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# **LEXIQUE OFFICIEL DES LAMPES RADIO**

**CARACTÉRISTIQUES DE SERVICE  
CULOTTAGES ET CLASSEMENT  
MÉTHODIQUE PAR FONCTION  
DE TOUTES LES LAMPES  
DE RÉCEPTION USUELLES**

**20<sup>e</sup> EDITION**

**SOCIÉTÉ DES ÉDITIONS RADIO**

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# **LEXIQUE OFFICIEL**

## **DES**

# **LAMPES RADIO**

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SOCIÉTÉ DES ÉDITIONS RADIO  
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# INTRODUCTION

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L'objet du LEXIQUE OFFICIEL, qui fut édité pour la première fois en 1941, est de condenser sous un volume très réduit l'essentiel des caractéristiques de service de toutes les lampes anciennes ou modernes qu'un radio technicien peut être amené à utiliser.

## LAMPES DÉCRITES

Le LEXIQUE ne comporte pas de courbes caractéristiques et ne contient que des renseignements pratiques. De la sorte, l'ouvrage est simple à consulter, il n'est pas volumineux et son prix n'est pas prohibitif. Les lampes décrites sont au nombre d'un millier. Les lampes étrangères qui n'ont jamais été introduites sur le marché français ont été systématiquement exclues pour alléger l'ouvrage; il en a été de même pour les anciennes lampes françaises de marques secondaires qui n'ont souvent existé que sur les catalogues. Le lecteur désireux d'obtenir des renseignements plus détaillés ou des courbes caractéristiques pourra se reporter à la documentation spécialisée des constructeurs ou à la collection intitulée CARACTÉRISTIQUES OFFICIELLES DES LAMPES RADIO.

## DIVISIONS DU LEXIQUE

La première partie du LEXIQUE est intitulée CARACTÉRISTIQUES. Elle donne tous les renseignements numé-

riques concernant chaque lampe ainsi que l'indication de son culottage. La seconde partie est le CLASSEMENT MÉTHODIQUE qui groupe les lampes suivant leurs utilisations; ce classement remplace les tableaux d'équivalence des premières éditions; il permet de choisir une lampe d'après sa tension ou son intensité de chauffage, ou encore d'après son culottage. On comprend immédiatement l'intérêt pratique de ce genre de classement qui permet de connaître toutes les lampes qui ont une certaine fonction avec un type de culot déterminé et qui ont un chauffage imposé. Quand on recherche une lampe de remplacement, on trouve donc sans hésiter les lampes identiques ou celles qui ne s'en écartent que d'une tolérance admise (type de culot, ou chauffage par exemple).

La troisième partie du LEXIQUE est constituée par les tableaux de culottage. Dans la case réservée à chaque dessin, sont indiqués les principaux types de lampes ayant ce culottage. Cela présente l'avantage de ne pas être obligé de consulter à nouveau les tableaux numériques lorsqu'on a lâché des yeux le LEXIQUE pendant quelques instants et que l'on a oublié le numéro exact du culot.

## CLASSIFICATION

La classification adoptée suit très exactement l'ordre alphabétique, et, comme en toute chose il faut adopter une loi, on notera que la lettre a reçu un droit de priorité



sur le chiffre. C'est ainsi que la **EL3** sera classée après la **ELL1** parce que la lettre **L** a la priorité sur le chiffre **3**. Il en résulte que les premières lampes du tableau seront celles dont les références commencent par des lettres. Pratiquement, cela signifie que les lampes « européennes » seront au début du tableau, et les « américaines » à la fin, tout au moins dans les grandes lignes.

Dans les tableaux, il n'a pas été, en général, tenu compte des différents suffixes qui peuvent suivre le « nom » d'une lampe. En effet, presque toujours ces suffixes ne font que caractériser le côté présentation d'une lampe sans affecter ses caractéristiques ou son culottage. C'est ainsi que dans les anciennes séries américaines **M** désignait une ampoule métallique, **G** une ampoule de verre et **MG** une ampoule de verre recouverte d'un blindage métallique. Parfois la lettre peut signifier qu'il s'agit d'une série « renforcée » prévue pour des besoins spéciaux, ou encore qu'il s'agit d'une lampe dont certaines caractéristiques ont été améliorées par rapport aux premiers types mis sur le marché.

Pour faciliter la lecture des tableaux caractéristiques, il a été fait usage d'une lettre symbolique accolée au numéro de référence du culot. Cette lettre désigne le type du culot. On trouve groupé dans la famille « européenne » tous les culots qui sont anciens ou n'appartiennent pas aux séries transcontinentales ou rimlock. De même, la famille « américaine » comporte les anciennes lampes américaines et les lampes qui n'appartiennent pas aux séries octal, locktal et miniature.

Le tableau de culots en fin d'ouvrage donne les schémas des différentes connexions. Les schémas sont « vus » du côté culot, c'est-à-dire du côté même où s'effectue le câblage. Lorsque une broche est susceptible d'être reliée à un blindage, le symbole de la mise à la masse a été adopté pour cette broche.

Voici les désignations des symboles :

|                               |                          |
|-------------------------------|--------------------------|
| <b>E</b> = européenne.        | <b>M</b> = miniature.    |
| <b>T</b> = transcontinentale. | <b>S</b> = subminiature. |

**A** = américaine.  
**O** = octal.  
**L** = locktal.

**R** = rimlock ou médium.  
**N** = noval.  
**D** = décal.

## NOTATIONS

Les notations utilisées sont aussi simples que possible, et sont imaginées de manière que l'utilisateur les retienne facilement et ne soit pas obligé de se référer constamment à un tableau de notations conventionnelles. C'est ainsi qu'une diode est désignée par le chiffre **2** et une triode par le chiffre **3**, la première ayant 2 électrodes et la seconde en ayant 3. Voici quelles sont ces notations :

| FONCTION                                | TYPE                |
|-----------------------------------------|---------------------|
| <b>VHF</b> = très haute fréquence.      |                     |
| <b>HF</b> = haute ou moyenne fréquence. | <b>2</b> = diode.   |
| <b>C</b> = changement de fréquence.     | <b>3</b> = triode.  |
| <b>D</b> = détection.                   | <b>4</b> = tétrode. |
| <b>BF</b> = préamplif. basse fréquence. | <b>5</b> = pentode. |
| <b>P</b> = amplification de puissance.  | <b>6</b> = hexode.  |
| <b>R</b> = redressement.                | <b>7</b> = heptode. |
| <b>I</b> = indication visuelle.         | <b>8</b> = octode.  |
| <b>TV</b> = télévision.                 | <b>9</b> = nonode.  |
| <b>FM</b> = modulation de fréquence.    |                     |

La lettre **V** suivant le nombre d'électrodes signifie que la lampe est à pente variable, et un astérisque **\*** caractérise une lampe à chauffage direct. Un double-diode-pentode à chauffage direct et pente variable sera désignée suivant ce code par :

**2-2-5V\***

et une double triode à chauffage indirect comme **ECC81** par les chiffres.



## **CARACTÉRISTIQUES**

Les valeurs indiquées dans le tableau proviennent des documents officiels fournis par les constructeurs. Parfois, ces caractéristiques ont pu varier dans le temps; elles peuvent également varier d'un constructeur à l'autre. Nous avons, en principe, adopté les chiffres les plus récents et ceux correspondant aux marques les plus utilisées lorsque, dans un type de lampe, il y a divergence entre constructeurs. Quand certains renseignements ne sont pas communiqués (résistances de polarisation ou d'anode), nous avons indiqué les valeurs sanctionnées par la pratique industrielle courante.

Il y a lieu de remarquer que certains fabricants, pour des raisons personnelles, utilisent et indiquent des chiffres dont la précision peut sembler exagérée. Nous avons reproduit fidèlement ces chiffres, mais nous signalons ici que l'utilisateur peut sans inconvénient s'en écarter légèrement. Une résistance de polarisation de 610 ohms peut être remplacée par une résistance de 600 ohms; d'ailleurs, les « coups de pouce » ainsi donnés sont d'une valeur bien inférieure à la tolérance normale que l'on exige d'une résistance.

Passons en revue les différentes colonnes du tableau. La référence est évidemment le « nom » de la lampe. Le type indique la composition de la lampe, par exemple triode-hexode à pente variable et chauffage indirect. Le numéro du culot est celui du dessin correspondant dans les tableaux de culottage; la lettre qui accompagne ce numéro indique le genre du culot. La tension filament s'exprime en volts, le chiffre entre parenthèses désignant l'intensité de chauffage en ampère. La fonction est désignée par le code cité plus haut; à remarquer que le chiffre entre parenthèses qui suit la lettre P désigne la puissance modulée en watts dans le cas de l'amplification de puissance.

La haute tension (ou tension d'anode), la tension écran

et la tension de polarisation s'expriment en volts. L'intensité anodique est chiffrée en milliampères; c'est la valeur du courant anodique lorsque l'anode reçoit la totalité de la haute tension (liaison par transformateur). La résistance d'anode est effectivement une résistance dans le cas d'un amplificateur à résistance; par contre, dans le cas de l'amplification de puissance, le chiffre de cette colonne désigne l'impédance du haut-parleur.

La résistance de polarisation est indiquée dans les cas des lampes à chauffage indirect seulement afin d'éviter des confusions par suite de la variété des montages possibles. La valeur de la résistance interne est celle de la lampe recevant la totalité de la tension anodique. La pente est exprimée en milliampères par volt. Rappelons que l'on peut connaître le coefficient d'amplification en multipliant la résistance interne (en milliers d'ohms) par la pente (en milliampères par volt). Pour les lampes de changement de fréquence, c'est la pente de conversion qui est indiquée.

Dans le cas de montage push-pull, le courant anodique est le courant total des deux lampes en l'absence de signal. L'impédance d'utilisation s'entend de plaque à plaque.

## **CLASSEMENT MÉTHODIQUE**

Cette partie du LEXIQUE se divise en plusieurs tableaux selon la fonction de la lampe. Dans le cas de lampes multiples, c'est la fonction principale qui l'a emporté. C'est ainsi qu'une double-diode-triode, servant à la détection et à la préamplification basse fréquence, sera classée selon cette dernière fonction.

Dans chaque tableau, les lampes sont classées par tension croissante du filament. A tension égale, le classement est fait par intensité croissante. A chauffage identique, les lampes sont groupées par type de culot. On peut donc, d'un simple coup d'œil, parcourir toute la liste des lampes semblables ou voisines.



# CARACTÉRISTIQUES

| Référence    | Type  | Culot | Tension Filament | Fonction         | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne | Pente    | OBSERVATIONS                    |
|--------------|-------|-------|------------------|------------------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------|----------|---------------------------------|
| <b>ABC1</b>  | 2-2-3 | T-123 | 4(0,65)          | D-BF             | 250           | 4                  | 50.000             | —             | -7                   | 2.500                   | 13.500             | 2        |                                 |
| <b>ABL1</b>  | 2-2-5 | T-125 | 4(2,4)           | D-P(4,3)         | 250           | 36                 | 7.000              | 250           | -6                   | 150                     | 50.000             | 9,5      |                                 |
| <b>AD1</b>   | 3*    | T-100 | 4(1,1)           | P(4,2)<br>P(9,2) | 250<br>250    | 60<br>120          | 2.300<br>9.000     | —<br>—        | -40<br>-45           | 700<br>375              | 670<br>—           | 6<br>—   | Push-pull classe A              |
| <b>AF3</b>   | 5V    | T-118 | 4(0,65)          | HF               | 250           | 8                  | —                  | 100           | -3-55                | 300                     | 1,2M $\Omega$      | 1,8      |                                 |
| <b>AF7</b>   | 5     | T-118 | 4(0,65)          | HF<br>BF         | 250<br>250    | 3<br>—             | —<br>0,2M $\Omega$ | 100<br>—      | -2<br>—              | 500<br>2.500            | 2M $\Omega$<br>—   | 2,1<br>— | 0,5 M $\Omega$ série sur écran  |
| <b>AK2</b>   | 8V    | T-122 | 4(0,65)          | C                | 250           | 1,6                | —                  | 90            | -1,5-25              | 300                     | 1,6M $\Omega$      | 0,6      |                                 |
| <b>AL2</b>   | 5     | T-117 | 4(1)             | P(3,8)           | 250           | 36                 | 7.000              | 250           | -25                  | 610                     | 60.000             | 2,6      |                                 |
| <b>AL4</b>   | 5     | T-115 | 4(1,75)          | P(4,3)           | 250           | 36                 | 7.000              | 250           | -6                   | 150                     | 50.000             | 9,5      |                                 |
| <b>AX50</b>  | 2-2*  | E-3   | 4(3,75)          | R                | 500           | 275                | —                  | —             | —                    | —                       | —                  | —        | Redresseur à gaz                |
| <b>AZ1</b>   | 2-2*  | T-99  | 4(1)             | R                | 400           | 75                 | —                  | —             | —                    | —                       | —                  | —        | 500 V. max. (60 mA)             |
| <b>AZ11</b>  | 2-2*  | E-31  | 4(1,1)           | R                | 500           | 60                 | —                  | —             | —                    | —                       | —                  | —        | 300 V. max. (100 mA)            |
| <b>AZ12</b>  | 2-2*  | E-31  | 4(2,2)           | R                | 500           | 120                | —                  | —             | —                    | —                       | —                  | —        | 300 V. max. (200 mA)            |
| <b>AZ41</b>  | 2-2*  | R-293 | 4(0,62)          | R                | 300           | 70                 | —                  | —             | —                    | —                       | —                  | —        | 500 V. max. (30 mA)             |
| <b>AZ50</b>  | 2-2*  | E-3   | 4(3)             | R                | 500           | 250                | —                  | —             | —                    | —                       | —                  | —        |                                 |
| <b>CY2</b>   | 2-2   | T-111 | 30(0,2)          | R                | 250           | 120                | —                  | —             | —                    | —                       | —                  | —        |                                 |
| <b>DAF40</b> | 2-5*  | R-388 | 1,4(0,025)       | HF-D             | 67,5          | 0,85               | —                  | 67,5          | 0                    | —                       | 1,6M $\Omega$      | 0,7      |                                 |
| <b>DAF41</b> | 2-5*  | R-388 | 1,4(0,025)       | D-BF             | 67,5          | —                  | 220.000            | —             | 0                    | —                       | 1,5M $\Omega$      | 0,8      | 0,82 M $\Omega$ série sur écran |



| Référence | Type | Culot | Tension Filament                                | Fonction                                 | Haute tension           | Intensité anodique | Résistance d'Anode                   | Tension Ecran           | Tension Polarisation           | Résistance Polarisation | Résistance interne               | Pente                     | OBSERVATIONS                   |
|-----------|------|-------|-------------------------------------------------|------------------------------------------|-------------------------|--------------------|--------------------------------------|-------------------------|--------------------------------|-------------------------|----------------------------------|---------------------------|--------------------------------|
| DAF91     | 2-5* | M-267 | 1,4(0,05)                                       | HF-D                                     | 67,5                    | 1,6                | —                                    | 67,5                    | 0                              | —                       | 0,6M $\Omega$                    | 0,62                      | Identique à 1S5                |
| DAF96     | 2-5* | M-267 | 1,4(0,025)                                      | D-BF                                     | 90                      | —                  | 0,5M $\Omega$                        | —                       | —                              | —                       | 1,6M $\Omega$                    | 0,4                       | 1,5 M $\Omega$ série sur écran |
| DA90      | 2    | M-272 | 1,4(0,15)                                       | D                                        | —                       | 0,5                | —                                    | —                       | —                              | —                       | —                                | —                         | Identique à 1A3                |
| DCC90     | 5*   | M-264 | 2,8(0,1)                                        | P(0,6)                                   | 135                     | 14,8               | 8.000                                | 90                      | -7,5                           | —                       | 90.000                           | 1,9                       | Identique à 3A4                |
| DF91      | 5V*  | M-262 | 1,4(0,05)                                       | HF                                       | 90                      | 3,7                | —                                    | 67,5                    | 0                              | —                       | 0,5M $\Omega$                    | 0,9                       | Identique à 1T4                |
| DF92      | 5*   | M-262 | 1,4(0,05)                                       | HF                                       | 90                      | 4,5                | —                                    | 90                      | 0                              | —                       | 350.000                          | 1                         | Identique à 1L4                |
| DF96      | 5*   | M-262 | 1,4(0,025)                                      | HF                                       | 64                      | 1,65               | —                                    | 64                      | 0                              | —                       | 0,7M $\Omega$                    | 0,85                      | Identique à 1AJ4               |
| DK40      | 7V*  | R-324 | 1,4(0,05)                                       | C                                        | 67,5                    | 1                  | —                                    | 67,5                    | 0-9,5                          | —                       | 0,9M $\Omega$                    | 0,42                      |                                |
|           |      |       |                                                 | C                                        | 135                     | 1                  | —                                    | 67,5                    | 0-18,5                         | —                       | 1M $\Omega$                      | 0,42                      |                                |
| DK91      | 7V*  | M-266 | 1,4(0,05)                                       | C                                        | 90                      | 1,7                | —                                    | 67,5                    | 0-9                            | —                       | 0,5M $\Omega$                    | 0,3                       | Identique à 1R5                |
| DK92      | 7*   | M-320 | 1,4(0,05)                                       | C                                        | 90                      | 0,7                | —                                    | 90                      | 0-12                           | —                       | 0,6M $\Omega$                    | 0,325                     |                                |
| DK96      | 7*   | M-320 | 1,4(0,025)                                      | C                                        | 65                      | 0,7                | —                                    | 65                      | —                              | —                       | 1M $\Omega$                      | 0,3                       | Identique à 1AB6               |
| DL21      | 5*   | O-372 | 1,4(0,05)                                       | P(0,16)                                  | 90                      | 4                  | 22.500                               | 90                      | -3                             | —                       | 0,3M $\Omega$                    | 1,3                       |                                |
| DL41      | 5*   | R-323 | 1,4(0,05)<br>1,4(0,1)<br>2,8(0,05)<br>2,8(0,05) | P(0,16)<br>P(0,55)<br>P(0,49)<br>P(1,85) | 90<br>120<br>120<br>150 | 4<br>10<br>9<br>—  | 22.500<br>12.000<br>13.500<br>15.000 | 90<br>120<br>120<br>150 | -3,6<br>-5,6<br>-5,45<br>-12,6 | —<br>—<br>—<br>—        | 175.000<br>80.000<br>95.000<br>— | 1,25<br>2,55<br>2,45<br>— | Push-pull classe B             |
| DL92      | 5*   | M-265 | 2,8(0,05)                                       | P(0,27)                                  | 90                      | 7,4                | 8.000                                | 67,5                    | -7                             | —                       | 0,1M $\Omega$                    | 1,57                      | Identique à 3S4                |
| DL93      | 5*   | M-264 | 2,8(0,1)                                        | P(0,6)                                   | 135                     | 14,8               | 8.000                                | 90                      | -7,5                           | —                       | 90.000                           | 1,9                       | Identique à 3A4                |
| DL94      | 5*   | M-265 | 2,8(0,05)                                       | P(0,24)                                  | 90                      | 7,7                | 10.000                               | 90                      | -4,5                           | —                       | 120.000                          | 2                         | Identique à 3Q4                |
| DL95      | 5*   | M-265 | 2,8(0,05)                                       | P(0,24)                                  | 90                      | 7,7                | 10.000                               | 90                      | -4,5                           | —                       | 90.000                           | 2,2                       | Identique à 3Q4                |
| DL96      | 5*   | M-263 | 2,8(0,025)                                      | P(0,2)                                   | 85                      | 5                  | 14.000                               | 85                      | -5,2                           | —                       | —                                | 1,4                       | Identique à 3C4                |
| DM70      | 3*   | M-328 | 1,4(0,025)                                      | I                                        | 85                      | 0,17               | —                                    | —                       | —                              | —                       | —                                | —                         |                                |



| Référence     | Type    | Culot | Tension Filament | Fonction | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne | Pente | OBSERVATIONS                     |
|---------------|---------|-------|------------------|----------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------|-------|----------------------------------|
| <b>DM71</b>   | 3*      | M-328 | 1,4(0,025)       | I        | 85            | 0,17               | —                  | —             | —                    | —                       | —                  | —     |                                  |
| <b>DY51</b>   | 2*      | Néant | 1,4(0,575)       | TV       | 5.000         | 3                  | —                  | —             | —                    | —                       | —                  | —     | Redresseur THT                   |
| <b>DY86</b>   | 2       | N-314 | 1,4(0,53)        | R        | 20.000        | 0,15               | —                  | —             | —                    | —                       | —                  | —     | Télévision                       |
| <b>DY87</b>   | 2       | N-314 | 1,4(0,550)       | TV       | 20.000        | 0,15               | —                  | —             | —                    | —                       | —                  | —     | Redresseur THT                   |
| <b>DY802</b>  | 2*      | M-382 | 1,4(0,6)         | TV       | 20.000        | 0,5                | —                  | —             | —                    | —                       | —                  | —     | Redresseur THT                   |
| <b>EEA91</b>  | 2-2     | M-276 | 6,3(0,3)         | D        | 150           | 9                  | —                  | —             | —                    | —                       | —                  | —     | Identique à 6AL5                 |
| <b>EABC80</b> | 2-2-2-3 | N-337 | 6,3(0,45)        | FM       | 250           | 1                  | —                  | —             | -3                   | —                       | 58.000             | 1,2   |                                  |
|               |         |       |                  | FM       | 100           | 0,8                | —                  | —             | -1                   | —                       | 54.000             | 1,3   |                                  |
| <b>EA41</b>   | 2-5V    | R-298 | 6,3(0,2)         | HF-D     | 200           | 6                  | —                  | —             | -2,4-34              | 300                     | 1,3M $\Omega$      | 1,9   | 44.000 $\Omega$ série sur écran  |
|               |         |       |                  | HF-D     | 100           | 2,8                | —                  | —             | -1,1-17              | 300                     | 1M $\Omega$        | 1,6   | 44.000 $\Omega$ série sur écran  |
|               |         |       |                  | D-BF     | 170           | 5                  | 200.000            | —             | -2-28                | 2.700                   | 1,2M $\Omega$      | 1,8   | 730.000 $\Omega$ série sur écran |
|               |         |       |                  | D-BF     | 100           | 2,8                | 200.000            | —             | -1,1-17              | 2.700                   | 1M $\Omega$        | 1,6   | 730.000 $\Omega$ série sur écran |
| <b>EA42</b>   | 2-5V    | R-302 | 6,3(0,2)         | HF-D     | 250           | 5                  | —                  | —             | -2-43                | 310                     | 1,4M $\Omega$      | 2     | 0,1M $\Omega$ série sur écran    |
|               |         |       |                  | HF-D     | 100           | 2,8                | —                  | —             | -1,2-16              | 310                     | 0,85M $\Omega$     | 1,7   | 56.000 $\Omega$ série sur écran  |
|               |         |       |                  | D-BF     | 250           | —                  | 220.000            | —             | —                    | 1.500                   | —                  | —     | 0,82M $\Omega$ série sur écran   |
| <b>EA50</b>   | 2       | Néant | 6,3(0,15)        | D        | 200           | 5                  | —                  | —             | —                    | —                       | —                  | —     |                                  |
| <b>EBC3</b>   | 2-2-3   | T-123 | 6,3(0,2)         | D-BF     | 250           | 5                  | 200.000            | —             | -5,5                 | 4.000                   | 15.000             | 2     |                                  |
|               |         |       |                  | D-BF     | 100           | —                  | 100.000            | —             | —                    | 8.000                   | —                  | —     |                                  |
| <b>EBC11</b>  | 2-2-3   | E-36  | 6,3(0,2)         | D-BF     | 250           | 5                  | 100.000            | —             | -8                   | 2.500                   | 11.500             | 2     |                                  |
|               |         |       |                  | D-BF     | 100           | 2                  | 50.000             | —             | -3,2                 | 2.000                   | 14.000             | 1,8   |                                  |
| <b>EBC33</b>  | 2-2-3   | O-188 | 6,3(0,2)         | D-BF     | 250           | —                  | 200.000            | —             | -2,1                 | 4.000                   | 19.000             | 1,6   |                                  |
| <b>EBC41</b>  | 2-2-3   | R-300 | 6,3(0,2)         | D-BF     | 250           | 1                  | 200.000            | —             | -3                   | 1.800                   | 58.000             | 1,2   |                                  |
| <b>EBC81</b>  | 2-2-3   | N-315 | 6,3(0,23)        | D-BF     | 250           | 0,7                | 22.000             | —             | -3                   | 1.000                   | 58.000             | 1,2   |                                  |
| <b>EBC90</b>  | 2-2-3   | M-291 | 6,3(0,3)         | D-BF     | 250           | 1                  | —                  | —             | -3                   | 300                     | 58.000             | 1,2   | Identique à 6AT6                 |
| <b>EBC91</b>  | 2-2-3   | M-291 | 6,3(0,3)         | D-BF     | 250           | 1,2                | —                  | —             | -2                   | 1.500                   | 62.500             | 1,6   | Identique à 6AV6                 |



| Référence    | Type   | Culot | Tension Filament | Fonction             | Haute tension     | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne  | Pente             | OBSERVATIONS                                       |
|--------------|--------|-------|------------------|----------------------|-------------------|--------------------|--------------------|---------------|----------------------|-------------------------|---------------------|-------------------|----------------------------------------------------|
| <b>EBF2</b>  | 2-2-5V | T-126 | 6,3(0,2)         | HF-D<br>HF-D         | 250<br>100        | 5<br>5             | —<br>—             | —<br>100      | -2-50<br>-2-38       | 300<br>300              | 1,5MΩ<br>0,4MΩ      | 1,8<br>1,8        | 95.000 Ω série sur écran                           |
| <b>EBF11</b> | 2-2-5V | E-37  | 6-3(0,2)         | HF-D<br>HF-D<br>D-BF | 100<br>250<br>250 | 5<br>5<br>1,5      | —<br>—<br>100.000  | 100<br>—<br>— | -2-16<br>-2-41<br>-2 | 300<br>300<br>1.000     | 0,3MΩ<br>2MΩ<br>2MΩ | 1,8<br>1,8<br>1,8 | 85.000 Ω série sur écran<br>0,4 MΩ série sur écran |
| <b>EBF32</b> | 2-2-5  | O-196 | 6,3(0,2)         | HF-D                 | 250               | 5                  | —                  | —             | -2                   | 300                     | 1,3MΩ               | 1,8               | 95.000 Ω série sur écran                           |
| <b>EBF80</b> | 2-2-5V | N-336 | 6,3(0,3)         | HF-D                 | 250               | 5                  | —                  | —             | -2-35                | 295                     | 1,5MΩ               | 2,2               | 0,1 MΩ série sur écran                             |
| <b>EBF83</b> | 2-2-5V | N-336 | 6,3(0,3)         | HF-D<br>HF-D         | 12,6<br>6,3       | 0,45<br>0,12       | —<br>—             | 12,6<br>6,3   | 0-8<br>0-8           | 0<br>0                  | 1MΩ<br>1MΩ          | 0,65<br>0,45      |                                                    |
| <b>EBF89</b> | 2-2-5  | N-336 | 6,3(0,3)         | HF-D                 | 250               | 9                  | —                  | —             | -2                   | 1.000                   | 1MΩ                 | 3,8               | 40.000 Ω série sur écran                           |
| <b>EBL1</b>  | 2-2-5  | T-126 | 6,3(1,4)         | D-P(4,3)             | 250               | 36                 | 7.000              | 250           | -6                   | 150                     | 50.000              | 9,5               |                                                    |
| <b>EBL21</b> | 2-2-5  | L-375 | 6,3(0,8)         | D-P(4,5)             | 250               | 36                 | 7.000              | 250           | -6                   | 150                     | 50.000              | 9                 |                                                    |
| <b>EB4</b>   | 2-2    | T-112 | 6,3(0,2)         | D                    | 200               | 0,8                | —                  | —             | —                    | —                       | —                   | —                 |                                                    |
| <b>EB11</b>  | 2-2    | E-33  | 6,3(0,2)         | D                    | 200               | 0,8                | —                  | —             | —                    | —                       | —                   | —                 |                                                    |
| <b>EB34</b>  | 2-2    | O-161 | 6,3(0,2)         | D                    | 250               | 0,8                | —                  | —             | —                    | —                       | —                   | —                 |                                                    |
| <b>EB41</b>  | 2-2    | R-326 | 6,3(0,3)         | D                    | 150               | 9                  | —                  | —             | —                    | —                       | —                   | —                 | Ondes ultra courtes                                |
| <b>EB91</b>  | 2-2    | M-311 | 6,3(0,3)         | TV                   | 150               | 9                  | —                  | —             | —                    | —                       | —                   | —                 |                                                    |
| <b>EC86</b>  | 3      | N-355 | 6,3(0,2)         | VHF                  | 175               | 12                 | —                  | —             | -1,5                 | 125                     | 4.800               | 14                |                                                    |
| <b>EC88</b>  | 3      | N-356 | 6,3(0,09)        | VHF                  | 160               | 12,5               | —                  | —             | -1,25                | 100                     | 4.800               | 14                |                                                    |
| <b>EC91</b>  | 3      | M-312 | 6,3(0,3)         | VHF                  | 250               | 10                 | —                  | —             | -1,5                 | 150                     | 12.000              | 8,5               |                                                    |
| <b>EC95</b>  | 3      | N-357 | 6,3(0,18)        | VHF                  | 200               | 10                 | —                  | —             | -1,2                 | 120                     | 7.600               | 10,5              |                                                    |
| <b>EC900</b> | 3      | L-374 | 6,3(0,18)        | HF                   | 135               | 11,5               | —                  | —             | -1                   | —                       | 5.000               | 14,5              | Très haute fréquence                               |



| Référence | Type | Culot | Tension Filament | Fonction | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne | Pente      | OBSERVATIONS                    |
|-----------|------|-------|------------------|----------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------|------------|---------------------------------|
| ECC40     | 3-3  | R-313 | 6,3(0,6)         | BF       | 250           | —                  | 200.000            | —             | -5,2                 | 4.000                   | 11.000             | 2,7        | Pour chaque triode              |
| ECC81     | 3-3  | N-305 | 12,6(0,15)       | HF       | 250           | 10                 | —                  | —             | -2,35                | —                       | —                  | 4,9        | Filament à prise médiane 12A7Z  |
| ECC82     | 3-3  | N-94  | 12,6(0,15)       | HF       | 250           | 10,5               | 100.000            | —             | -8,5                 | 800                     | 7.700              | 2,2        | Identique à 12AU7               |
| ECC83     | 3-3  | N-335 | 12,6(0,15)       | BF       | 250           | —                  | 250.000            | —             | -2                   | 2.700                   | 62.000             | 1,6        | Identique à 12AX7               |
| ECC84     | 3-3  | N-345 | 6,3(4,5)         | TV       | 90            | 112                | —                  | —             | -1,5                 | —                       | —                  | 6          |                                 |
| ECC85     | 3-3  | N-351 | 6,3(0,43)        | FM       | 250           | 10                 | —                  | —             | -2                   | —                       | 20.000             | 6          | Identique à 6AQ8                |
| ECC86     | 3-3  | N-351 | 6,3(0,3)         | HF       | 6,3           | 0,9                | —                  | —             | -0,4                 | —                       | 5.000              | 14         | Auto                            |
| ECC88     | 3-3  | N-351 | 6,3(0,33)        | TV       | 130           | —                  | —                  | —             | 0                    | 0                       | —                  | 12,5       |                                 |
| ECC91     | 3-3  | M-292 | 6,3(0,45)        | HF       | 100           | 8,5                | —                  | —             | -0,8                 | 50                      | 7.100              | 5,3        | Identique à 6J6                 |
| ECC189    | 3-3  | N-351 | 6,3(0,365)       | VHF      | 90            | 15                 | —                  | —             | -1,2                 | —                       | 2.700              | 12,5       |                                 |
| ECC812    | 3-3  | N-351 | 6,3(0,43)        | TV       | 150           | 7                  | —                  | —             | —                    | 330                     | 5.000              | 9,3        |                                 |
| ECF1      | 3-5  | T-129 | 6,3(0,2)         | HF<br>BF | 250<br>250    | 5<br>9             | —<br>—             | 100<br>—      | -2<br>-2             | 300<br>300              | 1,2MΩ<br>9.000     | 2,5<br>2,5 | Partie pentode<br>Partie triode |
| ECF80     | 3-5  | N-352 | 6,3(0,43)        | TV       | 100<br>170    | 14<br>10           | —<br>—             | —<br>170      | -2<br>-2             | —<br>—                  | —<br>0,4MΩ         | 5<br>6,2   | Partie triode<br>Partie pentode |
| ECF82     | 3-5  | N-352 | 6,3(0,45)        | TV       | 150<br>250    | 18<br>10           | —<br>—             | —<br>110      | —<br>—               | 56<br>68                | 5.000<br>0,4MΩ     | 8,5<br>5,2 | Partie triode<br>Partie pentode |
| ECF86     | 3-5  | N-358 | 6,3(0,385)       | C<br>C   | 190<br>190    | 12<br>8,5          | —<br>—             | —<br>150      | -3<br>-1,2           | —<br>—                  | —<br>—             | 5,5<br>12  | Partie triode<br>Partie pentode |
| ECF200    | 3-5  | D-387 | 6,3(0,4)         | TV<br>TV | 160<br>170    | 13<br>8,5          | 2.700<br>—         | 135<br>—      | -1,7<br>-1           | 100<br>—                | —<br>—             | 14<br>5    | Partie pentode<br>Partie triode |
| ECF201    | 3-5  | D-387 | 6,3(0,4)         | TV<br>TV | 200<br>100    | 13<br>14           | —<br>—             | 110<br>—      | -1,6<br>-2           | —<br>—                  | —<br>—             | 12<br>5    | Partie pentode<br>Partie triode |



| Référence | Type | Culot | Tension Filament | Fonction                            | Haute tension     | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne | Pente              | OBSERVATIONS                                     |
|-----------|------|-------|------------------|-------------------------------------|-------------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------|--------------------|--------------------------------------------------|
| ECF801    | 3-5  | N-383 | 6,3(0,41)        | C<br>C                              | 200<br>100        | 10<br>10           | —<br>—             | 200<br>—      | -1,2<br>-1,4         | —<br>—                  | —<br>—             | 10<br>8,5          | Partie pentode<br>Partie triode                  |
| ECF802    | 3-5  | N-352 | 6,3(0,43)        | TV<br>TV                            | 100<br>200        | 6<br>3,5           | —<br>—             | 100<br>—      | -1<br>-2             | —<br>—                  | 0,4MΩ<br>20.000    | 5,5<br>3,5         | Partie pentode<br>Partie triode                  |
| ECH3      | 3-6V | T-130 | 6,3(0,2)         | C<br>—                              | 250<br>250        | 3<br>3,3           | —<br>45.000        | 100<br>—      | -2-31<br>—           | 215<br>—                | 1,3MΩ<br>8.500     | 0,65<br>2,8        | Partie triode                                    |
| ECH4      | 3-7  | T-369 | 6 3(0,35)        | C<br>C                              | 250<br>250        | 3<br>4,5           | —<br>—             | —<br>—        | -2<br>—              | —<br>—                  | 1,4MΩ<br>—         | —<br>0,55          | Partie heptode<br>Partie triode                  |
| ECH11     | 3-6V | E-41  | 6,3(0,2)         | C<br>C                              | 100<br>250        | 1,8<br>2,3         | —<br>—             | 100<br>100    | -2-10<br>-2-12       | 350<br>300              | 2MΩ<br>1,4MΩ       | 0,60<br>0,65       |                                                  |
| ECH21     | 3-7  | L-374 | 6,3(0,35)        | C<br>C                              | 250<br>250        | 3<br>4,5           | —<br>—             | 250<br>—      | -2<br>—              | —<br>—                  | 1,4MΩ<br>—         | —<br>0,55          | Partie heptode<br>Partie triode                  |
| ECH41     | 3-6V | R-299 | 6,3(0,225)       | C                                   | 250               | 3                  | —                  | 105           | -2-28                | 200                     | 2MΩ                | 0,5                |                                                  |
| ECH42     | 3-6V | R-299 | 6,3(0,23)        | C                                   | 250               | 3                  | —                  | 105           | -2-20                | 180                     | 1,7MΩ              | 0,75               | 45.000 Ω série sur écran                         |
| ECH81     | 3-7V | N-338 | 6,3(0,3)         | C                                   | 250               | 2,5                | —                  | 92            | -2-28,5              | 150                     | 1MΩ                | 0,7                | Pour modulation de fréquence                     |
| ECH83     | 3-7  | N-338 | 6,3(0,3)         | C<br>C                              | 6,3<br>12,6       | 0,05<br>0,17       | —<br>—             | 6,3<br>12,6   | 0-6<br>0-10          | 0<br>0                  | 1,3MΩ<br>1,5MΩ     | 0,09<br>0,22       |                                                  |
| ECH84     | 3-7  | N-338 | 6,3(0,3)         | C<br>C                              | 135<br>50         | 20<br>3            | —<br>—             | 14<br>—       | -2<br>-1,9           | —<br>—                  | —<br>—             | 2,2<br>3,7         | Partie heptode<br>Partie triode                  |
| ECH200    | 3-7  | D-385 | 6,3(0,43)        | TV<br>TV                            | 14<br>100         | 0,8<br>9           | —<br>—             | 14<br>—       | —<br>-1              | —<br>—                  | —<br>—             | 2,2<br>8,5         | Partie heptode<br>Partie triode                  |
| ECL11     | 3-4  | E-40  | 6,3(1)           | BF-P(1,5)                           | 250<br>250        | 2<br>36            | —<br>7.000         | —<br>250      | -2,5<br>-6           | 150<br>150              | —<br>25.000        | 2<br>9             | Partie triode<br>Partie tétrade                  |
| ECL80     | 3-5  | N-304 | 6,3(0,3)         | BF-P(1,4)<br>BF-P(1,4)<br>BF-P(1,4) | 100<br>100<br>200 | 7,5<br>4<br>17,5   | —<br>—<br>11.000   | —<br>—<br>200 | 0<br>-2<br>-7,7      | —<br>—<br>—             | —<br>—<br>150.000  | 1,9<br>1,35<br>3,4 | Partie triode<br>Partie triode<br>Partie pentode |



| Référence | Type | Culot | Tension Filament | Fonction             | Haute tension            | Intensité anodique | Résistance d'Anode       | Tension Ecran        | Tension Polarisation | Résistance Polarisation      | Résistance interne               | Pente                | OBSERVATIONS                                     |
|-----------|------|-------|------------------|----------------------|--------------------------|--------------------|--------------------------|----------------------|----------------------|------------------------------|----------------------------------|----------------------|--------------------------------------------------|
| ECL82     | 3-5  | N-316 | 6,3(0,76)        | TV                   | 170                      | 41                 | —                        | 170                  | -11                  | 800                          | 25.000                           | 7,5                  |                                                  |
| ECL84     | 3-5  | N-359 | 6,3(0,72)        | TV<br>TV             | 200<br>220               | 3<br>18            | —<br>—                   | —<br>220             | -1,7<br>-3,4         | —<br>—                       | 16.000<br>0,15MΩ                 | 4<br>10              | Partie triode<br>Partie pentode                  |
| ECL85     | 3-5  | N-360 | 6,3(0,9)         | TV<br>TV             | 100<br>170               | 5<br>41            | —<br>—                   | —<br>170             | -0,8<br>-15          | —<br>—                       | 7.600<br>25.000                  | 6,5<br>7,5           | Partie triode<br>Partie pentode                  |
| ECL86     | 3-5  | N-361 | 6,3(0,3)         | BF<br>P(4)           | 250<br>250               | 1,2<br>36          | —<br>—                   | —<br>250             | -1,9<br>-7           | —<br>—                       | —<br>48.000                      | 1,6<br>10            | Partie triode<br>Partie pentode                  |
| ECL802    | 3-5  | N-360 | 6,3(0,9)         | TV<br>TV             | 50<br>100                | 200<br>10          | —<br>—                   | 170<br>—             | -1<br>0              | —<br>—                       | —<br>9.000                       | —<br>5,5             | Partie pentode<br>Partie triode                  |
| EC80      | 3    | N-332 | 6,3(0,48)        | TV                   | 250                      | 15                 | —                        | —                    | -1,5                 | —                            | —                                | 12                   | Identique à 6Q4                                  |
| EC81      | 3    | N-333 | 6,3(0,2)         | TV                   | 150                      | 30                 | —                        | —                    | -2                   | —                            | —                                | 5,5                  | Identique à 6R4                                  |
| EC92      | 3    | M-346 | 6,3(0,15)        | FM                   | 200                      | 11,5               | —                        | —                    | -1                   | —                            | —                                | 6,4                  | Identique à 6AB4                                 |
| EC93      | 3    | M-322 | 6,3(0,225)       | TV                   | 75                       | 16                 | —                        | —                    | —                    | —                            | —                                | 8                    | Oscillateur                                      |
| ED500     | 3    | N-380 | 6,3(0,4)         | TV                   | 25.000                   | 1,5                | —                        | —                    | —                    | —                            | —                                | —                    | Régulatrice                                      |
| EFL200    | 5-5  | D-386 | 6,3(0,95)        | TV<br>TV             | 250<br>200               | 0,1<br>—           | —<br>—                   | 75<br>180            | -2,7<br>—            | —<br>—                       | —<br>—                           | 0,2<br>—             | Première pentode<br>Seconde pentode              |
| EFM1      | 3-5V | T-128 | 6,3(0,2)         | I-BF                 | 250                      | 1,3                | 130.000                  | —                    | -2-20                | 1.000                        | —                                | —                    | 170.000 Ω série sur écran                        |
| EFM11     | 3-5  | E-38  | 6,3(0,2)         | I-BF                 | 250                      | 1                  | 130.000                  | —                    | -1,5                 | 650                          | —                                | —                    | 350.000 Ω série sur écran                        |
| EF6       | 5    | T-118 | 6,3(0,2)         | HF<br>HF<br>BF<br>BF | 250<br>100<br>250<br>100 | 3<br>3<br>3<br>3   | —<br>—<br>0,2MΩ<br>0,2MΩ | 100<br>100<br>—<br>— | -2<br>-2<br>-2<br>-2 | 300<br>300<br>3.000<br>5.000 | 2,5MΩ<br>0,8MΩ<br>2,5MΩ<br>0,8MΩ | 2<br>1,1<br>2<br>1,1 | 0,4 MΩ série sur écran<br>0,4 MΩ série sur écran |
| EF9       | 5V   | T-118 | 6,3(0,2)         | HF<br>HF             | 250<br>100               | 6<br>6             | —<br>—                   | —<br>100             | -2,5-55<br>-2,5-22   | 300<br>300                   | 1,2MΩ<br>0,4MΩ                   | 2,2<br>2,2           | 95.000 Ω série sur écran                         |



| Référence | Type | Culot | Tension Filament | Fonction | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne | Pente      | OBSERVATIONS                                          |
|-----------|------|-------|------------------|----------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------|------------|-------------------------------------------------------|
| EF11      | 5V   | E-34  | 6,3(0,2)         | HF<br>HF | 100<br>250    | 6<br>6             | —<br>—             | 100<br>—      | -2-21<br>-2-53       | 250<br>250              | 0,8MΩ<br>1,5MΩ     | 2,2<br>2,2 | 75.000 Ω série sur écran                              |
| EF12      | 5    | E-34  | 6,3(0,2)         | HF<br>BF | 250<br>250    | 3<br>3             | —<br>200.000       | 100<br>—      | -2<br>-2             | 500<br>3.000            | 1,5MΩ<br>1,5MΩ     | 2,1<br>2,1 | 0,6 MΩ série sur écran                                |
| EF13      | 5V   | E-35  | 6,3(0,2)         | HF       | 250           | 4,5                | —                  | 100           | -2-17                | 400                     | 0,5MΩ              | 2,3        |                                                       |
| EF22      | 5    | L-242 | 6 3(0,2)         | HF       | 250           | 6                  | —                  | —             | -2,5                 | 325                     | 1,2MΩ              | 2,2        | 90.000 Ω série sur écran                              |
| EF37A     | 5    | O-180 | 6,3(0,2)         | HF       | 250           | 3                  | —                  | 100           | -2                   | —                       | 2,5MΩ              | 1,8        |                                                       |
| EF39      | 5    | O-180 | 6,3(0,2)         | HF       | 250           | 6                  | —                  | —             | -2,5                 | 325                     | 1,2MΩ              | 2,2        | 90.000 Ω série sur écran                              |
| EF40      | 5    | R-327 | 6,3(0,2)         | HF       | 250           | 3                  | 200.000            | 100           | -2                   | 3.000                   | 3MΩ                | 1,8        |                                                       |
| EF41      | 5V   | R-297 | 6,3(0,2)         | HF<br>BF | 250<br>250    | 6<br>6             | —<br>200.000       | —<br>—        | -2,5-39<br>-2,5-39   | 325<br>1.400            | 1MΩ<br>1MΩ         | 2,2<br>2,2 | 90.000 Ω série sur écran<br>0,8 MΩ série sur écran    |
| EF42      | 5    | R-301 | 6,3(0,33)        | HF       | 250           | 10                 | —                  | 250           | -2                   | 160                     | 440.000            | 9,5        |                                                       |
| EF50      | 5    | E-42  | 6,3(0,3)         | HF       | 250           | 10                 | —                  | 250           | -2                   | 150                     | 1MΩ                | 6,5        | Télévision                                            |
| EF80      | 5    | N-303 | 6,3(0,3)         | HF       | 170           | 10                 | —                  | 170           | -2                   | —                       | 0,4MΩ              | 7,2        |                                                       |
| EF83      | 5    | N-347 | 6,3(0,2)         | BF       | 250           | 1,8                | 0,1MΩ              | —             | -1                   | —                       | 1,6MΩ              | 1,6        | 0,39 MΩ série sur écran                               |
| EF85      | 5V   | N-303 | 6,3(0,3)         | FM       | 250           | 10                 | —                  | 100           | -2-35                | —                       | 0,5MΩ              | 6          | <i>Pente variable</i>                                 |
| EF86      | 5    | N-347 | 6,3(0,2)         | BF       | 250           | 3                  | 0,1MΩ              | 140           | -2                   | 1.000                   | 2,5MΩ              | 1,85       |                                                       |
| EF89      | 5V   | N-354 | 6,3(0,2)         | HF<br>BF | 250<br>250    | 9<br>—             | —<br>220.000       | 100<br>—      | -2<br>—              | 160<br>1.200            | 1MΩ<br>—           | 3,85<br>—  | 51.000 Ω série sur écran<br>680.000 Ω série sur écran |
| EF91      | 5    | M-321 | 6,3(0,3)         | TV       | 250           | 10                 | —                  | 250           | -2                   | 160                     | 1MΩ                | 7,5        | Identique à 6AM6                                      |
| EF93      | 5V   | M-284 | 6,3(0,3)         | HF       | 250           | 11                 | —                  | 100           | -1-50                | 68                      | 1,5MΩ              | 4,4        | Identique à 6BA6                                      |
| EF94      | 5    | M-284 | 6,3(0,3)         | HF       | 250           | 10,8               | —                  | 150           | -1                   | 140                     | 2MΩ                | 5,2        | Identique à 6AU6                                      |



| Référence | Type | Culot | Tension Filament | Fonction                     | Haute tension     | Intensité anodique | Résistance d'Anode      | Tension Ecran     | Tension Polarisation | Résistance Polarisation | Résistance interne        | Pente             | OBSERVATIONS                                                       |
|-----------|------|-------|------------------|------------------------------|-------------------|--------------------|-------------------------|-------------------|----------------------|-------------------------|---------------------------|-------------------|--------------------------------------------------------------------|
| EF95      | 5    | M-289 | 6,3(0,175)       | HF                           | 180               | 7,7                | —                       | 120               | -2                   | 200                     | 690.000                   | 5,1               | Identique à 6AK5                                                   |
| EF97      | 5    | M-286 | 6,3(0,3)         | HF<br>HF                     | 6,3<br>12,6       | 0,8<br>2,4         | —<br>—                  | 6,3<br>12,6       | 0<br>0               | 0<br>0                  | 50.000<br>50.000          | 0,9<br>1,8        |                                                                    |
| EF98      | 5    | M-286 | 6,3(0,3)         | BF<br>BF                     | 6,3,<br>12,6      | —<br>—             | 5.000<br>5.000          | 6,3<br>12,6       | 0<br>0               | 0<br>0                  | 50.000<br>50.000          | 1,8<br>3          | 10.000 $\Omega$ série sur écran<br>10.000 $\Omega$ série sur écran |
| EF183     | 5    | N-303 | 6,3(0,3)         | VHF                          | 200               | 12                 | —                       | —                 | -2                   | —                       | 0,5M $\Omega$             | 12,5              | <i>Pente variable</i><br>27.000 $\Omega$ série sur écran           |
| EF184     | 5    | N-303 | 6,3(0,3)         | VHF                          | 200               | 10                 | —                       | 200               | -2,5                 | —                       | 0,35M $\Omega$            | 15                | <i>Pente fixe</i>                                                  |
| EL2       | 5    | T-117 | 6,3(0,2)         | P(3,6)<br>P(8,1)<br>P        | 250<br>250<br>250 | 32<br>55<br>15     | 8.000<br>8.000<br>5.000 | 250<br>250<br>—   | -18<br>-20<br>-25    | 500<br>300<br>1.500     | 70.000<br>70.000<br>4.100 | 2,8<br>2,8<br>1,7 | Push-pull classe AB<br>Montage en triode                           |
| EL3       | 5    | T-115 | 6,3(0,9)         | P(4,3)<br>P(12)              | 250<br>250        | 36<br>75           | 7.000<br>11.000         | 250<br>250        | -6<br>-6             | 150<br>65               | 50.000<br>—               | 9,5<br>—          | Push-pull classe AB                                                |
| EL5       | 5    | T-115 | 6,3(1,3)         | P(7,7)<br>P(16,4)<br>P(28,5) | 250<br>250<br>375 | 72<br>110<br>96    | 3.500<br>4.000<br>6.500 | 250<br>250<br>275 | -16<br>-17<br>-18    | 180<br>155<br>165       | 33.000<br>33.000<br>—     | 7<br>7<br>—       | Push-pull classe AB<br>Push-pull classe AB                         |
| EL6       | 5    | T-115 | 6,3(1,3)         | P(8,2)                       | 250               | 72                 | 3.500                   | 250               | -7                   | 85                      | 20.000                    | 15                |                                                                    |
| EL11      | 5    | E-34  | 6,3(0,9)         | P(4,5)                       | 250               | 36                 | 7.000                   | 250               | -6                   | 150                     | 50.000                    | 9                 |                                                                    |
| EL12      | 5    | E-34  | 6,3(1,2)         | P(8)                         | 250               | 72                 | 3.500                   | 250               | -7                   | 90                      | 30.000                    | 14,5              |                                                                    |
| EL33      | 5    | O-174 | 6,3(0,9)         | P(4,5)                       | 250               | 36                 | 7.000                   | 250               | -6                   | 150                     | 50.000                    | 9                 |                                                                    |
| EL34      | 5    | O-348 | 6,3(1,5)         | P(12)<br>P(37)               | 250<br>375        | 100<br>150         | 2.500<br>4.000          | 250<br>375        | -12<br>-22           | 107<br>132              | 15.000<br>—               | 11<br>—           | Push-pull classe AB                                                |
| EL36      | 5    | O-181 | 6,3(1,2)         | TV                           | 170               | —                  | —                       | 170               | -25                  | —                       | 10.000                    | 8                 |                                                                    |
| EL38      | 5    | O-317 | 6,3(1,4)         | TV                           | 300               | 85                 | —                       | —                 | —                    | 150                     | —                         | —                 | 5.000 $\Omega$ série sur écran                                     |
| EL39      | 5    | O-319 | 6,3(0,9)         | T                            | 400               | 35                 | —                       | 425               | -35                  | —                       | —                         | 6                 |                                                                    |



| Référence | Type | Culot | Tension Filament | Fonction       | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance Interne | Pente   | OBSERVATIONS        |
|-----------|------|-------|------------------|----------------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------|---------|---------------------|
| EL41      | 5    | R-296 | 6,3(0,65)        | P(4,5)         | 250           | 36                 | 7.000              | 250           | -6                   | 150                     | 50.000             | 9       |                     |
| EL42      | 5    | R-296 | 6,3(0,2)         | P(2,6)         | 250           | 22,5               | 11.000             | 250           | -13,5                | 310                     | 0,1M $\Omega$      | 2,9     |                     |
| EL50      | 5    | T-116 | 6,3(1,5)         | P(80)          | 400           | —                  | 16.000             | 400           | -37,5                | —                       | —                  | 4       | Push-pull classe B  |
| EL51      | 5    | T-370 | 6,3(1,9)         | P              | 750           | 60                 | —                  | 750           | -37,5                | —                       | 50.000             | 8       |                     |
| EL60      | 5    | L-373 | 6,3(1,5)         | P(12)<br>P(37) | 250<br>375    | 100<br>150         | 2.500<br>4.000     | 250<br>375    | -12<br>-22           | 107<br>132              | 15.000<br>—        | 11<br>— | Push-pull classe AB |
| EL81      | 5    | N-306 | 6,3(1,05)        | TV             | 180           | 45                 | —                  | 180           | 0                    | —                       | —                  | 6,5     | Identique à 6CJ6    |
| EL82      | 5    | N-307 | 6,3(0,8)         | TV             | 200           | 45                 | —                  | 200           | -14                  | —                       | 20.000             | 9,5     |                     |
| EL83      | 5    | N-308 | 6,3(0,7)         | TV             | 180           | 36                 | —                  | 180           | -2,9                 | 50                      | 0,1M $\Omega$      | 10      | Identique à 6CK6    |
| EL84      | 5    | N-307 | 6,3(0,76)        | P              | 250           | 48                 | 5.200              | 250           | -7,4                 | 140                     | 47.500             | 11,5    | Identique à 6BQ5    |
| EL86      | 5    | N-307 | 6,3(0,7)         | P(5,6)         | 170           | 70                 | 2.000              | 170           | -12,5                | 170                     | 23.000             | 10      |                     |
| EL90      | 4    | M-288 | 6,3(0,45)        | P(4,5)         | 250           | 45                 | 5.000              | 250           | -12,5                | 250                     | 52.000             | 4,1     | Identique à 6AQ5    |
| EL95      | 5    | M-329 | 6,3(0,2)         | P              | 250           | 24                 | 7.000              | 250           | -9                   | 320                     | 75.000             | 5       |                     |
| EL136     | 5    | O-362 | 6,3(1,65)        | TV             | 100           | 150                | —                  | 100           | -8                   | —                       | 4.000              | 21      |                     |
| EL183     | 5    | N-363 | 12,6(0,3)        | TV             | 220           | 21                 | —                  | 220           | -2,1                 | 130                     | 20.000             | 25      |                     |
| EL300     | 5    | O-362 | 6,3(1,65)        | TV             | 100           | 110                | —                  | 100           | —                    | 50                      | 3.500              | 17      |                     |
| EL500     | 5    | N-364 | 6,3(1,4)         | TV             | 250           | 250                | —                  | 250           | -10                  | —                       | —                  | —       |                     |
| EL502     | 5    | N-364 | 6,3(1,7)         | TV             | 250           | —                  | —                  | 250           | —                    | —                       | —                  | —       |                     |
| EL503     | 5    | N-377 | 6,3(1,2)         | P              | 250           | 100                | —                  | 250           | -13                  | —                       | 7.300              | 23      |                     |
| EL504     | 5    | N-364 | 6,3(1,38)        | TV             | 75            | 110                | —                  | 200           | -10                  | —                       | 10.000             | 8       |                     |
| EL505     | 5    | N-381 | 6,3(2)           | TV             | 700           | 440                | —                  | —             | —                    | —                       | —                  | —       |                     |



| Référence | Type | Culot | Tension Filament | Fonction | Haute tension | Intensité anodique | Résistance d'Anode         | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne | Pente  | OBSERVATIONS                  |
|-----------|------|-------|------------------|----------|---------------|--------------------|----------------------------|---------------|----------------------|-------------------------|--------------------|--------|-------------------------------|
| EL508     | 5    | N-378 | 6,3(0,825)       | TV       | 70            | —                  | —                          | 200           | -5                   | —                       | —                  | —      |                               |
| EL509     | 5    | N-381 | 6,3(2)           | TV       | 7.000         | —                  | —                          | 175           | -170                 | —                       | —                  | —      |                               |
| EL520     | 5    | N-377 | 6,3(1,2)         | P        | 250           | 100                | —                          | 250           | -13                  | —                       | 7.300              | 23     |                               |
| EM1       | 3    | T-127 | 6,3(0,2)         | I        | 250           | —                  | 2M $\Omega$                | 250           | 0-5                  | —                       | —                  | —      |                               |
| EM3       | 3    | T-127 | 6,3(0,2)         | I        | 250           | —                  | 1M $\Omega$                | 250           | 0-5                  | —                       | —                  | —      |                               |
| EM4       | 3-3  | T-133 | 6,3(0,2)         | I<br>I   | 250<br>100    | —<br>—             | 1M $\Omega$<br>1M $\Omega$ | 250<br>100    | 0-16<br>0-8          | —<br>—                  | —<br>—             | —<br>— | Double indication             |
| EM34      | 3-3V | O-215 | 6,3(0,2)         | I        | 250           | —                  | 1M $\Omega$                | 250           | 0-16                 | —                       | —                  | —      | Double sensibilité            |
| EM80      | 3    | N-339 | 6,3(0,3)         | I        | 250           | —                  | 0,5M $\Omega$              | —             | 0-16                 | —                       | —                  | —      |                               |
| EM81      | 3    | N-339 | 6,3(0,3)         | I        | 250           | 0,37               | 0,5M $\Omega$              | —             | -1-10,5              | —                       | —                  | —      |                               |
| EM84      | 3    | N-340 | 6,3(0,27)        | I        | 250           | —                  | 0,47M $\Omega$             | —             | 0-22                 | —                       | —                  | —      |                               |
| EM85      | 3    | N-340 | 6,3(0,3)         | I        | 250           | —                  | 0,5M $\Omega$              | —             | -1-20                | —                       | —                  | —      |                               |
| EM87      | 3    | N-340 | 6,3(0,3)         | I        | 250           | 2                  | 0,1M $\Omega$              | —             | 0-15                 | —                       | —                  | —      |                               |
| EQ80      | 9    | N-310 | 6,3(0,2)         | FM       | 250           | 0,25               | 500.000                    | —             | -4,5                 | 680                     | 3M $\Omega$        | —      |                               |
| EY51      | 2    | néant | 6,3(0,09)        | TV       | 5.000         | 3                  | —                          | —             | —                    | —                       | —                  | —      | Identique à 6X2               |
| EY80      | 2    | N-309 | 6,3(0,9)         | TV       | —             | 180                | —                          | —             | —                    | —                       | —                  | —      |                               |
| EY81      | 2    | N-349 | 6,3(1,75)        | R        | 350           | 125                | —                          | —             | —                    | —                       | —                  | —      | Identique à 6V <del>4</del> 3 |
| EY82      | 2    | N-309 | 6,3(0,9)         | R        | 280           | 300                | —                          | —             | —                    | —                       | —                  | —      | Pour 2 tubes                  |
| EY86      | 2    | N-350 | 6,3(0,09)        | R        | 24.500        | 0,3                | —                          | —             | —                    | —                       | —                  | —      | Identique à 6AX2              |
| EY87      | 2    | N-350 | 6,3(0,09)        | R        | 18.000        | 0,15               | —                          | —             | —                    | —                       | —                  | —      |                               |
| EY88      | 2    | N-330 | 6,3(1,23)        | R        | 4.500         | 150                | —                          | —             | —                    | —                       | —                  | —      |                               |
| EY91      | 2    | M-365 | 6,3(0,42)        | R        | 250           | 75                 | —                          | —             | —                    | —                       | —                  | —      |                               |



| Référence    | Type  | Culot | Tension Filament | Fonction     | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne              | Pente      | OBSERVATIONS          |
|--------------|-------|-------|------------------|--------------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|---------------------------------|------------|-----------------------|
| <b>EY500</b> | 3     | N-379 | 6,3(2,1)         | TV           | 5.600         | —                  | —                  | —             | —                    | —                       | —                               | —          | Diode de récupération |
| <b>EY802</b> | 2     | N-382 | 6,3(0,09)        | R            | 20.000        | 0,5                | —                  | —             | —                    | —                       | —                               | —          |                       |
| <b>EZ2</b>   | 2-2   | T-109 | 6,3(0,25)        | R            | 350           | 60                 | —                  | —             | —                    | —                       | —                               | —          |                       |
| <b>EZ4</b>   | 2-2   | T-109 | 6,3(0,9)         | R            | 350           | 175                | —                  | —             | —                    | —                       | —                               | —          |                       |
| <b>EZ11</b>  | 2-2   | E-32  | 6,3(0,3)         | R            | 250           | 60                 | —                  | —             | —                    | —                       | —                               | —          |                       |
| <b>EZ12</b>  | 2-2   | E-32  | 6,3(0,85)        | R<br>R       | 500<br>400    | 100<br>125         | —<br>—             | —<br>—        | —<br>—               | —<br>—                  | —<br>—                          | —<br>—     |                       |
| <b>EZ40</b>  | 2-2   | R-295 | 6,3(0,6)         | R            | 350           | 90                 | —                  | —             | —                    | —                       | —                               | —          |                       |
| <b>EZ41</b>  | 2-2   | O-295 | 6,3(0,4)         | R            | 250           | 60                 | —                  | —             | —                    | —                       | —                               | —          |                       |
| <b>EZ80</b>  | 2-2   | N-331 | 6,3(0,7)         | R            | 350           | 90                 | —                  | —             | —                    | —                       | —                               | —          |                       |
| <b>EZ81</b>  | 2-2   | N-331 | 6,3(0,7)         | R            | 350           | 150                | —                  | —             | —                    | —                       | —                               | —          | Identique à 6CA4      |
| <b>EZ90</b>  | 2-2   | M-275 | 6,3(0,6)         | R            | 325           | 70                 | —                  | —             | —                    | —                       | —                               | —          | Identique à 6X4       |
| <b>GZ32</b>  | 2-2   | O-160 | 5(2)             | R            | 350           | 250                | —                  | —             | —                    | —                       | —                               | —          |                       |
| <b>GZ34</b>  | 2-2   | O-160 | 5(1,9)           | R            | 350           | 250                | —                  | —             | —                    | —                       | —                               | —          |                       |
| <b>GZ40</b>  | 2-2   | R-295 | 5(0,75)          | R            | 350           | 90                 | —                  | —             | —                    | —                       | —                               | —          |                       |
| <b>GZ41</b>  | 2-2   | R-295 | 5(0,75)          | R            | 350           | 70                 | —                  | —             | —                    | —                       | —                               | —          |                       |
| <b>HBC90</b> | 2-2-3 | M-291 | 12,6(0,15)       | D-BF<br>D-BF | 250<br>100    | 1<br>0,8           | —<br>—             | —<br>—        | -3<br>-1             | 300<br>120              | 58.000<br>54.000                | 1,2<br>1,3 | Identique à 12AT6     |
| <b>HBC91</b> | 2-2-3 | M-291 | 12,6(0,15)       | D-BF         | 100           | —                  | 0,25M $\Omega$     | —             | -2                   | 5.500                   | 62.500                          | 1,6        |                       |
| <b>HCH81</b> | 3-7   | N-338 | 12,6(0,15)       | C            | 250           | 3,25               | —                  | 250           | -2-28,5              | 150                     | 1M $\Omega$                     | 0,77       |                       |
| <b>HF93</b>  | 5V    | M-284 | 12,6(0,15)       | HF<br>HF     | 250<br>100    | 11<br>10,8         | —<br>—             | 100<br>100    | -1-50<br>-1-50       | 68<br>68                | 1,5M $\Omega$<br>0,25M $\Omega$ | 4,4<br>4,3 | Identique à 12BA6     |



| Référence     | Type    | Culot | Tension Filament | Fonction                           | Haute tension          | Intensité anodique    | Résistance d'Anode                   | Tension Ecran          | Tension Polarisation      | Résistance Polarisation | Résistance interne                       | Pente                    | OBSERVATIONS                               |
|---------------|---------|-------|------------------|------------------------------------|------------------------|-----------------------|--------------------------------------|------------------------|---------------------------|-------------------------|------------------------------------------|--------------------------|--------------------------------------------|
| <b>HF94</b>   | 5       | M-284 | 12,6(0,15)       | HF<br>HF                           | 250<br>100             | 10,8<br>5,2           | —<br>—                               | 150<br>100             | -1<br>-1                  | 140<br>65               | 2MΩ<br>0,6MΩ                             | 5,2<br>3,9               | Identique à 12AU6                          |
| <b>HK90</b>   | 7       | M-290 | 12,6(0,15)       | C<br>C                             | 250<br>100             | 3<br>2,8              | —<br>—                               | 100<br>100             | -1,5<br>-1,5              | 150<br>150              | 1MΩ<br>0,5MΩ                             | 0,47<br>0,45             | Identique à 12BE6                          |
| <b>KL4</b>    | 5*      | T-101 | 2(0,14)          | P(0,4)<br>P(0,2)                   | 135<br>90              | 7<br>4,7              | 19.000<br>19.000                     | 135<br>90              | -4,7<br>-2,5              | —<br>—                  | 150.000<br>170.000                       | 2,1<br>1,8               |                                            |
| <b>KL5</b>    | 5*      | T-101 | 2(0,1)           | P(0,5)<br>P(0,2)<br>P(1)<br>P(0,3) | 135<br>90<br>135<br>90 | 8,5<br>4,8<br>12<br>8 | 16.000<br>19.000<br>25.000<br>25.000 | 135<br>90<br>135<br>90 | -6,5<br>-4<br>-12<br>-8,5 | —<br>—<br>—<br>—        | 135.000<br>180.000<br>135.000<br>180.000 | 1,7<br>1,4<br>1,7<br>1,4 | Push-pull classe AB<br>Push-pull classe AB |
| <b>KT66</b>   | 5       | O-174 | 6,3(1,27)        | P(5,8)                             | 400                    | 63                    | 4.500                                | 400                    | -38                       | —                       | 22.500                                   | 7                        |                                            |
| <b>KT88</b>   | 5       | O-174 | 6,3(1,6)         | P(27)                              | 485                    | 170                   | 2.500                                | 425                    | -48                       | —                       | 12.000                                   | 11                       | Push-pull                                  |
| <b>ME4</b>    | 3       | T-127 | 4(0,2)           | I                                  | 250                    | —                     | 2MΩ                                  | 250                    | 0-5                       | —                       | —                                        | —                        |                                            |
| <b>ME6</b>    | 3       | T-127 | 6,3(0,2)         | I                                  | 250                    | —                     | 2MΩ                                  | 250                    | 0-5                       | —                       | —                                        | —                        |                                            |
| <b>PABC80</b> | 2-2-2-3 | N-337 | 9,5(0,3)         | FM<br>FM                           | 250<br>100             | 1<br>0,8              | —<br>—                               | —<br>—                 | -3<br>-1                  | —<br>—                  | 58.000<br>54.000                         | 1,2<br>1,3               |                                            |
| <b>PCC84</b>  | 3-3     | N-345 | 7,4(0,3)         | TV                                 | 90                     | 12                    | —                                    | —                      | -1,5                      | —                       | 10.000                                   | 6                        |                                            |
| <b>PCC85</b>  | 3-3     | N-351 | 9(0,3)           | C                                  | 250                    | 10                    | —                                    | —                      | -2,5                      | 230                     | 9.500                                    | 6                        | Télévision                                 |
| <b>PCC88</b>  | 3-3     | N-351 | 7(0,3)           | HF                                 | 130                    | —                     | —                                    | —                      | 0                         | 0                       | —                                        | 12,5                     | Télévision                                 |
| <b>PCC189</b> | 3-3     | N-351 | 7(0,3)           | VHF                                | 90                     | 15                    | —                                    | —                      | -1,2                      | —                       | 2.700                                    | 12,5                     |                                            |
| <b>PCF80</b>  | 3-5     | N-352 | 9(0,3)           | TV                                 | 100<br>170             | 14<br>10              | —<br>—                               | —<br>170               | -2<br>-2                  | —<br>—                  | —<br>0,4MΩ                               | 5<br>6,2                 | Partie triode<br>Partie pentode            |
| <b>PCF82</b>  | 3-5     | N-352 | 9,45(0,3)        | TV                                 | 150<br>250             | 18<br>10              | —<br>—                               | —<br>110               | —<br>—                    | 56<br>68                | 5.000<br>0,4MΩ                           | 8,5<br>5,2               | Partie triode<br>Partie pentode            |
| <b>PCF86</b>  | 3-5     | N-358 | 8(0,3)           | C<br>C                             | 190<br>190             | 12<br>8,5             | —<br>—                               | —<br>150               | -3<br>-1,2                | —<br>—                  | —<br>—                                   | 5,5<br>12                | Partie triode<br>Partie pentode            |



| Référence | Type | Culot | Tension Filament | Fonction   | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne | Pente       | OBSERVATIONS                    |
|-----------|------|-------|------------------|------------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------|-------------|---------------------------------|
| PCF200    | 3-5  | N-387 | 8(0,3)           | TV<br>TV   | 170<br>170    | 10<br>14           | —<br>—             | 170<br>—      | -2<br>-2             | —<br>—                  | 0,4MΩ<br>4.000     | 6,2<br>5    | Partie pentode<br>Partie triode |
| PCF201    | 3-5  | N-387 | 8(0,3)           | TV<br>TV   | 160<br>100    | 13<br>14           | —<br>—             | 120<br>—      | -1,4<br>-3           | —<br>—                  | —<br>—             | 12<br>5     | Partie pentode<br>Partie triode |
| PCF801    | 3-5  | N-383 | 6,3(0,41)        | TV<br>TV   | 170<br>100    | 10<br>15           | —<br>—             | 120<br>—      | -1,4<br>-3           | —<br>—                  | —<br>—             | 10<br>8,5   | Partie pentode<br>Partie triode |
| PCF802    | 3-5  | N-352 | 6,3(0,43)        | TV<br>TV   | 100<br>200    | 6<br>3,5           | —<br>—             | 100<br>—      | -1<br>-2             | —<br>—                  | 0,4MΩ<br>20.000    | 5,5<br>3,5  | Partie pentode<br>Partie triode |
| PCH200    | 3-7  | D-385 | 9(0,3)           | TV<br>TV   | 14<br>100     | 0,8<br>9           | —<br>—             | 14<br>—       | —<br>-1              | —<br>—                  | —<br>—             | 2,2<br>8,5  | Partie heptode<br>Partie triode |
| PCL82     | 3-5  | N-316 | 16(0,3)          | TV<br>TV   | 170<br>170    | 4<br>41            | 15.000<br>—        | —<br>—        | 0<br>-11             | 0<br>820                | —<br>25.000        | 3<br>7,5    | Partie triode<br>Partie pentode |
| PCL84     | 3-5  | N-359 | 15(0,3)          | TV<br>TV   | 200<br>220    | 3<br>18            | —<br>—             | —<br>220      | -1,7<br>-3,4         | —<br>—                  | 16.000<br>0,15MΩ   | 4<br>10     | Partie triode<br>Partie pentode |
| PCL85     | 3-5  | N-360 | 18(0,3)          | TV<br>TV   | 100<br>170    | 5<br>41            | —<br>—             | —<br>170      | -0,8<br>-15          | —<br>—                  | 7.600<br>25.000    | 6,5<br>7,5  | Partie triode<br>Partie pentode |
| PCL86     | 3-5  | N-361 | 13(0,3)          | BF<br>P(4) | 230<br>230    | —<br>42            | 220.000<br>5.000   | —<br>—        | -1,7<br>-5,7         | —<br>—                  | 62.000<br>45.000   | 1,6<br>10,5 | Partie triode<br>Partie pentode |
| PCL802    | 3-5  | N-360 | 8(0,3)           | TV<br>TV   | 50<br>100     | 200<br>10          | —<br>—             | 170<br>—      | -1<br>0              | —<br>—                  | —<br>9.000         | —<br>5,5    | Partie pentode<br>Partie triode |
| PC86      | 3    | N-355 | 3,8(0,3)         | VHF        | 175           | 12                 | —                  | —             | -1,5                 | —                       | 4.800              | 14          |                                 |
| PC88      | 3    | N-356 | 4(0,3)           | VHF        | 160           | 12,5               | —                  | —             | 1,25                 | 100                     | 4.800              | 14          |                                 |
| PC95      | 3    | N-357 | 3,6(0,3)         | VHF        | 200           | 10                 | —                  | —             | -1,2                 | 120                     | 7.600              | 10,5        |                                 |
| PC900     | 3    | L-374 | 4(0,3)           | HF         | 135           | 11,5               | —                  | —             | -1                   | —                       | 5.000              | 14,5        | Très haute fréquence            |
| PD500     | 3    | N-380 | 7,3(0,3)         | TV         | 25.000        | 1,5                | —                  | —             | —                    | —                       | —                  | —           | Régulatrice                     |



| Référence     | Type    | Culot | Tension Filament | Fonction | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne | Pente    | OBSERVATIONS                        |
|---------------|---------|-------|------------------|----------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------|----------|-------------------------------------|
| <b>PF86</b>   | 5       | N-347 | 4,5(0,3)         | BF       | 250           | 2                  | —                  | 100           | -1,5                 | 1.000                   | 3M $\Omega$        | 1,75     |                                     |
| <b>PFL200</b> | 5-5     | D-386 | 19(0,3)          | TV<br>TV | 250<br>200    | 0,1<br>—           | —<br>—             | 75<br>180     | -2,7<br>—            | —<br>—                  | —<br>—             | 0,2<br>— | Première pentode<br>Seconde pentode |
| <b>PL36</b>   | 5       | O-181 | 25(0,3)          | TV       | 170           | 100                | —                  | 170           | -25                  | 250                     | 10.000             | 8        |                                     |
| <b>PL38</b>   | 5       | N-317 | 30(0,3)          | TV       | 200           | 75                 | —                  | 200           | -5,5                 | 65                      | 20.000             | 13,5     |                                     |
| <b>PL81</b>   | 5       | N-306 | 21,5(0,3)        | TV       | 180           | 45                 | —                  | 200           | -28                  | 500                     | 11.000             | 6        |                                     |
| <b>PL81F</b>  | 5       | N-306 | 21,5(0,3)        | P(T)     | 200           | —                  | —                  | —             | -2,8                 | 100                     | 11.000             | 6        | 2.000 $\Omega$ série sur écran      |
| <b>PL82</b>   | 5       | N-307 | 16,5(0,3)        | TV(4)    | 200           | 45                 | 4.000              | 200           | -14                  | —                       | 20.000             | 9,5      | Identique à 16A5                    |
| <b>PL83</b>   | 5       | N-308 | 15(0,3)          | TV       | 180           | 36                 | —                  | 180           | -2,9                 | —                       | 0,1M $\Omega$      | 10       | Sortie Vidéo                        |
| <b>PL84</b>   | 5       | N-307 | 15(0,3)          | P(6)     | 165           | 73                 | 2.400              | 165           | -12                  | 160                     | 20.000             | 10,5     |                                     |
| <b>PL136</b>  | 5       | O-362 | 35(0,3)          | TV       | 100           | 150                | —                  | 100           | -8                   | —                       | 4.000              | 21       |                                     |
| <b>PL300</b>  | 5       | O-362 | 35(0,3)          | TV       | 100           | 110                | —                  | 100           | —                    | 50                      | 3.500              | 17       |                                     |
| <b>PL500</b>  | 5       | N-364 | 28(0,3)          | TV       | 250           | 250                | —                  | 250           | -10                  | —                       | —                  | —        |                                     |
| <b>PL504</b>  | 5       | N-364 | 27(0,3)          | TV       | 75            | 110                | —                  | 200           | -10                  | —                       | 10.000             | 8        |                                     |
| <b>PL508</b>  | 5       | N-378 | 17(0,3)          | TV       | 70            | —                  | —                  | 200           | -5                   | —                       | —                  | —        |                                     |
| <b>PL509</b>  | 5       | N-381 | 40(0,3)          | TV       | 7.000         | —                  | —                  | 175           | -170                 | —                       | —                  | —        |                                     |
| <b>PY80</b>   | 2       | N-309 | 19(0,3)          | TV       | —             | 180                | —                  | —             | —                    | —                       | —                  | —        | Diode de récupération               |
| <b>PY81</b>   | 2       | N-330 | 17(0,3)          | TV       | —             | 150                | —                  | —             | —                    | —                       | —                  | —        | Identique à 17Z3                    |
| <b>PY82</b>   | 2       | N-309 | 19(0,3)          | R        | 250           | 180                | —                  | —             | —                    | —                       | —                  | —        | Identique à 19Y3                    |
| <b>PY88</b>   | 2       | N-330 | 26(0,3)          | R        | 4.500         | 150                | —                  | —             | —                    | —                       | —                  | —        |                                     |
| <b>PY500</b>  | 3       | N-379 | 42(0,3)          | TV       | 5.600         | —                  | —                  | —             | —                    | —                       | —                  | —        | Diode de récupération               |
| <b>UABC80</b> | 2-2-2-3 | N-337 | 28(0,1)          | D-BF     | 250           | —                  | —                  | —             | -3                   | 0                       | 58.000             | 1,2      | F. M.                               |



| Référence    | Type  | Culot | Tension Filament | Fonction | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne | Pente | OBSERVATIONS                     |
|--------------|-------|-------|------------------|----------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------|-------|----------------------------------|
| <b>UAF41</b> | 2-5V  | R-298 | 12,6(0,1)        | HF-D     | 200           | 6                  | —                  | —             | -2,4-34              | 300                     | 1,3M $\Omega$      | 1,9   | 44.000 $\Omega$ série sur écran  |
|              |       |       |                  | HF-D     | 100           | 2,8                | —                  | —             | -1,1-17              | 300                     | 1M $\Omega$        | 1,6   | 44.000 $\Omega$ série sur écran  |
|              |       |       |                  | D-BF     | 170           | 5                  | 200.000            | —             | -2-28                | 2.700                   | 1,2M $\Omega$      | 1,8   | 730.000 $\Omega$ série sur écran |
|              |       |       |                  | D-BF     | 100           | 2,8                | 200.000            | —             | -1,1-17              | 2.700                   | 1M $\Omega$        | 1,6   | 730.000 $\Omega$ série sur écran |
| <b>UAF42</b> | 2-5V  | R-302 | 12,6(0,1)        | HF-D     | 200           | 6                  | —                  | —             | -2,4-3,4             | 300                     | 1,3M $\Omega$      | 1,9   | Identique à UAF41 sauf culot     |
| <b>UBC41</b> | 2-2-3 | R-300 | 12,5(0,1)        | D-BF     | 100           | 0,8                | 100.000            | —             | -1                   | 1.800                   | 50.000             | 1,4   |                                  |
| <b>UBC81</b> | 2-2-3 | N-315 | 14(0,1)          | D-BF     | 170           | 0,45               | 0,1M $\Omega$      | —             | -1,5                 | 4.000                   | 42.000             | 1,65  |                                  |
| <b>UBF80</b> | 2-2-5 | N-336 | 17(0,1)          | HF-D     | 170           | 5                  | —                  | —             | -2-30                | 300                     | 0,9M $\Omega$      | 2,2   | 47.000 $\Omega$ série sur écran  |
| <b>UBF89</b> | 2-2-5 | N-336 | 19(0,1)          | HF-D     | 200           | 11                 | —                  | —             | -1,5                 | 100                     | 0,6M $\Omega$      | 4,5   |                                  |
| <b>UBL21</b> | 2-2-5 | L-375 | 55(0,1)          | D-P      | 180           | 61                 | 3.000              | 180           | -10                  | 140                     | 22.000             | 9     |                                  |
| <b>UB41</b>  | 2-2   | R-326 | 19(0,1)          | D        | 150           | 9                  | —                  | —             | —                    | —                       | —                  | —     |                                  |
| <b>UCC85</b> | 3-3   | N-351 | 26(0,1)          | C        | 250           | 10                 | —                  | —             | -2,3                 | 250                     | 9.500              | 6     | Télévision                       |
| <b>UC92</b>  | 3     | M-346 | 9,5(0,1)         | HF       | 250           | 10                 | —                  | —             | -2                   | 100                     | 12.000             | 5     |                                  |
| <b>UCH21</b> | 3-7   | L-374 | 20(0,1)          | C        | 200           | 3,5                | —                  | —             | -2                   | 150                     | 1M $\Omega$        | 0,75  | 15.000 $\Omega$ série sur écran  |
| <b>UCH41</b> | 3-6V  | R-299 | 14(0,1)          | C        | 200           | 3                  | —                  | 105           | -2,2-27              | 200                     | 1,4M $\Omega$      | 0,32  |                                  |
|              |       |       |                  | C        | 100           | 1                  | —                  | 53            | -1-14                | 225                     | 1M $\Omega$        | 0,50  |                                  |
| <b>UCH42</b> | 3-6V  | R-299 | 14(0,1)          | C        | 100           | 1,2                | —                  | 43            | -1-14                | 180                     | 1M $\Omega$        | 0,53  |                                  |
| <b>UCH81</b> | 3-7   | N-338 | 19(0,1)          | C        | 100           | 1,7                | —                  | 63            | -1,2                 | 150                     | 0,8M $\Omega$      | 0,62  | Identique à 19AJ8                |
| <b>UCL82</b> | 3-5   | N-316 | 48(0,1)          | TV       | 170           | 4                  | 15.000             | —             | 0                    | 0                       | —                  | 3     | Partie triode                    |
|              |       |       |                  | TV       | 170           | 41                 | —                  | 170           | -11                  | 820                     | 25.000             | 7,5   | Partie pentode                   |
| <b>UF21</b>  | 5     | L-242 | 12,6(0,1)        | HF       | 200           | 6                  | —                  | —             | -2,5                 | —                       | 1M $\Omega$        | 2,2   | 60.000 $\Omega$ série sur écran  |
| <b>UF41</b>  | 5V    | R-297 | 12,6(0,1)        | HF       | 200           | 3,3                | —                  | —             | -3-34                | 325                     | 1M $\Omega$        | 2,3   | 44.000 $\Omega$ série sur écran  |
|              |       |       |                  | HF       | 100           | 7,2                | —                  | —             | -1,4-17              | 325                     | 0,8M $\Omega$      | 1,9   | 44.000 $\Omega$ série sur écran  |
|              |       |       |                  | BF       | 170           | 6                  | 200.000            | —             | -2,5-28              | 2.500                   | 0,8M $\Omega$      | 2,2   | 730.000 $\Omega$ série sur écran |
|              |       |       |                  | BF       | 100           | 7,2                | 200.000            | —             | -1,4-17              | 2.500                   | 0,8M $\Omega$      | 1,9   | 730.000 $\Omega$ série sur écran |

[illegible]



| Référence | Type   | Culot | Tension Filament | Fonction | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne           | Pente        | OBSERVATIONS      |
|-----------|--------|-------|------------------|----------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|------------------------------|--------------|-------------------|
| 00A       | 3*     | A-47  | 5(0,25)          | D        | 45            | 1,5                | —                  | —             | 0                    | —                       | 30.000                       | 0,6          | Déetectrice à gaz |
| 01A       | 3*     | A-47  | 5(0,25)          | BF<br>BF | 135<br>90     | 3<br>2,5           | —<br>—             | —<br>—        | -9<br>-4,5           | —<br>—                  | 10.000<br>11.000             | 0,8<br>0,7   |                   |
| 1         | 2-2*   | A-45  | 6,3(0,3)         | R        | 350           | 50                 | —                  | —             | —                    | —                       | —                            | —            | Valve à mercure   |
| 1AB5      | 5*     | L-220 | 1,2(0,13)        | HF<br>HF | 150<br>90     | 6,8<br>3,5         | —<br>—             | 150<br>90     | -1,5<br>0            | —<br>—                  | 120.000<br>275.000           | 1,3<br>1,1   |                   |
| 1AB6      | 7*     | M-320 | 1,4(0,025)       | C        | 65            | 0,7                | —                  | 65            | —                    | —                       | 1M $\Omega$                  | 0,3          | Identique à DK96  |
| 1AC6      | 7*     | M-320 | 1,4(0,05)        | C        | 90            | 0,7                | —                  | 90            | 0-12                 | —                       | 0,6M $\Omega$                | 0,325        | Identique à DK92  |
| 1AD4      | 5      | S-341 | 1,25(0,1)        | BF       | 45            | 3                  | —                  | 45            | 0                    | —                       | —                            | 2            |                   |
| 1AE4      | 5*     | M-262 | 1,25(0,1)        | HF       | 90            | 3,5                | —                  | 90            | 0                    | —                       | 0,5M $\Omega$                | 1,55         |                   |
| 1AJ4      | 5*     | M-262 | 1,4(0,025)       | HF       | 64            | 1,65               | —                  | 64            | 0                    | —                       | 0,7M $\Omega$                | 0,85         | Identique à DF96  |
| 1A3       | 2      | M-272 | 1,4(0,15)        | D        | —             | 0,5                | —                  | —             | —                    | —                       | —                            | —            |                   |
| 1A4       | 5V*    | A-49  | 2(0,06)          | HF<br>HF | 180<br>90     | 2,3<br>2,2         | —<br>—             | 67,5<br>67,5  | -3-15<br>-3-15       | —<br>—                  | 1M $\Omega$<br>1M $\Omega$   | 0,75<br>0,72 |                   |
| 1A5       | 5*     | O-139 | 1,4(0,05)        | P(0,11)  | 90            | 4                  | 25.000             | 90            | -4,5                 | —                       | 300.000                      | 0,85         |                   |
| 1A6       | 7V*    | A-65  | 2(0,06)          | C<br>C   | 180<br>135    | 1,5<br>1,8         | —<br>—             | 67,5<br>67,5  | -3-22,5<br>-3-22,5   | —<br>—                  | 500.000<br>400.000           | 0,30<br>0,27 |                   |
| 1A7       | 7V*    | O-144 | 1,4(0,05)        | C        | 90            | 0,5                | —                  | 45            | 0                    | —                       | 600.000                      | 0,25         |                   |
| 1B3       | 2*     | O-135 | 1,25(0,2)        | R        | 14.000        | 2                  | —                  | —             | —                    | —                       | —                            | —            |                   |
| 1B4       | 5V*    | A-49  | 2(0,06)          | HF       | 180<br>90     | 1,7<br>1,6         | —<br>—             | 67,5<br>67,5  | -3-8<br>-3-8         | —<br>—                  | 1,5M $\Omega$<br>1M $\Omega$ | 0,65<br>0,60 |                   |
| 1B5       | 2-2-3* | A-66  | 2(0,06)          | D-BF     | 135           | 0,8                | —                  | —             | -3                   | —                       | 35.000                       | 0,57         |                   |
| 1B7       | 7V*    | O-144 | 1,4(0,1)         | C        | 90            | 1,5                | —                  | 45            | 0                    | —                       | 350.000                      | 0,35         |                   |

| Référence  | Type    | Culot | Tension Filament | Fonction                      | Haute tension    | Intensité anodique | Résistance d'Anode    | Tension Ecran    | Tension Polarisation | Résistance Polarisation | Résistance interne            | Pente             | OBSERVATIONS                    |
|------------|---------|-------|------------------|-------------------------------|------------------|--------------------|-----------------------|------------------|----------------------|-------------------------|-------------------------------|-------------------|---------------------------------|
| <b>1B8</b> | 2-3-5*  | O-154 | 1,4(0,1)         | D-P(0,2)<br>BF                | 90<br>90         | 6,3<br>0,15        | 14.000<br>—           | 90<br>—          | -6<br>0              | —<br>—                  | 14.000<br>240.000             | 1,15<br>0,27      | Partie pentode<br>Partie triode |
| <b>1C5</b> | 5*      | O-139 | 1,4(0,1)         | P(0,24)                       | 90               | 7,5                | 8.000                 | 90               | -7,5                 | —                       | 115.000                       | 0,55              |                                 |
| <b>1C6</b> | 7V*     | A-65  | 2(0,12)          | C<br>C                        | 180<br>135       | 1,5<br>1,3         | —<br>—                | 67,5<br>67,5     | -3-14<br>-3-14       | —<br>—                  | 700.000<br>600.000            | 0,32<br>0,30      |                                 |
| <b>1C7</b> | 7V*     | O-144 | 2(0,12)          | C<br>C                        | 180<br>135       | 1,5<br>1,3         | —<br>—                | 67,5<br>67,5     | -3-14<br>-3-14       | —<br>—                  | 700.000<br>600.000            | 0,32<br>0,30      |                                 |
| <b>1C8</b> | 7*      | O-143 | 1,25(0,04)       | C                             | 30               | 0,3                | —                     | 30               | 0                    | —                       | 300.000                       | 0,10              |                                 |
| <b>1D5</b> | 5V*     | O-142 | 2(0,06)          | HF<br>HF                      | 180<br>135       | 2,3<br>2,2         | —<br>—                | 67,5<br>67,5     | -3<br>-3             | —<br>—                  | 1M $\Omega$<br>1M $\Omega$    | 0,72<br>0,67      |                                 |
| <b>1D7</b> | 7V*     | O-144 | 2(0,06)          | C<br>C                        | 180<br>135       | 1,5<br>1,8         | —<br>—                | 67,5<br>67,5     | -3<br>-3             | —<br>—                  | 500.000<br>400.000            | 0,30<br>0,27      |                                 |
| <b>1D8</b> | 2-3-5*  | O-154 | 1,4(0,1)         | D-BF<br>P(0,2)                | 90<br>90         | 1,1<br>5           | —<br>12.000           | —<br>90          | 0<br>-9              | —<br>—                  | 43.500<br>200.000             | 0,57<br>0,92      | Partie triode<br>Partie pentode |
| <b>1E4</b> | 3*      | O-138 | 1,4(0,05)        | BF                            | 90               | 1,5                | —                     | —                | -3                   | —                       | 17.000                        | 0,82              |                                 |
| <b>1E5</b> | 5V*     | O-142 | 2(0,06)          | HF<br>HF                      | 180<br>90        | 1,7<br>1,6         | —<br>—                | 67,5<br>67,5     | -3-8<br>-3-8         | —<br>—                  | 1,5M $\Omega$<br>1M $\Omega$  | 0,65<br>0,60      |                                 |
| <b>1E7</b> | 5-5*    | O-152 | 2(0,24)          | P(0,57)                       | 135              | 7                  | 24.000                | 135              | -7,5                 | —                       | 220.000                       | 1,6               |                                 |
| <b>1F4</b> | 5*      | A-60  | 2(0,12)          | P(1,25)<br>P(0,31)<br>P(0,11) | 180<br>135<br>90 | 19<br>8<br>14      | —<br>16.000<br>20.000 | 180<br>135<br>90 | -7,5<br>-4,5<br>-3   | —<br>—<br>—             | 200.000<br>200.000<br>240.000 | 1,8<br>1,7<br>1,4 | Push-pull classe AB             |
| <b>1F5</b> | 5*      | O-19  | 2(0,12)          | P(0,31)                       | 135              | 8                  | 16.000                | 135              | -4,5                 | —                       | 200.000                       | 1,7               |                                 |
| <b>1F6</b> | 2-2-5V* | A-67  | 2(0,06)          | HF<br>BF                      | 180<br>135       | 2,2<br>—           | —<br>250.000          | 67,5<br>—        | -1,5-12<br>-2        | —<br>—                  | 1M $\Omega$<br>—              | 0,65<br>—         | 0,8 M $\Omega$ série sur écran  |
| <b>1F7</b> | 2-2-5V* | O-149 | 2(0,06)          | HF<br>BF                      | 180<br>135       | 2,2<br>—           | —<br>250.000          | 67,5<br>—        | -1,5-12<br>-2        | —<br>—                  | 1M $\Omega$<br>—              | 0,65<br>—         | 0,8 M $\Omega$ série sur écran  |



| Référence   | Type   | Culot | Tension Filament | Fonction                 | Haut tension            | Intensité anodique   | Résistance d'Anode | Tension Ecran    | Tension Polarisation       | Résistance Polarisation | Résistance interne              | Pente                     | OBSERVATIONS                              |
|-------------|--------|-------|------------------|--------------------------|-------------------------|----------------------|--------------------|------------------|----------------------------|-------------------------|---------------------------------|---------------------------|-------------------------------------------|
| <b>1G4</b>  | 3*     | O-138 | 1,4(0,05)        | BF                       | 90                      | 2,3                  | —                  | —                | -6                         | —                       | 10.700                          | 0,82                      |                                           |
| <b>1G5</b>  | 5*     | O-139 | 2(0,12)          | P(0,55)<br>P(0,25)       | 135<br>90               | 8,7<br>8,5           | 9.000<br>8.500     | 135<br>90        | -13,5<br>-6                | —<br>—                  | 160.000<br>133.000              | 1,5<br>1,5                |                                           |
| <b>1G6</b>  | 3-3*   | O-150 | 1,4(0,1)         | BF<br>P(0,67)            | 90<br>90                | 1<br>2               | —<br>12.000        | —<br>—           | 0<br>0                     | —<br>—                  | 45.000<br>45.000                | 0,67<br>0,67              | Push-pull classe B                        |
| <b>1H4</b>  | 3*     | O-138 | 2(0,06)          | BF<br>BF<br>BF<br>P(2,1) | 180<br>135<br>90<br>157 | 3,1<br>3<br>2,5<br>1 | —<br>—<br>—<br>—   | —<br>—<br>—<br>— | -13,5<br>-9<br>-4,5<br>-15 | —<br>—<br>—<br>—        | 10.300<br>10.300<br>11.000<br>— | 0,90<br>0,90<br>0,85<br>0 | Push-pull classe B                        |
| <b>1H5</b>  | 2-3*   | O-145 | 1,4(0,05)        | D-BF                     | 90                      | 0,15                 | 500.000            | —                | 0                          | —                       | 240.000                         | 0,27                      |                                           |
| <b>1H6</b>  | 2-2-3* | O-146 | 2(0,06)          | D-BF                     | 135                     | 0,8                  | —                  | —                | -3                         | —                       | 35.000                          | 0,57                      |                                           |
| <b>1J5</b>  | 5*     | O-139 | 2(0,12)          | P(0,57)                  | 135                     | 7                    | 13.500             | 135              | -16,5                      | —                       | 125.000                         | 1                         |                                           |
| <b>1J6</b>  | 3-3*   | O-150 | 2(0,24)          | P(2,1)<br>P(1,6)         | 135<br>135              | 5<br>0,1             | 10.000<br>10.000   | 135<br>135       | 0<br>-6                    | —<br>—                  | —<br>—                          | —<br>—                    | Push-pull classe B<br>Push-pull classe AB |
| <b>1LA4</b> | 5*     | L-221 | 1,4(0,05)        | P(0,1)                   | 90                      | 4                    | 25.000             | 90               | -4,5                       | —                       | 300.000                         | 0,8                       |                                           |
| <b>1LA6</b> | 7*     | L-227 | 1,4(0,05)        | C                        | 90                      | 0,5                  | —                  | 45               | 0                          | —                       | 750.000                         | 0,25                      |                                           |
| <b>1LB4</b> | 5*     | L-221 | 1,4(0,05)        | P(0,2)<br>P(0,03)        | 90<br>45                | 5<br>1,6             | 12.000<br>20.000   | 90<br>45         | -9<br>-4,5                 | —<br>—                  | 200.000<br>300.000              | 0,92<br>0,65              |                                           |
| <b>1LB6</b> | 7*     | L-226 | 1,4(0,05)        | C                        | 90                      | 0,4                  | —                  | 67,5             | 0                          | —                       | 2M $\Omega$                     | 0,1                       |                                           |
| <b>1LC5</b> | 5V*    | L-222 | 1,4(0,05)        | HF<br>HF                 | 90<br>45                | 1,17<br>1,10         | —<br>—             | 45<br>45         | 0<br>0                     | —<br>—                  | 1,5M $\Omega$<br>0,7M $\Omega$  | 0,77<br>0,75              |                                           |
| <b>1LC6</b> | 7*     | L-227 | 1,4(0,05)        | C<br>C                   | 90<br>45                | 0,75<br>0,70         | —<br>—             | 35<br>35         | 0<br>0                     | —<br>—                  | 650.000<br>300.000              | 0,27<br>0,25              |                                           |
| <b>1LD5</b> | 2-5*   | L-228 | 1,4(0,05)        | D-BF                     | 90<br>45                | 0,60<br>0,55         | —<br>—             | 45<br>45         | 0<br>0                     | —<br>—                  | 750.000<br>750.000              | 0,57<br>0,55              |                                           |

| Référence | Type | Culot | Tension Filament | Fonction             | Haute tension  | Intensité anodique | Résistance d'Anode    | Tension Ecran   | Tension Polarisation | Résistance Polarisation | Résistance interne            | Pente                | OBSERVATIONS                 |
|-----------|------|-------|------------------|----------------------|----------------|--------------------|-----------------------|-----------------|----------------------|-------------------------|-------------------------------|----------------------|------------------------------|
| 1LE3      | 3*   | L-218 | 1,4(0,05)        | BF                   | 90             | 4,5                | —                     | —               | 0                    | —                       | 11.200                        | 1,3                  |                              |
| 1LG5      | 5*   | L-219 | 1,4(0,05)        | HF<br>HF             | 90<br>45       | 1,7<br>1,5         | —<br>—                | 45<br>45        | 0<br>0               | —<br>—                  | 1M $\Omega$<br>350.000        | 0,8<br>0,8           |                              |
| 1LH4      | 2-3* | L-225 | 1,4(0,05)        | D-BF                 | 90             | 0,15               | —                     | —               | 0                    | —                       | 245.000                       | 0,27                 |                              |
| 1LN5      | 5*   | L-222 | 1,4(0,05)        | HF                   | 90             | 1,6                | —                     | 90              | 0                    | —                       | 1,1M $\Omega$                 | 0,8                  |                              |
| 1L4       | 5*   | M-262 | 1,4(0,05)        | HF                   | 90             | 4,5                | —                     | 90              | 0                    | —                       | 350.000                       | 1                    |                              |
| 1N5       | 5*   | O-142 | 1,4(0,05)        | HF                   | 90             | 1,2                | —                     | 90              | 0                    | —                       | 1,5M $\Omega$                 | 0,75                 |                              |
| 1N6       | 2-5* | O-147 | 1,4(0,05)        | D-P(0,1)             | 90             | 3,4                | 25.000                | 90              | -4,5                 | —                       | 300.000                       | 0,8                  |                              |
| 1P5       | 5*   | O-142 | 1,4(0,05)        | BF                   | 90             | 2,3                | —                     | 90              | 0                    | —                       | 800.000                       | 0,75                 |                              |
| 1Q5       | 4*   | O-139 | 1,4(0,1)         | P(0,27)              | 90             | 9,5                | 8.000                 | 90              | -4,5                 | —                       | —                             | 2,2                  |                              |
| 1Q6       | 2-5* | A-92  | 1,25(0,04)       | HF-D<br>HF-D         | 67,5<br>30     | 1,6<br>0,33        | —<br>—                | 67,5<br>30      | 0<br>0               | —<br>—                  | 400.000<br>500.000            | 0,60<br>0,33         |                              |
| 1R4       | 2    | L-232 | 1,4(0,15)        | D                    | 30             | 0,3                | —                     | —               | —                    | —                       | —                             | —                    | Très haute fréquence         |
| 1R5       | 7V*  | M-266 | 1,4(0,05)        | C<br>C               | 90<br>45       | 1,7<br>0,7         | —<br>—                | 67,5<br>45      | 0-9<br>0-9           | —<br>—                  | 500.000<br>600.000            | 0,30<br>0,23         |                              |
| 1SA6      | 5*   | O-141 | 1,4(0,05)        | HF<br>HF             | 90<br>45       | 2,4<br>1,1         | —<br>—                | 67,5<br>45      | 0<br>0               | —<br>—                  | 800.000<br>700.000            | 0,97<br>0,75         |                              |
| 1SB6      | 2-5* | O-148 | 1,4(0,05)        | D-BF<br>D-BF<br>D-BF | 90<br>45<br>90 | 1,4<br>0,6<br>1,4  | —<br>—<br>1M $\Omega$ | 67,5<br>45<br>— | 0<br>0<br>0          | —<br>—<br>—             | 700.000<br>900.000<br>700.000 | 0,66<br>0,50<br>0,66 | 5 M $\Omega$ série sur écran |
| 1S4       | 5*   | M-261 | 1,4(0,1)         | P(0,27)<br>P(0,06)   | 90<br>45       | 7,4<br>3,8         | 8.000<br>8.000        | 67,5<br>45      | -7<br>-4,5           | —<br>—                  | 100.000<br>100.000            | 1,57<br>1,25         |                              |
| 1S5       | 2-5* | M-267 | 1,4(0,05)        | HF-D<br>D-BF         | 67,5<br>90     | 1,6<br>—           | —<br>1M $\Omega$      | 67,5<br>—       | 0<br>0               | —<br>—                  | 600.000<br>600.000            | 0,62<br>0,62         | 3 M $\Omega$ série sur écran |
| 1T4       | 5V*  | M-262 | 1,4(0,05)        | HF<br>HF             | 90<br>45       | 3,7<br>1,9         | —<br>—                | 67,5<br>45      | 0<br>0               | —<br>—                  | 500.000<br>350.000            | 0,9<br>0,7           |                              |



| Référence | Type   | Culot | Tension Filament | Fonction                     | Haute tension            | Intensité anodique   | Résistance d'Anode              | Tension Ecran        | Tension Polarisation             | Résistance Polarisation      | Résistance interne                       | Pente                  | OBSERVATIONS                                                 |
|-----------|--------|-------|------------------|------------------------------|--------------------------|----------------------|---------------------------------|----------------------|----------------------------------|------------------------------|------------------------------------------|------------------------|--------------------------------------------------------------|
| 1T5       | 4*     | O-139 | 1,4(0,05)        | P(0,17)                      | 90                       | 6,5                  | 14.000                          | 90                   | -6                               | —                            | —                                        | 1,15                   |                                                              |
| 1U4       | 5*     | M-262 | 1,4(0,05)        | HF                           | 90                       | 1,6                  | —                               | 90                   | 0                                | —                            | 1,5M $\Omega$                            | 0,9                    |                                                              |
| 1U5       | 2-5*   | M-268 | 1,4(0,05)        | HF-D<br>D-BF<br>D-BF         | 67,5<br>90<br>45         | 1,6<br>—<br>—        | —<br>1M $\Omega$<br>1M $\Omega$ | 67,5<br>—<br>—       | 0<br>0<br>0                      | —<br>—<br>—                  | 600.000<br>—<br>—                        | 0,62<br>—<br>—         | 3 M $\Omega$ série sur écran<br>8 M $\Omega$ série sur écran |
| 1V        | 2      | A-50  | 6,3(0,3)         | R                            | 325                      | 45                   | —                               | —                    | —                                | —                            | —                                        | —                      |                                                              |
| 1V5       | 5*     | A-91  | 1,25(0,04)       | P(0,05)<br>P(0,01)           | 67,5<br>45               | 2<br>1               | 25.000<br>40.000                | 67,5<br>45           | -4,5<br>-3                       | —<br>—                       | 150.000<br>175.000                       | 0,75<br>0,60           |                                                              |
| 1W5       | 5*     | A-91  | 1,25(0,04)       | HF<br>HF                     | 67,5<br>30               | 1,8<br>0,4           | —<br>—                          | 67,5<br>30           | 0<br>0                           | —<br>—                       | 700.000<br>700.000                       | 0,73<br>0,43           |                                                              |
| 1Z2       | 2*     | M-260 | 1,5(0,3)         | R                            | 7.800                    | 2                    | —                               | —                    | —                                | —                            | —                                        | —                      |                                                              |
| 2A3       | 3*     | A-47  | 2,5(2,5)         | P(3,5)<br>P(10)              | 250<br>300               | 60<br>80             | 2.500<br>5.000                  | —<br>—               | -45<br>-60                       | —<br>—                       | 800<br>—                                 | 5,25<br>—              | Push-pull classe AB                                          |
| 2A5       | 5      | A-73  | 2,5(1,75)        | P(3,2)<br>P(0,8)<br>P(10)    | 250<br>250<br>315        | 34<br>31<br>62       | 7.000<br>4.000<br>10.000        | 250<br>—<br>285      | -16,5<br>-20<br>-24              | 400<br>650<br>330            | 80.000<br>2.600<br>—                     | 2,5<br>2,6<br>—        | Montage en triode                                            |
| 2A6       | 2-2-3  | A-75  | 2,5(0,8)         | D-BF<br>D-BF                 | 250<br>100               | 0,9<br>0,1           | 250.000<br>250.000              | —<br>—               | -2<br>-1                         | 3.750<br>8.000               | 91.000<br>—                              | 1,1<br>—               |                                                              |
| 2A7       | 7V     | A-84  | 2,5(0,8)         | C<br>C                       | 250<br>100               | 3,5<br>1             | —<br>—                          | 100<br>50            | -3-35<br>-1,5-35                 | 300<br>150                   | 360.000<br>600.000                       | 0,55<br>0,36           |                                                              |
| 2B7       | 2-2-5V | A-86  | 2,5(0,8)         | HF-D<br>HF-D<br>D-BF<br>D-BF | 250<br>100<br>250<br>100 | 6<br>5,8<br>6<br>5,8 | —<br>—<br>250.000<br>250.000    | 100<br>100<br>—<br>— | -3-17<br>-3-17<br>-3-17<br>-3-17 | 400<br>400<br>1.600<br>3.500 | 800.000<br>300.000<br>800.000<br>300.000 | 1<br>0,95<br>1<br>0,95 | 1 M $\Omega$ série sur écran<br>1 M $\Omega$ série sur écran |
| 2C4       | 3      | M-279 | 2,5(0,65)        | —                            | 350                      | 20                   | —                               | —                    | -50                              | —                            | —                                        | —                      | Relai à gaz                                                  |
| 2C22      | 3      | O-169 | 6,3(0,3)         | HF                           | 300                      | 11                   | —                               | —                    | -10,5                            | 270                          | 6.600                                    | 3                      |                                                              |

| Référence | Type   | Culot | Tension Filament | Fonction             | Haute tension | Intensité anodique | Résistance d'Anode     | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne | Pente        | OBSERVATIONS                    |
|-----------|--------|-------|------------------|----------------------|---------------|--------------------|------------------------|---------------|----------------------|-------------------------|--------------------|--------------|---------------------------------|
| 2D21      | 4      | M-283 | 6,3(0,6)         | —                    | 400           | 100                | —                      | —             | —                    | —                       | —                  | —            | Relai à gaz                     |
| 2E5       | 3      | A-76  | 2,5(0,8)         | I<br>I               | 250<br>100    | —<br>—             | 1M $\Omega$<br>500.000 | 250<br>100    | 0-8<br>0-3,3         | —<br>—                  | —<br>—             | —<br>—       |                                 |
| 2E36      | 5*     | A-58  | 1,25(0,03)       | P(0,006)<br>P(0,001) | 45<br>22,5    | 0,45<br>0,27       | 100.000<br>150.000     | 45<br>22,5    | -1,25<br>0           | 300<br>0                | 250.000<br>220.000 | 0,50<br>0,38 | Subminiature                    |
| 2G21      | 3-7*   | S-342 | 1,25(0,05)       | C                    | 22,5          | 0,2                | —                      | 22,5          | 0                    | —                       | 0,5M $\Omega$      | 0,06         |                                 |
| 2S/4S     | 2-2    | A-61  | 2,5(1,35)        | D                    | —             | —                  | —                      | —             | —                    | —                       | —                  | —            |                                 |
| 2V3       | 2*     | O-135 | 2,5(5)           | R                    | 6.000         | 2                  | —                      | —             | —                    | —                       | —                  | —            |                                 |
| 2W3       | 2*     | O-134 | 2,5(1,5)         | R                    | 350           | 55                 | —                      | —             | —                    | —                       | —                  | —            |                                 |
| 2X2       | 2      | A-51  | 2,5(1,75)        | R                    | 4.500         | 7,5                | —                      | —             | —                    | —                       | —                  | —            |                                 |
| 2Z2       | 2*     | A-44  | 2,5(1,5)         | R                    | 350           | 50                 | —                      | —             | —                    | —                       | —                  | —            |                                 |
| 3A4       | 5*     | M-264 | 2,8(0,1)         | P(0,6)               | 135           | 14,8               | 8.000                  | 90            | -7,5                 | —                       | 90.000             | 1,9          | Identique à DCC90               |
| 3A5       | 3-3*   | M-269 | 2,8(0,11)        | HF                   | 90            | 3,7                | —                      | —             | -2,5                 | —                       | 8.300              | 1,8          | Prise médiane sur filament      |
| 3A8       | 2-3-5* | O-153 | 2,8(0,05)        | HF-D<br>BF           | 90<br>90      | 1,5<br>0,2         | —<br>—                 | 90<br>—       | 0<br>0               | —<br>—                  | 800.000<br>200.000 | 0,75<br>0,32 | Partie pentode<br>Partie triode |
| 3B5       | 5*     | O-140 | 2,8(0,05)        | P(0,18)<br>P(0,07)   | 67,5<br>45    | 6,7<br>4,4         | 5.000<br>8.000         | 67,5<br>45    | -7<br>-4,5           | —<br>—                  | 100.000<br>100.000 | 1,5<br>1,4   | Prise médiane sur filament      |
| 3B7       | 3-3*   | L-229 | 2,8(1,1)         | HF                   | 90            | 5,2                | —                      | —             | 0                    | —                       | 11.300             | 1,8          | Prise médiane sur filament      |
| 3C4       | 5*     | M-263 | 2,8(0,025)       | P(0,2)               | 85            | 5                  | 14.000                 | 85            | -5,2                 | —                       | —                  | 1,4          | Identique à DL96                |
| 3C5       | 5*     | O-140 | 2,8(0,05)        | P(0,26)              | 90            | 6                  | 10.000                 | 90            | -9                   | —                       | —                  | 1,5          | Prise médiane sur filament      |
| 3C6       | 3-3*   | L-230 | 2,8(0,05)        | BF                   | 90            | 4,5                | —                      | —             | 0                    | —                       | 11.200             | 1,3          | Prise médiane sur filament      |
| 3D6       | 5*     | L-223 | 2,8(0,11)        | P(0,6)               | 150           | 10,2               | 14.000                 | 90            | -4,5                 | —                       | —                  | 2,4          | Prise médiane sur filament      |
| 3E6       | 5*     | L-224 | 2,8(0,05)        | HF                   | 90            | 2,5                | —                      | 90            | 0                    | —                       | 400.000            | 1,8          | Prise médiane sur filament      |
| 3LE4      | 5*     | L-223 | 2,8(0,05)        | P(0,3)               | 90            | 9                  | 6.000                  | 90            | -9                   | —                       | 110.000            | 1,6          | Prise médiane sur filament      |



| Référence    | Type | Culot | Tension Filament | Fonction       | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne | Pente  | OBSERVATIONS               |
|--------------|------|-------|------------------|----------------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------|--------|----------------------------|
| <b>3LF4</b>  | 5*   | L-223 | 2,8(0,05)        | P(0,27)        | 90            | 9,5                | 8.000              | 90            | -4,5                 | —                       | 90.000             | 2,2    | Prise médiane sur filament |
| <b>3Q4</b>   | 5*   | M-265 | 2,8(0,05)        | P(0,24)        | 90            | 7,7                | 10.000             | 90            | -4,5                 | —                       | 120.000            | 2      | Prise médiane sur filament |
| <b>3Q5</b>   | 5*   | O-140 | 2,8(0,05)        | P(0,23)        | 90            | 8                  | 8.000              | 90            | -4,5                 | —                       | 80.000             | 2      | Prise médiane sur filament |
| <b>3S4</b>   | 5*   | M-265 | 2,8(0,05)        | P(0,27)        | 90            | 7,4                | 8.000              | 67,5          | -7                   | —                       | 100.000            | 1,57   | Identique à DL92           |
| <b>3V4</b>   | 5*   | M-263 | 2,8(0,05)        | P(0,24)        | 90            | 7,7                | 10.000             | 90            | -4,5                 | —                       | 120.000            | 2      | Prise médiane sur filament |
| <b>4A6</b>   | 3-3* | O-151 | 4(0,06)          | P(1)           | 90            | 1,1                | 8.000              | —             | -1,5                 | —                       | 26.000             | 0,75   | Prise médiane sur filament |
| <b>5AZ4</b>  | 2-2* | O-136 | 5(2)             | R              | 350           | 125                | —                  | —             | —                    | —                       | —                  | —      |                            |
| <b>5R4</b>   | 2-2* | O-136 | 5(2)             | R              | 900           | 150                | —                  | —             | —                    | —                       | —                  | —      |                            |
| <b>5T4</b>   | 2-2* | O-136 | 5(2)             | R              | 450           | 225                | —                  | —             | —                    | —                       | —                  | —      |                            |
| <b>5U4</b>   | 2-2* | O-136 | 5(3)             | R              | 450           | 225                | —                  | —             | —                    | —                       | —                  | —      |                            |
| <b>5V4</b>   | 2-2  | O-160 | 5(2)             | R              | 375           | 175                | —                  | —             | —                    | —                       | —                  | —      |                            |
| <b>5W4</b>   | 2-2* | O-136 | 5(1,5)           | R              | 350           | 110                | —                  | —             | —                    | —                       | —                  | —      |                            |
| <b>5X3</b>   | 2-2* | A-45  | 5(2)             | R<br>R         | 400<br>1.275  | 110<br>30          | —<br>—             | —<br>—        | —<br>—               | —<br>—                  | —<br>—             | —<br>— |                            |
| <b>5X4</b>   | 2-2* | O-137 | 5(3)             | R              | 450           | 225                | —                  | —             | —                    | —                       | —                  | —      |                            |
| <b>5Y3</b>   | 2-2* | O-136 | 5(2)             | R              | 350           | 125                | —                  | —             | —                    | —                       | —                  | —      |                            |
| <b>5Y3GB</b> | 2-2  | O-160 | 5(2)             | R              | 350           | 125                | —                  | —             | —                    | —                       | —                  | —      |                            |
| <b>5Y4</b>   | 2-2* | O-137 | 5(2)             | R              | 350           | 125                | —                  | —             | —                    | —                       | —                  | —      |                            |
| <b>5Y25</b>  | 4    | M-367 | 6,3(0,9)         | P(35)<br>P(80) | 400<br>600    | —<br>—             | 6.800<br>6.900     | 300<br>300    | -30<br>-32           | —<br>—                  | —<br>—             | —<br>— | Push-pull<br>Push-pull     |
| <b>5Z3</b>   | 2-2* | A-45  | 5(3)             | R              | 450           | 225                | —                  | —             | —                    | —                       | —                  | —      |                            |
| <b>5Z4</b>   | 2-2  | O-160 | 5(2)             | R              | 350           | 125                | —                  | —             | —                    | —                       | —                  | —      |                            |

| Référence | Type | Culot | Tension Filament | Fonction       | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne | Pente       | OBSERVATIONS                                |
|-----------|------|-------|------------------|----------------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------|-------------|---------------------------------------------|
| 6AB4      | 3    | M-346 | 6,3(0,15)        | FM             | 200           | 11,5               | —                  | —             | -1                   | —                       | —                  | 6,4         | Identique à EC92                            |
| 6AB5      | 3    | A-76  | 6,3(0,15)        | I              | 135           | —                  | 250.000            | 135           | —                    | —                       | —                  | —           |                                             |
| 6AB6      | 3-3  | O-207 | 6,3(0,5)         | P(3,5)         | 250           | 34                 | 8.000              | —             | 0                    | 0                       | 40.000             | 1,8         | Couplage électronique                       |
| 6AB7      | 5    | O-173 | 6,3(0,45)        | HF             | 300           | 12,5               | —                  | 200           | -3                   | 190                     | 700.000            | 5           |                                             |
| 6AB8      | 3-5  | N-304 | 6,3(0,3)         | BF-P(1,4)      | 100<br>200    | 7,5<br>17,5        | —<br>11.000        | —<br>200      | 0<br>-7,7            | —<br>—                  | —<br>150.000       | 1,9<br>3,4  | Identique à ECL80<br>Partie pentode         |
| 6AC5      | 3    | O-164 | 6,3(0,4)         | P(8)<br>P(3,7) | 250<br>250    | 5<br>32            | 10.000<br>7.000    | —<br>—        | 0<br>+13             | 0<br>—                  | —<br>36.700        | —<br>3,4    | Push-pull classe B<br>Couplage électronique |
| 6AC6      | 3-4  | O-207 | 6,3(1,1)         | P(3,8)         | 180           | 45                 | 4.000              | —             | 0                    | 0                       | 18.000             | 3           | Couplage électronique                       |
| 6AC7      | 5V   | O-173 | 6,3(0,45)        | HF             | 300           | 10                 | —                  | 150           | -3-22                | 200                     | 1MΩ                | 9           |                                             |
| 6AD5      | 3    | O-164 | 6,3(0,3)         | BF<br>BF       | 250<br>100    | 0,9<br>—           | 250.000<br>250.000 | —<br>—        | -2<br>-1             | 4.500<br>10.000         | 66.000<br>—        | 1,5<br>—    |                                             |
| 6AD6      | 3    | O-163 | 6,3(0,15)        | I              | 100           | —                  | —                  | —             | 0-45                 | —                       | —                  | —           |                                             |
| 6AD7      | 3-5  | O-209 | 6,3(0,85)        | BF<br>P(3,2)   | 250<br>250    | 4<br>34            | —<br>7.000         | —<br>250      | -25<br>-16,5         | —<br>—                  | 19.000<br>80.000   | 0,32<br>2,5 | Partie triode<br>Partie pentode             |
| 6AE5      | 3    | O-164 | 6,3(0,3)         | BF             | 95            | 7                  | —                  | —             | -15                  | 2.000                   | 3.500              | 1,2         |                                             |
| 6AE6      | 3-3  | O-199 | 6,3(0,15)        | BF<br>BF       | 250<br>250    | 6,5<br>4,5         | —<br>—             | —<br>—        | -1,5-35<br>-1,5-9,5  | —<br>—                  | 2.500<br>3.500     | 1<br>0,95   | Première triode<br>Seconde triode           |
| 6AE7      | 3-3  | O-202 | 6,3(0,5)         | BF             | 250           | 5                  | —                  | —             | -13,5                | 1.350                   | 9.300              | 1,5         | Pour chaque triode                          |
| 6AF5      | 3    | O-164 | 6,3(0,3)         | BF             | 180           | 7                  | —                  | —             | -18                  | 250                     | 4.900              | 1,5         |                                             |
| 6AF6      | 3-3  | O-163 | 6,3(0,15)        | I<br>I         | 135<br>100    | 1,5<br>0,9         | —<br>—             | —<br>—        | 0+81<br>0+81         | —<br>—                  | —<br>—             | —<br>—      | A utiliser avec une 6K7<br>montée en triode |
| 6AF7      | 3-3V | O-215 | 6,3(0,3)         | I<br>I         | 250<br>100    | 0,20<br>0,15       | 1MΩ<br>0,5MΩ       | 250<br>100    | 0-19<br>0-5          | —<br>—                  | —<br>—             | —<br>—      | Double sensibilité                          |



| Référence   | Type    | Culot | Tension Filament | Fonction   | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne | Pente       | OBSERVATIONS          |
|-------------|---------|-------|------------------|------------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------|-------------|-----------------------|
| <b>6AG5</b> | 5       | M-289 | 6,3(0,3)         | HF<br>HF   | 250<br>100    | 7<br>5,5           | —<br>—             | 150<br>100    | -1,8<br>-0,7         | 200<br>100              | 800.000<br>300.000 | 5<br>4,75   |                       |
| <b>6AG6</b> | 5       | O-174 | 6,3(1,25)        | P(3,75)    | 250           | 32                 | 8.500              | 250           | -6                   | 160                     | 50.000             | 10          |                       |
| <b>6AG7</b> | 5       | O-172 | 6,3(0,65)        | HF         | 300           | 30                 | —                  | 150           | -3                   | 80                      | 130.000            | 11          |                       |
| <b>6AH5</b> | 5       | O-171 | 6,3(0,9)         | P(10,8)    | 350           | 54                 | 4.200              | 250           | -18                  | 320                     | 33.000             | 5,2         |                       |
| <b>6AH7</b> | 3-3     | O-203 | 6,3(0,3)         | BF<br>BF   | 250<br>100    | 12<br>3,7          | —<br>—             | —<br>—        | -9<br>-3,6           | 750<br>1.000            | 6.600<br>10.300    | 2,4<br>1,55 |                       |
| <b>6AJ5</b> | 5       | M-289 | 6,3(0,175)       | HF<br>P(1) | 28<br>180     | 3<br>—             | —<br>28.000        | 28<br>75      | -1<br>-7,5           | 200<br>—                | 90.000<br>—        | 2,75<br>—   | Classe AB             |
| <b>6AJ7</b> | 5       | O-173 | 6,3(0,45)        | HF         | 300           | 10                 | —                  | 300           | -2                   | 160                     | 1M $\Omega$        | 9           |                       |
| <b>6AJ8</b> | 3-7V    | N-338 | 6,3(0,3)         | C          | 250           | 2,5                | —                  | 92            | -2-28,5              | 150                     | 1M $\Omega$        | 0,7         | Identique à ECH81     |
| <b>6AK5</b> | 5       | M-289 | 6,3(0,175)       | HF<br>HF   | 180<br>120    | 7,7<br>7,5         | —<br>—             | 120<br>120    | -2<br>-2             | 200<br>200              | 690.000<br>340.000 | 5,1<br>5    |                       |
| <b>6AK6</b> | 5       | M-284 | 6,3(0,15)        | P(1,1)     | 180           | 15                 | 10.000             | 180           | -9                   | 500                     | 200.000            | 2,3         |                       |
| <b>6AK7</b> | 5       | O-172 | 6,3(0,65)        | P(3)       | 300           | 30                 | 10.000             | 150           | -3                   | 80                      | 130.000            | 11          |                       |
| <b>6AK8</b> | 2-2-2-3 | N-337 | 6,3(0,45)        | FM         | 250           | 1                  | —                  | —             | -3                   | —                       | 58.000             | 1,2         | Identique à EABC80    |
| <b>6AL5</b> | 2-2     | M-276 | 6,3(0,3)         | D          | 150           | 9                  | —                  | —             | —                    | —                       | —                  | —           | Identique à EB91      |
| <b>6AL6</b> | 5       | O-181 | 6,3(0,9)         | P(6,5)     | 250           | 72                 | 2.500              | 250           | -14                  | 180                     | 22.500             | 6           | Analogue à 6L6        |
| <b>6AL7</b> | 3       | O-198 | 6,3(0,15)        | I          | 315           | —                  | —                  | —             | —                    | —                       | —                  | —           |                       |
| <b>6AM6</b> | 5       | M-321 | 6,3(0,3)         | TV         | 250           | 10                 | —                  | 250           | -2                   | 160                     | 1M $\Omega$        | 7,5         |                       |
| <b>6AN6</b> | 2-2-2-2 | M-277 | 6,3(0,2)         | D          | 75            | 8                  | —                  | —             | —                    | —                       | —                  | —           |                       |
| <b>6AQ4</b> | 3       | M-312 | 6,3(0,3)         | HF         | 250           | 10                 | —                  | —             | -1,5                 | 150                     | 12.000             | 8,5         | Très haute fréquence. |
| <b>6AQ5</b> | 4       | M-288 | 6,3(0,45)        | P(4,5)     | 250           | 45                 | 5.000              | 250           | -12,5                | 250                     | 52.000             | 4,1         |                       |

| Référence    | Type  | Culot | Tension Filament | Fonction                   | Haute tension     | Intensité anodique | Résistance d'Anode       | Tension Ecran     | Tension Polarisation | Résistance Polarisation | Résistance interne         | Pente             | OBSERVATIONS        |
|--------------|-------|-------|------------------|----------------------------|-------------------|--------------------|--------------------------|-------------------|----------------------|-------------------------|----------------------------|-------------------|---------------------|
| <b>6AQ6</b>  | 2-2-3 | M-291 | 6,3(0,15)        | D-BF<br>D-BF               | 250<br>100        | 1<br>0,8           | —<br>—                   | —<br>—            | -3<br>-1             | 3.000<br>1.200          | 58.000<br>61.000           | 1,20<br>1,15      |                     |
| <b>6AQ7</b>  | 2-2-3 | O-189 | 6,3(0,3)         | D-BF                       | 250               | 2,3                | —                        | —                 | -2                   | 900                     | 44.000                     | 1,60              |                     |
| <b>6AQ8</b>  | 3-3   | N-351 | 6,3(0,43)        | FM                         | 250               | 10                 | —                        | —                 | -2                   | —                       | 20.000                     | 6                 | Identique à ECC85   |
| <b>6AR5</b>  | 5     | M-285 | 6,3(0,4)         | P(3,4)                     | 250               | 33                 | 7.600                    | 250               | -18                  | 420                     | 68.000                     | 2,3               |                     |
| <b>6AR6</b>  | 5     | O-175 | 6,3(1,2)         | P                          | 300               | 58                 | —                        | 300               | -36                  | 580                     | 22.000                     | 4,3               |                     |
| <b>6AS5</b>  | 5     | M-287 | 6,3(0,8)         | P(2,2)                     | 150               | 35                 | 4.500                    | 110               | -8,5                 | 230                     | —                          | 5,6               |                     |
| <b>6AS6</b>  | 5     | M-286 | 6,3(0,175)       | HF                         | 120               | 3,5                | —                        | 120               | -2                   | 220                     | —                          | 3,5               |                     |
| <b>6AS7</b>  | 3-3   | O-204 | 6,3(2,5)         | P                          | 135               | —                  | —                        | 125               | —                    | 250                     | 280                        | 7                 |                     |
| <b>6AT6</b>  | 2-2-3 | M-291 | 6,3(0,3)         | D-BF<br>D-BF               | 250<br>100        | 1<br>0,8           | —<br>—                   | —<br>—            | -3<br>-1             | 300<br>120              | 58.000<br>54.000           | 1,2<br>1,3        |                     |
| <b>6AT7N</b> | 3-3   | N-351 | 6,3(0,3)         | TV                         | 170               | 10                 | —                        | —                 | -2,35                | —                       | —                          | 4,9               |                     |
| <b>6AU6</b>  | 5     | M-284 | 6,3(0,3)         | HF<br>HF                   | 250<br>100        | 10,8<br>5,2        | —<br>—                   | 150<br>100        | -1<br>-1             | 140<br>65               | 2M $\Omega$<br>600.000     | 5,2<br>3,9        |                     |
| <b>6AV6</b>  | 2-2-3 | M-291 | 6,3(0,3)         | D-BF<br>D-BF               | 250<br>100        | 1,2<br>0,5         | —<br>—                   | —<br>—            | -2<br>-1             | 1.500<br>2.000          | 62.500<br>80.000           | 1,60<br>1,25      |                     |
| <b>6AX2</b>  | 2     | N-350 | 6,3(0,09)        | R                          | 24.500            | 0,3                | —                        | —                 | —                    | —                       | —                          | —                 | Identique à EY86    |
| <b>6A3</b>   | 3*    | A-47  | 6,3(1)           | P(3,2)<br>P(10)            | 250<br>325        | 60<br>80           | 2.500<br>5.000           | —<br>—            | -45<br>—             | 750<br>850              | 800<br>—                   | 5,25<br>—         | Push-pull classe AB |
| <b>6A4</b>   | 5*    | A-60  | 6,3(0,3)         | P(1,5)<br>P(0,7)<br>P(0,3) | 180<br>135<br>100 | 22<br>13<br>19     | 8.000<br>9.500<br>11.000 | 180<br>135<br>100 | -12<br>-9<br>-6,5    | 450<br>550<br>600       | 60.000<br>52.000<br>83.000 | 2,5<br>2,1<br>1,2 |                     |
| <b>6A5</b>   | 3     | O-166 | 6,3(1,25)        | P(3,7)<br>P(15)            | 250<br>325        | 60<br>80           | 2.500<br>3.000           | —<br>—            | -45<br>-68           | 700<br>—                | 300<br>—                   | 5,25<br>—         | Push-pull classe AB |



| Référence   | Type  | Culot | Tension Filament | Fonction     | Haute tension | Intensité anodique | Résistance d'anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne             | Pente        | OBSERVATIONS                 |
|-------------|-------|-------|------------------|--------------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------------------|--------------|------------------------------|
| <b>6A6</b>  | 3-3   | A-88  | 6,3(0,8)         | BF<br>P(10)  | 250<br>300    | 6<br>35            | —<br>10.000        | —<br>—        | -5<br>0              | 800<br>0                | 11.300<br>—                    | 3,1<br>—     | Driver<br>Push-pull classe B |
| <b>6A7</b>  | 7V    | A-84  | 6,3(0,3)         | C<br>C       | 250<br>100    | 3,5<br>1,1         | —<br>—             | 100<br>50     | -3-35<br>-1,5-20     | 300<br>300              | 360.000<br>600.000             | 0,55<br>0,36 |                              |
| <b>6A8</b>  | 7V    | O-183 | 6,3(0,3)         | C<br>C       | 250<br>100    | 3,5<br>1,1         | —<br>—             | 100<br>50     | -3-35<br>-1,5-20     | 300<br>300              | 360.000<br>600.000             | 0,55<br>0,36 |                              |
| <b>6BA6</b> | 5V    | M-284 | 6,3(0,3)         | HF<br>HF     | 250<br>100    | 11<br>10,8         | —<br>—             | 100<br>100    | -1-50<br>-1-50       | 68<br>68                | 1,5M $\Omega$<br>250.000       | 4,4<br>4,3   |                              |
| <b>6BA7</b> | 7     | N-334 | 6,3(0,3)         | C<br>C       | 250<br>100    | 3,6<br>3,8         | —<br>—             | 100<br>100    | -1<br>-1             | —<br>—                  | 1M $\Omega$<br>0,5M $\Omega$   | 0,95<br>0,9  |                              |
| <b>6BD6</b> | 5     | M-284 | 6,3(0,3)         | HF<br>HF     | 250<br>100    | 9<br>13            | —<br>—             | 100<br>100    | -3<br>-1             | 250<br>60               | 700.000<br>120.000             | 2<br>2,35    |                              |
| <b>6BD7</b> | 2-2-3 | N-315 | 6,3(0,25)        | D-BF         | 250           | 0-7                | 22.000             | —             | -3                   | 1.000                   | 58.000                         | 1,2          | Identique à EBC81            |
| <b>6BE6</b> | 7V    | M-290 | 6,3(0,3)         | C<br>C       | 250<br>100    | 3<br>2,8           | —<br>—             | 100<br>100    | 0-50<br>0-50         | 0<br>0                  | 1M $\Omega$<br>500.000         | 0,47<br>0,45 |                              |
| <b>6BE7</b> | 9     | N-310 | 6,3(0,2)         | FM           | 250           | 0,25               | 500.000            | —             | -4,5                 | 680                     | 3M $\Omega$                    | —            | Identique à EQ80             |
| <b>6BF6</b> | 2-2-3 | M-291 | 6,3(0,3)         | D-BF<br>D-BF | 250<br>100    | 9,5<br>—           | 100.000<br>100.000 | —<br>—        | -9<br>—              | 5.000<br>6.000          | 8.500<br>—                     | 1,9<br>—     |                              |
| <b>6BG6</b> | 5     | O-182 | 6,3(0,9)         | P            | 400           | 70                 | —                  | 250           | -15                  | 100                     | —                              | —            |                              |
| <b>6BH6</b> | 5     | M-286 | 6,3(0,15)        | HF<br>HF     | 250<br>100    | 7,4<br>3,6         | —<br>—             | 150<br>100    | -1<br>-1             | 200<br>100              | 1,4M $\Omega$<br>0,7M $\Omega$ | 4,6<br>3,4   |                              |
| <b>6BJ6</b> | 5     | M-286 | 6,3(0,15)        | HF<br>HF     | 250<br>100    | 9,2<br>9           | —<br>—             | 100<br>100    | -1<br>-1             | 80<br>80                | 1,3M $\Omega$<br>250.000       | 3,8<br>3,6   |                              |
| <b>6BM5</b> | 5     | M-288 | 6,3(0,45)        | P(3,5)       | 250           | 30                 | 7.000              | 250           | -6                   | 180                     | 60.000                         | 7            | Identique à 6P9              |
| <b>6BQ5</b> | 5     | N-307 | 6,3(0,076)       | P            | 250           | 48                 | 5.200              | 250           | -7,4                 | 140                     | 47.500                         | 11,5         | Identique à EL84             |

| Référence | Type   | Culot | Tension Filament | Fonction                     | Haute tension            | Intensité anodique   | Résistance d'Anode                         | Tension Ecran        | Tension Polarisation     | Résistance Polarisation      | Résistance interne                       | Pente                | OBSERVATIONS                                                     |
|-----------|--------|-------|------------------|------------------------------|--------------------------|----------------------|--------------------------------------------|----------------------|--------------------------|------------------------------|------------------------------------------|----------------------|------------------------------------------------------------------|
| 6BQ6      | 5      | O-181 | 6,3(1,2)         | TV                           | 250                      | 55                   | —                                          | 150                  | -22,5                    | 400                          | —                                        | 5,5                  |                                                                  |
| 6BQ7      | 3-3    | N-351 | 6,3(0,4)         | TV                           | 150                      | 18                   | —                                          | —                    | -2                       | 110                          | 5.800                                    | 6                    |                                                                  |
| 6BX6      | 5      | N-303 | 6,3(0,3)         | HF                           | 170                      | 10                   | —                                          | 170                  | -2                       | —                            | 0,4M $\Omega$                            | 7,2                  | Identique à EF80                                                 |
| 6BY7      | 5V     | N-303 | 6,3(0,3)         | FM                           | 250                      | 10                   | —                                          | 100                  | -2-35                    | —                            | 0,5M $\Omega$                            | 6                    | Identique à EF85                                                 |
| 6B4       | 3*     | O-138 | 6,3(1)           | P(3,2)<br>P(10)              | 250<br>325               | 60<br>80             | 2.500<br>5.000                             | —<br>—               | -45<br>-68               | 750<br>800                   | 800<br>—                                 | 5,25<br>—            | Push-pull classe AB                                              |
| 6B5       | 3-3    | A-78  | 6,3(0,8)         | P(4)                         | 300                      | 45                   | 7.000                                      | —                    | 0                        | 0                            | 24.000                                   | 2,4                  | Couplage électronique                                            |
| 6B6       | 2-2-3  | O-188 | 6,3(0,3)         | D-BF<br>D-BF                 | 250<br>100               | 1<br>—               | 0,25M $\Omega$<br>0,25M $\Omega$           | —<br>—               | -2<br>-1                 | 3.750<br>8.000               | 91.000<br>—                              | 1,1<br>—             |                                                                  |
| 6B7       | 2-2-5V | A-86  | 6,3(0,3)         | HF-D<br>HF-D<br>D-BF<br>D-BF | 250<br>100<br>250<br>100 | 6<br>5,8<br>6<br>5,8 | —<br>—<br>0,25M $\Omega$<br>0,25M $\Omega$ | 100<br>100<br>—<br>— | -3-17<br>-3-17<br>—<br>— | 400<br>400<br>1.600<br>3.500 | 800.000<br>300.000<br>800.000<br>300.000 | 1<br>0,9<br>1<br>0,9 | 1,2 M $\Omega$ série sur écran<br>1,1 M $\Omega$ série sur écran |
| 6B8       | 2-2-5V | O-196 | 6,3(0,3)         | HF-D<br>HF-D<br>D-BF<br>D-BF | 250<br>100<br>250<br>100 | 6<br>5,8<br>6<br>5,8 | —<br>—<br>0,25M $\Omega$<br>0,25M $\Omega$ | 100<br>100<br>—<br>— | -3-17<br>-3-17<br>—<br>— | 400<br>400<br>1.600<br>3.500 | 800.000<br>300.000<br>800.000<br>300.000 | 1<br>0,9<br>1<br>0,9 | 1,2 M $\Omega$ série sur écran<br>1,1 M $\Omega$ série sur écran |
| 6CA4      | 2-2    | N-331 | 6,3(0,7)         | R                            | 350                      | 150                  | —                                          | —                    | —                        | —                            | —                                        | —                    | Identique à EZ81                                                 |
| 6CB6      | 5      | M-286 | 6,3(0,3)         | HF                           | 200                      | 9,5                  | —                                          | 150                  | -8                       | 180                          | 0,6M $\Omega$                            | 6,2                  |                                                                  |
| 6CD6      | 5      | O-182 | 6,3(2,5)         | TV                           | 400                      | 38                   | —                                          | 300                  | —                        | 500                          | —                                        | —                    |                                                                  |
| 6CJ6      | 5      | N-306 | 6,3(1,05)        | TV                           | 180                      | 45                   | —                                          | 180                  | —                        | —                            | —                                        | 6,5                  | Identique à EL81                                                 |
| 6CK6      | 5      | N-308 | 6,3(0,7)         | TV                           | 180                      | 36                   | —                                          | 180                  | -2,9                     | 50                           | 0,1M $\Omega$                            | 10                   | Identique à EL83                                                 |
| 6CN8      | 3-5    | N-316 | 6,3(0,7)         | BF<br>P(3,5)                 | 250<br>200               | 9<br>35              | —<br>5.000                                 | —<br>200             | -12<br>-16               | 220<br>400                   | 12.000<br>—                              | 4,9<br>6,4           | Partie triode<br>Partie pentode                                  |
| 6C4       | 3      | M-280 | 6,3(0,15)        | HF<br>HF                     | 250<br>100               | 10,5<br>11,8         | —<br>—                                     | —<br>—               | -8,5<br>0                | 800<br>0                     | 7.720<br>6.250                           | 2,2<br>3,1           |                                                                  |



| Référence | Type   | Culot | Tension Filament | Fonction       | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne             | Pente        | OBSERVATIONS                                                 |
|-----------|--------|-------|------------------|----------------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------------------|--------------|--------------------------------------------------------------|
| 6C5       | 3      | O-164 | 6,3(0,3)         | BF<br>BF       | 250<br>100    | 8<br>4             | 100.000<br>100.000 | —<br>—        | -8<br>-2,5           | 6.500<br>7.500          | 10.000<br>—                    | 2<br>—       |                                                              |
| 6C6       | 5      | A-74  | 6,3(0,3)         | BF<br>BF       | 250<br>100    | 2<br>2             | 250.000<br>250.000 | —<br>—        | -3<br>-3             | 1.200<br>2.600          | 1,5M $\Omega$<br>1M $\Omega$   | 1,22<br>1,18 | 1 M $\Omega$ série sur écran<br>1 M $\Omega$ série sur écran |
| 6C7       | 2-2-3  | A-85  | 6,3(0,3)         | D-BF           | 250           | 4,5                | —                  | —             | -9                   | 2.000                   | 16.000                         | 1,25         |                                                              |
| 6C8       | 3-3    | O-205 | 6,3(0,3)         | BF<br>BF       | 250<br>100    | 3,2<br>0,4         | 100.000<br>100.000 | —<br>—        | -4,5<br>-1,5         | 3.000<br>3.500          | 22.500<br>—                    | 1,6<br>—     |                                                              |
| 6DA6      | 5V     | N-354 | 6,3(0,2)         | HF<br>BF       | 250<br>250    | 9<br>—             | —<br>220.000       | 100<br>—      | -2<br>—              | 160<br>1.200            | 1M $\Omega$<br>—               | 3,85<br>—    | Identique à EF89<br>0,68 M $\Omega$ série sur écran          |
| 6DC8      | 2-2-8  | N-336 | 6,3(0,3)         | HF-D           | 250           | 9                  | —                  | —             | -2                   | 1.000                   | 58.000                         | 1,2          | 40.000 $\Omega$ série sur écran                              |
| 6DQ6A     | 5      | O-181 | 6,3(1,2)         | TV             | 250           | 75                 | —                  | 150           | -22,5                | 100                     | 20.000                         | 6,6          |                                                              |
| 6DR6      | 5      | N-306 | 6,3(1,05)        | TV             | 250           | 32                 | —                  | 250           | -38,5                | —                       | 15.000                         | 4,6          |                                                              |
| 6DR8      | 2-2-5V | N-336 | 6,3(0,3)         | HF-D<br>HF-D   | 12,6<br>6,3   | 0,45<br>0,12       | —<br>—             | 12,6<br>6,3   | 0-8<br>0-8           | 0<br>0                  | 1M $\Omega$<br>1M $\Omega$     | 0,65<br>0,45 | Identique à EBF83                                            |
| 6DS8      | 3-7    | N-338 | 6,3(0,3)         | C<br>C         | 6,3<br>12,6   | 0,05<br>0,17       | —<br>—             | 6,3<br>12,6   | 0-6<br>0-10          | 0<br>0                  | 1,3M $\Omega$<br>1,5M $\Omega$ | 0,09<br>0,22 | Identique à ECH83                                            |
| 6D5       | 3      | O-164 | 6,3(0,7)         | P(1,4)<br>P(5) | 275<br>300    | 31<br>46           | 7.200<br>20.000    | —<br>—        | -40<br>-50           | 1.300<br>1.100          | 2.250<br>—                     | 2,1<br>—     | Push-pull classe AB                                          |
| 6D6       | 5V     | A-74  | 6,3(0,3)         | HF<br>HF       | 250<br>100    | 8,2<br>8           | —<br>—             | 100<br>100    | -3-50<br>-3-50       | 300<br>300              | 800.000<br>250.000             | 1,6<br>1,5   |                                                              |
| 6D7       | 5      | A-83  | 6,3(0,3)         | BF<br>BF       | 250<br>100    | 2<br>2             | 250.000<br>250.000 | —<br>—        | -3<br>-3             | 1.200<br>2.600          | 1,5M $\Omega$<br>1M $\Omega$   | 1,22<br>1,18 | 1 M $\Omega$ série sur écran<br>1 M $\Omega$ série sur écran |
| 6D8       | 7V     | O-183 | 6,3(0,15)        | C<br>C         | 250<br>135    | 3,5<br>1,5         | —<br>—             | 100<br>67,5   | -3-35<br>-3-25       | 300<br>300              | 400.000<br>600.000             | 0,55<br>0,32 |                                                              |
| 6ET6      | 5      | M-286 | 6,3(0,3)         | BF<br>BF       | 6,3<br>12,6   | —<br>—             | 5.000<br>5.000     | 6,3<br>12,6   | 0<br>0               | 0<br>0                  | 50.000<br>50.000               | 1,8<br>3     | Identique à EF98<br>10.000 $\Omega$ série sur écran          |

| Référence | Type | Culot | Tension Filament | Fonction                          | Haute tension            | Intensité anodique   | Résistance d'Anode                 | Tension Ecran        | Tension Polarisation       | Résistance Polarisation  | Résistance interne           | Pente                | OBSERVATIONS                                               |
|-----------|------|-------|------------------|-----------------------------------|--------------------------|----------------------|------------------------------------|----------------------|----------------------------|--------------------------|------------------------------|----------------------|------------------------------------------------------------|
| 6E5       | 3    | A-76  | 6,3(0,3)         | I<br>I                            | 250<br>100               | —<br>—               | 1M $\Omega$<br>0,5M $\Omega$       | 250<br>100           | 0-8<br>0-3                 | —<br>—                   | —<br>—                       | —<br>—               |                                                            |
| 6E6       | 3-3  | A-88  | 6,3(0,6)         | P(1,6)                            | 250                      | 18                   | 14.000                             | —                    | -27,5                      | —                        | 3.500                        | 1,7                  |                                                            |
| 6E7       | 5V   | A-83  | 6,3(0,3)         | HF<br>HF                          | 250<br>100               | 8,2<br>8             | —<br>—                             | 100<br>100           | -3-50<br>-3-50             | 300<br>300               | 800.000<br>250.000           | 1,6<br>1,5           |                                                            |
| 6E8       | 3-6V | O-212 | 6,3(0,3)         | C<br>C                            | 250<br>100               | 2,3<br>—             | —<br>—                             | 100<br>50            | -2-21<br>-2-21             | 400<br>400               | 1,2M $\Omega$<br>—           | 0,65<br>—            |                                                            |
| 6FN5      | 5    | O-362 | 6,3(1,65)        | TV                                | 7.500                    | 465                  | —                                  | 170                  | -150                       | —                        | 3.500                        | 17                   | Caractéristiques maxima                                    |
| 6F4       | 3    | A-80  | 6,3(0,22)        | HF                                | 80                       | 13                   | —                                  | —                    | -2                         | 150                      | 2.900                        | 5,8                  |                                                            |
| 6F5       | 3    | O-167 | 6,3(0,3)         | BF<br>BF                          | 250<br>100               | 0,9<br>0,4           | 250.000<br>250.000                 | —<br>—               | -2<br>-1                   | 4.500<br>10.000          | 66.000<br>85.000             | 1,5<br>1,1           |                                                            |
| 6F6       | 5    | O-174 | 6,3(0,7)         | P(3,2)<br>P(0,8)<br>P(11)<br>P(9) | 250<br>250<br>315<br>350 | 34<br>31<br>62<br>50 | 7.000<br>4.000<br>10.000<br>10.000 | 250<br>—<br>285<br>— | -16,5<br>-20<br>-24<br>-36 | 410<br>650<br>320<br>730 | 80.000<br>2.600<br>—<br>—    | 2,5<br>2,6<br>—<br>— | Montage en triode<br>Push-pull pentode<br>Push-pull triode |
| 6F7       | 3-5V | A-89  | 6,3(0,3)         | HF<br>HF<br>BF                    | 250<br>100<br>100        | 6,5<br>6,3<br>3,5    | —<br>—<br>—                        | 100<br>100<br>—      | -3-35<br>-3-35<br>-3       | 300<br>300<br>300        | 850.000<br>290.000<br>16.000 | 1,10<br>1,05<br>0,52 | Partie pentode<br>Partie pentode<br>Partie triode          |
| 6F8       | 3-3  | O-205 | 6,3(0,6)         | BF<br>BF                          | 250<br>100               | 9<br>10              | 100.000<br>100.000                 | —<br>—               | -8<br>0                    | 3.300<br>6.000           | 7.700<br>6.700               | 2,6<br>3             |                                                            |
| 6G5       | 3V   | A-76  | 6,3(0,3)         | I<br>I                            | 250<br>100               | —<br>—               | 1M $\Omega$<br>0,5M $\Omega$       | 250<br>100           | 0-22<br>0-8                | —<br>—                   | —<br>—                       | —<br>—               |                                                            |
| 6G6       | 5    | O-174 | 6,3(0,15)        | P(1,1)<br>P(0,6)<br>P(0,25)       | 180<br>135<br>180        | 15<br>11,5<br>11     | 10.000<br>12.000<br>12.000         | 180<br>135<br>—      | -9<br>-6<br>-12            | 500<br>500<br>1.100      | 175.000<br>170.000<br>4.750  | 2,3<br>2,1<br>2      | Montage en triode                                          |
| 6H4       | 2    | O-156 | 6,3(0,15)        | D                                 | 100                      | 4                    | —                                  | —                    | —                          | —                        | —                            | —                    |                                                            |
| 6H6       | 2-2  | O-161 | 6,3(0,3)         | D                                 | 117                      | 8                    | —                                  | —                    | —                          | —                        | —                            | —                    |                                                            |



| Référence   | Type   | Culot | Tension Filament | Fonction | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne | Pente | OBSERVATIONS                                                                                          |
|-------------|--------|-------|------------------|----------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------|-------|-------------------------------------------------------------------------------------------------------|
| <b>6H8</b>  | 2-2-5V | O-196 | 6,3(0,3)         | HF-D     | 250           | 6                  | —                  | —             | -2                   | 250                     | 1,2M $\Omega$      | 1,8   | 95.000 $\Omega$ série sur écran<br><br>1 M $\Omega$ série sur écran<br>0,5 M $\Omega$ série sur écran |
|             |        |       |                  | HF-D     | 100           | 6                  | —                  | 100           | -2                   | 250                     | 0,4M $\Omega$      | 1,8   |                                                                                                       |
|             |        |       |                  | D-BF     | 250           | 6                  | 250.000            | —             | -2                   | 1.500                   | 1,2M $\Omega$      | 1,8   |                                                                                                       |
|             |        |       |                  | D-BF     | 100           | 6                  | 250.000            | —             | -2                   | 3.500                   | 0,4M $\Omega$      | 1,8   |                                                                                                       |
| <b>6J4</b>  | 3      | M-281 | 6,3(0,4)         | HF       | 150           | 15                 | —                  | —             | -3                   | 200                     | 4.500              | 12    |                                                                                                       |
| <b>6J5</b>  | 3      | O-164 | 6,3(0,3)         | BF       | 250           | 9                  | 100.000            | —             | -8                   | 3.300                   | 7.700              | 2,6   |                                                                                                       |
|             |        |       |                  | BF       | 100           | 10                 | 100.000            | —             | 0                    | 6.000                   | 6.700              | 3     |                                                                                                       |
| <b>6J6</b>  | 3-3    | M-292 | 6,3(0,45)        | HF       | 100           | 8,5                | —                  | —             | -0,8                 | 50                      | 7.100              | 5,3   |                                                                                                       |
| <b>6J6R</b> | 3-3    | M-292 | 6,3(0,45)        | HF       | 100           | 8,5                | —                  | —             | -0,8                 | 50                      | 7.100              | 5,3   | Equivalent à 6J6 renforcé                                                                             |
| <b>6J7</b>  | 5      | O-180 | 6,3(0,3)         | BF       | 250           | 2                  | 250.000            | —             | -3                   | 1.200                   | 1M $\Omega$        | 1,22  | 1,2 M $\Omega$ série sur écran<br>1,2 M $\Omega$ série sur écran<br>Montage en triode                 |
|             |        |       |                  | BF       | 100           | 2                  | 250.000            | —             | -3                   | 2.600                   | 1M $\Omega$        | 1,18  |                                                                                                       |
|             |        |       |                  | BF       | 250           | 6,5                | —                  | —             | -8                   | 1.200                   | 10.500             | 1,9   |                                                                                                       |
|             |        |       |                  | HF       | 250           | 2                  | —                  | 100           | -3                   | 1.200                   | 1M $\Omega$        | 1,22  |                                                                                                       |
|             |        |       |                  | HF       | 100           | 2                  | —                  | 100           | -3                   | 1.200                   | 1M $\Omega$        | 1,18  |                                                                                                       |
|             |        |       |                  |          |               |                    |                    |               |                      |                         |                    |       |                                                                                                       |
| <b>6J8</b>  | 3-7V   | O-212 | 6,3(0,3)         | C        | 250           | 1,3                | —                  | 100           | -3-20                | 400                     | 4M $\Omega$        | 0,29  |                                                                                                       |
|             |        |       |                  | C        | 100           | 1,4                | —                  | 100           | -3-20                | 400                     | 0,9M $\Omega$      | 0,25  |                                                                                                       |
| <b>6K4</b>  | 3      | A     | 6,3(0,15)        | HF       | 100           | 12                 | —                  | —             | -2                   | 1.650                   | 3.650              | 5,5   | Sans culot                                                                                            |
| <b>6K5</b>  | 3      | O-168 | 6,3(0,3)         | BF       | 250           | 1,1                | —                  | —             | -3                   | 3.000                   | 50.000             | 1,4   |                                                                                                       |
|             |        |       |                  | BF       | 100           | 0,35               | —                  | —             | -1,5                 | 4.000                   | 78.000             | 0,9   |                                                                                                       |
| <b>6K6</b>  | 5      | O-174 | 6,3(0,4)         | P(4,5)   | 315           | 25                 | 9.000              | 250           | -21                  | 700                     | 75.000             | 2,1   |                                                                                                       |
|             |        |       |                  | P(3,4)   | 250           | 32                 | 7.600              | 250           | -18                  | 500                     | 68.000             | 2,3   |                                                                                                       |
|             |        |       |                  | P(0,35)  | 100           | 9                  | 12.000             | 100           | -7                   | 650                     | 104.000            | 1,5   |                                                                                                       |
| <b>6K7</b>  | 5      | O-180 | 6,3(0,3)         | HF       | 250           | 7                  | —                  | 250           | -3-42                | 300                     | 0,8M $\Omega$      | 1,45  |                                                                                                       |
|             |        |       |                  | HF       | 100           | 9,5                | —                  | 100           | -1-38                | 100                     | 0,15M $\Omega$     | 1,65  |                                                                                                       |
| <b>6K8</b>  | 3-6V   | O-213 | 6,3(0,3)         | C        | 250           | 2,5                | —                  | 100           | -3-30                | 300                     | 600.000            | 0,35  |                                                                                                       |
|             |        |       |                  | C        | 100           | 2,3                | —                  | 100           | -3-30                | 300                     | 400.000            | 0,32  |                                                                                                       |
| <b>6L5</b>  | 3      | O-164 | 6,3(0,15)        | BF       | 250           | 8                  | 100.000            | —             | -9                   | 6.500                   | 9.000              | 1,9   |                                                                                                       |
|             |        |       |                  | BF       | 100           | 4                  | 100.000            | —             | -3                   | 7.500                   | 10.000             | 1,5   |                                                                                                       |

| Référence | Type   | Culot | Tension Filament | Fonction                                        | Haute tension                   | Intensité anodique         | Résistance d'Anode                        | Tension Ecran                 | Tension Polarisation                | Résistance Polarisation     | Résistance interne                  | Pente                     | OBSERVATIONS                                                         |
|-----------|--------|-------|------------------|-------------------------------------------------|---------------------------------|----------------------------|-------------------------------------------|-------------------------------|-------------------------------------|-----------------------------|-------------------------------------|---------------------------|----------------------------------------------------------------------|
| 6L6       | 4      | O-170 | 6,3(0,9)         | P(6,5)<br>P(10,8)<br>P(1,3)<br>P(26,5)<br>P(47) | 250<br>350<br>250<br>360<br>360 | 72<br>54<br>40<br>88<br>88 | 2.500<br>4.200<br>5.000<br>6.600<br>3.800 | 250<br>250<br>—<br>270<br>270 | -14<br>-18<br>-20<br>-22,5<br>-22,5 | 180<br>310<br>500<br>—<br>— | 22.500<br>33.000<br>1.700<br>—<br>— | 6<br>5,2<br>4,7<br>—<br>— | Montage en triode<br>Push-pull classe AB<br>P.P. avec courant grille |
| 6L7       | 7V     | O-184 | 6,3(0,3)         | HF<br>C                                         | 250<br>250                      | 5,3<br>2,4                 | —<br>—                                    | 100<br>100                    | -3-15<br>-3-30                      | 250<br>300                  | 0,6M $\Omega$<br>1M $\Omega$        | 1,1<br>0,37               | Modulatrice                                                          |
| 6M6       | 5      | O-174 | 6,3(0,7)         | P(4)                                            | 250                             | 36                         | 7.000                                     | 250                           | -6                                  | 150                         | 50.000                              | 9,5                       |                                                                      |
| 6M7       | 5V     | O-180 | 6,3(0,3)         | HF                                              | 250                             | 6,5                        | —                                         | 100                           | -2,5-26                             | 300                         | 1,5M $\Omega$                       | 2,8                       |                                                                      |
| 6M8       | 2-3-5V | O-217 | 6,3(0,6)         | HF-D<br>BF                                      | 100<br>100                      | 8,5<br>0,5                 | —<br>—                                    | 100<br>—                      | -3<br>-1                            | —<br>—                      | 200.000<br>91.000                   | 1,9<br>1,1                | Partie pentode<br>Partie triode                                      |
| 6N4       | 3      | M-282 | 6,3(0,2)         | BF                                              | 180                             | 12                         | —                                         | —                             | -3,5                                | 400                         | 5.400                               | 6                         |                                                                      |
| 6N5       | 3      | A-76  | 6,3(0,15)        | I                                               | 180                             | —                          | 250.000                                   | 180                           | 0-12                                | —                           | —                                   | —                         |                                                                      |
| 6N6       | 3-3    | O-207 | 6,3(0,8)         | P(4)                                            | 300                             | 45                         | 7.000                                     | 300                           | 0                                   | 0                           | 24.000                              | 2,4                       | Couplage électronique                                                |
| 6N7       | 3-3    | O-200 | 6,3(0,8)         | P(10)                                           | 300                             | 35                         | 8.000                                     | —                             | 0                                   | 0                           | 11.000                              | 3,2                       | Push-pull classe B                                                   |
| 6N8       | 2-2-5V | N-336 | 6,3(0,3)         | HF-D                                            | 250                             | 5                          | —                                         | —                             | -2-35                               | 295                         | 1,5M $\Omega$                       | 2,2                       | 0,1 M $\Omega$ série sur écran                                       |
| 6P5       | 3      | O-164 | 6,3(0,3)         | BF<br>BF                                        | 250<br>100                      | 5<br>2,5                   | —<br>—                                    | —<br>—                        | -13,5<br>-5                         | 2.700<br>2.000              | 9.500<br>12.000                     | 1,45<br>1,15              |                                                                      |
| 6P7       | 3-5V   | O-208 | 6,3(0,3)         | HF<br>HF<br>BF                                  | 250<br>100<br>100               | 6,5<br>6,3<br>3,5          | —<br>—<br>—                               | 100<br>100<br>—               | -3-35<br>-3-35<br>-3                | —<br>—<br>—                 | 850.000<br>290.000<br>16.200        | 1,10<br>1,05<br>0,52      | Partie pentode<br>Partie pentode<br>Partie triode                    |
| 6P8       | 3-6    | O-213 | 6,3(0,8)         | C                                               | 250                             | 1,5                        | —                                         | 75                            | -2                                  | 400                         | —                                   | 0,5                       |                                                                      |
| 6P9       | 5      | M-288 | 6,3(0,45)        | P(3,5)                                          | 250                             | 30                         | 7.000                                     | 250                           | -6                                  | 180                         | 60.000                              | 7                         | Identique à 6BM5                                                     |
| 6Q4       | 3      | N-332 | 6,3(0,48)        | TV                                              | 250                             | 15                         | —                                         | —                             | -1,5                                | —                           | —                                   | 12                        | Identique à EC80                                                     |
| 6Q6       | 2-3    | O-186 | 6,3(0,15)        | D-BF                                            | 250                             | 1,2                        | —                                         | —                             | -3                                  | 2.500                       | 62.000                              | 1,05                      |                                                                      |



| Référence   | Type  | Culot | Tension Filament | Fonction                   | Haute tension                   | Intensité anodique          | Résistance d'Anode                | Tension Ecran             | Tension Polarisation         | Résistance Polarisation           | Résistance interne                                                        | Pente                               | OBSERVATIONS                                                                      |
|-------------|-------|-------|------------------|----------------------------|---------------------------------|-----------------------------|-----------------------------------|---------------------------|------------------------------|-----------------------------------|---------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------------------------------------------|
| <b>6Q7</b>  | 2-2-3 | O-188 | 6,3(0,3)         | D-BF<br>D-BF               | 250<br>100                      | 1,1<br>0,35                 | 250.000<br>250.000                | —<br>—                    | -3<br>-1,5                   | 5.000<br>5.500                    | 58.000<br>88.000                                                          | 1,2<br>0,8                          |                                                                                   |
| <b>6R4</b>  | 3     | N-333 | 6,3(0,2)         | TV                         | 150                             | 30                          | —                                 | —                         | -2                           | —                                 | —                                                                         | 5,5                                 | Identique à EC81                                                                  |
| <b>6R6</b>  | 5V    | O-178 | 6,3(0,3)         | HF                         | 250                             | 7                           | —                                 | 100                       | -3                           | 300                               | 800.000                                                                   | 1,45                                |                                                                                   |
| <b>6R7</b>  | 2-2-3 | O-188 | 6,3(0,3)         | BF<br>BF                   | 250<br>100                      | 9,5<br>0,5                  | 100.000<br>100.000                | —<br>—                    | -9<br>-3                     | 5.000<br>6.000                    | 8.500<br>—                                                                | 1,9<br>—                            |                                                                                   |
| <b>6SA7</b> | 7V    | O-185 | 6,3(0,3)         | C<br>C                     | 250<br>100                      | 3,5<br>3,3                  | —<br>—                            | 100<br>100                | -2-35<br>-2-35               | 150<br>150                        | 1M $\Omega$<br>0,5M $\Omega$                                              | 0,45<br>0,42                        |                                                                                   |
| <b>6SB7</b> | 7V    | O-185 | 6,3(0,3)         | C<br>C                     | 250<br>100                      | 3,8<br>3,6                  | —<br>—                            | 100<br>100                | -1-20<br>-1-20               | 70<br>70                          | 1M $\Omega$<br>0,5M $\Omega$                                              | 0,95<br>0,90                        |                                                                                   |
| <b>6SC7</b> | 3-3   | O-201 | 6,3(0,3)         | BF<br>BF                   | 250<br>100                      | 2<br>0,2                    | 250.000<br>250.000                | —<br>—                    | -2<br>-1                     | 1.400<br>5.000                    | 53.000<br>—                                                               | 1,32<br>—                           |                                                                                   |
| <b>6SD7</b> | 5V    | O-173 | 6,3(0,3)         | HF<br>HF                   | 250<br>100                      | 6<br>5,7                    | —<br>—                            | 100<br>100                | -2-25<br>-2-25               | 250<br>250                        | 1M $\Omega$<br>0,25M $\Omega$                                             | 3,6<br>3,3                          |                                                                                   |
| <b>6SE7</b> | 5     | O-173 | 6,3(0,3)         | HF<br>HF                   | 250<br>100                      | 4,5<br>5,5                  | —<br>—                            | 100<br>100                | -1,5<br>-1                   | 250<br>120                        | 1M $\Omega$<br>0,25M $\Omega$                                             | 3,4<br>3,1                          |                                                                                   |
| <b>6SF5</b> | 3     | O-165 | 6,3(0,3)         | BF<br>BF                   | 250<br>100                      | 0,9<br>0,15                 | 250.000<br>250.000                | —<br>—                    | -2<br>-1                     | 3.750<br>6.500                    | 66.000<br>85.000                                                          | 1,50<br>1,15                        |                                                                                   |
| <b>6SF7</b> | 2-5V  | O-193 | 6,3(0,3)         | HF-D<br>HF-D               | 250<br>100                      | 12,4<br>12                  | —<br>—                            | 100<br>100                | -1-35<br>-1-35               | 70<br>70                          | 700.000<br>200.000                                                        | 2<br>2                              |                                                                                   |
| <b>6SG7</b> | 5V    | O-176 | 6,3(0,3)         | HF<br>HF                   | 250<br>100                      | 11,8<br>8,2                 | —<br>—                            | 125<br>100                | -1-14<br>-1-11,5             | 70<br>80                          | 900.000<br>250.000                                                        | 4,7<br>4,1                          |                                                                                   |
| <b>6SH7</b> | 5     | O-176 | 6,3(0,3)         | HF<br>HF                   | 250<br>100                      | 10,8<br>5,3                 | —<br>—                            | 150<br>100                | -1<br>-1                     | 70<br>140                         | 900.000<br>350.000                                                        | 4,9<br>4                            |                                                                                   |
| <b>6SJ7</b> | 5     | O-173 | 6,3(0,3)         | HF<br>HF<br>BF<br>BF<br>BF | 250<br>100<br>250<br>250<br>100 | 3<br>2,9<br>9,2<br>3<br>2,9 | —<br>—<br>—<br>250.000<br>250.000 | 100<br>100<br>—<br>—<br>— | -3<br>-3<br>-8,5<br>-3<br>-3 | 800<br>800<br>900<br>860<br>1.700 | 1,5M $\Omega$<br>0,7M $\Omega$<br>7.600<br>1,5M $\Omega$<br>0,7M $\Omega$ | 1,65<br>1,57<br>2,5<br>1,65<br>1,57 | Montage en triode<br>1 M $\Omega$ série sur écran<br>1 M $\Omega$ série sur écran |

| Référence   | Type    | Culot | Tension Filament | Fonction     | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne         | Pente        | OBSERVATIONS |
|-------------|---------|-------|------------------|--------------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|----------------------------|--------------|--------------|
| <b>6SK7</b> | 5V      | O-173 | 6,3(0,3)         | HF<br>HF     | 250<br>100    | 9,2<br>13          | —<br>—             | 100<br>100    | -3-35<br>-1-35       | 170<br>80               | 800.000<br>120.000         | 2<br>2,35    |              |
| <b>6SL7</b> | 3-3     | O-204 | 6,3(0,3)         | BF           | 250           | 2,3                | —                  | —             | -2                   | 850                     | 44.000                     | 1,6          |              |
| <b>6SN7</b> | 3-3     | O-204 | 6,3(0,6)         | BF<br>BF     | 250<br>100    | 9<br>10            | —<br>—             | —<br>—        | -8<br>0              | 900<br>0                | 7.700<br>6.700             | 2,6<br>3     |              |
| <b>6SQ7</b> | 2-2-3   | O-187 | 6,3(0,3)         | D-BF<br>D-BF | 250<br>100    | 0,9<br>0,1         | 250.000<br>250.000 | —<br>—        | -2<br>-1             | 4.000<br>10.000         | 91.000<br>110.000          | 1,1<br>0,9   |              |
| <b>6SR7</b> | 2-2-3   | O-187 | 6,3(0,3)         | D-BF         | 250           | 9,5                | —                  | —             | -9                   | 950                     | 8.500                      | 1,9          |              |
| <b>6SS7</b> | 5V      | O-173 | 6,3(0,15)        | HF<br>HF     | 250<br>100    | 9<br>12,2          | —<br>—             | 100<br>100    | -3-15<br>-1-15       | 250<br>70               | 1M $\Omega$<br>120.000     | 1,85<br>1,95 |              |
| <b>6ST7</b> | 2-2-3   | O-173 | 6,3(0,15)        | BF           | 250           | 9,5                | —                  | —             | -9                   | 900                     | 8.500                      | 1,9          |              |
| <b>6SU7</b> | 3-3     | O-204 | 6,3(0,3)         | BF           | 250           | 2,3                | —                  | —             | -2                   | 800                     | 44.000                     | 1,6          |              |
| <b>6SV7</b> | 2-5     | O-193 | 6,3(0,3)         | HF-D         | 250           | 7,5                | —                  | 150           | -1                   | 100                     | 1,5M $\Omega$              | 3,6          |              |
| <b>6SZ7</b> | 2-2-3   | O-187 | 6,3(0,15)        | D-BF         | 250           | 1                  | —                  | —             | -3                   | 300                     | 58.000                     | 1,2          |              |
| <b>6S6</b>  | 5V      | O-177 | 6,3(0,45)        | HF           | 250           | 13                 | —                  | 100           | -2-25                | 125                     | 350.000                    | 4            |              |
| <b>6S7</b>  | 5V      | O-180 | 6,3(0,15)        | HF<br>HF     | 250<br>135    | 8,5<br>3,7         | —<br>—             | 100<br>67,5   | -3-38<br>-3-25       | 300<br>600              | 1M $\Omega$<br>1M $\Omega$ | 1,75<br>1,25 |              |
| <b>6S8</b>  | 2-2-2-3 | O-216 | 6,3(0,3)         | D-BF         | 250           | 0,9                | —                  | —             | -2                   | 2.200                   | 91.000                     | 1,1          |              |
| <b>6TH8</b> | 3-6V    | O-211 | 6,3(0,7)         | C            | 250           | 6                  | —                  | 70            | -3-28                | 200                     | 1M $\Omega$                | 0,8          |              |
| <b>6T5</b>  | 3V      | A-76  | 6,3(0,3)         | I            | 250           | —                  | 1M $\Omega$        | 250           | 0-22                 | —                       | —                          | —            |              |
| <b>6T6</b>  | 5       | O-179 | 6,3(0,45)        | HF           | 250           | 10                 | —                  | 100           | -1                   | 100                     | 1M $\Omega$                | 5,5          |              |
| <b>6T7</b>  | 2-2-3   | O-288 | 6,3(0,15)        | D-BF<br>D-BF | 250<br>100    | 1,2<br>0,3         | 200.000<br>200.000 | —<br>—        | -3<br>-1,5           | 4.000<br>5.000          | 62.000<br>95.000           | 1,05<br>0,68 |              |
| <b>6T8</b>  | 2-2-2-3 | A-93  | 6,3(0,45)        | D-BF<br>D-BF | 250<br>100    | 1<br>0,8           | —<br>—             | —<br>—        | -3<br>-1             | 3.000<br>1.200          | —<br>—                     | 1,2<br>1,3   |              |



| Référence | Type  | Culot | Tension Filament | Fonction                  | Haute tension     | Intensité anodique | Résistance d'Anode           | Tension Ecran     | Tension Polarisation | Résistance Polarisation | Résistance interne              | Pente              | OBSERVATIONS                                                     |
|-----------|-------|-------|------------------|---------------------------|-------------------|--------------------|------------------------------|-------------------|----------------------|-------------------------|---------------------------------|--------------------|------------------------------------------------------------------|
| 6U5       | 3V    | A-76  | 6,3(0,3)         | I<br>I                    | 250<br>100        | —<br>—             | 1M $\Omega$<br>0,5M $\Omega$ | 250<br>100        | 0-22<br>0-8          | —<br>—                  | —<br>—                          | —<br>—             |                                                                  |
| 6U6       | 4     | O-174 | 6,3(0,75)        | P(5,5)<br>P(2)            | 200<br>110        | 55<br>44           | 3.000<br>2.000               | 135<br>110        | -14<br>-10,5         | 240<br>220              | 20.000<br>10.000                | 5,5<br>2           |                                                                  |
| 6U7       | 5V    | O-180 | 6,3(0,3)         | HF<br>HF                  | 250<br>100        | 8,2<br>8           | —<br>—                       | 100<br>100        | -3-50<br>-3-50       | 300<br>300              | 800.000<br>250.000              | 1,6<br>1,5         |                                                                  |
| 6U8       | 3-5   | N-352 | 6,3(0,45)        | TV                        | 150<br>250        | 18<br>10           | —<br>—                       | —<br>110          | —<br>—               | 56<br>68                | 5.000<br>0,4M $\Omega$          | 8,5<br>5,2         | Partie triode<br>Partie pentode                                  |
| 6V3       | 2     | N-349 | 6,3(1,75)        | R                         | 350               | 125                | —                            | —                 | —                    | —                       | —                               | —                  | Identique à EY81                                                 |
| 6V4       | 2-2   | N-331 | 6,3(0,7)         | R                         | 350               | 90                 | —                            | —                 | —                    | —                       | —                               | —                  | Identique à EZ80                                                 |
| 6V6       | 4     | O-170 | 6,3(0,45)        | P(5,5)<br>P(4,5)<br>P(10) | 315<br>250<br>250 | 34<br>45<br>70     | 8.500<br>5.000<br>10.000     | 225<br>250<br>250 | -13<br>-12,5<br>-15  | 350<br>250<br>200       | 77.000<br>52.000<br>52.000      | 3,75<br>4,1<br>4,1 | Push-pull classe AB                                              |
| 6V7       | 2-2-3 | O-188 | 6,3(0,3)         | D-P(0,3)<br>D-P(0,07)     | 250<br>135        | 8<br>3,7           | 20.000<br>25.000             | —<br>—            | -20<br>-10,5         | 2.500<br>3.000          | 7.500<br>11.000                 | 1,1<br>0,75        |                                                                  |
| 6W5       | 2-2   | O-159 | 6,3(0,9)         | R                         | 325               | 90                 | —                            | —                 | —                    | —                       | —                               | —                  |                                                                  |
| 6W6       | 4     | O-170 | 6,3(1,25)        | P(3,3)                    | 135               | 58                 | 2.000                        | 135               | -9                   | 140                     | 24.000                          | 9                  |                                                                  |
| 6W7       | 5     | O-180 | 6,3(0,15)        | HF<br>BF<br>BF            | 250<br>250<br>100 | 2<br>2<br>—        | —<br>250.000<br>250.000      | 100<br>—<br>—     | -3<br>-3<br>—        | 1.200<br>2.200<br>5.500 | 1M $\Omega$<br>1M $\Omega$<br>— | 1,22<br>1,22<br>—  | 1,2 M $\Omega$ série sur écran<br>1,2 M $\Omega$ série sur écran |
| 6X2       | 2     | néant | 6,3(0,09)        | TV                        | 5.000             | 3                  | —                            | —                 | —                    | —                       | —                               | —                  | Identique à EY51                                                 |
| 6X4       | 2-2   | M-275 | 6,3(0,6)         | R                         | 325               | 70                 | —                            | —                 | —                    | —                       | —                               | —                  |                                                                  |
| 6X5       | 2-2   | O-159 | 6,3(0,6)         | R                         | 325               | 70                 | —                            | —                 | —                    | —                       | —                               | —                  |                                                                  |
| 6X6       | 3     | O-197 | 6,3(0,3)         | I                         | 250               | —                  | 1M $\Omega$                  | 250               | —                    | —                       | —                               | —                  |                                                                  |
| 6X8       | 3-5   | N-368 | 6,3(0,45)        | C<br>C                    | 125<br>125        | 12<br>9            | —<br>—                       | —<br>125          | -7<br>-1             | —<br>—                  | 6.000<br>0,2M $\Omega$          | 6,5<br>5,5         | Partie triode<br>Partie pentode                                  |

| Référence | Type | Culot | Tension Filament | Fonction         | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne | Pente      | OBSERVATIONS                             |
|-----------|------|-------|------------------|------------------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------|------------|------------------------------------------|
| 6Y3       | 2    | O-135 | 6,3(0,7)         | R                | 5.000         | 7,5                | —                  | —             | —                    | —                       | —                  | —          |                                          |
| 6Y5       | 2-2  | A-69  | 6,3(0,8)         | R                | 350           | 50                 | —                  | —             | —                    | —                       | —                  | —          |                                          |
| 6Y6       | 4    | O-170 | 6,3(1,25)        | P(6)<br>P(3,5)   | 200<br>135    | 61<br>58           | 2.600<br>2.000     | 135<br>135    | -14<br>-13,5         | 230<br>220              | 18.000<br>9.300    | 7,1<br>7   |                                          |
| 6Y7       | 3-3  | O-200 | 6,3(0,6)         | P(8)             | 250           | 21                 | 14.000             | —             | 0                    | 0                       | —                  | —          |                                          |
| 6ZY5      | 2-2  | O-159 | 6,3(0,3)         | R                | 325           | 40                 | —                  | —             | —                    | —                       | —                  | —          |                                          |
| 6Z3       | 2    | A-50  | 6,3(0,3)         | R                | 350           | 50                 | —                  | —             | —                    | —                       | —                  | —          |                                          |
| 6Z4       | 2-2  | A-61  | 6,3(0,5)         | R                | 350           | 50                 | —                  | —             | —                    | —                       | —                  | —          |                                          |
| 6Z5       | 2-2  | A-70  | 12,5(0,4)        | R                | 230           | 60                 | —                  | —             | —                    | —                       | —                  | —          | Prise médiane sur filament               |
| 6Z7       | 3-3  | O-200 | 6,3(0,3)         | P(4,2)<br>P(2,5) | 180<br>135    | 4,2<br>3           | 12.000<br>9.000    | —<br>—        | 0<br>0               | 0<br>0                  | —<br>—             | —<br>—     | Push-pull classe B<br>Push-pull classe B |
| 7AB7      | 5    | L-244 | 6,3(0,15)        | HF               | 250           | 4                  | —                  | 100           | -2                   | 400                     | 500.000            | 1,8        |                                          |
| 7AD7      | 5    | L-242 | 6,3(0,6)         | HF               | 300           | 28                 | —                  | 150           | -2                   | 68                      | 300.000            | 9,5        |                                          |
| 7AF7      | 3-3  | L-252 | 6,3(0,3)         | BF<br>BF         | 250<br>100    | 9<br>10,8          | —<br>—             | —<br>—        | -10<br>0             | 550<br>0                | 7.600<br>6.500     | 2,1<br>2,6 |                                          |
| 7AG7      | 5    | L-242 | 6,3(0,15)        | HF               | 250           | 6                  | —                  | 250           | -2                   | 250                     | 250.000            | 4,2        |                                          |
| 7AH7      | 5    | L-242 | 6,3(0,15)        | HF               | 250           | 6,8                | —                  | 250           | -2                   | 250                     | 1M $\Omega$        | 3,3        |                                          |
| 7AK7      | 5    | L-242 | 6,3(0,8)         | HF               | 150           | 40                 | —                  | 90            | 0                    | 0                       | 11.500             | 6,5        |                                          |
| 7A4       | 3    | L-238 | 6,3(0,3)         | BF<br>BF         | 250<br>100    | 9<br>10            | 100.000<br>100.000 | —<br>—        | -8<br>0              | 2.500<br>4.000          | 7.700<br>6.700     | 2,6<br>3   |                                          |
| 7A5       | 4    | L-240 | 6,3(0,3)         | P(2,2)           | 125           | 44                 | 2.700              | 125           | -9                   | 190                     | 17.000             | 6          |                                          |
| 7A6       | 2-2  | L-236 | 6,3(0,15)        | D                | 150           | 10                 | —                  | —             | —                    | —                       | —                  | —          |                                          |
| 7A7       | 5V   | L-242 | 6,3(0,3)         | HF<br>HF         | 250<br>100    | 9,2<br>13          | —<br>—             | 100<br>100    | -3-35<br>-1-35       | 300<br>80               | 800.000<br>120.000 | 2<br>2,35  |                                          |



| Référence  | Type          | Culot        | Tension Filament | Fonction       | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne             | Pente       | OBSERVATIONS        |
|------------|---------------|--------------|------------------|----------------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------------------|-------------|---------------------|
| <b>7A8</b> | <b>8V</b>     | <b>L-247</b> | <b>6,3(0,15)</b> | <b>C</b>       | <b>250</b>    | <b>3</b>           | —                  | <b>100</b>    | <b>-3-30</b>         | <b>300</b>              | <b>700.000</b>                 | <b>0,55</b> |                     |
|            |               |              |                  | <b>C</b>       | <b>100</b>    | <b>1,8</b>         | —                  | <b>75</b>     | <b>-3-30</b>         | <b>300</b>              | <b>650.000</b>                 | <b>0,37</b> |                     |
| <b>7B4</b> | <b>3</b>      | <b>L-238</b> | <b>6,3(0,3)</b>  | <b>BF</b>      | <b>250</b>    | <b>0,9</b>         | —                  | —             | <b>-2</b>            | <b>2.200</b>            | <b>66.000</b>                  | <b>1,5</b>  |                     |
|            |               |              |                  | <b>BF</b>      | <b>100</b>    | <b>0,4</b>         | —                  | —             | <b>-1</b>            | <b>2.500</b>            | <b>85.000</b>                  | <b>1,15</b> |                     |
| <b>7B5</b> | <b>5</b>      | <b>L-241</b> | <b>6,3(0,4)</b>  | <b>P(3,4)</b>  | <b>250</b>    | <b>32</b>          | <b>7.600</b>       | <b>250</b>    | <b>-18</b>           | <b>490</b>              | <b>68.000</b>                  | <b>2,3</b>  |                     |
|            |               |              |                  | <b>P(0,35)</b> | <b>100</b>    | <b>9</b>           | <b>12.000</b>      | <b>100</b>    | <b>-7</b>            | <b>660</b>              | <b>104.000</b>                 | <b>1,5</b>  |                     |
| <b>7B6</b> | <b>2-2-3</b>  | <b>L-248</b> | <b>6,3(0,3)</b>  | <b>D-BF</b>    | <b>250</b>    | <b>0,9</b>         | <b>250.000</b>     | —             | <b>-2</b>            | <b>4.000</b>            | <b>91.000</b>                  | <b>1,1</b>  |                     |
|            |               |              |                  | <b>D-BF</b>    | <b>100</b>    | <b>0,4</b>         | <b>250.000</b>     | —             | <b>-1</b>            | <b>10.000</b>           | <b>110.000</b>                 | <b>0,9</b>  |                     |
| <b>7B7</b> | <b>5V</b>     | <b>L-242</b> | <b>6,3(0,15)</b> | <b>HF</b>      | <b>250</b>    | <b>8,5</b>         | —                  | <b>100</b>    | <b>-3-40</b>         | <b>300</b>              | <b>750.000</b>                 | <b>1,75</b> |                     |
|            |               |              |                  | <b>HF</b>      | <b>100</b>    | <b>8,2</b>         | —                  | <b>100</b>    | <b>-3-40</b>         | <b>300</b>              | <b>300.000</b>                 | <b>1,67</b> |                     |
| <b>7B8</b> | <b>7V</b>     | <b>L-246</b> | <b>6,3(0,3)</b>  | <b>C</b>       | <b>250</b>    | <b>3,5</b>         | —                  | <b>100</b>    | <b>-3-35</b>         | <b>500</b>              | <b>360.000</b>                 | <b>0,55</b> |                     |
|            |               |              |                  | <b>C</b>       | <b>100</b>    | <b>1,1</b>         | —                  | <b>50</b>     | <b>-1,5-20</b>       | <b>800</b>              | <b>600.000</b>                 | <b>0,36</b> |                     |
| <b>7C4</b> | <b>2</b>      | <b>L-232</b> | <b>6,3(0,15)</b> | <b>D</b>       | <b>150</b>    | <b>8</b>           | —                  | —             | —                    | —                       | —                              | —           |                     |
| <b>7C5</b> | <b>4</b>      | <b>L-240</b> | <b>6,3(0,45)</b> | <b>P(4,5)</b>  | <b>250</b>    | <b>45</b>          | <b>5.000</b>       | <b>250</b>    | <b>-12,5</b>         | <b>500</b>              | <b>52.000</b>                  | <b>4,1</b>  | Push-pull classe AB |
|            |               |              |                  | <b>P(5,5)</b>  | <b>315</b>    | <b>34</b>          | <b>8.500</b>       | <b>225</b>    | <b>-13</b>           | <b>400</b>              | <b>77.000</b>                  | <b>3,7</b>  |                     |
|            |               |              |                  | <b>P(10)</b>   | <b>250</b>    | <b>70</b>          | <b>10.000</b>      | <b>250</b>    | <b>-15</b>           | <b>670</b>              | —                              | —           |                     |
|            |               |              |                  |                |               |                    |                    |               |                      |                         |                                |             |                     |
| <b>7C6</b> | <b>2-2-3</b>  | <b>L-249</b> | <b>6,3(0,15)</b> | <b>D-BF</b>    | <b>250</b>    | <b>1,3</b>         | <b>250.000</b>     | —             | <b>-1</b>            | <b>4.000</b>            | <b>100.000</b>                 | <b>1</b>    |                     |
|            |               |              |                  | <b>D-BF</b>    | <b>100</b>    | <b>1</b>           | <b>250.000</b>     | —             | <b>0</b>             | <b>0</b>                | <b>100.000</b>                 | <b>0,85</b> |                     |
| <b>7C7</b> | <b>5</b>      | <b>L-242</b> | <b>6,3(0,15)</b> | <b>HF</b>      | <b>250</b>    | <b>2</b>           | —                  | <b>100</b>    | <b>-3</b>            | <b>1.400</b>            | <b>2M<math>\Omega</math></b>   | <b>1,30</b> |                     |
|            |               |              |                  | <b>HF</b>      | <b>100</b>    | <b>1,8</b>         | —                  | <b>100</b>    | <b>-3</b>            | <b>1.400</b>            | <b>1,2M<math>\Omega</math></b> | <b>1,22</b> |                     |
| <b>7D7</b> | <b>3-6V</b>   | <b>L-256</b> | <b>6,3(0,45)</b> | <b>C</b>       | <b>250</b>    | <b>1,3</b>         | —                  | <b>100</b>    | <b>-3-25</b>         | <b>600</b>              | <b>1,5M<math>\Omega</math></b> | <b>0,27</b> |                     |
| <b>7E5</b> | <b>3</b>      | <b>L-239</b> | <b>6,3(0,15)</b> | <b>HF</b>      | <b>250</b>    | <b>13</b>          | —                  | —             | <b>-3,5</b>          | —                       | —                              | —           |                     |
| <b>7E6</b> | <b>2-2-3</b>  | <b>L-249</b> | <b>6,3(0,3)</b>  | <b>D-BF</b>    | <b>250</b>    | <b>7,5</b>         | —                  | <b>100</b>    | <b>-3</b>            | <b>250</b>              | <b>700.000</b>                 | <b>1,3</b>  |                     |
|            |               |              |                  | <b>D-BF</b>    | <b>100</b>    | <b>10</b>          | —                  | <b>100</b>    | <b>-1</b>            | <b>100</b>              | <b>150.000</b>                 | <b>1,6</b>  |                     |
| <b>7E7</b> | <b>2-2-5V</b> | <b>L-251</b> | <b>6,3(0,3)</b>  | <b>HF-D</b>    | <b>250</b>    | <b>7,5</b>         | —                  | <b>100</b>    | <b>-3-42</b>         | <b>330</b>              | <b>700.000</b>                 | <b>1,3</b>  |                     |
|            |               |              |                  | <b>HF-D</b>    | <b>100</b>    | <b>10</b>          | —                  | <b>100</b>    | <b>-1-36</b>         | <b>80</b>               | <b>150.000</b>                 | <b>1,6</b>  |                     |
| <b>7F7</b> | <b>3-3</b>    | <b>L-252</b> | <b>6,3(0,3)</b>  | <b>BF</b>      | <b>250</b>    | <b>2,3</b>         | —                  | —             | <b>-2</b>            | —                       | <b>44.000</b>                  | <b>1,60</b> |                     |
|            |               |              |                  | <b>BF</b>      | <b>100</b>    | <b>0,65</b>        | —                  | —             | <b>-1</b>            | —                       | <b>62.000</b>                  | <b>1,12</b> |                     |

| Référence | Type  | Culot | Tension Filament | Fonction | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne | Pente | OBSERVATIONS |
|-----------|-------|-------|------------------|----------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------|-------|--------------|
| 7F8       | 3-3   | L-253 | 6,3(0,3)         | HF       | 250           | 6                  | —                  | —             | -3                   | 500                     | —                  | 3,3   |              |
| 7G7       | 5V    | L-242 | 6,3(0,45)        | HF       | 250           | 6                  | —                  | 100           | -2-6                 | 250                     | 800.000            | 4,5   |              |
| 7G8       | 4-4   | L-254 | 6,3(0,3)         | HF       | 250           | 4,5                | —                  | 100           | -2,5                 | —                       | 225.000            | 2,1   |              |
| 7H7       | 5V    | L-242 | 6,3(0,3)         | HF       | 250           | 10                 | —                  | 150           | -2,5-19              | 200                     | 800.000            | 4,2   |              |
|           |       |       |                  | HF       | 100           | 8,2                | —                  | 100           | -1-12                | 180                     | 250.000            | 4,8   |              |
| 7J7       | 3-7V  | L-257 | 6,3(0,3)         | C        | 250           | 1,4                | —                  | 100           | -1,5-20              | 300                     | 1,5M $\Omega$      | 0,29  |              |
|           |       |       |                  | C        | 100           | 1,5                | —                  | 100           | -1,5-20              | 300                     | 0,5M $\Omega$      | 0,28  |              |
| 7K7       | 2-2-3 | L-250 | 6,3(0,3)         | D-BF     | 250           | 2,3                | —                  | —             | -2                   | 900                     | 44.000             | 1,6   |              |
| 7L7       | 5     | L-242 | 6,3(0,3)         | HF       | 250           | 4,5                | —                  | 100           | -1,5                 | 200                     | 1M $\Omega$        | 3,1   |              |
|           |       |       |                  | HF       | 100           | 5,5                | —                  | 100           | -1                   | 120                     | 100.000            | 3     |              |
| 7N7       | 3-3   | L-252 | 6,3(0,6)         | BF       | 250           | 9                  | —                  | —             | -8                   | —                       | 7.700              | 2,6   |              |
|           |       |       |                  | BF       | 100           | 10                 | —                  | —             | 0                    | 0                       | 6.700              | 3     |              |
| 7Q7       | 7V    | L-245 | 6,3(0,3)         | C        | 250           | 3,5                | —                  | 100           | -2-35                | 150                     | 1M $\Omega$        | 0,55  |              |
|           |       |       |                  | C        | 100           | 3,3                | —                  | 100           | -2-35                | 150                     | 0,5M $\Omega$      | 0,52  |              |
| 7R7       | 2-2-5 | L-251 | 6,3(0,3)         | HF-D     | 250           | 6,2                | —                  | 100           | -1                   | 125                     | 1M $\Omega$        | 3,4   |              |
|           |       |       |                  | HF-D     | 100           | 5,5                | —                  | 100           | -1                   | 125                     | 350.000            | 3     |              |
| 7S7       | 3-7V  | L-257 | 6,3(0,3)         | C        | 250           | 1,8                | —                  | 100           | -2-30                | 400                     | 1,2M $\Omega$      | 0,52  |              |
|           |       |       |                  | C        | 100           | 1,9                | —                  | 100           | -2-30                | 400                     | 0,5M $\Omega$      | 0,50  |              |
| 7T7       | 5     | L-242 | 6,3(0,3)         | HF       | 250           | 10,8               | —                  | 150           | -1                   | 60                      | 900.000            | 4,9   |              |
|           |       |       |                  | HF       | 100           | 5,3                | —                  | 100           | -1                   | 140                     | 350.000            | 4     |              |
| 7V7       | 5     | L-242 | 6,3(0,45)        | HF       | 300           | 10                 | —                  | 150           | -2                   | 160                     | 300.000            | 5,8   |              |
| 7W7       | 5     | L-243 | 6,3(0,45)        | HF       | 300           | 10                 | —                  | 150           | -2                   | 160                     | 300.000            | 5,8   |              |
| 7X7       | 2-2-3 | L-258 | 6,3(0,3)         | D-BF     | 250           | 1,9                | —                  | —             | -1                   | 500                     | 67.000             | 1,5   |              |
|           |       |       |                  | D-BF     | 100           | 1,2                | —                  | —             | 0                    | 0                       | 85.000             | 1     |              |
| 7Y4       | 2-2   | L-234 | 6,3(0,5)         | R        | 350           | 60                 | —                  | —             | —                    | —                       | —                  | —     |              |



| Référence | Type | Culot | Tension Filament | Fonction                           | Haute tension            | Intensité anodique | Résistance d'Anode                 | Tension Ecran    | Tension Polarisation       | Résistance Polarisation | Résistance interne               | Pente                    | OBSERVATIONS                                         |
|-----------|------|-------|------------------|------------------------------------|--------------------------|--------------------|------------------------------------|------------------|----------------------------|-------------------------|----------------------------------|--------------------------|------------------------------------------------------|
| 7Z4       | 2-2  | L-234 | 6,3(0,9)         | R                                  | 325                      | 100                | —                                  | —                | —                          | —                       | —                                | —                        |                                                      |
| 8A8       | 3-5  | N-352 | 9(0,3)           | TV                                 | 100<br>170               | 14<br>10           | —<br>—                             | —<br>170         | -2<br>-2                   | —<br>—                  | —<br>0,4MΩ                       | 5<br>6,2                 | Partie triode<br>Partie pentode                      |
| 8BQ7      | 3-3  | N-351 | 8,4(0,3)         | VHF                                | 150                      | 18                 | —                                  | —                | -2                         | 110                     | 5.800                            | 6                        |                                                      |
| 9AB4      | 3    | M-346 | 9,5(0,1)         | HF                                 | 250                      | 10                 | —                                  | —                | -2                         | 100                     | 12.000                           | 5                        | Identique à UC92                                     |
| 9AQ8      | 3-3  | N-351 | 26(0,1)          | C                                  | 250                      | 10                 | —                                  | —                | -2,5                       | 230                     | 9.500                            | 6                        |                                                      |
| 9A8       | 3-5  | N-352 | 9(0,3)           | C<br>C                             | 100<br>170               | 14<br>10           | —<br>—                             | —<br>170         | -2<br>-2                   | —<br>—                  | —<br>0,4MΩ                       | 5<br>6,2                 | Partie triode<br>Partie pentode                      |
| 9BM5      | 5    | M-288 | 9,5(0,3)         | P(3,5)                             | 250                      | 30                 | 7.000                              | 250              | -6                         | 180                     | 60.000                           | 7                        | Identique à 9P9                                      |
| 9BQ7      | 3-3  | N-351 | 6,3(0,4)         | TV                                 | 150                      | 18                 | —                                  | —                | -2                         | 110                     | 5.800                            | 6                        |                                                      |
| 9J6       | 3-3  | M-292 | 9,5(0,3)         | HF                                 | 100                      | 8,5                | —                                  | —                | -0,8                       | 50                      | 7.100                            | 5,3                      |                                                      |
| 9P9       | 5    | M-288 | 9,5(0,3)         | P(3,5)                             | 250                      | 30                 | 7.000                              | 250              | -6                         | 180                     | 60.000                           | 7                        | Identique à 9BM5                                     |
| 9U8       | 3-5  | N-352 | 9,45(0,3)        | TV                                 | 150<br>250               | 18<br>10           | —<br>—                             | —<br>110         | —<br>—                     | 56<br>68                | 5.000<br>0,4MΩ                   | 8,5<br>5,2               | Partie triode<br>Partie pentode                      |
| 10        | 3*   | A-47  | 7,4(1,25)        | P(0,4)<br>P(1,6)<br>P(25)<br>P(13) | 250<br>425<br>425<br>250 | 10<br>18<br>8<br>8 | 13.000<br>10.200<br>8.000<br>4.000 | —<br>—<br>—<br>— | -23,5<br>-40<br>-50<br>-28 | —<br>—<br>—<br>—        | 6.000<br>5.000<br>5.000<br>6.000 | 1,3<br>1,6<br>1,6<br>1,3 | P.P. avec courant grille<br>P.P. avec courant grille |
| 11        | 3*   | A-47  | 1,1(0,25)        | BF<br>BF                           | 135<br>90                | 3<br>2,5           | —<br>—                             | —<br>—           | -10,5<br>-4,5              | —<br>—                  | 15.000<br>15.500                 | 0,44<br>0,42             |                                                      |
| 12        | 3*   | A-47  | 1,1(0,25)        | BF<br>BF                           | 135<br>90                | 3<br>2,5           | —<br>—                             | —<br>—           | -10,5<br>-4,5              | —<br>—                  | 15.000<br>15.500                 | 0,44<br>0,42             |                                                      |
| 12AH7     | 3-3  | O-203 | 12,6(0,15)       | BF<br>BF                           | 180<br>100               | 7,6<br>3,7         | —<br>—                             | —<br>—           | -6,5<br>-3,6               | —<br>—                  | 8.400<br>10.300                  | 1,9<br>1,5               |                                                      |
| 12AJ8     | 3-7  | N-338 | 12,6(0,15)       | C                                  | 100                      | 1,7                | —                                  | 63               | -1,2                       | 150                     | 0,8MΩ                            | 0,62                     |                                                      |

| Référence     | Type  | Culot | Tension Filament | Fonction             | Haute tension     | Intensité anodique | Résistance d'Anode | Tension Ecran   | Tension Polarisation | Résistance Polarisation | Résistance interne           | Pente            | OBSERVATIONS                         |
|---------------|-------|-------|------------------|----------------------|-------------------|--------------------|--------------------|-----------------|----------------------|-------------------------|------------------------------|------------------|--------------------------------------|
| <b>12AL5</b>  | 2-2   | M-276 | 12,6(0,15)       | D                    | 150               | 9                  | —                  | —               | —                    | —                       | —                            | —                |                                      |
| <b>12AT6</b>  | 2-2-3 | M-291 | 12,6(0,15)       | D-BF<br>D-BF         | 250<br>100        | 1<br>0,8           | —<br>—             | —<br>—          | -3<br>-1             | 3.000<br>1.200          | 58.000<br>54.000             | 1,2<br>1,3       |                                      |
| <b>12AT7</b>  | 3-3   | A-94  | 12,6(0,15)       | BF<br>BF             | 250<br>100        | 10<br>11           | —<br>—             | —<br>—          | -2<br>-1             | —<br>—                  | —<br>—                       | 5,5<br>4         |                                      |
| <b>12AU6</b>  | 5     | M-284 | 12,6(0,15)       | HF<br>HF             | 250<br>100        | 10,8<br>5,2        | —<br>—             | 150<br>100      | -1<br>-1             | 65<br>130               | 2M $\Omega$<br>600.000       | 5,2<br>3,9       |                                      |
| <b>12AU7</b>  | 3-3   | N-94  | 12,6(0,15)       | HF<br>HF             | 250<br>100        | 10,5<br>11,8       | 100.000<br>—       | —<br>—          | -8,5<br>0            | 800<br>0                | 7.700<br>6.250               | 2,2<br>3,1       |                                      |
| <b>12AU7R</b> | 3-3   | N-94  | 12,6(0,15)       | HF                   | 250               | 10,5               | —                  | —               | -8,5                 | 800                     | 7.700                        | 2,2              | Equivalent à 12AU7 renforcé          |
| <b>12AV6</b>  | 2-2-3 | M-291 | 12,6(0,15)       | BF<br>BF             | 250<br>100        | 1,2<br>0,5         | —<br>—             | —<br>—          | -2<br>-1             | 1.600<br>2.000          | 80.000<br>62.500             | 1,60<br>1,25     |                                      |
| <b>12AW6</b>  | 5     | M-286 | 12,6(0,15)       | HF<br>HF<br>BF       | 250<br>100<br>250 | 7<br>5,5<br>5,5    | —<br>—<br>—        | 150<br>100<br>— | -1,4<br>-0,7<br>-4,5 | 200<br>100<br>825       | 800.000<br>300.000<br>11.000 | 5<br>4,75<br>3,8 | Montage en triode                    |
| <b>12AX7</b>  | 3-3   | N-335 | 12,6(0,15)       | BF                   | 250               | —                  | 250.000            | —               | -2                   | 2.700                   | 62.000                       | 1,6              |                                      |
| <b>12AX7R</b> | 3-3   | N-335 | 12,6(0,15)       | BF                   | 250               | —                  | 250.000            | —               | -2                   | 2.700                   | 62.000                       | 1,6              | Equivalent à 12AX7 renforcé          |
| <b>12A5</b>   | 5     | A-82  | 12,6(0,3)        | P(3,4)<br>P(0,8)     | 180<br>100        | 45<br>17           | 3.300<br>4.500     | 180<br>100      | -25<br>-15           | 280<br>750              | 35.000<br>50.000             | 2,4<br>1,7       |                                      |
| <b>12A6</b>   | 4     | O-170 | 12,6(0,15)       | P(3,4)               | 250               | 30                 | 13.500             | 250             | -12,5                | 370                     | 102.000                      | 0,97             |                                      |
| <b>12A7</b>   | 2-5   | A-87  | 12,6(0,3)        | R-P(0,5)<br>R-P(0,5) | 135<br>125        | 9<br>30            | 13.500<br>—        | 135<br>—        | -13,5<br>—           | 1.175<br>—              | 102.000<br>—                 | 0,97<br>—        | Partie pentode<br>Partie redresseuse |
| <b>12A8</b>   | 7V    | O-183 | 12,6(0,15)       | C<br>C               | 250<br>100        | 3,5<br>1,1         | —<br>—             | 100<br>50       | -3-35<br>-1,5-20     | 300<br>300              | 360.000<br>600.000           | 0,55<br>0,36     |                                      |
| <b>12BA6</b>  | 5     | M-284 | 12,6(0,15)       | HF<br>HF             | 250<br>100        | 11<br>10,8         | —<br>—             | 100<br>100      | -1<br>-1             | 68<br>68                | 1,5M $\Omega$<br>250.000     | 4,4<br>4,3       |                                      |



| Référence | Type  | Culot | Tension Filament | Fonction                     | Haute tension            | Intensité anodique   | Résistance d'Anode           | Tension Ecran        | Tension Polarisation | Résistance Polarisation          | Résistance interne                       | Pente                        | OBSERVATIONS                                     |
|-----------|-------|-------|------------------|------------------------------|--------------------------|----------------------|------------------------------|----------------------|----------------------|----------------------------------|------------------------------------------|------------------------------|--------------------------------------------------|
| 12BA7     | 7     | N-334 | 12,6(0,15)       | C<br>C                       | 250<br>100               | 3,6<br>3,8           | —<br>—                       | 100<br>100           | -1<br>-1             | —<br>—                           | 1MΩ<br>0,5MΩ                             | 0,95<br>0,95                 |                                                  |
| 12BD6     | 5     | M-284 | 12,6(0,15)       | HF<br>HF                     | 250<br>100               | 9<br>13              | —<br>—                       | 100<br>100           | -3<br>-1             | 240<br>60                        | 700.000<br>120.000                       | 2,35<br>2                    |                                                  |
| 12BE6     | 7     | M-290 | 12,6(0,15)       | C<br>C                       | 250<br>100               | 3<br>2,8             | —<br>—                       | 100<br>100           | -1,5<br>-1,5         | 150<br>150                       | 1MΩ<br>500.000                           | 0,47<br>0,45                 |                                                  |
| 12BF6     | 2-2-3 | M-291 | 12,6(0,15)       | D-BF                         | 250                      | 9,5                  | —                            | —                    | -9                   | 950                              | 8.500                                    | 1,9                          |                                                  |
| 12B7      | 5V    | L-242 | 12,6(0,15)       | HF<br>HF                     | 250<br>100               | 9,2<br>13            | —<br>—                       | 100<br>100           | -3<br>-1             | 240<br>60                        | 800.000<br>120.000                       | 2<br>2,3                     |                                                  |
| 12B8      | 3-5   | O-210 | 12,6(0,3)        | HF<br>BF                     | 90<br>90                 | 7<br>2,8             | —<br>—                       | 90<br>—              | -3<br>0              | —<br>—                           | 200.000<br>37.000                        | 1,8<br>2,4                   | Partie pentode<br>Partie triode                  |
| 12C8      | 2-2-5 | O-196 | 12,6(0,15)       | HF-D<br>HF-D<br>D-BF<br>D-BF | 250<br>100<br>250<br>100 | 6<br>5,8<br>6<br>5,8 | —<br>—<br>250.000<br>250.000 | 100<br>100<br>—<br>— | -3<br>-3<br>-3<br>-3 | 300<br>300<br>1.600<br>3.500     | 800.000<br>300.000<br>800.000<br>300.000 | 1<br>0,95<br>1<br>0,95       | 1,2 MΩ série sur écran<br>1,2 MΩ série sur écran |
| 12E5      | 3     | O-164 | 12,6(0,15)       | BF                           | 250                      | 5                    | —                            | —                    | -13,5                | 2.700                            | 9.500                                    | 1,45                         |                                                  |
| 12F5      | 3     | O-167 | 12,6(0,15)       | BF<br>BF                     | 250<br>100               | 0,9<br>0,1           | 250.000<br>250.000           | —<br>—               | -2<br>-1             | 4.500<br>10.000                  | 66.000<br>85.000                         | 1,5<br>1,15                  |                                                  |
| 12H6      | 2-2   | O-161 | 12,6(0,15)       | D                            | 117                      | 8                    | —                            | —                    | —                    | —                                | —                                        | —                            |                                                  |
| 12J5      | 3     | O-164 | 12,6(0,15)       | BF<br>BF                     | 250<br>100               | 9<br>10              | 100.000<br>100.000           | —<br>—               | -8<br>0              | 3.300<br>6.000                   | 7.700<br>6.700                           | 2,6<br>3                     |                                                  |
| 12J7      | 5     | O-180 | 12,6(0,15)       | HF<br>HF<br>BF<br>BF         | 250<br>100<br>250<br>100 | 2<br>2<br>2<br>2     | —<br>—<br>250.000<br>250.000 | 100<br>100<br>—<br>— | -3<br>-3<br>-3<br>-3 | 1.200<br>1.200<br>1.200<br>2.600 | 1MΩ<br>1MΩ<br>1MΩ<br>1MΩ                 | 1,22<br>1,18<br>1,22<br>1,18 | 1 MΩ série sur écran<br>0,5 MΩ série sur écran   |
| 12K7      | 5     | O-180 | 12,6(0,15)       | HF<br>HF                     | 250<br>100               | 7<br>9,5             | —<br>—                       | 100<br>100           | -3-42<br>-3-38       | 300<br>250                       | 800.000<br>150.000                       | 1,45<br>1,65                 |                                                  |

| Référence    | Type  | Culot | Tension Filament | Fonction             | Haute tension            | Intensité anodique   | Résistance d'Anode           | Tension Ecran        | Tension Polarisation | Résistance Polarisation    | Résistance interne                                               | Pente                        | OBSERVATIONS                                                 |
|--------------|-------|-------|------------------|----------------------|--------------------------|----------------------|------------------------------|----------------------|----------------------|----------------------------|------------------------------------------------------------------|------------------------------|--------------------------------------------------------------|
| <b>12K8</b>  | 3-6V  | O-213 | 12,6(0,15)       | C<br>C               | 250<br>100               | 2,5<br>2,3           | —<br>—                       | 100<br>100           | -3-30<br>-3-30       | 250<br>250                 | 600.000<br>400.000                                               | 0,35<br>0,32                 |                                                              |
| <b>12L8</b>  | 5-5   | O-214 | 12,6(0,15)       | P(1)<br>P(0,3)       | 180<br>110               | 13<br>6,1            | 10.000<br>14.000             | 180<br>110           | -9<br>-5,5           | 570<br>800                 | 160.000<br>220.000                                               | 2,1<br>1,7                   |                                                              |
| <b>12N8</b>  | 2-2-5 | N-336 | 12,6(0,3)        | HF-D                 | 250                      | 5                    | —                            | —                    | -2-35                | 295                        | 1,5M $\Omega$                                                    | 2,2                          | 0,1 M $\Omega$ série sur écran                               |
| <b>12Q7</b>  | 2-2-3 | O-188 | 12,6(0,15)       | D-BF<br>D-BF         | 250<br>100               | 1,1<br>0,35          | 250.000<br>250.000           | —<br>—               | -3<br>-1,5           | 5.000<br>3.500             | 58.000<br>88.000                                                 | 1,2<br>0,8                   |                                                              |
| <b>12SA7</b> | 7V    | O-185 | 12,6(0,15)       | C<br>C               | 250<br>100               | 3,5<br>3,3           | —<br>—                       | 100<br>100           | -2-35<br>-2-35       | 180<br>180                 | 1M $\Omega$<br>0,5M $\Omega$                                     | 0,45<br>0,42                 |                                                              |
| <b>12SC7</b> | 3-3   | O-201 | 12,6(0,15)       | BF<br>BF             | 250<br>100               | 2<br>0,2             | 250.000<br>250.000           | —<br>—               | -2<br>-1             | 1.400<br>5.000             | 53.000<br>—                                                      | 1,32<br>—                    |                                                              |
| <b>12SF5</b> | 3     | O-165 | 12,6(0,15)       | BF<br>BF             | 250<br>100               | 0,9<br>0,15          | 250.000<br>250.000           | —<br>—               | -2<br>-1             | 3.750<br>6.500             | 66.000<br>85.000                                                 | 1,5<br>1,15                  |                                                              |
| <b>12SF7</b> | 2-5V  | O-193 | 12,6(0,15)       | D-BF<br>D-BF         | 250<br>100               | 12,4<br>12           | —<br>—                       | 100<br>100           | -1-35<br>-1-35       | 70<br>70                   | 700.000<br>200.000                                               | 2,05<br>1,97                 |                                                              |
| <b>12SG7</b> | 5V    | O-176 | 12,6(0,15)       | HF<br>HF             | 250<br>100               | 9,2<br>8,2           | —<br>—                       | 150<br>100           | -2,5-17<br>-1-11     | 200<br>80                  | 1M $\Omega$<br>250.000                                           | 4<br>4,1                     |                                                              |
| <b>12SH7</b> | 5     | O-176 | 12,6(0,15)       | HF<br>HF             | 250<br>100               | 10,8<br>5,3          | —<br>—                       | 150<br>100           | -1<br>-1             | 70<br>130                  | 900.000<br>350.000                                               | 4,9<br>4                     |                                                              |
| <b>12SJ7</b> | 5     | O-173 | 12,6(0,15)       | HF<br>HF<br>BF<br>BF | 250<br>100<br>250<br>100 | 3<br>2,9<br>3<br>2,9 | —<br>—<br>250.000<br>250.000 | 100<br>100<br>—<br>— | -3<br>-3<br>-3<br>-3 | 750<br>750<br>860<br>1.700 | 1,5M $\Omega$<br>0,7M $\Omega$<br>1,5M $\Omega$<br>0,7M $\Omega$ | 1,65<br>1,57<br>1,65<br>1,57 | 1 M $\Omega$ série sur écran<br>1 M $\Omega$ série sur écran |
| <b>12SK7</b> | 5V    | O-173 | 12,6(0,15)       | HF<br>HF             | 250<br>100               | 9,2<br>13            | —<br>—                       | 100<br>100           | -3-35<br>-3-35       | 200<br>150                 | 800.000<br>120.000                                               | 2<br>2,35                    |                                                              |
| <b>12SL7</b> | 3-3   | O-204 | 12,6(0,15)       | BF                   | 250                      | 2,3                  | —                            | —                    | -2                   | —                          | 44.000                                                           | 1,6                          |                                                              |



| Référence    | Type  | Culot | Tension Filament | Fonction                  | Haute tension     | Intensité anodique | Résistance d'Anode       | Tension Ecran     | Tension Polarisation | Résistance Polarisation | Résistance interne         | Pente              | OBSERVATIONS |
|--------------|-------|-------|------------------|---------------------------|-------------------|--------------------|--------------------------|-------------------|----------------------|-------------------------|----------------------------|--------------------|--------------|
| <b>12SN7</b> | 3-3   | O-204 | 12,6(0,3)        | BF<br>BF                  | 250<br>100        | 9<br>10            | —<br>—                   | —<br>—            | -8<br>0              | —<br>0                  | 7.700<br>6.700             | 2,6<br>3           |              |
| <b>12SQ7</b> | 2-2-3 | O-187 | 12,6(0,15)       | D-BF<br>D-BF              | 250<br>100        | 0,9<br>0,1         | 250.000<br>250.000       | —<br>—            | -1,5<br>-1           | 4.000<br>10.000         | 91.000<br>—                | 1,1<br>—           |              |
| <b>12SR7</b> | 2-2-3 | O-187 | 12,6(0,15)       | D-BF<br>D-BF              | 250<br>100        | 9,5<br>0,5         | 100.000<br>100.000       | —<br>—            | -9<br>-3             | 5.000<br>6.000          | 8.500<br>—                 | 1,9<br>—           |              |
| <b>12SW7</b> | 2-2-3 | O-187 | 12,6(0,15)       | D-BF                      | 250               | 9,5                | —                        | —                 | -9                   | 950                     | 8.500                      | 1,9                |              |
| <b>12SX7</b> | 3-3   | O-204 | 12,6(0,3)        | BF<br>BF                  | 250<br>100        | —<br>—             | —<br>—                   | —<br>—            | -8<br>0              | —<br>—                  | 7.700<br>6.700             | —<br>—             |              |
| <b>12SY7</b> | 7     | O-185 | 12,6(0,15)       | C                         | 250               | 3,5                | —                        | 100               | -2                   | 160                     | 1MΩ                        | 0,45               |              |
| <b>12Z3</b>  | 2     | A-50  | 12,6(0,3)        | R                         | 235               | 55                 | —                        | —                 | —                    | —                       | —                          | —                  |              |
| <b>14AF7</b> | 3-3   | L-252 | 12,6(0,15)       | BF<br>BF                  | 250<br>100        | 9<br>10,8          | —<br>—                   | —<br>—            | -10<br>0             | 1.100<br>0              | 7.600<br>6.500             | 2,1<br>2,6         |              |
| <b>14A4</b>  | 3     | L-238 | 12,6(0,15)       | BF<br>BF                  | 250<br>100        | 9<br>10            | —<br>—                   | —<br>—            | -8<br>0              | 900<br>0                | 7.700<br>6.700             | 2,6<br>3           |              |
| <b>14A5</b>  | 4     | L-241 | 12,6(0,15)       | P(2,8)                    | 250               | 30                 | 7.500                    | 250               | -12,5                | 350                     | 70.000                     | 3                  |              |
| <b>14A7</b>  | 5V    | L-242 | 12,6(0,15)       | HF<br>HF                  | 250<br>100        | 9,2<br>13          | —<br>—                   | 100<br>100        | -3<br>-1             | 250<br>60               | 800.000<br>120.000         | 2<br>2,35          |              |
| <b>14B6</b>  | 2-2-3 | L-248 | 12,6(0,15)       | D-BF<br>D-BF              | 250<br>100        | 0,9<br>0,4         | —<br>—                   | —<br>—            | -2<br>-1             | 2.200<br>2.500          | 91.000<br>110.000          | 1,1<br>0,9         |              |
| <b>14B8</b>  | 7V    | L-246 | 12,6(0,15)       | C<br>C                    | 250<br>100        | 3,5<br>1,1         | —<br>—                   | 100<br>50         | -3-35<br>-1,5-20     | 500<br>750              | 360.000<br>600.000         | 0,55<br>0,36       |              |
| <b>14C5</b>  | 4     | L-241 | 12,6(0,22)       | P(4,5)<br>P(5,5)<br>P(10) | 250<br>315<br>250 | 45<br>34<br>70     | 5.000<br>8.500<br>10.000 | 250<br>225<br>250 | -12,5<br>-13<br>-15  | 250<br>360<br>200       | 52.000<br>77.000<br>52.000 | 4,1<br>3,75<br>4,1 |              |
| <b>14C7</b>  | 5     | L-242 | 12,6(0,15)       | HF<br>HF                  | 250<br>100        | 2,2<br>5,7         | —<br>—                   | 100<br>100        | -3<br>-1             | 1.000<br>130            | 1MΩ<br>400.000             | 1,57<br>2,27       |              |

| Référence   | Type  | Catot | Tension Filament | Fonction     | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne             | Pente        | OBSERVATIONS     |
|-------------|-------|-------|------------------|--------------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------------------|--------------|------------------|
| <b>14E6</b> | 2-2-3 | L-249 | 12,6(,015)       | D-BF<br>D-BF | 250<br>100    | 9,5<br>3,9         | —<br>—             | —<br>—        | -9<br>-3             | 950<br>800              | 8.500<br>11.000                | 1,9<br>1,5   |                  |
| <b>14E7</b> | 2-2-5 | L-251 | 12,6(0,15)       | HF-D<br>HF-D | 250<br>100    | 7,5<br>10          | —<br>—             | 100<br>100    | -3-42<br>-1-36       | 330<br>80               | 700.000<br>150.000             | 1,3<br>1,6   |                  |
| <b>14F7</b> | 3-3   | L-252 | 12,6(0,15)       | BF<br>BF     | 250<br>100    | 2,3<br>0,65        | —<br>—             | —<br>—        | -2<br>-1             | —<br>—                  | 44.000<br>62.000               | 1,6<br>1,12  |                  |
| <b>14F8</b> | 3-3   | L-253 | 12,6(0,15)       | HF           | 250           | 6                  | —                  | —             | -3                   | 500                     | —                              | 3,3          |                  |
| <b>14H7</b> | 5V    | L-242 | 12,6(0,15)       | HF<br>HF     | 250<br>100    | 9,5<br>8,2         | —<br>—             | 150<br>100    | -2,5-19<br>-1-12     | 200<br>90               | 800.000<br>250.000             | 3,8<br>3,8   |                  |
| <b>14J7</b> | 3-7V  | L-257 | 12,6(0,15)       | C<br>C       | 250<br>100    | 1,4<br>1,5         | —<br>—             | 100<br>100    | -3-20<br>-3-20       | 750<br>750              | 1,5M $\Omega$<br>0,5M $\Omega$ | 0,29<br>0,28 |                  |
| <b>14N7</b> | 3-3   | L-252 | 12,6(0,3)        | BF<br>BF     | 250<br>100    | 9<br>10            | 100.000<br>100.000 | —<br>—        | -8<br>0              | 900<br>0                | 7.700<br>6.700                 | 2,6<br>3     |                  |
| <b>14Q7</b> | 7V    | L-245 | 12,6(0,15)       | C<br>C       | 250<br>100    | 3,5<br>3,3         | —<br>—             | 100<br>100    | -2<br>-2             | 130<br>130              | 1M $\Omega$<br>0,5M $\Omega$   | 0,55<br>0,52 |                  |
| <b>14R7</b> | 2-2-5 | L-251 | 12,6(0,15)       | HF-D<br>HF-D | 250<br>100    | 6,2<br>5,5         | —<br>—             | 100<br>100    | -1<br>-1             | 125<br>125              | 1M $\Omega$<br>350.000         | 3,4<br>3     |                  |
| <b>14S7</b> | 3-7V  | L-257 | 12,6(0,15)       | C<br>C       | 250<br>100    | 1,8<br>1,9         | —<br>—             | 100<br>100    | -2-38<br>-2-25       | 400<br>400              | 1,2M $\Omega$<br>0,5M $\Omega$ | 0,52<br>0,50 |                  |
| <b>14W7</b> | 5     | L-243 | 12,6(0,22)       | HF           | 300           | 10                 | —                  | 150           | -2                   | 160                     | 300.000                        | 5,8          |                  |
| <b>14Y4</b> | 2-2   | L-234 | 12,6(0,3)        | R            | 325           | 70                 | —                  | —             | —                    | —                       | —                              | —            |                  |
| <b>15</b>   | 5     | A-64  | 2(0,22)          | HF<br>HF     | 135<br>67,5   | 1,81<br>1,85       | —<br>—             | 67,5<br>67,5  | -1,5<br>-1,5         | 700<br>700              | 800.000<br>630.000             | 0,75<br>0,71 |                  |
| <b>15A6</b> | 5     | N-308 | 15(0,3)          | TV           | 180           | 36                 | —                  | 180           | -2,9                 | —                       | 0,1M $\Omega$                  | 10           | Identique à PL83 |
| <b>16A5</b> | 5     | N-307 | 16,5(0,3)        | TV(4)        | 200           | 45                 | 4.000              | 200           | -14                  | —                       | 20.000                         | 9,5          | Identique à PL82 |



| Référence    | Type    | Culot | Tension Filament | Fonction          | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne           | Pente        | OBSERVATIONS                    |
|--------------|---------|-------|------------------|-------------------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|------------------------------|--------------|---------------------------------|
| <b>16CN8</b> | 3-5     | N-316 | 16(0,3)          | BF<br>P(3,5)      | 250<br>250    | 9<br>35            | —<br>5.000         | —<br>200      | -12<br>-16           | 220<br>400              | 12.000<br>—                  | 4,9<br>6,4   | Partie triode<br>Partie pentode |
| <b>17C8</b>  | 2-2-5V  | N-336 | 17(0,1)          | HF-D              | 250           | 5                  | —                  | —             | -2-35                | 295                     | 1,5M $\Omega$                | 2,2          | 0,1 M $\Omega$ série sur écran  |
| <b>17Z3</b>  | 2       | N-330 | 17(0,3)          | TV                | —             | 150                | —                  | —             | —                    | —                       | —                            | —            | Identique à PY81                |
| <b>18</b>    | 5       | A-73  | 14(0,3)          | P(3,2)<br>P(11)   | 250<br>315    | 34<br>62           | 7.000<br>10.000    | 250<br>285    | -16,5<br>-24         | 410<br>330              | 80.000<br>—                  | 2,5<br>—     |                                 |
| <b>19</b>    | 3-3*    | A-68  | 2(0,26)          | P(2,1)            | 135           | 5                  | 10.000             | —             | 0                    | —                       | —                            | —            | Push-pull classe B              |
| <b>19AJ8</b> | 3-7     | N-338 | 19(0,1)          | C                 | 100           | 1,7                | —                  | 63            | -1,2                 | 150                     | 0,8M $\Omega$                | 0,62         | Identique à UCH81               |
| <b>19D8</b>  | 3-7V    | N-338 | 19(0,1)          | C                 | 250           | 2,5                | —                  | 92            | -2-28,5              | 150                     | 1M $\Omega$                  | 0,7          |                                 |
| <b>19FL8</b> | 2-2-5   | N-336 | 19(0,1)          | HF-D              | 200           | 11                 | —                  | —             | -1,5                 | 100                     | 0,6M $\Omega$                | 4,5          |                                 |
| <b>19T8</b>  | 2-2-2-3 | A-93  | 18,9(0,15)       | D-BF<br>D-BF      | 250<br>100    | 1<br>0,8           | —<br>—             | —<br>—        | -3<br>-1             | 3.000<br>1.200          | —<br>—                       | 1,2<br>1,3   |                                 |
| <b>19W3</b>  | 2       | N-309 | 19(0,3)          | TV                | —             | 180                | —                  | —             | —                    | —                       | —                            | —            | Identique à PY80                |
| <b>19Y3</b>  | 2       | N-309 | 19(0,3)          | R                 | 250           | 180                | —                  | —             | —                    | —                       | —                            | —            | Identique à PY82                |
| <b>20</b>    | 3*      | A-47  | 3,3(0,13)        | P(0,1)<br>P(0,05) | 135<br>90     | 6<br>2,8           | 6.500<br>9.600     | —<br>—        | -22,5<br>-16,5       | —<br>—                  | 5.850<br>7.800               | 0,6<br>0,45  |                                 |
| <b>20J8</b>  | 3-7V    | O-212 | 20(0,15)         | C<br>C            | 250<br>100    | 1,5<br>1,4         | —<br>—             | 100<br>100    | -3-20<br>-3-20       | 300<br>300              | 2M $\Omega$<br>0,9M $\Omega$ | 0,27<br>0,25 |                                 |
| <b>21A6</b>  | 5       | N-306 | 21,5(0,3)        | TV                | 180           | 430                | —                  | —             | 0                    | —                       | —                            | —            | Identique à PL81                |
| <b>21A7</b>  | 3-7V    | L-257 | 21(0,16)         | C                 | 250           | 1,3                | —                  | 100           | -3                   | 600                     | 2M $\Omega$                  | 0,27         |                                 |
| <b>21B6</b>  | 5       | N-306 | 21,5(0,3)        | TV                | 180           | 45                 | —                  | 200           | -28                  | 500                     | 11.000                       | 6            |                                 |
| <b>21TH8</b> | 3-6V    | O-211 | 21(0,2)          | C                 | 250           | 6                  | —                  | 70            | -3-28                | 200                     | 1M $\Omega$                  | 0,8          |                                 |
| <b>22</b>    | 4*      | A-48  | 3,3(0,13)        | HF                | 135           | 3,7                | —                  | 67,5          | -1,5                 | —                       | 250.000                      | 0,5          |                                 |
| <b>24</b>    | 4       | A-63  | 2,5(1,75)        | HF                | 250           | 4                  | —                  | 90            | -3                   | 500                     | 600.000                      | 1,05         |                                 |

| Référence    | Type  | Culot | Tension Filament | Fonction                   | Haute tension     | Intensité anodique | Résistance d'Anode      | Tension Ecran     | Tension Polarisation | Résistance Polarisation | Résistance interne         | Pente                | OBSERVATIONS                                           |
|--------------|-------|-------|------------------|----------------------------|-------------------|--------------------|-------------------------|-------------------|----------------------|-------------------------|----------------------------|----------------------|--------------------------------------------------------|
| <b>25AC5</b> | 3     | O-164 | 25(0,3)          | P(2)<br>P(6)               | 110<br>180        | 45<br>4            | 2.000<br>4.800          | —<br>—            | +15<br>0             | —<br>0                  | 15.200<br>—                | 3,8<br>—             | Couplage électronique<br>Push-pull avec courant grille |
| <b>25A6</b>  | 5     | O-174 | 25(0,3)          | P(2,2)<br>P(2)<br>P(0,9)   | 160<br>135<br>90  | 33<br>37<br>20     | 5.000<br>4.000<br>4.500 | 120<br>135<br>95  | -18<br>-20<br>-15    | 630<br>450<br>450       | 42.000<br>35.000<br>45.000 | 2,37<br>2,45<br>2,00 |                                                        |
| <b>25A7</b>  | 2-5   | O-194 | 25(0,3)          | R<br>P(0,77)               | 117<br>100        | 75<br>20,5         | —<br>4.500              | —<br>100          | —<br>-15             | —<br>600                | —<br>50.000                | —<br>1,8             | Partie valve<br>Partie pentode                         |
| <b>25BQ6</b> | 5     | O-181 | 25(0,3)          | TV                         | 250               | 55                 | —                       | 150               | -22,5                | 400                     | —                          | 5,5                  |                                                        |
| <b>25B5</b>  | 3-3   | A-77  | 25(0,3)          | P(3,8)<br>P(2)             | 180<br>110        | 46<br>45           | 4.000<br>2.000          | 100<br>110        | 0<br>0               | 0<br>0                  | 15.000<br>11.500           | 2,3<br>2,2           | Couplage électronique                                  |
| <b>25B6</b>  | 5     | O-174 | 25(0,3)          | P(7,1)<br>P(4,3)<br>P(2,4) | 200<br>135<br>105 | 62<br>61<br>48     | 2.500<br>1.700<br>1.700 | 135<br>135<br>105 | -23<br>-22<br>-18    | 350<br>340<br>360       | 18.000<br>15.000<br>15.500 | 5<br>5<br>4,8        |                                                        |
| <b>25B8</b>  | 3-5   | O-210 | 25(0,15)         | HF<br>BF                   | 100<br>100        | 7,6<br>0,6         | —<br>—                  | 100<br>—          | -1-43<br>-1          | —<br>—                  | 185.000<br>75.000          | 2<br>1,5             | Partie pentode<br>Partie triode                        |
| <b>25CD6</b> | 5     | O-182 | 25(0,6)          | TV                         | 400               | 38                 | —                       | 300               | —                    | 500                     | —                          | —                    |                                                        |
| <b>25C6</b>  | 4     | O-170 | 25(0,3)          | P(6)<br>P(3,6)             | 200<br>135        | 61<br>58           | 2.600<br>2.000          | 135<br>135        | -14<br>-13,5         | 220<br>220              | 18.300<br>9.300            | 7,1<br>7             |                                                        |
| <b>25D8</b>  | 2-3-5 | O-217 | 25(0,15)         | HF-D<br>BF                 | 100<br>100        | 8,5<br>0,5         | —<br>—                  | 100<br>—          | -3<br>-1             | —<br>—                  | 200.000<br>91.000          | 1,9<br>1,1           | Partie pentode<br>Partie triode                        |
| <b>25L6</b>  | 4     | O-170 | 25(0,3)          | P(4,3)<br>P(2,1)           | 200<br>110        | 50<br>49           | 3.000<br>2.000          | 110<br>110        | -8<br>-7,5           | 150<br>140              | 30.000<br>13.000           | 9,5<br>9             |                                                        |
| <b>25N6</b>  | 3-3   | O-206 | 25(0,3)          | P(3,8)<br>P(2)             | 180<br>110        | 46<br>45           | 4.000<br>2.000          | 100<br>110        | 0                    | 0<br>0                  | 15.000<br>11.500           | 2,3<br>2,2           | Couplage électronique                                  |
| <b>25T3</b>  | 2     | O-318 | 25(0,3)          | D                          | —                 | —                  | —                       | —                 | —                    | —                       | —                          | —                    | Télévision                                             |
| <b>25X6</b>  | 2-2   | O-161 | 25(0,15)         | R                          | 125               | 60                 | —                       | —                 | —                    | —                       | —                          | —                    |                                                        |
| <b>25Y5</b>  | 2-2   | A-71  | 25(0,3)          | R                          | 235               | 75                 | —                       | —                 | —                    | —                       | —                          | —                    |                                                        |



| Référence | Type | Culot | Tension Filament | Fonction           | Haute tension      | Intensité anodique | Résistance d'Anode | Tension Ecran        | Tension Polarisation    | Résistance Polarisation | Résistance interne                | Pente                | OBSERVATIONS                   |
|-----------|------|-------|------------------|--------------------|--------------------|--------------------|--------------------|----------------------|-------------------------|-------------------------|-----------------------------------|----------------------|--------------------------------|
| 25Y6      | 2-2  | O-161 | 25(0,15)         | R                  | 235                | 75                 | —                  | —                    | —                       | —                       | —                                 | —                    |                                |
| 25Z3      | 2    | A-50  | 25(0,3)          | R                  | 250                | 50                 | —                  | —                    | —                       | —                       | —                                 | —                    |                                |
| 25Z5      | 2-2  | A-71  | 25(0,3)          | R                  | 117                | 75                 | —                  | —                    | —                       | —                       | —                                 | —                    |                                |
| 25Z6      | 2-2  | O-161 | 25(0,3)          | R                  | 235                | 75                 | —                  | —                    | —                       | —                       | —                                 | —                    |                                |
| 26        | 3*   | A-47  | 1,5(1,05)        | BF<br>BF<br>BF     | 180<br>135<br>90   | 6,2<br>5,5<br>2,9  | —<br>—<br>—        | —<br>—<br>—          | -14,5<br>-10<br>-7      | —<br>—<br>—             | 7.300<br>7.600<br>9.800           | 1,15<br>1,10<br>0,93 |                                |
| 26A7      | 5-5  | O-214 | 26,5(0,6)        | P(0,2)             | 26,5               | 20                 | 1.500              | 26,5                 | -4,5                    | —                       | 2.500                             | 5,5                  |                                |
| 27        | 3    | A-62  | 2,5(1,75)        | BF<br>BF<br>BF     | 250<br>135<br>90   | 5,2<br>4,7<br>3    | —<br>—<br>—        | —<br>—<br>—          | -21<br>-9<br>-6         | 4.000<br>2.000<br>2.000 | 9.250<br>9.000<br>10.000          | 0,97<br>1<br>0,9     |                                |
| 28D7      | 4-4  | L-255 | 28(0,4)          | HF                 | 28                 | 12,5               | 4.000              | 28                   | -3,5                    | —                       | 4.200                             | 3,4                  |                                |
| 28Z5      | 2-2  | L-235 | 28(0,24)         | R                  | 325                | 100                | —                  | —                    | —                       | —                       | —                                 | —                    |                                |
| 30        | 3*   | A-47  | 2(0,06)          | BF<br>BF<br>BF     | 180<br>135<br>90   | 3,1<br>3<br>2,5    | —<br>—<br>—        | —<br>—<br>—          | -13,5<br>-9<br>-4,5     | —<br>—<br>—             | 10.300<br>10.300<br>11.000        | 0,9<br>0,9<br>0,85   |                                |
| 31        | 3*   | A-47  | 2(0,13)          | P(0,37)<br>P(0,18) | 180<br>135         | 12,3<br>8          | 5.700<br>7.000     | —<br>—               | -30<br>-22,5            | —<br>—                  | 3.600<br>4.100                    | 1,05<br>0,92         |                                |
| 32        | 4*   | A-48  | 2(0,06)          | HF<br>HF           | 180<br>135         | 1,7<br>1,7         | —<br>—             | 67,5<br>67,5         | -3<br>-3                | —<br>—                  | 1,2M $\Omega$<br>950.000          | 0,65<br>0,64         |                                |
| 32L7      | 2-4  | O-194 | 32,5(0,3)        | R<br>P(1)          | 125<br>110         | 60<br>40           | —<br>2.600         | —<br>110             | —<br>-7,5               | —<br>160                | —<br>15.000                       | —<br>6               | Partie diode<br>Partie tétrode |
| 33        | 5*   | A-60  | 2(0,26)          | P(1,4)<br>P(0,7)   | 180<br>135         | 22<br>14,5         | 6.000<br>7.000     | 180<br>135           | -18<br>-13,5            | —<br>—                  | 55.000<br>50.000                  | 1,7<br>1,45          |                                |
| 34        | 5V*  | A-49  | 2(0,06)          | HF<br>HF<br>HF     | 180<br>135<br>67,5 | 2,8<br>2,8<br>2,7  | —<br>—<br>—        | 67,5<br>67,5<br>67,5 | -3-22<br>-3-22<br>-3-22 | —<br>—<br>—             | 1M $\Omega$<br>600.000<br>400.000 | 0,62<br>0,60<br>0,56 |                                |

| Référence | Type | Culot | Tension Filament | Fonction                     | Haute tension     | Intensité anodique | Résistance d'Anode         | Tension Ecran     | Tension Polarisation | Résistance Polarisation | Résistance Interne            | Pente             | OBSERVATIONS               |
|-----------|------|-------|------------------|------------------------------|-------------------|--------------------|----------------------------|-------------------|----------------------|-------------------------|-------------------------------|-------------------|----------------------------|
| 35/51     | 4V   | A-63  | 2,5(1,75)        | HF                           | 250               | 6,5                | —                          | 90                | -3-40                | 350                     | 400.000                       | 1,05              |                            |
| 35A5      | 4    | L-241 | 35(0,15)         | P(3,3)<br>P(1,5)             | 200<br>110        | 41<br>40           | 4.500<br>2.500             | 110<br>110        | -8<br>-7,5           | 180<br>175              | 40.000<br>14.000              | 5,9<br>5,8        |                            |
| 35B5      | 5    | M-288 | 35(0,15)         | P(1,5)                       | 110               | 40                 | 2.500                      | 110               | -7,5                 | 170                     | —                             | 5,8               |                            |
| 35C5      | 5    | M-287 | 35(0,15)         | P(1,5)                       | 110               | 41                 | 2.500                      | 110               | -7,5                 | 150                     | —                             | 5,8               |                            |
| 35FN5     | 5    | O-362 | 35(0,3)          | TV                           | 7.500             | 465                | —                          | 170               | -150                 | —                       | 3.500                         | 17                | Caractéristiques maximales |
| 35L6      | 4    | O-170 | 35(0,15)         | P(3,3)<br>P(1,5)             | 200<br>110        | 41<br>40           | 4.500<br>2.500             | 110<br>110        | -8<br>-7,5           | 180<br>175              | 40.000<br>14.000              | 5,9<br>5,8        |                            |
| 35W4      | 2    | M-274 | 35(0,15)         | R                            | 117               | 100                | —                          | —                 | —                    | —                       | —                             | —                 |                            |
| 35Y4      | 2    | L-233 | 35(0,15)         | R                            | 235               | 100                | —                          | —                 | —                    | —                       | —                             | —                 |                            |
| 35Z3      | 2    | L-231 | 35(0,15)         | R                            | 235               | 100                | —                          | —                 | —                    | —                       | —                             | —                 |                            |
| 35Z4      | 2    | O-155 | 35(0,15)         | R                            | 117               | 100                | —                          | —                 | —                    | —                       | —                             | —                 |                            |
| 35Z5      | 2    | O-157 | 35(0,3)          | R                            | 235               | 100                | —                          | —                 | —                    | —                       | —                             | —                 |                            |
| 35Z6      | 2-2  | O-161 | 35(0,3)          | R                            | 235               | 110                | —                          | —                 | —                    | —                       | —                             | —                 |                            |
| 36        | 4    | A-63  | 6,3(0,3)         | HF<br>HF                     | 250<br>100        | 3,2<br>1,8         | —<br>—                     | 90<br>55          | -3<br>-1,5           | 800<br>800              | 550.000<br>550.000            | 1,08<br>0,85      |                            |
| 37        | 3    | A-62  | 6,3(0,3)         | BF<br>BF<br>BF               | 250<br>135<br>100 | 7,5<br>4,1<br>2,5  | —<br>—<br>—                | —<br>—<br>—       | -18<br>-9<br>-6      | 2.400<br>2.200<br>2.400 | 8.400<br>10.000<br>11.500     | 1,1<br>0,9<br>0,8 |                            |
| 38        | 5    | A-64  | 6,3(0,3)         | P(2,5)<br>P(0,55)<br>P(0,27) | 260<br>135<br>100 | 22<br>9<br>7       | 10.000<br>13.500<br>15.000 | 250<br>135<br>100 | -25<br>-13,5<br>-9   | 1.000<br>1.300<br>1.100 | 100.000<br>130.000<br>140.000 | 1,2<br>0,9<br>0,8 |                            |
| 39        | 5V   | A-64  | 6,3(0,3)         | HF<br>HF                     | 250<br>90         | 5,8<br>5,6         | —<br>—                     | 90<br>90          | -3-42<br>-3-42       | 400<br>400              | 1M $\Omega$<br>375.000        | 1,05<br>0,96      |                            |



| Référence | Type | Culot | Tension Filament | Fonction                    | Haute tension     | Intensité anodique | Résistance d'Anode       | Tension Ecran     | Tension Polarisation | Résistance Polarisation | Résistance interne          | Pente             | OBSERVATIONS                                                                                   |
|-----------|------|-------|------------------|-----------------------------|-------------------|--------------------|--------------------------|-------------------|----------------------|-------------------------|-----------------------------|-------------------|------------------------------------------------------------------------------------------------|
| 40        | 3*   | A-47  | 5(0,25)          | BF<br>BF                    | 180<br>135        | 0,2<br>0,2         | —<br>250.000             | —<br>—            | -3<br>-1,5           | —<br>—                  | 150.000<br>150.000          | 0,2<br>2          |                                                                                                |
| 40Z5      | 2    | O-157 | 45(0,15)         | R                           | 235               | 100                | —                        | —                 | —                    | —                       | —                           | —                 |                                                                                                |
| 41        | 5    | A-73  | 6,3(0,4)         | P(4,5)<br>P(3,4)<br>P(0,35) | 315<br>250<br>100 | 25<br>32<br>9      | 9.000<br>7.600<br>12.000 | 250<br>250<br>100 | -21<br>-18<br>-7     | 700<br>490<br>650       | 75.000<br>68.000<br>104.000 | 2,1<br>2,3<br>1,5 |                                                                                                |
| 42        | 5    | A-73  | 6,3(0,7)         | P(3,2)<br>P(11)             | 250<br>315        | 34<br>62           | 7.000<br>10.000          | 250<br>285        | -16,5<br>-24         | 410<br>325              | 80.000<br>—                 | 2,5<br>—          | Push-pull classe AB                                                                            |
| 43        | 5    | A-73  | 25(0,3)          | P(2,2)<br>P(2)<br>P(0,9)    | 160<br>135<br>95  | 33<br>37<br>20     | 5.000<br>4.000<br>4.500  | 120<br>135<br>95  | -18<br>-20<br>-15    | 450<br>450<br>630       | 42.000<br>35.000<br>45.000  | 2,37<br>2,45<br>2 |                                                                                                |
| 45        | 3*   | A-47  | 2,5(1,5)         | P(1,6)<br>P(18)             | 250<br>275        | 34<br>28           | 3.900<br>3.200           | —<br>—            | -50<br>-68           | —<br>—                  | 1.610<br>—                  | 2,17<br>—         | P.P. avec courant grille                                                                       |
| 45B5      | 5    | N-303 | 45(0,1)          | HF                          | 170               | 10                 | —                        | 100               | -2-10                | 150                     | 0,5MΩ                       | 3,6               |                                                                                                |
| 45Z3      | 2    | M-270 | 45(0,075)        | R                           | 117               | 65                 | —                        | —                 | —                    | —                       | —                           | —                 |                                                                                                |
| 45Z5      | 2    | O-157 | 45(0,15)         | R                           | 235               | 100                | —                        | —                 | —                    | —                       | —                           | —                 |                                                                                                |
| 46        | 4*   | A-59  | 2,5(1,75)        | P(20)<br>P(16)<br>P(1,25)   | 400<br>300<br>250 | 6<br>4<br>22       | 5.800<br>5.200<br>6.400  | —<br>—<br>—       | 0<br>0<br>-33        | 0<br>0<br>1.500         | —<br>—<br>2.380             | —<br>—<br>2,35    | P.P. deux grilles reliées<br>P.P. deux grilles reliées<br>2 <sup>e</sup> grille reliée à anode |
| 47        | 5*   | A-60  | 2,5(1,75)        | P(2,7)                      | 250               | 31                 | 7.000                    | 250               | -16,5                | —                       | 60.000                      | 2,5               |                                                                                                |
| 48        | 4    | A-72  | 30(0,4)          | P(3)<br>P(2)                | 125<br>95         | 52<br>52           | 1.500<br>1.500           | 100<br>95         | -22,5<br>-20         | 350<br>315              | 11.000<br>4.000             | 3,9<br>3,9        |                                                                                                |
| 49        | 4*   | A-59  | 2(0,12)          | P(3,5)<br>P(0,17)           | 180<br>135        | 2<br>6             | 12.000<br>11.000         | —<br>—            | 0<br>-20             | —<br>—                  | —<br>4.175                  | —<br>1,12         | Push-pull classe B<br>2 <sup>e</sup> grille reliée à anode                                     |
| 50        | 3*   | A-47  | 7,5(1,25)        | P(4,6)<br>P(1,6)            | 450<br>300        | 55<br>35           | 4.350<br>4.600           | —<br>—            | -84<br>-54           | —<br>—                  | 1.800<br>2.000              | 2,1<br>1,9        |                                                                                                |

| Référence   | Type  | Culot | Tension Filament | Fonction         | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance Interne           | Pente        | OBSERVATIONS                                                     |
|-------------|-------|-------|------------------|------------------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|------------------------------|--------------|------------------------------------------------------------------|
| <b>50A5</b> | 4     | L-241 | 50(0,15)         | P(4,3)<br>P(2,1) | 200<br>110    | 50<br>49           | 3.000<br>2.000     | 110<br>110    | -8<br>-7,5           | 155<br>140              | 35.000<br>10.000             | 8,2<br>8,2   |                                                                  |
| <b>50B5</b> | 5     | M-288 | 50(0,15)         | P(1,9)           | 110           | 49                 | 2.500              | 110           | -7,5                 | 140                     | 14.000                       | 7,5          |                                                                  |
| <b>50C5</b> | 5     | M-287 | 50(0,15)         | P(1,9)           | 110           | 50                 | 2.500              | 110           | -7,5                 | 130                     | 10.000                       | 7,5          |                                                                  |
| <b>50C6</b> | 5     | O-174 | 50(0,15)         | P(6)<br>P(3,6)   | 200<br>135    | 61<br>58           | 2.600<br>2.000     | 135<br>135    | -14<br>-13,5         | 215<br>220              | 18.300<br>9.300              | 7,1<br>7     |                                                                  |
| <b>50L6</b> | 5     | O-170 | 50(0,15)         | P(4,3)<br>P(2,1) | 200<br>110    | 50<br>49           | 3.000<br>2.000     | 110<br>110    | -8<br>-7,5           | 150<br>140              | 30.000<br>13.000             | 9,5<br>9     |                                                                  |
| <b>50X6</b> | 2-2   | L-234 | 50(0,15)         | R                | 235           | 75                 | —                  | —             | —                    | —                       | —                            | —            |                                                                  |
| <b>50Y6</b> | 2-2   | O-161 | 50(0,15)         | R                | 235           | 75                 | —                  | —             | —                    | —                       | —                            | —            |                                                                  |
| <b>50Y7</b> | 2-2   | O-162 | 46(0,15)         | R                | 235           | 65                 | —                  | —             | —                    | —                       | —                            | —            |                                                                  |
| <b>50Z6</b> | 2-2   | O-161 | 50(0,3)          | R                | 235           | 250                | —                  | —             | —                    | —                       | —                            | —            |                                                                  |
| <b>50Z7</b> | 2-2   | O-162 | 50(0,15)         | R                | 235           | 65                 | —                  | —             | —                    | —                       | —                            | —            |                                                                  |
| <b>52</b>   | 4*    | A-59  | 6,3(0,3)         | P(5)<br>P(1,5)   | 180<br>110    | 43<br>3            | 10.000<br>2.000    | —<br>—        | 0<br>0               | 0<br>0                  | —<br>1.750                   | —<br>3       | Push-pull (2 grilles reliées)<br>Seconde grille reliée à anode   |
| <b>53</b>   | 3-3   | A-88  | 2,5(2)           | P(10)<br>P       | 300<br>250    | 35<br>6            | 10.000<br>—        | —<br>—        | 0<br>-5              | 0<br>—                  | —<br>11.300                  | —<br>3,1     | Push-pull classe B<br>Driver                                     |
| <b>55</b>   | 2-2-3 | A-75  | 2,5(1)           | D-BF<br>D-BF     | 250<br>100    | 8<br>3,7           | 100.000<br>100.000 | —<br>—        | -20<br>-10,5         | 7.000<br>8.000          | 7.500<br>11.000              | 1,1<br>0,75  |                                                                  |
| <b>56</b>   | 3     | A-62  | 2,5(1)           | BF<br>BF         | 250<br>100    | 5<br>2,5           | 100.000<br>100.000 | —<br>—        | -13,5<br>-8          | 6.000<br>8.000          | 9.500<br>12.000              | 1,45<br>1,15 |                                                                  |
| <b>57</b>   | 5     | A-74  | 2,5(1)           | BF<br>BF         | 250<br>100    | 2<br>2             | 250.000<br>250.000 | —<br>—        | -3<br>-3             | 2.600<br>1.200          | 1,5M $\Omega$<br>1M $\Omega$ | 1,22<br>1,18 | 1,2 M $\Omega$ série sur écran<br>1,2 M $\Omega$ série sur écran |
| <b>58</b>   | 5V    | A-74  | 2,5(1)           | HF<br>HF         | 250<br>100    | 8,2<br>8           | —<br>—             | 100<br>100    | -3-50<br>-3-50       | 300<br>300              | 800.000<br>250.000           | 1,6<br>1,5   |                                                                  |



| Référence | Type  | Culot | Tension Filament | Fonction    | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne | Pente    | OBSERVATIONS                        |
|-----------|-------|-------|------------------|-------------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------|----------|-------------------------------------|
| 59        | 5     | A-81  | 2,5(2)           | P(1,25)     | 250           | 26                 | 5.000              | —             | -28                  | 1.100                   | 2.300              | 2,6      | Montage triode                      |
|           |       |       |                  | P(3)        | 250           | 35                 | 6.000              | 250           | -1                   | 410                     | 40.000             | 2,5      | Push-pull triode                    |
|           |       |       |                  | P(20)       | 400           | 26                 | 6.000              | 0             | 8                    | 0                       | —                  | —        |                                     |
| 70A7      | 2-5   | O-195 | 70(0,15)         | P(1,5)<br>R | 110<br>125    | 40<br>60           | 2.500<br>—         | 110<br>—      | -7,5<br>—            | 170<br>—                | 15.000<br>—        | 5,8<br>— | Partie pentode<br>Partie redresseur |
| 70L7      | 2-4   | O-192 | 70(0,15)         | P(1,8)<br>R | 110<br>125    | 40<br>70           | 2.000<br>—         | 110<br>—      | -7,5<br>—            | 170<br>—                | 15.000<br>—        | 7,5<br>— |                                     |
| 71A       | 3*    | A-47  | 5(0,25)          | P(0,8)      | 180           | 20                 | 4.800              | —             | -40,5                | —                       | 1.750              | 1,7      |                                     |
|           |       |       |                  | P(0,12)     | 90            | 10                 | 3.000              | —             | -16,5                | —                       | 2.170              | 1,4      |                                     |
| 75        | 2-2-3 | A-75  | 6,3(0,3)         | D-BF        | 250           | 0,9                | 250.000            | —             | -2                   | 3.900                   | 91.000             | 1,1      |                                     |
|           |       |       |                  | D-BF        | 100           | 0,4                | 250.000            | —             | -1                   | 11.000                  | 110.000            | 0,9      |                                     |
| 76        | 3     | A-62  | 6,3(0,3)         | BF          | 250           | 5                  | 100.000            | —             | -13,5                | 6.000                   | 9.500              | 1,45     |                                     |
|           |       |       |                  | BF          | 100           | 2,5                | 100.000            | —             | -5                   | 8.000                   | 12.000             | 1,15     |                                     |
| 77        | 5     | A-74  | 6,3(0,3)         | HF          | 250           | 2,3                | —                  | 100           | -3                   | 1.100                   | 1M $\Omega$        | 1,25     |                                     |
|           |       |       |                  | HF          | 100           | 1,7                | —                  | 60            | -1,5                 | 700                     | 600.000            | 1,10     |                                     |
| 78        | 5V    | A-74  | 6,3(0,3)         | HF          | 250           | 7                  | —                  | 100           | -3-42                | 300                     | 800.000            | 1,45     |                                     |
|           |       |       |                  | HF          | 100           | 9,5                | —                  | 100           | -1-38                | 80                      | 150.000            | 1,65     |                                     |
| 79        | 3-3   | A-79  | 6,3(0,6)         | P(8)        | 250           | 10,5               | 14.000             | —             | 0                    | 0                       | —                  | —        | Push-pull classe B                  |
| 80        | 2-2*  | A-45  | 5(2)             | R           | 350           | 125                | —                  | —             | —                    | —                       | —                  | —        |                                     |
| 80S       | 2-2   | A-52  | 5(2)             | R           | 350           | 125                | —                  | —             | —                    | —                       | —                  | —        |                                     |
| 81        | 2*    | A-44  | 7,5(1,25)        | R           | 700           | 85                 | —                  | —             | —                    | —                       | —                  | —        |                                     |
| 82        | 2-2*  | A-45  | 2,5(3)           | R           | 450           | 115                | —                  | —             | —                    | —                       | —                  | —        | Vapeur de mercure                   |
| 83        | 2-2*  | A-45  | 5(3)             | R           | 450           | 225                | —                  | —             | —                    | —                       | —                  | —        | Vapeur de mercure                   |
| 83V       | 2-2   | A-52  | 5(2)             | R           | 375           | 175                | —                  | —             | —                    | —                       | —                  | —        |                                     |
| 84        | 2-2   | A-61  | 6,3(0,5)         | R           | 325           | 60                 | —                  | —             | —                    | —                       | —                  | —        |                                     |

| Référence | Type  | Culot | Tension Filament | Fonction         | Haute tension    | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne      | Pente             | OBSERVATIONS                        |
|-----------|-------|-------|------------------|------------------|------------------|--------------------|--------------------|---------------|----------------------|-------------------------|-------------------------|-------------------|-------------------------------------|
| 85        | 2-2-3 | A-75  | 6,3(0,3)         | D-BF<br>D-BF     | 250<br>100       | 8<br>3             | 100.000<br>100.000 | —<br>—        | -20<br>-10,5         | 7.000<br>8.000          | 7.500<br>11.000         | 1,1<br>0,75       |                                     |
| 85AS      | 2-2-3 | A-75  | 6,3(0,3)         | D-BF             | 250              | 4,5                | —                  | —             | -9                   | 2.000                   | 16.000                  | 1,25              |                                     |
| 89        | 5     | A-74  | 6,3(0,4)         | P(3,4)<br>P(0,3) | 250<br>100       | 32<br>9,5          | 6.750<br>10.700    | 250<br>100    | -25<br>-10           | 650<br>900              | 70.000<br>104.000       | 1,8<br>1,2        |                                     |
| 112A      | 3*    | A-47  | 5(0,25)          | BF<br>BF<br>BF   | 180<br>135<br>90 | 7,7<br>6,2<br>5    | —<br>—<br>—        | —<br>—<br>—   | -13,5<br>-9<br>-4,5  | —<br>—<br>—             | 4.700<br>5.100<br>5.400 | 1,8<br>1,6<br>1,6 |                                     |
| 117L7     | 2-4   | O-191 | 117(0,09)        | P(0,85)<br>R     | 105<br>117       | 43<br>75           | 4.000<br>—         | 105<br>—      | -5,2<br>—            | 110<br>—                | 17.000<br>—             | 5,3<br>—          | Partie tétrode<br>Partie redresseur |
| 117M7     | 2-4   | O-191 | 117(0,09)        | P(0,85)<br>R     | 105<br>117       | 43<br>75           | 4.000<br>—         | 105<br>—      | -5,2<br>—            | 110<br>—                | 17.000<br>—             | 5,3<br>—          | Partie tétrode<br>Partie redresseur |
| 117N7     | 2-4   | O-190 | 117(0,09)        | P(1,2)<br>R      | 100<br>117       | 51<br>75           | 3.000<br>—         | 100<br>—      | -6<br>—              | 100<br>—                | 16.000<br>—             | 7<br>—            | Partie tétrode<br>Partie redresseur |
| 117P7     | 2-4   | O-190 | 117(0,09)        | P(0,85)<br>R     | 105<br>117       | 43<br>75           | 4.000<br>—         | 105<br>—      | -5,2<br>—            | 110<br>—                | 17.000<br>—             | 5,3<br>—          | Partie tétrode<br>Partie redresseur |
| 117Z3     | 2     | M-273 | 117(0,04)        | R                | 117              | 90                 | —                  | —             | —                    | —                       | —                       | —                 |                                     |
| 117Z4     | 2     | O-155 | 117(0,04)        | R                | 117              | 90                 | —                  | —             | —                    | —                       | —                       | —                 |                                     |
| 117Z6     | 2-2   | O-161 | 117(0,075)       | R                | 117              | 60                 | —                  | —             | —                    | —                       | —                       | —                 |                                     |
| 182B      | 3*    | A-47  | 5(1,25)          | P(1,35)          | 250              | 20                 | 4.500              | —             | -35                  | —                       | 2.500                   | 2                 |                                     |
| 183       | 3*    | A-47  | 5(1,25)          | P(1,8)           | 250              | 20                 | 4.500              | —             | -65                  | —                       | 2.000                   | 1,5               |                                     |
| 200A      | 3*    | A-47  | 5(0,25)          | D                | 45               | 1,5                | —                  | —             | 0                    | 0                       | 30.000                  | 0,67              |                                     |
| 205D      | 3*    | A-47  | 4,5(1,6)         | P                | 350              | 35                 | —                  | —             | -20                  | —                       | 3.600                   | 1,8               |                                     |



| Référence | Type | Culot | Tension Filament | Fonction | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne | Pente | OBSERVATIONS           |
|-----------|------|-------|------------------|----------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------|-------|------------------------|
| 210T      | 3*   | A-47  | 7,5(1,25)        | P(1,6)   | 425           | 18                 | 10.200             | —             | -40                  | —                       | 5.000              | 1,60  |                        |
|           |      |       |                  | P(0,9)   | 350           | 16                 | 11.000             | —             | -32                  | —                       | 5.150              | 1,55  |                        |
|           |      |       |                  | P(0,4)   | 250           | 10                 | 13.000             | —             | -23                  | —                       | 6.000              | 1,33  |                        |
| 373       | 2*   | E-1   | 4(0,8)           | R        | 220           | 40                 | —                  | —             | —                    | —                       | —                  | —     |                        |
| 485       | 3    | A-62  | 3(1,25)          | BF       | 180           | 5,8                | —                  | —             | -9                   | 1.500                   | 8.900              | 1,4   |                        |
| 505       | 2*   | E-1   | 4(1)             | R        | 400           | 60                 | —                  | —             | —                    | —                       | —                  | —     |                        |
| 506       | 2-2* | E-3   | 4(1)             | R        | 300           | 75                 | —                  | —             | —                    | —                       | —                  | —     |                        |
| 807       | 4    | M-367 | 6,3(0,9)         | P(35)    | 400           | —                  | 6.800              | 300           | -30                  | —                       | —                  | —     | Push-pull              |
|           |      |       |                  | P(80)    | 600           | —                  | 6.900              | 300           | -32                  | —                       | —                  | —     | Push-pull              |
| 864       | 3*   | A-47  | 1,1(0,25)        | BF       | 135           | 3,5                | —                  | —             | -9                   | —                       | 12.700             | 0,64  |                        |
|           |      |       |                  | BF       | 90            | 2,9                | —                  | —             | -4,5                 | —                       | 13.500             | 0,61  |                        |
| 866       | 2*   | A-44  | 2,5(5)           | R        | 1.750         | 400                | —                  | —             | —                    | —                       | —                  | —     | Vapeur de mercure      |
| 950       | 5*   | A-60  | 2(0,12)          | P(0,57)  | 135           | 7                  | 13.500             | 135           | -16,5                | —                       | 125.000            | 1     |                        |
| 954       | 5    | A-57  | 6,3(0,15)        | HF       | 250           | 2                  | —                  | 90            | -3                   | 1.100                   | 1M $\Omega$        | 1,4   | Lampe gland            |
|           |      |       |                  | HF       | 90            | 1,2                | —                  | 90            | -3                   | 1.750                   | 1M $\Omega$        | 1,1   |                        |
|           |      |       |                  | BF       | 250           | 2                  | 250.000            | 50            | -2,1                 | 3.000                   | 1M $\Omega$        | 1,4   |                        |
| 955       | 3    | A-56  | 6,3(0,15)        | HF       | 180           | 8                  | —                  | —             | -35                  | 3.500                   | 12.500             | 2     | Lampe gland            |
| 956       | 5V   | A-57  | 6,3(0,15)        | HF       | 250           | 6,7                | —                  | 100           | -3-45                | 320                     | 750.000            | 1,8   | Lampe gland            |
| 957       | 3    | A-56  | 1,25(0,05)       | HF       | 135           | 2                  | —                  | —             | -5                   | —                       | 20.800             | 0,65  | Lampe gland            |
| 958A      | 3    | A-56  | 1,25(0,1)        | HF       | 135           | 5                  | —                  | —             | -7,5                 | —                       | 10.000             | 1,2   | Lampe gland            |
| 959       | 5*   | A-53  | 1,25(0,05)       | HF       | 145           | 1,7                | —                  | 67,5          | -3                   | —                       | 800.000            | 0,6   | Lampe gland            |
| 1201      | 3    | L-239 | 6,3(0,15)        | HF       | 250           | 13                 | —                  | —             | -3,5                 | —                       | —                  | —     | Oscillateur microondes |
| 1203      | 2    | L-232 | 6,3(0,15)        | D        | 150           | 8                  | —                  | —             | —                    | —                       | —                  | —     | Détection microondes   |
| 1204      | 5    | L-244 | 6,3(0,15)        | HF       | 250           | 4                  | —                  | 100           | -2                   | 350                     | 500.000            | 1,8   |                        |

| Référence | Type | Culot | Tension Filament | Fonction        | Haute tension     | Intensité anodique | Résistance d'Anode | Tension Ecran   | Tension Polarisation | Résistance Polarisation | Résistance interne          | Pente              | OBSERVATIONS                                         |
|-----------|------|-------|------------------|-----------------|-------------------|--------------------|--------------------|-----------------|----------------------|-------------------------|-----------------------------|--------------------|------------------------------------------------------|
| 1206      | 4-4  | L-254 | 6,3(0,3)         | HF              | 250               | 4,5                | —                  | 100             | -2,5                 | 500                     | 225.000                     | 2,1                |                                                      |
| 1221      | 5    | A-74  | 6,3(0,3)         | HF<br>HF        | 250<br>100        | 2<br>2             | —<br>—             | 100<br>100      | -3<br>-3             | 1.200<br>1.200          | 1M $\Omega$<br>1M $\Omega$  | 1,22<br>1,18       |                                                      |
| 1223      | 5    | O-180 | 6,3(0,3)         | HF<br>HF        | 250<br>100        | 2<br>2             | —<br>—             | 100<br>100      | -3<br>-3             | 1.200<br>1.200          | 1M $\Omega$<br>1M $\Omega$  | 1,22<br>1,18       |                                                      |
| 1229      | 4*   | A-48  | 2(0,06)          | HF<br>HF        | 180<br>135        | 1,7<br>1,7         | —<br>—             | 67,5<br>67,5    | -3<br>-3             | 1.400<br>1.400          | 1,2M $\Omega$<br>950.000    | 0,65<br>0,64       |                                                      |
| 1230      | 3*   | A-47  | 2(0,06)          | BF<br>BF<br>BF  | 180<br>135<br>90  | 2,1<br>3<br>2,5    | —<br>—<br>—        | —<br>—<br>—     | -13,5<br>-9<br>-4,5  | —<br>—<br>—             | 10.300<br>10.300<br>11.000  | 0,9<br>0,9<br>0,85 |                                                      |
| 1231      | 5    | L-242 | 6,3(0,45)        | HF<br>HF<br>HF  | 250<br>300<br>300 | 13<br>12<br>10     | —<br>—<br>—        | —<br>150<br>150 | -5<br>-2,5<br>-2,5   | 400<br>200<br>200       | 5.200<br>540.000<br>700.000 | 6,3<br>6,5<br>5,5  | Montage triode<br>Montage tétrode<br>Montage pentode |
| 1232      | 5    | L-242 | 6,3(0,45)        | HF              | 250               | 6                  | —                  | 100             | -2                   | 250                     | 800.000                     | 4,5                |                                                      |
| 1247      | 2*   | A-90  | 0,7(0,065)       | D               | 300               | 0,4                | —                  | —               | —                    | —                       | —                           | —                  | Pour voltmètres à lampes                             |
| 1273      | 5    | L-242 | 6,3(0,3)         | HF<br>HF        | 250<br>100        | 2,2<br>5,7         | —<br>—             | 100<br>100      | -3<br>-1             | 1.000<br>135            | 1M $\Omega$<br>400.000      | 1,57<br>2,27       | Antimicrophonique                                    |
| 1274      | 2-2  | O-159 | 6,3(0,6)         | R               | 325               | 70                 | —                  | —               | —                    | —                       | —                           | —                  |                                                      |
| 1275      | 2-2* | A-45  | 5(1,75)          | R               | 450               | 225                | —                  | —               | —                    | —                       | —                           | —                  |                                                      |
| 1276      | 3*   | A-47  | 4,5(1,14)        | P(3,2)<br>P(15) | 250<br>325        | 60<br>80           | 2.500<br>3.000     | —<br>—          | -45<br>-68           | —<br>—                  | 800<br>—                    | 5,25<br>—          |                                                      |
| 1280      | 5    | L-242 | 12,6(0,15)       | HF<br>HF        | 250<br>100        | 2,2<br>5,7         | —<br>—             | 100<br>100      | -3<br>-1             | 1.000<br>315            | 1M $\Omega$<br>400.000      | 1,57<br>2,27       | Antimicrophonique                                    |
| 1284      | 5    | L-242 | 12,6(0,15)       | P               | 250               | 9                  | —                  | 100             | -3                   | 260                     | 800.000                     | 0,2                |                                                      |
| 1291      | 3-3* | L-229 | 2,8(0,11)        | HF              | 90                | 5,2                | —                  | —               | 0                    | 0                       | 11.300                      | 1,9                |                                                      |
| 1293      | 3*   | L-218 | 1,4(0,11)        | HF              | 90                | 5,2                | —                  | —               | 0                    | 0                       | —                           | 1,5                |                                                      |



| Référence | Type | Culot | Tension Filament | Fonction | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne | Pente       | OBSERVATIONS         |
|-----------|------|-------|------------------|----------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------|-------------|----------------------|
| 1294      | 2    | L-232 | 1,4(0,15)        | D        | 30            | 0,3                | —                  | —             | —                    | —                       | —                  | —           | Très haute fréquence |
| 1299      | 4*   | L-223 | 2,8(0,11)        | P(0,6)   | 150           | 10,2               | 14.000             | 90            | -4,5                 | —                       | —                  | 2,4         |                      |
| 1561      | 2-2* | E-3   | 4(2)             | R        | 500           | 120                | —                  | —             | —                    | —                       | —                  | —           |                      |
| 1562      | 2*   | E-1   | 7,5(1,25)        | R        | 750           | 110                | —                  | —             | —                    | —                       | —                  | —           |                      |
| 1612      | 7V   | O-184 | 6,3(0,3)         | HF<br>C  | 250<br>250    | 5,3<br>5,3         | —<br>—             | 100<br>100    | -3-15<br>-6-30       | 300<br>300              | 600.000<br>1,5MΩ   | 1,1<br>0,37 | Modulatrice          |
| 1626      | 3    | O-164 | 12,6(0,25)       | HF       | 250           | 25                 | —                  | —             | -70                  | —                       | —                  | —           | 4 watts HF           |
| 1629      | 3    | O-197 | 12,6(0,15)       |          | 250<br>100    | —<br>—             | 1MΩ<br>500.000     | —<br>—        | 0-8<br>0-3           | —<br>—                  | —<br>—             | —<br>—      |                      |
| 1654      | 2*   | M-259 | 1,4(0,05)        | D        | —             | 1                  | —                  | —             | —                    | —                       | —                  | —           |                      |
| 1805      | 2-2* | E-3   | 4(1)             | R        | 500           | 60                 | —                  | —             | —                    | —                       | —                  | —           |                      |
| 1815      | 2-2* | E-3   | 4(2,5)           | R        | 500           | 180                | —                  | —             | —                    | —                       | —                  | —           |                      |
| 1817      | 2-2* | E-3   | 4(4)             | R        | 350           | 300                | —                  | —             | —                    | —                       | —                  | —           |                      |
| 1823      | 2-2* | E-3   | 4(1)             | R        | 300           | 75                 | —                  | —             | —                    | —                       | —                  | —           |                      |
| 1831      | 2-2* | E-3   | 4(1)             | R        | 700           | 60                 | —                  | —             | —                    | —                       | —                  | —           |                      |
| 1832      | 2*   | E-1   | 4(1,2)           | R        | 700           | 120                | —                  | —             | —                    | —                       | —                  | —           |                      |
| 1851      | 5V   | O-180 | 6,3(0,45)        | HF       | 300           | 10                 | —                  | 150           | -3-32                | 240                     | 750.000            | 9           |                      |
| 1852      | 5V   | O-173 | 6,3(0,45)        | HF       | 300           | 10                 | —                  | 150           | -3-22                | 240                     | 750.000            | 9           |                      |
| 1853      | 5V   | O-173 | 6,3(0,45)        | HF       | 300           | 12,5               | —                  | 200           | -3-22                | 190                     | 700.000            | 5           |                      |
| 1875      | 2*   | T-98  | 4(2,3)           | R        | 7.000         | 5                  | —                  | —             | —                    | —                       | —                  | —           |                      |
| 1876      | 2*   | T-97  | 4(0,3)           | R        | 850           | 5                  | —                  | —             | —                    | —                       | —                  | —           |                      |
| 1882      | 2-2* | T-99  | 5(2)             | R        | 400           | 110                | —                  | —             | —                    | —                       | —                  | —           |                      |

| Référence | Type | Culot | Tension Filament | Fonction                              | Haute tension            | Intensité anodique    | Résistance d'Anode                | Tension Ecran            | Tension Polarisation     | Résistance Polarisation  | Résistance interne    | Pente              | OBSERVATIONS                                                      |
|-----------|------|-------|------------------|---------------------------------------|--------------------------|-----------------------|-----------------------------------|--------------------------|--------------------------|--------------------------|-----------------------|--------------------|-------------------------------------------------------------------|
| 1883      | 2-2  | T-110 | 5(1,6)           | R                                     | 350                      | 125                   | —                                 | —                        | —                        | —                        | —                     | —                  |                                                                   |
| 1884      | 2-2* | O-160 | 2,5(1)           | R                                     | 350                      | 40                    | —                                 | —                        | —                        | —                        | —                     | —                  |                                                                   |
| 4641      | 3*   | E-9   | 4(2)             | P(27,5)<br>P(43)                      | 1.000<br>1.000           | 50<br>5               | 40.000<br>18.000                  | —<br>—                   | -82<br>-96               | —<br>—                   | —<br>—                | —<br>—             | Push-pull classe AB<br>Push-pull classe B                         |
| 4646      | 2*   | E-8   | 4(1,3)           | R                                     | 1.000                    | 75                    | —                                 | —                        | —                        | —                        | —                     | —                  |                                                                   |
| 4654      | 5    | T-116 | 6,3(1,35)        | P(8,8)<br>P(19,5)<br>P(28,5)<br>P(55) | 250<br>250<br>375<br>600 | 72<br>116<br>96<br>50 | 3.500<br>4.500<br>6.500<br>10.000 | 275<br>275<br>275<br>300 | -14<br>-17<br>-17<br>-25 | 175<br>120<br>165<br>450 | 22.000<br>—<br>—<br>— | 8,5<br>—<br>—<br>— | Push-pull classe AB<br>Push-pull classe AB<br>Push-pull classe AB |
| 4671      | 3    | E-10  | 6,3(0,15)        | HF                                    | 180                      | 4,5                   | —                                 | —                        | -5                       | 1.100                    | 12.500                | 2                  |                                                                   |
| 4672      | 5    | E-11  | 6,3(0,15)        | HF                                    | 250                      | 2                     | —                                 | 100                      | -3                       | 1.100                    | 3,5MΩ                 | 1,4                |                                                                   |
| 4673      | 5    | T-118 | 4(1,35)          | HF                                    | 250                      | 8                     | —                                 | 200                      | -2,5                     | 260                      | 1,5MΩ                 | 5                  |                                                                   |
| 4682      | 5    | T-117 | 4(1)             | P(14)                                 | 375                      | 58                    | 15.000                            | 250                      | -32                      | 500                      | —                     | —                  | Push-pull classe AB                                               |
| 4683      | 3*   | T-100 | 4(0,9)           | P(20)                                 | 350                      | 70                    | 5.000                             | —                        | -75                      | 850                      | —                     | —                  | Push-pull classe AB                                               |
| 4684      | 5    | T-115 | 4(1,75)          | P(12)                                 | 375                      | 60                    | 13.000                            | 250                      | —                        | 142                      | —                     | —                  | Push-pull classe AB                                               |
| 4688      | 5    | T-115 | 4(2)             | P(28,5)                               | 375                      | 96                    | 6.500                             | 275                      | —                        | 165                      | —                     | —                  | Push-pull classe AB                                               |
| 4689      | 5    | T-115 | 6,3(1,35)        | P(28,5)                               | 375                      | 96                    | 6.500                             | 275                      | —                        | 165                      | —                     | —                  | Push-pull classe AB                                               |
| 4694      | 5    | T-115 | 6,3(1,2)         | P(12)                                 | 375                      | 60                    | 13.000                            | 250                      | —                        | 142                      | —                     | —                  | Push-pull classe AB                                               |
| 4695      | 5V   | E-11  | 6,3(0,15)        | HF                                    | 250                      | 5,5                   | —                                 | 100                      | -3-45                    | 400                      | 800.000               | 1,8                | Ondes ultra-courtes                                               |
| 4696      | 4    | T-124 | 6,3(0,6)         | HF                                    | 250                      | 8                     | —                                 | 150                      | -2,5                     | 300                      | —                     | 14                 | Tétrode à émission secondaire                                     |
| 4699      | 5    | T-115 | 6,3(1,3)         | P(25,5)                               | 300                      | 134                   | 5.000                             | 325                      | —                        | 100                      | —                     | —                  | Push-pull classe AB                                               |
| 5654      | 5    | M-289 | 6,3(0,175)       | HF                                    | 180                      | 7,7                   | —                                 | 120                      | -2                       | 200                      | 690.000               | 5,1                | Equivalent à 6AK5 renforcé                                        |
| 5672      | 5    | S-341 | 1,25(0,05)       | P                                     | 67,5                     | 3,25                  | —                                 | 67,5                     | -6,5                     | —                        | —                     | 0,65               |                                                                   |



| Référence | Type | Culot | Tension Filament | Fonction | Haute tension | Intensité anodique | Résistance d'Anode | Tension Ecran | Tension Polarisation | Résistance Polarisation | Résistance interne | Pente | OBSERVATIONS                |
|-----------|------|-------|------------------|----------|---------------|--------------------|--------------------|---------------|----------------------|-------------------------|--------------------|-------|-----------------------------|
| 5679      | 2-2  | L-237 | 6,3(0,15)        | D        | 150           | 8                  | —                  | —             | —                    | —                       | —                  | —     |                             |
| 5725      | 5    | M-286 | 6,3(0,175)       | HF       | 120           | 3,5                | —                  | 120           | -2                   | 220                     | —                  | 3,5   | Equivalent à 6AS6 renforcé  |
| 5726      | 2-2  | M-276 | 6,3(0,3)         | D        | 150           | 9                  | —                  | —             | —                    | —                       | —                  | —     | Equivalent à 6AL5 renforcé  |
| 5749      | 5V   | M-284 | 6,3(0,3)         | HF       | 250           | 11                 | —                  | 100           | -1-50                | 68                      | 1,5M $\Omega$      | 4,4   | Equivalent à 6BA6 renforcé  |
| 5751      | 3-3  | N-305 | 12,6(0,15)       | BF       | 250           | —                  | 250.000            | —             | -2                   | 2.700                   | 62.000             | 1,6   | Equivalent à 12AX7 renforcé |
| 6005      | 4    | M-288 | 6,3(0,45)        | P(4,5)   | 250           | 4,5                | 5.000              | 250           | -12,5                | 250                     | 52.000             | 4,1   | Equivalent à 6AQ5 renforcé  |
| 9001      | 5    | M-289 | 6,3(0,15)        | HF       | 250           | 2                  | —                  | 100           | -3                   | 1.100                   | 1M $\Omega$        | 1,4   |                             |

# CLASSEMENT MÉTHODIQUE

## REDRESSEMENT

| Tension Filament | Type | Culot | Référence   |
|------------------|------|-------|-------------|
| 0                | 2-2  | O-158 | <b>OZ4</b>  |
| 1,25(0,2)        | 2*   | O-135 | <b>1B3</b>  |
| 1,4(0,53)        | 2    | N-314 | <b>DY86</b> |
| 1,5(0,3)         | 2*   | M-260 | <b>1Z2</b>  |
| 2,5(1)           | 2-2* | O-160 | <b>1884</b> |
| 2,5(1,5)         | 2*   | A-44  | <b>2Z2</b>  |
| 2,5(1,5)         | 2*   | O-134 | <b>2W3</b>  |
| 2,5(1,75)        | 2    | A-51  | <b>2X2</b>  |
| 2,5(3)           | 2-2* | A-45  | <b>82</b>   |
| 2,5(5)           | 2*   | A-44  | <b>866</b>  |
| 2,5(5)           | 2*   | O-135 | <b>2V3</b>  |
| 4(0,3)           | 2*   | T-97  | <b>1876</b> |
| 4(0,62)          | 2-2* | R-293 | <b>AZ41</b> |
| 4(0,8)           | 2*   | E-1   | <b>373</b>  |
| 4(1)             | 2*   | E-1   | <b>505</b>  |
| 4(1)             | 2-2* | E-3   | <b>506</b>  |
| 4(1)             | 2-2* | E-3   | <b>1831</b> |
| 4(1)             | 2-2* | E-3   | <b>1823</b> |
| 4(1)             | 2-2* | E-3   | <b>1805</b> |
| 4(1)             | 2-2* | T-99  | <b>AZ1</b>  |
| 4(1,1)           | 2-2* | E-31  | <b>AZ11</b> |
| 4(1,1)           | 2-2* | E-31  | <b>AZ12</b> |
| 4(1,2)           | 2*   | E-1   | <b>1832</b> |
| 4(1,3)           | 2*   | E-8   | <b>4646</b> |
| 4(2)             | 2-2* | E-3   | <b>1561</b> |
| 4(2,3)           | 2*   | T-98  | <b>1875</b> |
| 4(2,5)           | 2-2* | E-3   | <b>1815</b> |

## REDRESSEMENT

| Tension Filament | Type | Culot | Référence    |
|------------------|------|-------|--------------|
| 4(3)             | 2-2* | E-3   | <b>AZ50</b>  |
| 4(3,75)          | 2-2* | E-3   | <b>AX50</b>  |
| 4(4)             | 2-2* | E-3   | <b>1817</b>  |
| 5(0,75)          | 2-2  | R-295 | <b>GZ40</b>  |
| 5(1,5)           | 2-2* | O-136 | <b>5W4</b>   |
| 5(1,6)           | 2-2  | T-110 | <b>1883</b>  |
| 5(1,75)          | 3*   | A-45  | <b>1275</b>  |
| 5(1,9)           | 2-2  | O-160 | <b>GZ34</b>  |
| 5(2)             | 2-2* | A-45  | <b>5X3</b>   |
| 5(2)             | 2-2* | A-45  | <b>80</b>    |
| 5(2)             | 2-2  | A-52  | <b>80S</b>   |
| 5(2)             | 2-2  | A-52  | <b>83V</b>   |
| 5(2)             | 2-2* | T-99  | <b>1882</b>  |
| 5(2)             | 2-2* | O-136 | <b>5AZ4</b>  |
| 5(2)             | 2-2* | O-136 | <b>5R4</b>   |
| 5(2)             | 2-2* | O-136 | <b>5T4</b>   |
| 5(2)             | 2-2  | O-160 | <b>5V4</b>   |
| 5(2)             | 2-2* | O-136 | <b>5Y3</b>   |
| 5(2)             | 2-2  | O-160 | <b>5Y3GB</b> |
| 5(2)             | 2-2* | O-137 | <b>5Y4</b>   |
| 5(2)             | 2-2  | O-160 | <b>5Z4</b>   |
| 5(2)             | 2-2* | A-45  | <b>5Z3</b>   |
| 5(2)             | 2-2* | A-45  | <b>83</b>    |
| 5(2)             | 2-2  | O-160 | <b>GZ32</b>  |
| 5(3)             | 2-2  | O-136 | <b>5U4</b>   |
| 5(3)             | 2-2* | O-137 | <b>5X4</b>   |
| 6,3(0,09)        | 2    | N-350 | <b>EY86</b>  |

## REDRESSEMENT

| Tension Filament | Type | Culot | Référence    |
|------------------|------|-------|--------------|
| 6,3(0,09)        | 2    | N-350 | <b>6AX2</b>  |
| 6,3(0,09)        | 2    | N-382 | <b>EY802</b> |
| 6,3(0,25)        | 2-2  | T-109 | <b>EZ2</b>   |
| 6,3(0,3)         | 2-2  | E-32  | <b>EZ11</b>  |
| 6,3(0,3)         | 2-2* | A-45  | <b>1</b>     |
| 6,3(0,3)         | 2    | A-50  | <b>1V</b>    |
| 6,3(0,3)         | 2    | A-50  | <b>6Z3</b>   |
| 6,3(0,3)         | 2-2  | O-159 | <b>6ZY5</b>  |
| 6,3(0,4)         | 2-2  | O-295 | <b>EZ41</b>  |
| 6,3(0,42)        | 2    | M-365 | <b>EY91</b>  |
| 6,3(0,5)         | 2-2  | A-61  | <b>6Z4</b>   |
| 6,3(0,5)         | 2-2  | A-61  | <b>7Z4</b>   |
| 6,3(0,5)         | 2-2  | A-61  | <b>84</b>    |
| 6,3(0,5)         | 2-2  | L-234 | <b>7Y4</b>   |
| 6,3(0,6)         | 2-2  | O-159 | <b>6X5</b>   |
| 6,3(0,6)         | 2-2  | O-159 | <b>1274</b>  |
| 6,3(0,6)         | 2-2  | M-275 | <b>6X4</b>   |
| 6,3(0,6)         | 2-2  | M-275 | <b>EZ90</b>  |
| 6,3(0,6)         | 2-2  | R-295 | <b>EZ40</b>  |
| 6,3(0,7)         | 2    | O-135 | <b>6Y3</b>   |
| 6,3(0,7)         | 2-2  | N-331 | <b>EZ80</b>  |
| 6,3(0,7)         | 2-2  | N-331 | <b>EZ81</b>  |
| 6,3(0,7)         | 2-2  | N-331 | <b>6CA4</b>  |
| 6,3(0,7)         | 2-2  | N-331 | <b>6V4</b>   |
| 6,3(0,7)         | 2-2  | A-69  | <b>6Y5</b>   |
| 6,3(0,8)         | 2-2  | T-109 | <b>EZ4</b>   |
| 6,3(0,9)         | 2-2  | O-159 | <b>6W5</b>   |



## REDRESSEMENT

| Tension Filament | Type | Culot | Référence |
|------------------|------|-------|-----------|
| 6,3(0,9)         | 2    | N-309 | EY82      |
| 6,3(1,23)        | 2    | N-330 | EY88      |
| 6,3(1,75)        | 2    | N-349 | EY81      |
| 6,3(1,75)        | 2    | N-349 | 6V3       |
| 7,5(1,25)        | 2*   | E-1   | 1562      |
| 7,5(1,25)        | 2*   | A-44  | 81        |
| 12,6(0,3)        | 2    | A-50  | 12Z3      |
| 12,6(0,3)        | 2-2  | L-234 | 14Y4      |
| 12,6(0,4)        | 2-2  | A-70  | 6Z5       |
| 19(0,3)          | 2    | N-309 | PY82      |
| 19(0,3)          | 2    | N-309 | 19Y3      |
| 25(0,15)         | 2-2  | O-161 | 25X6      |
| 25(0,15)         | 2-2  | O-161 | 25Y6      |
| 25(0,3)          | 2-2  | A-71  | 25Y5      |
| 25(0,3)          | 2    | A-50  | 25Z3      |
| 25(0,3)          | 2-2  | A-71  | 25Z5      |
| 25(0,3)          | 2-2  | O-161 | 25Z6      |
| 26(0,1)          | 2    | M-366 | UY92      |
| 26(0,3)          | 2    | N-330 | PY88      |
| 28(0,24)         | 2-2  | L-235 | 28Z5      |
| 30(0,2)          | 2-2  | T-111 | CY2       |
| 31(0,1)          | 2    | R-294 | UY41      |
| 31(0,1)          | 2    | R-294 | UY42      |
| 31(0,1)          | 2    | R-294 | V311      |
| 31(0,1)          | 2    | R-294 | V312      |
| 35(0,15)         | 2    | O-155 | 35Z4      |
| 35(0,15)         | 2    | L-233 | 35Y4      |
| 35(0,15)         | 2    | L-231 | 35Z3      |
| 35(0,15)         | 2    | M-274 | 35W4      |
| 35(0,3)          | 2    | O-157 | 35Z5      |
| 35(0,3)          | 2-2  | O-161 | 35Z6      |
| 38(0,1)          | 2    | N-309 | UY85      |
| 38(0,1)          | 2    | N-309 | UY82      |

## REDRESSEMENT

| Tension Filament | Type | Culot | Référence |
|------------------|------|-------|-----------|
| 45(0,075)        | 2    | M-270 | 45Z3      |
| 45(0,15)         | 2    | O-157 | 40Z5      |
| 45(0,15)         | 2    | O-157 | 45Z5      |
| 46(0,15)         | 2-2  | O-162 | 50Y7      |
| 50(0,1)          | 2    | O-371 | UY1N      |
| 50(0,15)         | 2-2  | O-161 | 50Y6      |
| 50(0,15)         | 2-2  | O-162 | 50Z7      |
| 50(0,15)         | 2-2  | L-234 | 50X6      |
| 50(0,3)          | 2-2  | O-161 | 50Z6      |
| 117(0,04)        | 2    | O-155 | 117Z4     |
| 117(0,075)       | 2-2  | O-161 | 117Z6     |
| 117(0,04)        | 2    | M-273 | 117Z3     |

## HAUTE OU MOYENNE FRÉQUENCE

| Tension Filament | Type    | Culot | Référence |
|------------------|---------|-------|-----------|
| 1,2(0,13)        | 5*      | L-220 | 1AB5      |
| 1,25(0,04)       | 2-5*    | A-92  | 1Q6       |
| 1,25(0,04)       | 5*      | A-91  | 1W5       |
| 1,25(0,05)       | 3       | A-56  | 957       |
| 1,25(0,05)       | 5*      | A-53  | 959       |
| 1,25(0,1)        | 3       | A-56  | 958A      |
| 1,25(0,1)        | 5*      | M-262 | 1AE4      |
| 1,4(0,025)       | 5*      | M-262 | DF96      |
| 1,4(0,025)       | 5*      | M-262 | 1AJ4      |
| 1,4(0,025)       | 2-5*    | R-388 | DAF40     |
| 1,4(0,05)        | 5*      | O-142 | 1N5       |
| 1,4(0,05)        | 5*      | O-141 | 1SA6      |
| 1,4(0,05)        | 5V*     | L-222 | 1LC5      |
| 1,4(0,05)        | 5*      | L-219 | 1LG5      |
| 1,4(0,05)        | 5*      | L-222 | 1LN5      |
| 1,4(0,05)        | 5*      | M-262 | 1L4       |
| 1,4(0,05)        | 2-5*    | M-267 | 1S5       |
| 1,4(0,05)        | 5V*     | M-262 | 1T4       |
| 1,4(0,05)        | 5*      | M-262 | 1U4       |
| 1,4(0,05)        | 5V*     | M-262 | DF91      |
| 1,4(0,05)        | 5*      | M-262 | DF92      |
| 1,4(0,05)        | 2-5*    | M-267 | DAF91     |
| 1,4(0,05)        | 2-5*    | M-268 | 1U5       |
| 1,4(0,11)        | 3*      | L-218 | 1293      |
| 2(0,06)          | 5V*     | A-49  | 1A4       |
| 2(0,06)          | 2-2-3*  | A-49  | 1B4       |
| 2(0,06)          | 2-2-3*  | A-66  | 1B5       |
| 2(0,06)          | 2-2-5V* | A-67  | 1F6       |
| 2(0,06)          | 4*      | A-48  | 32        |
| 2(0,06)          | 5V*     | A-49  | 34        |
| 2(0,06)          | 4*      | A-48  | 1229      |
| 2(0,06)          | 5V*     | O-142 | 1D5       |
| 2(0,06)          | 5V*     | O-142 | 1E5       |

## HAUTE OU MOYENNE FRÉQUENCE

| Tension Filament | Type    | Culot | Référence    |
|------------------|---------|-------|--------------|
| 2(0,06)          | 2-2-5V* | O-149 | <b>1F7</b>   |
| 2(0,22)          | 5       | A-64  | <b>15</b>    |
| 2,5(0,8)         | 2-2-5V  | A-86  | <b>2B7</b>   |
| 2,5(1)           | 5V      | A-74  | <b>58</b>    |
| 2,5(1,75)        | 4       | A-63  | <b>24</b>    |
| 2,5(1,75)        | 4V      | A-63  | <b>35/51</b> |
| 2,8(0,05)        | 2-2-5*  | O-153 | <b>3A8</b>   |
| 2,8(0,05)        | 5*      | L-224 | <b>3E6</b>   |
| 2,8(0,11)        | 3-3*    | L-229 | <b>1291</b>  |
| 2,8(0,11)        | 3-3*    | M-269 | <b>3A5</b>   |
| 2,8(1,1)         | 3-3*    | L-229 | <b>3B7</b>   |
| 3,3(0,13)        | 4*      | A-48  | <b>22</b>    |
| (40,3)           | 3       | L-374 | <b>PC900</b> |
| 4(0,65)          | 5       | T-118 | <b>AF7</b>   |
| 4(1,1)           | 5V      | E-21  | <b>AF3</b>   |
| 4(1,35)          | 5       | T-118 | <b>4673</b>  |
| 6,3(0,15)        | 3       | E-10  | <b>4671</b>  |
| 6,3(0,15)        | 5       | E-11  | <b>4672</b>  |
| 6,3(0,15)        | 5V      | E-11  | <b>4695</b>  |
| 6,3(0,15)        | 3       | A     | <b>6K4</b>   |
| 6,3(0,15)        | 5       | A-57  | <b>954</b>   |
| 6,3(0,15)        | 3       | A-56  | <b>955</b>   |
| 6,3(0,15)        | 5V      | A-57  | <b>956</b>   |
| 6,3(0,15)        | 5V      | O-173 | <b>6SS7</b>  |
| 6,3(0,15)        | 5V      | O-180 | <b>6S7</b>   |
| 6,3(0,15)        | 5       | O-180 | <b>6W7</b>   |
| 6,3(0,15)        | 5       | L-244 | <b>7AB7</b>  |
| 6,3(0,15)        | 5       | L-242 | <b>7AG7</b>  |
| 6,3(0,15)        | 5       | L-242 | <b>7AH7</b>  |
| 6,3(0,15)        | 5V      | L-242 | <b>7B7</b>   |
| 6,3(0,15)        | 5       | L-242 | <b>7C7</b>   |
| 6,3(0,15)        | 3       | L-239 | <b>7E5</b>   |
| 6,3(0,15)        | 3       | L-239 | <b>1201</b>  |

## HAUTE OU MOYENNE FRÉQUENCE

| Tension Filament | Type   | Culot | Référence    |
|------------------|--------|-------|--------------|
| 6,3(0,15)        | 5      | L-254 | <b>1204</b>  |
| 6,3(0,15)        | 5      | M-286 | <b>6BH6</b>  |
| 6,3(0,15)        | 5      | M-286 | <b>6BJ6</b>  |
| 6,3(0,15)        | 3      | M-280 | <b>6C4</b>   |
| 6,3(0,15)        | 5      | M-289 | <b>9001</b>  |
| 6,3(0,175)       | 5      | M-289 | <b>6AK5</b>  |
| 6,3(0,175)       | 5      | M-289 | <b>EF95</b>  |
| 6,3(0,175)       | 5      | M-289 | <b>5654</b>  |
| 6,3(0,175)       | 5      | M-286 | <b>5725</b>  |
| 6,3(0,175)       | 5      | M-286 | <b>6AS6</b>  |
| 6,3(0,18)        | 3      | L-374 | <b>EC900</b> |
| 6,3(0,2)         | 2-2-5V | E-37  | <b>EBF11</b> |
| 6,3(0,2)         | 5V     | E-34  | <b>EF11</b>  |
| 6,3(0,2)         | 5      | E-34  | <b>EF12</b>  |
| 6,3(0,2)         | 5V     | E-35  | <b>EF13</b>  |
| 6,3(0,2)         | 2-2-5V | T-126 | <b>EBF2</b>  |
| 6,3(0,2)         | 3-5    | T-129 | <b>ECF1</b>  |
| 6,3(0,2)         | 5      | O-180 | <b>EF39</b>  |
| 6,3(0,2)         | 2-2-5  | O-196 | <b>EBF32</b> |
| 6,3(0,2)         | 5      | T-118 | <b>EF6</b>   |
| 6,3(0,2)         | 5V     | T-118 | <b>EF9</b>   |
| 6,3(0,2)         | 2-5V   | R-298 | <b>EAF41</b> |
| 6,3(0,2)         | 5      | L-242 | <b>EF22</b>  |
| 6,3(0,2)         | 2-5V   | R-312 | <b>EAF42</b> |
| 6,3(0,2)         | 5      | O-180 | <b>EF37A</b> |
| 6,3(0,2)         | 5V     | R-297 | <b>EF41</b>  |
| 6,3(0,2)         | 5      | R-327 | <b>EF40</b>  |
| 6,3(0,2)         | 3      | N-333 | <b>EC81</b>  |
| 6,3(0,2)         | 5V     | N-354 | <b>6DA6</b>  |
| 6,3(0,2)         | 5V     | N-354 | <b>EF89</b>  |
| 6,3(0,22)        | 3      | A-80  | <b>6F4</b>   |
| 6,3(0,3)         | 5      | E-42  | <b>EF50</b>  |
| 6,3(0,3)         | 2-2-5V | A-86  | <b>6B7</b>   |

## HAUTE OU MOYENNE FRÉQUENCE

| Tension Filament | Type   | Culot | Référence   |
|------------------|--------|-------|-------------|
| 6,3(0,3)         | 5V     | A-74  | <b>6D6</b>  |
| 6,3(0,3)         | 5V     | A-83  | <b>6E7</b>  |
| 6,3(0,3)         | 4      | A-63  | <b>36</b>   |
| 6,3(0,3)         | 5V     | A-64  | <b>39</b>   |
| 6,3(0,3)         | 5      | A-74  | <b>77</b>   |
| 6,3(0,3)         | 5V     | A-74  | <b>78</b>   |
| 6,3(0,3)         | 5      | A-74  | <b>1221</b> |
| 6,3(0,3)         | 3      | O-169 | <b>2C22</b> |
| 6,3(0,3)         | 2-2-5V | O-196 | <b>6B8</b>  |
| 6,3(0,3)         | 2-2-5V | O-196 | <b>6H8</b>  |
| 6,3(0,3)         | 5      | O-180 | <b>6J7</b>  |
| 6,3(0,3)         | 5      | O-180 | <b>6K7</b>  |
| 6,3(0,3)         | 7V     | O-184 | <b>6L7</b>  |
| 7,3(0,3)         | 5V     | O-180 | <b>6M7</b>  |
| 6,3(0,3)         | 3-5V   | O-208 | <b>6P7</b>  |
| 6,3(0,3)         | 5V     | O-178 | <b>6R6</b>  |
| 6,3(0,3)         | 5V     | O-173 | <b>6SD7</b> |
| 6,3(0,3)         | 5      | O-173 | <b>6SE7</b> |
| 6,3(0,3)         | 2-5V   | O-193 | <b>6SF7</b> |
| 6,3(0,3)         | 5V     | O-176 | <b>6SG7</b> |
| 6,3(0,3)         | 5      | O-176 | <b>6SH7</b> |
| 6,3(0,3)         | 5      | O-173 | <b>6SJ7</b> |
| 6,3(0,3)         | 5V     | O-173 | <b>6SK7</b> |
| 6,3(0,3)         | 2-5    | O-193 | <b>6SV7</b> |
| 6,3(0,3)         | 5V     | O-180 | <b>6SU7</b> |
| 6,3(0,3)         | 5      | O-180 | <b>1223</b> |
| 6,3(0,3)         | 7V     | O-184 | <b>1612</b> |
| 6,3(0,3)         | 5V     | L-242 | <b>7A7</b>  |
| 6,3(0,3)         | 2-2-5V | L-251 | <b>7E7</b>  |
| 6,3(0,3)         | 3-3    | L-253 | <b>7F8</b>  |
| 6,3(0,3)         | 4-4    | L-254 | <b>7G8</b>  |
| 6,3(0,3)         | 5V     | L-242 | <b>7H7</b>  |
| 6,3(0,3)         | 5      | L-242 | <b>7L7</b>  |



## HAUTE OU MOYENNE FRÉQUENCE

| Tension Filament | Type   | Culot | Référence    |
|------------------|--------|-------|--------------|
| 6,3(0,3)         | 2-2-5  | L-251 | <b>7R7</b>   |
| 6,3(0,3)         | 5      | L-242 | <b>7T7</b>   |
| 6,3(0,3)         | 4-4    | L-254 | <b>1206</b>  |
| 6,3(0,3)         | 5      | L-242 | <b>1273</b>  |
| 6,3(0,3)         | 5      | M-289 | <b>6AG5</b>  |
| 6,3(0,3)         | 5V     | M-284 | <b>6BA6</b>  |
| 6,3(0,3)         | 5V     | M-284 | <b>EF93</b>  |
| 6,3(0,3)         | 5      | M-284 | <b>EF94</b>  |
| 6,3(0,3)         | 5V     | M-284 | <b>5749</b>  |
| 6,3(0,3)         | 5      | M-284 | <b>6BD6</b>  |
| 6,3(0,3)         | 5      | M-284 | <b>6AU6</b>  |
| 6,3(0,3)         | 5      | M-286 | <b>6CB6</b>  |
| 6,3(0,3)         | 3      | M-312 | <b>6AQ4</b>  |
| 6,3(0,3)         | 5      | M-286 | <b>EF97</b>  |
| 6,3(0,3)         | 5      | N-303 | <b>EF80</b>  |
| 6,3(0,3)         | 2-2-5V | N-336 | <b>6N8</b>   |
| 6,3(0,3)         | 2-2-5V | N-336 | <b>6DR8</b>  |
| 6,3(0,3)         | 2-2-8  | N-336 | <b>6DC8</b>  |
| 6,3(0,3)         | 5      | N-303 | <b>6BX6</b>  |
| 6,3(0,3)         | 2-2-5V | N-336 | <b>EBF80</b> |
| 6,3(0,3)         | 2-2-5V | N-336 | <b>EBF83</b> |
| 6,3(0,3)         | 2-2-5  | N-336 | <b>EBF89</b> |
| 6,3(0,3)         | 3-3    | N-351 | <b>ECC86</b> |
| 6,3(0,33)        | 5      | R-301 | <b>EF42</b>  |
| 6,3(0,4)         | 3      | M-281 | <b>6J4</b>   |
| 6,3(0,45)        | 5      | O-173 | <b>6AB7</b>  |
| 6,3(0,45)        | 5V     | O-173 | <b>6AC7</b>  |
| 6,3(0,45)        | 5      | O-173 | <b>6AJ7</b>  |
| 6,3(0,45)        | 5V     | O-197 | <b>6S6</b>   |
| 6,3(0,45)        | 5      | O-179 | <b>6T6</b>   |
| 6,3(0,45)        | 5V     | O-180 | <b>1851</b>  |
| 6,3(0,45)        | 5V     | O-173 | <b>1852</b>  |
| 6,3(0,45)        | 5V     | O-173 | <b>1853</b>  |

## HAUTE OU MOYENNE FRÉQUENCE

| Tension Filament | Type   | Culot | Référence     |
|------------------|--------|-------|---------------|
| 6,3(0,45)        | 5V     | L-242 | <b>7G7</b>    |
| 6,3(0,45)        | 5      | L-242 | <b>7V7</b>    |
| 6,3(0,45)        | 5      | L-243 | <b>7W7</b>    |
| 6,3(0,45)        | 5      | L-242 | <b>1231</b>   |
| 6,3(0,45)        | 5      | L-242 | <b>1232</b>   |
| 6,3(0,45)        | 3-3    | M-292 | <b>6J6</b>    |
| 6,3(0,45)        | 3-3    | M-292 | <b>6J6R</b>   |
| 6,3(0,45)        | 3-3    | M-292 | <b>ECC91</b>  |
| 6,3(0,48)        | 3      | N-332 | <b>EC80</b>   |
| 6,3(0,6)         | 4      | T-124 | <b>4696</b>   |
| 6,3(0,6)         | 2-3-5V | O-217 | <b>6M8</b>    |
| 6,3(0,6)         | 5      | L-242 | <b>7AD7</b>   |
| 6,3(0,65)        | 5      | O-172 | <b>6AG7</b>   |
| 6,3(0,8)         | 5      | L-242 | <b>7AK7</b>   |
| 7(0,3)           | 3-3    | N-351 | <b>PCC88</b>  |
| 7,4(0,3)         | 3-3    | N-345 | <b>PCC84</b>  |
| 9,5(0,1)         | 3      | M-346 | <b>UC92</b>   |
| 9,5(0,1)         | 3      | M-346 | <b>9AB4</b>   |
| 9,5(0,3)         | 3-3    | M-292 | <b>9J6</b>    |
| 12,5(0,1)        | 5      | N-303 | <b>UF80</b>   |
| 12,6(0,1)        | 2-5V   | R-298 | <b>UAF41</b>  |
| 12,6(0,1)        | 5      | L-242 | <b>UF21</b>   |
| 12,6(0,1)        | 2-5V   | R-302 | <b>UAF42</b>  |
| 12,6(0,1)        | 5V     | R-297 | <b>UF41</b>   |
| 12,6(0,1)        | 5      | N-303 | <b>UF89</b>   |
| 12,6(0,15)       | 3-3    | N-94  | <b>12AU7</b>  |
| 12,6(0,15)       | 3-3    | A-94  | <b>12AU7R</b> |
| 12,6(0,15)       | 2-2-5  | O-196 | <b>12C8</b>   |
| 12,6(0,15)       | 5      | O-180 | <b>12J7</b>   |
| 12,6(0,15)       | 5      | O-180 | <b>12K7</b>   |
| 12,6(0,15)       | 5V     | O-176 | <b>12SG7</b>  |
| 12,6(0,15)       | 5      | O-176 | <b>12SH7</b>  |
| 12,6(0,15)       | 5      | O-173 | <b>12SJ7</b>  |

## HAUTE OU MOYENNE FRÉQUENCE

| Tension Filament | Type   | Culot | Référence    |
|------------------|--------|-------|--------------|
| 12,6(0,15)       | 5V     | O-173 | <b>12SK7</b> |
| 12,6(0,15)       | 5V     | L-242 | <b>12B7</b>  |
| 12,6(0,15)       | 5V     | L-242 | <b>14A7</b>  |
| 12,6(0,15)       | 5      | L-242 | <b>14C7</b>  |
| 12,6(0,15)       | 2-2-5  | L-251 | <b>14E7</b>  |
| 12,6(0,15)       | 3-3    | L-253 | <b>14F8</b>  |
| 12,6(0,15)       | 5V     | L-242 | <b>14H7</b>  |
| 12,6(0,15)       | 2-2-5  | L-251 | <b>14R7</b>  |
| 12,6(0,15)       | 5      | L-242 | <b>1280</b>  |
| 12,6(0,15)       | 5      | M-284 | <b>12AU6</b> |
| 12,6(0,15)       | 5      | M-286 | <b>12AW6</b> |
| 12,6(0,15)       | 5V     | M-284 | <b>HF93</b>  |
| 12,6(0,15)       | 5      | M-284 | <b>HF94</b>  |
| 12,6(0,15)       | 5      | M-284 | <b>12BA6</b> |
| 12,6(0,15)       | 5      | M-284 | <b>12BD6</b> |
| 12,6(0,15)       | 3-3    | N-94  | <b>ECC82</b> |
| 12,6(0,15)       | 3-3    | N-305 | <b>ECC81</b> |
| 12,6(0,15)       | 5      | L-243 | <b>14W7</b>  |
| 12,6(0,22)       | 5      | O-210 | <b>12B8</b>  |
| 12,6(0,3)        | 3-5    | N-336 | <b>12N8</b>  |
| 12,6(0,3)        | 2-2-5  | N-336 | <b>UBF80</b> |
| 17(0,1)          | 2-2-5  | N-336 | <b>17C8</b>  |
| 17(0,1)          | 2-2-5V | N-336 | <b>UF85</b>  |
| 19(0,1)          | 5V     | N-303 | <b>UBF89</b> |
| 19(0,1)          | 2-2-5  | N-339 | <b>19FL8</b> |
| 19(0,1)          | 2-2-5  | N-336 | <b>25B8</b>  |
| 20(0,18)         | 3-5    | O-210 | <b>25D8</b>  |
| 20(0,18)         | 2-3-5  | O-217 | <b>UF42</b>  |
| 21(0,1)          | 5      | R-301 | <b>28D7</b>  |
| 28(0,4)          | 4-4    | L-255 | <b>45B5</b>  |
| 45(0,1)          | 5      | N-303 |              |

## CHANGEMENT DE FRÉQUENCE

| Tension Filament | Type | Culot | Référence    |
|------------------|------|-------|--------------|
| 1,25(0,04)       | 7V   | O-143 | <b>1C8</b>   |
| 1,4(0,025)       | 7*   | M-320 | <b>1AB6</b>  |
| 1,25(0,05)       | 3-7* | S-342 | <b>2G21</b>  |
| 1,4(0,025)       | 7*   | M-320 | <b>DK96</b>  |
| 1,4(0,05)        | 7V*  | O-144 | <b>1A7</b>   |
| 1,4(0,05)        | 7*   | L-227 | <b>1LA6</b>  |
| 1,4(0,05)        | 7*   | L-226 | <b>1LB6</b>  |
| 1,4(0,05)        | 7*   | L-227 | <b>1LC6</b>  |
| 1,4(0,05)        | 7V*  | M-266 | <b>1R5</b>   |
| 1,4(0,05)        | 7*   | M-320 | <b>1AC6</b>  |
| 1,4(0,05)        | 7V*  | M-266 | <b>DK91</b>  |
| 1,4(0,05)        | 7*   | M-320 | <b>DK92</b>  |
| 1,4(0,05)        | 7V*  | R-324 | <b>DK40</b>  |
| 1,4(0,1)         | 7V*  | O-144 | <b>1B7</b>   |
| 2(0,06)          | 7V*  | A-65  | <b>1A6</b>   |
| 2(0,06)          | 7V*  | O-144 | <b>1D7</b>   |
| 2(0,12)          | 7V*  | A-65  | <b>1C6</b>   |
| 2(0,12)          | 7V*  | O-144 | <b>1C7</b>   |
| 2,5(0,8)         | 7V   | A-84  | <b>2A7</b>   |
| 4(0,65)          | 8V   | T-122 | <b>AK2</b>   |
| 6,3(0,15)        | 7V   | O-183 | <b>6D8</b>   |
| 6,3(0,15)        | 8V   | L-247 | <b>7A8</b>   |
| 6,3(0,2)         | 3-6V | E-41  | <b>ECH11</b> |
| 6,3(0,2)         | 3-6V | T-130 | <b>ECH3</b>  |
| 6,3(0,225)       | 3-6V | R-299 | <b>ECH41</b> |
| 6,3(0,23)        | 3-6V | R-299 | <b>ECH42</b> |
| 6,3(0,3)         | 3-7  | N-338 | <b>ECH84</b> |
| 6,3(0,3)         | 7V   | A-84  | <b>6A7</b>   |
| 6,3(0,3)         | 7V   | O-183 | <b>6A8</b>   |
| 6,3(0,3)         | 3-6V | O-212 | <b>6E8</b>   |
| 6,3(0,3)         | 3-7V | O-212 | <b>6J8</b>   |
| 6,3(0,3)         | 3-6V | O-213 | <b>6K8</b>   |
| 6,3(0,3)         | 7V   | O-185 | <b>6SA7</b>  |

## CHANGEMENT DE FRÉQUENCE

| Tension Filament | Type | Culot | Référence     |
|------------------|------|-------|---------------|
| 6,3(0,3)         | 7V   | O-185 | <b>6SB7</b>   |
| 6,3(0,3)         | 7V   | O-184 | <b>1612</b>   |
| 6,3(0,3)         | 7V   | L-246 | <b>7B8</b>    |
| 6,3(0,3)         | 3-7V | L-257 | <b>7J7</b>    |
| 6,3(0,3)         | 7V   | L-245 | <b>7Q7</b>    |
| 6,3(0,3)         | 3-7V | L-257 | <b>7S7</b>    |
| 6,3(0,3)         | 7V   | M-290 | <b>6BE6</b>   |
| 6,3(0,3)         | 7V   | M-290 | <b>EK90</b>   |
| 6,3(0,3)         | 3-7  | N-338 | <b>6DS8</b>   |
| 6,3(0,3)         | 3-7V | N-338 | <b>6AJ8</b>   |
| 6,3(0,3)         | 3-7V | N-338 | <b>ECH81</b>  |
| 6,3(0,3)         | 3-7  | N-338 | <b>ECH83</b>  |
| 6,3(0,3)         | 7    | N-334 | <b>6BA7</b>   |
| 6,3(0,35)        | 3-7  | T-369 | <b>ECH4</b>   |
| 6,3(0,35)        | 3-7  | L-374 | <b>ECH21</b>  |
| 6,3(0,385)       | 3-5  | N-358 | <b>ECF86</b>  |
| 6,3(0,41)        | 3-5  | N-383 | <b>ECF801</b> |
| 6,3(0,45)        | 3-6V | L-256 | <b>7D7</b>    |
| 6,3(0,45)        | 3-5  | N-368 | <b>6X8</b>    |
| 6,3(0,7)         | 3-6V | O-211 | <b>6TH8</b>   |
| 6,3(0,8)         | 3-6  | O-213 | <b>6P8</b>    |
| 8(0,3)           | 3-5  | N-358 | <b>PCF86</b>  |
| 9(0,3)           | 3-3  | N-351 | <b>PCC85</b>  |
| 9(0,3)           | 3-5  | N-352 | <b>9A8</b>    |
| 12,6(0,15)       | 7V   | O-183 | <b>12A8</b>   |
| 12,6(0,15)       | 3-6V | O-213 | <b>12K8</b>   |
| 12,6(0,15)       | 7V   | O-185 | <b>12SA7</b>  |
| 12,6(0,15)       | 7    | O-185 | <b>12SY7</b>  |
| 12,6(0,15)       | 7V   | L-246 | <b>14B8</b>   |
| 12,6(0,15)       | 3-7V | L-257 | <b>14J7</b>   |
| 12,6(0,15)       | 7V   | L-245 | <b>14Q7</b>   |
| 12,6(0,15)       | 3-7V | L-257 | <b>14S7</b>   |
| 12,6(0,15)       | 7    | M-290 | <b>12BE6</b>  |

## CHANGEMENT DE FRÉQUENCE

| Tension Filament | Type | Culot | Référence    |
|------------------|------|-------|--------------|
| 12,6(0,15)       | 7    | M-290 | <b>HK90</b>  |
| 12,6(0,15)       | 7    | N-334 | <b>12BA7</b> |
| 12,6(0,15)       | 3-7  | N-338 | <b>HCH81</b> |
| 12,6(0,15)       | 3-7  | N-338 | <b>12AJ8</b> |
| 14(0,1)          | 3-6V | R-299 | <b>UCH41</b> |
| 14(0,1)          | 3-6V | R-299 | <b>UCH42</b> |
| 19(0,1)          | 3-7  | N-338 | <b>UCH81</b> |
| 19(0,1)          | 3-7  | N-338 | <b>19AJ8</b> |
| 19(0,1)          | 3-7V | N-338 | <b>19D8</b>  |
| 20(0,1)          | 3-7  | L-374 | <b>UCH21</b> |
| 21(0,15)         | 3-7V | O-212 | <b>20J8</b>  |
| 21(0,2)          | 3-6V | O-211 | <b>21TH8</b> |
| 21(0,16)         | 3-7V | L-257 | <b>21A7</b>  |
| 26(0,1)          | 3-3  | N-351 | <b>UCC85</b> |
| 26(0,1)          | 3-3  | N-351 | <b>9AQ8</b>  |



# DÉTECTION

| Tension Filament | Type    | Culot | Référence    |
|------------------|---------|-------|--------------|
| 0,7(0,065)       | 2*      | A-90  | <b>1247</b>  |
| 1,4(0,05)        | 2*      | M-259 | <b>1654</b>  |
| 1,4(0,15)        | 2       | L-232 | <b>1R4</b>   |
| 1,4(0,15)        | 2       | M-272 | <b>DA90</b>  |
| 1,4(0,15)        | 2       | M-272 | <b>1A3</b>   |
| 2,5(1,35)        | 2-2     | A-61  | <b>2S/4S</b> |
| 5(0,25)          | 3*      | A-47  | <b>00A</b>   |
| 5(0,25)          | 3*      | A-47  | <b>200A</b>  |
| 6,3(0,15)        | 2       | —     | <b>EA50</b>  |
| 6,3(0,15)        | 2       | O-156 | <b>6H4</b>   |
| 6,3(0,15)        | 2-2     | L-236 | <b>7A6</b>   |
| 6,3(0,15)        | 2       | L-232 | <b>7C4</b>   |
| 6,3(0,15)        | 2       | L-232 | <b>1203</b>  |
| 6,3(0,15)        | 2-2     | L-237 | <b>5679</b>  |
| 6,3(0,2)         | 2-2     | E-33  | <b>EB11</b>  |
| 6,3(0,2)         | 2-2     | —     | <b>EB34</b>  |
| 6,3(0,2)         | 2-2-2-2 | M-277 | <b>6AN6</b>  |
| 6,3(0,3)         | 2-2     | O-161 | <b>6H6</b>   |
| 6,3(0,3)         | 2-2     | M-276 | <b>EA91</b>  |
| 6,3(0,3)         | 2-2     | M-276 | <b>6AL5</b>  |
| 6,3(0,3)         | 2-2     | M-276 | <b>5726</b>  |
| 6,3(0,3)         | 2-2     | R-326 | <b>EB41</b>  |
| 12,6(0,15)       | 2-2     | O-161 | <b>12H6</b>  |
| 12,6(0,15)       | 2-2     | M-276 | <b>12AL5</b> |
| 19(0,1)          | 2-2     | R-326 | <b>UB41</b>  |
| 25(0,3)          | 2       | O-318 | <b>25T3</b>  |

# PRÉAMPLIFICATION BF

| Tension Filament | Type    | Culot | Référence    |
|------------------|---------|-------|--------------|
| 1,1(0,25)        | 3*      | A-47  | <b>11</b>    |
| 1,1(0,25)        | 3*      | A-47  | <b>12</b>    |
| 1,1(0,25)        | 3*      | A-47  | <b>864</b>   |
| 1,4(0,025)       | 2-5*    | R-388 | <b>DAF41</b> |
| 1,4(0,025)       | 2-5*    | M-267 | <b>DAF96</b> |
| 1,4(0,05)        | 3*      | O-138 | <b>1E4</b>   |
| 1,4(0,05)        | 3*      | O-138 | <b>1G4</b>   |
| 1,4(0,05)        | 2-3*    | O-145 | <b>1H5</b>   |
| 1,4(0,05)        | 5*      | O-142 | <b>1P5</b>   |
| 1,4(0,05)        | 2-5*    | O-148 | <b>1SB6</b>  |
| 1,4(0,05)        | 2-5*    | L-228 | <b>1LD5</b>  |
| 1,4(0,05)        | 3*      | L-218 | <b>1LE3</b>  |
| 1,4(0,05)        | 2-3*    | L-225 | <b>1LH4</b>  |
| 1,4(0,05)        | 2-5*    | M-267 | <b>1S5</b>   |
| 1,4(0,05)        | 2-5*    | M-268 | <b>1U5</b>   |
| 1,5(1,05)        | 3*      | A-47  | <b>26</b>    |
| 2(0,06)          | 2-2-5V* | A-67  | <b>1F6</b>   |
| 2(0,06)          | 3*      | A-47  | <b>30</b>    |
| 2(0,06)          | 3*      | A-47  | <b>1230</b>  |
| 2(0,06)          | 2-2-5V* | O-149 | <b>1F7</b>   |
| 2(0,06)          | 3*      | O-138 | <b>1H4</b>   |
| 2(0,06)          | 2-2-3*  | O-146 | <b>1H6</b>   |
| 2(0,06)          | 2-2-2-3 | A-93  | <b>19T8</b>  |
| 2,5(0,8)         | 2-2-3   | A-75  | <b>2A6</b>   |
| 2,5(0,8)         | 2-2-5V  | A-86  | <b>2B7</b>   |
| 2,5((1)          | 3       | A-62  | <b>56</b>    |
| 2,5(1)           | 2-2-3   | A-75  | <b>55</b>    |
| 2,5(1)           | 5       | A-74  | <b>57</b>    |
| 2,5(1,75)        | 3       | A-62  | <b>27</b>    |
| 2,8(0,05)        | 2-3-5*  | O-153 | <b>3A8</b>   |
| 2,8(0,05)        | 3-3*    | L-230 | <b>3C6</b>   |
| 3(0,06)          | 3*      | A-46  | <b>V99</b>   |
| 3(1,25)          | 3       | A-62  | <b>485</b>   |

# PRÉAMPLIFICATION BF

| Tension Filament | Type   | Culot | Référence    |
|------------------|--------|-------|--------------|
| 4(0,65)          | 2-2-3  | T-123 | <b>ABC1</b>  |
| 4(0,65)          | 5      | T-118 | <b>AF7</b>   |
| 4,5(0,3)         | 5      | N-347 | <b>PF86</b>  |
| 5(0,25)          | 3*     | A-47  | <b>O1A</b>   |
| 5(0,25)          | 3*     | A-47  | <b>112A</b>  |
| 6,3(0,15)        | 5      | A-57  | <b>954</b>   |
| 6,3(0,15)        | 3      | O-164 | <b>6L5</b>   |
| 6,3(0,15)        | 2-3    | O-186 | <b>6Q6</b>   |
| 6,3(0,15)        | 2-2-3  | O-173 | <b>6ST7</b>  |
| 6,3(0,15)        | 2-2-3  | O-187 | <b>6SZ7</b>  |
| 6,3(0,15)        | 2-2-3  | O-288 | <b>6T7</b>   |
| 6,3(0,15)        | 5      | O-180 | <b>6W7</b>   |
| 6,3(0,15)        | 2-2-3  | L-249 | <b>7C6</b>   |
| 6,3(0,15)        | 2-2-3  | M-291 | <b>6AQ6</b>  |
| 6,3(0,2)         | 2-2-3  | E-36  | <b>EBC11</b> |
| 6,3(0,2)         | 2-2-3  | O-188 | <b>EBC33</b> |
| 6,3(0,2)         | 2-2-5V | E-37  | <b>EBF11</b> |
| 6,3(0,2)         | 5      | E-34  | <b>EF12</b>  |
| 6,3(0,2)         | 2-2-3  | T-123 | <b>EBC3</b>  |
| 6,3(0,2)         | 3-5    | T-129 | <b>ECF1</b>  |
| 6,3(0,2)         | 5      | T-118 | <b>EF6</b>   |
| 6,3(0,2)         | 3      | M-282 | <b>6N4</b>   |
| 6,3(0,2)         | 5      | N-347 | <b>EF86</b>  |
| 6,3(0,2)         | 5V     | N-354 | <b>6DA6</b>  |
| 6,3(0,2)         | 5      | N-347 | <b>EF83</b>  |
| 6,3(0,2)         | 5V     | N-354 | <b>EF89</b>  |
| 6,3(0,2)         | 2-5V   | R-298 | <b>EAF41</b> |
| 6,3(0,2)         | 2-5V   | R-312 | <b>EAF42</b> |
| 6,3(0,2)         | 2-2-3  | R-300 | <b>EBC41</b> |
| 6,3(0,2)         | 5V     | R-297 | <b>EF41</b>  |
| 6,3(0,23)        | 2-2-3  | N-315 | <b>EBC81</b> |
| 6,3(0,25)        | 2-2-3  | N-315 | <b>6BD7</b>  |
| 6,3(0,3)         | 2-2-5V | A-86  | <b>6B7</b>   |

## PRÉAMPLIFICATION BF

| Tension Filament | Type    | Culot | Référence   |
|------------------|---------|-------|-------------|
| 6,3(0,3)         | 5       | A-74  | <b>6C6</b>  |
| 6,3(0,3)         | 2-2-3   | A-85  | <b>6C7</b>  |
| 6,3(0,3)         | 5       | A-83  | <b>6D7</b>  |
| 6,3(0,3)         | 3       | A-62  | <b>37</b>   |
| 6,3(0,3)         | 2-2-3   | A-75  | <b>75</b>   |
| 6,3(0,3)         | 3       | A-62  | <b>76</b>   |
| 6,3(0,3)         | 2-2-3   | A-75  | <b>85</b>   |
| 6,3(0,3)         | 3       | O-164 | <b>6AD5</b> |
| 6,3(0,3)         | 3-3     | O-203 | <b>6AH7</b> |
| 6,3(0,3)         | 2-2-3   | O-189 | <b>6AQ7</b> |
| 6,3(0,3)         | 2-2-3   | O-188 | <b>6B6</b>  |
| 6,3(0,3)         | 2-2-5V  | O-196 | <b>6B8</b>  |
| 6,3(0,3)         | 3       | O-164 | <b>6C5</b>  |
| 6,3(0,3)         | 3-3     | O-205 | <b>6C8</b>  |
| 6,3(0,3)         | 3       | O-167 | <b>6F5</b>  |
| 6,3(0,3)         | 2-2-5V  | O-196 | <b>6H8</b>  |
| 6,3(0,3)         | 3       | O-164 | <b>6J5</b>  |
| 6,3(0,3)         | 5       | O-180 | <b>6J7</b>  |
| 6,3(0,3)         | 3       | O-168 | <b>6K5</b>  |
| 6,3(0,3)         | 7V      | O-184 | <b>6L7</b>  |
| 6,3(0,3)         | 3       | O-164 | <b>6P5</b>  |
| 6,3(0,3)         | 3-5V    | O-208 | <b>6P7</b>  |
| 6,3(0,3)         | 2-2-3   | O-188 | <b>6Q7</b>  |
| 6,3(0,3)         | 2-2-3   | O-188 | <b>6R7</b>  |
| 6,3(0,3)         | 3-3     | O-201 | <b>6SC7</b> |
| 6,3(0,3)         | 3       | O-165 | <b>6SF5</b> |
| 6,3(0,3)         | 5       | O-173 | <b>6SJ7</b> |
| 6,3(0,3)         | 3-3     | O-204 | <b>6SL7</b> |
| 6,3(0,3)         | 3-3     | O-204 | <b>6SN7</b> |
| 6,3(0,3)         | 2-2-3   | O-187 | <b>6SQ7</b> |
| 6,3(0,3)         | 2-2-3   | O-187 | <b>6SR7</b> |
| 6,3(0,3)         | 3-3     | O-204 | <b>6SU7</b> |
| 6,3(0,3)         | 2-2-2-3 | O-216 | <b>6S8</b>  |

## PRÉAMPLIFICATION BF

| Tension Filament | Type    | Culot | Référence    |
|------------------|---------|-------|--------------|
| 6,3(0,3)         | 3-3     | L-252 | <b>7AF7</b>  |
| 6,3(0,3)         | 3       | L-238 | <b>7A4</b>   |
| 6,3(0,3)         | 3       | L-238 | <b>7B4</b>   |
| 6,3(0,3)         | 2-2-3   | L-248 | <b>7B6</b>   |
| 6,3(0,3)         | 2-2-3   | L-249 | <b>7E6</b>   |
| 6,3(0,3)         | 3-3     | L-252 | <b>7F7</b>   |
| 6,3(0,3)         | 2-2-3   | L-250 | <b>7K7</b>   |
| 6,3(0,3)         | 3-3     | L-252 | <b>7N7</b>   |
| 6,3(0,3)         | 5       | M-286 | <b>6ET6</b>  |
| 6,3(0,3)         | 5       | M-286 | <b>EF98</b>  |
| 6,3(0,3)         | 2-2-3   | M-291 | <b>6AT6</b>  |
| 6,3(0,3)         | 2-2-3   | M-291 | <b>6BF6</b>  |
| 6,3(0,3)         | 2-2-3   | M-291 | <b>EBC90</b> |
| 6,3(0,3)         | 2-2-3   | M-291 | <b>EBC91</b> |
| 6,3(0,3)         | 3-5     | N-304 | <b>6AB8</b>  |
| 6,3(0,3)         | 3-5     | N-361 | <b>ECL86</b> |
| 6,3(0,45)        | 2-2-2-3 | A-93  | <b>6T8</b>   |
| 6,3(0,45)        | 2-2-3   | L-258 | <b>7X7</b>   |
| 6,3(0,6)         | 3-3     | O-205 | <b>6F8</b>   |
| 6,3(0,6)         | 3-3     | R-313 | <b>ECC40</b> |
| 12,6(0,1)        | 2-5V    | R-298 | <b>UAF41</b> |
| 12,6(0,1)        | 2-2-3   | R-300 | <b>UBC41</b> |
| 12,6(0,1)        | 5V      | R-297 | <b>UF41</b>  |
| 12,6(0,15)       | 3-3     | A-94  | <b>12AT7</b> |
| 12,6(0,15)       | 3-3     | O-203 | <b>12AH7</b> |
| 12,6(0,15)       | 2-2-5   | O-196 | <b>12C8</b>  |
| 12,6(0,15)       | 3       | O-164 | <b>12E5</b>  |
| 12,6(0,15)       | 3       | O-167 | <b>12F5</b>  |
| 12,6(0,15)       | 3       | O-164 | <b>12J5</b>  |
| 12,6(0,15)       | 5       | O-180 | <b>12J7</b>  |
| 12,6(0,15)       | 3-3     | O-204 | <b>12SL7</b> |
| 12,6(0,15)       | 2-2-3   | O-187 | <b>12SQ7</b> |
| 12,6(0,15)       | 2-2-3   | O-187 | <b>12SR7</b> |

## PRÉAMPLIFICATION BF

| Tension Filament | Type  | Culot | Référence     |
|------------------|-------|-------|---------------|
| 12,6(0,15)       | 2-2-3 | O-187 | <b>12SW7</b>  |
| 12,6(0,15)       | 3-3   | L-252 | <b>14AF7</b>  |
| 12,6(0,15)       | 2-2-3 | L-248 | <b>14B6</b>   |
| 12,6(0,15)       | 3-3   | L-252 | <b>14F7</b>   |
| 12,6(0,15)       | 3     | L-238 | <b>14A4</b>   |
| 12,6(0,15)       | 2-2-3 | L-249 | <b>14E6</b>   |
| 12,6(0,15)       | 2-2-3 | M-291 | <b>12AT6</b>  |
| 12,6(0,15)       | 2-2-3 | M-291 | <b>12AV6</b>  |
| 12,6(0,15)       | 2-2-3 | M-291 | <b>HBC90</b>  |
| 12,6(0,15)       | 2-2-3 | M-291 | <b>HBC91</b>  |
| 12,6(0,15)       | 5     | M-286 | <b>12AW6</b>  |
| 12,6(0,15)       | 2-2-3 | M-291 | <b>12BF6</b>  |
| 12,6(0,15)       | 3-3   | N-335 | <b>ECC83</b>  |
| 12,6(0,15)       | 3-3   | N-335 | <b>12AX7</b>  |
| 12,6(0,15)       | 3-3   | N-335 | <b>12AX7R</b> |
| 12,6(0,15)       | 3-3   | N-305 | <b>5751</b>   |
| 12,6(0,3)        | 3-5   | O-210 | <b>12B8</b>   |
| 12,6(0,3)        | 3-3   | O-204 | <b>12SN7</b>  |
| 12,6(0,3)        | 3-3   | O-204 | <b>12SX7</b>  |
| 12,6(0,3)        | 3-3   | L-252 | <b>14N7</b>   |
| 13(0,3)          | 3-5   | N-361 | <b>PCL86</b>  |
| 14(0,1)          | 2-2-3 | N-315 | <b>UBC81</b>  |
| 25(0,15)         | 3-5   | O-210 | <b>25B8</b>   |
| 25(0,15)         | 2-3-5 | O-217 | <b>25D8</b>   |



## AMPLIFICATION BF DE PUISSANCE

| Tension Filament | Type   | Culot | Référence |
|------------------|--------|-------|-----------|
| 1,25(0,03)       | 5*     | A-58  | 2E36      |
| 1,25(0,04)       | 5*     | A-91  | 1V5       |
| 1,25(0,05)       | 5      | S-341 | 5672      |
| 2,8(0,025)       | 5*     | M-263 | DL96      |
| 1,4(0,05)        | 4*     | O-139 | 1T5       |
| 1,4(0,05)        | 5*     | O-139 | 1A5       |
| 1,4(0,05)        | 2-5*   | O-147 | 1N6       |
| 1,4(0,05)        | 5*     | O-372 | DL21      |
| 1,4(0,05)        | 5*     | L-221 | 1LA4      |
| 1,4(0,05)        | 5*     | L-221 | 1LB4      |
| 1,4(0,1)         | 4*     | O-139 | 1Q5       |
| 1,4(0,1)         | 5*     | O-139 | 1C5       |
| 1,4(0,1)         | 3-3*   | O-150 | 1G6       |
| 1,4(0,1)         | 2-3-5* | O-154 | 1B8       |
| 1,4(0,1)         | 2-3-5* | O-154 | 1D8       |
| 1,4(0,1)         | 5*     | M-261 | 1S4       |
| 1,4(0,1)         | 5*     | R-323 | DL41      |
| 2(0,06)          | 3*     | A-47  | 31        |
| 2(0,1)           | 5*     | T-101 | KL5       |
| 2(0,12)          | 4*     | A-59  | 49        |
| 2(0,12)          | 5*     | A-60  | 1F4       |
| 2(0,12)          | 5*     | A-60  | 950       |
| 2(0,12)          | 5*     | O-139 | 1F5       |
| 2(0,12)          | 5*     | O-139 | 1G5       |
| 2(0,12)          | 5*     | O-139 | 1J5       |
| 2(0,14)          | 5*     | T-101 | KL4       |
| 2(0,24)          | 3-3*   | O-150 | 1J6       |
| 2(0,24)          | 5-5*   | O-152 | 1E7       |
| 2(0,26)          | 3-3*   | A-68  | 19        |
| 2(0,26)          | 5*     | A-60  | 33        |
| 2,5(1,5)         | 3*     | A-47  | 45        |
| 2,5(1,75)        | 4*     | A-59  | 46        |
| 2,5(1,75)        | 5*     | A-60  | 47        |

## AMPLIFICATION BF DE PUISSANCE

| Tension Filament | Type  | Culot | Référence |
|------------------|-------|-------|-----------|
| 2,5(1,75)        | 5     | A-73  | 2A5       |
| 2,5(2)           | 5     | A-81  | 59        |
| 2,5(2)           | 3-3   | A-88  | 53        |
| 2,5(2,5)         | 3*    | A-47  | 2A3       |
| 2,8(0,025)       | 5*    | M-263 | 3C4       |
| 2,8(0,05)        | 5*    | O-140 | 3Q5       |
| 2,8(0,05)        | 5*    | O-140 | 3B5       |
| 2,8(0,05)        | 5*    | O-140 | 3C5       |
| 2,8(0,05)        | 5*    | L-223 | 3LE4      |
| 2,8(0,05)        | 5*    | L-223 | 3LF4      |
| 2,8(0,05)        | 5*    | M-265 | DL94      |
| 2,8(0,05)        | 5*    | M-265 | 3Q4       |
| 2,8(0,05)        | 5*    | M-265 | 3S4       |
| 2,8(0,05)        | 5*    | M-265 | DL92      |
| 2,8(0,05)        | 5*    | M-265 | DL95      |
| 2,8(0,05)        | 5*    | M-263 | 3V4       |
| 2,8(0,1)         | 5*    | M-264 | 3A4       |
| 2,8(0,1)         | 5*    | M-264 | DL93      |
| 2,8(0,1)         | 5*    | M-264 | DCC90     |
| 2,8(0,11)        | 4*    | L-223 | 1299      |
| 2,8(0,11)        | 5*    | L-223 | 3D6       |
| 3,3(0,13)        | 3*    | A-47  | 20        |
| 4(0,06)          | 3-3*  | O-151 | 4A6       |
| 4(0,09)          | 3*    | T-100 | 4683      |
| 4(1)             | 5     | T-117 | AL2       |
| 4(1)             | 5     | T-117 | 4682      |
| 4(1,1)           | 3*    | T-100 | AD1       |
| 4(1,75)          | 5     | T-115 | AL4       |
| 4(1,75)          | 5     | T-115 | 4684      |
| 4(2)             | 3*    | E-9   | 4641      |
| 4(2)             | 5     | T-115 | 4688      |
| 4(2,4)           | 2-2-5 | T-125 | ABL1      |
| 4,5(1,14)        | 3*    | A-47  | 1276      |

## AMPLIFICATION BF DE PUISSANCE

| Tension Filament | Type  | Culot | Référence |
|------------------|-------|-------|-----------|
| 4,5(1,6)         | 3*    | A-47  | 205D      |
| 5(0,25)          | 3*    | A-47  | 40        |
| 5(0,25)          | 3*    | A-47  | 71A       |
| 5(1,25)          | 3*    | A-47  | 182B      |
| 5(1,25)          | 3*    | A-47  | 183       |
| 6,3(0,1)         | 3*    | O-138 | 6B4       |
| 6,3(0,15)        | 5     | O-348 | EL34      |
| 6,3(0,15)        | 5     | O-174 | 6G6       |
| 6,3(0,15)        | 3-3   | O-199 | 6AE6      |
| 6,3(0,15)        | 4     | L-232 | 7C5       |
| 6,3(0,15)        | 5     | M-284 | 6AK6      |
| 6,3(0,175)       | 5     | M-289 | 6AJ5      |
| 6,3(0,2)         | 5     | T-117 | EL2       |
| 6,3(0,2)         | 5     | R-296 | EL42      |
| 6,3(0,2)         | 5     | M-329 | EL95      |
| 6,3(0,3)         | 4*    | A-59  | 52        |
| 6,3(0,3)         | 5*    | A-60  | 6A4       |
| 6,3(0,3)         | 5     | A-64  | 38        |
| 6,3(0,3)         | 3     | O-164 | 6AE5      |
| 6,3(0,3)         | 3     | O-164 | 6AF5      |
| 6,3(0,3)         | 5     | O-182 | 6BG6      |
| 6,3(0,3)         | 3-3   | O-200 | 6Z7       |
| 6,3(0,3)         | 2-2-3 | O-188 | 6V7       |
| 6,3(0,3)         | 4     | L-240 | 7A5       |
| 6,3(0,3)         | 2-2-3 | M-291 | 6AV6      |
| 6,3(0,3)         | 3-5   | N-304 | ECL80     |
| 6,3(0,3)         | 3-5   | N-361 | ECL86     |
| 6,3(0,4)         | 5     | A-73  | 41        |
| 6,3(0,4)         | 5     | A-74  | 89        |
| 6,3(0,4)         | 3     | O-164 | 6AC5      |
| 6,3(0,4)         | 5     | O-174 | 6K6       |
| 6,3(0,4)         | 5     | L-241 | 7B5       |
| 6,3(0,4)         | 5     | M-285 | 6AR5      |

## AMPLIFICATION BF DE PUISSANCE

| Tension Filament | Type  | Culot | Référence |
|------------------|-------|-------|-----------|
| 6,3(0,45)        | 4     | O-170 | 6V6       |
| 6,3(0,45)        | 4     | M-288 | 6AQ5      |
| 6,3(0,45)        | 4     | M-288 | 6005      |
| 6,3(0,45)        | 5     | M-288 | 6P9       |
| 6,3(0,45)        | 4     | M-288 | EL90      |
| 6,3(0,45)        | 5     | M-288 | 6BM5      |
| 6,3(0,5)         | 3-3   | O-207 | 6AB6      |
| 6,3(0,5)         | 3-3   | O-202 | 6AE7      |
| 6,3(0,6)         | 3-3   | A-88  | 6E6       |
| 6,3(0,6)         | 3-3   | A-79  | 79        |
| 6,3(0,6)         | 3-3   | O-200 | 6Y7       |
| 6,3(0,65)        | 5     | O-172 | 6AK7      |
| 6,3(0,65)        | 5     | R-296 | EL41      |
| 6,3(0,7)         | 5     | A-73  | 42        |
| 6,3(0,7)         | 3     | O-164 | 6D5       |
| 6,3(0,7)         | 5     | O-174 | 6F6       |
| 6,3(0,7)         | 5     | O-174 | 6M6       |
| 6,3(0,7)         | 5     | N-307 | EL86      |
| 6,3(0,7)         | 3-5   | N-316 | 6CN8      |
| 6,3(0,75)        | 4     | O-174 | 6U6       |
| 6,3(0,76)        | 5     | N-307 | EL84      |
| 6,3(0,76)        | 5     | N-307 | 6BQ5      |
| 6,3(0,8)         | 3-3   | A-88  | 6A6       |
| 6,3(0,8)         | 3-3   | A-78  | 6B5       |
| 6,3(0,8)         | 3-3   | O-207 | 6N6       |
| 6,3(0,8)         | 3-3   | O-200 | 6N7       |
| 6,3(0,8)         | 5     | M-287 | 6AS5      |
| 6,3(0,8)         | 2-2-5 | L-375 | EBL21     |
| 6,3(0,85)        | 3-5   | O-209 | 6AD7      |
| 6,3(0,9)         | 5     | E-34  | EL11      |
| 6,3(0,9)         | 5     | T-115 | EL3       |
| 6,3(0,9)         | 4     | O-170 | 6L6       |
| 6,3(0,9)         | 5     | O-171 | 6AH5      |

## AMPLIFICATION BF DE PUISSANCE

| Tension Filament | Type | Culot | Référence |
|------------------|------|-------|-----------|
| 6,3(0,9)         | 5    | O-181 | 6AL6      |
| 6,3(0,9)         | 4    | M-367 | 5Y25      |
| 6,3(0,9)         | 4    | M-367 | 807       |
| 6,3(0,9)         | 5    | O-174 | EL-33     |
| 6,3(1)           | 3-4  | E-40  | ECL11     |
| 6,3(1)           | 3*   | A-47  | 6A3       |
| 6,3(1,1)         | 3-4  | O-207 | 6AC6      |
| 6,3(1,2)         | 5    | E-34  | EL12      |
| 6,3(1,2)         | 5    | O-175 | 6AR6      |
| 6,3(1,2)         | 5    | T-115 | 4694      |
| 6,3(1,2)         | 5    | N-377 | EL503     |
| 6,3(1,2)         | 5    | N-377 | EL520     |
| 6,3(1,25)        | 3    | O-166 | 6A5       |
| 6,3(1,25)        | 4    | O-170 | 6W6       |
| 6,3(1,25)        | 4    | O-170 | 6Y6       |
| 6,3(1,25)        | 5    | O-174 | 6AG6      |
| 6,3(1,27)        | 5    | O-174 | KT66      |
| 6,3(1,3)         | 5    | T-115 | EL5       |
| 6,3(1,3)         | 5    | T-115 | EL6       |
| 6,3(1,3)         | 5    | T-115 | 4699      |
| 6,3(1,35)        | 5    | T-116 | 4654      |
| 6,3(1,35)        | 5    | T-115 | 4689      |
| 6,3(1,5)         | 5    | T-116 | EL50      |
| 6,3(1,5)         | 5    | L-373 | EL60      |
| 6,3(1,6)         | 5    | O-174 | KT88      |
| 6,3(1,9)         | 5    | T-370 | EL51      |
| 6,3(2,5)         | 3-3  | O-204 | 6AS7      |
| 7,5(1,25)        | 3*   | A-47  | 10        |
| 7,5(1,25)        | 3*   | A-47  | 50        |
| 7,5(1,25)        | 3*   | A-47  | 210T      |
| 9,5(0,3)         | 5    | M-288 | 9BM5      |
| 9,5(0,3)         | 5    | M-288 | 9P9       |
| 12,6(0,15)       | 4    | O-170 | 12A6      |

## AMPLIFICATION BF DE PUISSANCE

| Tension Filament | Type    | Culot | Référence |
|------------------|---------|-------|-----------|
| 12,6(0,15)       | 5-5     | O-214 | 12L8      |
| 12,6(0,15)       | 4       | L-241 | 14A5      |
| 12,6(0,15)       | 5       | L-242 | 1284      |
| 12,6(0,22)       | 4       | L-241 | 14C5      |
| 12,6(0,3)        | 5       | A-82  | 12A5      |
| 12,6(0,3)        | 2-5     | A-87  | 12A7      |
| 13(0,3)          | 3-5     | N-361 | PCL86     |
| 14(0,3)          | 5       | A-73  | 18        |
| 15(0,3)          | 5       | N-307 | PL84      |
| 16(0,3)          | 3-5     | N-316 | 16CN8     |
| 25(0,3)          | 3-3     | A-77  | 25B5      |
| 25(0,3)          | 5       | A-73  | 43        |
| 25(0,3)          | 3       | O-164 | 25AC5     |
| 25(0,3)          | 4       | O-170 | 25C6      |
| 25(0,3)          | 4       | O-170 | 25L6      |
| 25(0,3)          | 5       | O-174 | 25A6      |
| 25(0,3)          | 5       | O-174 | 25B6      |
| 25(0,3)          | 2-5     | O-194 | 25A7      |
| 25(0,3)          | 3-3     | O-206 | 25N6      |
| 26,5(0,6)        | 5-5     | O-214 | 26A7      |
| 28(0,1)          | 2-2-2-3 | N-337 | UABC80    |
| 30,4(0,4)        | 4       | A-72  | 48        |
| 32,5(0,3)        | 2-4     | O-194 | 32L7      |
| 35(0,15)         | 4       | O-170 | 35L6      |
| 35(0,15)         | 4       | L-241 | 35A5      |
| 35(0,15)         | 5       | M-288 | 35B5      |
| 35(0,15)         | 5       | M-287 | 35C5      |
| 45(0,1)          | 5       | R-296 | UL41      |
| 45(0,1)          | 5       | N-307 | UL84      |
| 50(0,15)         | 5       | O-174 | 50C6      |
| 50(0,15)         | 5       | O-170 | 50L6      |
| 50(0,15)         | 4       | L-241 | 50A5      |
| 50(0,15)         | 5       | M-288 | 50B5      |



## AMPLIFICATION BF DE PUISSANCE

| Tension Filament | Type  | Culot | Référence    |
|------------------|-------|-------|--------------|
| 50(0,15)         | 5     | M-287 | <b>50C5</b>  |
| 55(0,1)          | 2-2-5 | L-375 | <b>UBL21</b> |
| 70(0,15)         | 2-4   | O-192 | <b>70L7</b>  |
| 70(0,15)         | 2-5   | O-195 | <b>70A7</b>  |
| 117(0,09)        | 2-4   | O-190 | <b>117N7</b> |
| 117(0,09)        | 2-4   | O-190 | <b>117P7</b> |
| 117(0,09)        | 2-4   | O-191 | <b>117L7</b> |
| 117(0,09)        | 2-4   | O-191 | <b>117M7</b> |

## INDICATION VISUELLE

| Tension Filament | Type | Culot | Référence    |
|------------------|------|-------|--------------|
| 1,4(0,025)       | 3*   | N-328 | <b>DM70</b>  |
| 1,4(0,025)       | 3*   | M-328 | <b>DM71</b>  |
| 2,5(0,8)         | 3    | A-76  | <b>2E5</b>   |
| 4(0,2)           | 3    | T-127 | <b>ME4</b>   |
| 6,3(0,15)        | 3    | A-76  | <b>6AB5</b>  |
| 6,3(0,15)        | 3    | A-76  | <b>6N5</b>   |
| 6,3(0,15)        | 3    | O-163 | <b>6AD6</b>  |
| 6,3(0,15)        | 3-3  | O-163 | <b>6AF6</b>  |
| 6,3(0,15)        | 3    | O-198 | <b>6AL7</b>  |
| 6,3(0,2)         | 3-5  | E-38  | <b>EFM11</b> |
| 6,3(0,2)         | 3-3V | O-215 | <b>EM34</b>  |
| 6,3(0,2)         | 3    | T-132 | <b>C/EM2</b> |
| 6,3(0,2)         | 3-5V | T-128 | <b>EFM1</b>  |
| 6,3(0,2)         | 3    | T-127 | <b>EM1</b>   |
| 6,3(0,2)         | 3    | T-127 | <b>EM3</b>   |
| 6,3(0,2)         | 3-3  | T-133 | <b>EM4</b>   |
| 6,3(0,2)         | 3    | T-127 | <b>ME6</b>   |
| 6,3(0,27)        | 3    | N-340 | <b>EM84</b>  |
| 6,3(0,3)         | 2    | N-350 | <b>EM87</b>  |
| 6,3(0,3)         | 3    | A-76  | <b>6E5</b>   |
| 6,3(0,3)         | 3V   | A-76  | <b>6G5</b>   |
| 6,3(0,3)         | 3V   | A-76  | <b>6T5</b>   |
| 6,3(0,3)         | 3V   | A-76  | <b>6U5</b>   |
| 6,3(0,3)         | 3-3V | O-215 | <b>6AF7</b>  |
| 6,3(0,3)         | 3    | O-197 | <b>6X6</b>   |
| 6,3(0,3)         | 3    | N-339 | <b>EM80</b>  |
| 6,3(0,3)         | 3    | N-339 | <b>EM81</b>  |
| 6,3(0,3)         | 3    | N-340 | <b>EM85</b>  |
| 12,6(0,1)        | 3-3V | O-215 | <b>UM34</b>  |
| 12,6(0,1)        | 3-3  | O-353 | <b>UM4</b>   |
| 12,6(0,15)       | 3    | O-197 | <b>1629</b>  |
| 19(0,1)          | 3    | N-339 | <b>UM80</b>  |
| 19(0,1)          | 3    | N-339 | <b>UM81</b>  |

## TÉLÉVISION

| Tension Filament | Type | Culot | Référence     |
|------------------|------|-------|---------------|
| 1,4(0,550)       | 2    | N-314 | <b>DY87</b>   |
| 1,4(0,575)       | 2*   | —     | <b>DY51</b>   |
| 1,4(0,6)         | 2*   | M-382 | <b>DY802</b>  |
| 3,6(0,3)         | 3    | N-357 | <b>PC95</b>   |
| 3,8(0,3)         | 3    | N-355 | <b>PC86</b>   |
| 4(0,3)           | 3    | N-356 | <b>PC88</b>   |
| 6,3(0,08)        | 2    | Néant | <b>EY51</b>   |
| 6,3(0,09)        | 2    | —     | <b>6X2</b>    |
| 6,3(0,09)        | 3    | N-356 | <b>EC88</b>   |
| 6,3(0,18)        | 3    | N-357 | <b>EC95</b>   |
| 6,3(0,2)         | 3    | N-333 | <b>6R4</b>    |
| 6,3(0,2)         | 3    | N-355 | <b>EC86</b>   |
| 6,3(0,225)       | 3    | M-322 | <b>EC93</b>   |
| 6,3(0,3)         | 5    | M-321 | <b>EF91</b>   |
| 6,3(0,3)         | 2-2  | M-311 | <b>EB91</b>   |
| 6,3(0,3)         | 3    | M-312 | <b>EC91</b>   |
| 6,3(0,3)         | 5    | M-326 | <b>6AM6</b>   |
| 6,3(0,3)         | 5    | N-303 | <b>EF183</b>  |
| 6,3(0,3)         | 5    | N-303 | <b>EF184</b>  |
| 6,3(0,3)         | 3-3  | N-351 | <b>6AT7</b>   |
| 6,3(0,33)        | 3-3  | N-351 | <b>ECC88</b>  |
| 6,3(0,365)       | 3-3  | N-351 | <b>ECC189</b> |
| 6,3(0,4)         | 3-5  | D-387 | <b>ECF200</b> |
| 6,3(0,4)         | 3-5  | D-387 | <b>ECF201</b> |
| 6,3(0,4)         | 3    | N-380 | <b>ED500</b>  |
| 6,3(0,4)         | 3-3  | N-351 | <b>6BQ7</b>   |
| 6,3(0,4)         | 3-3  | N-351 | <b>9BQ7</b>   |
| 6,3(0,41)        | 3-5  | N-383 | <b>PCF801</b> |
| 6,3(0,43)        | 3-5  | N-352 | <b>PCF802</b> |
| 6,3(0,43)        | 3-5  | N-352 | <b>ECF802</b> |
| 6,3(0,43)        | 3-5  | N-352 | <b>ECF80</b>  |
| 6,3(0,43)        | 3-7  | D-385 | <b>ECH200</b> |
| 6,3(0,43)        | 3-3  | N-351 | <b>ECC812</b> |

## TÉLÉVISION

| Tension Filament | Type | Culot | Référence     |
|------------------|------|-------|---------------|
| 6,3(0,45)        | 3-5  | N-352 | <b>6U8</b>    |
| 6,3(0,45)        | 3-5  | N-352 | <b>ECF82</b>  |
| 6,3(0,45)        | 3-3  | N-345 | <b>ECC84</b>  |
| 6,3(0,48)        | 3    | N-332 | <b>6Q4</b>    |
| 6,3(0,7)         | 5    | N-308 | <b>EL83</b>   |
| 6,3(0,7)         | 5    | N-308 | <b>6CK6</b>   |
| 6,3(0,72)        | 3-5  | N-359 | <b>ECL84</b>  |
| 6,3(0,76)        | 3-5  | N-316 | <b>ECL82</b>  |
| 6,3(0,825)       | 5    | N-378 | <b>EL508</b>  |
| 6,3(0,8)         | 5    | N-307 | <b>EL82</b>   |
| 6,3(0,9)         | 5    | O-319 | <b>EL39</b>   |
| 6,3(0,9)         | 2    | N-309 | <b>EY80</b>   |
| 6,3(0,9)         | 3-5  | N-360 | <b>ECL85</b>  |
| 6,3(0,9)         | 3-5  | N-360 | <b>ECL802</b> |
| 6,3(0,95)        | 5-5  | D-386 | <b>EFL200</b> |
| 6,3(1,05)        | 5    | N-306 | <b>EL81</b>   |
| 6,3(1,05)        | 5    | N-306 | <b>6DR6</b>   |
| 6,3(1,05)        | 5    | N-306 | <b>6CJ6</b>   |
| 6,3(1,2)         | 5    | O-181 | <b>6BQ6</b>   |
| 6,3(1,2)         | 5    | O-181 | <b>6DQ6A</b>  |
| 6,3(1,2)         | 5    | O-181 | <b>EL36</b>   |
| 6,3(1,38)        | 5    | N-364 | <b>EL504</b>  |
| 6,3(1,4)         | 5    | O-317 | <b>EL38</b>   |
| 6,3(1,4)         | 5    | N-364 | <b>EL500</b>  |
| 6,3(1,65)        | 5    | O-362 | <b>EL136</b>  |
| 6,3(1,65)        | 5    | O-362 | <b>6FN5</b>   |
| 6,3(1,65)        | 5    | O-362 | <b>EL300</b>  |
| 6,3(1,7)         | 5    | N-364 | <b>EL502</b>  |
| 6,3(2)           | 5    | N-378 | <b>EL505</b>  |
| 6,3(2)           | 5    | N-381 | <b>EL509</b>  |
| 6,3(2,1)         | 3    | N-379 | <b>EY500</b>  |
| 6,3(2,5)         | 5    | O-182 | <b>6CD6</b>   |
| 7(0,3)           | 3-3  | N-351 | <b>PCC189</b> |

## TÉLÉVISION

| Tension Filament | Type | Culot | Référence     |
|------------------|------|-------|---------------|
| 7,3(0,3)         | 3    | N-380 | <b>PD500</b>  |
| 8(0,3)           | 3-5  | N-387 | <b>PCF200</b> |
| 8(0,3)           | 3-5  | N-387 | <b>PCF201</b> |
| 8(0,3)           | 3-5  | N-360 | <b>PCL802</b> |
| 8 4(0,3)         | 3-3  | N-351 | <b>8BQ7</b>   |
| 9(0,3)           | 3-5  | N-352 | <b>PCF80</b>  |
| 9(0,3)           | 3-5  | N-352 | <b>8A8</b>    |
| 9(0,3)           | 3-7  | D-385 | <b>PCH200</b> |
| 9,45(0,3)        | 3-5  | N-352 | <b>PCF82</b>  |
| 9,45(0,3)        | 3-5  | N-352 | <b>9U8</b>    |
| 12,6(0,3)        | 5    | N-363 | <b>EL183</b>  |
| 15(0,3)          | 5    | N-308 | <b>PL83</b>   |
| 15(0,3)          | 5    | N-308 | <b>15A6</b>   |
| 15(0,3)          | 3-5  | N-359 | <b>PCL84</b>  |
| 16(0,3)          | 3-5  | N-316 | <b>PCL82</b>  |
| 16,5(0,3)        | 5    | N-307 | <b>PL82</b>   |
| 16,5(0,3)        | 5    | N-307 | <b>16A5</b>   |
| 17(0,3)          | 2    | N-330 | <b>PY81</b>   |
| 17(0,3)          | 2    | N-330 | <b>17Z3</b>   |
| 17(0,3)          | 5    | N-378 | <b>PL508</b>  |
| 18(0,3)          | 3-5  | N-360 | <b>PCL85</b>  |
| 19(0,3)          | 2    | N-309 | <b>PY80</b>   |
| 19(0,3)          | 2    | N-309 | <b>19W3</b>   |
| 19(0,3)          | 5-5  | D-386 | <b>PFL200</b> |
| 21,5(0,3)        | 5    | N-306 | <b>21A6</b>   |
| 21,5(0,3)        | 5    | N-306 | <b>PL81</b>   |
| 21,5(0,3)        | 5    | N-306 | <b>PL81F</b>  |
| 25(0,3)          | 5    | O-181 | <b>21B6</b>   |
| 25(0,3)          | 5    | O-181 | <b>PL36</b>   |
| 25(0,3)          | 5    | O-181 | <b>25BQ6</b>  |
| 25(0,6)          | 5    | O-182 | <b>25CD6</b>  |
| 27(0,3)          | 5    | N-364 | <b>PL504</b>  |
| 28(0,3)          | 5    | N-364 | <b>PL500</b>  |

## TÉLÉVISION

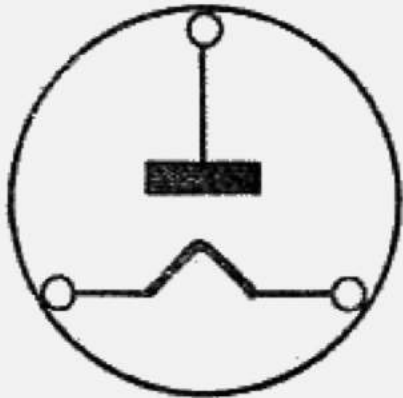
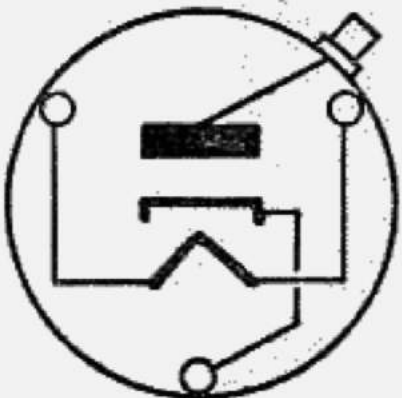
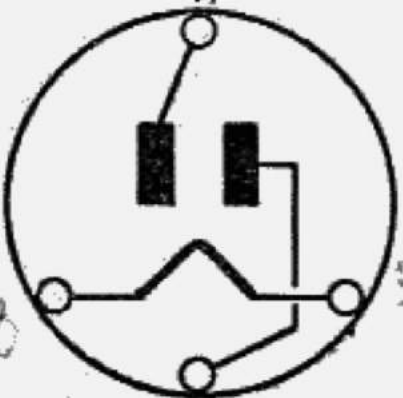
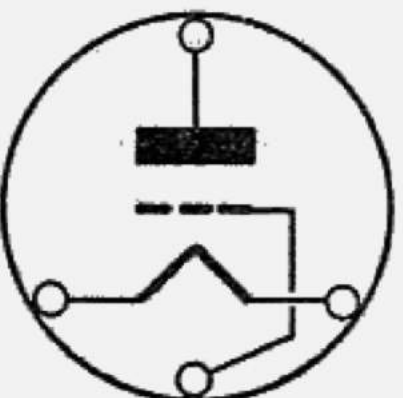
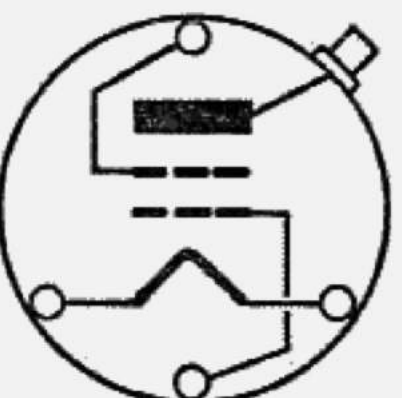
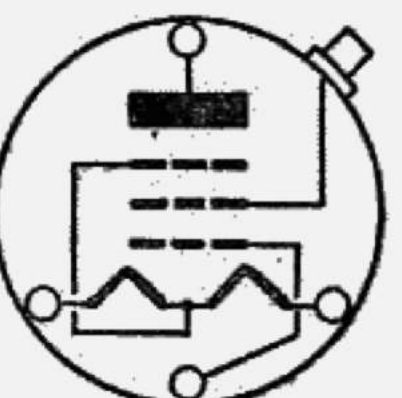
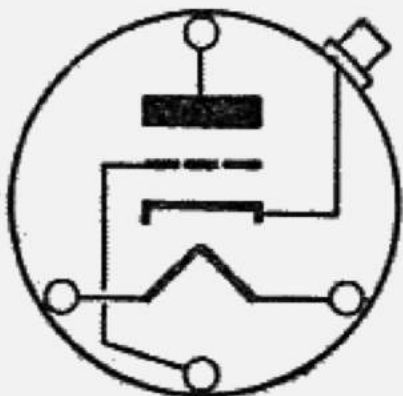
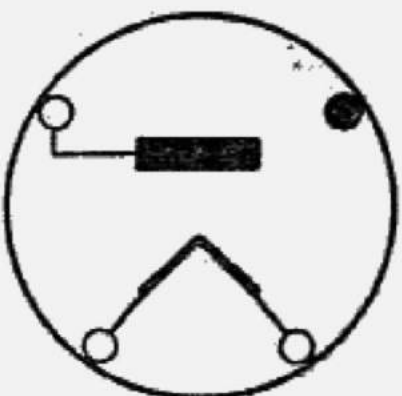
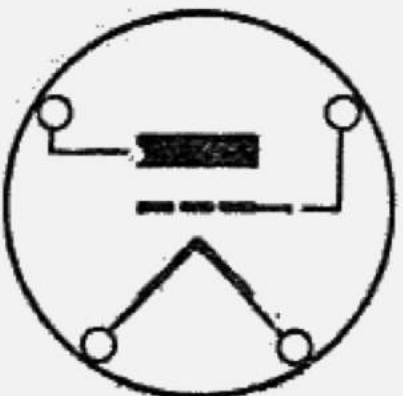
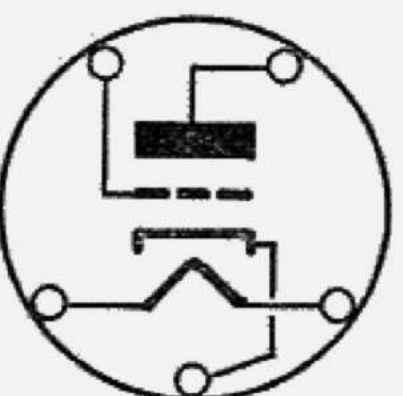
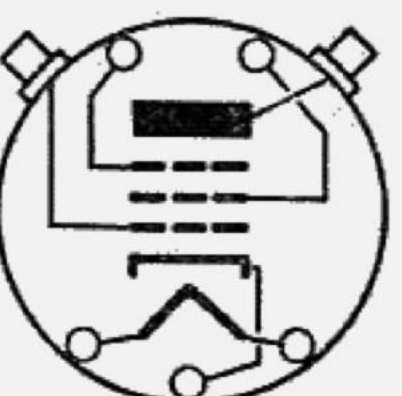
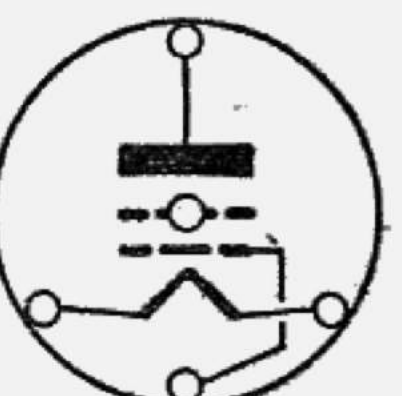
| Tension Filament | Type | Culot | Référence    |
|------------------|------|-------|--------------|
| 30(0,3)          | 5    | N-317 | <b>PL38</b>  |
| 35(0,3)          | 5    | O-362 | <b>PL300</b> |
| 35(0,3)          | 5    | O-362 | <b>PL136</b> |
| 35(0,3)          | 5    | O-362 | <b>35FN5</b> |
| 40(0,3)          | 5    | N-381 | <b>PL509</b> |
| 42(0,3)          | 3    | N-379 | <b>PY500</b> |
| 48(0,1)          | 3-5  | N-316 | <b>UCL82</b> |

## MODULATION DE FRÉQUENCE

| Tension Filament | Type    | Culot | Référence     |
|------------------|---------|-------|---------------|
| 6,3(0,15)        | 3       | M-346 | <b>EC92</b>   |
| 6,3(0,15)        | 3       | M-346 | <b>6AB4</b>   |
| 6,3(0,2)         | 9       | N-310 | <b>EQ80</b>   |
| 6,3(0,2)         | 9       | N-310 | <b>6BE7</b>   |
| 6,3(0,3)         | 5V      | N-303 | <b>6BY7</b>   |
| 6,3(0,3)         | 5V      | N-303 | <b>EF85</b>   |
| 6,3(0,43)        | 3-3     | N-351 | <b>ECC85</b>  |
| 6,3(0,43)        | 3-3     | N-351 | <b>6AQ8</b>   |
| 6,3(0,45)        | 2-2-2-3 | N-337 | <b>EABC80</b> |
| 6,3(0,45)        | 2-2-2-3 | N-337 | <b>6AK8</b>   |
| 9,5(0,3)         | 2-2-2-3 | N-337 | <b>PABC80</b> |

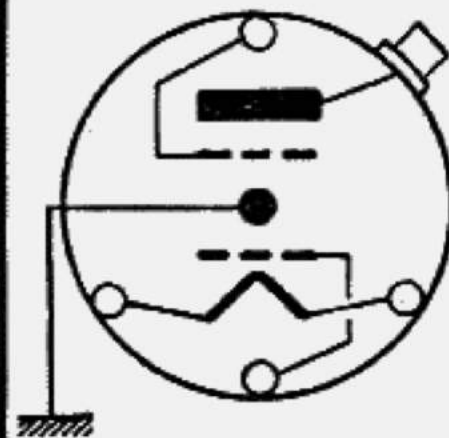


# CULOTTAGES

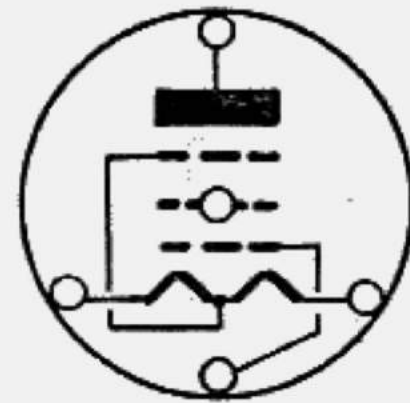
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|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
|  <p>373<br/>505</p> <p>1</p> <p>1562<br/>1802<br/>1832</p> |  <p>2</p>              |  <p>AX50<br/>AZ50<br/>506<br/>1561</p> <p>3</p> <p>1805<br/>1815<br/>1817</p> |  <p>4</p>               |  <p>5</p>                        |  <p>B433<br/>B543</p> <p>6</p> |
|  <p>E424</p> <p>7</p>                                     |  <p>4646</p> <p>8</p> |  <p>4641</p> <p>9</p>                                                        |  <p>4671</p> <p>10</p> |  <p>4672<br/>4695</p> <p>11</p> |  <p>E451</p> <p>12</p>        |



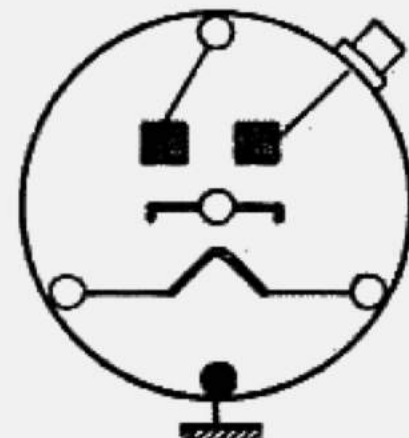
13



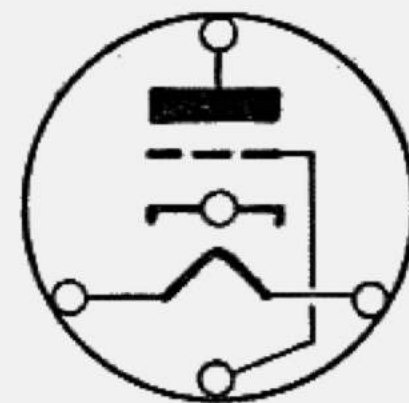
14



15

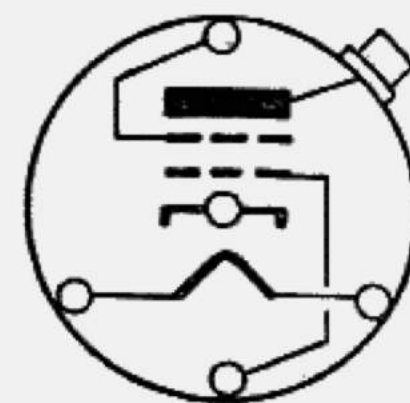


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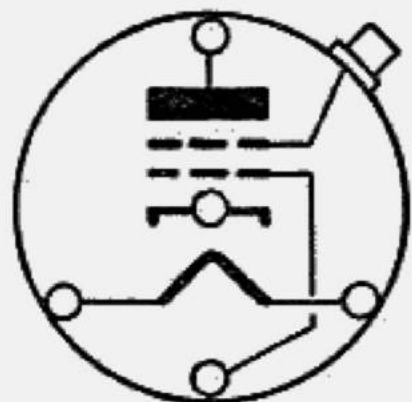
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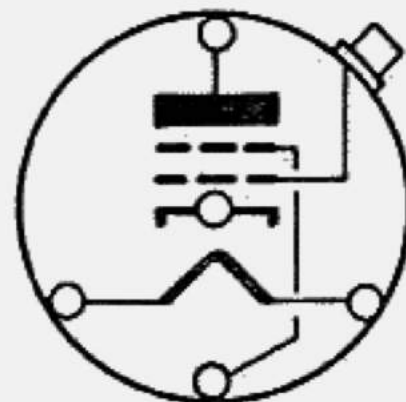
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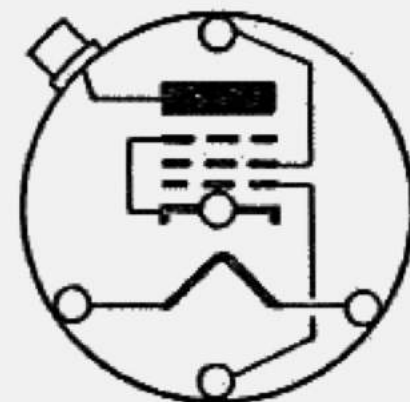
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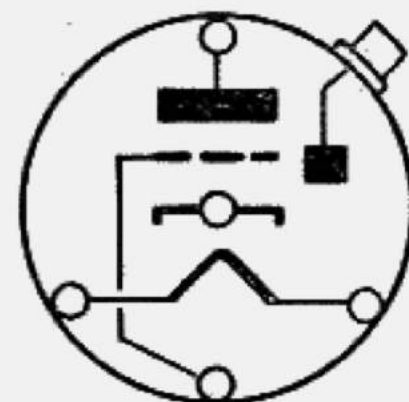
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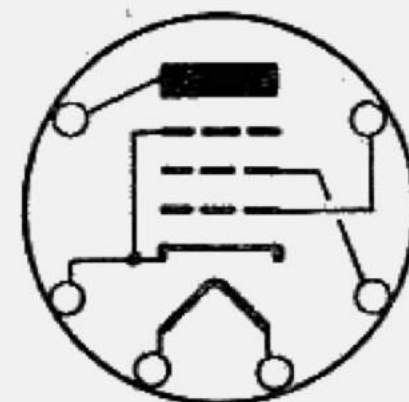
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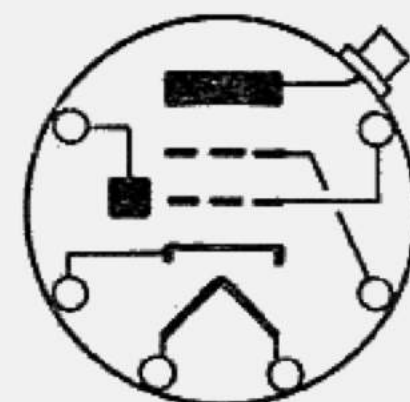


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E463

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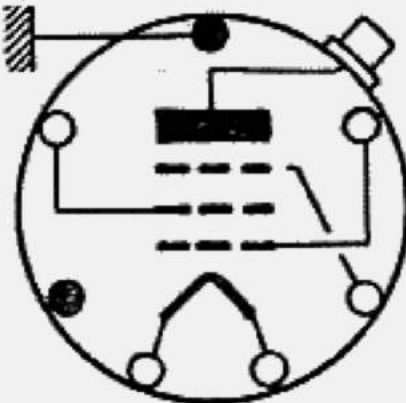
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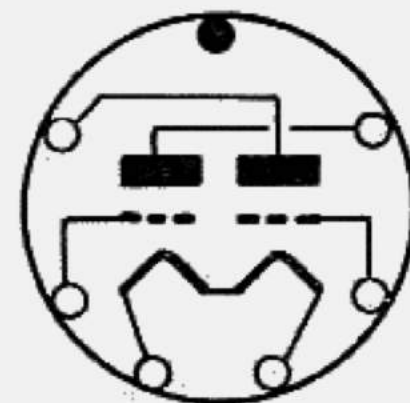


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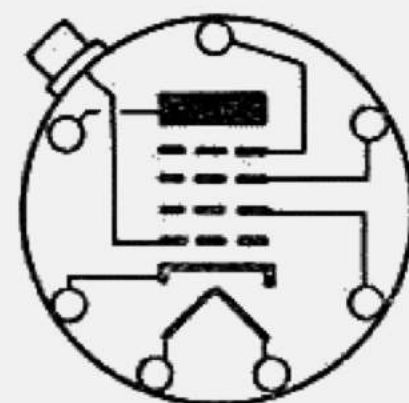
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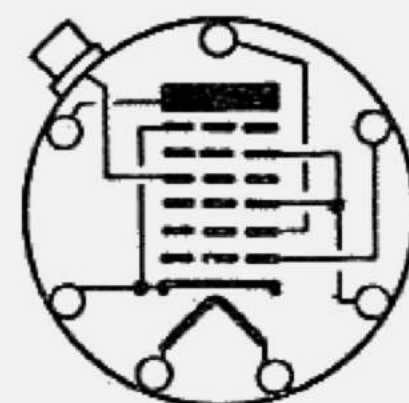
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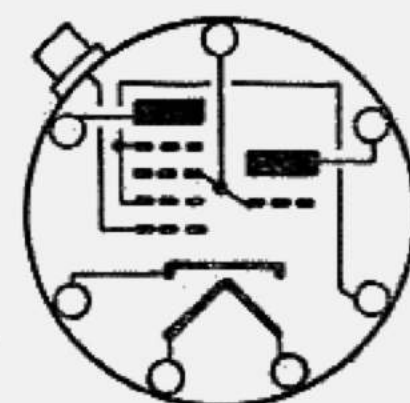
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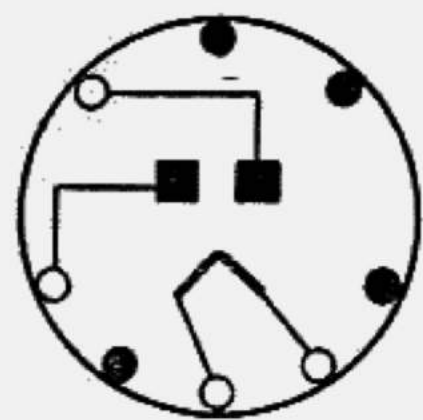
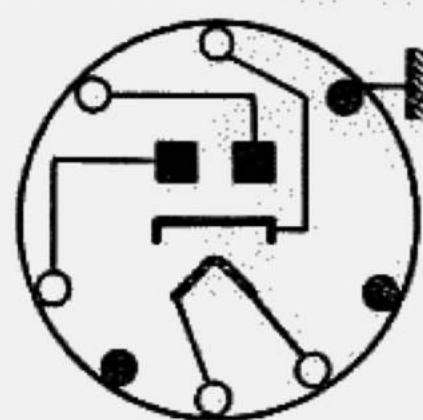
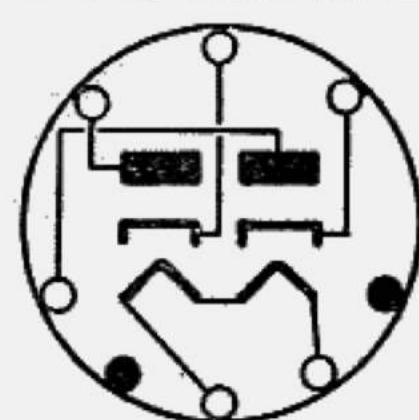
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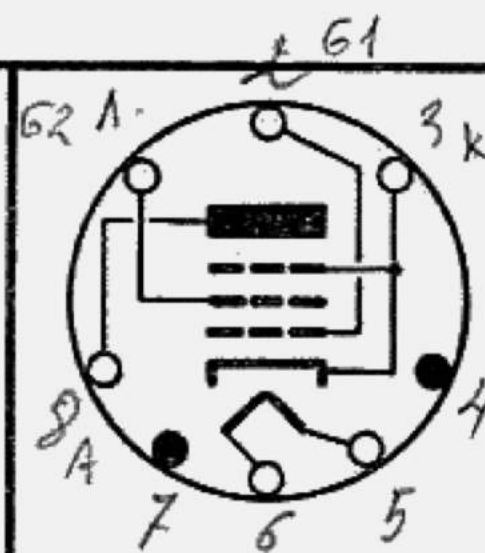
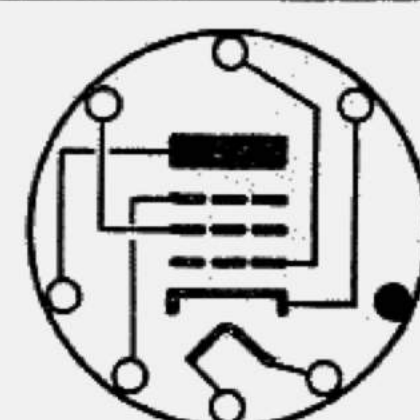
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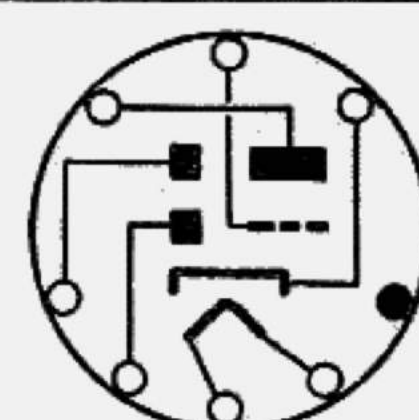


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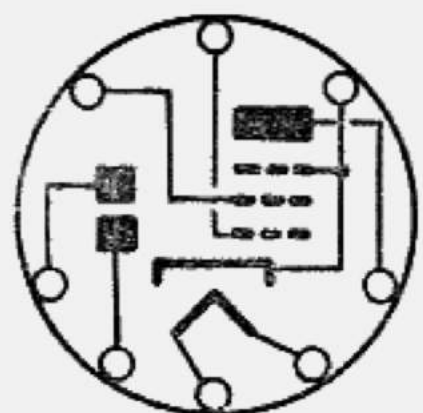
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EF11  
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EL12

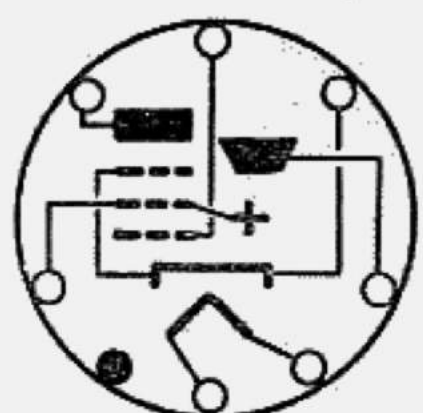
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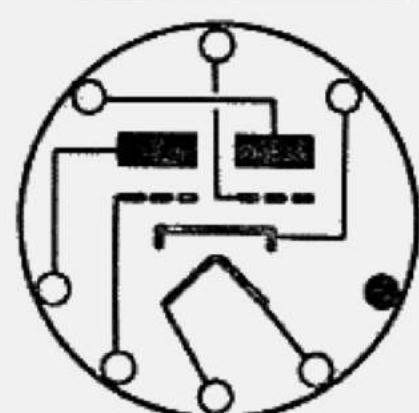
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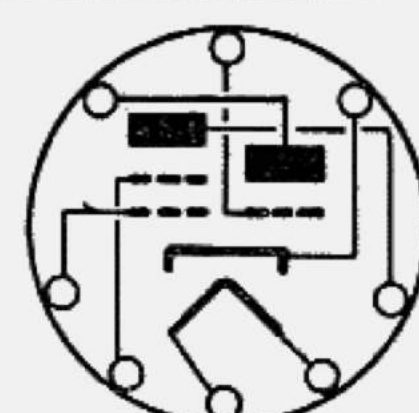
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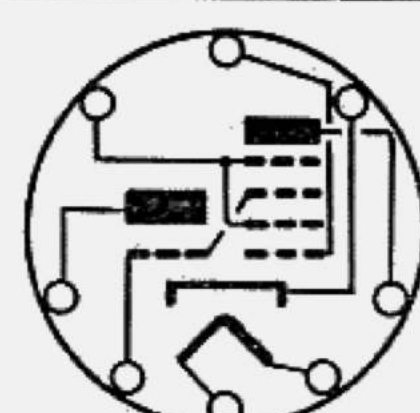
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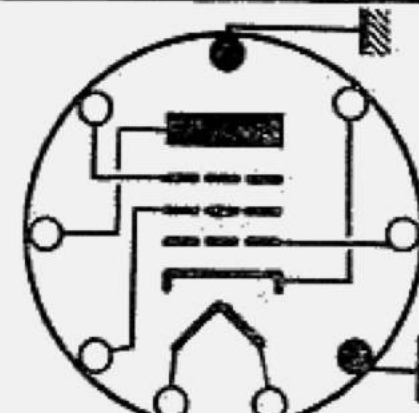
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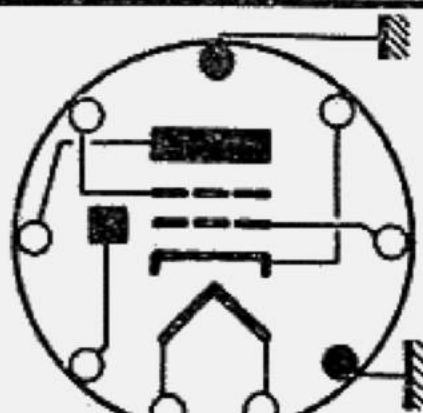
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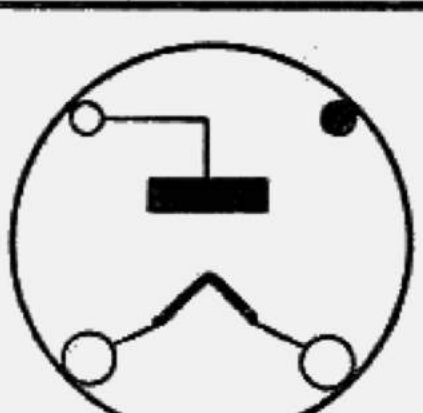
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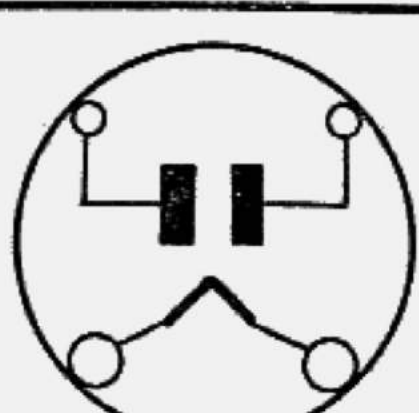
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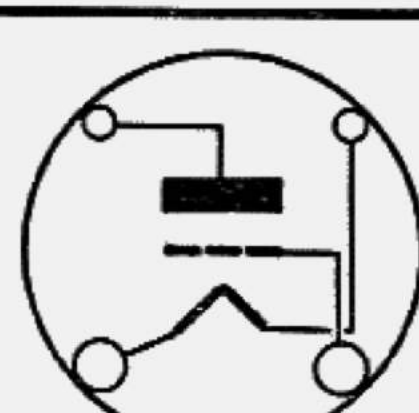
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866

44

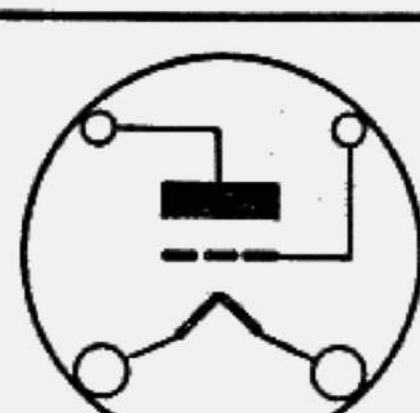
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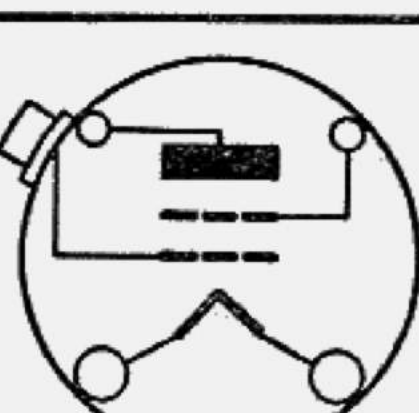
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V99

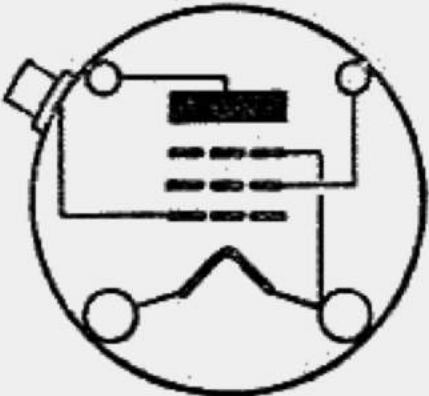
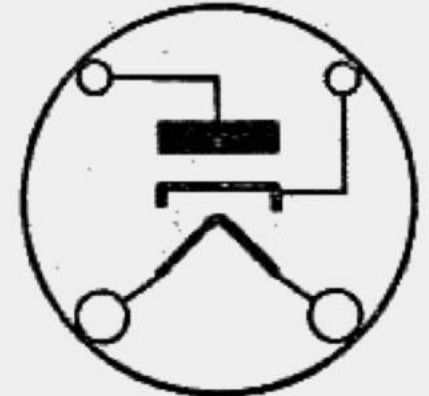
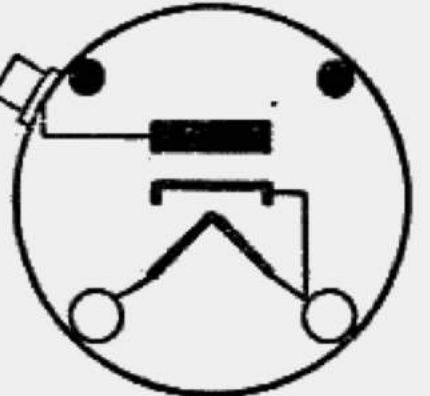
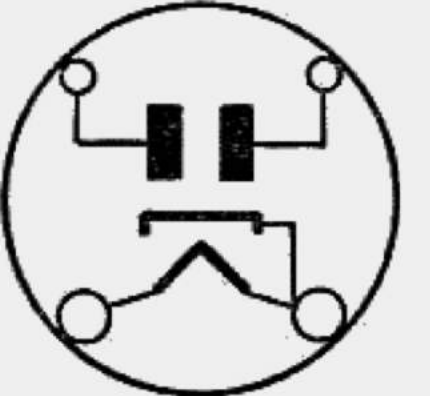
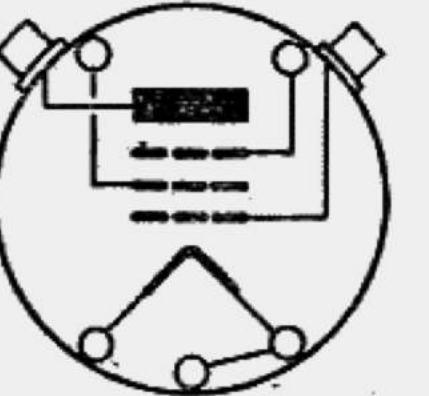
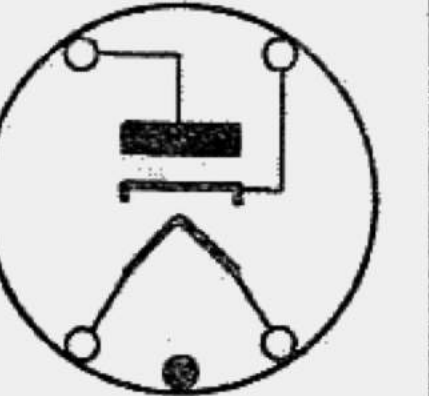
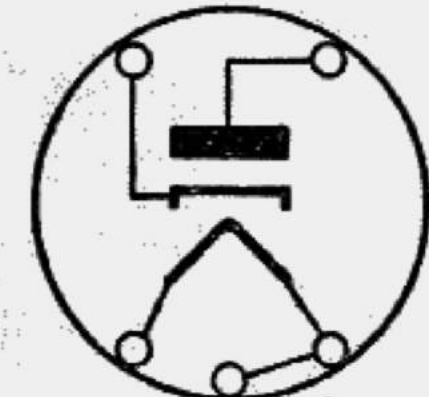
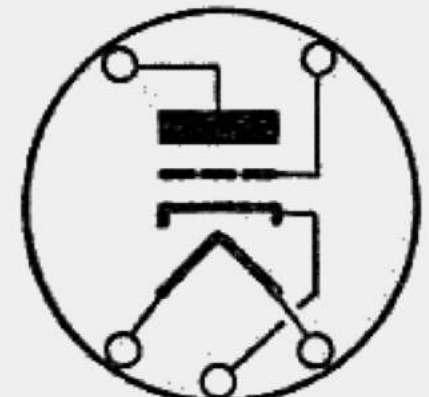
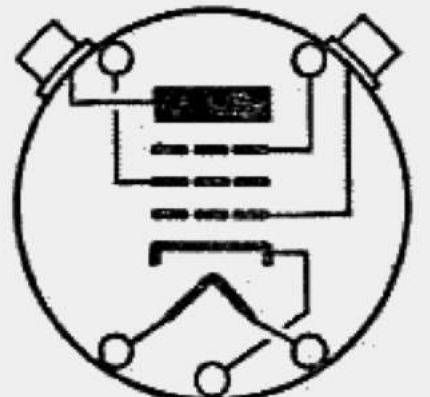
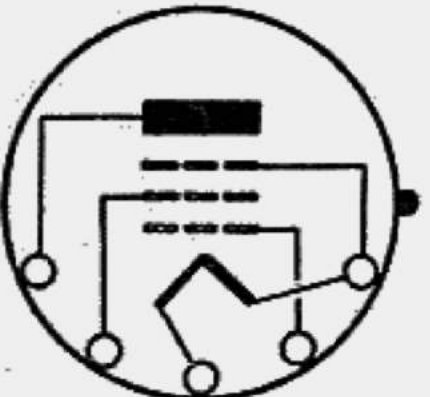
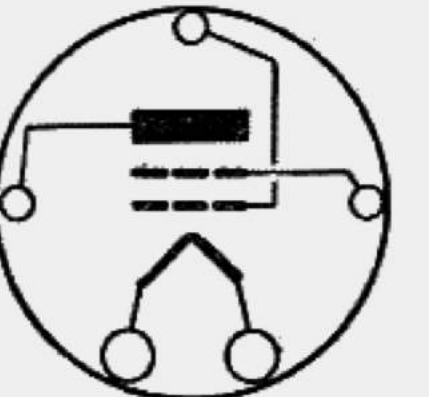
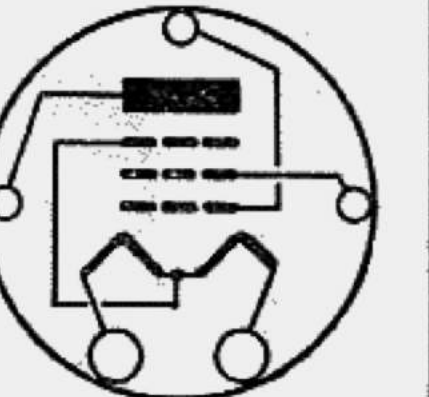
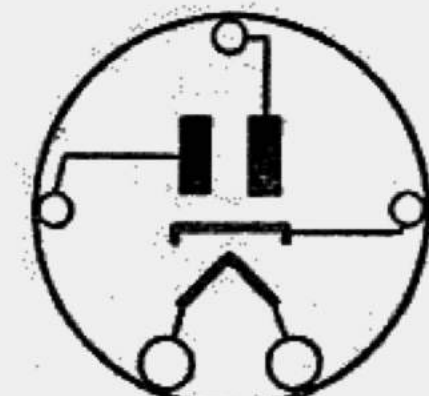
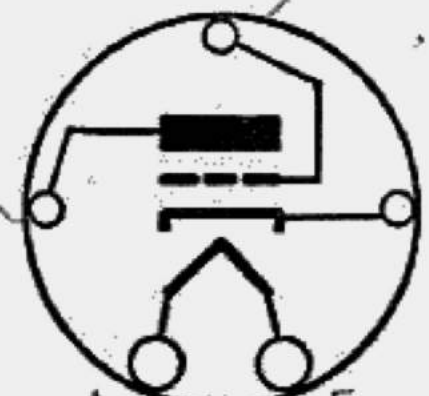
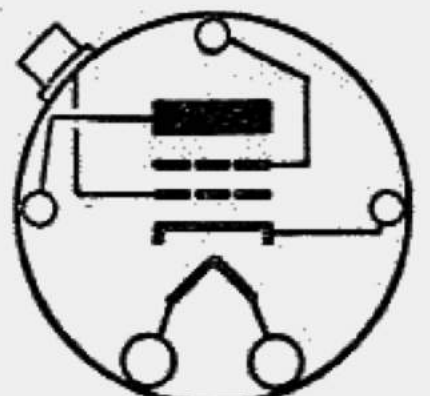
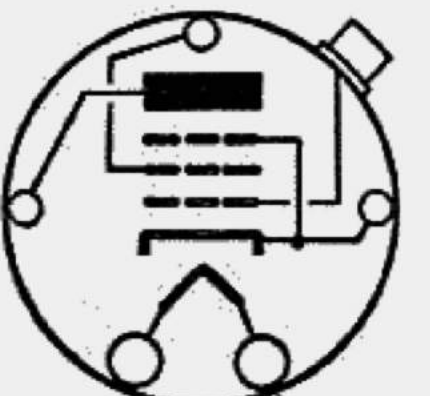
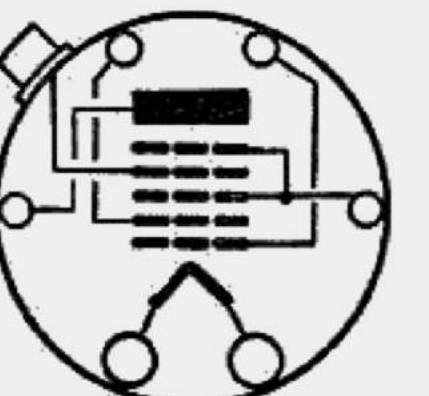
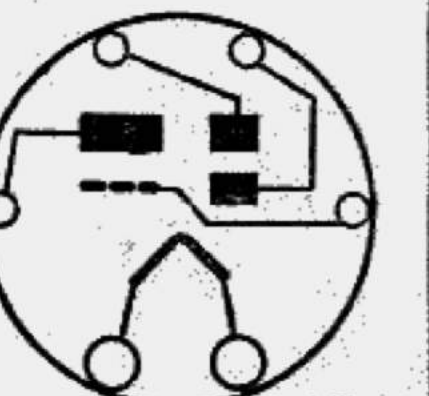
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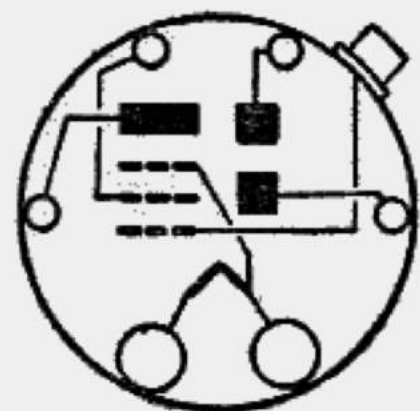
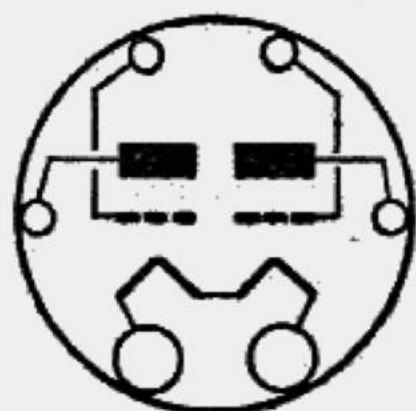
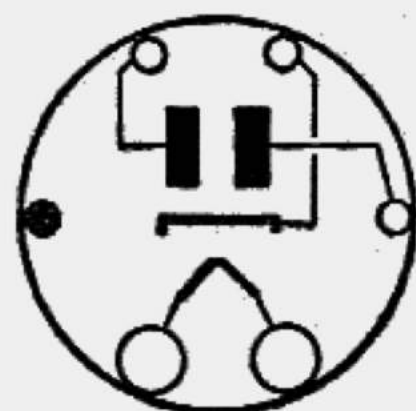
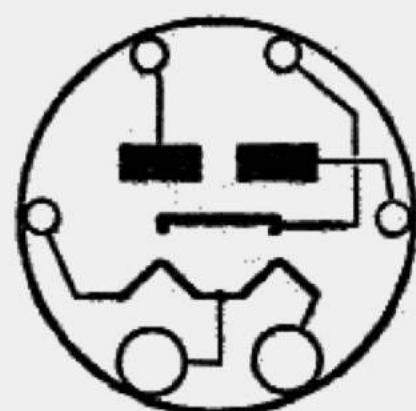
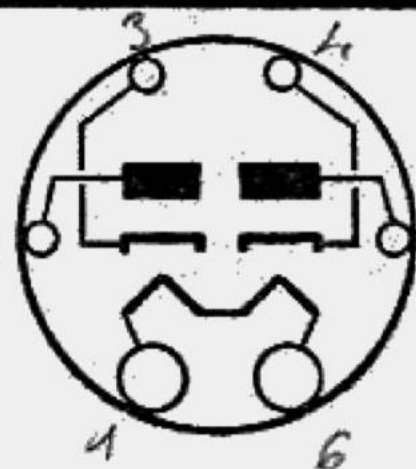
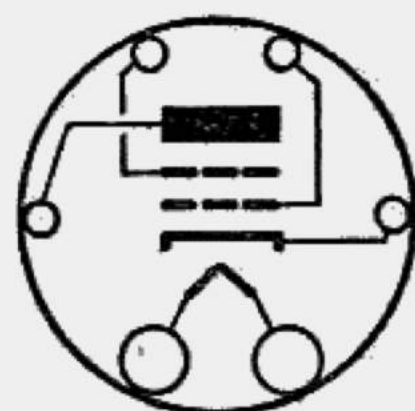
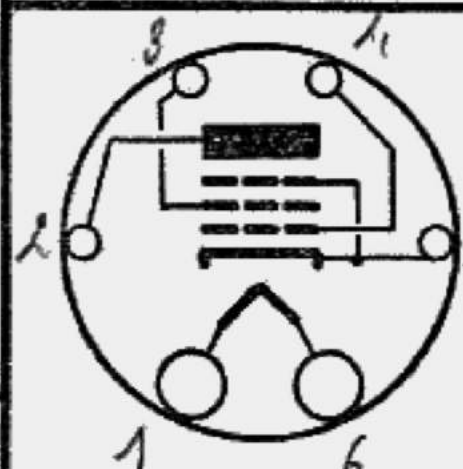
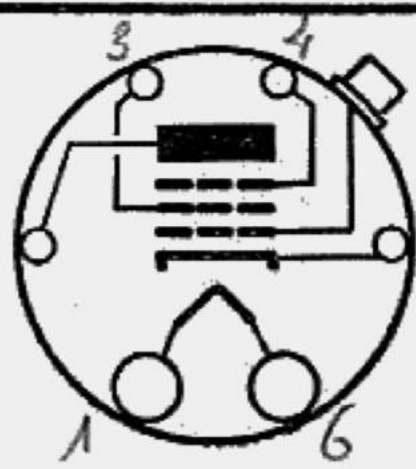
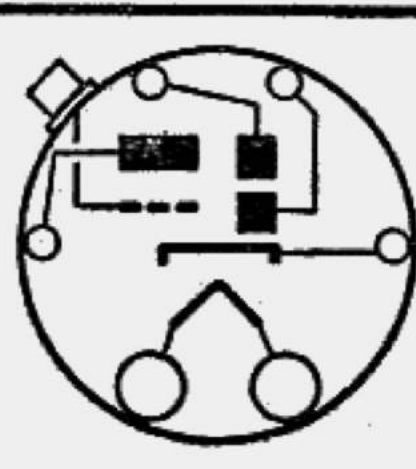
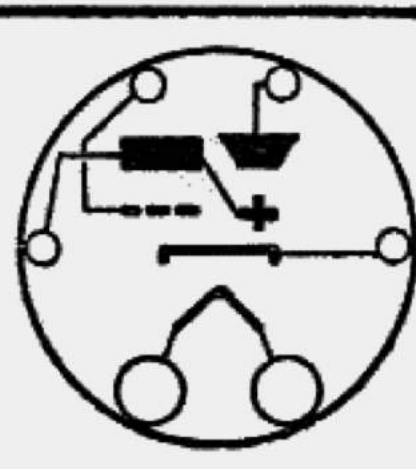
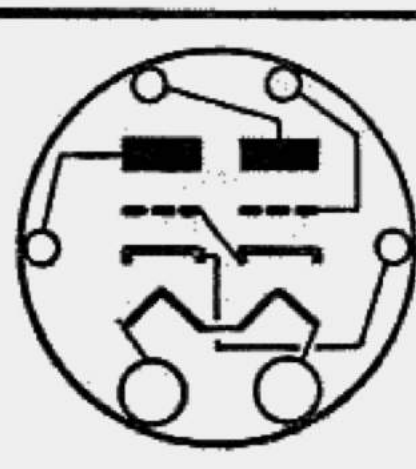
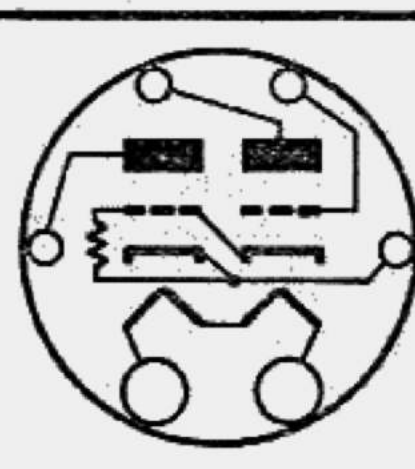
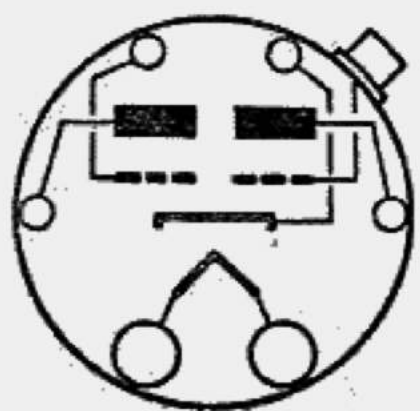
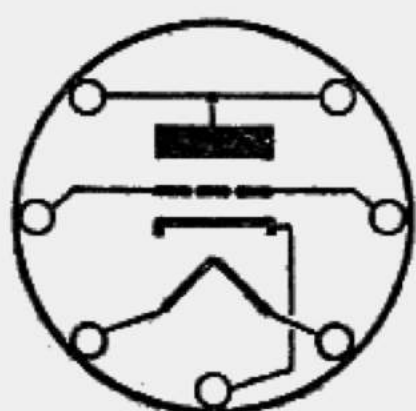
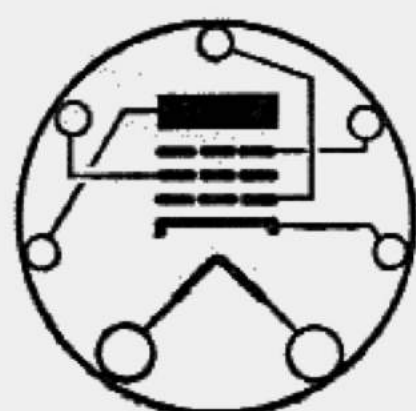
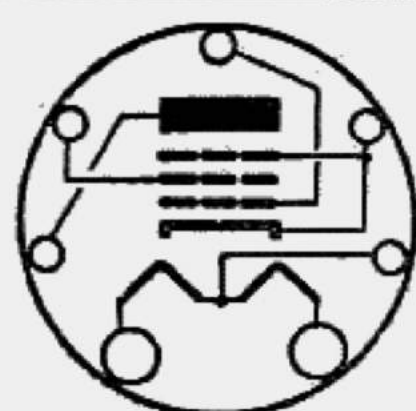
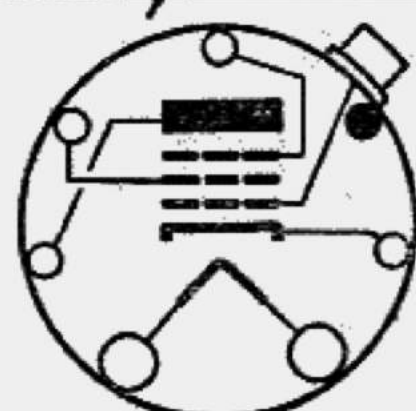
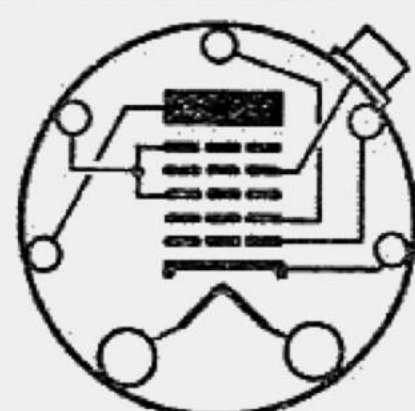
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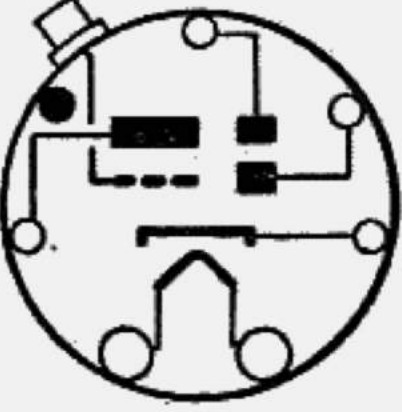
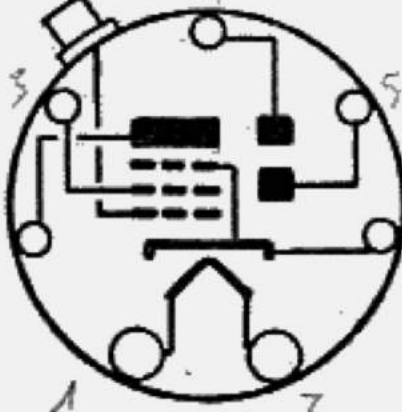
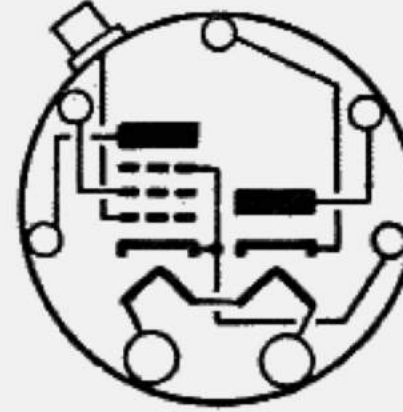
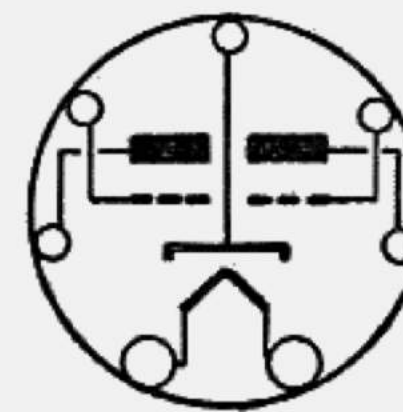
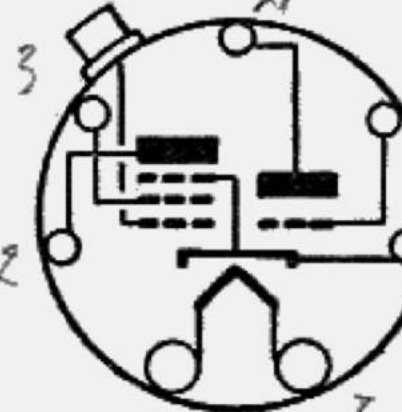
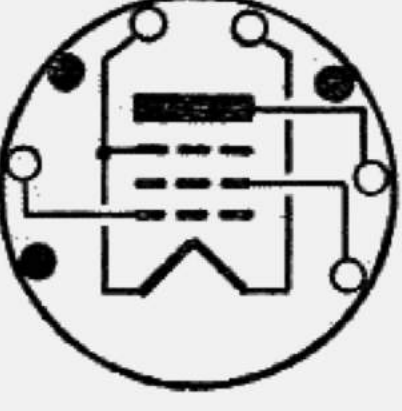
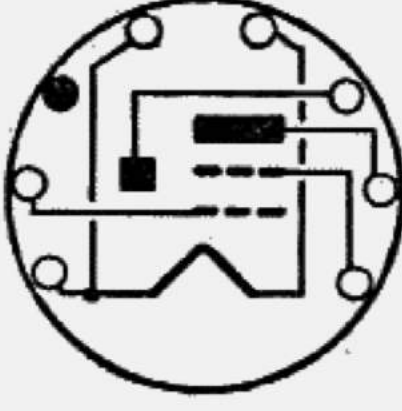
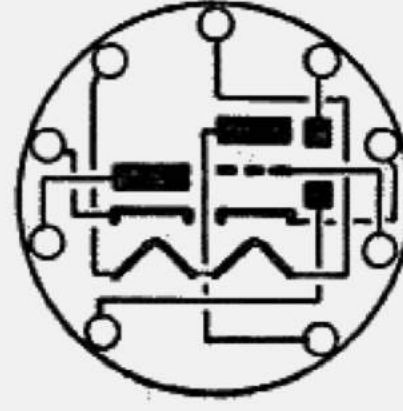
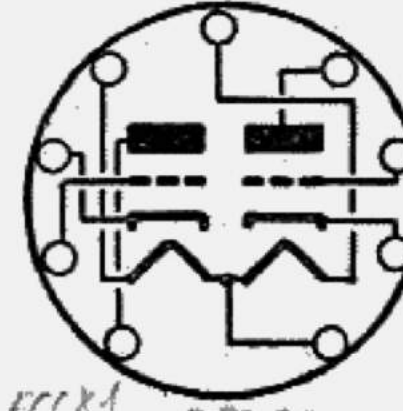
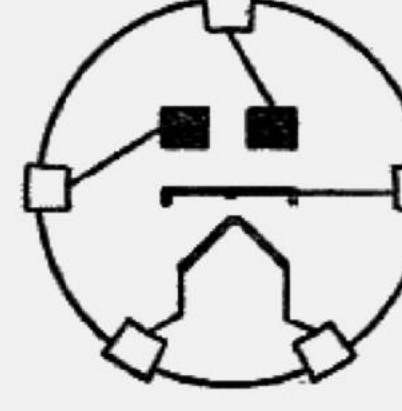
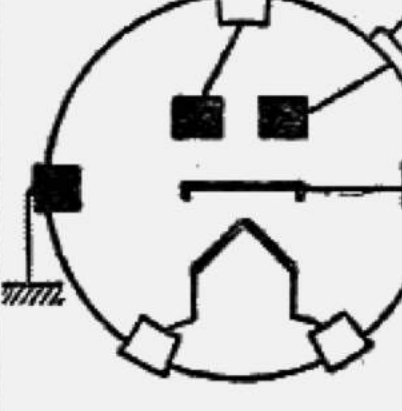
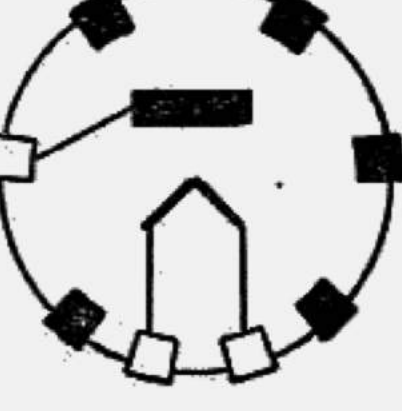
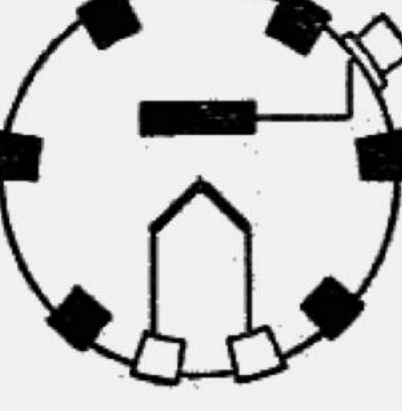
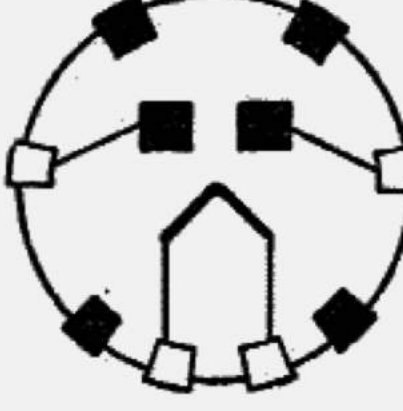
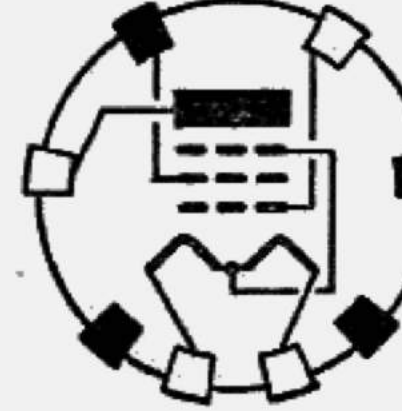
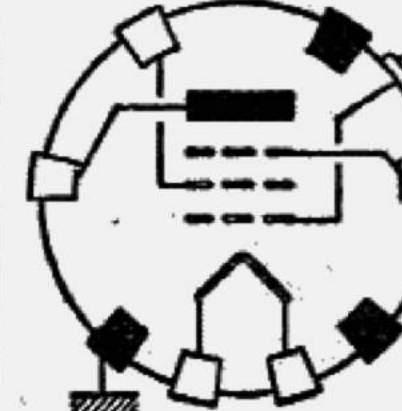
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48

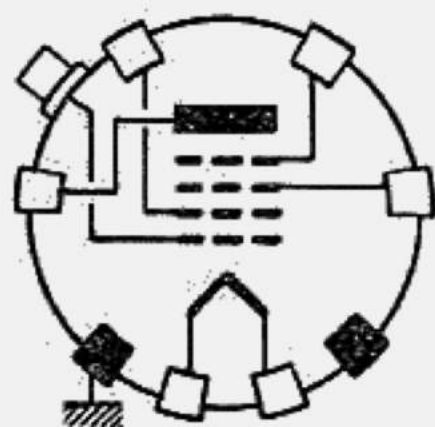
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|  <p>1A4<br/>1B4<br/>34</p> <p>49</p>     |  <p>1V<br/>6Z3<br/>12Z3</p> <p>50 25Z3</p>      |  <p>2X2</p> <p>51</p>                |  <p>80S<br/>83V</p> <p>52</p>        |  <p>959</p> <p>53</p>               |  <p>54</p>                                       |
|  <p>55</p>                              |  <p>955<br/>957<br/>958</p> <p>56</p>          |  <p>954<br/>956</p> <p>57</p>       |  <p>2E3</p> <p>58</p>               |  <p>46<br/>49<br/>52</p> <p>59</p> |  <p>1F4<br/>6A4<br/>33</p> <p>60 47<br/>950</p> |
|  <p>2S/4S<br/>6Z4<br/>84</p> <p>61</p> |  <p>27<br/>37<br/>58</p> <p>62 76<br/>485</p> |  <p>24<br/>35<br/>36</p> <p>63</p> |  <p>15<br/>38<br/>39</p> <p>64</p> |  <p>1A6<br/>1C6</p> <p>65</p>     |  <p>1B5</p> <p>66</p>                          |



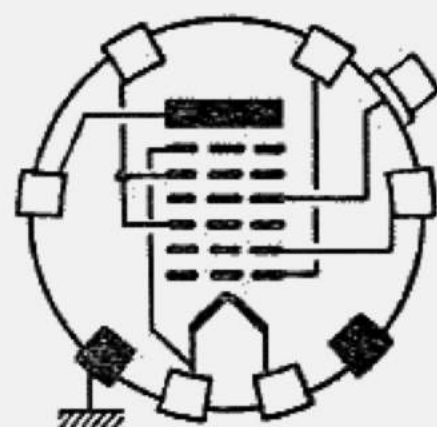
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25Z5 **71**48 **72**2A5  
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41 **73** 42  
436C6  
6D6  
57 **74** 58  
77  
782A6  
55  
75 **75** 856AB5  
6E5  
6G5 **76** 6N5  
6T5  
6U535B5 **77**6B5 **78**79 **79**6F4 **80**59 **81**12A5 **82**6D7  
6E7 **83**2A7  
6A7 **84**

|                                                                                                                |                                                                                                                 |                                                                                                                     |                                                                                                                                                     |                                                                                                                                 |                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
|  <p>8C7 <b>85</b></p>         |  <p>2B7<br/>6B7 <b>86</b></p> |  <p>12A7 <b>87</b></p>           |  <p>6A6<br/>6E6<br/>53 <b>88</b></p>                             |  <p>6F7 <b>89</b></p>                        |  <p>1247 <b>90</b></p>           |
|  <p>V5<br/>1W5 <b>91</b></p> |  <p>1Q6 <b>92</b></p>        |  <p>6T8<br/>19T8 <b>93</b></p>  |  <p>ECC81<br/>E30CC<br/>ECC82<br/>12AT7<br/>12AU7 <b>94</b></p> |  <p>KB2 <b>95</b></p>                       |  <p>CB1 <b>96</b></p>           |
|  <p>1876 <b>97</b></p>      |  <p>1875 <b>98</b></p>      |  <p>AZ1<br/>1882 <b>99</b></p> |  <p>AD1 <b>100</b> KC4<br/>4683</p>                            |  <p>KL1<br/>KL2 <b>101</b> KL4<br/>KL5</p> |  <p>KF3<br/>KF4 <b>102</b></p> |

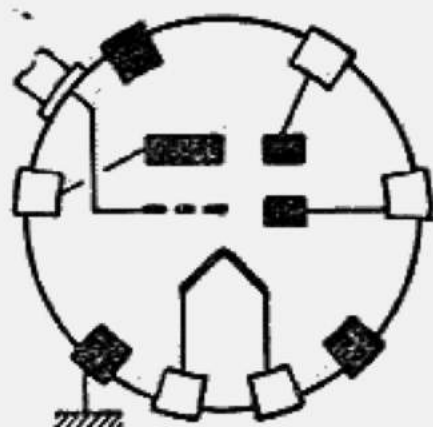




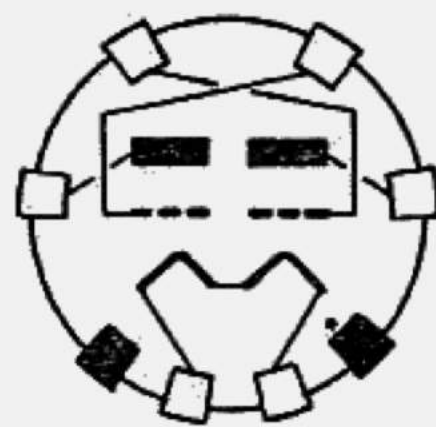
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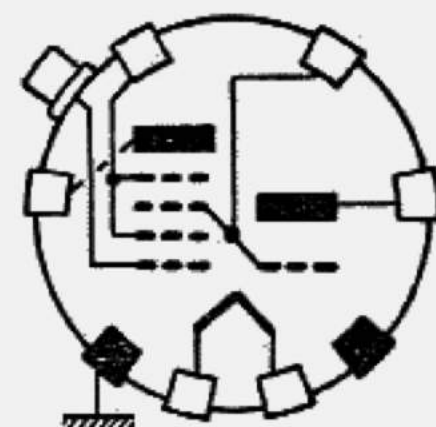
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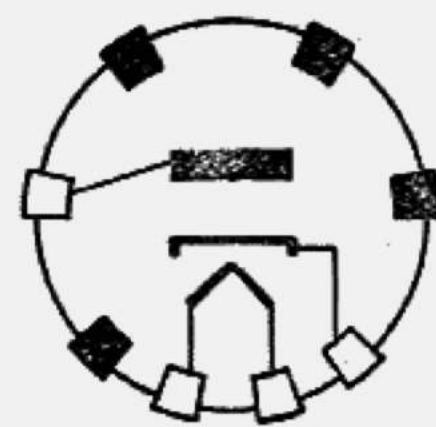
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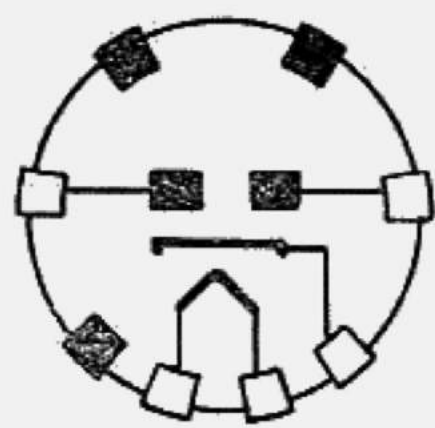
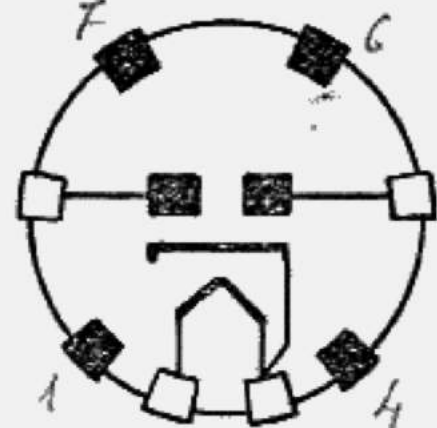
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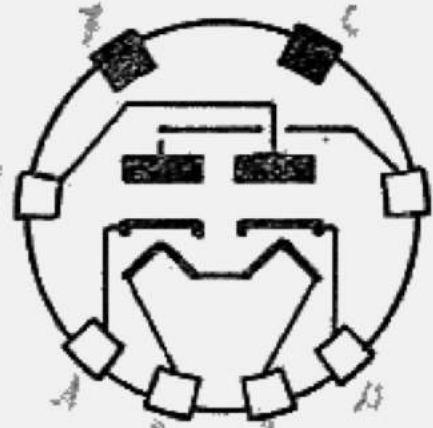
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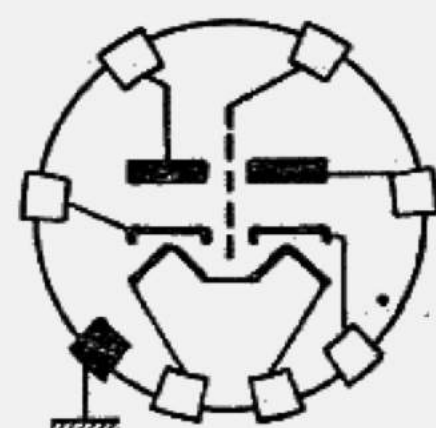
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EZ2 109 EZ4

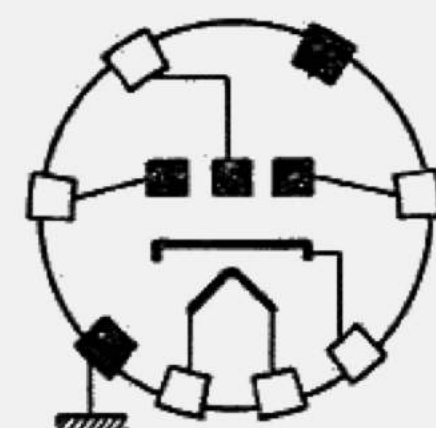
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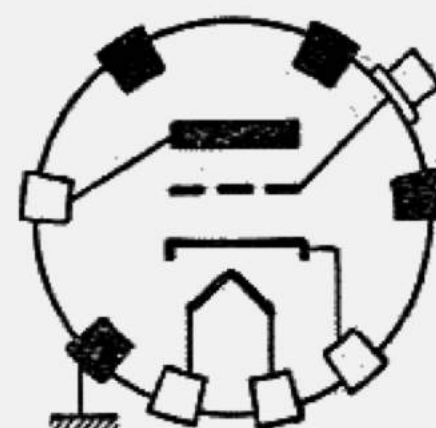
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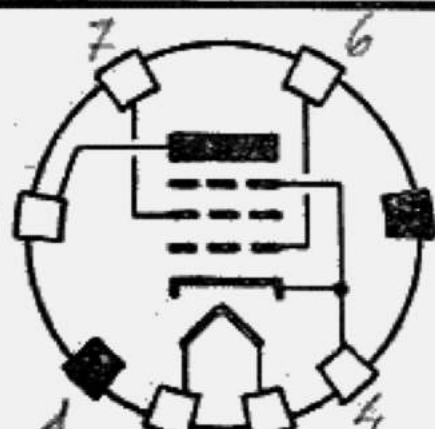
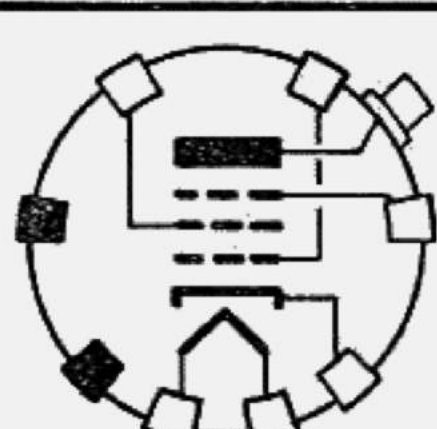
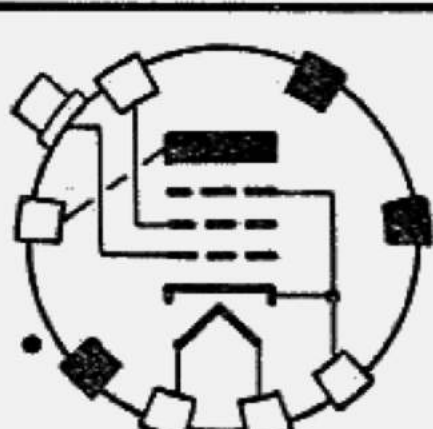
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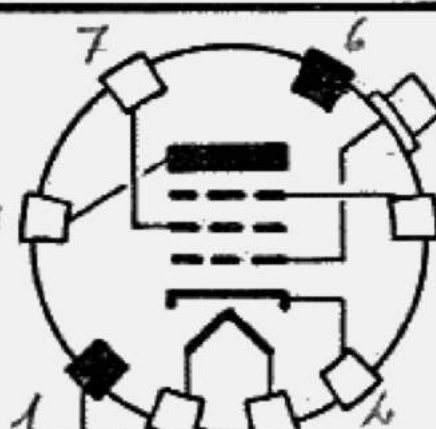
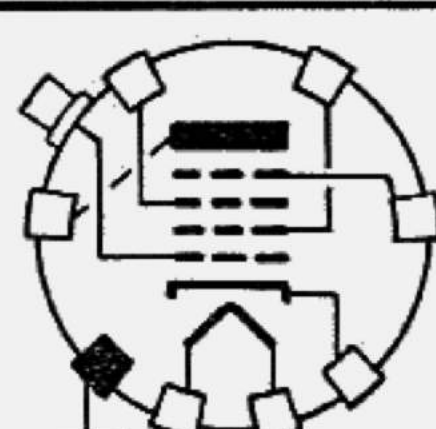
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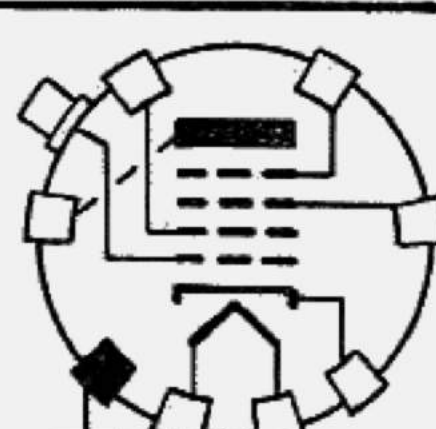
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AL4 115 EL3  
EL5  
EL6EL50  
4654 116

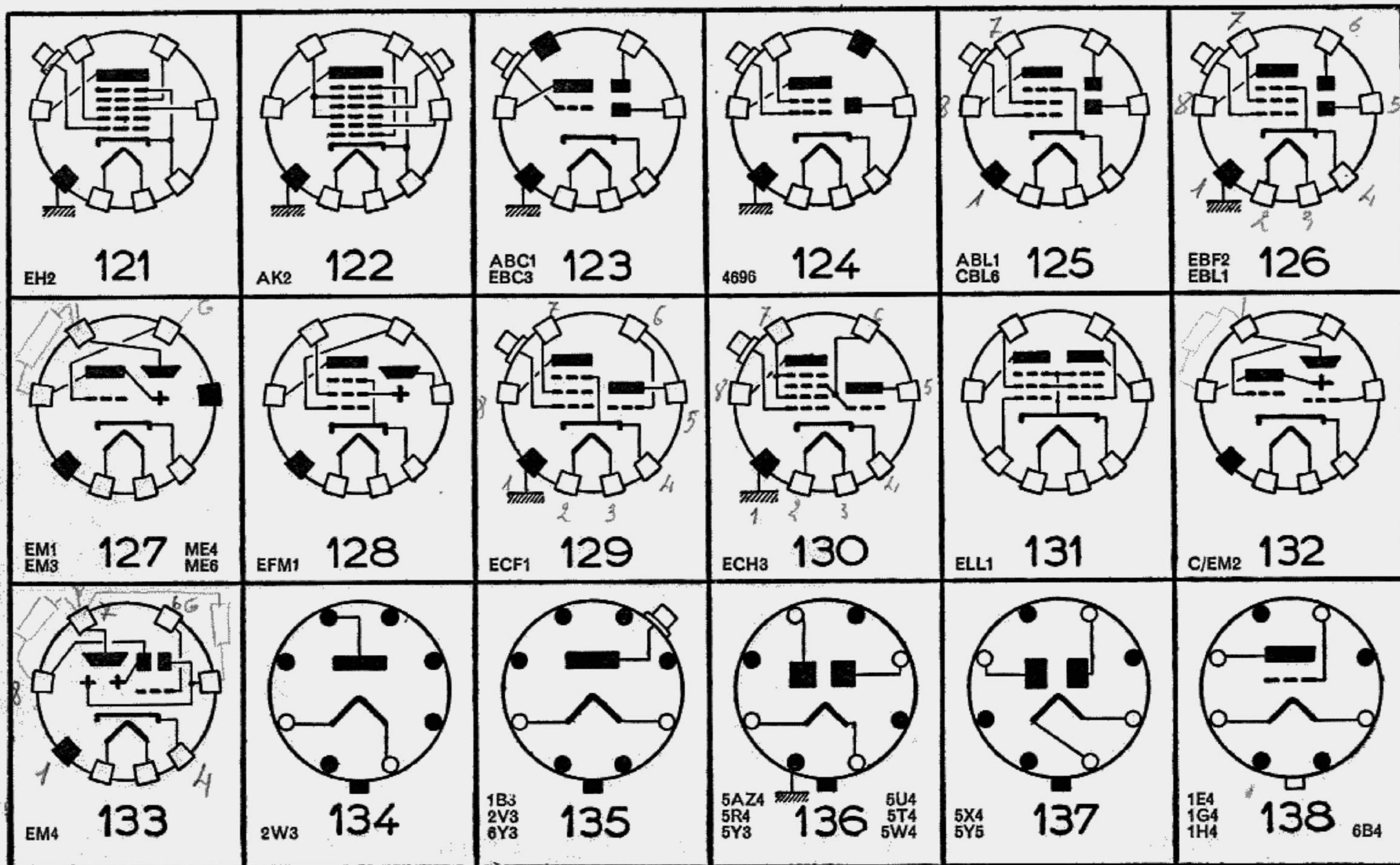
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EF9

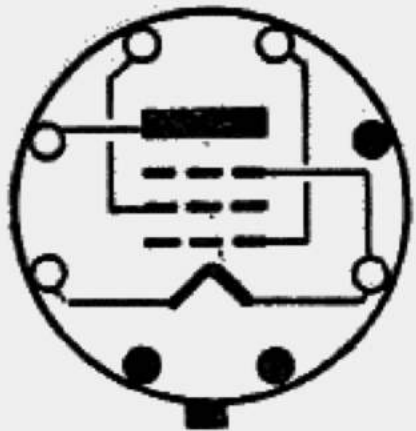
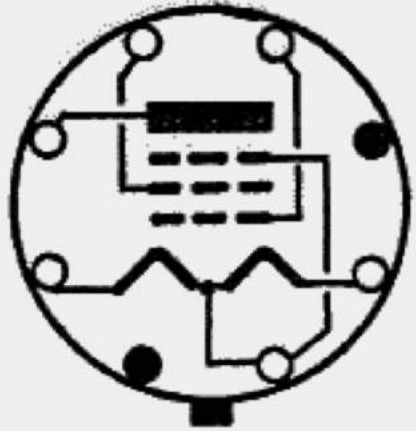
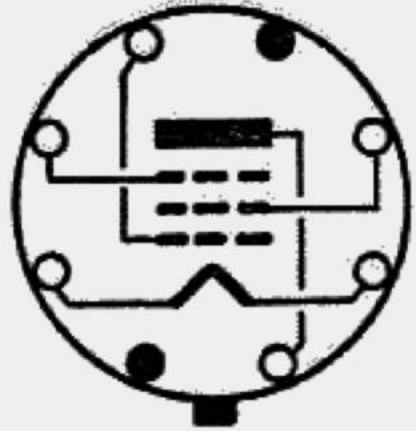
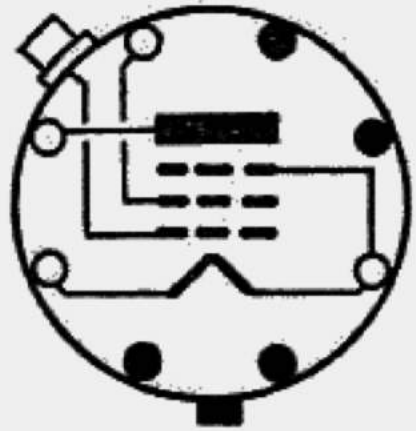
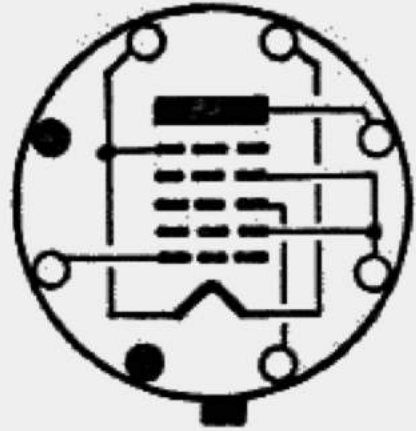
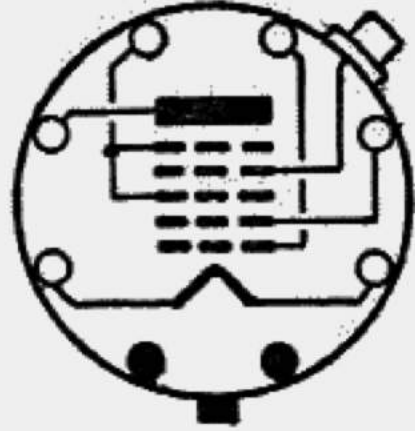
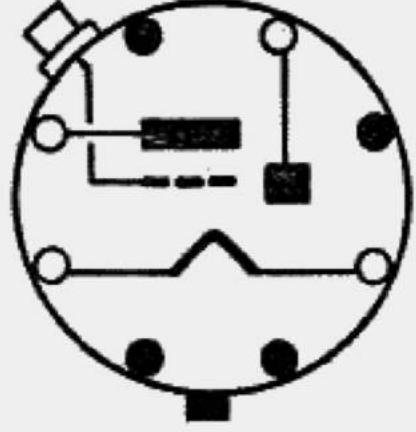
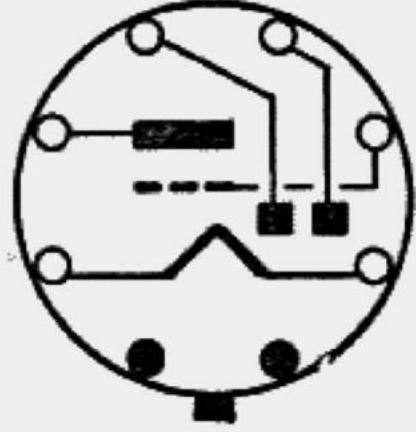
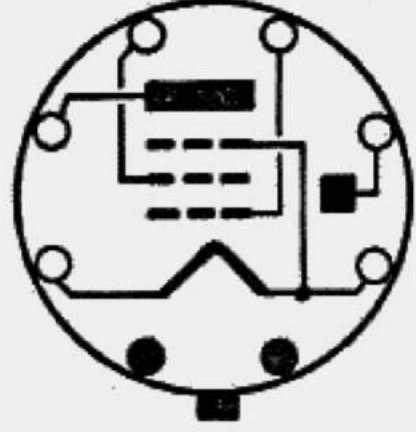
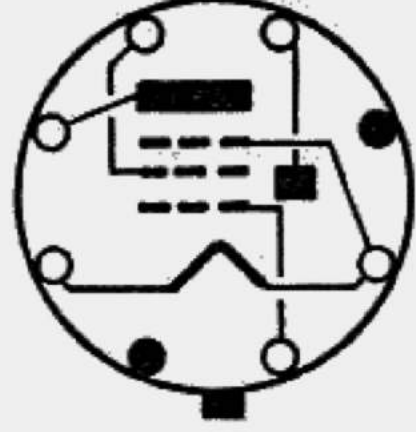
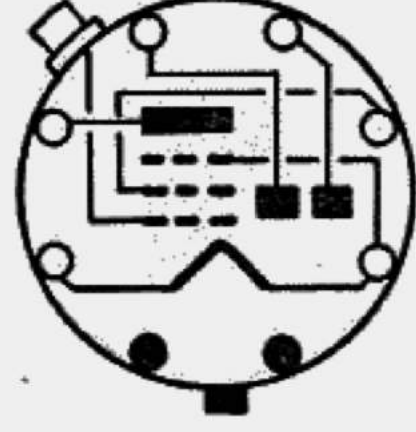
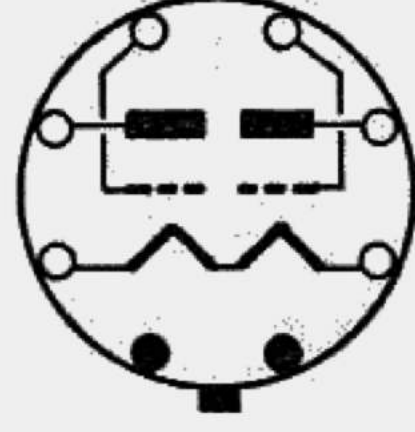
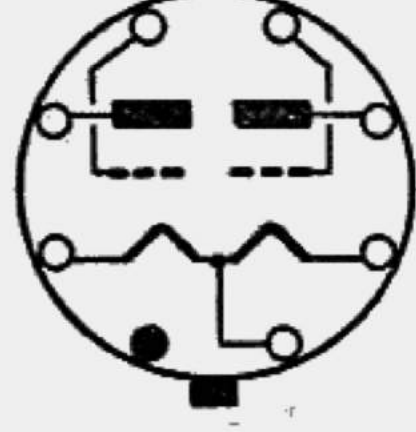
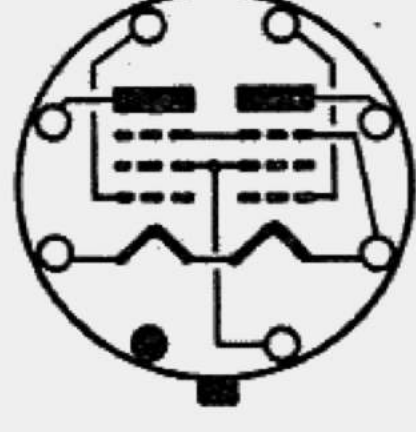
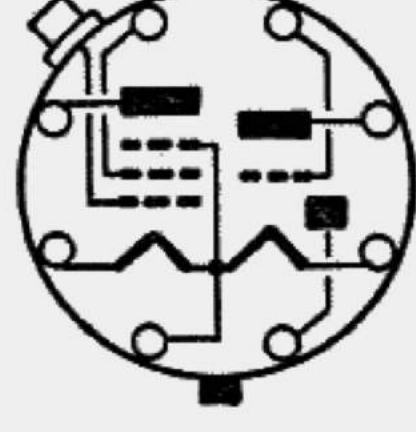
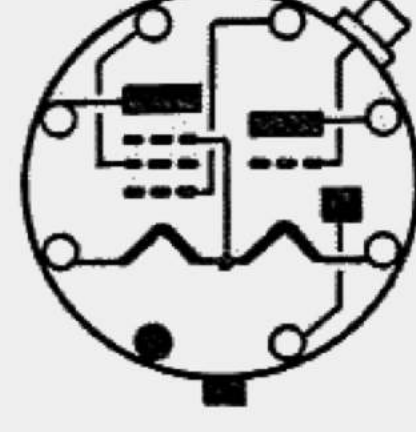
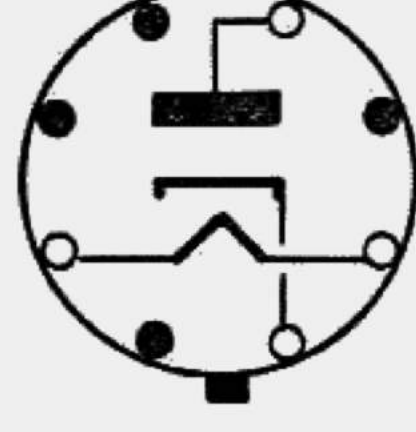
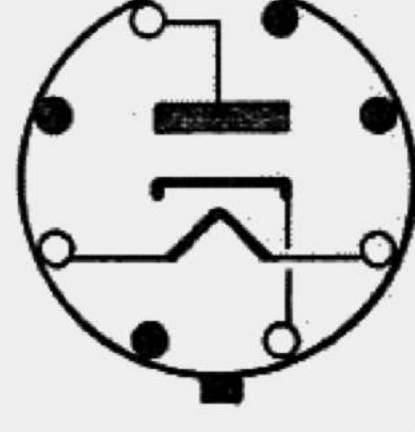
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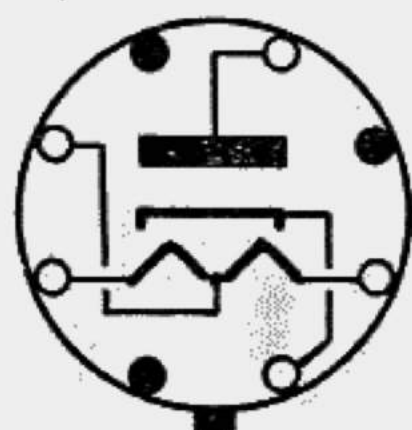


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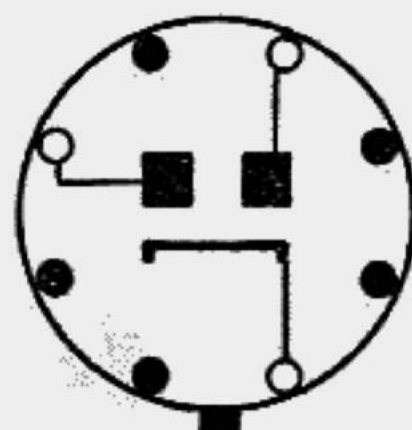


|                                                                                                                                            |                                                                                                                             |                                                                                                                    |                                                                                                                                         |                                                                                                                           |                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
|  <p>1A5 1G5<br/>1C5 1J5<br/>1F5 1Q5</p> <p><b>139</b></p> |  <p>3B5 3C5<br/>3Q5</p> <p><b>140</b></p> |  <p>1SA6</p> <p><b>141</b></p>  |  <p>1D5 1E5<br/>1N5</p> <p><b>142</b></p> <p>1P5</p> |  <p>1C8</p> <p><b>143</b></p>          |  <p>1A7 1B7<br/>1C7</p> <p><b>144</b></p> <p>1D7</p> |
|  <p>1H5</p> <p><b>145</b></p>                            |  <p>1H6</p> <p><b>146</b></p>            |  <p>1N6</p> <p><b>147</b></p>  |  <p>1SB6</p> <p><b>148</b></p>                      |  <p>1F7</p> <p><b>149</b></p>         |  <p>1G6 1J6</p> <p><b>150</b></p>                   |
|  <p>4A6</p> <p><b>151</b></p>                           |  <p>1E7</p> <p><b>152</b></p>           |  <p>3A8</p> <p><b>153</b></p> |  <p>1B8 1D8</p> <p><b>154</b></p>                  |  <p>35Z4 117Z4</p> <p><b>155</b></p> |  <p>6H4</p> <p><b>156</b></p>                      |



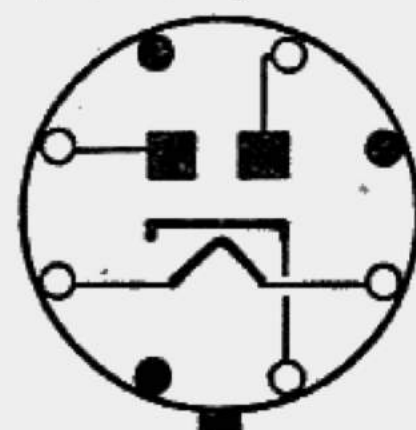
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157



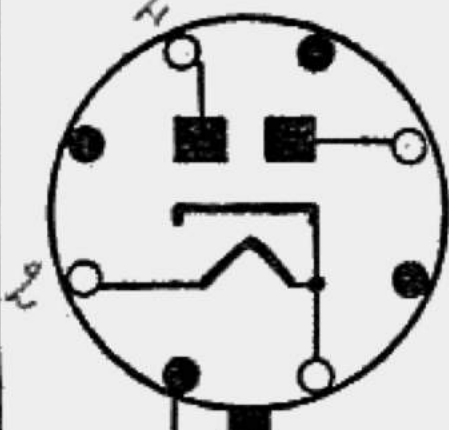
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158



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6ZY5

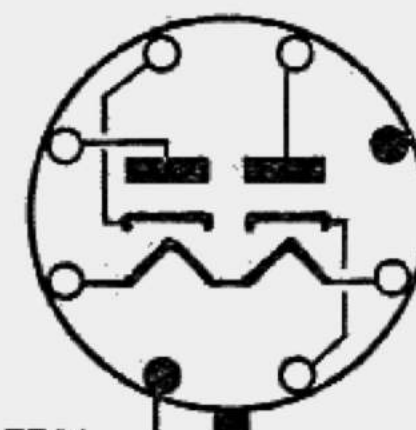
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5Z4

160

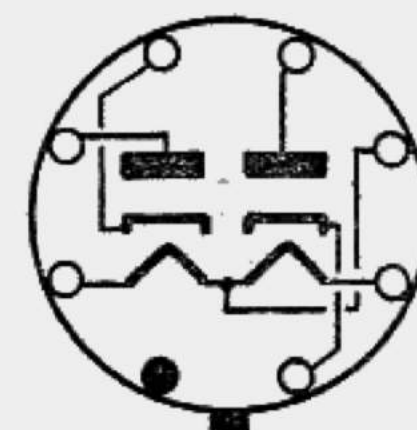
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EB34  
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12H6  
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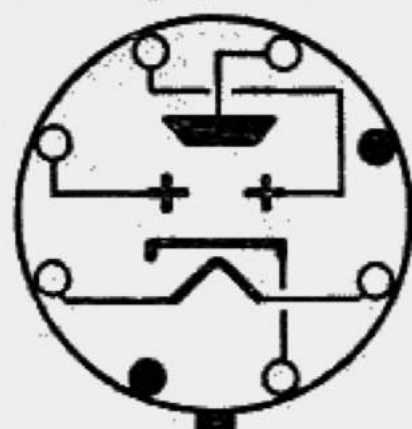
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25Y6  
25Z6  
35Z6



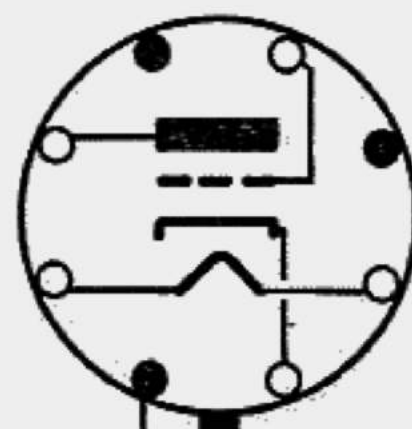
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162



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6AF6

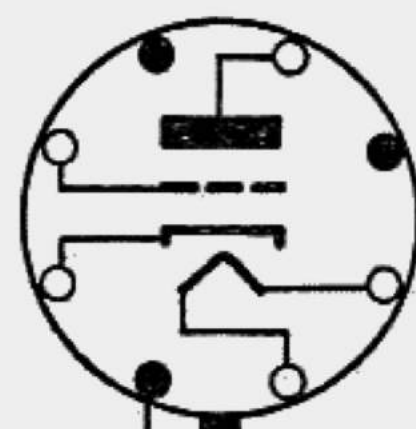
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6C5  
6D5

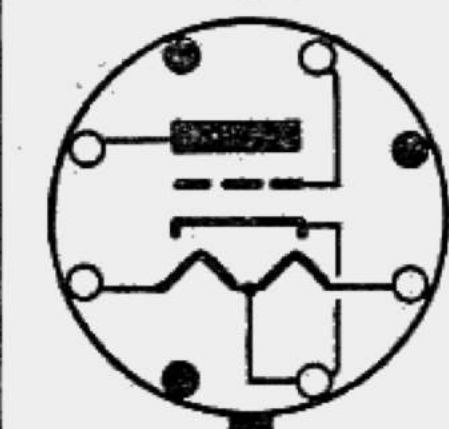
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6K5  
6P5



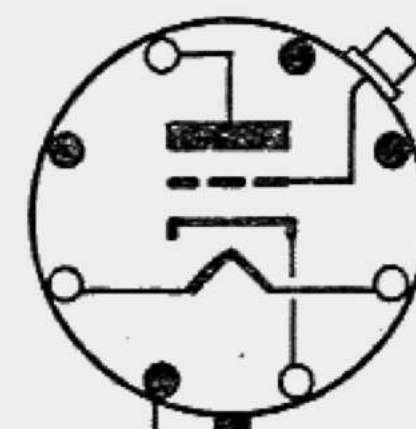
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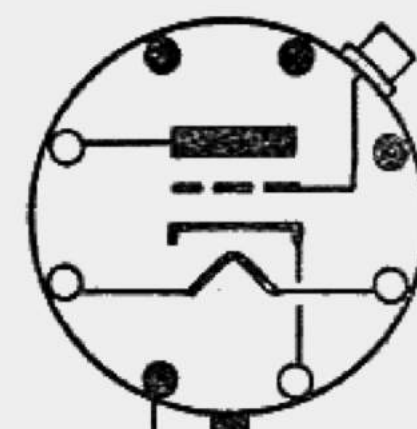
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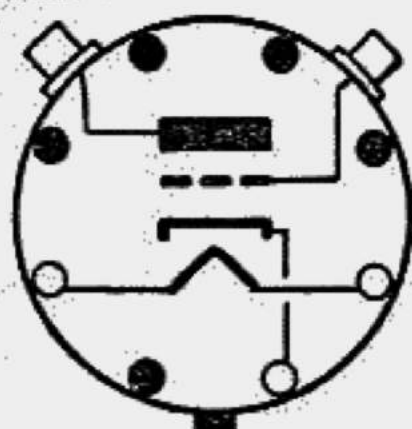
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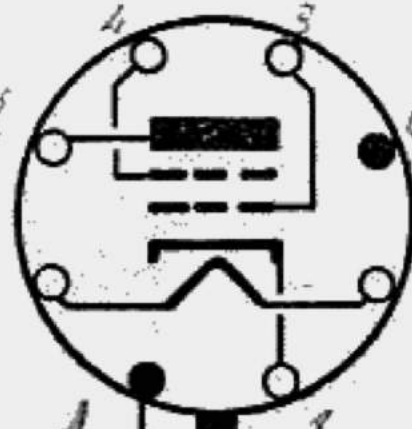
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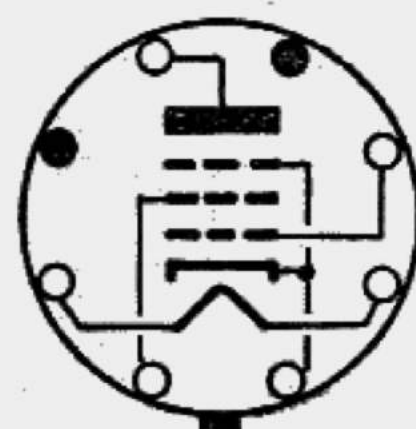
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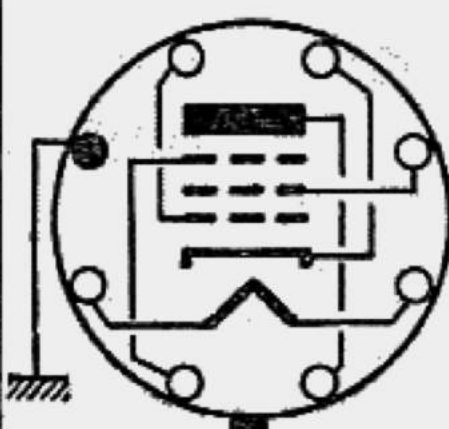
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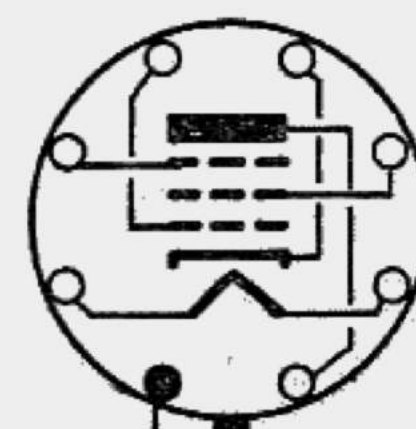
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171



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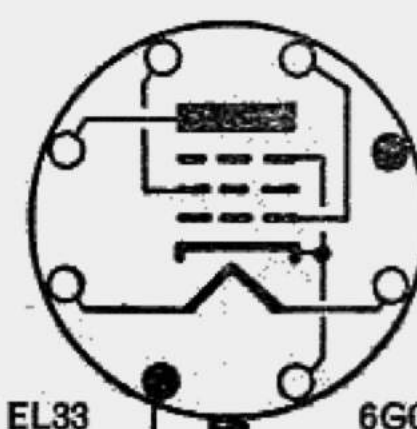
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173

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1853

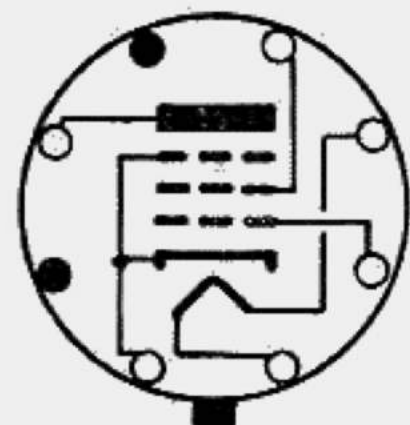


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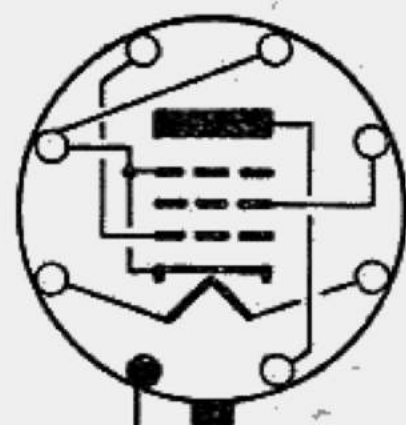
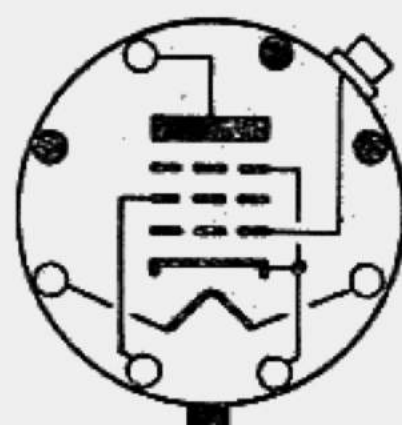
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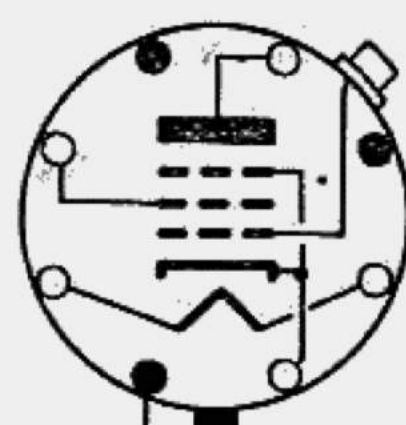




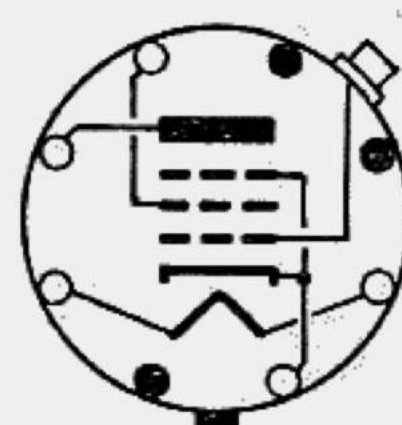
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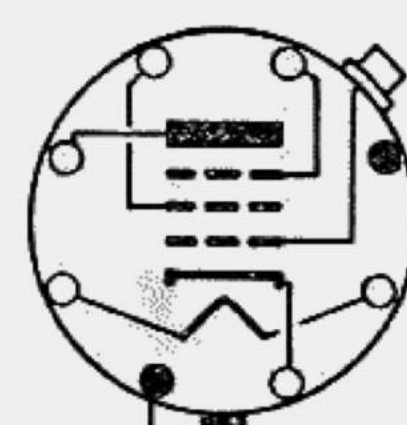
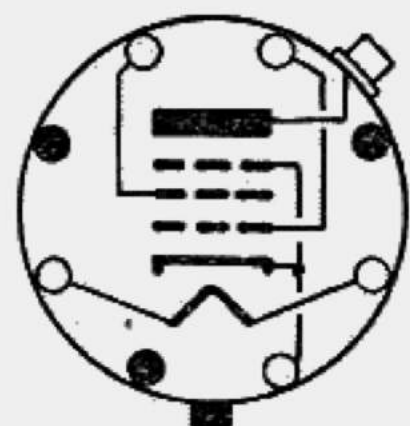
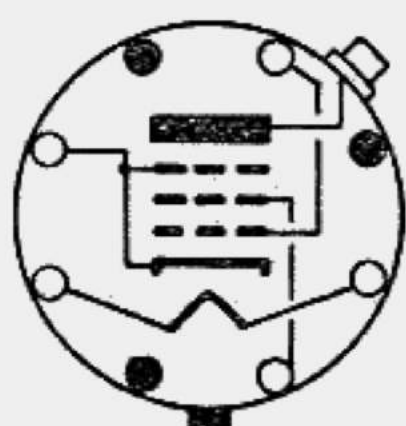
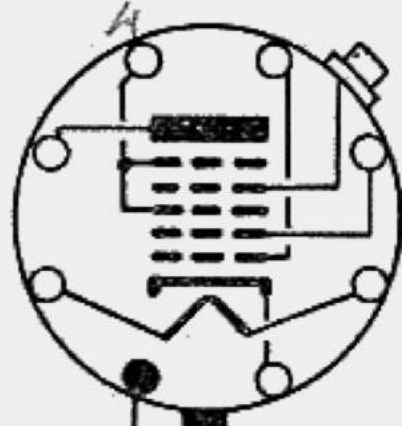
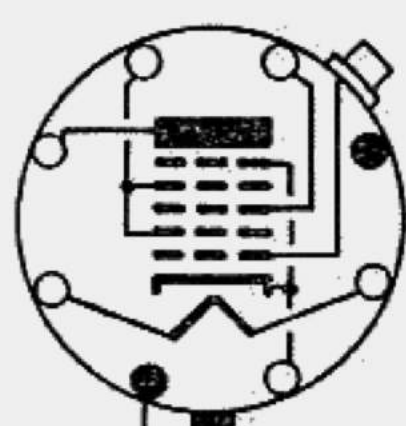
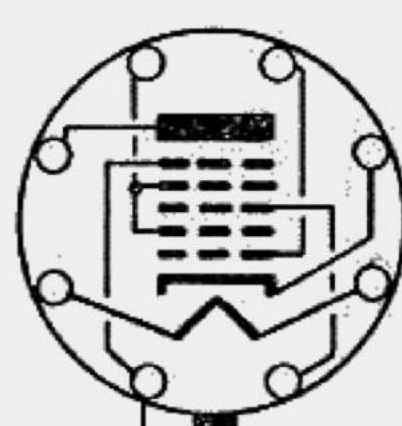
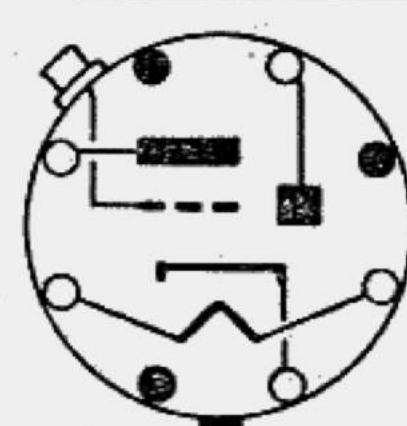
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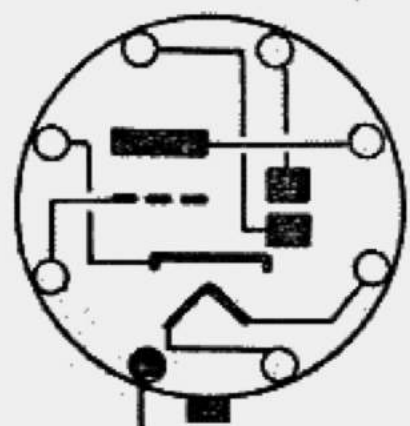
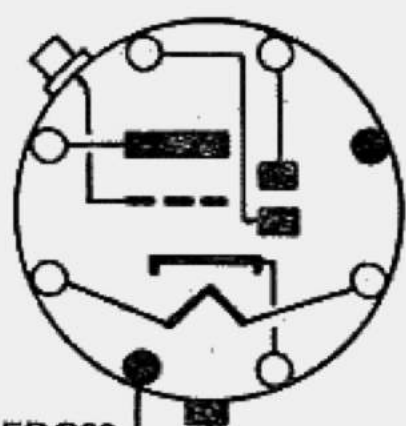
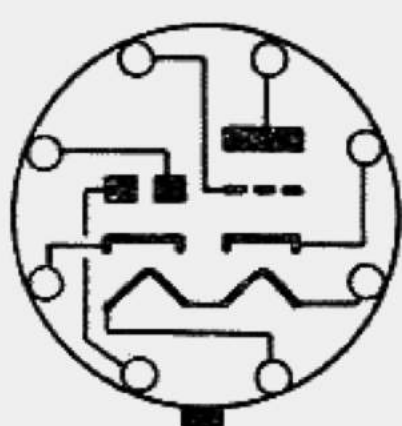
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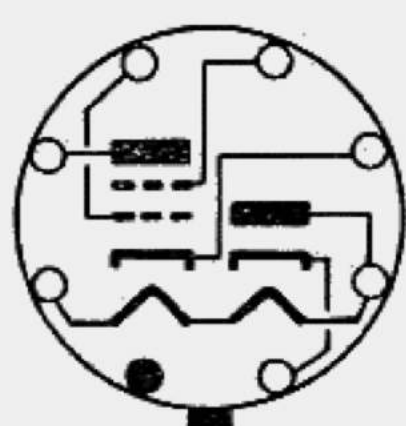
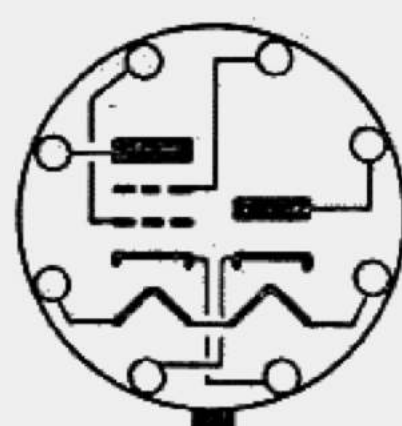
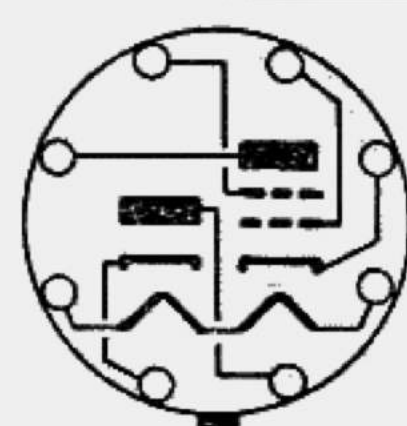
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6DQ6A  
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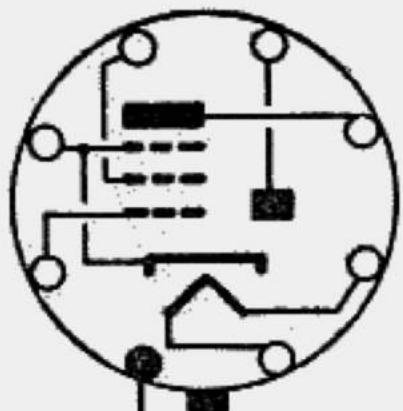
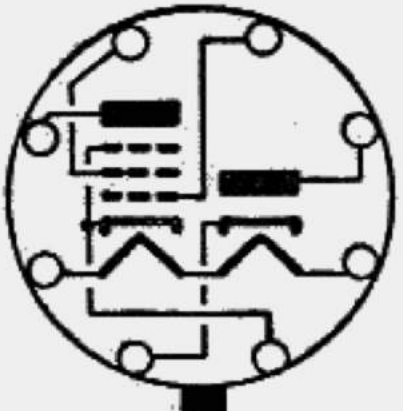
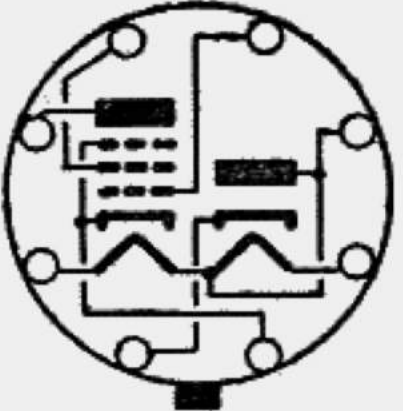
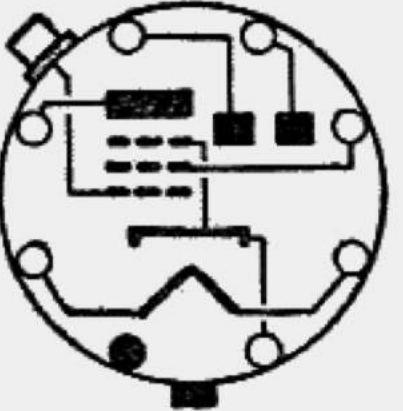
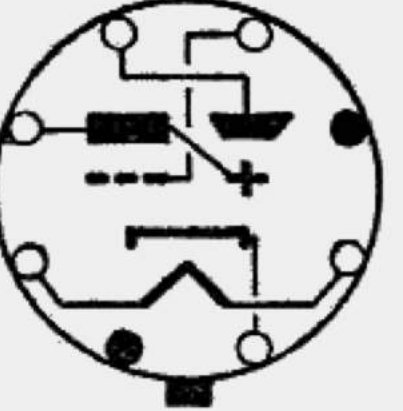
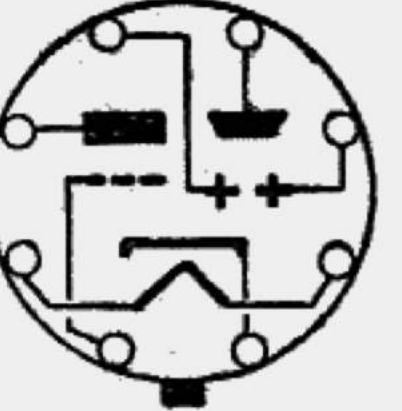
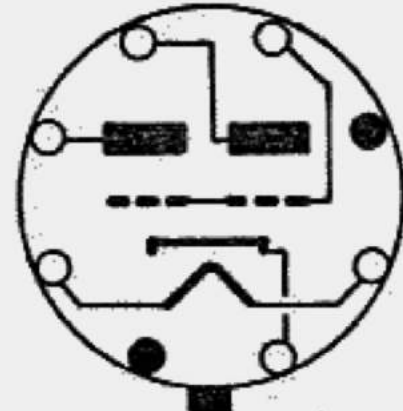
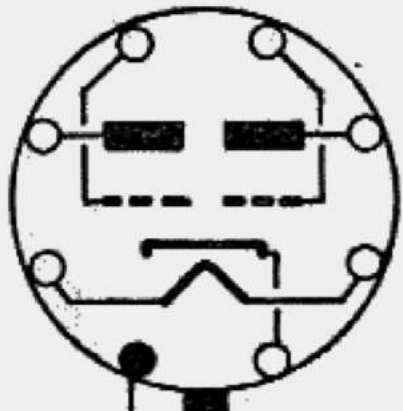
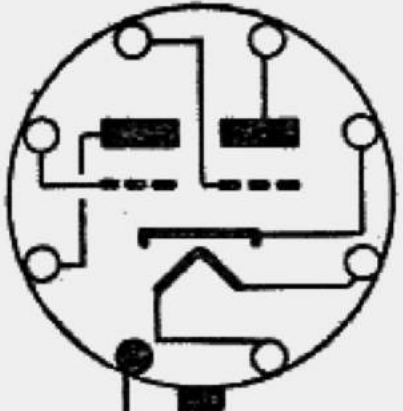
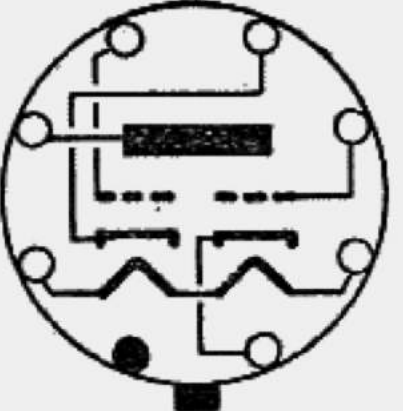
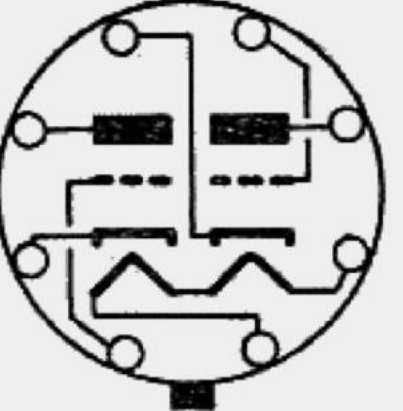
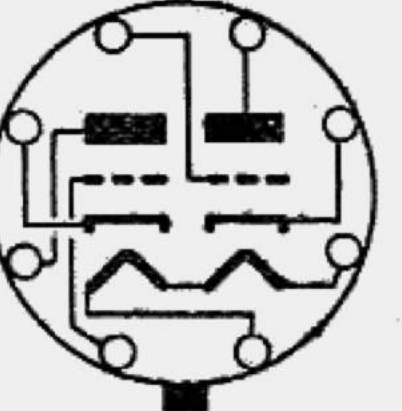
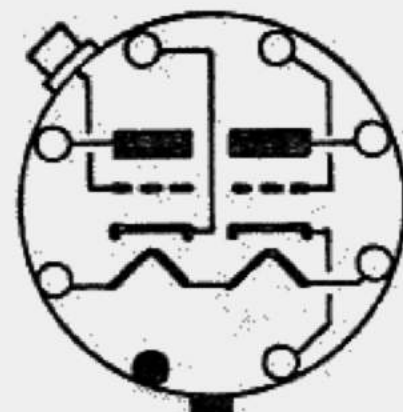
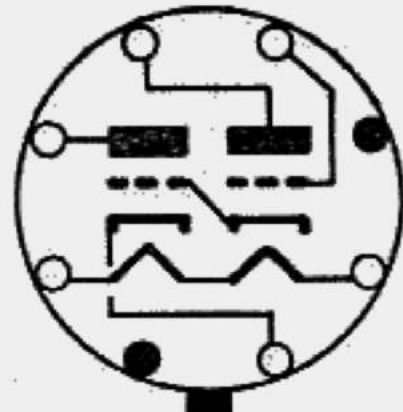
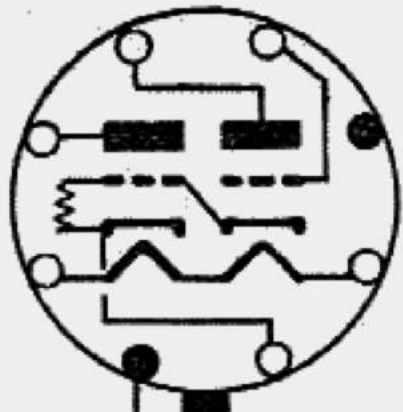
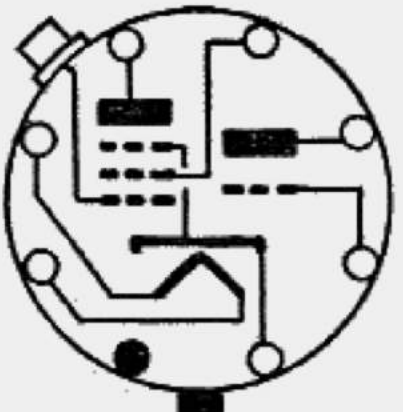
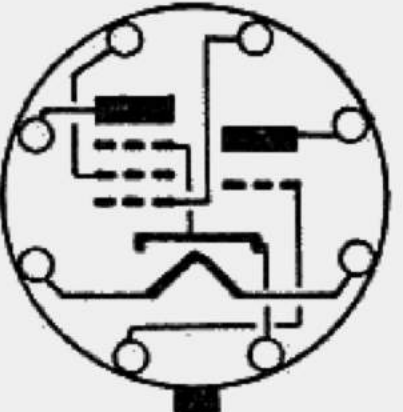
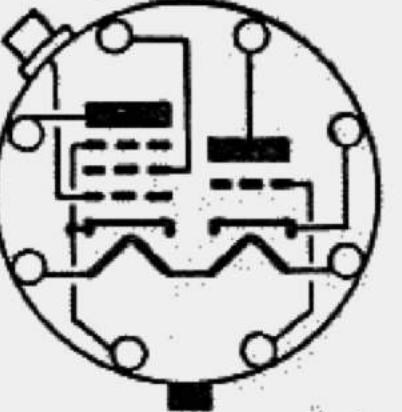
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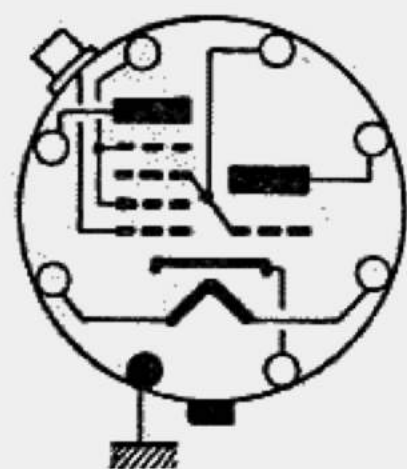
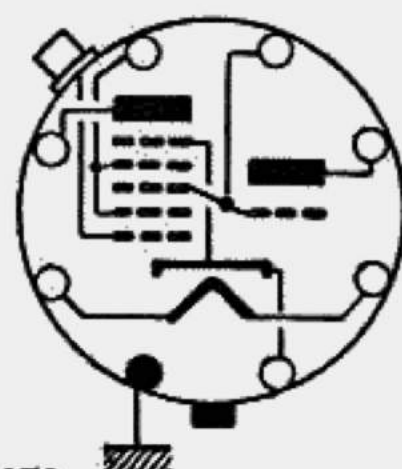
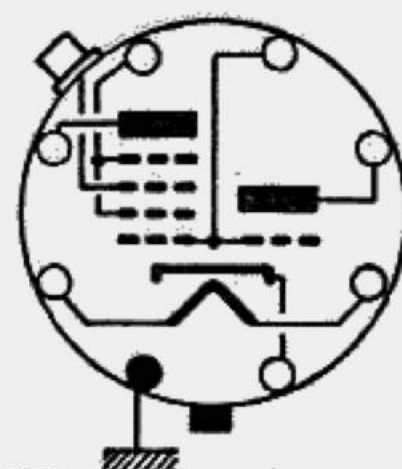
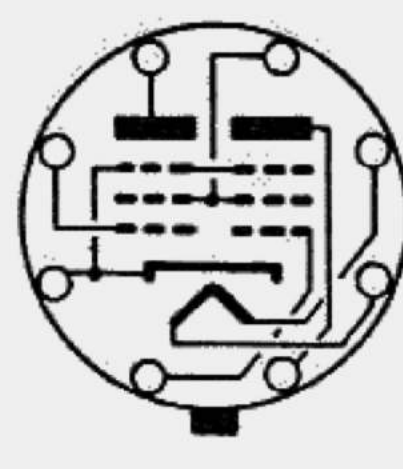
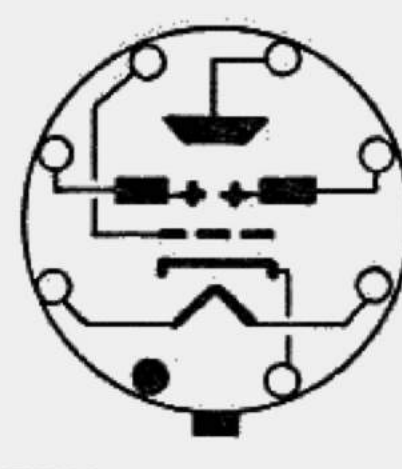
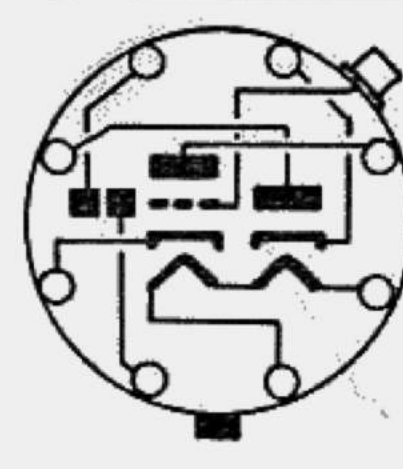
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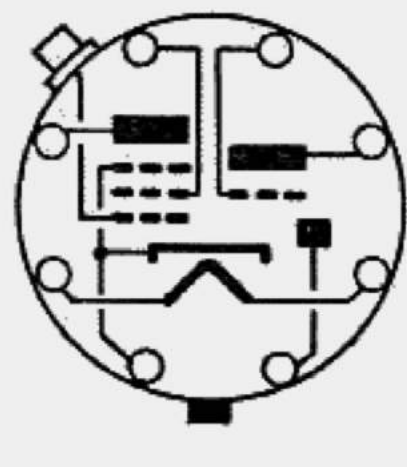
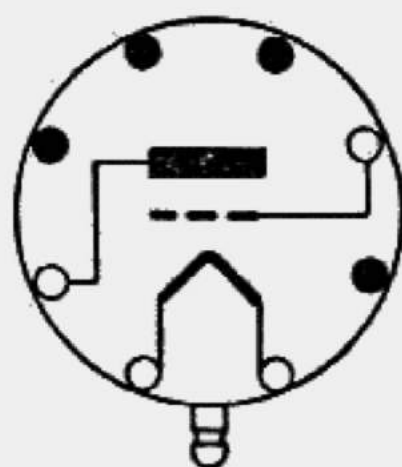
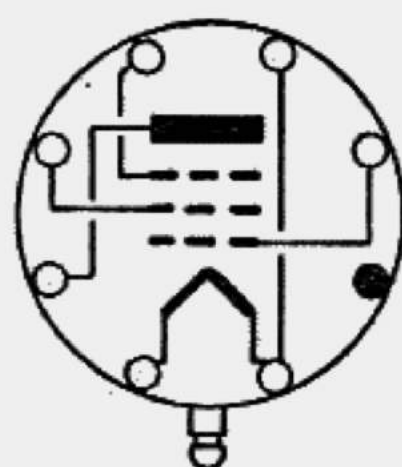
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|                                                                                                                             |                                                                                                                           |                                                                                                                               |                                                                                                                                      |                                                                                                                       |                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>6SF7<br/>6SV7<br/>12SF7</p> <p>193</p> |  <p>25A7<br/>32L7</p> <p>194</p>        |  <p>70A7</p> <p>195</p>                    |  <p>EBF32<br/>6B8<br/>6H8<br/>12C8</p> <p>196</p> |  <p>6X6<br/>1629</p> <p>197</p>    |  <p>198</p>                                                                |
|  <p>6AE6</p> <p>199</p>                   |  <p>6N7<br/>6Y7<br/>6Z7</p> <p>200</p> |  <p>6SC7<br/>12SC7</p> <p>201</p>         |  <p>6AE7</p> <p>202</p>                          |  <p>6AH7<br/>12AH7</p> <p>203</p> |  <p>6AS7<br/>6SL7<br/>6SN7</p> <p>204</p> <p>6SU7<br/>12SL7<br/>12SN7</p> |
|  <p>6C8<br/>6F8</p> <p>205</p>           |  <p>25N6</p> <p>206</p>               |  <p>207</p> <p>6AB6<br/>6AC6<br/>6N6</p> |  <p>6P7</p> <p>208</p>                          |  <p>6AD7</p> <p>209</p>          |  <p>12B8<br/>25B8</p> <p>210</p>                                         |

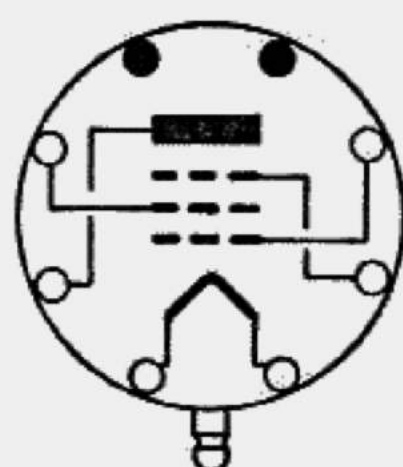


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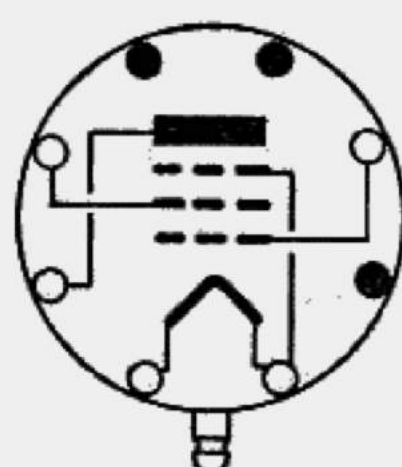
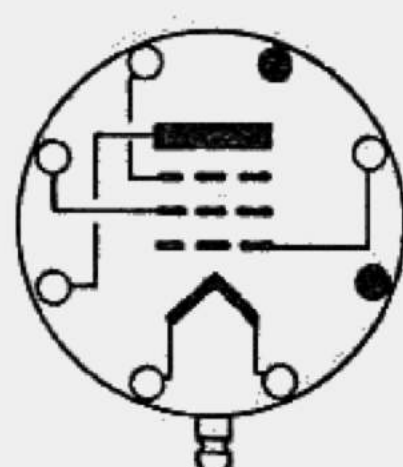
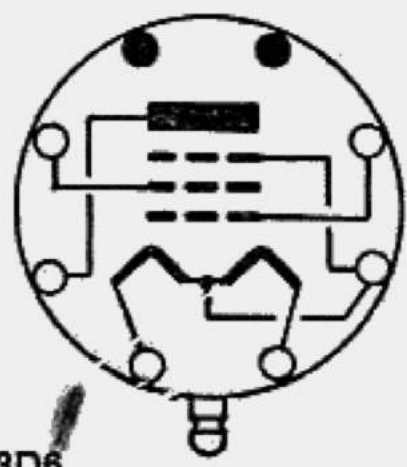
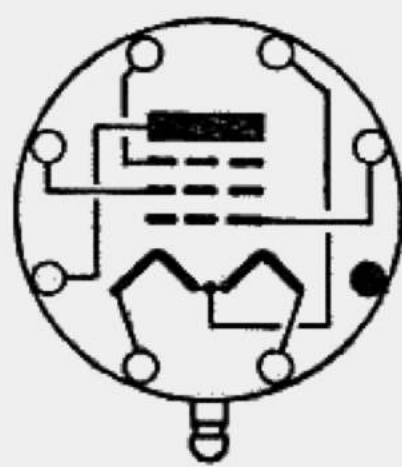
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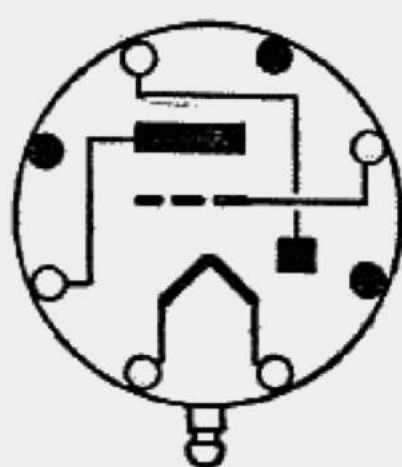
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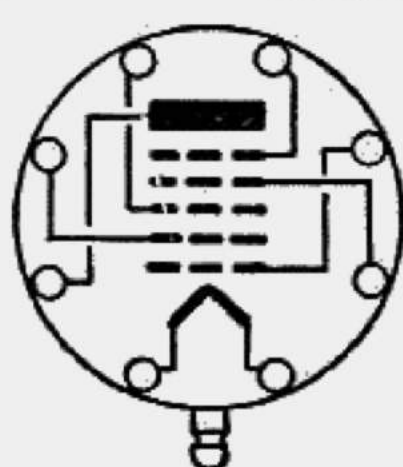
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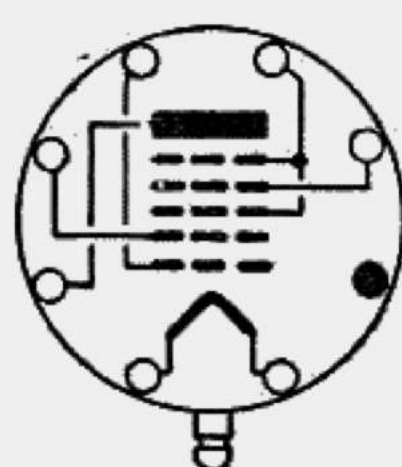
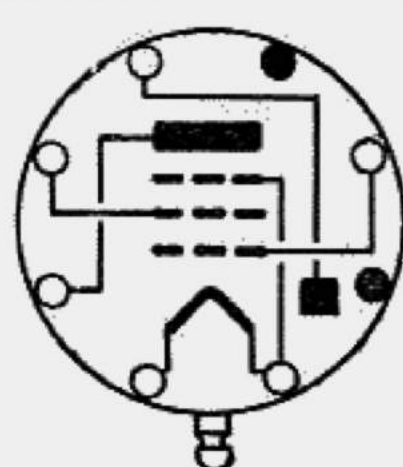
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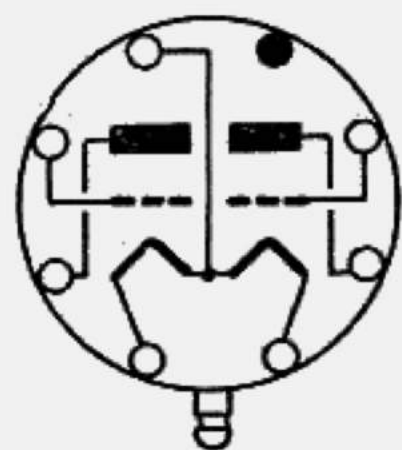
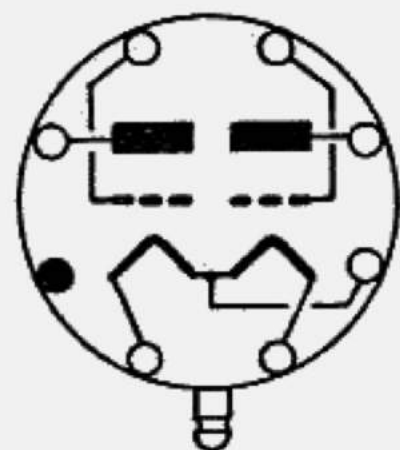
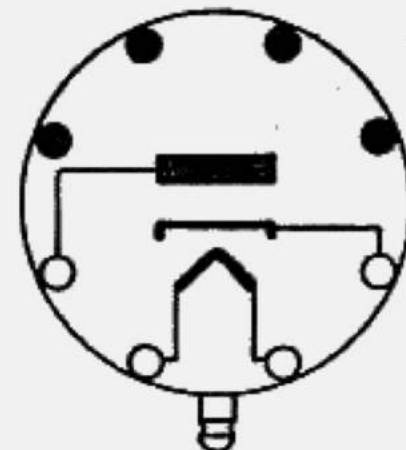
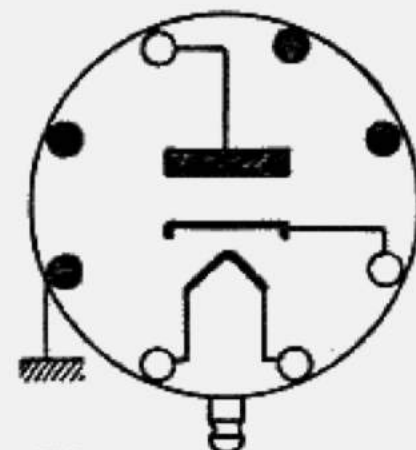
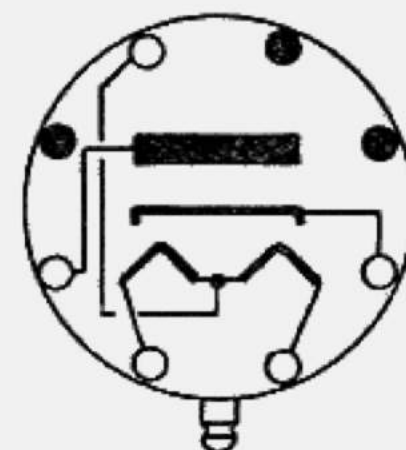
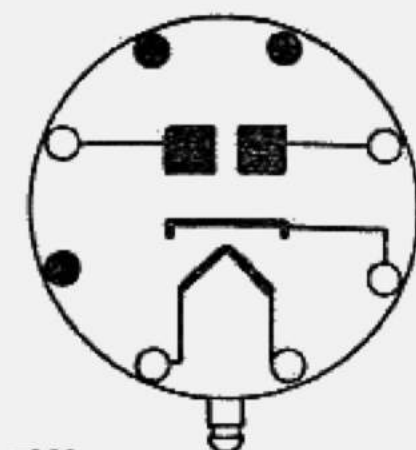
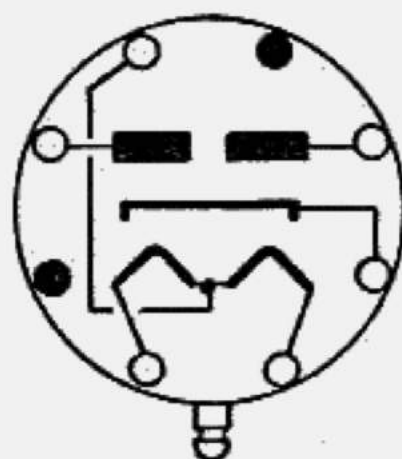
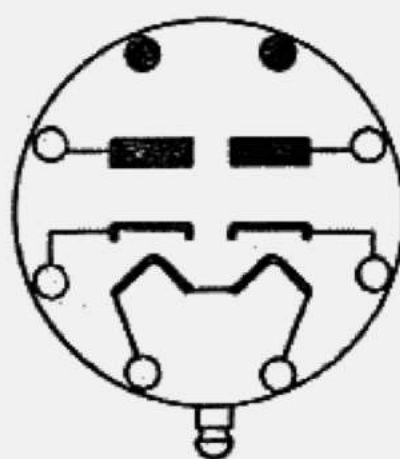
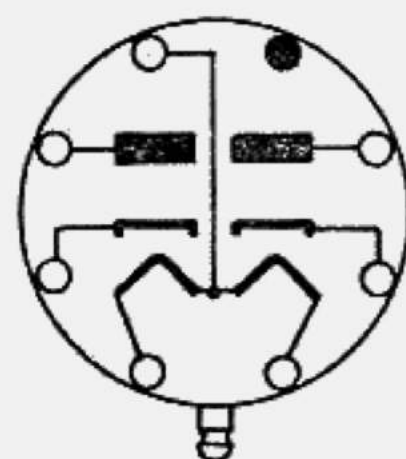
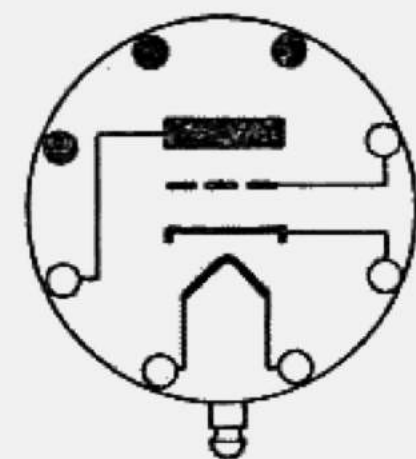
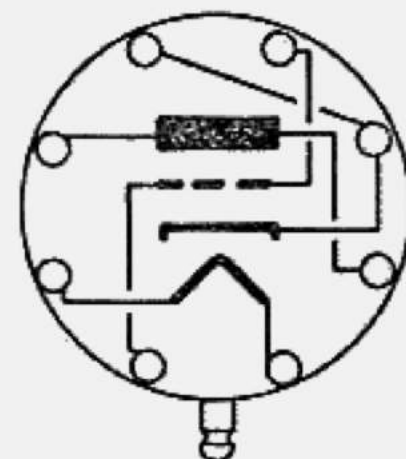
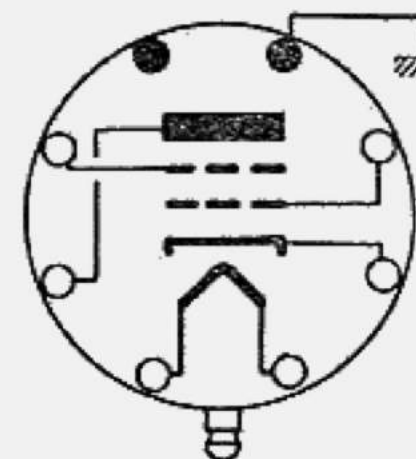
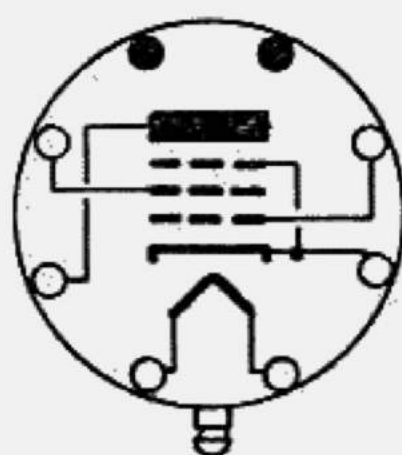
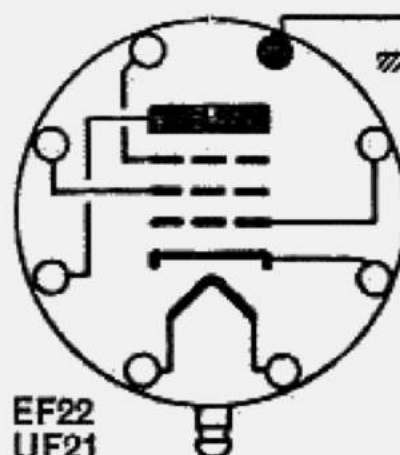
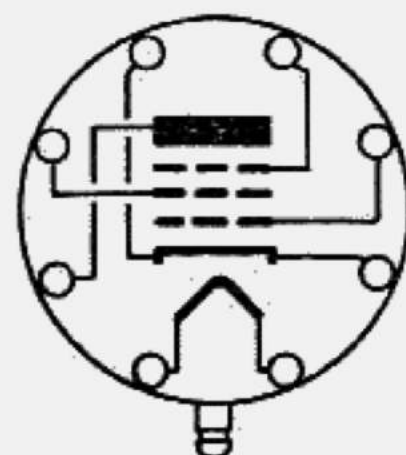
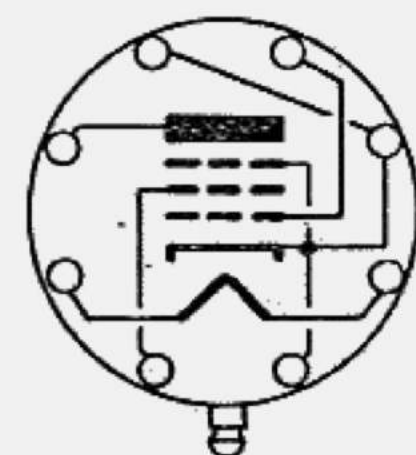
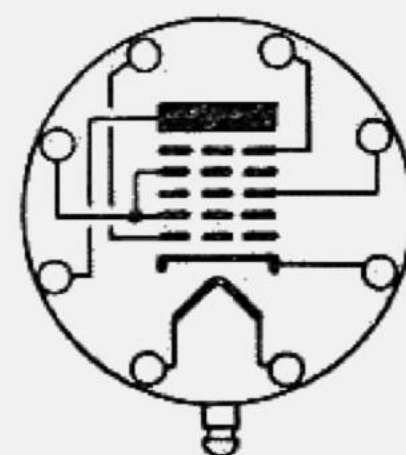
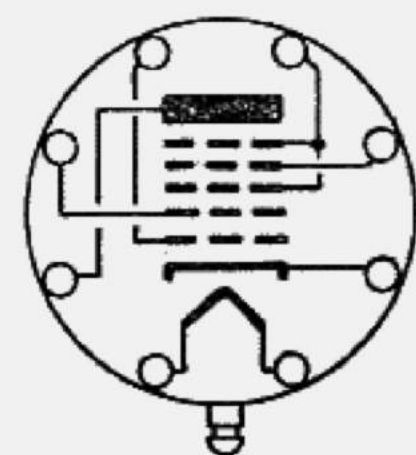
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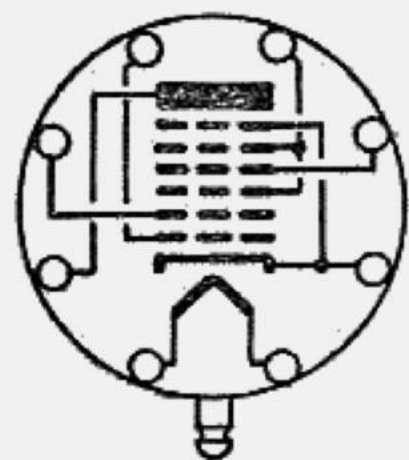
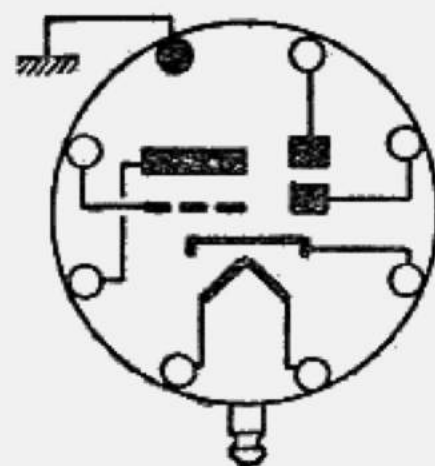
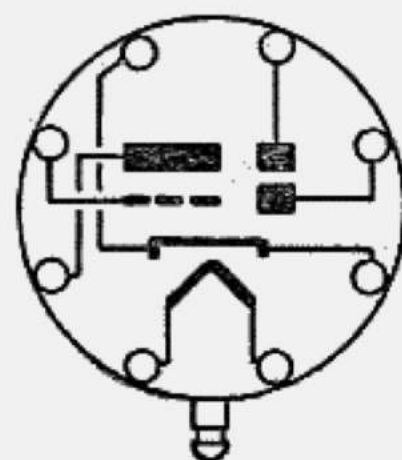
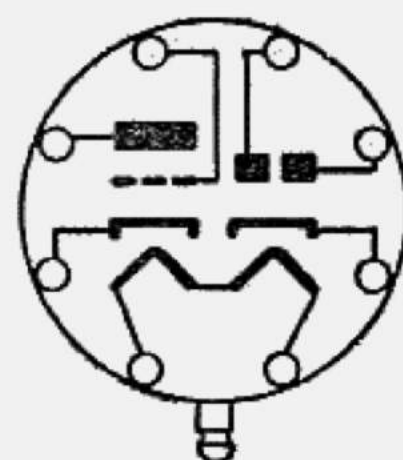
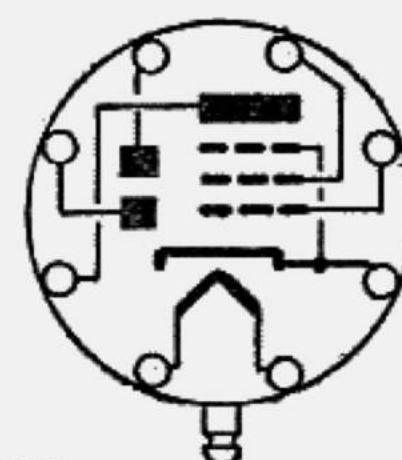
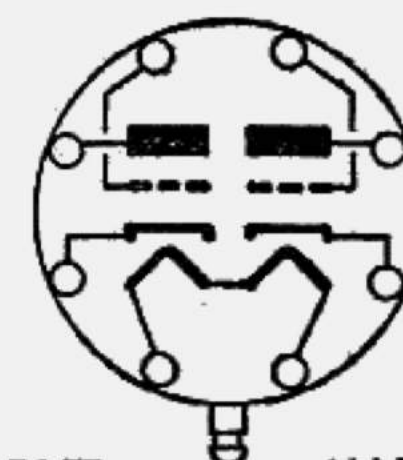
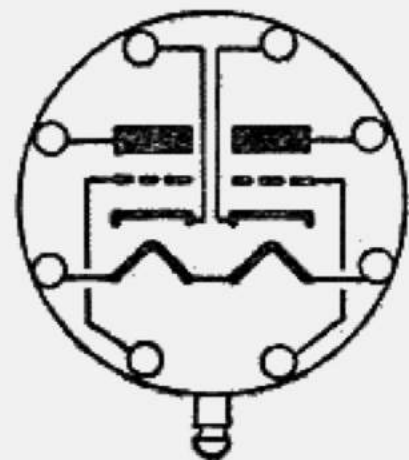
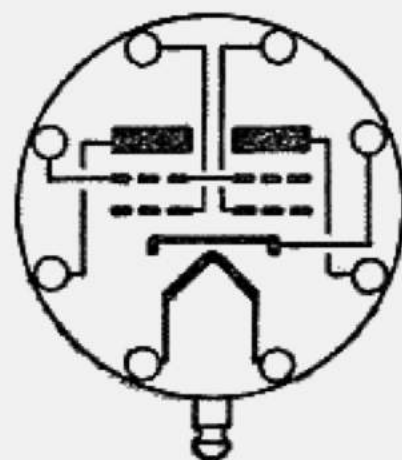
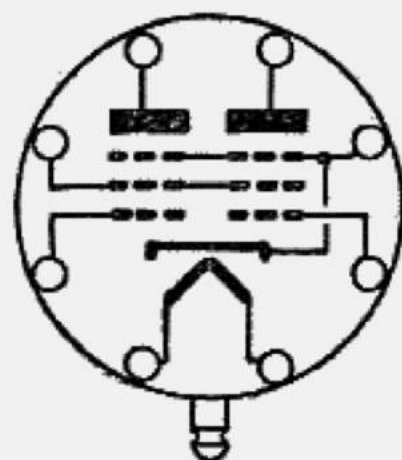
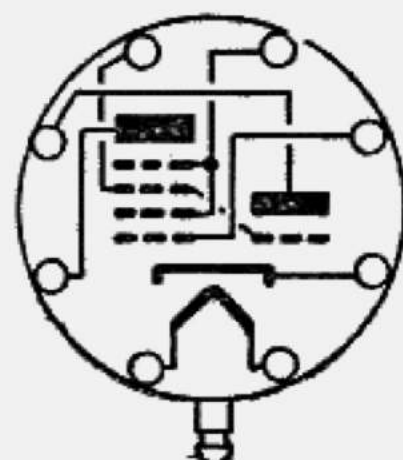
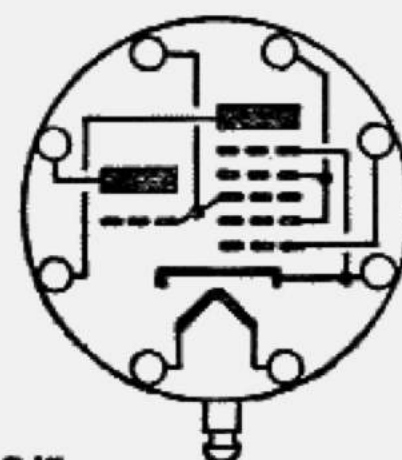
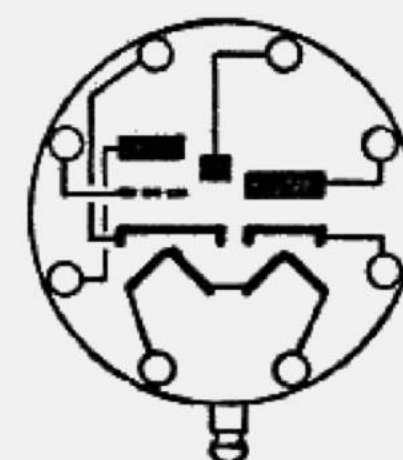
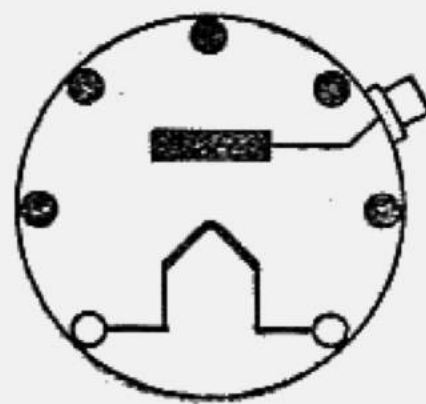
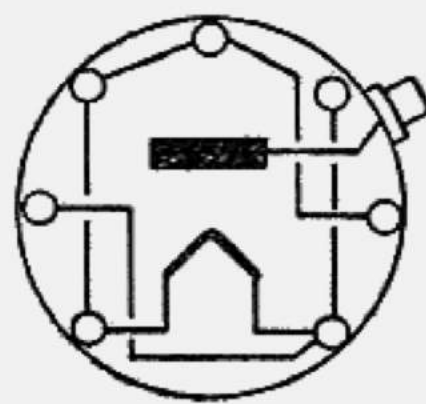
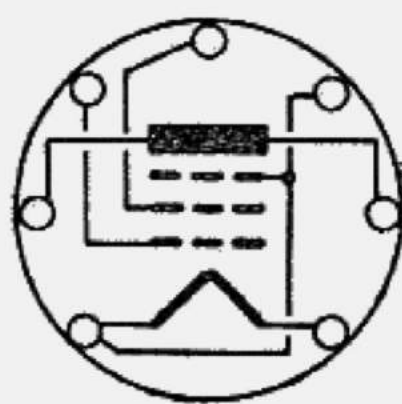
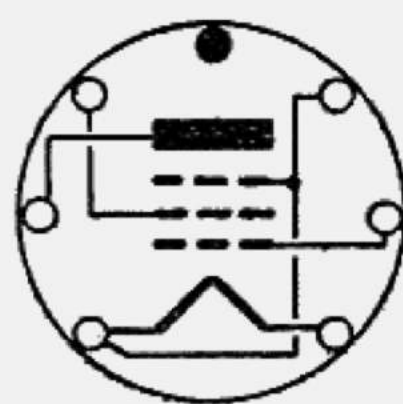
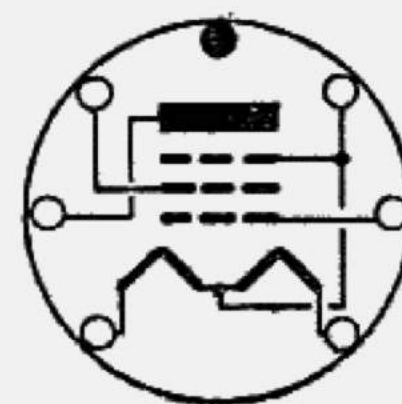
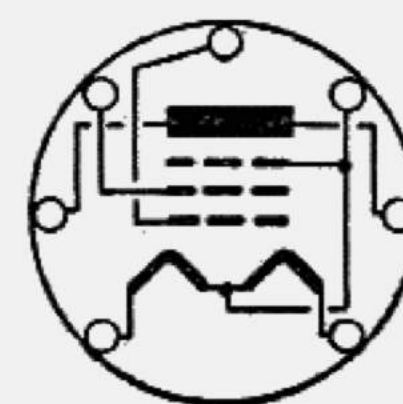
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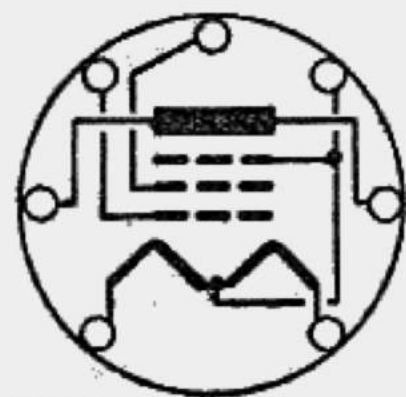
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7Z4  
14Y4 **234** 50X628Z5 **235**7A6 **236**5679 **237**7A4  
7B4  
14A4 **238**7E5  
1201 **239**7A5  
7C5 **240**7B5  
14A5  
14C5 **241** 35A5  
50A5EF22  
UF21  
7A7  
7B7  
7C7 **242** 7G7  
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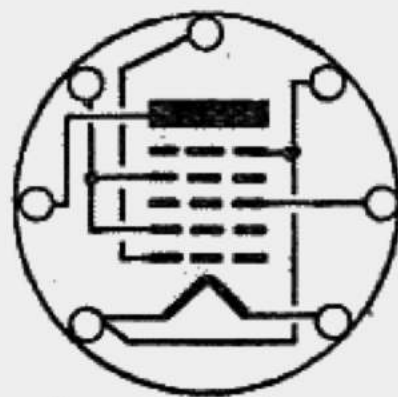


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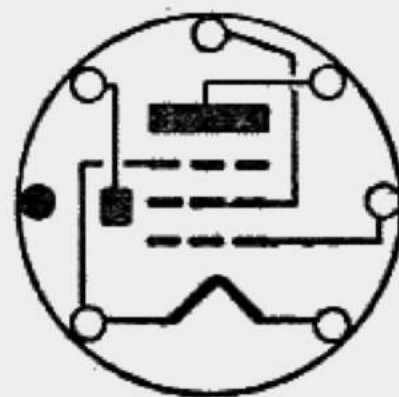
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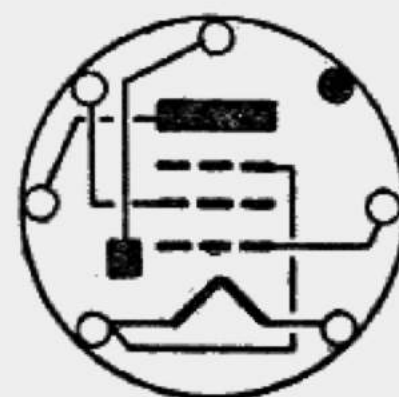
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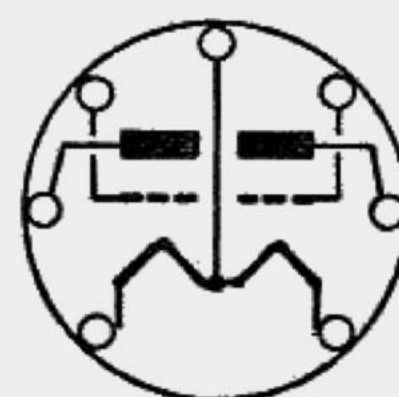
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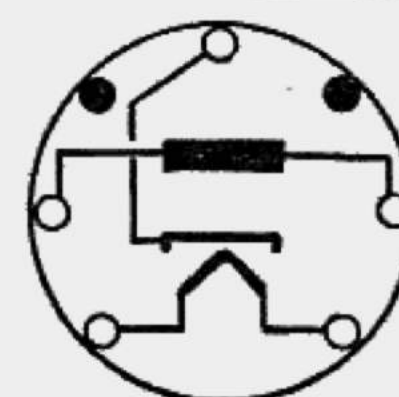
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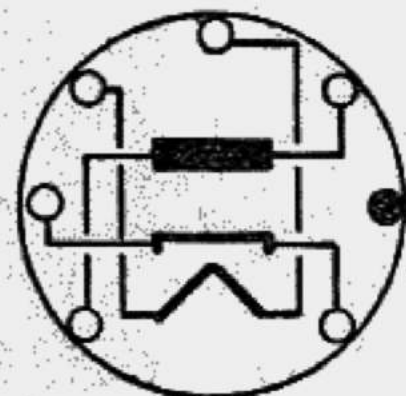
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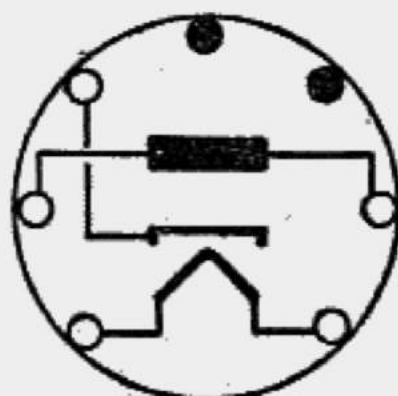


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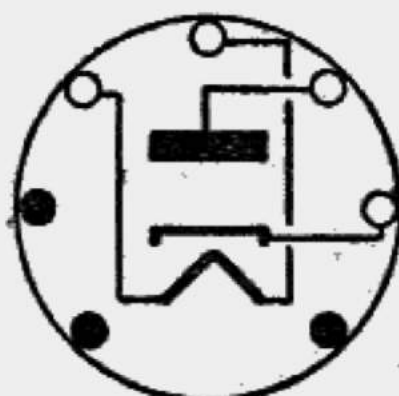


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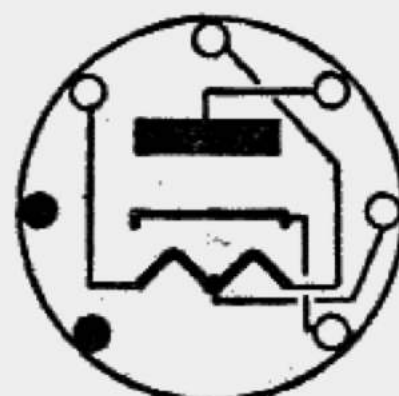
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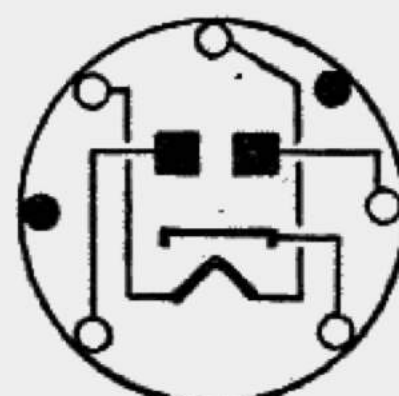
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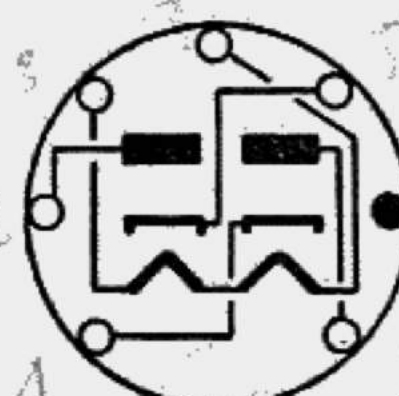
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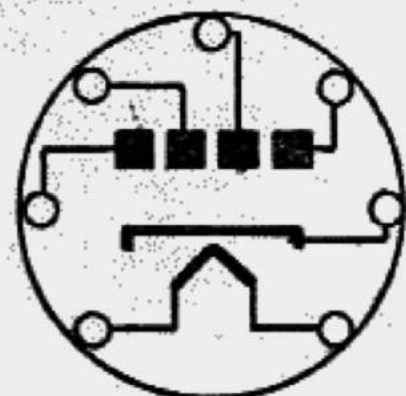
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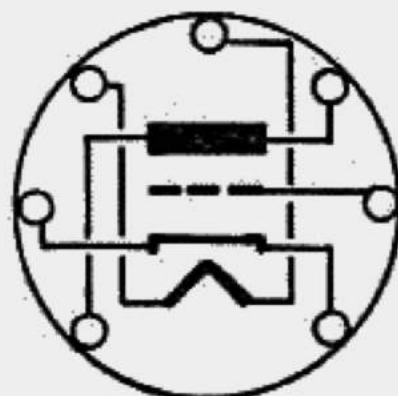
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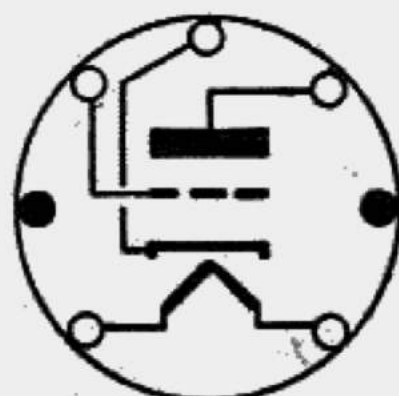


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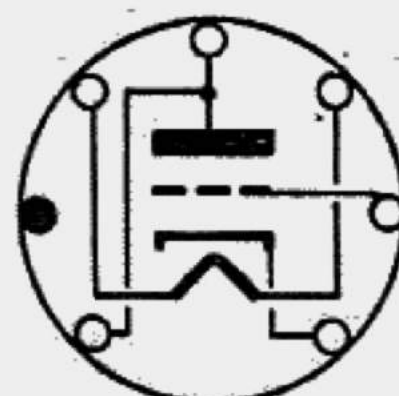


278



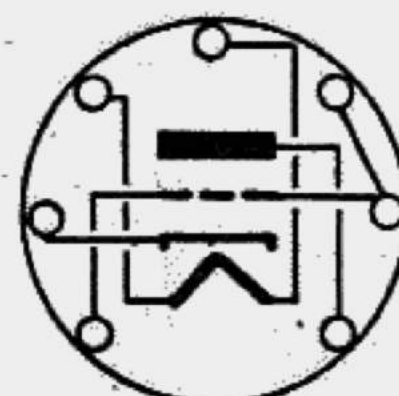
2C4

279



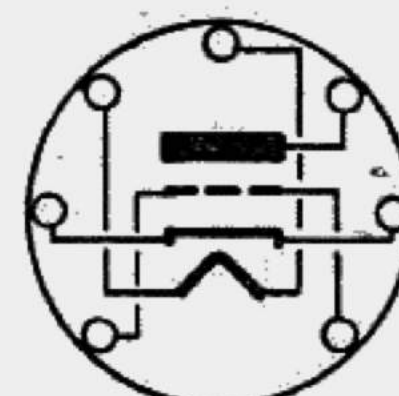
6C4

280



6J4

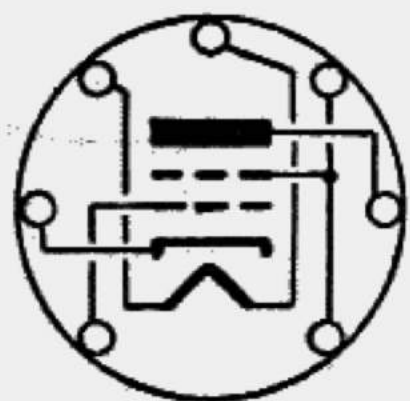
281



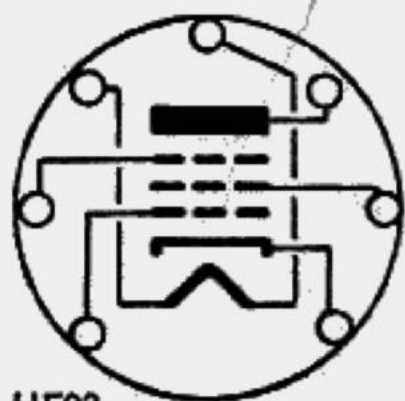
6N4

282





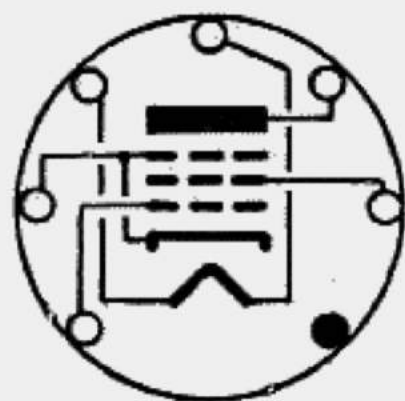
2D21 **283**



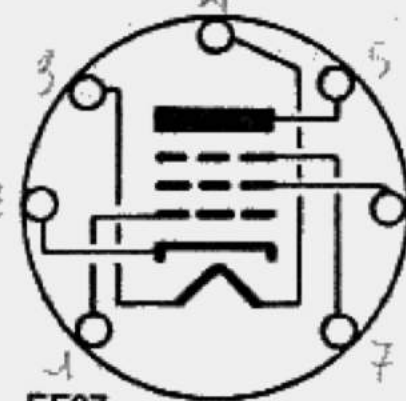
HF93  
HF94  
6AK6  
6AU6  
6BA6

**284**

6BD6  
12AU6  
12BA6



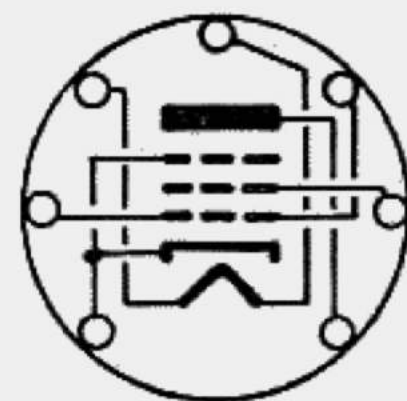
6AR5 **285**



EF97  
6AS6  
6BH6  
6BJ6  
6ET6

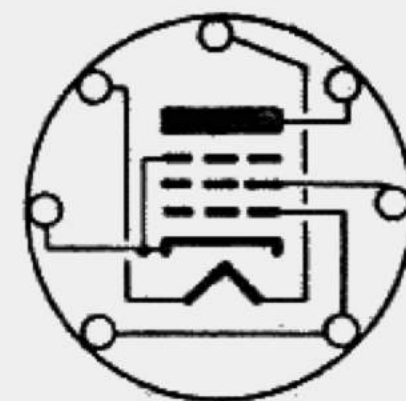
**286**

EF98  
5725  
6CB6  
12AW6



6AS5  
35C5  
50C5

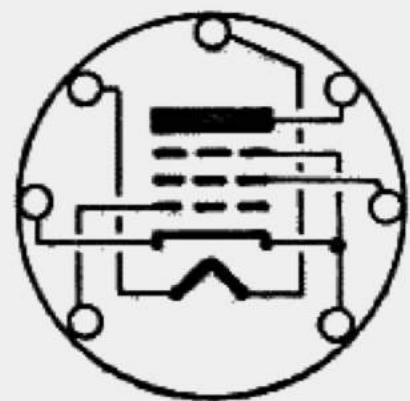
**287**



6AQ5  
35B5  
50B5

**288**

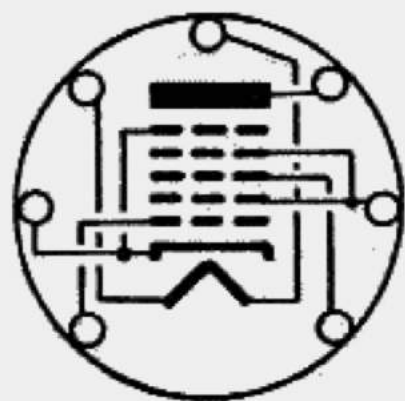
6P9  
EL90  
6BM5



6AG5  
6AJ5  
6AK5

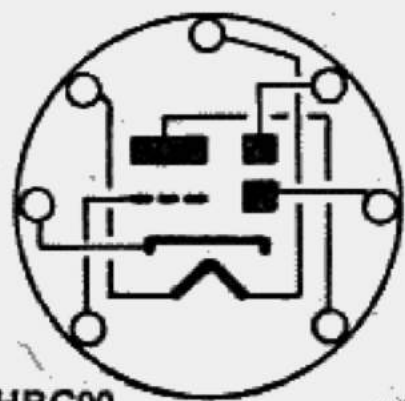
**289**

5654  
9001



HK90  
EK90  
6BE6  
12BE6

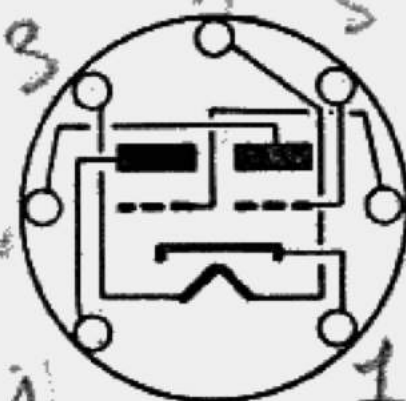
**290**



HBC90  
HEC91  
6AQ6  
6AT6  
6AV6

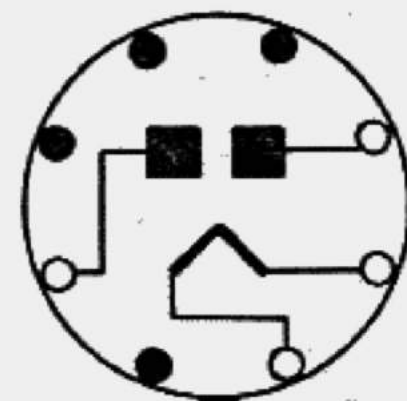
**291**

6BF6  
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12AV6

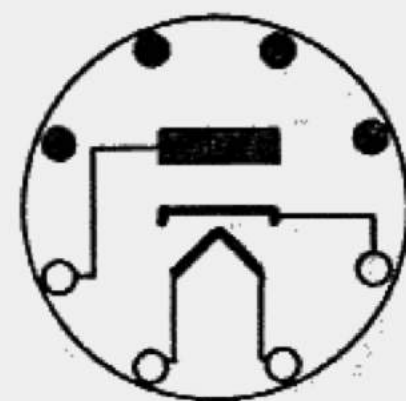


9J6  
ECC91  
6J6

**292**



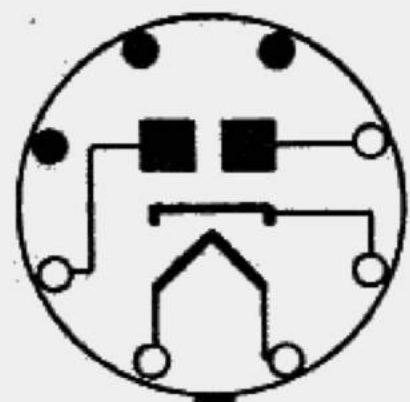
AZ41 **293**



UY41  
UY42  
V311

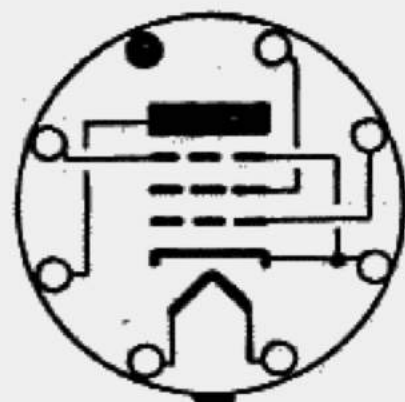
**294**

V312



EZ41  
GZ40  
GZ41

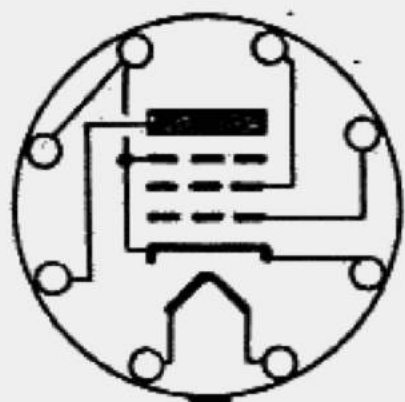
**295**



EL41  
UL41

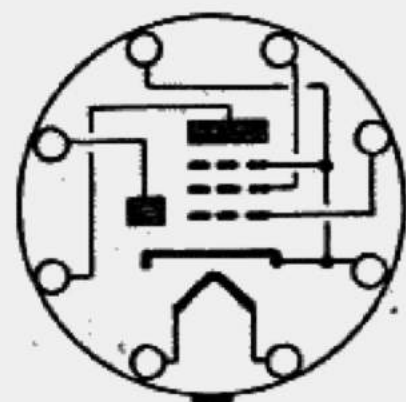
**296**

EL42



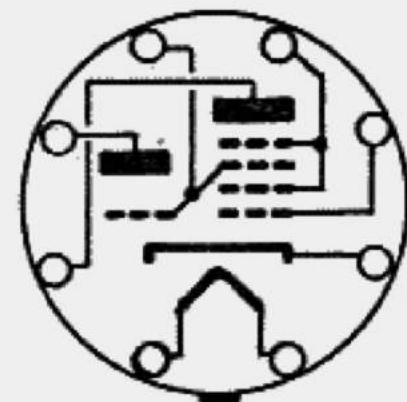
EF41  
HF121  
UF41

**297**



EAF41  
UAF41

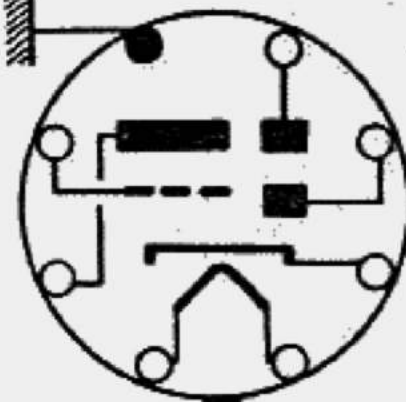
**298**



ECH41  
UCH41

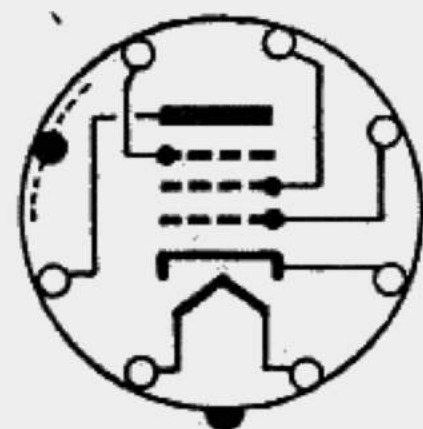
**299**

ECH42  
UCH42



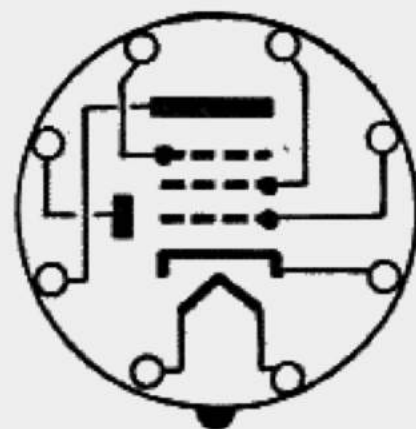
UBC41  
EBC41

**300**



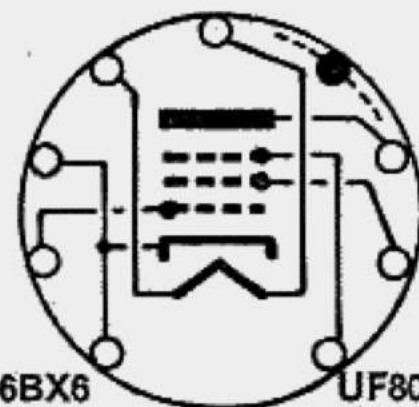
UF42  
EF42

301



EAF42  
UAF42

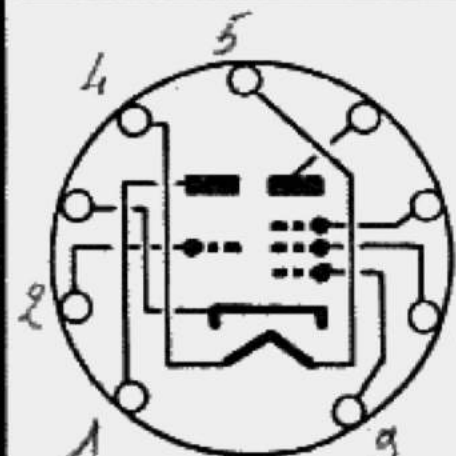
302



6BX6  
EF85  
EF80  
EF183  
EF184

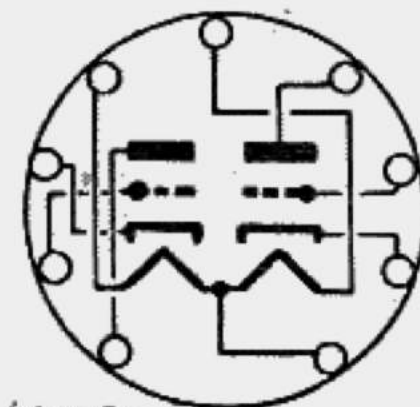
303

UF80  
UF85  
UF89  
6BY7  
45B5



6AB8  
ECL80

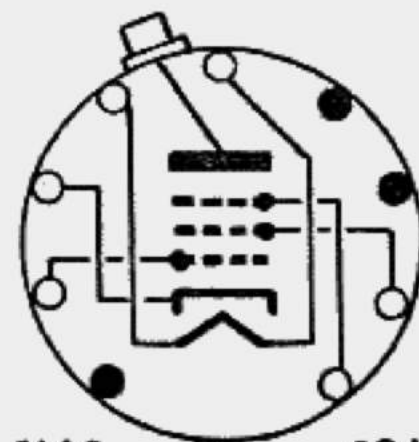
304



5751  
ECC81  
12AT7

305

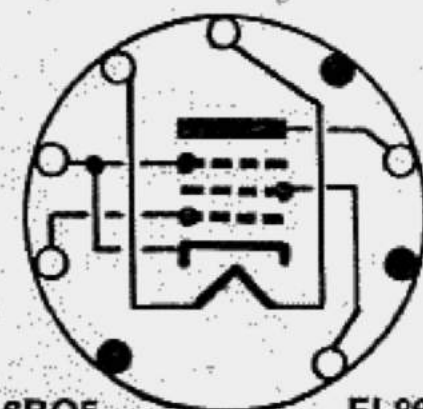
12AX7



21A6  
EL81  
PL81  
PL81F

306

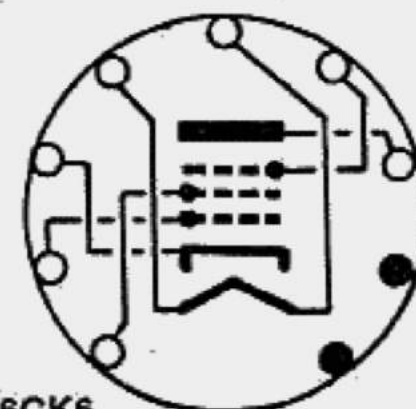
6CJ6  
6DR6  
21B6



6BQ5  
16A5  
EL82  
EL84

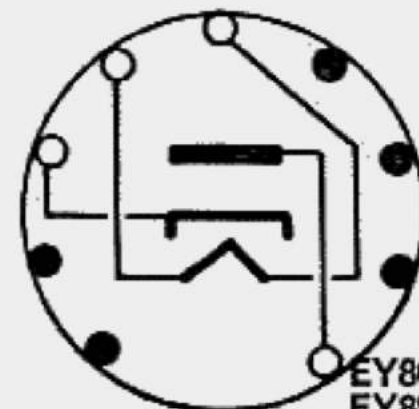
307

EL86  
PL82  
PL84  
UL84



6CK6  
EL83  
15A6  
PL83

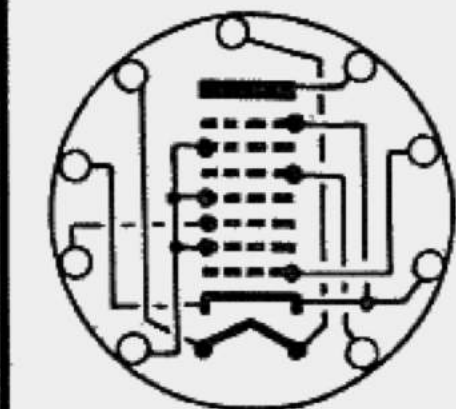
308



19W3  
PY80  
PY82

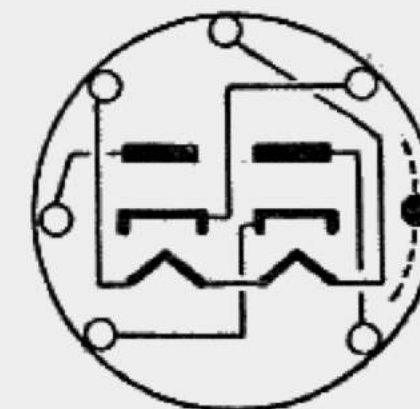
309

EY80  
EY82  
UY82  
UY85  
19Y3



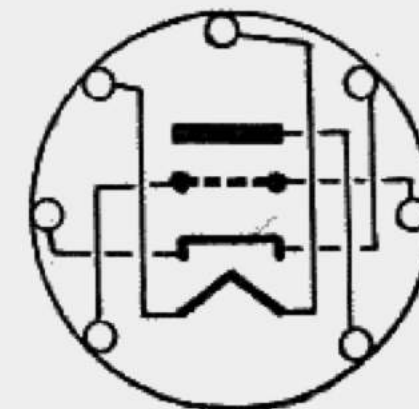
EQ80

310



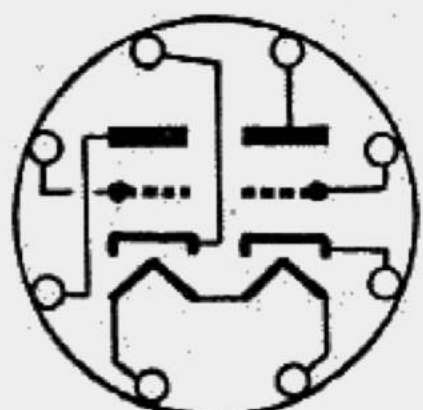
EB91

311



EC91  
6AQ4

312



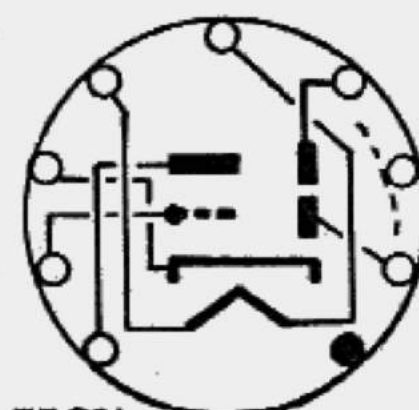
ECC40

313



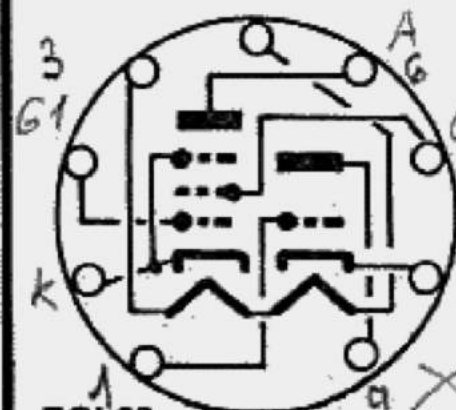
DY86  
DY87

314



EBC81  
UBC81  
6BD7

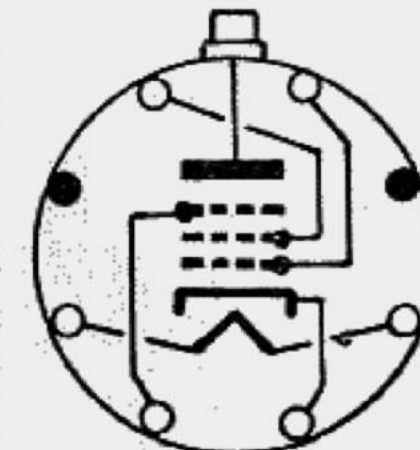
315



ECL82  
PCL82  
UCL82

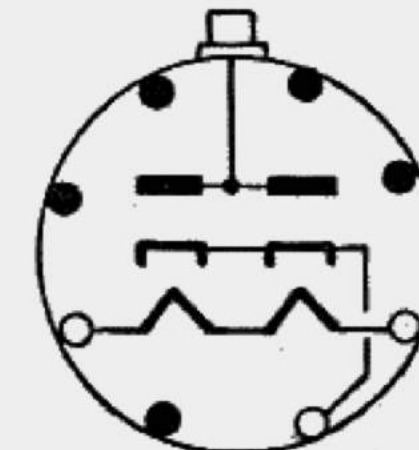
316

6CN8  
16CN8



EL38  
PL38

317

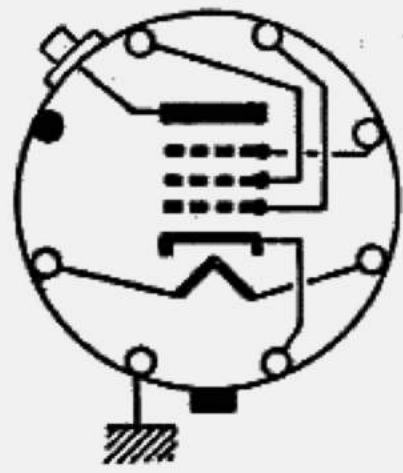
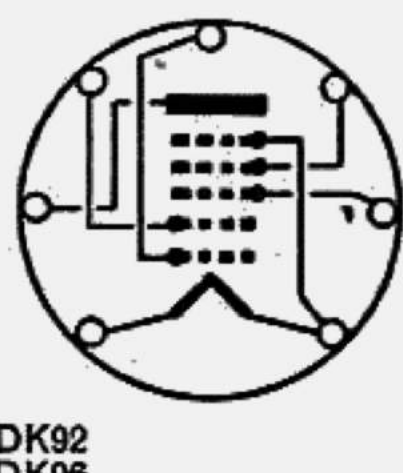
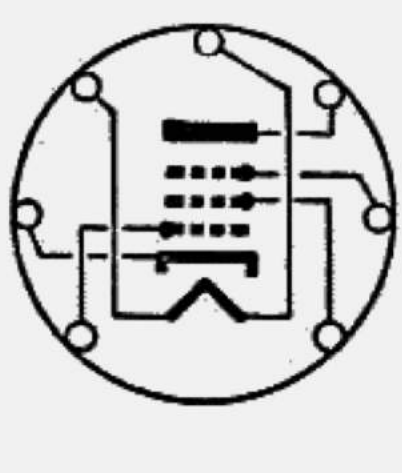
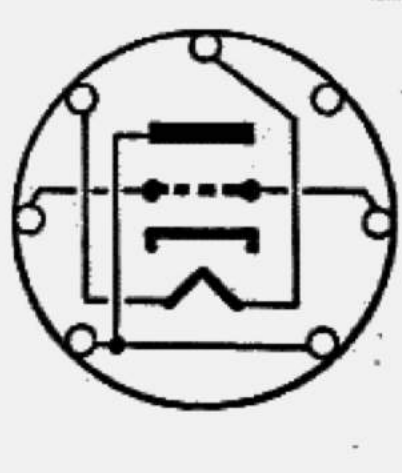
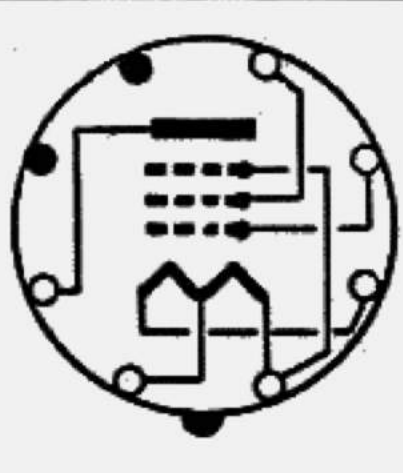
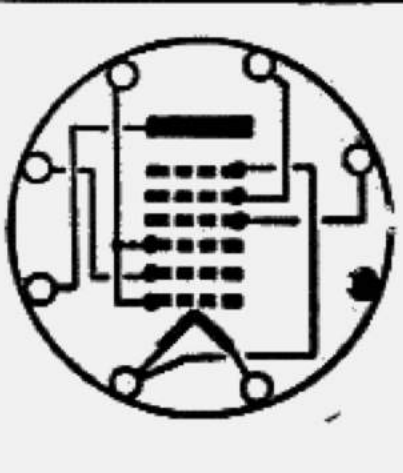
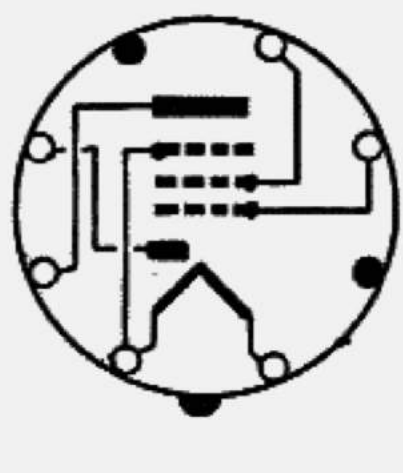
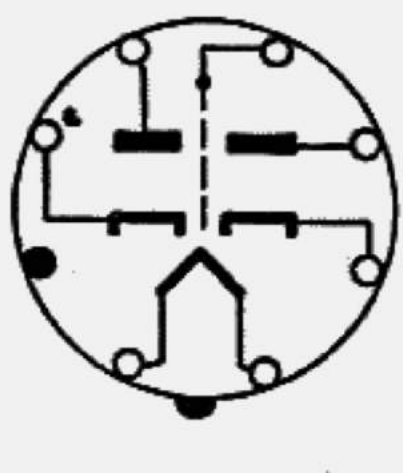
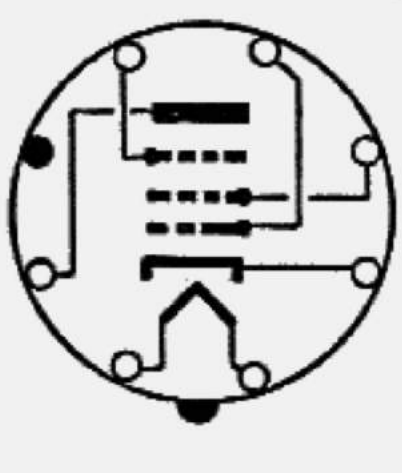
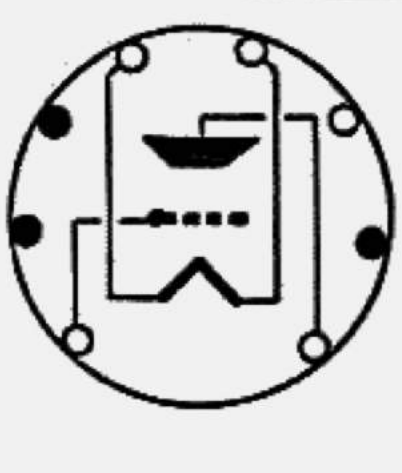
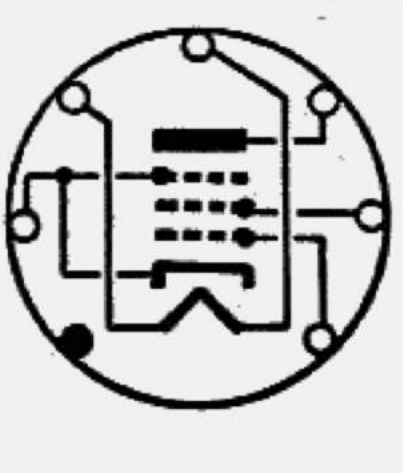
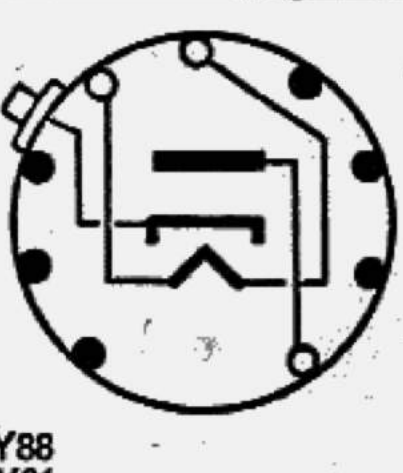
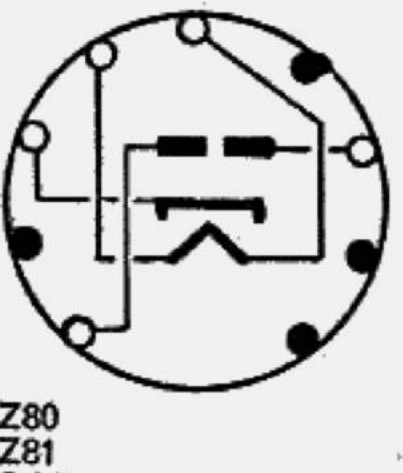
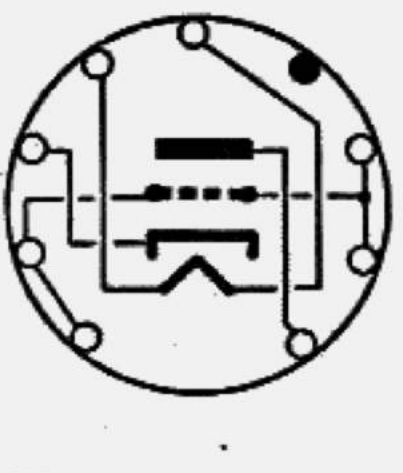
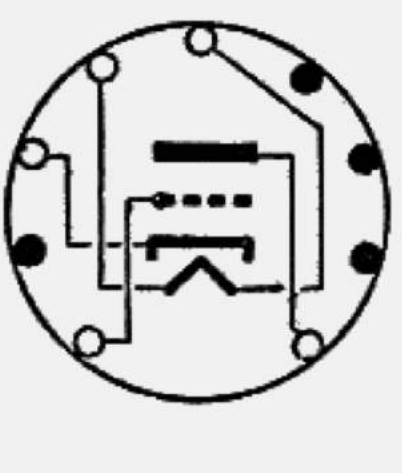
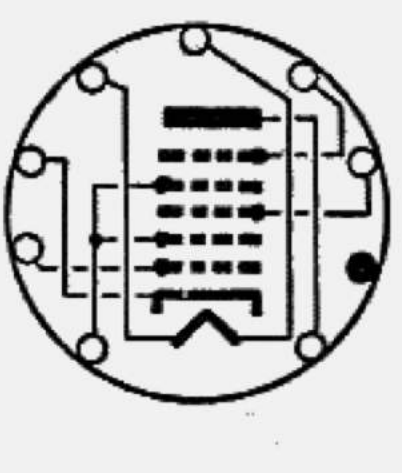
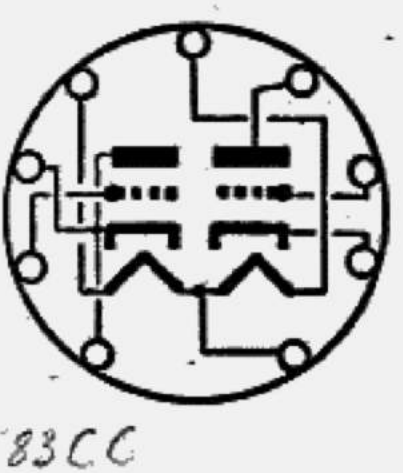
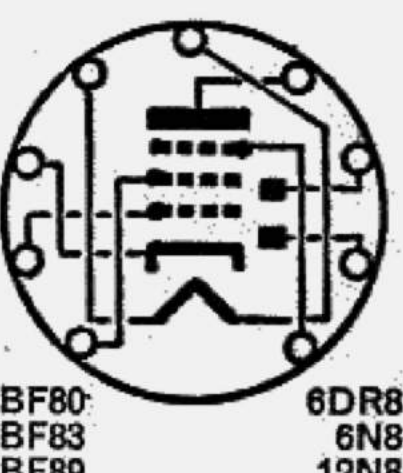


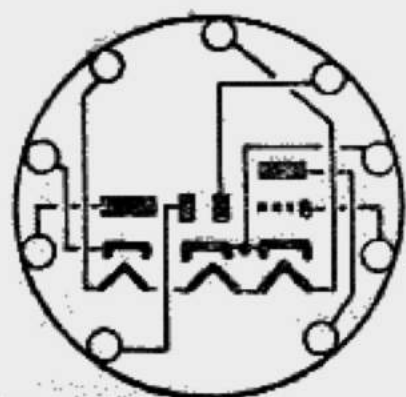
25T3

318

6AQ4

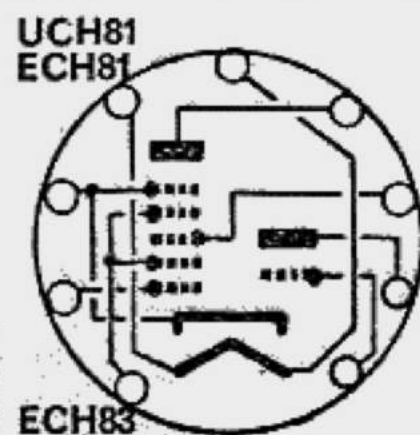


|                                                                                                                                      |                                                                                                                                      |                                                                                                                      |                                                                                                                        |                                                                                                                         |                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>EL39</p> <p>319</p>                             |  <p>DK92<br/>DK96<br/>1AB6<br/>1AC6</p> <p>320</p> |  <p>6AM6<br/>EF91</p> <p>321</p>  |  <p>EC93</p> <p>322</p>             |  <p>DL41</p> <p>323</p>              |  <p>DK40</p> <p>324</p>                                                                                            |
|  <p>DAF40</p> <p>325</p>                           |  <p>UB41<br/>EB41</p> <p>326</p>                  |  <p>EF40</p> <p>327</p>          |  <p>DM70<br/>DM71</p> <p>328</p>   |  <p>EL95</p> <p>329</p>             |  <p>EY88<br/>PY81<br/>PY88<br/>17Z3</p> <p>330</p>                                                                |
|  <p>EZ80<br/>EZ81<br/>6CA4<br/>6V4</p> <p>331</p> |  <p>6Q4<br/>EC80</p> <p>332</p>                  |  <p>6R4<br/>EC81</p> <p>333</p> |  <p>6BA7<br/>12BA7</p> <p>334</p> |  <p>12AX7<br/>ECC83</p> <p>335</p> |  <p>EBF80<br/>EBF83<br/>EBF89<br/>UBF80<br/>UBF89</p> <p>6DR8<br/>6N8<br/>12N8<br/>17C8<br/>19FL8</p> <p>336</p> |



EABC80  
PABC80  
UABC80  
6AK8

337

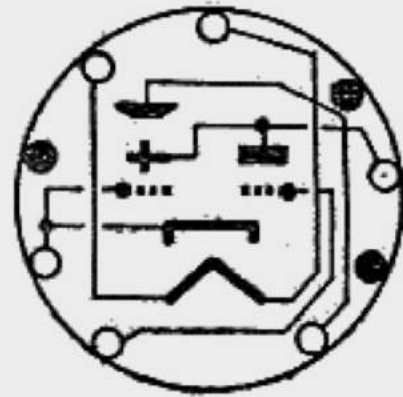


UCH81  
ECH81

ECH83  
ECH84  
HCB81  
6AJ8  
6DS8

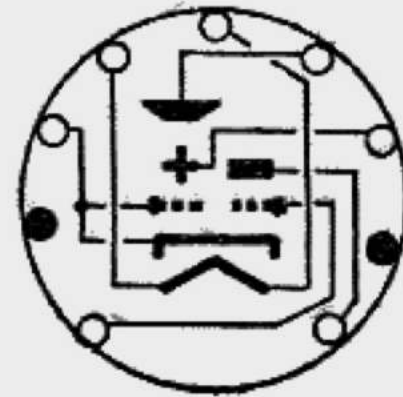
338

12AJ8  
19AJ8  
19D8



EM80  
EM81  
UM80

339



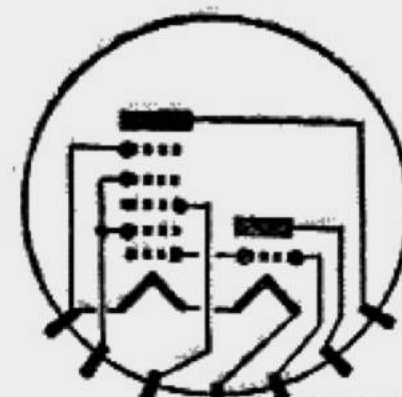
EM84  
EM85  
EM87

340



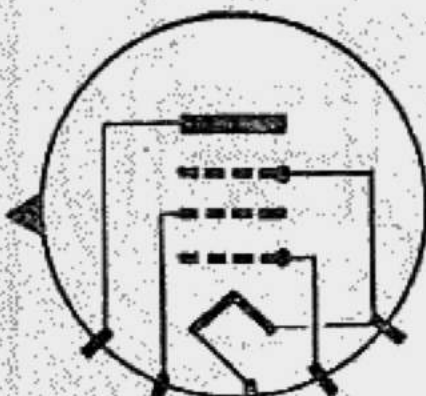
1AD4  
5672

341



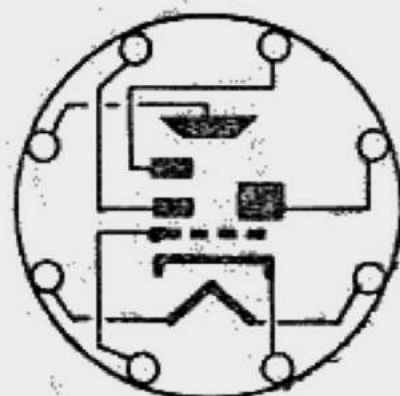
2G21

342



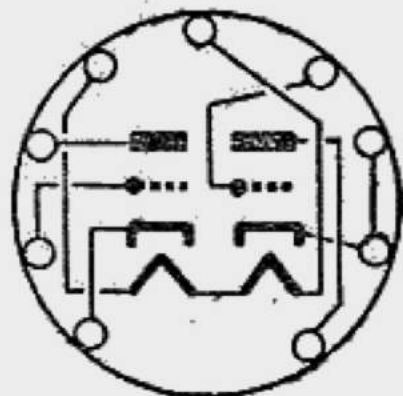
DL66  
DF66

343



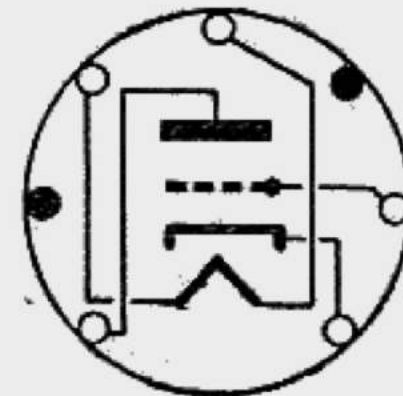
6AL7

344



ECC84  
PCC84

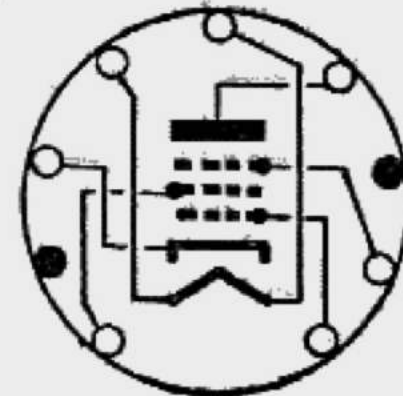
345



EC92  
6AB4  
UC92

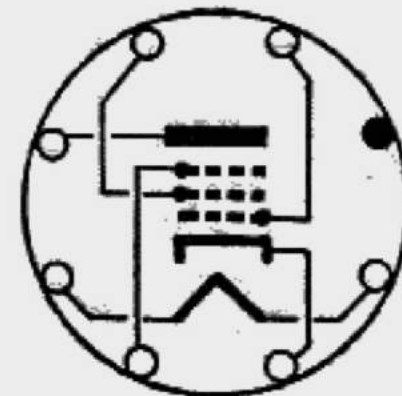
346

9AB4



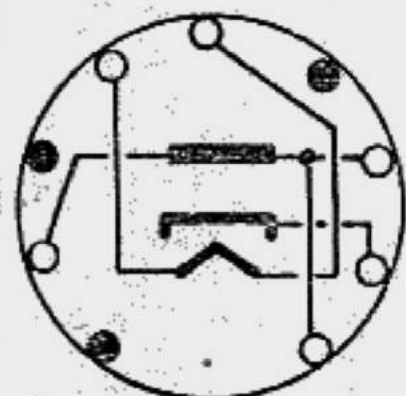
EF83  
EF86  
PF86

347



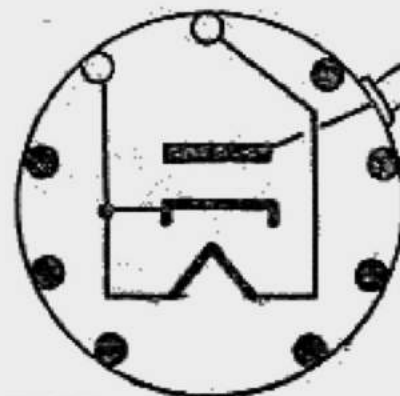
EL34

348



EY81  
6V8

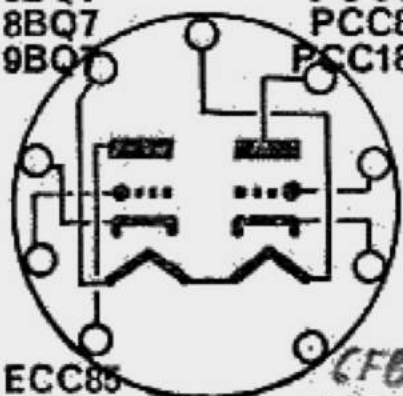
349



DY87  
EY86  
EY87  
6AX2

350

GY86  
GY87

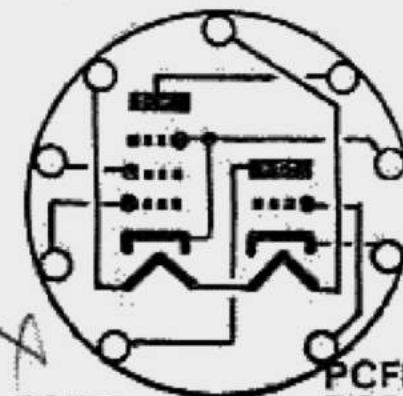


6BQ7  
8BQ7  
9BQ7

351

PCC85  
PCC88  
PCC189

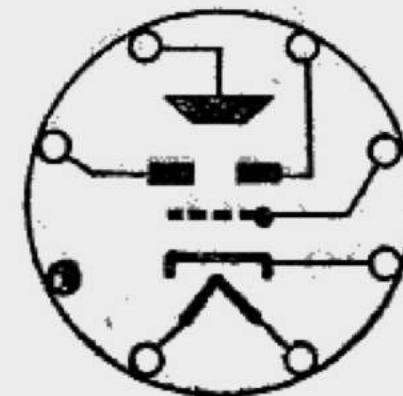
UCC85  
6AT7  
6AQ8  
9AQ8



ECF80  
ECF82  
ECF802  
6U8

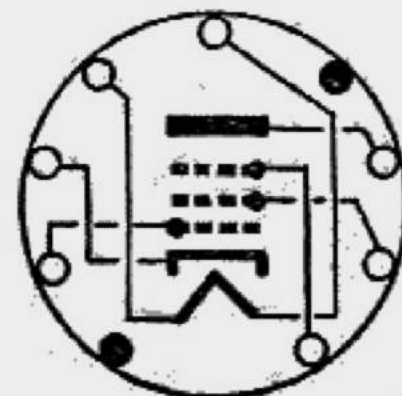
352

PCF80  
PCF82  
PCF802  
8A8  
9A8



UM4

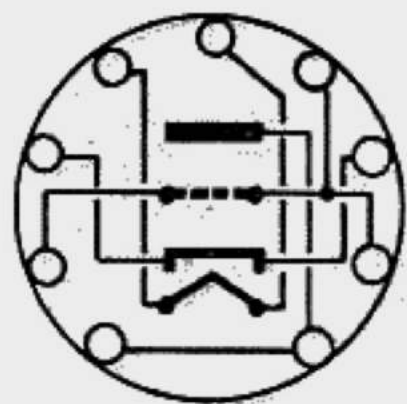
353



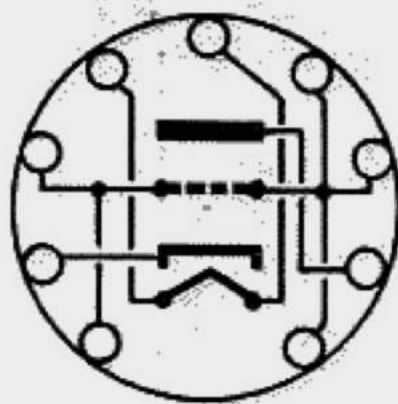
EF89  
6DA6

354

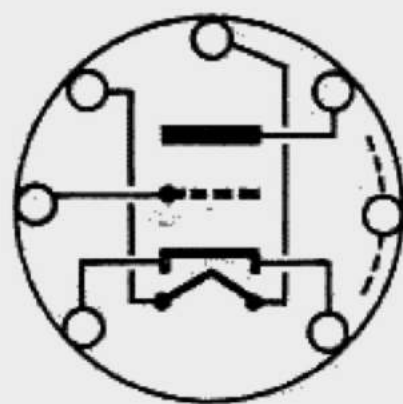




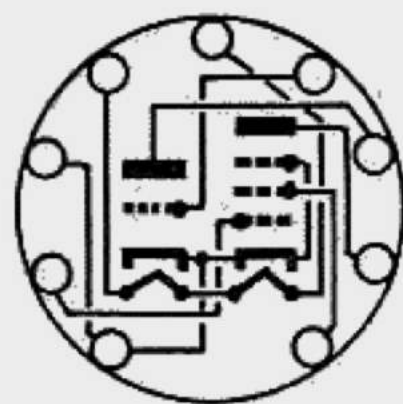
355



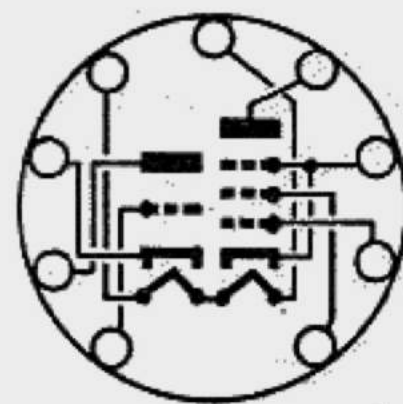
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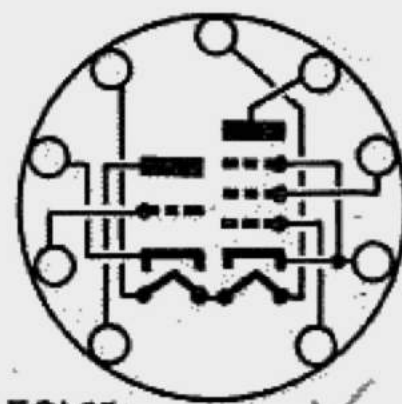
357



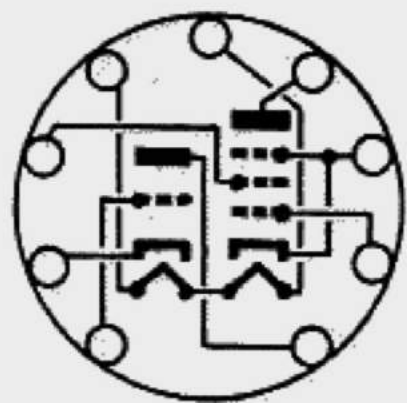
ECF86  
PCF86 358



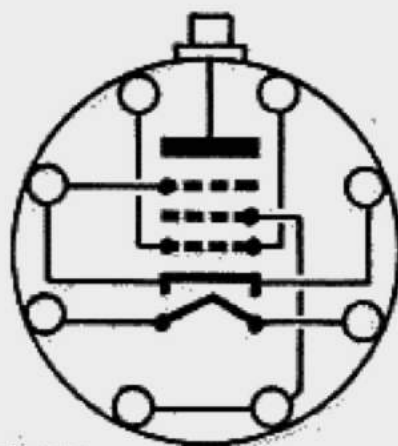
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PCL84 359 X



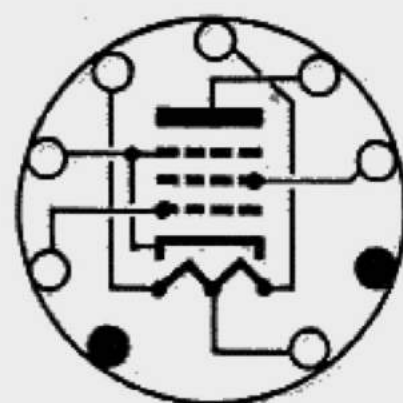
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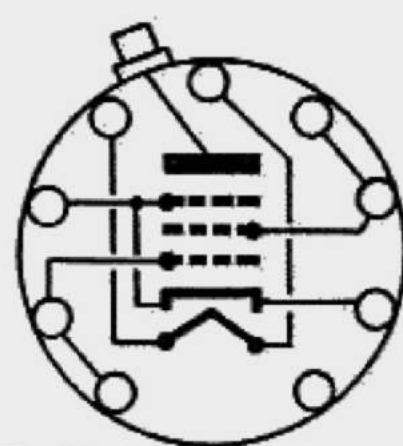
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362 6FN5  
35FN5



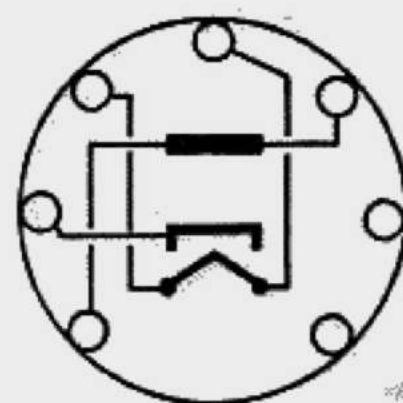
EL183 363



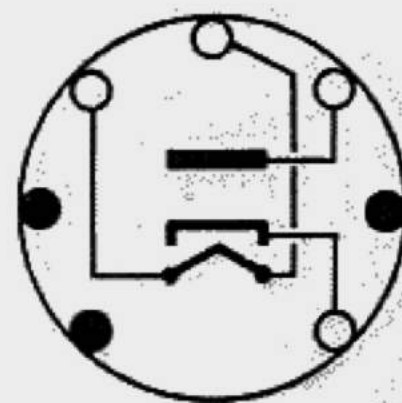
EL500  
EL502  
EL504

364

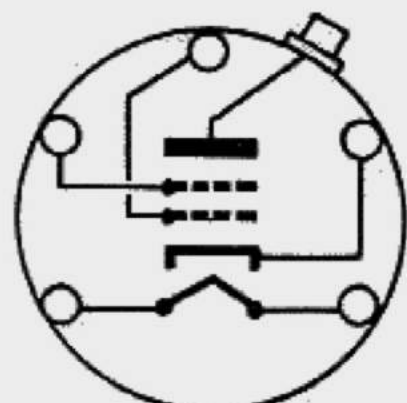
PL504



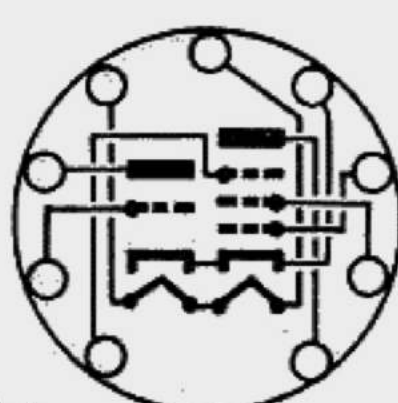
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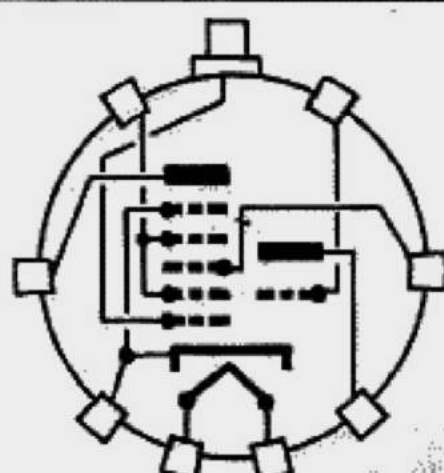
UY92 366



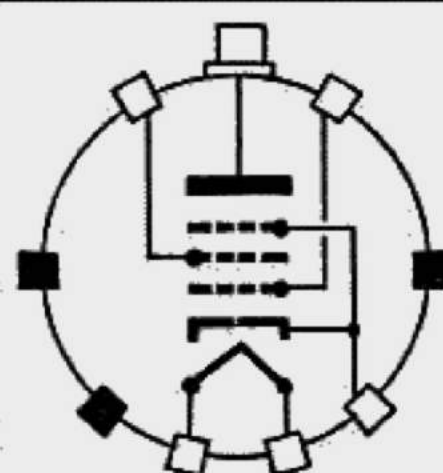
367



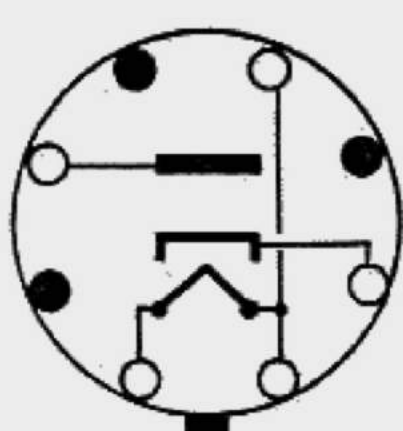
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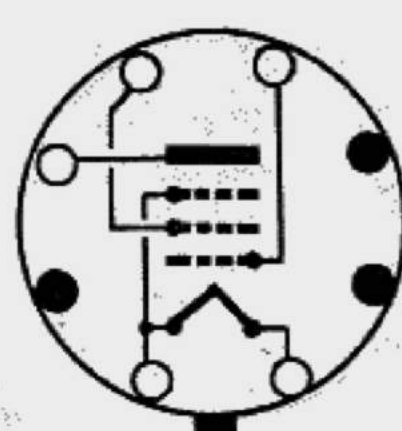
ECH4 369



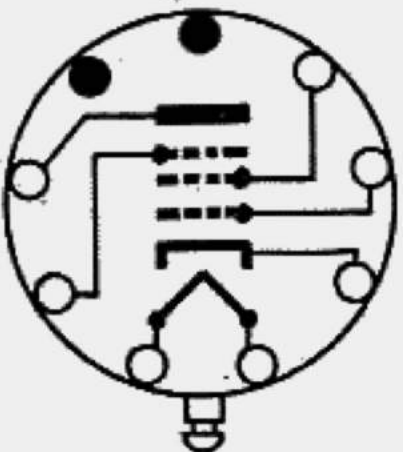
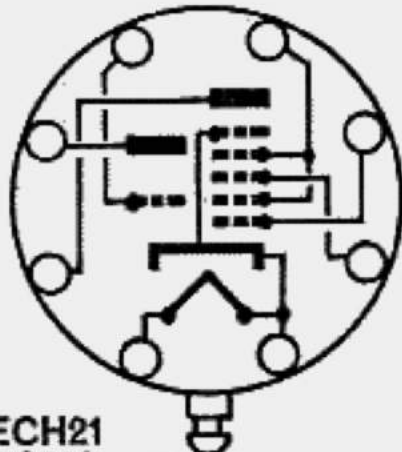
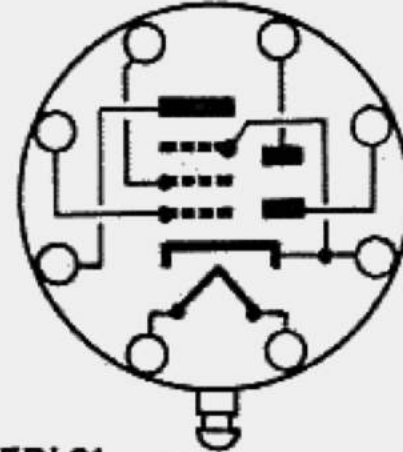
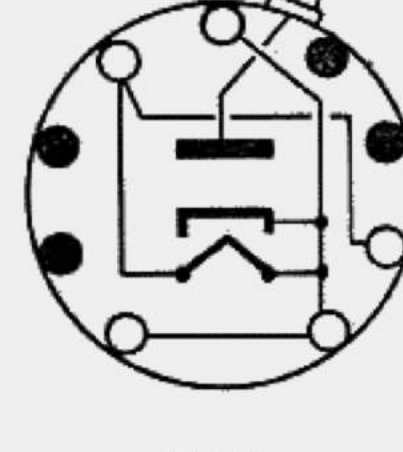
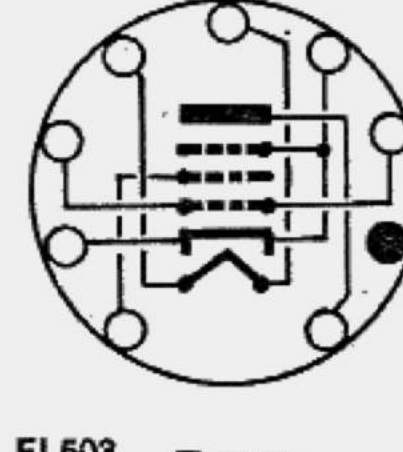
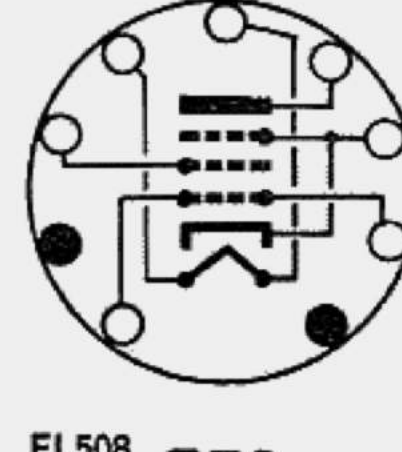
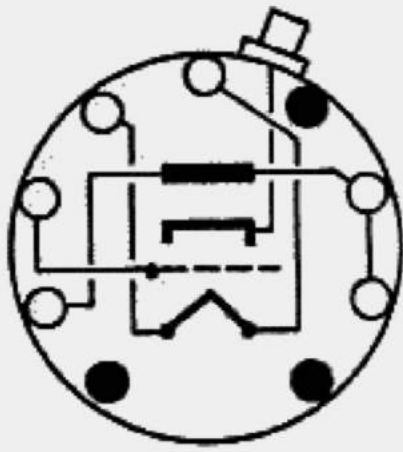
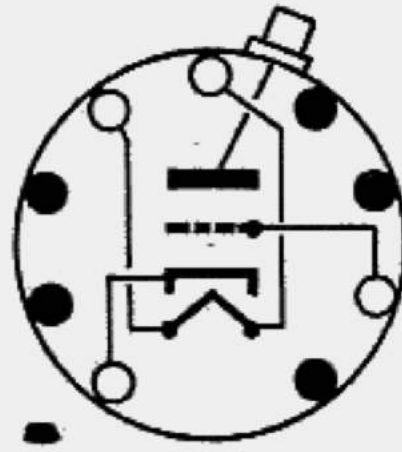
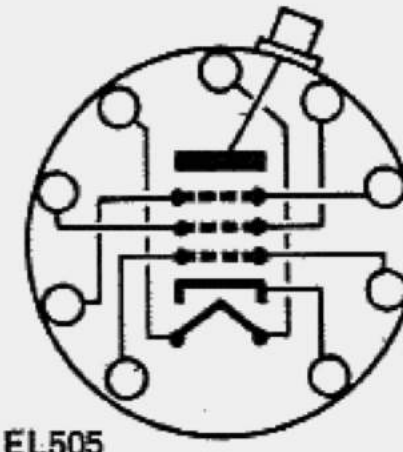
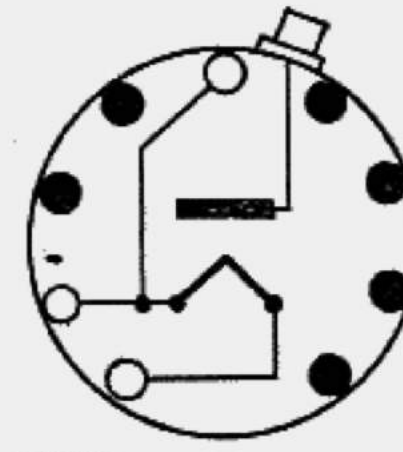
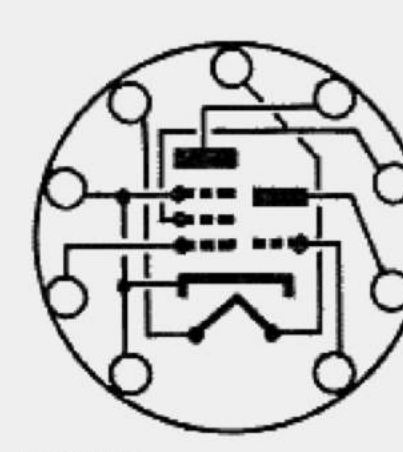
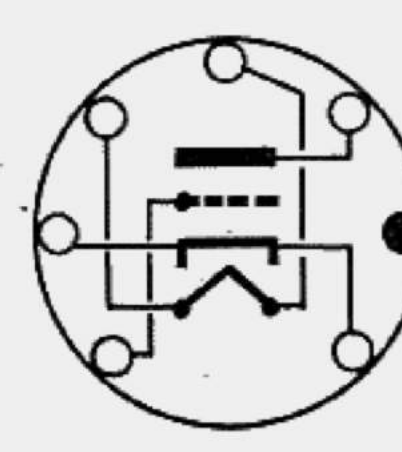
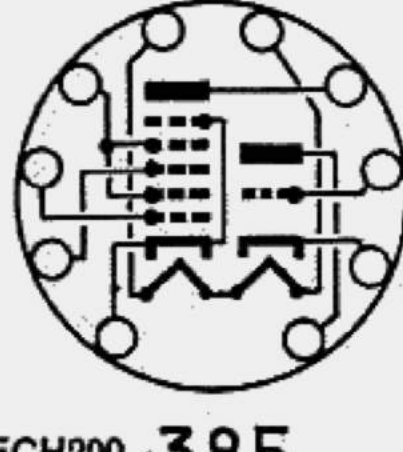
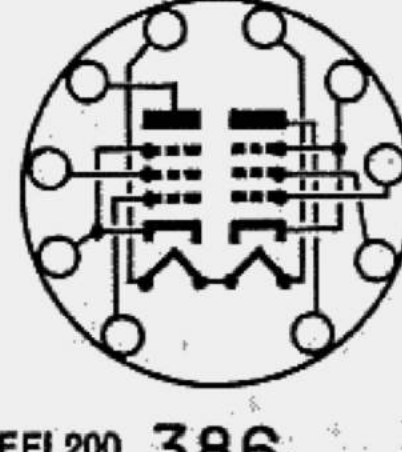
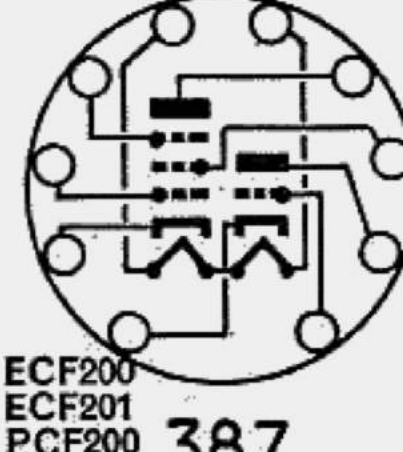
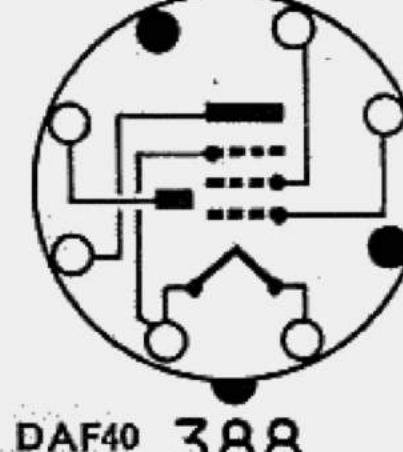
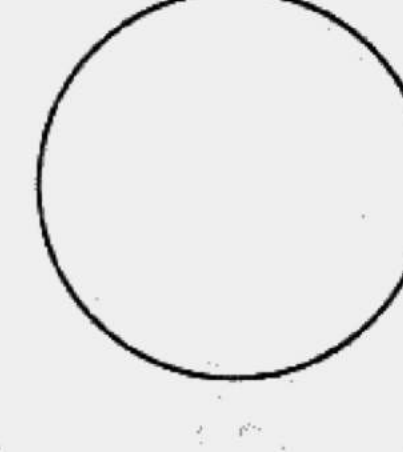
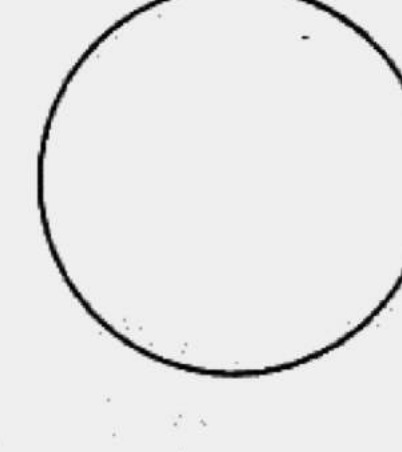
EL51 370



UY1N 371



DL21 372

|                                                                                                                         |                                                                                                                                      |                                                                                                                                                 |                                                                                                                              |                                                                                                                          |                                                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
|  <p>EL60 <b>373</b></p>                |  <p>ECH21<br/>EC900<br/>PC900 <b>374</b> UCH21</p> |  <p>EBL21<br/>UBL21 <b>375</b></p>                           |  <p>GY501 <b>376</b></p>                  |  <p>EL503<br/>EL520 <b>377</b></p>    |  <p>EL508<br/>PL508 <b>378</b></p> |
|  <p>EY500<br/>PY500 <b>379</b></p>    |  <p>ED500<br/>PD500 <b>380</b></p>                |  <p>EL505<br/>EL509<br/>PL509 <b>381</b></p>                |  <p>DY802<br/>EY802 <b>382</b> GY802</p> |  <p>ECF801<br/>PCF801 <b>383</b></p> |  <p><b>384</b></p>                |
|  <p>ECH200<br/>PCH200 <b>385</b></p> |  <p>EFL200<br/>PFL200 <b>386</b></p>             |  <p>ECF200<br/>ECF201<br/>PCF200<br/>PCF201 <b>387</b></p> |  <p>DAF40<br/>DAF41 <b>388</b></p>      |                                     |                                  |