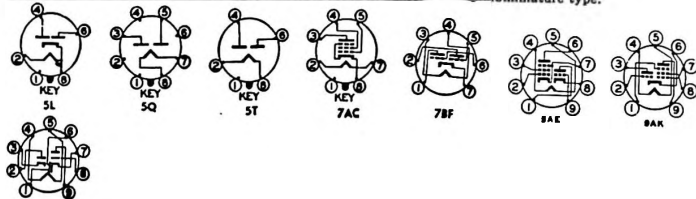


| Tube Type                  | Classification by Construction  | Base Connections | Outline Dwg               | Type Cathode | Filament Volts | Filament Amp | Max Plate Volts                            | Max Screen Volts | Capacitance in Micromicrofarads                                      |                                     |            |
|----------------------------|---------------------------------|------------------|---------------------------|--------------|----------------|--------------|--------------------------------------------|------------------|----------------------------------------------------------------------|-------------------------------------|------------|
|                            |                                 |                  |                           |              |                |              |                                            |                  | Input                                                                | Output                              | Grid-plate |
| 6J8                        | Medium-Mu Twin Triode           | 7BF              | 5-2                       | Htr          | 4.7V           | 0.6V         | 300<br>300                                 | —<br>—           | 2.6<br>1.6<br>1.0 <sub>2</sub>                                       | 1.5<br>(Both Sections in Push-Pull) | 1.5        |
| 5R4-G<br>5R4-GY<br>5R4-WGY | Full-Wave High-Vacuum Rectifier | 5T               | 16-3<br>16-3<br>—         | Fil          | 5.0            | 2.0          | Tube Voltage Drop: ♦<br>67 v at 250 ma d-c |                  |                                                                      |                                     |            |
| 6T4                        | Full-Wave High-Vacuum Rectifier | 5T               | 10-1                      | Fil          | 5.0            | 2.0          | Tube Voltage Drop: ♦<br>45 v at 225 ma d-c |                  |                                                                      |                                     |            |
| 6T8                        | Triple Diode High-Mu Triode     | 9E               | 6-2                       | Htr          | 4.7V           | 0.6V         | 300                                        | —                | 1.6▲                                                                 | 1.0▲                                | 2.2▲       |
| 5U4-G                      | Full-Wave High-Vacuum Rectifier | 5T               | 16-3                      | Fil          | 5.0            | 3.0          | Tube Voltage Drop: ♦<br>44 v at 225 ma d-c |                  |                                                                      |                                     |            |
| 5U4-GA                     | Full-Wave High-Vacuum Rectifier | 5T               | T-X                       | Fil          | 5.0            | 3.0          | Tube Voltage Drop: ♦<br>44 v at 225 ma d-c |                  |                                                                      |                                     |            |
| 5U4-GB                     | Full-Wave High-Vacuum Rectifier | 5T               | T-X                       | Fil          | 5.0            | 3.0          | Tube Voltage Drop: ♦<br>50 v at 275 ma d-c |                  |                                                                      |                                     |            |
| 6U8                        | Triode-Pentode                  | 9AE              | 6-2                       | Htr          | 4.7V           | 0.6V         | 300<br>300                                 | 150<br>—         | Pentode Section<br>Triode Section                                    |                                     |            |
| 5V4-G<br>5V4-GA            | Full-Wave High-Vacuum Rectifier | 5L               | 14-3<br>T-X               | Htr          | 5.0            | 2.0          | Tube Voltage Drop: ♦<br>25 v at 175 ma d-c |                  |                                                                      |                                     |            |
| 5V6-GT                     | Beam Power Amplifier            | 7AC              | 9-11<br>or<br>9-41        | Htr          | 4.7V           | 0.6V         | 315<br>—<br>315                            | 285<br>—<br>—    | Single Tube<br>2 Tubes, Push-Pull<br>Triode Connection (G2 & P tied) |                                     |            |
| 5W4<br>5W4-GT              | Full-Wave High-Vacuum Rectifier | 5T               | 8-6<br>9-13               | Fil          | 5.0            | 1.5          | Tube Voltage Drop: ♦<br>45 v at 100 ma d-c |                  |                                                                      |                                     |            |
| 5X4-G                      | Full-Wave High-Vacuum Rectifier | 5Q               | 16-3                      | Fil          | 5.0            | 3.0          | Tube Voltage Drop: ♦<br>58 v at 225 ma d-c |                  |                                                                      |                                     |            |
| 5X4-GA                     | Full-Wave High-Vacuum Rectifier | 5Q               | T-X                       | Fil          | 5.0            | 3.0          | Tube Voltage Drop: ♦<br>47 v at 250 ma d-c |                  |                                                                      |                                     |            |
| 6X8                        | Triode-Pentode Converter        | 9AK              | 6-2                       | Htr          | 4.7V           | 0.6V         | 250<br>250                                 | 250<br>—         | Pentode Section<br>Triode Section                                    |                                     |            |
| 5Y3-G                      | Full-Wave High-Vacuum Rectifier | 5T               | 14-3                      | Fil          | 5.0            | 2.0          | Tube Voltage Drop: ♦<br>30 v at 125 ma d-c |                  |                                                                      |                                     |            |
| 5Y3-GA<br>5Y3-GT           | Full-Wave High-Vacuum Rectifier | 5T               | T-X<br>9-13<br>or<br>9-42 | Fil          | 5.0            | 2.0          | Tube Voltage Drop: ♦<br>30 v at 125 ma d-c |                  |                                                                      |                                     |            |
| 5Y4-G                      | Full-Wave High-Vacuum Rectifier | 5Q               | 14-3                      | Fil          | 5.0            | 2.0          | Tube Voltage Drop: ♦<br>60 v at 125 ma d-c |                  |                                                                      |                                     |            |

Metal tubes are shown in bold-face type, miniature tubes in *italics*.

Subminiature type.



| Service                                                                                                    | Plate Volts                                                                                                                                               | Screen Volts                           | Ng Grid Volts                                         | Plate Milliamperes                                                                                        | Screen Milliamperes                                                                                        | R <sub>p</sub> Ohms                                                               | G <sub>m</sub> $\mu$ mhos                  | # Factor                         | Load for Rated Output, Ohms                 | Power Output, Watts                | Tube Type                                       |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------|----------------------------------|---------------------------------------------|------------------------------------|-------------------------------------------------|
| Class A Amplifier $\Phi$<br>Class C Amplifier                                                              | 100<br>150                                                                                                                                                | —<br>—                                 | R <sub>k</sub> = 50 $\Omega$<br>10.0                  | 8.5<br>30                                                                                                 | —<br>—                                                                                                     | 7,100 $\Omega$<br>[input Signal = 0.35 watt] $\Phi$<br>[ $\mu$ = 16 ma d-c]       | 5,300<br>—                                 | 38<br>—                          | —<br>—                                      | —<br>3.5 $\frac{1}{2}$             | <b>6J8</b>                                      |
| Full-Wave Rectifier                                                                                        | Max d-c output current = 250 ma; max peak inverse voltage = 2800 volts; rms supply voltage per plate = 750 volts; max peak current per plate = 650 ma     |                                        |                                                       |                                                                                                           |                                                                                                            |                                                                                   |                                            |                                  |                                             |                                    | <b>5R4-G</b><br><b>5R4-GY</b><br><b>5R4-WGY</b> |
| Full-Wave Rectifier                                                                                        | Max d-c output current = 225 ma; max peak inverse voltage = 1550 volts; max rms supply voltage per plate = 450 volts; max peak current per plate = 875 ma |                                        |                                                       |                                                                                                           |                                                                                                            |                                                                                   |                                            |                                  |                                             |                                    | <b>6T4</b>                                      |
| Class A Amplifier                                                                                          | 250<br>100                                                                                                                                                | —<br>—                                 | 3.0<br>1.0                                            | 1.0<br>0.8                                                                                                | —<br>—                                                                                                     | 58,000 $\Omega$<br>54,000 $\Omega$                                                | 1,200<br>1,300                             | 70<br>70                         | —<br>—                                      | —<br>—                             | <b>6T8</b>                                      |
| Full-Wave Rectifier                                                                                        | Max d-c output current = 225 ma; max peak inverse voltage = 1550 volts; rms supply voltage per plate = 450 volts; max peak current per plate = 800 ma     |                                        |                                                       |                                                                                                           |                                                                                                            |                                                                                   |                                            |                                  |                                             |                                    | <b>5U4-G</b>                                    |
| Full-Wave Rectifier                                                                                        | Max d-c output current = 250 ma; max peak inverse voltage = 1550 volts; rms supply voltage per plate = 450 volts; max peak current per plate = 900 ma     |                                        |                                                       |                                                                                                           |                                                                                                            |                                                                                   |                                            |                                  |                                             |                                    | <b>5U4-GA</b>                                   |
| Full-Wave Rectifier                                                                                        | Max d-c output current = 275 ma; max peak inverse voltage = 1550 volts; rms supply voltage per plate = 450 volts; max peak current per plate = 1000 ma    |                                        |                                                       |                                                                                                           |                                                                                                            |                                                                                   |                                            |                                  |                                             |                                    | <b>5U4-GB</b>                                   |
| Class A Amplifier<br>Class A Amplifier                                                                     | 250<br>150                                                                                                                                                | 110<br>—                               | R <sub>k</sub> = 68 $\Omega$<br>R <sub>k</sub> = 56   | 10<br>18                                                                                                  | 3.5<br>—                                                                                                   | 400,000 $\Omega$<br>5,000 $\Omega$                                                | 5,200<br>8,500                             | —<br>40                          | —<br>—                                      | —<br>—                             | <b>6U8</b>                                      |
| Full-Wave Rectifier                                                                                        | Max d-c output current = 175 ma; max peak inverse voltage = 1400 volts; rms supply voltage per plate = 375 volts; max peak current per plate = 525 ma     |                                        |                                                       |                                                                                                           |                                                                                                            |                                                                                   |                                            |                                  |                                             |                                    | <b>5V4-G</b><br><b>5V4-GA</b>                   |
| Class A Amplifier<br>Class A Amplifier<br>Class AB <sub>1</sub> Amplifier<br>Vertical Deflection Amplifier | 315<br>250<br>180<br>285<br>250<br>250                                                                                                                    | 225<br>125<br>180<br>285<br>250<br>250 | 13<br>12.5<br>8.5<br>19<br>15<br>12.5                 | 34 $\frac{1}{2}$<br>45 $\frac{1}{2}$<br>29 $\frac{1}{2}$<br>4.0 $\frac{1}{2}$<br>70 $\frac{1}{2}$<br>49.5 | 2.2 $\frac{1}{2}$<br>4.5 $\frac{1}{2}$<br>3.0 $\frac{1}{2}$<br>4.0 $\frac{1}{2}$<br>5.0 $\frac{1}{2}$<br>— | 80,000 $\Omega$<br>50,000 $\Omega$<br>50,000 $\Omega$<br>—<br>1,980 $\Omega$<br>— | 3,750<br>4,100<br>3,700<br>—<br>5,000<br>— | —<br>—<br>—<br>—<br>8,000<br>9.8 | 8,500<br>5,000<br>5,500<br>—<br>10,000<br>— | 5.5<br>4.5<br>2.0<br>14<br>10<br>— | <b>5V6-GT</b>                                   |
| Full-Wave Rectifier                                                                                        | Max d-c output current = 100 ma; max peak inverse voltage = 1400 volts; max rms supply voltage per plate = 350 volts; max peak current per plate = 300 ma |                                        |                                                       |                                                                                                           |                                                                                                            |                                                                                   |                                            |                                  |                                             |                                    | <b>5W4</b><br><b>5W4-GT</b>                     |
| Full-Wave Rectifier                                                                                        | Max d-c output current = 225 ma; max peak inverse voltage = 1550 volts; max rms supply voltage per plate = 450 volts; max peak current per plate = 875 ma |                                        |                                                       |                                                                                                           |                                                                                                            |                                                                                   |                                            |                                  |                                             |                                    | <b>5X4-G</b>                                    |
| Full-Wave Rectifier                                                                                        | Max d-c output current = 250 ma; max peak inverse voltage = 1550 volts; rms supply voltage per plate = 450 volts; max peak current per plate = 900 ma     |                                        |                                                       |                                                                                                           |                                                                                                            |                                                                                   |                                            |                                  |                                             |                                    | <b>5X4-GA</b>                                   |
| Class A Amplifier<br>Class A Amplifier                                                                     | 250<br>100                                                                                                                                                | 150<br>—                               | R <sub>k</sub> = 200 $\Omega$<br>R <sub>k</sub> = 100 | 7.7<br>8.5                                                                                                | 1.6<br>—                                                                                                   | 750,000 $\Omega$<br>6,900 $\Omega$                                                | 4,600<br>5,800                             | —<br>40                          | —<br>—                                      | —<br>—                             | <b>5X8</b>                                      |
| Full-Wave Rectifier                                                                                        | Max d-c output current = 125 ma; max peak inverse voltage = 1400 volts; max rms supply voltage per plate = 350 volts; max peak current per plate = 375 ma |                                        |                                                       |                                                                                                           |                                                                                                            |                                                                                   |                                            |                                  |                                             |                                    | <b>5Y3-G</b>                                    |
| Full-Wave Rectifier                                                                                        | Max d-c output current = 125 ma; max peak inverse voltage = 1400 volts; rms supply voltage per plate = 350 volts; max peak current per plate = 400 ma     |                                        |                                                       |                                                                                                           |                                                                                                            |                                                                                   |                                            |                                  |                                             |                                    | <b>5Y3-GA</b><br><b>5Y3-GT</b>                  |
| Full-Wave Rectifier                                                                                        | Max d-c output current = 125 ma; max peak inverse voltage = 1400 volts; rms supply voltage per plate = 350 volts; max peak current per plate = 375 ma     |                                        |                                                       |                                                                                                           |                                                                                                            |                                                                                   |                                            |                                  |                                             |                                    | <b>5Y4-G</b>                                    |

§ Approximate.

▲ Without external shield.

† Zero signal.

‡ Grids 3 and 5 are screen. Grid 4 is signal.

§ Grid input grid.

# Conversion transconductance.

▲ Maximum.

♥ Grids 2 and 4 are screen. Grid 3 is signal.

‡ Screen supply voltage.

§ Absolute maximum rating.

† Plate-to-plate.

‡ Per section.

§ For both sections.

\* Minimum.

† Heater warm-up time controlled for series-string service.

‡ Plate supply voltage.

§ Input plate.

♥ The duration of the pulse voltage must not exceed 15 percent of one scanning cycle.

‡ Section 1.

§ Section 2.

† A resistor of 3 ohms must be put in series with heater.