

| 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                                          | Out-put | Grid-plate |
| 6U8           | Triode-Pentode                   | 9AE              | 6-2                | Htr          | 6.3            | 0.45         | 300                                       | 150              | Pentode Section                                |         |            |
|               |                                  |                  |                    |              |                |              | 300                                       | —                | Triode Section                                 |         |            |
| 6V5<br>6V5-A  | Half-Wave High-Vacuum Rectifier  | 9BD              | 6-7<br>T-X         | Htr          | 6.3            | 1.75         | Tube Voltage Drop:<br>19 v at 250 ma d-c  |                  |                                                |         |            |
| 6V4           | Full-Wave High-Vacuum Rectifier  | 9M               | 6-4                | Htr          | 6.3            | 0.6          | Tube Voltage Drop: ♦<br>20 v at 45 ma d-c |                  |                                                |         |            |
| 6V5-GT        | Beam Power Amplifier             | 6AO              | 9-11               | Htr          | 6.3            | 0.45         | 315                                       | 285              | —                                              | —       | —          |
| 6V6           | Beam Power Amplifier             | 7AC              | 8-6                | Htr          | 6.3            | 0.45         | 315                                       | 285              | Single Tube                                    |         |            |
|               |                                  |                  |                    |              |                |              |                                           |                  | 2 Tubes, Push-pull                             |         |            |
| 6V6-GT        | Beam Power Amplifier             | 7AC              | 9-11<br>or<br>9-41 | Htr          | 6.3            | 0.45         | 315                                       | 285              | Single Tube                                    |         |            |
|               |                                  |                  |                    |              |                |              | —                                         | —                | 2 Tubes, Push-Pull                             |         |            |
|               |                                  |                  |                    |              |                |              | 315                                       | —                | Triode Connection<br>(G <sub>1</sub> & P tied) |         |            |
| 6V7-G         | Duplex-Diode Medium-Mu Triode    | 7V               | 12-8               | Htr          | 6.3            | 0.3          | 250                                       | —                | 2.0                                            | 3.5     | 1.7        |
| 6V8           | Triple-Diode, High-Mu Triode     | 9AH              | 6-2                | Htr          | 6.3            | 0.45         | 300                                       | —                | —                                              | —       | —          |
| 6W2           | Half-Wave High-Voltage Rectifier | 6X2              | T-X                | Htr          | 6.3            | 0.08         | —                                         | —                | —                                              | —       | —          |
| 6W4-GT        | Half-Wave High-Vacuum Rectifier  | 4CG              | 9-11<br>or<br>9-41 | Htr          | 6.3            | 1.2          | Tube Voltage Drop:<br>21 v at 250 ma d-c  |                  |                                                |         |            |
| 6W5-G         | Full-Wave High-Vacuum Rectifier  | 6S               | 12-7               | Htr          | 6.3            | 0.9          | Tube Voltage Drop: ♦<br>24 v at 90 ma d-c |                  |                                                |         |            |
| 6W6-GT        | Beam Power Amplifier             | 7AC              | 9-11<br>or<br>9-41 | Htr          | 6.3            | 1.2          | 300                                       | 150              | Pentode Connection                             |         |            |
|               |                                  |                  |                    |              |                |              | 300                                       | —                | Triode Connection<br>(G <sub>1</sub> & P tied) |         |            |
| 6W7-G         | Sharp-Cutoff Pentode             | 7R               | 12-8               | Htr          | 6.3            | 0.15         | 300                                       | 300              | 5.0                                            | 8.5     | 0.007      |
| 6X2           | Half-Wave High-Voltage Rectifier | 6X2              | T-X                | Htr          | 6.3            | 0.09         | —                                         | —                | —                                              | —       | ♦          |
| 6X4           | Full-Wave High-Vacuum Rectifier  | 5BS              | 5-3                | Htr          | 6.3            | 0.6          | Tube Voltage Drop: ♦<br>22 v at 70 ma d-c |                  |                                                |         |            |
| 6X5<br>6X5-GT | Full-Wave High-Vacuum Rectifier  | 6S               | 8-6<br>9-11        | Htr          | 6.3            | 0.6          | Tube Voltage Drop: ♦<br>22 v at 70 ma d-c |                  |                                                |         |            |

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

| Service                                                                                                                | Plate<br>Volts                                                                                                                                              | Screen<br>Volts | Neg<br>Grid<br>Volts           | Plate<br>Milli-<br>amperes | Screen<br>Milli-<br>amperes | R <sub>p</sub> ,<br>Ohms           | G <sub>m</sub> ,<br>μmbos | μ-<br>fac-<br>tor | Load<br>or<br>Rated<br>Out-<br>put,<br>Ohms | Power<br>Out-<br>put,<br>Watts | Tube<br>Type  |
|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------------|----------------------------|-----------------------------|------------------------------------|---------------------------|-------------------|---------------------------------------------|--------------------------------|---------------|
| Class A<br>Amplifier                                                                                                   | 250                                                                                                                                                         | 110             | R <sub>k</sub> =<br>68         | 10                         | 3.5                         | 400,000 $\Omega$                   | 5,200                     | —                 | —                                           | —                              | 6V8           |
| Class A<br>Amplifier                                                                                                   | 150                                                                                                                                                         | —               | R <sub>k</sub> =<br>56         | 18                         | —                           | 5,000 $\Omega$                     | 8,500                     | 40                | —                                           | —                              |               |
| TV Damp-<br>er Service                                                                                                 | Max d-c output current = 135 ma; max peak inverse voltage @ = 8000 volts;<br>max peak current = 800 ma                                                      |                 |                                |                            |                             |                                    |                           |                   |                                             |                                | 6V9<br>6V5-A  |
| Full-Wave<br>Rectifier                                                                                                 | Max d-c output current = 90 ma; rms supply voltage per plate = 350 volts                                                                                    |                 |                                |                            |                             |                                    |                           |                   |                                             |                                | 6V4           |
| Class A<br>Amplifier                                                                                                   | 315<br>250                                                                                                                                                  | 225<br>130      | 13<br>12.5                     | 34†<br>45†                 | 2.2†<br>4.5†                | 77,000 $\Omega$<br>52,000 $\Omega$ | 3,750<br>4,100            | —                 | 8,500<br>5,000                              | 5.5<br>4.5                     | 6V5-GT        |
| Class A<br>Amplifier                                                                                                   | 315<br>250                                                                                                                                                  | 225<br>180      | 13<br>8.5                      | 34†<br>29†                 | 2.2†<br>3†                  | 80,000 $\Omega$<br>50,000 $\Omega$ | 3,750<br>3,700            | —                 | 8,500<br>5,500                              | 5.5<br>4.5                     | 6V6           |
| Class AB <sub>1</sub><br>Amplifier                                                                                     | 285<br>250                                                                                                                                                  | 285<br>250      | 19<br>15                       | 70†<br>70†                 | 4†<br>5.0†                  | 70,000 $\Omega$<br>80,000 $\Omega$ | 3,600<br>3,750            | —                 | 800†<br>1000†                               | 2.0<br>2.0                     |               |
| Class A<br>Amplifier                                                                                                   | 315<br>250                                                                                                                                                  | 225<br>250      | 13<br>12.5                     | 34†<br>45†                 | 2.2†<br>4.5†                | 80,000 $\Omega$<br>50,000 $\Omega$ | 3,750<br>3,700            | —                 | 8,500<br>5,000                              | 5.5<br>4.5                     | 6V6-GT        |
| Class AB <sub>1</sub><br>Amplifier                                                                                     | 180<br>250                                                                                                                                                  | 180<br>250      | 8.5<br>15                      | 29†<br>70†                 | 3†<br>5.0†                  | 50,000 $\Omega$<br>—               | 3,700<br>—                | —                 | 5,500<br>8,000                              | 2.0<br>1.4                     |               |
| Vertical<br>Deflection<br>Amplifier                                                                                    | 285<br>250                                                                                                                                                  | 285<br>250      | 19<br>15                       | 70†<br>70†                 | 4†<br>5.0†                  | —<br>1,960 $\Omega$                | —<br>5,000                | —<br>9.8          | —<br>1000†                                  | —<br>10                        |               |
| Max positive pulse plate voltage @ = 1200 volts; max plate dissipation = 9<br>watts; max d-c cathode current = 35 ma   |                                                                                                                                                             |                 |                                |                            |                             |                                    |                           |                   |                                             |                                |               |
| Class A<br>Amplifier                                                                                                   | 250                                                                                                                                                         | —               | 20                             | 8.0                        | —                           | 7,500                              | 1,100                     | 8.3               | 20,000                                      | 0.350                          | 6V7-G         |
| Class A<br>Amplifier                                                                                                   | 250<br>100                                                                                                                                                  | —               | 3.0<br>1.0                     | 1.0<br>0.8                 | —                           | 58,000 $\Omega$<br>54,000 $\Omega$ | 1,200<br>1,300            | 70                | —                                           | —                              | 6V8           |
| TV Flyback<br>Rectifier                                                                                                | Max d-c output current = 0.5 ma; max peak inverse voltage @ = 25,000 volts                                                                                  |                 |                                |                            |                             |                                    |                           |                   |                                             |                                | 6W2           |
| TV Damp-<br>er Service                                                                                                 | Max d-c output current = 125 ma; max peak inverse voltage @ = 3850 volts;<br>max peak current = 750 ma                                                      |                 |                                |                            |                             |                                    |                           |                   |                                             |                                | 6W4-GT        |
| Full-Wave<br>Rectifier                                                                                                 | Max d-c output current = 90 ma; max peak inverse voltage = 1250 volts; max<br>rms supply voltage per plate = 325 volts; max peak current per plate = 270 ma |                 |                                |                            |                             |                                    |                           |                   |                                             |                                | 6W5-G         |
| Class A<br>Amplifier                                                                                                   | 200<br>110                                                                                                                                                  | 125<br>110      | R <sub>k</sub> =<br>180<br>7.5 | 46†<br>49†                 | 2.2†<br>4.0†                | 28,000 $\Omega$<br>13,000 $\Omega$ | 8,000<br>8,000            | —                 | 4,000<br>2,000                              | 3.8<br>2.1                     | 6W6-GT        |
| Vertical<br>Deflection<br>Amplifier                                                                                    | 225                                                                                                                                                         | 30              | 22                             | 3†                         | —                           | 1,000 $\Omega$                     | 3,800                     | 6.2               | —                                           | —                              |               |
| Max positive pulse plate voltage @ = 1200 volts; max plate dissipation = 7.5<br>watts; max d-c cathode current = 40 ma |                                                                                                                                                             |                 |                                |                            |                             |                                    |                           |                   |                                             |                                | 6W7-G         |
| Class A<br>Amplifier                                                                                                   | 250                                                                                                                                                         | 100             | 3.9                            | 2.9                        | 0.5                         | 1,500,000 $\Omega$                 | 1,225                     | —                 | —                                           | —                              |               |
| TV Flyback<br>Rectifier                                                                                                | Max d-c output current = 0.2 ma; max peak inverse voltage = 17,000 volts;<br>max peak current = 80 ma                                                       |                 |                                |                            |                             |                                    |                           |                   |                                             |                                | 6X2           |
| Full-Wave<br>Rectifier                                                                                                 | Max d-c output current = 70 ma; max peak inverse voltage = 1250 volts; rms<br>supply voltage per plate = 325 volts; max peak current per plate = 210 ma     |                 |                                |                            |                             |                                    |                           |                   |                                             |                                | 6X4           |
| Full-Wave<br>Rectifier                                                                                                 | Max d-c output current = 70 ma; max peak inverse voltage = 1250 volts; rms<br>supply voltage per plate = 325 volts; max peak current per plate = 210 ma     |                 |                                |                            |                             |                                    |                           |                   |                                             |                                | 6X5<br>6X5-GT |

### 1. Approximate

▲ Without external shield.

+ Zero signal.

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

input grid.

# Conversion transconductance

♣Maximum: \_\_\_\_\_

♥Grids 2 and 4 are screen

▼ Grids 2 and 4 are derived from the input grid.

✚ Screen supply voltage.

☐ Absolute ma

Ⓐ For both sections.

\* Minimum.

† Heater warm-up time controlled for

#### 4 Heater warm-up & accessories-string service

• Plate supply voltage

|| Input plate.

—The dura

not exceed

not exceed 15 percent of one scanning cycle.