

RADIOTRON

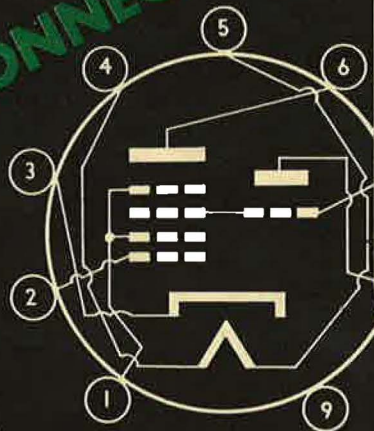
RECEIVING VALVE MANUAL

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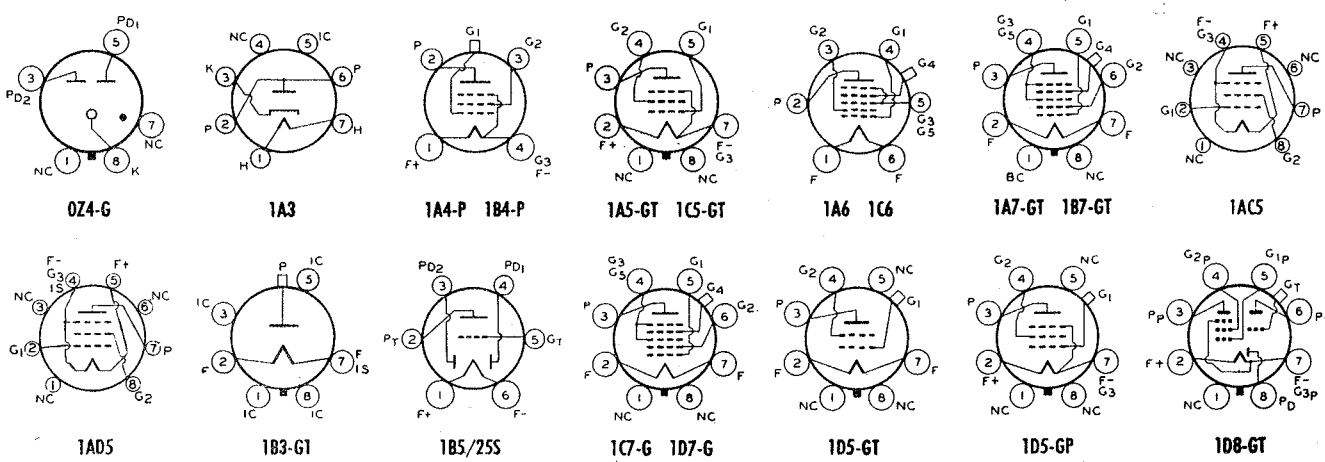
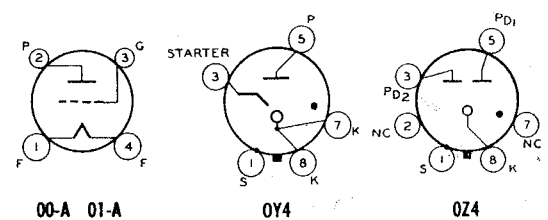
RADIOTRON RECEIVING VALVE MANUAL

RCA RANGE

| Type | Name | Tube Dimensions | Cathode Type and Rating | | Use <small>Values to right give operating conditions and characteristics for indicated typical use</small> | Plate Supply Volts | Grid Bias Volts | Screen Supply Volts | Screen Current Ma. | Plate Current Ma. | AC Plate Resistance Ohms | Trans-conductance (Grid-plate) μ mhos | Amplification Factor | Load for Stated Power Output Ohms | Power Output Watts | Type |
|---------|--------------------------------------|-----------------|-------------------------|-----------------|---|--|---------------------|-----------------------------|----------------------|---------------------|--|--|----------------------|-----------------------------------|--------------------|---------|
| | | | C.T. | Volts | | | | | | | | | | | | |
| 00-A | Detector Triode | D12 | D.C. F | 5.0 0.25 | Grid-Leak Detector | 45 | | Grid Return to (-) Filament | 1.5 | 30000 | 666 | 20 | | | 00-A | |
| 01-A | Detector Amplifier | D12 | D.C. F | 5.0 0.25 | Class A Amplifier | 90 135 | - 4.5 - 9.0 | | 2.5 3.0 | 11000 10000 | 725 800 | 8.0 8.0 | | | 01-A | |
| 0Y4 | Half-Wave Gas Rectifier | B2 | | Cold | Rectifier | Max. Peak Inverse Plate Volts, 300 Max. D.C. Starting Volts, 95 | | | | | Max. Peak Plate Current, 500 ma. Max. D.C. Output Current, 75 ma. | | | | 0Y4 | |
| 0Z4 | Full-Wave Gas Rectifier | B2 | | Cold | Rectifier | Starting-Supply Voltage per Plate, 300 min. peak volts. Peak Plate Current, 200 max. ma. D.C. Output Current, 75 max. ma. D.C. Output Voltage, 300 max. volts. | | | | | | | | | 0Z4 | |
| 0Z4-G | Full-Wave Gas Rectifier | B1a | | Cold | Rectifier | | | | | | | | | | 0Z4-G | |
| 1A3 | HF Diode | B0 | | H 1.4 0.15 | Detector Rectifier | Max. Peak Inverse Volts, 330 Max. Peak Plate Ma., 5 | | | | | Max. D.C. Output Ma., 0.5 Max. Peak Heater-Cathode Volts, 140 | | | | 1A3 | |
| 1A4-P | Remote-Cutoff Pentode | D9 | | D.C. F 2.0 0.06 | Amplifier | For other characteristics, refer to Type 1D5-GP. | | | | | | | | | | 1A4-P |
| 1A5-GT | Power Amplifier Pentode | C3 | | D.C. F 1.4 0.05 | Class A Amplifier | 85 90 | - 4.5 - 4.5 | 85 90 | 0.7 0.8 | 3.5 4.0 | 300000 300000 | 800 850 | | 25000 25000 | 0.100 0.115 | 1A5-GT |
| 1A6 | Pentagrid Converter | D9 | | D.C. F 2.0 0.06 | Converter | 135 180 | { - 3.0 min. } | 67.5 67.5 | 2.5 2.4 | 1.2 1.3 | 400000 500000 | Anode-Grid (#2): 180 max. volts, 2.3 ma. Oscillator-Grid (#1) Resistor \bullet . Conversion Transcond., 300 micromhos. | | | 1A6 | |
| 1A7-GT | Pentagrid Converter | C3 | | D.C. F 1.4 0.05 | Converter | 90 | 0 | 45 \ddagger | 0.7 | 0.6 | 600000 | Anode-Grid (#2): 90 max. volts, 1.2 ma. Oscillator-Grid (#1) Resistor, 0.2 meg. Conversion Transcond., 250 micromhos. | | | 1A7-GT | |
| 1AC5 | Power Pentode | A | | F 1.25 0.04 | Class A Amplifier | 30 45 67.5 | - 2 - 3 - 4.5 | 30 45 67.5 | 0.1 0.2 0.4 | 0.5 1.0 2.0 | 200000 170000 150000 | 450 600 750 | | 50000 40000 25000 | 5 15 50 | 1AC5 |
| 1AD5 | Sharp-Cutoff Pentode | A | | F 1.25 0.04 | Class A Amplifier | 30 45 67.5 | 0 0 0 | 30 45 67.5 | 0.16 0.35 0.75 | 0.45 0.9 1.85 | 700000 700000 700000 | 430 580 735 | | | | 1AD5 |
| 1B3-GT | Half-Wave Rectifier | D2 | | F 1.25 0.2 | Half-Wave Rectifier | Max. Peak Inverse Plate Volts, 30000 Max. Peak Plate Ma., 17 | | | | | | Max. Average Plate Ma., 2 Max. Frequency of Supply Voltage, 300 Kc | | | 1B3-GT | |
| 1B4-P | RF Amplifier Pentode | D9 | | D.C. F 2.0 0.06 | Amplifier | For other characteristics, refer to Type 1E5-GP. | | | | | | | | | | 1B4-P |
| 1B5/25S | Duplex-Diode Triode | D6 | | D.C. F 2.0 0.06 | Triode Unit as Amplifier | For other characteristics, refer to Type 1H6-G. | | | | | | | | | | 1B5/25S |
| 1B7-GT | Pentagrid Converter | C3 | | D.C. F 1.4 0.10 | Converter | 90 | 0 | 45 \ddagger | 1.3 | 1.5 | 350000 | Anode-Grid (#2): 90 max. volts, 1.6 ma. Oscillator-Grid (#1) Resistor \bullet . Conversion Transcond., 350 micromhos. | | | 1B7-GT | |
| 1C5-GT | Power Amplifier Pentode | C2b | | D.C. F 1.4 0.10 | Class A Amplifier | 83 90 | - 7.0 - 7.5 | 83 90 | 1.6 1.6 | 7.0 7.5 | 110000 115000 | 1500 1550 | | 9000 8000 | 0.20 0.24 | 1C5-GT |
| 1C6 | Pentagrid Converter | D9 | | D.C. F 2.0 0.12 | Converter | For other characteristics, refer to Type 1C7-G. | | | | | | | | | | 1C6 |
| 1C7-G | Pentagrid Converter | D8 | | D.C. F 2.0 0.12 | Converter | 135 180 | - 3.0 - 3.0 | 67.5 67.5 | 2.5 2.0 | 1.3 1.5 | 600000 700000 | Anode-Grid (#2): 180 max. volts, 4.0 ma. Oscillator-Grid (#1) Resistor \bullet . Conversion Transcond., 325 micromhos. | | | 1C7-G | |
| 1D5-GP | Remote-Cutoff Pentode | D8 | | D.C. F 2.0 0.06 | Class A Amplifier | 90 180 | { - 3.0 min. } | 67.5 67.5 | 0.9 0.8 | 2.2 2.3 | 600000 1.0 \S | 720 750 | | | 1D5-GP | |
| 1D5-GT | Remote-Cutoff Tetrode | D8 | | D.C. F 2.0 0.06 | Class A Amplifier | 180 | - 3.0 | 67.5 | 0.7 | 2.2 | 600000 | 650 | | | 1D5-GT | |
| 1D7-G | Pentagrid Converter | D8 | | D.C. F 2.0 0.06 | Converter | For other characteristics, refer to Type 1A6. | | | | | | | | | | 1D7-G |
| 1D8-GT | Diode-Triode-Power Amplifier Pentode | C2b | | D.C. F 1.4 0.10 | Pentode Unit as Class A Amplifier Triode Unit as Class A Amplifier | 45 90 | - 4.5 - 9.0 | 45 90 | 0.3 1.0 | 1.6 5.0 | 300000 200000 | 650 925 | | 20000 12000 | 0.035 0.200 | 1D8-GT |

Four vertical rules before or after type No. = Subminiature type.
 Three vertical rules before or after type No. = Miniature type having either 7 or 9 pins.
 Two vertical rules before or after type No. = Metal type.
 One vertical rule before or after type No. = GT or other larger glass type.
 Light Face = Discontinued type.
 For key to tube dimensions and, legend for base and envelope connection diagrams, see page 23.
 ★ For Grid-leak Detection—plate volts 45, grid return to + filament or to cathode.
 ◻ Grids #3 and #5 are screen. Grid No. 4 is signal-input grid.

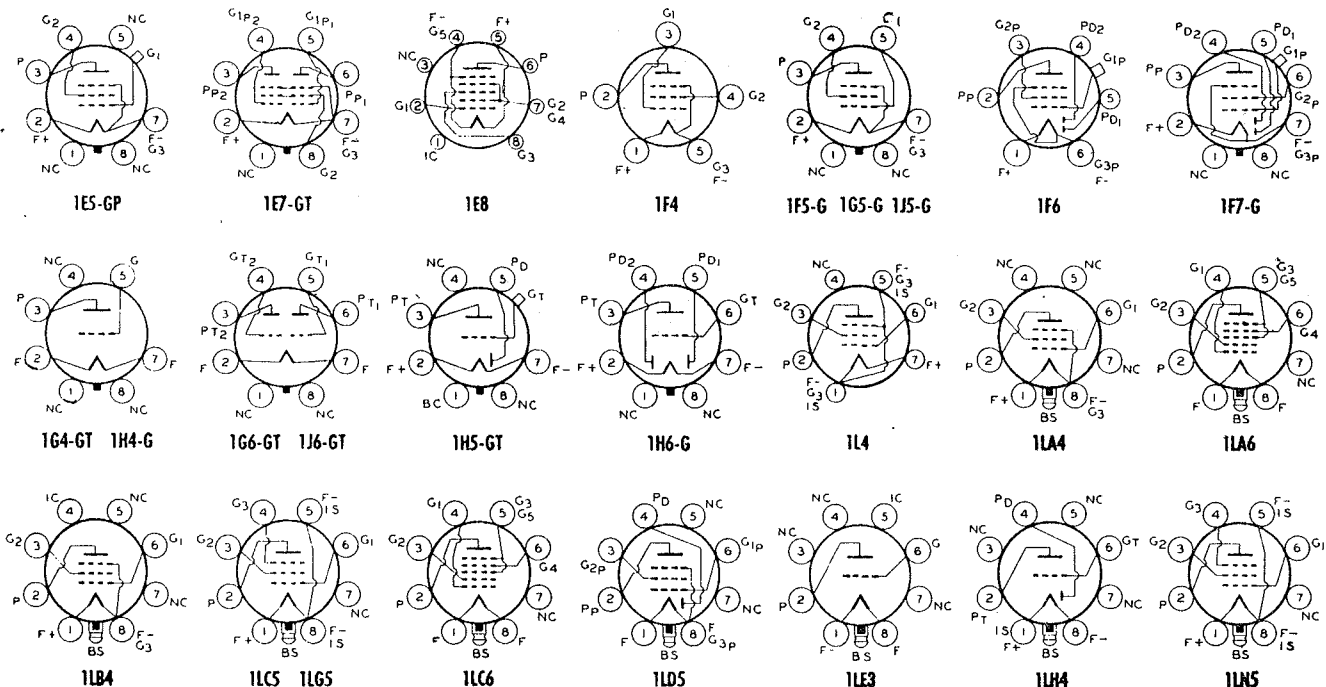
† Power output is for two tubes at stated plate-to-plate load.
 ▲ Grids #2 and #4 are screen. Grid #3 is signal-input control grid.
 † For two tubes.
 • 50000 ohms.
 § Megohms.
 † Obtained preferably by using 70000-ohm voltage-dropping resistor in series with 90-volt supply.
 ** For grid of following tube.
 † Applied through plate resistor of 250000 ohms.
 † Either ac or dc may be used on filament or heater, except as specifically noted. For use of dc on ac filament types, decrease stated grid volts by 1/2 (approx.) of filament voltage.



1E5-GP to 1LN5

| Type | Name | Tube Dimensions | Cathode Type and Rating | | Use Values to right give operating conditions and characteristics for indicated typical use | Plate Supply Volts | Grid Bias Volts | Screen Supply Volts | Screen Current Ma | Plate Current Ma | AC Plate Resistance Ohms | Transconductance (Grid-plate) μ mhos | Amplification Factor | Load for Stated Power Output Ohms | Power Output Watts | Type |
|--------|------------------------------|-----------------|-------------------------|-----------|--|---------------------|--------------------------|---------------------|-------------------|-------------------|----------------------------|--|----------------------|-----------------------------------|--------------------|--------|
| | | | C.T. | Volts | | | | | | | | | | | | |
| 1E5-GP | RF Amplifier Pentode | D8 | D.C. F | 2.0 0.06 | Class A Amplifier | 90 180 | - 3.0 - 3.0 | 67.5 67.5 | 0.7 0.6 | 1.6 1.7 | 1.0 Ω 1.3 | 600 650 | | | | 1E5-GP |
| 1E7-GT | Twin-Pentode Power Amplifier | C2b | D.C. F | 2.0 0.24 | Class A Amplifier | 135 | - 7.5 | 135 | | | | | | 24000 | 0.575 | 1E7-GT |
| 1E8 | Pentagrid Converter | A | F | 1.25 0.04 | Converter | 30 45 67.5 | 0 0 0 | 30 45 67.5 | 0.8 1.1 1.5 | 0.3 0.6 1.0 | 300000 400000 400000 | | | | | 1E8 |
| 1F4 | Power Amplifier Pentode | D12 | D.C. F | 2.0 0.12 | Amplifier | | | | | | | | | | | 1F4 |
| 1F5-G | Power Amplifier Pentode | D10 | D.C. F | 2.0 0.12 | Class A Amplifier | 90 135 | - 3.0 - 4.5 | 90 135 | 1.1 2.4 | 4.0 8.0 | 240000 200000 | 1400 1700 | | 20000 16000 | 0.11 0.31 | 1F5-G |
| 1F6 | Duplex-Diode Pentode | D8 | D.C. F | 2.0 0.06 | Pentode Unit as Amplifier | | | | | | | | | | | 1F6 |
| 1F7-G | Duplex-Diode Pentode | D8 | D.C. F | 2.0 0.06 | Pentode Unit as RF Amplifier Pentode Unit as AF Amplifier | 180 135 \times | - 1.5 - 2.0 | 67.5 | 0.7 | 2.2 | 1.0 Ω | 650 | | | | 1F7-G |
| 1G4-GT | Medium-Mu Triode | C4 | D.C. F | 1.4 0.05 | Class A Amplifier | 90 | - 6.0 | | | 2.3 | 10700 | 825 | 8.8 | | | 1G4-GT |
| 1G5-G | Power Amplifier Pentode | D10 | D.C. F | 2.0 0.12 | Class A Amplifier | 90 135 | - 6.0 - 13.5 | 90 135 | 2.5 2.5 | 8.5 8.7 | 133000 160000 | 1500 1550 | | 8500 9000 | 0.25 0.55 | 1G5-G |
| 1G6-GT | Twin-Triode Amplifier | C4 | D.C. F | 1.4 0.10 | Class B Amplifier | 90 | 0 | | | | | | | 12000 | 0.350 | 1G6-GT |
| 1H4-G | Detector Amplifier | D3 | D.C. F | 2.0 0.06 | Class A Amplifier Class B Amplifier | 90 135 180 | - 4.5 - 9.0 - 13.5 | | | | 11000 10300 10300 | 850 900 900 | 9.3 9.3 9.3 | | | 1H4-G |
| 1H5-GT | Diode High-Mu Triode | C3 | D.C. F | 1.4 0.05 | Triode Unit as Class A Amplifier | 90 | 0 | | | 0.15 | 240000 | 275 | 65 | | | 1H5-GT |
| 1H6-G | Duplex-Diode Triode | D3 | D.C. F | 2.0 0.06 | Triode Unit as Class A Amplifier | 135 | - 3.0 | | | 0.8 | 35000 | 575 | 20 | | | 1H6-G |
| 1J5-G | Power Pentode | D10 | D.C. F | 2.0 0.12 | Class A Amplifier | 135 | - 16.5 | 135 | 2.0 | 7.0 | 105000 | 950 | | 13500 | 0.45 | 1J5-G |
| 1J6-GT | Twin-Triode Amplifier | C10 | D.C. F | 2.0 0.24 | Class B Amplifier | 135 135 | 0 - 3.0 | | | | | | | 10000 10000 | 2.2 2.0 | 1J6-GT |
| 1L4 | RF Amplifier Pentode | B0 | D.C. F | 1.4 0.05 | Class A Amplifier | 90 90 | 0 0 | 67.5 90 | 1.2 2.0 | 2.9 4.5 | 600000 260000 | 925 1025 | | | | 1L4 |
| 1LA4 | Power Amplifier Pentode | B5 | D.C. F | 1.4 0.05 | Amplifier | | | | | | | | | | | 1LA4 |
| 1LA6 | Pentagrid Converter | B5 | D.C. F | 1.4 0.05 | Converter | 90 | 0 | 45 Φ | 0.6 | 0.55 | 750000 | | | | | 1LA6 |
| 1LB4 | Power Amplifier Pentode | B5 | D.C. F | 1.4 0.05 | Class A Amplifier | | | | | | | | | | | 1LB4 |
| 1LC5 | RF Amplifier Pentode | B5 | D.C. F | 1.4 0.05 | Class A Amplifier | 45 90 | 0 0 | 45 45 | 0.35 0.30 | 1.10 1.15 | 700000 1.0 Ω | 750 775 | | | | 1LC5 |
| 1LC6 | Pentagrid Converter | B5 | D.C. F | 1.4 0.05 | Converter | 45 90 | 0 0 | 35 35 | 0.75 0.70 | 0.70 0.75 | 300000 300000 | | | | | 1LC6 |
| 1LD5 | Diode-Pentode | B5 | D.C. F | 1.4 0.05 | Pentode Unit as Class A Amplifier | | | | | | | | | | | 1LD5 |
| 1LE3 | Medium-Mu Triode | B5 | F | 1.4 0.05 | Class A Amplifier | 90 90 | 0 - 3 | | | | 4.5 1.4 | 11200 19000 | 1300 760 | 14.5 | | 1LE3 |
| 1LG5 | Remote-Cutoff Pentode | B5 | F | 1.4 0.05 | Class A Amplifier | 90 90 | 0 - 1.5 | 45 90 | 0.4 0.9 | 1.7 3.7 | 1.0 Ω 500000 | 800 1150 | | | | 1LG5 |
| 1LH4 | Diode High-Mu Triode | B5 | D.C. F | 1.4 0.05 | Triode Unit as Class A Amplifier | | | | | | | | | | | 1LH4 |
| 1LN5 | RF Amplifier Pentode | B5 | D.C. F | 1.4 0.05 | Class A Amplifier | 90 | 0 | 90 | 0.35 | 1.6 | 1.1 Ω | 800 | | | | 1LN5 |

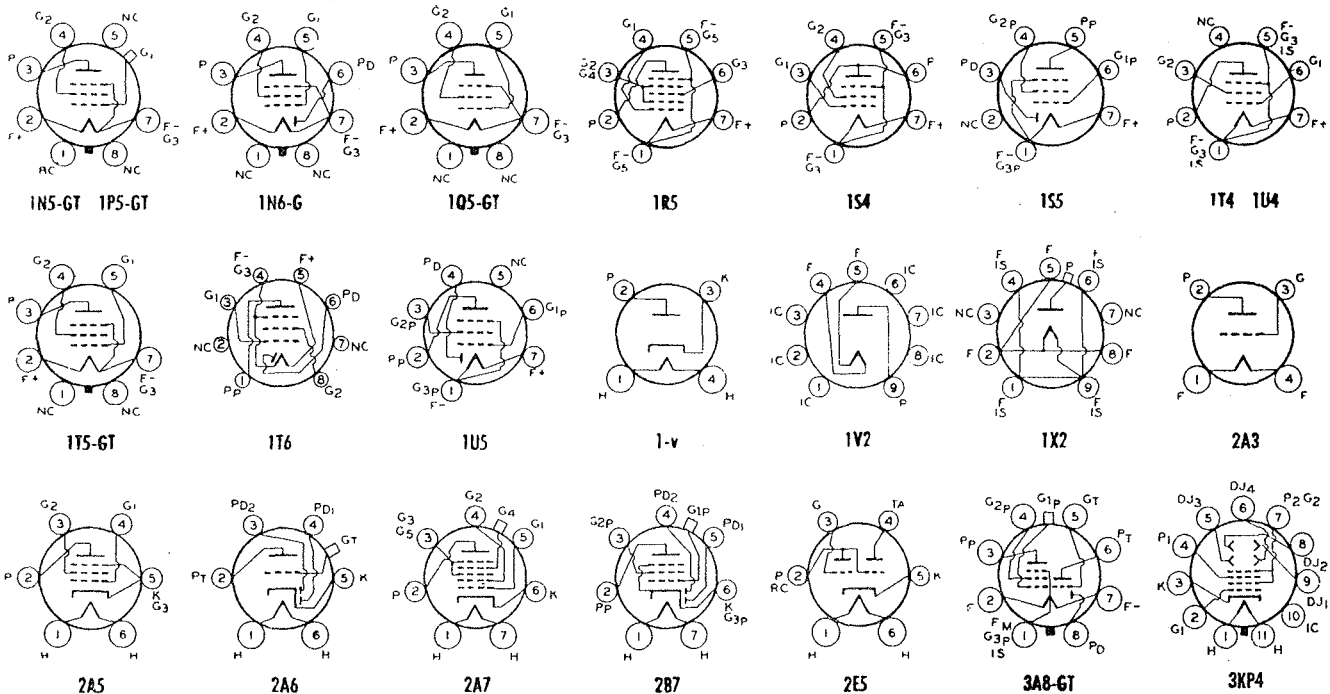
For footnotes, see preceding page



1N5-GT to 3KP4

| Type | Name | Tube Dimensions | Cathode Type and Rating | | | Use Values to right give operating conditions and characteristics for indicated typical use | Plate Supply Volts | Grid Bias Volts | Screen Supply Volts | Screen Current Ma. | Plate Current Ma. | AC Plate Resistance Ohms | Trans-conductance (Grid-plate) μmhos | Amplification Factor | Load for Stated Power Output Ohms | Power Output Watts | Type |
|--------|------------------------------------|-----------------|-------------------------|-------|------|--|--|------------------------|------------------------|-----------------------|----------------------|-----------------------------|--|----------------------|--------------------------------------|-----------------------|--------|
| | | | C. T. | Volts | Amp. | | | | | | | | | | | | |
| 1N5-GT | RF Amplifier Pentode | C3 | D.C. | 1.4 | 0.05 | Class A Amplifier | 90 | 0 | 90 | 0.3 | 1.2 | 1.5Ω | 750 | — | — | — | 1N5-GT |
| 1N6-G | Diode-Power Amplifier Pentode | D1 | D.C. | 1.4 | 0.05 | Pentode Unit as Class A Amplifier | 90 | - 4.5 | 90 | 0.7 | 3.4 | 300000 | 800 | — | 25000 | 0.1 | 1N6-G |
| 1P5-GT | Remote-Cutoff Pentode | C3 | D.C. | 1.4 | 0.05 | Class A Amplifier | 90 | 0 | 90 | 0.7 | 2.3 | 800000 | 750 | — | — | — | 1P5-GT |
| 1Q5-GT | Beam Power Amplifier | C3 | D.C. | 1.4 | 0.1 | Class A Amplifier | 90 | - 4.5 | 90 | 1.3 | 9.5 | 90000 | 2200 | — | 8000 | 0.27 | 1Q5-GT |
| 1R5 | Pentagrid Converter | B0 | D.C. | 1.4 | 0.05 | Converter | 45 | 0 | 45 | 1.9 | 0.7 | 600000 | Grid #1 Resistor, 100000 ohms. Conversion Resistor, 300 micromhos. | | | 1R5 | |
| 1S4 | Power Amplifier Pentode | B0 | D.C. | 1.4 | 0.1 | Class A Amplifier | 45 | - 4.5 | 45 | 0.8 | 3.7 | 100000 | 1250 | — | 8000 | 0.065 | 1S4 |
| 1S5 | Diode-Pentode | B0 | D.C. | 1.4 | 0.05 | Pentode Unit as AF Amplifier | 90 | - 7.0 | 67.5 | 1.4 | 1.7 | 100000 | 1575 | — | 8000 | 0.27 | 1S5 |
| 1T4 | Super-Control RF Amplifier Pentode | B0 | D.C. | 1.4 | 0.05 | Class A Amplifier | 45 | 0 | 45 | 0.7 | 1.7 | 350000 | 700 | — | — | — | 1T4 |
| 1T5-GT | Beam Power Amplifier | C4 | D.C. | 1.4 | 0.05 | Class A Amplifier | 90 | - 6.0 | 90 | 0.8 | 6.5 | — | 1150 | — | 14000 | 0.17 | 1T5-GT |
| 1T6 | Diode-Pentode | A | F | 1.25 | 0.04 | Pentode Unit as Class A Amplifier | 30 | 0 | 30 | 0.10 | 0.33 | 500000 | 330 | — | — | — | 1T6 |
| 1U4 | RF Amplifier Pentode | B0 | D.C. | 1.4 | 0.05 | Class A Amplifier | 90 | 0 | 90 | 0.50 | 1.0 | 1.0Ω | 900 | — | — | — | 1U4 |
| 1U5 | Diode-Pentode | B0 | D.C. | 1.4 | 0.05 | Pentode Unit as Class A Amplifier | 90 | - 4.5 | 90 | 0.7 | 3.5 | 500000 | 330 | — | — | — | 1U5 |
| 1-v | Half-Wave Rectifier | D5 | H | 6.3 | 0.3 | With Capacitive-Input Filter | Plate Supply, 90 volts applied through 1 meg. resistor. Screen Supply, 90 volts applied through 3.3 meg. resistor. Grid Bias, 0 volts. Grid Resistor, 10 megohms. Voltage Gain, 66 approx. | | | | | | | | | | 1-v |
| 1V2 | Half-Wave Rectifier | B0a | F | 0.625 | 0.3 | Pulsed Rectifier | Max. A-C Plate Volts (RMS), 325 Min. Total Effective Plate-Supply Impedance: Up to 117 volts, 0 ohms; at 150 volts, 30 ohms; at 325 volts, 75 ohms. | | | | | | | | | | 1V2 |
| 1X2 | Half-Wave Rectifier | B4 | F | 1.25 | 0.2 | Half-Wave Rectifier | Max. Peak Inverse Plate Volts, 7500 Max. Peak Plate Ma., 10 Max. Average Plate Ma., 0.5 | | | | | | | | | | 1X2 |
| 2A3 | Power Amplifier Triode | E3 | F | 2.5 | 2.5 | Class A Amplifier | 250 | - 45.0 | — | — | 60.0 | 800 | 5250 | 4.2 | 2500 | 3.5 | 2A3 |
| 2A4-G | Glow-Discharge Triode | D3 | D.C. | 2.5 | 2.5 | Relay Service | 300 | - 45.0 | — | — | 80.0 | — | — | — | 5000 | 10.0 | 2A4-G |
| 2A5 | Power Amplifier Pentode | D12 | H | 2.5 | 1.75 | Amplifier | 300 | - 62 volts, fixed bias | — | — | 80.0 | — | — | — | 3000 | 15.0 | 2A5 |
| 2A6 | Duplex-Diode High-Mu Triode | D8 | H | 2.5 | 0.8 | Triode Unit as Amplifier | Max. Peak Inverse Anode Volts, 200 Max. Peak Forward Anode Volts, 200 Max. Peak Anode Current, 1.25 ampere Max. Av. Anode Current, 0.1 ampere | | | | | | | | | | 2A6 |
| 2A7 | Pentagrid Converter | D9 | H | 2.5 | 0.8 | Converter | For other characteristics, refer to Type 6F6-G. | | | | | | | | | | 2A7 |
| 2B7 | Duplex-Diode Pentode | D9 | H | 2.5 | 0.8 | Pentode Unit as Amplifier | For other characteristics, refer to Type 6B8-G. | | | | | | | | | | 2B7 |
| 2E5 | Electron-Ray Tube | D5 | H | 2.5 | 0.8 | Visual Indicator | For other characteristics, refer to Type 6E5. | | | | | | | | | | 2E5 |
| 3A8-GT | Diode-Triode RF Amplifier Pentode | C6 | D.C. | 1.4 | 0.1 | Triode Unit as Class A Amplifier | 90 | 0 | — | — | 0.2 | 200000 | 325 | 65 | — | — | 3A8-GT |
| | | | D.C. | 2.8 | 0.05 | Pentode Unit as Class A Amplifier | 90 | 0 | 90 | 0.5 | 1.5 | 800000 | 750 | — | — | — | 3A8-GT |
| 3KP4 | Directly Viewed Kinescope | G1a | H | 6.3 | 0.6 | Picture Reproduction | Focus: Electrostatic Deflection: Electrostatic Phosphor: No. 4 Picture Size: 13 1/2" x 2 1/2" Deflection Factors: DJ1 and DJ2, (nearer screen), 100 to 136 vdc/in./kv; DJ3 and DJ4, (nearer base), 76 to 104 vdc/in./kv. | | | | | | | | | | 3KP4 |

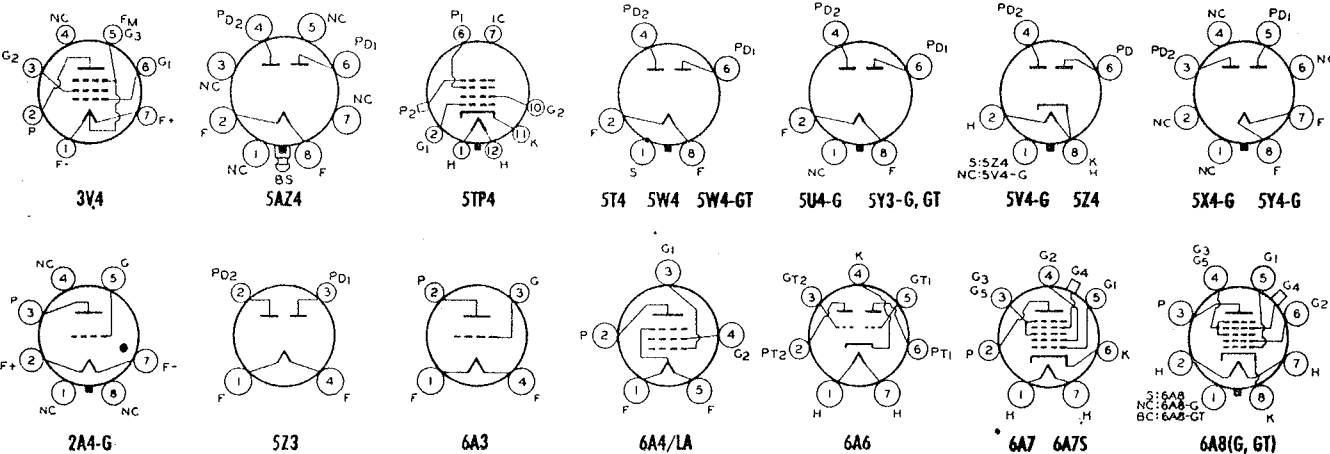
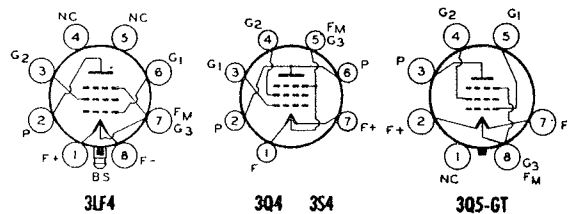
For footnotes, see following page



| Type | Name | Tube Dimensions | Cathode Type and Rating | | | Use Values to right give operating conditions and characteristics for indicated typical use | Plate Supply Volts | Grid Bias Volts | Screen Supply Volts | Screen Current Ma. | Plate Current Ma. | AC Plate Resistance Ohms | Trans-conductance (Grid-plate) μmhos | Amplification Factor | Load for Stated Power Output Ohms | Power Output Watts | Type | |
|--------|-------------------------|-----------------|-------------------------|-------------|---|--|--------------------|-----------------|---------------------|--------------------|-------------------|--|--------------------------------------|---|--|--|--------|------|
| | | | C. T. | Volts | Amp. | | | | | | | | | | | | | |
| 3L4 | Beam Power Amplifier | B5 | D.C. 1.4 F 2.8 | 0.1 0.05 | Class A Amplifier | | | | | | | | | | | | 3L4 | |
| 3Q4 | Power Amplifier Pentode | B0 | D.C. 1.4 F 2.8 | 0.1 0.05 | Class A Amplifier | | | | | | | | | | | | 3Q4 | |
| 3Q5-GT | Beam Power Amplifier | C3 | D.C. 1.4 F 2.8 | 0.1 0.05 | Class A Amplifier | 110 110 | - 6.6 - 6.6 | 110 110 | 1.4 1.1 | 10.0 8.5 | 100000 110000 | 2200 2000 | | 8000 8000 | 0.40 0.33 | | 3Q5-GT | |
| 3S4 | Power Amplifier Pentode | B0 | D.C. 1.4 F 2.8 | 0.1 0.05 | Class A Amplifier | 90 90 | - 7 - 7 | 67.5 67.5 | 1.4 1.1 | 7.4 6.1 | 100000 100000 | 1575 1425 | | 8000 8000 | 0.27 0.235 | | 3S4 | |
| 3V4 | Power Amplifier Pentode | B0 | D.C. 1.4 F 2.8 | 0.1 0.05 | Class A Amplifier | 90 90 | - 4.5 - 4.5 | 90 90 | 2.1 1.7 | 9.5 7.7 | 100000 120000 | 2150 2000 | | 10000 10000 | 0.27 0.24 | | 3V4 | |
| 5A24 | Full-Wave Rectifier | C2a | F 5.0 | 2.0 | | For ratings and characteristics, refer to Type 5Y3-GT. | | | | | | | | | | 5A24 | | |
| 5T4 | Full-Wave Rectifier | D7 | F 5.0 | 2.0 | With Capacitive-Input Filter Max. A-C Volts per Plate (RMS), 450 Max. Peak Inverse Volts, 1550 With Inductive-Input Filter Max. A-C Volts per Plate (RMS), 550 Max. Peak Inverse Volts, 1550 | | | | | | | | | Max. D-C Output Ma., 225 Max. Peak Plate Ma., 675 | Min. Total Effect. Supply Imped. per Plate, 150 ohms | | 5T4 | |
| 5TP4 | Projection Kinescope | H1 | H 6.3 | 0.6 | Picture Reproduction With Reflective Optical System | | | | | | | | | Focus: Electrostatic Deflection: Magnetic Deflection Angle: 50° Phosphor: No. 4 Picture Size: 18" x 24" | Anode-No. 2 Volts, 27000 (max.) Anode-No. 1 Volts for Focus, 4300 to 5400 (6000 max.) Grid-No. 2 Volts, 200 (350 max.) Grid-No. 1 Volts for Visual Cutoff, -42 to -98 | Anode-No. 2 Current Range, 100 to 200 microamperes Anode-No. 1 Current, 75 microamperes (max.) Grid-No. 2 Current Range, -15 to +15 microamperes | | 5TP4 |
| 5U4-G | Full-Wave Rectifier | E2 | F 5.0 | 3.0 | With Capacitive-Input Filter Max. A-C Volts per Plate (RMS), 450 Max. Peak Inverse Volts, 1550 With Inductive-Input Filter Max. A-C Volts per Plate (RMS), 550 Max. Peak Inverse Volts, 1550 | | | | | | | | | Max. D-C Output Ma., 225 Max. Peak Plate Ma., 675 | Min. Total Effect. Supply Imped. per Plate, 75 ohms | | 5U4-G | |
| 5V4-G | Full-Wave Rectifier | D10 | H 5.0 | 2.0 | With Capacitive-Input Filter Max. A-C Volts per Plate (RMS), 375 Max. Peak Inverse Volts, 1400 With Inductive-Input Filter Max. A-C Volts per Plate (RMS), 500 Max. Peak Inverse Volts, 1400 | | | | | | | | | Max. D-C Output Ma., 175 Max. Peak Plate Ma., 525 | Min. Total Effect. Supply Imped. per Plate, 100 ohms | | 5V4-G | |
| 5W4 | Full-Wave Rectifier | C2 | F 5.0 | 1.5 | With Capacitive-Input Filter Max. A-C Volts per Plate (RMS), 350 Max. Peak Inverse Volts, 1400 With Inductive-Input Filter Max. A-C Volts per Plate (RMS), 500 Max. Peak Inverse Volts, 1400 | | | | | | | | | Max. D-C Output Ma., 100 Max. Peak Plate Ma., 300 | Min. Total Effect. Supply Imped. per Plate, 50 ohms | | 5W4 | |
| 5W4-GT | Full-Wave Rectifier | C5 | F 5.0 | 2.0 | With Capacitive-Input Filter Max. A-C Volts per Plate (RMS), 350 Max. Peak Inverse Volts, 1400 With Inductive-Input Filter Max. A-C Volts per Plate (RMS), 500 Max. Peak Inverse Volts, 1400 | | | | | | | | | Max. D-C Output Ma., 100 Max. Peak Plate Ma., 300 | Min. Total Effect. Supply Imped. per Plate, 50 ohms | | 5W4-GT | |
| 5X4-G | Full-Wave Rectifier | E2 | F 5.0 | 3.0 | | For other ratings, refer to Type 5U4-G. | | | | | | | | | | 5X4-G | | |
| 5Y3-G | Full-Wave Rectifier | C5 | F 5.0 | 2.0 | With Capacitive-Input Filter Max. A-C Volts per Plate (RMS), 350 Max. Peak Inverse Volts, 1400 With Inductive-Input Filter Max. A-C Volts per Plate (RMS), 500 Max. Peak Inverse Volts, 1400 | | | | | | | | | Max. D-C Output Ma., 125 Max. Peak Plate Ma., 400 | Min. Total Effect. Supply Imped. per Plate, 50 ohms | | 5Y3-G | |
| 5Y3-GT | Full-Wave Rectifier | C5 | F 5.0 | 2.0 | With Capacitive-Input Filter Max. A-C Volts per Plate (RMS), 350 Max. Peak Inverse Volts, 1400 With Inductive-Input Filter Max. A-C Volts per Plate (RMS), 500 Max. Peak Inverse Volts, 1400 | | | | | | | | | Max. D-C Output Ma., 125 Max. Peak Plate Ma., 400 | Min. Total Effect. Supply Imped. per Plate, 50 ohms | | 5Y3-GT | |
| 5Y4-G | Full-Wave Rectifier | D10 | F 5.0 | 2.0 | | For other ratings, refer to Type 5Y3-GT. | | | | | | | | | | 5Y4-G | | |
| 5Z3 | Full-Wave Rectifier | E3 | F 5.0 | 3.0 | | For other ratings, refer to Type 5U4-G. | | | | | | | | | | 5Z3 | | |
| 5Z4 | Full-Wave Rectifier | C2 | H 5.0 | 2.0 | With Capacitive-Input Filter Max. A-C Volts per Plate (RMS), 350 Max. Peak Inverse Volts, 1400 With Inductive-Input Filter Max. A-C Volts per Plate (RMS), 500 Max. Peak Inverse Volts, 1400 | | | | | | | | | Max. D-C Output Ma., 125 Max. Peak Plate Ma., 375 | Min. Total Effect. Supply Imped. per Plate, 50 ohms | | 5Z4 | |
| 6A3 | Power Amplifier Triode | E3 | F 6.3 | 1.0 | Amplifier | For other characteristics, refer to Type 6B4-G. | | | | | | | | | | 6A3 | | |
| 6A4/LA | Power Amplifier Pentode | D12 | F 6.3 | 0.3 | Class A Amplifier | 100 180 | - 6.5 - 12.0 | 100 180 | 1.6 3.9 | 9.0 22.0 | 83250 45500 | 1200 2200 | | 11000 8000 | 0.31 1.40 | | 6A4/LA | |
| 6A6 | Twin-Triode Amplifier | D12 | H 6.3 | 0.8 | Amplifier | For other characteristics, refer to Type 6N7-GT. | | | | | | | | | | 6A6 | | |
| 6A7 | Pentagrid Converter | D9 | H 6.3 | 0.3 | Converter | For other characteristics, refer to Type 6A8. | | | | | | | | | | 6A7 | | |
| 6A7S | Pentagrid Converter | D9 | H 6.3 | 0.3 | Converter | For other characteristics, refer to Type 6A8. | | | | | | | | | | 6A7S | | |
| 6A8 | Pentagrid Converter | C1 | H 6.3 | 0.3 | Converter | 100 250 | - 1.5 - 3.0 | 50 100 | 1.3 2.7 | 1.1 3.5 | 600000 360000 | Anode-Grid (#2): 250 max. volts, 4.0 ma. Oscillator-Grid (#1) Resistor = Conversion Transcond., 550 micromhos. | | | | 6A8 | | |
| 6A8-G | Pentagrid Converter | D8 | H 6.3 | 0.3 | Converter | | | | | | | | | | | 6A8-G | | |
| 6A8-GT | Pentagrid Converter | C3 | H 6.3 | 0.3 | Converter | | | | | | | | | | | 6A8-GT | | |

Four vertical rules before or after type No. = Subminiature type.
 Three vertical rules before or after type No. = Miniature type having either 7 or 9 pins.
 Two vertical rules before or after type No. = Metal type.
 One vertical rule before or after type No. = GT or other larger glass type.
 Light Face = Discontinued type.
 For key to tube dimensions and, legend for base and envelope connection diagrams, see page 23.
 • Grids #3 and #5 are screen. Grid No. 4 is signal-input grid.
 † Power output is for two tubes at stated plate-to-plate load.

▲ Grids #2 and #4 are screen. Grid #3 is signal-input control grid.
 Note 1: Subscript 1 on class of amplifier service (as AB₁) indicates that grid current does not flow during any part of input cycle.
 ♦ For two tubes.
 † Supply voltage applied through 20000-ohm voltage-dropping resistor.
 • 50000 ohms.
 § Megohms.
 ■ Either ac or dc may be used on filament or heater, except as specifically noted. For use of dc on ac filament types, decrease stated grid volts by 1/2 (approx.) of filament voltage.



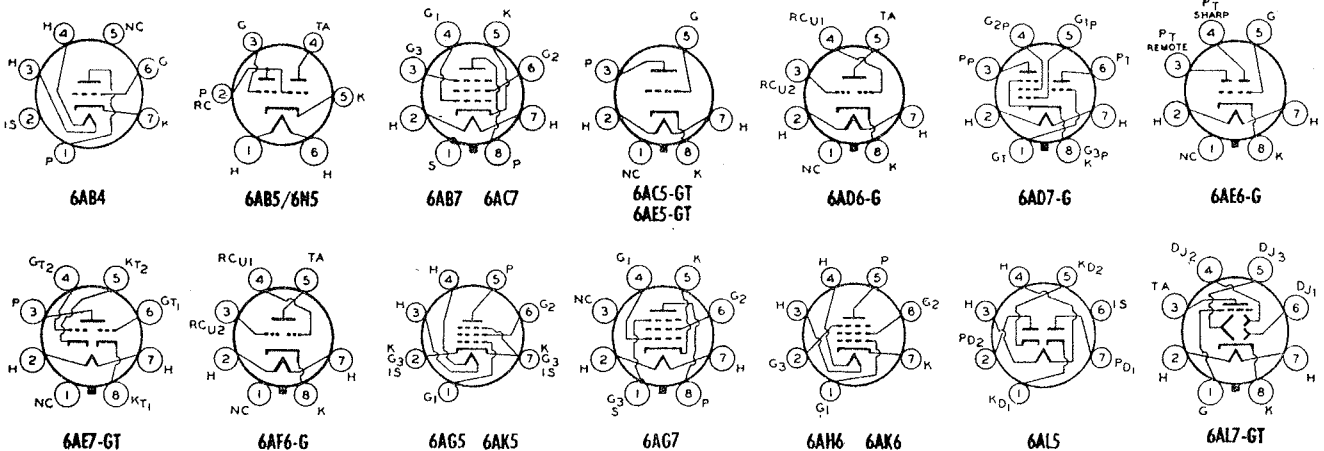
6AB4 to 6AL7-GT

| Type | Name | Tube Dimensions | Cathode Type and Rating | | | Use Values to right give operating conditions and characteristics for indicated typical use | Plate Supply Volts | Grid Bias Volts | Screen Supply Volts | Screen Current Ma. | Plate Current Ma. | AC Plate Resistance Ohms | Trans-conductance (Grid-plate) μ mhos | Amplification Factor | Load for Stated Power Output Ohms | Power Output Watts | Type |
|----------|---------------------------------------|-----------------|-------------------------|-------|-------|---|--|--|---------------------|--------------------|-------------------|--------------------------|--|---------------------------|-----------------------------------|--------------------|----------|
| | | | C.T. | Volts | Amp. | | | | | | | | | | | | |
| 6AB4 | RF Amplifier Triode | B0 | H | 6.3 | 0.15 | Class A Amplifier | 100 250 | -1 -2 | — | — | 3.7 10.0 | — | 4000 5500 | 54 55 | — | — | 6AB4 |
| 6AB5/6N5 | Electron-Ray Tube | D4 | H | 6.3 | 0.15 | Visual Indicator | Plate & Target Supply = 135 volts. Triode Plate Resistor = 0.25 meg. Target Current = 2.0 ma. Grid Bias, -10.0 volts; Shadow Angle, 0°. Bias, 0 volts; Angle, 90°. Plate Current, 0.5 ma. Plate & Target Supply = 135 volts. Triode Plate Resistor = 1.0 meg. Target Current = 1.9 ma. Grid Bias, -13.5 volts; Shadow Angle, 0°. Bias, 0 volts; Angle 90°. Plate Current, 0.13 ma. | | | | | | | | | | 6AB5/6N5 |
| 6AB7 | Remote-Cutoff Pentode | B2 | H | 6.3 | 0.45 | Class A Amplifier | 300 | -3.0 | 200 | 3.2 | 12.5 | 700000 | 5000 | — | — | — | 6AB7 |
| 6AC5-GT | High-Mu Power Amplifier Triode | C3 | H | 6.3 | 0.4 | Class B Amplifier Dynamic-Coupled Amplifier With 76 Driver | 250 | 0 | — | — | 5.0 | — | — | — | 10000 | 8.0† | 6AC5-GT |
| | | | | | | | 250 | Bias for both 6AC5-GT and 76 is developed in coupling circuit. Average Plate Current of Driver = 5.5 milliamperes. Average Plate Current of 6AC5-GT = 32 milliamperes. | | | | | | | | | |
| 6AC7 | Sharp-Cutoff Pentode | B2 | H | 6.3 | 0.45 | Class A Amplifier | 300 | Cath. Bias | 150 | 2.5 | 10.0 | 1.0§ | 9000 | — | Cathode-Bias Resistor, 160 ohms | — | 6AC7 |
| 6AD6-G | Electron-Ray Tube Twin Indicator Type | B5a | H | 6.3 | 0.15 | Visual Indicator | Target Voltage, 100 volts. Control-Electrode Voltage, -23 volts; Shadow Angle, 135°. Target Current, 0.8 ma. Control-Electrode Voltage, 45 volts; Angle, 0°. Target Current, 1.5 ma. Target Voltage, 150 volts. Control-Electrode Voltage, -50 volts; Shadow Angle, 135°. Target Current, 1.2 ma. Control-Electrode Voltage, 75 volts; Angle, 0°. Target Current, 3 ma. | | | | | | | | | | 6AD6-G |
| 6AD7-G | Triode-Power Amplifier Pentode | D10 | H | 6.3 | 0.85 | Triode Unit as Class A Amplifier Pentode Unit as Class A Amplifier Pentode Unit With 6F6-G as Push-Pull Class AB ₁ Amplifier | 250 | -25.0 | — | — | 3.7 | 19000 | 325 | 6 | — | — | 6AD7-G |
| | | | | | | | 250 | -16.5 | 250 | 6.5 | 34.0 | 80000 | 2500 | — | 7000 | 3.2 | |
| | | | | | | | 375 | Cath. Bias | 250 | 6.7 | 41.0 | — | Cathode-Bias Resistor, 470 ohms | 16000 | 9.0† | | |
| 6AE5-GT | Amplifier Triode | C3 | H | 6.3 | 0.3 | Class A Amplifier | 95 | -15.0 | — | — | 7.0 | 3500 | 1200 | 4.2 | — | 6AE5-GT | |
| 6AE6-G | Twin-Plate Control Tube | D3 | H | 6.3 | 0.15 | Remote Cutoff Triode Remote Cutoff Triode | 250 | -1.5 | — | — | 6.5 | 25000 | 1000 | 25 | — | 6AE6-G | |
| | | | | | | | 250 | -35.0 | — | — | 0.01 | — | — | — | — | | |
| | | | | | | | 250 | -1.5 | — | — | 4.5 | 35000 | 950 | 33 | — | | |
| 6AE7-GT | Twin-Input Triode Amplifier | C3 | H | 6.3 | 0.5 | Class A Amp. AA Driver For Push-Pull 6AC5-GT In Dynamic-Coupled Amplifier | 250 | -13.5 | — | — | 10.0 | 4650 | 3000 | 14 | — | 6AE7-GT | |
| | | | | | | | Bias for both 6AC5-GT and 6AE7-GT developed in coupling circuit. Zero-Signal Plate Current of 6AE7-GT = 10 milliamperes. Zero-Signal Plate Current of 6AC5-GT = 64 milliamperes. Power Output is for two 6AC5-GT at stated plate-to-plate load. | | | | | | | | | | |
| 6AF6-G | Electron-Ray Tube Twin Indicator Type | B0c | H | 6.3 | 0.15 | Visual Indicator | Target Voltage, 125 volts. Control-Electrode Voltage, 0 volts; Shadow Angle, 95°. Target Current, 0.65 ma. Control-Electrode Voltage, 80 volts; Angle, 0°. Target Voltage, 250 volts. Control-Electrode Voltage, 0 volts; Shadow Angle, 95°. Target Current, 2.2 ma. Control-Electrode Voltage, 160 volts; Angle, 0°. | | | | | | | | | | 6AF6-G |
| 6AG5 | Sharp-Cutoff Pentode | B0 | H | 6.3 | 0.3 | As Pentode Class A Amplifier As Triode Class A Amplifier | 100 | Cath. Bias | 100 | 1.5 | 4.5 | 700000 | 4250 | Cath. Bias Res., 180 ohms | 6AG5 | | |
| | | | | | | | 250 | Bias | 150 | 2.0 | 7.0 | 800000 | 5000 | Cath. Bias Res., 200 ohms | | | |
| | | | | | | | 180 | Cath. Bias | — | — | 7.0 | 7900 | 5700 | Cath. Bias Res., 350 ohms | | | |
| | | | | | | | 250 | Bias | — | — | 5.5 | 11000 | 3800 | Cath. Bias Res., 825 ohms | | | |
| 6AG7 | Video Power Amplifier Pentode | C2 | H | 6.3 | 0.65 | Class A Amplifier | 300 | Cath. Bias - 2.0 | 125 | 7.0 | 28.0 | — | Cathode-Bias Resistor, 57 ohms. Load Resistance, 3500 ohms. Peak-to-Peak Volts Output, 140 approx. | 6AG7 | | | |
| 6AH6 | Sharp-Cutoff Pentode | B0 | H | 6.3 | 0.45 | Class A Amplifier | 300 | Cath. Bias | 150 | 2.5 | 10.0 | 500000 | 9000 | Cath. Res., 160 ohms | 6AH6 | | |
| 6AK5 | Sharp-Cutoff Pentode | A1 | H | 6.3 | 0.175 | Class A Amplifier | 120 | Cath. Bias | 120 | 2.5 | 7.5 | 340000 | 5000 | Cath. Res., 200 ohms | 6AK5 | | |
| 6AK6 | Power Amplifier Pentode | B0 | H | 6.3 | 0.15 | Class A Amplifier | 180 | -9.0 | 180 | 2.5 | 15 | 200000 | 2300 | — | 10000 | 1.1 | 6AK6 |
| 6AL5 | Twin Diode | A1 | H | 6.3 | 0.3 | Detector Rectifier | Max. Peak Inverse Volts, 330 Max. Peak Plate Ma. per Plate, 54 Max. D.C. Output Ma. per Plate, 0 Max. Peak Heater-Cathode Volts, 330 | | | | | | | | | | 6AL5 |
| 6AL7-GT | Electron-Ray Tube Indicator Type | C0a | H | 6.3 | 0.15 | Visual Indicator | Target Voltage, 315 volts Grid Voltage = 0 volts Cathode Bias Res., 3300 ohms approx. Grid Voltage for Pattern Cutoff, -7 volts approx. Deflecting Electrodes—No. 1, No. 2 and No. 3 Voltage = 0 | | | | | | | | | | 6AL7-GT |

Three vertical rules before or after type No. = Miniature type having either 7 or 9 pins.
Two vertical rules before or after type No. = Metal type.
One vertical rule before or after type No. = GT or other larger glass type.
Light Face = Discontinued type.
For key to tube dimensions and legend for base and electrode connection diagrams, see page 23.
• Grids #3 and #5 are screen. Grid No. 4 is signal-input grid.
† Power output is for two tubes at stated plate-to-plate load.

▲ Grids #2 and #4 are screen. Grid #3 is signal-input control grid.
Note 1: Subscript 1 on class of amplifier service (as AB₁) indicates that grid current does not flow during any part of input cycle.
□ Grid #2 tied to plate.
♣ For two tubes.
♠ Supply voltage applied through 20000-ohm voltage-dropping resistor.
§ 50000 ohms.
¶ Megohms.
AA Both grids connected together; likewise both cathodes.

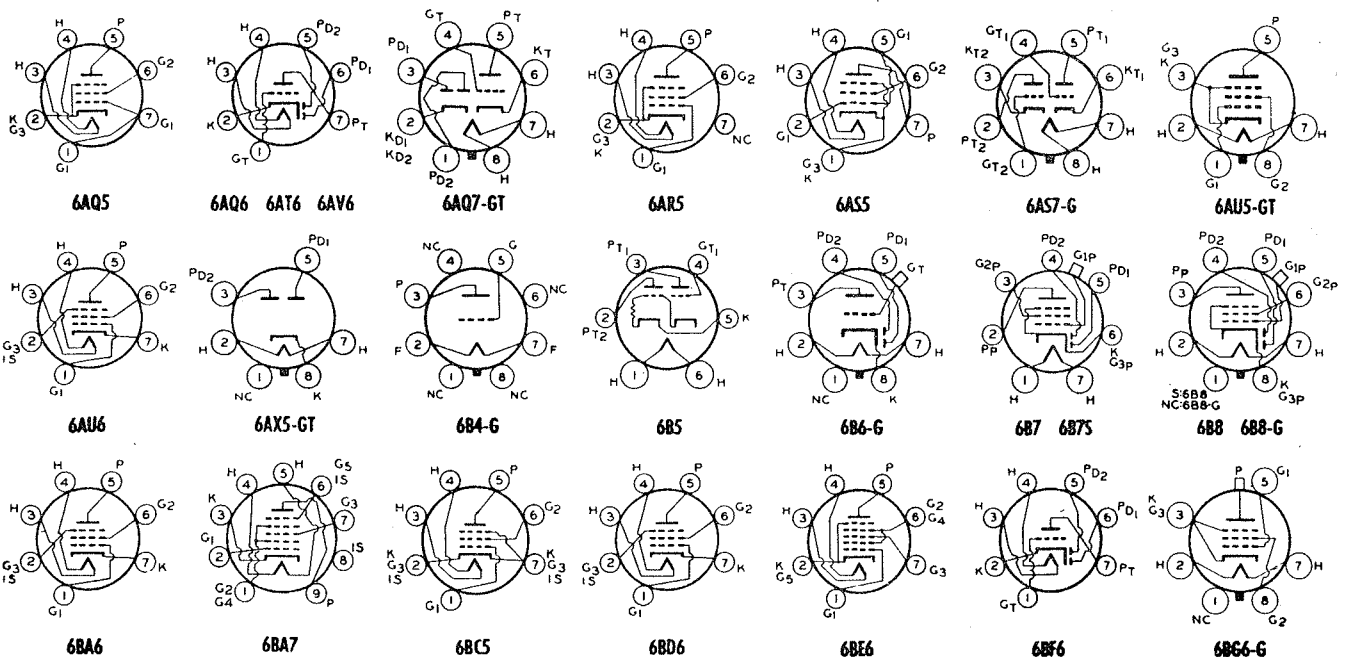
** For grid of following tube.
* Applied through plate resistor of 250000 ohms.
■ Either ac or dc may be used on filament or heater, except as specifically noted. For use of dc on ac filament types, decrease stated grid volts by 1/2 (approx.) of filament voltage.
♥ Applied through plate resistor of 100000 ohms.
• With tube mounted horizontally and pins No. 4 and No. 8 in a vertical plane (pin 4 on top), deflecting electrode No. 1 controls left-hand section of pattern, deflecting electrode No. 2 controls top right-hand section of pattern, deflecting electrode No. 3 controls bottom section of pattern.



6AQ5 to 6BG6-G

| Type | Name | Tube Dimensions | Cathode Type and Rating | | Use Values to right give operating conditions and characteristics for indicated typical use | Plate Supply Volts | Grid Bias Volts | Screen Supply Volts | Screen Current Ma. | Plate Current Ma. | AC Plate Resistance Ohms | Trans-conductance (Grid-plate) micromhos | Amplification Factor | Load for Stated Power Output Ohms | Power Output Watts | Type |
|---------|--------------------------------|-----------------|-------------------------|-------|--|---|----------------------|----------------------|--------------------|-------------------|---|--|---------------------------|-----------------------------------|--------------------|---------|
| | | | C. T. | Volts | | | | | | | | | | | | |
| 6AQ5 | Beam Power Amplifier | B1 | H | 6.3 | 0.45 | 180 | - 8.5 | 180 | 3.0 | 29.0 | 58000 | 3700 | — | 5500 | 2.0 | 6AQ5 |
| | | | | | | 250 | -12.5 | 250 | 4.5 | 45.0 | 52000 | 4100 | — | 5000 | 4.5 | |
| 6AQ6 | Duplex-Diode High-Mu Triode | B0 | H | 6.3 | 0.15 | 100 | - 1.0 | — | — | 0.8 | 61000 | 1150 | 70 | — | — | 6AQ6 |
| 6AQ7-GT | Twin-Diode High-Mu Triode | C2b | H | 6.3 | 0.3 | 250 | - 2 | — | — | 2.3 | 44000 | 1600 | 70 | — | — | 6AQ7-GT |
| 6AR5 | Power Pentode | B1 | H | 6.3 | 0.4 | 250 | -16.5 | 250 | 10 | 34.0 | 65000 | 2400 | — | 7000 | 3.2 | 6AR5 |
| 6AS5 | Beam Power Amplifier | B1 | H | 6.3 | 0.8 | 250 | -18 | 250 | 10 | 32.0 | 68000 | 2300 | — | 7600 | 3.4 | 6AS5 |
| 6AS7-G | Low-Mu Twin Power Triode | E2 | H | 6.3 | 2.5 | 135 | — | Cath. Res., 250 ohms | | 125 | — | 280 | 7000 | 2.0 | — | 6AS7-G |
| | | | | | | Booster Tube for Television Scanning | | | | | Max. Peak Inverse Plate Volts, 1700 Max. Heater-Cathode Volts, ±300 | | | | | |
| 6AT6 | Duplex-Diode High-Mu Triode | B0 | H | 6.3 | 0.3 | 100 | - 1.0 | — | — | 0.8 | 54000 | 1300 | 70 | — | — | 6AT6 |
| 6AU5-GT | Beam Power Amplifier | C2b | H | 6.3 | 1.25 | Horizontal Deflection Amplifier in TV Equipment | | | | | Max. DC Plate Volts, 450; Max. DC Plate Ma., 100 | | | | | 6AU5-GT |
| 6AU6 | RF Amplifier Pentode | B0 | H | 6.3 | 0.3 | 100 | Cath. Bias | 100 | 2.1 | 5.0 | 500000 | 3900 | Cath. Bias Res., 150 ohms | — | — | 6AU6 |
| 6AV6 | Twin-Diode High-Mu Triode | B0 | H | 6.3 | 0.3 | 100 | - 1.0 | — | — | 0.5 | 80000 | 1250 | 100 | — | — | 6AV6 |
| | | | | | | 250 | - 2.0 | — | — | 1.2 | 62500 | 1600 | 100 | — | — | |
| 6AX5-GT | Full-Wave Rectifier | C2b | H | 6.3 | 1.2 | With Capacitive-Input Filter | | | | | Max. AC Volts per Plate (RMS), 450 Max. Peak Inverse Volts, 1250 | | | | | 6AX5-GT |
| | | | | | | With Inductive-Input Filter | | | | | Max. AC Volts per Plate (RMS), 450 Max. Peak Inverse Volts, 1250 | | | | | |
| 6B4-G | Power Amplifier Triode | E2 | F | 6.3 | 1.0 | 250 | -45.0 | — | — | 60.0 | 800 | 5250 | 4.2 | 2500 | 3.20 | 6B4-G |
| | | | | | | 325 | Cath. Bias, 850 ohms | 80.0 | — | — | — | — | — | 5000 | 10.0† | |
| 6B5 | Direct-Coupled Power Amplifier | D12 | H | 6.3 | 0.8 | Class A Amplifier | | | | | | | | | | 6B5 |
| 6B6-G | Duplex-Diode High-Mu Triode | D8 | H | 6.3 | 0.3 | Triode Unit as Amplifier | | | | | | | | | | 6B6-G |
| 6B7 | Duplex-Diode Pentode | D9 | H | 6.3 | 0.3 | Pentode Unit as Amplifier | | | | | | | | | | 6B7 |
| 6B7S | Duplex-Diode Pentode | D9 | H | 6.3 | 0.3 | Pentode Unit as Amplifier | | | | | | | | | | 6B7S |
| 6B8 | Duplex-Diode Pentode | C1 | H | 6.3 | 0.3 | Pentode Unit as Amplifier | | | | | | | | | | 6B8 |
| 6B8-G | Duplex-Diode Pentode | D8 | H | 6.3 | 0.3 | Pentode Unit as RF Amplifier | | | | | 90 μ Cath. Bias, 3500 ohms. Screen Resistor = 1.1 meg. Grid Resistor, ** Gain per stage = 55 300 μ Cath. Bias, 1600 ohms. Screen Resistor = 1.2 meg. / 0.5 megohm. Gain per stage = 79 | | | | | 6B8-G |
| | | | | | | Pentode Unit as AF Amplifier | | | | | 90 μ Cath. Bias, 3500 ohms. Screen Resistor = 1.1 meg. Grid Resistor, ** Gain per stage = 55 300 μ Cath. Bias, 1600 ohms. Screen Resistor = 1.2 meg. / 0.5 megohm. Gain per stage = 79 | | | | | |
| 6BA6 | RF Amplifier Pentode | B0 | H | 6.3 | 0.3 | 100 | Cath. Bias | 100 | 4.4 | 10.8 | 250000 | 4300 | Cath. Bias Res., 68 ohms | — | — | 6BA6 |
| 6BA7 | Pentagrid Converter | B0a | H | 6.3 | 0.3 | 100 | - 1.0 | 100 | 10.2 | 3.6 | 500000 | Grid-No. 1 Resistor, 20000 ohms | — | — | 6BA7 | |
| 6BC5 | Sharp-Cutoff Pentode | B0 | H | 6.3 | 0.3 | 250 | Cath. Bias | 150 | 2.1 | 7.5 | 800000 | 5700 | Cath. Bias Res., 180 ohms | — | — | 6BC5 |
| 6BD6 | Remote-Cutoff Pentode | B0 | H | 6.3 | 0.3 | 100 | - 1 | 100 | 5.0 | 13.0 | 150000 | 2550 | — | — | 6BD6 | |
| 6BE6 | Pentagrid Converter | B0 | H | 6.3 | 0.3 | 100 | - 1.5 | 100 | 7.5 | 2.6 | 400000 | Grid #1 Resistor, 20000 ohms | — | — | 6BE6 | |
| 6BF6 | Duplex-Diode Triode | B0 | H | 6.3 | 0.3 | 250 | - 1.5 | 100 | 7.5 | 2.6 | 400000 | Conversion Transcond., 475 micromhos | — | — | 6BF6 | |
| 6BG6-G | Beam Power Amplifier | F1 | H | 6.3 | 0.9 | Horizontal Deflection Amplifier in TV Equipment | | | | | Max. DC Plate Volts, 700 Max. DC Plate Ma., 100 | | | | | 6BG6-G |

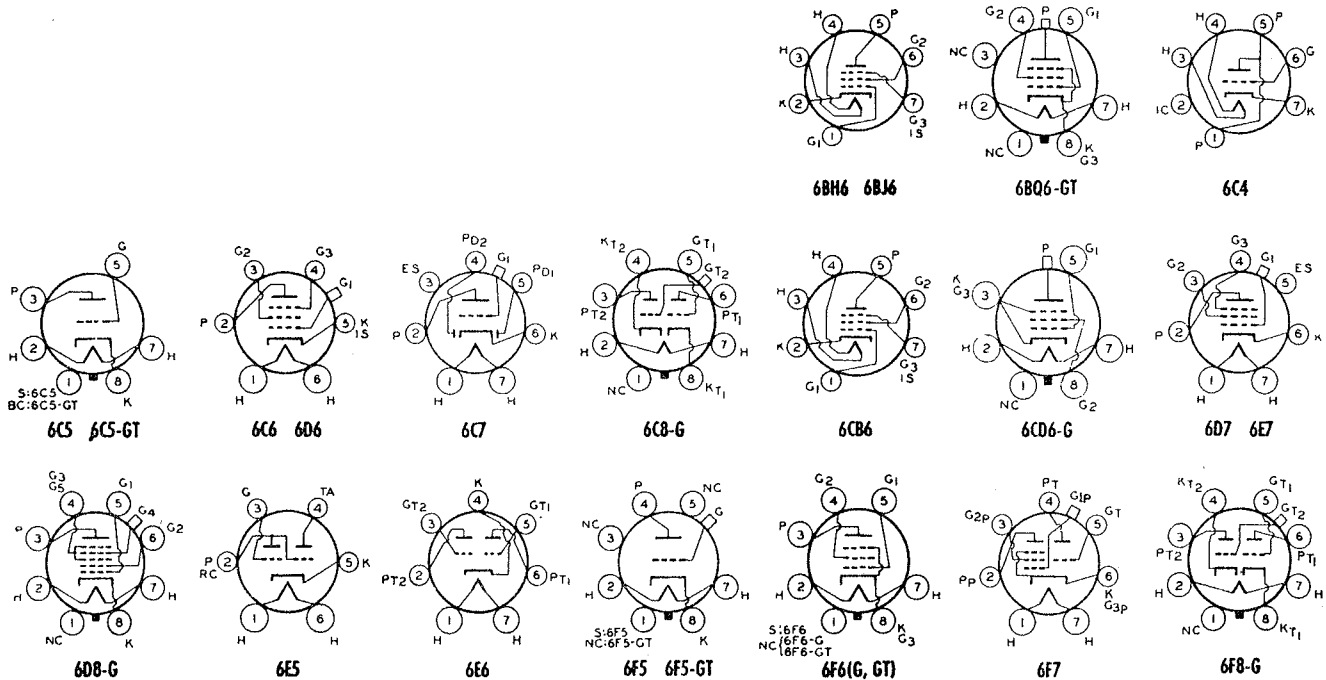
For footnotes, see preceding page.



6BH6 to 6F8-G

| Type | Name | Tube Dimensions | Cathode Type and Rating | | | Use Values to right give operating conditions and characteristics for indicated typical use | Plate Supply Volts | Grid Bias Volts | Screen Supply Volts | Screen Current Ma | Plate Current Ma | AC Plate Resistance Ohms | Trans-conductance (Grid-plate) μ mbars | Amplification Factor | Load for Stated Power Output Ohms | Power Output Watts | Type | |
|--|-----------------------------|-----------------|-------------------------|-------|------|--|--|-------------------|--|--------------------------------------|--|--|--|----------------------------------|---|--------------------|--------------|-----|
| | | | C. T. | Volts | Amp. | | | | | | | | | | | | | |
| 6BH6 | Sharp-Cutoff Pentode | 80 | H | 6.3 | 0.15 | Class A Amplifier | 100 250 | - 1.0 - 1.0 | 100 150 | 1.4 2.9 | 3.6 7.4 | 700000 1.4 μ | 3400 4600 | — | — | — | 6BH6 | |
| 6BJ6 | RF Amplifier Pentode | 80 | H | 6.3 | 0.15 | Class A Amplifier | 100 250 | - 1.0 - 1.0 | 100 100 | 3.5 3.3 | 9.0 9.2 | 250000 1.3 μ | 3650 3800 | — | — | — | 6BJ6 | |
| 6BQ6-GT | Beam Power Amplifier | C11 | H | 6.3 | 1.2 | Horizontal Deflection Amplifier in TV Equipment | Max. DC Plate Volts, 550 Max. DC Plate Ma., 100 | | Max. Peak Positive-Pulse Plate Volts, 4000 Max. Plate Dissipation, 10 watts | | | | | | | | 6BQ6-GT | |
| 6C4 | HF Power Triode | 80 | H | 6.3 | 0.15 | Class A Amplifier | 100 250 | — - 8.5 | — — | — — | 11.8 10.5 | 6250 7700 | 3100 2200 | 19.5 17 | — | — | — | 6C4 |
| | | | | | | Class C Amplifier | 300 | - 27.0 | — | — | 25.0 | Grid Current, 7 ma. Driving Power, 0.35 watt | — | — | — | — | — | |
| 6C5 | Medium-Mu Triodes | B2 | H | 6.3 | 0.3 | Class A Amplifier | 250 | - 8.0 | — | — | 8.0 | 10000 | 2000 | 20 | — | — | 6C5 | |
| 6C5-GT | | C3 | | | | Bias Detector | 250 | - 17.0 approx. | Plate current to be adjusted to 0.2 milliampere with no signal. | 90 ∇ 300 ∇ | Cath. Bias, 6400 ohms. Cath. Bias, 5300 ohms. | Grid Resistor, ** 0.25 megohm. | Gain per stage = 11 Gain per stage = 13 | 6C5-GT | | | | |
| 6C6 | Sharp-Cutoff Pentode | D13 | H | 6.3 | 0.3 | Amplifier Detector | For other characteristics, refer to Type 6J7. | | | | | | | | | | 6C6 | |
| 6CB6 | Sharp-Cutoff Pentode | B0 | H | 6.3 | 0.3 | Class A Amplifier | 200 | Cath. Bias | 150 | 2.8 | 9.5 | 600000 | 6200 | Cath. Bias Res., 180 ohms | — | — | 6CB6 | |
| 6C7 | Duplex-Diode Triode | D9 | H | 6.3 | 0.3 | Triode Unit as Class A Amplifier | 250 | - 9.0 | — | — | 4.5 | 16000 | 1250 | 20 | — | — | 6C7 | |
| 6C8-G | Twin-Triode Amplifier | D8 | H | 6.3 | 0.3 | Each Unit as Amplifier | 250 | - 4.5 | — | — | 3.2 | 22500 | 1600 | 36 | — | — | 6C8-G | |
| 6CD6-G | Beam Power Amplifier | F1 | H | 6.3 | 2.5 | Horizontal Deflection Amplifier in TV Equipment | Max. DC Plate Volts, 700 Max. DC Plate Ma., 170 | | Max. Peak Positive-Pulse Plate Volts, 6000 Max. Plate Dissipation, 15 watts | | | | | | | | 6CD6-G | |
| 6D6 | Remote-Cutoff Pentode | D13 | H | 6.3 | 0.3 | Amplifier Mixer | For other characteristics, refer to Type 6U7-G. | | | | | | | | | | 6D6 | |
| 6D7 | Sharp-Cutoff Pentode | D13 | H | 6.3 | 0.3 | Amplifier Detector | For other characteristics, refer to Type 6J7. | | | | | | | | | | 6D7 | |
| 6D8-G | Pentagrid Converter | D8 | H | 6.3 | 0.15 | Converter | 135 250 | - 3.0 - 3.0 | 67.5 100 | 1.7 2.6 | 1.5 3.5 | 600000 400000 | Anode-Grid (#2): 250 μ max. volts. 4.3 ma. Oscillator-Grid (#1) Resistor \bullet . Conversion Transcond., 550 micromhos. | — | — | — | 6D8-G | |
| 6E5 | Electron-Ray Tube | D4 | H | 6.3 | 0.3 | Visual Indicator | Plate & Target Supply = 125 volts. Triode Plate Resistor = 1.0 meg. Target Current = 0.8 ma. Grid Bias, -4.0 volts; Shadow Angle, 0°. Bias, 0 volts; Angle, 90°; Plate Current, 0.1 ma. Plate & Target Supply = 250 volts. Triode Plate Resistor = 1.0 meg. Target Current = 2.0 ma. Grid Bias, -7.5 volts; Shadow Angle, 0°. Bias, 0 volts; Angle, 90°; Plate Current, 0.2 ma. | | | | | | | | | | 6E5 | |
| 6E6 | Twin-Triode Power Amplifier | D12 | H | 6.3 | 0.6 | Push-Pull Class A Amplifier | 180 250 | - 20.0 - 27.5 | — | — | — | — | — | — | Power Output is for one tube at stated plate-to-plate load. | 15000 14000 | 0.75 1.60 | 6E6 |
| 6E7 | Remote-Cutoff Pentode | D13 | H | 6.3 | 0.3 | Amplifier | For other characteristics, refer to Type 6U7-G. | | | | | | | | | | 6E7 | |
| 6F5 | High-Mu Triode | C1 | H | 6.3 | 0.3 | Amplifier | For other characteristics, refer to Type 6SF5. | | | | | | | | | | 6F5 | |
| 6F5-GT | High-Mu Triode | C2b | H | 6.3 | 0.3 | Amplifier | For other characteristics, refer to Type 6SF5. | | | | | | | | | | 6F5-GT | |
| 6F6 | Power Pentodes | C2 | H | 6.3 | 0.7 | Pentode Class A Amplifier | 250 285 | - 16.5 - 20.0 | 250 285 | 6.5 7.0 | 34.0 38.0 | 80000 78000 | 2500 2550 | — | 7000 7000 | 3.2 4.8 | 6F6 | |
| | | | | | | Triode Class A Amplifier | 250 | - 20.0 | — | — | 31.0 | 2600 | 2600 | 6.8 | 4000 | 0.85 | | |
| 6F6-G | Power Pentodes | D10 | H | 6.3 | 0.7 | Pentode Push-Pull Class A Amplifier | 315 315 | Cath. Bias - 24.0 | 285 285 | 12.0 \clubsuit 12.0 \clubsuit | 62.0 \clubsuit 62.0 \clubsuit | Cath. Bias Resistor, 320 ohms \clubsuit | — | 10000 10000 | 10.5 \dagger 11.0 \dagger | 6F6-G | | |
| Triode Push-Pull Class AB ₁ Amplifier | | | | | | 375 375 | Cath. Bias - 26.0 | 250 250 | 8.0 \clubsuit 5.0 \clubsuit | 54.0 \clubsuit 34.0 \clubsuit | Cath. Bias Resistor, 340 ohms \clubsuit | — | 10000 10000 | 19.0 \dagger 18.5 \dagger | | | | |
| 6F6-GT | Power Pentodes | C10 | H | 6.3 | 0.7 | Triode Push-Pull Class AB ₁ Amplifier | 350 350 | Cath. Bias - 38.0 | — | — | 50.0 \clubsuit 48.0 \clubsuit | Cath. Bias Resistor, 730 ohms \clubsuit | — | 10000 6000 | 9.0 \dagger 13.0 \dagger | 6F6-GT | | |
| Triode Unit as Class A Amplifier | | | | | | 100 | - 3.0 min. | — | — | 3.5 | 16000 | 500 | 8 | — | — | | | |
| 6F7 | Triode-Pentode | D9 | H | 6.3 | 0.3 | Triode Unit as Class A Amplifier | 100 | - 3.0 min. | 100 | 1.6 | 6.3 | 290000 | 1050 | — | — | 6F7 | | |
| | | | | | | Pentode Unit as Class A Amplifier | 250 | - 3.0 min. | 100 | 1.5 | 6.3 | 850000 | 1100 | — | — | | | |
| | | | | | | Pentode Unit as Mixer | 250 | - 10.0 | 100 | 0.6 | 2.8 | Oscillator Peak Volts = 7.0. Conversion Transcond. = 300 micromhos. | — | — | — | | | |
| 6F8-G | Twin-Triode Amplifier | D8 | H | 6.3 | 0.6 | Each Unit as Amplifier | For other characteristics, refer to Type 6J5. | | | | | | | | | | 6F8-G | |

For footnotes, see following page.



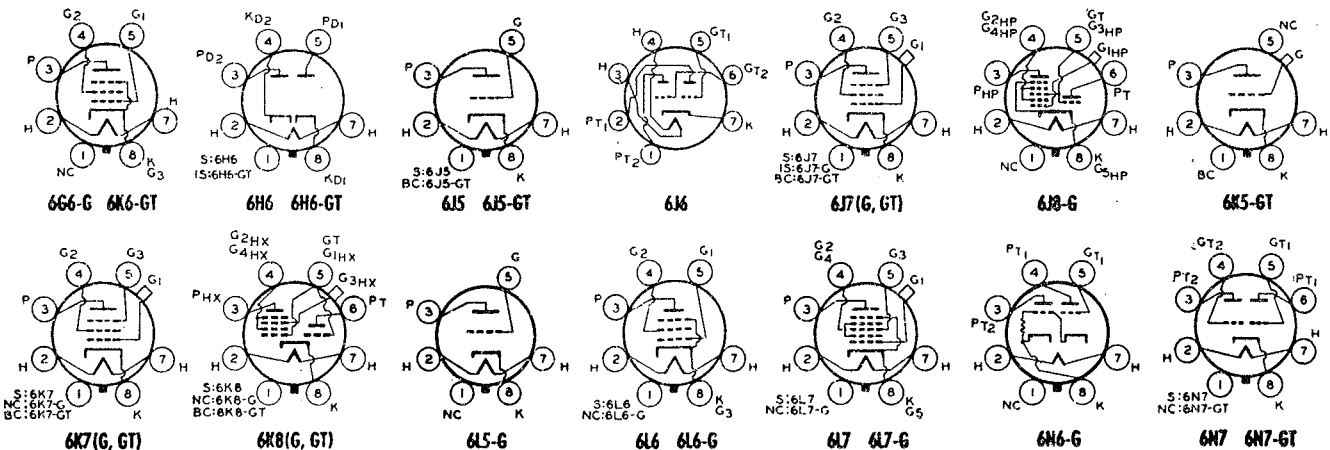
6G6-G to 6N7-GT

| Type | Name | Tube Dimensions | Cathode Type and Rating | | | Use Values to right give operating conditions and characteristics for indicated typical use | Plate Supply Volts | Grid Bias Volts | Screen Supply Volts | Screen Current Ma. | Plate Current Ma. | AC Plate Resistance Ohms | Trans-conductance (Grid-plate) μ mhos | Amplification Factor | Load for Stated Power Output Ohms | Power Output Watts | Type | |
|------------------------|-----------------------------|-----------------|-------------------------|-------|------|---|--|--|---|--|--|--|--|--|--|--|------------------------|---------------|
| | | | C.T. | Volts | Amp. | | | | | | | | | | | | | |
| 6G6-G | Power Amplifier Pentode | D3 | H | 6.3 | 0.15 | Pentode Class A Amplifier Triode Class A Amplifier | 135 180 | - 6.0 - 9.0 | 135 180 | 2.0 2.5 | 11.5 15.0 | 170000 175000 | 2100 2300 | — — | 12000 10000 | 0.6 1.1 | 6G6-G | |
| 6H6 6H6-GT | Twin Diodes | A1a C3 | H | 6.3 | 0.3 | Voltage Doubler Half-Wave Rectifier | Max. A-C Supply Volts per Plate (RMS), 150 Total Effect. Plate-Supply Imped. per Plate: half-wave, 30 ohms; full-wave, 15 ohms. Max. A-C Plate Volts (RMS), 150 Min. Total Effective Plate-Supply Impedance: up to 117 volts, 15 ohms; at 150 volts, 40 ohms. | | | | | | | | | | 8 min. 8 min. | 6H6 6H6-GT |
| 6J5 6J5-GT | Medium-Mu Triodes | B2 B3 | H | 6.3 | 0.3 | Class A Amplifier | 90 250 | 0 - 8.0 | — — | — — | 10.0 9.0 | 6700 7700 | 3000 2600 | 20 20 | — — | — — | 6J5 6J5-GT | |
| 6J6 | Medium-Mu Twin Triode | B0 | H | 6.3 | 0.45 | Each Unit as Class A Amplifier Push-Pull Class C Amplifier | 100 150 | — -10.0 | — Cath. Res., 220 ohms, both units | — — | 8.5 30.0 | 7100 — | 5300 — | 38 — | — — | — 3.5 | 6J6 | |
| 6J7 6J7-G 6J7-GT | Sharp-Cutoff Pentodes | C1 D8 C3 | H | 6.3 | 0.3 | Pentode Class A RF Amplifier Pentode Class A AF Amplifier Pentode Bias Detector Triode Class A Amplifier | 100 250 250 180 | - 3.0 - 3.0 - 4.3 - 5.3 | 100 100 100 — | 0.5 0.5 — — | 2.0 2.0 — — | 1.05 1.0 + § — — | 1185 1225 — — | — — — — | — — — — | — — — — | 6J7 6J7-G 6J7-GT | |
| 6J8-G | Triode-Heptode Converter | D8 | H | 6.3 | 0.3 | Triode Unit as Oscillator Heptode Unit as Mixer | 100 250 | — - 3.0 | — 100 | — 3.0 | — 1.4 | — 900000 | — 4.0 § | — — | — — | — — | — — | 6J8-G |
| 6K5-GT | High-Mu Triode | C3 | H | 6.3 | 0.3 | Class A Amplifier | 100 250 | - 1.5 - 3.0 | — — | — — | 0.35 1.1 | 78000 50000 | 900 1400 | 70 70 | — — | — — | 6K5-GT | |
| 6K6-GT | Power Amplifier Pentode | C3 | H | 6.3 | 0.4 | Single-Tube Class A Amplifier Push-Pull Class A Amplifier | 100 250 315 | - 7.0 - 18.0 - 21.0 | 100 250 250 | 1.6 5.5 4.0 | 9.0 32.0 25.5 | 104000 90000 110000 | 1500 2300 2100 | — — — | 12000 7600 9000 | 0.35 3.40 4.50 | 6K6-GT | |
| 6K7 6K7-G 6K7-GT | Remote-Cutoff Pentodes | C1 D8 C3 | H | 6.3 | 0.3 | Class A Amplifier Mixer in Superheterodyne | 100 250 | - 1.0 - 3.0 | 100 125 | 2.7 2.6 | 9.5 10.5 | 150000 600000 | 1650 1650 | — — | — — | — — | 6K7 6K7-G 6K7-GT | |
| 6K8 6K8-G 6K8-GT | Triode-Hexode Converters | C1 D8 C10 | H | 6.3 | 0.3 | Triode Unit as Oscillator Hexode Unit as Mixer | 100 100 250 | — - 3.0 - 3.0 | — 100 100 | — 6.2 6.0 | — 2.3 2.5 | — 400000 600000 | — — — | — — — | — — — | — — — | 6K8 6K8-G 6K8-GT | |
| 6L5-G | Medium-Mu Triode | D3 | H | 6.3 | 0.15 | Class A Amplifier | 135 230 | - 5.0 - 9.0 | — — | — — | 3.5 8.0 | 11300 9000 | 1500 1900 | 17 17 | — — | — — | 6L5-G | |
| 6L6 6L6-G | Beam Power Amplifiers | D7 E2 | H | 6.3 | 0.9 | Single-Tube Class A Amplifier Push-Pull Class A Amplifier Push-Pull Class AB ₁ Amplifier Push-Pull Class AB ₂ Amplifier Single Triode Class A Amplifier | 250 250 270 360 360 360 250 | - 14.0 Cath. Bias - 17.5 Cath. Bias - 22.5 Cath. Bias - 18.0 Cath. Bias - 22.5 Cath. Bias - 20.0 Cath. Bias | 250 250 270 270 270 270 250 | 5.0 5.4 11.0 11.0 5.0 5.0 3.5 5.0 4.0 4.0 | 72.0 75.0 134.0 134.0 88.0 88.0 78.0 88.0 — — | — — — — — — — — — — | — — — — — — — — — — | 2500 2500 5000 5000 6600 9300 6000 3800 — — | 6.5 6.5 17.5 18.5 26.5 24.5 31.0 47.0 — — | — — — — — — — — — — | 6L6 6L6-G | |
| 6L7 6L7-G | Pentagrid Mixers | C1 D8 | H | 6.3 | 0.3 | Mixer in Superheterodyne Class A Amplifier | 250 250 | - 3.0 - 3.0 | 100 100 | 7.1 6.5 | 2.4 5.3 | — 600000 | — 1100 | — — | — — | — — | 6L7 6L7-G | |
| 6N6-G | Direct-Coupled Power Triode | D10 | H | 6.3 | 0.8 | Class A Amplifier | Output Triode: Plate Volts, 300; Plate Ma., 45; Load, 7000 ohms. Triode: Plate Volts, 300; Grid Volts, 0; A-F Signal Volts (Peak), 21; Plate Ma., 8 | | | | | | | | | | 4.0 | 6N6-G |
| 6N7 6N7-GT | High-Mu Twin Power Triodes | C2 C3 | H | 6.3 | 0.8 | Class A Amplifier (as Driver) Class B Amplifier | 250 294 | - 5.0 - 6.0 | — — | — — | 6.0 7.0 | 11300 11000 | 3100 3200 | 35 35 | 20000 or more | exceeds 0.4 | 6N7 6N7-GT | |

Three vertical rules before or after type No. = Miniature type having either 7 or 9 pins.
Two vertical rules before or after type No. = Metal type.
One vertical rule before or after type No. = GT or other larger glass type.
Light Face = Discontinued type.
For key to tube dimensions and, legend for base and envelope connection diagrams, see page 23.
Note 1: Subscript 1 on class of amplifier service (as AB₁) indicates that grid current does not flow during any part of input cycle.
† Power output is for two tubes at stated plate-to-plate load.

□ Grid #2 tied to plate.
‡ For two tubes.
♣ Supply voltage applied through 20000-ohm voltage-Megohms.
§ For signal-input control-grid (#1); control-grid #3 bias, -3 volts.
‡ Grids #2 and #3 tied to plate.
° Both grids connected together; likewise, both plates.
Note 2: Subscript 2 on class of amplifier service (as AB₂) indicates that grid current flows during some part of input cycle.
A Grids #2 and #4 are screen. Grid #1 is signal-input control grid.

** For grid of following tube.
‡ Applied through plate resistor of 250000 ohms.
‡ Either ac or dc may be used on filament or heater, except as specifically noted. For use of dc on ac filament types, decrease stated grid volts by 1/2 (approx.) of filament voltage.
‡ Applied through plate resistor of 100000 ohms.



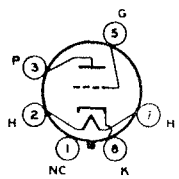
6P5-GT to 6SQ7-GT

| Type | Name | Tube Dimensions | Cathode Type and Rating | | | Use Values to right give operating conditions and characteristics for indicated typical use | Plate Supply Volts | Grid Bias Volts | Screen Supply Volts | Screen Current Ma | Plate Current Ma | AC Plate Resistance Ohms | Trans-conductance (Grid-plate) μ mhos | Amplification Factor | Load for Stated Power Output Ohms | Power Output Watts | Type |
|------------------------|------------------------------|-----------------|-------------------------|-------|------|--|---|-------------------------|---------------------|-------------------|--------------------|------------------------------|--|----------------------|-----------------------------------|--------------------|------------------------|
| | | | C. T. | Volts | Amp. | | | | | | | | | | | | |
| 6P5-GT | Medium-Mu Triode | C3 | H | 6.3 | 0.3 | Amplifier Detector | For other characteristics, refer to Type 76. | | | | | | | | | 6P5-GT | |
| 6P7-G | Triode-Pentode | D8 | H | 6.3 | 0.3 | Amplifier and Converter | For other characteristics, refer to Type 6F7. | | | | | | | | | 6P7-G | |
| 6Q7 6Q7-G 6Q7-GT | Twin-Diode High-Mu Triodes | C1 D8 C3 | H | 6.3 | 0.3 | Triode Unit as Class A Amplifier | 100 250 | - 1.0 - 3.0 | — | — | 0.8 1.1 | 58000 58000 | 1200 1200 | 70 70 | — | — | 6Q7 6Q7-G 6Q7-GT |
| 6R7 6R7-G 6R7-GT | Twin-Diode Medium-Mu Triodes | C1 D8 C2b | H | 6.3 | 0.3 | Triode Unit as Class A Amplifier | 250 | - 9.0 | — | — | 9.5 | 8500 | 1900 | 16 | — | — | 6R7 6R7-G 6R7-GT |
| 6S4 | Medium-Mu Triode | B3 | H | 6.3 | 0.6 | Vertical Deflection Amplifier in TV Equipment | Max. DC Plate Volts, 500 Max. DC Cathode Ma., 30 | | | | | | | | | 6S4 | |
| 6S7 6S7-G | Remote-Cutoff Pentodes | C1 D8 | H | 6.3 | 0.15 | Class A Amplifier | 135 250 | - 3.0 - 3.0 | 67.5 100 | 0.9 2.0 | 3.7 8.5 | 1.0\$ 1.0\$ | 1250 1750 | — | — | — | 6S7 6S7-G |
| 6S8-GT | Triode-Diode Triode | C9b | H | 6.3 | 0.3 | Triode Unit as Class A Amplifier | 100 250 | - 1.0 - 2.0 | — | — | 0.4 0.9 | 110000 91000 | 900 1100 | 100 100 | — | — | 6S8-GT |
| 6SA7 | Pentagrid Converter | B2 | H | 6.3 | 0.3 | Mixer | 100 250 | Self-Excited | 100 100 | 8.5 8.5 | 3.3 3.5 | 50000 1.0\$ | Grid #1 Resistor, 20000 ohms. Conversion Transcond., 450 micromhos. | | | 6SA7 | |
| 6SA7-GT | Pentagrid Converter | C3 | H | 6.3 | 0.3 | Mixer | For other characteristics, refer to Type 6SA7. | | | | | | | | | 6SA7-GT | |
| 6SB7-Y | Pentagrid Converter | B2 | H | 6.3 | 0.3 | Mixer | 100 250 | - 1.0 - 1.0 | 100 100 | 10.2 10.0 | 3.6 3.8 | 50000 1.0\$ | Grid #1 Resistor, 20000 ohms Conversion Transcond., 950 micromhos | | | 6SB7-Y | |
| 6SC7 | Twin-Triode Amplifier | B2' | H | 6.3 | 0.3 | Each Unit as Amplifier | 250 | - 2.0 | — | — | 2.0 | 53000 | 1325 | 70 | — | — | 6SC7 |
| 6SF5 6SF5-GT | High-Mu Triodes | B2 C3 | H | 6.3 | 0.3 | Class A Amplifier | 100 250 | - 1.0 - 2.0 | — | — | 0.4 0.9 | 85000 66000 | 1150 1500 | 100 100 | — | — | 6SF5 6SF5-GT |
| 6SF7 | Diode-Remote-Cutoff Pentode | B2 | H | 6.3 | 0.3 | Pentode Unit as Class A Amplifier | 100 250 | - 1.0 - 1.0 | 100 100 | 4.3 4.1 | 13.5 13.9 | 200000 700000 | 1975 2050 | — | — | — | 6SF7 |
| 6SG7 | Remote-Cutoff Pentode | B2 | H | 6.3 | 0.3 | Class A Amplifier | 100 250 250 | - 1.0 - 1.0 - 2.5 | 100 125 150 | 3.2 4.4 3.4 | 8.2 11.0 9.2 | 250000 900000 1.0 + \$ | 4100 4700 4000 | — | — | — | 6SG7 |
| 6SH7 | Sharp-Cutoff Pentode | B2 | H | 6.3 | 0.3 | Class A Amplifier | 100 250 | - 1.0 - 1.0 | 100 150 | 2.1 4.1 | 5.3 10.8 | 350000 900000 | 4000 4900 | — | — | — | 6SH7 |
| 6SJ7 6SJ7-GT | Sharp-Cutoff Pentodes | B2 C3 | H | 6.3 | 0.3 | Class A Amplifier | 100 250 | - 3.0 - 3.0 | 100 100 | 0.9 0.8 | 2.9 3.0 | 700000 1.0 + \$ | 1575 1650 | — | — | — | 6SJ7 6SJ7-GT |
| 6SK7 6SK7-GT | Remote-Cutoff Pentodes | B2 C3 | H | 6.3 | 0.3 | Class A Amplifier | 100 250 | - 1.0 - 3.0 | 100 100 | 4.0 2.6 | 13.0 9.2 | 120000 800000 | 2350 2000 | — | — | — | 6SK7 6SK7-GT |
| 6SL7-GT | Twin-Triode Amplifier | C3 | H | 6.3 | 0.3 | Each Unit as Amplifier | 250 | - 2.0 | — | — | 2.3 | 44000 | 1600 | 70 | — | — | 6SL7-GT |
| 6SN7-GT | Twin-Triode Amplifier | C3 | H | 6.3 | 0.6 | Each Unit as Amplifier | For other characteristics, refer to Type 6J5. | | | | | | | | | 6SN7-GT | |
| 6SQ7 6SQ7-GT | Twin-Diode High-Mu Triodes | B2 C3 | H | 6.3 | 0.3 | Triode Unit as Class A Amplifier | 100 250 | - 1.0 - 2.0 | — | — | 0.5 1.1 | 110000 85000 | 925 1175 | 100 100 | — | — | 6SQ7 6SQ7-GT |

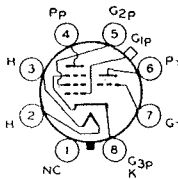
Three vertical rules before or after type No. = Miniature type having either 7 or 9 pins.
Two vertical rules before or after type No. = Metal type.
One vertical rule before or after type No. = GT or other larger glass type.
Light Face = Discontinued type.

For key to tube dimensions and, legend for base and envelope connection diagrams, see page 23.
† Power output is for two tubes at stated plate-to-plate load.
▲ Grids #2 and #4 are screen. Grid #3 is signal-input control grid.
Note 1: Subscript 1 on class of amplifier service (as AB₁) indicates that grid current does not flow during any part of input cycle.

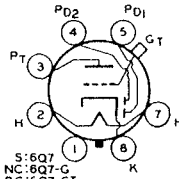
- ◆ For two tubes.
- § Megohms.
- * For grid of following tube
- ✕ Applied through plate resistor of 250000 ohms.
- Either ac or dc may be used on filament or heater, except as specifically noted. For use of dc on ac filament types, decrease stated grid volts by 1/2 (approx.) of filament voltage.
- ◇ For television damper service



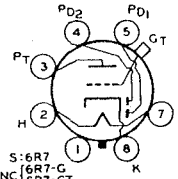
6P5-GT



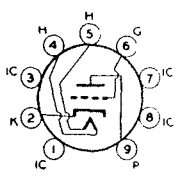
6P7-G



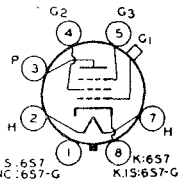
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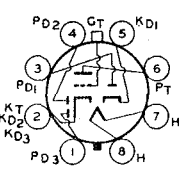
6R7(G, GT)



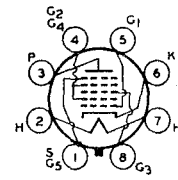
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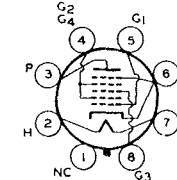
6S7 6S7-G



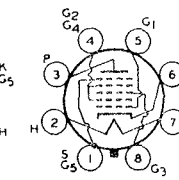
6S8-GT



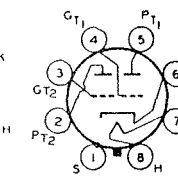
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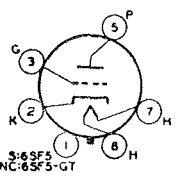
6SA7-GT



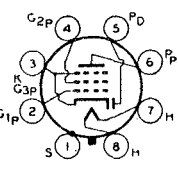
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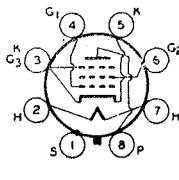
6SC7



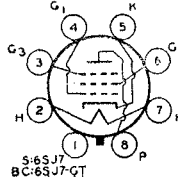
6SF5(GT)



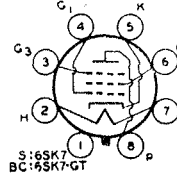
6SF7



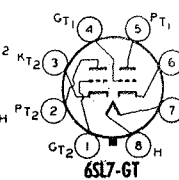
6SG7 6SH7



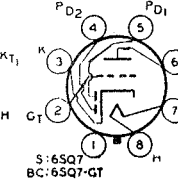
6SJ7(GT)



6SK7(GT)



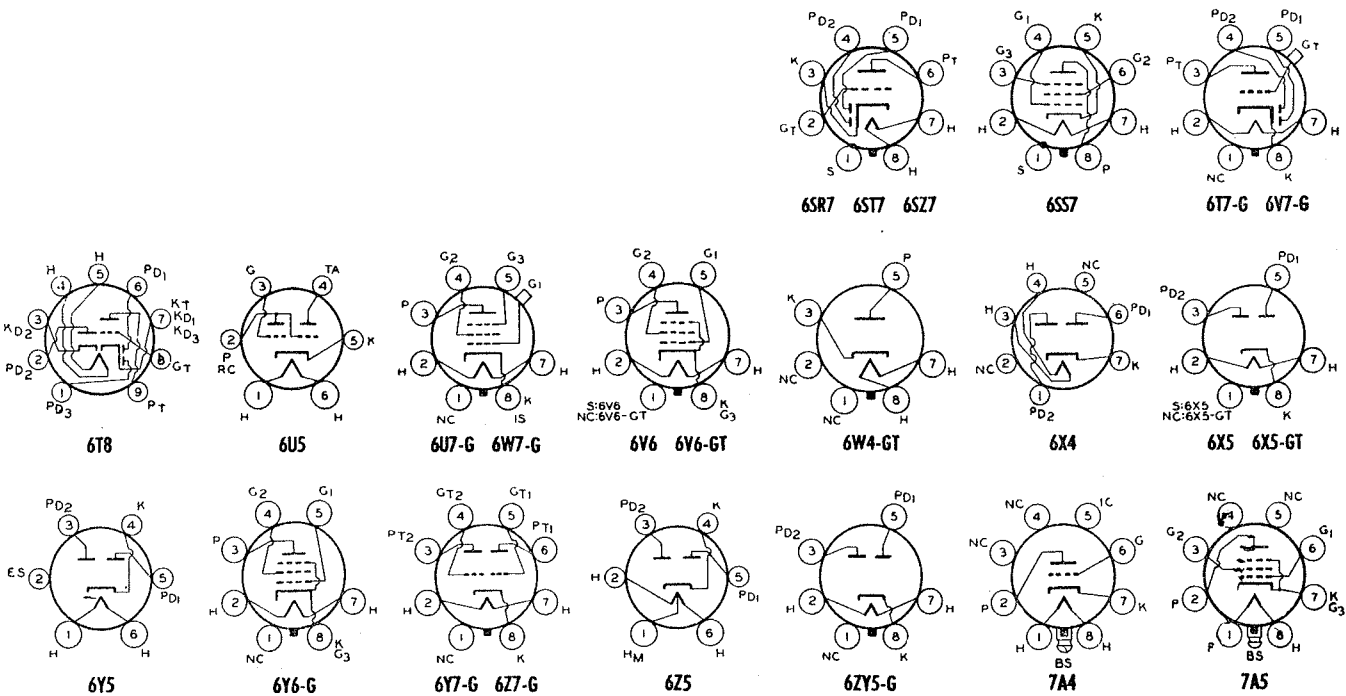
6SL7-GT



6SN7-GT

| Type | Name | Tube Dimensions | Cathode Type and Rating | | | Use Values to right give operating conditions and characteristics for indicated typical use | Plate Supply Volts | Grid Bias Volts | Screen Supply Volts | Screen Current Ma. | Plate Current Ma. | AC Plate Resistance Ohms | Trans-conductance (Grid-plate) μmhos | Amplification Factor | Load for Stated Power Output Ohms | Power Output Watts | Type | |
|--------|-----------------------------|-----------------|-------------------------|-------|------|--|---|---------------------------|------------------------|-----------------------|----------------------|-----------------------------|---|----------------------|--------------------------------------|-----------------------|-------------------|--------|
| | | | C.T. | Volts | Amp. | | | | | | | | | | | | | |
| 6SR7 | Duplex-Diode Triode | B2 | H | 6.3 | 0.3 | Triode Unit as Class A Amplifier | 250 | - 9.0 | — | — | 9.5 | 8500 | 1900 | 16 | 10000 | 0.3 | 6SR7 | |
| 6SS7 | Remote-Cutoff Pentode | B2 | H | 6.3 | 0.15 | Class A Amplifier | 100 250 | - 1.0 - 3.0 | 100 100 | 3.1 2.0 | 9.0 | 120000 1.05 | 1930 1850 | — | — | — | 6SS7 | |
| 6ST7 | Duplex-Diode Triode | B2 | H | 6.3 | 0.15 | Triode Unit as Amplifier | For other characteristics, refer to Type 6SR7. | | | | | | | | | | 6ST7 | |
| 6SZ7 | Duplex-Diode High-Mu Triode | B2 | H | 6.3 | 0.15 | Triode Unit as Class A Amplifier | 100 250 | - 1.0 - 3.0 | — | — | 0.8 1.0 | 61000 58000 | 1150 1200 | 70 70 | — | — | 6SZ7 | |
| 6T7-G | Duplex-Diode High-Mu Triode | D8 | H | 6.3 | 0.15 | Triode Unit as Class A Amplifier | 135 250 | - 1.5 - 3.0 | — | — | 0.9 1.2 | 65000 62000 | 1000 1050 | 65 65 | — | — | 6T7-G | |
| 6T8 | Triple-Diode High-Mu Triode | 80a | H | 6.3 | 0.45 | Triode Unit as Class A Amplifier | 100 250 | - 1 - 3 | — | — | 0.8 1.0 | 54000 58000 | 1300 1200 | 70 70 | — | — | 6T8 | |
| 6U5 | Electron-Ray Tube | D4 | H | 6.3 | 0.3 | Visual Indicator | Plate & Target Supply = 125 volts. Triode Plate Resistor = 0.5 meg. Target Current = 1.0 ma. Grid Bias, -8 volts; Shadow Angle, 0°. Bias, 0 volts; Angle, 90°. Plate Current, 0.19 ma. Plate & Target Supply = 250 volts. Triode Plate Resistor = 1.0 meg. Target Current = 4.0 ma. Grid Bias, -22 volts; Shadow Angle, 0°. Bias, 0 volts; Angle, 90°. Plate Current, 0.24 ma. | | | | | | | | | | 6U5 | |
| 6U7-G | Remote-Cutoff Pentode | D12a | H | 6.3 | 0.3 | Class A Amplifier Mixer in Superhetrodyne | 100 250 | - 3.0 - 3.0 | 100 100 | 2.2 2.0 | 8.0 8.2 | 250000 800000 | 1500 1600 | — | — | — | 6U7-G | |
| 6V6 | Beam Power Amplifiers | C2 | H | 6.3 | 0.45 | Single-Tube Class A Amplifier | 180 250 315 | - 8.5 - 12.5 - 13.0 | 180 250 225 | 3.0 4.5 2.2 | 29.0 45.0 34.0 | 58000 52000 77000 | 3700 4100 3750 | — | — | 5500 5000 8500 | 2.0 4.5 5.5 | 6V6 |
| 6V6-GT | Beam Power Amplifiers | C3 | H | 6.3 | 0.45 | Push-Pull Class AB ₁ Amplifier | 250 285 | - 15.0 - 19.0 | 250 285 | 5.0 4.0 | 70.0 70.0 | — | — | — | — | 10000 8000 | 10.0 14.0 | 6V6-GT |
| 6V7-G | Duplex-Diode Triode | D8 | H | 6.3 | 0.3 | Triode Unit as Amplifier | For other characteristics, refer to Type 85. | | | | | | | | | | 6V7-G | |
| 6W4-GT | Half-Wave Rectifier | C2a | H | 6.3 | 1.2 | With Capacitive-Input Filter | Max. A-C Plate Volts (RMS), 350 Max. Peak Inverse Volts 3500φ, 1250 Max. D-C Output Ma., 100 Max. Peak Plate Ma., 600 Min. Total Effect. Supply Imped. per Plate, 145 ohms. | | | | | | | | | | 6W4-GT | |
| 6W7-G | Sharp-Cutoff Pentode | D8 | H | 6.3 | 0.15 | Class A Amplifier | 250 | - 3.0 | 100 | 0.5 | 2.0 | 1.5§ | 1225 | — | — | — | 6W7-G | |
| 6X4 | Full-Wave Rectifier | B3 | H | 6.3 | 0.6 | With Capacitive-Input Filter | Max. A-C Volts per Plate (RMS), 325 Max. Peak Inverse Volts, 1250 Max. D-C Output Ma., 70 Max. Peak Plate Ma., 210 Min. Total Effect. Supply Imped. per Plate, 150 ohms | | | | | | | | | | 6X4 | |
| 6X5 | Full-Wave Rectifiers | C2 | H | 6.3 | 0.6 | With Capacitive-Input Filter | Max. A-C Volts per Plate (RMS), 325 Max. Peak Inverse Volts, 1250 Max. D-C Output Ma., 70 Max. Peak Plate Ma., 210 Min. Value of Input Choke, 8 henries | | | | | | | | | | 6X5 | |
| 6X5-GT | Full-Wave Rectifiers | C3 | H | 6.3 | 0.6 | With Inductive-Input Filter | Max. A-C Volts per Plate (RMS), 450 Max. Peak Inverse Volts, 1250 Max. D-C Output Ma., 70 Max. Peak Plate Ma., 210 Min. Value of Input Choke, 8 henries | | | | | | | | | | 6X5-GT | |
| 6Y5 | Full-Wave Rectifier | D5 | H | 6.3 | 0.8 | With Capacitive-Input Filter | Max. A-C Volts per Plate (RMS), 350 Max. D-C Output Ma., 50 | | | | | | | | | | 6Y5 | |
| 6Y6-G | Beam Power Amplifier | D10 | H | 6.3 | 1.25 | Single-Tube Class A Amplifier | 135 200 | - 13.5 - 14.0 | 135 135 | 3.5 2.2 | 58.0 61.0 | 9300 18300 | 7000 7100 | — | — | 2000 2600 | 3.6 6.0 | 6Y6-G |
| 6Y7-G | Twin-Triode Amplifier | D3 | H | 6.3 | 0.6 | Class B Amplifier | For other characteristics, refer to Type 79. | | | | | | | | | | 6Y7-G | |
| 6Z5 | Full-Wave Rectifier | D5 | H | 6.3 | 0.8 | With Capacitive-Input Filter | Max. A-C Volts per Plate (RMS), 230 Max. D-C Output Ma., 60 | | | | | | | | | | 6Z5 | |
| 6Z7-G | Twin-Triode Amplifier | D3 | H | 6.3 | 0.3 | Class B Amplifier | 135 180 | 0 | — | — | — | — | — | — | — | 9000 12000 | 2.5 4.2 | 6Z7-G |
| 6ZY5-G | Full-Wave Rectifier | D3 | H | 6.3 | 0.3 | With Capacitive-Input Filter | Max. A-C Volts per Plate (RMS), 325 Max. Peak Inverse Volts, 1250 Max. D-C Output Ma., 40 Max. Peak Plate Ma., 120 Min. Total Effect. Supply Imped. per Plate, 225 ohms | | | | | | | | | | 6ZY5-G | |
| 7A4 | Medium-Mu Triode | B5 | H | 6.3 | 0.3 | Amplifier | For other characteristics, refer to Type 6J5. | | | | | | | | | | 7A4 | |
| 7A5 | Beam Power Amplifier | C2a | H | 6.3 | 0.75 | Class A Amplifier | 110 125 | - 7.5 - 9.0 | 110 125 | 3.0 3.3 | 40.0 44.0 | 16000 17000 | 5800 6000 | — | — | 2500 2700 | 1.5 2.2 | 7A5 |

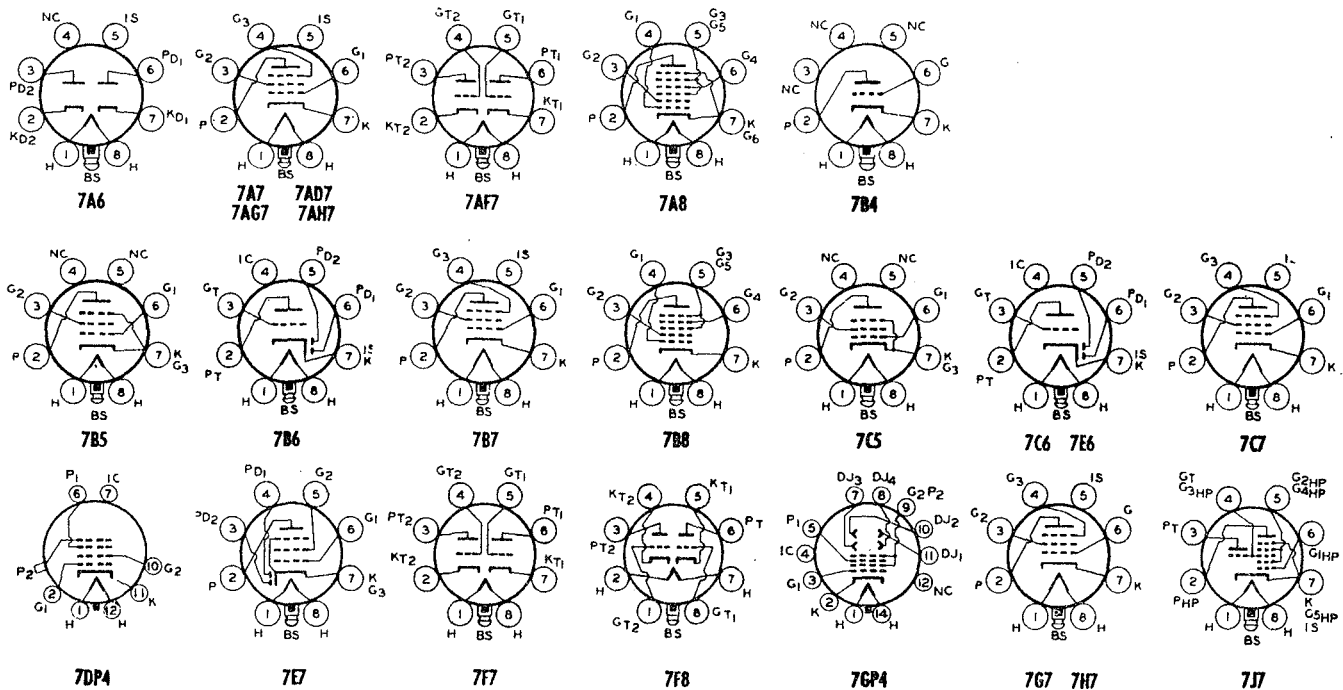
For footnotes, see preceding page



7A6 to 7J7

| Type | Name | Tube Dimensions | Cathode Type and Rating | | | Use Values to right give operating conditions and characteristics for indicated typical use | Plate Supply Volts | Grid Bias Volts | Screen Supply Volts | Screen Current Ma. | Plate Current Ma. | AC Plate Resistance Ohms | Trans-conductance (Grid-plate) μmhos | Amplification Factor | Load for Stated Power Output Ohms | Power Output Watts | Type |
|------|-----------------------------|-----------------|-------------------------|-------|------|--|--------------------|-----------------|---------------------|--------------------|-------------------|--------------------------|---|----------------------|-----------------------------------|--------------------|------|
| | | | C. T. | Volts | Amp. | | | | | | | | | | | | |
| 7A6 | Twin Diode | B5 | H | 6.3 | 0.15 | Detector Rectifier | | | | | | | | | | 7A6 | |
| 7A7 | Remote-Cutoff Pentode | B5 | H | 6.3 | 0.3 | Class A Amplifier | | | | | | | | | | 7A7 | |
| 7AD7 | Power Pentode | C2a | H | 6.3 | 0.6 | Class A Amplifier | | | | | | | | | | 7AD7 | |
| 7AF7 | Medium-Mu Twin Triode | B5 | H | 6.3 | 0.3 | Each Unit as Class A Amplifier | | | | | | | | | | 7AF7 | |
| 7AG7 | Sharp-Cutoff Pentode | B5 | H | 6.3 | 0.15 | Class A Amplifier | | | | | | | | | | 7AG7 | |
| 7AH7 | Sharp-Cutoff Pentode | B5 | H | 6.3 | 0.15 | Class A Amplifier | | | | | | | | | | 7AH7 | |
| 7A8 | Octode Converter | B5 | H | 6.3 | 0.15 | Converter | | | | | | | | | | 7A8 | |
| 7B4 | High-Mu Triode | B5 | H | 6.3 | 0.3 | Amplifier | | | | | | | | | | 7B4 | |
| 7B5 | Power Amplifier Pentode | C2a | H | 6.3 | 0.4 | Class A Amplifier | | | | | | | | | | 7B5 | |
| 7B6 | Duplex-Diode High-Mu Triode | B5 | H | 6.3 | 0.3 | Triode Unit as Amplifier | | | | | | | | | | 7B6 | |
| 7B7 | Remote-Cutoff Pentode | B5 | H | 6.3 | 0.15 | Class A Amplifier | | | | | | | | | | 7B7 | |
| 7B8 | Pentagrid Converter | B5 | H | 6.3 | 0.3 | Converter | | | | | | | | | | 7B8 | |
| 7C5 | Beam Power Amplifier | C2a | H | 6.3 | 0.45 | Class A Amplifier | | | | | | | | | | 7C5 | |
| 7C6 | Duplex-Diode High-Mu Triode | B5 | H | 6.3 | 0.15 | Triode Unit as Class A Amplifier | | | | | | | | | | 7C6 | |
| 7C7 | Sharp-Cutoff Pentode | B5 | H | 6.3 | 0.15 | Class A Amplifier | | | | | | | | | | 7C7 | |
| 7DP4 | Directly Viewed Kinescope | 11 | H | 6.3 | 0.6 | Picture Reproduction | | | | | | | | | | 7DP4 | |
| 7E6 | Duplex-Diode Triode | B5 | H | 6.3 | 0.3 | Triode Unit as Amplifier | | | | | | | | | | 7E6 | |
| 7E7 | Duplex-Diode Pentode | B5 | H | 6.3 | 0.3 | Pentode Unit as Class A Amplifier | | | | | | | | | | 7E7 | |
| 7F7 | Twin-Triode Amplifier | B5 | H | 6.3 | 0.3 | Each Unit as Amplifier | | | | | | | | | | 7F7 | |
| 7F8 | Twin-Triode Amplifier | B5 | H | 6.3 | 0.3 | Each Unit as Class A Amplifier | | | | | | | | | | 7F8 | |
| 7G7 | Sharp-Cutoff Pentode | B5 | H | 6.3 | 0.45 | Class A Amplifier | | | | | | | | | | 7G7 | |
| 7GP4 | Directly Viewed Kinescope | K | H | 6.3 | 0.6 | Picture Reproduction | | | | | | | | | | 7GP4 | |
| 7H7 | Sharp-Cutoff Pentode | B5 | H | 6.3 | 0.3 | Class A Amplifier | | | | | | | | | | 7H7 | |
| 7J7 | Triode-Heptode Converter | B5 | H | 6.3 | 0.3 | Triode Unit as Oscillator Heptode Unit as Mixer | | | | | | | | | | 7J7 | |

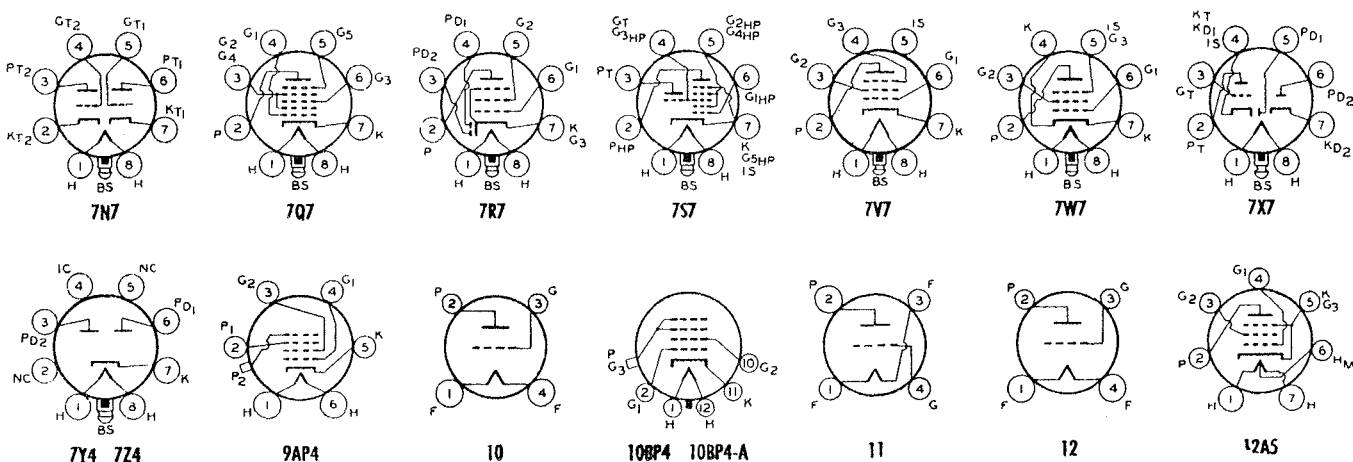
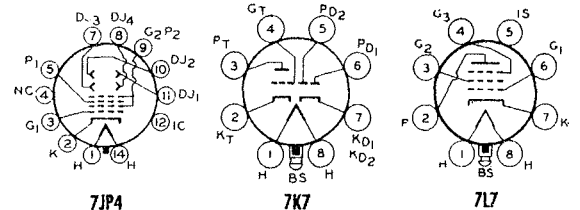
For footnotes, see following page.



| Type | Name | Tube Dimensions | Cathode Type and Rating | | | Use Values to right give operating conditions and characteristics for indicated typical use | Plate Supply Volts | Grid Bias Volts | Screen Supply Volts | Screen Current Ma | Plate Current Ma | AC Plate Resistance Ohms | Trans-conductance (Grid-plate) μmhos | Amplification Factor | Load for Stated Power Output Ohms | Power Output Watts | Type | |
|----------|---|---|-------------------------|-------------|------------|--|---|--|------------------------|----------------------|---------------------|-----------------------------|--|--|--|--|------------|-----|
| | | | C. T. | Volts | Amp. | | | | | | | | | | | | | |
| 7J4 | Directly Viewed Kinescope | J | H | 6.3 | 0.6 | Picture Reproduction | Focus: Electrostatic Deflection: Electrostatic Phosphor: No. 4 Size of Picture with Rounded Ends: 4 3/8" x 6 1/2" | Anode-No. 2 and Grid-No. 2 Volts, 6000 (max.) Anode-No. 1 Volts for Focus, 1620 to 2400 (2800 max.) Anode-No. 1 Current Range, -15 to +10 microamperes Grid-No. 1 Volts for Visual Cutoff, -72 to -168 Deflection Factors: DJ ₁ and DJ ₂ (nearer screen), 31 to 41 vdc./in./kv; DJ ₃ and DJ ₄ (nearer base), 25 to 34 vdc./in./kv | | | | | | | | 7J4 | | |
| 7K7 | Twin-Diode-High-Mu Triode | B5 | H | 6.3 | 0.3 | Triode Unit as Class A Amplifier | 250 | - 2.0 | 100 | 2.4 | 2.3 | 44000 | 1600 | 70 | | | 7K7 | |
| 7L7 | RF Amplifier Pentode | B5 | H | 6.3 | 0.3 | Class A Amplifier | 100 250 | - 1.0 - 1.5 | 100 100 | 5.5 4.5 | 5.5 1.0§ | 100000 3100 | 3000 | | | | 7L7 | |
| 7N7 | Twin-Triode Amplifier | C2a | H | 6.3 | 0.6 | Each Unit as Class A Amplifier | For other characteristics, refer to Type 6SN7-GT | | | | | | | | | | 7N7 | |
| 7Q7 | Pentagrid Converter | B5 | H | 6.3 | 0.3 | Converter | 100 250 | - 2.0 - 2.0 | 100 100 | 8.5 8.5 | 3.3 3.5 | 50000 1.0§ | Grid #1 Resistor, 20000 ohms. Conversion Transcond., 550 micromhos. | | | 7Q7 | | |
| 7R7 | Duplex-Diode Pentode | B6 | H | 6.3 | 0.3 | Pentode Unit as Class A Amplifier | 100 250 | - 1.0 - 1.0 | 100 100 | 2.2 2.1 | 5.5 5.7 | 35000 1.0§ | 3000 | | | | 7R7 | |
| 7S7 | Triode-Heptode Converter | B5 | H | 6.3 | 0.3 | Triode Unit as Oscillator Heptode Unit as Mixer | 100 250 | - 2.0 - 2.0 | 100 100 | 3.0 3.0 | 1.9 1.8 | 50000 1.25§ | Triode-Grid Resistor, 50000 ohms Triode-Grid & Heptode-Grid Current, 0.4 ma. Triode-Grid & Heptode-Grid Current, 0.3 ma. Conversion Transcond., 500 micromhos. Conversion Transcond., 525 micromhos. | | | 7S7 | | |
| 7V7 | RF Amplifier Pentode | B5 | H | 6.3 | 0.45 | Class A Amplifier | 300 | | 150 | 3.9 | 10.0 | 300000 | 5800 | | | Cath. Bias Res., 160 ohms | 7V7 | |
| 7W7 | RF Amplifier Pentode | B5 | H | 6.3 | 0.45 | Class A Amplifier | For other characteristics, refer to Type 7V7. | | | | | | | | | | 7W7 | |
| 7X7 | Twin Diode-High-Mu Triode | C2a | H | 6.3 | 0.3 | Triode Unit as Class A Amplifier | 100 250 | 0 - 1.0 | | | 1.2 1.9 | 85000 67000 | 1000 1500 | 85 100 | | | 7X7 | |
| 7Y4 | Full-Wave Rectifier | B5 | H | 6.3 | 0.5 | With Capacitive-Input Filter With Inductive-Input Filter | Max. A-C Volts per Plate (RMS), 325 Max. Peak Inverse Volts, 1250 | | | | | | | Max. D-C Output Ma., 70 Max. Peak Plate Ma., 180 | Min. Total Effect. Supply Imped. per Plate, 150 ohms. | | 7Y4 | |
| 7Z4 | Full-Wave Rectifier | C2a | H | 6.3 | 0.9 | With Capacitive-Input Filter With Inductive-Input Filter | Max. A-C Volts per Plate (RMS), 325 Max. Peak Inverse Volts, 1250 | | | | | | | Max. D-C Output Ma., 100 Max. Peak Plate Ma., 300 | Min. Total Effect. Supply Imped. per Plate, 75 ohms Min. Value of Input Choke, 10 henries | | 7Z4 | |
| 9AP4 | Directly Viewed Kinescope | O | H | 2.5 | 2.1 | Picture Reproduction | Focus: Electrostatic Deflection: Magnetic Phosphor: No. 4 Picture Size: 5 3/8" x 7 1/4" | Anode-No. 2 Volts, 7000 (max.) Anode-No. 1 Volts for Focus, 1192 to 1788 (2000 max.) Grid-No. 2 Volts, 250 (300 max.) | | | | | | | | Grid-No. 1 Volts for Visual Cutoff, -20 to -60 Grid-No. 1 Signal Voltage, (Peak-to-Peak) value, 30 volts approx. | 9AP4 | |
| 10Q | Power Amplifier Triode | E3 | F | 7.5 | 1.25 | Class A Amplifier | 350 425 | -32.0 -40.0 | | | | 16.0 18.0 | 5150 5000 | 1550 1600 | 8.0 8.0 | 11000 10200 | 0.9 1.6 | 10Q |
| 10BP4 | Directly Viewed Kinescope | This type has clear glass face plate, but in other respects is same as 10BP4-A. | | | | | | | | | | | | | | | 10BP4 | |
| 10BP4-A | Directly Viewed Kinescope "With Filterglass" Face Plate | M | H | 6.3 | 0.3 | Picture Reproduction | Focus: Magnetic Deflection: Magnetic Phosphor: No. 4 Picture Size: 6 1/8" x 9 1/8" | Requires External, Double-Field, Ion-Trap Magnet | | | | | | | | Anode Volts, 12000 max. Grid-No. 2 Volts, 250 (410 max.) Grid-No. 1 Volts for Visual Cutoff, -27 to -63 volts Grid-No. 1—Circuit-Resistance, 1.5 megohms max. | 10BP4-A | |
| 11 12 | Detector* Amplifier Triode | D2a D2a | D.C. F | 1.1 | 0.25 | Class A Amplifier | 90 135 | - 4.5 - 10.5 | | | 2.5 3.0 | 15500 15000 | 425 440 | 6.6 6.6 | | | 11 12 | |
| 12A5 | Power Amplifier Pentode | D5 | H | 6.3 12.6 | 0.6 0.3 | Class A Amplifier | 100 180 | -15.0 -25.0 | 100 180 | 3.0 8.0 | 17.0 45.0 | 50000 35000 | 1700 2400 | | 4500 3300 | 0.8 3.4 | 12A5 | |

Three vertical rules before or after type No. = Miniature type having either 7 or 9 pins.
Two vertical rules before or after type No. = Metal type.
One vertical rule before or after type No. = GT or other larger glass type.
Light Face = Discontinued type.
For key to tube dimensions and, legend for base and envelope connection diagrams, see page 23.
* For Grid-leak Detection—plate volts 45, grid return to + filament or to cathode.
a Grids #3 and #5 are screen. Grid No. 4 is signal-input grid.

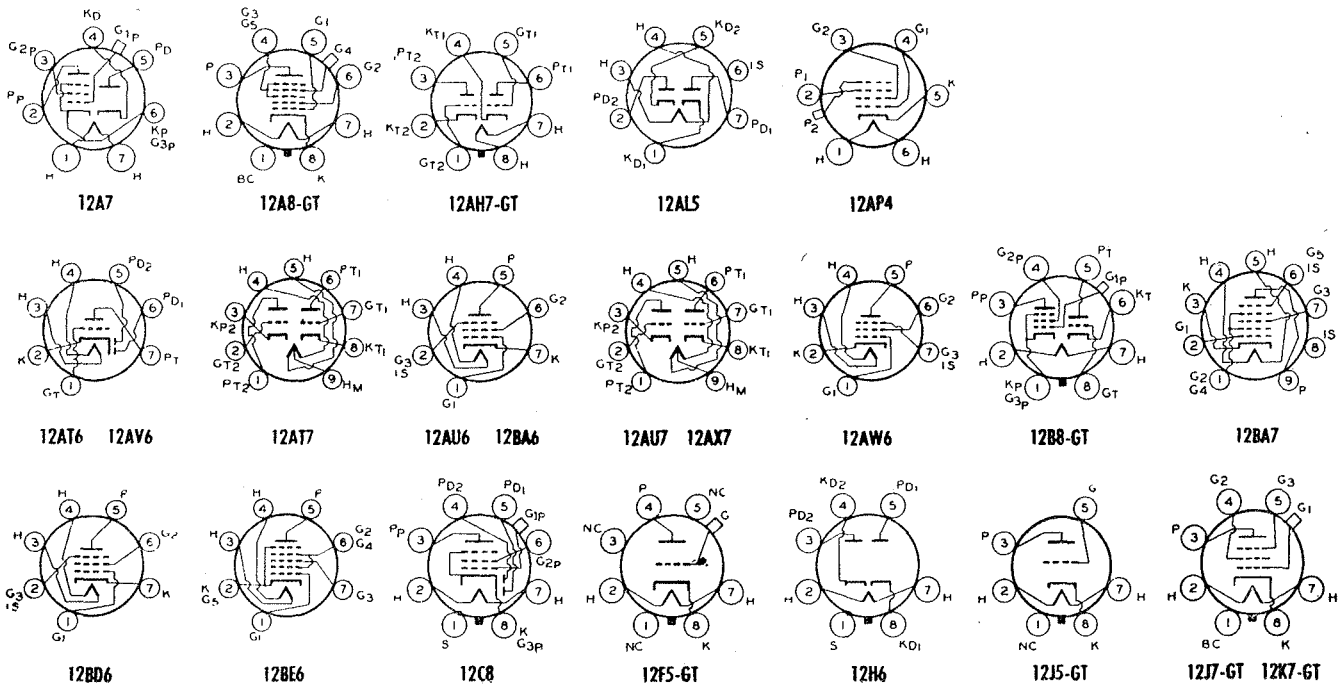
▲ Grids #2 and #4 are screen. Grid #3 is signal-input control grid.
▲ Supply voltage applied through 20000-ohm voltage-dropping resistor.
▲ 50000 ohms.
▲ Megohms.
■ Either ac or dc may be used on filament or heater, except as specifically noted. For use of dc on ac filament types, decrease stated grid volts by 1/2 (approx.) of filament voltage.
● Superseded by 10-Y. See Power and Gas Tubes Booklet PG-101A.



12A7 to 12K7-GT

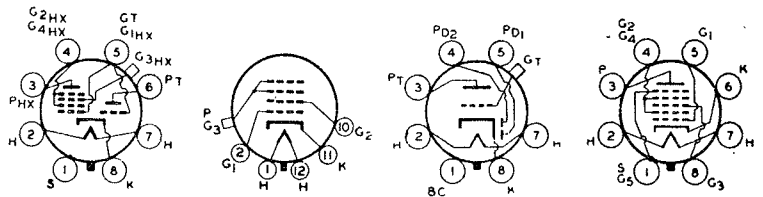
| Type | Name | Tube Dimensions | Cathode Type and Rating | | | Use Values to right give operating conditions and characteristics for indicated typical use | Plate Supply Volts | Grid Bias Volts | Screen Supply Volts | Screen Current Ma. | Plate Current Ma. | AC Plate Resistance Ohms | Trans-conductance (Grid-plate) μ mhos | Amplification Factor | Load for Stated Power Output Ohms | Power Output Watts | Type |
|----------|-----------------------------|-----------------|-------------------------|-------------|-------------|---|--------------------|--|---------------------|---|-------------------|--------------------------|---|----------------------|-----------------------------------|--------------------|------|
| | | | C. T. | Volts | Amp. | | | | | | | | | | | | |
| 12A7 | Rectifier-Pentode | D9 | H | 12.6 | 0.3 | 135 | -13.5 | 135 | 2.5 | 9.0 | 102000 | 975 | — | 13500 | 0.55 | 12A7 | |
| 12A8-GT | Pentagrid Converter | C3 | H | 12.6 | 0.15 | Maximum A-C Plate Voltage..... 125 Volts, RMS Maximum D-C Output Current..... 30 Milliamperes | | | | | | | | | | 12A8-GT | |
| 12AH7-GT | Twin Triode | C0a | H | 12.6 | 0.15 | 100 180 | - 3.6 - 6.5 | — | — | 3.7 7.6 | 10300 8400 | 1550 1900 | 16 16 | — | — | 12AH7-GT | |
| 12AL5 | Twin-Diode | A1 | H | 12.6 | 0.15 | For other characteristics, refer to Type 6AL5. | | | | | | | | | | 12AL5 | |
| 12AP4 | Directly Viewed Kinescope | 0 | H | 2.5 | 2.1 | Focus: Electrostatic Deflection: Magnetic Phosphor: No. 4 Picture Size: 7 $\frac{3}{8}$ " x 9 $\frac{3}{4}$ " | | Anode-No. 2 Volts, 7000 (max.) Anode-No. 1 Volts for Focus, 1192 to 1788 (2000 max.) Grid-No. 2 Volts 250 (300 max.) | | Grid-No. 1 Volts for Visual Cutoff, -20 to -60 Grid-No. 1 Signal Voltage, (Peak-to-Peak) value, 30 volts approx. | | | | | | 12AP4 | |
| 12AT6 | Duplex-Diode High-Mu Triode | B0 | H | 12.6 | 0.15 | For other characteristics, refer to Type 6AT6. | | | | | | | | | | 12AT6 | |
| 12AT7 | High-Mu Twin Triode | B0a | H | 6.3 12.6 | 0.3 0.15 | 100 250 | — | — | — | 3.7 10.0 | 15000 10900 | 4000 5500 | 60 60 | — | — | 12AT7 | |
| 12AU6 | RF Amplifier Pentode | B0 | H | 12.6 | 0.15 | For other characteristics, refer to Type 6AU6. | | | | | | | | | | 12AU6 | |
| 12AU7 | Twin-Triode Amplifier | B0a | H | 6.3 12.6 | 0.3 0.15 | 100 250 | 0 - 8.5 | — | — | 11.8 10.5 | 6500 7700 | 3100 2200 | 20 17 | — | — | 12AU7 | |
| 12AV6 | Twin-Diode High-Mu Triode | B0 | H | 12.6 | 0.15 | For other characteristics, refer to Type 6AV6. | | | | | | | | | | 12AV6 | |
| 12AW6 | RF Amplifier Pentode | B0 | H | 12.6 | 0.15 | For other characteristics, refer to Type 6AG5. | | | | | | | | | | 12AW6 | |
| 12AX7 | High-Mu Twin Triode | B0a | H | 6.3 12.6 | 0.3 0.15 | 100 250 | - 1.0 - 2.0 | — | — | 0.5 1.2 | 80000 62500 | 1250 1600 | 100 100 | — | — | 12AX7 | |
| 12B8-GT | Triode-Pentode | C10a | H | 12.6 | 0.3 | 90 | 0 | — | — | 2.8 | 37000 | 2400 | 90 | — | — | 12B8-GT | |
| 12BA6 | RF Amplifier Pentode | B0 | H | 12.6 | 0.15 | For other characteristics, refer to Type 6BA6. | | | | | | | | | | 12BA6 | |
| 12BA7 | Pentagrid Converter | B0a | H | 12.6 | 0.15 | For other characteristics, refer to Type 6BA7. | | | | | | | | | | 12BA7 | |
| 12BD6 | Remote-Cutoff Pentode | B0 | H | 12.6 | 0.15 | For other characteristics, refer to Type 6BD6. | | | | | | | | | | 12BD6 | |
| 12BE6 | Pentagrid Converter | B0 | H | 12.6 | 0.15 | For other characteristics, refer to Type 6BE6. | | | | | | | | | | 12BE6 | |
| 12C8 | Duplex-Diode Pentode | C1 | H | 12.6 | 0.15 | 250 | - 3.0 | 125 | 2.3 | 10.0 | 600000 | 1325 | — | — | — | 12C8 | |
| 12F5-GT | High-Mu Triode | C2b | H | 12.6 | 0.15 | 90 \times Cath. Bias, 3500 ohms. Screen Resistor = 1.1 meg. Grid Resistor, ** Gain per stage = 55 300 \times Cath. Bias, 1600 ohms. Screen Resistor = 1.2 meg. / 0.5 megohm. (Gain per stage = 79) | | | | | | | | | | 12F5-GT | |
| 12H6 | Twin-Diode | A1a | H | 12.6 | 0.15 | For other ratings, refer to Type 6H6. | | | | | | | | | | 12H6 | |
| 12J5-GT | Medium-Mu Triode | C3 | H | 12.6 | 0.15 | For other characteristics, refer to Type 6J5. | | | | | | | | | | 12J5-GT | |
| 12J7-GT | Sharp-Cutoff Pentode | C3 | H | 12.6 | 0.15 | For other characteristics, refer to Type 6J7. | | | | | | | | | | 12J7-GT | |
| 12K7-GT | Remote-Cutoff Pentode | C3 | H | 12.6 | 0.15 | For other characteristics, refer to Type 6K7. | | | | | | | | | | 12K7-GT | |

For footnotes, see following page.

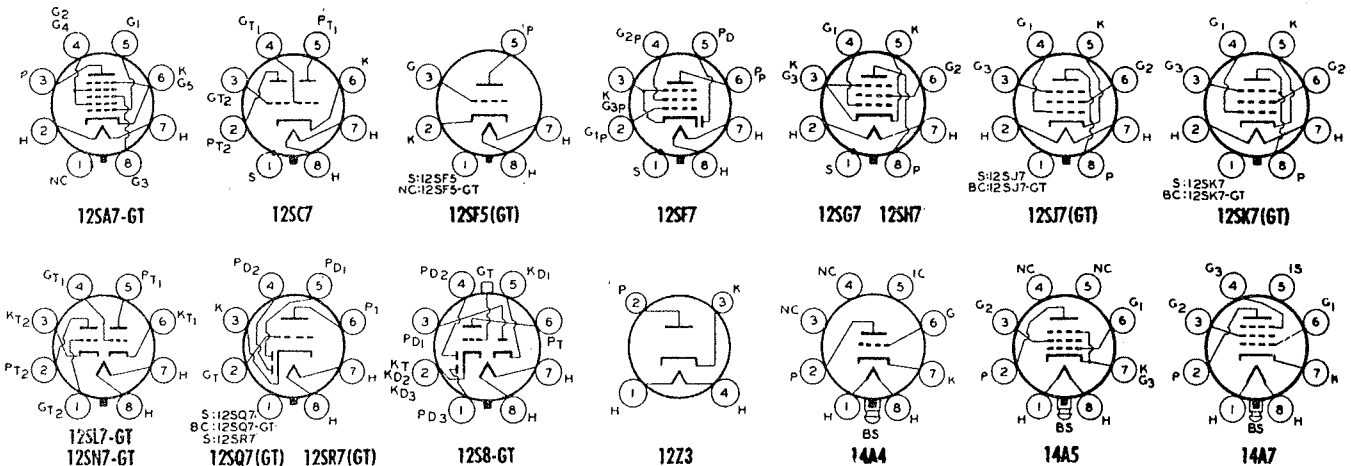


| Type | Name | Tube Dimensions | Cathode Type and Rating | | Use <small>Values to right give operating conditions and characteristics for indicated typical use</small> | Plate Supply Volts | Grid Bias Volts | Screen Supply Volts | Screen Current Ma | Plate Current Ma | AC Plate Resistance Ohms | Trans-conductance (Grid-plate) μmhos | Amplification Factor | Load for Stated Power Output Ohms | Power Output Watts | Type |
|----------|---|--|-------------------------|-------|---|-----------------------|--------------------|------------------------|----------------------|---------------------|-----------------------------|--|----------------------|--------------------------------------|-----------------------|----------|
| | | | C. T. | Volts | | | | | | | | | | | | |
| 12K8 | Triode-Hexode Converter | C1 | H | 12.6 | 0.15 | | | | | | | | | | | 12K8 |
| 12LP4 | Directly Viewed Kinescope | This type has clear glass face plate, but in other respects is same as 12LP4-A | | | | | | | | | | | | | | 12LP4 |
| 12LP4-A | Directly Viewed Kinescope With "Filterglass" Face Plate | H | H | 6.3 | 0.6 | | | | | | | | | | | 12LP4-A |
| 12Q7-GT | Duplex-Diode High-Mu Triode | C3 | H | 12.6 | 0.15 | | | | | | | | | | | 12Q7-GT |
| 12SA7 | Pentagrid Converter | B2 | H | 12.6 | 0.15 | | | | | | | | | | | 12SA7 |
| 12SA7-GT | Pentagrid Converter | C3 | H | 12.6 | 0.15 | | | | | | | | | | | 12SA7-GT |
| 12SC7 | Twin-Triode Amplifier | B2 | H | 12.6 | 0.15 | | | | | | | | | | | 12SC7 |
| 12SF5 | High-Mu Triode | B2 | H | 12.6 | 0.15 | | | | | | | | | | | 12SF5 |
| 12SF5-GT | High-Mu Triode | C3 | H | 12.6 | 0.15 | | | | | | | | | | | 12SF5-GT |
| 12SF7 | Diode-Remote-Cutoff Pentode | B2 | H | 12.6 | 0.15 | | | | | | | | | | | 12SF7 |
| 12SG7 | Semi-Remote-Cutoff Pentode | B2 | H | 12.6 | 0.15 | | | | | | | | | | | 12SG7 |
| 12SH7 | Sharp-Cutoff Pentode | B2 | H | 12.6 | 0.15 | | | | | | | | | | | 12SH7 |
| 12SJ7 | Sharp-Cutoff Pentodes | B2 | H | 12.6 | 0.15 | | | | | | | | | | | 12SJ7 |
| 12SJ7-GT | Sharp-Cutoff Pentodes | C3 | H | 12.6 | 0.15 | | | | | | | | | | | 12SJ7-GT |
| 12SK7 | Remote-Cutoff Pentodes | B2 | H | 12.6 | 0.15 | | | | | | | | | | | 12SK7 |
| 12SK7-GT | Remote-Cutoff Pentodes | C3 | H | 12.6 | 0.15 | | | | | | | | | | | 12SK7-GT |
| 12SL7-GT | Twin-Triode Amplifier | C3 | H | 12.6 | 0.15 | | | | | | | | | | | 12SL7-GT |
| 12SN7-GT | Twin-Triode Amplifier | C3 | H | 12.6 | 0.3 | | | | | | | | | | | 12SN7-GT |
| 12SQ7 | Duplex-Diode High-Mu Triode | B2 | H | 12.6 | 0.15 | | | | | | | | | | | 12SQ7 |
| 12SQ7-GT | Duplex-Diode High-Mu Triode | C3 | H | 12.6 | 0.15 | | | | | | | | | | | 12SQ7-GT |
| 12SR7 | Duplex-Diode Triode | B2 | H | 12.6 | 0.15 | | | | | | | | | | | 12SR7 |
| 12SR7-GT | Duplex-Diode Triode | C3 | H | 12.6 | 0.15 | | | | | | | | | | | 12SR7-GT |
| 12S8-GT | Triple-Diode-High-Mu Triode | C8s | H | 12.6 | 0.15 | | | | | | | | | | | 12S8-GT |
| 12Z3 | Half-Wave Rectifier | D8 | H | 12.6 | 0.3 | | | | | | | | | | | 12Z3 |
| 14A4 | Medium-Mu Triode | B5 | H | 12.6 | 0.15 | | | | | | | | | | | 14A4 |
| 14A5 | Beam Power Amplifier | B5 | H | 12.6 | 0.15 | | | | | | | | | | | 14A5 |
| 14A7 | Remote-Cutoff Pentode | B5 | H | 12.6 | 0.15 | | | | | | | | | | | 14A7 |

Three vertical rules before or after type No. = Miniature type having either 7 or 9 pins.
 Two vertical rules before or after type No. = Metal type.
 One vertical rule before or after type No. = GT or other larger glass type.
 Light Face = Discontinued type.
 For key to tube dimensions and legend for base and envelope connection diagrams, see page 23.
 • Grids #3 and #5 are screen. Grid No. 4 is signal-input grid.
 □ Grid #2 tied to plate.
 ▲ Grids #2 and #4 are screen. Grid #3 is signal-input control grid.
 ** For grid of following tube.
 * Applied through plate resistor of 250000 ohms.
 ■ Either ac or dc may be used on filament or heater, except as specifically noted. For use of dc on ac filament types, decrease stated grid volts by 1/2 (approx.) of filament voltage.



12K8 12LP4 12LP4-A 12Q7-GT 12SA7

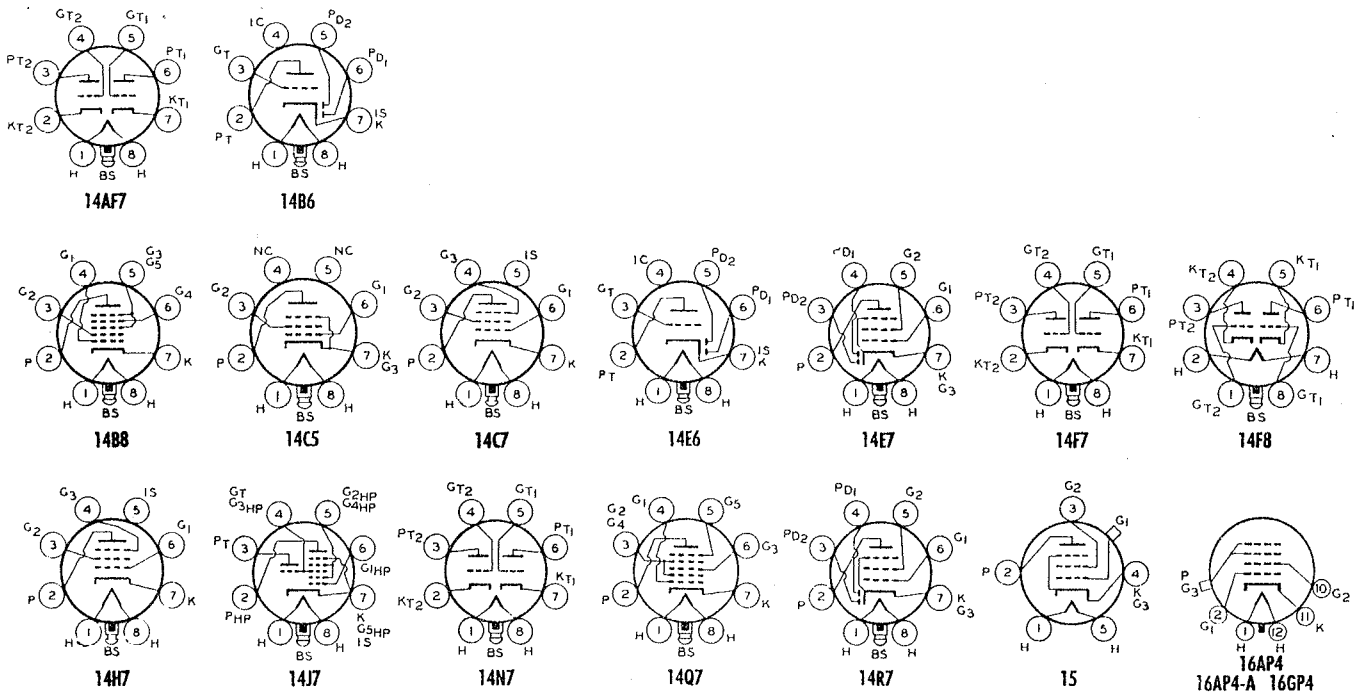


14AF7 to 16GP4

| Type | Name | Tube Dimensions | Cathode Type and Rating | | | Use Values to right give operating conditions and characteristics for indicated typical use | Plate Supply Volts | Grid Bias Volts | Screen Supply Volts | Screen Current Ma | Plate Current Ma | AC Plate Resistance Ohms | Trans-conductance (Grid-plate) μ mhos | Amplification Factor | Load for Stated Power Output Ohms | Power Output Watts | Type |
|---------|----------------------------------|-----------------|-------------------------|-------|-------|--|--------------------|-----------------------------|---------------------|-------------------|------------------|--------------------------|---|----------------------|-----------------------------------|--------------------|---------|
| | | | C. T. | Volts | Amp. | | | | | | | | | | | | |
| 14AF7 | Medium-Mu Twin Triode | B5 | H | 12.6 | 0.15 | | | | | | | | | | | | 14AF7 |
| 14B6 | Duplex-Diode High-Mu Triode | B5 | H | 12.6 | 0.15 | | | | | | | | | | | | 14B6 |
| 14B8 | Pentagrid Converter | B5 | H | 12.6 | 0.15 | | | | | | | | | | | | 14B8 |
| 14C5 | Beam Power Amplifier | C2a | H | 12.6 | 0.225 | 180 315 | - 8.5 -13 | 180 225 | 3.0 2.2 | 29.0 34.0 | 58000 77000 | 3700 3750 | | 5500 8500 | 2 5.5 | | 14C5 |
| 14C7 | Sharp-Cutoff Pentode | B5 | H | 12.6 | 0.15 | | | | | | | | | | | | 14C7 |
| 14E6 | Duplex-Diode Triode | B5 | H | 12.6 | 0.15 | | | | | | | | | | | | 14E6 |
| 14E7 | Twin-Diode-Remote-Cutoff Pentode | B5 | H | 12.6 | 0.15 | 100 250 | - 1 - 3 | 100 100 | 2.7 1.6 | 10.0 7.5 | 150000 700000 | 1600 1300 | | | | | 14E7 |
| 14F7 | Twin-Triode Amplifier | B5 | H | 12.6 | 0.15 | | | | | | | | | | | | 14F7 |
| 14F8 | Medium-Mu Twin Triode | B0b | H | 12.6 | 0.15 | 250 | | Cathode-Bias Res., 500 ohms | | 6.0 | | 3300 | 48 | | | | 14F8 |
| 14H7 | Remote-Cutoff Pentode | B5 | H | 12.6 | 0.15 | | | | | | | | | | | | 14H7 |
| 14J7 | Triode-Heptode Converter | B5 | H | 12.6 | 0.15 | | | | | | | | | | | | 14J7 |
| 14N7 | Twin-Triode Amplifier | C2a | H | 12.6 | 0.3 | | | | | | | | | | | | 14N7 |
| 14Q7 | Pentagrid Converter | B5 | H | 12.6 | 0.15 | | | | | | | | | | | | 14Q7 |
| 14R7 | Duplex-Diode Pentode | B5 | H | 12.6 | 0.15 | | | | | | | | | | | | 14R7 |
| 15 | RF Amplifier Pentode | O9 | D.C. H | 2.0 | 0.22 | 67.5 135 | - 1.5 - 1.5 | 67.5 67.5 | 0.3 0.3 | 1.85 1.85 | 630000 800000 | 710 750 | | | | | 15 |
| 16AP4 | Directly Viewed Kinescope | P | H | 6.3 | 0.6 | | | | | | | | | | | | 16AP4 |
| 16AP4-A | Directly Viewed Kinescope | P0 | H | 6.3 | 0.6 | | | | | | | | | | | | 16AP4-A |
| 16GP4 | Directly Viewed Kinescope | L | H | 6.3 | 0.6 | | | | | | | | | | | | 16GP4 |

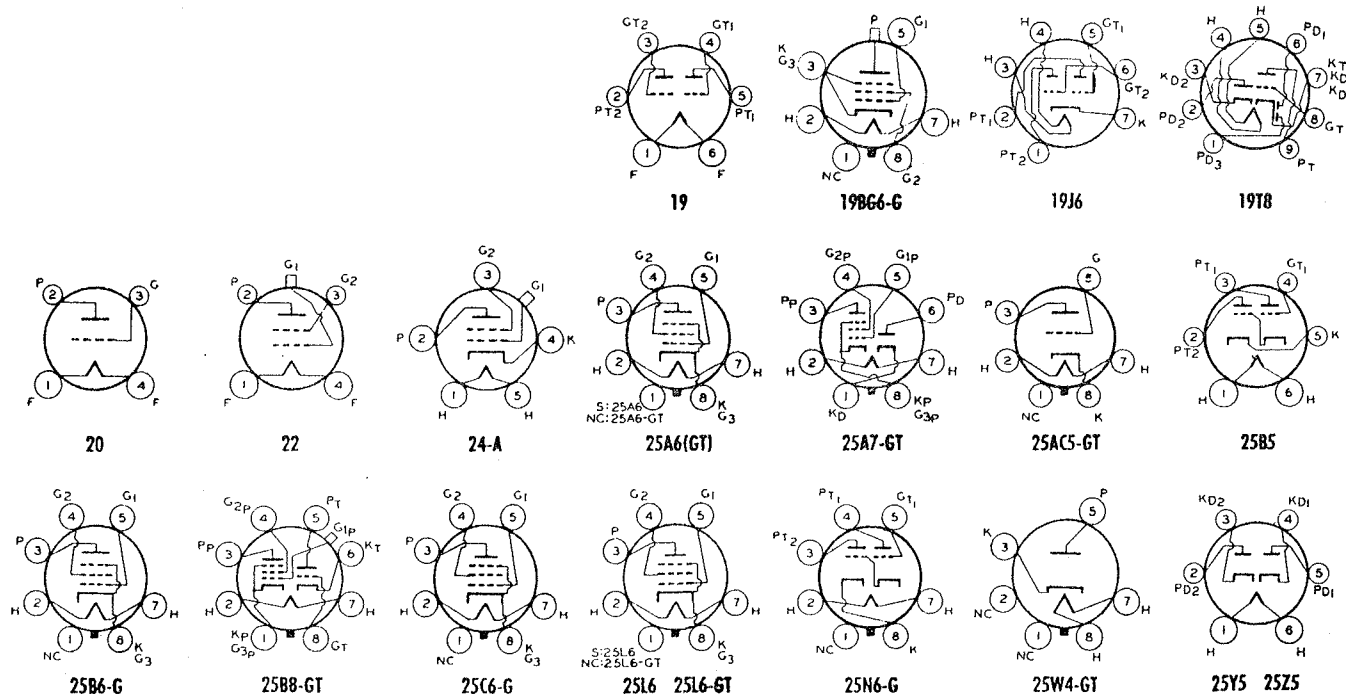
Three vertical rules before or after type No. = Miniature type having either 7 or 9 pins.
 Two vertical rules before or after type No. = Metal type.
 One vertical rule before or after type No. = GT or other larger glass type.
 Light Face = Discontinued type.
 For key to tube dimensions and, legend for base and envelope connection diagrams, see page 23.
 □ Grids #3 and #5 are screen. Grid No. 4 is signal-input grid.

▲ Grids #2 and #4 are screen. Grid #3 is signal-input control grid.
 ♦ For two tubes.
 ✖ Applied through plate resistor of 250000 ohms.
 ■ Either ac or dc may be used on filament or heater, except as specifically noted. For use of dc on ac filament types, decrease stated grid volts by 1/2 (approx.) of filament voltage.
 * Maximum.
 † Value is for both units operating at the specified conditions.



| Type | Name | Tube Dimensions | Cathode Type and Rating | | Use Values to right give operating conditions and characteristics for indicated typical use | Plate Supply Volts | Grid Bias Volts | Screen Supply Volts | Screen Current Ma. | Plate Current Ma. | AC Plate Resistance Ohms | Trans-conductance (Grid-plate) μ mhos | Amplification Factor | Load for Stated Power Output Ohms | Power Output Watts | Type | | |
|----------|--------------------------------|-----------------|-------------------------|-------|--|---|-----------------|---|---|---|--|---|--|-----------------------------------|---|--|----------|---------|
| | | | C. T. | Volts | | | | | | | | | | | | | Amp. | |
| 19 | Twin-Triode Amplifier | D5 | D.C. F | 2.0 | 0.26 | For other characteristics, refer to Type 1J6-G. | | | | | | | | | | 19 | | |
| 19BG6-G | Beam Power Amplifier | F1 | H | 18.9 | 0.3 | Horizontal Deflection Amplifier in TV Equipment | | | | | Max. DC Plate Volts, 500 Max. DC Plate Current, 100 ma. | | | | | Max. Peak Positive-Pulse Plate Volts, 6000 Max. Plate Dissipation, 20 watts | | 19BG6-G |
| 19J6 | Medium-Mu Twin Triode | B0 | H | 18.9 | 0.15 | Each Unit as Class A Amplifier | | Cathode-Bias Res., 50 ω ohms | | For other characteristics, refer to Type 6T8. | | | | | | | 19J6 | |
| 19T8 | Triple-Diode High-Mu Triode | B0a | H | 18.9 | 0.15 | Triode Unit as Class A Amplifier | | For other characteristics, refer to Type 6T8. | | | | | | | | | | 19T8 |
| 20 | Power Amplifier Triode | D1 | D.C. F | 3.3 | 0.132 | Class A Amplifier | | 90 | -16.5 | — | — | 3.0 | 8000 | 415 | 3.3 | 9600 | 0.045 | 20 |
| 22 | RF Amplifier Tetrode | E1 | D.C. F | 3.3 | 0.132 | Screen-Grid RF Amplifier | | 135 | -1.5 | 45 | 0.6* | 1.7 | 725000 | 375 | — | — | — | 22 |
| 24-A | RF Amplifier Tetrode | E1 | H | 2.5 | 1.75 | Screen-Grid RF Amplifier | | 135 | -1.5 | 67.5 | 1.3* | 3.7 | 325000 | 500 | — | — | — | 24-A |
| | | | | | | Bias Detector | | 180 | -3.0 | 90 | 1.7* | 4.0 | 400000 | 1000 | — | — | — | |
| | | | | | | 250 ω (approx.) | | 20 to 45 | Plate current to be adjusted to 0.1 milliampere with no signal. | | | | | | | | | |
| 25A6 | Power Amplifier Pentode | C2 | H | 25.0 | 0.3 | Class A Amplifier | | 95 | -15.0 | 95 | 4.0 | 20.0 | 45000 | 2000 | — | 4500 | 0.9 | 25A6 |
| | | | | | | 160 | | -18.0 | 120* | 6.5 | 33.0 | 42000 | 2375 | — | 5000 | 2.2 | | |
| 25A6-GT | Power Amplifier Pentode | C3 | H | 25.0 | 0.3 | Class A Amplifier | | For other characteristics, refer to Type 25A6. | | | | | | | | | | 25A6-GT |
| 25A7-GT | Rectifier Pentode | C3 | H | 25.0 | 0.3 | Pentode Unit as Class A Amplifier | | 100 | -15.0 | 100 | 4.0 | 20.5 | 50000 | 1800 | — | 4500 | 0.77 | 25A7-GT |
| | | | | | | Half-Wave Rectifier | | Max. A-C Plate Volts (RMS), 117 | | | | | Max. D-C Output Ma., 75 | | | | | |
| | | | | | | Max. Peak Inverse Volts, 350 | | Max. Peak Plate Ma., 450 | | | | | Min. Total Effect. Supply Impedance, 15 ohms. | | | | | |
| 25AC5-GT | High-Mu Power Amplifier Triode | C3 | H | 25.0 | 0.3 | Class B Amplifier | | 180 | 0 | — | — | 4.0 ϕ | — | — | 4800 | 6.0 | 25AC5-GT | |
| | | | | | | Dynamic-Coupled Amp. With Type 6AE5-GT Driver | | Bias for both 25AC5-GT and 6AE5-GT developed in circuit. Average Plate Current of Driver = 7 milliamperes. Average Plate Current of 25AC5-GT = 45 milliamperes. | | | | | | | | | | |
| 25B5 | Direct-Coupled Power Amplifier | D0a | H | 25.0 | 0.3 | Amplifier | | For other characteristics, refer to Type 25N6-G. | | | | | | | | | | 25B5 |
| 25B6-G | Power Amplifier Pentode | D10 | H | 25.0 | 0.3 | Class A Amplifier | | 105 | -16.0 | 105 | 2.0 | 48.0 | 15500 | 4800 | — | 1700 | 2.4 | 25B6-G |
| | | | | | | 200 | | -23.0 | 135 | 1.8 | 62.0 | 18000 | 5000 | — | 2500 | 7.1 | | |
| 25B8-GT | Triode-Pentode | C3 | H | 25.0 | 0.15 | Triode Unit as Class A Amplifier | | 100 | -1.0 | — | — | 0.6 | 75000 | 1500 | 112 | — | — | 25B8-GT |
| | | | | | | Pentode Unit as Class A Amplifier | | 100 | -3.0 | 100 | 2.0 | 7.6 | 185000 | 2000 | — | — | — | |
| 25C6-G | Beam Power Amplifier | D10 | H | 25.0 | 0.3 | Class A Amplifier | | For other characteristics, refer to Type 6Y6-G. | | | | | | | | | | 25C6-G |
| 25L6 | Beam Power Amplifier | C2 | H | 25.0 | 0.3 | Amplifier | | 110 | -7.5 | 110 | 4.0 | 49.0 | 13000 | 9000 | — | 2000 | 2.1 | 25L6 |
| | | | | | | 200 | | -8.0 | 110 | 2.0 | 50.0 | 30000 | 9500 | — | 3000 | 4.3 | | |
| 25L6-GT | Beam Power Amplifier | C3 | H | 25.0 | 0.3 | Amplifier | | For other characteristics, refer to Type 50L6-GT. | | | | | | | | | | 25L6-GT |
| 25N6-G | Direct-Coupled Power Amplifier | D9 | H | 25.0 | 0.3 | Class A Amplifier | | Output Triode: Plate Volts, 180; Plate Ma., 46; Load, 4000 ohms. | | | | | | | Triode: Plate Volts, 100; Grid Volts, 0; A-F Signal Volts (Peak), 29.7; Plate Ma., 5.8. | | 3.8 | 25N6-G |
| 25W4-GT | Half-Wave Rectifier | C2b | H | 25.0 | 0.3 | Half-Wave Rectifier | | For other characteristics, refer to Type 6W4-GT. | | | | | | | | | | 25W4-GT |
| 25Y5 | Rectifier-Doubler | D5 | H | 25.0 | 0.3 | Half-Wave Rectifier | | Max. A-C Volts per Plate (RMS), 235 | | | | | Min. Total Effective Plate-Supply Impedance per Plate, 0 ohms. | | | | | 25Y5 |
| 25Z5 | Rectifier-Doubler | D5 | H | 25.0 | 0.3 | Rectifier-Doubler | | For other ratings, refer to Type 25Z6. | | | | | | | | | | 25Z5 |

For footnotes, see preceding page.

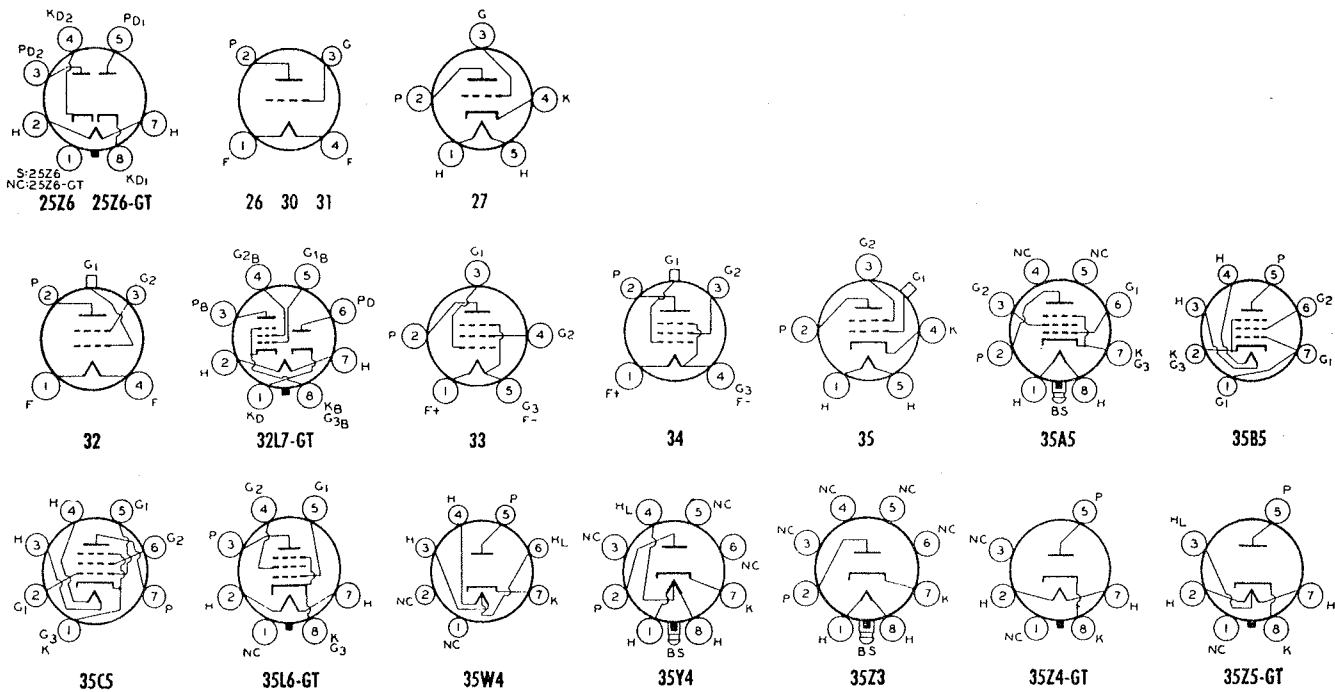


25Z6 to 35Z5-GT

| Type | Name | Tube Dimensions | Cathode Type and Rating | | Use Values to right give operating conditions and characteristics for indicated typical use | Plate Supply Volts | Grid Bias Volts | Screen Supply Volts | Screen Current Ma. | Plate Current Min. | AC Plate Resistance Ohms | Trans-conductance (Grid-plate) μ mhos | Amplification Factor | Load for Stated Power Output Ohms | Power Output Watts | Type |
|-----------------|--|-----------------|-------------------------|-------|--|--|---|-------------------------------------|--|---|---|---|----------------------|---|--------------------|---------|
| | | | C.T. | Volts | | | | | | | | | | | | |
| 25Z6 25Z6-GT | Vacuum Rectifier-Doublers | C2 C3 | H | 25.0 | 0.3 | Voltage Doubler | | Max. A-C Volts per Plate (RMS), 117 | | Min. Total Effective Plate-Supply Impedance: Half-Wave, 30 ohms; Full-Wave, 15 ohms. | | | | | | 25Z6 |
| | | | | | | Half-Wave Rectifier | | Max. A-C Volts per Plate (RMS), 235 | | Min. Total Effect. Supply Imped. per Plate: Up to 117 volts, 15 ohms; at 235 volts, 100 ohms. | | | | | | |
| 26 | Amplifier Triode | D12 | F | 1.5 | 1.05 | Class A Amplifier | 90 180 | -7.0 -14.5 | — | 2.9 6.2 | 8900 7300 | 935 1150 | 8.3 8.3 | — | — | 26 |
| 27 | Detector* Amplifier Triode | D5 | H | 2.5 | 1.75 | Class A Amplifier | 135 250 | -9.0 — | — | 4.5 5.2 | 9000 9250 | 1000 975 | 9.0 9.0 | — | — | 27 |
| | | | | | | Bias Detector | 250 | {-30.0} approx. | Plate current to be adjusted to 0.2 milliampere with no signal. | | | | | | | |
| 30 | Medium-Mu Triode | D5 | D.C. F | 2.0 | 0.06 | Amplifier | For other characteristics, refer to Type 1H4-G. | | | | | | | | | 30 |
| 31 | Power Amplifier Triode | D5 | D.C. F | 2.0 | 0.13 | Class A Amplifier | 135 180 | -22.5 -30.0 | — | 8.0 12.3 | 4100 3600 | 925 1050 | 3.8 3.8 | 7000 5700 | 0.185 0.375 | 31 |
| | | | | | | Screen-Grid RF Amplifier | 135 180 | -3.0 -3.0 | 67.5 67.5 | 0.4 0.4 | 1.7 1.7 | 950000 640 | 650 | Plate current to be adjusted to 0.2 milliampere with no signal. | | |
| 32 | RF Amplifier Tetrode | E1 | D.C. F | 2.0 | 0.06 | Screen-Grid RF Amplifier | 180 | {-6.0} approx. | 67.5 | — | Plate current to be adjusted to 0.2 milliampere with no signal. | | | | | 32 |
| | | | | | | Bias Detector | 180 | {-6.0} approx. | 67.5 | | | | | | | |
| 32L7-GT | Rectifier-Beam Power Amplifier | C3 | H | 32.5 | 0.3 | Amplifier Unit as Class A Amplifier | 90 90 | -5.0 -7.0 | 90 90 | 3.0 2.0 | 38.0 27.0 | 15000 17000 | 6000 4800 | 2600 2600 | 0.8 1.0 | 32L7-GT |
| | | | | | | Half-Wave Rectifier | Maximum A-C Plate Voltage 125 Volts, RMS Maximum D-C Output Current 60 Milliamperes. | | | | | | | | | |
| 33 | Power Amplifier Pentode | D12 | D.C. F | 2.0 | 0.26 | Class A Amplifier | 180 | -18.0 | 180 | 5.0 | 22.0 | 55000 | 1700 | 6000 | 1.5 | 33 |
| 34 | Supercontrol RF Amplifier Pentode | E1 | D.C. F | 2.0 | 0.06 | Screen-Grid RF Amplifier | 135 180 | {-3.0} min. | 67.5 67.5 | 1.0 1.0 | 2.8 2.8 | 600000 1.0 | 600 620 | | | 34 |
| | | | | | | Screen-Grid RF Amplifier | 180 250 | {-3.0} min. | 90 90 | 2.5* 2.5* | 6.3 6.5 | 300000 400000 | 1020 1050 | | | |
| 35A5 | Beam Power Amplifier | C2a | H | 35.0 | 0.15 | Single-Tube Class A Amplifier | For other characteristics, refer to Type 35L6-GT. | | | | | | | | | 35A5 |
| 35B5 | Beam Power Amplifier | B3 | H | 35.0 | 0.15 | Class A Amplifier | For other characteristics, refer to Type 35C5. | | | | | | | | | 35B5 |
| 35C5 | Beam Power Amplifier | B3 | H | 35.0 | 0.15 | Class A Amplifier | 110 | -7.5 | 110 | 3.0 | 40.0 | 13000 | 5800 | 2500 | 1.5 | 35C5 |
| 35L6-GT | Beam Power Amplifier | C3 | H | 35.0 | 0.15 | Single-Tube Class A Amplifier | 110 200 | -7.5 -8.0 | 110 125 | 3.0 2.0 | 40.0 43.0 | 14000 34000 | 5800 6100 | 2500 5000 | 1.5 3.3 | 35L6-GT |
| | | | | | | Half-Wave Rectifier Heater Tap for Pilot | Max A-C Plate Volts (RMS), 117 Min. Total Effect. Plate-Supply Impedance, 15 ohms Max. D-C Output Ma.: With Pilot and No Shunt Res., 60; With Pilot and Shunt Res., 90; Without Pilot, 100 | | | | | | | | | |
| 35W4 | Half-Wave Rectifier Heater Tap for Pilot | B3 | H | 35.0 | 0.15 | With Capacitive-Input Filter | For other characteristics, refer to Type 35W4. | | | | | | | | | 35W4 |
| 35Y4 | Half-Wave Rectifier | C2a | H | 35.0 | 0.15 | With Capacitive-Input Filter | For other ratings, refer to Type 35Z4-GT. | | | | | | | | | 35Y4 |
| 35Z3 | Half-Wave Rectifier | C2a | H | 35.0 | 0.15 | With Capacitive-Input Filter | For other ratings, refer to Type 35Z4-GT. | | | | | | | | | 35Z3 |
| 35Z4-GT | Half-Wave Rectifier | C3 | H | 35.0 | 0.15 | With Capacitive-Input Filter | Max. A-C Plate Volts (RMS), 235 | | Min. Total Effective Plate-Supply Impedance: Up to 117 volts, 15 ohms; at 235 volts, 100 ohms. | | | | | | | 35Z4-GT |
| 35Z5-GT | Half-Wave Rectifier Heater Tap for Pilot | C3 | H | 35.0 | 0.15 | With Capacitive-Input Filter | Max. A-C Plate Volts (RMS), 235 | | Min. Total Effect. Plate-Supply Imped.: Up to 117 volts, 15 ohms; at 235 volts, 100 ohms. | | Max. D-C Output Ma.: With Pilot and No Shunt Res., 60; With Pilot and Shunt Res., 90; Without Pilot, 100. | | | | | 35Z5-GT |

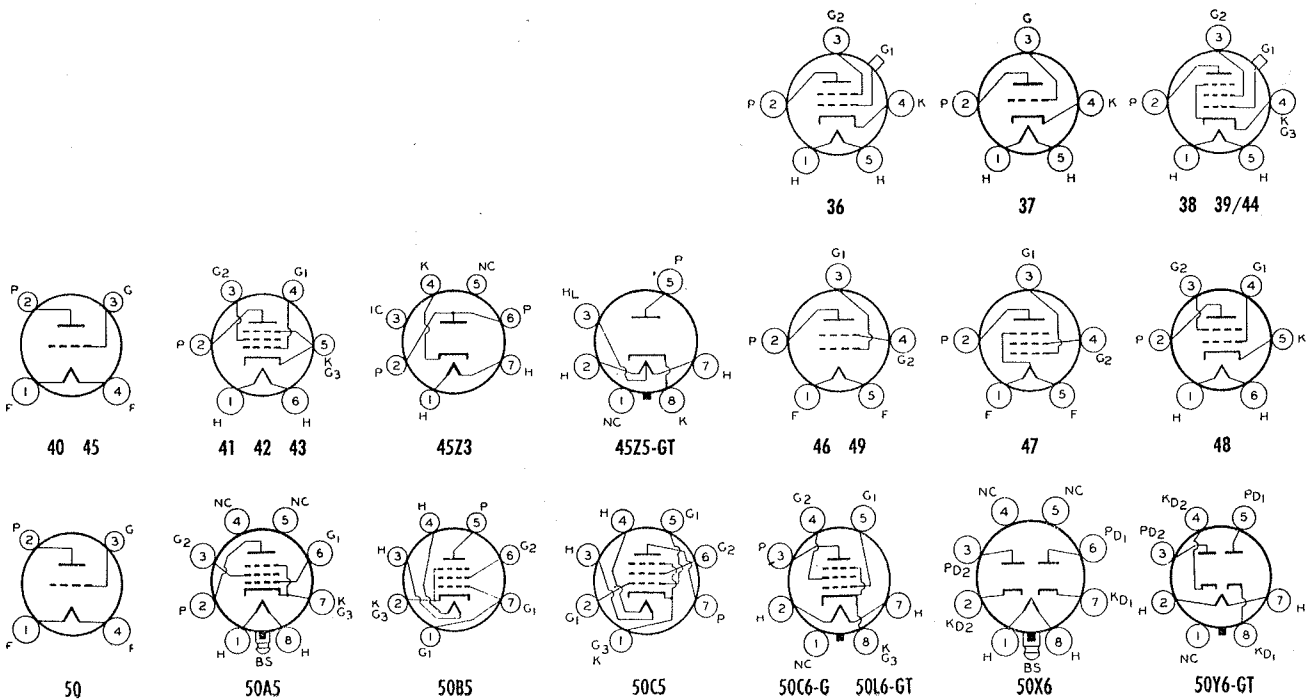
Three vertical rules before or after type No. = Miniature type having either 7 or 9 pins.
Two vertical rules before or after type No. = Metal type.
One vertical rule before or after type No. = GT or other larger glass type.
Light Face = Discontinued type.
For key to tube dimensions and legend for base and envelope connection diagrams, see page 23.
★ For Grid-leak Detection—plate volts 45, grid return to + filament or to cathode.
† Power output is for two tubes at stated plate-to-plate load.
□ Grid #2 tied to plate.
◆ For two tubes

§ Megohms.
Note 2: Subscript 2 on class of amplifier service (as AB₂) indicates that grid current flows during some part of input cycle.
** For grid of following tube.
✱ Applied through plate resistor of 250000 ohms.
■ Either ac or dc may be used on filament or heater, except as specifically noted. For use of dc on ac filament types, decrease stated grid volts by 1/2 (approx.) of filament voltage.
♥ Applied through plate resistor of 100000 ohms.
♦ Grids #1 and #2 tied together.
‡ Panel lamp section is between pins 2 and 7.
• Maximum.



| Type | Name | Tube Dimensions | Cathode Type and Rating | | | Use <small>Values to right give operating conditions and characteristics for indicated typical use</small> | Plate Supply Volts | Grid Bias Volts | Screen Supply Volts | Screen Current Ma. | Plate Current Ma. | AC Plate Resistance Ohms | Trans-conductance (Grid-plate) μ mhos | Amplification Factor | Load for Stated Power Output Ohms | Power Output Watts | Type |
|---------|--|-----------------|-------------------------|-------|-------|---|--|-----------------|---------------------|--------------------|-------------------|--------------------------|---|---|-----------------------------------|--------------------|---------|
| | | | C. T. | Volts | Amp. | | | | | | | | | | | | |
| 36 | RF Amplifier Tetrode | D9 | H | 6.3 | 0.3 | Screen-Grid RF Amplifier | 100 - 1.5 | 55 | — | 1.8 | 550000 | 850 | — | — | — | 36 | |
| | | | | | | Bias Detector | 250 - 3.0 | 90 | 1.7* | 3.2 | 550000 | 1080 | Grid-bias values are approximate. Plate current to be adjusted to 0.1 milliamperere with no signal. | | | | |
| 37 | Detector* Amplifier Triode | D5 | H | 6.3 | 0.3 | Class A Amplifier | 90 - 6.0 | — | — | 2.5 | 11500 | 800 | 9.2 | — | 37 | | |
| | | | | | | Bias Detector | 250 - 18.0 | 90 | — | 7.5 | 8400 | 1100 | 9.2 | Grid-bias values are approximate. Plate current to be adjusted to 0.2 milliamperere with no signal. | | | |
| 38 | Power Amplifier Pentode | D9 | H | 6.3 | 0.3 | Class A Amplifier | 100 - 9.0 | 100 | 1.2 | 7.0 | 140000 | 875 | — | 15000 | 0.27 | 38 | |
| 39/44 | Remote-Cutoff Pentode | D9 | H | 6.3 | 0.3 | Class A Amplifier | 250 - 25.0 | 250 | 3.8 | 22.0 | 100000 | 1200 | — | 10000 | 2.50 | 39/44 | |
| 40 | Medium-Mu Triode | D12 | D.C. F | 5.0 | 0.25 | Class A Amplifier | 90 - 10.0 | 90 | 1.6 | 5.6 | 400000 | 1000 | — | — | — | | |
| 41 | Power Amplifier Pentode | D5 | H | 6.3 | 0.4 | Amplifier | 250 - 28.0 | 90 | 1.4 | 5.8 | 1.05 | 1050 | — | — | — | 40 | |
| 42 | Power Amplifier Pentode | D12 | H | 6.3 | 0.7 | Amplifier | 135* - 1.5 | — | — | 0.2 | 150000 | 200 | 30 | — | — | 40 | |
| 43 | Power Amplifier Pentode | D12 | H | 25.0 | 0.3 | Amplifier | 180* - 3.0 | — | — | 0.2 | 150000 | 200 | 30 | — | — | 40 | |
| 45 | Power Amplifier Triode | D12 | F | 2.5 | 1.5 | Class A Amplifier | 180 - 31.5 | — | — | 31.0 | 1650 | 2125 | 3.5 | 2700 | 0.82 | 45 | |
| 45Z3 | Half-Wave Rectifier | B0 | H | 45.0 | 0.075 | Half-Wave Rectifier | 275 - 56.0 | — | — | 36.0 | 1700 | 2050 | 3.5 | 4600 | 2.00 | | |
| 45Z5-GT | Half-Wave Rectifier Heater Tap for Pilot | C3 | H | 45.0 | 0.15 | With Capacitive-Input Filter | 275 Cath. Bias, 775 ohms ϕ | — | — | 36.0 ϕ | — | — | — | 5060 | 12.0 \dagger | 45Z3 | |
| 46 | Dual-Grid Power Amplifier | E3 | F | 2.5 | 1.75 | Class A Amplifier \square | 275 - 31.5 | — | — | 22.0 | 2380 | 2350 | 5.6 | 6400 | 1.25 | 46 | |
| 47 | Power Amplifier Pentode | E3 | F | 2.5 | 1.75 | Class B Amplifier \blacktriangledown | 300 0 | — | — | 8.0 ϕ | — | — | — | 5200 | 16.0 \dagger | | |
| 48 | Power Amplifier Tetrode | E3 | D.C. H | 30.0 | 0.4 | Class A Amplifier | 400 0 | — | — | 12.0 ϕ | — | — | — | 5800 | 20.0 \dagger | 47 | |
| 49 | Dual-Grid Power Amplifier | D12 | D.C. F | 2.0 | 0.12 | Tetrode | 250 - 16.5 | 250 | 6.0 | 31.0 | 60000 | 2500 | — | 7000 | 2.7 | | |
| 50 | Power Amplifier Triode | F1a | F | 7.5 | 1.25 | Class A Amplifier | 125 - 19.0 | 96 | 9.0 | 52.0 | — | 3800 | — | 1500 | 2.0 | 48 | |
| 50A5 | Beam Power Amplifier | C2a | H | 50.0 | 0.15 | Class A Amplifier | 125 - 20.0 | 100 | 9.5 | 56.0 | — | 3900 | — | 1500 | 2.5 | | |
| 50B5 | Beam Power Amplifier | B3 | H | 50.0 | 0.15 | Class A Amplifier | 125 - 20.0 | 100 | — | 100.0 ϕ | — | — | — | 3000 | 5.0 \dagger | 49 | |
| 50C5 | Beam Power Amplifier | B3 | H | 50.0 | 0.15 | Class A Amplifier \square | 135 - 20.0 | — | — | 6.0 | 4175 | 1125 | 4.7 | 11000 | 0.17 | | |
| 50C6-G | Beam Power Amplifier | D10 | H | 50.0 | 0.15 | Class B Amplifier \blacktriangledown | 180 0 | — | — | 4.0 ϕ | — | — | — | 12000 | 3.5 \dagger | 50 | |
| 50L6-GT | Beam Power Amplifier | C3 | H | 50.0 | 0.15 | Class A Amplifier | 300 - 54.0 | — | — | 35.0 | 2000 | 1900 | 3.8 | 4600 | 1.6 | | |
| 50X6 | Rectifier-Doubler | C2a | H | 50.0 | 0.15 | Class A Amplifier | 400 - 70.0 | — | — | 55.0 | 1800 | 2100 | 3.8 | 3670 | 3.4 | 50A5 | |
| 50Y6-GT | Rectifier-Doubler | C3 | H | 50.0 | 0.15 | Class A Amplifier | 450 - 84.0 | — | — | 55.0 | 1800 | 2100 | 3.8 | 4350 | 4.6 | | |
| 50B5 | Beam Power Amplifier | B3 | H | 50.0 | 0.15 | Class A Amplifier | For other characteristics, refer to Type 50L6-GT. | | | | | | | | | | 50A5 |
| 50C5 | Beam Power Amplifier | B3 | H | 50.0 | 0.15 | Class A Amplifier | For other characteristics, refer to Type 50C5. | | | | | | | | | | 50B5 |
| 50C6-G | Beam Power Amplifier | D10 | H | 50.0 | 0.15 | Class A Amplifier | 110 - 7.5 | 110 | 4.0 | 49.0 | 10000 | 7500 | — | 2500 | 1.9 | 50C5 | |
| 50L6-GT | Beam Power Amplifier | C3 | H | 50.0 | 0.15 | Class A Amplifier | 135 - 13.5 | 135 | 3.5 | 58.0 | 9300 | 7000 | — | 2000 | 3.6 | 50C6-G | |
| 50X6 | Rectifier-Doubler | C2a | H | 50.0 | 0.15 | Class A Amplifier | 200 - 14.0 | 135 | 2.2 | 61.0 | 18300 | 7100 | — | 2600 | 6.0 | | |
| 50Y6-GT | Rectifier-Doubler | C3 | H | 50.0 | 0.15 | Class A Amplifier | 110 - 7.5 | 110 | 4.0 | 49.0 | 13000 | 8000 | — | 2000 | 2.1 | 50L6-GT | |
| 50X6 | Rectifier-Doubler | C2a | H | 50.0 | 0.15 | Class A Amplifier | 200 - 0 | 125 | 2.2 | 46.0 | 28000 | 8000 | — | 4000 | 3.8 | | |
| 50Y6-GT | Rectifier-Doubler | C3 | H | 50.0 | 0.15 | Rectifier-Doubler | Max. A-C Volts per Plate (RMS), 117 Min. Total Effective Plate-Supply Impedance: Half-Wave, 30 ohms; Full-Wave, 15 ohms. | | | | | | | | | | 50X6 |
| 50Y6-GT | Rectifier-Doubler | C3 | H | 50.0 | 0.15 | Rectifier-Doubler | Max. D-C Output Ma., 75 Min. Total Effect. Supply Imped. per Plate: Up to 117 volts, 15 ohms; at 150 volts, 40 ohms; at 235 volts, 100 ohms. | | | | | | | | | | |
| 50Y6-GT | Rectifier-Doubler | C3 | H | 50.0 | 0.15 | Rectifier-Doubler | Max. A-C Volts per Plate (RMS), 235 Min. Total Effect. Supply Imped. per Plate: Up to 117 volts, 15 ohms; at 150 volts, 40 ohms; at 235 volts, 100 ohms. | | | | | | | | | | 50Y6-GT |
| 50Y6-GT | Rectifier-Doubler | C3 | H | 50.0 | 0.15 | Rectifier-Doubler | For other ratings, refer to Type 25Z6. | | | | | | | | | | 50Y6-GT |

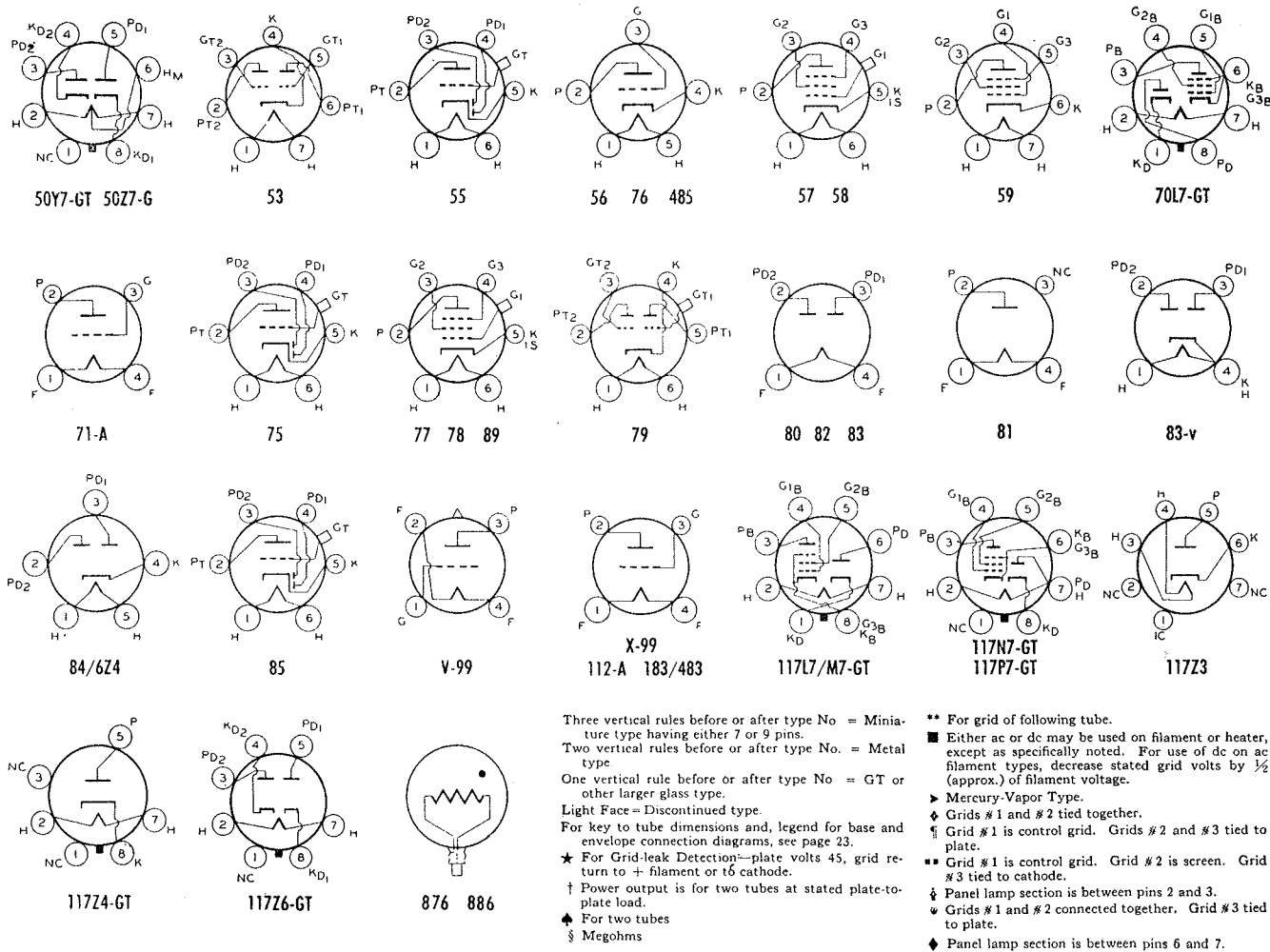
For footnotes, see preceding page.



50Y7-GT to 886

| Type | Name | Tube Dimensions | Cathode Type and Rating | | | Use Values to right give operating conditions and characteristics for indicated typical use | Plate Supply Volts | Grid Bias # | Screen Supply Volts | Screen Current Ma. | Plate Current Ma. | AC Plate Resistance Ohms | Trans-conductance (Grid-plate) jumbos | Amplification Factor | Load for Stated Power Output Ohms | Power Output Watts | Type | |
|-------------|--|-----------------|-------------------------|-------|-------|--|---|-----------------|---------------------|--------------------------|---|--------------------------|---------------------------------------|----------------------|-----------------------------------|--------------------|-----------|---|
| | | | C. T. | Volts | Amp. | | | | | | | | | | | | | |
| 50Y7-GT | Rectifier-Doubler Heater Tap for Pilot | C2b | H | 50.0 | 0.15 | Voltage Doubler | Max. A-C Volts per Plate (RMS), 117 Max. D-C Output ma., 65 | | | | | | | | | | 50Y7-GT | |
| | | | | | | Half-Wave Rectifier | Min. Total Effective Plate-Supply Impedance per Plate, 15 ohms Max. A-C Volts per Plate (RMS), 235 Max. D-C Output ma. per Plate, 65 | | | | | | | | | | | |
| 50Z7-G | Rectifier-Doubler Heater Tap for Pilot | D3 | H | 50.0 | 0.15 | Voltage Doubler | Max. A-C Volts per Plate (RMS), 117 Max. D-C Output Ma., 65 | | | | | | | | | | 50Z7-G | |
| | | | | | | Half-Wave Rectifier | Min. Total Effective Plate-Supply Impedance per Plate: Up to 117 volts, 15 ohms; at 150 volts, 40 ohms; at 235 volts, 100 ohms | | | | | | | | | | | |
| 53 | Twin-Triode Amplifier | D12 | H | 2.5 | 2.0 | Amplifier | For other characteristics, refer to Type 6N7-GT. | | | | | | | | | | 53 | |
| 55 | Duplex-Diode Triode | D9 | H | 2.5 | 1.0 | Triode Unit as Amplifier | For other characteristics, refer to Type 85. | | | | | | | | | | 55 | |
| 56 | Medium-Mu Triode* | D5 | H | 2.5 | 1.0 | Amplifier Detector | For other characteristics, refer to Type 76. | | | | | | | | | | 56 | |
| 57 | Sharp-Cutoff Pentode | D13 | H | 2.5 | 1.0 | Amplifier Detector | For other characteristics, refer to Type 6J7. | | | | | | | | | | 57 | |
| 58 | Remote-Cutoff Pentode | D13 | H | 2.5 | 1.0 | Amplifier Mixer | For other characteristics, refer to Type 6U7-G. | | | | | | | | | | 58 | |
| 59 | Triple-Grid Power Amplifier | E3 | H | 2.5 | 2.0 | Triode* Class A Amplifier | 250 | -28.0 | — | — | 26.0 | 2300 | 2600 | 6.0 | 5000 | 1.25 | 59 | |
| | | | | | | Pentode** Class A Amplifier | 250 | -18.0 | 250 | 9.0 | 35.0 | 55000 | 2500 | — | 6000 | 3.0 | | |
| | | | | | | Triode* Class B Amplifier | 300 | 0 | — | — | 20.0 | — | — | — | 4600 | 15.0 | | |
| | | | | | | Amplifier Unit as Class A Amplifier | 400 | 0 | — | — | 26.0 | — | — | — | 6000 | 20.0 | | |
| 70L7-GT | Rectifier-Beam Power Amplifier | C10 | H | 70.0 | 0.15 | Half-Wave Rectifier | Max. A-C Plate Volts (RMS), 117 Max. Peak Inverse Volts, 350 | | | | | | | | | | 70L7-GT | |
| | | | | | | Amplifier Unit as Class A Amplifier | 110 | -7.5 | 110 | 3.0 | 40.0 | 15000 | 7500 | — | 2000 | 1.8 | | |
| 71-A | Power Amplifier Triode | D12 | F | 5.0 | 0.25 | Class A Amplifier | 90 | -16.5 | — | — | 10.0 | 2170 | 1400 | 3.0 | 3000 | 0.125 | 71-A | |
| 75 | Duplex-Diode High-Mu Triode | D9 | H | 6.3 | 0.3 | Amplifier | 180 | -40.5 | — | — | 20.0 | 1750 | 1700 | 3.0 | 4800 | 0.790 | | |
| 76 | Detector Amplifier Triode* | D5 | H | 6.3 | 0.3 | Class A Amplifier | 250 | -13.5 | — | — | 5.0 | 9500 | 1450 | 13.8 | — | — | 76 | |
| 77 | Triple-Grid Detector Amplifier | D9 | H | 6.3 | 0.3 | Bias Detector | 250 | -20.0 (approx.) | — | — | — | — | — | — | — | — | | — |
| 77 | Triple-Grid Detector Amplifier | D9 | H | 6.3 | 0.3 | Class A Amplifier | 100 | -1.5 | 60 | 0.4 | 1.7 | 600000 | 1100 | — | — | — | 77 | |
| | | | | | | Bias Detector | 250 | -3.0 | 100 | 0.5 | 2.3 | 1.0+§ | 1250 | — | — | — | | |
| 78 | Remote-Cutoff Pentode | D9 | H | 6.3 | 0.3 | Amplifier Mixer | 250 | -1.95 | 50 | Cathode current 0.65 ma. | — | — | — | — | — | — | — | — |
| 78 | Remote-Cutoff Pentode | D9 | H | 6.3 | 0.3 | Amplifier Mixer | For other characteristics, refer to Type 6K7. | | | | | | | | | | 78 | |
| 79 | Twin-Triode Amplifier | D9 | H | 6.3 | 0.6 | Class B Amplifier | 180 | 0 | — | — | Power Output is for one tube at stated plate-to-plate load. | | | | 7000 | 5.5 | 79 | |
| 80 | Full-Wave Rectifier | D12 | F | 5.0 | 2.0 | Amplifier | 250 | 0 | — | — | — | — | — | — | 14000 | 8.0 | | |
| 80 | Full-Wave Rectifier | D12 | F | 5.0 | 2.0 | Amplifier | For other ratings, refer to Type 5Y3-GT. | | | | | | | | | | 80 | |
| 81 | Half-Wave Rectifier | F1a | F | 7.5 | 1.25 | With Capacitive-Input Filter | Max. A-C Plate Volts (RMS), 700 Max. Peak Inverse Volts, 2000 | | | | | | | | | | 81 | |
| 82 | Full-Wave Rectifier | D12 | F | 2.5 | 3.0 | With Capacitive-Input Filter | Max. A-C Volts per Plate (RMS), 450 Max. Peak Inverse Volts, 1550 | | | | | | | | | | 82 | |
| | | | | | | With Inductive-Input Filter | Max. D-C Output Ma., 115 Max. Peak Plate Ma., 600 | | | | | | | | | | | |
| 83 | Full-Wave Rectifier | E3 | F | 5.0 | 3.0 | With Capacitive-Input Filter | Max. A-C Volts per Plate (RMS), 450 Max. Peak Inverse Volts, 1550 | | | | | | | | | | 83 | |
| | | | | | | With Inductive-Input Filter | Max. D-C Output Ma., 225 Max. Peak Plate Ma., 1000 | | | | | | | | | | | |
| 83-v | Full-Wave Rectifier | D12 | H | 5.0 | 2.0 | Amplifier | For other ratings, refer to Type 5V4-G. | | | | | | | | | | 83-v | |
| 84/6Z4 | Full-Wave Rectifier | D5 | H | 6.3 | 0.5 | With Capacitive-Input Filter | Max. A-C Volts per Plate (RMS), 325 Max. Peak Inverse Volts, 1250 | | | | | | | | | | 84/6Z4 | |
| | | | | | | With Inductive-Input Filter | Max. D-C Output Ma., 60 Max. Peak Plate Ma., 180 | | | | | | | | | | | |
| 85 | Duplex-Diode Triode | D9 | H | 6.3 | 0.3 | Triode Unit as Class A Amplifier | 135 | -10.5 | — | — | 3.7 | 11000 | 750 | 8.3 | 25000 | 0.075 | 85 | |
| | | | | | | Class A Amplifier | 250 | -20.0 | — | — | 8.0 | 7500 | 1100 | 8.3 | 20000 | 0.350 | | |
| 89 | Triple-Grid Power Amplifier | D9 | H | 6.3 | 0.4 | As Triode* Class A Amplifier | 160 | -20.0 | — | — | 17.0 | 3300 | 1425 | 4.7 | 7000 | 0.30 | 89 | |
| | | | | | | As Pentode** Class A Amplifier | 250 | -31.0 | 100 | — | 32.0 | 2600 | 1800 | 4.7 | 5500 | 0.90 | | |
| | | | | | | As Triode* Class A Amplifier | 100 | -10.0 | 100 | 1.6 | 9.5 | 104000 | 1200 | — | 10700 | 0.33 | | |
| | | | | | | As Triode* Class B Amplifier | 250 | -25.0 | 250 | 5.0 | 32.0 | 70000 | 1800 | — | 6750 | 3.40 | | |
| V-99 X-99 | Detector* Amplifier Triodes | G4 D1 | D.C. F | 3.3 | 0.063 | Class A Amplifier | 90 | -4.5 | — | — | 2.5 | 15500 | 425 | 6.6 | — | — | V-99 X-99 | |
| 112-A | Detector* Amplifier Triode | D12 | D.C. F | 5.0 | 0.25 | Class A Amplifier | 90 | -4.5 | — | — | 5.0 | 5400 | 1575 | 8.5 | — | — | 112-A | |
| 117L7/M7-GT | Rectifier-Beam Power Amplifier | C3b | H | 117 | 0.09 | Amplifier Unit as Class A Amplifier | 105 | -5.2 | 105 | 4.0 | 43.0 | 17000 | 5300 | — | 4000 | 0.85 | | |
| 117N7-GT | Rectifier-Beam Power Amplifier | C3b | H | 117 | 0.09 | Half-Wave Rectifier | Max. A-C Plate Volts (RMS), 117 Max. Peak Inverse Volts, 350 | | | | | | | | | | 117N7-GT | |
| | | | | | | Amplifier Unit as Class A Amplifier | 100 | -6.0 | 100 | 5.0 | 51.0 | 16000 | 7000 | — | 3000 | 1.2 | | |
| 117P7-GT | Rectifier-Beam Power Amplifier | C3b | H | 117 | 0.09 | Half-Wave Rectifier | Max. A-C Plate Volts (RMS), 117 Max. Peak Inverse Volts, 350 | | | | | | | | | | 117P7-GT | |
| | | | | | | Amplifier Unit as Class A Amplifier | For other characteristics, refer to Type 117L7/M7-GT. | | | | | | | | | | | |
| 117Z3 | Half-Wave Rectifier | B1a | H | 117 | 0.04 | With Capacitive-Input Filter | Max. A-C Plate Volts (RMS), 117 Max. Peak Inverse Volts, 330 | | | | | | | | | | 117Z3 | |
| | | | | | | With Inductive-Input Filter | Max. D-C Output Ma., 90 Max. Peak Plate Ma., 540 | | | | | | | | | | | |
| 117Z4-GT | Half-Wave Rectifier | C0 | H | 117.0 | 0.04 | With Capacitive-Input Filter | Max. A-C Plate Volts (RMS), 117 Max. Peak Inverse Volts, 350 | | | | | | | | | | 117Z4-GT | |
| | | | | | | With Inductive-Input Filter | Max. D-C Output ma., 90 Max. Peak Plate ma., 540 | | | | | | | | | | | |
| 117Z6-GT | Rectifier-Doubler | C3 | H | 117 | 0.075 | Voltage Doubler | Max. A-C Volts per Plate (RMS), 117 Max. D-C Output Ma., 60 | | | | | | | | | | 117Z6-GT | |
| | | | | | | Half-Wave Rectifier | Min. Total Effective Plate-Supply Impedance per Plate: Half-Wave, 30 ohms; Full-Wave, 15 ohms Max. A-C Volts per Plate (RMS), 235 Max. D-C Output Ma. per Plate, 60 | | | | | | | | | | | |
| 183/483 | Power Amplifier Triode | D12 | F | 5.0 | 1.25 | Class A Amplifier | 250 | -60.0 | — | — | 30.0 | 1750 | 1700 | 3.0 | 5000 | 1.8 | 183/483 | |
| 485 | Detector Amplifier Triode | D5 | H | 3.0 | 1.25 | Class A Amplifier | 180 | -9.0 | — | — | 5.8 | 8900 | 1400 | 12.5 | — | — | 485 | |
| 876 | Current Regulator | G1 | F | — | — | Voltage Range | 40 to 60 Volts | | | | | | | | | | 876 | |
| 886 | Current Regulator | G1 | F | — | — | Voltage Range | 40 to 60 Volts | | | | | | | | | | 886 | |
| | | | | | | | | | | | | Operating Current | | 1.7 Amperes | | | | |
| | | | | | | | | | | | | Operating Current | | 2.05 Amperes | | | | |

For footnotes, see following page



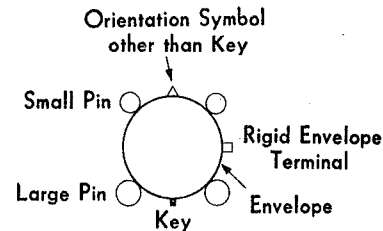
LEGEND FOR BASE AND ENVELOPE CONNECTION DIAGRAMS

Bottom Views

KEY TO TERMINAL DESIGNATIONS

Subscripts B, D, HP, HX, P, T, and TR indicate, respectively, beam unit, diode unit, heptode unit, hexode unit, pentode unit, triode unit, and tetrode unit in multi-unit types.

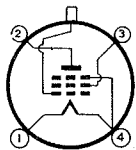
- | | | |
|-----------------------------------|--|----------------------------|
| BC = Base Sleeve | H = Heater | K = Cathode |
| BS = Base Shell | H _L = Heater Tap for Panel Lamp | NC = No Connection |
| DJ = Deflecting Electrode | H _M = Heater Mid-Tap | P = Plate (Anode) |
| ES = External Shield | IC = Internal Connection—Do Not Use | RC = Ray-Control Electrode |
| F = Filament | IS = Internal Shield | S = Shell |
| F _M = Filament Mid-Tap | ● = Gas-Type Tube | TA = Target |
| G = Grid | | U = Unit |



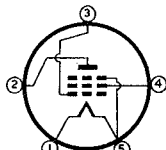
KEY TO TUBE DIMENSIONS

| Symbol | Maximum Overall Length x Diameter | Symbol | Maximum Overall Length x Diameter | Symbol | Maximum Overall Length x Diameter | Symbol | Maximum Overall Length x Diameter | Symbol | Maximum Overall Length x Diameter |
|--------|-----------------------------------|--------|-----------------------------------|--------|-----------------------------------|--------|-----------------------------------|--------|-----------------------------------|
| A | 1 1/2" x 3/8" | B5 | 2 1/2" x 1 1/8" | C10 | 3 7/8" x 1 9/16" | D9 | 4 17/32" x 1 9/16" | G1a | 1 1/2" x 2 3/8" |
| A1 | 1 1/2" x 3/8" | B5a | 2 1/2" x 1 1/8" | C10a | 3 7/8" x 1 9/16" | D9a | 4 19/32" x 1 9/16" | H1 | 1 9/16" x 5 1/8" |
| A1a | 1 1/2" x 1 5/16" | C0 | 3 1/2" x 1 1/8" | C11 | 3 7/8" x 1 9/16" | D10 | 4 3/8" x 1 13/16" | H1 | 1 9/16" x 7 3/8" |
| B0 | 2 1/2" x 1 1/8" | C0a | 3 1/2" x 1 1/8" | D1 | 4 1/2" x 1 13/16" | D12 | 4 11/16" x 1 13/16" | J | 1 4 1/16" x 7 1/8" |
| B0a | 2 3/8" x 1 1/8" | C1 | 3 1/2" x 1 1/8" | D2 | 4 1/2" x 1 13/16" | D12a | 4 1/2" x 1 13/16" | K | 1 4 1/16" x 7 1/8" |
| B0b | 2 3/8" x 1 1/8" | C2 | 3 1/2" x 1 1/8" | D2a | 4 1/2" x 1 13/16" | D13 | 4 15/16" x 1 13/16" | L | 1 7 1/16" x 1 16" |
| B0c | 2 3/8" x 1 1/8" | C2a | 3 1/2" x 1 1/8" | D3 | 4 1/2" x 1 13/16" | E1 | 5 1/2" x 1 13/16" | M | 1 8 1/8" x 1 10 1/8" |
| B1 | 2 1/2" x 1 1/8" | C2b | 3 1/2" x 1 1/8" | D4 | 4 3/8" x 1 13/16" | E2 | 5 1/2" x 1 13/16" | N | 1 9 1/8" x 1 12 1/8" |
| B1a | 2 1/2" x 1 1/8" | C3 | 3 1/2" x 1 1/8" | D5 | 4 3/8" x 1 13/16" | E3 | 5 1/2" x 1 13/16" | O | 2 1 3/8" x 9 1/8" |
| B2 | 2 1/2" x 1 1/8" | C5 | 3 1/2" x 1 1/8" | D7 | 4 1/2" x 1 13/16" | F1 | 5 1/2" x 2 1/8" | P | 2 2 3/8" x 1 16" |
| B3 | 2 1/2" x 1 1/8" | C5a | 3 1/2" x 1 1/8" | D8 | 4 3/8" x 1 13/16" | F1a | 6 1/2" x 2 1/8" | P0 | 2 2 3/8" x 1 16" |
| B4 | 2 1/2" x 1 1/8" | C9a | 3 1/2" x 1 1/8" | D8a | 4 1/2" x 1 13/16" | G1 | 8" x 2 1/8" | Q | 2 5 1/8" x 1 12 3/8" |

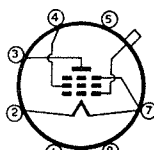
| TYPE | NAME | DIMENSIONS Maximum Overall Length x Diam. | CATHODE TYPE AND RATING | | | USE Values to right give operating conditions and characteristics for indicated typical use | PLATE SUPPLY Volts | GRID BIAS Volts | SCREEN SUPPLY Volts | Screen Current mA. | PLATE CURRENT mA. | A-C PLATE RESISTANCE Ohms | TRANS-CONDUCTANCE (or conv. cond.) μ mhos | Amplification Factor | LOAD For Stated Power Output Ohms | POWER OUTPUT Watts |
|--------|-------------------------|--|-------------------------|------------|--------------|--|---|------------------------------|--|---|---|--|--|----------------------------|--------------------------------------|-----------------------|
| | | | C.T. | Volts | Amp. | | | | | | | | | | | |
| 1C4 | REMOTE CUT-OFF PENTODE | 4 1/8" x 1 9/16" | D.C. F. | 2.0 | 0.12 | Amplifier | 135 135 135 | 0 0 -3.0 | 45 67.5 90 | 0.5 0.9 0.5 | 1.25 2.5 1.5 | 1,560,000 800,000 1,850,000 | 780 1,000 700 | — | — | — |
| ID4 | POWER PENTODE | 4 1/8" x 1 13/16" | D.C. F. | 2.0 | 0.24 | Class A Amplifier | 135 157.5 180 | -4.5 -4.5 -6.0 | 135 157.5 180 | 1.5 2.2 2.3 | 6.0 9.0 9.5 | 150,000 125,000 137,000 | 2,150 2,400 2,400 | — | 15,000 15,000 15,000 | 0.35 0.55 0.75 |
| 1K4 | SHARP CUT-OFF PENTODE | 4 1/8" x 1 9/16" | D.C. F. | 2.0 | 0.12 | Amplifier | For other characteristics refer to Type 1K5-G below. | | | | | | | | | |
| 1K5-G | SHARP CUT-OFF PENTODE | 4 3/8" x 1 9/16" | D.C. F. | 2.0 | 0.12 | R-F Amplifier | 90 135 135 | 0 0 0 | 67.5 45 67.5 | 0.95 0.48 0.93 | 2.48 1.25 2.50 | 750,000 1,750,000 1,000,000 | 1,020 820 1,050 | — | — | — |
| | | | | | | A-F Amplifier (Resistance Coupled) Plate load 0.25 meg. | 135 135 180 180 | -1.5 -1.5 -1.5 -1.5 | Fol. Grid Resistor 0.5 meg., Voltage Gain, 62.5 Fol. Grid Resistor 1.0 meg., Voltage Gain, 75.0 | | Screen fed from 135 volts through 0.75 meg. resistor. | | | | | |
| | | | | | | Class A Triode Amplifier Grid No. 2 tied to plate | 90 135 180 | -3.0 -4.5 -6.0 | — — — | 1.5 3.5 5.9 | 14,800 10,700 9,000 | -1,000 1,400 1,700 | 15.8 15.0 15.3 | 30,000 15,000 10,000 | .013 .05 0.1 | |
| 1K6 | DUO-DIODE PENTODE | 4 1/8" x 1 9/16" | D.C. F. | 2.0 | 0.12 | Amplifier | For other characteristics refer to Type 1K7-G below. | | | | | | | | | |
| 1K7-G | DUO-DIODE PENTODE | 4 3/8" x 1 9/16" | D.C. F. | 2.0 | 0.12 | Pentode Unit as R-F Amplifier | 135 135 135 | 0 0 -4.5 | 45 67.5 135 | 0.35 0.7 0.5 | 0.9 1.8 1.5 | 2,000,000 1,250,000 1,400,000 | 620 800 700 | — | — | — |
| | | | | | | Pentode Unit as A-F Amplifier (Resistance Coupled) Plate load 0.25 meg. | 135 135 180 180 | -1.5 -1.5 -1.5 -1.5 | Fol. Grid Resistor 0.5 meg., Voltage Gain, 63.0 Fol. Grid Resistor 1.0 meg., Voltage Gain, 76.0 | | Screen fed from 135 volts through 1.0 meg. resistor. | | | | | |
| | | | | | | Class A Triode Amplifier Grid No. 2 tied to plate | 135 180 | -4.5 -6.0 | — — | 2.0 3.5 | 16,500 15,000 | 900 1,000 | 15 15 | 30,000 40,000 | .038 .06 | |
| 1L5-G | POWER PENTODE | 4 3/8" x 1 13/16" | D.C. F. | 2.0 | 0.24 | Class A Amplifier | 135 157.5 180 | -4.5 -4.5 -6.0 | 135 157.5 180 | 1.5 2.2 2.3 | 6.0 9.0 9.5 | 150,000 125,000 137,000 | 2,150 2,400 2,400 | — | 15,000 15,000 15,000 | 0.35 0.55 0.75 |
| 1M5-G | REMOTE CUT-OFF PENTODE | 4 3/8" x 1 9/16" | D.C. F. | 2.0 | 0.12 | Class A Amplifier | 135 135 135 | 0 0 -3.0 | 45 67.5 90 | 0.5 0.9 0.5 | 1.25 2.5 1.5 | 1,560,000 800,000 1,850,000 | 780 1,000 700 | — | — | — |
| 2D21 | THYRATRON TETRODE | 2 1/8" x 3 1/4" | H. | 6.3 | 0.6 | Relay Tube and Grid-Controlled Rectifier | Max. Peak Inverse Volts, 1,300 Max. Peak Forward Volts, 650 | | | | | Max. Peak Cathode Ma., 500 Average Cathode Ma., 100 | | | | |
| 3A4 | POWER AMPLIFIER PENTODE | 2 1/8" x 3 1/4" | D.C. F. | 1.4 2.8 | 0.2 0.1 | Class A Amplifier | 135 150 | -7.5 -8.4 | 90 90 | 2.6 2.2 | 14.8 13.3 | 90,000 100,000 | 1,900 1,900 | — | 8,000 8,000 | 0.6 0.7 |
| | | | | | | R-F Power Amplifier | 150 | — | 135 | 6.5 | 18.3 | Grid Resistor, 0.2 megohm Grid Current, 0.13 ma. | | — | 1.2 at 10 Mc | |
| 3A5 | H-F TWIN TRIODE | 2 1/8" x 3 1/4" | D.C. F. | 1.4 2.8 | 0.22 0.11 | Each Unit as Class A Amplifier | 90 | -2.5 | — | — | 3.7 | 8,300 | 1,800 | 15 | — | — |
| | | | | | | Push-Pull Class C Amplifier | 135 | -20.0 | from Grid resistor, 4,000 ohms | | 30.0 | Grid Current, 5 ma. Driving Power, 0.2 watt | | — | 2.0 at 40 Mc | |
| 5R4-GY | FULL-WAVE RECTIFIER | 5 9/16" x 2 7/16" | F. | 5.0 | 2.0 | With Choke Input Filter | Peak Inverse Voltage = 2800 max. volts Peak Plate Current per Plate = 650 max. mA. | | | R.M.S. Voltage per Plate = 1,000 max. volts. D-C Output Current = 175 max. mA. Choke Inductance = 10.0 min. henrys. | | | | | | |
| | | | | | | With Condenser Input Filter | R.M.S. Voltage per Plate = 1,000 max. volts. D-C Output Current = 150 max. mA. Filter-Input Condenser = 4 max. microfarads. Total Plate Supply Impedance per Plate = 575 min. ohms. | | | | | | | | | |



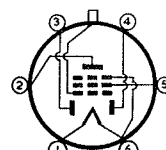
1C4, 1K4



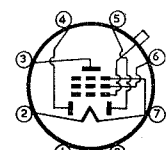
ID4



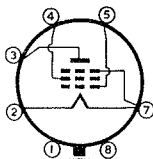
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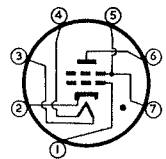
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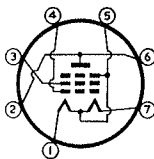
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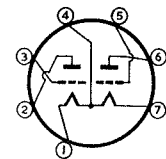
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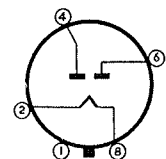
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3A4

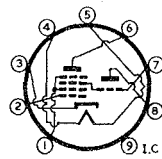


3A5

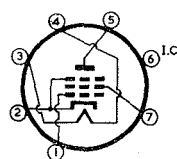


5R4-GY

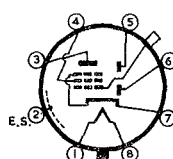
| TYPE | NAME | DIMENSIONS Maximum Overall Length x Diam. | CATHODE TYPE AND RATING | | | USE Values to right give operating conditions and characteristics for indicated typical use | PLATE SUPPLY Volts | GRID BIAS Volts | SCREEN SUPPLY Volts | Screen Current mA. | PLATE CURRENT mA. | A-C PLATE RESISTANCE Ohms | TRANS-CONDUCTANCE (or conv. cond.) μ mhos | Amplification Factor | LOAD For Stated Power Output Ohms | POWER OUTPUT Watts | |
|-------------|----------------------------------|--|---|-------|------|--|---|--|------------------------|-----------------------|---|------------------------------|--|--|--------------------------------------|-----------------------|--|
| | | | C.T. | Volts | Amp. | | | | | | | | | | | | |
| 6AE8 | TRIODE-HEXODE CONVERTER | 2 1/8" x 7/8" | H. | 6.3 | 0.3 | Converter | 250 | -2 -25 | 85 | 3.2 3.5 | 3.5 Nil | 2 meg. | 0.5, 300 μA; 0.7, 300 μA; 1.5, 0.45 mA. | — | — | — | |
| 6AM5 | POWER PENTODE | 2 1/8" x 3/4" | H. | 6.3 | 0.2 | Class A Amplifier | 250 | -13.5 | 250 | 2.4 | 16 | 150,000 | 2,600 | 390 | 16,000 | 1.4 | |
| 6AR7-GT | DUO-DIODE REMOTE CUT-OFF PENTODE | 3 3/8" x 1 1/16" | H. | 6.3 | 0.3 | Pentode Unit as A-F Amplifier | 250 | -2 | 100 | 1.8 | 7.0 | 1 meg. | 2,500 | 2,500 | — | — | |
| 6B7S | DUO-DIODE REMOTE CUT-OFF PENTODE | 4 1/2" x 1 1/16" | Electrically identical to Type 6G8-G below, | | | | | | | | | | | | | | |
| 6BJ5 | POWER PENTODE | 2 3/4" x 3/4" | H. | 6.3 | 0.64 | Class A Amplifier | 250 | -5 | 250 | 5.5 | 35 | 40,000 | 10,500 | 420 | 7,000 | 4.0 | |
| 6BQ7 | TWIN-TRIODE | 2 3/16" x 7/8" | H. | 6.3 | 0.4 | Single Section Class A Amplifier | 150 | -2 | — | — | 10 | 5,800 | 6,000 | 35 | — | — | |
| 6G8-G | DUO-DIODE REMOTE CUT-OFF PENTODE | 4 3/8" x 1 1/16" | H. | 6.3 | 0.3 | Pentode Unit as R-F Amplifier | 250 | -3.0 | 100 | 1.5 | 6.5 | 850,000 | 1,100 | 900 | — | — | |
| | | | | | | | 250 | -3.0 | 125 | 2.2 | 9.5 | 510,000 | 1,210 | 600 | — | — | |
| | | | | | | | 135 | Fol. Grid Resistor 0.5 meg., Voltage Gain 63.5 | | | | | | | | | |
| | | | | | | | 250 | Fol. Grid Resistor 1.0 meg., Voltage Gain 75.0 | | | | | | | | | |
| | | | | | | | 250 | Fol. Grid Resistor 0.5 meg., Voltage Gain 77.0 | | | | | | | | | |
| | | | | | | | 250 | Fol. Grid Resistor 1.0 meg., Voltage Gain 93.0 | | | | | | | | | |
| | | | | | | | | | | | | | Cathode Bias Resistor = 2,000 ohms. Screen-Supply Voltage Divider Network—1.0 megohm to B+ max. and 0.25 megohm to Earth. | | | | |
| 6J7-G /1620 | LOW-NOISE PENTODE | 4 3/8" x 1 1/16" | H. | 6.3 | 0.3 | Low-Noise Amplifier | For other characteristics refer to Type 6J7-G, see page 9. | | | | | | | | | | |
| 6J8-GA | TRIODE-HEPTODE CONVERTER | 4 3/8" x 1 1/16" | H. | 6.3 | 0.45 | Heptode Unit as Mixer | 250 | -3.0 | 100 | 2.9 | 1.3 | 4,000,000 | 290 | Triode Plate fed from 250 max. volts through 20,000 ohms, Current = 5.0 mA. Oscillator (triode) Grid Resistor 50,000 ohms, Current 0.4 mA. | | | |
| | | | | | | | 100 | 0 | — | — | 7.0 | 10,600 | 1,600 | 17 | — | — | |
| 6U5-G | TUNING INDICATOR | 4 3/8" x 1 1/16" | H. | 6.3 | 0.3 | Tuning Indicator | Plate and Target Supply = 100 volts. Triode Plate Resistor = 0.5 meg. Target Current = 1.0 mA. Grid Bias, -8 volts; Shadow Angle, 0°. Bias, 0 volts; Angle 90°; Plate Current, 0.19 mA. | | | | | | | | | | |
| | | | | | | | Plate and Target Supply = 250 volts. Triode Plate Resistor = 1.0 meg. Target Current = 4.0 mA. Grid Bias, -22 volts; Shadow Angle, 0°. Bias, 0 volts; Angle, 90°; Plate Current, 0.24 mA. | | | | | | | | | | |
| 6X8 | TRIODE-PENTODE CONVERTER | 2 3/16" x 7/8" | H. | 6.3 | 0.45 | Converter | 150 | -3.5 | 150 | 1.8 | 6.2 | — | 2,100 | — | — | — | |
| 16RP4 | DIRECTLY VIEWED KINESCOPE | 19 1/8" x 16 1/16" | H. | 6.3 | 0.6 | Picture Reproduction | Focus. Magnetic Deflect.; Magnetic Deflect.; Angle, 70° Phosphor: P4 Picture Size: 10 1/2" x 13 1/2" | | | | Requires External, Single Field, Iron-Trap Magnet | | Anode Volts, 16,000 max. Grid-No. 2 Volts, 300 (410 max.) Grid-No. 1 Volts for Visual Cut-off -33 to -77 volts Grid-No. 1 Circuit Resistance, 1.5 megohms max. | | | | |
| 16TP4 | DIRECTLY VIEWED KINESCOPE | 18 1/2" x 16 1/16" | H. | 6.3 | 0.6 | Picture Reproduction | As above | | | | As above | | As above, except Anode Volts: 14,000 max. | | | | |
| 17BP4-A | DIRECTLY VIEWED KINESCOPE | 19 1/8" x 16 3/4" | H. | 6.3 | 0.6 | Picture Reproduction | As above, except Picture Size: 11 1/8" x 14 3/8" | | | | As above | | As 16RP4 | | | | |



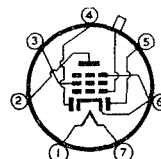
6AE8



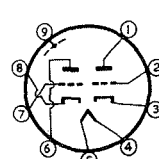
6AM5, 6BJ5



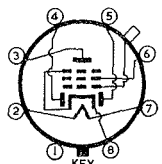
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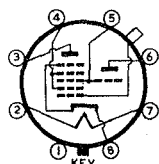
6B7-S



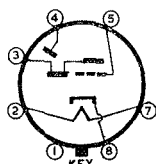
6BQ7



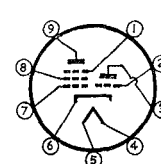
6G8-G



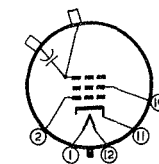
6J8-GA



6U5-G



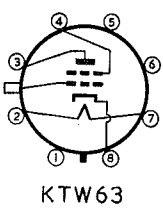
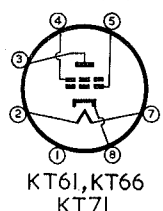
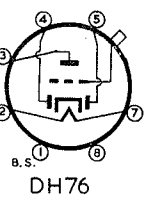
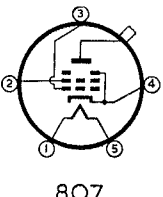
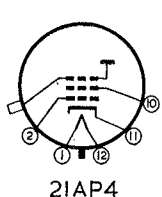
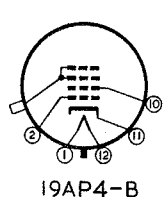
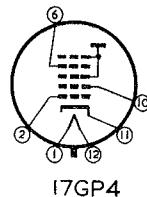
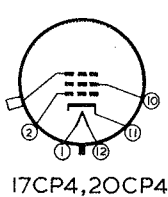
6X8



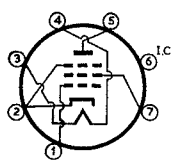
16RP4, 16TP4
17BP4-A

17CP4 to L77

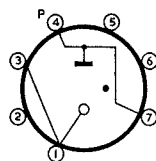
| TYPE | NAME | DIMENSIONS Maximum Overall Length x Diam. | CATHODE TYPE AND RATING | | | USE <i>Values to right give operating conditions and characteristics for indicated typical use</i> | PLATE SUPPLY | GRID BIAS | SCREEN SUPPLY | Screen Current | PLATE CURRENT | A-C PLATE RESISTANCE | TRANS-CONDUCTANCE (or conv. cond.) | Amplification Factor | LOAD For Stated Power Output | POWER OUTPUT |
|---------|---------------------------|--|--|-------|------|---|---|-----------|---------------|----------------|---------------|--|------------------------------------|----------------------|------------------------------|--------------|
| | | | C.T. | Volts | Amp. | | Volts | Volts | mA. | mA. | Ohms | μ mhos | Ohms | Watts | | |
| 17CP4 | DIRECTLY VIEWED KINESCOPE | 18 $\frac{1}{16}$ " x 17" | H. | 6.3 | 0.6 | Picture Reproduction | As 16RP4, except Picture Size: 11" x 14 $\frac{5}{8}$ " | | | As 16RP4 | | As 16RP4 | | | | |
| 17GP4 | DIRECTLY VIEWED KINESCOPE | 18 $\frac{1}{2}$ " x 17" | H. | 6.3 | 0.6 | Picture Reproduction | As 17CP4, except Focus: Electrostatic | | | As above | | As 16RP4, except Grid-No. 2 Volts, 300 (500 max.) | | | | |
| 19AP4-B | DIRECTLY VIEWED KINESCOPE | 22" x 18 $\frac{1}{4}$ " | H. | 6.3 | 0.6 | Picture Reproduction | Focus: Magnetic Deflect.: Magnetic Deflect. Angle: 66° Phosphor: P4 Picture Size: 11 $\frac{1}{2}$ " x 15 $\frac{3}{8}$ " | | | As above | | Anode Volts: 19,000 max. Grid-No. 2 Volts, 300 (410 max.) Grid-No. 1 Volts for Visual Cut-off —33 to —77 volts Grid-No. 1 Circuit Resistance, 1.5 megohms max. | | | | |
| 20CP4 | DIRECTLY VIEWED KINESCOPE | 21 $\frac{1}{16}$ " x 20 $\frac{5}{16}$ " | H. | 6.3 | 0.6 | Picture Reproduction | As above, except Deflect. Angle: 70° Picture Size: 13 $\frac{1}{4}$ " x 17 $\frac{1}{4}$ " | | | As above | | As above, except Anode Volts: 18,000 max. | | | | |
| 21AP4 | DIRECTLY VIEWED KINESCOPE | 22 $\frac{1}{16}$ " x 21" | H. | 6.3 | 0.6 | Picture Reproduction | As 20CP4, except Picture Size: 13 $\frac{3}{8}$ " x 18 $\frac{3}{8}$ " | | | As above | | As 20CP4, except Grid-No. 2 Volts, 300 (500 max.) | | | | |
| 161 | BARRETTER | 3 $\frac{5}{8}$ " x 1 $\frac{3}{16}$ " | F. | — | 0.16 | Current Regulator | Voltage Range, 100-200 volts. Edison Screw Base. | | | | | | | | | |
| 302 | BARRETTER | 5 $\frac{1}{2}$ " x 2 $\frac{5}{8}$ " | F. | — | 0.3 | Current Regulator | Voltage Range, 112-195 volts. Edison Screw Base. | | | | | | | | | |
| 807 | POWER TETRODE | 5 $\frac{3}{8}$ " x 2 $\frac{1}{16}$ " | H. | 6.3 | 0.9 | Class A Amplifier | 275 | -15 | 275 | 6.2 | 86 | 21,500 | 6,300 | 135 | 2,380 | 8.25 |
| B36 | TWIN-TRIODE | 3 $\frac{5}{8}$ " x 1 $\frac{1}{8}$ " | Electrically interchangeable with Type 12SN7-GT. | | | | | | | | | | | | | |
| B65 | TWIN-TRIODE | 3 $\frac{7}{8}$ " x 1 $\frac{1}{8}$ " | Electrically interchangeable with Type 6SN7-GT. | | | | | | | | | | | | | |
| B63 | DUO-DIODE | 3 $\frac{1}{16}$ " x 1 $\frac{7}{16}$ " | Electrically interchangeable with Type 6H6-G. | | | | | | | | | | | | | |
| D77 | DUO-DIODE | Identical to Type 6AL5. | | | | | | | | | | | | | | |
| DH63 | DUO-DIODE HIGH-MU TRIODE | 4 $\frac{3}{16}$ " x 1 $\frac{3}{8}$ " | Electrically interchangeable with Type 6Q7-GT. | | | | | | | | | | | | | |
| DH76 | DUO-DIODE HIGH-MU TRIODE | 4 $\frac{3}{16}$ " x 1 $\frac{1}{2}$ " | H. | 13.0 | 0.16 | Triode Unit as Class A Amplifier | 250 | -3 | — | — | 1.0 | 58,000 | 1,200 | 70 | — | — |
| DH77 | DUO-DIODE HIGH-MU TRIODE | Identical to Type 6AT6. | | | | | | | | | | | | | | |
| DH107 | DUO-DIODE HIGH-MU TRIODE | | H. | 19.0 | 0.1 | | Other electrical characteristics identical to Type 12AT6. | | | | | | | | | |
| KT61 | POWER TETRODE | 4 $\frac{11}{16}$ " x 1 $\frac{3}{8}$ " | H. | 6.3 | 0.95 | Class A Amplifier | 250 | -4.3 | 250 | 7.5 | 40 | 75,000 | 10,500 | 790 | 6,000 | 4.3 |
| KT63 | POWER TETRODE | Identical to Type 6F6-G. | | | | | | | | | | | | | | |
| KT66 | POWER TETRODE | 5 $\frac{1}{16}$ " x 2 $\frac{1}{16}$ " | H. | 6.3 | 1.27 | Class A Amplifier | 250 | -15 | 250 | 6.3 | 85 | 22,500 | 6,300 | 142 | 2,200 | 7.25 |
| KT71 | POWER TETRODE | 4 $\frac{1}{8}$ " x 1 $\frac{3}{16}$ " | H. | 48.0 | 0.16 | Class A Amplifier | 175 | -9.8 | 175 | 12.0 | 70 | — | — | — | 2,500 | 5.0 |
| KTW63 | REMOTE CUT-OFF TETRODE | 4 $\frac{3}{4}$ " x 1 $\frac{1}{2}$ " | Similar to Types 6K7-G and 6U7-G. | | | | | | | | | | | | | |
| L63 | MEDIUM-MU TRIODE | 3 $\frac{7}{8}$ " x 1 $\frac{1}{8}$ " | Electrically interchangeable with Type 6J5-GT. | | | | | | | | | | | | | |
| L77 | MEDIUM-MU TRIODE | Identical to Type 6C4. | | | | | | | | | | | | | | |



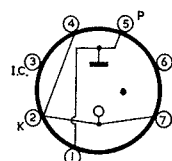
| TYPE | NAME | DIMENSIONS <i>Maximum Overall Length x Diam.</i> | CATHODE TYPE AND RATING | | | USE <i>Values to right give operating conditions and characteristics for indicated typical use</i> | PLATE SUPPLY Volts | GRID BIAS Volts | SCREEN SUPPLY Volts | Screen Current mA. | PLATE CURRENT mA. | A-C PLATE RESISTANCE Ohms | TRANS-CONDUCTANCE (or conv. cond.) μ mhos | Amplification Factor | LOAD For Stated Power Output Ohms | POWER OUTPUT Watts |
|------------|-------------------------|---|-------------------------|-------|------|---|--|--|------------------------|-----------------------|----------------------|------------------------------|--|----------------------|--------------------------------------|-----------------------|
| | | | C.T. | Volts | Amp. | | | | | | | | | | | |
| N17 | POWER PENTODE | Identical to Type 354. | | | | | | | | | | | | | | |
| N18 | POWER PENTODE | Identical to Type 3Q4. | | | | | | | | | | | | | | |
| N19 | POWER PENTODE | Identical to Type 3V4. | | | | | | | | | | | | | | |
| N37 | POWER PENTODE | 2 $\frac{1}{8}$ " x $\frac{3}{4}$ " | H. | 13.0 | 0.3 | Class A Amplifier | 165 | -8 | 165 | 7 | 54.5 | 28,500 | 10,000 | 285 | 3,000 | 4.0 |
| N77 | POWER PENTODE | Identical to Type 6AM5. | | | | | | | | | | | | | | |
| N78 | POWER PENTODE | Identical to Type 6BJ5. | | | | | | | | | | | | | | |
| N108 | POWER PENTODE | | H. | 40.0 | 0.1 | Other electrical characteristics identical to Type N37. | | | | | | | | | | |
| QS.70/20 | VOLTAGE REGULATOR | 2 $\frac{1}{8}$ " x $\frac{3}{4}$ " | — | — | — | Voltage Regulator | Min. D-C Starting Volts, 105. D-C Operating Volts, 70. D-C Operating Current, 20 mA. max., 2 mA. min. | | | | | | | | | |
| QS.83/3 | VOLTAGE REFERENCE VALVE | 2 $\frac{1}{8}$ " x $\frac{3}{4}$ " | — | — | — | Voltage Reference Valve | Voltage Stability, 0.1%. Min. D-C Starting Volts, 130. D-C Operating Volts, 83. D-C Operating Current Range, 1-5 mA. | | | | | | | | | |
| QS.95/10 | VOLTAGE REGULATOR | 2 $\frac{1}{8}$ " x $\frac{3}{4}$ " | — | — | — | Voltage Regulator | Min. Ignition Electrode Volts, 150. Min. D-C Starting Volts, 110. D-C Operating Volts, 95. D-C Operating Current, 10 mA. max., 2 mA. min. | | | | | | | | | |
| QS.150/15 | VOLTAGE REGULATOR | 2 $\frac{1}{8}$ " x $\frac{3}{4}$ " | — | — | — | Voltage Regulator | Min. Ignition Electrode Volts, 240. Min. D-C Starting Volts, 170. D-C Operating Volts, 150. D-C Operating Current, 15 mA. max., 2 mA. min. | | | | | | | | | |
| U31 | HALF-WAVE RECTIFIER | 4 $\frac{3}{8}$ " x 1 $\frac{1}{2}$ " | H. | 26.0 | 0.3 | With Condenser Input Filter | Max. A-C Plate Volts (R.M.S.), 250. Max. D-C Output mA., 120. Max. Peak Inverse Volts, 700. Max. Peak Plate mA., 750. | | | | | | | | | |
| U37 | HIGH VOLTAGE RECTIFIER | 1 $\frac{7}{8}$ " x $\frac{1}{2}$ " | F. | 1.4 | 0.14 | Half Wave Rectifier | Peak Inverse Voltage, 15,000. D-C Output Current, 2 mA. Peak Plate Current, 12 mA. Surge Plate Current, 40 mA. | | | | | | | | | |
| U52 /5U4-G | FULL-WAVE RECTIFIER | 5 $\frac{5}{16}$ " x 2 $\frac{1}{16}$ " | F. | 5.0 | 2.25 | With Choke Input Filter With Condenser Input Filter | Peak Inverse Voltage, 1430 max. volts Peak Plate Current per Plate, 770 max. mA. | R.M.S. Voltage per Plate, 500 max. volts. D-C Output Current, 250 max. mA. Choke Inductance, 3.0 min. henrys. R.M.S. Voltage per Plate, 500 max. volts. D-C Output Current, 250 max. mA. Filter-Input Condenser, 8 max. microfarads. Total Plate Supply Impedance per Plate, 150 min. ohms. | | | | | | | | |
| U76 | HALF-WAVE RECTIFIER | 3 $\frac{7}{8}$ " x 1 $\frac{11}{32}$ " | H. | 30.0 | 0.16 | With Condenser Input Filter | Max. A-C R.M.S. Plate, 250 volts. Max. D-C Output, 100 mA. Max. Peak Inverse, 700 volts. Max. Peak Plate Current, 500 mA. Plate Supply Impedance, 100 ohms. Filter Input Condenser, 32 max. microfarads. | | | | | | | | | |
| U78 | FULL-WAVE RECTIFIER | Identical to Type 6X4. | | | | | | | | | | | | | | |
| U107 | HALF-WAVE RECTIFIER | 2 $\frac{3}{4}$ " x $\frac{3}{4}$ " | H. | 40.0 | 0.1 | With Condenser Input Filter | Max. A-C Plate Volts (R.M.S.), 250. Max. D-C Output mA., 90. Max. Peak Inverse Volts, 700. Max. Peak Plate mA., 540. | | | | | | | | | |
| W17 | REMOTE CUT-OFF PENTODE | Identical to Type 1T4. | | | | | | | | | | | | | | |
| W76 | REMOTE CUT-OFF PENTODE | 4 $\frac{3}{16}$ " x 1 $\frac{11}{32}$ " | H. | 13.0 | 0.16 | Class A Amplifier | 175 | -2-3 | 100 | 1.7 | 8.5 | 500,000 | 1 500 | 750 | — | — |
| W77 | REMOTE CUT-OFF PENTODE | 2 $\frac{1}{8}$ " x $\frac{3}{4}$ " | H. | 6.3 | 0.2 | Class A Amplifier | 200 | -2.5 | 200 | 2.0 | 8.0 | 500,000 | 2,500 | 1,250 | — | — |
| W107 | REMOTE CUT-OFF PENTODE | 2 $\frac{1}{8}$ " x $\frac{3}{4}$ " | H. | 12.6 | 0.1 | Other electrical characteristics identical to Type W77. | | | | | | | | | | |



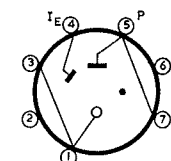
N37, N108



QS 70/20



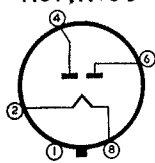
QS 83/3



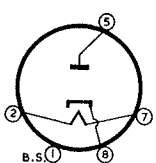
QS95/10, QS 150/15



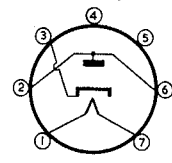
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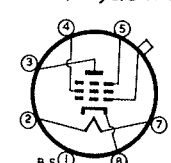
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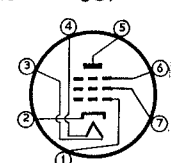
U31, U76



U107



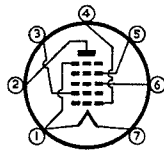
W76



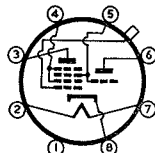
W77, W107

X17 to ZD17

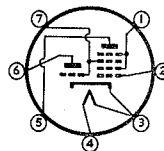
| TYPE | NAME | DIMENSIONS Maximum Overall Length x Diam. | CATHODE TYPE AND RATING | | | USE Values to right give operating conditions and characteristics for indicated typical use | PLATE SUPPLY Volts | GRID BIAS Volts | SCREEN SUPPLY Volts | Screen Current mA. | PLATE CURRENT mA. | A-C PLATE RESISTANCE Ohms | TRANS-CONDUCTANCE (or conv. cond.) μ mhos | Amplification Factor | LOAD For Stated Power Output Ohms | POWER OUTPUT Watts |
|------|-------------------------|--|---|-------|------|--|--|--------------------|------------------------|-----------------------|----------------------|------------------------------|--|------------------------------|--------------------------------------|-----------------------|
| | | | C.T. | Volts | Amp. | | | | | | | | | | | |
| X17 | PENTAGRID CONVERTER | Identical to Type 1R5. | | | | | | | | | | | | | | |
| X18 | PENTAGRID CONVERTER | 2½" x ¾" | D.C. F. | 1.4 | 0.05 | Converter | 90 | 0 | 45 | — | — | — | 300 | Anode-Grid Voltage, 70 max. | | |
| X61M | TRIODE-HEXODE CONVERTER | 4½" x 1½" | H. | 6.3 | 0.3 | Converter | 250 | -3 | 100 | 2.8 | 3.7 | 700,000 | 620 | Current, 3.5 mA. | | |
| | | | | | | | Oscillator Plate fed from 250 volts through 30,000 ohms. Oscillator Grid Resistor, 50,000 ohms. Current, 0.3 mA. | | | | | | | | | |
| X63 | PENTAGRID CONVERTER | Similar to Type 6A8-G. | | | | | | | | | | | | | | |
| X76M | TRIODE-HEXODE CONVERTER | 4½" x 1½" | H. | 13.0 | 0.16 | Converter | 250 | -3 | 100 | 2.8 | 3.7 | 700,000 | 620 | Current, 3.5 mA. | | |
| | | | | | | | Oscillator Plate fed from 250 volts through 30,000 ohms. Oscillator Grid Resistor, 50,000 ohms. Current, 0.3 mA. | | | | | | | | | |
| X78 | TRIODE-HEXODE CONVERTER | 2½" x ¾" | Identical to Type 6AE8, except for basing. | | | | | | | | | | | | | |
| X79 | TRIODE-HEXODE CONVERTER | Identical to Type 6AE8. | | | | | | | | | | | | | | |
| X109 | TRIODE-HEXODE CONVERTER | | H. | 19.0 | 0.1 | Other electrical characteristics identical to Type 6AE8. | | | | | | | | | | |
| Y61 | TUNING INDICATOR | Identical to Type 6U5-G. | | | | | | | | | | | | | | |
| Z63 | SHARP CUT-OFF PENTODE | 4½" x 1½" | Electrically interchangeable with Type 6J7-G. | | | | | | | | | | | | | |
| Z77 | R-F AMPLIFIER PENTODE | 2½" x ¾" | H. | 6.3 | 0.3 | Class A Amplifier | 250 | -2 | 250 | 2.5 | 10 | 300 000 | 7,500 | Cathode Bias Res., 160 ohms. | | |
| | | | | | | Triode | 250 | -2 | — | — | 12.5 | 10,000 | 7,500 | 75 | Cathode Bias Res., 160 ohms. | |
| ZD17 | DIODE-PENTODE | Identical to Type 1S5. | | | | | | | | | | | | | | |



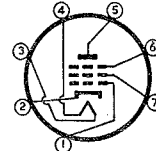
X18



X61M, X76M



X78



Z77

9375

OTHER MANUFACTURERS' TYPES

1A6 to 6AG6-G

| TYPE | NAME | DIMENSIONS Maximum Overall Length x Diam. | CATHODE TYPE AND RATING | | | USE Values to right give operating conditions and characteristics for indicated typical use | PLATE SUPPLY Volts | GRID BIAS Volts | SCREEN SUPPLY Volts | Screen Current mA. | PLATE CURRENT mA. | A-C PLATE RESISTANCE Ohms | TRANS-CONDUCTANCE (or conv. cond.) μ mhos | Amplification Factor | LOAD For Stated Power Output Ohms | POWER OUTPUT Watts |
|--------|----------------------|--|-------------------------|-------|-------|--|-----------------------|--------------------|------------------------|--|----------------------|------------------------------|--|----------------------|--------------------------------------|-----------------------|
| | | | C.T. | Volts | Amp. | | | | | | | | | | | |
| 1A6 | PENTAGRID CONVERTER | 2½" x ¾" | F. | 1.4 | 0.025 | Converter | 85 | 0 | 64 | 0.17 | 0.65 | 1 meg. | 300 | — | — | — |
| 1A6 | PENTAGRID CONVERTER | 2½" x ¾" | F. | 1.4 | 0.05 | Converter | 85 | 0 | 60 | 0.14 | 0.65 | 1 meg. | 325 | — | — | — |
| 1A5 | DIODE PENTODE | 2½" x ¾" | F. | 1.4 | 0.025 | Class A Amplifier | 85 | 10 meg. | 85 | Plate Load Resistance, 1 meg. Voltage Gain, 62. Screen Feed Resistance, 3.3 meg. | | | | | | |
| 1E3 | H-F TRIODE | 2½" x ¾" | F. | 1.25 | 0.22 | Class A Amplifier | 150 | -3.5 | — | — | 20 | 4,000 | 3,500 | 14 | — | — |
| 3C4 | POWER PENTODE | 2½" x ¾" | F. | 1.4 | 0.025 | Class A Amplifier | 85 | -5.2 | 85 | 1.1 | 5.0 | 125,000 | 1,350 | 169 | — | 0.2 |
| 6AB8 | TRIODE-POWER PENTODE | 2½" x ¾" | H. | 6.3 | 0.3 | Triode | 100 | -2.3 | — | — | 4.0 | 12,500 | 1,400 | 17 | — | — |
| | | | | | | Pentode | 170 | -6.3 | 170 | 2.8 | 15.0 | 150,000 | 3,300 | 495 | 11,000 | 1.0 |
| 6AD8 | DUO-DIODE PENTODE | 2½" x ¾" | H. | 6.3 | 0.3 | Class A Amplifier | 250 | -2 | 85 | 2.3 | 6.7 | 1 meg. | 1,100 | 1,100 | — | — |
| 6AG6-G | POWER PENTODE | 5½" x 2½" | H. | 6.3 | 1.2 | Class A Amplifier | 250 | -6 | 250 | 6.0 | 32.0 | 60,000 | 10,000 | 600 | 9,000 | 3.75 |

RADIOTRON LIST OF EQUIPMENT TYPES

JANUARY, 1952

| CLASSIFICATIONS | | Current Receiver Equipment Types | | | | | Additional Types for Miscell. Application | |
|-----------------------------------|----------------|----------------------------------|-------|----------------------------|---------------------------------|-----------|--|------------|
| | | Battery | | A.C. | | A.C./D.C. | | |
| | | Miniature | Octal | Miniature | Octal | Miniature | Miniature | Octal |
| Frequency Converters | Pentagrids | 1R5 | 1C7-G | 6BE6 | 6A8-G | 12BE6 | | |
| | Triode-Hexodes | | | 6AE8 | X61M | | | |
| R-F Pentodes. Remote Cut-Off | | 1T4 | 1M5-G | 6BA6 | 6U7-G | 12BA6 | | |
| R-F & A-F Pentodes. Sharp Cut-Off | | | 1K5-G | 6AU6 | | 12AU6 | Z77 | 6J7-G/1620 |
| Double-Diode R-F Pentodes | | | 1K7-G | | 6AR7-GT 6B8-GT | | | |
| Diode A-F Pentodes | | 1S5 | | | | | | |
| Double-Diode Triodes | | | | 6AV6 | 6SQ7-GT | 12AT6 | | |
| Double-Diodes | | | | | | | 6AL5 | |
| Double-Triodes | | | | | | | 6J6 12AT7 12AU7 12AX7 | 6SN7-GT |
| Triodes | | | | | | | 6C4 | |
| Output Tetrodes & Pentodes | | 3S4 3V4 | 1L5-G | 6AQ5 6BJ5 | 6V6-GT | 50C5 | | KT66 |
| Half-Wave Rectifiers | | | | | | 35W4 | | |
| Full-Wave Rectifiers | | | | 6X4 | 5Y3-GT 6X5-GT | | | U52/5U4-G |

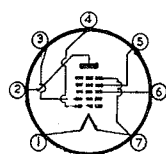
N.B.—Recommended types are shown in bold face.

This list of types is presented to assist equipment manufacturers in planning for future production of broadcast receivers and similar equipment.

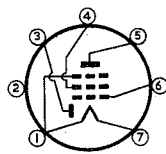
By using types shown on this list in bold face, manufacturers will tend to reap the benefits of better availability, lower cost and better quality.

These types are in general made in Australia, and are intended to satisfy the main requirements of receiver manufacturers.

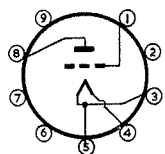
To extend the advantage of standardisation to valves for miscellaneous applications, a number of other types are included on the list, and these are shown in ordinary type. A list of specific T.V. types is not given, as developments in this field are at present so rapid. Advice on the best choice of T.V. types will be given on enquiry.



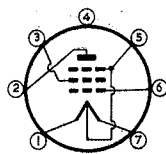
IAB6, IAC6



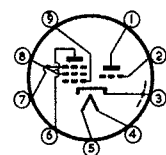
IAHS



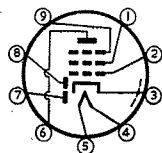
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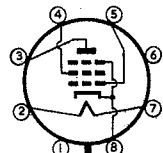
3C4



6AB8



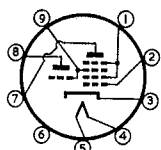
6AD8



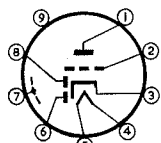
6AG6-G

6AM6 to 6R4

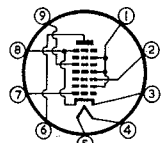
| TYPE | NAME | DIMENSIONS Maximum Overall Length x Diam. | CATHODE TYPE AND RATING | | | USE Values to right give operating conditions and characteristics for indicated typical use | PLATE SUPPLY Volts | GRID BIAS Volts | SCREEN SUPPLY Volts | Screen Current mA. | PLATE CURRENT mA. | A-C PLATE RESISTANCE Ohms | TRANS-CONDUCTANCE (or conv. cond.) μ mhos | Amplification Factor | LOAD For Stated Power Output Ohms | POWER OUTPUT Watts |
|------|---------------------------------|--|-------------------------|-------|------|--|--|--------------------|------------------------|-----------------------|----------------------|------------------------------|--|----------------------|--------------------------------------|-----------------------|
| | | | C.T. | Volts | Amp. | | | | | | | | | | | |
| 6AM6 | SHARP CUT-OFF PENTODE | | Similar to Type Z77. | | | | | | | | | | | | | |
| 6AN7 | TRIODE-HEXODE CONVERTER | 2 5/8" x 7/8" | H. | 6.3 | 0.23 | Converter | 250 | -2 | 85 | 3.0 | 3.0 | 1.6 meg. | 750 | 70 | — | — |
| 6BD7 | DUO-DIODE TRIODE | 2 5/8" x 7/8" | H. | 6.3 | 0.23 | Class A Amplifier | 250 | -3 | — | — | 1.0 | 58,000 | 1,200 | 70 | — | — |
| 6BE7 | F-M LIMITER DETECTOR | 2 5/8" x 7/8" | H. | 6.3 | 0.2 | Detector | 250 | -4.5 | 20 | 1.5 | 0.25 | 5 meg. | — | — | — | — |
| 6BH5 | REMOTE CUT-OFF PENTODE | 2 5/8" x 7/8" | H. | 6.3 | 0.2 | Class A Amplifier | 250 | -2.5 | 100 | 1.7 | 6.0 | 1 meg. | 2,200 | 2,200 | — | — |
| 6BR7 | LOW-NOISE SHARP CUT-OFF PENTODE | 2 5/8" x 7/8" | H. | 6.3 | 0.15 | Class A Amplifier | 250 | -3 | 100 | 0.6 | 2.1 | 2.5 meg. | 1,250 | 3,120 | — | — |
| 6BS7 | LOW-NOISE SHARP CUT-OFF PENTODE | 2 3/8" x 7/8" | | | | | Electrically identical to Type 6BR7. | | | | | | | | | |
| 6BW6 | POWER PENTODE | 2 5/8" x 7/8" | | | | | Electrically identical to Type 6V6-GT. | | | | | | | | | |
| 6BX6 | SHARP CUT-OFF PENTODE | 2 5/8" x 7/8" | H. | 6.3 | 0.3 | Class A Amplifier | 170 | -2 | 170 | 2.5 | 10.0 | 400,000 | 7,200 | 2,830 | — | — |
| 6CH6 | POWER PENTODE | 2 5/8" x 7/8" | H. | 6.3 | 0.75 | Class A Amplifier | 250 | -4.5 | 250 | 6.0 | 40.0 | 50,000 | 11,000 | 550 | 6,000 | — |
| 6CJ6 | POWER PENTODE | 3 1/8" x 7/8" | H. | 6.3 | 1.05 | Class A Amplifier | 250 | -38.5 | 250 | 2.4 | 32 | 15,000 | 4,600 | 69 | 8,000 | — |
| 6CK6 | POWER PENTODE | 3 1/8" x 7/8" | H. | 6.3 | 0.71 | Class A Amplifier | 250 | -5.5 | 250 | 5 | 36 | 130,000 | 10,000 | 1,300 | 7,000 | — |
| 6M5 | POWER PENTODE | 3 1/8" x 7/8" | H. | 6.3 | 0.71 | Class A Amplifier | 250 | -7 | 250 | 5.2 | 36 | 40,000 | 10,000 | 400 | 7,000 | — |
| 6N8 | DUO-DIODE PENTODE | 2 5/8" x 7/8" | H. | 6.3 | 0.3 | Class A Amplifier | 250 | -2 | 85 | 1.75 | 5 | 1.6 meg. | 2,200 | 3,520 | — | — |
| 6Q4 | H-F TRIODE | 2 1/2" x 7/8" | H. | 6.3 | 0.48 | Class A Amplifier | 250 | -1.5 | — | — | 15 | 6,600 | 12,000 | 80 | — | — |
| 6R4 | H-F TRIODE | 2 1/2" x 7/8" | H. | 6.3 | 0.2 | Class A Amplifier | 150 | -2 | — | — | 30 | 2,900 | 5,500 | 16 | — | — |



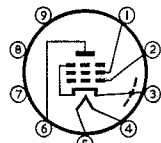
6AN7



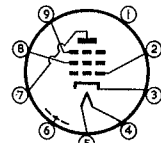
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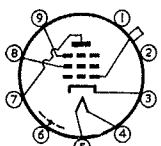
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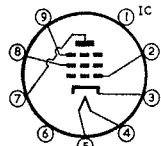
6BH5



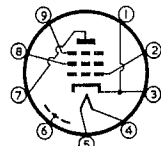
6BR7



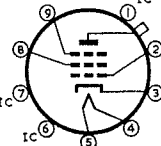
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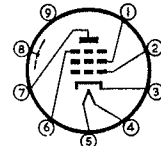
6BW6, 6CH6



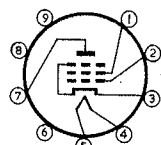
6BX6



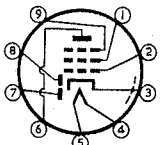
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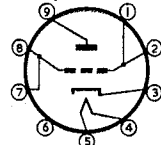
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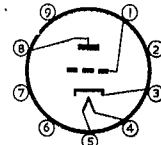
6M5



6N8

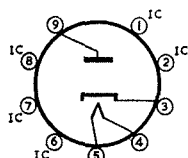


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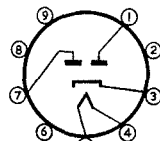


6R4

| TYPE | NAME | DIMENSIONS <i>Maximum Overall Length x Diam.</i> | CATHODE TYPE AND RATING | | | USE <i>Values to right give operating conditions and characteristics for indicated typical use</i> | PLATE SUPPLY <i>Volts</i> | GRID BIAS <i>Volts</i> | SCREEN SUPPLY <i>Volts</i> | Screen Current <i>mA.</i> | PLATE CURRENT <i>mA.</i> | A-C PLATE RESISTANCE <i>Ohms</i> | TRANSCONDUCTANCE (or conv. cond.) <i>μ mhos</i> | Amplification Factor | LOAD For Stated Power Output <i>Ohms</i> | POWER OUTPUT <i>Watts</i> |
|-------|--------------------------|--|-------------------------|-------------|-------------|---|---|---------------------------|-------------------------------|------------------------------|-----------------------------|-------------------------------------|--|----------------------|---|------------------------------|
| | | | C.T. | Volts | Amp. | | | | | | | | | | | |
| 6U3 | HALF-WAVE RECTIFIER | 3 ¹ / ₁₆ " x 7 ⁷ / ₈ " | H | 6.3 | 0.9 | Rectifier | Max. Peak Inverse Volts, 4,000. Max. Peak Plate Current, 400 mA. Max. D.C. Output Current, 180 mA. | | | | | | | | | |
| 6V4 | FULL-WAVE RECTIFIER | 3 ³ / ₁₆ " x 7 ⁷ / ₈ " | H. | 6.3 | 0.6 | Rectifier | Max. A.C. Plate Volts, 350. Max. Input Condenser, 50mF. Max. D.C. Output Current, 90mA | | | | | | | | | |
| 6X2 | HALF-WAVE RECTIFIER | 2" x 5 ⁵ / ₈ " | H. | 6.3 | 0.08 | Rectifier | Max. Peak Inverse Volts, 15,000. Min. Limiting Resistance, 0.1 meg. Max. D.C. Output Current, 0.5 mA. Max. Input Condenser, 0.1 mF. | | | | | | | | | |
| 7D9 | POWER PENTODE | Identical to Type 6AM5. | | | | | | | | | | | | | | |
| 7D10 | POWER PENTODE | Identical to Type 6CH6. | | | | | | | | | | | | | | |
| 8D3 | SHARP CUT-OFF PENTODE | Similar to Type Z77. | | | | | | | | | | | | | | |
| 8D5 | LOW-NOISE PENTODE | Identical to Type 6BR7. | | | | | | | | | | | | | | |
| 8D6 | SHARP CUT-OFF PENTODE | Similar to Type 6BX6. | | | | | | | | | | | | | | |
| 8D7 | LOW-NOISE PENTODE | Identical to Type 6BS7. | | | | | | | | | | | | | | |
| 9D6 | REMOTE CUT-OFF PENTODE | Identical to Type W77. | | | | | | | | | | | | | | |
| 12AH8 | TRIODE-HEPTODE CONVERTER | 2 ⁵ / ₈ " x 7 ⁷ / ₈ " | H. | 6.3 12.6 | 0.3 0.15 | Converter | 250 | -3 | 100 | 4.4 | 2.6 | 1.5 meg. | 550 | — | — | — |
| 12AY7 | LOW-NOISE TWIN TRIODE | 2 ³ / ₁₆ " x 7 ⁷ / ₈ " | H. | 6.3 12.6 | 0.3 0.15 | Single Section Class A Amplifier | 250 | -4 | — | — | 3.0 | 23,500 | 1,700 | 40 | — | — |
| 15A6 | POWER PENTODE | 3 ¹ / ₈ " x 7 ⁷ / ₈ " | H. | 15.0 | 0.3 | Class A Amplifier | 180 | -2.9 | 180 | 4.0 | 36.0 | 100,000 | 10,000 | 1,000 | 5,000 | — |
| 16A5 | POWER PENTODE | 3 ¹ / ₁₆ " x 7 ⁷ / ₈ " | H. | 16.5 | 0.3 | Class A Amplifier | 200 | -13.9 | 200 | 8.5 | 45.0 | 24,000 | 7,600 | 182 | 4,000 | 4.2 |
| 19AQ5 | POWER PENTODE | | H. | 19.0 | 0.15 | Other electrical characteristics identical to Type 6AQ5. | | | | | | | | | | |
| 19X3 | HALF-WAVE RECTIFIER | 3 ¹ / ₁₆ " x 7 ⁷ / ₈ " | H. | 19.0 | 0.3 | Other electrical characteristics identical to Type 6U3. | | | | | | | | | | |
| 19Y3 | HALF-WAVE RECTIFIER | 3 ¹ / ₁₆ " x 7 ⁷ / ₈ " | H. | 19.0 | 0.3 | Rectifier | Max. Peak Inverse Volts, 700. Max. Input Condenser, 60mF. Max. D.C. Output Current, 180 mA. | | | | | | | | | |
| 20D3 | TRIODE-HEXODE CONVERTER | 2 ³ / ₁₆ " x 7 ⁷ / ₈ " | H. | 6.3 12.6 | 0.3 0.15 | Converter | 250 | -3 | 100 | 4.6 | 3.6 | 700,000 | 690 | — | — | — |
| 21A6 | POWER PENTODE | 3 ¹ / ₄ " x 7 ⁷ / ₈ " | H. | 21.5 | 0.3 | Class A Amplifier | 180 | -23 | 180 | 3.0 | 45.0 | — | 6,500 | — | — | — |
| 85A2 | VOLTAGE REFERENCE | 2 ¹ / ₈ " x 3 ³ / ₄ " | | | | Voltage Regulator | Striking Volts, 125. Current Range, 1-10mA. Regulated Volts, 85. | | | | | | | | | |
| 6005 | POWER PENTODE | Ruggedized version of Type 6AQ5. | | | | | | | | | | | | | | |
| 6057 | TWIN-TRIODE | Ruggedized version of Type 12AX7. | | | | | | | | | | | | | | |
| 6058 | TWIN-DIODE | Ruggedized version of Type 6AL5. | | | | | | | | | | | | | | |
| 6059 | LOW-NOISE PENTODE | Ruggedized version of Type 6BR7. | | | | | | | | | | | | | | |
| 6060 | TWIN-TRIODE | Ruggedized version of Type 12AT7. | | | | | | | | | | | | | | |
| 6061 | POWER PENTODE | Ruggedized version of Type 6BW6. | | | | | | | | | | | | | | |
| 6063 | FULL-WAVE RECTIFIER | Ruggedized version of Type 6X4. | | | | | | | | | | | | | | |



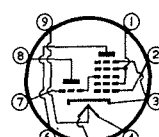
6U3, 19Y3
19X3



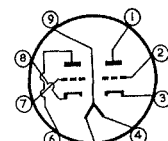
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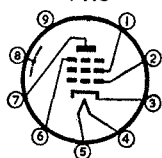
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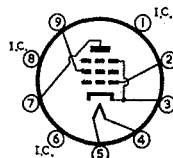
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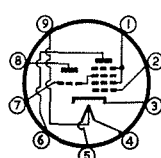
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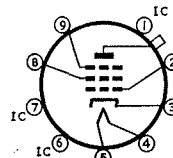
15A6



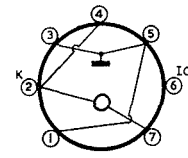
16A5



20D3



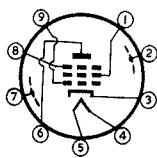
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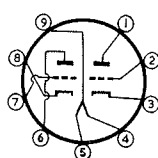
85A2

6064 to EB91

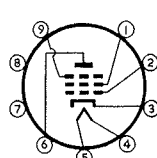
| TYPE | NAME | DIMENSIONS <i>Maximum Overall Length x Diam.</i> | CATHODE TYPE AND RATING | | | USE <i>Values to right give operating conditions and characteristics for indicated typical use</i> | PLATE SUPPLY Volts | GRID BIAS Volts | SCREEN SUPPLY Volts | Screen Current mA. | PLATE CURRENT mA. | A-C PLATE RESISTANCE Ohms | TRANS-CONDUCTANCE (or conv. cond.) μ mhos | Amplification Factor | LOAD For Stated Power Output Ohms | POWER OUTPUT Watts |
|-------|---------------------------------|---|-----------------------------------|-------------|------------|---|-----------------------|--------------------|------------------------|-----------------------|----------------------|------------------------------|---|----------------------|--------------------------------------|-----------------------|
| | | | C.T. | Volts | Amp. | | | | | | | | | | | |
| 6064 | SHARP CUT-OFF PENTODE | | Ruggedized version of Type Z77. | | | | | | | | | | | | | |
| 6065 | REMOTE CUT-OFF PENTODE | | Ruggedized version of Type W77. | | | | | | | | | | | | | |
| 6066 | TWIN-DIODE TRIODE | | Ruggedized version of Type 6AT6. | | | | | | | | | | | | | |
| 6067 | TWIN-TRIODE | | Ruggedized version of Type 12AU7. | | | | | | | | | | | | | |
| 6073 | VOLTAGE REGULATOR | | Ruggedized version of Type OA2. | | | | | | | | | | | | | |
| 6074 | VOLTAGE REGULATOR | | Ruggedized version of Type OB2. | | | | | | | | | | | | | |
| 6084 | LONG-LIFE SHARP CUT-OFF PENTODE | 2 $\frac{5}{8}$ " x 7 $\frac{1}{8}$ " | H. | 6.3 | 0.3 | Class A Amplifier | 250 | -2 | 100 | 0.55 | 3.0 | 1.8 meg. | 1,850 | 3,300 | — | — |
| 6085 | LONG-LIFE DOUBLE TRIODE | 2 $\frac{5}{8}$ " x 7 $\frac{1}{8}$ " | H. | 6.3 12.6 | 0.6 0.3 | Single Section Class A Amplifier | 250 | -5.5 | — | — | 6.0 | 11,100 | 2,700 | 30 | — | — |
| 6086 | POWER PENTODE | 2 $\frac{5}{8}$ " x 7 $\frac{1}{8}$ " | H. | 18.0 | 0.1 | Class A Amplifier | 210 | -1.8 | 120 | 1.7 | 8.3 | 440,000 | 8,200 | 3,600 | 20,000 | 0.66 |
| DA90 | H-F DIODE | | Identical to Type 1A3. | | | | | | | | | | | | | |
| DAF91 | DIODE-PENTODE | | Identical to Type 1S5. | | | | | | | | | | | | | |
| DAF96 | DIODE PENTODE | | Identical to Type 1AH5. | | | | | | | | | | | | | |
| DC80 | H-F TRIODE | | Identical to Type 1E3. | | | | | | | | | | | | | |
| DCC90 | TWIN-TRIODE | | Identical to Type 3A5. | | | | | | | | | | | | | |
| DF91 | REMOTE CUT-OFF PENTODE | | Identical to Type 1T4. | | | | | | | | | | | | | |
| DF92 | SHARP CUT-OFF PENTODE | | Identical to Type 1L4. | | | | | | | | | | | | | |
| DF96 | REMOTE CUT-OFF PENTODE | 2 $\frac{1}{4}$ " x 3 $\frac{1}{4}$ " | F. | 1.4 | 0.025 | Class A Amplifier | 90 | 0 | 90 | 0.5 | 1.65 | 1.4 meg. | 850 | 1,200 | — | — |
| DK91 | PENTAGRID CONVERTER | | Identical to Type 1R5. | | | | | | | | | | | | | |
| DK92 | PENTAGRID CONVERTER | | Identical to Type 1AC6. | | | | | | | | | | | | | |
| DK96 | PENTAGRID CONVERTER | | Identical to Type 1AB6. | | | | | | | | | | | | | |
| DL91 | POWER PENTODE | | Identical to Type 1S4. | | | | | | | | | | | | | |
| DL92 | POWER PENTODE | | Identical to Type 3S4. | | | | | | | | | | | | | |
| DL93 | POWER PENTODE | | Identical to Type 3A4. | | | | | | | | | | | | | |
| DL94 | POWER PENTODE | | Identical to Type 3V4. | | | | | | | | | | | | | |
| DL95 | POWER PENTODE | | Identical to Type 3Q4. | | | | | | | | | | | | | |
| DL96 | POWER PENTODE | | Identical to Type 3C4. | | | | | | | | | | | | | |
| DY30 | HALF-WAVE RECTIFIER | | Identical to Type 1B3-GT. | | | | | | | | | | | | | |
| EAC91 | H-F DIODE-TRIODE | 2 $\frac{1}{8}$ " x 3 $\frac{1}{4}$ " | H. | 6.3 | 0.3 | Class A Amplifier | 200 | -2.8 | — | — | 7.5 | 12,800 | 2,800 | 36 | — | — |
| EB34 | DUO-DIODE | 3 $\frac{1}{4}$ " x 1 $\frac{7}{16}$ " | H. | 6.3 | 0.2 | Other electrical characteristics similar to Type 6H6-G. | | | | | | | | | | |
| EB91 | DUO-DIODE | | Identical to Type 6AL5. | | | | | | | | | | | | | |



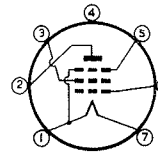
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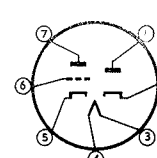
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6086

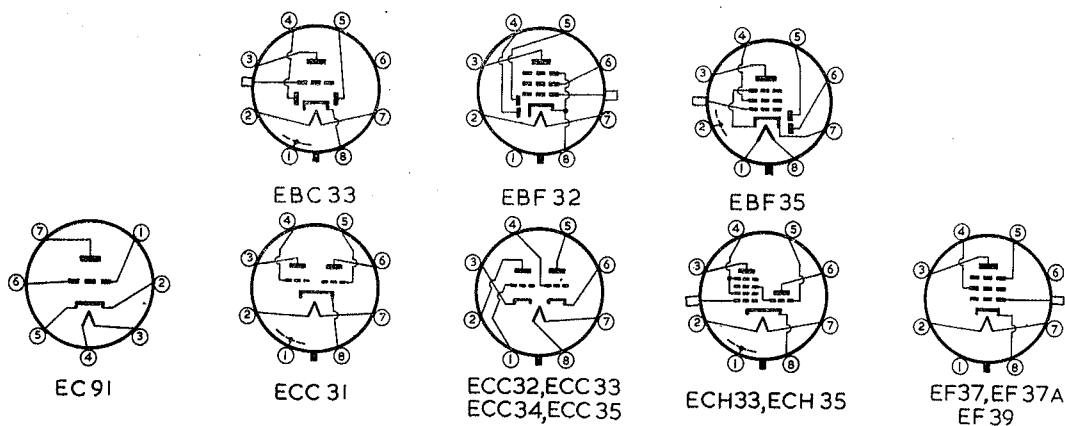


DF96



EAC91

| TYPE | NAME | DIMENSIONS <i>Maximum Overall Length x Diam.</i> | CATHODE TYPE AND RATING | | | USE <i>Values to right give operating conditions and characteristics for indicated typical use</i> | PLATE SUPPLY Volts | GRID BIAS Volts | SCREEN SUPPLY Volts | Screen Current mA. | PLATE CURRENT mA. | A-C PLATE RESISTANCE Ohms | TRANS-CONDUCTANCE (or conv. cond.) μ mhos | Amplification Factor | LOAD For Stated Power Output Ohms | POWER OUTPUT Watts |
|-------|-------------------------|---|---|-------|------|---|-----------------------|--------------------|------------------------|-----------------------|----------------------|------------------------------|--|----------------------|--------------------------------------|-----------------------|
| | | | C.T. | Volts | Amp. | | | | | | | | | | | |
| EBC33 | DUO-DIODE TRIODE | 4" x 1 1/4" | H. | 6.3 | 0.2 | Class A Amplifier | 250 | -5.5 | — | — | 5.0 | 15,000 | 2,000 | 30 | — | — |
| EBF32 | DUO-DIODE PENTODE | 4 7/16" x 1 5/16" | H. | 6.3 | 0.2 | Class A Amplifier | 250 | -2.0 | 100 | 1.6 | 5.0 | 1.3 meg. | 1,800 | 2,340 | — | — |
| EBF35 | DUO-DIODE PENTODE | Identical to Type EBF32, except for basing. | | | | | | | | | | | | | | |
| EBF80 | | Identical to Type 6N8. | | | | | | | | | | | | | | |
| EC80 | | Identical to Type 6Q4. | | | | | | | | | | | | | | |
| EC81 | | Identical to Type 6R4. | | | | | | | | | | | | | | |
| EC91 | H-F TRIODE | 2 1/8" x 3/4" | H. | 6.3 | 0.3 | Class A Amplifier | 250 | -1.5 | — | — | 10.0 | 12,000 | 8,500 | 100 | — | — |
| ECC31 | TWIN-TRIODE | 4 3/16" x 1 13/16" | H. | 6.3 | 0.95 | Single Section Class A Amplifier | 250 | -4.6 | — | — | 6.0 | 14,000 | 2,300 | 32 | — | — |
| ECC32 | TWIN-TRIODE | 4 3/16" x 1 13/16" | Identical to Type ECC31, except that ECC32 has separate Cathodes. | | | | | | | | | | | | | |
| ECC33 | TWIN-TRIODE | 3 1/4" x 1 5/16" | H. | 6.3 | 0.4 | Single Section Class A Amplifier | 250 | -4.0 | — | — | 9.0 | 9,700 | 3,600 | 35 | — | — |
| ECC34 | TWIN-TRIODE | 4 3/16" x 1 13/16" | H. | 6.3 | 0.95 | Single Section Class A Amplifier | 250 | -16 | — | — | 10.0 | 5,200 | 2,200 | 11.5 | — | — |
| ECC35 | TWIN-TRIODE | 3 1/4" x 1 5/16" | H. | 6.3 | 0.4 | Single Section Class A Amplifier | 250 | -2.5 | — | — | 2.3 | 34,000 | 2,000 | 68 | — | — |
| ECC81 | TWIN-TRIODE | Identical to Type 12AT7. | | | | | | | | | | | | | | |
| ECC91 | TWIN-TRIODE | Identical to Type 6J6. | | | | | | | | | | | | | | |
| ECH33 | TRIODE-HEXODE CONVERTER | 4 1/2" x 1 7/16" | H. | 6.3 | 0.2 | Other electrical characteristics identical to ECH35. | | | | | | | | | | |
| ECH35 | TRIODE-HEXODE CONVERTER | 4 1/2" x 1 7/16" | H. | 6.3 | 0.3 | Converter | 250 | -2 | 100 | 3.0 | 3.0 | 1.3 meg. | 650 | — | — | — |
| ECL80 | | Identical to Type 6AB8. | | | | | | | | | | | | | | |
| EF37 | SHARP CUT-OFF PENTODE | 4" x 1 1/4" | H. | 6.3 | 0.2 | Class A Amplifier | 250 | -2 | 100 | 0.8 | 3.0 | 2.5 meg. | 1,800 | 4,500 | — | — |
| EF37A | LOW-NOISE PENTODE | Identical to Type EF37. | | | | | | | | | | | | | | |
| EF39 | REMOTE CUT-OFF PENTODE | 4" x 1 1/4" | H. | 6.3 | 0.2 | Class A Amplifier | 250 | -2.5 | 100 | 1.7 | 6.0 | 1.25 meg. | 2,200 | 2,750 | — | — |
| EF80 | | Identical to Type 6BX6. | | | | | | | | | | | | | | |
| EF91 | HIGH-SLOPE R-F PENTODE | Identical to Type Z77. | | | | | | | | | | | | | | |
| EF92 | REMOTE CUT-OFF PENTODE | Identical to Type W77. | | | | | | | | | | | | | | |
| EF93 | REMOTE CUT-OFF PENTODE | Identical to Type 6BA6. | | | | | | | | | | | | | | |
| EF95 | H-F PENTODE | Identical to Type 6AK5. | | | | | | | | | | | | | | |



EL33 to UBF80

| TYPE | NAME | DIMENSIONS Maximum Overall Length x Diam. | CATHODE TYPE AND RATING | | | USE Values to right give operating conditions and characteristics for indicated typical use | PLATE SUPPLY Volts | GRID BIAS Volts | SCREEN SUPPLY Volts | Screen Current mA. | PLATE CURRENT mA. | A-C PLATE RESISTANCE Ohms | TRANS-CONDUCTANCE (or conv. cond.) μ mhos | Amplification Factor | LOAD For Stated Power Output Ohms | POWER OUTPUT Watts | | | | |
|-------|----------------------|--|---|-------|------|--|-------------------------------------|--------------------|----------------------------------|-----------------------|----------------------|------------------------------|--|----------------------|--------------------------------------|-----------------------|---------------------------------|--|-----------------------------|--|
| | | | C.T. | Volts | Amp. | | | | | | | | | | | | | | | |
| EL33 | POWER PENTODE | 5" x 1 1/8" | Electrically identical to Type 6AG6-G. $P_o = 4.5W$ | | | | | | | | | | | | | | | | | |
| EL35 | POWER PENTODE | 5 1/16" x 1 1/8" | H. | 6.3 | 1.35 | Class A Amplifier | 250 | -15.5 | 250 | 8.0 | 72.0 | 15,500 | 5,000 | 77.5 | 2,500 | 6.0 | | | | |
| EL37 | POWER PENTODE | 5 3/16" x 2 1/8" | H. | 6.3 | 1.4 | Class A Amplifier | 250 | -13.5 | 250 | 13.5 | 100.0 | 13,500 | 11,000 | 148 | 2,500 | 10.5 | | | | |
| EL81 | POWER PENTODE | Identical to Type 6CJ6. | | | | | | | | | | | | | | | | | | |
| EL83 | POWER PENTODE | Identical to Type 6CK6. | | | | | | | | | | | | | | | | | | |
| EL91 | POWER PENTODE | Identical to Type 6AM5. | | | | | | | | | | | | | | | | | | |
| EM34 | TUNING INDICATOR | 3 1/2" x 1 1/8" | H. | 6.3 | 0.2 | Tuning Indicator | 250 | -5 to -16 | — | — | 0.75 | — | — | — | — | — | | | | |
| EQ80 | F-M LIMITER DETECTOR | Identical to Type 6BE7. | | | | | | | | | | | | | | | | | | |
| EY51 | HALF-WAVE RECTIFIER | Identical to Type 6X2. | | | | | | | | | | | | | | | | | | |
| EY80 | FULL-WAVE RECTIFIER | Identical to Type 6U3. | | | | | | | | | | | | | | | | | | |
| EY91 | HALF-WAVE RECTIFIER | 2 3/16" x 3/4" | H. | 6.3 | 0.2 | Rectifier | Max. Peak Inverse Plate Volts, 750. | | Max. Peak Plate Current, 375 mA. | | | | | | | | Max. D.C. Output Current, 75mA. | | Max. Input Condenser, 32mF. | |
| EZ35 | FULL-WAVE RECTIFIER | Identical to Type 6X5-GT. | | | | | | | | | | | | | | | | | | |
| EZ82 | FULL-WAVE RECTIFIER | Derated 6V4. | | | | | | | | | | | | | | | | | | |
| GZ32 | FULL-WAVE RECTIFIER | Similar to Type 5V4-G. | | | | | | | | | | | | | | | | | | |
| PL21 | THYRATRON | Identical to Type 2D21. | | | | | | | | | | | | | | | | | | |
| PL33 | POWER PENTODE | 5" x 1 1/8" | H. | 19.0 | 0.3 | Class A Amplifier | 225 | -5.3 | 225 | 3.4 | 32 | 50,000 | 9,000 | 450 | 7,000 | 3.3 | | | | |
| PL38 | POWER PENTODE | 5 5/16" x 2 1/8" | H. | 30.0 | 0.3 | Class A Amplifier | 200 | -5.5 | 200 | 9.0 | 75 | 20,000 | 13,500 | 270 | — | — | | | | |
| PL81 | POWER PENTODE | Identical to Type 21A6. | | | | | | | | | | | | | | | | | | |
| PL82 | POWER PENTODE | Identical to Type 16A5. | | | | | | | | | | | | | | | | | | |
| PL83 | POWER PENTODE | Identical to Type 15A6. | | | | | | | | | | | | | | | | | | |
| PY80 | HALF-WAVE RECTIFIER | Identical to Type 19X3. | | | | | | | | | | | | | | | | | | |
| PY82 | HALF-WAVE RECTIFIER | Identical to Type 19Y3. | | | | | | | | | | | | | | | | | | |
| PZ30 | FULL-WAVE RECTIFIER | 4 3/4" x 1 1/8" | H. | 52.0 | 0.3 | Rectifier | Max. D.C. Plate Volts, 240 r.m.s. | | Max. D.C. Plate Current, 400mA. | | | | | | | | | | | |
| U30 | BARRETER | 4 7/8" x 1 5/8" | F. | — | 0.1 | Current Regulator | Voltage Range, 70-122.5. | | | | | | | | | | | | | |
| UBF80 | DUO-DIODE PENTODE | 2 1/8" x 7/8" | H. | 17.0 | 0.1 | Other electrical characteristics identical to Type 6N8. | | | | | | | | | | | | | | |

