**7408 BEAM POWER TUBE**

Glass octal type used as output amplifier tube in high-quality sound systems. Outlines section, 13D; requires octal socket.

- Heater Voltage (ac/dc) .......................................................... 6.3 volts
- Heater Current ................................................................. 0.45 amperes
- Heater-Cathode Voltage:
  - Peak value ................................................................. 1200 volts
  - Average value .............................................................. 100 volts
- Direct Interelectrode Capacitances:
  - Grid No.1 to Plate ..................................................... 0.7 pF
  - Grid No.1 to Cathode, Heater, Grid No.2, and Grid No.3 9 pF
  - Plate to Cathode, Heater, Grid No.2, and Grid No.3 .... 7.5 pF

**Class A Amplifier**

**MAXIMUM RATINGS (Design-Maximum Values)**

- Plate Voltage ................................................................. 350 volts
- Grid-No.2 (Screen-Grid) Voltage ...................................... 315 volts
- Grid-No.2 Input ............................................................... 2.2 watts
- Plate Dissipation ............................................................ 14 watts

**TYPICAL OPERATION AND CHARACTERISTICS**

- Plate Voltage ................................................................. 600 volts
- Grid-No.2 Voltage .......................................................... 250 volts
- Grid-No.1 (Control-Grid) Voltage ..................................... 250 volts
- Peak AF Grid-No.1 Voltage ............................................... 0 volts
- Zero-Signal Plate Current ............................................... 100 mA
- Maximum-Signal Plate Current ......................................... 47 mA
- Zero-Signal Grid-No.2 Current ......................................... 22 mA
- Maximum-Signal Grid-No.2 Current ................................... 4.5 mA
- Plate Resistance (Approx.) ............................................ 50000 ohms
- Transconductance .......................................................... 1400 μmhos
- Load Resistance .............................................................. 5000 ohms
- Total Harmonic Distortion ............................................... 7 per cent
- Maximum-Signal Power Output .......................................... 4.5 watts

**MAXIMUM CIRCUIT VALUES**

- Grid-No.1-Circuit Resistance:
  - For fixed-bias operation ............................................. 0.1 megohm
  - For cathode-bias operation ........................................... 0.5 megohm

*This value can be measured by a method involving a recurrent waveform such that the maximum ratings of the tube will not be exceeded.

---

**7543 SHARP-CUTOFF PENTODE**

Miniature type used in compact audio equipment. Outlines section, 5C; requires miniature 7-contact socket. This type is identical with miniature type 6AU6A except that it has a controlled hum characteristic.

**HUM OUTPUT VOLTAGE**

- Average Value, (rms, cathode bypassed) .......................... 1.2 millivolt
- Average Value (rms, cathode unbypassed) .......................... 0.9 millivolt

* Measured in “true rms” units under the following conditions: heater volts (ac), 6.3; center tap of heater transformer connected to ground; plate and grid-No.2 supply volts, 250; plate load resistor, 0.27 megohm; grid-No.3 and internal shield connected to cathode at socket; grid-No.2 resistor, 0.68 megohm; grid-No.1 resistor, 0.1 megohm; cathode resistor, 1000 ohms; grid resistor of following stage, 10 megohms; and stage gain, 340.

* Same conditions as above except that cathode resistor is unbypassed and stage gain is 110.