



technical information

CBS ELECTRONICS
A Division of Columbia Broadcasting System, Inc.
Danvers, Massachusetts

E280F/7722

Wideband Pentode Amplifier

Wideband pentode amplifier with very high transconductance in a miniature envelope and 9-pin base.

MECHANICAL DATA

| | |
|--------------------------------------|------------------------|
| Cathode, coated unipotential | |
| Bulb | T-6 1/2 |
| Base | 9-pin miniature button |
| Basing | 9EQ |
| Maximum overall height | 2.43 inches |
| Maximum seated height | 2.15 inches |
| Maximum height from base to shoulder | 1.88 inches |
| Maximum diameter | .875 inches |
| Mounting position | Any |

PIN CONNECTIONS

| | |
|----------------|----------------------------|
| Pin 1: Cathode | Pin 6: Internal Connection |
| Pin 2: Grid 1 | Pin 7: Plate |
| Pin 3: Cathode | Pin 8: Grid 3 and shield |
| Pin 4: Heater | Pin 9: Grid 2 |
| Pin 5: Heater | |

ELECTRICAL DATA

Heater Characteristics

| | | |
|-----------------------------------|-----|-------|
| Heater voltage | 6.3 | volts |
| Heater current | 320 | ma |
| Peak heater-cathode voltage, max. | | |
| Heater negative to cathode | 60 | volts |
| Heater positive to cathode | 120 | volts |

Direct Interelectrode Capacitances

| | | |
|-----------------|------|----|
| Input | 9.3 | μf |
| Output | 2.1 | μf |
| Grid 1 to plate | .035 | μf |

Maximum Ratings (Absolute maximum values)

| | | |
|-----------------------------------|-----|-------|
| Plate supply voltage | 400 | volts |
| Plate voltage, d-c | 220 | volts |
| Grid 2 supply voltage | 400 | volts |
| Grid 2 voltage, d-c | 180 | volts |
| Grid 1 voltage, negative | 50 | volts |
| Grid 1 voltage, positive† | 0 | volts |
| Plate dissipation | 4.0 | watts |
| Grid 2 dissipation | 1.1 | watts |
| Cathode current | 30 | ma |
| Grid 1 circuit resistance‡ | 0.5 | meg |
| Bulb temperature at hottest point | 170 | °C |

Characteristics

| | Pentode | Triode | |
|-------------------------------|---------|--------|-------|
| Plate supply voltage | 190 | 160 | volts |
| Grid 3 voltage | 0 | 0 | volts |
| Grid 2 supply voltage | 160 | 160 | volts |
| Grid 1 supply voltage † | +8 | +8 | volts |
| Cathode resistor | 370 | 400 | ohms |
| Plate current | 20 | 24.5 | ma |
| Grid 2 current | 6 | | ma |
| Transconductance | 26,000 | 33,000 | μmhos |
| Amplification factor | | 60 | |
| Input resistance, 100 mc * | 1400 | | ohms |
| Plate resistance, approximate | 100k | 1800 | ohms |

† Grid 1 current must not exceed 0.5 μa, to prevent damage to tube.

‡ Values for automatic control grid bias arrangement.

* Both cathode leads connected together.

