Beam Power Tube

9-PIN MINIATURE TYPE

GENERAL DATA

Electrical:
Heater, for Unipotential Cathode:
Voltage (AC or DC).................. 6.3 volts
Current.................................. 1.2 amp
Direct Interelectrode Capacitances
(Approx.): a
Grid No.1 to plate.................. 0.2 μf
Grid No.1 to cathode & grid No.3,
grid No.2, and heater............... 13 μf
Plate to cathode & grid No.3,
grid No.2, and heater............... 8 μf

Mechanical:
Operating Position.................. Any
Maximum Overall Length............. 2-3/4"
Maximum Seated Length............. 2-1/2"
Length, Base Seat to Bulb Top (Excluding tip)... 2-1/8" ± 3/32"
Diameter............................... 0.750" to 0.875"
Bulb.................................. T6-1/2
Base.................................. Small-Button Noval 9-Pin (JEDEC No.E9-1)
Basing Designation for BOTTOM VIEW........ 9GR

AMPLIFIER — Class A1

Maximum Ratings, Design-Center Values:
PLATE VOLTAGE...................... 300 max. volts
GRID-No.2 (SCREEN-GRID) VOLTAGE.... 150 max. volts
GRID-No.2 INPUT.................... 1.25 max. watts
PLATE DISSIPATION.................. 10 max. watts
PEAK HEATER-CATHODE VOLTAGE:
Heater negative with respect to cathode.. 200 max. volts
Heater positive with respect to cathode.. 200b max. volts

Typical Operation and Characteristics:
Plate Supply Voltage.................. 110 200 volts
Grid-No.2 Supply Voltage.............. 110 125 volts
Grid-No.1 (Control-grid) Voltage..... -7.5 - volts
Cathode Resistor...................... - 180 ohms
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak AF Grid-No.1 Voltage</td>
<td>7.5 8.5</td>
</tr>
<tr>
<td>Zero-Signal Plate Current</td>
<td>49 46</td>
</tr>
<tr>
<td>Max.-Signal Plate Current</td>
<td>50 47</td>
</tr>
<tr>
<td>Zero-Signal Grid-No.2 Current</td>
<td>4 2.2</td>
</tr>
<tr>
<td>Max.-Signal Grid-No.2 Current</td>
<td>10 8.5</td>
</tr>
<tr>
<td>Plate Resistance (Approx.)</td>
<td>13000 28000</td>
</tr>
<tr>
<td>Transconductance</td>
<td>8000 8000</td>
</tr>
<tr>
<td>Load Resistance</td>
<td>2000 4000</td>
</tr>
<tr>
<td>Total Harmonic Distortion</td>
<td>10 10</td>
</tr>
<tr>
<td>Max.-Signal Power Output</td>
<td>2.1 3.8</td>
</tr>
</tbody>
</table>

**Maximum Circuit Values:**

Grid-No.1-Circuit Resistance:
- For fixed-bias operation: 0.1 max. megohm
- For cathode-bias operation: 2.2 max. megohms

**VERTICAL-DEFLECTION AMPLIFIER**

**Maximum Ratings, Design-Center Values Except as Noted:**

For operation in a 525-line, 30-frame system:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>DC PLATE VOLTAGE</td>
<td>300 max.</td>
</tr>
<tr>
<td>PEAK POSITIVE-PULSE PLATE VOLTAGE</td>
<td></td>
</tr>
<tr>
<td>(Absolute maximum)</td>
<td>2000 max.</td>
</tr>
<tr>
<td>DC GRID-No.2 (SCREEN-GRID) VOLTAGE</td>
<td>150 max.</td>
</tr>
<tr>
<td>PEAK NEGATIVE-PULSE GRID-No.1 VOLTAGE</td>
<td>250 max.</td>
</tr>
</tbody>
</table>

**CATHODE CURRENT:**
- Peak: 200 max. ma
- Average: 55 max. ma
- GRID-No.2 INPUT: 1.25 max. watts
- PLATE DISSIPATION: 10 max. watts

**PEAK HEATER-CATHODE VOLTAGE:**
- Heater negative with respect to cathode: 200 max. volts
- Heater positive with respect to cathode: 200 max. volts

**Maximum Circuit Values:**

Grid-No.1-Circuit Resistance:
- For fixed-bias operation: 0.1 max. megohm
- For cathode-bias operation: 2.2 max. megohms

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**Notes:**
- Without external shield.
- The dc component must not exceed 100 volts.
- As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.
- This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.
- Under no circumstances should this absolute value be exceeded.