BEAM POWER TUBE

Intended for use in equipment having series heater-string arrangement

GENERAL DATA

Electrical:
Heater, for Unipotential Cathode:
  Voltage ............. 25 ........... ac or dc volts
  Current ............. 0.6 ........... amp
  Warm-up time (Average) .... 11 ........... sec

For definition of heater warm-up time and method of determining it, see sheet HEATER WARM-UP TIME MEASUREMENT at front of this Section.

Direct Interelectrode Capacitances (Approx.):°
  Grid No.1 to plate ............. 0.8 μf
  Grid No.1 to cathode & grid No.3, grid No.2, and heater ............. 22 μf
  Plate to cathode & grid No.3, grid No.2, and heater ............. 11.5 μf

Characteristics, Class A1 Amplifier:
  Plate Voltage ............. 50 125 volts
  Grid-No.2 (Screen-Grid) Voltage ............. 100 125 volts
  Grid-No.1 (Control-Grid) Voltage ............. 0 -18 volts
  Mu Factor, Grid No.2 to Grid No.1 ............. 4.35
  Plate Resistance (Approx.) ............. - 4000 ohms
  Transconductance ............. - 9000 μmhos
  Plate Current ............. 240* 70 ma
  Grid-No.2 Current ............. 30* 6.3 ma
  Grid-No.1 Voltage (Approx.) for plate current of 0.5 ma ............. - 36 volts

Mechanical:
Operating Position ............. Vertical, base up or down, or Horizontal with pins 1 and 3 in vertical plane

Maximum Overall Length ............. 5"

Seated Length ............. 4-1/4" ± 3/16"

Maximum Diameter ............. 1-9/16"

Bulb ............. T12

Cap. ............. Small (JETEC No.C1-1)

Base ............. Short Medium-Shell Octal 8-Pin with External Barriers, Style B (JETEC No.BB-118)

Basing Designation for BOTTOM VIEW ............. 5BT

Pin 1 - No Connection
Pin 2 - Heater
Pin 3 - Cathode, Grid No.3
Pin 4 - No Connection

Pin 5 - Grid No.1
Pin 6 - No Connection
Pin 7 - Heater
Pin 8 - Grid No.2
Cap - Plate

°: See next page.
**BEAM POWER TUBE**

**25DN6**

**HORIZONTAL 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>
</tr>
</thead>
<tbody>
<tr>
<td>DC PLATE VOLTAGE</td>
<td>700 max. volts</td>
</tr>
<tr>
<td>PEAK POSITIVE-PULSE PLATE VOLTAGE</td>
<td>6600 max. volts</td>
</tr>
<tr>
<td>PEAK NEGATIVE-PULSE PLATE VOLTAGE</td>
<td>1500 max. volts</td>
</tr>
<tr>
<td>DC GRID-No.2 (SCREEN-GRID) VOLTAGE</td>
<td>175 max. volts</td>
</tr>
<tr>
<td>PEAK NEGATIVE-PULSE GRID-No.1 VOLTAGE</td>
<td>200 max. volts</td>
</tr>
<tr>
<td>CATHODE CURRENT:</td>
<td></td>
</tr>
<tr>
<td>Peak</td>
<td>700 max. ma</td>
</tr>
<tr>
<td>Average</td>
<td>200 max. ma</td>
</tr>
<tr>
<td>GRID-No.2 INPUT</td>
<td>3 max. watts</td>
</tr>
<tr>
<td>PLATE DISSIPATION†</td>
<td>15 max. watts</td>
</tr>
<tr>
<td>PEAK HEATER-CATHODE VOLTAGE:</td>
<td></td>
</tr>
<tr>
<td>Heater negative with respect to cathode</td>
<td>200 max. volts</td>
</tr>
<tr>
<td>Heater positive with respect to cathode</td>
<td>200 max. volts</td>
</tr>
<tr>
<td>BULB TEMPERATURE (At hottest point on bulb surface)</td>
<td>225 max. °C</td>
</tr>
</tbody>
</table>

**Maximum Circuit Values:**

Grid-No.1-Circuit Resistance:

*For grid-resistor-bias operation†* | 0.47 max. megohm

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* Without external shield.
* These values can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.
* As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.
* This rating is applicable when the duration of the voltage pulse does not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.
* Under no circumstances should this absolute value be exceeded.
† It is essential that the plate dissipation be limited in the event of loss of grid-No.1 signal. For this purpose, some protective means such as a cathode resistor of suitable value should be employed.
† The dc component must not exceed 100 volts.