Beam Power Tube

FORCED-AIR COOLED

GENERAL DATA

Electrical:

Filament, Thoriated Tungsten:
- Voltage (AC or DC)............. 7.5 volts
- Current at filament
  volts = 7.5.................. 20 amp
  Transconductance............. 10000 μmhos
- Mu-Factor, Grid No.2
to Grid No.1.................. 6.1 7.7
- Direct interelectrode Capacitances (Approx.):^b
  Grid No.1 to plate........... 0.36 pf
  Grid No.1 to filament and
grid No.2.................... 24 32 pf
  Plate to filament and grid
  No.2....................... 7 9.5 pf

Mechanical:

Operating Position.............. Vertical, base up or down
- Maximum Overall Length........ 9-5/8" ± 3/8"
- Seated Length.................. 8-3/8" ± 3/8"
- Maximum Diameter............... 5-1/4"
- Weight (Approx.).............. 1.5 lbs
- Cap.......................... Skirted Medium (JEDEC No.C1-14)
- Base......................... Special Ventilated Metal-Shell 5-Pin
  BOTTOM VIEW
  Pin 1 - Filament
  Pin 2 - Grid No.2
  Pin 3 - Grid No.1
  Pin 4 - Grid No.2
  Pin 5 - Filament
  Cap - Plate

Thermal:

Forced-Air Cooling:

Through Base—A sufficient airflow should be provided to keep the base-seal temperature below its specified maximum value. The air should enter through the socket, cool the base pins, flow through the base, and then be directed along the bulb envelope.

To Plate Seal—Adequate air should be circulated around the envelope and plate seal to keep the temperature of the latter below its specified maximum value.
Base-Seal Temperature: 150 max. °C
Plate-Seal Temperature: 200 max. °C

Components:
Socket: Eimac SK-500 Air-System Socket, or equivalent
Heat-Radiating Plate Connector: Eimac HR-8, or equivalent

AF POWER AMPLIFIER & MODULATOR—Class AB
Maximum CCS Ratings, Absolute-Maximum Values:

<table>
<thead>
<tr>
<th>Component</th>
<th>Maximum Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC PLATE VOLTAGE</td>
<td>6000 max. volts</td>
</tr>
<tr>
<td>DC GRID-No.2 VOLTAGE</td>
<td>1000 max. volts</td>
</tr>
<tr>
<td>MAX.-SIGNAL DC PLATE CURRENT</td>
<td>700 max. ma</td>
</tr>
<tr>
<td>GRID-No.2 INPUT</td>
<td>75 max. watts</td>
</tr>
<tr>
<td>PLATE DISSIPATION</td>
<td>1000 max. watts</td>
</tr>
</tbody>
</table>

RF POWER AMPLIFIER & OSCILLATOR—Class C Telegraphy
and
RF POWER AMPLIFIER—Class C FM Telephony
Maximum CCS Ratings, Absolute-Maximum Values:

At frequencies up to 110 Mc

<table>
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<tr>
<th>Component</th>
<th>Maximum Value</th>
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<tbody>
<tr>
<td>DC PLATE VOLTAGE</td>
<td>6000 max. volts</td>
</tr>
<tr>
<td>DC GRID-No.2 VOLTAGE</td>
<td>1000 max. volts</td>
</tr>
<tr>
<td>DC GRID-No.1 VOLTAGE</td>
<td>-500 max. volts</td>
</tr>
<tr>
<td>DC PLATE CURRENT</td>
<td>700 max. ma</td>
</tr>
<tr>
<td>GRID-No.2 INPUT</td>
<td>75 max. watts</td>
</tr>
<tr>
<td>GRID-No.1 INPUT</td>
<td>25 max. watts</td>
</tr>
<tr>
<td>PLATE DISSIPATION</td>
<td>1000 max. watts</td>
</tr>
</tbody>
</table>

PLATE-MODULATED RF POWER AMPLIFIER—Class C Telephony
Carrier conditions per tube for use with a maximum modulation factor of 1
Maximum CCS Ratings, Absolute-Maximum Values:

At frequencies up to 110 Mc

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<th>Maximum Value</th>
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<tbody>
<tr>
<td>DC PLATE VOLTAGE</td>
<td>5000 max. volts</td>
</tr>
<tr>
<td>DC GRID-No.2 VOLTAGE</td>
<td>1000 max. volts</td>
</tr>
<tr>
<td>DC GRID-No.1 VOLTAGE</td>
<td>-500 max. volts</td>
</tr>
<tr>
<td>DC PLATE CURRENT</td>
<td>600 max. ma</td>
</tr>
<tr>
<td>GRID-No.2 INPUT</td>
<td>75 max. watts</td>
</tr>
<tr>
<td>GRID-No.1 INPUT</td>
<td>25 max. watts</td>
</tr>
<tr>
<td>PLATE DISSIPATION</td>
<td>670 max. watts</td>
</tr>
</tbody>
</table>

a The filament voltage as measured at the filament pins, should be 7.5 volts. For long life, excursions from this value should not exceed 15 per cent.
b With external shield.
c Continuous Commercial Service.
d Key-down conditions per tube without amplitude modulation. Amplitude modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115 per cent of the carrier conditions.

RADIO CORPORATION OF AMERICA
Electronic Components and Devices
Harrison, N. J.