Power Triode

FORCED-AIR COOLED
For Cathode-Drive Applications
at Frequencies up to 2500 Mc

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:
Voltage (AC or DC)\(^a\) ................. 6.3 ± 5% volts
Current at heater volts = 6.3 ........... 1.03 amp
Amplification Factor ...................... 95
Transconductance, for dc plate volts
= 600 and dc plate ma. = 75 ........... 24800 \(\mu\)hos
Direct Interelectrode Capacitances (Approx.):\(^b\)
Grid to plate ................................ 2 \(\mu\)F
Grid to cathode ............................. 6.5 \(\mu\)F
Plate to cathode ............................ 0.024 \(\mu\)F

Mechanical:

Operating Position ...................... Any
Maximum Overall Length ................. 2-3/4"
Diameter ................................... 1-1/4" ± 1/64"
Mounting ................................... Only plate flange to be used as
socket stop and clamping surface
Weight (Approx.) .......................... 2 oz
Radiator .................................... Integral part of tube
Terminal Diagram (See Dimensional Outline):

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P - Plate
G - Grid
K - Cathode
H - Heater
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Thermal:

Air Flow:

Through radiator—Adequate air flow should be delivered by
a blower during the application of any voltages.

To plate, grid, cathode, and heater seals—A sufficient
quantity of air should be delivered to these seals to
prevent their temperature from exceeding the specified
maximum value.

Seal Temperature (Plate, grid, cathode,
and heater) .............................. 250 max. \(^o\)C
Recommended Air-Flow Cowling .......... .157-JAN
Recommended Air Flow on Plate Radiator at
sea level with incoming-air temperature
\((^o\)C) = 25, plate dissipation (watts) = 100 . 12.5 \(\text{cfm}

\(^\text{a}\) indicates a change.
PLATE-MODULATED RF POWER AMPLIFIER — Class C Telephony

Carrier conditions per tube for use
with a maximum modulation factor of 1

Maximum CCS\(^c\) Ratings, Absolute-Maximum Values:

For frequencies up to 2500 Mc

<table>
<thead>
<tr>
<th>DC PLATE VOLTAGE</th>
<th>(600^d) max. volts</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRID VOLTAGE:</td>
<td></td>
</tr>
<tr>
<td>Negative-bias value</td>
<td>150 max. volts</td>
</tr>
<tr>
<td>Peak-negative-rf value</td>
<td>400 max. volts</td>
</tr>
<tr>
<td>Peak-positive-rf value</td>
<td>30 max. volts</td>
</tr>
<tr>
<td>DC GRID CURRENT</td>
<td>50 max. ma</td>
</tr>
<tr>
<td>DC CATHODE CURRENT</td>
<td>100 max. ma</td>
</tr>
<tr>
<td>GRID INPUT</td>
<td>2 max. watts</td>
</tr>
<tr>
<td>PLATE DISSIPATION</td>
<td>70 max. watts</td>
</tr>
</tbody>
</table>

RF POWER AMPLIFIER & OSCILLATOR — Class C Telegraphy\(^e\)

Maximum CCS\(^c\) Ratings, Absolute-Maximum Values:

For frequencies up to 2500 Mc

<table>
<thead>
<tr>
<th>DC PLATE VOLTAGE</th>
<th>1000 max. volts</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRID VOLTAGE:</td>
<td></td>
</tr>
<tr>
<td>Negative-bias value</td>
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</tr>
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<tr>
<td>Peak-positive-rf value</td>
<td>30 max. volts</td>
</tr>
<tr>
<td>DC GRID CURRENT</td>
<td>50 max. ma</td>
</tr>
<tr>
<td>DC CATHODE CURRENT</td>
<td>125 max. ma</td>
</tr>
<tr>
<td>GRID INPUT</td>
<td>2 max. watts</td>
</tr>
<tr>
<td>PLATE DISSIPATION</td>
<td>100 max. watts</td>
</tr>
</tbody>
</table>

\(^a\) Because the cathode is subjected to considerable back bombardment as the frequency is increased with resultant increase in temperature, the heater voltage should be reduced depending on operating conditions and frequency to prevent overheating the cathode and resultant short life.

\(^b\) With special shielded socket.

\(^c\) Continuous Commercial Service.

\(^d\) For modulation factors less than 1, a higher dc plate voltage may be used provided the sum of the peak-positive audio voltage and the dc plate voltage does not exceed 1200 volts.

\(^e\) Key-down conditions pertain without amplitude modulation. 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.

→ Indicates a change.