Beam Power Tube

Quick-Heating Filament  High Power Sensitivity
90 Watts CW Input (ICAS) up to 60 MHz
60 Watts CW Input (ICAS) at 175 MHz
For use as an rf power amplifier in communications equipment

ELECTRICAL
Filament, Coated:
Voltage (AC or DC) ............... 1.6 ± 10% V
Current at 1.6 volts ............ 3.2 A
Heating time ................ 1 s
Transconductance\(^a\) ............. 6000 \(\mu\)mho
Mu-Factor\(^a\), Grid No.2 to Grid No.1 .... 4
Direct Interelectrode Capacitances:
Grid No.1 to plate ............ 0.24 max. pF
Grid No.1 to filament & grid
No.3 & internal shield, base
sleeve and grid No.2 .......... 11 pF
Plate to filament & grid No.3
& internal shield, base
sleeve and grid No.2 .......... 8.5 pF

MECHANICAL
Operating Position ............... Vertical, or horizontal with plane of pins 3 and 7 vertical
Maximum Overall Length ............ 3-13/16"
Seated Length ................ 3-1/8" ± 1/8"
Maximum Diameter ............... 1-21/32"
Bulb ................................ T-12
Cap ................................ Small (JEDEC No.C1-1)
Base ................................ Small wafer octal 8-pin with sleeve
(JEDEC Group 1, No.B8-150)
Bulb Temperature (At hottest point) ...... 220 max. °C

RF POWER AMPLIFIER & OSC. – CLASS C TELEGRAPHY\(^b\)
AND
RF POWER AMPLIFIER – CLASS C FM TELEGRAPHY

Maximum ICAS Ratings, Absolute-Maximum Values:

<table>
<thead>
<tr>
<th>DC Plate Voltage</th>
<th>DC Grid-No.2 Voltage</th>
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<tr>
<td>750 max. V</td>
<td>250 max. V</td>
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</table>
DC Grid-No.1 Voltage .................. -150 max. V
DC Plate Current ..................... 150 max. mA
DC Grid-No.1 Current .................. 4 max. mA
Plate Input ............................. 90 max. W
Grid-No.2 Input ....................... 3 max. W
Plate Dissipation ..................... 25 max. W

Typical Operation as Amplifier at 175 MHz
DC Plate Voltage ................... 400 V
DC Grid-No.2 Voltage ................ 190 V
  From a series resistor of............. 18000 Ω
DC Grid-No.1 Voltage ................ -60 V
  From a grid resistor of.............. 30000 Ω
DC Plate Current .................... 150 mA
DC Grid-No.2 Current ................. 11 mA
DC Grid-No.1 Current (Approx.) ....... 2 mA
Driving Power (Approx.) .............. 4.5 W
Power Output (Approx.) ............... 30 W

Maximum Circuit Values:
Grid-No.1 Circuit Resistance .......... 30000 max. Ω

a For plate volts = 200 V, grid No.2 volts = 200 V, and plate
  current = 100 mA.

The following footnotes apply to the RCA Transmitting Tube
Operating Considerations given at front of this section.

b See Classes of Service.

c See Electrical Considerations - Grid-No.2 Voltage Supply.

d See Electrical Considerations - Grid-No.1 Voltage Supply.
DIMENSIONAL OUTLINE - Dimensions In Inches (mm)

T12 BULB

SMALL-CAP
JEDEC No. Ci-1

SMALL-WAFER
OCTAL
8-PIN BASE
WITH SLEEVE
JEDEC GROUP 1,
No. B8-150

1-9/16 MAX.
(39.69) DIA

3-1/8 ± 1/8
(79.37 ± .32)

3-13/16 MAX.
(96.84)

1-21/32 MAX.
(42.07) DIA.

TERMINAL DIAGRAM (Bottom View)

Pin 1: Filament 1, Grid No.3, Internal Shield
Pin 2: Filament 2
Pin 3: Grid No.2
Pin 4: Same as Pin No.1
Pin 5: Grid No.1
Pin 6: Same as Pin No.1
Pin 7: Filament 2
Pin 8: Base Sleeve
Cap: Plate