



ELECTRONIC TUBE REFERENCE

6166

Power - Beam (NOT sweep) (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL
DATA

1 SECTION
CONSTRUCTION
BEAMPOWER

Forced-air-cooled coaxial beam-power tube with integral radiator for high-power RF and television transmitting service, optimized for low parasitics at VHF frequencies.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	5 V / 181 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Beam Power	
MAXIMUM PLATE VOLTAGE	6000 V
MAXIMUM SCREEN VOLTAGE	1200 V
MAXIMUM PLATE DISSIPATION	10000 W
<i>Representative electrical section from supplied RCA data sheet.</i>	

Forced-air-cooled coaxial beam-power tube with integral radiator for high-power RF/TV service. Published RCA data include the applicable ratings, characteristics, operating conditions, and capacitances from the supplied sheet.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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Published test conditions and operating points. Values on this page are preserved as reported by this source.

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Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage nominal	5 V	WholeTube
Heater/filament current	181 A	WholeTube
Published electrical value	10 MHz	Published source row
Published electrical value (value 2)	220 MHz	Published source row
Voltage (AC or DC)a	5 %	Published source row
Voltage (AC or DC)a (value 2)	5 %	Published source row
Current at	5 V	Published source row
Current at (value 2)	181 V	Published source row
Minimum heating time	15 s	Published source row
Cold resistance	0 ohm	Published source row
Cold resistance (value 2)	38 ohm	Published source row
Mu Factor, Grid No	2	Published source row
Mu Factor, Grid No (value 2)	1	Published source row
for plate volts =	2000 V	Published source row
for plate volts = (value 2)	2 V	Published source row
DC PLATE VOLTAGE	6000 V	Published source row
DC GRID-No	2 V	Published source row
DC GRID-No (value 2)	2000 V	Published source row
DC PLATE CURRENT	4 A	Published source row
PLATE INPUT	22000 W	Published source row
GRID-No	2 W	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GRID-No (value 2)	400 W	Published source row
PLATE DISSIPATION	10000 W	Published source row
GRID-No	1 W	Published source row
GRID-No (value 2)	300 W	Published source row
DC Plate Voltage	5800 V	Published source row
DC Grid-No	2 V	Published source row
DC Grid-No (value 2)	1200 V	Published source row
DC Grid-No.1 Voltage	-130 V	Published source row
Peak RF Grid-No	1	Published source row
DC Grid-No	2 A	Published source row
DC Grid-No (value 2)	0 mA	Published source row
DC Grid-No (value 3)	7 A	Published source row
DC Plate-to-Grid-No.1 Voltage	5885 V	Published source row
DC Grid-No	2 V	Published source row
DC Grid-No (value 2)	885 V	Published source row
DC Cathode-to-Grid-No.1 Voltage	85 V	Published source row
DC Grid-No	2 A	Published source row
DC Grid-No (value 2)	152 mA	Published source row
DC PLATE VOLTAGE	6000 V	Published source row
DC GRID-No	2 V	Published source row
DC GRID-No (value 2)	2000 V	Published source row
DC PLATE CURRENT	4 A	Published source row
PLATE INPUT	22000 W	Published source row
PLATE DISSIPATION	10000 W	Published source row
GRID-No.1 DISSIPATION	300 W	Published source row
DC Plate Voltage	5800 V	Published source row
DC Grid-No	2 V	Published source row
DC Grid-No (value 2)	1200 V	Published source row
Peak RF Grid-No.1 Voltage	375 V	Published source row
DC Grid-No	2 A	Published source row
DC Grid-No (value 2)	148 mA	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Grid-No	1	Published source row
DC PLATE VOLTAGE	6900 V	Published source row
DC GRID-No	2 V	Published source row
DC GRID-No (value 2)	2000 V	Published source row
MAX.-SIGNAL DC PLATE CURRENT	2.75 A	Published source row
(CONTROL-GRID) CURRENT	600 mA	Published source row
MAX.-SIGNAL PLATE INPUT	18000 W	Published source row
MAX.-SIGNAL GRID-No	2 W	Published source row
MAX.-SIGNAL GRID-No (value 2)	400 W	Published source row
PLATE DISSIPATION	10000 W	Published source row
DC Plate Voltage	6900 V	Published source row
DC Plate Voltage (value 2)	6500 V	Published source row
DC Grid-No	2 V	Published source row
DC Grid-No (value 2)	1200 V	Published source row
DC Grid-No (value 3)	1200 V	Published source row
DC Grid-No.1 Voltage''	-125 V	Published source row
DC Grid-No.1 Voltage''' (value 2)	-125 V	Published source row
Zero-Signal DC Plate Current	200 mA	Published source row
Zero-Signal DC Plate Current (value 2)	200 mA	Published source row
Zero-Signal DC Grid-No	2 A	Published source row
Zero-Signal DC Grid-No (value 2)	0 mA	Published source row
Zero-Signal DC Grid-No (value 3)	0 mA	Published source row
Effective RF Load Resistance	5400 ohm	Published source row
Effective RF Load Resistance (value 2)	1200 ohm	Published source row
Max.-Signa DC Plate Current	675 mA	Published source row
Max.-Signa DC Plate Current (value 2)	2.75 A	Published source row
Max.-Signa DC Grid-No	2 A	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Max.-Signa DC Grid-No (value 2)	35 mA	Published source row
Max.-Signa DC Grid-No (value 3)	260 mA	Published source row
Max.-Signa DC Grid-No.l Current	0 mA	Published source row
Max.-Signa DC Grid-No.l Current (value 2)	80 mA	Published source row
Max.-Signa Peak RF Grid-No.l Voltage	125 V	Published source row
Max.-Signa Peak RF Grid-No.l Voltage (value 2)	305 V	Published source row
Max.-Signa Power Output (Approx)	2920 W	Published source row

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.l to filament	42 pF	Published source row
Plate to filamentb	0.08 pF	Published source row
Grid No	2 pF	Published source row
Grid No (value 2)	24 pF	Published source row
G I -Grid No	1	Published source row
G2 -Grid No	2	Published source row
temperature of	45	Published source row
~~ Minimum air flow	350 cfm	Published source row
~~ Minimum air flow (value 2)	270 cfm	Published source row
~~ Minimum air flow (value 3)	200 cfm	Published source row
Static pressure	3	Published source row
Static pressure (value 2)	2	Published source row
Static pressure (value 3)	1	Published source row
Static pressure (value 4)	1.3	Published source row

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