



ELECTRONIC TUBE REFERENCE

8122

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

CONSOLIDATED TECHNICAL
DATA

1 SECTION
CONSTRUCTION
BEAMPOWER

Forced-air-cooled coaxial transmitting beam-power tube for RF amplification, oscillation, regulation, distributed amplification, and linear-amplifier service to approximately 500 MHz.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	9
NOMINAL HEATER	13.5 V / 1.3 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Beam Power	
MAXIMUM PLATE VOLTAGE	3000 V
MAXIMUM SCREEN VOLTAGE	400 V
MAXIMUM PLATE DISSIPATION	400 W
MAXIMUM SCREEN DISSIPATION	8 W
<i>Electrical section extracted from supplied RCA data sheet.</i>	

Forced-air-cooled coaxial beam-power tube for RF power amplification, oscillation, regulation and distributed amplification to 500 MHz.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1940 RCA

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

1940 RCA

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Frequency	500 MHz	—
RFPowerOutput	300 W	470MHz
PeakEnvelopePowerOutput	570 W	30MHz;ClassAB2



SOURCE OPERATING CONDITIONS

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1971 RCA HB3 Binder 6 of 7

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

1971 RCA HB3 BINDER 6 OF 7

Section 1 · Beam Power

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage nominal	13.5 V	WholeTube
Heater/filament current nominal	1.3 A	WholeTube
Grid No	1 pF	Published source row
Grid No (value 2)	0 pF	Published source row
Grid No (value 3)	13 pF	Published source row
Grid No	1 pF	Published source row
Grid No	1 pF	Published source row
Grid No (value 2)	2 pF	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No (value 3)	24 pF	Published source row
Grid No	2 pF	Published source row
Grid No (value 2)	7 pF	Published source row
Grid No	2 pF	Published source row
Grid No (value 2)	26 pF	Published source row
Cathode to heater	3	Published source row
Cathode to heater (value 2)	4	Published source row
Grid No	2	Published source row
Grid No (value 2)	2943	Published source row
Grid No (value 3)	-2	Published source row

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Published electrical value	7 A	Published source row
Published electrical value (value 2)	13 A	Published source row
Published electrical value (value 3)	5 A	Published source row
Published electrical value (value 4)	10 A	Published source row
Current at	13.5 V	Published source row
Current at (value 2)	1 V	Published source row
Current at (value 3)	3 V	Published source row
Minimum heating time	60	Published source row
Mu-Factor, Grid No	2	Published source row
Mu-Factor, Grid No (value 2)	12	Published source row
Plate volts =	450 V	Published source row
Plate volts = (value 2)	2 V	Published source row
Plate volts = (value 3)	325 V	Published source row
DC Grid-No	2 V	Published source row
DC Grid-No (value 2)	400 V	Published source row
DC Grid-No. 1 Voltage	-100 V	Published source row
DC Plate Current at Peak of Envelope	4509 mA	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Grid-No.1 Current	100 mA	Published source row
Plate Dissipation	400 W	Published source row
Grid-No	2 W	Published source row
Grid-No (value 2)	8 W	Published source row
Peak Heater-Cathode Voltage ±	150 V	Published source row
DC Plate Voltage	2000 V	Published source row
DC Plate Voltage (value 2)	2500 V	Published source row
DC Grid-No	2 V	Published source row
DC Grid-No (value 2)	400 V	Published source row
DC Grid-No (value 3)	400 V	Published source row
DC Grid-No. 1 Voltage	-35 V	Published source row
DC Grid-No. 1 Voltage (value 2)	-35 V	Published source row
Zero-Signal DC Plate Current	100 mA	Published source row
Zero-Signal DC Plate Current (value 2)	1 mA	Published source row
Zero-Signal DC Plate Current (value 3)	15 mA	Published source row
Effective RF Load Resistance	3050	Published source row
Effective RF Load Resistance (value 2)	3500	Published source row
DC Grid-No	2	Published source row
Average DC Grid-No. 1 Current	0.05 mA	Published source row
Average DC Grid-No. 1 Current (value 2)	3 mA	Published source row
Peak-of-Envelope Driver Power Output (Approx)	0.3 W	Published source row
Peak-of-Envelope Driver Power Output (Approx) (value 2)	0.5 W	Published source row
Output-Circuit Efficiency (Approx)	90	Published source row
Output-Circuit Efficiency (Approx) (value 2)	90	Published source row
Grid-No	2	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No (value 2)	10000	Published source row
DC Plate Voltage	1800 V	Published source row
DC Grid-No	2 V	Published source row
DC Grid-No (value 2)	400 V	Published source row
DC Grid-No. 1 Voltage	-100 V	Published source row
DC Plate Current	250 mA	Published source row
DC Grid-No. 1 Current	100 mA	Published source row
~~ Grid-No	2 W	Published source row
~~ Grid-No (value 2)	5 W	Published source row
Plate Dissipation	280 W	Published source row
DC Plate Voltage	2200 V	Published source row
DC Grid-No	2 V	Published source row
DC Grid-No (value 2)	400 V	Published source row
DC Grid-No. 1 Voltage	-100 V	Published source row
DC Plate Current	300 mA	Published source row
DC Grid-No. 1 Current	100 mA	Published source row
Grid-No	2 W	Published source row
Grid-No (value 2)	8 W	Published source row
Plate Dissipation	400 W	Published source row
Peak Heater-Cathode Voltage X1	50 V	Published source row
DC Plate Voltage	700 V	Published source row
DC Plate Voltage (value 2)	1000 V	Published source row
DC Plate Voltage (value 3)	1500 V	Published source row
DC Plate Voltage (value 4)	2000 V	Published source row
DC Grid-No	2 V	Published source row
DC Grid-No (value 2)	175 V	Published source row
DC Grid-No (value 3)	200 V	Published source row
DC Grid-No (value 4)	200 V	Published source row
DC Grid-No (value 5)	200 V	Published source row
DC Grid-No. 1 Voltage	-10 V	Published source row
DC Grid-No. 1 Voltage (value 2)	-30 V	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Grid-No. 1 Voltage (value 3)	-30 V	Published source row
DC Grid-No. 1 Voltage (value 4)	-30 V	Published source row
DC Plate Current	300 mA	Published source row
DC Plate Current (value 2)	300 mA	Published source row
DC Plate Current (value 3)	300 mA	Published source row
DC Plate Current (value 4)	300 mA	Published source row

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