



ELECTRONIC TUBE REFERENCE

8121

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, and regulator service, with useful operation 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

SECTION 1 Beam Power	
MAXIMUM PLATE VOLTAGE	2200 V
MAXIMUM SCREEN VOLTAGE	400 V
MAXIMUM PLATE DISSIPATION	150 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 and regulation 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	235 W	470MHz



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 (value 2)	2 pF	Published source row
Grid No (value 3)	24 pF	Published source row
Grid No	2 pF	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No (value 2)	6.5 pF	Published source row
Cathode to heater	3.4 pF	Published source row

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage 1AC or DC)a	13.5 A	Published source row
Voltage 1AC or DC)a (value 2)	10 A	Published source row
Current at	13.5 V	Published source row
Current at (value 2)	1.3 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
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 at Peak of Envelope	450 mA	Published source row
DC Grid-No. 1 Current	100 mA	Published source row
Plate Dissipation	150 W	Published source row
Grid-No	2 W	Published source row
Grid-No (value 2)	8 W	Published source row
Heater negative with respect to cathode	150 V	Published source row
Heater positive with respect to cathode	150 V	Published source row
DC Plate Voltage	1000 V	Published source row
DC Plate Voltage (value 2)	1500 V	Published source row
DC Grid-No	2 V	Published source row
DC Grid-No (value 2)	250 V	Published source row
DC Grid-No (value 3)	250 V	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Grid-No. 1 Voltage	-20 V	Published source row
DC Grid-No. 1 Voltage (value 2)	-20 V	Published source row
Zero-Signal DC Plate Current	100 mA	Published source row
Zero-Signal DC Plate Current (value 2)	100 mA	Published source row
Effective RF Load Resistance	2270	Published source row
Effective RF Load Resistance (value 2)	3800	Published source row
DC Grid-No	2	Published source row
Average DC Grid-No. 1 Current	0.058 mA	Published source row
Average DC Grid-No. 1 Current (value 2)	0.058 mA	Published source row
Output-Circuit Efficiency, (Approx)	90	Published source row
Output-Circuit Efficiency, (Approx) (value 2)	85	Published source row
Grid-No	2	Published source row
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
,/	1 mA	Published source row
,/ (value 2)	100 mA	Published source row
• Grid-No	2 W	Published source row
• Grid-No (value 2)	5 W	Published source row
Plate Dissipation	105 W	Published source row
Heater negative with respect to cathode	150 V	Published source row
Heater positive with respect to cathode	150 V	Published source row
at frequency of	50	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
at frequency of (value 2)	4	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)	700 V	Published source row
DC Plate Voltage (value 5)	1000 V	Published source row
DC Plate Voltage (value 6)	1500 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 (value 6)	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
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 Grid-No. 1 Voltage (value 5)	-30 V	Published source row
DC Grid-No. 1 Voltage (value 6)	-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
DC Plate Current (value 5)	300 mA	Published source row
DC Plate Current (value 6)	300 mA	Published source row
DC Grid-No	2 mA	Published source row
DC Grid-No (value 2)	25 mA	Published source row
DC Grid-No (value 3)	20 mA	Published source row
DC Grid-No (value 4)	20 mA	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Grid-No (value 5)	10 mA	Published source row
DC Grid-No (value 6)	10 mA	Published source row
DC Grid-No. 1 Current	50 mA	Published source row
DC Grid-No. 1 Current (value 2)	40 mA	Published source row
DC Grid-No. 1 Current (value 3)	40 mA	Published source row
DC Grid-No. 1 Current (value 4)	30 mA	Published source row
DC Grid-No. 1 Current (value 5)	30 mA	Published source row

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