



ELECTRONIC TUBE REFERENCE

6816

Power - Beam (NOT sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

BEAMPOWER

Forced-air-cooled ceramic-metal radial-beam tetrode designed for UHF RF amplification and oscillation, also capable of audio-frequency power service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 2 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Beam Power	
AMPLIFICATION FACTOR	18
MAXIMUM PLATE VOLTAGE	1000 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	115 W
MAXIMUM SCREEN DISSIPATION	4.5 W
MAXIMUM GRID DISSIPATION	1 W
MAXIMUM CATHODE CURRENT	180 mA
<i>Promoted fields populated from published ratings/characteristics; additional published values retained in TUBE_SECTION_PARAMETER.</i>	

Forced-air-cooled UHF beam power tube for RF amplification, oscillation, and audio-frequency power service.



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
HeaterVoltageNominal	6.3 V	Nominal
HeaterCurrentNominal	1.8 A	Nominal
Maximum Plate Voltage	1000 V	—
Maximum Plate Dissipation	115 W	—
Maximum Cathode Current	180 mA	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1962 Eimac

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

1962 EIMAC

Section 1 · Beam Power

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Control Grid to Cathode Capacitance	13 pF	—
Control Grid to Screen Grid Capacitance	17.5 pF	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode Warmup Time Minimum	60 s	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Frequency Full-Rated Power Input	1215 MHz	—
Maximum DC Plate Current	180 mA	—
Typical Useful Power Output	80 W	Frequency=400MHz
Typical Useful Power Output	40 W	Frequency=1200MHz



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
80 WATTS CW POWER OUTPUT – published value 1	80 W	CW
80 WATTS CW POWER OUTPUT – published value 2	40 W	CW
Voltage (AC or DC)	6.3	Published datasheet value
Current at heater volis = 6 3 – published value 1	6	Published datasheet value
Current at heater volis = 6 3 – published value 2	3	Published datasheet value
Current at heater volis = 6 3 – published value 3	2	Published datasheet value
Current at heater volis = 6 3 – published value 4	1	Published datasheet value
Mu-Factor, Grid No.2 to Grid No I	18	Published datasheet value
Grid P,o.i to date	0.065 mA	Published datasheet value
Grid No.1 to cathode & heater	13 pF	Published datasheet value
Plate to cathode & heater	0.013 mA	Published datasheet value

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to grid No.2	18 pF	Published datasheet value
Grid No.2 to plate	4.8 pF	Published datasheet value
Grid No.2 to cathode & heater – published value 1	0 mA	Published datasheet value
Grid No.2 to cathode & heater – published value 2	45 mA	Published datasheet value
Bypass Capacitor – published value 1	2948	Published datasheet value
Bypass Capacitor – published value 2	0	Published datasheet value
Grid-No.2 Bypass Capacitor – published value 1	2926	Published datasheet value
Grid-No.2 Bypass Capacitor – published value 2	0	Published datasheet value
Grid-No.2 Bypass Capacitor – published value 3	2929	Published datasheet value
Grid-No.2 Bypass Capacitor – published value 4	1	Published datasheet value
Grid No. 1, cathode, and heater)	250 mA	Published datasheet value
Plate-Core Temperature	250 mA	Published datasheet value
DC plate voltage	1000	Published datasheet value
DC grid-No.2 (screen-grid) voltage	300	Published datasheet value
Plate dissipation – published value 1	1	Published datasheet value
Plate dissipation – published value 2	15	Published datasheet value
DC Plate Voltage – published value 1	650	Published datasheet value
DC Plate Voltage – published value 2	850	Published datasheet value
DC Grid-No.2 Voltage – published value 1	300	Published datasheet value
DC Grid-No.2 Voltage – published value 2	300	Published datasheet value
DC Grid-No – published value 1	-15	Published datasheet value

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Grid-No – published value 2	-15	Published datasheet value
Peak AF Grid-No. 1-to-Grid-No. 1 Voltage – published value 1	30	Published datasheet value
Peak AF Grid-No. 1-to-Grid-No. 1 Voltage – published value 2	30	Published datasheet value
Zero-Signal DC Plate Current – published value 1	80 mA	Published datasheet value
Zero-Signal DC Plate Current – published value 2	80 mA	Published datasheet value
Zero-Signal DC Grid-No.2 Current – published value 1	0 mA	Published datasheet value
Zero-Signal DC Grid-No.2 Current – published value 2	0 mA	Published datasheet value
Effective Load Resistance – published value 1	4330	Published datasheet value
Effective Load Resistance – published value 2	7000	Published datasheet value
Effective Load Resistance – published value 3	2	Published datasheet value
DC plate voltage	1000	Published datasheet value
DC Grid-No. 1 Voltage – published value 1	-15	Published datasheet value
DC Grid-No. 1 Voltage – published value 2	-15	Published datasheet value
Peak AF Grid-No. 1-to-Grid-No.1 Voltage – published value 1	46	Published datasheet value
Peak AF Grid-No. 1-to-Grid-No.1 Voltage – published value 2	46	Published datasheet value
Zt:ro-Signal DC Plate Current – published value 1	80 mA	Published datasheet value
Zt:ro-Signal DC Plate Current – published value 2	80 mA	Published datasheet value
Effective Load Resistance – published value 1	2450	Published datasheet value
Effective Load Resistance – published value 2	3960	Published datasheet value

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC grid-No.2 voltage	300	Published datasheet value
DC grid-No. 1 voltage	100	Published datasheet value
DC plate current at peak of envelope	350 mA	Published datasheet value
DC grid-No. 1 current	30 mA	Published datasheet value
Plate input	180	Published datasheet value
Grid-No.2 Input	4.5	Published datasheet value
DC Grid-No. 1 Voltage – published value 1	-18.5	Published datasheet value
DC Grid-No. 1 Voltage – published value 2	-18.5	Published datasheet value
Zero-Signal DC Plate Current – published value 1	40 mA	Published datasheet value
Zero-Signal DC Plate Current – published value 2	40 mA	Published datasheet value
Effective RF Load Resistance – published value 1	2200	Published datasheet value
Effective RF Load Resistance – published value 2	3500	Published datasheet value
DC Plate Current at Peak of Envelope – published value 1	100 mA	Published datasheet value
DC Plate Current at Peak of Envelope – published value 2	100 mA	Published datasheet value
Average DC Plate Current – published value 1	75 mA	Published datasheet value
Average DC Plate Current – published value 2	75 mA	Published datasheet value
Average DC Grid-No.2 Current – published value 1	3.6 mA	Published datasheet value
Average DC Grid-No.2 Current – published value 2	1.7 mA	Published datasheet value
Peak-Envelope Driver Power Output (Approx.). 0.5 0.5 – published value 1	0.5	Published datasheet value

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Max.-signal do plate current	180 mA	Published datasheet value
Max.-signal plate input	180	Published datasheet value

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Max.-signal grid-No.2 input	4.5	Published datasheet value
Max.-Signal DC Plate Current – published value 1	200 mA	Published datasheet value
Max.-Signal DC Plate Current – published value 2	200 mA	Published datasheet value
Max.-Signal DC Grid-No.2 Current – published value 1	20 mA	Published datasheet value
Max.-Signal DC Grid-No.2 Current – published value 2	20 mA	Published datasheet value
Max.-Signal Power Output (Approx) – published value 1	50	Published datasheet value
Max.-Signal Power Output (Approx) – published value 2	80	Published datasheet value
Max.-signal do grid-No. 1 (control grid) current	30 mA	Published datasheet value
Max.-Signal DC Plate Current – published value 1	355 mA	Published datasheet value
Max.-Signal DC Plate Current – published value 2	355 mA	Published datasheet value
Max.-Signal DC Grid-No.2 Current – published value 1	25 mA	Published datasheet value
Max.-Signal DC Grid-No.2 Current – published value 2	25 mA	Published datasheet value
Max.-Signal DC Grid-No.1 Current – published value 1	15 mA	Published datasheet value
Max.-Signal DC Grid-No.1 Current – published value 2	15 mA	Published datasheet value
Max.-Signal Power Output (Approx.) – published value 1	85	Published datasheet value
Max.-Signal Power Output (Approx.) – published value 2	140	Published datasheet value

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes, and their source documents.

