



ELECTRONIC TUBE REFERENCE

8792

Power - Beam (NOT sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

BEAMPOWER

High-power beam tube intended for RF transmitting service, with ratings and construction suited to professional communications and broadcast power amplification.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	5.5 V / 17.3 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	3500 V
MAXIMUM PLATE DISSIPATION	1500 W
Source-derived section; identical dual beam-power sections compressed where applicable.	

RCA-8792* is designed specifically to meet the high linearity and low noise requirements of modern HF, single sideband equipments.

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
1000 Watts PEP Output	1000 W	1000 Watts PEP Output
Full Input to	400 MHz	Full Input to 400 MHz Beam Power Tube
it can deliver one kilowatt output at	20 W	it can deliver one kilowatt output at 70% efficiency with a gain of better than 20 dB.
put, and to UHF, Class B linear service, where it will deliver	300 W	put, and to UHF, Class B linear service, where it will deliver 300 watts carrier power output.
Voltage® (ac orde) oo v v vn. .. {	3.75 V	Voltage® (ac orde) oo v v vn. .. {5.5 typ. V Greatest Diameter. .. (95.3 mm) 3.75 in
Grid No	0.14 pF	Grid No.1 to Plate® 0.14 pF T L.
Grid No	38 pF	Grid No.1 to Cathode-Heater 38 pF Seal""nI'u ' d o
Plate to Cathode-Heaterç	250 pF	Plate to Cathode-Heaterç 0.02 pF al Temperature® 250 max. °C
Grid No	2 pF	Grid No.1to Grid No.2. 52 pF (Plate, Grid No.1, Grid No.2
Grid No	16 pF	Grid No.2to Plate 16 pF Cathode-Heater, and Heater)
Grid No	250 pF	Grid No.2 to Cathode-Heater® 1.4 pF Plate Core Temperature d 250 max. °C
b por: plate voltage =	2500 V	b por: plate voltage = 2500 V d See Dimensional Outline for temperature measurement
grid No	600 V	grid No.2 voltage = 600 V points.
plate current =	600 mA	plate current = 600 mA
peak-to-average power ratio of	30 MHz	peak-to-average power ratio of 2. In a grid-drive circuit at 30 MHz

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum CCS Ratings, Absolute-Maximum Values: DC Plate Voltage	2500 V	Maximum CCS Ratings, Absolute-Maximum Values: DC Plate Voltage 2500 2500 V
DC Grid-No	600 V	DC Grid-No.2 Voltage 600 600 V
up to	400 MHz	up to 400 MHz
DC Grid-No	61 V	DC Grid-No.1 Voltageh 65 61 V
DC GRID-No	1050 V	DC GRID-No.2 VOLTAGEY. 1000 max. V Effective RF Load Resistance . . 1050 1050 Q
Peak RF Grid Voltage	47 V	Peak RF Grid Voltage 50 47 V
In a grid-drive citcuit at	108 MHz	In a grid-drive citcuit at 108 MHz with an output circuit
bandwidth of	2 MHz	bandwidth of 2.0 MHz"
DCPlate Voltage o i v v	3350 V	DCPlate Voltage o i v v 3350V
DC Grid-No	2 V	DC Grid-No.2 Voltage o
DC PLATE VOLTAGEf	1 V	DC PLATE VOLTAGEf..... 3500 max. V DC Grid-No.1 Voltage cvvvo
DC GRID-No	1000 V	DC GRID-No.2 VOLTAGES. 1000 max. V
DC GRID-No	0.55 V	DC GRID-No.1 VOLTAGEK -300 max. V DCPlateCurrent . ..o vv v v e v vveen 0.55 A
Carrier conditions for use with a maximum modulation In a cathode drive circuit at	400 MHz	Carrier conditions for use with a maximum modulation In a cathode drive circuit at 400MHz with an output cir-
DC PLATE VOLTAGEf,	500 V	DC PLATE VOLTAGEf , 3500 max. DC Grid-No.2 Voltage9 500 V
DC Grid-No	65 V	DC Grid-No.1 Voltage™ 65 V
DC GRID-No	2 V	DC GRID-No.2 VOLTAGES.
.. 1000 max. DCPlateCurrent 550 mA	550 mA	.. 1000 max. DCPlateCurrent 550 mA
DC PLATE CURRENT	-10 mA	DC PLATE CURRENT 700 max. mA DC Grid-No.2 Current. + « .o v oo v vu e -10 mA
Class C Television Service Typical Operation in Grid-Drive Circuvit at	216 MHz	Class C Television Service Typical Operation in Grid-Drive Circuvit at 216 MHz
Synchronizing-level conditions per tube unless other- BandwidthP of	6 MHz	Synchronizing-level conditions per tube unless other- BandwidthP of 6.0 MHz

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
wise specified DCPlate Voltage v e v v v v v	2500 V	wise specified DCPlate Voltage v e v v v v v 2500 V
Moximum CCS Ratings, Absolute-Maximum Values: DC Grid-No	500 V	Moximum CCS Ratings, Absolute-Maximum Values: DC Grid-No.2 Voltage cven v 500 V
Up to	1 MHz	Up to 400 MHz Peak RF Grid-No.1 Voltage:
DC PLATE VOLTAGE!	60 V	DC PLATE VOLTAGE! 3500 max. V Pedestallevel 60 V
DC GRID-No	1 V	DC GRID-No.2 VOLTAGES. 1000 max. V DC Grid-No.1 Voltage o
GRID-No	-40 mA	GRID-No.2 INPUT 50 max. W DC Grid No.2 Current Pedestal level. -40 mA
Synchronizing level	5 mA	Synchronizing level. 5.0 mA
GRID-No	0 mA	GRID-No.1 CURRENT 200 max. mA Pedestal level 00 A
€ See Section V.C. of	300 ohm	€ See Section V.C. of 1CE-300. a ten ohm, unbypassed cathode resistor. See also Section
"1HEATER VOLTAGE Ej =55V	55 V	"1HEATER VOLTAGE Ej =55V
GRID No	2 V	GRID No.2 VOLTAGE EC2=GOOV
GRID NO	500 V	GRID NO. 2 VOLTAGE E, [®] 500V
20 = 5.9 OHMS	5.9 ohm	20 = 5.9 OHMS
Zo =	13.4 ohm	Zo = 13.4 OHMS
No.2, and grid-No.1 voltages. In typical operation C PRESSURE	1 V	No.2, and grid-No.1 voltages. In typical operation C PRESSURE
at 1500 watts, plate dissipation, and 225° C plate LEVE L g	225 W	at 1500 watts, plate dissipation, and 225° C plate LEVE L g
seal temperature,	60 in	seal temperature, 29 cfm at 0.35 inches of water 60}

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
factor of	3.5 MHz	factor of 1.0 cuit bandwidth of 3.5 MHz"

TUBE TINKER

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and their source documents.

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