

ELECTRONIC TUBE REFERENCE

6293

Power - Beam (NOT sweep) electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
BEAMPOWER

Pulse-rated beam-power tube intended for high-current pulse amplifier or switching service, emphasizing short-duration peak voltage and current rather than continuous output.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7CK	BASE PINS	8
NOMINAL HEATER	6.3 V / 1.25 A	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

7CK - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – G3	A	G3 – Suppressor Grid	CONNECTED
PIN1 – K	A	K – Cathode	CONNECTED
PIN2 – H	–	H – Heater	CONNECTED
PIN3 – G2	A	G2 – Screen Grid	CONNECTED
PIN4 – G3	A	G3 – Suppressor Grid	CONNECTED
PIN4 – K	A	K – Cathode	CONNECTED
PIN5 – G1	A	G1 – Control Grid	CONNECTED
PIN6 – G3	A	G3 – Suppressor Grid	CONNECTED
PIN6 – K	A	K – Cathode	CONNECTED
PIN7 – H	–	H – Heater	CONNECTED
PIN8 – SH	A	SH – Internal Shield	CONNECTED
CAP1 – P	A	P – Plate (Anode)	CONNECTED

SECTION RATINGS

SECTION1 Beam Power	
TRANSCONDUCTANCE	0.007 S
AMPLIFICATION FACTOR	4.5
MAXIMUM PLATE VOLTAGE	3500 V
MAXIMUM SCREEN VOLTAGE	500 V
MAXIMUM PLATE DISSIPATION	10 W
Representative electrical section from supplied RCA data sheet.	

The RCA 6293 is a beam power tube intended for rectangular-wave pulse-modulator service, with pulse plate voltages up to 4 kV.



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

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	PulseModulator text	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1956 RCA Transmitting Tubes

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

1956 RCA TRANSMITTING TUBES

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Plate Supply Voltage Maximum	3500 V	DutyFactor<=0.003
Instantaneous Plate Voltage Maximum	4000 V	DutyFactor<=0.003
Peak Plate Current Maximum	3.5 A	DutyFactor<=0.003
Plate Dissipation Maximum	10 W	—
Duty Factor Maximum	1 ratio	Reduced peak-current operation



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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage nominal	6.3 V	WholeTube
Heater/filament current	1.25 A	WholeTube
Voltage (AC or DC)	6.3 %	Published source row
Voltage (AC or DC) (value 2)	10 %	Published source row
Current at heater volts =	6.3 V	Published source row
Current at heater volts = (value 2)	1.25 V	Published source row
Transconductance, for plate volts =	200 V	Published source row
grid-No	2 V	Published source row
grid-No (value 2)	200 V	Published source row
Mu-Factor, Grid No	2	Published source row
Mu-Factor, Grid No (value 2)	1	Published source row
plate volts =	200 V	Published source row
plate volts = (value 2)	2 V	Published source row
INSTANTANEOUS PLATE VOLTAGE i1	5 V	Published source row
DC GRID-No	2 V	Published source row
DC GRID-No (value 2)	500 V	Published source row
DC GRID-No	1 V	Published source row
DC GRID-No (value 2)	300 V	Published source row
GRID-N o	1	Published source row
PEAK GRID-No	2 A	Published source row
PEAK GRID-No (value 2)	750 mA	Published source row
PEAK GRID-No.1 CURRENT	500 mA	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater negative with respect to cathode	135 V	Published source row
Heater positive with respect to cathode	135 V	Published source row
DC Plate Supply Voltage	3000 V	Published source row
DC Grid-No	2 V	Published source row
DC Grid-No (value 2)	300 V	Published source row
DC Grid-No.1 Supply Voltage –	175 V	Published source row
Peak Positive Grid-No	1 V	Published source row
Peak Positive Grid-No (value 2)	65 V	Published source row
DC Grid-No o	2 A	Published source row
DC Grid-No o (value 2)	0 mA	Published source row
DC Grid-No o (value 3)	4 A	Published source row
DC Grid-No	1 A	Published source row
DC Grid-No (value 2)	2.5 mA	Published source row
Load Resistance (RL),	100 W	Published source row
Grid-No.1-Circuit Resistance	30000 ohm	Published source row
used in the plate supply circuit, the grid-No	2	Published source row

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No	1 pF	Published source row
Grid No (value 2)	0.24 pF	Published source row
internal shield, grid No	2	Published source row
sleeve, and heater	13 pF	Published source row
internal shield, grid No	2	Published source row
sleeve, and heater	8.5 pF	Published source row
Heater Current	1 A	Published source row
Heater Current (value 2)	1.175 A	Published source row
Heater Current (value 3)	1.325 A	Published source row
Grid No	1 pF	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No (value 2)	2 pF	Published source row
Grid No (value 3)	0.24 pF	Published source row
& internal shield, grid No	2	Published source row
base sleeve, and heater	2 pF	Published source row
base sleeve, and heater (value 2)	12 pF	Published source row
base sleeve, and heater (value 3)	15 pF	Published source row
internal shield, grid No	2	Published source row
base sleeve, and heater	2 pF	Published source row
base sleeve, and heater (value 2)	7.3 pF	Published source row
base sleeve, and heater (value 3)	9.5 pF	Published source row
Plate Current	3 mA	Published source row
Plate Current (value 2)	46 mA	Published source row
Plate Current (value 3)	94 mA	Published source row
Grid-No	2 mA	Published source row
Grid-No (value 2)	3 mA	Published source row
Grid-No (value 3)	0 mA	Published source row
Grid-No (value 4)	5.5 mA	Published source row
Peak Plate Current	1.4 A	Published source row
Peak Plate Current (value 2)	2.4 A	Published source row
Note	3 V	Published source row
Note (value 2)	6.3 V	Published source row
Note (value 3)	300 V	Published source row
g n tl-N o	2	Published source row
g n tl-N o (value 2)	200	Published source row
g n tl-N o (value 3)	-33	Published source row
conditions: rectangular-wave modulation applied to grid No	1	Published source row
pulse duration of	1	Published source row
of	3000 V	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
of (value 2)	2000 V	Published source row
grid No	2	Published source row
grid No (value 2)	500	Published source row
age of	-300 V	Published source row
age of (value 2)	1 V	Published source row
age of (value 3)	100 V	Published source row
Ecc2: Grid-No	2 V	Published source row
Ecc2: Grid-No (value 2)	5 V	Published source row
Ecc2: Grid-No (value 3)	1000 V	Published source row
Eb h: Plate Supply Voltage R	6 ohm	Published source row
Eb h: Plate Supply Voltage R (value 2)	10000 ohm	Published source row
Eb h: Plate Supply Voltage R (value 3)	50 ohm	Published source row