



ELECTRONIC TUBE REFERENCE

6159B

Power - Beam (NOT sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
BEAMPOWER

Improved 6159-family beam-power transmitting tube for RF communications service, providing compact moderate-power output with a 26.5 V heater.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	8
NOMINAL HEATER	26.5 V / 300 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Beam Power	
TRANSCONDUCTANCE	0.007 S
AMPLIFICATION FACTOR	4.5
MAXIMUM PLATE VOLTAGE	750 V
MAXIMUM SCREEN VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	35 W
MAXIMUM SCREEN DISSIPATION	3 W

Representative electrical section from supplied RCA data sheet.

High-power-sensitivity beam-power transmitting tube with 26.5-V heater. Published RCA data include the applicable ratings, characteristics, operating conditions, and capacitances from the supplied sheet.

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage nominal	26.5 V	WholeTube
Heater/filament current	300 mA	WholeTube
RCA "DARK HEATER" WITH	21 V	Published source row
RCA "DARK HEATER" WITH (value 2)	31 V	Published source row
Voltage (AC or DC)	26.5 V	Published source row
Current at heater volts =	26.5 V	Published source row
Current at heater volts = (value 2)	0.3 V	Published source row
Minimum heating time	60 s	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
Voltage (AC or DC)v	26.5 V	Published source row
Current at	26.5 V	Published source row
Current at (value 2)	0 V	Published source row
Current at (value 3)	28 V	Published source row
Current at (value 4)	0.32 V	Published source row
Useful Power Output"	59 W	Published source row
~ It is recommended that the design-center heater voltage be	26.5 V	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
voltage oP	26.5 V	Published source row
voltage oP (value 2)	600 V	Published source row
voltage oP (value 3)	2 V	Published source row
voltage oP	200 ohm	Published source row
voltage oP (value 2)	1 ohm	Published source row
voltage oP (value 3)	24 ohm	Published source row
current oP	15 mA	Published source row
current oP (value 2)	1 mA	Published source row
current oP (value 3)	2.5 mA	Published source row
current oP (value 4)	7 mA	Published source row
frequency of	15 MHz	Published source row
Voltage (AC or CC)x –	24 V	Published source row
Voltage (AC or CC)x – (value 2)	29 V	Published source row
Current at	26.5 V	Published source row
Current at (value 2)	0 V	Published source row
Current at (value 3)	28 V	Published source row
Current at (value 4)	0.32 V	Published source row
Useful Power Output ly	59 W	Published source row
voltage of	26.5 V	Published source row
voltage of (value 2)	600 V	Published source row
voltage of (value 3)	2 V	Published source row
voltage of	200 ohm	Published source row
voltage of (value 2)	24 ohm	Published source row
voltage of (value 3)	10 ohm	Published source row
current of	15 mA	Published source row
current of (value 2)	1 mA	Published source row
current of (value 3)	2.5 mA	Published source row
current of (value 4)	3 mA	Published source row
frequency of	15 MHz	Published source row
z With conditions in note (y) above, reduce heater voltage to	21 V	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Useful power output will be at least	90	Published source row
voltage of	26.5 V	Published source row
sample lots of tubes with	31	Published source row
on the heater, a cycle of	1 min	Published source row
on the heater, a cycle of (value 2)	4 min	Published source row
After	1000	Published source row
Published electrical value	48	Published source row
With heater voltage of	26.5 V	Published source row
With heater voltage of (value 2)	100 V	Published source row
With ac or do heater voltage of	26.5 V	Published source row
With ac or do heater voltage of (value 2)	1 V	Published source row
grid-No	1 Mohm	Published source row
grid-No (value 2)	10 Mohm	Published source row
With ac or do heater voltage of	26.5 V	Published source row
With ac or do heater voltage of (value 2)	200 V	Published source row
and cathode grid No	1	Published source row
and cathode grid No (value 2)	2	Published source row
Cathode Warmup Time Minimum	60 s	RCA 6159B minimum heater warm-up time

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	—0.24 pF	6159B grid No.1 to plate, maximum; without external shield