

ELECTRONIC TUBE REFERENCE

6161

Power - Triode (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Forced-air-cooled power triode for RF power-amplifier and oscillator service at microwave frequencies.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 3.4 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
AMPLIFICATION FACTOR	27
MAXIMUM PLATE VOLTAGE	1600 V
MAXIMUM PLATE DISSIPATION	250 W
MAXIMUM CATHODE CURRENT	3.2 A
Representative electrical section from supplied RCA data sheet.	

Forced-air-cooled power triode for RF power-amplifier and oscillator service at microwave frequencies.



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 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater or filament voltage	6.3 V	Published nominal value
Heater or filament current	3.4 A	Published nominal value
Amplification factor	27	Published operating characteristic
Maximum operating frequency	2000 MHz	Reduced-rating service

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate dissipation	250 W	Published maximum rating
Maximum CW input	400 W	Up to 900 MHz
Useful power output	325 W	Television synchronizing level
Minimum air flow	16 cfm	At full plate dissipation



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 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	6.3 V	—
HeaterOrFilamentCurrent	3.4 A	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
MaximumOperatingFrequency	2000 MHz	—



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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage nominal	6.3 V	WholeTube
Heater/filament current	3.4 A	WholeTube
Voltage' ~	6.9 V	Published source row
Current at	6.3 V	Published source row
Current at (value 2)	34 V	Published source row
DC Plate-to-Grid Voltage	1600 V	Published source row
DC Cathode-to-Grid Voltage	100 V	Published source row
Output-Circuit Efficiency (Approx.)	89 %	Published source row
DC Plate-to-Grid Voltage	1600 V	Published source row
DC Cathode-torrid Voltage	100 V	Published source row
Output-Circuit Efficiency (Approx.)	65	Published source row
DC PLATE VOLTAGE	1600 V	Published source row
DC GRID VOLTAGE (White level)	-300 V	Published source row
DC PLATE CURRENT	350 mA	Published source row
PLATE INPUT	560 W	Published source row
PLATE DISSIPATION	250 W	Published source row
DC Plate-torrid Voltage	1600 V	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak RF Cathode-torrid Voltage	130 V	Published source row
Output~ircuit Efficiency (Approx.)	89	Published source row
DC Plate-torrid Voltage	1600 V	Published source row
Peak RF Cathode-to-Grid Voltage	135 V	Published source row
Output-Circuit Efficiency (Approx.)	65 %	Published source row
DC PLATE VOLTAGE	1300 V	Published source row
DC GRID VOLTAGE	-300 V	Published source row
DC PLATE CURRENT	210 mA	Published source row
PLATE INPUT	270 W	Published source row
PLATE DISSIPATION	167 W	Published source row
DC Plate-to-Grid Voltage	1400 V	Published source row
DC Cathode-to-Grid Voltage	150 V	Published source row
Peak RF Cathode-to-Grid Voltage	200 V	Published source row
DC Plate Current	210 mA	Published source row
DC Grid Current (Approx.)	70 mA	Published source row
Driver Power Output (Approx.)"	70 W	Published source row
Output-Circuit Efficiency (Approx.)	80 %	Published source row
Useful Power Output (Approx)	180 W	Published source row
DC Plate-to-Grid Voltage	1400 V	Published source row
DC Cathode-torrid Voltage	150 V	Published source row
Peak RF Cathode-to-Grid Voltage	200 V	Published source row
DC Plate Current	210 mA	Published source row
DC Grid Current (Approx.)	70 mA	Published source row
Driver Power Output (Approx.){'~	75 W	Published source row
Output-Circuit Efficiency (Approx.)	60 %	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Useful Power Output (Approx)	120 W	Published source row
DC PLATE VOLTAGE	1600 V	Published source row
DC GRID VOLTAGE	-300 V	Published source row
DC PLATE CURRENT	250 mA	Published source row
PLATE INPUT	400 W	Published source row
PLATE DISSIPATION	250 W	Published source row
DC Plate-to-Grid Voltage	1650 V	Published source row
Peak RF Cathode-to-Grid Voltage	200 V	Published source row
DC Plate Current	250 mA	Published source row
DC Grid Current (Approx)	50 mA	Published source row
Driver Power Output (Approx.)+	75 W	Published source row
Output-Circuit Efficiency (Approx.)	82 %	Published source row
Useful Power Output (Approx)	270 W	Published source row
DC Plate-to-Grid-Voltage	1650 V	Published source row
Peak RF Cathode-to-Grid Voltage	200 V	Published source row
DC Plate Current	250 mA	Published source row
DC Grid Current (Approx)	10 mA	Published source row
Output-Circuit Efficiency (Approx.)	60 %	Published source row
Useful Power Output (Approx)	180 W	Published source row
DC PLATE VOLTAGE	1600 V	Published source row
DC GRID VOLTAGE	-300 V	Published source row
DC PLATE CURRENT	250 mA	Published source row
PLATE INPUT	400 W	Published source row
PLATE DISSIPATION	250 W	Published source row
DC Plate-to-Grid Voltage	1760 V	Published source row
DC Plate-to-Grid Voltage (value 2)	1675 V	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid Voltage	300 V	Published source row
Grid Voltage (value 2)	300 V	Published source row
DC Plate Current	250 mA	Published source row
DC Plate Current (value 2)	250 mA	Published source row
DC Grid Current (Approx.)	50 mA	Published source row
DC Grid Current (Approx.) (value 2)	21 mA	Published source row

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to cathode and heater§	11 pF	Published source row
Plate to cathode and heater°	0 pF	Published source row
Plate to cathode and heater° (value 2)	19 pF	Published source row
Minimum air flow	16 cfm	Published source row
Minimum air flow (value 2)	10 cfm	Published source row
Minimum air flow (value 3)	5.7 cfm	Published source row
Static pressure	0.85	Published source row
Static pressure (value 2)	0.4	Published source row
Static pressure (value 3)	0	Published source row
Static pressure (value 4)	16	Published source row
DC PLATE VOLTAGE	1600 V	Published source row
DC PLATE CURRENT	350 mA	Published source row
PLATE INPUT	560 W	Published source row
PLATE DISSIPATION	250 W	Published source row
Heater Current	1 A	Published source row