



ELECTRONIC TUBE REFERENCE

5946

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

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Forced-air-cooled power triode designed for plate-pulsed amplifier and oscillator service through approximately 1.3 GHz. Its ratings include high pulse plate voltage and 250 W average plate dissipation for high-power UHF pulse applications.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	9
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	25
MAXIMUM PLATE VOLTAGE	7500 V
MAXIMUM PLATE DISSIPATION	250 W
MAXIMUM CATHODE CURRENT	1 A
<i>Representative electrical section from supplied RCA data sheet.</i>	

Forced-air-cooled power triode for plate-pulsed oscillator and amplifier service through 1300 MHz.



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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate dissipation	250 W	Published maximum rating
Useful pulse power output	14000 W	Plate-pulsed UHF oscillator/amplifier
Maximum operating frequency	1250 MHz	Published pulse service
Minimum air flow	16 cfm	At 250 W 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	—
Application	PlatePulsedOscillatorAndAmplifier	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
MaximumOperatingFrequency	1300 MHz	—



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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage nominal	6.3 V	WholeTube
Heater/filament current	3.4 A	WholeTube
Voltage (AC or DC)	6.3 V	Published source row
Current	3.4 A	Published source row
Minimum heating time	1 min	Published source row
Amplification Factor	25	Published source row
PLATE-SUPPLY VOLTAGE	7500 V	Published source row
PLATE-SUPPLY VOLTAGE (value 2)	7500 V	Published source row
GRID-BIAS VOLTAGE	600 V	Published source row
GRID-BIAS VOLTAGE (value 2)	600 V	Published source row
PEAK RECTIFIED GRID CURRENT	1 A	Published source row
PEAK RECTIFIED GRID CURRENT (value 2)	750 mA	Published source row
DC PLATE CURRENT	45 mA	Published source row
DC PLATE CURRENT (value 2)	250 mA	Published source row
DC GRID CURRENT	10 mA	Published source row
DC GRID CURRENT (value 2)	70 mA	Published source row
PLATE INPUT	340 W	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PLATE INPUT (value 2)	340 W	Published source row
PLATE DISSIPATION	250 W	Published source row
PLATE DISSIPATION (value 2)	250 W	Published source row
Plate-Supply Voltage	5500 V	Published source row
Plate-Supply Voltage (value 2)	7500 V	Published source row
Grid-Bias Voltage	375 V	Published source row
Grid-Bias Voltage (value 2)	500 V	Published source row
Peak RF Grid Voltage	625 V	Published source row
Peak RF Grid Voltage (value 2)	850 V	Published source row
Peak Rectified Grid Current	250 mA	Published source row
Peak Rectified Grid Current (value 2)	500 mA	Published source row
DC Plate Current	35 mA	Published source row
DC Plate Current (value 2)	45 mA	Published source row
DC Grid Current	0 mA	Published source row
DC Grid Current (value 2)	25 A	Published source row
DC Grid Current (value 3)	5 mA	Published source row

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Dissipation	150 W	Published source row
Plate Dissipation (value 2)	200 W	Published source row
Plate Dissipation (value 3)	250 W	Published source row
Min. Air Flow	5.7 cfm	Published source row
Min. Air Flow (value 2)	10 cfm	Published source row
Min. Air Flow (value 3)	16 cfm	Published source row
Static Pressure	0.16	Published source row
Static Pressure (value 2)	0.4	Published source row
Static Pressure (value 3)	0.85	Published source row
Heater Current	1 A	Published source row
Heater Current (value 2)	3.05 A	Published source row
Heater Current (value 3)	3.75 A	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-Plate Capacitance	5.6 pF	Published source row
Grid-Plate Capacitance (value 2)	6.6 pF	Published source row
Grid-Cathode Capacitance	10.5 pF	Published source row
Grid-Cathode Capacitance (value 2)	12.5 pF	Published source row
Plate-Cathode Capacitance	3 pF	Published source row
Plate-Cathode Capacitance (value 2)	0.12 pF	Published source row
Plate-Cathode Capacitance (value 3)	0.26 pF	Published source row
Plate Voltage	1 V	Published source row
Plate Voltage (value 2)	4 V	Published source row
Plate Voltage (value 3)	500 V	Published source row
Plate Voltage (value 4)	850 V	Published source row
Plate Voltage	1 V	Published source row
Plate Voltage (value 2)	5 V	Published source row
Plate Voltage (value 3)	690 V	Published source row
Plate Voltage (value 4)	1140 V	Published source row
Grid Voltage	1 V	Published source row
Grid Voltage (value 2)	6 V	Published source row
Grid Voltage (value 3)	-165 V	Published source row
Peak Cathode Current	1 A	Published source row
Peak Cathode Current (value 2)	7 A	Published source row
Peak Cathode Current (value 3)	12 A	Published source row
Useful Power Output at Peak of Pulse	1.8	Published source row
Useful Power Output at Peak of Pulse (value 2)	12	Published source row
Note	1 V	Published source row
Note (value 2)	6.9 V	Published source row
Note	2	Published source row
Note (value 2)	-15	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
give do plate current of2	50	Published source row
Note u: With do grid voltage of	-10	Published source row
give do plate current of	25	Published source row
Note	5	Published source row
Note (value 2)	-20	Published source row
give do plate current of	250	Published source row
Note	6	Published source row
Note (value 2)	1600	Published source row
give do plate current of	1	Published source row
Note	7	Published source row
Note g: With peak positive-pulse plate-supply voltage of	7500 V	Published source row
current from pulse supply ofu	5	Published source row
current of	0.5	Published source row
current of (value 2)	0.01	Published source row