

ELECTRONIC TUBE REFERENCE

803

Power - Pentode (NOT beam) (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Thoriated-tungsten transmitting power pentode for RF amplification and oscillator service to approximately 20 MHz.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	5
NOMINAL HEATER	10 V / 5 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Pentode	
TRANSCONDUCTANCE	0.004 S
MAXIMUM PLATE VOLTAGE	2000 V
MAXIMUM SCREEN VOLTAGE	500 V
MAXIMUM PLATE DISSIPATION	125 W
MAXIMUM CATHODE CURRENT	175 mA
Published ratings and characteristics from source sheet.	

Thoriated-tungsten power pentode for RF power-amplifier and oscillator service, usable with full input to about 20 MHz.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1938 RCA Transmitting Tubes

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

1938 RCA TRANSMITTING TUBES

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
as high as	20 MHz	as high as 20 megacycles. The maximum rated plate dissipation of the tube is
D-C Plate Voltage	2000 V	D-C Plate Voltage . . 2000 max. Volts
D-C Suppressor Voltage (Grid No. 3)	500 V	D-C Suppressor Voltage (Grid No. 3) 500 max. Volts
Screen Input	20 W	Screen Input- .. 20 max. Watts
Plate Dissipation	125 W	Plate Dissipation --- -- 125 max. Watts
D-C Plate Voltage -- 1250 1500	2000 V	D-C Plate Voltage -- 1250 1500 2000 Volts
D-C Suppressor Voltage .-. 40 40	40 V	D-C Suppressor Voltage .-. 40 40 40 Volts
D-C Plate Current --.- 130 110	80 mA	D-C Plate Current --.- 130 110 80 Milliamperes
Power Output (Approx.)-- 52 53	33 W	Power Output (Approx.)-- 52 53 33 Watts
D-C Plate Voltage	2000 V	D-C Plate Voltage- 2000 max. Volts
Screen Input	30 W	Screen Input..... 30 max. Watts
Peak R-F Grid Voltage ... 200 190	170 V	Peak R-F Grid Voltage ... 200 190 170 Volts
Peak A'F Suppressor Voltage_ no 130	150 V	Peak A'F Suppressor Voltage_ no 130 150 Volts
Screen Resistor... 13000 17000	35000 Ω	Screen Resistor.. 13000 17000 35000 Ohms
Grid Resistor --- 5000 5000	7000 Ω	Grid Resistor --- 5000 5000 7000 Ohms
Driving Power (Approx.) - 4 3.5	2.5 W	Driving Power (Approx.) - 4 3.5 2.5 Watts
D-C Plate Voltage	2000 V	D-C Plate Voltage. .. 2000 max. Volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
D-C Plate Voltage ... 1250 1500	2000 V	D-C Plate Voltage ... 1250 1500 2000 Volts
Peak R'F Grid Voltage 160 130	100 V	Peak R'F Grid Voltage 160 130 100 Volts
Peak A'F Grid Voltage . 75 65	50 V	Peak A'F Grid Voltage . 75 65 50 Volts
D-C Grid Current (Approx.) - 8 6	4 mA	D-C Grid Current (Approx.) - 8 6 4 Milliamperes
Driving Power (Approx.)t .. 4 3	2 W	Driving Power (Approx.)t .. 4 3 2 Watts
Power Output (Approx.) . 52 53	53 W	Power Output (Approx.) . 52 53 53 Watts
D-C Plate Voltage ____' 1600 max	1600 V	D-C Plate Voltage ____' 1600 max. 1600 max. Volts
D-C Screen Voltage*** . 500 max	500 V	D-C Screen Voltage*** . 500 max. 500 max. Volts
D-C Grid Volt. (Grid No. 1) -500 max	-500 V	D-C Grid Volt. (Grid No. 1) -500 max. -500 max. Volts
D'C Plate Current .. 160 max	160 mA	D'C Plate Current .. 160 max. 160 max. Milliamperes
D-C Grid Current.-... 50 max	50 mA	D-C Grid Current.-... 50 max. 50 max. Milliamperes
Plate Input ... 250 max	250 W	Plate Input ... 250 max. 250 max. Watts
Screen Input .. 20 max	30 W	Screen Input .. 20 max. 30 max. Watts
Plate Dissipation_ 85 max	85 W	Plate Dissipation_ 85 max. 85 max. Watts
D-C Plate Voltage . 1250 1600 1250	1600 V	D-C Plate Voltage . 1250 1600 1250 1600 Volts
D-C Grid Current (Approx.) 20 20 45	45 mA	D-C Grid Current (Approx.) 20 20 45 45 Milliamperes
D-C Plate Voltage ... _ . 2000 max	2000 V	D-C Plate Voltage ... _ . 2000 max. 2000 max. Volts
D-C Screen Voltage.. 500 500 150	150 V	D-C Screen Voltage.. 500 500 150 150 Volts
Peak R-F Grid Voltage- 175 175 190	190 V	Peak R-F Grid Voltage- 175 175 190 190 Volts
D-C Plate Current 160 160 160	160 mA	D-C Plate Current 160 160 160 160 Milliamperes
D-C Grid Current (Approx.) 12 12 27	26 mA	D-C Grid Current (Approx.) 12 12 27 26 Milliamperes

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Driving Power (Approx.) 2 2 4.4	4.4 W	Driving Power (Approx.) 2 2 4.4 4.4 Watts
each stated value of grid voltage should be decreased by	7 V	each stated value of grid voltage should be decreased by 7 volts and the circuit returns made to the
For high-frequency operation above	20 MHz	For high-frequency operation above 20 megacycles, see page 144.


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 General Electric Transmitting Types

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

1950 GENERAL ELECTRIC TRANSMITTING TYPES

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum full-rating frequency	20 MHz	—

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Service	RF amplifier / frequency multiplier / oscillator / modulator	


SOURCE DATA APPENDIX

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 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	4000 μ S	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	2000 V	—
Maximum Screen Voltage	600 V	—
Maximum Plate Dissipation	125 W	—
Maximum Cathode Current	175 mA	—
Full-Input Operating Frequency Maximum	20 MHz	—
Power Output	23 W	ClassC,RF
Typical Plate Voltage	600 V	Representative published point
Typical Plate Current	55 mA	Representative published point