

ELECTRONIC TUBE REFERENCE

837

Power - Pentode (NOT beam) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Heater-cathode transmitting pentode for RF power-amplifier and oscillator service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	7
NOMINAL HEATER	12.6 V / 700 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Pentode	
TRANSCONDUCTANCE	0.0034 S
MAXIMUM PLATE VOLTAGE	500 V
MAXIMUM SCREEN VOLTAGE	200 V
MAXIMUM PLATE DISSIPATION	12 W
Published ratings and characteristics from source sheet.	

Heater-cathode transmitting pentode for RF power-amplifier and oscillator service.

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
D-C Plate Voltage	500 V	D-C Plate Voltage.. 500 max. Volts
D-C Suppressor Voltage (Grid No. 3)	200 V	D-C Suppressor Voltage (Grid No. 3) 200 max. Volts
D-C Screen Voltage (Grid No. 2)	200 V	D-C Screen Voltage (Grid No. 2) 200 max. Volts
D-C Plate Current	40 mA	D-C Plate Current 40 max. Milliamperes
Plate Input	16 W	Plate Input 16 max. Watts
Suppressor Input	5 W	Suppressor Input 5 max. Watts
Screen Input	5 W	Screen Input 5 max. Watts
Plate Dissipation	12 W	Plate Dissipation 12 max. Watts
D-C Plate Voltage ... 400 500	500 V	D-C Plate Voltage ... 400 500 500 Volts
D-C Screen Voltage 200 200	200 V	D-C Screen Voltage 200 200 200 Volts
Peak R-F Grid Voltage . 28 25	24 V	Peak R-F Grid Voltage . 28 25 24 Volts
D-C Screen Current .. 10 15	12 mA	D-C Screen Current .. 10 15 12 Milliamperes
D-C Plate Voltage	500 V	D-C Plate Voltage ... 500 max.Volts
D-C Screen Voltage (Grid No. 2)	200 V	D-C Screen Voltage (Grid No. 2) ... 200 max.Volts
D-C Grid Voltage (Grid No. 1)	-200 V	D-C Grid Voltage (Grid No. 1) ... -200 max.Volts
D-C Plate Current	40 mA	D-C Plate Current... 40 max.Milliamperes
D-C Grid Current	8 mA	D-C Grid Current 8 max. Milliamperes
Plate Input	16 W	Plate Input... 16 max. Watts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
D-C Plate Voltage.. 400	500 V	D-C Plate Voltage.. 400 500 Volts
D-C Grid Voltage .. -20	-20 V	D-C Grid Voltage .. -20 -20 Volts
Peak R-F Grid Voltage. 45	32 V	Peak R-F Grid Voltage. 45 32 Volts
Peak A-F Suppressor Voltage. 55	65 V	Peak A-F Suppressor Voltage. 55 65 Volts
D-C Plate Current..... 35	30 mA	D-C Plate Current..... 35 30 Milliamperes
D-C Screen Current... 37	23 mA	D-C Screen Current... 37 23 Milliamperes
D-C Grid Current (Approx.) . 8	3.5 mA	D-C Grid Current (Approx.) . 8 3.5 Milliamperes
Screen Resistor. 6500	14000 Ω	Screen Resistor. 6500 14000 Ohms
Grid Resistor .-. 2500	5700 Ω	Grid Resistor .-. 2500 5700 Ohms
Driving Power (Approx.) .-... 0.4	0.1 W	Driving Power (Approx.) .-... 0.4 0.1 Watt
Power Output (Approx.) 4	5 W	Power Output (Approx.) 4 5 Watts
D'C Plate Voltage	500 V	D'C Plate Voltage 500 max. Volts
D-C Suppressor Voltage (Grid No. 3)	200 V	D-C Suppressor Voltage (Grid No. 3) 200 max. Volts
D-C Screen Voltage (Grid No. 2)	200 V	D-C Screen Voltage (Grid No. 2) 200 max. Volts
D-C Grid Voltage (Grid No. 1)	-200 V	D-C Grid Voltage (Grid No. 1) -200 max. Volts
D'C Plate Current	40 mA	D'C Plate Current 40 max. Milliamperes
Plate Input	16 W	Plate Input 16 max. Watts
Suppressor Input	5 W	Suppressor Input 5 max. Watts
Screen Input	5 W	Screen Input 5 max. Watts
Plate Dissipation	12 W	Plate Dissipation 12 max. Watts
D-C Screen Voltage --- 200 200	200 V	D-C Screen Voltage --- 200 200 200 Volts
D-C Grid Voltage -- -50 -45	-43 V	D-C Grid Voltage -- -50 -45 -43 Volts
Peak R'F Grid Voltage --- 58 48	44 V	Peak R'F Grid Voltage --- 58 48 44 Volts
D-C Plate Current .. 35 30	30 mA	D-C Plate Current .. 35 30 30 Milliamperes
Power Output (Approx.) - 4 5	5.5 W	Power Output (Approx.) - 4 5 5.5 Watts
D-C Plate Voltage .. 400 max	400 V	D-C Plate Voltage .. 400 max. 400 max. Volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
D-C Screen Voltage*** _:_ 200 max	200 V	D-C Screen Voltage*** _:_ 200 max. 200 max. Volts
D'C Grid Voltage (Grid No. 1)_ -200 max	-200 V	D'C Grid Voltage (Grid No. 1)_ -200 max. -200 max. Volts
D-C Plate Current ..- 50 max	50 mA	D-C Plate Current ..- 50 max. 50 max. Milliamperes
D-C Grid Current _ 8 max	8 mA	D-C Grid Current _ 8 max. 8 max. Milliamperes
Plate Input _ 20 max	20 W	Plate Input _ 20 max. 20 max. Watts
Screen Input*** __-. 5 max	7.5 W	Screen Input*** __-. 5 max. 7.5 max. Watts
Plate Dissipation- 8 max	8 W	Plate Dissipation- 8 max. 8 max. Watts
D-C Plate Voltage--- 400	400 V	D-C Plate Voltage--- 400 400 Volts
D'C Grid Voltage .. -40	-70 V	D'C Grid Voltage .. -40 -70 Volts
Peak R-F Grid Voltage . 60	100 V	Peak R-F Grid Voltage . 60 100 Volts
D-C Plate Current .. 45	45 mA	D-C Plate Current .. 45 45 Milliamperes
D'C Screen Current .. 20	30 mA	D'C Screen Current .. 20 30 Milliamperes
Grid Resistor . 8000	10000 Ω	Grid Resistor . 8000 10000 Ohms
Driving Power (Approx.) .. 0.3	0.7 W	Driving Power (Approx.) .. 0.3 0.7 Watt*
D-C Plate Voltage . 500 max	500 V	D-C Plate Voltage . 500 max. 500 max. Volts
D-C Screen Voltage*** . 200 max	200 V	D-C Screen Voltage*** . 200 max. 200 max. Volts
D-C Grid Volt. (Grid No. 1). -200 max	-200 V	D-C Grid Volt. (Grid No. 1). -200 max. -200 max. Volts
D-C Plate Current . 80 max	80 mA	D-C Plate Current . 80 max. 80 max. Milliamperes
D-C Grid Current .. 8 max	8 mA	D-C Grid Current .. 8 max. 8 max. Milliamperes
Plate Input . 32 max	32 W	Plate Input . 32 max. 32 max. Watts
Suppressor Input	5 W	Suppressor Input . 5 max. Watts
Screen Input*** . 8 max	8 W	Screen Input*** . 8 max. 8 max. Watts
Plate Dissipation . 12 max	12 W	Plate Dissipation . 12 max. 12 max. Watts
D-C Plate Voltage . 500 500 400	500 V	D-C Plate Voltage . 500 500 400 500 Volts
D-C Grid Voltage ... -85 -75 -70	-70 V	D-C Grid Voltage ... -85 -75 -70 -70 Volts
D-C Screen Current ... 30 15 25	15 mA	D-C Screen Current ... 30 15 25 15 Milliamperes

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
D-C Grid Current (Approx.) 8 4 8	8 mA	D-C Grid Current (Approx.) 8 4 8 8 Milliamperes
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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	12.6 V	—
HeaterOrFilamentCurrent	700 mA	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
FrequencyForMaximumRatings	20 MHz	—
Power Output	45 W	ClassC


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
HeaterOrFilamentVoltage	12.6 V	—
HeaterOrFilamentCurrent	700 mA	—
OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
MaximumOperatingFrequency	20 MHz	Reduced ratings may apply at upper frequencies