



ELECTRONIC TUBE REFERENCE

814

Power - Beam (NOT sweep) (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL
DATA

1 SECTION
CONSTRUCTION
BEAMPOWER

Thoriated-tungsten beam-power transmitting tube designed for RF amplifier and oscillator service, usable at full input to approximately 30 MHz.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	5
NOMINAL HEATER	10 V / 4 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Beam Power	
PLATE RESISTANCE	2400 Ω
TRANSCONDUCTANCE	0.005 S
AMPLIFICATION FACTOR	12
MAXIMUM PLATE VOLTAGE	2000 V
MAXIMUM SCREEN VOLTAGE	400 V
MAXIMUM PLATE DISSIPATION	200 W
MAXIMUM CATHODE CURRENT	150 mA
<i>Published maximum ratings and characteristics promoted from the approved datasheet; mode-specific values preserved as parameters.</i>	

Thoriated-tungsten beam-power tube for RF amplifier and oscillator service, usable with full input to about 30 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 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
high as	30 MHz	high as 30 megacycles. RCA-814 has a ceramic base.
D-C Plate Voltage	1250 V	D-C Plate Voltage ... 1250 max. Volts
D-C Screen Voltage (Grid No. 2)	300 V	D-C Screen Voltage (Grid No. 2) . 300 max. Volts
D-C Plate Current	60 mA	D-C Plate Current... 60 max. Milliamperes
Plate Input	75 W	Plate Input.-. 75 max. Watts
Screen Input	6.7 W	Screen Input . 6.7 max. Watts
Plate Dissipation	50 W	Plate Dissipation . 50 max. Watts
D-C Plate Voltage ... 1000	1250 V	D-C Plate Voltage ... 1000 1250 Volts
D-C Screen Voltage ... 200	200 V	D-C Screen Voltage ... 200 200 Volts
Peak R-F Grid Voltage.... 50	50 V	Peak R-F Grid Voltage.... 50 50 Volts
D'C Plate Current . 60	60 mA	D'C Plate Current . 60 60 Milliamperes
D-C Screen Current . 1.3	1 mA	D-C Screen Current . 1.3 1 Milliamperes
D-C Grid Current (Approx.) . 1.8	1.8 mA	D-C Grid Current (Approx.) . 1.8 1.8 Milliamperes
Driving Power (Approx.)t . 0.65	0.65 W	Driving Power (Approx.)t . 0.65 0.65 Watt
Power Output (Approx.) .. 20	25 W	Power Output (Approx.) .. 20 25 Watts
D-C Plate Current	60 mA	D-C Plate Current--- 60 max. Milliamperes
Plate Input	75 W	Plate Input 75 max. Watts
Plate Dissipation	50 W	Plate Dissipation 50 max. Watts
D-C Plate Voltage .. 1000	1250 V	D-C Plate Voltage .. 1000 1250 Volts
D-C Screen Voltage .. 200	200 V	D-C Screen Voltage .. 200 200 Volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak R-F Grid Voltage .. 129	129 V	Peak R-F Grid Voltage .. 129 129 Volts
Peak A-F Grid Voltage . 64	64 V	Peak A-F Grid Voltage . 64 64 Volts
D'C Plate Current . 60	60 mA	D'C Plate Current . 60 60 Milliamperes
D-G Screen Current . 2	1.4 mA	D-G Screen Current . 2 1.4 Milliamperes
D'C Grid Current (Approx.) .. 3	2.8 mA	D'C Grid Current (Approx.) .. 3 2.8 Milliamperes
Power Output (Approx.) 25	29 W	Power Output (Approx.) 25 29 Watts
D'C Screen Voltage (Grid No. 2)	300 V	D'C Screen Voltage (Grid No. 2). 300 Volts
D-C Grid Voltage (Grid No. 1)	-300 V	D-C Grid Voltage (Grid No. 1)... -300 Volts
D-C Or in Cttrrf mt	10 mA	D-C Or in Cttrrf mt . 10 Milliamperes
Sr.RFFN Tmpht	6.7 W	Sr.RFFN Tmpht .. 6.7 Watts
Plate Dissipation	34 W	Plate Dissipation 34 max. Watts
Driving Power (Approx.) .. 2	2 W	Driving Power (Approx.) .. 2 2 Watts
D-C Plate Voltage	1250 V	D-C Plate Voltage . 1250 max. Volts
D-C Screen Voltage (Grid No. 2)	300 V	D-C Screen Voltage (Grid No. 2) . 300 max. Volts
D-C Grid Voltage (Grid No. 1)	-300 V	D-C Grid Voltage (Grid No. 1). -300 max. Volts
D-C Plate Current	150 mA	D-C Plate Current.... 150 max. Milliamperes
D-C Grid Current	10 mA	D-C Grid Current ... 10 max. Milliamperes
Plate Input	180 W	Plate Input... 180 max. Watts
Screen Input	10 W	Screen Input. 10 max. Watts
Plate Dissipation	50 W	Plate Dissipation 50 max. Watts
D-C Plate Voltage .. . 1000	1250 V	D-C Plate Voltage .. . 1000 1250 Volts
D'C Screen Voltage . . 300	300 V	D'C Screen Voltage . . 300 300 Volts
Peak R-F Grid Voltage . . 150	165 V	Peak R-F Grid Voltage . . 150 165 Volts
D-C Plate Current 150	144 mA	D-C Plate Current 150 144 Milliamperes
D-C Screen Current .. . 17.5	22.5 mA	D-C Screen Current .. . 17.5 22.5 Milliamperes
Grid Resistor .. . 7000	8000 Ω	Grid Resistor .. . 7000 8000 Ohms

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
is used, each stated value of grid voltage should be decreased by	7 V	is used, each stated value of grid voltage should be decreased by 7 volts and the circuit returns made
For high-frequency operation above	30 MHz	For high-frequency operation above 30 megacycles, see page 144.


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

193X Taylor Transmitting

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

193X TAYLOR TRANSMITTING

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament Voltage	10 V	Nominal published value
Filament Current	4 A	Nominal published value
Maximum Operating Plate Voltage	2000 V	Class C oscillator / RF power-amplifier service where published
Maximum Plate Dissipation	200 W	Published maximum rating
Plate to Grid,	13 pF	Published direct interelectrode capacitance
Grid to Filament, mmf	7 pF	Published direct interelectrode capacitance
Plate to Filament,	5.5 pF	Published direct interelectrode capacitance

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	2400 ohm	Published general characteristic
Mutual Conductance	5000 μS	Published general characteristic
Amplification Factor	12	Published general characteristic


SOURCE DATA APPENDIX

1940 Taylor Tubes

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

1940 TAYLOR TUBES

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Power output	110 W	ClassB RF PlateVoltage=2000V
Power output	115 W	ClassB RF PlateVoltage=2500V



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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 · Beam Power

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	10 V	—
HeaterOrFilamentCurrent	3.25 A	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
FrequencyForMaximumRatings	30 MHz	—



SOURCE DATA APPENDIX

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 · Beam Power

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	3300 μ S	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	1500 V	—
Maximum Screen Voltage	400 V	—
Maximum Plate Dissipation	65 W	—
Maximum Cathode Current	150 mA	—
Full-Input Operating Frequency Maximum	30 MHz	—
Power Output	210 W	ClassC,RF
Typical Plate Voltage	1500 V	Representative published point
Typical Plate Current	150 mA	Representative published point

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes, and their source documents.

[Catalog](#) [Tube types](#) [Full books](#) [Blog](#) [Feedback & corrections](#)