

ELECTRONIC TUBE REFERENCE

812A

Power - Triode electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
TRIODE

Medium-mu directly heated power triode for RF amplification, oscillation, and modulation. Approximately 65 W plate dissipation and kilovolt-class operation provide a useful balance of gain, drive requirements, and transmitting power.

GENERAL CHARACTERISTICS

BASE DESIGNATION	3G	BASE PINS	4
NOMINAL HEATER	6.3 V / 4 A	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

3G - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – Pin 1	–	F – Filament	CONNECTED
PIN3 – Pin 3	A	G1 – Control Grid	CONNECTED
PIN4 – Pin 4	–	F – Filament	CONNECTED
CAP1 – Top cap	A	P – Plate (Anode)	CONNECTED

SECTION RATINGS

SECTION1 Triode	
AMPLIFICATION FACTOR	29
MAXIMUM PLATE VOLTAGE	1500 V
MAXIMUM PLATE DISSIPATION	65 W
MAXIMUM GRID DISSIPATION	7 W
MAXIMUM CATHODE CURRENT	175 mA
<i>Published ratings/characteristics promoted where unambiguous.</i>	

Power triode for RF amplifier, modulator and oscillator service.



SOURCE OPERATING CONDITIONS

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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 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	6.3 V	—
HeaterOrFilamentCurrent	4 A	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
FrequencyForMaximumRatings	30 MHz	—



SOURCE OPERATING CONDITIONS

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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
Amplification Factor	29	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	1500 V	—
Maximum Plate Dissipation	65 W	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Cathode Current	175 mA	—
Full-Input Operating Frequency Maximum	30 MHz	—
Power Output	135 W	ClassC,RF
Typical Plate Voltage	1125 V	Representative published point
Typical Plate Current	125 mA	Representative published point


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1963 Amperex Condensed

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

1963 AMPEREX CONDENSED

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	1250 V	RFPower
Plate current	140 mA	RFPower
Power output	130 W	RFPower
Grid voltage	-90 V	RFPower
Grid current	30 mA	RFPower
Maximum frequency	100 MHz	RFPower


SOURCE DATA APPENDIX

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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage nominal	6.3 V	WholeTube
Heater/filament current nominal	4 A	WholeTube
Grid to filament	5.4 pF	Published source row
Plate to filament	0.77 pF	Published source row

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC)	6.3 V	Published source row
Voltage (AC or DC) (value 2)	0.3 V	Published source row
Current at filament volts	6.3 V	Published source row
Current at filament volts (value 2)	4 V	Published source row
DC PLATE VOLTAGE	1250 V	Published source row
DC PLATE VOLTAGE (value 2)	1500 V	Published source row
MAX.-SIGNAL DC PLATE CURRENT'	175 mA	Published source row
MAX.-SIGNAL DC PLATE CURRENT' (value 2)	175 mA	Published source row
MAX.-SIGNAL PLATE INPUT`	165 W	Published source row
MAX.-SIGNAL PLATE INPUT` (value 2)	235 W	Published source row
PLATE DISSIPATION'	45 W	Published source row
PLATE DISSIPATION' (value 2)	65 W	Published source row
DC Plate Voltage	1250 V	Published source row
DC Plate Voltage (value 2)	1500 V	Published source row
DC Grid Voltage#	-40 V	Published source row
DC Grid Voltage# (value 2)	-48 V	Published source row
Peak AF Grid-to-Grid Voltage	225 V	Published source row
Peak AF Grid-to-Grid Voltage (value 2)	270 V	Published source row
Zero-Signal DC Plate Current	22 mA	Published source row

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Zero-Signal DC Plate Current (value 2)	28 mA	Published source row
Max.-Signal DC Plate Current	260 mA	Published source row
Max.-Signal DC Plate Current (value 2)	310 mA	Published source row
DC PLATE VOLTAGE	1000 V	Published source row
DC PLATE VOLTAGE (value 2)	1250 V	Published source row
DC GRID VOLTAGE	-200 V	Published source row
DC GRID VOLTAGE (value 2)	-200 V	Published source row
DC PLATE CURRENT	125 mA	Published source row
DC PLATE CURRENT (value 2)	150 mA	Published source row
DC GRID CURRENT	35 mA	Published source row
DC GRID CURRENT (value 2)	35 mA	Published source row
PLATE INPUT	115 W	Published source row
PLATE INPUT (value 2)	175 W	Published source row
PLATE DISSIPATION	30 W	Published source row
PLATE DISSIPATION (value 2)	45 W	Published source row
DC Plate Voltage	1000 V	Published source row
DC Plate Voltage (value 2)	1250 V	Published source row
DC Grid Voltage	3400 ohm	Published source row
DC Grid Voltage (value 2)	3300 ohm	Published source row
Peak RF Grid Voltage	220 V	Published source row
Peak RF Grid Voltage (value 2)	240 V	Published source row
DC Plate Current	115 mA	Published source row
DC Plate Current (value 2)	140 mA	Published source row
DC Grid Current (Approx.)	33 mA	Published source row
DC Grid Current (Approx.) (value 2)	35 mA	Published source row
Power Output (Approx)	85 W	Published source row
Power Output (Approx) (value 2)	130 W	Published source row
DC PLATE VOLTAGE	1250 V	Published source row
DC PLATE VOLTAGE (value 2)	1500 V	Published source row

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

199X Svetlana

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

199X SVETLANA

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
T he SvetlanaTM	812 A	SourcePage1-2
the plate cap. The Svetlana	812 A	SourcePage1-2
modulator or RF amplifier at full ratings to	30 MHz	SourcePage1-2
The Svetlana	812 A	SourcePage1-2
Voltage (AC or DC) 6.3 ±	0.3 V	SourcePage1-2
Current	4 A	SourcePage1-2
Maximum frequency for full ratings	30 MHz	SourcePage1-2
Grid to filament	5.4 pF	SourcePage1-2
Plate to filament	0.77 pF	SourcePage1-2
Grid to plate	5.5 pF	SourcePage1-2

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC plate voltage 1250	1500 V	SourcePage1-2
Maximum-signal DC plate current 175	175 mA	SourcePage1-2
Plate Dissipation 45	65 W	SourcePage1-2
Grid Dissipation 7	7 W	SourcePage1-2
DC grid voltage -200	-200 V	SourcePage1-2
Typical Operation, Class C (Frequencies to	30 MHz	TypicalOperation
DC plate voltage 1250	1500 V	TypicalOperation
DC grid voltage -90	-120 V	TypicalOperation

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak grid voltage 200	240 V	TypicalOperation
Plate current 140	170 mA	TypicalOperation
DC grid current 30	30 mA	TypicalOperation
Grid drive power* 5.4	6.5 W	TypicalOperation
Power output * 130	190 W	TypicalOperation
Plate dissipation 45	65 W	TypicalOperation
DC grid voltage -40	-48 V	TypicalOperation
Peak grid voltage 225	270 V	TypicalOperation
Plate current 260	310 mA	TypicalOperation
Zero signal plate current 22	28 mA	TypicalOperation
Grid driving power* 3.5	5 W	TypicalOperation
Power output * 235	340 W	TypicalOperation
Effective load resistance 12,200	13200 ohms	TypicalOperation

TUBE TINKER

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and their source documents.

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