



ELECTRONIC TUBE REFERENCE

250TL

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

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Eimac low-mu transmitting power triode for RF amplifier and oscillator service. Manufacturer operating data emphasize Class-C radio-frequency power generation with substantial plate voltage, current, and output capability.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	4
NOMINAL HEATER	5 V / 10.5 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
TRANSCONDUCTANCE	0.00265 S
AMPLIFICATION FACTOR	14
MAXIMUM PLATE VOLTAGE	4000 V
MAXIMUM PLATE DISSIPATION	250 W
MAXIMUM GRID DISSIPATION	35 W
<i>Published maximum ratings and characteristics audited; additional applicable numerical data retained in parameter table.</i>	

250TL is a Triode device. Radiation-cooled high-power transmitting triode for RF amplifier/oscillator service; 250TL is listed with 250 W maximum plate dissipation. Published operating, rating, and characteristic data from the supplied page were preserved in the technical output.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 Eimac Tubes

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

1950 EIMAC TUBES

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage	5 V	Voltage - 5.0 volts
Current [1]	10 A	Current - 10 .5 amperes
Current [2]	5 A	Current - 10 .5 amperes
Grid-Plate	3.1	Grid-Plate 3.1 JJJLf
Grid -Filament	3.7	Grid -Filament 3.7 p.p.f
Plate-Filament [1]	0	Plate-Filament - 0 .7 p.p.f
Plate-Filament [2]	7	Plate-Filament - 0 .7 p.p.f
Transconductance ([1]	11	Transconductance (11)=350 ma ., EI>=3000, e c = - 130) 26 50 p.mhos
Transconductance ([2]	350	Transconductance (11)=350 ma ., EI>=3000, e c = - 130) 26 50 p.mhos
Transconductance ([3]	3000	Transconductance (11)=350 ma ., EI>=3000, e c = - 130) 26 50 p.mhos
Transconductance ([4]	130	Transconductance (11)=350 ma ., EI>=3000, e c = - 130) 26 50 p.mhos
Transconductance ([5]	26	Transconductance (11)=350 ma ., EI>=3000, e c = - 130) 26 50 p.mhos
Transconductance ([6]	50	Transconductance (11)=350 ma ., EI>=3000, e c = - 130) 26 50 p.mhos
Frequency for Maximum Ratings	40 MHz	Frequency for Maximum Ratings 40 mc
D-C Plate Voltage [1]	1500 V	D-C Plate Voltage 1500 2000 3000 3000 volts
D-C Plate Voltage [2]	2000 V	D-C Plate Voltage 1500 2000 3000 3000 volts
D-C Plate Voltage [3]	3000 V	D-C Plate Voltage 1500 2000 3000 3000 volts
D-C Plate Voltage [4]	3000 V	D-C Plate Voltage 1500 2000 3000 3000 volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Max.-Signal D-C Plate Cu rrent, per t ube" - • • • •	350	Max.-Signal D-C Plate Cu rrent, per t ube" - • • • • 350 ma o
Plate Dissipa tion, per tube " • • • •	250	Plate Dissipa tion, per tube " • • • • 250 wat ts
D-C Grid Voltage (approx.) [1]	40 V	D-C Grid Voltage (approx.) - 40 - 80 -175 volts
D-C Grid Voltage (approx.) [2]	80 V	D-C Grid Voltage (approx.) - 40 - 80 -175 volts
D-C Grid Voltage (approx.) [3]	-175 V	D-C Grid Voltage (approx.) - 40 - 80 -175 volts
Peak A-F Grid Input Voltage [1]	770 V	Peak A-F Grid Input Voltage 770 800 840 volts
Peak A-F Grid Input Voltage [2]	800 V	Peak A-F Grid Input Voltage 770 800 840 volts
Peak A-F Grid Input Voltage [3]	840 V	Peak A-F Grid Input Voltage 770 800 840 volts
Z e ro-Sig nal D-C Plate Cu rrent [1]	200	Z e ro-Sig nal D-C Plate Cu rrent - 200 150 100 ma o
Z e ro-Sig nal D-C Plate Cu rrent [2]	150	Z e ro-Sig nal D-C Plate Cu rrent - 200 150 100 ma o
Z e ro-Sig nal D-C Plate Cu rrent [3]	100	Z e ro-Sig nal D-C Plate Cu rrent - 200 150 100 ma o
Max.-Signal D-C Plate Cu rren t [1]	700	Max.-Signal D-C Plate Cu rren t - 700 650 500 ma o
Max.-Signal D-C Plate Cu rren t [2]	650	Max.-Signal D-C Plate Cu rren t - 700 650 500 ma o
Max.-Signal D-C Plate Cu rren t [3]	500	Max.-Signal D-C Plate Cu rren t - 700 650 500 ma o
Ma x.-Signal Driving Power (approx.) [1]	32 W	Ma x.-Signal Driving Power (approx.) - 32 28 17 watts
Ma x.-Signal Driving Power (approx.) [2]	28 W	Ma x.-Signal Driving Power (approx.) - 32 28 17 watts
Ma x.-Signal Driving Power (approx.) [3]	17 W	Ma x.-Signal Driving Power (approx.) - 32 28 17 watts
Effective Load, Plate -to-Plate [1]	3700	Effective Load, Plate -to- Plate - 3700 6150 13000 ohms
Effective Load, Plate -to-Plate [2]	6150	Effective Load, Plate -to- Plate - 3700 6150 13000 ohms
Effective Load, Plate -to-Plate [3]	13000	Effective Load, Plate -to- Plate - 3700 6150 13000 ohms

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Max.-S ignal Pla te Power Output [1]	580 W	Max.-S ignal Pla te Power Output 580 800 1000 watts
Max.-S ignal Pla te Power Output [2]	800 W	Max.-S ignal Pla te Power Output 580 800 1000 watts
Max.-S ignal Pla te Power Output [3]	1000 W	Max.-S ignal Pla te Power Output 580 800 1000 watts
D-C Plate Vo ltage [1]	2000	D-C Plate Vo ltage 2000 3000 4000 4000 volts
D-C Plate Vo ltage [2]	3000	D-C Plate Vo ltage 2000 3000 4000 4000 volts
D-C Plate Vo ltage [3]	4000	D-C Plate Vo ltage 2000 3000 4000 4000 volts
D-C Plate Vo ltage [4]	4000	D-C Plate Vo ltage 2000 3000 4000 4000 volts
D-C Plate Curren t [1]	350	D-C Plate Curren t 350 335 310 350 mao
D-C Plate Curren t [2]	335	D-C Plate Curren t 350 335 310 350 mao
D-C Plate Curren t [3]	310	D-C Plate Curren t 350 335 310 350 mao
D-C Plate Curren t [4]	350	D-C Plate Curren t 350 335 310 350 mao
D-C Grid Cu rrent [1]	45	D-C Grid Cu rrent 45 45 40 50 mao
D-C Grid Cu rrent [2]	45	D-C Grid Cu rrent 45 45 40 50 mao
D-C Grid Cu rrent [3]	40	D-C Grid Cu rrent 45 45 40 50 mao
D-C Grid Cu rrent [4]	50	D-C Grid Cu rrent 45 45 40 50 mao
D-C Grid Vol tage [1]	200	D-C Grid Vol tage - 200 - 350 - 500 vol ts
D-C Grid Vol tage [2]	350	D-C Grid Vol tage - 200 - 350 - 500 vol ts
D-C Grid Vol tage [3]	500	D-C Grid Vol tage - 200 - 350 - 500 vol ts
Plate Power Ou tp ut [1]	4 W	Plate Power Ou tp ut - 4 55 750 1000 watts
Plate Power Ou tp ut [2]	55 W	Plate Power Ou tp ut - 4 55 750 1000 watts
Plate Power Ou tp ut [3]	750 W	Plate Power Ou tp ut - 4 55 750 1000 watts
Plate Power Ou tp ut [4]	1000 W	Plate Power Ou tp ut - 4 55 750 1000 watts
Plate Dissipat ion [1]	245	Plate Dissipat ion - 245 2 50 2 50 2 50 watts
Plate Dissipat ion [2]	2	Plate Dissipat ion - 245 2 50 2 50 2 50 watts
Plate Dissipat ion [3]	50	Plate Dissipat ion - 245 2 50 2 50 2 50 watts
Plate Dissipat ion [4]	2	Plate Dissipat ion - 245 2 50 2 50 2 50 watts
Plate Dissipat ion [5]	50	Plate Dissipat ion - 245 2 50 2 50 2 50 watts
Plate Dissipat ion [6]	2	Plate Dissipat ion - 245 2 50 2 50 2 50 watts
Plate Dissipat ion [7]	50	Plate Dissipat ion - 245 2 50 2 50 2 50 watts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak R. F. Grid Input Voltage, (approx.) [1]	575 V	Peak R. F. Grid Input Voltage, (approx.) - 575 720 900 volts
Peak R. F. Grid Input Voltage, (approx.) [2]	720 V	Peak R. F. Grid Input Voltage, (approx.) - 575 720 900 volts
Peak R. F. Grid Input Voltage, (approx.) [3]	900 V	Peak R. F. Grid Input Voltage, (approx.) - 575 720 900 volts
Driving Power, (approx. l [1]	22 W	Driving Power, (approx. l 22 29 33 watts
Driving Power, (approx. l [2]	29 W	Driving Power, (approx. l 22 29 33 watts
Driving Power, (approx. l [3]	33 W	Driving Power, (approx. l 22 29 33 watts
the relationship of plate efficiency, I	7	the relationship of plate efficiency, I- 7'
power output and grid driving power ~ [1]	35 W	power output and grid driving power ~ 35 6'
power output and grid driving power ~ [2]	6 W	power output and grid driving power ~ 35 6'
at plate voltages of [1]	2000 V	at plate voltages of 2000, 3000 and II: %~:,t~ ~"II:~:P~GC:.N-
at plate voltages of [2]	3000 V	at plate voltages of 2000, 3000 and II: %~:,t~ ~"II:~:P~GC:.N-
plate dissipation in watts is indicated	0	plate dissipation in watts is indicated 0



SOURCE OPERATING CONDITIONS

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1958 Amperex Industrial

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

1958 AMPEREX INDUSTRIAL

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	3000 V	RFAmplifierOrOscillator; ClassC; Telegraphy
Plate current	350 mA	RFAmplifierOrOscillator; ClassC; Telegraphy

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
RF output power	750 W	RF Amplifier Or Oscillator; Class C; Telegraphy
Grid voltage	-500 V	RF Amplifier Or Oscillator; Class C; Telegraphy
Grid current	50 mA	RF Amplifier Or Oscillator; Class C; Telegraphy
Maximum frequency at full input rating	40 MHz	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	3.1 pF	—
Grid-to-filament capacitance	3.7 pF	—
Plate-to-filament capacitance	0.7 pF	—


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1962 Eimac

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

1962 EIMAC

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Frequency for Maximum Ratings	40 MHz	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum DC Plate Current	350 mA	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-Plate Capacitance	3 pF	—
Grid-Filament Capacitance	3.7 pF	—
Plate-Filament Capacitance	0.7 pF	—