



ELECTRONIC TUBE REFERENCE

250TH

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

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Eimac transmitting triode intended for RF power amplification and oscillator service. Published Class-C operating data support hundreds of watts of RF output, with full-input ratings extending into the VHF-range edge.

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	0.00665 S
AMPLIFICATION FACTOR	37
MAXIMUM PLATE VOLTAGE	4000 V
MAXIMUM PLATE DISSIPATION	250 W
Published maximum ratings and characteristics audited; additional applicable numerical data retained in parameter table.	

250TH is a Triode device. Radiation-cooled high-power transmitting triode for RF amplifier/oscillator service; 250TH 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	10.5 A	Current - 10.5 amperes
Grid-Plate [1]	2	Grid-Plate 2 .9 uu f
Grid-Plate [2]	9	Grid-Plate 2 .9 uu f
Grid-Filament	5	Grid-Filament 5.0 uuf
Plate-Filament [1]	0	Plate-Filament - 0 .7 uuf
Plate-Filament [2]	7	Plate-Filament - 0 .7 uuf
Transconductance ([1]	11	Transconductance (11)=300 ma ., E _h =3000, e(.-20) 6650 umhos
Transconductance ([2]	300	Transconductance (11)=300 ma ., E _h =3000, e(.-20) 6650 umhos
Transconductance ([3]	3000	Transconductance (11)=300 ma ., E _h =3000, e(.-20) 6650 umhos
Transconductance ([4]	-20	Transconductance (11)=300 ma ., E _h =3000, e(.-20) 6650 umhos
Transconductance ([5]	6650	Transconductance (11)=300 ma ., E _h =3000, e(.-20) 6650 umhos
Frequency for Maximum Ratings	40	Frequency for Maximum Ratings 40 me.
D-C Plate Vol tage [1]	1500	D-C Plate Vol tage 1500 2000 3000 3000 volts
D-C Plate Vol tage [2]	2000	D-C Plate Vol tage 1500 2000 3000 3000 volts
D-C Plate Vol tage [3]	3000	D-C Plate Vol tage 1500 2000 3000 3000 volts
D-C Plate Vol tage [4]	3000	D-C Plate Vol tage 1500 2000 3000 3000 volts
Max.-S ignal D-C Plate Cur rent, per tube ':' - • • •	350	Max.-S ignal D-C Plate Cur rent, per tube ':' - • • • • 350 mao

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Dissipation, per tube: ' • • •	250 W	Plate Dissipation, per tube: ' • • • 250 watts
D-C Grid Voltage (approx.) a [1]	-30	D-C Grid Voltage (approx.) a -30 -65 volts
D-C Grid Voltage (approx.) a [2]	-65	D-C Grid Voltage (approx.) a -30 -65 volts
Peak A-F Grid Input Voltage [1]	410 V	Peak A-F Grid Input Voltage 410 460 460 volts
Peak A-F Grid Input Voltage [2]	460 V	Peak A-F Grid Input Voltage 410 460 460 volts
Peak A-F Grid Input Voltage [3]	460 V	Peak A-F Grid Input Voltage 410 460 460 volts
Zero-Signal D-C Plate Current [1]	220	Zero-Signal D-C Plate Current - 220 14 0 100 ma
Zero-Signal D-C Plate Current [2]	14	Zero-Signal D-C Plate Current - 220 14 0 100 ma
Zero-Signal D-C Plate Current [3]	0	Zero-Signal D-C Plate Current - 220 14 0 100 ma
Zero-Signal D-C Plate Current [4]	100	Zero-Signal D-C Plate Current - 220 14 0 100 ma
Max.-Signal D-C Plate Current [1]	700 mA	Max.-Signal D-C Plate Current - 700 700 560 ma .
Max.-Signal D-C Plate Current [2]	700 mA	Max.-Signal D-C Plate Current - 700 700 560 ma .
Max.-Signal D-C Plate Current [3]	560 mA	Max.-Signal D-C Plate Current - 700 700 560 ma .
Max.-Signal Driving Power (approx .) [1]	36 W	Max.-Signal Driving Power (approx .) - 36 34 24 watts
Max.-Signal Driving Power (approx .) [2]	34 W	Max.-Signal Driving Power (approx .) - 36 34 24 watts
Max.-Signal Driving Power (approx .) [3]	24 W	Max.-Signal Driving Power (approx .) - 36 34 24 watts
Effective Load, Plate-to-Plate [1]	4300	Effective Load, Plate-to-Plate - 4300 6000 12250 ohms
Effective Load, Plate-to-Plate [2]	6000	Effective Load, Plate-to-Plate - 4300 6000 12250 ohms
Effective Load, Plate-to-Plate [3]	12250	Effective Load, Plate-to-Plate - 4300 6000 12250 ohms
Max.-Signal Plate Power Output [1]	650 W	Max.-Signal Plate Power Output 650 900 1150 watts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Max.-Signal Plate Power Output [2]	900 W	Max.-Signal Plate Power Output 650 900 1150 watts
Max.-Signal Plate Power Output [3]	1150 W	Max.-Signal Plate Power Output 650 900 1150 watts
D-C Plate Voltage [1]	2000 V	D-C Plate Voltage 2000 3000 4000 4000 volts
D-C Plate Voltage [2]	3000 V	D-C Plate Voltage 2000 3000 4000 4000 volts
D-C Plate Voltage [3]	4000 V	D-C Plate Voltage 2000 3000 4000 4000 volts
D-C Plate Voltage [4]	4000 V	D-C Plate Voltage 2000 3000 4000 4000 volts
D-C Plate Current [1]	357 mA	D-C Plate Current 357 333 313 350 ma o
D-C Plate Current [2]	333 mA	D-C Plate Current 357 333 313 350 ma o
D-C Plate Current [3]	313 mA	D-C Plate Current 357 333 313 350 ma o
D-C Plate Current [4]	350 mA	D-C Plate Current 357 333 313 350 ma o
D-C Grid Current [1]	94 mA	D-C Grid Current 94 90 93 100 ma o
D-C Grid Current [2]	90 mA	D-C Grid Current 94 90 93 100 ma o
D-C Grid Current [3]	93 mA	D-C Grid Current 94 90 93 100 ma o
D-C Grid Current [4]	100 mA	D-C Grid Current 94 90 93 100 ma o
D-C Grid Voltage [1]	10 V	D-C Grid Voltage - 10 0 - 150 -220 volts
D-C Grid Voltage [2]	0 V	D-C Grid Voltage - 10 0 - 150 -220 volts
D-C Grid Voltage [3]	150 V	D-C Grid Voltage - 10 0 - 150 -220 volts
D-C Grid Voltage [4]	-220 V	D-C Grid Voltage - 10 0 - 150 -220 volts
Plate Power Output [1]	464 W	Plate Power Output - 464 750 1000 watts
Plate Power Output [2]	750 W	Plate Power Output - 464 750 1000 watts
Plate Power Output [3]	1000 W	Plate Power Output - 464 750 1000 watts
Plate Input [1]	714	Plate Input 714 1000 1250 watts
Plate Input [2]	1000	Plate Input 714 1000 1250 watts
Plate Input [3]	1250	Plate Input 714 1000 1250 watts
Plate Dissipation [1]	250 W	Plate Dissipation - 250 250 250 250 watts
Plate Dissipation [2]	250 W	Plate Dissipation - 250 250 250 250 watts
Plate Dissipation [3]	250 W	Plate Dissipation - 250 250 250 250 watts
Plate Dissipation [4]	250 W	Plate Dissipation - 250 250 250 250 watts
Peak R. F. Grid Input Voltage, (approx.) [1]	345 V	Peak R. F. Grid Input Voltage, (approx.) - 345 395 470 volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak R. F. Grid Input Voltage, (approx.) [2]	395 V	Peak R. F. Grid Input Voltage, (approx.) - 345 395 470 volts
Peak R. F. Grid Input Voltage, (approx.) [3]	470 V	Peak R. F. Grid Input Voltage, (approx.) - 345 395 470 volts
Driving Power , (approx .) [1]	29 W	Driving Power , (approx .) 29 32 39 watts
Driving Power , (approx .) [2]	32 W	Driving Power , (approx .) 29 32 39 watts
Driving Power , (approx .) [3]	39 W	Driving Power , (approx .) 29 32 39 watts
'>' ~N''	-4 A	'>' ~N'''-4 " CONSTANT CURRENT
the relationship of plate efficiency, ~ [1]	35	the relationship of plate efficiency, ~ 35 EI M AC 250TH
the relationship of plate efficiency, ~ [2]	250	the relationship of plate efficiency, ~ 35 EI M AC 250TH
driving power and power output fig	0 W	driving power and power output fig - 0



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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	RF Amplifier Or Oscillator; Class C; Telegraphy
Plate current	333 mA	RF Amplifier Or Oscillator; Class C; Telegraphy
RF output power	750 W	RF Amplifier Or Oscillator; Class C; Telegraphy
Grid voltage	-220 V	RF Amplifier Or Oscillator; Class C; Telegraphy
Grid current	100 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	2.9 pF	—
Grid-to-filament capacitance	5 pF	—
Plate-to-filament capacitance	0.7 pF	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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	2.9 pF	—
Grid-Filament Capacitance	5 pF	—
Plate-Filament Capacitance	0.7 pF	—