



ELECTRONIC TUBE REFERENCE

100TH

Power - Triode electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

High-mu transmitting power triode for Class C RF amplification or oscillation and Class B audio/modulator service. Rated for 100 W plate dissipation, operation to about 40 MHz, and several hundred watts output under published conditions.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	4
NOMINAL HEATER	5 V / 6.3 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
TRANSCONDUCTANCE	0.0045 S
AMPLIFICATION FACTOR	38
MAXIMUM PLATE VOLTAGE	3000 V
MAXIMUM PLATE DISSIPATION	100 W
MAXIMUM GRID DISSIPATION	20 W
Published maximum ratings and average characteristics promoted.	

Three-electrode transmitting tube designed for Class B audio-frequency power-amplifier/modulator and Class C radio-frequency power-amplifier or oscillator operation.

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
The Eimac [1]	100 W	The Eimac 100TH is a high -mu powe r t riode hav ing a ma ximum plate dissipation rating of 100
The Eimac [2]	100 W	The Eimac 100TH is a high -mu powe r t riode hav ing a ma ximum plate dissipation rating of 100
C o o ling of t he	100	C o o ling of t he 100TH is accomplished by radiatio n from the plate, whi ch ope ra tes at a visible
Current	6.3 A	Current - - 6.3 amperes
Grid-P late [1]	2	Grid-P late 2 .0 /L/L f
Grid-P late [2]	0	Grid-P late 2 .0 /L/L f
Gr id-Filament	2.9	Gr id-Filament - - - - - 2.9 /L/Lf
~ Plate-Fi lament [1]	0	~ Plate-Fi lament - - - - - 0 .3 /L/Lf
~ Plate-Fi lament [2]	3	~ Plate-Fi lament - - - - - 0 .3 /L/Lf
~ Transconductance (i b= [1]	200	~ Transconductance (i b=200 ma ., Eb=3000v ., e c= -5v.) 4500/Lmhos
~ Transconductance (i b= [2]	3000	~ Transconductance (i b=200 ma ., Eb=3000v ., e c= -5v.) 4500/Lmhos
~ Transconductance (i b= [3]	-5	~ Transconductance (i b=200 ma ., Eb=3000v ., e c= -5v.) 4500/Lmhos
~ Transconductance (i b= [4]	4500	~ Transconductance (i b=200 ma ., Eb=3000v ., e c= -5v.) 4500/Lmhos
Frequency for Maximum Ratings	40 MHz	Frequency for Maximum Ratings 40Mc.
Grid Eimac HR	2	Grid Eimac HR-2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
AND MODULATOR D-C Plate Voltage [1]	1500	AND MODULATOR D-C Plate Voltage - 1500 2000 2500 Volts
AND MODULATOR D-C Plate Voltage [2]	2000	AND MODULATOR D-C Plate Voltage - 1500 2000 2500 Volts
AND MODULATOR D-C Plate Voltage [3]	2500	AND MODULATOR D-C Plate Voltage - 1500 2000 2500 Volts
D-C Grid Voltage (approx.) * • [1]	-20 V	D-C Grid Voltage (approx.) * • -20 -3 5 -50 Volts
D-C Grid Voltage (approx.) * • [2]	-3 V	D-C Grid Voltage (approx.) * • -20 -3 5 -50 Volts
D-C Grid Voltage (approx.) * • [3]	5 V	D-C Grid Voltage (approx.) * • -20 -3 5 -50 Volts
D-C Grid Voltage (approx.) * • [4]	-50 V	D-C Grid Voltage (approx.) * • -20 -3 5 -50 Volts
Max-Signal D-C Plate Current [1]	320 mA	Max-Signal D-C Plate Current - 320 280 250 Ma.
Max-Signal D-C Plate Current [2]	280 mA	Max-Signal D-C Plate Current - 320 280 250 Ma.
Max-Signal D-C Plate Current [3]	250 mA	Max-Signal D-C Plate Current - 320 280 250 Ma.
Effective Load , Plate-to-Plate [1]	8800	Effective Load , Plate-to-Plate - 8800 15,000 22,000 Ohms.
Effective Load , Plate-to-Plate [2]	15000	Effective Load , Plate-to-Plate - 8800 15,000 22,000 Ohms.
Effective Load , Plate-to-Plate [3]	22000	Effective Load , Plate-to-Plate - 8800 15,000 22,000 Ohms.
D-C PLATE VOLTAGE [1]	3000	D-C PLATE VOLTAGE - 3000 MAX. VOLTS Peak A-F Grid Input Voltage [per tube] - 145 150 155 Volts
D-C PLATE VOLTAGE [2]	145	D-C PLATE VOLTAGE - 3000 MAX. VOLTS Peak A-F Grid Input Voltage [per tube] - 145 150 155 Volts
D-C PLATE VOLTAGE [3]	150	D-C PLATE VOLTAGE - 3000 MAX. VOLTS Peak A-F Grid Input Voltage [per tube] - 145 150 155 Volts
D-C PLATE VOLTAGE [4]	155	D-C PLATE VOLTAGE - 3000 MAX. VOLTS Peak A-F Grid Input Voltage [per tube] - 145 150 155 Volts
Max-Signal Peak Driving Power [1]	18 W	Max-Signal Peak Driving Power 18 19 15 Watts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Ma x-Signal Peak Driving Power [2]	19 W	Ma x-Signal Peak Driving Power 18 19 15 Wa tt s
Ma x-Signal Peak Driving Power [3]	15 W	Ma x-Signal Peak Driving Power 18 19 15 Wa tt s
Max-Sig na l Nomina l Driving Power (approx.) [1]	9 W	Max-Sig na l Nomina l Driving Power (approx.) 9 9.5 7.5 Wa tts
Max-Sig na l Nomina l Driving Power (approx.) [2]	9.5 W	Max-Sig na l Nomina l Driving Power (approx.) 9 9.5 7.5 Wa tts
Max-Sig na l Nomina l Driving Power (approx.) [3]	7.5 W	Max-Sig na l Nomina l Driving Power (approx.) 9 9.5 7.5 Wa tts
Max- Sig na l Plat e Power O utput [1]	280 W	Max- Sig na l Plat e Power O utput - - 280 360 425 Watts
Max- Sig na l Plat e Power O utput [2]	360 W	Max- Sig na l Plat e Power O utput - - 280 360 425 Watts
Max- Sig na l Plat e Power O utput [3]	425 W	Max- Sig na l Plat e Power O utput - - 280 360 425 Watts
PLATE DISSIPATIO N, PER TUBE	100	PLATE DISSIPATIO N, PER TUBE - 100 MAX. W ATTS 'Ad just to give stated ze ro signa l p la te c urre nt .
AND OSCILLATOR D-C Plate Volt ag e [1]	1500	AND OSCILLATOR D-C Plate Volt ag e - 1500 2000 3000 Volts
AND OSCILLATOR D-C Plate Volt ag e [2]	2000	AND OSCILLATOR D-C Plate Volt ag e - 1500 2000 3000 Volts
AND OSCILLATOR D-C Plate Volt ag e [3]	3000	AND OSCILLATOR D-C Plate Volt ag e - 1500 2000 3000 Volts
D-C Grid C urr ent [1]	48	D-C Grid C urr ent - 48 39 51 Ma.
D-C Grid C urr ent [2]	39	D-C Grid C urr ent - 48 39 51 Ma.
D-C Grid C urr ent [3]	51	D-C Grid C urr ent - 48 39 51 Ma.
D-C PLATE VOLTAGE [1]	3000 V	D-C PLATE VOLTAGE 3000 MAX. VOLTS Driving Powe r [approx.] 10 8 18 Watts
D-C PLATE VOLTAGE [2]	10 V	D-C PLATE VOLTAGE 3000 MAX. VOLTS Driving Powe r [approx.] 10 8 18 Watts
D-C PLATE VOLTAGE [3]	8 V	D-C PLATE VOLTAGE 3000 MAX. VOLTS Driving Powe r [approx.] 10 8 18 Watts
D-C PLATE VOLTAGE [4]	18 V	D-C PLATE VOLTAGE 3000 MAX. VOLTS Driving Powe r [approx.] 10 8 18 Watts
Grid Dissipa tion [1]	7	Grid Dissipa tion 7 5 10 W att s
Grid Dissipa tion [2]	5	Grid Dissipa tion 7 5 10 W att s
Grid Dissipa tion [3]	10	Grid Dissipa tion 7 5 10 W att s

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
D-C PLATE CURRENT	225 mA	D-C PLATE CURRENT 225 MA X. MA.
Plate Power Input • [1]	285 W	Plate Power Input • 285 335 500 Watts
Plate Power Input • [2]	335 W	Plate Power Input • 285 335 500 Watts
Plate Power Input • [3]	500 W	Plate Power Input • 285 335 500 Watts
PLATE DISSIPATION [1]	100 W	PLATE DISSIPATION 100 MAX. WATTS Plate Dissipation 100 100 100 Watts
PLATE DISSIPATION [2]	100 W	PLATE DISSIPATION 100 MAX. WATTS Plate Dissipation 100 100 100 Watts
PLATE DISSIPATION [3]	100 W	PLATE DISSIPATION 100 MAX. WATTS Plate Dissipation 100 100 100 Watts
PLATE DISSIPATION [4]	100 W	PLATE DISSIPATION 100 MAX. WATTS Plate Dissipation 100 100 100 Watts
~ GRID DISSIPATION [1]	20 W	~ GRID DISSIPATION 20 MAX. WATTS Plate Power Output - 185 235 400 Watts
~ GRID DISSIPATION [2]	185 W	~ GRID DISSIPATION 20 MAX. WATTS Plate Power Output - 185 235 400 Watts
~ GRID DISSIPATION [3]	235 W	~ GRID DISSIPATION 20 MAX. WATTS Plate Power Output - 185 235 400 Watts
~ GRID DISSIPATION [4]	400 W	~ GRID DISSIPATION 20 MAX. WATTS Plate Power Output - 185 235 400 Watts
D-C Plate Voltage [1]	1500	D-C Plate Voltage 1500 2000 2500 Volts
D-C Plate Voltage [2]	2000	D-C Plate Voltage 1500 2000 2500 Volts
D-C Plate Voltage [3]	2500	D-C Plate Voltage 1500 2000 2500 Volts
AMPLIFIER D-C Grid Voltage [1]	150 V	AMPLIFIER D-C Grid Voltage - - 150 -200 -250 Volts
AMPLIFIER D-C Grid Voltage [2]	-200 V	AMPLIFIER D-C Grid Voltage - - 150 -200 -250 Volts
AMPLIFIER D-C Grid Voltage [3]	-250 V	AMPLIFIER D-C Grid Voltage - - 150 -200 -250 Volts
Class-C Telephony (Carrier conditions, per tube) D-C Plate Current - Ib0 [1]	150 mA	Class-C Telephony (Carrier conditions, per tube) D-C Plate Current - Ib0 150 140 Ma.
Class-C Telephony (Carrier conditions, per tube) D-C Plate Current - Ib0 [2]	140 mA	Class-C Telephony (Carrier conditions, per tube) D-C Plate Current - Ib0 150 140 Ma.
MAXIMUM' RATINGS Peak R-F Grid Input Voltage [1]	325 V	MAXIMUM' RATINGS Peak R-F Grid Input Voltage 325 375 425 Volts
MAXIMUM' RATINGS Peak R-F Grid Input Voltage [2]	375 V	MAXIMUM' RATINGS Peak R-F Grid Input Voltage 325 375 425 Volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
MAXIMUM' RATINGS Peak R-F Gr id Input Voltage [3]	425 V	MAXIMUM' RATINGS Peak R-F Gr id Input Voltage 325 375 425 Volts
D-C PLATE VO LTAGE [1]	2500 W	D-C PLATE VO LTAGE 2500 MAX. VO LTS Driving Power (approx.) 15 15.5 17 Wa tts
D-C PLATE VO LTAGE [2]	15 W	D-C PLATE VO LTAGE 2500 MAX. VO LTS Driving Power (approx.) 15 15.5 17 Wa tts
D-C PLATE VO LTAGE [3]	15.5 W	D-C PLATE VO LTAGE 2500 MAX. VO LTS Driving Power (approx.) 15 15.5 17 Wa tts
D-C PLATE VO LTAGE [4]	17 W	D-C PLATE VO LTAGE 2500 MAX. VO LTS Driving Power (approx.) 15 15.5 17 Wa tts
Grid Dissipation [1]	8 W	Grid Dissipation 8 7.3 7 W atts
Grid Dissipation [2]	7.3 W	Grid Dissipation 8 7.3 7 W atts
Grid Dissipation [3]	7 W	Grid Dissipation 8 7.3 7 W atts
D-C PLATE CURRE NT	180	D-C PLATE CURRE NT - 180 MAX. MA.
Plat e Power Input [1]	240 W	Plat e Power Input - 240 300 350 Watts


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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum operating plate voltage	3000 V	ClassC
Typical operating plate voltage	2000 V	ClassC


SOURCE DATA APPENDIX

1962 Eimac

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

1962 EIMAC
Section 1 · Triode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-Plate Capacitance	2 pF	—
Grid-Filament Capacitance	2.9 pF	—
Plate-Filament Capacitance	0.3 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Frequency for Full Ratings	40 MHz	—
Maximum DC Plate Current	225 mA	RF/AF
RF Typical Plate Voltage	3000 V	ClassC
RF Typical Plate Power Output	400 W	ClassC
AF Typical Plate Voltage	2500 V	ClassAB;TwoTubes
AF Typical Plate Power Output	425 W	ClassAB;TwoTubes
Plate-Modulated Maximum Plate Voltage	2500 V	ClassC;Telephony
Plate-Modulated Maximum Plate Current	180 mA	ClassC;Telephony