



ELECTRONIC TUBE REFERENCE

75TH

Power - Triode electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Eimac medium-mu transmitting triode for RF amplification, oscillation, and audio modulation. Rated around 75 W plate dissipation, it provides substantial Class C RF output or higher combined output from a two-tube modulator.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	5 V / 6.25 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
TRANSCONDUCTANCE	0.00415 S
AMPLIFICATION FACTOR	20
MAXIMUM PLATE VOLTAGE	3000 V
MAXIMUM PLATE DISSIPATION	75 W
MAXIMUM GRID DISSIPATION	16 W
MAXIMUM CATHODE CURRENT	225 mA
<i>Promoted maximum ratings/characteristics populated from published headings; service-specific values retained in parameters.</i>	

Medium-mu transmitting triode for RF amplifier, oscillator, and audio modulator service.

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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament Voltage	5 V	—
Filament Current	6.25 A	—
Amplification Factor	20	—
Transconductance	4150 μ S	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-Plate Capacitance	2.3 pF	—
Grid-Filament Capacitance	2.7 pF	—
Plate-Filament Capacitance	0.3 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum DC Plate Voltage	3000 V	RF Class C and audio service
Maximum DC Plate Current	225 mA	RF Class C
Maximum Plate Dissipation	75 W	—
Maximum Grid Dissipation	16 W	—
Frequency Limit for Published RF Ratings	40 MHz	—
Typical RF Plate Output	225 W	Class C; 2 kV plate
Typical Audio Plate Output	300 W	Two tubes, Class B; 2 kV plate

CONSTRUCTION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cooling	Radiation and air circulation	—

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
} The Eimac	75	} The Eimac 75TH is a medium-mu power triode intended for use as an amplifier, oscillator, or
modulator. I+ has a maximum plate dissipation rating of	75 W	modulator. I+ has a maximum plate dissipation rating of 75 watts and a maximum plate voltage rating
The [1]	75 W	The 75TH in Class-C R-F service will deliver up to 225 watts plate power output with 10 watts
The [2]	225 W	The 75TH in Class-C R-F service will deliver up to 225 watts plate power output with 10 watts
The [3]	10 W	The 75TH in Class-C R-F service will deliver up to 225 watts plate power output with 10 watts
driving power. Two [1]	75 W	driving power. Two 75TH's in Class-B modulator service will deliver up to 300 watts maximum-signal
driving power. Two [2]	300 W	driving power. Two 75TH's in Class-B modulator service will deliver up to 300 watts maximum-signal
plate power output with	3 W	plate power output with 3 watts driving power.
Voltage	5 V	Voltage ----- 5.0 volts
Current	6.25 A	Current - 6.25 amperes
Amplification Factor (Average}	20	Amplification Factor (Average} ----- 20
Transconductance (l,= [1]	225 mA	Transconductance (l,=225 ma., E;=3000 v.) --- ---- 4150 ymhos
Transconductance (l,= [2]	3000 mA	Transconductance (l,=225 ma., E;=3000 v.) --- ---- 4150 ymhos
Transconductance (l,= [3]	4150 mA	Transconductance (l,=225 ma., E;=3000 v.) --- ---- 4150 ymhos

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
' Highest Frequency for Maximum Ratings	40 MHz	' Highest Frequency for Maximum Ratings - - - - - 40 Mc
RADIO FREQUENCY POWER AMPLIFIER TYPICAL OPERATION (Frequencies up to	40 MHz	RADIO FREQUENCY POWER AMPLIFIER TYPICAL OPERATION (Frequencies up to 40 Mc.)
D-C Plate Voltage [1]	1000 V	D-C Plate Voltage - - - - - 1000 1500 2000 volts
D-C Plate Voltage [2]	1500 V	D-C Plate Voltage - - - - - 1000 1500 2000 volts
D-C Plate Voltage [3]	2000 V	D-C Plate Voltage - - - - - 1000 1500 2000 volts
MAXIMUM RATINGS (Frequencies up to [1])	40 MHz	MAXIMUM RATINGS (Frequencies up to 40 Mc.) p Peak R-F Grid Inpyt Voltage (approx.) 270 280 350 \rrnoalfs
MAXIMUM RATINGS (Frequencies up to [2])	270 MHz	MAXIMUM RATINGS (Frequencies up to 40 Mc.) p Peak R-F Grid Inpyt Voltage (approx.) 270 280 350 \rrnoalfs
MAXIMUM RATINGS (Frequencies up to [3])	280 MHz	MAXIMUM RATINGS (Frequencies up to 40 Mc.) p Peak R-F Grid Inpyt Voltage (approx.) 270 280 350 \rrnoalfs
MAXIMUM RATINGS (Frequencies up to [4])	350 MHz	MAXIMUM RATINGS (Frequencies up to 40 Mc.) p Peak R-F Grid Inpyt Voltage (approx.) 270 280 350 \rrnoalfs
D-C PLATE VOLTAGE [1]	3000 V	D-C PLATE VOLTAGE - - - - - 3000 MAX. VOLTS Driving Power {approx.} - - 9 [10 watts
D-C PLATE VOLTAGE [2]	9 V	D-C PLATE VOLTAGE - - - - - 3000 MAX. VOLTS Driving Power {approx.} - - 9 [10 watts
D-C PLATE VOLTAGE [3]	10 V	D-C PLATE VOLTAGE - - - - - 3000 MAX. VOLTS Driving Power {approx.} - - 9 [10 watts
D-C PLATE CURRENT [1]	225 mA	D-C PLATE CURRENT - - - - - 225 MAX. MA Plate Power Input - - - - - 215 250 300 watts
D-C PLATE CURRENT [2]	215 mA	D-C PLATE CURRENT - - - - - 225 MAX. MA Plate Power Input - - - - - 215 250 300 watts
D-C PLATE CURRENT [3]	250 mA	D-C PLATE CURRENT - - - - - 225 MAX. MA Plate Power Input - - - - - 215 250 300 watts
D-C PLATE CURRENT [4]	300 mA	D-C PLATE CURRENT - - - - - 225 MAX. MA Plate Power Input - - - - - 215 250 300 watts
PLATE DISSIPATION [1]	75 W	PLATE DISSIPATION - - - - - 75 MAX. WATTS Plate Dissipation - - - - - 75 75 75 watts
PLATE DISSIPATION [2]	75 W	PLATE DISSIPATION - - - - - 75 MAX. WATTS Plate Dissipation - - - - - 75 75 75 watts
PLATE DISSIPATION [3]	75 W	PLATE DISSIPATION - - - - - 75 MAX. WATTS Plate Dissipation - - - - - 75 75 75 watts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PLATE DISSIPATION [4]	75 W	PLATE DISSIPATION - - - - 75 MAX. WATTS Plate Dissipation - - - - 75 75 75 watts
GRID DISSIPATION [1]	16 W	GRID DISSIPATION - - - - 16 MAX. WATTS Plate Power Output - - - - 140 175 225 watts
GRID DISSIPATION [2]	140 W	GRID DISSIPATION - - - - 16 MAX. WATTS Plate Power Output - - - - 140 175 225 watts
GRID DISSIPATION [3]	175 W	GRID DISSIPATION - - - - 16 MAX. WATTS Plate Power Output - - - - 140 175 225 watts
GRID DISSIPATION [4]	225 W	GRID DISSIPATION - - - - 16 MAX. WATTS Plate Power Output - - - - 140 175 225 watts
D-C Plate Voltage [1]	1000	D-C Plate Voltage - - - - 1000 1500 2000 I
D-C Plate Voltage [2]	1500	D-C Plate Voltage - - - - 1000 1500 2000 I
D-C Plate Voltage [3]	2000	D-C Plate Voltage - - - - 1000 1500 2000 I
FREQUENCY AMPLIFIER D-C Grid Voltage - - - - IS0 [1]	-200	FREQUENCY AMPLIFIER D-C Grid Voltage - - - - IS0 —200 —300 volts
FREQUENCY AMPLIFIER D-C Grid Voltage - - - - IS0 [2]	-300	FREQUENCY AMPLIFIER D-C Grid Voltage - - - - IS0 —200 —300 volts
MAXIMUM RATINGS (Frequencies up to [1])	40 MHz	MAXIMUM RATINGS (Frequencies up to 40 Mc.) Peak R-F Grid Input Voltage (approx.) 300 330 440 'r/noalFs
MAXIMUM RATINGS (Frequencies up to [2])	300 MHz	MAXIMUM RATINGS (Frequencies up to 40 Mc.) Peak R-F Grid Input Voltage (approx.) 300 330 440 'r/noalFs
MAXIMUM RATINGS (Frequencies up to [3])	330 MHz	MAXIMUM RATINGS (Frequencies up to 40 Mc.) Peak R-F Grid Input Voltage (approx.) 300 330 440 'r/noalFs
MAXIMUM RATINGS (Frequencies up to [4])	440 MHz	MAXIMUM RATINGS (Frequencies up to 40 Mc.) Peak R-F Grid Input Voltage (approx.) 300 330 440 'r/noalFs
D-C PLATE VOLTAGE	2400	D-C PLATE VOLTAGE - - - - 2400 MAX. VOLTS Driving Power (approx.)
PLATE DISSIPATION [1]	50 W	PLATE DISSIPATION - - - - 50 MAX. WATTS Plate Dissipation - - - - 50 50 50 watds
PLATE DISSIPATION [2]	50 W	PLATE DISSIPATION - - - - 50 MAX. WATTS Plate Dissipation - - - - 50 50 50 watds
PLATE DISSIPATION [3]	50 W	PLATE DISSIPATION - - - - 50 MAX. WATTS Plate Dissipation - - - - 50 50 50 watds
PLATE DISSIPATION [4]	50 W	PLATE DISSIPATION - - - - 50 MAX. WATTS Plate Dissipation - - - - 50 50 50 watds

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GRID DISSIPATION [1]	16 W	GRID DISSIPATION - - - - - 16 MAX. WATTS Plate Power Output - - - - - 85 125 170 watts
GRID DISSIPATION [2]	85 W	GRID DISSIPATION - - - - - 16 MAX. WATTS Plate Power Output - - - - - 85 125 170 watts
GRID DISSIPATION [3]	125 W	GRID DISSIPATION - - - - - 16 MAX. WATTS Plate Power Output - - - - - 85 125 170 watts
GRID DISSIPATION [4]	170 W	GRID DISSIPATION - - - - - 16 MAX. WATTS Plate Power Output - - - - - 85 125 170 watts
D-C Plate Voltage [1]	1000	D-C Plate Voltage - - - - - 1000 1500 2000 1t
D-C Plate Voltage [2]	1500	D-C Plate Voltage - - - - - 1000 1500 2000 1t
D-C Plate Voltage [3]	2000	D-C Plate Voltage - - - - - 1000 1500 2000 1t
D-C Plate Voltage [4]	1	D-C Plate Voltage - - - - - 1000 1500 2000 1t
Class-B Zero-Signal D-C Plate Current [1]	90 mA	Class-B Zero-Signal D-C Plate Current - - 90 & 7 50 ma.
Class-B Zero-Signal D-C Plate Current [2]	7 mA	Class-B Zero-Signal D-C Plate Current - - 90 & 7 50 ma.
Class-B Zero-Signal D-C Plate Current [3]	50 mA	Class-B Zero-Signal D-C Plate Current - - 90 & 7 50 ma.
D-C PLATE VOLTAGE - < [1]	3000 V	D-C PLATE VOLTAGE - < - 3000 MAX. YVOLTS Peak A-F Grid Input Yoltage (per tube) 175 165 175 volts
D-C PLATE VOLTAGE - < [2]	175 V	D-C PLATE VOLTAGE - < - 3000 MAX. YVOLTS Peak A-F Grid Input Yoltage (per tube) 175 165 175 volts
D-C PLATE VOLTAGE - < [3]	165 V	D-C PLATE VOLTAGE - < - 3000 MAX. YVOLTS Peak A-F Grid Input Yoltage (per tube) 175 165 175 volts
D-C PLATE VOLTAGE - < [4]	175 V	D-C PLATE VOLTAGE - < - 3000 MAX. YVOLTS Peak A-F Grid Input Yoltage (per tube) 175 165 175 volts
Max-Signal Driving Power {approx.} [1]	7	Max-Signal Driving Power {approx.} - 7 4 3 walts
Max-Signal Driving Power {approx.} [2]	4	Max-Signal Driving Power {approx.} - 7 4 3 walts
Max-Signal Driving Power {approx.} [3]	3	Max-Signal Driving Power {approx.} - 7 4 3 walts
MAX-SIGNAL D-C PLATE CURRENT [1]	225 mA	MAX-SIGNAL D-C PLATE CURRENT - - 225 MAX. MA. max glgna: P;iafe Dlpssapahg\ (per tube) 75 75 75 watts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
MAX-SIGNAL D-C PLATE CURRENT [2]	75 mA	MAX-SIGNAL D-C PLATE CURRENT - - 225 MAX. MA. max glgna: P;iafe Dlpssapahg\ (per tube) 75 75 75 watts
MAX-SIGNAL D-C PLATE CURRENT [3]	75 mA	MAX-SIGNAL D-C PLATE CURRENT - - 225 MAX. MA. max glgna: P;iafe Dlpssapahg\ (per tube) 75 75 75 watts
MAX-SIGNAL D-C PLATE CURRENT [4]	75 mA	MAX-SIGNAL D-C PLATE CURRENT - - 225 MAX. MA. max glgna: P;iafe Dlpssapahg\ (per tube) 75 75 75 watts
ax-Signa ate Power Output [1]	200	ax-Signa ate Power Output - - 200 250 300 t
ax-Signa ate Power Output [2]	250	ax-Signa ate Power Output - - 200 250 300 t
ax-Signa ate Power Output [3]	300	ax-Signa ate Power Output - - 200 250 300 t
PLATE DISSIPATION L [1]	75 W	PLATE DISSIPATION L 75 MAX. WATTS P Total Harmonic Distortion - - - 1.5 2.0 2.0 ';;r ::enf
PLATE DISSIPATION L [2]	1.5 W	PLATE DISSIPATION L 75 MAX. WATTS P Total Harmonic Distortion - - - 1.5 2.0 2.0 ';;r ::enf
PLATE DISSIPATION L [3]	2 W	PLATE DISSIPATION L 75 MAX. WATTS P Total Harmonic Distortion - - - 1.5 2.0 2.0 ';;r ::enf



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

1965 Eimac Tube Manual

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

1965 EIMAC TUBE MANUAL

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification Factor	20	—
Grid Dissipation Maximum	16 W	—
Frequency Maximum	40 MHz	—
Typical Class-C Output Power	225 W	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Two-Tube Modulator Output Power	350 W	—

TUBE TINKER

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and their source documents.

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