



ELECTRONIC TUBE REFERENCE

8162

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

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TRIODE

Eimac high-mu forced-air-cooled external-anode power triode with flexible base leads. Approximately 3 kW plate dissipation and very high amplification factor suit high-power zero-bias linear RF and audio amplifier service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	7.5 V / 51 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
AMPLIFICATION FACTOR	200
MAXIMUM PLATE VOLTAGE	5000 V
MAXIMUM PLATE DISSIPATION	3000 W
MAXIMUM GRID DISSIPATION	225 W
MAXIMUM CATHODE CURRENT	4 A
<i>Promoted maximum ratings/characteristics populated from published headings; service-specific values retained in parameters.</i>	

8162/3CX3000F7 high-mu forced-air power triode with flexible base leads.

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 [1]	8162	The Eimac 8162/3X3000F7 is an external-anode power triode
The Eimac [2]	3	The Eimac 8162/3X3000F7 is an external-anode power triode
The Eimac [3]	0	The Eimac 8162/3X3000F7 is an external-anode power triode
Voltage	7.5 V	Voltage - - - 7.5 volts
Current = = =	51 A	Current = = = - 51 amperes = T
Amplification Factor	200	Amplification Factor - - - 200 &
Frequency for Maximum Ratings = =	30 MHz	Frequency for Maximum Ratings = = 30 Mc
MAXIMUM RATINGS (Per Tube) D-C Plate Voltage	4000	MAXIMUM RATINGS (Per Tube) D-C Plate Voltage 4000 wvolts
D-C PIATE VOLTAGE [1]	5000 V	D-C PIATE VOLTAGE 5000 VOLTS D-C Grid Voltage 0 volts
D-C PIATE VOLTAGE [2]	0 V	D-C PIATE VOLTAGE 5000 VOLTS D-C Grid Voltage 0 volts
D-C PLATE CURRENT [1]	2.5 A	D-C PLATE CURRENT 2.5 AMPS Zero-8ig D-C Plate Current* 0.640 amps
D-C PLATE CURRENT [2]	8 A	D-C PLATE CURRENT 2.5 AMPS Zero-8ig D-C Plate Current* 0.640 amps
D-C PLATE CURRENT [3]	640 mA	D-C PLATE CURRENT 2.5 AMPS Zero-8ig D-C Plate Current* 0.640 amps
PLATE DISSIPATION [1]	3 A	PLATE DISSIPATION 3 KW Max-Sig D-C Plate Current 4.00 amps
PLATE DISSIPATION [2]	4 A	PLATE DISSIPATION 3 KW Max-Sig D-C Plate Current 4.00 amps

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GRID DISSIPATION [1]	225 A	GRID DISSIPATION 225 WATTS Max-8Sig D-C Grid Current 0.860 -amps
GRID DISSIPATION [2]	8 A	GRID DISSIPATION 225 WATTS Max-8Sig D-C Grid Current 0.860 -amps
GRID DISSIPATION [3]	860 mA	GRID DISSIPATION 225 WATTS Max-8Sig D-C Grid Current 0.860 -amps
Driving Power	120 W	Driving Power 120 watts
Peak A-F Driving Voltage (per tube)	185	Peak A-F Driving Voltage (per tube) 185 wvolts
Load Resistance, Plate-to-Plate	2200 ohm	Load Resistance, Plate-to-Plate 2200 ohms
Max [1]	8 W	Max-8sig Plate Output Power 11,000 watts
Max [2]	11000 W	Max-8sig Plate Output Power 11,000 watts
MAXIMUM RATINGS D-C Plate Voltage [1]	4000	MAXIMUM RATINGS D-C Plate Voltage 4000 5000 wvolts
MAXIMUM RATINGS D-C Plate Voltage [2]	5000	MAXIMUM RATINGS D-C Plate Voltage 4000 5000 wvolts
D-C PLATE VOLTAGE [1]	5000 V	D-C PLATE VOLTAGE 5000 VOLTS Zero-Sig D-C Plate Current* 0.32 0.44 amps
D-C PLATE VOLTAGE [2]	0.32 V	D-C PLATE VOLTAGE 5000 VOLTS Zero-Sig D-C Plate Current* 0.32 0.44 amps
D-C PLATE VOLTAGE [3]	0.44 V	D-C PLATE VOLTAGE 5000 VOLTS Zero-Sig D-C Plate Current* 0.32 0.44 amps
D-C PLATE CURRENT [1]	2.5 A	D-C PLATE CURRENT 2.5 AMPS Max~Sig D-C Plate Current 2.00 1.56 amps
D-C PLATE CURRENT [2]	2 A	D-C PLATE CURRENT 2.5 AMPS Max~Sig D-C Plate Current 2.00 1.56 amps
D-C PLATE CURRENT [3]	1.56 A	D-C PLATE CURRENT 2.5 AMPS Max~Sig D-C Plate Current 2.00 1.56 amps
PLATE DISSIPATION [1]	3 A	PLATE DISSIPATION 3 KW Max-Sig D-C Grid Current 0.42 0.33 amps
PLATE DISSIPATION [2]	420 mA	PLATE DISSIPATION 3 KW Max-Sig D-C Grid Current 0.42 0.33 amps
PLATE DISSIPATION [3]	330 mA	PLATE DISSIPATION 3 KW Max-Sig D-C Grid Current 0.42 0.33 amps
GRID DISSIPATION [1]	225 W	GRID DISSIPATION 225 WATTS Driving Impedance 50 50 ohms



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
Grounded-Filament Input Capacitance	38 pF	—
Grounded-Filament Output Capacitance	0.6 pF	—
Grounded-Filament Grid-Plate Capacitance	24 pF	—
Grounded-Grid Input Capacitance	38 pF	—
Grounded-Grid Output Capacitance	24 pF	—
Grounded-Grid Plate-Cathode Capacitance	0.6 pF	—
Frequency Maximum	30 MHz	—
RF Plate Voltage Maximum	5000 V	—
RF Plate Current Maximum	2.5 A	—
Typical Power Gain Minimum	20 ratio	—
Forced-Air Cooling Required	1 boolean	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1975 Eimac Tube Manual

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

1975 EIMAC TUBE MANUAL

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grounded-Filament Input Capacitance	38 pF	—
Grounded-Filament Output Capacitance	0.6 pF	—
Grounded-Filament Grid-Plate Capacitance	24 pF	—
Grounded-Grid Input Capacitance	38 pF	—
Grounded-Grid Output Capacitance	24 pF	—
Grounded-Grid Plate-Cathode Capacitance	0.6 pF	—
Frequency Maximum	30 MHz	—
RF Plate Voltage Maximum	5000 V	—
RF Plate Current Maximum	2.5 A	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Power Gain Minimum	20 ratio	GroundedGrid



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1976 Eimac Tube Manual

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

1976 EIMAC TUBE MANUAL

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grounded-Filament Input Capacitance	38 pF	—
Grounded-Filament Output Capacitance	0.6 pF	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grounded-Filament Grid-Plate Capacitance	24 pF	—
Grounded-Grid Input Capacitance	38 pF	—
Grounded-Grid Output Capacitance	24 pF	—
Grounded-Grid Plate-Cathode Capacitance	0.6 pF	—
Frequency Maximum	30 MHz	—
RF Plate Voltage Maximum	5000 V	—
RF Plate Current Maximum	2.5 A	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Power Gain Minimum	20 ratio	GroundedGrid



SOURCE OPERATING CONDITIONS

199X Svetlana

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

199X SVETLANA

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Current @	7.5 V	amplifiers. A modern mesh filament is used,
Input	38 pF	amplifiers. A modern mesh filament is used,
Output	24 pF	amplifiers. A modern mesh filament is used,
Feedback	0.6 pF	amplifiers. A modern mesh filament is used,
Input	38 pF	amplifiers. A modern mesh filament is used,
Output	0.6 pF	amplifiers. A modern mesh filament is used,
Feedback	24 pF	amplifiers. A modern mesh filament is used,
Maximum frequency for full ratings (CW)	75 MHz	amplifiers. A modern mesh filament is used,

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC plate voltage	5000 V	Maximum Ratings
DC plate current	2.5 A	Maximum Ratings
Plate dissipation	4000 W	Maximum Ratings
Grid dissipation	225 W	Maximum Ratings
(Frequencies to	30 MHz	Typical Operation
Plate Voltage 4000 4800	4800 V	Typical Operation
Zero-signal plate current* 0.25 0.35	350 mA	Typical Operation
Single-tone plate current 2.00 1.68	2 A	Typical Operation
Grid bias 0 0	0 V	Typical Operation
Single-tone grid current* 0.61 0.46	600 mA	Typical Operation
Peak driving power 420 293	410 W	Typical Operation
Plate dissipation 2285 2275	2775 W	Typical Operation
Single-tone plate output power 6030 6000	7266 W	Typical Operation
Resonant load impedance 1210 1720	1425 Ohms	Typical Operation
Driving impedance 47.5 50.0	46.3 Ohms	Typical Operation
DC Plate voltage	5000 V	Maximum Ratings
DC Plate current	2.5 A	Maximum Ratings
Plate dissipation	4000 W	Maximum Ratings
Grid dissipation	225 W	Maximum Ratings
(Frequencies to	110 MHz	Typical operation
Plate voltage 3500	4800 V	Typical operation
Grid voltage -50	-60 V	Typical operation
Plate current 1.30	1.54 A	Typical operation
Grid current* 0.42	480 mA	Typical operation
Peak RF cathode voltage* 220	267 V	Typical operation
Calculated driving power* 310	435 W	Typical operation