



ELECTRONIC TUBE REFERENCE

3CX3000F7

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

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TRIODE

High-mu forced-air-cooled power triode with flexible grid and filament leads, intended principally for grounded-grid RF amplification. It combines multi-kilowatt dissipation with high power gain and substantial RF output.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	7.5 V / 50.5 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
AMPLIFICATION FACTOR	160
MAXIMUM PLATE VOLTAGE	5000 V
MAXIMUM PLATE DISSIPATION	4000 W
MAXIMUM GRID DISSIPATION	225 W
MAXIMUM CATHODE CURRENT	2.5 A
<i>Promoted ratings mapped semantically from printed characteristics/maximum-ratings tables; remaining published electrical and operating-condition data retained densely in TUBE_SECTION_PARAMETER.</i>	

High-mu forced-air ceramic-metal power triode with flexible grid/filament leads.



SOURCE OPERATING CONDITIONS

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
Plate dissipation 985	1480 W	Typical operation

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Useful output power 3300	5500 W	Typical operation
DC plate voltage	5000 V	Maximum Ratings (per tube)
DC plate current	2.5 A	Maximum Ratings (per tube)
Plate dissipation	4000 W	Maximum Ratings (per tube)
Grid dissipation	225 W	Maximum Ratings (per tube)
Plate voltage	4000 V	Typical Operation (two tubes, sinusoidal waveform)
Zero-signal plate current	500 mA	Typical Operation (two tubes, sinusoidal waveform)
Maximum-signal plate current	3.58 A	Typical Operation (two tubes, sinusoidal waveform)
Maximum-signal grid current	580 mA	Typical Operation (two tubes, sinusoidal waveform)
Peak AF grid voltage	190 V	Typical Operation (two tubes, sinusoidal waveform)
Peak driving power	115 W	Typical Operation (two tubes, sinusoidal waveform)
Maximum-signal plate dissipation	1850 W	Typical Operation (two tubes, sinusoidal waveform)
Plate output power	10500 W	Typical Operation (two tubes, sinusoidal waveform)
Load resistance (plate-to-plate)	2720 Ohms	Typical Operation (two tubes, sinusoidal waveform)
Filament current at	7.5 V	Typical Operation (two tubes, sinusoidal waveform)
Input 30.0	45 pF	Typical Operation (two tubes, sinusoidal waveform)
Output 20.0	28 pF	Typical Operation (two tubes, sinusoidal waveform)
Feedback –	1 pF	Typical Operation (two tubes, sinusoidal waveform)
Input 30.0	45 pF	Typical Operation (two tubes, sinusoidal waveform)
Output	1 pF	Typical Operation (two tubes, sinusoidal waveform)
Feedback 20.0	28 pF	Typical Operation (two tubes, sinusoidal waveform)
Zero-Bias plate current (Eb =	5000 V	Typical Operation (two tubes, sinusoidal waveform)

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cut-off bias ($E_b =$	5000 V	Typical Operation (two tubes, sinusoidal waveform)
below	250 °C	Typical Operation (two tubes, sinusoidal waveform)
maintain these temperatures below	225 °C	Typical Operation (two tubes, sinusoidal waveform)
with an inlet-air temperature of	40 °C	Typical Operation (two tubes, sinusoidal waveform)
tabulated. At frequencies above	30 MHz	Typical Operation (two tubes, sinusoidal waveform)

TUBE TINKER

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