



ELECTRONIC TUBE REFERENCE

3CX3000A7

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

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Very high-mu ceramic power triode designed for grounded-grid RF amplification and also usable in high-power audio service. Forced-air cooled, with multi-kilowatt dissipation and published operation extending into VHF.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	7.5 V / 51.5 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 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>Maximum ratings promoted from the printed service-rating tables; typical operating values are preserved as parameters.</i>	

High-mu forced-air ceramic-metal power triode, coaxial-base version.



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
Maximum plate voltage	5000 V	—
Maximum plate/cathode current	2.5 A	—
Maximum plate dissipation	4000 W	—
Maximum grid dissipation	225 W	—



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	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grounded-Grid Output Capacitance	24 pF	—
Grounded-Grid Plate-Cathode Capacitance	0.6 pF	—
Frequency Maximum	110 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	110 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 DATA APPENDIX

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	—
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	110 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 DATA APPENDIX

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	class AB, or class B RF or audio amplifiers.
Input	38 pF	class AB, or class B RF or audio amplifiers.
Output	24 pF	class AB, or class B RF or audio amplifiers.
Feedback	0.6 pF	class AB, or class B RF or audio amplifiers.
Input	38 pF	class AB, or class B RF or audio amplifiers.
Output	0.6 pF	class AB, or class B RF or audio amplifiers.
Feedback	24 pF	class AB, or class B RF or audio amplifiers.
Maximum frequency for full ratings (CW)	110 MHz	class AB, or class B RF or audio amplifiers.

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

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
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
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	3000 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)

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
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)
Cut-off bias (Eb =	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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