



ELECTRONIC TUBE REFERENCE

4CX40000G

Power - Tetrode (NOT beam) (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL
DATA

1 SECTION
CONSTRUCTION
TETRODE

Very-high-power ceramic-metal tetrode with 40 kW plate dissipation for broadcast and professional RF service to approximately 220 MHz.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	11 V / 9 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Tetrode	
MAXIMUM PLATE VOLTAGE	14000 V
MAXIMUM SCREEN VOLTAGE	2000 V
MAXIMUM PLATE DISSIPATION	40000 W
MAXIMUM SCREEN DISSIPATION	1500 W
MAXIMUM GRID DISSIPATION	1000 W
Single electrical section; values mapped from printed ratings/characteristics.	

The EIMAC 4CX40,000G is a ceramic/metal power P tetrode intended for use in audio or radio-frequency applications. It features a high-stability pyrolytic graphite grid and a type of internal mechanical structure which results in high rf operating efficiency. Low rf losses in this structure permit operation of the tube at full ratings up to 220 MHz.

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 · Tetrode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
The EIMAC	0 a	The EIMAC 4CX40,000G is a ceramic/metal power P
ratings up to	220 MHz	ratings up to 220 MHz.
Current, o	170 volts	Current, o 15 .0 volts s o e . . , 170 A
DC SCREEN VOLTAGE	2000 VOLTS	DC SCREEN VOLTAGE 2000 VOLTS
DC GRID VOLTAGE	440 VOLTS	DC GRID VOLTAGE -1000 VOLTS Screen Current 440 mAdc
DC PLATE CURRENT	10 AMPERES	DC PLATE CURRENT 10 AMPERES
PLATE DISS	40 KILOWATTS	PLATE DISSIPATION 40 KILOWATTS
SCREEN DISSIPATION	60 WATTS	SCREEN DISSIPATION 1500 WATTS Useful Power Output 2 60 kW
GRID DISSIPATION	1000 WATTS	GRID DISSIPATION 1000 WATTS
obtained principally by means of a grid resistor, the resistor must be adjustable	1 a	obtained principally by means of a grid resistor, the resistor must be adjustable to produce the required bias
practice to add a	15 a	practice to add a 15% safety factor to the indicated air flow, and allow for variables
two-minute period,	1 a	two-minute period, If a step-start sequence is used the initial voltage applied
tube instantaneously. If the power failure exceeds	60 seconds	tube instantaneously. If the power failure exceeds 60 seconds, the programmed
FILAMENT OPERATION - The rated nominal filament voltage for the tube is	150 volts	FILAMENT OPERATION - The rated nominal filament voltage for the tube is 15,0 volts,
to rise above the rated maximum during brief periods (	10 seconds	to rise above the rated maximum during brief periods (10 seconds maximum) such as

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GRID OPERATION - The control grid has a maximum dissipation rating of	1000 a	GRID OPERATION - The control grid has a maximum dissipation rating of 1000 watts,
Lo A . AIRFLOW: BASE TQ ANODE- ;;;_:'	3 A	Lo A . AIRFLOW: BASE TQ ANODE- ;;;_:' 3
T TTTITTTITTTITTT T INLET]AIR TEMPERATURE	35 °c	T TTTITTTITTTITTT T INLET]AIR TEMPERATURE: 35°c
A AXIM CORE TEMPERATURE;	250 A	A AXIM CORE TEMPERATURE; 250°C. -
FI =	110 MHz	FI = 110 MHz
egk/ib =	2 a	egk/ib = 17 »; ic2: === 2.0 a
egk/ib =	5 a	egk/ib = 27 a; fc2: ==- 5.0 a
etd/	100 a	etd/1b = 100 a
(gnd.cath.connectlon) Cout	43 pF	(gnd.cath.connectlon) Cout: 33 43 pF
Cgp: ==	2 pF	Cgp: ==- 2.0 pF
(gnd.grid connection) Cout	45 pF	(gnd.grid connection) Cout: 35 45 pF
Cpk: ===	0.5 pF	Cpk: === 0.5 pF
and maintain this value for	120 seconds	and maintain this value for 120 seconds.
design value for each rating below the	60 seconds	design value for each rating below the 60 seconds the full operating voltage may be
factor so that the absolute values wil! never ure exceeds	60 seconds	factor so that the absolute values wil! never ure exceeds 60 seconds, the programmed warmup
over	120 seconds	over 120 seconds. This can be accomp!ished by
based on	8 °C	based on 2 maximum tube temperature of 225°C 8. In addition to the normal plate over-current
and a cooling air temperature of	35 a	and a cooling air temperature of 35°C, with interlock, screen current interlock, and air-
Cooling of the base requires a minimum of	100 a	Cooling of the base requires a minimum of 100 intact if the criteria is met.
cfm of air (at a maximum temperature of	35 a	cfm of air (at a maximum temperature of 35°C)
quency. d	300 MHz	. quency. d 300 MHz most t il
mechanical, shall be	1 A	mechanical, shall be 1%. A tube having 1 or

TUBE TINKER

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