



ELECTRONIC TUBE REFERENCE

4CW50000J

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

CONSOLIDATED TECHNICAL
DATA

1 SECTION
CONSTRUCTION
TETRODE

High-power ceramic/metal transmitting tetrode designed for RF power amplification, linear amplification, oscillation, modulation, broadcast, or related high-power service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	12 V / 220 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Tetrode	
AMPLIFICATION FACTOR	4.5
MAXIMUM PLATE VOLTAGE	17500 V
MAXIMUM SCREEN VOLTAGE	2500 V
MAXIMUM PLATE DISSIPATION	50000 W
MAXIMUM SCREEN DISSIPATION	1500 W
MAXIMUM GRID DISSIPATION	400 W
<i>Published absolute maximum ratings promoted from the applicable service tables; pulse-service maxima are used only where explicitly noted in the tube note.</i>	

Ceramic/metal water-cooled power tetrode for 50–100 kW output service, recommended for Class-AB1 RF linear-amplifier operation.

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
Heater/Filament Voltage	12 V	—
Heater/Filament Current	220 A	At 12.0 V nominal
Frequency for Maximum Ratings	110 MHz	—
Maximum Plate Voltage	17500 V	Highest published applicable absolute maximum
Maximum Screen Voltage	2500 V	Highest published applicable absolute maximum
Maximum Plate Dissipation	50000 W	—
Maximum Screen Dissipation	1500 W	—
Maximum Grid Dissipation	400 W	—
Maximum DC Plate Current	12 A	—
Plate Voltage	8300 V	ClassAB;RFLinearAmplifier
Screen Voltage	1500 V	ClassAB;RFLinearAmplifier
Plate Output Power	45000 W	ClassAB;RFLinearAmplifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-Screen Amplification Factor	4.5	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input Capacitance	310 pF	GroundedCathode
Output Capacitance	48 pF	GroundedCathode
Feedback Capacitance	1 pF	GroundedCathode
Input Capacitance	290–330 pF	GroundedCathode;EquipmentDesignRange

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Output Capacitance	42–53 pF	GroundedCathode;EquipmentDesignRange
Feedback Capacitance	—1.5 pF	GroundedCathode;EquipmentDesignRange
Input Capacitance	113–137 pF	GroundedGrid;EquipmentDesignRange
Output Capacitance	45–55 pF	GroundedGrid;EquipmentDesignRange
Feedback Capacitance	—0.5 pF	GroundedGrid;EquipmentDesignRange