



300 Watt Plate Dissipation

Operates at 250°C Envelope Temperature

Eimac, the world's largest manufacturer of power transmitting tubes, introduces a new ceramic power tetrode — the 4CX300A.

Rugged ceramic-metal construction, ceramic support of electrodes within the tube, and superior production techniques have created a low-noise tube which operates quietly despite heavy accelerative forces from shock and vibration. Supported solely at its base by the Eimac X648 Air System Socket, the 4CX300A will withstand repeated 11 millisecond 50g shocks in any plane without internal shorts or mechanical damage. And, there are no major electrode resonances when the tube is vibrated from 30 to 2000 cps.

High temperature processing has produced an extremely clean tube with more thorough outgassing. Further, the metal-ceramic construction inhibits deterioration of electrical characteristics while operating continuously at envelope temperatures of 250 degrees centigrade.

The Eimac 4CX300A, which features extremely low series lead inductance, operates at full ratings through 500 megacycles... five hundred watts input as a radio-frequency power amplifier or oscillator, three hundred watts input as a plate-modulated radio-frequency amplifier.

EITEL-McCULLOUGH, INC.
SAN BRUNO · CALIFORNIA

Eimac First with Ceramic Tubes that can take it

Eimac

TENTATIVE DATA

(Class-C Telephony or FM Telephony)
(Key-Down conditions, per tube)

MAXIMUM RATINGS

D-C PLATE VOLTAGE	2000 MAX. VOLTS
D-C SCREEN VOLTAGE	300 MAX. VOLTS
D-C GRID VOLTAGE	-250 MAX. VOLTS
D-C PLATE CURRENT	250 MAX. MA
PLATE DISSIPATION	300 MAX. WATTS
SCREEN DISSIPATION	12 MAX. WATTS
GRID DISSIPATION	2 MAX. WATTS

TYPICAL OPERATION (Frequencies up to 175Mc, per tube)

D-C Plate Voltage	500	1000	1500	2000 volts
D-C Screen Voltage	250	250	250	250 volts
D-C Grid Voltage	-90	-90	-90	-90 volts
D-C Plate Current	250	250	250	250 ma
D-C Screen Current	45	35	30	25 ma
D-C Grid Current	32	28	28	27 ma
Peak R-F Grid Voltage (approx.)	118	116	116	115 volts
Driving Power	3.6	3.2	3.2	2.8 watts
Plate Power Input	125	250	375	500 watts
Plate Power Output	85	195	300	410 watts

Class-C Telephony (Carrier conditions, per tube)

MAXIMUM RATINGS

D-C PLATE VOLTAGE	1500 MAX. VOLTS
D-C SCREEN VOLTAGE	300 MAX. VOLTS
D-C GRID VOLTAGE	-250 MAX. VOLTS
D-C PLATE CURRENT	200 MAX. MA
PLATE DISSIPATION	200 MAX. WATTS
SCREEN DISSIPATION	12 MAX. WATTS
GRID DISSIPATION	2 MAX. WATTS

TYPICAL OPERATION (Frequencies up to 175Mc, per tube)

D-C Plate Voltage	500	1000	1500 volts
D-C Screen Voltage	250	250	250 volts
D-C Grid Voltage	-100	-100	-100 volts
D-C Plate Current	200	200	200 ma
D-C Screen Current	45	35	25 ma
D-C Grid Current	22	19	17 ma
Peak R-F Grid Input Voltage	124	122	121 volts
Driving Power	2.7	2.3	2.1 watts
Plate Power Input	100	200	300 watts
Plate Power Output	75	160	250 watts

MAXIMUM RATINGS (Per Tube)

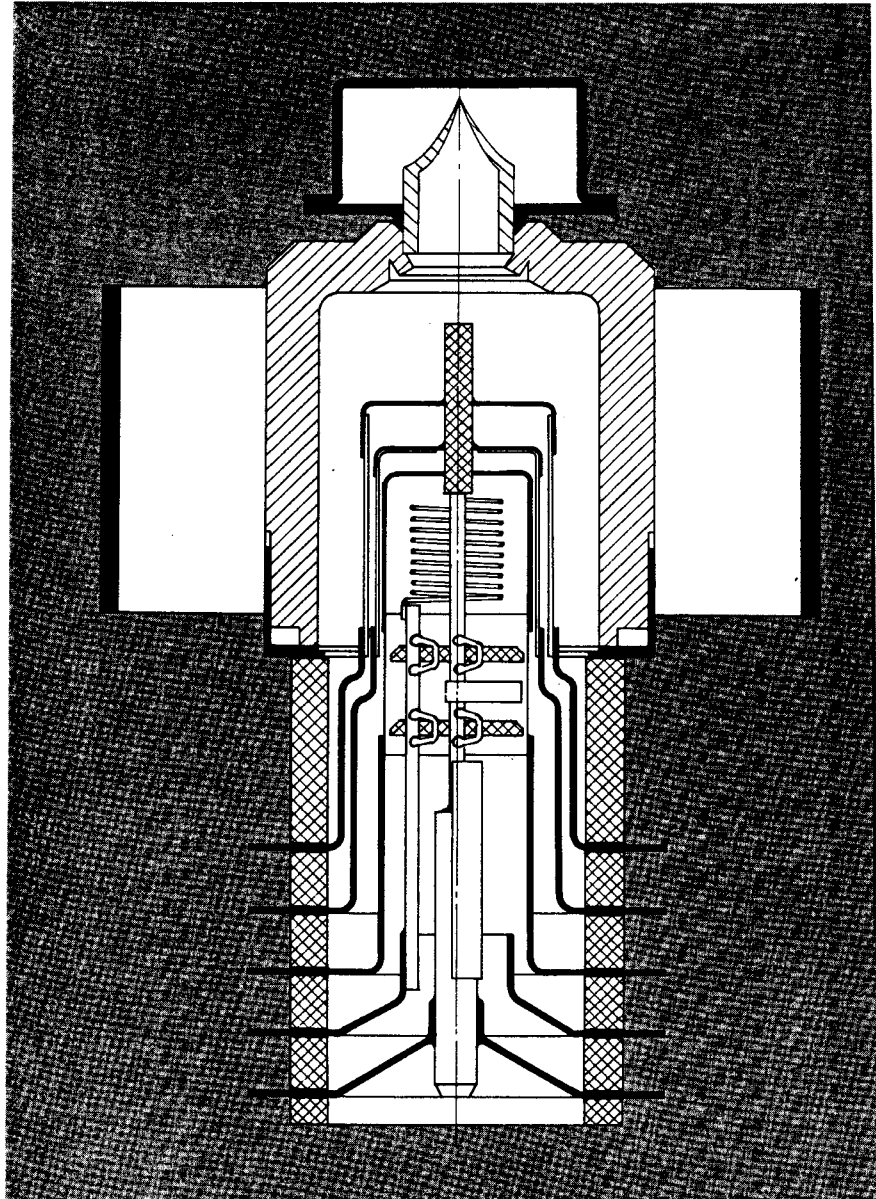
D-C PLATE VOLTAGE	2000 MAX. VOLTS
D-C SCREEN VOLTAGE	400 MAX. VOLTS
D-C PLATE CURRENT	250 MAX. MA
PLATE DISSIPATION	300 MAX. WATTS
SCREEN DISSIPATION	12 MAX. WATTS
GRID DISSIPATION	2 MAX. WATTS

TYPICAL OPERATION

Class-AB₁ R-F Linear Amplifier (Frequencies to 175 Mc, per tube)

D-C Plate Voltage	1000	1500	2000 volts
D-C Screen Voltage	350	350	350 volts
D-C Grid Voltage (Approx.)*	-50	-50	-50 volts
Zero-Signal D-C Plate Current	100	100	100 ma
Max-Signal D-C Plate Current	250	250	250 ma
Max-Signal D-C Screen Current	25	20	15 ma
Peak R-F Grid Voltage	50	50	50 volts
Driving Power	0	0	0 watts
Max-Signal Plate Dissipation	125	150	175 watts
Max-Signal Power Output	125	225	325 watts

*Adjust grid voltage to obtain specified zero-signal plate current.



GENERAL CHARACTERISTICS

ELECTRICAL

Cathode: Oxide Coated, Unipotential	
Minimum Heating Time	30 seconds
Cathode-to-Heater Voltage	150 max. volts
Heater: Voltage	6.0 volts
Current	2.75 amperes
Grid-Screen Amplification Factor	
(Average)	5
Direct Inter-electrode Capacitances	
(Average)	
Grid-Plate	0.04 uuf
Input	29.5 uuf
Output	4.8 uuf
Transconductance	12,000 umhos
$(E_b=500v., E_{c2}=250v., I_b=200ma)$	
Frequency for Maximum Plate	
Voltage Ratings	500 Mc

MECHANICAL

Base	Special
Recommended Socket	Eimac SK-700 or SK-710
Base Connections	See outline drawing
Mounting	Any position
Cooling	Forced air
Shock	50g for 11 Milliseconds, any Plane, Socket Supported.
Vibration	Low Noise Output 30 to 2,000 cps.
Maximum Over-All Dimensions	
Length	2.375 inches
Diameter	1.65 inches
Net Weight	3.75 ounces
Shipping Weight	1.5 pounds

