

**TENTATIVE DATA**

**EITEL-McCULLOUGH, Inc.**  
SAN BRUNO, CALIFORNIA

**3X2500F3**

MEDIUM MU TRIODE

The Eimac 3X2500F3 is a medium-mu, forced air-cooled, external-anode power triode capable of high output at relatively low plate voltages. A single tube will deliver a radio-frequency plate power output of 5000 watts at a plate voltage of 3500.

Flexible grid and filament leads simplify socketing and equipment design for industrial and communication frequencies below 50 Mc. The grid lead is detachable so that for grounded-grid operation, complete external shielding may be used between plate and filament circuits.

**GENERAL CHARACTERISTICS**

**ELECTRICAL**

Filament: Thoriated tungsten	
Voltage - - - - -	7.5 volts
Current - - - - -	48 amperes
Maximum starting current - - - - -	100 amperes
Amplification Factor (Average) - - - - -	20
Direct Interelectrode Capacitances (Average)	
Grid-Plate - - - - -	20 $\mu\mu\text{fd.}$
Grid-Filament - - - - -	48 $\mu\mu\text{fd.}$
Plate-Filament - - - - -	1.2 $\mu\mu\text{fd.}$
Transconductance ( $i_b=830 \text{ ma.}, E_b=3000 \text{ v.}$ ) - - - - -	20,000 $\mu\text{mhos}$

**MECHANICAL**

Cooling - - - - -	Forced air <sup>1</sup>
Maximum Overall Dimensions:	
Length - - - - -	10 inches
Diameter - - - - -	4.25 inches
Net Weight - - - - -	7.5 pounds
Shipping Weight (Average) - - - - -	17 pounds



**RADIO FREQUENCY POWER AMPLIFIER OR OSCILLATOR**

(Conventional Neutralized Amplifier)

Class-C Telegraphy (Key-down conditions, per tube)

MAXIMUM RATINGS (Frequencies below 50 Mc.)

D-C PLATE VOLTAGE - - - - -	5000 MAX. VOLTS
D-C PLATE CURRENT - - - - -	2.0 MAX. AMPS
PLATE DISSIPATION <sup>1</sup> - - - - -	2500 MAX. WATTS
PLATE COOLER CORE TEMPERATURE - - - - -	150 MAX. °C
GRID DISSIPATION - - - - -	150 MAX. WATTS

**TYPICAL OPERATION**

D-C Plate Voltage - - - - -	3500	4000	5000	volts
D-C Grid Voltage - - - - -	-420	-360	-400	volts
D-C Plate Current - - - - -	1.8	1.6	2	amps
D-C Grid Current - - - - -	500	425	475	ma.
Peak R-F input Voltage - - - - -	735	630	710	volts
Driving Power (approx.) - - - - -	325	238	338	watts
Grid Dissipation - - - - -	120	88	148	watts
Plate Input - - - - -	6300	6400	10000	watts
Plate Dissipation - - - - -	1300	1400	2500	watts
Plate Power Output - - - - -	5000	5000	7500	watts

<sup>1</sup> A minimum flow of 120 cubic feet of air per minute must be passed through the plate cooler. The pressure drop across the cooler at this flow equals 1.6" of water. A minimum air flow of 6 cubic feet per minute must also be directed toward the filament stem structure, be-

tween the inner and outer filament conductors. Cooling air in the above quantities must be supplied to both plate cooler and filament seals before applying filament voltage, and should be continued for five minutes after the filament power is removed.

