

TENTATIVE DATA



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.

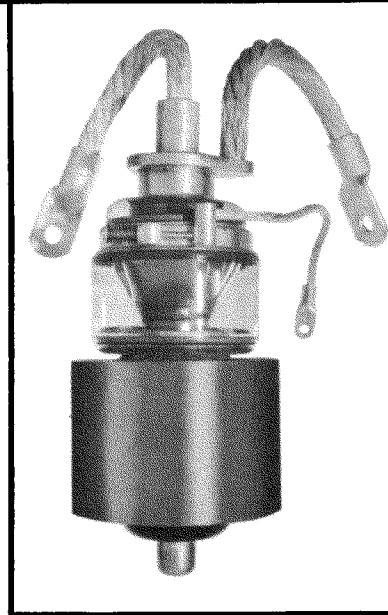
GENERAL CHARACTERISTICS

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 μmhos |

MECHANICAL

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



RADIO FREQUENCY POWER AMPLIFIER

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 ¹ - - - - - | 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 |

¹ 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.

