

FEDERAL POWER TRIODE Type F-6400 6 Kilowatts Plate Dissipation



GENERAL DATA

DESCRIPTION:

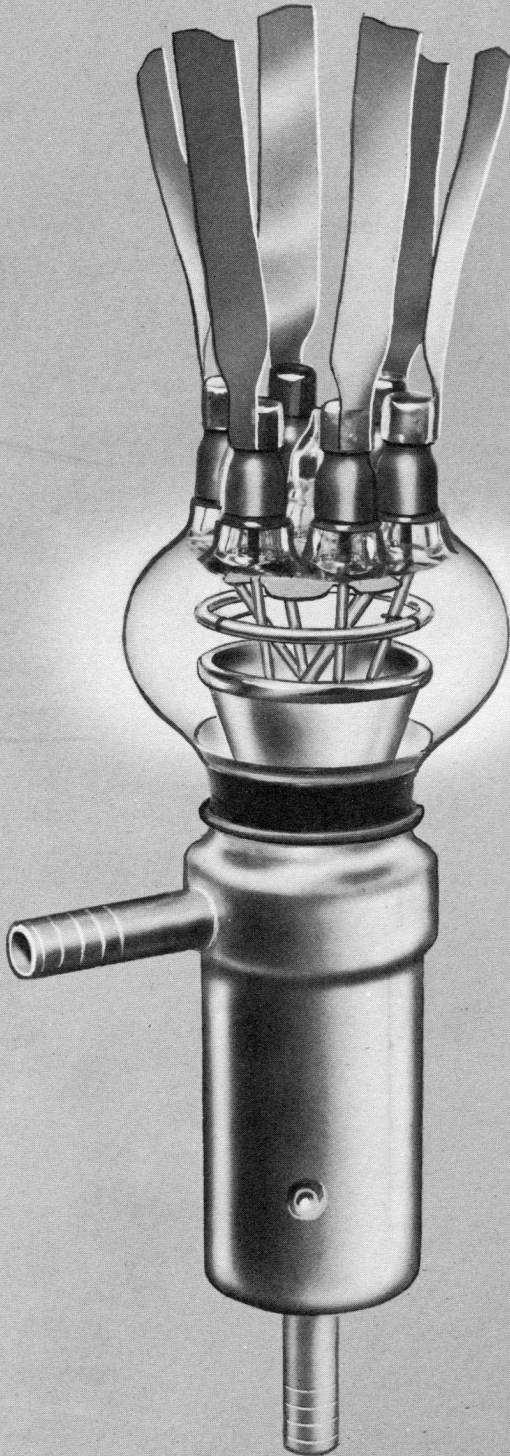
Federal's Type F-6400 is a three-electrode tube designed for use as a modulator, R-F amplifier and oscillator. The tube has an integral water jacket and is capable of dissipating 6 KW during continuous commercial service. The cathode is a thoriated tungsten filament. Maximum ratings apply up to 30 megacycles. Operation up to 50 megacycles is permissible at reduced ratings.

Electrical:

| | |
|------------------------------------------------------------------------|-----------------------|
| ▶ Filament Voltage | 13 Volts |
| ▶ Filament Current | 36 Amperes |
| ▶ Amplification Factor, $E_c = -200 \text{ V}, I_b = 0.2 \text{ A}$ | 25 |
| ▶ Interelectrode Capacitances | |
| Grid-Plate | 13.4 $\mu\mu\text{f}$ |
| Grid-Filament | 15.0 $\mu\mu\text{f}$ |
| Plate-Filament | 1.8 $\mu\mu\text{f}$ |

Mechanical:

| | |
|------------------------------|----------------------|
| ▶ Mounting Position | Vertical, Anode Down |
| ▶ Type of Cooling— | Water and Forced Air |
| ▶ Required Water Flow | |
| Plate Dissipation | 2 4 6 KW |
| Minimum Water Flow | .5 2 3.5 GPM |
| Pressure Drop | .1 1 2 PSI |
| ▶ Maximum Glass Temperature | 180° C |
| ▶ Net Weight, Approximate | 1 1/4 Pounds |



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| Maximum Ratings vs. Operating Frequency | 30 | 50 |
|-----------------------------------------------------------|-----|---------------|
| Frequency | 30 | 50 Megacycles |
| Percentage of Maximum Rated Plate Voltage and Plate Input | 100 | 75 Per Cent |
| Class C—Telegraphy | 100 | 75 Per Cent |

Maximum Ratings and Typical Operating Conditions

RADIO-FREQUENCY POWER AMPLIFIER AND OSCILLATOR—CLASS C TELEGRAPHY

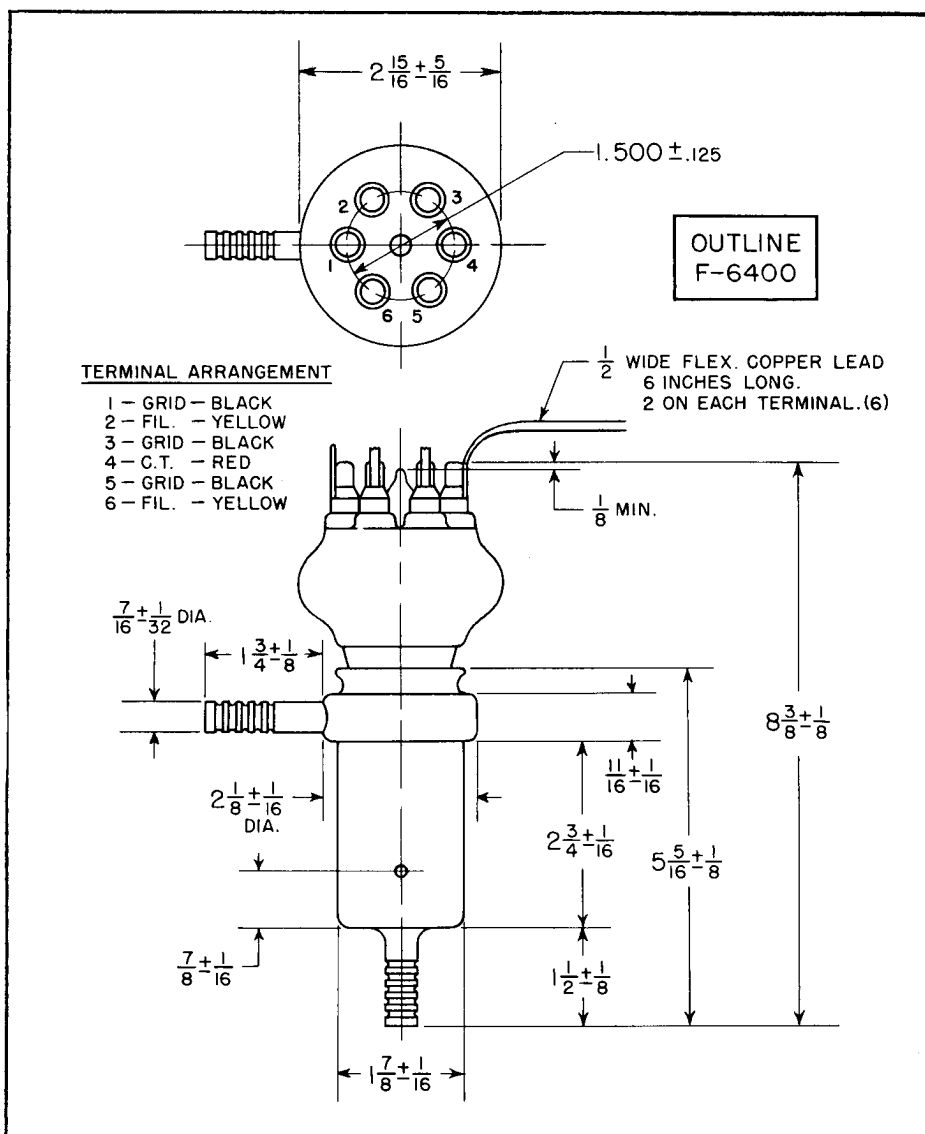
(Key down conditions per tube without amplitude modulation)

Maximum Ratings, Absolute Values

| | |
|-------------------|--------------|
| DC Plate Voltage | 9,200 Volts |
| DC Grid Voltage | —1,500 Volts |
| DC Plate Current | 2.0 Amperes |
| DC Grid Current | .2 Amperes |
| Plate Input | 18 Kilowatts |
| Plate Dissipation | 6 Kilowatts |

Typical Operation

| | |
|--------------------------|--------------|
| DC Plate Voltage | 9,000 Volts |
| DC Grid Voltage | —800 Volts |
| Peak R-F Grid Voltage | 1,510 Volts |
| DC Plate Current | 2.0 Amperes |
| DC Grid Current, approx. | .150 Amperes |
| Driving Power, approx. | 225 Watts |
| Power Output | 12 Kilowatts |

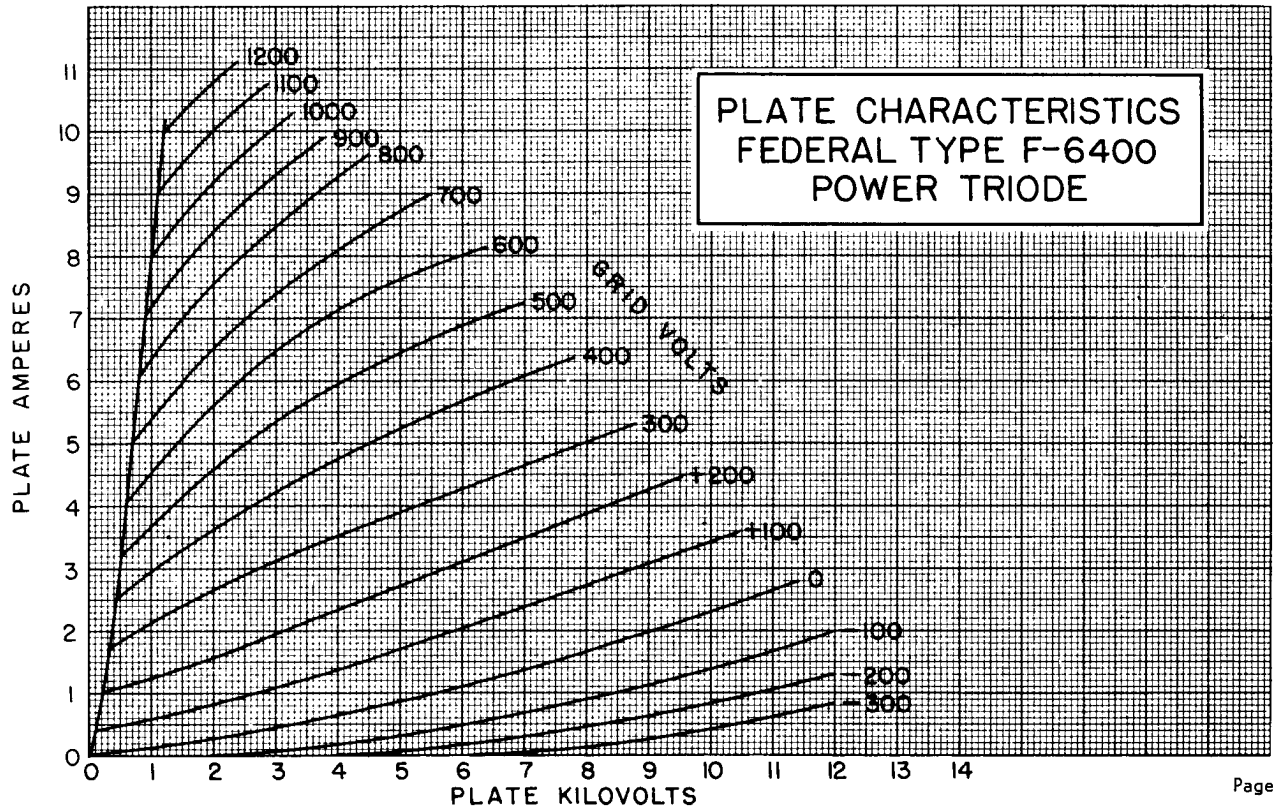
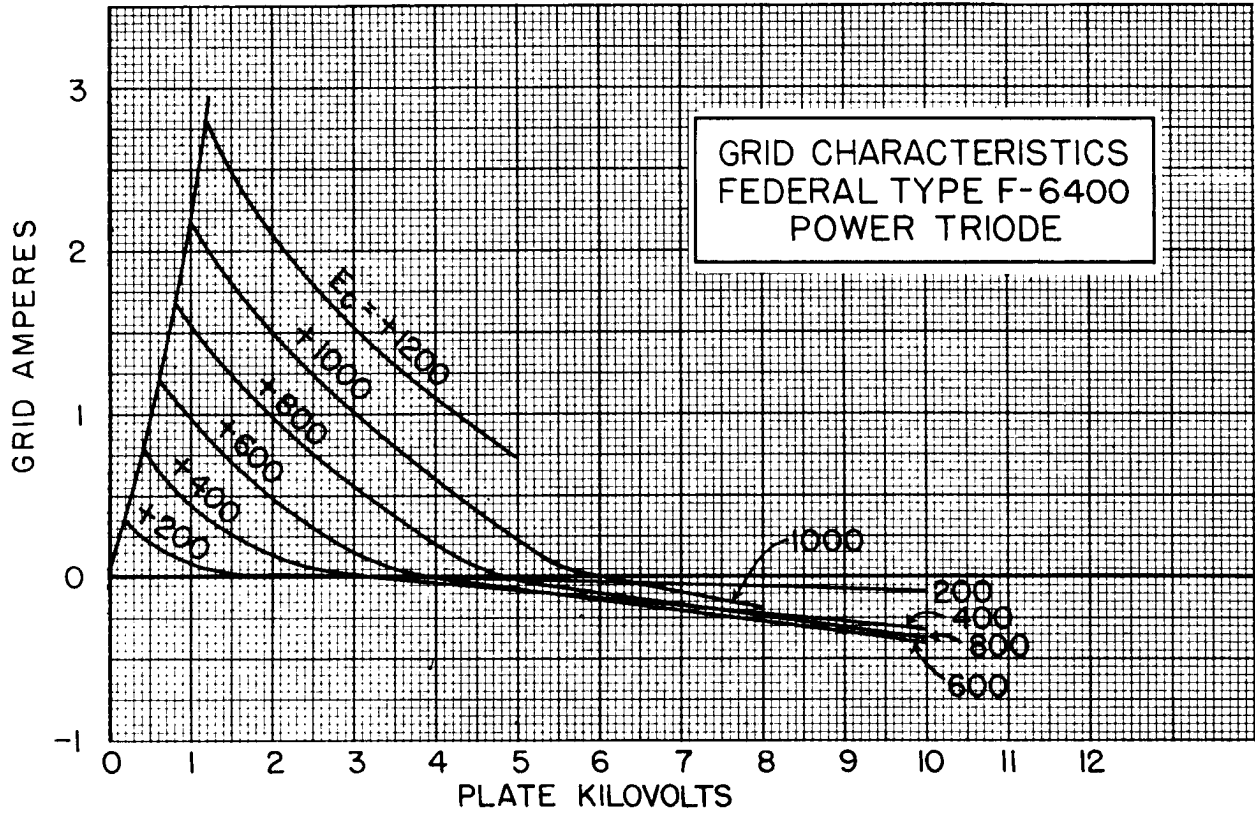


High efficiency radiator allows reduced blower cost in new equipment design.

FEDERAL POWER TRIODE

Type F-6400

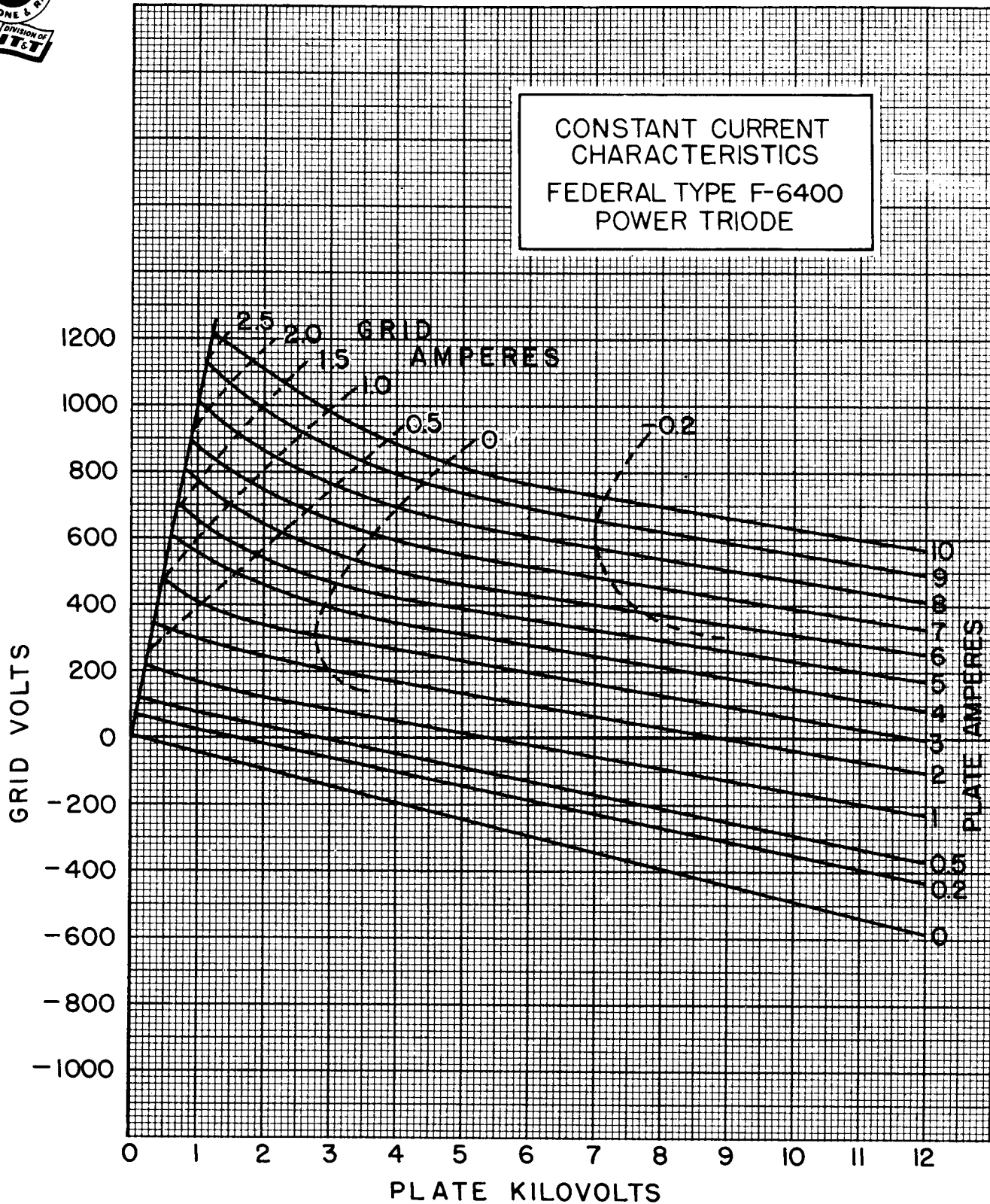
6 Kilowatts Plate Dissipation



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6 Kilowatts Plate Dissipation

Grid and Filament leads attached for convenience of equipment designers.



Federal Telephone and Radio Company

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