

FEDERAL POWER TRIODE

Type F-6400

6 Kilowatts Plate Dissipation



GENERAL DATA

DESCRIPTION:

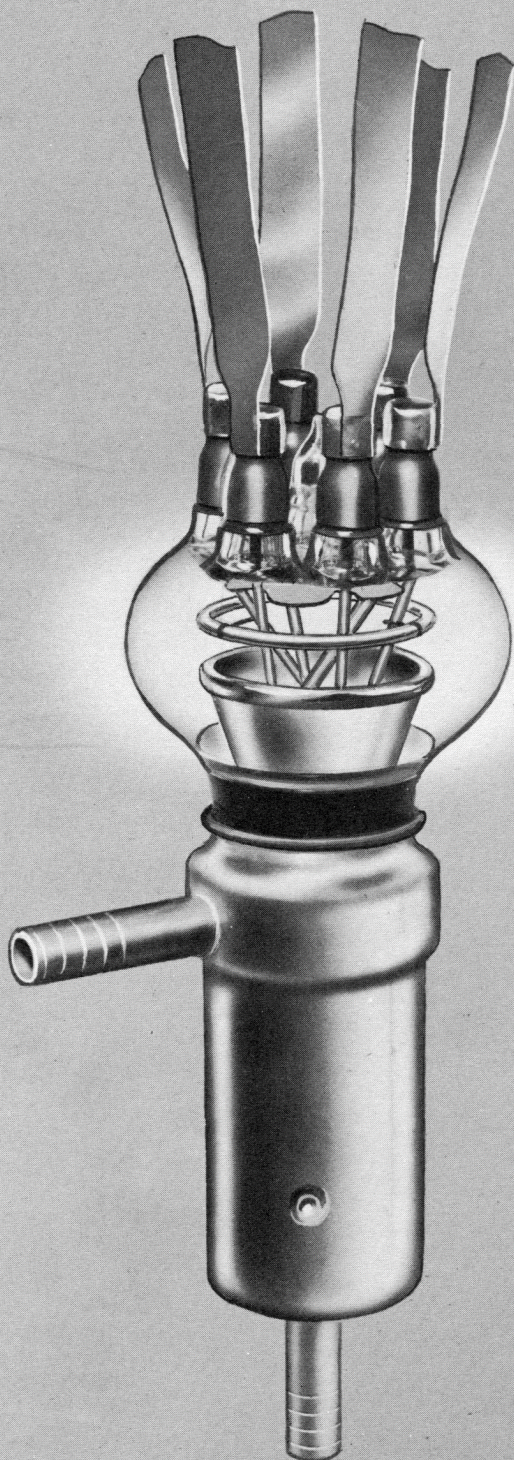
Federal's Type F-6400 is a three-electrode tube designed for use as a modulator, R-F amplifier and oscillator. The tube has an integral water jacket and is capable of dissipating 6 KW during continuous commercial service. The cathode is a thoriated tungsten filament. Maximum ratings apply up to 30 megacycles. 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 μf
Grid-Filament	15.0 μf
Plate-Filament	1.8 μf

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		
Frequency	30	50 Megacycles
Percentage of Maximum Rated Plate Voltage and Plate Input		
Class C—Telegraphy	100	75 Per Cent

Maximum Ratings and Typical Operating Conditions

RADIO-FREQUENCY POWER AMPLIFIER AND OSCILLATOR—CLASS C TELEGRAPHY

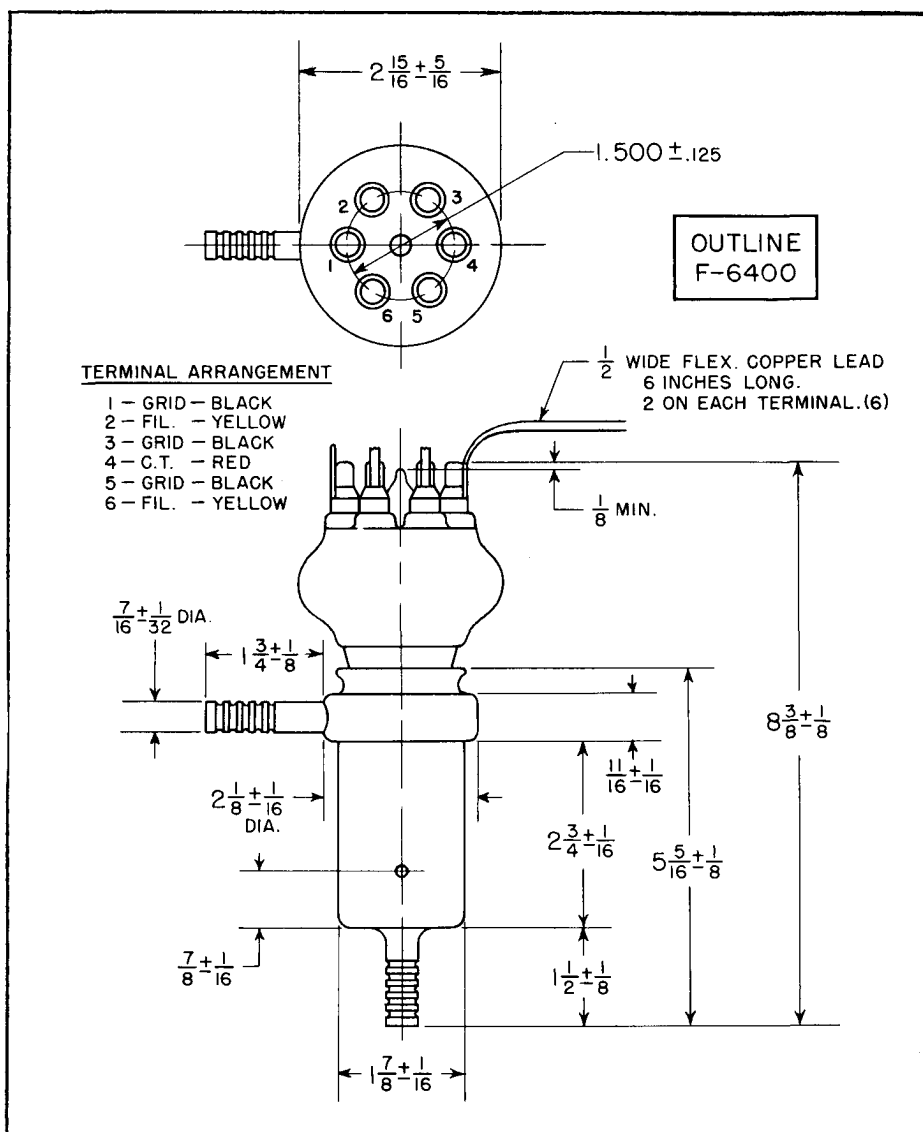
(Key down conditions per tube without amplitude modulation)

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

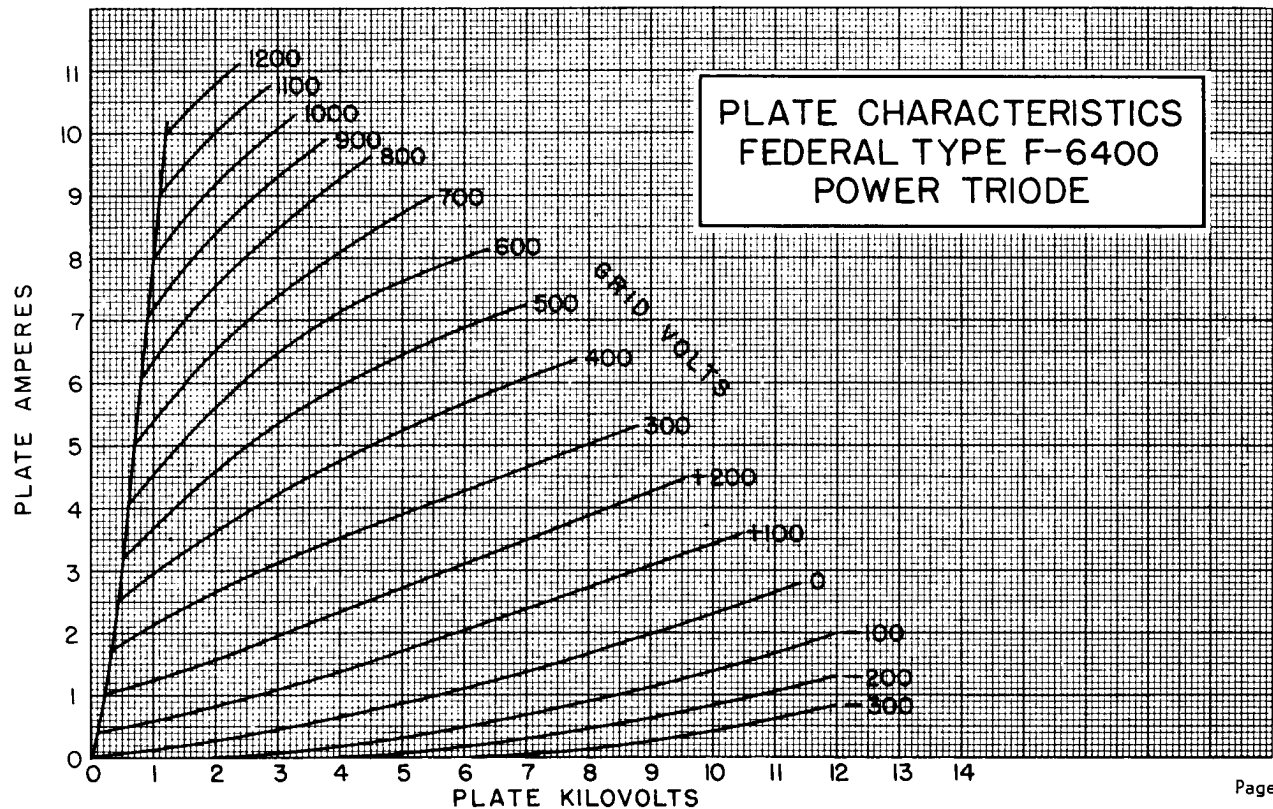
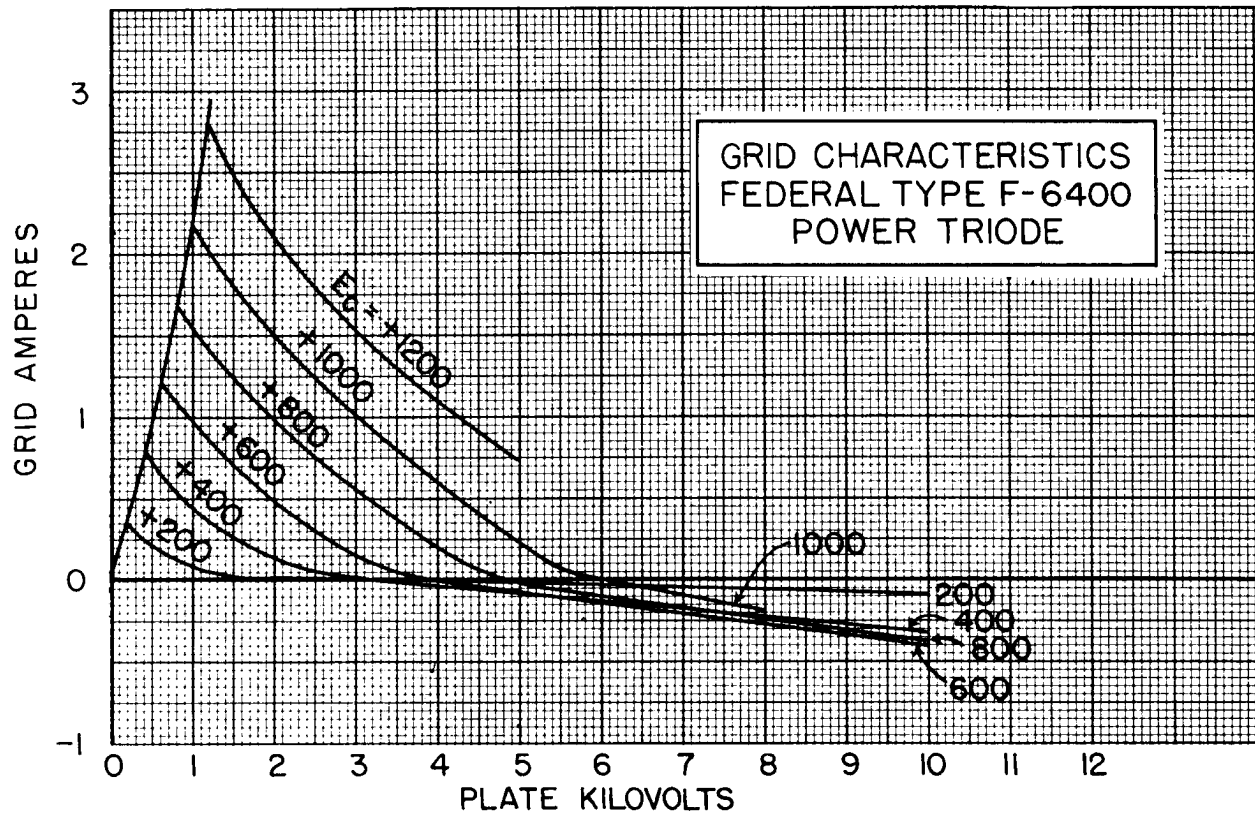


High efficiency radiator allows
reduced blower cost in new
equipment design.

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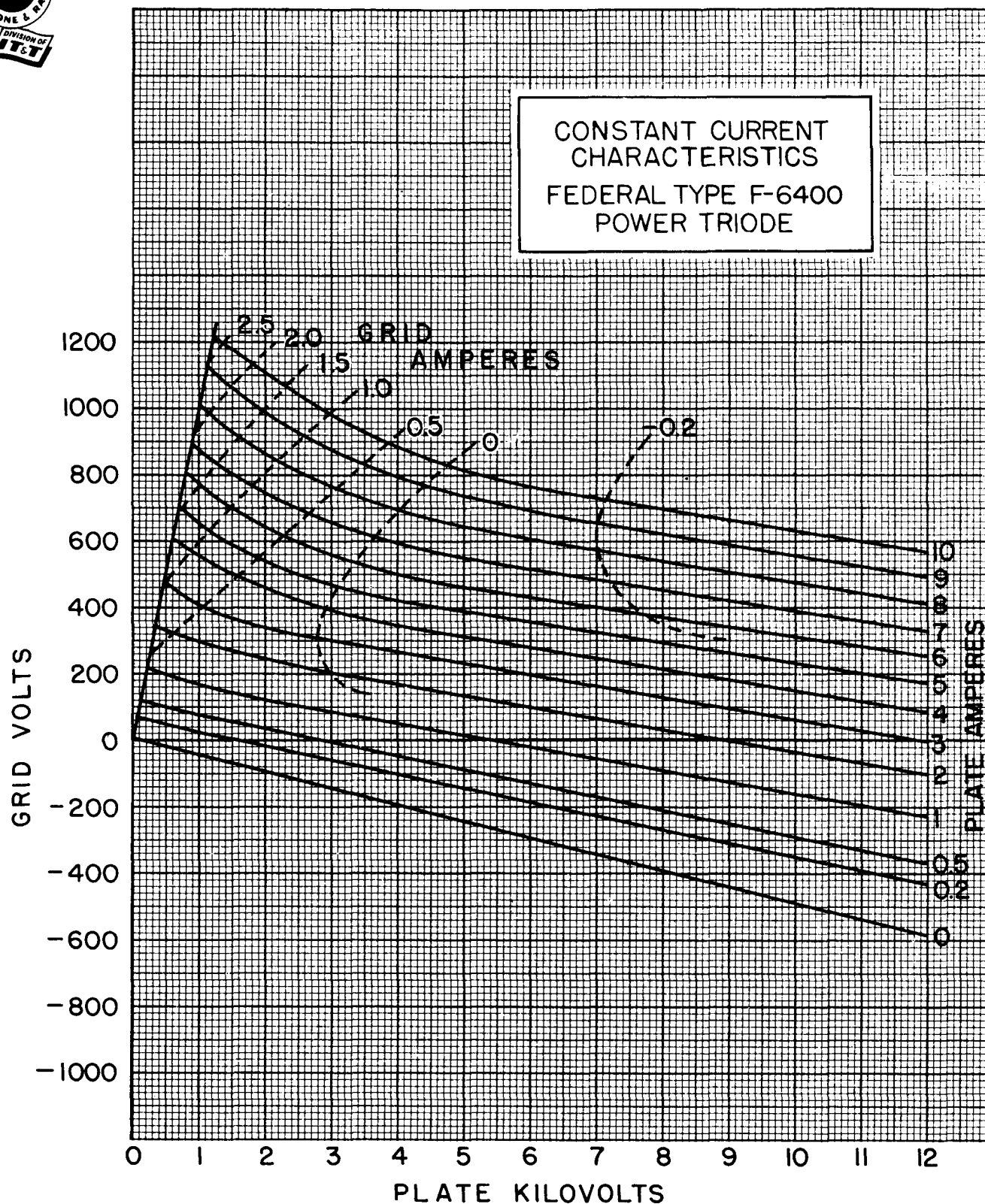


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Grid and Filament leads attached for convenience of equipment designers.



Federal Telephone and Radio Company

100 Kingsland Road VACUUM TUBE DEPARTMENT Clifton, New Jersey