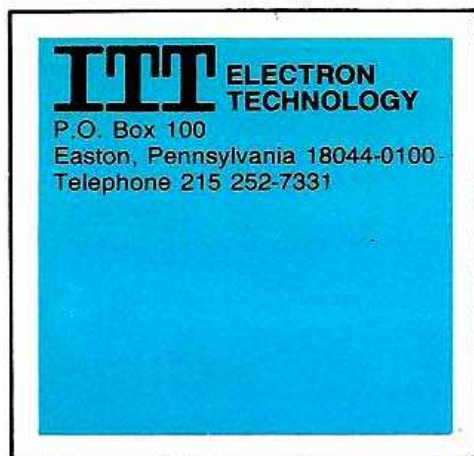




F-6800A

POWER TRIODE

DESCRIPTION:

The F-6800A is a three electrode tube designed for use as an industrial oscillator. The anode is capable of dissipating 20 kilowatts during Continuous Commercial Service. Cooling is accomplished by circulating water. The cathode is a thoriated tungsten filament and may be operated on D-C or single phase A-C. Maximum ratings apply up to 22.5 megacycles and operation up to 50 megacycles is permissible at reduced ratings.

GENERAL CHARACTERISTICS

Electrical

Filament Voltage	7.5	Volts
Filament Current	107	Amperes
Filament Starting Current	300	Amperes Maximum
Filament Cold Resistance	0.01	Ohms
Filament Heating Time	15	Seconds Minimum
Amplification Factor		
$E_C = -200$ v.; $I_B = 1.25$ amps	19.5	
Direct Inter-Electrode Capacitances		
Grid-Plate	26	μ pf
Grid-Filament	25	μ pf
Plate-Filament	1.0	μ pf

Mechanical

Mounting Position	Vertical, Anode Down
Type of Cooling	Water and Forced Air
Water Flow on Anode	8 GPM
Maximum Outgoing Water Temperature	70°C
Air Flow on Bulb (Note 1)	50 CFM
Glass Temperature (at hottest part)	180°C Maximum
Net Weight (Approximate)	6 Pounds

Note 1: Operation at frequencies above 15 megacycles may require air flow onto the dish center in order to hold the temperature of the seals and dish below 180°C. The blower required should deliver 50 cfm through a 3" diameter nozzle.

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

Radio-Frequency Power Amplified and Oscillator - Class C Telegraphy
 (Key down conditions per tube without Amplitude Modulation) (Note 2)

Maximum CCS Ratings, Absolute Values

D-C Plate Voltage	15,000	Max. Volts
D-C Grid Voltage	-1,800	Max. Volts
D-C Plate Current	3.5	Max. Amperes
D-C Grid Current	0.50	Max. Amperes
Plate Input	45	Max. Kilowatts
Plate Dissipation	20	Max. Kilowatts

Note 2: Modulation essentially negative may be used if the positive peak of the envelope does not exceed 115 percent of the carrier conditions.

Typical Operation

D-C Plate Voltage	12,500	Volts
D-C Grid Voltage	-1,200	Volts
Peak R-F Grid Voltage	2,100	Volts
D-C Plate Current	3.5	Amperes
D-C Grid Current (Approximate)	0.45	Amperes
Driving Power (Approximate)	900	Watts
Power Output (Approximate)	33	Kilowatts

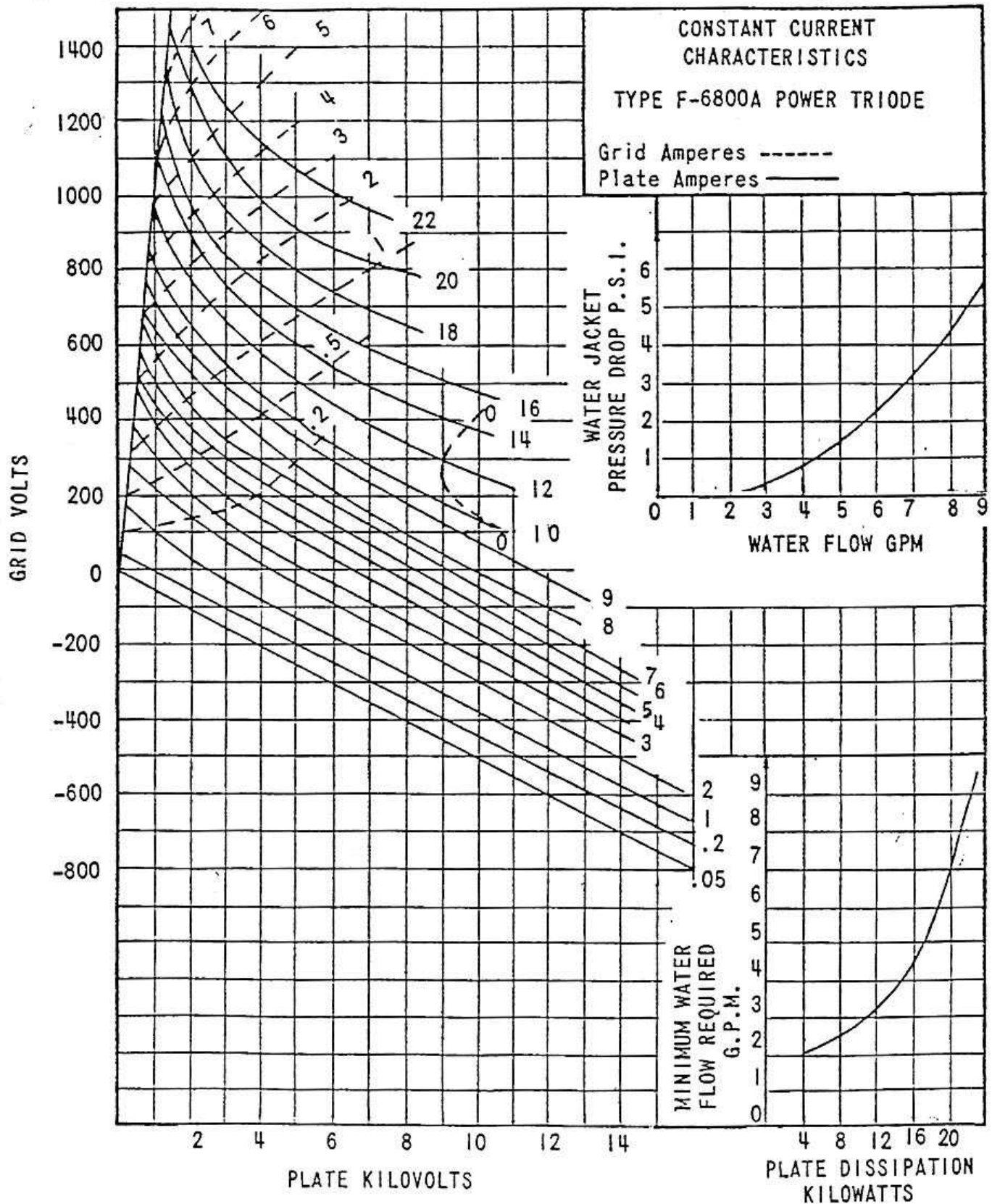
RATINGS VERSUS FREQUENCY

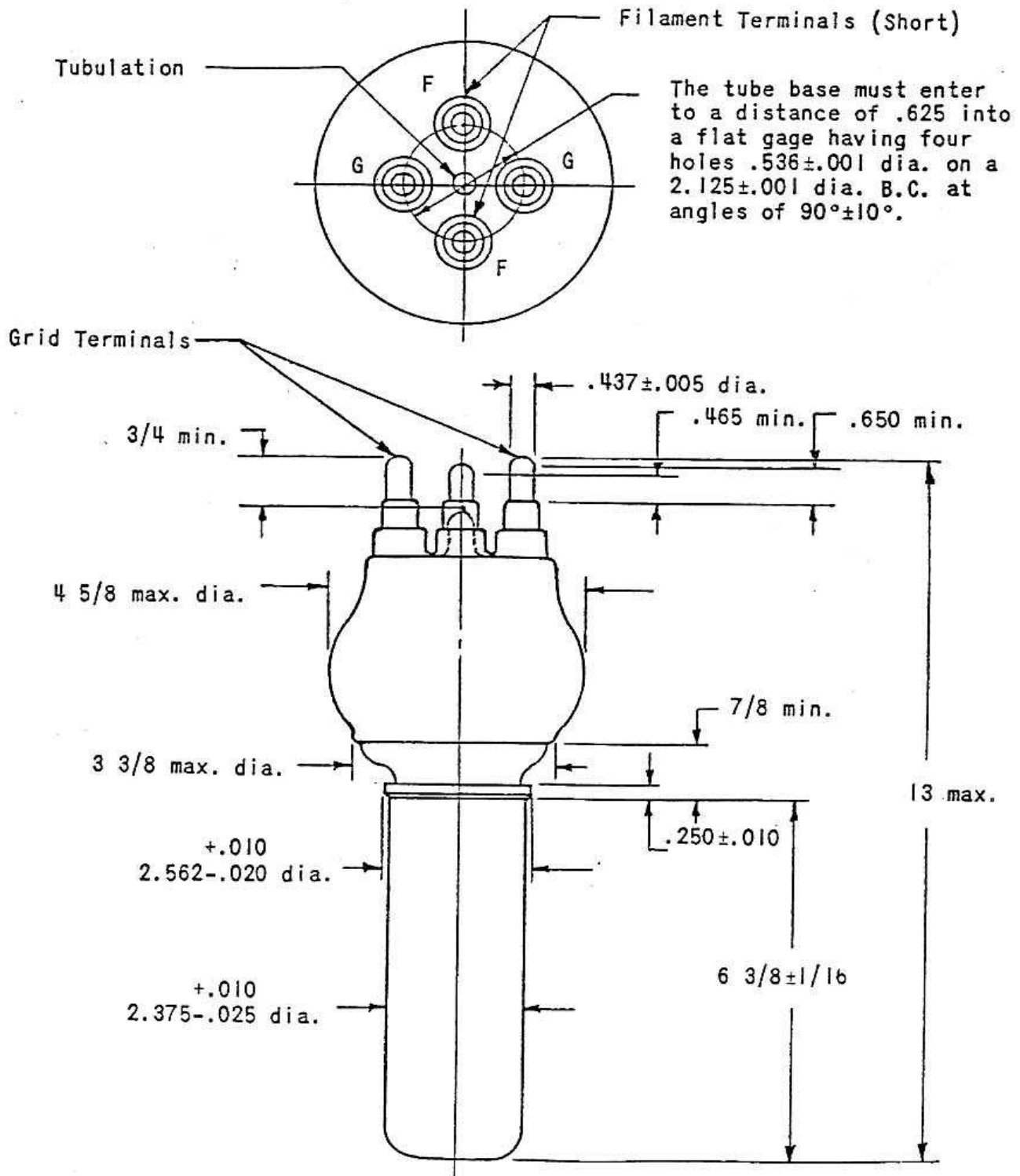
Maximum ratings apply up to 22.5 megacycles. The tube may be operated at higher frequencies provided the maximum values of plate voltage and power input are reduced according to the tabulation below (other maximum ratings are the same as shown above). Special attention should be given to adequate ventilation of the bulb at these frequencies.

Frequency	27.5	30	50	Megacycles
Percentage of Maximum Rated Plate Voltage and Plate Input	100	80	50	Percent

Additional information for specific applications can be obtained from the:

ITT ELECTRON TECHNOLOGY DIVISION
 Applications Department
 P.O. Box 100
 Easton, Pennsylvania 18042





ACCESSORIES

