ITT ELECTRON TECHNOLOGY
P.O. Box 100
Easton, Pennsylvania 18044-0100
Telephone 215 252-7331

F-6801
POWER TRIODE

DESCRIPTION:

The F-6801 is a three electrode tube designed for use as an industrial oscillator. The anode is capable of dissipating 10 kilowatts during Continuous Commercial Service. Cooling is accomplished by forced air. The cathode is a thoriated tungsten filament of free-hung design 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	Maximum Amperes
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	27	µµf
Grid-Filament	25	µµf
Plate-Filament	1.25	µµf

Mechanical

Mounting Position ..... Vertical, Anode Down

Air Flow

Through Radiator

The tabulation listed below indicates the required flow of incoming air, through the radiator, for the various plate dissipation values. Cooling air to be applied before the application of filament power and to continue for 3 minutes after removal of filament power.

Percentage of Maximum Rated Plate Dissipation for each Class of Service

	100% Rating	80% Rating	60% Rating	
Air Flow	750	525	350	Min. cfm
Static Pressure	2	1	.45	Inches Water

Radiator Temperature (Measured on the core at end away from incoming air).	200 Max. °C
Glass Temperature (at hottest part), (Note 1)	180 Maximum °C
Net Weight (Approximate)	45 Pounds

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

Radio-Frequency Power Amplifier 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	0.5	Max. Amperes
Plate Input	40	Max. Kilowatts
Plate Dissipation	10	Max. Kilowatts

Typical Operation

D-C Plate Voltage	12,500	Volts
D-C Grid Voltage	-1,200	Volts
Peak R-F Grid Voltage	2,000	Volts
D-C Plate Current	3.0	Amperes
D-C Grid Current (Approximate)	0.43	Amperes
Driving Power (Approximate)	850	Watts
Power Output (Approximate)	28	Kilowatts

Note 1: Operation at frequencies above 15 mc may require air flow on the dish center in order to hold the temperature of the seals and dish below 180°C. This flow may be obtained by deflection of the anode cooling air, or by means of a separate blower supplying 50 cfm through a 3" diameter nozzle.

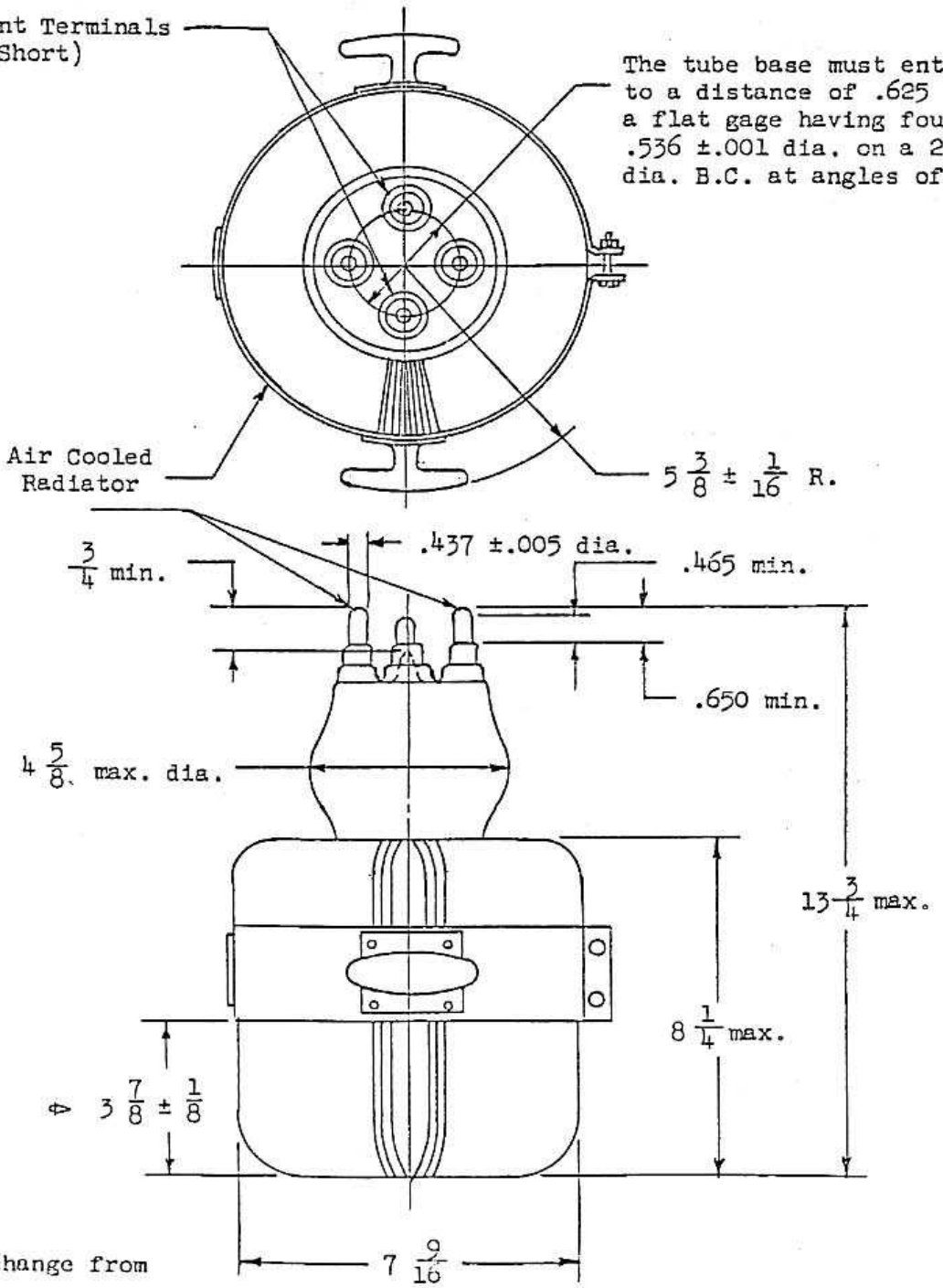
Note 2: Modulation essentially negative may be used if the positive peak of the envelope does not exceed 115 percent of the carrier conditions.

Additional information for specific applications can be obtained from the:

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

ACCESSORIES

Spanner Wrench (2 req'd)	RT-52843
Terminal Connector Assy. (4 req'd)	RT-52578
Air Jacket Type III	RT-53134 (Ordering No.) RT-54485 (Outline Dwg.)



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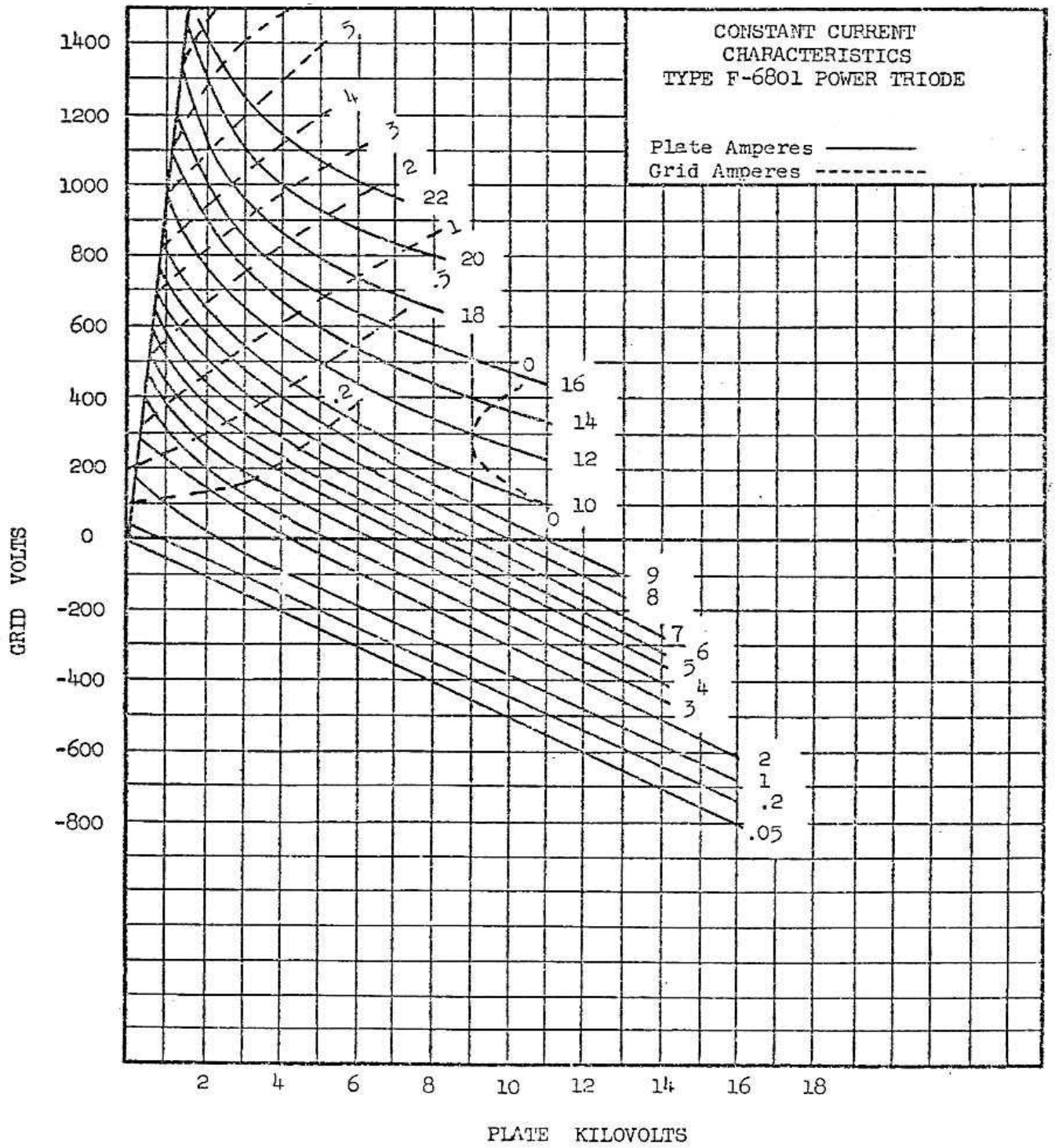

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