

ITT ELECTRON
TECHNOLOGY

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

F-7C25

POWER TRIODE

DESCRIPTION:

The F-7C25 type is a three electrode tube designed for use in industrial applications. The relatively wide spacing between the elements, and the lack of internal insulators make this type meet the severe conditions of radio frequency heating service. The anode is air-cooled, capable of dissipating 2.5 kilowatts. The cathode is a thoriated tungsten filament. Maximum ratings apply up to 30 megacycles.

GENERAL CHARACTERISTICS:

Electrical

Filament Voltage	11	Volts
Filament Current	28	Amperes
Filament Starting Current	56	Amperes
Filament Cold Resistance	0.047	Ohms
Peak Cathode Current	10	Amperes
Amplification Factor, $E_p = 3,000$ Volts, $I_b = 0.200$ Amps	25	
Interelectrode Capacitances		
Grid-Plate	13.2	uuf
Grid-Filament	14.5	uuf
Plate-Filament	1.7	uuf

Mechanical

Mounting Position	Vertical, Anode Down		
Type of Cooling - Forced Air Maximum			
Incoming Air Temperature	45° Centigrade		
Required Air Flow on Anode			
Plate Dissipation (Kilowatts)	2.5	2.0	1.5
Air Flow - Cubic Feet Per Minute	150	120	90
Pressure - Inches Water	2.5	1.6	0.9
Maximum Glass Temperature	150° Centigrade		
Net Weight, Approximate	5 Pounds		

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MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

For Maximum Frequency of 50 Megacycles

RADIO-FREQUENCY POWER AMPLIFIER AND OSCILLATOR-CLASS C TELEGRAPHYMaximum Ratings

DC Plate Voltage	5,000	Volts
DC Grid Voltage	-1,500	Volts
DC Plate Current	1.3	Amperes
DC Grid Current	0.150	Amperes
Plate Input	6.5	Kilowatts
Plate Dissipation	2.5	Kilowatts

Typical Operation

DC Plate Voltage	4,000	4,500	5,000	Volts
DC Grid Voltage	-400	-500	-600	Volts
Peak R-F Grid Voltage	1,000	1,150	1,300	Volts
DC Plate Current	1.0	1.2	1.2	Amperes
DC Grid Current	0.08	0.1	0.13	Amperes
Driving Power, Approximate ...	80	110	160	Watts
Power Output	2.5	3.1	4.0	Kilowatts

PLATE-MODULATED RADIO-FREQUENCY POWER AMPLIFIER-CLASS C TELEPHONE

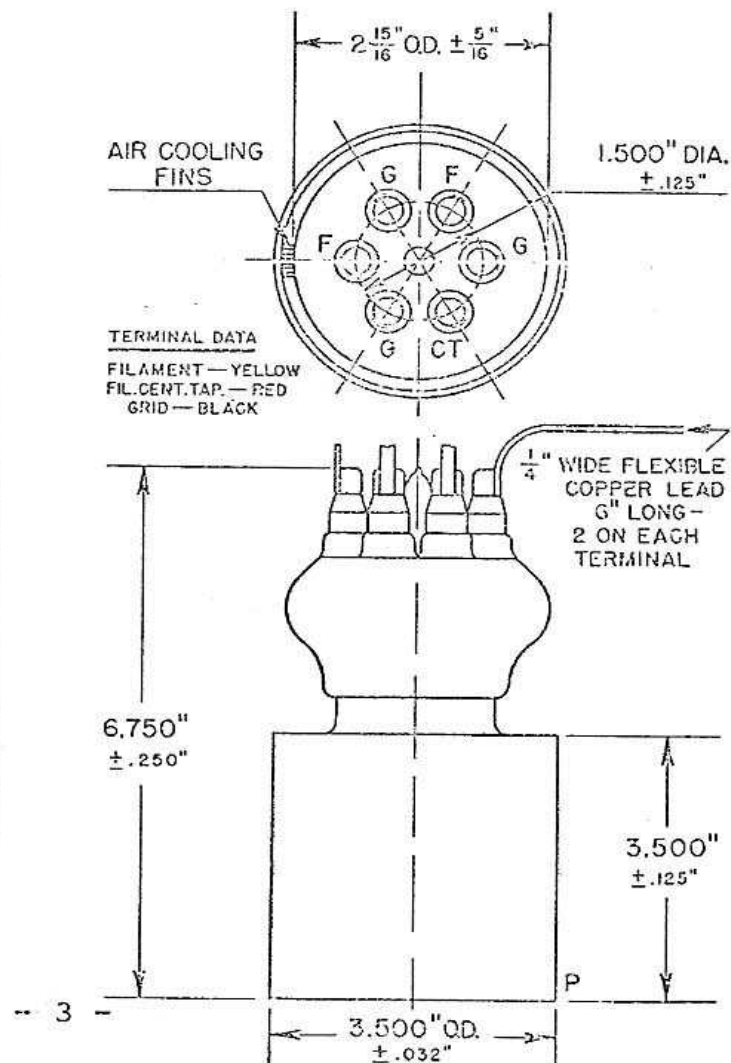
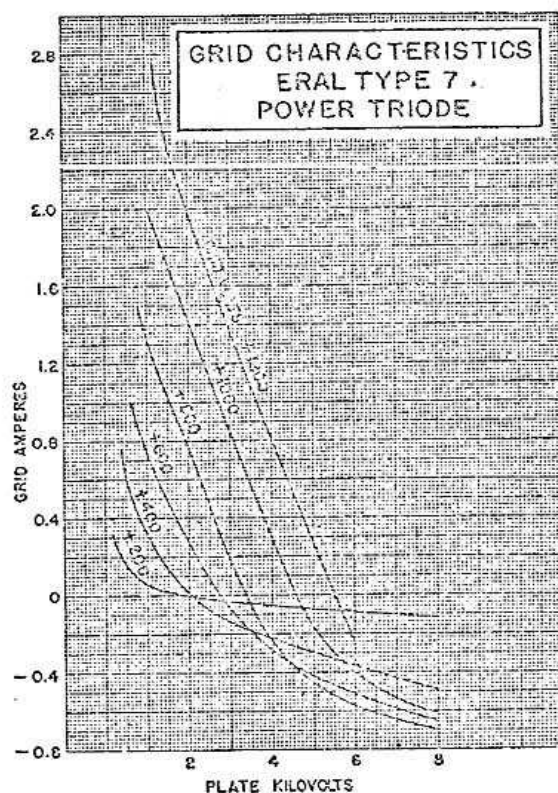
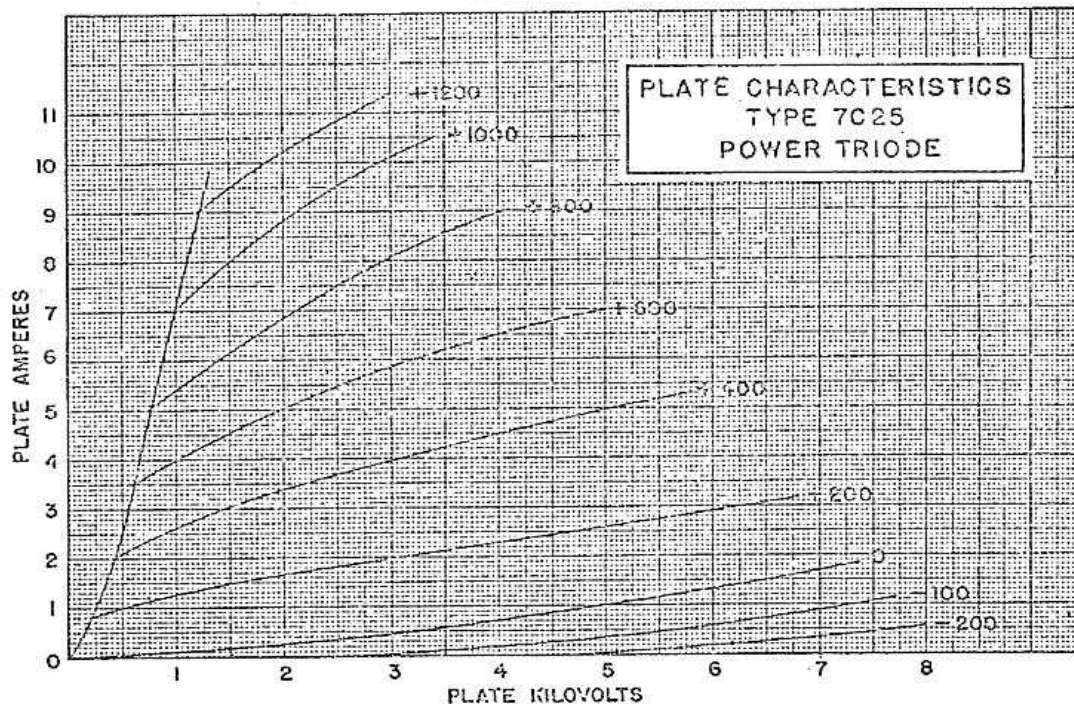
(Carrier conditions per tube for use with maximum modulation factor of 1.0)

Maximum Ratings

DC Plate Voltage	4,000	Volts
DC Grid Voltage	-1,500	Volts
DC Plate Current	1.0	Amperes
DC Grid Current	0.15	Amperes
Plate Input	4.0	Kilowatts
Plate Dissipation	1.6	Kilowatts

Typical Operation

DC Plate Voltage	3,500	Volts
DC Grid Voltage	-500	Volts
Peak R-F Grid Voltage	1,000	Volts
DC Plate Current	0.825	Amperes
DC Grid Current	0.110	Amperes
Driving Power, Approximate ...	100	Watts
Power Output	2	Kilowatts



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