

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

F-8C25N

POWER TRIODE

DESCRIPTION:

The F-8C25N is a low Mu triode designed primarily for use on an audio amplifier or modulator, its electrical characteristics making it particularly suitable for Class AB modulator circuits. The grid is specially processed to inhibit primary and secondary emission over a wide range of grid and plate voltages. The anode is air-cooled and capable of 12 kilowatts dissipation. The cathode is a thoriated tungsten filament. Maximum ratings apply for audio frequency use only.

GENERAL CHARACTERISTICS:

Electrical

Filament Voltage	7.0	Volts
Filament Current	110	Amps
Amplification Factor		
$E_c = -200v$ $I_b = 1.0A$	6	
Direct Inter-Electrode Capacitance		
Grid-Plate	43	uuf
Grid-Filament	53	uuf
Plate-Filament	8	uuf

Mechanical

Mounting Position			
Type of Cooling			
Maximum Incoming Air Temperature .	45°	Centigrade	
Required Air Flow on Anode			
Plate Dissipation - KW	12	9.5	7.0
Air Flow - CFM Minimum	400	287	200
Pressure - Inches of Water	3.5	2.0	1.0
Maximum Glass and Seal Temperature*.	180°	Centigrade	
Weight, Approximate	23	Pounds	
Maximum Radiator Temperature*			
(Measured on the core at the end			
away from incoming air)	200°	Centigrade	

* A temperature sensitive lacquer manufactured by the Tempil Corporation, 132 West 22nd Street, New York, is convenient for this measurement.

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MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONSAudio-Frequency Power Amplifier and Modulator - Class AB₁Maximum Ratings, Absolute Values

DC Plate Voltage	8 KV
Maximum Signal DC Plate Current**	5 Amperes
Maximum Signal Plate Input**	30 KW
Plate Dissipation**	12 KW
Grid Dissipation	500 Watts

** Averaged over any audio frequency cycle of sine wave form.

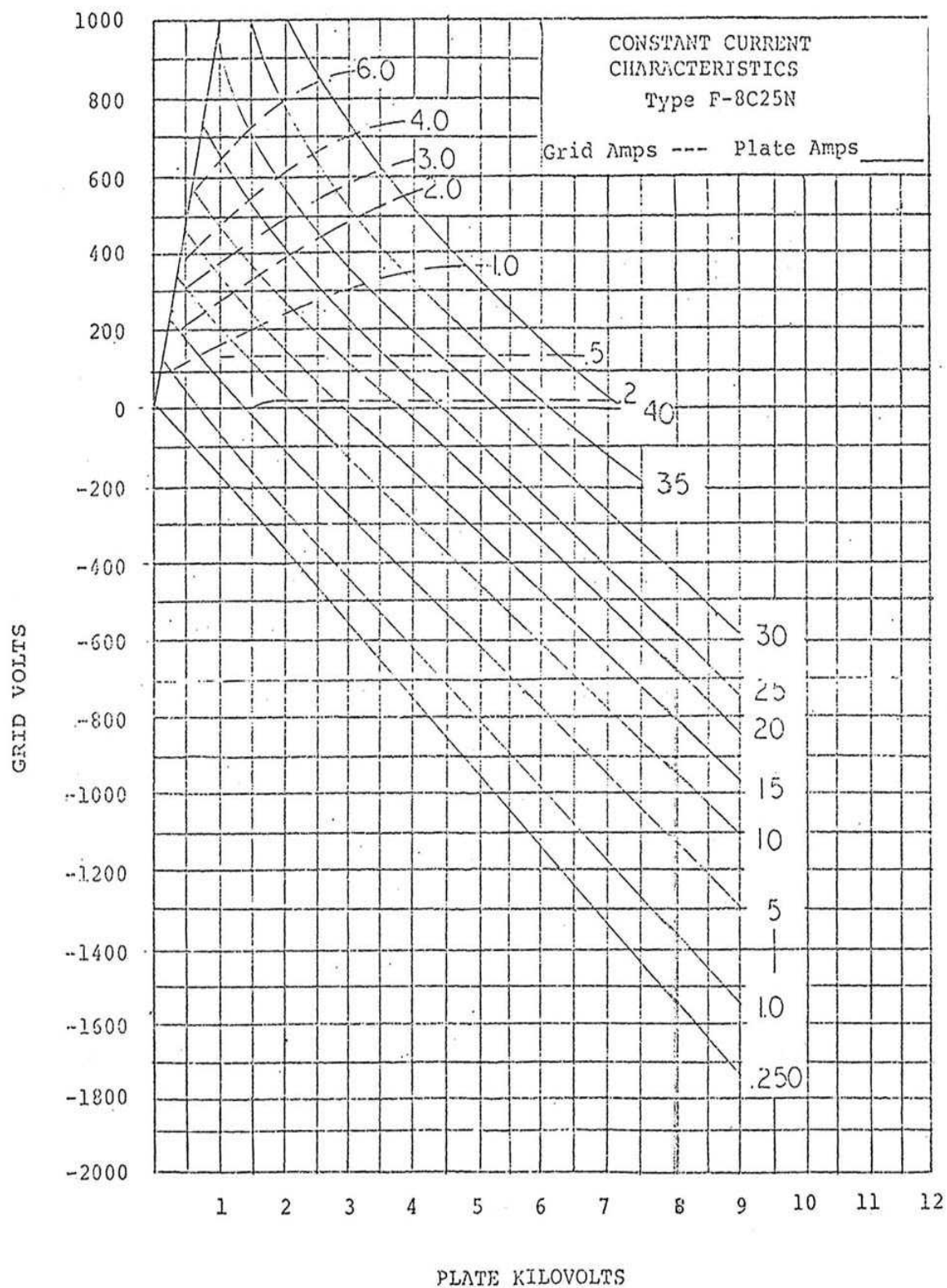
Typical Operation

(Unless otherwise specified, values are for two tubes)

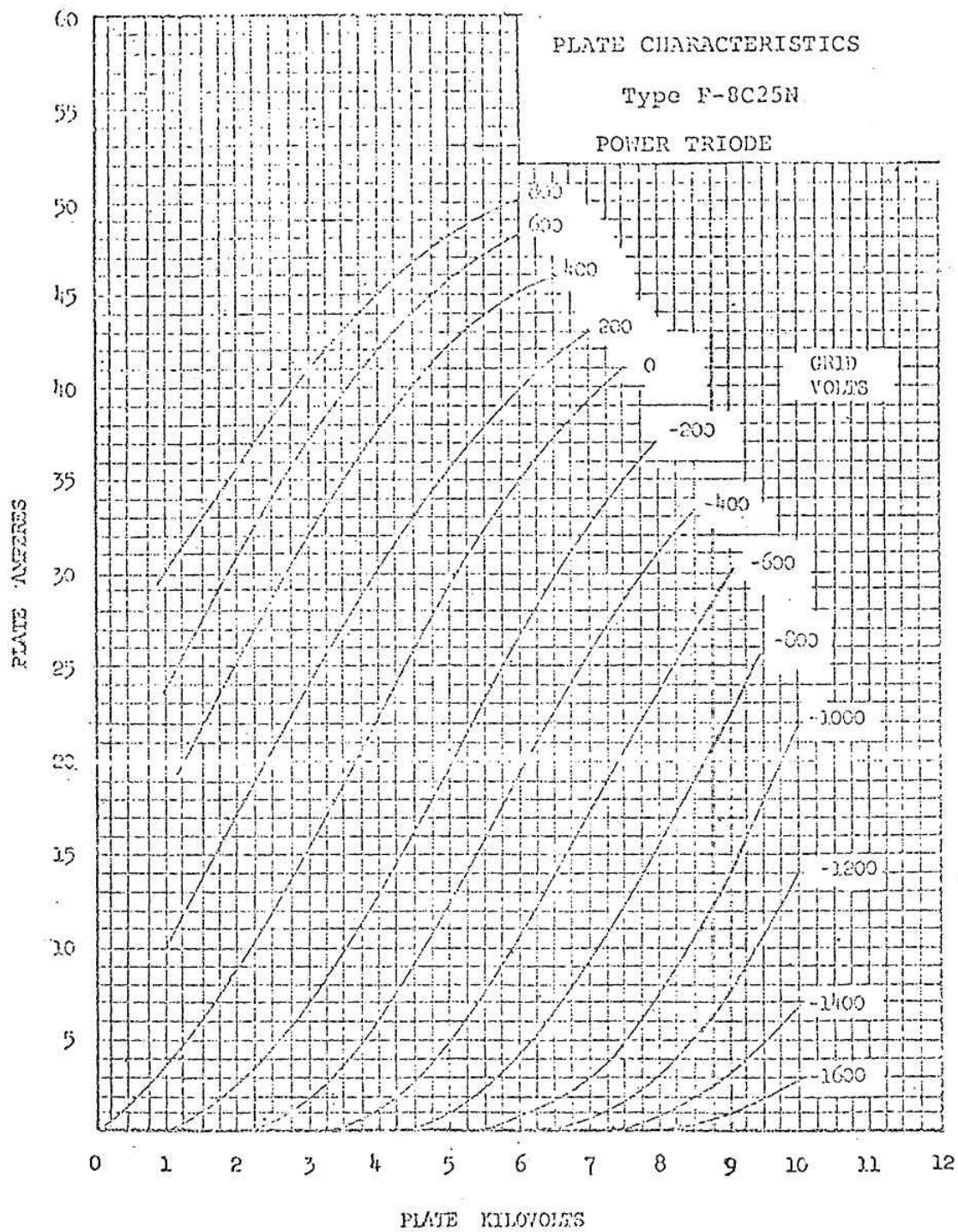
DC Plate Voltage	3750	5000	7000	Volts
DC Grid Voltage	-650	-900	-1400	Volts
Peak A-F Grid-to-Grid Voltage	1260	1760	2740	Volts
Zero Signal DC Plate Current	0.6	0.8	0.5	Amperes
Maximum Signal DC Plate Current ..	2.8	2.6	3.2	Amperes
Effective Load Resistance Plate- to-Plate	2250	3700	4600	Ohms
Maximum Signal Driving Power	0	0	0	Watts
Maximum Signal Power Out	5.4	7.4	13.75	KW

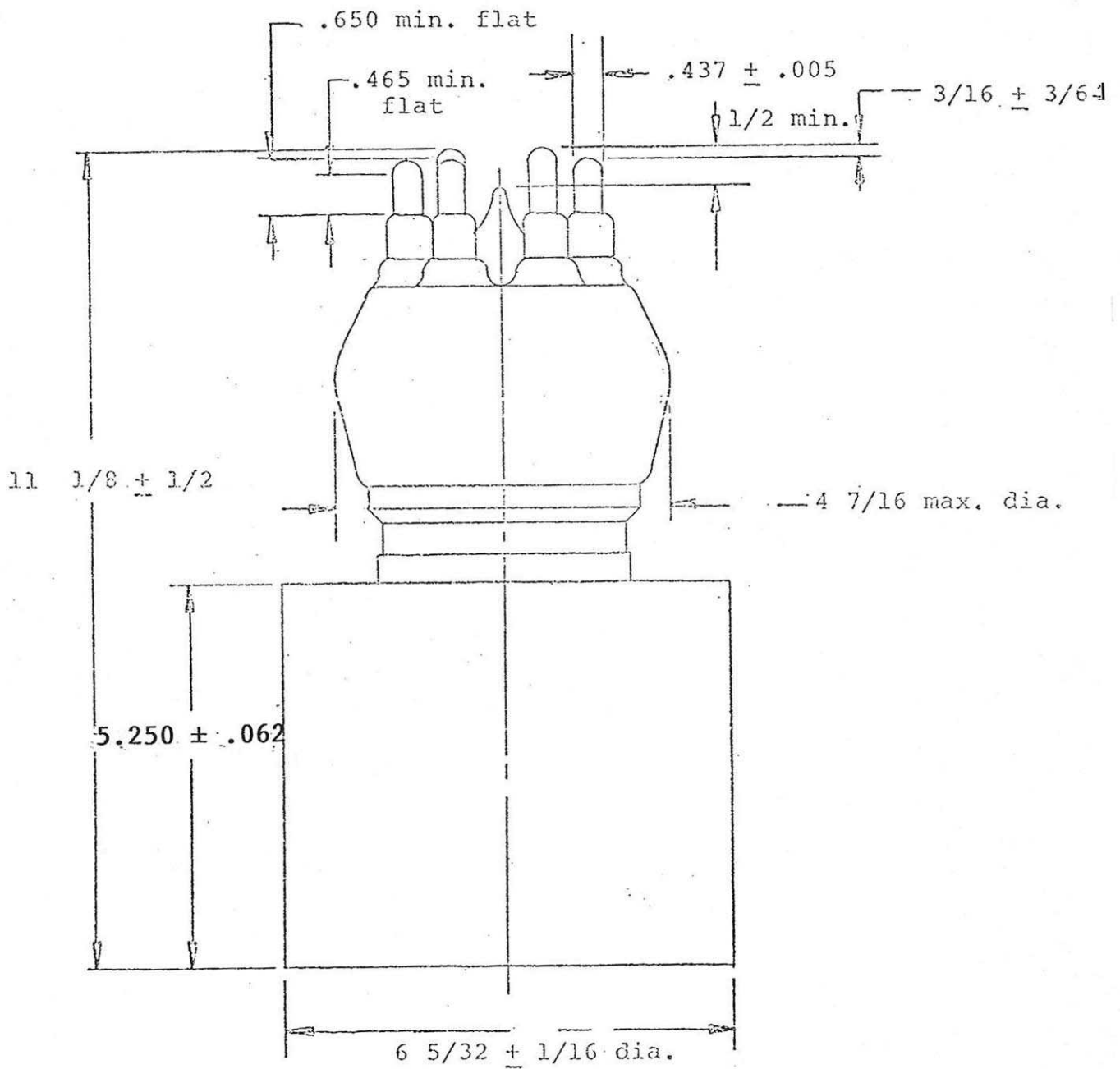
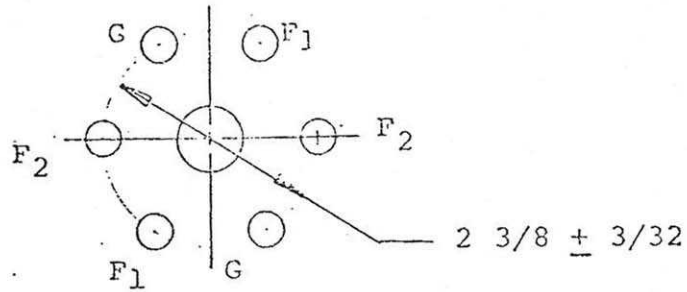
Pulse Service Operations

In pulse amplifier service, it is possible to operate the tube under conditions not permissible in CW operation. Operation up to 11 KV plate voltage is permissible. Because of the wide variety of operating conditions, it is advisable that tube operation recommendations be obtained from our Engineering Department for specific conditions.

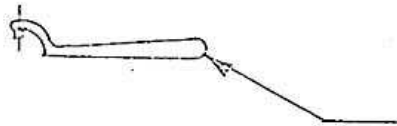


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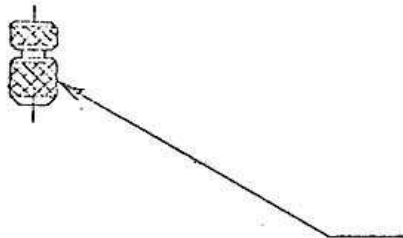




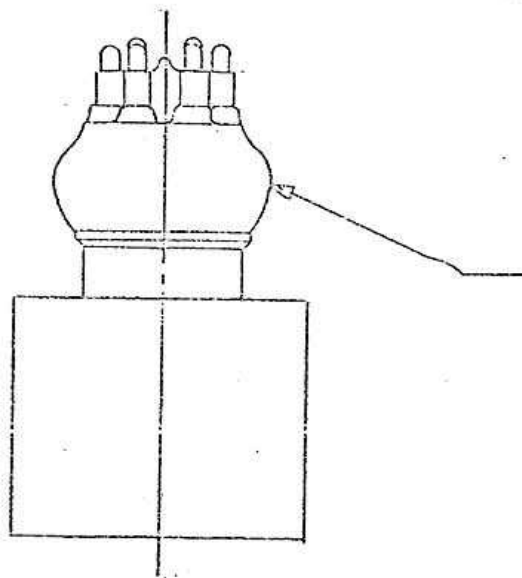
OUTLINE F-8C25N POWER TRIODE



Spanner Wrench
RT-52843-1 (2 required)



Terminal Connector
Assembly (6 required)
RT-53978-1 (Ordering No.)
RT-54529-1 (Outline Dwg.)



Tube Types
F-8C25N

ACCESSORIES