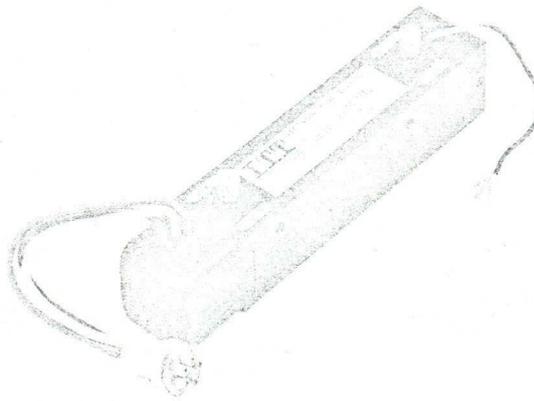


ELECTRON TUBE DIVISION  
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F-2085



## TRAVELING WAVE TUBE

### DESCRIPTION

The tube type F-2085 is a 1.0 kilowatt grid pulsed traveling-wave amplifier having a minimum gain of 34 db over a frequency range of 7.0 to 11.0 GHz. The tube is a helix type TWT, PPM focused and of metal-ceramic construction for rugged environmental applications. The tube is conduction cooled and may be mounted in any position. The maximum operating duty cycle is 1.0 percent at a maximum pulse width of 10 microseconds. The F-2085 has type TNC coaxial RF connectors and an isolated collector for monitoring electron beam transmission.

### RF PERFORMANCE

	Typical Values	Performance Limits
Frequency	7.0-11.0 GHz	7.0-11.0 GHz
Pk Power Output	1200 Watts	1000 Watts Min.
Gain at 1.0 KW Pk Pwr (Note 2)	37 db	34 db Min.
Small Signal Gain (Note 3)	43 db	40 db Min.
Duty Cycle	.01	.01

### ELECTRICAL REQUIREMENTS

	Typical Values			Performance Limits
	Min.	Max.	Units	
Cathode Voltage	-10.5	-9.5	-11.0	KV
Cathode Current	1.5		1.7	Amp Pk
Heater Volts	6.3	6.0	6.6	Volts
Heater Current	3.1	3.0	4.0	Amp
Grid Bias Voltage (Notes 1,2)	-90	-90	-200	Volts
Grid Pulse Voltage (Note 1)	200	160	270	Volts
Grid Capacitance to all	24		25	uuf
Cathode Capacitance to all	23		25	uuf
Grid Current	.200		.400	Amp Pk

### MECHANICAL

RF Connections	TNC
DC Connections	Winchester-PM6P-LSH Type II
Cooling (Note 4)	Conduction
Weight	6.0 lbs.
Mounting Position (Note 5)	Any
Construction	Metal-Ceramic
Focusing	PPM

### ENVIRONMENTAL

Shock	60G, 11 millisecond pulse
Vibration	10G, cycles 5-500
Operating Temperature	0°C to 75°C
Non-Oper. Temperature	-62°C to +75°C
Altitude	Any

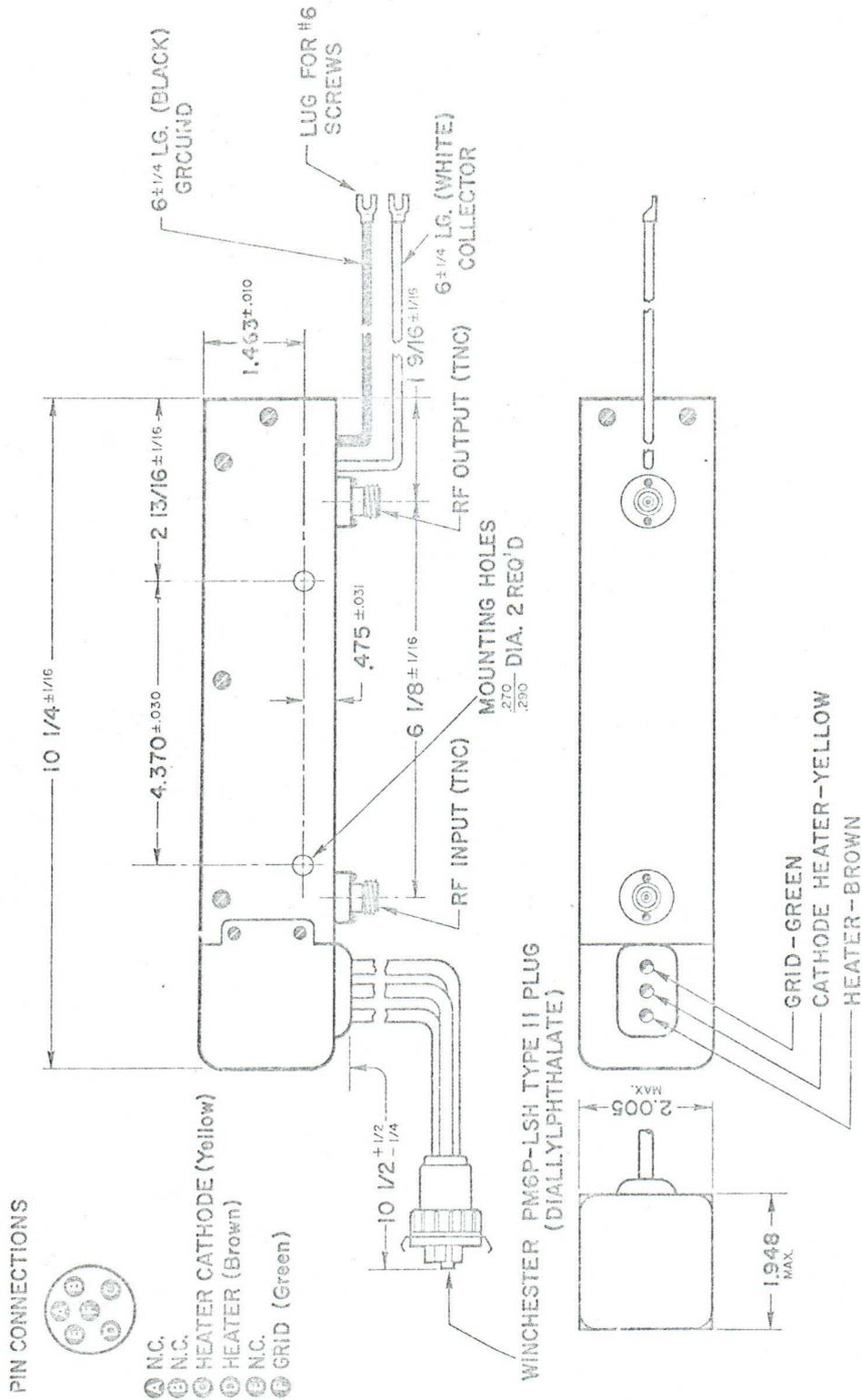
NOTE 1 Voltages with respect to cathode.

NOTE 2 High voltage must NOT be applied in absence of proper Grid bias.

NOTE 3 Modified tubes with small signal and power gains flat to within  $\pm 2$  db can be provided upon special request.

NOTE 4 For proper conduction cooling the tube must be securely fastened to a flat heat sink surface. The use of heat sink compound (Astrodyne Conductive Compound 829 or equivalent) is recommended, and the temperature of the heat sink must NOT exceed 90°C.

NOTE 5 Mounting screws must be of non-magnetic material.



U.K. technical and sales enquiries should be directed to :

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