



General Characteristics

The F-7847 traveling wave tube employing a helix type wave propagating structure is a power amplifier for operation in the 5000 to 6000 Mc frequency range. The power output is approximately 10 watts with a minimum gain of 27 db and the tube is air or water cooled. It is designed for CW operation with a maximum duty cycle of 1.0. The input and output fittings are designed to mate with TNC type connectors. A solenoid provides the magnetic field and is not integral with the tube.

ELECTRICAL DATA GENERAL

Heater Voltage	6.3 ( $\pm 5\%$ ) Volts
Heater Current at 6.3 Volts	2.2 Amps

MECHANICAL DATA GENERAL

Envelope	Metal
Power Connection	Winchester PM6P
R.F. Connectors	TNC Female
Cathode	Unipotential Oxide
Focusing	Electromagnetic
Cooling	Water cooled jacket or air cooled (as specified)
Mounting Position	Any
Weight (approx.)	14 Oz.

ABSOLUTE RATINGS

Voltages shown are with respect to cathode	
Maximum Anode Voltage	3000 Volts
Maximum Control Electrode Voltage	0 Volts
Maximum Collector Dissipation	200 Watts
Maximum Cathode Current	70 mAdc
Maximum Helix Current	2 mAdc

## TYPICAL OPERATION

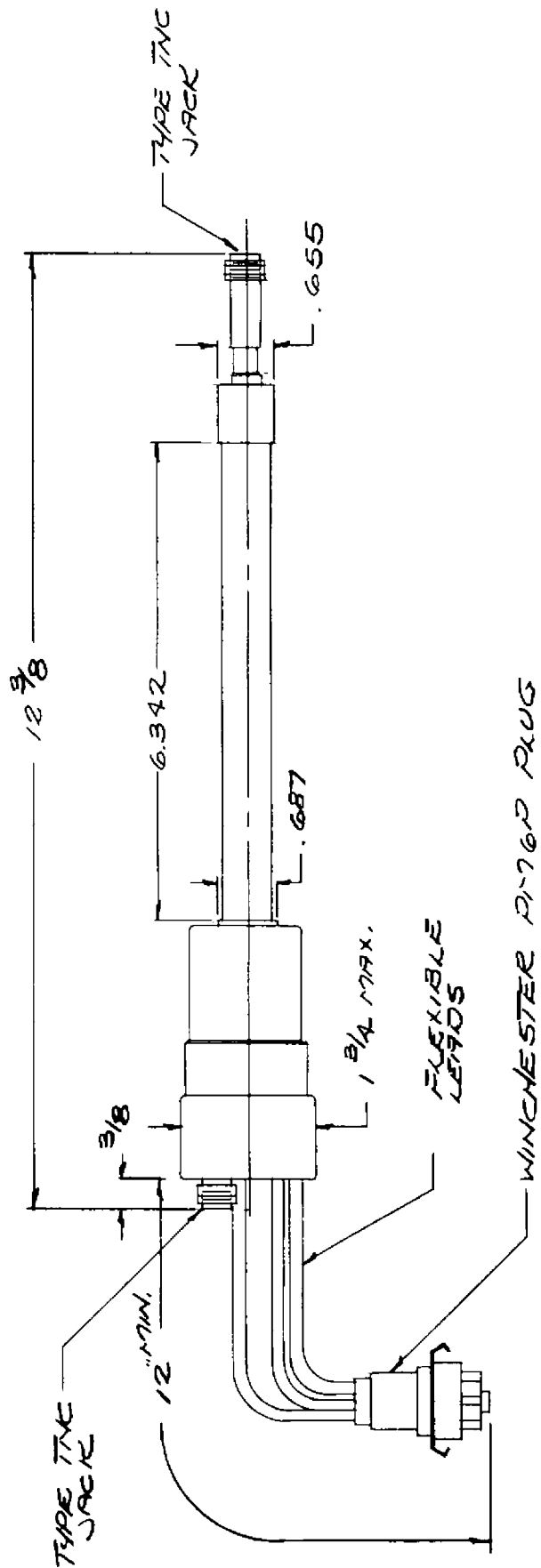
### Conditions:

Magnetic Focusing Field	1200	Gauss
Focus Electrode Voltage	0	Volts
Anode Voltage	2800	Volts

### Characteristics:

	<u>Min.</u>	<u>Max.</u>	
Frequency	5.0	6.0	Gc
Helix Current		2.0	mAdc
Cathode Current		70.0	mAdc
R.F. Power Output	10.0		Watts
Gain	27.0		db
Output VSWR		2.5:1	-





JEDEC TYPE F-7847

