TENTATIVE

DESCRIPTION:

The F-7067 is a 1 watt pulse traveling wave amplifier tube having 30 db gain and 8.0 to 12.0 kmc frequency range. It is constructed in a rugged metal envelope with a helix type slow wave structure. The integral matching circuit is in 50 ohm coaxial line and is provided with female TNC connectors. The tube is self-aligning in the external solenoid which is required to provide a uniform magnetic field. A convergent beam gun and oxide impregnated cathode are used. The tube is for pulse service, at a maximum duty cycle of .04. A grid suitable for pulsing is provided.

ELECTRICAL RATINGS, ABSOLUTE VALUES:

Heater Voltage	6.3 (±10%)	volts
Heater Current	2.3	amperes
Maximum Anode Voltage (Note 1)	4500	volts
Maximum Helix Current (Note 2)	15	ma peak
Maximum Collector Dissipation (beam power)	10	watts
Maximum Grid Voltage (Note 3)		
Positive	+100	volts
Negative	-100	volts

ELECTRICAL INFORMATION:

Maximum Frequency	12.0	kmc
Minimum Frequency	8.0	kmc
Minimum Cold Transmission Loss	50	db
Capacitance		
Control Electrode to all elements	15	μμf max.

MECHANICAL INFORMATION:

Type of Cathode	Oxide Impregnated Unipotential
Gun Connections	Flying Leads
R-F Connections	Female TNC Connectors
Magnetic Field Strength (nominal)	1200 gauss
Mounting Position	Any
Weight (tube only)	1 pound
Type of Cooling	Conduction to Solenoid

TYPICAL OPERATION:

Anode Voltage	3600 volts
Anode Current	50 ma peak
Helix Current	5 ma peak
Grid Voltage	
Bias	-10 volts
Applied Voltage Pulse	120 volts peak
Power Output (nominal) (Note 4)	1 watts peak
Gain (nominal)	30 db
Duty Cycle	.01

Note 1: All voltages shown are with respect to cathode. Anode and collector are connected internally to the shell, and the outer coaxial conductor of the r-f connections is also at shell potential. The helix is connected to the center conductor of the coaxial line and a d-c connection to the helix must be provided externally in the r-f circuitry.

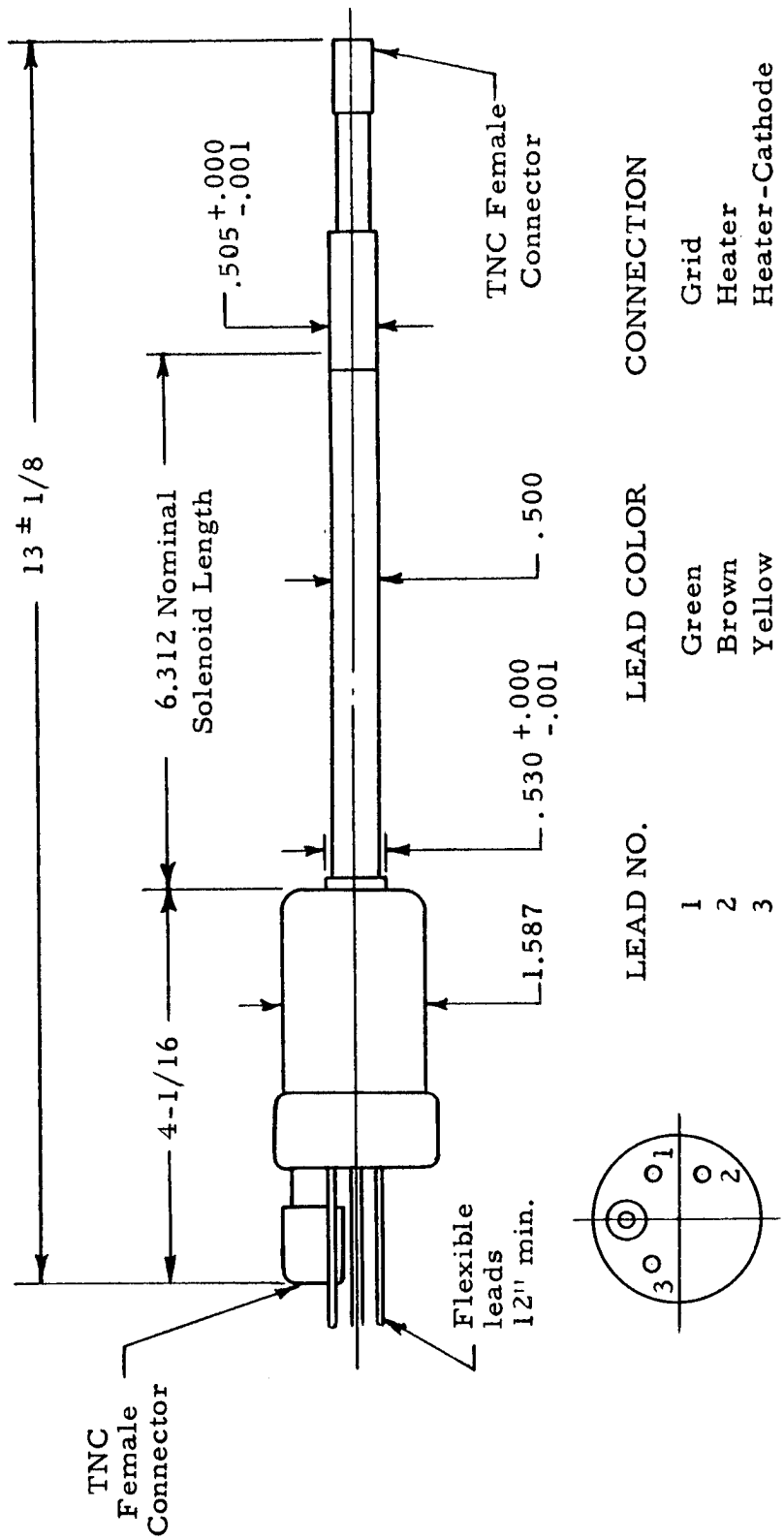
Note 2: Initial adjustments of voltage and magnetic field may be made at low duty cycles. 5 ma helix current must not be exceeded at maximum duty cycle (.04).

Note 3: Positive voltage must not be applied to the grid in the absence of anode voltage.

Note 4: 2 watts power output at 30 db gain can be obtained from 8.0 to 11.0 kmc.

Additional information for specific applications can be obtained from the

Electron Tube Applications Section
ITT Components Division
P.O. Box 412
Clifton, New Jersey



OUTLINE - F-7067 TRAVELING WAVE TUBE