ELECTRONIC INNOVATIONS IN ACTION

TUBES

OBJECTIVE
TECHNICAL INFORMATION

These ratings represent the design objective for this product. Refer to the Preliminary Technical Information sheet for ratings currently achieved in the progression towards design objectives. If PTI sheets do not exist, consult your local Tube Department Regional Sales Office.

DEVELOPMENTAL TYPE

ZM-6257
OTI-207
Page 1
9-67

This technical information is proprietary and is furnished only as a service to customers

ZM-6257

PACKAGED VOLTAGE-TUNABLE MAGNETRON

3500-4500 Megacycles — 10 Watt CW Output

The ZM-6257 is a magnetically shielded voltage-tunable oscillator which operates at a minimum power output of 10 watts over the 3500 to 4500-megacycle frequency range. Unlike conventional electron devices employing magnetic fields, this shielded VTM is unaffected by passive magnetic materials. It does not require special tools, storage facilities or handling other than that normally given to a non-magnetic electron device. It is a complete radio-frequency power source which requires only d-c input power and generates radio-frequency power over its electronically tuned frequency range. This voltage-tuned magnetron may be operated over a portion or all of the frequency range or operated at a fixed frequency. Its frequency versus voltage-tuning characteristic is essentially linear.

GENERAL

	Minimum	Bogey	Maximum	
Electrical				
Cathode – Directly Heated				
Filament Voltage *	2.0	2.3	2.6	Volts
Filament Current	–	3.0	–	Amperes
Mechanical				
Mounting Position				Any
Net Weight, maximum			1.5	Pounds
Thermal				
Type of Cooling – Forced Air				
Air Flow			30	Cubic Feet per Minute
Ambient Air Temperature, maximum			50	C

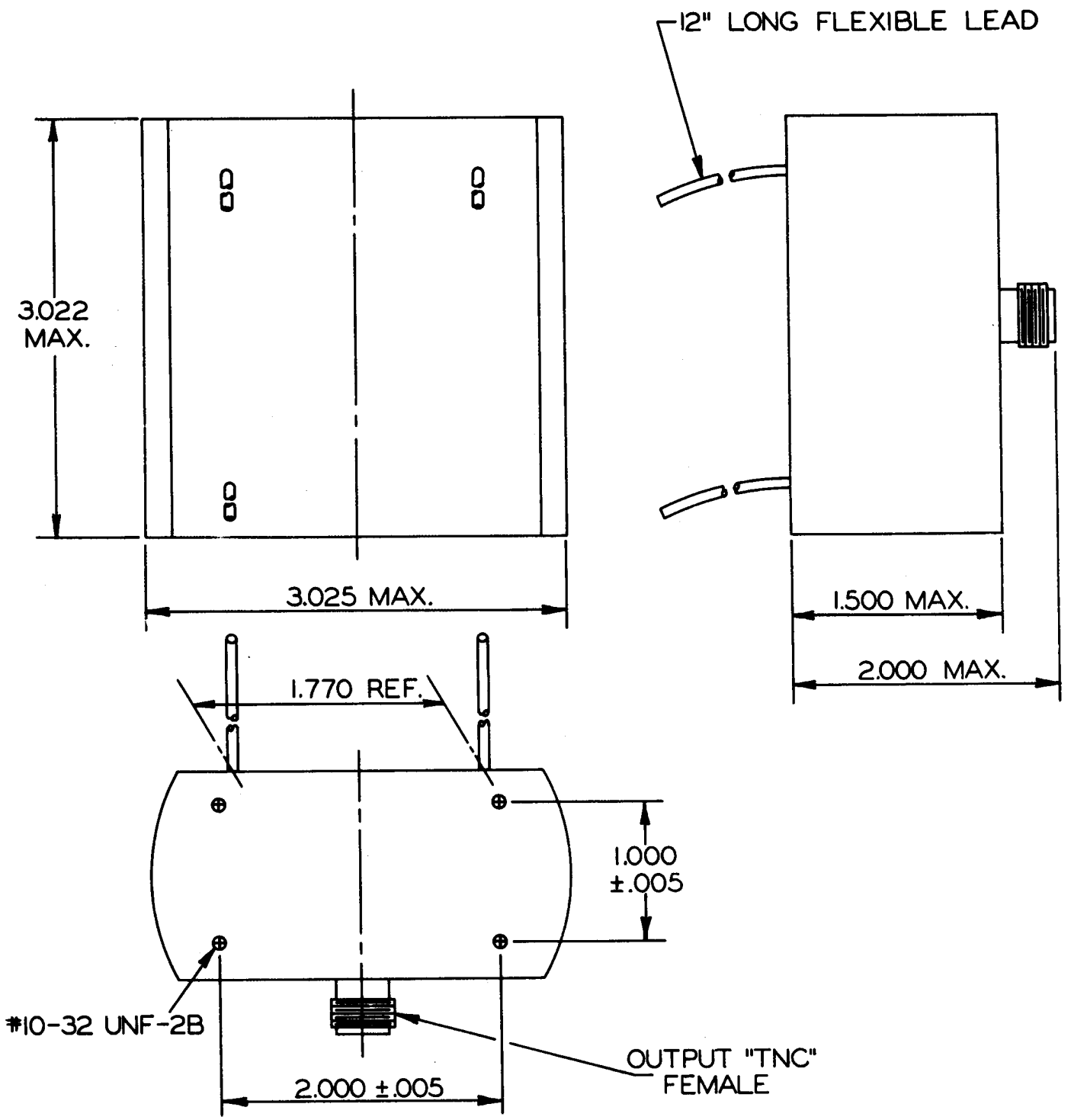
Typical Operating Conditions

Operation with 60-cycle Sweep Voltage

Filament Voltage *, approximate	2.3	Volts
Filament Current	3.0	Amperes
Tunable Range †	3500-4500	Megacycles
Tuning Sensitivity, approximate	2.2	Megacycles per Volt
Anode Voltage at 4.0 Gigacycles	1700	Volts
Anode Current, average	20	Milliamperes
Injection Electrode Voltage, positive with respect to cathode	400	Volts
Injection Electrode Current	0.01	Milliamperes
Voltage Standing Wave Ratio of Load	1.15	
Power Output, minimum	10	Watts
Variation over Band	Less than 2.5:1	

Filament voltage should be adjusted to provide 3.0 amperes of filament current under broadband swept oscillating conditions.

Frequency controlled by anode voltage.



TUBE DEPARTMENT
GENERAL ELECTRIC
Schenectady, N. Y. 12305