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-6222
OTI-107B

9-67

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

PACKAGED VOLTAGE-TUNABLE MAGNETRON

2000-4000 Megacycles — 1.0 Watt CW Output

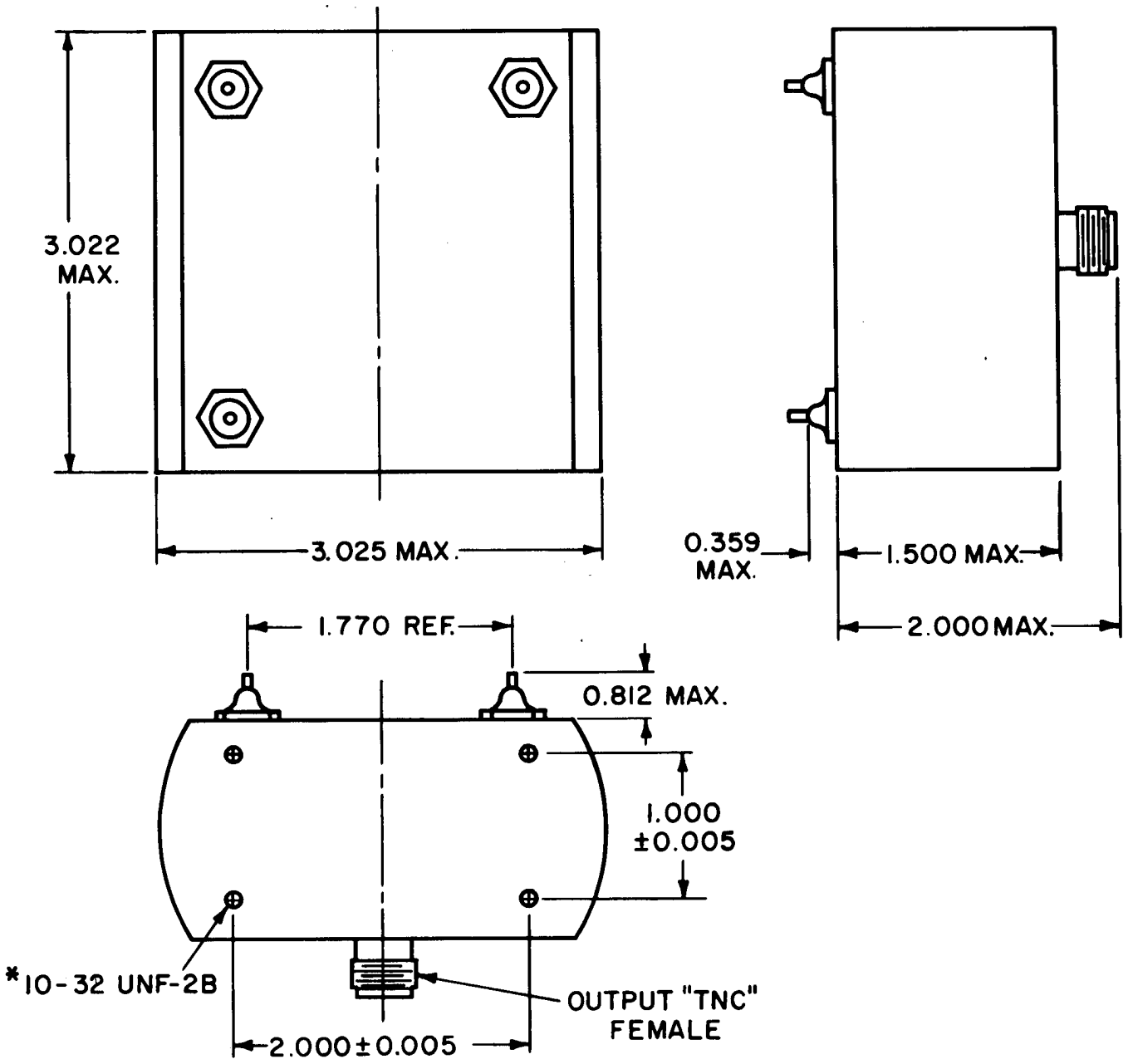
The ZM-6222 is a magnetically shielded voltage-tunable oscillator which operates at a minimum power output of one watt over the 2000 to 4000-megacycle frequency range. Unlike conventional electron devices employing magnetic fields, this shielded VTM is unaffected by passive magnetic materials. It does not require special tools, storage facilities or handling other than that normally given to a non-magnetic electron device. This shielded VTM also incorporates RFI shielding to attenuate stray radio-frequency on the d-c leads to levels below -40 dbc. It is a complete radio-frequency power source which requires only d-c input power and generates radio-frequency power over its electronically tuned octave 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	2.5	3.0	Volts
Filament Current	-	2.0	-	Amperes
Mechanical				
Mounting Position – Any				
Net Weight, maximum			1.5	Pounds
Thermal				
Type of Cooling – Forced Air				
Air Flow			5	Cubic Feet per Minute
Ambient Air Temperature, maximum			50	C
Typical Operating Conditions				
Operation with 60-cycle Sweep Voltage				
Filament Voltage*, approximate			2.5	Volts
Filament Current			2.0	Amperes
Tunable Range†			2000-4000	Megacycles
Tuning Sensitivity, approximate			2.3	Megacycles per Volt
Anode Voltage at 3.0 Gigacycles			1300	Volts
Anode Current, average			10-15	Milliamperes
Injection Electrode Voltage, positive with respect to cathode			100-400	Volts
Injection Electrode Current			0.01	Milliamperes
Voltage Standing Wave Ratio of Load			1.15	
Power Output, minimum			1.0	Watts
Variation over Band		Less than 2.5:1		

* Filament voltage should be adjusted to provide 2.0 amperes of filament current under broadband swept oscillating conditions.

† Frequency controlled by anode voltage.



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