



**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-6265A**  
**OTI-214**  
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**12-68**

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

**ZM-6265A**

**PACKAGED VOLTAGE-TUNABLE MAGNETRON**

**2500-3500 MEGACYCLES**

**10 WATT OUTPUT**

The ZM-6265A is a small, lightweight, magnetically shielded voltage-tunable oscillator with an integral isolator which operates at a minimum power output of 10 watts over the 2500-3500 megacycle frequency range. Unlike conventional electron devices employing magnetic fields, this shielded VTM is unaffected by passive magnetic materials. When specified, the ZM-6265A can be aligned for low-noise performance. Its noise power is at least 80 decibels per megacycle below the carrier at one megacycle away from the carrier. It is a complete radio-frequency power source requiring only d-c input power and generates radio-frequency power over its electronically tuned frequency range. This shielded VTM 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**

	Min.	Bogey	Max.	
<b>Electrical</b>				
Cathode - Directly Heated				
Filament Voltage*, approximate . . . . .	2.2	2.5	2.7	Volts
Filament Current* . . . . .	-	3.0	-	Amperes
<b>Mechanical</b>				
Mounting Position - Any				
Net Weight . . . . .			1.0	Pounds
<b>Thermal</b>				
Type of Cooling - Forced Air				
Air Flow . . . . .			30	Cubic Feet per Minute
Ambient Air Temperature . . . . .			50	C

**MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS**

<b>Absolute Values</b>				
Anode Voltage . . . . .		2500	Volts	
Anode Current . . . . .		40	Milliamperes	
Power Input, with Forced Air Cooling . . . . .		85	Watts	
Injection Electrode Voltage . . . . .		700	Volts	
Injection Electrode Current . . . . .		1.0	Milliamperes	
Filament Current . . . . .		3.5	Amperes	
<b>Typical Operating Conditions</b>				
Operation with 60-cycle Sweep Voltage				
Filament Voltage*, approximate . . . . .		2.50	Volts	
Filament Current . . . . .		3.0	Amperes	
Tunable Range# . . . . .		2500-3500	Megacycles	
Tuning Rate, approximate . . . . .		1.8	Megacycles per Volt	
Anode Voltage at 3 Kilomegacycles . . . . .		1850	Volts	
Anode Current, Average . . . . .		20-30	Milliamperes	
Injection Electrode Voltage, Positive with Respect to Cathode . . . . .		300-600	Volts	
Injection Electrode Current . . . . .		0.1	Milliamperes	
Voltage Standing Wave Ratio of Load . . . . .		2.0		
Power Output, Minimum . . . . .		10.0	Watts	
Noise † . . . . .		-80	Decibels per Megacycle	

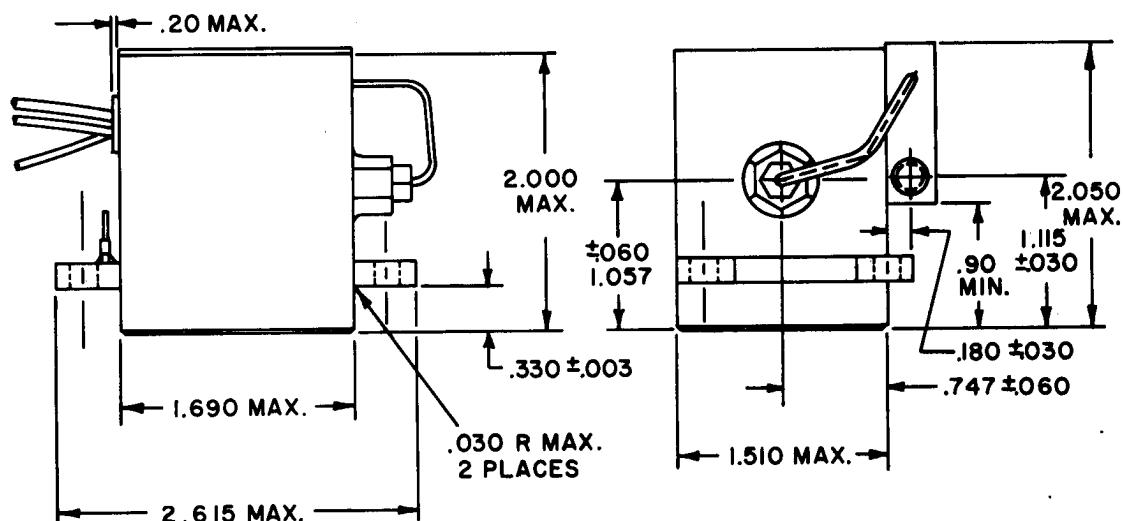
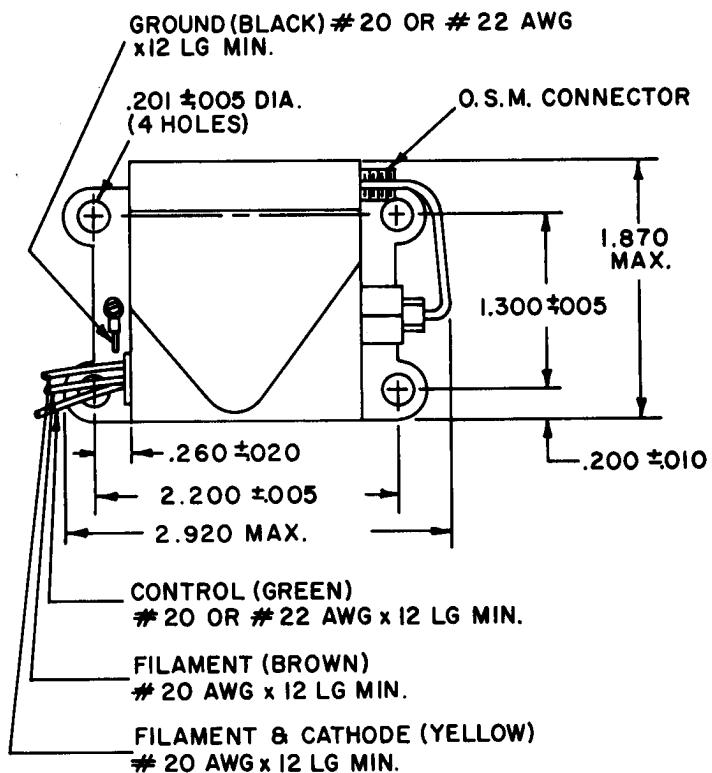
\* Filament voltage should be adjusted to provide a filament current of 3.0 amperes under broadband swept oscillating conditions.

# Frequency controlled by anode voltage.

The specifications of this type are subject to change. This device is now under development and is made available for experimental purposes only. For the most recent information concerning the status of this development, please consult your local Tube Department Regional Sales Office, or current Preliminary Technical Information for the same catalog number.

NOTE: Since a change in anode voltage of one volt produces a frequency change of approximately 1.8 megacycles, the anode supply should have sufficiently low ripple and high regulation to prevent an excess of frequency modulation.

† Measured at 1.5 megacycles away from carrier with respect to carrier power level. This is an optional parameter which is included on special order only.



TUBE DEPARTMENT  
**GENERAL ELECTRIC**  
Schenectady, N. Y. 12305