



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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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

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

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

Absolute Values		
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
Typical Operating Conditions		
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.

