DESCRIPTION
The EM1331 Voltage Tunable Magnetron Oscillator delivers at least 35 watts over the frequency range of 2200-2300 Mc. This miniature magnetically shielded oscillator is ideally suited for applications requiring compact lightweight packaging. Its unique magnetic circuit results in negligible external magnetic field and permits the tube to contact other ferromagnetic materials with no degradation in performance.

FEATURES
- Magnetically Shielded
- Light Weight
- Linear Voltage Tuning
- Small Size
- Flat Power Output

TYPICAL PERFORMANCE

ELECTRICAL
- Frequency Range - 2200-2300 Mc
- Anode Voltage - 2060-2160 V
- Cathode Current - 41-44 mA
- Typical Power Output - 40-42 W
- Anode FM Sensitivity - 1 Mc/Volt
- Injection Anode Voltage - 500 Volts
- Injection Anode Current - 0.0 mA
- Heater Voltage (AC or DC) - 6.3 Volts
- Heater Current (AC or DC) - 1.0 Amp
- Load Impedance - 50 Ohm
- Load VSWR - 1.1:1
- Power Variation - 1 db

MECHANICAL
- Operating Position - Any
- Cooling - Forced Air
- Electrical Connection - Flying Leads
- RF Output Coupling - TNC Female
- Weight - 3.5 lbs. max.

MAXIMUM RATINGS*
- Anode Voltage - 2500 Volts
- Cathode Current - 60 mA
- Injection Anode Voltage - 750 Volts
- Injection Anode Current - 1 mA
- Load VSWR - 1.2:1

*Damage to the tube may occur if maximum ratings are exceeded.
NOTES:

1. The operating frequency is a function of the anode voltage; therefore any voltage ripple on the anode supply appears as frequency modulation on the RF output.

2. The heater supply may be either alternating or direct current. If direct current is used, the heater connections must be connected to the negative terminal of the heater supply.

3. Cooling—To insure optimum tube performance, the magnet shell should be maintained below 70° C.

4. Temperature Stability — The permanent magnet of the shielded VTM has been temperature stabilized to minimize frequency changes caused by variations in the magnet temperature. The temperature/frequency coefficient for the shielded VTM is 0.008% of the operating frequency per degree centigrade. A positive change in temperature will always produce a positive change in frequency.

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CHARACTERISTIC CURVES
Typical Performance Values

POWER OUTPUT

ANODE VOLTAGE

FREQUENCY-Mc