



ELECTRONIC TUBE REFERENCE

EM1331

Specialized - Magnetron electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
MAGNETRON

Miniature magnetically shielded voltage-tunable magnetron oscillator covering 2200–2300 MHz. It delivers at least 35 W, typically about 40–42 W, while its compact magnetic circuit minimizes external field for closely packaged microwave equipment.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 1 A	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Magnetron	
MAXIMUM PLATE VOLTAGE	2500 V
<i>Promoted fields populated only where the published value maps directly to the schema; device-specific values retained as parameters.</i>	

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. ®
Magnetically Shielded ⌀ Small Size

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1962 Eimac

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1962 EIMAC

Section 1 · Magnetron

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
The EM1 [1]	331	The EM1331 Voltage Tunable Magnetron Oscillator delivers at least 35
The EM1 [2]	35	The EM1331 Voltage Tunable Magnetron Oscillator delivers at least 35
watts over the frequency range of [1]	2200 MHz	watts over the frequency range of 2200-2300 Mc. This miniature magneti-
watts over the frequency range of [2]	-2300 MHz	watts over the frequency range of 2200-2300 Mc. This miniature magneti-
Frequency Range [1]	2200 MHz	Frequency Range ----- 2200-2300 Mc
Frequency Range [2]	-2300 MHz	Frequency Range ----- 2200-2300 Mc
Anode Voltage [1]	2060	Anode Voltage ----- 2060-2160 V
Anode Voltage [2]	-2160	Anode Voltage ----- 2060-2160 V
Cathode Current [1]	41 mA	Cathode Current ----- 41-44 mA
Cathode Current [2]	-44 mA	Cathode Current ----- 41-44 mA
Typical Power Output [1]	40	Typical Power Output - 40-42 W
Typical Power Output [2]	-42	Typical Power Output - 40-42 W
Anode FM Sensitivity	1 MHz	Anode FM Sensitivity - 1 Mc/Volt
Injection Anode Voltage	500 V	Injection Anode Voltage 500 Volts
Injection Anode Current	0 mA	Injection Anode Current ----- . 0.0 mA
Heater Voltage (ACorDC)	6.3 V	Heater Voltage (ACorDC) ----- 6.3 Volts
Heater Current (ACorDC)	1	Heater Current (ACorDC) ----- . 1.0 Amp
Load Impedance	50	Load Impedance ----- . . 50 Ohm
Load VSWR [1]	1.1	Load VSWR ----- . . . 1.1:1
Load VSWR [2]	1	Load VSWR ----- . . . 1.1:1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Power Variation	1	Power Variation - - - - - 1db
Anode Voltage	2500 V	Anode Voltage - - - - - 2500 Volts
Cathode Current - - - - - - -«	60 mA	Cathode Current - - - - -« - - . 60 mA
Injection Anode Voltage	750 V	Injection Anode Voltage 750 Volts
Injection Anode Current	1 mA	Injection Anode Current - 1 mA
Load VSWR - - - - - + - .« [1]	12	Load VSWR - - - - - + - .« - - 12:1
Load VSWR - - - - - + - .« [2]	1	Load VSWR - - - - - + - .« - - 12:1
modulation on the RF output	3.515	modulation on the RF output. 3.515
the operating frequency per degree centi	3	the operating frequency per degree centi- 3
@ [1]	50	@ 50 POWER OUTPUT - 2175
@ [2]	2175	@ 50 POWER OUTPUT - 2175

TUBE TINKER

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and their source documents.

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