



ELECTRONIC TUBE REFERENCE

EM1320

Specialized - Magnetron electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
MAGNETRON

Miniature magnetically shielded voltage-tunable magnetron oscillator covering 1000–2000 MHz and delivering at least 100 mW. Designed for compact lightweight equipment, its magnetic circuit minimizes external field and supports anode-voltage-controlled frequency tuning.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	6.3 V / 900 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Magnetron	
MAXIMUM PLATE VOLTAGE	2200 V
<i>Promoted fields populated only where the published value maps directly to the schema; device-specific values retained as parameters.</i>	

EIMAC EM1320 The EM1320 Voltage Tunable Magnetron Oscillator delivers at least 100 mw over the frequency range of 1000-2000 mc. This miniature magnet- ically 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.

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	320	The EM1320 Voltage Tunable Magnetron Oscillator delivers at least
Published value [1]	100 MHz	100 mw over the frequency range of 1000-2000 mc. This miniature magnet-
Published value [2]	1000 MHz	100 mw over the frequency range of 1000-2000 mc. This miniature magnet-
Published value [3]	-2000 MHz	100 mw over the frequency range of 1000-2000 mc. This miniature magnet-
Frequency Range [1]	1000 MHz	Frequency Range - 1000-2000 Mc
Frequency Range [2]	-2000 MHz	Frequency Range - 1000-2000 Mc
Anode Voltage [1]	920	Anode Voltage - 920-1840V
Anode Voltage [2]	-1840	Anode Voltage - 920-1840V
Cathode Current [1]	1 mA	Cathode Current - 1-6 mA
Cathode Current [2]	-6 mA	Cathode Current - 1-6 mA
Typical Power Output	200 mw	Typical Power Output - 200 mw
Anode FM Sensitivity	1 MHz	Anode FM Sensitivity 1 Mc/Volt
Injection Anode Voltage	200 V	Injection Anode Voltage 200 Volts
Injection Anode Current	0 mA	Injection Anode Current 0.0 mA
Heater Voltage (AC or DC)	6.3 V	Heater Voltage (AC or DC) 6.3 Volts
Heater Current (AC or DC)	0.9	Heater Current (AC or DC) 0.9 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
Power Variation - +	1	Power Variation - +1db

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode Voltage	2200 V	Anode Voltage - - 2200 Volts
Cathode Current	12 mA	Cathode Current - - 12 mA
Injection Anode Voltage	500 V	Injection Anode Voltage - 500 Volts
Injection Anode Current	1 mA	Injection Anode Current - 1 mA
Load VSWR [1]	3	Load VSWR - - - 3:1
Load VSWR [2]	1	Load VSWR - - - 3:1
Published value [1]	1	1. The operating frequency is a function of the A 3.050
Published value [2]	3.05	1. The operating frequency is a function of the A 3.050
anode voltage; therefore any voltage ripple [1]	2	anode voltage; therefore any voltage ripple 2 e 1292
anode voltage; therefore any voltage ripple [2]	1292	anode voltage; therefore any voltage ripple 2 e 1292
on the anode supply appears as frequency D	3.05	on the anode supply appears as frequency D 3.050
modulation on the RF output. } ' [1]	13004	modulation on the RF output. } ' 13004 500
modulation on the RF output. } ' [2]	500	modulation on the RF output. } ' 13004 500
or direct current. If direct current is used, R J [1]	2.32	or direct current. If direct current is used, R J 2.320] 2.380
or direct current. If direct current is used, R J [2]	2.38	or direct current. If direct current is used, R J 2.320] 2.380
Published value	4	4, Temperature Stability — The permanent I

TUBE TINKER

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