

EITEL-MCCULLOUGH, INC.

X-1150

VOLTAGE TUNABLE MAGNETRON

FREQUENCY 980 - Mc 1020

MINIMUM OUTPUT POWER 40 W

TYPICAL PERFORMANCE

ELECTRICAL

Frequency Range	_	-	_	-	980 Mc 1020
Anode Voltage	-	-	_	-	2040 V 2120
Cathode Current	_	-	-	-	45-50 mA
Typical Output Power -	-	-	-	-	45 W
Anode FM Sensitivity -	-	-	-	-	.45 Mc/V
Injection Anode Voltage	-	-	-	-	200 V
Injection Anode Current	-	-	-	-	0.0 mA
Heater Voltage (AC) -	-	-	_	-	6.3 V
Heater Current (AC) -	-	-	-	-	0.8 A
Load Impedance	-	-	-	-	50 ohms
Service	-	-	-	-	cw



L-BAND OSCILLATOR

*MAXIMUM RATINGS

Anode Voltage	_	-	_	_	-	-	2500 V
Cathode Current	-	_	-	-	-	_	60 mA
Injection Anode Voltage							
Injection Anode Current	-	_	-		_	_	1 m A

^{*}Damage to the tube may occur if maximum ratings are exceeded.

POWER OUTPUT VS FREQUENCY EIMAC VTM *X1150 INSECTION ANODE 100 VOLTS FREQUENCY MC 980 985 990 995 1000 1010 1020 ANODE VOLTAGE 2040 2047 2058 2054 2080 2100 2120 ANODE CURRENT MA 45 47 46 47 49

MECHANICAL

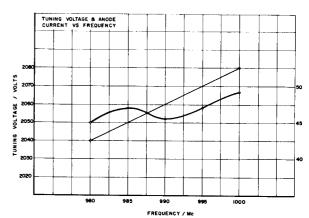
Operating Position	_	_	_	_	_	Anv
Cooling	-	_	_	_	_	Forced Air
Electrical Connection		-	_	_	-	Flexible Leads
RF Output Coupling	-	-	-	`-	_	Type N Jack
Weight	-		_	_	_	3.5 Pounds

ENVIRONMENTAL

Vibration		-	-	-	-	-	-	-	-	-	10G (to 2kc)
Shock	-	_	-	-	-	-		-	-	-	100G (11ms)
Altitude		-	-	-	-	-	-	-	-	-	70,000 ft.

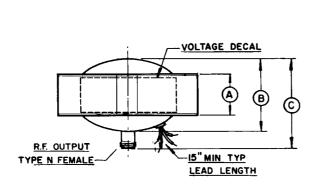
OUTLINE DIMENSIONS

Height	_	_	_	_	_	_	-	_	_	_	35 inches
Width	-	-	_	_	-	-	_	_	_	-	2.5 inches
Length	-	-		-	-	-	_	-	-	-	4.5 inches

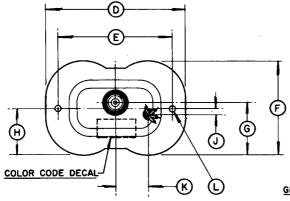


APPLICATION NOTES

- 1. COOLING: To insure optimum tube performance the magnet temperature should be maintained below 70°C.
- 2. PROXIMITY OF FERROUS MATERIALS: To minimize variations in performance, ferrous materials should be kept at least 6 inches from the magnetron package. Modulation of the tube may be produced by rotating ferrous materials and such parts as fans, shafts and couplings should be placed as far from the magnetron package as possible. Transformers and chokes should not be placed in such close proximity to the tube that their stray magnetic fields will interfere with the magnetron operation.
- 3. TEMPERATURE STABILITY: The permanent magnet for the X-1150 has been temperature stabilized to minimize frequency changes caused by variations in the ambient temperature. The temperature/frequency coefficient for the X-1150 package is typically .02% of the operating frequency per degree Centigrade. Thus, for an operating frequency of 1000 megacycles, the temperature/frequency coefficient is typically 200 kilocycles per degree Centigrade. A positive change in temperature will always produce a positive change in frequency.
- 4. ANODE VOLTAGE: The operating frequency is a function of the anode voltage; therefore, any voltage ripple on the anode supply will appear as frequency modulation on the RF output signal.



DIMENSIONS IN INCHES											
DIMENSIONAL DATA											
REF.	EF. MIN. MAX. NOM.										
Α			1.375								
В	·		2.300								
С			2.910								
D		4.600									
Ε	3.640	3.671									
F		3.100	3.000								
G			1.656								
н			1.500								
J			.375								
K			1.000								
L			.187 D.								
L											



CONNECTIONS

GROUND - GREEN

HEATER - WHITE

HEATER CATHODE - BLACK

INJECTION ANODE - YELLOW