



EITEL-McCULLOUGH, INC.
SAN CARLOS, CALIFORNIA

X-1150

**VOLTAGE TUNABLE
MAGNETRON**

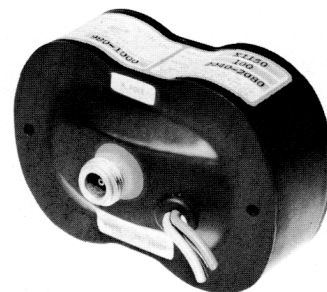
**FREQUENCY
980 - Mc 1020**

**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	- - - - -	500 V
Injection Anode Current	- - - - -	1 mA

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

MECHANICAL

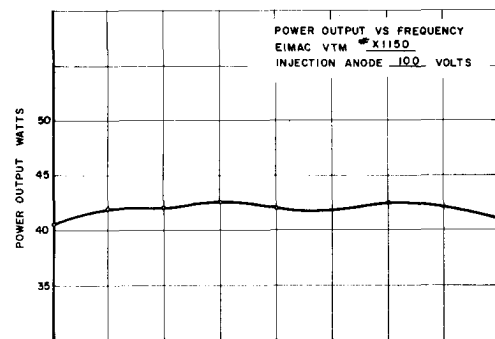
Operating Position	- - - - -	Any
Cooling	- - - - -	Forced Air
Electrical Connection	- - - - -	Flexible Leads
RF Output Coupling	- - - - -	Type N Jack
Weight	- - - - -	3.5 Pounds

ENVIRONMENTAL

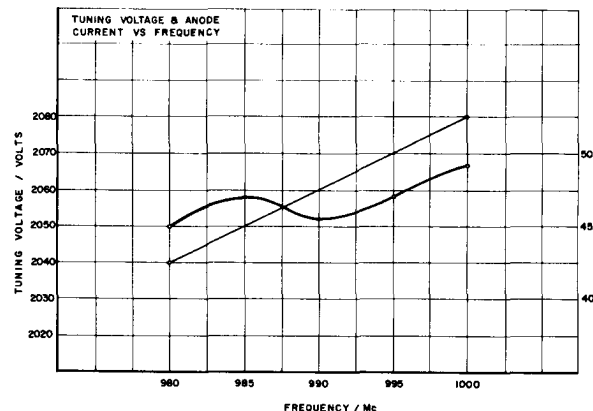
Vibration	- - - - -	10G (to 2kc)
Shock	- - - - -	100G (11ms)
Altitude	- - - - -	70,000 ft.

OUTLINE DIMENSIONS

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

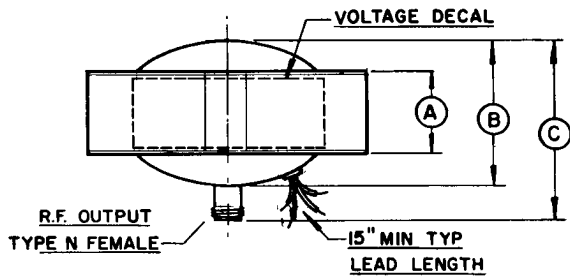
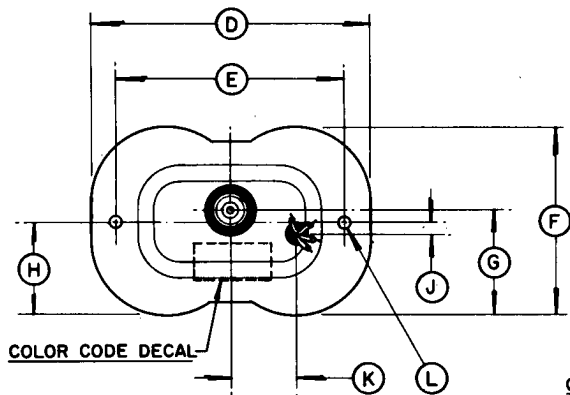


FREQUENCY MC	980	985	990	995	1000	1010	1020
ANODE VOLTAGE	2040	2047	2058	2064	2080	2100	2120
ANODE CURRENT MA	45	47	46	47	49	51	52



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.

[illegible]

CONNECTIONS

GROUND - GREEN

HEATER - WHITE

HEATER CATHODE - BLACK

INJECTION ANODE - YELLOW