Eimac®

EITEL-McCULLOUGH, INC.
SAN CARLOS, CALIFORNIA

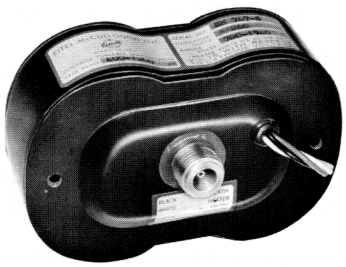
EM-1093

VOLTAGE TUNABLE MAGNETRON

FREQUENCY 2.475 - 2.725

MINIMUM OUTPUT POWER 1.75 W

TYPICAL PERFORMANCE



S-BAND OSCILLATOR

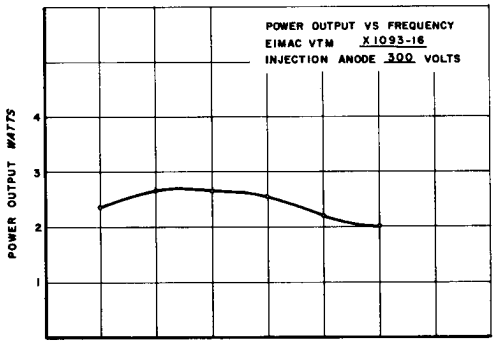
ELECTRICAL

Frequency Range	2475-2725 Mc
Anode Voltage	1100-1200 V
Cathode Current	12-20 mA
Typical Output Power	2-3 W
Anode FM Sensitivity	2.5 Mc/volt
Injection Anode Voltage	300 V
Injection Anode Current	0.0 mA
Heater Voltage (AC) (DC)	6.3 V
Heater Current (AC) (DC)	.65 A
Load Impedance	50 ohms
Service	cw

*MAXIMUM RATINGS

Anode Voltage	1500 V
Cathode Current	25 mA
Injection Anode Voltage	400 V
Injection Anode Current	0.5 mA

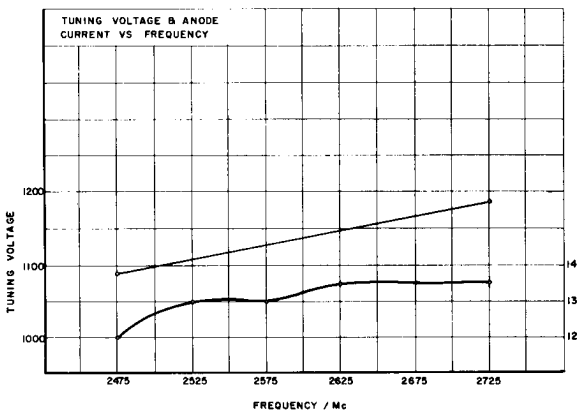
*Damage to the tube may occur if maximum ratings are exceeded.



FREQUENCY MC	2475	2525	2575	2625	2675	2725
ANODE VOLTAGE	1080	1100	1120	1140	1160	1180
ANODE CURRENT MA	12.0	13.0	13.0	13.5	13.5	13.5

MECHANICAL

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



ENVIRONMENTAL

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

OUTLINE DIMENSIONS

Height	3 inches
Width	2.1 inches
Length	4.5 inches

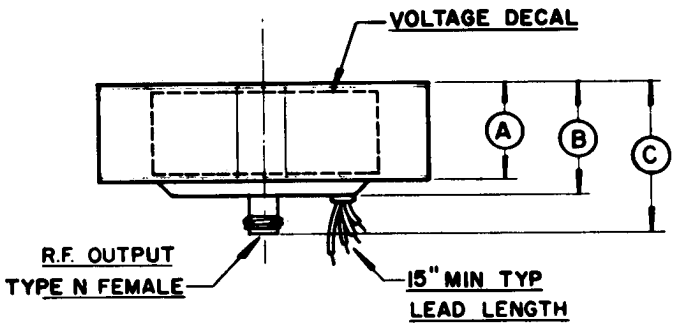
APPLICATION NOTES

1. COOLING: To insure optimum tube performance the magnet temperature should be maintained below 70°C.

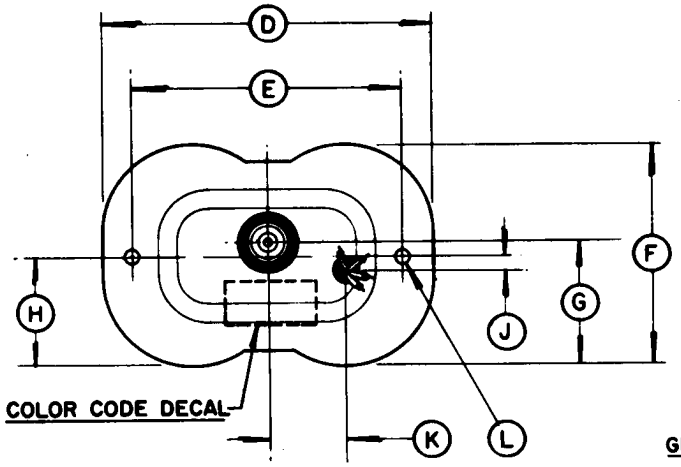
2. PROXIMITY OF FERROUS MATERIALS: To minimize variations in performance, ferrous materials should be kept at least 6 inches from the magnetron package. Modulation of the tube may be produced by rotating ferrous materials and such parts as fans, shafts and couplings should be placed as far from the magnetron 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 EM-1093 has been temperature stabilized to minimize frequency changes caused by variations in the ambient temperature. The temperature/frequency coefficient for the EM-1093 package is typically .008% of the operating frequency per degree Centigrade. Thus, for an operating frequency of 2600 megacycles, the temperature/frequency coefficient is typically 520 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.	MIN.	MAX.	NOM.
A			1.375
B			1.562
C			2.172
D		4.600	
E	3.640	3.671	
F		3.100	3.000
G			1.656
H			1.500
J			.375
K			1.000
L			.187 D.



CONNECTIONS

GROUND - GREEN

HEATER - WHITE

HEATER CATHODE - BLACK

INJECTION ANODE - YELLOW