

EITEL-MCCULLOUGH, INC.

X-1111

TWO-CAVITY
KLYSTRON

TYPICAL PERFORMANCE

ELECTRICAL PERFORMANCE

 $13.3 \pm .005$ Gc Frequency Setting - -2.0 W min Power Output Electronic Tuning Range (3 db bandwidth) -10 Mc $2150 \pm 75 \text{ Vdc}$ Resonator Voltage Cathode Curent 15-25 mA Modulation Sensitivity 100 kc/V Heater Voltage -Heater Current -VSWR of Load -6.3 V(ac or dc) \pm 5% 0-70 A 1.2:1Temperature Coefficient $\pm 100 \text{ kc/}^{\circ}\text{C}$ Warm-up Time 35 seconds

MAXIMUM RATINGS

Resonator Voltage - - - - - 2500 Vdc Cathode Current - - - - - 30 mA

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

MECHANICAL

Operating Position - Any Electrical Connection Flexible Leads RF Output Coupling - RG—91/V waveguide flange Cooling Required - Conduction Net Weight - - - 8 ounces Shipping Weight (approximate) 4 Pounds

ENVIRONMENTAL PERFORMANCE

Temperature Range - - - 20 to +75° C

Altitude - - - - - 100,000 feet max

Vibration - - - - - 10 G, 20 to 2000 cps

Shock - - - - - - 60 G. 11 ms

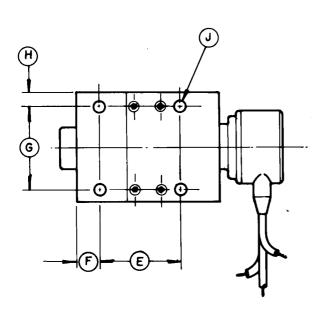
OUTLINE DIMENSIONS

Height - - - - - - - - .90 inches Width - - - - - - - 1.35 inches Length - - - - - - - 2.80 inches

APPLICATION NOTES

- 1. NOTE: All voltages are referred to the cathode.
- 2. RESONATOR: The resonator of the X-1111 is integral with the body of the klystron. For this reason it is often convenient to operate the resonator at chassis potential, with the repeller and cathode at appropriate negative potentials.
- 3. CATHODE: The heater voltage should be maintained with \pm 5% of the rated value of 6.3 volts if variations in performance are to be minimized and best tube life obtained.

The heater and cathode of the X-1111 are internally connected. When the resonator of this tube is operated at chassis potential, the heater transformer must be insulated for the cathode-to-resonator voltage.



DIMENSIONS IN INCHES			
DIMENSIONAL DATA			
REF.	MIN.	MAX.	NOM.
Α		2.660	
В			.920
С			.905
D		1.325	
Ε	. 946	.966	
F			.250
G	.984	1.004	
Н			.159
J	.144D	.150 D	:

