EITEL-McCULLOUGH, INC.
SAN CARLOS, CALIFORNIA

X-1111

TWO-CAVITY KLYSTRON

TYPICAL PERFORMANCE

ELECTRICAL PERFORMANCE

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

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

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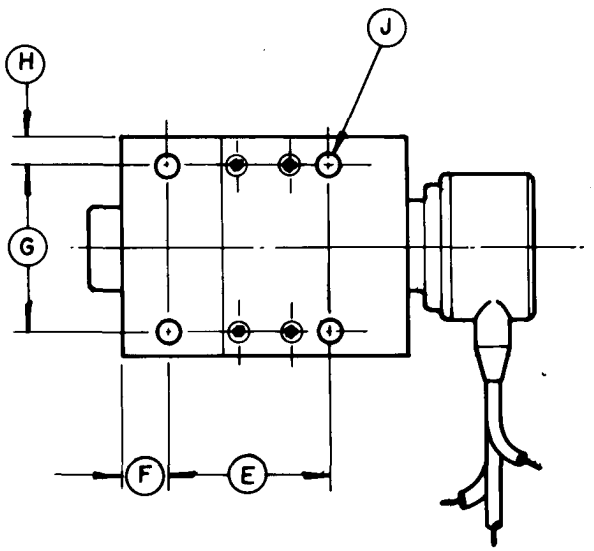
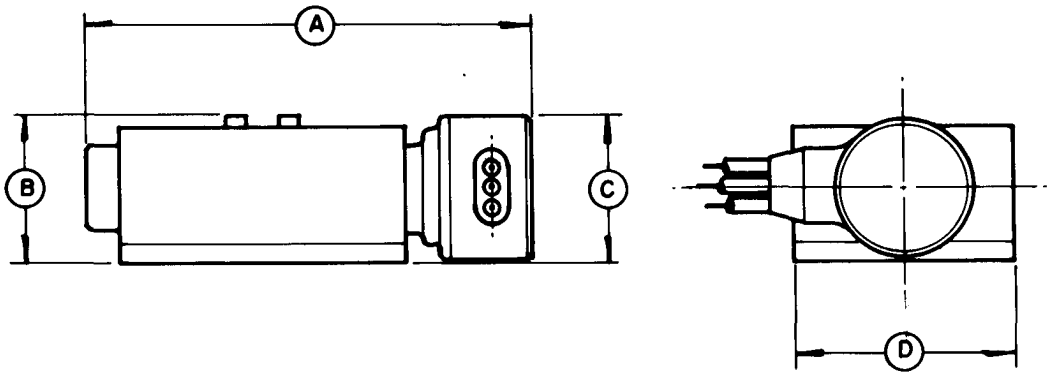
APPLICATION NOTES

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 ±5% of the rated value of 6.3 volts if variations in performance are to be mimimized 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.
A		2.660	
B			.920
C			.905
D		1.325	
E	.946	.966	
F			.250
G	.984	1.004	
H			.159
J	.144 D	.150 D