



EITEL-McCULLOUGH, INC.
SAN CARLOS, CALIFORNIA

X-1113

TWO-CAVITY
KLYSTRON

TENTATIVE DATA

ELECTRICAL PERFORMANCE

Frequency Setting	- -	35 Gc
Power Output	- - -	2.0 W min
Electronic Tuning Range (3 db bandwidth)	-	40 Mc
Resonator Voltage	-	2500±150 Vdc
Cathode Current	- -	25-40 mA _{dc}
Modulation Sensitivity		100 Kc/V.
Heater Voltage	- -	6.3 V(ac or dc)±5%
Heater Current	- -	2.0 A
VSWR of Load	- -	1.2:1
Warm-up Time	- -	35 seconds
	- - - - -	

MAXIMUM RATINGS

Resonator Voltage - - - - - 3100 Vdc

Note: Damage to the tube may occur if the maximum rating is exceeded.

MECHANICAL

Operating Position	-	Any
Electrical Connection		Flexible Leads
RF Output Coupling	-	RG-96/V waveguide flange
Cooling Required	- -	Blower or Conduction
Net Weight	- - - -	17 ounces
Shipping Weight (approximate)		5 Pounds

ENVIRONMENTAL PERFORMANCE

Temperature	- - - - -	-20 to +75°C
Altitude	- - - - -	100,000 feet max
Vibration	- - - - -	2 G, 20 to 2000 cps
Shock	- - - - -	15 G, 11 ms

OUTLINE DIMENSIONS

Height	- - - - -	2.0 inches
Width	- - - - -	1.9 inches
Length	- - - - -	3.5 inches

APPLICATION NOTES

NOTE: All voltages are referred to the cathode.

1. RESONATOR: The resonator of the X-1113 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.
2. 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-1113 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.