

EIMAC

A Division of Varian Associates
SAN CARLOS, CALIFORNIA

X-1095

REFLEX KLYSTRON

TYPICAL PERFORMANCE

ELECTRICAL PERFORMANCE Frequency Setting	-	-facto	ory pre een 5.	eset at f .9 & 6.7	reque Gc	ncy			4
Power Output		_		400	mW				
Electronic Tuning Range									
(3 db bandwidth) -	-	-		100	Mc				
Resonator Voltage	-	-		600	Vdc				
Cathode Current	-	-		45	mA				
Repeller Voltage	-		100 to	—200	Vdc				
Modulation Sensitivity -	-	-	2.	0 to 3.0	Mc/V	7			
Heater Voltage	-	-		6.3	V (ac	or do	•)		
Heater Current	-	-		0.7	Α				3 9
Mode	-	-		43/4					
VSWR of Load	-	-		1.2:1	max				
Temperature Coefficient	-	-		± 50	kc/°	C			
Warm-up Time	-	-		30	secon	ıds			
AAAVIAAIIAA BATINIOC									
MAXIMUM RATINGS									700 Vdc
Resonator Voltage -	•	-	-		-	-		•	60 mA
Cathode Current	-المئسد م	· •	-	 4141	- دما <i>د</i> م	-		•	
Repeller Voltage (negativ		-			,			-	- —50 to —500 Vdc
Note: Damage to the tul	e may	occu	r ir tn	e maxi	num	rating	gs are	exce	eaea.
MECHANICAL									
Operating Position -			-		-	-		. <u>-</u>	Any
Electrical Connection -			-		-	-		. <u>-</u>	Flexible Leads
RF Output Coupling -		. <u>-</u>	-		-	-			See Outline Drawing
Cooling Required	- .		-		-	-		. <u>-</u>	Conduction
Net Weight	7 .		-		-	-			6 ounces
Shipping Weight (approx	kimate) -	-		-	-			4 Pounds
ENVIRONMENTAL PERFORMA	NCE								
Temperature	-		-		-	-			—55°C to +125°C
Altitude									
			-		-	-		· -	 70,000 feet max
Vibration		- 	-		-	-		· -	10 G, 5 to 2000 cps
Vibration Shock		 	- - -		-	- -	- ·	· -	
Shock		 	-	 	- - -	- - -		· -	10 G, 5 to 2000 cps
Shock OUTLINE DIMENSIONS	-	· -	-		-	- -		. <u>-</u> 	10 G, 5 to 2000 cps 100 G, 11 ms
Shock OUTLINE DIMENSIONS Height		· .	-			- - -		· -	10 G, 5 to 2000 cps - 100 G, 11 ms - 1.42 inches
Shock OUTLINE DIMENSIONS		· .	-		-	- - -		· -	10 G, 5 to 2000 cps 100 G, 11 ms



APPLICATION NOTES

NOTE: All voltages referred to the cathode.

COOLING: At sea level this tube will not require forced air cooling when operated at its maximum rated dissipation with an ambient temperature less than 125° Centigrade. The waveguide flange connection will normally provide the required heat-sink for conduction cooling. If an insulator is used between the tube and waveguide for DC isolation, forced air cooling may be required to maintain the ceramic-to-metal seal temperatures below the maximum rating of 150° Centigrade.

RESONATOR: The resonator of the X1095 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.

CATHODE: The heater voltage should be maintained within $\pm 5\%$ of the rated value of 6.3 volts if variations in performance are to be minimized and the best tube life obtained.

The heater and cathode of the X1095 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.

VSWR OF LOAD: To obtain the typical performance listed, the load VSWR should be less than 1.2:1.

