

TYPICAL OPERATION (continued)

Repeller Voltage*	- - - - -	-290	Vdc
3 db Bandwidth	- - - - -	25	Mc
Modulation Sensitivity	- - - - -	0.8	Mc/V

*All voltages referred to cathode.

MAXIMUM RATINGS

Resonator Voltage	- - - - -	450	Vdc
Cathode Current	- - - - -	50	mAdc
Repeller Voltage	- - - - -	500	Vdc
Ambient Temperature	- - - - -	150°	C
Resonator Dissipation with conduction cooling	- - - - -	20	watts
Resonator Dissipation with forced air cooling	- - - - -	30	watts

APPLICATION

Cooling: At sea level this tube will not require forced air cooling when operated at less than 20 watts resonator dissipation and an ambient temperature of less than 150° C. The waveguide-flange connection will normally provide the required heat sink for conduction cooling. If the tube is operated at a resonator dissipation of greater than 20 watts or if an insulator is used between the tube and waveguide for DC isolation, forced air cooling will be required to maintain the body temperature below the maximum rating of 175° Centigrade.

Resonator: The resonator of the 1K20XN-A 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 best tube life obtained.

The heater and cathode of the 1K20XN-A 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.

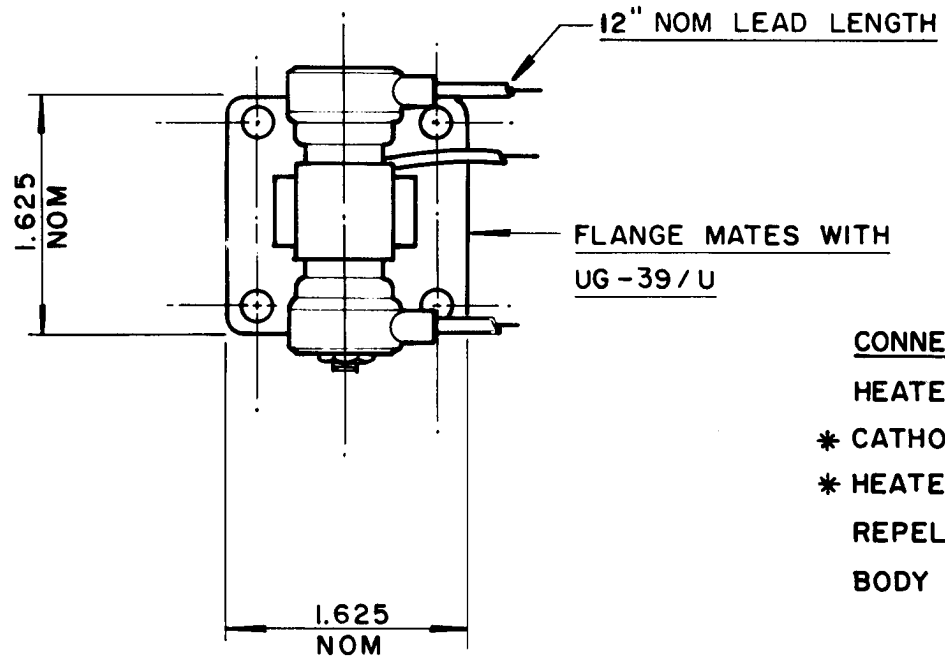
Mechanical Trimming: The 1K20XN-A is fitted with a locking tuner that allows ± 50 mc trimming. The center frequency is factory pre-set to your specification.

Shock and Vibration: This klystron is specifically designed for use in applications encountering vibration and shock extremes. This tube is capable of delivering its rated power output when subjected to vibration levels of 10g (20-2,000 cps) or shock of up to 40g (11 milliseconds duration).

With a vibration level of 10g in any reference plane, the peak-to-peak FM deviation will be less than 200 kilocycles.

Special Applications: For additional information regarding any specific application, write to Microwave Division, Eitel-McCullough, Inc., San Carlos, California, telephone Lytell 1-1451, Cable EIMAC.

IK20XN-A



CONNECTIONS

- HEATER - WHITE
- * CATHODE - BLACK
- * HEATER - BLACK
- REPELLER - RED
- BODY - BLACK - WHITE
- * INTERNALLY CONNECTED

