

M1325L/M5187

X-Band Magnetron

M1325L/M5187 is designed for the magnetron of x-band radar system. The frequency range is fixed <9380 ~ 9440MHz> and the peak output power is 25kW.

— MAXIMUM RATINGS —

	Min	Max	Unit
Peak anode current.....	6.0	10.0	A
Peak anode power input.....	—	75	kW
Duty cycle.....	—	0.001	—
Pulse duration.....	0.05	2.0	μs
Rate of rise of voltage pulse.....	—	150	kV/μs
Anode temperature.....	—	120	°C
V.S.W.R at the output coupler.....	—	1.5:1	—

— ELECTRICAL —

	Min	Typical	Max	Unit
Heater voltage (Note 1).....	5.7	6.3	6.9	V
Preheat time.....	120	—	—	s
Peak anode voltage (Note 2).....	7.5	8.0	8.5	kV
Peak output power (Note 2).....	20	25	—	kW
Frequency (Note 2).....	9380	9410	9440	MHz

Note 1: Measured with heater voltage of 6.3V and no anode input power, the heater current limits are 0.43A minimum, 0.6A maximum.

For average pulse input powers greater than 40 watts, the heater voltage must be reduced within 3 seconds after the application of h.t. according to the following schedule:

$$\text{Heater Voltage } E_f = 0.08(100 - P_i) \text{ (V)}$$

P_i : Input Power (Average) (W)

Note 2: Measured at peak anode current 8.0A

95-10



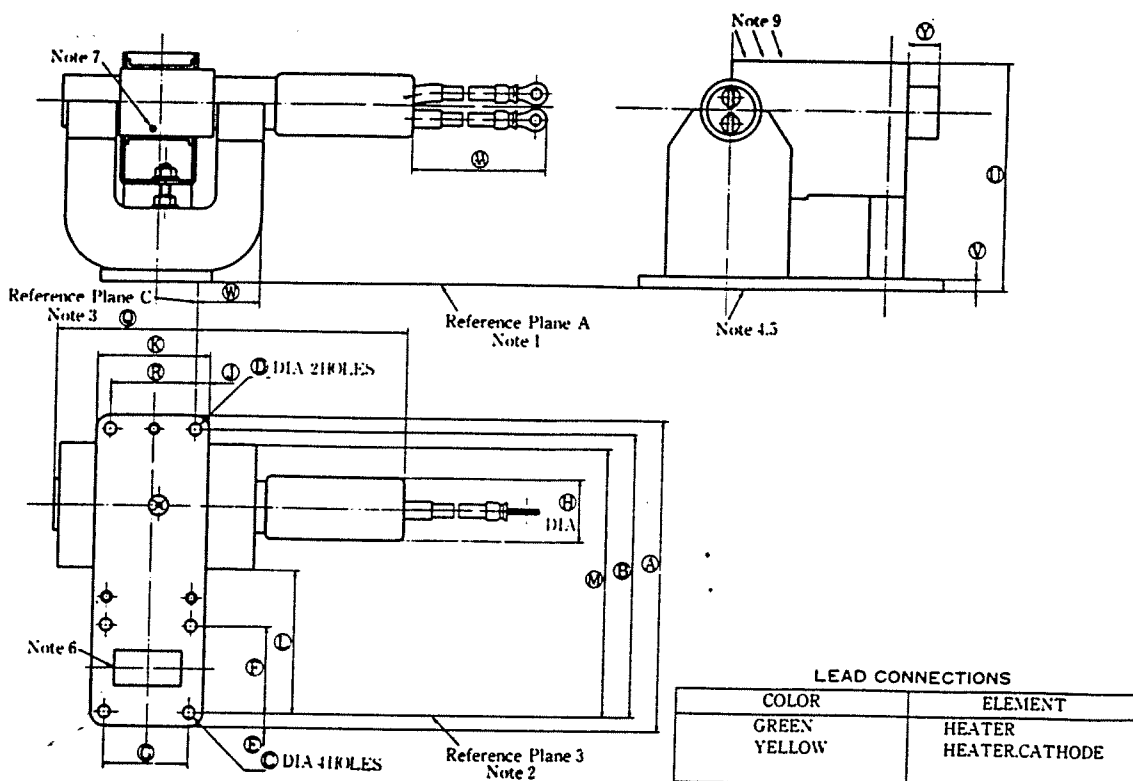
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OUTLINE

M1325L/M5187



Outline Dimensions (All dimensions without limits are nominal)

Ref	Inches	Millimeters	Ref	Inches	Millimeters
A	4.433 ± 0.015	113.11 ± 0.4	M	4.000max	101.6max
B	4.103	104.22	N	3.25max	82.5max
C	0.170 ± 0.003	4.315 ± 0.075	Q	2.187max	55.55max
D	0.175 ± 0.003	4.445 ± 0.075	R	1.22 ± 0.004	30.99 ± 0.1
E	0.187max	4.75max	S	0.875	22.23
F	1.280 ± 0.004	32.51 ± 0.1	T	0.375max	9.35max
G	1.220 ± 0.004	30.99 ± 0.1	U	3.313max	84.15max
H	1.000	25.4	V	0.125	3.18
J	0.218	5.54max	W	1.187max	30.15max
K	1.625	41.28	X	0.25max	6.4max
L	1.811min	46min			

Outline Notes

- Reference plane "A" lies on bottom surface of mounting plate.
- Reference plane "B" passes through the centers of the two top holes of the mounting plate as shown and is perpendicular to plane "A".
- Reference plane "C" intersects plane "B" at the center of the mounting plate hole as shown and is perpendicular to planes "A" and "B".
- With bottom surface of mounting plate resting on a flat surface, a feeler gauge .508 (0.02 inch) thick and 3.1 (0.125 inch) wide shall not enter more than 3.1 (0.125 inch) at any point.
- All metal surfaces except bottom surface of mounting plate shall be painted.
- The position of the waveguide and fixing holes will be such that the valve operates into coupler type UG-40 B/U.
- Anode temperature measured at this point.
- Length of flying leads measured from the center of the anode block.
- Recommended direction of air flow.