

M1458

X-Band Magnetron

M1458 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
Perk anode power input	-	75	kW
Duty cycle	-	0.001	-
Pulse duration	-	1.0	µs
Rate of rise of voltage pulse	-	100	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)	7.2	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 25 watts, the heater voltage must be reduced within 3 seconds after the application of h. t. according to the following schedule:

$$\text{Heater Voltage } E_f = 6.3 \sqrt{1 - \frac{P_i}{100}} \quad (\text{V})$$

Pi:Input Power (Average) (W)

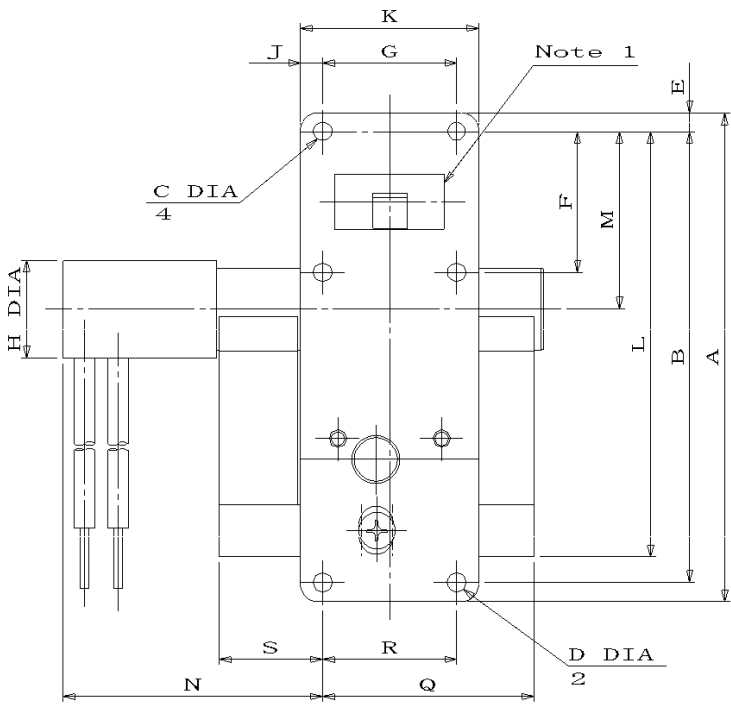
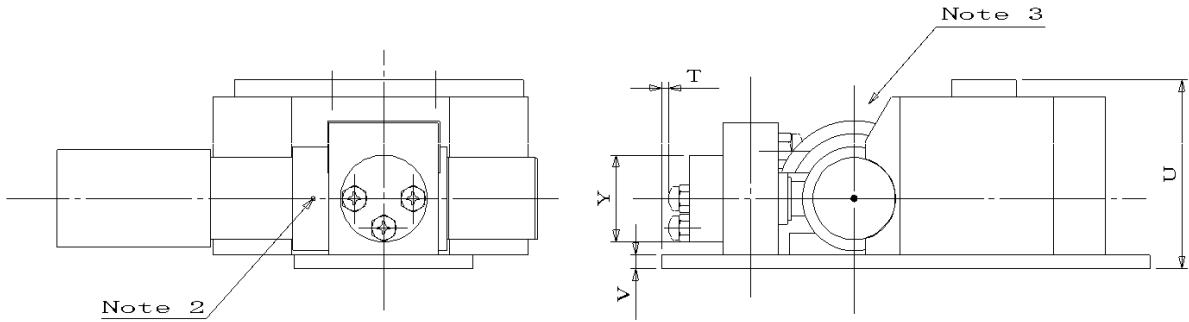
Note 2: Measured at peak anode current 8.0A



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OUTLINE

Note: Dimensions are in mm



Outline Dimensions
(All dimensions without limits are nominal)

Ref	Millimeters
A	113±0.4
B	104.2±0.1
C	4.3±0.1
D	4.4±0.1
E	4.75max
F	32.5±0.2
G	31±0.1
H	25.4max
J	5.54max
K	41.2
L	100max
M	41
N	60.5max
Q	55.55max
R	31±0.1
S	27max
T	0min
U	35max
V	3.2

LEAD CONNECTIONS

COLOR	ELEMENT
GREEN	HEATER
YELLOW	HEATER CATHODE

Outline Notes

1. The position of the waveguide and fixing holes will be such that the valve operates into coupler type UG-40 B/U.
2. Anode temperature measured at this point.
3. Recommended direction of air flow.