Date	Oct. 27, 2022

NISSHINBO

Released

X-band Magnetron

Model No. M1568B(J)

■ GENERAL DESCRIPTION

M1568B(J) is designed for the magnetron of X-band radar system. The frequency range is fixed <9380 - 9440MHz> and the peak output power is 25kW.

■ ELECTRICAL CHARACTERISTICS

PARAMETERS		MINIMUM	TYPICAL	MAXIMUM	UNITS
Heater voltage	(note 1)	5.7	6.3	6.9	V
Heater current		0.43	0.52	0.6	A
Preheat time		120	-	-	s
Peak anode voltage	(note 2)	7.2	8.0	8.5	kV
Peak output power	(note 2)	22.5	25.0	-	kW
Frequency	(note 2)	9380	9410	9440	MHz

■ ABSOLUTE MAXIMUM RATINGS

These ratings cannot necessarily be used simultaneously and no individual ratings should be exceeded.

PARAMETERS		MINIMUM	MAXIMUM	UNITS
Peak anode current	(note 3)	6.0	10.0	A
Peak anode power input		-	75	kW
Duty cycle		-	0.001	-
Pulse duration		0.05	1.2	μs
Rate of rise of voltage pulse		-	100	kV/μs
Anode temperature		-	110	℃
VSWR at the output coupler		-	1.5 : 1	-

Notes

1. With no anode input power. For average pulse input powers greater than 25 watts, the heater voltage must be reduced within 3 seconds after applied high voltage according to the following schedule:

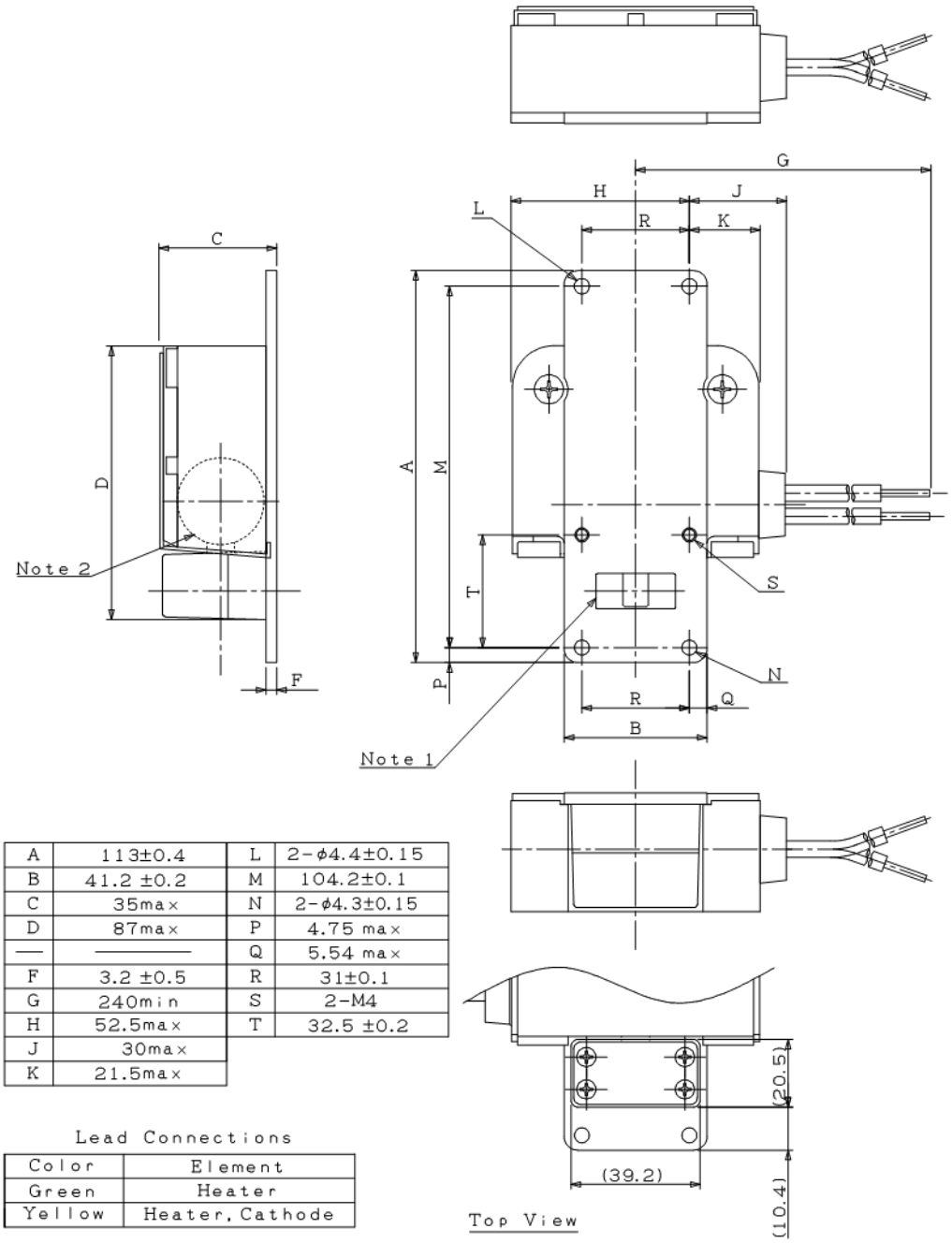
   Heater Voltage: $\mathrm{Ef} = 6.3\sqrt{1 - \frac{Pi}{100}}$ [V]

   Mean input power (Pi) = Anode current ×Anode voltage ×Duty cycle (W)
2. Measured at peak anode current 8.0A.

＊Above Specifications are subject to change without notice.

3. Any overshoot of the anode current is not acceptable. The impedance of this magnetron is the same as current magnetron excluding the transient impedance. This means that the additional reactance should be required for adjustment the anode current wave form, if this magnetron will be installed into the similar modulator circuit as before.

■ OUTLINE



A	113±0.4	L	2-φ4.4±0.15
B	41.2 ±0.2	M	104.2±0.1
C	35max	N	2-φ4.3±0.15
D	87max	P	4.75 max
—	———	Q	5.54 max
F	3.2 ±0.5	R	31±0.1
G	240min	S	2-M4
H	52.5max	T	32.5 ±0.2
J	30max		
K	21.5max		

Lead Connections

Color	Element
Green	Heater
Yellow	Heater, Cathode

Note 1:The position of the waveguide and fixing holes will be such that the valve operates into coupler type UG-40 B/U.
Note 2:Anode temperature mesured at this point.

(Dimensions are expressed in “mm”.)

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