

Date

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Released

S band Magnetron

Model No. M1623

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Microwave Division

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Microwave Division

Title:

Datasheet of M1623

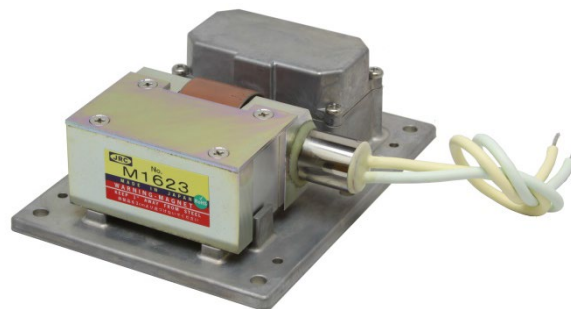
Reference No.:
DS-M1623

Rev.:
08E

Sheet:
1/3

■ GENERAL DESCRIPTION

M1623 is designed for the magnetron of S band radar system. The frequency range is fixed <3040 ~ 3060MHz> and the peak output power is 30kW.



■ ELECTRICAL CHARACTERISTICS

| PARAMETERS | MINIMUM | TYPICAL | MAXIMUM | UNITS |
|-----------------------------|---------|---------|---------|-------|
| Heater voltage (note 1) | 5.7 | 6.3 | 6.9 | V |
| Heater current | 1.1 | 1.3 | 1.4 | A |
| Preheat time | 180 | - | - | s |
| Peak anode voltage (note 2) | 7.2 | 8.0 | 8.5 | kV |
| Peak output power (note 2) | 25 | 30 | - | kW |
| Frequency (note 2) | 3040 | 3043 | 3060 | 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 | 6.0 | 12.0 | A |
| Peak anode power input | - | 100 | kW |
| Duty cycle | - | 0.001 | - |
| Pulse duration | 0.07 | 1.0 | μs |
| Rate of rise of voltage pulse | - | 130 | kV/μs |
| Anode temperature | - | 120 | °C |
| 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 the application of h.t. according to the following schedule:

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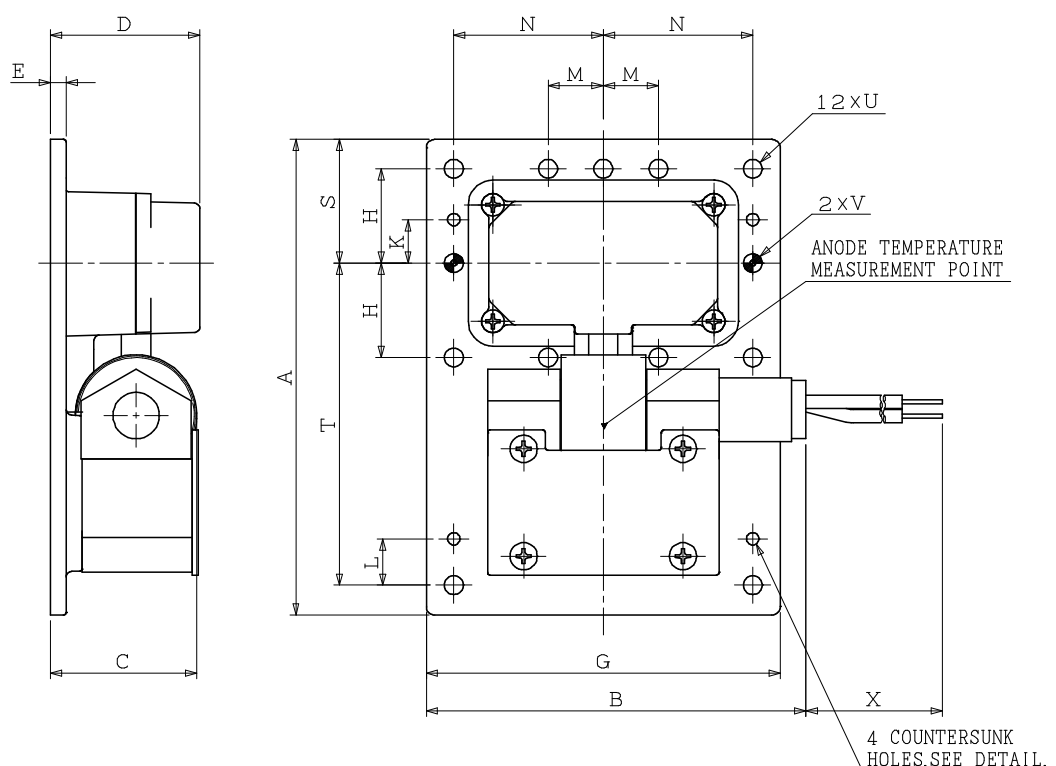
| Mean input power(W) | Heater Voltage(V) |
|---------------------|-------------------|
| Less than 25 | 6.3 |
| 25 to 62 | 5.3 |
| 62 to 100 | 4.5 |

Mean input power (Pi) = Anode current × Anode voltage × Duty cycle (W)

2. Measured at peak anode current 8.0A.

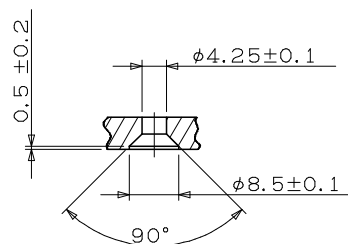
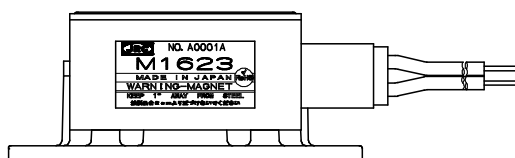
■ OUTLINE

(All Dimensions without limits are nominal.)



DEMONSTRATIONS Unit : mm

| | | | |
|---|----------|---|------------|
| A | 165.1MAX | M | 19.05±0.05 |
| B | 150MAX | N | 51.6±0.1 |
| C | 52MAX | P | --- |
| D | 55MAX | R | --- |
| E | 5.5 | S | 42.7 |
| F | --- | T | 111.1 |
| G | 123.2MAX | U | φ6.5±0.1 |
| H | 32.54 | V | φ6.5±0.05 |
| J | --- | W | --- |
| K | 15 | X | 250MIN |
| L | 16 | | |



DETAIL OF COUNTERSUNK HOLES

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