



New Japan Radio Co., Ltd.

Technical
Information

Rev.3

MAF1610B

X-Band Magnetron



MAF1610B is designed for the magnetron of x-band radar system.

The frequency range is fixed <9380 - 9440MHz> and the peak output power is 1.8kW.

---- MAXIMUM RATINGS ----

| | Min | Max | Unit |
|-------------------------------|------|-------|-------------------|
| Peak anode current | 2.0 | 2.5 | A |
| Average anode power input | - | 10 | W |
| Duty cycle | - | 0.001 | - |
| Pulse duration | 0.05 | 1.25 | us |
| Rate of rise of voltage pulse | - | 55 | kV/us |
| Anode temperature | - | 100 | degree centigrade |
| V.S.W.R at the output coupler | - | 1.5:1 | - |

---- ELECTRICAL ----

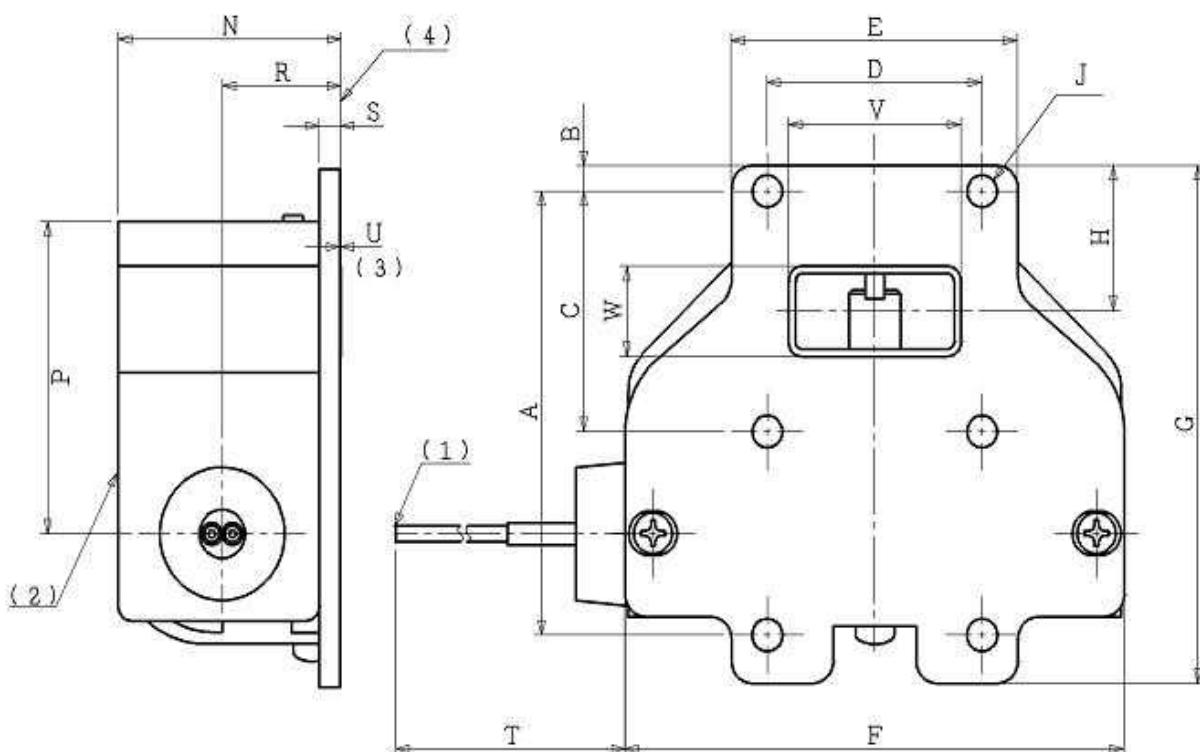
| | Min | Typical | Max | Unit |
|-----------------------------|------|---------|------|------|
| Heater voltage | 5.7 | 6.3 | 6.9 | V |
| Heater current (Note 1) | - | - | - | A |
| Preheat time | 60 | - | - | S |
| Peak anode voltage (Note 2) | 2.9 | 3.2 | 3.4 | kV |
| Peak output power (Note 2) | 1.5 | 1.8 | - | kW |
| Frequency (Note 2) | 9380 | 9410 | 9440 | MHz |

Notes:

1. Measured with heater voltage of 6.3V and no anode input power, the heater current limits are 0.5A minimum, 0.6A maximum. No reduction of heater voltage at operating is required.
2. Measured at peak anode current 2.0A.

OUTLINE

Note: Dimensions are in mm



| | | | |
|---|--------------------------|---|----------------|
| A | 60 ± 0.2 | L | 9 |
| B | 3.75 | M | 7 |
| C | 32.5 ± 0.1 | N | 33 MAX |
| D | 31 ± 0.1 | P | 43 |
| E | 41.3 | R | 17 |
| F | 72 | S | 3 |
| G | 70 | T | 185 ± 10 |
| H | 20 | U | 0.1 ± 0.05 |
| J | $4 - \phi 4.32 \pm 0.08$ | V | 24.9 ± 0.2 |
| K | $2 - \phi 4.4 \pm 0.1$ | W | 12.2 ± 0.2 |

Lead Connections

| Colour | Element |
|--------|-----------------|
| Green | Heater |
| Yellow | Heater, Cathode |

