

**Released**

# S-band Magnetron

## Model No. M1302L/M5020

**Copyright©****Nisshinbo Micro Devices Inc.  
Microwave Business Headquarters**

-Notice of Proprietary Information-

This document and its contents are proprietary to Nisshinbo Micro Devices Inc.  
This publication and its contents may not be reproduced or distributed for any other purpose  
without the written permission of Nisshinbo Micro Devices Inc.  
Those specifications listed in this document are subject to change at any time.

## ■ GENERAL DESCRIPTION

M1302L/M5020 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
Preheat time	180	-	-	s
Peak anode voltage (note 2)	7.5	8.0	8.5	kV
Peak output power (note 2)	25	-	-	kW
Frequency (note 2)	3040	-	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	-	1.0	μs
Rate of rise of voltage pulse	-	130	kV/μs
Anode temperature	-	120	°C
VSWR at the output coupler	-	1.5 : 1	-

\* Above Specifications are subject to change without notice.

## Notes

1. Measured with heater voltage of 6.3V and no anode input power, the heater current limits are 1.1A minimum, 1.4A maximum.

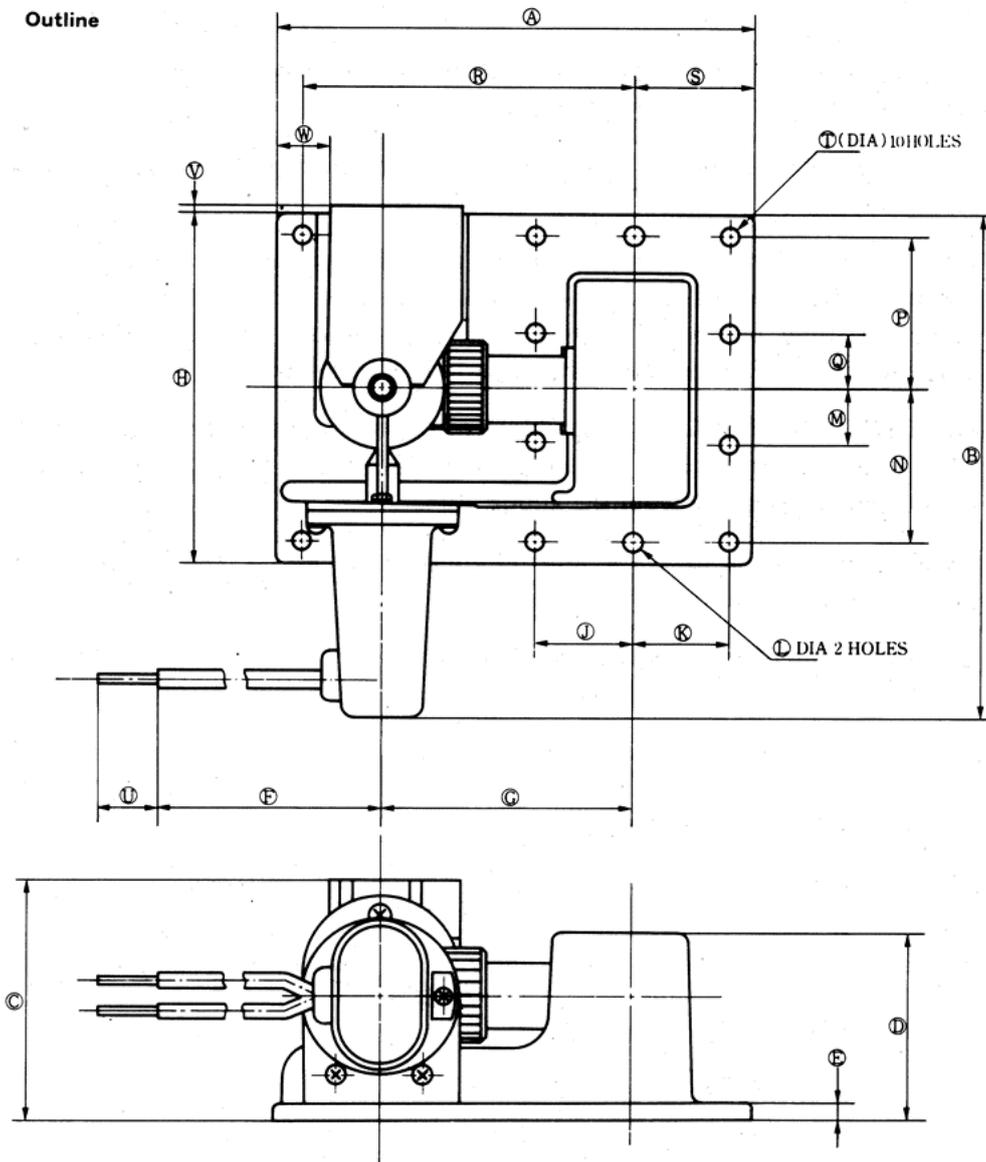
For average pulse input powers greater than 25 watts, the heater voltage must be reduced within 3 seconds after the application of high voltage according to the following schedule:

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

2. Measured at peak anode current 8.0A.

\* Above Specifications are subject to change without notice.

## ■ OUTLINE



### LEAD CONNECTIONS

COLOR	ELEMENT
GREEN	HEATER
YELLOW	HEATER,CATHODE

### Outline Dimensions (All dimensions without limits are nominal.)

Ref	Inches	Millimeters	Ref	Inches	Millimeters
A	6.500max	165.1max	M	0.750±0.002	19.050±0.051
B	7.000max	177.8max	N	2.031±0.002	51.587±0.051
C	3.500max	88.90max	P	2.031±0.002	51.587±0.051
D	2.562max	65.07max	Q	0.750±0.002	19.050±0.051
E	0.236	6	R	4.375	111.1
F	11.750~12.50	298.5~311.2	S	1.700	43.18
G	3.250±0.250	82.55 ±6.35	T	0.250~0.251	6.35~6.63
H	4.850max	123.2max	U	0.500	12.70
J	1.281±0.002	32.537±0.051	V	0.197max	5.00max
K	1.281±0.002	32.537±0.051	W	0.629	16
L	0.250~0.251	6.35~6.375			

\* Above Specifications are subject to change without notice.

