

The HITACHI 2M252 is fixed frequency continuous wave magnetron intended for use in microwave ovens and industrial microwave heating applications.

The useful RF power output at 2450 MHz band is approx. 3000 watts into a matched load.

FEATURES

1. Stable performance with water cooling jackets
2. Suitable performance and excellent reliability for use in microwave ovens and industrial microwave heating applications
3. Sufficient noise suppression with the improvement of integrated filter circuit

GENERAL DATA

ELECTRICAL

Filament Voltage (Stand-by)	-----	4.0	V
Filament Voltage (Operation)	-----	(Fig. 1)	
Filament Current (Stand-by)	-----	23	A
Filament Surge Current (peak)	-----	100	A
Filament Pre-heating Time	-----	12	sec
Frequency (with matched load)	-----	2455	MHz
Recommending Operation	-----	Continuous	
Anode Potential	-----	Grounded	
Filament Potential	-----	Negative High Voltage	
		- 5.2	kV
Magnet	-----	Permanent Magnet	

Temperature Coefficient	-----	-0.2	%/K
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MECHANICAL

Dimensions : See dimensional outline (Fig. 5).

Width	-----	120	mm MAX.
Length	-----	129	mm MAX.
Height (antenna height is excluded.)	---	149	mm MAX.
Antenna height	-----	48	mm MAX.
Weight	-----	Approx. 3.5	kg
Mounting Position	-----	Vertical axis either end up	
Cooling	-----	Water	

(Fig. 4)

ABSOLUTE MAXIMUM RATINGS

		Min.	Max.	Unit
Filament Voltage (Stand-by)	-----	3.8	4.2	V
Filament Voltage (Operation)	-----	(Fig. 1)	(Fig. 1)	V
Preheating Time	-----	8	-	s
Average Anode Current	-----	-	900	mAdc
Peak Anode Current	-----	-	2500	mAp
Average Anode Input	-----	-	4600	W
Load VSWR (Continuously)	-----	-	1.5	
Anode Core Temperature	-----	-	160	Deg.-C
Storage Temperature	-----	-30	60	Deg.-C
Antenna Temperature (metal-ceramic seal point)	--	-	350	Deg.-C
Case Temperature	-----	-	100	Deg.-C
Water Temperature at Outlet	-----	-	60	Deg.-C

TYPICAL OPERATION

Test conditions : at a matched load, and with the power supply of single phase
full-wave rectifier without filter

Filament Voltage (Stand-by)	-----	4.0	V
Filament Voltage (Operation)	-----	2.2	V
Average Anode Current	-----	840	mA
Peak Anode Voltage	-----	5.2	kV
Average Power Output (matched load)	-----	3000	W
Frequency (matched load)	-----	2455	MHz
Cooling Water Flow	-----	3	L/min
Water Temperature at Inlet	-----	25	Deg.-C

Note :

- (1) The information contained herein is tentative and may be changed without prior notice. It is therefore advisable to contact HITACHI before proceeding with the design of equipment incorporating this product.
- (2) Data are based on the Testing Methods for Continuous Wave Magnetrons ED-1501 (ET-145A) set by the Electronic Industries Association of Japan (EIAJ).
- (3) Precautions for Safety : Please see attached news letter of No. NL73M1053.

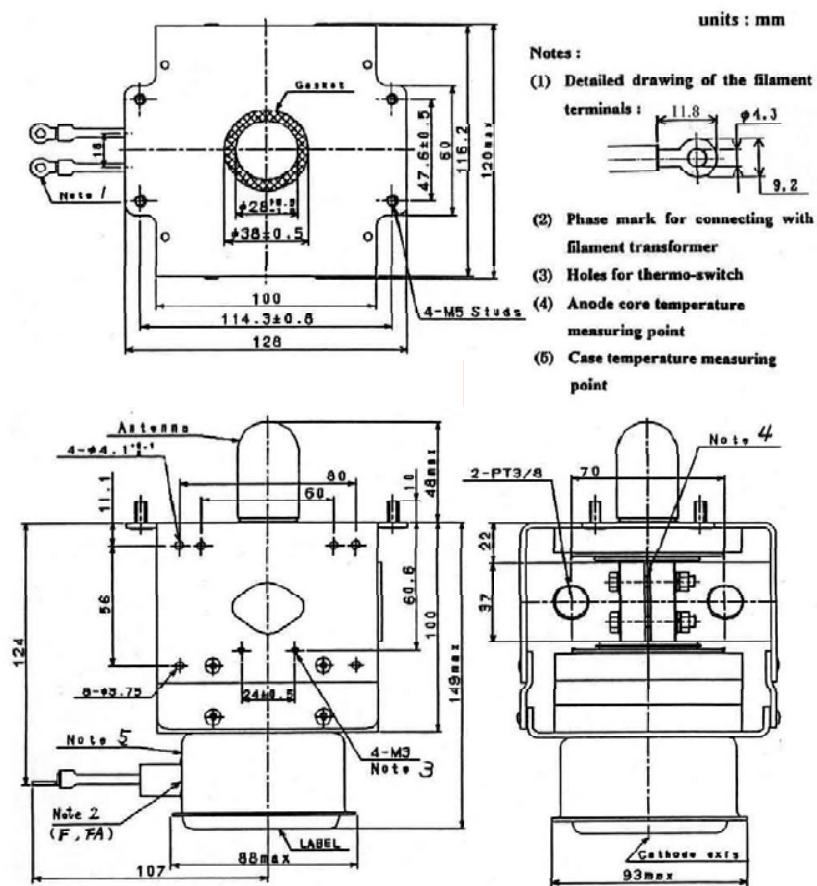


Fig. 5 Dimensional Outline of The 2M252

Output Structure of Magnetron

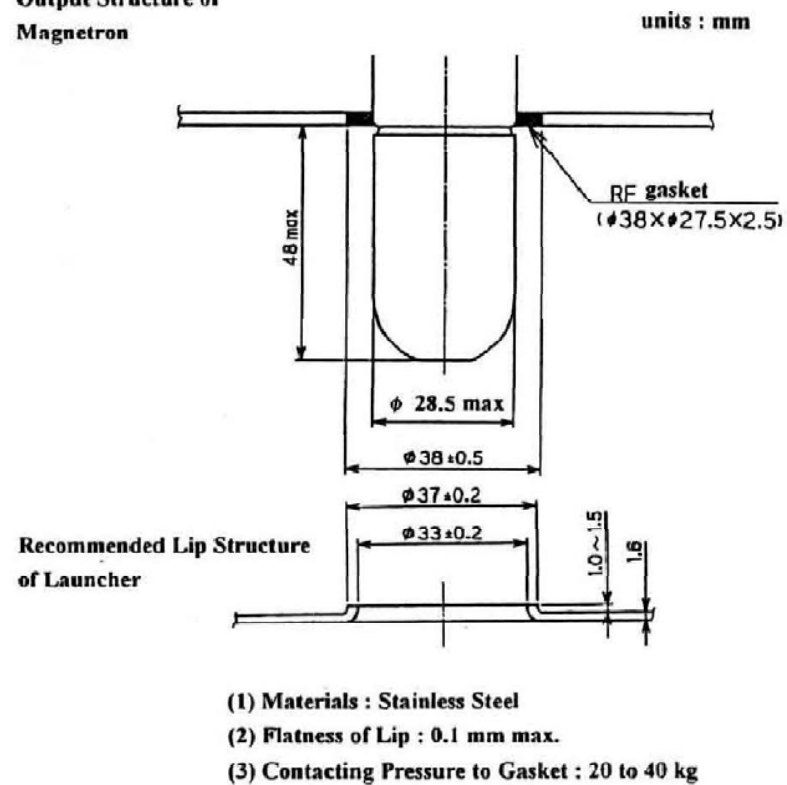


Fig. 6 Details of Output Coupling Portion and Recommended Launcher Design