TEST SPECIFICATIONS

Type : 2M130

Description : Continuous Wave Magnetron, 2450MHz, Fixed Frequency.

Absolute Maximum Ratings :

Item	Symbol	Min.	Max.	Unit	Note
Filament Surge Current	—	—	100	Aac	
Filament Voltage,Stand-by	Ef	4.40	5.00	Vac	
Filament Voltage,Operation	Ef	(See Fig.1)		Vac	1,2
Pre-heating Time	Tk	5	—	sec	1,3
Peak Anode Voltage.	ebm	—	4.3	KVp	1
Peak Anode Current	ibm	—	2.1	Ap	1
Average Anode Current	Ib	—	750	mAdc	1
Average Anode Input	Pi	—	2.6	KW	1
Load VSWR	σ L	—	4	—	1,7
Anode Core Temperature	Tp	—	180	℃	
Case Temperature	Tcase	—	120	℃	
Storage Temperature	—	-30	60	℃	

Test conditions for electrical characteristics :

Filament Voltage	Ef = 4.6 V (Stand-by), Ef = 3.9 V (operation)
Average Anode Current	Ib = 725 mAdc
Load VSWR	σ L = 1.1 or less
Cooling Air Flow	Q = 1.5 m³/min (35 CFM) or greater

Limits and characteristics :

Item	Conditions	Symbol	Bogie	Min.	Max.	Unit	Note
Filament Current,Stand-by	tk=120secMin.	If	20	18.5	21.5	Aac	1,4,5
Peak Anode Voltage		ebm	4.00	3.85	4.20	kVp	1,4,5,10
Average Power Output		Po	1950	1750	—	W	1,4,5,10
Frequency		fo	2455	2440	2470	MHz	1,4,5,10
Stability	σ L=3 or less	ST	—	700	—	mAdc	1,4,5,6,8
Breakdown Voltage		Et	—	10	—	kVdc	9

Notes :

1. Power supply should be single-phase , full-wave rectifier without filter.
2. Filament Voltage should be regulated as shown in Fig.1.
3. To apply to sigle phase fullwave rectifier without filter. If power supply is different, the figure shall be reviewed.
4. Block diagram of the test equipment is shown in Sheet NO.1609-0002-1.
5. Launcher and tapered waveguides are shown in Sheet NO.1609-0007-1.
6. Any instability such as mode jump,run away,should not be observed at any phase of the specified VSWR.
7. The load impedance should be kept outside the region on the Rieke diagram shown in Fig.2.
8. Operete momentarily 5 sec maximum to avoid destruction of the tube.
9. No continuous spark at 10 KVdc after gradual voltage up.
   (RL =100 K ohms. potential of anode shall be plus.)
10. Figures are specified at 20 ± 1℃ of the magnets' temperature.
    If the magnets' temperature is T ℃, ebm (T), Po(T) and fo shall be :

    $ebm\ (T) = \{\ 1-0.002\ (T-20)\ \}\ ebm$

    $Po\ (T) = \{\ 1-0.002\ (T-20)\ \}\ Po$

    $fo\ (T) = fo$

    Measurement shall be done within 15 sec after ebm is supplied.

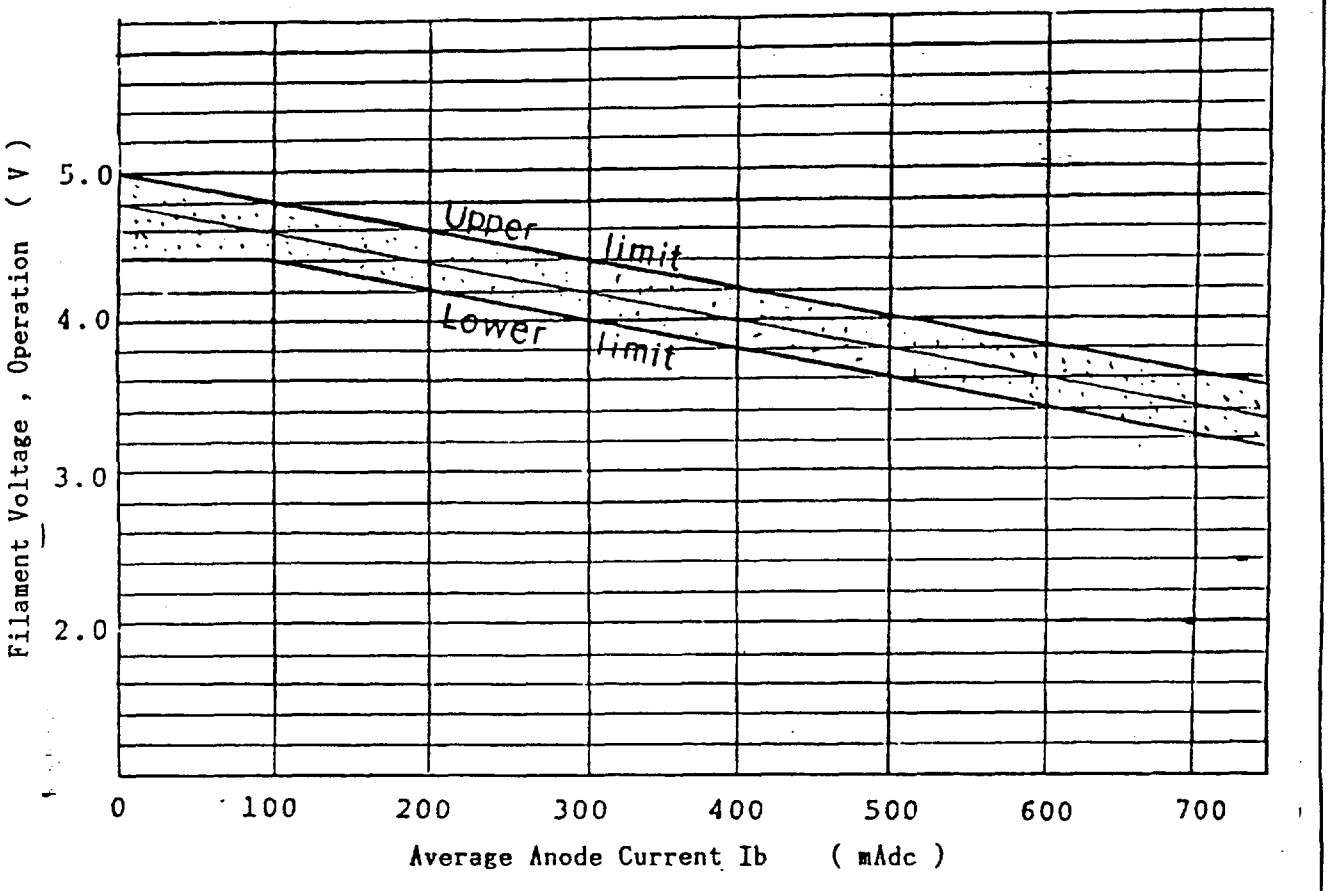

Fig .1 Reduction Chart of Filament Voltage

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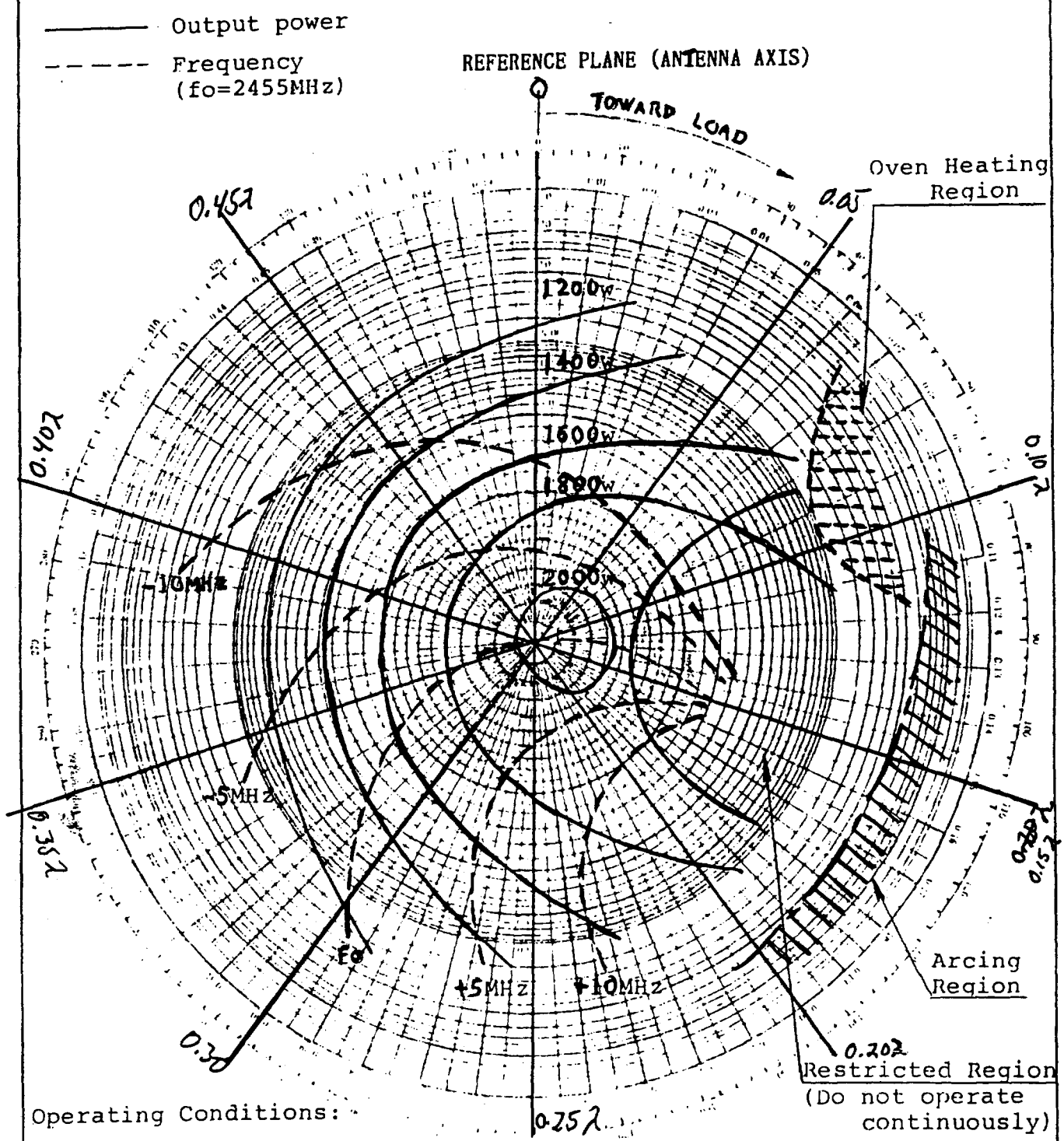
RIEKE DIAGRAM



Operating Conditions:

Power Supply: Single phase, fullwave rectifier without filter

Average Anode Current = 700 mA

Fig.2 Rieke Diagram of the 2M130

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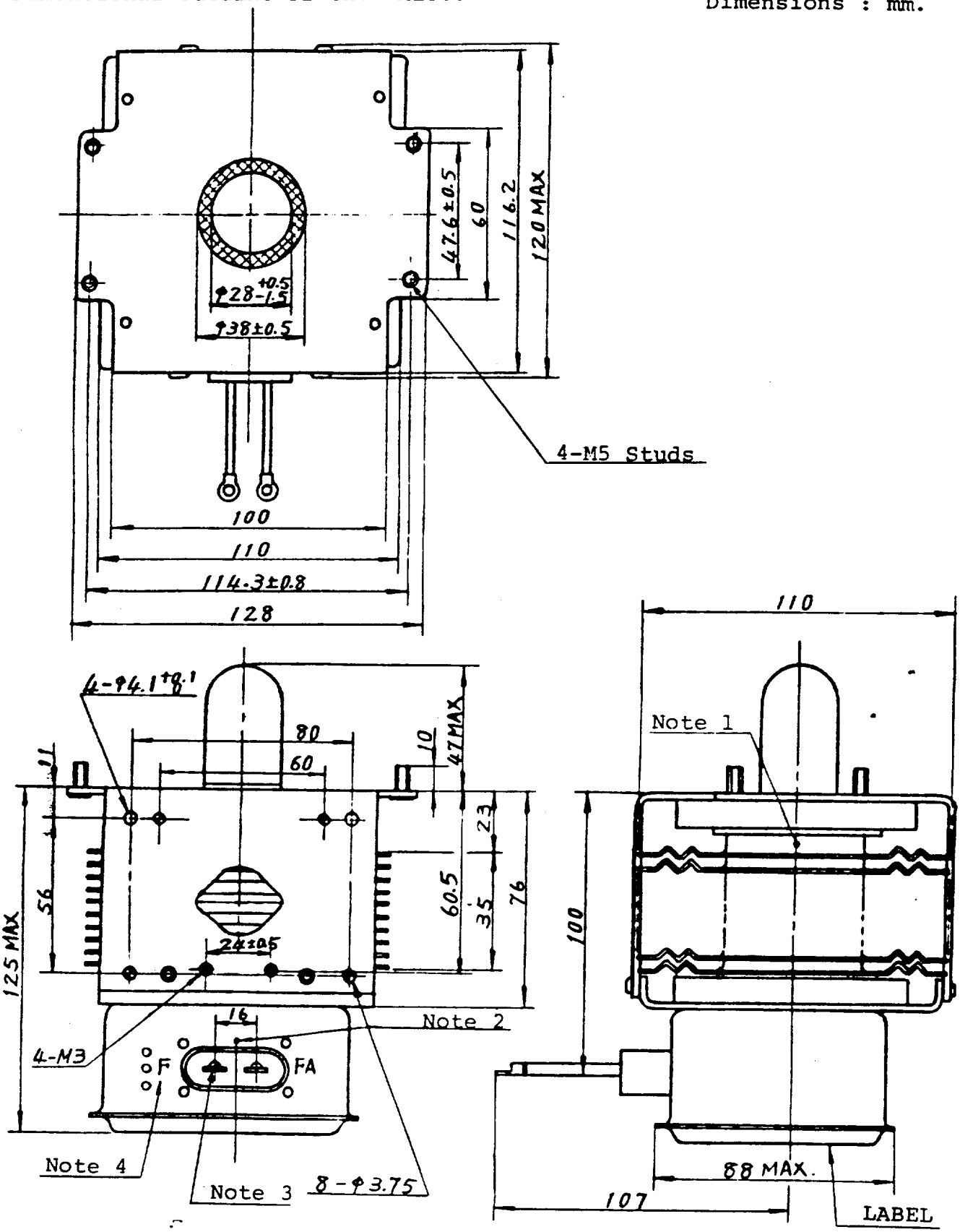
Dimensional outline of the 2M130.

Dimensions : mm.



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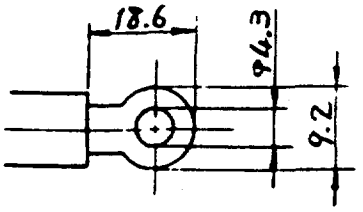
Notes: 1. Anode core temperature measuring point (down stream air).

2. Case temperature measuring point.

3. Detailed drawing of the filament terminal:



4. Filament terminal near this mark(three serial holes) shall be connected with filament transformer so as to be positive polarity when anode current flows.

5. Change of numbers and dimensions of holes on the yoke which are not specified in the drawing should be accepted.

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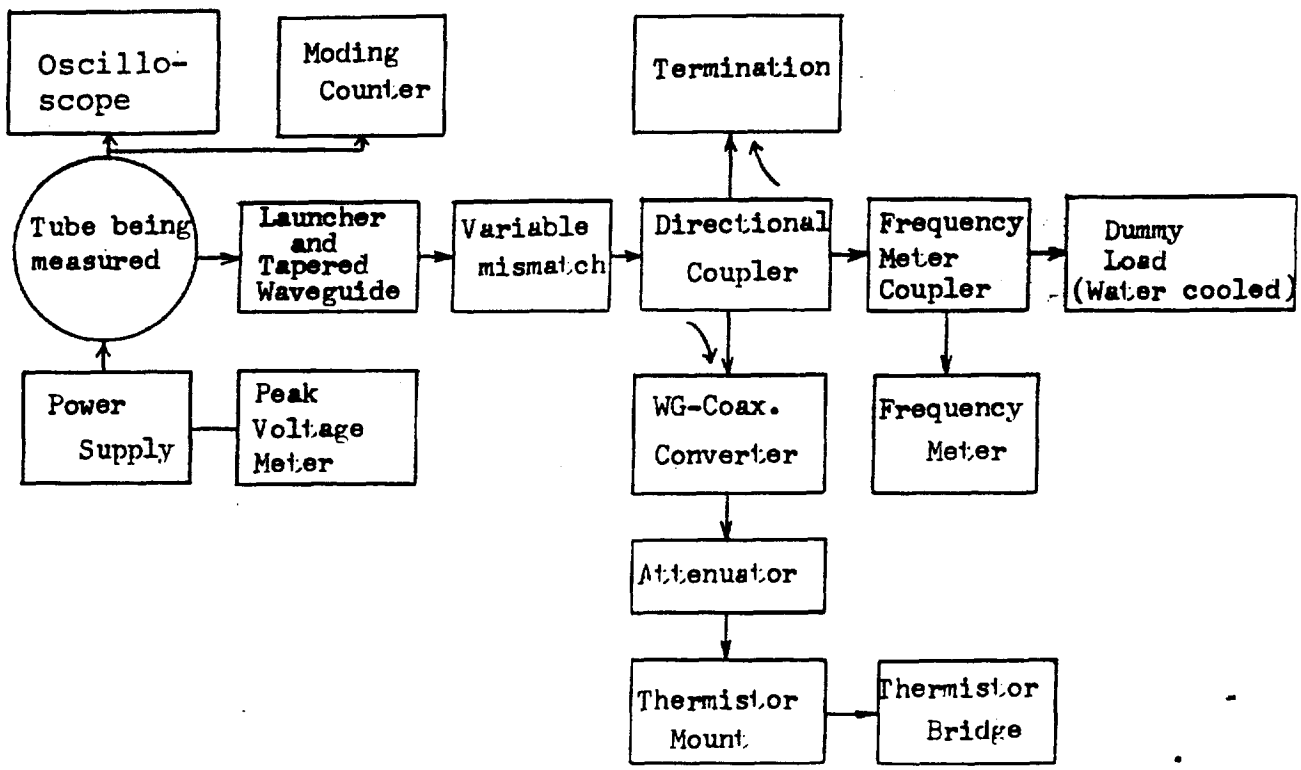
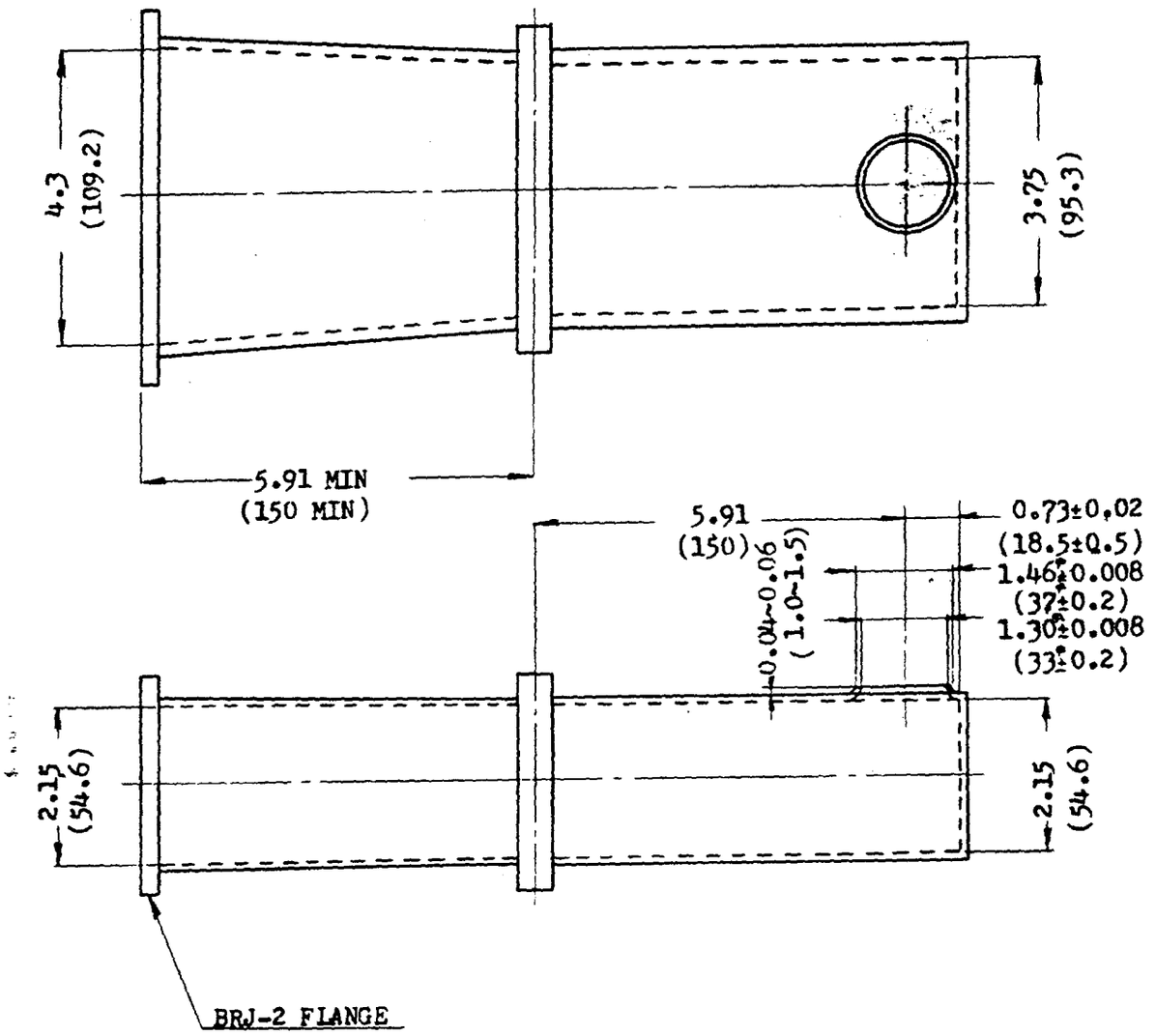
BLOCK DIAGRAM OF TEST EQUIPMENT



LAUNCHER & WAVEGUIDE
(FOR TEST ONLY)

Dimensions in inches
(in millimeters)



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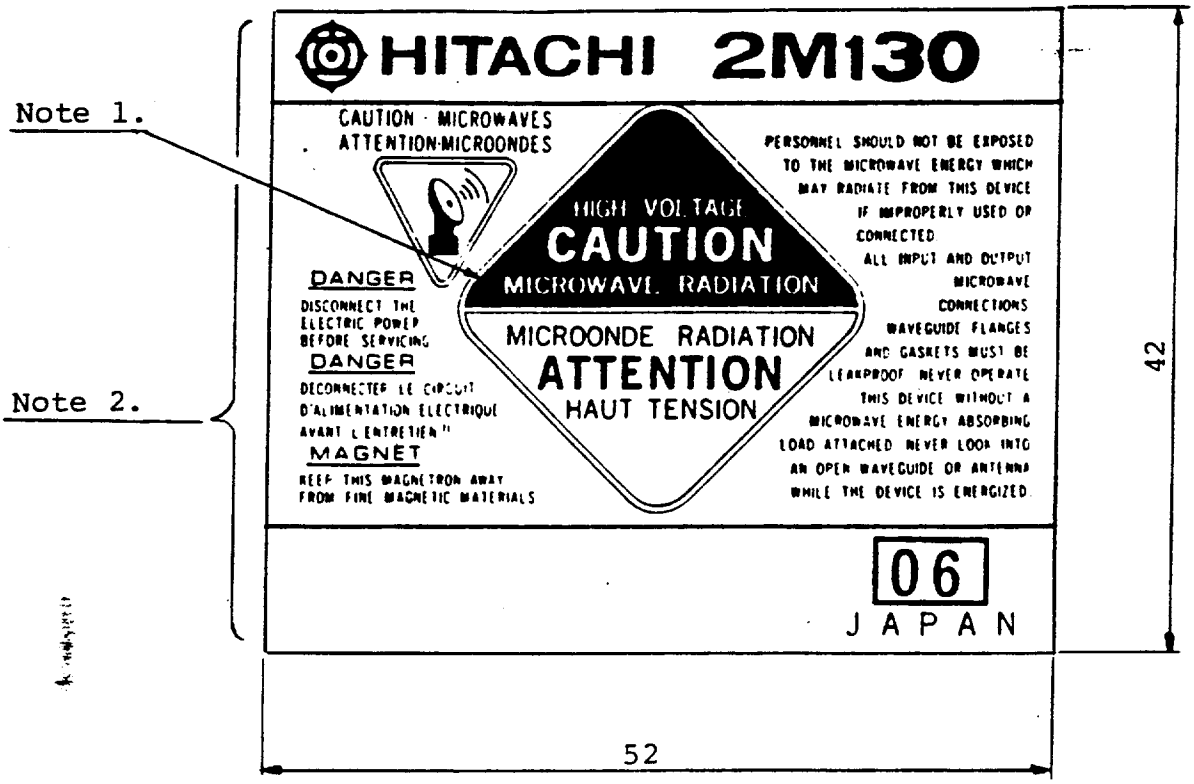
LABEL

Dimensions: mm.



Note:

1. Area indicated to be red with white letters.
2. Area indicated to be white with red letters.

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