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NL10250-2

Description: Continuous wave magnetron, 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	-	3.1	Kw	1
Load VSWR	σL	-	4	-	1,5
Anode Core Temperature	Tp	-	180	C	
Case Temperature	Tcase	-	120	C	
Storage Temperature	-	-30	60	C	

TEST CONDITIONS FOR ELECTRICAL CHARACTERISTICS:

Filament Voltage	Ef = 4.6 V (stand-by), Ef = 3.4 V (operation)
Average Anode Current	Ib = 725 mAdc
Load VSWR	σL = 1.1 or less
Cooling Air Flow	Q = 1.5m^3/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,
Peak Anode Voltage		ebm	4.00	3.85	4.20	kVp	1,8
Average Power Output		Po	1950	1750	-	W	1,8
Frequency		fo	2455	2440	2470	MHz	1,8
Stability	σ L=3 or less	ST	-	700	-	mAdc	1,4,6
Breakdown Voltage		Et	-	10	-	kVdc	7

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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 single phase full-wave rectifier without filter. If power supply is different, the figure shall be reviewed.

4. Any instability such as mode jump, run away, should not be observed at any phase of the specified VSWR.

5. The load impedance should be kept outside the region on the Reike Diagram

6. Operate momentarily 5 sec maximum to avoid destruction of tube.

7. No continuous spark at 10 kVdc after gradual voltage up.
(RL = 100K ohms. Potential of anode shall be plus)

8. Figures specified at 20+/- 1°C of the magnets' temperature.
If the magnets' temperature is T °C, 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
Measurements shall be done within 15 seconds after ebm is supplied.

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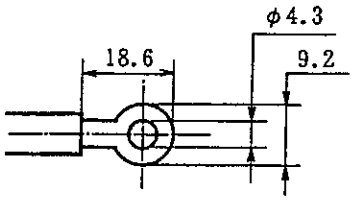
NOTES:

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 soon as to 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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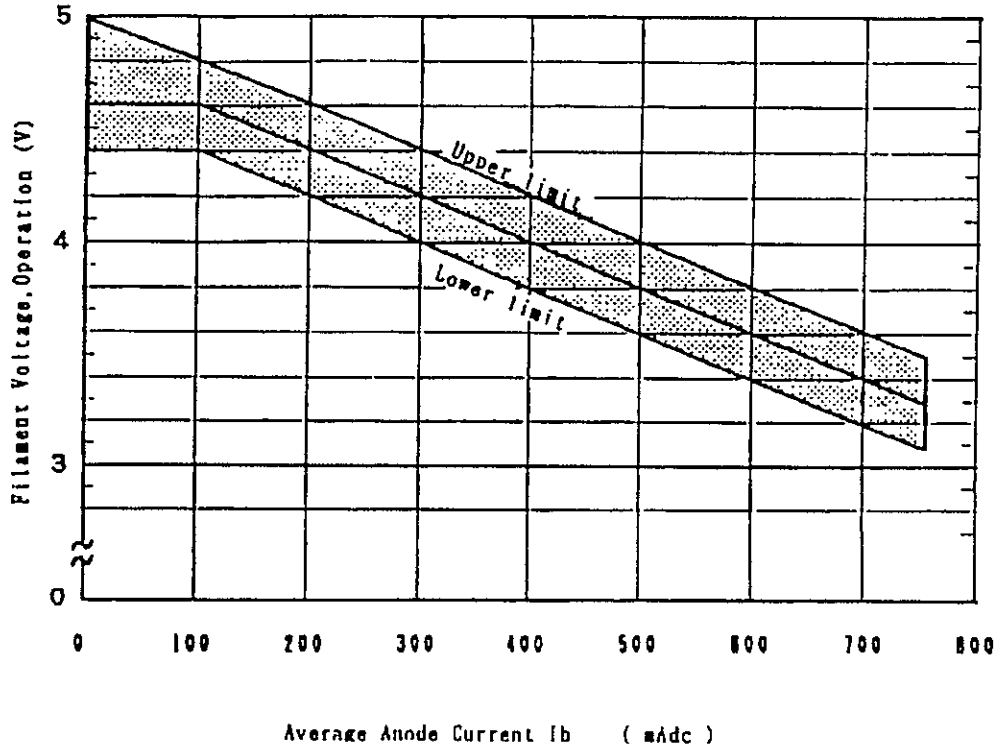

Fig. 1 Reduction Chart of Filament Voltage

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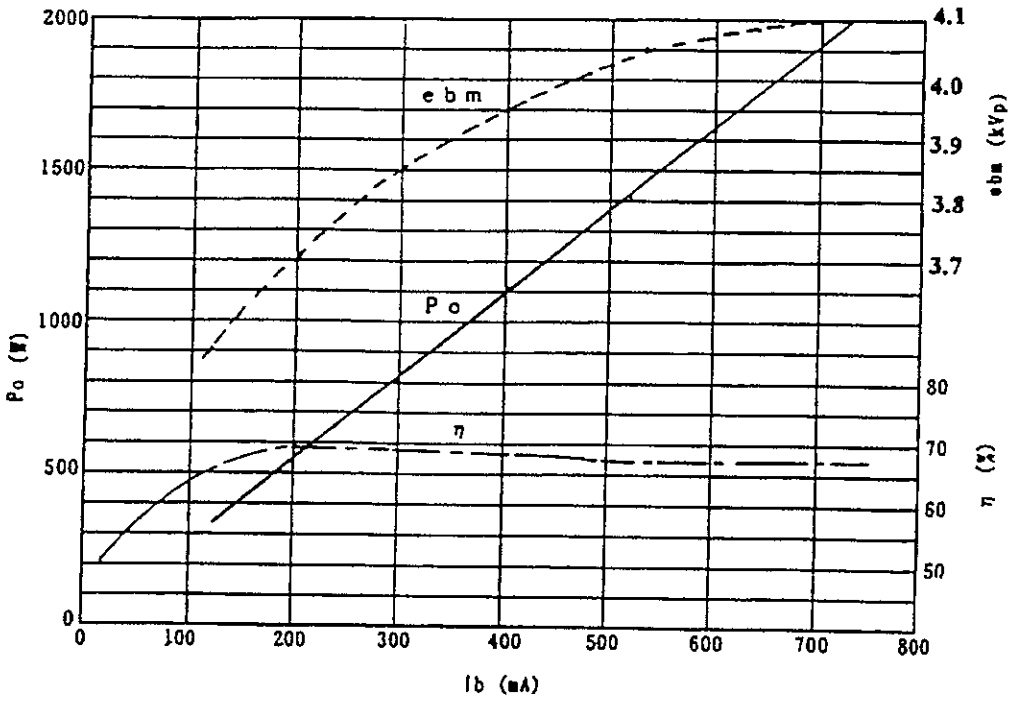

Test conditions

1. Load VSWR : $\sigma L \leq 1.1$
2. Anode supply : Single phase, full wave rectifier without filter
3. Filament voltage : 3.4 V

Fig. 2 Performance Chart

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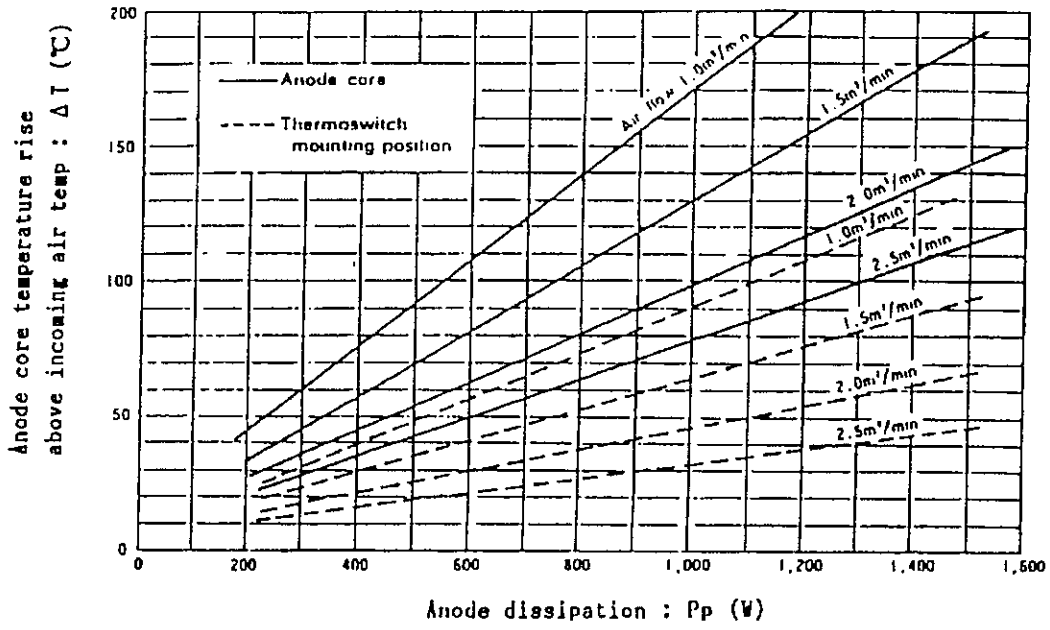

Anode Dissipation vs. Anode Core Temperature Rise

Fig. 3 Cooling Requirements

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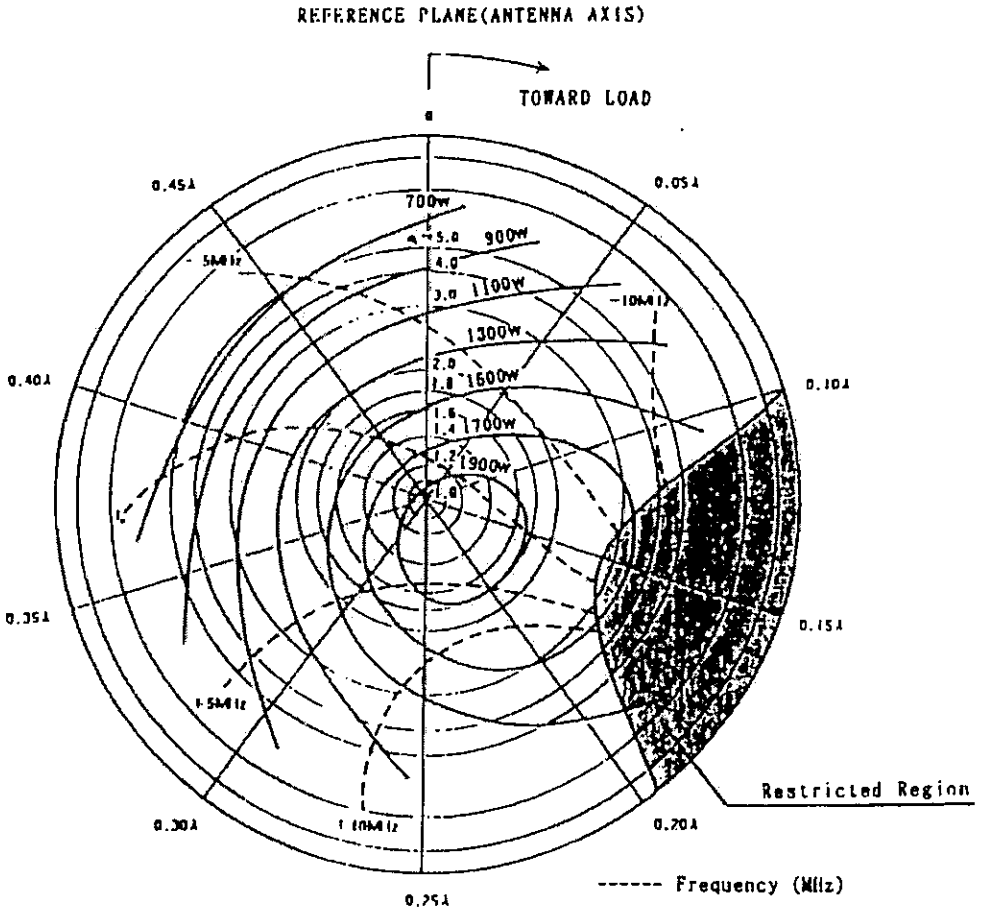

Test conditions

1. Average anode current : 725 mA
2. Anode supply : Single phase, full wave rectifier without filter
3. Filament Voltage : 3.4 V

Rieke Diagram

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Dimensions in millimeters