

ADMIRALTY SIGNAL ESTABLISHMENT

Specification AD/CV308/Issue 2. Dated 8.1.46. To be read in conjunction with K1001 ignoring clauses:-5.2; 5.3; 5.8; 7.2.	<u>SECURITY</u>	
	<u>Specification</u> Restricted	<u>Valve</u> Restricted

→ indicates a change

<u>TYPE OF VALVE:-</u> V-M Oscillator <u>CATHODE:-</u> Indirectly heated <u>ENVELOPE:-</u> Copper plated Ni-Fe/glass.		<u>MARKING</u>	
		See K1001/4. Additional marking:- See Note D.	
<u>RATING</u>		Note	<u>BASE</u>
Heater Voltage (V)	4.0		Small bayonet cap with shoulder B15/25 x 18 (see BSS 54-1941).
Heater Current (A)	1.2		
Max. Anode Voltage (kV)	1.5	A	<u>DIMENSIONS AND CONNECTIONS</u>
Max. Total Cathode Current (mA)	14.0	A,B	
Min. Total Tuning Range (cm)	4.9 to 10.1		
Reflector Voltage Range (V)	-4.0 to -4.50		
Min. Power Output (mW)	1.0	C	
<u>NOTES</u>			
A. V_a = Resonator Voltage. V_r = Reflector Voltage. The "anode" is regarded as the two discs nearest the base.			
B. Measured with $V_a = 1.5$ kV, $V_r = -4.0$ to -4.50 V and valve in oscillating conditions.			
C. Measured at any part of the tuning range; this value will be exceeded considerably at most points in the range.			
D. The base shall be marked indelibly to indicate the cathode connection; the marking shall consist of a "C", with a small arrow indicating the cathode terminal.			

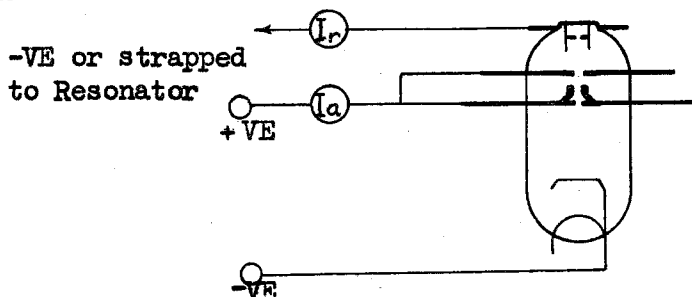
TESTS

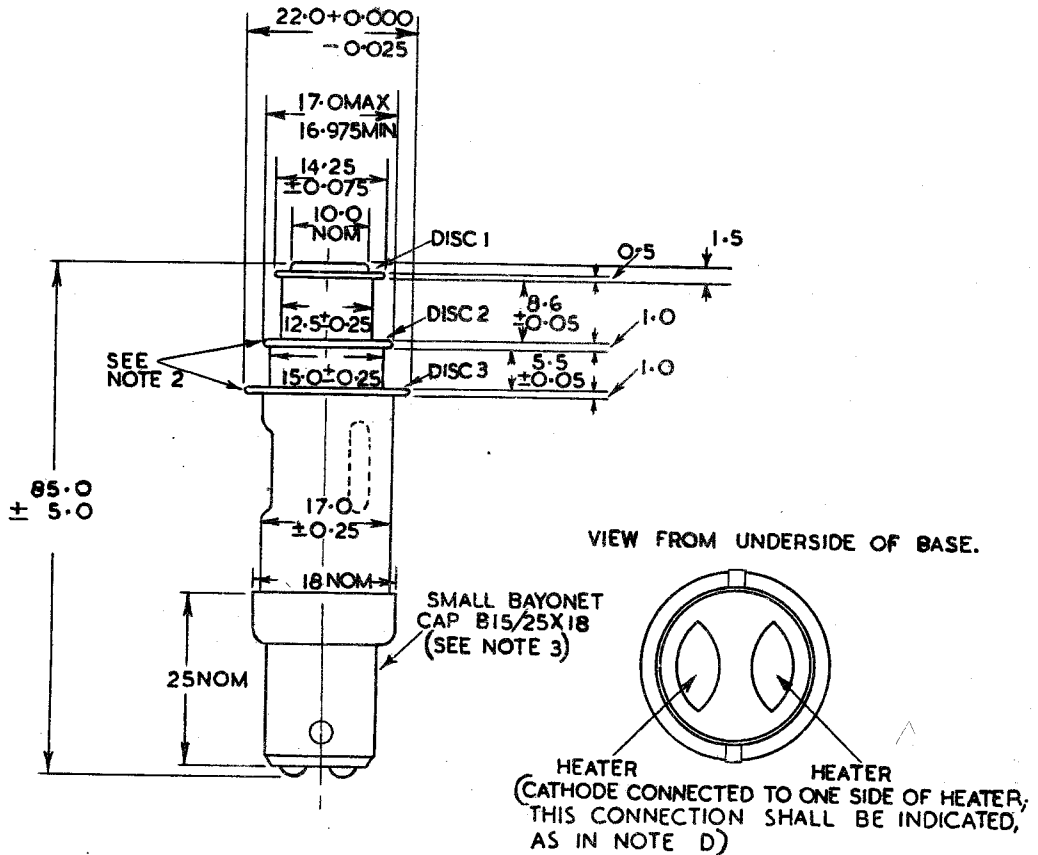
To be performed in addition to those applicable in K1001

	Test Conditions			Test	Limits		No. Tested	Note
	Vh (V)	Va (kV)	Vr (V)		Min.	Max.		
a	4.0	-	-	Ih (A)	1.0	1.25	100%	
b i	4.0	Strapped	1.0 kV	(i) Ia + Ir (mA)	8.5	10.0	100%	
ii	Vary Vh by ± 0.5 V keeping the other conditions the same.			(ii) Change in Ia + Ir from value in (i) (mA)	-	1.0	100%	
c	4.0	Strapped	1.0 kV	Gun efficiency $\frac{I_r}{(I_a + I_r)}$	80%	-	100%	1
d	4.0	1.0	Vary Vr negatively until a minimum Ia is obtained.	Reflection Ratio $\frac{(I_a + I_r)}{(I_a)}$	1.4	-	100%	1
e	4.0	1.5	Adjust	Minimum Total tuning range for continuous oscillation (Mc/s)	2970 to 6130		100%	2
				Power Output at any point of tuning range (mW)	1.0	-		
f	4.0	1.5	Adjust for maximum power output in correct mode at 4.9 cms.	Measure Vr (V)	-380	-450	100%	2

NOTES

1. The value of Ia + Ir is the value obtained in test b i.
2. These tests are carried out in the approved circuit:- Type III tuning mechanism.
3. The method of reading Ir and Ia is detailed in the following schematic.



**NOTES.**

1. ALL DIMENSIONS ARE IN MMS
2. TOP EDGE OF DISCS 2 & 3 TO BE ROUNDED 0.2 NOM RADIUS
3. PERMISSIBLE VARIATION BETWEEN AXIS OF VALVE & AXIS OF CAP NOT TO EXCEED 1°