

VALVE ELECTRONIC

CV2383

ADMIRALTY SIGNAL AND RADAR ESTABLISHMENT

Specification AD/CV2383 Issue No. 1 dated 9.2.56. To be read in conjunction with K1001	<u>SECURITY</u>	
	<u>Specification</u> Unclassified	<u>Valve</u> Unclassified

<u>TYPE OF VALVE:</u> Forced Air Cooled Power Triode		<u>MARKING</u> See K1001/4	
<u>CATHODE:</u> Directly Heated, Thoriated Tungsten Filament			
<u>ENVELOPE:</u> Metal - Glass			
<u>PROTOTYPE:</u> B.R.191			
<u>RATINGS</u>		<u>CONNECTIONS AND DIMENSIONS</u>	
		Note	
Filament Voltage	(V) 12.6		See drawing on Page 3
Filament Current	(A) 29.0	B	
Max. Anode Voltage up to 30 Mc/s	(kV) 6.25	A	<u>MOUNTING POSITION</u> Vertical, with filament terminals above the anode.
Max. Anode Voltage up to 110 Mc/s	(kV) 5.25	A	
Max. Anode Voltage up to 220 Mc/s	(kV) 3.5	A	
Max. Anode Dissipation	(kW) 3.0	A, C	
Max. Anode Current	(A) 1.4	A	
Max. Grid Dissipation	(W) 100	A	
Amplification Factor		D	
Mutual Conductance	(mA/V) 14.0	E	
<u>CAPACITANCES (pF)</u>			
	cag	18.8	
	cgf	19.0	
	caf	0.5	
<u>NOTES</u>			
A. Absolute Maximum Value.			
B. Filament starting current must never exceed 175A, even momentarily.			
C. With forced air cooling of at least 135 cubic feet per minute through the radiator, and of at least 8 cubic feet per minute directed into the filament header from a one inch nozzle.			
D. For $I_a = 0.5A$; $V_g = -25V$			
E. For $V_a = 2.5 kV$; $I_a = 0.7A$			

TESTS

To be performed in addition to those applicable in K1001

	Test Conditions				Test	Limits		No. Tested	Note
	V _f (V AC)	V _a (V)	V _g (V)	I _a (A)		Min.	Max.		
a					<u>Capacitances</u> C _{ag} (pF) C _{gf} (pF) C _{af} (pF)	16.5 15.5 -	20.5 22.5 0.62	100%	
b	12.6	0	0	0	I _f (A)	27.0	31.0	100%	1
c	12.6	4000	Adjust	0.7	Reverse I _g (μA) After 5 minutes	-	40.0	100%	1
d	12.6	4000	-do-	0.025	Reverse I _g (μA)	-	15.0	100%	1
e	12.6	1500	1500		<u>Pulse Emission</u> I _a + I _g (A)	20.0	-	100%	1,2
f	12.6	6000		1.0 approx.	<u>RF Test</u> To be applied for at least 30 minutes			100%	1,3
g					Repeat Tests b, c and d			100%	1
h	12.6	4000	Adjust	0.05	-V _g (V)	115.0	180.0	100%	1
j	12.6	Adjust	-50	0.5	V _a (kV)	2.75	3.55	100%	1
k	12.6	Adjust to value V _{a1}	-45	0.5	$\mu = \frac{V_{a1} - V_{a2}}{40}$	26.5	34.5	100%	1
		Adjust to value V _{a2}	-5	0.5					
l	12.6	2500	Adjust to value V _{g1}	0.8	$g_m = \frac{200}{ V_{g2} - V_{g1} }$	11.5	16.5	100%	1
		2500	Adjust to value V _{g2}	0.6					

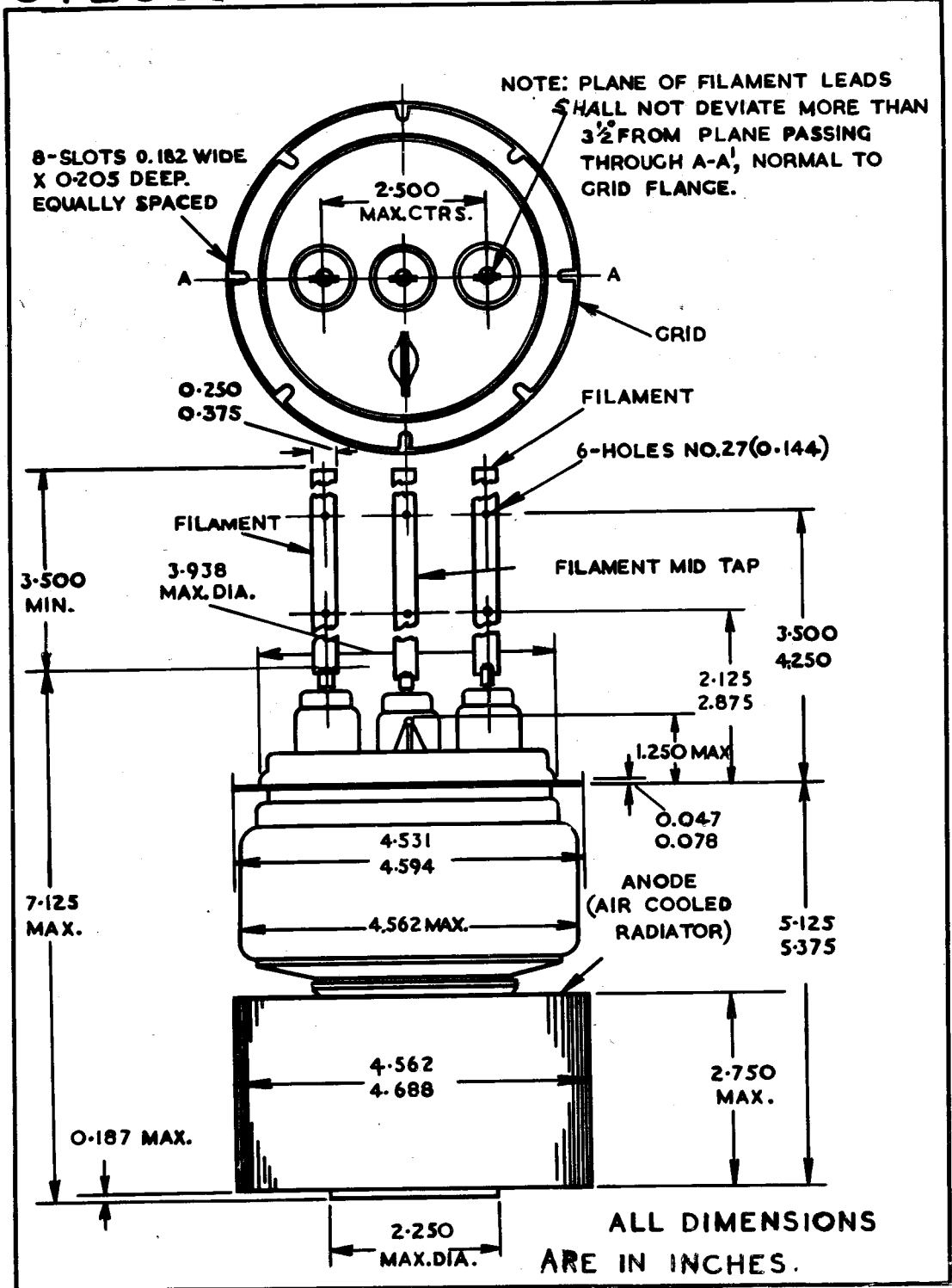
TESTS

To be performed in addition to those applicable in K1001

	Test Conditions				Test	Limits		No. Tested	Note
	V _f (V AC)	V _a (V)	V _g (V)	I _a (A)		Min.	Max.		
m	12.6	250	100		I _a (A)	0.9	1.4	100%	1
n	12.6	250	100		I _g (A)	0.23	0.47	100%	1

NOTES

1. In this, and in all subsequent tests, the filament shall be heated by 50 c/s current and all circuit returns shall be made to the centre tap on the filament transformer secondary. There shall also be an air flow of at least 135 cubic feet per minute through the radiator and of at least 8 cubic feet per minute directed into the filament header from a one inch nozzle.
2. Measured by either of the methods described in K1001; Appendix V.
3. Oscillate at a frequency of 115 ± 5 Mc/s in a coaxial line circuit with $R_g = 2000$ ohms and $I_g = 250 \pm 50$ mA. Details of a suitable oscillator for this test may be obtained from the specifying authority.



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