

Specification MOS(A)/CV2298 Issue 1 Dated 6.10.53 To be read in conjunction with K1001 excluding clauses 5.2, 5.8.	<u>SECURITY</u>	
	<u>Specification</u> UNCLASSIFIED	<u>Valve</u> UNCLASSIFIED

TYPE OF VALVE - Transmitting Tetrode  CATHODE - Directly-heated thoriated tungsten  ENVELOPE - Metal-glass construction  PROTOTYPE - Mod. CV1583	<u>MARKING</u>  See K1001/4.
	<u>BASE</u>  See Drawing on Page 4.

<u>RATING</u>				<u>DIMENSIONS</u> <u>AND</u> <u>CONNECTIONS</u>
			Note	
Filament Voltage	(V)	10.0	A	See Drawing on Page 4.
Filament Current	(A)	70.0	A, C	
Max. Anode Dissipation	(W)	500	B	
Max. Operating Frequency	(Mc/s)	60		
Max. Seal Temperature	(°C)	140		

<u>CAPACITANCES (pF)</u>				See Drawing on Page 4.
Anode to all other electrodes		20		
Grid to all other electrodes		35		
Cag (max.)		2		

NOTES

A. Adequate cooling of the filament leads and adjacent re-entrant portion of the envelope, shall be provided by at least 10 cubic feet of air per minute with a pressure drop in the order of 2 inches of water.

B. For this dissipation forced air cooling must be provided by at least 85 cubic feet of air per minute with a pressure drop across the valve in the order of 2 inches of water.

C. The valve should be operated at a constant current of 70 amperes to ensure maximum life. Under these conditions the range of filament voltage will be 9.3 to 10.7 volts.

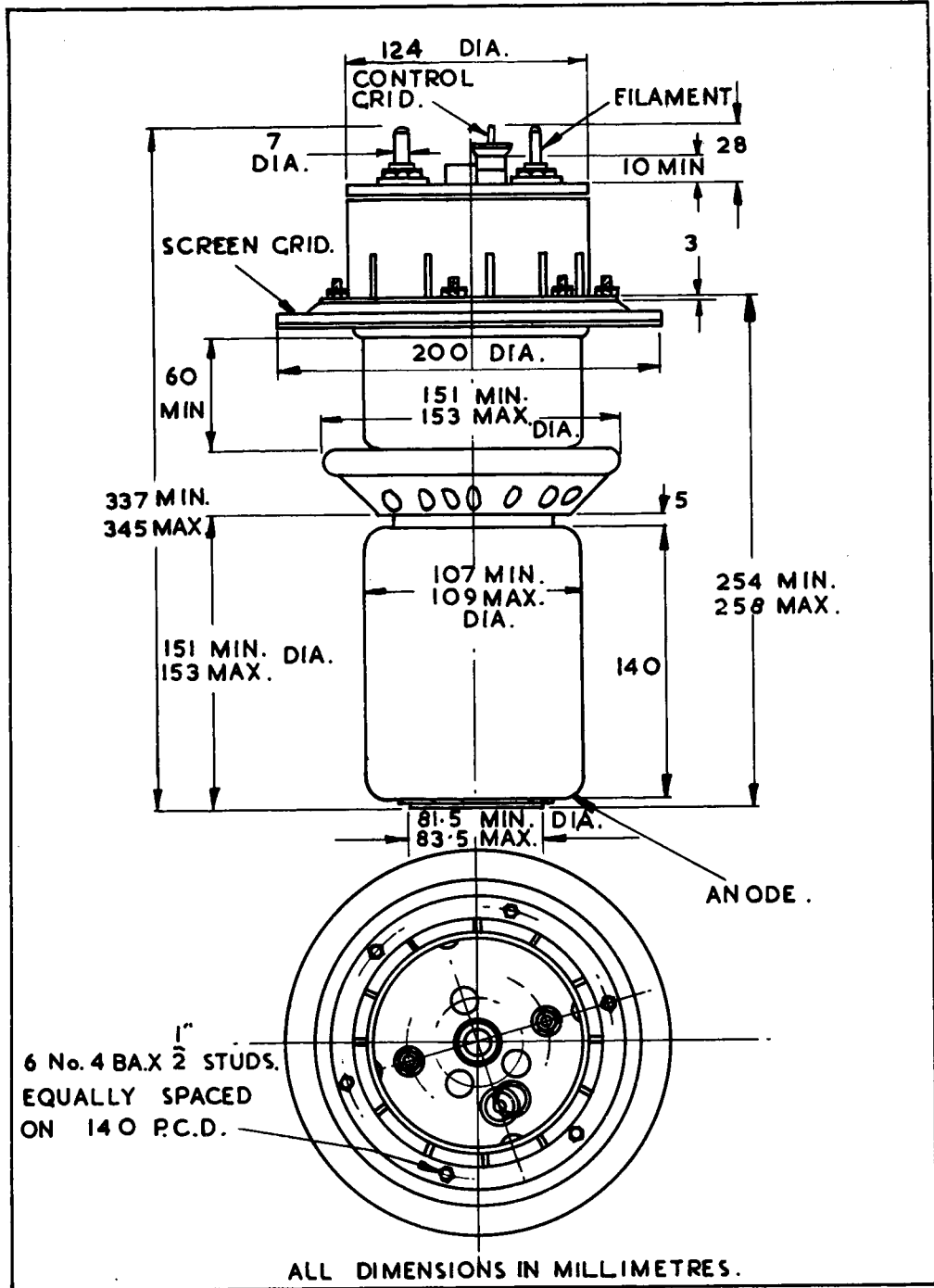
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To be performed in addition to those applicable in K1001

Test Conditions					Test	Limits		No. Tested	Note	
						Min.	Max.			
Forced air cooling for the filament leads and the anode shall be provided by not more than 10 cu. ft. and 85 cu. ft. of air per min. respectively with a pressure drop across the valve in the order of 2 ins. of water.										
	Vf (V)	Va (V)	Vg2 (V)	Vg1 (V)	Ia (mA)					
a	10.0	Raised slowly to 35 kV and maintained until flashing ceases.	Strapped and connected to a negative supply.		A trace	<u>Hot Flash Process</u> Anode voltage to be maintained at 35 kV for a period of 5 minutes without further flashing.	-	-	100%	1,2
b	0	7.5 kV RF at 22 Mc/s applied between screen and control grids. Anode connected to earth; filament not connected. Tp = 5 μsecs; PRF = 300.				Conditions to be maintained for 1 minute without breakdown.	-	-	100%	2
c	10.0	0	0	0	0	If (A)	66.5	73.5	100%	
d	10.0	1.2 kV	1.2 kV	-	420	Reverse Ig (mA)	-	1.0	100%	
e	10.0	1.2 kV	1.2 kV	-	420	Vg1 (V)	-70	-105	100%	
f	10.0	1000V reduced to 700V	1000V reduced to 700V	-	Maintained at 200	Vg1 change (V)	48	64	100%	
g	10.0	Strapped. Pulse of peak value 6 kV, half sine waveform. Tp = 2 μsecs; PRF = 50.				Ic (A)	70	-	100%	
h	See K1001/AIII					<u>Capacitances</u> (pF)				
						C <sub>a</sub> - all	16.0	24.0	2%	(1)
						C <sub>g</sub> - all	26.3	43.7		
						C <sub>ag</sub>	-	2.0		

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Test Conditions	Test	Limits		No. Tested	Note
		Min.	Max.		
1	<u>Life</u> A minimum life of 500 hours is expected, life failure being considered to occur when the emission of the valve has fallen below 0.5A at $V_f = 6.6V$ , with $V_a$ , $V_{g2}$ , and $V_{g1} = 300V$ .				
<u>NOTES</u>					
1. For this hot flash process there shall be a 300 ohm resistor in series with the applied volts, and a capacitance of 0.25 $\mu F$ in parallel with the supply volts on the supply side of the resistor.					
2. Once the conditions specified have been met the test conditions need not be repeated for acceptance testing.					



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