

MINISTRY OF SUPPLY D.L.R.D.(A)/R.A.E.

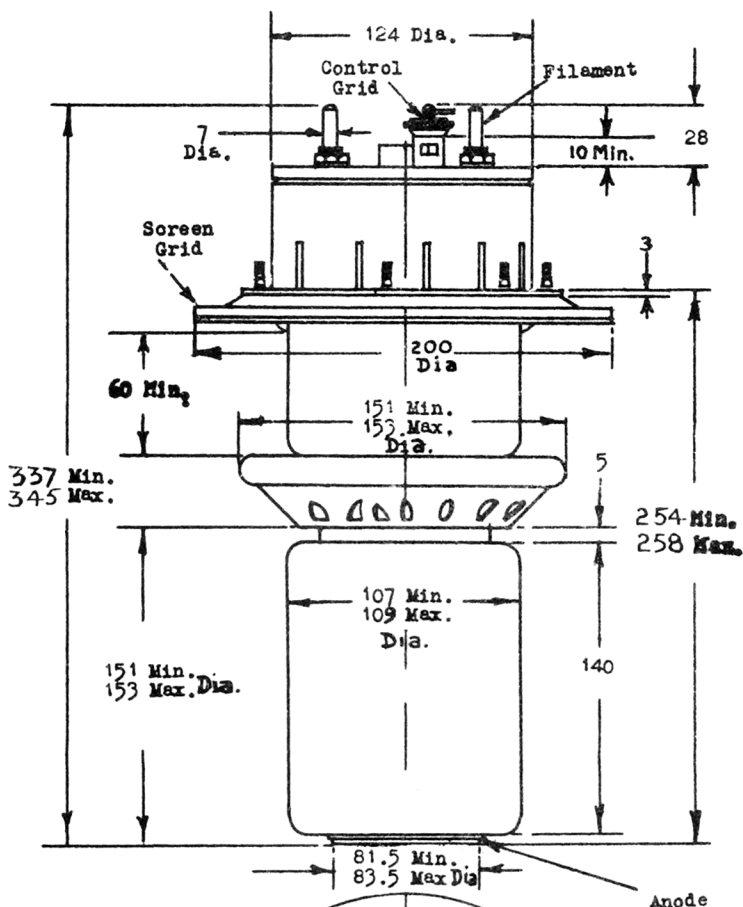
Specification MOSA/CV2197 Issue 3 Dated 12.6.1953 To be read in conjunction with K.1001 excluding clauses 5.2, 5.8	<table border="1"> <tr> <th colspan="2">SECURITY</th></tr> <tr> <td>Specification</td><td>Valve</td></tr> <tr> <td>UNCLASSIFIED</td><td>UNCLASSIFIED</td></tr> </table>	SECURITY		Specification	Valve	UNCLASSIFIED	UNCLASSIFIED
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Specification	Valve						
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—————> Indicates a change

TYPE OF VALVE - Transmitting Tetrode			<u>MARKING</u>	
CATHODE - Directly heated thoriated tungsten			See K.1001/4.	
ENVELOPE - Metal-glass Construction			<u>DIMENSIONS AND CONNECTIONS</u>	
PROTOTYPE - CV1583 Mod.			See drawing on Page 3.	
<u>RATING</u>			Note	
Filament Voltage	(V)	10.0	A	
Filament Current	(A)	70.0	A,C	
Max. Anode Dissipation	(W)	500	B	
Max. Operating Frequency	(Mc/s)	60		
Max. Seal Temperature		140°C		
<u>CAPACITANCES (pF)</u>				
Anode to all other electrodes		20		
Grid to all other electrodes		35		
Cag (max.)		2		
<u>NOTES</u>				
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 of 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 of 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.				

To be performed in addition to those applicable in K1001

Test Conditions					Test	Limits		No.	Notes	
						Min.	Max.	Tested		
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 minute respectively with a pressure drop across the valve of the order of 2 in. of water.										
a	See K1001/IIII				Capacitances (pF)					
					Ca-all	16.0	24.0			
					Cg-all	26.3	43.7			
					Cag	-	2.0		2 (1)	
	Vf (V)	Va (V)	Vg2 (V)	Vg1 (V)	Ia (mA)					
b	10.0	Raised slowly to 35 kV and maintained until flashing ceases		strapped	a trace	Hot Flash Process Anode Voltage to be maintained at 35 kV for a period of 5 minutes without further flashing				1,2
c	0	7.5 kV Pulses of RF at 22 Mc/s of pulse length 5 $\mu$ Sec. and a repetition rate of 300 pulse per sec. applied between the Screen and Control Grid	-	-	-	Conditions to be maintained for 1 minute without breakdown			100%	2
d	10.0	0	0	0	-	If (A)	66.5	73.5	100%	
e	10.0	1.2kV	1.2kV	-	420	Reverse Ig (mA)	-	1.0	100%	
f	10.0	1.2kV	1.2kV	-	420	Vg1 (V)	-70.0	-105	100%	
g	10.0	1.0kV Reduced to 700V	1.0kV reduced to 700V	-	Maintained at 200	Vg1 change (V)	48	64	100%	
h	10.0	Strapped. Pulse of peak value 6kV, half sine wave shape, duration 2 $\mu$ Secs. and PRF = 50 c/s to be supplied		-	Ic (A)	70	-	100%		
j	Life 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 Vf = 6.6V, with Va, Vg2, and Vg1 = 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.										



All dimensions  
in millimetres