

MINISTRY OF SUPPLY (D.C.D.)

Specification MAP/CVX451 Issue 1 Dated 19.10.50. To be read in conjunction with K1001	SECURITY	
	<u>Specification</u> UNCLASSIFIED	<u>Valve</u> UNCLASSIFIED

→ Indicates a change

TYPES OF VALVE - Electrometer Triode CATHODE - Directly Heated ENVELOPE - Glass PROTOTYPE - VX.3094		<u>MARKING</u> See K1001/4																					
<table border="1" style="width: 100%;"> <thead> <tr> <th colspan="2" style="text-align: center;"><u>RATING</u></th> <th style="text-align: center;">Note</th> </tr> </thead> <tbody> <tr> <td>Filament Voltage</td> <td style="text-align: center;">(V)</td> <td style="text-align: center;">1.25</td> </tr> <tr> <td>Filament Current</td> <td style="text-align: center;">(A)</td> <td style="text-align: center;">0.025</td> </tr> <tr> <td>Max. Anode Voltage</td> <td style="text-align: center;">(V)</td> <td style="text-align: center;">9</td> </tr> <tr> <td>Mutual Conductance</td> <td style="text-align: center;">($\mu\text{A}/\text{V}$)</td> <td style="text-align: center;">70 A</td> </tr> <tr> <td>Amplification Factor</td> <td></td> <td style="text-align: center;">1.0 A</td> </tr> <tr> <td>Min. Grid-Cathode resistance</td> <td style="text-align: center;">(Ω)</td> <td style="text-align: center;">10^{14} B</td> </tr> </tbody> </table>		<u>RATING</u>		Note	Filament Voltage	(V)	1.25	Filament Current	(A)	0.025	Max. Anode Voltage	(V)	9	Mutual Conductance	($\mu\text{A}/\text{V}$)	70 A	Amplification Factor		1.0 A	Min. Grid-Cathode resistance	(Ω)	10^{14} B	<u>DIMENSIONS AND CONNECTIONS</u> See Drawing on Page 3.
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<u>CAPACITANCES pF</u> Cg - all 1.7 Cg - a 0.2																							
<u>NOTES</u> A. Measured at $V_a = 6\text{V}$; $V_g = -2$. B. Measured at $V_a = 6\text{V}$; $V_g = -3.5$. C. Do not finger glass envelope within $\frac{1}{2}$ " of leads, and wires are not to be soldered nearer than $\frac{1}{2}$ " to the base to avoid contamination of the glass.																							

TESTS

To be performed in addition to those applicable in K1001

Test Conditions					Test	Limits		No. Tested	Note
						Min.	Max.		
See K1001/AIII									
	Vh	Va	Ia(μ A)	Vg					
a	1.25	0	0	0	If (A)	0.021	0.028	6 per week	
b	1.25	6	-	0	Ia (μ A)	250	500	100%	
c	1.25	6	-	adjust	gm (μ A/V)	50	-	100%	
	Vg is swung from -1 to -3 volts								
d	1.25	6	-	-3.5	Grid-Cathode Insulation (Ω)	10^{14}	-	100%	1

NOTES

1. Insulation is measured by inserting a known high resistance (approximately 10^{12} ohms into the grid circuit and noting the change in anode current, this permits the grid current and, hence, the grid-cathode insulation, to be calculated.
2. The valve should be operated in darkness in a dry container made of metal to serve as an electrostatic screen.

