

VALVE ELECTRONICADMIRALTY SIGNAL & RADAR ESTABLISHMENT

Specification AD/CV2868/Issue 7. Dated : 26.2.49. To be read in conjunction with K1001, ignoring clause :- 5.2.	<table border="1"> <tr> <th colspan="2"><u>SECURITY</u></th></tr> <tr> <td><u>Specn.</u></td><td><u>Valve</u></td></tr> <tr> <td>Restricted</td><td>Unclassified</td></tr> </table>	<u>SECURITY</u>		<u>Specn.</u>	<u>Valve</u>	Restricted	Unclassified
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Restricted	Unclassified						

<u>TYPE OF VALVE</u> :- Xenon filled grid controlled rectifier		<u>MARKING</u>																											
<u>CATHODE</u> :- Directly heated, oxide-coated.		See K1001/4.																											
<u>ENVELOPE</u> :- Glass.		<u>BASE AND CONNECTIONS</u>																											
<u>PROTOTYPE</u> :- C1A.		USM4B																											
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1	Heater																												
2	No connection																												
3	Grid																												
4	Heater																												
TC	Anode																												
		<u>TOP CAP</u>																											
		See K1001/AI/D5.5																											
		<u>DIMENSIONS</u>																											
		See K1001/AI/D1 and Fig. 1 page 3.																											
		<u>Dimension mm</u>	<u>Nom.</u>	<u>Max.</u>																									
		A	-	176																									
		B	47	49																									
		<u>PACKAGING.</u>																											
		See K1005.																											
<u>NOTES</u>																													
A. Measured with respect to the centre of the filament at $V_a = 75 \text{ V RMS}$.																													
B. Filament heating time :- 20 secs.																													

TESTS

To be performed in addition to those applicable in K1001.
The filament must be run for 20 secs. before switching on the H.T.

	Test Conditions				Test	Limits.		No. Tested	Note
	Vf (V)	Va (V)	Vg (V)	Ia (mA)		Min.	Max.		
a	2.5 A.C.	-	-	-	If (A)	-	6.5	100%	
b	2.5 A.C.	D.C. Ad- justed	0	400	D.C. Arc Drop Va (V)	-	11	100%	1,2
c	2.5 A.C.	110 A.C.	2.0 V In- crease in -ive direc- tion.		Cut off Vg (V)	1.35	-2.75	100%	1
d	2.5 A.C.	110 A.C. decreas- ed until cut off.	+ 3.0		A.C. Starting Voltage Va (V)	-	45	100%	1
e	2.5 A.C.	135 A.C.	Adjust		Peak Forward Voltage Vg (V)	-	-5.3	100%	1
f	2.5 A.C.	110 A.C.	Adjust for cut off with 1. Rg = 1M Ω (=Eg1 say) 2. Rg = 0 (=Eg2 say)		Grid Current Ig = $\frac{Eg1 - Eg2}{Rg}$ (μ A)	-	5	100%	3

NOTES.

1. $R_g = 1000 \Omega$.
2. Operate valve for 1 minute before taking the reading.
3. In the formula $R_g = 1M \Omega$.
4. All anode and grid circuit returns to centre tap of the filament and voltages measured with respect to this point.
5. A suitable resistance shall be included in the anode lead. The anode current must not exceed 640 mA in any test.

