

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

Specification MOSA/CV1994 Issue 1 Dated 15.12.55 To be read in conjunction with BS.1409, and K1001, ignoring 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
SECURITY							
Specification	Valve						
UNCLASSIFIED	UNCLASSIFIED						

TYPE OF VALVE - Aircooled triode			<u>MARKING</u> See K.1001/4 and Note D	
CATHODE - Directly heated, tungsten filament			<u>BASE</u> None	
ENVELOPE - Metal glass construction				
PROTOTYPE - MOV ACT9 or 3J/121E				
<u>RATING</u>			<u>CONNECTIONS AND DIMENSIONS</u>	
			Note	
Filament Voltage	(V)	Marked Value	A	
Filament Current	(A)	22		
Max. Anode Voltage	(kV)	10		
Max. Anode Dissipation	(kW)	0.8	B	
Mutual Conductance	(mA/V)	3.1	C	
Anode Impedance	(kΩ)	12.5	C	
Amplification Factor		40	C	
Maximum total emission at 90% saturation	(A)	2		
Maximum input - Below 3 Mc/s	(kV)	10		
	(mA)	400		
Up to 30 Mc/s	(kV)	5		
	(mA)	400		
Up to 60 Mc/s	(kV)	4		
	(mA)	400		
<u>CAPACITANCES (pF)</u>				
C in (nom.)		23.2		
C out (nom.)		1.6		
Ca, g1 (nom.)		15.9		

## NOTES

- A. Marked Value of  $V_f$  will be that of test (c).
- B. With unrestricted air circulation. The dissipation may be increased to 1.1 kW, with forced air circulation giving an airflow pressure equal to 3" of water.
- C. At  $V_a = 5kV$ ,  $I_a = 200$  mA.
- D. The valve shall be marked with the filament voltage, as determined in test shown on Page 2, Clause C.
- N.B. This valve is a CV28, except that it is supplied without the anode cooling fins. Elements cooler A.M. Ref. No. 10AR/2436 must be fitted before putting this valve into service.

To be performed in addition to those applicable in K1001

Test Conditions					Test	Limits		No. Tested
						Min.	Max.	
a	See K1001/AIII				Capacitances (pF)			
					C in	-	29.0	2% (10)
					C out	-	2.0	2% (10)
					Ca, g1	-	20.0	2% (10)
b	Vf	Va	Vg	Ia(mA)	If (A)	21.0	24.0	100%
	16.0	0	0	0				
c	-	500 volts to grid and anode strapped		300	Vf (V) This value of Vf times 1.29 is to be the marked voltage	11.7	13.2	100%
d	16.0	5000	-	200	Ia to be maintained steady for 10 mins. the grid potential being read at the commencement of the test and after successive intervals of 1 min. During test the grid potential shall attain a steady value. Grid potential variation throughout test (V)	-	6.0	100%
					Reverse Ig1 at beginning and end of test ( $\mu$ A)	-	30.0	100%
e	Marked Voltage	5000	-	200	Amplification factor	34.0	46.0	100%
f	Marked Voltage	5000	-	200	Anode Impedance ( $\Omega$ )	11,000	15,000	100%

Life A minimum life of 1000 hours is expected, life failure being considered to occur when the emission of the valves has fallen below 300 mA with a filament voltage of 10% above that required for an emission of 300 mA at the commencement of the life test; other conditions as in test clause 'c' above. The designs, materials and processing should be controlled with this in view.

Records will be kept by Service users of the lives (against each serial number), and cases of poor lives will be reported for the guidance of the contractor.