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

VALVE ELECTRONIC **CV1511**

Specification MOSA/CV1511 Issue 5 Dated 16.4.1953 To be read in conjunction with K1001	SECURITY Specification: UNCLASSIFIED Valve: UNCLASSIFIED

→ Indicates a change

TYPE OF VALVE - Cathode Ray Tube

TYPE OF DEFLECTION - Electrostatic. Suitable for symmetrical deflection.

BULB - Internally coated with conductive coating.

SCREEN - BYL10 or BYM25 or BYL46.

PROTOTYPE - VCR511

MARKING

See K1001/4

BASE

B 12 D

CONNECTIONS

Pin	Electrode
1	C
2	G
3	H
4	H
5	No connection
6	A2
7	No connection
8	Y2
9	X2
10	A3
11	X1
12	Y1

RATING

			Note
Heater Voltage	(V)	4.0	
Heater Current	(A)	1.0	
Max. Final Anode Voltage	(kV)	6.5	
X-plate Sensitivity	(mm/V)	1000/Va3	
Y-plate Sensitivity	(mm/V)	1000/Va3	
TYPICAL OPERATING CONDITIONS			
Final Anode Voltage	(kV)	4.0	
Second Anode Voltage	(V)	800	
Beam Current	(μA)	20	

DIMENSIONS

See Drawing on Page 3.

NOTES

A. A magnetic shield shall be supplied fitted to the valve, and be such as to provide adequate screening from internal magnetic field.

B. When viewing the screen with the valve positioned such that the base spigot is uppermost, a positive voltage applied to the terminal X1 shall deflect the spot to the right, and a positive voltage applied to the terminal Y1 shall deflect the spot downwards.

To be performed in addition to those applicable in K1001

	Test Conditions				Test	Limits		No. Tested
						Min.	Max.	
	Vh	Va3 (kV)	Va2	Vg	INTER-ELECTRODE CAPACITANCES (pF)			
a	See K1001/5A.13				1. Each X or Y plate to all other electrodes.	-	20	5%(10)
					2. Grid to all other electrodes	-	20	
					3. One X to one Y plate	-	5	
b	4.0	0	0	0	Ih (A)	0.75	1.2	100%
→ c	4.0	4.0	Adjust for optimum focus	Adjust	-Vg (V)	1	-	100%
	Adjust Vg to give a light output of 0.01 candelas on a closed raster (through a C2 filter Type 26 (10AB/474))							
→ d	4.0	4.0	ditto	Adjust to cut-off	(1) -Vg (V)	23	60	
					(2) Change in value of Vg from test (c) (V)	-	25	
→ e	4.0	4.0	ditto	Adjust	(1) Line width (mm)	-	0.8	100%
	DEFLECTION With a sine wave time base of 10 kc/s (nominally) and a line length of 200 mm in the X and 200 mm in the Y directions successively. GRID The grid will be pulsed positively from cut-off with amplitude equal to the value obtained in test d(2), the nominal value of pulse duration and recurrence being 100 μsecs and 100c/s respectively.				(2) Va2 (V)	600	1200	100%
f	4.0	4.0	Any convenient value	-60	GRID INSULATION			
	Recommended method K1001/5A.3.2 Resistor = 10MΩ				1. Leakage Current (μA)	-	6.0	
					2. Increase in voltmeter reading	-	100%	100%
g	4.0	4.0	Adjust for optimum focus.	Any convenient value.	DEFLECTION SENSITIVITIES			
					1.X.plate (mm/V)	750/Va3	1250/Va3	10%(10)
					2.Y.plate (mm/V)	750/Va3	1250/Va3	

TESTS (Continued)

CV1511

	Test Conditions				Test	Limits		No. Tested
	Vh	Va3 (kV)	Va2	Vg		Min.	Max.	
h	4.0	4.0	Adjust for optimum focus	Any convenient value	Deviation of spot from centre of screen (mm)	-	25	100%
j	4.0	4.0	ditto	ditto	USEFUL SCREEN AREA			
	Deflections measured from centre of screen				1.X deflection (mm)	± 105	-	100%
					2.Y deflection (mm)	± 50	-	100%
k	4.0	4.0	ditto	ditto	1.Orientation of X axis of deflection relative to 00' on drawing.	80°	100°	100%
					2.Angle between X and Y axes of deflection.	85°	95°	100%
l					The screen shall not be worse for graininess and non-uniformity than a standard tube or pattern.			
m	Test to be carried out in Test Set 331				Afterglow (secs)	15	-