

Specification MOSA/CV1591 to CV1595 inclusive Issue 6 To be read in conjunction with B.S.448, B.S.1409 & K1001	<u>SECURITY</u>	
	<u>Specification</u> UNCLASSIFIED	<u>Valve</u> UNCLASSIFIED

-----> Indicates a change

<p><b>TYPE OF VALVES</b> - Cathode Ray Tube</p> <p><b>TYPE OF DEFLECTION</b> - Electrostatic, suitable for either symmetrical or asymmetrical operation.</p> <p><b>TYPE OF FOCUS</b> - Electrostatic.</p> <p><b>BULB</b> - Internally coated with conductive coating.</p> <p><b>SCREENS</b> - Afterglow YYM5 - CV1591 YYM36 - CV1592 GGM7 - CV1593 GGM27 - CV1594 YYM31 - CV1595</p> <p><b>PROTOTYPES</b> - VCR517A - CV1591 VCR517B - CV1592 VCR517C - CV1593 VCR517D - CV1594 VCR517E - CV1595</p>	<p><u>MARKING</u></p> <p>See K1001/4</p> <p><u>BASE</u></p> <p>B.S.448/B12D</p> <p><u>CONNECTIONS</u></p>																																							
	<table border="1"> <tr> <th>Pin</th> <th>Electrode</th> </tr> <tr> <td>1</td> <td>g</td> </tr> <tr> <td>2</td> <td>k</td> </tr> <tr> <td>3</td> <td>h</td> </tr> <tr> <td>4</td> <td>h</td> </tr> <tr> <td>5</td> <td>a1</td> </tr> <tr> <td>6</td> <td>a2</td> </tr> <tr> <td>7</td> <td>IC</td> </tr> <tr> <td>8</td> <td>y2</td> </tr> <tr> <td>9</td> <td>x2</td> </tr> <tr> <td>10</td> <td>a3</td> </tr> <tr> <td>11</td> <td>x1</td> </tr> <tr> <td>12</td> <td>y1</td> </tr> </table>	Pin	Electrode	1	g	2	k	3	h	4	h	5	a1	6	a2	7	IC	8	y2	9	x2	10	a3	11	x1	12	y1													
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<p><u>NOTES</u></p> <p>A. This rating applies only at normal atmospheric pressure.</p> <p>B. The tube shall be adequately free from microphony.</p> <p>C. Absolute Value.</p>																																								

To be performed in addition to those applicable in K1001

Test Conditions						Test	Limits		No. Tested	Note
							Min.	Max.		
a See K1001/5A.13						<u>CAPACITANCES</u> (pF) (1) Each x or y plate to all other electrodes. (2) Grid to all other electrodes (3) One x to one y plate	-	25	5% (10)	
	Vh	Va3 (kV)	Va2	Val (kV)	Vg					
b	4	0	0	0	0	Th (A)	0.7	1.3	100%	
c	4	3	Adjust for optimum focus	2	Adjust to out-off	Vg (V) Value to be noted	-	-80	100%	
d	4	3	ditto	2	-	(1) Vg (V) (2) Change in value of Vg from test (c) (V)	-1	-	100%	
e	4	3	ditto	2	-	(1) Line width (mm) (2) Va2 (V)	-	0.8	100%	
DEFLECTION With a sine wave time base of 10 kc/s nom. and a line length of 130 mm. in the x and y directions successively.									100%	
f	4	3	Any convenient value	2	-80	<u>GRID INSULATION</u> (1) Leakage Current (μA) (2) Increase in Voltmeter reading	-	16	100%	
Recommended method K1001/5A.3.2. Resistor = 5 Megohms									100%	
g	4	3	Adjust for optimum focus	2	Any convenient value	<u>DEFLECTION SENSITIVITIES</u> (1) x plate (mm/V) (2) y plate (mm/V)	650/ Va3	790/ Va3	10% (10)	
							790/ Va3	970/ Va3	10% (10)	
h	4	3	ditto	2	ditto	Deviation of spot (mm) from centre of screen	-	10	100%	
j	4	3	ditto	2	ditto	<u>USEFUL SCREEN AREA</u> Diameter (mm)	130	-	100%	
Deflections to cover stated circle centred on centre of screen.										

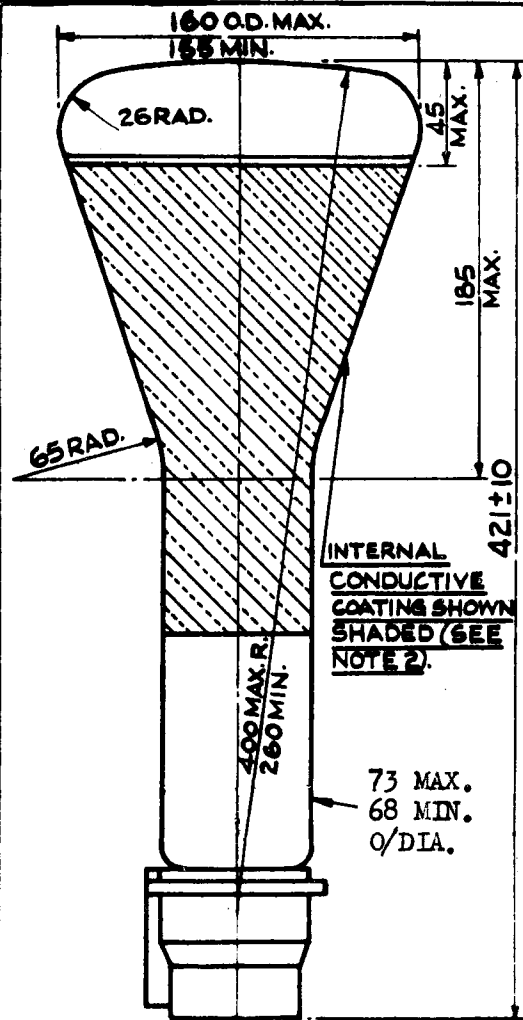
Test Conditions						Test	Limits		No. Tested	Note
							Min.	Max.		
	Vh	Va3 (kV)	Va2	Val (kV)	Vg					
k	4	3	Adjust for Optimum focus	2	Any convenient value	<u>TRAPEZOIDAL DISTORTIONS</u> (1) Angles between opposite sides. (2) Angles between adjacent sides	175° 85°	185° 95°	100% 100%	
l	4	3	ditto	2	ditto	(1) Orientation of x axis of deflection relative to OO' on the drawing. (2) Angle between x and y axes of deflection.	80° 85°	100° 95°	100% 100%	
m	4	3	Un-focussed	2	ditto	The screen shall not be worse for gaininess and non-uniformity than a standard tube or pattern			100%	
n	4	3	Adjusted for optimum focus	2	ditto	Afterglow (secs)	5	-	100%	2 ←
p	4	3	ditto	2	ditto	<u>SPECTRAL DISTRIBUTION</u> Ratio:- $\frac{\text{Light Output}}{\text{Light Output Thro' G2 Filter}} =$	-	3	100%	1

NOTE

- It will normally be satisfactory to make a visual examination of the colour of the screen and to apply Test "p" only in cases of doubt.
- This test shall be performed using an approved test set. The specified figure is for Test Set 331, A.M. Ref. No. 10S/696. ←

# CV1591 TO CV1595

PAGE 4.



## NOTE:

- 1 WHEN VIEWING THE SCREEN WITH THE TUBE POSITIONED SUCH THAT THE BASE SPIGOT IS UPPERMOST, A POSITIVE VOLTAGE APPLIED TO THE TERMINAL XI SHALL DEFLECT THE SPOT TO THE LEFT AND A POSITIVE VOLTAGE APPLIED TO THE TERMINAL YI SHALL DEFLECT THE SPOT UPWARDS.
- 2 THE INTERNAL CONDUCTIVE COATING SHALL BE OF SUCH DIMENSIONS THAT IT FUNCTIONS EFFECTIVELY BUT DOES NOT OBSCURE THE REQUIRED USEFUL SCREEN AREA.
- 3 THE NECK DIA. MAY BE REDUCED TO A MINIMUM OF 58 MM. PROVIDED THAT RUBBER RINGS OR OTHER APPROVED PACKING IS SUPPLIED WITH THE TUBE TO BRING THE OVERALL DIA. WITHIN THE STATED TOLERANCES.

ALL DIMENSIONS IN MILLIMETRES.