

Specification MOS (A)/CV420 Issue 4 Dated 17. 8. 54 To be read in conjunction with K1001	<u>SECURITY</u>	
	<u>Specification</u> UNCLASSIFIED	<u>Valve</u> UNCLASSIFIED

—> Indicates a change

TYPE OF VALVE - Cathode Ray Tube TYPE OF FOCUS - Electro-static TYPE OF DEFLECTION - Magnetic BULB - Internally coated with conductive coating SCREEN - C08 PROTOTYPE - VCRX277	<u>MARKING</u>																																								
	See K1001/4.																																								
	<u>BASE</u>																																								
	International Cetal.																																								
<u>RATING</u>	<u>CONNECTIONS</u>																																								
	<table border="1" style="width: 100%;"> <thead> <tr> <th colspan="2"></th> <th style="text-align: center;">Pin</th> <th style="text-align: center;">Electrode</th> </tr> </thead> <tbody> <tr> <td>Heater Voltage</td> <td>(V) 4.0</td> <td>1</td> <td>No connection</td> </tr> <tr> <td>Heater Current</td> <td>(A) 1.0</td> <td>2</td> <td>A1</td> </tr> <tr> <td>Max. First Anode Voltage</td> <td>(kV) 1.45</td> <td>3</td> <td>A2</td> </tr> <tr> <td>Max, Third Anode Voltage</td> <td>(kV) 8.0</td> <td>4</td> <td>No connection</td> </tr> <tr> <td>Max, Peak Beam Current</td> <td>(uA) 100</td> <td>5</td> <td>G</td> </tr> <tr> <td></td> <td></td> <td>6</td> <td>C</td> </tr> <tr> <td></td> <td></td> <td>7</td> <td>H</td> </tr> <tr> <td></td> <td></td> <td>8</td> <td>H</td> </tr> <tr> <td></td> <td></td> <td>S.C.</td> <td>A3</td> </tr> </tbody> </table>			Pin	Electrode	Heater Voltage	(V) 4.0	1	No connection	Heater Current	(A) 1.0	2	A1	Max. First Anode Voltage	(kV) 1.45	3	A2	Max, Third Anode Voltage	(kV) 8.0	4	No connection	Max, Peak Beam Current	(uA) 100	5	G			6	C			7	H			8	H			S.C.	A3
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<u>Typical Operating Conditions</u>	<u>SIDE CONTACT</u>																																								
First Anode Voltage (kV) 1.25 Second Anode Voltage (V) 950 Third Anode Voltage (kV) 7.0	Snap Terminal Connector.																																								
	<u>DIMENSIONS</u>																																								
	See Drawing on Page 4																																								

NOTES

A. Absolute maximum value.

B. The first anode must always be at least 50V positive to the second anode and the supply network must take account of variations in first anode current from zero to working value.

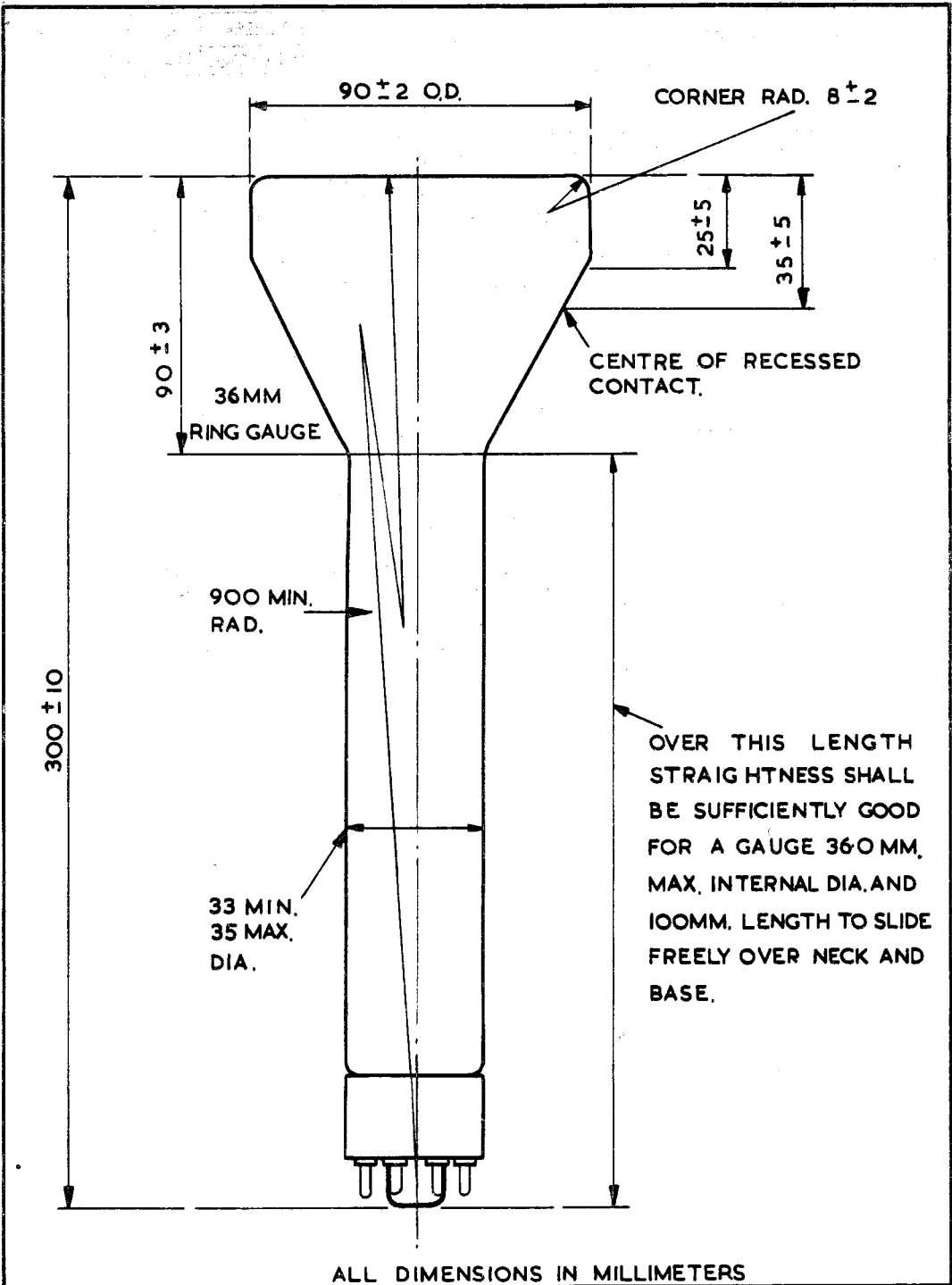
To be performed in addition to those applicable in K1001.

Test Conditions					Test	Limits		No. Tested	Note	
						Min.	Max.			
a	Vh (V)	Va3 (kV)	Va2 (kV)	Val (kV)	Vg (V)	CAPACITANCES (pF) 1. Cg-c 2. Cc-h	-	10 10	5% (20)	
	See K1001/5A.13									
b	4.0	0	0	0	0	Ih (A)	0.95	1.15	100%	
c	4.0	7.0	Adjust for optimum focus	1.25	Adjust to out-off. Value to be noted.	Vg (V)	40	-80	100%	
d	4.0	7.0	As for Test (c)	1.25	-	Light Intensity Beam Current (μA)	-	5.0	100%	
e	4.0	7.0	As for Test (c)	1.25	-	1. Vg (-V)	1	-	100%	
						2. Change in Vg from value found in Test (c) (V)	-	35		
Adjust Vg to give a beam current = 100 μA. Spot to be deflected off the usable screen area.						3. Beam current shall increase continuously over the range of Vg from out-off to that value required for Test (d).	-	-		
f	4.0	7.0	As for Test (c)	1.25	-	1. Line Width (mm) 2. Va2 (V)	- 850	0.5 1050	100%	1
DEFLECTION. With a sine-wave time base of 10 kc/s nom. and a line length of 80 mm, the line width shall be measured at the centre of the trace, in the X and Y directions, successively. GRID. The grid shall be pulsed positively from cut-off with amplitude equal to the value obtained in Test (e2). Nom Tp = 100 μsecs. Nom PRF = 100 1/s.										
g	4.0	7.0	Any convenient value	1.25	-80	Grid Insulation 1. Leakage Current (μA) 2. Increase in voltmeter reading (%)	- -	8 100%	100%	
See K1001/5A.3.2 Grid resistor = 10 megohms										

Test Conditions					Test	Limits		No. Tested	Note	
						Min.	Max.			
Vh (V)	Va3 (kV)	Va2 (kV)	Val (kV)	Vg (V)						
h	4.0	7.0	As for Test (g)	1.25	Any convenient value	Deviation of unfocussed spot from centre of screen (mm)	-	5	100%	
j	As for Test (h)				Useful Screen Area Diameter (mm)	80	-	100%		
k	4.0	7.0	Any convenient value	1.25	-	Persistence (secs)	30	-	100%	
Tests shall be performed using an approved method.										
m	The tube shall be capable of use with an earth connection to any point on the HT potential divider without causing distortion of the trace or spot shift.							TA		

NOTE

1. Alternatively, the test may be performed using a raster having a 10 kc/s nom sine-wave time base 80 mm long in the X direction and a 50 c/s scan in the Y direction, widened so that the individual lines are separated by at least one line width. The line width shall be measured in both X and Y directions. The grid need not be pulsed for this alternative test, but should be set to give a beam current = 100 μ A.



ALL DIMENSIONS IN MILLIMETERS