

CV2464

Specification MOS/CV2464 Issue 1 dated:- 13th October, 1958 To be read in conjunction with K1001 and B.S.448	SECURITY	
	<u>Specification</u> Unclassified	<u>Valve</u> Unclassified

← Indicates a Change

<u>TYPE OF VALVE:-</u> Cathode Ray Tube <u>TYPE OF DEFLECTION:-</u> Magnetic <u>TYPE OF FOCUS:-</u> Electrostatic <u>BULB:-</u> Glass. Internally coated with conductive coating. <u>SCREEN:-</u> YY7. With aluminium backing. <u>PROTOTYPE:-</u> VCRX412			MARKING See K1001/4																
			SIDE CONTACT BS.448.CT7.																
<table border="1" style="width: 100%;"> <thead> <tr> <th style="text-align: center;">RATING</th> <th></th> <th style="text-align: center;">Note</th> </tr> </thead> <tbody> <tr> <td>Heater Voltage (V)</td> <td style="text-align: center;">6.3</td> <td style="text-align: center;">A</td> </tr> <tr> <td>Heater Current (A)</td> <td style="text-align: center;">0.6</td> <td style="text-align: center;">B</td> </tr> <tr> <td>Max. a1 and a3 Voltage (kV)</td> <td style="text-align: center;">8.0</td> <td style="text-align: center;">B</td> </tr> <tr> <td>Max. a2 Voltage (V)</td> <td style="text-align: center;">±500</td> <td></td> </tr> </tbody> </table>			RATING		Note	Heater Voltage (V)	6.3	A	Heater Current (A)	0.6	B	Max. a1 and a3 Voltage (kV)	8.0	B	Max. a2 Voltage (V)	±500		BASE B.S.448 B12A with metal shell	
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<u>TYPICAL OPERATING CONDITIONS</u> <table border="1" style="width: 100%;"> <tbody> <tr> <td>a1 and a3 Voltage (kV)</td> <td style="text-align: center;">7.0</td> </tr> <tr> <td>a2 Voltage (V)</td> <td style="text-align: center;">±150</td> </tr> </tbody> </table>			a1 and a3 Voltage (kV)	7.0	a2 Voltage (V)	±150	CONNECTIONS												
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<u>NOTES</u> A. Heater current may be between 0.3 and 0.6 amps. nominal B. Absolute maximum value. C. The tube should operate satisfactorily with either the anode or cathode at earth potential.			Pin	Electrode															
			1	h															
			2	g															
			3	No pin															
			4	No pin															
			5	No pin															
			6	a2															
			7	No connection															
			8	No pin															
			9	No pin															
			10	No connection															
			11	k															
			12	h															
Side Contact	a1 and a3																		
			DIMENSIONS See drawings on pages 5 and 6																

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Z.17846.R.

To be performed in addition to those applicable in K1001

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Clause	Test Conditions	Tests	Limits		No. Tested	
			Min.	Max.		
a	See K1001/5A.13.	<u>Capacitances</u> (pf) 1. Grid to all other electrodes 2. Cathode to all other electrodes			12 12	2%(5) 2%(5)

FOR ALL TESTS GIVEN BELOW $V_h = 6.3$ VOLTS

b		<u>Heater Current</u> 1. Limits (A) 2. Deviation from manufacturer's nominal (%)	0.27	0.66 ± 10	100% 100%
c	The cathode to be 150V positive with respect to heater. See K1001/5A.3.3.	<u>Heater-Cathode leakage</u> Leakage current (uA)		150	100%

FOR ALL TESTS GIVEN BELOW V_{a1} and $V_{a3} = 7.0$ KV

d	Adjust V_{a2} for optimum focus and V_g for cut-off. See K1001/5A. 10.	<u>Grid base</u> (V) $-V_g$ (Value to be noted.)	35	90	100%
e	Using a focussed raster of 70 x 70 mm:- 1. Adjust V_g to give a light intensity of 2.0 candela. 2. Adjust V_g to give a light intensity of 1.0 candela.	<u>Grid Drive</u> 1. Change in V_g from that in test "d". (V) 2. Change in V_g from that in test "d". (V) 3. The beam current shall increase continuously from zero to that required for 2.0 candela.		38 25	100% 100% 100%
f	Adjust V_{a2} for optimum focus at the centre of a linear scan in two directions at right angles successively and a scan length of 100 mm. and 100 uS. duration. Grid drive from cut-off with a 100 uS pulse at 100 p.p.s. repetition and amplitude found in test "0.2".	1. <u>Line width</u> measured at the centre of the trace. (mm) 2. V_{a2} for focus (V)		0.5 -150 +150	100% 100%

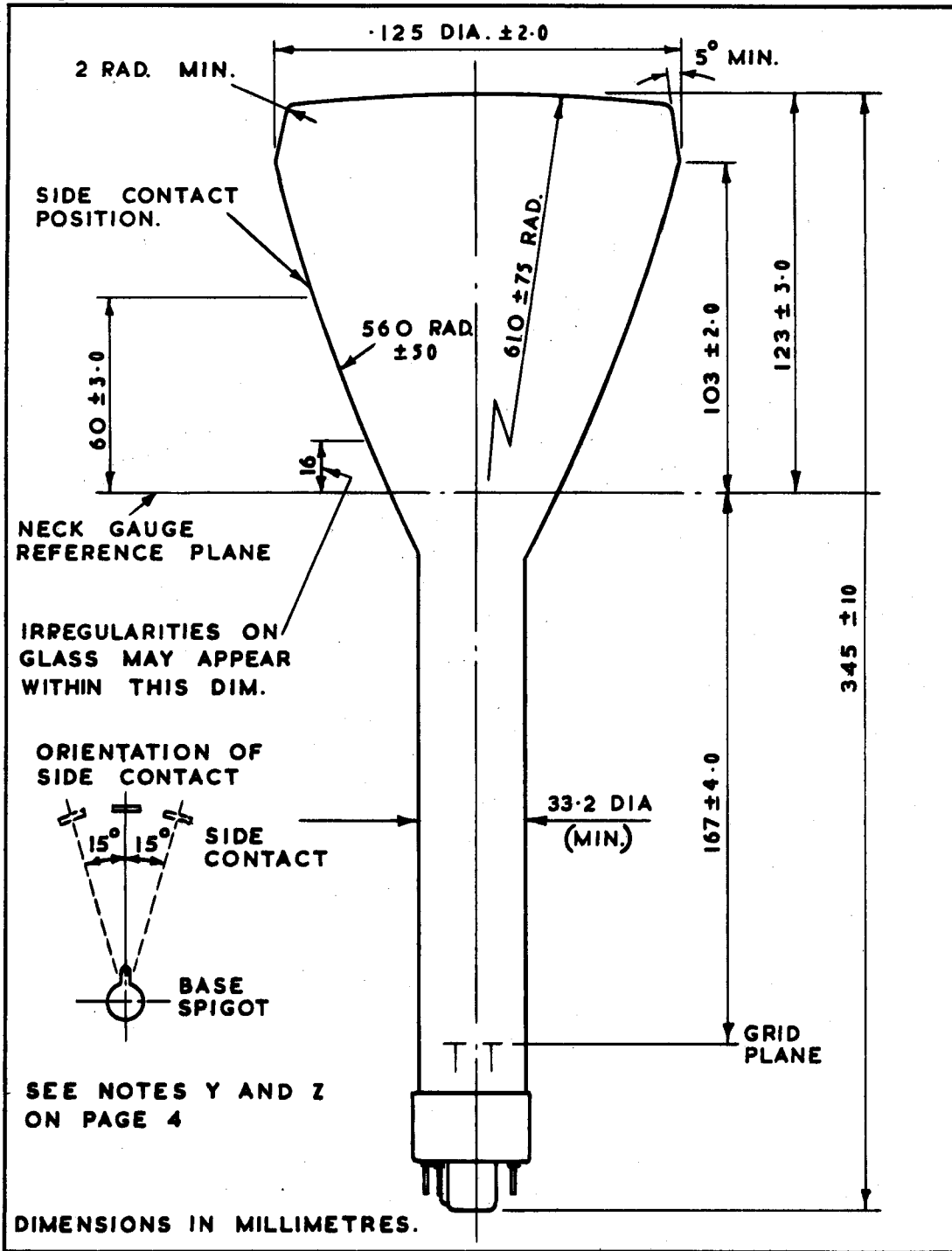
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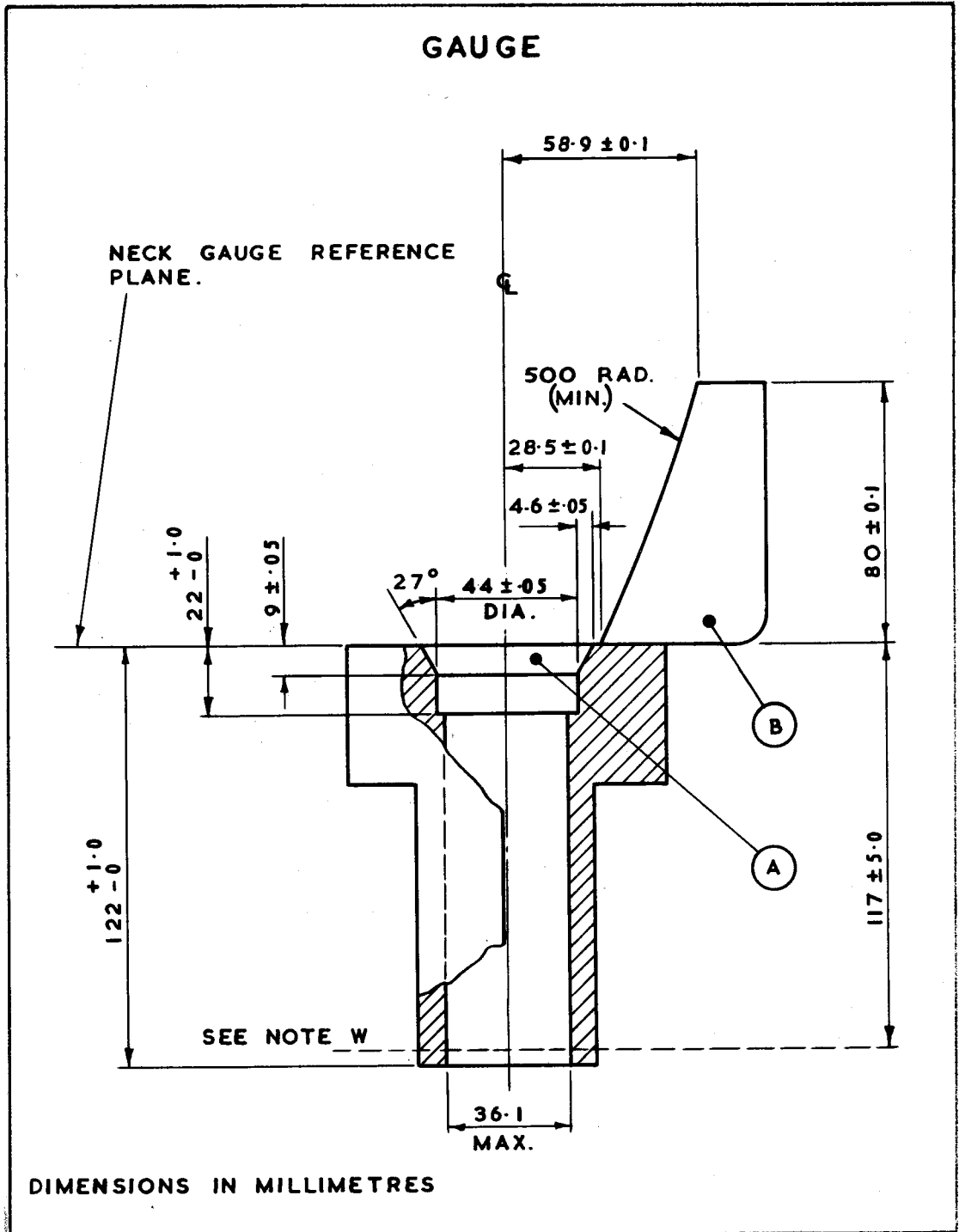
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Clause	Test Conditions	Tests	Limits		No. Tested
			Min.	Max.	
e	(i) $V_g = -90$ volts OR (ii) See K1001/5A.3.2.	<u>Grid Insulation</u> (i) Leakage Current (uA) OR (ii) Increase in voltmeter reading		9 100%	100%
h	Adjust V_{a2} for optimum focus and V_g any convenient value. No deflecting field.	Deviation of spot from the geometric centre of the screen (mm)		7	100%
j	With deflection to cover the useful screen dia. produced by deflection coil to G.E.C. drawing ELB.57181 and V_g as in test "e.1" adjust V_{a2} for optimum focus.	<u>Useful Screen Area Diameter</u> (mm)	109		100%
k	With a raster of convenient size adjust V_g for a screen brightness of 2 foot lamberts. Excitation time 5 seconds minimum.	<u>Afterglow</u> Decay time to 0.014 foot lamberts (Secs)	4	16	100%
l	Defocussed raster of any convenient brightness to cover the useful screen area. See note 1.	<u>Blemishes</u> (Stones, bubbles and Screen defects). Above 1.0 mm. dia. 1.0 mm. to 0.5 mm. dia. Below 0.5 mm. dia. ignore. Spacing between blemishes (mm)		None 6	100%
Notes					
1. It two or more blemishes, including those below 0.5 mm, are separated by a distance not greater than the maximum dimension of the largest blemish in the group, then the group of blemishes shall be considered as one blemish of dimension equal to the maximum overall dimension of the group.					
Drawing Notes					
V The gauge drawing on Page 6 is not a working drawing for the manufacture of a suitable gauge but it is intended only to indicate critical dimensions with tolerances.					
W. At this plane the gauge will include a centring device to align the gauge axis with the neck axis, where the neck axis is the locus of the average radius for an irregular neck. The accuracy of the centring device shall be such that it is capable of repeatedly clamping a truly circular body of nominal neck diameter so that its axis does not deviate from the gauge axis by more than 0.2 mm.					

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- X. Concentricity of all turning on the neck gauge to be within ± 0.025 mm.
- Y. When the tube is rotated through one revolution, minus the irregular glass area permitted for the side contact, whilst mating with the taper (A) of the gauge, the bulb shall not foul against the vane (B).
- Z. The extended neck axis defined as the axis of the neck gauge (Page 6), must not deviate from the geometric centre of the screen face by more than 2 mm. at the screen face plane.





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