

Specification MOA/CV389 Issue 2B 12th November, 1964 To be read in conjunction with K1001 and BS448	<u>SECURITY</u>	
	<u>Specification</u> UNCLASSIFIED	<u>Valve</u> UNCLASSIFIED

→ indicates a change

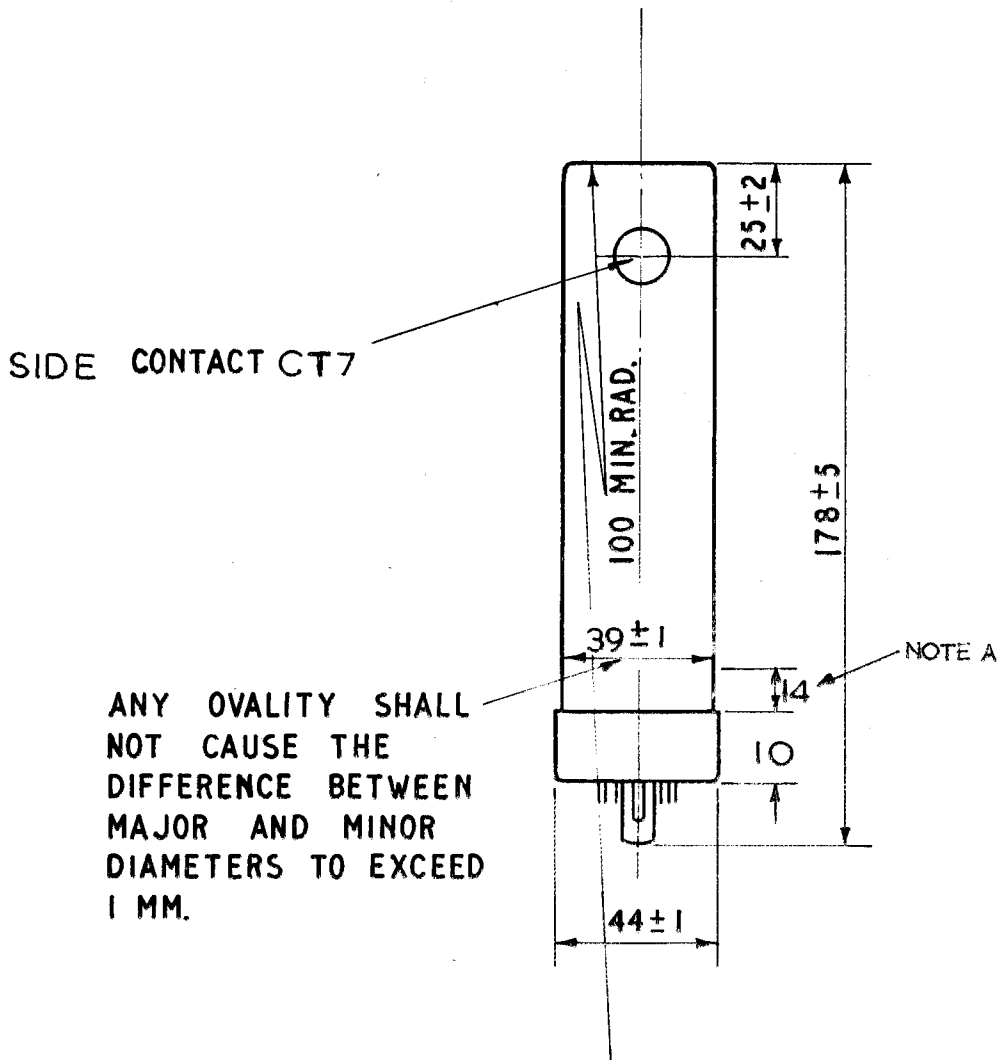
TYPE OF VALVE - Cathode Ray Tube (P.D.A.) DEFLECTION - Electrostatic, Symmetrical FOCUS - Electrostatic BULB - Glass with internal conductive coating SCREEN - GG4 PROTOTYPE - VCRX 210	<u>MARKING</u> See K1001/4	
	<u>BASE</u> See BS448: B9G with moulded sole plate and spigot	
<u>RATINGS</u>	Note	<u>CONNECTIONS</u> Pin. Electrode
All limiting values are absolute		
Heater Voltage (V)	4.0	1 Heater and Cathode h+k
Heater Current (A)	1.0	2 Grid g
Max. Anode 4 Voltage (KV)	4.0	3 Heater h
Max. Anode 3 Voltage (KV)	1.7	4 Anode 2 a2
Max. Anode 2 Voltage (V)	200	5 X Plate 1 X1
Max. Peak Cathode Current (mA)	500	6 Y Plate 1 y1
		7 Anode 1 and Anode 3 a1 +a3
		8 Y Plate 2 y2
		9 X Plate 2 X2
		Side Contact Anode 4 a4
<u>Typical Operating Conditions</u>		
Anode 4 Voltage (KV)	3.5	
Anode 3 Voltage (KV)	1.5	
Anode 2 Voltage (Approx) (V)	75	
Beam Current (mA)	30	
Cathode Current (mA)	40	
X Plate Sensitivity (mm/V)	0.110	B
Y Plate Sensitivity (mm/V)	0.087	B
<u>DIMENSIONS</u> See drawing on page 4		
<u>SIDE CONTACT</u> CT 7		

NOTES

- A. The tube shall be of the post deflection accelerator type and of a design such that a change of $\pm 10\%$ in the Anode 2 voltage shall produce no appreciable change in the cut off voltage.
- B. When viewing the screen with the tube positioned such that the keyway of the spigot is at an angle of 30° to the left of the vertical, a position voltage on pin 5 will deflect the spot to the right, and a positive voltage on pin 8 will deflect the spot upwards.

Test conditions unless otherwise stated:-								
		Vh(V)	Va4(KV)	Va3(KV)	Va2 and Vg			
		4	3.5	1.5	Any convenient value			
K1001 5A	TEST	TEST CONDITIONS	AQL %	Insp. Level	Sym- bol	LIMITS		Units
						Min	Max.	
→ 3.1	General Inspection Dimensions	No Voltages No voltages see drawing on page 4		100% 100%				
→ 3.2.1	Loose Particles	No Voltages		100%				
→ 4.1.1	Insulation	No Voltages		100%				
→ 4.1.2	Grid Insulation Leakage Current <u>Alternative Method</u> Increase in voltmeter reading Heater Current	Vg = -120V: Rg = 0 Rg = 10M ohm		100% 100%	Ig	-	12	μA
→ 4.3	Negative Grid Cut-off Voltage (V1) Negative Grid Voltage (V2) Grid Base (V1-V2)	Optimum focus: No deflection Light Intensity = 0.1 Candela on close raster. Optimum Focus	1.5%	100% 100%	Vg	40	120 record	V
→ 5.7 & 5.7.1	Focus, line width at centre of trace, and Anode 2 voltage	Optimum Focus The line width shall be measured at the centre of the trace. Grid drive from cut- off by 100μS pulse of amplitude (V1-V2). p.r.f. = 100 p.p.s. max		100% 100%	Vg Va2	10	35 0.5 110	V mm V
6.1	Deflection Sensitivity (1) X Plate (2) Y Plate			100% 100%		0.095 0.075	0.125 0.1	mm/v mm/v

K1001 5A	TEST	TEST CONDITION	AQL %	Insp. Level	Sym- bol	LIMITS		UNITS
						Min.	Max	
→ 6.4.1	Spot Position and Displacement			100%		-	3	mm
→ 6.3	Useful Screen Area Diameter on Geo- metric Centre.			100%		35	-	mm
	Angle between X and Y axis of deflection			100%		88	92	deg- rees
	Orientation of Y axis of deflection relative to axis through key way on base spigot			100%		20	40	deg- rees
	Orientation of diameter line through side contact relative to axis through keyway on base spigot			100%		-	± 10	deg- rees
→ 4.6	Capacitances Each X plate -all Each Y plate -all to each Y plate Grid to all		6.5	IC	cx-all cy-all Cx-y cg-all	- - - -	12 12 3 20	pF pF pF pF
→ 7.2	Resistance to external pressure			Q.A.				



NOTES

A. OVER THIS LENGTH THE DIAMETER SHALL BE 40 ± 2

ALL DIMENSIONS ARE IN MILLIMETRES