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

VALVE ELECTRONIC **CV418**

Specification MOSA/CV418 Issue 3 Dated 26.6.53 To be read in conjunction with K.1001.	SECURITY Specification: UNCLASSIFIED Valve: UNCLASSIFIED

→ Indicates a change

TYPE OF VALVE - High Speed Oscilloscope Cathode Ray Tube

TYPE OF DEFLECTION - Electrostatic

BULB - Internally coated with Conductive coating

SCREEN - GGN

PROTOTYPE - MX2

MARKING

See K1001/4

BASE

E.M.8

RATING			Note
Heater Voltage	(V)	4	
Heater Current	(A)	1.2	
Max. Final Anode Voltage	(KV)	2	
Max. Continuous Cathode Current	(mA)	1	
X-plate Sensitivity	(mm/V)	620/Va3	
Y-plate Sensitivity	(mm/V)	530/Va3	

CAPACITANCES (pF)	
(1) Each X-plate to all other electrodes	12
(2) Each Y-plate to all other electrodes	8
(3) Grid to all other electrodes	10
(4) One X- to one Y-Plate	.013

CONNECTIONS

Pin	Electrode
1	A2
2	H
3	C
4	H
5	G
6	X2
7	A1 and A3
8	X1
Side Contacts	Y1 and Y2 (See drawing on page 4)

SIDE CONTACTS

See K1001/A1/D.5.1

DIMENSIONS

See Drawing on page 4

NOTE

A. When viewing the screen with the tube positioned such that the terminals A1 and A3 are downwards, a positive voltage applied to 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 K.1001

	Test Conditions				Test	Limits Min.	Limits Max.	No. Tested	Note
a	See K1001/5A.13				CAPACITANCES (pF) (1)Each X plate to all other electrodes. (2)Each Y plate to all other electrodes. (3)Grid to all other electrodes. (4)One X plate to one Y plate.	 - - - -	 15 10 15 0.2	 5%(5) 5%(5) 5%(5) 5%(5)	
b	Cathode 50V positive to Heater				Ihc (μA)	-	100	100%	
	Deflection voltages shall be symmetrical in all cases								
	Vh	Va3 (KV)	Va2	Vg					
c	4	0	0	0	Ih (A)	1.08	1.32	100%	
d	4	1.2	adjusted for optimum focus	adjust for cut-off	Vg (V) Value to be noted	-25	-50	100%	
e	4	1.2	ditto	adjust	Change in value of Vg from clause (d) (V) Vg adjusted to give a light output of 0.01 candelas on a close raster; drive voltage from cut-off shall not exceed 20 volts.	-	20	100%	
f	4	1.2	ditto	adjust	(1) Line width (mm) (2) Va2 (V) Vg adjusted to give a light output of 0.01 candelas	- 125	1 175	100% 100%	
g	4	1.2	ditto	reduce to zero	Beam current (μA)	40	-	100%	
h	4	1.2	Any convenient value	-50	GRID INSULATION (1)Leakage Current (μA) (2)Increase in voltmeter reading Recommended method, see K1001/5A.3.2 Resistor = 10 Megohms	- -	5 100%	100% 100%	
j	4	1.2	ditto	Any convenient value	DEFLECTION SENSITIVITIES (1)X plate (mm/V) (2)Y plate (mm/V)	540/Va3 460/Va3	700/Va3 600/Va3	5%(10) 5%(10)	
k	4	1.2	ditto	ditto	Deviation of spot from centre of screen (mm)	-	10	100%	
l	4	1.2	ditto	ditto	USEFUL SCREEN AREA Diameter (mm) Deflections to cover the stated circle centred on the centre of the screen	70	-	100%	

TESTS (Contd.)

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	Test Conditions				Test	Limits		No. Tested	Note
	Vh	Va3 (KV)	Va2	Vg		Min.	Max.		
m	4	1.2	Any convenient value	Any convenient value	Orientation of Y axis of deflection relative to 00' on the drawing	-	±10°	100%	
n	4	1.2	ditto	ditto	Angle between X and Y axis of deflection	88°	92°	100%	

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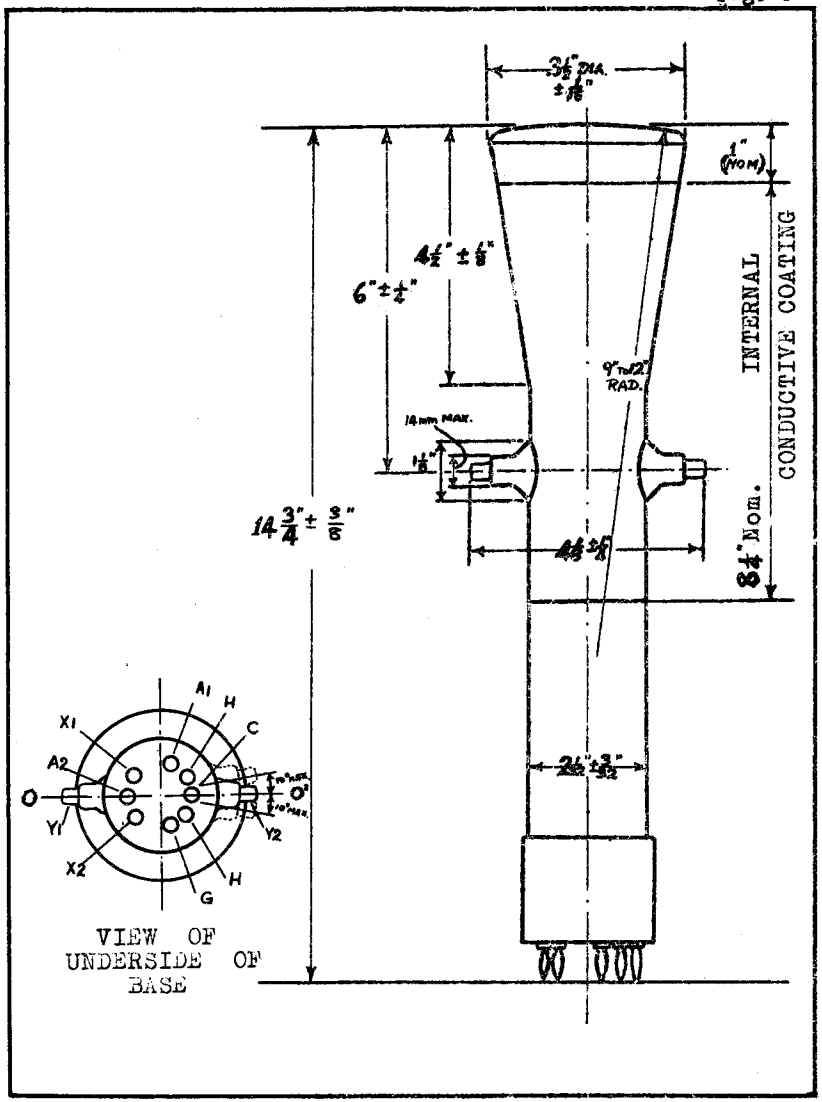

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