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



Specification MOSA/CV1131	SECURITY			
Issue 3 Dated 20.5.1953 To be read in conjunction with K.1001	Specification	Valve		
	Unclassified	UNCLASSIFIED		

	Indicates	A	chance
		•	ONG THE C

TYPE OF VALVE	- Cathode Ray Tube	MARKING
TYPE OF DEFLECTION	- Electrostatic, suitable for symmetrical deflection	See K.1001/4
BULB	- Internally coated with conductive coating	BASE
SCREEN	- GGN 35	12 side-contact type
PROTOTYPE	- VOR131	CONTECTIONS

		<u> </u>			
RATINGS		Pin	Electrode		
X-deflection Sensitivity (mmy Y-deflection Sensitivity (mmy Desirable Spot Size (TYPICAL OPERATING CONDITIONS Final Anode Voltage (Page 1) Second Anode Voltage (Page 1) Second Voltage (Page 1) Second Voltage (Page 1) Second S	(V) 900/Va3 ma) 0.75 (V) 4.0 (V) 800 (V) -18	Note	1 2 3 4 5 6 7 8 9 10 11	C G H H No connection A2 No connection Y2 X2 A3 X1	
	V) -33 (A) 20		DIMENSIONS See Drawing on page A		

notes

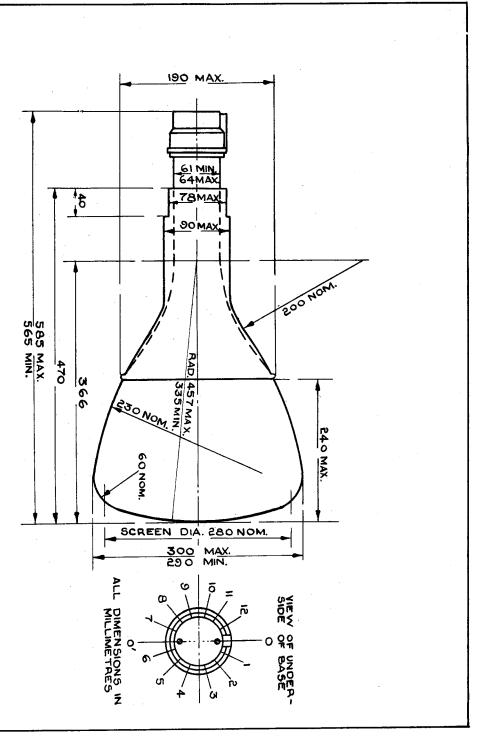
- A. A magnetic shield shall be supplied fitted to the tube and shall be such as to provide adequate screening from external magnetic fields.
- B. When viewing the screen with the tube positioned such that the base spigot is uppermost, a positive voltage applied to the terminal X_1 shall deflect the spot to the right, and a positive voltage applied to the terminal Y_1 shall deflect the spot downwards.

CVII3I

To be performed in addition to those applicable in K.1001

								
		Test Cond	itions	Thorat.	L	imits	No.	
		rest cour	retous	Test	Min.	Max.	Tested	Note
See	K.10	01/54.13		CAPACITANCES (pF) 1. Each X or Y				
				electrodes.	-	20		
				2. Grid to all other electrodes.	-	20	5% (10)	
				3. One X to one Y plate.	-	5		
٧h	Va3 (KV)	Va2	Vg					
4.0	0	0	0	Ih (A)	•75	1.2	100%	
4.0	4.0	Adjust for optimum focus	Adjust to cut off	Vg (V) Value to be noted	-23	60		
I	•		-	(i) Vg (V)	-3			
ness	of '	1.0 foot la	mbert, on	value of Vg from test (c) (V)	•	25	100%	
4.0	4.0	ditto	-	(i) Line width (mms)	-	.8	100%	
DEFIECTION With a sine wave time base of 10 Kc/s nom. and a line length of 210 mm in the X and 100 mm in the Y directions successively. The line width to be measured at the centre of the trace.			(ii) Va2 (V)	600	1200	100%	,	
GRID The grid will be pulsed positively from cut off with amplitude equal to the value obtained in test $d(ii)$, the nominal value of pulse duration and recurrence being $100~\mu$ secs and $100~e/s$.								
4.0	4.0	ditto	Any con- venient value	(i) Grid leakage current (#A) (ii) Increase in voltmeter reading	-	6.0 100%	100%	
See	K.10	01/5A.3.2.			·			
to t	e ins							
	Vh 4.0 4.0 Vg s ness a so 4.0 DEFI time at t GRIII posi ampl obtas nomi tion 100 4.0	Vh Va3 (KV) 4.0 0 4.0 4.0 Vg adjus mess of a scan s 4.0 4.0 DEFLECTION time bas a line 1 the X and direction The line at the comment obtained nominal tion and 100 \(mu\) see K.10 10 megoin	Vn Vaj Va2 (KV) 4.0 0 0 4.0 4.0 Adjust for optimum focus 4.0 4.0 ditto Vg adjusted to give ness of 1.0 foot 1s a Scan size of 210 4.0 4.0 ditto DEFIRITION With a stime base of 10 Kc/a line length of 21 the X and 100 mm in directions successifthe line width to bat the centre of the GRID The grid will positively from cut amplitude equal to obtained in test d(nominal value of pution and recurrence 100 \(\mu\) secs and 100 4.0 4.0 ditto Recommended method See K.1001/5A.3.2. 10 megohm resistor to be inserted	Vn Vaj Va2 Vg 4.0 0 0 0 0 4.0 4.0 Adjust for to optimum cut focus off 4.0 4.0 ditto - Vg adjusted to give a brightness of 1.0 foot lambert, on a scan size of 210 x 100 mms 4.0 4.0 ditto - DEFIECTION With a sine wave time base of 10 Kc/s nom. and a line length of 210 mm in the X and 100 mm in the Y directions successively. The line width to be measured at the centre of the trace. GRID The grid will be pulsed positively from cut off with amplitude equal to the value obtained in test d(ii), the nominal value of pulse duration and recurrence being 100 \(\mu\) secs and 100 \(\sigma\)/s. 4.0 4.0 ditto Any convenient value Recommended method See K.1001/5A.3.2. 10 megohm resistor to be inserted	See K.1001/5A.13 CAPACITANCES (pF) 1. Bach I or I plate to all other electrodes. 2. Grid to all other electrodes. 3. One I to one I plate. Vh Va3 Va2 Vg 4.0 0 0 0 Ih (A) 4.0 4.0 ditto - Vg adjusted to give a brightness of 1.0 foot lambert, on a scan size of 210 x 100 mms 4.0 4.0 ditto - Vg adjusted to give a brightness of 1.0 foot lambert, on a scan size of 210 x 100 mms 4.0 4.0 ditto - Vg (ii) Change in value of Vg from test (c) (V) 1.0 4.0 ditto - Vg (ii) Line width (mms) DEFIRCTION With a sine wave time base of 10 Kc/s nom. and a line length of 210 mm in the I directions successively. The line width to be measured at the centre of the trace. GRID The grid will be pulsed positively from out off with amplitude equal to the value obtained in test (ii), the nominal value of pulse duration and recurrence being 100 \(\mu\) secs and 100 \(\mu\)/s. 4.0 4.0 ditto Any (i) Grid leakage current (\mu\)/s and (ii) Increase in voltmeter reading Recommended method See K.1001/5A.3.2. 10 megohn resistor to be inserted	See K.1001/5A.13 CAPACITANCES (pF)	See K.1001/5A.13 Capaditances (pf) 1. Each X or Y plate to all other electrodes. - 20 2. Grid to all other electrodes. - 20 3. One X to one Y plate. - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5	See K.1001/5A.13 CAPACITANGES (pF) 1. Each X or Y 1. Each X or Y

			Test Condi	+i.one	Test:	Limits		No. tested	Note
L			Test Count	T10HS	rest	Min. Mex.			
	Vh	Va3 (KV)	Va2	٧g					
g	4.0	4.0	Adjust for optimum focus	Any Con- venient value	DEFLECTION SENSITIVITIES 1. X-plate (mm/V) 2. Y-plate	500/Va3 550/Va3	1	100%	
h	4.0	4.0	ditto	ditto	Deflection of spot from centre of screen (mm)	-	2 5	100%	
j	4.0	4.0	ditto	ditto	USEFUL SCREEN AREA 1. X-deflection (mm) 2. Y-deflection (mm)	_	-	100%	
k	4.0 4.0 ditto ditto Angle measured relative to axis 00' on drawing on Page 4.			tive to	Orientation of axis of deflection	-	<u>+</u> 10%	100%	
1	4.0	4.0	ditto	ditto	Angle between X and Y axes	880	92°	100%	
102.	cont	al be inuou a ra	ditto am current s spot mov ster 210 m	ement	Life Test Life (hours)	1000		1%	



CV1131/3/4