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

VALVE ELECTRONIC **CV 1523** Amdt 1

Specification ~~MOSA~~ MOA/CV.1523 Issue 3 Dated 12.6.1953 To be read in conjunction with K.1001	SECURITY Specification: UNCLASSIFIED Valve: UNCLASSIFIED

Amdt 1

→ Indicates a change

TYPE OF VALVE - Cathode Ray Tube

TYPE OF DEFLECTION - Electrostatic, suitable for symmetrical operation

BULB - Glass - internally coated with conductive coating

SCREEN - GGN/1/28/35

PROTOTYPE - VCR 523

MARKING

See K.1001/4

BASE

12 Contact Key Base

CONNECTIONS

Pin	Electrode
1	C
2	G
3	H
4	H
5	A_1 (See Note B)
6	A_2
7	Int. Coating (Note B)
8	Y_2
9	X_2
10	A_3
11	X_1
12	Y_1

RATING

			Note
Heater Voltage	(V)	4	
Heater Current	(A)	1	
X-plate Sensitivity	(mm/V)	1345/Va3	
Y-plate Sensitivity	(mm/V)	1300/Va3	
Max. First Anode voltage	(KV)	2	
Max. Final Anode Voltage	(KV)	7	
TYPICAL OPERATING CONDITIONS			
Final Anode Voltage	(KV)	6	
Second Anode Voltage	(KV)	1.6	
First Anode Voltage	(KV)	1.8	
Beam Current	(μA)	20	

DIMENSIONS

See drawing on Page 3

NOTES

A. When viewing the screen with the tube positioned so 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.

B. The tube will normally be operated with A_3 and conductive coating tied and if a manufacturer so desires these two electrodes may be strapped internally and the connection to contact marked "Internal Conductive Coating" omitted. Also if desired A_1 may be strapped to another electrode and the connection to contact A_1 omitted.

C. The internal conductive coating shall be of such dimensions that it functions effectively but does not obscure the required useful screen area.

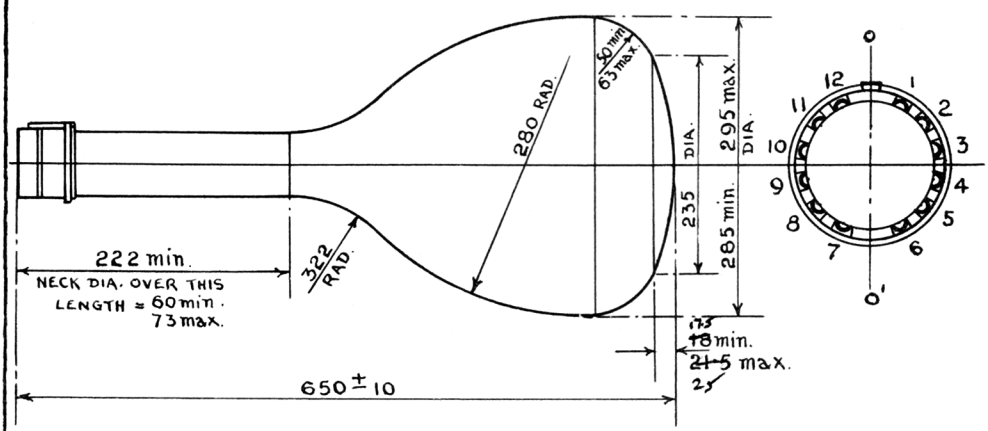
To be performed in addition to those applicable in K1001

	Test Conditions					Test	Limits Min.	Limits Max.	No. Tested	Note
a	See K1001/5A.13					INTER-ELECTRODE CAPACITANCES (pF) 1. Each X or Y plate to all other electrodes. 2. Grid to all other electrodes. 3. One X to one Y plate.	 - - -	 20 25 10	 5% (10) 5% (10) 5% (10)	
	Deflection Voltages shall be applied symmetrically in all cases.									
	Vh	Va3 (KV)	Va2	Va1 (KV)	Vg					
b	4	0	0	0	0	Ih (A)	0.8	1.3	100%	
c	4	6	Adjust for optimum focus	1.8	Adjust to cut off	Vg (V)	-30	-100	100%	
d	4	6	ditto	1.8	Adjust	(1) Vg (2) Change in Vg from (c) (V)	-1 -	- 60	100% 100%	
	Adjust Vg to give a light output of 0.1 candelas on a closed raster.									
→ e	4	6	ditto	1.8	ditto	(1) Line width (mm)	-	0.8	100%	
	DEFLECTION - With a sine-wave time base of 10 kc/s nom. and line length of 200 mm. in the X direction and 100 mm. in the Y direction 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(2), the nominal values of pulse duration and recurrence being 100 μsecs. and 100 c/s respectively.					(2) Va2 (V)	800	1800	100%	
f	4	6	Any convenient value	1.8	-100	GRID INSULATION (1) Leakage current (μA) (2) Increase in voltmeter reading	 - -	 10 100%	 100% 100%	
	Recommended method - See K1001/5A.3.2 Resistor = 10 megohms.									

TESTS (continued)

CV1523

Test Conditions						Test	Limits		No. Tested	Note
	Vh	Va3 (KV)	Va2	Va1 (KV)	Vg		Min.	Max.		
g	4	6	Adjust for optimum focus	1.8	Any convenient value	DEFLECTION SENSITIVITIES (1) X plate (mm/V) (2) Y plate (mm/V)	1090/ Va3 1000/ Va3	1600/ Va3 1600/ Va3	5% (10) 5% (10)	
h	4	6	ditto	1.8	ditto	Deviation of spot from centre of screen (mm)	-	25	100%	
j	4	6	ditto	1.8	ditto	USEFUL SCREEN AREA (1) X deflection (mm) (2) Y deflection (mm)	±105 ±50	- -	100% 100%	
k	4	6	ditto	1.8	ditto	(1) Orientation of X axis of deflection relative to 00' on drawing. (2) Angle between X and Y axes of deflection.	80° 85°	100° 95°	5% (10)	



Amdt. 1

ALL DIMENSIONS IN MILLIMETRES

ELECTRONIC VALVE SPECIFICATIONS

SPECIFICATIONS MOSA/CV1523 ISSUE 3 DATED 12.6.1953

AMENDMENT NO. 1

1. Page 1. Top of Page

   (a) Amend the Specification Authority "MINISTRY OF SUPPLY D.L.R.D.(A)/R.A.E." to read "MINISTRY OF AVIATION D.L.R.D./ R.A.E.".

   (b) Amend the Specification Title "Specification MOSA/CV.1085" to read "Specification MOA/CV.1085".

2. Page 3 Outline Drawing

   Amend the Chord Height of Screen dimensions of "Min.18" and "Max.21.5" to read "Min.17.5" and "Max. 25".

June 1965
N.22966

T.V.C. for R.A.E.

JAAP 1965