VALVE ELECTRONIC

MINISTRY OF SUPPLY (ARDE)

CV2468

Specification M.O.S. C.V.2468
Issue No. 1 dated 2.6.58
To be read in conjunction with K1001

SECURITY
Specification: Unclassified
Valve: Unclassified

⟷ Indicates a change

TYPE OF VALVE:- Cathode Ray Tube

TYPE OF DEFLECTION:- Electrostatic (Y plates only) and magnetic.

TYPE OF FOCUS:- Magnetic

SCREEN:- G.0.8. (Aluminised)

MARKING

See K1001/4

BASE
T.0.

RATING			Note
Heater Voltage	(V)	4.0	
Heater Current	(A)	1.0	
Max. Final Anode Voltage	(kV)	15.0	A
Max. Heater/Cathode Voltage	(V)	200	A

TYPICAL OPERATING CONDITIONS		
Final Anode Voltage	(kV)	10
Deflection Sensitivity	(mm/V)	0.25

CAPACITANCES (pF)	
Y1 - Y2	3.2
Either Y Plate to Anode	5.0
Grid to all other electrodes	9
Cathode to all other electrodes	9

CONNECTIONS

Pin	Electrodes
1	No connection
2	Heater
3	Pin omitted
4	Pin omitted
5	Grid
6	Pin omitted
7	Heater
8	Cathode
S.C.	Anode

SIDE ARM CONTACTS

Y Deflector Plates

SIDE CONTACTS

See K1001/A1/D5.1

DIMENSIONS

See Drawing Page 5. ←

NOTES

A. Absolute Maximum Value.

B. The focussing requirements and the amount of deflection defocussing will be checked on the Type Approval samples. After Type Approval has been granted the construction of the tubes must remain as in the Approved samples.

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TESTS

To be performed in addition to those applicable in K1001

	Test Conditions	Test	Limits Min.	Limits Max.	No. Tested
a	See K1001/5.A.13.	Capacitances (pF)			
		1. Y1 Plate to Y2 Plate	-	5.0	
		2. Each Y Plate to Anode	-	8.0	10%
		3. Grid to all other electrodes	-	13.0	(2)
		4. Cathode to all other electrodes	-	12.0	

FOR ALL FURTHER TESTS Vh = 4.0 Volts.

b		Heater Current Ih (A)	0.9	1.1	100%
c	± 200 volts heater to cathode	Heater Cathode Current (/µA)	-	100	100%

FOR ALL FURTHER TESTS Va = 10 kV - ANODE TO BE AT EARTH POTENTIAL
ADJUST RING MAGNET AT REAR OF CATHODE FOR FULL ILLUMINATION OF ANODE APERATURE
(NO FOCUSSING FIELD PRESENT)

d	See K1001/5.A.11.1	Deviation of unfocussed Spot from centre of Screen. (mm)		5	100%

FOR ALL FURTHER TESTS ADJUST FOCUS COIL TO POSITION FOCUSSED SPOT IN CENTRE OF UNFOCUSSED SPOT AREA

e	Adjust Vg for Cut off See K1001/5.A.10	Grid Cut off Voltage -Vg (V)	110	170	100%
f	With a 200 line close raster of convenient size adjust Vg for a light intensity of 0.02 Candela See K1001/5.A.9. and Note 1.	Light Output Anode Current (µA)	-	5	100%
g	With screen fully illuminated by close raster adjust Vg for 25 µA anode current. See K1001/5.A.18	1. Change of Vg from cut off Clause (e) (V)	17	25	100%
		2. Beam Current (/µA)	5	10	100%
h	With screen fully illuminated by close raster adjust Vg to near cut-off See K1001/5.A.12.	Useful Screen Area 1. Y Axis (mm)	±23.5	-	100%
		2. X Axis (mm)	±23.5	-	100%

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TESTS (Contd.)

	Test Conditions	Test	Limits Min.	Limits Max.	No. Tested
j	With a defocussed raster to cover useful screen area. See Note 2.	Blemishes Glass Bubbles and screen dead spots (mm)	-	0.25	100%
k	With a 10 kc/s line of length 65 mm the line width shall be measured at the centre of the trace The grid shall be pulsed positively from cut off with amplitude equal to the value obtained in test (g1). The nominal value of pulse duration 100 µsecs. Recurrence rate 50 c/s.	Line Width (mm)	-	0.3	100%
l		Deflection Sensitivity Y Plate (mm/V)	0.24	0.26	100%
m	See K1001/5.A.3.2. (a) Vg = -200V. (b) Alternative method resistor = 25 Mohm.	Grid Insulation (a) Leakage Current (µA) (b) Increase in voltmeter reading.	- -	8 100%	100%
n	With a focussed raster to cover useful screen area anode current = 5 µA.	Deflection Distortion Angle between opposite sides "Parallel" to Y Plates.	179°	181°	100%
p	With a defocussed raster and a luminance of 1.75 foot Lamberts when viewed through a C2 filter or equivalent. See Note 3.	Afterglow Time taken for luminance to decay to 0.55% of initial value. (secs)	55	-	100%
q	With a focussed raster to cover useful screen area. Anode current = 25 µA See Note 4.	Focus Coil Current (mA)	12	16	T.A.

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NOTES

1. Beam current (Ib) is defined as the current flowing to the anode via. the external link from the screen metallising. Beam current can be measured by replacing this link with a microammeter. Anode current (Ia) is the sum of the Beam current and that appearing in the anode. It is measured in the anode lead.

2. Bubbles smaller than 0.2 mm diameter can be ignored unless in sufficient concentration to produce perceptible cloudiness. Bubbles and blemishes $>$ 0.2 mm dia. and $<$ 0.25 mm dia. must not be closer than 5 mm to each other and not more than 5 to be present in any area of 10 mm radius.

3. This test may be performed using Test Set Type 331 fitted with an N_4 filter. The specified limit applies. Time of excitation 30 sec. $\pm$ 2 secs.

4. The face of the focus coil is positioned 92 mm from the 36 mm Ring Gauge reference line A - A.
Use focus coil type GAC/3621/D.

5. Test A.2. Capacitance of Y plate to Anode measurement should be carried out after the external aquadag coating has been applied.

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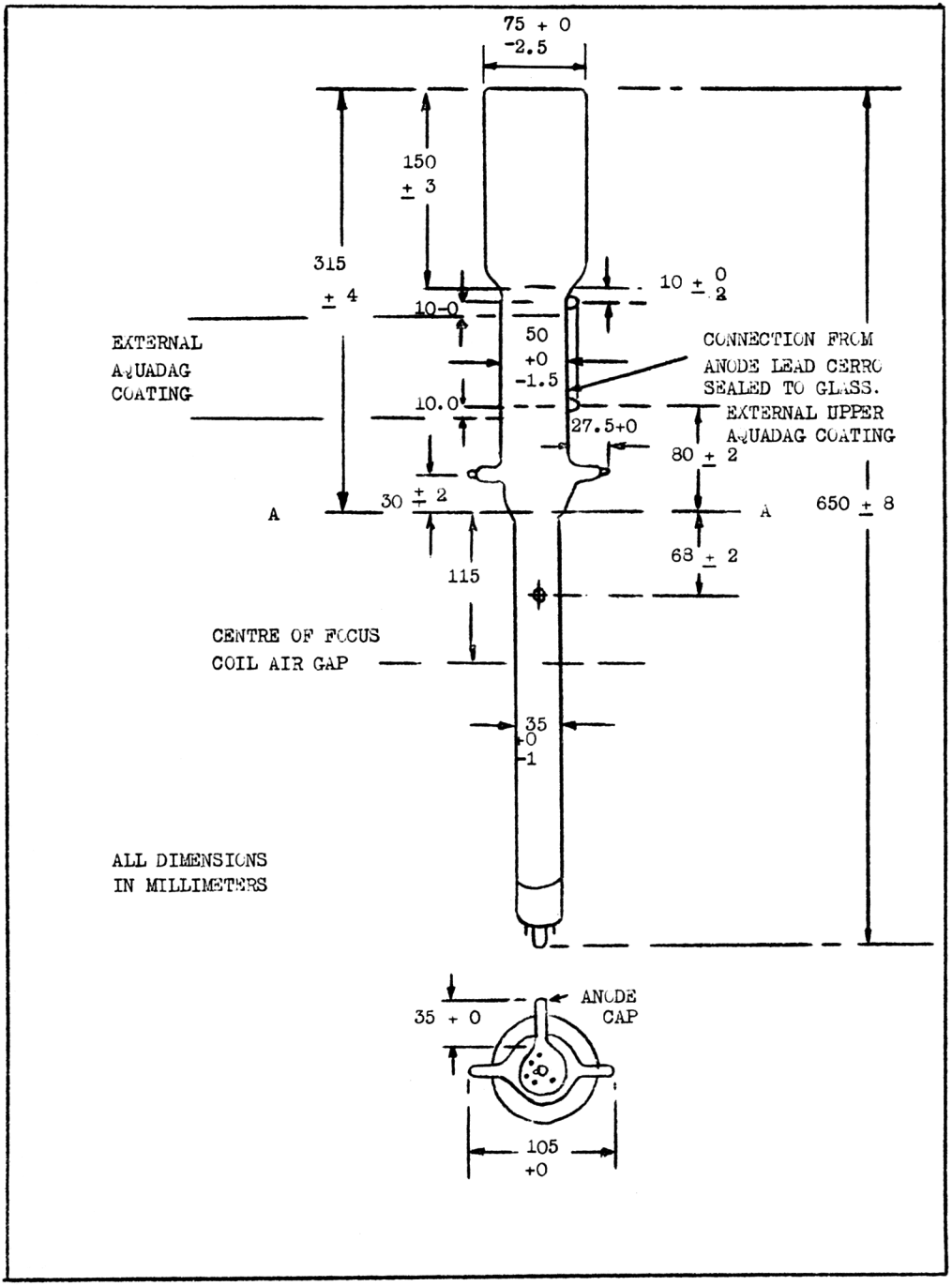
75 + 0
-2.5
150
± 3
315
± 4
10 ± 0
2
10-0
50
+0
-1.5
EXTERNAL
AQUADAG
COATING
CONNECTION FROM
ANODE LEAD CERRO
SEALED TO GLASS.
10.0
27.5+0
EXTERNAL UPPER
AQUADAG COATING
80 ± 2
A
30 ± 2
A
650 ± 8
63 ± 2
115
CENTRE OF FOCUS
COIL AIR GAP
35
+0
-1
ALL DIMENSIONS
IN MILLIMETERS
35 + 0
ANODE
CAP
105
+0