MINISTRY OF SUPPLY (ARDE)

VALVE ELECTRONIC **CV2467**

Specification M.O.S. C.V.2467
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) Symmetrical, and magnetic.

TYPE OF FOCUS:- Magnetic

SCREEN:- BB2 (Aluminised)

MARKING
See K1001/4

BASE
I.O.

| 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 Plate to Anode | 5.0 |
| Grid to all other electrodes | 9 |
| Cathode to all other electrodes | 9 |

CONNECTIONS

| Pin | Electrode |
|---|---|
| 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 | (2) |
| | | 4. Cathode to all other electrodes | - | 12 | |

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 (/uA) | - | 100 | 100% |

FOR ALL FURTHER TESTS Va = 10kV - ANODE TO BE AT EARTH POTENTIAL ADJUST RING MAGNET AT REAR OF CATHODE FOR FULL ILLUMINATION OF ANODE APERTURE (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 0.25 orthochromatic candela. See K1001/5.A.9. and Note 1. | Light Output Anode current (/uA) | - | 5 | 100% |
| g | With screen fully illuminated by close raster adjust Vg for 25 /uA X See K1001/5.A.18. | 1. Change of Vg from cut-off clause (e) (V) | 17 | 25 | 100% |
| | | 2. Beam current (/uA) | 5 | 10 | 100% |
| h | With screen fully illuminated by close raster adjust Vg to near cut-off. See K1001/5.A.12. | 1. Useful Screen Area Y Axis (mm) | ±23.5 | - | 100% |
| | | 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 Mohms | Grid Insulation (a) Leakage current (µA) (b) Increase in voltmeter reading | - - | 8 100% | 100% |
| n | With control grid adjusted To value obtained in Clause (e) | Anode Leakage (/uA) | - | 0.5 | 100% |
| o | 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 focussed raster to cover useful screen area anode current = 25 µA. See Note 3. | Focus Coil Current (mA) | 12 | 16 | T.A. |

1. NOTES

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.

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NOTES (Contd.)

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. 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.

4. Test A.2. Capacitance of Y Plate to Anodes measurement should be carried out after the external aquadag coating has been applied.

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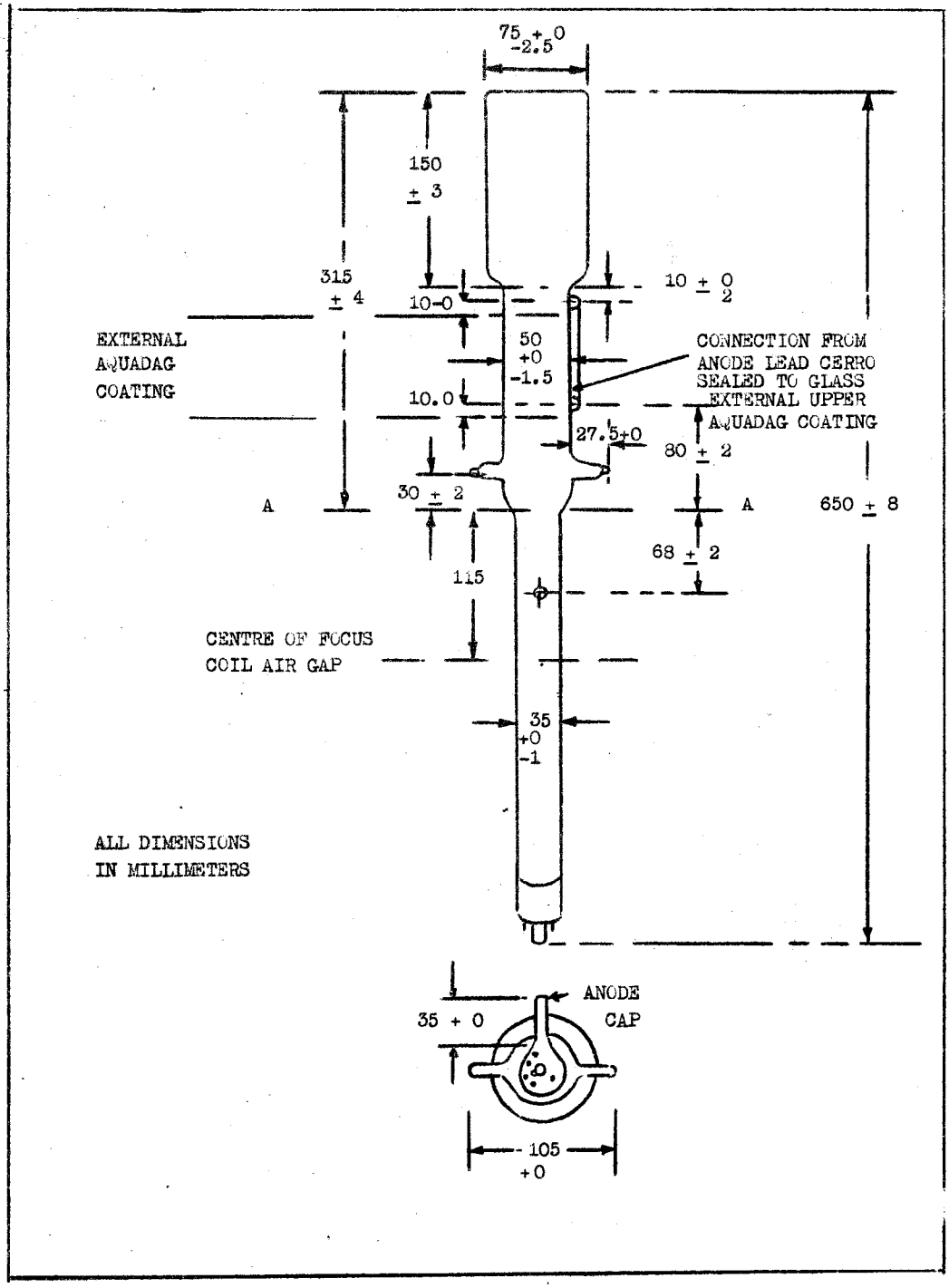


C.V.2467/1/5