MINISTRY OF SUPPLY (D.C.D.)

VALVE ELECTRONIC **CV1546**
(VCR140A)

Specification MAP/CV1546/Issue 2
Dated 11.9.46.
To be read in conjunction with K1003

MARKING

| Specification | Valve |
|---|---|
| RESTRICTED | RESTRICTED |

→ Indicates a change

TYPE OF DEFLECTION: Magnetic

TYPE OF FOCUS: Magnetic

BULB: Internally coated with conductive coating

SCREEN: BYL 46

| RATING | | | Note |
|---|---|---|---|
| Heater Voltage | (V) | 4.0 | |
| Heater Current | (A) | 1.0 | |
| Max. Anode Voltage | (kV) | 9.0 | |

NOTE

A. The bulb and neck shall be reasonably free from stones, bubbles and cords.

MARKING

See K1001/4

BASE

I.O.

| Pin | Electrode |
|---|---|
| 1 | No connection |
| 2 | Heater |
| 3 | Pin omitted |
| 4 | Pin omitted |
| 5 | Grid |
| 6 | Pin omitted |
| 7 | Heater |
| 8 | Cathode |
| Side Con-tact | Anode |

SIDE CONTACT

Plug cap to conform to BSS 448

DIMENSIONS

See drawing on page 4

To be performed in addition to those applicable in K1003

| | Test Conditions | | | Test | Limits Min. | Limits Max. | No. Tested |
|---|---|---|---|---|---|---|---|
| a | See K1003/5.12 | | | Capacitances (pF) Grid to all other electrodes | - | 10 | 5% (5) |
| | Vh | Va(kV) | Vg | | | | |
| b | 4.0 | 0 | 0 | Ih (A) | 0.8 | 1.2 | 100% |
| c | 4.0 | 4.0 | Adjust for cut-off. With the tube positioned in the coil unit (See Note 2) and the focus adjusted for optimum spot size. | Vg (V) Value to be noted | -30 | -65 | 100% |
| d | 4.0 | 4.0 | - Vg adjusted to give a light output of 0.12 candles when viewed through a C2 filter, (Type 26, Ref.10AB/474) on a close raster of convenient size. | (1) Vg (V)<br>(2) Change in value of Vg from test (c) (V)<br>(3) Within the range of grid voltage from cut-off to light output, the beam current shall increase continuously | -1<br>- | -<br>25 | 100%<br>100% |
| e | 4.0 | 4.0 | - Focus adjusted for optimum. DEFLECTION - With a sine wave line scan of 50 c/s nom. & a line length of 255 mm. in X & Y directions successively, the line width will be measured at the centre of the trace. (Duty ratio = unity) | (1) Focus coil current (mA)<br>(2) Line Width (mm) | 83<br>- | 105<br>1.6 | T.A.<br>100% |

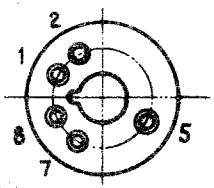
TESTS (Cont'd)

CV1546

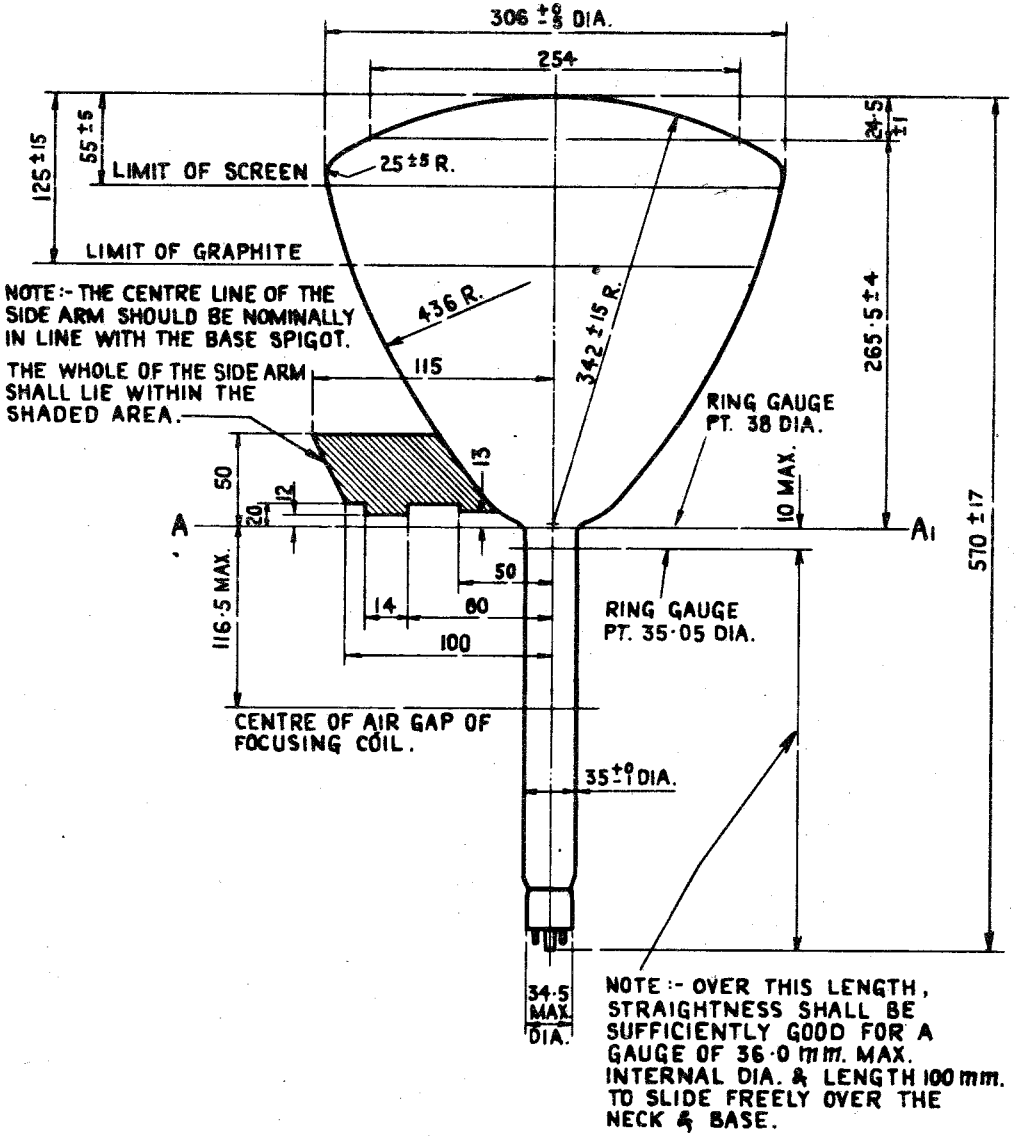
| | Test Conditions | | | Test | Limits Min. | Limits Max. | No. Tested |
|---|---|---|---|---|---|---|---|
| | Vh | Va(kV) | Vg | | | | |
| f | 4.0 | 4.0 | -65 | **Grid Insulation** | | | |
| | Recommended Methods:- See K1003/5.4.2. Resistor = 10 MΩ | | | 1. Leakage Current (μA) | - | 6.5 | 100% |
| | | | | 2. Increase in Voltmeter reading | - | 100% | |
| g | 4.0 | 4.0 | Any convenient value | **Useful Screen Area** Diameter (mm) | 255 | - | 100% |
| | Focus adjusted for optimum. Deflection to cover stated circle centred on centre of screen. | | | | | | |
| h | 4.0 | 4.0 | Near cut-off | Deviation of spot from centre of screen | - | 15 | 100% |
| | No focussing coil energisation. | | | | | | |
| j | 4.0 | 4.0 | Any convenient value | The screen shall not be worse for graininess and uniformity than a standard tube or pattern. | | | |
| k | 4.0 | 4.0 | - | Afterglow (secs.) | Results to be collated | | 10% |
| | Test to be done in Test Set 331, using a close raster of convenient size. | | | | | | |

NOTES

1. For the purpose of tests (c), (d), (e), (g), (h) and (k) the focussing fields required are to be obtained by means of rotating gear unit magnetic, Reference No.10QB/66, with the focussing coil in its mean position.
2. The tube will be mounted with the front edge of the coil assembly mounting set 1.5 mm. from axis $AA^1$. (See drawing on page 4).




VIEW OF UNDERSIDE OF BASE.




ALL DIMENSIONS IN MILLIMETRES.