MINISTRY OF SUPPLY (D.C.D.)

VALVE ELECTRONIC
(VT75A)

# CV1576

Specification MAP/CV1576/Issue 7
Dated 24.7.47.
To be read in conjunction with K1001 ignoring clause 5.2.

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

→ Indicates a change

TYPE OF VALVE : Output tetrode (Pentode characteristic)

CATHODE : Indirectly heated

ENVELOPE : Glass-unmetallised

PROTOTYPE : KT44T

MARKING

See K1001/4 ←

| RATING | | | Note |
|---|---|---|---|
| Heater Voltage | (V) | 4.0 | |
| Heater Current | (A) | 2.0 | |
| Normal Continuous Operation | | | |
| Max. Anode Voltage | (V) | 400 | |
| Max. Screen Voltage | (V) | 300 | |
| Max. Anode Dissipation | (W) | 10.0 | |
| Max. Screen Dissipation | (W) | 3.0 | |
| Mutual Conductance | (mA/V) | 6.25 | A |
| Pulse Working | | | |
| Max. Anode Supply Voltage | (kV) | 1.0 | |
| Max. Screen Supply Voltage | (kV) | 1.0 | |
| Max. Peak Anode Voltage | (kV) | 10.0 | |

NOTE

A. Va = 250, Vg2 = 250, Ia = 85 mA.

BASE

B7

| Pin | Electrode |
|---|---|
| 1 | No connection |
| 2 | Control grid |
| 3 | Beam forming plates |
| 4 | Heater |
| 5 | Heater |
| 6 | Cathode |
| 7 | Screen grid |
| T.C. | Anode |

The beam forming plates may be internally connected to cathode in which case there would be no connection to Pin 3.

TOP CAP

See K1001/AI/D5.1

DIMENSIONS

See K1001/AI/D1.

| Dimension | | Min. | Max. |
|---|---|---|---|
| A | (mm) | 144 | 152 |
| B | (mm) | - | 57 |

To be performed in addition to those applicable in K1001.

| | Test Conditions | | | | | Test | Limits Min. | Limits Max. | No. Tested |
|---|---|---|---|---|---|---|---|---|---|
| Before the following tests are made, the valve is to be run for a period of 5 minutes with Vf = 4.0, Va = Vg2 = 250, Ia = 85 mA. The beam forming plates are to be connected to the cathode during this warming period and during the following tests. | | | | | | | | | |
| | Vf | Va | Vg2 | Vg1 | Ia (mA) | | | | |
| a | 4.0 | 0 | 0 | 0 | 0 | Ih (A) | 1.8 | 2.2 | 100% or S |
| b | 4.0 | 250 | 250 | - | 85 | Reverse Ig1 (μA) | - | 2.5 | 100% |
| c | The valve shall be processed so that it will withstand the following conditions for one minute without flashing occurring (See Note 1) | | | | | | | | |
| | 4.2 | See Note 2 | 800 | Not more positive than -200 | - | | | | 100% See Note 1 |
| d | 4.2 | 500 | 800 | +50 See Note 3 | - | (1) Ia (A)<br>(2) Ig2 (mA) | 1.6<br>To be less than 20% of anode current reading in (d.1) | - | 100%<br>100% |
| e | 4.2 | 500 | 600 | +50 See Note 3 | - | Ig1 | To be positive | | 100% |
| f | 4.2 | 1kV | 1kV | -200 | - | Ia (mA) | - | 1.0 | 100% |
| g | The disposition of the leads in the pinch shall be such that at 1/5th atmosphere, 1 kV. can be applied between pin No.7 and any other pin without breakdown. | | | | | | | | 1% (10) |

NOTES

1. The processing shall be carried out in an approved apparatus and once the conditions specified in clause 'c' have been met, the test conditions need not be repeated for acceptance testing.

2. Pulse of approximately half sine wave shape, 9 kV. (approx.) instantaneous peak, superimposed on 1 kV. D.C. and 2 μsecs. half period to be applied 750 ± 250 times per second.

3. This voltage to be applied as an intermittent pulse of, say, 10 μsecs. duration. Measurements to be made when grid is 50 volts positive.