VALVE ELECTRONIC **CV 2236**

Department of Atomic Energy - A.E.R.E.

| Specification D.At.En./CV2236<br>Issue 2 Dated 18.3.54.<br>To be read in conjunction with K1001<br>ignoring clauses 5.2. | SECURITY<br>Specification: UNCLASSIFIED<br>Valve: UNCLASSIFIED |
|---|---|

→ Indicates a change

**TYPE OF VALVE** - Gas Filled Trigger Tube

**CATHODE** - Cold

**ENVELOPE** - Glass, Unmetallised

**PROTOTYPE** - VX.8107

**MARKING**

See K1001/4

**BASE**

B9A

| RATING | | Note |
|---|---|---|
| Min. Anode to Cathode Breakdown voltage. (V) | 285 | A |
| Max. Mean Cathode Current. (mA) | 2.5 | B.C. |
| Max. Peak Cathode Current. (mA) | 10.0 | C |
| Max. Auxiliary Cathode Current. (μA) | 10.0 | |
| Nominal Maintaining voltage at 2 mA. (V) | 110 | |

**CONNECTIONS**

| Pin | Electrode |
|---|---|
| 1 | Auxiliary Cathode |
| 2 | Anode |
| 3 | Not Connected |
| 4 | Auxiliary Cathode |
| 5 | Trigger |
| 6 | Cathode |
| 7 | Cathode |
| 8 | Cathode |
| 9 | Trigger |

**DIMENSIONS**

See K1001/A1/D4.

| Dimension | Min. | Max. |
|---|---|---|
| A m.m. | - | 44.45 |
| B m.m. | - | 22.4 |

**NOTES**

A. $V_t = 100_V$ , $I_{aux}$ 2 to 4 μA.

B. Averaged over any interval of 15 secs.

C. The cathode current can be divided in any way between trigger and anode.

## TESTS

To be performed in addition to those applicable in K1001

| | Test Conditions | | Test | Limits | | No. | Note |
|---|---|---|---|---|---|---|---|
| | | | | Min. | Max. | Tested | |
| | $V_t$ D.C. | Va D.C. | | | | | |
| a | Adj. | 260 | $V_t$ strike (V) | 141 | 151 | 100% | 2 |
| → b | Adj. | 215 | $\Delta V_t$ strike (V) | -1 | +5 | 100% | 3 |
| → c | Adj. | 275 | $\Delta V_t$ strike (V) | -1 | +1 | 100% | 3 |
| d | Adj. | 285 | $V_t$ extinguish (V) | 100 | - | 100% | 4 |
| e | 100 | 250 | Ia ( µA) | 2.0 | 3.5 | 100% | |
| f | See note 5 | | Output ripple test | | | 100% | 5 |
| g | See note 7 | | Leakage current Trigger to rest ( µA) | | 0.17 | 100% | 7 |
| h | See note 8 | | Leakage current Aux. Cathode to rest ( µA) | | 0.17 | 100% | 8 |

### NOTES

→ 1. Tests (a) to (e) to be conducted in the test circuit No.1 on page 3.
All tests to be conducted with the valve covered by a suitable light tight electrostatically shielded container.

2. Increase $V_t$ from + 100v in a positive direction and note the value at which the valve strikes.

3. The change in $V_t$ from that obtained in test (a) shall not exceed the limits shown.

4. The valve shall oscillate by having a suitable trigger voltage applied. The trigger voltage shall then be reduced until the valve just extinguishes and the value obtained shall be within limits.

→ 5. This test to be conducted in circuit No.2 on page 3. The peak to
→ peak output ripple voltage shall not exceed 5 volts measured with no D.C. load on the output of the circuit.

6. The valve base is to be silicone coated in an approved manner in order to maintain high insulation under conditions of high humidity.

7. In this test +100v is to be applied to the trigger electrode (pins 5 & 9), the remainder of the pins are connected to earth.

8. In this test +100v is to be applied to the auxiliary cathode (pins 1 & 4), the remainder of the pins are connected to earth.

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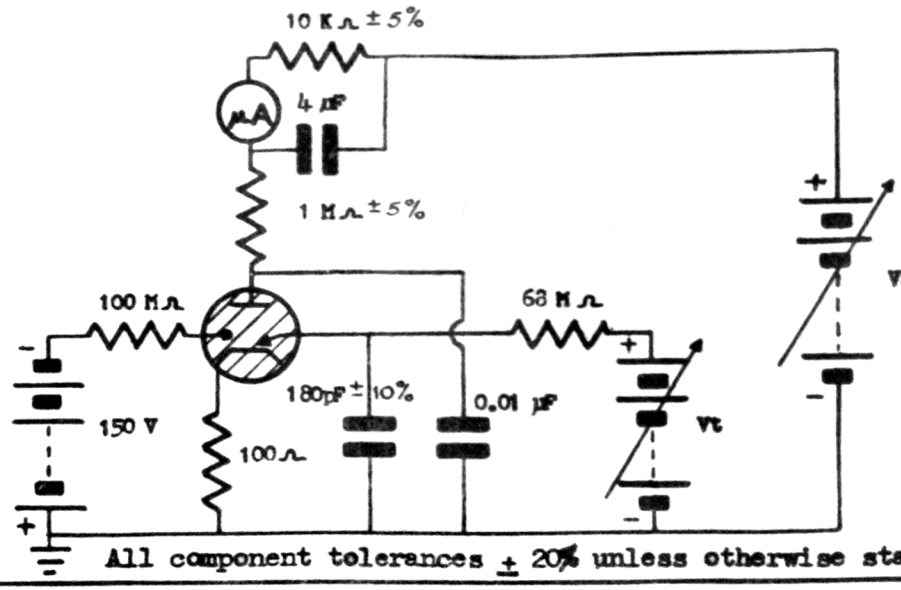
## CIRCUIT No 1

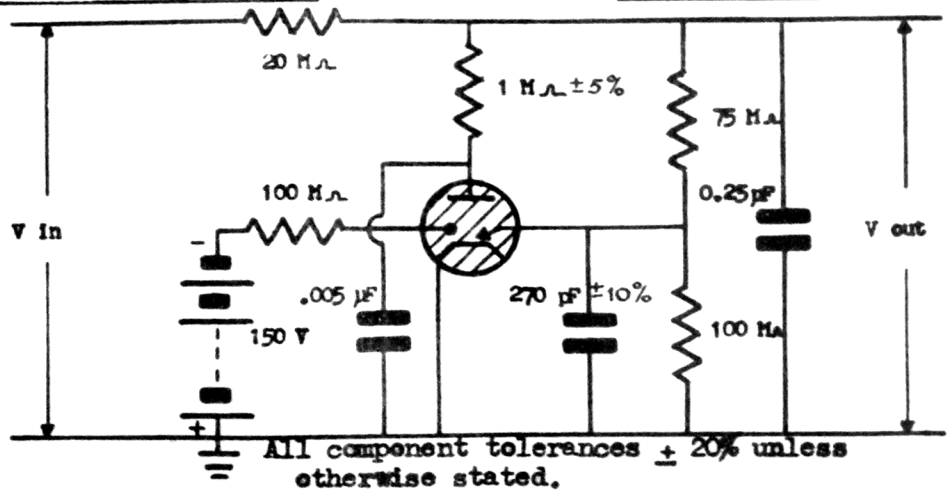



All component tolerances ± 20% unless otherwise stated.

## CIRCUIT No 2

V in should be approx. 500 V.

V out should be approx. 270 V.




All component tolerances ± 20% unless otherwise stated.

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