

UNITED KINGDOM ATOMIC ENERGY AUTHORITY (A.E.R.E.)

VALVE ELECTRONIC

|  |   |
|--|---|
| Specification A.E.R.E./CV.2269<br>Issue 3 Dated 5.4.56.<br>To be read in conjunction with K.1001 | SECURITY<br><u>Specification</u> <u>Valve</u><br>UNCLASSIFIED      UNCLASSIFIED |
|--|---|

→ Indicates a change

|  |                       |                               |  |
|--|-----------------------|-------------------------------|--|
| TYPE OF VALVE - Electrometer Triode<br>CATHODE - Directly Heated<br>ENVELOPE - Glass<br>PROTOTYPE - VX.8049, CV.495  |                       | <u>MARKING</u><br>See K1001/4 |  |
| <u>RATING</u>  |                       | Note                          | <u>BASE</u><br>See Drawing on page 2.                      |
| Heater Voltage (V)   | 1.25                  | A                             | <u>CONNECTIONS AND DIMENSIONS</u><br>See Drawing on page 2 |
| Heater Current (mA)  | 13                    |                               |  |
| Max. Anode Voltage (V)   | 25                    |                               |  |
| Max. Anode Current (uA)  | 250                   |                               |  |
| Mutual Conductance (uA/V)  | 80                    |                               |  |
| Amplification Factor (u)   | 2.2                   |                               |  |
| Max. Negative Grid Current (A)   | $1.0 \times 10^{-12}$ | A                             |  |
| <u>NOTES</u>   |                       |                               |  |
| A. Measured at $V_a = 9V$ $I_a = 100 \mu A$ .  |                       |                               |  |
| B. Anode Voltage must be applied after the heater voltage to avoid excessive drift.  |                       |                               |  |
| C. Do not finger glass envelope within 1/2-in. of leads, and wires are not to be soldered nearer than 1/2-in. to the base to avoid contamination of the glass. |                       |                               |  |

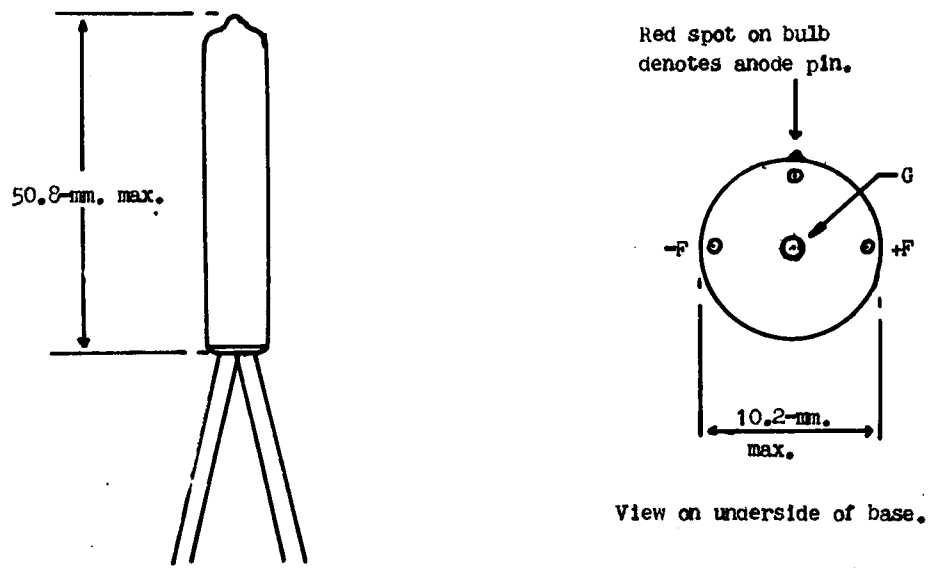
## TESTS

To be performed in addition to those applicable in K1001

| Test Conditions |      |    |        | Test   | Limits |                       | No. Tested | Notes |
|-----------------|------|----|--------|--|--------|-----------------------|------------|-------|
|                 |      |    |        |  | Min.   | Max.                  |            |       |
| A               | VH   | VA | IA(uA) | Ih (mA)  | 11.5   | 14.5                  | 100% or 8  |       |
| B               | 1.25 | 9  | 100    | Vg (V)   | -2.0   | -3.75                 | 100%       |       |
| C               | 1.25 | 9  | 100    | gm (uA/V)                                      | 70     | 90                    | 100%       | 1     |
| D               | 1.25 | 9  | 100    | Ig (A)   | -      | $1.0 \times 10^{-12}$ | 100%       | 2     |
| E               | 1.25 | 9  |        | Ia for Ig = 0.<br>i.e. cross over<br>test (uA) | 160    |                       | 100%       | 2 & 3 |
| F               | 1.25 | 9  | 100    | u  | 1.7    | 2.7                   | 100% or 8  | 1     |

### NOTES

1. Measured by increasing the bias by 0.5 volts negative from the value obtained in clause (B).  
In clause (F), VA is adjusted to maintain constant IA.
2. Measurements should be made in an electrostatically shielded, light tight container.
3. Measured by isolating the grid lead and checking that the equilibrium value of IA is not less than 160 u.



CV.2269/3/11.