

| Specification MAP/CV1045/Issue 6<br>Dated 21.7.50<br>To be read in conjunction with K1001. | <table> <tr> <th data-bbox="659 231 896 277">SECURITY</th><th data-bbox="896 231 1099 277"></th></tr> <tr> <td data-bbox="659 277 896 329">Specification<br/>UNCLASSIFIED</td><td data-bbox="896 277 1099 329">Valve<br/>UNCLASSIFIED</td></tr> </table> | SECURITY |  | Specification<br>UNCLASSIFIED | Valve<br>UNCLASSIFIED |
|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--|-------------------------------|-----------------------|
| SECURITY                                                                                   |                                                                                                                                                                                                                                                          |          |  |                               |                       |
| Specification<br>UNCLASSIFIED                                                              | Valve<br>UNCLASSIFIED                                                                                                                                                                                                                                    |          |  |                               |                       |

→ Indicates a change

|                                       |      |  |                                                 |                                           |                   |      |
|---------------------------------------|------|--|-------------------------------------------------|-------------------------------------------|-------------------|------|
| <u>TYPE OF VALVE</u> - Triode         |      |  | <u>MARKING</u><br><br>See K.1001/4              |                                           |                   |      |
| <u>CATHODE</u> - Directly heated      |      |  |                                                 |                                           |                   |      |
| <u>ENVELOPE</u> - Glass, unmetallised |      |  |                                                 |                                           |                   |      |
| <u>PROTOTYPE</u> - X56                |      |  |                                                 |                                           |                   |      |
| <u>RATING</u>                         |      |  | Note<br><br><br><br><br><br><br><br>A<br>A<br>A | <u>BASE</u><br><br>B4                     |                   |      |
| Filament Voltage (V)                  | 2.0  |  |                                                 | Pin                                       | Electrode         |      |
| Filament Current (A)                  | 0.44 |  |                                                 |                                           |                   |      |
| Max. Anode Voltage (V)                | 300  |  |                                                 |                                           |                   |      |
| Max. Anode Dissipation (W)            | 3.5  |  |                                                 |                                           |                   |      |
| Mutual Conductance (mA/V)             | 2.7  |  |                                                 | 1                                         | Anode             |      |
| Amplification Factor                  | 10.8 |  |                                                 | 2                                         | Grid              |      |
| Anode Impedance ( $\Omega$ )          | 4000 |  |                                                 | 3                                         | Filament negative |      |
| Max. Operating Frequency (Mc/s)       | 20   |  |                                                 | 4                                         | Filament positive |      |
| <u>CAPACITANCES (pF)</u>              |      |  |                                                 | <u>DIMENSIONS</u><br><br>See K.1001/AI/D1 |                   |      |
| Caf                                   | 3.75 |  | Dimension                                       |                                           | Min.              | Max. |
| Cgf                                   | 4.75 |  | A                                               | (mm)                                      | 95                | 110  |
| Cag                                   | 5.3  |  | B                                               | (mm)                                      | -                 | 45   |

NOTES

A: At Va = 200, Vg = -10, Ia = 15.5 mA.

# CV1045

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## TESTS

To be performed in addition to those applicable in K.1001.

| Test Conditions                     |                                                                                                                           |               |                              |        | Test                                                                                                                                               | Limits |      | No. Tested               |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------|------------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------|--------|------|--------------------------|
|                                     |                                                                                                                           |               |                              |        |                                                                                                                                                    | Min.   | Max. |                          |
| a                                   | See K1001/5.2.<br><u>Test Voltages</u><br>250V. between grid and filament.<br>500V. between any other pair of electrodes. |               |                              |        | Insulation (MΩ)                                                                                                                                    | 150    | -    | 100%                     |
| b                                   | Using Adaptor type 35.<br>Ref. No. 10A/13331.<br>See K.1001/AIII                                                          |               |                              |        | <u>CAPACITANCES</u> (pF)                                                                                                                           |        |      | 6<br><br>per<br><br>week |
|                                     | Links to H.P.                                                                                                             | Links to L.P. | Links to E                   |        |                                                                                                                                                    |        |      |                          |
|                                     | 1                                                                                                                         | 3,4           | 2,5,6,7,8,9,10<br>TC1, TC2   |        |                                                                                                                                                    |        |      |                          |
|                                     | 2                                                                                                                         | 3,4           | 1,5,6,7,8,9,10<br>TC1, TC2   |        |                                                                                                                                                    |        |      |                          |
|                                     | 1                                                                                                                         | 2             | 3,4,5,6,7,8,9,10<br>TC1, TC2 |        |                                                                                                                                                    |        |      |                          |
| c                                   | Vf                                                                                                                        | Va            | Vg                           | Ia(mA) | If (A)                                                                                                                                             | 0.42   | 0.46 | 100%<br>or S             |
|                                     | 2.0                                                                                                                       | 0             | 0                            | 0      |                                                                                                                                                    |        |      |                          |
| d                                   | 2.0                                                                                                                       | 200           | -10                          | -      | Ia (mA)                                                                                                                                            | 11     | 20   | 100%                     |
| e                                   | 2.0                                                                                                                       | 200           | -10                          | -      | gm (mA/V)                                                                                                                                          | 2.5    | -    | 100%                     |
| f                                   | 2.0                                                                                                                       | 200-180       | -10                          | -      | Change in Ia (mA)                                                                                                                                  | 4.0    | 5.7  | 100%<br>or S             |
| g                                   | 2.0                                                                                                                       | 300           | -                            | 12     | <u>DISSIPATION</u><br>There shall be no signs of breakdown during test.<br>1. Variation in setting of Vg (V)<br>2. Reverse Ig at end of test. (μA) |        |      | 100%<br><br>100%         |
| Conditions maintained for 2 minutes |                                                                                                                           |               |                              |        |                                                                                                                                                    |        |      |                          |