

MINISTRY OF SUPPLY (S.R.D.E.)

|                                                                          |                                                                  |                              |
|--------------------------------------------------------------------------|------------------------------------------------------------------|------------------------------|
| Specification: MOS/CV26/Issue 4                                          | <u>SECURITY</u>                                                  |                              |
| Dated: 2.5.47                                                            | <u>Specification</u><br><u>Restricted</u><br><i>Unclassified</i> | <u>Valve</u><br>Unclassified |
| To be read in conjunction with K1001,<br>ignoring clauses 5.2, 5.8 & 7.2 |                                                                  |                              |

→ indicates a change

|                                                       |        |      |      |                     |                     |      |
|-------------------------------------------------------|--------|------|------|---------------------|---------------------|------|
| <u>TYPE OF VALVE:-</u> R.F. beam power amplifier      |        |      |      | <u>MARKING.</u>     |                     |      |
| <u>CATHODE:-</u> Directly heated                      |        |      |      | See K1001/4         |                     |      |
| <u>ENVELOPE:-</u> Glass - unmetallised                |        |      |      |                     |                     |      |
| <u>PROTOTYPE:-</u> 813                                |        |      |      |                     |                     |      |
| <u>RATING.</u>                                        |        |      | Note | <u>BASE</u><br>USG7 |                     |      |
| Filament voltage                                      |        | 10.0 |      | Pin                 | Electrode           |      |
| Filament current                                      | (A)    | 5.0  |      | 1                   | Filament            |      |
| Max. Anode voltage                                    |        | 2000 |      | 2                   | No connection       |      |
| Max. Anode dissipation                                | (W)    | 100  |      | 3                   | Screen grid         |      |
| Max. Screen voltage                                   |        | 400  |      | 4                   | Control grid        |      |
| Max. Screen dissipation                               | (W)    | 15.0 |      | 5                   | Beam forming plates |      |
| Max. frequency for above ratings                      | (Mc/s) | 30   |      | 6                   | No connection       |      |
| Anode current                                         | (mA)   | 50   | A    | 7                   | Filament            |      |
| Max. screen current                                   | (mA)   | 3.0  | A    | TC                  | Anode               |      |
| Mutual conductance                                    | (mA/V) | 3.75 | A    | <u>TOP CAP</u>      |                     |      |
| <u>CAPACITANCES (pF)</u>                              |        |      |      | See K1001/AI/D5.5   |                     |      |
| Cag <sub>1</sub> (Max.)                               |        | 0.2  |      | <u>DIMENSIONS</u>   |                     |      |
| Cae                                                   |        | 14.0 |      | See K1001/AI/D1     |                     |      |
| Cg <sub>1e</sub>                                      |        | 16.3 |      |                     |                     |      |
| <u>NOTES</u>                                          |        |      |      | Dimension.          | Min.                | Max. |
| A. Measured at Va=2000, Vg <sub>2</sub> =400, Ia=50mA |        |      |      | A mm                | 178                 | 191  |
|                                                       |        |      |      | B mm                | -                   | 66   |
|                                                       |        |      |      | C mm                | -                   | 55.5 |
|                                                       |        |      |      | F mm                | -                   | 164  |

TESTS

To be performed in addition to those applicable in K1001

|   | Test Conditions |                |                                          |                 |                     | Test                              | Limits |      | No. Tested |
|---|-----------------|----------------|------------------------------------------|-----------------|---------------------|-----------------------------------|--------|------|------------|
|   |                 |                |                                          |                 |                     |                                   | Min.   | Max. |            |
| a | See K1001/AIII  |                |                                          |                 |                     | Capacitance(pF)                   |        |      |            |
|   | Links to H.P.   | Links to L.P.  | Links to E.                              |                 |                     |                                   |        |      |            |
|   | TC <sub>1</sub> | 4              | 1,2,3,5, 6,7,8,9, 10,TC <sub>2</sub>     |                 |                     | (i)Cag <sub>1</sub>               | -      | 0.2  | T.A.       |
|   | 4               | 1,2,3,5, 6,7   | 8,9,10, TC <sub>1</sub> ,TC <sub>2</sub> |                 |                     | (ii)Cg <sub>1e</sub>              | 13.0   | 19.6 | 6          |
|   | TC <sub>1</sub> | 1,2,3,5, 6,7   | 4,8,9,10, TC <sub>2</sub>                |                 |                     | (iii)Cae                          | 10.5   | 17.5 | per week   |
|   | V <sub>f</sub>  | V <sub>a</sub> | V <sub>g2</sub>                          | V <sub>g1</sub> | I <sub>a</sub> (mA) |                                   |        |      |            |
| b | 10.0            | -              | -                                        | -               | -                   | I <sub>f</sub> (A)                | 4.7    | 5.3  | 100% or S  |
| c | 10.0            | 2000           | 400                                      | -               | 50                  | V <sub>g1</sub> (V)               | -33    | -47  | 100%       |
| d | 10.0            | 2000           | 400                                      | -               | 50                  | I <sub>g2</sub> (mA)              | -      | 3.0  | 100%       |
| e | 10.0            | 2000           | 400                                      | Vary            | 50                  | g <sub>m</sub> (mA/V) (Note 2)    | 3.0    | 4.5  | 100%       |
| f | 10.0            | 2000           | 400                                      | -               | 75                  | Rev. I <sub>g</sub> (μA) (Note 3) | -      | 10   | 100%       |
| g | 10.0            | 2000           | 400                                      | -80             | -                   | I <sub>a</sub> (mA) cut off.      | -      | 2.0  | 100%       |
| h | 10.0            | 750            | 750                                      | 750             | -                   | I <sub>e</sub> (A) (Note 4)       | 2.5    | -    | 100%       |

NOTES

1. Tests b to h inclusive measured with A.C. filament heating, centre point earthed.
2. Vary V<sub>g1</sub> ± 2 volts from mean.
3. Measurement made after 3 mins. run.
4. See K1001/AV.