

MINISTRY OF SUPPLY - S.R.D.E.

|                                       |                      |              |
|---------------------------------------|----------------------|--------------|
| Specification MOS/CV2347              | <u>SECURITY</u>      |              |
| Issue 1 Dated 18.1.55.                | <u>Specification</u> | <u>Valve</u> |
| To be read in conjunction with K.1001 | UNCLASSIFIED         | UNCLASSIFIED |

→ Indicates a change

|                                                                         |      |      |                     |                       |       |
|-------------------------------------------------------------------------|------|------|---------------------|-----------------------|-------|
| TYPE OF VALVE - Beam Power Amplifier                                    |      |      | <u>MARKING</u>      |                       |       |
| CATHODE - Indirectly heated                                             |      |      | See K.1001/4.       |                       |       |
| ENVELOPE - Glass - unmetallised                                         |      |      | <u>BASE</u>         |                       |       |
| PROTOTYPE - 5B/258 M.                                                   |      |      | B8G                 |                       |       |
| <u>RATING</u>                                                           |      | Note | <u>CONNECTIONS</u>  |                       |       |
|                                                                         |      |      | Pin                 | Electrode             |       |
| Heater Voltage (V)                                                      | 19.0 | A    | 1                   | Heater                |       |
| Heater Current (A)                                                      | 0.3  |      | 2                   | Cathode & Beam Plates |       |
| Max. Anode Voltage (V)                                                  | 600  |      | 3                   | Grid 2                |       |
| Max. Anode Voltage ( $I_a = 0$ ) (V)                                    | 750  |      | 4                   | Cathode & Beam Plates |       |
| Max. Screen Voltage (V)                                                 | 300  |      | 5                   | Grid 1                |       |
| Max. Anode Current (mA)                                                 | 120  |      | 6                   | Grid 1                |       |
| Max. Anode Dissipation (W)                                              | 25   | B    | 7                   | Cathode & Beam Plates |       |
| Max. Screen Dissipation (W)                                             | 4.5  |      | 8                   | Heater                |       |
| Mutual Conductance (mA/V)                                               | 6    | B    | T.C. Anode          |                       |       |
| Inner $\mu$                                                             | 9    |      |                     |                       |       |
| Max. D.C. Control Grid Voltage (V)                                      | -200 |      | <u>TOP GAP</u>      |                       |       |
| Max. R.F. Voltage between Control and Screen Grids (V)                  | 1000 |      | See K.1001/A1/D5.2. |                       |       |
| Max. Frequency for above ratings (Mc/s)                                 | 60   |      |                     |                       |       |
| <u>CAPACITANCES</u> (pF)                                                |      |      | <u>DIMENSIONS</u>   |                       |       |
| C <sub>ag1</sub>                                                        | 0.1  |      | See K.1001/A1/D7.   |                       |       |
| C <sub>ge</sub>                                                         | 13   |      | Dimensions          | Min.                  | Max.  |
| C <sub>ae</sub>                                                         | 7    |      | A mm                | -                     | 105.6 |
|                                                                         |      |      | B mm                | -                     | 30.15 |
|                                                                         |      |      | L mm                | -                     | 92.1  |
| <u>NOTES</u>                                                            |      |      |                     |                       |       |
| A. Absolute Maximum Values.                                             |      |      |                     |                       |       |
| B. Measured at $V_a = 300V$ ; $V_{g2} = 250V$ ; $I_a = 72 \text{ mA}$ . |      |      |                     |                       |       |

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

| Test Conditions |                  |               |                         |        |         | Test                      | Limits |      | No. Tested | Note |
|-----------------|------------------|---------------|-------------------------|--------|---------|---------------------------|--------|------|------------|------|
|                 |                  |               |                         |        |         |                           | Min    | Max. |            |      |
| a               | See K.1001/A.111 |               |                         |        |         | <u>CAPACITANCES (pF)</u>  |        |      | 6          |      |
|                 | Links to H.P.    | Links to L.P. | Links to E.             |        |         |                           |        |      |            |      |
|                 | TC1              | 5,6           | 1,2,3,4,7,8,9,10<br>TC2 |        |         |                           | -      | 0.2  |            |      |
|                 | TC1              | 1,2,3,4,7,8   | 5,6,9,10, TC2           |        |         |                           | -      | 8.0  |            |      |
|                 | 5,6              | 1,2,3,4,7,8   | 9,10,TC1, TC2           |        |         | (iii) C <sub>ge</sub>     | -      | 14.0 | per week   |      |
|                 | Vh               | Va            | Vg2                     | Vg1    | Ia (mA) |                           |        |      |            |      |
| b               | 19.0             | -             | -                       | -      | -       | Ih (A)                    | 0.27   | 0.33 | 100% or S  |      |
| c               | 19.0             | 500           | 300                     | Adjust | 50      | Reverse Ig1 (Note 1) (μA) | -      | 5.0  | 100%       |      |
| d               | 19.0             | 500           | 300                     | -      | 28      | Vg1 (V)                   | -25    | -40  | 100%       |      |
| e               | 19.0             | 500           | 300                     | -      | 28      | Ig2 (mA)                  | -      | 2.5  | 100%       |      |
| f               | 19.0             | 500           | 300                     | -75    | -       | Ia cut-off (mA)           | -      | 1.0  | 100%       |      |
| g               | 19.0             | 300           | 300                     | 300    | -       | Ie (note 2) (A)           | 3.5    | -    | 100%       |      |

NOTES

- After 2 minutes the reverse current to the control grid shall not exceed the value specified and shall not be rising. *cont'd BDU*
- This test shall be carried out by the application of a 2 μsec. pulse of 300 volts peak amplitude and 50 c/s repetition frequency between the cathode and all other electrodes strapped together.

*(cont'd. If the control grid current is rising after a two-minute test, the test may be continued up to eight minutes, after which time the control grid shall not exceed the specified maximum, and shall not be rising.*

ELECTRONIC VALVE SPECIFICATIONS

SPECIFICATIONS MOS/CV.2347

ISSUE 1 DATED 18.1.55

AMENDMENT NO. 1

Page 2    Note 1

Add to existing wording :-

"If the control grid current is rising after a two-minute test, the test may be continued up to eight minutes, after which time the control grid current shall not exceed the specified maximum, and shall not be rising".

August, 1960  
N.33643

T.V.C. for S.R.D.E.

✓AAS 14/700