

MINISTRY OF SUPPLY - DLRD(A)/RRE

VALVE ELECTRONIC

CV2897

Specification MOS(A)/CV2897
 Issue 1 Dated 30.11.53
 To be read in conjunction with K1001.

| SECURITY | |
|---------------|--------------|
| Specification | Valve |
| UNCLASSIFIED | UNCLASSIFIED |

| | | | | | |
|----------------------------------|--|--|--|---|---------------|
| TYPE OF VALVE - Cathode Ray Tube | | | | <u>MARKING</u> | |
| TYPE OF DEFLECTION - Magnetic | | | | See K1001/4. | |
| TYPE OF FOCUS - Magnetic | | | | <u>BASE</u> | |
| SCREEN - BB1 (See Note A) | | | | International Octal | |
| PROTOTYPE - C211Q/X2 | | | | Metal shell with phenolic insert. See Drawing Note V. | |
| <u>RATING</u> | | | | <u>CONNECTIONS</u> | |
| | | | | Pin | Electrode |
| | | | | 1 | No connection |
| | | | | 2 | Heater |
| | | | | 3 | Pin omitted |
| | | | | 4 | Pin omitted |
| | | | | 5 | Grid |
| | | | | 6 | Pin omitted |
| | | | | 7 | Heater |
| | | | | 8 | Cathode |
| | | | | SC | Anode |
| | | | | <u>SIDE CONTACT</u> | |
| | | | | See K1001/A1/D5.1. | |
| <u>CAPACITANCES</u> (pF) | | | | <u>DIMENSIONS</u> | |
| | | | | See Drawing on Page 4. | |
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CV2897/1/1

To be performed in addition to those applicable in K1001

| Test Conditions | | | | Test | Limits | | No. Tested | Note |
|------------------|---|-----------|----------------------|--|--|----------------------------------|------------|------|
| Vh (V) | Va (kV) | Vg (V) | Ib (μ A) | | Min. | Max. | | |
| See K1001/5A.13. | | | | Capacitances (pF) Grid to all other electrodes Cathode to all other electrodes | 6.0 6.0 | 14.0 10.0 | 6 per week | 3 |
| b | 4.0 | - | - | Ih (A) | 0.8 0.9 | 1.1 | 100% | |
| c | 4.0 | 15.0 | Adjust for cut-off | Vg (V) | -55 | -105 | 100% | |
| d | 4.0 | 15.0 | Adjust | 100 | (i) Change in Vg from value found in Test (c) (V) (ii) Line Width (mm) (iii) Focus Coil Current (mA) (iv) Within the range of Vg from cut-off to that for Ib = 100 μ A, the beam current shall increase continuously. | 25 - 30 40 0.2 42 | 100% | 1 |
| e | 4.0 | 15.0 | -105 | - | Grid Insulation (i) Leakage Current (μ A) (ii) Increase in voltmeter reading | - - 10.5 100% | 100% | |
| f | 4.0 | 15.0 | Any convenient value | - | Useful Screen Area Diameter (mm) | 165 - | 100% | |
| g | 4.0 | 15.0 | Near cut-off | - | Deviation of unfocussed spot from the centre of the screen (mm) | - 5 | 100% | |
| h | | | | | Screen blemishes to be not worse than an agreed standard. | - - | 100% | |
| j | No bubbles or blemishes in the glass face of the tube shall be greater than 0.04 in. dia., and the maximum number of bubbles and blemishes permissible shall be according to the following: With the screen divided into three zones, separated by concentric circles of 2 ins., 4 ins. and 6 ins. diameter, the inner zone bubble density may be up to 2 per sq. in. max., the middle zone 4 per sq. in. max., and outer zone 6 per sq. in. The periphery zone beyond the 6 ins. diameter may include 6 or more per sq. in. | | | | | | 100% | |

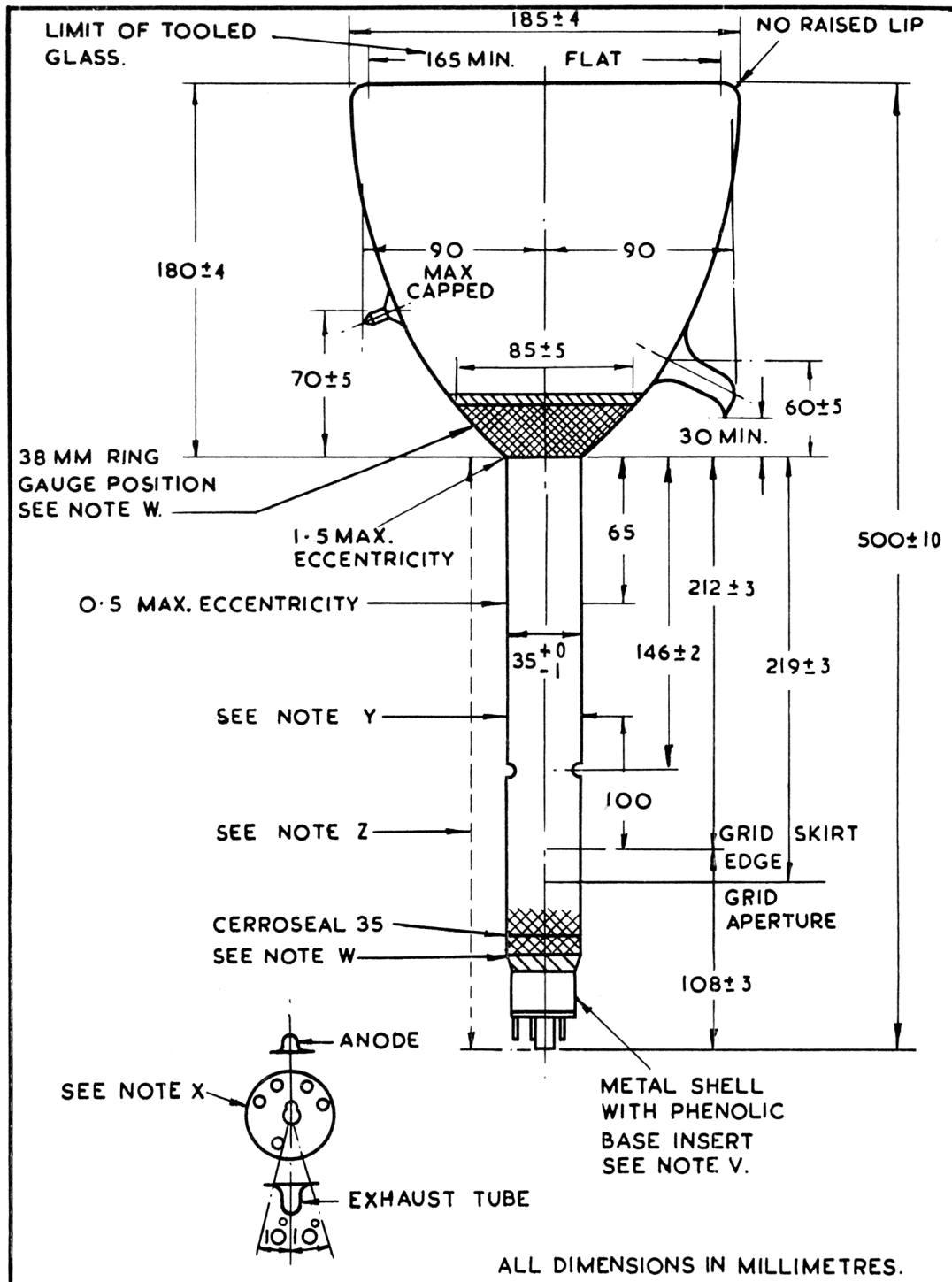
| Test Conditions | | | | Test | Limits | | No. Tested | Note |
|-----------------|---------|--------------------|---------------|---------------|--------|------|------------|------|
| Vh (V) | Va (KV) | Vg (V) | Ib (μ A) | | Min. | Max. | | |
| k 4.0 | 15.0 | Adjust for cut-off | - | Cold Emission | - | - | 100% | 2 |

NOTES

1. The necessary focussing field shall be obtained using a focus coil to Marconi Drawing No. E/RAD/B9756, Assy. A, mounted so that the gap is towards the screen of the tube and at a distance of 130 mm from the 38 mm ring-gauge position.
2. There shall be no spurious excitation of the screen resulting in visual or ultra-violet light output.
3. This test shall be performed after the application of the external Aquadag coating
See Amendment 1 for this note

DRAWING NOTES

- V. Maximum diameter of metal shall not exceed 34 mm. and a ring gauge 35.25 mm. max. internal diameter and of length 50 mm. shall slide freely over the base and neck when the shell is cemented to the neck.
- W. Neck to be coated with Acheson Dag No. 490 and two coats of Bakelite Varnish V130/1, having minimum overlap of 3 mm.
- X. Angle between plane through anode connection and axis of tube and plane through base spigot not to exceed 15° .
- Y. The axis of the tube is defined as the extended axis of that section of the gun neck from the modulator edge 100 mm. towards 38 mm. ring gauge reference line.
- Z. Over this length straightness shall be sufficiently good for a gauge 37 mm. maximum internal diameter and of length 100 mm. to slide freely over neck and base.



Amendment No. 1
to Specification CV2897 - Issue 1 - dated 30.11.53

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Test Conditions

Delete Clauses "h" and "j"

Insert new Clause "h" as follows:-

| Test Conditions | Test | Limits | | No. Tested | Note |
|--|---|--------|------|---------------|------|
| | | Min. | Max. | | |
| Adjust V_g , for any Convenient brightness with a defocussed raster to cover the useful screen area. | <u>Blemishes</u> (Including bubbles, dead spots and colour spots). | | | 100% | 4 |
| | Above 1 mm diameter | | None | | |
| | 0.5-1 mm diameter | | 4 | | |
| | 0.2-0.5 mm diameter | | 10 | | |
| | ignore all blemishes below 0.2 mm dia. Min separation of any two blemishes 20 mm. | | | | |

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Notes

Add note 4 as follows:-

NOTE 4. If two or more blemishes are separated by a distance not greater than the maximum dimension of the largest blemish in the Group, then the Group of blemishes shall be considered as one blemish of dimension equal to the maximum overall dimension of the Group.

T. V. C.

for R. R. E.

ELECTRONIC VALVE SPECIFICATIONS

SPECIFICATION MOS/CV2897
Issue 1 dated 30.11.53.

AMENDMENT No. 2.

Page 2. Amend heater current Minimum Limit from 0.9 to 0.8
Test b

October, 1959.

R.R.E. Malvern.

N. 8354

✓ RRM
18/11/60