MINISTRY OF SUPPLY - D.L.R.D./R.A.E.

VALVE ELECTRONIC **CV2798**

| Specification MOS(A)/CV2798 | SECURITY | |
|---|---|---|
| | Specification | Valve |
| Issue 1 Dated 1.6.57. | UNCLASSIFIED | UNCLASSIFIED |
| To be read in conjunction with B.S.448, B.S.1409 and K.1001 | | |

TYPE OF VALVE - R.F. Power Double Tetrode

CATHODE - Indirectly Heated

ENVELOPE - Glass, unmetallised

PROTOTYPE - QQV03-10

MARKING

See K.1001/4

BASE

B.S. 448/B9A

RATING
(All limiting values are absolute)

| | | | Note |
|---|---|---|---|
| Heater Voltage (parallel) | (V) | 6.3 | |
| Heater Current (parallel) | (A) | 0.84 | |
| Heater Voltage (series) | (V) | 12.6 | |
| Heater Current (series) | (A) | 0.42 | |
| Max. Operating Anode Voltage | (V) | 300 | |
| Max. Operating Screen Voltage | (V) | 200 | |
| Max. Anode Dissipation | (W) | 5 | B,C,D |
| Max. Screen Dissipation | (W) | 1.0 | C |
| Max. Grid Dissipation | (W) | 0.2 | C |
| Max. Negative Grid Voltage | (V) | 150 | |
| Max. D.C. Cathode Current | (mA) | 50 | C |
| Max. Peak Cathode Current | (mA) | 225 | C |
| Max. Intermittent Peak Cathode Current with A.M. | (mA) | 360 | C |
| Max. Heater - Cathode Voltage | (V) | 100 | |
| Max. Operating Frequency | (Mc/s) | 225 | |

CONNECTIONS

| Pin | Electrode | |
|---|---|---|
| 1 | Grid (1) | g'1 |
| 2 | Cathode | k |
| 3 | Grid (2) | g"1 |
| 4 | Heater | h |
| 5 | Heater | h |
| 6 | Anode (1) | a' |
| 7 | Screen (Com) | g2 |
| 8 | Anode (2) | a" |
| 9 | Heater C.T. | h (tap) |

DIMENSIONS

| Dimensions (mm) | Min. | Max. |
|---|---|---|
| A seated height | - | 71.5 |
| C diameter | - | 22.2 |
| D overall length | - | 78.5 |

CAPACITANCES (pF)

| | | |
|---|---|---|
| C in | 6.2 | C,D |
| C out | 2.7 | C,D |
| C in (both sections in push pull) | 5.0 | A,D |
| C out (both sections in push pull) | 1.5 | A,D |

MOUNTING POSITION

Any, but when mounted horizontally pins 2 and 7 should be in a Vertical plane.

NOTES

A. The valve is internally neutralized for push-pull operation

B. Cooling is by radiation and convection; maximum bulb temperature = 225°C; maximum temperature of pins = 120°C.

C. Per section.

D. Without screen.

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## TESTS

To be performed in addition to those applicable in K1001

| | Test Conditions | | | | | Tests | Limits Min. | Limits Max. | No. Tested | Note |
|---|---|---|---|---|---|---|---|---|---|---|
| a | Measured on a 1 Mc/s bridge with valve mounted in a fully shielded holder. Valve not screened | | | | | CAPACITANCES (pF) | | | | |
| | | | | | | C in | 5.7 | 6.7 | 6 per week | 1 |
| | | | | | | C out | 2.35 | 3.6 | | |
| | | | | | | Ca, gl | - | 0.08 | | |
| | | | | | | Ca', g"1 | - | 0.08 | 6 per week | |
| | | | | | | Ca", g'1 | - | 0.08 | | |
| | | | | | | Cgl', g"1 | 1.8 | 2.2 | | |
| | | | | | | Ca', a" | 0.08 | 0.12 | | |
| b | Vh (V) | Va (V) | Vg2 (V) | Vgl (V) | Ia (mA) | | | | | |
| | 6.3 | 0 | 0 | 0 | 0 | Heater Current (A) | 0.78 | 0.88 | 100% or S | |
| c | 6.3 | 150 | 150 | Adjust | 40 | Reverse Grid Current (μA) | - | 1.3 | 100% | 1,2 |
| d | 6.3 | 200 | 200 | -45 | - | Anode Current (1) (mA) | - | 1.5 | 100% | 3 |
| e | 6.3 | 200 | 200 | -15 | - | Anode Current (2) (mA) | 13 | 62 | 100% | 3 |
| f | 6.3 | 200 | 200 | Adjust | 30 | Screen Current (mA) | - | 5.0 | 100% | 3 |
| g | | See K1001/5.3 except ± 100V shall be applied between heater and cathode. | | | | Heater Cathode Leakage (μA) | - | 40 | 100% | |
| h | 6.3 | 300 | 200 | Adjust | 75 | Power out at 150 Mc/s (W) | 10 | - | 20 per week | 4 |

### NOTES

1. Per section
2. Read after 3 minutes operation
3. Test each section separately, the other section being biassed to -100V negative.
4. Rgl variable between 5 K.ohms and 55 K.ohms. A typical circuit diagram is shown on page 3.

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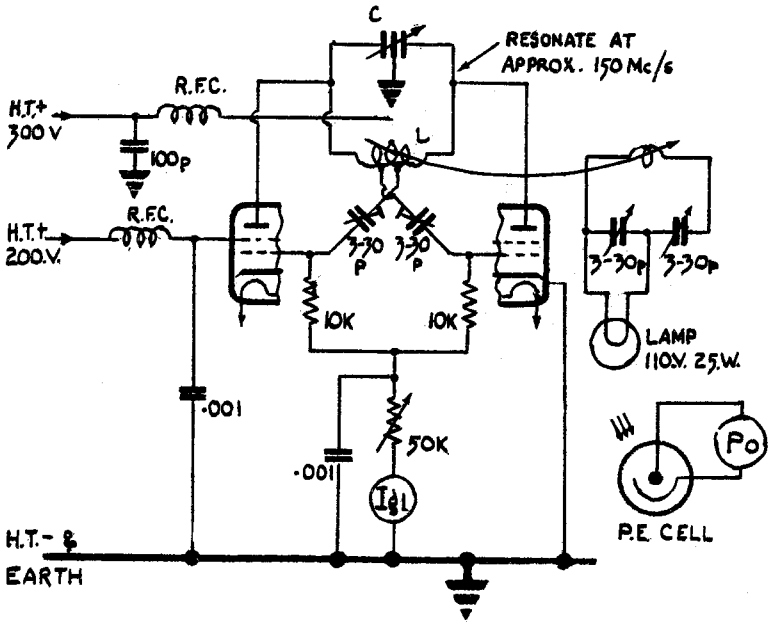
## POWER OUTPUT TEST CIRCUIT.




NOTE. TEST CONDITIONS ARE :-

$I_a$ = 75mA, $I_{g2}$ = 3-4mA. AVERAGE

$I_{g1}$ = 2mA AVERAGE, $V_f$ = 6·3.

Po = 10 WATTS MINIMUM.

$R_{g1}$ = 5-50K.