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| Specification MAP/CV186/Issue 2. Dated 3.1.49 To be read in conjunction with K1001 ignoring clauses 5.2, 5.3, 5.8 | <u>SECURITY</u> | |
| | <u>Specification</u> RESTRICTED | <u>Valve</u> UNCLASSIFIED |

→ Indicates change

| | | |
|--|-----------------------|---|
| <u>TYPE OF VALVE</u> - Magnetron <u>CATHODE</u> - Indirectly heated <u>ENVELOPE</u> - Copper <u>PROTOTYPE</u> - | Note | <u>MARKING</u> See K1001/4 <hr/> <u>PACKING</u> See K1005 |
| <u>RATING</u> Heater voltage V 6.0 Heater current A 1.25 Nominal operating frequency Mc/s 3320 Maximum Anode Dissipation W 150 Typical operating conditions Peak Anode Voltage (Approx.) kV 14 Peak Anode Current A 9.5 Field Strength gauss 1350 Peak Power Output kV 35 | A A A A A | <u>BASE</u> None <hr/> <u>DIMENSIONS & CONNECTIONS</u> See drawing on Page 4 |

Note A. When operating under these conditions, the magnetron must be air cooled such that the temperature of the block does not exceed 140°C.

To be carried out in addition to those applicable in K1001.

| Clause | Test Conditions | | | Test | Limits | | No. Tested | Note |
|---|---|-----|-------------------------------|--|--------|------|------------|------|
| | Field Strength (gauss) | Vh | Peak Ia(A) | | Min. | Max. | | |
| For the following tests the Magnetron Block shall be maintained at a temperature of $100^{\circ} \pm 20^{\circ}\text{C}$ by means of air cooling. | | | | | | | | |
| a | Cold Impedance Test. This test shall be carried out immediately following the process of setting up to the correct frequency and in an approved apparatus. The crystal probe shall then be set in a position specified for the apparatus. Then with the oscillator adjusted to 3390 Mc/s. the deflection on the meter shall not be greater than 1% of that obtained at resonance. | | | | | | | 2 |
| b | 0 | 6.0 | 0 | Ih A | 1.0 | 1.5 | 100% | |
| c | 1350 ± 25 | 6.0 | 10 | Peak Va kV | 12.0 | 14.0 | 100% | 1 |
| d | 1350 ± 25 | 6.0 | 10 | Output frequency Mc/s | 3305 | 3335 | 100% | 1 |
| e | 1350 ± 25 | 6.0 | varied over range 6.0 to 12.0 | The output frequency shall vary smoothly with input current and shall show no discontinuity over this range of input current | | | 100% | 1 |
| f | 1350 ± 25 | 6.0 | 10 | Peak output Power kW | 25 | - | 100% | 1 |
| g | 1350 ± 25 | 6.0 | 10 | Limits will be set on the position of the matching plug for maximum power output according to the test apparatus | | | 100% | |

NOTES

1. Test to be carried out in approved equipment. The matching shall be adjusted for Maximum power output. Modulation conditions shall be:- repetition frequency 2500 per sec., pulse length 1 μ sec. or other approved conditions.
2. The coupling loop in this valve must be shaped on a jig to ensure uniformity. Test clause 'a' will be carried out as a Type Approval test, and if it is satisfactory this is proof of the suitability of the jig.

- NOTES FOR USERS
1. THE DIA. OF THE CIRCUIT TUBE OVER THIS LENGTH MUST NOT BE LESS THAN 0.667"
 2. THE MINIMUM RADIATOR HOUSING WIDTH MUST BE .625"
 3. THE NORMAL MAGNET AIR GAP IS 1.496" ± 0.004"

