VALVE ELECTRONIC **CV186**

Specification MAP/CV186/Issue 2. Dated 3.1.49 To be read in conjunction with K1001 ignoring clauses 5.2, 5.3, 5.8	SECURITY Specification: ~~RESTRICTED~~ Unclassified Valve: UNCLASSIFIED

→ Indicates change

TYPE OF VALVE - Magnetron CATHODE - Indirectly heated ENVELOPE - Copper PROTOTYPE -			Note
RATING			
Heater voltage	V	6.0	
Heater current	A	1.25	
Nominal operating frequency	Mc/s	3320	
Maximum Anode Dissipation	W	150	A
Typical operating conditions			
Peak Anode Voltage (Approx.)	kV	14	A
Peak Anode Current	A	9.5	A
Field Strength	gauss	1350	
Peak Power Output	kV	35	A

MARKING
See K1001/4

PACKING
See K1005

BASE
None

DIMENSIONS & CONNECTIONS
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° ± 20°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 oscilator 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"