MINISTRY OF SUPPLY (D.C.D.) VALVE ELECTRONIC **CV38**

Specification MAP/CV38/Issue 4 Dated 14.1.49 To be read in conjunction with K1001, ignoring clauses:- 5.2, 5.3, 5.8.	SECURITY Specification: ~~RESTRICTED~~ Unclassified Valve: UNCLASSIFIED

→ Indicates a change

TYPE OF VALVE - Magnetron
CATHODE - Indirectly heated
ENVELOPE - Copper
PROTOTYPE - E.1198

MARKING
See K1001/4.

PACKING
See K1005.

BASE
None

RATING			Note
Heater Voltage	(V)	6.0	
Heater Current	(A)	1.2	
Nom. Operating Frequency	(Mc/s)	3297	
Max. Anode Dissipation	(W)	150	A
TYPICAL OPERATING CONDITIONS			
Peak Anode Voltage (approx.)	(kV)	8.0	A
Peak Anode Current	(A)	7.0	A
Field Strength	(gauss)	1050	
Peak Power Output	(kW)	7.0	A

DIMENSIONS AND CONNECTIONS
See drawing on page 3.

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 performed in addition to those applicable in K1001

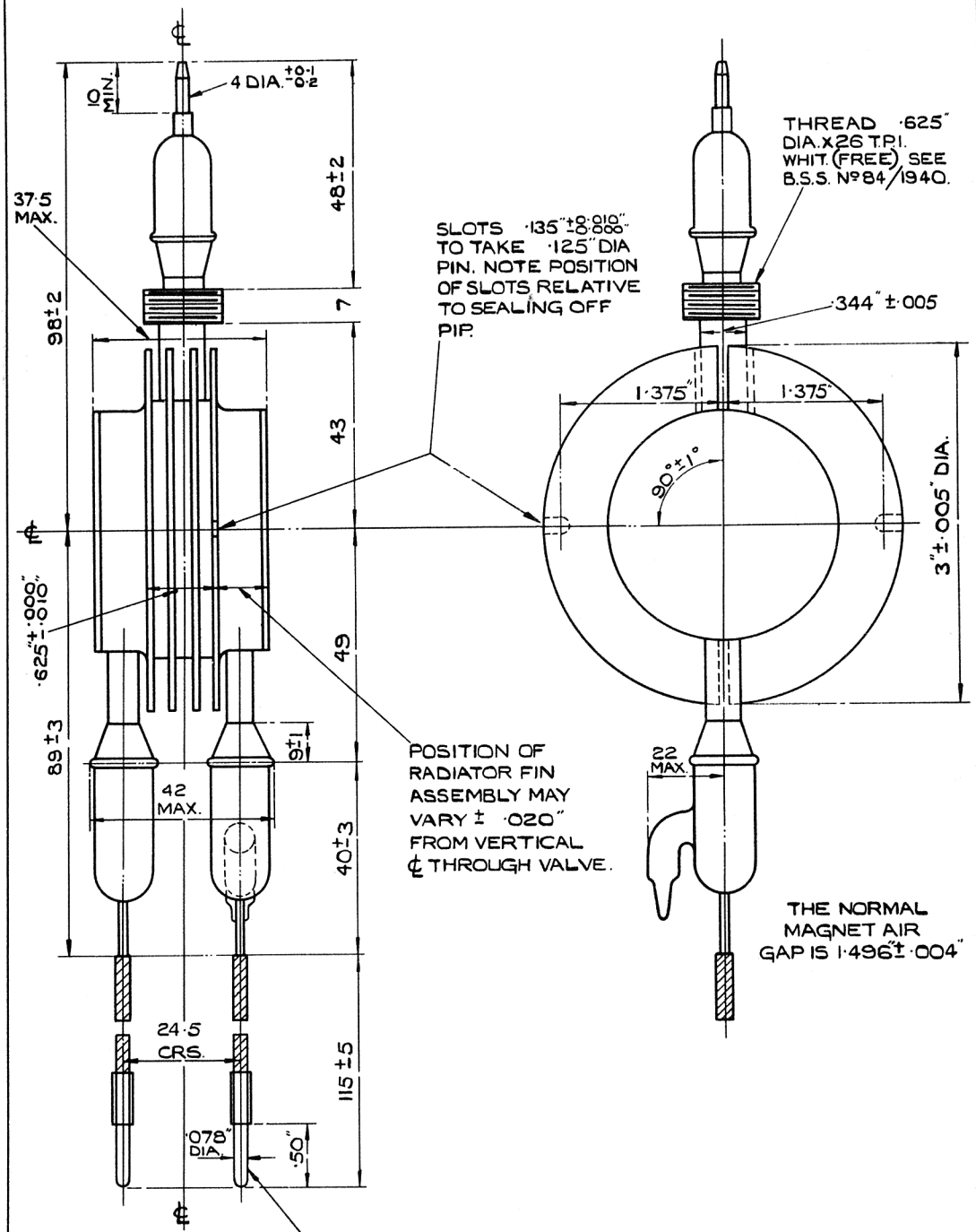
	Test Conditions: Field Strength (Gauss)	Vh	Peak Ia(A)	Test	Limits: Min.	Limits: Max.	No. Tested.	Note
For the following tests the magnetron block shall be maintained at a temperature of 100° ± 20°C. by means of air cooling.								
a	0	6.0	-	Ih (A)	1.0	1.5	100%	
b	1050	6.0	7.0	Peak Va (kV)	7.0	10.0	100%	1
c	1050	6.0	7.0	Output Frequency (Mc/s)	3261	3333	100%	1
d	1050	6.0	Varied over range 5.0 to 9.0	The output frequency shall vary smoothly with input current, and shall show no discontinuity over this range of input current.			100%	1
e	1050	6.0	7.0	Peak output power (kW)	5.0	-	100%	1
f	The valve shall function satisfactorily in an equipment type T.3130.						100%	2

NOTES

1 - Test to be carried out under approved conditions
Modulation conditions shall be:-
Repetition frequency 500 per sec.
Pulse length 0.75 μ sec.

2 - If, in tests (b), (c), (d) and (e), the test conditions simulate operation in an equipment type T.3130, then test (f) need not be carried out.

CV38


4 DIA. +0·1 −0·2
10 MIN.
48±2
7
43
49
40±3
115±5
98±2
89±3
37·5 MAX.
·625" ±·000" −·010"
9±1
42 MAX.
24·5 CRS.
·078" DIA.
·50"
SLOTS ·135" +0·010" −0·000" TO TAKE ·125" DIA PIN. NOTE POSITION OF SLOTS RELATIVE TO SEALING OFF PIP.
POSITION OF RADIATOR FIN ASSEMBLY MAY VARY ± ·020" FROM VERTICAL ℄ THROUGH VALVE.
THREAD ·625" DIA. x 26 T.P.I. WHIT. (FREE) SEE B.S.S. No 84/1940.
·344" ±·005
1·375"
1·375"
90° ±1°
3" ±·005" DIA.
22 MAX.
THE NORMAL MAGNET AIR GAP IS 1·496" ±·004"
CATHODE CONNECTED TO THIS LEAD.
ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED.