MINISTRY OF SUPPLY (D.C.D.)

VALVE ELECTRONIC **CV 46**

Specification MAP/CV46/Issue 4.
Dated 14.1.49
To be read in conjunction with
K1001, ignoring clauses:-
5.2, 5.8, 7.2.

SECURITY	
Specification	Valve
~~RESTRICTED~~ Unclassified	UNCLASSIFIED

→ Indicates a change

TYPE OF VALVE - Triode

CATHODE - Directly heated thoriated tungsten

ENVELOPE - Metal - glass construction.

MARKING
See K1001/4

PACKING
See K1005

BASE
None

DIMENSIONS
See Page 3.

RATING			Note
Filament Voltage	(V)	8.25	
Filament Current	(A)	7.0	
Maximum Anode Voltage	(kV)	2.0	
Maximum Anode Dissipation	(W)	150	B
Amplification factor		15.5	A
Anode Impedance	(Ω)	5000	A
Max. Operation Frequency	(Mc/s)	100	

CAPACITANCES		
Anode to grid	(pF)	3.75
Grid to filament	(pF)	2.2
Anode to filament	(pF)	0.9

NOTES

A: At V_a = 1.0 kV, I_a = 100mA

B: Forced air cooling must be provided so that the temperature of the anode radiator does not exceed 140°C measured at the junction of the anode and the cooling fins. A suitable air flow is approximately 15 cu.ft. per minute with a pressure drop across the valve of the order of 1½ inches of water. Forced air cooling must be applied before the filament is switched on.

C: The valve must be mounted vertically.

D: The attention of equipment designers is drawn to the fragility of the valve seals, and consequently special care should be exercised in the mechanical design of associated circuits.

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TESTS

To be performed in addition to those applicable in K1001.

	Test Conditions				Test	Limits Min.	Limits Max.	No. Tested
	For the following tests forced air cooling shall be provided so that the temperature of the anode radiator shall not exceed 140°C. measured at the junction of the anode and the cooling fins. A suitable air flow is approx. 15 cu.ft. per minute with a pressure drop across the valve of the order of 1½ inches of water.							
a	Vf 8.25 A.C.	Va 0	Vg 0	Ia(mA) -	If (A)	6.4	7.6	100%
b	8.25 A.C. Maintained for 5 minutes.	1500	-	100	Reverse Ig (μA) The last 3 one minute readings to be steady.	-	10	100%
c	8.25 A.C.	1000	-	100	-Vg1 (V)	19	29	100%
d	8.25 A.C.	700	-	100	Vg change from value obtained in test (c) (V)	14	22	1% (1)
e	8.25 A.C.	Strapped. Peak applied voltage 1500V. Test to be performed by an approved method.		-	Ie (A)	5	-	100%
f	8.25 A.C.	-	-104	4	Va (V)	1325	1700	100%
g	To be measured using Adaptor Type 100. Ref. 10A/17529. See K1001/AIII				CAPACITANCES			
	Links to H.P.	Links to L.P.	Links to E					
	2	3	1,4,5,6,7,8,9,10 TC1, TC2		Cag (pF)	3.0	4.5	6 per week
	3	1	2,4,5,6,7,8,9,10 TC1, TC2		Cgf (pF)	1.5	2.9	

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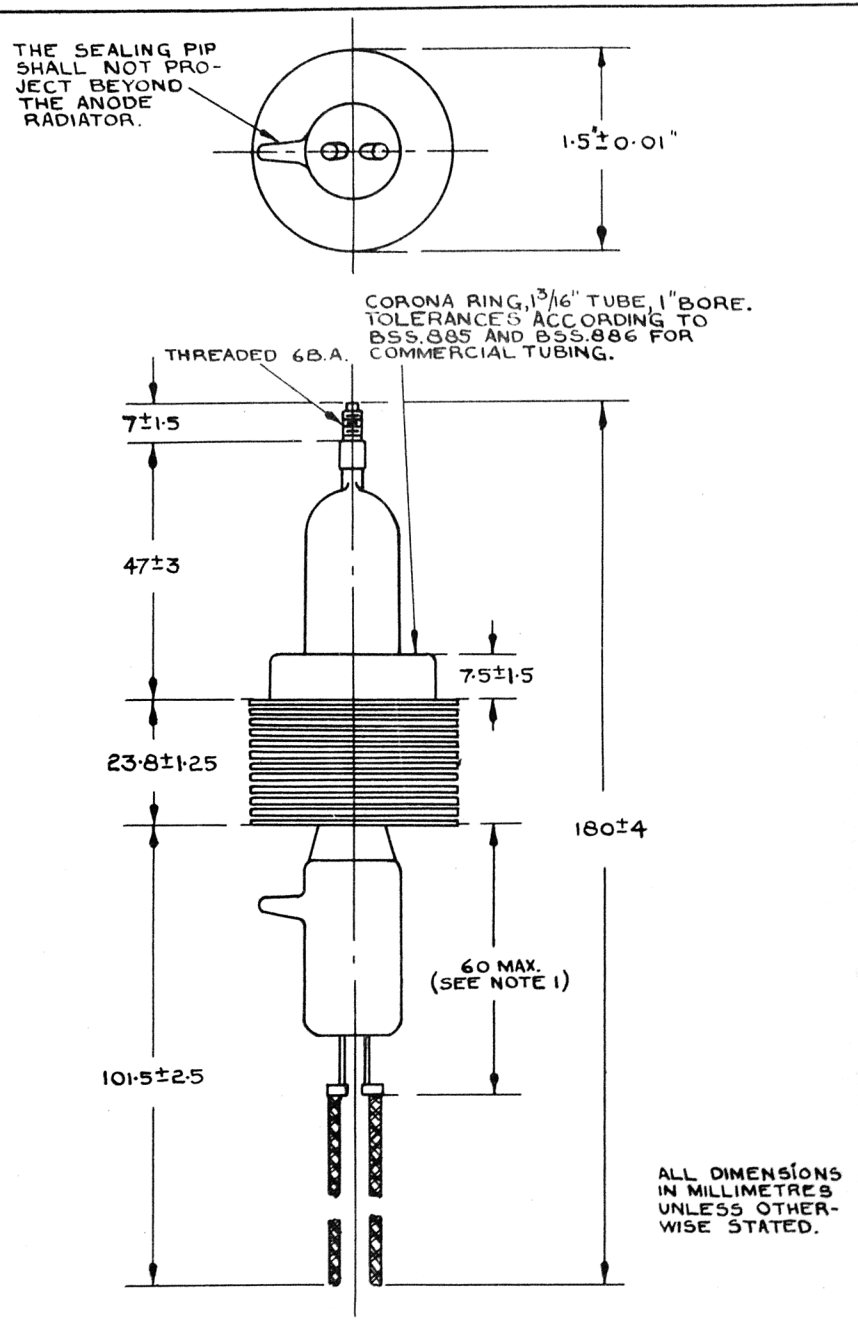

NOTE 1. THIS DIMENSION SHALL INCLUDE ANY RIGIDITY OF THE FILAMENT LEADS DUE TO THE SPREAD OF SOLDER FROM THE CONNECTIONS WITH THE TUNGSTEN LEAD OUT WIRES.