VALVE ELECTRONIC

CV 2324

GENERAL POST OFFICE: E-IN-C (S)

Specification: G.P.O./CV.2324	SECURITY	
	Specification	Valve
Dated: Issue 2 1st February 1960		
To be read in conjunction with K 1001	Unclassified	Unclassified

→ indicates a change

TYPE OF VALVE: Air Blast cooled Tetrode

CATHODE: Directly heated. Thoriated Tungsten filament

ENVELOPE: Copper/glass. Nickel/Iron/ Cobalt/alloy.

PROTOTYPE: CR.176

MARKING

See K 1001/4

Additional markings required (See Note B)

Serial No.....

Filament Volts 5.0

RATING			NOTE
Filament Voltage	(V)	5.0	
Filament Current (nominal)	(A)	64.0	
Max. direct anode voltage	(kV)	7.5	
Max. anode dissipation	(kW)	3.5	
Max. screen grid dissipation	(W)	200	
Max. control grid dissipation	(W)	25	
→ Mutual conductance	(mA/V)	8.25	A.
Inner amplification factor		4.4	A.
Peak usable emission	(A)	10.0	
Max. frequency for above ratings	(Mc/s)	30.0	
Air flow 350 c/f/minute at a pressure drop of 3 inches water gauge			

BASE

See drawing, Page 3

CONNEXIONS

See drawing, page 3.

DIMENSIONS

See drawing, page 3

CAPACITANCE. (pF)		NOTE
C (input)	40	
C (output)	14	
C a g	0.4	

PACKAGING

See K 1005

NOTE

A. Measured at Va = 3.0 kV, Vg2 = 1500 V, Ia = 1.0 A.

B. It is not essential that the additional markings shall appear within the frame.

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TESTS

To be performed in addition to those applicable in K 1001

	TEST CONDITIONS					TEST	LIMITS MIN.	LIMITS MAX.	NO. TESTED	NOTE
a	See K 1001/A/III					CAPACITANCES (pF) Ca - all. Cg - all.	 11 38	 15 47	 10%	
b	Vf (V)	Vg1 (V)	Vg2 (V)	Va (kv)	Ia (A)	If (A)	59	71	100%	2
	5.0	-	-	-	-					
c	5.0	3000	3000	3.0		Ie (A)	18	-	100%	3.2
d	5.0	Adjust	1500	4.0	1.0	Ig2 (mA) Rev. Ig1 (μA) Vg1 (V)	- -170	30 32 -260	100% 100% 100%	2 1.2 2
e	5.0	Adjust	1500	4.0	0.05	Rev. Ig1 (μA)	-	20	100%	2
						Vg1 (V)	-	-500	100%	2
→ f	5.0	Read	1500	3.0	0.75	gm (mA/V)	7.5	9.0	100%	2
		Read	1500	3.0	1.25					
g		Read	1000	3.0	1.0	Inner μ				
		Read	1500	3.0	1.0		3.7	5.1	100%	2
→ h	5.0			6.0		OSCILLATION TEST (1) Ia (A)	1.2	1.6	100%	4.2
j	Repeat tests of Ig1 in tests d and e. Difference in measurements to be < 5 μA. Repeat test c.									
k	5.0			6.0		OSCILLATION TEST (2)			T.A.	5

NOTES

1. The Ig1 test in test d shall be continued for 10 minutes and the value of Ig1 shall not be rising at the end of the test period.
2. Tests are to be carried out with the filament heated by 50 c.p.s. current, and all circuit returns shall be made to the centre tap on the filament transformer secondary. Air flow of 350 c/f/minute through radiator.
3. Peak emission to be obtained by pulse method as outlined in K 1001 AV, or by other apparatus approved by the TYPE APPROVAL authority.
4. → Oscillation frequency = 0.5 Mc/s. Vg2 = 0.75/1.25 kV, Ig1 = 40/80mA, Rg = 6000 ohms. Oscillate for 20 minutes
5. → The Oscillation Test (2) shall be conducted at an oscillation frequency of 30 Mc/s in a circuit approved by the TYPE APPROVAL authority.

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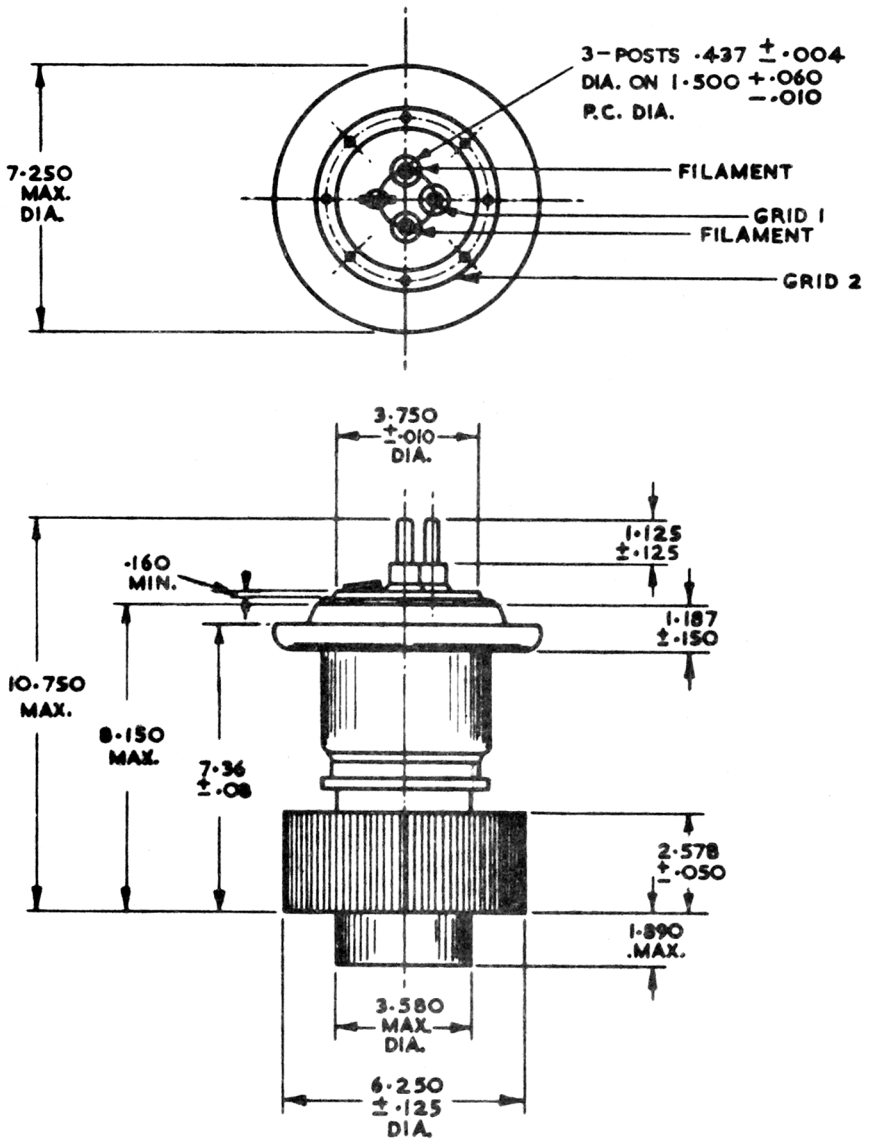
DIMENSIONAL DIAGRAM



NOTE :– THE FINISH OF THE VALVE TO MEET THE REQUIREMENTS OF THE TYPE APPROVAL AUTHORITY

ALL DIMENSIONS IN INCHES