MINISTRY OF SUPPLY (D.C.D.)

VALVE ELECTRONIC

CV1583

Specification MAP/CV1583/Issue 3 Dated 23-7-50 To be read in conjunction with K1001, excluding clauses 5.2, 5.8.	SECURITY Specification: UNCLASSIFIED Valve: UNCLASSIFIED

→ Indicates a change

TYPE OF VALVE - Transmitting Tetrode

CATHODE - Directly heated thoriated tungsten

ENVELOPE - Metal-Glass Construction

COMMERCIAL PROTOTYPE - E.1024

MARKING

See K.1001/4 ←

DIMENSIONS AND CONNECTIONS

See drawing on Page 4.

RATING		Note
Filament Voltage (V)	10.0	A
Filament Current (A)	70.0	A
Max Anode Dissipation (W)	500	B
Max operating frequency (Mc/s)	60	

CAPACITANCES (μμF)	
Anode to all other electrodes	20
Grid to all other electrodes	35
Anode to grid (max)	2

NOTES

A. Adequate cooling of the filaments leads and adjacent re-entrant portion of the envelope, shall be provided by at least 10 cu.ft. of air per minute with a pressure drop of the order of 2 inches of water.

B. For this dissipation forced air cooling must be provided by at least 85 cu.ft. of air per minute with a pressure drop across the valve of the order of 2 inches of water.

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TESTS

To be performed in addition to those applicable in K1001.

	Test Conditions					Test	Limits Min.	Limits Max.	No. Tested
Forced air cooling for the filament leads and the anode shall be provided by not more than 10 cu. ft. and 85 cu. ft. of air per minute, respectively with a pressure drop across the valve of the order of 2 inches of water.									
a	Vf	Va	Vg2	Vg1	Ia(mA)	HOT FLASH PROCESS			
	10.0	Raised slowly to 27.5 kV. and maintained until flashing ceases See Note 1	Strapped		A trace	Anode voltage to be maintained at 27.5 kV. for a period of 5 mins. without further flashing. See Note 1.			100%
b	10.0	0	0	0	-	If (A)	66.5	73.5	100%
c	10.0	1.2kV.	1.2kV.	-	420	Reverse Igl (mA)	-	1.0	100%
d	10.0	1.2kV.	1.2kV.	-	420	Vgl (V)	-70.0	-105	100%
e	10.0	1.0kV. Reduced to 700	1.0kV. Reduced to 700	-	Maintained at 200	Vgl change (V)	48	64	100%
f	-	300	300	300	Total cathode current 0.5A	Vf (V)	-	6.0	100%
g	10.0	150	150	150	-	Total Ic (A)	0.9	1.5	100%
h	10.0	Strapped. Pulse of peak value 6kV., half sine wave shape, duration 2μsecs. and recurrence frequency 50 c.p.s. to be applied			-	Ic (A)	70	-	5% (4)
j	See K1001/AIII					CAPACITANCES (pF)			
						Ca-all	16.0	24.0	2%
						Cg-all	26.3	43.7	(1)
						Cag	-	2.0	
k	Life A minimum average life of 500 hours is expected, life failure being considered to occur when the emission of the valve has fallen below 0.5 amp. at Vf. = 6.6 volts, other conditions as in test clause (f).								

TESTS

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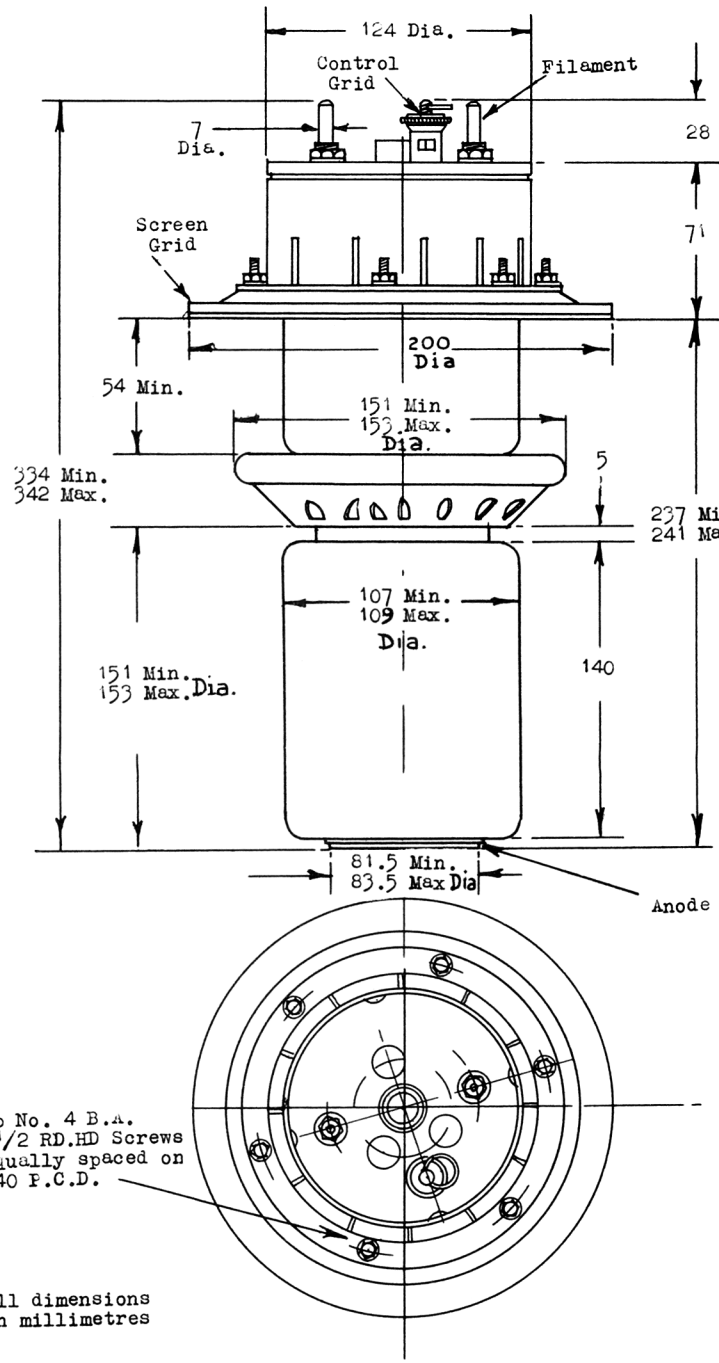
To be performed in addition to those applicable in K1001

	Test Conditions	Test	Limits Min.	Limits Max.	No. Tested
	NOTES				
1.	Once the conditions specified in test clause (b) have been met the test conditions need not be repeated for acceptance testing. For this hot flash process there shall be a 300Ω resistor in series with the applied volts and a capacitance of 0.25μF. in parallel with the supply volts on the supply side of the resistor.				


124 Dia.
Control Grid
Filament
7 Dia.
28
Screen Grid
71
200 Dia
54 Min.
151 Min.
153 Max.
Dia.
5
334 Min.
342 Max.
237 Min.
241 Max.
107 Min.
109 Max.
Dia.
151 Min.
153 Max. Dia.
140
81.5 Min.
83.5 Max Dia
Anode
6 No. 4 B.A. x 1/2 RD.HD Screws equally spaced on 140 P.C.D.
All dimensions in millimetres