

Specification MAP/CV288/Issue 3

Dated 15.7.47.

To be read in conjunction with K.1001,
ignoring clause 5.3.SECURITYSpecificationValve~~Secret~~
Unclassified~~Secret~~
Unclassified

→ Indicates a change

TYPE OF VALVE: Disc seal TriodeCATHODE: Indirectly HeatedENVELOPE: Copper-glassPROTOTYPE: VX.3034MARKING

See K1001/4

RATING

Note

Heater Voltage	(V)	15.0	
Heater Current	(A)	3.0	
Max. D.C. Anode Voltage	(kV)	1.0	
Max. Pulse Anode Voltage	(kV)	6.0	
Max. Anode Dissipation	(W)	250	A
Min. Peak Anode Current	(A)	60	
Amplification Factor		40	B
Mutual Conductance	(mA/V)	30	B
Efficiency :			
(1) at 500 Mc/s with 7db gain		60%	
(2) at 1000 Mc/s with 3 db gain		30%	

CAPACITANCES (pF)

C _{ag}	16.5
C _{gc}	22.0
C _{ac}	0.4

DIMENSIONS AND CONNECTIONS

See drawing on page 3.

NOTES

- A. For this dissipation forced air cooling shall be provided by not less than 20 cu. ft. of air per min. through the anode radiator with a pressure drop of the order of 2 inches of water and approx. 5 cu. ft. of air per min. through the grid diffuser. The temperature on the outside of the anode flange and on the copper part of grid disc should not exceed 100°C. These conditions apply for ambient temperatures up to 30°C.
- B. For $V_a = 1.0$ kV., $I_a = 250$ mA.

To be performed in addition to those applicable in K.1001

	Test Conditions				Test	Limits		No. Tested	Notes
	Vf	Vg	Va	Ia(mA)		Min.	Max.		
a	15.0	-500	4.0 kV	-	Conditions to be maintained for a period of one minute without flashing.			100%	1
b	15.0	0	0	0		If (A)	2.7	3.3	100%
c	15.0	adjust	1000	250	Vg (V)	-10	-20	100%	
d	15.0	adjust	1000	250	Reverse Ig (μ A)	-	20	100%	
e	15.0	adjust	800	250	Vg change from value found in test (c) (V)	3.3	6.6	100%	
f	15.0	adjust	1000	250	gm (mA/V)	20	-	100%	
		Peak grid swing ± 1 V. max.							
g	15.0	adjust	1000	50	Vg (V)	-	-40	100%	
h	15.0	Anode and grid strapped. Peak applied voltage = 750, $T_p = 2 \mu$ sec., pulse shape sinusoidal. prf = 50%			Peak emission (A)	60	-	100%	
j	Measurement to be made at a frequency of 1.0 Mc/s.				Capacitances (pF)				
					Cag	15.0	18.0	6	
					Cog	19.0	25.0	per	
					Cao	-	0.6	week	

NOTES

1. Test (a) forms part of the processing of the valve, and having been met during manufacture, shall not be repeated for acceptance testing. For this hot flash test, applied voltages shall be supplied through a circuit as in fig.1.

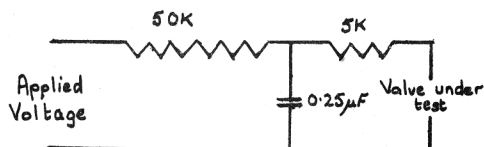
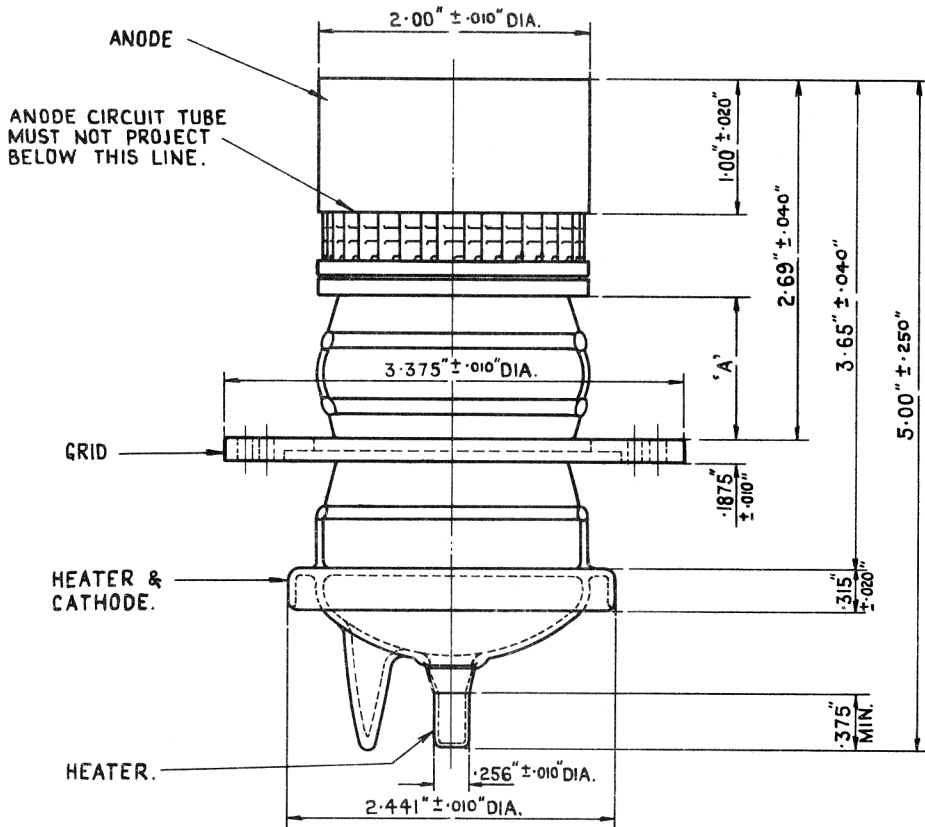


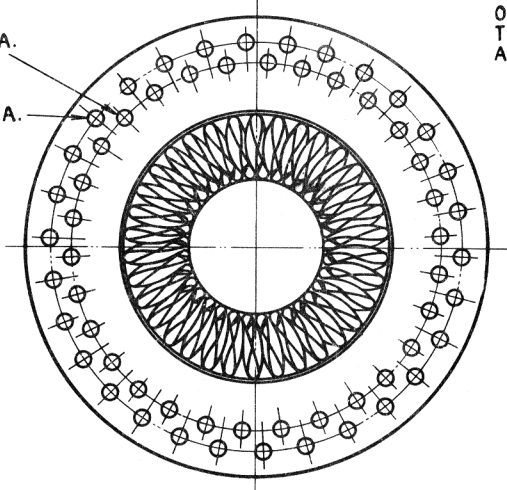
Fig. 1

2. For the above tests forced air cooling, as detailed in Note A on page 1, shall be used.



30 HOLES .125" DIA.
ON 2.718" P.C.D.

30 HOLES .125" DIA.
ON 3.07" P.C.D.



OVER THIS LENGTH 'A.'
THE DISTANCE FROM
AXIS MUST NOT EXCEED 1.25."

OUTLINE OF VALVE.