MINISTRY OF ~~SUPPLY~~ AVIATION D.L.R.D./RAE (~~S.R.D.E.~~)

VALVE ELECTRONIC CV1736

Specification ~~MoS~~ MoA/CV1736
Issue 2 Dated 19.7.55.
To be read in conjunction with K1001
ignoring clause:- 5.3.

SECURITY	
Specification	Valve
UNCLASSIFIED	UNCLASSIFIED

→ Indicates a change

TYPE OF VALVE - Disc seal triode
CATHODE - Indirectly heated
ENVELOPE - Copper-glass
PROTOTYPE - E.1457

MARKING
See K1001/4

RATING			Note
Heater Voltage	(V)	6.3	
Heater Current	(A)	4.0	
Max. D.C. Anode Voltage	(V)	600	
Max. Pulse Anode Voltage	(kV)	4.0	
Max. Anode Dissipation	(W)	75	A
Min. Peak Emission	(A)	15	
Amplification Factor		22	B
Mutual Conductance	(mA/V)	20	B
Efficiency			
(1) at 500 Mc/s with 11db gain		60%	
(2) at 1000 Mc/s with 8 db gain		40%	
CAPACITANCES (pF)			
Cag		6.5	
Ccg		10.5	
Cac		0.3	

DIMENSIONS AND CONNECTIONS

See drawing on page 4

NOTES

A. For this dissipation at ambient temperatures up to 30°C. forced air cooling shall be provided by not less than 5 cu.ft. of air per. min. with a pressure drop across the valve of the order of 2 inches of water.

B. For Va = 500V., Ia = 100mA.

C. All limiting values are absolute

To be performed in addition to those applicable in K1001

	Test Conditions				Test	Limits		No. Tested	Notes
	Vh	Vg	Va	Ia (mA)		Min.	Max.		
a	6.3	-700	4.0kV	-	Conditions to be maintained for a period of one minute without flashing			100%	1,2,3
b	7.8	-700	0	-	Grid current (uA)	-	100	100%	1,2,4
c	7.5	-500	0	-	Grid current (uA)	-	100	100%	1,4
d	7.5	Adjust	500	100	Grid current (uA)	-	40	100%	1,5
e	6.3	0	0	0	Ih (A)	3.6	4.4	100%	1
f	6.3	Adjust	500	100	Vg (V)	-7.5	-12.5	100%	1
g	6.3	Adjust	500	100	Reverse grid current (uA)	-	10	100%	1,6
h	6.3	Adjust	400	100	Vg change from value obtained in test 'f' (V)	3.0	5.5	100%	1
j	6.3	Adjust	500	100	gm. (mA/V)	14	-	100%	1
	Peak grid swing ±1V Max.								
k	6.3	Adjust	500	10	Vg (V)	-	-30	100%	1
l	6.3	Anode and grid strapped. Peak applied voltage = 750V. Tp = 2usec.p.r.f. = 50 per sec., pulse shape sinusoidal.			Peak emission (A)	15	-	100%	1
m	Measurement to be made at frequency of 1.0Mc/s				Capacitances (pF)				
					Cag	5.0	8.0	6 per week	
					Ccg	7.0	14.0		
					Cac	-	0.5		

CV1736

NOTES

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

2. These tests form part of the processing of the valve, and having been met during manufacture, shall not be repeated for acceptance testing.

3. For this hot flash test, applied voltages shall be supplied through a circuit as in Fig. 1.

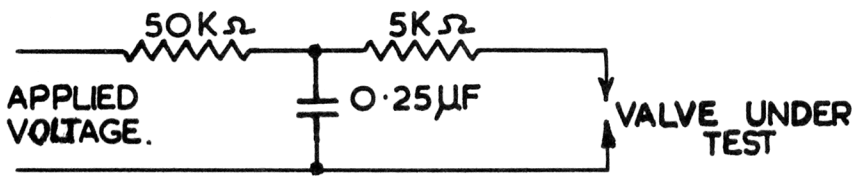


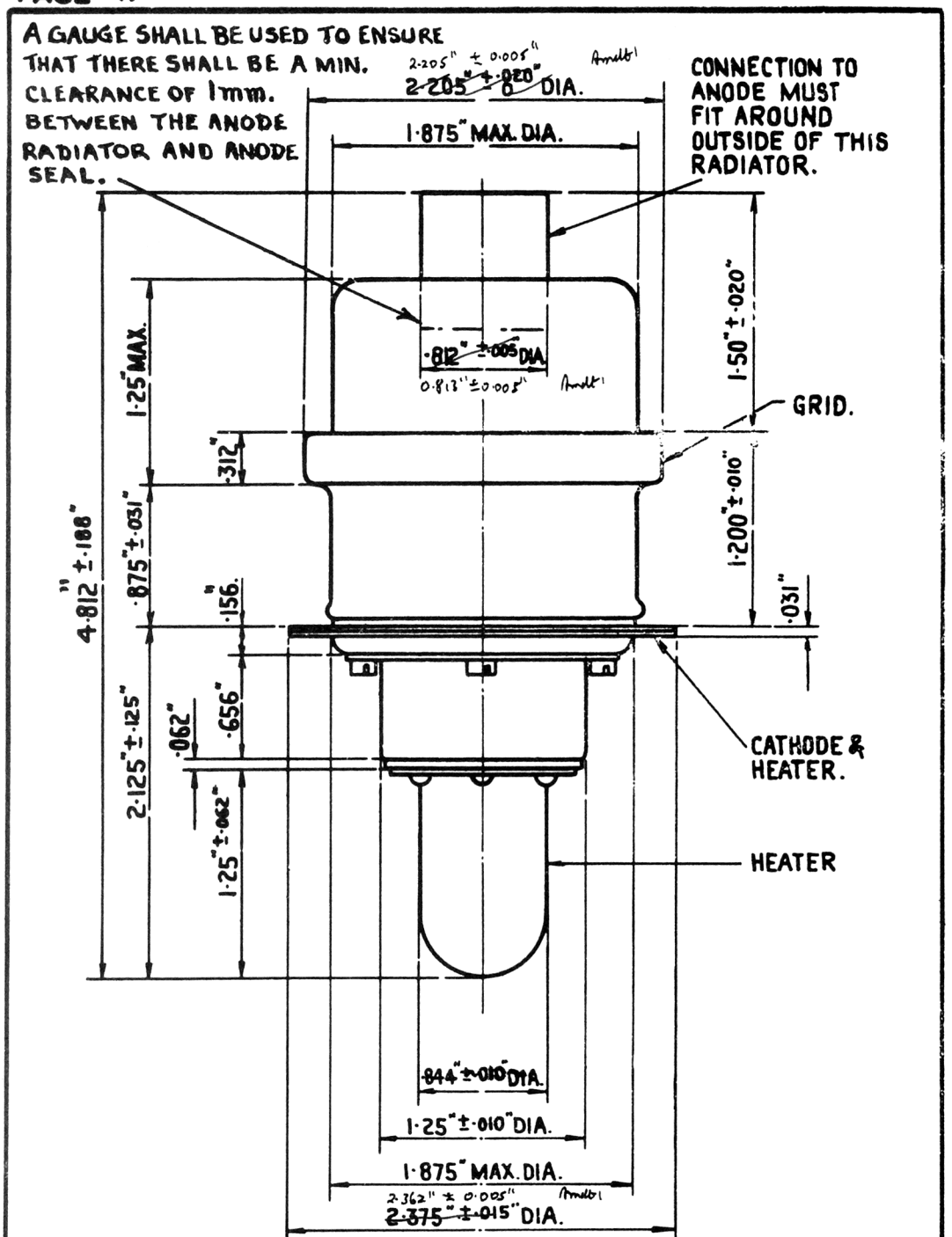
FIG. 1.

4. Anode and cathode to be strapped together. A grid limiting resistance of 0.5 Megohm shall be used, such that Ig does not greatly exceed 1mA under grid-cathode short circuit conditions.

5. This test to be performed after the valve has been run on "heaters only" for 20 mins. The grid current is to be within specification, less than 5 secs. after application of H.T.

6. Reverse grid current to come within limits, in less than 5 mins. after switching on.

CV 1736



ALL EXTERNAL CONTACT SURFACES, EXCEPT HEATER, TO BE RHODIUM PLATED.

ELECTRONIC VALVE SPECIFICATIONS

SPECIFICATION MOS/CV1736 ISSUE 2 DATED 19.7.63

AMENDMENT NO.1

1. Page 1. Top of Page.

(a) Amend "MINISTRY OF SUPPLY (S.R.D.E.)" to read "MINISTRY OF AVIATION D.L.R.D./R.A.E."

(b) Specification Title, amend to read "MOA/CV1736"

/2.

2. Page 4 Drawing

Amend the specified dimensions as follows:-

(a) Anode Radiator Diameter

Amend '0.812" ± .005" to read '0.813" ± 0.005"'

(b) Cathode and Heater Flange Diameter

Amend '2.375" ± .015"' to read '2.362" ± 0.005"'

(c) Grid Ring Diameter

Amend '2.205" $^{+\ .020"}_{-\ 0}$' to read '2.205 ± 0.005'

August, 1963
N.190322

T.V.C. for R.A.E.

17/7/63