

VALVE ELECTRONIC

CV424

ADMIRALTY SIGNAL & RADAR ESTABLISHMENT

Specification AD/CV424/Issue 4. Dated : 22. 3. 54. To be read in conjunction with K1001.	<u>SECURITY</u>	
	<u>Specification</u> Unclassified	<u>Valve</u> Unclassified

<u>TYPE OF VALVE</u> :- Double R/F Beam Tetrode.			<u>MARKING</u>	
<u>CATHODE</u> :- Indirectly Heated.			See K1001/4.	
<u>ENVELOPE</u> :- Glass - Unmetallised.				
<u>PROTOTYPE</u> :- QQV-06/40.				
<u>RATING</u>			<u>BASE</u>	
			See drawing, Page 3.	
Heater Voltage (v)	6.3	Note G	<u>Pin</u>	<u>Electrode</u>
Heater Current (A)	1.8	C		
Max. Anode Voltage (v)	600	D	1	Heater
Max. Grid Voltage (v)	-175	D	2	Control Grid (b)
Max. Screen Grid Voltage (v)	250	D	3	Screen Grids (a)(b)
Max. Cathode Heater Voltage (v)	100		4	Cathode
Max. Cathode Current (mA)	120	B	5	Heater Centre Tap
Max. Peak Cathode Current (mA)	700	B	6	Control Grid (a)
Max. Anode Dissipation (W)	20	A,B	7	Heater
Max. Screen Dissipation (W)	3.5	A,B	Tc1	Anode (a)
Max. Grid Dissipation (W)	1.0	B	Tc2	Anode (b)
Max. Temperature Pins and Bulb	180°C		<u>TOP CAP</u>	
			See drawing, Page 3.	
<u>CAPACITANCES (Nominal)</u>			<u>DIMENSIONS</u>	
Cag1 (pF)	0.06	B	See drawing, Page 3.	
Cg1c (pF)	10.5	B		
Cac (pF)	3.2	B		
C out (pF)	2.0			
C in (pF)	6.0			

NOTES

- A. The valve may be operated at full ratings up to 150 Mc/s without cooling other than by normal radiation and convection. Above this frequency forced air cooling is required at the rate of 2 cu.ft. per minute up to 250 Mc/s and at 5 cu.ft. per minute from 250-300 Mc/s.
- B. Each section.
- C. Centre tapped 12.6 V Heater.
- D. Absolute maximum values.

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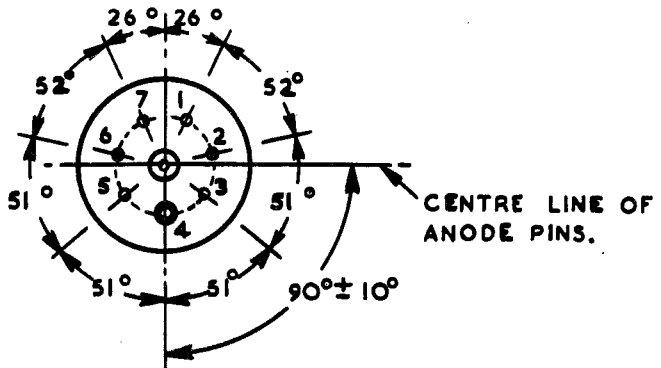
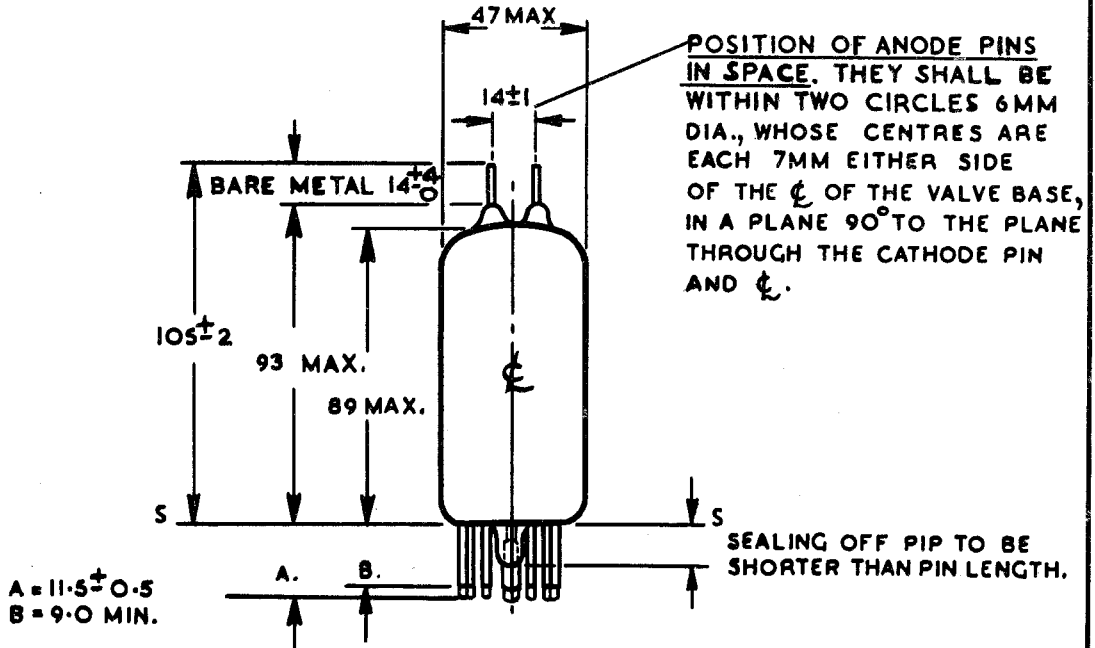
TESTS

To be performed in addition to those applicable in K1001.

	Test Conditions					Test	Limits		No. Tested	Note
	Vh (v)	Va (v)	Vg ¹ (v)	Vg ² (v)	Ia (mA)		Min.	Max.		
a	6.3	0	0	0	0	Ih (A)	1.6	2.0	100%	
b	6.3	600	-4.0	250	-	Ia (mA)	-	5	100%	1
c	6.3	600	-24	250	-	Ia (mA)	18	52	100%	1
d	6.3	600	-16	250	-	Ia (mA)	60	130	100%	1
e	6.3	600	Adjust	250	4.0	Ig ¹ (μA)	-	-12	100%	1,2
f	6.3	600	Adjust	250	4.0	Ig ² (mA)	-	6	100%	1
g	6.3	Anode, grid and screen grid strapped and 50 V 50 cycles applied.				Ie (mA)	125	-	100%	1
h	6.3	400	-60	250	2x100	Amplifier Test To be carried out at 300 Mc/s. (Ig ² should be 4-9 mA each section) (Ig ¹ should be 1.2-2.8 mA each section) P load = 35 ^W				
						Power Output (W)	35	-	100%	3
j						Capacitances (pF) Cac (each section) difference between sections not to exceed 0.5 pF. Ca ^{a,b} Cg ^{1c} (each section) Cg ^{a,b}	2.8 0.35 9.5 1.0	3.7 0.55 12.0 1.5	6 per week	

NOTES

1. Tests to be applied to each half of valve, control grid of unit not under test being connected to -100 V.
2. Reading to be made after 3 minutes operation.
3. ^WP load at circuit transfer efficiency = 73%.



PITCH CIRCLE DIAMETER OF PINS 25.4 ± 0.13.

ANGLES SHOWN TO BE WITHIN ± 15°.

DIA. OF PINS 1, 2, 3, 5, 6 & 7 TO BE 1.32 TO 1.52.

DIA. OF PIN 4 TO BE 3.10 TO 3.25.

DIA. OF ANODE PINS TO BE 2 ± 0.05.

THE END OF THE PINS SHALL BE TAPERED OR ROUNDED.

THE PINS SHALL BE ACCEPTED BY THE PIN POSITION GAUGE IN B.S. 448, SECTION B7A TO WITHIN 1MM OF THE SOLE S.S.

ALL DIMENSIONS ARE IN MILLIMETRES EXCEPT WHERE OTHERWISE STATED.

ANY GLASS ON THE PINS SHALL NOT EXTEND MORE THAN 3.5MM FROM THE SOLE S.S.