

SPECIFICATION AD/CV2420

Issue No. 2 dated 27.1.59.

AMENDMENT NO. 1

Page 1. NOTE B. In items (i) and (ii) the words "output power" should be amended to "input power".

April, 1959. Admiralty Surface Weapons Establishment

N.54914/D

ELECTRONIC VALVE SPECIFICATIONS
SPECIFICATION AD/CV2420
ISSUE No. 2 DATED 27.1.59

Amendment No. 2

Page 1. Heater Current (Nominal)
Amend from 1.1A to read 1.2A.

Page 2. 4.10.8. Heater Current
Amend limits from 1.0A min. 1.2A max.
to read: 1.1A min. 1.3A max.

May, 1961. ADMIRALTY SURFACE WEAPONS ESTABLISHMENT

56926/D

ELECTRONIC VALVE SPECIFICATIONS
SPECIFICATION AD/CV2420 ISSUE NO.2 DATED 27TH JANUARY 1959

AMENDMENT NO. 3

Page 1. No. of Pages: delete "4" and substitute "3"
Dimensions: Amend "See drawing on Page 4"
to read, "See drawing on Page 3 of Specification
AD/CV2421".

Page 4. Delete (but do not destroy) this drawing.

June, 1963.

T.V.C. for ASWE

(163871)

ADMIRALTY SIGNAL AND RADAR ESTABLISHMENT

CV2420

Specification AD/CV2420 Issue No. 2, dated 27. 1. 59. To be read in conjunction with K1006	<u>SECURITY</u> Specification Valve Unclassified Unclassified
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→ Indicates a change

<u>TYPE OF VALVE:</u> Tunable packaged Magnetron for CW operation. <u>CATHODE:</u> Indirectly heated. <u>PROTOTYPE:</u> VX8182		<u>MARKING</u> See K1001/4	
<u>RATINGS</u> (All limiting values are absolute)		<u>DIMENSIONS</u> See drawing on Page 4	
			Note
→ Heater Voltage (V)	6.3±0.6		A
Heater Current (Nominal) (A)	1.1		
→ Heater running Voltage at full power. (V)	4.5		B
Max. D.C. Anode Voltage (V)	1100		
Min. D.C. Anode Voltage (V)	900		
Max. Peak Anode Current (during modulation) (mA)	100		
Max. Anode Current (unmodulated) (mA)	60		
Nom. Anode Current (unmodulated) (mA)	50		
Min. Anode Current (unmodulated) (mA)	20		
Max. Mean Anode Input Power (W)	60		
Min. Efficiency (%)	10		
→ Max. Temperature of Anode Block (°C)	140		C
Min. Tuning Range (Mc/s)	9150 to 9600		
<u>NOTES</u>			
A. This heater voltage shall be applied at least two minutes before the application of anode voltage.			
→	B. Immediately the anode voltage is applied the heater voltage must be adjusted as follows:-		
	(i) to 4.5 V for output power of 60 watts.		
	(ii) to 6.3 V " " " " 0 to 20 watts.		
	Adjust proportionately for output power of 20 to 60 watts.		
→	C. Measured at the anode block on the side remote from the blower.		

TUNABLE PACKAGED MAGNETRON FOR CW OPERATION

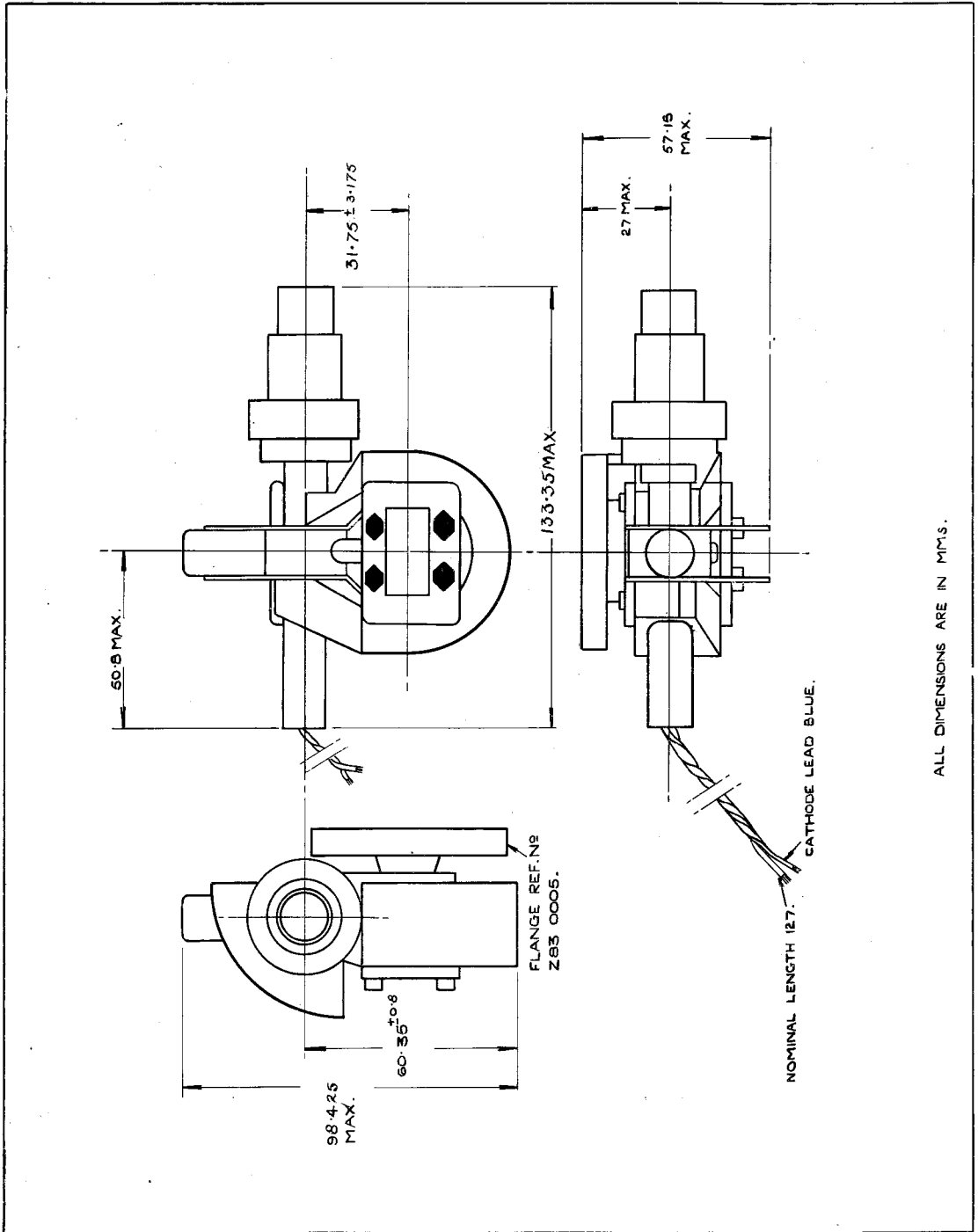
Ratings:	Ef	Eb	ib	Ib	P1	tk	Anode T	Eff'cy
Absolute Maximum	V 6.3 +0.6 Note 1	V 1100	mA 100 Note 5	mA 60 Note 6	W 60	Sec. -	°C 140	% -
Minimum Test → Conditions: Note 1	4.5	900	-	20 50	-	120	-	10

<u>Ref.</u>	<u>Test</u>	<u>Conditions</u>	<u>Min.</u>	<u>Max.</u>
	± Vibration:	2.5g at 170 e/s for 60 secs. No Voltages.	- Note 7	-
4.5	Holding Period:	t= 28 days		
4.10.8	Heater Current	Ef= 6.3V; Ib=0	If: 1.0	1.2A
4.10.5	Anode Voltage:	F1= 9150 Mc/s F2= 9600 Mc/s Note 1	Eb: 910 Eb: 910	1090V 1090V
4.16.3.6	Power Output:	F1= 9150 Mc/s F2= 9600 Mc/s	Po: 5 Po: 5	- W - W
4.16.5	Pulling Factor:	F1= 9150 Mc/s F2= 9600 Mc/s Note 2	ΔF: - ΔF: -	20 Mc/s 20 Mc/s
4.16.6	± Pushing Factor:	Ib= 25/50 mA d.c. F= 9375 Mc/s	ΔF: - 1 Mc/s per mA	
4.11	Life Test (Long):	F= 9375 Mc/s Note 3	t: 500 - hrs	
4.11.4	Life Test (Long) End Point:	Change in Power Output Note 3	Po: -	20%
4.11	Life Test (Short):	F= 9375 Mc/s Note 4	t: 20 - hrs	

NOTES

1. The valve shall be run with $E_f = 6.3V$ only for not more than two minutes before the anode voltage is applied; and E_f shall be reduced to 4.5V immediately upon application of anode voltage.
2. Pulling figure to be measured with a VSWR of 1.5 : 1 varied through all phases.
3. One valve to be tested per year.
4. One valve to be tested per month. Valves to be within specification after test.
5. Peak anode current during modulation.
6. Anode current, unmodulated.
7. The directions of vibration to be:
 - (i) Perpendicular to the plane of the flange.
 - (ii) Parallel to the plane of the flange and to its narrower edges.

This test shall not result in shorts or defects which will cause the tube to be inoperative.



ALL DIMENSIONS ARE IN MMS.