

Specification MOS/CV2221/Issue 2. Dated March 20, 1952. To be read in conjunction with K1001	<u>SECURITY</u> Specification Unclassified	Valve Unclassified
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<u>TYPE OF VALVE:-</u> Velocity modulated magnetically focussed local oscillator.			<u>MARKING</u> See K1001/4	
<u>CATHODE:-</u> Indirectly heated.			<u>PACKAGING</u> See K1005	
<u>ENVELOPE:-</u> Copper-glass				
<u>PROTOTYPE:-</u> VX7057				
<u>RATING</u>			<u>BASE</u> B7G	
Heater voltage (V)	6.3			
Heater current (A)	0.3			
Nominal tuning range (cms)	7.5-11.5		Pin	Electrode
Max. dissipation anode and resonator (W)	15		1	Grid 1
Anode voltage (V)	150-420	A	2	Cathode
Resonator voltage (V)	140-400		3	Heater
Max. screen voltage (V)	400		4	Heater
Max. resonator dissipation (W)	8	B	5	Anode
Max. cathode current (mA)	65		6	Resonator
Max. screen dissipation (W)	1.5		7	Grid 2
			<u>DIMENSIONS</u> See page 3	

NOTES

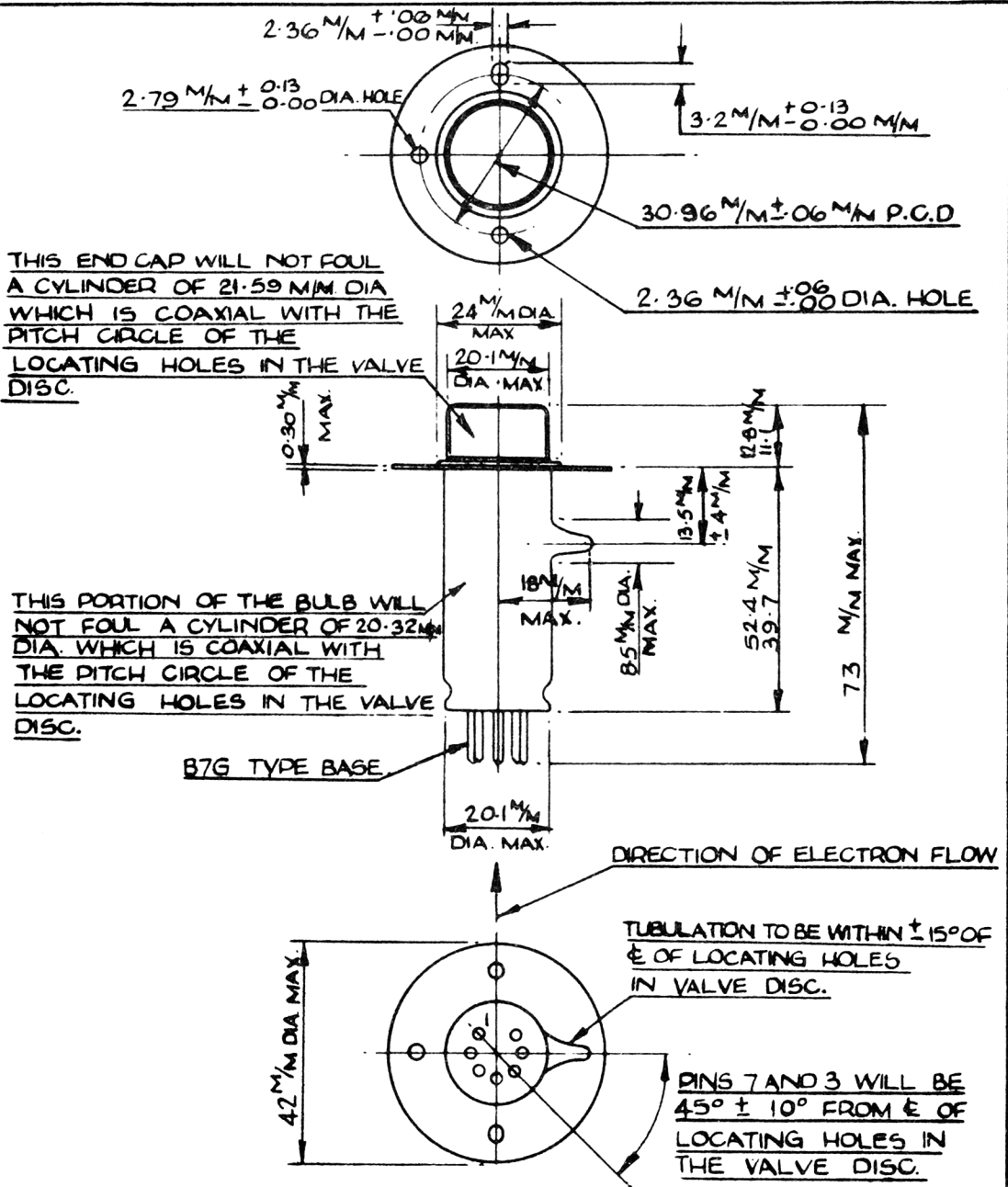
- Anode should be approximately 20 volts positive to resonator when low noise output is required.
- Screen volts should not exceed resonator volts by more than 50V.
- A permanent magnet is used to focus the electron beam and is orientated so that maximum current flows to the anode. Locating holes are provided so that the magnetic alignment position is the same for all valves. The magnet should have a uniform field strength of approximately 1000 oersteds. Jessop magnets type 9501 and 10512 are recommended.

To be performed in addition to those applicable in K1001

Test Conditions							Test	Limits		No. Tested
								Min.	Max.	
	V <sub>h</sub> (V)	V <sub>g1</sub> (V)	V <sub>a</sub> (V)	V <sub>g2</sub> (V)	V <sub>res</sub> (V)	I <sub>c</sub> (mA)				
a	6.3	-	-	-	-	-	I <sub>h</sub> (A)	0.27	0.33	100%
b	6.0	-40	Set at Vr1	Adjust (Note2)	Adjust	47	(1) Power Output (mW) (2) Resonator voltage (Vr1) (V)	500 295		100%
c	6.0	-40	Set at Vr2	Adjust (Note3)	Adjust	65	(1) Power output (mW) (2) Resonator voltage (Vr2) (V)	500 170		100%
d	6.0	-40	Set at Vr3	Adjust (Note4)	Adjust	41	Oscillation shall be detected. Resonator voltage(Vr3) (V)			100%
e	6.6	-200	235- 245	150	225	-	Reverse I <sub>g</sub> (uA)	-	30	100%
f	6.6	-40	235- 245	Adjust	225	65	I <sub>g2</sub> (mA) V <sub>g2</sub> (V)	80	6.0 210	100%

## NOTES

- Tests b, c and d shall be carried out in an approved test set.
- V<sub>g2</sub> is adjusted to give I<sub>c</sub> = 47 mA with oscillation at 7.9 cms.
- V<sub>g2</sub> is adjusted to give I<sub>c</sub> = 65 mA with oscillation at 11.0 cm.
- V<sub>g2</sub> is adjusted to give I<sub>c</sub> = 41 mA with oscillation at 7.5 cm.



SPECIFICATION MCS/CV 2221/ISSUE 2.

AMENDMENT NO. 1.

Page 3.

Amend the dimension from the valve disc to the top of the valve

from 12.8 mm	to	12.55 mm max.
11.1		11.1 mm min.

September 1952.

T.V.C. Office.  
(for RRDE)

Z.4108.R.