

Specification MOSA/CV393 Issue 2 Dated 14.1.1954. To be read in conjunction with K.1001	<u>SECURITY</u>	
	<u>Specification</u> UNCLASSIFIED	<u>Valve</u> UNCLASSIFIED

—————> Indicates a change

TYPE OF VALVE - Velocity modulated magnetically focussed local oscillator				<u>MARKING</u> See K.1001/4.	
CATHODE - Indirectly heated				<u>BASE</u> B7G	
ENVELOPE - Copper/Glass					
PROTOTYPE - CV299				<u>CONNECTIONS</u>	
<u>RATING</u>			Note		
Heater Voltage	(V)	6.3	D	1 2 3 4 5 6 7	Grid 1 Cathode Heater Heater Anode Resonator Grid 2
Heater Current	(A)	0.3	D		
Nominal Tuning Range	(cm)	8 to 16	A		
Minimum Output Power between 9 and 11 cm	(mW)	300			
Minimum Output Power between 8 and 16 cm	(mW)	50			
Nominal Anode Voltage Range	(V)	100 to 360	B		
Nominal Resonator Voltage Range	(V)	100 to 360	B		
Maximum Screen Voltage	(V)	400	C	<u>DIMENSIONS</u> See page 4.	
Maximum Screen Dissipation	(W)	1.5			
Maximum Resonator Dissipation	(W)	12			
Maximum Anode and Resonator Dissipation	(W)	15			

NOTES

- A. A permanent magnet is used to focus the electron beam, and is orientated so that the maximum current flows to the anode. Locating holes are provided so that the magnet alignment position is the same for all valves. The magnet should have a uniform field strength of approximately 1,000 oersteds, the service magnet being A.P. 58079.
- B. The anode voltage should never be less than, but preferably approximately 20 volts positive to the resonator voltage.
- C. The screen voltage should preferably not exceed the resonator voltage.
- D. The valve normally has a 1,000 o/s heater supply.

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

Test Conditions							Test	Limits		No. Tested	Note			
Vh (V)	Vg1 (V)	Va (V)	Vr (V)	Vg2 (V)	Ic (mA)	Min.		Max.						
a	6.3	0	0	0	0	0	Ih (A)	0.27	0.33	100%	2			
b	6.6	-200	235 to 245	225	150	-	Reverse Ig1 (μA)	-	30	100%				
c	6.6	0	235 to 245	225	Ad-just	65	(i) Vg2 (V) (ii) Ig2 (mA)	80 -	200 7	100%				
Tests 'd', 'e' and 'f' to be carried out in the test circuit on page 3.														
d	6.0	Vg2 (V)	Ia + r (mA)	X (ins.)	(i) Range of R to maintain oscillation (kΩ) (ii) Max. detector current within above range (mA) (iii) Frequency of oscillation (f1) (Mc/s)	12.5	13.3	100%	100%	100%				
		Adjust and record potentiometer position (P1)	24.5	0.030 ±.002								0.2	-	100%
		R initially adjusted between 12.5 and 13.5 kΩ for max. crystal current at Ia + r = 24.5 mA.										-	1875	100%
e	6.0	Leave potentiometer at (P1)	-	0.350 ±.003	Range of R to maintain oscillation shall be at least 600 ohms within the limits 7.0 - 10.0 k ohms.	-	-	100%						
f	6.0	Leave potentiometer at (P1)	-	0.900 ±.005	(i) Range of R to maintain oscillation (kΩ)	2.4	3.0	100%	100%	100%				
					(ii) Max. detector current within the above range (mA)							1.5	-	100%
					(iii) Frequency of oscillation (Mc/s)							3580 or 2 f1 whichever is greater		
NOTES														
1. Tests 'd', 'e' and 'f' to be carried out with DC supply conditions as shown in figure 1 (Page 3), and in an approved tuning cavity fitted with an approved detector unit (an approved tuning cavity is given in MAP drawing BTR91428 and an approved crystal detector unit is given in MAP drawing DTR88502). The crystal output circuit is to be 100Ω resistive inclusive of meter.														
Dimension 'X' is from the inside surface of the valve end of the cavity to the most forward part of the plunger. (Fig. 2, Page 3).														
2. The valve normally has a 1,000 c/s heater supply.														

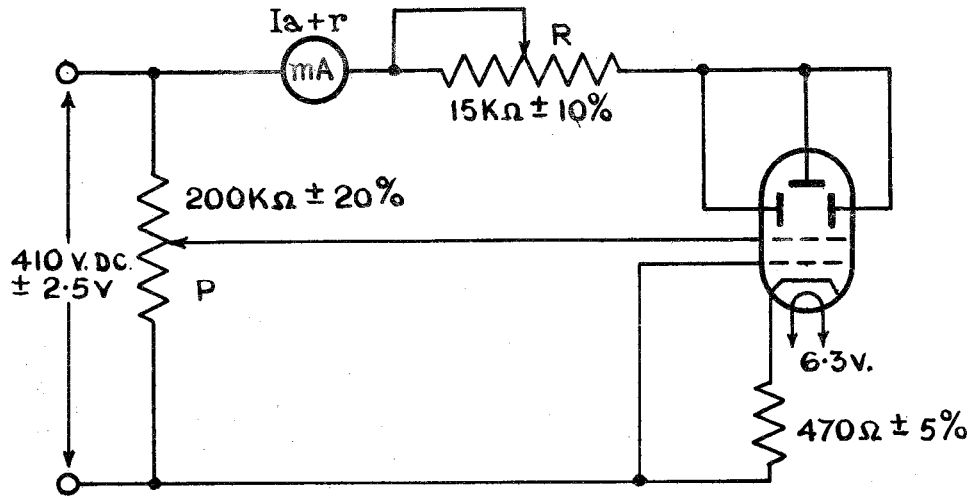


FIG.1

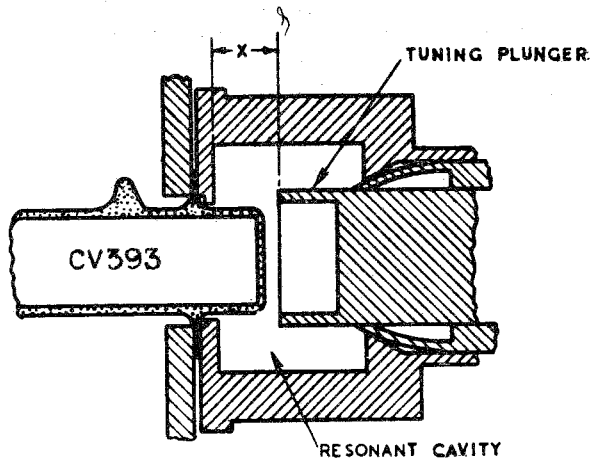


FIG.2

