

Specification MAP/CV1104/Issue 4 Dated 8.1.46. To be read in conjunction with K1001.	<u>SECURITY</u>	
	<u>Specification</u> RESTRICTED	<u>Valve</u> RESTRICTED

—→ Indicates a change

<u>TYPE OF VALVE</u> - Pentode <u>CATHODE</u> - Directly heated oxide coated. <u>ENVELOPE</u> - Glass - unmetallised <u>PROTOTYPE</u> - PT15			<u>MARKING</u> See K1001/4	
<u>RATING</u>		Note	<u>BASE</u> - (See Note C) B.5. (ceramic)	
Filament Voltage (V) 6.0 Filament Current (A) 1.3 Max. Anode Voltage (V) 1250 Max. Screen Voltage (V) 300 Max. Anode Dissipation (W) 30 Mutual Conductance (mA/V) 3.1			Pin	Electrode
		A	1	Screen grid
			2	Control grid
			3	Filament
			4	Filament
		B	5	Suppressor grid
			T.C.	Anode
<u>CAPACITANCES (pF)</u> C _{ae} 14.0 C _{ge} 21.7 C _{ag} (max.) 0.11			<u>PLUG TOP CAP</u> See K1001/AI/D5.1	
			<u>DIMENSIONS</u> See K1001/AI/D1	
			Dimension	Min. Max.
			A (mm)	180 187
			B (mm)	50 53

NOTES

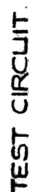
- A:- Valve shall be capable of satisfactory operation over a filament voltage range of 5.9V. to 7.8V.
 B:- At $V_a = 1000$, $V_{g2} = 300$, $I_a = 40\text{mA}$.
 C:- Any insulating sleeving used for base connections shall be glass tubing.

To be performed in addition to those applicable in K1001

	Test Conditions						Test	Limits		No. Tested	Note
								Min.	Max.		
a	See K1001/AIII						<u>CAPACITANCES (pF)</u>				
	Links to H.P.	Links to L.P.	Links to E.								
	T.C.1.	1,3,4,5,	2,6,7,8,9,10,T.C.2.					12.3	16.7	6 per week	1
	2	1,3,4,5,	6,7,8,9,10,T.C.1,T.C.2.					18.5	25.0		
	T.C.1.	2	1,3,4,5,6,7,8,9,10,T.C.2.					-	0.11	T.A.	
b	Vf	Va	Vg2	Vg1	Vg3	Ia(mA)	If (A)	1.17	1.43	100% or S	
c	6.0	1000	300	-	0	40	Vg1 (V)	-18.0	-35.0	100%	
d	6.0	1000	300	-	0	40	Ig2 (mA)	-	6.5	100%	
e	6.0	1000	300	-	0	40	gm (mA/V)	2.5	3.7	100%	
	Peak grid swing $\pm 1.0V_{max}$										
f	6.0	1000	300	-	0	1.0	Vg1 (V)	-	-60	100%	
g	6.0	1000	300	-	0	40	Reverse Ig1 (μA)	-	10.0	100%	
h	Valve shall be tested in a chassis with a circuit as shown on page 3. The test chassis used shall be of an approved construction and calibrated against a reference chassis held at the Royal Aircraft Establishment, Farnborough. The test shall be made under the following conditions:- Vf = 5.9V. H.T. feed to CV1104 not greater than 60mA. Drive such that the grid current of the CV1104 does not exceed 3mA.						<u>OPERATIONAL TEST</u>				
							Output Power (W)	36	-	100%	
j	Conditions as in test clause (h) except that the input H.T. voltage is increased to 1500V., and the value of the screen resistance is increased to give Ia = 50 mA. max. Ig2 = 22 mA. max.						<u>OVER VOLTAGE TEST</u>				
							There shall be no sparking between electrodes or other signs of breakdown over a period of 2 mins.			5% (5)	2
k	At the conclusion of test (j) a voltage of -50V.D.C. plus 70V. RMS at a frequency of 50 cps shall be applied to G3						<u>SUPPRESSOR CONTROL TEST</u>				
							Change in Ia (mA)	12	-	100%	

NOTES

- Capacitances shall be measured with valve screened by a cylinder 65mm. high and 55mm. dia.
- Alternatively the test may be carried out on 100% of the valves, when the test period may be reduced to 30 secs.



TERMINAL BOARD AT
BACK OF CHASSIS