

Specification MAP/CV1049/Issue 4 Dated 24.1.49 To be read in conjunction with K.1001.	<u>SECURITY</u>	
	<u>Specification</u> RESTRICTED	<u>Valve</u> UNCLASSIFIED

→ Indicates a change

<u>TYPE OF VALVE</u> : -H.F. Pentode  <u>CATHODE</u> : - Directly heated  <u>BULB</u> : - Glass - metallised  <u>PROTOTYPE</u> : - 210SPT.	<u>MARKING</u> See K1001/4.
	<u>PACKING</u> See K1005
	<u>BASE</u> B7

<u>RATING</u>		Note	Pin	Electrode
Filament Voltage (V)	2.0		1	Metallising
Filament Current (A)	0.1		2	Control grid
Max. Anode Voltage (V)	150		3	Suppressor grid
Max. Screen Voltage (V)	80		4	Filament
Max. Anode Dissipation (W)	1.0		5	Filament
Max. Screen Dissipation (W)	0.3		6	No connection
Mutual Conductance (mA/V)	1.3	A	7	Screen grid
Anode Impedance (M Ω)	0.6	A	T.C.	Anode

<u>CAPACITANCES (pF)</u>  Cae 7.1 Cge 8.6 Cag 0.02	<u>TOP CAP</u> See K1001/A1/D5.4		
	<u>DIMENSIONS</u> See K1001/A1/D1		
	Dimension	Min.	Max.
	A (mm)	120	130
B (mm)	-	46	

NOTES

A: Va = 120V, Vg2 = 60V, Vg1 = 0.

## TESTS

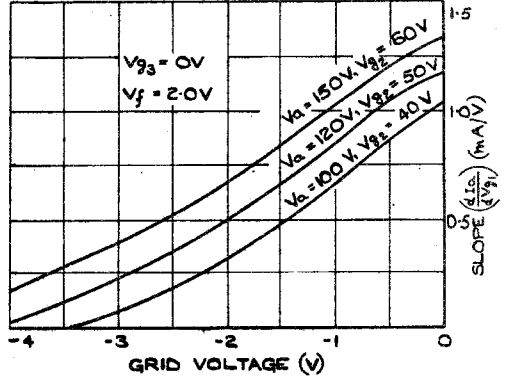
To be performed in addition to those applicable in K1001.

Test Conditions						Test	Limits		No. Tested			
							Min.	Max.				
See K1001/AlIII. Measured using adaptor type 37. Ref. 10A/13333						<u>CAPACITANCES (pF)</u>			6 per week			
a	Links to H.P.	Links to L.F.	Links to E							C <sub>ae</sub>	6.1	8.1
	TC1	1,3,4,5 6,7.	2,8,9 10 TC2							C <sub>ge</sub>	7.0	10.0
	2	1,3,4,5 6,7.	8,9,10 TC1,TC2							C <sub>ag</sub>	-	0.02
	TC1	2	1,3,4,5 6,7,8,9 10, TC2						T.A.			
	V <sub>f</sub>	V <sub>a</sub>	V <sub>g2</sub>	V <sub>g1</sub>	V <sub>g3</sub>	I <sub>f</sub> (A)	0.09	0.11	100% or S			
b	2.0	0	0	0	0							
c	2.0	150	60	0	0	I <sub>a</sub> (mA)	2.0	3.9	100%			
d	2.0	150	60	-0.5	0	g <sub>m</sub> (mA/V)	1.05	-	100%			
Peak grid swing + 0.5V. max.												
e	2.0	150	60	-6.0	0	I <sub>a</sub> (mA)	-	0.1	100%			
f	2.0	150	60	-1.0	0	Reverse I <sub>g1</sub> (μA)	-	1.0	100%			

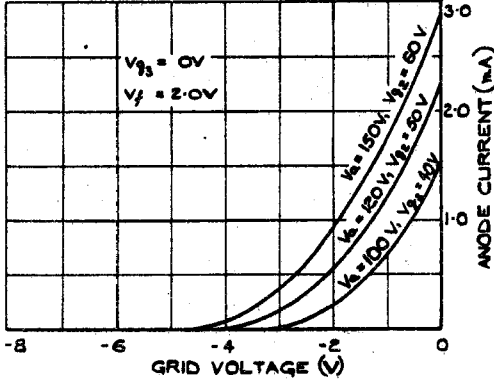
**NORMAL OPERATING CONDITIONS**

ANODE VOLTAGE	120 V
ANODE CURRENT	1.2 mA
GRID BIAS	-1.5 V
GRID BIAS FOR 0.5 mA GRID CURRENT	ZERO
SCREEN VOLTAGE	60 V
SCREEN CURRENT	0.35 mA
SUPPRESSOR VOLTAGE	ZERO
MUTUAL CONDUCTANCE	0.8 mA/V
$(V_a = 120 \text{ V}, V_{g2} = 60 \text{ V}, V_{g1} = -1.5 \text{ V})$	
ANODE IMPEDANCE	1.2 M $\Omega$
$(V_a = 120 \text{ V}, V_{g2} = 60 \text{ V}, V_{g1} = -1.5 \text{ V})$	
SCREEN TRAILER RESISTANCE	0.17 M $\Omega$
MAX. A.F. VOLTAGE OUTPUT AS DETECTOR (20% MODULATION)	1.5 V. R.M.S. APPROX.

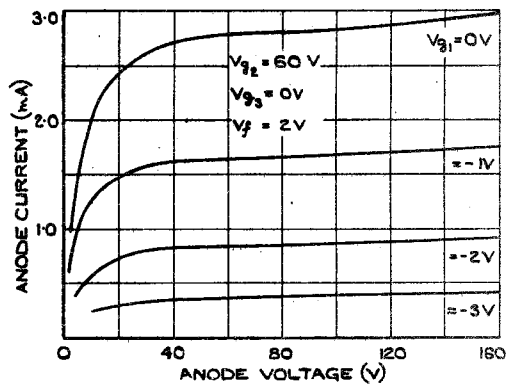
SLOPE  $\left(\frac{dI_a}{dV_{g1}}\right)$  - GRID VOLTAGE CURVES.



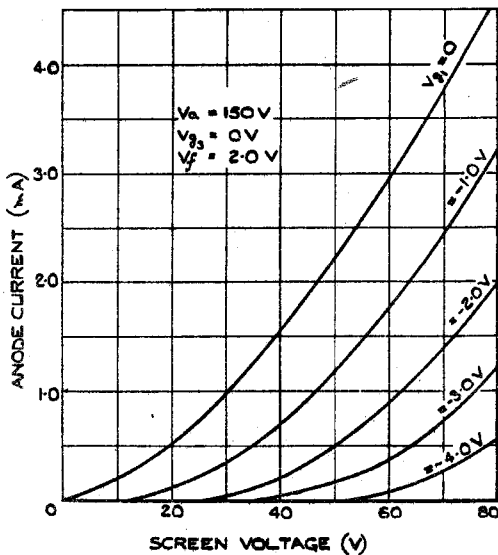
ANODE CURRENT - GRID VOLTAGE CURVES



ANODE CURRENT - ANODE VOLTAGE CURVES



ANODE CURRENT - SCREEN VOLTAGE CURVES



SCREEN CURRENT - SCREEN VOLTAGE CURVES

