

Specification MAP/CV1049/Issue 4 Dated 24.1.49 To be read in conjunction with K.1001.	<table> <tr> <th colspan="2">SECURITY</th></tr> <tr> <td>Specification RESTRICTED</td><td>Valve UNCLASSIFIED</td></tr> </table>	SECURITY		Specification RESTRICTED	Valve UNCLASSIFIED
SECURITY					
Specification RESTRICTED	Valve UNCLASSIFIED				

→ Indicates a change

<u>TYPE OF VALVE:-</u> H.F. Pentode			<u>MARKING</u>		
<u>CATHODE:</u> - Directly heated			See K1001/4.		
<u>BULB:</u> - Glass - metallised			<u>PACKING</u>		
			See K1005		
<u>PROTOTYPE:</u> - 210SPT.			<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>			<u>TOP CAP</u>		
Cae	7.1		See K1001/AI/D5.4		
Cge	8.6		<u>DIMENSIONS</u>		
Cag	0.02		See K1001/AI/D1		
Dimension		Min.	Max.		
A (mm)	120	130			
B (mm)	-	46			

NOTES

A: $V_a = 120V$, $V_{g2} = 60V$, $V_{g1} = 0$.

TESTS

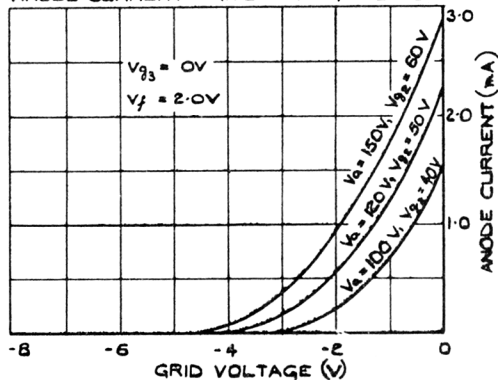
To be performed in addition to those applicable in K1001.

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

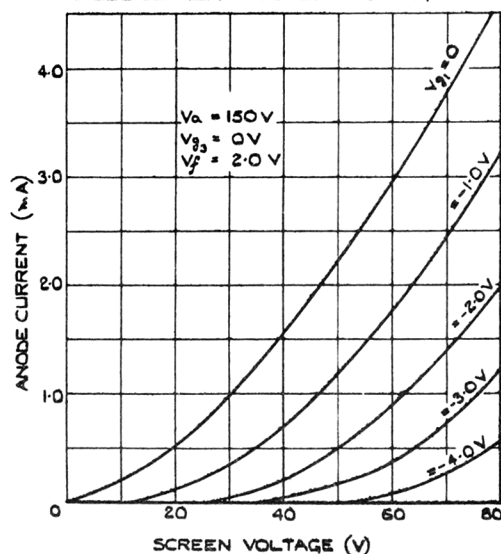
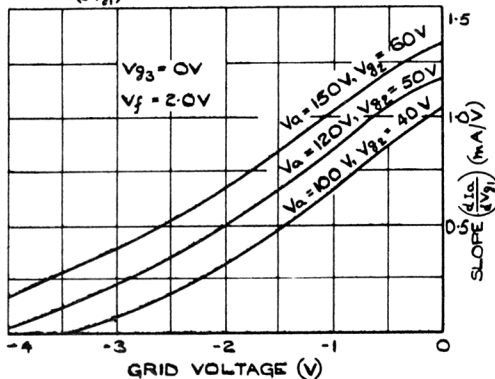
NORMAL OPERATING CONDITIONS

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

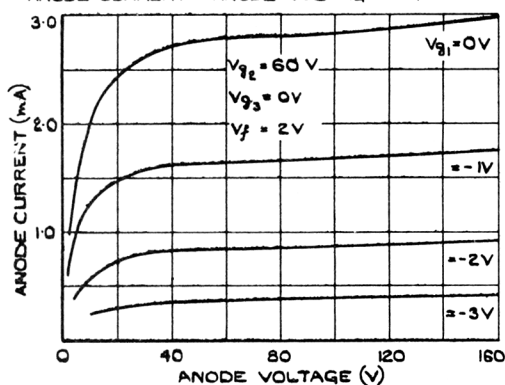
ANODE CURRENT - GRID VOLTAGE CURVES



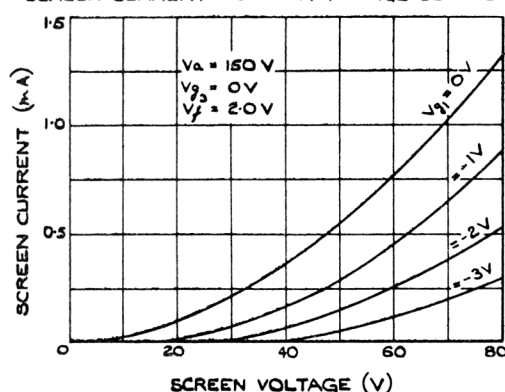
ANODE CURRENT - SCREEN VOLTAGE CURVES

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

ANODE CURRENT - ANODE VOLTAGE CURVES



SCREEN CURRENT - SCREEN VOLTAGE CURVES



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