

MINISTRY OF SUPPLY (S.R.D.E.)

Specification MOS/CV1344/Issue 3 Dated 26.6.46. To be read in conjunction with K1001.	SECURITY Specification <u>Restricted</u> Valve <u>Restricted</u>
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→ indicates a change

<u>TYPE OF VALVE:-</u> Triode pentode <u>CATHODE:-</u> Directly heated <u>ENVELOPE:-</u> Glass, metallised <u>PROTOTYPE:-</u> TP22	MARKING See K1001/4																																																																																																
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%; text-align: center;"><u>RATING</u></th> <th style="width: 10%;"></th> <th style="width: 10%; text-align: center;">Note</th> <th style="width: 50%;"></th> </tr> </thead> <tbody> <tr> <td>Filament voltage (V)</td> <td>2.0</td> <td></td> <td>BASE B9</td> </tr> <tr> <td>Filament current (A)</td> <td>0.26</td> <td></td> <td>Pin Electrode</td> </tr> <tr> <td colspan="3"><u>PENTODE SECTION</u></td> <td>1 Screen grid</td> </tr> <tr> <td>Max. anode voltage (V)</td> <td>150</td> <td></td> <td>2 Pentode anode</td> </tr> <tr> <td>Max. screen voltage (V)</td> <td>150</td> <td></td> <td>3 Suppressor grid</td> </tr> <tr> <td>Mutual conductance (mA/V)</td> <td>1.3</td> <td>A</td> <td>4 Filament</td> </tr> <tr> <td colspan="3"><u>TRIODE SECTION</u></td> <td>5 Filament</td> </tr> <tr> <td>Max. anode voltage (V)</td> <td>150</td> <td></td> <td>6 No connection</td> </tr> <tr> <td>Mutual conductance (mA/V)</td> <td>1.3</td> <td>B</td> <td>7 Triode anode</td> </tr> <tr> <td>Amplification factor</td> <td>33</td> <td>B</td> <td>8 Triode control grid</td> </tr> <tr> <td colspan="3"></td> <td>9 Metallising</td> </tr> <tr> <td colspan="3"></td> <td>T.C. Pentode control grid</td> </tr> <tr> <td colspan="3"><u>CAPACITANCES (pF)</u></td> <td style="text-align: center;">TOPCAP</td> </tr> <tr> <td colspan="3"><u>PENTODE SECTION</u></td> <td>See K1001/AI/D5.1</td> </tr> <tr> <td>Cag1 (max)</td> <td>0.032</td> <td></td> <td style="text-align: center;">DIMENSION</td> </tr> <tr> <td>Cae</td> <td>12.0</td> <td></td> <td>See K1001/AI/D1</td> </tr> <tr> <td>Cge</td> <td>9.25</td> <td></td> <td style="text-align: center;">Dimension Min. Max.</td> </tr> <tr> <td>Cg3*</td> <td>9.6</td> <td></td> <td>A mm 118.5 125.5</td> </tr> <tr> <td>Pentode anode to triode anode</td> <td>2.35</td> <td></td> <td>B mm 43 47</td> </tr> <tr> <td colspan="3"><u>TRIODE SECTION</u></td> <td>L mm 103.5 109.5</td> </tr> <tr> <td>Cag1</td> <td>4.6</td> <td></td> <td></td> </tr> <tr> <td>Cae</td> <td>9.1</td> <td></td> <td></td> </tr> <tr> <td>Cg1*</td> <td>4.5</td> <td></td> <td></td> </tr> </tbody> </table>	<u>RATING</u>		Note		Filament voltage (V)	2.0		BASE B9	Filament current (A)	0.26		Pin Electrode	<u>PENTODE SECTION</u>			1 Screen grid	Max. anode voltage (V)	150		2 Pentode anode	Max. screen voltage (V)	150		3 Suppressor grid	Mutual conductance (mA/V)	1.3	A	4 Filament	<u>TRIODE SECTION</u>			5 Filament	Max. anode voltage (V)	150		6 No connection	Mutual conductance (mA/V)	1.3	B	7 Triode anode	Amplification factor	33	B	8 Triode control grid				9 Metallising				T.C. Pentode control grid	<u>CAPACITANCES (pF)</u>			TOPCAP	<u>PENTODE SECTION</u>			See K1001/AI/D5.1	Cag1 (max)	0.032		DIMENSION	Cae	12.0		See K1001/AI/D1	Cge	9.25		Dimension Min. Max.	Cg3*	9.6		A mm 118.5 125.5	Pentode anode to triode anode	2.35		B mm 43 47	<u>TRIODE SECTION</u>			L mm 103.5 109.5	Cag1	4.6			Cae	9.1			Cg1*	4.5			
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To be performed in addition to those applicable in K1001

	Test conditions			Test	Limits		No. tested			
					Min.	Max.				
a	See K1001/AIII			<u>Capacitances (pF)</u> <u>PENTODE SECTION</u>						
	Links to H.P.	Links to L.P.	Links to E							
	2	TC ₁	1,3,4,5,6,7,8,9,10,TC ₂	(i) Cag ₁	-	0.032				
	2	1,3,4,5,6,7,8,9	10,TC ₁ ,TC ₂	(ii) Cas	9.0	15.0				
	TC ₁	1,3,4,5,6,7,8,9	2,10,TC ₂	(iii) Cg _{1e}	7.0	11.5	6			
	3	1,4,5,6,7,8,9,TC ₁	2,10,TC ₂	(iv) Cg _{3e}	8.3	10.9	per			
	2	7	1,3,4,5,6,8,9,10,TC ₁ ,TC ₂	(v) Pentode anode to triode anode.	1.7	3.0	week			
	7	8	1,2,3,4,5,6,7,9,10,TC ₁ ,TC ₂	<u>TRIODE SECTION</u> (vi) Cag ₁	3.5	6.0				
	7	1,2,3,4,5,6,9,TC ₁	8,10,TC ₂	(vii) Cas	6.8	11.4				
8	1,2,3,4,5,6,9,TC ₁	7,10,TC ₂	(viii) Cg _{1e}	3.6	5.6					
b	V _f = 2.0 volts			I _f	(A)	0.23	0.29	100%		
	Pentode Section									
c	V _f	V _a	V _{g3}	V _{g2}	V _{g1}	I _a (uA)				
d	2.0	120	0	60	0	-	I _a (mA)	2.0	4.0	100%
e	2.0	120	0	60	0 to -1	-	I _{g2} (mA)	0.75	1.5	10% (50)
f	2.0	120	0	60	-1	-	g _m (mA/V)	1.1	1.6	100%
g	2.0	120	0	120	Read.	30	Rev I _g (uA)	-	1.0	100%
h	2.0	120	0	120	As in clause K	30	V _{g1} (V)	-9	-16	1% (20)
							g _m (uA/V)	14	44	1% (20)
	Triode section									
j	V _f	V _a	V _g							
k	2.0	100	0				I _a (mA)	1.6	3.5	100%
	2.0	100	0 to -1				g _m (mA/V)	1.1	1.6	100%