

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

Specification MOS/CV 2103/Issue 3		<u>SECURITY</u>	
Dated:- 9.8.51.		<u>Specification</u>	<u>Valve</u>
To be read in conjunction with K1001		Restricted	Unclassified

→ indicates a change

<u>TYPE OF VALVE</u> :- Sub-miniature var. mu H.F. Pentode				<u>MARKING</u> CV 2103			
<u>CATHODE</u> :- Directly heated				Date Code & Factory			
<u>ENVELOPE</u> :- Glass-umetallised				Identification Code			
<u>PROTOTYPE</u> :- VX8020							
<u>RATING</u>			Note	<u>BASE</u> B8D			
Filament voltage	(V)	1.25	A A A A B	<u>CONNECTIONS</u>			
Filament current	(mA)	25		Pin	Electrode		
Max. anode voltage	(V)	100		1	Internal Connection		
Max. screen voltage	(V)	100		2	G ₁		
Mutual Conductance	(mA/V)	0.95		3	No Connection		
Anode impedance	(MΩ)	0.65		4	-F (S _c)		
Anode current	(mA)	1.9		5	+F (G ₃)		
Screen current	(mA)	0.55		6	No Connection		
Vg ₁ for 10μA/V	(V)	-16		7	A		
				8	G ₂		
<u>CAPACITANCES</u> (pF)			C C C	<u>DIMENSIONS</u> See drawing page 3.			
C _{ag} (max.)		0.01		Dimension	Min.	Max.	
C _{ae}		5.0		A	m.m.	41.2	
C _{ge}		2.9		B	m.m.	10.16	

NOTES

- A. Measured at $V_a = V_{g2} = 70V$, $V_{g1} = 0V$
 B. Measured at $V_a = V_{g2} = 70V$.
 C. Measured with valve shielded.

A sharp bend must not be made in any valve lead closer than 1.5 mm. to the glass seal and soldered joints in the leads must not be made closer than 5.0 mm. to the seal.

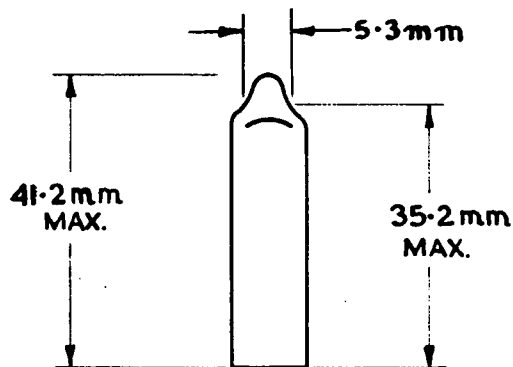
TESTS

To be performed in addition to those applicable in K1001

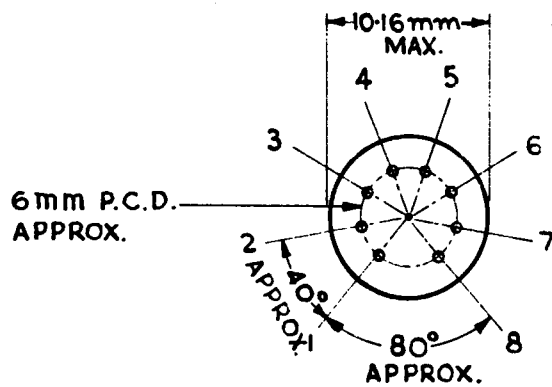
	Test Conditions				Test	Limits		No. Tested	Note
						Min.	Max.		
a	See K1001/ATII				Capacitances (Shielded)(pF)				
	Links to H.P.	Links to L.P.	Links to K.						
	7	2	1,3,4,5, 6,8	(i) Cag	-	0.01	T.A.	1	
	7	1,3,4,5, 6,8	2	(ii) Cae	4.5	5.5	6 per week	1	←
	2	1,3,4,5, 6,8	7	(iii) Cge	2.4	3.4		1	←
b	Vf	Va	Vg2	Vg1					
	1.25	-	-	-	If (mA)	22	28	100%	
c	1.25	70	70	0	Ia (mA)	1.4	2.4	100%	
d	1.25	70	70	0	Ig2 (mA)	0.4	0.7	100%	←
e	1.25	70	70	-1.5	Rev.Ig1 (μA)	-	0.5	100%	
f	1.25	70	70	0	gm (mA/V)	0.7	1.2	100%	←
→ g	1.1	70	70	0	gm (mA/V)	0.56	-	100%	←
h	1.25	70	70	-13.5	Ia(tail) (μA)	2	60	100%	2 ←

NOTES

- 1. Capacities measured with shield roundvalve.
All should be measured at R.F.
2. 1 Megohm protective resistance in series



BULBS STRAIGHTNESS TEST
 THE FINISHED VALVE MUST PASS
 THROUGH A CYLINDRICAL GAUGE
 OF LENGTH AT LEAST EQUAL
 TO THAT OF THE BULB. I.D.
 OF CYLINDER = 0.4 INCH.



VALVE BASE APPROX $\frac{2}{1}$

THE LEADS SHALL BE FLEXIBLE 25 - 27 S.W.G.
 TINNED COPPER-CLAD NICKEL IRON WIRE AT LEAST
 32 mm IN LENGTH.