VALVE ELECTRONIC

CV2103
(VX8020)

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

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

→ indicates a change

TYPE OF VALVE:- Sub-miniature var. mu H.F. Pentode
CATHODE:- Directly heated
ENVELOPE:- Glass-unmetallised
PROTOTYPE:- VX8020

MARKING
CV 2103
Date Code & Factory Identification Code

BASE
B8D

RATING		Note
Filament voltage (V)	1.25	
Filament current (mA)	25	
→ Max. anode voltage (V)	100	
→ Max. screen voltage (V)	100	
→ Mutual Conductance (mA/V)	0.95	A
→ Anode impedance (MΩ)	0.65	A
Anode current (mA)	1.9	A
→ Screen current (mA)	0.55	A
Vg1 for 10μA/V (V)	-16	B
CAPACITANCES (pF)		
Cag (max.)	0.01	C
Cae	5.0	C
Cge	2.9	C

CONNECTIONS

Pin	Electrode
1	Internal Connection ←
2	G_1
3	No Connection ←
4	-F (Sc) ←
5	+F (G_3) ←
6	No Connection ←
7	A
8	G_2

DIMENSIONS
See drawing page 3.

Dimension	Min.	Max.
A m.m.		41.2 ←
B m.m.		10.16 ←

NOTES

A. Measured at Va = Vg2 = 70V, Vg1 = 0V
B. Measured at Va = Vg2 = 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.

CV 2103

TESTS

To be performed in addition to those applicable in K1001

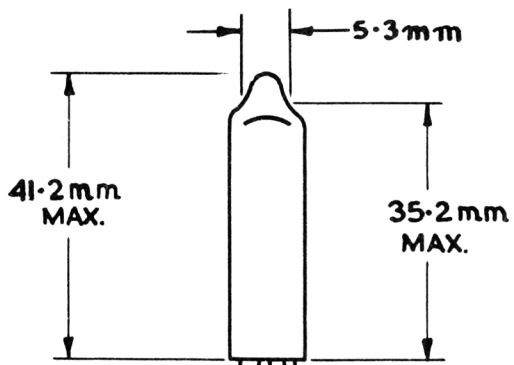
	Test Conditions				Test	Limits		No. Tested	Note
						Min.	Max.		
	See K1001/AIII				Capacitances				
	Links to H.P.	Links to L.P.	Links to E.		(Shielded) (pF)				
a	7	2	1,3,4,5,6,8		(i) Cag	-	0.01	T.A.	1
	7	1,3,4,5,6,8	2		(ii) Cae	4.5	5.5	6 per week	1
	2	1,3,4,5,6,8	7		(iii) Cge	2.4	3.4		1
	Vf	Va	Vg2	Vg1					
b	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.

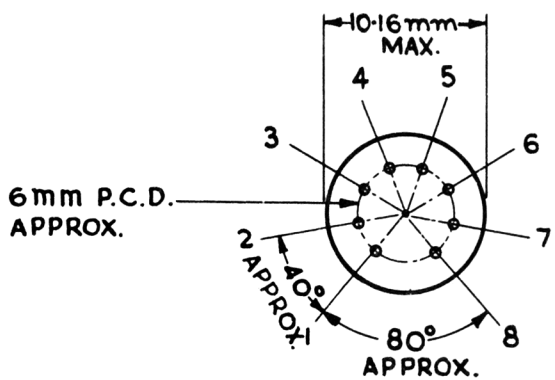
2. 1 Megohm protective resistance in series

CV2103



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 32mm IN LENGTH.