VALVE ELECTRONIC

CV2104
(VX8021)

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

Specification MOS/CV 2104/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 Diode-Pentode
CATHODE:- Directly heated
ENVELOPE:- Glass-unmetallised
PROTOTYPE:- VX8021

MARKING
CV 2104
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)	0.4	A
→ Anode impedance	(MΩ)	0.7	A
→ Anode current	(mA)	0.75	A
→ Screen current	(mA)	0.2	A
Nominal power output	(mW)	20	B

CONNECTIONS

Pin	Electrode
1	A
2	No Connection ←
3	G1
4	-F (G_3)
5	+F
6	D
7	No Connection ←
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 = 90V, Vg1 = -2.3V
B. Measured at Va = Vg2 = 90V, Vg1 = -2.3V, R_L = 0.15 MΩ

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.

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TESTS

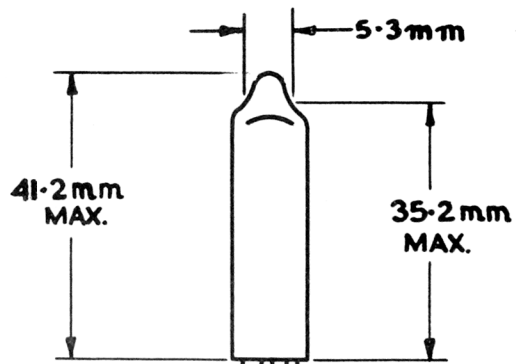
To be performed in addition to those applicable in K1001

	Test Conditions					Test		Limits		No. Tested
	Vf	Va	Vg2	Vg1	Vd			Min.	Max.	
a	1.25	-	-	-	-	If	(mA)	22	28	100%
b	1.25	70	70	0	-	Ia	(mA)	0.8	1.4	100%
c	1.25	70	70	0	-	Ig2	(mA)	0.20	0.34	100%
d	1.25	70	70	-1.5	-	Rev.Ig1	(µA)	-	0.5	100%
e	1.25	70	70	0	-	gm	(mA/V)	0.34	0.56	100%
→ f	1.1	70	70	0	-	gm	(mA/V)	0.27	-	100%
g	1.25	0	0	0	-	Id(Note 1)	(µA)	3.0	-	100%
h	1.25	0	0	0	+10 +5	Id	(mA)	1.0 0.3	-	100%

NOTE

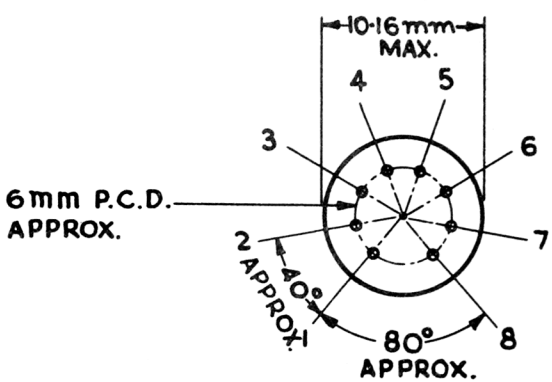
1. Meter resistance 600 ohms.

CV2104



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.

ELECTRONIC VALVE SPECIFICATIONS
SPECIFICATION MOA/CV2104

ISSUE 3 DATED 9TH AUGUST, 1951.

AMENDMENT NO. 1

Page 2. Test h

Test conditions Column Vd

Delete + 10 Insert + 5

Test Id, Column Min. Limits

Delete 1.0 Insert 0.3.

October, 1961.
N.4646

Signals Research and Development Establishment.

5.2.62