MINISTRY OF SUPPLY (D.L.R.D.(A)/R.A.E.)

VALVE ELECTRONIC

CV2130

Specification MOSA/CV.2130 Issue 6 Dated 11.1.55 To be read in conjunction with BS448,BS1409 & K1001	SECURITY Specification: UNCLASSIFIED Valve: UNCLASSIFIED

→ Indicates a change

TYPE OF VALVE - V.H.F. Power Tetrode (Transmitting)

CATHODE - Directly Heated

ENVELOPE - Glass - unmetallised

PROTOTYPE - QY3 - 125

MARKING

See K.1001/4

RATING

(All Limiting Values are Absolute)

			Note
Filament Voltage	(V)	5.0	
Filament Current	(A)	6.5	
Max. Anode Voltage	(kV)	3	B
Max. Screen Voltage	(V)	600	B
Max. Anode Dissipation	(W)	125	B
Max. Screen Dissipation	(W)	20	B
Max. Control Grid Dissipation	(W)	5	B
Max. D.C. Control Grid Voltage	(V)	-500	B
Max. D.C. Anode Current	(mA)	225	B
Mutual Conductance	(mA/V)	2.45	
Inner Amplification factor ($\mu g1$, g2)		6.2	
Max. Anode Top Cap Temperature		220°C	A

BASE

BS.448/B5F

CONNECTIONS

Pin	Electrode
1	f
2	g2
3	g1
4	g2
5	f
T.C.	a

CAPACITANCES (pF)

C in (nom.)	10.8
C out (nom.)	3.0
Ca, g1 (max.)	0.07

DIMENSIONS

See Drawing on Page 4 ←

NOTES

A. Forced Air Cooling is required at frequencies above 30 Mc/s.
The temperature of the anode seal shall not exceed 170°C.
The base seals shall be cooled by the circulation of at least 2 cubic feet of air per minute
For intermittent use the maximum temperature shall be 220°C.

B. Class C Telegraphy

To be performed in addition to those applicable in K.1001

	Test Conditions					Test	Limits Min.	Limits Max.	No. Tested	Note
a	See K.1001/AIII									
	Links to H.P.		Links to L.P.	Links to E.		CAPACITANCES (pF)				
	3		1,2,4,5	6,7,8,9, 10, T.C.1, T.C.2		C in	9.2	12.4	6 per week	
	T.C.1		1,2,4,5,	3,6,7,8, 9,10, T.C.2		C out	2.5	3.5		
	T.C.1		3	1,2,4,5,6,7,8, 9,10, T.C.2		Ca, g1	-	0.07	T.A.	
	Vf	Va(kV)	Vg2	Vg1	Ia(mA)					
b	5.0	0	0	0	0	If	6.0	7.0	100% or S	
c	6.0	See Note 1				g1 Primary Emission (μA)	-	500	100%	1
d	6.0	See Note 2				g2 Primary Emission (μA)	-	500	100%	2
e	5.0	2.5	500	Adjust	50	Vg1 (V)	-63	-80	100%	
f	5.0	2.5	500	Adjust	50	Ig1 (μA)	-	10	100%	
g	5.0	400(V)	400	100	-	Ig1 (mA)	-	50	100%	3
h	5.0	-	300	Adjust	-	μg1, g2	5.2	6.5	20 per week	4
k	5.0	Anode, g2 and g1 strapped with 2.5 kV Peak applied				Peak Emission (A)	4.0	-	100%	
m	5.0	3.0	350	-	100	Power Output (W) Ig2 (mA)	175 15	- 50	20 per week	5
n	5.0	3.0	350	-	100	Power Output (W)	175	-	T.A.	6

NOTES

1. With anode and g2 floating, the 50 c/s A.C. volts applied to g1 through suitable rectifiers, shall be adjusted to heat the grid during the (+)ve half-cycles and give mean Ig1 = 170 mA D.C. The grid emission shall be measured during the (-)ve half-cycles. Test duration = 15 seconds minimum.

2. With anode floating, the 50 c/s A.C. volts applied to g2 through suitable rectifiers, shall be adjusted to heat the grid during the (+)ve half-cycles and give a mean Ig2 = 75 mA D.C. The grid emission shall be measured during the (-)ve half-cycles. Test duration = 15 seconds minimum.

CV2130

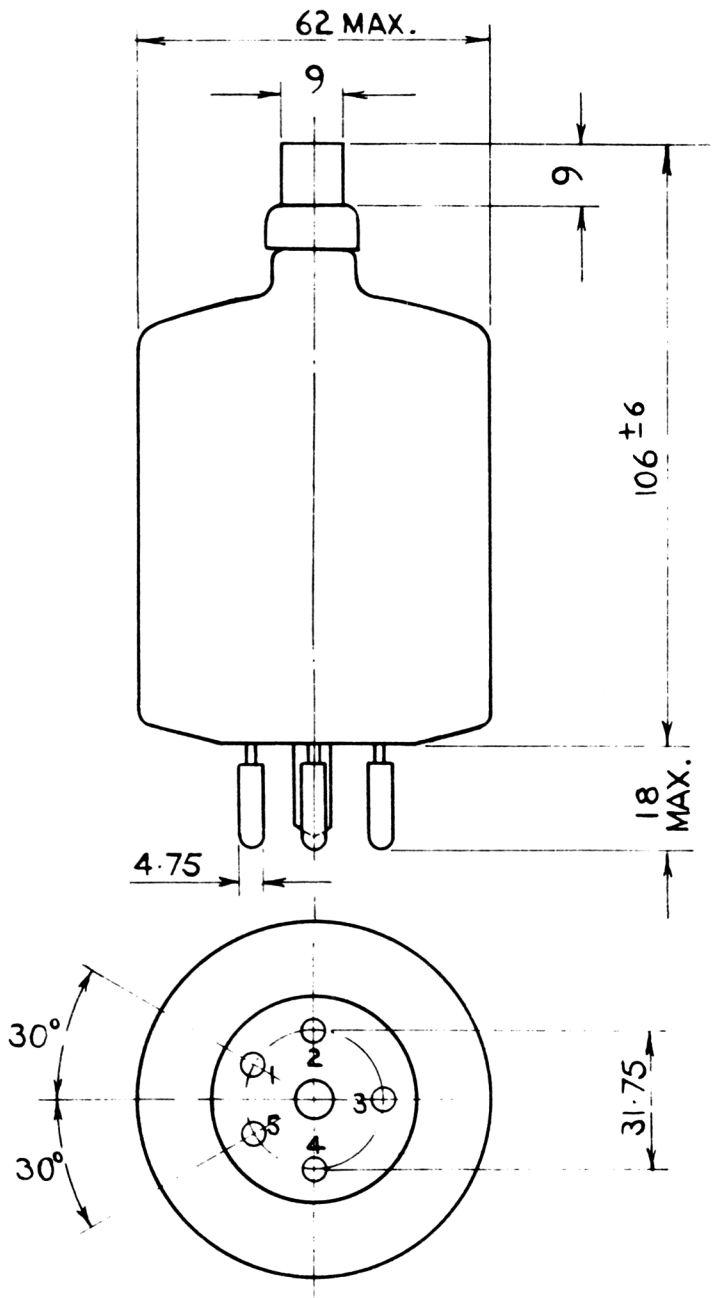
NOTES (Continued)

3. Ig1 must increase continuously when Vg1 is increased uniformly from 0 - 1 volt.

4. Anode floating; Vg1 D.C. adjusted to give Ig2 = 60 mA.

5. Power oscillation test frequency = 15 Mc/s; Rg1 = 15000 ohms

6. Power oscillation test frequency = 120 Mc/s; Rg1 = 15000 ohms



ALL DIMENSIONS IN MILLIMETRES