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

VALVE ELECTRONIC **CV2131**

Specification MOSA/CV.2131 Issue 6 Dated 29.5.56 To be read in conjunction with BS448 BS1409 and K1001	SECURITY Specification: UNCLASSIFIED Valve: UNCLASSIFIED

→ Indicates a change

TYPE OF VALVE - Transmitting Tetrode

CATHODE - Directly Heated

ENVELOPE - Glass, unmetallised

PROTOTYPE - QY4 - 250

MARKING

See K.1001/4

RATINGS

			Note
Filament Voltage	(V)	5.0	
Filament Current	(A)	14.1	
Max. Anode Voltage	(kV)	4	A,C
Max. Screen Voltage	(V)	600	A,C
Max. Anode Dissipation	(W)	250	A,C
Max. Screen Dissipation	(W)	35	A,C
Max. Control Grid Dissipation	(W)	10	A,C
Max. D.C. Control Grid Voltage	(V)	-500	A,C
Max. D.C. Anode Current	(mA)	350	A,C
Mutual Conductance	(mA/V)	4.0	
Inner Amplification Factor (μg1,g2)		5.25	
Max. Anode Top Cap Temperature		170°C	A,B

BASE

B.S.448/B5F

CONNECTIONS

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

CAPACITANCES (pF)

C in (nom.)	12.6
C out (nom.)	4.4
Ca, g1 (max.)	0.14

DIMENSIONS

See Drawing on Page 3

NOTES

A. Absolute value.

B. 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.

C. Class C. Telegraphy.

Z.11975.R.

CV2131

TESTS

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

	Test Conditions					Test	Limits		No. Tested	Note
							Min.	Max.		
	See K.1001/AIII									
	Links to H.P.		Links to L.P.		Links to E	CAPACITANCES (pF)				
a	3		1,2,4,5,		6,7,8,9,10, T.C.1,T.C.2	C in	10.70	14.50	6 per week	
a	T.C.1		1,2,4,5		3,6,7,8,9, 10,T.C.2	C out	3.70	5.10		
a	T.C.1		3		1,2,4,5,6, 7,8,9,10, T.C.2	Ca, g1	-	0.14	T.A.	
	Vf	Va(kV)	Vg2	Vg1	Ia(mA)					
b	5.0	0	0	0	0	If (A)	13.5	14.7	100% or S	
c	6.0	See Note 1				g1 Primary Emission (μA)	-	500	100%	1
d	6.0	See Note 2		0	-	g2 Primary Emission (μA)	-	500	100%	2
e	5.0	2.5	500	Adjust	100	Vg1 (V)	-65	-95	100%	
f	5.0	2.5	500	Adjust	100	Ig1 (μA)	-	10	100%	
g	5.0	-	500	Adjust	-	μg1,g2	4.5	6.0	20 per week	3
h	5.0	Anode, g2 and g1 Strapped with 2.5 kV Peak applied				Peak Emission (A)	4.0	-	100%	
→ j	5.0	3.0	350	-	200	Power Output (W) Ig2 (mA)	350	- 100	20 per week	4
k	5.0	3.0	350	-	200	Power Output (W)	350	-	T.A.	5

NOTES

(1) With anode and g2 floating, the 50c/s A.C. volts applied to g1 through suitable rectifiers, shall be adjusted to heat the grid during the (+)ve half cycles and give a mean Ig1 = 200 mA D.C. The grid emission shall be measured during (-)ve half cycles. Test duration to be 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 = 170 mA D.C. The grid emission shall be measured during (-)ve half cycles. Test duration to be 15 seconds minimum.

CV2131

NOTES (Cont'd)

(3) Anode earthed, Vg1 adjusted to give:

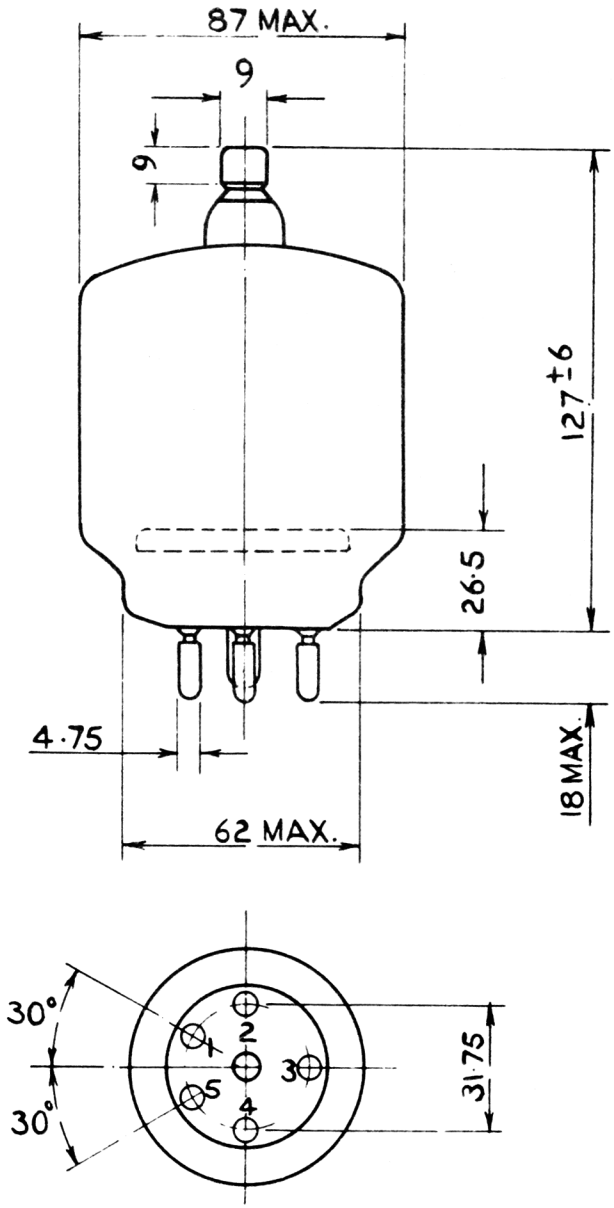
I_{g2} = 70 mA.

(4) Power oscillation test frequency = 15 Mc/s:

R_{g1} = 12,000 ohms.

(5) Power oscillation test frequency = 75 Mc/s:

R_{g1} = 12,000 ohms.



ALL DIMENSIONS IN MILLIMETRES.