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

VALVE ELECTRONIC **CV417**

Specification MOSA/CV417 Issue 5 Dated 6.12.1954 To be read in conjunction with B.S.448, B.S.1409 and K1001	SECURITY Specification: UNCLASSIFIED Valve: UNCLASSIFIED

→ Indicates a change

TYPE OF VALVE - Grounded Grid Triode CATHODE - Indirectly Heated ENVELOPE - Glass (See Note E) PROTOTYPE - EC.91 R.E.T.M.A. DESIGNATION - 6AQ4	MARKING See K1001/4 Additional Marking 6AQ4 ← BASE B.S.448/B7G

RATINGS			Note
Heater Voltage	(V)	6.3	
Heater Current	(A)	0.3	
Max. Operating Anode Voltage	(V)	275	A
Max. Anode Voltage (Ia = 0)	(V)	550	A
Max. Anode Dissipation	(W)	3.0	A,B
Max. Mean Cathode Current	(mA)	17	A
Mutual Conductance	(mA/V)	8.5	C
Amplification Factor		100	C
Min. Grid Voltage to ensure cut-off to a slope of 100 μA/V	(V)	-8.0	
Max. h,k Voltage	(V)	150	A
Max. g,k Voltage	(V)	100	A
Max. Operating Frequency	(Mc/s)	250	

CAPACITANCES (pF)		
Cg,kh (Nom.)	5.25	D
Ca,kh (Max.)	0.2	D
Ca, g (Nom.)	3.8	D
Ck, gh (Nom.)	8.5	D

CONNECTIONS

Pin	Electrode
1	g
2	k
3	h
4	h
5	k
6	g
7	a

DIMENSIONS ←
See B.S.448/B7G/2.1.
Size Ref. No. 2

Dimensions (mm)	Min.	Max.
A seated height	-	47.5 ←
C diameter	-	19.0
D overall length	-	54.5 ←

NOTES

A. Absolute maximum values.
B. Without shield.
C. Va = 250V; Vg = -1.5V; Ia = 10mA
D. Measured with close fitting metal shield, connected to grid.
E. The inner surface of the bulb shall be treated to prevent bulb charge effects which could give rise to noise.

CV417

TESTS

To be carried out in addition to those applicable in K1001

	Test Conditions			Test	Limits Min.	Limits Max.	No. Tested	Note
				CAPACITANCES (pF)				
	Links to H.P.	Links to L.P.	Links to E					
	1,6,8,9	2,3,4,5,	7 and 10 TC1, TC2	Cg,kh	3.9	6.6	6 per week.	1
a	7	2,3,4,5,	1,6,8,9, 10 TC1, TC2	Ca,kh	-	0.2	T.A.	1
	7	1,6,8,9	2,3,4,5 10, TC1 TC2	Ca,g	3.1	4.5	6 per week	1
	2,5	1,3,4,6 8 and 9	7 and 10 TC1, TC2	Ck, gh	7.0	10.0		

	Vh (V)	Va (V)	Vg1 (V)	Ia (mA)					
b	6.3	0	0	0	Ih (A)	0.27	0.33	100% or S	
c	6.3	250	-	10	-Vg1 (V)	1	2	100%	
d	6.3	250	-	10	gm (mA/V)	7	10	100%	
e	6.3	250	-	10	-Ig (μA)	-	0.5	100%	
f	6.3	250	-5	-	Ia (mA)	-	0.75	100%	
g	6.3	250	-	10	Equivalent noise resistance (ohms) with grid earthed	-	400	T.A.	

NOTES

1. Measured with a close fitting metal shield connected to grid.

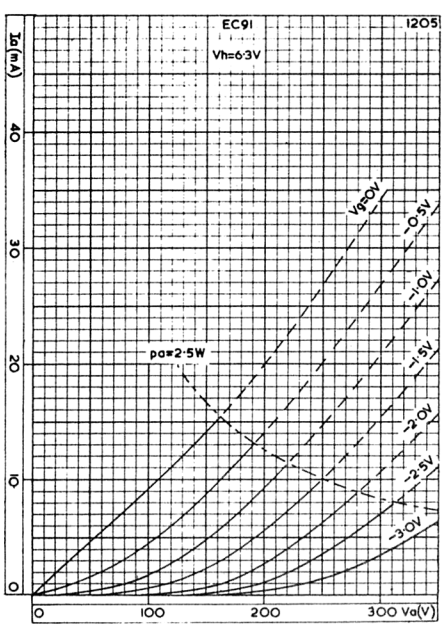
DATA SHEET

Valve Electronic Type CV 417

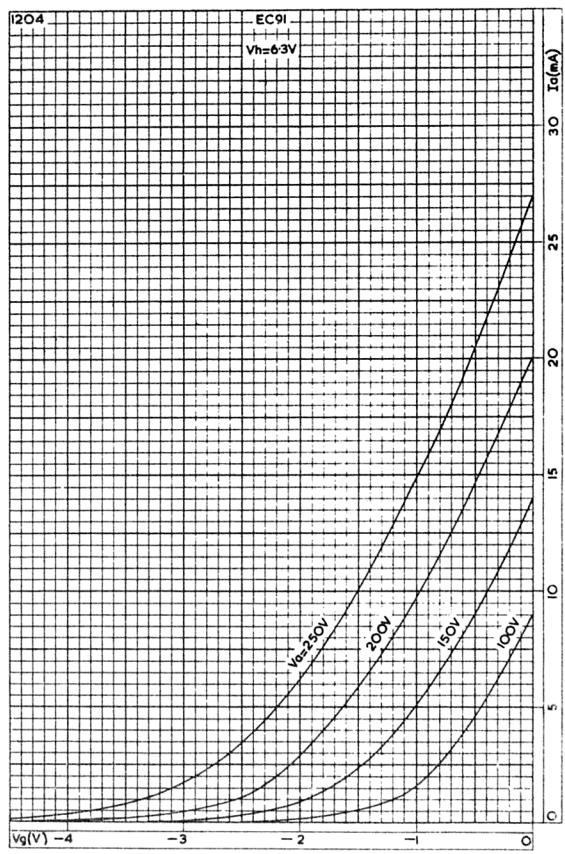
TYPICAL OPERATING CONDITIONS

Anode Voltage	250	Volts
Cathode Bias Resistor	150	Ohms
Anode Current	10	mA
Grid (g1) Voltage	-1.5	Volts
Mutual Conductance	8.5	mA/V
Amplification Factor	100	-
Anode Impedance	12,000	Ohms
Equivalent Noise Resistance	400	Ohms
Max. Operating Frequency	250	mc/s

Mounting Position - Any



ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE
WITH GRID VOLTAGE AS PARAMETER.



ANODE CURRENT PLOTTED AGAINST GRID VOLTAGE
WITH ANODE VOLTAGE AS PARAMETER.