

SPECIFICATION MOS(A)/CV417

ISSUE 5 DATED 6.12.54

AMENDMENT NO. 1

Page 1 Ratings

Amend the value for Amplification Factor from 100 to read 90.

Royal Aircraft Establishment.

March, 1959.

N.54576

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

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

-----> Indicates a change

TYPE OF VALVE	- Grounded Grid Triode		<u>MARKING</u> See K1001/4 <u>Additional Marking</u> 6AQ4		
CATHODE	- Indirectly Heated		<u>BASE</u> B.S.448/B7G		
ENVELOPE	- Glass (See Note E)				
PROTOTYPE	- EG.91				
R.E.T.M.A. DESIGNATION	- 6AQ4				
<u>RATINGS</u>		Note	<u>CONNECTIONS</u>		
Heater Voltage	(V) 6.3		Pin	Electrode	
Heater Current	(A) 0.3				
Max. Operating Anode Voltage	(V) 275	A	1	g	
Max. Anode Voltage (Ia = 0)	(V) 550	A	2	k	
Max. Anode Dissipation	(W) 3.0	A,B	3	h	
Max. Mean Cathode Current	(mA) 17	A	4	h	
Mutual Conductance	(mA/V) 8.5	C	5	k	
Amplification Factor	100	C	6	g	
Min. Grid Voltage to ensure out-off to a slope of 100 μ A/V	(V) -8.0		7	a	
Max. h,k Voltage	(V) 150	A	<u>DIMENSIONS</u> See B.S.448/B7G/2.1. Size Ref. No. 2		
Max. g,k Voltage	(V) 100	A			
Max. Operating Frequency	(Mc/s) 250		Dimensions (mm)	Min.	Max.
<u>CAPACITANCES (pF)</u>			A seated height	-	47.5
Cg, kh (Nom.)	5.25	D	C diameter	-	19.0
Ca, kh (Max.)	0.2	D	D overall length	-	54.5
Ca, g (Nom.)	3.8	D			
Ck, gh (Nom.)	8.5	D			
<u>NOTES</u>					
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		No. Tested	Note					
						Min.	Max.							
a					CAPACITANCES (pF)									
	Links to H.P.	Links to L.P.	Links to E		Cg, kh	3.9	6.6	6 per week.	1					
	1,6,8,9	2,3,4,5,	7 and 10 TC1, TC2											
	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	1
2,5	1,3,4,6 8 and 9	7 and 10 TC1, TC2		Ck, gh						7.0	10.0	per week		
b	Vh (V)	Va (V)	Vgl (V)	Ia (mA)	Ih (A)	0.27	0.33	100% or 3						
c	6.3	250	-	10	-Vgl (V)	1	2	100%						
d	6.3	250	-	10	gm (mA/V)	7	10	100%						
e	6.3	250	-	10	-I _g (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.

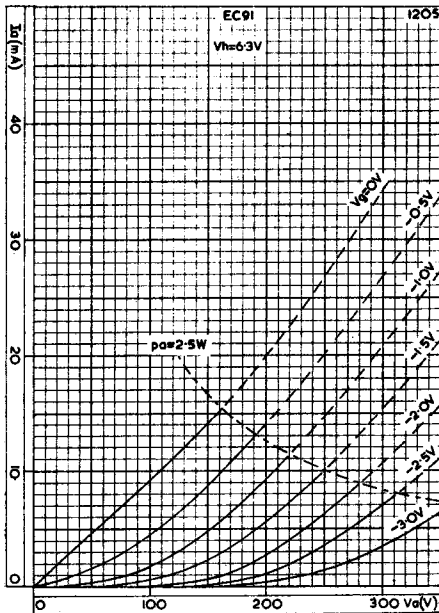
DATA SHEET

Valve Electronic Type CV 417

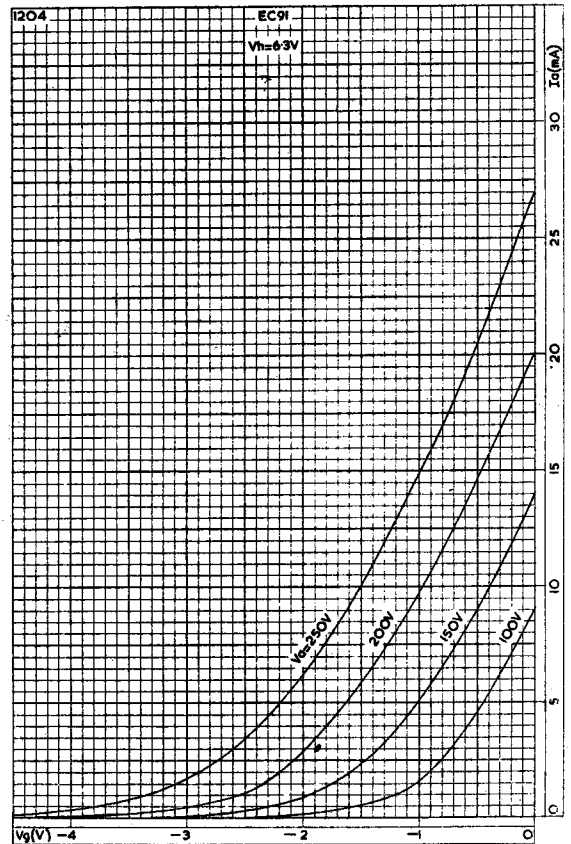
TYPICAL OPERATING CONDITIONS

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.