

ELECTRONIC VALVE SPECIFICATIONS

SPECIFICATION CV.465

ISSUE 5 DATED 16.10.54

AMENDMENT No.1

Page 1

Dimensions Table

Amend the table to read
as follows:

Dimensions	Min.	Max.
A m.m.	-	38.00
B m.m.	9.3	10.16

T.V.C. Office for
Director,
Royal Aircraft Establishment.

April, 1957

N. 87688

ELECTRONIC VALVE SPECIFICATIONS

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AMENDMENT NO.2.

Page 2

Test "g". Ia

Under "Va" column delete 100V and substitute "See Note 2".

Amend Note 2 to read:

"With an anode supply voltage of 100V applied through
a 1M Ω protective resistance to the anode."

6th August, 1957.
N.5053

Director,
Royal Aircraft Establishment.

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

Specification MOSA/CV465 Issue 5 Dated 16.10.54 To be read in conjunction with B.S.1409 and K1001	<u>SECURITY</u>	
	<u>Specification</u> UNCLASSIFIED	<u>Valve</u> UNCLASSIFIED

→ Indicates a change

TYPE OF VALVE - H.F. Pentode, sharp cut off		<u>MARKING</u> See K.1001/4 CV number, T.A. letters, Factory and Date code, only required.			
CATHODE - Indirectly Heated					
ENVELOPE - Unmetallised Glass		<u>BASE</u> B8D			
PROTOTYPE - VX8045					
<u>RATING</u>		Note	<u>CONNECTIONS</u>		
Heater Voltage	(V)	6.3	Pin	Electrode	
Heater Current	(mA)	150			
Max. anode Voltage (Ia = 0)	(V)	350	1	g1	
Max. Screen Voltage (Ig2 = 0)	(V)	350			
Max. anode Dissipation	(W)	1.0	2	k, g3 + s	
Max. Screen Dissipation	(W)	0.4			
Max. Operating anode Voltage	(V)	190	3	h	
Max. Operating Screen Voltage	(V)	190			
Mutual Conductance	(mA/V)	5.0	4	k, g3 + s	
anode Impedance	(MΩ)	0.3			
Anode Current	(mA)	7.0	5	a	
Screen Current	(mA)	2.2			
Max. Cathode Current	(mA)	12	6	h	
Inner μ		36			
			7	g2	
			3	k, g3 + s	
			<u>DIMENSIONS</u> See drawing on Page 3		
<u>CAPACITANCES (pF)</u>			Dimensions	Min.	Max.
Cin (nom) Shielded		4.0	A mm.	-	38.00
(nom) Unshielded		4.0			
Cout (nom) Shielded		2.5	B mm.	-	10.16
(nom) Unshielded		2.00			
Ca, g1 (max) Shielded		0.015			
(max) Unshielded		0.02			
<u>NOTES</u>					
A. Absolute maximum values.					
B. All measured at Va = Vg2 = 100; Vg1 = - 1.4.					

TESTS

To be performed in addition to those applicable in K1001

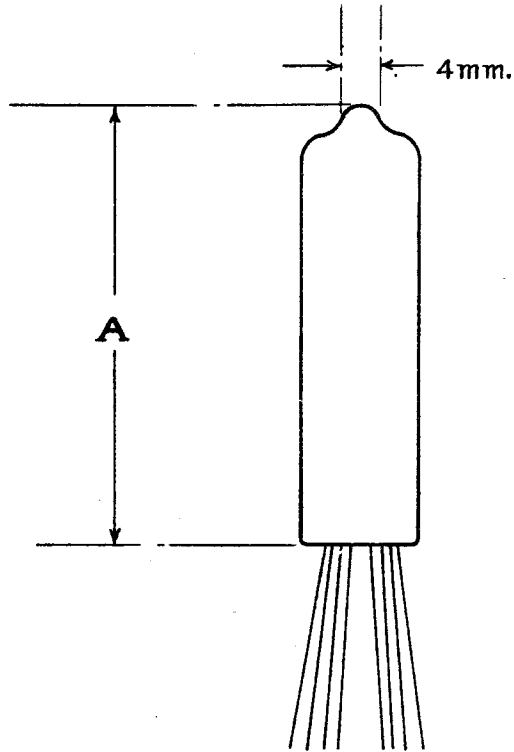
Test Conditions						Test	Limits		No. Tested	Note		
							Min.	Max.				
See K1001/A. III						<u>CAPACITANCE (pF)</u>	C in	3.3	4.9	6	1	
Links to H.P.	Links to L.P.	Links to E										
1	2,3,4,6,7,8, Sh.	5										
5	2,3,4,6,7,8, Sh.	1										
1	5	2,3,4,6,7,8, Sh.										
	Vh	Va	Vg2	Ia	Vg1							
b	6.3	-	-	-	-	Ih (ma)	135	165	100% or 3			
c	6.3	100	100	7.0 mA.	Adjust	Vg1 (V)	-0.8	-2.0	100%			
d	6.3	100	100	7.0 mA.	-	gm mA/V	4.0	6.0	100%			
e	6.3	100	100	7.0 mA.	-	Ig2 (mA)	1.8	2.6	100%			
f	6.3	100	100	7.0 mA.	-	Reverse Ig (μA)	0	0.5	100%			
g	6.3	100	100	-	-8V	Ia (μA)	-	50	100%		2	
h	6.3	100	100	7.0 mA	-	inner μ	31	41	20 per week		3	

Vibration and Microphony

To be determined

NOTES

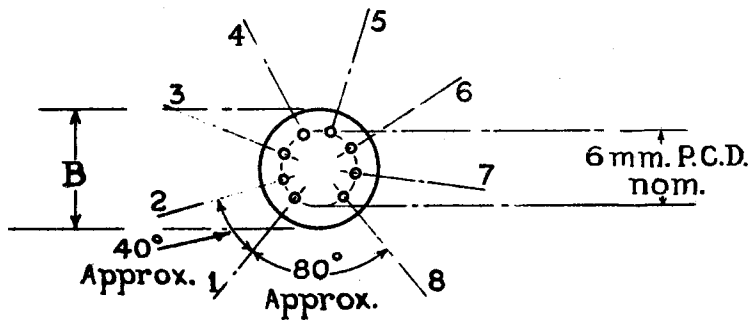
1. Capacities measured with shield round valve. Connections refer to valve pins. All should be measured at R.F.
2. 1 Megohm protective resistance in meter circuit.
3. Peak grid swing $\pm 0.5V$, Vg2 adjusted to maintain constant Ia.



BULB 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.

THE LEADS SHALL BE FLEXIBLE 25-27 S.W.G. TINNED WIRE AT LEAST 38 mm. IN LENGTH



Valve Electronic Type CV 465

PRELIMINARY DATA AND OPERATING CONDITIONS

Maximum Ratings (In addition to those given in the Test Specification)

Grid (g_1) Voltage at $I_{g_1} = +0.3\mu A$	-1.3	Volts
Grid to Cathode Resistance	0.5	Megohm
Heater to Cathode Resistance	20,000	Ohms
Heater to Cathode Voltage	100	Volts

Typical Operating Conditions

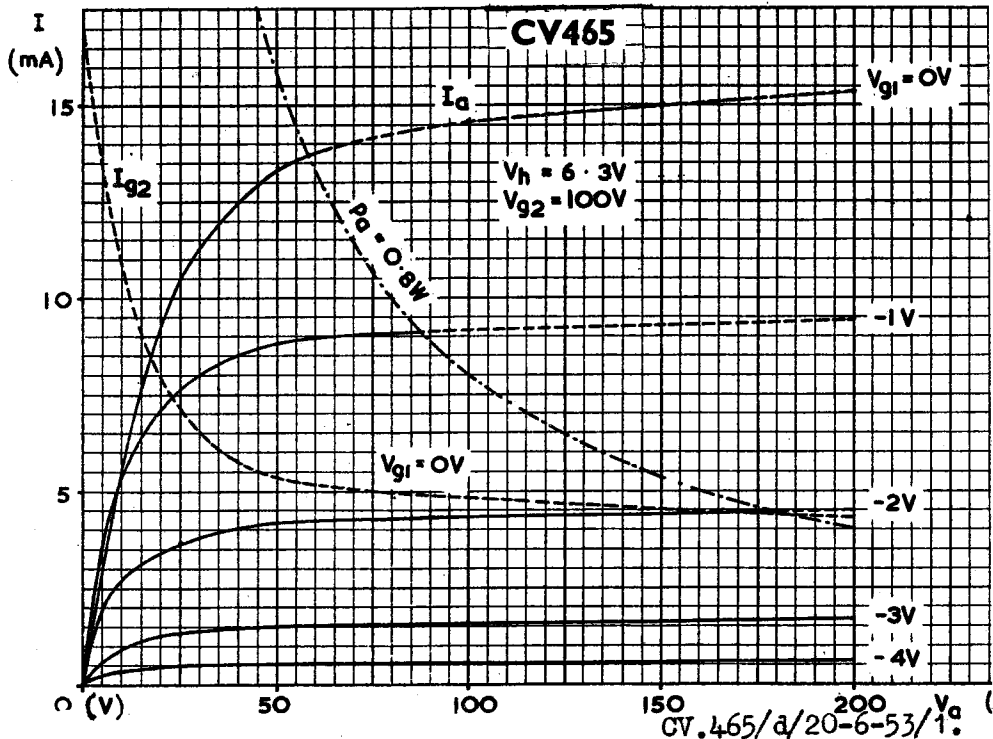
Anode Voltage	100	Volts
Screen (g_2) Voltage	100	Volts
Anode Current	7.0	mA
Screen (g_2) Current	2.2	mA
Grid (g_1) ² Voltage	-1.4	mA
Mutual Conductance	5.0	mA/V
Anode Impedance	0.25	Megohm
Amplification factor (g_m/g_o)	36	-
Equivalent Noise Resistance	1,600	Ohms
Input Damping at 50 Mc/s	30,000	Ohms

Mounting Position - Any

Leads

The leads must not be bent at a point nearer than 1.5 mm. to the base seal.
Soldering of leads to connections must be at least 5 mm. from the base seal.

Maximum Bulb Temperature - 100°C. approx.



DATA SHEET

