

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

Specification MOSA/JV465
 Issue 5 Dated 16.10.54
 To be read in conjunction with B.3.1409 and K1001

SECURITY
Specification Valve
 UNCLASSIFIED 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									
PROTOTYPE - VX8045				<u>BASE</u> B8D					
<u>RATING</u>				<u>CONNECTIONS</u>					
				Note					
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		2		k, g3 + s	
Max. anode Dissipation (W)				1.0		3		h	
Max. Screen Dissipation (W)				0.4		4		k, g3 + s	
Max. Operating anode Voltage (V)				190		5		a	
Max. Operating Screen Voltage (V)				190		6		h	
Mutual Conductance (ma/V)				5.0		7		g2	
Anode Impedance (MΩ)				0.3		3		k, g3 + s	
Anode Current (ma)				7.0					
Screen Current (ma)				2.2					
Max. Cathode Current (ma)				12					
Inner μ				36					
						<u>DIMENSIONS</u>			
						See drawing on Page 3			
<u>CAPACITANCES (pF)</u>						Dimensions		Min.	Max.
Cin (nom) Shielded				4.0					
(nom) Unshielded				4.0		A mm.		-	38.00
Cout (nom) Shielded				2.5		B mm.		9.3	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.									

To be performed in addition to those applicable in K1001

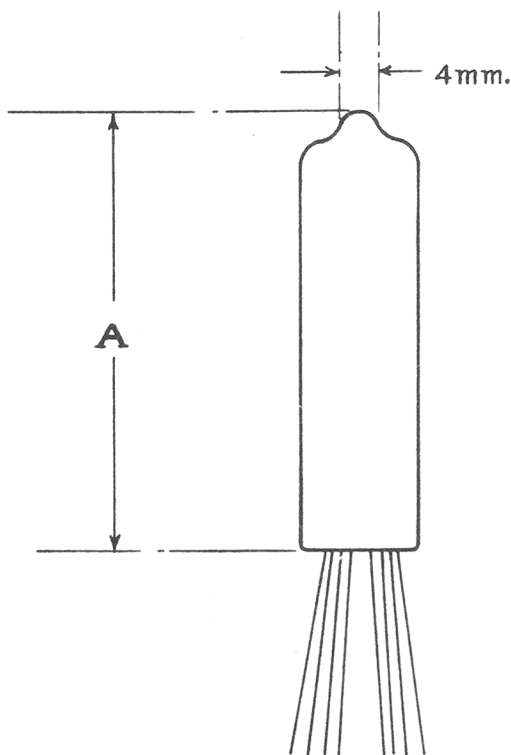
Test Conditions						Test	Limits		No. Tested	Note					
							Min.	Max.							
a	See K1001/A. III					<u>CAPACITANCE (pF)</u>			6	1					
	Links to H.P.	Links to L.P.	Links to E	C in	3.3						4.9	per			
	1	2,3,4,6, 7,8, Sh.	5												
	5	2,3,4,6, 7,8, Sh.	1										C out	2.1	3.1
	1	5	2,3,4,6, 7,8, Sh.												
b	Vh	Va	Vg2	Ia	Vg1	Ih (mA)	135	165	100% or S						
	6.3	-	-	-	-										
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	See 100 Note	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

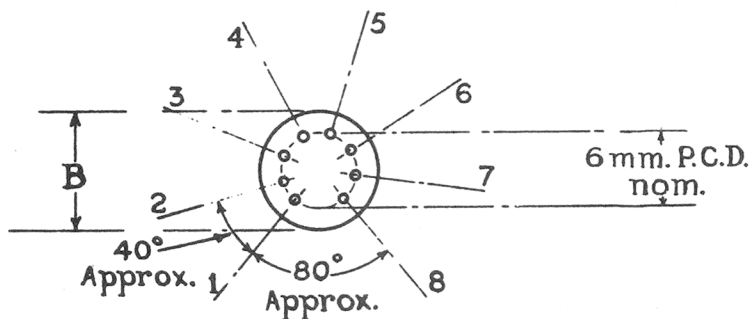
- Capacities measured with shield round valve. Connections refer to valve pins. All should be measured at R.F.
- with an anode supply voltage of 100V applied through
2. a 1 Megohm protective resistance in meter circuit. to the anode.
- Peak grid swing $\pm 0.5V$, Vg2 adjusted to maintain constant Ia.



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



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

SPECIFICATION CV.465

ISSUE 5 DATED 16.10.54

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.

DATA SHEET

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

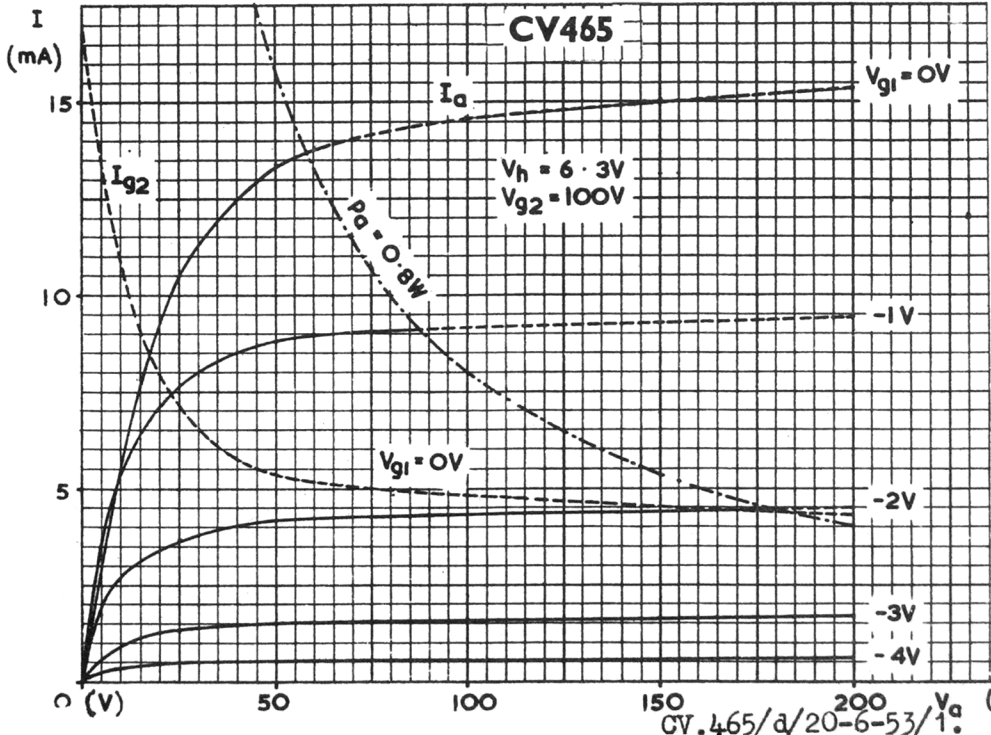
Anode Voltage	100	Volts
Screen (g_2) Voltage	100	Volts
Anode Current	7.0	mA
Screen (g_2) Current	2.2	mA
Grid (g_1) Voltage	-1.4	mA
Mutual Conductance	5.0	mA/V
Anode Impedance	0.25	Megohm
Amplification factor (μ_a)	36	-
Equivalent Noise Resistance	1,600	Ohms
Input Damping at 50 Mc/s	30,000	Ohms

Mounting Position - Any

Leads

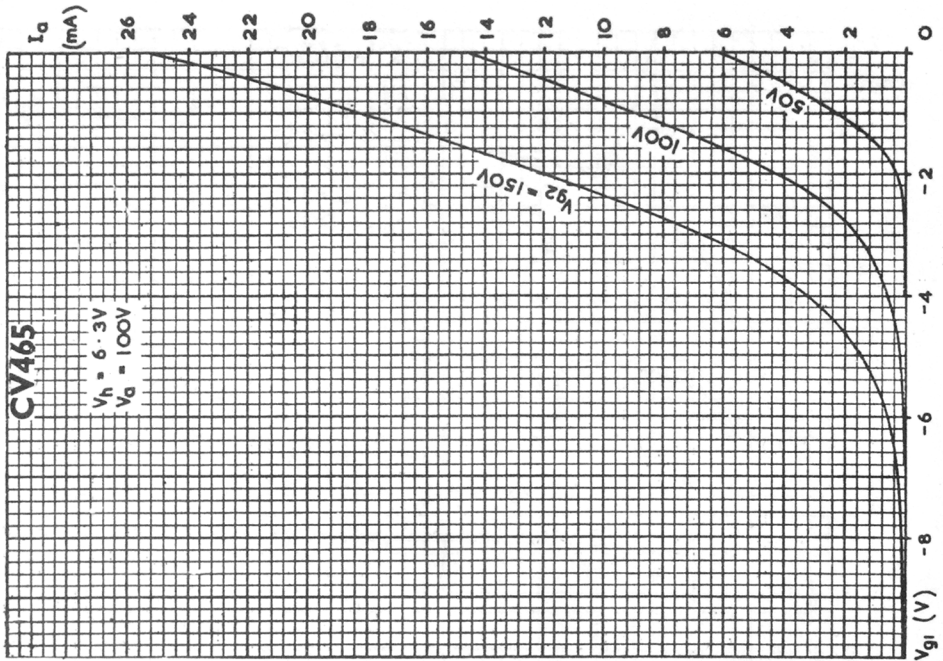
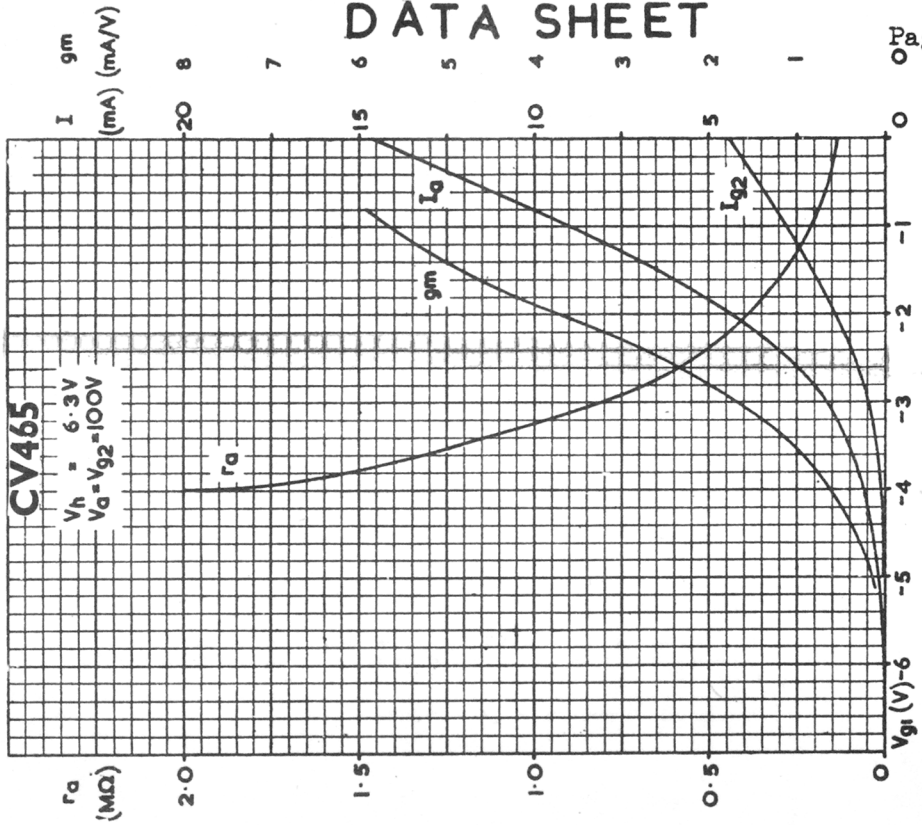
The leads must not be bent at a point nearer than 1.5 mm. to the base seal.
Soldering of leads to connections must be at least 5 mm. from the base seal.

Maximum Bulb Temperature - 100°C. approx.



DATA SHEET

Page 2.



CV.465/a/20-6-53/2