

SPECIFICATION C.V. 785 ISSUE 3 dated 15th December, 1949

AMENDMENT NO.1

Page 1. Capacitances

Amend Cge to read 3.5

Page 2. Capacitance test a(iii)

Amend max. limit to read 4.3

T.V.C. Office

for S.R.D.E.

May. 1957  
N.87691

MINISTRY OF SUPPLY (S.R.D.E.)

Specification MOS/CV785/Issue 3	<u>SECURITY</u>	
Dated:- 15.12.49.	<u>Specification</u>	<u>Valve</u>
To be read in conjunction with K1001	Restricted	Unclassified

→ indicates a change

<u>TYPE OF VALVE:-</u> Vari-u H.F. Pentode		<u>MARKING</u>	
<u>CATHODE:-</u> Directly heated		See K1001/4	
<u>ENVELOPE:-</u> Glass-unmetallised		Additional marking:-	
<u>PROTOTYPE:-</u> 1T4		1T4	
<u>RATING</u>		<u>Note</u>	<u>BASE</u> B7G.
Filament voltage (V)	1.4		<u>Pin</u>
Filament current (mA)	50		<u>Electrode</u>
Max. anode voltage	100		1 F-ve, G <sub>3</sub> , Sh.
Max. screen voltage	75		2 Anode
Mutual conductance (mA/V)	0.9	A	3 Screen grid
Anode impedance (MΩ)	0.5	A	4 No connection
Anode current (mA)	3.5	A	5 F-ve, G <sub>3</sub> , Sh.
Grid bias for gm = 10 uA/V	-16	B	6 Control grid
Max. cathode current (mA)	6.5		7 F+ve
<u>CAPACITANCES (pF)</u>			<u>DIMENSIONS</u>
Cag (max)	0.01	C	See K1001/AI/D <sub>4</sub> .
Cae	7.5	C	<u>Dimension</u>
Cge	3.6	C	<u>Min.</u>
			<u>Max.</u>
			A mm
			B mm
			-
			54
			-
			19

NOTES

- Measured at  $V_a = 90$ ,  $V_{g2} = 67.5$ ,  $V_{g1} = 0$ .
- Measured at  $V_a = 90$ ,  $V_{g2} = 67.5$ .
- With a close fitting shield connected to the negative end of the filament.

## TESTS

To be performed in addition to those applicable in K1001

	Test conditions				Test	Limits		No. tested
						Min.	Max.	
a	See K1001/AIII				<u>Capacitances (pF)</u>			
	Links to H.P.	Links to L.P.	Links to E.					
	(i) Cag (Note 1)	-	0.01	T.A.				
	2	1,3,4,5,7	6,8,9,10,TC <sub>1</sub> ,TC <sub>2</sub>	(ii) Cae	5.3	9.7	6	
	6	1.3.4.5.7	2,8,9,10,TC <sub>1</sub> ,TC <sub>2</sub>	(iii) Cge	2.7	4.7	per week	
b	Vf	Va	Vg2	Vg1	If (mA)	44	56	100% or S
	1.4	-	-	-				
c	1.4	90	67.5	-2	Rev.Ig1 (uA)	-	1.0	100%
d	1.4	90	67.5	0	Ia (mA)	2.3	4.7	100%
e	1.4	90	67.5	0	Ig2 (mA)	0.65	2.15	100% or S
f	1.4	90	67.5	0	gm (mA/V)	0.66	1.13	100% or S
g	1.1	90	67.5	0	gm (mA/V)	0.57	-	100%
h	1.4	90	67.5	-14.5	Ia tail (uA)	10	250	100% or S

### NOTES

1. Cag will be measured on the Western Electric Capacitance Bridge at 465 Kc/s. Details of the bridge may be obtained from the Type Approving Authority, who will test preproduction valves in this apparatus if the manufacturer so desires.

(No. of pages - 2) **DATA SHEET**

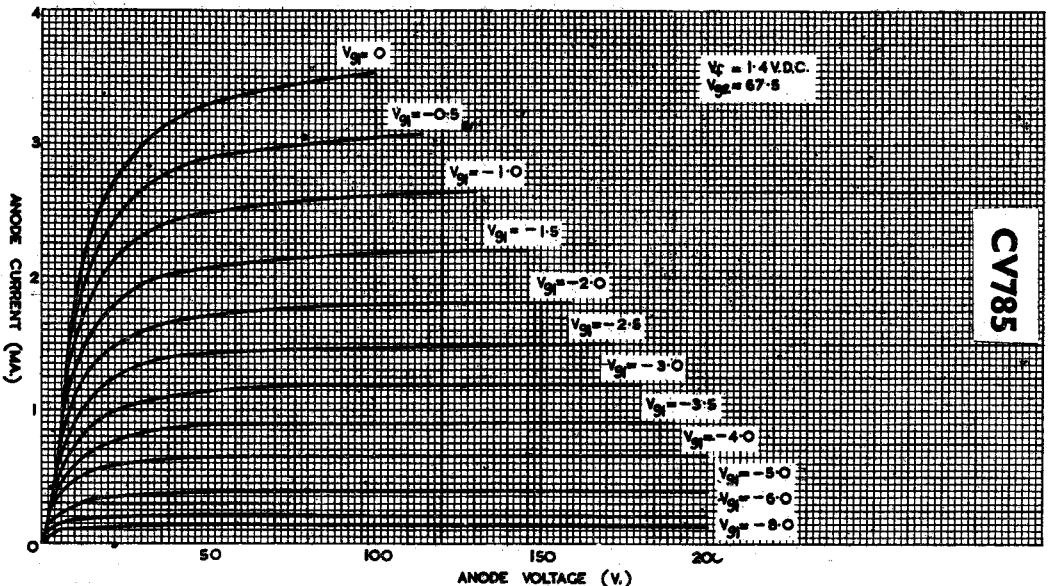
**Valve Electronic Type CV 785**

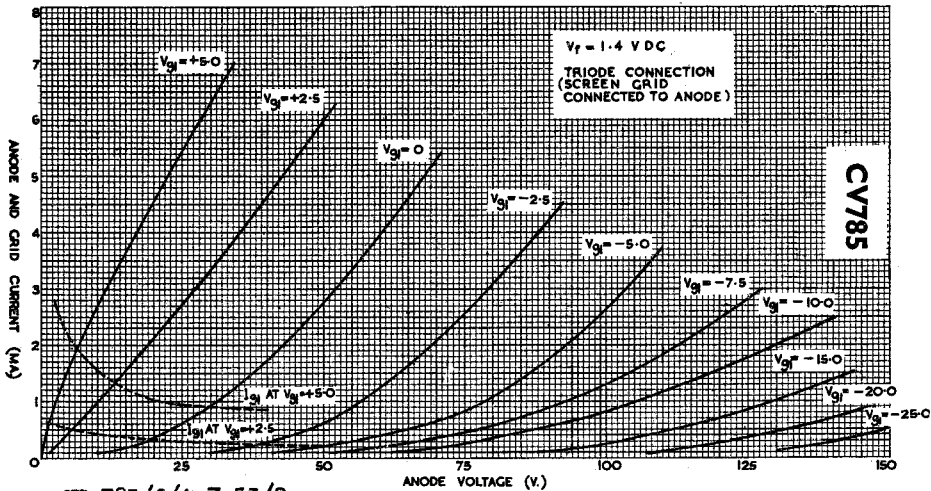
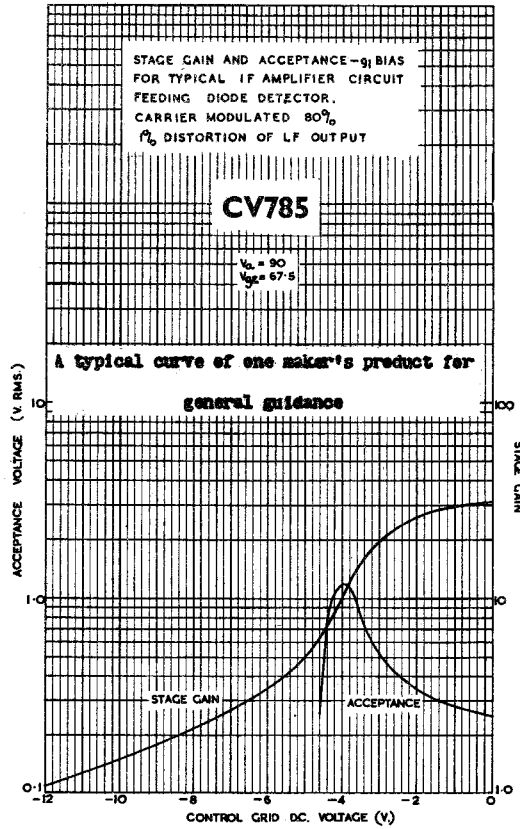
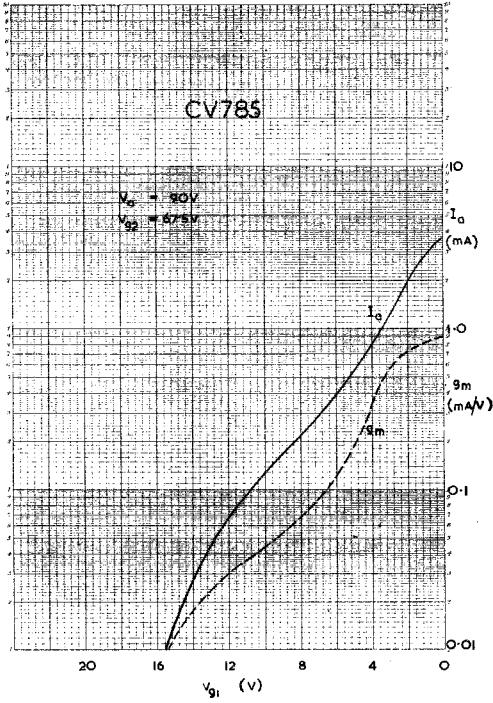
**TYPICAL OPERATING CONDITIONS**

As Class A Amplifier

Anode Voltage	..... 45	..... 90	..... 90	..... Volts
Anode Current	..... 1.7	..... 1.8	..... 3.5	..... mA
Screen ( $g_2$ ) Voltage	..... 45	..... 45	..... 67.5	..... Volts
Screen ( $g_2$ ) Current	..... 0.7	..... 0.65	..... 1.4	..... mA
x Grid ( $g_1$ ) Voltage	..... 0	..... 0	..... 0	..... Volts
Mutual Conductance	..... 0.7	..... 0.75	..... 0.9	..... mA/V
Anode Impedance	..... 0.35	..... 0.8	..... 0.5	..... Megohm
$g_1$ bias for $g_m = 10 \text{ mA/V}$	..... -10	..... -10	..... -16	..... Volts

x The grid return is connected to filament negative.





CV.785/a/1-7-53/2.