

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

Specification MOS/CV784/Issue 3 Dated:- 12.11.47 To be read in conjunction with K1001	<table border="1"> <tr> <th colspan="2"><u>SECURITY</u></th></tr> <tr> <td><u>Specification</u> Restricted</td><td><u>Valve</u> Unclassified</td></tr> </table>	<u>SECURITY</u>		<u>Specification</u> Restricted	<u>Valve</u> Unclassified
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—————→ indicates a change

<u>TYPE OF VALVE:-</u> Diode-pentode				<u>MARKING</u>		
<u>CATHODE:-</u> Directly heated				See K1001/4		
<u>ENVELOPE:-</u> Glass-unmetallised				Additional marking:-		
<u>PROTOTYPE:-</u> 1S5				1S5		
<u>RATING</u>				<u>BASE</u>		
				B7G.		
			Note	Pin	Electrode	
Filament voltage	(V)	1.4		1	F-ve, G3	
Filament current	(mA)	50		2	No connection	
Max. anode voltage		100		3	Diode anode	
Max. screen voltage		100		4	Screen grid	
Mutual conductance	(mA/V)	0.63	A	5	Anode	
Anode impedance	(MΩ)	0.6	A	6	Control grid	
Anode current	(mA)	1.6	A	7	F+ve	
Screen current	(mA)	0.4	A			
Max. cathode current	(mA)	5.0				
<u>NOTES</u>				<u>DIMENSIONS</u>		
A. Measured at $V_a = 67.5$, $V_{g2} = 67.5$, $V_{g1} = 0$.				See K1001/AI/D4.		
				Dimension	Min.	Max.
				A mm	-	54
				B mm	-	19

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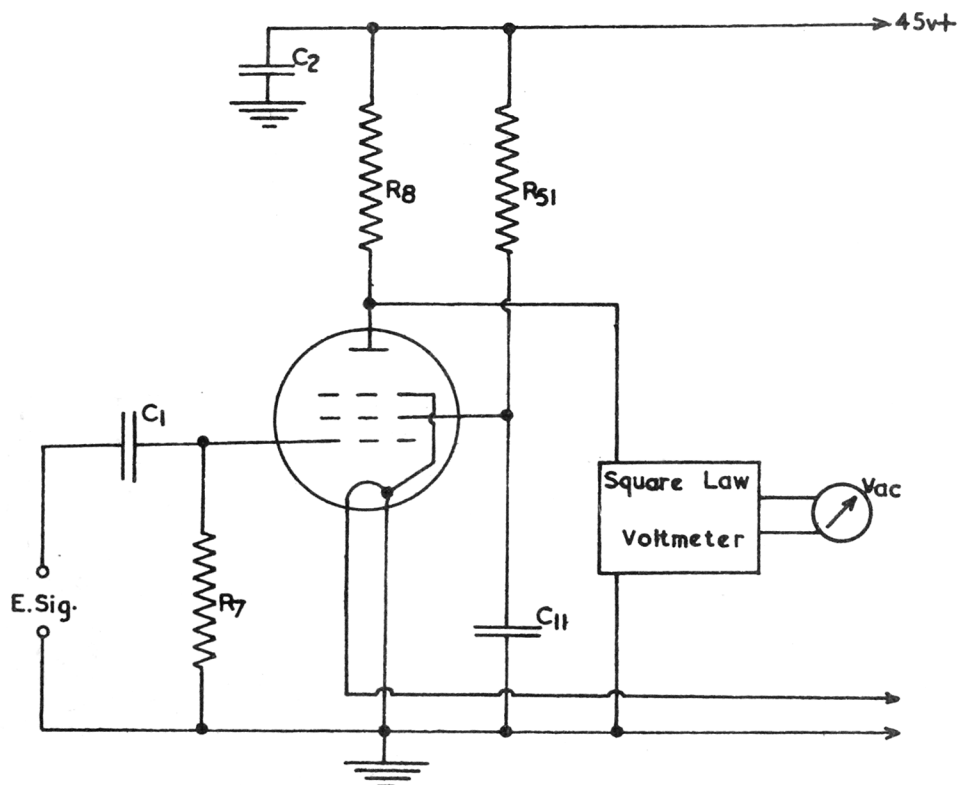
TESTS

To be performed in addition to those applicable in K1001

	Test conditions					Test	Limits		No. tested
							Min.	Max.	
	Vf	Va	Vg2	Vg1	Vd				
a	1.4	-	-	-	-	If (mA)	44	56	100% or S
b	1.4	90	90	-2.5	-	Rev. Ig (uA)	-	0.5	100%
c	1.4	90	90	-1.8	-	Ia (mA)	1.05	2.15	100%
d	1.4	90	90	-1.8	-	Ig2 (mA)	0.24	0.56	100% or S
e	1.4	90	90	-1.8	-	gm (mA/V)	0.48	0.77	100% or S
f	1.1	90	90	-1.8	-	gm (mA/V)	0.38	-	100%
g	1.4	0	0	0	10	Diode emission (mA)	0.5	-	100%
h	1.4	0	0	0	-	Id (uA) (Note 1)	25	-	100%
j	1.4					A.C. Amplification (Fig. 1) (Vac)	6.0	-	T.A.

NOTES

1. The diode plate to the +ve end of the filament through a 5000 ohms resistance which includes a meter.



$C_1 = 0.1\mu\text{F}$ capacitor

$C_2 = 8\mu\text{F}$ decoupling capacitor

$C_{11} = 0.1\mu\text{F}$ decoupling capacitor

$R_7 = 10\text{M}\Omega \pm 10\%$

$R_8 = 500\text{k}\Omega \pm 1\%$

$R_{51} = 3.3\text{M}\Omega \pm 20\%$

$E.\text{Sig} = 0.2\text{v RMS}, 50 \text{ o/s.}$

FIG. I.

DATA SHEET

Valve Electronic Type CV 784

TYPICAL OPERATING CONDITIONS.

As Class A Amplifier

Anode Voltage	67.5	.....	Volts
Anode Current	1.6	.....	mA
Screen (g_2) Voltage	67.5	.....	Volts
Screen (g_2) Current	0.4	.....	mA
x Grid (g_1) Voltage	0	.....	Volts
Mutual Conductance	0.625	.....	mA/V
Anode impedance	0.6	.....	Megohm

x The control grid return is connected to filament negative.

As Resistance Coupled Amplifier

Anode & Screen SUPPLY Voltage	45	.....	67.5	.....	90	....	Volts
Anode Load Resistor	1.0	.....	1.0	.....	1.0	...	Megohm
Screen (g_2) Series Feed Resistor	1.9	.....	2.2	.....	2.5	...	Megohm
x Grid (g_1) Resistor	10.0	.....	10.0	.....	10.0	..	Megohms
Peak Voltage Output	14	.....	17	.....	31	....	Volts
Voltage Gain	31	.....	36	.....	45		

x The control grid return is connected to filament negative.

Diode Section

The diode anode is located at the negative end of the filament and, except for the filament, it is independent of the pentode section.

