VALVE ELECTRONIC

CV 784

(1S5)

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

Specification MOS/CV784/Issue 3 Dated :- 12.11.47 To be read in conjunction with K1001	SECURITY Specification: Restricted Valve: Unclassified

→ indicates a change

TYPE OF VALVE:- Diode-pentode
CATHODE:- Directly heated
ENVELOPE:- Glass-unmetallised
PROTOTYPE:- 1S5

MARKING
See K1001/4
Additional marking:-
1S5

RATING		Note
Filament voltage (V)	1.4	
Filament current (mA)	50	
Max. anode voltage	100	
Max. screen voltage	100	
Mutual conductance (mA/V)	0.63	A
Anode impedance (MΩ)	0.6	A
Anode current (mA)	1.6	A
Screen current (mA)	0.4	A
Max. cathode current (mA)	5.0	

BASE
B7G.

Pin	Electrode
1	F-ve, G3
2	No connection
3	Diode anode
4	Screen grid
5	Anode
6	Control grid
7	F+ve

NOTES

A. Measured at Va = 67.5, V_{g2} = 67.5, V_{g1} = 0.

DIMENSIONS
See K1001/A1/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
	Vf	Va	Vg_2	Vg_1	Vd		Min.	Max.	
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	-	Ig_2 (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.

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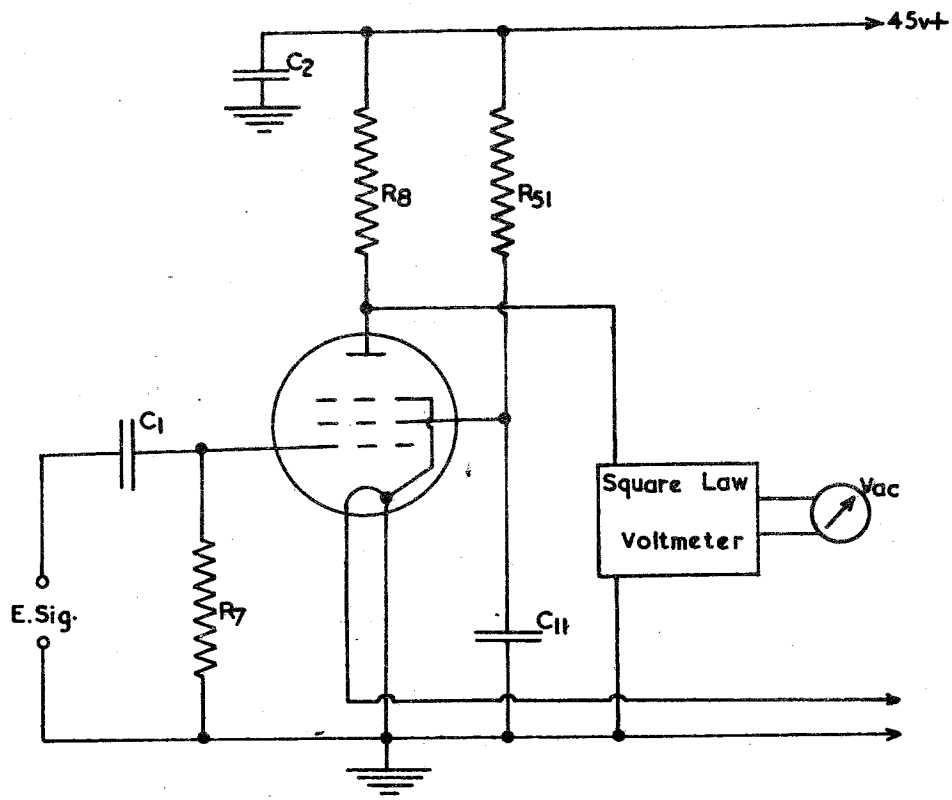


C_1 = 0.1uF capacitor

C_2 = 8uF decoupling capacitor

C_{11} = 0.1uF decoupling capacitor

R_7 = 10MΩ ± 10%

R_8 = 500kΩ ± 1%

R_{51} = 3.3MΩ ± 20%

E.Sig. = 0.2v RMS, 50 c/s.

FIG. 1.

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.

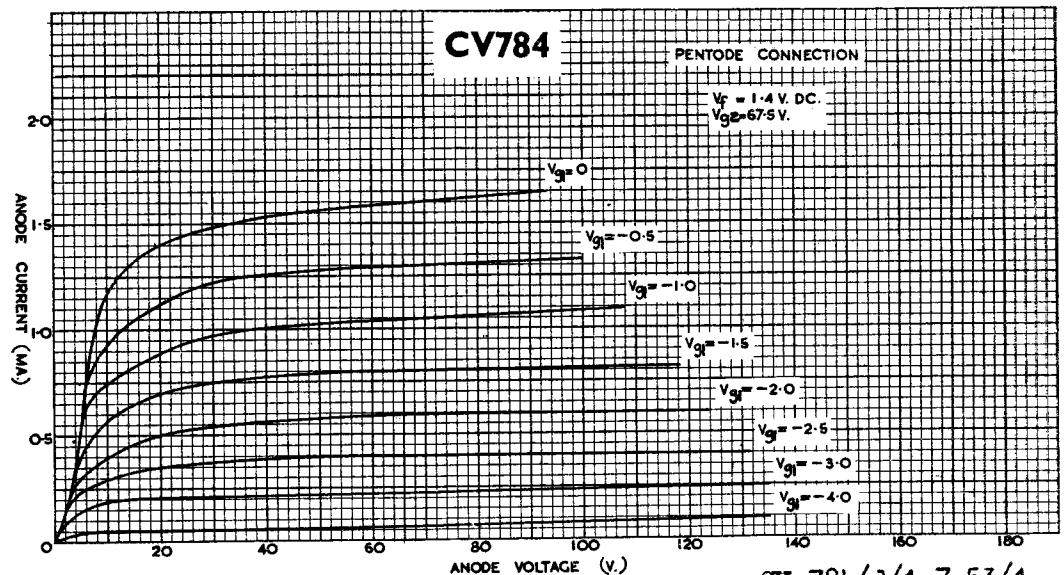
As Resistance Coupled Amplifier

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	

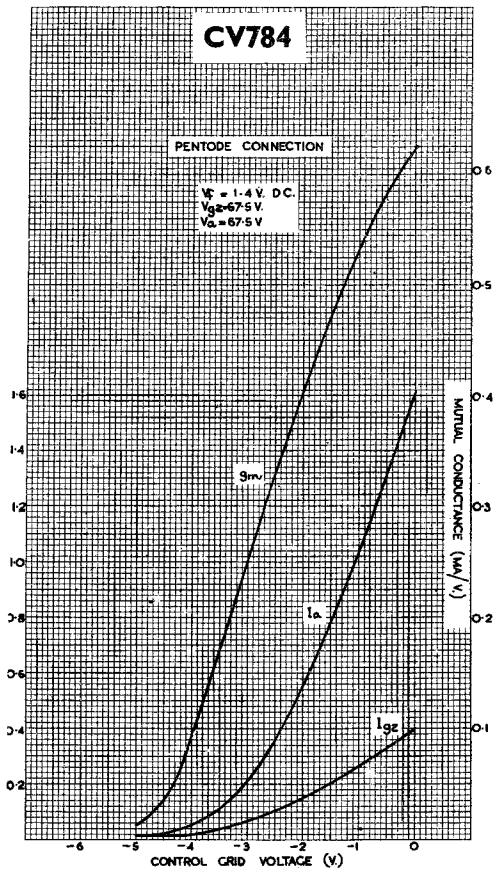
x The control grid return is connected to filament negative.

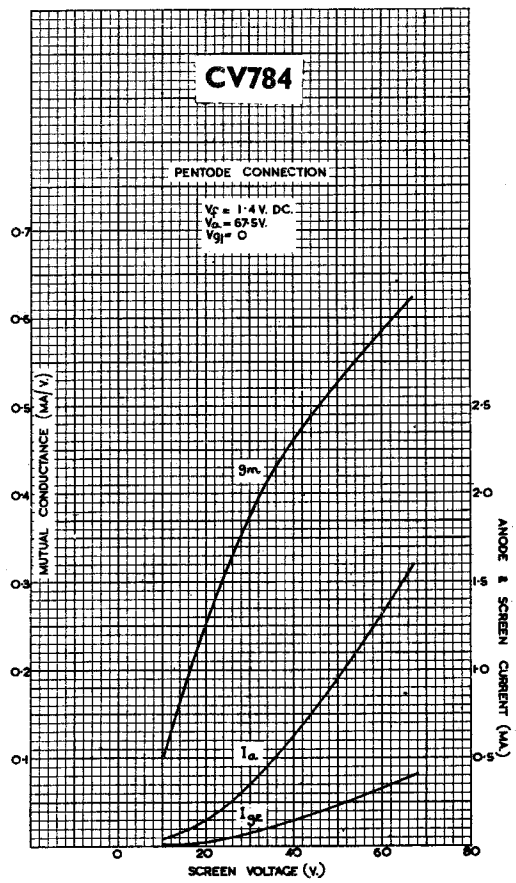
Diode Section

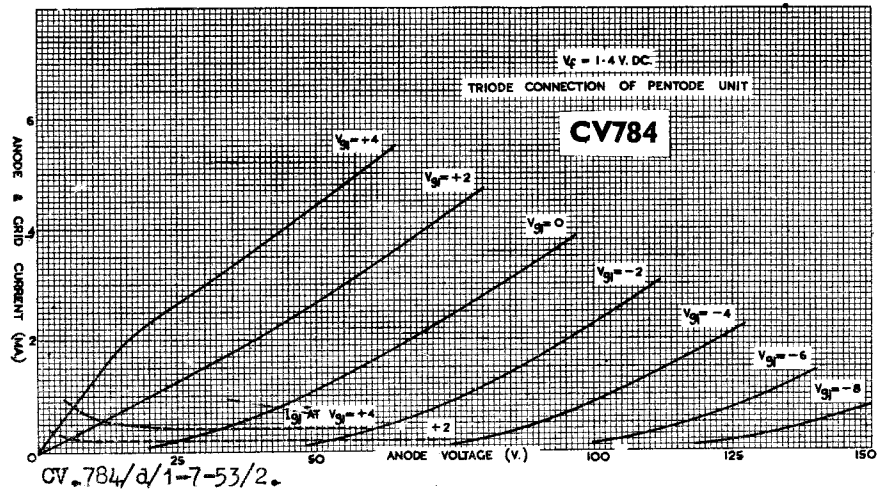
The diode anode is located at the negative end of the filament and, except for the filament, it is independent of the pentode section.



CV 784 DATA SHEET







CV.784/d/1-7-53/2.