

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

Specification MOS/CV820/Issue 3 Dated:- 6.2.50. To be read in conjunction with K1001	<u>SECURITY</u>	
	<u>Specification</u> Restricted	<u>Valve</u> Unclassified

→ indicates a change

<u>TYPE OF VALVE:-</u> Power amplifier pentode <u>CATHODE:-</u> Directly heated <u>ENVELOPE:-</u> Glass-urmetallised <u>PROTOTYPE:-</u> 3S4			<u>MARKING</u> See K1001/4 Additional marking:- 3S4		
			<u>PACKAGING</u> See K1005		
<u>RATING</u>			<u>BASE</u> B7G		
			Note		
Filament voltage (series)	(V)	2.8	Pin	Electrode	
Filament current (series)	(mA)	50	1	F-ve	Note B
Filament voltage (parallel)	(V)	1.4	2	Anode	
Filament current (parallel)	(mA)	100	3	Control grid	
Max. anode voltage	(V)	100	4	Screen grid	
Max. screen voltage	(V)	75	5	F-ve, G3, C.T.	Note B
Mutual conductance	(mA/V)	1.5	6	Anode	
Anode impedance (approx.)	(MΩ)	0.1	7	F+ve	
Anode current	(mA)	7.4	<u>DIMENSIONS</u> See K1001/AI/D4.		
Screen current	(mA)	1.4	Dimension	Min.	Max..
Max. cathode current	(mA)	13.0	A mm	-	54
<u>NOTES</u> A. Measured at $V_a = 90$, $V_{g2} = 67.5$, $V_{g1} = -7$ B. Pin 1 is F-ve for $V_f = 2.8v$, Pin 5 is F-ve for $V_f = 1.4v$, when Pins 1 and 7 are F+ve			B mm	-	19

CV820

TESTS

To be performed in addition to those applicable in K1001

	Test Conditions				Test	Limits		No. Tested
	Vf	Va	Vg2	Vg1		Min.	Max.	
a	1.4	-	-	-	If (mA)	88	112	100% or S
b	1.4	90	67.5	-7	Rev.Ig (μ A)	-	1.0	100%
c	1.4	90	67.5	-7	Ia (mA)	5.1	9.7	100%
d	1.4	90	67.5	-7	Ig2 (mA)	0.85	2.1	100% or S
e	1.4	90	67.5	-7	gm (mA/V)	1.3	1.85	100% or S
f	1.1	90	67.5	0	Ia (mA) (Note 1)	12	-	100%
g	1.4	90	67.5	-16.5	Ia (μ A) (cut-off)	-	200	100% or S

NOTES

1. This is a snap test.

DATA SHEET

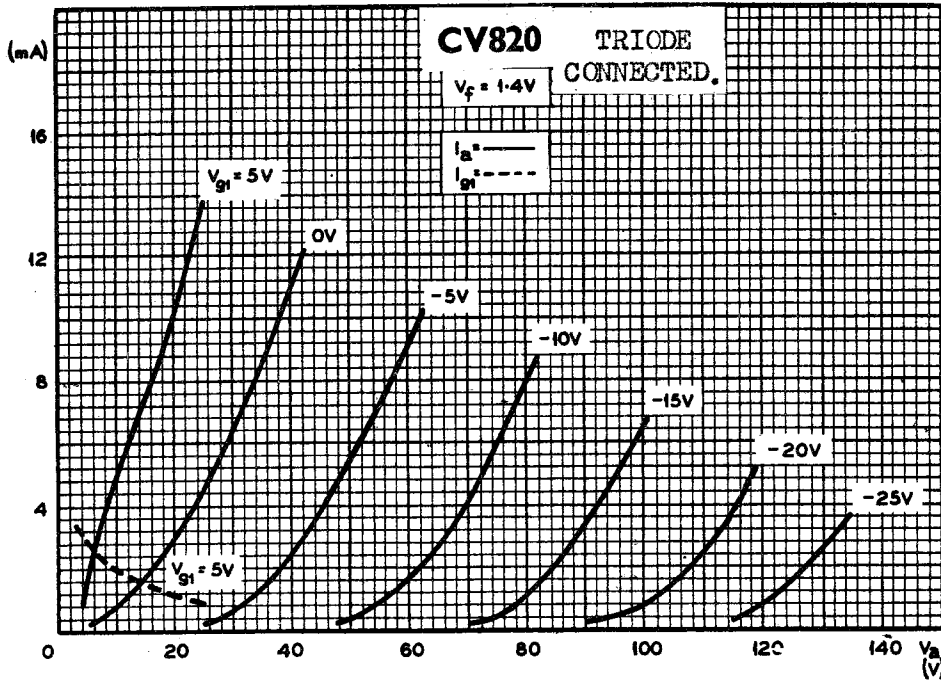
Valve Electronic Type CV 820

TYPICAL OPERATING CONDITIONS

As Class A1 Audio Frequency Amplifier

	Series		Parallel		
	Filaments		Filaments		
Anode Voltage	67.5	90	67.5	90	Volts
Screen (G2) Voltage	67.5	67.5	67.5	67.5	Volts
Grid (G1) Voltage	-7	-7	-7	-7	Volts
Peak Grid Drive Voltage	7.0	7.0	7.0	7.0	Volts
Anode Current (zero signal)	6.0	6.1	7.2	7.4	mA
Screen (G2) Current (zero signal)	1.2	1.1	1.5	1.4	mA
Anode Impedance	0.1	0.1	0.1	0.1	Meg.
Mutual Conductance	1.4	1.42	1.55	1.57	mA/V
Optimum Load Resistance	5,000	8,000	5,000	8,000	ohms
Power Output	160	235	180	270	mW
Total Distortion	12	13	10	12	%

Note: When used with series filament connection, a resistor must be connected between pins 1 and 5 to balance the voltages in the two sections of the filament.



DATA SHEET

