MINISTRY OF SUPPLY - DLRD(A)/RRE

VALVE ELECTRONIC **CV 492**

Specification MOS(A)/CV492
Issue 5 Dated 24.11.53
To be read in conjunction with K1001.

SECURITY	
Specification	Valve
UNCLASSIFIED	UNCLASSIFIED

→ Indicates a change

TYPE OF VALVE - High mu, Double Triode

CATHODE - Indirectly-heated

ENVELOPE - Glass - Unmetallised

PROTOTYPE - 12AX7

RTMA DESIGNATION - 12AX7

MARKING

See K1001/4
Additional Marking - 12AX7
(See Note F)

BASE

B9A

RATING			Note
Heater Voltage	(V)	12.6	A
Heater Current	(A)	0.15	A
Max. Anode Voltage	(V)	330	D
Max. No-Load Anode Voltage	(V)	550	D
Max. Anode Dissipation	(W)	1.1	B,D
Max. Heater-Cathode Voltage	(V)	200	D
Max. Cathode Current	(mA)	20	D,D
Mutual Conductance	(mA/V)	1.6	C
Amplification Factor		100	C
Anode Impedance	(ohms)	62500	C

CONNECTIONS

Pin	Electrode
1	A (b)
2	G (b)
3	C (b)
4	H
5	H
6	A (a)
7	G (a)
8	C (a)
9	HCT

CAPACITANCES (pF)		
Ca-g	1.7	E
Cg-e	1.6	E
Ca(a) - e	0.46	E
Ca(b) - e	0.34	E

DIMENSIONS

See K1001/A1/D4

Dimension (mm)	Min.	Max.
A	-	56.0
B	-	22.4

MOUNTING POSITION

Any

NOTES

A. Centre-tapped heater.
B. Each section, measured without metal screen.
C. Measured at: Va = 250V; Vg_1 = -2V; (Ia = 1.2 mA).
D. Absolute maximum value.
E. Measured without a metal screen.
F. In addition to the requirements of K1001/4, the RTMA designation shall also be clearly and indelibly marked on the valve.

CV492/5/1

Z.5498.R.

To be performed in addition to those applicable in K1001

	Test Conditions			Test	Limits Min.	Limits Max.	No. Tested	Note
	Links to H.P.	Links to L.P.	Links to E.					
a				CAPACITANCES (pF) Ca(a) - g(a) Ca(b) - g(b) Cg(a) - e Cg(b) - e Ca(a) - e Ca(b) - e	Results to be recorded and collated			1
	Vh (V)	Va (V)	Vg1 (V)					
b	12.6	0	0	Ih (A)	.138	.162	100% or S	
c	12.6	For other conditions see Note 2.		Heater-Cathode Insulation Leakage current (μA)	-	20	100%	3
d	12.6	250	-2	Ia (mA)	0.75	1.75	100%	3
e	12.6	250	-4	Ia (μA)	0	35	100%	3
f	12.6	250	-2	Reverse Ig (μA)	-	1.0	100%	4
g	12.6	250	-2	gm (mA/V)	1.25	2.05	100%	3
h	12.6	250	-2	μ	85	115	20 per week	3
j	6.3	30 max.	30	Emission (mA)	55	-	100%	3,5
k	12.6	For other conditions see Note 6.		AC Amplification Va (V)	8.4	-	6 per week	3

NOTES

1. Measured without a metal screen.
2. Vhc = ± 100V through a resistance of not greater than 100K.
3. Each section shall be tested separately. Section not under test to be connected to the active cathode.
4. Anode (a) shall be connected to anode (b); grid (a) to grid (b) and cathode (a) to cathode (b). Of the total current not more than 0.5 μA shall be present in any one section.
5. Test voltages shall be applied only for sufficient time to obtain a steady reading.
6. The test shall be made with an input of 200 mV AC at f = 60-2000 cps through a 0.1 uF condenser. Grid resistor = 10 megohms; Anode load resistor = 500K; Vht = 100V DC; Vg = 0.

DATA SHEET

Valve Electronic Type CV 492

TYPICAL OPERATING CONDITIONS (PER SECTION)

Anode Voltage	100	250	Volts
Anode Current	0.5	1.2	mA
Grid Voltage	-1.0	-2.0	Volts
Anode Impedance	80,000	62,500	Ohms
Mutual Conductance	1.25	1.6	mA/V
Amplification Factor	100	100	-

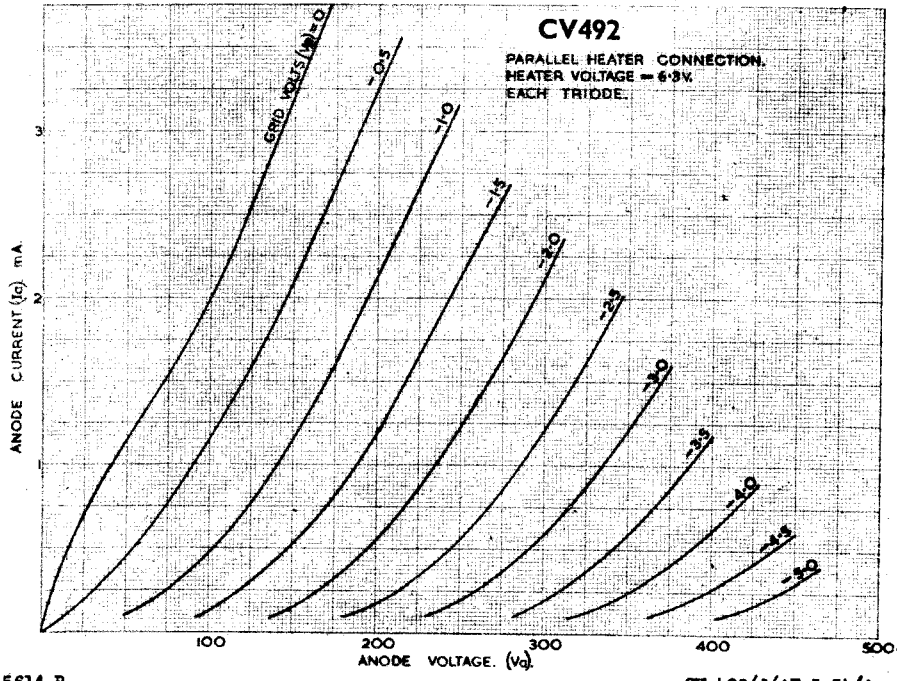
Operation as Resistance Coupled Amplifier

Anode Supply Voltage	100	250	Volts
Anode Load Resistor	0.25	0.25	Megohms
Cathode Bias Resistor	6,500	3,000	Ohms
Peak Output	10	50	Volts
Stage Gain	45	60	-

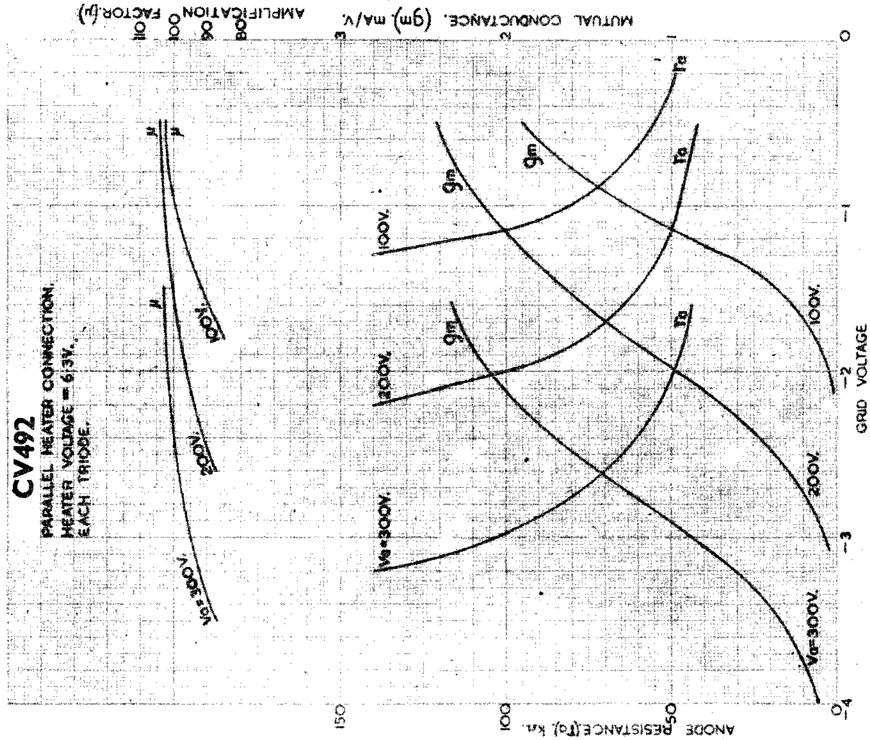
The two triodes may be used in cascade provided that separate bias resistors and separate cathode resistor by-pass condensors are used and all grid and anode wiring is kept short.

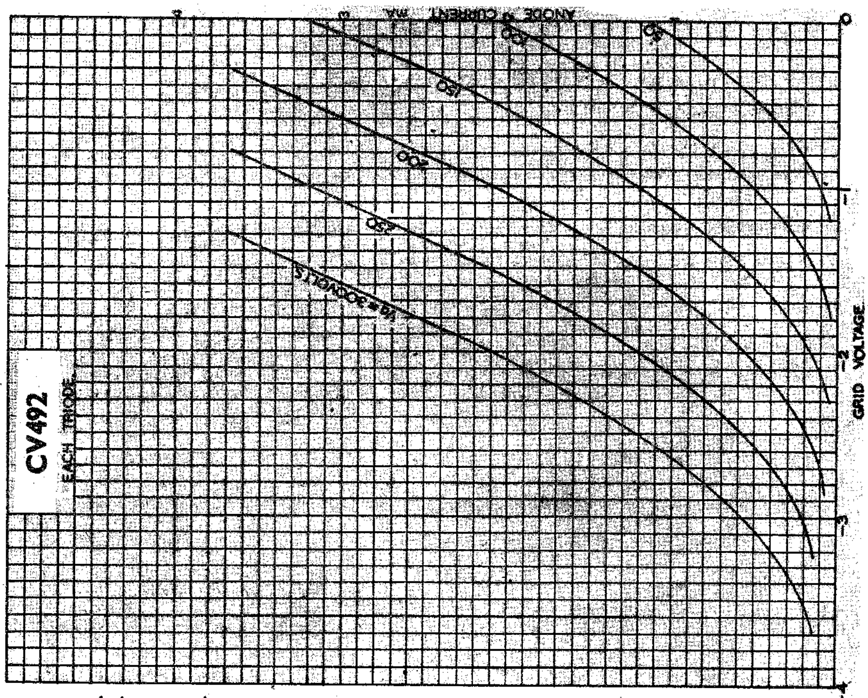
This type of valve can be used successfully as a paraphase amplifier or as a phase splitter in push pull circuits.

Mounting Position - Any.

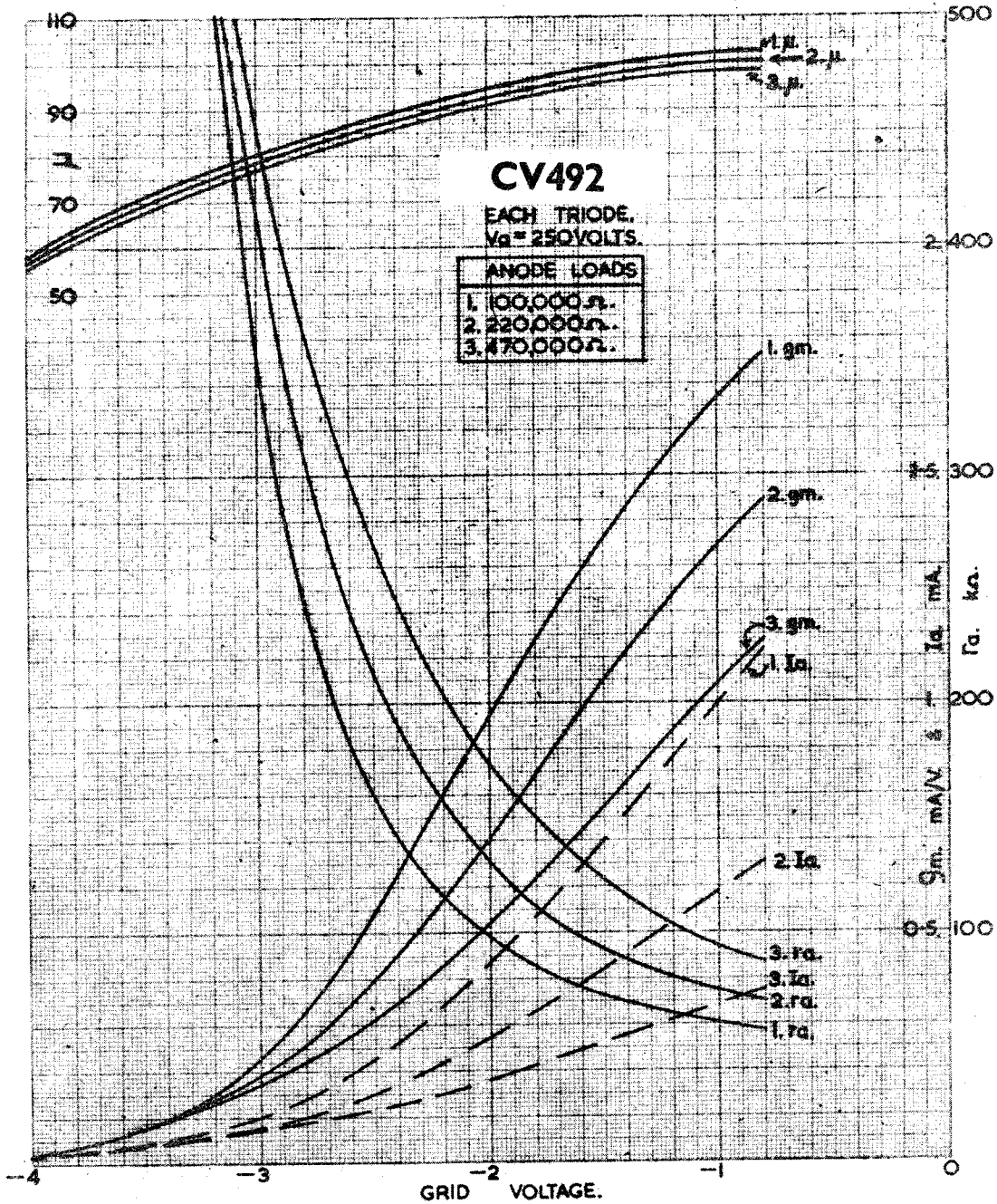


DATA SHEET


CV492
PARALLEL HEATER CONNECTION.
HEATER VOLTAGE = 6.3V.
EACH TRIODE.
MUTUAL CONDUCTANCE. (gm) mA/V.
AMPLIFICATION FACTOR (μ)
ANODE RESISTANCE (ra) kΩ
GRID VOLTAGE
Va=300V.
200V.
100V.


CV492
EACH TRIODE.
ANODE CURRENT mA
GRID VOLTAGE
Va=300VOLTS

DATA SHEET



CV492/d/17-3-54/3.