C V493

MINISTRY OF SUPPLY (D.L.R.D.(A)/RAE) VALVE ELECTRONIC

Specification MAP/CV.493 Issue 3 Dated 20.3.1952 To be read in conjunction with K.1001	SECURITY Specification: UNCLASSIFIED Valve: UNCLASSIFIED

→ Indicates a change

TYPE OF VALVE - High Vacuum, Full Wave Rectifier
CATHODE - Indirectly Heated
ENVELOPE - Glass, unmetallised
PROTOTYPE - 6X4

MARKING
See K.1001/4

BASE
B7G

RATING			Note
Heater Voltage	(V)	6.3	
Heater Current	(A)	0.6	
Max. Peak Inverse Voltage	(V)	1375	A
Max. Mean Anode Current	(mA)	75	A
Max. Peak Anode Current	(mA)	230	A
Max. Surge Anode Current	(mA)	750	
Max. Heater Cathode Voltage	(V)	450	A,B

CONNECTIONS

Pin	Electrode
1	A (b)
2	No connection
3	H
4	H
5	No connection
6	A (a)
7	C

DIMENSIONS
See K.1001/A1/D4

Dimensions	Min.	Max.
A mm	-	67
B mm	-	19.05
L mm	-	60.0

NOTE

A. Absolute maximum values.

B. This figure applies with heater positive or negative with respect to cathode.

To be performed in addition to those applicable in K.1001

	Test Conditions		Test	Limits		No. Tested	Note
				Min.	Max.		
	Vh (V)	Va (V)					
a	6.3	0	Ih (A)	0.54	0.66	100% or S	
b	6.3	50 DC (max)	Ia (mA)	140	-	100%	1
c	6.3	-	1. Output Current (mA)	70	-	100%	
	Input Voltage = 400-0-400V, RMS; Frequency = 50 c/s; Load Resistance = 5700 ohms Reservoir Condenser = 8μF; Effective Resistance per Anode introduced externally shall be such that a valve which gives a voltage drop of 22V when passing 70mA per anode, shall give an output current of 75mA		2. Run for 1 min. and reject for softness or persistent flashover.				

NOTE

1. Test to be performed on each anode separately.

DATA SHEET

Valve Electronic Type CV 493

TYPICAL OPERATING CONDITIONS

Full Wave Rectifier - Condenser Input Filter

A.C. Anode Voltage (rms) per anode	250	275	300	325	Volts
Limiting resistance per anode	250	250	250	250	Ohms
Reservoir Condenser	4	4	4	4	mfd
D.C. Output Current	70	70	70	70	mA
D.C. Output Voltage	237	270	300	333	Volts

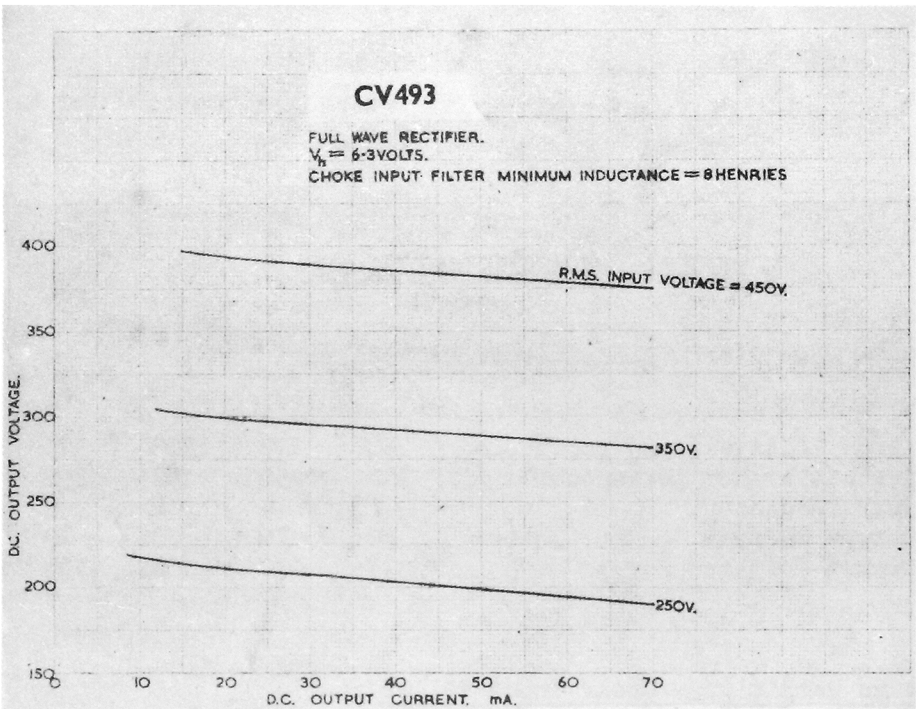
Full Wave Rectifier - Choke Input Filter

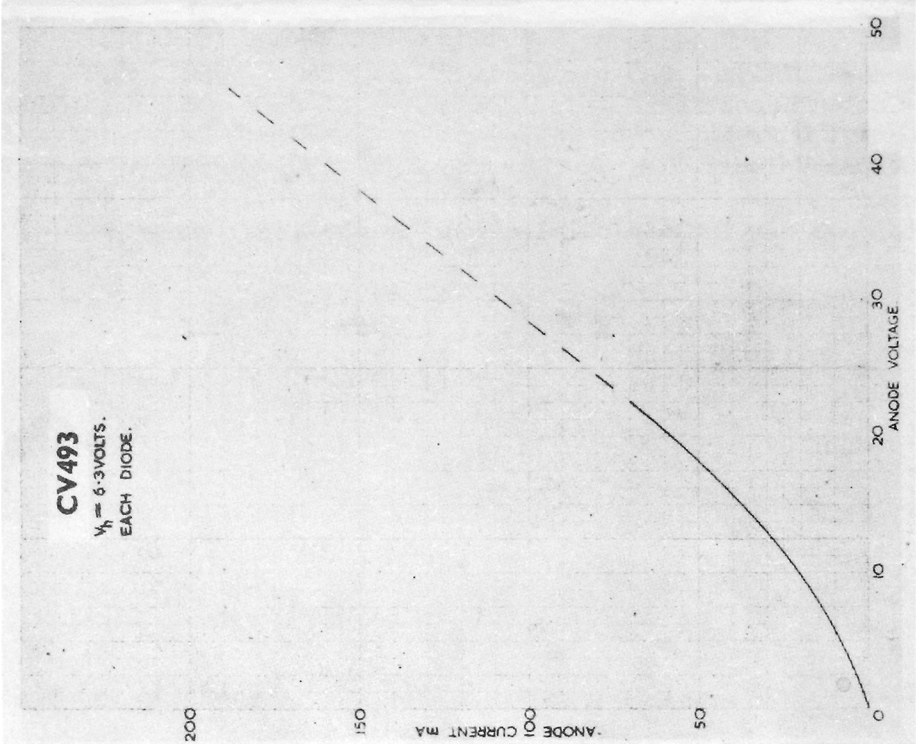
A.C. Anode Voltage (rms) per anode	250	350	450	Volts
Input Choke Inductance	8	8	8	Henries
D.C. Output Current	70	70	70	mA
D.C. Output Voltage *	190	280	375	Volts

* This does not include voltage drop in the input choke

Mounting Position - Any

DATA SHEET

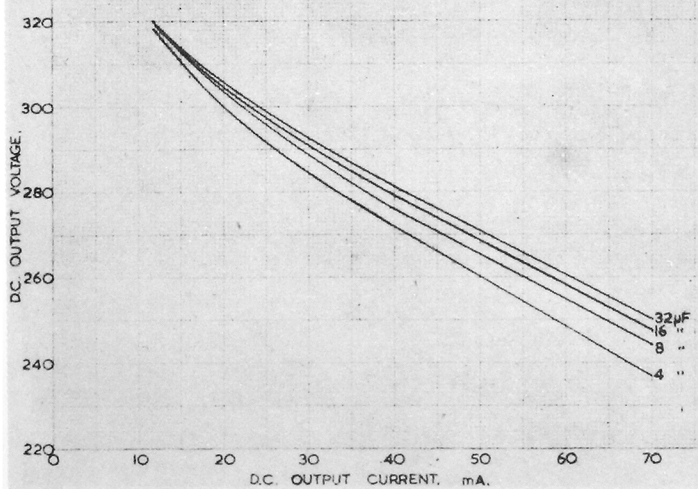

CV493
FULL WAVE RECTIFIER.
V_h = 6·3VOLTS.
CHOKE INPUT FILTER MINIMUM INDUCTANCE = 8 HENRIES
R.M.S. INPUT VOLTAGE = 450V.
350V.
250V.
D.C. OUTPUT VOLTAGE.
400
350
300
250
200
150
0
10
20
30
40
50
60
70
D.C. OUTPUT CURRENT. mA.


CV493
V_h = 6·3VOLTS.
EACH DIODE.
ANODE CURRENT mA
200
150
100
50
0
ANODE VOLTAGE
50
40
30
20
10
0

DATA SHEET

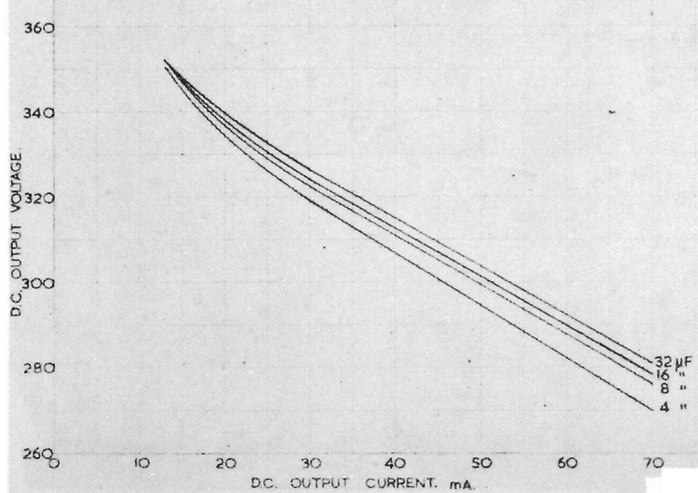
CV493

FULL WAVE RECTIFIER.
V_h = 6·3VOLTS.
R.M.S. INPUT VOLTAGE = 250V.
LIMITING RESISTOR EACH ANODE = 250Ω.



CV493

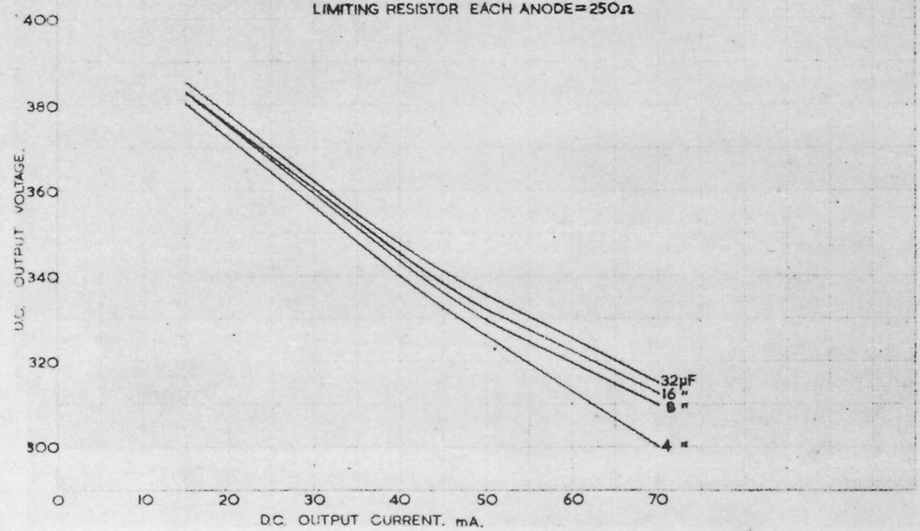
FULL WAVE RECTIFIER.
V_h = 6·3VOLTS.
R.M.S. INPUT VOLTAGE = 275V.
LIMITING RESISTOR EACH ANODE = 250Ω.



DATA SHEET

CV493

FULL WAVE RECTIFIER.
V_h = 6·3VOLTS.
R.M.S. INPUT VOLTAGE = 300V.
LIMITING RESISTOR EACH ANODE = 250Ω.



CV493

FULL WAVE RECTIFIER.
V_h = 6·3VOLTS.
R.M.S. INPUT VOLTAGE = 325V.
LIMITING RESISTOR EACH ANODE = 250Ω.