VALVE ELECTRONIC **CV 753**
(1A3)

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

Specification MOS/CV753/Issue 3 Dated:- 15.12.49. To be read in conjunction with K1001, ignoring clauses:- 5.2 and 5.3	SECURITY Specification: Restricted Valve: Unclassified

⟶ indicates a change

TYPE OF VALVE:- Diode, U.H.F.
CATHODE:- Indirectly heated
ENVELOPE:- Glass-unmetallised
PROTOTYPE:- 1A3

MARKING
See K1001/4
Additional marking:-
1A3

RATING			Note
Heater voltage	(V)	1.4	
Heater current	(mA)	150	
Max. peak inverse voltage		365	
Max. peak plate current	(mA)	5.0	
D.C. output current	(mA)	0.55	
Max. H.C. potential		100	
Max. anode voltage (RMS)		130	
CAPACITANCES (pF)			
Cac		0.6	
Cah		1.05	
Chc		0.7	

BASE
B7G.

Pin	Electrode
1	Heater
2	Anode
3	Cathode
4	Not connected
5	Int.connection (Do not use)
6	Anode
7	Heater

DIMENSIONS
See K1001/AI/D4

Dimension	Min.	Max.
A mm	-	54
B mm	-	19

CV 753

TESTS

To be performed in addition to those applicable in K1001

	Test conditions			Test	Limits Min.	Limits Max.	No. tested
a	See K1001/AIII			Capacitances (pF)			
	Links to H.P.	Links to L.P.	Links to E				
	3	2,6	1,4,5,7,8,9,10,TC1,TC2	(i) Cac	0.35	0.85	6
	2,6	1,5,7	3,4,8,9,10,TC1,TC2	(ii) Cah	0.85	1.25	per
→	3	1,5,7	2,4,6,8,9,10,TC1,TC2	(iii) Chc	0.4	0.9	week
b	Vh: 1.1	Va: 100 volts D.C. applied between heater and cathode with cathode positive to heater and 100,000 ohms external resistance.		Heater-cathode insulation leakage current (uA)	0	20	1% (20)
c	1.4	-		If (mA)	135	165	100%
d	1.1	-		If (Note 1) (mA)	121	149	100%
e	-	-		Resonant Freq. (Note 2) (Mc/s)	500		T.A.
f	1.1	-		Operation: Output current (mA) (Note 3)	0.36	-	100%

NOTES

1. This test is an alternative to test c. Both tests need not be performed.
2. This test may be made with the cold valve in a parallel line circuit. The circuit consists of two rods each 0.125" dia. and spaced with their centres 0.345" apart. A shorting bar 0.125" x 0.5" x 0.875" slides on the rods. Holes 38/1000" dia. are drilled and slotted at one end of each rod to make a sliding contact over pins 3 and 6 on the valve base. The valve is inserted in the rods so that the base is 0.013" from the end of the rods. The line is loosely coupled to a 500 Mc/s oscillator and the shorting bar is adjusted until resonance is indicated by a dip in the oscillator grid current or by a wavemeter. The distance between the base of the valve and the resonant position of the shorting bar shall not be less than 7 cms.
3. The valve is tested in a half wave rectifier circuit with 50 volts RMS input, 0.1 MΩ load and 2 uF reservoir condenser.

DATA SHEET

Valve Electronic Type CV 753

TYPICAL OPERATING CONDITIONS

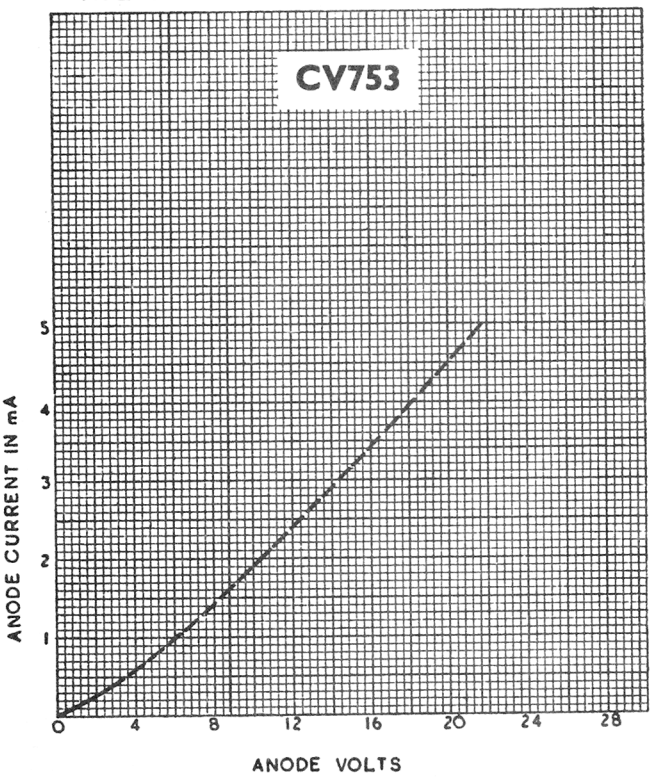
As rectifier at 50 c.p.s. - with Condenser Input Filter

Anode Supply Voltage (R.M.S.)	117	Volts
D.C. Output current	0.5	mA
Input Condenser	2.0	µF
Min. effective circuit impedance	0	Ohms

Note

The resonant frequency of this valve is approximately 1,000 mc/s.

AVERAGE CHARACTERISTIC CURVE



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CV 753/a.