MINISTRY OF SUPPLY - DLRD(A)/RRE(South) VALVE ELECTRONIC

CV2296

Specification MOS(A)/CV2296 Issue 2 Dated 28. 4. 55 To be read in conjunction with K1001 & BS.448	SECURITY	
	Specification	Valve
	UNCLASSIFIED	UNCLASSIFIED

Indicates a change.

TYPE OF VALVE - Gas-filled Tetrode
CATHODE - Cold
ENVELOPE - Glass - Unmetallised
PROTOTYPE - NSP2

RATING

		Note
Max. Anode DC Voltage (V)	380	A
Min. Anode DC Voltage (V)	220	A
Max. Peak Anode Current (A)	250	B
Max. Mean Anode Current (mA)	40-100	C
Peak Inverse Anode Voltage (V)	350	
Trigger Voltage (V)	80-130	D
Max. Average Grid Current (mA)	10	
Max. Flashing Frequency (per sec)	250	
Ambient Temperature Range (°C)	-35 to +60	
STARTING CHARACTERISTICS (See Note E)		
Min. Trigger Current (Va = 380V) (uA)	50	
Min. Trigger Current (Va = 200V) (uA)	300	
Max Delay Time (usecs)	40	F
TYPICAL OPERATING CONDITIONS		
DC Supply Voltage (V)	330	
Screen Grid Voltage (V)	70	
Trigger Pulse Amplitude (V)	70	G
Charging Resistor (ohms)	3000	
Discharge Capacitor (uF) for operation at (c/s) 6 - 35	4	
30 - 50	3	
45 - 80	2	
80 - 150	1	
140 - 250	0.5	

MARKING

See K1001/4.

BASE

Octal
BS.448 : B8-0

See K1001/A1V/D2 M Dimension (iii) applies

CONNECTIONS

Pin	Electrode
1	No connection
2	No connection
3	Anode
4	Screen Grid
5	Control Grid
6	Pin omitted
7	No connection
8	Cathode

DIMENSIONS

See K1001/A1/D1.

Dimension (mms)	Min.	Max.
A	-	103
B	-	32
L	-	89

MOUNTING POSITION

Any

NOTES

A. DC Supply Voltage.

B. A minimum of 5 amps is necessary for the formation of an arc discharge with a tube drop of approximately 20 volts. If the main gap current is less than 5 amps peak, a glow discharge is likely to form with a 70 volt drop and result in excessive cathode dissipation.

C. Limitation due to heating of cathode, dependent on peak current and duty cycle.

D. For triggering between screen and grid.

E. With control grid 80 - 130 volts negative with respect to screen grid.

F. Less than 40 μsecs dependent on circuit conditions. With higher energy pulses the delay time can be considerably reduced.

G. Negative with respect to screen voltage.

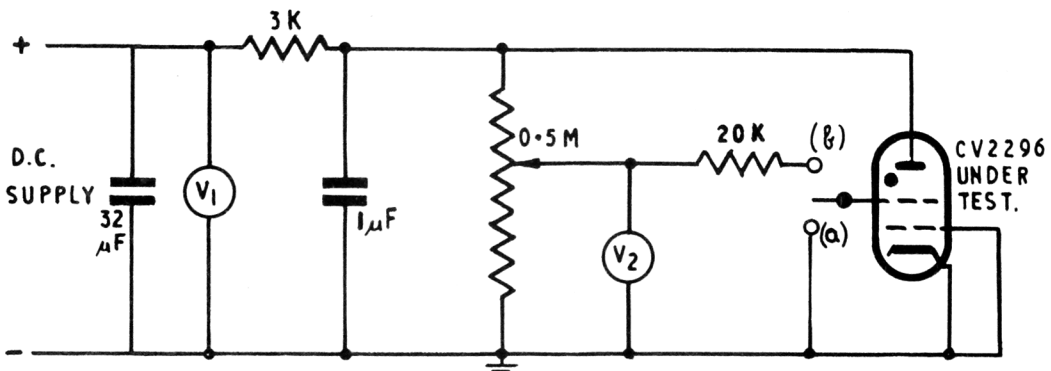
TESTS

CV2296

To be performed in addition to those applicable in K1001

	Test Conditions	Test	Limits Min.	Limits Max.	No. Tested	Note
a →	With the valve operating in the test circuit shown in Fig. 1 on Page 4, and switch set to position (a), 330V DC shall be applied across the reservoir condenser.	Anode-Screen Grid Breakdown Voltage (V1) (V)	330	-	100%	
b	As for Test (a) but switch in position (b); 330V DC shall be applied across the reservoir condenser. The screen grid voltage shall be increased until the valve fires.	Screen Grid Starting Potential Screen grid breakdown potential measured just before conduction starts. (V)	80	130	100%	
c	The valve shall be operated in the test circuit shown in Fig. 2 on Page 4.	Life (hrs)	300	-	TA	

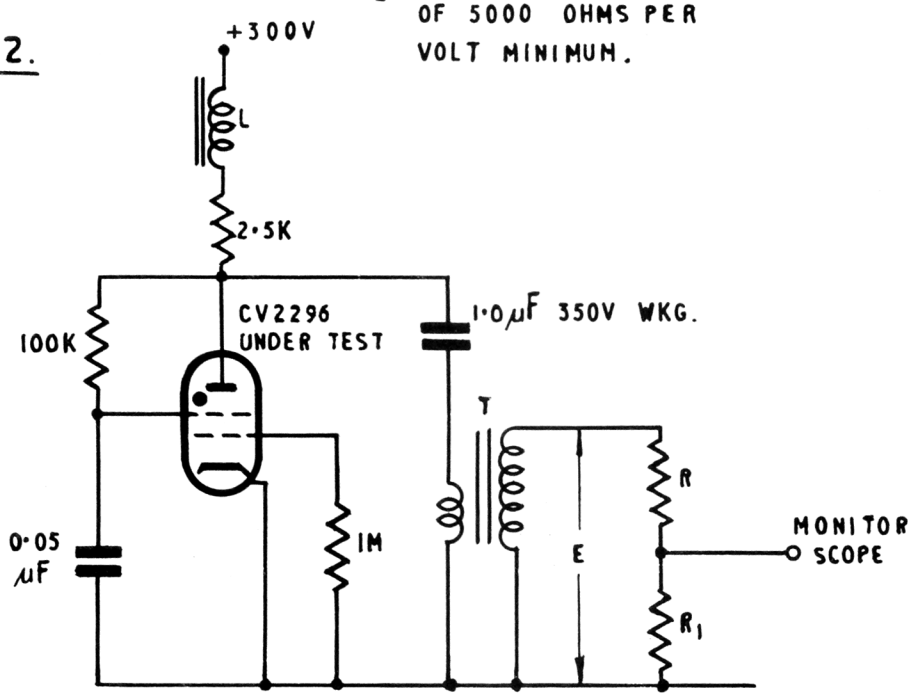
FIG. 1. TEST CIRCUITS FOR CV.2296



V_1 – MOVING COIL METER

V_2 – MOVING COIL METER OF 5000 OHMS PER VOLT MINIMUM.

FIG. 2.



CHOKE L AND TRANSFORMER T ARE CONTAINED IN TRANSFORMER TYPE 2932 (A.M. REF. 10K/16995)