MINISTRY OF SUPPLY (D.C.D.)

VALVE ELECTRONIC

CV 339

Specification MAP/CV339/Issue 3 Dated 21.7.49. To be read in conjunction with K1001, ignoring clauses 5.2, 5.8.	SECURITY Specification [redacted] Unclassified Valve UNCLASSIFIED

→ Indicates a change

TYPE OF VALVE: Enclosed Triggered Spark Gap.
CATHODE: Cold
ENVELOPE: Glass - unmetallised protected (see Note B)
PROTOTYPE: VX. 6017

MARKING

See K1001/4

BASE

3 pin Quindecal

RATING		Note
Trigger Voltage (kV)	3.5	A
Min. Working Voltage (kV)	6.6	A
Peak Output Power (kW)	150	A

CONNECTIONS

Pin	Electrode
1	Trigger electrode
2 to 7	Omitted
8	Anode
9 to 14	Omitted
15	No connection
TC	Cathode

TOP CAP

See K.1001/A1/D5.11

DIMENSIONS

See drawing on page 4

NOTES

A. Under the following conditions:-

Main Gap Voltage = 7.2 kV.
Pulse Length = 0.5 μsec.
Repetition Frequency = 1200 per sec.

Constant current charging is used and the load and line are matched.

B. The valve shall be provided with adequate splinter proofing.

To be performed in addition to those applicable in K1001.

	Test Conditions	Test	Limits Min.	Limits Max.	No. Tested	Note
For the purpose of the following tests, all electrode potentials shall be measured with respect to the anode, which encloses the trigger rod.						
a	Cathode Voltage = -4.5kV. max. Trigger circuit shall be derived from an approved pulse generator supplying a positive pulse of 9.0kV. ± 10% on open circuit, at a repetition frequency of 1200 per sec. and with a build up time to max. voltage of 0.5-0.75 μsec. The line shall be of 80Ω impedance and designed for a pulse length of ½μsec. and shall be charged through a choke of 180H. The external load shall be matched to the line.	A spark shall occur which also delivers power to the load circuit.			100%	1
b	Cathode voltage = -7.2kV. Other conditions as in test clause 'a'.	Trigger breakdown Voltage (kV).	-	5.0	100%	
c	Cathode Voltage = -6.6kV. Other conditions as in test clause 'a'.	i. Jitter (μsecs.) (Total lateral movement of the trailing edge of the monitored pulse).	-	0.2	100%	
		ii. Fluctuations of amplitude.	-	±10%	100%	

TESTS (Cont'd.)

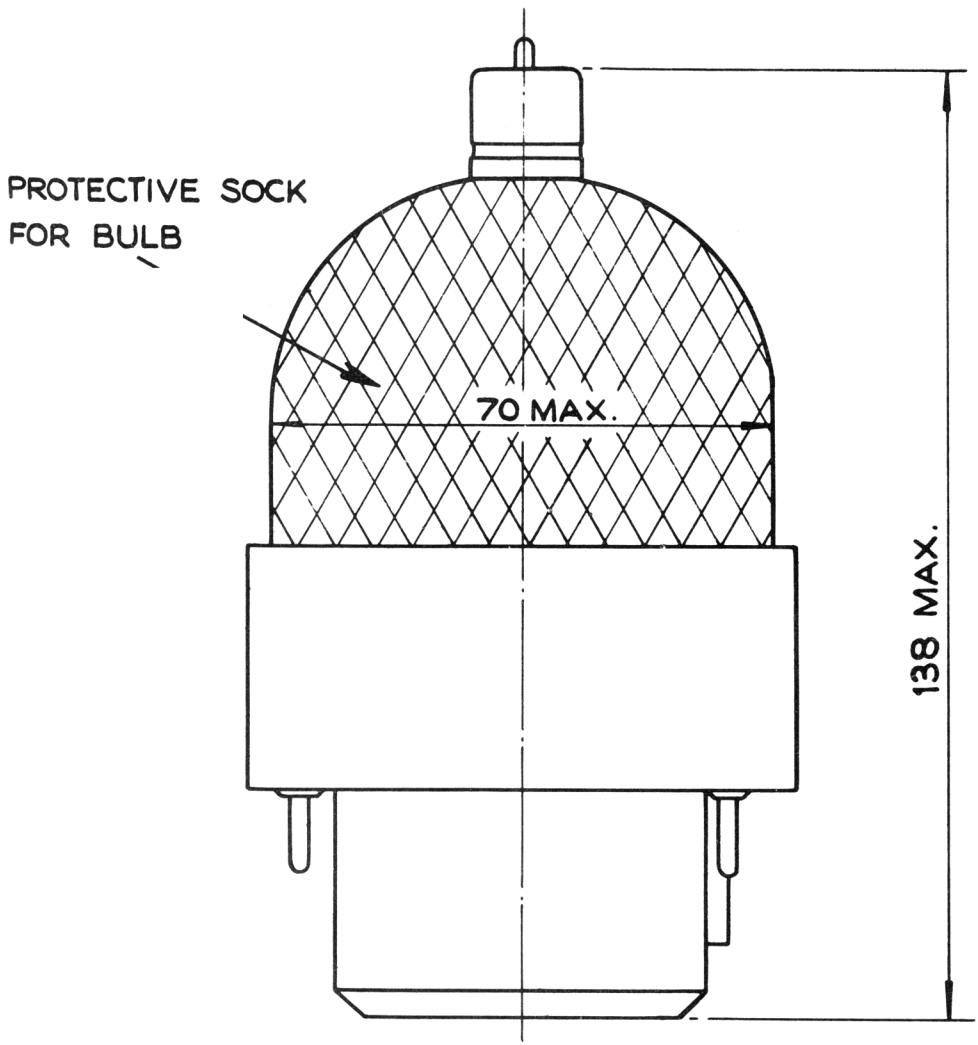
To be performed in addition to those applicable in K.1001.

CV339

	Test Conditions	Test	Limits Min.	Limits Max.	No. Tested	Note
d	Cathode Voltage = -8.4 kV. Other conditions as in test clause 'a'.	i. Jitter (μsecs.) (Total) lateral movement of the trailing edge of the monitored pulse).	-	0.2	100%	
		ii. Fluctuations of amplitude.	-	$\pm$10%	100%	
e	With set up as in test clause 'a' the cathode voltage shall be increased until unstable operation occurs.	Negative Cathode Voltage at which irregular breakdown (i.e. breakdown not correlated with the trigger pulse) occurs at a rate of between 1 and 6 times per sec. (kV).	14.0	-	100% or S	

Note

1. Test clause 'a' must be performed first in test schedule.



DIMENSIONS IN M/M