VALVE ELECTRONIC

ADMIRALTY SURFACE WEAPONS ESTABLISHMENT

CV6173

Specification AD/CV6173 Issue No.1 dated 1st February 1966. To be read in conjunction with K1001	SECURITY Specification: Unclassified Valve: Unclassified

TYPE OF VALVE Enclosed triggered spark gap

CATHODE Cold

ENVELOPE Glass-protected (Note A)

PROTOTYPE 351/24B9

MARKING

K1001/4

BASE

CL3

RATINGS

(All limiting values are absolute)

			Note
Trigger Voltage	kV	3.2	B
Min. Working Voltage	kV	6.8	B
Peak Output Power	kW	160	B

CONNECTIONS

PIN	ELECTRODE
1	Trigger
2	Anode
3	No connection
T.C.	Cathode

TOP CAP

CT5

DIMENSIONS

See Drawing, Page 3

MOUNTING POSITION

Any

NOTES

A The valve shall be provided with adequate splinter proofing.

B Under the following conditions:-
Main Gap Voltage = 7.2 kV
Pulse Length = 0.5 μs
Repetition Frequency = 1200 per sec.
Constant Current Charging.
Load and Line Matched.

C The Joint Services Catalogue Number is 5960-99-037-4556

To be performed in addition to those applicable in K1001

Test (a) is to be performed first.

The electrode voltages are measured with respect to the Anode.

	Test	Test Conditions	Insp. Level	Sym-bol	Limits		Units
					Min.	Max.	
a	Low Voltage Breakdown	Cathode Voltage = -4.5 kV Note 1	100%		Note 2		
b	Trigger Breakdown Voltage	As for test (a) but with Cathode Voltage = -7.2 kV	100%			5.0	kV
c	(i) Jitter (variation of trailing edge of pulse) (ii) Fluctuation of pulse amplitude	As for test (a) but with Cathode Voltage = -6.8 kV	100%			0.2 ±10%	μS
d	(i) Jitter (variation of trailing edge of pulse) (ii) Fluctuation of pulse amplitude	As for test (a) but with Cathode Voltage = -8.4 kV	100%			0.2 ±10%	μS
e	Cathode voltage for irregular breakdown	Note 3	100%		-10.5		kV
f	Life Test End point test:- Cathode voltage for irregular breakdown	Cathode voltage = -7.2 kV Time 1200 hours Note 1 Note 3	1%		-8.5		kV

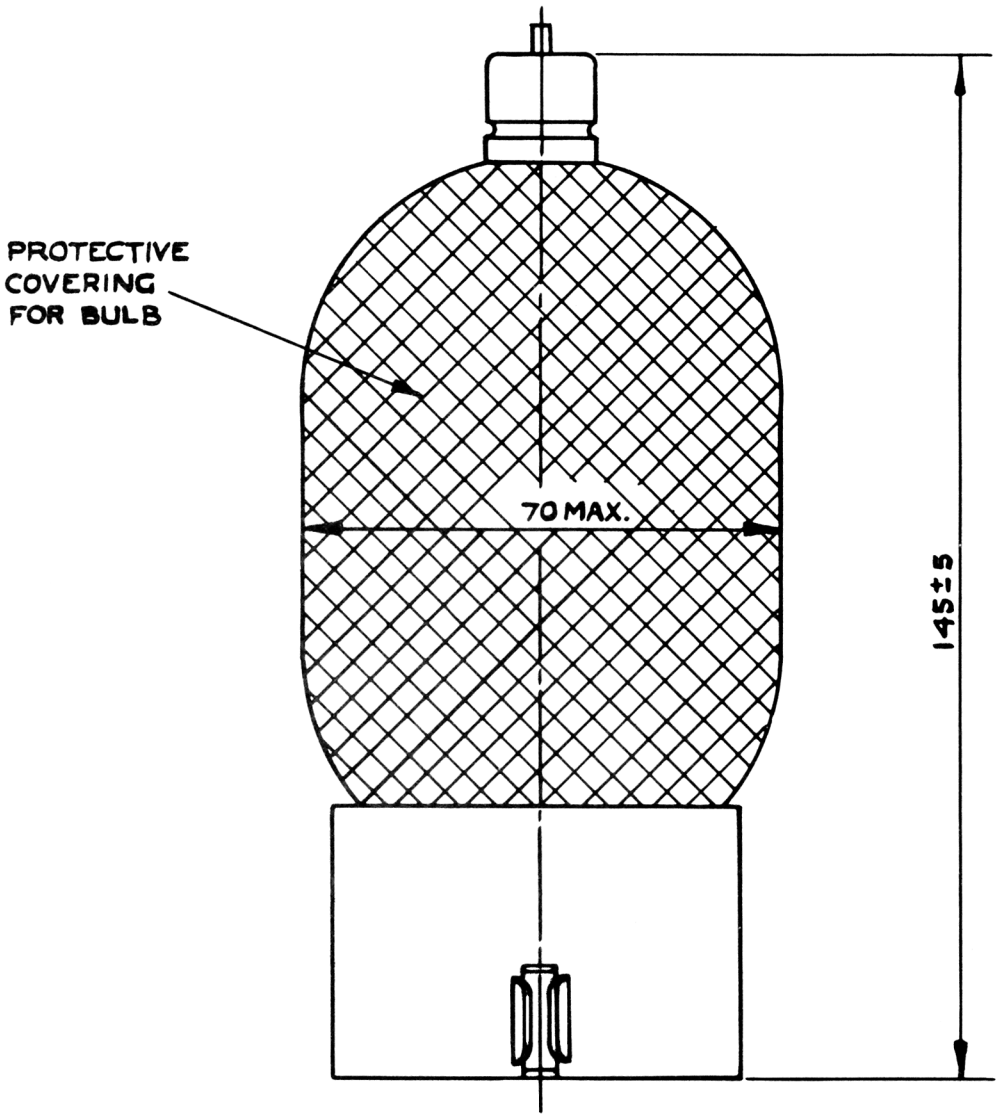
NOTES

1. The trigger voltage shall be derived from an approved pulse generator supplying a positive pulse of 8.5 kV ± 10% on open circuit at a repetition frequency of 1200 per sec. and with a rise time of 0.5 - 0.75 μ sec. The line shall be of 80 ohms impedance and designed for a pulse length of 0.5 μsec. and shall be charged through a choke of 180H. The external load shall be matched to the line.

2. A spark which delivers power to the load circuit shall occur.

3. With the conditions of test (a) the negative cathode voltage shall be increased until breakdown not correlated with the trigger pulse occurs at a rate between 1 and 6 times per sec.

CV6173



DIMENSIONS IN M/M