VALVE ELECTRONIC **CV486**

MINISTRY OF SUPPLY - DLRD(A)/TRE

Specification MOS(A)/CV486 Issue 2 Dated 16.10.52 To be read in conjunction with K1001 excluding clauses 5.2 and 5.8	SECURITY	
	Specification	Valve
	UNCLASSIFIED	UNCLASSIFIED

→ Indicates a change

TYPE OF VALVE - Enclosed Triggered Spark Gap

CATHODE - Cold

ENVELOPE - Glass - unmetallised, Protected (See Note B)

PROTOTYPE - VX6112

RATING

			Note
Trigger Voltage	(kV)	4.5	A
Min. Working Voltage	(kV)	12.0	A
Peak Output Power (approx.)	(kW)	525	A

MARKING

See K1001/4

BASE

B15A3

CONNECTIONS

Pin	Electrode
1	Trigger
2	Anode
3	No connection
4 to 8	Omitted
TC	Cathode

TOP CAP

See K1001/A1/D5.11

DIMENSIONS

See Drawing, Page 3.

NOTES

A. Under the following conditions:-

Main Gap Voltage = -13.5 kV
Tp = 0.5 usec
Prf = 1300 pps

Constant current changing is used and the lead and line are matched.

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

Z.4255.R.

TESTS

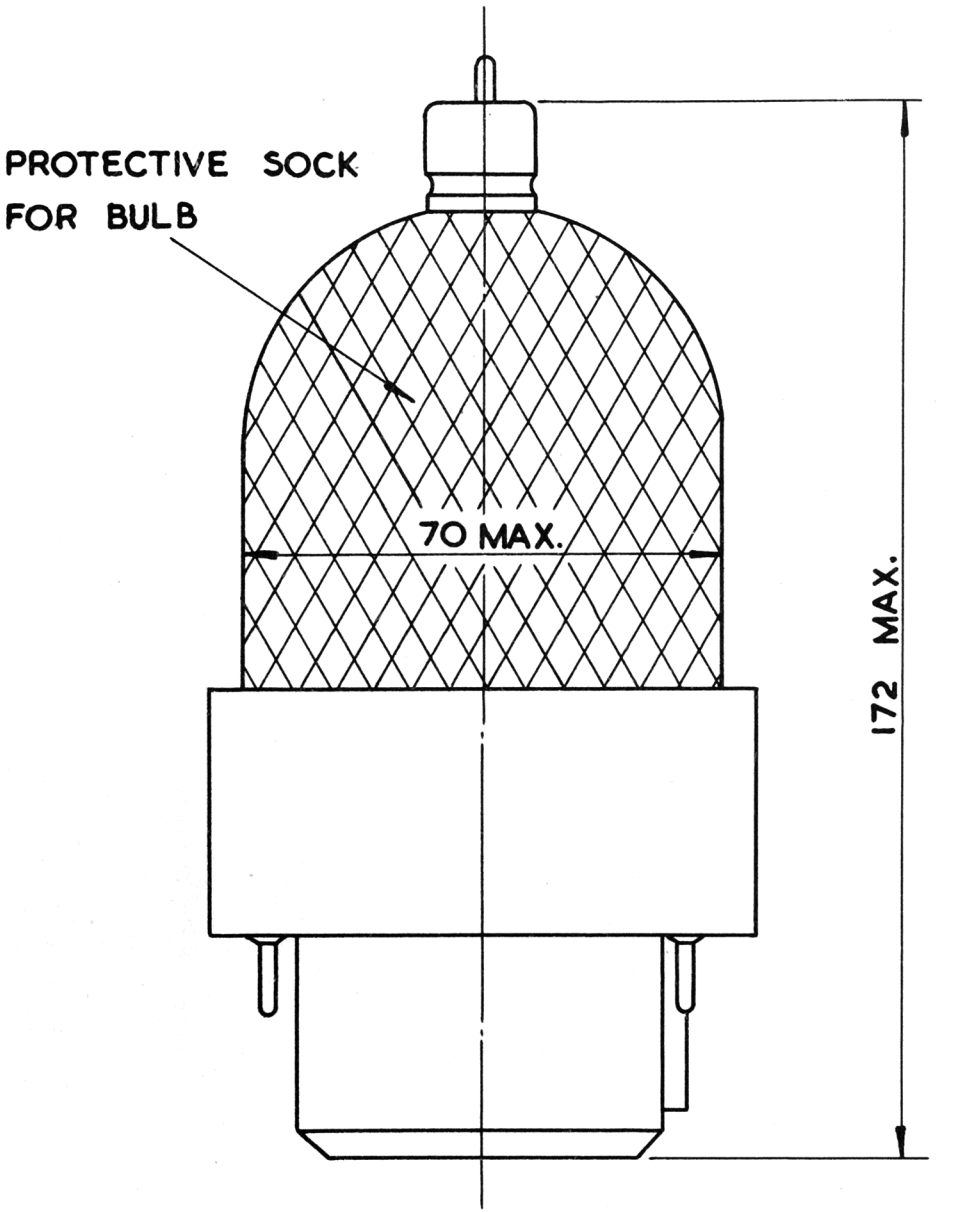
To be performed in addition to those applicable in K1001

	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 = -7.5kV max. Trigger voltage shall be derived from an approved pulse generator supplying a positive pulse of 11.0 ± 1kV on open-circuit, at a repetition frequency of 1300 c/s and with max. build-up time to max. voltage of 0.5 to 0.75 μsec. 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 70 ohms.	A spark shall occur which also delivers power to the load.			100%	1
b	Cathode Voltage = -13.5kV Other conditions as in Test (a).	Trigger breakdown voltage (kV)		6.5	100%	
c	Cathode Voltage = -12kV Other conditions as in Test (a).	1. Jitter (μsec) (Total lateral movement of the trailing edge of the monitored pulse)	-	0.2	100%	
		2. Fluctuations of amplitude	-	± 10%	100%	
d	Cathode Voltage = -15.0kV Other conditions as in Test (a).	1. Jitter (μsec) (Total lateral movement of the trailing edge of the monitored pulse)	-	0.2		-
		2. Fluctuation of amplitude	-	± 10%		
e	With the set-up as in Test (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 timesper sec. (kV)	16	-	100% or S	

NOTE

1. Test (a) must be performed first in the test schedule.

CV 486



DIMENSIONS IN M/M