VALVE ELECTRONIC **CV2285**

ADMIRALTY SIGNAL & RADAR ESTABLISHMENT

Specification AD/CV2285 Issue 1. Dated : 22. 10. 53. To be read in conjunction with K1001.	SECURITY Specification: Unclassified Valve: Unclassified

TYPE OF VALVE: Gas filled cell for S-Band Polarisation-twist TR Systems. CONSTRUCTION: Cylindrical Glass Cell. PROTOTYPE: VX3146.	MARKING K1001/4 and Note "D".
RATING See "Tests".	DIMENSIONS Note F See Drawing Page 4. Amdt 2

NOTES

A. The envelope shall be constructed from W1 Glass.

B. Solid Filling. The narrow tube of the cell shall be filled as completely as possible with Brazilian Rock Crystal quartz chips capable of passing a sieve with 1.65 mm mesh and of being retained by one with 1.2 mm mesh.

C. The cell shall also contain a Krypton gas filling at 5 mm ± ½ mm mercury pressure.

D. No marking is to be applied to the narrow parts of the cell.

E. Packaging. The cells shall be packaged in an approved type of carton containing a set of 20 cells. To K1005 (Patent issue) Amdt 1

F. Each cell shall be checked in the concentricity gauge, shown on page 4. Amdt 2

TESTS

To be performed in addition to those applicable in K1001.

	Test Conditions	Test	Limits		No. Tested	Notes
			Min.	Max.		
a	Increase RF input to twist-section until glow-discharge appears in tubes.	Minimum Arcing Power (kW peak)	-	10	10% or 20	1 3
b	Increase RF input until cells spark in waveguide. PRF = 500 p.p.s. Pulse-duration = 2 μsecs.	Power-handling capacity (MW peak)	2.5	-	10% or 20	1 3
c	Measure Arc-loss at input of 2 MW peak (20 tubes).	Arc-loss (db)	-	0.5	10% or 20	1 3
d	Measure de-ionisation time for recovery to 6 db down at receiver arm.	Deionisation (recovery) time (μsecs)	-	30	10% or 20	2 3

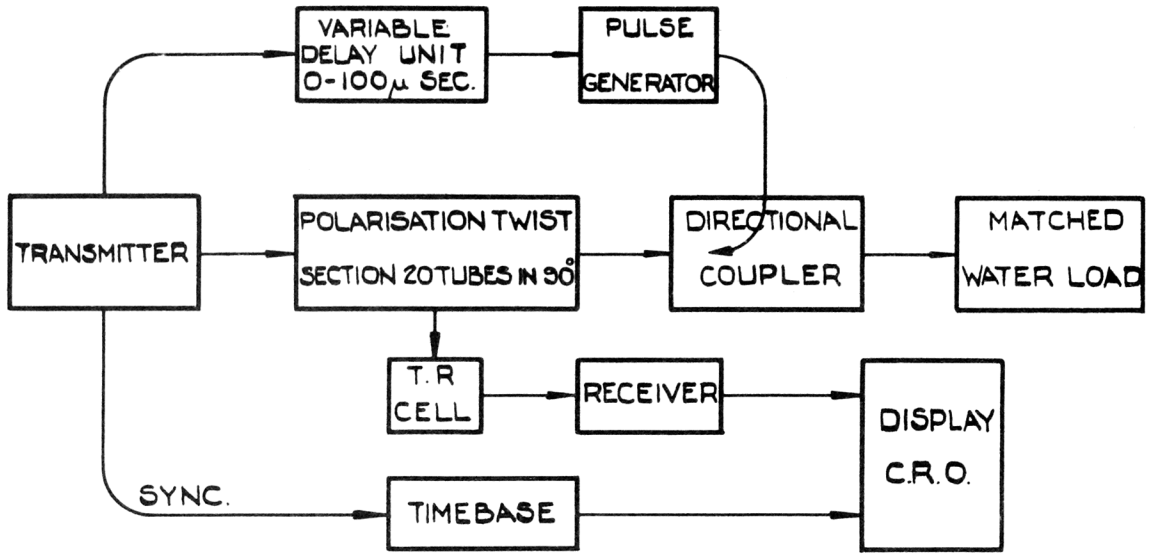
NOTES

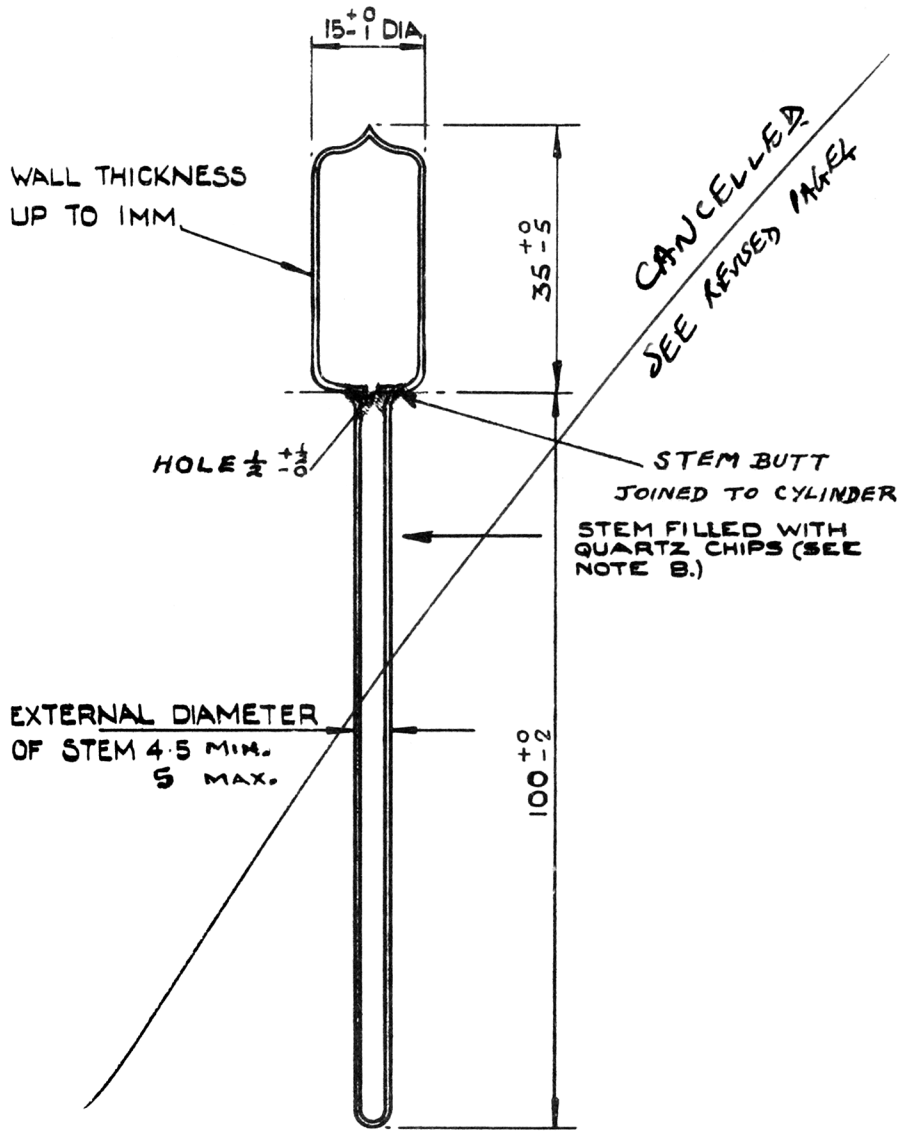
1. Using equipment as shown in Fig. 1.
2. Using equipment as shown in Fig. 2.
3. If any of the 20 fail, all tubes are to be tested.

FIG. 1

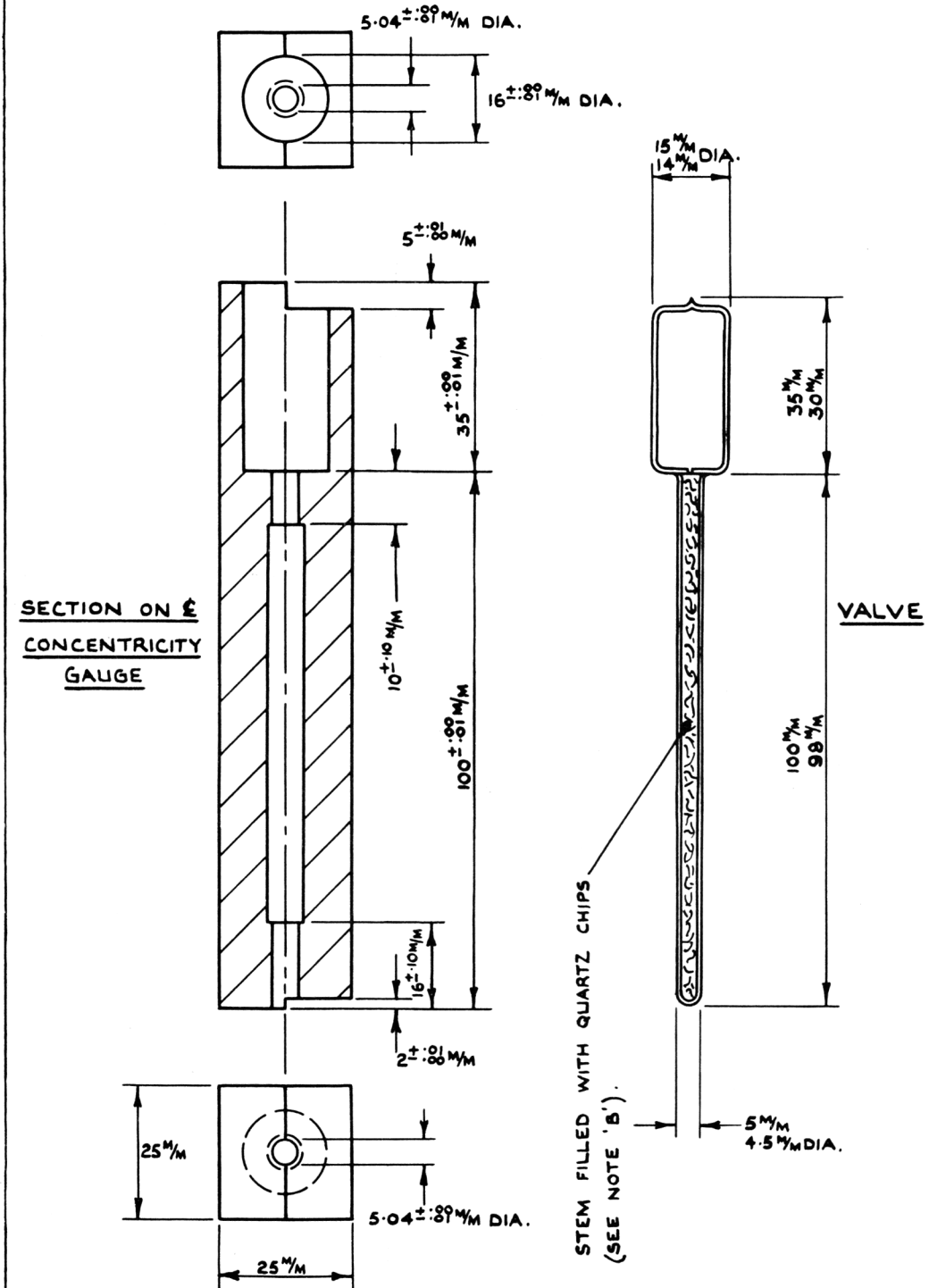
$$\text{ARC-LOSS} = 10 \log_{10} P1/P2.$$

FIG. 2.





DIMENSIONS IN MM.


5·04 ±·01 M/M DIA.
16 ±·01 M/M DIA.
5 ±·01 M/M
35 ±·01 M/M
10 ±·10 M/M
100 ±·01 M/M
16 ±·10 M/M
2 ±·01 M/M
25 M/M
5·04 ±·01 M/M DIA.
25 M/M
SECTION ON ℄
CONCENTRICITY
GAUGE
15 M/M
14 M/M DIA.
35 M/M
30 M/M
100 M/M
98 M/M
VALVE
STEM FILLED WITH QUARTZ CHIPS
(SEE NOTE 'B').
5 M/M
4·5 M/M DIA.

ELECTRONIC VALVE SPECIFICATIONS

SPECIFICATION AD/CV.2285, ISSUE 1, DATED 22.10.53

AMENDMENT NO. 1

Page 1. Note E

Delete entirely the existing note and substitute
Packaging - To K1005 (latest issue).

June, 1964

T.V.C.
for A.S.W.E.

ELECTRONIC VALVE SPECIFICATIONS.

SPECIFICATION AD/CV2285, ISSUE 1, DATED 22.10.53

AMENDMENT No. 2.

1. Page 1.

   (i) Dimensions:- Add "Note F"

   (ii) Notes. Insert new Note F:-

   F. Each cell shall be checked in the concentricity gauge, shown on page 4.

2. Page 4 Cancel, but do not destroy, existing Page 4 and substitute new Page 4, attached hereto.

February, 1965.
NM.310272.

T.V.C. for A.S.W.E.

29/6/65