SPECIFICATION AD/CV.497 ISSUE NO. 5 DATED 12.7.56

AMENDMENT No. 1

Page 3 Insert note 4 as below:-

4. Application should be made to the Specifying Authority for copies of detailed drawings No. B206026 (Assembly A).

January, 1959

Admiralty Signal & Radar Establishment

N.54163/D

VALVE ELECTRONIC **C.V.497.**

ADMIRALTY SIGNAL AND RADAR ESTABLISHMENT

Specification AD/CV497 Issue No. 5 dated 12.7.56 To be read in conjunction with K1001 (ignoring clauses 5.2 and 5.8) and B.S.448.	SECURITY Specification: Unclassified Valve: Unclassified

→ INDICATES A CHANGE

TYPE OF VALVE:- T.R. Switch for $3\frac{1}{2}$" x $1\frac{3}{4}$" Waveguide input.

PROTOTYPE:- CV 293 modified.

MARKING
See K1001/4
Additional Marking
Serial No. .....

RATINGS		Note
Operating Frequency (Mc/s)	2935 to 3060	
Min. Primer Supply Voltage (V)	-800	B
→ Max. Primer Operating Current (/uA)	150	B
→ Min. Primer Operating Current (/uA)	100	B
→ Max. Peak Power (kW)	500	C

TOP CAP

See B.S.448/6/1.6 ← (6 BA thread)

DIMENSIONS AND CONNECTIONS

See Drawing on page 4.

N O T E S

A. All limiting values are absolute.

→ B. Primer current to be limited by a series resistor of which at least 1 Megohm must be adjacent to the valve.

→ C. Without Pre T.R. Switch.

TESTS

To be performed in addition to those applicable in K1001

	Test Conditions	Test	Limits Min.	Limits Max.	No. Tested	Note
a	The Waveguide to be energised by not more than 10 mW, RF. The frequency tuning range shall be obtained by adjusting the two tuners.	Frequency Range (Mc/s)	2935 to 3060	-	100%	
b	Test shall be performed at least 7 days after any previous discharge.	Primer Breakdown (Secs) The delay between the application of the primer voltage and the initial breakdown shall be measured.	-	5	100%	1
c		Primer Operating Voltage. The primer voltage shall be measured after breakdown has occurred. (V)	200	300	100%	1
d	The Waveguide shall be energised with 450 kW ± 10% peak RF with prf 500 pps ± 10% and terminated in a matched load. Test shall be carried out with a frequency between 2925 Mc/s and 3075 Mc/s.	High Power 1. Spike Energy (Ergs/Pulse) 2. Peak Flat Power(mW) For a sampling test, the mean value of a sample of 5 valves shall be less than the max. limits quoted.	1.6 (1.8) 320 (380)		5% (5)	2 & 3
e	When used with a pre-T.R. Switch as Crystal Protection Unit	Deionisation Time (/µS)	-	5	100%	

TEST

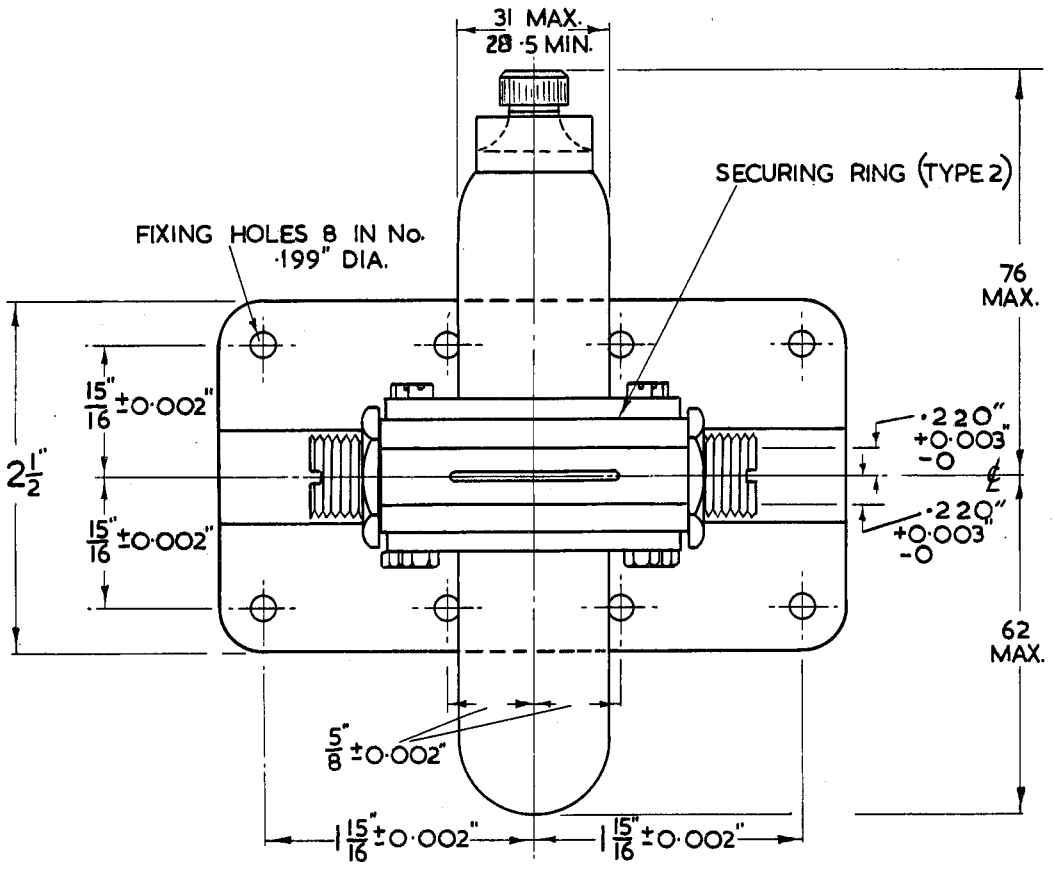
NOTES

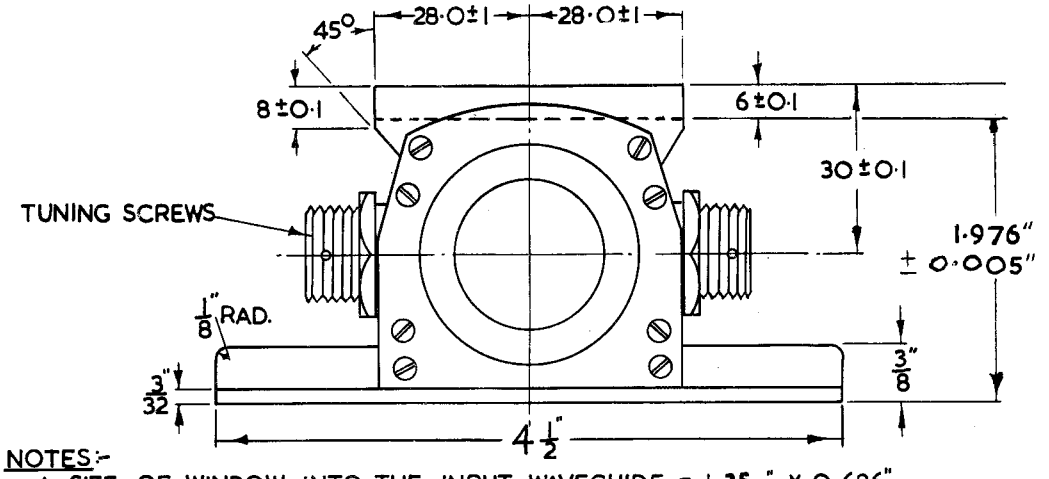
1. The D.C. primer supply voltage shall be 800 volts having a peak to peak ripple voltage not exceeding 1% and the primer shall be negative with respect to the resonator. The regulation of the supply shall be negligible up to load currents of 200/uA. The supply shall be connected to the primer electrode through resistances totalling 5.5 Megohms ± 10% of which at least 1 Megohm must be placed adjacent to the valve.

2. If the average value of spike or flat exceeds the maximum limits quoted, the batch from which the sample is drawn shall be tested 100% and the limits for spike and flat shall be 1.8 ergs/pulse and 380 mW peak for individual valves.

3. High power leakage measurements shall be made with the tuning slugs within two turns of the full-out position.

OUTLINE DIMENSIONS





NOTES:-

1. SIZE OF WINDOW INTO THE INPUT WAVEGUIDE = 1·25 " X 0·686"
   " " " " " OUTPUT " = 1·250" X 0·125"
2. ALL DIMENSIONS IN MMS EXCEPT WHERE OTHERWISE STATED.