VALVE ELECTRONIC

ADMIRALTY SURFACE WEAPONS ESTABLISHMENT

CV6006

Specification AD/CV6006. Issue No. 1 Dated 22.6.59. To be read in conjunction with K1001	SECURITY Specification Unclassified	 Valve Unclassified

TYPE OF VALVE Power Limiting Gas Cell

PROTOTYPE VX1042

MARKING

See K1001/4

RATING		Note
Operating Frequency Range (Mc/s)	7000 to 11,500	
Max. Peak Power (W)	100	
Min. Primer Supply Voltage (V)	-950	
Primer Current (/uA)	100	A

DIMENSIONS

See drawing on Page 4.

NOTES

A. The primer current shall be limited by a series resistance of which at least 1 megohm must be placed adjacent to the cell.

B. The Joint Services Catalogue Number is 5960-99-037-2082.

TESTS

To be performed in addition to those applicable in K1001 after a holding period of 7 days.

	PRIMER SUPPLY	TEST CONDITIONS	TEST	LIMITS MIN.	LIMITS MAX.	NO. TESTED
(a)	-900V	Test to be performed at least 7 days after any previous discharge. See Note 1.	Primer Breakdown (Secs.)	-	5	100%
(b)	-1000V	See Note 1.	Primer Operating Voltage (V)	160	260	100%
(c)	-1000V	Valve shall be mounted between matched impedances (V.S.W.R. better than 1.1:1). This line shall be energised by not more than 10 mW R.F. Power. Primer Current adjusted to 100 µA. See Note 1.	Insertion Loss (dB)			
			(1) at 7000 Mc/s	0.75	1.25	100%
			(2) at 7500 Mc/s	0.55	1.05	100%
			(3) at 8000 Mc/s	0.20	0.70	100%
			(4) at 8500 Mc/s	0.40	0.90	100%
			(5) at 9000 Mc/s	0.50	1.00	100%
			(6) at 9500 Mc/s	0.85	1.35	100%
			(7) at 10000 Mc/s	0.60	1.10	100%
			(8) at 10500 Mc/s	0.20	0.70	100%
			(9) at 11000 Mc/s	0.70	1.30	100%
			(10) at 11500 Mc/s	1.75	2.75	100%
(d)	-1000V	The test frequency of the simulated echo pulse shall be within the range 9000-9500 Mc/s, and its power incident on the cell shall be less than 10 mW. The test frequency of the transmitter pulse shall be within the range 9000-9500 Mc/s and the peak power 10W. Pulse length of simulated echo shall be 1 µS and p.r.f. 1000 c.p.s. See Notes 1 and 2.	Recovery Time (nS) The time shall be measured from the trailing edge of the transmitter pulse for an insertion loss exceeding that immediately before the transmitter pulse by 6 dB.	-	50	100%
(e)	-1000V	Applied power varied from 10 mW to 10 W peak. Pulse length 1.0 µS p.r.f. 1000 c/s. See Notes 1 and 2.	Leakage Power (mW peak) The max. leakage shall be measured at frequencies of (i) 9000 Mc/s (ii) 9400 Mc/s (iii) 9800 Mc/s	-	300	100%
(f)	-1000V	Primer Voltage applied for a period of 1500 hours See Notes 1, 3 and 4.	Life D.C. Primer Life			TA and 5% or 6 whichever is the greater number.

/NOTES. ....

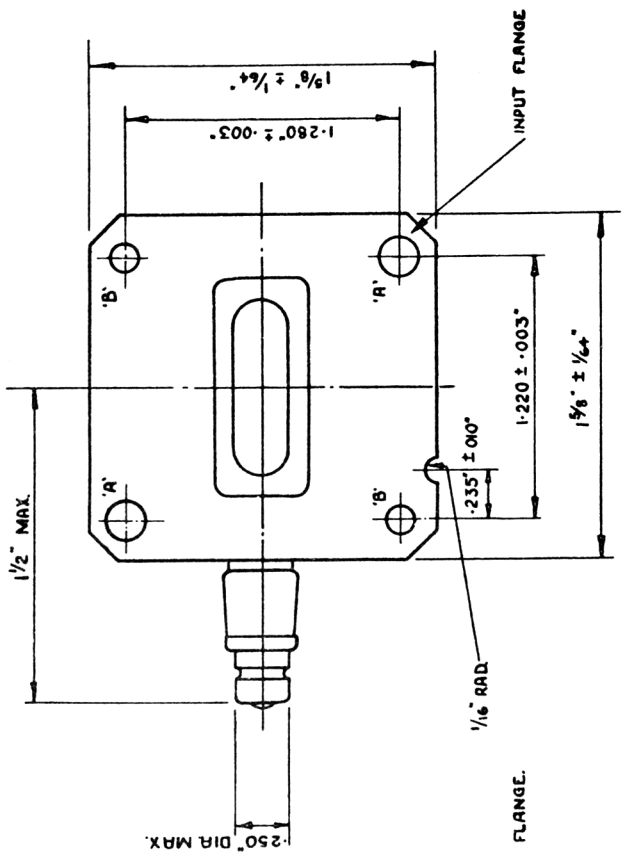
NOTES

1. The primer supply shall be d.c. having a peak ripple voltage not exceeding 1% and shall be negative with respect to the body of the cell. The regulation of the supply shall be negligible at load currents up to 300 μA. The supply shall be connected to the primers through resistances totalling 8.0 ± 5% megohm, of which at least 1 megohm shall be placed adjacent to the cell.

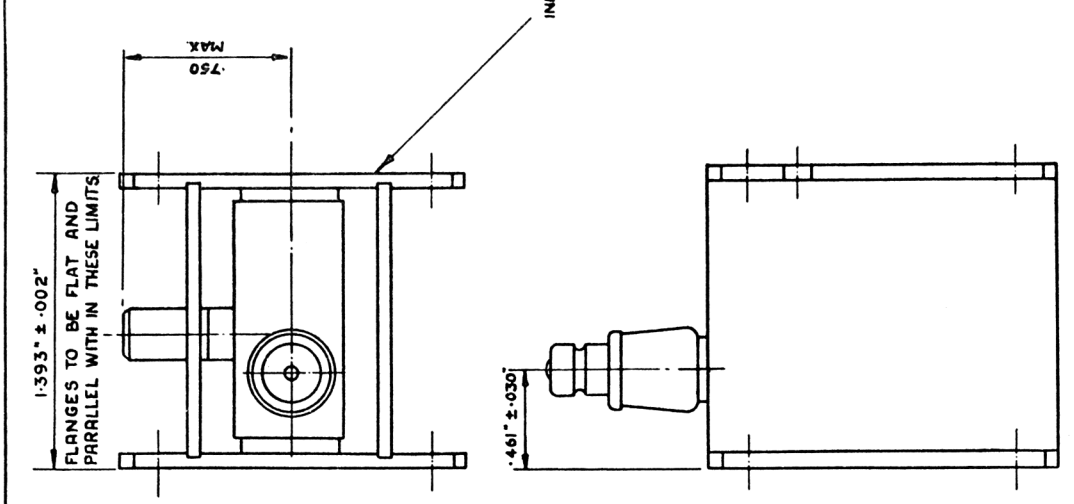
2. A selected tunable magnetron type CV.2421 (or a suitable frequency variant of CV.2421) shall be used.

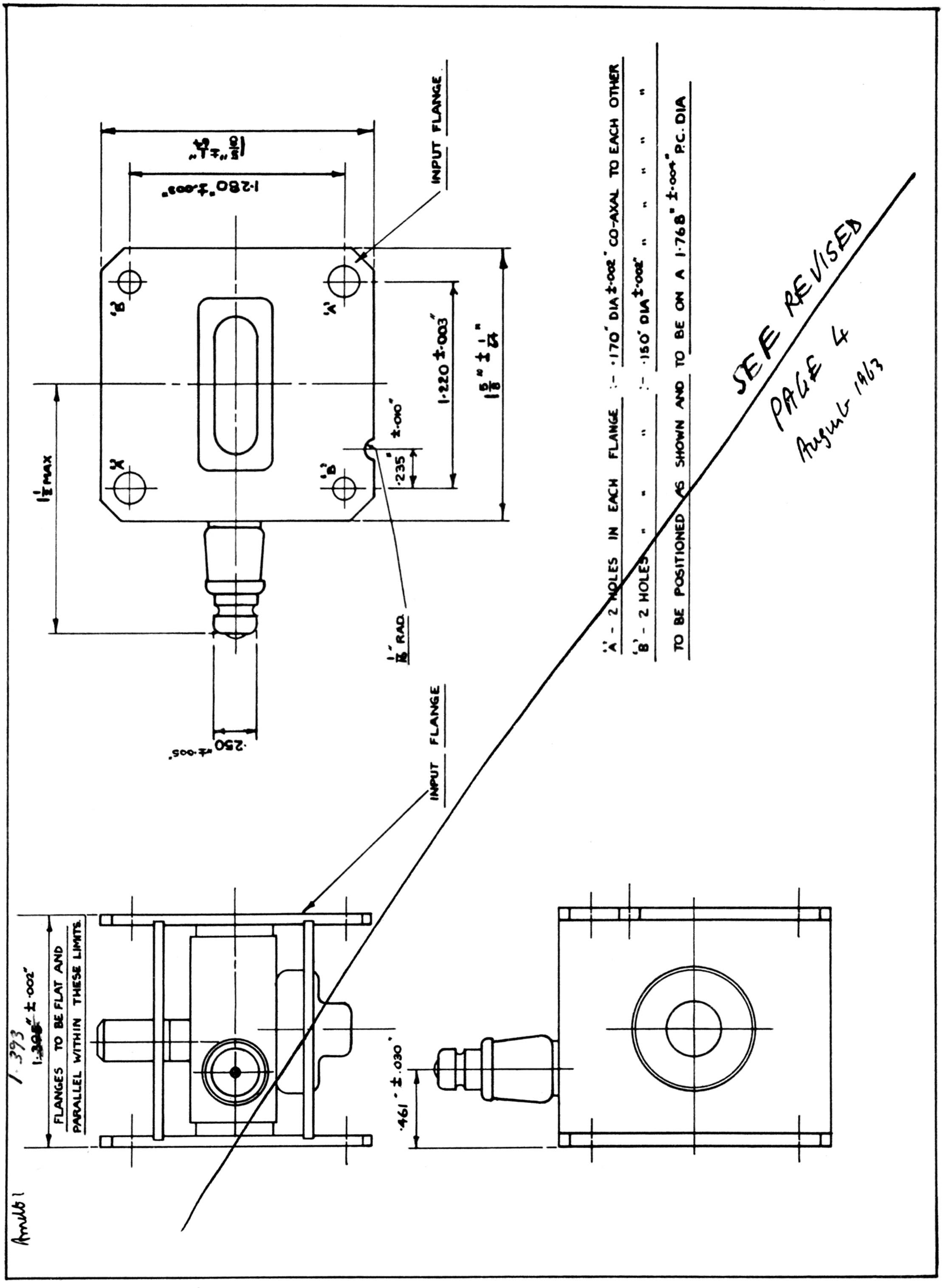
3. At the conclusion of the test period tests (a) to (e) must be repeated and the limits of tests (a) to (e) are to be taken as life test end limits.

4. Life test samples are to be taken at random from the production batch. For Type Approval the life test shall be performed on two cells; both of which must be satisfactory at the end of test. During production, life test records shall be submitted by the manufacturer to the Production Authority. When sufficient data has been accumulated a new specification issue, including a batch sentencing life test will be produced.



'A'- 2 HOLES IN EACH FLANGE :-·170" DIA. ± ·002" CO-AXIAL TO EACH OTHER.
'B'- 2 HOLES " " " :-·150" DIA. ± ·002" " " " "
TO BE POSITIONED AS SHOWN AND TO BE ON A 1·768" ± ·004" P.C. DIA.




INPUT FLANGE
1·280" ±·003"
1·220 ±·003
1 5/8" ± 1/64"
·235" ±·010"
1/16" RAD
1 1/8 MAX
·250" ±·005"
INPUT FLANGE
1·393
±·002"
FLANGES TO BE FLAT AND PARALLEL WITHIN THESE LIMITS.
·461" ±·030"
'A' - 2 HOLES IN EACH FLANGE :- ·170" DIA ±·002" CO-AXAL TO EACH OTHER
'B' - 2 HOLES " " " :- ·150" DIA ±·002" " " " "
TO BE POSITIONED AS SHOWN AND TO BE ON A 1·768" ±·004" P.C. DIA
SEE REVISED PAGE 4 August 1963
Amdt 1

ELECTRONIC VALVE SPECIFICATIONS

SPECIFICATION AD/CV6006
ISSUE NO.1 DATED 22.6.1959.

AMENDMENT No. 1

Page 4. Drawing.	Dimension.	Overall length should read 1.393" $\pm$ 0.002" instead of 1.395".

October, 1959.

Admiralty Surface Weapons Establishment.

N. 71492/D

ELECTRONIC VALVE SPECIFICATIONS

SPECIFICATION AD/CV6006 ISSUE 1. DATED 22.6.59

AMENDMENT NO. 2

Page 4 Cancel, but do not destroy existing Page 4 and insert new Page 4 dated August, 1963 attached hereto.

August, 1963

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

N.190365

SAAS 12/10/63