

SPECIFICATION AD/CV.1483-86

ISSUE NO. 4 DATED 23/7/57

AMENDMENT NO. 1

Page 3 (Lower half)

Insert inches sign (i.e. ") after the figure 1.53  
in the legend "Edge of Radiator to axis of thread  
1.53" max."

TVC for A.S.R.E.

December, 1958.

N.44390

ELECTRONIC VALVE SPECIFICATIONS

SPECIFICATION AD/CV1483-86

Issue No. 4 DATED 23.7.57

AMENDMENT NO. 2

Page 3 Remove existing page 3 and substitute new pages  
3 and 4 herewith.

April, 1962

ADMIRALTY SURFACE WEAPONS ESTABLISHMENT

(12498)

ADMIRALTY SIGNAL AND RADAR ESTABLISHMENT

Specification AD/CVI483, CVI484, CVI485, CVI486. Issue No. 4 dated 23.7.57. To be read in conjunction with K1001 ignoring clauses 5.2, 5.3 and 5.8.	<u>SECURITY</u>	
	<u>Specification</u>	<u>Valve</u>
	Unclassified	Unclassified

→ Indicates a change

<u>TYPE OF VALVE:</u> Magnetron		<u>MARKING</u>	
<u>CATHODE:</u>	Indirectly heated, oxide-coated.	See K1001/4	
<u>ENVELOPE:</u>	Copper and Glass.	<u>Additional Marking:</u>	
<u>PROTOTYPE:</u>	E1373.	Serial No.....	
<u>RATINGS</u>		<u>DIMENSIONS &amp; CONNECTIONS</u>	
All limiting values are absolute.		See drawing on Page 3 ←	
		Note	
Heater Voltage (A.C. or D.C.) (V)	5.0	A	
Heater Current (A)	2.6		
Nominal Frequencies: CVI483 (Mc/s)	3592		
CVI484 (Mc/s)	3550		
CVI485 (Mc/s)	3510		
CVI486 (Mc/s)	3470		
Max. Anode Dissipation (W)	400	B	
<u>TYPICAL OPERATING CONDITIONS</u>			
Peak Anode Voltage (kV)	26	C	
Peak Anode Current (A)	40	C	
Peak Power Output (kW)	400	C	
<u>NOTES</u>			
A. $V_h = 5.0V$ for starting only. For normal running $V_h = 0V$ .			
B. During operation and testing, air must be blown through a suitable fitting enclosing the cooling fins of the anode so that the block temperature does not rise above $140^{\circ}C$ .			
C. These figures are for pulse operation with:-			
(i) Pulse recurrence frequency : 500 pps.			
(ii) Pulse length : $0.5 \mu s$ .			
(iii) Pulse shape : Sensibly square.			
(iv) Field strength : 2300 oersteds (See Note D)			
D. The valve is expected to operate with any field in the range $2300 \pm 100$ oersteds. This point will be checked at Type Approval.			
E. The magnetron shall be processed so as to ensure, as far as possible, that only brief ageing (of the order of 5 mins. or less) is necessary when it is put into service.			
F. In use, the cathode lead side of the valve shall be adjacent to the north pole of the magnet.			

CV1483  
 CV1484  
 CV1485  
 CV1486

TESTS

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

	Test Conditions		Test	Limits		No. Tested	Note
	Vh (V)	Ia Peak (A)		Min.	Max.		
a	5.0	-	Ih (A)	2.3	2.9	100%	1
b	0	40	Va Peak (kV)	23.5	29.5	100%	2
c	0	40	Frequencies:- CV1483 (Mc/s) CV1484 (Mc/s) CV1485 (Mc/s) CV1486 (Mc/s)	3570 3530 3490 3450	3614 3570 3530 3490	100%	2, 3
d	0	40	Peak Output Power (kW)	360	-	100%	2
e	0	Ia peak to be varied from 30A to 45A, with loading for optimum output at 40A. The change of frequency is to be observed.	Frequency Continuity	The frequency shall vary smoothly and without discontinuity and by not more than 5 Mc/s.		100%	2

NOTES

- Vh = 5.0V for starting only. For normal running Vh = 0V.
- The valve is to be tested (tests 'b' to 'e') under the following conditions:-
  - (i) Pulse Recurrence frequency : 500 pps.
  - (ii) Min. Pulse length : 0.5 μs.
  - (iii) Pulse shape : Sensibly square.
  - (iv) Field strength : 2300 ± 20 oersteds.
 No serious or persistent flashing (internal or external) shall occur during the tests.
- Grouping and Remeasurement If, on a single remeasurement, a valve falls within an adjacent group, action shall be taken according to the extent of the discrepancy:-
  - (a) By not more than 6 Mc/s. The grouping remains unchanged.
  - (b) By more than 20 Mc/s. Re-group accordingly.
  - (c) By an amount between 6 Mc/s and 20 Mc/s. Make three more remeasurements; if the average of the four measurements shows a discrepancy of less than 6 Mc/s, the grouping remains unchanged; if more than 6 Mc/s, re group accordingly.



