VALVE ELECTRONIC

CV1483 CV1484 CV1485 CV1486

ADMIRALTY SIGNAL AND RADAR ESTABLISHMENT

Specification AD/CV1483, CV1484, CV1485, CV1486. Issue No. 4 dated 23.7.57. To be read in conjunction with K1001 ignoring clauses 5.2, 5.3 and 5.8.	SECURITY	
	Specification	Valve
	Unclassified	Unclassified

→ Indicates a change

TYPE OF VALVE: Magnetron

CATHODE: Indirectly heated, oxide-coated.

ENVELOPE: Copper and Glass.

PROTOTYPE: E1373.

MARKING

See K1001/4

Additional Marking:

Serial No.....

RATINGS

All limiting values are absolute.

			Note
Heater Voltage (A.C. or D.C.)	(V)	5.0	A
Heater Current	(A)	2.6	
Nominal Frequencies: CV1483	(Mc/s)	3592	
CV1484	(Mc/s)	3550	
CV1485	(Mc/s)	3510	
CV1486	(Mc/s)	3470	
Max. Anode Dissipation	(W)	400	B
TYPICAL OPERATING CONDITIONS			
Peak Anode Voltage	(kV)	26	C
Peak Anode Current	(A)	40	C
Peak Power Output	(kW)	400	C

DIMENSIONS & CONNECTIONS

See drawing on Page 3 ←

N O T E S

A. Vh = 5.0V for starting only. For normal running Vh = 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°C.

C. These figures are for pulse operation with:-

(i) Pulse recurrence frequency : 500 pps.
(ii) Pulse length : 0.5 μS.
(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 ± 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.

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:-			100%	2,3
			CV1483 (Mc/s)	3570	3614		
			CV1484 (Mc/s)	3530	3570		
			CV1485 (Mc/s)	3490	3530		
			CV1486 (Mc/s)	3450	3490		
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

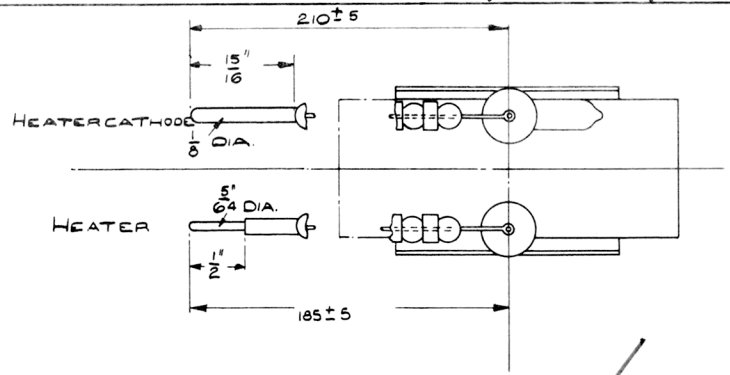
1. Vh = 5.0V for starting only. For normal running Vh = 0V.

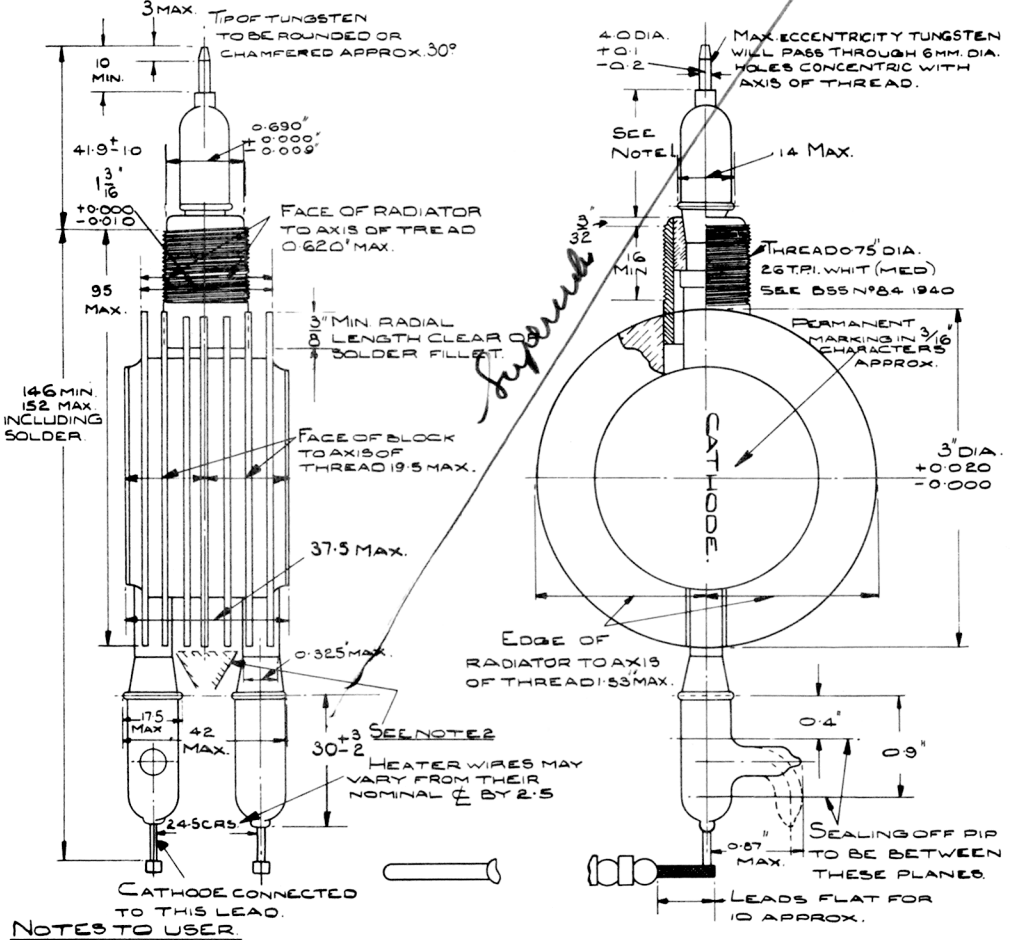
2. The valve is to be tested (tests 'b' to 'e') under the following conditions:-
   (i) Pulse Recurrence frequency : 500 pps.
   (ii) Min. Pulse length : 0.5 µS.
   (iii) Pulse shape : Sensibly square.
   (iv) Field strength : 2300 ± 20 oersteds.

   No serious or persistent flashing (internal or external) shall occur during the tests.

3. 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.

CV1483, CV1484, CV1485, CV1486.

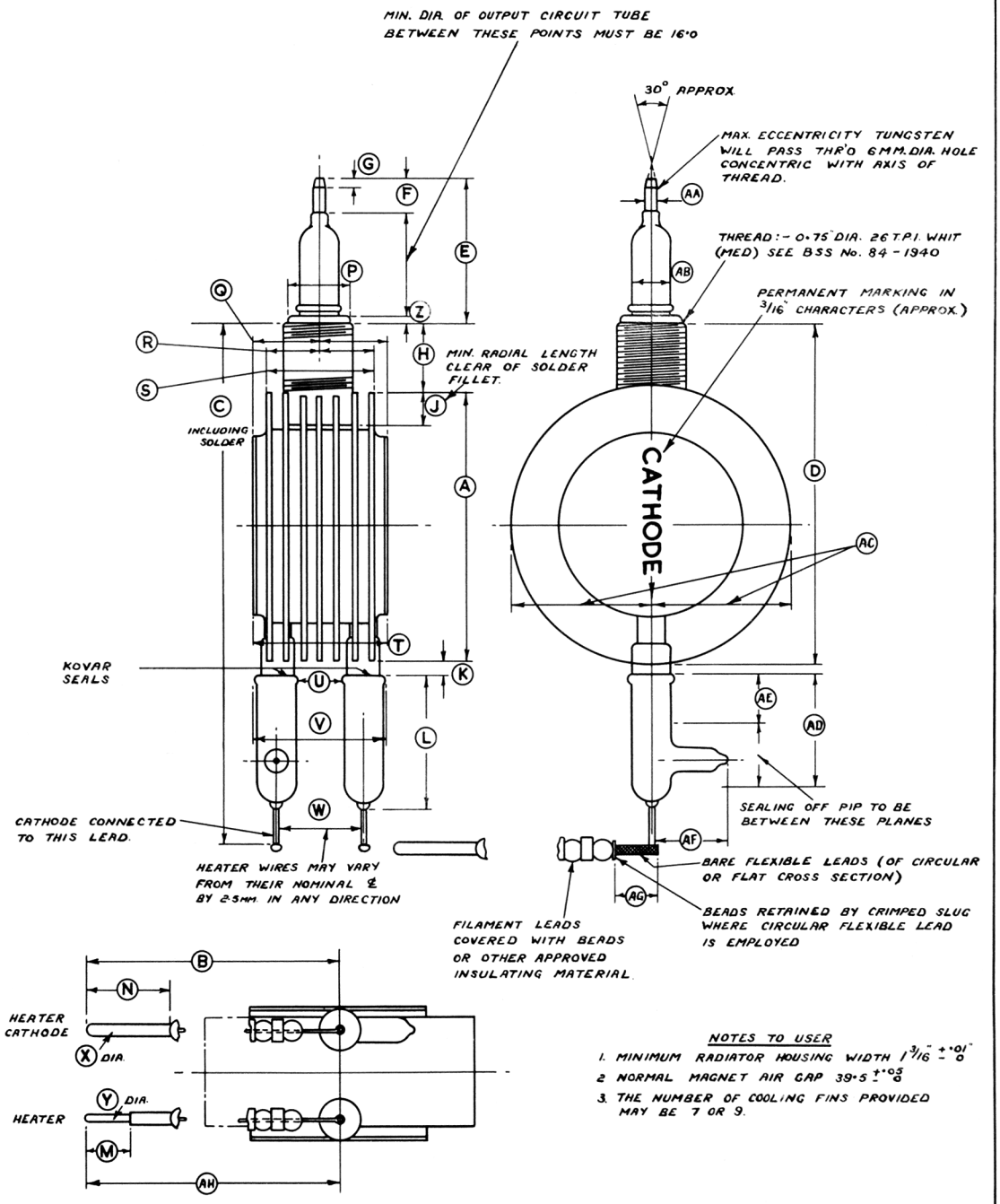




NOTES TO USER.

1. MINIMUM DIA. OF CIRCUIT TUBE BETWEEN THESE POINTS MUST BE 16.
2. BETWEEN FILAMENT THIMBLES MAX. WIDTH OF HOUSING 7 EACH SIDE OF ℄ & ANGLE OF SIDES NOT GREATER THAN 70°
3. MIN. RADIATOR HOUSING WIDTH 1 3/16" +0·010."
4. NORMAL MAGNET AIR GAP 39·5 ± 0·5

ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.



NOTES TO USER

1. MINIMUM RADIATOR HOUSING WIDTH $1\frac{3}{16}^{+0.01}_{-0}$"
2. NORMAL MAGNET AIR GAP $39{\cdot}5^{+0.5}_{-0}$
3. THE NUMBER OF COOLING FINS PROVIDED MAY BE 7 OR 9.

DIMENSIONS ON PAGE 4

OUTLINE DIMENSIONS.

REFERENCE	DIMENSION		NOTE	REFERENCE	DIMENSION		NOTE
	INCHES	m.m.			INCHES	m.m.	
A	$3{\cdot}0 \pm 0{\cdot}02$			S	$1\frac{3}{16} \pm 0{\cdot}01$		
B		210 ± 5		T		37·5 MAX.	
C		149 ± 3	INCLUDING SOLDER	U	0·437 MIN.		
D		95 MAX.		V		42 MAX.	
E		$41{\cdot}9 \pm 1{\cdot}0$		W		24·5 CRS.	
F		10 MIN.		X	$\frac{1}{8} \pm \frac{1}{64}$ DIA.		
G		3 MAX.		Y	$\frac{5}{64} \pm \frac{1}{64}$ DIA		
H		16 MIN.		Z	$\frac{3}{32}$ NOM.		
J	$\frac{3}{8}$ MIN.			AA		$^{+0{\cdot}1}_{-0{\cdot}2}$	
K	$\frac{1}{16}$ NOM.			AB		14 MAX.	
L	$1\frac{1}{4}$ MIN.		GLASS	AC	1·53 MAX.		EDGE OF RADIATOR TO AXIS OF THREAD
M	$\frac{1}{2}$ NOM.			AD	0·9 MAX.		
N	$\frac{15}{16}$ NOM.			AE	0·4 MIN.		
P	$^{+0{\cdot}001}_{0{\cdot}69-0{\cdot}009}$			AF	0·87 MAX.		
Q		19·5 MAX.	FACE OF BLOCK TO AXIS OF THREAD	AG		10 APPROX.	
R	0·62 MAX.		FACE OF RADIATOR TO AXIS OF THREAD	AH		185 ± 5	

(12498)

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)

AD 13/4