VALVE ELECTRONIC **CV1254**

ADMIRALTY SIGNAL ESTABLISHMENT

(NT97)

Specification AD/CV1254/Issue 3.
Dated 11.11.46.
To be read in conjunction with K1001, ignoring clauses:- 5.2, 5.8.

SECURITY	
Specification	Valve
Restricted	Unclassified

TYPE OF VALVE:- Triode - air-cooled.
CATHODE:- Directly heated thoriated tungsten.
ENVELOPE:- Glass to metal; diffuser soldered to anode.
PROTOTYPE:- E1265.

MARKING

See K1001/4.

BASE

None

For connections see Fig. 1.

DIMENSIONS

See Fig. 1.

Gauge.

A.S.E. Gauge No. 332, Fig. 2, is used to check the dimensions of the grid seal. The gauge must screw into the seal without difficulty.

PACKING

See K1001/7.3.

RATING			Note
Filament Voltage	(V)	11.0	
Filament Current	(A)	12.25	
Max. Anode Peak Voltage	(kV)	9.0	
Average Anode Peak Current	(A)	17.5	
Max. Anode Dissipation	(W)	100	A
Max. Operating Freq.	(Mc/s)	600	

CAPACITANCES (pF.)

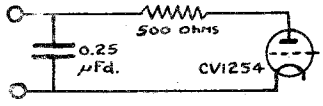
Cag (nom.)	7.2
Cgf (nom.)	4.3

NOTE

A. With forced air cooling. During testing and operation the valve must be mounted vertically, but either the filament pins or grid thimble shall be uppermost. The air-cooled surface of the anode must be maintained below 140°C. Air blown on to the anode diffuser at a rate of at least 5 cu. ft. per min. and on to the grid seal or lead at about 1 cu. ft. per min., is suggested.

TESTS

To be performed in addition to those applicable in K1001.

	Test Conditions				Test	Limits		No. Tested	Note
	Vf (V)	Va (kV)	Vg (V)	Ia (mA)		Min.	Max.		
a	11.0	0 to 12 slowly	Adjusted	1.0 approx.	Hot Flash			100%	1
	H.T. applied thus:-  for 3 mins. at Va = 12 kV. Vg preferably auto-bias.								
b	11.0	-	-	-	If (A)	11.0	13.5	100%	
c	11.0	1.0	Adjusted	100	i. -Ig (total) (µA)	-	80	100%	3
					ii. -Ig (gas) (µA)	-	10		
d	11.0	1.0	Adjusted	100	Vg (V)	-24	-39	100%	
e	11.0	1.0	x	100	x - y (V)	14	25	1%(1)	
	11.0	0.7	y	100					
f	11.0	3.0	3.0		Ie peak emission (A)	17.5	-	100%	2
	Peak emission to be measured under approved conditions.								
g	Adjusted	1.0	0	50	(Reduced emission) Vf (V)	-	4.70	100%	2
h	Valve cold.				CAPACITANCES (pF.) i. Cag	5.7	8.7	Type Approval	
					ii. Cgf	3.0	5.6		

NOTES

1. Each valve must be processed as shewn in test 'a'. This test need be applied once only to each valve. Each valve to be processed until internal flashing substantially ceases.
2. Test 'f' must be done if possible; if not, test 'g' must be done in its place. Valves failing test 'g' are satisfactory if they pass test 'f'. Peak emission (test 'f') to be measured under pulse conditions with pulse length of 2 µ secs. repetition frequency 50 p.p.s., the pulse shape to be sinusoidal.
3. The gas component of -Ig can be taken as the immediate decrease in -Ig when -Vg is rapidly increased to cut off Ia. The presence of unsaturated grid emission may render test 'c ii' impossible.

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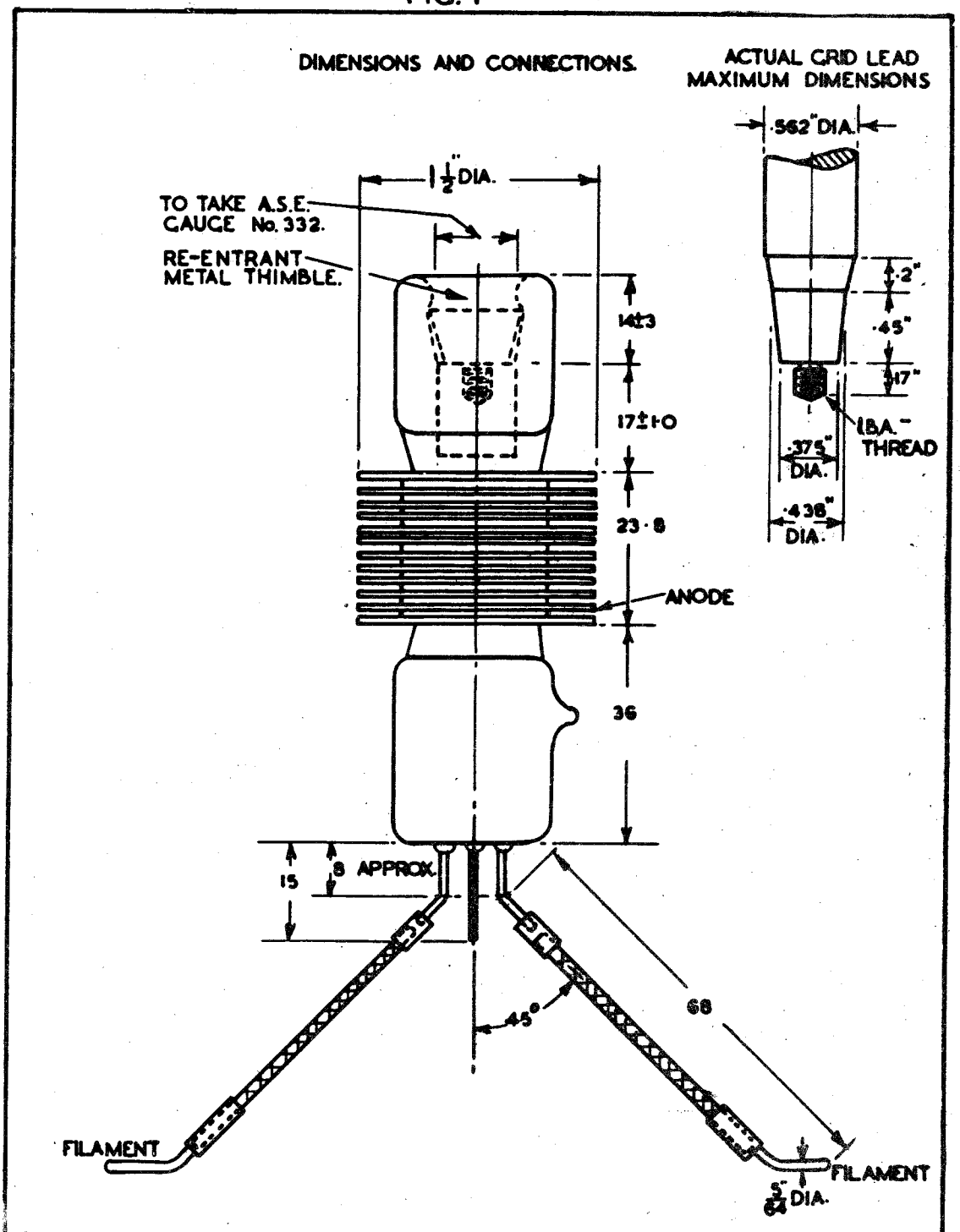
FIG. 1


DIMENSIONS AND CONNECTIONS.
ACTUAL GRID LEAD MAXIMUM DIMENSIONS
·562" DIA.
1½" DIA.
TO TAKE A.S.E. GAUGE No. 332.
RE-ENTRANT METAL THIMBLE.
14±3
17±1·0
23·8
ANODE
36
15
8 APPROX.
45°
68
·2"
·45"
·17"
1B.A. THREAD
·375" DIA.
·438" DIA.
FILAMENT
FILAMENT
5/64" DIA.
ALL DIMENSIONS IN MILLIMETRES EXCEPT WHERE OTHERWISE STATED.

A.S.E. GAUGE No 332.
"GO" GAUGE FOR CV1253 AND 1254. GRID SEAL.

MATERIAL - BRASS OR MILD STEEL.