VALVE ELECTRONIC **CV199**

ADMIRALTY SIGNAL ESTABLISHMENT

Specification AD/CV199/Issue 3.
Dated 21.2.47.
To be read in conjunction with K1001, ignoring clauses:- 5.2, 5.8.

SECURITY	
Specn.	Valve
~~Restricted~~ Unclass	Unclassified

TYPE OF VALVE:- Triode, with forced air-cooled anode.
CATHODE:- Indirectly heated, oxide coated.
ENVELOPE:- Metal/glass.
PROTOTYPE:- Low emission NT99.

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

RATING			Note
Vh	(V)	6.0	
Ih	(A)	6.5	
Average Vg	(V)	-31	
Peak Va	(kV)	8.0	B
Max. Wa	(W)	150	A
Wavelength of operation	(cm)	50	

CAPACITANCES (pF.)	
Cag	8.0
Cgc	11.0
Cac	2.25

DIMENSIONS
See Fig. 1, page 3.

GAUGE
A.S.E. gauge No.334 is used to check grid seal. See Fig. 2, page 4.

PACKING
See ~~K1001/7.3~~. K1005

NOTES

A. During testing and operation, the air-cooled surface of the anode must be maintained below 140°C. A blast of air blown on to the anode diffuser at the rate of at least 5 cu.ft./min., and on to the grid seal or lead at the rate of about 1 cu.ft./min., is suggested.

B. The valves, when operated in a push-pull oscillator, modulated by a pulse of length 1 μS, with repetition frequency 500 p.p.s. with Va not more than 8 kV. shall withstand being switched on in two stages, viz:- half Va to full Va, without conditioning other than that given by the manufacturers.

TESTS

To be performed in addition to those applicable in K1001.

	Test Conditions Vh (V)	Va (V)	Ia (mA)	Test	Limits Min.	Max.	No. Tested	Note
a	6.0			Ih (A)	5.85	7.15	100%	
b	6.0	1000	100	Vg (V)	-19	-55	100%	
c	6.0	1000	100	Reverse Ig (gas) (μA)	-	10	100%	1
d	6.0	1000	100	Reverse Ig (grid emission) (mA)	-	10	100%	1
e	6.0	500	100	i. Vg	Must not be positive		100%	
	Vg adjusted and noted.			ii. Change in -Vg from value in test 'b' (V)	17	37	100%	
f	6.0	1000		Peak emission (Ia + Ig) (A)	20	-	100%	2
	Vg = 1000 V.							
g	Valve cold.			Capacitances			Type Approval only	
				i. Cag (pF)	6	10		
				ii. Cgc (pF)	8.25	13.75		
				iii. Cac (pF)	1.5	3.0		

NOTES

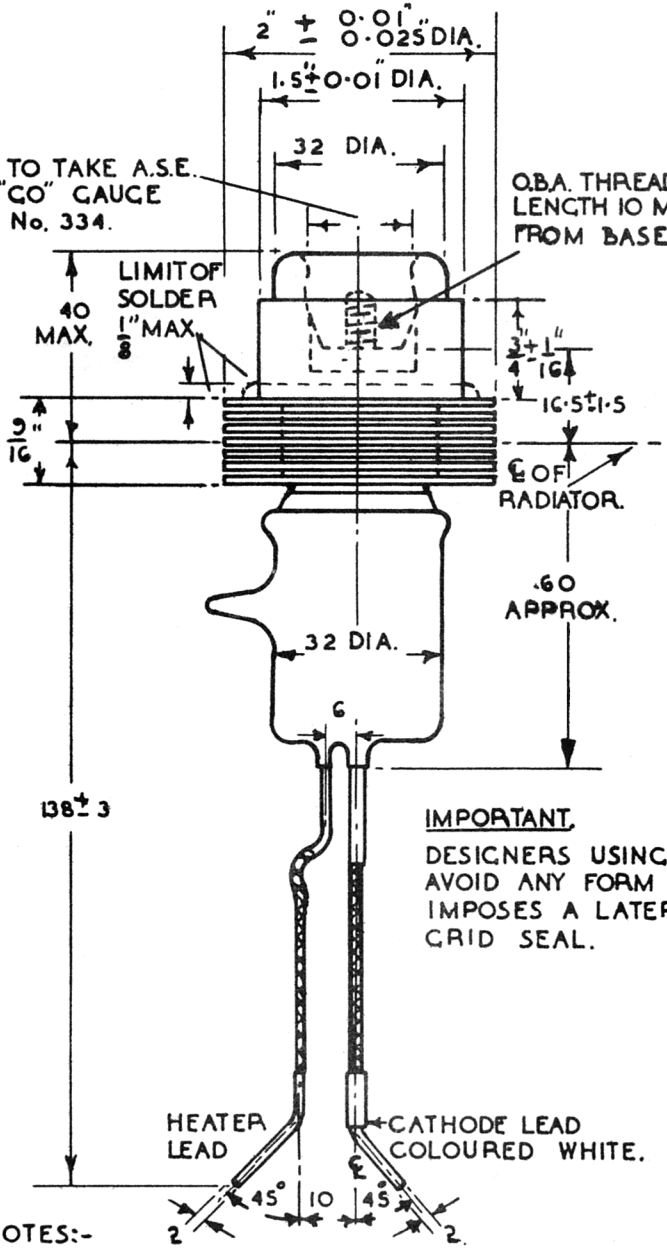
1. The gas component of the reverse grid current can be taken as its immediate decrease when -Vg is rapidly increased to cut off Ia. The presence of unsaturated grid emission may render test 'c' impossible.

2. Under pulse conditions. Tp = 2 μS, PRF = 50 per sec. Pulse shape to be sinusoidal.

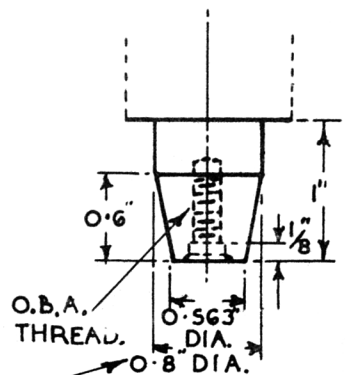
FIG 1.

CV199

OUTLINE DIMENSIONS.



MAXIMUM OUTSIDE DIMENSIONS OF GRID CONNECTIONS.



WHEREVER POSSIBLE KEEP THIS DIMENSION DOWN TO 0·75" DIA.

NOTES:-

1. THE AXIS THROUGH THE GRID SCREW MUST NOT VARY FROM ITS NOMINAL POSITION WITH RESPECT TO THE CORONA RING AND ANODE RADIATOR BY MORE THAN 0·10".
2. ALL DIMENSIONS ARE IN MMS. UNLESS OTHERWISE STATED.

A.S.E. GAUGE No 334

MATERIAL-BRASS OR MILD STEEL.