VALVE ELECTRONIC **CV55**

ADMIRALTY SIGNAL ESTABLISHMENT

Specification AD/CV55/Issue 4. Dated 13.11.46. To be read in conjunction with K1001.	SECURITY Specn. ~~Restricted~~ Unclass Valve Unclassified

TYPE OF VALVE:- Air-cooled triode oscillator for CW use. CATHODE:- Indirectly heated. ENVELOPE:- Metal - glass. PROTOTYPE:- E1190.	MARKING See K1001/4. Additional Marking Serial No. ..... See Note A.

RATING			Note	DIMENSIONS AND CONNECTIONS
Heater Voltage	(V)	6.3 to 7.0	B	See Fig. 1.
Heater Current	(A)	2.7		
Max. Anode Dissipation	(W)	50	C	Suitable gauges for checking the dimensions are shewn in G.E.C. drawings A42102F, A43407D/11 and A43408R/1 or later issues of these drawings.
Amplification Factor		15		
Min. Operating Wavelength	(cm.)	50		
Continuous output power at 50 cm. per pair.	(W)	20	D	
CAPACITANCES (pF)				
Cag		3.8		
Cgc		7.3		
Cac		2.2		

NOTES

A. Valves and cartons are to be marked with two figures (e.g. 10/150) the first figure giving the peak emission in amps and the second Ia (mA) at Va = 100 V, Vg = 0.

B. The filament volts should be as little above 6.3 V as possible.

C. The temperature of the anode and grid seals must be kept below 140°C. Forced-air-cooling is necessary, a flow of approx. 4 cu. ft./min. being recommended. The pressure drop is of the order of 1.5" of water but may be lower, depending on the design of the system.

d. Under sustained oscillation conditions Va = 500 V.

TESTS

To be performed in addition to those applicable in K1001.

	Test Conditions Vh (V)	Va (V)	Vg (V)	Ia (mA)	Test	Limits Min.	Limits Max.	No. Tested	Note
a	7.0				Ih (A)	2.4	3.0	100%	
b	7.0	500		100	Vg (V)	-12	-30	100%	
c	7.0	500		100	Reverse Ig (μA)				
					i. Gas	-	10	100%	1
					ii. Grid emission and/or leak.	-	100	100%	
d	7.0	300		100	i. Vg (V)	Must not be positive		100%	
					ii. Vg change from test 'b' (V)	7	20	100%	
e	7.0	500	500		Ie peak (A)	10	-	100%	2
f					Capacitances (pF)			Type	
					i. Cag	2.1	5.5	ap-	
					ii. Cgc	5.1	9.5	proval	
					iii. Cac	0.5	3.9	Test.	

NOTES

1. Ig (gas) is measured as the immediate decrease in reverse Ig when -Vg is rapidly increased to cut off Ia. Should the presence of unsaturated grid emission make this measurement in test 'c(i)' impossible, the test may be considered fulfilled if no trace of gas is evident in test 'e'.

2. Ie measured under pulse conditions, with Tp = 2/μS, PRF 50 per sec., the pulse shape sinusoidal.

OUTLINE DIMENSIONS.

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FIG 1.