

ADMIRALTY SIGNAL ESTABLISHMENT

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

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

<u>RATING</u>		Note	<u>DIMENSIONS AND CONNECTIONS</u>
Heater Voltage (V)	6.3 to 7.0	B	See Fig. 1.  Suitable gauges for checking the dimensions are shown in G.E.C. drawings A42102F, A43407D/11 and A43408R/1 or later issues of these drawings.
Heater Current (A)	2.7		
Max. Anode Dissipation (W)	50	C	
Amplification Factor	15		
Min. Operating Wavelength (cm.)	50		
Continuous output power at 50 cm. per pair. (W)	20	D	
<u>CAPACITANCES (pF)</u>			
C <sub>ag</sub>	3.8		
C <sub>gc</sub>	7.3		
C <sub>ac</sub>	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 I<sub>a</sub> (mA) at V<sub>a</sub> = 100 V, V<sub>g</sub> = 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 V<sub>a</sub> = 500 V.

TESTS

To be performed in addition to those applicable in K1001.

	Test Conditions				Test	Limits		No. Tested	Note
	Vh (V)	Va (V)	Vg (V)	Ia (mA)		Min.	Max.		
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 ( $\mu$ A) i. Gas ii. Grid emission and/or leak.	-	10	100%	1
						-	100	100%	
d	7.0	300		100	i. Vg (V) ii. Vg change from test 'b' (V)	Must not be positive		100%	
						7	20	100%	
e	7.0	500	500		Ie peak (A)	10	-	100%	2
f					<u>Capacitances</u> (pF) i. Cag ii. Cgc iii. Cac	2.1 5.1 0.5	5.5 9.5 3.9	Type approval Test.	

NOTES

- Ig (gas) is measured as the immediate decrease in reverse Ig when  $-V_g$  is rapidly increased to cut off  $I_a$ . 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'.
- Ie measured under pulse conditions, with  $T_p = 2/\mu$ S, PRF 50 per sec., the pulse shape sinusoidal.

OUTLINE DIMENSIONS

CV55

