

ADMIRALTY SIGNAL & RADAR ESTABLISHMENT

Specification AD/CV240/Issue 4. Dated :- 28.5.48. To be read in conjunction with K1001, ignoring clause :- 5.8.	<u>SECURITY</u>	
	<u>Specn.</u> Restricted	<u>Valve.</u> Unclassified

→ Indicates a change

<u>TYPE OF VALVE</u> :- Triode with air cooled anode		<u>MARKING</u> See K1001/4.	
<u>CATHODE</u> :- Indirectly heated, oxide coated			
<u>ENVELOPE</u> :- Metal - Glass			
<u>PROTOTYPE</u> :- E1496			
<u>RATING</u>		<u>DIMENSIONS AND CONNECTIONS</u>	
Heater Voltage (V)	6.0	See drawing page 3.	
Heater Current (A)	17.0		
Max. peak anode voltage (kV)	15.0		A
Max. anode dissipation (kW)	1.0		B
Amplification factor	35.0		
Min. peak emission (A)	125.0	<u>PACKAGING</u> See K1005.	
<u>CAPACITANCES (pF.approx.)</u>			
→ C _{ag}	16.0		
→ C _{gc}	18.0		
→ C _{ac}	4.5		

NOTES

- A. The valve is initially designed to operate as an oscillator at 80 - 90 Mc/s with $T_p = 15 \mu\text{s}$, PRF = 250 p/s.
- B. Cooling. During operation the temperature of the anode and grid seals must be kept below 140°C. Forced air cooling with a flow of approximately 70 cub.ft. per minute for the anode and 6 cub.ft. per minute for the grid is necessary, the approximate pressure drops being of the order of 1½-inches and 1-inch respectively.

TESTS

To be performed in addition to those applicable in K1001.

	Test Conditions				Test	Limits		No. Tested
	Vh (V)	Va (kV)	Ia (mA)	Vg (V)		Min.	Max.	
a	6.0				Ih (A)	15.3	18.7	100%
b	6.0	2	500		-Vg (V)	-13	-33	100%
c	6.0	2	500		-I _g (gas-current) (μA)	-	50	100%
d	6.0	1.5	500		Change in -Vg from test 'b' (V)	11	18	100%
e	6.0				Peak emission (A)	125	-	100%
Peak emission to be measured with Va = Vg = 2 kV, Tp = 5 μs, PRF 50 p/s, pulse shape - sinusoidal.								
f	Capacitances measured with valve cold on approved gear at 1 kc/s. M/S				Cac	3.0	6.0	5% (not less than 2 p.w.)
					Cag	15	17.5	
					Cgc	16	20	
g	Functional test. The valve to be run in an approved equipment under normal operating conditions (Va = 15 kV, Pulse length 15 μs) for a period of not less than 5 minutes.							100%

