

ADMIRALTY SIGNAL ESTABLISHMENT

Specification AD/CVI193/Issue 5. Dated 31.10.46. To be read in conjunction with K1001.	<table border="1"> <tr> <th colspan="2">SECURITY</th></tr> <tr> <td>Specification</td><td>Valve</td></tr> <tr> <td>Restricted</td><td>Unclassified</td></tr> </table>	SECURITY		Specification	Valve	Restricted	Unclassified
SECURITY							
Specification	Valve						
Restricted	Unclassified						

<u>TYPE OF VALVE:-</u> Triode-hexode frequency changer.			<u>MARKING</u>		
<u>CATHODE:-</u> Indirectly heated.			See K1001/4.		
<u>ENVELOPE:-</u> Glass, unmetallised.					
<u>PROTOTYPE:-</u> X65.					
<u>RATING</u>			<u>BASE</u>		
			IO		
		Note	See K1001/AIV/D2.		
Heater Voltage (DC or AC) (V)		6.3	Pin	Electrode	
Heater Current (A)		0.32	1	No connection	
Max. Anode Voltage (V)		250	2	Heater	
Max. Screen Voltage (V)		100	3	Anode	
Oscillator Anode Voltage (V)		250	4	Screen Grids G2 and G4	
Oscillator Grid Peak Voltage (V)		10	5	Oscillator and Mixer	
Min. Control Grid Voltage (V)		-3		Grid G3	
Average Total Cathode Current (mA)		11	6	Oscillator Anode	
Average Conversion Conductance (at $V_{g1} = -3$) (μmhos)		225	7	Heater	
Average Conversion Conductance (at $V_{g1} = -35$) (μmhos)		0.2	8	Cathode	
Conversion Impedance ($M \Omega$)		2.5	TC	Control Grid, G1	
Range of V_h for satisfactory operation (V)		5.7 - 7.5	<u>TOP CAP</u>		
			See K1001/AI/D5.2.		
			<u>DIMENSIONS</u>		
			See K1001/AI/D1.		
<u>CAPACITANCES (pF.)</u>			Dimension	Min.	Max.
Gg1-all	3.5	C			
Gg1-a	0.12	C			
Ca-all	5.5	C			
Cgo-ao	2.0	C	A mm	-	114
Cao-all	5.5	C			
Cgo-all	10.4	C	B mm	-	41.5
Cgo-g1	0.2	C			
			<u>PACKING</u>		
			See K1001/7.		

NOTES

- A. V_{ao} applied through 30,000 ohms.
- B. $V_{go} = 10$ V peak.
- C. Measured with external valve shield.

To be performed in addition to those applicable in K1001.

	Test Conditions					Test	Limits		No. Tested	Notes
	Vh (V)	Va (V)	Vg2 (V)	Vg1 (V)	Vao (V)		Min.	Max.		
a	6.3	-	-	-	-	Ih (A)	0.27	0.37	100% or S	
b	6.3	250	100	-3	100	Total Cathode return current (mA)	7.7	14.5	100%	1
c	6.3	250	100	-3	100	Gc (μ A/V)	146	304	100%	1 2
d	6.3	250	100	-20	0	Ia tail (μ A)	3	300	100%	1
e	6.3	250	100	-3	100	Reverse Ig (μ A)	-	1.0	100%	1
f	6.0	-	-	-	-	H.F. Oscillation Positive Ig (μ A)	68	-	5%	3
	Valve to be tested in the gear described in Specification D.C.D., W.T. 1182 for the valve CV1099.									

NOTES

1. Vgo = 10 V peak AC applied through 50,000 ohms.
2. 1 V peak AC applied to g1; test to be performed in an approved circuit.
3. If necessary an alternative test may be applied, with agreed positive grid current limits, by arrangement with the issuing authorities.