

VALVE ELECTRONIC **CV2278**

ADMIRALTY SIGNAL & RADAR ESTABLISHMENT

Specification AD/CV2278/Issue 2. Dated : 22.7.53. To be read in conjunction with K1001.	<u>SECURITY</u>	
	<u>Specification</u> Unclassified	<u>Valve</u> Unclassified

<u>TYPE OF DEFLECTION:</u> Magnetic. <u>TYPE OF FOCUS:</u> Magnetic. <u>BULB:</u> Internally coated with conductive coating. <u>SCREEN:</u> 008 (With Aluminium Backing). <u>PROTOTYPE:</u> VCRX353.	<u>MARKING</u>	
	See K1001/4.	
	<u>BASE</u>	
	IO	
	<u>Pin</u>	<u>Electrode</u>
	1	No connection
	2	Heater
	3	Pin omitted
	4	Pin omitted
	5	Grid
	6	Pin omitted
	7	Heater
	8	Cathode
	Side Contact	Anode
	Side Contact-Plug cap to conform to K1001/AI/D5.1.	
<u>RATING</u>		
	<u>Note</u>	
Heater Voltage (V)	4.0	
Heater Current (A)	1.0	
Maximum Anode Voltage (kV)	5.0	
<u>NOTE</u>		
The gun assembly shall be sufficiently robust to withstand considerable mechanical shocks without suffering displacement.		

TESTS

To be performed in addition to those applicable in K1001.

	Test Conditions			Test	Limits		No. Tested
	Vh	Va(kV)	Vg		Min.	Max.	
a				Capacitance (pF) Grid to all other electrodes.	-	25	5% (5)
b	4.0	0	0	Ih (A)	-	1.2	100%
c	4.0	4.0	Adjusted	Line Width (mm)	-	0.5	100%
	Focus adjusted for optimum.			<p><u>Deflection</u> - With a linear scan, with a repetition frequency of 10 Kc/s. and a line length 180 mm, the line width will be measured at the centre of the trace.</p> <p><u>Grid</u> - The grid will be pulsed positively from cut off with amplitude equal to the value obtained in test 'd' the nominal value of pulse duration and recurrence rate being 100 μsecs. and 100 c/sec. respectively.</p>			
d	4.0	4.0	Adjusted	i. Vg	To be at least 1V negative to cathode		100%
	Vg adjusted to give a light output of 0.13 candles.			ii. Focus coil current (mA)	80	120	T.A.
e	4.0	4.0	Adjusted to cut off	i. Vg (V)	-30	-65	100%
				ii. Increase in negative value of Vg from value in 'd'.	-	30	100%

CV2278/2/ii

TESTS (Contd.)

	Test Conditions			Test	Limits		No. Tested
	Vh	Va(kV)	Vg		Min.	Max.	
f	4.0	4.0	-65	<u>Grid Insulation</u> Leakage current (μ A) Increase in volt- meter reading.	-	6.5	100%
			Resistor = 10 Meg- ohms. See K1001/5A.3.2.		-	100%	100%
g	4.0	4.0	Within working range	<u>Useful Screen Area</u> Dia. (mm)	180	-	100%
			Focus adjusted to optimum.				
h	4.0	4.0	Within working range.	Deviation of spot from centre of screen. (mm)	-	10	100%
			No focussing coil energisation.				
j	4.0	4.0	-	Afterglow (secs).	8	-	10%
			Test to be done with Test Set 331 using a close raster of con- venient size, and an N3 filter.				

NOTE

For the purpose of tests 'c', 'd', 'e', 'g' and 'j' the focussing fields required are to be obtained by means of an approved focus coil in the position shown on the drawing.

