ADMIRALTY SIGNAL AND RADAR ESTABLISHMENT

VALVE ELECTRONIC **CV2314**

Specification AD/CV2314 Issue No. 1 Dated: 29.7.54. To be read in conjunction with K1001.	SECURITY Specification: Unclassified Valve: Unclassified

TYPE OF VALVE: Cathode Ray Tube

TYPE OF DEFLECTION: Magnetic

TYPE OF FOCUS: Magnetic

SCREEN: BY8 (with aluminium backing)

PROTOTYPE: CV429

MARKING

See K1001/4

BASE

B12A
Wafer with metal shell

RATINGS

		Note
Heater Voltage (V)	6.3	
Heater Current (A)	0.6	B
Max. First Anode Voltage (V)	600	
Max. Final Anode Voltage (kV)	15	
Max. Heater-Cathode Voltage (V)	150	A
Min. Persistence (at Va2=15kV) (Secs)	12	

CONNECTIONS

Pin	Electrode
1	H
2	G
3	-
4	-
5	-
6	NC
7	NC
8	-
9	-
10	A1
11	C
12	H
S.C.	A2

CAPACITANCES (pF)

Max. Cg to all other electrodes	15
Max. Cc to all other electrodes	8

SIDE CONTACT

See K1001/A1/D5.1

DIMENSIONS

See drawing page 4.

NOTE

A. Heater negative to cathode.

B. Heater current may be 0.3A or 0.6A nominal.

TESTS

To be performed in addition to those applicable in K1001

	Test Conditions				Test	Limits		No. Tested	Note
	Vh (V)	Va2 (kV)	Va1 (V)	Vg (V)		Min.	Max.		
a.	See K1001/5A.13				CAPACITANCES (pF) Grid to all other electrodes Cathode to all other electrodes	 - -	 15 8	 5% (20) 5% (20)	
b.	6.3	0	0	0	Ih (A)	.28	.66	100%	
c.	6.3	15	300	Adjust to cut-off	-Vg (V)	30	90	100%	
d.	6.3	10	300	-	i Light output (candela) ii Change in value of Vg from test 'C' iii The brightness shall increase smoothly from cut-off to Ib = 50 µA.	.20 -	- 30	100%	
	Vg adjusted to give a beam current of 50 µA using a close raster of convenient size and C.2 filter (Type 26, Ref. 10AB(476)).								
e.	6.3	15	300	-	i Light output (candela) ii Change in value of Vg from test 'C' iii The brightness shall increase smoothly from cut-off to Ib = 50 µA	.35 -	- 30	100%	
	Vg adjusted to give a beam current of 50 µA using a close raster of convenient size and a C.2 filter.								
f.	6.3	15	300	-	Line Width (mm)	-	0.7	100%	
	Deflection. With a linear scan of 10 kc/s and a line of length 250 mm, the line width will be measured at the centre of the trace. Grid. The grid will be pulsed positively from cut-off with amplitude equal to the value obtained in Test 'e', the nominal value of pulse duration and recurrence rate being 100 µ secs. and 100 c/s respectively.								
g.	6.3	15	300	-90	Grid Insulation i. Leakage current (µA) ii. Increase in voltmeter reading	- -	9 100%	100% 100%	
	or with recommended method of K1001/5A.3.2. and with 10 megohms resistor.								

CV2314

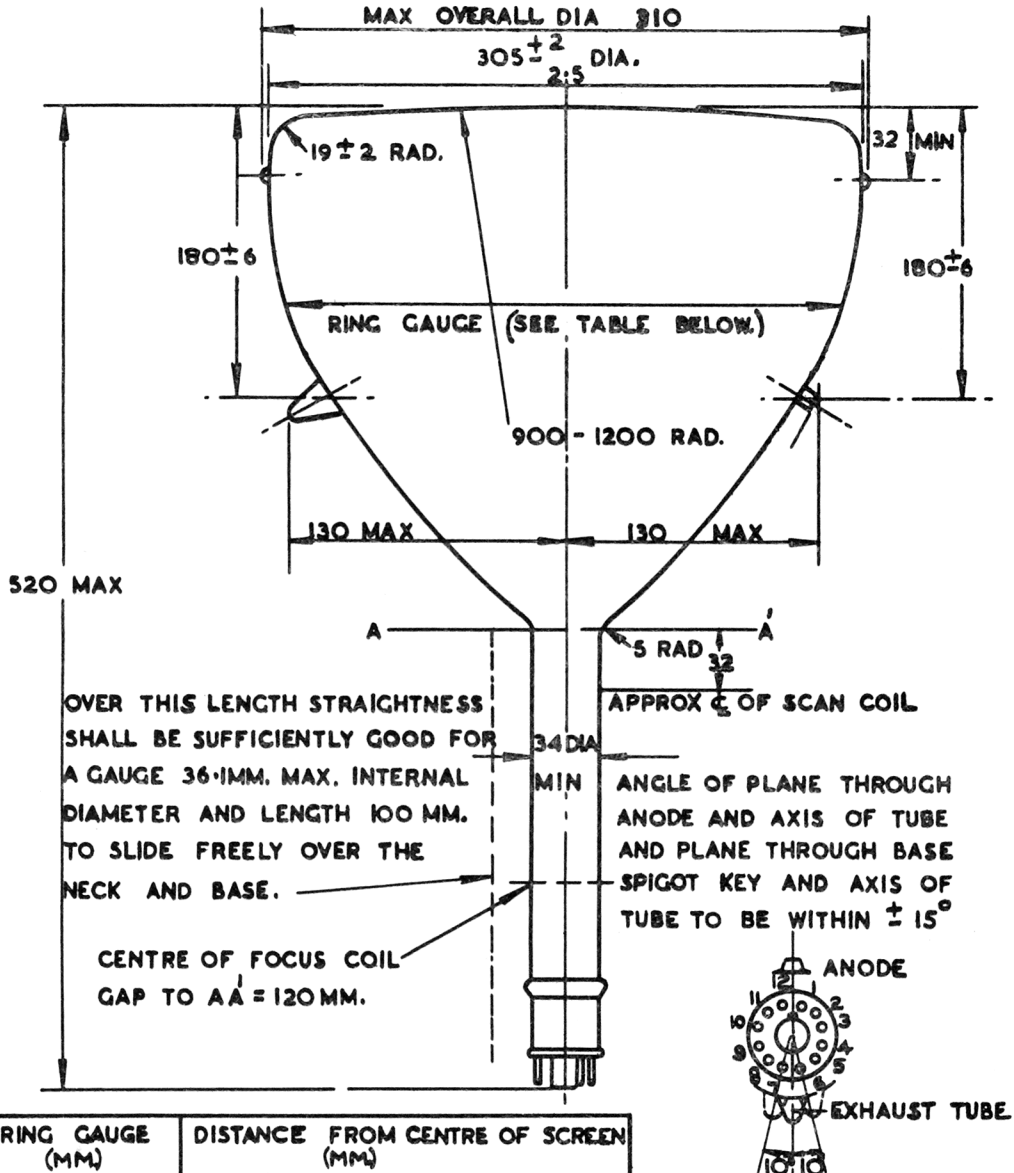
TESTS

To be performed in addition to those applicable in K1001

	Test Conditions				Test	Limits		No. Tested	Note
	Vh (V)	Va2 (kV)	Va1 (V)	Vg (V)		Min.	Max.		
h.	6.3	-	-	-	Heater-Cathode Leakage				
	See K1001/5A.3.3. A voltage of 150V shall be applied between heater and cathode.				Leakage Current (μA)	-	150	100%	
j.	6.3	15	300	Any convenient value	Useful Screen Area				
	Adjust for optimum focus. Deflection to cover the stated circle centred on the centre of the screen.				Diameter (mm)	250	-	100%	
k.	6.3	15	300	Pulsed as in 'f'	Deviation of spot from centre of screen (mm).	-	15	100%	
	No focusing or deflecting field shall be present.				Unfocused spot diameter (mm).		15	100%	
l.	6.3	15	300	Adjust	Persistence				
	Test to be performed with Test Set Type 331, using a close raster of convenient size and filter N3				(secs.)	12	-	10%(2)	
m.	6.3	10	300	Adjust	Persistence				
	Test to be performed with Test Set Type 331, using a close raster of convenient size and filter N3				(secs.)	10	-	10%(2)	
n.					Stones, Bubbles and Blemishes				
	Within 75 mm radius of centre of screen				0.75 mm dia. max.	-	6	100%	1
	Above 75 mm radius				1.0 mm dia. max.	-	6		
	Spacing between any bubbles to be greater than 20 mm. Bubbles less than 0.25 mm diameter to be ignored.								

NOTE

1. The tube shall be operated with a close raster covering the usable area of the tube.



RING GAUGE (MM)	DISTANCE FROM CENTRE OF SCREEN (MM)
280	96 ± 10
230	150 ± 9
180	191 ± 8
130	222 ± 7
80	249 ± 6
36·1	272 ± 3·5

ALL DIMENSIONS IN M.M.