ELECTRONIC VALVE SPECIFICATIONS
SPECIFICATION AD/CV2280
Issue 2 dated 29.6.53.

Amendment No. 1

Page 1.

Side Contract.

Delete:- Snap Terminal

Insert:- CT7.
See BS448/CT.7

March, 1962.

Admiralty Surface Weapons Establishment.

N.11579

VALVE ELECTRONIC **CV2280**

ADMIRALTY SIGNAL & RADAR ESTABLISHMENT

Specification AD/CV2280 Issue 2. Dated: 29. 6. 53. To be read in conjunction with K1001.	SECURITY Specification: Unclassified Valve: Unclassified

→ indicates a change

TYPE OF DEFLECTION : Electrostatic.
BULB : Internally coated with conductive coating.
SCREEN : BY8.
PROTOTYPE : VCRX192.

MARKING

See K1001/4.

BASE

B12B

Pin	Electrode
1	C
2	G
3	H
4	H
5	A2
6	Pin omitted
7	Y2
8	X2
9	A1, A3 and conductive coating.
10	X1
11	Y1
12	Pin omitted
Side Contact	A4

RATING

		Note
Heater Voltage (V)	4.0	
Heater Current (A)	1.0	
Max. Fourth Anode Voltage (kV)	5.0	
Max. Third Anode Voltage (kV)	2.0	

TYPICAL OPERATING CONDITIONS

Fourth Anode Voltage (kV)	4.0
Third Anode Voltage (kV)	2.0
Second Anode Voltage (V)	150
X-Plate Sensitivity (mm/V)	0.13
Y-Plate Sensitivity (mm/V)	0.13

SIDE CONTACT

Snap Terminal

DIMENSIONS

See Drawing on Page 4.

PACKING

See K1005 under CV1526

NOTES

A. The tube shall be of the post deflector accelerated type and of a design such that a change of ± 10% in the Va2 Voltage shall not produce an appreciable change in the cut-off voltage.

B. The tube shall be adequately free from microphony.

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TESTS

To be performed in addition to those applicable in K1001.

	Test Conditions					Test	Limits		No. Tested
	Vh	Va4 (kV)	Va1 Va3 (kV)	Va2	Vg		Min.	Max.	
In all cases symmetrical deflecting voltages shall be applied to the Y plates and asymmetrical deflecting voltages to the X plates.									
a	See K1001/AIII					Capacitances (pF) i. Each X or Y plate to all other electrodes. ii. One X to one Y plate. iii. Grid to all other electrodes.	 - - -	 15 4 21	 5%(5)
b	4.0	0	0	0	0	Ih (A)	0.9	1.1	5%(10)
c	4.0	4.0	2.0	Adjusted for optimum focus.	Adjust to cut off	Vg (V)	-	-105	100%
d	4.0	4.0	2.0	-do-	-	i. Vg (V) ii. Change in value of Vg from Test 'c' (V) iii. Within the range of grid voltage from cut-off to standard light output beam current shall increase continuously. iv. Afterglow (secs)	-1.0 - 12	- 20 -	100% 100% 100% 100%
	Vg adjusted to obtain a light output of 0.07 candela through a C2 filter. Test Set 331 used.								
e	4.0	4.0	2.0	-do-	-	i. Line width (mm) ii. Va2 (V)	- -	1.2 200	100% 5%(10)
	DEFLECTION With a sine wave time base of 10 kc/s nom. and a line length of 55 mm in the X and Y directions successively. The line width to 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 (d.ii), the nominal values of pulse duration and recurrence being 100 µsecs and 100 c/s respectively.								

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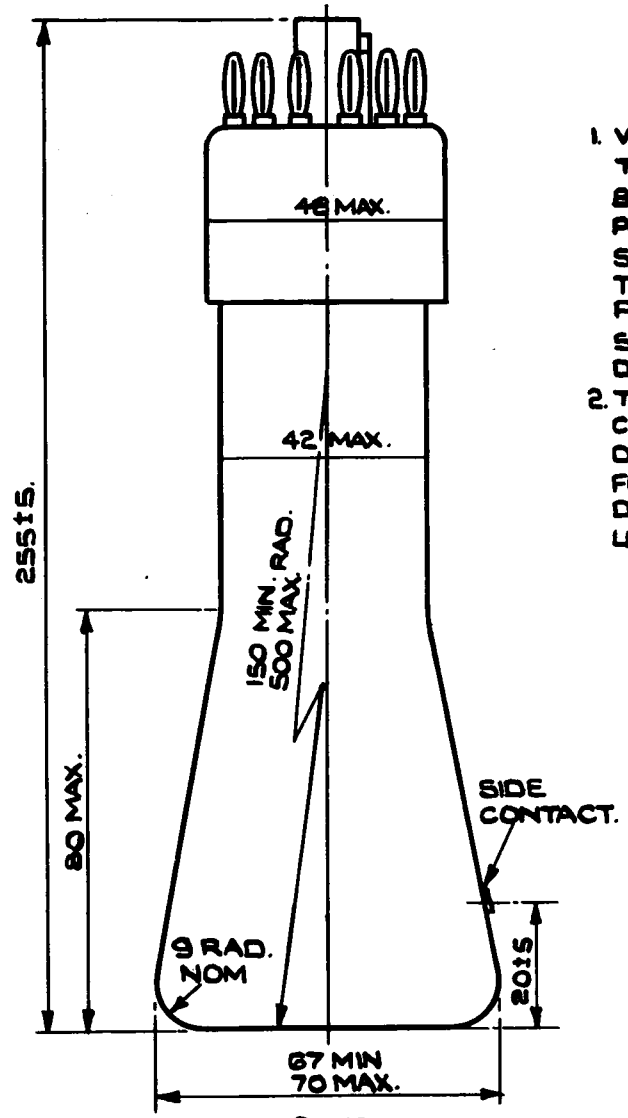
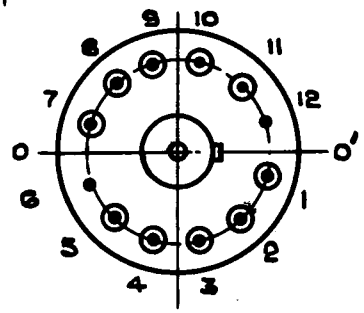
TESTS (CONTD.)

	Test Conditions					Test	Limits		No. Tested
	Vh	Va4 (kV)	Va3 Va1 (kV)	Va2	Vg		Min.	Max.	
f	4.0	4.0	2.0	Any convenient value.	-105	**Grid Insulation**			
						i. Leakage Current (μA)	-	21	100%
						ii. Increase in voltmeter reading.	-	100%	100%
	Recommended alternative method :- See K1001/5A.3.2. Resistor = 5 Megohms.								
g	4.0	-	-	ditto	-	**Heater Cathode Insulation**			
						Leakage Current (uA)	-	200	100%
	See K1001/5A.3.3. A voltage of 100 V shall be applied between heater and cathode, the former being negative.								
h	4.0	4.0	2.0	ditto	Any convenient value.	**Deflection Sensitivities.**			
						i. X-plate (mm/V)	0.10	0.16	5% (10)
						ii. Y-plate (mm/V)	0.10	0.16	
j	4.0	4.0	2.0	ditto	ditto	Deviation of spot from centre of screen. (mm)	-	7.0	100%
k	4.0	4.0	2.0	ditto	ditto	**Useful Screen Area**			
	Deflection to cover stated circle centred on centre of screen.					Diameter (mm)	55	-	100%
l	4.0	4.0	2.0	ditto	ditto	Angle between X and Y axes of deflection	88°	92°	100%
m	4.0	4.0	2.0	ditto	ditto	i. Orientation of Y axis of deflection relative to OO' on drawing.	-	±10°	100%
						ii. Orientation of dia. line through snap terminal relative to Y axis.	-	±10°	100%





VIEW OF UNDERSIDE OF BASE.

NOTES.

1. VIEWING THE SCREEN OF THE TUBE WITH THE KEY OF THE BASE UPPERMOST, A POSITIVE POTENTIAL APPLIED TO PIN X_2 SHALL DEFLECT THE SPOT TO THE RIGHT. AND A POSITIVE POTENTIAL APPLIED TO PIN Y_2 SHALL DEFLECT THE SPOT DOWNWARDS.
2. THE INTERNAL CONDUCTIVE COATINGS SHALL BE OF SUCH DIMENSIONS THAT THEY FUNCTION EFFECTIVELY BUT DO NOT OBSCURE THE USEFUL SCREEN AREA.

ALL DIMENSIONS IN MILLIMETRES.