ADMIRALTY SURFACE WEAPONS ESTABLISHMENT

VALVE ELECTRONIC **CV6125**

Specification AD/CV 6125 Issue 1 dated 14th June 1963. To be read in conjunction with K1001	SECURITY Specification: Unclassified Valve: Unclassified

TYPE OF VALVE: Square faced Cathode-Ray Tube

TYPE OF DEFLECTION: Electrostatic (Symmetrical)

TYPE OF FOCUS: Electrostatic

ENVELOPE: Glass with internal Conductive coating

SCREEN: G64

PROTOTYPE: S6SK-106

RATING

All limiting values are absolute

			Note
Heater Voltage	(V)	6.3	
Heater Current	(A)	0.6	
Max. 1st Anode Voltage	(kV)	2	
Max. 2nd Anode Voltage	(kV)	1.5	
Max. 3rd Anode Voltage	(kV)	10	
Max. negative Grid Voltage	(V)	150	
Max. Heater-Cathode Voltage	(V)	100	

TYPICAL OPERATING CONDITIONS

1st Anode Voltage	(kV)	2
2nd Anode Voltage	(kV)	1
3rd Anode Voltage	(kV)	7.5
Negative Grid Voltage for cut-off	V	50
x Deflection Factor	(V/cm)	98
y Deflection Factor	(V/cm)	68

MARKING

See K1001/4

BASE

See BS448.B12D

CONNECTIONS

Pin	Electrode	
1	Grid	g
2	Cathode	k
3	Heater	h
4	Heater	h
5	1st Anode	a1
6	2nd Anode	a2
7	-	
8	-	
9	-	
10	-	
11	-	
12	-	

Side connections to 3rd Anode and deflection plates. See drawing on Page 5.

DIMENSIONS

See drawing on page 5

PACKAGING

See K1005

MOUNTING POSITION

Any

NOTES

A The trace is square with respect to the edges of the tube to within ± 2°.

B The Joint Service Catalogue Number is 5960-99-037-3418

TESTS

To be performed in addition to those applicable in K1001.

Tests are to be performed in the specified order unless otherwise agreed with the Inspecting Authority.

Test conditions - unless otherwise stated:-

Vh(V)	Vg	Va1 (kV)	Va2	Va3 (kV)
6.3	Adjust	2	Adjust	7.5

Test	K1001	Test	Test Conditions	AQL %	Insp. Level	Symbol	Limits Min.	Limits Max.	Units
(a)	5.A.4.6.	Capacitances	No Voltages Cg - all Ck - all Cy1 - all except y2 Cx1 - all except x2 Cy1 - y2 Cx1 - x2	6.5	IB		 - - - - - -	 20 35 20 25 5 5	 pf pf pf pf pf pf
(b)		Heater Current	No voltages except Vh		100%	Ih	0.48	0.6	A
(c)	5.A.4.1.	Heater-Cathode Leakage Current	Vh-k= ± 100V		100%		-	100	µA
(d)		Cathode Current	See Note 1.		100%	Ik	350	-	µA
(e)	5.A.4.1.	Grid Insulation	Leakage Current with Va2 = 1kV, Vg= -70V or Increase in cut-off voltage with Rg = 7 megohms.		100%		- -	10 100%	µA -
(f)	5.A.6.4.	Spot Position			100%		-	5.0	mm
(g)	5.A.4.3.	Negative Grid Cut-off Voltage			100%		30	70	V
(h)		Focus (i) Second anode Voltage. (ii) Line Width	Focused undeflected spot. Note 2.		100%	Va2	800 -	1100 0.5	V mm

Test	K1001	Test	Test Conditions	AQL %	Insp. Level	Sym-bol	Limits Min.	Limits Max.	Units
(j)		Grid Drive	Focused Raster Light Output 0.6 Candela, Measure change in Vg from Cut-Off value, Test (g).		100%		-	20	V
(k)		Useful Screen Area	Focused Raster of maximum available size. Measure length in (i) x direction (ii) y direction		100%		 100 100	 - -	 mm mm
(l)	AXV	Screen and Face Plate Defects	Defocused raster of maximum available size. Defects (i) 0.25-0.5 mm Dia. (ii) 0.5-1.5 mm Dia. (iii) More than 1.5 mm Dia. Note 3		100%		 - - -	 10 5 0	
(m)		Geometrical Distortion	Focused raster, x = 100 mm, y = 80 mm Measure deviation of edges of raster from the rect-angle enclosing its widest points		100%		-	2.0	mm
(n)		Angle between x and y axes	A.C. deflection on x and y plates in turn		100%		88	92	Deg.
(o)		Deflection factor	(i) x - axis (ii) y - axis		100%		- -	115 80	V/cm V/cm

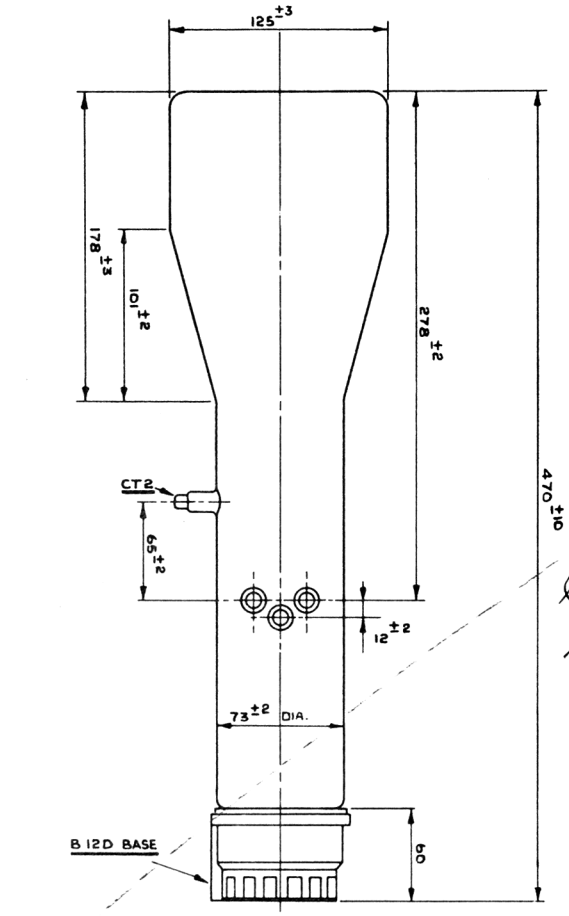
NOTES

1. With Vg =-30V adjust Va1 for visual cut-off on a focused spot. Then measure cathode current with Vg =-1V.

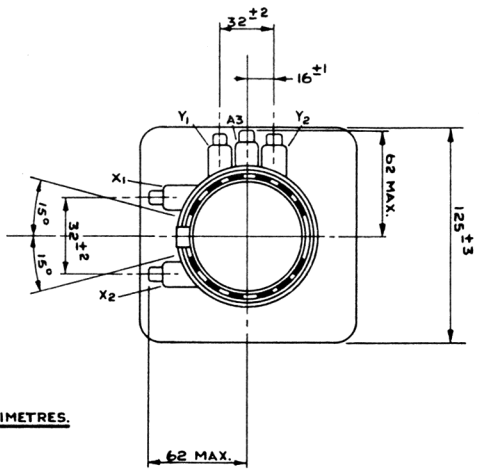
2. With focus conditions as in test (h)(i) apply a 10 kc/s line, 10 cm long with grid drive 6V from cut-off value obtained in test (g). Measure line width at centre of trace.

3. If two or more defects are separated by a distance not greater than the length of the largest defect in the group, the group shall be regarded as one defect of size equal to the overall size of the group. In the case of a non-circular defect diameter shall be taken as the mean of major and minor axes.

CV6125



This has been superseded (Booklet 1)
Revised sheet now available.



DIMENSIONS IN MILLIMETRES.

ELECTRONIC VALVE SPECIFICATIONS

SPECIFICATION AD/CV 6125, ISSUE No.1 DATED 14th JUNE 1963

Amendment No.1

Remove and destroy existing Page 5 and substitute new Page 5, dated 30th November 1964, attached hereto.

Not available

T.V.C. for A.S.W.E.

January 1965
(229607)