ASWE

ADMIRALTY SIGNAL AND RADAR ESTABLISHMENT

VALVE ELECTRONIC **CV1868**

Specification AD/CV1868 Issue No. 1 Dated : 5.1.55 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:	008 with aluminium backing
BULB:	Glass. Internally coated with conductive coating.
SCREEN DIAMETER:	5 inches.
PROTOTYPES:	Mullard - MF13 Cinema Television - 5T03A

MARKING
See K1001/4

BASE
B8 - 0

(See B.S. 448)
See K1001/A1V/D2
M Dimension (V) applies

RATING			Note
Heater Voltage	(V)	6.3	
Heater Current	(A)	0.3 or 0.6	
Max. First Anode Voltage	(V)	500	A
Max. Second Anode Voltage	(kV)	11	A
Max. Heater-Cathode Voltage (heater negative to cathode)	(V)	150	A

CONNECTIONS	
Pin	Electrode
1	-
2	H
3	A1
4	-
5	G
6	-
7	C
8	H
SC	A2

SIDE CONTACT - CT7
See B.S.448, Sect. 6/1.7

DIMENSIONS
See drawing, Page 4

NOTES

A. Absolute Maximum Value.

B. The focussing requirements and the amount of deflection defocus will be checked on the Type Approval samples. After Type Approval has been granted, the construction of the tubes must remain as in the Type Approved samples.

C. The fluoride screen shall not contain beryllium.

Z.8358.R.

TESTS

To be performed in addition to those applicable in K1001

	Test Conditions				Test	Limits		No. Tested
	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	 - -	 10 10	 5% (20)
b	6.3	0	0	0	Ih (A)	0.28	0.65	100%
c	6.3	7.0	450	Adjust to Cut Off	Cut Off Negative Vg (V)	45	110	100%
d	6.3	7.0	450	Adjust Spot to be deflected off useable screen area or scanned. Adjust Vg for Ib = 30 μA.	Change in Vg from value found in test (c) (V)	-	28	100%
e	6.3	7.0	450	- Focus: Adjusted to optimum with centre of air gap of focus coil 78 mm from ref. line. (See drawing) Deflection: A linear line scan of 10 kc/s and a line length of 100 mm in the X and Y directions successively. Grid: To be pulsed positively from cut off, with amplitude equal to the value obtained in test (d), with pulse duration of 100 μsecs. (nominal) and with repetition rate not exceeding 50 p.p.s.	Line Width (mm) (Measured at centre of trace)	-	0.5	(100%)
f	6.3	7.0	450	Adjust Vg adjusted so that light output is 0.08 candela from a linear raster 10 cms x 10 cms	Light Output Beam current for light output of 0.08 candela. (μA)	-	7.5	100%
g	6.3	7.0	450	-110 or (b) Using recommended method of K1001/5A 3.2 and 10 megohms resistor.	Grid Insulation (a) Leakage current (μA) (b) Increase in voltmeter reading.	 - -	 11 100%	 100% 100%

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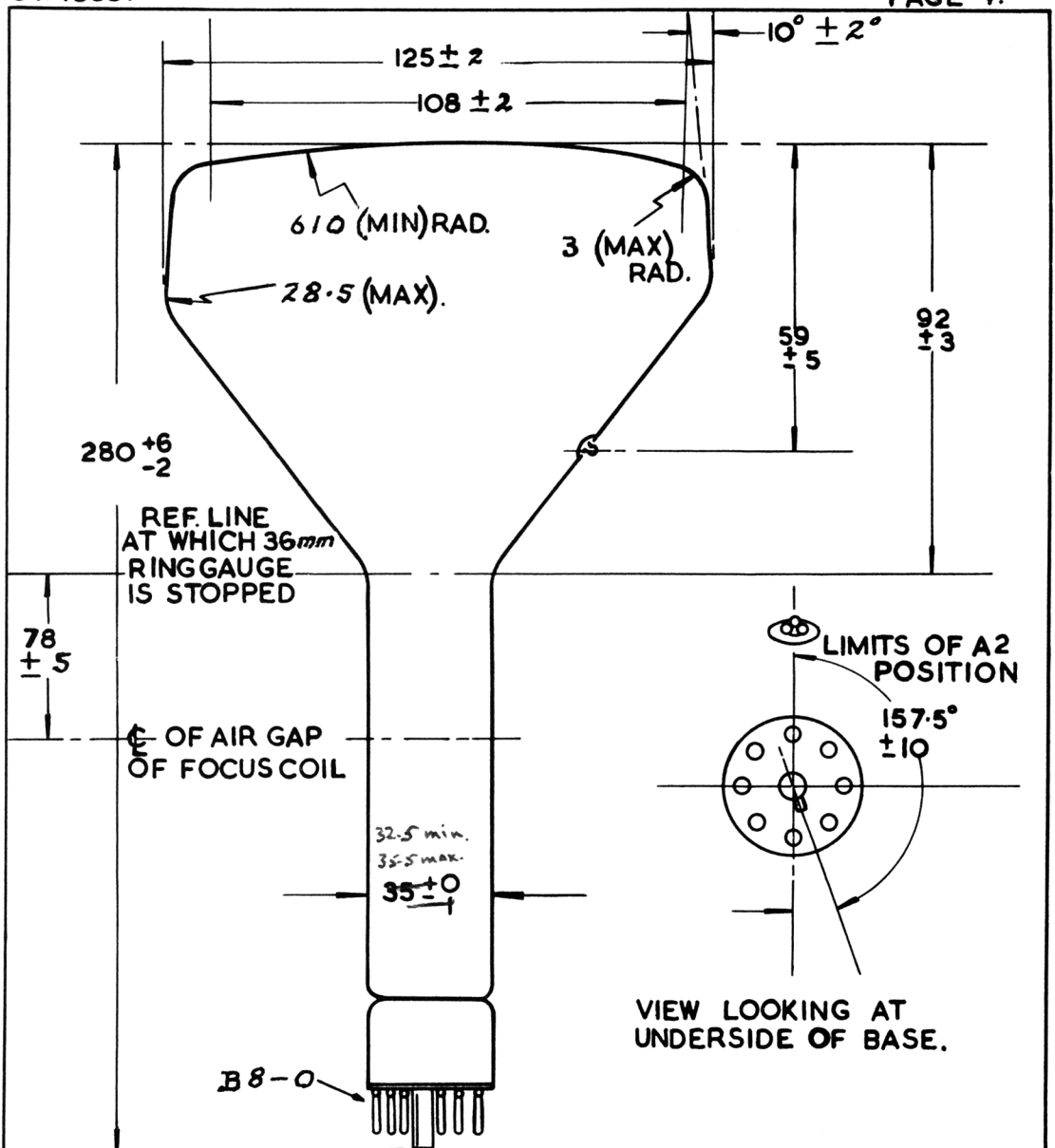
TESTS

To be performed in addition to those applicable in K1001

	Test Conditions				Test	Limits		No. Tested
	Vh (V)	Va2 (kV)	Va1 (V)	Vg (V)		Min.	Max.	
h	6.3	-	-	-	Heater-Cathode Insulation Leakage current (μA)	-	150	100%
	150 Volts applied between heater and cathode.							
j	6.3	7.0	450	Adjust	Useful Screen Area Diameter (mm)	108	-	100%
k	6.3	7.0	450	-do-	Spot Displacement Deviation of unfocussed spot from centre of screen. (mm)	-	8	100%
l	6.3	7.0	450	-do-	Persistance Time taken from cessation of excitation for light output to fall to 0.5% of its initial value. (secs)	120	-	5% (20)
	Vg to be adjusted to give a light output of 0.03 candela with an unfocussed linear raster of 65 mm x 65 mm.							



NOTE

RING GAUGE OF 36·4 MAX. INT. DIA. AND 50 MIN. LENGTH SHALL SLIDE OVER BASE AND NECK.

ALL DIMENSIONS ARE IN MILLIMETERS.

Specification CV.1868 - Issue 1 - dated 2.7.57.

Amendment No. 1

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Amend diameter of the neck of the tube shown in the drawing to read:-

32.5 mm Min.
35.5 mm Max.

instead of 35 ± 1 mm.

July 1957

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

N88360.