ADMIRALTY SURFACE WEAPONS ESTABLISHMENT

VALVE ELECTRONIC

CV6170

Specification AD/CV6170 Issue 1 dated 6th January 1966 To be read in conjunction with K1001 and BS448	SECURITY Specification: Unclassified Valve: Unclassified

TYPE OF VALVE - Cathode Ray Tube
DEFLECTION - Magnetic
FOCUS - Electrostatic
BULB - Glass with internal conductive coating
SCREEN - RR5
PROTOTYPE - M5RR-321

MARKING
See K1001/4

BASE
BS448/B12A

RATINGS

All limiting values are absolute

			Note
Heater Voltage	(V)	6.3	
Heater Current	(A)	0.5	
Max. Anode 1 and Anode 3 voltage	(kV)	10	A
Max. Anode 2 voltage range for focussing	(V)	±100	
Max. negative Anode 2 voltage	(V)	150	
Max. negative heater-cathode voltage	(V)	150	A
Typical operating			
Typical operating conditions			
Anode 1 and 3 voltage	(kV)	8	
Anode 2 voltage	(V)	0	
Grid voltage for cut-off	(V)	-50	

CAPACITANCES

Cg-all (nom)	(pf)	9.5
Ck-all (nom)	(pf)	6.5

CONNECTIONS

Pin	Electrode	
1	Heater	h
2	Grid	g
6	Anode 2	a2
7	External coating	
10	-	
11	Cathode	k
12	Heater	h
SC	Anodes 1 and 3	a1,3

SIDE CONTACT
BS448/CT8

DIMENSIONS
See drawing on page 4

NOTES

A. Absolute Maximum Value

B. The Joint Services Catalogue Number is 5960-99-037-4458

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TESTS

To be performed in addition to those applicable in K1001

An interlaced 405 line TV raster may be used when required

Test Conditions - unless otherwise stated:-

Vh (V)	Va1, 3 (kV)	Va2	Vg	Vhk (V)
6.3	8	Adjust	Adjust	0

Test No.	K1001 Issue 6	Test	Test Conditions	Insp. Level	Symbol	Limits		Units
						Min.	Max.	
(a)	5A.4.1.1	Electrode Insulation	No voltages	100%				
(b)	5A.4.1.2	Grid Insulation	Vg = -75V	100%	Ig	-	10	μA
(c)	5A.4.1.3	Heater-Cathode Leakage	Vhk = -150V Va1, 3 = 0	100%	Ihk	-	100	μA
(d)		Heater Current		100%	Ih	0.45	0.55	A
(e)	5A.4.3	Negative Grid Cut-off Voltage	Focussed Spot	100%	Vg	37	75	V
(f)	5A.4.4	Grid Drive	Ik = 100 μA Screen over-scanned Measure Change of grid voltage from that in test (e)	100%		15	35	V
(g)	5A.5.7.2.2	Focus		100%				
		(i) Line Width	Pulsed line 45 mm. long. Grid drive 100 μS. pulses, 250 p.p.s max. Peak 1k = 100 μA. Optimum focus.			-	0.55	mm
		or						
		Pulsed Spot Diameter	Grid drive 0.2 μS pulses 50 p.p.s. Peak 1k = 100 μA. Optimum focus.			-	0.65	mm
		(ii) Focus Voltage	As for test (i) above		Va.2	-100	100	V
(h)	5A.5.1.1	Light Intensity	Focussed Raster of convenient size 1k = 10 μA Note 1	100%		0.037	-	Candela

Tests (Cont'd.)

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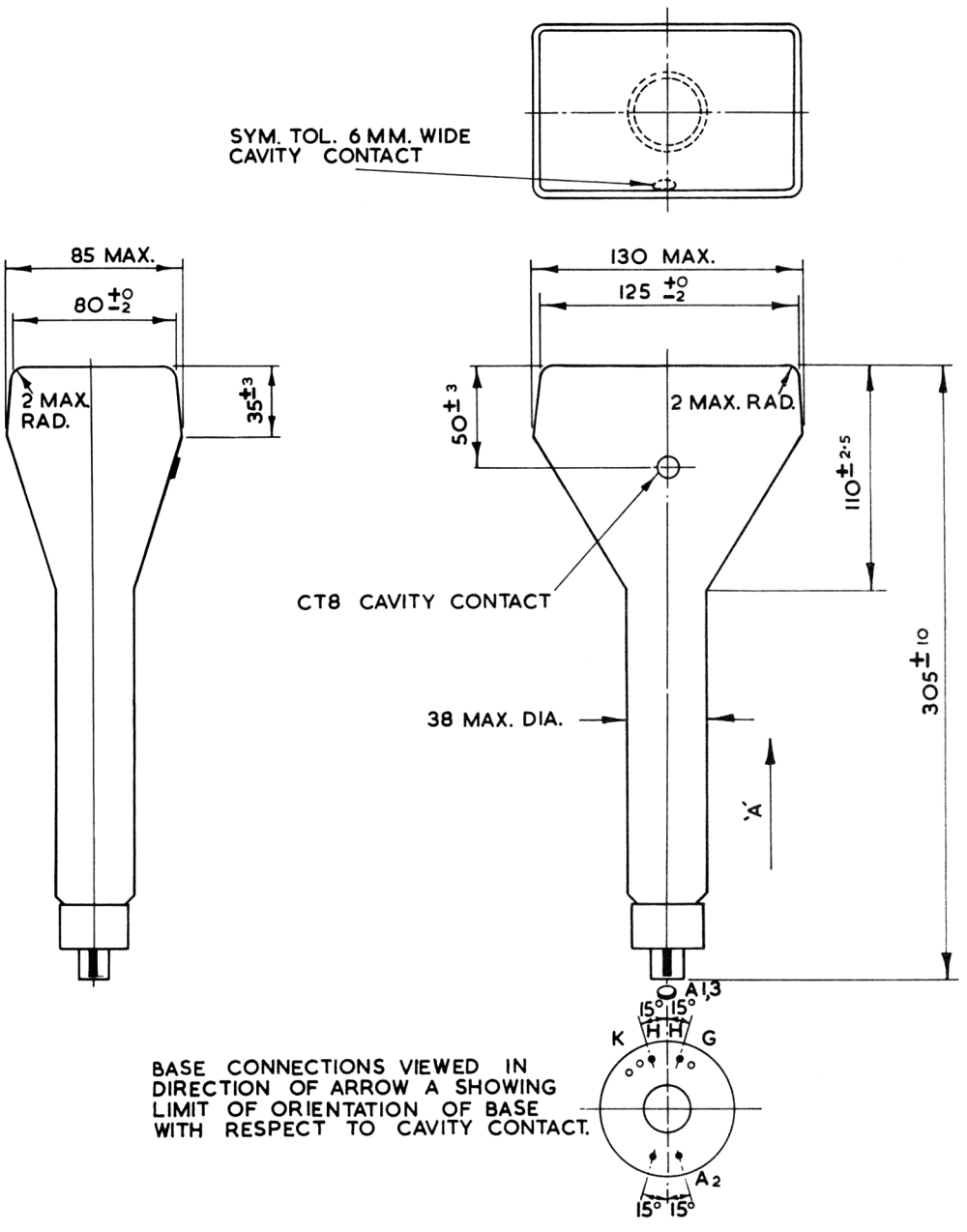
Test No.	K1001 Issue 6	Test	Test Conditions	Insp. Level	Symbol	Limits		Units
						Min.	Max.	
(j)	5A.6.3	Useful Screen Area		100%		108 x 63	-	mm^2
(k)	5A.4.2	Flashover and Stray Emission	Va 1, 3 = 10 kV through 1M ohm Vg = -100V Va2 = 100V Tapping rate 4 per sec. for 10 secs.	100%				
(l)	AXV	Screen and Faceplate Defects. Size 0.25 to 0.6 mm Size 0.6 to 1 mm Size above 1 mm	Scan over useful area with defocussed raster of convenient brightness		 No. No. No.		 10 5 0	

NOTES

1. Measured using an eye corrected EEL cell, calibrated with a 2600 ± 50°K colour temperature source, in contact with the cathode ray tube faceplate



BASE CONNECTIONS VIEWED IN DIRECTION OF ARROW A SHOWING LIMIT OF ORIENTATION OF BASE WITH RESPECT TO CAVITY CONTACT.

DIMENSIONS IN M.M.