

ADMIRALTY SURFACE WEAPONS ESTABLISHMENT

CV6140

Specification AD/CV6140 Issue 1 dated 1.1.65 To be read in conjunction with K1001 and BS448	<table border="1"> <tr> <th colspan="2">SECURITY</th></tr> <tr> <td>Specification Unclassified</td><td>Valve Unclassified</td></tr> </table>	SECURITY		Specification Unclassified	Valve Unclassified
SECURITY					
Specification Unclassified	Valve Unclassified				

TYPE OF VALVE - Cathode Ray Tube				<u>MARKING</u>	
DEFLECTION - Magnetic				See K1001/4	
FOCUS - Electrostatic					
BULB - Glass with internal conductive coating				<u>BASE</u>	
				BS448/B12A	
SCREEN - GG2					
PROTOTYPE - M6SK-303					
<u>RATINGS</u>				<u>CONNECTIONS</u>	
All limiting values are absolute					
			Note	Pin	Electrode
Heater Voltage (V)			6.3	1	Heater h
Heater Current (A)			0.5	2	Grid g
Max. Anode 1 and Anode 3 voltage (kV)			10	6	Anode 2 a2
Max. Anode 2 voltage range for focussing (V)			±100	7	External coating
Max. negative Anode 2 voltage (V)			150	10	-
Max. negative heater-cathode voltage (V)			150	11	Cathode, k
				12	Heater h
				S.C.	Anodes 1 and 3 a1,3
Typical Operating Conditions:				<u>SIDE CONTACT</u>	
Anodes 1 and 3 voltage (kV)			8	BS448/CT8	
Anode 2 voltage (V)			0		
Grid voltage for cut-off (V)			-50	<u>DIMENSIONS</u>	
<u>CAPACITANCES</u>				See drawing on page 4	
Cg-all (nom) (pF)			9.5		
Ck-all (nom) (pF)			6.5		
<u>NOTES</u>					
A. Absolute Maximum Value					
B. The Joint Services Catalogue Number is 5960-99-037-4031					

CV6140

TESTS

Page 2

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)
6.3

Va1, 3 (kV)
8

Va2
Adjust

Vg
Adjust

Vhk (V)
0

Test No.	K1001 Issue	Test	Test Conditions	Insp. Level	Sym-bol	Limits		Units
						Min.	Max.	
(a)	5A.4.1.1	Electrode Insulation	No voltages	100%				
(b)	5A.4.1.1	Grid Insulation	Vg = -75V	100%	Ig	-	10	/ μ A
(c)	5A.4.1.3	Heater-Cathode Leakage	Vhk = -150V Va1, 3 = 0	100%	Ihk	-	100	/ μ A
(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 μ A Screen over-scanned Measure Change of grid voltage from that in test (e)	100%		15	35	V
(g)	5A.5 7.2.2	Focus (i) Line Width	Pulsed line 45 mms long. Grid drive 100 μ S pulses 250 pps Peak Ik 100 μ A. Optimum focus	100%		-	0.35	mm
		(ii) Focus Voltage	As for (i)	100%	Va2	-100	100	V
(h)	5A.5.1.1	Light Intensity	Focussed Raster of convenient size. Ik = 10 μ A	100%		0.25	-	Candela
(j)	5A.6.3	Useful Screen Area		100%		108 $\times$ 108	-	mm ²
(k)	5A.4.2	Flashover and Stray Emission	Va1, 3 = 10 kV through 1M ohm Vg = -100V Va2 = 100V Tapping rate 4 per sec. for 10 secs.	100%				

Amult.1

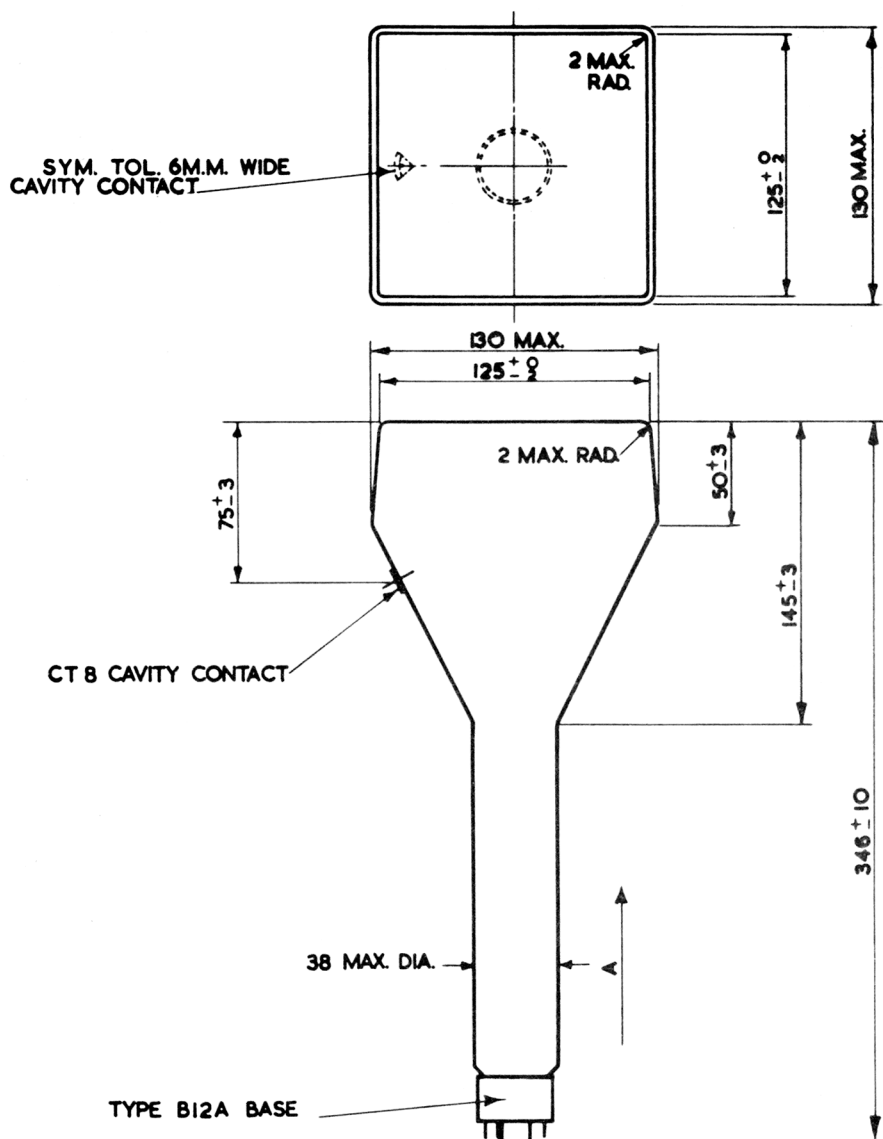
CV6140/1/2
Amult.1

* or
Pulsed Spot
Diameter

Grid Drive 0.2ms pulses 250 pps
Peak Ik = 100 μ A Optimum Focus

- 0.65 mm

Test No.	K1001 Issue 6	Test	Test Conditions	Insp. Level	Sym- bol	Limits		Units
						Min.	Max.	
(1)	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.		10	
					No.		5	
					No.		0	



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

DIMENSIONS IN M.M.

CV 6140/1/4

ELECTRONIC VALVE SPECIFICATIONS

SPECIFICATION AD/CV6140, ISSUE 1, DATED 1.1.65
AMENDMENT No.1

Page 2. Test clause 'g'. Delete existing test and substitute the following:-

Test No.	KID01 Issue 6	Test	Test Conditions	Insp. Level	Symbol	LIMITS		Units
						Min.	Max.	
(g)	5A.5.7.2.2.	Focus (1) Line width	Pulsed line 45mm long. Grid drive 100 μ S pulses, 250 p.p.s. max. Peak Ik = 100 μ A. Optimum focus.	100%		-	0.55	mm
		<u>OR</u> Pulsed Spot Diameter	Grid drive 0.2 μ S pulses, 50 p.p.s. Peak Ik = 100 μ A Optimum focus.			-	0.65	mm
		(11) Focus voltage	As for test (1) above.		Va2	-100	100	V

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

N.278505