

MINISTRY OF SUPPLY

Specification MOS/CV1382/Issue 1. Dated 27.11.45. To be read in conjunction with K1003.	<u>SECURITY</u> <u>Specification</u> Restricted	<u>C.R.T.</u> Restricted
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→ Indicates a change

<u>TYPE OF DEFLECTION:-</u> Electrostatic.		<u>MARKING</u>  See K1001/4.
<u>BULB:-</u>	Internally coated with graphite. The coating to be connected to a <sub>3</sub> .	
<u>SCREEN:-</u>	GGN1 or GGN28	
<u>RATING</u>	Note	<u>BASE</u> 12 Pin Spigot
Heater Voltage (V)	4	<u>DIMENSIONS</u> <u>AND</u> <u>CONNECTIONS</u>  See Drawing on Page 4.
Heater Current (A)	1.1	
Max. Final Anode Voltage (kV)	1.5	
X plate sensitivity (mm/V)	$\frac{170}{V_{a3}}$	
Y plate sensitivity (mm/V)	$\frac{170}{V_{a3}}$	
<u>TYPICAL OPERATING CONDITIONS</u>		
First and Final Anode Voltage (V)	450	
Second Anode Voltage (V)	70	
Beam Current (μA)	2	

NOTE

- A:- The tube must be adequately free from microphony. This test to be covered by type approval.
- B:- The focussing system should be preferably of the three electrode type.

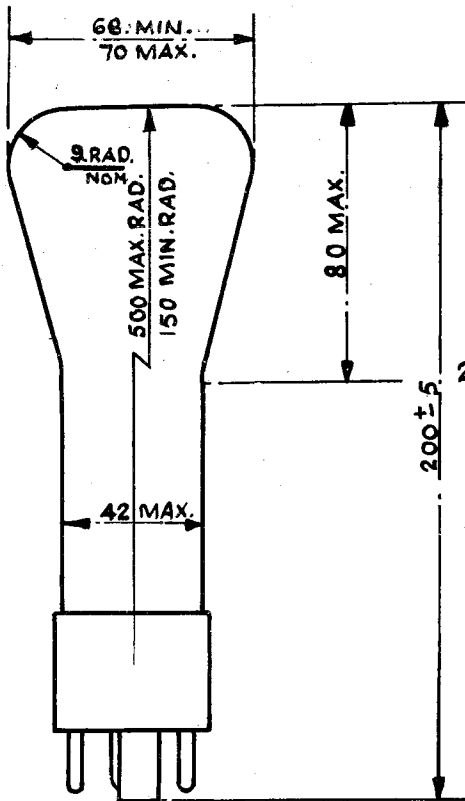
To be performed in addition to those applicable in K1003.

Clause	Test Conditions				Tests	Limits		No. Tested.
	V <sub>h</sub>	V <sub>a1</sub> V <sub>a3</sub>	V <sub>a2</sub>	V <sub>g</sub>		Min.	Max.	
(a)	0	0	0	0	<b>Capacitances</b> (pf) 1. Each X or Y plate to all other electrodes. 2. Grid to all other electrodes. 3. Each X to each Y plate.	-	15	Type Approval Test only
(b)	4	0	0	0	I <sub>h</sub> (A)	.95	1.25	5% (5)
(c)	4	0	0	0	Cathode-Heater Current. (μA)	-	100	1% (5)
(d)	4	450	-	-	1. Line width shall not be greater than that of a standard tube. 2. V <sub>a2</sub> (V) 3. V <sub>g</sub> (to be noted) (V) 4. A change of + one volt in V <sub>g</sub> to cause a perceptible increase in brightness, and no appreciable change of focus.	25 -2.5	100 -	100%
(e)	4	450	As in (d)	-	V <sub>g</sub> (V)	-	-15	1% (5)
(f)	4	450	As in (d)	0	<b>Deflector Plate Current</b> Total current flowing to all deflector plates. (μA)	-	5	100%
(g)	4	450	As in (d)	Any convenient value	<b>Deflection Sensitivities</b> 1. X plate. (mm/V) 2. Y plate. (mm/V)	$\frac{135}{V_{a3}}$ $\frac{135}{V_{a3}}$	$\frac{205}{V_{a3}}$ $\frac{205}{V_{a3}}$	5% (10)

(h)	4	450	As in (d)	As in (g)	Deviation of spot from centre of screen. (mm)	-	5	100%
(j)	4	450	As in (d)	As in (d)	Spot movement. (mm)	-	4	100%
All deflector plates connected together and their potential not more than 200v. below az.								
(k)	4	450	As in (d)	As in (g)	Angle between X and Y axes.	80°	100°	5% (10)
(l)	4	450	As in (d)	As in (g)	<u>Useful Screen Area</u> Radius (mm) DIAMETER	55	-	100%
(m)	4	1500	See Clause 5.14 of K1003.		Over Voltage Test			100%
(n)	4	450	As in (d)	As in (d)	<u>Life Test</u> Life. (hrs)	500	-	0.5% (3)
Deflection to cover a raster of area <del>80</del> x 80 mms.								

40 x 40 mms.

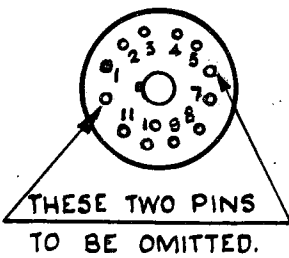
ALL DIMENSIONS IN MILLIMETRES.



### NOTES.

1. VIEWING THE SCREEN WITH THE KEY ON THE BASE UPPERMOST A POSITIVE POTENTIAL APPLIED TO PIN X2 SHALL DEFLECT THE SPOT TO THE RIGHT AND A POSITIVE POTENTIAL APPLIED TO PIN Y2 SHALL DEFLECT THE SPOT DOWNWARDS.
2. THE INTERNAL CONDUCTIVE COATING SHALL BE OF SUCH DIMENSIONS THAT IT FUNCTIONS EFFECTIVELY BUT DOES NOT OBSCURE THE REQUIRED USEFUL SCREEN AREA.

PIN.	ELECTRODE.
1	CATHODE.
2	GRID.
3	HEATER.
4	HEATER.
5	2 <sup>ND</sup> . ANODE A2.
7	PLATE Y2
8	PLATE X2
9	3 <sup>RD</sup> . ANODE A3
10	PLATE X1
11	PLATE Y1.



PIN CONNECTIONS  
VIEWED FROM  
UNDERSIDE OF BASE.