MINISTRY OF AIRCRAFT PRODUCTION (D.C.D.)

CATHODE RAY TUBE TYPE **CV1530** (VCR530)

Specification MAP/CV1530/Issue 2 Dated 13.12.45. To be read in conjunction with K1003	SECURITY Specification: CONFIDENTIAL Tube: RESTRICTED

→ Indicates a change

TYPE OF DEFLECTION - Magnetic
TYPE OF FOCUS - Electrostatic
BULB - Internally coated with conductive coating.
SCREEN - YYM36

MARKING
VCR.530
10CV/1530 ←

BASE
I.O.

RATING			Note
Heater Voltage	(V)	4.0	
Heater Current	(A)	1.0	
Max. First Anode Voltage	(kV)	1.45	A
Max. Third Anode Voltage	(kV)	8.0	A
TYPICAL OPERATING CONDITIONS			
Third Anode Voltage	(kV)	7.0	
Second Anode Voltage	(kV)	1.0	
First Anode Voltage	(kV)	1.25	B
Working Beam Current (peak)	(uA)	250	
Working First Anode Current	(uA)	500	B

Pin	Electrode
1	No connection
2	First Anode
3	Second Anode
4	No connection
5	Grid
6	Cathode
7	Heater
8	Heater
Side Contact	Third Anode

SIDE CONTACT
Flush Type.

DIMENSIONS AND CONNECTIONS
See drawing on page 4. ←

NOTES

A:- The tube shall be capable of operating with these voltages at a pressure equivalent to 4.45" of mercury at 15°C.

B:- The first anode must always be at least 50V. positive to the second anode and the supply network must take account of variations in first anode current from zero to working value.

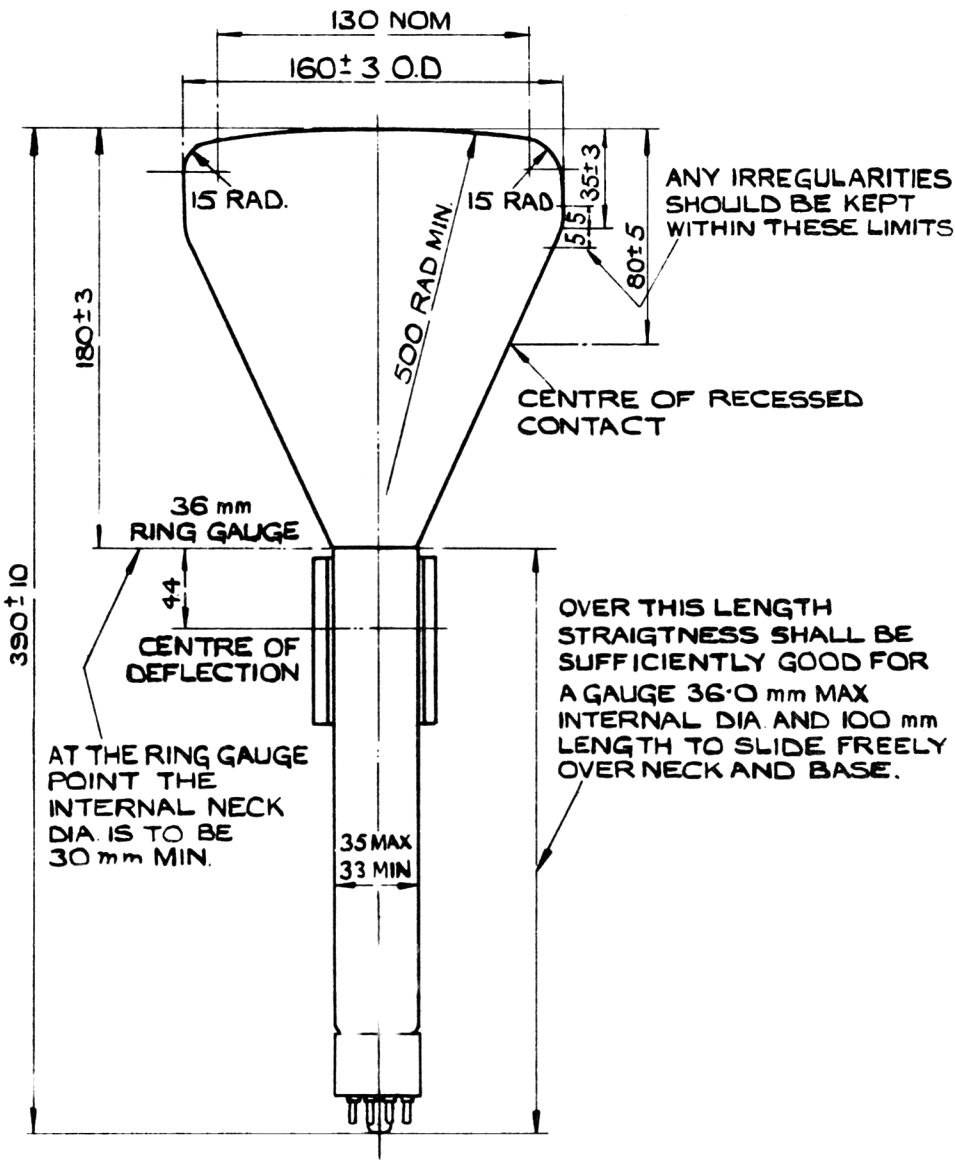
To be performed in addition to those applicable in K1003

	Test Conditions					Test	Limits		No. Tested
	Vh	Va3 (kV)	Va2 (kV)	Va1 (kV)	Vg		Min.	Max.	
a	See K1003/5.12.					INTERELECTRODE CAPACITANCE (pF) Cg- all	-	25	5%(10)
b	4.0	0	0	0	0	Ih (A)	0.7	1.2	100%
c	4.0	7.0	Adjust for optimum focus	1.25	Adjust to cut off	Vg (V) Value to be noted	-	-100	100%
d	4.0	7.0	ditto	1.25	-	1. Vg (V)	-1	-	100%
	Vg adjusted to give a light output of 2.5 candles on a close raster.					2. Change in value of Vg from test(c) (V)	-	55	100%
						3. Within the range of grid voltage from cut off to standard light output the beam current shall increase continuously.			100%
e	4.0	7.0	ditto	1.25	-	1. Line width (mm)	-	0.8	100%
	DEFLECTION - With a sinewave time base of 15 Kc/s nom. and line length of 135 mm. in X and Y directions successively, the line width will be measured at the centre of the trace. GRID - The grid will be pulsed positively with amplitude equal to the value obtained in test (d.2), the nominal values of pulse duration and recurrence being 100 µsecs. and 100 c/s respectively.					2. Va2 (V)	900	1200	100%
f	4.0	7.0	Any convenient value	1.25	-100	GRID INSULATION 1. Leakage current (µA)	-	20	100%
	See K1003/5.4.2. Resistor = 5 MΩ					2. Increase in in voltmeter reading	-	100%	100%
g	4.0	7.0	ditto	1.25	Any convenient value	Deviation of spot from centre of screen (mm)	-	10	100%

TESTS (CONTD.)

CV1530

	Test Conditions					Test	Limits		No. Tested
	Vh	Va3 (kV)	Va2 (kV)	Va1 (kV)	Vg		Min.	Max.	
h	4.0	7.0	Any convenient value	1.25	Any convenient value	USEFUL SCREEN AREA Diameter (mm)	135	-	100%
j	4.0	7.0	-	1.25	ditto Deflecting field to give a raster covering the useful screen area. The spot shall be defocussed such that separate lines shall not be discernable on the raster.	1. The screen shall not be worse for graininess than a standard pattern. 2. The variation of brightness over any part of the area shall not exceed a 2 : 1 ratio.			100% 100%
k	Test to be performed using Test Set 331.					After-glow (secs.)	4	16	10%



THE ANGLE BETWEEN THE PLANES THROUGH THE TUBE AXIS AND THE CENTRE OF THE SIDE CONTACT, AND THE TUBE AXIS AND THE KEY IN THE SPIGOT OF THE BASE SHALL NOT BE MORE THAN ± 10°

ALL DIMENSIONS IN MILLIMETRES