MINISTRY OF SUPPLY

CATHODE RAY TUBE CV300

Specification MOS/CV300/Issue 1 Dated 28.1.46. To be read in conjunction with K1003	SECURITY Specification: Restricted	Tube: Restricted

→ Indicates a change

TYPE OF DEFLECTION:- Magnetic

BULB :- Internally coated with conductive coating

SCREEN :- Blue BEN

MARKING

See K1001/4

RATING			Note
Heater Voltage	(V)	4.0	
Heater Current	(A)	1.0	
Maximum Anode Voltage	(KV)	8	
Desirable Spot Size	(mms)	0.5	
Normal Working Anode Voltage	(KV)	5.4	
Working Beam Current	(μA)	15.0	
Pulsed Beam Current	(μA)	100.0	

BASE
International Octal

DIMENSIONS AND CONNECTIONS

See Drawing on Page 4

NOTE

A:- The gun assembly shall be sufficiently robust to withstand considerable mechanical shocks without suffering displacement.

TESTS

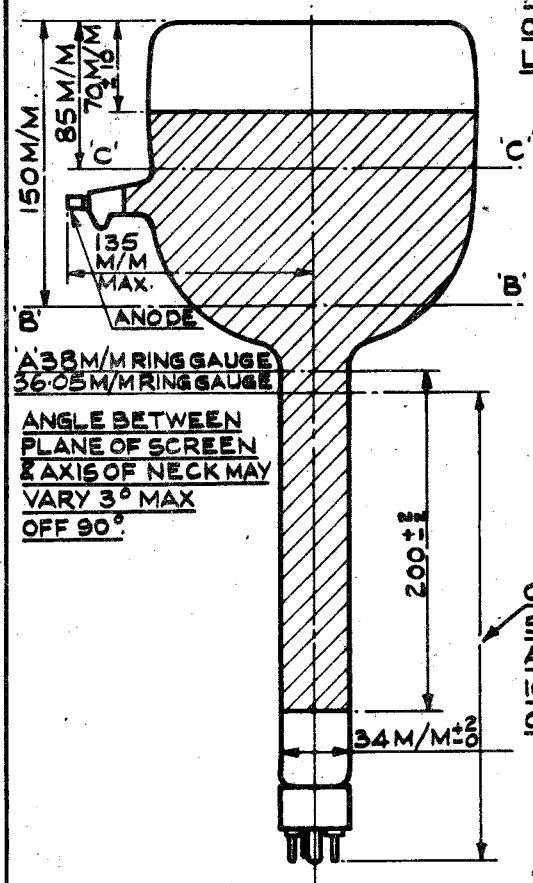
To be carried out in addition to those applicable in K.1003

Clause	Test Conditions				Test	Limits		No. Tested
	Vh	Va (KV)	Vg	Ib (μA)		Min.	Max.	
(a)					Interelectrode Capacitances (Pf) Grid to all other electrodes	-	25	5%
(b)	4.0	0	0	-	Ih(A)	-	1.2	100%
(c)	4.0	5.4	Adjusted	-	Line width	-	1mm	100%
	Front edge of coil assembly mounting set 1.5mm from axis AA (see drg.) Coil current adjusted for optimum focus and vG to give a beam current equal to 50 microamps; 94mm scan in X & Y directions successively							
(d)	4.0	5.4	Adjusted	15.0	V_g	To be at least 26V negative to cathode value to be noted		100%
	Focussing conditions as in test (c)							
(e)	4.0	5.4	Adjusted	3.0	Increase in negative value of Vg compared with value noted in test (d)	-	7	100%
	Focussing conditions as in test (c)							
(f)	4.0	5.4	Adjusted	100.0	Decrease in negative value of Vg compared with value in test (e)	-	20	100%
	Focussing conditions as in test (c)							
(g)	4.0	5.4	Adjusted	0.1	1) V_g 2) Increase in negative value of Vg compared with value noted in test (e)	42	77 9	100%
	Focussing conditions as in test (c)							

CV300

Clause	Test Conditions				Test	Limits		No. Tested
	V_h	Va (KV)	V_g	Ib (μA)		Min.	Max.	
(h)	4.0	5.4	-	-	Grid Insulation 1) Leakage Current (μA) 2) Increase in voltmeter reading.		7.7 100%	100%
	1) vG at -77V 2) See clause 5.4.2. of K1003 Resistance 10MΩ							
(j)	4.0	5.4	Within Working Range	-	There shall be no shadowing at any orientation of trace			100%
	Focussing conditions as in test (c). Deflection field to give a repeating line 165 mms in length, centred on centre of screen.							
(k)	4.0	5.4	Within Working Range	-	Deviation of centre of unfocussed spot from centre of screen (mms)	-	10	100%
	No focus coil energisation							
(l)	4.0	5.4	Within Working Range		The screen shall not be worse for non-uniformity than a standard tube.			100%
	No focussing coil energisation. Deflecting fields to give raster of area approximately 12cms x 12cms.							
(m)	4.0	5.4	Adjusted	-	Life Test Life (hours)	1000		1%
	Normal brightness and continuous spot movement over raster of area approx. 12cms x 12cms.							

CV300.



ANY PROTUBERANCE DUE TO SEALING OFF, OR ANODE CONNECTION SHALL LIE BETWEEN 'BB' & 'CC'.

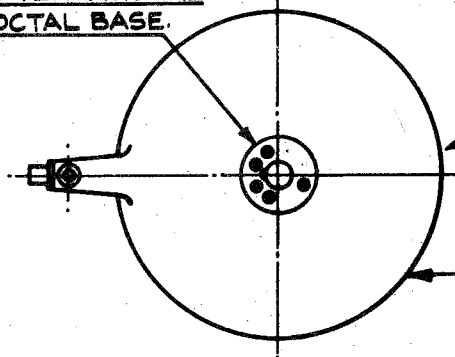
BASE CONNECTIONS

PIN	ELECTRODE
1	NO CONNECTION
2	HEATER
3	NO PIN
4	NO PIN
5	GRID
6	NO PIN
7	HEATER
8	CATHODE.

ANGLE BETWEEN PLANE OF SCREEN & AXIS OF NECK MAY VARY 3° MAX OFF 90°.

OVER THIS LENGTH STRAIGHTNESS SHALL BE SUFFICIENTLY GOOD FOR A GAUGE 3·7 CMS. INTERNAL DIA & 10CMS. IN LENGTH TO SLIDE FREELY OVER NECK & BASE.

DIAMETER BULB TO BE 18 ±4mm EXCLUSIVE OF ANODE TERMINAL AND PIP.



ANGLE BETWEEN PLANE THROUGH ANODE CONNECTION & AXIS OF TUBE & PLANE THROUGH BASE SPIGOT. NOT TO EXCEED 15°.

VIEW OF UNDERSIDE OF BASE.

ALL DIMENSIONS IN MILLIMETRES.