MINISTRY OF SUPPLY - DLRD(A)/TRE

VALVE ELECTRONIC **CV487**

Specification MOS(A)/CV487 Issue 3 Dated 16/10/52 To be read in conjunction with K1001	SECURITY Specification: UNCLASSIFIED Valve: UNCLASSIFIED

→ Indicates a change

TYPE OF VALVE - Cathode Ray Tube

TYPE OF DEFLECTION - Magnetic

TYPE OF FOCUS - Magnetic

SCREEN - YY7 (with aluminium backing)

PROTOTYPE - VCRX315

MARKING

See K1001/4

BASE

B7B

CONNECTIONS

Pin	Electrode	
1	IC	←
2	A1	
3	G	
4	IC	←
5	H2	
6	C	
7	H1	
SC	A2	

RATING

			Note
Heater Voltage	(V)	4.0	
Heater Current	(A)	1.0	
Max. First Anode Voltage	(V)	300	
Max. Final Anode Voltage	(kV)	7.0	
Max. Heater-Cathode Voltage	(V)	100	A
→ Min. Grid Voltage	(V)	-1	

SIDE CONTACT

As K1001/A1/D5.1, with an annular ring indented to provide locking for the anode contact clip.

DIMENSIONS

See Drawing, Page 4.

NOTES

A. Heater negative with respect to cathode.

→ B. The anode 2 cap may be secured by means of an approved conducting thermoplastic cement.

→ C. The pins of the base shall be coated with Grease, DTD577 and the base masked for transit using waxed fabric secured with adhesive tape.

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CV487

TESTS

To be performed in addition to those applicable in K1001

	Test Conditions				Test	Limits Min.	Limits Max.	No. Tested	Note
a	See K1001/5A.13				Capacitances (pF) 1. Grid to all other electrodes 2. Cathode to all other electrodes	 - -	 15 10	 5%(20) 5%(20)	
	Vh (V)	Va2 (kV)	Va1 (V)	Vg (V)					
b	4.0	0	0	0	Ih (A)	0.84	1.1	100%	
c	4.0	5.5	250	Adjust to cut-off	-Vg (V)	25	60	100%	
d	4.0 Vg adjusted to give a light output of 0.5 candle, using a close raster of convenient size.	5.5	250	-	1. Change in Vg from value found in Test (c). (V) 2. Within the range of grid voltage from cut-off to light output the beam current shall increase continuously.	- 	20 	100% 100%	
e	4.0 Focus adjusted for optimum. Deflection Using a linear scan of 10 kc/s and a line length of 200 mm in X and Y directions successively, the line width shall be measured at the centre of the trace. Grid The grid shall be pulsed positively from cut-off with amplitude equal to the value obtained in Test (d.1), the nominal value of pulse duration and recurrence rate being 100 µsecs and 100 c/s, respectively.	5.5	250	-	Line Width (mm)	-	0.5	100%	
f	4.0 Recommended method: See K1001/5A.3.2 Resistor = 5 Megohms.	5.5	250	60	Grid Insulation 1. Leakage Current (µA) 2. Increase in voltmeter reading	 - -	 12 100%	 100% 100%	

TESTS (Contd.)

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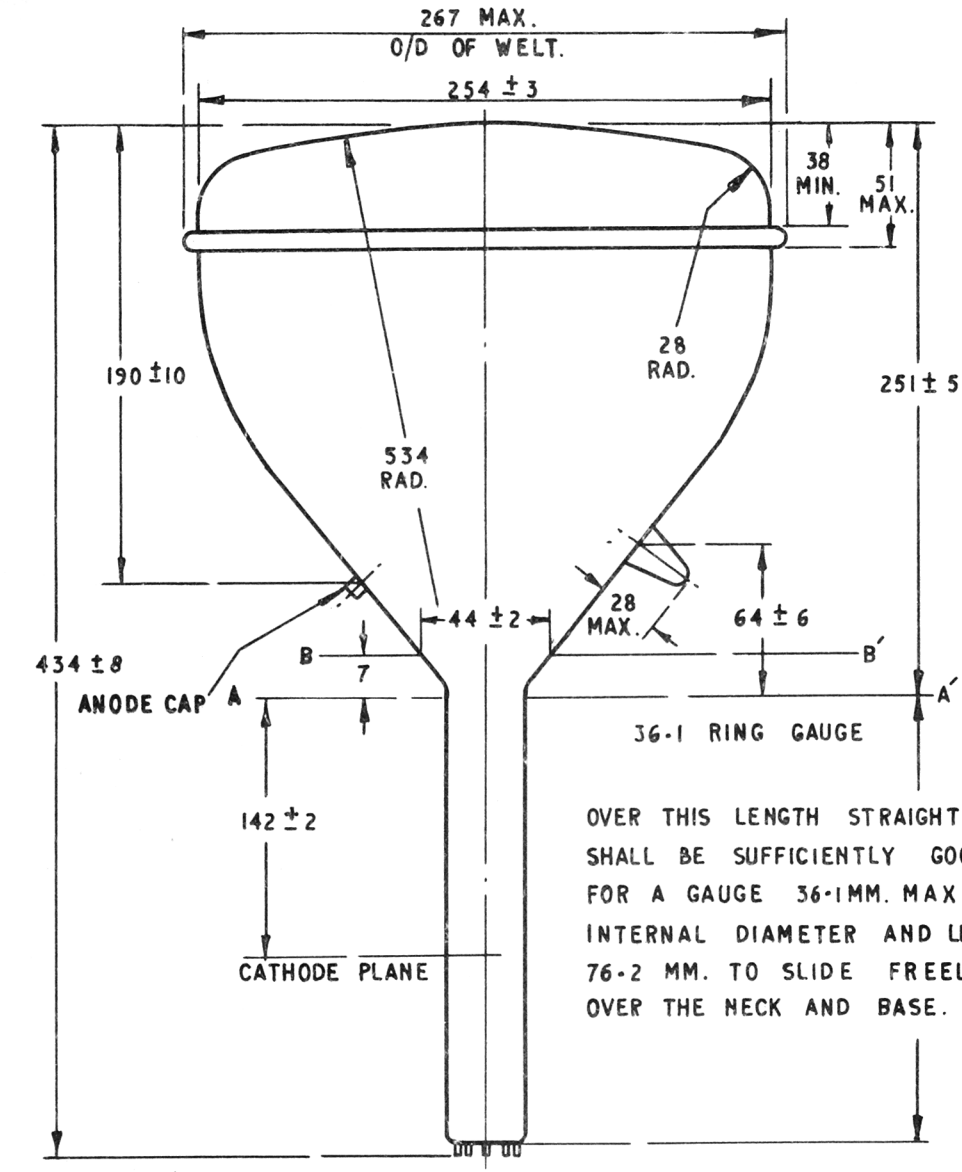
	Test Conditions				Test	Limits		No. Tested	Note
	Vh (V)	Va2 (kV)	Va1 (V)	Vg (V)		Min.	Max.		
g	4.0	5.5	250	Adjust	Useful Screen Area (mm) Diameter	225	-	100%	2
	Adjust for optimum focus. Deflection to cover the stated circle concentric with the screen centre with no evidence of neck shadow.								
h	4.0	5.5	250	Near cut-off	Deviation of spot from centre of screen (mm)	-	10	100%	
	No focus coil energisation								
j	4.0	5.5	250	Adjust	Persistence (secs)	4	-	100%	
	Test to be performed with Test Set, Type 331 using a close raster of convenient size and the N4 filter.								

NOTES

1. To prevent screen burning it is advisable not to focus during the cut-off tests. The focussing fields should be adjusted for optimum for other tests, with the focus coil gap 100 mm from line AA' (See Drawing, Page 4).

2. The deflector coil length must not be less than 70 mm and the coil centre not less than 40 mm from the axis of BB' (See Drawing, Page 4).



ALL DIMENSIONS IN MMS.