MINISTRY OF SUPPLY, R.R.E.

VALVE ELECTRONIC

CV2472

Specification MOS/CV2472 Issue 1. Dated 25th July, 1958 To be read in conjunction with K1001 and BS.448	SECURITY Specification: Unclassified Valve: Unclassified

→ Indicates a change

TYPE OF VALVE:- Cathode Ray Rube	MARKING See K1001/4
TYPE OF DEFLECTION:- Magnetic	
TYPE OF FOCUS:- Magnetic	BASE B7B
SCREEN:- G08. Aluminium backed	
PROTOTYPE:- CV487	

RATING			Note
Heater Voltage	(V)	4.0	
Heater Current	(A)	1.0	
Max. a1 Voltage	(V)	400	
Max. a2 Voltage	(kV)	9.0	
Max. Heater-Cathode Voltage	(V)	100	A

TYPICAL OPERATING CONDITIONS		
a1 Voltage	(V)	250
a2 Voltage	(kV)	5.5

CONNECTIONS

Pin	Electrode
1	Internal Connection
2	a1 First Anode
3	g Grid
4	Internal Connection
5	h Heater
6	k Cathode
7	h Heater
Side Contact	a2 Second Anode

SIDE CONTACT

CT1.
See BS.448

DIMENSIONS

See drawing, Page 4

NOTES

A. Heater negative with respect to cathode.

B. 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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CV2472

To be performed in addition to those applicable in K1001

Clause	Test Conditions	Test	Limits Min.	Limits Max.	No. Tested
a	See K1001/5A.13	Capacitances (pf)			
		1. Grid to all other electrodes	-	15	2%(5)
		2. Cathode to all other electrodes	-	10	2%(5)
		3. a2. to external coating	1000	-	100%
	FOR ALL TESTS BELOW V_h = 4.0 VOLTS				
b		Heater Current (A)	0.84	1.1	100%
	FOR ALL TESTS BELOW, EXCEPT CLAUSE "1", Va_1 = 250V and Va2 = 5.5 kV				
c	Adjust for optimum focus and Vg for cut-off See K1001/5A.10.	Grid Base -Vg. (V)	25	60	100%
d	Adjust Vg to give a light intensity of 0.5 candela, using a focussed raster of convenient size.	1. Grid Drive (Change in Vg from value found in test "c") (V)	-	20	100%
		2. The beam current shall increase continuously from cut-off to the light intensity of 0.5 candela.			100%
e	Using a linear scan of 10 Kc/s and a line length of 200 mm. in two directions at right angles, adjust for optimum centre focus. GRID The grid shall be pulsed positively from cut-off with amplitude equal to the value obtained in test "d1.", the nominal values of pulse duration and recurrence rate being 100uS and 100 c/s respectively.	Line Width at the centre of the trace (mm)	-	0.5	100%
f	(i) Vg = -60V OR (ii) See K1001/5A.3.2 Resistor 5 Megohm.	Grid Insulation (i) Leakage current. (uA) OR (ii) Increase in voltmeter reading		12 100%	100%
g	Adjust for optimum focus. Deflection to cover the useful screen area. See Note 2	Useful Screen Area Diameter. (mm)	225	-	100%

TESTS (Contd.) CV2472

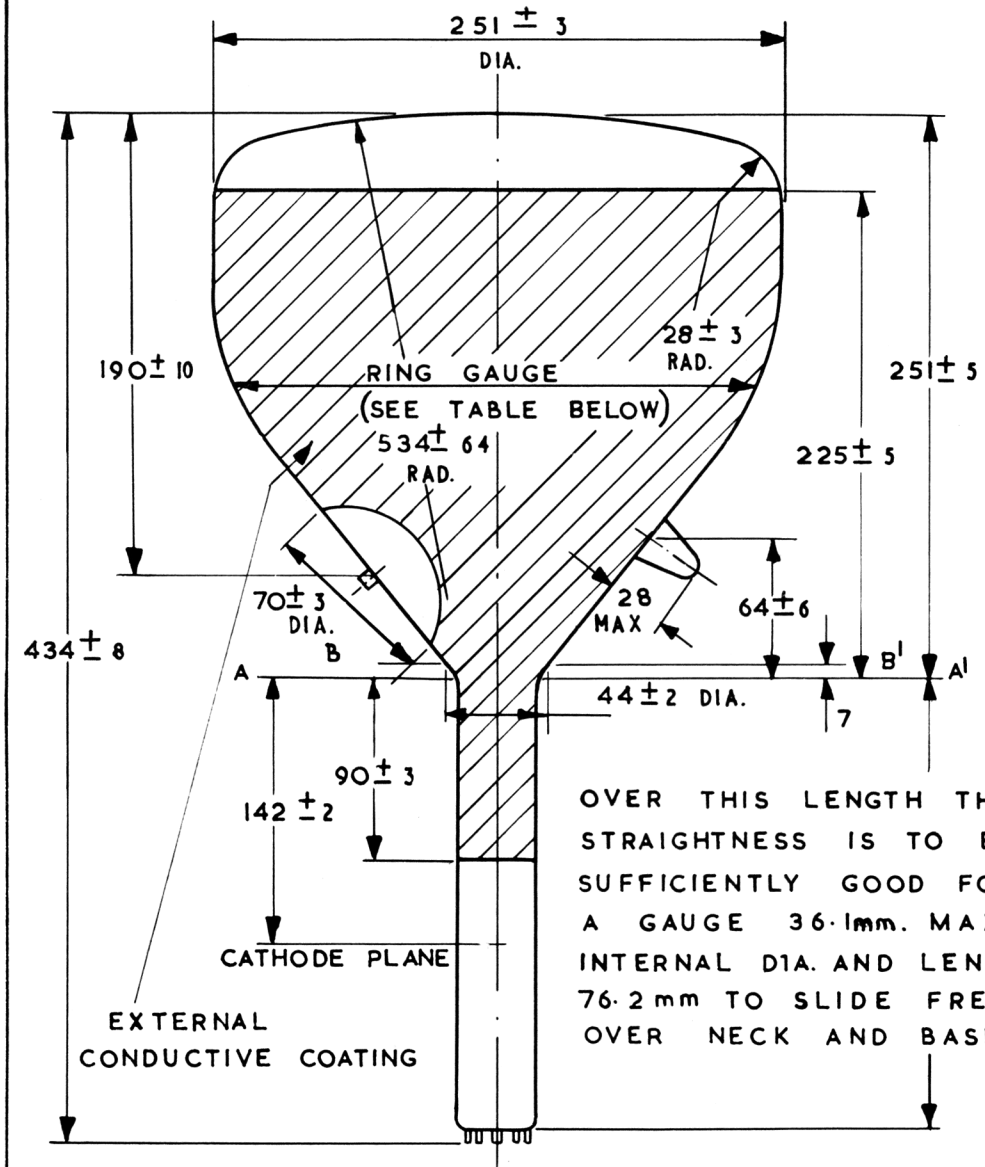
Clause	Test Conditions	Test	Limits Min.	Limits Max.	No. Tested
h	No focus or deflecting fields 1. Vg any convenient value.	1. Deviation of spot from the geometric centre of the screen (mm)	-	10	100%
	2. Grid driven +ve from cut-off with a pulse of amplitude as found in test "d.1" and of 100 uS duration at a repetition of 25 to 100 p.p.s.	2. Unfocussed spot diameter (mm)	-	19	100%
j	Screen to be scanned with a linear raster of convenient size. No focussing field, Vg adjusted for a screen luminence of 2 foot lamberts. Excitation time 120 secs. ± 15 secs.	Afterglow Decay time to 0.014 foot lamberts (Secs)	16	60	10%(10)
k	Defocussed raster of any convenient luminance to cover the useful screen area. See note 3.	Blemishes. (Stones, Bubbles and Screen Defects). Above 1.5 mm. dia. 1.5 mm to 1.0 mm. dia. 1.0 mm to 0.5 mm. dia. Spacing between blemishes (mm)	None 20	 4 20	100%
l	Tube to be subjected to the climatic conditions of K1001/10.1 for a period of 28 days.	The external coating shall show no signs of blistering or flaking			T.A.

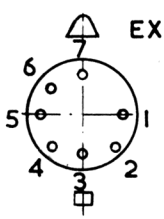
NOTES

1. The centre of the focus coil shall be 100 mm. from the 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).

3. If two or more blemishes, including those between 0.5 mm. and 0.25 mm. are separated by a distance not greater than the largest blemish in the group, then the group of blemishes shall be considered as one blemish of dimension equal to the maximum overall dimension of the group.





A2 AND EXHAUST PIP TO BE WITHIN ± 15° OF LINE THROUGH PINS 3 AND 7 OF BASE.

A 2.

ALL DIMENSIONS IN MMS

RING GAUGE DIA	DISTANCE FROM CENTRE OF TUBE FACE
90 mm.	215 ± 5 mm.
135 mm.	190 ± 12 mm.
200 mm.	148 ± 10 mm.