MINISTRY OF SUPPLY (D.L.R.D./RAE)

Valve Electronic **CV5119**

SPECIFICATION MOS/CV.5119 ISSUE NO. 1 DATED 10.2.58	SECURITY SPECIFICATION: Unclassified VALVE: Unclassified

TYPE OF VALVE: Cathode Ray Tube with concave face.

TYPE OF DEFLECTION: Magnetic.

TYPE OF FOCUS: Magnetic.

ENVELOPE: Glass with internal conductive coating.

SCREEN: GG5 with aluminium backing and anti-reflection coated front face.

PROTOTYPE: 31C2/P1 (Mod.)

MARKING

See K.1001/4

RATING
(all limiting values are absolute)

			NOTES
Heater Voltage	(V)	6.3	
Heater Current	(A)	0.6	
Max. Anode Voltage	(KV)	12.5	
Max. Heater Cathode Voltage	(V)	150	
Typical Operating Conditions			
Anode Voltage	(KV)	9.5	
Grid Voltage (cut off)	(V)	68	

CAPACITANCES (pF)

Cathode to all (max.)	10
Grid to all (max.)	10

BASE

BSS.448/B12A

CONNECTORS

PIN	ELECTRODE	
1	Heater	h
2	Grid	g1
3,4,5,6, 7,8,9	No pin	NP
10	No connection	NC
11	Cathode	k
12	Heater	h
Side Contact	Anode	a

SIDE CONTACT

Recess Cap BS.448/CT8

DIMENSIONS

See drawing on page 3

NOTES

1. Heater negative.
2. The tube has a linear bearing scale on its inner front face as shown in drawing on page 4.

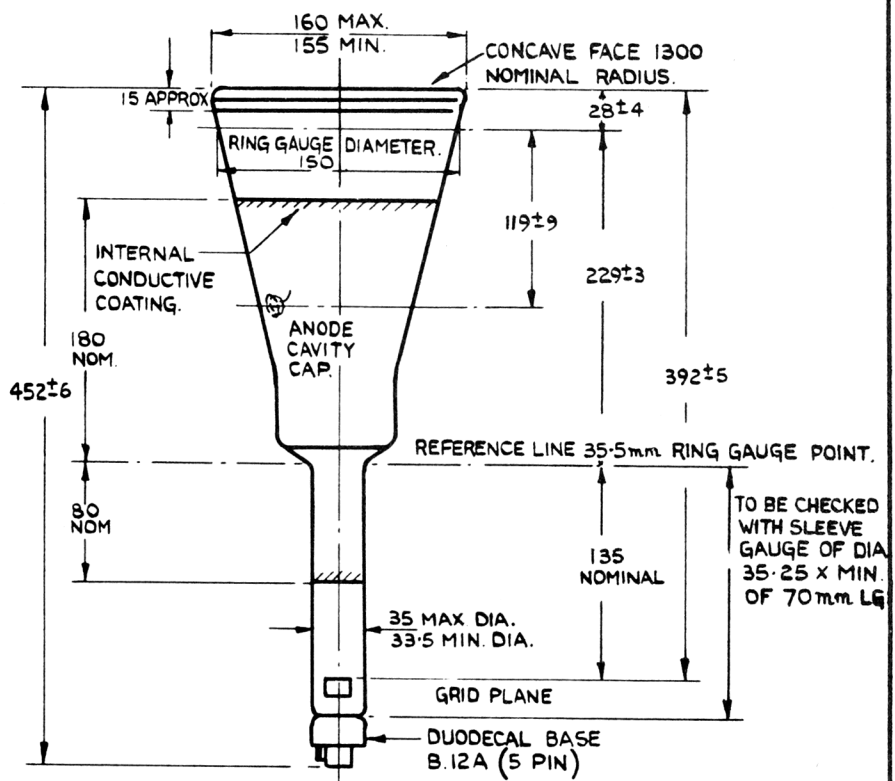
To be performed in addition to K1001

	Test Conditions	Test	Limits Min.	Limits Max.	No. Tested	Notes
a	See K.1001/5A.13	Capacitances (pF) Grid to all other electrodes Cathode to all other electrodes	 - -	 10 10	 5% (5)	
	Vh (V) | Va (KV) | Vg (V)					
b	6.3 | - | -	Heater Current (A)	.53	.67	100%	
c	6.3 | 9.5 | Adjust to cut-off Measured with a 140mm long focussed line.	Negative Grid Volts (-V)	43	93	100%	
d	6.3 | 9.5 | Adjust Adjust for optimum focus. Vg adjusted to give a light output of 0.15 candela.	1) Negative grid volts (V) 2) Change in value of Vg from test 'C'. (V)	28 -	- 15	100% 100%	
e	6.3 | 9.5 | Adjust Adjust for optimum focus. Vg adjusted to give a light output of 0.15 candela with a linear of sine wave scan of 50 c/s nom. and line of length 140mm in the X and Y directions successively. The line width to be measured at the centres.	Line width. (mm)	-	1.3	100%	1
f	6.3 | 9.5 | -100 For recommended method see K1001/5A.3.2 Resistance = 10 MΩ	Grid Insulation 1) Leakage Current (μA) or 2) Increase in voltmeter reading.	 - -	 10 100%	 100% 100%	
g	6.3 9.5 Any convenient values. See K1001/5A.11.1.	Deviation of Spot from centre of screen. (mm)	-	10	100%	

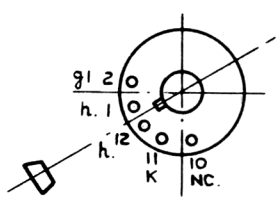
NOTES

1. Centre of focus coil gap to be 41 mm from grid face.

CV5119



VIEW OF BASE END.

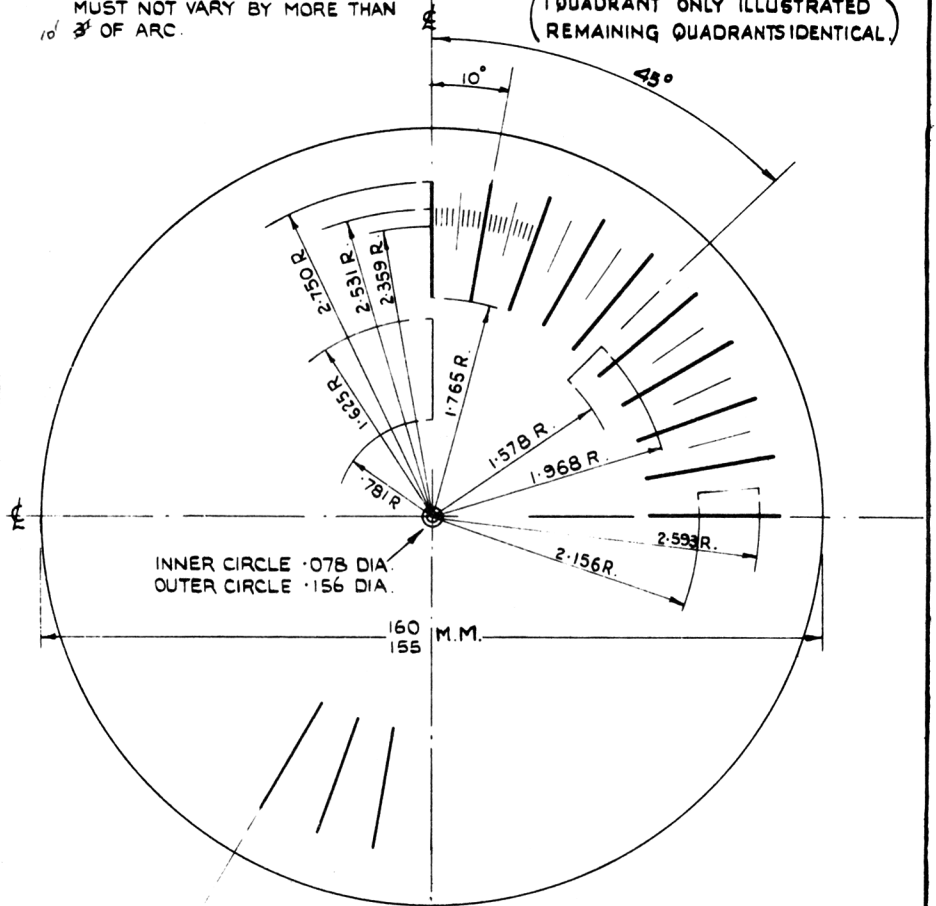


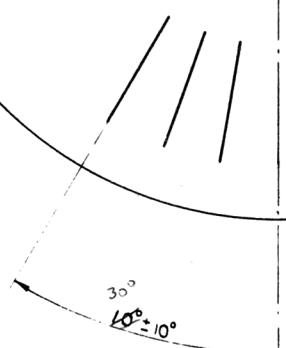
ANODE TERMINAL
IN LINE WITH SPIGOT ±15°

ALL DIMENSIONS IN mm.

VARIATION OF ANGULAR MARKINGS MUST NOT EXCEED ±1' ±10' OF ARC FROM THEIR THEORETICAL POSITIONS. THE SPACING OF ANY 2 ADJACENT MARKINGS MUST NOT VARY BY MORE THAN 1' 10' OF ARC.

SCALE TO BE LINEAR 0°/360° WITH THE 10° LINES & CENTRE CIRCLES ·012" THICK. THE 1°, 5° INNER 45° & INNER 90° LINES TO BE ·007" THICK. (1 QUADRANT ONLY ILLUSTRATED REMAINING QUADRANTS IDENTICAL)





REQUIRED ANGULAR RELATIONSHIP BETWEEN C.R.T. ANODE CONNECTOR CAP & 180° RADIAL GRADUATION LINE.

NOTES.

1 MASTER SCALE SHOULD BE ENGRAVED TWICE FULL SIZE ON HARD BLACK ANODISED ALUMINIUM SHEET.

2 FINAL SCALE TO BE INDELIBLY MARKED AND FIRED ONTO THE INNER SURFACE OF THE SCREEN.

SCALE MARKING

ALL DIMENSIONS IN INCHES, EXCEPT WHERE OTHERWISE STATED.

ELECTRONIC VALVE SPECIFICATIONS
SPECIFICATION MOS/CV.5119
ISSUE No. 1 DATED 10.2.58
AMENDMENT No. 1.

Page 4.

a) Note in Top left hand corner.

Amend the note to read as follows:-

"Variation of angular markings must not exceed ±10' of arc from their theoretical positions. The spacing of any 2 adjacent markings must not vary by more than 10' of arc".

b) Beneath lower left hand quadrant of face plate:-

The dimension quoted as $10^{\circ} \pm 10^{\circ}$ amend to read:-

"$30^{\circ} \pm 10^{\circ}$"

Royal Aircraft Establishment.

January 1960

N 12448