VALVE ELECTRONIC

MINISTRY OF SUPPLY. R.R.E.

CV1738

Specification MOS/CV1738
Issue 1A - dated 2nd July, 1960
To be read in conjunction with K1001 and BS448

SECURITY

Specification	Valve
Unclassified	Unclassified

→ Indicates a change

TYPE OF VALVE:- Cathode Ray Tube
TYPE OF DEFLECTION:- Magnetic
TYPE OF FOCUS:- Magnetic
BULB:- Glass, Internally coated with conductive coating.
SCREEN:- BB1 (Zinc Oxide) aluminium backed

MARKING
See K1001/4

BASE
BS448 B8G

RATING		Note	
Heater Voltage	(V)	4	
Heater Current	(A)	1	
Max. Anode Voltage	(kV)	25	
Max. Heater - Cathode Voltage	(V)	150	A
TYPICAL OPERATING CONDITIONS			
Anode Voltage	(kV)	22	
Grid Voltage (cut-off)	(V)	-50	
Grid Drive to give a light output of 0.08 Candela	(V)	25	
Heater - Cathode Voltage	(V)	10	A
CAPACITANCES			
Max.Cg to all other electrodes	(pf)	12	
Max. C_c to all other electrodes	(pf)	12	

CONNECTIONS

Pin	Electrode
1	Internally connected
2	Heater
3	Internally connected
4	Internally connected
5	Grid
6	Internally connected
7	Heater
8	Cathode
Side Contact	Anode

SIDE CONTACT

To fit cap valve Connector Type 332 Ref No.10H/21409

DIMENSIONS

See drawing, page 4

NOTES

A. Heater negative to cathode

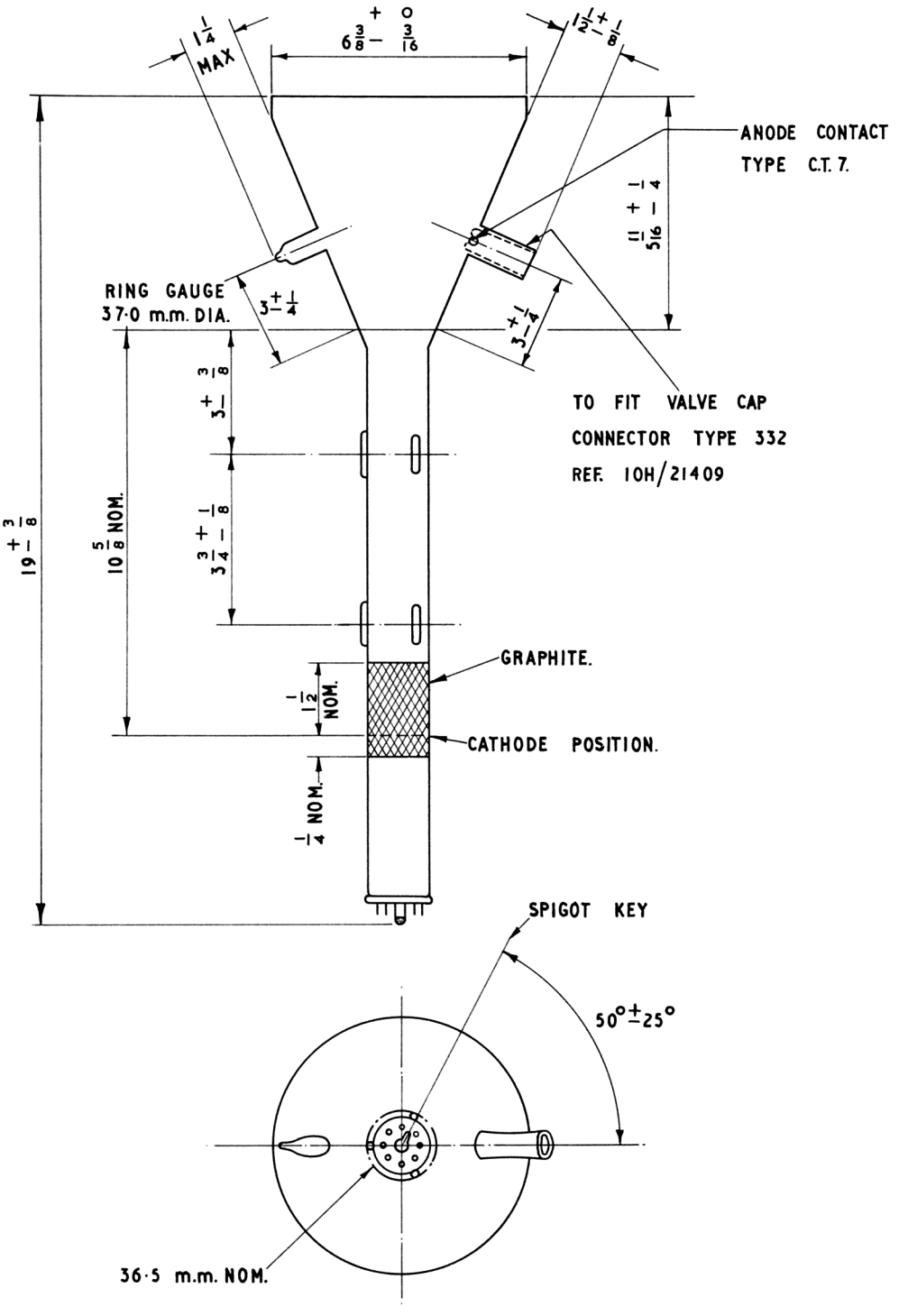
CV1738

TESTS

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		12	2%(5)
		2. Cathode to all other electrodes		12	2%(5)
	FOR ALL TESTS BELOW Vh = 4.0V EXCEPT CLAUSE j				
b		Heater Current (A)	0.8	1.1	100%
	FOR ALL TESTS BELOW Va = 22 kV EXCEPT CLAUSE j				
c	Adjust for optimum focus Adjust Vg for cut-off See K1001/5A.10.	Grid Base - Vg (V) (Value to be noted)	30	70	100%
d	Adjust Vg for a light intensity of 0.08 candela using a raster of convenient size.	Grid Drive Change in Vg from value found in test (c) (V)	15	30	100%
e	Adjust for optimum focus. Linear line scan $5\frac{1}{4}$" long. Adjust Vg as determined in (d). With an interlaced 405 line T.V. raster with the frame scan expanded to facilitate line width measurement.	Line Width measured at the centre of the trace (mm)		0.15	100%
f	Adjust for optimum focus, set = 0 using a raster of convenient size	Light intensity (candela)		0.6	100%
g	Vg = -50V	Grid Insulation Leakage current (uA)		5	100%
h	Vhk 150 Volts See K1001/5A.3.3.	Heater-Cathode Insulation Leakage current (uA)		150	100%
j	Vh = 0 Volts Va = 25 kV.	Anode Leakage Current (uA)		0.1	100%
k	Adjust for optimum focus Vg taken beyond cut-off.	Stray Emission There shall be no visible screen excitation. Heater-cathode voltage adjusted for optimum value (V)		20	100%

Clause	Test Conditions	Test	Limits Min.	Limits Max.	No Tested
l	Adjust for optimum focus. Vg as in test "d". Raster to cover screen area	Useful Screen Dia (in)	$5\frac{1}{4}$		100%
m	With a defocussed raster covering the useful screen area	Blemishes (mm) 1. The screen and inner part of the glass face in a central area 1 2/3" dia. shall be free from non-uniformity such as swirls or mottling and from (a) opaque blemishes of mean dia. or (b) semi transparent blemishes of mean dia. 2. The screen area between the 1 2/3" dia. and $5\frac{1}{4}$" dia. shall be free from (a) opaque blemishes of mean dia. or (b) semi transparent blemishes of mean dia. 3. In the outer half of the thickness of the glass face, blemishes of mean dia. (a) may be present in the central area or of the mean dia. (b) in the rest of the face.		(a)0.25 (b)0.4 (a)0.8 (b)1.0 (a)0.8 (b)1.0	100%
n	No focussing or deflecting fields. Vg any convenient value.	Centrality Deviation of spot from geometric centre of screen (mm)		7	100%



ALL DIMENSIONS IN INCHES UNLESS OTHERWISE STATED.