MINISTRY OF SUPPLY - DLRD/RRE

VALVE ELECTRONIC **CV2490**

Specification MOS/CV 2490 Issue 1 dated 31st December, 1958. To be read in conjunction with K1001(7) and BS448	SECURITY Specification: UNCLASSIFIED Valve: UNCLASSIFIED

→ indicates a change

TYPE OF VALVE - Cathode Ray Tube
DEFLECTION - Magnetic
FOCUS - Electrostatic
BULB - Glass with internal conductive coating
SCREEN - YG/7
PROTOTYPE - M6SJ-303

MARKING

See K1001/4

BASE

BS448/B12A

RATINGS

All limiting values are absolute

			Note
Heater Voltage	(V)	6.3	
Heater Current	(A)	0.5	
Max. Anode 1 and Anode 3 voltage	(kV)	10	A
Max. Anode 2 voltage range for focussing	(V)	±100	
Max. negative Anode 2 voltage	(V)	150	
Max. negative heater-cathode voltage	(V)	150	A
Typical Operating Conditions:			
Anode 1 + 3 voltage	(kV)	8	
Anode 2 voltage	(V)	0	
Grid voltage for cut-off	(V)	-50	

CONNECTIONS

Pin	Electrode
1	Heater, h
2	Grid, g
6	Anode 2, a2
7	External coating
10	No connection
11	Cathode, k
12	Heater, h
S.C.	Anode 1, /Anode 3, a1/3

SIDE CONTACT

BS448/CT8

CAPACITANCES

Cg-all (nom)	(pF)	9.5
Ck-all (nom)	(pF)	6.5

DIMENSIONS

See drawing on page 4

NOTES

A. Absolute Maximum Value

Z.18695.

TESTS

General Test Conditions:

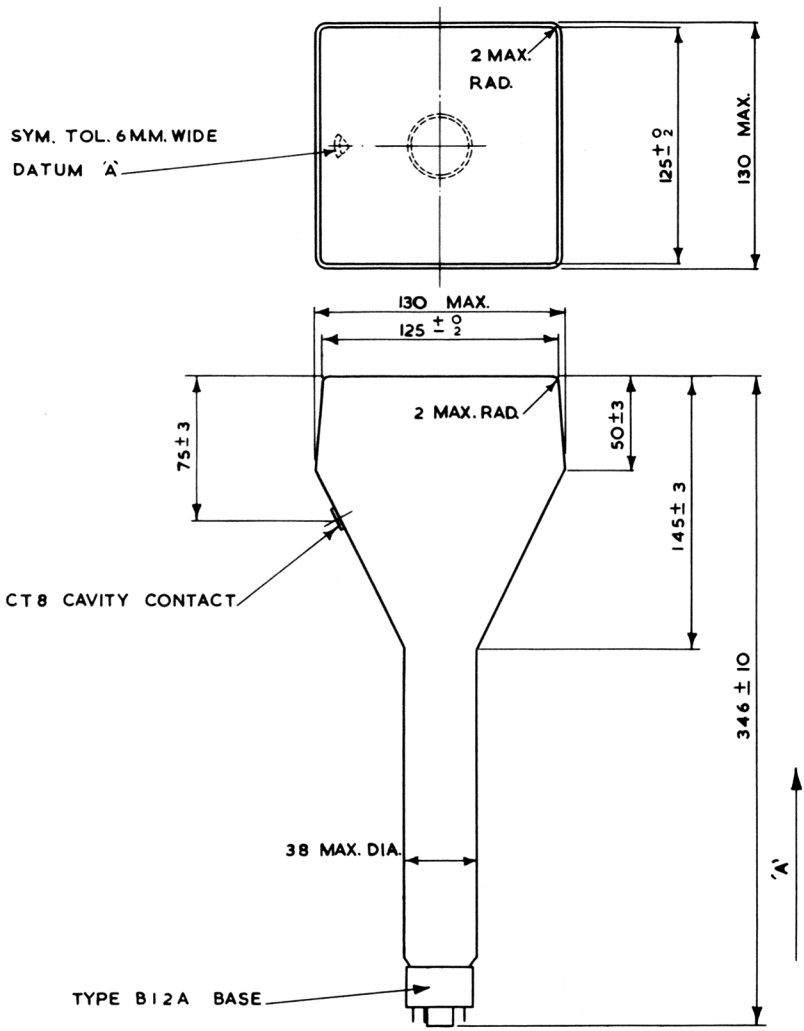
Vh(V)	Va1, Va3 (kV)	Vg(V)	Va(V)	Vhk(V)
6.3	8	Adjust	Adjust	0

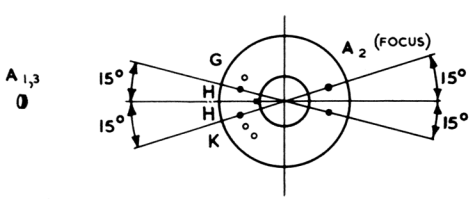
An interlaced 405 line TV raster may be used when required.

K1001	TEST	TEST CONDITIONS	AQL %	Insp. level	Symbol	LIMITS Min.	LIMITS Max.	Units
5A.1	General Inspection	No voltages		100%				
	Dimensions	No voltages, see drawing on page 4		100%				
5A.2	Loose Particles	No voltages		100%				
5A.3.1	Insulation	No voltages		100%				
5A.3.2	Grid Insulation	Vg = -75V		100%	Ig	-	10	/uA
5A.3.3	Heater-cathode leakage current	Vhk = -150V Va1, Va3 = 0		100%	Ihk	-	100	/uA
	Heater current			100%	Ih	0.45	0.55	A
5A.10	Negative grid cut-off voltage V1	Optimum Focus No deflection		100%	Vg	37 record	75 V1	V V
	Grid voltage V2	Ik = 100 /uA Scan applied		100%	Vg	record	V2	V
	Grid Drive	V1 - V2		100%	Vg	15	35	V
5A.7	Focus; line width at Four 90° points	Circular scan diameter = 60mm (nom) Ik = 10 /uA Optimum focus		100%		-	0.35	mm
	Focus voltage	As for Focus		100%	Va2	-100	+100	V
5A.8	Light Intensity	Focussed raster area = 48 sq.cm. Ik = 10 /uA		100%		~~20~~ /15"	-	Foot-Lamberts
5A.12	Useful screen area			100%		108 x 108	-	mm^2
5A.17	Persistence measured as decay time to 1% brightness	Linear raster of convenient size, uniform screen excitation, Ik = 10 /uA		100%		1	5	sec
	Flashover and Spurious Emission	Vg = -100V Va1, Va3 = 10KV Note 1		100%				
5A.2	Screen Blemishes, Stones, Bubbles and Screen Defects.	Scan over useful screen area with defocussed raster of convenient brightness.		100%				
	Size 0.25 to 0.6mm						10	
	Size 0.6 to 1mm						5	
	Size above 1mm						0	

NOTE

1. There shall be no visible fluorescent after a preheating period of two minutes.





BASE CONNECTIONS VIEWED IN DIRECTION OF ARROW 'A' SHOWING LIMIT OF ORIENTATION OF BASE WITH RESPECT TO CAVITY CONTACT.

DIMENSIONS IN M.M.

ELECTRONIC VALVE SPECIFICATIONS

SPECIFICATION MOS/CV2490

ISSUE 1 DATED 31.12.58

AMENDMENT NO.1

Page 2 Clause 5A.8 Light Intensity

In Column headed "LIMITS Min."
amend figure from "20" to "15"

T.V.C. for R.R.E.

August, 1959.

N.71101