VALVE ELECTRONIC CV 5408

Specification: G.P.O./CV 5408/Issue 1

Dated: 20.4.65

To be read in conjunction with K 1001, BS 448 and BS 1409

SECURITY	
Specification	Valve
Unclassified	Unclassified

→ indicates a change

TYPE OF VALVE: Medium Power Travelling Wave Amplifier

CATHODE: Indirectly Heated

ENVELOPE: Glass

PROTOTYPE: N 1013

MARKING

See K 1001/4

Ratings and Characteristics
All limiting values are absolute

			Notes
Max. Heater Voltage	(V)	6·6	
Max. Collector Voltage	(V)	800	
Max. Collector Current	(mA)	4·5	
Max. Helix Voltage	(V)	700	
Max. Helix Current	(μA)	500	
Max. Grid 2 Voltage	(V)	700	
Max. Grid 2 Dissipation	(mW)	100	
Max. Grid 1 Voltage (always negative)	(V)	50	
Max. Grid 1 Dissipation	(mW)	100	
Heater Voltage	(V)	6·3	
Heater Current	(A)	0·36	A
Min. Cathode Heating Time	(Mins)	2	
Frequency Range	(Gc/s)	1·7 to 2·3	
Gain (low level)	(db)	33	
Noise Factor	(db)	20	
Output Power (Saturated)	(mW)	250	
Magnetic Field	(Gauss)	400	

Note. A Heater Starting Current, peak instantaneous value must not exceed 1·5 amps.

Base
1.0.

Connections

Pin	Electrode
1	g^2
2	K
3	h
4	h
5	helix
6	omitted
7	N.C.
8	g^2
Cap	Collector

Dimensions

See drawing page 4

CV 5408

Tests

To be performed in addition to those applicable in K 1001

Test conditions unless otherwise stated						Notes
V_h	V_{g2}	V_{col}	I_{col}	I_{sol}	Frequencies	
6·3V ± 5%	480V	750V	4 mA	1·8A	1·8, 2·0 & 2·25 Gc/s	1

Test Clause	Test conditions			Test & Units		Limits		Notes
	Freq. Gc/s	V_{Hel}	V_{g1}			Min	Max	
a	-	-	-	Heater Current	A	0·33	0·39	2
b	-	650	Adj.	Focusing and Centering Grid 1 Voltage Max. helix current on rotation Min. helix current on rotation	 V µA µA	 0	 -30 250 100	3
c	1·8	665	Adj.	Gain and Power (1) Grid 1 Voltage Helix Current Gain at 5 mW output Gain at 50 mW output Power at saturation	 V µA db db mW	 0 29 27 150	 -30 100	4, 5
d	2·0	650	Adj.	Gain and Power (2) Grid 1 Voltage Helix Current Gain at 5 mW output Gain at 50 mW output Power at saturation	 V µA db db mW	 0 30 28 175	 -30 100	4, 5
e	2·25	635	Adj.	Gain and Power (3) Grid 1 Voltage Helix Current Gain at 5 mW output Gain at 50 mW output Power at saturation	 V µA db db mW	 0 30 28 150	 -30 100	4, 5

Notes.

1. These tests to be performed in a circuit approved by the Type Approval Authorities. A pre-heating time of three minutes is required before any test is made.

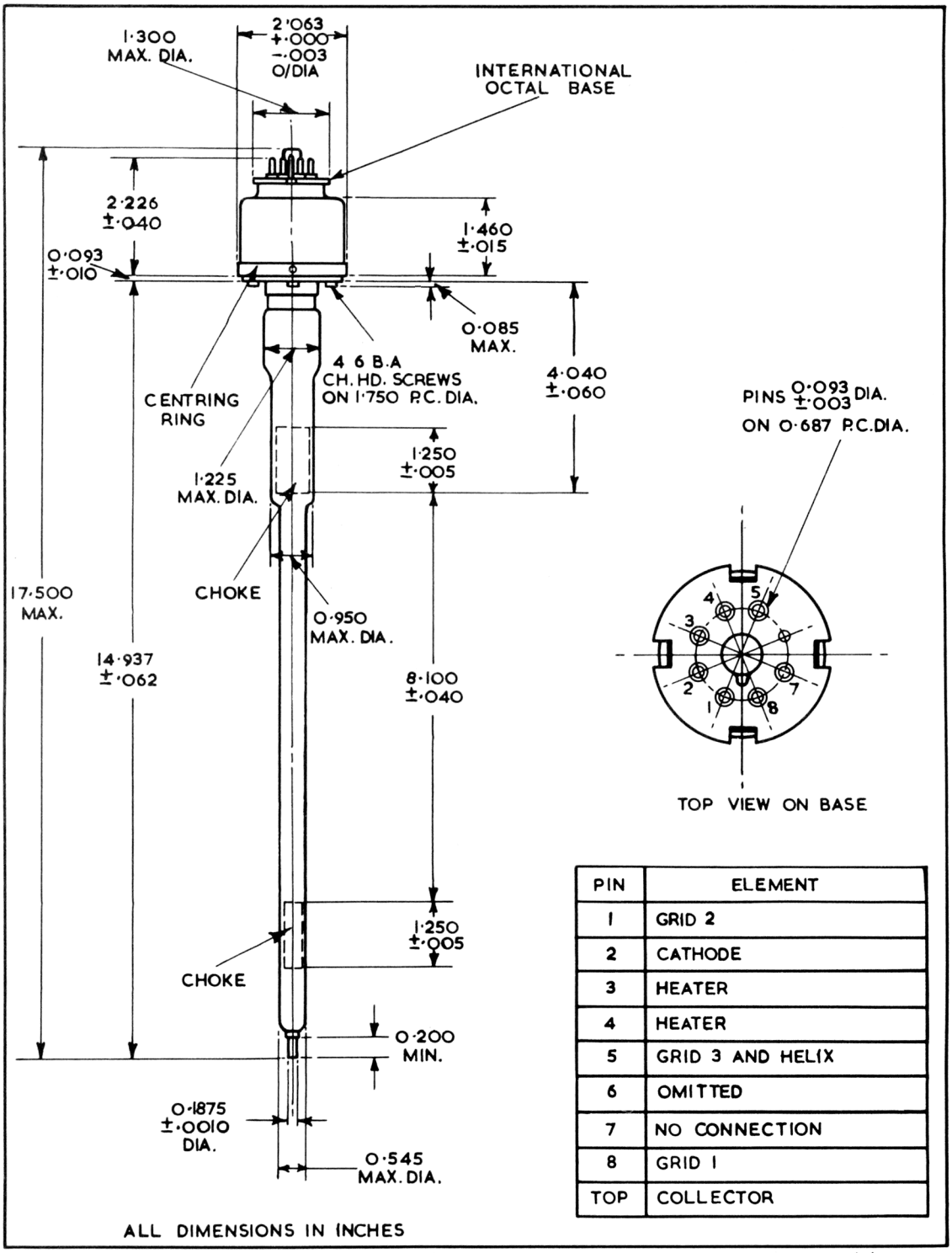
2. This test shall be performed with only the heater voltage applied.

3. The grid 1 voltage to be set initially at about -50 volts and then adjusted until the collector current attains its operating value. The tube is then rotated through 360^{0} to obtain the maximum and minimum values of helix current.

4. The tube to be set up as in Note 3 and then rotated to a position of minimum helix current.

5. The matching adjustments on the mount should be set for maximum power output.

CV 5408



PIN	ELEMENT
1	GRID 2
2	CATHODE
3	HEATER
4	HEATER
5	GRID 3 AND HELIX
6	OMITTED
7	NO CONNECTION
8	GRID 1
TOP	COLLECTOR