

VALVE ELECTRONIC CV 447

GENERAL POST OFFICE: E-IN-C (S)

Specification: GPO/CV447/Issue 3	<u>SECURITY</u>	
Dated: February, 1959	<u>Specification</u>	<u>Valve</u>
To be read in conjunction with K 1001	Unclassified	Unclassified

→ indicates a change

<u>TYPE OF VALVE:</u> Hot Cathode Mercury Vapour Thyatron				<u>MARKING</u>	
<u>CATHODE:</u> Directly Heated.				See K 1001/4	
<u>ENVELOPE:</u> Glass.					
→ <u>PROTOTYPE</u> 3V/531E					
<u>RATING</u>			Note	<u>BASE</u>	
				See drawing, page 3.	
Heater Volts	(V)	5.0	A	<u>CONNECTIONS</u>	
Nominal Current	(A)	20.0	A	Pin	Electrode
Max. Peak Inverse Voltage	(kV)	20	A	1	Filament
Max. Peak Anode Current	(A)	10.0	A	2	Grid
Max. Average Anode Current	(A)	2.5	A	3	Filament
				TC	Anode
Condensed Mercury temperature range with forced ventilation.		15°C to 65°C	A	<u>TOP CAP</u>	
				See drawing, Page 3.	
				<u>DIMENSIONS</u>	
				See drawing, Page 3.	
				<u>PACKAGING</u>	
				See K 1005	
<u>NOTE</u>					
A. These ratings apply to operation with a choke input filter and a supply frequency of 50 c.p.s.					

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TESTS

To be performed in addition to those applicable in K1001

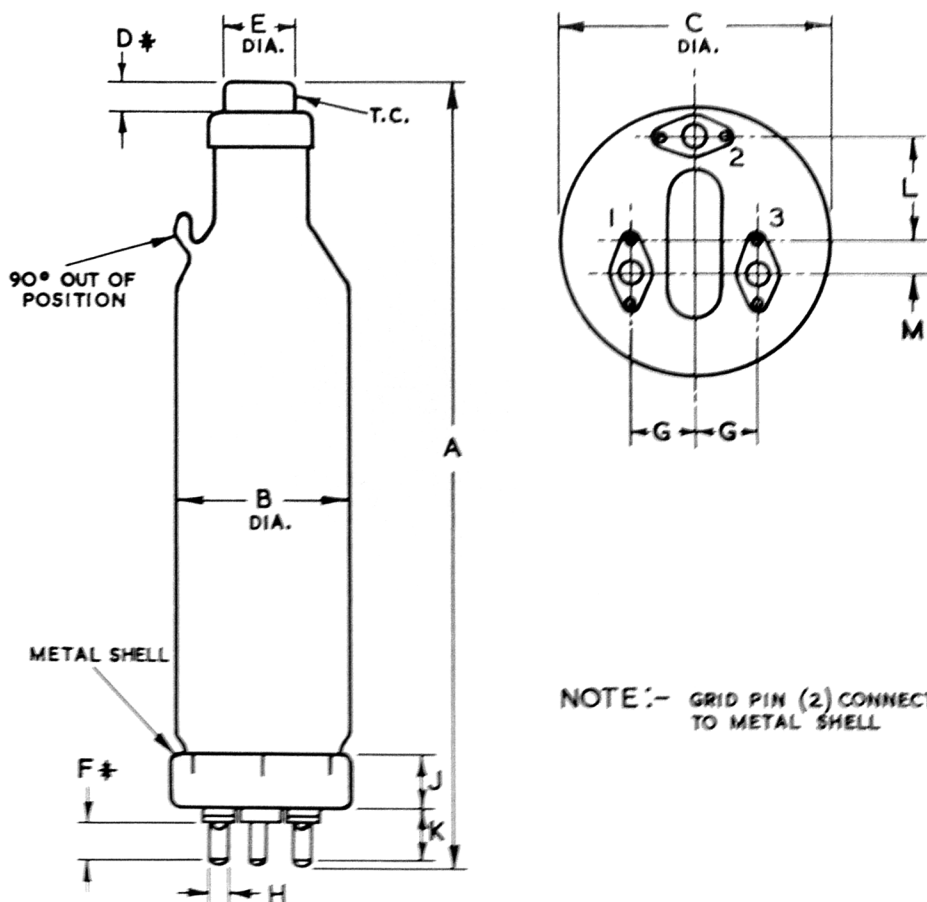
	Test Conditions				Test	Limits		No. Tested	Note
	Vf (V)	Vg1 (V)	Va (kV)	Ia (A)		Min.	Max.		
a	5.0	-	-	-	If (A)	17.0	23.0	100%	1
b	5.0	g1 Connected to Anode through Rg1 500 ohms	25 volts DC in series with a Resis- tance R	5.0	Volt drop (V)	-	16.0	100%	
c	5.0	-20V in series with 2500 ohms	<u>P.I.V.</u> 0	0	Operational Test. Two Valves in FW Rectifier Circuit.			100%	2
	5.0	-20V in series with 2500 ohms.	20	0	Raise Va slowly until PIV is 20 kV. Maintain for 2 mins.	The Valve shall not strike and no arc back or flashover shall occur during the 2 mins holding period.			
	5.0	+20V in series with 2500 ohms.	20	1.25	Raise Va slowly until PIV is 20 kV. Maintain for 3 mins.	No arc back of flash- over shall occur dur- ing the 3 minutes holding period.			

NOTES

- Each valve shall be preheated at Vf 5.0 volts for not less than 15 mins. before applying this or any subsequent test. If the filament supply is interrupted between tests a similar preheating period of 15 mins. shall precede any subsequent test.
- For this test both valves shall be mounted in a holder so arranged that a supply of air at a pressure of not less than $1\frac{1}{2}$ inches of water and a temperature of $38^{\circ}\text{C} \pm 2^{\circ}\text{C}$ is directed at the base of the valve.

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DIMENSIONAL DIAGRAM



DIM.	MILLIMETRES	DIM.	MILLIMETRES
A	435 MAX.	G	22.00 ± 0.25
B	95.3 MAX.	H	9.53 ± 0.05
C	96.04 ± 0.4	J	25.4 ± 0.4
D	10.0 MIN.	K	28.57 ± 0.51
E	36.00 ± 0.25	L	36.00 ± 0.25
F	23.80 ± 0.51	M	10.00 ± 0.25

DENOTES :- CONTACT LENGTH