

Specification MOA/CV4117		<u>SECURITY</u>	
Issue 1 dated June 1962		<u>Specification</u>	<u>Valve</u>
To be read in conjunction with K1001, BS448, & BS1409		Unclassified	Unclassified
indicates a change			
TYPE OF VALVE - Reliable High Voltage, Half Wave Rectifier with flexible leads.		<u>MARKING</u>	
CATHODE	- Indirectly heated	See K1001/4	
ENVELOPE	- Glass	<u>BASE</u>	
PROTOTYPE	- VX3542	None	
<u>RATING</u>		<u>CONNECTIONS</u>	
All limiting values absolute		<u>Lead</u>	<u>Electrode</u>
Filament Voltage	(V) 6.3	Top Lead	Anode
Filament Current	(A) 0.225	Bottom leads	Heaters
Max. Peak Inverse Voltage	(kV) 17	<u>DIMENSIONS</u>	
Max. Peak Anode Current	(mA) 5	See drawing on Page 4	
Max. Shock (short duration)	(g) 500	Dimension (mm)	Min. Max.
Max. Acceleration (Continuous operation)	(g) 5	Overall Length	- 53
<u>TYPICAL OPERATING DATA</u>		Diameter	- 21
<u>Sinusoidal Input</u>		Lead length	30
r.m.s. Input Voltage	(kV) 5	<u>MOUNTING POSITION</u>	
Rectified Voltage	(kV) 6.5	Any	
Rectified Current	(μ A) 200		
Reservoir Capacitor (2kc/s wkg)	μ F 0.001		
<u>CAPACITANCE (pF)</u>			
C _{a-k} (nom)	1.6		
<u>NOTES</u>			
A. The valve may be operated up to a frequency of 2500 c/s.			
B. Joint Services Catalogue Number 5960-99-037-3183			

TESTS

CV4117

TEST CONDITIONS - unless otherwise specified								
V _h = 6.3v V _a = 100v								
K1001	TEST	TEST CONDITIONS	AQL %	Insp. Level	Sym-bol	Limits		Units
						Min.	Max.	
7.1	Glass Strain	No voltages	6.5	I				
	<u>GROUP A</u> Voltage Breakdown	Notes 1 and 2		100%				
	<u>GROUP B</u> Heater Current Anode Current (1) Anode Current (2)	V _a = 0 V _h = 5.7v	1.5 1.5 1.5	I I I	I _h I _a I _a	200 3.8 3.4	250 6.2 mA	mA mA mA
5.12 5.9	<u>GROUP C</u> Lead fragility Capacitance	No voltages Measured on a 1 Mo/s bridge	6.5 6.5	IA IC	 C _{a-k}	 2.0	 pf	
11.3	<u>GROUP D</u> Fatigue	Combined AQL V _h = 6.3v Switched 1 min on; 3 mins. off; V _a = 0 Frequency = 170c/s Min peak accel = 5g Duration: 30 + 30 + 39 HRS	6.5					
	<u>Post Fatigue Tests</u> Voltage Breakdown Heater Current Anode Current	Notes 1 and 2	2.5 2.5 2.5		I _h I _a	200 3.4	250 mA	mA mA
11.4	Shock	No voltages Hammer angle = 30°		IA				
11.4	<u>Post Shock Tests</u> Voltage breakdown Heater Current Anode Current (1)	Notes 1 and 2	2.5 2.5 2.5		I _h I _a	200 2.5	250 mA	mA mA

K1001	TEST	TEST CONDITIONS	AQL %	Insp. Level	Sym-bol	Limits		Units
						Min.	Max.	
	<u>GROUP E</u>							
A/VI/5	Life							
A/VI/5.1	<u>Stability Life Test</u> Change in Anode Current	Note 1	1.0	I	I _a		10	%
A/VI/5.3	<u>Intermittent Life Test</u> End Point 500 hrs.							
A/VI/5.6	Inoperatives Heater Current Anode Current (1)		2.5 2.5 2.5		I _h I _a	200 2.5	250	mA mA
	<u>GROUP F</u>							
A/IX/2.5	Re-test after 28 days holding period			100%				
A/VI/5.6	Inoperatives		0.5					

NOTES

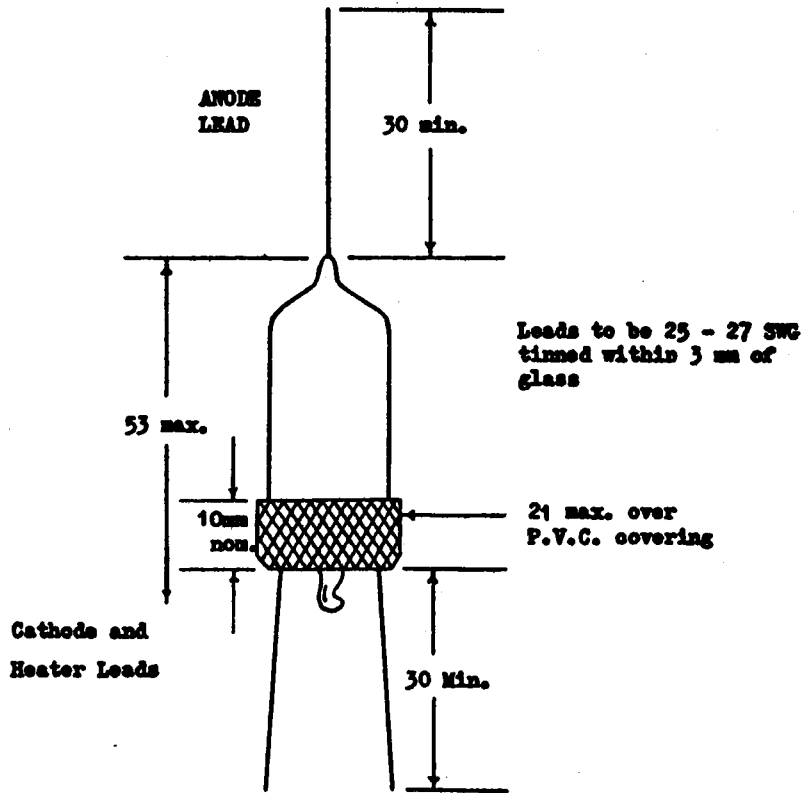
1. Valves shall be operated in a half-wave rectifier circuit under the following conditions:-

f input	1600 c.p.s.	approximately
I _{DC} out	200 μA	minimum
I _a pk	5 mA	nominal
P.I.V.	17 KV	nominal
C _{res}	0.002 μF	nominal

2. Valves shall be run for at least one minute under the conditions in Note 1.

Valves will be rejected for persistent flashing or any signs of softness.

OUTLINE DRAWING



Dimensions in m.m.