MINISTRY OF AVIATION - DLRD/RRE

VALVE ELECTRONIC SEMICONDUCTOR DEVICE

CV7357

Specification MOA/CV7357 Issue 1 dated 30.3.62 To be used in conjunction with K1007	SECURITY Specification: Unclassified Valve: Unclassified

indicates a change

TYPE OF DEVICE - Silicon High Voltage Rectifier
CONSTRUCTION - Moulded (Note A)
PROTOTYPE - HTS10-B

MARKING

See K1007/4.

CV number, Factory Code, Date Code and Polarity.

RATINGS

Not for Inspection purposes
All limiting values are absolute

			Note
Max.Peak Inverse Voltage -40°C to +100°C	(uV)	10	B
Max.Peak Inverse Voltage of either half of unit.	(kV)	5	A & B
Max.Mean Rectified Current	(A)	0.5	C
Min Storage Temperature	(°C)	-40	
Max.Storage Temperature	(°C)	+100	
Max.Continuous Vibration	(g)	10	
Max.Shock	(g)	500	

CHARACTERISTICS

Max.Reverse Leakage Current at max P.I.V., at 25°C	(uA)	20
at 100°C	(uA)	75

DIMENSIONS

See drawing Page 6

MOUNTING POSITION

Any

PACKAGING

See K1007/14

NOTES

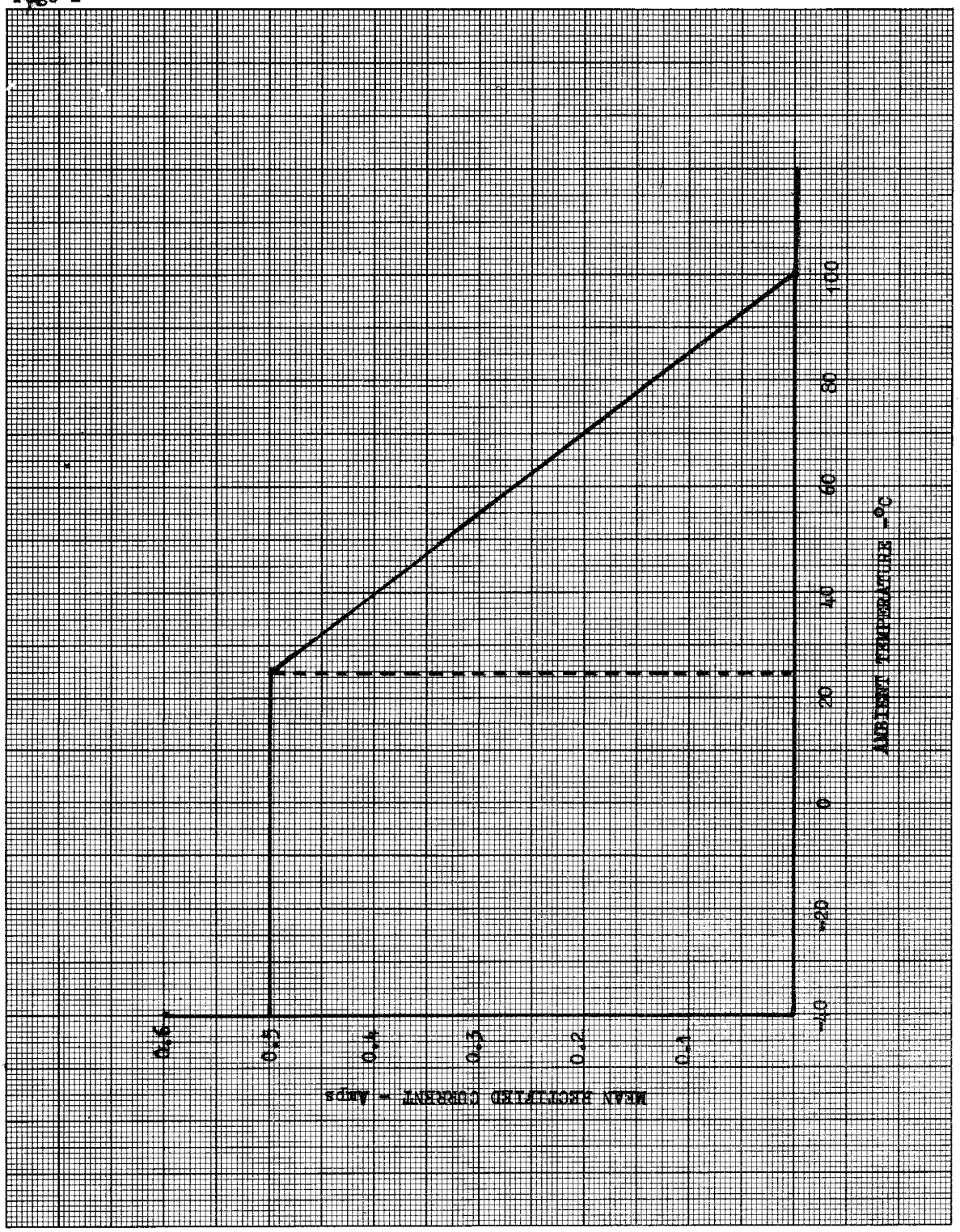
A. This assembly contains a number of individual silicon rectifiers connected in series with voltage sharing and hole storage capacitors connected in parallel across pairs of rectifiers. The device has a centre top terminal to allow for two devices to be interconnected to form a full wave bridge rectifier to operate at a maximum PIV of 5kV per arm. All the individual rectifiers used in the assembly must previously have passed the requirements of the CV7026 to CV7030 series or CV7018 to CV7020 series specification.

B. This rating refers to all waveforms including very short transients.

C. See derating curve Page 2.

D. JOINT SERVICE CATALOGUE NUMBER: 5960-99-037-2993

E. WARNING See Note Page 5.


AMBIENT TEMPERATURE - °C
100
80
60
40
20
0
-20
-40
MEAN RECTIFIED CURRENT - Amps
0.5
0.4
0.3
0.2
0.1
0

	TESTS (Note 1) To be performed in addition to those in K1007							
K1007 Ref.	Test	Test Conditions	AQL %	Insp. Level	Sym-bol	LIMITS		Units
						Min.	Max.	
	GROUP A omitted							
	GROUP B							
5C.4	Forward Voltage Drop (1)	I_F = 0.5 A d.c. T_{amb} = 15°C - 30°C	0.65	II	V_F	-	24	V
5C.4	Forward Voltage Drop (2)	I_F = 0.5 A d.c. T_{amb} = 15°C - 30°C	0.65	II	V_F	-	12	V
5C.2	Reverse Leakage Current (1)	Note 2 T_{amb} = 15°C - 30°C V_R = 10kV	0.65	II	I_R	-	20	µA
	GROUP C							
5C.2	Reverse Leakage Current (2)	T_{amb} = 100°C V_R = 10.0kV	2.5	I	I_R	-	75	µA
	GROUP D							
	Capacitance	V_R = -10V f = 1 Kc/s V input = 1V. RMS(max)	6.5	I	C_{ac}	275	550	pF

TESTS (Contd)

K1007 Ref.	Test	Test Conditions	AQL %	Insp. Level	Symbol	LIMITS Min.	LIMITS Max.	Units
	GROUP E							
10.2	Temperature Cycling	No Voltages Three cycles -40°C to +100°C Note 3		IC				
10.3	Climatic	Notes 3 and 4		IC				
	Post Temperature Cycling and Climatic Tests							
8	Inoperatives		6.5					
5C.4	Forward Voltage Drop (1)	I_F = 0.5 A d.c. T_{amb} = 15°C - 30°C	6.5		V_F	-	26	V
5C.2	Reverse Leakage Current(1)	T_{amb} = 15°C - 30°C V_R = 10.0 kV	6.5		I_R	-	24	µA
	GROUPS F & G omitted							

NOTES

1. All the individual rectifiers used in this assembly must previously have passed the requirements of the CV7026 to CV7030 series of specification, Groups F and G are therefore not repeated.

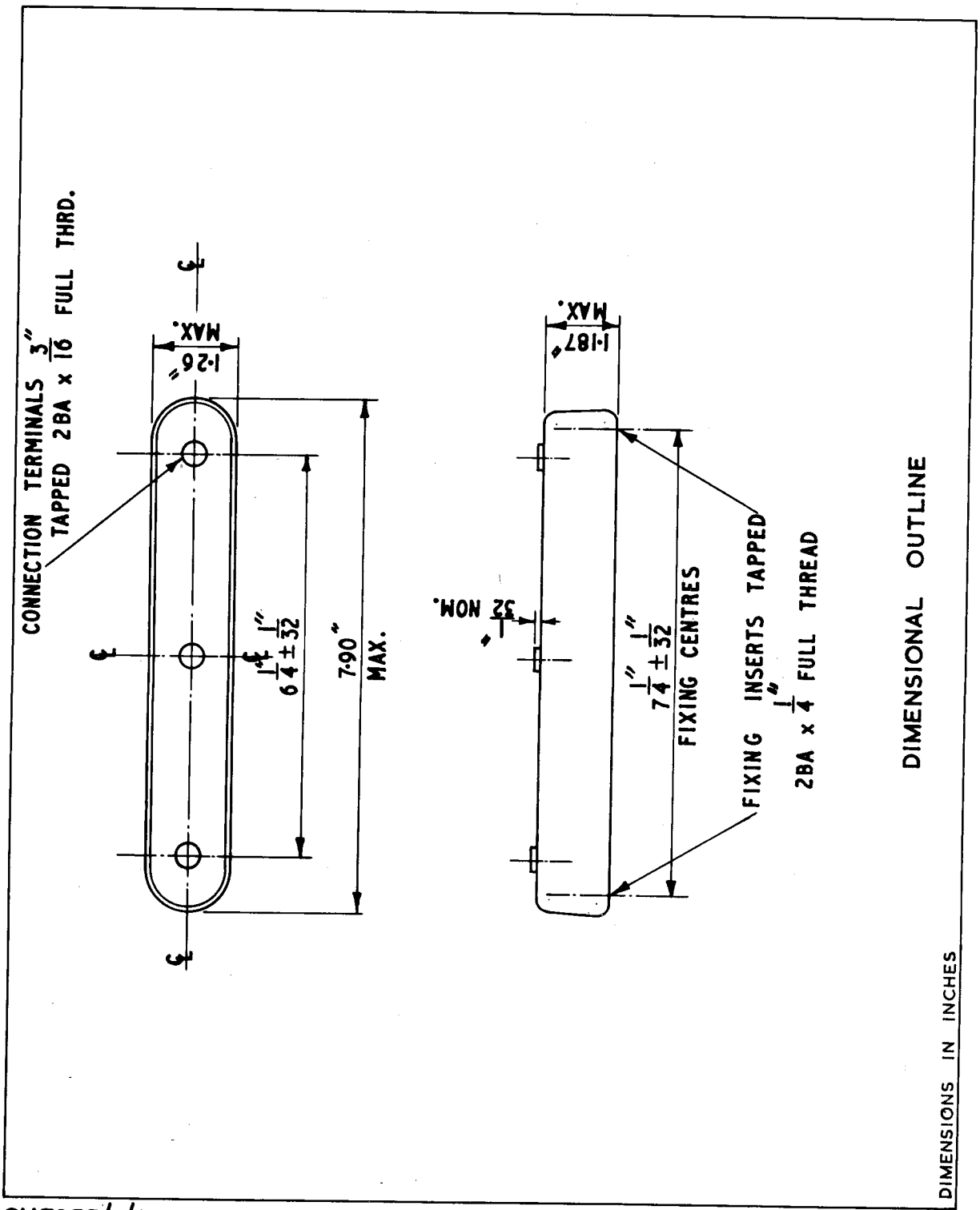
2. This test should be made in turn on each half of the rectifier.

3. The sample shall initially be subjected to Temperature Cycling followed by the Climatic Test and it shall then pass the post temperature cycling and climatic tests.

4. For this test Method C (K1007/10.3.3) shall be used.
The samples shall be subjected to a minimum of 6 cycles.

5. WARNING

Since this rectifier contains capacitors as described under Note A above the usual precautions against shock must be taken if the device is handled shortly after it has been subjected to high voltage. The condensers will discharge internally through the rectifiers within a few minutes of the removal of the high voltage.


CONNECTION TERMINALS 3/16" TAPPED 2BA x 16 FULL THRD.
1·26" MAX.
1 1/4 ± 1/32"
6 4
7·90" MAX.
1·187" MAX.
1/32" NOM.
1 1/4 ± 1/32" FIXING CENTRES
FIXING INSERTS TAPPED 2BA x 1/4" FULL THREAD
DIMENSIONAL OUTLINE
DIMENSIONS IN INCHES