



SPECIFICATIONS

MESSRS.

DEVICE TYPE NAME

SHV-04

1. Scope

The Present specifications shall only apply to Sanken High Voltage Diode type SHV-04.

2. Construction and Appearance

- 2.1 Construction : Resin Molded
 2.2 Outline Drawing : Refer to Fig.6
 2.3 Marking : Refer to Fig.6

3. Absolute Maximum Ratings

No.	Description	Symbol	Ratings	Unit	Conditions
1	Transient Peak Reverse Voltage	VRSM	—	kV	1 min.
2	Peak Reverse Voltage	VRM	4	kV	
3	Average Forward Current	IO	2	mA	Flyback pulse rectification Average Value.
4	Forward Surge Current	IFSM	0.5	A	50Hz Sine Half-Wave, One Shot, Peak Value , Ta=25°C
5	Storage Temperature	Tstg	-40~+120	°C	
6	Operating Case Temperature	TC	100	°C	

4. Electrical Characteristics(Ta=25°C)

No.	Description	Symbol	Ratings	Unit	Conditions
1	Forward Voltage Drop	VF	16 max.	V	IF=10 mA
2	Reverse Leakage Current (1)	I R(1)	1 max.	μ A	VR=4 kV
3	Reverse Leakage Current (2)	I R(2)	2 max.	μ A	VR=4 kV, Ta=100°C
4	Reverse Recovery Time	trr	0.18 max.	μ S	If=Ir=10mA, 90% value See Fig.2

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ESA-2004E

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5. Performance for Environmental, Mechanical and Electrical Test

5.1 Test Items and Conditions

No.	Description	Ratings	Test Conditions
1	High Temperature Storage Test	500hours	+120°C in air
2	Low Temperature Storage Test	500hours	-40°C in air
3	Heat Cycle Test	5 cycles	-40~120°C ,1H/1H, gas phase
4	High Humidity Storage Test	500hours	60°C,90~95%
5	Operational Life Test	500hours	See Fig.3
6	Soldering Heat Test	5 sec	Lead wire shall be immersed 4mm away from the body of the diode,in 360°C solder
7	Solderability Test	90%	Lead wire shall be immersed 4mm away from the body of the diode, in 250°C solder 3sec
8	Drop Test	3 times	Height 1m onto maple trr board or iron plate
9	Lead Pull Test	10 sec	Weight 1kg
10	Lead Bend Test	1 time	See Fig.4
11	Lead Twist Test	1 time	See Fig.5

5.2 Judgement Standard for above 5.1 Test Items

- * To satisfy the characteristics of Item 4 in all test Items
- * Lead wire shall not break during test in test Item No.8~11

6. Derating

*See Fig.1

7. Outline Drawing and Marking

*See Fig.6

8. Directions

A package of the present diode is intentionally small on the premise the diode shall be remolded when employed. For this reason , the use of the diode is not recommended unless it is remolded.

Remolding is required to insure insulation voltage at the surface, heat radiation and to protect penetration of humidity.

Epoxy resin to be used for remolding shall be superior in close adhesion to the diode surface, thermal condition , protection of penetration of humidity and shall be low-distortion when expanding and contracting.

Fig.1 Derating

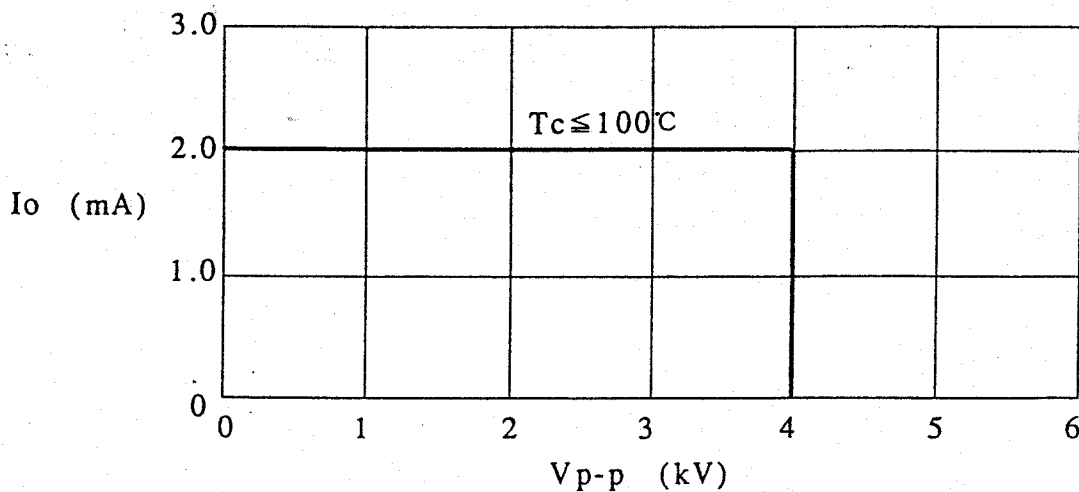


Fig.2 Reverse Recovery Time Test Circuit and Condition

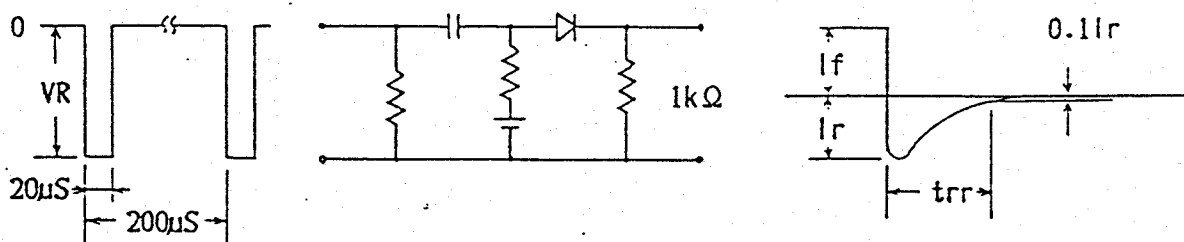
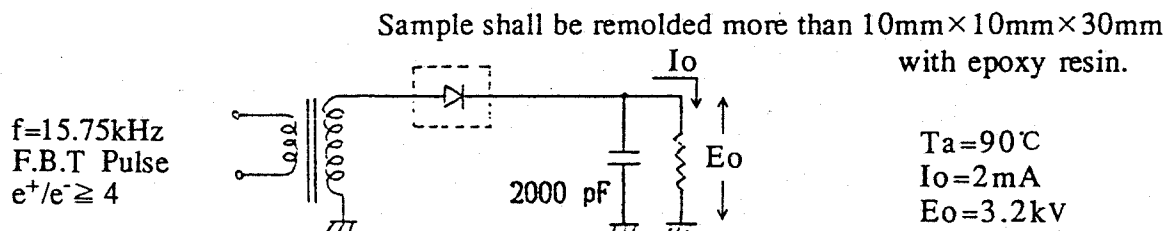


Fig.3 Operational Life Test Circuit and Condition



Sample shall be remolded more than $10\text{mm} \times 10\text{mm} \times 30\text{mm}$ with epoxy resin.

Fig.4 Lead Bend Test

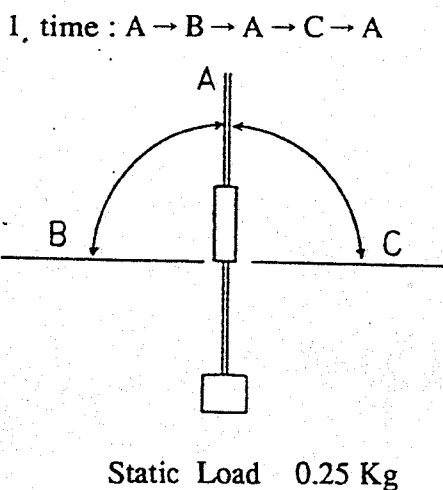


Fig.5 Lead Twist Test

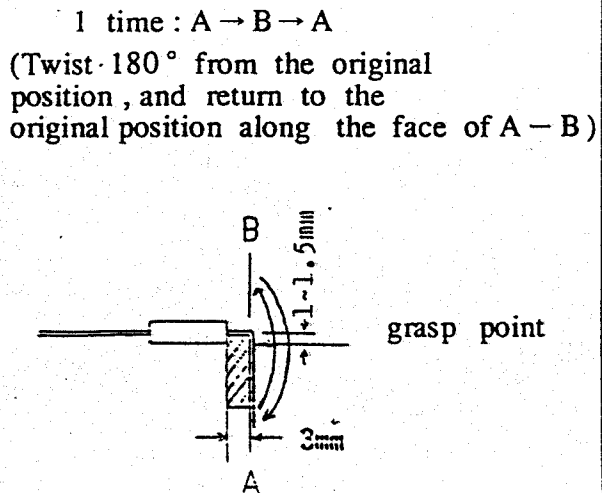
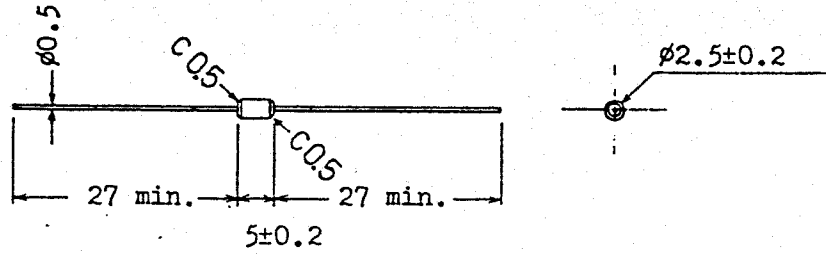


Fig.6 Outline Drawing and Marking

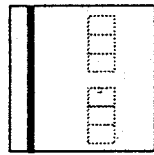
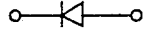
Unit : mm

Dimensions



This dimension does not include the tolerance of burr.

Marking (Red)



Lot No. Year Last Figure : nos.,
 Month 1~9 : nos.,
 10~12 : O,N,D
 Date 1~10 : A
 11~20 : B
 21~31 : C

Type Mark and cathode band