SEMITEC® Ishizuka Electronics Corporation

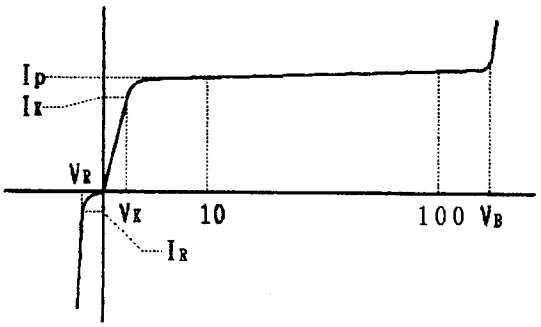
The specifications of the CRD

This specification defines electrical requirements, ratings, dimensions, and reliability of the CRD

1. TYPE NO. ..... E－152

2. ELECTRICAL REQUIREMENTS:

2－1	Pinch－off current	Ip＝1.28 ～ 1.72 mA
		Measuring condition : 10V 0.2sec. at 25℃
2－2	Knee voltage	Vk≦ 2.0 V at 0.8Ip
2－3	Dynamic impedance	Z_T ≒ 0.40 MΩ
2－4	Current regulating ratio	I_{100} /Ip≦ 1.1
2－5	Temperature coefficient	-0.13 ～ -0.40 %/℃



Note:
1) I_R:Maximum reverse current
2) Ik:knee current 0.8Ip
3) Ip:pinch－off current
4) V_B:Breakdown Voltage

3. MAXIMUM RATINGS:

3－1	Rating voltage	Vm: 100 V
3－2	Rating power	Pm: 300 mW
3－3	Thermal resistance	Rt: 300 ℃/W
3－4	Maximum reverse current	Ir: 50 mA
3－5	Rating temperature	Tm: -30℃ ～ 150℃

Date : Feb. 18, 2002		Spec. NO.: S02-0029
Approved by: 慈道	Checked by: 豊田	Drawn by: SATO, M.

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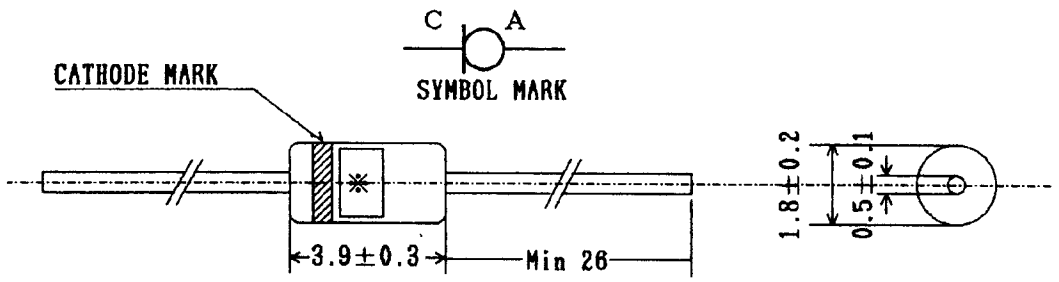
4. DIMENSIONS(mm):



※:TYPE NO, DATE, LOT NO.

5. RELIABILITY

5-1. Dry Heat

After test sample was exposed in the atmosphere of 150±5℃ for 1 000±12 hours, the change ratio of the pinch off current should be within ±5% of the initial value.

5-2. Dump Heat

After test sample was exposed in the atmosphere of 95%RH, 70 ℃, for 1 000±12 hours, the change ratio of the pinch off current should be within ±5% of the initial value.

5-3. Load test

After test sample was applied 300mW in air at 25℃ for 1 000±12 hours, the change ratio of the pinch off current should be within ±5% of the initial value.

5-4. Change of temperature

After test sample was repeated 5 times cycle in heat cycles as follows, the change ratio of the pinch off current should be within ±5% of the initial value.

-25℃(30 min.)⇨ room temp(15 min.)⇨ 120℃(30 min.)⇨ room temp(15 minutes)

6. MECHANICAL CHARACTERISTICS

6-1. Robustness of terminations

After the lead wire of fixed test sample was given 5N static weight pull for 30 seconds in the direction of lead axis, characteristics and appearances should be no conspicuous change

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6-2. Resistance to Soldering heat

After the lead wire of test sample was one time dipped at the level of 5±1mm below glass area in solder bath at 260℃±10℃ for 3±0.5 seconds, the change ratio of the pinch off current should be within ±5% of the initial value.

6-3. Solderability

The surface of the lead wire should be soldered more than 90% of all surface after dipped in solder bath (Pb:Sn=4:6) at 230℃±5℃ for 3±0.5 seconds.

7. INSPECTION STANDARD

MIL-STD-105D

TEST ITEM	AQL	LEVEL	REMARK
Electrical requirements A	AQL 1.0%	I	Ip, Vk, I_{100}/Ip
Electrical requirements B	AQL 2.5%	I	Others
Appearances	AQL 2.5%	I	
Dimensions	AQL 2.5%	I	

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