

To all our customers

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Renesas Technology Corp.
Customer Support Dept.
April 1, 2003

Cautions

Keep safety first in your circuit designs!

1. Renesas Technology Corporation puts the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage.

Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of nonflammable material or (iii) prevention against any malfunction or mishap.

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HSK4148

Silicon Epitaxial Planar Diode for Various Detector,
Modulator, Demodulator

RENESAS

ADE-208-1503 (Z)

Rev.0
Feb. 2002

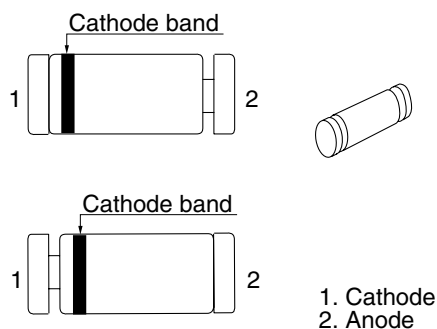
Features

- Low capacitance. ($C = 4.0 \text{ pF max}$)
- Short reverse recovery time. ($t_r = 4.0 \text{ ns max}$)
- LLD package is suitable for high density surface mounting and high speed assembly.

Ordering Information

Type No.	Cathode band	Package Code
HSK4148	Light Blue	LLD

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	V_{RM}	100	V
Reverse voltage	V_R	75	V
Peak forward current	I_{FM}	450	mA
Non-Repetitive peak forward surge current	I_{FSM}^*	1	A
Average forward current	I_O	150	mA
Power dissipation	Pd	500	mW
Junction temperature	Tj	200	°C
Storage temperature	Tstg	-65 to +200	°C

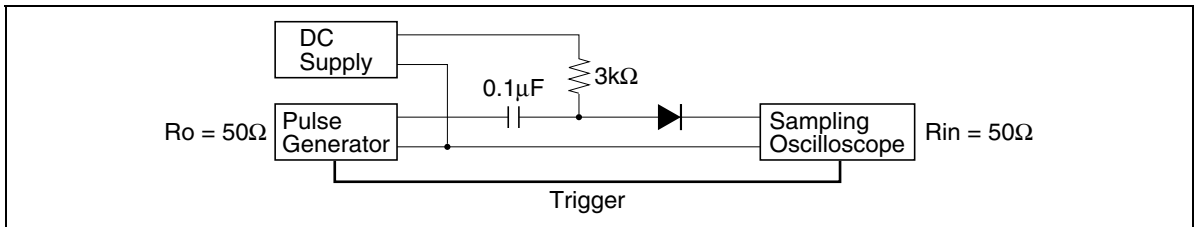
Note: Within 1s forward surge current.

Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	V_F	—	—	1.0	V	$I_F = 10 \text{ mA}$
Reverse current	I_R	—	—	25	nA	$V_R = 20 \text{ V}$
Capacitance	C	—	—	4.0	pF	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$
Reverse recovery time	t_{rr}^*	—	—	4.0	ns	$I_F = 10 \text{ mA}, V_R = 6 \text{ V}, I_{rr} = 1 \text{ mA}, R_L = 100 \Omega$

Note: Reverse recovery time test circuit



Main Characteristic

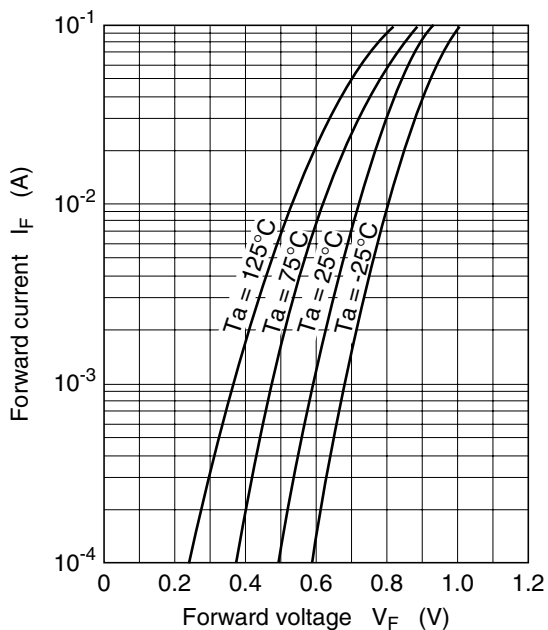


Fig.1 Forward current vs. Forward voltage

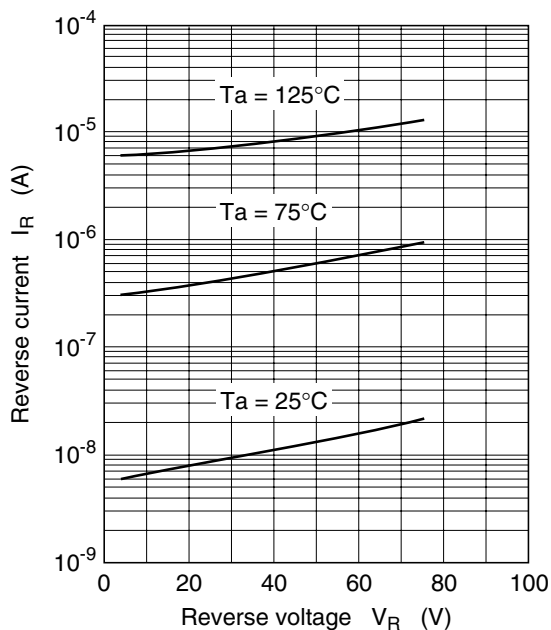


Fig.2 Reverse current vs. Reverse voltage

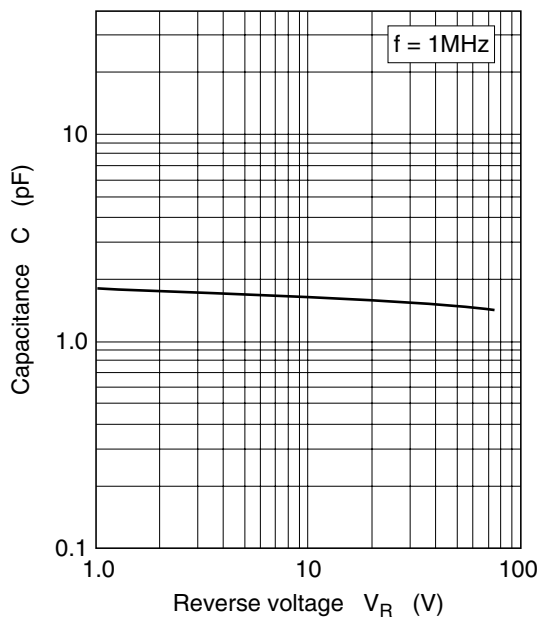
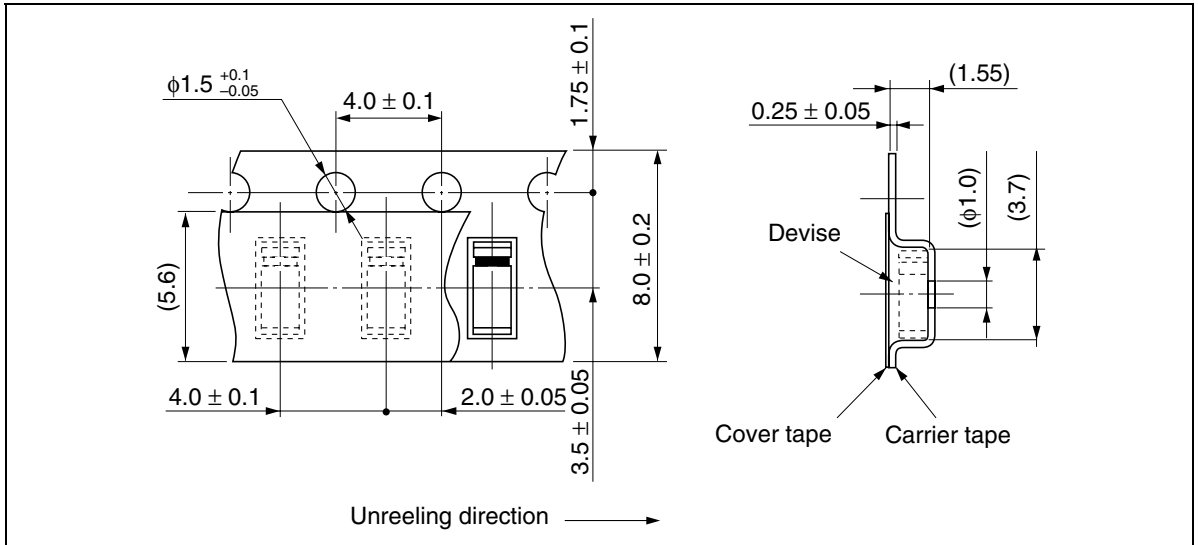


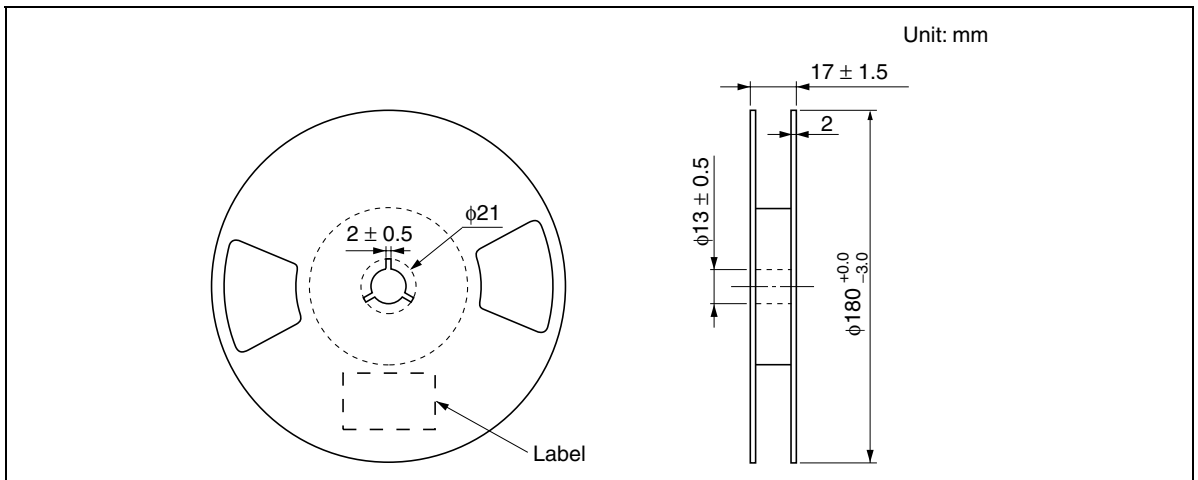
Fig.3 Capacitance vs. Reverse voltage

LLD Taping (TR TYPE)

Unit: mm, (): reference only

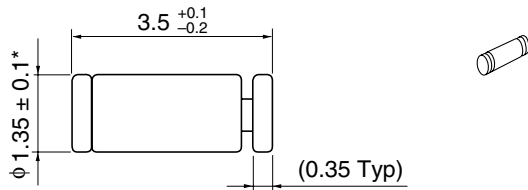


Taping reel dimension



Package Dimensions

As of July, 2001
Unit: mm



* HSK122: $\phi 1.4 \pm 0.1$ type

Hitachi Code	LLD
JEDEC	—
JEITA	—
Mass (reference value)	0.027 g

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