

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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# HSL278

Silicon Schottky Barrier Diode

**RENESAS**

ADE-208-1564 (Z)

Rev.0  
Jan. 2003

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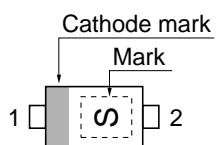
## Features

- Low forward voltage, Low capacitance.
- Extremely small Flat Package (EFP) is suitable for surface mount design.

## Ordering Information

Type No.	Laser Mark	Package Code
HSL278	S	EFP

## Pin Arrangement



1. Cathode
2. Anode

## Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Repetitive peak reverse voltage	$V_{RRM}$	30	V
Reverse voltage	$V_R$	30	V
Non-Repetitive peak forward surge current	$I_{FSM}^*$	200	mA
Peak forward current	$I_{FM}$	150	mA
Average rectified current	$I_O$	30	mA
Junction temperature	Tj	125	°C
Storage temperature	Tstg	-55 to +125	°C

Note: 10 ms sine wave 1 pulse

## Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	$V_{F1}$	—	—	0.30	V	$I_F = 1$ mA
	$V_{F2}$	—	—	0.95		$I_F = 30$ mA
Reverse current	$I_R$	—	—	700	nA	$V_R = 10$ V
Capacitance	C	—	—	1.50	pF	$V_R = 1$ V, $f = 1$ MHz
ESD-Capability *1	—	100	—	—	V	C = 200 pF, $R_L = 0$ Ω, Both forward and reverse direction 1 pulse.

Notes: 1. Failure criterion ;  $I_R \geq 1.4$  μA at  $V_R = 10$  V

2. Please do not use the soldering iron due to avoid high stress to the EFP package.

3. The material of lead is exposed for cutting plane. Therefore, soldering nature of lead tip part is considered as unquestioned. Please kindly consider soldering nature.

Main Characteristic

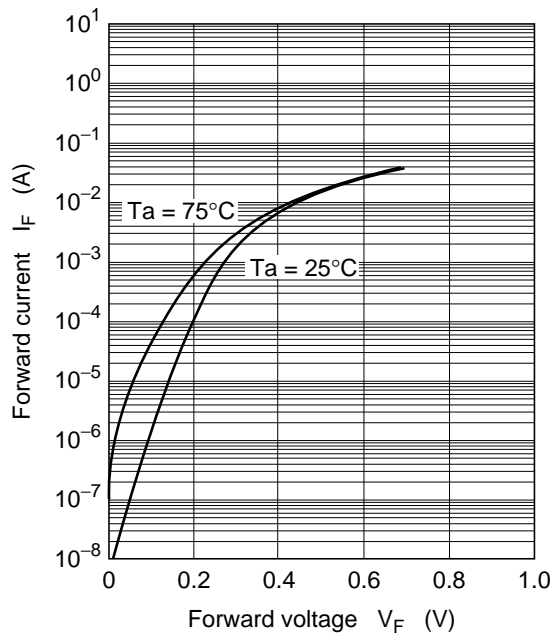


Fig.1 Forward current vs. Forward voltage

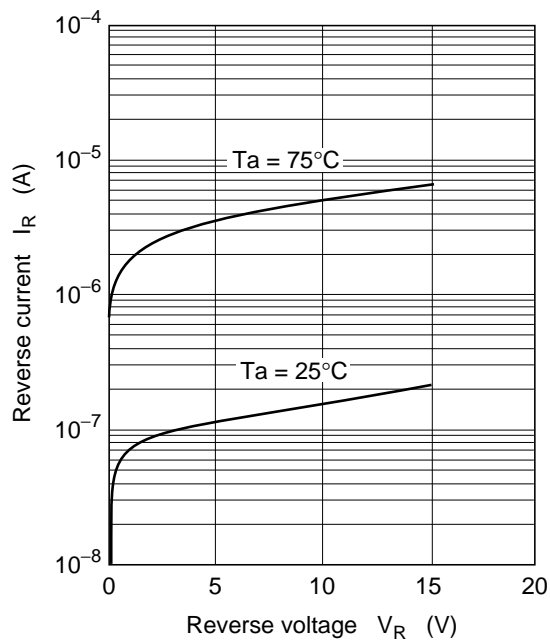


Fig.2 Reverse current vs. Reverse voltage

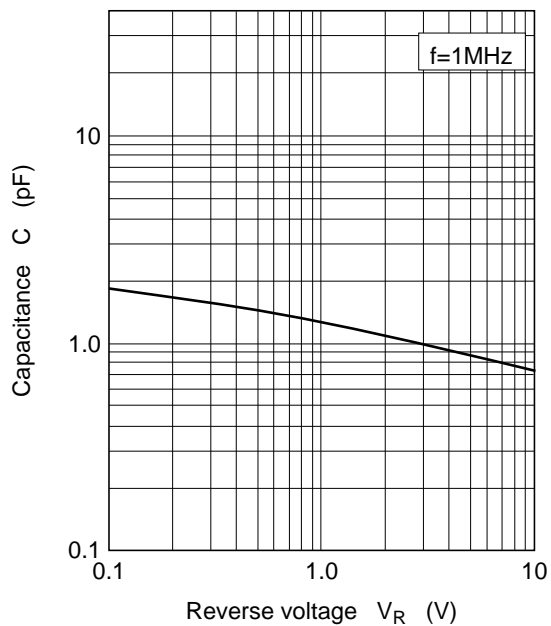
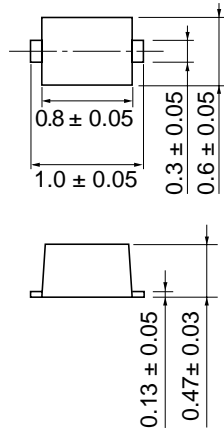


Fig.3 Capacitance vs. Reverse voltage

## Package Dimensions

As of July, 2002

Unit: mm



Hitachi Code	EFP
JEDEC	—
JEITA	—
Mass (reference value)	0.0007 g

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