

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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# HSB2838

Silicon Epitaxial Planar Diode for High Speed Switching



ADE-208-486A (Z)

Rev.1  
Mar. 2002

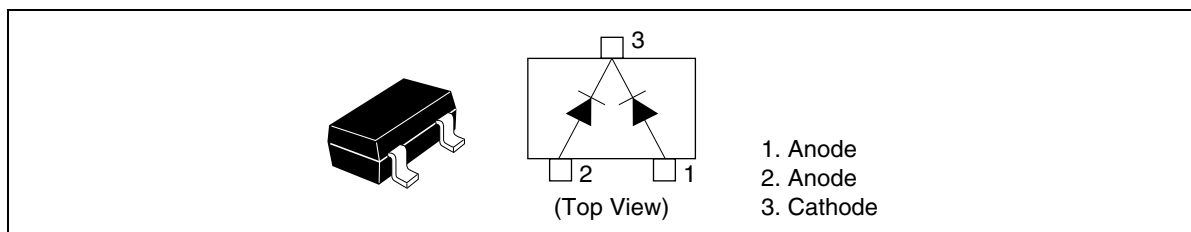
## Features

- Fast recovery time.
- CMPAK package is suitable for high density surface mounting and high speed assembly.

## Ordering Information

Type No.	Laser Mark	Package Code
HSB2838	A6	CMPAK

## Pin Arrangement



## Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	$V_{RM}$	85	V
Reverse voltage	$V_R$	80	V
Average rectified current	$I_O^{*1}$	100	mA
Peak forward current	$I_{FM}^{*1}$	300	mA
Non-Repetitive peak forward surge current	$I_{FSM}^{*2}$	4	A
Junction temperature	Tj	125	°C
Storage temperature	Tstg	-55 to +125	°C

Notes: 1. Two device total.

2. Value at duration of 1 μsec, two device total.

## Electrical Characteristics \*

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	$V_{F1}$	—	—	1.0	V	$I_F = 10$ mA
	$V_{F2}$	—	—	1.0		$I_F = 50$ mA
	$V_{F3}$	—	—	1.2		$I_F = 100$ mA
Reverse current	$I_R$	—	—	0.1	μA	$V_R = 80$ V
Capacitance	C	—	—	2.0	pF	$V_R = 0$ V, $f = 1$ MHz
Reverse recovery time	$t_{rr}$	—	—	3.0	ns	$I_F = 10$ mA, $V_R = 6$ V, $R_L = 50$ Ω

Note: Per one device.

Main Characteristic

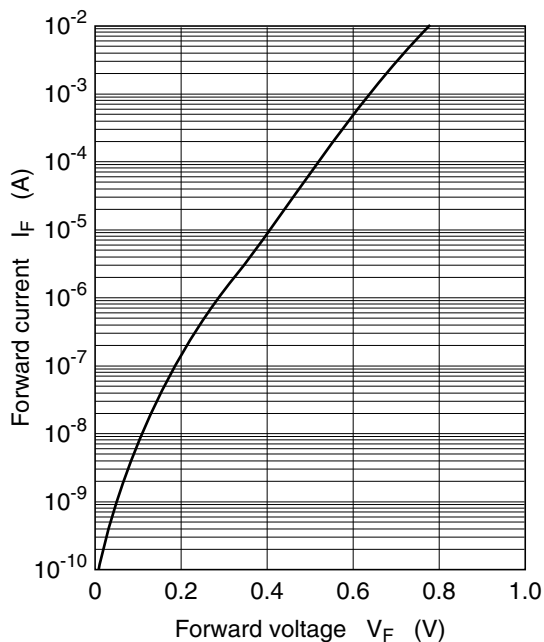


Fig.1 Forward current vs. Forward voltage

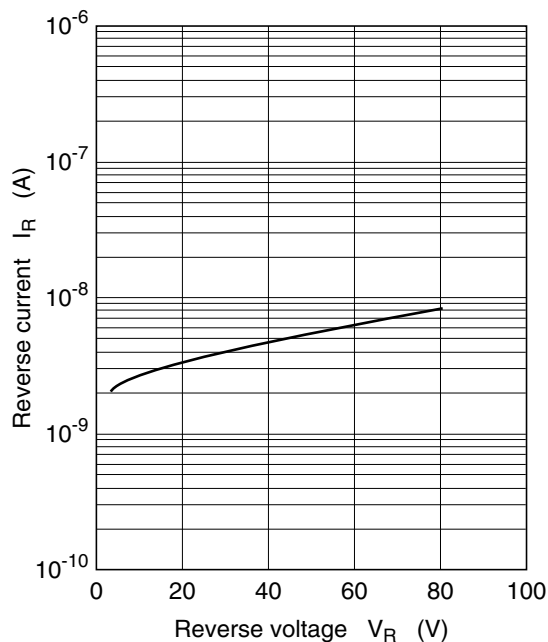


Fig.2 Reverse current vs. Reverse voltage

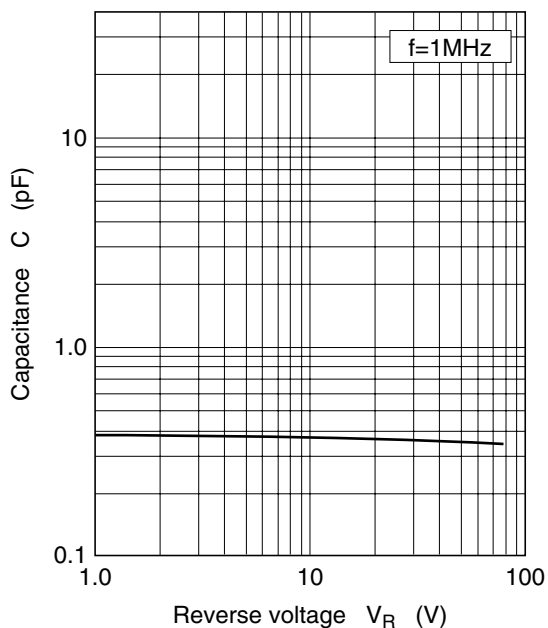
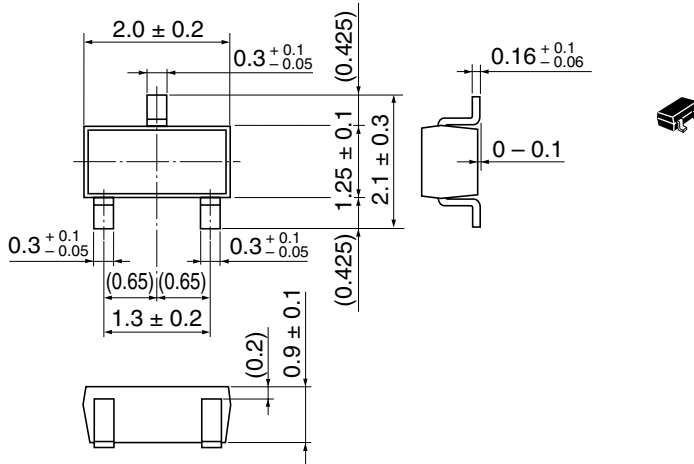


Fig.3 Capacitance vs. Reverse voltage

## Package Dimensions

As of July, 2001  
Unit: mm



Hitachi Code	CMPAK
JEDEC	—
JEITA	Conforms
Mass (reference value)	0.006 g