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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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HVB190S

Silicon Epitaxial Planar PIN Diode for High Frequency Attenuator



ADE-208-1597 (Z)

Rev.0
Oct. 2002

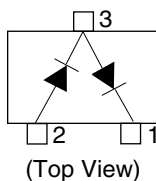
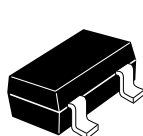
Features

- Low capacitance. ($C = 0.35 \text{ pF max}$)
- Low forward resistance. ($r_f = 3.0 \Omega \text{ typ}$)
- CML package is suitable for high density surface mounting and high speed assembly.

Ordering Information

Type No.	Laser Mark	Package Code
HVB190S	H9	CML

Pin Arrangement



1. Cathode
2. Anode
3. Cathode
Anode

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	50	V
Forward current	I_F	50	mA
Power dissipation	P_d *1	100	mW
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	-55 to +125	°C

Note: 1. Two device total.

Electrical Characteristics *1

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	V_F	—	—	1.0	V	$I_F = 50$ mA
Reverse current	I_R	—	—	100	nA	$V_R = 50$ V
Capacitance	C	—	—	0.35	pF	$V_R = 50$ V, $f = 1$ MHz
Forward resistance	r_f	—	3.0	5.0	Ω	$I_F = 10$ mA, $f = 100$ MHz
ESD-Capability *2	—	200	—	—	V	C = 200 pF, Both forward and reverse direction 1 pulse

Notes: 1. Per one device.

2. Failure criterion ; $I_R \geq 200$ nA at $V_R = 50$ V

Main Characteristic

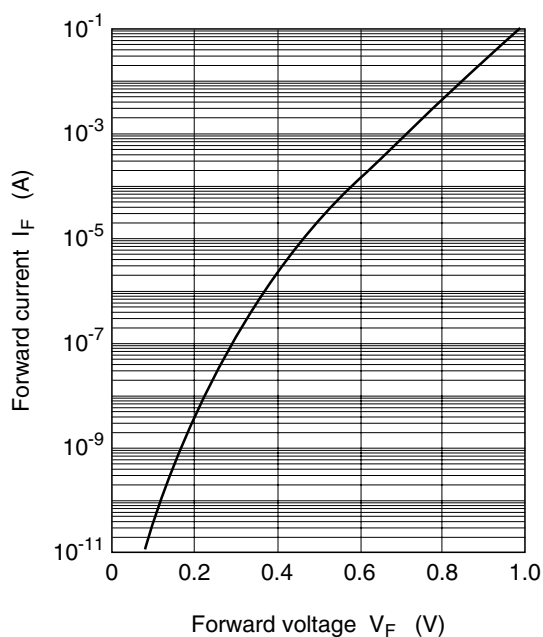


Fig.1 Forward current vs. Forward voltage

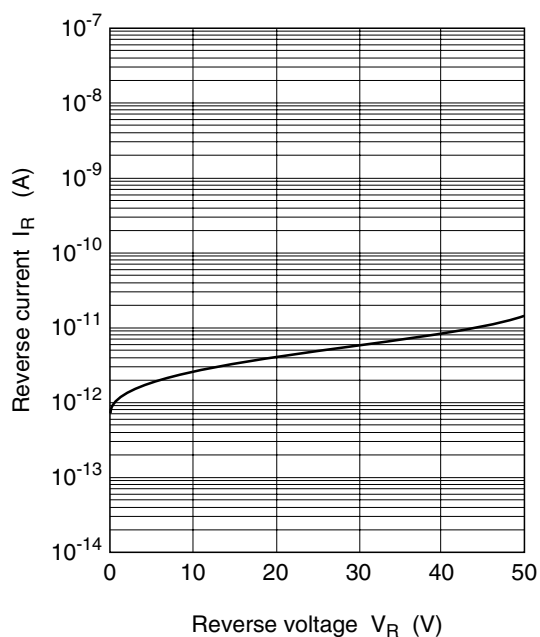


Fig.2 Reverse current vs. Reverse voltage

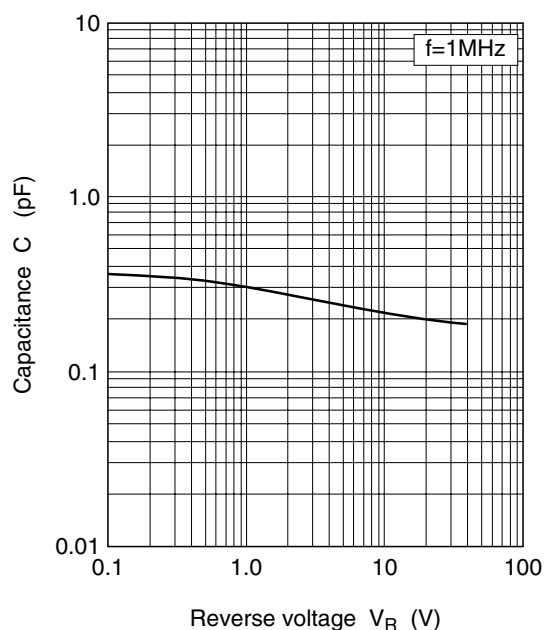


Fig.3 Capacitance vs. Reverse voltage

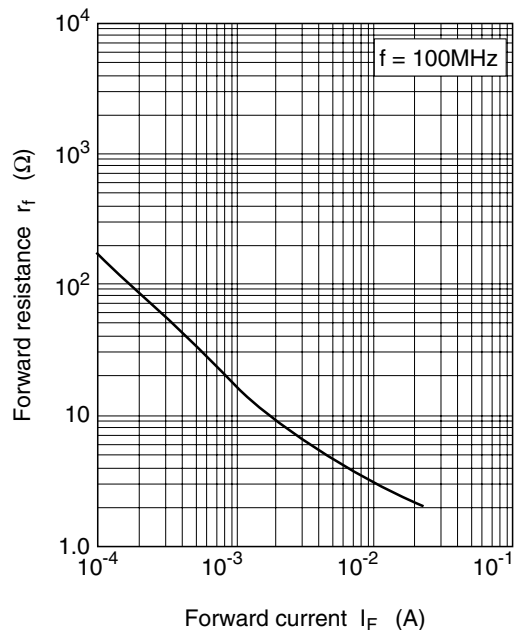
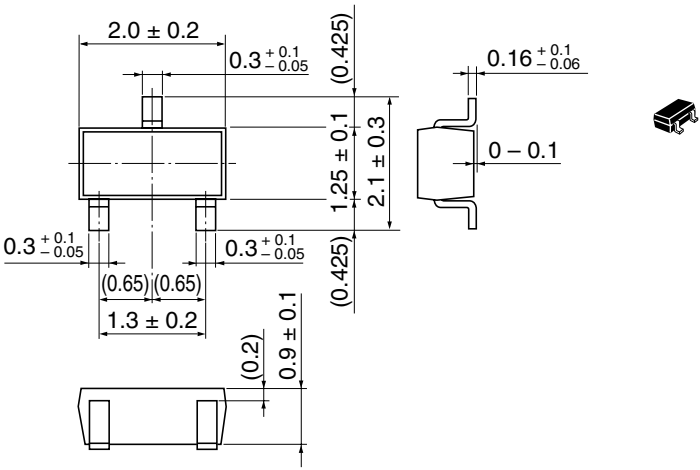


Fig.4 Forward resistance vs. Forward current

Package Dimensions

As of July, 2002
Unit: mm



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

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