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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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HVD133

Silicon Epitaxial Planar Pin Diode for High Frequency Switching



ADE-208-947 (Z)

Rev. 0
Jun. 2000

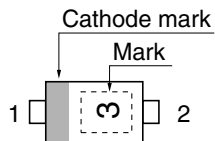
Features

- Low capacitance. ($C1 = 1.0 \text{ pF max}$)
- Low forward resistance. ($r_f = 0.7 \Omega \text{ max}$)
- Super small Flat Package (SFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVD133	3	SFP

Pin Arrangement



1. Cathode
2. Anode

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	30	V
Power dissipation	Pd	150	mW
Junction temperature	Tj	125	°C
Storage temperature	Tstg	-55 to +125	°C

Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse voltage	V_R	30	—	—	V	$I_R = 1 \mu\text{A}$
Reverse current	I_R	—	—	100	nA	$V_R = 25 \text{ V}$
Forward voltage	V_F	—	—	0.85	V	$I_F = 2 \text{ mA}$
Capacitance	C_1	—	—	1.0	pF	$V_R = 1 \text{ V}, f = 1 \text{ MHz}$
	C_6	—	—	0.9		$V_R = 6 \text{ V}, f = 1 \text{ MHz}$
Forward resistance	r_f	—	0.55	0.7	Ω	$I_F = 2 \text{ mA}, f = 100 \text{ MHz}$

Note : Please do not use the soldering iron due to avoid high stress to the SFP package.

Main Characteristic

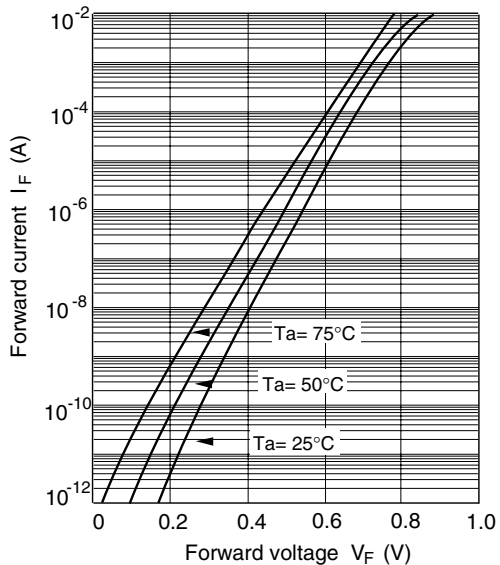


Fig.1 Forward current Vs. Forward voltage

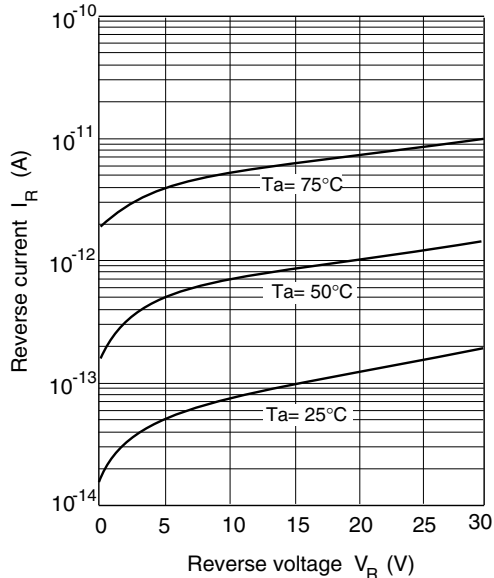


Fig.2 Reverse current Vs. Reverse voltage

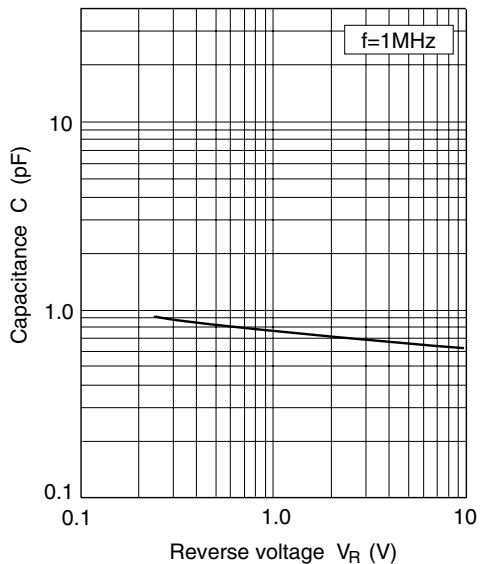


Fig.3 Capacitance Vs. Reverse voltage

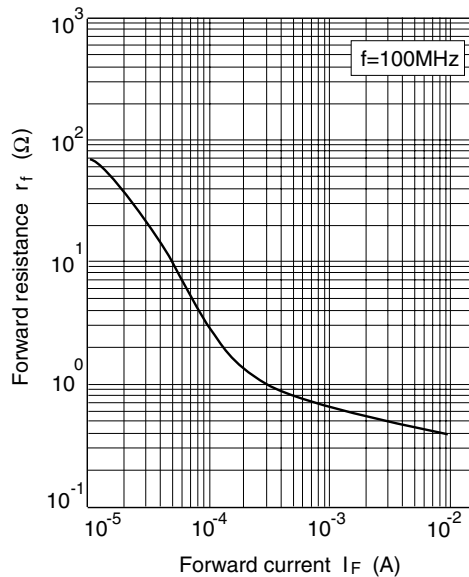
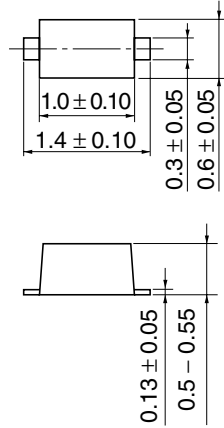


Fig.4 Forward resistance Vs. Forward current

Package Dimensions

Unit: mm



Hitachi Code	SFP
JEDEC	—
EIAJ	—
Mass (reference value)	0.0010 g

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