

To our customers,

Old Company Name in Catalogs and Other Documents

On April 1st, 2010, NEC Electronics Corporation merged with Renesas Technology Corporation, and Renesas Electronics Corporation took over all the business of both companies. Therefore, although the old company name remains in this document, it is a valid Renesas Electronics document. We appreciate your understanding.

Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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Renesas Technology Home Page: <http://www.renesas.com>

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

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HVD135

Silicon Epitaxial Trench Pin Diode for Antenna Switching



ADE-208-948 (Z)

Rev. 0
Jul. 2000

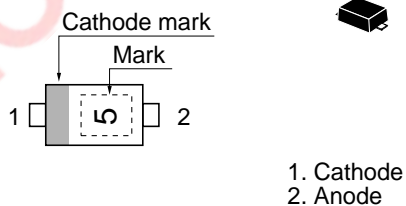
Features

- Adopting the trench structure improves low capacitance. ($C = 0.6 \text{ pF max}$)
- Low forward resistance. ($r_f = 2.0 \Omega \text{ max}$)
- Low operation current.
- Super small Flat Package (SFP) is suitable for surface mount design.

Ordering Information

Type No	Laser Mark	Package Code
HVD135	5	SFP

Outline



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	V_{RM}	65	V
Reverse voltage	V_R	60	V
Forward current	I_F	100	mA
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 current	I_R	—	—	0.1	μA	$V_R = 60$ V
Forward voltage	V_F	—	—	0.9	V	$I_F = 2$ mA
Capacitance	C	—	—	0.6	pF	$V_R = 1$ V, $f = 1$ MHz
Forward resistance	r_f	—	—	2.0	Ω	$I_F = 2$ mA, $f = 100$ MHz
ESD-Capability *1	—	100	—	—	V	C = 200 pF, R = 0 Ω, Both forward and reverse direction 1 pulse.

Notes : 1. Failure criterion ; $I_R > 100$ nA at $V_R = 60$ V

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

Main Characteristic

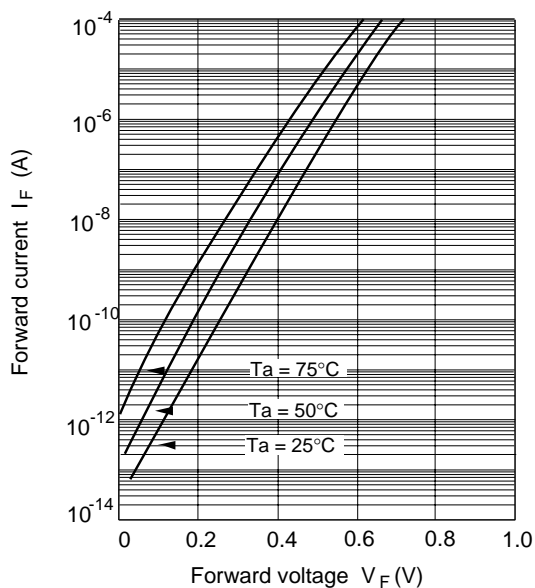


Fig.1 Forward current Vs. Forward voltage

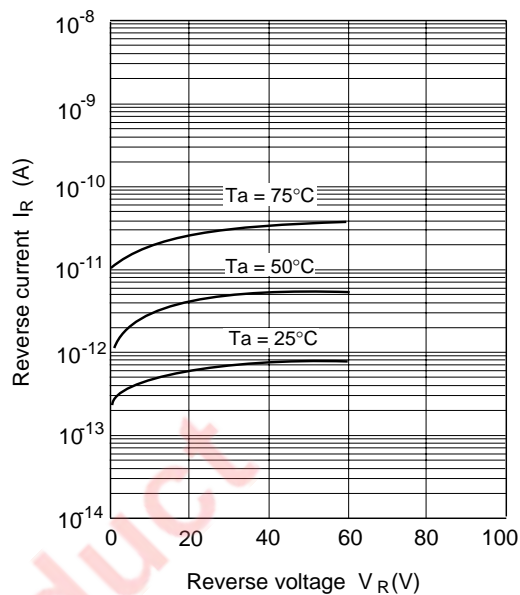


Fig.2 Reverse current Vs. Reverse voltage

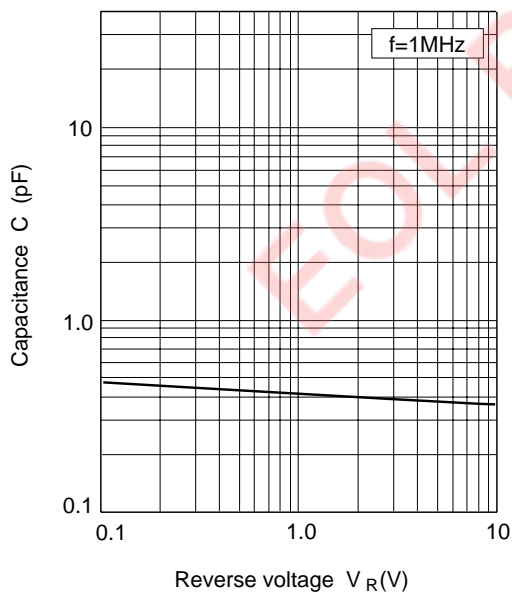


Fig.3 Capacitance Vs. Reverse voltage

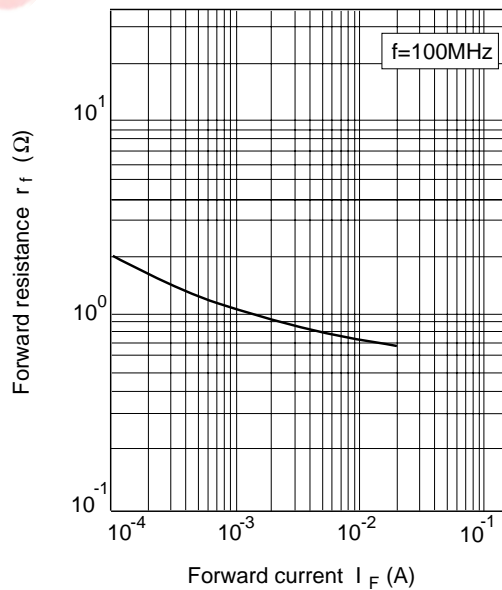


Fig.4 Forward resistance Vs. Forward current

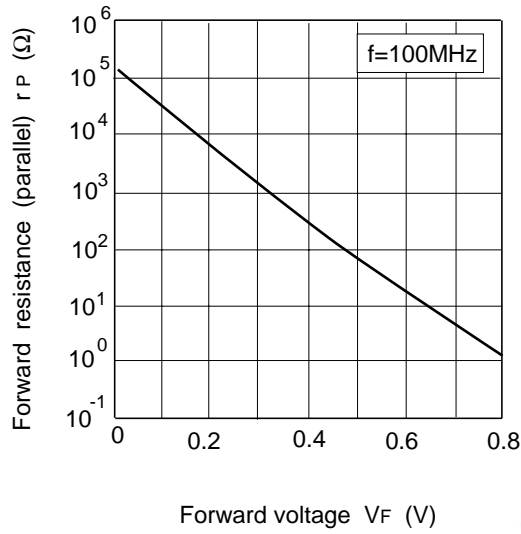
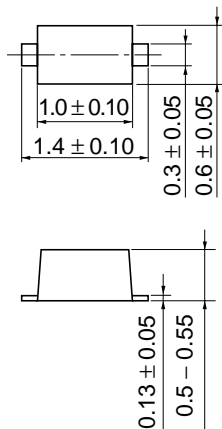


Fig.5 Forward resistance (parallel) Vs. Forward voltage

Package Dimensions

Unit: mm



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

EOL Product

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