

HVL147M

Silicon Epitaxial Trench Pin Diode for Antenna Switching

REJ03G0394-0200
Rev.2.00
Oct 20, 2004

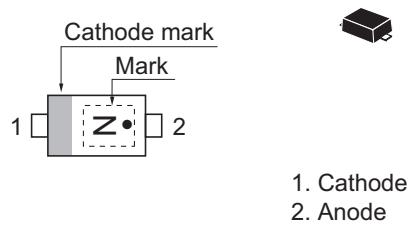
Features

- Adopting the trench structure improves low capacitance.($C = 0.31 \text{ pF max}$)
- Low forward resistance. ($r_f = 1.5 \Omega \text{ max}$)
- Low operation current.
- Thin Extremely small Flat Package (TEFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVL147M	N	TEFP

Pin Arrangement



1. Cathode
2. Anode

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V _R	30	V
Forward current	I _F	100	mA
Power dissipation	P _d	100	mW
Junction temperature	T _j	125	°C
Storage temperature	T _{stg}	-55 to +125	°C

Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I _R	—	—	100	nA	V _R = 30 V
Forward voltage	V _F	—	—	1.00	V	I _F = 10 mA
Capacitance	C	—	—	0.31	pF	V _R = 1 V, f = 1 MHz
Forward resistance	r _f	—	2.5	—	Ω	I _F = 2 mA, f = 100 MHz
		—	—	1.5		I _F = 10 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 = 30 V

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

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

Main Characteristic

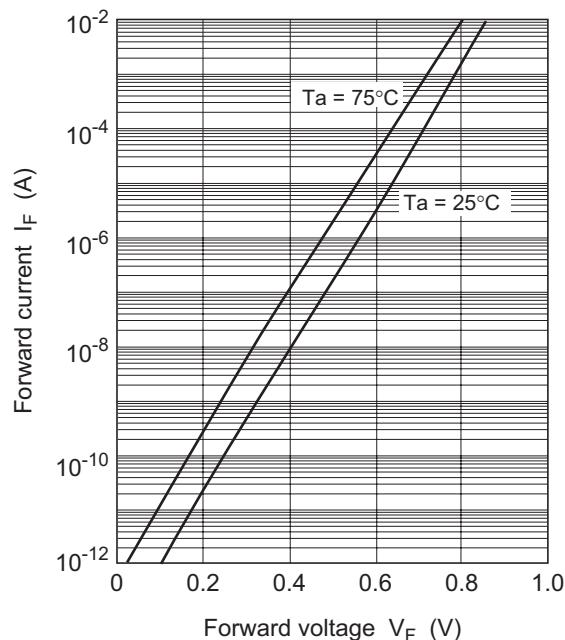


Fig.1 Forward current vs. Forward voltage

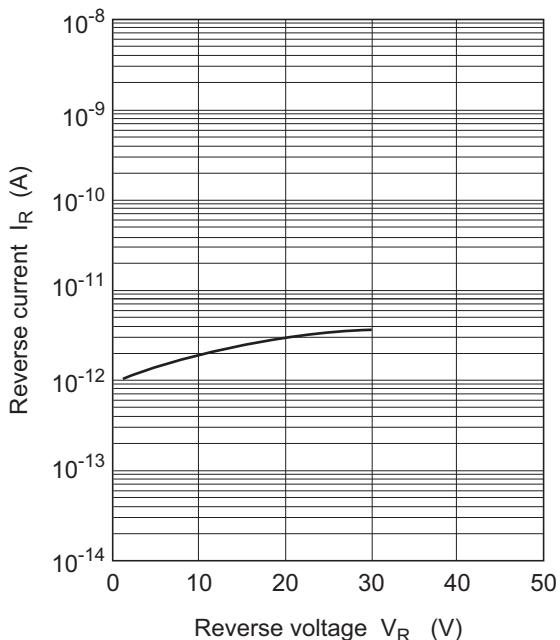


Fig.2 Reverse current vs. Reverse voltage

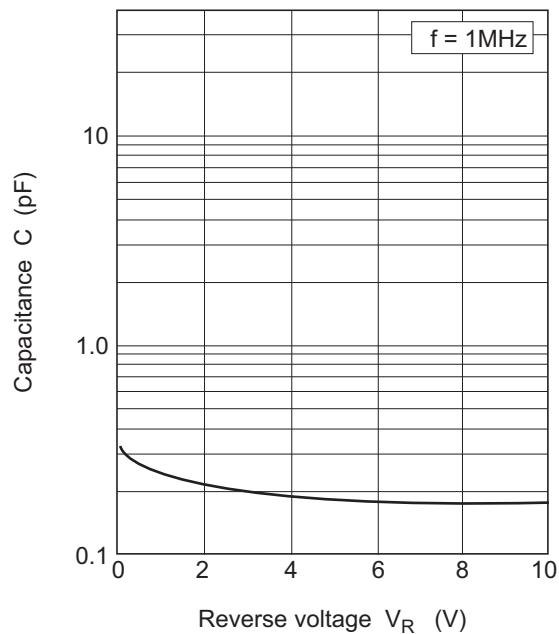


Fig.3 Capacitance vs. Reverse voltage

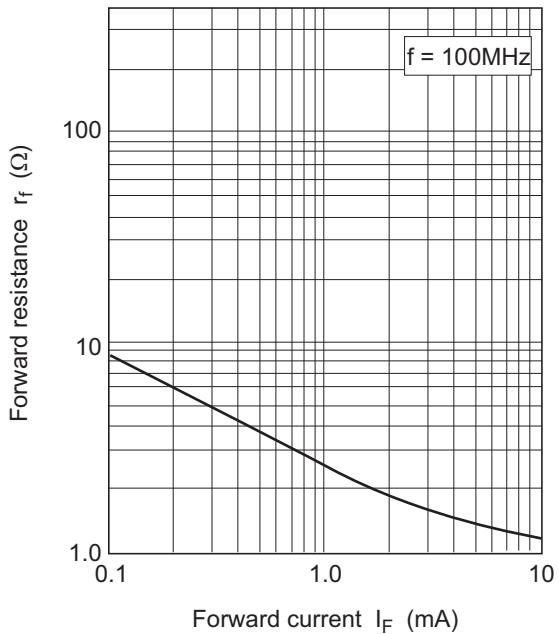
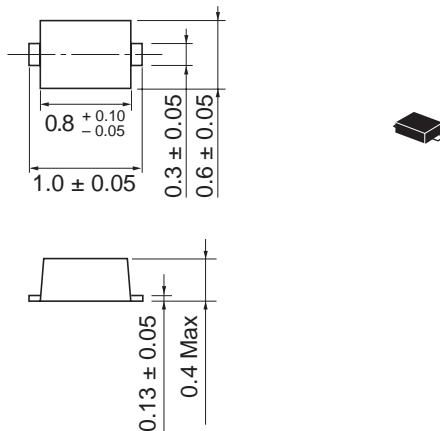


Fig.4 Forward resistance vs. Forward current

Package Dimensions

As of January, 2003
Unit: mm



Package Code	TEFP
JEDEC	—
JEITA	—
Mass (reference value)	0.0006 g

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Renesas Technology America, Inc.

450 Holger Way, San Jose, CA 95134-1368, U.S.A
Tel: <1> (408) 382-7500, Fax: <1> (408) 382-7501

Renesas Technology Europe Limited

Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K.
Tel: <44> (1628) 585-100, Fax: <44> (1628) 585-900

Renesas Technology Hong Kong Ltd.

7th Floor, North Tower, World Finance Centre, Harbour City, 1 Canton Road, Tsimshatsui, Kowloon, Hong Kong
Tel: <852> 2265-6688, Fax: <852> 2730-6071

Renesas Technology Taiwan Co., Ltd.

10th Floor, No.99, Fushing North Road, Taipei, Taiwan
Tel: <886> (2) 2715-2888, Fax: <886> (2) 2713-2999

Renesas Technology (Shanghai) Co., Ltd.

Unit2607 Ruijing Building, No.205 Maoming Road (S), Shanghai 200020, China
Tel: <86> (21) 6472-1001, Fax: <86> (21) 6415-2952

Renesas Technology Singapore Pte. Ltd.

1 Harbour Front Avenue, #06-10, Keppel Bay Tower, Singapore 098632
Tel: <65> 6213-0200, Fax: <65> 6278-8001