

# HVL147M

## Silicon Epitaxial Trench Pin Diode for Antenna Switching

REJ03G0394-0200

Rev.2.00

Oct 20, 2004

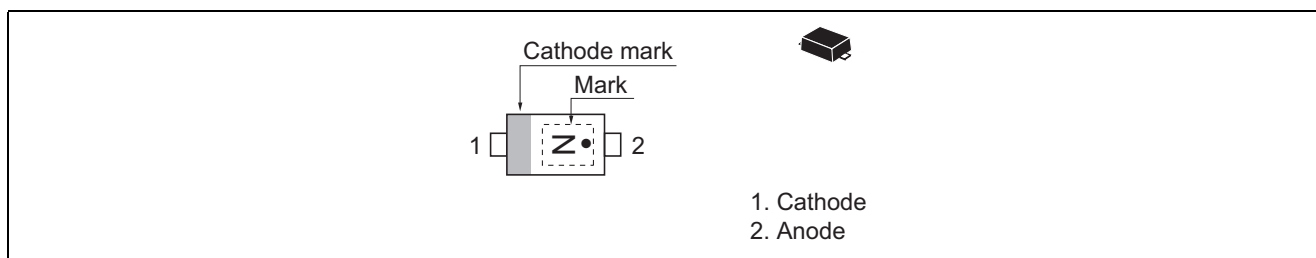
### Features

- Adopting the trench structure improves low capacitance.(C = 0.31 pF max)
- Low forward resistance. (rf = 1.5  $\Omega$  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



## 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	$V_R = 30\text{ V}$
Forward voltage	$V_F$	—	—	1.00	V	$I_F = 10\text{ mA}$
Capacitance	$C$	—	—	0.31	pF	$V_R = 1\text{ V}$ , $f = 1\text{ MHz}$
Forward resistance	$r_f$	—	2.5	—	$\Omega$	$I_F = 2\text{ mA}$ , $f = 100\text{ MHz}$
		—	—	1.5		$I_F = 10\text{ mA}$ , $f = 100\text{ MHz}$
ESD-Capability *1	—	100	—	—	V	$C = 200\text{ pF}$ , $R = 0\ \Omega$ , Both forward and reverse direction 1 pulse.

Notes: 1. Failure criterion ;  $I_R > 100\text{ nA}$  at  $V_R = 30\text{ V}$ 

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

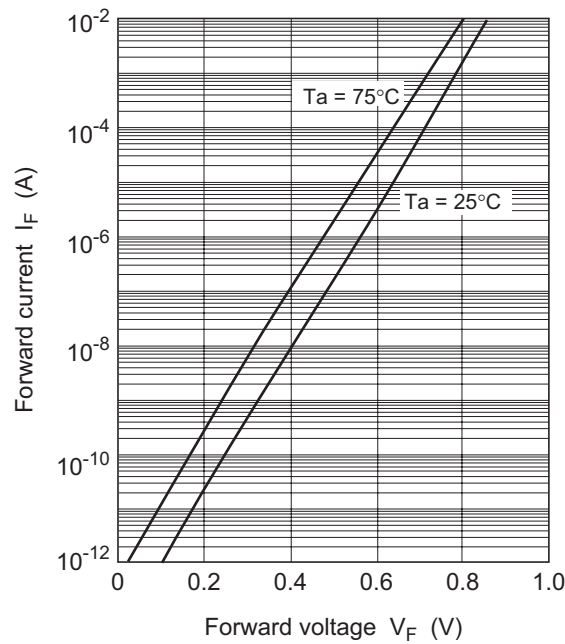


Fig.1 Forward current vs. Forward voltage

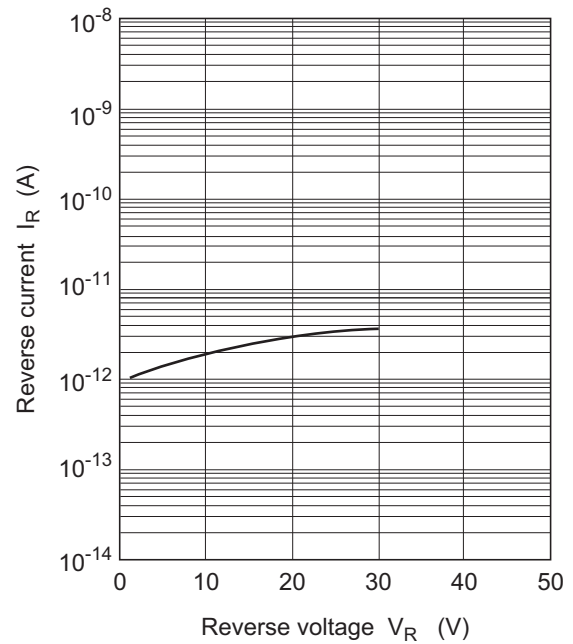


Fig.2 Reverse current vs. Reverse voltage

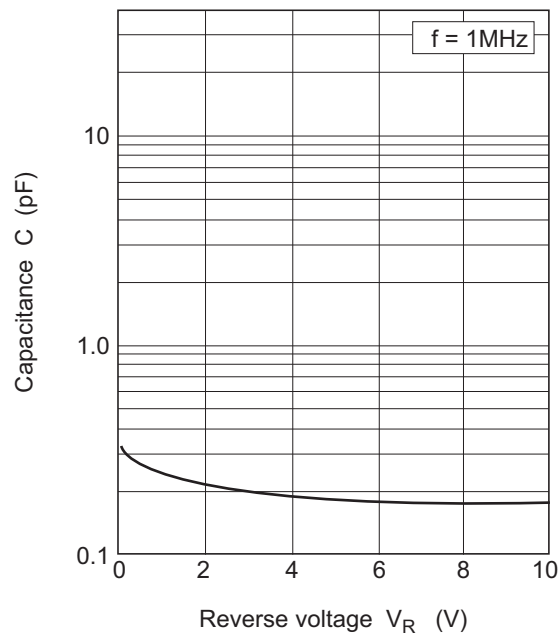


Fig.3 Capacitance vs. Reverse voltage

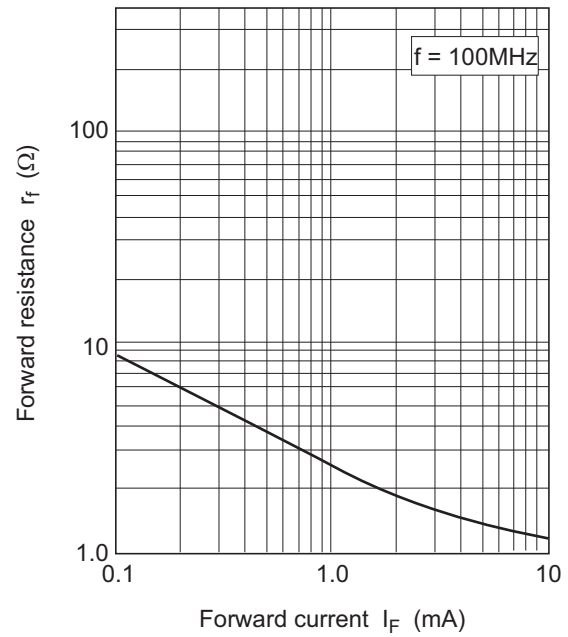
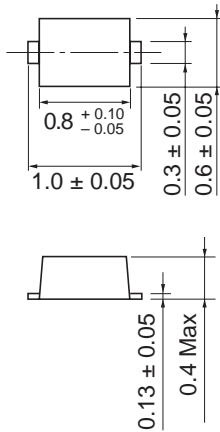


Fig.4 Forward resistance vs. Forward current

Package Dimensions

As of January, 2003  
Unit: mm



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

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