HVL147

Silicon Epitaxial Trench Pin Diode for Antenna Switching

REJ03G0393-0200
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 Ω max)
- Low operation current.
- Extremely small Flat Package (EFP) is suitable for surface mount design.
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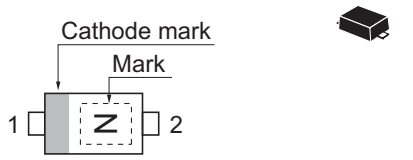
Ordering Information

Type No.	Laser Mark	Package Code
HVL147	N	EFP

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	Pd	100	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	—	—	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 EFP 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

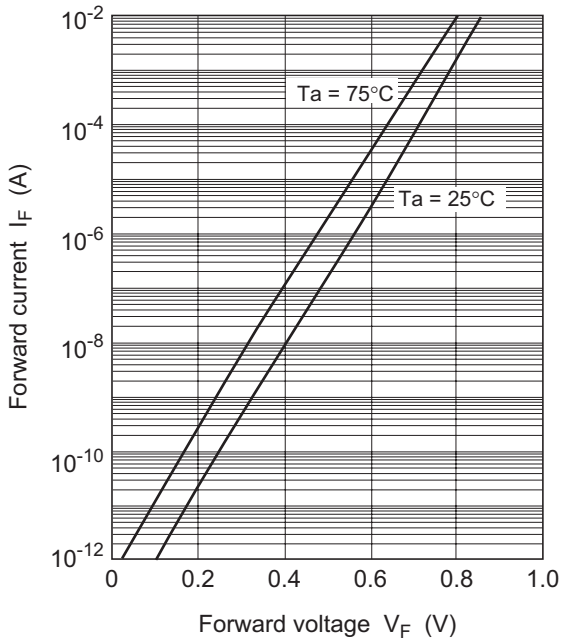


Fig.1 Forward current vs. Forward voltage

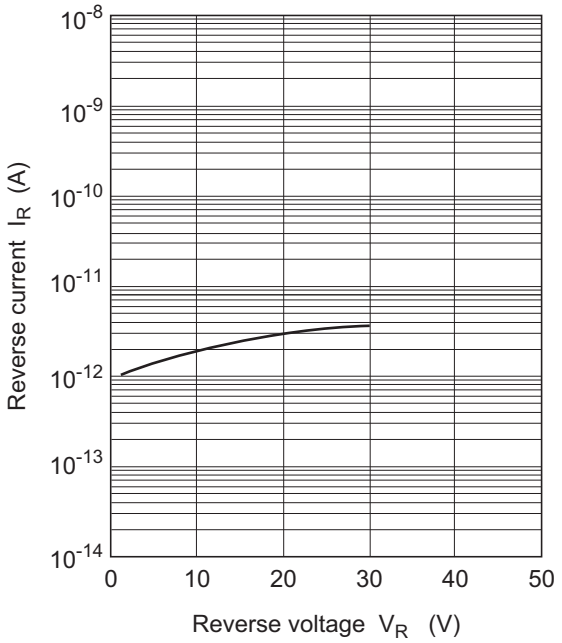


Fig.2 Reverse current vs. Reverse voltage

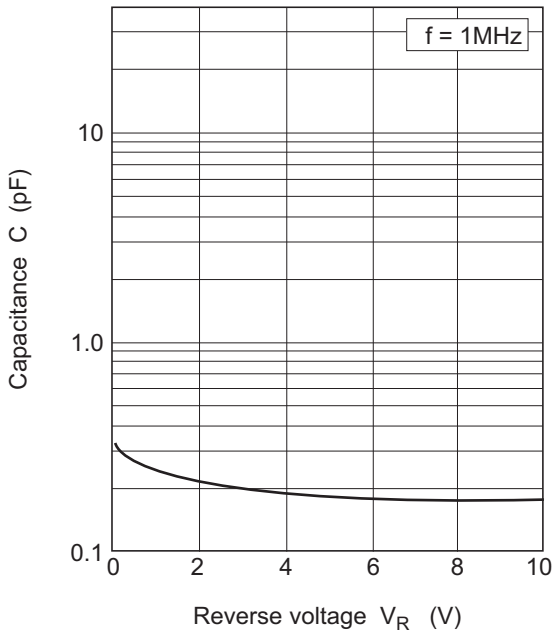


Fig.3 Capacitance vs. Reverse voltage

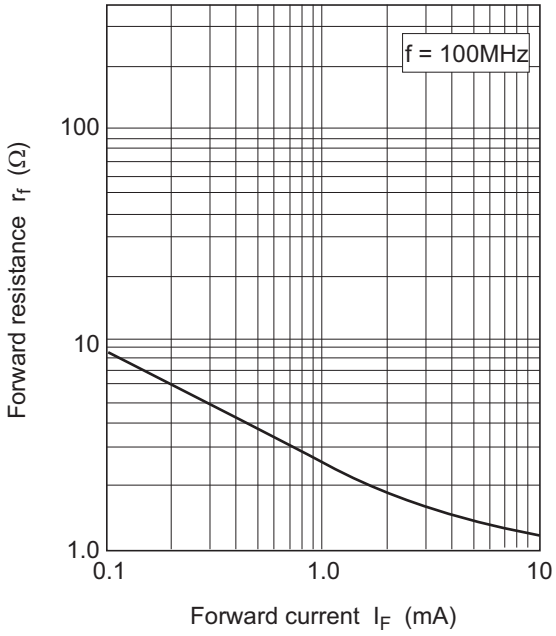
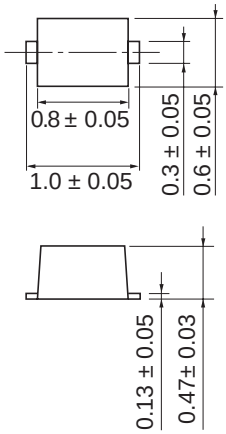


Fig.4 Forward resistance vs. Forward current

Package Dimensions

As of January, 2003

Unit: mm



Package Code	EFP
JEDEC	—
JEITA	—
Mass (reference value)	0.0007 g

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