

To our customers,

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## Old Company Name in Catalogs and Other Documents

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April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

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Not recommended  
for new design

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# HVL133A

## Silicon Epitaxial Planar Pin Diode for Antenna Switching

REJ03G0066-0200

Rev.2.00

Jan 12, 2006

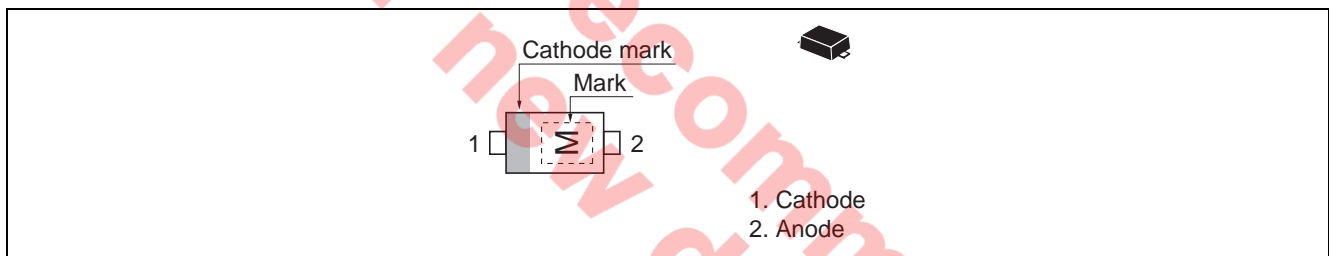
### Feature

- An optimal solution for antenna switching in mobile phones.
- Low capacitance. ( $C_1 = 1.0 \text{ pF max}$ )
- Low forward resistance. ( $r_f = 0.7 \Omega \text{ max}$ )
- Extremely small Flat Lead Package (EFP) is suitable for surface mount design.

### Ordering Information

Type No.	Laser Mark	Package Name	Package Code
HVL133A	M	EFP	PXSF0002ZA-A

### Pin Arrangement



## Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	$V_R$	30	V
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 voltage	$V_R$	30	—	—	V	$I_R = 1 \mu A$
Reverse current	$I_R$	—	—	100	nA	$V_R = 25 V$
Forward voltage	$V_F$	—	—	0.85	V	$I_F = 2 mA$
Capacitance	$C_1$	—	—	1.00	pF	$V_R = 1 V, f = 1 MHz$
	$C_6$	—	—	0.90		$V_R = 6 V, f = 1 MHz$
Forward resistance	$r_f$	—	0.55	0.70	$\Omega$	$I_F = 2 mA, f = 100 MHz$

Note: For EFP package, 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

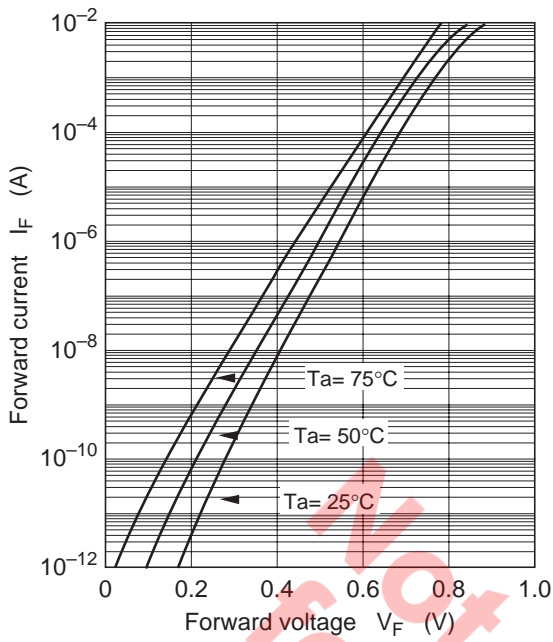


Fig.1 Forward current vs. Forward voltage

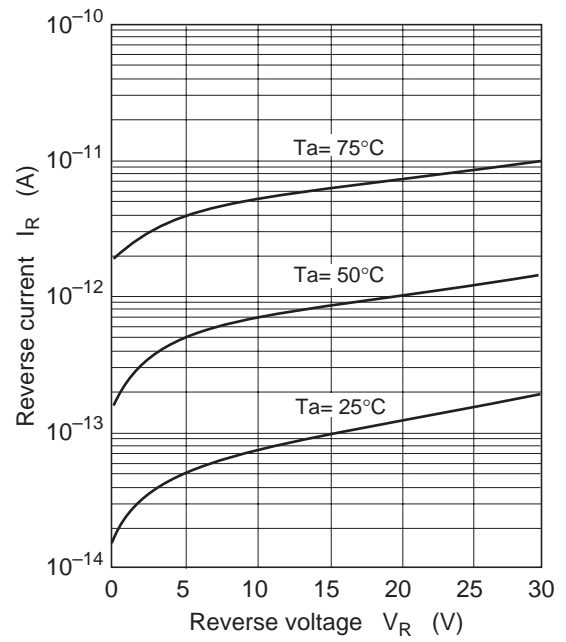


Fig.2 Reverse current vs. Reverse voltage

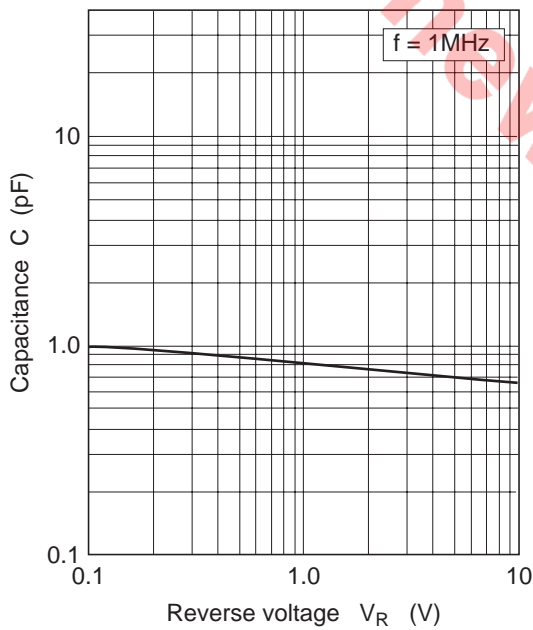


Fig.3 Capacitance vs. Reverse voltage

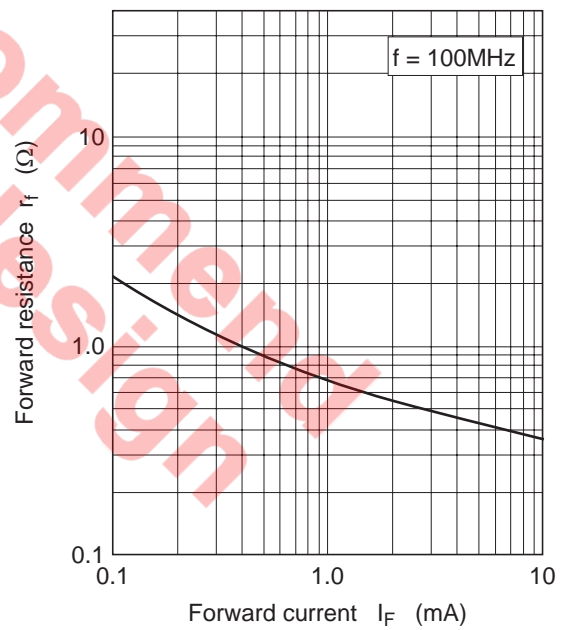
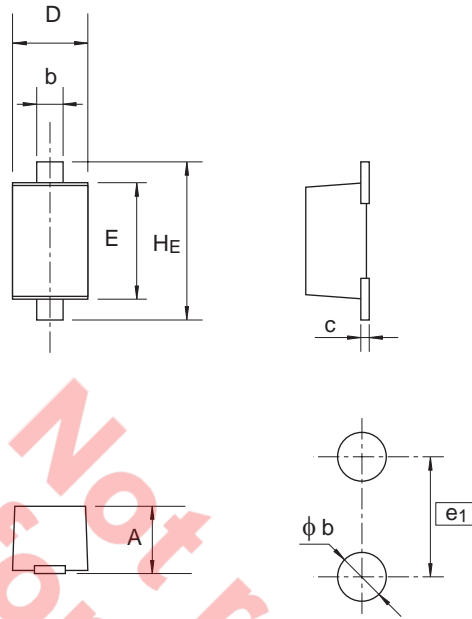


Fig.4 Forward resistance vs. Forward current

Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
EFP	—	PXSF0002ZA-A	EFP / EFPV	0.0007g



Pattern of terminal position areas

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	0.44	0.47	0.50
b	0.25	0.30	0.35
c	0.08	0.13	0.18
D	0.55	0.60	0.65
E	0.75	0.80	0.85
$H_E$	0.95	1.00	1.05
$\phi b$	—	0.40	—
$e_1$	—	1.00	—

Not recommend for new design

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