

## HVC133A

### Silicon Epitaxial Planar Pin Diode for Antenna Switching

REJ03G0170-0100Z

Rev.1.00

Jan.21.2004

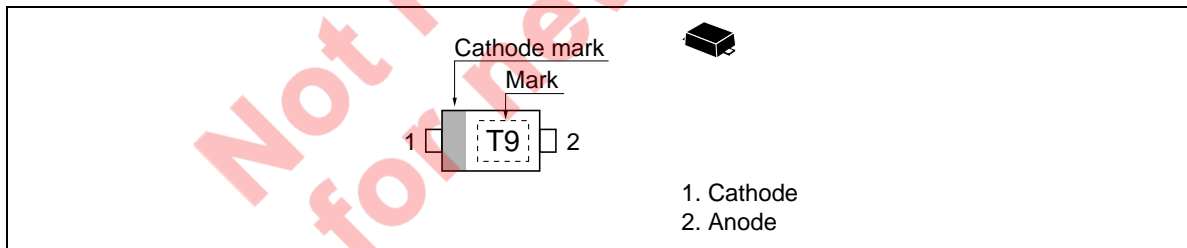
#### Features

- An optimal solution for antenna switching in mobile phones.
- Low capacitance. ( $C1 = 1.0 \text{ pF max}$ )
- Low forward resistance. ( $r_f = 0.7 \Omega \text{ max}$ )
- Ultra small Flat Package (UFP) is suitable for surface mount design.

#### Ordering Information

Type No.	Laser Mark	Package Code
HVC133A	T9	UFP

#### Pin Arrangement



## Absolute Maximum Ratings

(T<sub>a</sub> = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V <sub>R</sub>	30	V
Power dissipation	P <sub>d</sub>	150	mW
Junction temperature	T <sub>j</sub>	125	°C
Storage temperature	T <sub>stg</sub>	-55 to +125	°C

## Electrical Characteristics

(T<sub>a</sub> = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse voltage	V <sub>R</sub>	30	—	—	V	I <sub>R</sub> = 1 μA
Reverse current	I <sub>R</sub>	—	—	100	nA	V <sub>R</sub> = 25 V
Forward voltage	V <sub>F</sub>	—	—	0.85	V	I <sub>F</sub> = 2 mA
Capacitance	C <sub>1</sub>	—	—	1.00	pF	V <sub>R</sub> = 1 V, f = 1 MHz
	C <sub>6</sub>	—	—	0.90		V <sub>R</sub> = 6 V, f = 1 MHz
Forward resistance	r <sub>f</sub>	—	0.55	0.70	Ω	I <sub>F</sub> = 2 mA, f = 100 MHz

Main Characteristic

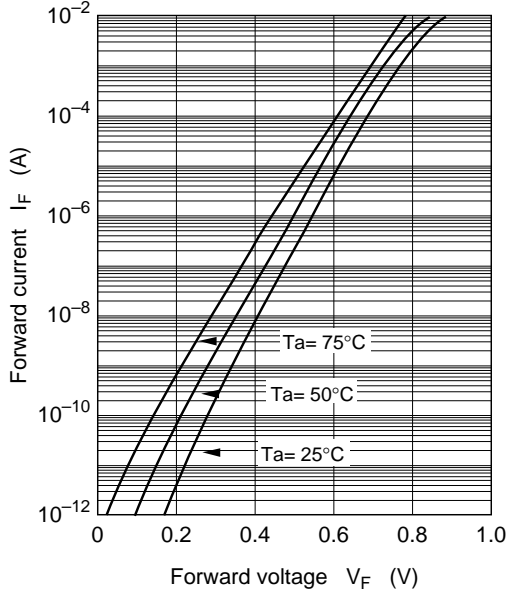


Fig.1 Forward current vs. Forward voltage

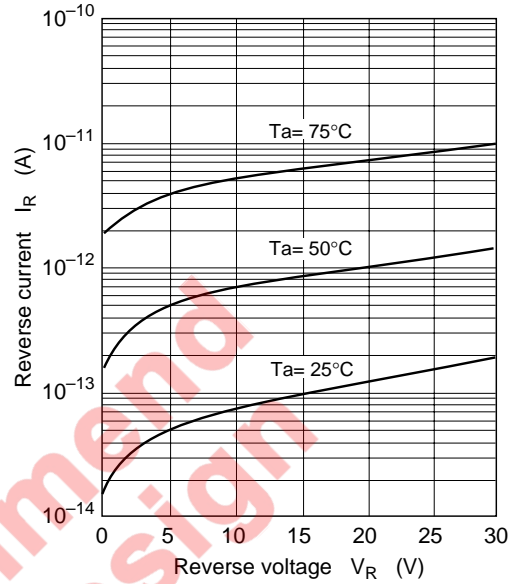


Fig.2 Reverse current vs. Reverse voltage

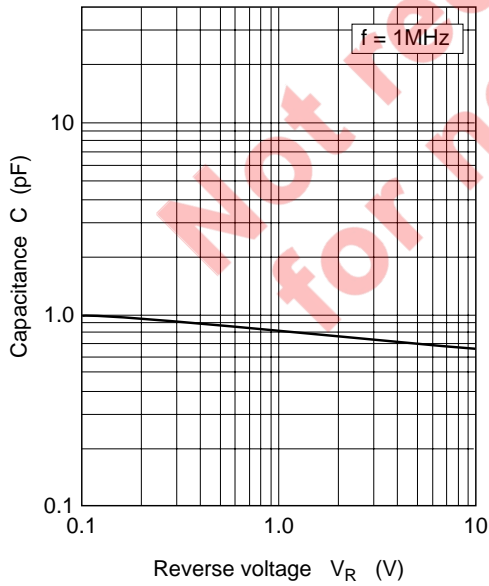


Fig.3 Capacitance vs. Reverse voltage

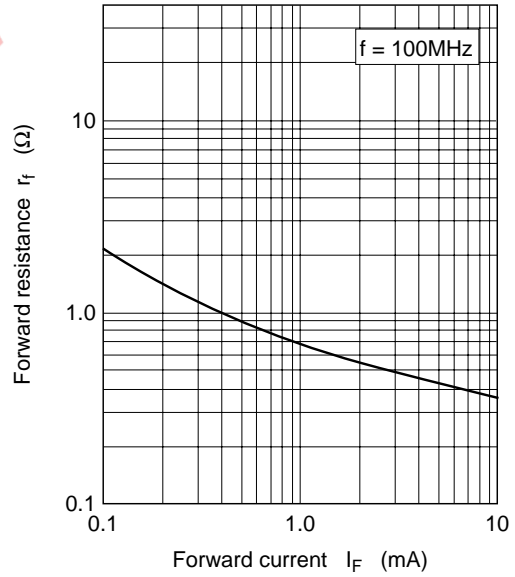
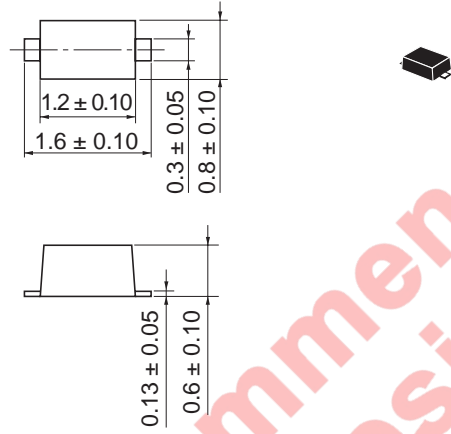


Fig.4 Forward resistance vs. Forward current

Package Dimensions

As of January, 2003  
Unit: mm



Package Code	UFP
JEDEC	—
JEITA	Conforms
Mass (reference value)	0.0016 g

Not recommend  
for new design

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