



HVC142A

Silicon Epitaxial Planar Pin Diode for Antenna Switching

REJ03G0422-0100
 (Previous: ADE-208-1588)
 Rev.1.00
 Nov 26, 2004

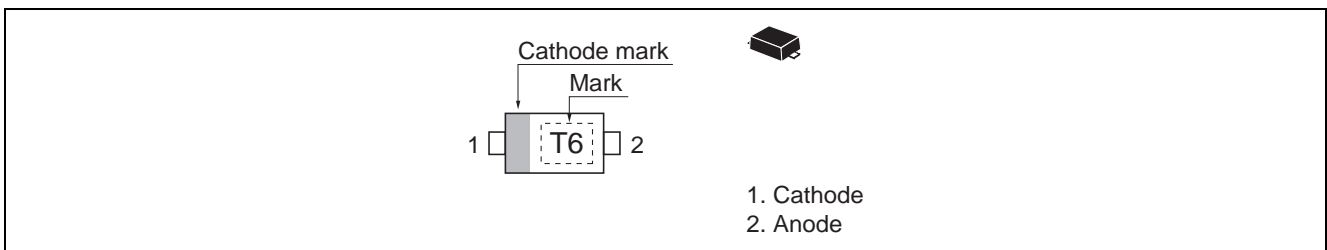
Features

- An optimal solution for antenna switching in mobile phones.
- Low capacitance. (C = 0.35 pF max)
- Low forward resistance. (rf = 1.3 Ω max)
- Ultra small Flat Lead Package (UFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVC142A	T6	UFP

Pin Arrangement



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Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Reverse voltage	V_R	30	V
Forward current	I_F	100	mA
Power dissipation	P_d	150	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	—	—	1.0	V	$I_F = 10\text{ mA}$
Capacitance	C	—	—	0.35	pF	$V_R = 1\text{ V}, f = 1\text{ MHz}$
Forward resistance	r_f	—	—	1.3	Ω	$I_F = 10\text{ mA}, f = 100\text{ MHz}$
ESD-Capability *1	—	100	—	—	V	$C = 200\text{ pF}, R = 0\ \Omega$, Both forward and reverse direction 1 pulse.

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

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Main Characteristic

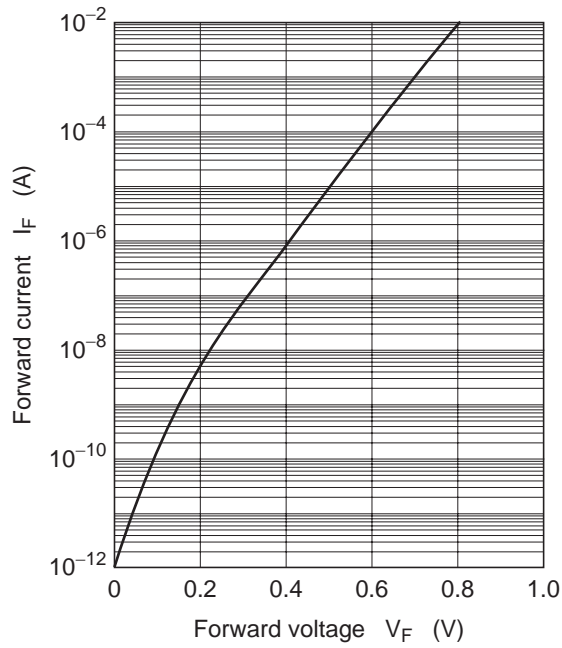


Fig.1 Forward current vs. Forward voltage

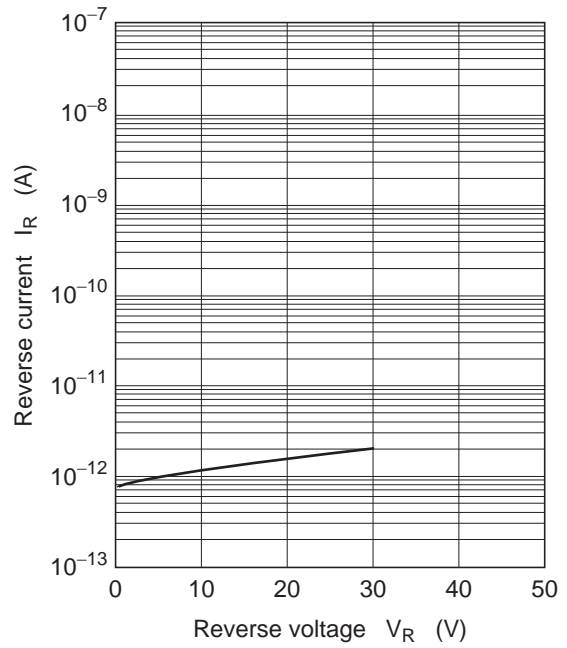


Fig.2 Reverse current vs. Reverse voltage

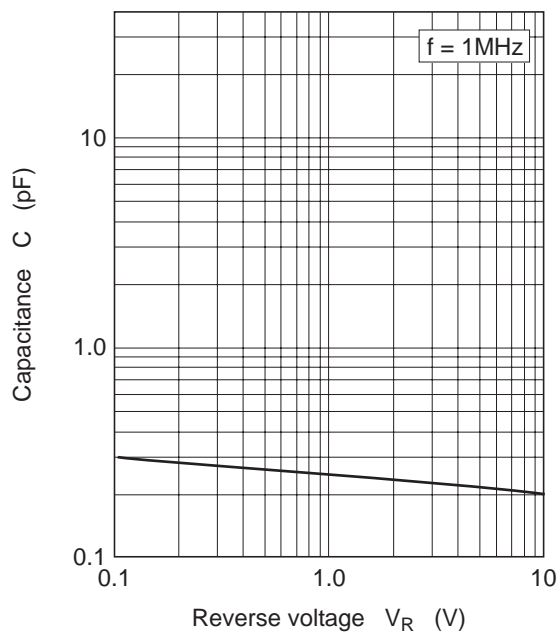


Fig.3 Capacitance vs. Reverse voltage

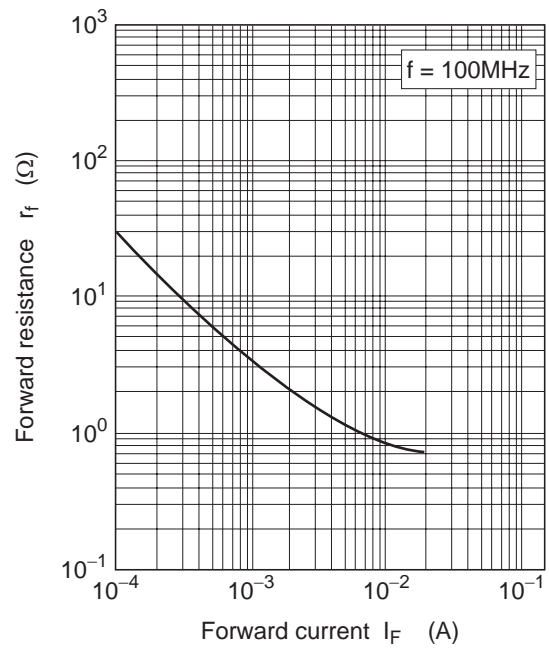


Fig.4 Forward resistance vs. Forward current

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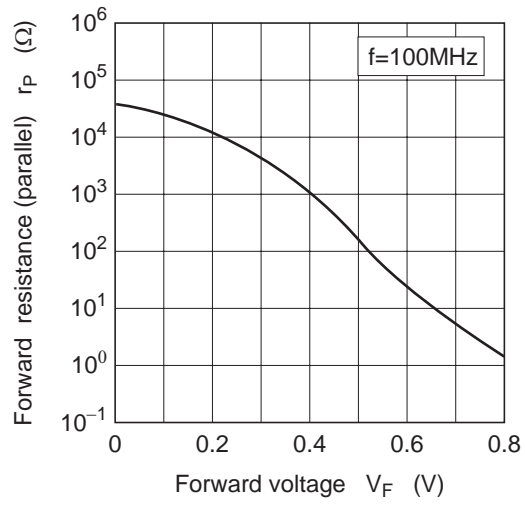
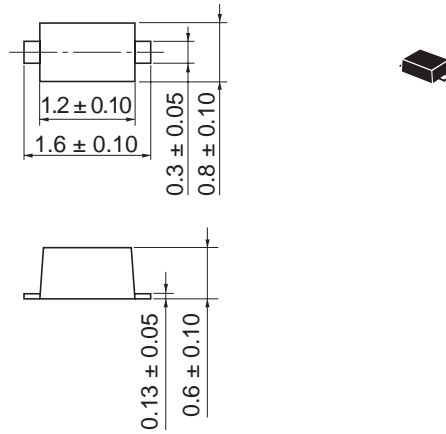


Fig.5 Forward resistance (parallel) vs. Forward voltage

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Package Dimensions

As of January, 2003
Unit: mm



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

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