

To all our customers

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Renesas Technology Corp.
Customer Support Dept.
April 1, 2003

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Keep safety first in your circuit designs!

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Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of nonflammable material or (iii) prevention against any malfunction or mishap.

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HVC190

Silicon Epitaxial Planar PIN Diode for High Frequency Attenuator



ADE-208-1595 (Z)

Rev.0
Oct. 2002

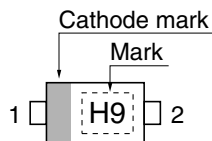
Features

- Low capacitance. ($C = 0.35 \text{ pF max}$)
- Low forward resistance. ($r_f = 3.0 \Omega \text{ typ}$)
- Ultra small Flat Package (UFP) is suitable for surface mount design.

Ordering Information

Type No.	Laser Mark	Package Code
HVC190	H9	UFP

Pin Arrangement



1. Cathode
2. Anode

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	50	V
Forward current	I_F	50	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
Forward Voltage	V_F	—	—	1.0	V	$I_F = 50 \text{ mA}$
Reverse current	I_R	—	—	100	nA	$V_R = 50 \text{ V}$
Capacitance	C	—	—	0.35	pF	$V_R = 50 \text{ V}$, $f = 1 \text{ MHz}$
Forward resistance	r_f	—	3.0	5.0	Ω	$I_F = 10 \text{ mA}$, $f = 100 \text{ MHz}$
ESD-Capability *2	—	200	—	—	V	C = 200 pF, Both forward and reverse direction 1 pulse

Notes: 1. Failure criterion ; $I_R \geq 200 \text{ nA}$ at $V_R = 50 \text{ V}$

Main Characteristic

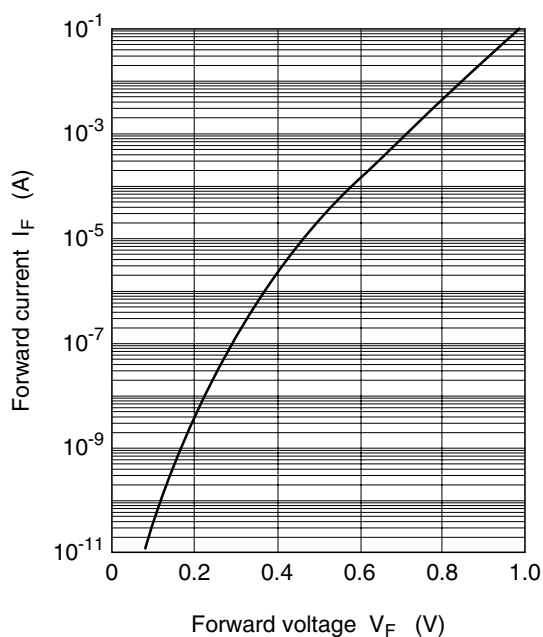


Fig.1 Forward current vs. Forward voltage

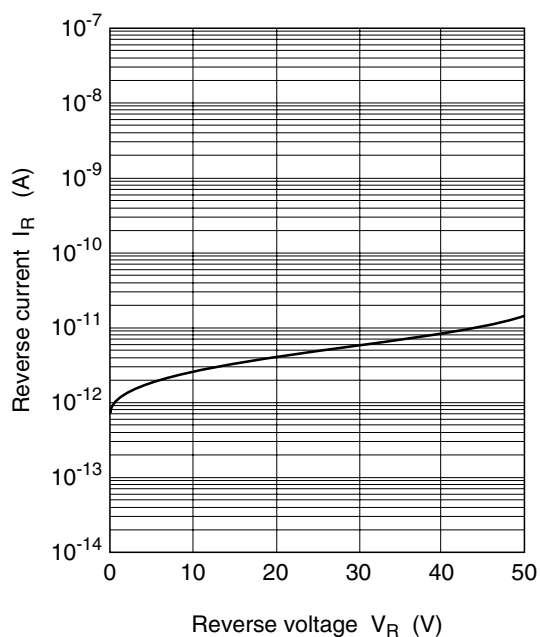


Fig.2 Reverse current vs. Reverse voltage

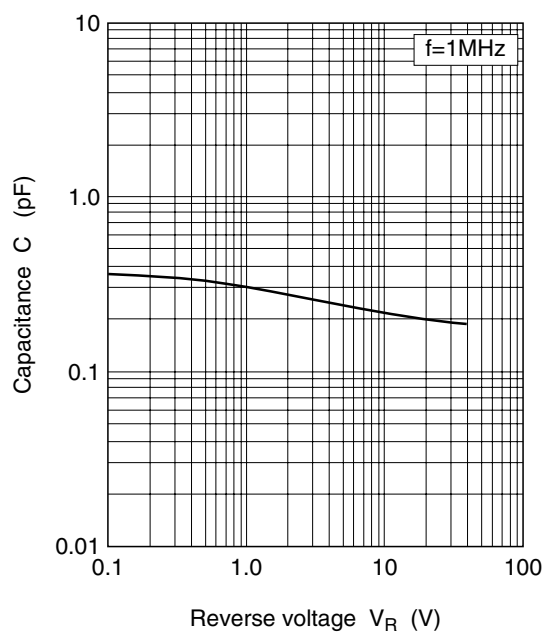


Fig.3 Capacitance vs. Reverse voltage

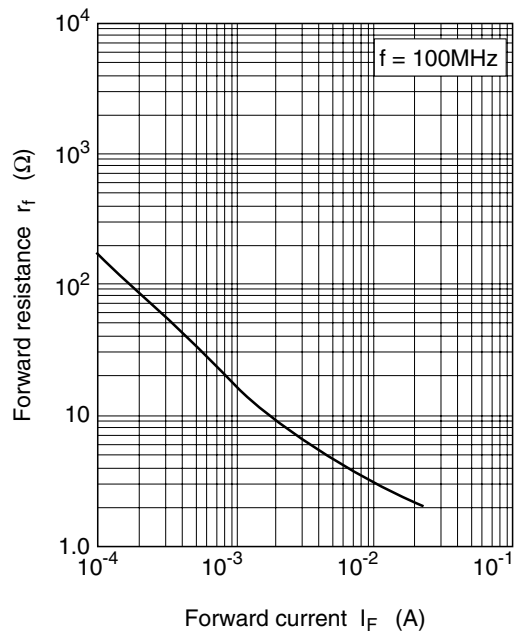
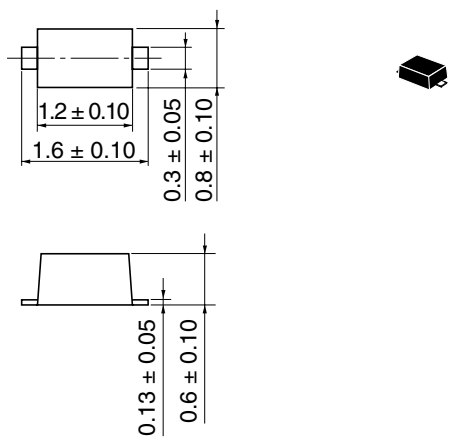


Fig.4 Forward resistance vs. Forward current

Package Dimensions

As of July, 2002
Unit: mm



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

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