

To our customers,

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Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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HVC190

Silicon Epitaxial Planar PIN Diode for Attenuator

REJ03G0441-0200
Rev.2.00
Oct 08, 2009

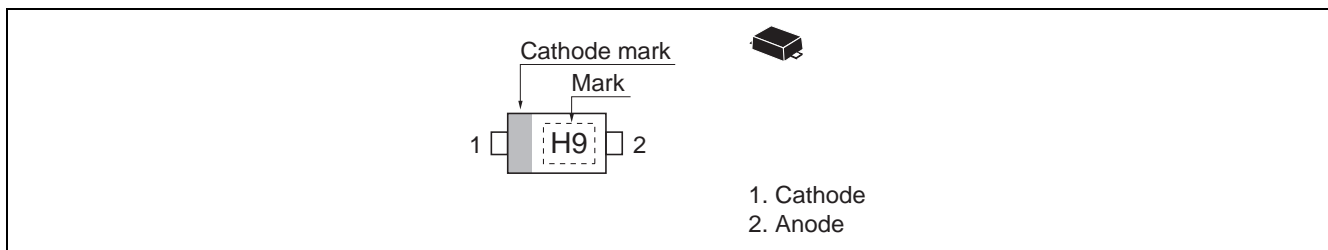
Features

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

Ordering Information

Part No	Laser Mark	Package Name	Package Code	Taping Abbreviation (Quantity)
HVC190 TRF HVC190 KRF	H9	UFP	PWSF0002ZA-A	TRF (4,000 pcs / reel) KRF (8,000 pcs / reel)

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	50	V
Forward current	I_F	50	mA
Power dissipation	P_d	150	mA
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	V_F	—	—	1.0	V	$I_F = 50$ mA
Reverse current	I_R	—	—	100	nA	$V_R = 50$ V
Capacitance	C	—	—	0.35	pF	$V_R = 50$ V, $f = 1$ MHz
Forward resistance	r_f	—	3.0	5.0	Ω	$I_F = 10$ mA, $f = 100$ MHz
ESD-Capability *1	—	200	—	—	V	C = 200 pF, Both forward and reverse direction 1 pulse

Note: 1. Failure criterion ; $I_R \geq 200$ nA at $V_R = 50$ V

Main Characteristics

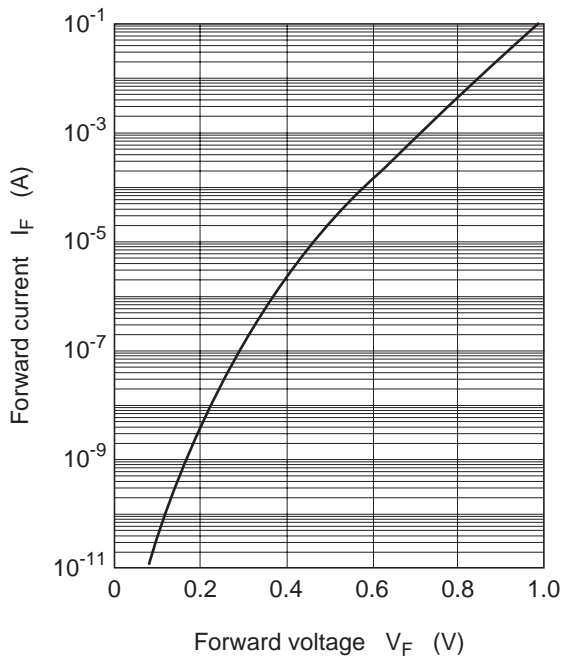


Fig.1 Forward current vs. Forward voltage

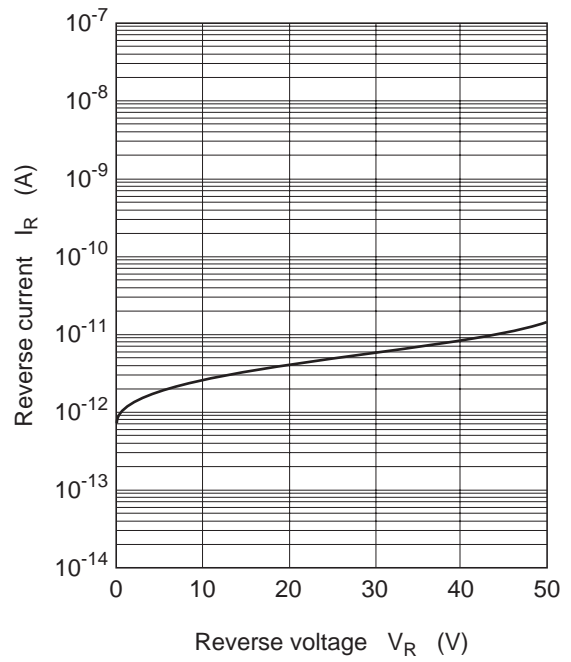


Fig.2 Reverse current vs. Reverse voltage

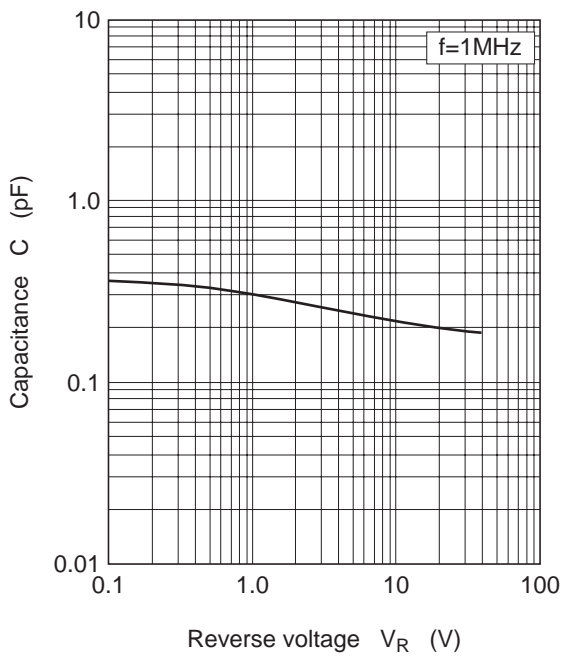


Fig.3 Capacitance vs. Reverse voltage

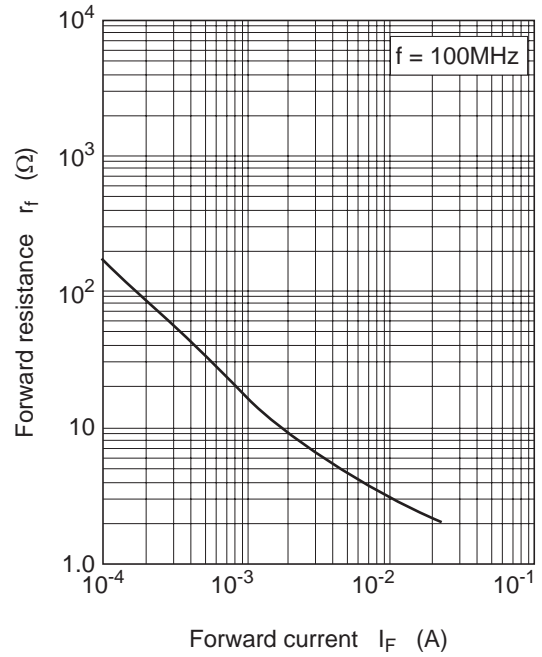
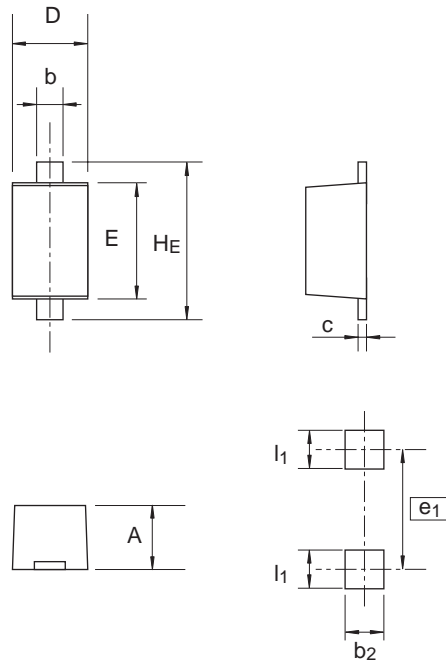


Fig.4 Forward resistance vs. Forward current

Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
UFP	SC-79	PWSF0002ZA-A	UFP / UFPV	0.0016g



Pattern of terminal position areas

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	0.50	0.60	0.70
b	0.25	0.30	0.35
c	0.08	0.13	0.18
D	0.70	0.80	0.90
E	1.10	1.20	1.30
H_E	1.50	1.60	1.70
b_2	—	0.80	—
e_1	—	1.70	—
l_1	—	0.60	—

Notes:

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