

HVC135

Silicon Epitaxial Trench Pin Diode for Antenna Switching

HITACHI

ADE-208-818A (Z)

Rev 1

Feb. 2000

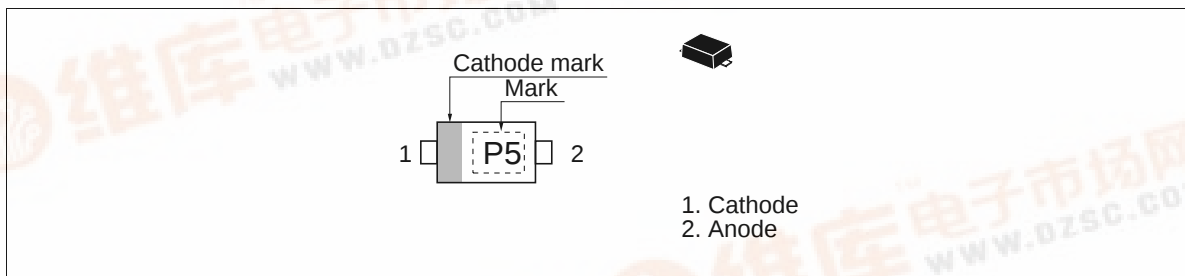
Features

- Adopting the trench structure improves low capacitance.(C=0.6pF max)
- Low forward resistance. ($r_f=2.0\Omega$ max)
- Low operation current.
- Ultra small Flat Package (UFP) is suitable for surface mount design and stable rf characteristics in high frequency.

Ordering Information

Type No.	Laser Mark	Package Code
HVC135	P5	UFP

Outline



HVC135

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	V_{RM}	65	V
Reverse voltage	V_R	60	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	—	—	0.1	μA	$V_R = 60V$
Forward voltage	V_F	—	—	0.9	V	$I_F = 2\text{ mA}$
Capacitance	C	—	—	0.6	pF	$V_R = 1V, f = 1\text{ MHz}$
Forward resistance	r_f	—	—	2.0	Ω	$I_F = 2\text{mA}, f = 100\text{ MHz}$
ESD-Capability ^{*1}	—	100	—	—	V	C = 200pF , Both forward and reverse direction 1 pulse.

Notes 1. Failure criterion ; $I_R > 100\text{nA}$ at $V_R = 60\text{ V}$

Main Characteristic

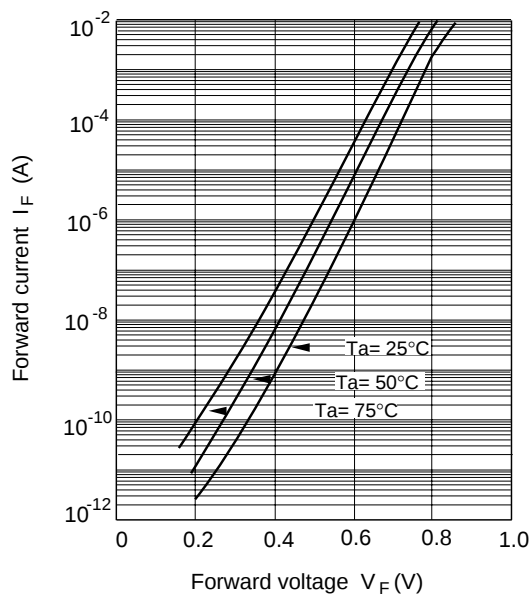


Fig.1 Forward current Vs. Forward voltage

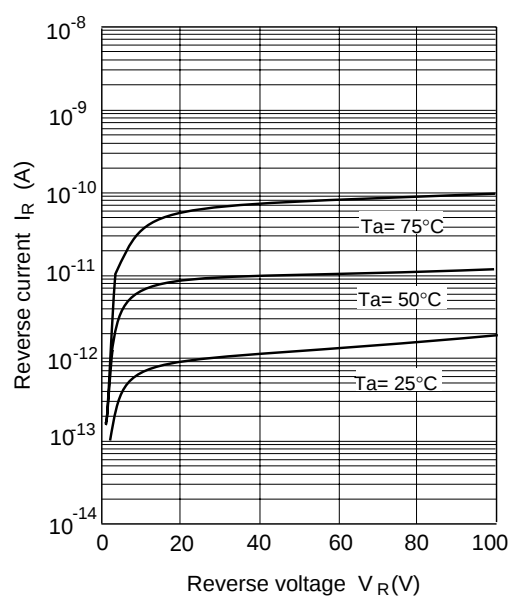


Fig.2 Reverse current Vs. Reverse voltage

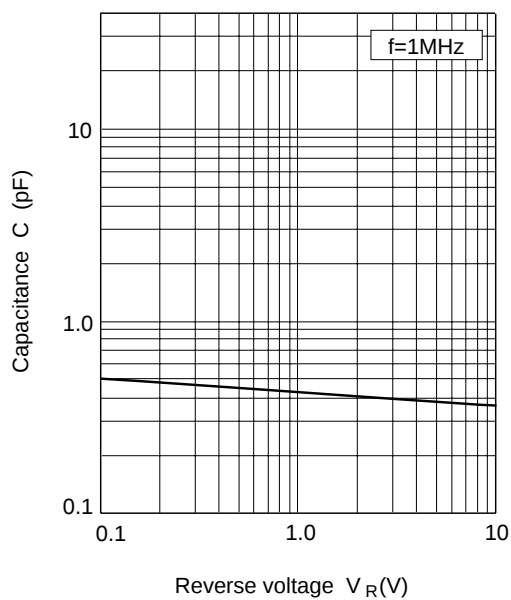


Fig.3 Capacitance Vs. Reverse voltage

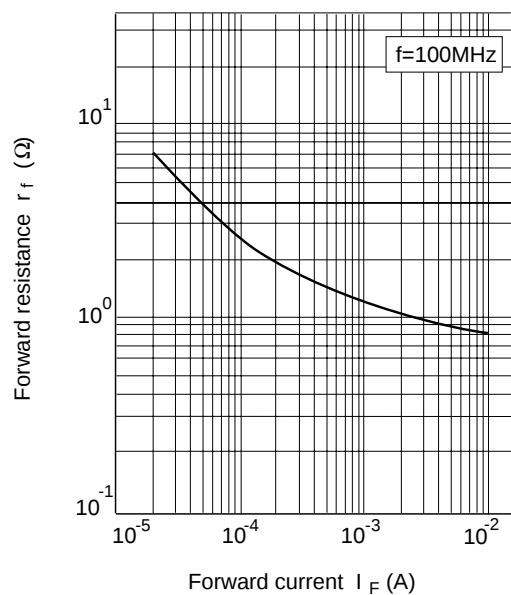


Fig.4 Forward resistance Vs. Forward current

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Main Characteristic

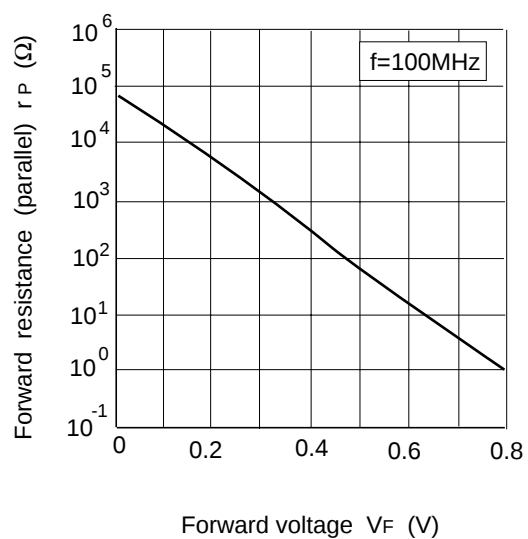
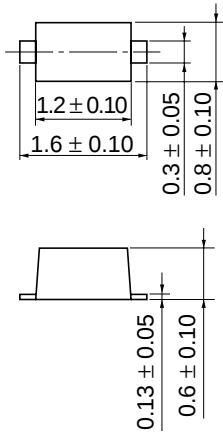


Fig.5 Forward resistance (parallel) Vs. Forward voltage

Package Dimensions

Unit: mm



Hitachi Code	UFP
JEDEC	—
EIAJ	Conforms
Weight (reference value)	0.0016 g

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HITACHI

Hitachi, Ltd.

Semiconductor & Integrated Circuits.
Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan
Tel: Tokyo (03) 3270-2111 Fax: (03) 3270-5109

URL	NorthAmerica	:	http://semiconductor.hitachi.com/
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For further information write to:

Hitachi Semiconductor
(America) Inc.
179 East Tasman Drive,
San Jose, CA 95134
Tel: <1> (408) 433-1990
Fax: <1> (408) 433-0223

Hitachi Europe GmbH
Electronic components Group
Domacher StraÙe 3
D-85622 Feldkirchen, Munich
Germany
Tel: <49> (89) 9 9180-0
Fax: <49> (89) 9 29 30 00

Hitachi Europe Ltd.
Electronic Components Group.
Whitebrook Park
Lower Cookham Road
Maidenhead
Berkshire SL6 8YA, United Kingdom
Tel: <44> (1628) 585000
Fax: <44> (1628) 778322

Hitachi Asia Pte. Ltd.
16 Collyer Quay #20-00
Hitachi Tower
Singapore 049318
Tel: 535-2100
Fax: 535-1533

Hitachi Asia Ltd.
Taipei Branch Office
3F, Hung Kuo Building, No.167,
Tun-Hwa North Road, Taipei (105)
Tel: <886> (2) 2718-3666
Fax: <886> (2) 2718-8180

Hitachi Asia (Hong Kong) Ltd.
Group III (Electronic Components)
7/F., North Tower, World Finance Centre,
Harbour City, Canton Road, Tsim Sha Tsui,
Kowloon, Hong Kong
Tel: <852> (2) 735 9218
Fax: <852> (2) 730 0281
Telex: 40815 HITEC HX