HVC135

Silicon Epitaxial Trench Pin Diode for Antenna Switching

HITACHI

ADE-208-818A (Z)
Rev 1
Feb. 2000

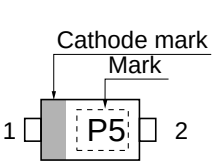
Features

- Adopting the trench structure improves low capacitance.(C=0.6pF max)
- Low forward resistance. (rf=2.0Ω 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



1. Cathode
2. Anode

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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	Tj	125	°C
Storage temperature	Tstg	-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 mA
Capacitance	C	—	—	0.6	pF	V_R = 1V, f = 1 MHz
Forward resistance	r_f	—	—	2.0	Ω	I_F = 2mA, f = 100 MHz
ESD-Capability[*1]	—	100	—	—	V	C = 200pF , Both forward and reverse direction 1 pulse.

Notes 1. Failure criterion ; I_R > 100nA at V_R =60 V

Main Characteristic

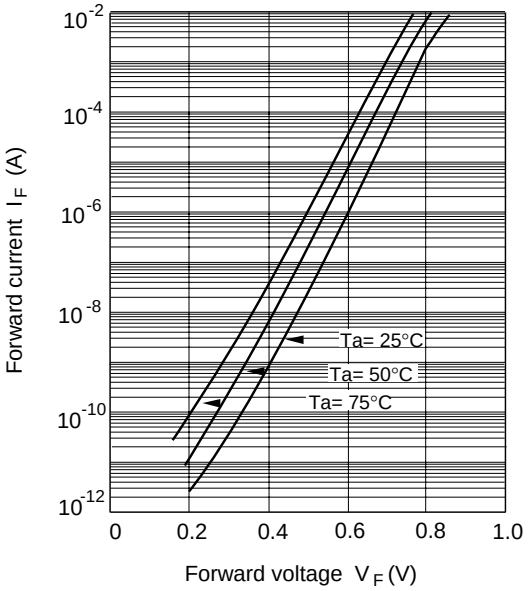


Fig.1 Forward current Vs. Forward voltage

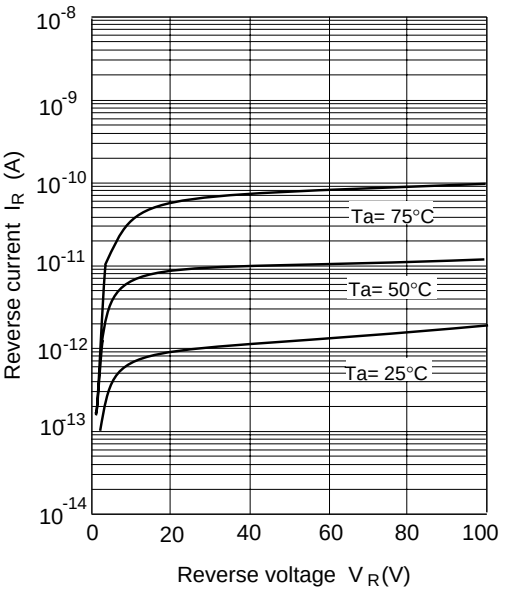


Fig.2 Reverse current Vs. Reverse voltage

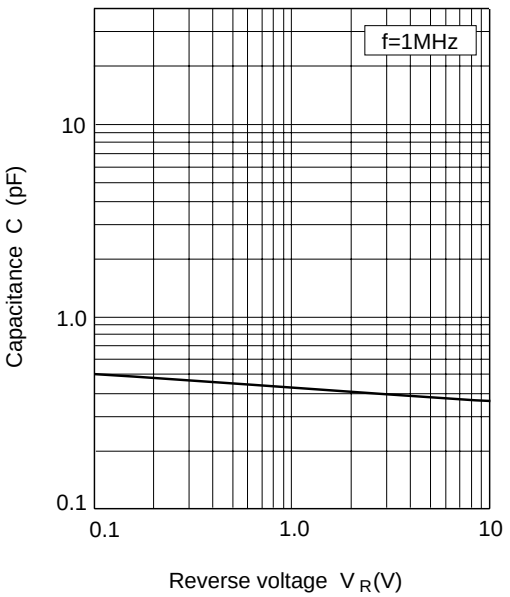


Fig.3 Capacitance Vs. Reverse voltage

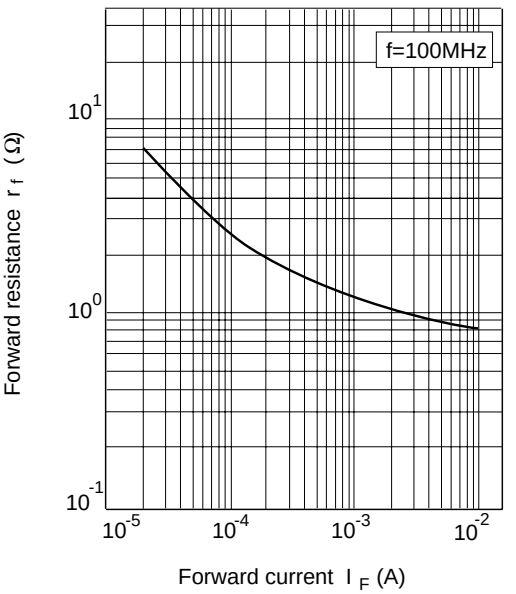


Fig.4 Forward resistance Vs. Forward current

Main Characteristic

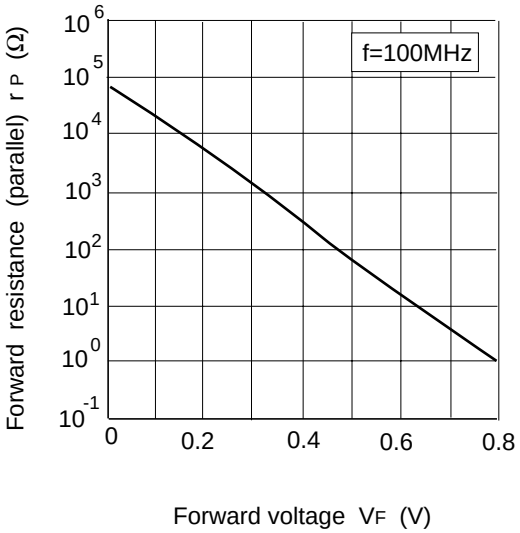
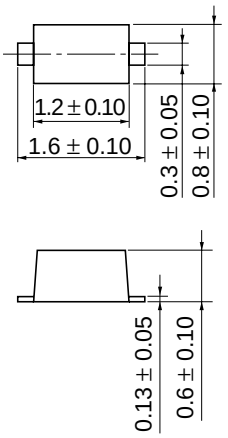


Fig.5 Forward resistance (parallel) Vs. Forward voltage

Package Dimensions

Unit: mm



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

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