HVD142A

Silicon Epitaxial Planar Pin Diode for Antenna Switching

REJ03G0428-0200
Rev.2.00
Sep 21, 2005

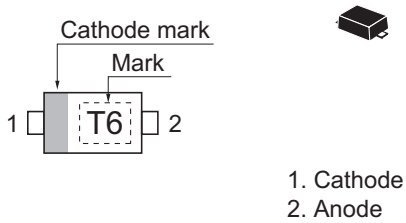
Features

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

Ordering Information

Type No.	Laser Mark	Package Name	Package Code (Previous Code)
HVD142A	T6	SFP	PUSF0002ZB-A (SFP)

Pin Arrangement



1. Cathode
2. Anode

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Reverse voltage	V_R	30	V
Forward current	I_F	100	mA
Power dissipation	Pd	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	—	—	100	nA	V_R = 30 V
Forward voltage	V_F	—	—	1.0	V	I_F = 10 mA
Capacitance	C	—	—	0.35	pF	V_R = 1 V, f = 1 MHz
Forward resistance	r_f	—	—	1.3	Ω	I_F = 10 mA, f = 100 MHz
ESD-Capability *[1]	—	100	—	—	V	C = 200 pF, R = 0 Ω, Both forward and reverse direction 1 pulse.

Notes: 1. Failure criterion ; I_R > 100 nA at V_R = 30 V

2. For SFP package, the material of lead is exposed for cutting plane. There for, soldering nature of lead tip part is considered as unquestioned. Please kindly consider soldering nature.

Main Characteristic

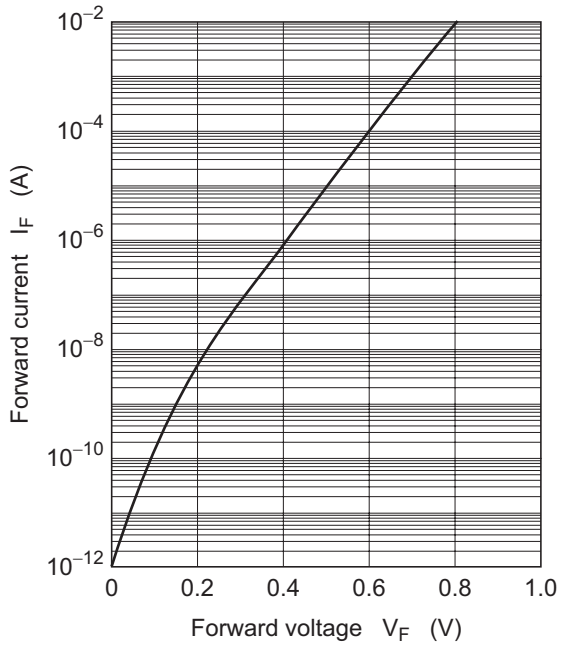


Fig.1 Forward current vs. Forward voltage

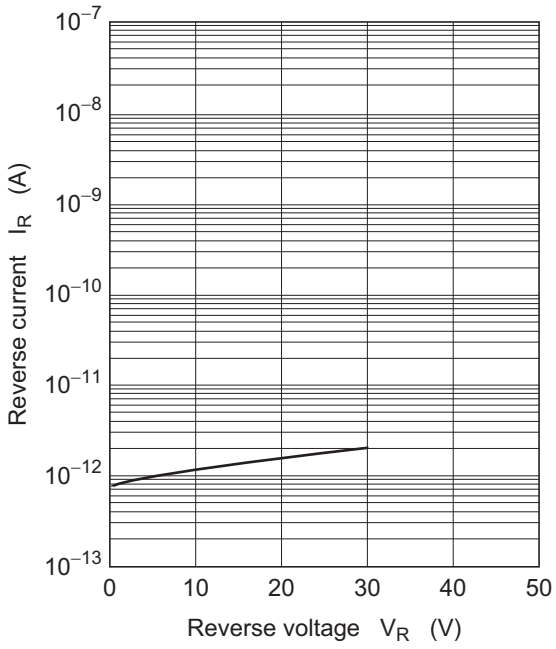


Fig.2 Reverse current vs. Reverse voltage

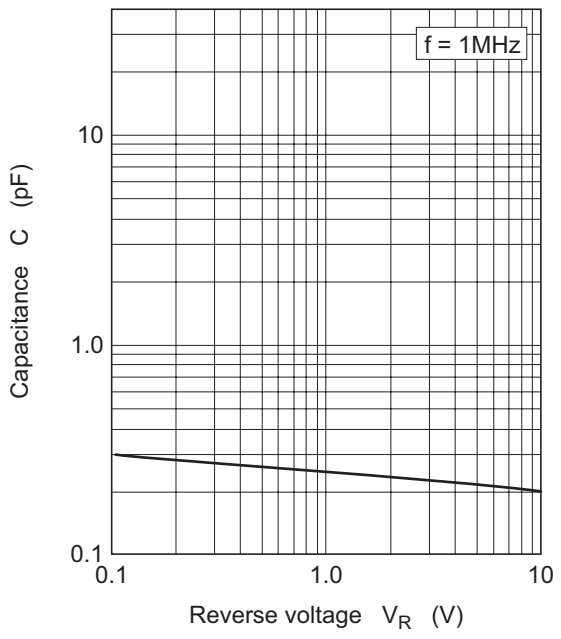


Fig.3 Capacitance vs. Reverse voltage

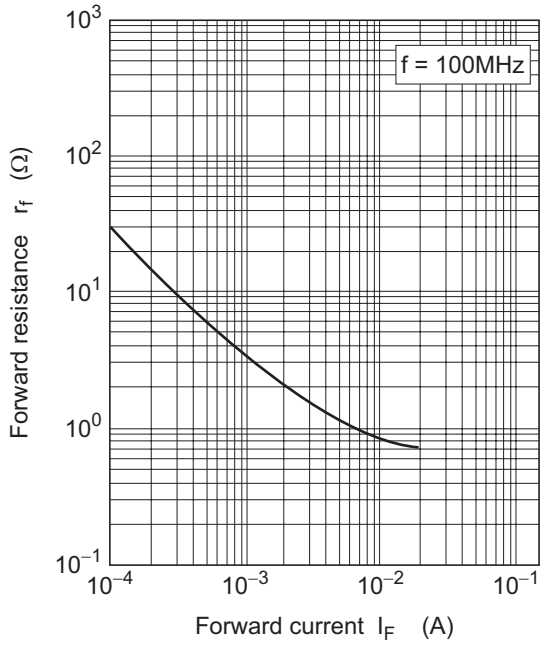


Fig.4 Forward resistance vs. Forward current

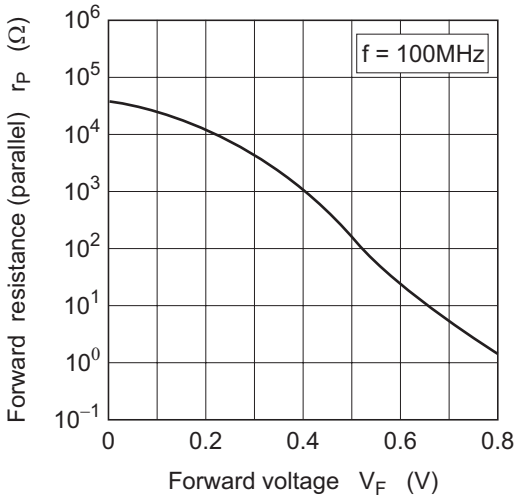
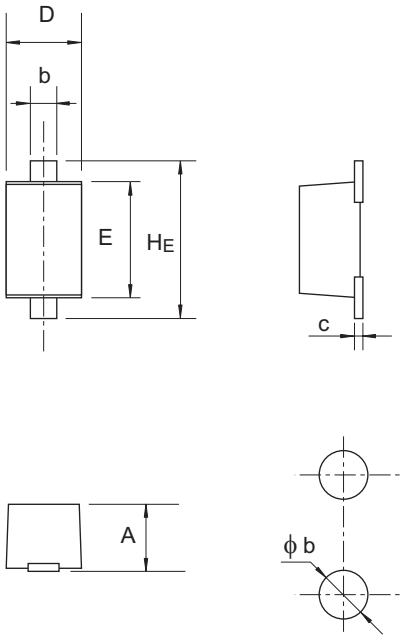


Fig.5 Forward resistance (parallel) vs. Forward voltage

Package Dimensions

JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
—	PUSF0002ZB-A	SFP / SFPV	0.0010g



Pattern of terminal position areas

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	0.50	—	0.55
b	0.25	0.30	0.35
c	0.08	0.13	0.18
D	0.55	0.60	0.65
E	0.90	1.00	1.10
H_E	1.30	1.40	1.50
ϕ b	—	0.50	—
e1	—	1.40	—

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