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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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HSD278

Silicon Schottky Barrier Diode for Detector

REJ03G0605-0200
(Previous: ADE-208-1015A)
Rev.2.00
Apr 15, 2005

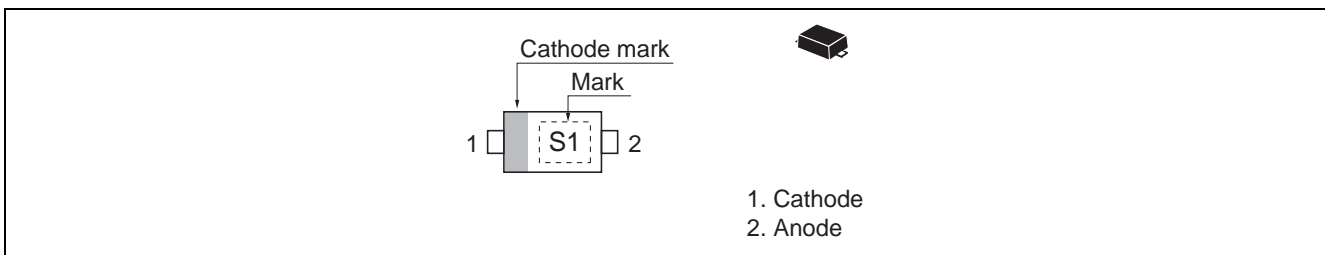
Features

- Low forward voltage, Low capacitance.
- Super small Flat Lead Package (SFP) is suitable for surface mount design.

Ordering Information

Type No.	Cathode Mark	Package Name	Package Code (Previous Code)
HSD278	S1	SFP	PUSF0002ZB-A (SFP)

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Repetitive peak reverse voltage	V_{RRM}	30	V
Reverse voltage	V_R	30	V
Non-Repetitive peak forward surge current	I_{FSM}^*	200	mA
Peak forward current	I_{FM}	150	mA
Average rectified current	I_o	30	mA
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	-55 to +125	°C

Note: 10 ms sine wave 1 pulse

Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	V_{F1}	—	—	0.30	V	$I_F = 1 \text{ mA}$
	V_{F2}	—	—	0.95		$I_F = 30 \text{ mA}$
Reverse current	I_R	—	—	700	nA	$V_R = 10 \text{ V}$
Capacitance	C	—	—	1.5	pF	$V_R = 1 \text{ V}$, $f = 1 \text{ MHz}$
ESD-Capability * ¹	—	100	—	—	V	C = 200 pF, $R_L = 0 \Omega$, Both forward and reverse direction 1 pulse.

Notes: 1. Failure criterion ; $I_R \geq 1.4 \mu\text{A}$ at $V_R = 10 \text{ V}$

2. Please do not use the soldering iron due to avoid high stress to the SFP package.

Main Characteristic

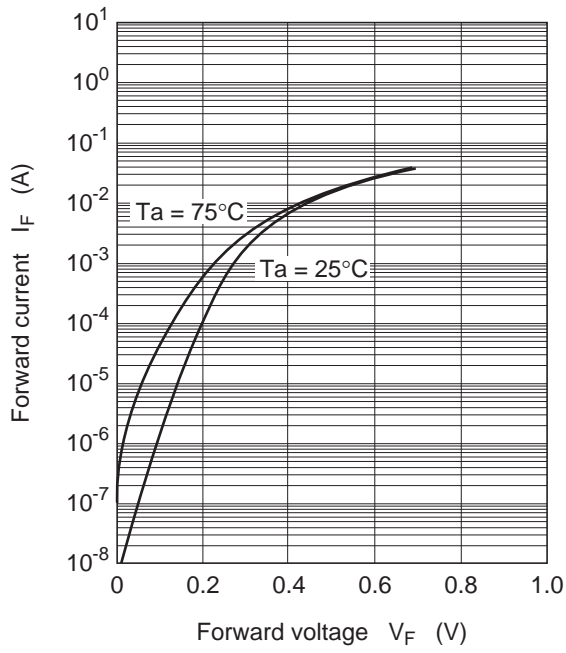


Fig.1 Forward current vs. Forward voltage

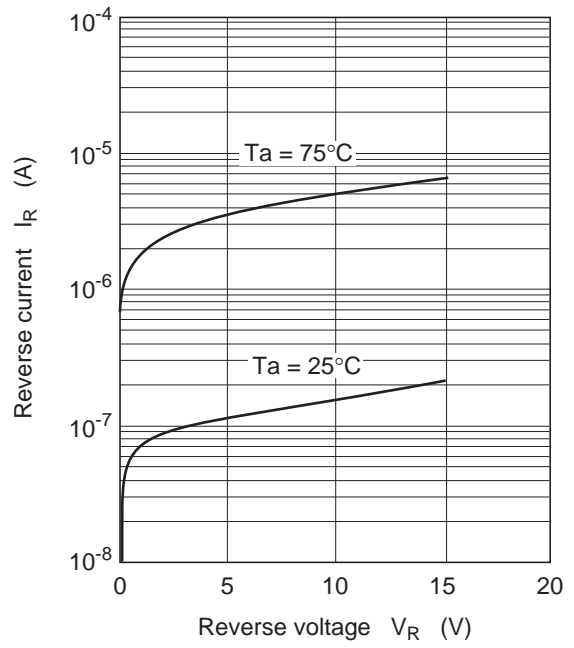


Fig.2 Reverse current vs. Reverse voltage

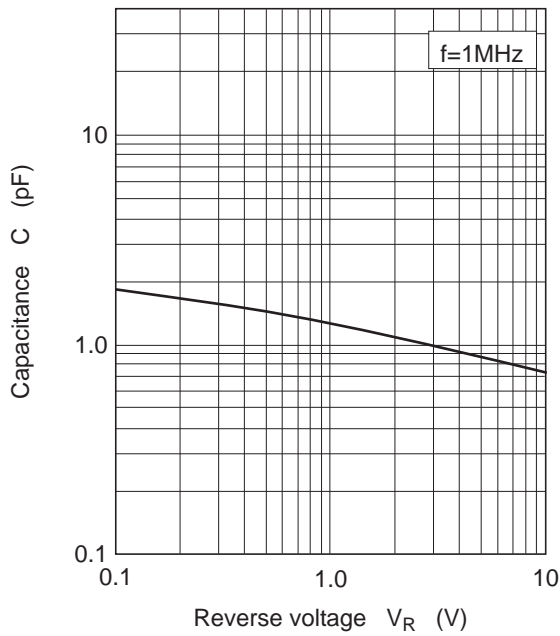
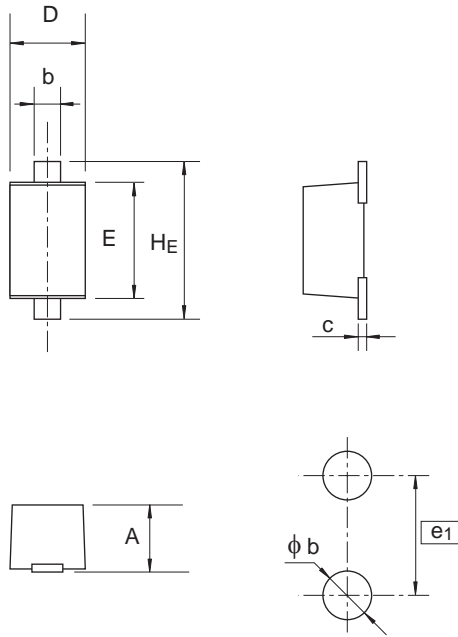


Fig.3 Capacitance vs. Reverse voltage

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
ϕb	—	0.50	—
e_1	—	1.40	—

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