

# HRC0103C

## Silicon Schottky Barrier Diode for Rectifying

REJ03G0069-0300  
 Rev.3.00  
 Jan 09, 2009

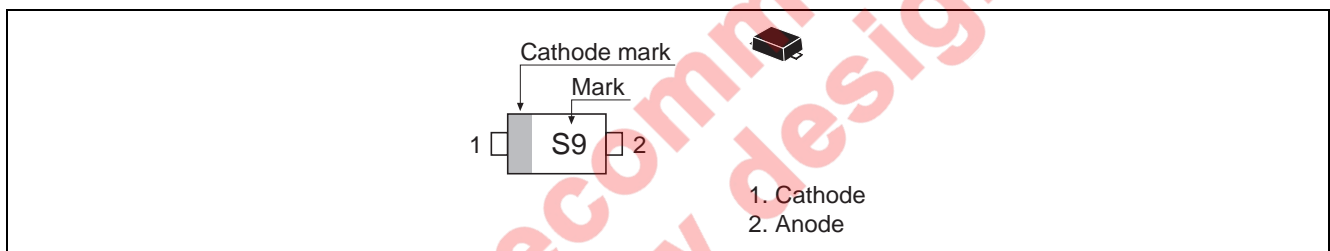
### Features

- Low reverse voltage drop and suitable for high efficiency reverse current.
- Ultra small Flat Lead Package (UFP) is suitable for compact and high-density surface mount design.

### Ordering Information

Part No.	Laser Mark	Package Name	Package Code	Taping Abbreviation (Quantity)
HRC0103CTRF	S9	UFP	PWSF0002ZA-A	TRF (4,000 pcs / reel)

### Pin Arrangement



Not recommended for new design

### Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	$V_{RM}^{*1}$	30	V
Reverse voltage	$V_R$	30	V
Average rectified current	$I_O^{*1}$	100	mA
Peak forward surge current	$I_{FM}$	300	mA
Non-Repetitive peak forward surge current	$I_{FSM}^{*2}$	1	A
Junction temperature	$T_j$	125	°C
Storage temperature	$T_{stg}$	-55 to +125	°C

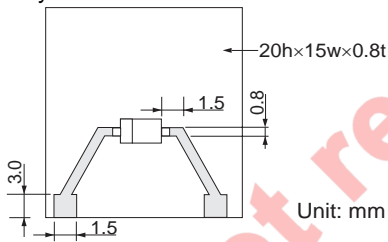
- Notes: 1. See from Fig.3 to Fig.5.  
 2. 10 ms sine wave 1 pulse.

### Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	$V_{F1}$	—	—	0.40	V	$I_F = 10 \text{ mA}$
	$V_{F2}$	—	—	0.60	V	$I_F = 100 \text{ mA}$
Reverse current	$I_{R1}$	—	—	0.1	$\mu\text{A}$	$V_R = 5 \text{ V}$
	$I_{R2}$	—	—	0.2		$V_R = 10 \text{ V}$
Capacitance	C	—	—	8.0	pF	$V_R = 0.5 \text{ V}, f = 1 \text{ MHz}$
Thermal resistance	$R_{th(j-a)}$	—	550	—	°C/W	Polyimide board <sup>*1</sup>

Note: 1. Polyimide board



2. For UFP 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 Characteristics

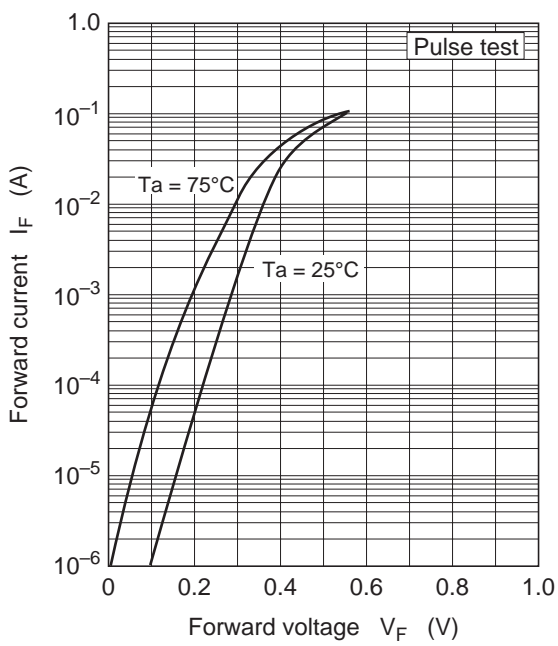


Fig.1 Forward current vs. Forward voltage

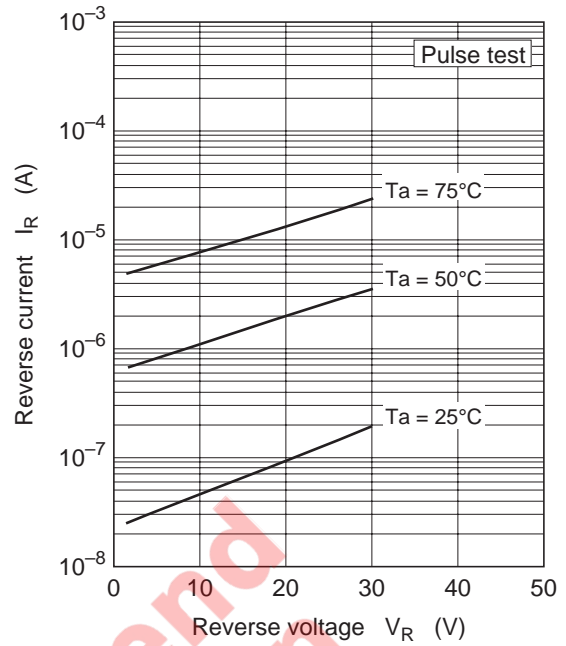


Fig.2 Reverse current vs. Reverse voltage

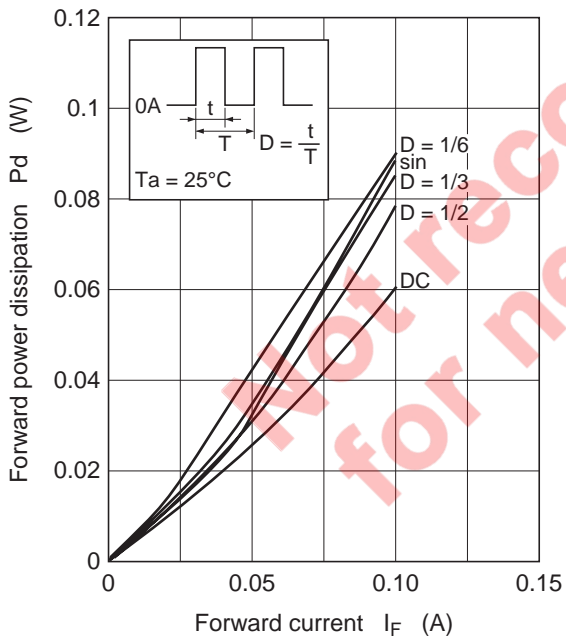


Fig3. Forward power dissipation vs. Forward current

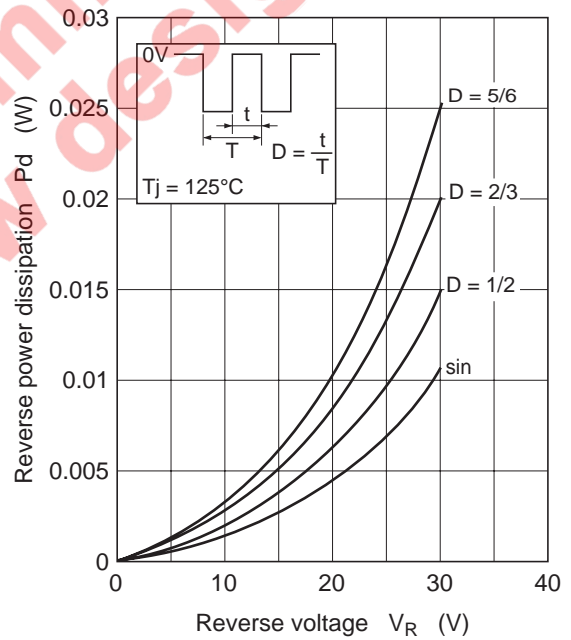


Fig4. Reverse power dissipation vs. Reverse voltage

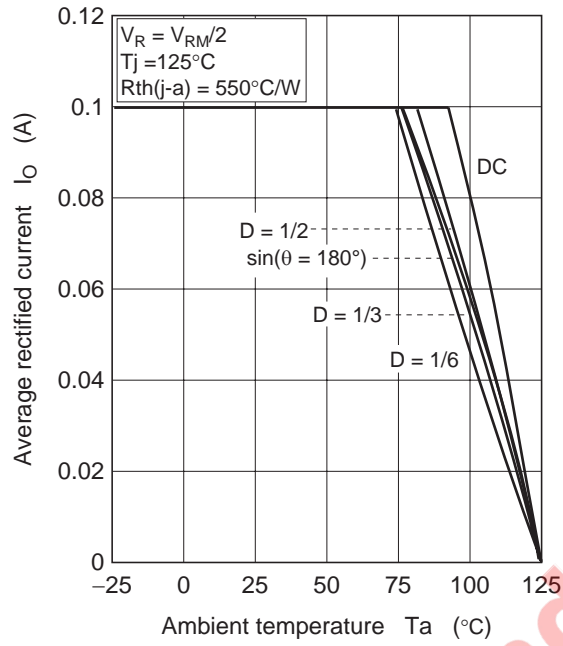
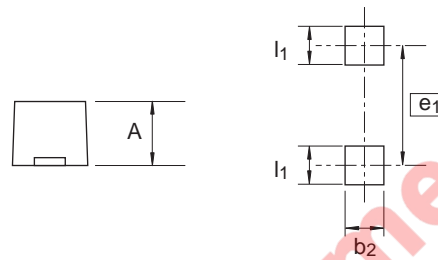
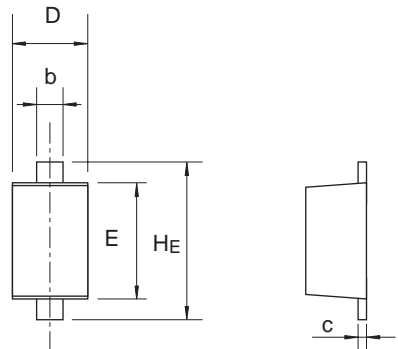


Fig.5 Average rectified current vs. Ambient temperature

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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
HE	1.50	1.60	1.70
b2	—	0.80	—
e1	—	1.70	—
l1	—	0.60	—

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