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April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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Not recommended
for new design

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HSB88WS

Silicon Schottky Barrier Diode for Balanced Mixer

REJ03G0589-0400
 (Previous: ADE-208-026C)
 Rev.4.00
 Apr 05, 2005

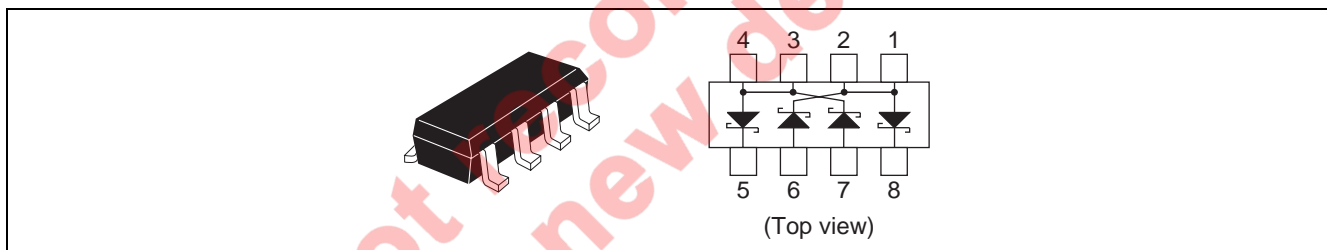
Features

- Small ΔV_F and ΔC .
- Good for surface mounting on printed circuit board.
- Each diode can be biased.
- Wideband operation.

Ordering Information

Type No.	Laser Mark	Package Name	Package Code (Previous Code)
HSB88WS	—	MOP	PTSP0008DB-A (MOP)

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	10	V
Average rectified current	I_O^{*1}	15	mA
Power dissipation	P_d^{*1}	150	mW
Junction temperature	T_j	125	°C
Operation temperature	T_{opr}	-40 to +85	°C
Storage temperature	T_{stg}	-55 to +125	°C

Note: 1. 4 devices total

Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	V_{F1}	0.365	—	0.435	V	$I_F = 1 \text{ mA}$
	V_{F2}	0.520	—	0.600		$I_F = 10 \text{ mA}$
Reverse current	I_{R1}	—	—	0.2	μA	$V_R = 2 \text{ V}$
	I_{R2}	—	—	10		$V_R = 10 \text{ V}$
Capacitance	C	—	—	0.85	pF	$V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$
Capacitance deviation	ΔC^{*1}	—	—	0.2	pF	$V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$
Forward voltage deviation	ΔV_F^{*1}	—	—	15	mV	$I_F = 10 \text{ mA}$
ESD-Capability ^{*2}	—	30	—	—	V	C = 200 pF, R = 0 Ω , Both forward and reverse direction 1 pulse.

Notes: 1. Deviation between 4 devices in one package.

2. Failure criterion ; $I_R > 0.4 \mu\text{A}$ at $V_R = 2 \text{ V}$

Not recommended for new designs

Main Characteristic

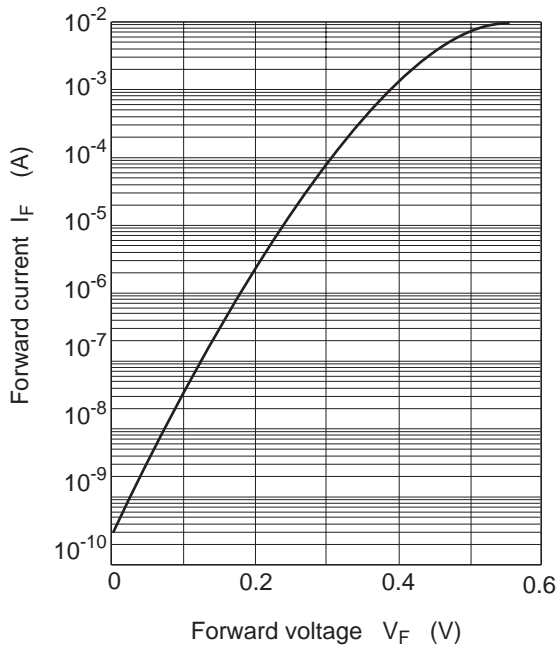


Fig.1 Forward current vs. Forward voltage

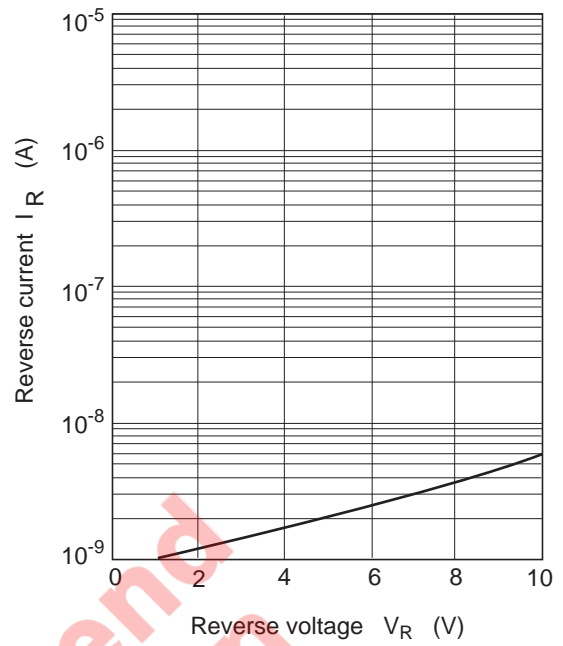


Fig.2 Reverse current vs. Reverse voltage

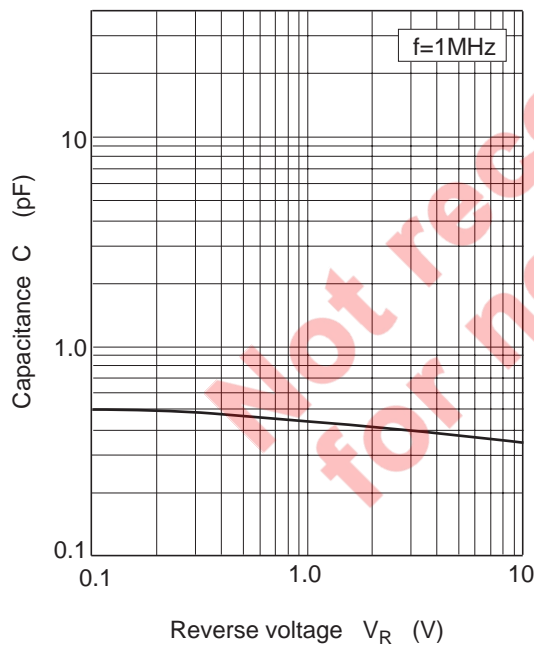
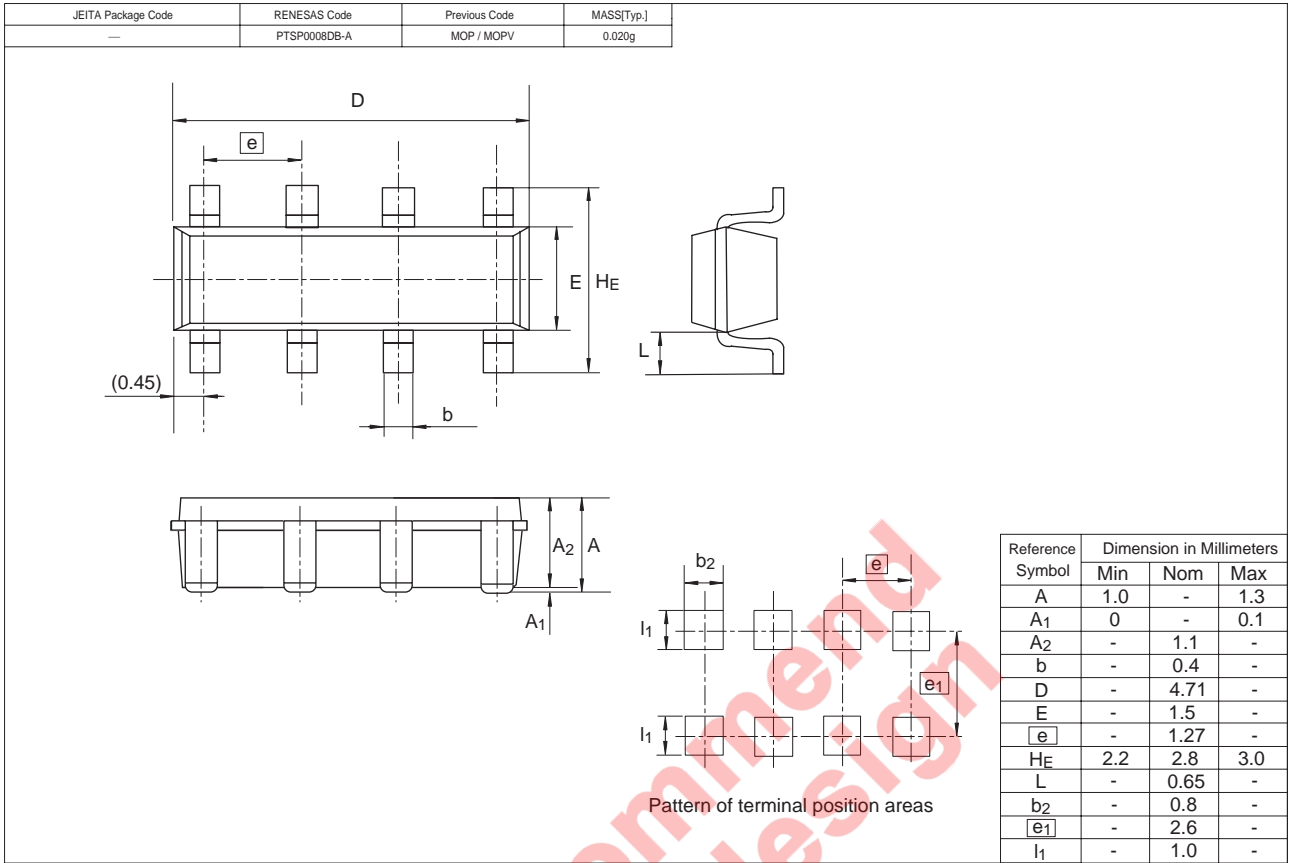


Fig.3 Capacitance vs. Reverse voltage

Package Dimensions



Not recommended for new designs

Keep safety first in your circuit designs!

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Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of nonflammable material or (iii) prevention against any malfunction or mishap.

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