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Renesas Technology Corp.
Customer Support Dept.
April 1, 2003

Cautions

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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HSB88WS

Silicon Schottky Barrier Diode for Balanced Mixer

RENESAS

ADE-208-026C (Z)

Rev. 3
Aug. 2000

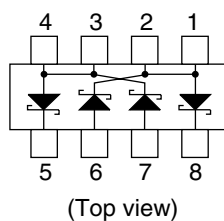
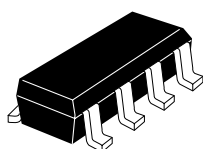
Features

- 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 Code
HSB88WS	—	MOP

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	10	V
Average rectified current	I_O^*	15	mA
Power dissipation	P_d^*	150	mW
Junction temperature	Tj	125	°C
Operation temperature	Topr	−40 to +85	°C
Storage temperature	Tstg	−55 to +125	°C

Note: 4 devices total

Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	V_{F1}	365	—	435	mV	$I_F = 1 \text{ mA}$
	V_{F2}	520	—	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 $V_R = 2 \text{ V}$

Main Characteristic

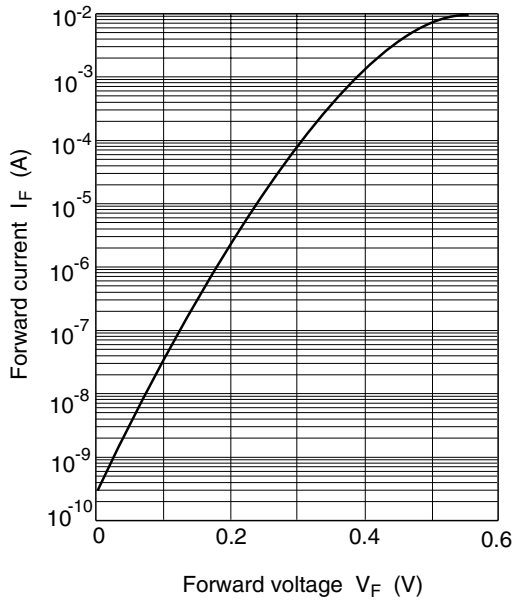


Fig.1 Forward current Vs. Forward voltage

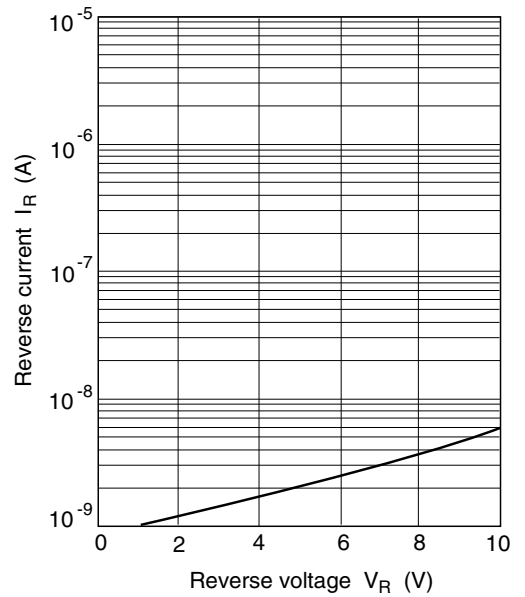


Fig.2 Reverse current Vs. Reverse voltage

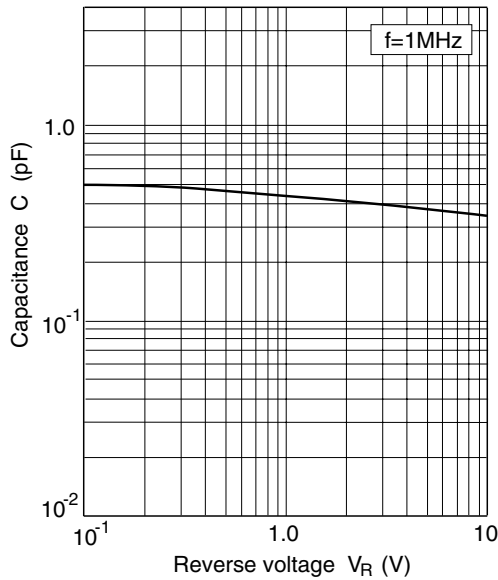
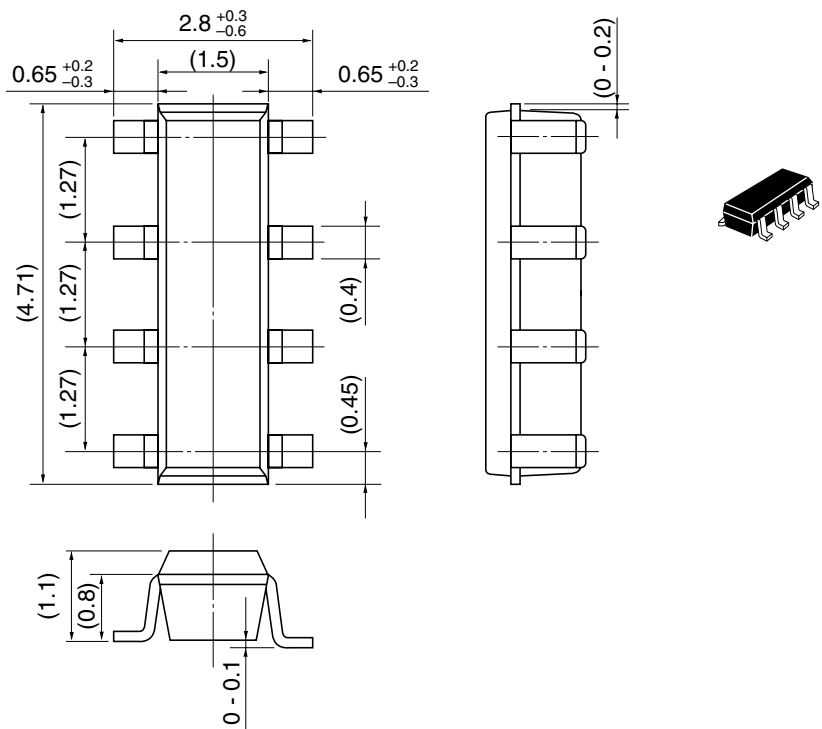


Fig.3 Capacitance Vs. Reverse voltage

Package Dimensions

Unit: mm



Hitachi Code	MOP
JEDEC	—
EIAJ	—
Mass (reference value)	0.020 g

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