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# HSB88WS

Silicon Schottky Barrier Diode for Balanced Mixer

# HITACHI

ADE-208-026C (Z)

Rev. 3  
Aug. 2000

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## Features

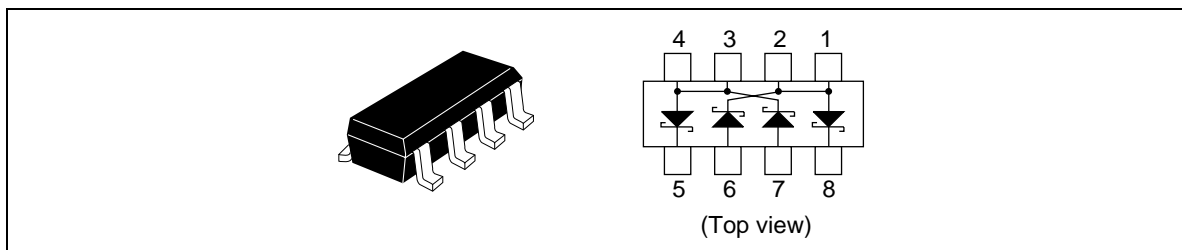
- Small  $\Delta V_f$  and  $\Delta C$ .
- Good for surface mounting on printed circuit board.
- Each diode can be biased.
- Wideband operation.

## Ordering Information

Type No.	Laser Mark	Package Code
HSB88WS	—	MOP

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## Pin Arrangement



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## HSB88WS

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### 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	$Pd^*$	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: 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	$\mu\text{A}$	$V_R = 2 \text{ V}$
	$I_{R2}$	—	—	10		$V_R = 10 \text{ V}$
Capacitance	C	—	—	0.85	pF	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$
Capacitance deviation	$\Delta C^{*1}$	—	—	0.2	pF	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$
Forward voltage deviation	$\Delta V_F^{*1}$	—	—	15	mV	$I_F = 10 \text{ mA}$
ESD-Capability <sup>*2</sup>	—	30	—	—	V	C = 200 pF, R = 0 $\Omega$ , 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

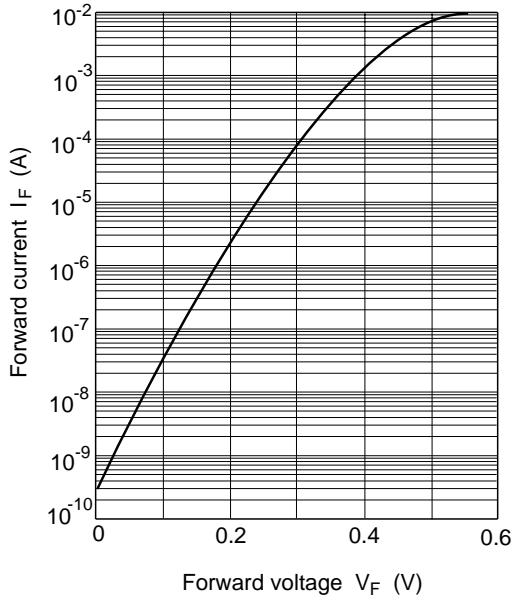


Fig.1 Forward current Vs. Forward voltage

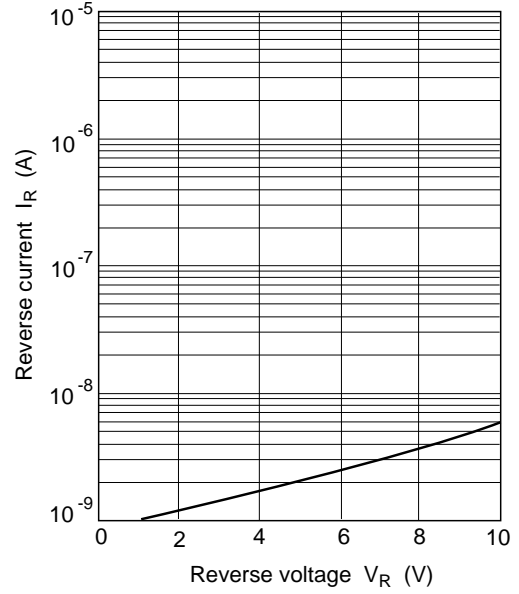


Fig.2 Reverse current Vs. Reverse voltage

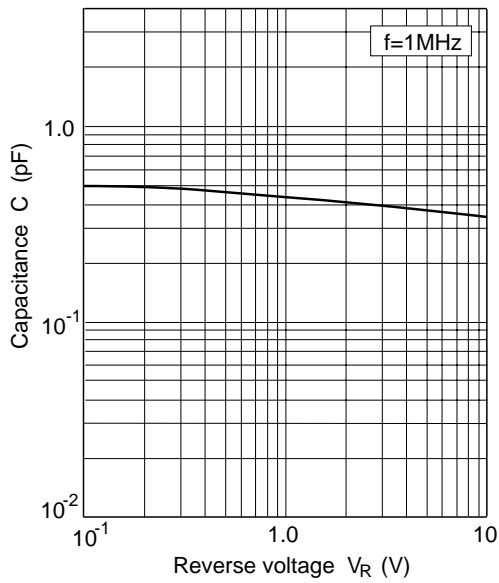
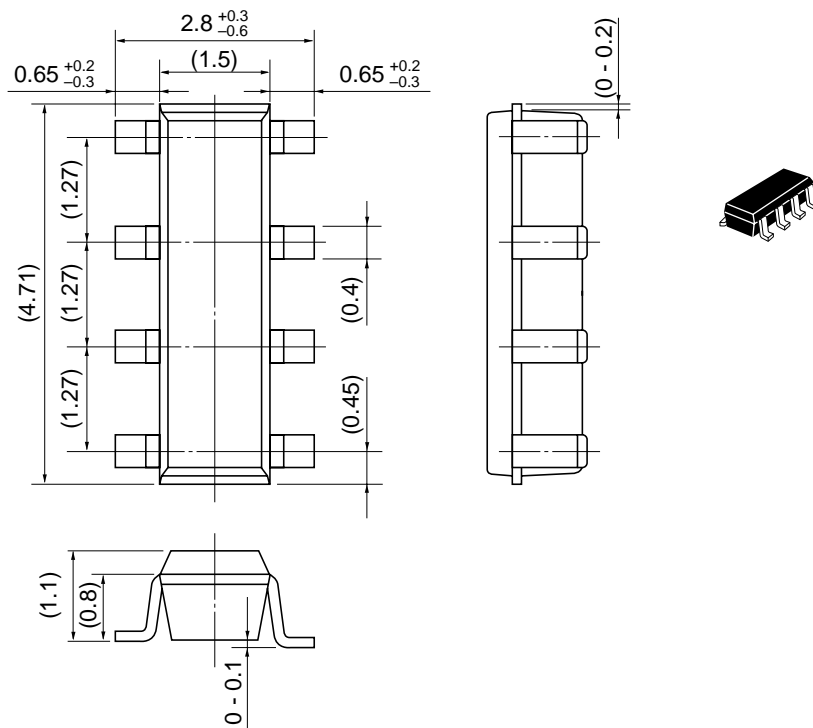


Fig.3 Capacitance Vs. Reverse voltage

# HSB88WS

## Package Dimensions

Unit: mm



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

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