

HSB88WS

Silicon Schottky Barrier Diode for Double Balanced Mixer

HITACHI

Preliminary
Rev. 2
Sep. 1993

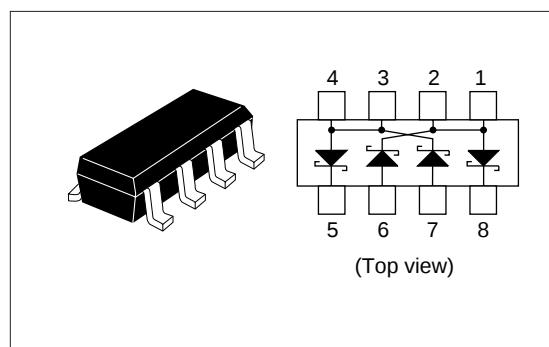
Features

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

Ordering Information

Type No.	Mark	Package Code
HSB88WS	Silver	MOP

Pin Arrangement



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Item	Symbol	Value	Unit
Reverse voltage	V_R	10	V
Average forward current	I_o^*	15	mA
Power dissipation	P_d^*	150	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Operation temperature	T_{opr}	-40 to +85	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

* 4 Devices total

Electrical Characteristics ($T_a = 25^\circ\text{C}$)

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	—	—	0.2	pF	$V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$
Forward voltage deviation	ΔV_F	—	—	15	mV	$I_F = 10 \text{ mA}$
ESD-Capability	—	30	—	—	V	* $C=200\text{pF}$, Both forward and reverse direction 1 pulse.

* Failure criterion ; $I_R \geq 50\mu\text{A}$ at $V_R = 10 \text{ V}$

** Deviation between 4 devices in one package

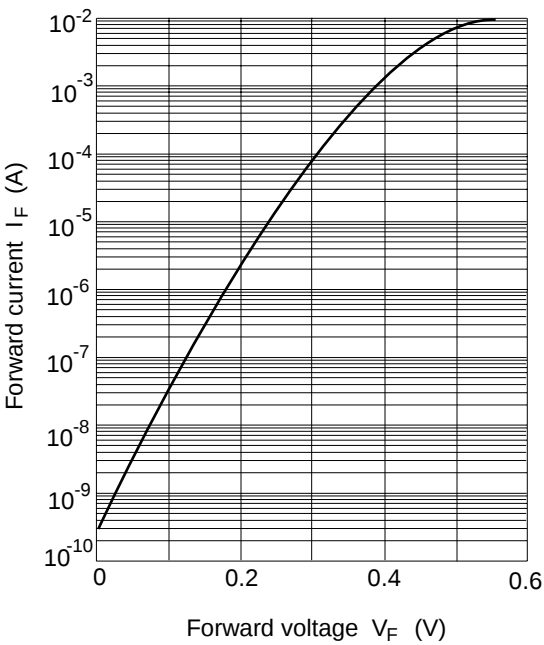


Fig.1 Forward current Vs. Forward voltage

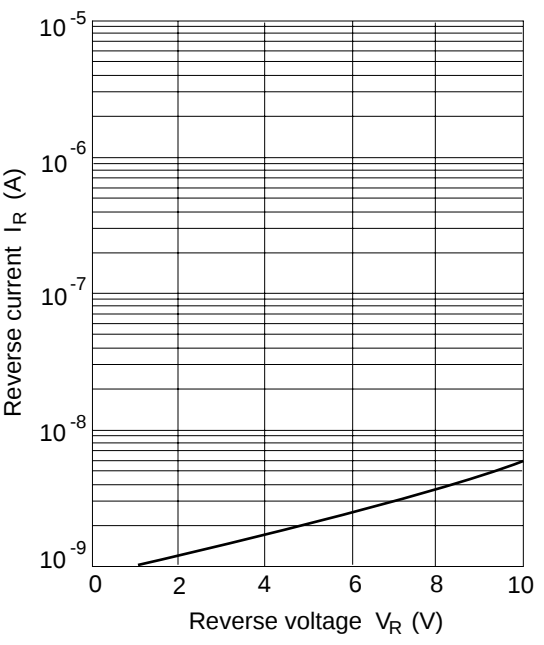


Fig.2 Reverse current Vs. Reverse voltage

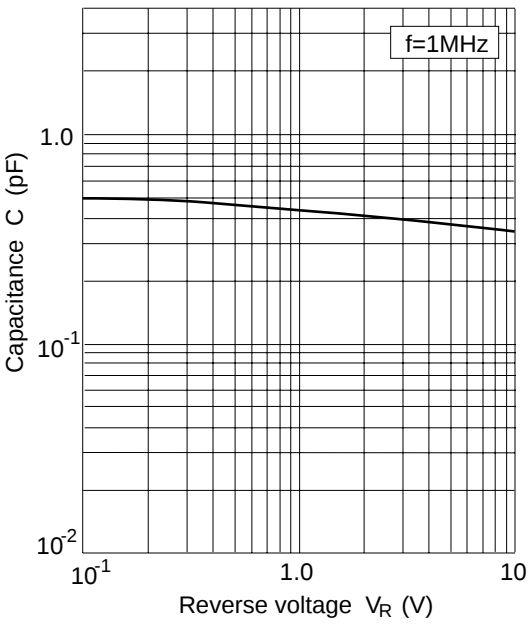


Fig.3 Capacitance Vs. Reverse voltage

Package Dimensions

Unit: mm

