

To all our customers

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

Cautions

Keep safety first in your circuit designs!

1. Renesas Technology Corporation puts the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage.

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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HSM123

Silicon Epitaxial Planar Diode for High Speed Switching



ADE-208-027F (Z)

Rev.6
Nov. 2002

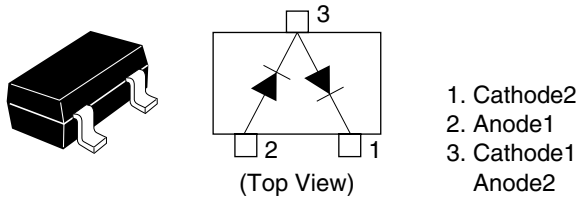
Features

- Low capacitance, proof against high voltage.
- Fast recovery time.
- MPAK package is suitable for high density surface mounting and high speed assembly.

Ordering Information

Type No.	Laser Mark	Package Code
HSM123	A9	MPAK

Pin Arrangement



Absolute Maximum Ratings *¹

(Ta = 25°C)

Item	Symbol	Value	Unit
Peak reverse voltage	V_{RM}	85	V
Reverse voltage	V_R	80	V
Peak forward current	I_{FM}	300	mA
Non-Repetitive peak forward surge current	I_{FSM}^{*2}	4	A
Average forward current	I_O	100	mA
Junction temperature	Tj	125	°C
Storage temperature	Tstg	−55 to +125	°C

Notes: 1. Per one device.

2. Within 1 μs forward surge current.

Electrical Characteristics *

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	V_{F1}	—	0.70	1.0	V	$I_F = 10 \text{ mA}$
	V_{F2}	—	0.79	1.0		$I_F = 50 \text{ mA}$
	V_{F3}	—	0.85	1.2		$I_F = 100 \text{ mA}$
Reverse current	I_R	—	—	0.1	μA	$V_R = 80 \text{ V}$
Capacitance	C	—	1.0	4.0	pF	$V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$
Reverse recovery time	t_{rr}	—	—	3.0	ns	$I_F = 10 \text{ mA}$, $V_R = 6 \text{ V}$, $R_L = 50 \Omega$

Note: Per one device.

Main Characteristic

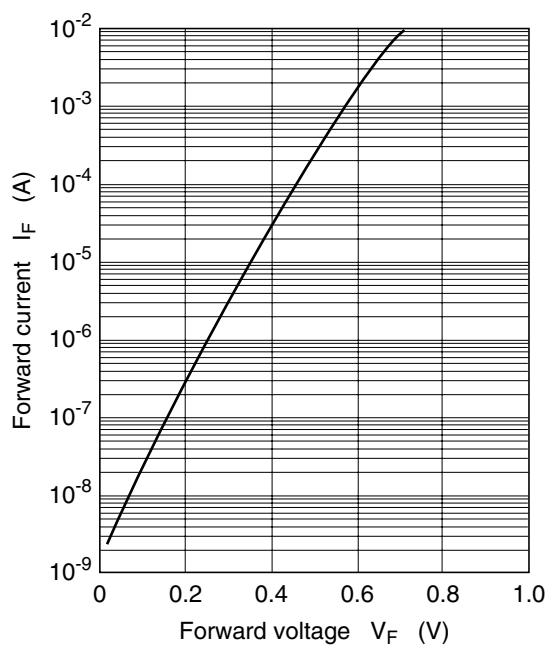


Fig.1 Forward Current vs. Forward Voltage

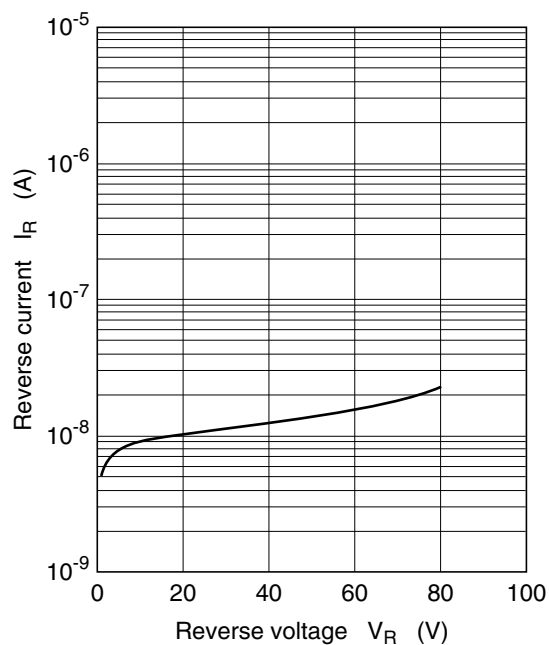


Fig.2 Reverse Current vs. Reverse Voltage

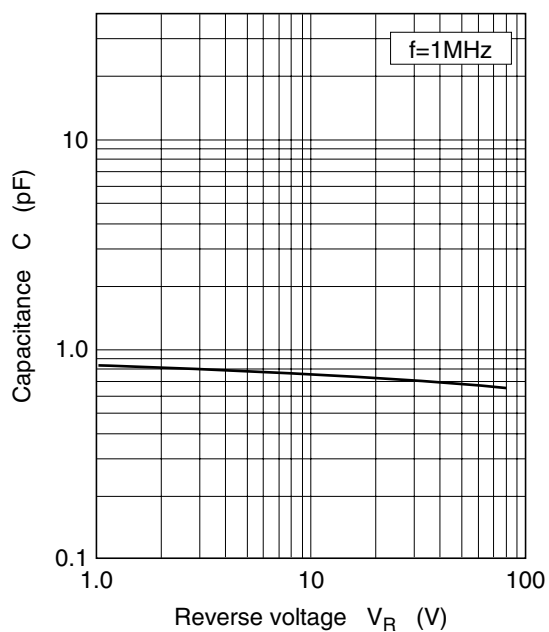
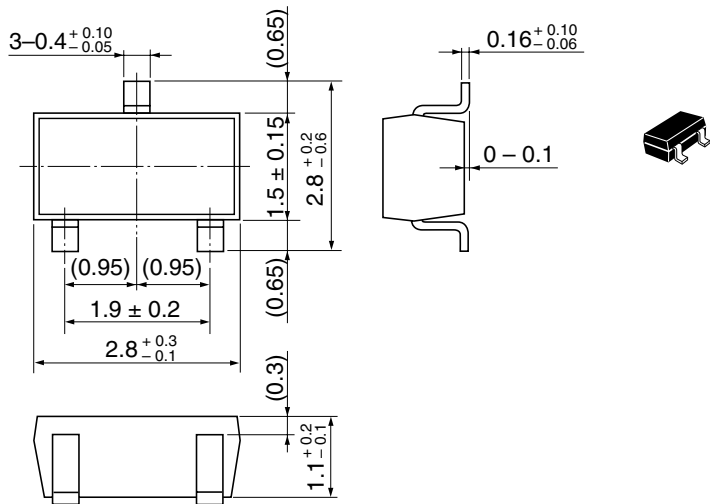


Fig.3 Capacitance vs. Reverse Voltage

Package Dimensions

As of July, 2002
Unit: mm



Hitachi Code	MPAK
JEDEC	—
JEITA	Conforms
Mass (reference value)	0.011 g

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