

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!

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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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# HSM223C

Silicon Epitaxial Planar Diode for High Speed Switching

**RENESAS**

ADE-208-092D (Z)

Rev.4  
Mar. 2002

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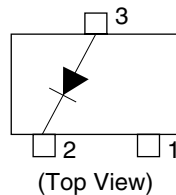
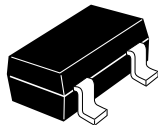
## Features

- 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
HSM223C	A8	MPAK

## Pin Arrangement



1. NC
2. Cathode
3. Anode

## Absolute Maximum Ratings

(Ta = 25°C)

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

Note: Within 1  $\mu$ s forward surge current.

## Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	$V_{F1}$	—	0.76	1.0	V	$I_F = 10$ mA
	$V_{F2}$	—	0.88	1.0		$I_F = 50$ mA
	$V_{F3}$	—	0.97	1.2		$I_F = 100$ mA
Reverse current	$I_R$	—	—	0.1	$\mu$ A	$V_R = 80$ V
Capacitance	C	—	0.5	2.0	pF	$V_R = 0$ V, f = 1 MHz
Reverse recovery time	$t_{rr}$	—	—	3.0	ns	$I_F = 10$ mA, $V_R = 6$ V, $R_L = 50$ $\Omega$

Main Characteristic

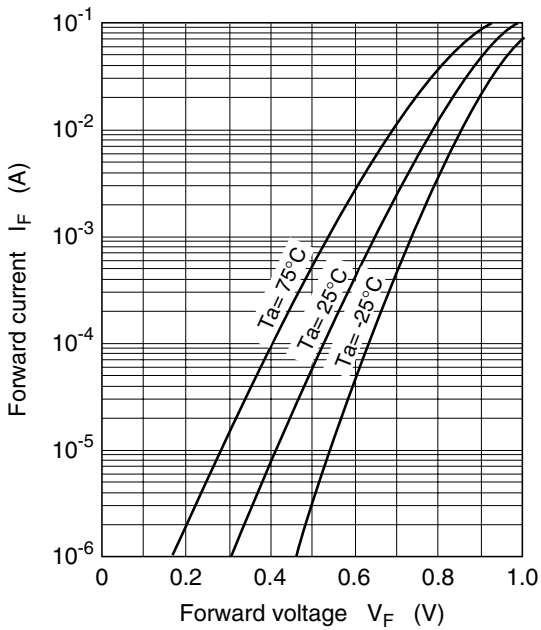


Fig.1 Forward current vs. Forward voltage

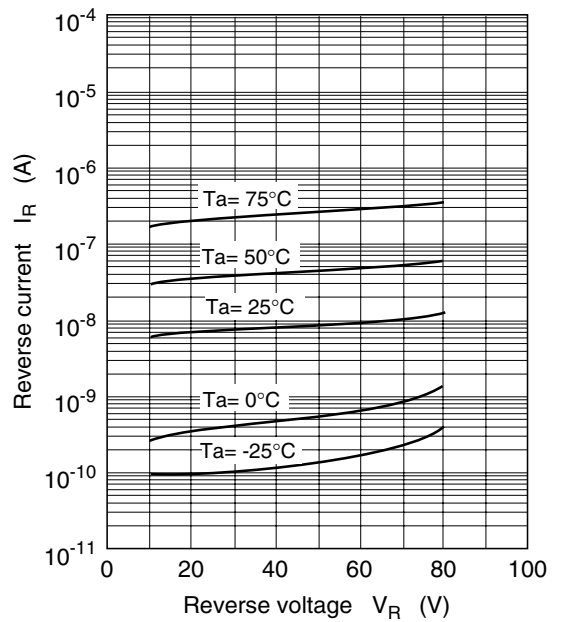


Fig.2 Reverse current vs. Reverse voltage

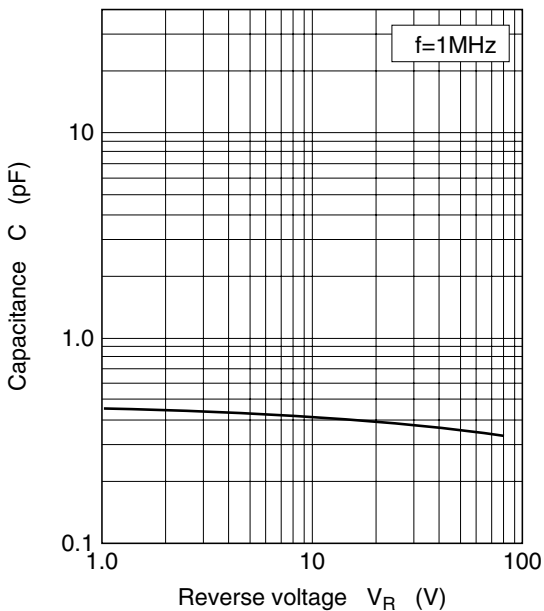
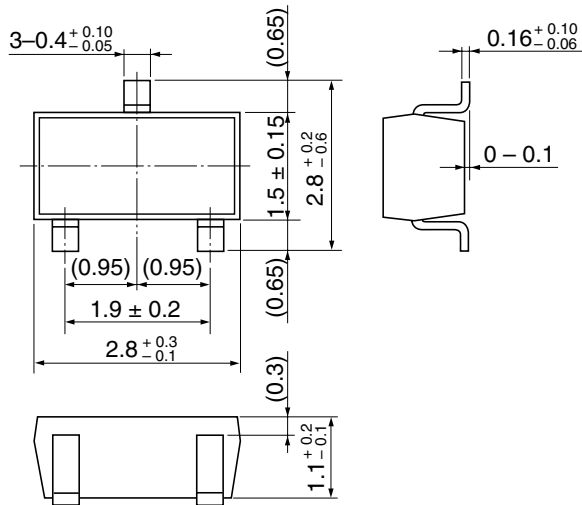


Fig.3 Capacitance vs. Reverse voltage

## Package Dimensions

As of July, 2001  
Unit: mm



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

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