

# HSM107S

Silicon Schottky Barrier Diode for System Protection

# HITACHI

ADE-208-058F(Z)

Rev 6

Sep. 1998

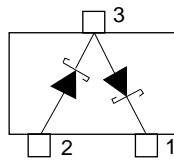
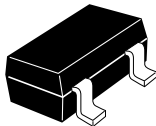
## Features

- Low  $V_F$  and high efficiency.
- HSM107S which is interconnected in series configuration is designed for protection from not only external excessive voltage but also miss-operation on electric systems.
- MPAK package is suitable for high density surface mounting and high speed assembly.

## Ordering Information

Type No.	Laser Mark	Package Code
HSM107S	C5	MPAK

## Outline



(Top View)

- 1 Cathode 2
- 2 Anode 1
- 3 Cathode 1  
Anode 2

## Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	$V_R$	8	V
Peak forward current	$I_{FM}$	0.1	A
Non-Repetitive Peak forward surge current	$I_{FSM}^{*1}$	0.5	A
Average forward current	$I_O$	50	mA
Junction temperature	$T_J$	125	°C
Storage temperature	$T_{stg}$	-55 to +125	°C

Notes: 1. Square wave, 10ms

## Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse voltage	$V_R$	8	—	—	—	$I_R = 1.0$ mA
Reverse current	$I_R$	—	—	30	$\mu$ A	$V_R = 5$ V
Forward voltage	$V_F$	—	—	0.3	V	$I_F = 10$ mA
ESD Capability <sup>*1</sup>	—	100	—	—	V	C=200pF, Both forward and reverse direction 1 pulse

Notes: 1. Failure Criterion ;  $I_R \geq 60\mu$ A at  $V_R=5$ V

Main Characteristic

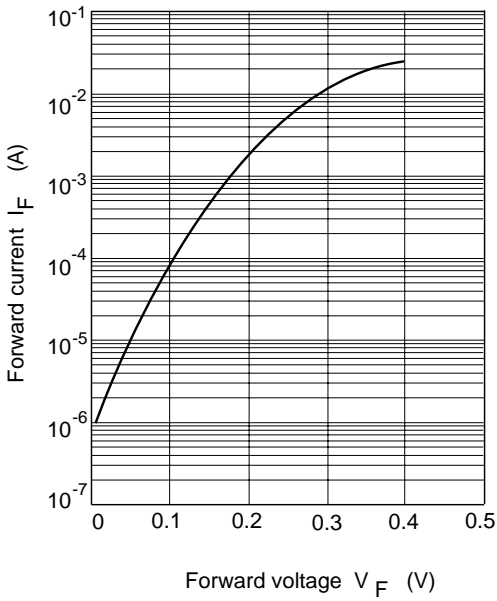


Fig.1 Forward current Vs. Forward voltage

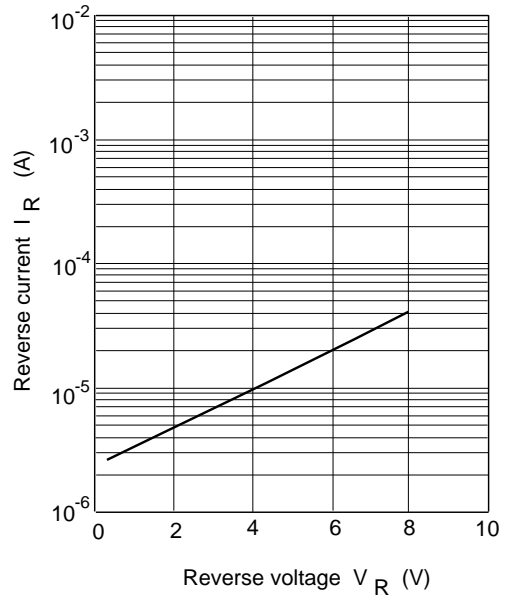


Fig.2 Reverse current Vs. Reverse voltage

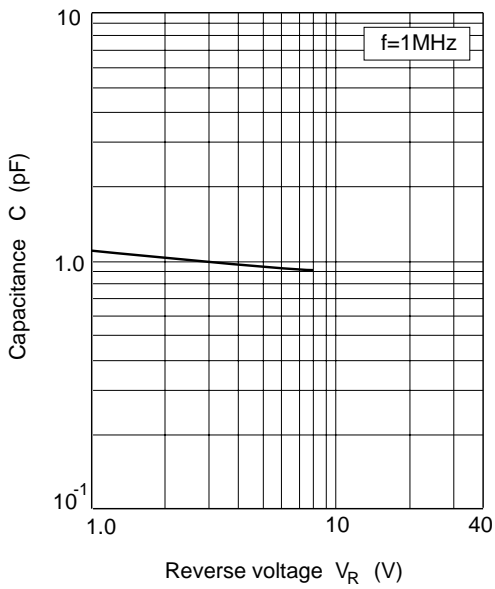
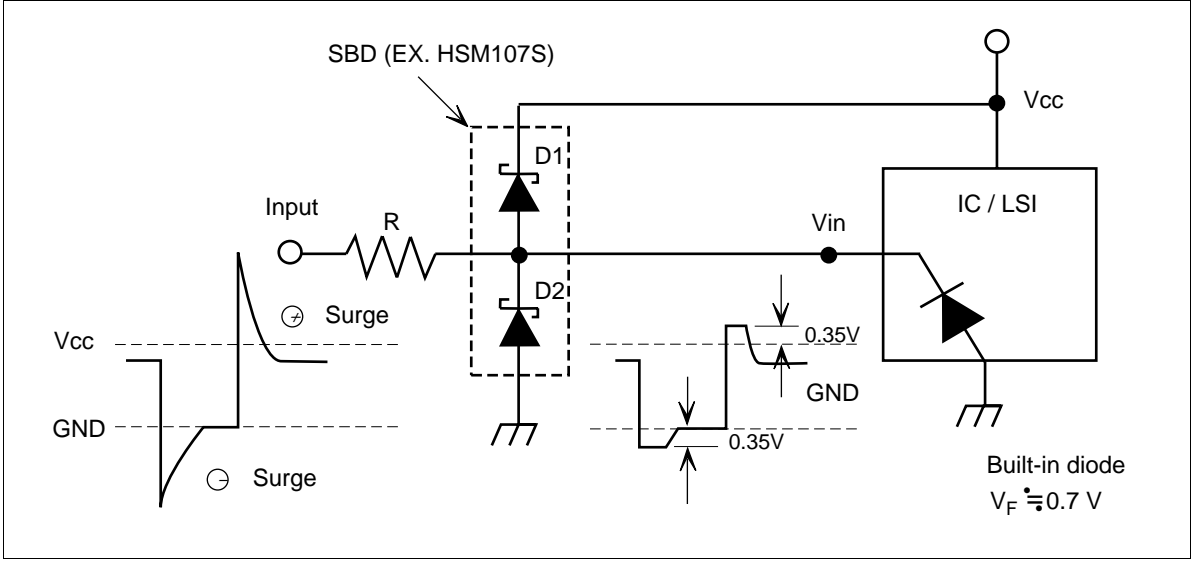


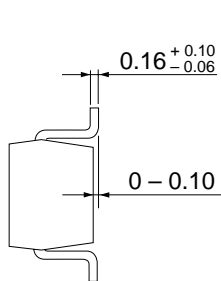
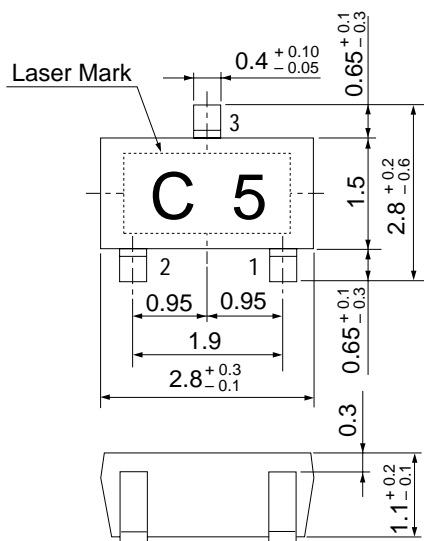
Fig.3 Capacitance Vs. Reverse voltage

## Example of application circuit



Package Dimensions

Unit : mm



- 1 Cathode 2
- 2 Anode 1
- 3 Cathode 1  
Anode 2

Hitachi Code	MPAK(1)
JEDEC Code	—
EIAJ Code	SC-59A
Weight (g)	0.011

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