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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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HSM126S

Silicon Schottky Barrier Diode for System Protection

RENESAS

ADE-208-111C (Z)

Rev. 3
May 1995

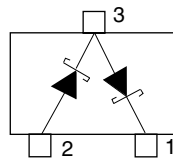
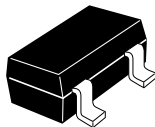
Features

- HSM126S which is connected in series configuration enable to protect electric systems from miss-operation against external + and – surge.
- Low V_F and low leakage current.
- MPAK package is suitable for high density surface mounting and high speed assembly.

Ordering Information

| Type No. | Laser Mark | Package Code |
|----------|------------|--------------|
| HSM126S | S14 | MPAK |

Pin Arrangement



(Top View)

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

Absolute Maximum Ratings*³

(Ta = 25°C)

| Item | Symbol | Value | Unit |
|-------------------------------------------|----------------|-------------|------|
| Repetitive peak reverse voltage | V_{RRM} | 20 | V |
| Average forward current | I_O^{*1} | 200 | mA |
| Non-Repetitive peak forward surge current | I_{FSM}^{*2} | 2 | A |
| Junction temperature | Tj | 125 | °C |
| Storage temperature | Tstg | -55 to +125 | °C |

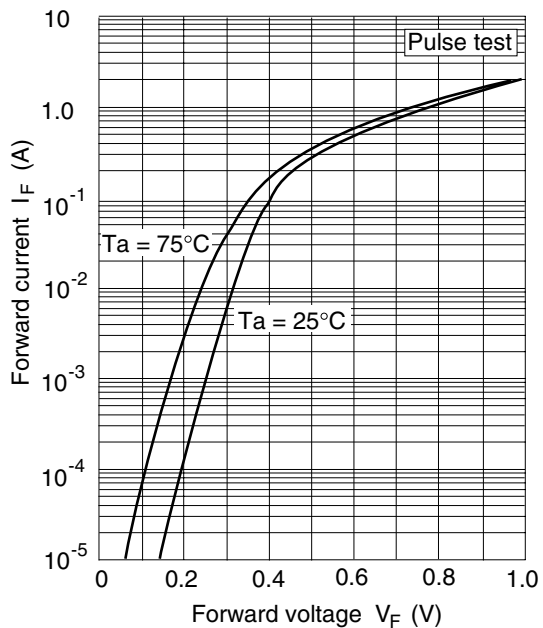
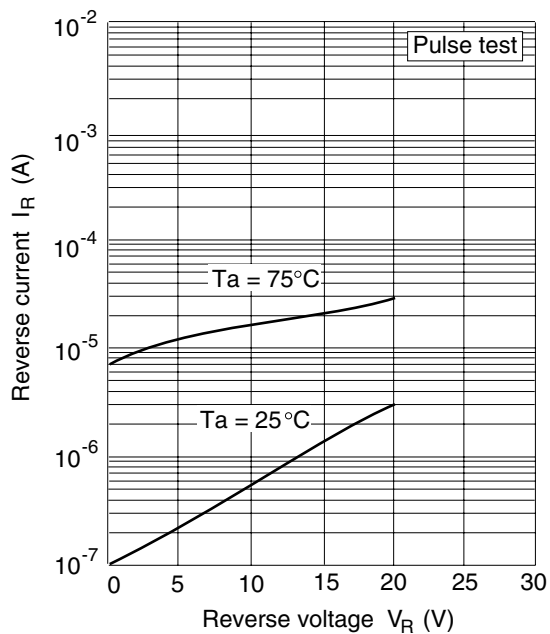
Notes: 1. Sine wave, Two device total
2. 50Hz half sine wave 1 pulse
3. Per one device

Electrical Characteristics*

(Ta = 25°C)

| Item | Symbol | Min | Typ | Max | Unit | Test Condition |
|-----------------|--------|-----|-----|------|------|----------------------|
| Reverse current | I_R | — | — | 2.0 | μA | $V_R = 5V$ |
| Forward voltage | V_F | — | — | 0.35 | V | $I_F = 10mA$ |
| Capacitance | C | — | 40 | — | pF | $V_R = 0V, f = 1MHz$ |

Note: Per one device

**Fig.1 Forward current Vs. Forward voltage****Fig.2 Reverse current Vs. Reverse voltage**

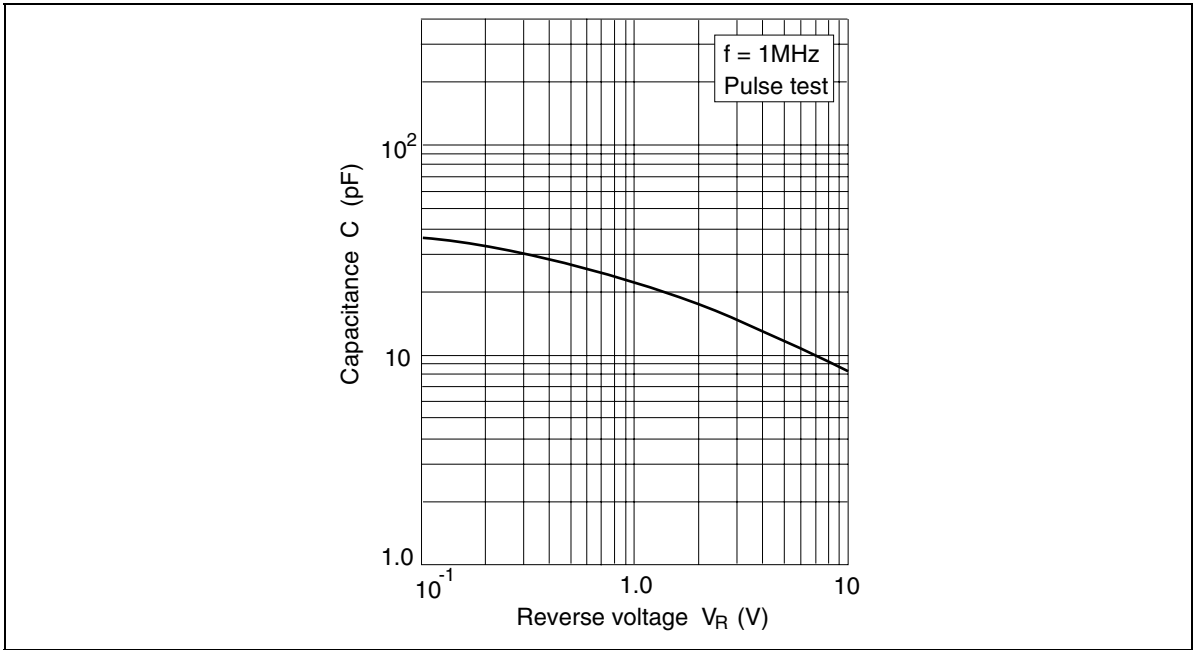
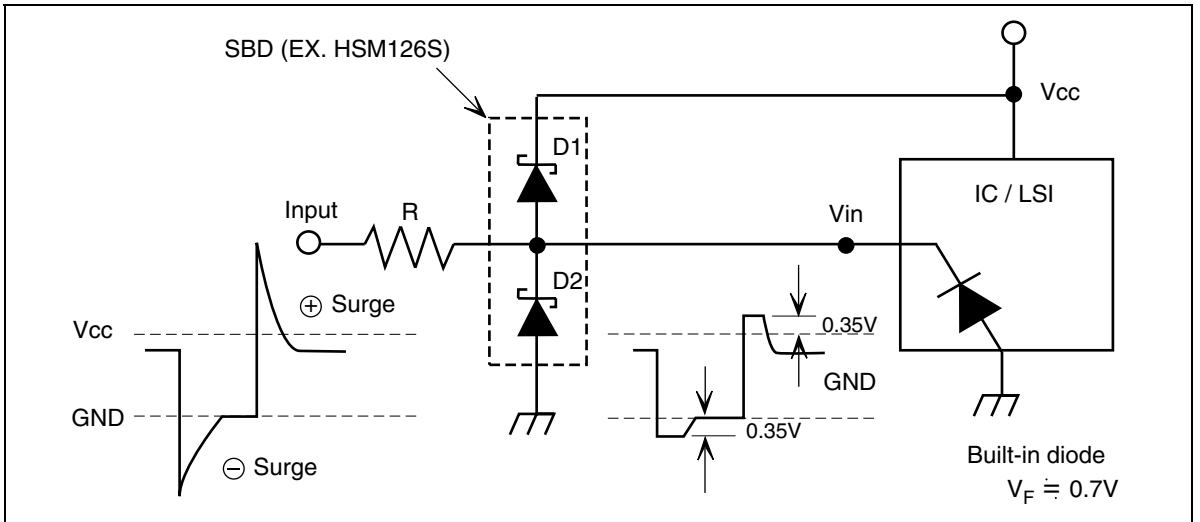


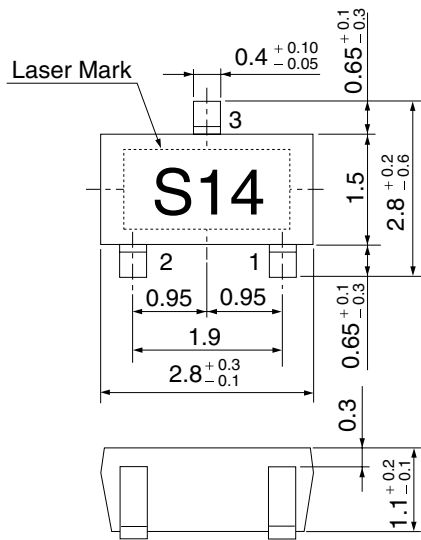
Fig.3 Capacitance Vs. Reverse voltage

Example of application circuite



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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