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April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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Not recommended
for new design

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1SS120

Silicon Epitaxial Planar Diode for High Speed Switching

REJ03G0565-0400
 (Previous: ADE-208-167C)
 Rev.4.00
 Mar 24, 2005

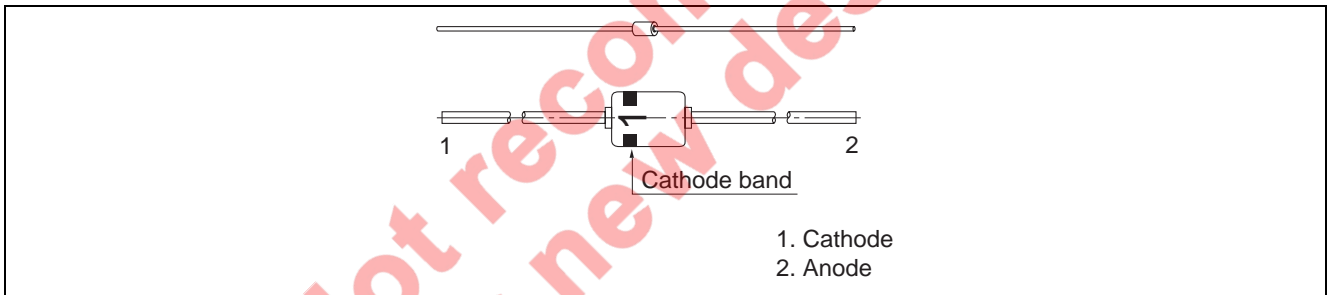
Features

- Low capacitance. ($C = 3.0 \text{ pF max}$)
- Short reverse recovery time. ($t_{rr} = 3.5 \text{ ns max}$)
- Small glass package (MHD) enables easy mounting and high reliability.

Ordering Information

| Type No. | Cathode band | Mark | Package Name | Package Code (Previous Code) |
|----------|--------------|------|--------------|------------------------------|
| 1SS120 | Light Blue | 1 | MHD | GRZZ0002ZC-A (MHD) |

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

| Item | Symbol | Value | Unit |
|---|-------------|-------------|------|
| Peak reverse voltage | V_{RM} | 70 | V |
| Reverse voltage | V_R | 60 | V |
| Average rectified current | I_o | 150 | mA |
| Peak forward current | I_{FM} | 450 | mA |
| Non-Repetitive peak forward surge current | I_{FSM}^* | 1 | A |
| Power dissipation | P_d | 250 | mW |
| Junction temperature | T_j | 175 | °C |
| Storage temperature | T_{stg} | -65 to +175 | °C |

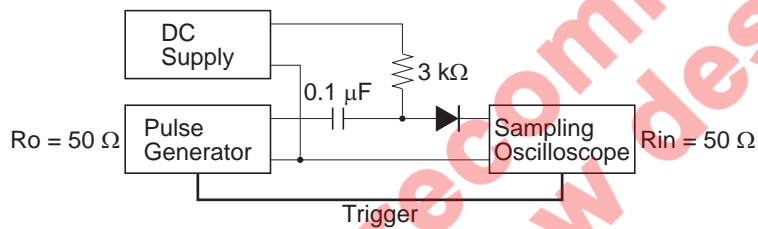
Note: Within 1s forward surge current.

Electrical Characteristics

(Ta = 25°C)

| Item | Symbol | Min | Typ | Max | Unit | Test Condition |
|-----------------------|------------|-----|-----|-----|---------|---|
| Forward voltage | V_F | — | — | 0.8 | V | $I_F = 10$ mA |
| Reverse current | I_R | — | — | 0.1 | μ A | $V_R = 60$ V |
| Capacitance | C | — | — | 3.0 | pF | $V_R = 1$ V, $f = 1$ MHz |
| Reverse recovery time | t_{rr}^* | — | — | 3.5 | ns | $I_F = 10$ mA, $V_R = 6$ V, $R_L = 50 \Omega$ |

Note: Reverse recovery time test circuit



Main Characteristic

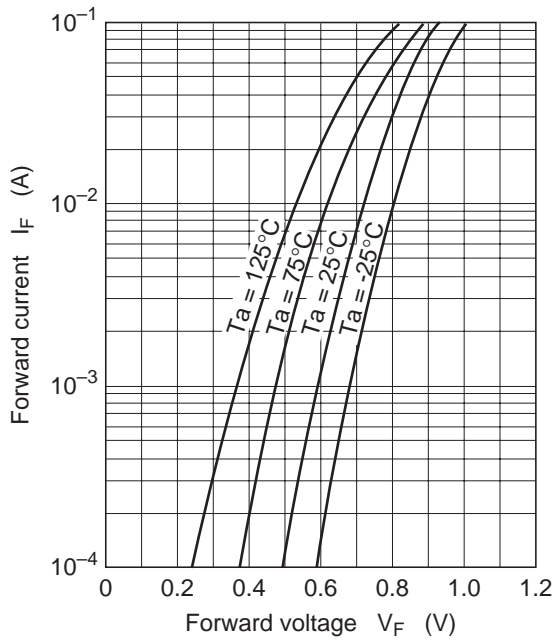


Fig.1 Forward current vs. Forward voltage

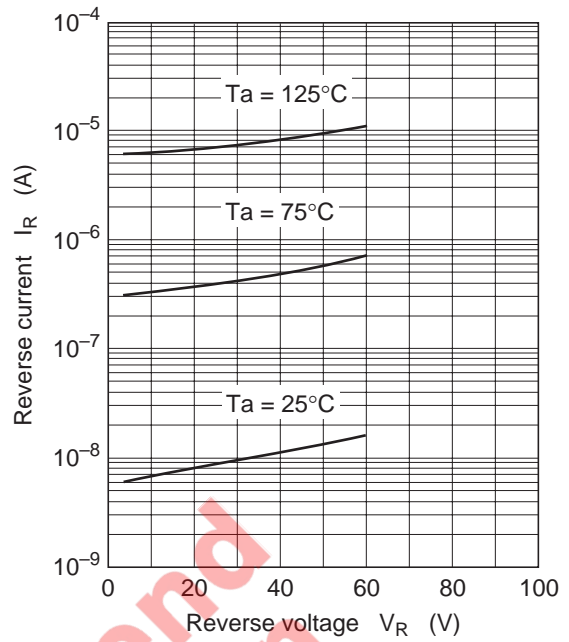


Fig.2 Reverse current vs. Reverse voltage

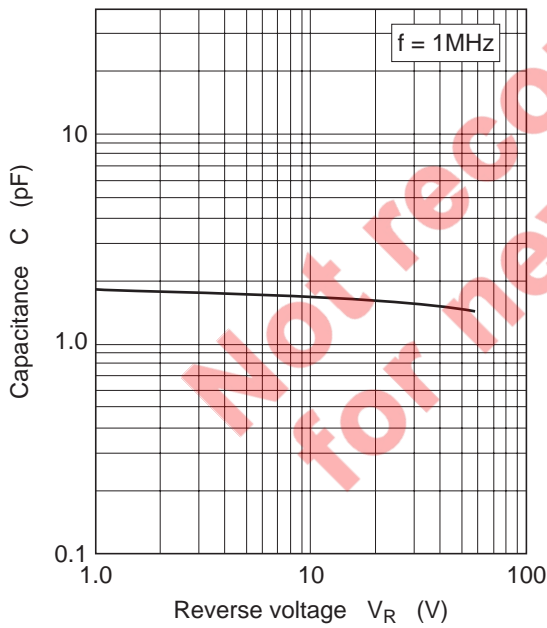
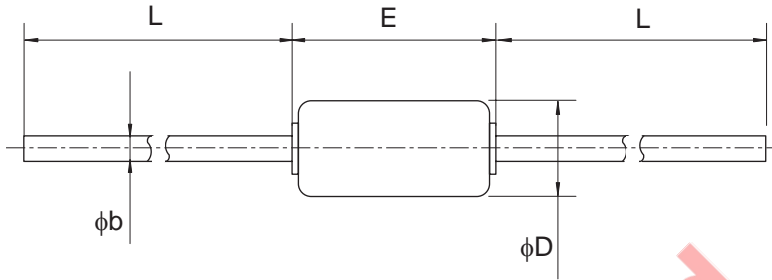


Fig.3 Capacitance vs. Reverse voltage

Package Dimensions

| | | | |
|--------------------|--------------|---------------|------------|
| JEITA Package Code | RENESAS Code | Previous Code | MASS[Typ.] |
| — | GRZZ0002ZC-A | MHD / MHDV | 0.084g |



| Reference Symbol | Dimension in Millimeters | | |
|------------------|--------------------------|-----|-----|
| | Min | Nom | Max |
| φb | - | 0.4 | - |
| φD | - | 2.0 | - |
| E | - | - | 2.4 |
| L | 26.0 | - | - |

Not recommend for new design

Keep safety first in your circuit designs!

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Renesas Technology America, Inc.

450 Holger Way, San Jose, CA 95134-1368, U.S.A
Tel: <1> (408) 382-7500, Fax: <1> (408) 382-7501

Renesas Technology Europe Limited

Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K.
Tel: <44> (1628) 585-100, Fax: <44> (1628) 585-900

Renesas Technology Hong Kong Ltd.

7th Floor, North Tower, World Finance Centre, Harbour City, 1 Canton Road, Tsimshatsui, Kowloon, Hong Kong
Tel: <852> 2265-6688, Fax: <852> 2730-6071

Renesas Technology Taiwan Co., Ltd.

10th Floor, No.99, Fushing North Road, Taipei, Taiwan
Tel: <886> (2) 2715-2888, Fax: <886> (2) 2713-2999

Renesas Technology (Shanghai) Co., Ltd.

Unit2607 Ruijing Building, No.205 Maoming Road (S), Shanghai 200020, China
Tel: <86> (21) 6472-1001, Fax: <86> (21) 6415-2952

Renesas Technology Singapore Pte. Ltd.

1 Harbour Front Avenue, #06-10, Keppel Bay Tower, Singapore 098632
Tel: <65> 6213-0200, Fax: <65> 6278-8001