

# HSU119

## Silicon Epitaxial Planar Diode for High Speed Switching

REJ03G0190-0200

Rev.2.00

Feb 04, 2009

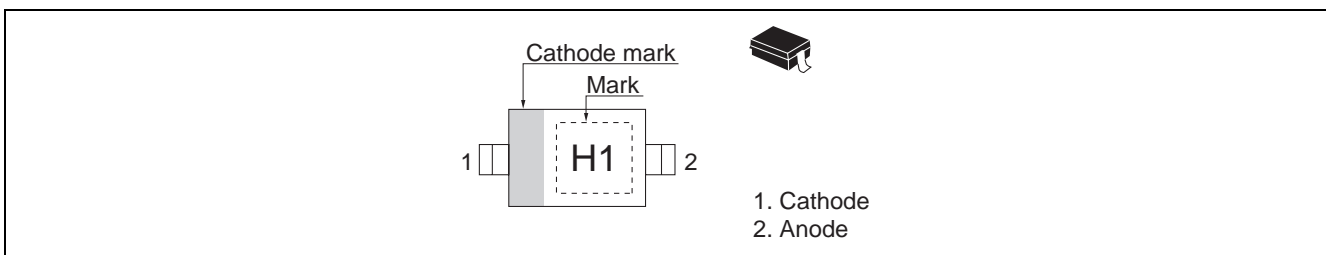
### Features

- Low capacitance. ( $C = 2.0 \text{ pF max}$ )
- Short reverse recovery time. ( $t_{rr} = 3.0 \text{ ns max}$ )
- Lineup of environmental friendly Halogen free type (HSU119-N)
- Ultra small Resin Package (URP) is suitable for compact and high-density surface mount design.

### Ordering Information

| Part No.                           | Laser Mark | Package Name | Package Code | Taping Abbreviation (Quantity) |
|------------------------------------|------------|--------------|--------------|--------------------------------|
| HSU119TRF                          | H1         | URP          | PTSP0002ZA-A | TRF (3,000 pcs / reel)         |
| HSU119-NTRF<br>(Halogen-free type) |            |              |              |                                |

### Pin Arrangement



### Absolute Maximum Ratings

(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 | $I_{FSM}^{*1}$ | 4           | A    |
| Average rectified current                 | $I_O$          | 100         | mA   |
| Junction temperature                      | $T_j$          | 125         | °C   |
| Storage temperature                       | $T_{stg}$      | -55 to +125 | °C   |

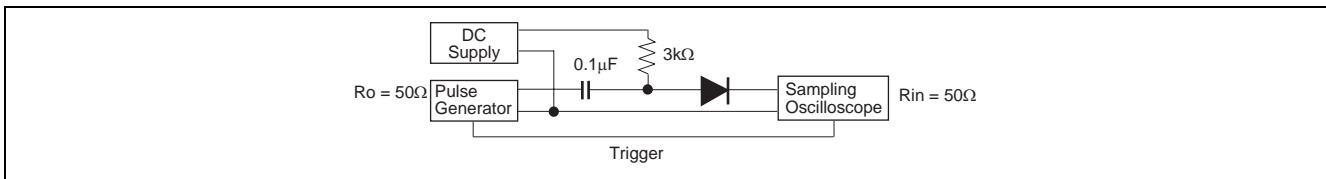
Note: 1. Within 1µs forward surge current.

### Electrical Characteristics

(Ta = 25°C)

| Item                                | Symbol   | Min | Typ | Max | Unit | Test Condition  |
|-------------------------------------|----------|-----|-----|-----|------|---|
| Forward voltage                     | $V_{F1}$ | —   | —   | 0.8 | V    | $I_F = 10 \text{ mA}$                                     |
|                                     | $V_{F2}$ | —   | —   | 1.2 | V    | $I_F = 100 \text{ mA}$                                    |
| Reverse current                     | $I_R$    | —   | —   | 0.1 | µA   | $V_R = 80 \text{ V}$                                      |
| Capacitance                         | C        | —   | —   | 2.0 | pF   | $V_R = 0 \text{ V}, f = 1 \text{ MHz}$                    |
| Reverse recovery time* <sup>1</sup> | $t_{rr}$ | —   | —   | 3.0 | ns   | $I_F = 10 \text{ mA}, V_R = 6 \text{ V}, R_L = 50 \Omega$ |

Note: 1. Reverse recovery time test circuit



Main Characteristics

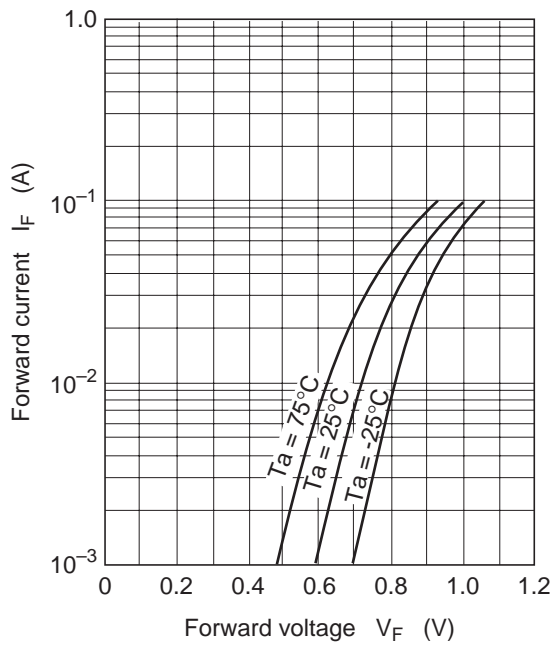


Fig.1 Forward current vs. Forward voltage

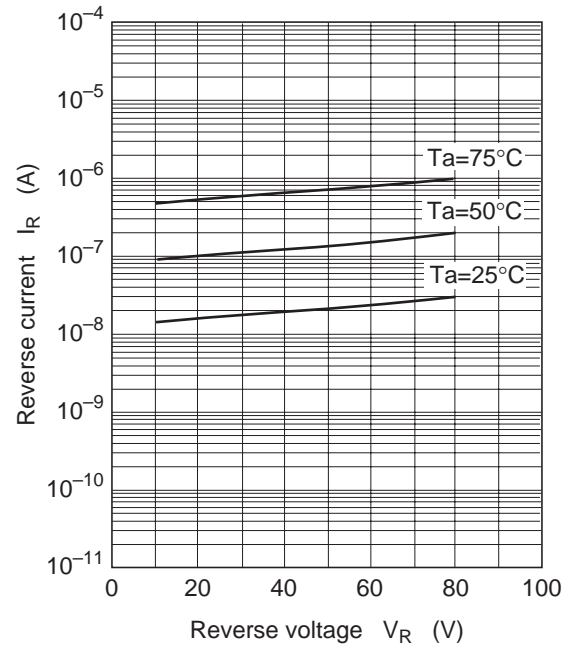


Fig.2 Reverse current vs. Reverse voltage

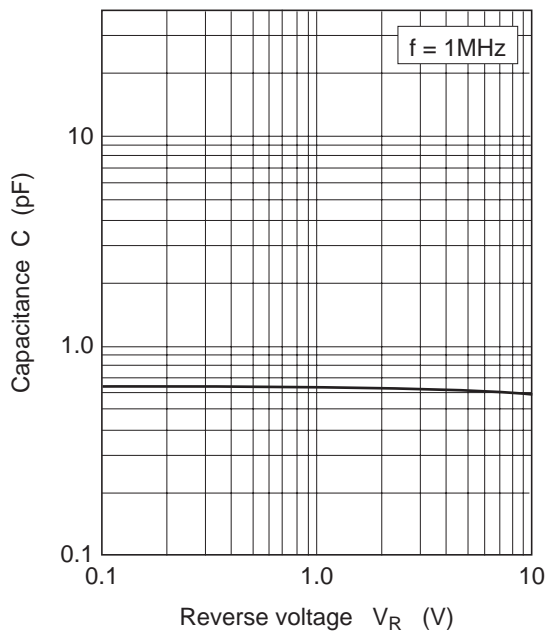
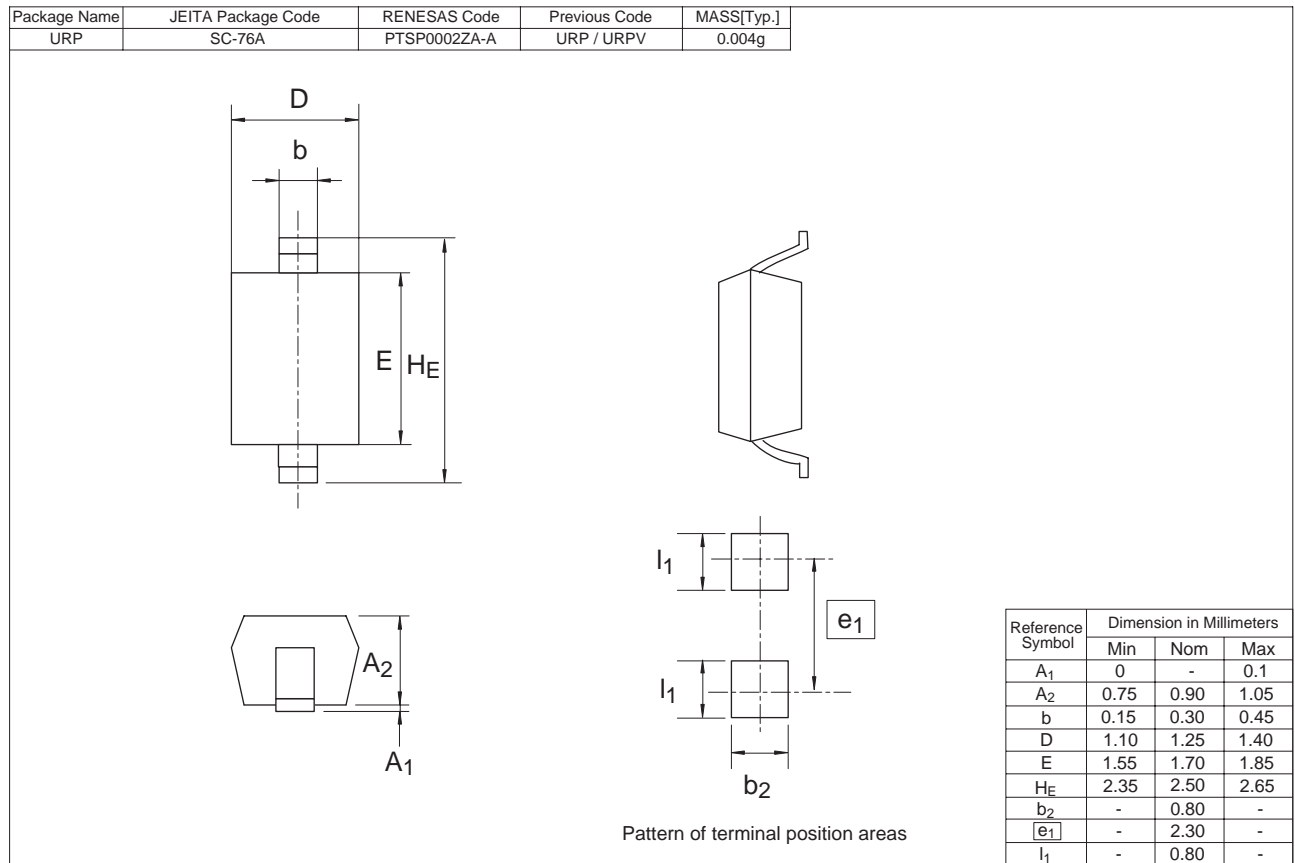


Fig.3 Capacitance vs. Reverse voltage

### Package Dimensions



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