



Surface Mount General-purpose Rectifiers

**Reverse Voltage - 50 to 1000 Volts
Forward Current 1.0 Amperes**

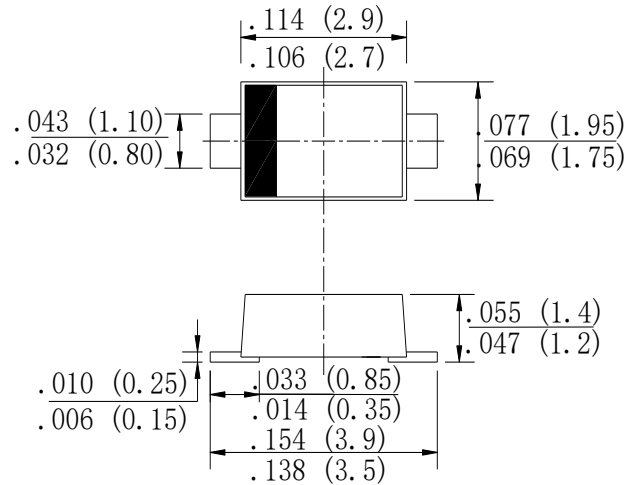
Features

- Low reverse leakage
- High forward surge capability
- High reliability
- High temperature soldering guaranteed:260°C/10seconds
- Lead and body according with RoHS standard
- High reliability grade(AEC Q101 qualified)

Mechanical Data

- Case:S0D-123FL Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Pure tin plated, lead free
- System:Accreditation throughIATF16949 System

SOD-123FL



Package Outline Dimensions in Inches (Millimeters)

Maximum Ratings & Characteristics Ratings at 25°C ambient temperature unless otherwise specified

| Parameter | Symbols | S1AL | S1BL | S1DL | S1GL | S1JL | S1KL | S1ML | Unit |
|--|--------------------|---------------|------|------|------|------|------|------|------|
| Maximum repetitive peak reverse voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified current | I _{F(AV)} | 1 | | | | | | | A |
| Non-repetitive peak forward surge current 8.3 ms singlehalf sine-wave | I _{FSM} | 30 | | | | | | | A |
| Maximum forward voltage@I _F =1.0A | V _F | 1.1 | | | | | | | V |
| Maximum reverse current T _A = 25°C T _A = 125°C | I _R | 5 100 | | | | | | | uA |
| Typical thermal resistance (Note 1) | R _{θJA} | 85 | | | | | | | °C/W |
| Type junction capacitance V _R =4.0V,f=1MHz | C _J | 12 | | | | | | | pF |
| Operating junction | T _J | - 55 to + 150 | | | | | | | °C |
| Storage temperature rang | T _{STG} | - 55 to + 150 | | | | | | | °C |

Note:

1)Thermal resistance from junction to ambient, PCB mounted.

Rating and Characteristic Curves

S1AL THRU S1ML



Fig. 1 - Forward Current Derating Curve

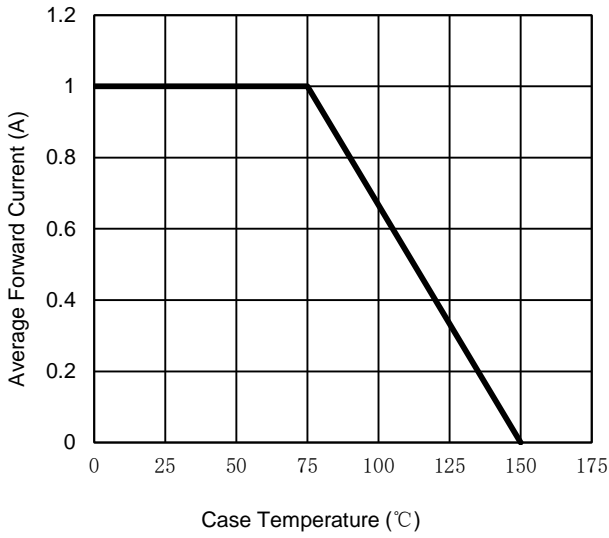


Fig. 2 - Maximum Non-Repetitive Surge Current

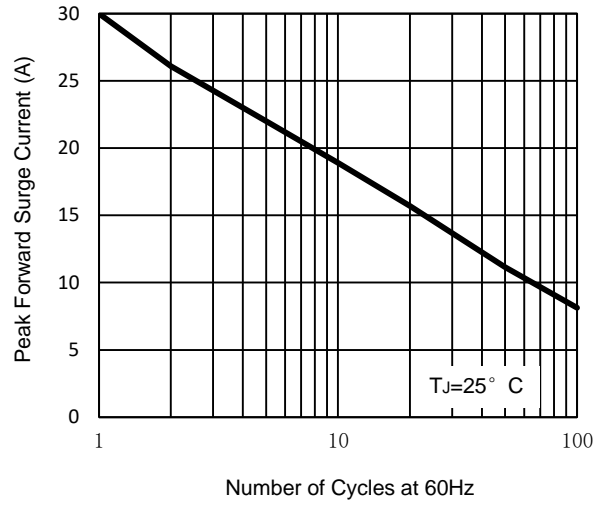


Fig. 3 - Typical Reverse Characteristics

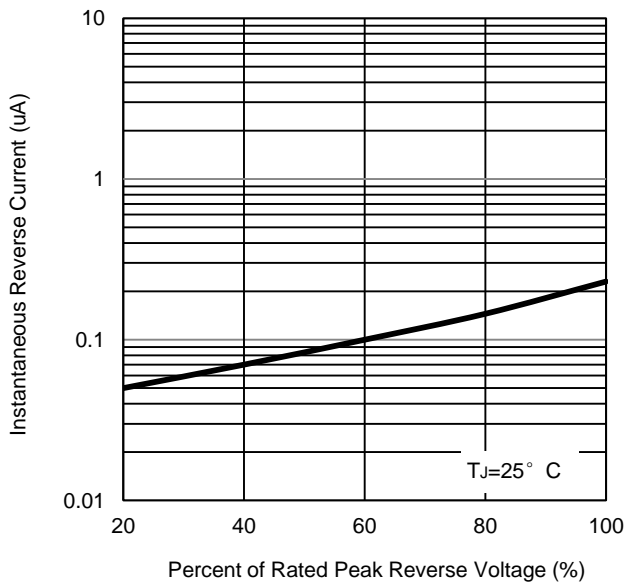
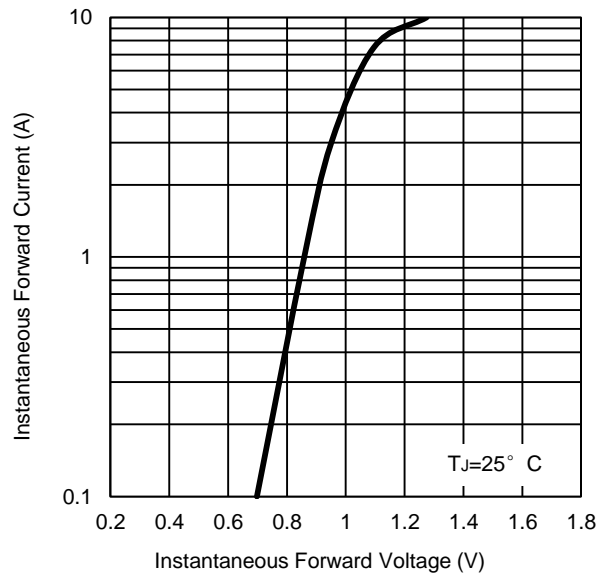


Fig. 4 - Typical Forward Characteristics



The curve above is for reference only.



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