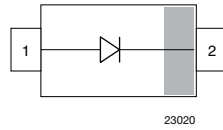
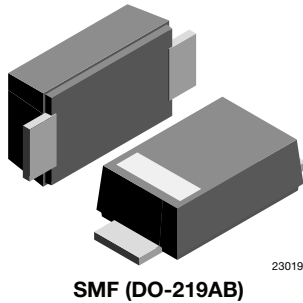


Schottky Rectifier Surface-Mount

eSMP® Series

FEATURES

- For surface mounted applications
- Ideal for automated placement
- Low power loss, high efficiency
- Oxide planar chip junction
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Meets JESD 201 class 2 whisker test
- Wave and reflow solderable
- AEC-Q101 qualified
- Compatible to SOD-123W package case outline or SOD-123F and SOD-123FL
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

LINKS TO ADDITIONAL RESOURCES

MECHANICAL DATA
Case: SMF (DO-219AB)

Polarity: color band denotes cathode end

Weight: approx. 15 mg

Packaging codes / options:

GS18/10K per 13" reel (8 mm tape), MOQ = 50K

GS08/3K per 7" reel (8 mm tape), MOQ = 30K

Circuit configuration: single

PARTS TABLE

| PART | ORDERING CODE | MARKING | REMARKS |
|------|------------------------|---------|---------------|
| SL02 | SL02-GS18 or SL02-GS08 | S2 | Tape and reel |
| SL03 | SL03-GS18 or SL03-GS08 | S3 | Tape and reel |

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25\text{ °C}$, unless otherwise specified)

| PARAMETER | TEST CONDITION | PART | SYMBOL | VALUE | UNIT |
|---|-----------------------|------|-------------|-------|------|
| Maximum repetitive peak reverse voltage | | SL02 | V_{RRM} | 20 | V |
| | | SL03 | V_{RRM} | 30 | V |
| Maximum RMS voltage | | SL02 | V_{RMS} | 14 | V |
| | | SL03 | V_{RMS} | 21 | V |
| Maximum DC blocking voltage | | SL02 | V_{DC} | 20 | V |
| | | SL03 | V_{DC} | 30 | V |
| Maximum average forward rectified current | $T_L = 109\text{ °C}$ | | $I_{F(AV)}$ | 1.1 | A |
| Peak forward surge current 8.3 ms single half sine-wave | | | I_{FSM} | 40 | A |

THERMAL CHARACTERISTICS ($T_{amb} = 25\text{ °C}$, unless otherwise specified)

| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT |
|---|----------------|------------|-------------|------|
| Thermal resistance junction to ambient air ⁽¹⁾ | | R_{thJA} | 180 | K/W |
| Maximum operating junction temperature | | T_j | 125 | °C |
| Storage temperature range | | T_{stg} | -55 to +150 | °C |

Note
⁽¹⁾ Mounted on epoxy substrate with 3 mm x 3 mm Cu pads ($\geq 40\text{ }\mu\text{m}$ thick)

| ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified) | | | | | | | |
|---|-------------------------------------|------|----------|------|-------|-------|---------------|
| PARAMETER | TEST CONDITION | PART | SYMBOL | MIN. | TYP. | MAX. | UNIT |
| Instantaneous forward voltage | $I_F = 0.5\text{ A}$ ⁽¹⁾ | SL02 | V_F | | 0.360 | 0.385 | V |
| | | SL03 | V_F | | 0.395 | 0.43 | V |
| Typical instantaneous forward voltage | $I_F = 1.1\text{ A}$ | SL02 | V_F | | 0.420 | | V |
| | | SL03 | V_F | | 0.450 | | V |
| Maximum DC reverse current at rated DC blocking voltage | $T_A = 25\text{ }^{\circ}\text{C}$ | SL02 | I_R | | | 250 | μA |
| | $T_A = 100\text{ }^{\circ}\text{C}$ | SL02 | I_R | | | 8 | mA |
| | $T_A = 25\text{ }^{\circ}\text{C}$ | SL03 | I_R | | | 130 | μA |
| | $T_A = 100\text{ }^{\circ}\text{C}$ | SL03 | I_R | | | 6 | mA |
| Reverse recovery time | | SL02 | t_{rr} | | | < 10 | ns |
| | | SL03 | t_{rr} | | | < 10 | ns |

Note

(1) Pulse test: 300 μs pulse width, 1 % duty cycle

TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

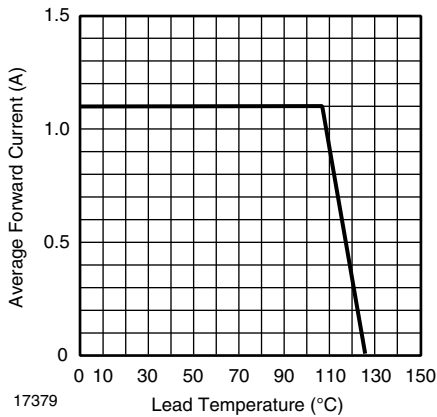


Fig. 1 - Forward Current Derating Curve

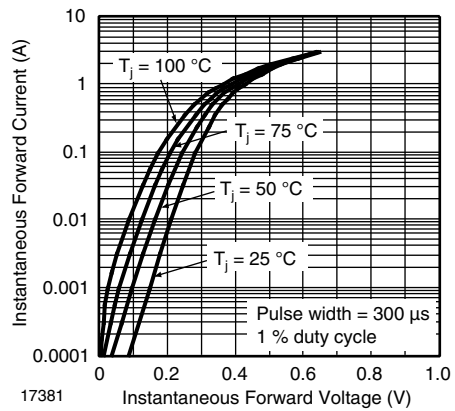


Fig. 3 - Typical Instantaneous Forward Characteristics - SL02

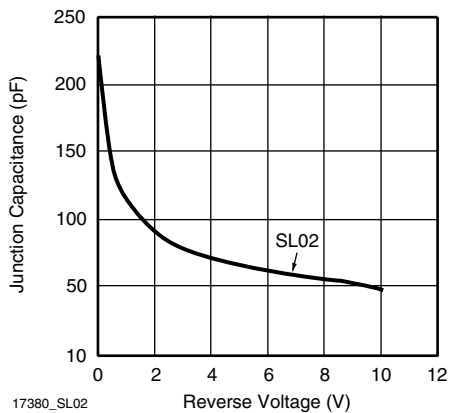


Fig. 2 - Typical Junction Capacitance

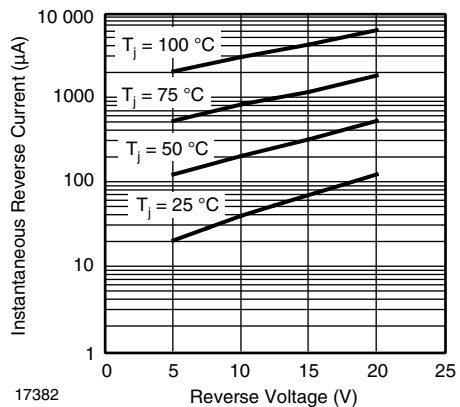


Fig. 4 - Typical Reverse Current Characteristics - SL02

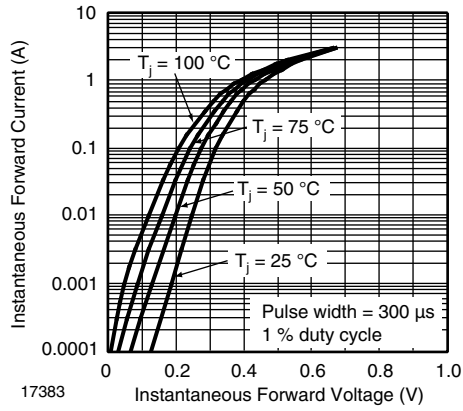


Fig. 5 - Typical Instantaneous Forward Characteristics - SL03

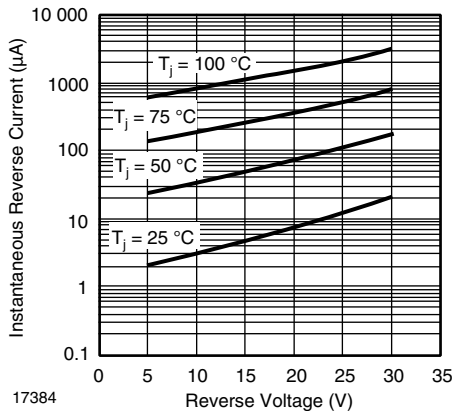
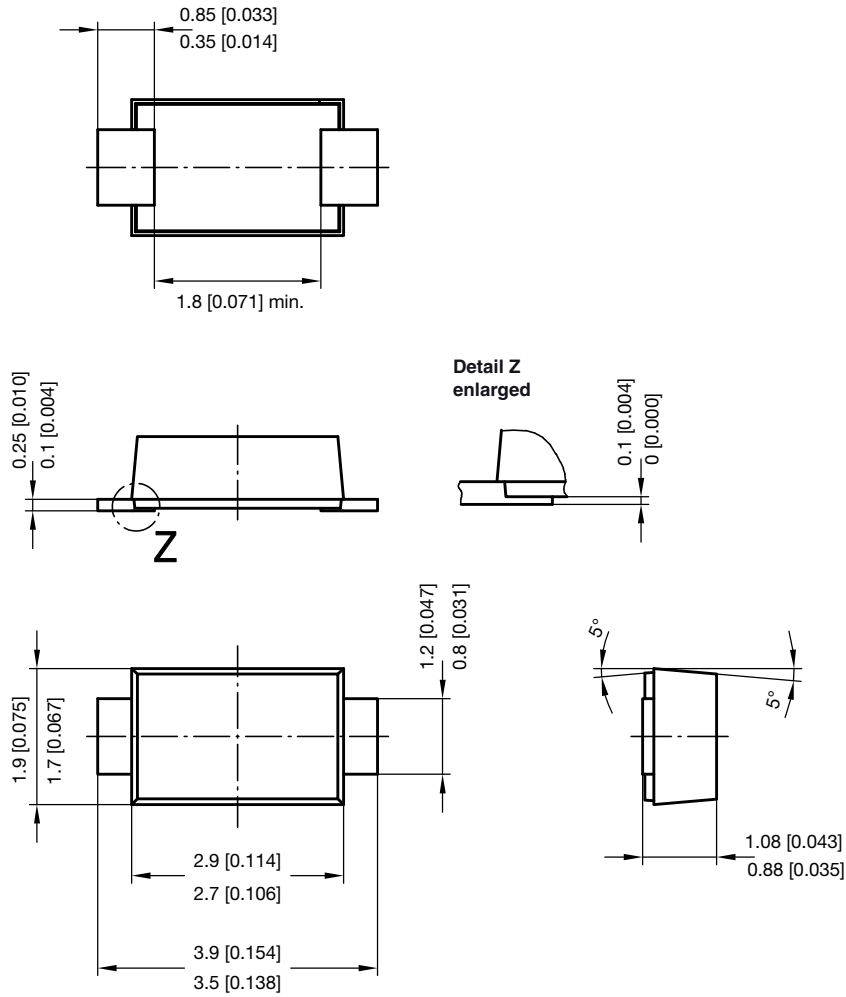


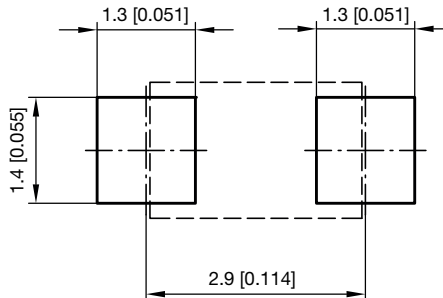
Fig. 6 - Typical Reverse Current Characteristics - SL03

PACKAGE DIMENSIONS in millimeters (inches): **SMF (DO-219AB)**



foot print recommendation:

Reflow soldering



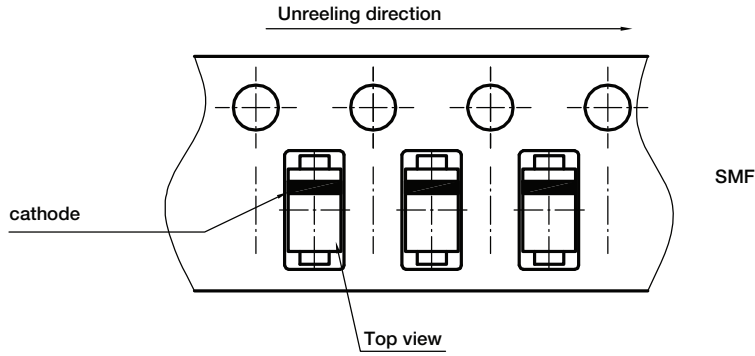
Created - Date: 15. February 2005

Rev. 6 - Date: 24.Feb.2021

Document no.: S8-V-3915.01-001 (4)

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ORIENTATION IN CARRIER TAPE - SMF (DO-219AB)



Document no.: S8-V-3717.02-003 (4)
Created - Date: 09. Feb. 2010
22670



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