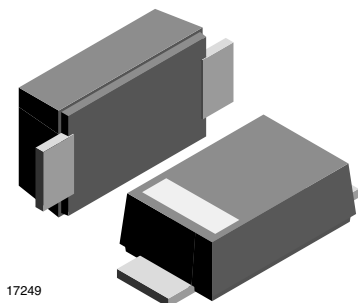




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## Schottky Rectifier Surface Mount



### FEATURES

- For surface mounted applications
- Ideal for automated placement
- Low power loss, high efficiency
- High temperature soldering: 260 °C/10 s at terminals
- Wave and reflow solderable
- AEC-Q101 qualified
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC


**RoHS**  
COMPLIANT

### MECHANICAL DATA

**Case:** DO-219AB (SMF)

**Polarity:** color band denotes cathode end

**Weight:** approx. 15 mg

**Packaging codes/options:**

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

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

**Int. construction:** 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 |
| SL04 | SL04-GS18 or SL04-GS08 | S4      | Tape and reel |

### ABSOLUTE MAXIMUM RATINGS ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , 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    |
|                                                         |                                        | SL04 | $V_{RRM}$   | 40    | V    |
| Maximum RMS voltage                                     |                                        | SL02 | $V_{RMS}$   | 14    | V    |
|                                                         |                                        | SL03 | $V_{RMS}$   | 21    | V    |
|                                                         |                                        | SL04 | $V_{RMS}$   | 28    | V    |
| Maximum DC blocking voltage                             |                                        | SL02 | $V_{DC}$    | 20    | V    |
|                                                         |                                        | SL03 | $V_{DC}$    | 30    | V    |
|                                                         |                                        | SL04 | $V_{DC}$    | 40    | V    |
| Maximum average forward rectified current               | $T_{tp} = 109\text{ }^{\circ}\text{C}$ |      | $I_{F(AV)}$ | 1.1   | A    |
| Peak forward surge current 8.3 ms single half sine-wave |                                        |      | $I_{FSM}$   | 40    | A    |

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

| PARAMETER                                                 | TEST CONDITION | SYMBOL     | VALUE       | UNIT               |
|-----------------------------------------------------------|----------------|------------|-------------|--------------------|
| Thermal resistance junction to ambient air <sup>(1)</sup> |                | $R_{thJA}$ | 180         | K/W                |
| Maximum operating junction temperature                    |                | $T_j$      | 125         | $^{\circ}\text{C}$ |
| Storage temperature range                                 |                | $T_{stg}$  | - 55 to 150 | $^{\circ}\text{C}$ |

#### Note

<sup>(1)</sup> 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             |
|                                                                                                   |                                     | SL04 | $V_F$    |      | 0.450 | 0.51  | V             |
| Typical instantaneous forward voltage                                                             | $I_F = 1.1\text{ A}$                | SL02 | $V_F$    |      | 0.420 |       | V             |
|                                                                                                   |                                     | SL03 | $V_F$    |      | 0.450 |       | V             |
|                                                                                                   |                                     | SL04 | $V_F$    |      | 0.530 |       | V             |
| Maximum DC reverse current at rated DC blocking voltage                                           | $T_A = 25\text{ }^{\circ}\text{C}$  | SL02 | $I_R$    |      |       | 250   | $\mu\text{A}$ |
|                                                                                                   | $T_A = 100\text{ }^{\circ}\text{C}$ | SL02 | $I_R$    |      |       | 8     | mA            |
|                                                                                                   | $T_A = 25\text{ }^{\circ}\text{C}$  | SL03 | $I_R$    |      |       | 130   | $\mu\text{A}$ |
|                                                                                                   | $T_A = 100\text{ }^{\circ}\text{C}$ | SL03 | $I_R$    |      |       | 6     | mA            |
|                                                                                                   | $T_A = 25\text{ }^{\circ}\text{C}$  | SL04 | $I_R$    |      |       | 20    | $\mu\text{A}$ |
|                                                                                                   | $T_A = 100\text{ }^{\circ}\text{C}$ | SL04 | $I_R$    |      |       | 6     | mA            |
| Reverse recovery time                                                                             |                                     | SL02 | $t_{rr}$ |      |       | < 10  | ns            |
|                                                                                                   |                                     | SL03 | $t_{rr}$ |      |       | < 10  | ns            |
|                                                                                                   |                                     | SL04 | $t_{rr}$ |      |       | < 10  | ns            |

## Note

(1) Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle

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

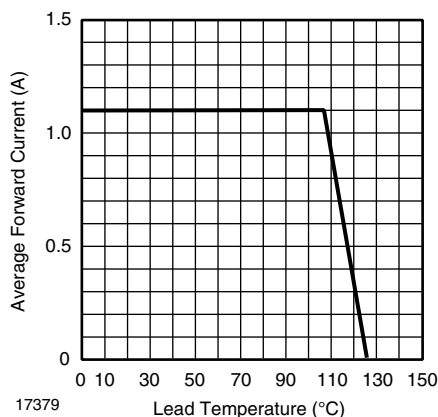


Fig. 1 - Forward Current Derating Curve

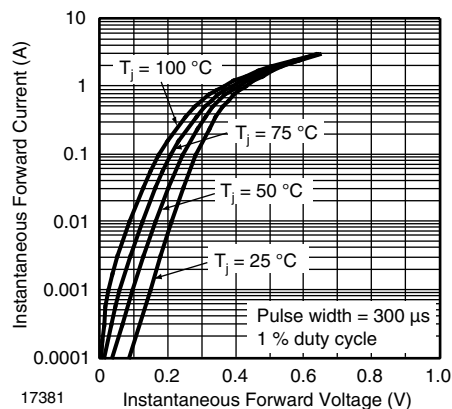


Fig. 3 - Typical Instantaneous Forward Characteristics - SL02

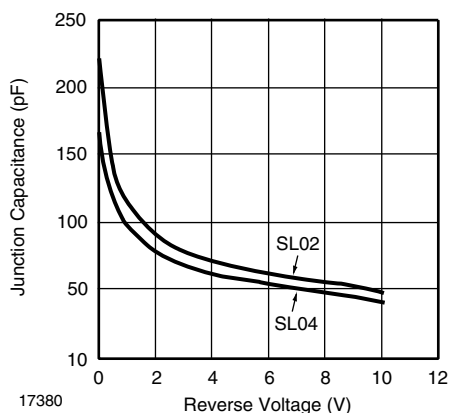


Fig. 2 - Typical Junction Capacitance

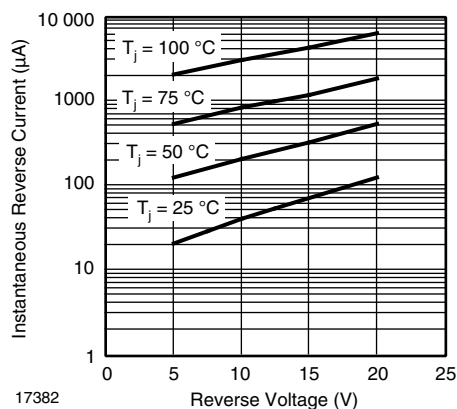


Fig. 4 - Typical Reverse Current Characteristics - SL02

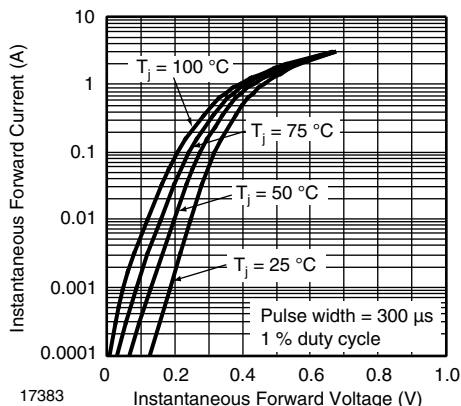


Fig. 5 - Typical Instantaneous Forward Characteristics - SL03

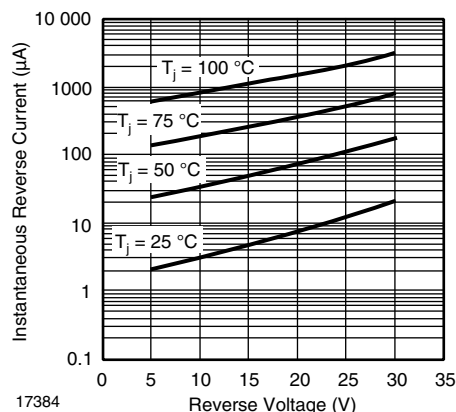
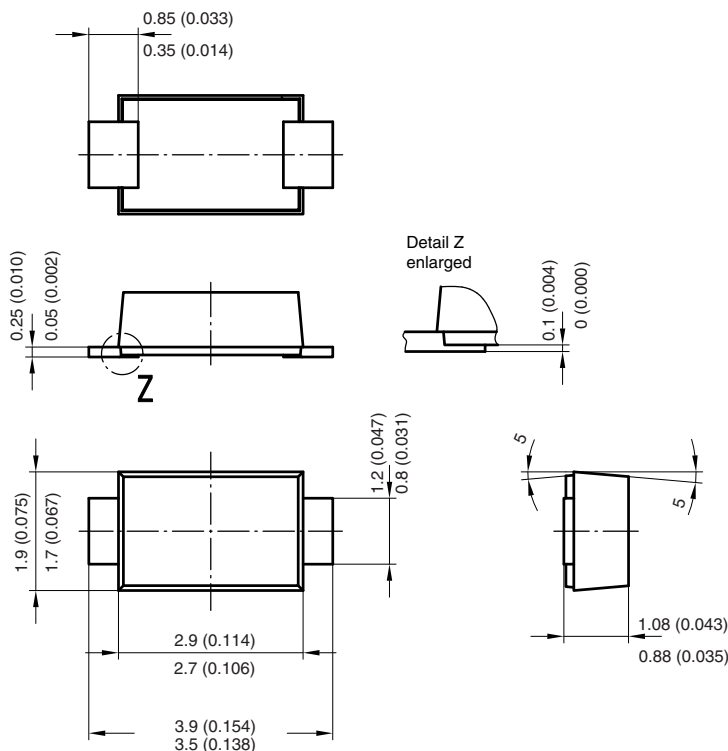
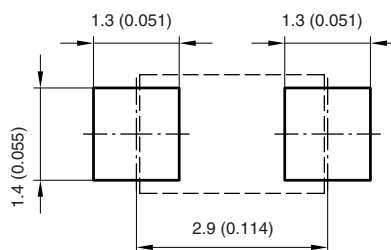


Fig. 6 - Typical Reverse Current Characteristics - SL03

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

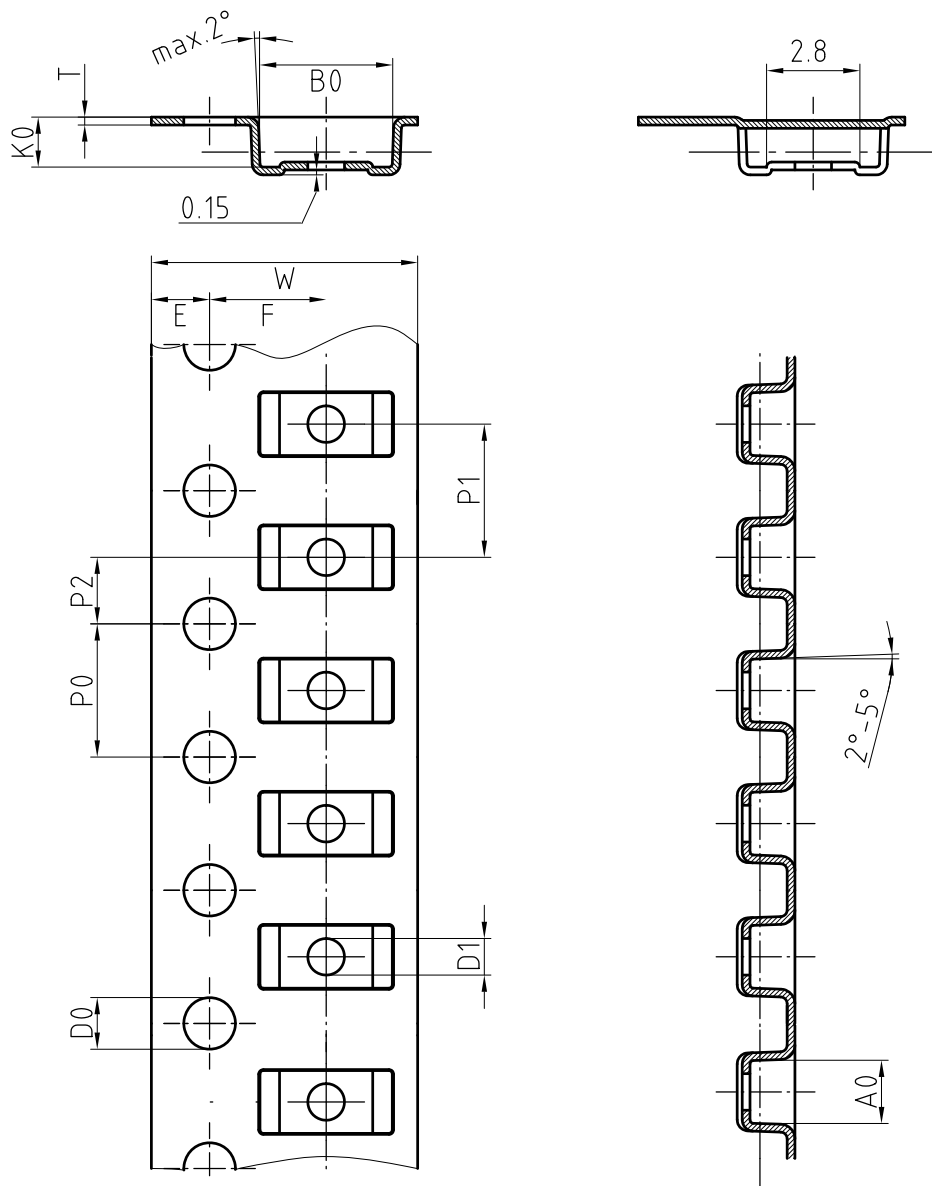


Foot print recommendation:



Created - Date: 15. February 2005  
 Rev. 3 - Date: 13. March 2007  
 Document no.:S8-V-3915.01-001 (4)  
 17247

## BLISTERTAPE DIMENSIONS in millimeters: DO-219 AB (SMF)



| Mat: | A0  | B0  | K0  | W   | T     | P0  | P2  | P1  | D0  | D1 | E    | F   |
|------|-----|-----|-----|-----|-------|-----|-----|-----|-----|----|------|-----|
| PS   | 1.9 | 4.0 | 1.5 | 8.0 | 0.235 | 4.0 | 2.0 | 4.0 | 1.5 | 1  | 1.75 | 3.5 |

Document-No.: S8-V-3717.02-001 (3)

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