

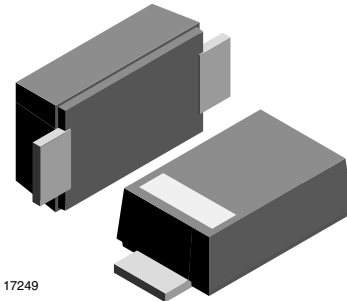
## Small Signal Schottky Diodes

### Features

- For surface mounted applications
- Low-profile package
- 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
- Halogen-free according to IEC 61249-2-21 definition



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**



17249

### Mechanical Data

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

**Polarity:** color band denotes cathode end

**Weight:** approx. 15 mg

**Packaging codes/options:**

18/10 k per 13" reel (8 mm tape), 50 k/box

08/3 k per 7" reel (8 mm tape), 30 k/box

### Parts Table

Part	Ordering code	Marking	Remarks
SL02-M	SL02-M-18 or SL02-M-08	U2	Tape and reel
SL03-M	SL03-M-18 or SL03-M-08	U3	Tape and reel
SL04-M	SL04-M-18 or SL04-M-08	U4	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-M	$V_{RRM}$	20	V
		SL03-M	$V_{RRM}$	30	V
		SL04-M	$V_{RRM}$	40	V
Maximum RMS voltage		SL02-M	$V_{RMS}$	14	V
		SL03-M	$V_{RMS}$	21	V
		SL04-M	$V_{RMS}$	28	V

# SL02-M, SL03-M, SL04-M



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Parameter	Test condition	Part	Symbol	Value	Unit
Maximum DC blocking voltage		SL02-M	$V_{DC}$	20	V
		SL03-M	$V_{DC}$	30	V
		SL04-M	$V_{DC}$	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
Instaneous forward voltage	$I_F = 0.5\text{ A}$ <sup>1)</sup>	SL02-M	$V_F$		0.360	0.385	V
		SL03-M	$V_F$		0.395	0.43	V
		SL04-M	$V_F$		0.450	0.51	V
Typical instantaneous forward voltage	$I_F = 1.1\text{ A}$	SL02-M	$V_F$		0.420		V
		SL03-M	$V_F$		0.450		V
		SL04-M	$V_F$		0.530		V
Maximum DC reverse current at rated DC blocking voltage	$T_A = 25\text{ }^{\circ}\text{C}$	SL02-M	$I_R$			250	$\mu\text{A}$
	$T_A = 100\text{ }^{\circ}\text{C}$	SL02-M	$I_R$			8	mA
	$T_A = 25\text{ }^{\circ}\text{C}$	SL03-M	$I_R$			130	$\mu\text{A}$
	$T_A = 100\text{ }^{\circ}\text{C}$	SL03-M	$I_R$			6	mA
	$T_A = 25\text{ }^{\circ}\text{C}$	SL04-M	$I_R$			20	$\mu\text{A}$
	$T_A = 100\text{ }^{\circ}\text{C}$	SL04-M	$I_R$			6	mA

Note:

<sup>1)</sup> Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle

## Typical Characteristics

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

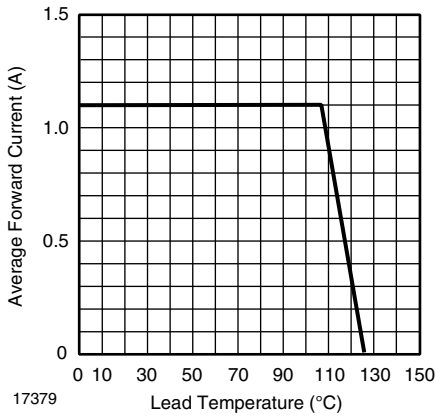


Figure 1. Forward Current Derating Curve

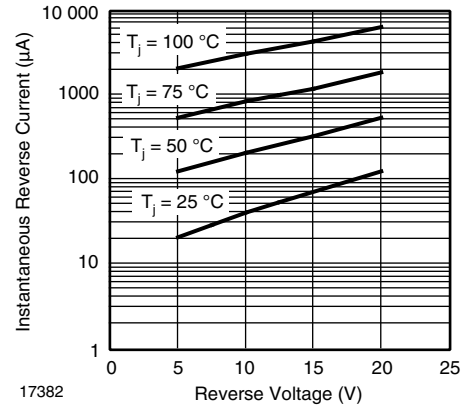


Figure 4. Typical Reverse Current Characteristics - SL02

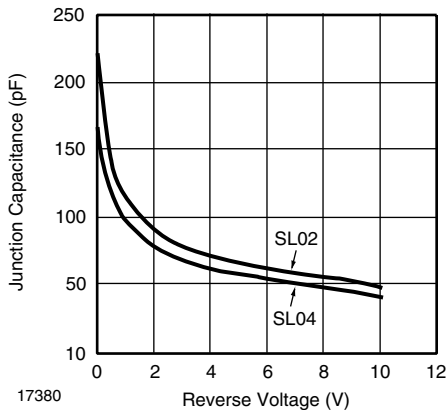


Figure 2. Typical Junction Capacitance

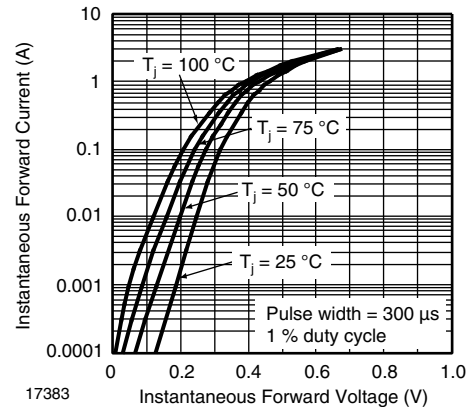


Figure 5. Typical Instantaneous Forward Characteristics - SL03

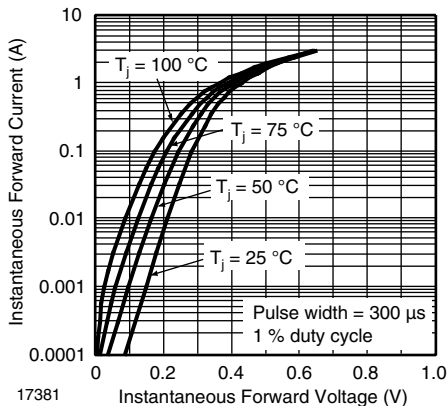


Figure 3. Typical Instantaneous Forward Characteristics - SL02

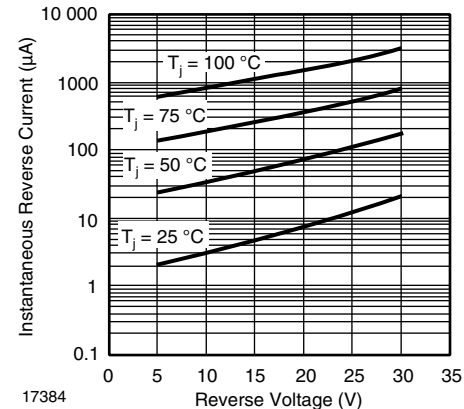


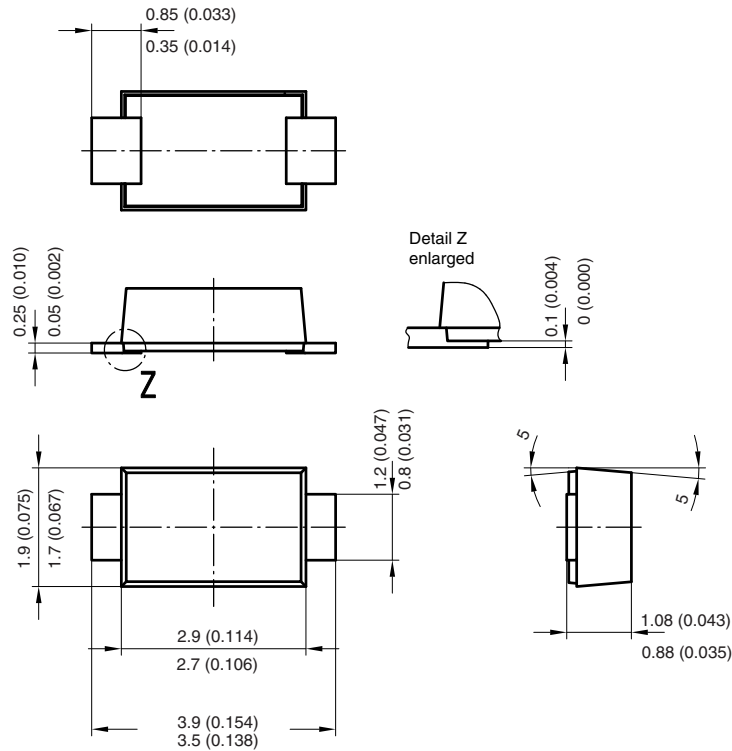
Figure 6. Typical Reverse Current Characteristics - SL03

# SL02-M, SL03-M, SL04-M

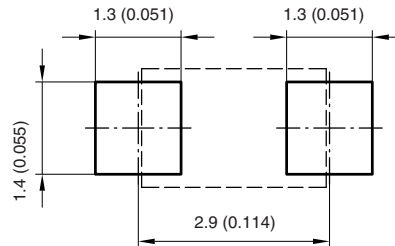


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Package Dimensions in millimeters (inches): DO-219AB

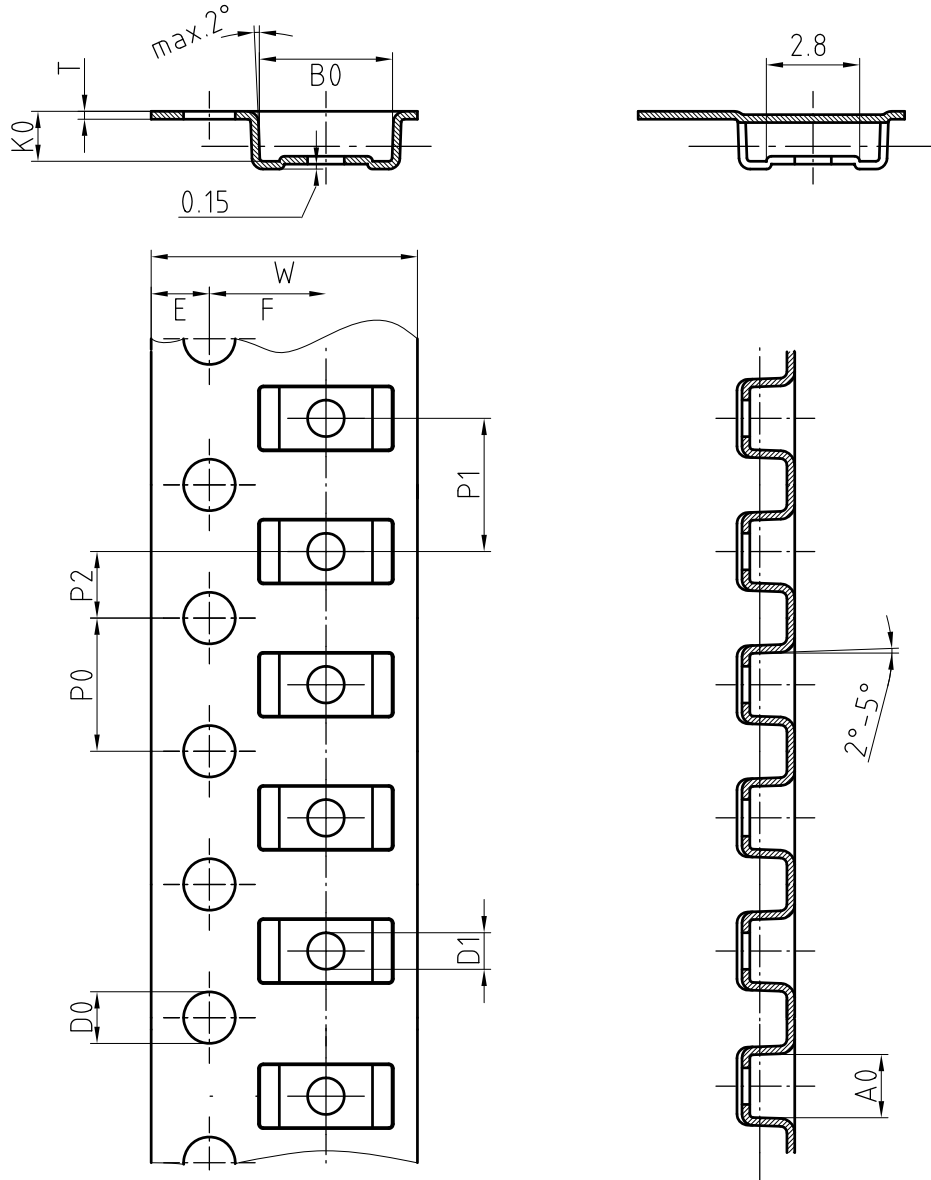


Foot print recommendation:



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

## Blisertape Dimensions for SMF in millimeters



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

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