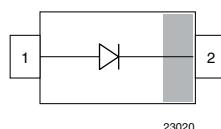
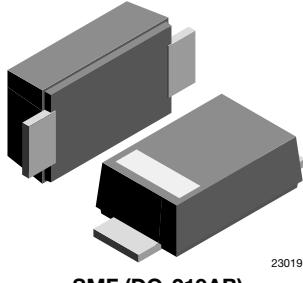


Schottky Rectifier Surface-Mount

eSMP® Series

SMF (DO-219AB)
DESIGN SUPPORT TOOLS

[click logo to get started](#)
FEATURES

- For surface mounted applications
- Low-profile package
- 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
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT
HALOGEN
FREE

MECHANICAL DATA
Case: SMF (DO-219AB)

Polarity: color band denotes cathode end

Weight: approx. 15 mg

Packaging codes / options:

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

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

Circuit configuration: single

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		

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

THERMAL CHARACTERISTICS ($T_{amb} = 25^\circ\text{C}$, 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 ($\geq 40 \mu\text{m}$ thick)

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

Note

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

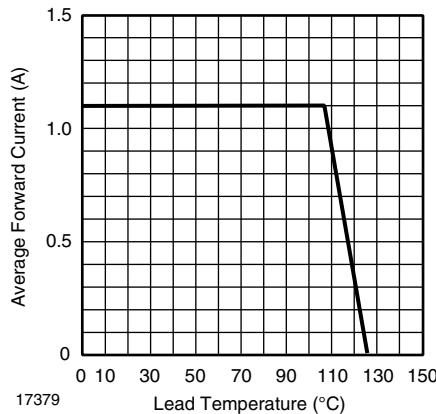
TYPICAL CHARACTERISTICS ($T_{amb} = 25^\circ C$, unless otherwise specified)


Fig. 1 - Forward Current Derating Curve

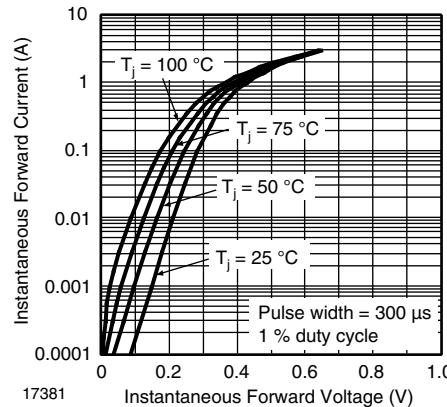


Fig. 3 - Typical Instantaneous Forward Characteristics - SL02

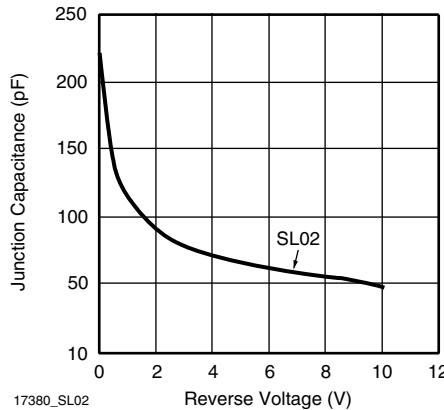


Fig. 2 - Typical Junction Capacitance

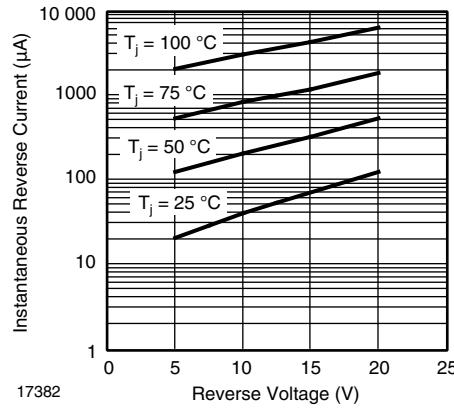


Fig. 4 - Typical Reverse Current Characteristics - SL02

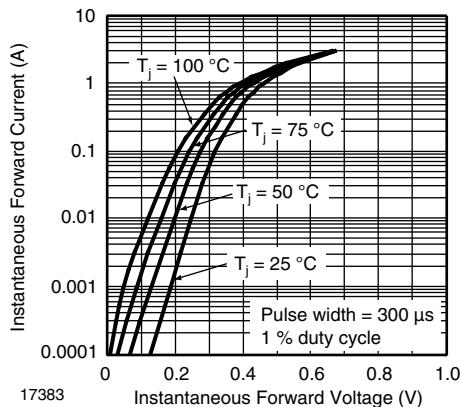


Fig. 5 - Typical Instantaneous Forward Characteristics - SL03

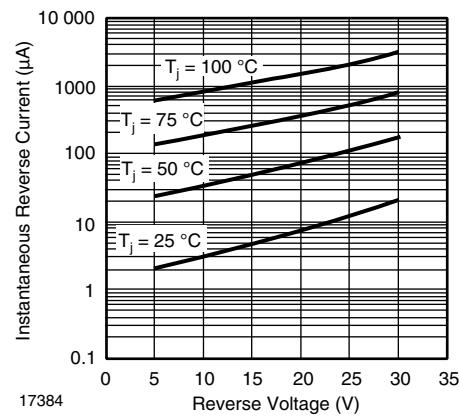
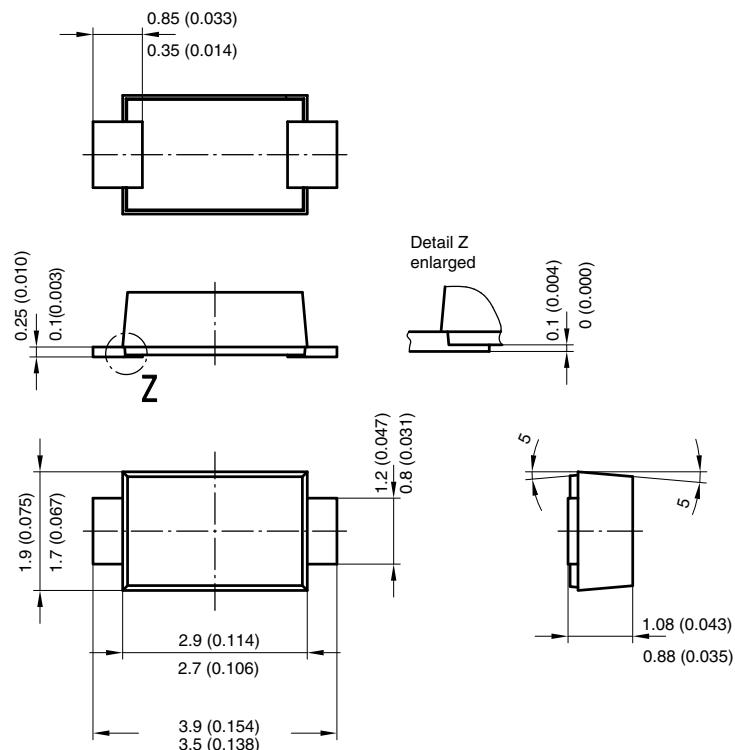
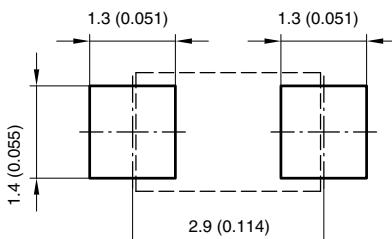


Fig. 6 - Typical Reverse Current Characteristics - SL03

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



Foot print recommendation:

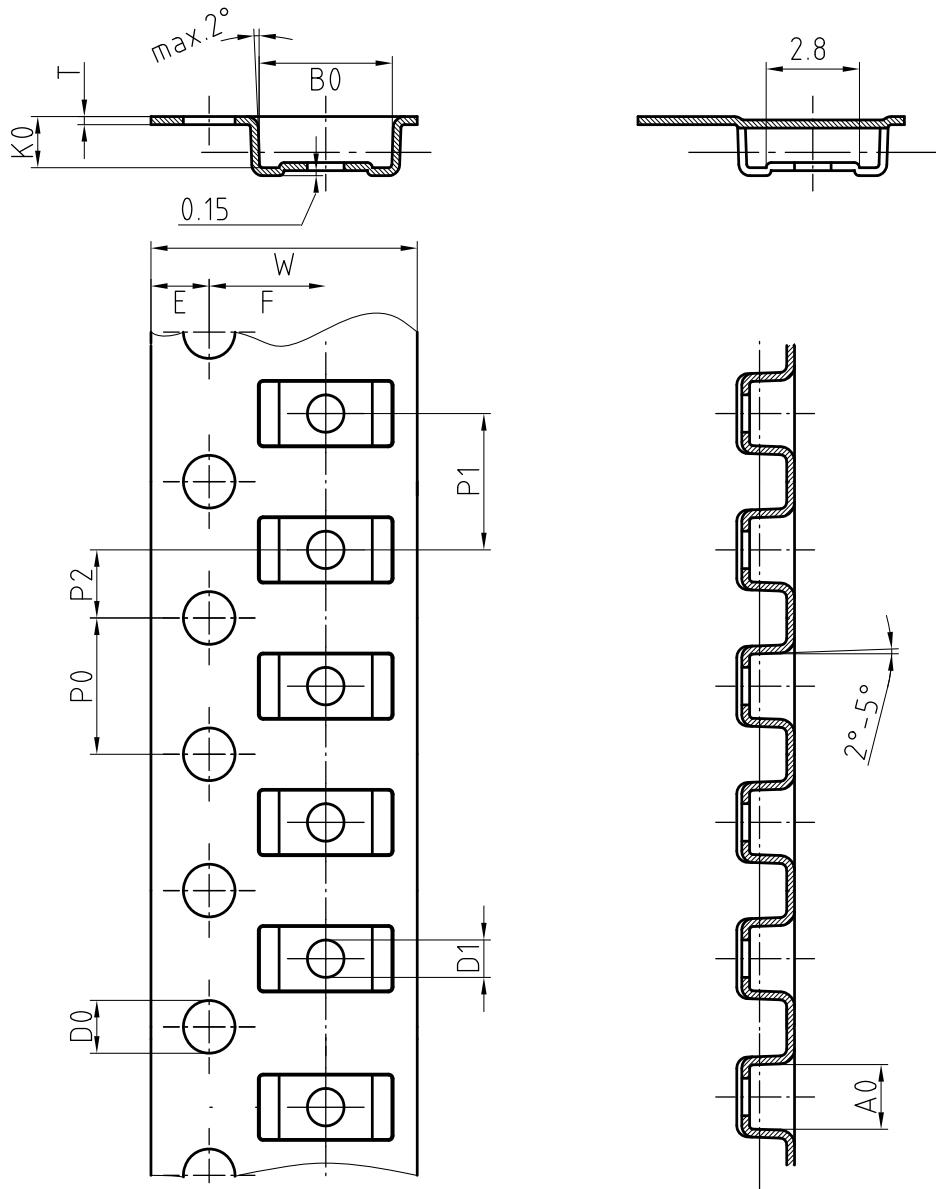


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Document no.: S8-V-3915.01-001 (4)

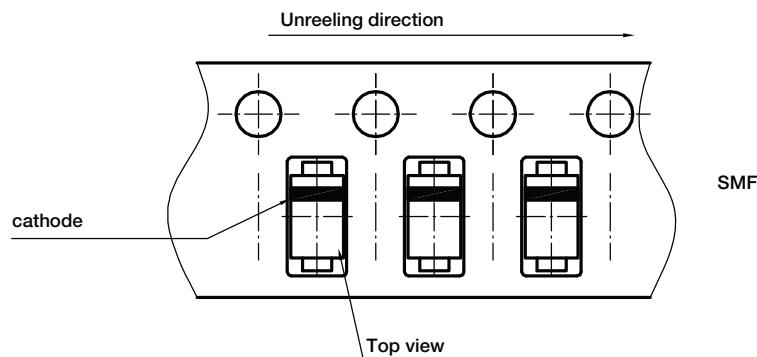
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BLISTERTAPE DIMENSIONS in millimeters: **SMF (DO-219AB)**


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)

18513

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

Document no.: S8-V-3717.02-003 (4)

Created - Date: 09. Feb. 2010

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