

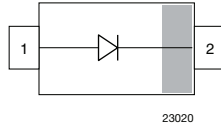
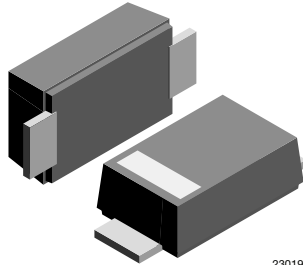


**THE DATASHEET OF  
SL03-M-08**



## Schottky Rectifier Surface-Mount

### eSMP® Series



SMF (DO-219AB)

### DESIGN SUPPORT TOOLS

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### 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](http://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 <sub>amb</sub> = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage		SL02-M	V <sub>RRM</sub>	20	V
		SL03-M	V <sub>RRM</sub>	30	V
Maximum RMS voltage		SL02-M	V <sub>RMS</sub>	14	V
		SL03-M	V <sub>RMS</sub>	21	V
Maximum DC blocking voltage		SL02-M	V <sub>DC</sub>	20	V
		SL03-M	V <sub>DC</sub>	30	V
Maximum average forward rectified current	T <sub>L</sub> = 109 °C		I <sub>F(AV)</sub>	1.1	A
Peak forward surge current 8.3 ms single half sine-wave			I <sub>FSM</sub>	40	A

THERMAL CHARACTERISTICS (T <sub>amb</sub> = 25 °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air <sup>(1)</sup>		R <sub>thJA</sub>	180	K/W
Maximum operating junction temperature		T <sub>j</sub>	125	°C
Storage temperature range		T <sub>stg</sub>	-55 to +150	°C

### Note

<sup>(1)</sup> Mounted on epoxy substrate with 3 mm x 3 mm Cu pads (≥ 40 μm thick)

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Instantaneous forward voltage	$I_F = 0.5\text{ A}$ <sup>(1)</sup>	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	$T_A = 25\text{ }^{\circ}\text{C}$	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
Reverse recovery time		SL02-M	$t_{rr}$			< 10	ns
		SL03-M	$t_{rr}$			< 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)

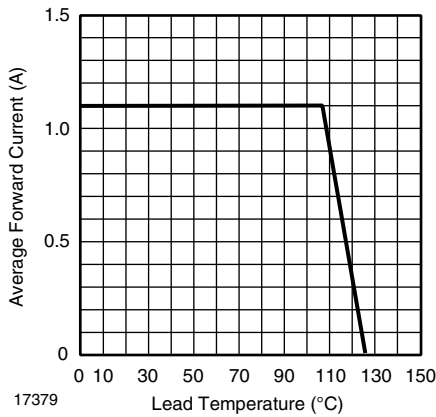


Fig. 1 - Forward Current Derating Curve

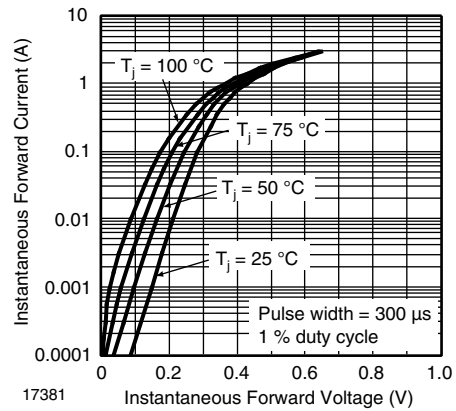


Fig. 3 - Typical Instantaneous Forward Characteristics - SL02

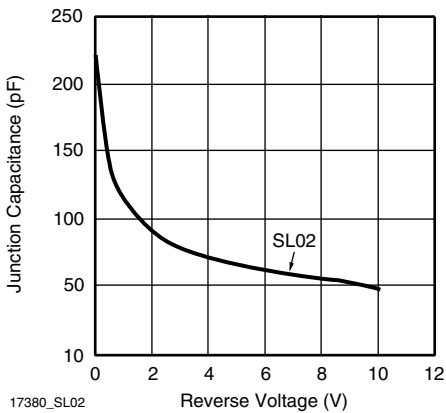


Fig. 2 - Typical Junction Capacitance

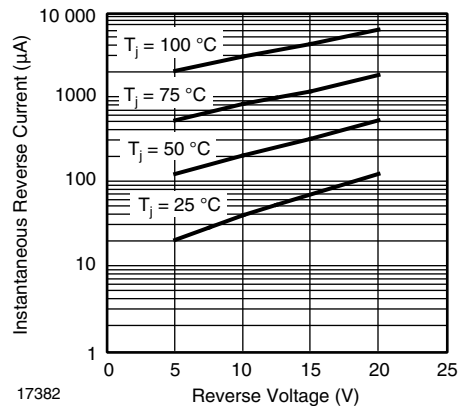


Fig. 4 - Typical Reverse Current Characteristics - SL02

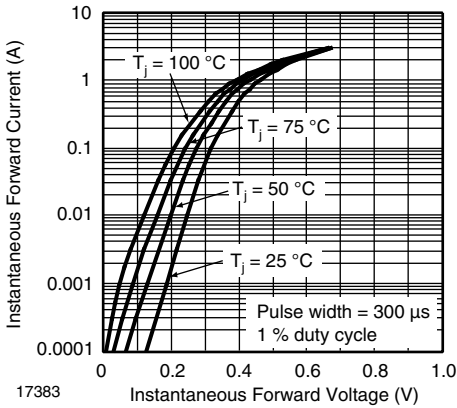


Fig. 5 - Typical Instantaneous Forward Characteristics - SL03

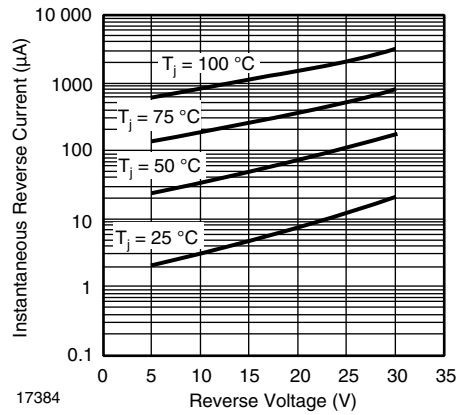
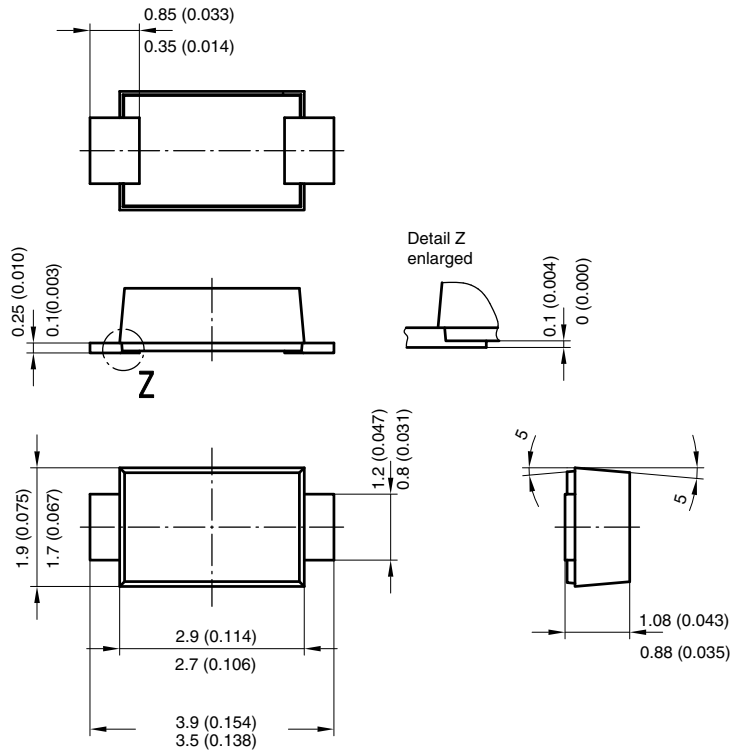
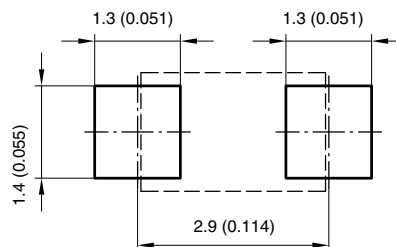


Fig. 6 - Typical Reverse Current Characteristics - SL03

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



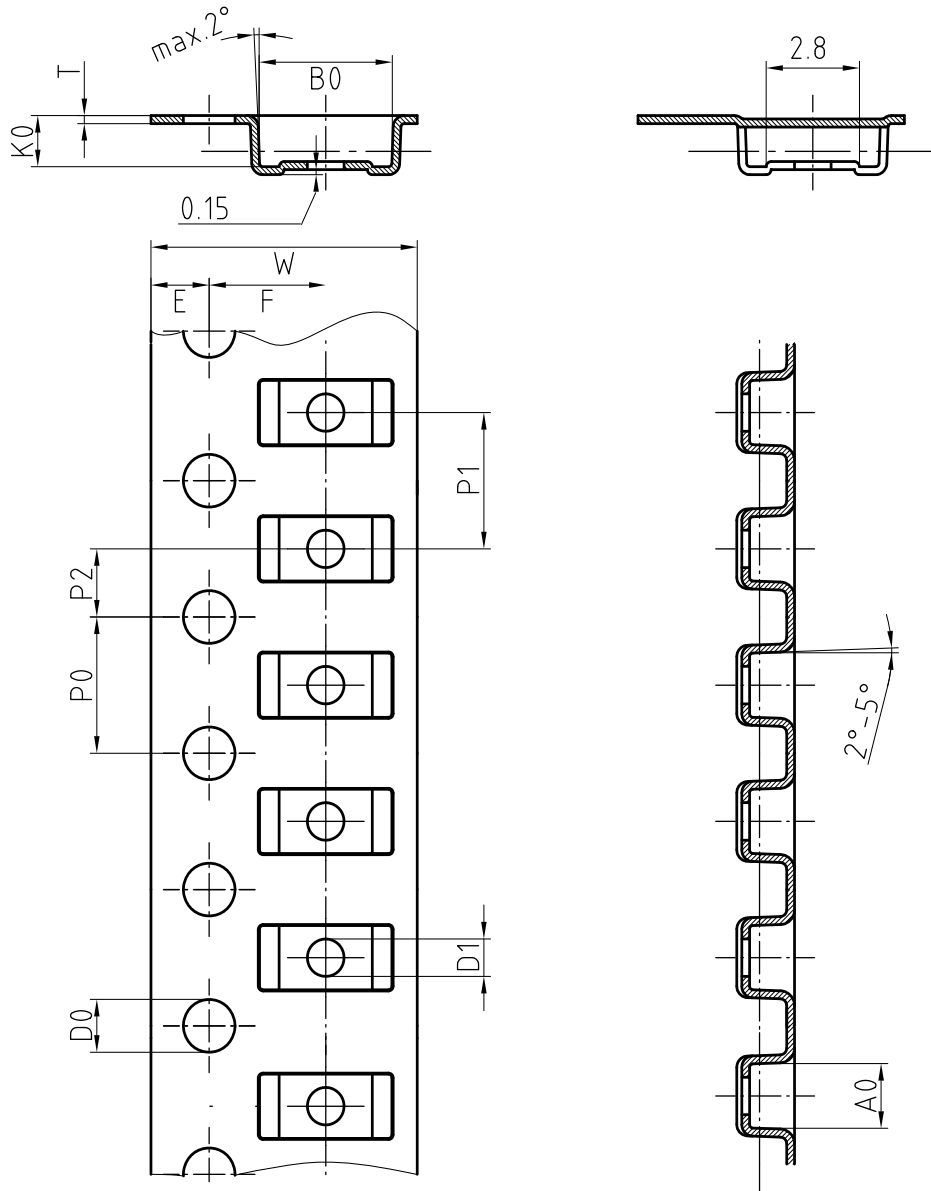
Foot print recommendation:



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



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



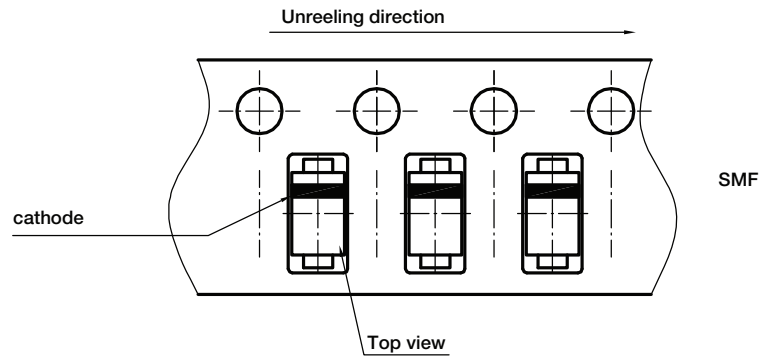
Mat:	A0	B0	K0	W	T	P0	P2	P1	D0	D1	E	F
PS	1.9	4.0	1.5	8.0	0.235	4.0	2.0	4.0	1.5	1	1.75	3.5

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  
22670



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