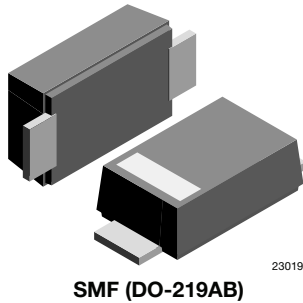


## Schottky Rectifier Surface-Mount

### 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](http://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 <sup>(1)</sup>		$R_{thJA}$	180	K/W
Maximum operating junction temperature		$T_j$	125	°C
Storage temperature range		$T_{stg}$	-55 to +150	°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
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	$\mu\text{A}$
	$T_A = 100\text{ }^{\circ}\text{C}$	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
Reverse recovery time		SL02	$t_{rr}$			< 10	ns
		SL03	$t_{rr}$			< 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)

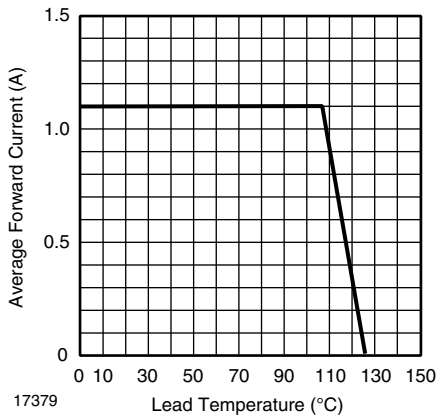


Fig. 1 - Forward Current Derating Curve

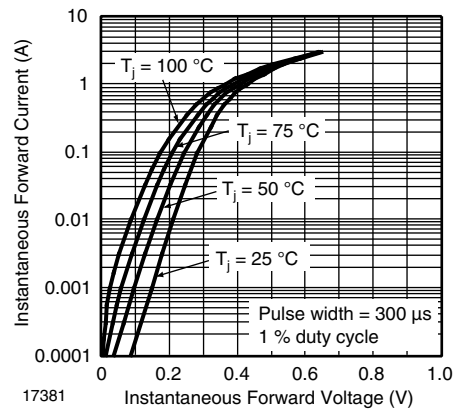


Fig. 3 - Typical Instantaneous Forward Characteristics - SL02

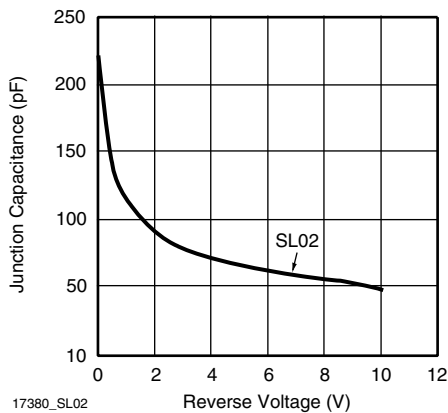


Fig. 2 - Typical Junction Capacitance

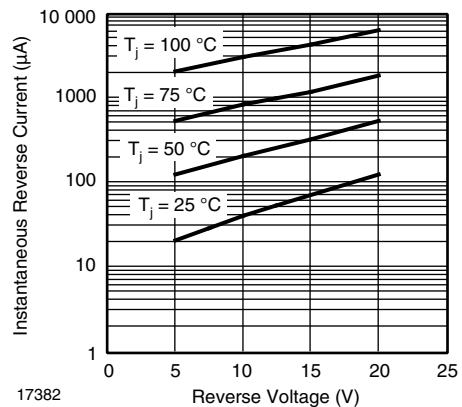


Fig. 4 - Typical Reverse Current Characteristics - SL02

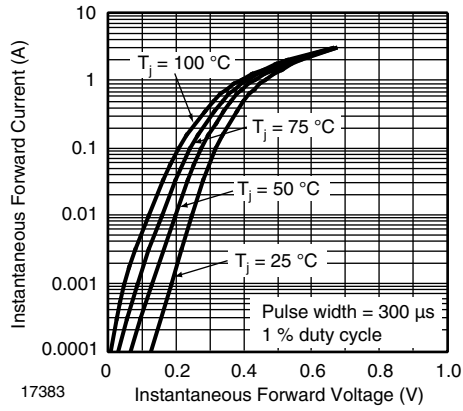


Fig. 5 - Typical Instantaneous Forward Characteristics - SL03

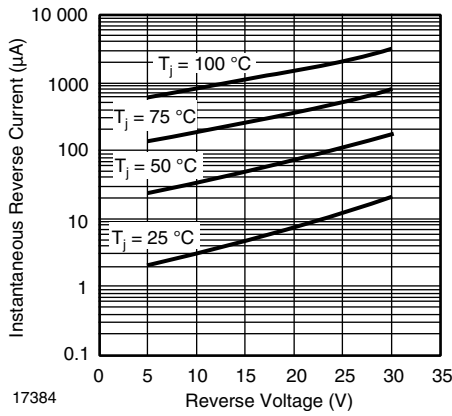
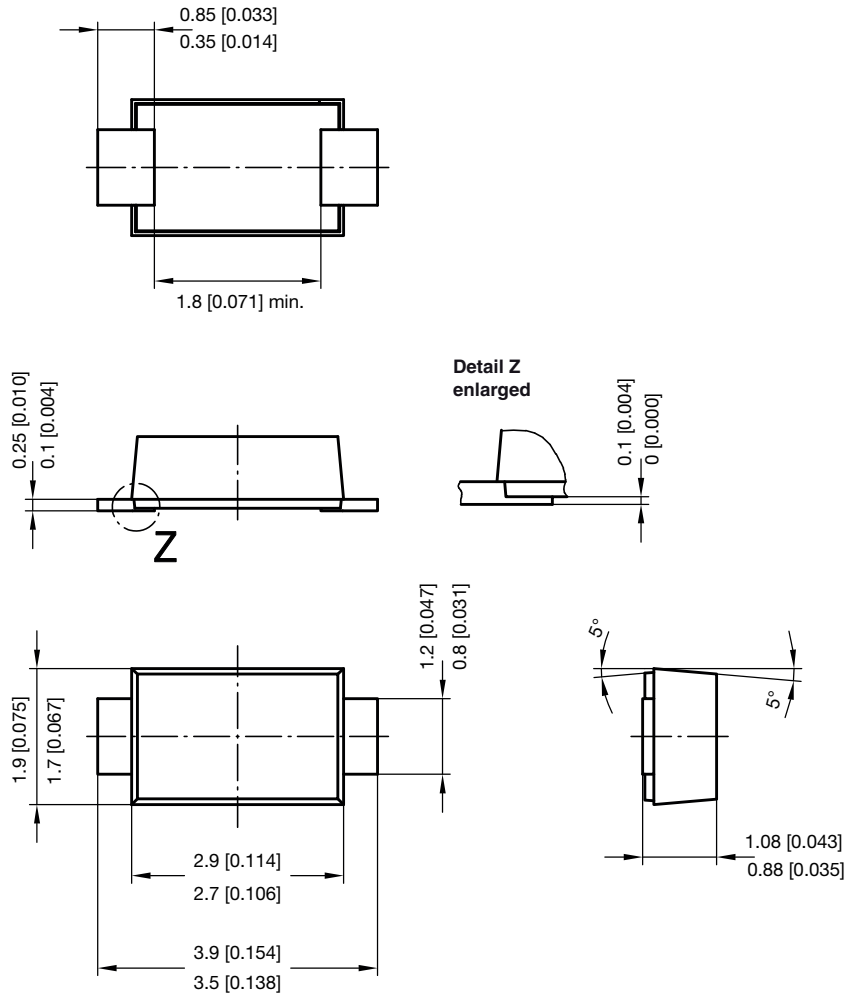


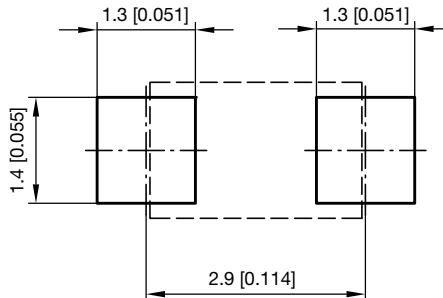
Fig. 6 - Typical Reverse Current Characteristics - SL03

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



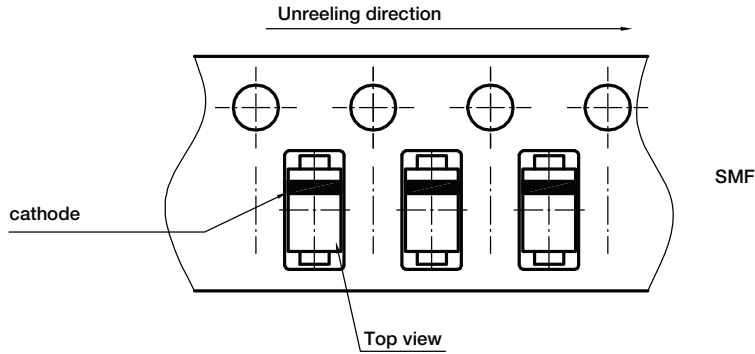
foot print recommendation:

Reflow soldering



Created - Date: 15. February 2005  
 Rev. 6 - Date: 24.Feb.2021  
 Document no.: S8-V-3915.01-001 (4)  
 22989

**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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