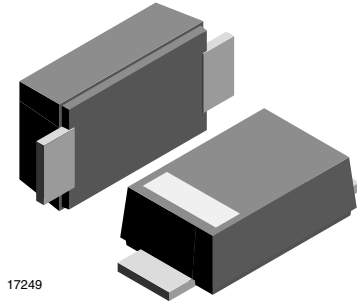




# Schottky Rectifier Surface Mount



### 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

### MECHANICAL DATA

Case: DO-219AB (SMF)

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

Int. construction: 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
SL04-M	SL04-M-18 or SL04-M-08	U4	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
		SL04-M	V <sub>RRM</sub>	40	V
Maximum RMS voltage		SL02-M	V <sub>RMS</sub>	14	V
		SL03-M	V <sub>RMS</sub>	21	V
		SL04-M	V <sub>RMS</sub>	28	V
Maximum DC blocking voltage		SL02-M	V <sub>DC</sub>	20	V
		SL03-M	V <sub>DC</sub>	30	V
		SL04-M	V <sub>DC</sub>	40	V
Maximum average forward rectified current	T <sub>tp</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)



ELECTRICAL CHARACTERISTICS (T <sub>amb</sub> = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Instantaneous forward voltage	I <sub>F</sub> = 0.5 A <sup>(1)</sup>	SL02-M	V <sub>F</sub>		0.360	0.385	V
		SL03-M	V <sub>F</sub>		0.395	0.43	V
		SL04-M	V <sub>F</sub>		0.450	0.51	V
Typical instantaneous forward voltage	I <sub>F</sub> = 1.1 A	SL02-M	V <sub>F</sub>		0.420		V
		SL03-M	V <sub>F</sub>		0.450		V
		SL04-M	V <sub>F</sub>		0.530		V
Maximum DC reverse current at rated DC blocking voltage	T <sub>A</sub> = 25 °C	SL02-M	I <sub>R</sub>			250	μA
	T <sub>A</sub> = 100 °C	SL02-M	I <sub>R</sub>			8	mA
	T <sub>A</sub> = 25 °C	SL03-M	I <sub>R</sub>			130	μA
	T <sub>A</sub> = 100 °C	SL03-M	I <sub>R</sub>			6	mA
	T <sub>A</sub> = 25 °C	SL04-M	I <sub>R</sub>			20	μA
	T <sub>A</sub> = 100 °C	SL04-M	I <sub>R</sub>			6	mA
Reverse recovery time		SL02-M	t <sub>rr</sub>			< 10	ns
		SL03-M	t <sub>rr</sub>			< 10	ns
		SL04-M	t <sub>rr</sub>			< 10	ns

**Note**

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

**TYPICAL CHARACTERISTICS** (T<sub>amb</sub> = 25 °C, unless otherwise specified)

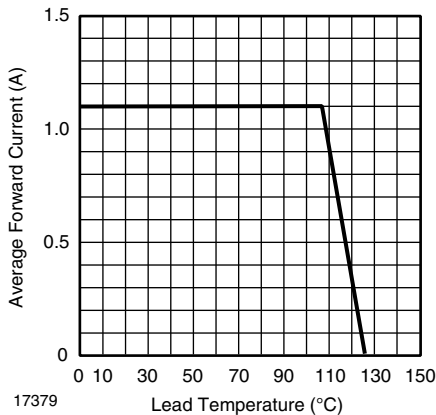


Fig. 1 - Forward Current Derating Curve

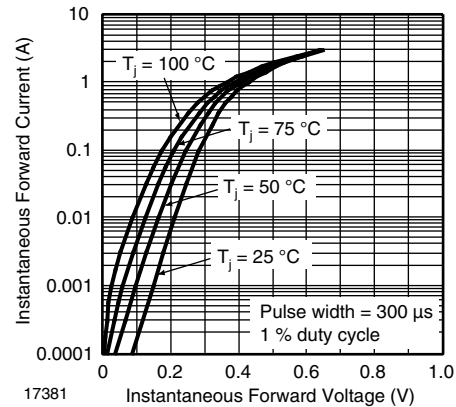


Fig. 3 - Typical Instantaneous Forward Characteristics - SL02

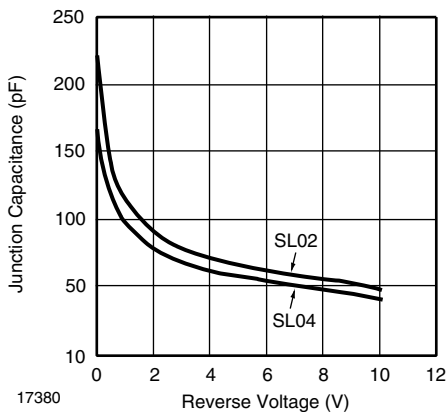


Fig. 2 - Typical Junction Capacitance

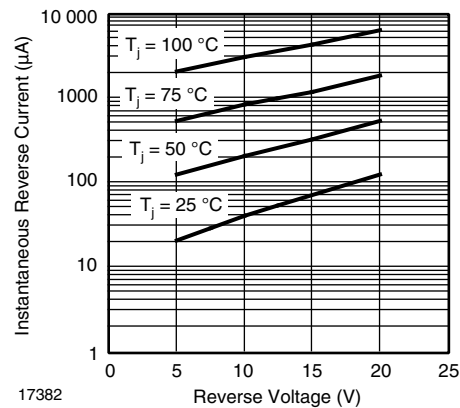


Fig. 4 - Typical Reverse Current Characteristics - SL02

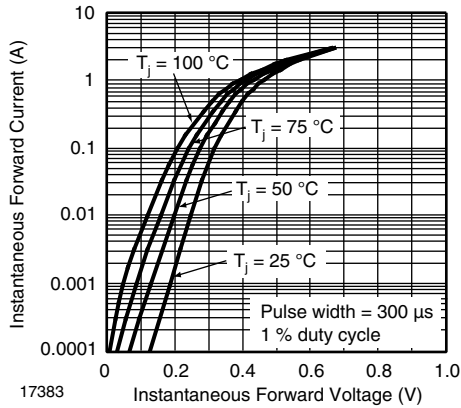


Fig. 5 - Typical Instantaneous Forward Characteristics - SL03

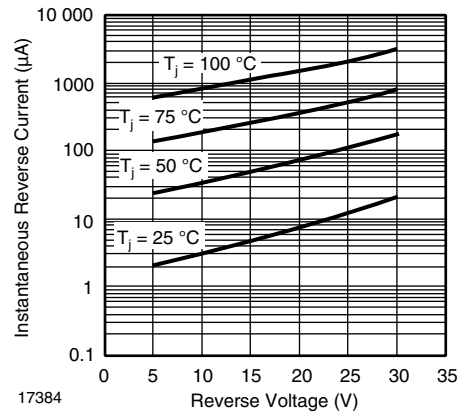
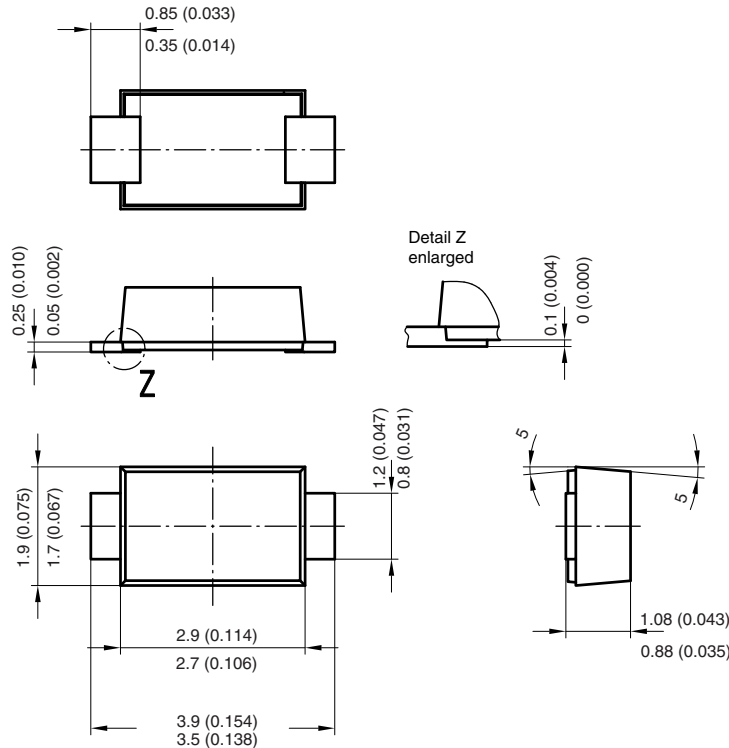
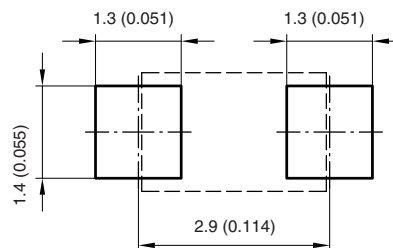


Fig. 6 - Typical Reverse Current Characteristics - SL03

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



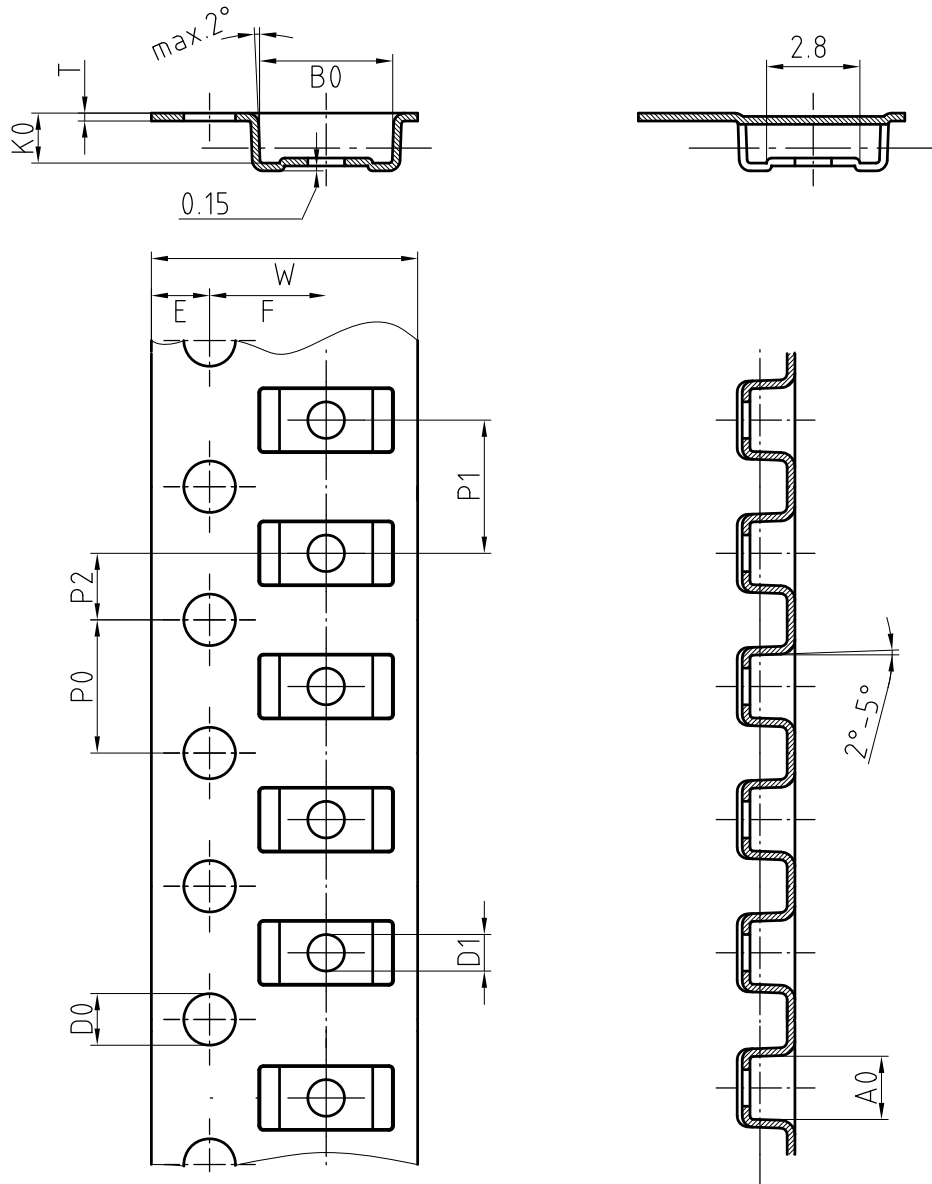
Foot print recommendation:



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 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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