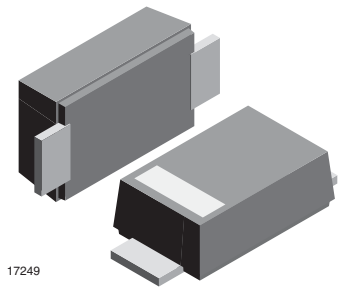
Standard Recovery Rectifier, High Voltage Surface Mount



FEATURES

- For surface mounted applications
- Low profile package
- Ideal for automated placement
- Glass passivated
- High temperature soldering: 260 °C/10 s at terminals
- Wave and reflow solderable
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT

MECHANICAL DATA

Case: DO-219AB (SMF)
Polarity: band denotes cathode end
Weight: approx. 15 mg
Packaging codes/options:
GS18/10K per 13" reel (8 mm tape), 50K/box
GS08/3K per 7" reel (8 mm tape), 30K/box
Int. construction: Single

PARTS TABLE

PART	ORDERING CODE	MARKING	REMARKS
S1FLB	S1FLB-GS18 or S1FLB-GS08	FB	Tape and reel
S1FLD	S1FLD-GS18 or S1FLD-GS08	FD	Tape and reel
S1FLG	S1FLG-GS18 or S1FLG-GS08	FG	Tape and reel
S1FLJ	S1FLJ-GS18 or S1FLJ-GS08	FJ	Tape and reel
S1FLK	S1FLK-GS18 or S1FLK-GS08	FK	Tape and reel
S1FLM	S1FLM-GS18 or S1FLM-GS08	FM	Tape and reel

ABSOLUTE MAXIMUM RATINGS (T_{amb} = 25 °C, unless otherwise specified)

PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage		S1FLB	V_{RRM}	100	V
		S1FLD	V_{RRM}	200	V
		S1FLG	V_{RRM}	400	V
		S1FLJ	V_{RRM}	600	V
		S1FLK	V_{RRM}	800	V
		S1FLM	V_{RRM}	1000	V
Maximum RMS voltage		S1FLB	V_{RMS}	70	V
		S1FLD	V_{RMS}	140	V
		S1FLG	V_{RMS}	280	V
		S1FLJ	V_{RMS}	420	V
		S1FLK	V_{RMS}	560	V
		S1FLM	V_{RMS}	700	V
Maximum DC blocking voltage		S1FLB	V_{DC}	100	V
		S1FLD	V_{DC}	200	V
		S1FLG	V_{DC}	400	V
		S1FLJ	V_{DC}	600	V
		S1FLK	V_{DC}	800	V
		S1FLM	V_{DC}	1000	V
Maximum average forward rectified current	T_{tp} = 75 °C		$I_{F(AV)}$	1.5	A
	T_A = 65 °C (1)		$I_{F(AV)}$	0.7	A
Peak forward surge current 8.3 ms single half sine-wave	T_L = 25 °C		I_{FSM}	22	A

Note

(1) Averaged over any 20 ms periode

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THERMAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)				
PARAMETER	**TEST CONDITION**	**SYMBOL**	**VALUE**	**UNIT**
Thermal resistance junction to ambient air (1)		R_{thJA}	180	K/W
Operating junction and storage temperature range		T_j, T_{stg}	- 55 to + 150	°C

Note

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

ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)							
PARAMETER	**TEST CONDITION**	**PART**	**SYMBOL**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
Maximum instaneous forward voltage	1 A (1)	S1FLB	V_F			1.1	V
		S1FLD	V_F			1.1	V
		S1FLG	V_F			1.1	V
		S1FLJ	V_F			1.1	V
		S1FLK	V_F			1.1	V
		S1FLM	V_F			1.1	V
Maximum DC reverse current at rated DC blocking voltage	T_A = 25 °C	S1FLB	I_R			10	µA
		S1FLD	I_R			10	µA
		S1FLG	I_R			10	µA
		S1FLJ	I_R			10	µA
		S1FLK	I_R			10	µA
		S1FLM	I_R			10	µA
	T_A = 125 °C	S1FLB	I_R			50	µA
		S1FLD	I_R			50	µA
		S1FLG	I_R			50	µA
		S1FLJ	I_R			50	µA
		S1FLK	I_R			50	µA
		S1FLM	I_R			50	µA
Reverse recovery time	I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A	S1FLB	t_{rr}			1.8	µs
		S1FLD	t_{rr}			1.8	µs
		S1FLG	t_{rr}			1.8	µs
		S1FLJ	t_{rr}			1.8	µs
		S1FLK	t_{rr}			1.8	µs
		S1FLM	t_{rr}			1.8	µs
Typical capacitance	4 V, 1 MHz	S1FLB	C_j		4		pF
		S1FLD	C_j		4		pF
		S1FLG	C_j		4		pF
		S1FLJ	C_j		4		pF
		S1FLK	C_j		4		pF
		S1FLM	C_j		4		pF

Note

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

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TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

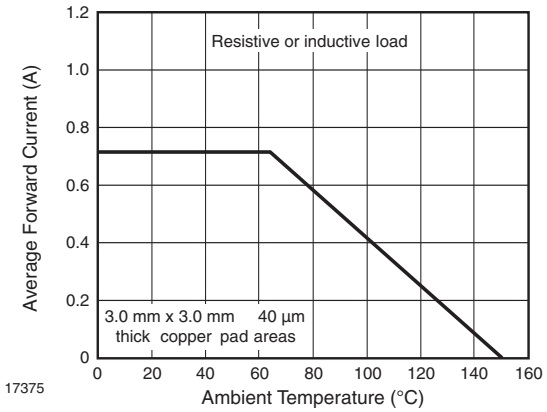


Fig. 1 - Forward Current Derating Curve

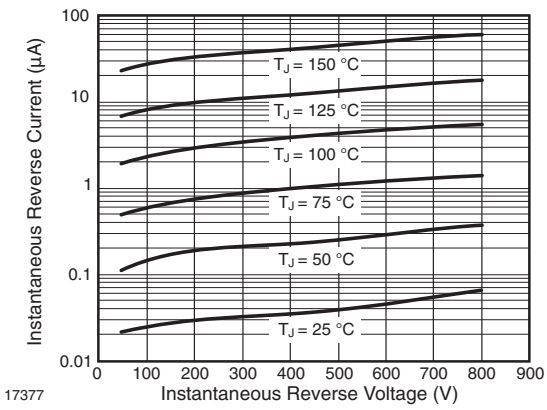


Fig. 3 - Typical Instantaneous Reverse Characteristics

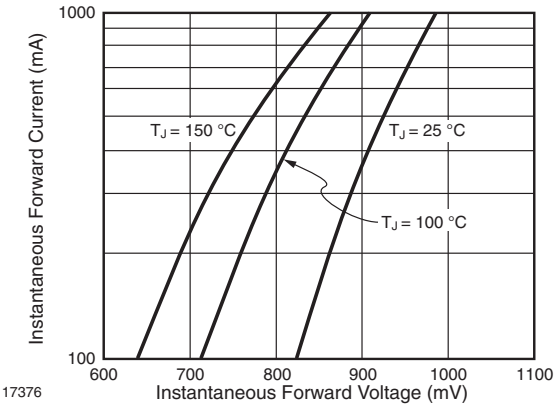


Fig. 2 - Typical Instantaneous Forward Characteristics

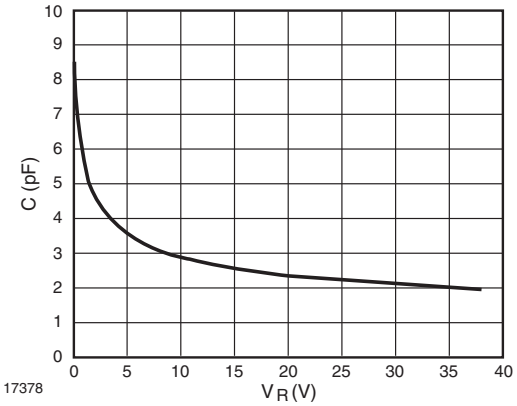
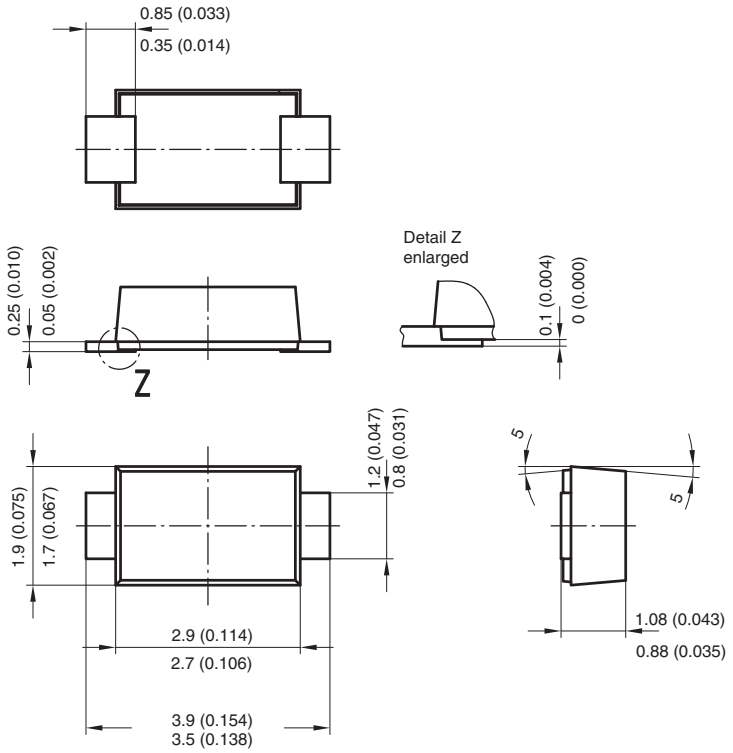


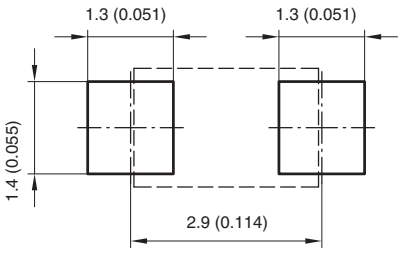
Fig. 4 - Capacitance vs. Reverse Voltage

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



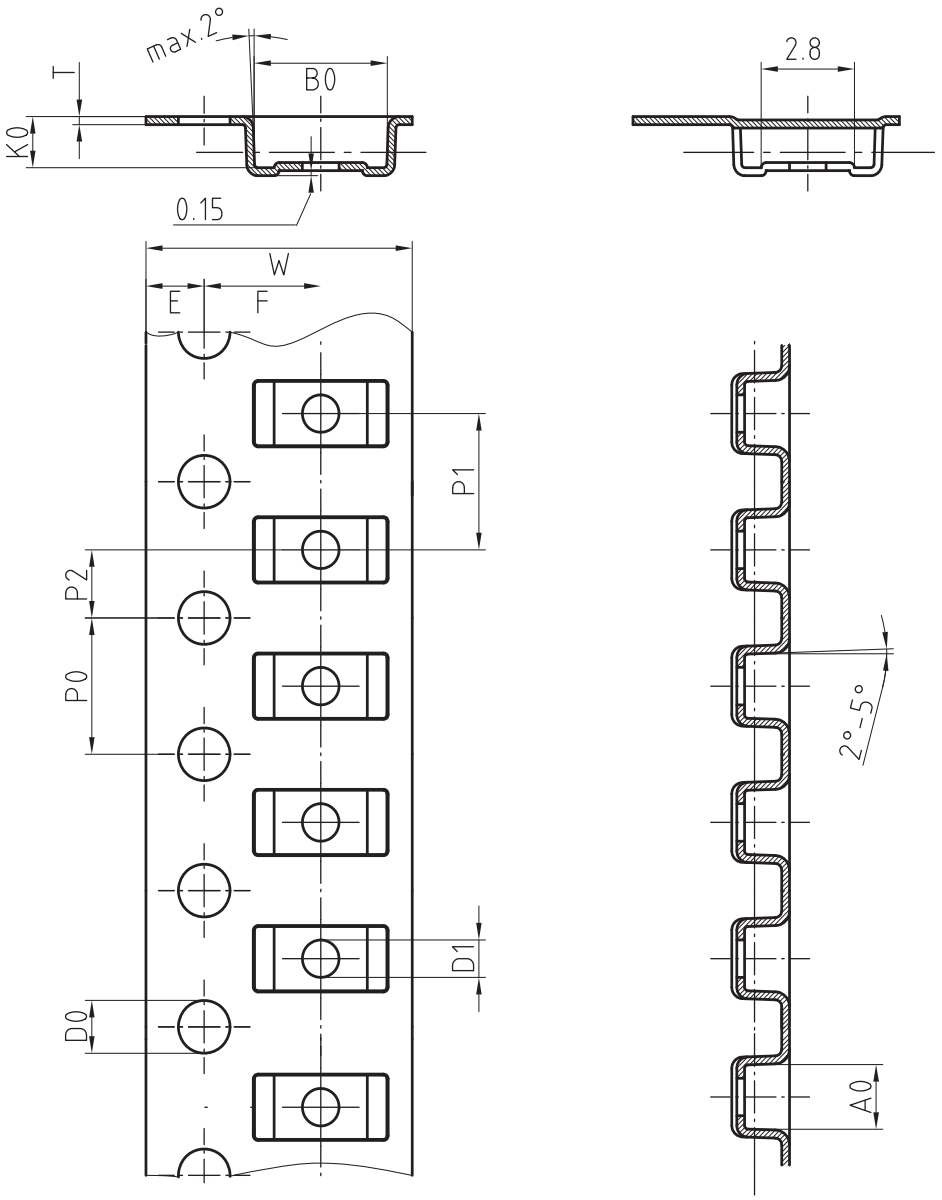
Foot print recommendation:



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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

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