



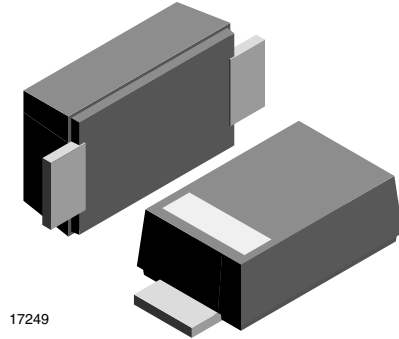
Small Signal Switching Diode, High Voltage

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
- 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



17249

Mechanical Data

Case: JEDEC DO219AB (SMF[®]) plastic case

Polarity: 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

Parts Table

Part	Ordering code	Marking	Remarks
S1FLB-M	S1FLB-M-18 or S1FLB-M-08	HB	Tape and reel
S1FLD-M	S1FLD-M-18 or S1FLD-M-08	HD	Tape and reel
S1FLG-M	S1FLG-M-18 or S1FLG-M-08	HG	Tape and reel
S1FLJ-M	S1FLJ-M-18 or S1FLJ-M-08	HJ	Tape and reel
S1FLM-M	S1FLM-M-18 or S1FLM-M-08	HM	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-M	V _{RRM}	100	V
		S1FLD-M	V _{RRM}	200	V
		S1FLG-M	V _{RRM}	400	V
		S1FLJ-M	V _{RRM}	600	V
		S1FLM-M	V _{RRM}	1000	V
Maximum RMS voltage		S1FLB-M	V _{RMS}	70	V
		S1FLD-M	V _{RMS}	140	V
		S1FLG-M	V _{RMS}	280	V
		S1FLJ-M	V _{RMS}	420	V
		S1FLM-M	V _{RMS}	700	V
Maximum DC blocking voltage		S1FLB-M	V _{DC}	100	V
		S1FLD-M	V _{DC}	200	V
		S1FLG-M	V _{DC}	400	V
		S1FLJ-M	V _{DC}	600	V
		S1FLM-M	V _{DC}	1000	V

Parameter	Test condition	Part	Symbol	Value	Unit
Maximum average forward rectified current	$T_{ip} = 75\text{ }^{\circ}\text{C}$ ¹⁾		$I_{F(AV)}$	1.5	A
	$T_A = 65\text{ }^{\circ}\text{C}$ ¹⁾		$I_{F(AV)}$	0.7	A
Peak forward surge current 8.3 ms single half sine-wave	$T_L = 25\text{ }^{\circ}\text{C}$		I_{FSM}	22	A

Note:

¹⁾ Averaged over any 20 ms period

Thermal Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$, 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	$^{\circ}\text{C}$

Note:

¹⁾ 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	Symbol	Min.	Typ.	Max.	Unit
Maximum instantaneous forward voltage	1 A ¹⁾	V_F			1.1	V
Maximum DC reverse current at rated DC blocking voltage	$T_A = 25\text{ }^{\circ}\text{C}$	I_R			10	μA
	$T_A = 125\text{ }^{\circ}\text{C}$	I_R			50	μA
Reverse recovery time	$I_F = 0.5\text{ A}, I_R = 1\text{ A}, I_{rr} = 0.25\text{ A}$	t_{rr}			1.8	μs
Typical capacitance at 4 V, MHz		C_j		4		pF

Note:

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

Typical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

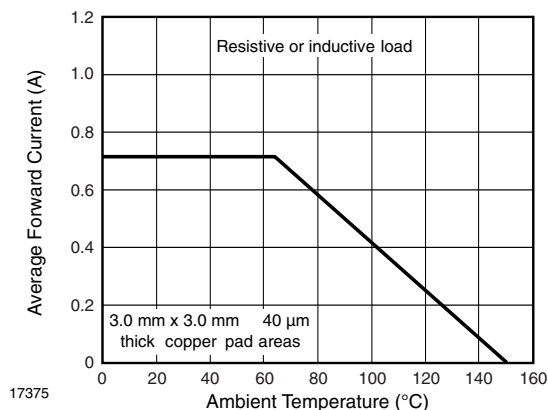


Figure 1. Forward Current Derating Curve

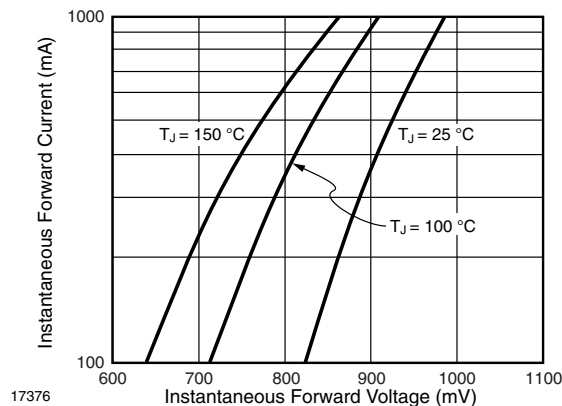


Figure 2. Typical Instantaneous Forward Characteristics

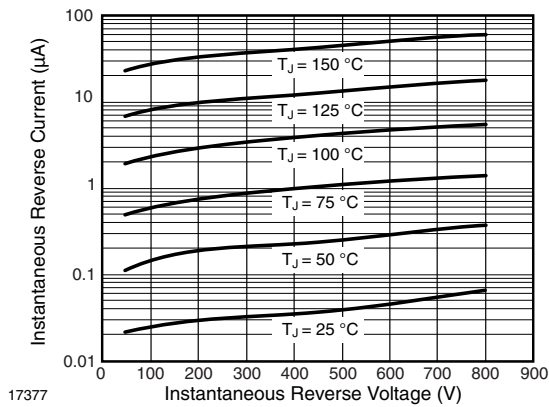


Figure 3. Typical Instantaneous Reverse Characteristics

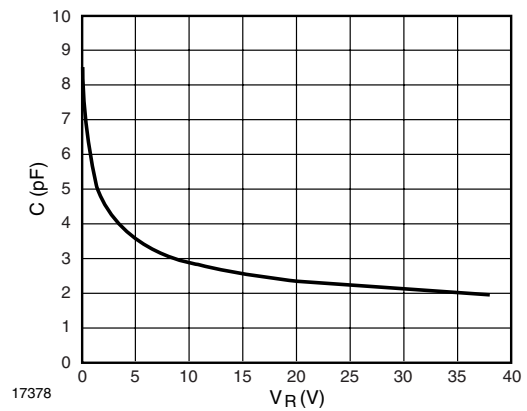
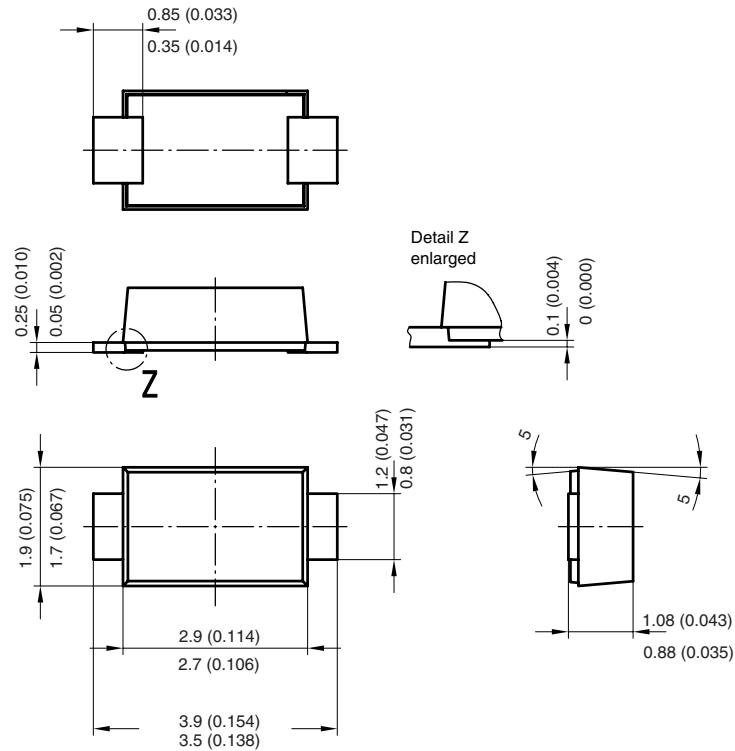


Figure 4. Capacitance vs. Reverse Voltage

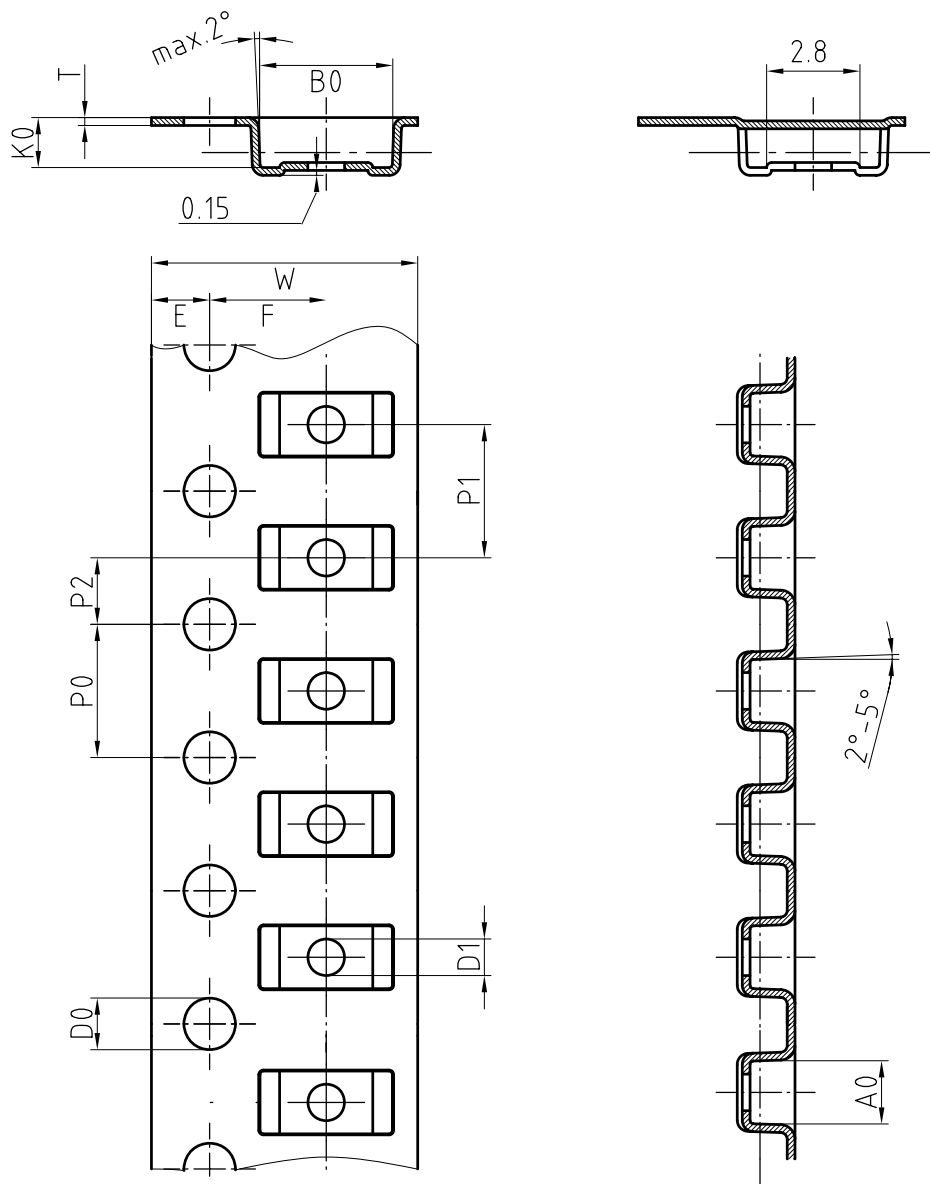
Package Dimensions in millimeters (inches): DO219AB



Foot print recommendation:

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

Blister Tape Dimensions for SMF in millimeters



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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