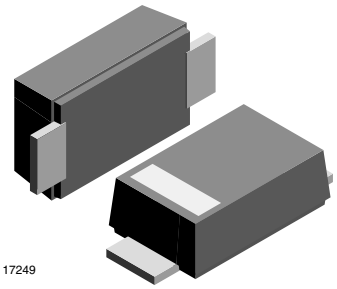
Small Signal Fast Switching Diode, High Voltage

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
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC

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)
GS08/3K per 7" reel (8 mm tape)

Parts Table

Part	Ordering code	Marking	Remarks
RS07B	RS07B-GS18 or RS07B-GS08	RB	Tape and reel
RS07D	RS07D-GS18 or RS07D-GS08	RD	Tape and reel
RS07G	RS07G-GS18 or RS07G-GS08	RG	Tape and reel
RS07J	RS07J-GS18 or RS07J-GS08	RJ	Tape and reel
RS07K	RS07K-GS18 or RS07K-GS08	RK	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		RS07B	V_{RRM}	100	V
		RS07D	V_{RRM}	200	V
		RS07G	V_{RRM}	400	V
		RS07J	V_{RRM}	600	V
		RS07K	V_{RRM}	800	V
Maximum RMS voltage		RS07B	V_{RMS}	70	V
		RS07D	V_{RMS}	140	V
		RS07G	V_{RMS}	280	V
		RS07J	V_{RMS}	420	V
		RS07K	V_{RMS}	560	V
Maximum DC blocking voltage		RS07B	V_{DC}	100	V
		RS07D	V_{DC}	200	V
		RS07G	V_{DC}	400	V
		RS07J	V_{DC}	600	V
		RS07K	V_{DC}	800	V
Maximum average forward rectified current	T_{tp} = 65 °C		$I_{F(AV)}$	1.4	A
	T_A = 45 °C		$I_{F(AV)}$	0.5	A
Peak forward surge current 8.3 ms half sine-wave	T_L = 25 °C		I_{FSM}	30	A

Thermal Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to tie point		R_{thJtp}	30	K/W
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 glass PCB 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 instantaneous forward voltage	0.7 A [1)]	RS07B	V_F			1.15	V
		RS07D	V_F			1.15	V
		RS07G	V_F			1.15	V
		RS07J	V_F			1.15	V
	1 A [1)]	RS07K	V_F			1.3	V
Maximum DC reverse current at rated DC blocking voltage	T_A = 25°C	RS07B	I_R			10	µA
		RS07D	I_R			10	µA
		RS07G	I_R			10	µA
		RS07J	I_R			10	µA
		RS07K	I_R			2	µA
	T_A = 125°C	RS07B	I_R			50	µA
		RS07D	I_R			50	µA
		RS07G	I_R			50	µA
		RS07J	I_R			50	µA
		RS07K	I_R			150	µA
Reverse recovery time	I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A	RS07B	t_{rr}			150	ns
		RS07D	t_{rr}			150	ns
		RS07G	t_{rr}			150	ns
		RS07J	t_{rr}			250	ns
		RS07K	t_{rr}			300	ns
Typical capacitance	4 V, 1 MHz	RS07B	C_D		9		pF
		RS07D	C_D		9		pF
		RS07G	C_D		9		pF
		RS07J	C_D		9		pF
		RS07K	C_D		4		pF

Note:
[1)] Pulse test, 300 µs pulse width 1 % duty cycle

For technical questions within your region, please contact one of the following:
DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com

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Typical Characteristics

T_{amb} = 25 °C, unless otherwise specified

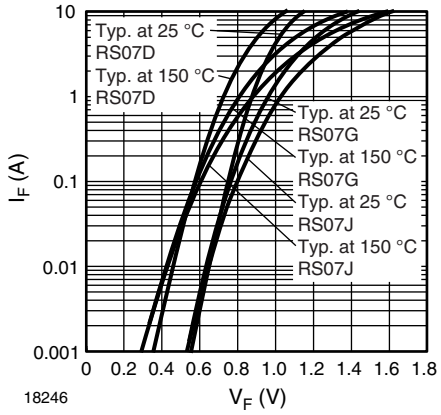


Figure 1. Typical Forward Characteristics

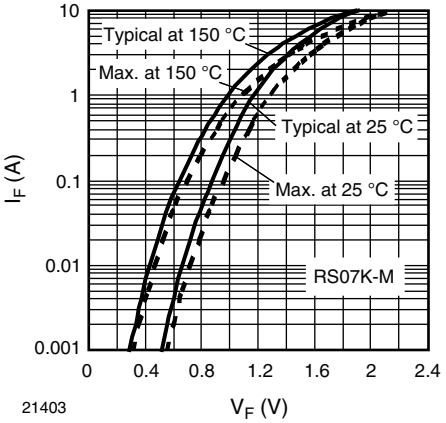


Figure 2. Typical Forward Characteristics

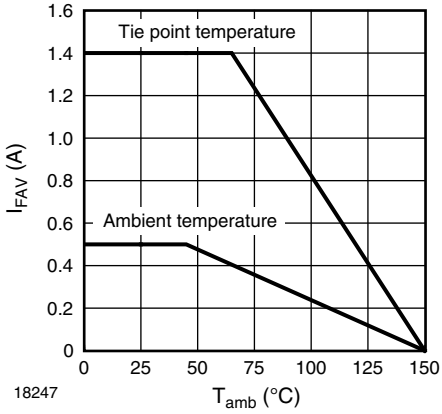


Figure 3. Forward Current Derating Curve

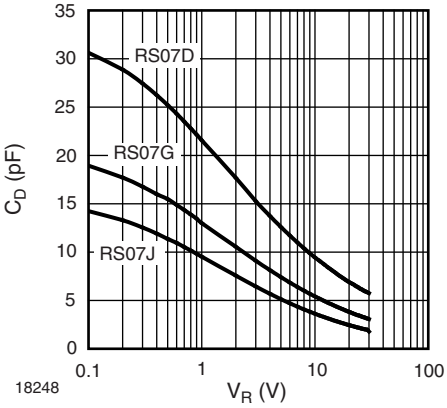


Figure 4. Typ. Diode Capacitance vs. Reverse Voltage

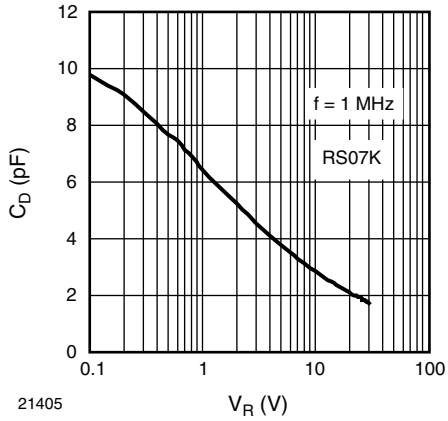


Figure 5. Typ. Diode Capacitance vs. Reverse Voltage

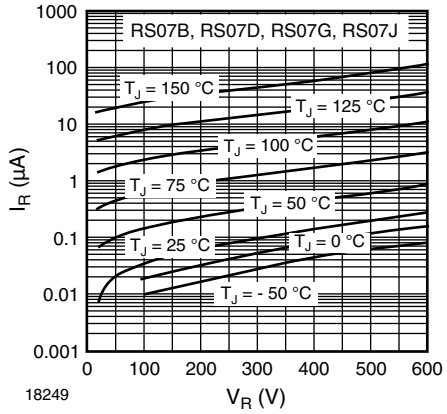


Figure 6. Typical Reverse Characteristics

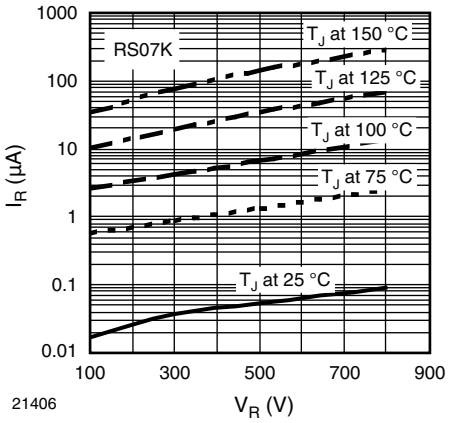
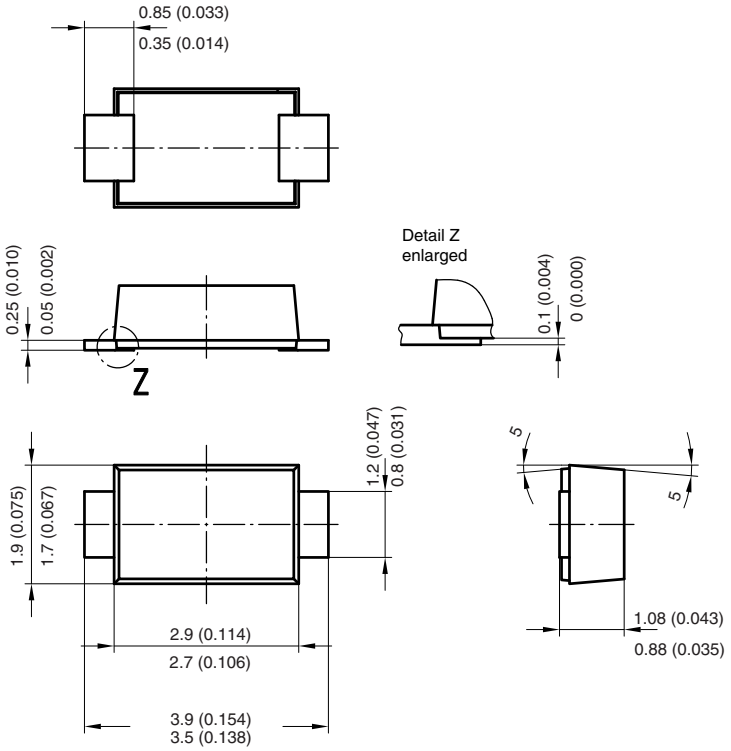
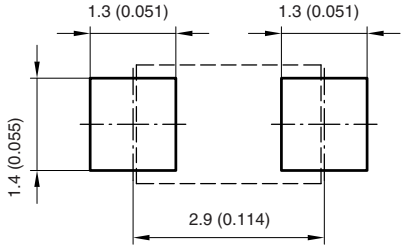


Figure 7. Typical Reverse Characteristics

Package Dimensions in millimeters (inches): **DO-219AB (SMF)**

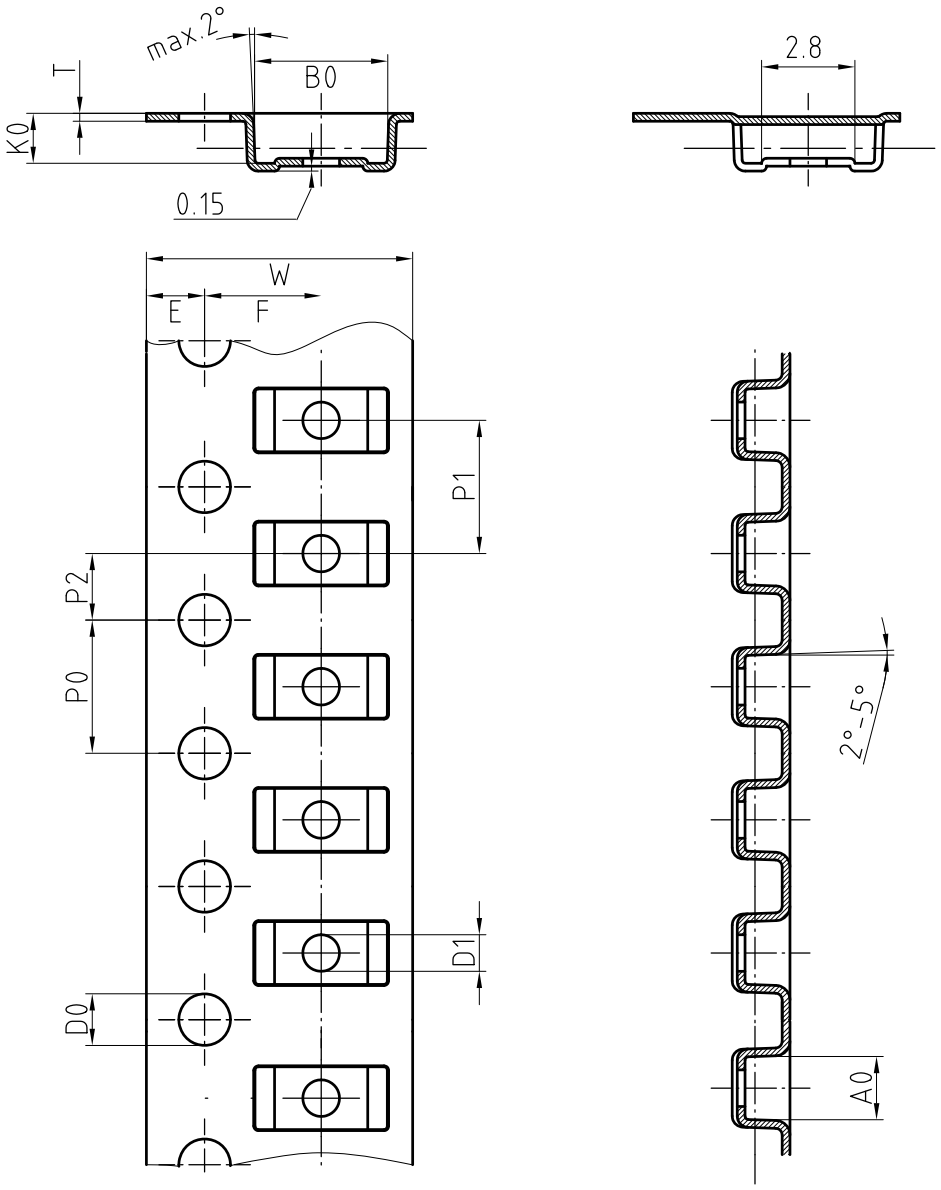


Foot print recommendation:



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

Blistertape Dimensions 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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