



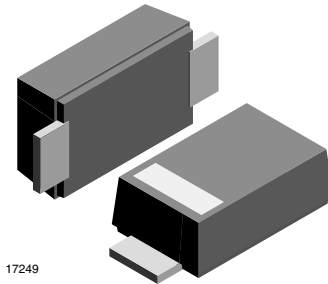
Small Signal Fast Switching Diode, High Voltage

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
- 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)

08/3K per 7" reel (8 mm tape)

Parts Table

Part	Ordering code	Marking	Remarks
RS07B-M	RS07B-M-18 or RS07B-M-08	TB	Tape and reel
RS07D-M	RS07D-M-18 or RS07D-M-08	TD	Tape and reel
RS07G-M	RS07G-M-18 or RS07G-M08	TG	Tape and reel
RS07J-M	RS07J-M-18 or RS07J-M-08	TJ	Tape and reel
RS07K-M	RS07K-M-18 or RS07K-M-08	TK	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-M	V _{RRM}	100	V
		RS07D-M	V _{RRM}	200	V
		RS07G-M	V _{RRM}	400	V
		RS07J-M	V _{RRM}	600	V
		RS07K-M	V _{RRM}	800	V
Maximum RMS voltage		RS07B-M	V _{RMS}	70	V
		RS07D-M	V _{RMS}	140	V
		RS07G-M	V _{RMS}	280	V
		RS07J-M	V _{RMS}	420	V
		RS07K-M	V _{RMS}	560	V
Maximum DC blocking voltage		RS07B-M	V _{DC}	100	V
		RS07D-M	V _{DC}	200	V
		RS07G-M	V _{DC}	400	V
		RS07J-M	V _{DC}	600	V
		RS07K-M	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

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

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to tie point (for RS07K-M only)		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	$^{\circ}\text{C}$

Note:

¹⁾ Mounted on epoxy glass PCB 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
Maximum instantaneous forward voltage	0.7 A ¹⁾	RS07B-M	V_F			1.15	V
		RS07D-M	V_F			1.15	V
		RS07G-M	V_F			1.15	V
		RS07J-M	V_F			1.15	V
		RS07K-M	V_F			1.3	V
		1 A ¹⁾	RS07K-M	V_F			1.3
Maximum DC reverse current at rated DC blocking voltage	$T_A = 25\text{ }^{\circ}\text{C}$	RS07B-M	I_R			10	μA
		RS07D-M	I_R			10	μA
		RS07G-M	I_R			10	μA
		RS07J-M	I_R			10	μA
		RS07K-M	I_R			2	μA
	$T_A = 125\text{ }^{\circ}\text{C}$	RS07B-M	I_R			50	μA
		RS07D-M	I_R			50	μA
		RS07G-M	I_R			50	μA
		RS07J-M	I_R			50	μA
		RS07K-M	I_R			150	μA
Reverse recovery time	$I_F = 0.5\text{ A}, I_R = 1\text{ A}, I_{rr} = 0.25\text{ A}$	RS07B-M	t_{rr}			150	ns
		RS07D-M	t_{rr}			150	ns
		RS07G-M	t_{rr}			150	ns
		RS07J-M	t_{rr}			250	ns
		RS07K-M	t_{rr}			300	ns
Typical capacitance	4 V, 1 MHz	RS07B-M	C_D		9		pF
		RS07D-M	C_D		9		pF
		RS07G-M	C_D		9		pF
		RS07J-M	C_D		9		pF
		RS07K-M	C_D		4		pF

Note:

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



Typical Characteristics

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

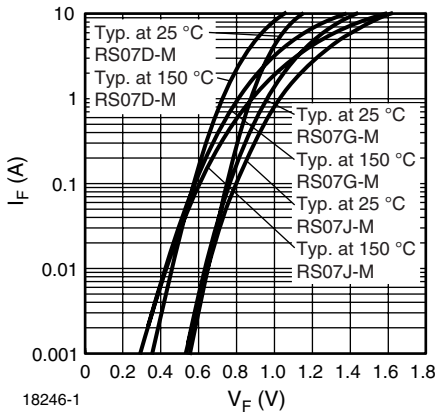


Figure 1. Typical Forward Characteristics

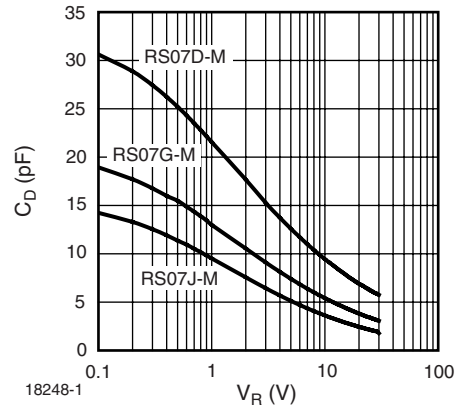


Figure 4. Typ. Diode Capacitance vs. Reverse Voltage

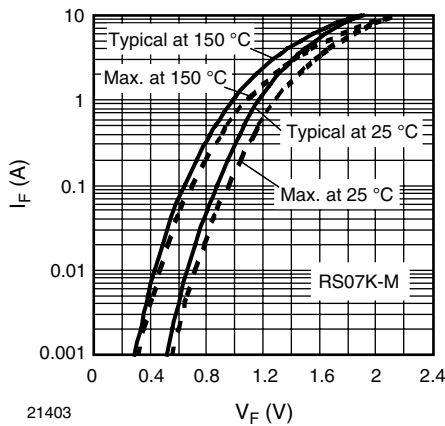


Figure 2. Typical Forward Characteristics

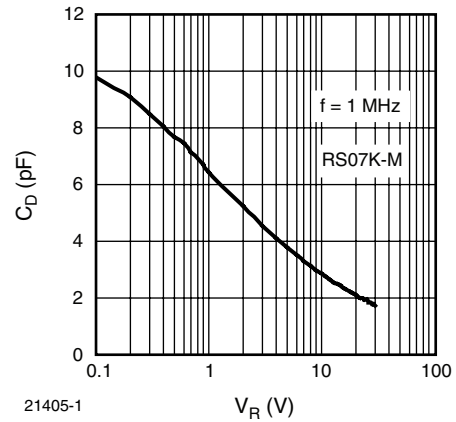


Figure 5. Typ. Diode Capacitance vs. Reverse Voltage

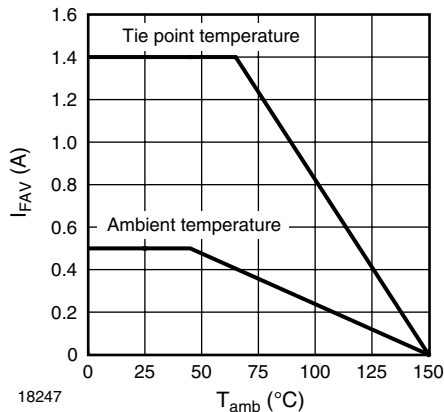


Figure 3. Forward Current Derating Curve

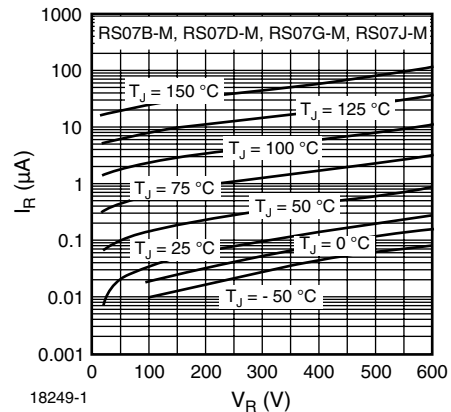


Figure 6. Typical Reverse Characteristics

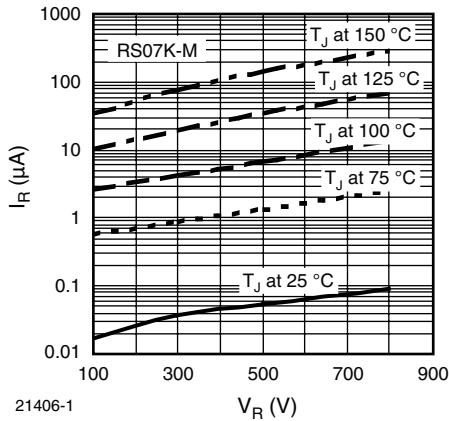
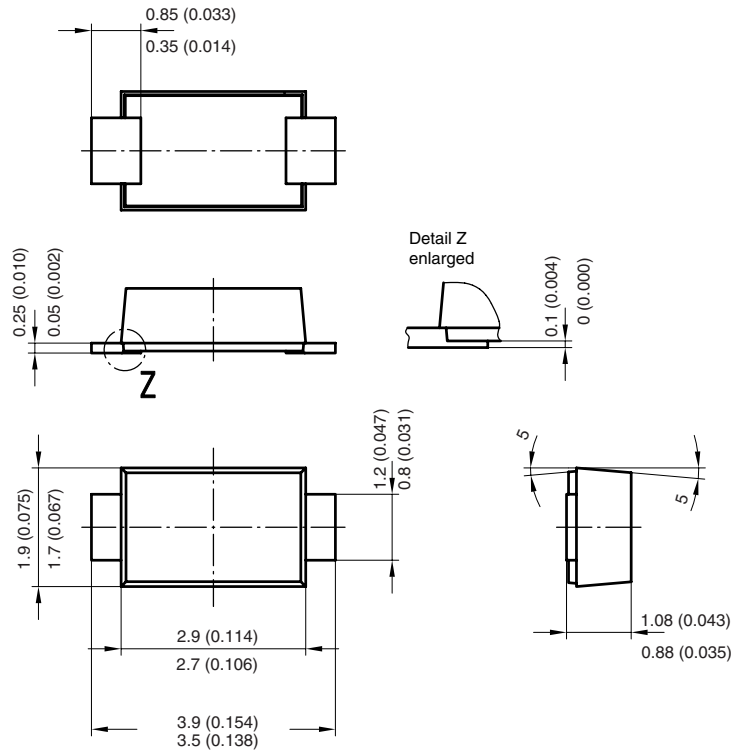
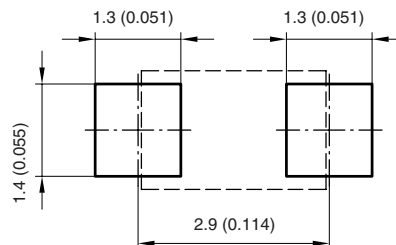


Figure 7. Typical Reverse Characteristics

Package Dimensions in millimeters (inches)



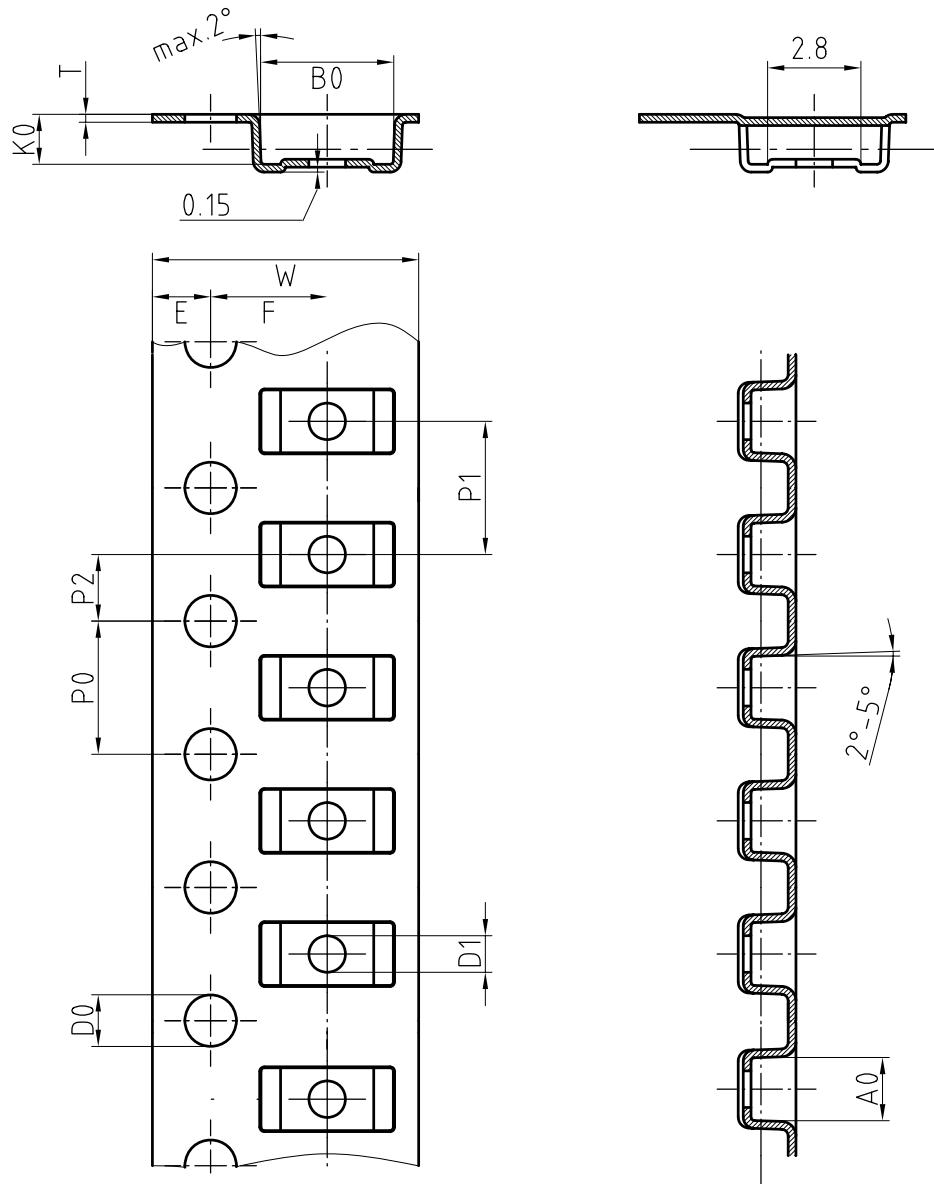
Foot print recommendation:



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



Blisertape 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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