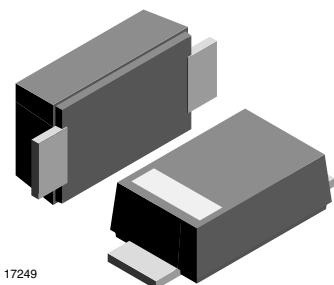




## Fast Rectifier Surface Mount



## 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)

**Int. construction:** single

## FEATURES

- For surface mounted applications
- Low profile package
- Ideal for automated placement
- Glass passivated
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Meets JESD 201 class 2 whisker test
- Wave and reflow solderable
- AEC-Q101 qualified
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

RoHS  
COMPLIANT

## 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 ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , 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	$T_{tp} = 65\text{ }^{\circ}\text{C}$		$I_{F(AV)}$	1.4	A
	$T_A = 45\text{ }^{\circ}\text{C}$		$I_{F(AV)}$	0.5	A
Peak forward surge current 8.3 ms half sine-wave	$T_L = 25\text{ }^{\circ}\text{C}$		$I_{FSM}$	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		$R_{thJP}$	30	K/W
Thermal resistance junction to ambient air <sup>(1)</sup>		$R_{thJA}$	180	K/W
Operating junction and storage temperature range		$T_j, T_{stg}$	-55 to 150	$^{\circ}\text{C}$

**Note**

<sup>(1)</sup> 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
Instantaneous forward voltage	$I_F = 0.7\text{ A}$ <sup>(1)</sup>	RS07B	$V_F$			1.15	V
		RS07D	$V_F$			1.15	V
		RS07G	$V_F$			1.15	V
		RS07J	$V_F$			1.15	V
		RS07K	$V_F$			1.3	V
	$I_F = 1\text{ A}$ <sup>(1)</sup>	RS07K	$V_F$			1.3	V
Maximum DC reverse current at rated DC blocking voltage	$T_A = 25\text{ }^{\circ}\text{C}$	RS07B	$I_R$			10	$\mu\text{A}$
		RS07D	$I_R$			10	$\mu\text{A}$
		RS07G	$I_R$			10	$\mu\text{A}$
		RS07J	$I_R$			10	$\mu\text{A}$
		RS07K	$I_R$			2	$\mu\text{A}$
	$T_A = 125\text{ }^{\circ}\text{C}$	RS07B	$I_R$			50	$\mu\text{A}$
		RS07D	$I_R$			50	$\mu\text{A}$
		RS07G	$I_R$			50	$\mu\text{A}$
		RS07J	$I_R$			50	$\mu\text{A}$
		RS07K	$I_R$			150	$\mu\text{A}$
Reverse recovery time	$I_F = 0.5\text{ A}, I_R = 1\text{ A}, I_{rr} = 0.25\text{ A}$	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	$C_j$		9		pF
		RS07D	$C_j$		9		pF
		RS07G	$C_j$		9		pF
		RS07J	$C_j$		9		pF
		RS07K	$C_j$		4		pF

**Note**

<sup>(1)</sup> Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle

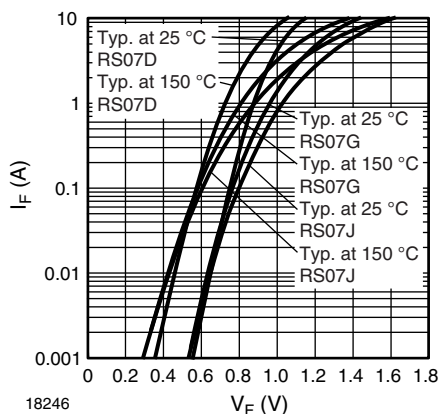
**TYPICAL CHARACTERISTICS** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)

Fig. 1 - Typical Forward Characteristics

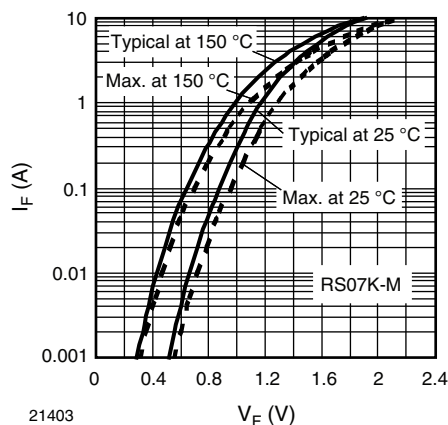


Fig. 2 - Typical Forward Characteristics

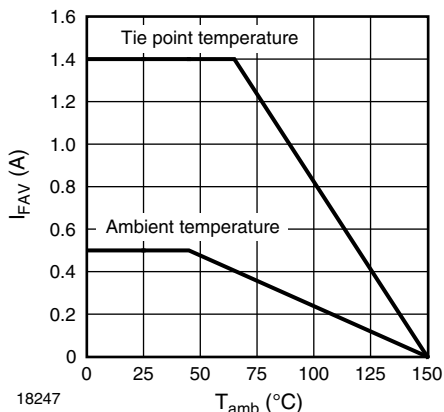


Fig. 3 - Forward Current Derating Curve

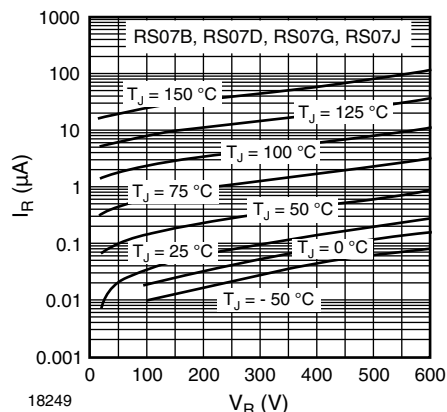


Fig. 6 - Typical Reverse Characteristics

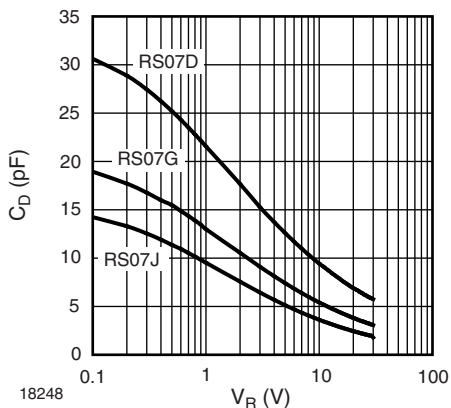


Fig. 4 - Typical Diode Capacitance vs. Reverse Voltage

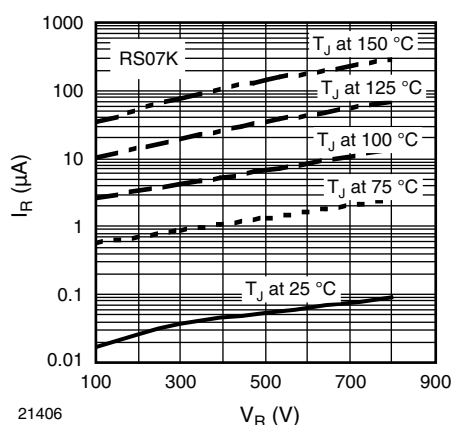


Fig. 7 - Typical Reverse Characteristics

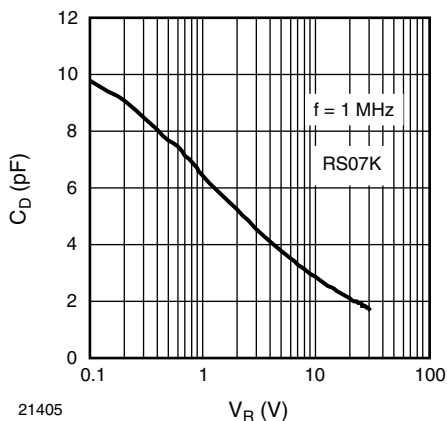
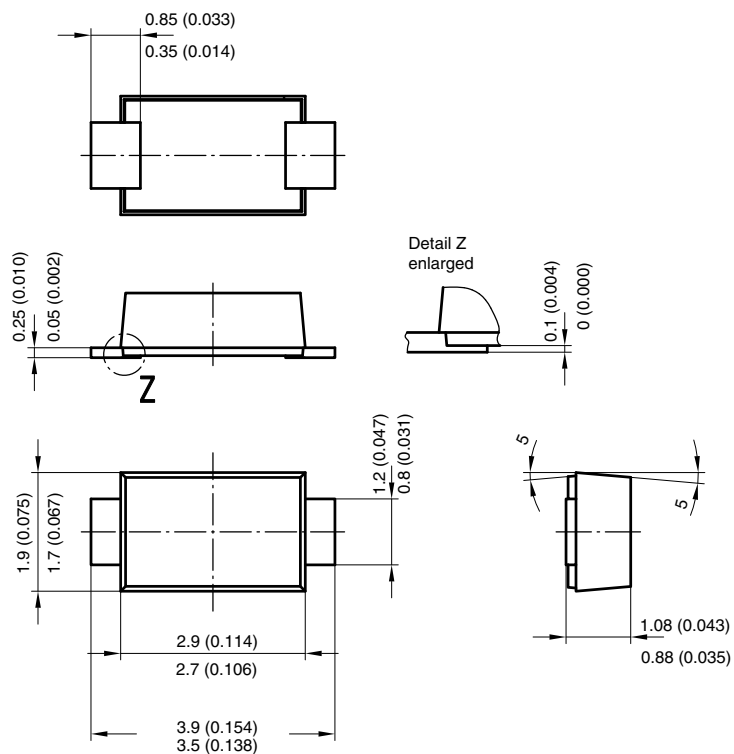


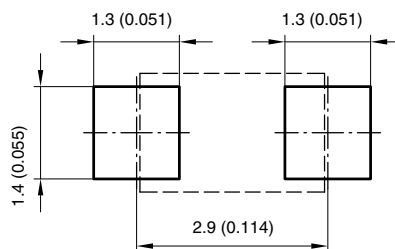
Fig. 5 - Typical Diode Capacitance vs. Reverse Voltage



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



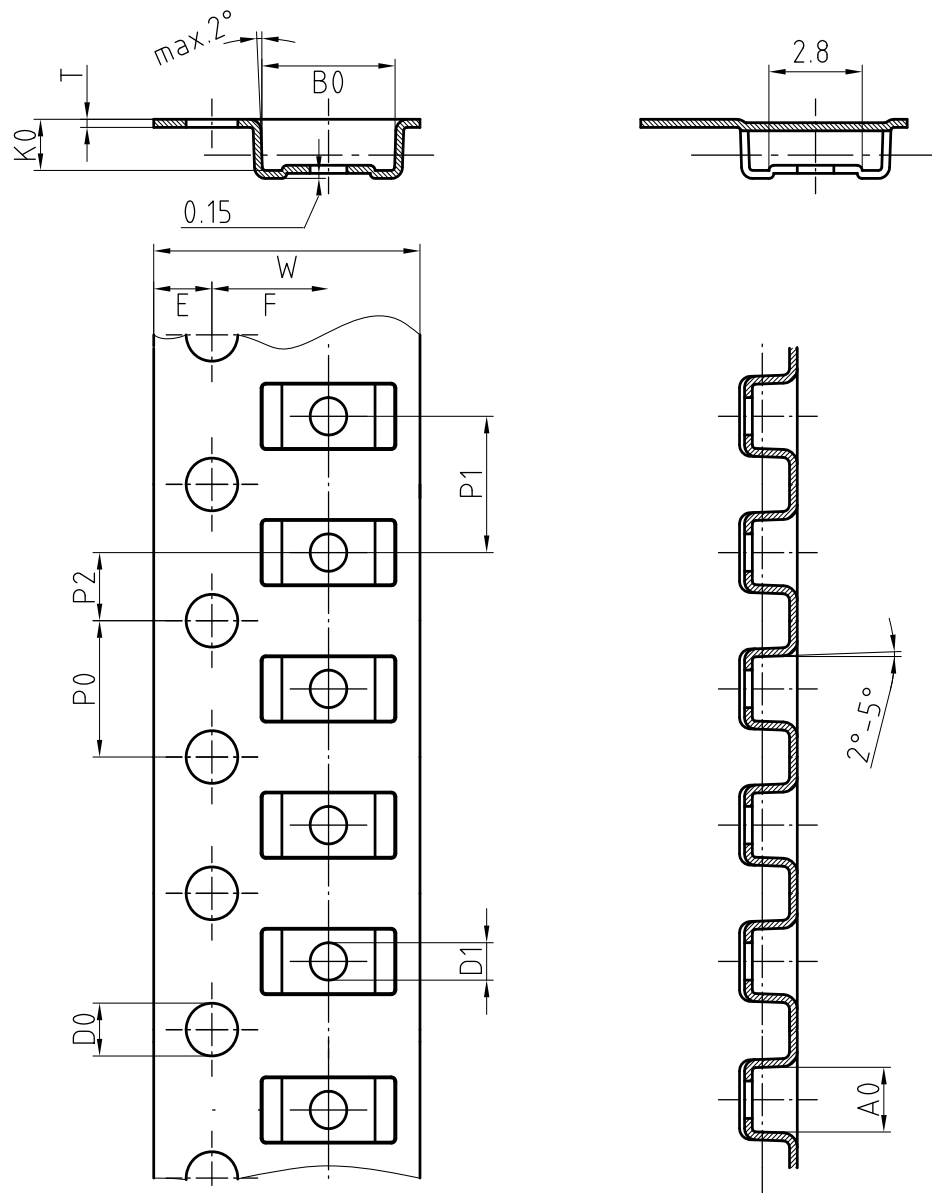
Foot print recommendation:



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



**BLISTERTAPE DIMENSIONS** 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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