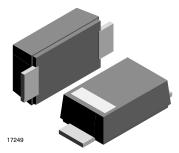


Vishay Semiconductors

Standard Recovery Rectifier High Voltage Surface Mount



MECHANICAL DATA

Case: DO-219AB (SMF)

Int. construction: single

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)

FEATURES

• For surface mounted applications



- · Low profile package
- Ideal for automated placement
- Glass passivated

(63)

• High temperature soldering: 260 °C/10 s at compliant terminals

- Wave and reflow solderable
- AEC-Q101 qualified
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC

PARTS TABLE			
PART	ORDERING CODE	MARKING	REMARKS
S07B	S07B-GS18 or S07B-GS08	SB	Tape and reel
S07D	S07D-GS18 or S07D-GS08	SD	Tape and reel
S07G	S07G-GS18 or S07G-GS08	SG	Tape and reel
S07J	S07J-GS18 or S07J-GS08	SJ	Tape and reel
S07M	S07M-GS18 or S07M-GS08	SM	Tape and reel

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
		S07B	V_{RRM}	100	V
		S07D	V _{RRM}	200	V
Maximum repetitive peak reverse voltage		S07G	V_{RRM}	400	V
		S07J	V_{RRM}	600	V
		S07M	V_{RRM}	1000	V
Maximum RMS voltage		S07B	V _{RMS}	70	V
		S07D	V _{RMS}	140	V
		S07G	V _{RMS}	280	V
		S07J	V _{RMS}	420	V
		S07M	V _{RMS}	700	V
		S07B	V_{DC}	100	V
		S07D	V_{DC}	200	V
Maximum DC blocking voltage		S07G	V_{DC}	400	V
		S07J	V_{DC}	600	V
		S07M	V_{DC}	1000	V
Maximum average forward rectified aurent	$T_{tp} = 75 ^{\circ}\text{C}^{(1)}$		I _{F(AV)}	1.5	Α
Maximum average forward rectified current	$T_A = 65 ^{\circ}C^{(1)}$		I _{F(AV)}	0.7	Α
Peak forward surge current 8.3 ms single half sine-wave	T _L = 25 °C		I _{FSM}	25	А

Note

(1) Averaged over any 20 ms period



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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 _{stg}	- 55 to 150	°C	

Note

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

PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Instaneous forward voltage	I _F = 1 A ⁽¹⁾	S07B	V _F			1.1	V
		S07D	V _F			1.1	V
		S07G	V _F			1.1	V
		S07J	V _F			1.1	V
		S07M	V _F			1.1	V
	T _A = 25 °C	S07B	I _R			10	μA
		S07D	I _R			10	μΑ
		S07G	I _R			10	μΑ
		S07J	I _R			10	μA
Maximum DC reverse current at		S07M	I _R			10	μA
rated DC blocking voltage		S07B	I _R			50	μA
	T _A = 125 °C	S07D	I _R			50	μA
		S07G	I _R			50	μA
		S07J	I _R			50	μA
		S07M	I _R			50	μA
Reverse recovery time	I _F = 0.5 A, I _R = 1 A, I _{rr} = 0.25 A	S07B	t _{rr}			1800	ns
		S07D	t _{rr}			1800	ns
		S07G	t _{rr}			1800	ns
		S07J	t _{rr}			1800	ns
		S07M	t _{rr}			1800	ns
	4 V, 1 MHz	S07B	Cj		4		pF
Typical capacitance		S07D	Cj		4		pF
		S07G	Cj		4		pF
		S07J	Cj		4		pF
		S07M	Ci		4		pF

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

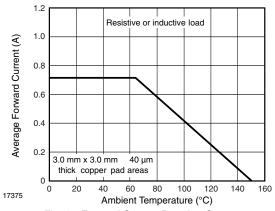


Fig. 1 - Forward Current Derating Curve

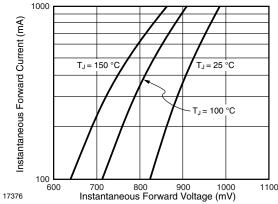
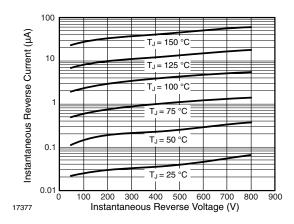


Fig. 2 - Typical Instantaneous Forward Characteristics

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

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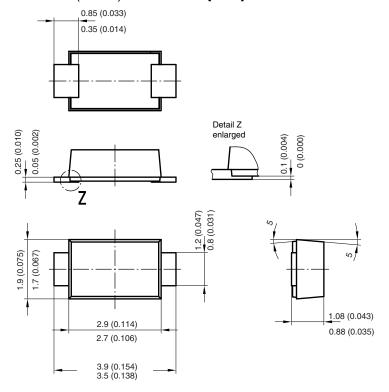


10 9 8 7 6 C (pF) 5 4 2 0 10 20 25 30 35 40 17378 $V_{R}(V)$

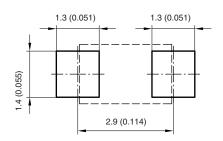
Fig. 3 - Typical Instantaneous Reverse Characteristics

Fig. 4 - Capacitance vs. Reverse Voltage

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



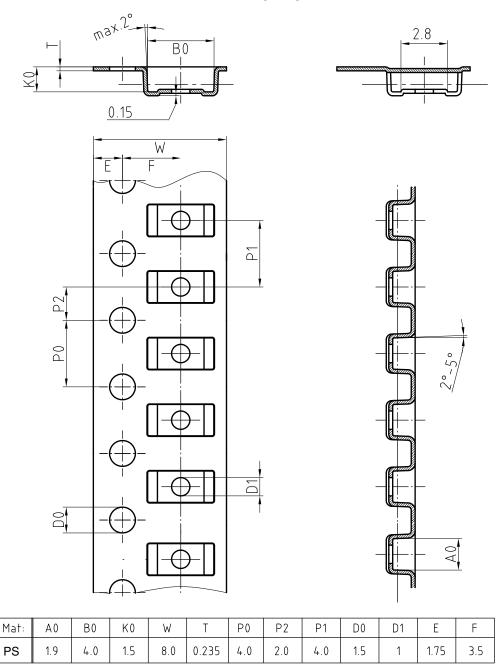
Foot print recommendation:



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

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



Document-No.: S8-V-3717.02-001 (3)

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