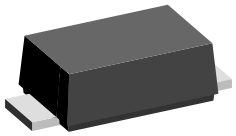
Small Signal Fast Switching Diode, High Voltage

Features

- For surface mounted applications
- Low profile package
- Ideal for automated placement
- Glass passivated
- High temperature soldering:
  260 °C/ 10 seconds at terminals
- Lead (Pb)-free component
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



17249

Mechanical Data

Case: JEDEC DO-219AB (SMF®) Plastic case
Polarity: Band denotes cathode end
Weight: approx. 15 mg
Packaging codes-options:
GS18 / 10 k per 13" reel (8 mm tape), 50 k/box
GS08 / 3 k per 7" reel (8 mm tape), 30 k/box

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
Maximum repetitive peak reverse voltage		S07B	V_{RRM}	100	V
		S07D	V_{RRM}	200	V
		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
Maximum DC blocking voltage		S07B	V_{DC}	100	V
		S07D	V_{DC}	200	V
		S07G	V_{DC}	400	V
		S07J	V_{DC}	600	V
		S07M	V_{DC}	1000	V
Maximum average forward rectified current	T_{tp} = 75 °C[1)]		$I_{F(AV)}$	1.5	A
	T_A = 65 °C[1)]		$I_{F(AV)}$	0.7	A
Peak forward surge current 8.3 ms single half sine-wave	T_L = 25 °C		I_{FSM}	25	A

1) Averaged over any 20 ms period

Thermal Characteristics

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

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air[2)]		R_{thJA}	180	K/W
Operating junction and storage temperature range		T_J, T_{STG}	- 55 to + 150	°C

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

Electrical Characteristics

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

Parameter	Test condition	Symbol	Min	Typ.	Max	Unit
Maximum instantaneous forward voltage	1.0 A[3)]	V_F			1.1	V
Maximum DC reverse current at rated DC blocking voltage	T_A = 25 °C	I_R			10	μA
	T_A = 125 °C	I_R			50	μA
Reverse recovery time	I_F = 0.5 A, I_R = 1.0 A, I_{rr} = 0.25 A	t_{rr}			1.8	μs
Typical capacitance at 4 V, MHz		C_j		4		pF

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

Typical Characteristics (Tamb = 25 °C unless otherwise specified)

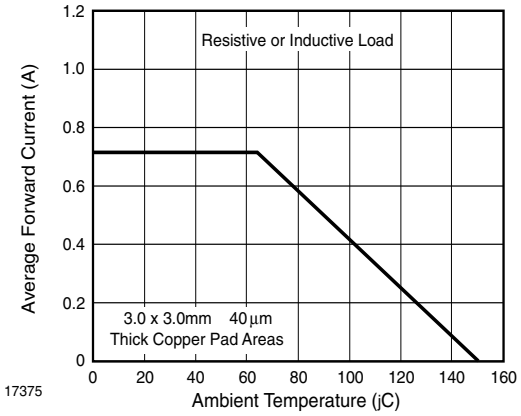


Figure 1. Forward Current Derating Curve

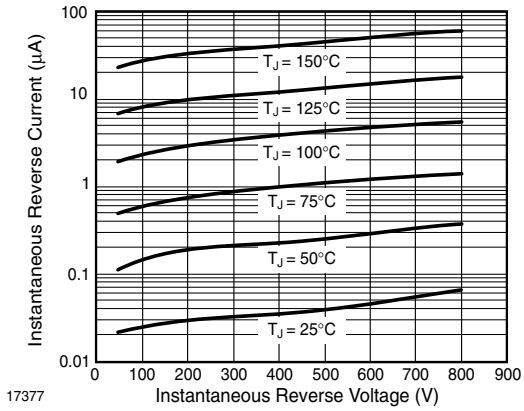


Figure 3. Typical Instantaneous Reverse Characteristics

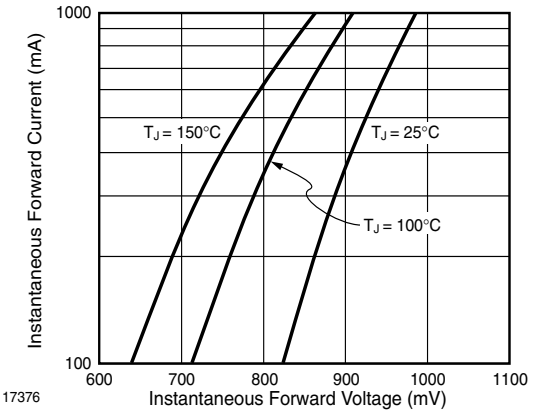


Figure 2. Typical Instantaneous Forward Characteristics

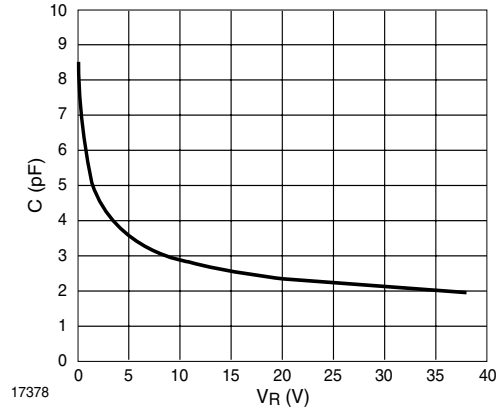
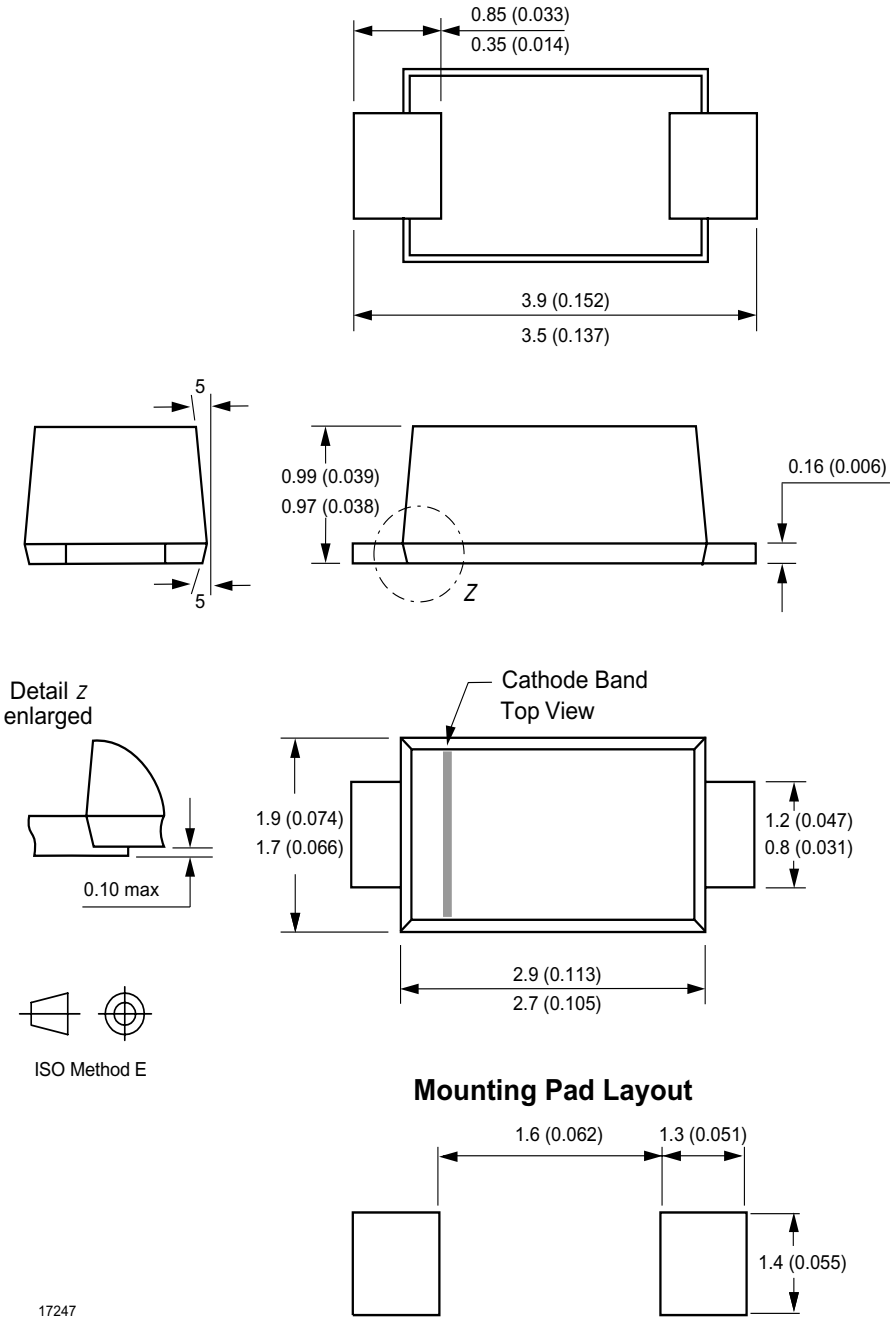


Figure 4. Capacitance vs. Reverse Voltage

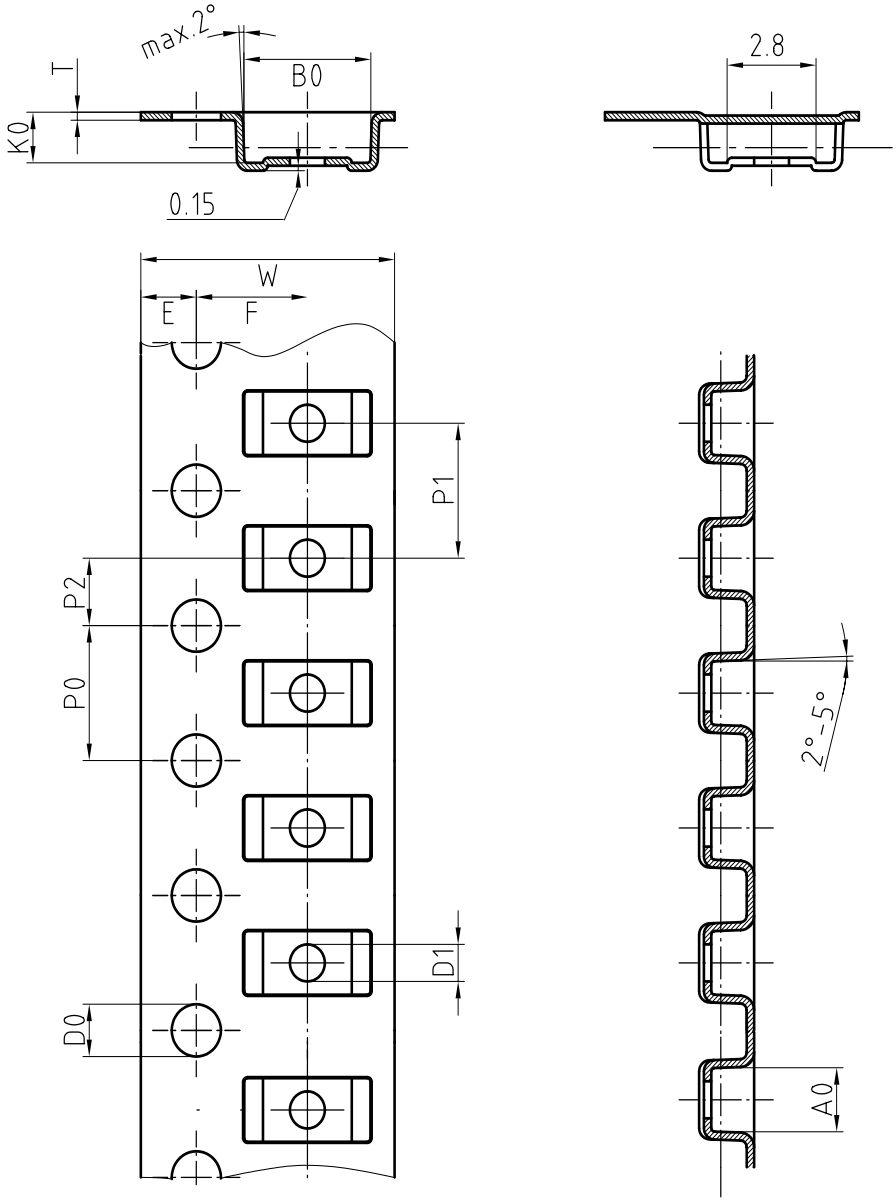
Package Dimensions in mm (Inches)



Mounting Pad Layout

17247

Blistertape for 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

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Ozone Depleting Substances Policy Statement

It is the policy of Vishay Semiconductor GmbH to

1. Meet all present and future national and international statutory requirements.
2. Regularly and continuously improve the performance of our products, processes, distribution and operating systems with respect to their impact on the health and safety of our employees and the public, as well as their impact on the environment.

It is particular concern to control or eliminate releases of those substances into the atmosphere which are known as ozone depleting substances (ODSs).

The Montreal Protocol (1987) and its London Amendments (1990) intend to severely restrict the use of ODSs and forbid their use within the next ten years. Various national and international initiatives are pressing for an earlier ban on these substances.

Vishay Semiconductor GmbH has been able to use its policy of continuous improvements to eliminate the use of ODSs listed in the following documents.

1. Annex A, B and list of transitional substances of the Montreal Protocol and the London Amendments respectively
2. Class I and II ozone depleting substances in the Clean Air Act Amendments of 1990 by the Environmental Protection Agency (EPA) in the USA
3. Council Decision 88/540/EEC and 91/690/EEC Annex A, B and C (transitional substances) respectively.

Vishay Semiconductor GmbH can certify that our semiconductors are not manufactured with ozone depleting substances and do not contain such substances.

We reserve the right to make changes to improve technical design
and may do so without further notice.
Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer. Should the buyer use Vishay Semiconductors products for any unintended or unauthorized application, the buyer shall indemnify Vishay Semiconductors against all claims, costs, damages, and expenses, arising out of, directly or indirectly, any claim of personal damage, injury or death associated with such unintended or unauthorized use.

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