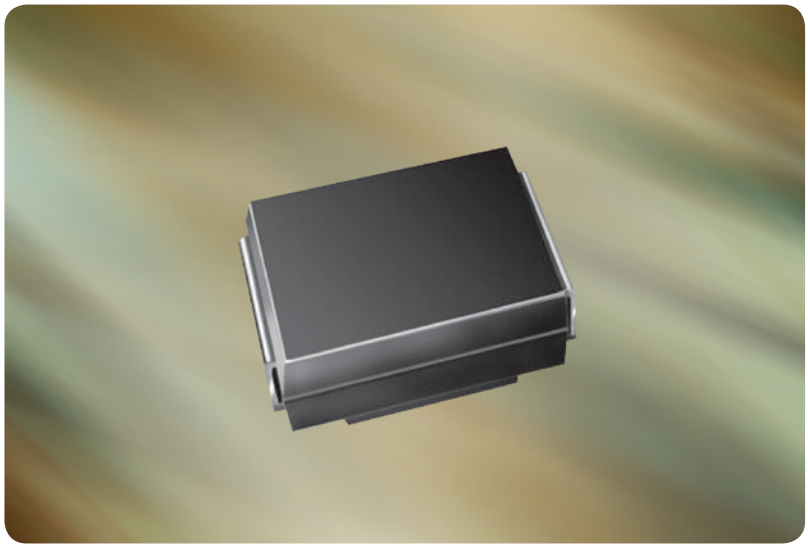
DIODES

SMBJxxxD Series

TransZorb® TVS Offer More Precise Breakdown Voltage, Higher Peak Pulse Surge Current Capability, and Lower Clamping Voltage



KEY BENEFITS

- Designed to protect sensitive electronics against voltage transients induced by inductive load switching and lightning
- Tightened breakdown voltage tolerance of ± 3.5 %
- Low-profile DO-214AA (SMBJ) package
- High peak pulse surge currents from 2.03 A to 65.9 A
- Excellent clamping capability from 9.1 V to 301 V
- High surge capability to 600 W at 10/1000 µs
- Series consists of 47 TVS with stand-off voltages from 5 V to 188 V
- Available with uni-directional polarity
- Temperature range from -55 °C to +150 °C
- Ideal for automated placement
- RoHS-compliant and halogen-free

APPLICATIONS

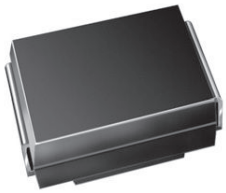
- DC adapter power line protection, power supply snubber circuits, and general voltage surge protection in consumer, computer, industrial, and telecommunication equipment

RESOURCES

- Datasheet: please visit www.vishay.com/ppg?87606
- For technical questions, contact DiodesAmericas@vishay.com, DiodesEurope@vishay.com, or DiodesAsia@vishay.com
- Material categorization:
  For definitions of compliance, please see www.vishay.com/doc?99912

A WORLD OF SOLUTIONS

Surface Mount TRANSZORB® Transient Voltage Suppressors



DO-214AA (SMBJ-Bend)

FEATURES

- Low profile package
- Ideal for automated placement
- ± 3.5 %, very tight V_{BR} tolerance
- Available in uni-directional
- 600 W peak pulse power capability with a 10/1000 µs waveform, repetitive rate (duty cycle): 0.01 %
- Excellent clamping capability
- Very fast response time
- Low incremental surge resistance
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT
HALOGEN FREE

PRIMARY CHARACTERISTICS	
V_{BR} (uni-directional)	6.5 V to 228 V
V_{WM}	5.0 V to 188 V
P_{PPM}	600 W
P_D at T_M = 50 °C	5.0 W
P_D at T_A = 25 °C	1.0 W
T_J max.	150 °C
Polarity	Uni-directional
Package	DO-214AA (SMBJ)

TYPICAL APPLICATIONS

Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on ICs, MOSFETs, signal lines of sensor units for consumer, computer, industrial, and telecommunication.

MECHANICAL DATA

Case: DO-214AA (SMBJ)
Molding compound meets UL 94 V-0 flammability rating
Base P/N-M3 - halogen-free, RoHS-compliant, and industrial grade

Terminals: matte tin plated leads, solderable per J-STD-002 and JESD 22-B102
M3 suffix meets JESD 201 class 2 whisker test

Polarity: for uni-directional types the band denotes cathode end

MAXIMUM RATINGS (T_A = 25 °C unless otherwise noted)

PARAMETER		SYMBOL	VALUE	UNIT
Peak pulse power dissipation	with a 10/1000 µs waveform	P_{PPM} (1)	600	W
Peak pulse current	with a 10/1000 µs waveform	I_{PPM} (1)	See next table	A
Power dissipation	T_M = 50 °C	P_D (2)	5.0	W
	T_A = 25 °C	P_D (3)	1.0	
Operating junction and storage temperature range		T_J, T_{STG}	-55 to +150	°C

Revision 8-May-15

Notes

(1) Non-repetitive current pulse, per fig. 3 and derated above T_A = 25 °C per fig. 2
(2) Power dissipation mounted on infinite heatsink
(3) Power dissipation mounted on minimum recommended pad layout

ORDERING INFORMATION (Example)

PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
SMBJ5.0D-M3/H	0.096	H	750	7" diameter plastic tape and reel
SMBJ5.0D-M3/I	0.096	I	3200	13" diameter plastic tape and reel