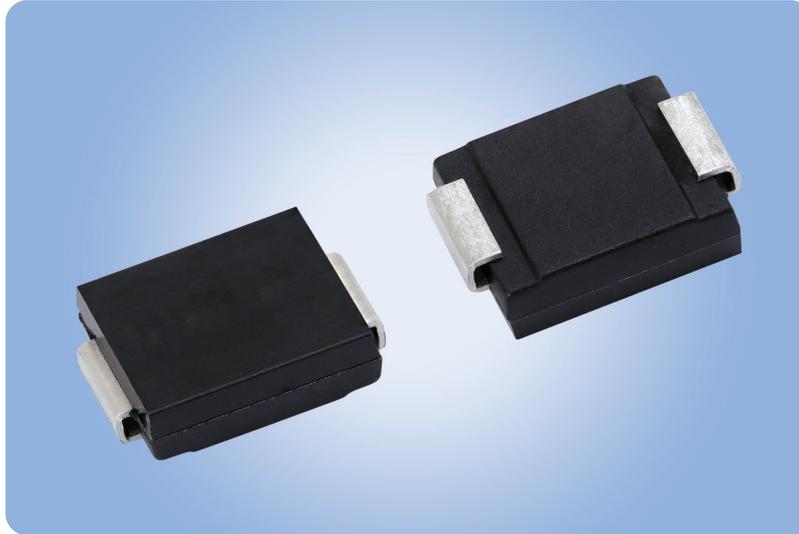




Surface-Mount PAR[®] Transient Voltage Suppressors With 5 kW High Surge Capability in SMC (DO-214AB) Package



KEY BENEFITS

- SMC (DO-214AB) package
- High surge capability to 5 kW at 10/1000 μ s
 - 233 % higher than conventional 1.5 kW devices in SMC package
- High operating junction temperature up to +185 °C
- AEC-Q101 qualified
- 16 TVS devices with stand-off voltages from 10 V to 43 V
- Peak pulse power current from 72 A to 294.1 A at 10/1000 μ s
- Maximum clamping voltage from 17 V to 69.4 V
- Very fast response times
- Low incremental surge resistance

APPLICATIONS

- Use in sensitive electronics for protection against voltage transients induced by inductive load switching and lightning on ICs, MOSFETs, and signal lines of sensor units for consumer, computer, industrial, automotive, and telecommunications applications

RESOURCES

- Datasheet: 5KASMC10A thru 5KASMC43A - www.vishay.com/ppg?89432
- For technical questions contact: DiodesAmerica@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



Surface Mount PAR[®] Transient Voltage Suppressors

High Temperature Stability and High Reliability Conditions



SMC (DO-214AB)

PRIMARY CHARACTERISTICS	
V_{WM}	10 V to 43 V
V_{BR}	11.1 V to 52.8
P_{PPM} (10 x 1000 μ s)	5000 W
P_D	6.5 W
T_J max.	185 °C
Polarity	Uni-directional
Package	SMC (DO-214AB)

TYPICAL APPLICATIONS

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

FEATURES

- Junction passivation optimized design passivated anisotropic rectifier technology
- $T_J = 185$ °C capability suitable for high reliability and automotive requirement
- Available in uni-directional polarity only
- 5000 W peak pulse power capability with a 10/1000 μ s waveform
- 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
- AEC-Q101 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE

MECHANICAL DATA

Case: SMC (DO-214AB)

Molding compound meets UL 94 V-0 flammability rating
Base P/NHM3_X - halogen-free, RoHS-compliant and AEC-Q101 qualified (“_X” denotes revision code e.g. A, B,)

Terminals: matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

HM3 suffix meets JESD 201 class 2 whisker test

Polarity: color 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 μ s waveform (fig. 3)	$P_{PPM}^{(1)}$	5000	W
Peak power pulse current with a 10/1000 μ s waveform (fig. 1)	$I_{PPM}^{(1)}$	See next table	A
Power dissipation on infinite heatsink, $T_M = 50$ °C	P_D	6.5	W
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +185	°C

Note

(1) Non-repetitive current pulse, per fig. 3 and derated above $T_A = 25$ °C per fig. 2