Surface Mount PAR® Transient Voltage Suppressors

High Temperature Stability and High Reliability Conditions

DO-218AB

FEATURES

- Junction passivation optimized design passivated anisotropic rectifier technology
- T_J = 175 °C capability suitable for high reliability and automotive requirement
- Low leakage current
- Low forward voltage drop
- High surge capability
- Meets ISO7637-2 surge specification
- Meets MSL level 1, per J-STD-020, LF maximum peak of 245 °C
- AEC-Q101 qualified
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC

RoHS COMPLIANT

PRIMARY CHARACTERISTICS	
V_{BR}	27 V
P_{PPM} (10 x 1000 µs)	6600 W
P_D	8 W
I_{RSM}	130 A
I_{FSM}	700 A
T_J max.	175 °C

TYPICAL APPLICATIONS

Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting, especially for automotive load dump protection application.

MECHANICAL DATA

Case: DO-218AB
Molding compound meets UL 94 V-0 flammability rating
Base P/NHE3 - RoHS compliant, AEC-Q101 qualified

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102
HE3 suffix meets JESD 201 class 2 whisker test

Polarity: Heatsink is anode

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

PARAMETER	SYMBOL	VALUE	UNIT
Peak pulse power dissipation with 10/1000 µs waveform	P_{PPM}	6600	W
Power dissipation on infinite heatsink at T_C = 25 °C (fig. 1)	P_D	8.0	W
Non-repetitive peak reverse surge current for 10 µs/10 ms exponentially decaying waveform	I_{RSM}	130	A
Maximum working stand-off voltage	V_{WM}	22.0	V
Peak forward surge current 8.3 ms single half sine-wave	I_{FSM}	700	A
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 175	°C

ELECTRICAL CHARACTERISTICS (T_C = 25 °C unless otherwise noted)							
PARAMETER	TEST CONDITIONS		SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse Zener voltage	I_Z = 10 mA		V_Z	24.0	-	30.0	V
Zener voltage temperature coefficient	I_Z = 10 mA		V_{ZTC}	-	-	36	mV/°C
Clamping voltage for 10 µs/10 ms exponentially decaying waveform	I_{PP} = 75 A		V_C	-	-	40.0	V
Instantaneous forward voltage	I_F = 6.0 A		V_F (1)	-	-	0.98	V
	I_F = 100 A			-	0.93	-	
Reverse leakage current	Rated V_{WM}	T_J = 25 °C	I_R	-	-	1.0	µA
		T_J = 175 °C		-	-	50.0	

Note

(1) Measured on a 300 µs square pulse width

THERMAL CHARACTERISTICS (T_C = 25 °C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Typical thermal resistance, junction to case	$R_{\theta JC}$	0.90	°C/W

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
SM8A27HE3/2D (1)	2.605	2D	750	13" diameter plastic tape and reel, anode towards the sprocket hole

Note

(1) AEC-Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

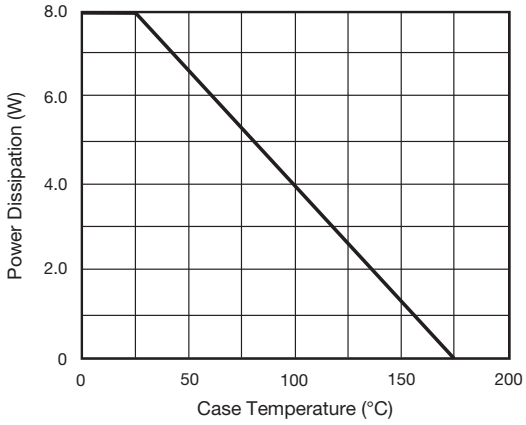


Fig. 1 - Power Derating Curve

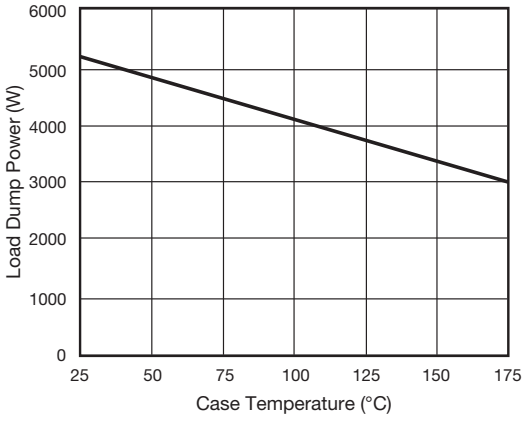


Fig. 2 - Load Dump Power Characteristics
(10 ms Exponential Waveform)

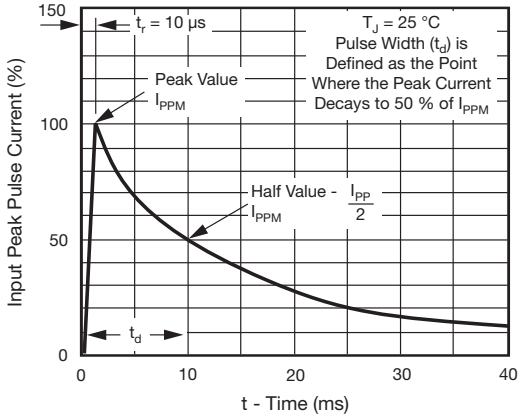


Fig. 3 - Pulse Waveform

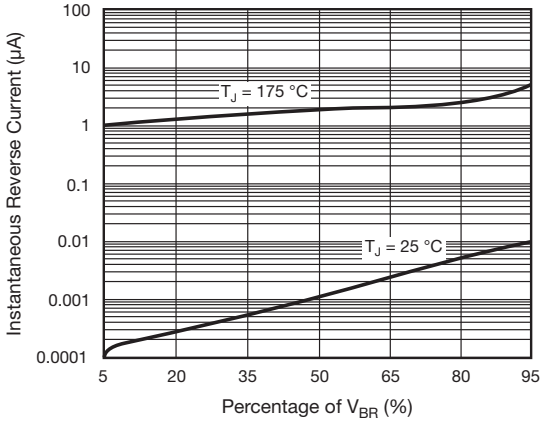


Fig. 6 - Typical Reverse Characteristics

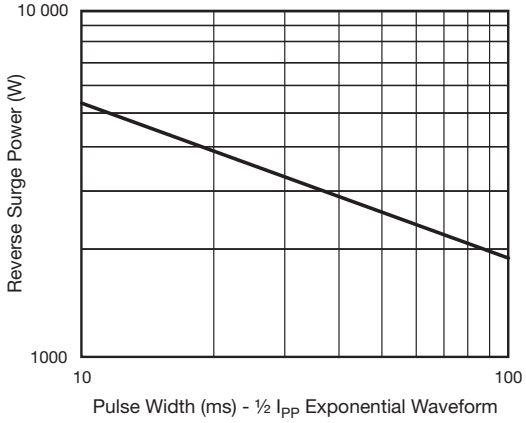


Fig. 4 - Reverse Power Capability

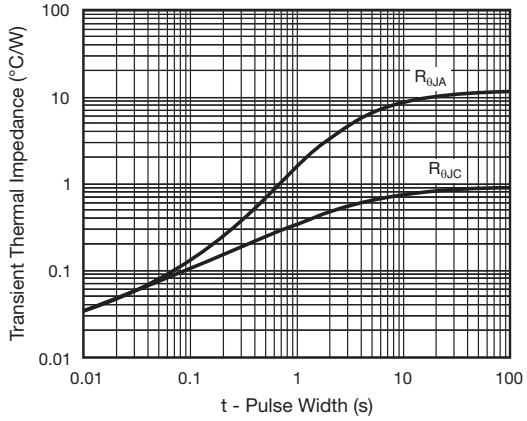


Fig. 7 - Typical Transient Thermal Impedance

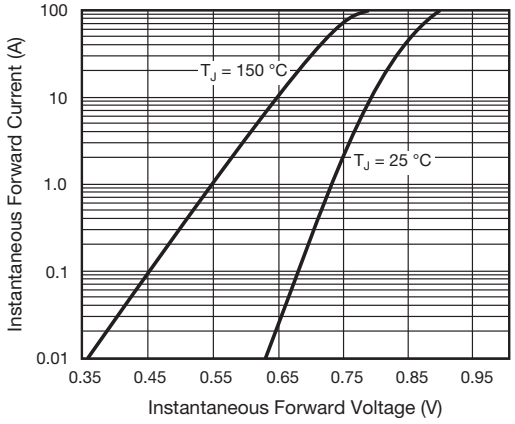
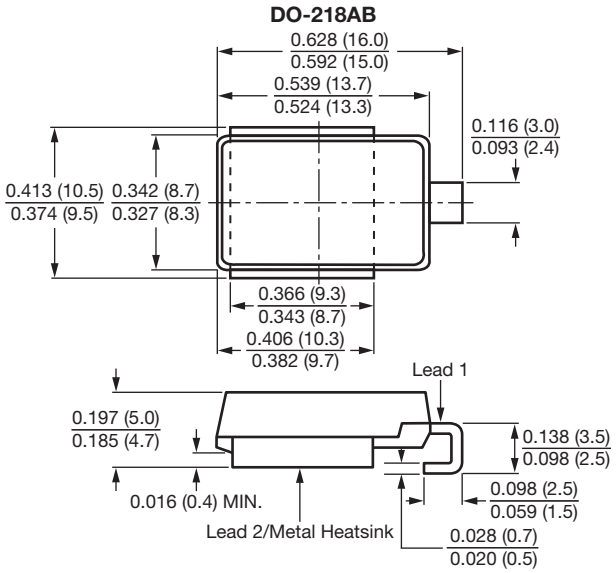
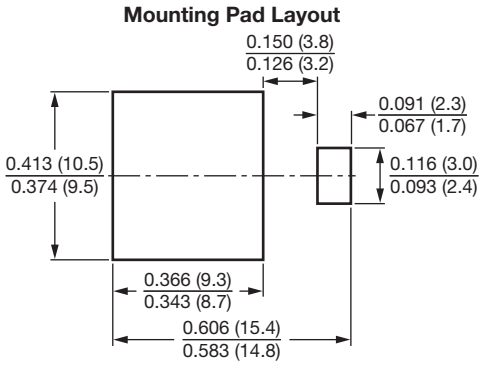


Fig. 5 - Typical Instantaneous Forward Characteristics

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, “Vishay”), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay’s knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer’s responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer’s technical experts. Product specifications do not expand or otherwise modify Vishay’s terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

Material Category Policy

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.

Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.

单击下面可查看定价，库存，交付和生命周期等信息

>>Vishay(威世)