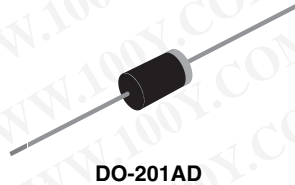


Soft Recovery Ultrafast Plastic Rectifier

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-54151736
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)



MAJOR RATINGS AND CHARACTERISTICS	
$I_{F(AV)}$	3.5 A
V_{RRM}	50 V to 200 V
I_{FSM}	90 A
t_{rr}	20 ns
V_F	0.89 V
$T_j \text{ max.}$	150 °C

FEATURES

- Glass passivated chip junction
- Ultrafast reverse recovery time
- Low forward voltage drop
- Low leakage current
- Low switching losses, high efficiency
- High forward surge capability
- Solder Dip 260 °C, 40 seconds
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



TYPICAL APPLICATIONS

For use in high frequency rectification and free-wheeling application in switching mode converters and inverters for consumer, computer and telecommunication.

MECHANICAL DATA

Case: DO-201AD

Epoxy meets UL 94V-0 flammability rating

Terminals: Matte tin plated leads, solderable per J-STD-002B and JESD22-B102D

E3 suffix for commercial grade

Polarity: Color band denotes cathode end

MAXIMUM RATINGS ($T_A = 25\text{ °C}$ unless otherwise noted)						
PARAMETER	SYMBOL	SBYV28-50	SBYV28-100	SBYV28-150	SBYV28-200	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	V
Minimum reverse breakdown voltage at 100 μ A	$V_{(BR)}$	55	110	165	220	V
Maximum average forward rectified current 0.375" (9.5 mm) lead lengths at $T_L = 85\text{ °C}$	$I_{F(AV)}$	3.5				A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	90				A
Operating and storage temperature range	T_J, T_{STG}	- 55 to + 150				°C

SBYV28-50 thru SBYV28-200

Vishay General Semiconductor

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-54151736
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)



ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)							
PARAMETER	TEST CONDITIONS	SYMBOL	SBYV28-50	SBYV28-100	SBYV28-150	SBYV28-200	UNIT
Maximum instantaneous forward voltage ⁽¹⁾	at 3.5 A $T_J = 25\text{ }^\circ\text{C}$ $T_J = 150\text{ }^\circ\text{C}$	V_F			1.1 0.89		V
Maximum DC reverse current at rated DC blocking voltage	$T_A = 25\text{ }^\circ\text{C}$ $T_A = 100\text{ }^\circ\text{C}$	I_R			5.0 300		μA
Maximum reverse recovery time	at $I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $I_{rr} = 0.25\text{ A}$ $T_J = 25\text{ }^\circ\text{C}$	t_{rr}			20		ns
Typical junction capacitance	at 4.0 V, 1 MHz	C_J			20		pF

Note:

(1) Pulse test: $t_p = 300\text{ }\mu\text{s}$, duty cycle $\leq 2\%$

THERMAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)							
PARAMETER	SYMBOL	SBYV28-50	SBYV28-100	SBYV28-150	SBYV28-200	UNIT	
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$			25		$^\circ\text{C/W}$	

Note:

(1) Lead length = 3/8" on P.C. Board with 1.5" x 1.5" copper surface

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
SBYV28-200-E3/54	1.138	54	1400	13" Diameter Paper Tape & Reel
SBYV28-200-E3/73	1.138	73	1000	Ammo Pack Packaging

RATINGS AND CHARACTERISTICS CURVES

($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

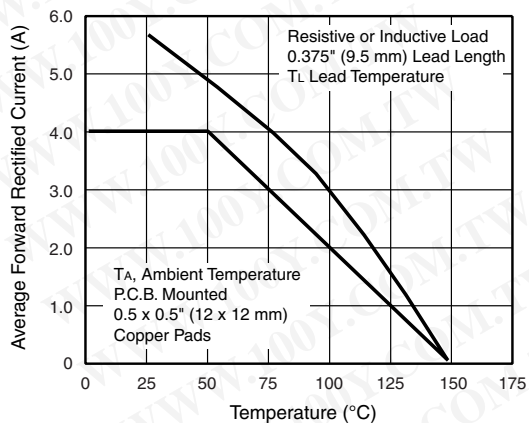


Figure 1. Forward Current Derating Curves

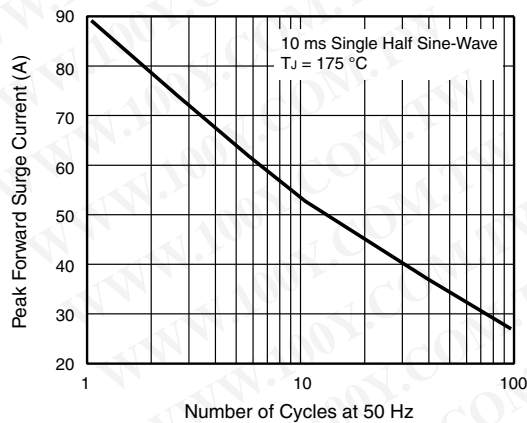


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current



勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-54151736
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

SBYV28-50 thru SBYV28-200

Vishay General Semiconductor

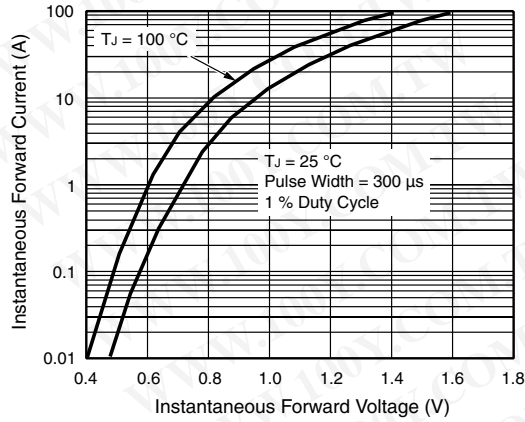


Figure 3. Typical Instantaneous Forward Characteristics

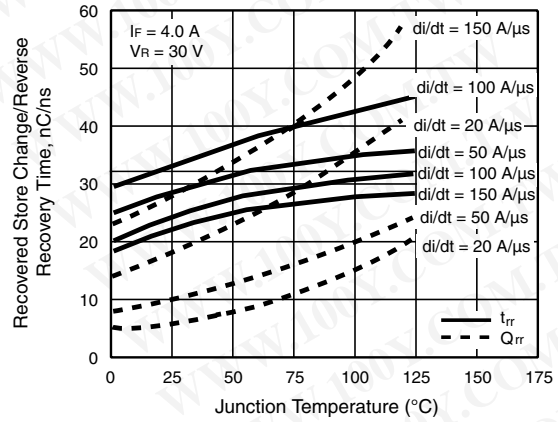


Figure 5. Reverse Switching Characteristics

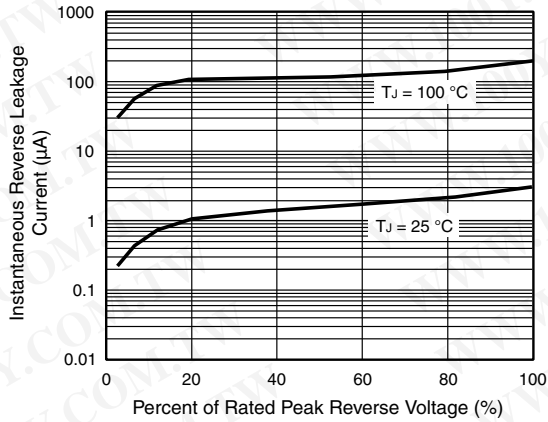


Figure 4. Typical Reverse Leakage Characteristics

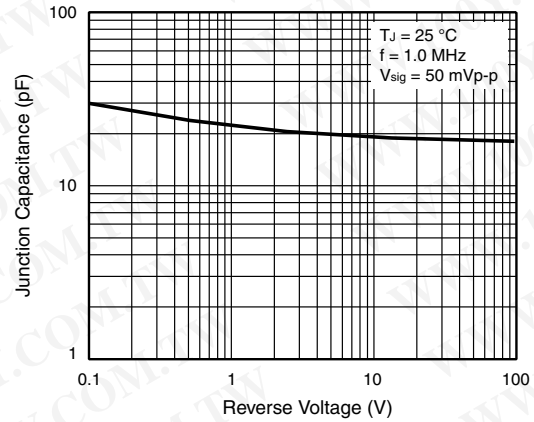
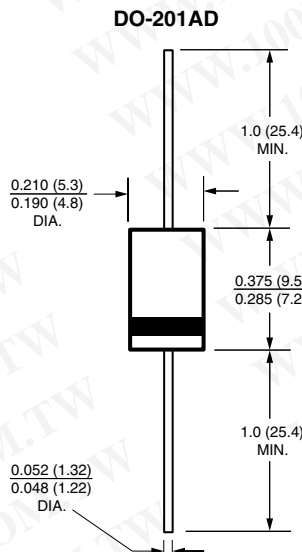


Figure 6. Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-54151736
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

Legal Disclaimer Notice

Vishay

Notice

Specifications of the products displayed herein are subject to change without notice. Vishay Intertechnology, Inc., or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Vishay's terms and conditions of sale for such products, Vishay assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of Vishay products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Vishay for any damages resulting from such improper use or sale.