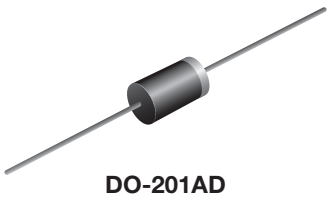
SB320A thru SB360A

Vishay General Semiconductor

Schottky Barrier Rectifier



DO-201AD

FEATURES

- Guardring for overvoltage protection
- Very small conduction losses
- Extremely fast switching
- Low forward voltage drop
- High frequency operation
- 20 kV ESD capability
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC

RoHS COMPLIANT

TYPICAL APPLICATIONS

For use in low voltage high frequency inverters, freewheeling, dc-to-dc converters, and polarity protection applications.

MECHANICAL DATA

Case: DO-201AD
Molding compound meets UL 94 V-0 flammability rating
Base P/N-E3 - RoHS compliant, commercial grade

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102
E3 suffix meets JESD 201 class 1A whisker test

Polarity: Color band denotes the cathode end

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	3.0 A
V_{RRM}	20 V to 60 V
I_{FSM}	80 A
V_F	0.50 V, 0.70 V
T_J max.	150 °C

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

PARAMETER	SYMBOL	SB320A	SB330A	SB340A	SB350A	SB360A	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	V
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	V
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	V
Maximum average forward rectified current at 0.375" (9.5 mm) lead length (fig. 1)	$I_{F(AV)}$	3.0					A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	80					A
Electrostatic discharge capacitor voltage human body model air discharge: C = 100 pF, R = 1.5 kΩ	V_C	20					kV
Voltage rate of change (rated V_R)	dV/dt	10 000					V/µs
Operating junction and storage temperature range	T_J, T_{STG}	- 65 to + 150					°C

For technical questions within your region, please contact one of the following:
DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com

ELECTRICAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)									
PARAMETER	**TEST CONDITIONS**		**SYMBOL**	**SB320A**	**SB330A**	**SB340A**	**SB350A**	**SB360A**	**UNIT**
Maximum instantaneous forward voltage	3.0 A		V_F (1)	0.50			0.70		V
Maximum reverse current at rated V_R		T_A = 25 °C	I_R (2)	0.5					mA
		T_A = 100 °C		20			10		

Notes

(1) Pulse test: 300 µs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

THERMAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)								
PARAMETER	**SYMBOL**	**SB320A**	**SB330A**	**SB340A**	**SB350A**	**SB360A**	**UNIT**
Typical thermal resistance	$R_{\theta JA}$ (1)	40					°C/W
	$R_{\theta JL}$ (1)	12					

Note

(1) Thermal resistance from junction to lead vertical P.C.B. mounting, 0.500" (12.7 mm) lead length with 2.5" x 2.5" (63.5 mm x 63.5 mm) copper pad

ORDERING INFORMATION (Example)				
PREFERRED P/N	**UNIT WEIGHT (g)**	**PREFERRED PACKAGE CODE**	**BASE QUANTITY**	**DELIVERY MODE**
SB340A-E3/54	1.077	54	1400	13" diameter paper tape and reel
SB340A-E3/73	1.077	73	1000	Ammo pack packaging

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

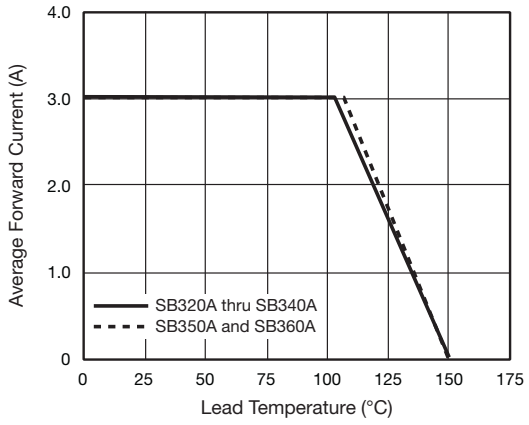


Fig. 1 - Forward Current Derating Curve

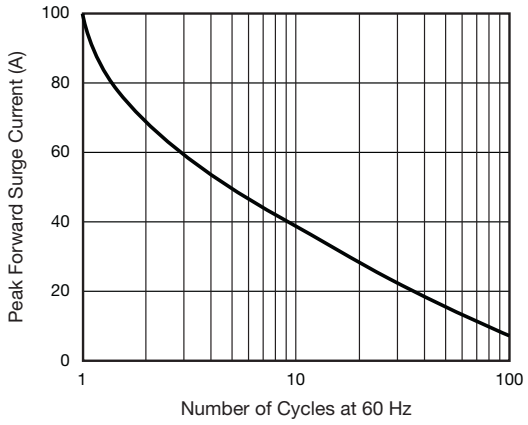


Fig. 2 - Forward Current Derating Curve

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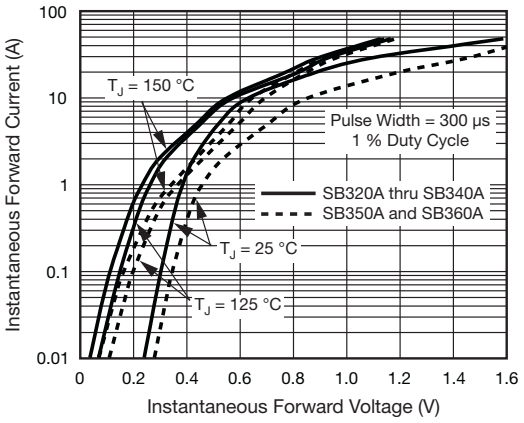


Fig. 3 - Typical Instantaneous Forward Characteristics

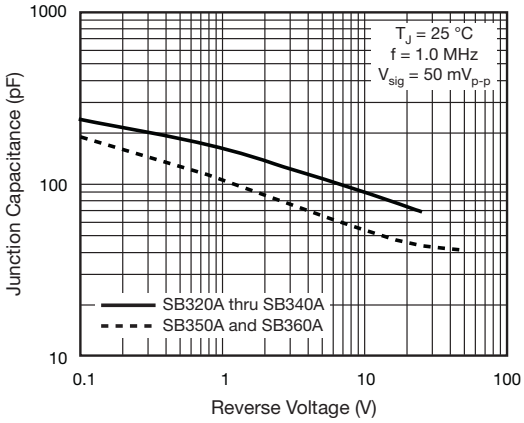


Fig. 5 - Typical Junction Capacitance

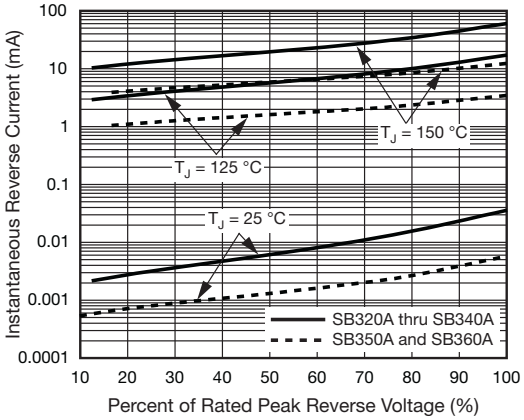


Fig. 4 - Typical Reverse Characteristics

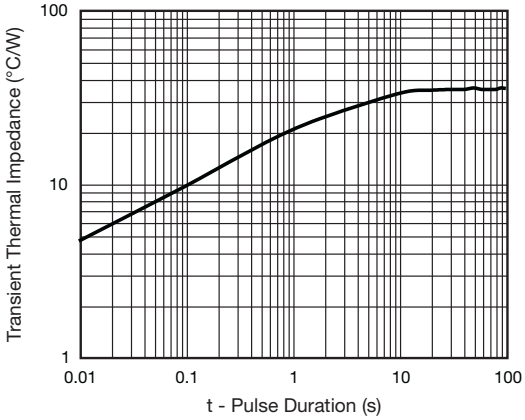
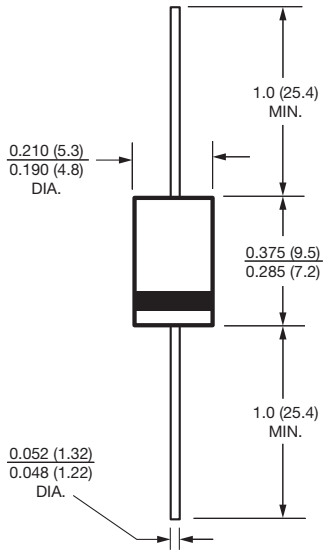


Fig. 6 - Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

DO-201AD



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