New Product



ROHS COMPLIANT

Vishay General Semiconductor

High Current Density Surface Mount Schottky Rectifier



DO-214AA (SMB)

3.0 A

40 V

100 A

0.34 V

150 °C

PRIMARY CHARACTERISTICS

I_{F(AV)}

V_{RRM}

I_{FSM}

 V_F at I_F = 3.0 A

T_{.1} max.

FEATURES

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- · Low power losses, high efficiency
- Very low forward voltage drop
- · High surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Solder dip 260 °C, 40 s
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC

TYPICAL APPLICATIONS

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

MECHANICAL DATA

Case: DO-214AA (SMB)

Epoxy meets UL 94 V-0 flammability rating

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

E3 suffix for commercial grade, meets JESD 201 class 1A whisker test

Polarity: Color band denotes cathode end

MAXIMUM RATINGS ($T_A = 25 \text{ °C}$ unless otherwise noted)				
PARAMETER	SYMBOL	B340LB	UNIT	
Device marking code		B34		
Maximum repetitive peak reverse voltage	V _{RRM}	40	V	
Maximum RMS voltage	V _{RMS}	28	V	
Maximum DC blocking voltage	V _{DC}	40	V	
Max. average forward rectified current at T_L (Fig. 1)	I _{F(AV)}	3.0	А	
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	100	А	
Voltage rate of change (rated V _R)	dV/dt	10 000	V/µs	
Operating junction temperature range	Т _Ј	- 65 to + 150	°C	
Storage temperature range	T _{STG}	- 65 to + 150	°C	

Document Number: 89039 Revision: 20-Apr-09 For technical questions within your region, please contact one of the following: PDD-Americas@vishay.com, PDD-Asia@vishay.com, PDD-Europe@vishay.com



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ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)							
PARAMETER	TEST C	ONDITIONS	SYMBOL	TYP.	MAX.	UNIT	
Maximum instantaneous forward voltage ⁽¹⁾	3.0 A	T _J = 25 °C T _J = 125 °C	V _F	0.43 0.34	0.45 0.38	V	
Maximum reverse current at rated $V_R^{(2)}$		T _J = 25 °C T _J = 125 °C	I _R	- 26	0.4 40	mA	

Notes:

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

(2) Pulse test: Pulse width \leq 40 ms

THERMAL CHARACTERISTICS ($T_A = 25 \text{ °C}$ unless otherwise noted)					
PARAMETER	SYMBOL	B340LB	UNIT		
Typical thermal resistance ⁽¹⁾	$R_{ extsf{ heta}JA}$ $R_{ extsf{ heta}JL}$	70 25	°C/W		

Note:

(1) Aluminum substrate mounted

ORDERING INFORMATION (Example)					
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE	
B340LB-E3/52T	0.096	52T	750	7" diameter plastic tape and reel	
B340LB-E3/5BT	0.096	5BT	3200	13" diameter plastic tape and reel	

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

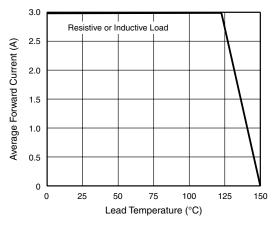


Figure 1. Forward Current Derating Curve

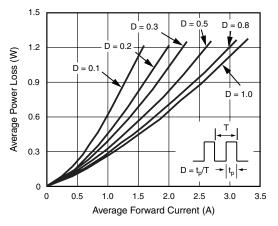


Figure 2. Forward Power Loss Characteristics



B340LB

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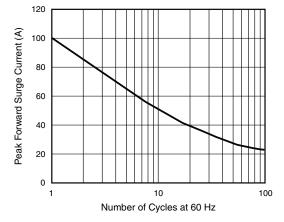


Figure 3. Maximum Non-Repetitive Peak Forward Surge Current

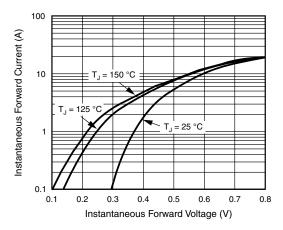


Figure 4. Typical Instantaneous Forward Characteristics

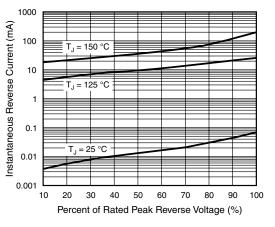


Figure 5. Typical Reverse Characteristics

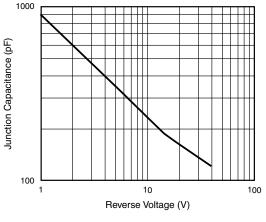
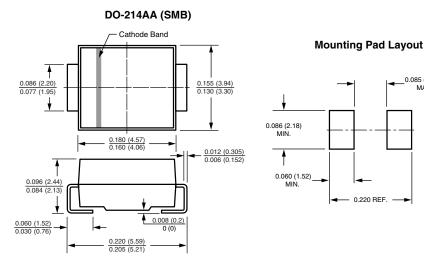


Figure 6. Typical Junction Capacitance

0.085 (2.159) MAX.

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



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