**New Product** 

B330LA & B340A



Vishay General Semiconductor

# **High-Current Density Surface Mount Schottky Rectifier**



DO-214AC (SMA)

3.0 A

30 V, 40 V

65 A

0.50 V, 0.55 V

150 °C

**PRIMARY CHARACTERISTICS** 

I<sub>F(AV)</sub>

V<sub>RRM</sub>

I<sub>FSM</sub>

VF

T<sub>J</sub> max.

### FEATURES

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- 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
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

### **TYPICAL APPLICATIONS**

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

(Note: These devices are not Q101 qualified.)

### **MECHANICAL DATA**

Case: DO-214AC (SMA)

Epoxy meets UL 94V-0 flammability rating

**Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD22-B102

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

Polarity: Color band denotes the cathode end

<b>MAXIMUM RATINGS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)					
PARAMETER	SYMBOL	B330LA	B340A	UNIT	
Device marking code		B33	B34	V	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	30	40	V	
Maximum RMS voltage	V <sub>RMS</sub> 21 28		V		
Maximum DC blocking voltage	V <sub>DC</sub>	30	40	V	
Maximum average forward rectified current at $T_{L}$ (Fig. 1)	I <sub>F(AV)</sub>	3.0		А	
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	65		А	
Voltage rate of change (rated V <sub>R</sub> )	dV/dt	10 000		V/µs	
Operating junction temperature range	TJ	- 65 to + 150		°C	
Storage temperature range	T <sub>STG</sub>	- 65 to + 150		°C	





ROHS COMPLIANT

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ELECTRICAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)						
PARAMETER	TEST CONDITIONS		SYMBOL	MAX.	MAX.	UNIT
Maximum instantaneous forward voltage (1)	3.0 A	T <sub>J</sub> = 25 °C	V <sub>F</sub>	0.5	0.55	V
Maximum reverse current at rated $V_{R}^{(2)}$		T <sub>J</sub> = 25 °C	I <sub>R</sub>	0.5	0.5	mA

Notes:

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

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

<b>THERMAL CHARACTERISTICS</b> ( $T_A = 25 \degree C$ unless otherwise noted)						
PARAMETER	SYMBOL	B330LA	B340A	UNIT		
Typical thermal resistance <sup>(1)</sup>	R <sub>θJA</sub> R <sub>θJL</sub>		10 28	°C/W		

Note:

(1) Aluminum substrate mounted

ORDERING INFORMATION (Example)						
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE		
B330LA-E3/61T	0.064	61T	1800	7" diameter plastic tape and reel		
B330LA-E3/5AT	0.064	5AT	7500	13" diameter plastic tape and reel		

### **RATINGS AND CHARACTERISTICS CURVES**

(T<sub>A</sub> = 25 °C unless otherwise noted)

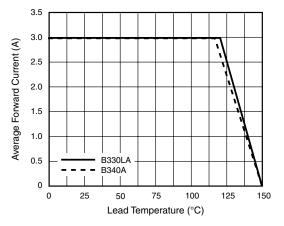


Figure 1. Forward Currenrt Derating Curve

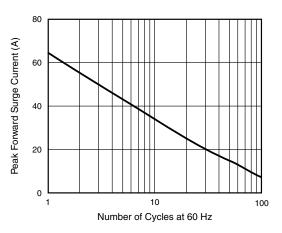


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current



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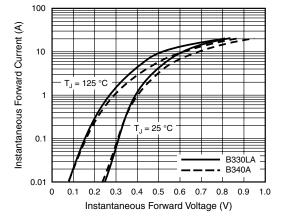


Figure 3. Typical Instantaneous Forward Characteristics

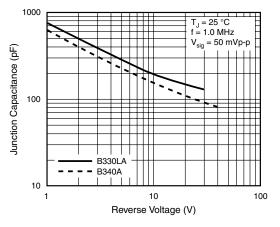


Figure 5. Typical Junction Capacitance

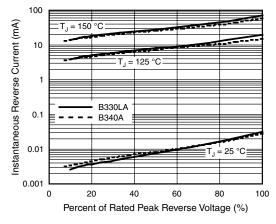
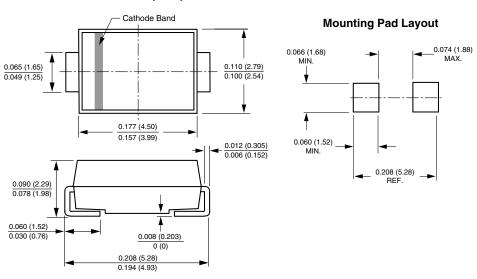


Figure 4. Typical Reverse Characteristics

### PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



DO-214AC (SMA)

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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