COMPLIANT

HALOGEN

FREE



Vishay General Semiconductor

High-Current Density Surface Mount Schottky Rectifier



DO-214AC (SMA)

PRIMARY CHARACTERISTICS					
Package	DO-214AC (SMA)				
I _{F(AV)}	3.0 A				
V_{RRM}	30 V, 40 V				
I _{FSM}	65 A				
V_{F}	0.50 V, 0.55 V				
T _J max.	150 °C				
Diode variations	Single die				

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
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

TYPICAL APPLICATIONS

For use in low voltage, high frequency inverters, freewheeling, DC/DC converters, and polarity protection applications.

MECHANICAL DATA

Case: DO-214AC (SMA)

Molding compound meets UL 94 V-0 flammability rating Base P/N-M3 - halogen-free, RoHS compliant, and

commercial grade

Terminals: Matte tin plated leads, solderable per

J-STD-002 and JESD 22-B102

M3 suffix meets JESD 201 class 1A whisker test **Polarity:** Color band denotes the cathode end

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	B330LA	B340A	UNIT		
Device marking code		B33	B34			
Maximum repetitive peak reverse voltage	V _{RRM}	30	40	V		
Maximum RMS voltage	V _{RMS}	21	28	V		
Maximum DC blocking voltage	V _{DC}	30	40	V		
Maximum average forward rectified current at T _L (fig. 1)	I _{F(AV)}	3.0		Α		
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	65		А		
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	°C			

ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)						
PARAMETER	TEST CONDITIONS		SYMBOL	B330LA	B340A	UNIT
Maximum instantaneous forward voltage	3.0 A	T _J = 25 °C	V _F ⁽¹⁾	0.5	0.55	V
Maximum reverse current at rated V _R		T _J = 25 °C	I _R (2)	0.5	0.5	mA

Notes

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

(2) Pulse test: Pulse width ≤ 40 ms



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THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)					
PARAMETER	SYMBOL	B330LA	B340A	UNIT	
Typical thermal resistance	R ₀ JA (1)	110		°C/W	
	R _{0JL} (1)	28			

Note

(1) Aluminum substrate mounted

ORDERING INFORMATION (Example)						
PREFERRED P/N UNIT WEIGHT (g) PREFERRED PACKAGE CODE		DE BASE QUANTITY DELIVERY MOD				
B330LA-M3/61T	0.064	61T	1800	7" diameter plastic tape and reel		
B330LA-M3/5AT	0.064	5AT	7500	13" diameter plastic tape and reel		

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

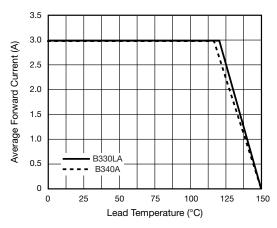


Fig. 1 - Forward Current Derating Curve

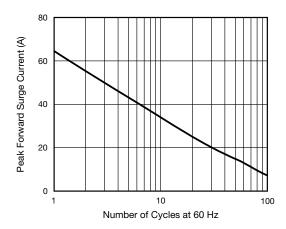


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

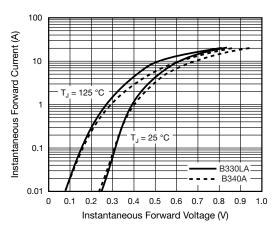


Fig. 3 - Typical Instantaneous Forward Characteristics

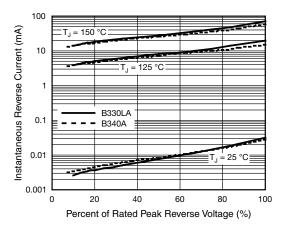


Fig. 4 - Typical Reverse Characteristics



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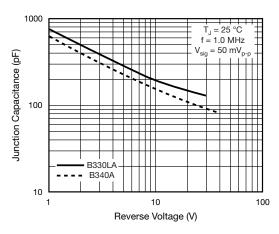
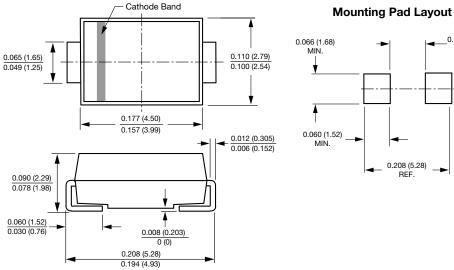


Fig. 5 - Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters) DO-214AC (SMA)



0.074 (1.88) MAX. 0.060 (1.52) 0.208 (5.28)

REF.



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