HALOGEN

FREE



Vishay General Semiconductor

High-Current Density Surface-Mount Schottky Rectifier



SMA (DO-214AC)



LINKS TO ADDITIONAL RESOURCES



PRIMARY CHARACTERISTICS					
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				
Package	SMA (DO-214AC)				
Circuit configuration	Single				

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: SMA (DO-214AC)

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 +150		°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 $\leq 40 \text{ ms}$



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

Note

(1) Aluminum substrate mounted

ORDERING INFORMATION (Example)						
PREFERRED P/N	UNIT WEIGHT (g)	UNIT WEIGHT (g) PREFERRED PACKAGE CODE BASE QUANTI		DELIVERY MODE		
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)

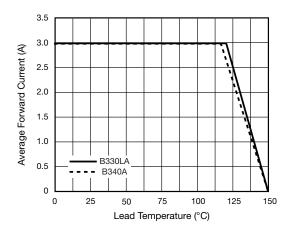


Fig. 1 - Forward Current Derating Curve

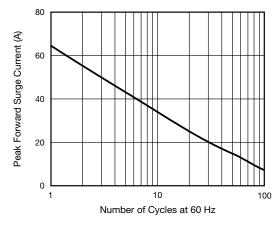


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

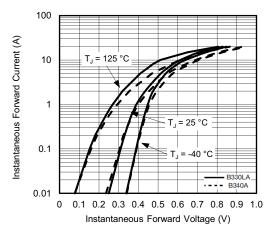


Fig. 3 - Typical Instantaneous Forward Characteristics

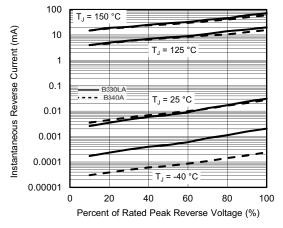


Fig. 4 - Typical Reverse Characteristics



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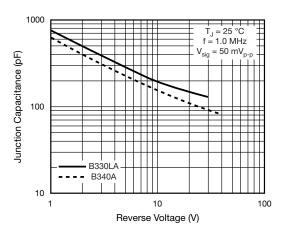


Fig. 5 - Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

SMA (DO-214AC) Cathode Band **Mounting Pad Layout** 0.074 (1.88) 0.066 (1.68) MAX. 0.065 (1.65) 0.110 (2.79) 0.049 (1.25) 0.100 (2.54) 0.177 (4.50) 0.157 (3.99) 0.060 (1.52) 0.012 (0.305) MIN. 0.006 (0.152) 0.208 (5.28) REF 0.090 (2.29) 0.078 (1.98) 0.060 (1.52) 0.030 (0.76) 0.008 (0.203) 0 (0) 0.208 (5.28) 0.194 (4.93)



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