

## Vishay General Semiconductor

# **Surface Mount Schottky Barrier Rectifier**



**DO-214AC (SMA)** 

PRIMARY CHARACTERISTICS					
I <sub>F(AV)</sub>	3.0 A				
V <sub>RRM</sub>	50 V, 60 V				
I <sub>FSM</sub>	50 A				
V <sub>F</sub> at I <sub>F</sub> = 3.0 A	0.55 V				
T <sub>J</sub> max.	150 °C				
Package	DO-214AC (SMA)				
Diode variations	Single die				

#### **FEATURES**

- Low profile package
- · Ideal for automated placement





RoHS

· High efficiency

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 <a href="https://www.vishay.com/doc?99912">www.vishay.com/doc?99912</a>

#### **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-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 2 whisker test **Polarity:** Color band denotes the cathode end

MAXIMUM RATINGS (T <sub>A</sub> = 25 °C unless otherwise noted)					
PARAMETER	SYMBOL	B350A	B360A	UNIT	
Device marking code		B35	B36		
Maximum repetitive peak reverse voltage V <sub>RRM</sub>		50	60	V	
Maximum average forward rectified current (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>	50		А	
Voltage rate of change (rated V <sub>R</sub> )	dV/dt	10 000		V/µs	
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150		°C	



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<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)						
PARAMETER	TEST CONDITIONS		SYMBOL	TYP.	MAX.	UNIT
Maximum instantaneous		V_ (1)	0.64	0.72	V	
forward voltage		T <sub>A</sub> = 125 °C	<b>v</b> F (.,	0.55	0.62	V
Maximum reverse current	Rated V <sub>R</sub>	T <sub>A</sub> = 25 °C T <sub>A</sub> = 125 °C	I <sub>R</sub> <sup>(2)</sup>	-	200	μA
		T <sub>A</sub> = 125 °C		2.9	10	mA
Typical junction capacitance	4.0 V, 1 MHz		CJ	145	-	pF

#### **Notes**

 $^{(1)}\,$  Pulse test: 300  $\mu s$  pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)					
PARAMETER	SYMBOL	BOL B350A B360A		UNIT	
Typical thermal resistance	R <sub>0JA</sub> (1)	72		°C/W	
	R <sub>0JL</sub> (1)	12			

#### Note

 $^{(1)}$  PCB. mounted with 0.32" x 0.32" (8 mm x 8 mm) copper pad areas.  $T_L$  measured at lead terminal mount.

ORDERING INFORMATION (Example)						
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE		
B360A-E3/61T	0.064	61T	1800	7" diameter plastic tape and reel		
B360A-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)

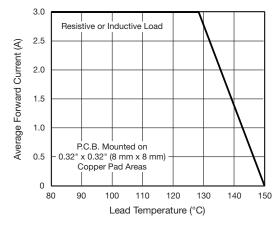


Fig. 1 - Forward Current Derating Curve

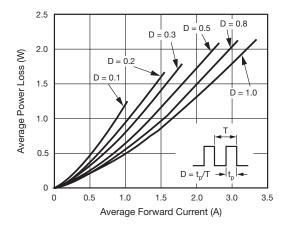


Fig. 2 - Forward Power Loss Characteristics



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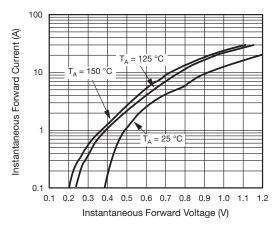


Fig. 3 - Typical Instantaneous Forward Characteristics

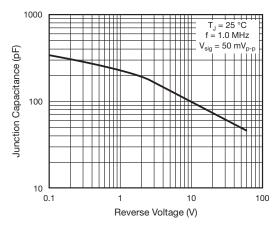


Fig. 5 - Typical Junction Capacitance

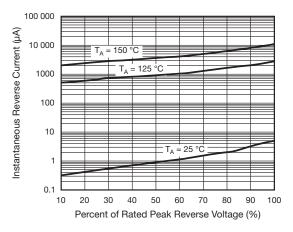
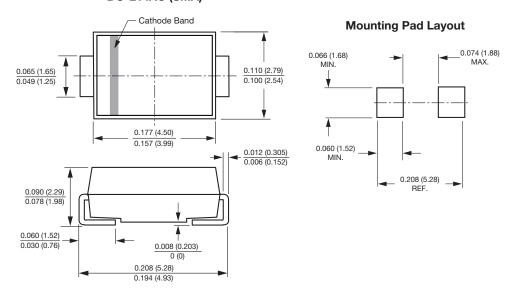


Fig. 4 - Typical Reverse Characteristics

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





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