

## Surface Mount Schottky Barrier Rectifier



DO-214AC (SMA)

### FEATURES

- Low profile package
- Ideal for automated placement
- Low forward voltage drop, low power losses
- 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 [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT

### 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

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	3.0 A
$V_{RRM}$	50 V, 60 V
$I_{FSM}$	50 A
$V_F$ at $I_F = 3.0$ A	0.55 V
$T_J$ max.	150 °C
Package	DO-214AC (SMA)
Diode variations	Single die

MAXIMUM RATINGS ( $T_A = 25$ °C unless otherwise noted)				
PARAMETER	SYMBOL	B350A	B360A	UNIT
Device marking code		B35	B36	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	60	V
Maximum average forward rectified current (fig. 1)	$I_{F(AV)}$	3.0		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	50		A
Voltage rate of change (rated $V_R$ )	$dV/dt$	10 000		V/ $\mu$ s
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150		°C

**ELECTRICAL CHARACTERISTICS** ( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	TYP.	MAX.	UNIT
Maximum instantaneous forward voltage	$I_F = 3.0\text{ A}$	$T_A = 25\text{ }^{\circ}\text{C}$	0.64	0.72	V
		$T_A = 125\text{ }^{\circ}\text{C}$	0.55	0.62	
Maximum reverse current	Rated $V_R$	$T_A = 25\text{ }^{\circ}\text{C}$	-	200	$\mu\text{A}$
		$T_A = 125\text{ }^{\circ}\text{C}$	2.9	10	mA
Typical junction capacitance	4.0 V, 1 MHz	$C_J$	145	-	pF

**Notes**(1) Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle(2) Pulse test: Pulse width  $\leq 40\text{ ms}$ **THERMAL CHARACTERISTICS** ( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)

PARAMETER	SYMBOL	B350A	B360A	UNIT
Typical thermal resistance	$R_{\theta JA}^{(1)}$	72		$^{\circ}\text{C/W}$
	$R_{\theta JL}^{(1)}$	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

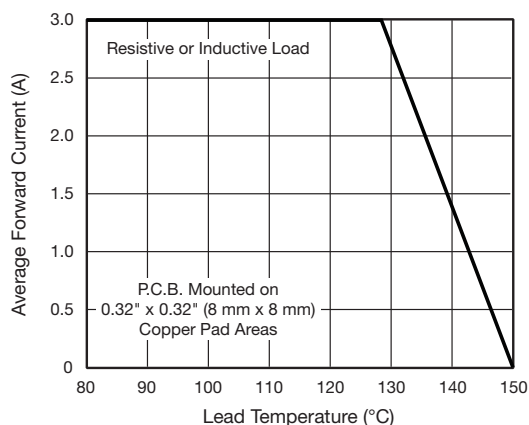
**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

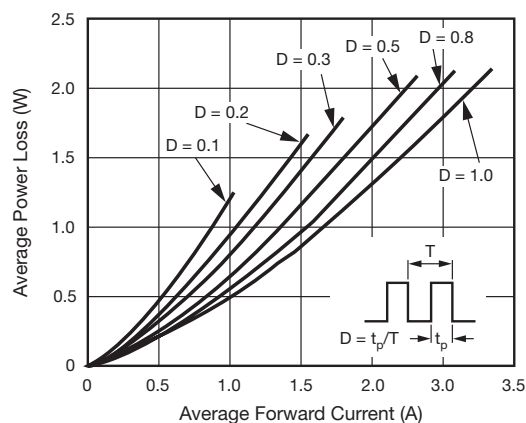


Fig. 2 - Forward Power Loss Characteristics

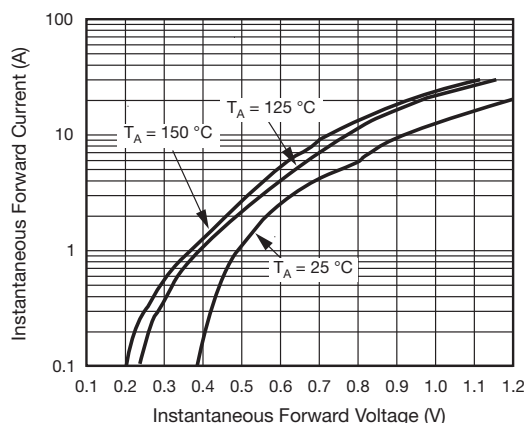


Fig. 3 - Typical Instantaneous Forward Characteristics

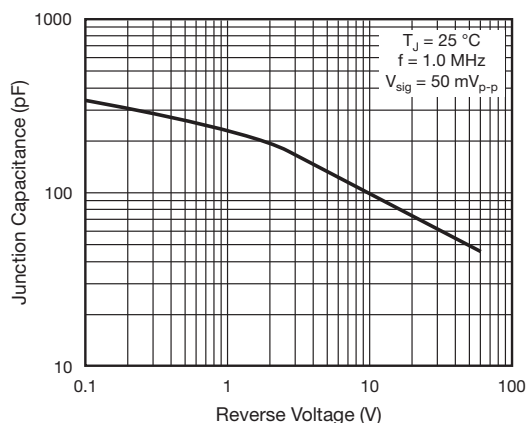


Fig. 5 - Typical Junction Capacitance

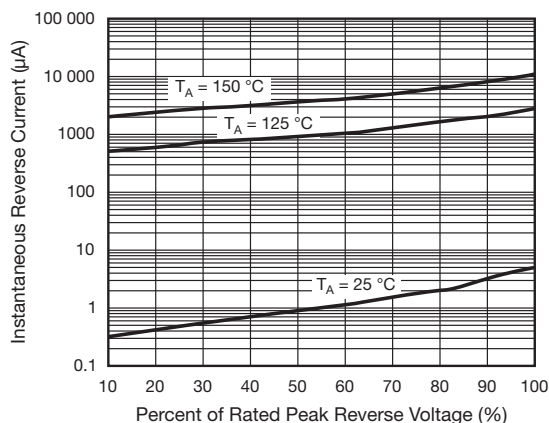
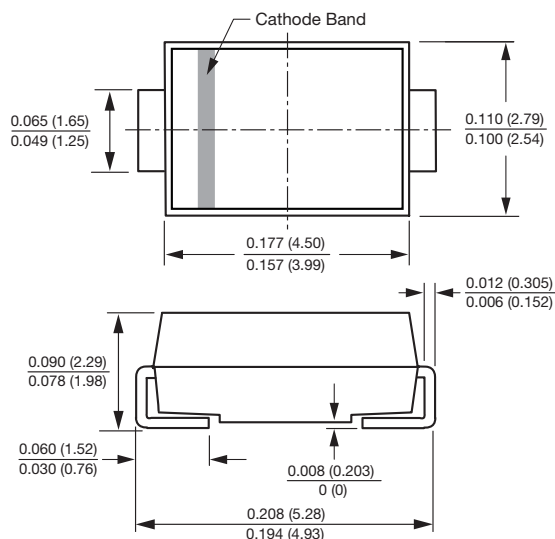


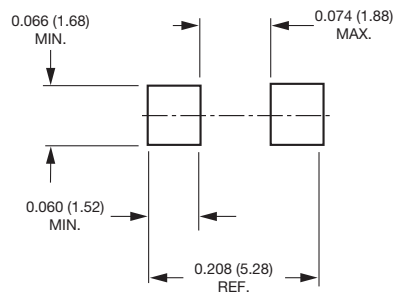
Fig. 4 - Typical Reverse Characteristics

# **PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)

## **DO-214AC (SMA)**



## **Mounting Pad Layout**





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