

# Surface-Mount Schottky Barrier Rectifier


**SMA (DO-214AC)**

Cathode  Anode

## LINKS TO ADDITIONAL RESOURCES



## 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  
HALOGEN  
**FREE**

## 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 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	SMA (DO-214AC)
Circuit configuration	Single

## 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/μs
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150		°C

## ELECTRICAL CHARACTERISTICS ( $T_A = 25$ °C unless otherwise noted)

PARAMETER	TEST CONDITIONS		SYMBOL	TYP.	MAX.	UNIT
Maximum instantaneous forward voltage	$I_F = 3.0$ A	$T_A = 25$ °C	$V_F$ <sup>(1)</sup>	0.64	0.72	V
		$T_A = 125$ °C		0.55	0.62	
Maximum reverse current	Rated $V_R$	$T_A = 25$ °C	$I_R$ <sup>(2)</sup>	-	200	μA
		$T_A = 125$ °C		2.9	10	
Typical junction capacitance	4.0 V, 1 MHz		$C_J$	145	-	pF

### Notes

<sup>(1)</sup> Pulse test: 300 μs pulse width, 1 % duty cycle

<sup>(2)</sup> Pulse test: Pulse width ≤ 40 ms



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

PARAMETER	SYMBOL	B350A	B360A	UNIT
Typical thermal resistance	R <sub>θJA</sub> <sup>(1)</sup>	72		°C/W
	R <sub>θJL</sub> <sup>(1)</sup>	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-M3/61T	0.064	61T	1800	7" diameter plastic tape and reel
B360A-M3/5AT	0.064	5AT	7500	13" diameter plastic tape and reel

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

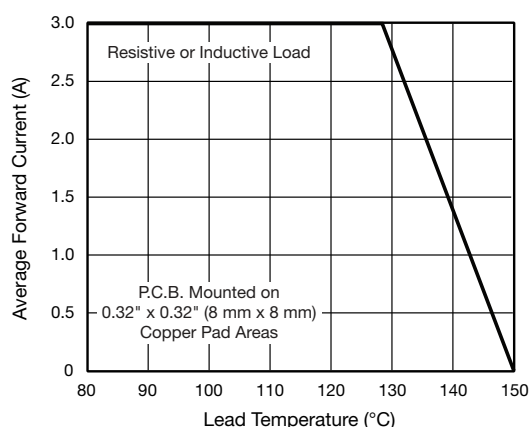


Fig. 1 - Forward Current Derating Curve

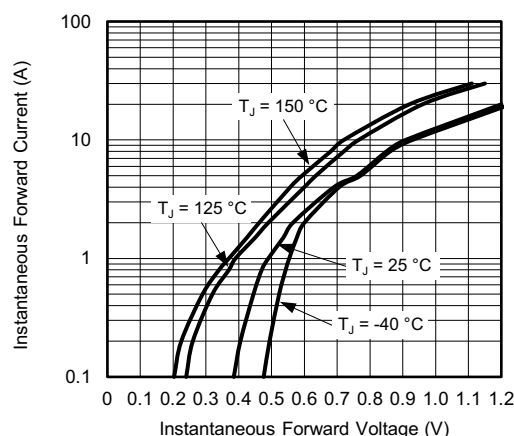


Fig. 3 - Typical Instantaneous Forward Characteristics

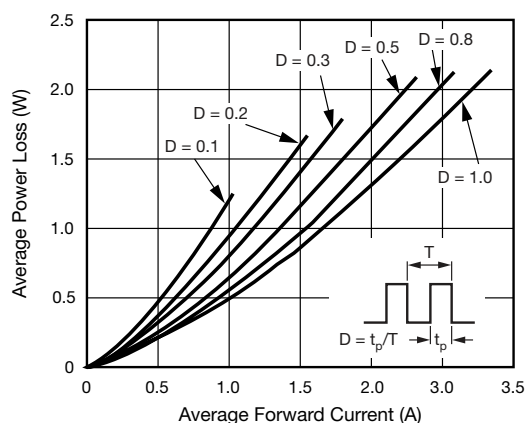


Fig. 2 - Forward Power Loss Characteristics

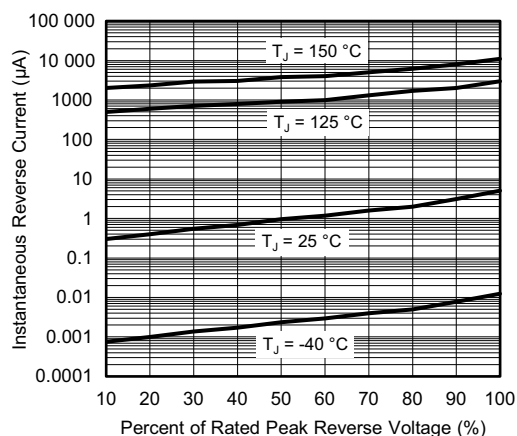


Fig. 4 - Typical Reverse Characteristics

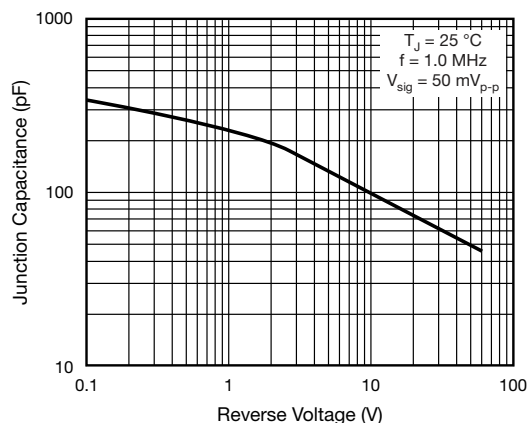
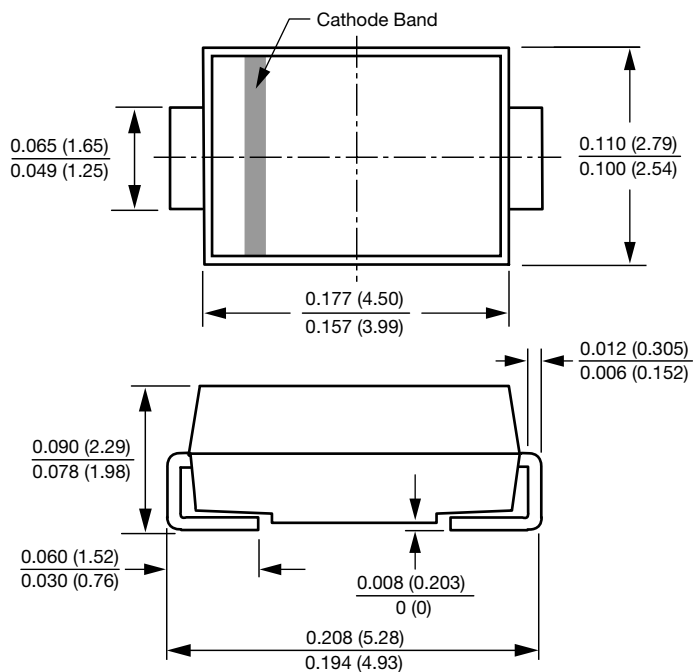
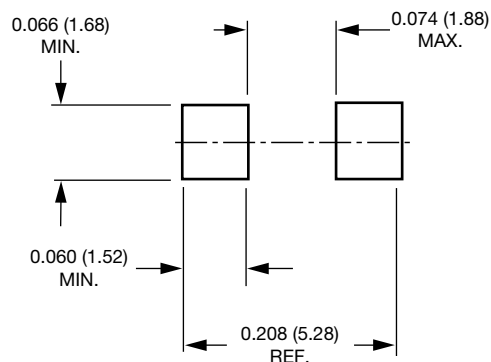


Fig. 5 - Typical Junction Capacitance

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

**SMA (DO-214AC)**

**Mounting Pad Layout**




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