

# Surface-Mount Schottky Rectifier


**SMB (DO-214AA)**

Cathode  Anode

## 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](http://www.vishay.com/doc?99912)



## LINKS TO ADDITIONAL RESOURCES



## TYPICAL APPLICATIONS

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

## MECHANICAL DATA

**Case:** SMB (DO-214AA)

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
$I_{FSM}$	60 A
$V_F$ at $I_F = 3.0$ A	0.51 V
$T_J$ max.	150 °C
Package	SMB (DO-214AA)
Circuit configurations	Single

## MAXIMUM RATINGS ( $T_A = 25$ °C unless otherwise noted)

PARAMETER	SYMBOL	B350B	B360B	UNIT
Device marking code		B35	B36	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	60	V
Maximum average forward rectified current at $T_L$ (fig. 1)	$I_{F(AV)}$	3.0		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	60		A
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	$T_J = 25$ °C	$V_F$ <sup>(1)</sup>	0.58	0.66	V
		$T_J = 125$ °C		0.51	0.59	
Maximum reverse current	Rated $V_R$	$T_J = 25$ °C	$I_R$ <sup>(2)</sup>	-	100	µA
		$T_J = 125$ °C		3	10	mA

### 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	B350B	B360B	UNIT
Typical thermal resistance	$R_{\theta JA}^{(1)}$	70		°C/W
	$R_{\theta JM}^{(1)}$	15		

**Note**

(1) PCB mounted with 0.4" x 0.4" (10 mm x 10 mm) copper pad areas, thermal resistance  $R_{\theta JA}$  - junction to ambient,  $R_{\theta JM}$  - junction to mount

**ORDERING INFORMATION** (Example)

PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
B360B-E3/52T	0.096	52T	750	7" diameter plastic tape and reel
B360B-E3/5BT	0.096	5BT	3200	13" diameter plastic tape and reel

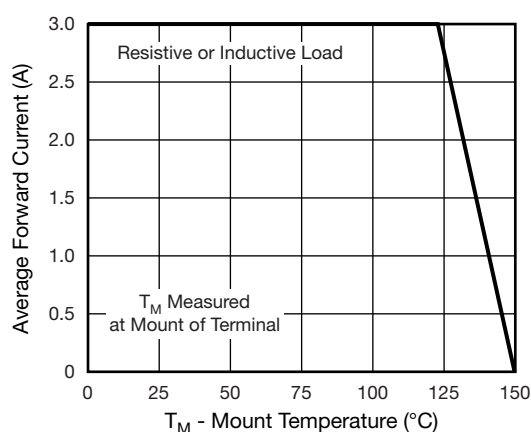
**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)

Fig. 1 - Maximum Forward Current Derating Curve

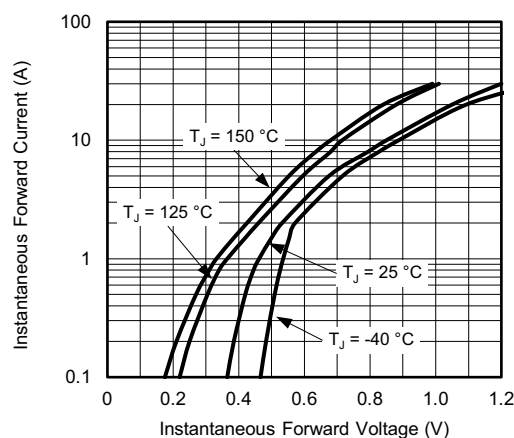


Fig. 3 - Typical Instantaneous Forward Characteristics

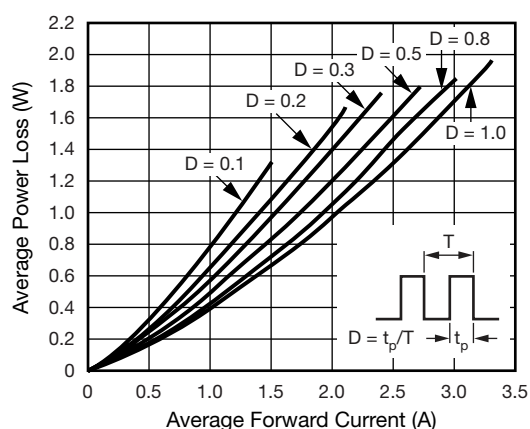


Fig. 2 - Forward Power Loss Characteristics

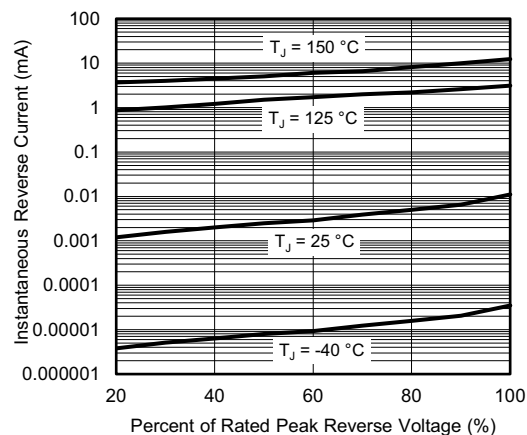


Fig. 4 - Typical Reverse Leakage Characteristics

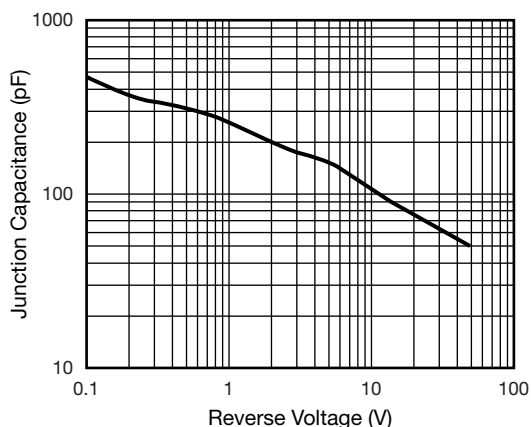
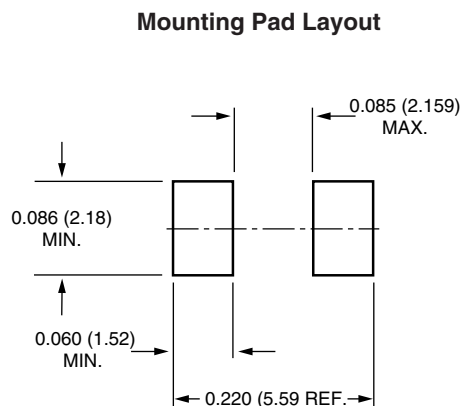
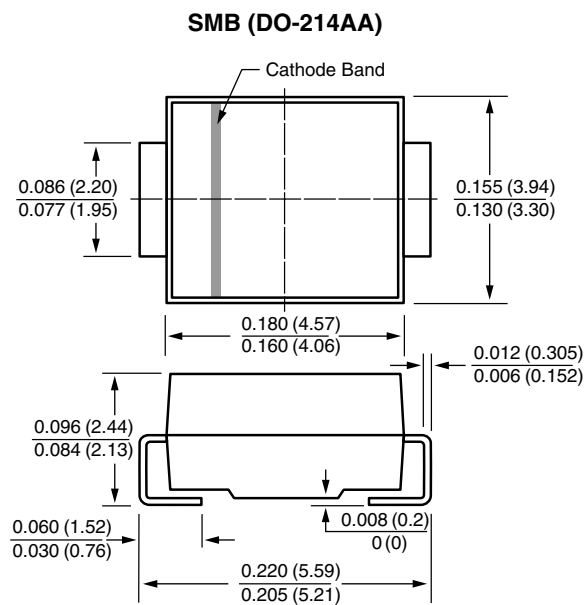


Fig. 5 - Typical Junction Capacitance

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




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