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Vishay General Semiconductor

Surface Mount Schottky Rectifier



DO-214AA (SMB)

3.0 A

50 V, 60 V

60 A

0.51 V

150 °C

PRIMARY CHARACTERISTICS

I_{F(AV)} V_{RRM}

I_{FSM}

 V_F at $I_F = 3.0$ A

T_J max.

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
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC

TYPICAL APPLICATIONS

For use in low voltage, high frequency inverters, freewheeling, dc-to-dc converters, and polarity protection applications.

MECHANICAL DATA

Case: DO-214AA (SMB) 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 1A whisker test

Polarity: Color band denotes the cathode end

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		А	
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	60		А	
Operating junction and storage temperature range	T _J , T _{STG}	- 55 to + 150		°C	

ELECTRICAL CHARACTERISTICS ($T_A = 25 \text{ °C}$ 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 ⁽¹⁾	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 ⁽²⁾	-	100	μA		
		T _J = 125 °C		3	10	mA		

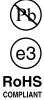
Notes

⁽¹⁾ Pulse test: 300 µs pulse width, 1 % duty cycle

⁽²⁾ Pulse test: Pulse width \leq 40 ms

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For technical questions within your region, please contact one of the following:

Revision:
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DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesAsia@vishay.co



B350B, B360B

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THERMAL CHARACTERISTICS ($T_A = 25 \text{ °C}$ unless otherwise noted)					
PARAMETER	SYMBOL	B350B B360B		UNIT	
Typical thermal resistance	R _{θJA} ⁽¹⁾	70		°C/W	
	R _{0JM} ⁽¹⁾	15			

Note

⁽¹⁾ P.C.B. mounted with 0.4" x 0.4" (10 mm x 10 mm) copper pad areas, thermal resistance R_{0JA} - junction to ambient, R_{0JM} - 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 °C unless otherwise noted)

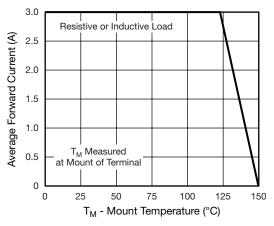


Fig. 1 - Maximum Forward Current Derating Curve

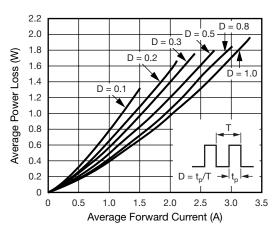


Fig. 2 - Forward Power Loss Characteristics

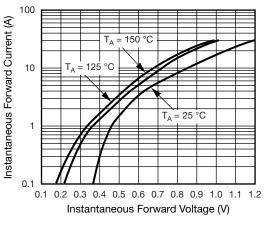


Fig. 3 - Typical Instantaneous Forward Characteristics

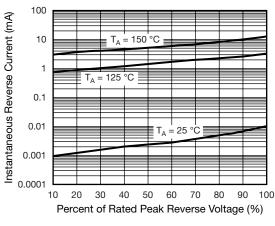


Fig. 4 - Typical Reverse Leakage Characteristics

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B350B, B360B

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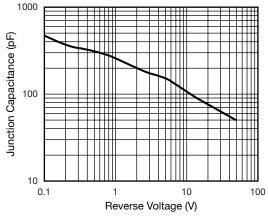
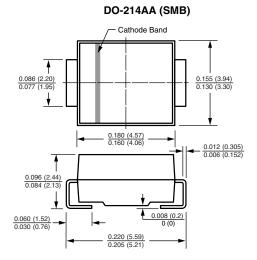
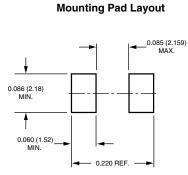


Fig. 5 - Typical Junction Capacitance









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