Surface-Mount Schottky Barrier Rectifier



SMA (DO-214AC)

Cathode ○—◀—○ Anode

LINKS TO ADDITIONAL RESOURCES

3D Models

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

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 (1)	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 (2)	-	200	µA
		T_A = 125 °C		2.9	10	mA
Typical junction capacitance	4.0 V, 1 MHz		C_J	145	-	pF

Notes

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

(2) Pulse test: Pulse width ≤ 40 ms

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THERMAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)				
PARAMETER	**SYMBOL**	**B350A**	**B360A**	**UNIT**
Typical thermal resistance	$R_{\theta JA}$ (1)	72		°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-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 °C unless otherwise noted)

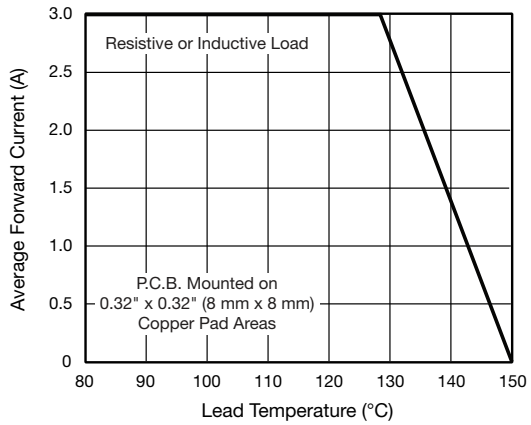


Fig. 1 - Forward Current Derating Curve

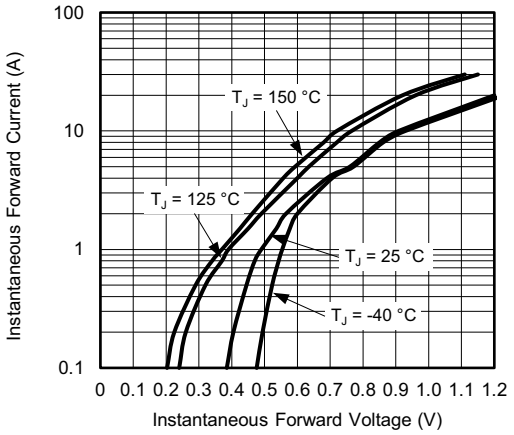


Fig. 3 - Typical Instantaneous Forward Characteristics

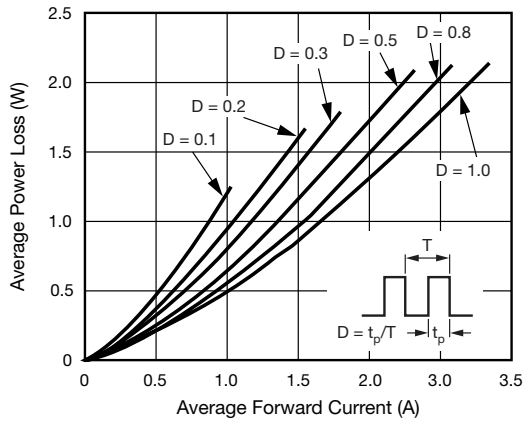


Fig. 2 - Forward Power Loss Characteristics

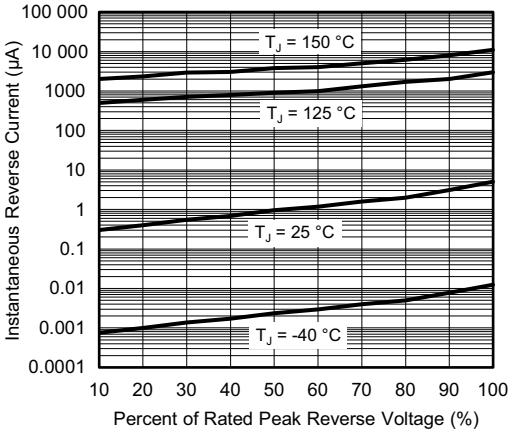


Fig. 4 - Typical Reverse Characteristics

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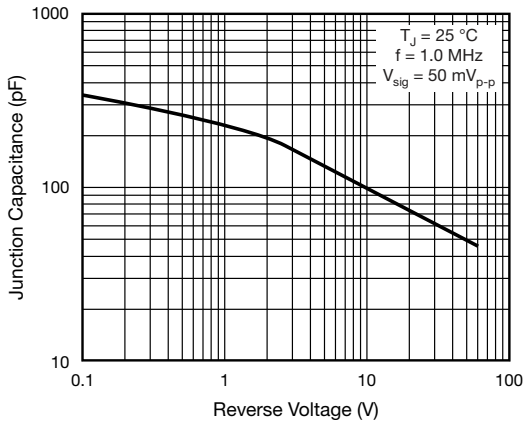
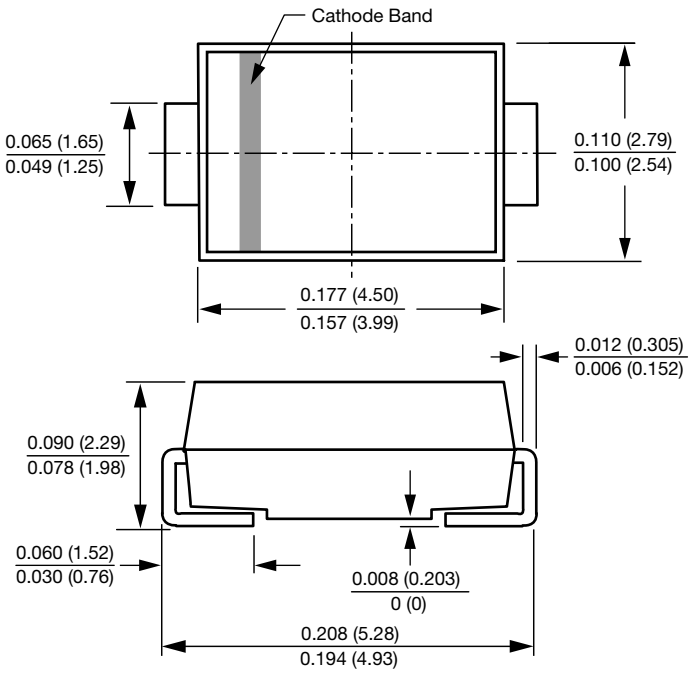


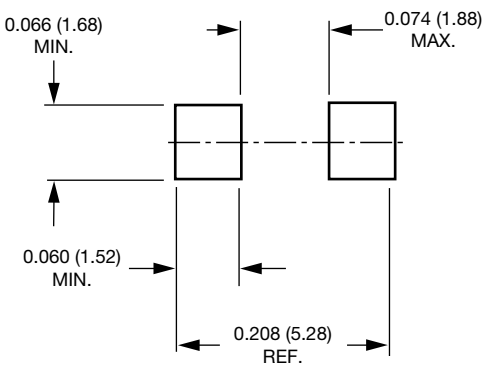
Fig. 5 - Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

SMA (DO-214AC)



Mounting Pad Layout



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