

## Surface Mount Schottky Barrier Rectifier

### FEATURES

- Ideal for automated placement
- Low forward voltage drop
- Low leakage current
- Meets environmental standard MIL-S-19500D
- Moisture sensitivity: level 1, per J-STD-020
- Solder dip 275 °C, 10 s
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC



DO-214AA (SMB)

### TYPICAL APPLICATIONS

For use in general purpose rectification of lighting, power supplies, inverters, converters and freewheeling diodes for consumer, automotive and telecommunication.

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	3 A
$V_{RRM}$	20 V to 100 V
$I_{FSM}$	80A
$V_F$	0.42V, 0.5V, 0.75V
$T_J \text{ max.}$	125 °C , 150 °C

### MECHANICAL DATA

**Case:** DO-214AA, molded epoxy body, Epoxy meets UL 94V-0 flammability rating

**Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD22B-106

**Polarity:** Laser Band Denotes Cathode Band

### MAXIMUM RATINGS ( $T_A = 25\text{ °C}$ unless otherwise noted)

PARAMETER	SYMBOL	SL32B	SL33B	SL34B	SL35B	SL36B	SL37B	SL38B	SL39B	SL310B	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	70	80	90	100	V
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	49	56	63	70	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	70	80	90	100	V
Maximum average forward rectified current at TL(See Fig.1)	$I_{F(AV)}$	3									A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	80									A
Operating junction temperature range	$T_J$	- 55 to + 125				- 55 to + 150					°C
Storage temperature range	$T_{STG}$	- 55 to + 150									°C

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

PARAMETER	TEST CONDITIONS	SYMBOL	SL32B	SL33B	SL34B	SL35B	SL36B	SL37B	SL38B	SL39B	SL310B	UNIT
Maximum instantaneous forward voltage	IF=3 A	VF	0.42			0.5		0.75				V
Maximum DC reverse current at rated DC blocking voltage	TA=25°C	IR	0.2			0.15						mA
	TA=100°C		20			TBD						
Typical junction capacitance	4.0 V, 1 MHz	CJ	220								pF	

## THERMAL CHARACTERISTICS (TA = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	SL32B	SL33B	SL34B	SL35B	SL36B	SL37B	SL38B	SL39B	SL310B	UNIT	
Maximum thermal resistance	RθJA (1)	72										°C/W
	RθJT (2)	22										

Notes: (1) Thermal resistance from junction to ambient, 0.276 × 0.276" (7.0 × 7.0mm) copper pads to each terminal  
 (2) Thermal resistance from junction to terminal, 0.276 × 0.276" (7.0 × 7.0mm) copper pads to each terminal

## RATINGS AND CHARACTERISTICS CURVES

(Tj = 25 °C unless otherwise noted)

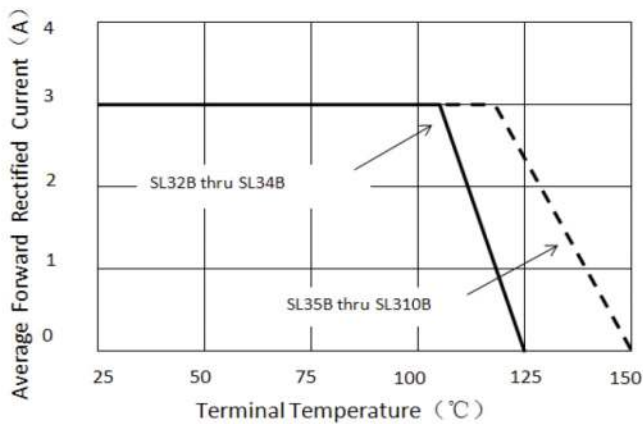


Figure 1. Forward Current Derating Curve



Figure 2. Maximum Non-repetitive Peak Forward Surge Current

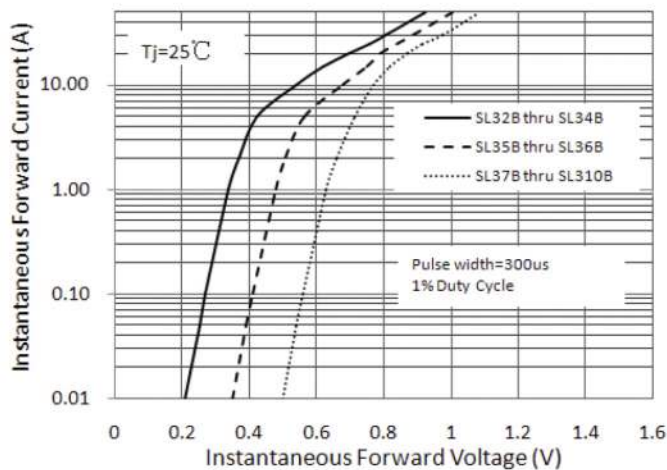


Figure 3. Typical Instantaneous Forward Characteristics

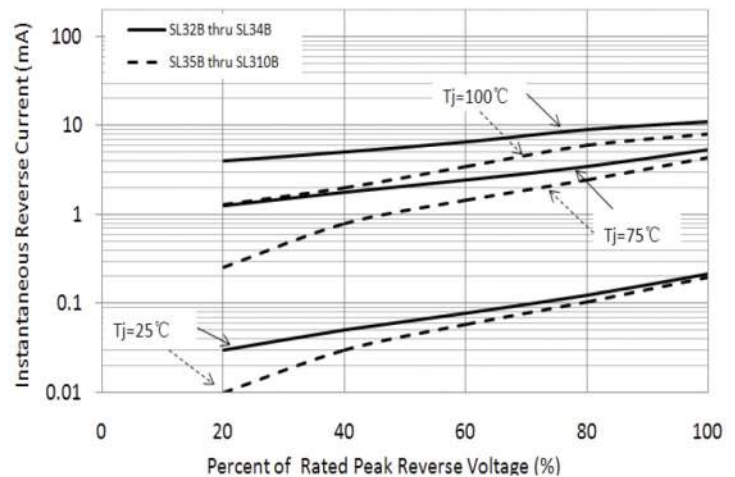


Figure 4. Typical Reverse Characteristics

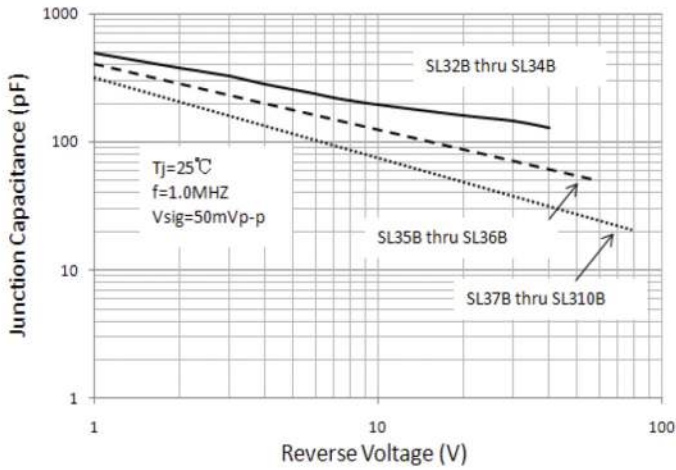
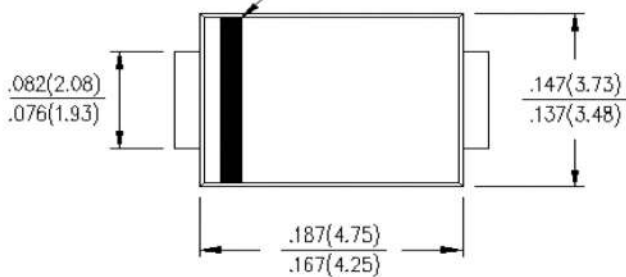


Figure 5. Typical Junction Capacitance

## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

### DO-214AA(SMB)

Cathode Band



### MOUNTING PAD LAYOUT

