

## 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, 10s
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC



Package: DO-214AA (SMB)



## Applications

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

## 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

## Absolute Maximum Ratings

( $T_A=25^{\circ}\text{C}$  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 @ TL(See Fig.1)	$I_{F(AV)}$	3.0									A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load	$I_{FSM}$	80									A
Operating Junction Temperature Range	$T_J$	- 55 to + 125				- 55 to + 150					$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	- 55 to + 150									$^{\circ}\text{C}$

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

Parameter	Symbol	SL32B	SL33B	SL34B	SL35B	SL36B	SL37B	SL38B	SL39B	SL310B	Unit
Maximum Thermal Resistance	$R_{\theta JA}$ (1)	72									$^{\circ}\text{C}/\text{W}$
	$R_{\theta JT}$ (2)	22									
Typical Thermal Resistance	$R_{\theta JC}$	37									

Notes: (1) Thermal resistance from junction to ambient, 0.276x0.276 inch (7.0x7.0mm) copper pads to each terminal

(2) Thermal resistance from junction to terminal, 0.276x0.276 inch (7.0x7.0mm) copper pads to each terminal

**Electrical Characteristics** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

Parameter	Test Conditions	Symbol	SL32B	SL33B	SL34B	SL35B	SL36B	SL37B	SL38B	SL39B	SL310B	Unit
Maximum Instantaneous Forward Voltage	$I_F=3\text{A}$	$V_F$	0.42			0.5		0.75				V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A=25^\circ\text{C}$	$I_R$	0.2			0.15						mA
Typical Junction Capacitance	4.0V, 1 MHz	$C_J$	220									pF

**Typical Electrical Characteristic Curves**

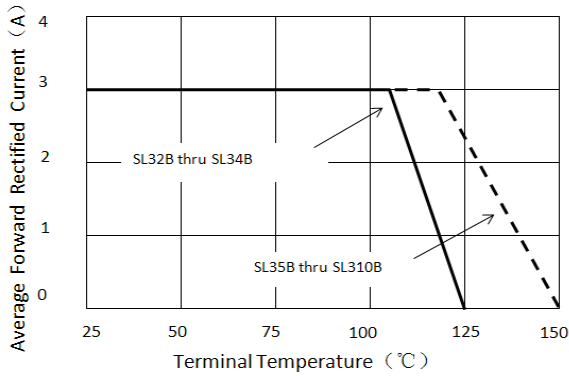


Figure 1. Forward Current Derating Curve

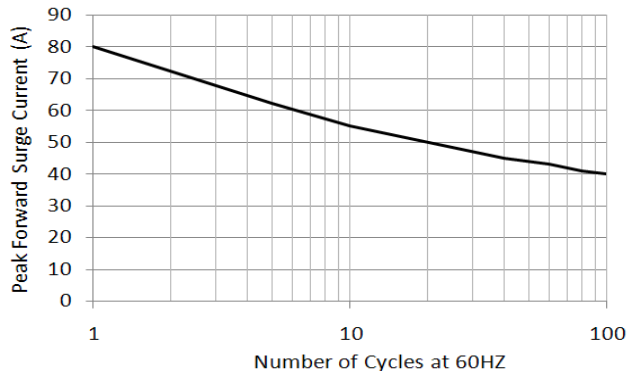


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

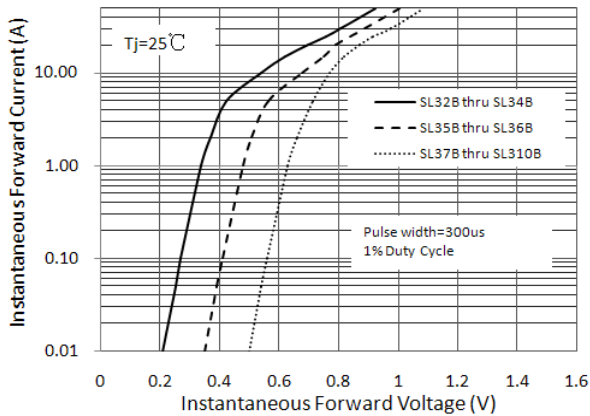


Figure 3. Typical Instantaneous Forward Characteristics

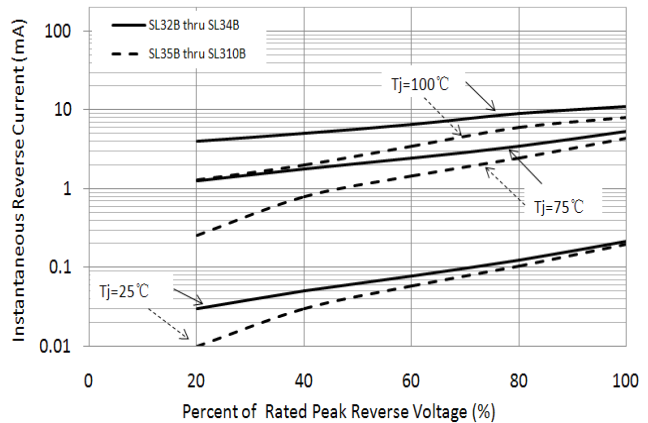


Figure 4. Typical Reverse Characteristics

## Typical Electrical Characteristic Curves

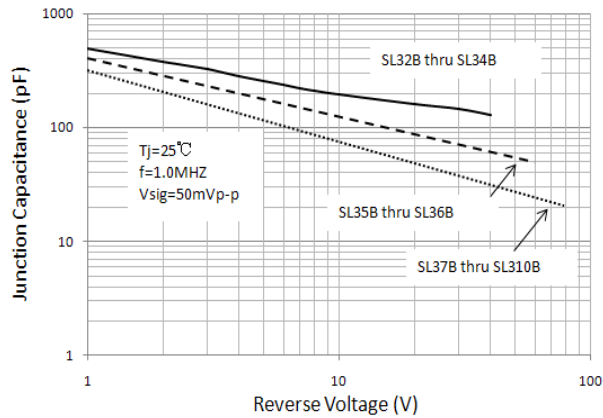
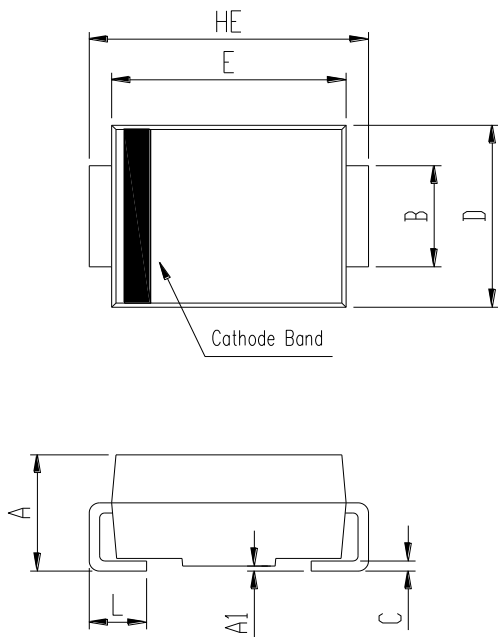


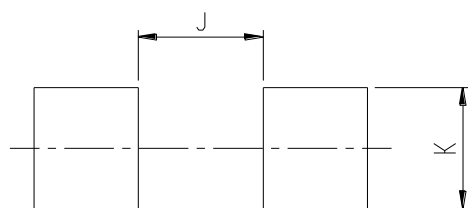
Figure 5. Typical Junction Capacitance

## Package Outline Dimensions (SMB)



SMB (DO-214AA)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.99	2.61	0.078	0.103
A1	0.00	0.20	0.000	0.008
B	1.93	2.08	0.076	0.082
C	0.15	0.31	0.006	0.012
D	3.48	3.73	0.137	0.147
E	4.25	4.75	0.167	0.187
HE	5.26	5.46	0.207	0.215
L	0.90	1.41	0.035	0.056

## Recommended Pad Layout



SMB Recommended Pad Layout (Reference Only)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	-	2.60	-	0.102
K	2.20	-	0.087	-
M	1.80	-	0.071	-