

SL32B thru SL310B

Surface Mount Schottky Rectifiers
Reverse Voltage 20V - 100V Forward Current 3A

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°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						°C
Storage Temperature Range	T _{STG}	- 55 to + 150									°C

Thermal Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	SL32B	SL33B	SL34B	SL35B	SL36B	SL37B	SL38B	SL39B	SL310B	Unit
Maximum Thermal Resistance	R _{θJA} (1)	72									°C/W
	R _{θJT} (2)	22									
Typical Thermal Resistance	R _{θJC}	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 =3A	V _F	0.42			0.5		0.75				V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25°C	I _R	0.2			0.15						mA
Typical Junction Capacitance	4.0V, 1 MHz	C _J	220									pF

Typical Electrical Characteristic Curves

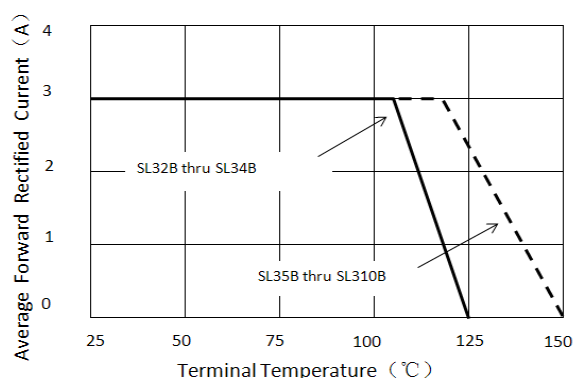


Figure 1. Forward Current Derating Curve

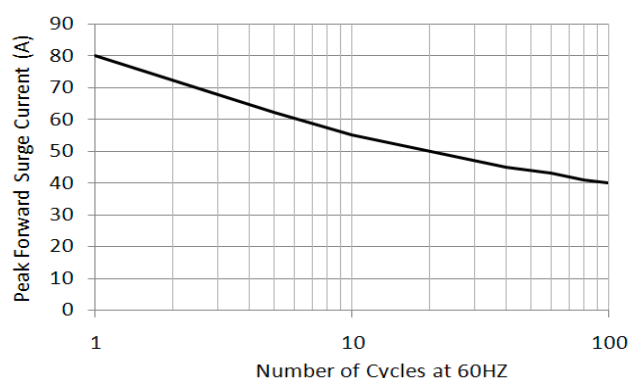


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

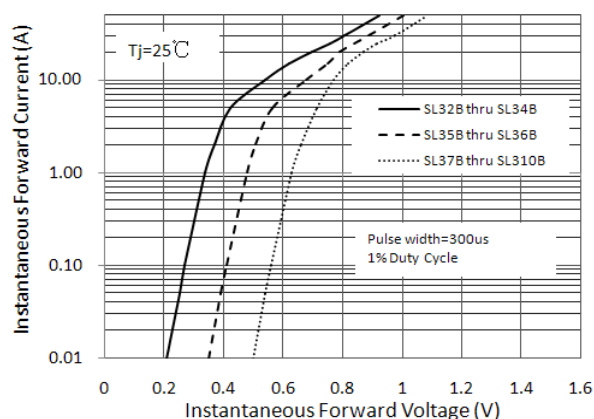


Figure 3. Typical Instantaneous Forward Characteristics

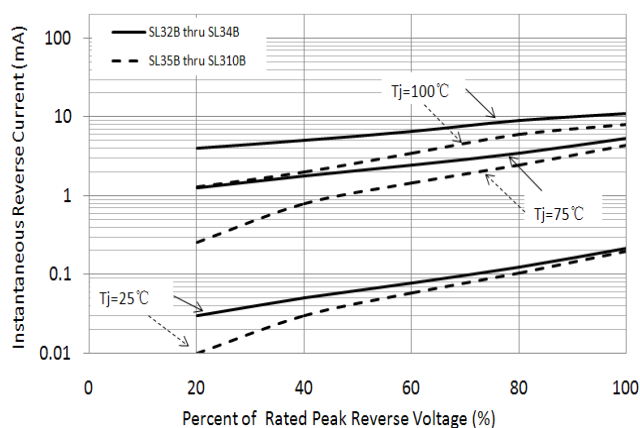


Figure 4. Typical Reverse Characteristics

Typical Electrical Characteristic Curves

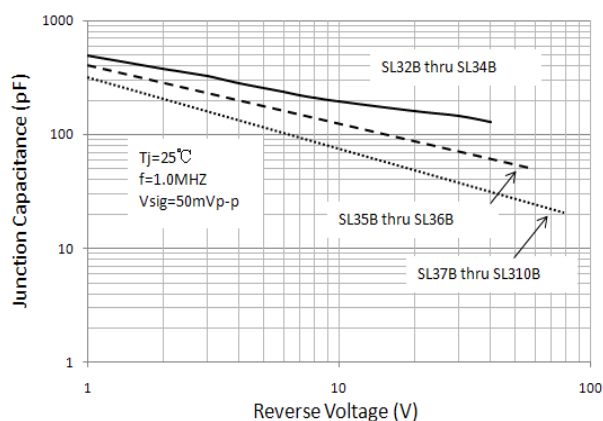
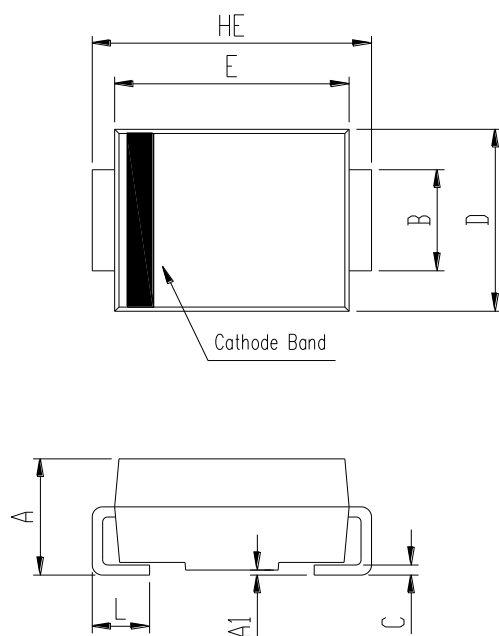


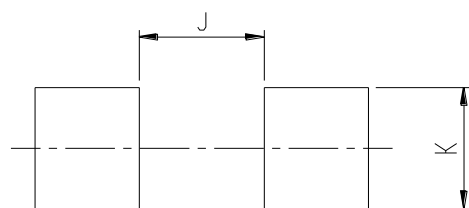
Figure 5. Typical Junction Capacitance

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	-