

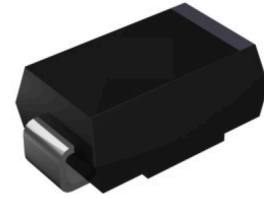


# THE DATASHEET OF SL54B



## Features

- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Ideal for automated placement
- Meets environmental standard MIL-S-19500D
- Solder dip 275 °C, 10s



Package: DO-214AA (SMB)

## Applications

For use in general purpose rectification of lighting, power supply, inverter, converter and freewheeling diodes for consumer, automotive and telecommunication.

## Maximum Ratings (T<sub>A</sub> = 25°C unless otherwise noted)

Parameter	Symbol	SL52B	SL53B	SL54B	SL55B	SL56B	SL57B	SL58B	SL59B	SL510B	Unit	
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	70	80	90	100	V	
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	49	56	63	70	V	
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	70	80	90	100	V	
Maximum Average Forward Rectified current at T <sub>L</sub> (See Fig.1)	I <sub>F(AV)</sub>	5									A	
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	I <sub>FSM</sub>	120					250					A
Operating Junction Temperature Range	T <sub>J</sub>	- 55 to + 125				- 55 to + 150						°C
Storage Temperature Range	T <sub>stg</sub>	- 55 to + 150										°C

## Electrical Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

Parameter	Test Conditions	Symbol	SL52B	SL53B	SL54B	SL55B	SL56B	SL57B	SL58B	SL59B	SL510B	Unit	
Maximum Instantaneous Forward Voltage	I <sub>F</sub> =5 A	V <sub>F</sub>	0.43			0.50		0.70				V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	T <sub>A</sub> =25°C	I <sub>R</sub>	0.5					0.05					mA
	T <sub>A</sub> =100°C		50					50					
Typical Junction Capacitance	4.0 V, 1 MHz	C <sub>J</sub>	350									pF	

## Thermal Characteristics

Parameter	Symbol	SL52B	SL53B	SL54B	SL55B	SL56B	SL57B	SL58B	SL59B	SL510B	Unit	
Maximum thermal resistance	R <sub>θJA</sub> (1)	72										°C/W
	R <sub>θJT</sub> (2)	22										

Notes: (1) Thermal resistance from junction to ambient, 0.276x 0.276 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

## Ratings and Characteristics Curves

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

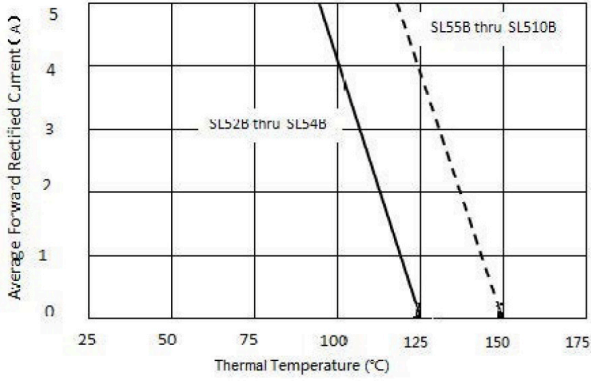


Figure 1. Forward Current Derating Curve

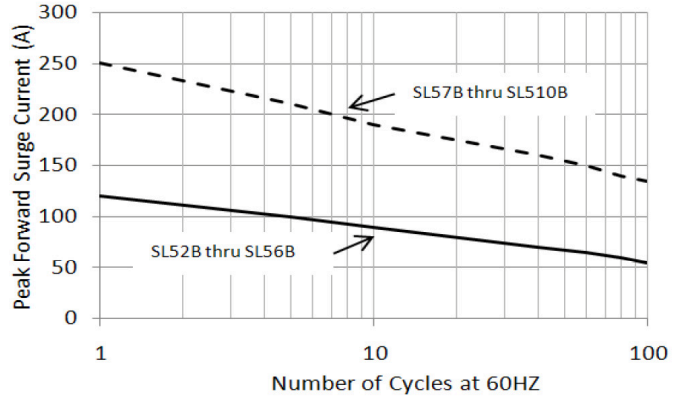


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

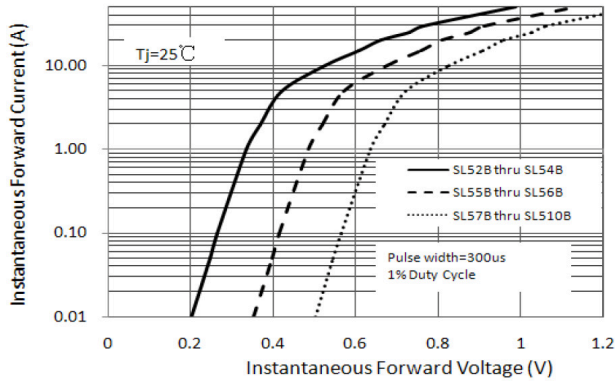


Figure 3. Typical Instantaneous Forward Characteristics

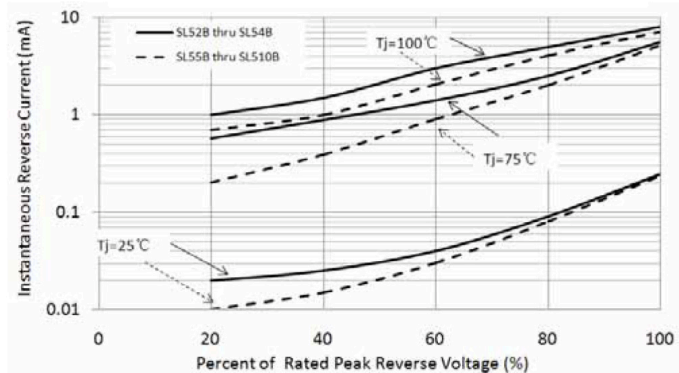


Figure 4. Typical Reverse Characteristics

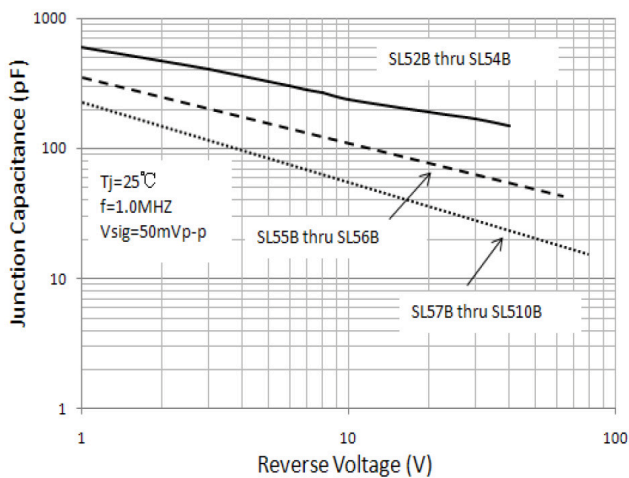
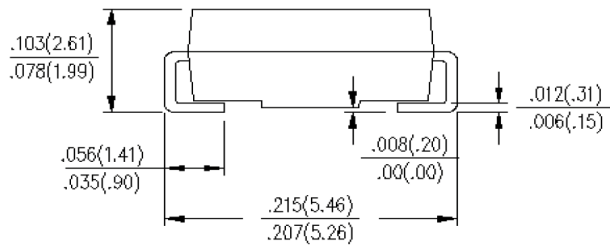
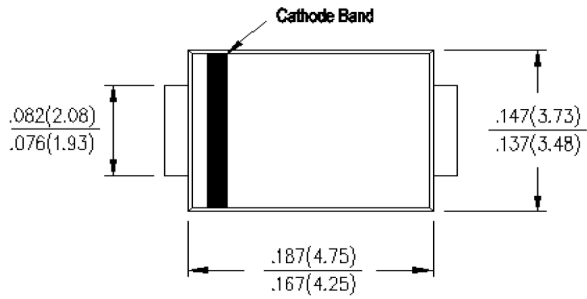


Figure 5. Typical Junction Capacitance

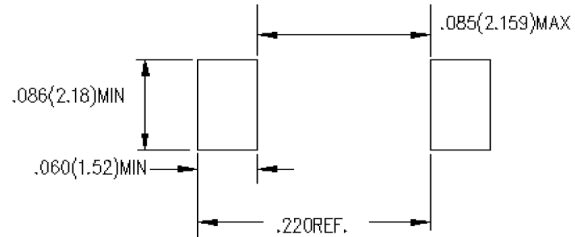
## Package Outline Dimensions

in inches (millimeters)

### DO-214AA (SMB)





### MOUNTING PAD LAYOUT



## Looking for pricing, stock, or lifecycle information?

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