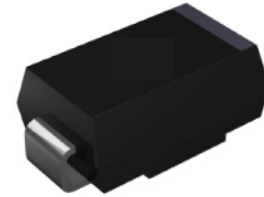


Features

- 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_A = 25°C unless otherwise noted)

Parameter	Symbol	SL52B	SL53B	SL54B	SL55B	SL56B	SL57B	SL58B	SL59B	SL510B	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 T _L (See Fig.1)	I _{F(AV)}	5									A	
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	I _{FSM}	120					250					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 (T_A = 25°C unless otherwise noted)

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

Thermal Characteristics

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

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

Ratings and Characteristics Curves

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

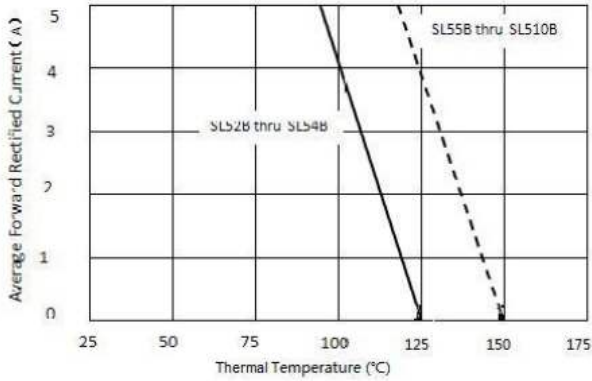


Figure 1. Forward Current Derating Curve

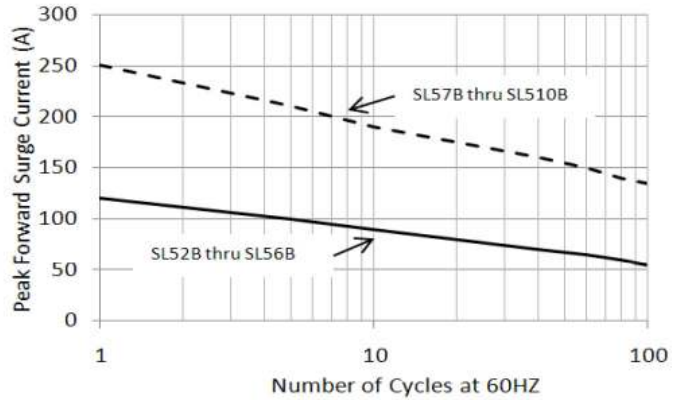


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

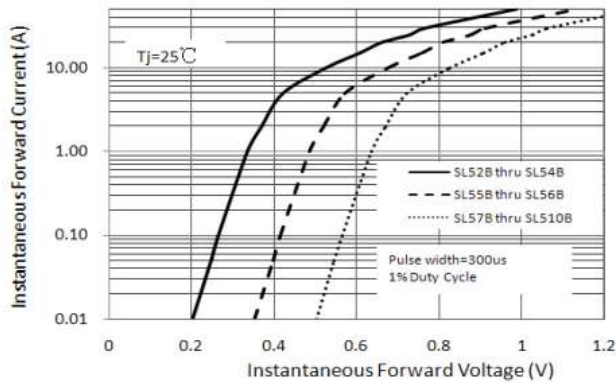


Figure 3. Typical Instantaneous Forward Characteristics

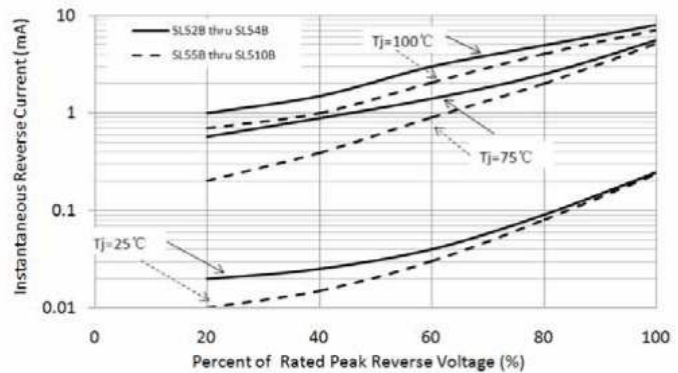


Figure 4. Typical Reverse Characteristics

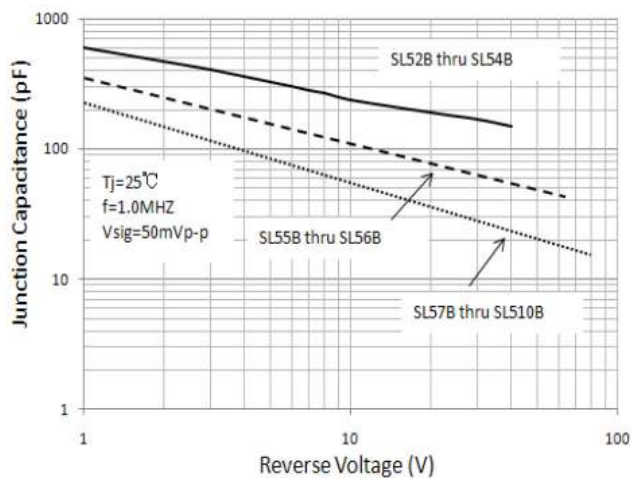
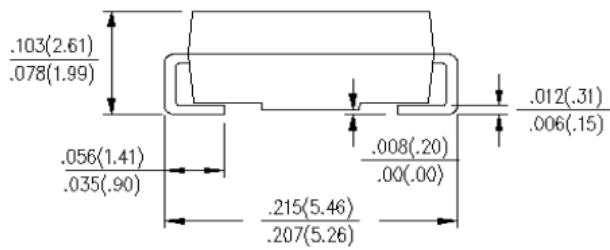
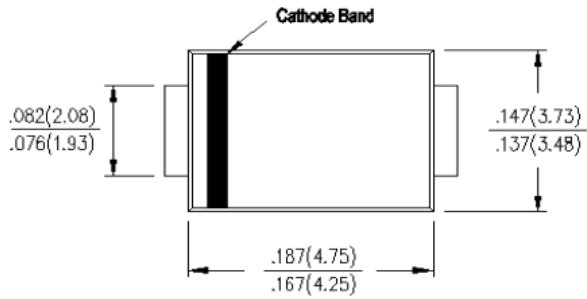


Figure 5. Typical Junction Capacitance

Package Outline Dimensions

in inches (millimeters)

DO-214AA (SMB)



MOUNTING PAD LAYOUT

