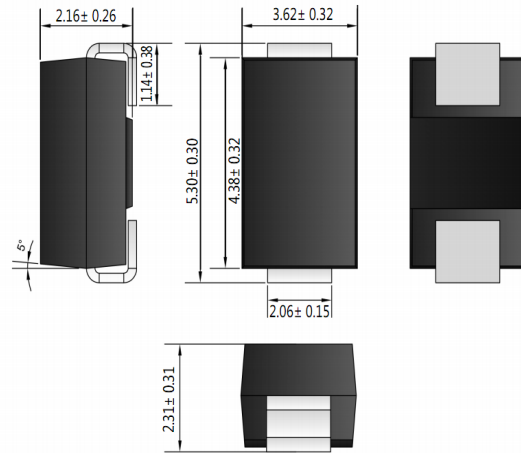


Features

- Low Forward Voltage
- Epitaxial Construction with Oxide Passivation
- Guard Ring for Transient and ESD Protection
- Surge Overload Rating to 125A Peak
- Low Power Loss
- Fast Switching
- Ideally Suited for Use in High Frequency SMPS, Inverters and As Free Wheeling Diodes

SMB /DO-214AA



Mechanical Data

- Case: SMB/DO-214AA, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.093 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version**

Maximum Ratings @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Characteristic	Symbol	SR52	SR53	SR54	SR55	SR56	SR58	SR59	SR510	Unit	
Peak Repetitive Reverse Voltage	V_{RRM}										
Working Peak Reverse Voltage	V_{RWM}	20	30	40	50	60	80	90	100	V	
DC Blocking Voltage	V_R										
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	35	42	56	63	70	V	
Average Rectified Output Current (Note 1)	I_O	5.0								A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	125								A	
Forward Voltage @ $I_F = 5.0\text{A}$	V_{FM}	0.50			0.75		0.85			V	
Peak Reverse Current @ $T_J = 25^{\circ}\text{C}$ At Rated DC Blocking Voltage @ $T_J = 100^{\circ}\text{C}$	I_{RM}					0.5 20					mA
Typical Junction Capacitance (Note 2)	C_J	500			380					pF	
Thermal Resistance, Junction to Ambient (Note 1)	R_{JA}					70					$^{\circ}\text{C/W}$
Thermal Resistance, Junction to Case (Note 1)	R_{JC}					18					
Operating Temperature Range	T_J	-55 to +125			-55 to +150					$^{\circ}\text{C}$	
Storage Temperature Range	T_{STG}	-55 to +150								$^{\circ}\text{C}$	

Note: 1. Mounted on FR-4 PCB with 8.0 x 8.0mm copper pads.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

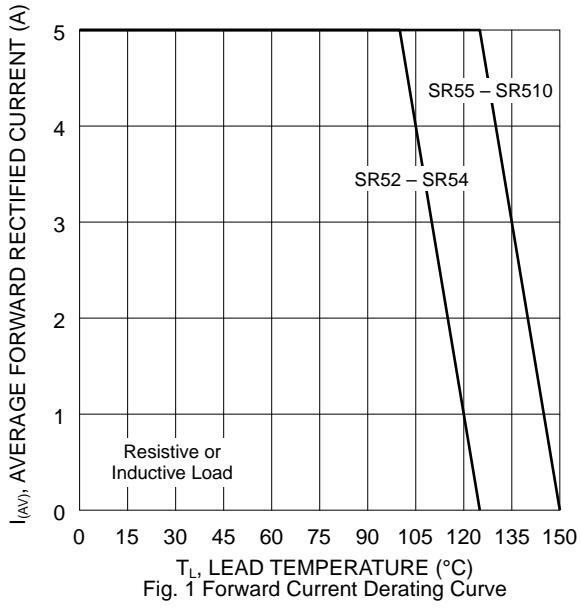


Fig. 1 Forward Current Derating Curve

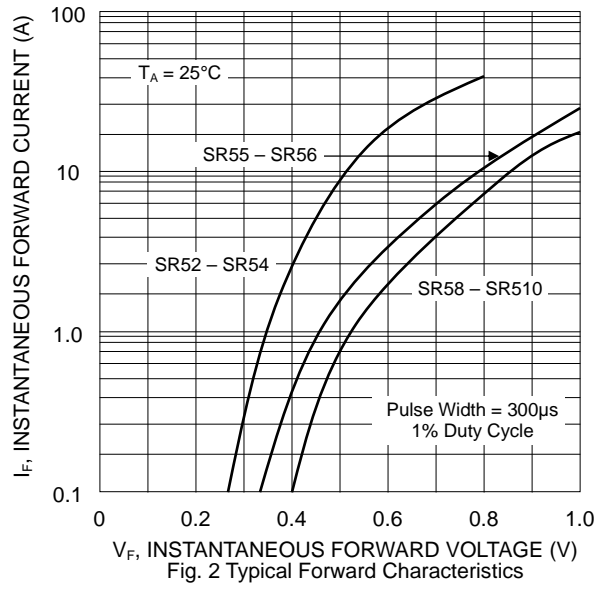


Fig. 2 Typical Forward Characteristics

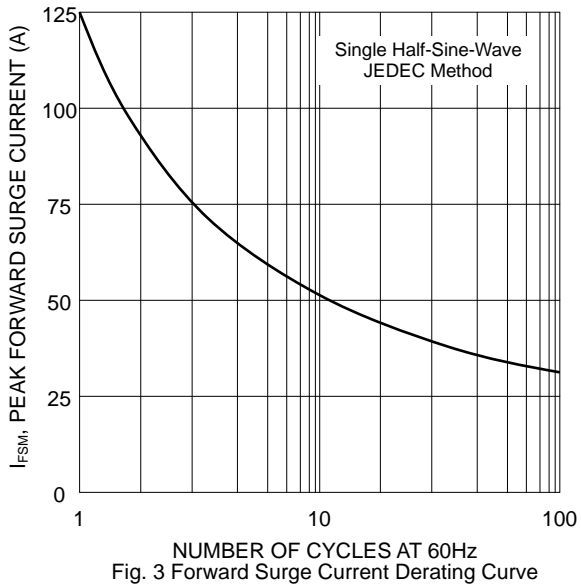


Fig. 3 Forward Surge Current Derating Curve

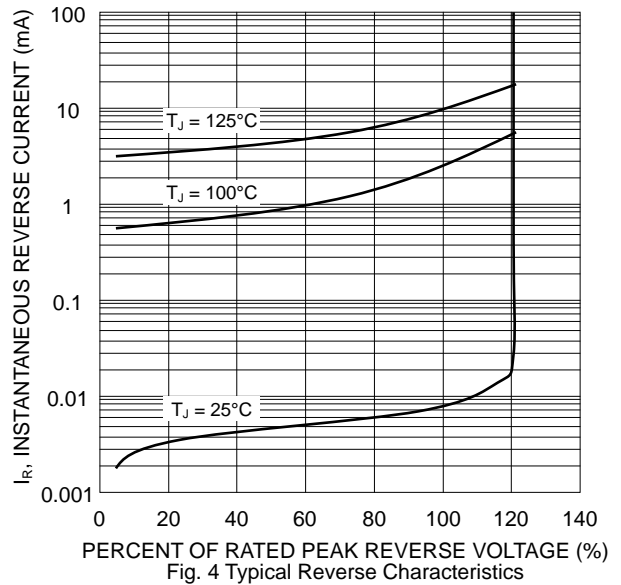


Fig. 4 Typical Reverse Characteristics

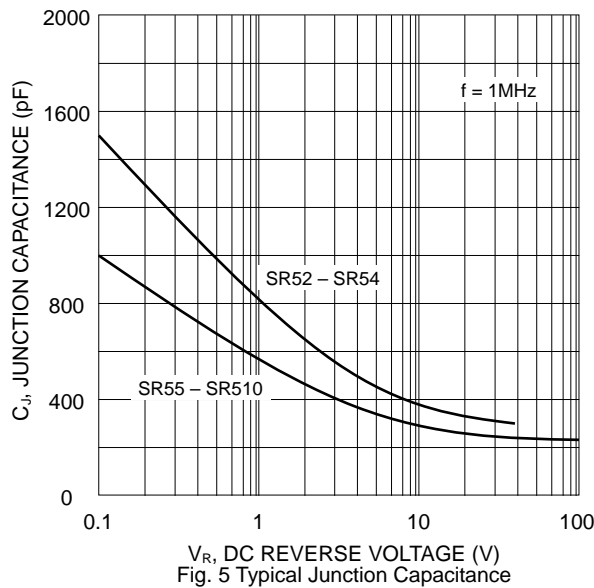
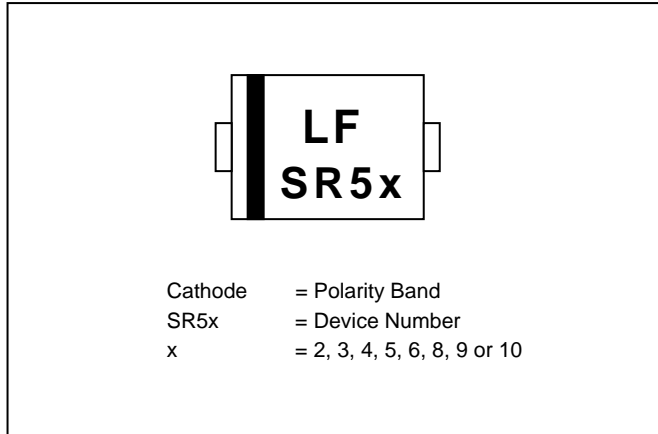
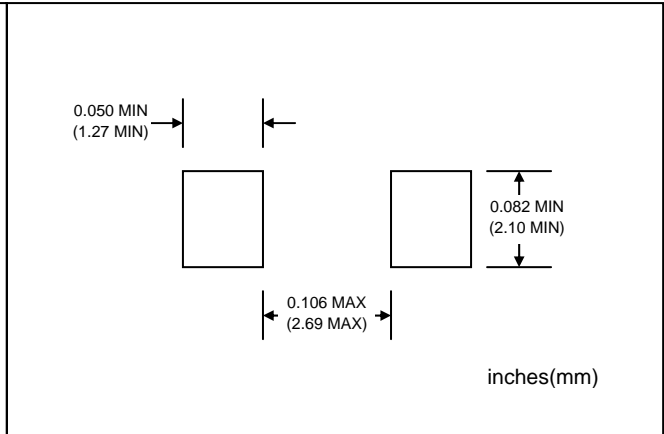


Fig. 5 Typical Junction Capacitance

MARKING INFORMATION

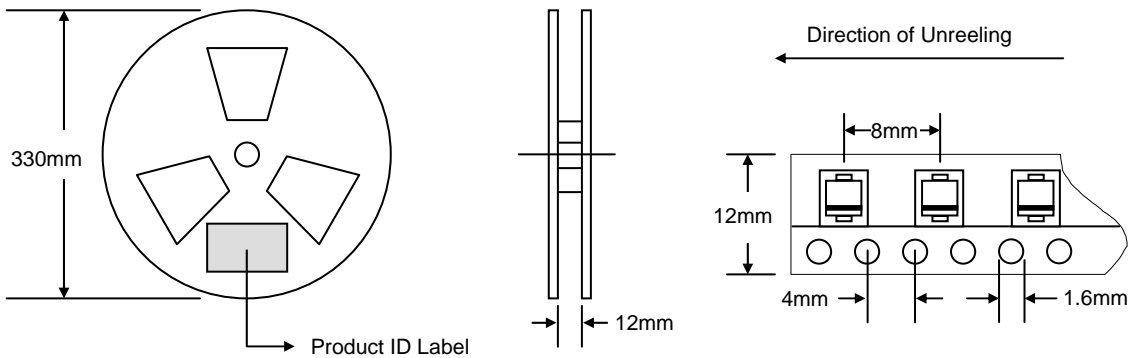


RECOMMENDED FOOTPRINT



PACKAGING INFORMATION

TAPE & REEL



Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
330	3,000	340 x 337 x 45	6,000	370 x 370 x 420	48,000	14.0