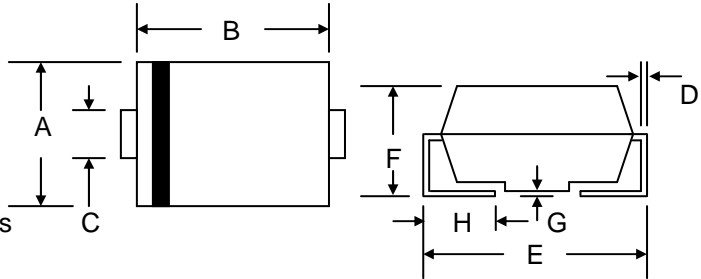


Features

- **Very Low Forward Voltage**
- Epitaxial Construction with Oxide Passivation
- Guard Ring for Transient and ESD Protection
- Surge Overload Rating to 50A Peak
- Low Power Loss
- Fast Switching
- Ideally Suited for Use in High Frequency SMPS, Inverters and As Free Wheeling Diodes



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: Device Code, See Page 3
- Weight: 0.093 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**

SMB/DO-214AA		
Dim	Min	Max
A	3.30	3.94
B	4.06	4.70
C	1.91	2.11
D	0.152	0.305
E	5.08	5.59
F	2.13	2.44
G	0.051	0.203
H	0.76	1.27
All Dimensions in mm		

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

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	MBRS230L	MBRS240L	MBRS260L	MBRS2100L	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	30	40	60	100	V
Working Peak Reverse Voltage	V_{RWM}					
DC Blocking Voltage	V_R					
Average Rectified Output Current (Note 1)	I_O	2.0				A
Peak Reverse Leakage Current @ DC Blocking Voltage	I_{RM}	250		150		μA
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	50				A
Thermal Resistance, Junction to Ambient (Note 1)	R_{JA}	115				$^\circ\text{C/W}$
Thermal Resistance, Junction to Lead (Note 1)	R_{JL}	20				
Operating Temperature Range	T_J	-55 to +125			-55 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150				$^\circ\text{C}$

Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Test Conditions		Symbol	MBRS230L, MBR240L		MBRS260L		MBRS2100L		Unit
				Typ.	Max.	Typ.	Max.	Typ.	Max.	
Forward Voltage	$I_F = 1.0\text{A}$	$T_A = 25^\circ\text{C}$	V_F	0.37	-	0.40	-	0.53	-	V
				$I_F = 2.0\text{A}$	0.41	0.45	0.47	0.52	0.66	
	$I_F = 1.0\text{A}$	$T_A = 125^\circ\text{C}$		0.25	-	0.30	-	0.47	-	
				$I_F = 2.0\text{A}$	0.30	-	0.41	-	0.56	

Note: 1. Mounted on FR-4 PC board with minimum recommended pad area.

MBRS230L – MBRS2100L

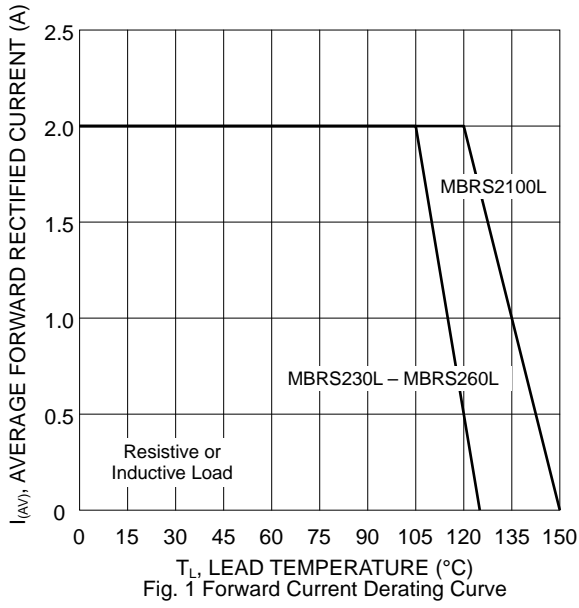


Fig. 1 Forward Current Derating Curve

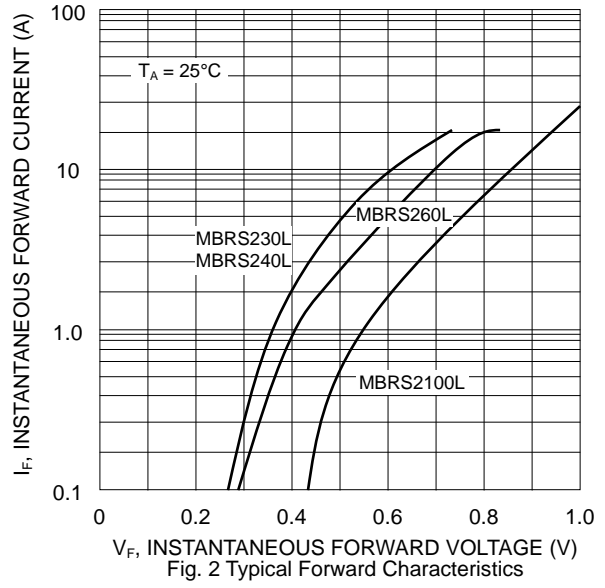


Fig. 2 Typical Forward Characteristics

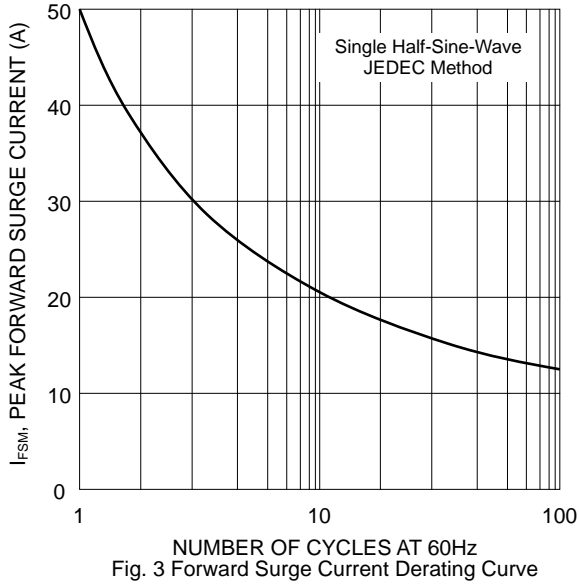


Fig. 3 Forward Surge Current Derating Curve

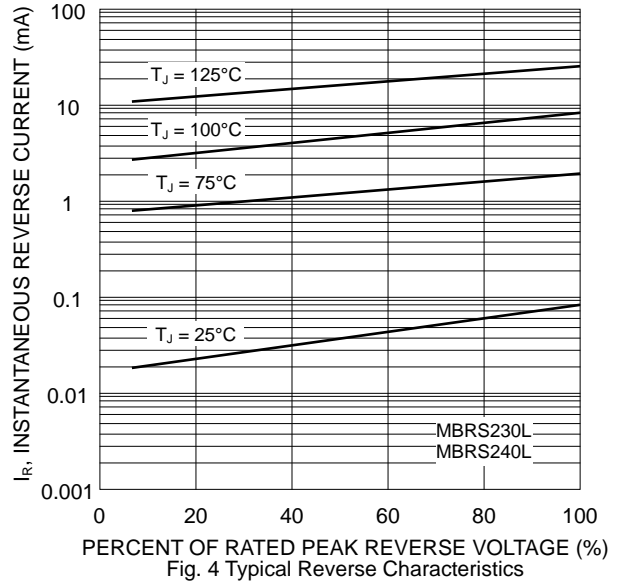


Fig. 4 Typical Reverse Characteristics

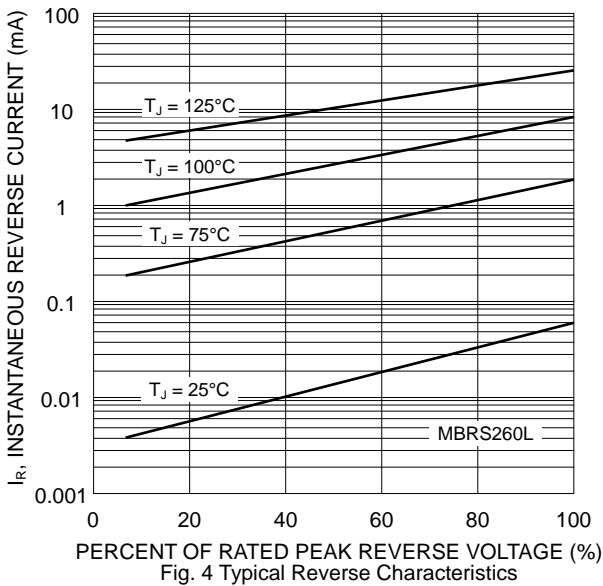


Fig. 4 Typical Reverse Characteristics

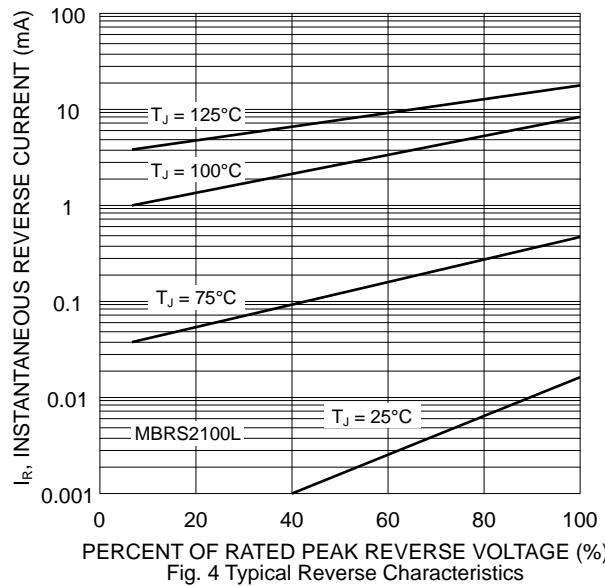
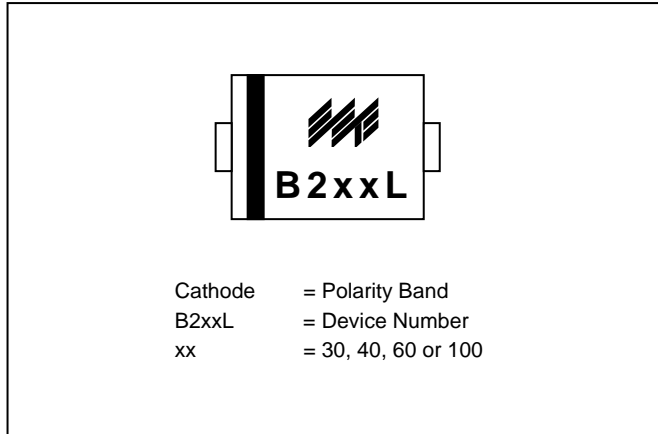
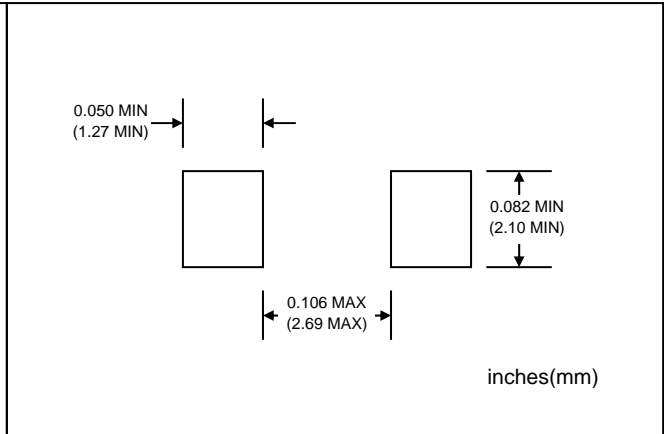


Fig. 4 Typical Reverse Characteristics

MARKING INFORMATION

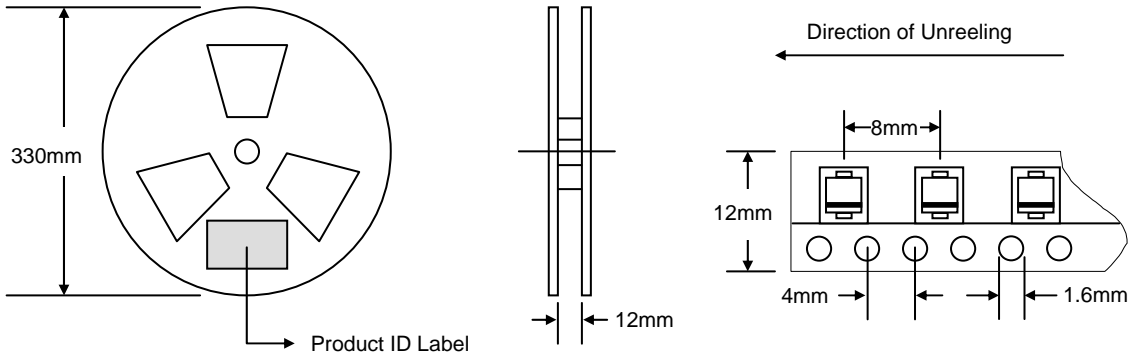


RECOMMENDED FOOTPRINT



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

Note: 1. Paper reel, white or gray color.
 2. Components are packed in accordance with EIA standard 481-1 and 481-2.

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
MBRS230L-T3	SMB	3000/Tape & Reel
MBRS240L-T3	SMB	3000/Tape & Reel
MBRS260L-T3	SMB	3000/Tape & Reel
MBRS2100L-T3	SMB	3000/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, MBRS230L-T3-LF.**

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