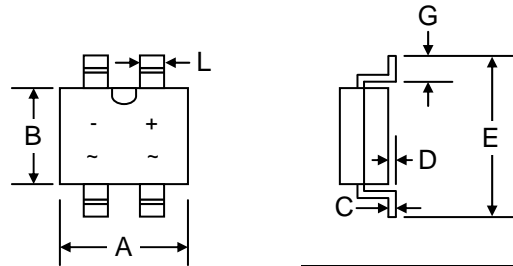


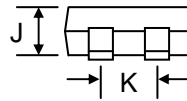
### Features

- **Ultra-Slim 1.6mm Max. Case Height**
- Glass Passivated Die Construction
- High Reliability
- Low Forward Voltage Drop
- High Surge Current Capability
- Designed for Surface Mount Application
- Plastic Material – UL Flammability 94V-0



### Mechanical Data

- Case: MBL-S, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Weight: 0.10 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**



MBL-S		
Dim	Min	Max
A	4.50	5.10
B	3.60	4.60
C	0.10	0.35
D	—	0.20
E	6.40	7.20
G	0.70	1.10
J	1.30	1.60
K	2.20	2.60
L	0.56	0.84
All Dimensions in mm		

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

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

Characteristic	Symbol	LB1S	LB2S	LB4S	LB6S	LB8S	LB10S	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$							
Working Peak Reverse Voltage	$V_{RWM}$	100	200	400	600	800	1000	V
DC Blocking Voltage	$V_R$							
RMS Reverse Voltage	$V_{R(RMS)}$	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @ $T_A = 40^\circ\text{C}$	$I_O$	0.8						A
Average Rectified Output Current (Note 2) @ $T_A = 40^\circ\text{C}$		0.5						
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	35						A
Forward Voltage per diode @ $I_F = 0.4\text{A}$ @ $I_F = 0.8\text{A}$	$V_{FM}$	1.0 1.1						V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$	$I_{RM}$	5.0 500						$\mu\text{A}$
Typical Junction Capacitance per diode (Note 3)	$C_J$	13						pF
Thermal Resistance Junction to Ambient (Note 2)	$R_{JA}$	134						$^\circ\text{C/W}$
Thermal Resistance Junction to Ambient (Note 1)	$R_{JA}$	76						
Thermal Resistance Junction to Lead (Note 2)	$R_{JL}$	20						
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150						$^\circ\text{C}$

Note: 1. Mounted on aluminum substrate PCB with 1.3 x 1.3mm pad areas.  
2. Mounted on glass epoxy PCB with 1.3 x 1.3mm pad areas.  
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

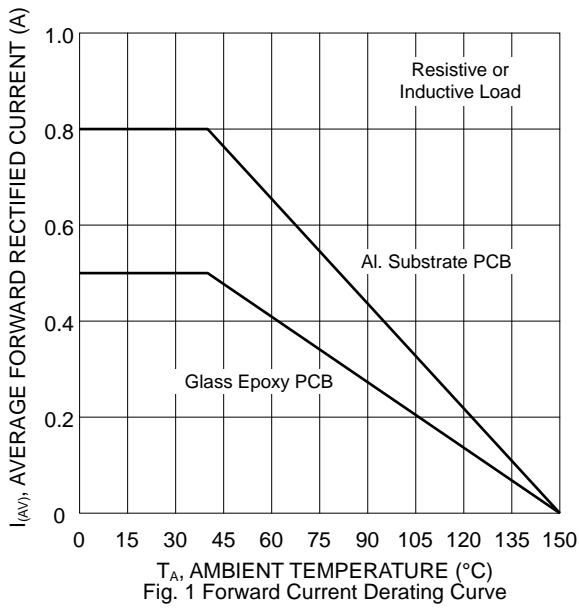


Fig. 1 Forward Current Derating Curve

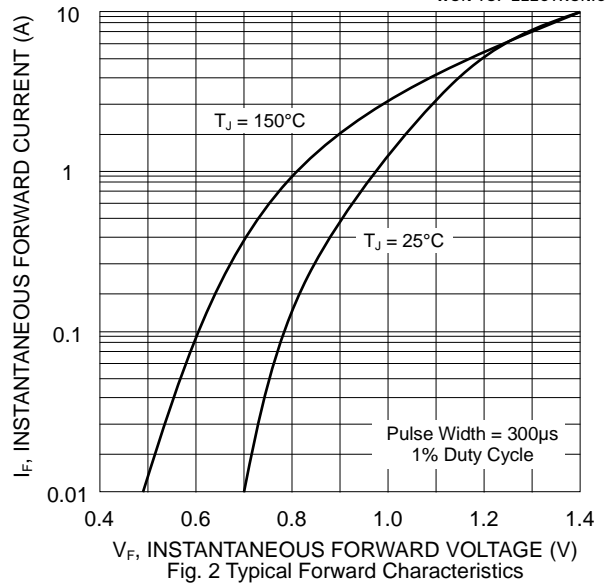


Fig. 2 Typical Forward Characteristics

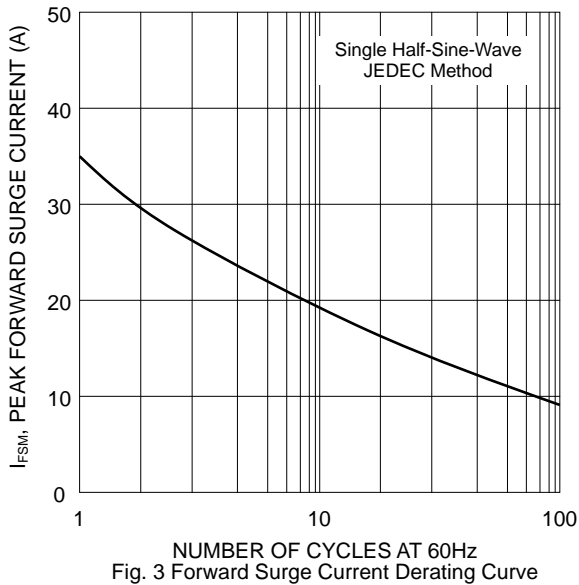


Fig. 3 Forward Surge Current Derating Curve

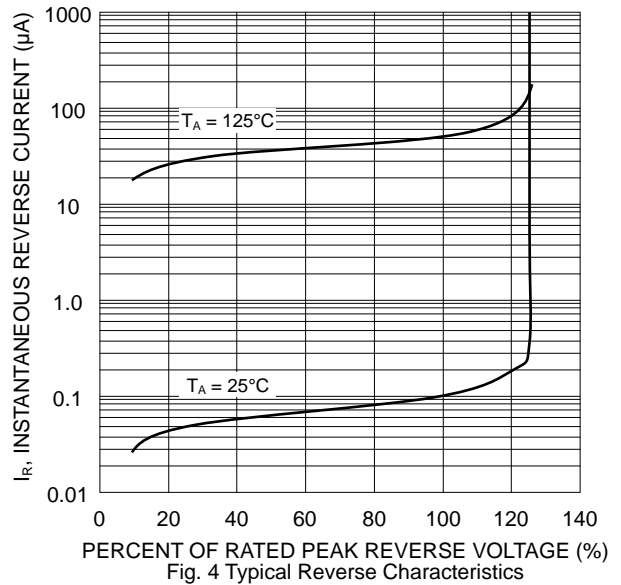


Fig. 4 Typical Reverse Characteristics

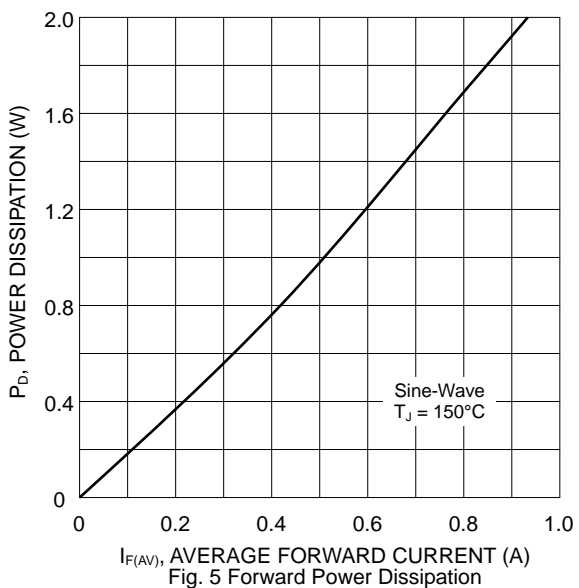


Fig. 5 Forward Power Dissipation

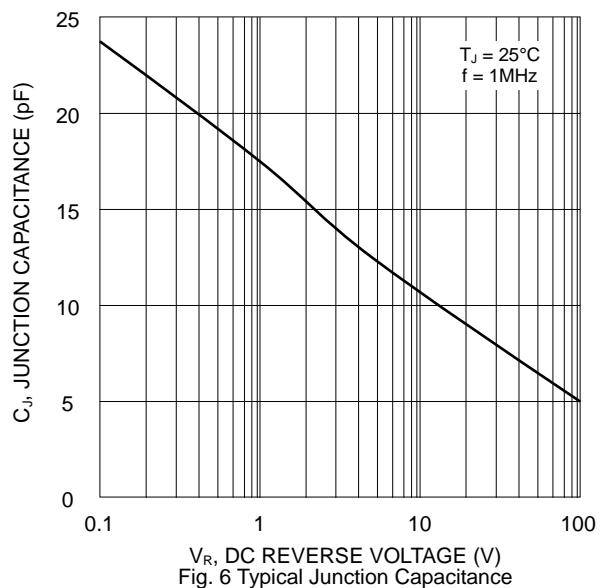
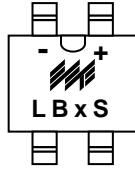


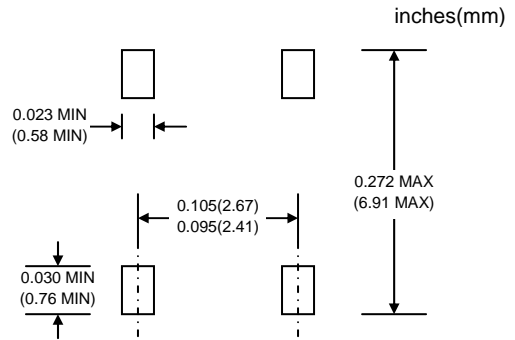
Fig. 6 Typical Junction Capacitance

## MARKING INFORMATION



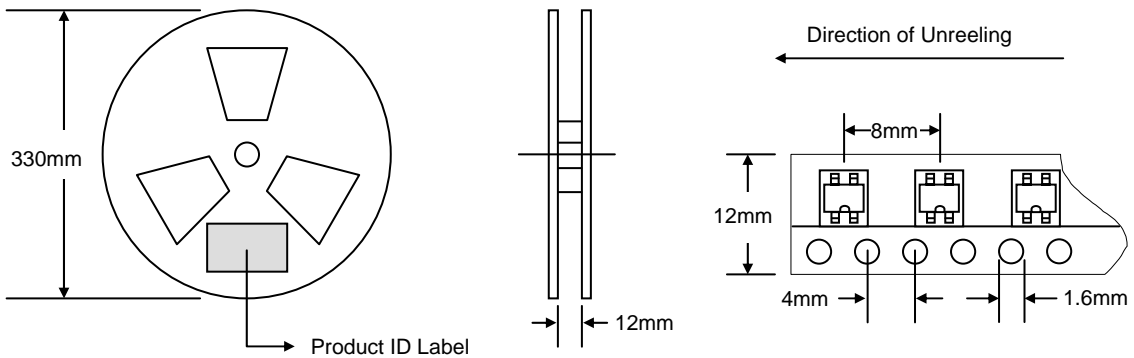
LBxS = Device Number  
 x = 1, 2, 4, 6, 8 or 10  
 Polarity = As Marked on Body

## 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	4,000	340 x 337 x 45	8,000	370 x 370 x 420	64,000	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
LB1S-T3	MBL-S	4000/Tape & Reel
LB2S-T3	MBL-S	4000/Tape & Reel
LB4S-T3	MBL-S	4000/Tape & Reel
LB6S-T3	MBL-S	4000/Tape & Reel
LB8S-T3	MBL-S	4000/Tape & Reel
LB10S-T3	MBL-S	4000/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, LB1S-T3-LF.**

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**WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT.** WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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