



# MR10L-30-LE

## GLASS PASSIVATED FAST BRIDGE RECTIFIERS

**Voltage**

1000 V

**Current**

3 A

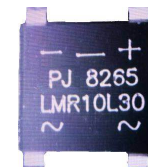
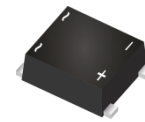
### Features

- Glass Passivated Chip Junction
- For surface mounted applications
- Thin profile package for space constrain utilization
- Fast reverse recovery time
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### Mechanical Data

- Case: MSBL Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.008 ounces, 0.236 grams

MSBL



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

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	1000	V
Maximum Rms Voltage	V <sub>RMS</sub>	700	V
Maximum Dc Blocking Voltage	V <sub>DC</sub>	1000	V
Maximum Average Forward Current Per Diode	I <sub>F(AV)</sub>	3	A
Peak Forward Surge Current : 8.3ms Single Half Sine-Wave Superimposed On Rated Load Per Diode	I <sub>FSM</sub>	90	A
Peak Forward Surge Current : 1ms Single Half Sine-Wave Superimposed On Rated Load Per Diode	I <sub>FSM</sub>	200	A
Typical Junction Capacitance Measured at 1 MHz And Applied V <sub>R</sub> = 4 V	C <sub>J</sub>	55	pF
Rating for fusing (t<8.3ms)	I <sup>2</sup> t	33.6	A <sup>2</sup> s
Typical Thermal Resistance Per Diode	R <sub>θJA</sub> <sup>(1)</sup> R <sub>θJC</sub> <sup>(2)</sup>	135 20	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°C



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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage Per Diode	$V_F$	$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.97	-	V
		$I_F = 3\text{ A}, T_J = 25^\circ\text{C}$	-	1.12	1.30	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.77	-	
		$I_F = 3\text{ A}, T_J = 125^\circ\text{C}$	-	0.94	-	
Reverse Current Per Diode	$I_R$	$V_R = 1000\text{ V}, T_J = 25^\circ\text{C}$	-	-	5	uA
		$V_R = 1000\text{ V}, T_J = 125^\circ\text{C}$	-	7	500	
Reverse Recovery Time	$T_{RR}$	$I_F = 0.5\text{ A}, I_R = 1\text{ A},$ $I_{RR} = 0.25\text{ A}, T_J = 25^\circ\text{C}$	-	-	250	ns

NOTES:

1. Mounted on a FR4 PCB, single-sided copper, mini pad.
2. Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area.



# MR10L-30-LE

## TYPICAL CHARACTERISTIC CURVES

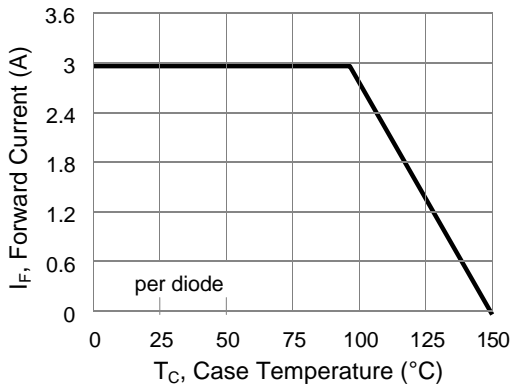


Fig.1 Forward Current Derating Curve

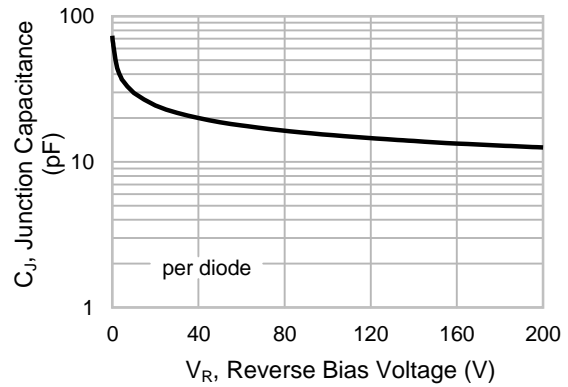


Fig.2 Typical Junction Capacitance

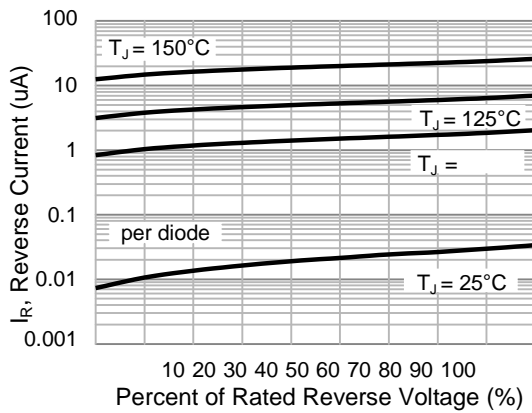


Fig.3 Typical Reverse Characteristics

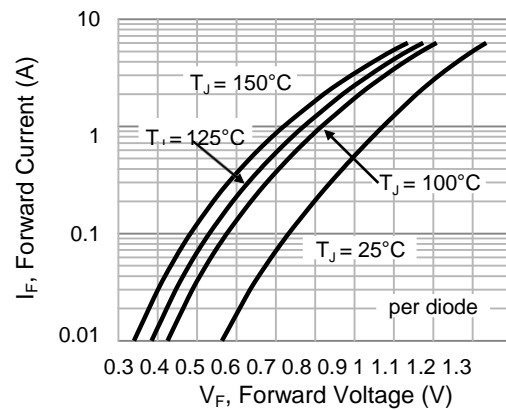


Fig.4 Typical Forward Characteristics

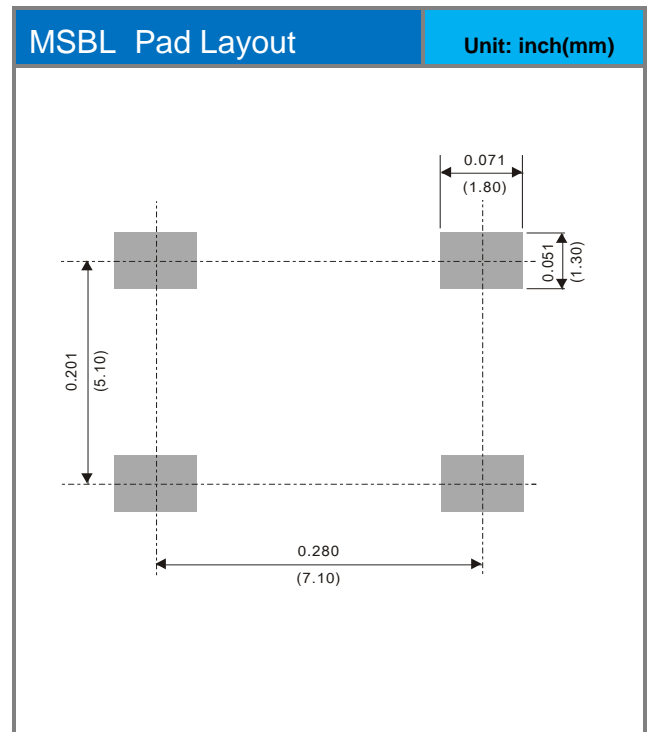
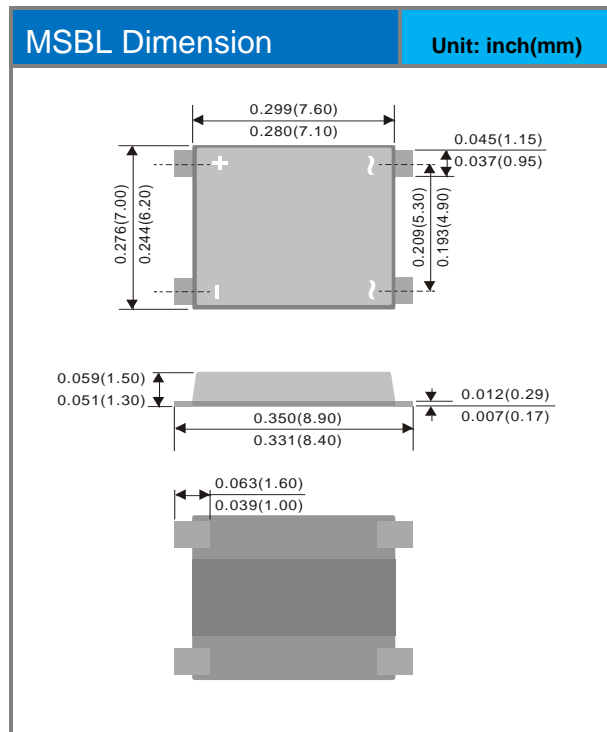


# MR10L-30-LE

## Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
MR10L-30-LE_R2_00001	MSBL	3K / 13" Reel	LMR10L30	Halogen free

## Packaging Information & Mounting Pad Layout





## MR10L-30-LE

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