



# THE DATASHEET OF LMB12S-TP



### Features

- Halogen Free. "Green" Device (Note 1)
- High Current Capability
- Low Profile Package
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note 2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

### Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value					Unit
		LMB12S	LMB14S	LMB16S	LMB18S	LMB110S	
Peak Repetitive Reverse Voltage	$V_{RRM}$	20	40	60	80	100	V
Working Peak Reverse Voltage	$V_{RWM}$						
DC Blocking Voltage	$V_R$						
RMS Reverse Voltage	$V_{RMS}$	14	28	42	56	70	V
Average Rectified Forward Current	$I_{F(AV)}$	1					A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	$I_{FSM}$	30					A
Current Squared Time @ $1ms \leq t \leq 8.3ms$	$I^2t$	3.735					A <sup>2</sup> s

### Marking code

Part Number	Marking Code
LMB12S	LB12S
LMB14S	LB14S
LMB16S	LB16S
LMB18S	LB18S
LMB110S	LB110S

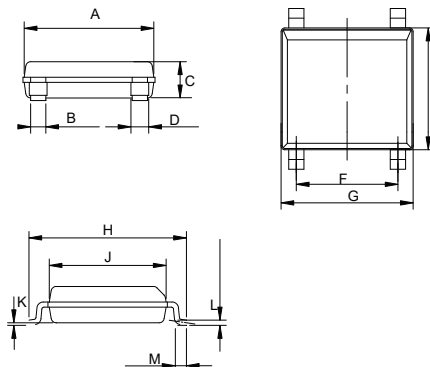
### Internal Structure

Pin	Description	Simplified Outline	Graphic Symbol
1	Anode		
4	Cathode		
2&3	AC		

- Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.  
2. High temperature solder exemption applied, see EU directive annex 7a.

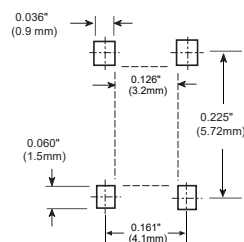
**1 Amp**  
**General Purpose AC Bridge**  
**20 to 100 Volts**

### LMBS-1



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.197	0.205	4.90	5.20	
B	0.024		0.60		
C	---	0.059	---	1.50	
D	0.024	0.032	0.60	0.80	
E	---	0.189	---	4.80	
F	0.150	0.165	3.80	4.20	
G	---	0.209	---	5.30	
H	0.236	0.252	6.00	6.60	
J	0.177	0.185	4.30	4.70	
K	0.0009	0.004	0.02	0.21	
L	0.006	0.012	0.15	0.30	
M	0.017	0.031	0.25	0.80	

### Suggested Solder Pad Layout



## Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$T_J$	Operating Junction Temperature Range		-55		150	°C
$T_{stg}$	Storage Temperature Range		-55		150	°C
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead			25		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient			62.5		°C/W

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage LMB12S~LMB14S LMB16S LMB18S~LMB110S	$V_F$	$I_F=0.5A; T_J=25^\circ C$			0.55 0.65 0.85	V
Reverse Current LMB12S~LMB16S LMB18S~LMB110S	$I_R$	at Rated $V_R; T_J=25^\circ C$ at Rated $V_R; T_J=125^\circ C$ at Rated $V_R; T_J=25^\circ C$ at Rated $V_R; T_J=125^\circ C$			0.1 20 0.01 5	mA
Junction Capacitance LMB12S~LMB14S LMB16S LMB18S~LMB110S	$C_J$	$V_R=4V; f=1MHz; T_J=25^\circ C$		50 40 30		pF

**Curve Characteristics**

Fig. 1 - Forward Current Derating Curve

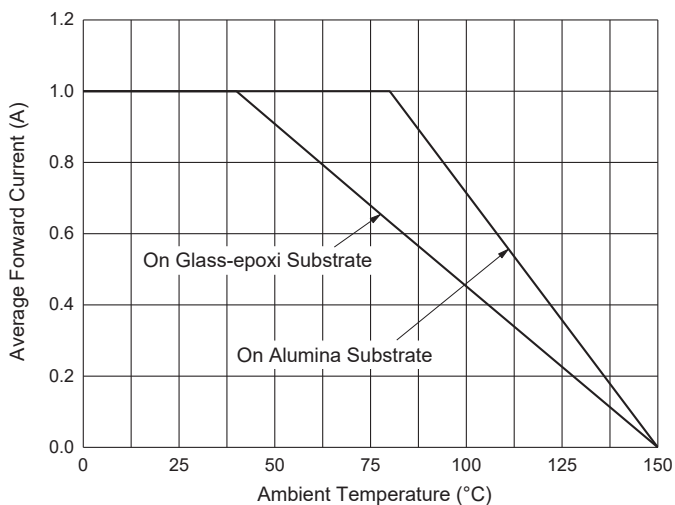


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

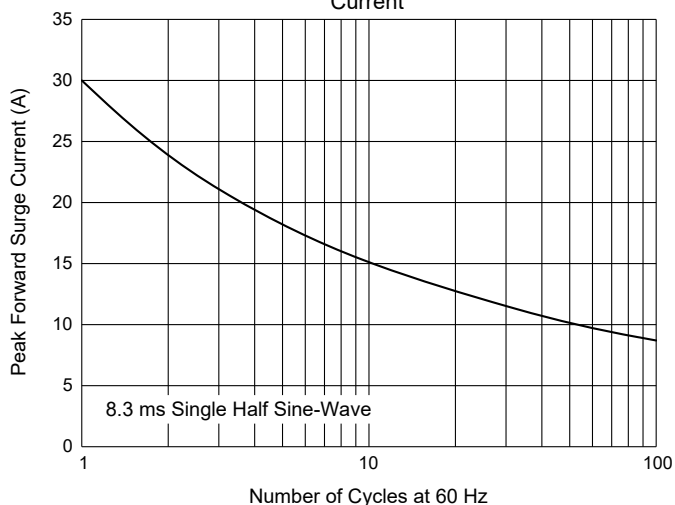


Fig. 3 - Typical Forward Characteristics

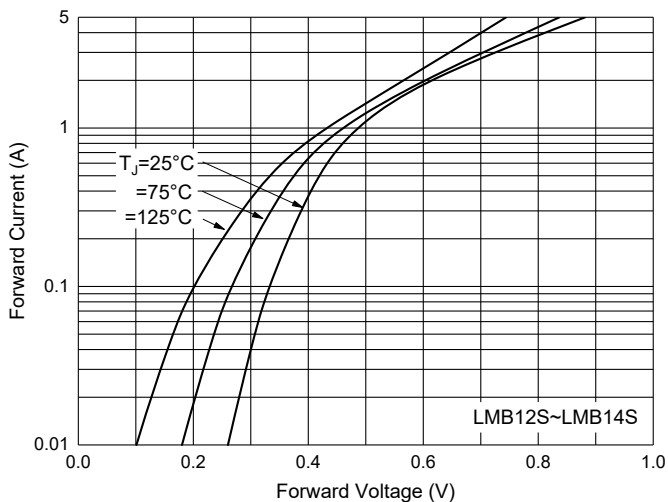


Fig. 4 - Typical Reverse Leakage Characteristics

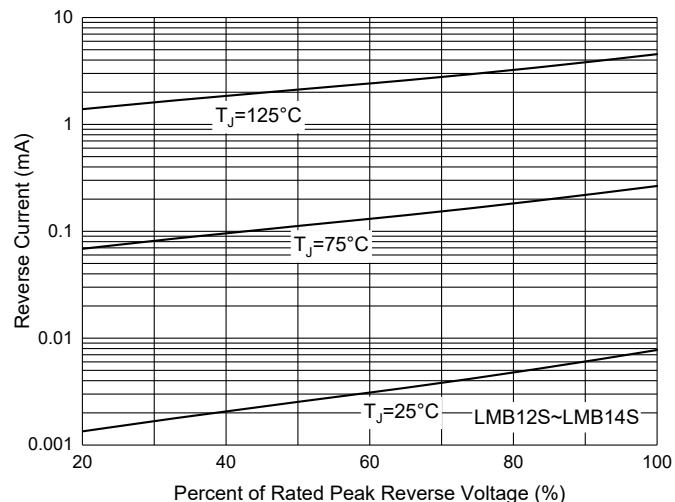


Fig. 5 - Typical Forward Characteristics

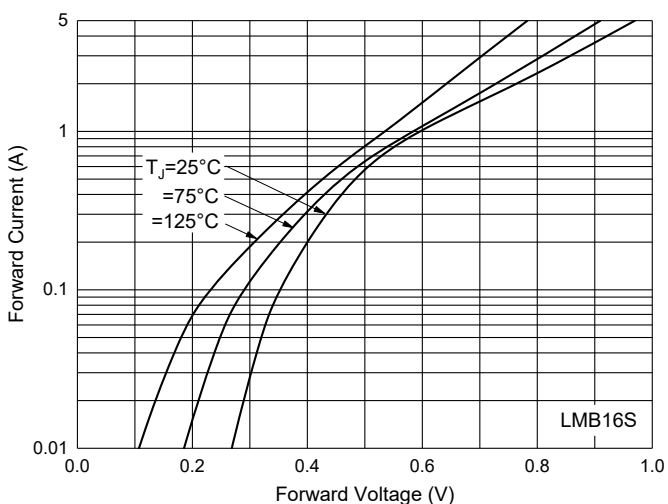
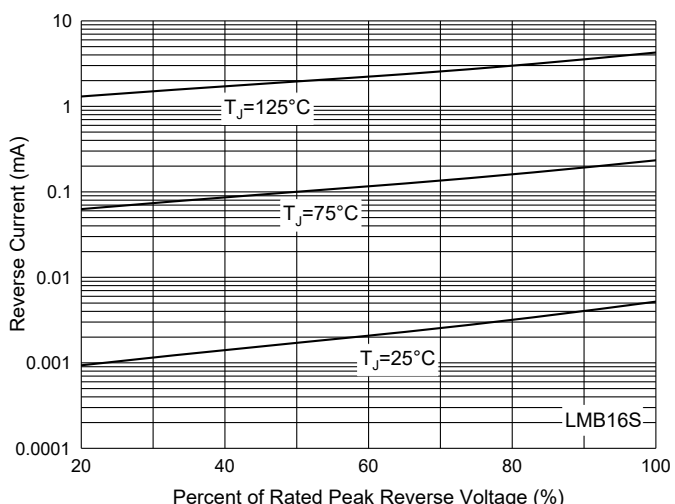


Fig. 6 - Typical Reverse Leakage Characteristics



## Curve Characteristics

Fig. 7 - Typical Forward Characteristics

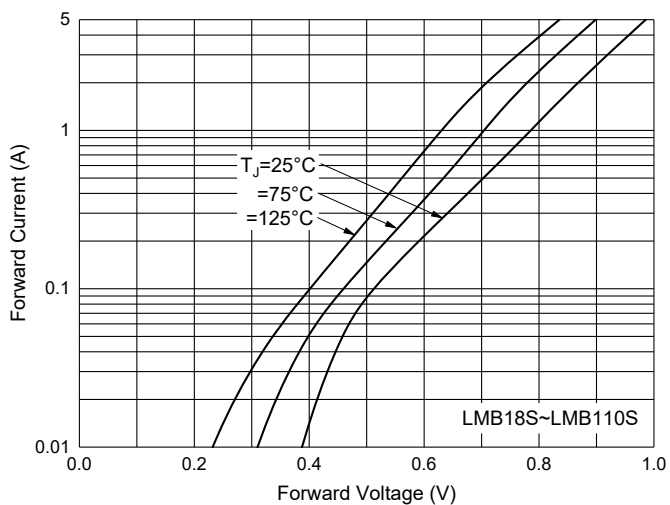


Fig. 8 - Typical Reverse Leakage Characteristics

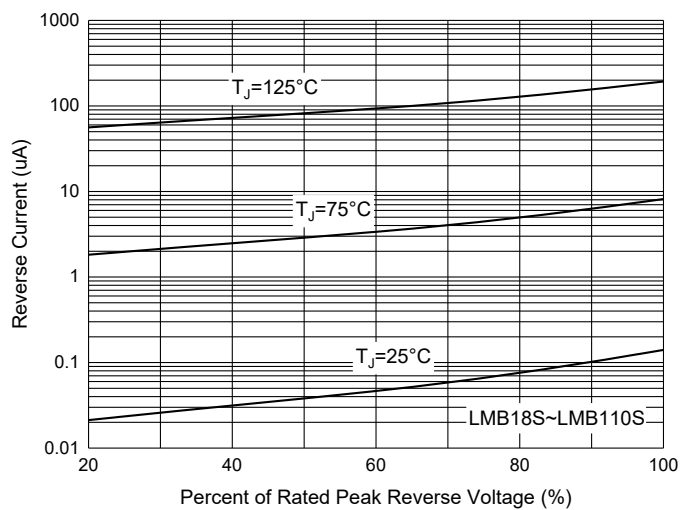
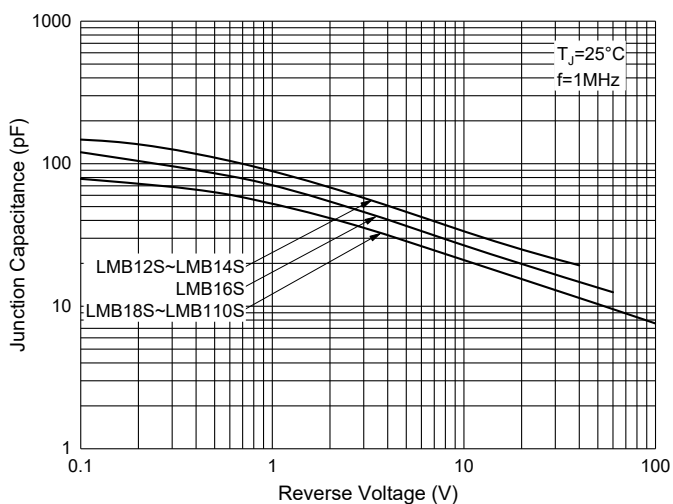


Fig. 9 - Typical Capacitance Characteristics



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:5Kpcs/Reel

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