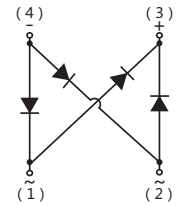


Surface Mount Glass Passivated Bridge Rectifier

Features

- Glass Passivated Chip Junction
- Reverse Voltage - 100 to 1000 V
- Forward Current - 1A
- High Surge Current Capability
- Designed for Surface Mount Application
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Data

- Case: MBL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 75mg/0.0026oz

Ordering Information

Part Number	Shipping	Reel
LTM1L-10 THRU LTM10L-10-TR5	5000PCS Tape&Reel	13 inches

Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbol	LTM1L-10	LTM2L-10	LTM4L-10	LTM6L-10	LTM8L-10	LTM10L-10	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @ Fig.1	$I_{F(AV)}$	1						A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load(JEDEC Method)	I_{FSM}	35						A
Peak Forward Surge Current 1.0 ms Single Half Sine Wave Superimposed on Rated Load(JEDEC Method)	I_{FSM}	70						A
I^2t Rating for fusing (3ms≤t≤8.3ms)	I^2t	5						A ² S
Max Instantaneous Forward Voltage at 1.0A	V_F	1						V
Maximum DC Reverse Current @ $T_A=25\text{ }^\circ\text{C}$ at Rated DC Reverse Voltage @ $T_A=125\text{ }^\circ\text{C}$	I_R	5 100						μA
Typical Junction Capacitance (Note1)	C_j	10						pF
Typical Thermal Resistance (Note2)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	45 15 25						$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150						$^\circ\text{C}$

Note:(1) Measured at 1MHz and applied reverse voltage of 4V D.C.

(2) Mounted on glass epoxy PC board with 4×1.5"×1.5" (3.81cm×3.81cm) copper pad.

Characteristics Curves

Fig.1 Average Rectified Output Current Derating Curve

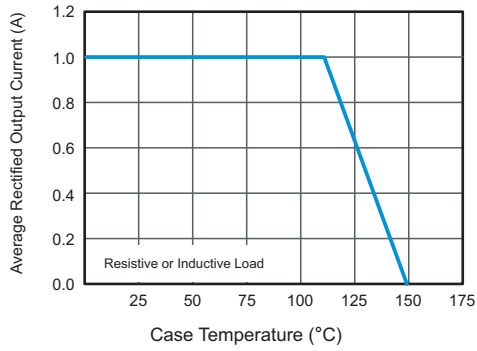


Fig.2 Typical Reverse Characteristics

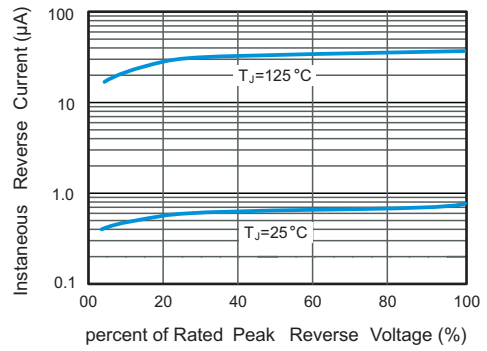


Fig.3 Typical Instantaneous Forward Characteristics

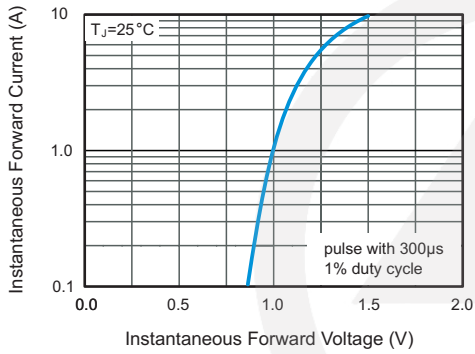


Fig.4 Typical Junction Capacitance

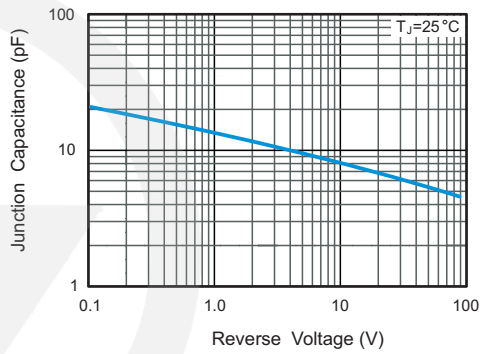
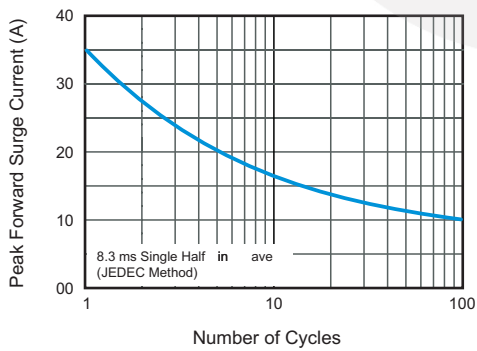
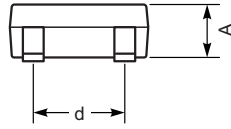
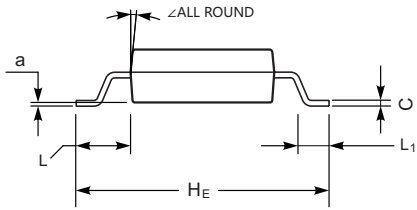


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

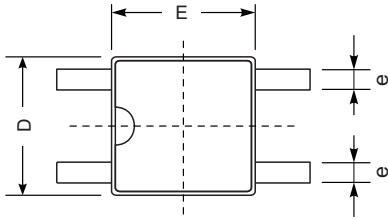


MBL Package Outline

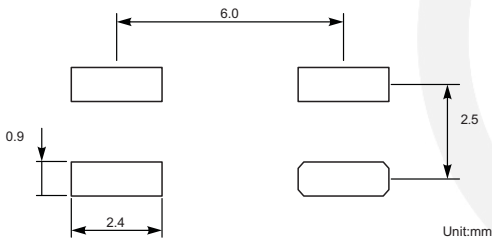


Unit: mm

SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	1.20	1.60
C	0.12	0.18
D	3.45	3.95
E	3.60	4.10
HE	6.40	7.00
d	2.30	2.70
e	0.50	0.80
L	1.30	1.70
L1	0.50	1.10
a	-	0.20
θ	7°	



MBL Suggested Pad Layout

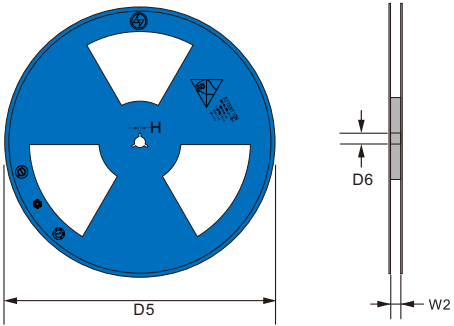


Marking

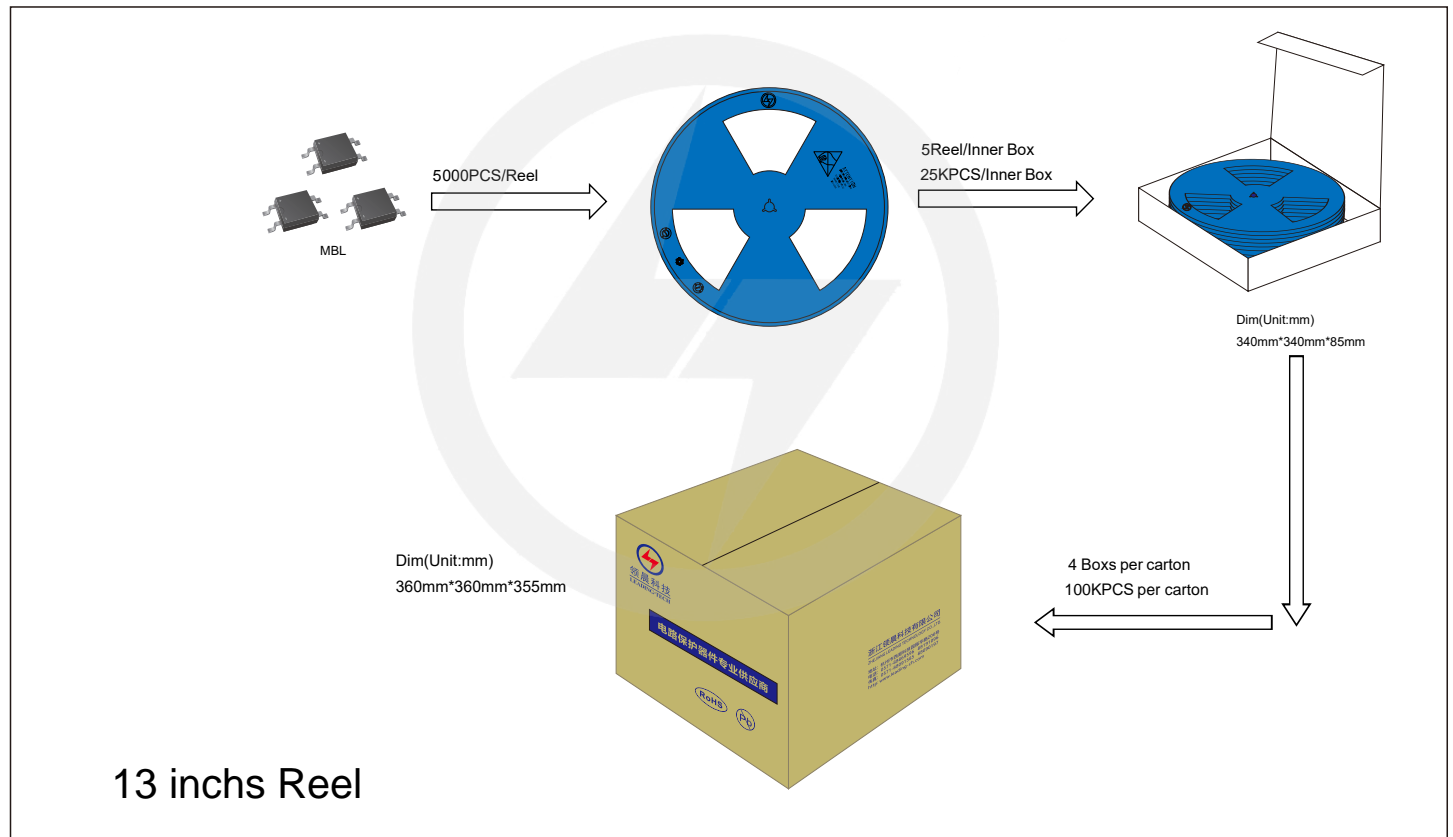
Type number	Marking code
LTM1L-10	10L1
LTM2L-10	10L2
LTM4L-10	10L4
LTM6L-10	10L6
LTM8L-10	10L8
LTM10L-10	10L10

Reel Dimensions

Unit : mm

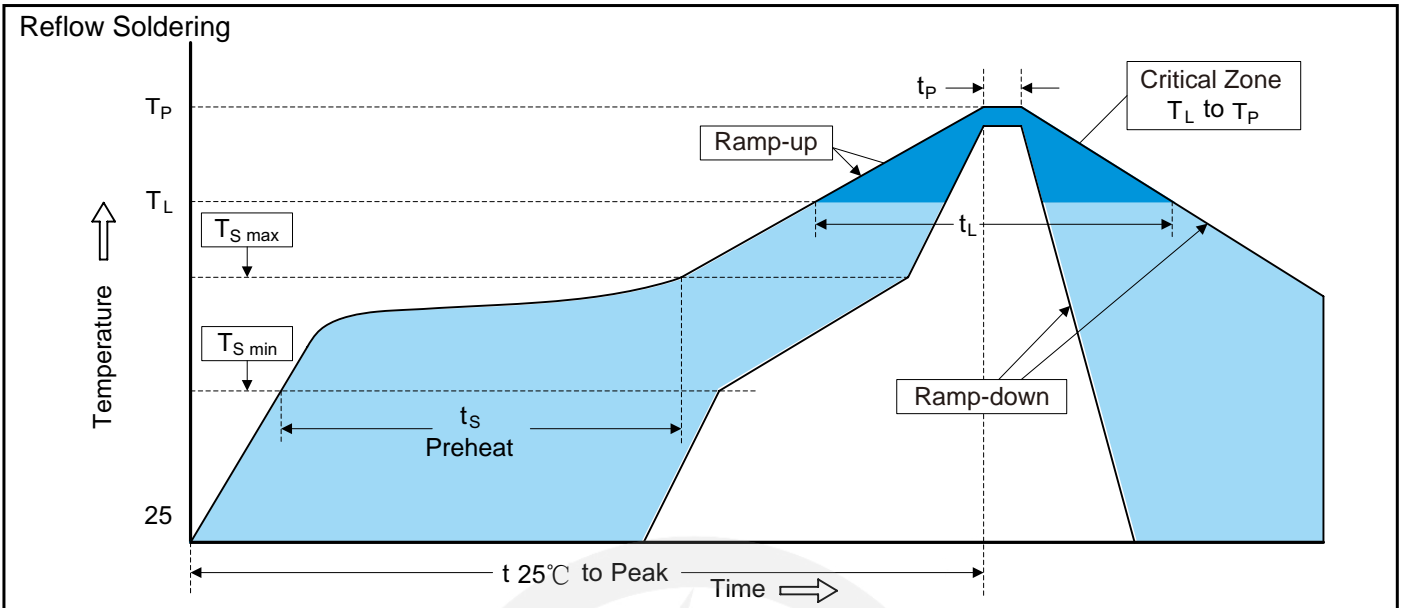
<p>13" Reel</p> 	D5	$\Phi 330.0 \pm 2.0$
	D6	$\Phi 13.5 \pm 0.5$
	H	2.5 ± 1.0
	W2	12 ± 2.0
	Quantity: 5000PCS	

Packaging





Recommended Soldering Conditions



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T _L to T _P)	3°C/second max.
Preheat	
-Temperature Min (T _{S min})	150°C
-Temperature Max (T _{S max})	200°C
-Time (min to max) (t _s)	60-180 seconds
T _{S max} to T _L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T _L)	217°C
-Time (t _L)	60-150 seconds
Peak Temperature (T _P)	260°C
Time within 5°C of actual Peak Temperature (t _p)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

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Version Update Information

Series NO.	Enactment/Revision Date	Effective Date	Version	Revision content	Revision Reason	Revision Person	Note
01	2024.3.19	2024.3.19	3.0	New File	/	Ding	
02	2025.05.29	2025.05.29	3.1	Update packaging information	/	Ding	