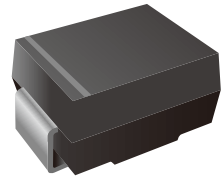


## Surface Mount Ultrafast Recovery Rectifier

### Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- High efficiency
- Lead free in comply with EU RoHS 2011/65/EU directives



### Mechanical Data

- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end

### Ordering Information

Part Number	Shipping	Reel
LTU2AB THRU LTU2MB-TR3	3000PCS Tape&Reel	13 inches

### Maximum Ratings and Electrical Characteristics ( $T_a=25$ unless otherwise noted )

Parameter	Symbol	LTU2AB	LTU2BB	LTU2DB	LTU2GB	LTU2JB	LTU2KB	LTU2MB	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_c = 125$ °C	$I_{F(AV)}$	2							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	50							A
Maximum Instantaneous Forward Voltage at 2 A	$V_F$	1.0		1.3	1.65			V	
Maximum DC Reverse Current $T_a = 25$ °C at Rated DC Blocking Voltage $T_a = 125$ °C	$I_R$	5 100							$\mu A$
Maximum Reverse Recovery Time <sup>(1)</sup>	$t_{rr}$	50				75			ns
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$	60							°C/W
Typical Junction Capacitance at $V_R=4V$ , $f=1MHz$	$C_j$	20							pF
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150							°C

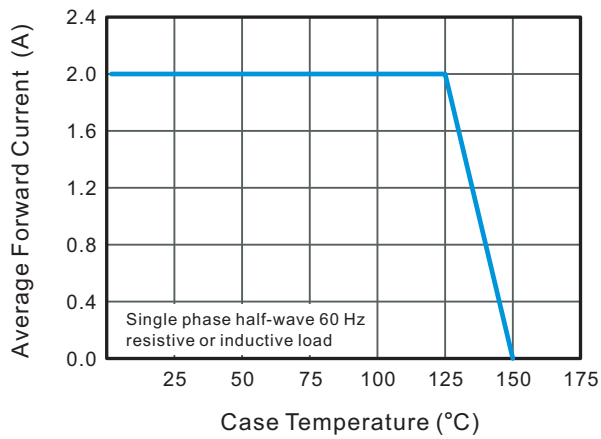
( 1 ) Measured with  $I_f = 0.5 A$ ,  $I_r = 1 A$ ,  $I_{rr} = 0.25 A$ .

( 2 ) P.C.B. mounted with 2.0" X 2.0" (5 cm X 5 cm) copper pad areas.

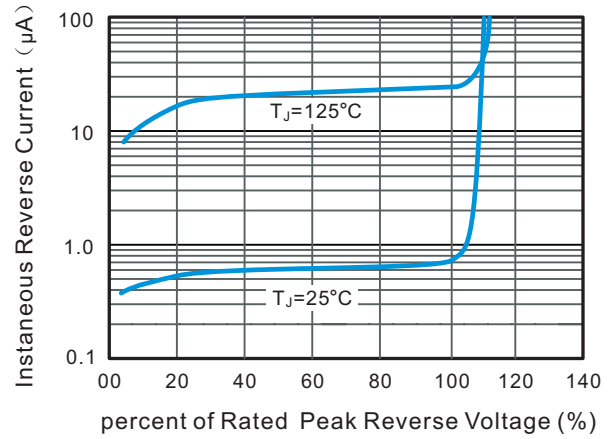


## Characteristic Curves

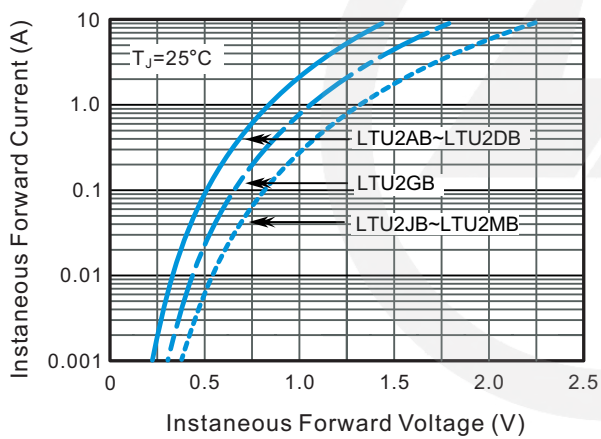
**Fig1. Forward Current Derating Curve**



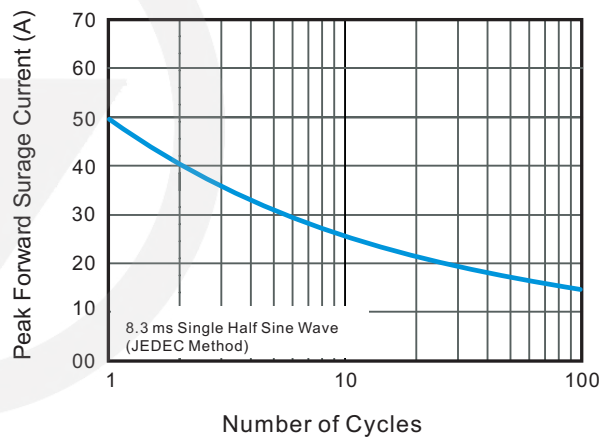
**Fig2. Typical Reverse Characteristics**



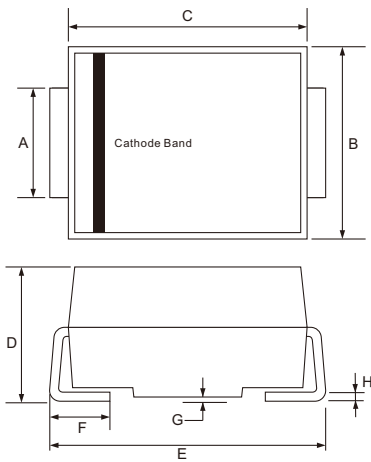
**Fig3. Typical Forward Characteristics**



**Fig4. Maximum Non-Repetitive Peak Forward Surge Current**



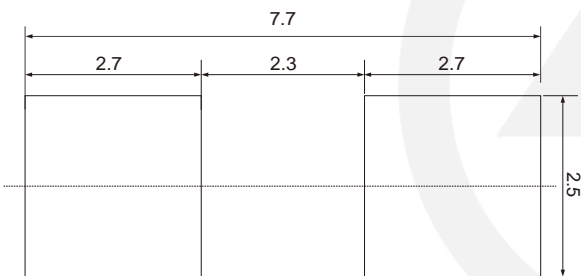
## SMB Package Outline



Unit: mm

SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	1.90	2.20
B	3.30	3.94
C	4.05	4.75
D	2.13	2.65
E	5.08	5.59
F	0.76	1.52
G	0.203 TYP.	
H	0.15	0.31

## SMB Suggested Pad Layout



**Note:**

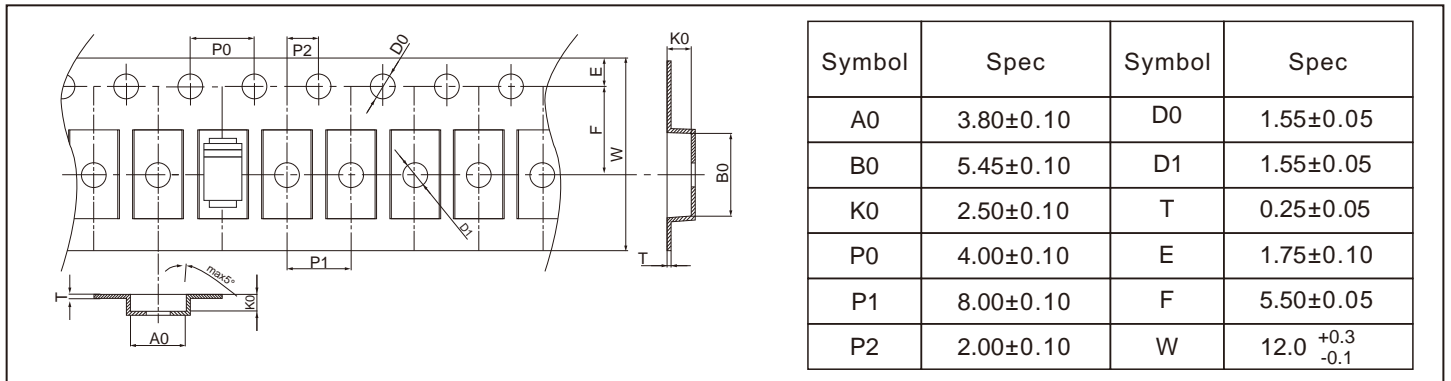
1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$
3. The pad layout is for reference purpose only.

## Marking

Type number	Marking code
LTU2AB	US2A
LTU2BB	US2B
LTU2DB	US2D
LTU2GB	US2G
LTU2JB	US2J
LTU2KB	US2K
LTU2MB	US2M

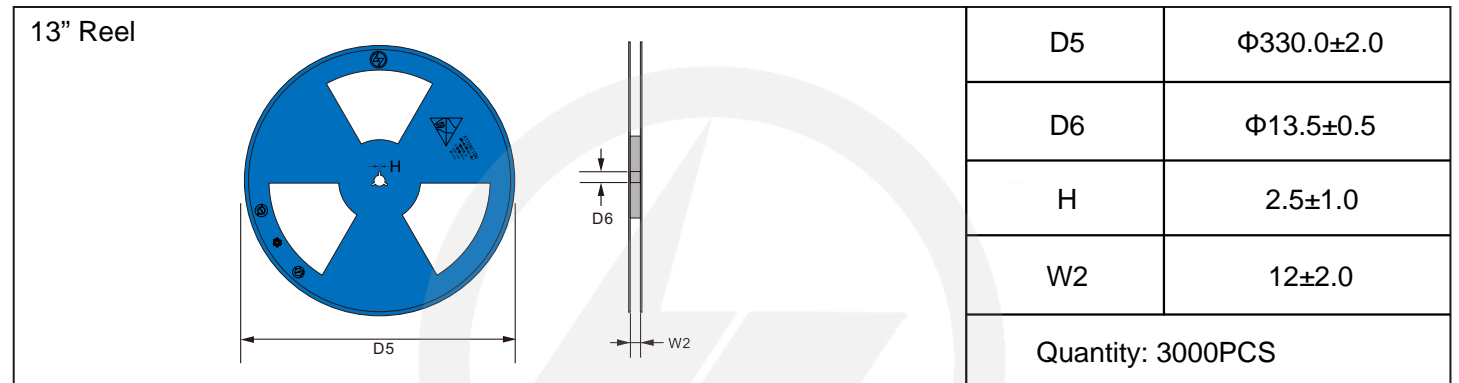
## Carrier Tape Dimensions

Unit : mm

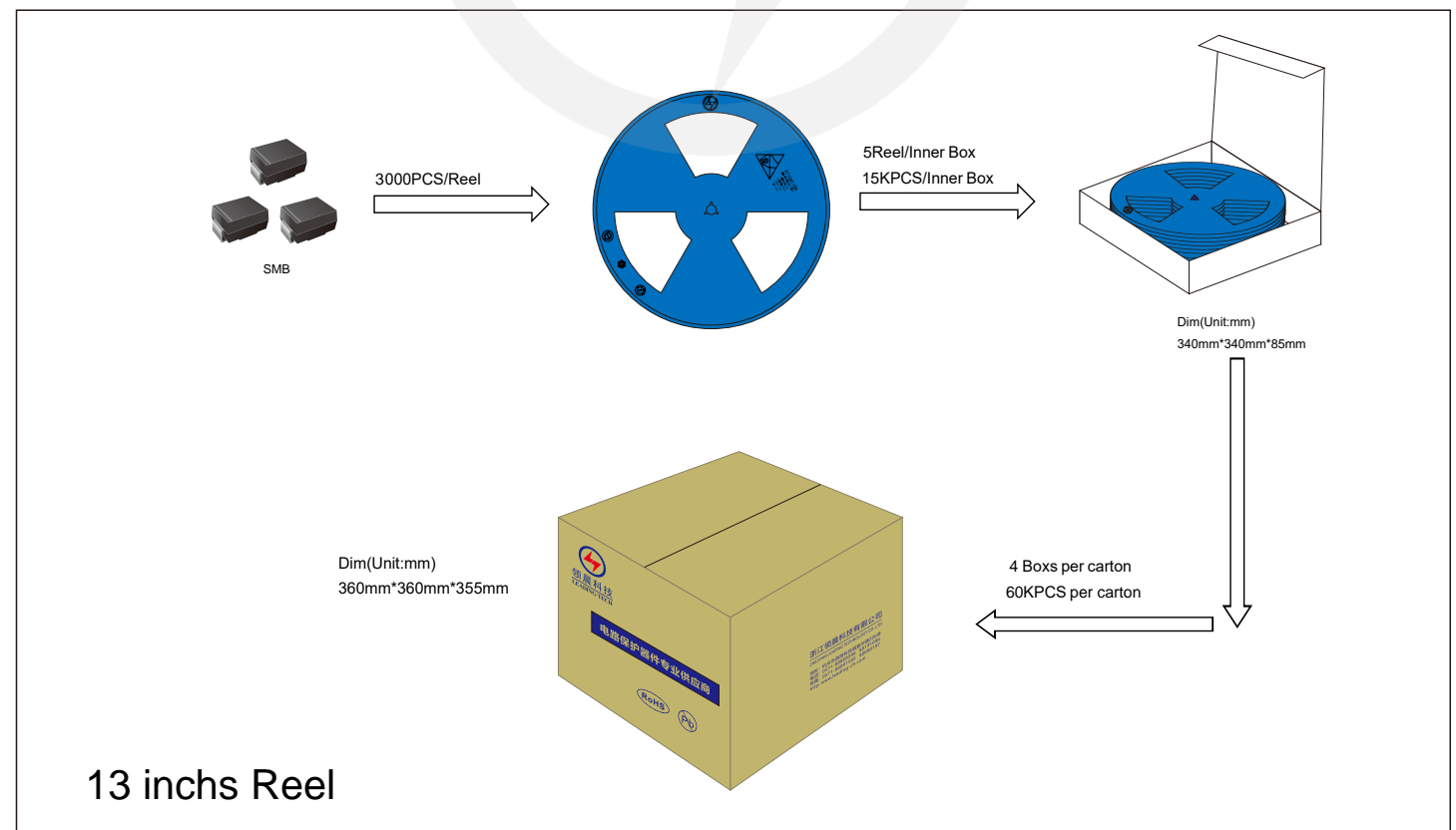


## Reel Dimensions

Unit : mm



## 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	2024.5.18	2024.5.18	3.0	New File	/	Ding	
02	2025.06.17	2025.06.17	3.1	Update packaging information	/	Ding	