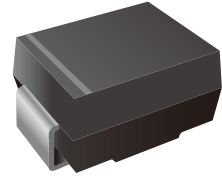


Surface Mount Schottky Barrier Rectifier

Features

- Ultra fast switching for high efficiency
- Glass passivated chip junction
- For surface mounted applications
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Data

- Case: SMB
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Mounting Position: Any
- Polarity: Color band denotes cathode end

Ordering Information

Part Number	Shipping	Reel
LTU3AB THRU LTU3MB-TR3	3000PCS Tape&Reel	13 inches

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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

Parameter	Symbols	LTU3AB	LTU3BB	LTU3DB	LTU3GB	LTU3JB	LTU3KB	LTU3MB	Units
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 $T_L=55^\circ\text{C}$	$I_{(AV)}$	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100.0							A
Maximum instantaneous forward voltage at 3.0A	V_F	1.0		1.3		1.7		V	
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	I_R	5.0 100.0							μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	50				75			ns
Typical junction capacitance (NOTE 2)	C_J	50				30			pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	45.0							$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

Note: 1.Reverse recovery condition $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$

2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

3.P.C.B. mounted with 0.2"x0.2"(5.0mmx5.0mm) copper pad areas

Characteristics Curves

FIG. 1 FORWARD CURRENT DERATING CURVE

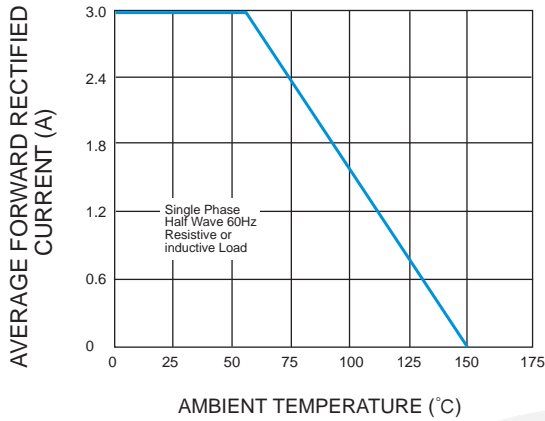


FIG. 2 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

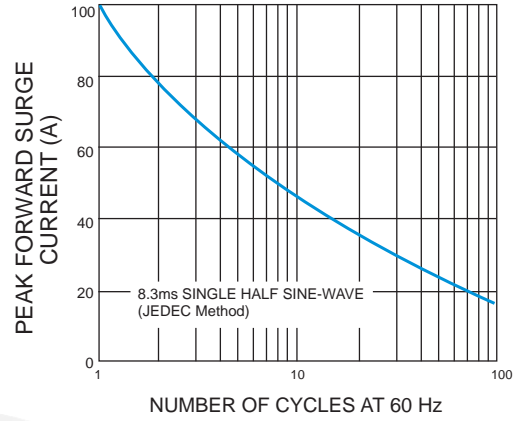


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

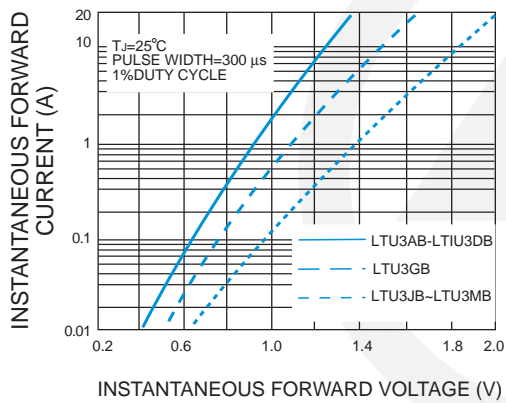


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

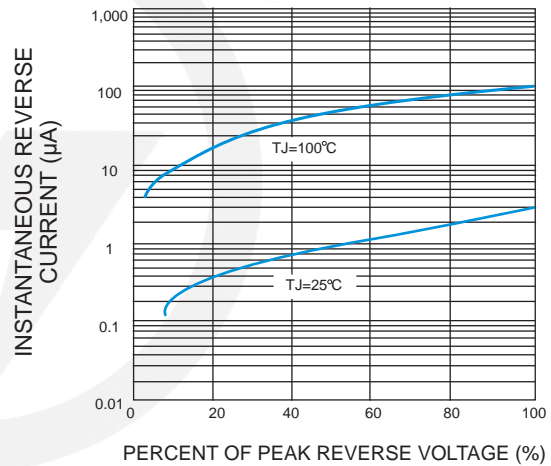


FIG. 5 TYPICAL JUNCTION CAPACITANCE

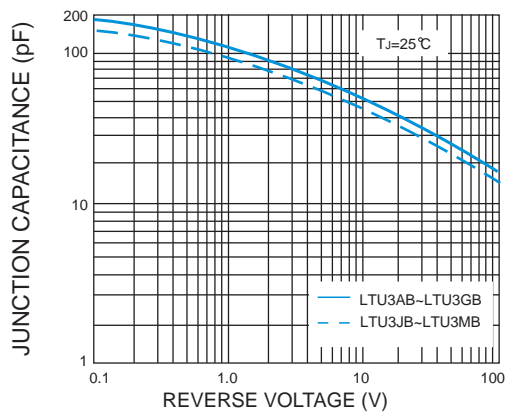
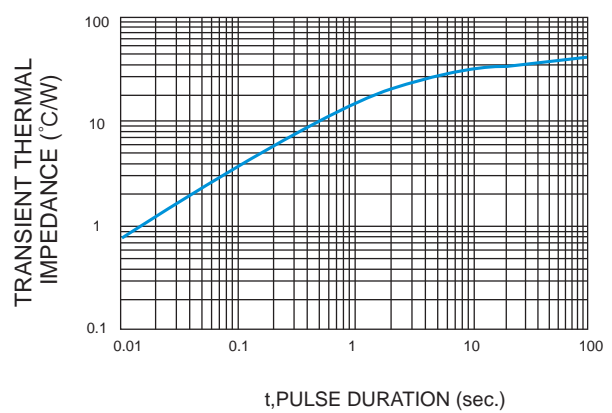
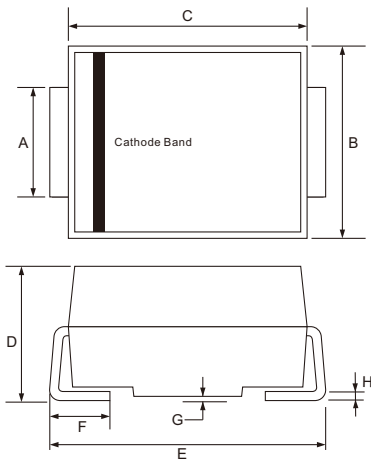


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE



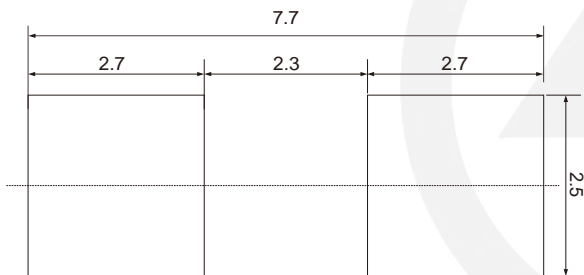
SMB Package Outline



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:

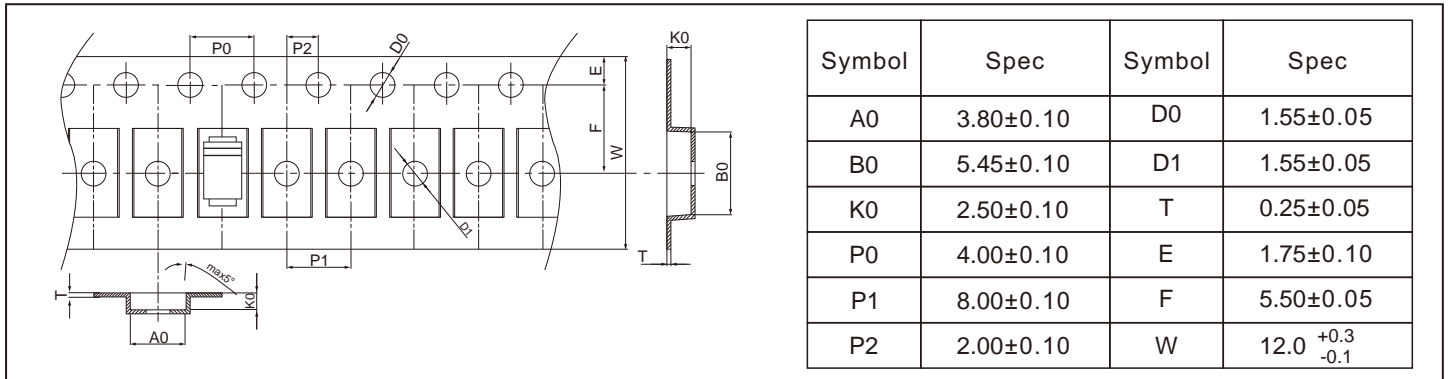
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purpose only.

Marking

Type number	Marking code
LTU3AB	U3A or US3A
LTU3BB	U3B or US3B
LTU3DB	U3D or US3D
LTU3GB	U3G or US3G
LTU3JB	U3J or US3J
LTU3KB	U3K or US3K
LTU3MB	U3M or US3M

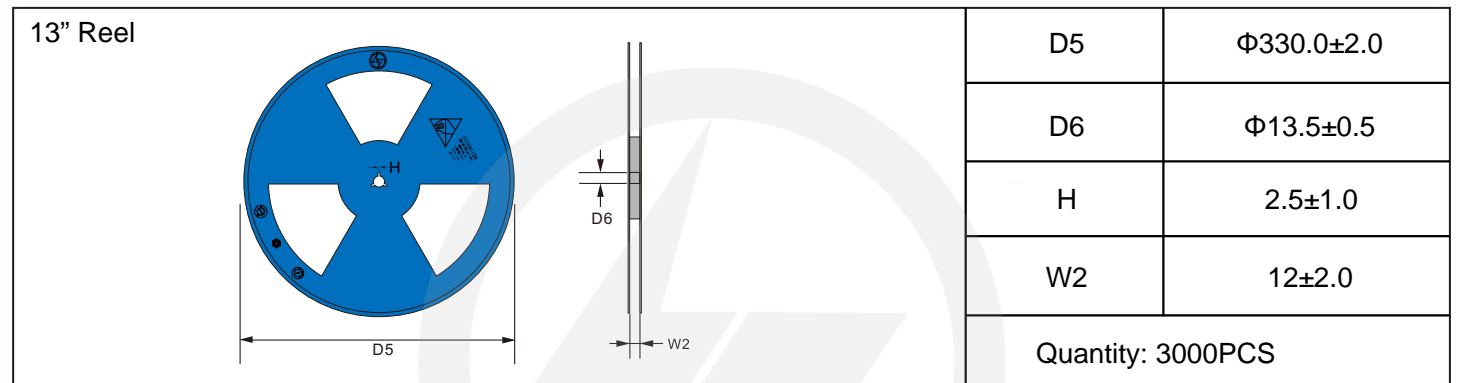
Carrier Tape Dimensions

Unit : mm

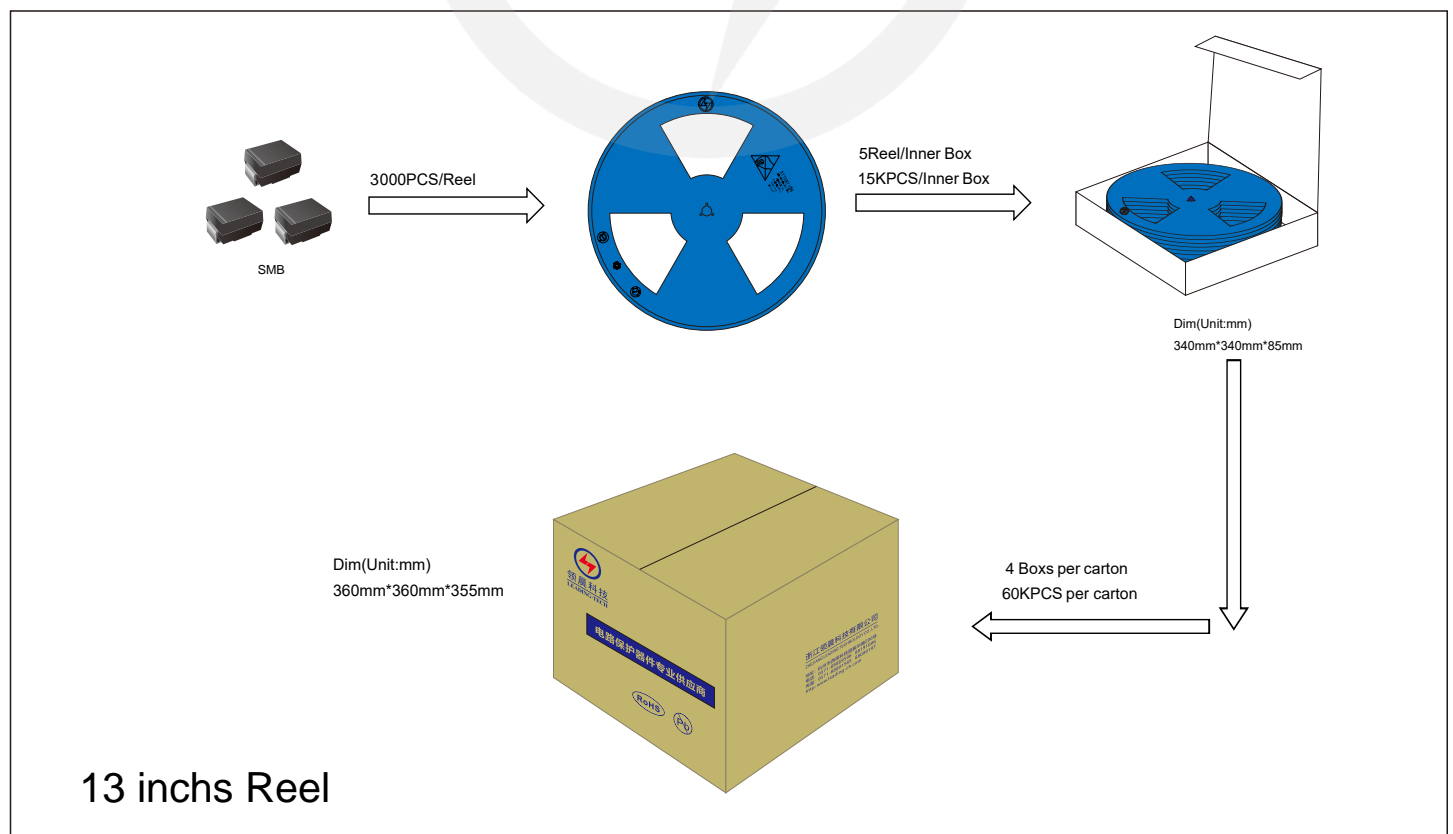


Reel Dimensions

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	2024.04.18	2024.04.18	3.0	New File	/	Ding	