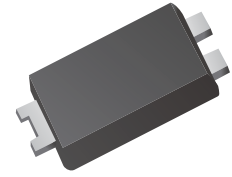


10.0Amp Surface Mount Schottky Barrier Rectifiers

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Data

- Case: TO-227B
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Mounting Position: Any

Ordering Information

Part Number	Marking	Shipping	Reel
LT1045L-TR5	SB1045L	5000PCS 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	Symbol	LT1045L	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	45	V
Maximum RMS voltage	V_{RMS}	32	V
Maximum DC blocking voltage	V_{DC}	45	V
Maximum average forward rectified current at $T_L=110^\circ\text{C}$	$I_{(AV)}$	10	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	175	A
Maximum instantaneous forward voltage at 10A	V_F	$T_A=25^\circ\text{C}$	0.45
		$T_A=100^\circ\text{C}$	0.42
Maximum DC reverse current at rated DC blocking voltage	I_R	$T_A=25^\circ\text{C}$	0.5
		$T_A=100^\circ\text{C}$	20
Typical thermal resistance (Note1)	$R_{\theta JA}$	31	$^\circ\text{C/W}$
Operating junction and Storage temperature range	T_j, T_{stg}	-55 to +125	$^\circ\text{C}$

Note: 1. Polymide PCB, 2oz. Copper Cathode pad dimensions 18.8mmx14.4mm. Anod pad dimensions 5.6mmx14.4mm



Characteristics Curves

FIG. 1 FORWARD CURRENT DERATING CURVE

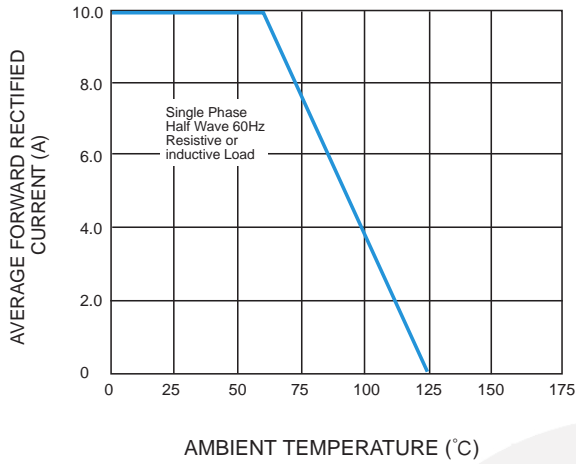


FIG. 2 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

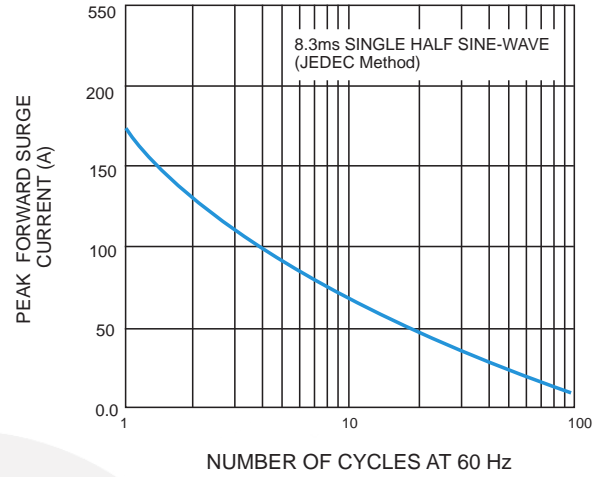


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

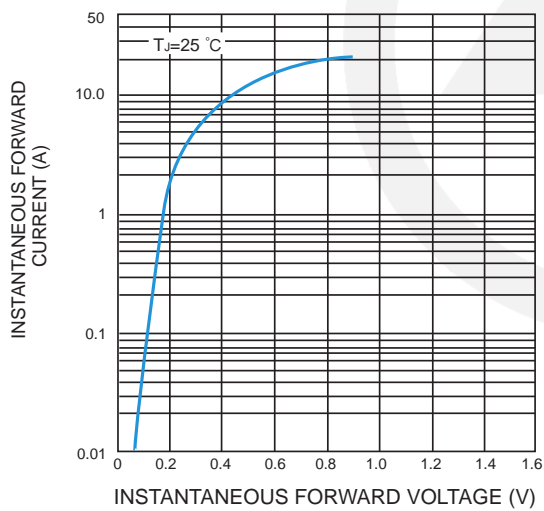
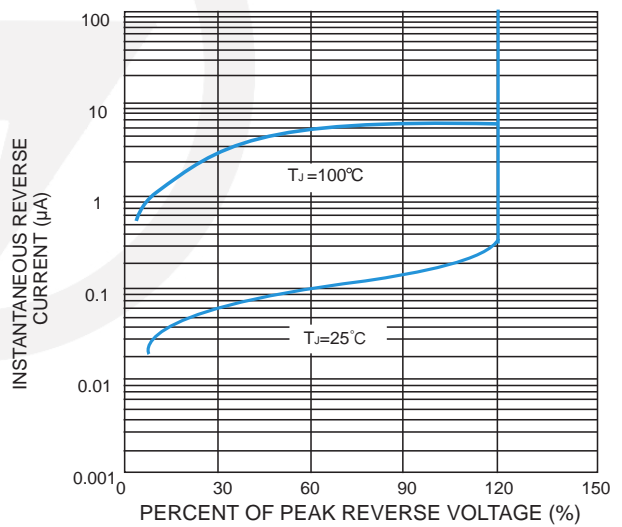
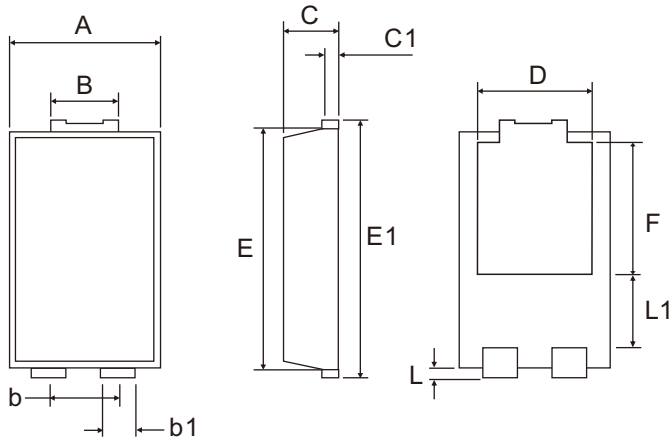


FIG. 4 TYPICAL REVERSE CHARACTERISTICS



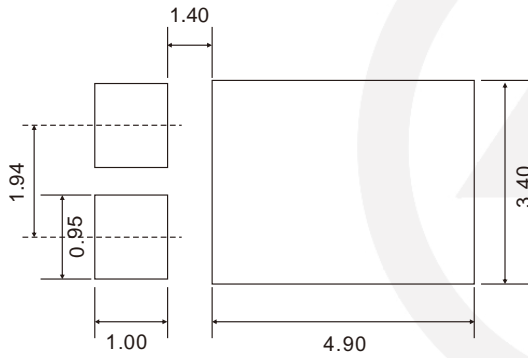
TO-277B Package Outline



Unit: mm

SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	3.90	4.10
B	1.70	1.90
C	1.00	1.20
C1	0.20	0.40
E	5.30	5.50
E1	6.40	6.60
D	3.15 TYP.	
F	3.55 TYP.	
L	0.50	0.70
b	1.85 TYP.	
b1	0.8	1.0
L1	1.0	1.4

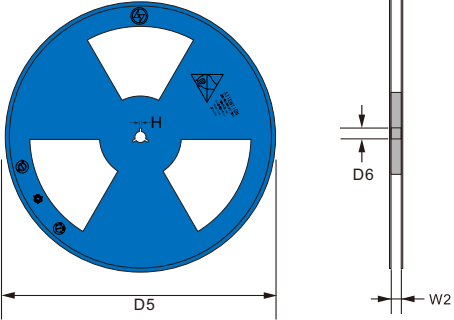
TO-277B Suggested Pad Layout



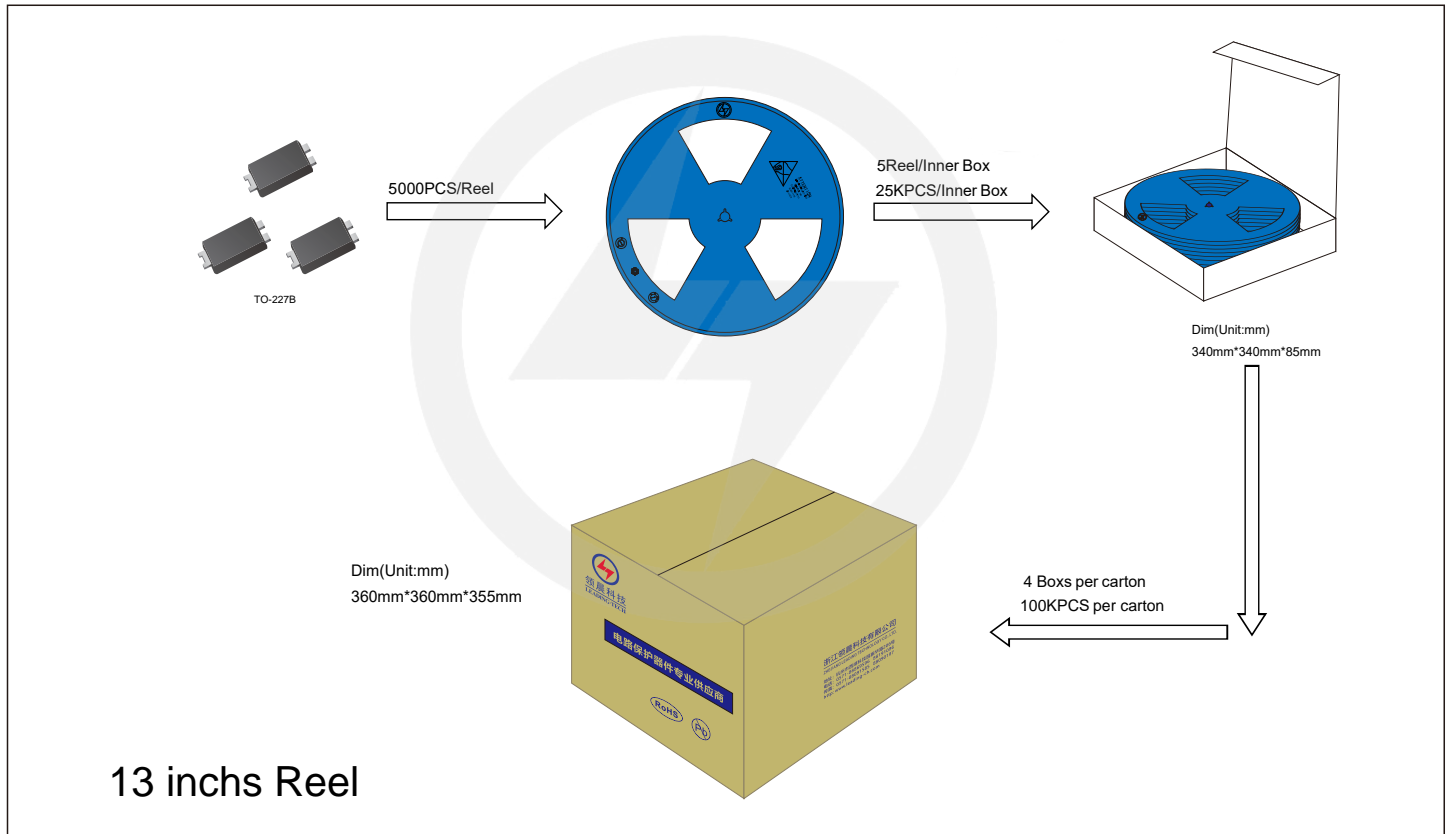
- Note:
1. Controlling dimension: in millimeters.
 2. General tolerance: ± 0.05 mm
 3. The pad layout is for reference purpose only.

Reel Dimensions

Unit : mm

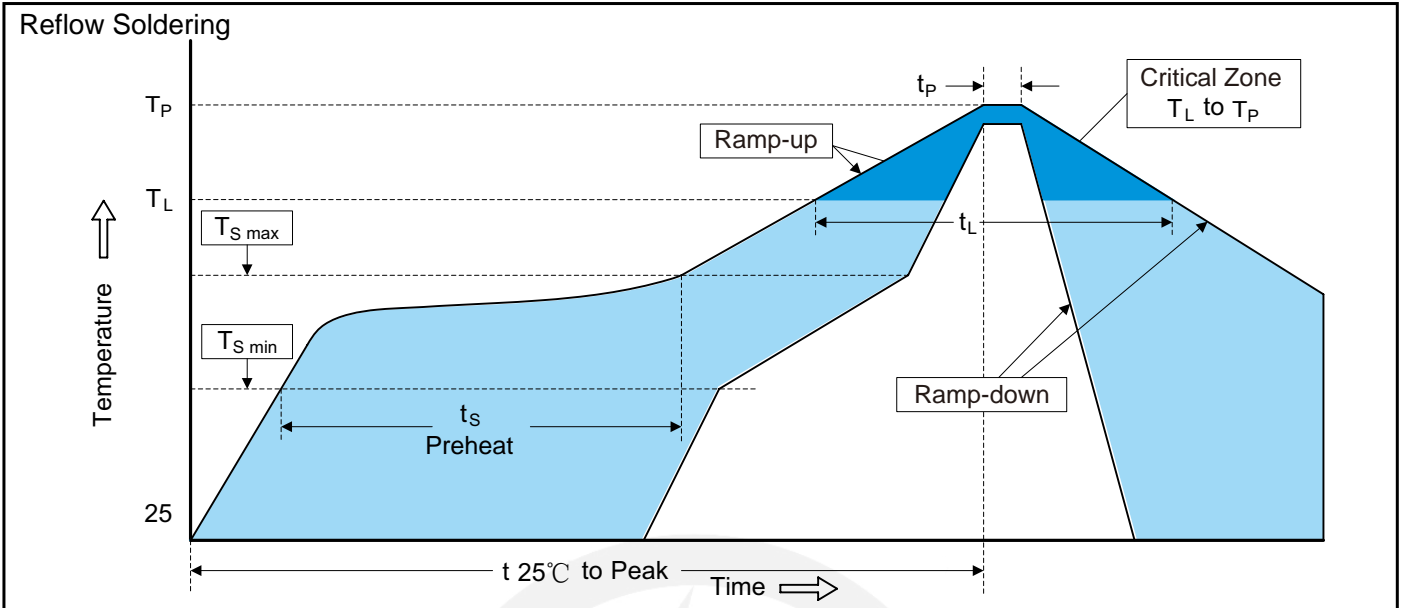
<p>13" Reel</p> 	D5	$\Phi 330.0 \pm 2.0$
	D6	$\Phi 13.5 \pm 0.5$
	H	2.5 ± 1.0
	W2	12 ± 2.0
	Quantity: 5000PCS	

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	2024.12.16	2024.12.16	3.0	New File	/	Ding	