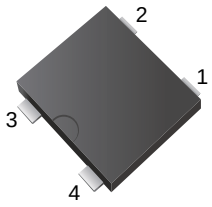
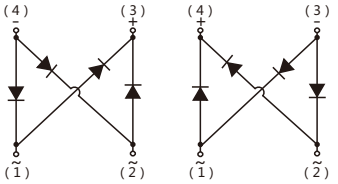
LTB20/LTB20R

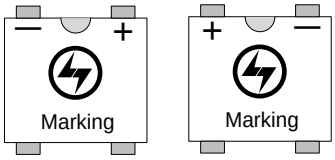
Surface Mount Bridge Rectifier



Features

- Reverse Voltage 2000 V
- Forward Current 1 A
- High Surge Current Capability
- Designed for Surface Mount Application
- Lead free in comply with EU RoHS 2011/65/EU directives





LTB20 LTB20R

Mechanical Data

- Case:LTB
- Terminal:Leads solderable per MIL-STD-750 Method 2026

Ordering Information

Part Number	Marking	Shipping	Reel
LTB20	LTB20	5000PCS Tape&Reel	13 inchs
LTB20R	LTB20.	5000PCS Tape&Reel	13 inchs

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

Parameter	Symbol	LTB20	LTB20R	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	2000		V
Maximum RMS voltage	V_{RMS}	1400		V
Maximum DC Blocking Voltage	V_{DC}	2000		V
Average Rectified Output Current at T_c = 125 °C	I_O	1		A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30		A
Maximum Forward Voltage at 1A	V_F	1.1		V
Maximum DC Reverse Current @T_A=25 °C at Rated DC Blocking Voltage @T_A=125 °C	I_R	5 150		μA
Typical Junction Capacitance (Note1)	C_J	20		pF
Operating and Storage Temperature Range	T_J, T_{stg}	-55 ~ +150		°C

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

Characteristic Curves

FIG.1 AVERAGE RECTIFIED OUTPUT CURRENT DERATING CURVE

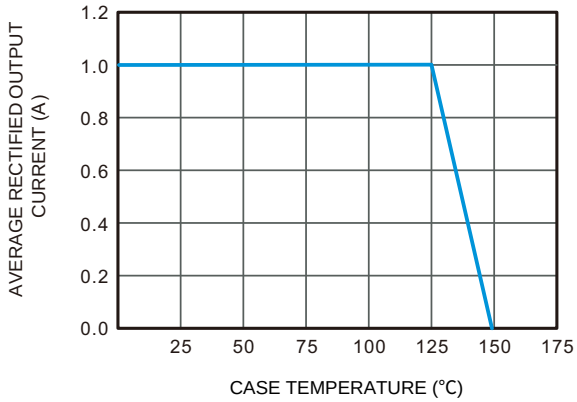


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

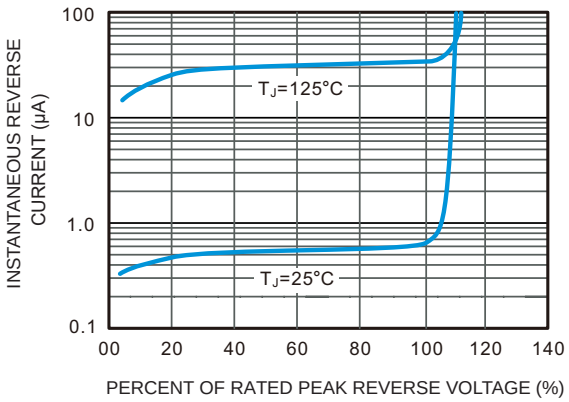


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

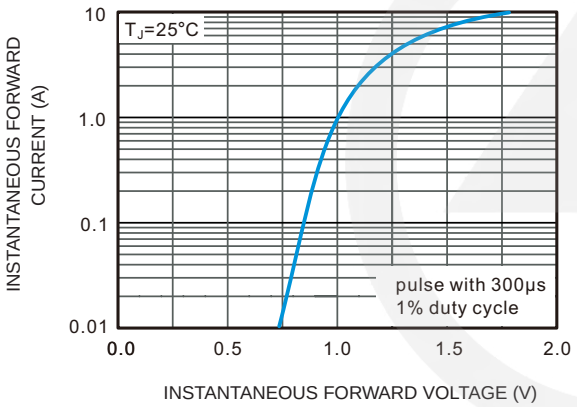


FIG. 4 TYPICAL JUNCTION CAPACITANCE

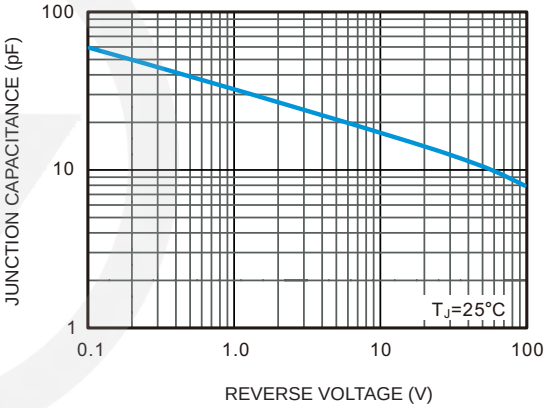
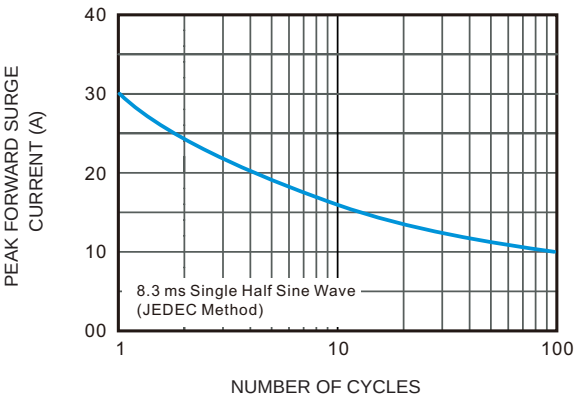


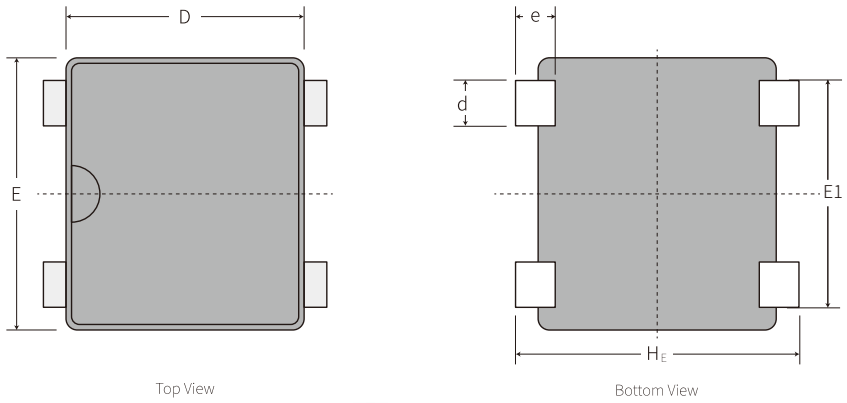
FIG. 2 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

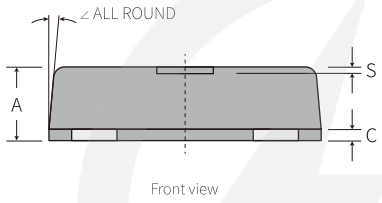


Package Outline

LTB

Unit：mm



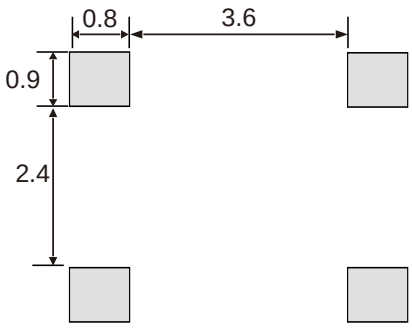


UNIT		A	C	D	E	H_E	S	d	e	E1	∠
mm	max	1.50	0.30	4.40	5.00	5.20	0.20	1.00	0.90	4.20	5°
	min	1.10	0.10	4.00	4.60	4.80	0.10	0.60	0.50	3.80	

Suggested Pad Layout

LTB

Unit：mm

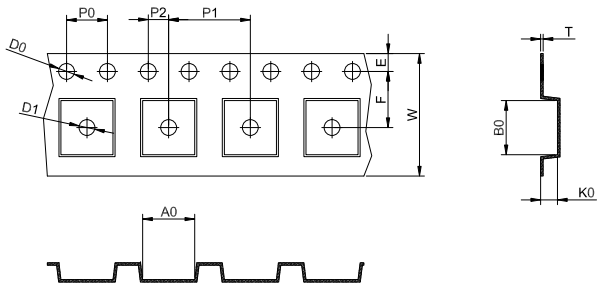


Note:

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

Carrier Tape Dimensions

Unit：mm

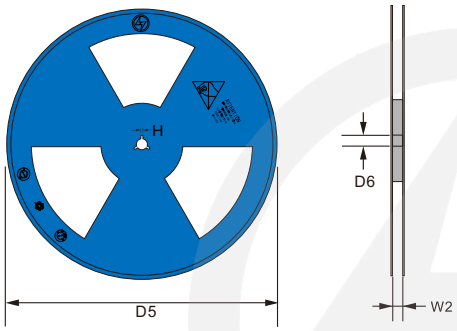


Symbol	Spec	Symbol	Spec
W	12.00±0.10	P1	8.00±0.10
E	1.75±0.10	P2	2.00±0.05
F	5.50±0.05	T	0.25±0.02
D0	1.55±0.05	A0	5.10±0.10
D1	1.55±0.10	B0	5.30±0.10
P0	4.00±0.10	K0	1.65±0.05

Reel Dimensions

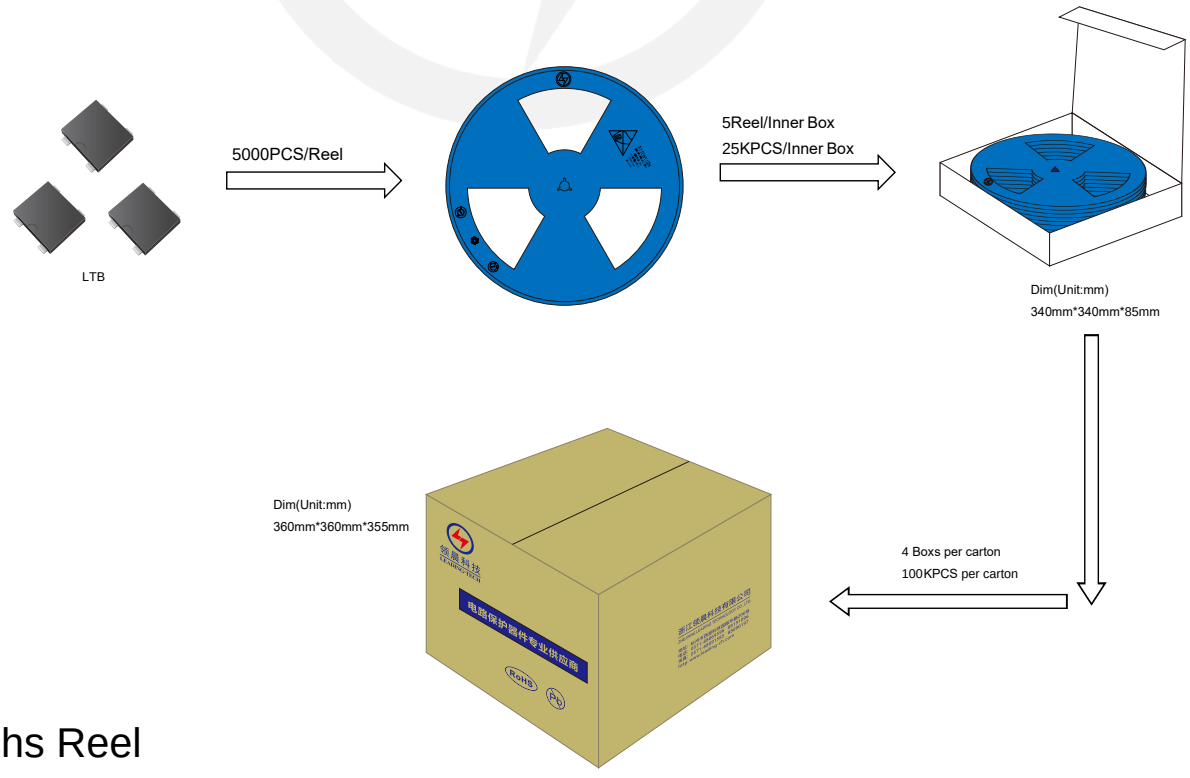
Unit：mm

13” Reel



D5	Φ330.0±2.0
D6	Φ13.5±0.5
H	2.5±1.0
W2	12±2.0
Quantity: 5000PCS	

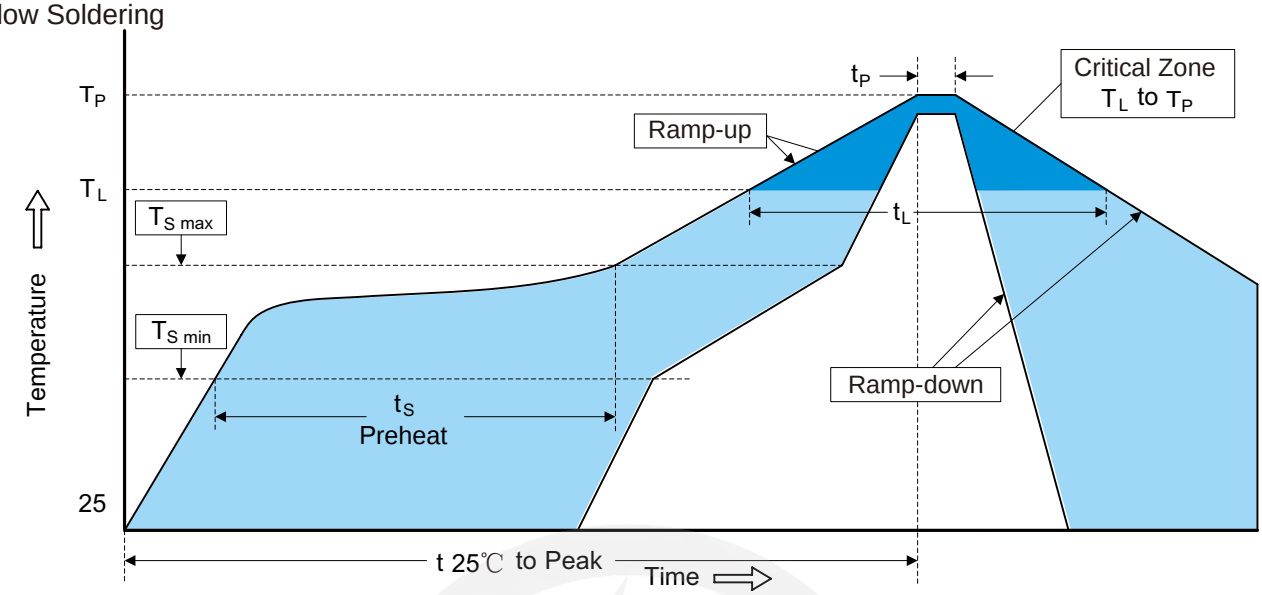
Packaging



13 inchs Reel

Recommended Soldering Conditions

Reflow Soldering



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3℃/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_S)	 150℃ 200℃ 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	 3℃/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	 217℃ 60-150 seconds
Peak Temperature (T_P)	260℃
Time within 5℃ of actual Peak Temperature (t_P)	20-40 seconds
Ramp-down Rate	6℃/second max.
Time 25℃ 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	2024.04.16	2024.04.16	1.0	New File	/	Ding	
02	2025.03.07	2025.03.07	1.1	Optimize Suggested Pad Layout	/	Ding	
03	2025.06.21	2025.06.21	1.2	Update packaging information	/	Ding	
04	2025.07.30	2025.07.30	1.3	Update Suggested Pad Layout	/	Ding	