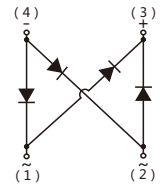
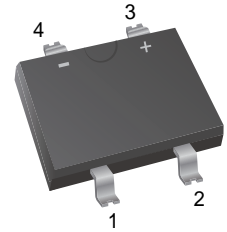


## Surface Mount Bridge Rectifier

### Features

- Surface mount bridge, small package
- Ideal for printed circuit boards
- Glass passivated chip junction
- High forward current capability up to 8.0A
- High surge current capability
- High heat dissipation capability
- Low profile package
- Low forward voltage drop
- Plastic package has Underwrites Laboratory Flammability Classification 94V-0
- Lead free in comply with EU RoHS 2011/65/EU directives



### Mechanical Data

- Case: HBS
- Polarity: As marked on body
- Epoxy meets UL-94V-0 Flammability rating
- Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22-B102
- Approx. Weight: 0.38g

### Ordering Information

Part Number	Marking	Shipping	Reel
LTRH810B-TR2.5	RH810B	2500PCS Tape&Reel	13 inchs

### Maximum Ratings and Electrical Characteristics

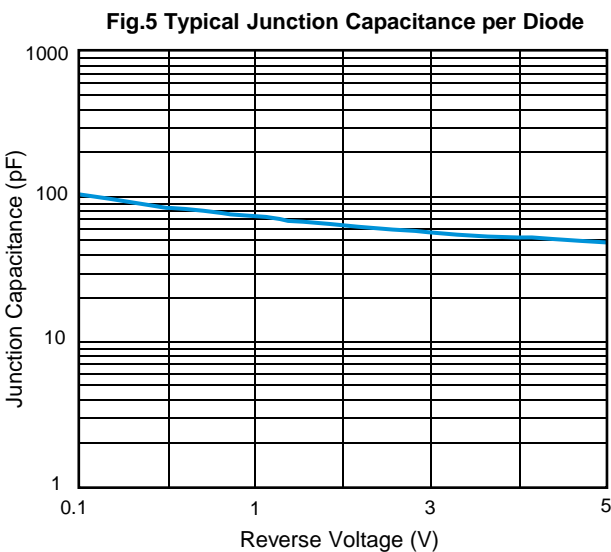
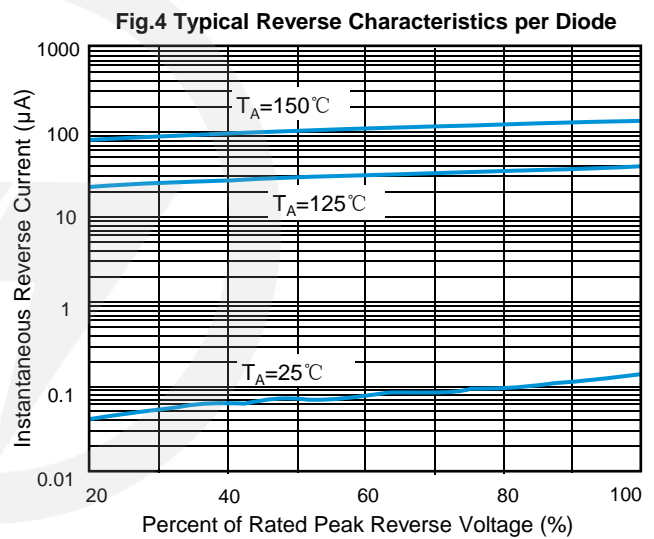
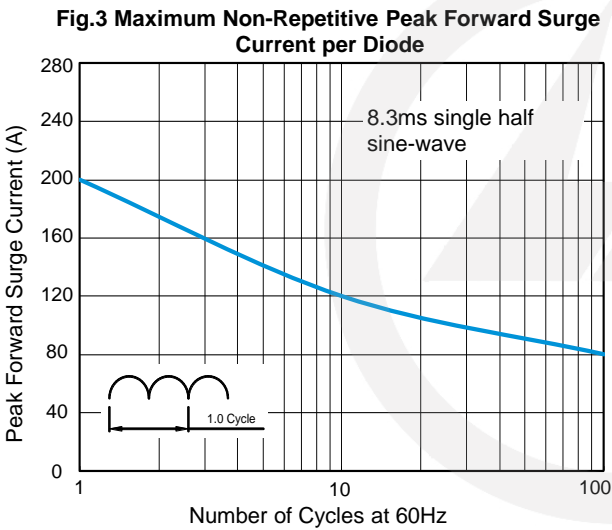
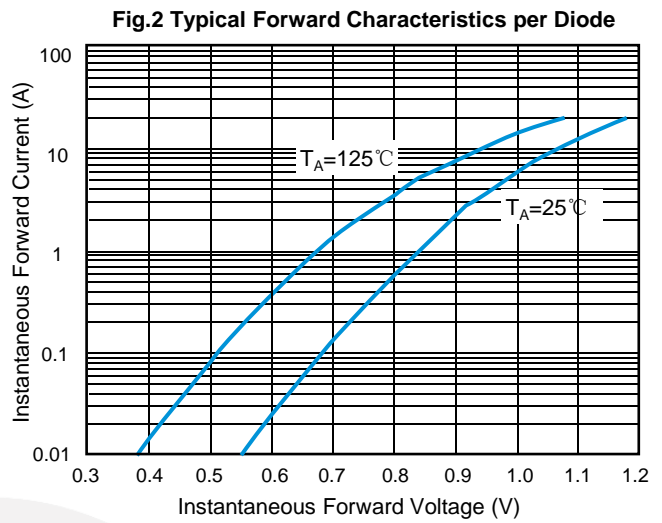
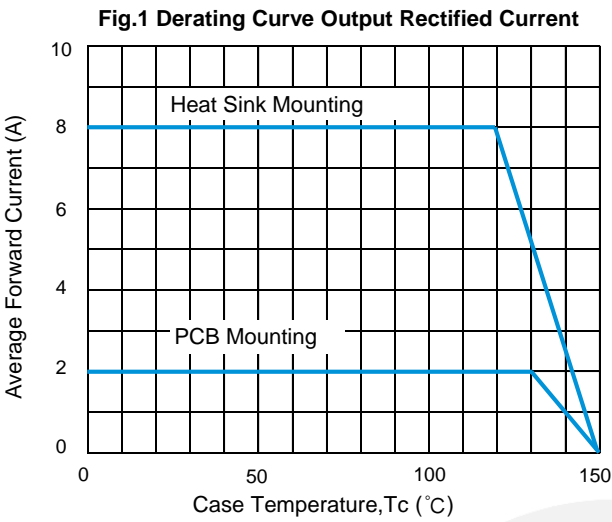
Ratings at 25°C ambient temperature unless otherwise specified. Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbol	LTRH810B	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	1000	V
Maximum RMS voltage	$V_{RMS}$	700	V
Maximum DC blocking voltage	$V_{DC}$	1000	V
Maximum average forward rectified output current at $T_A=25^\circ\text{C}$	$I_{F(AV)}$	8.0	A
Non-Repetitive Peak forward surge current 8.3 ms single sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	200	A
Instantaneous forward voltage drop per diode	$V_F$	@ $I_F=1.0\text{A}$	0.95
		@ $I_F=4.0\text{A}$	1.1
		@ $I_F=8.0\text{A}$	1.3
Reverse Current at Rated DC Blocking Voltage	$I_R$	$T_A=25^\circ\text{C}$	5.0
		$T_A=125^\circ\text{C}$	100
Maximum reverse recovery time ( $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$ )	$T_{rr}$	350	nS
Typical thermal resistance	$R_{\theta J-A}$	70.0	$^\circ\text{C/W}$
	$R_{\theta J-C}$	15.0	
	$R_{\theta J-L}$	22.0	
Operating junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150	$^\circ\text{C}$

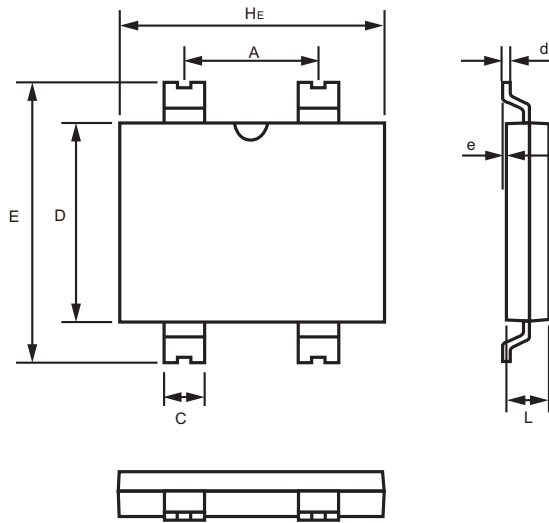
Note1: Measured at 1.0MHz and applied reverse voltage of 5.0V DC;



Characteristics Curves (TA = 25°C unless otherwise noted)



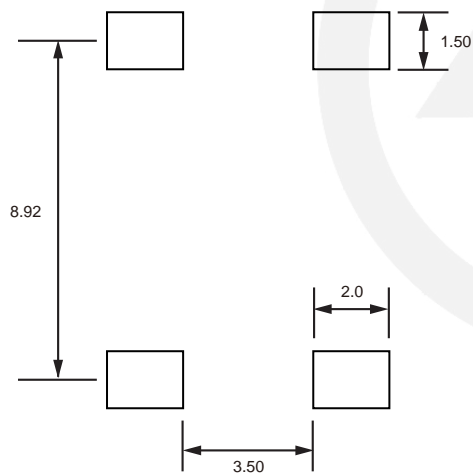
## HBS Package Outline



Unit: mm

SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	4.800	5.400
C	1.300	1.700
D	6.900	7.500
E	9.700	10.30
He	9.900	10.50
d	0.150	0.350
e	0.000	0.150
L	1.300	1.900

## HBS Suggested Pad Layout

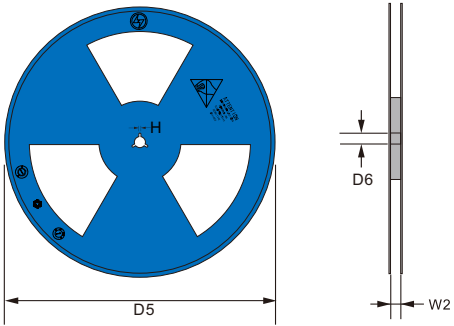


Note:

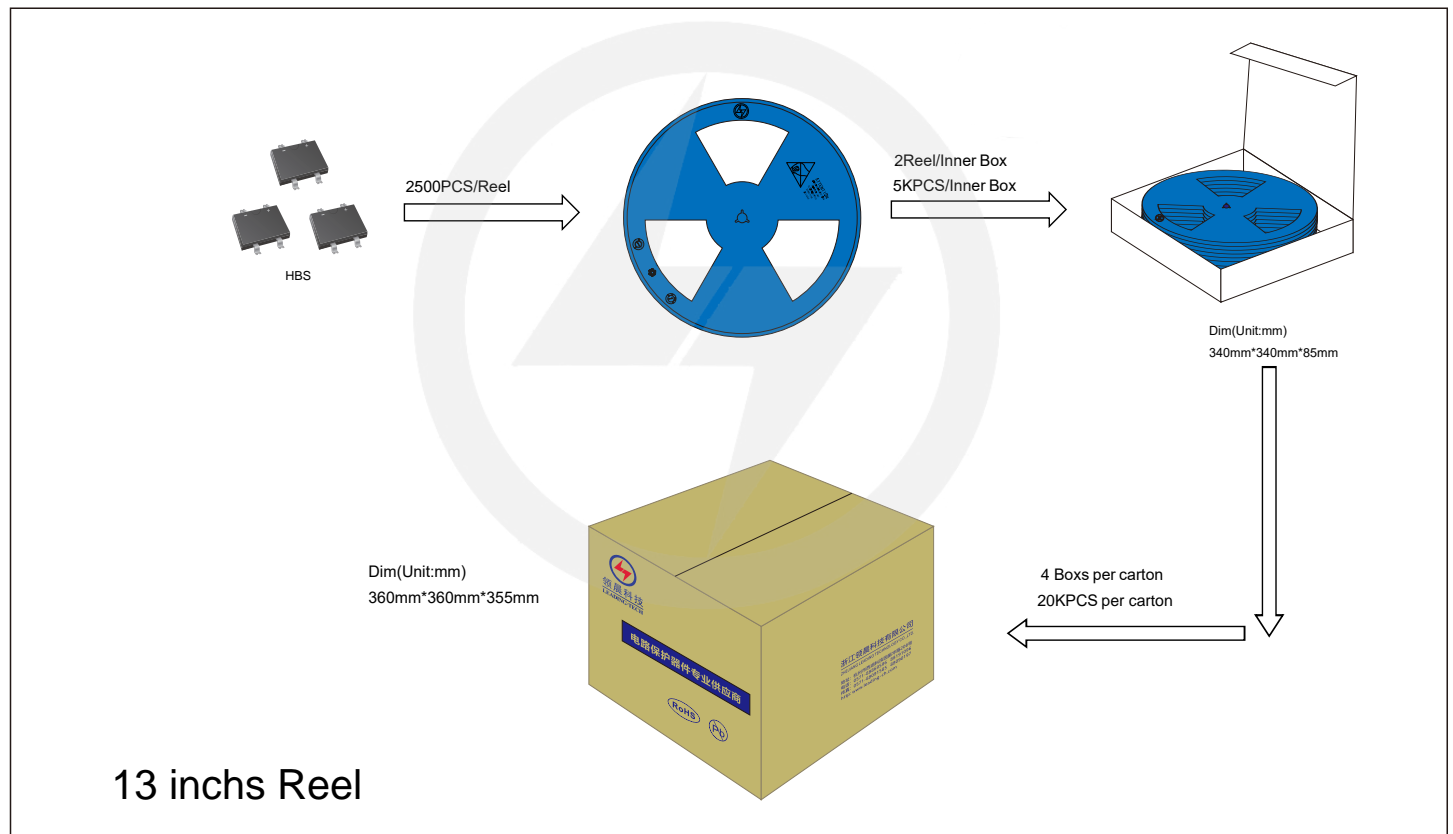
1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$
3. The pad layout is for reference purpose only.

## Reel Dimensions

Unit : mm

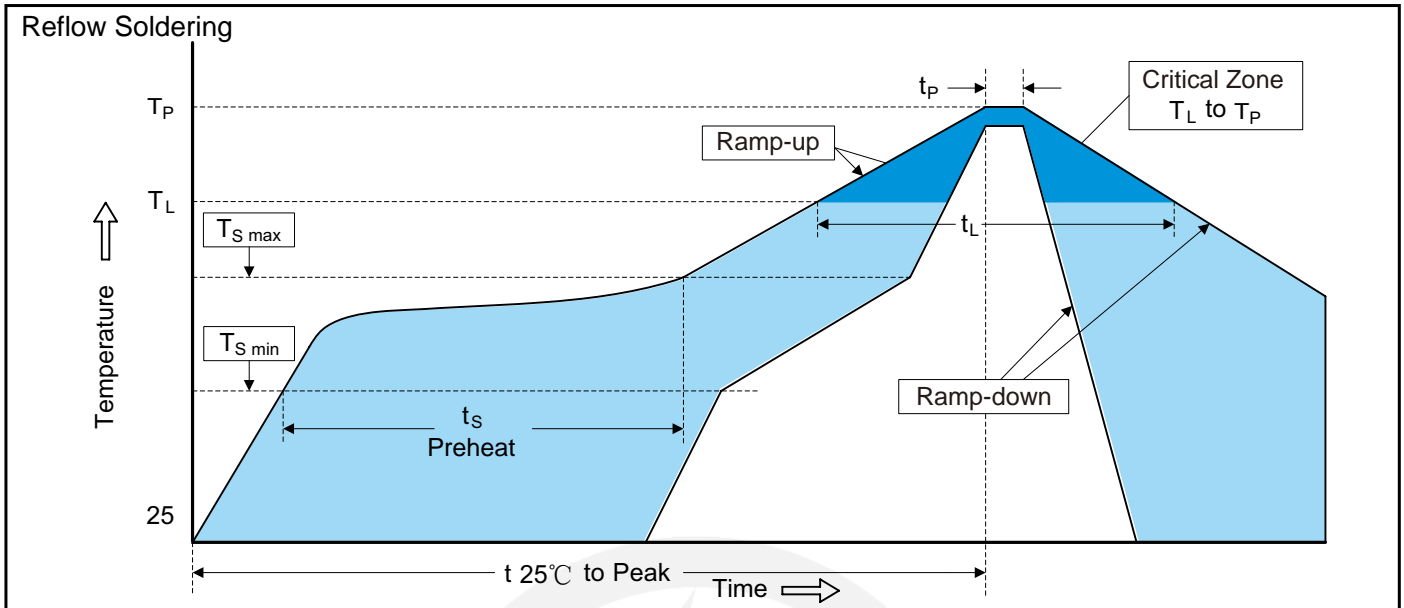
<p>13" Reel</p> 	D5	$\Phi 330.0 \pm 2.0$
	D6	$\Phi 13.5 \pm 0.5$
	H	$2.5 \pm 1.0$
	W2	$12 \pm 2.0$
	Quantity: 2500PCS	

## Packaging





Recommended Soldering Conditions



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T <sub>L</sub> to T <sub>P</sub> )	3°C/second max.
Preheat	
-Temperature Min (T <sub>S min</sub> )	150°C
-Temperature Max (T <sub>S max</sub> )	200°C
-Time (min to max) (t <sub>s</sub> )	60-180 seconds
T <sub>S max</sub> to T <sub>L</sub>	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T <sub>L</sub> )	217°C
-Time (t <sub>L</sub> )	60-150 seconds
Peak Temperature (T <sub>P</sub> )	260°C
Time within 5°C of actual Peak Temperature (t <sub>p</sub> )	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	2025.05.07	2025.05.07	3.0	New file	/	Ding	