

## Single Phase Glass Passivated Bridge Rectifiers

### Features

- Rating to 1000V PRV
- Ideal for printed circuit board
- Low forward voltage drop, high current capability
- Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- The plastic material has UL flammability classification 94V-0
- Lead free in comply with EU RoHS 2011/65/EU directives



### Mechanical Data

- Case: DBS
- Polarity: As marked on Body
- Mounting position: Any
- Approx. Weight: 0.3g

### Ordering Information

Part Number	Shipping	Reel
LTD101B THRU LTD107B-TR1K5	1500PCS 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 derate current by 20%.

Characteristics	Symbol	LTD101B	LTD102B	LTD103B	LTD104B	LTD105B	LTD106B	LTD107B	Unit
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @T <sub>A</sub> =40°C	I <sub>(AV)</sub>	1.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	35							A
Maximum Forward Voltage at 1.0A DC	V <sub>F</sub>	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage @T <sub>J</sub> =25°C @T <sub>J</sub> =125°C	I <sub>R</sub>	10 500							μA
Typical Junction Capacitance Per Element (Note1)	C <sub>J</sub>	25							pF
Typical Thermal Resistance (Note2)	R <sub>JA</sub>	63							°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150							°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150							°C

Note: DBS for surface mount package.



Characteristics Curves

FIG.1 FORWARD CURRENT DERATING CURVE

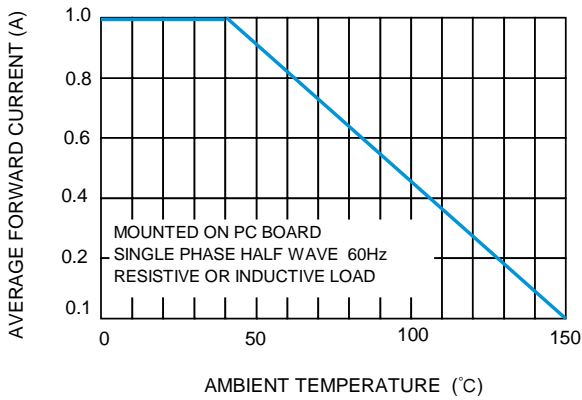


FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

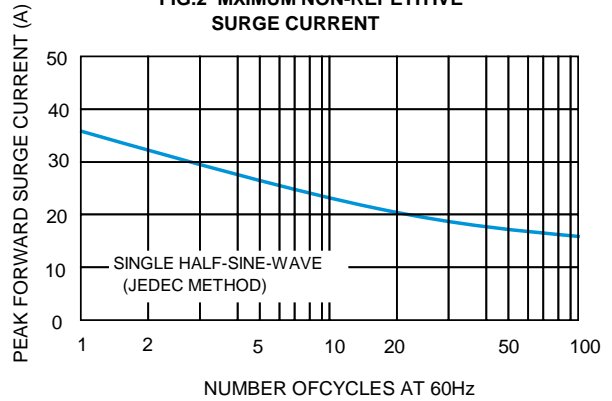


FIG.3 TYPICAL JUNCTION CAPACITANCE

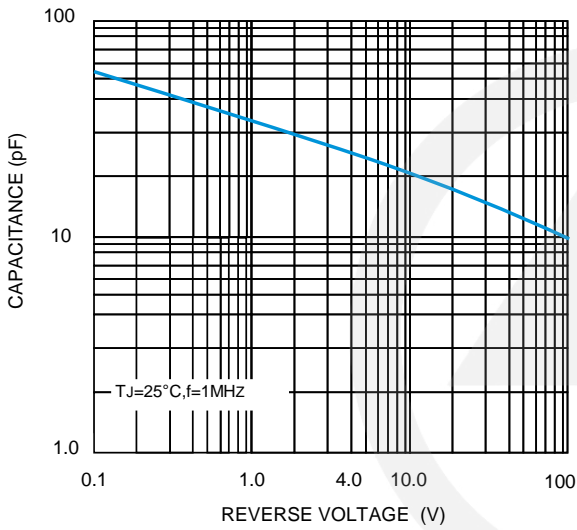


FIG.4 TYPICAL FORWARD CHARACTERISTICS

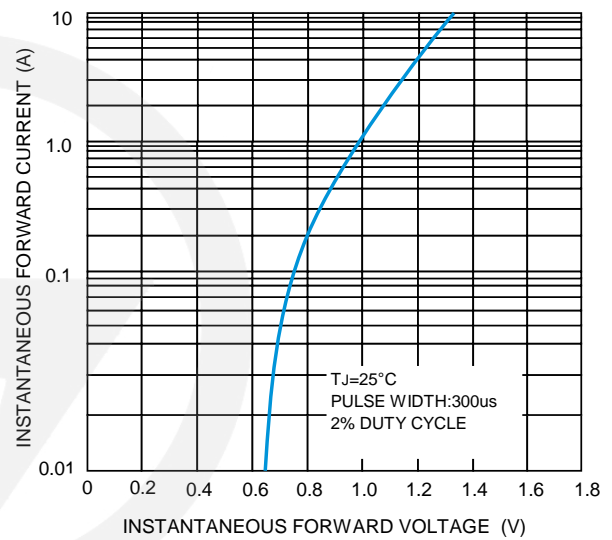
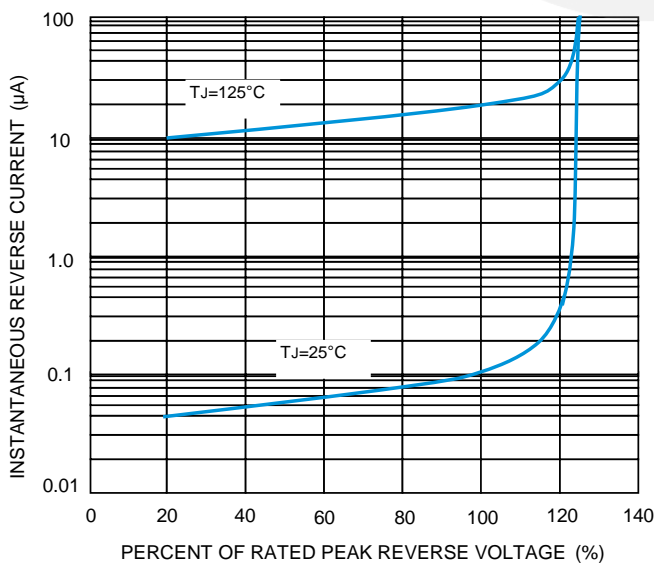
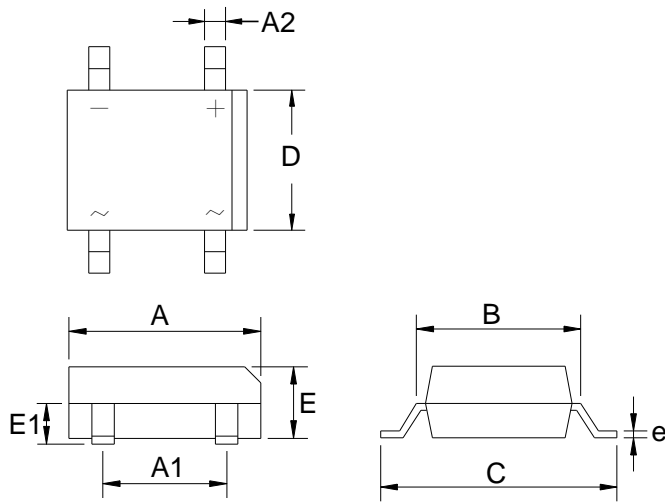


FIG.5 TYPICAL REVERSE CHARACTERISTICS



## DBS Package Outline

Unit : mm

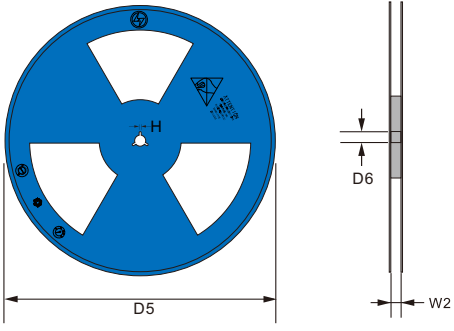


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	7.800	8.500
A1	5.000	5.200
A2	0.900	1.200
B	7.200	8.000
C	9.700	10.200
D	6.200	6.500
E	2.350	3.000
E1	1.300	1.600
e	0.200	0.350

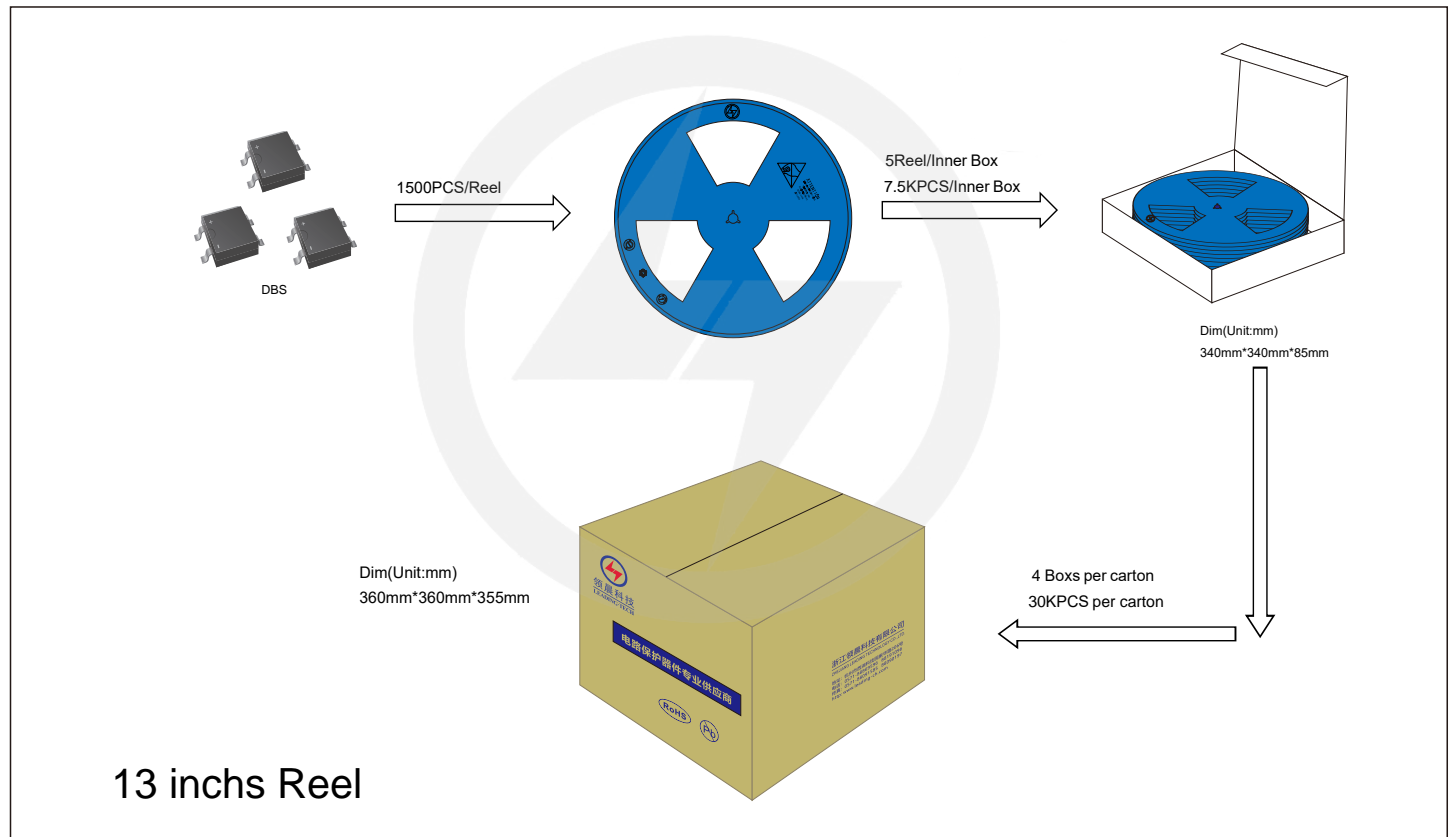


## Reel Dimensions

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: 1500PCS	

## 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	2024.05.18	2024.05.18	3.0	New file	/	Ding	