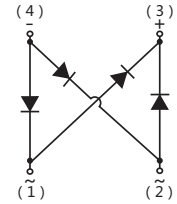
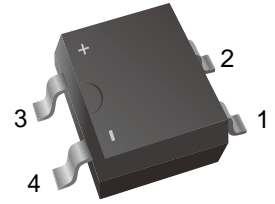


## 1A Surface Mount Glass Passivated Bridge Rectifier

### Features

- Glass Passivated Chip Junction
- Reverse Voltage 100 to 1000 V
- Forward Current 1A
- High Surge Current Capability
- Designed for Surface Mount Application
- Lead free in comply with EU RoHS 2011/65/EU directives



### Mechanical Data

- Case : MBS
- Terminals: Solderable per MIL-STD-750, Method 2026

### Ordering Information

Part Number	Shipping	Reel
MB1S THRU MB10S-TR3	3000PCS Tape&Reel	13 inchs

### Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

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

Parameter	Symbol	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	100	200	400	600	800	1000	V
Average Rectified Output Current @ Fig.1	$I_O$	1.0						A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	35						A
Maximum Forward Voltage at 1.0 A	$V_F$	1.1						V
Maximum DC Reverse Current @ $T_A=25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125\text{ }^\circ\text{C}$	$I_R$	5 100						$\mu\text{A}$
Typical Junction Capacitance ( Note1 )	$C_j$	7						pF
Typical Thermal Resistance ( Note2 )	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	45 15 25						$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150						$^\circ\text{C}$

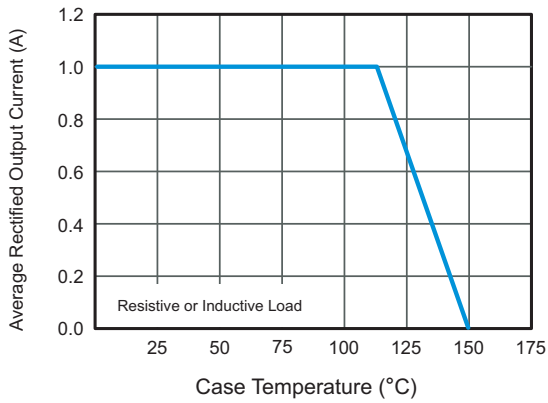
Note: (1) Measured at 1MHz and applied reverse voltage of 4 V D.C.

(2) Mounted on glass epoxy PC board 4X1.5" X 1.5" (3.81 cm X 3.81 cm) copper pad.

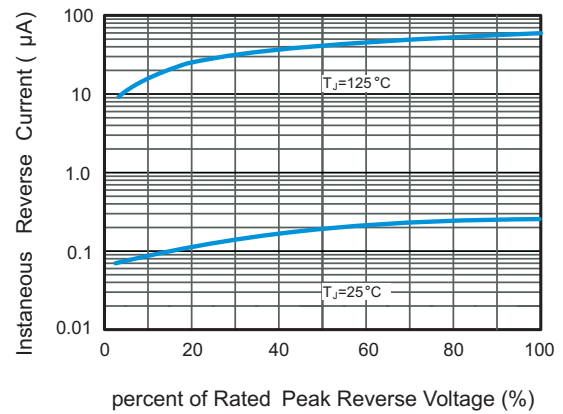


Characteristics Curves

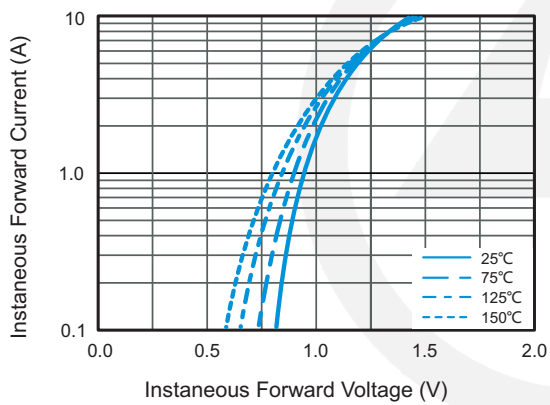
**Fig.1 Average Rectified Output Current Derating Curve**



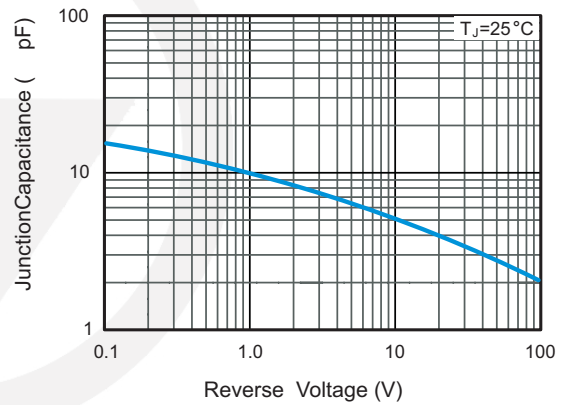
**Fig.2 Typical Instantaneous Reverse Characteristics**



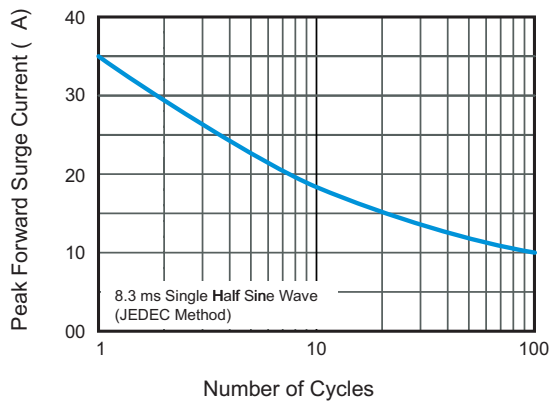
**Fig.3 Typical Forward Characteristic**



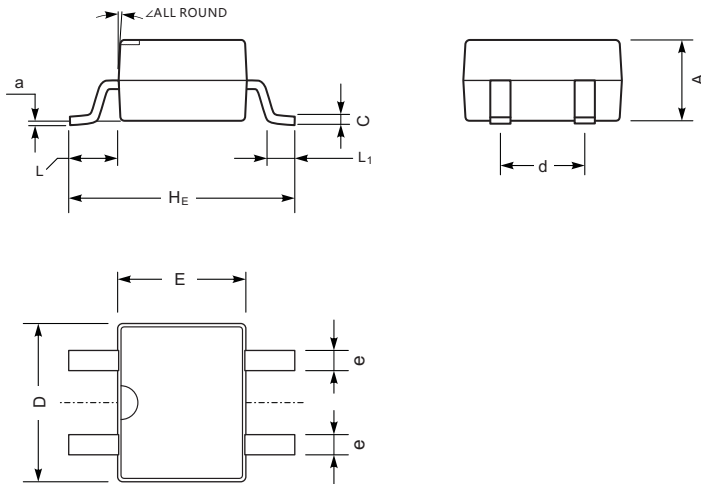
**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



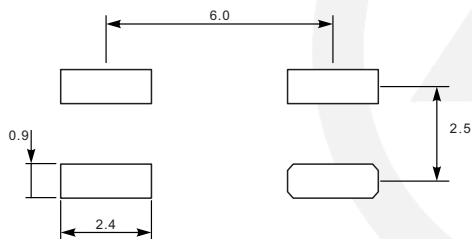
## MBS Package Outline



Unit: mm

SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	2.20	2.60
C	0.15	0.22
D	4.50	5.00
E	3.60	4.10
HE	6.40	7.00
d	2.30	2.70
e	0.50	0.70
L	1.30	1.70
L1	0.50	1.10
a	-	0.20
θ	7°	

## MBS Suggested Pad Layout



Note:

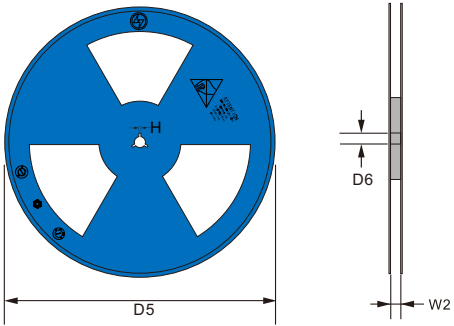
1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$
3. The pad layout is for reference purpose only.

## Marking

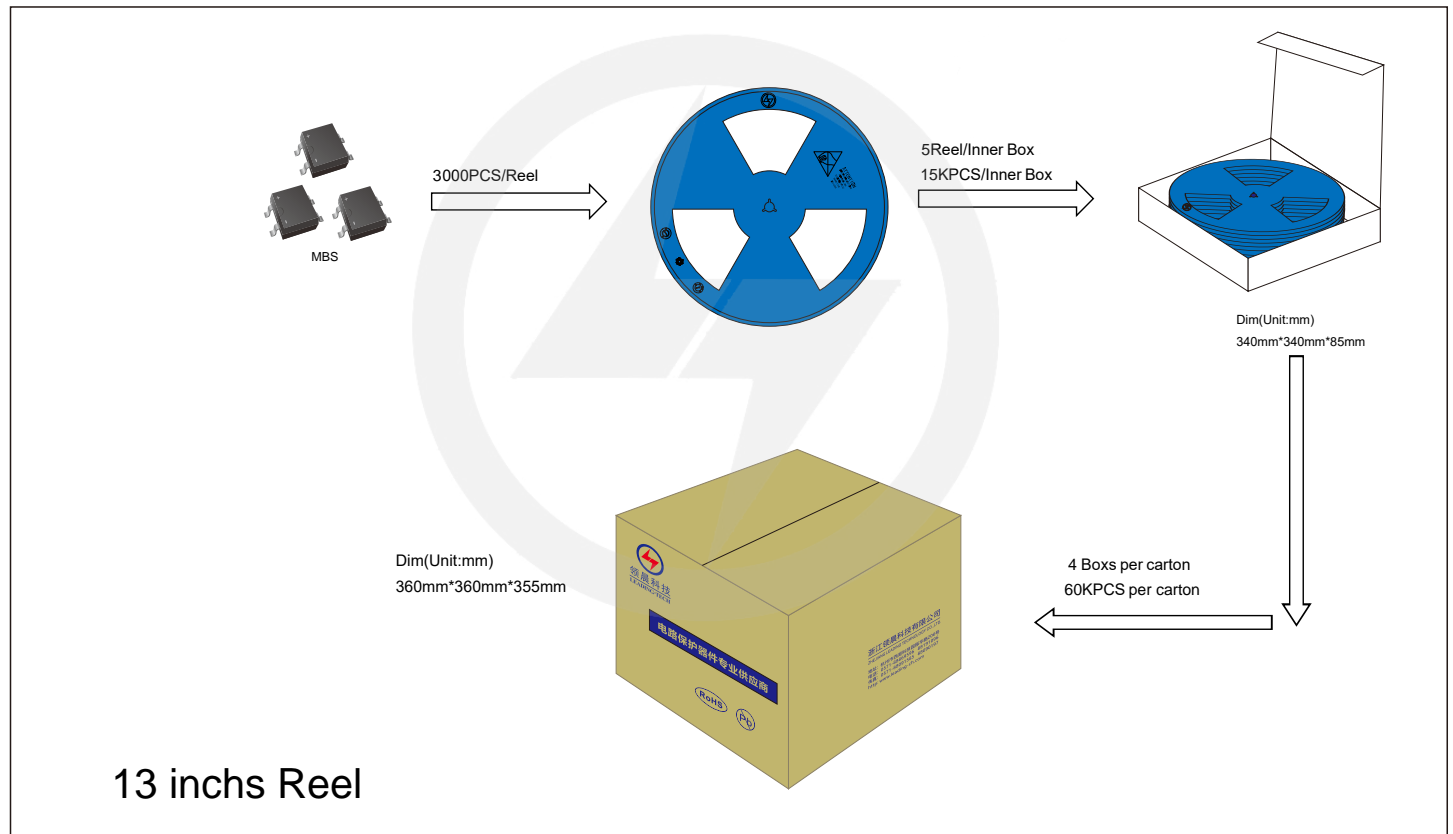
Type number	Marking code
MB1S	MB1S
MB2S	MB2S
MB4S	MB4S
MB6S	MB6S
MB8S	MB8S
MB10S	MB10S

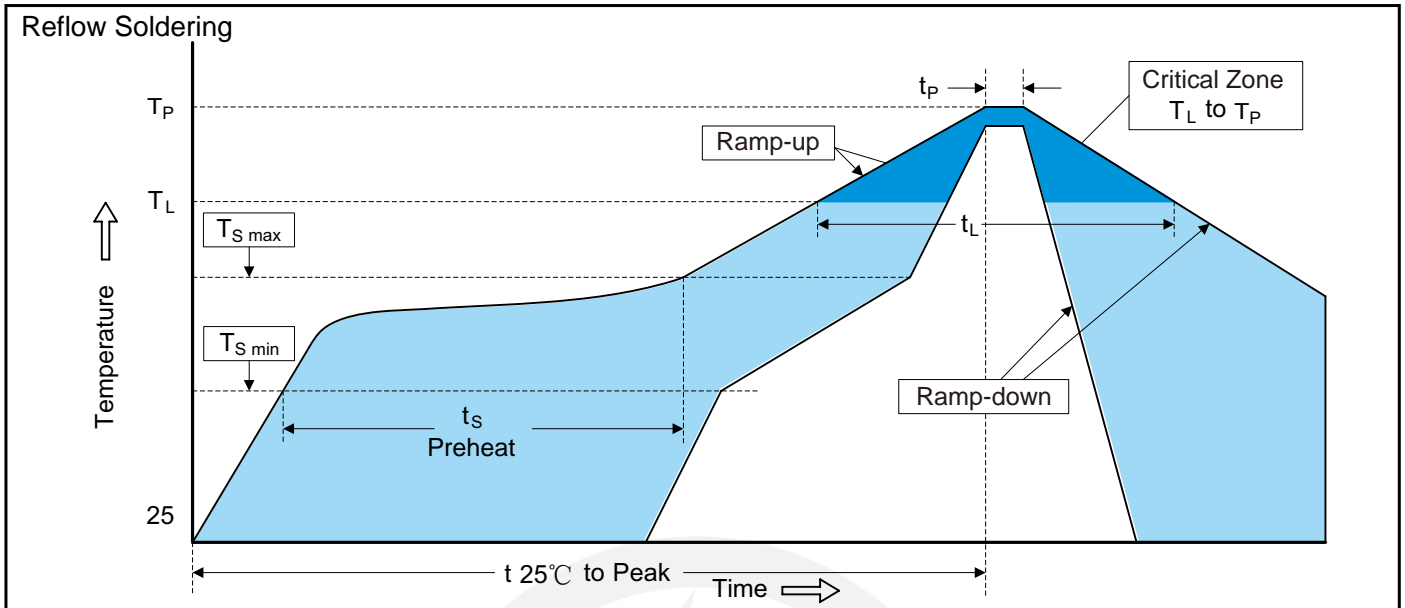
## Reel Dimensions

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: 3000PCS	

## 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	2024.9.27	2024.9.27	3.0	New File	/	Ding	
02	2025.05.29	2025.05.29	3.1	Update packaging information	/	Ding	