MB1LK THRU MB10LK

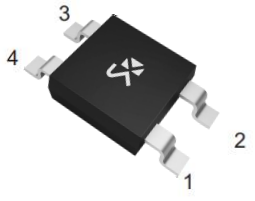
1A Surface Mount Glass Passivated Bridge Rectifier

Features

- Glass Passivated Chip Junction
- Reverse Voltage -100 to 1000V
- Forward Current -1A
- High Surge Current Capability
- Designed for Surface Mount Application

PINNING

PIN	DESCRIPTION
1	Input Pin (~)
2	Input Pin (~)
3	Output Anode (+)
4	Output Cathode (-)



MBL Package

Marking

Type number	Marking code
MB1LK	MB1LK
MB2LK	MB2LK
MB4LK	MB4LK
MB6LK	MB6LK
MB8LK	MB8LK
MB10LK	MB10LK

Maximum Ratings and Electrical Characteristics

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

Parameter		Symbol	MB 1LK	MB 2LK	MB 4LK	MB 6LK	MB 8LK	MB 10LK	Units
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
Maximum Average Forward Rectified Current @Fig.1		$I_{F(AV)}$	1.0						A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimpose on Rated Load(JEDEC Method)		I_{FSM}	35						A
Peak Forward Surge Current 1.0 ms Single Half Sine Wave Superimpose on Rated Load(JEDEC Method)		I_{FSM}	70						A
I^2t Rating for fusing(3ms≤t≤8.3ms)		I^2t	5.0						A^2S
Maximum Instantaneous Forward Voltage at 1A		V_F	1.1						V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_A= 25℃	I_R	5						μA
	T_A= 125℃		100						μA
Typical Junction Capacitance(1)		C_J	10						pF
Typical Thermal Resistance(2)		$R_{\theta JA}$	45						℃/W
		$R_{\theta JC}$	15						
		$R_{\theta JL}$	25						
Operating and Storage Temperature Range		T_j,T_{STG}	-55~+150						℃

Note: 1. Measured at 1 MHz and applied reverse voltage of 4 V D.C
2. Mounted on glass epoxy PC board with 4×1.5”×1.5”(3.81×3.81cm)copper pad.

Typical Characteristics

Fig.1 Average Rectified Output Current Derating Curve

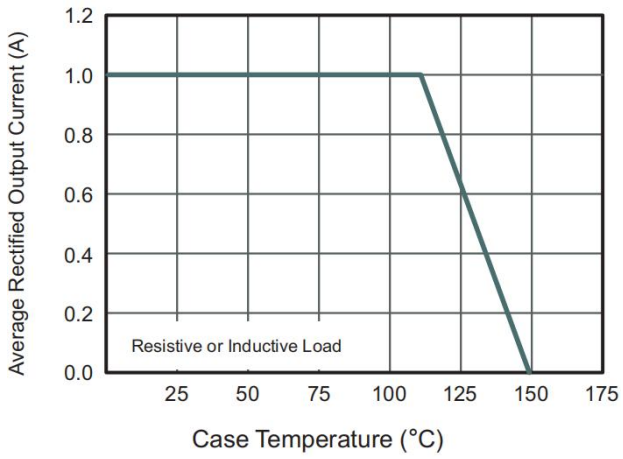


Fig.2 Typical Reverse Characteristics

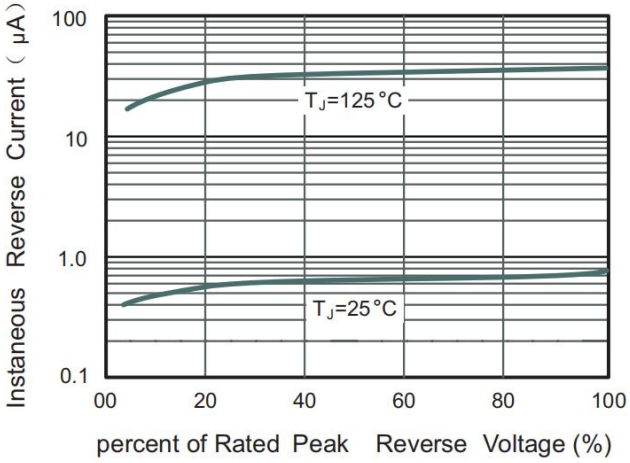


Fig.3 Typical Instaneous Forward Characteristics

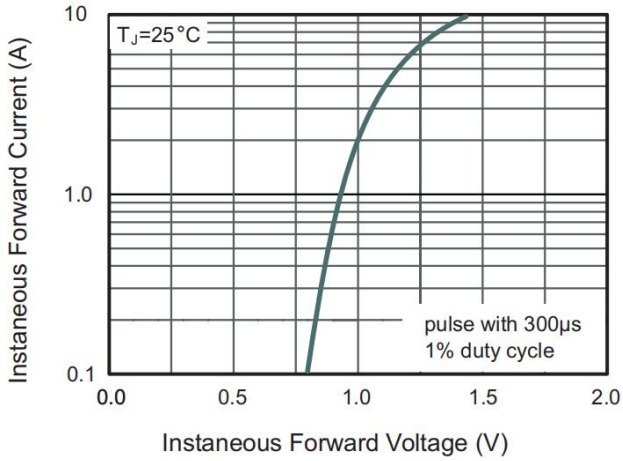


Fig.4 Typical Junction Capacitance

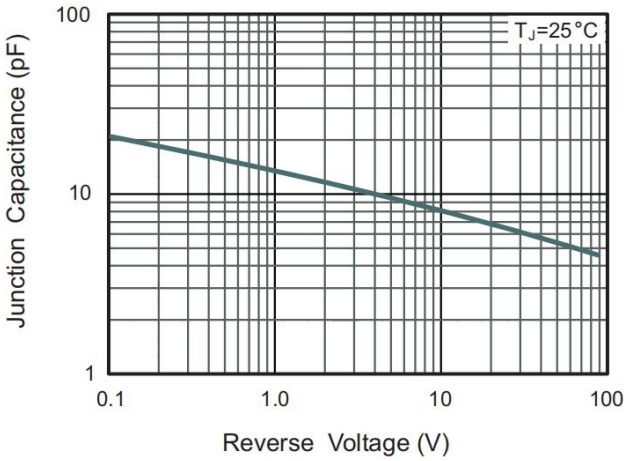
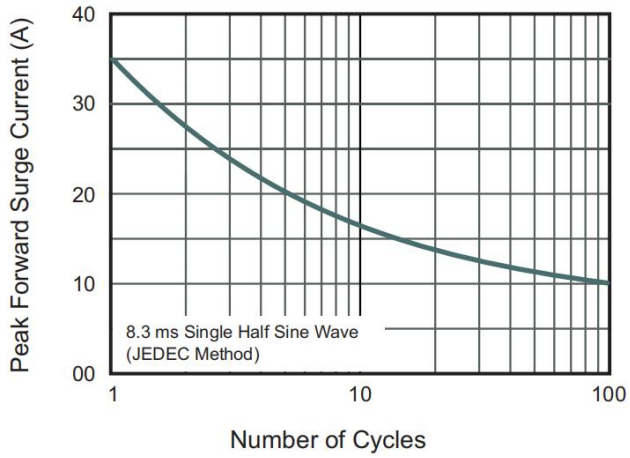


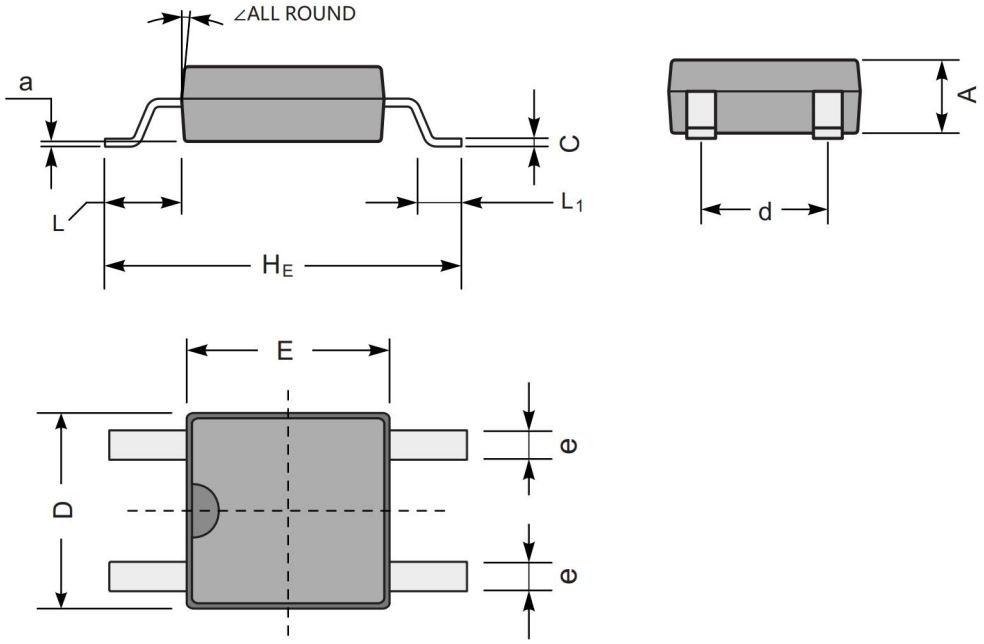
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



Package Information

MBL

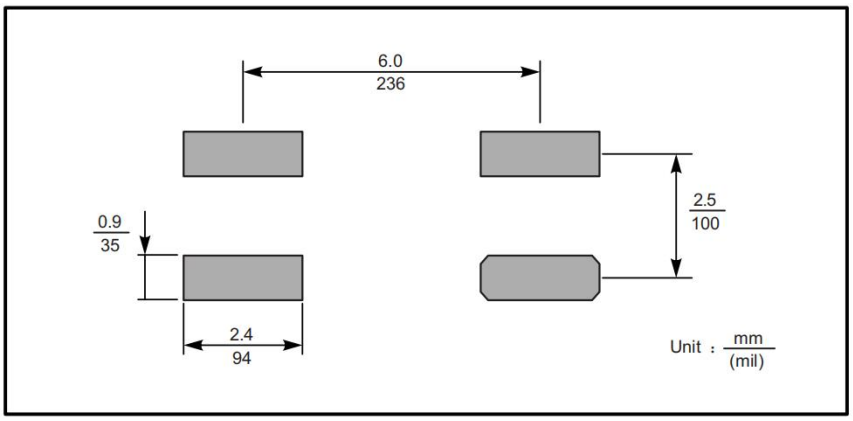
Dimensions in mm



MBL mechanical data

UNIT		A	C	D	E	H_E	d	e	L	L_1	a	∠
mm	max	1.6	0.18	3.95	4.1	7.0	2.7	0.8	1.7	1.1	0.2	7°
	min	1.2	0.12	3.45	3.6	6.4	2.3	0.5	1.3	0.5	-	
mil	max	63	7.1	156	161	275	106	31	67	43	8	
	min	47	4.7	136	142	252	91	17	51	20	-	

The recommended mounting pad szie



Shikues Disclaimer

1.Accuracy of Information and Right to Modify

The information provided in this document is for reference only. Shikues reserves the right to make changes to this document and to the specifications of the products described herein at any time, without prior notice, for the purpose of improving reliability, function, design, or for any other reason. It is the customer's responsibility to obtain and verify the latest product information and specifications before making any final design, procurement, or usage decisions.

2.No Warranty

Shikues makes no express or implied warranties, representations, or guarantees regarding the suitability of its products for any particular purpose.

Shikues assumes no liability for any assistance provided or for the design of customer products. All products are supplied "as is."

3.Intended Use and Limitation of Liability

The products described in this document are intended for use in general-purpose electronic devices. They are neither designed nor tested nor authorized for use in transportation equipment or applications requiring high reliability. Unless expressly authorized in writing by Shikues, these products must not be used as critical components in life-support systems or any applications where failure could directly pose a risk to human life (including, but not limited to, medical devices, transportation systems, aerospace equipment, nuclear facilities, and safety-critical systems).

Shikues assumes no responsibility or liability for any consequences arising from the use of its products in unauthorized or unintended applications.

Neither Shikues nor its representatives shall be held liable for any resulting damages.

4.Intellectual Property

This document does not grant any express or implied license—whether by estoppel, implication, or otherwise—to use any intellectual property rights of Shikues.