

# GLASS PASSIVATED SURFACE MOUNT BRIDGE RECTIFIERS

## MSBL

### Description:

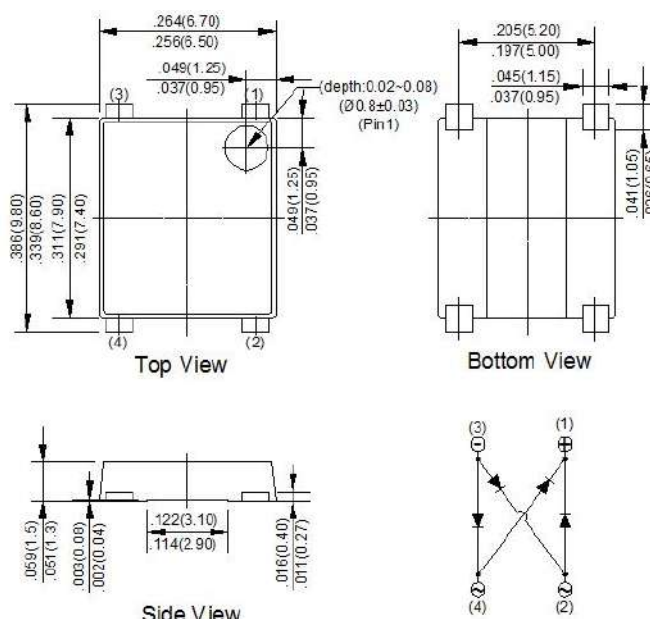
Suitable for AC-to-DC bridge full wave rectification for SMPS, LED lighting, adapter, battery charger, home appliances, office equipment, and telecommunication applications.

### Features:

- Compact, thin profile package design
- Ideal for SMT manufacturing
- Reliable robust construction
- UL recognized file#E364304

### Mechanical Data:

- Molding compound meets UL 94 V-0 flammability rating, Halogen-free, RoHS-compliant, and commercial grade
- Polarity indicator: As marked on body



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 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	DB301S	DB302S	DB303S	DB304S	DB305S	DB306S	DB307S	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>C</sub> =120°C	I <sub>(AV)</sub>	3							A
Peak Forward Surge Current @ 8.3ms single half sine-wave @ 1.0ms	I <sub>FSM</sub>	105							A
Maximum Forward Voltage @ T <sub>J</sub> = 25°C @ 1.5A DC @ 3.0A DC	V <sub>F</sub>	1.02							V
Maximum DC Reverse Current @ T <sub>J</sub> =25°C at Rated DC Blocking Voltage @ T <sub>J</sub> =125°C	I <sub>R</sub>	5							µA
Typical junction Capacitance per element (Note 1)	C <sub>J</sub>	35							pF
I <sup>2</sup> t Rating for fusing (1ms < t < 8.3ms)	I <sup>2</sup> t	23.3							I <sup>2</sup> t
Typical Thermal Capacitance (Note 2)	R <sub>θJC</sub>	8							°C/W
	R <sub>θJL</sub>	15							
	R <sub>θJA</sub>	25							
Operating Temperature Range	T <sub>J</sub>	-55 to +150							°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150							°C

Notes: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

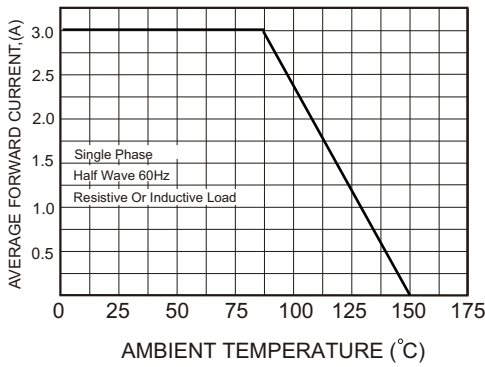
2. Thermal Resistance test performed in accordance with JESD-51. Unit mounted on

15 mm\*12 mm\*1.6 mm AL pad attach 195 mm\*110 mm\*10 mm steel plate

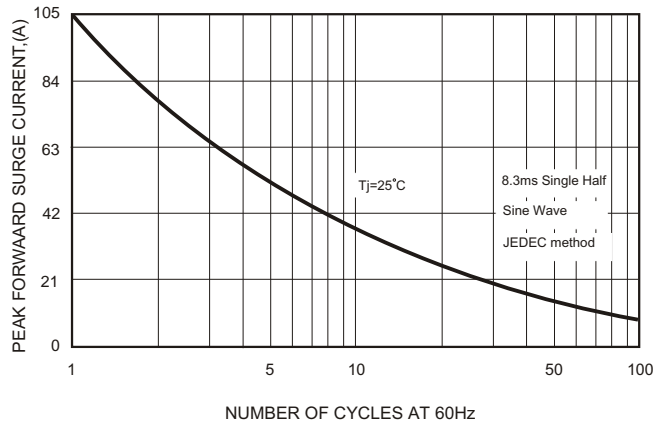
3. The typical data above is for reference only

**RATING AND CHARACTERISTIC CURVES**

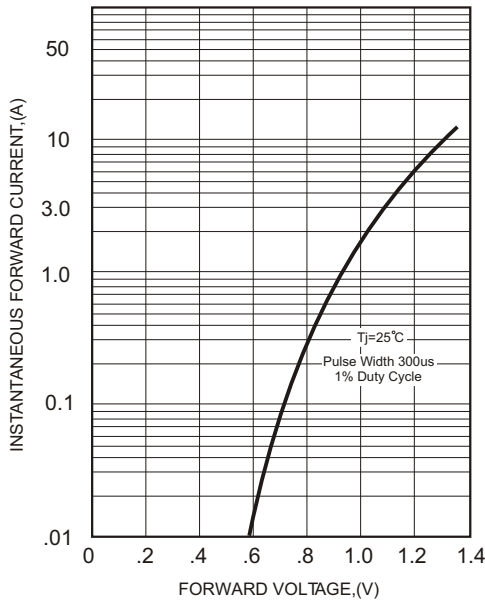
**FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE**



**FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG.3-TYPICAL FORWARD CHARACTERISTICS**



**FIG.4-TYPICAL REVERSE CHARACTERISTICS**

