

# MSB30A thru MSB30M

## GLASS PASSIVATED SURFACE MOUNT BRIDGE RECTIFIERS

### GENERAL 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

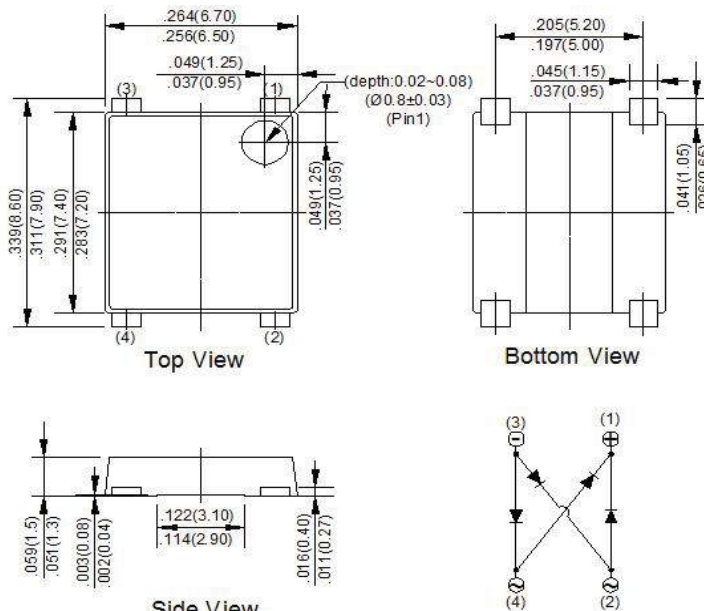
- Compact, thin profile package design
- Ideal for SMT manufacturing
- Reliable robust construction
- UL recognized file#E364304

### MECHANICAL DATA

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

REVERSE VOLTAGE - 50 to 1000 Volts  
FORWARD CURRENT -3 Amperes

### MSBL



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	MSB30A	MSB30B	MSB30D	MSB30G	MSB30J	MSB30K	MSB30M	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℃	I <sub>(AV)</sub>	3							A
Peak Forward Surge Current @ 8.3ms	I <sub>FSM</sub>	100							A
single half sine-wave @ 1.0ms		200							
Maximum Forward Voltage @ T <sub>J</sub> = 25℃ @ 1.5A DC	V <sub>F</sub>	1.02							V
@ 3.0A DC		1.1							
Maximum DC Reverse Current @T <sub>J</sub> =25℃	I <sub>R</sub>	5							μA
at Rated DC Blocking Voltage @T <sub>J</sub> =125℃		500							
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							℃/W
	R <sub>θJL</sub>	15							
	R <sub>θJA</sub>	25							
Operating Temperature Range	T <sub>J</sub>	-55 to +150							℃
Storage Temperature Range	T <sub>STG</sub>	-55 to +150							℃

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 (典型值仅供参考).

# RATING AND CHARACTERISTIC CURVES

## MSB30A thru MSB30M

FIG. 1 – FORWARD CURRENT DERATING CURVE

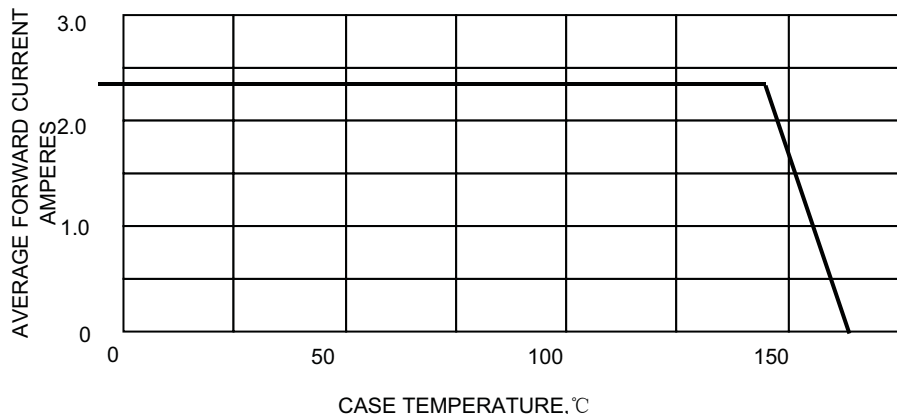


FIG. 2 – MAXIMUM NON-REPETITIVE

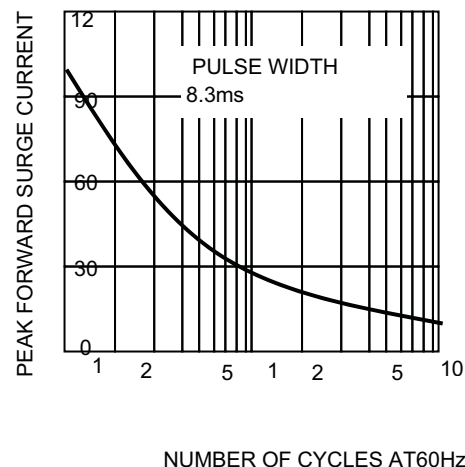


FIG.3-TYPICAL FORWARD

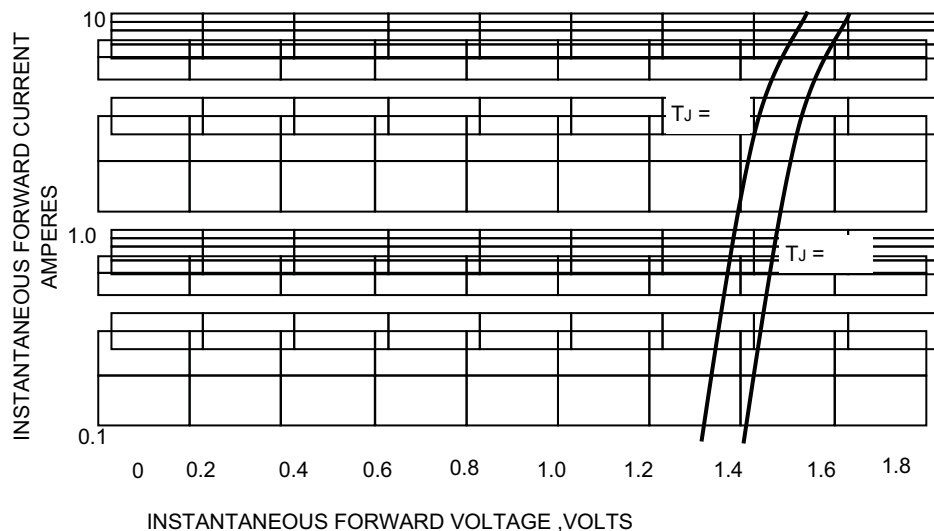


FIG.4 – TYPICAL JUNCTION CAPACITANCE

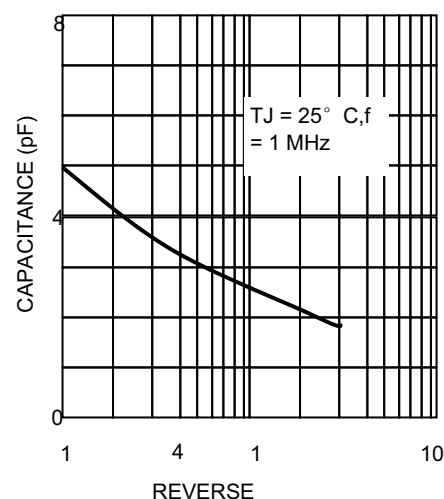
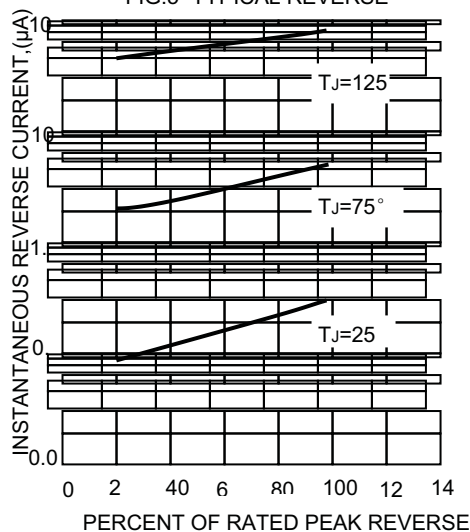


FIG.5- TYPICAL REVERSE



The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考)!