

## GLASS PASSIVATED SURFACE MOUNT BRIDGE RECTIFIERS

### Features

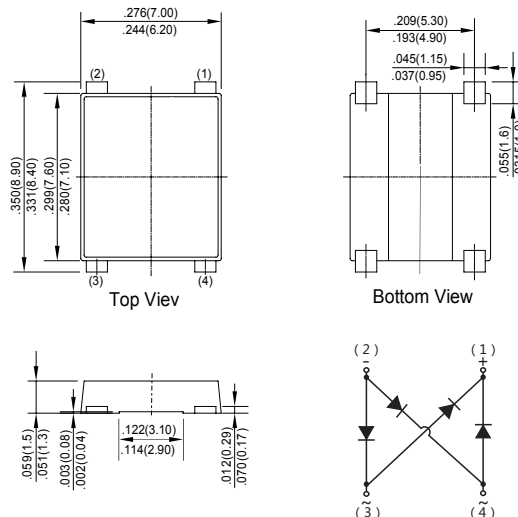
- ◆ Glass Passivated Chip Junction
- ◆ Reverse Voltage - 100 to 1000 V
- ◆ Forward Current- 3.0 A
- ◆ Fast reverse recovery time
- ◆ Designed for Surface Mount Application

UMSB

ROHS  
COMPLIANT

### Mechanical Data

Case: JEDEC UMSB molded plastic body  
 Terminals: Solderable per MIL-STD-750, Method 2026 A  
 Polarity: Polarity symbol marking on body  
 Mounting Position: Any  
 Weight : 0.00825 ounce, 0.234 grams



Dimensions in inches and (millimeters)

### 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 current derate by 20%.

Parameter	Symbols	MDD RMSB30B	MDD RMSB30D	MDD RMSB30G	MDD RMSB30J	MDD RMSB30K	MDD RMSB30M	Units
Marking Code								
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	3						A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	90						A
Maximum Forward Voltage at 3.0 A	V <sub>F</sub>	1.3						V
Maximum DC Reverse Current @T <sub>a</sub> =25 °C at Rated DC Blocking Voltage @T <sub>a</sub> =125 °C	I <sub>R</sub>	5.0 200						μA
Typical Junction Capacitance (Note 1)	C <sub>j</sub>	40						pF
Typical Thermal Resistance ( Note2 )	R <sub>θJA</sub> R <sub>θJC</sub> R <sub>θJL</sub>	65 15 30						°C/W
Maximum Reverse Recovery Time ( Note3 )	t <sub>rr</sub>	150			250	500		ns
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>stg</sub>	-55 ~ +150						°C

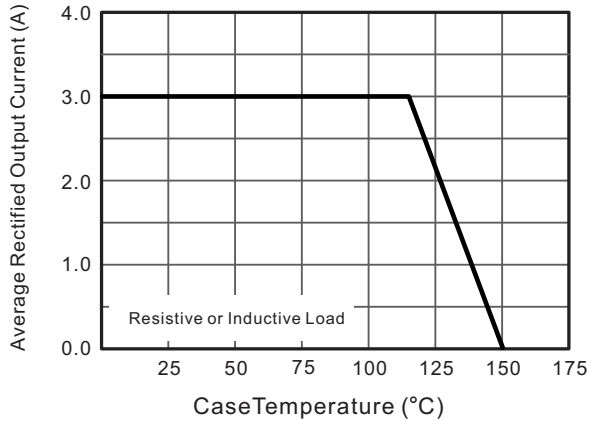
Note: 1. Measured at 1MHz and applied reverse voltage of 4 V D.C.

2. Mounted on glass epoxy PC board with  $4 \times 1.5 \times 1.5$ " ( 3.81  $\times$  3.81 cm ) copper pad areas.

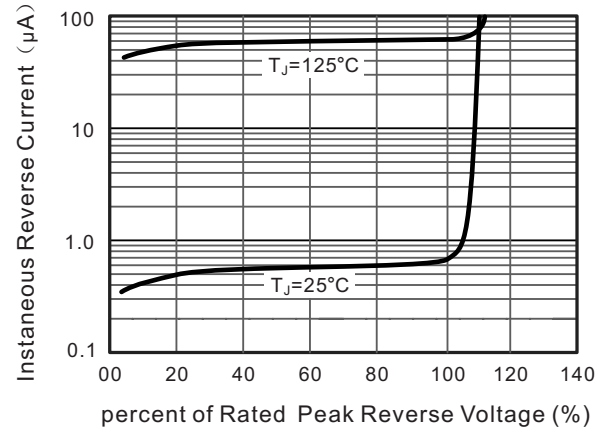
3. Measured with  $I = 0.5\text{ A}$ ,  $I = 1\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$ .

## Typical Characteristics

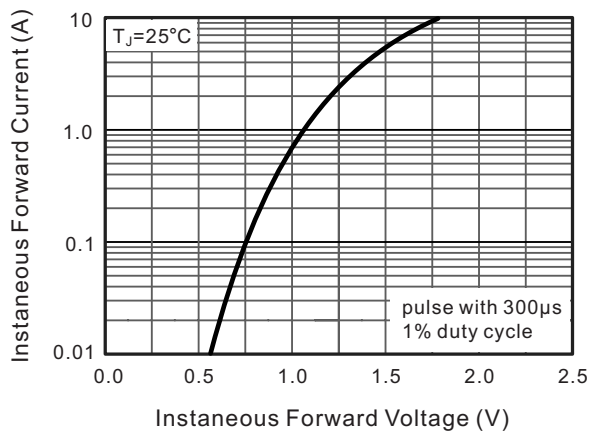
**Fig.1 Average Rectified Output Current Derating Curve**



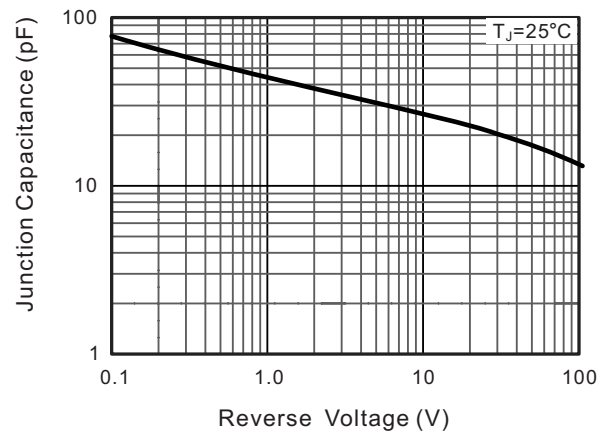
**Fig.2 Typical Reverse Characteristics**



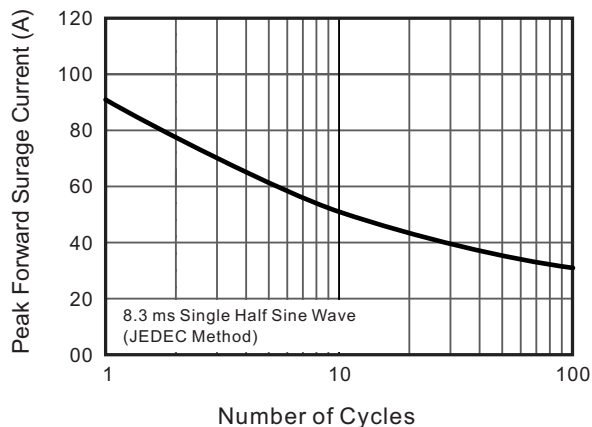
**Fig.3 Typical Instantaneous Forward Characteristics**



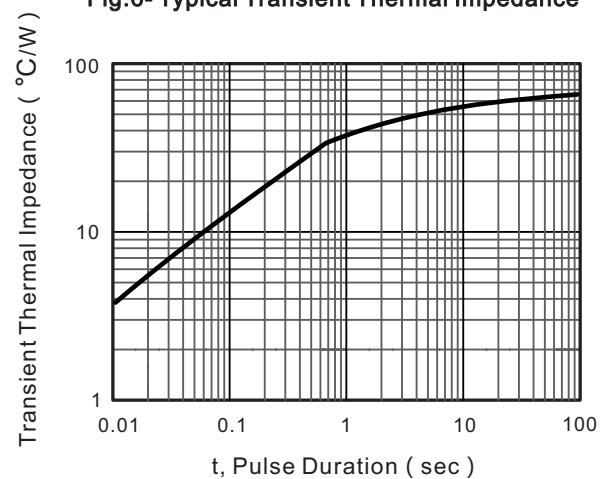
**Fig.4 Typical Junction Capacitance**



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

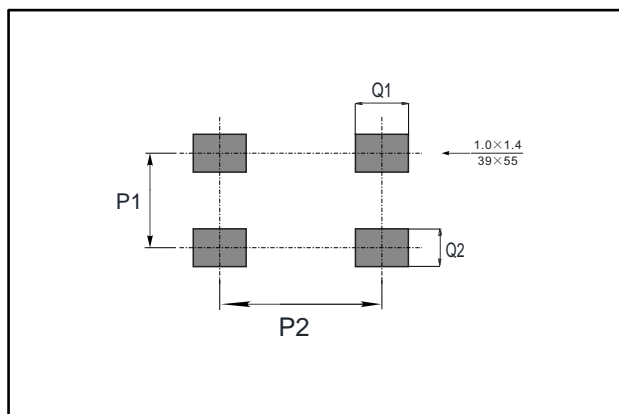


**Fig.6 Typical Transient Thermal Impedance**



The curve above is for reference only.

## Suggested Pad Layout



Dim	Min
P1	5.1
P2	7.1
Q1	1.8
Q2	1.3

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