

## Super Fast Recovery Rectifier Bridge

Reverse Voltage - 300 to 600 V

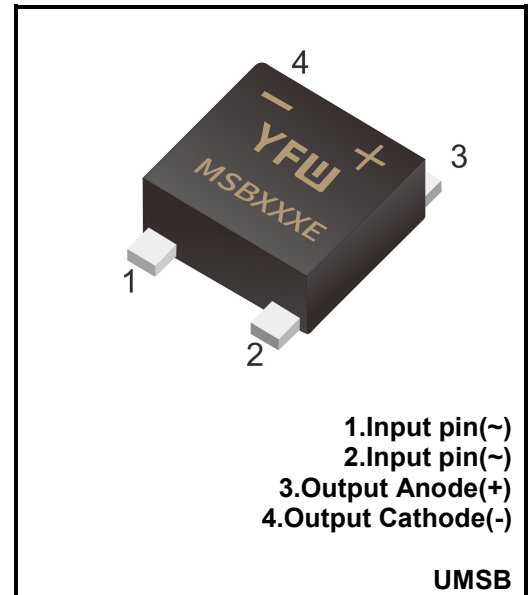
Forward Current – 4A

### FEATURES

- ◆High current capability
- ◆Low forward voltage drop
- ◆Glass Passivated Chip Junction
- ◆Low power loss, high efficiency
- ◆Lead free in comply with EU RoHS 2011/65/EU directives

### MECHANICAL DATA

- ◆Case: UMSB
- ◆Terminals: Solderable per MIL-STD-750, Method 2026
- ◆Approx. Weight: 233.7mg / 0.00824oz



### 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 %

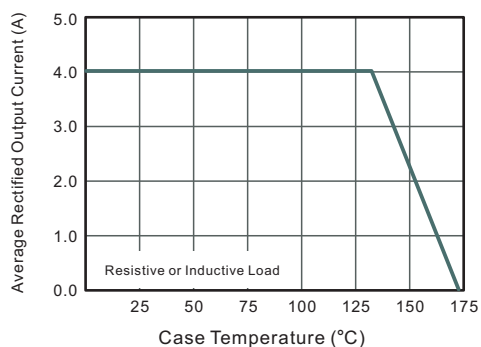
Parameter		Symbols	MSB403E	MSB406E	Units
Maximum Repetitive Peak Reverse Voltage		$V_{RRM}$	300	600	V
Maximum RMS voltage		$V_{RMS}$	200	420	V
Maximum DC Blocking Voltage		$V_{DC}$	300	600	V
Average Rectified Output Current at $T_C = 125^\circ C$		$I_{(AV)}$	4.0		A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC method)		$I_{FSM}$	125		A
Forward Voltage per element @ $I_F = 4A$ DC		$V_F$	1.20	1.50	V
Maximum Reverse Recovery Time		$T_{rr}$	50		nS
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ $T_a = 25^\circ C$	$I_R$	5		$\mu A$
	@ $T_a = 125^\circ C$		500		
Typical Junction Capacitance		$C_J$	50		pF
Operating and Storage Temperature Range		$T_j, T_{stg}$	-55 ~ +175		$^\circ C$

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

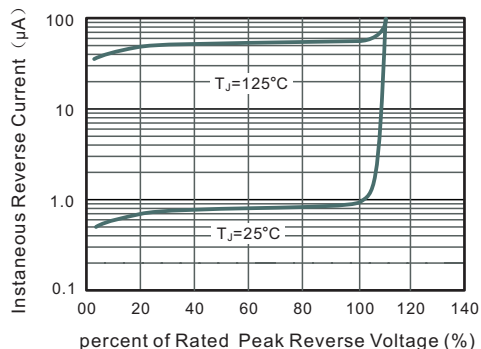
(2) Mounted on glass epoxy PC board with 4×1.5"×1.5" ( 3.81×3.81 cm ) copper pad.

**Ratings and Characteristic Curves**

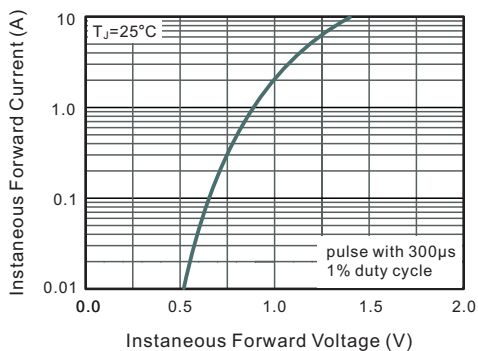
**Fig.1 Average Rectified Output Current Derating Curve**



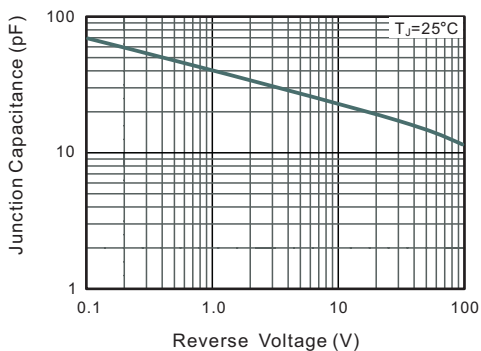
**Fig.2 Typical Reverse Characteristics**



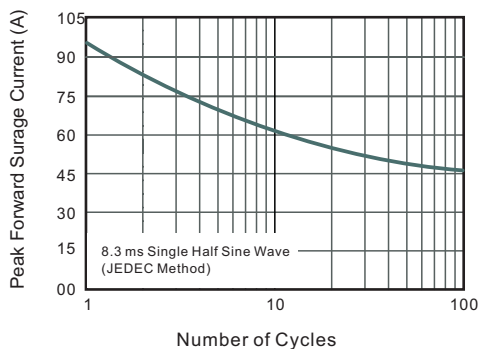
**Fig.3 Typical Instantaneous Forward Characteristics**



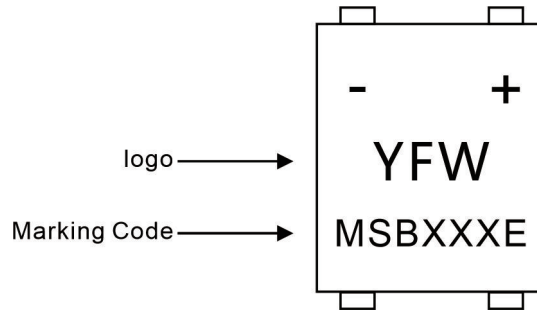
**Fig.4 Typical Junction Capacitance**



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



## Marking Diagram



## Ordering information

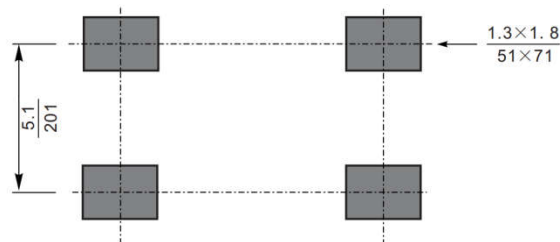
Package	Packing Description	Packing Quantity
UMSB	Tape/Reel, 13" reel	3000PCS/Reel 30000PCS/Carton

## Package Dimensions

### UMSB

Dim.	Millimeter(mm)		(mil)	
	Min.	Max.	Min.	Max.
A	1.3	1.5	51	59
C	0.17	0.29	7	12
D	6.2	7.0	244	276
E	7.1	7.6	280	299
E <sub>1</sub>	8.4	8.9	331	350
L	1.0	1.6	31.5	55
e	4.9	5.3	193	209
b	0.95	1.15	37	45
∠	10°			

## The recommended mounting pad size



Unit:  $\frac{\text{mm}}{(\text{mil})}$

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