

## 3.0A SURFACE MOUNT GLASS PASSIVATED BRIDGE

RECTIFIER Reverse Voltage - 600 to 1000 V

Forward Current – 3.0A

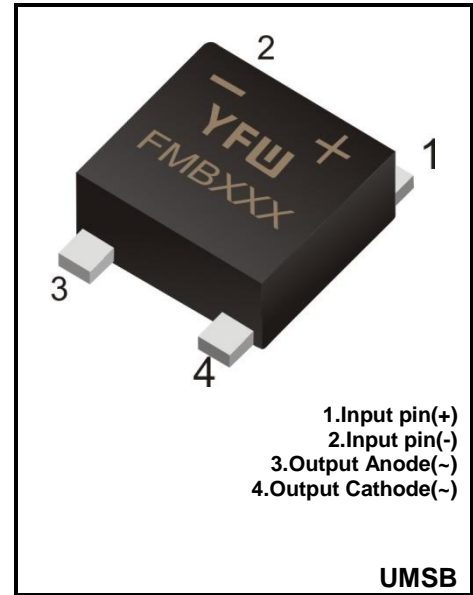


### FEATURES

- ◆Fast reverse recovery time
- ◆Designed for Surface Mount Application
- ◆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: 0.234g / 0.00824oz



### Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

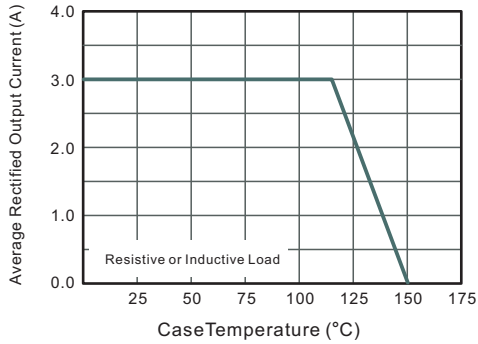
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	FMSB30J	FMSB30K	FMSB30M	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	600	800	1000	V
Average Rectified Output Current at $T_c = 125\text{ }^\circ\text{C}$	$I_o$	3.0			A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load(JEDEC method)	$I_{FSM}$	110			A
Forward Voltage per element at 3.0A	$V_F$	1.0			V
Maximum DC Reverse Current @ $T_A=25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125\text{ }^\circ\text{C}$	$I_R$	5.0 100			$\mu\text{A}$
Typical Junction Capacitance <sup>(Note1)</sup>	$C_j$	40			pF
Maximum Reverse Recovery Time <sup>(Note2)</sup> $I_F=0.5\text{A}, I_R=1\text{A}, I_{RR}=0.25\text{A}$	$T_{rr}$	10			$\mu\text{S}$
$I^2t$ rating for fusing (1ms<t<10ms)	$I^2t$	60.5			$\text{A}^2\text{S}$
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +175			$^\circ\text{C}$

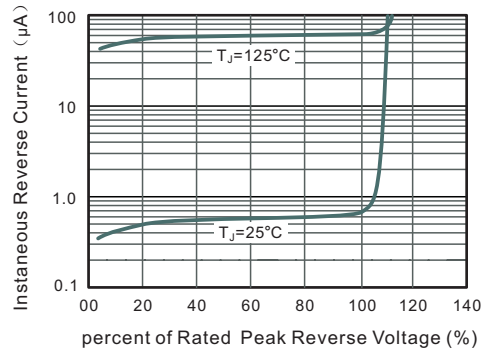
(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) Mounted on glass epoxy PC board with 4x1.5"x1.5" (3.81x3.81 cm) copper pad.

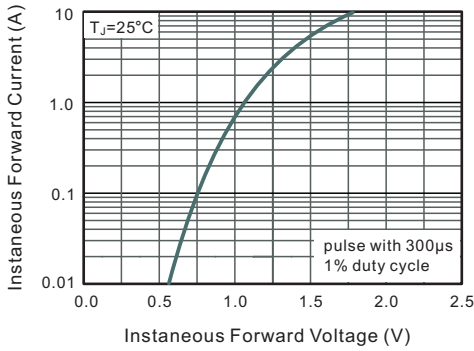
**Fig.1 Average Rectified Output Current Derating Curve**



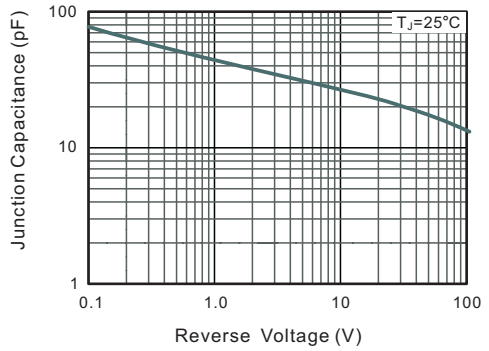
**Fig.2 Typical Reverse Characteristics**



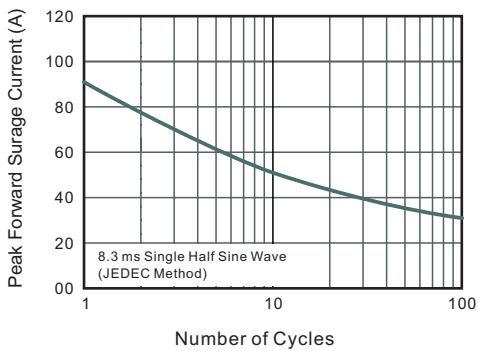
**Fig.3 Typical Instantaneous Forward Characteristics**



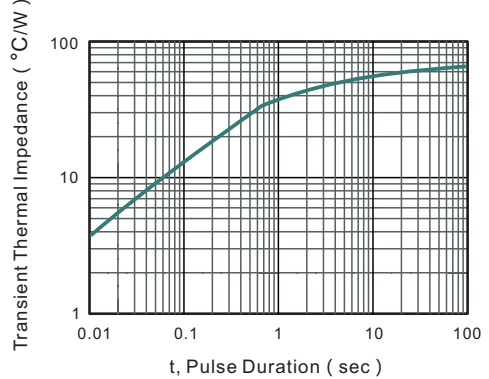
**Fig.4 Typical Junction Capacitance**



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

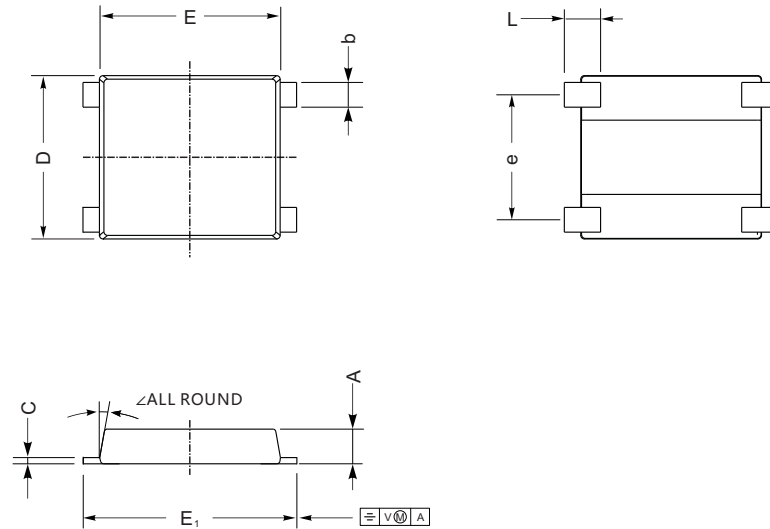


**Fig.6- Typical Transient Thermal Impedance**



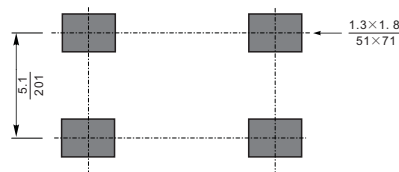
**Package Outline UMSB**

Plastic surface mounted package; 4 leads



UNIT		A	C	D	E	E <sub>1</sub>	L	e	b	$\angle$
mm	max	1.5	0.29	7.0	7.6	8.9	1.6	5.3	1.15	10°
	min	1.3	0.17	6.2	7.1	8.4	1.0	4.9	0.95	
mil	max	59	12	276	299	350	55	209	45	
	min	51	7	244	280	331	31.5	193	37	

**The recommended mounting pad size**



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

**Summary of Packing Options**

Package	Packing Description	Packing Quantity	Industry Standard
UMSB	Tape/Reel, 13" reel	3000	EIA-481-1