

**4.0A SURFACE MOUNT GLASS PASSIVATED BRIDGE**

**RECTIFIER Reverse Voltage - 100 to 1000 V**

**Forward Current – 4.0A**

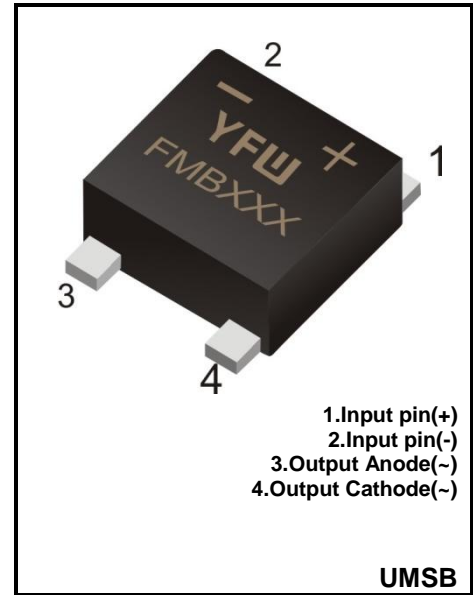


**FEATURES**

- ◆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



1.Input pin(+)  
2.Input pin(-)  
3.Output Anode(-)  
4.Output Cathode(-)

**UMSB**

**Maximum Ratings and Electrical characteristics**

Ratings at 25 °C ambient temperature unless otherwise specified.

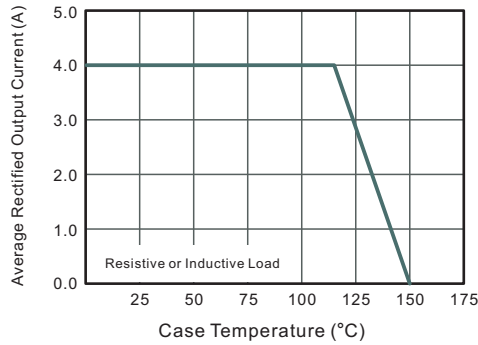
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	FMSB40B	FMSB40D	FMSB40G	FMSB40J	FMSB40K	FMSB40M	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	100	200	400	600	800	1000	V
Average Rectified Output Current at $T_c = 125\text{ }^\circ\text{C}$	$I_o$	4.0						A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load(JEDEC method)	$I_{FSM}$	95						A
Forward Voltage per element at 4.0A	$V_F$	1.3						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			$\mu\text{A}$
Typical Junction Capacitance <sup>(Note1)</sup>	$C_j$	50						pF
Maximum Reverse Recovery Time <sup>(Note2)</sup>	$T_{rr}$	150			250	500		nS
Typical Thermal Resistance <sup>(Note3)</sup>	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JC}$				60 15 25			$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150						$^\circ\text{C}$

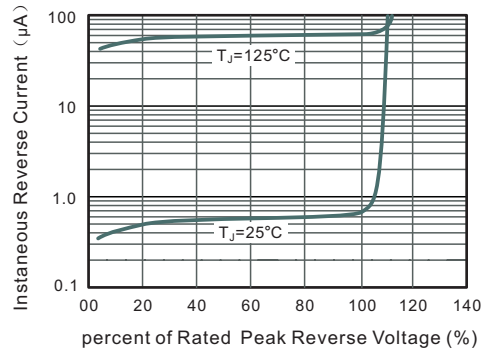
(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

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

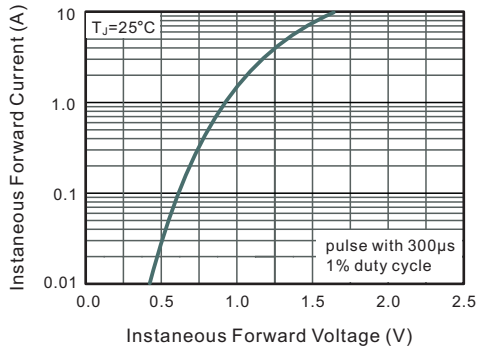
**Fig.1 Average Rectified Output Current Derating Curve**



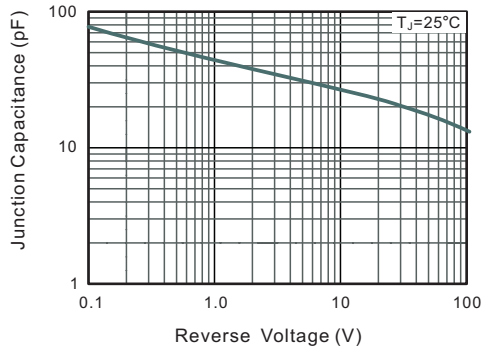
**Fig.2 Typical Reverse Characteristics**



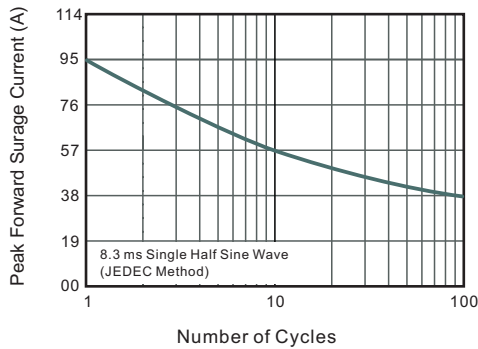
**Fig.3 Typical Instantaneous Forward Characteristics**



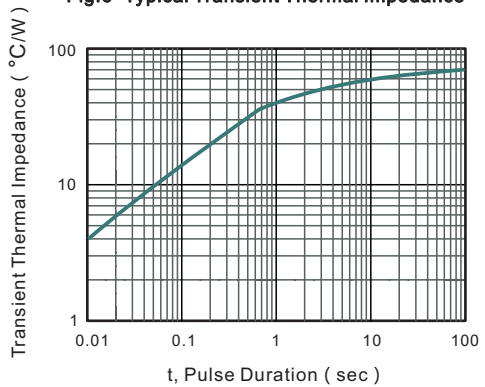
**Fig.4 Typical Junction Capacitance**



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



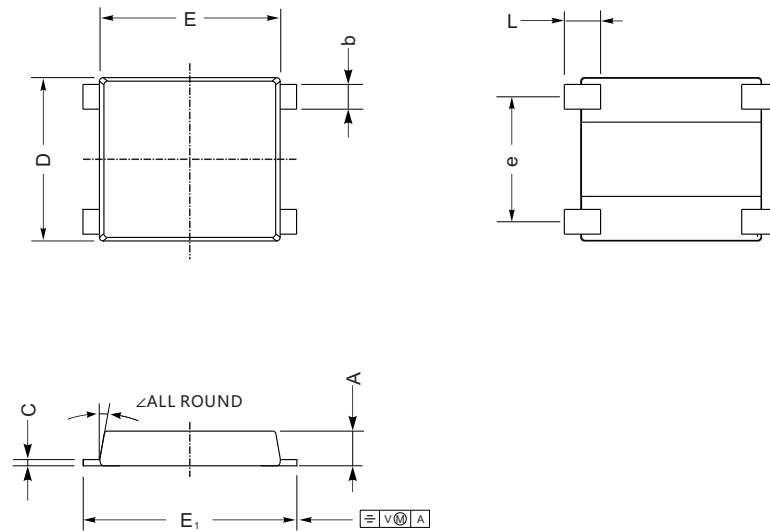
**Fig.6- Typical Transient Thermal Impedance**



**Package Outline**

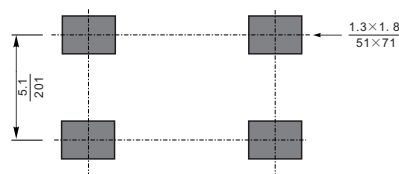
**UMSB**

Plastic surface mounted package; 4 leads



UNIT		A	C	D	E	E <sub>1</sub>	L	e	b	∠
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