

3.0A SURFACE MOUNT GLASS PASSIVATED BRIDGE

RECTIFIER Reverse Voltage - 600 to 1000 V

Forward Current – 3.0A

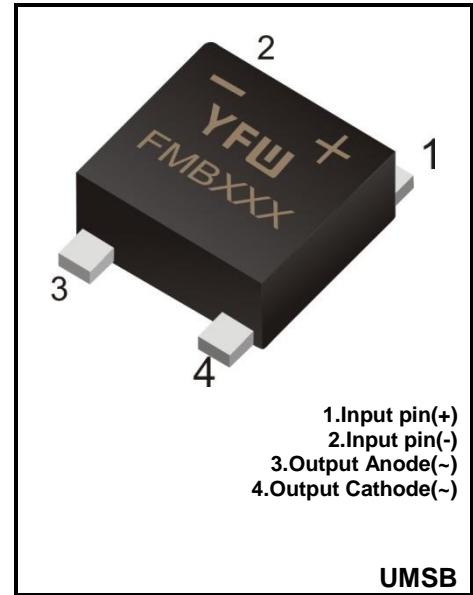


FEATURES

- ◆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			μA
Typical Junction Capacitance ^(Note1)	C_j	40			pF
Maximum Reverse Recovery Time ^(Note2) $I_F=0.5\text{A}, I_R=1\text{A}, I_{RR}=0.25\text{A}$	T_{rr}	10			μS
I^2 rating for fusing (1ms<t<10ms)	I^2t	60.5			A^2S
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

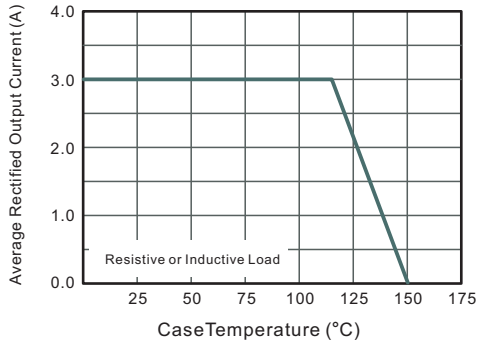


Fig.2 Typical Reverse Characteristics

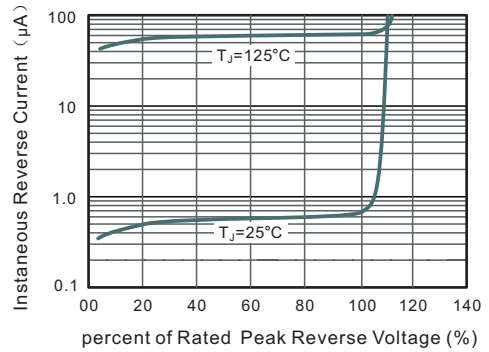


Fig.3 Typical Instantaneous Forward Characteristics

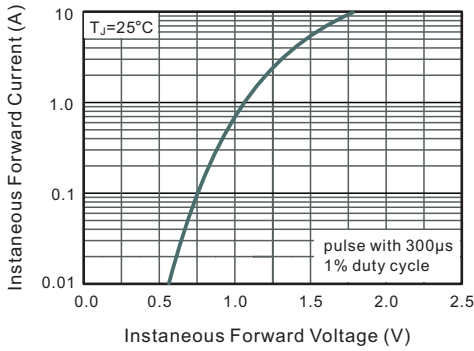


Fig.4 Typical Junction Capacitance

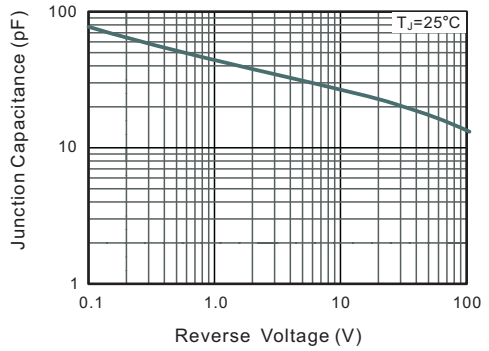


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

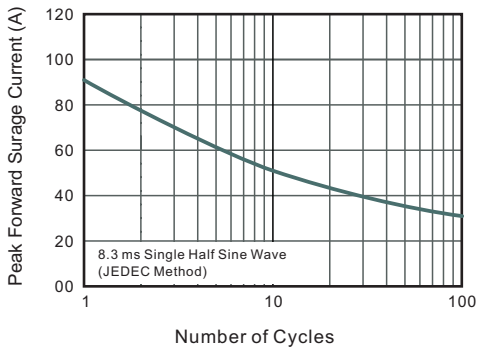
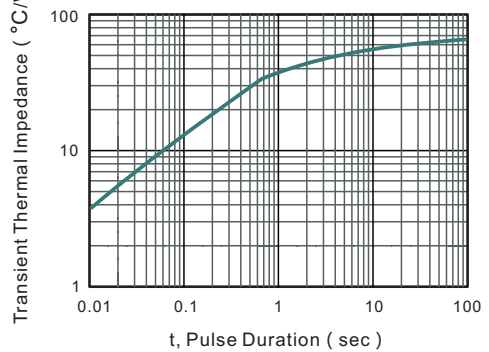
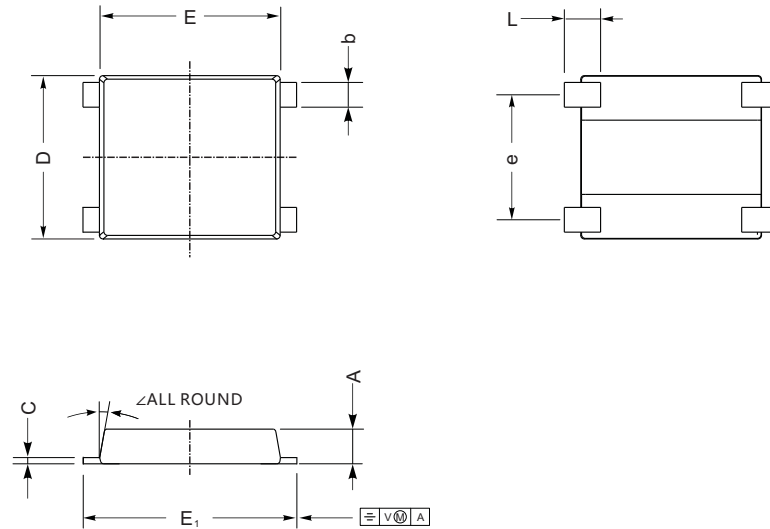


Fig.6- Typical Transient Thermal Impedance



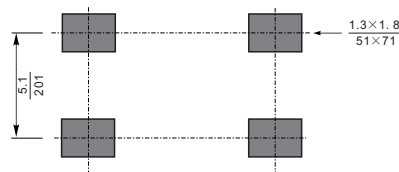
Package Outline UMSB

Plastic surface mounted package; 4 leads



UNIT		A	C	D	E	E ₁	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

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