

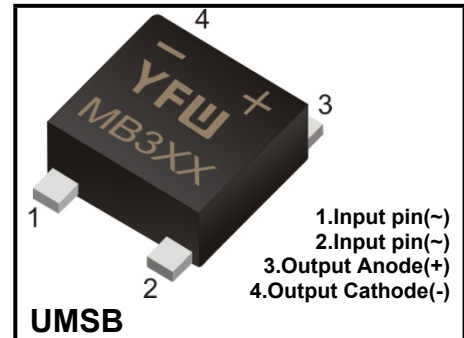
3A SURFACE MOUNT GLASS PASSIVATED BRIDGE

RECTIFIER Reverse Voltage - 100 to 1000 V

Forward Current – 3A

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



UMSB	
Marking Code	
MSB30B	MB30B
MSB30D	MB30D
MSB30G	MB30G
MSB30J	MB30J
MSB30K	MB30K
MSB30M	MB30M

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	MSB30B	MSB30D	MSB30G	MSB30J	MSB30K	MSB30M	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 $T_c = 125^\circ C$	I_o	3						A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load(JEDEC method)	I_{FSM}	80						A
Forward Voltage per element at 3.0A	V_F	1.1						V
Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=125^\circ C$	I_R	5 100						μA
Typical Junction Capacitance (Note1)	C_j	40						pF
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150						$^\circ C$

(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.

Fig.1 Average Rectified Output Current Derating Curve

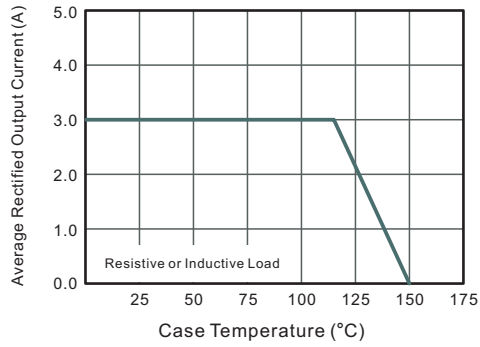


Fig.2 Typical Reverse Characteristics

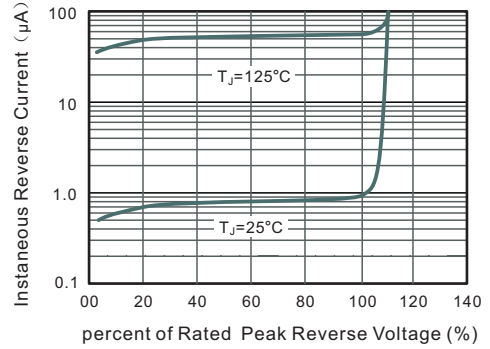


Fig.3 Typical Instantaneous Forward Characteristics

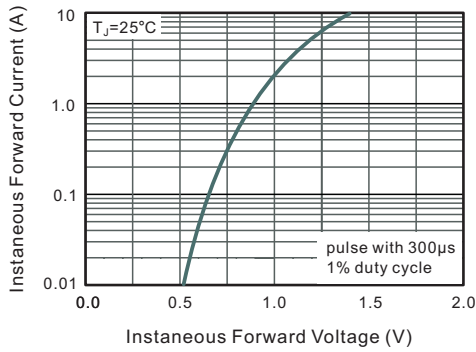


Fig.4 Typical Junction Capacitance

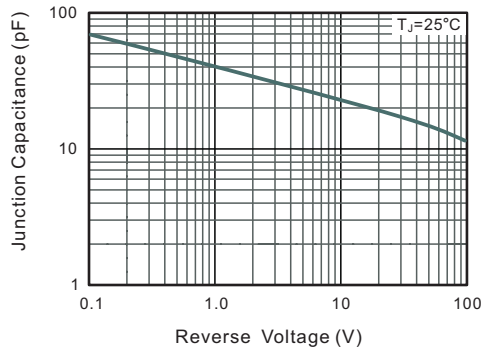
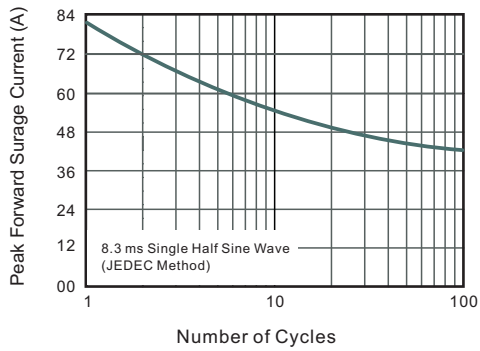


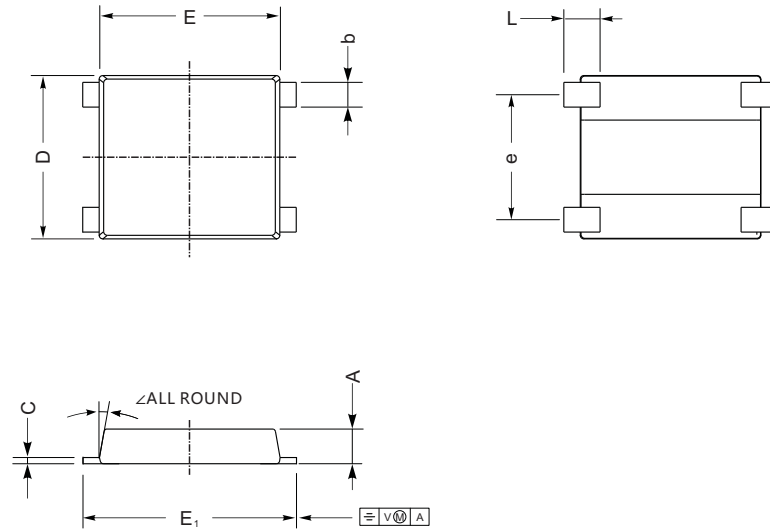
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



Package Outline

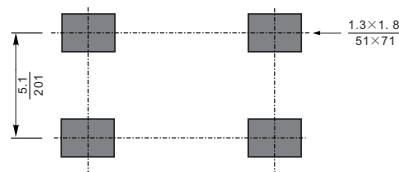
UMSB

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