

4A Super Fast Recovery Rectifier Bridge

Reverse Voltage - 300 to 600 V
Forward Current – 4A

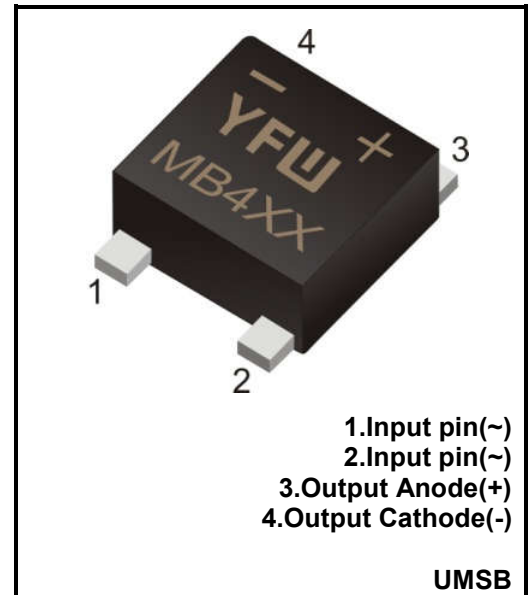
FEATURES

- ◆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}	35		nS
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ $T_a = 25^\circ C$	I_R	5		μA
	@ $T_a = 125^\circ C$		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

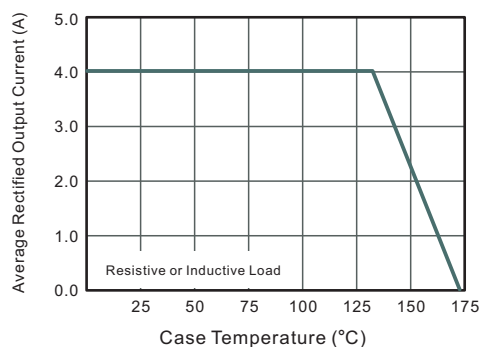


Fig.2 Typical Reverse Characteristics

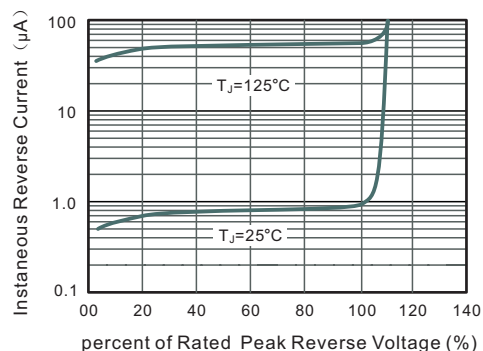


Fig.3 Typical Instantaneous Forward Characteristics

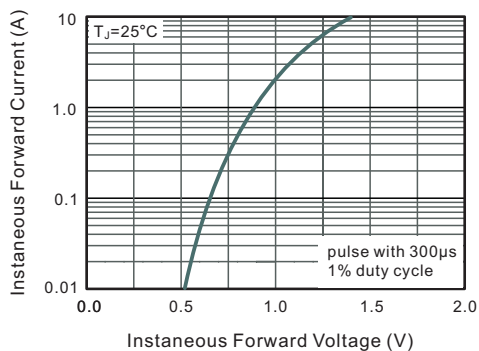


Fig.4 Typical Junction Capacitance

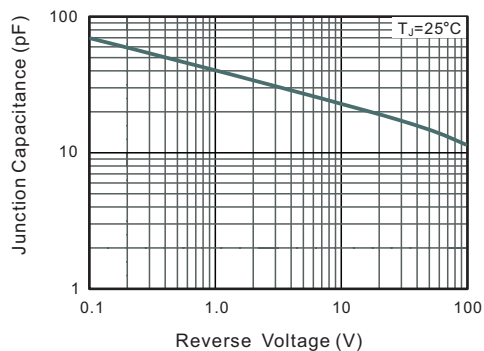
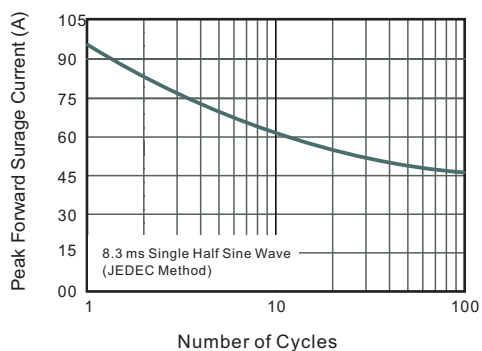
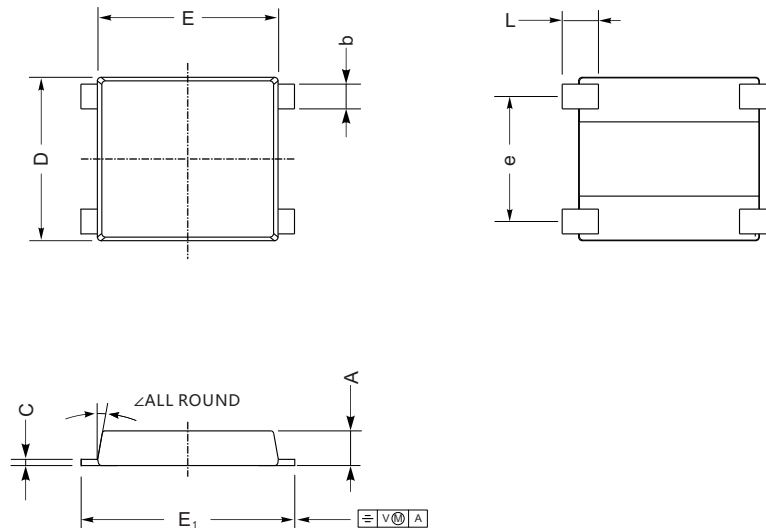


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

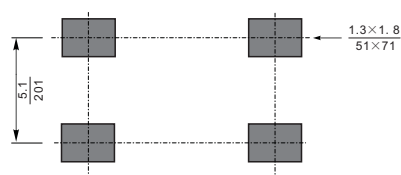


Plastic surface mounted package; 4 leads



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