

**SINGLE PHASE 3.0AMP GLASS PASSIVATED  
BRIDGE RECTIFIERS**
**Reverse Voltage - 50 to 1000 V**
**Forward Current - 3A**
**FEATURES**

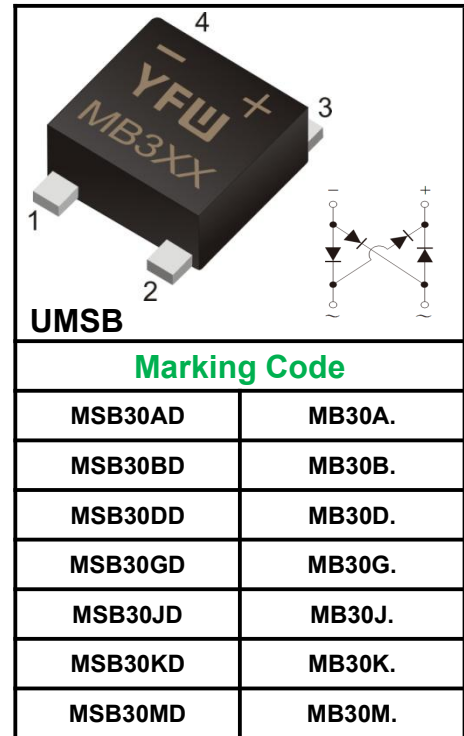
- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Idea for printed circuit board
- ◆ Glass passivated Junction chip
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed 250°C/10 seconds at terminals

**MECHANICAL DATA**

- ◆ Case : Molded plastic body
- ◆ Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- ◆ Polarity : Polarity symbol marking on body
- ◆ Mounting Position : Any

**Maximum Ratings and Electrical characteristics**

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%



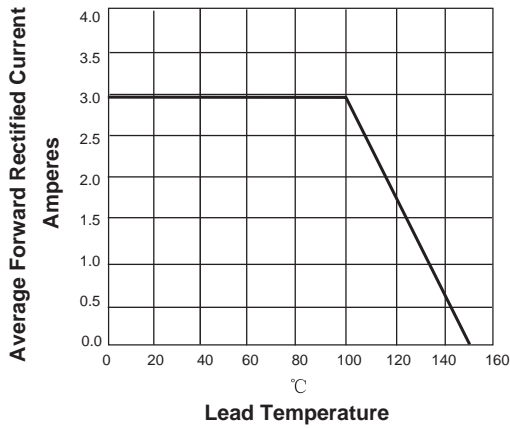
Parameter	Symbols	MSB30AD	MSB30BD	MSB30DD	MSB30GD	MSB30JD	MSB30KD	MSB30MD	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at $T_L=100^\circ\text{C}$	$I_{(AV)}$	3							A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rate Load	$I_{FSM}$	120							A
Rating for fusing ( $t=8.3\text{ms}$ , $T_a=25^\circ\text{C}$ )	$I^2_t$	59.76							$\text{A}^2_s$
Maximum instantaneous forward voltage at 3.0A	$V_F$	1.1							V
Maximum DC Reverse Current @ $T_a=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_a=125^\circ\text{C}$	$I_R$	5.0 500							$\mu\text{A}$
Typical Junction Capacitance (Note1)	$C_j$	33							pF
Typical thermal resistance	$R_{qJA}$	55.0							$^\circ\text{C/W}$
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

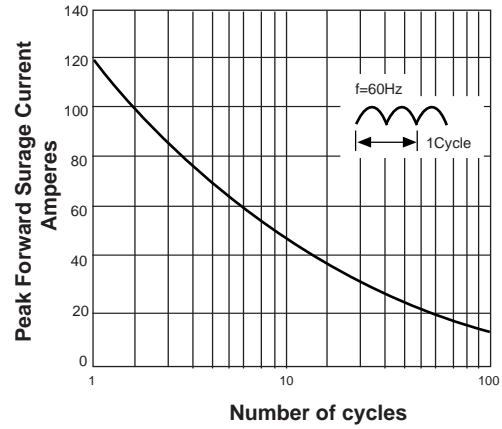
(2) Mounted on glass epoxy PC board with 4×1.5"×1.5" (3.81×3.81 cm) copper pad.

**Ratings And Characteristic Curves**

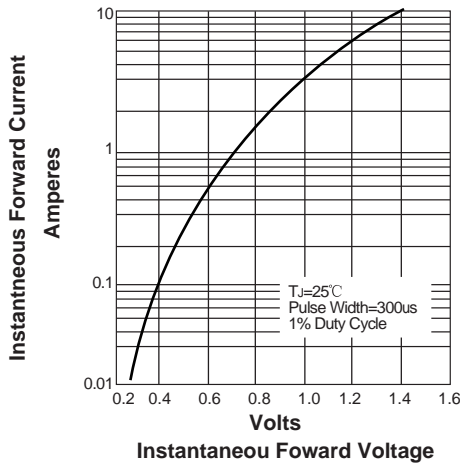
**FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT**



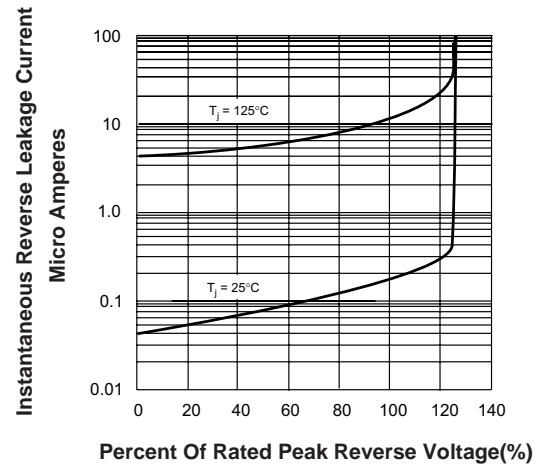
**FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG**



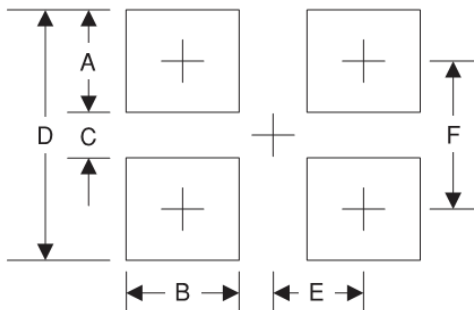
**FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS**



**FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS**



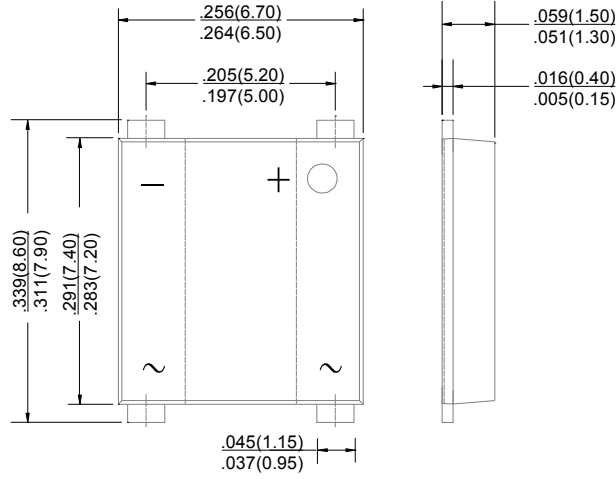
**Suggested Pad Layout**



Symbol	Unit (mm)	Unit (inch)
A	1.8	0.071
B	2.0	0.078
C	5.50	0.216
D	9.15	0.360
E	2.6	0.102
F	7.35	0.289

**Package Outline**

**UMSB**



**Summary of Packing Options**

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

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