

## SINGLE PHASE 4.0AMP GLASS PASSIVATED BRIDGE RECTIFIERS

Reverse Voltage - 100 to 1000 V

Forward Current - 4A

### FEATURES

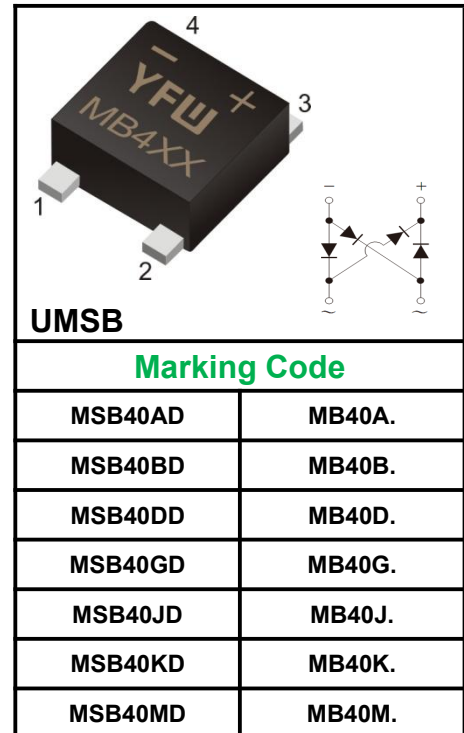
- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Idea for printed circuit board
- ◆ Glass passivated Junction chip
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed 250°C/10 seconds at terminals

### 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%.

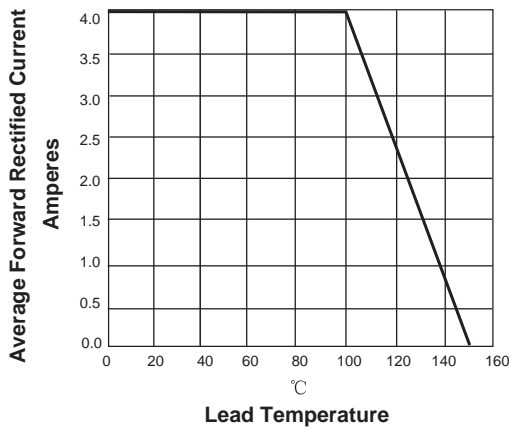


Parameter	Symbols	MSB40AD	MSB40BD	MSB40DD	MSB40GD	MSB40JD	MSB40KD	MSB40MD	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at $T_L=100^\circ\text{C}$	$I_{(AV)}$	4							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	150							A
Rating for fusing ( $t=8.3\text{ms}$ , $T_a=25^\circ\text{C}$ )	$I^2_t$	93.3							A <sup>2</sup> s
Forward Voltage per element at 4.0A	$V_F$	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_A=25^\circ\text{C}$ @ $T_A=125^\circ\text{C}$	$I_R$	5 500							$\mu\text{A}$
Typical Junction Capacitance (Note1)	$C_j$	38.0							pF
Typical thermal resistance	$R_{qJA}$	55							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150							$^\circ\text{C}$

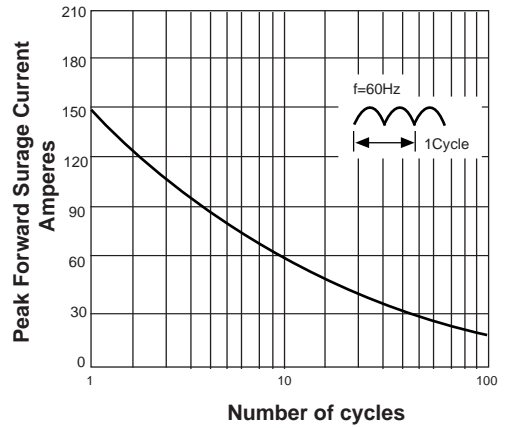
1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

**Ratings And Characteristic Curves**

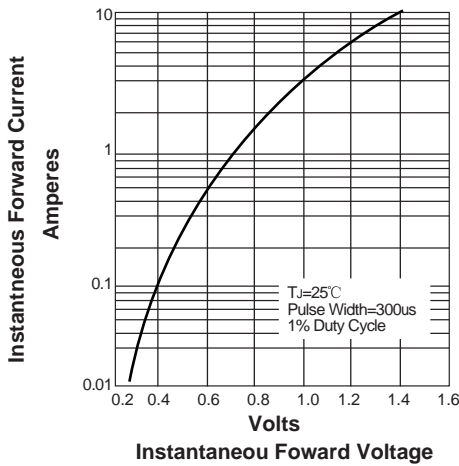
**FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT**



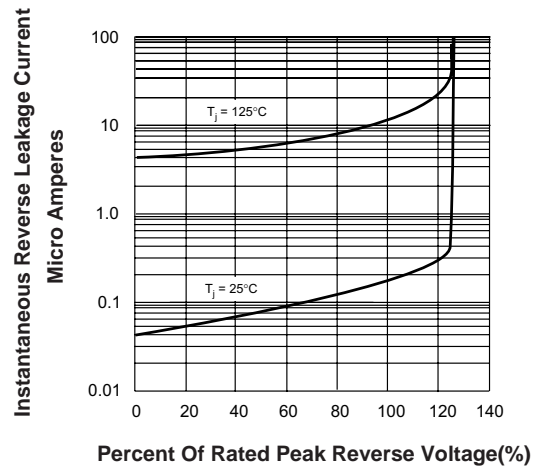
**FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG**



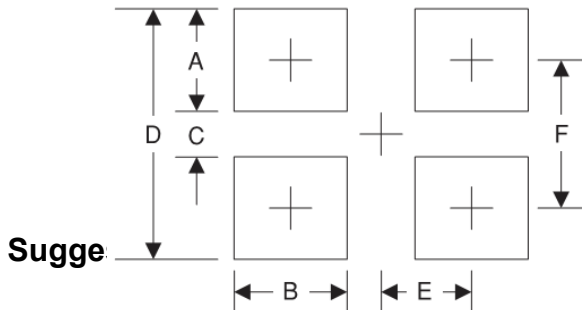
**FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS**



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



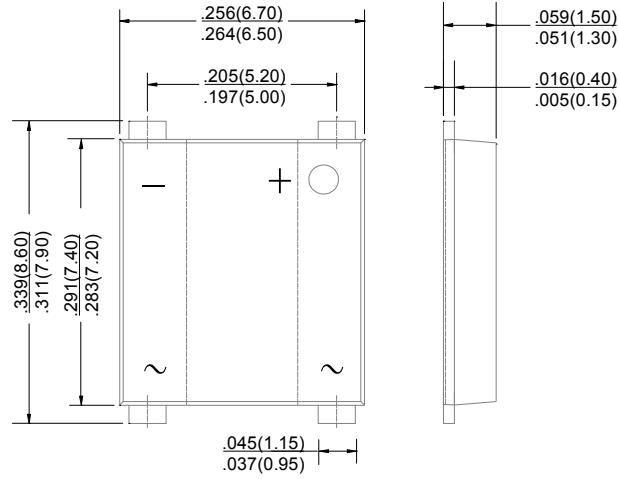
**Suggested Pad Layout**



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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