

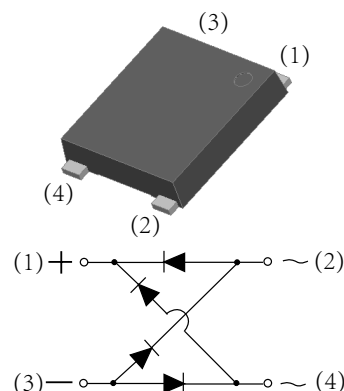
# MSB Plastic-Encapsulate Bridge Rectifier

## Bridge Rectifier

### Features:

- $I_{F(AV)}$  4A
- $V_{RRM}$  1000V"
- High surge current capability
- Glass passivated chip

**MSB**



### Application's

- General purpose 1 phase Bridge rectifier applications

### Marking

- MSB410

### Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions		MSB410
Repetitive Peak Reverse Voltage	$V_{RRM}$	V			1000
Maximum RMS Voltage	$V_{RMS}$	V			700
Maximum DC Blocking Voltage	$V_{DC}$	V			1000
Average Rectified Output Current	$I_o$	A	60Hz sine wave, R-load, $T_a=100^{\circ}C$	On alumina substrate	4.0
Surge(Non-repetitive)Forward Current	$I_{FSM}$	A	8.3ms sine wave, 1 cycle, $T_j=25^{\circ}C$		150
Current Squared Time	$I^2t$	$A^2S$	$1ms \leq t < 8.3ms$ $T_j=25^{\circ}C$ , Rating of per diode		41.5
Operation Junction and Storage Temperature Range	$T_j, T_{stg}$	$^{\circ}C$			-55 ~+150

### Electrical Characteristics (T=25°C Unless otherwise specified)

Item	Symbol	Unit	Test Condition		Max
Maximum Peak Forward Voltage	$V_{FM}$	V	$I_{FM}=4.0A$ , Pulse measurement, Rating of per diode		0.98
Maximum Reverse Recovery Time	$T_{RR}$	ns	Measured with $I_F=0.5A, I_R=1A, I_{RR}=0.25A$		5000
Maximum Peak Reverse Current	$I_{RRM1}$	$\mu A$	$V_{RM}=V_{RRM}$ , Pulse measurement, Rating of per diode	$T_A=25^{\circ}C$	5.0
	$I_{RRM2}$	$\mu A$		$T_A=125^{\circ}C$	500
Thermal Resistance	$R_{\theta J-A}$	$^{\circ}C/W$	Between junction and ambient, On alumina substrate		55
	$R_{\theta J-L}$		Between junction and lead		15
	$R_{\theta J-C}$		Between junction and case		10

**Typical Characteristics**

FIG.1: FORWARD CURRENT DERATING CURVE

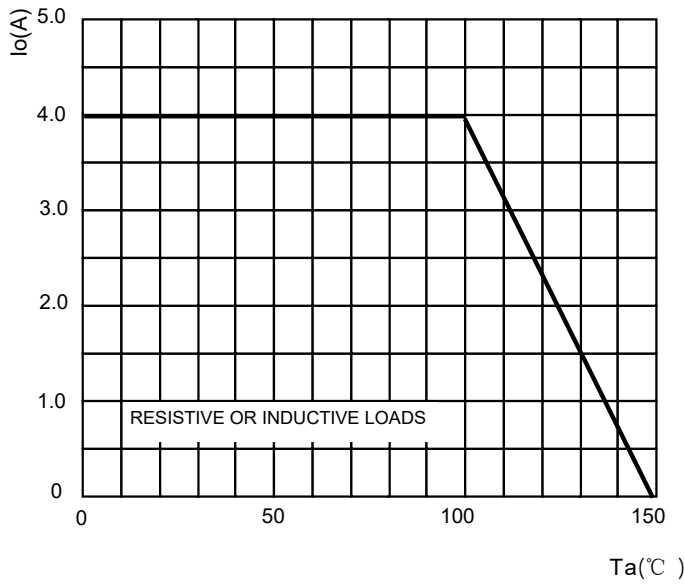


FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

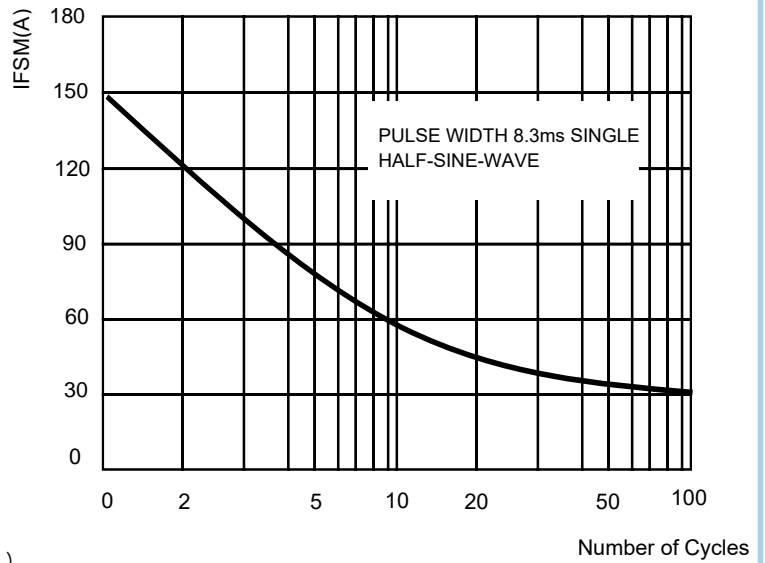


FIG.3: TYPICAL FORWARD CHARACTERISTICS

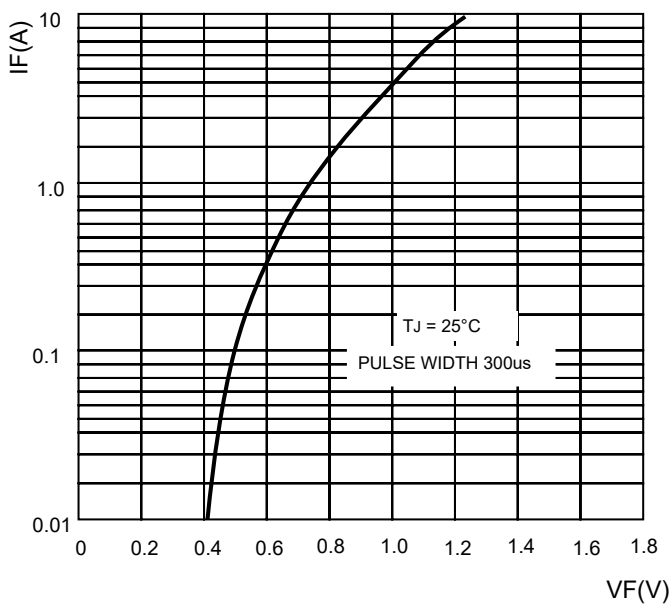
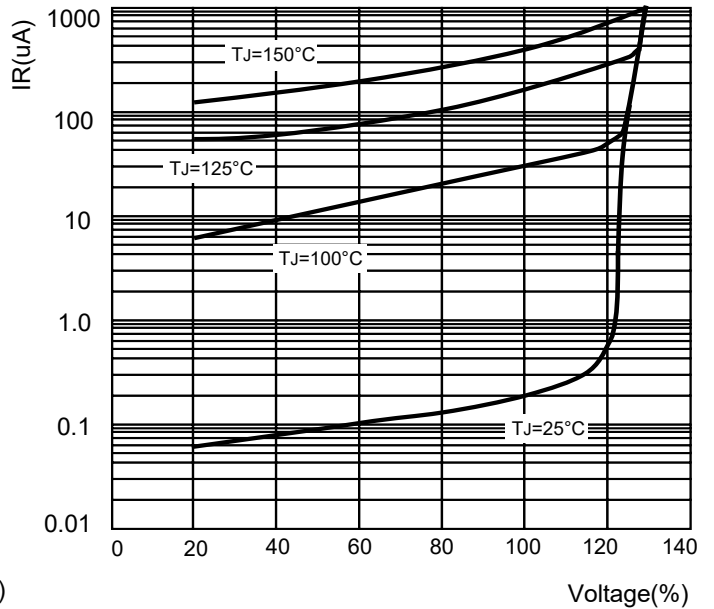
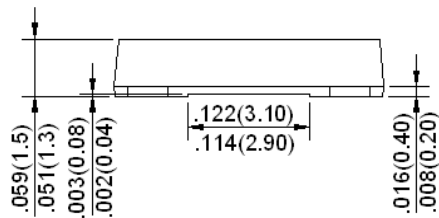
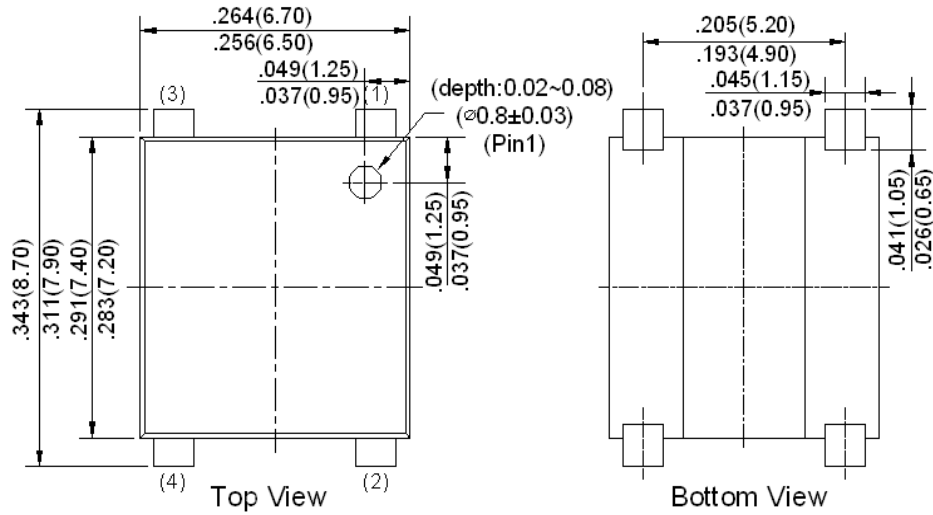


FIG.4: TYPICAL REVERSE CHARACTERISTICS

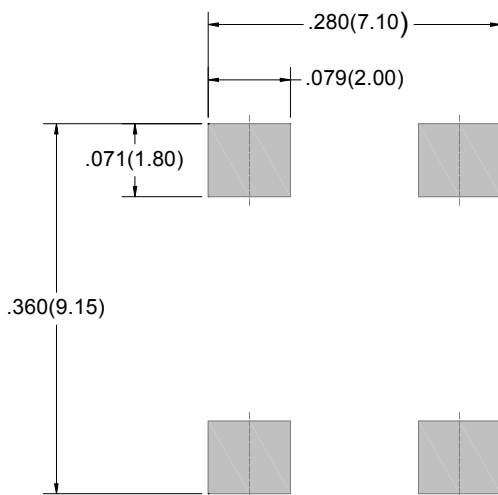


### UMSB Package Outline Dimensions



Dimensions in inches and (millimeters)

### UMSB Suggested Pad Layout



**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.