

UMSB Plastic-Encapsulate Bridge Rectifier

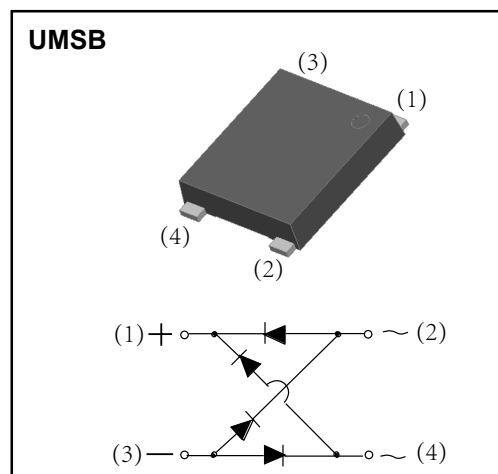
HALOGEN FREE

Features

- I_O 3A
- VRRM 50V-1000V
- Low forward voltage drop
- High surge current capability
- Glass passivated chip junction

Mechical Data

- Case: UMSB molded plastic
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Solder plated, solderable per MIL- STD-202, Method 208
- Polarity: Color band denotes cathode end



Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	MSB30						
				A	B	D	G	J	K	M
Repetitive Peak Reverse Voltage	V_{RRM}	V		50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V		35	70	140	280	420	560	700
Maximum DC blocking Voltage	V_{DC}	V		50	100	200	400	600	800	1000
Average Forward Current	$I_{F(AV)}$	A	60HZ Half-sine wave, Resistance load, $T_A = 50^\circ C$	3.0						
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave, 1 cycle, $T_A = 25^\circ C$	80						
Current Squared Time	I^2t	A ² S	$1ms \leq t < 8.3ms$ $T_j = 25^\circ C$, Rating of per diode	26.56						
Junction Temperature	T_J	$^\circ C$		-55~+150						
Storage Temperature	T_{STG}	$^\circ C$		-55 ~ +150						

Electrical Characteristics ($T_A = 25^\circ C$ Unless otherwise specified)

Item	Symbol	Unit	Test Condition	MSB30						
				A	B	D	G	J	K	M
Forward voltage	V_F	V	$I_F = 3.0A$	1.1						
Peak Reverse Current	I_{RRM1}	μA	$V_{RM} = V_{RRM}$	$T_A = 25^\circ C$						
	I_{RRM2}			$T_A = 125^\circ C$						
Thermal Resistance(Typical)	$R_{\theta JA}$	$^\circ C/W$	Between junction and ambient	55						
	$R_{\theta JL}$		Between junction and terminal	15						
	$R_{\theta JC}$		Between junction and case	10						

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

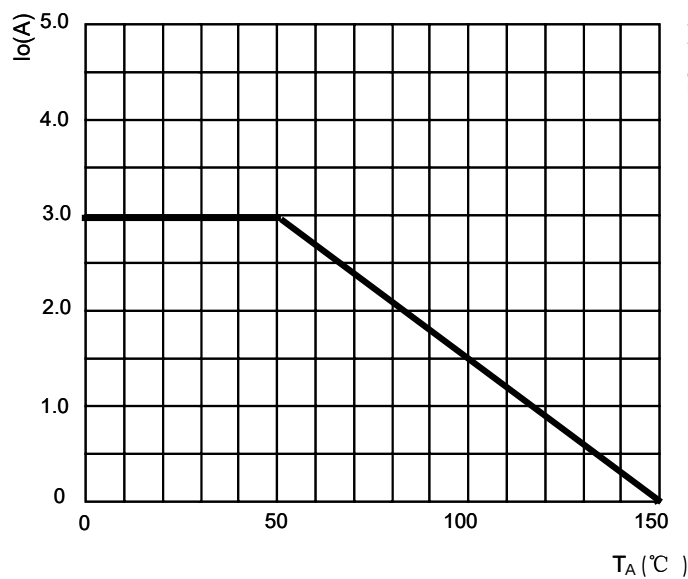


FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

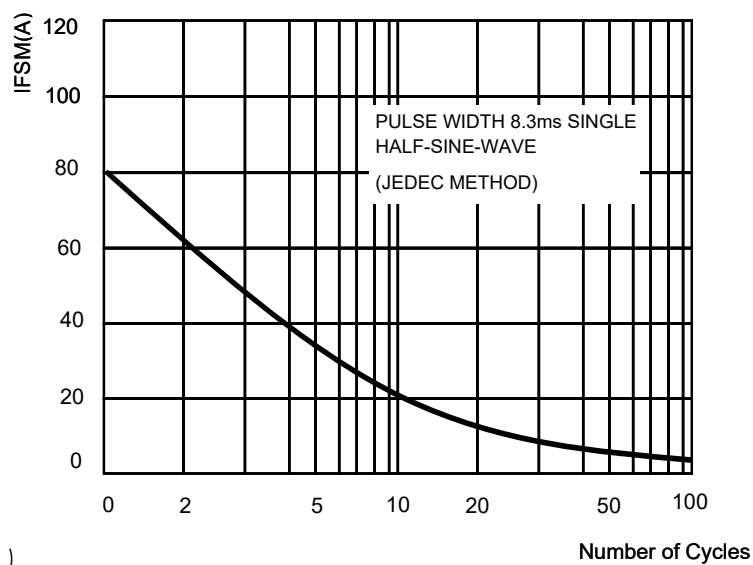


FIG.3: TYPICAL FORWARD CHARACTERISTICS

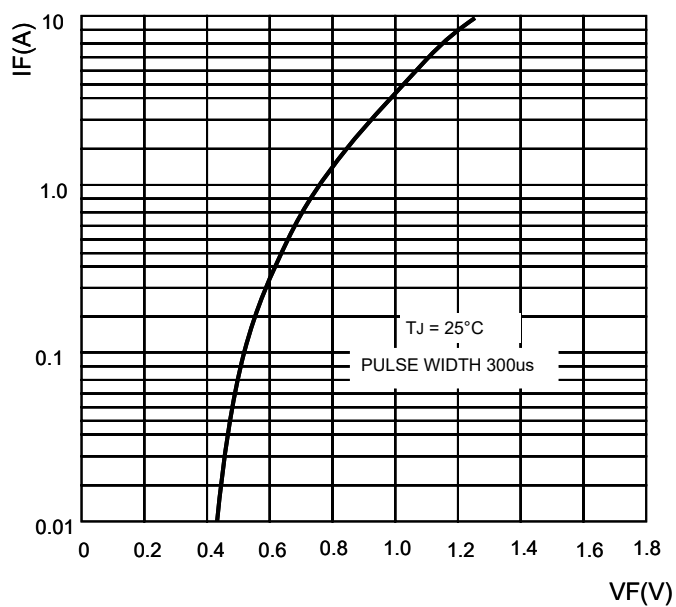
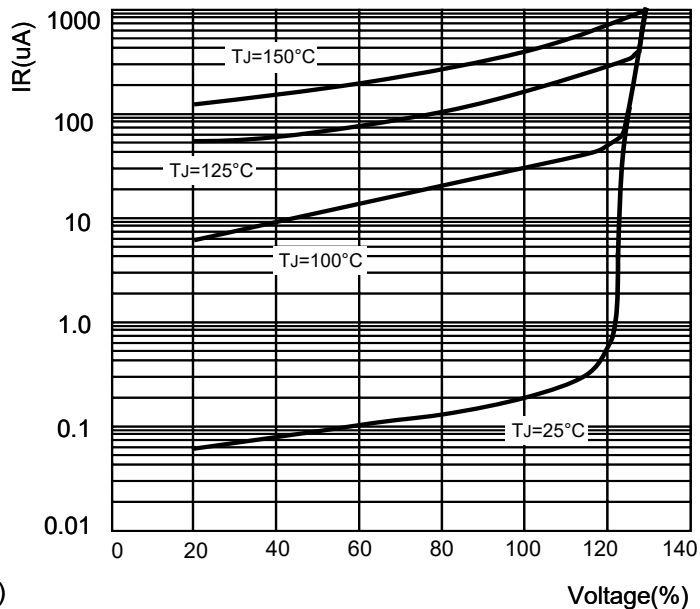
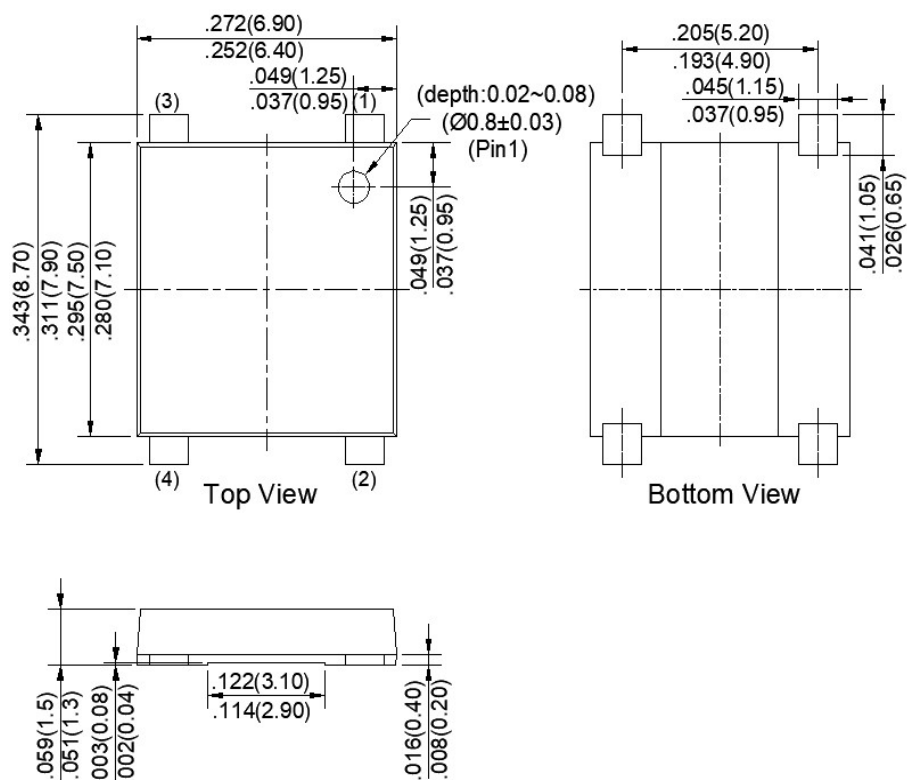


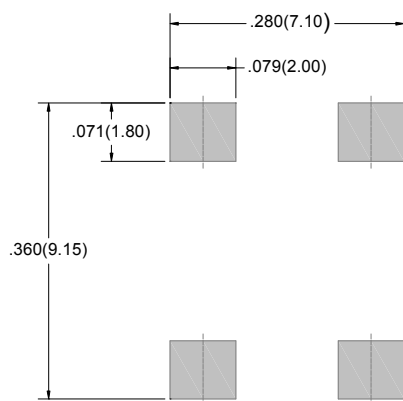
FIG.4: TYPICAL REVERSE CHARACTERISTICS



UMSB Package Outline Dimensions



UMSB Suggested Pad Layout



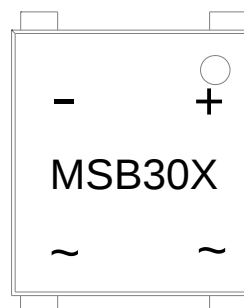
Note:

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

Ordering Information

Part Number	Package	Shipping Quantity
MSB30A- MSB30M	UMSB	3000/tape&Reel

Marking Diagram



X: From A To M

Reel Taping Specifications For Surface Mount Devices-UMSB

