

UMSB Plastic-Encapsulate Bridge Rectifier

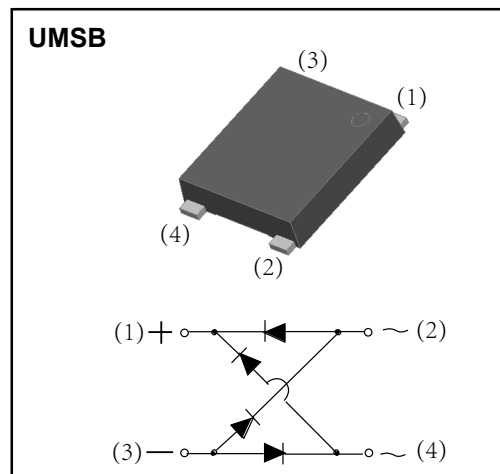
HALOGEN FREE

Features

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

Mechanical Data

- Case: USB 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	Conditions	RMSB30MA
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, $T_a=60^\circ\text{C}$	3.0
Surge(Non-repetitive)Forward Current	I_{FSM}	A	8.3ms half sine wave, 1 cycle, $T_j=25^\circ\text{C}$	110
Current Squared Time	I^2t	A^2S	$1\text{ms} \leq t < 8.3\text{ms}$ $T_j=25^\circ\text{C}$, Rating of per diode	50.2
Operation Junction and Storage Temperature Range	T_j, T_{stg}	$^\circ\text{C}$		-55 ~+150

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

Item	Symbol	Unit	Test Condition	Max	
Maximum Peak Forward Voltage	V_{FM}	V	$I_{FM}=3.0\text{A}$, Pulse measurement, Rating of per diode	1.3	
Maximum Reverse Recovery Time	T_{RR}	ns	Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{RR}=0.25\text{A}$	250	
Maximum Peak Reverse Current	I_{RRM1}	μA	$V_{RM}=V_{RRM}$, Pulse measurement, Rating of per diode	$T_A=25^\circ\text{C}$	5.0
	I_{RRM2}	μA		$T_A=125^\circ\text{C}$	500
Thermal Resistance	$R_{\theta J-A}$	$^\circ\text{C/W}$	Between junction and ambient	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

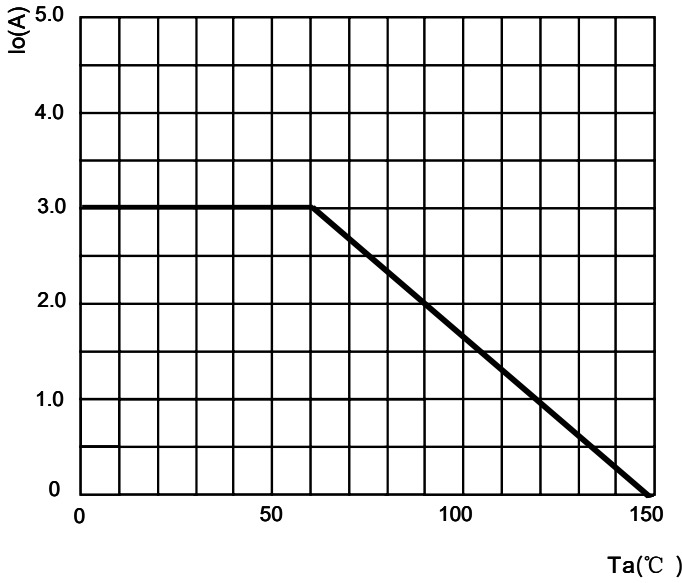


FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

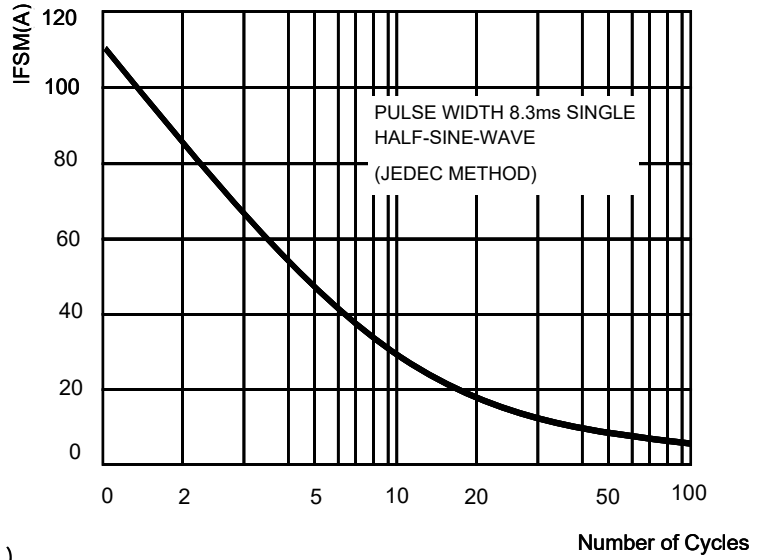


FIG.3: TYPICAL FORWARD CHARACTERISTICS

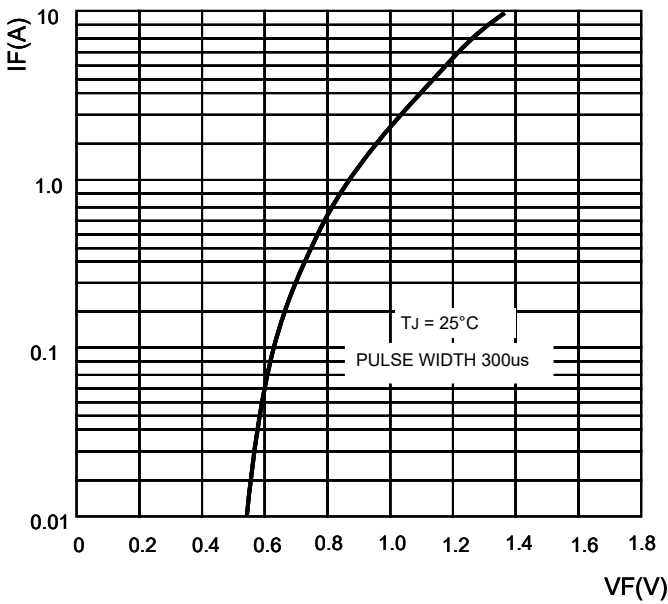
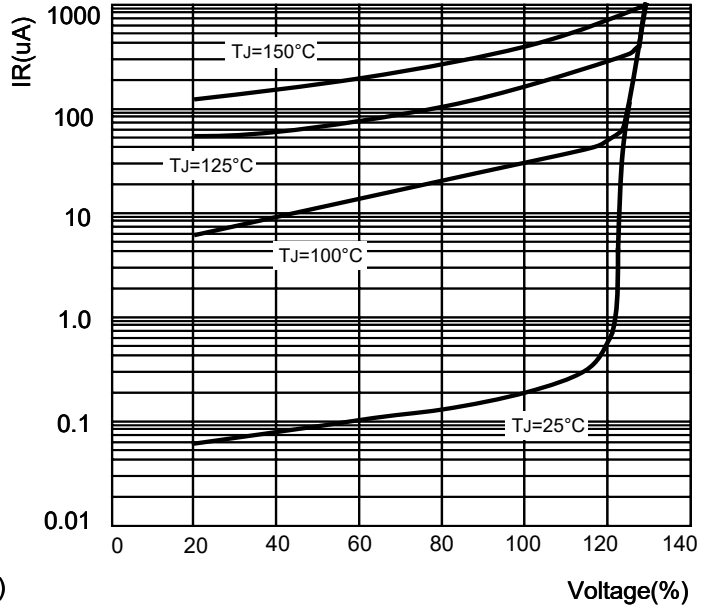
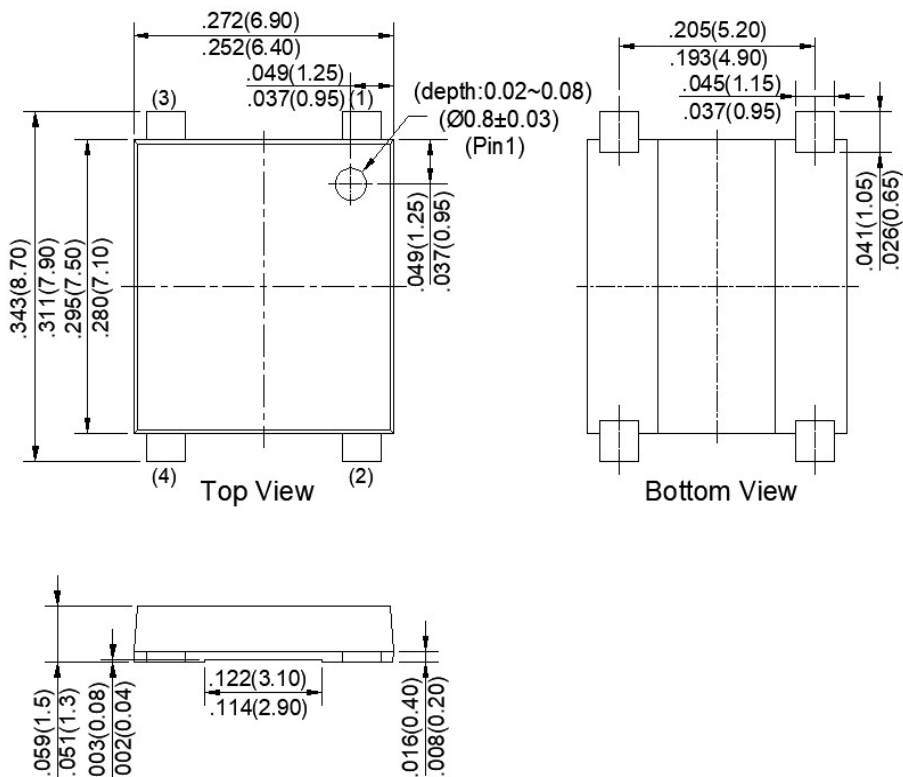


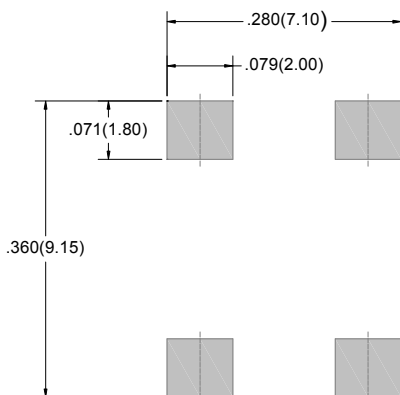
FIG.4: TYPICAL REVERSE CHARACTERISTICS



UMSB Package Outline Dimensions



UMSB Suggested Pad Layout



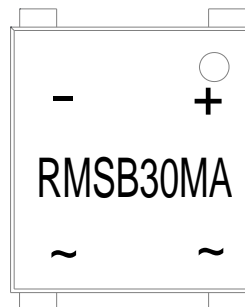
Note:

- Controlling dimension: in millimeters.
- General tolerance: ± 0.05 mm.
- The pad layout is for reference purposes only.

Ordering Information

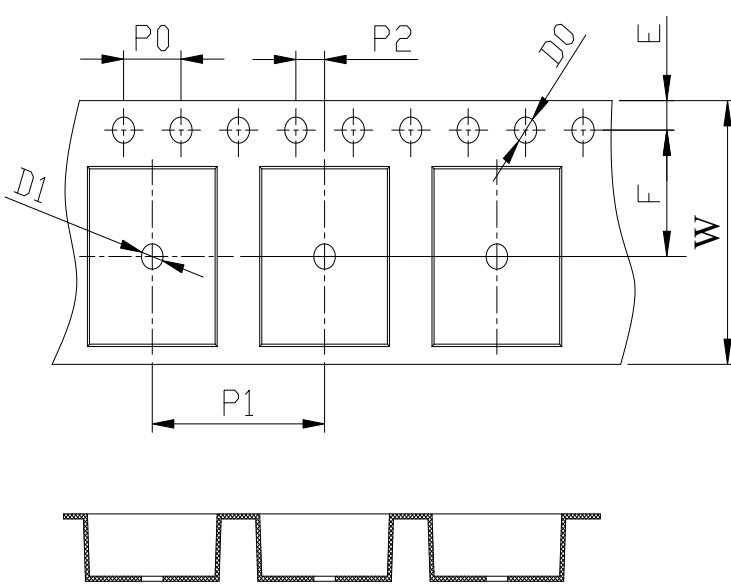
Part Number	Package	Shipping Quantity
RMSB30MA	UMSB	3000/tape&Reel

Marking Diagram



X:From A To M

Reel Taping Specifications For Surface Mount Devices-UMSB



参数代号	标准 mm
W	16.0 ± 0.1
T	0.28 ± 0.02
A0	7.0 ± 0.10
B0	8.7 ± 0.10
K0	1.65 ± 0.10
E	1.75 ± 0.10
F	7.5 ± 0.10
P0	4.00 ± 0.10
P1	12.00 ± 0.10
P2	2.00 ± 0.10
D0	$1.50 + 0.1 / -0$
D1	$1.50 + 0.25 / -0$
10P0	40.00 ± 0.2