

UMSB Plastic-Encapsulate Bridge Rectifier

Features

- Ideal for printed circuit board
- Small size, simple installation
- High surge current capability
- Reliable low cost construction utilizing molded plastic technique
- High temperature soldering guaranteed: 260/10 seconds at 5lbs., (2.3kg) tension

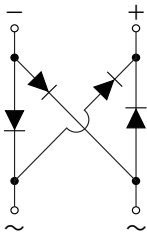
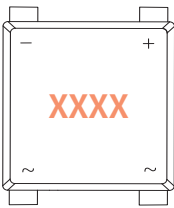
Applications

General purpose 1 phase Bridgerectifier applications

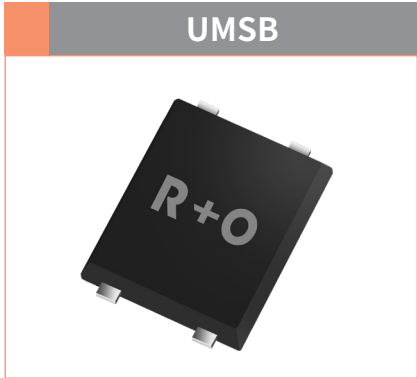
Mechanical Data

- Case: UMSB
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity: Cathode line denotes the cathode end

Function Diagram



Reverse Voltage
50-1000 V
Forward Current
4.0 Ampere



Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MSB40A	MSB40B	MSB40D	MSB40G	MSB40J	MSB40K	MSB40M
Device marking code			MSB40A	MSB40B	MSB40D	MSB40G	MSB40J	MSB40K	MSB40M
Maximum 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
Maximum Average Forward Rectified Current @60Hz sinewave, Resistance load,TL (Fig.1)	$I_{F(AV)}$	A	4.0						
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	120						
Rating for fusing (t=8.3ms, Ta=25 °C)	I^2t	A ² S	60						
Storage temperature	T_{stg}	°C	-55 ~ +150						
Junction temperature	T_j	°C	-55 ~ +150						
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	50						
	$R_{\theta J-L}$	°C /W	18						

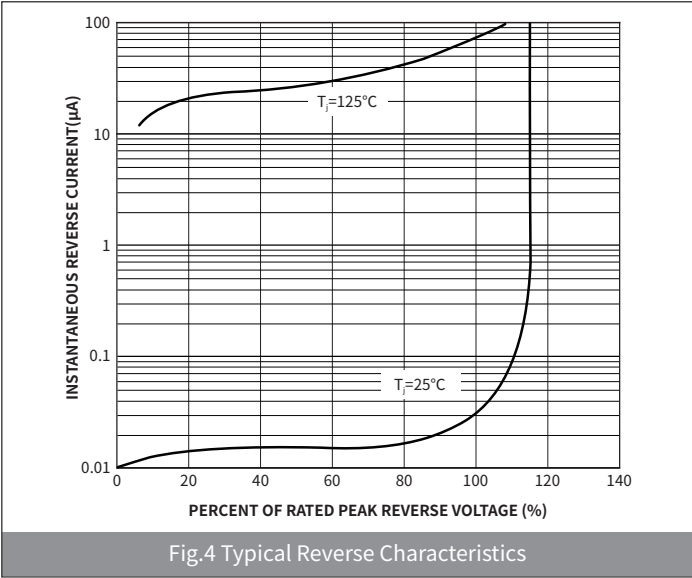
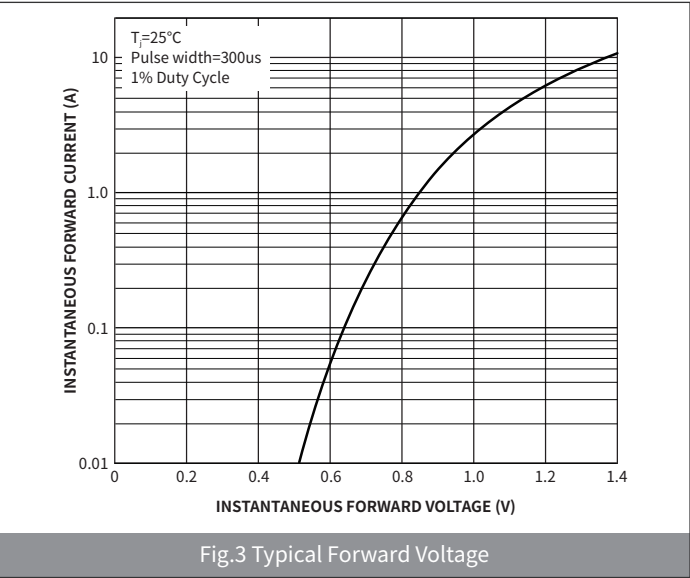
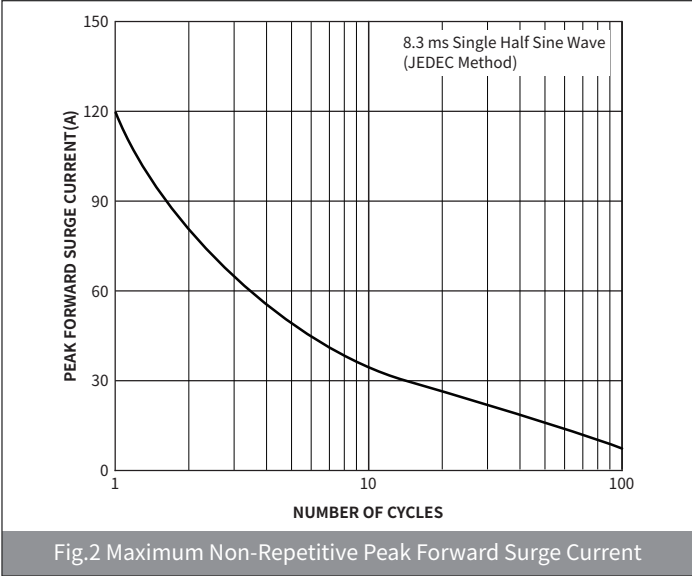
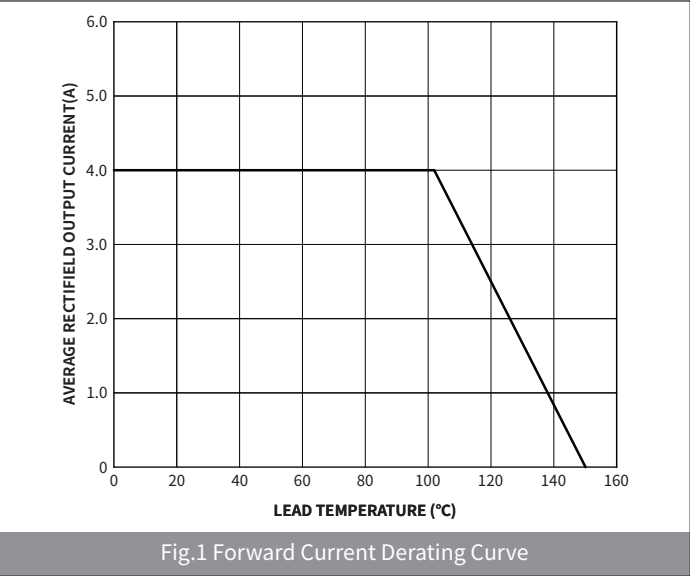
MSB40A THRU MSB40M

UMSB 4.0 AMP Plastic-Encapsulate Bridge Rectifier

Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	MSB40A	MSB40B	MSB40D	MSB40G	MSB40J	MSB40K	MSB40M
Maximum instantaneous forward voltage	$I_F=4.0A$	V_F	V	1.1						
Maximum DC reverse current at rated DC blocking voltage	$V_R=V_{DC}, T_A=25^{\circ}C$	I_{R1}	μA	5.0						
	$V_R=V_{DC}, T_A=100^{\circ}C$	I_{R2}		200						
Typical junction capacitance	4.0V DC, 1MHz	C_J	pF	31						

Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



MSB40A THRU MSB40M

UMSB 4.0 AMP Plastic-Encapsulate Bridge Rectifier

● Ordering Information

PACKAGE	PACKAGE CODE	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
UMSB	R3	3000	6000	54000	13"

● Package Outline Dimensions (UMSB)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.3	1.5	0.051	0.059
C	0.17	0.29	0.007	0.012
D	6.2	7.0	0.244	0.276
E	7.1	7.6	0.280	0.299
E1	8.4	8.9	0.331	0.350
L	1.0	1.6	0.032	0.055
e	4.9	5.3	0.193	0.209
b	0.95	1.15	0.037	0.045
θ	10°			

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
N	5.1	5.3	0.201	0.209
M	7.1	7.3	0.280	0.287
X	1.8	2.0	0.071	0.079
Y	1.3	1.5	0.051	0.059