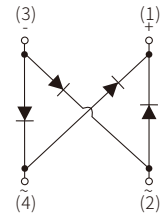


## FEATURES

- | Compact, thin profile package design
- | Ideal for SMT manufacturing
- | Reliable robust construction



UMSB



Schematic Symbol

## MECHANICAL DATA

- | Case: UMSB
- | Terminals: Solderable per MIL-STD-750, Method 2026

## APPROVALS

<b>RoHS</b>	Compliance with 2011/65/EU
<b>HF</b>	Compliance with IEC61249-2-21:2003

## MAXIMUM RATINGS AND CHARACTERISTICS (T<sub>A</sub>=25°C)

Parameter	Symbol	RMSB 40A	RMSB 40B	RMSB 40D	RMSB 40G	RMSB 40J	RMSB 40K	RMSB 40M	Unit
Marking		RMSB 40A	RMSB 40B	RMSB 40D	RMSB 40G	RMSB 40J	RMSB 40K	RMSB 40M	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	
Maximum Average Forward Rectified Current T <sub>c</sub> =120°C	I <sub>(AV)</sub>	4.0							A
Peak Forward Surge Current @ 8.3ms	I <sub>FSM</sub>	125							
I <sup>2</sup> t Rating for fusing (1ms < t < 8.3ms)	I <sup>2</sup> t	64.8							
Maximum DC Reverse Current at Rated DC Blocking Voltage	T <sub>j</sub> =25°C	5							μA
	T <sub>j</sub> =125°C	500							
Maximum Reverse Recovery Time	T <sub>RR</sub>	150				250	500		ns
Typical junction Capacitance per element (Note 1)	C <sub>j</sub>	35							pF

Parameter		Symbol	RMSB 40A	RMSB 40B	RMSB 40D	RMSB 40G	RMSB 40J	RMSB 40K	RMSB 40M	Unit
Maximum Forward Voltage @ $T_J = 25^\circ\text{C}$	@2.0A DC	$V_F$	1.3						V	
	@4.0A DC		1.5							
Typical Thermal Capacitance (Note 2)		$R_{\theta JC}$	8						$^\circ\text{C/W}$	
		$R_{\theta JL}$	15							
		$R_{\theta JA}$	25							
Operating Temperature Range		$T_J$	-55 to +150						$^\circ\text{C}$	
Storage Temperature Range		$T_{STG}$	-55 to +150						$^\circ\text{C}$	

Notes:

1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC
2. Thermal Resistance test performed in accordance with JESD-51. Unit mounted on 15 mm\*12 mm\*1.6 mm AL pad attach 195 mm\*110 mm\*10 mm steel plate
3. The typical data above is for reference only

## CHARACTERISTIC CURVES

Fig. 1- Forward Current Derating Curve

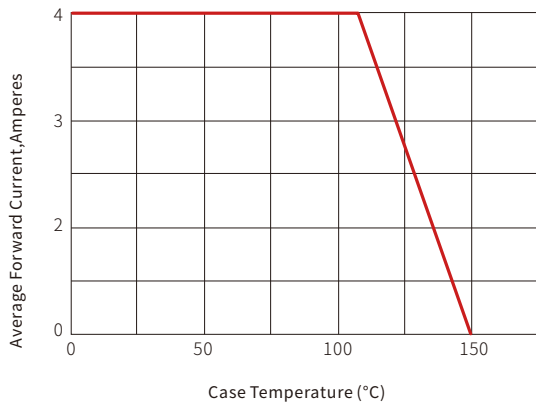
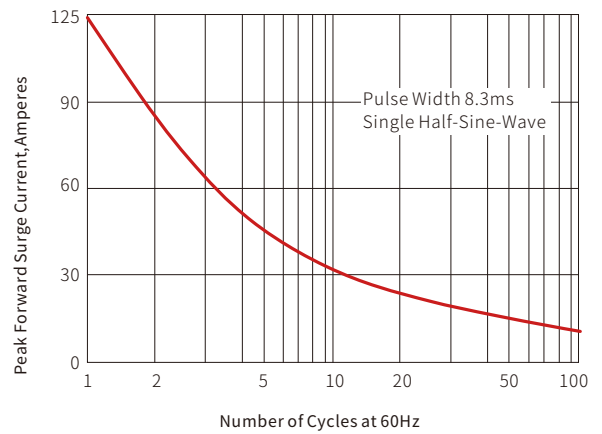
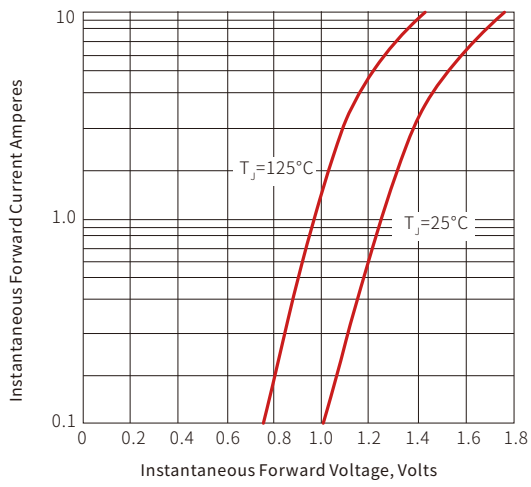


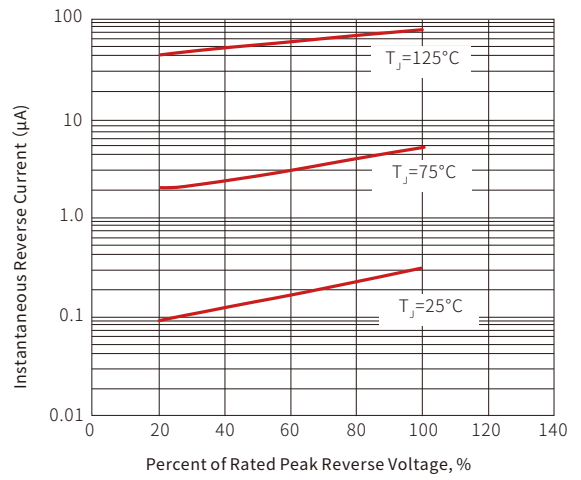
Fig. 2- Maximum Non-Repetitive Surge Current



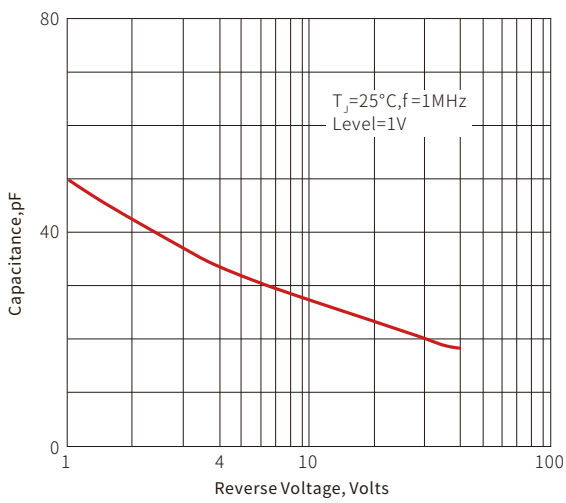
**Fig. 3-Typical Forward Characteristics**



**Fig. 4-Typical Revers Characteristics**

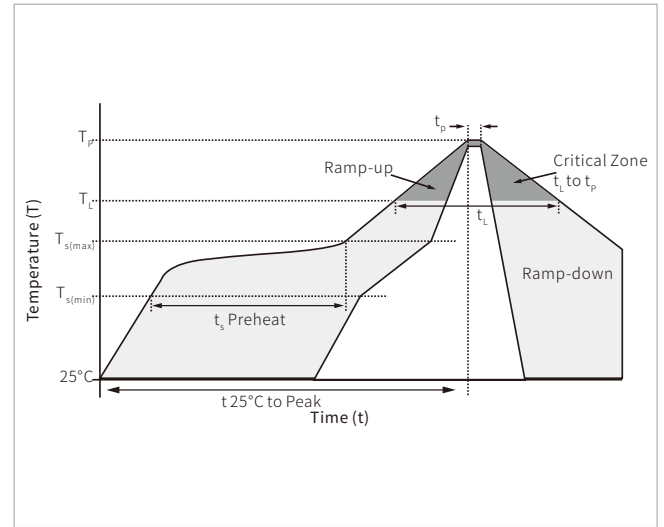


**Fig. 5-Typical Junction Capacitance**

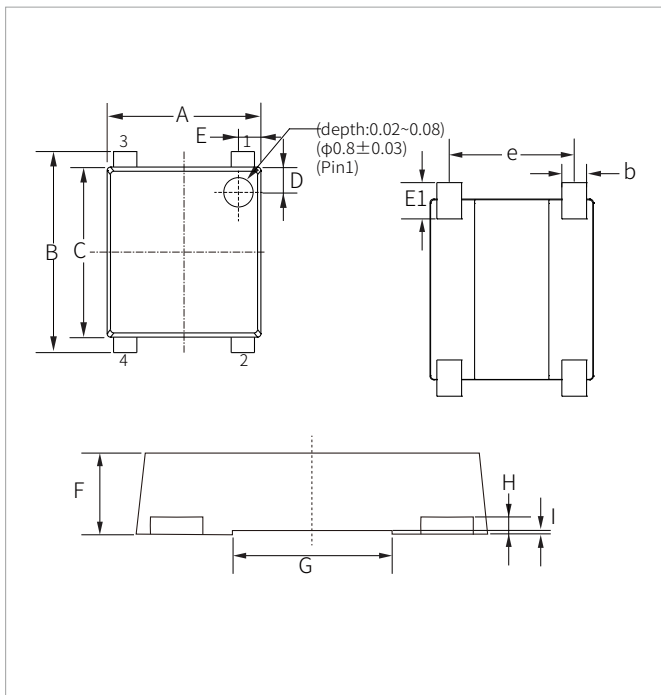


## SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ( $T_{s(min)}$ )	150°C
	Temperature Max ( $T_{s(max)}$ )	200°C
	Time (min to max) ( $t_s$ )	60 – 180 secs
Average ramp up rate (Liquidus Temp ( $T_L$ ) to peak)		3°C/second max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		3°C/second max
Reflow	Temperature ( $T_L$ ) (Liquidus)	217°C
	Time (min to max) ( $t_L$ )	60 – 150 seconds
Peak Temperature ( $T_p$ )		260°C
Time within 5°C of actual peak Temperature ( $t_p$ )		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature ( $T_p$ )		8 minutes max.
Do not exceed		260°C



## UMSB PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	6.50	6.70	0.256	0.264
B	7.90	8.60	0.311	0.339
C	7.20	7.40	0.283	0.291
D	0.95	1.25	0.037	0.049
E	0.95	1.25	0.037	0.049
E1	0.65	1.05	0.026	0.041
e	5.00	5.20	0.197	0.205
b	0.95	1.15	0.037	0.045
F	1.30	1.50	0.051	0.059
G	2.90	3.10	0.114	0.122
H	0.27	0.40	0.011	0.016
I	0.04	0.08	0.002	0.003

## ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
RMSB40A-RMSB40M	UMSB	3000PCS	7"

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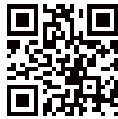
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Website



Wechat

To find your local partner within Semiware's global website: [www.semiware.com](http://www.semiware.com)

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