

FMSB40B~FMSB40M

Rev.C Dec.-2024

/ Descriptions

4.0A

UMSB

4.0A Surface Mount Glass Passivated Bridge Rectifier,UMSB thin package.

/ Features

100V~1000V

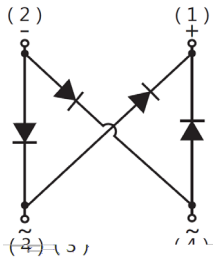
4.0A

Glass Passivated Chip Junction, Reverse Voltage :100 to 1000V,Forward Current: 4.0A, Fast reverse recovery time, Designed for Surface Mount Application, HF product.

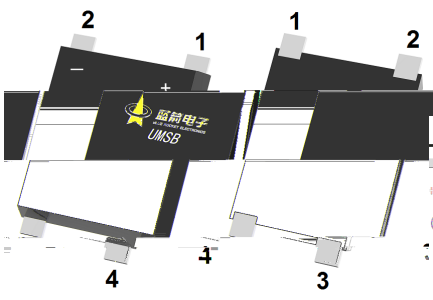
/ Applications

General purpose.

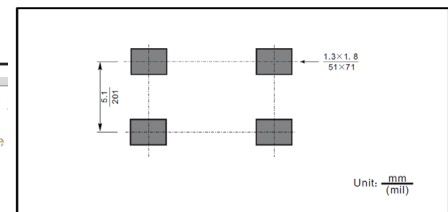
/ Equivalent Circuit



/ Pinning



The recommended mounting pad size



/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating						Unit
		FMSB40B	FMSB40D	FMSB40G	FMSB40J	FMSB40K	FMSB40M	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	100	200	400	600	800	1000	V
Average Rectified Output Current at $T_c = 115$	I_o	4.0						A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	95						A
Typical Junction Capacitance <small>Note1</small>	C_j	50						pF
Typical Thermal Resistance <small>Note2</small>	R_{JA}	60						C/W
	R_{JC}	15						
	R_{JL}	25						
Maximum Reverse Recovery Time <small>Note3</small>	t_{rr}	150			250	500		ns
Operating and Storage Temperature Range	T_j, T_{stg}	-55~+150						

Note:

1. Measured at 1 MHz and applied reverse voltage of 4 V D.C
2. Mounted on glass epoxy PC board with 4x1.5 x1.5 (3.81x3.81cm) copper pad.
3. Measured with $I_F = 0.5 A$, $I_R = 1 A$, $I_{rr} = 0.25 A$.

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Rating	Unit
Forward Voltage per element	V_F	$I_F=4.0A$	1.3	V
Maximum DC Reverse Current at Maximum DC Blocking Voltage	I_R	$T_a=25$	5.0	A
		$T_a=125$	200	

/ Electrical Characteristic Curve

Fig.1 Average Rectified Output Current Derating Curve

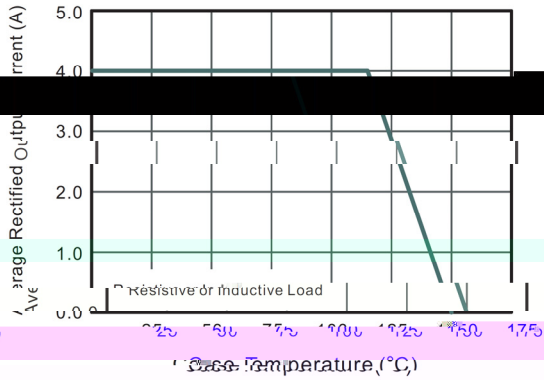


Fig.2 Typical Reverse Characteristics

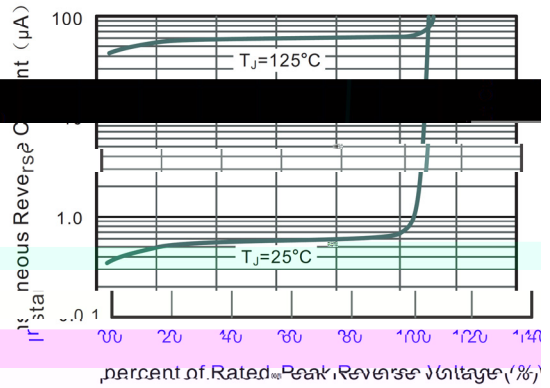


Fig.3 Typical Instantaneous Forward Characteristics

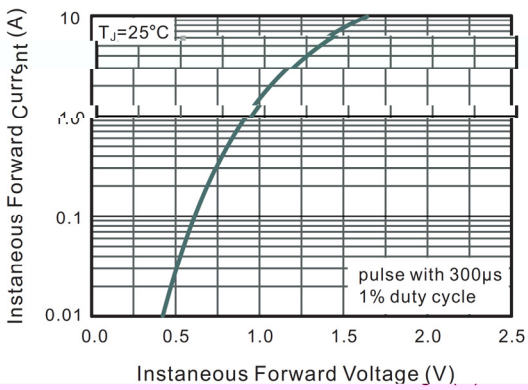


Fig.4 Typical Junction Capacitance

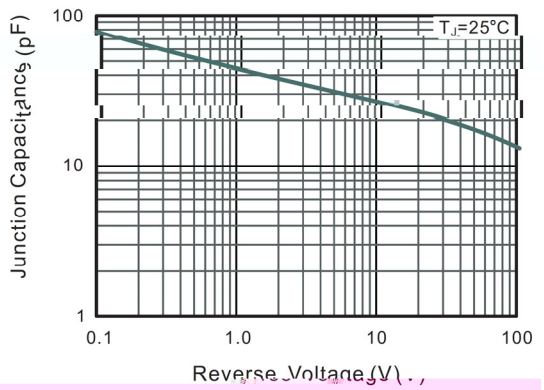


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

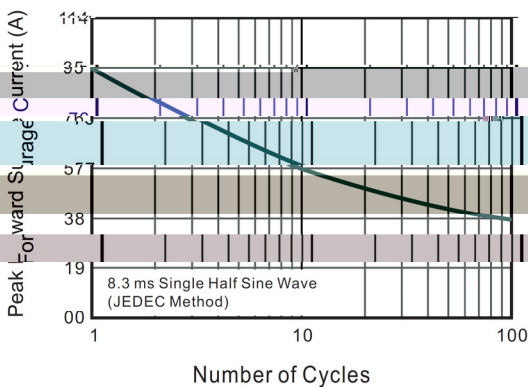
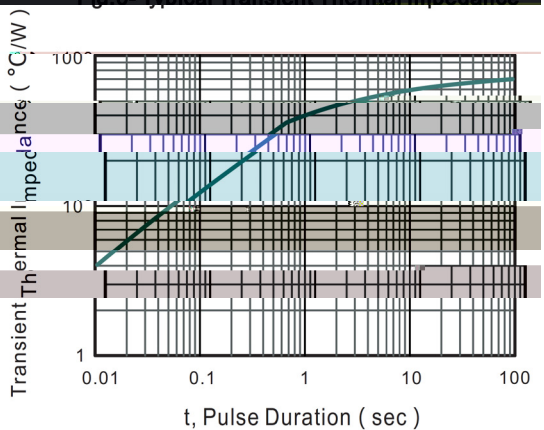
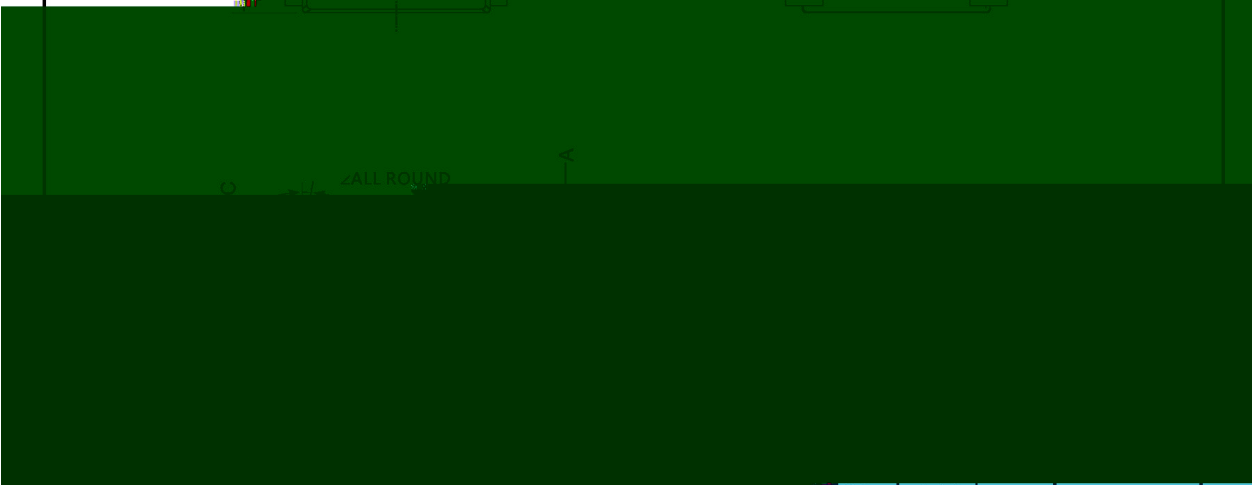
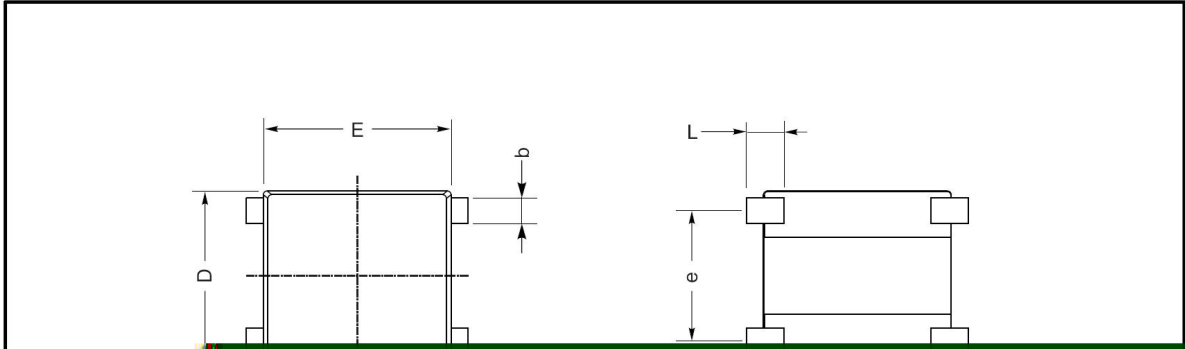


Fig.6 Typical Transient Thermal Impedance



/ Package Dimensions

UMSB



mm	max	1.3	0.29	7.0	7.0	8.9	1.0	5.3	1.15	10°
	min	1.3	0.17	6.2	7.1	8.4	1.0	4.9	0.95	
mil	max	59	12	276	299	350	55	209	45	
	min	51	7	244	280	331	31.5	193	37	

/ Marking Instructions



FMB40M

Note:

FMB40M Product Type Code

**** Lot No. Code, code change with Lot No

Marking

Type number	Marking code
FMSB40B	FMB40B
FMSB40D	FMB40D
FMSB40G	FMB40G
FMSB40J	FMB40J
FMSB40K	FMB40K
FMSB40M	FMB40M

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DATA SHEET

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Note:

- | | | | |
|---|---------|-----------|---|
| 1 | 150 180 | 60 90sec; | 1.Preheating:150~180 , Time:60~90sec. |
| 2 | 245±5 | 5±0.5sec; | 2.Peak Temp.:245±5 , Duration:5±0.5sec. |
| 3 | 2 10 | /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
UMSB	3,000	2	6,000	6	36,000	13"×16	337×337×49	380×335×366