

/ Descriptions

4.0A

UMSB

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

/ Features

100V~1000V

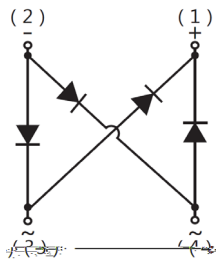
4.0A

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

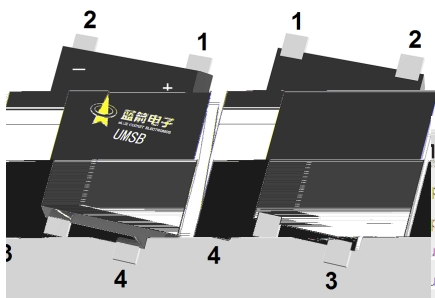
/ Applications

General purpose.

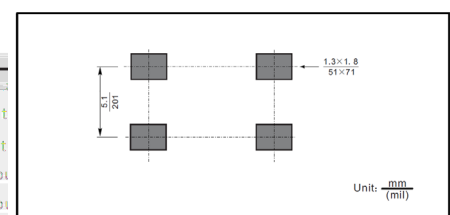
/ Equivalent Circuit



/ Pinning



The recommended mounting pad size



/ Marking

See Marking Instructions.

FMSB40B~FMSB40M

Rev.C Dec.-2024

/ 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 Tc = 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 Note1	C _j	50						pF
Typical Thermal Resistance Note2	R _{θJA}	60						°C/W
	R _{θJC}	15						
	R _{θJL}	25						
Maximum Reverse Recovery Time Note3	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 4×1.5 ×1.5 (3.81×3.81cm) 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	μA
		$T_a=125$	200	

/ Electrical Characteristic Curve

Fig.1 Average Rectified Output Current Derating Curve

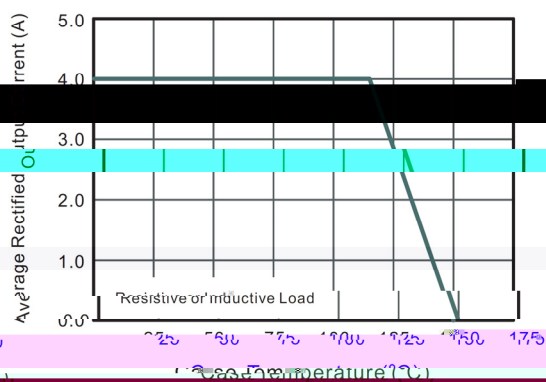


Fig.2 Typical Reverse Characteristics

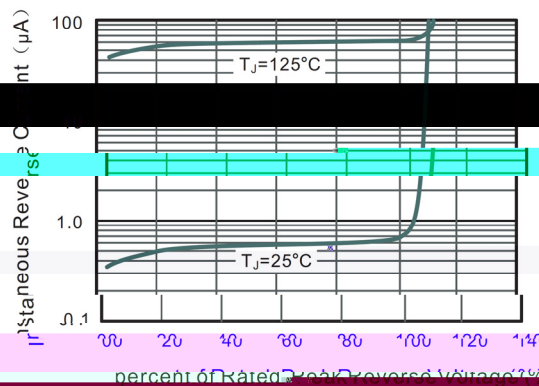


Fig.3 Typical Instantaneous Forward Characteristics

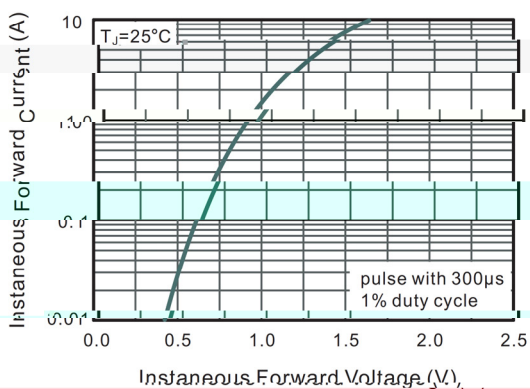


Fig.4 Typical Junction Capacitance

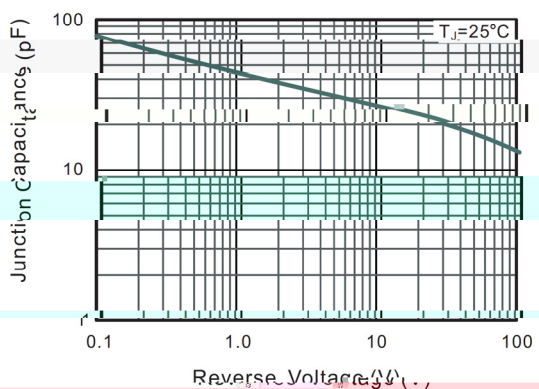


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

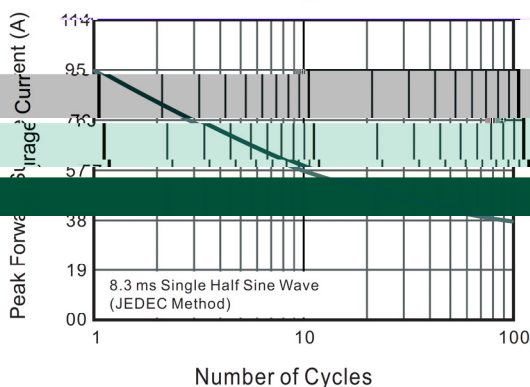
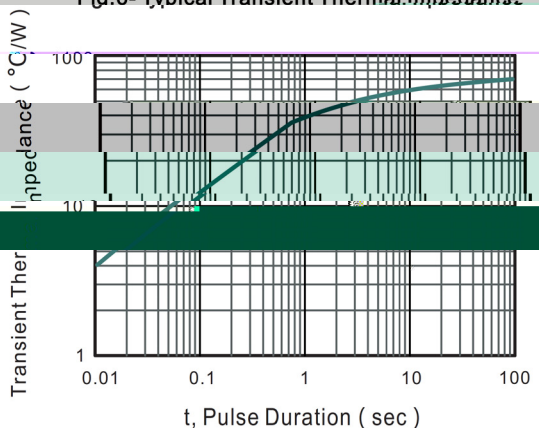
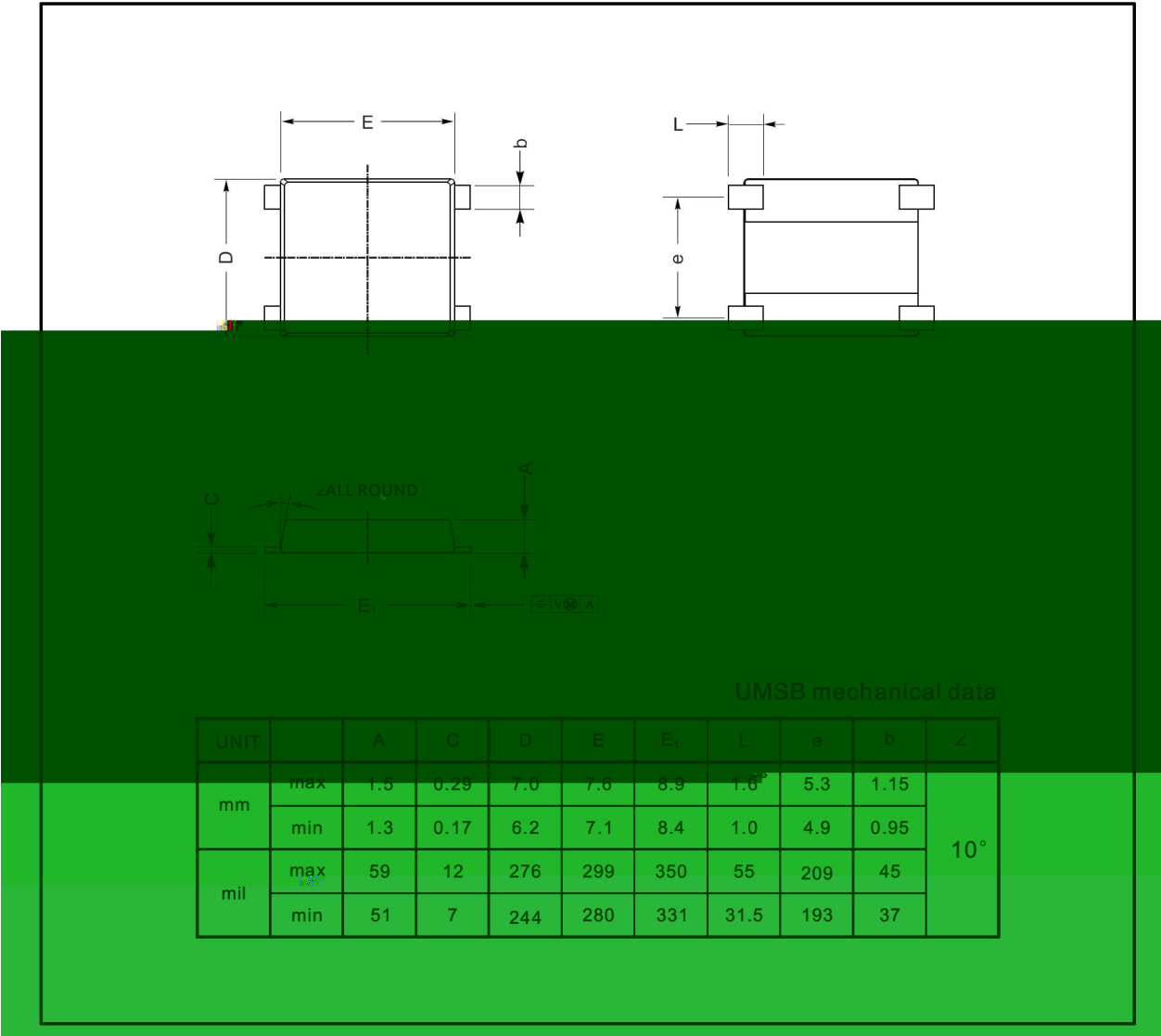


Fig.6 Typical Transient Thermal Impedance



/ Package Dimensions

UMSB



/ 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

() / Temperature Profile for IR Reflow Soldering(Pb-Free)

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)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
UMSB	3,000	2	6,000	6	36,000	13"×16	337×337×49	380×335×366