

Low VF Bridge Rectifiers



PINNING

PIN	DESCRIPTION
1	Input Pin (~)
2	Input Pin (~)
3	Output Anode (+)
4	Output Cathode (-)

Features

- Glass Passivated Chip Junction
- Low I_{RRM}
- Low V_F
- High V_{RRM}

Applications

- Switching Power Supply
- Home Appliances, Office Devices
- Industrial Auto-equipments

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	MSB40JL	MSB40KL	MSB40ML	Units
Maximum Repetitive Peak Reverse Voltage	VRRM	600	800	1000	V
Maximum RMS voltage	VRMS	420	560	700	V
Maximum DC Blocking Voltage	VDC	600	800	1000	V
Average Rectified Output Current	Io	4.0			A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	IFSM	150			A
I ² t rating for fusing (1ms< t < 8.3ms)	I ² t	93.3			A ² S
Maximum Forward Voltage at 2.0 A	VF	0.95			V
Maximum DC Reverse Current @TA=25 °C at Rated DC Blocking Voltage @TA=125 °C	IR	10 500			μA
Operating and Storage Temperature Range	Tj, Tstg	-55 ~ +150			°C
Typical thermal resistance (Note 1)	RθJC	8			°C/W
	RθJA	60			

Note: 1. Thermal Resistance : Heat-sink case mounted or if PCB mounted.

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Ratings And Characteristics Curves (TA = 25 °C unless otherwise noted)

Fig.1 Current Derating, Case

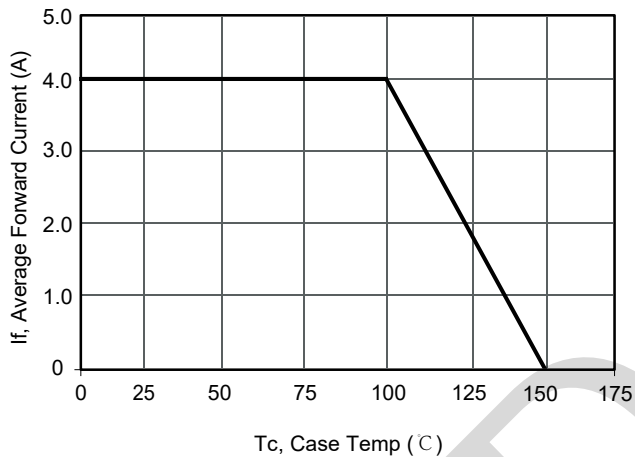


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

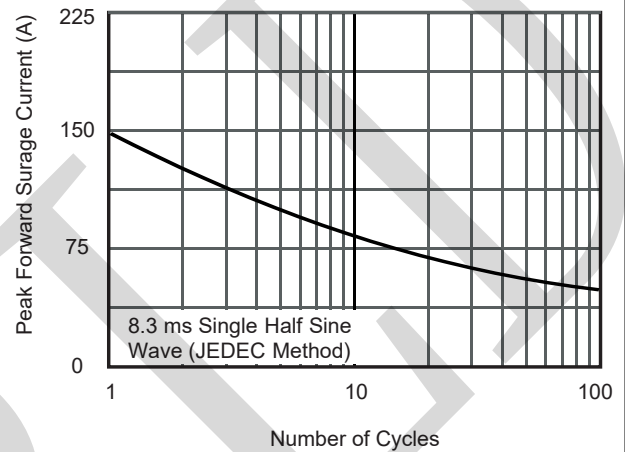


Fig.3 Typical Forward Voltage

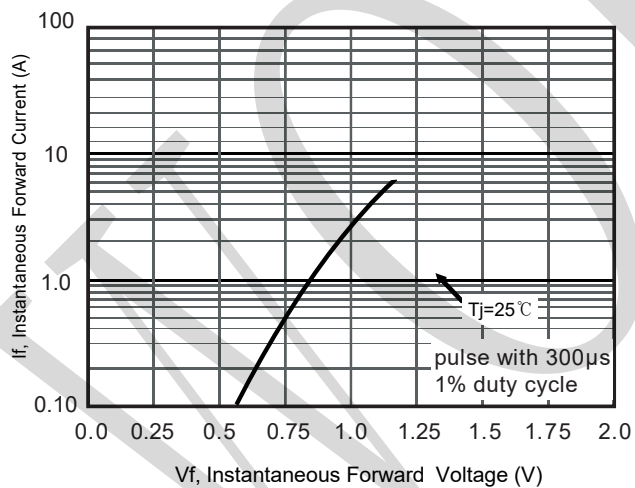
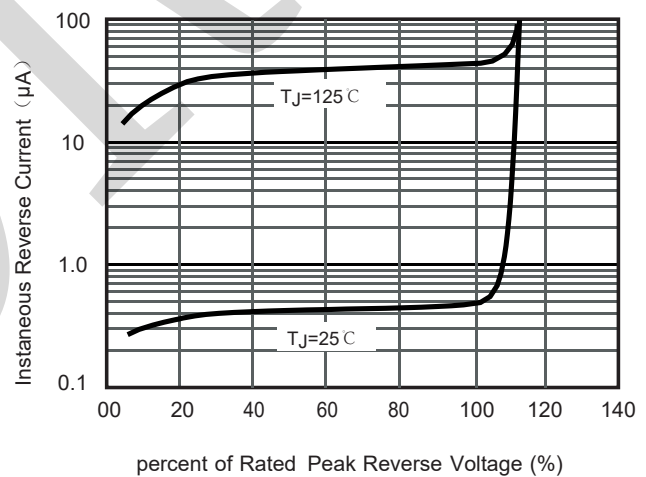
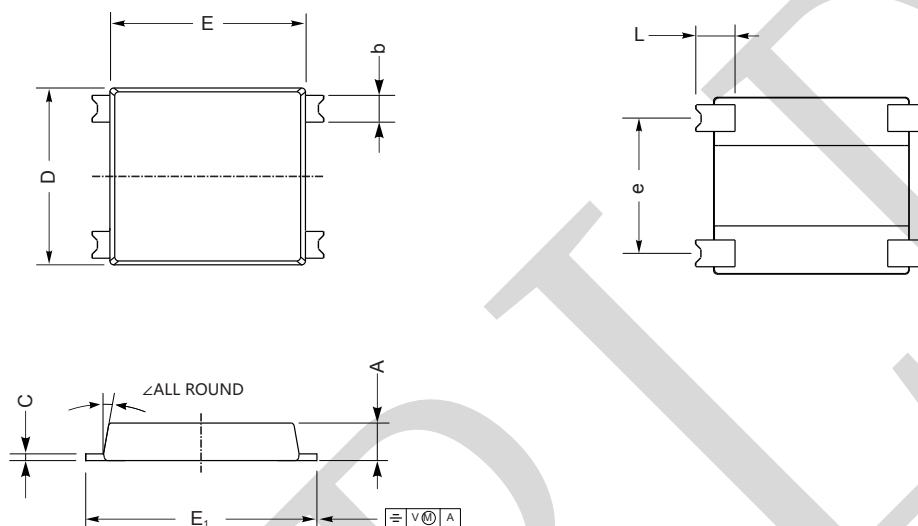


Fig.4 Typical Reverse Characteristics



Package Outline Dimensions

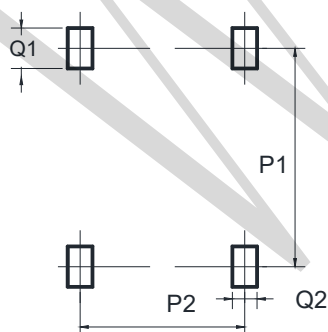
Note: unit In(mm)



MSB mechanical data

UNIT		A	C	D	E	E1	L	e	b	∠
mm	max	1.5	0.29	7.0	7.6	8.9	1.6	5.3	1.15	7°
	min	1.3	0.17	6.2	7.1	8.4	1.0	4.9	0.95	

MSB Suggested Pad Layout



Dimensions is millimeters

UNIT		P1	P2	Q1	Q2
mm	min	8.30	5.10	1.6	1.2

Marking Information



- ①
- ②
- ③

①W : Company's trademark

②Product model : MSB40J/K/ML

③PDC information:

Y X WW H M

Y:Year code(ex:0=2020)

X:Internal identification code 1

WW:Week code(01 to 53)

H:Halogen-free

M:Internal identification code 2

Revision Histor			
Date	Revision	Description & changes	Author
2026.07.01	1.0	Initial version	Ren