

## Silicon Bridge Rectifiers

## MBF10J--MBF10M

### Features

- Glass passivated junction
- High surge current capability
- Saves space on printed circuit boards
- High temperature soldering guaranteed:  
260°C/10 seconds

- RoHS Compliant

### Mechanical Data

- Case: Molded plastic body RoHS-compliant
- Molding compound meets UL 94 V-0 flammability rating
- Terminals: Lead Free Plating (Matte Tin Finish.)
- Polarity indicator: As marked on body



### Maximum Ratings (@T<sub>A</sub> = 25°C unless otherwise specified)

Characteristic	Symbol	MBF10J	MBF10K	MBF10M	Units
Peak repetitive reverse voltage	V <sub>RRM</sub>	600	800	1000	V
RMS reverse voltage	V <sub>RMS</sub>	420	560	700	V
DC blocking voltage	V <sub>DC</sub>	400	800	1000	V
Maximum average forward output current	I <sub>F(AV)</sub>	1.0			A
Peak forward surge current, 8.3ms single half-sine-wave	@T <sub>J</sub> = 25°C I <sub>FSM</sub>	30			A
I <sup>2</sup> t Rating for fusing	@T <sub>J</sub> = 25°C I <sup>2</sup> t	3.7			A <sup>2</sup> s

### Thermal Characteristics

Parameter	Symbol	MBF10J	MBF10K	MBF10M	Units
Typical thermal resistance per leg (Note 1)	R <sub>θJA</sub>	67			°C/W
	R <sub>θJC</sub>	24			
	R <sub>θJL</sub>	13			
Operating junction temperature range	T <sub>J</sub>	- 55 ---- + 150			°C
Storage temperature range	T <sub>STG</sub>	- 55 ---- + 150			°C

Note:

1. Device mounted on PCB with 10 mm x 20 mm x 0.1mm copper pad areas

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### Electrical Characteristics (@T<sub>A</sub> = 25°C unless otherwise specified)

Parameter	Symbol	Test conditions		Typ.	Max.	Units
Maximum instantaneous forward voltage	V <sub>F</sub>	I <sub>F</sub> =1.0A Per Diode		--	1.15	V
Maximum Reverse current	I <sub>R</sub>	Rated V <sub>R</sub> , Per Diode	@T <sub>A</sub> =25°C	--	5	μ A
			@T <sub>A</sub> =125°C	--	100	

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### Ratings and Characteristic Curves ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Fig.1-Forward Current Derating Curve

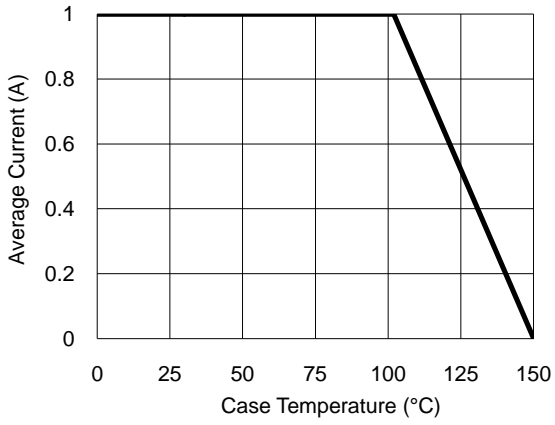


Fig.2- Surge Current Derating Curve

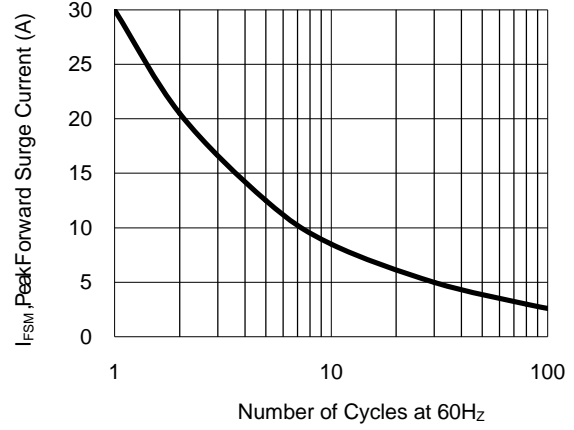


Fig.3- Typical Forward Voltage Characteristic

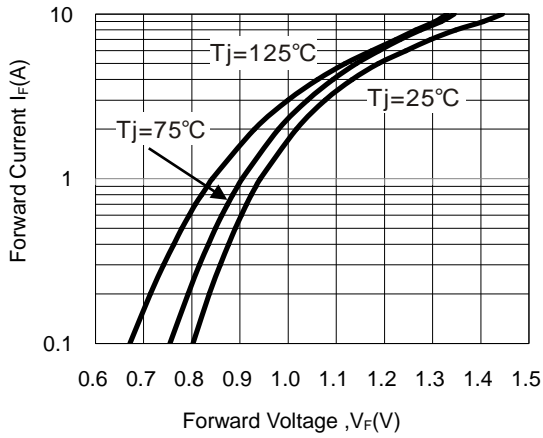
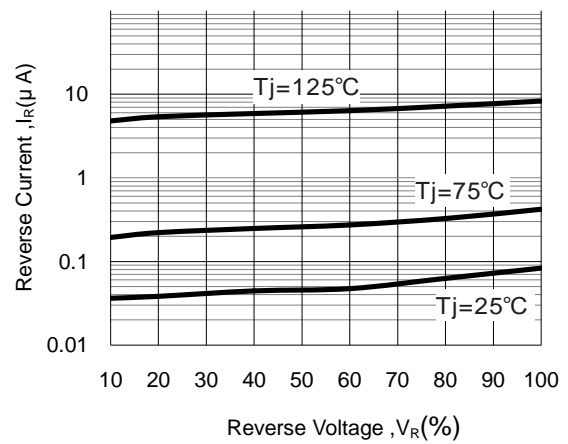


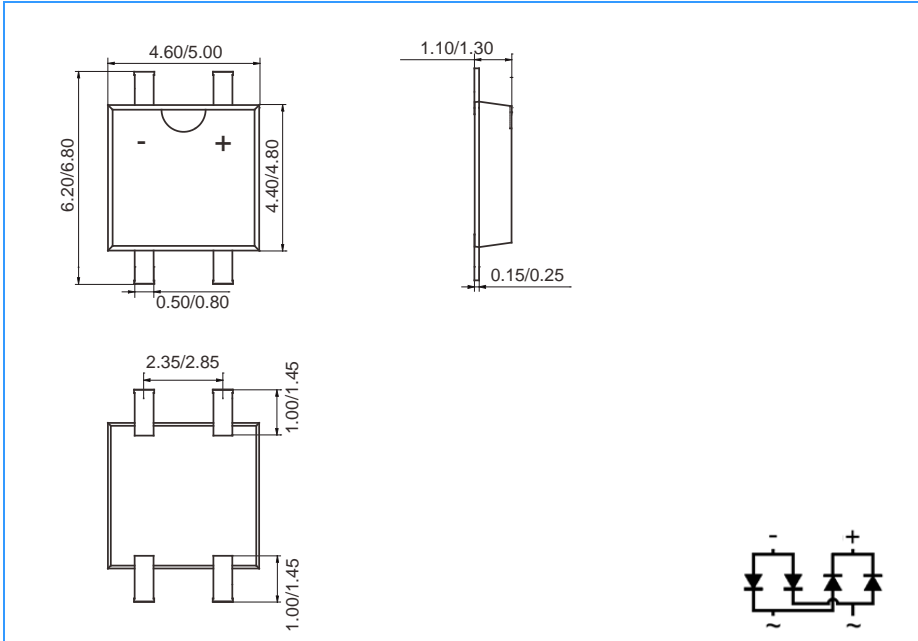
Fig.4- Typical Reverse Characteristic



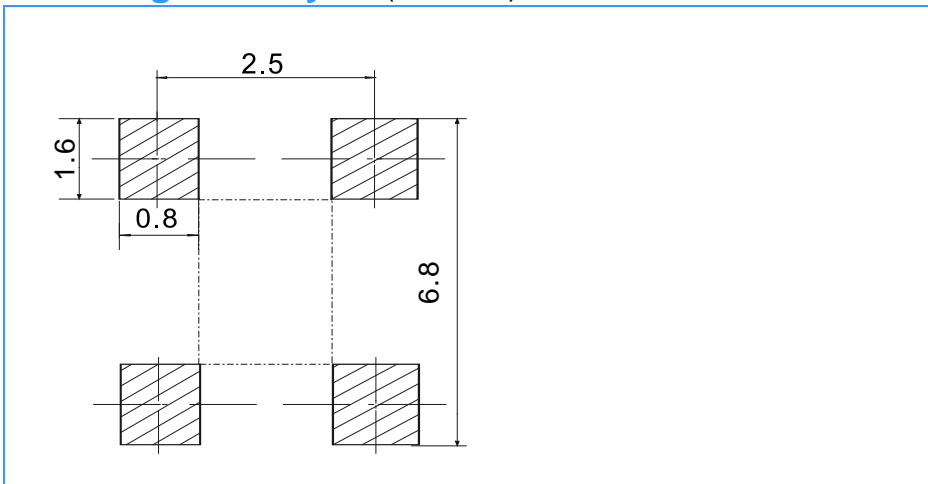
## Silicon Bridge Rectifiers

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### Package Outline Dimensions(unit:mm)



### Mounting Pad Layout(unit:mm)



### Ordering Information

Part No.	Marking	Package	Shipping
MBF10J	MBF10J	MBF	5000/Tape&Reel
MBF10K	MBF10K	MBF	5000/Tape&Reel
MBF10M	MBF10M	MBF	5000/Tape&Reel