

# Silicon Bridge Rectifiers

## MBF10J - MBF10M

### Features

- Glass passivated junction
- High surge current capability
- Saves space on printed circuit boards
- High-temp soldering guaranteed: 260°C @ 10s.
- RoHS compliant with Halogen-free



### 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)

Parameter	Symbol	MBF10J	MBF10K	MBF10M	Unit
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	I <sub>FSM</sub>	30			A
I <sup>2</sup> t Rating for fusing	I <sup>2</sup> t	3.7			A <sup>2</sup> s

### Thermal Characteristics

Parameter	Symbol	MBF10J	MBF10K	MBF10M	Unit
Typical Thermal Resistance per leg *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 p.c.b. with 10 mm x 20 mm x 0.1mm copper pad area

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### Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

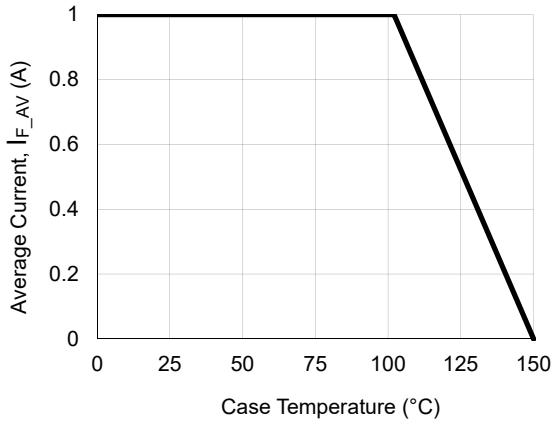
Parameter	Symbol	Test Condition	Typ.	Max.	Unit	
Maximum Instantaneous Forward Voltage	$V_F$	$I_F = 1.0\text{A}$ Per Diode	-	1.15	V	
Maximum Reverse Current	$I_R$	Rated $V_R$ , Per Diode	@ $T_A = 25^\circ\text{C}$	-	5.0	$\mu\text{A}$
			@ $T_A = 125^\circ\text{C}$	-	100.0	

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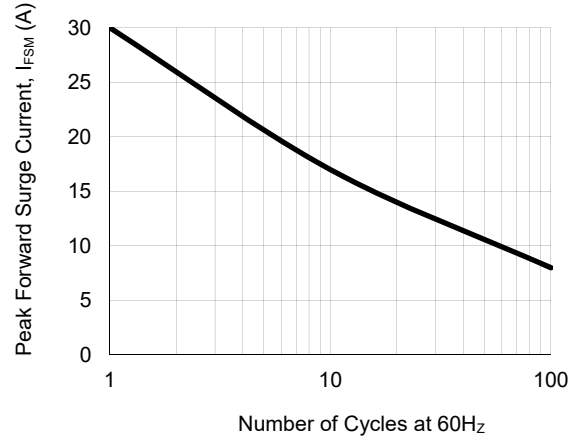
# MBF10J - MBF10M

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

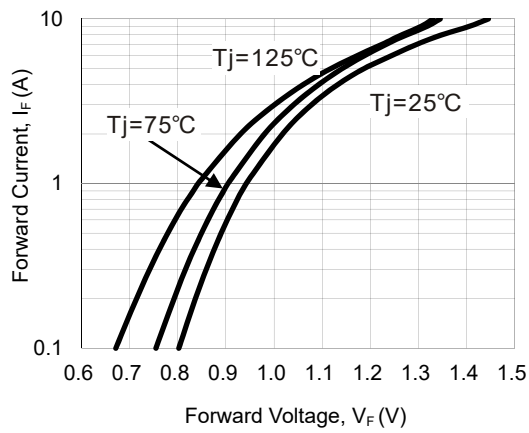
**Fig.1 Forward Current Derating Curve**



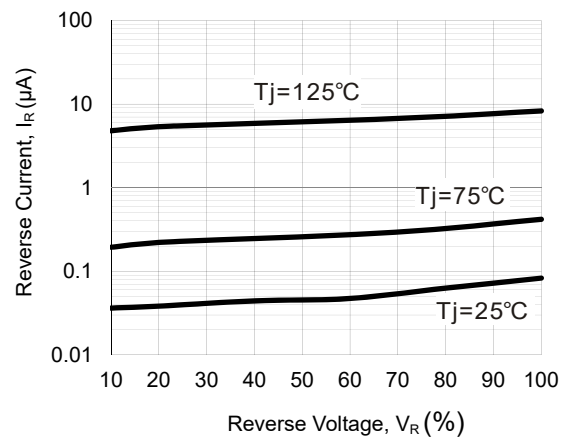
**Fig.2 Surge Current Derating Curve**



**Fig.3 Typical Forward Voltage Characteristics**



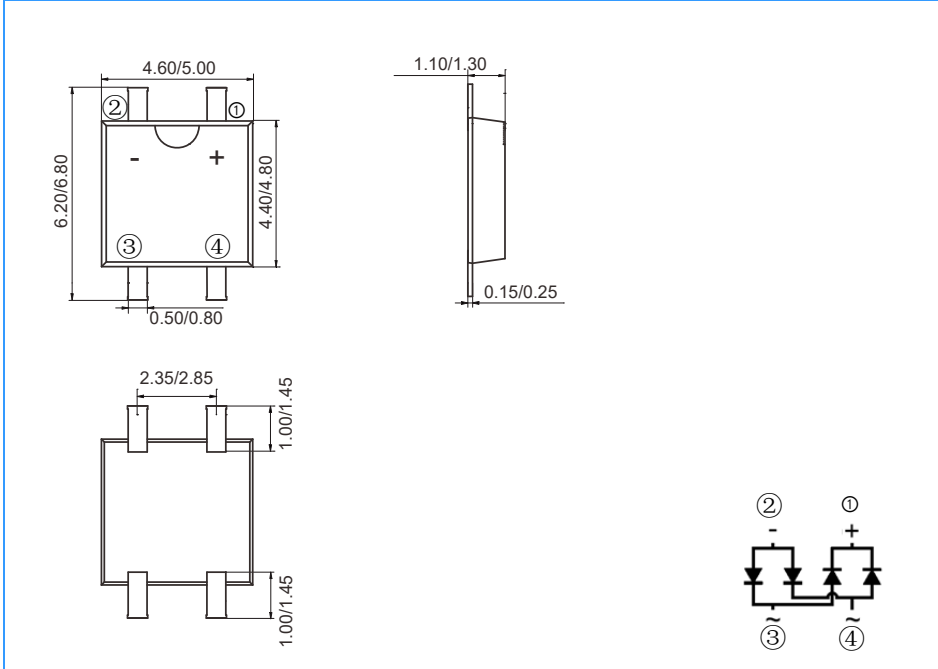
**Fig.4 Typical Reverse Characteristics**



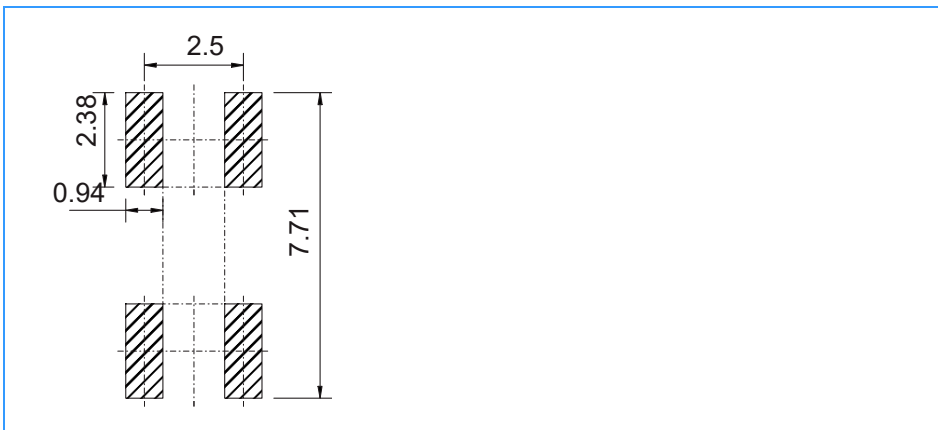
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### Package Outline Dimensions (Unit: mm)



### Mounting Pad Layout (Unit: mm)



### Ordering Information

Part Number	Marking	Package	Shipping Quantity
MBF10J	MBF10J	MBF	5000 / Tape & Reel
MBF10K	MBF10K	MBF	5000 / Tape & Reel
MBF10M	MBF10M	MBF	5000 / Tape & Reel