

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_A = 25°C unless otherwise specified)

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

Thermal Characteristics

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

Note:

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

Silicon Bridge Rectifiers**MBF10J--MBF10M****Electrical Characteristics** (@T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test conditions		Typ.	Max.	Units
Maximum instantaneous forward voltage	V _F	I _F =1.0A Per Diode		--	1.15	V
Maximum Reverse current	I _R	Rated V _R , Per Diode	@T _A =25°C	--	5	μ A
			@T _A =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

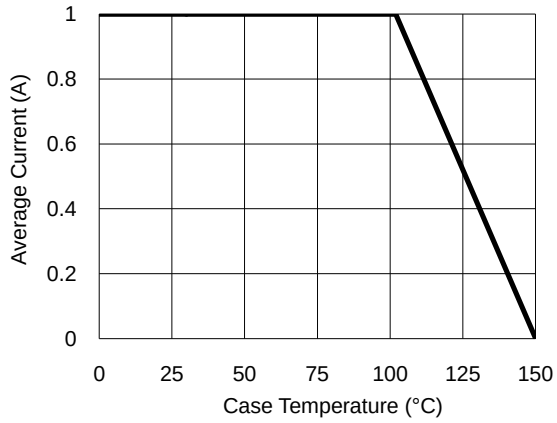


Fig.2- Surge Current Derating Curve

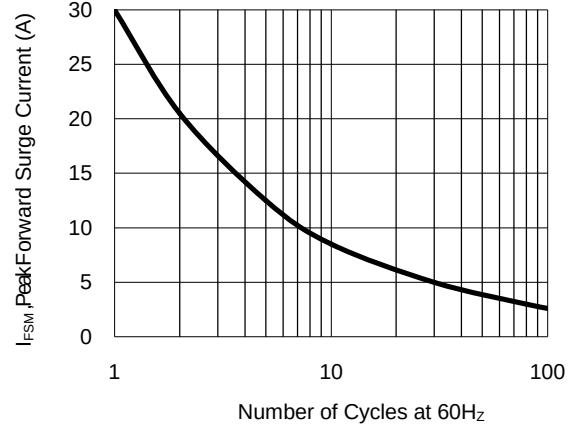


Fig.3- Typical Forward Voltage Characteristic

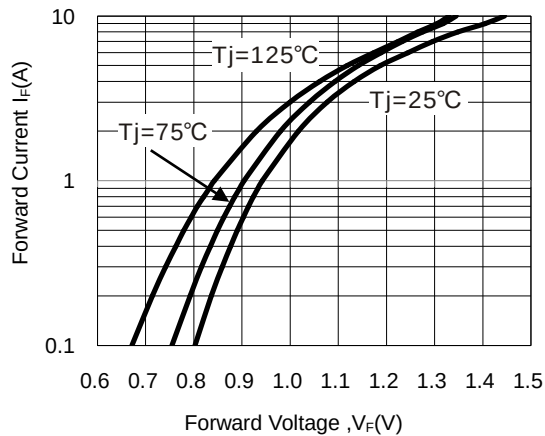
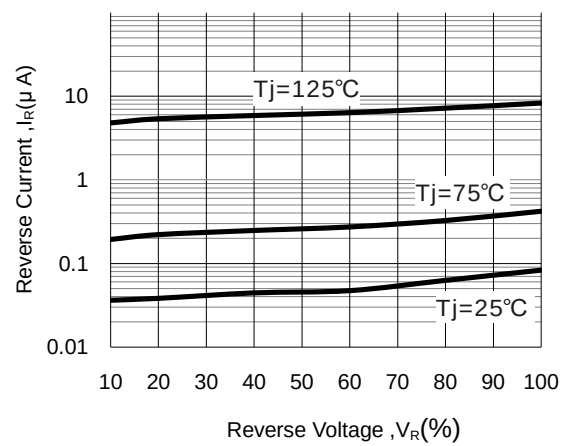


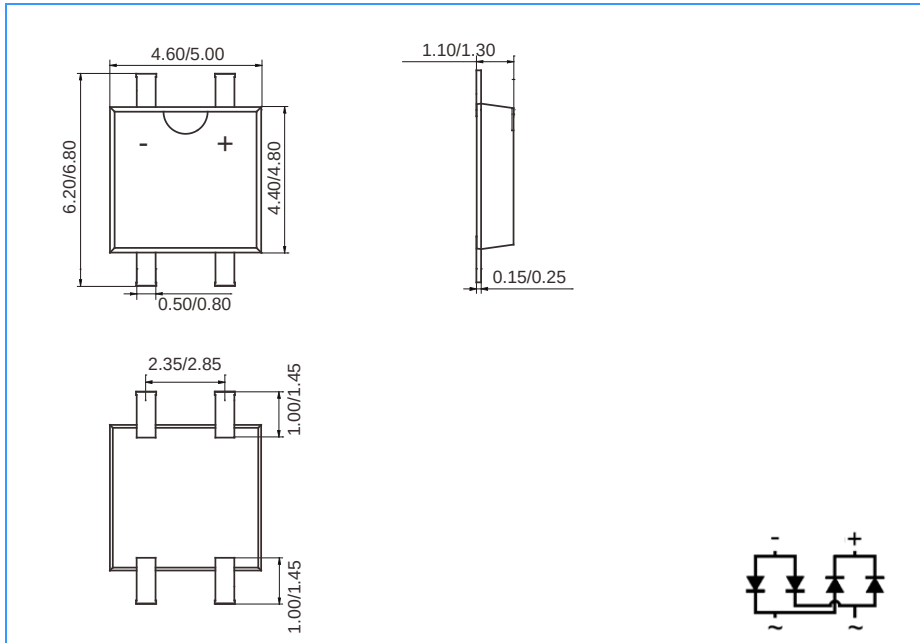
Fig.4- Typical Reverse Characteristic



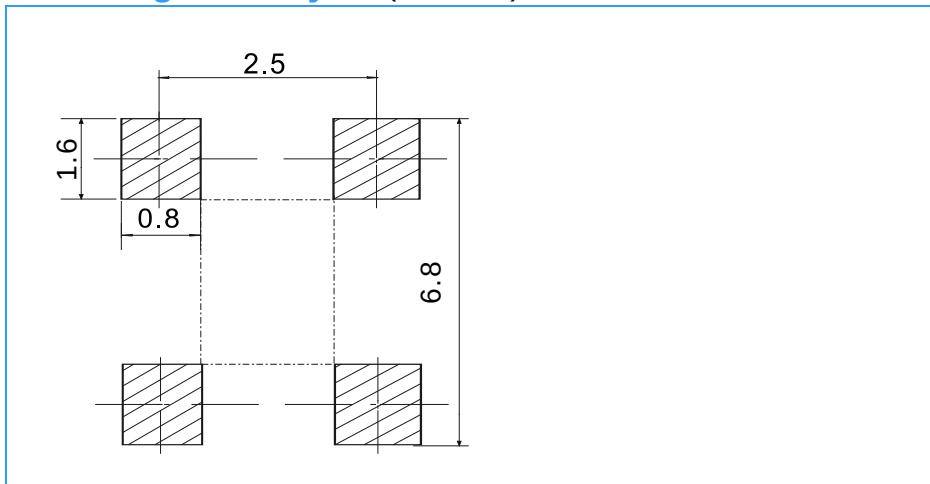
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Package Outline Dimensions(unit:mm)



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