

Silicon Bridge Rectifiers

MBF15M

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	MBF15M	Units
Peak repetitive reverse voltage	V _{RRM}	1000	V
RMS reverse voltage	V _{RMS}	700	V
DC blocking voltage	V _{DC}	1000	V
Maximum average forward output current	I _{F(AV)}	1.5	A
Peak forward surge current, 8.3ms single half-sine-wave	@T _J = 25°C I _{FSM}	40	A
I ² t Rating for fusing	@T _J = 25°C I ² t	6.6	A ² s

Thermal Characteristics

Parameter	Symbol	MBF15M	Units
Typical thermal resistance per leg (Note 1)	R _{θJA}	72	°C/W
	R _{θJC}	31	
	R _{θJL}	15	
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

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Electrical Characteristics (@T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test conditions		Typ.	Max.	Units
Maximum instantaneous forward voltage	V _F	I _F =1.5A Per Diode		--	1.15	V
Maximum Reverse current	I _R	Rated V _R , Per Diode	@T _A =25°C	--	10	μ A
			@T _A =125°C	--	200	

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

Fig.1-Forward Current Derating Curve

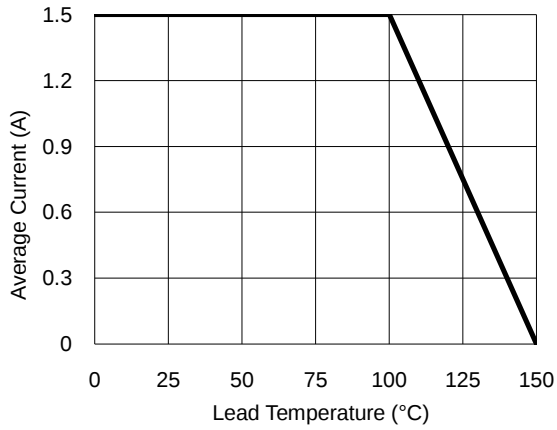


Fig.2- Surge Current Derating Curve

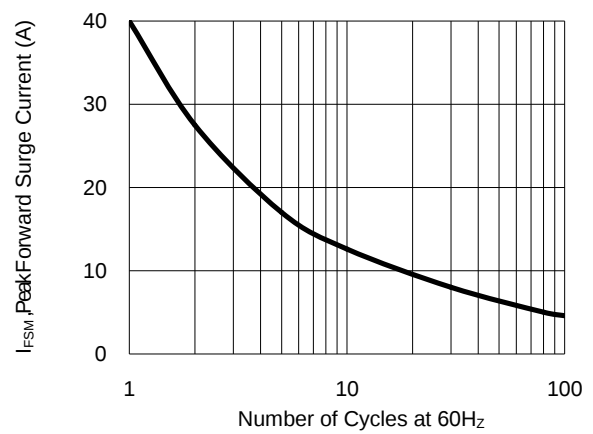


Fig.3- Typical Forward Voltage Characteristic

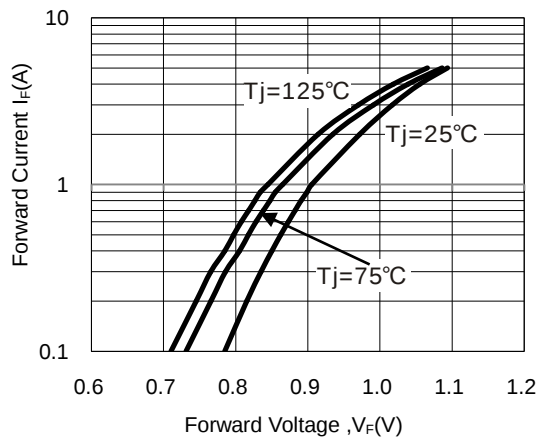
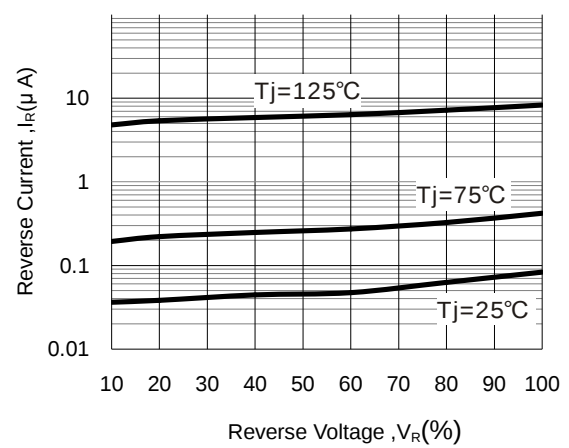


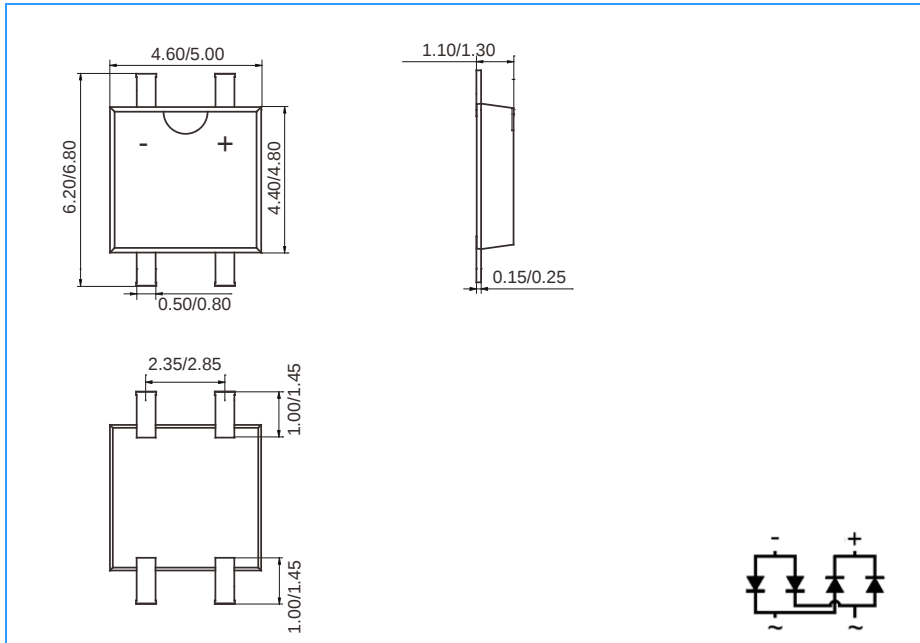
Fig.4- Typical Reverse Characteristic



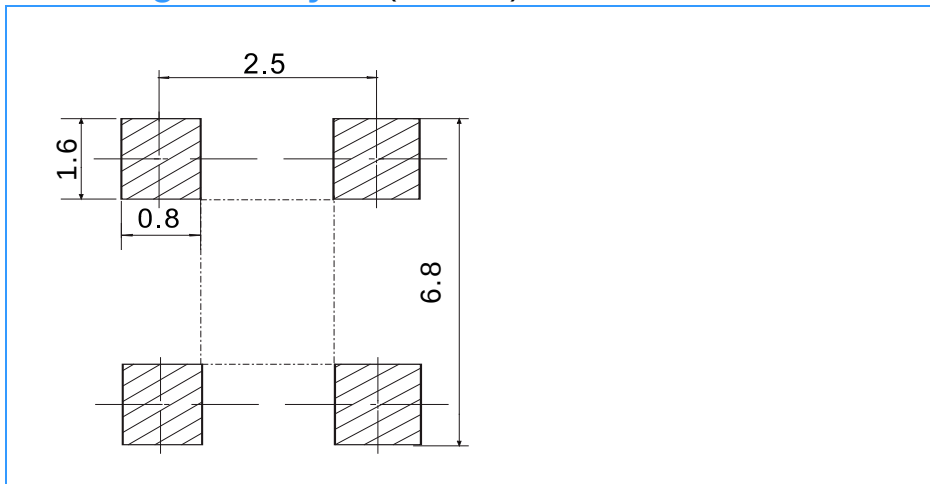
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Package Outline Dimensions(unit:mm)



Mounting Pad Layout(unit:mm)



Ordering Information

Part No.	Marking	Package	Shipping
MBF15M	MBF15M	MBF	5000/Tape&Reel