

# Schottky Barrier Rectifiers

# MBRXF150--MBRXF160

## Features

- Metal silicon junction, majority carrier conduction
- High surge capability
- High temperature soldering guaranteed:  
260°C/10 seconds
- High current capability, low forward voltage drop
- Guarding for over voltage protection
- RoHS Compliant



## Mechanical Data

- Case: SOD-123F molded plastic
- Molding compound, UL flammability classification rating 94V-0
- Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: Color band denotes cathode end

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

Characteristic	Symbol	MBRXF150	MBRXF160	Units
Peak repetitive reverse voltage	V <sub>RRM</sub>	50	60	V
RMS reverse voltage	V <sub>RMS</sub>	35	42	V
DC blocking voltage	V <sub>DC</sub>	50	60	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>	35		A

## Thermal Characteristics

Parameter	Symbol	MBRXF150	MBRXF160	Units
Typical thermal resistance (Note 1)	R <sub>θJA</sub>	85		°C/W
	R <sub>θJC</sub>	23		
	R <sub>θJL</sub>	15		
Operating junction temperature range	T <sub>J</sub>	- 55 ---- + 125		°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(Note 1)	V <sub>F</sub>	I <sub>F</sub> =1.0A	@T <sub>A</sub> =25°C	--	0.75	V
Maximum Reverse current (Note 2)	I <sub>R</sub>	Rated V <sub>R</sub> ,	@T <sub>J</sub> =25°C	--	500	μ A
			@T <sub>J</sub> =100°C	--	20	m A

Note:

- 1.Pulse test: 300us pulse width, 1 % duty cycle
- 2.Pulse test: Pulse width 40ms

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

Fig.1-Forward Current Derating Curve

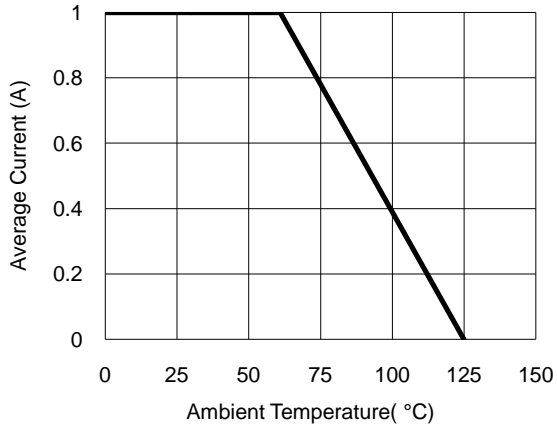


Fig.2- Surge Current Derating Curve

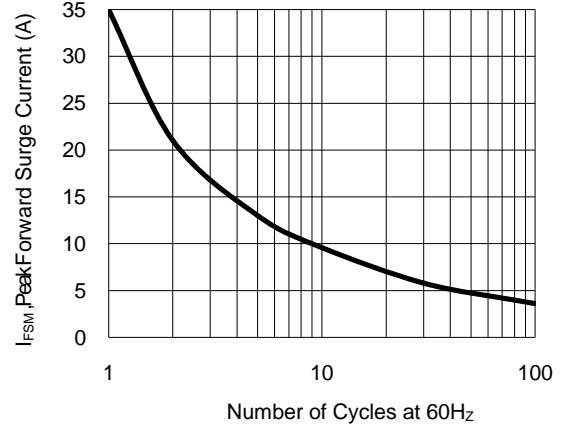


Fig.3- Typical Forward Voltage Characteristic

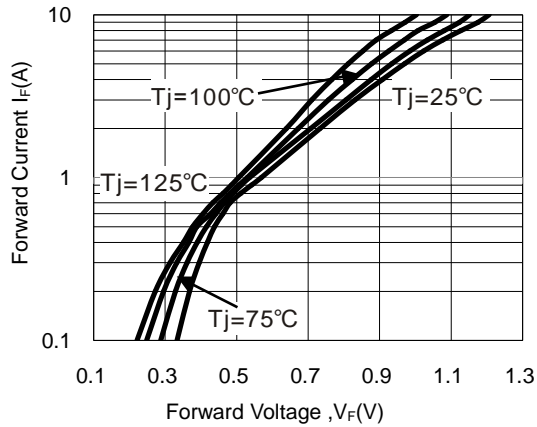
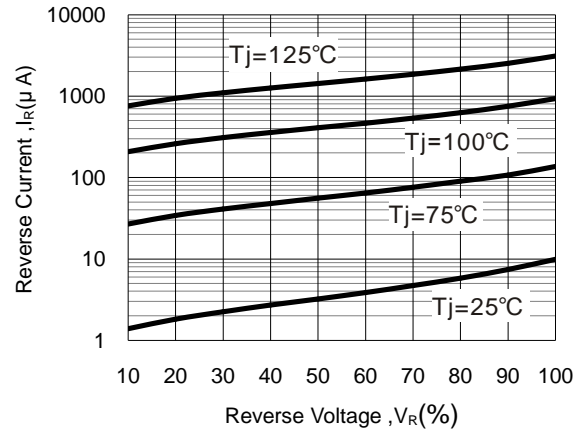


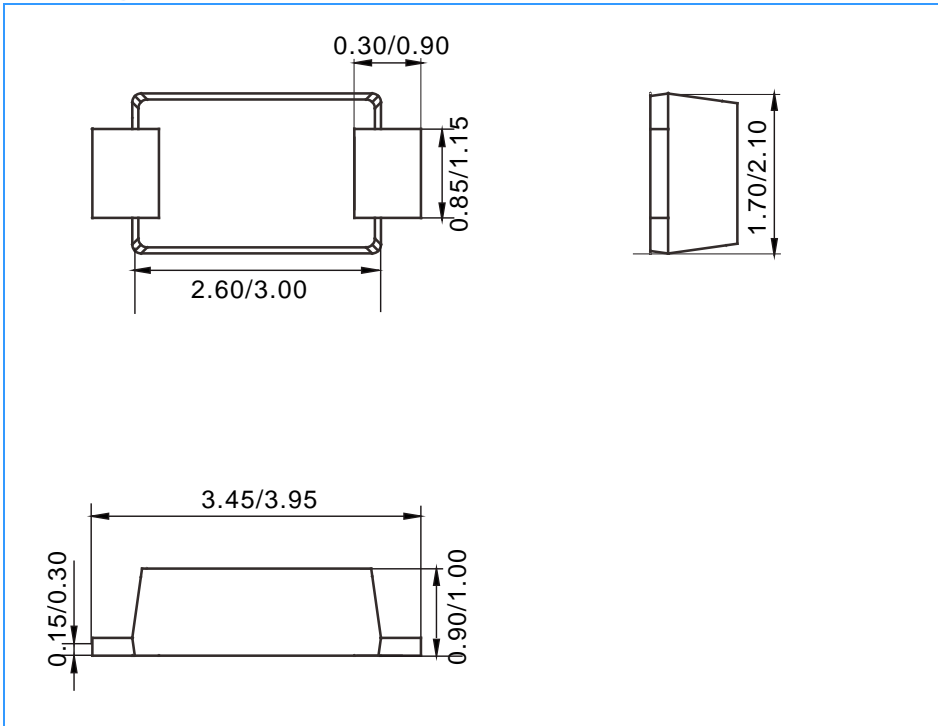
Fig.4- Typical Reverse Characteristic



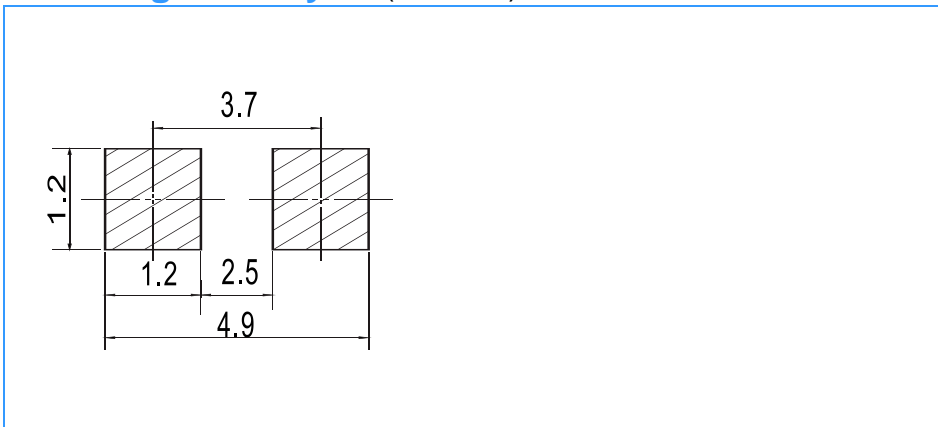
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### Package Outline Dimensions(unit:mm)



### Mounting Pad Layout(unit:mm)



### Ordering Information

Part No.	Marking	Package	Shipping
MBRXF150	F15	SOD-123F	10000/Tape&Reel
MBRXF160	F16	SOD-123F	10000/Tape&Reel