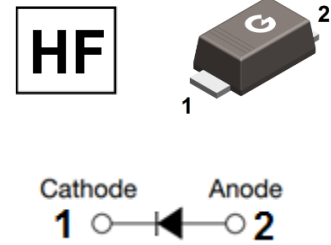


# Schottky Barrier Rectifier

## MBRX3150 - MBRX3200

### Features

- Metal silicon junction, majority carrier conduction
- High forward surge current capability
- Low forward voltage drop
- High temperature soldering guaranteed: 260°C @ 10s
- Robust guarding for over voltage protection
- RoHS compliant with Halogen-free



### Mechanical Data

- Case: SOD-123FL 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)

| Parameter                                                  | Symbol            | MBRX3150 | MBRX3200 | Unit |
|------------------------------------------------------------|-------------------|----------|----------|------|
| Peak Repetitive Reverse Voltage                            | V <sub>RRM</sub>  | 150      | 200      | V    |
| RMS Reverse Voltage                                        | V <sub>RMS</sub>  | 105      | 140      | V    |
| DC Blocking Voltage                                        | V <sub>DC</sub>   | 150      | 200      | V    |
| Average Forward Output Current                             | I <sub>F_AV</sub> | 3.0      |          | A    |
| Peak Forward Surge Current,<br>8.3ms Single Half Sine wave | I <sub>FSM</sub>  | 80       |          | A    |

### Thermal Characteristics

| Parameter                            | Symbol           | MBRX3150   | MBRX3200 | Unit |
|--------------------------------------|------------------|------------|----------|------|
| Typical Thermal Resistance *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 ~ +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 0.1 mm copper pad area

# Schottky Barrier Rectifier

## MBRX3150 - MBRX3200

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

| Parameter                                   | Symbol     | Test Conditions                   |                             | Min. | Typ. | Max. | Unit          |
|---------------------------------------------|------------|-----------------------------------|-----------------------------|------|------|------|---------------|
| Reverse Breakdown Voltage                   | $V_{(BR)}$ | $I_R = 100\mu\text{A}$ , MBRX3150 |                             | 150  | -    | -    | V             |
|                                             |            | $I_R = 100\mu\text{A}$ , MBRX3200 |                             | 200  | -    | -    | V             |
| Instantaneous Forward Voltage* <sup>1</sup> | $V_F$      | $I_F = 3.0\text{A}$               |                             | -    | -    | 0.90 | V             |
| Reverse Current* <sup>2</sup>               | $I_R$      | Rated<br>$V_R$                    | @ $T_J = 25^\circ\text{C}$  | -    | -    | 30   | $\mu\text{A}$ |
|                                             |            |                                   | @ $T_J = 100^\circ\text{C}$ | -    | -    | 5    | mA            |

Note\*<sup>1</sup>: Pulse test: 300us pulse width, 1 % duty cycle

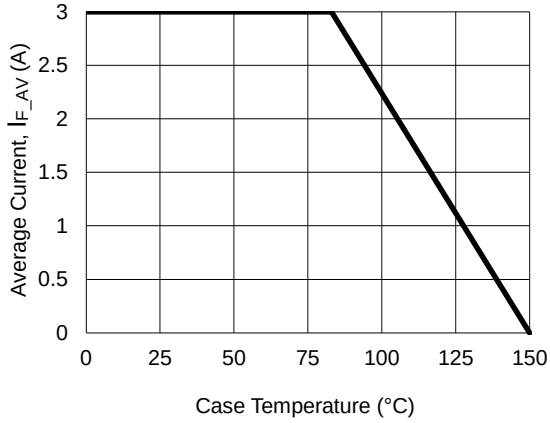
Note\*<sup>2</sup>: Pulse test: Pulse width 40ms

# Schottky Barrier Rectifier

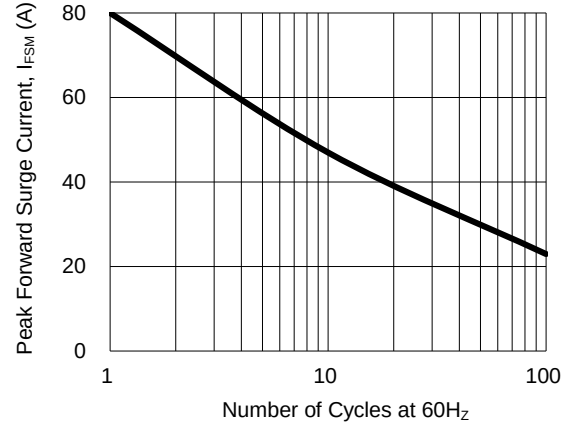
## MBRX3150 - MBRX3200

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

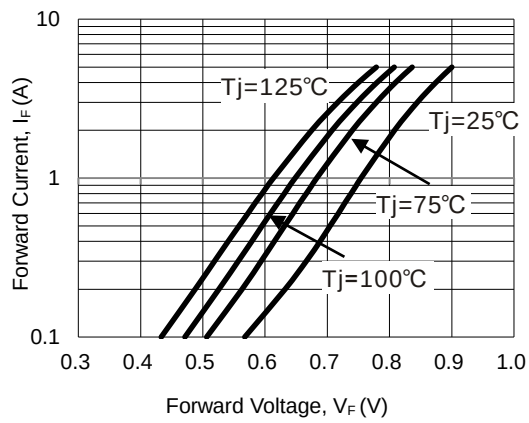
**Fig.1 Forward Current Derating Curve**



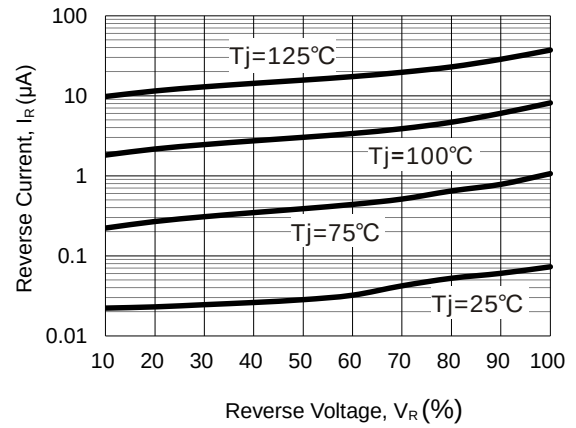
**Fig.2 Surge Current Derating Curve**



**Fig.3 Typical Forward Voltage Characteristics**



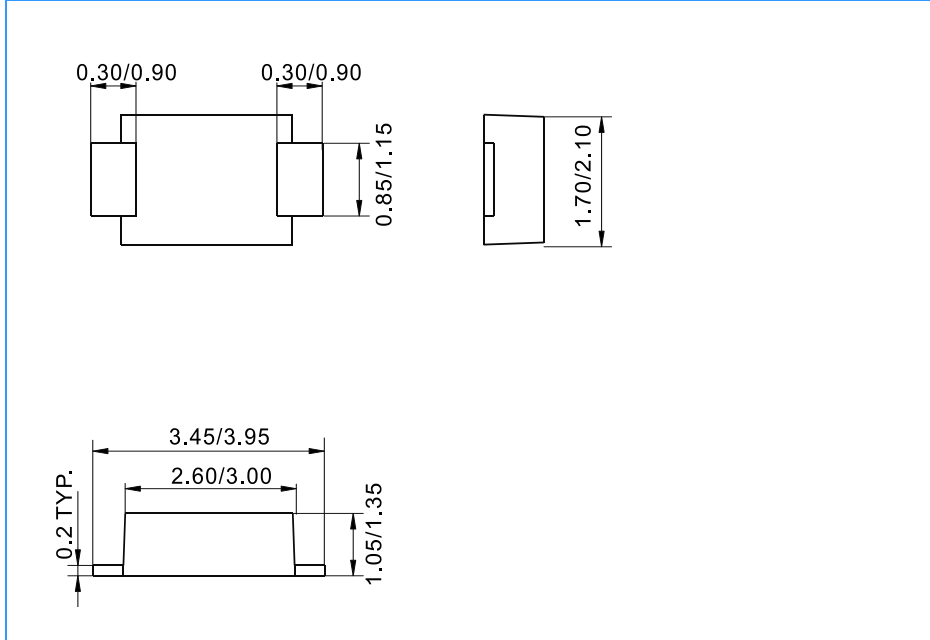
**Fig.4 Typical Reverse Characteristics**



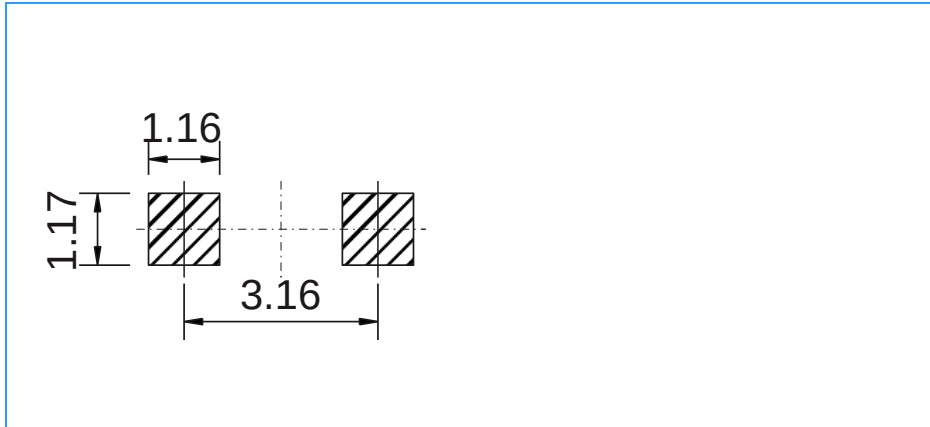
# Schottky Barrier Rectifier

## MBRX3150 - MBRX3200

### Package Outline Dimensions (Unit: mm)



### Mounting Pad Layout (Unit: mm)



### Ordering Information

| Part Number | Marking | Package   | Shipping Quantity     |
|-------------|---------|-----------|-----------------------|
| MBRX3150    | 3C      | SOD-123FL | 10 kpcs / Tape & Reel |
| MBRX3200    | 3D      | SOD-123FL | 10 kpcs / Tape & Reel |