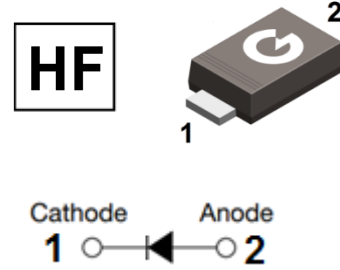


# Schottky Barrier Rectifier

## MBRXT250 - MBRXT260

### 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-123T 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            | MBRXT250 | MBRXT260 | Unit |
|------------------------------------------------------------|-------------------|----------|----------|------|
| 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    |
| Average Forward Output Current                             | I <sub>F_AV</sub> | 2.0      |          | A    |
| Peak Forward Surge Current,<br>8.3ms Single Half Sine wave | I <sub>FSM</sub>  | 50       |          | A    |

### Thermal Characteristics

| Parameter                              | Symbol           | MBRXT250   | MBRXT260 | Unit |
|----------------------------------------|------------------|------------|----------|------|
| Thermal Resistance Junction-to-Air *1  | R <sub>θJA</sub> | 110        |          | °C/W |
| Thermal Resistance Junction-to-Case *1 | R <sub>θJC</sub> | 23         |          | °C/W |
| Thermal Resistance Junction-to-Lead *1 | R <sub>θJL</sub> | 15         |          | °C/W |
| Operating Junction Temperature Range   | T <sub>J</sub>   | -55 ~ +150 |          | °C   |
| Storage Temperature Range              | T <sub>STG</sub> | -55 ~ +150 |          | °C   |

# Schottky Barrier Rectifier

## MBRXT250 - MBRXT260

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

| Parameter                       | Symbol     | Test Condition                          | Min. | Typ. | Max. | Unit          |
|---------------------------------|------------|-----------------------------------------|------|------|------|---------------|
| Reverse Breakdown Voltage       | $V_{(BR)}$ | $I_R = 100\mu\text{A}$ , MBRXT250       | 50   | -    | -    | V             |
|                                 |            | $I_R = 100\mu\text{A}$ , MBRXT260       | 60   | -    | -    | V             |
| Forward Voltage *2              | $V_F$      | $I_F = 2\text{A}$                       | -    | -    | 0.65 | V             |
| Maximum Peak Reverse Current *3 | $I_R$      | Rated $V_R$ , $T_J = 25^\circ\text{C}$  | -    | -    | 100  | $\mu\text{A}$ |
|                                 |            | Rated $V_R$ , $T_J = 100^\circ\text{C}$ | -    | -    | 10   | mA            |

Notes:

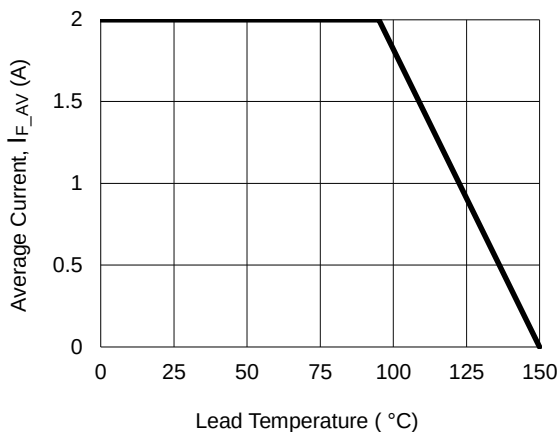
1. The data tested by surface mounted on p.c.b. with 10 mm x 20 mm x 0.1 mm copper pad area
2. The data tested by pulsed, pulse width  $\leq 300\mu\text{s}$ , duty cycle  $\leq 1\%$
3. The data tested by pulsed, pulse width  $\leq 40\text{ms}$

# Schottky Barrier Rectifier

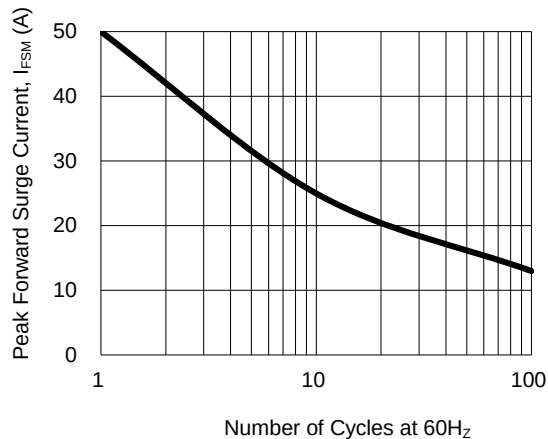
## MBRXT250 - MBRXT260

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

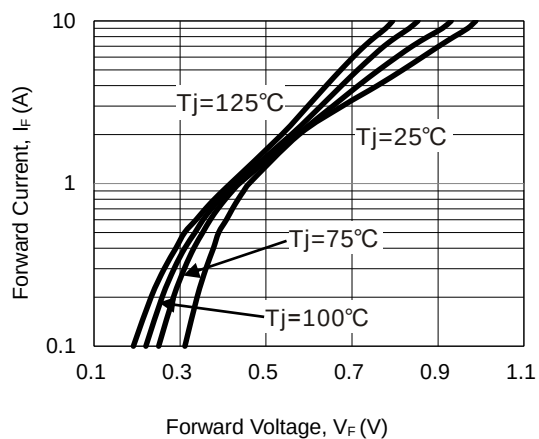
**Fig.1 Forward Current Derating Curve**



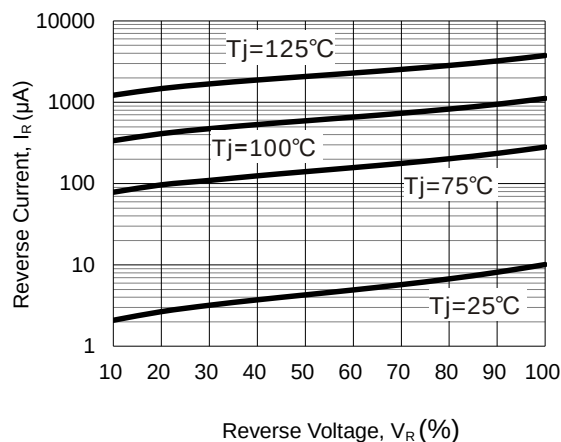
**Fig.2 Surge Current Derating Curve**



**Fig.3 Typical Forward Voltage Characteristics**



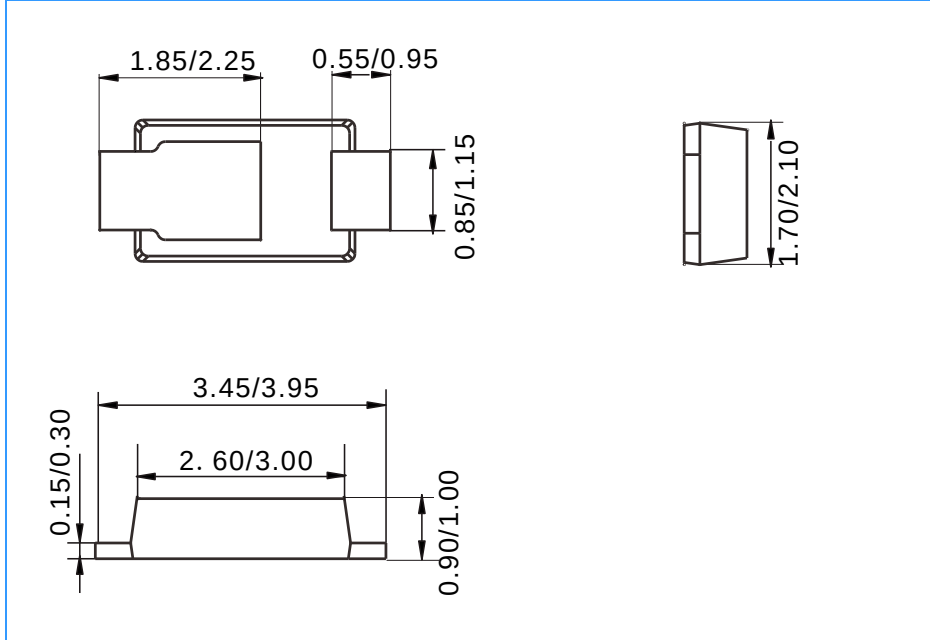
**Fig.4 Typical Reverse Characteristics**



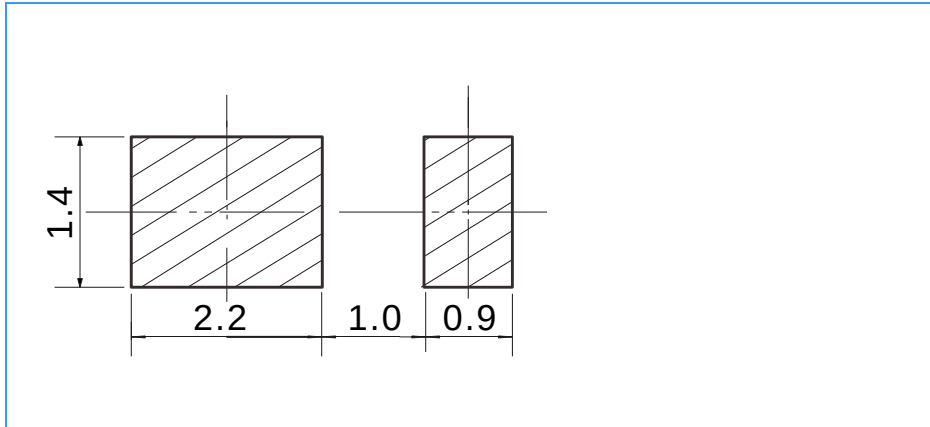
## Schottky Barrier Rectifier

## MBRXT250 - MBRXT260

### Package Outline Dimensions (Unit: mm)



### Mounting Pad Layout (Unit: mm)



### Ordering Information

| Part Number | Marking | Package  | Shipping Quantity     |
|-------------|---------|----------|-----------------------|
| MBRXT250    | T25     | SOD-123T | 10 kpcs / Tape & Reel |
| MBRXT260    | T26     | SOD-123T | 10 kpcs / Tape & Reel |