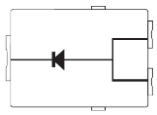
# MBR5H60PC-AU

## Surface Mount Ultra Low $I_R$ Schottky Barrier Rectifier

| Voltage | 60 V | Current | 5 A |
|---|---|---|---|

TO-277C



### Features

- Low leakage current
- Deal for automated placement
- Low power loss, high efficiency
- High surge current capability
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### Mechanical Data

- Case : TO-277C package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.11 grams

### Maximum Ratings and Thermal Characteristics ($T_A$ = 25 °C unless otherwise noted)

| PARAMETER | SYMBOL | LIMIT | UNITS |
|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 60 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 42 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 60 | V |
| Maximum Average Forward Rectified Current | $I_{F(AV)}$ | 5 | A |
| Peak Forward Surge Current : 8.3 ms single half sine-wave superimposed on rated load | $I_{FSM}$ | 190 | A |
| Typical Junction Capacitance<br>Measured at 1 MHZ And Applied $V_R$ = 4 V | $C_J$ | 250 | pF |
| Typical Thermal Resistance (Note 1)<br>(Note 2)<br>(Note 2) | $R_{\theta JA}$<br>$R_{\theta JC}$<br>$R_{\theta JL}$ | 65<br>22<br>15 | °C/W |
| Operating Junction Temperature Range | $T_J$ | -55~175 | °C |
| Storage Temperature Range | $T_{STG}$ | -55~175 | °C |

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## Electrical Characteristics ($T_A$ = 25 °C unless otherwise noted)

| PARAMETER | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNITS |
|---|---|---|---|---|---|---|
| Forward Voltage | $V_F$ | $I_F$ = 1 A, $T_J$ = 25 °C | - | 0.52 | - | V |
| | | $I_F$ = 3 A, $T_J$ = 25 °C | - | 0.61 | - | |
| | | $I_F$ = 5 A, $T_J$ = 25 °C | - | - | 0.75 | |
| | | $I_F$ = 1 A, $T_J$ = 125 °C | - | 0.41 | - | |
| | | $I_F$ = 3 A, $T_J$ = 125 °C | - | 0.51 | - | |
| | | $I_F$ = 5 A, $T_J$ = 125 °C | - | 0.57 | - | |
| Reverse Current | $I_R$ | $V_R$ = 48 V, $T_J$ = 25 °C | - | 0.12 | - | uA |
| | | $V_R$ = 60 V, $T_J$ = 25 °C | - | - | 5 | |
| | | $V_R$ = 60 V, $T_J$ = 125 °C | - | - | 2.2 | mA |

NOTES :

1. Mounted on a FR4 PCB, single-sided copper, standard footprint.
2. Mounted on a FR4 PCB, single-sided copper, with 100 $cm^2$ copper pad area.

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## TYPICAL CHARACTERISTIC CURVES

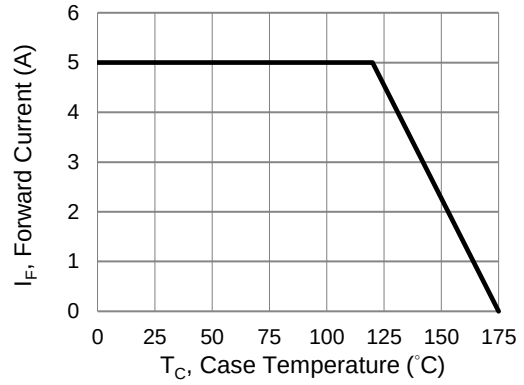



Fig.1 Forward Current Derating Curve

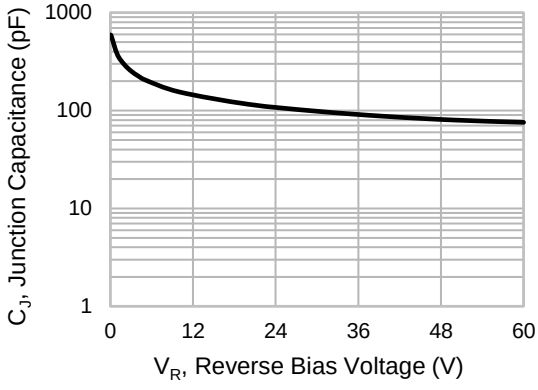



Fig.2 Typical Junction Capacitance

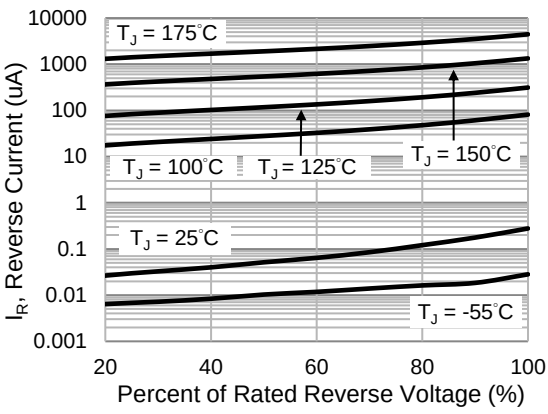



Fig.3 Typical Reverse Characteristics

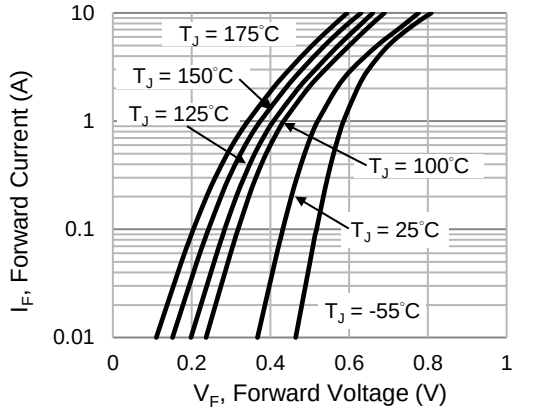



Fig.4 Typical Forward Characteristics

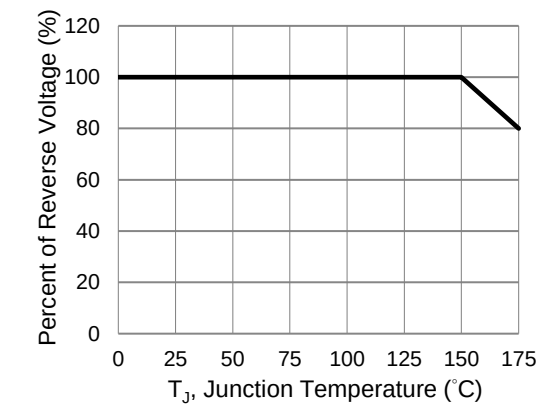



Fig.5 Operating Temperature Derating Curve

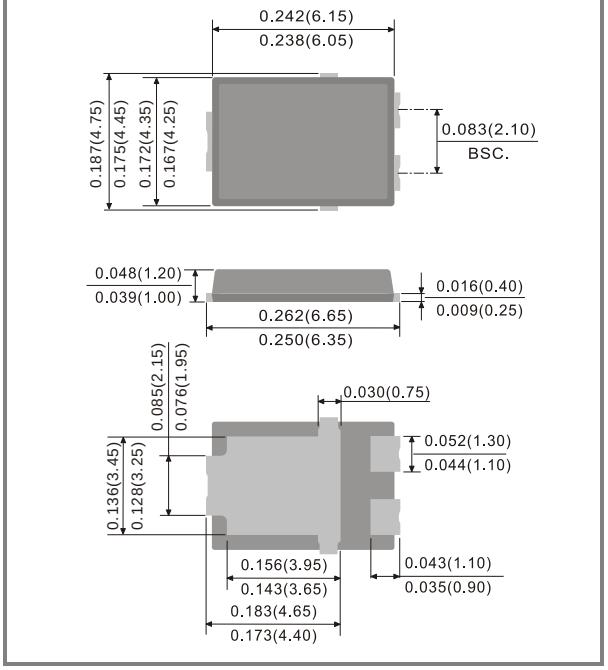
# MBR5H60PC-AU

## Part No. Packing Code Version

| Part No. | Package Type | Packing Type | Marking | Version |
|---|---|---|---|---|
| MBR5H60PC-AU | TO-277C | 5K pcs / 13” reel | MBR5H60PC | Halogen free RoHS compliant |

## Packaging Information & Mounting Pad Layout

TO-277C Dimension — Unit: inch(mm)




TO-277C Pad Layout — Unit: inch(mm)