

MBR10200CD

Surface Mount Schottky Barrier Rectifier

Voltage

200 V

Current

10 A

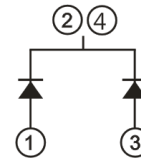
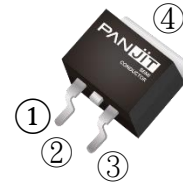
Features

- Low power loss, high efficiency
- High surge current capability
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case : TO-252AA Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.3217 grams

TO-252AA



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

| PARAMETER | SYMBOL | LIMIT | UNITS |
|--|------------------------------|------------|-------|
| Maximum Repetitive Peak Reverse Voltage | V _{RRM} | 200 | V |
| Maximum RMS Voltage | V _{RMS} | 140 | V |
| Maximum DC Blocking Voltage | V _{DC} | 200 | V |
| Maximum Average Forward Current | I _{F(AV)} | per device | 10 |
| | | per diode | 5 |
| Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load Per Diode | I _{FSM} | 120 | A |
| Typical Junction Capacitance Measured at 1 MHz And Applied V _R = 4 V | C _J | 90 | pF |
| Typical Thermal Resistance | (Note 1) R _{θJA} | 50 | °C/W |
| | (Note 2) R _{θJC} | 5 | |
| | (Note 2) R _{θJL} | 4.6 | |
| Operating Junction Temperature Range | T _J | -55~175 | °C |
| Storage Temperature Range | T _{STG} | -55~175 | °C |

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

| PARAMETER | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNITS |
|---------------------------|--------|---|------|------|------|-------|
| Forward Voltage Per Diode | V_F | $I_F = 1\text{ A}, T_J = 25^\circ\text{C}$ | - | 0.69 | - | V |
| | | $I_F = 3\text{ A}, T_J = 25^\circ\text{C}$ | - | 0.77 | - | V |
| | | $I_F = 5\text{ A}, T_J = 25^\circ\text{C}$ | - | 0.81 | 0.87 | V |
| | | $I_F = 1\text{ A}, T_J = 125^\circ\text{C}$ | - | 0.53 | - | V |
| | | $I_F = 3\text{ A}, T_J = 125^\circ\text{C}$ | - | 0.62 | - | V |
| | | $I_F = 5\text{ A}, T_J = 125^\circ\text{C}$ | - | 0.67 | - | V |
| Reverse Current Per Diode | I_R | $V_R = 160\text{ V}, T_J = 25^\circ\text{C}$ | - | 47 | - | nA |
| | | $V_R = 200\text{ V}, T_J = 25^\circ\text{C}$ | - | - | 50 | uA |
| | | $V_R = 200\text{ V}, T_J = 125^\circ\text{C}$ | - | 122 | - | |

NOTES :

1. Mounted on a FR4 PCB, single-sided copper, standard footprint.
2. Mounted on a FR4 PCB, single-sided copper, with 100 cm² copper pad area.

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TYPICAL CHARACTERISTIC CURVES

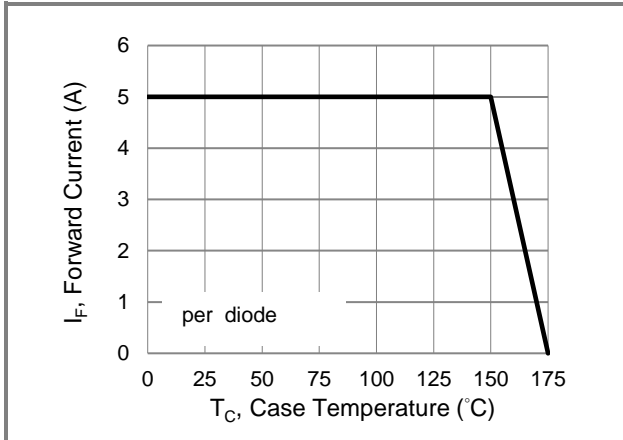


Fig.1 Forward Current Derating Curve

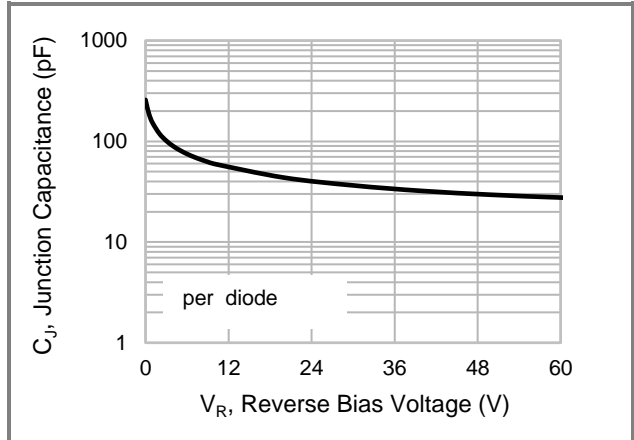


Fig.2 Typical Junction Capacitance

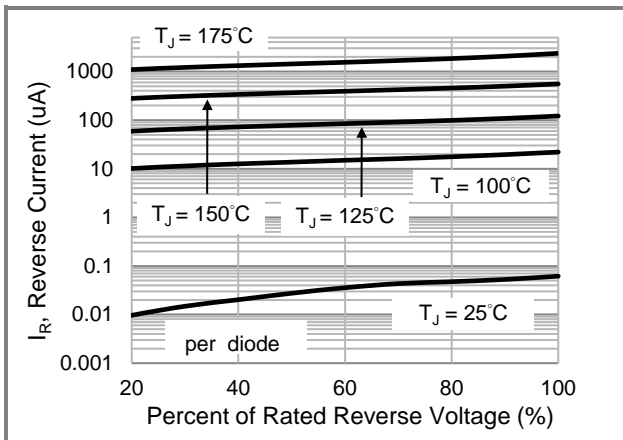


Fig.3 Typical Reverse Characteristics

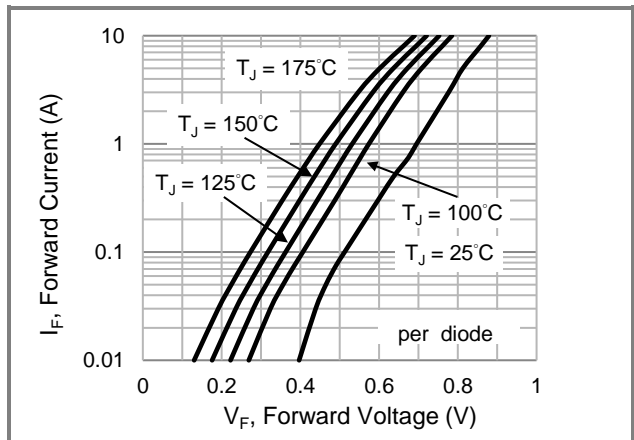


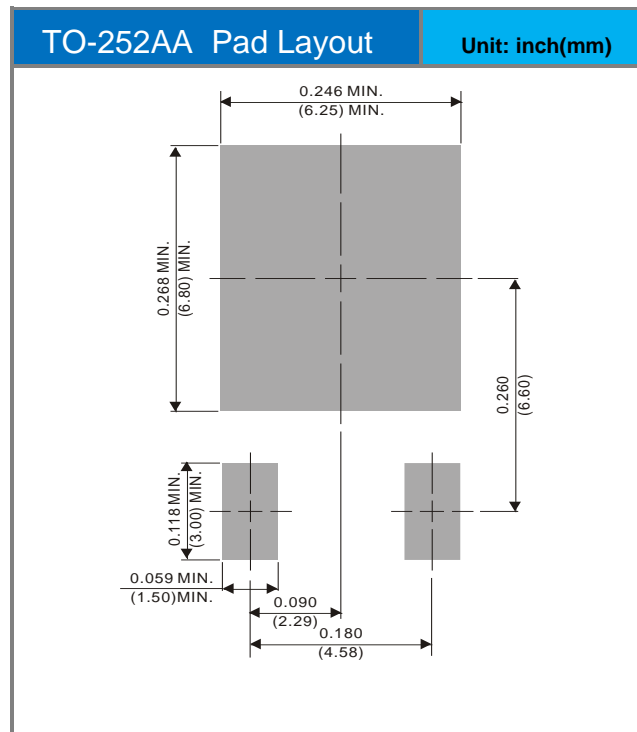
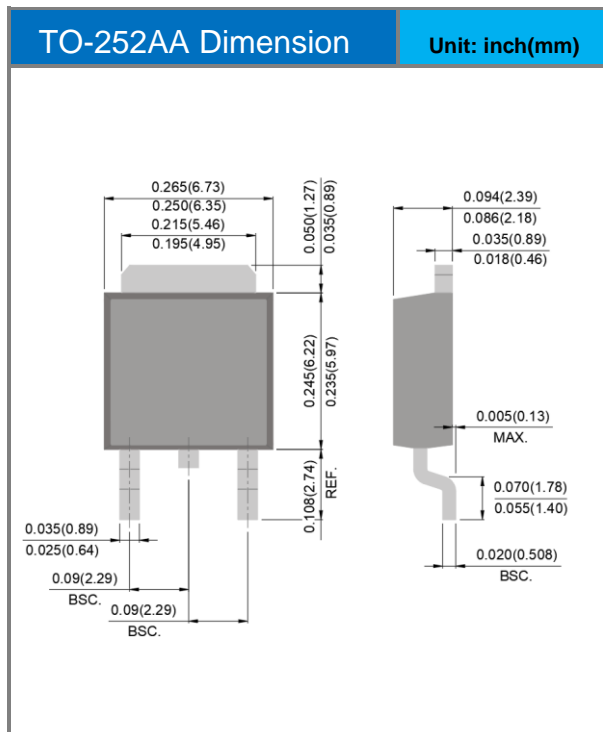
Fig.4 Typical Forward Characteristics

MBR10200CD

Product and Packing Information

| Part No. | Package Type | Packing Type | Marking |
|------------|--------------|-------------------|----------|
| MBR10200CD | TO-252AA | 3K pcs / 13" reel | MR10200C |

Packaging Information & Mounting Pad Layout



MBR10200CD

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