

MBRF30200CT

Dual Common-Cathode High-Voltage Schottky Rectifier

Features

- Guard ring for overvoltage protection
- Lower power losses, high efficiency
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High frequency operation
- Solder Dip 260 °C, 40 s
- RoHS compliant package

Application

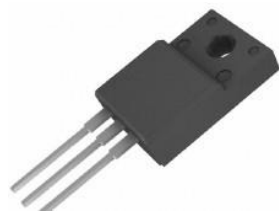
For use in high frequency rectifier of switching mode power supplies, free wheeling diodes, dc-to-dc converters or polarity protection application.

Mechanical Data

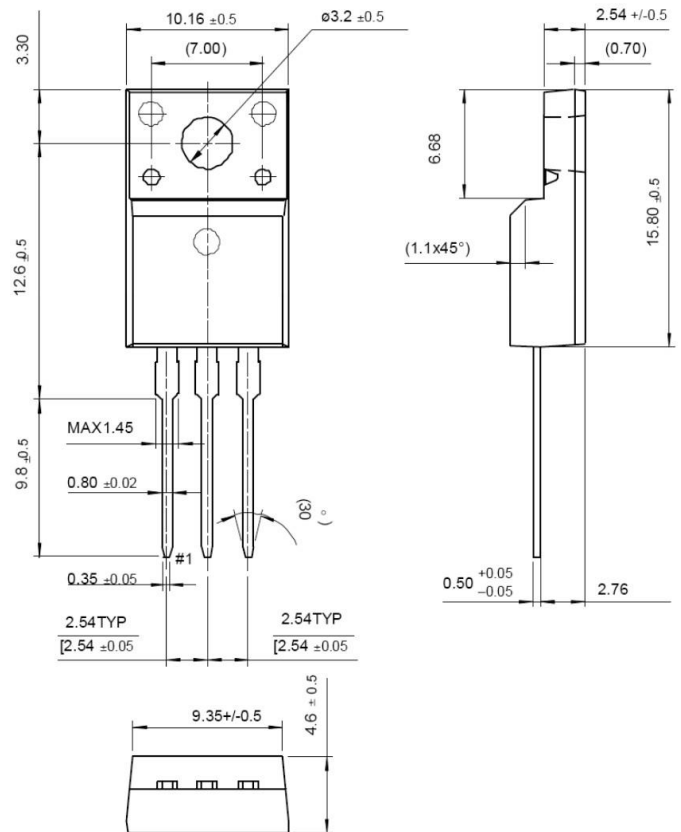
- Case: ITO-220AB
- Molding compound meets UL 94 V-0 flammability rating
- Terminals: Matte tin plated leads, solderable per meets JESD 201
- Polarity: As marked
- Weight: 2.4 grams
- Mounting Torque: 10 in-lbs maximum

Packing & Order Information

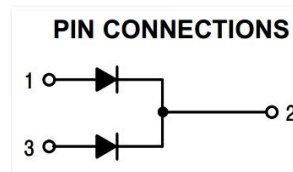
50/Tube ; 1,000/Box



RoHS
COMPLIANT



Graphic symbol



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum Ratings (Tc=25°C unless otherwise noted)

| Parameter | Symbol | MBRF30200CT | Unit |
|---|--------|-------------|------|
| Maximum repetitive peak reverse voltage | VRRM | 200 | V |
| Working peak reverse voltage | VRWM | 140 | V |
| Maximum DC blocking voltage | VDC | 200 | V |
| Maximum average forward rectified current | IF(AV) | 30 | A |

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Maximum Ratings (Tc=25°C unless otherwise noted)

| Parameter | Symbol | MBR30200CT | Unit |
|--|--------|-------------|------|
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | IFSM | 250 | A |
| Non-repetitive avalanche energy at 25 °C IAS = 2 A per diode | EAS | 20 | mJ |
| Reverse Recovery Time (IF = 0.5A, IR = 1A, IRR =0.25A) | Trr | 20 | ns |
| Operating junction temperature range | TJ | -55 to +150 | °C |
| Storage temperature range | TSTG | -55 to +150 | °C |

Electrical characteristics (Tc=25°C unless otherwise noted)

| Parameter | Symbol | Value | | Unit |
|---|--------|------------|--------------|------|
| | | Typical | Max | |
| Instantaneous forward voltage at IF=15A, Tj=25°C at IF=15A, Tj=125°C | VF | 0.8 0.7 | 0.90 0.80 | V |
| Maximum reverse current per leg Tj=25°C | IR | 100 | | u'A |
| at working peak reverse voltage Tj=125°C | | 1 | | m'A |

Notes :

- (1) Pulse test: 300 µs pulse width, 1 % duty cycle
- (2) Pulse test: Pulse width ≤ 40 ms

Thermal characteristics (Tc=25°C unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|----------------------------|--------|------------|------|
| Typical thermal resistance | | MBR30200CT | °C/W |
| | RθJA | 60 | |
| | Rthjc | 5 | |

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■ TYPICAL CHARACTERISTICS @ Ta=25 °C unless otherwise specified

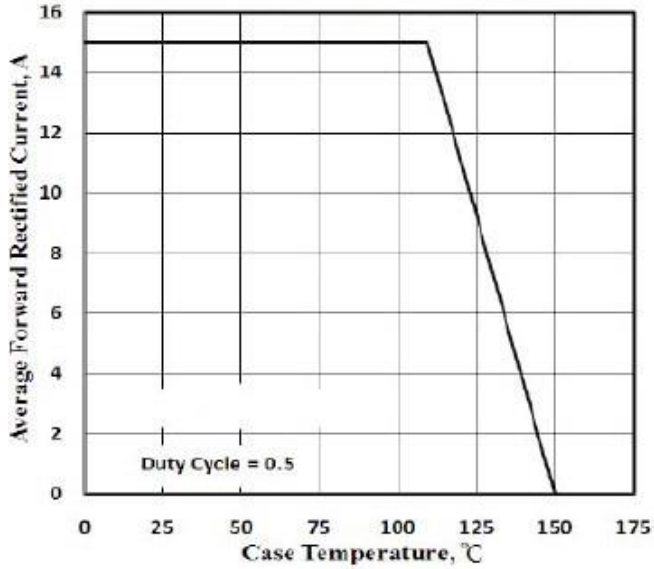


FIG. 1-FORWARD CURRENT DERATING CURVE

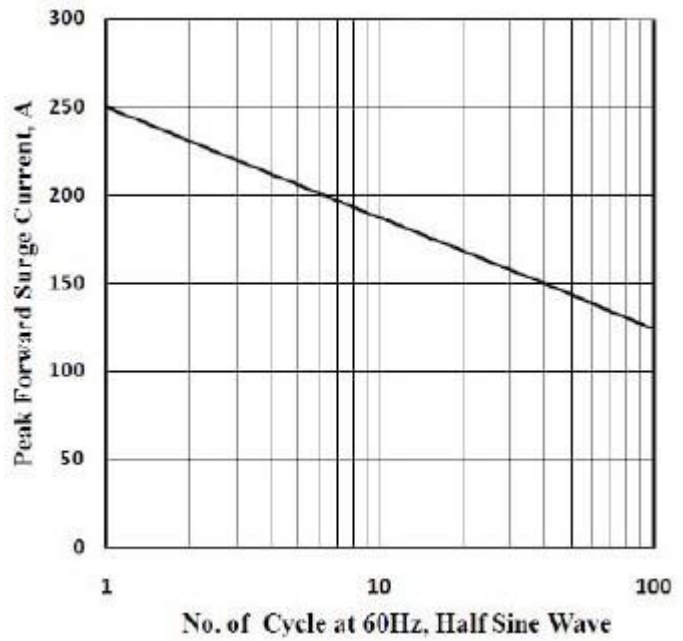


FIG. 2-MAXIMUM NON-REPETITIVE SURGE CURRENT

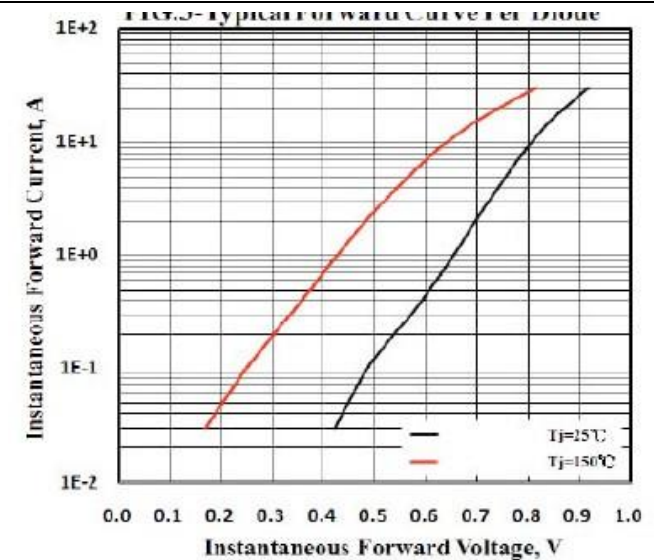


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

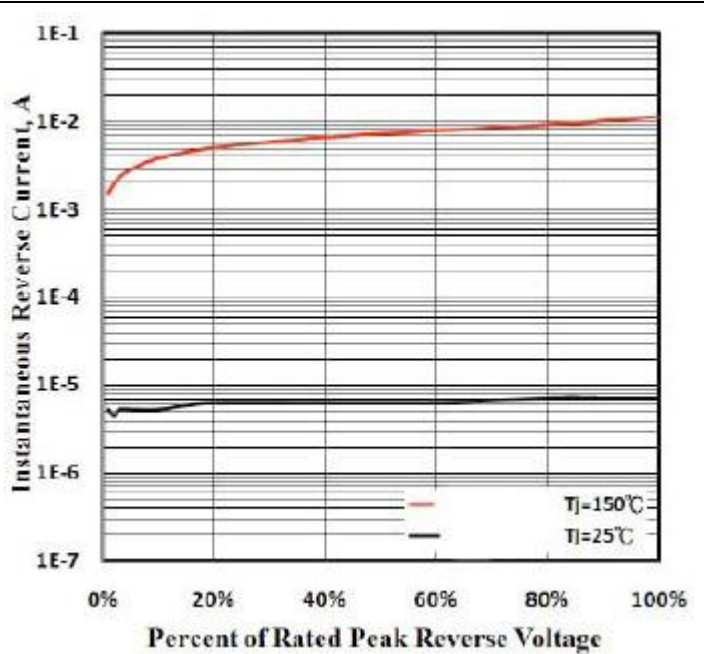


FIG. 4-TYPICAL FORWARD CHARACTERISTICS

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