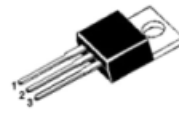




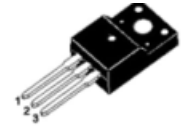
MBR30L100CTF Schottky barrier rectifiers Low I_R at High Temperature

Features

- Construction utilizes void-free molded plastic technique
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:
250°C/10 seconds
- Component in accordance RoHS 2011/65/EU



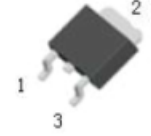
TO-220AB/CT



TO-220F/CT



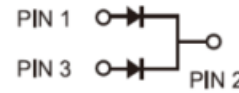
TO-263/DC



TO-252/CS



RoHS
COMPLIANT



Mechanical Data

Case: TO-220AB/F

Molding compound meets

UL 94 V-0 flammability rating

- **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- **Polarity:** As marked
- **Mounting Position:** Any

Major Ratings and Characteristics

| | |
|--------------------|-----------------------------------|
| I _{F(AV)} | 30A |
| V _{RRM} | 20 V to 200 V |
| I _{FSM} | 200A |
| V _F | 0.40V, 0.45V, 0.55V, 0.65V, 0.75V |
| T _{Jmax.} | 125°C, 150°C |

Maximum Ratings & Electrical Characteristics (T_A = 25 °C unless otherwise noted)

| Items | Symbol | MBR 30L20 | MBR 30L40 | MBR 30L45 | MBR 30L60 | MBR 30L100 | MBR 30L150 | MBR 30L200 | Unit |
|--|-----------------------------------|-------------|-----------|-----------|-----------|-------------|------------|------------|------|
| Maximum repetitive peak reverse voltage | V _{RRM} | 20 | 40 | 45 | 60 | 100 | 150 | 200 | V |
| Maximum RMS voltage | V _{RMS} | 14 | 28 | 31.5 | 42 | 70 | 105 | 140 | V |
| Maximum DC blocking voltage | V _{DC} | 20 | 40 | 45 | 60 | 100 | 150 | 200 | V |
| Average forward rectified current (See Fig.1) | I _{F(AV)} | 30.0 | | | | | | | A |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | I _{FSM} | 200.0 | | | | | | | A |
| Thermal resistance from junction to case | R _{θJc} | 2.0 | | | | | | | °C/W |
| Operating junction and storage temperature range | T _J , T _{STG} | -55 to +125 | | | | -55 to +150 | | | °C |
| Maximum instantaneous forward voltage at 15.0A | V _F | 0.40 | 0.45 | 0.55 | 0.65 | 0.75 | | V | |
| Typical junction capacitance ⁽¹⁾ | C _J | 800 | | | | 350 | | | pF |
| Maximum DC reverse current at rated DC blocking voltage | T _A =25°C | 0.15 | | | | 0.1 | | | mA |
| | T _A =100°C | 40.0 | | | | 20.0 | | | |

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.



Typical Performance Characteristics

Figure 1. Forward Current Characteristics

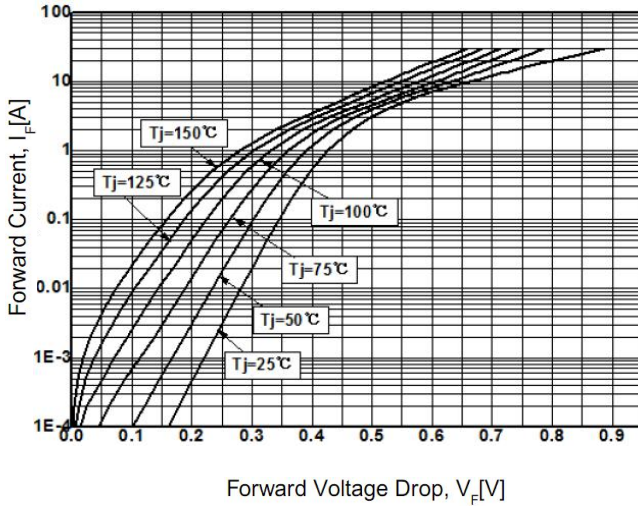


Figure 2. Reverse Leakage Current

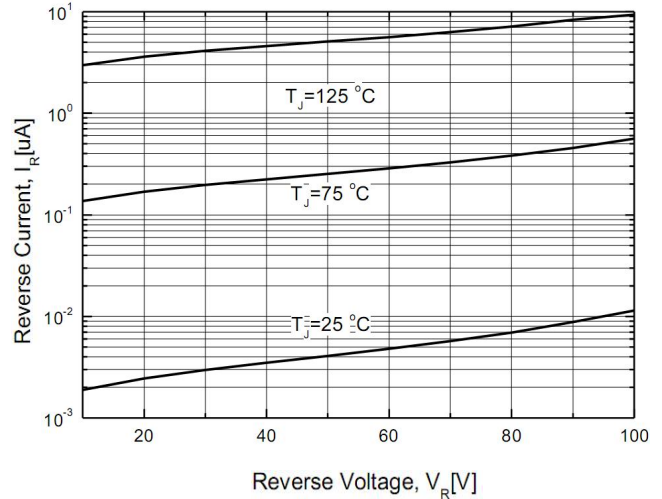


Figure 3. Junction Capacitance

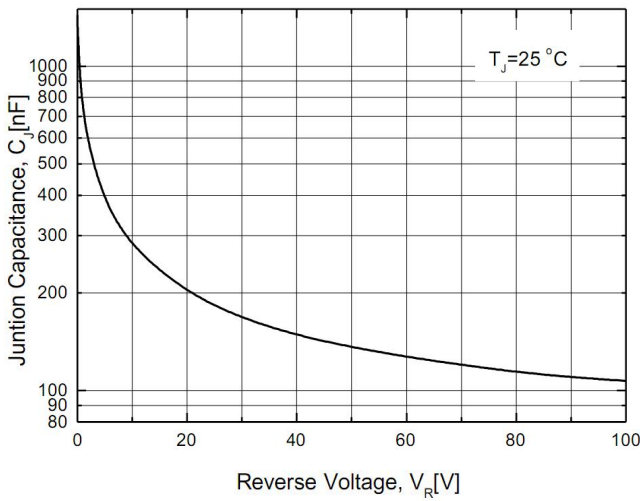
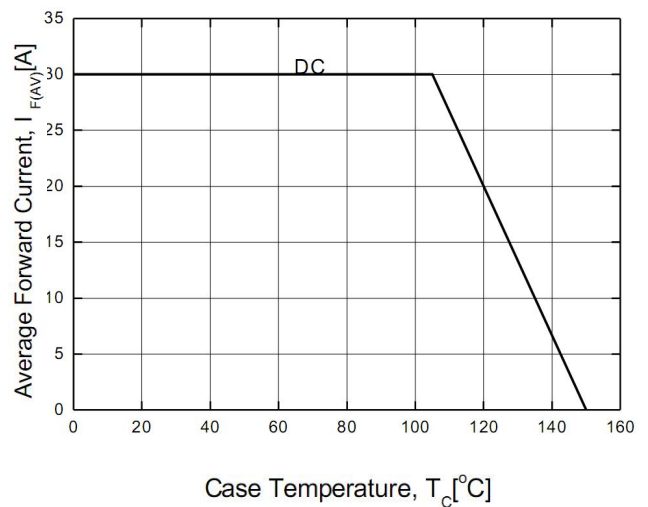


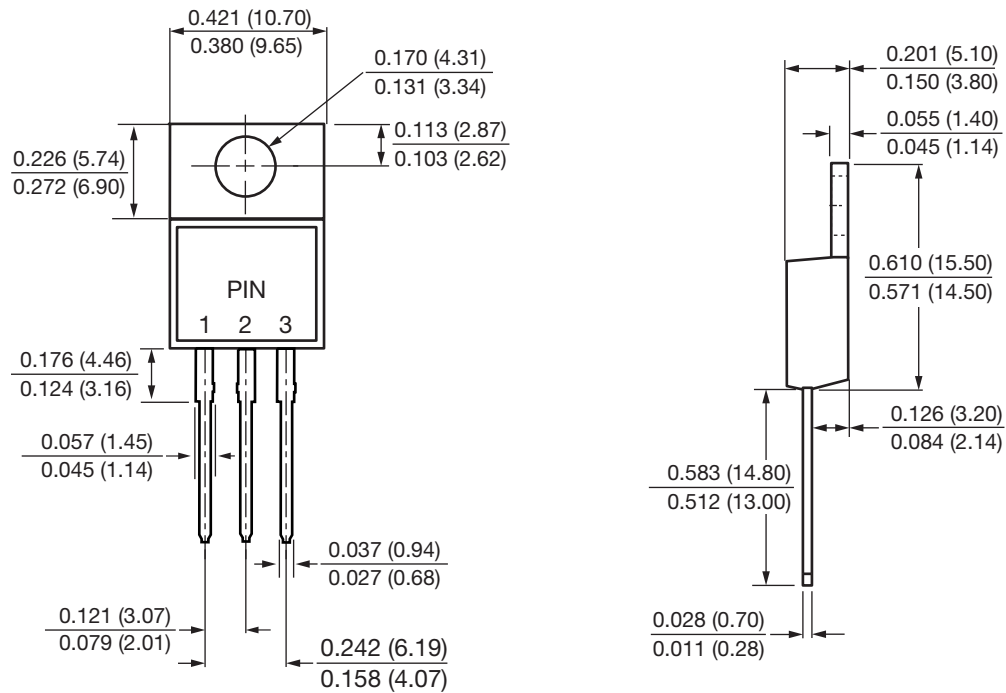
Figure 4. Power Derating





Package Outline

TO-220F



Dimensions in inches and (millimeters)

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- Zhejiang TRR Microelectronics Inc advises customers to obtain the latest version of the device information before placing orders to verify that the required information is current.