

**VOLTAGE RANGE: 40 - 200V**

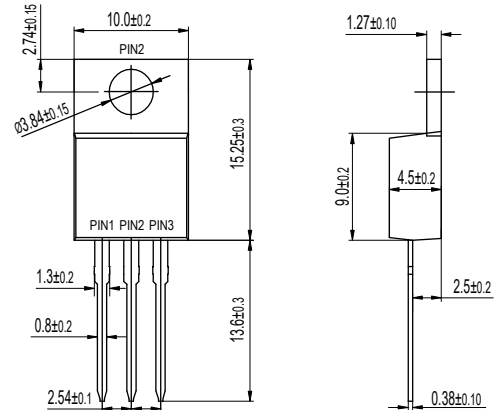
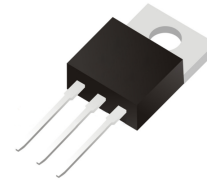
**CURRENT: 30A**

### Features

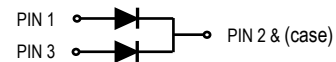
- High efficiency operation
- Low power loss
- Low stored charge majority carrier conduction
- High forward surge capability
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std (Halogen Free)

### Mechanical Data

- Circuit figure: Common cathode
- Leads: Solderable per mil-std-202, Method 208
- Polarity: as marked
- Mounting torque: 5 in-lbs maximum
- Terminals: Puretin plated
- Weight: TO-220AB 1.85 grams



TO-220AB



### Maximum Ratings and Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise specified

| RATINGS   | SYMBOL            | MBR 3040CT  | MBR 3045CT | MBR 3060CT | MBR 30100CT | MBR 30150CT | MBR 30200CT | UNIT |
|---|-------------------|-------------|------------|------------|-------------|-------------|-------------|------|
| Maximum repetitive reverse voltage  | VRRM              | 40          | 45         | 60         | 100         | 150         | 200         | V    |
| Maximum RMS voltage   | VRMS              | 28          | 32         | 42         | 70          | 105         | 140         | V    |
| Maximum DC blocking voltage   | VDC               | 40          | 45         | 60         | 100         | 150         | 200         | V    |
| Maximum average forward current per device per diode  | I <sub>AV</sub>   | 30          |            |            |             | 15          |             | A    |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load                      | I <sub>FSM</sub>  | 280         |            |            |             |             |             | A    |
| Typical thermal resistance (Note 1)   | R <sub>θ-JC</sub> | 2.0         |            |            |             |             |             | °C/W |
| Operating junction temperature range  | T <sub>J</sub>    | -55 to +150 |            |            |             | -55 to +175 |             | °C   |
| Storage temperature range   | T <sub>STG</sub>  | -55 to +175 |            |            |             |             |             | °C   |
| Maximum forward voltage per leg at I <sub>F</sub> =15A  | V <sub>F</sub>    | 0.65        | 0.75       | 0.85       | 0.95        |             |             | V    |
| Maximum average reverse current at rated DC blocking voltage T <sub>J</sub> =25°C T <sub>J</sub> =125°C | I <sub>R</sub>    | 0.10<br>15  |            | 0.01<br>8  |             |             |             | mA   |

Notes: 1. Thermal resistance from junction to case.

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

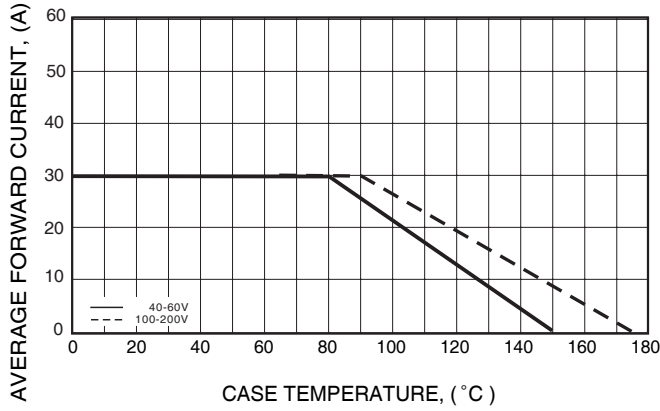


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

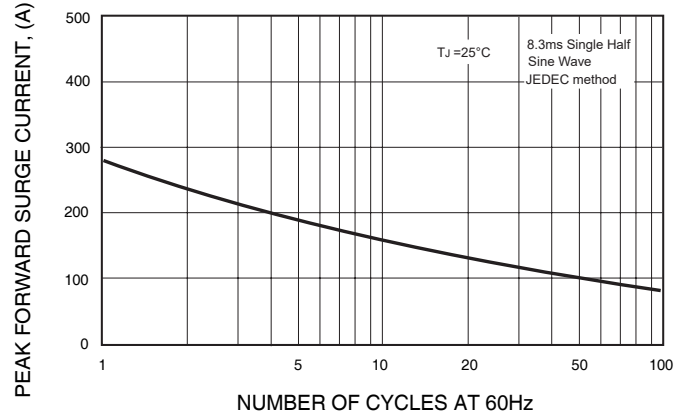


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

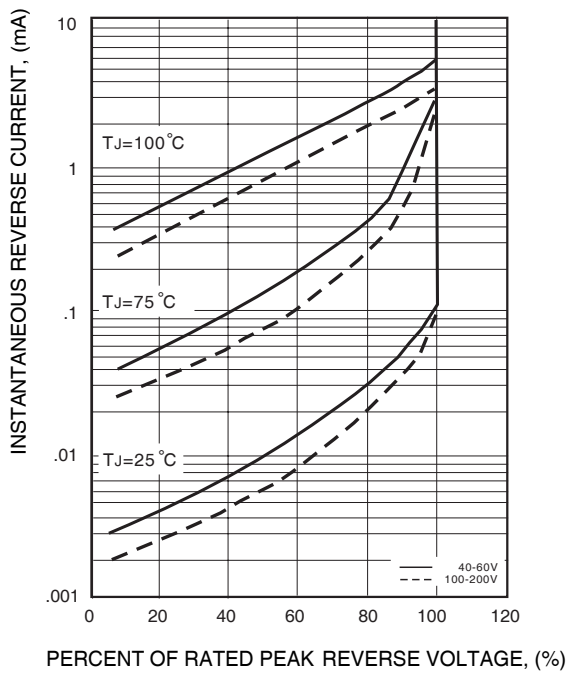


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

