

**VOLTAGE RANGE: 40 - 200V**

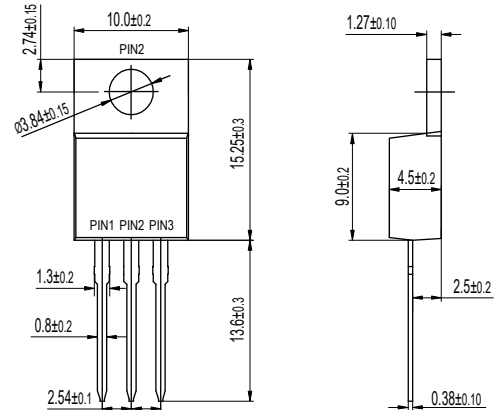
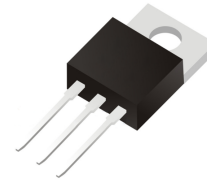
**CURRENT: 30A**

### Feaures

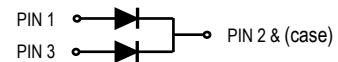
- High efficiency operation
- Low power loss
- Low stored charge majority carrier conduction
- High forward surge capability
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std (Halogen Free)

### 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                               | IAV    | 30<br>15    |            |            |             |             |             | A    |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load | IFSM   | 280         |            |            |             |             |             | A    |
| Typical thermal resistance (Note 1)                                                | Rθ-JC  | 2.0         |            |            |             |             |             | °C/W |
| Operating junction temperature range                                               | TJ     | -55 to +150 |            |            |             | -55 to +175 |             | °C   |
| Storage temperature range                                                          | TSTG   | -55 to +175 |            |            |             |             |             | °C   |
| Maximum forward voltage per leg at IF=15A                                          | VF     | 0.65        |            | 0.75       | 0.85        | 0.95        |             | V    |
| Maximum average reverse current at rated DC blocking voltage TJ=25°C TJ=125°C      | IR     | 0.10<br>15  |            |            | 0.01<br>8   |             |             | mA   |

Notes: 1. Thermal resistance from junction to case.

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

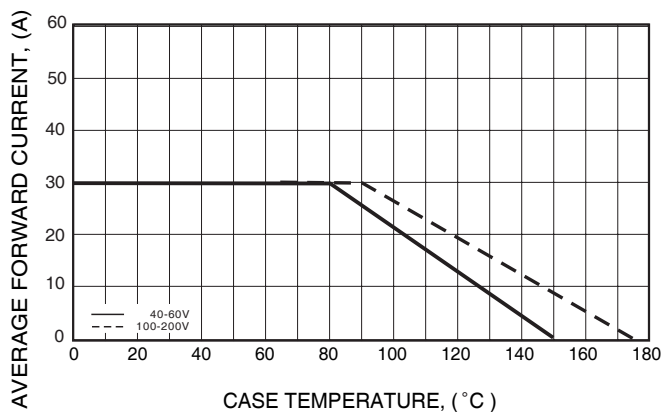


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

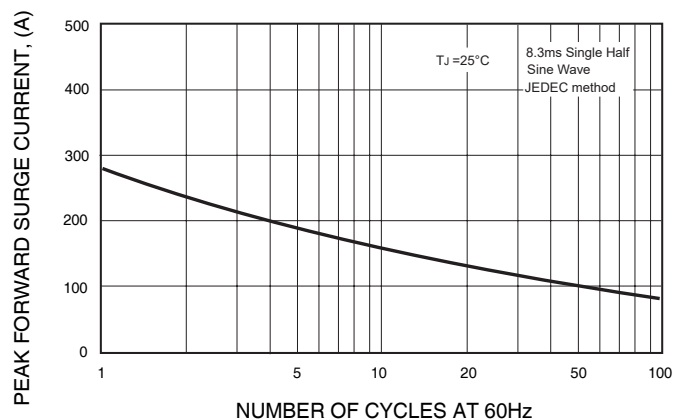


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

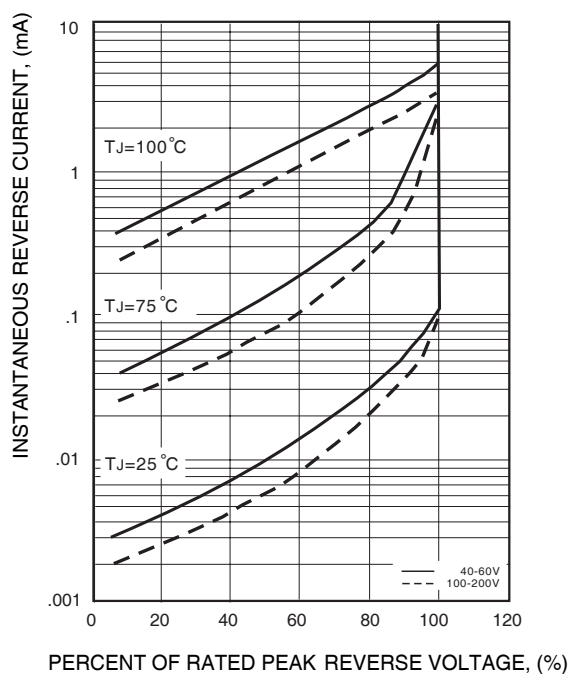


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

