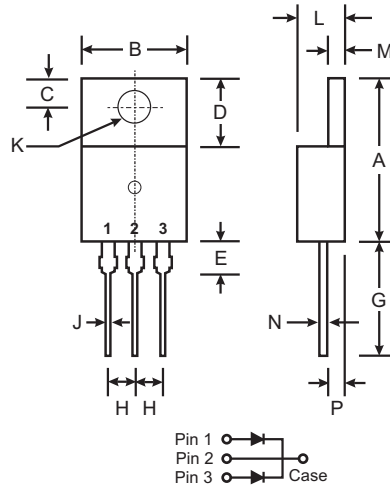


Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- **Lead Free Finish, RoHS Compliant (Note 4)**

Mechanical Data

- Case: TO-220AB
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish – Bright Tin. Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Marking: Type Number
- Weight: 2.24 grams (approx.)



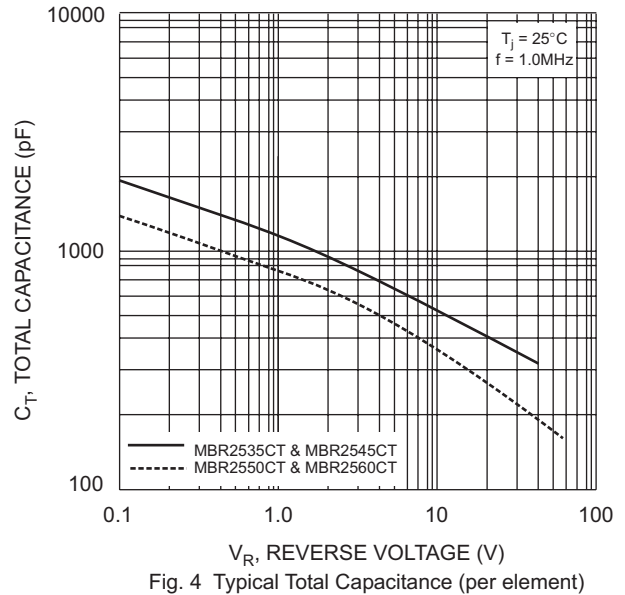
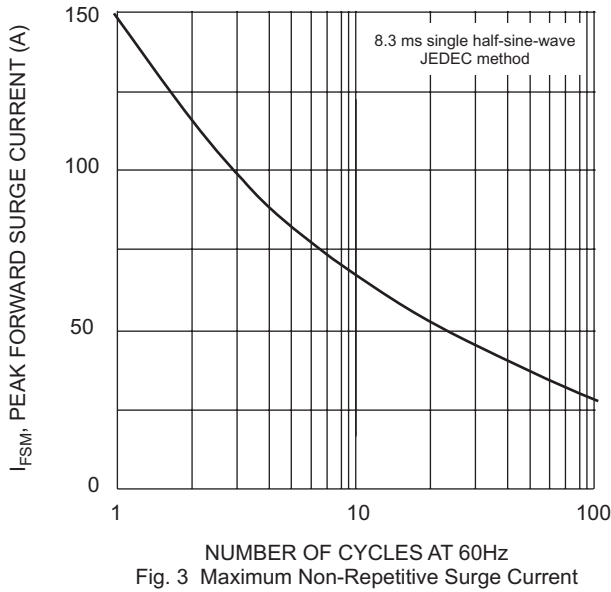
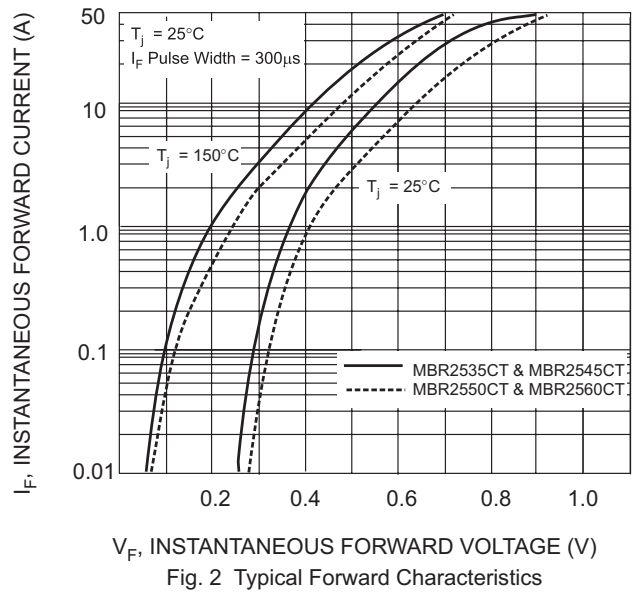
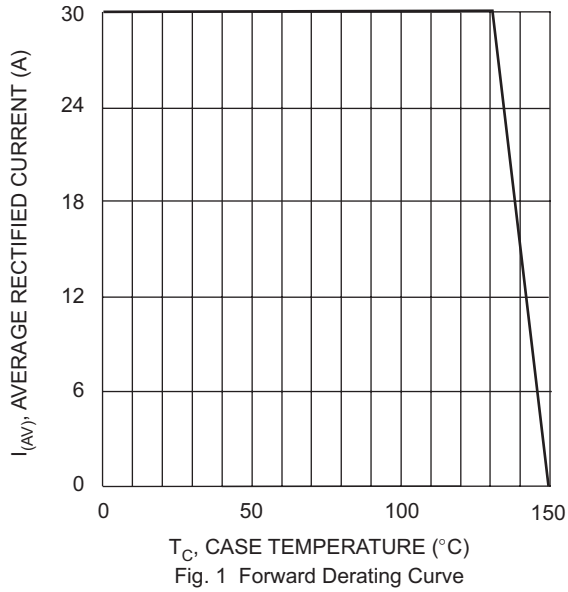
| TO-220AB | | |
|----------------------|-------|-------|
| Dim | Min | Max |
| A | 14.48 | 15.75 |
| B | 10.00 | 10.40 |
| C | 2.54 | 3.43 |
| D | 5.90 | 6.40 |
| E | 2.80 | 3.93 |
| G | 12.70 | 14.27 |
| H | 2.40 | 2.70 |
| J | 0.69 | 0.93 |
| K | 3.54 | 3.78 |
| L | 4.07 | 4.82 |
| M | 1.15 | 1.39 |
| N | 0.30 | 0.50 |
| P | 2.04 | 2.79 |
| All Dimensions in mm | | |

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| Characteristic | Symbol | MBR2535CT | MBR2545CT | MBR2550CT | MBR2560CT | Unit |
|---|-----------------------------------|-------------------|-----------|--------------|-----------|------|
| Peak Repetitive Reverse Voltage | V _{RRM} | 35 | 45 | 50 | 60 | V |
| Working Peak Reverse Voltage | V _{RWM} | | | | | |
| DC Blocking Voltage | V _R | | | | | |
| RMS Reverse Voltage | V _{R(RMS)} | 25 | 32 | 35 | 42 | V |
| Average Rectified Output Current @ T _C = 130°C | I _O | 30 | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 150 | | | | A |
| Peak Repetitive Reverse Surge Current (Note 3) | I _{RRM} | 1.0 | | 0.5 | | A |
| Forward Voltage Drop @ I _F = 15.0A, T _C = 25°C @ I _F = 15.0A, T _C = 125°C @ I _F = 30.0A, T _C = 25°C @ I _F = 30.0A, T _C = 125°C | V _{FM} | — 0.82 0.73 | | 0.75 0.65 | | V |
| Peak Reverse Current at Rated DC Blocking Voltage @ T _C = 25°C @ T _C = 125°C | I _{RM} | 0.2 40 | | 1.0 50 | | mA |
| Typical Total Capacitance (Note 2) | C _T | 750 | | 500 | | pF |
| Typical Thermal Resistance Junction to Case (Note 1) | R _{θJC} | 1.5 | | | | °C/W |
| Operating and Storage Temperature Range | T _j , T _{STG} | -65 to +150 | | | | °C |

- Notes:
1. Thermal resistance junction to case mounted on heatsink.
 2. Measured at 1.0MHz and Applied Reverse Voltage of 4.0V DC.
 3. 2.0μs pulse width, f = 1.0KHz.
 4. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.



Ordering Information (Note 5)

| Device | Packaging | Shipping |
|------------|-----------|----------|
| MBR25xxCT* | TO-220AB | 50/Tube |

* xx = Device type, e.g. MBR2545CT

Notes: 4. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02008.pdf>.