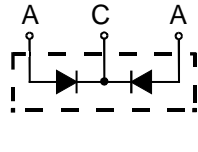
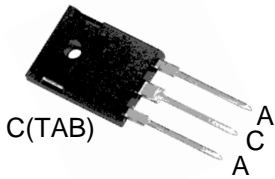


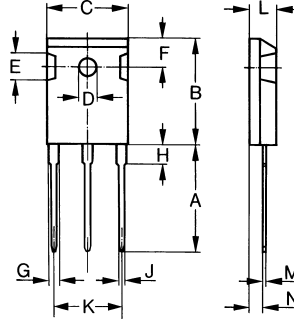
MBR3030PT thru MBR3045PT

Wide Temperature Range and High T_{jm} Schottky Barrier Rectifiers



A=Anode, C=Cathode, TAB=Cathode

Dimensions TO-247AD



| Dim. | Millimeter | | Inches | |
|------|------------|-------|--------|-------|
| | Min. | Max. | Min. | Max. |
| A | 19.81 | 20.32 | 0.780 | 0.800 |
| B | 20.80 | 21.46 | 0.819 | 0.845 |
| C | 15.75 | 16.26 | 0.610 | 0.640 |
| D | 3.55 | 3.65 | 0.140 | 0.144 |
| E | 4.32 | 5.49 | 0.170 | 0.216 |
| F | 5.4 | 6.2 | 0.212 | 0.244 |
| G | 1.65 | 2.13 | 0.065 | 0.084 |
| H | - | 4.5 | - | 0.177 |
| J | 1.0 | 1.4 | 0.040 | 0.055 |
| K | 10.8 | 11.0 | 0.426 | 0.433 |
| L | 4.7 | 5.3 | 0.185 | 0.209 |
| M | 0.4 | 0.8 | 0.016 | 0.031 |
| N | 1.5 | 2.49 | 0.087 | 0.102 |

| | V_{RRM} | V_{RMS} | V_{DC} |
|------------------|-----------|-----------|----------|
| | V | V | V |
| MBR3030PT | 30 | 21 | 30 |
| MBR3035PT | 35 | 24.5 | 35 |
| MBR3040PT | 40 | 28 | 40 |
| MBR3045PT | 45 | 31.5 | 45 |

| Symbol | Characteristics | Maximum Ratings | Unit |
|-----------------|--|--|---------------------------|
| $I_{(AV)}$ | Maximum Average Forward Rectified Current @ $T_c=125^\circ\text{C}$ | 30 | A |
| I_{FSM} | Peak Forward Surge Current 8.3ms Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD) | 200 | A |
| dv/dt | Voltage Rate Of Change (Rated V_R) | 10000 | V/us |
| V_F | Maximum Forward Voltage (Note 1) | $I_F=20\text{A}$ @ $T_J=25^\circ\text{C}$ $I_F=20\text{A}$ @ $T_J=125^\circ\text{C}$ $I_F=30\text{A}$ @ $T_J=25^\circ\text{C}$ $I_F=30\text{A}$ @ $T_J=125^\circ\text{C}$ | V |
| I_R | Maximum DC Reverse Current At Rated DC Blocking Voltage | $@T_J=25^\circ\text{C}$ $@T_J=125^\circ\text{C}$ | 1 60 mA |
| $R_{\theta JC}$ | Typical Thermal Resistance (Note 2) | 1.4 | $^\circ\text{C}/\text{W}$ |
| C_J | Typical Junction Capacitance Per Element (Note 3) | 500 | pF |
| T_J | Operating Temperature Range | -55 to +150 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature Range | -55 to +175 | $^\circ\text{C}$ |

NOTES: 1. 300us Pulse Width, Duty Cycle 2%.
 2. Thermal Resistance Junction To Case.
 3. Measured At 1.0MHz And Applied Reverse Voltage Of 4.0V DC.

FEATURES

- * Metal of silicon rectifier, majority carrier conducton
- * Guard ring for transient protection
- * Low power loss, high efficiency
- * High current capability, low V_F
- * High surge capacity
- * For use in low voltage, high frequency inverters, free whelling, and polarity protection applications

MECHANICAL DATA

- * Case: TO-247AD molded plastic
- * Polarity: As marked on the body
- * Weight: 0.2 ounces, 5.6 grams
- * Mounting position: Any



MBR3030PT thru MBR3045PT

Wide Temperature Range and High T_{jm} Schottky Barrier Rectifiers

FIG.1 - FORWARD CURRENT DERATING CURVE

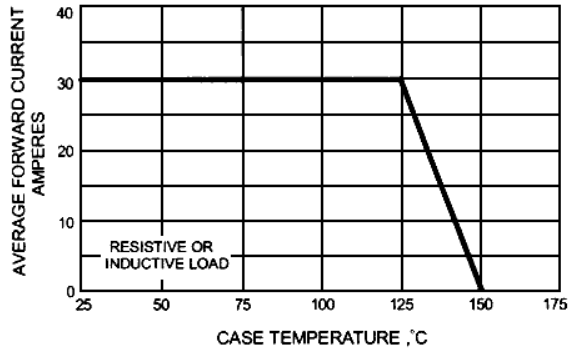


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

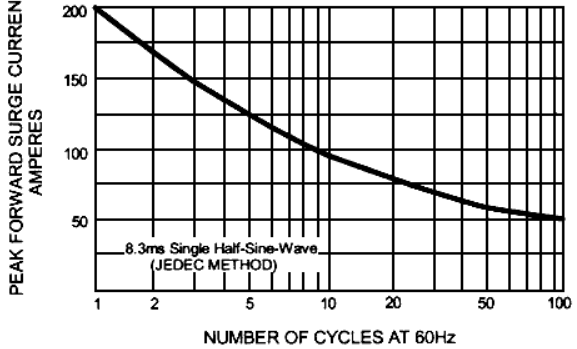


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

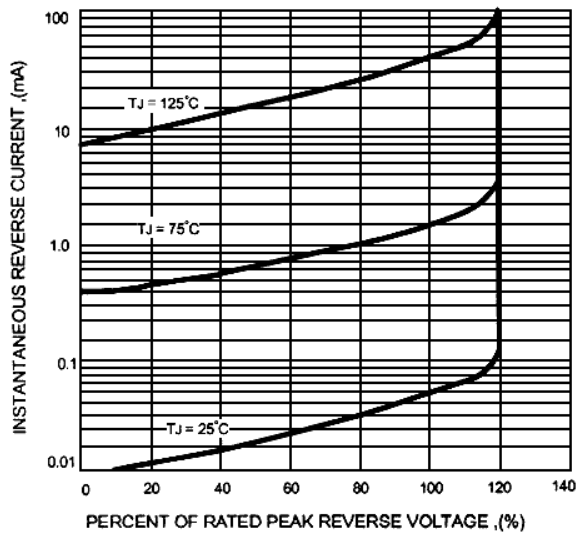


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

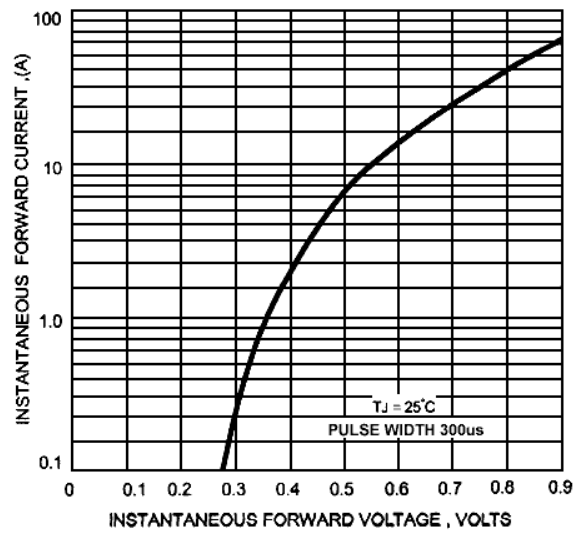


FIG.5 - TYPICAL JUNCTION CAPACITANCE

