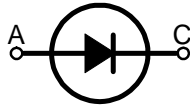
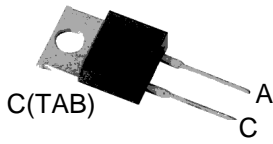


MBR870L thru MBR8100L

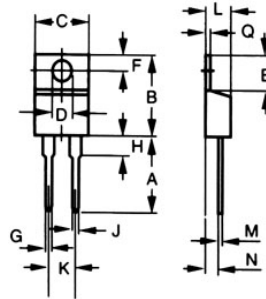
Wide Temperature Range and High T_{jm} Schottky Barrier Rectifiers



A=Anode, C=Cathode, TAB=Cathode

| | V_{RRM} V | V_{RMS} V | V_{DC} V |
|-----------------|----------------|----------------|---------------|
| MBR870L | 70 | 49 | 70 |
| MBR880L | 80 | 56 | 80 |
| MBR890L | 90 | 63 | 90 |
| MBR8100L | 100 | 70 | 100 |

Dimensions TO-220AC



| Dim. | Inches | | Millimeter | |
|------|--------|-------|------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 0.500 | 0.580 | 12.70 | 14.73 |
| B | 0.560 | 0.650 | 14.23 | 16.51 |
| C | 0.380 | 0.420 | 9.66 | 10.66 |
| D | 0.139 | 0.161 | 3.54 | 4.08 |
| E | 2.300 | 0.420 | 5.85 | 6.85 |
| F | 0.100 | 0.135 | 2.54 | 3.42 |
| G | 0.045 | 0.070 | 1.15 | 1.77 |
| H | - | 0.250 | - | 6.35 |
| J | 0.025 | 0.035 | 0.64 | 0.89 |
| K | 0.190 | 0.210 | 4.83 | 5.33 |
| L | 0.140 | 0.190 | 3.56 | 4.82 |
| M | 0.015 | 0.022 | 0.38 | 0.56 |
| N | 0.080 | 0.115 | 2.04 | 2.49 |
| Q | 0.025 | 0.055 | 0.64 | 1.39 |

| Symbol | Characteristics | Maximum Ratings | Unit |
|-----------------|---|-----------------|--------------------|
| I_{AV} | Maximum Average Forward Rectified Current @ $T_c=125^\circ\text{C}$ | 8 | A |
| I_{FSM} | Peak Forward Surge Current 8.3ms Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD) | 230 | A |
| dv/dt | Voltage Rate Of Change (Rated V_R) | 10000 | V/us |
| V_F | Maximum Forward Voltage (Note 1) $I_F=8\text{A}$ @ $T_J=25^\circ\text{C}$ $I_F=8\text{A}$ @ $T_J=125^\circ\text{C}$ | 0.72 0.58 | V |
| I_R | Maximum DC Reverse Current At Rated DC Blocking Voltage @ $T_J=25^\circ\text{C}$ @ $T_J=125^\circ\text{C}$ | 0.55 7 | mA |
| $R_{\theta JC}$ | Typical Thermal Resistance (Note 2) | 2.0 | $^\circ\text{C/W}$ |
| C_J | Typical Junction Capacitance (Note 3) | 280 | 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 conduction
- * 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 wheeling, and polarity protection applications

MECHANICAL DATA

- * Case: TO-220AC molded plastic
- * Polarity: As marked on the body
- * Weight: 0.08 ounces, 2.24 grams
- * Mounting position: Any

Sirectifier®

MBR870L thru MBR8100L

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

FIG.1 - FORWARD CURRENT DERATING CURVE

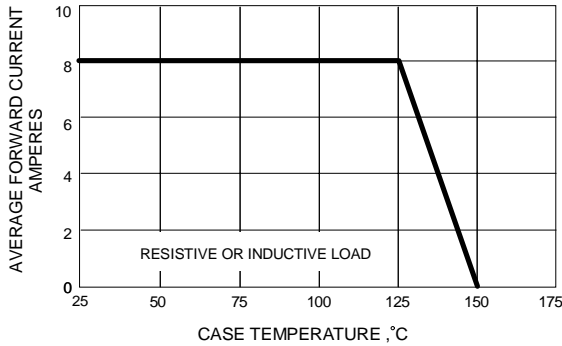


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

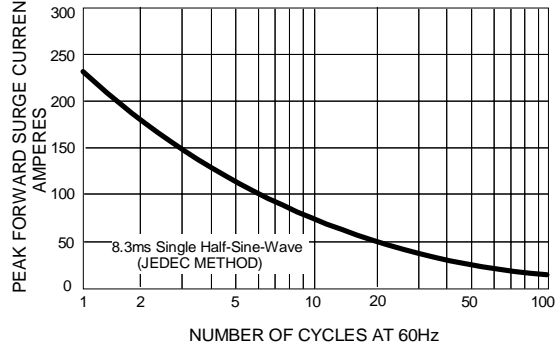


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

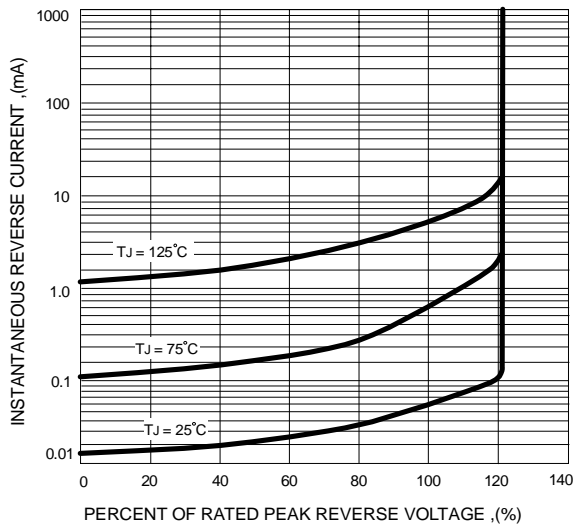


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

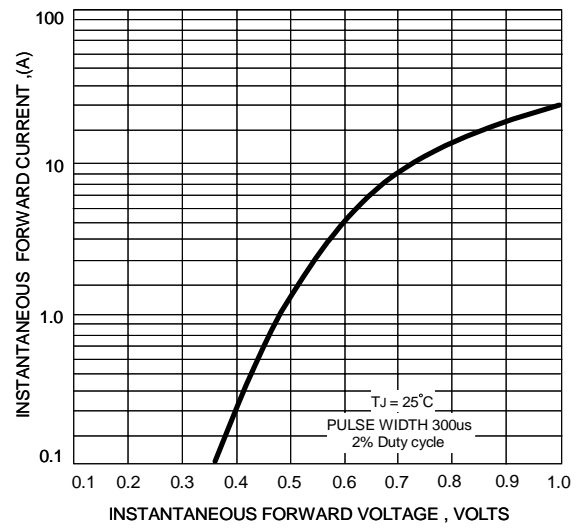


FIG.5 - TYPICAL JUNCTION CAPACITANCE

