



Micro Commercial Components
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MBR3020WT THRU MBR3060WT

Features

- High Surge Capacity
- Low Power Loss, High Efficiency
- High Current Capability, Low V_F
- Metal of silicon Rectifier, majority Carrier Conduction
- Guard Ring For Transient Protection
- Plastic Package Has UL Flammability Classification 94V-0

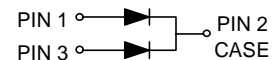
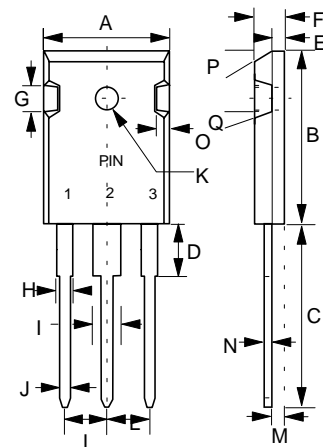
Maximum Ratings

- Operating Temperature: -55°C to $+150^{\circ}\text{C}$
- Storage Temperature: -55°C to $+175^{\circ}\text{C}$

| MCC Part Number | Maximum Re current Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|---|---------------------|-----------------------------|
| MBR3020WT | 20V | 14V | 20V |
| MBR3030WT | 30V | 21V | 30V |
| MBR3035WT | 35V | 24.5V | 35V |
| MBR3040WT | 40V | 28V | 40V |
| MBR3045WT | 45V | 31.5V | 45V |
| MBR3060WT | 60V | 42V | 60V |

30 Amp Schottky Barrier Rectifier 20 to 60 Volts

TO-247



Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|-------------|------------------------------|--|
| Average Forward Current | $I_{F(AV)}$ | 30.0A | $T_C=125^{\circ}\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 200A | 8.3ms half sine |
| Maximum Instantaneous Forward Voltage MBR3020WT-3045WT MBR3060WT MBR3020WT-3045WT MBR3060WT | V_F | .63V .75V .76V .80V | $I_{FM} = 20.0A$ $T_A=25^{\circ}\text{C}$ $I_{FM} = 30.0A$ $T_A=25^{\circ}\text{C}$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage MBR3020WT-3045WT MBR3060WT MBR3020WT-3045WT MBR3060WT | I_R | 1mA 5mA 60mA 100mA | $T_C=25^{\circ}\text{C}$ $T_C=25^{\circ}\text{C}$ $T_C=125^{\circ}\text{C}$ $T_C=125^{\circ}\text{C}$ |
| Typical Junction Capacitance | C_j | 500pF | Measured at 1.0MHz, $V_R=4.0V$ |

Pulse test: Pulse width 300 usec, duty cycle 2%.

| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|------|---------|-------|-------------|
| | INCHES | | MM | | |
| | MIN | MAX | MIN | MAX | |
| A | .620 | .640 | 15.75 | 16.25 | |
| B | .837 | .856 | 21.25 | 21.75 | |
| C | .772 | .791 | 19.60 | 20.10 | |
| D | .149 | .172 | 3.78 | 4.38 | |
| E | .074 | .082 | 1.88 | 2.08 | |
| F | .192 | .202 | 4.87 | 5.13 | |
| G | .173 TYP | | 4.4 TYP | | |
| H | .075 | .085 | 1.90 | 2.16 | |
| I | .115 | .127 | 2.93 | 3.22 | |
| J | .044 | .048 | 1.12 | 1.22 | |
| K | .114 | .126 | 2.90 | 3.20 | \emptyset |
| L | .205 | .224 | 5.20 | 5.70 | |
| M | .083 | .095 | 2.10 | 2.40 | |
| N | .020 | .030 | 0.51 | 0.76 | |
| O | .076 | .086 | 1.93 | 2.18 | |
| P | 20° TYP | | | | |
| Q | 10° TYP | | | | |

MBR3020WT thru MBR30100WT

FIG.1 - FORWARD CURRENT DERATING CURVE

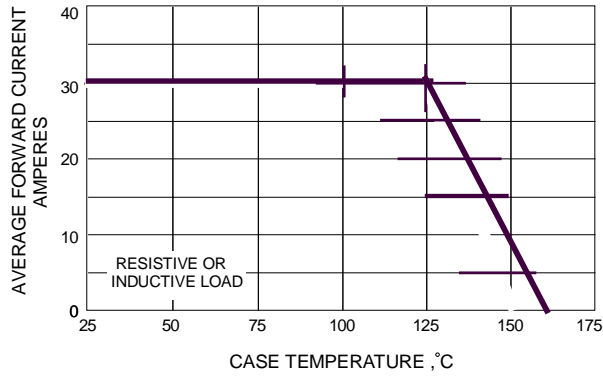


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

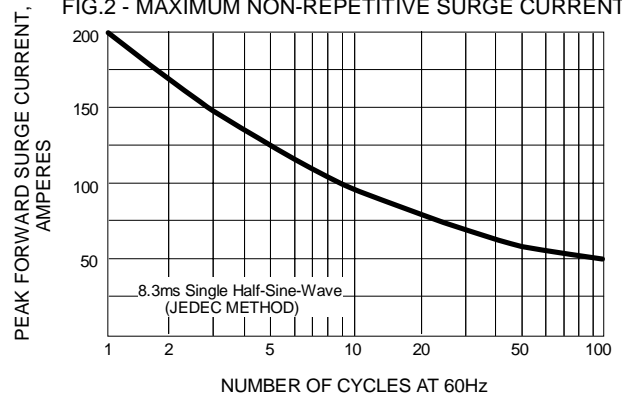


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

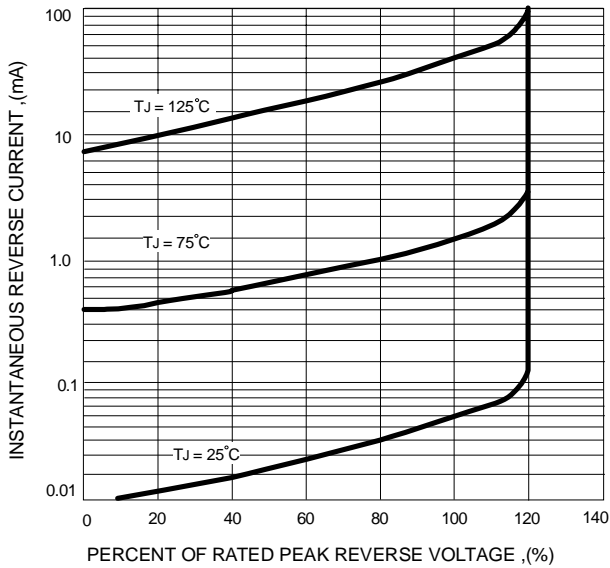


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

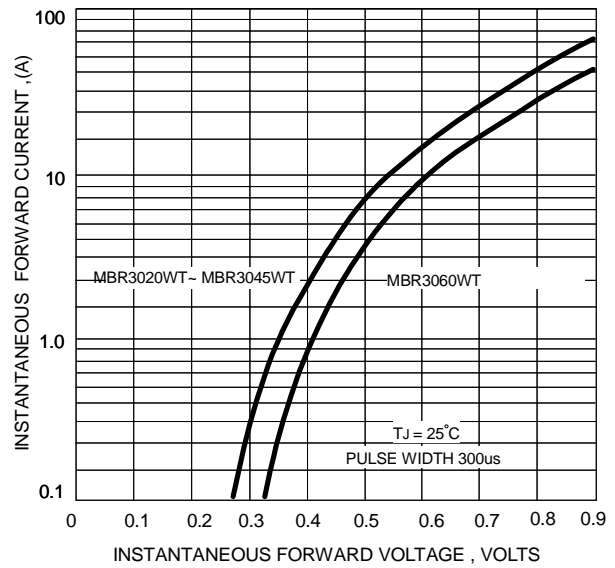


FIG.5 - TYPICAL JUNCTION CAPACITANCE

