



Micro Commercial Components  
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# **MBR6030PT THRU MBR6045PT**

## **Features**

- Meatl of Silicon Rectifier, Majority Conduction
- Guard ring for transient protection
- Low Forward Voltage Drop
- High Current Capability, High Efficiency
- Low Power Loss

## **Maximum Ratings**

- Operating Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C

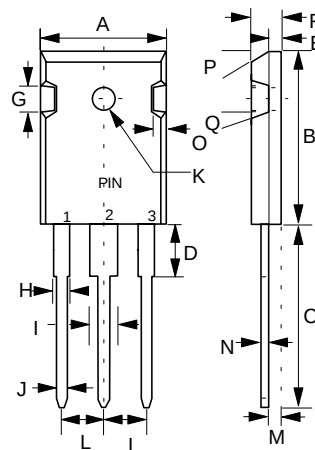
| MCC Catalog Number | Maximum Reccurent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------|----------------------------------------|---------------------|-----------------------------|
| MBR6030PT          | 30V                                    | 21V                 | 30V                         |
| MBR6040PT          | 40V                                    | 28V                 | 40V                         |
| MBR6045PT          | 45V                                    | 31.5V               | 45V                         |

## **Electrical Characteristics @ 25°C Unless Otherwise Specified**

|                                                         |             |             |                                                       |
|---------------------------------------------------------|-------------|-------------|-------------------------------------------------------|
| Average Forward Current                                 | $I_{F(AV)}$ | 60 A        | $T_C = 125^\circ\text{C}$                             |
| Peak Forward Surge Current                              | $I_{FSM}$   | 500A        | 8.3ms, half sine                                      |
| Maximum Instantaneous Forward Voltage                   | $V_F$       | .61V        | $I_{FM} = 30A;$<br>$T_J = 25^\circ\text{C}$           |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 1mA<br>50mA | $T_J = 25^\circ\text{C}$<br>$T_J = 100^\circ\text{C}$ |

## **60 Amp Schottky Barrier Rectifier 30 to 45 Volts**

## **TO-3P**



PIN 1 PIN 2  
PIN 3 CASE

| DIM | INCHES   |      | MM      |       | NOTE |
|-----|----------|------|---------|-------|------|
|     | 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  | Ø    |
| 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  |      |         |       |      |

\*Pulse Test: Pulse Width 300µsec, Duty Cycle 1%

FIG.1 - FORWARD CURRENT DERATING CURVE

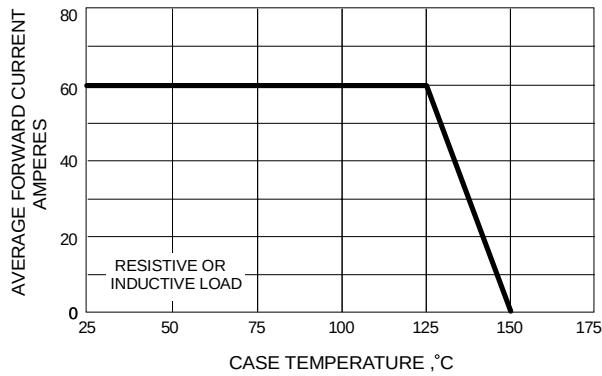


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

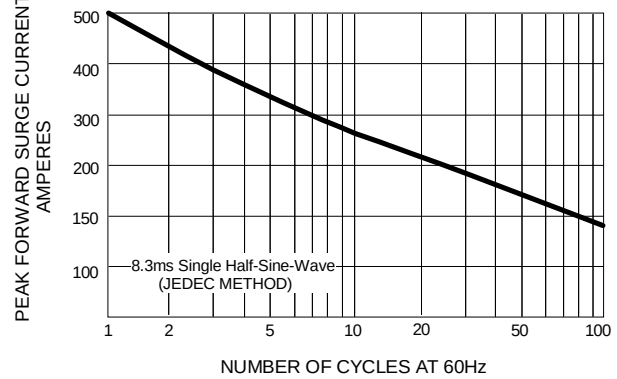


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

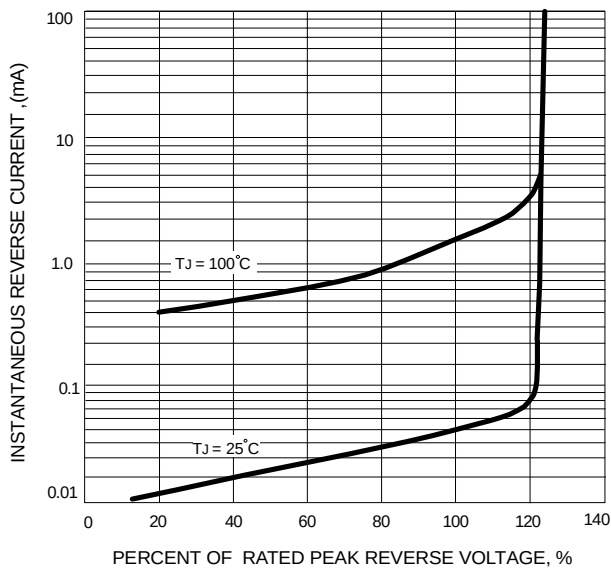


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

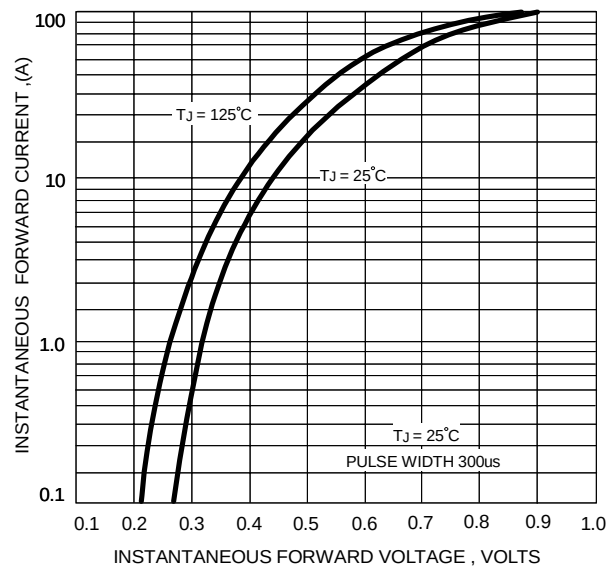


FIG.5 - TYPICAL JUNCTION CAPACITANCE

