

## Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Low Power Loss High Efficiency
- High Surge Capacity and High Current Capability
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

## **Maximum Ratings**

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Typical Thermal Resistance: 3°C/W Junction to Case

| MCC<br>Part Number | Device<br>Marking | Maximum<br>Recurrent<br>Peak Reverse<br>Voltage | Maximum<br>RMS Voltage | Maximum DC<br>Blocking<br>Voltage |
|--------------------|-------------------|-------------------------------------------------|------------------------|-----------------------------------|
| MBRD1520           | MBRD1520          | 20V                                             | 14V                    | 20V                               |
| MBRD1530           | MBRD1530          | 30V                                             | 21V                    | 30V                               |
| MBRD1540           | MBRD1540          | 40V                                             | 28V                    | 40V                               |
| MBRD1545           | MBRD1545          | 45V                                             | 31.5V                  | 45V                               |
| MBRD1550           | MBRD1550          | 50V                                             | 35V                    | 50V                               |
| MBRD1560           | MBRD1560          | 60V                                             | 42V                    | 60V                               |
| MBRD1580           | MBRD1580          | 80V                                             | 56V                    | 80V                               |
| MBRD15100          | MBRD15100         | 100V                                            | 70V                    | 100V                              |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

| Average Forward<br>Current                                                                         | I <sub>F(AV)</sub> | 15A                     | T <sub>C</sub> =115°C                         |
|----------------------------------------------------------------------------------------------------|--------------------|-------------------------|-----------------------------------------------|
| Peak Forward Surge<br>Current                                                                      | I <sub>FSM</sub>   | 150A                    | 8.3ms,Half Sine                               |
| Maximum Forward<br>Voltage Drop Per<br>Element<br>MBRD1520-1545<br>MBRD1550-1560<br>MBRD1580-15100 | V <sub>F</sub>     | 0.63V<br>0.75V<br>0.84V | I <sub>FM</sub> =15 A<br>T <sub>J</sub> =25⁰C |
| Maximum DC Reverse<br>Current at Rated DC<br>Blocking Voltage                                      | I <sub>R</sub>     | 0.1mA                   | T <sub>J</sub> =25⁰C                          |

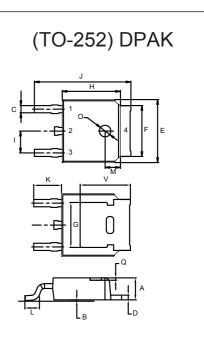
Note :1. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.

#### **Internal Structure**

-0 PIN 2.4



# 15 Amp Schottky Barrier Rectifier 20 to 100 Volts



| DIMENSIONS |        |       |      |       |      |
|------------|--------|-------|------|-------|------|
| DIM        | INCHES |       | MM   |       | NOTE |
|            | MIN    | MAX   | MIN  | MAX   | NOTE |
| А          | 0.087  | 0.094 | 2.20 | 2.40  |      |
| В          | 0.000  | 0.005 | 0.00 | 0.13  |      |
| С          | 0.026  | 0.034 | 0.66 | 0.86  |      |
| D          | 0.018  | 0.023 | 0.46 | 0.58  |      |
| Е          | 0.256  | 0.264 | 6.50 | 6.70  |      |
| F          | 0.201  | 0.215 | 5.10 | 5.46  |      |
| G          | 0.1    | 0.190 |      | 83    |      |
| Н          | 0.236  | 0.244 | 6.00 | 6.20  |      |
| I          | 0.086  | 0.094 | 2.18 | 2.39  |      |
| J          | 0.386  | 0.409 | 9.80 | 10.40 |      |
| Κ          | 0.114  |       | 2.90 |       |      |
| L          | 0.055  | 0.067 | 1.40 | 1.70  |      |
| Μ          | 0.063  |       | 1.60 |       |      |
| 0          | 0.043  | 0.051 | 1.10 | 1.30  |      |
| Q          | 0.000  | 0.012 | 0.00 | 0.30  |      |
| V          | 0.211  |       | 5.35 |       |      |



## **Curve Characteristics**

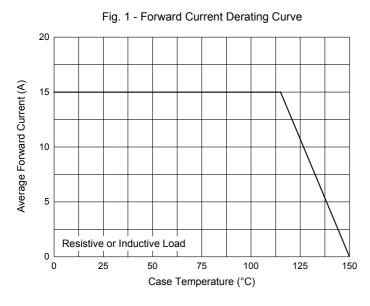
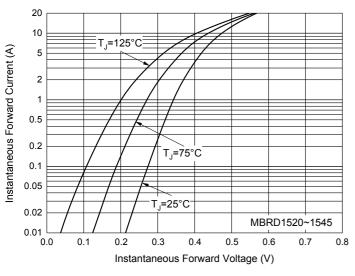
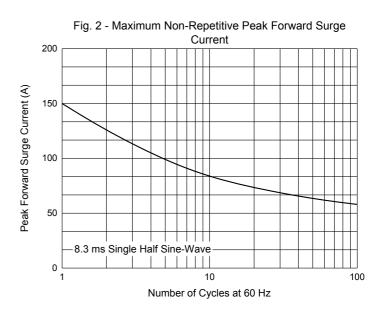
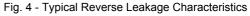
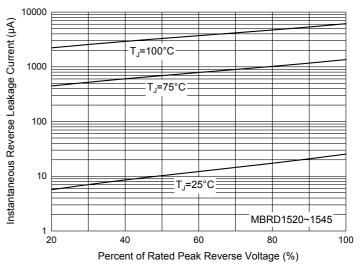


Fig. 3 - Typical Instantaneous Forward Characteristics











## **Ordering Information**

| Device         | Packing                 |  |
|----------------|-------------------------|--|
| Part Number-TP | Tape&Reel: 2.5Kpcs/Reel |  |

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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