

**SCHOTTKY BARRIER RECTIFIERS**

REVERSE VOLTAGE - 30 to 60 Volts  
FORWARD CURRENT - 40 Amperes

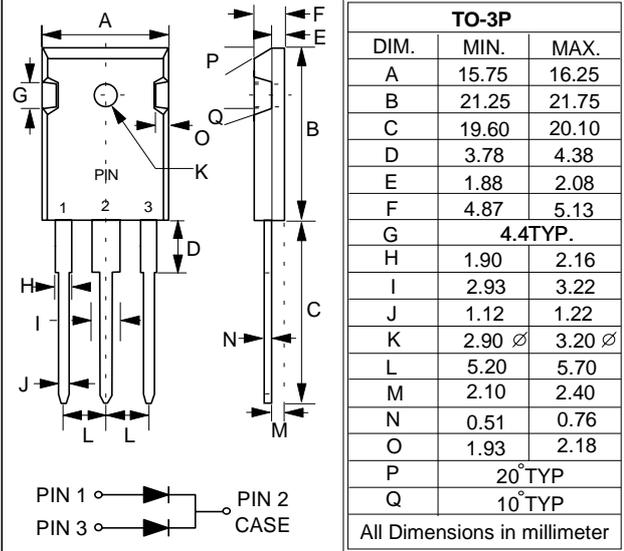
**FEATURES**

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- High current capability, low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage, high frequency inverters, free whelling, and polarity protection applications

**MECHANICAL DATA**

- Case : TO-3P molded plastic
- Polarity : As marked on the body
- Weight : 0.2 ounces, 5.6 grams
- Mounting position : Any

**TO-3P**



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

| CHARACTERISTICS  | SYMBOL | MBR 4030PT                            | MBR 4035PT | MBR 4040PT   | MBR 4045PT  | MBR 4050PT   | MBR 4060PT | UNIT |
|--|--------|---------------------------------------|------------|--------------|-------------|--------------|------------|------|
| Maximum Recurrent Peak Reverse Voltage   | VRRM   | 30                                    | 35         | 40           | 45          | 50           | 60         | V    |
| Maximum RMS Voltage  | VRMS   | 21                                    | 24.5       | 28           | 31.5        | 35           | 42         | V    |
| Maximum DC Blocking Voltage  | VDC    | 30                                    | 35         | 40           | 45          | 50           | 60         | V    |
| Maximum Average Forward Rectified Current (See Fig.1) @Tc=125°C                                  | I(AV)  | 40                                    |            |              |             |              |            | A    |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC METHOD) | IFSM   | 400                                   |            |              |             |              |            | A    |
| Voltage Rate of Change (Rated VR)  | dv/dt  | 10000                                 |            |              |             |              |            | V/us |
| Maximum Forward Voltage (Note 1)   | VF     | IF=20A @ Tj=25°C<br>IF=20A @ Tj=125°C |            | 0.70<br>0.60 |             | 0.80<br>0.70 |            | V    |
|  |        | IF=40A @ Tj=25°C<br>IF=40A @ Tj=125°C |            | 0.80<br>0.75 |             | -<br>-       |            |      |
| Maximum DC Reverse Current at Rated DC Blocking Voltage @Tj=25°C @Tj=125°C                       | IR     |                                       |            |              | 1.0<br>100  |              |            | mA   |
| Typical Thermal Resistance (Note 2)  | RθJC   |                                       |            |              | 1.4         |              |            | °C/W |
| Typical Junction Capacitance per element (Note 3)  | CJ     |                                       |            |              | 700         |              |            | pF   |
| Operating Temperature Range  | TJ     |                                       |            |              | -55 to +150 |              |            | °C   |
| Storage Temperature Range  | TSTG   |                                       |            |              | -55 to +175 |              |            | °C   |

NOTES : 1. 300us Pulse Width, 2% Duty Cycle.  
2. Thermal Resistance Junction to Case.  
3. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

