

**SCHOTTKY BARRIER RECTIFIERS**

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

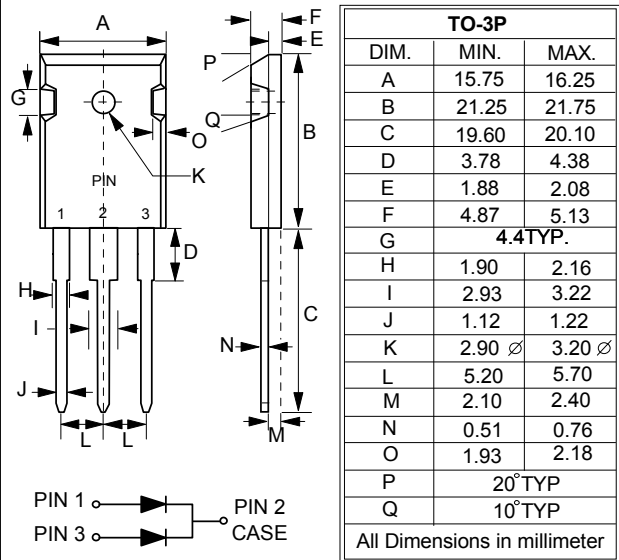
**FEATURES**

- Metal of silicon rectifier, majority carrier conductor
- 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
- Max. mounting torque = 0.5 N.m (5.1 Kgf.cm)

**TO-3P**

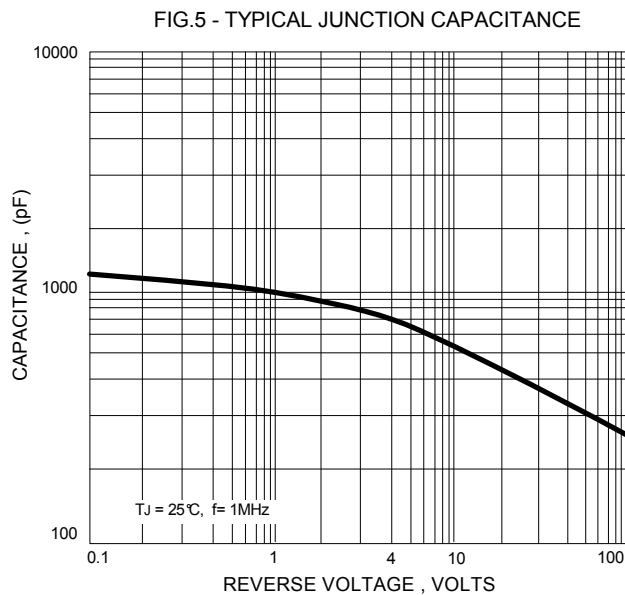
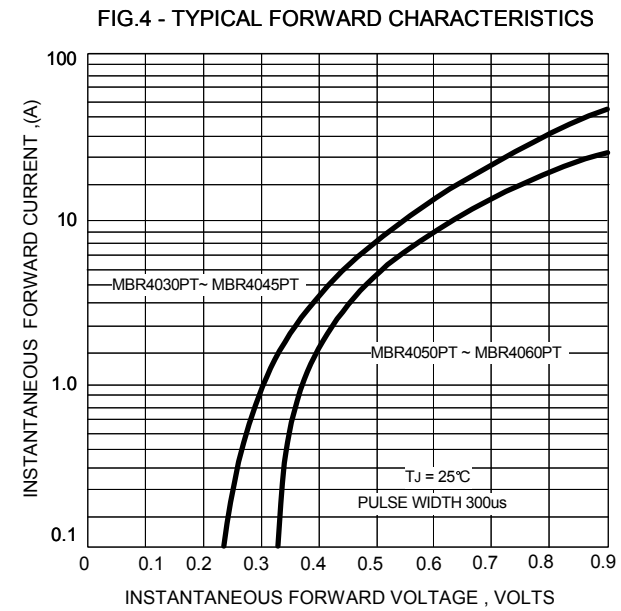
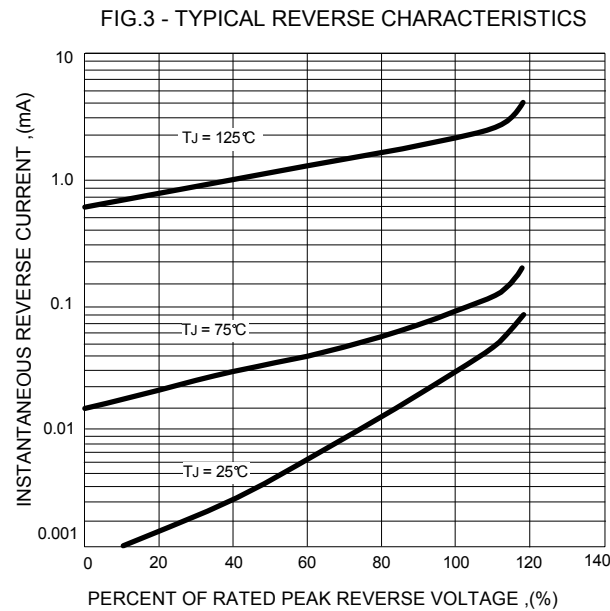
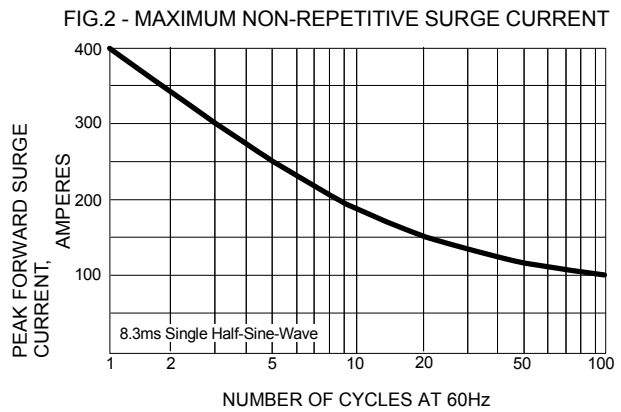
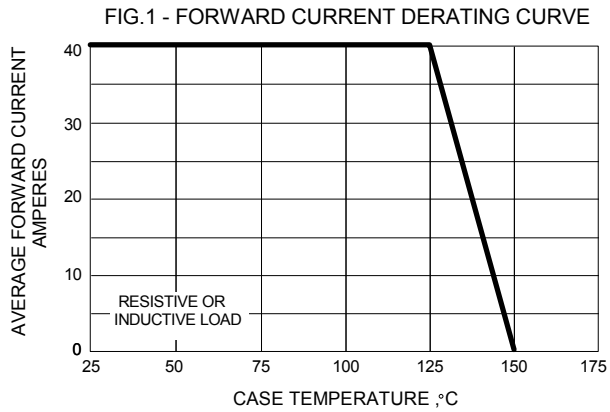


**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

| 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            | IAV    | 40                                    |            |            |              |            |              | A    |
| Peak Forward Surge Current 8.3ms single half sine-wave @TJ=25°C            | 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     |                                       |            |            | 0.1<br>100   |            |              | mA   |
| Typical Thermal Resistance (Note 2) Per leg Total                          | ReJC   |                                       |            |            | 1.5<br>1.2   |            |              | °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.



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