

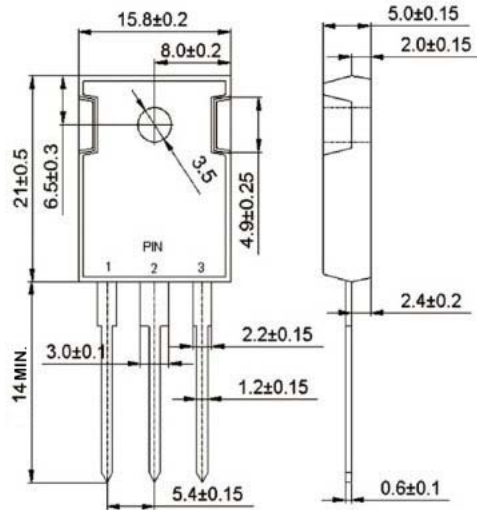
#### Features

- Schottky Barrier Chip
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- For Use in Low Voltage Application
- Guard Ring Die Construction
- Plastic Case Material has UL Flammability Classification Rating 94V-O

#### Mechanical Data

- Case: TO-247AD/TO-3P, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Mounting Position: Any
- **Lead Free: For RoHS / Lead Free Version**

TO-247AD/TO-3P

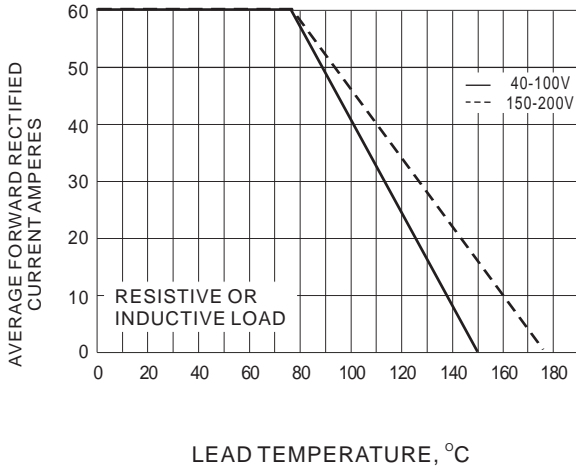


#### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

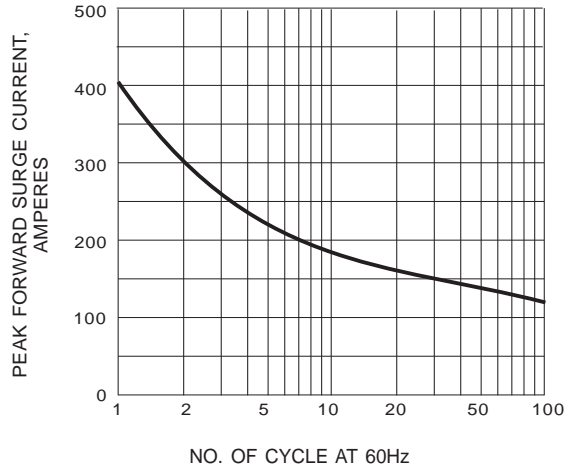
Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| Characteristic  | Symbol          | MBR 6040 PT | MBR 6045 PT | MBR 6050 PT | MBR 6060 PT | MBR 60100 PT | MBR 60150 PT | MBR 60200 PT | Units              |                  |
|---|-----------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------------|------------------|
| Peak Repetitive Reverse Voltage   | $V_{RRM}$       | 40          | 45          | 50          | 60          | 100          | 150          | 200          | V                  |                  |
| Working Peak Reverse Voltage  | $V_{RWM}$       |             |             |             |             |              |              |              |                    |                  |
| DC Blocking Voltage   | $V_R$           |             |             |             |             |              |              |              |                    |                  |
| RMS Reverse Voltage   | $V_{R(RMS)}$    | 28          | 31          | 35          | 42          | 70           | 105          | 140          | V                  |                  |
| Average Rectified Output Current @ $T_L = 75^\circ\text{C}$ (Note 1)  | $I_O$           | 60          |             |             |             |              |              |              | A                  |                  |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$       | 400         |             |             |             |              |              |              | A                  |                  |
| Forward Voltage @ $I_F = 30\text{A}$  | $V_{FM}$        | 0.70        |             | 0.75        |             | 0.80         |              | 0.90         | V                  |                  |
| Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$        | $I_{RM}$        |             |             | 0.1         |             |              | 0.05         | 10           | mA                 |                  |
| Typical Junction Capacitance (Note 2)   | $C_j$           | 350         |             | 280         |             |              | 200          |              | pF                 |                  |
| Typical Thermal Resistance (Note 1)   | $R_{\theta JA}$ | 3.5         |             |             |             | 2.0          |              |              | $^\circ\text{C/W}$ |                  |
| Operating and Storage Temperature Range   | $T_j, T_{STG}$  | -55 to +150 |             |             |             |              | -55 to +175  |              |                    | $^\circ\text{C}$ |

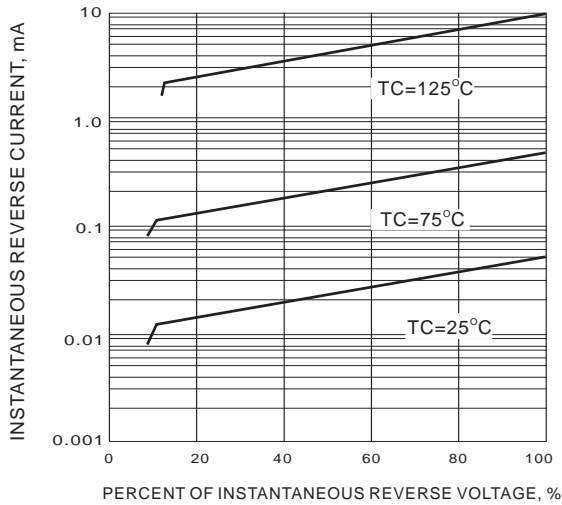
Note: 1. Valid provided that leads are kept at ambient temperature at a distance of 9.5mm from the case.  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.



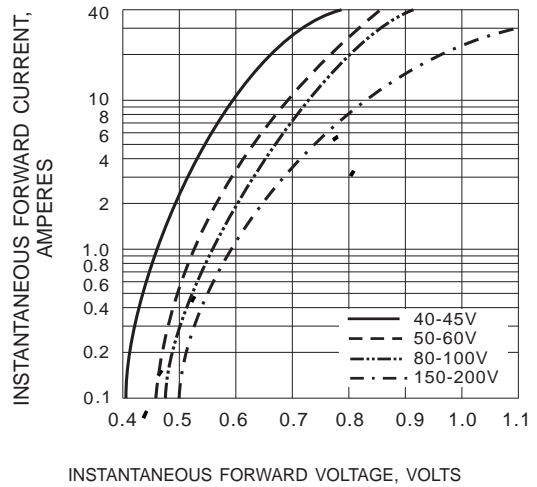
**Fig.1- FORWARD CURRENT DERATING CURVE**



**Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



**Fig.3- TYPICAL REVERSE CHARACTERISTIC**



**Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC**