

## Schottky Barrier Rectifiers

### Reverse Voltage 40 to 200 Volts, Forward Current 60A

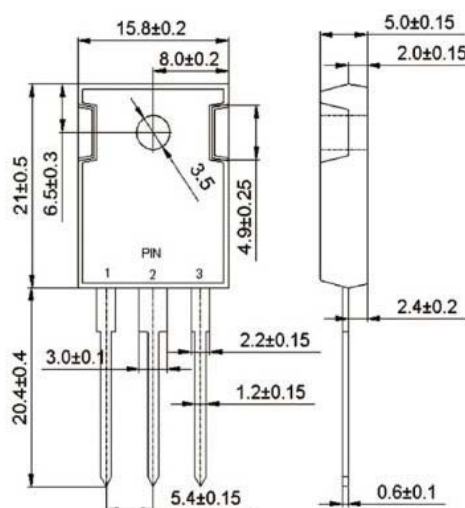
#### Features

- 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<sub>A</sub>=25°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 <sub>RRM</sub>	40	45	50	60	100	150	200	V	
Working Peak Reverse Voltage	V <sub>RWM</sub>									
DC Blocking Voltage	V <sub>R</sub>									
RMS Reverse Voltage	V <sub>R(RMS)</sub>	28	31	35	42	70	105	140	V	
Average Rectified Output Current @T <sub>L</sub> = 75°C (Note 1)	I <sub>O</sub>	60							A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	400							A	
Forward Voltage @I <sub>F</sub> = 30A	V <sub>FM</sub>	0.70		0.75		0.80		0.90	V	
Peak Reverse Current @T <sub>A</sub> = 25°C At Rated DC Blocking Voltage @T <sub>A</sub> = 100°C	I <sub>RM</sub>	0.1					0.05		10	mA
		20								
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	350		280		200			pF	
Typical Thermal Resistance (Note 1)	R <sub>θJA</sub>	3.5				2.0				°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-55 to +150					-55 to +175			°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.



# MBR6040PT ~ MBR60200PT

## RATINGS AND CHARACTERISTIC CURVES

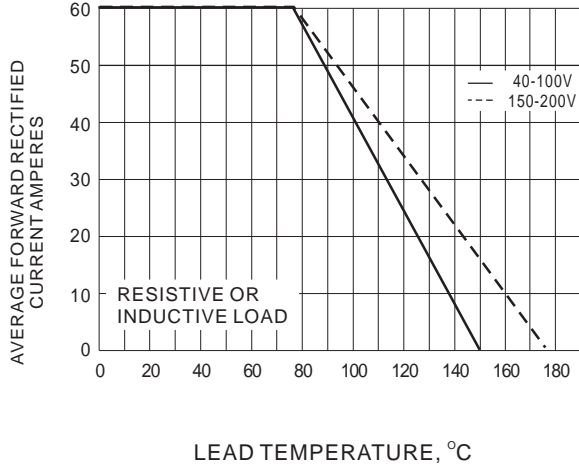


Fig.1- FORWARD CURRENT DERATING CURVE

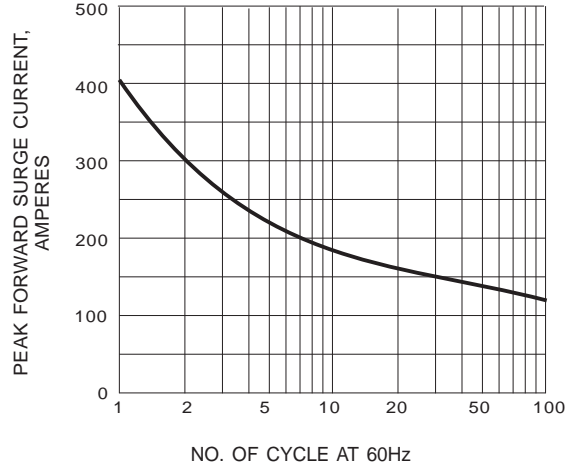


Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

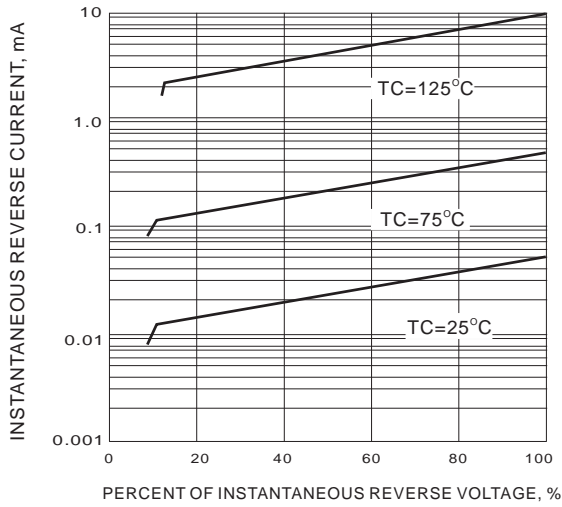


Fig.3- TYPICAL REVERSE CHARACTERISTIC

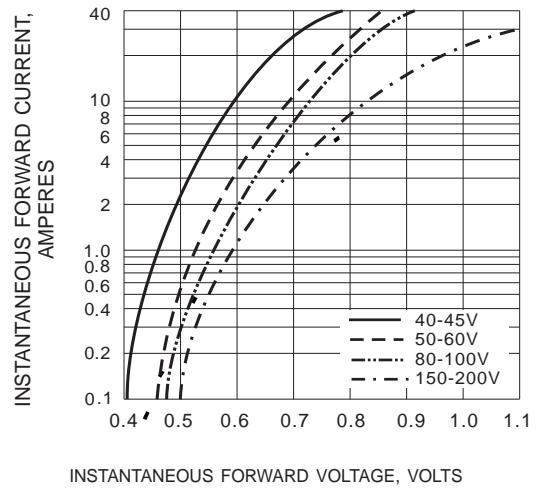


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC