



# MBR1035 THRU MBR10150

**10AMPS. SCHOTTKY  
BARRIER RECTIFIER**

**Voltage Range  
35 to 150 Volts  
Current  
10.0 Amperes**

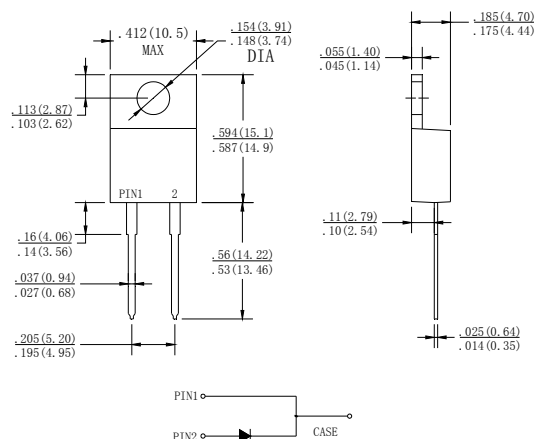
## Features

- Plastic material used carries Underwriters Laboratory Classifications 94V-0
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Guardring for overvoltage protection
- High temperature soldering guaranteed:  
260°C/10 seconds, 0.25" (6.35mm) from case

## Mechanical Data

- Cases: JEDEC TO-220AC molded plastic body
- Terminals: Pure tin plated, lead free. solderable per MIL-STD-750, Method 2026
- Polarity: As marked
- Mounting position: Any
- Mounting torque: 5 in. - lbs. max
- Weight: 0.08 ounce, 2.24 grams

TO-220AC



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number		MBR 1035	MBR 1045	MBR 1050	MBR 1060	MBR 1090	MBR 10100	MBR 10150	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	35	45	50	60	90	100	150	V
Maximum RMS Voltage	V <sub>RMS</sub>	24	31	35	42	63	70	105	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	35	45	50	60	90	100	150	V
Maximum Average Forward Rectified Current at @ TC = 125°C	I <sub>O</sub>	10.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	150							A
Forward Voltage Drop @ I <sub>F</sub> = 10A, TC = 25°C @ I <sub>F</sub> = 10A, TC = 125°C @ I <sub>F</sub> = 20A, TC = 25°C @ I <sub>F</sub> = 20A, TC = 125°C	V <sub>FM</sub>	0.70 0.57 0.84 0.72		0.80 0.70 0.95 0.85		0.85 0.71 0.94 0.80		1.05 0.90 1.15 1.00	V
Peak Reverse Current @ TC = 25°C at Rated DC Blocking Voltage @ TC = 125°C	I <sub>RM</sub>	0.1 15.0		0.1 10.0		0.1 6.0			mA
Typical Thermal Resistance Junction to Case (Note )	R <sub>θ Jc</sub>	3.0							°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-65 to +150							°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +175							°C

**NOTE:** Thermal Resistance from Junction to Case Per Leg, with Heatsink Size (2"x3"x0.25") Al-Plate.

# RATING AND CHARACTERISTIC CURVES MBR1035 THRU MBR10150



FIG.1-MAXIMUM NONO-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

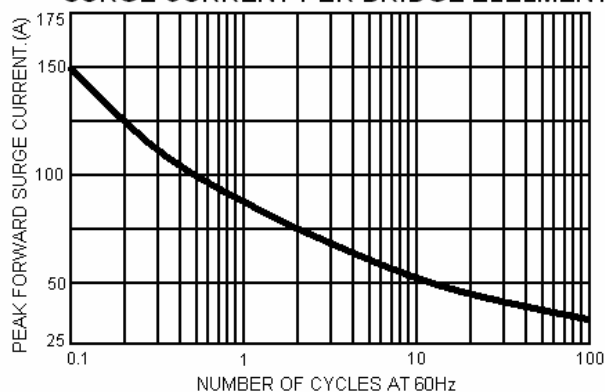


FIG.2-MAXIMUM FORWARD CURRENT DERATING CURVE

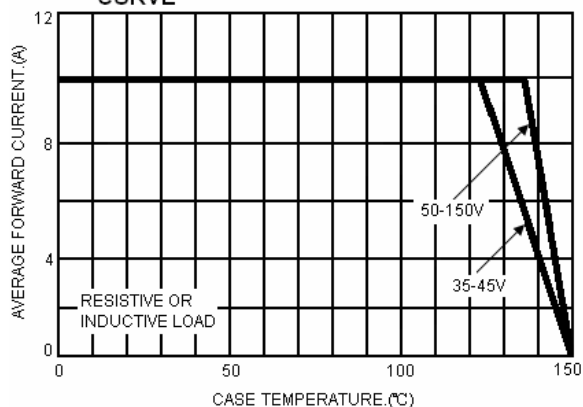


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

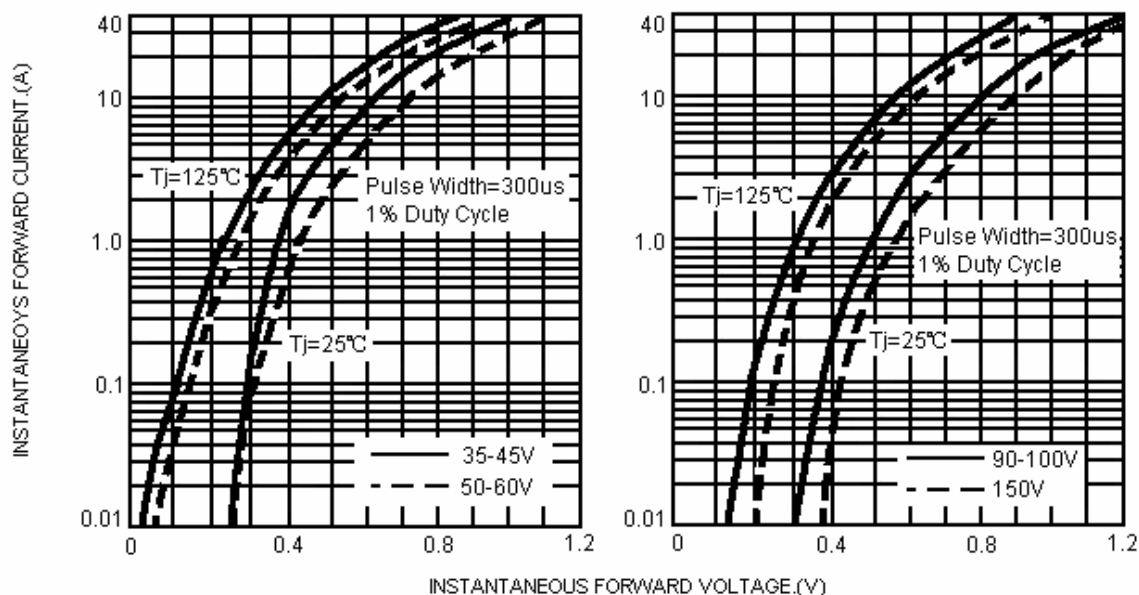


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

