



# MBR2035CT THRU MBR20150CT

**20AMPS. SCHOTTKY  
BARRIER RECTIFIER**

Voltage Range  
35 to 150 Volts  
Current  
20 Amperes

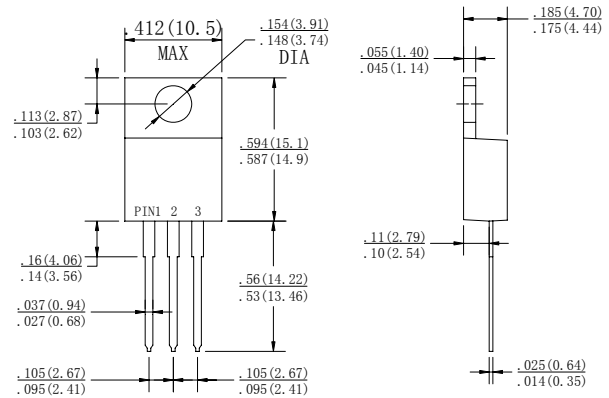
## Features

- 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-220AB 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-220AB



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 2035 CT	MBR 2045 CT	MBR 2050 CT	MBR 2060 CT	MBR 2090 CT	MBR 20100 CT	MBR 20150 CT	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
Average Rectified Output Current at @ T <sub>C</sub> = 135°C	I <sub>O</sub>	20							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, T <sub>C</sub> = 25°C @ I <sub>F</sub> = 10A, T <sub>C</sub> = 125°C @ I <sub>F</sub> = 20A, T <sub>C</sub> = 25°C @ I <sub>F</sub> = 20A, T <sub>C</sub> = 125°C	V <sub>FM</sub>	0.70 0.57 0.84 0.72		0.80 0.70 0.95 0.85		0.85 0.75 0.95 0.85		0.99 0.87 1.23 1.10	V
Peak Reverse Current @ T <sub>C</sub> = 25°C at Rated DC Blocking Voltage @ T <sub>C</sub> = 125°C	I <sub>RM</sub>	0.1 15.0		0.1 10.0		0.1 5.0			mA
Typical Thermal Resistance Junction to Case (Note )	R θ <sub>JC</sub>	1.0				2.0			°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 (4"x6"x0.25") Al-Plate.

# RATING AND CHARACTERISTIC CURVES

## MBR2035CT THRU MBR20150CT



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

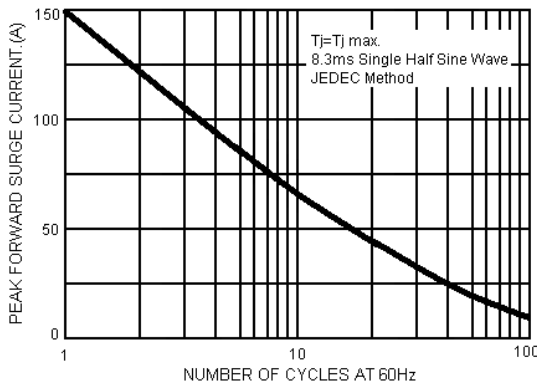


FIG.2-MAXIMUM FORWARD CURRENT DERATING CURVE

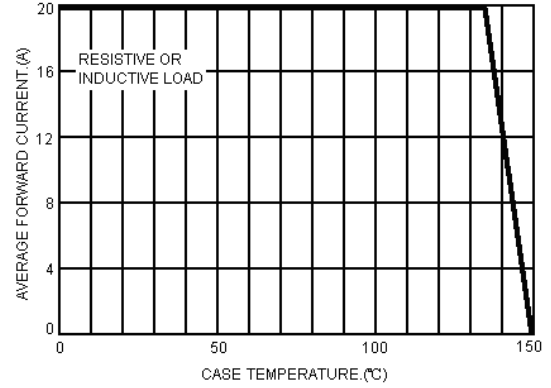


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

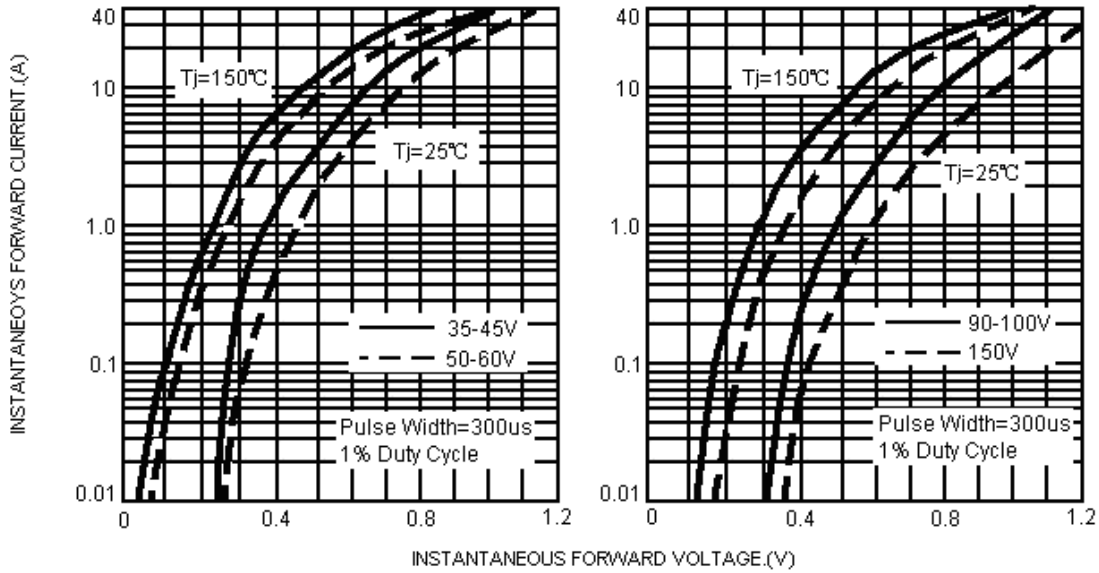


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

