

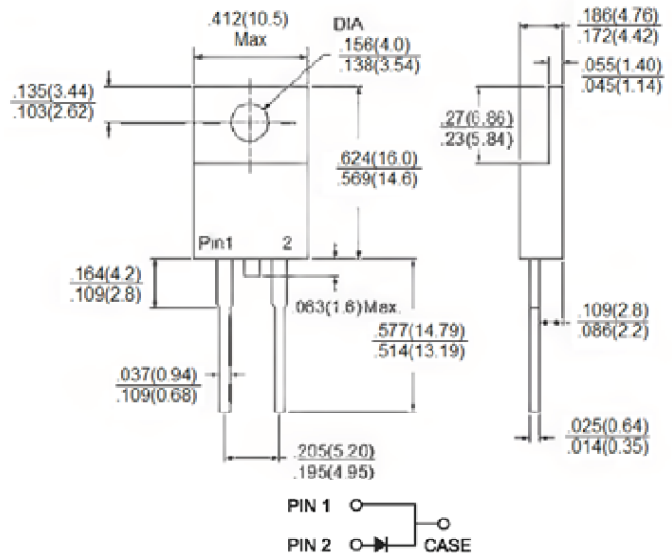

RoHS COMPLIANCE

Features

- ◇ UL Recognized File # E-326243
- ◇ Plastic material used carriers Underwriters Laboratory Classification 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
- ◇ Guard-ring for overvoltage protection
- ◇ High temperature soldering guaranteed: 260°C/10 seconds, 0.25"(6.35mm) from case
- ◇ Green compound with suffix "G" on packing code & prefix "G" on datecode

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: 1.88 grams


Dimensions in inches and (millimeters)
Marking Diagram


- MBR10XX = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%

Type Number	Symbol	MBR 1035	MBR 1045	MBR 1050	MBR 1060	MBR 1090	MBR 10100	MBR 10150	MBR 10200	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	35	45	50	60	90	100	150	200	V
Maximum RMS Voltage	V_{RMS}	24	31	35	42	63	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	35	45	50	60	90	100	150	200	V
Maximum Average Forward Rectified Current at $T_C=125^\circ\text{C}$	$I_{F(AV)}$	10								A
Peak Repetitive Forward Current (Rated VR, Square Wave, 20KHz) at $T_C=125^\circ\text{C}$	I_{FRM}	20								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150								A
Peak Repetitive Reverse Surge Current (Note 1)	I_{RRM}	1.0	0.5							A
Maximum Instantaneous Forward Voltage at: (Note 2) $I_F=10A, T_A=25^\circ\text{C}$ $I_F=10A, T_A=125^\circ\text{C}$	V_F	0.70 0.57	0.80 0.70		0.85 0.71		1.05 -			V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage @ $T_A=25^\circ\text{C}$ @ $T_A=125^\circ\text{C}$	I_R	0.1								mA
		15	10		6					mA
Voltage Rate of Change (Rated V_R)	dV/dt	10,000								V/us
Typical Junction Capacitance	C_j	500								pF
Maximum Typical Thermal Resistance	$R_{\theta JC}$	3								$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	- 65 to + 150								$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 65 to + 175								$^\circ\text{C}$

 Note 1: 2.0uS Pulse Width, $f=1.0\text{KHz}$

Note 2: Pulse Test : 300uS Pulse Width, 1% Duty Cycle

RATINGS AND CHARACTERISTIC CURVES (MBR1035 THRU MBR10200)

