

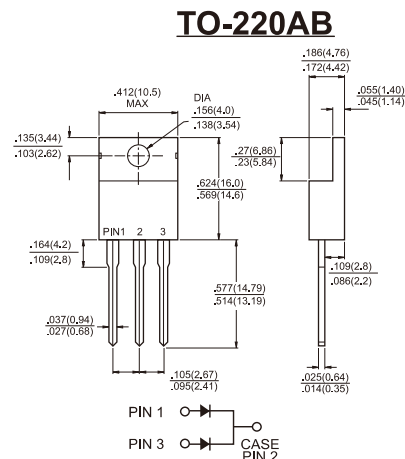


## Features

- ✧ UL Recognized File # E-326243
- ✧ 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
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode.

## 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: 1.88grams



Dimensions in inches and (millimeters)

## 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	MBR	MBR	MBR	MBR	MBR	MBR	MBR	Units			
		1035	1045	1050	1060	1090	10100	10150	10200				
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 $V_R$ , Square Wave, 20KHz) at $T_c=125^\circ\text{C}$	$I_{FRM}$	10								A			
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	120								A			
Peak Repetitive Reverse Surge Current (Note 2)	$I_{RRM}$	1.0				0.5				A			
Maximum Instantaneous Forward Voltage at: $I_F=5A, T_A=25^\circ\text{C}$ $I_F=5A, T_A=125^\circ\text{C}$ $I_F=10A, T_A=25^\circ\text{C}$ $I_F=10A, T_A=125^\circ\text{C}$	$V_F$	0.70	0.57	0.80	0.65	0.85	0.75	0.88	0.78	V			
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage (Note 1) @ $T_A=25^\circ\text{C}$ @ $T_A=125^\circ\text{C}$	$I_R$	0.1				15				10	2.0	5.0	mA mA
Voltage Rate of Change (Rated $V_R$ )	$dV/dt$	10,000								V/ $\mu\text{s}$			
Maximum Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	1.5								$^\circ\text{C/W}$			
Operating Junction Temperature Range	$T_J$	-65 to +150								$^\circ\text{C}$			
Storage Temperature Range	$T_{STG}$	-65 to +175								$^\circ\text{C}$			

- Notes: 1. Pulse Test: 300 $\mu\text{s}$  Pulse Width, 1% Duty Cycle  
2. 2.0 $\mu\text{s}$  Pulse Width,  $f=1.0$  KHz  
3. Mount on Heatsink Size of 2 in x 3 in x 0.25in Al-Plate.



RATINGS AND CHARACTERISTIC CURVES (MBR1035CT THRU MBR10200CT)

