

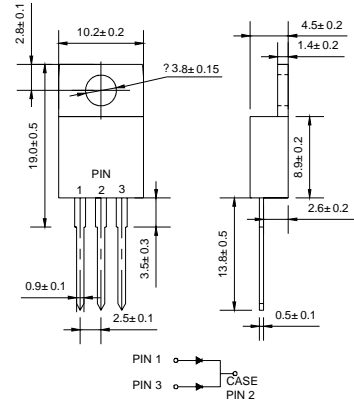


## Features

- ✧ Metal-Semiconductor junction with guard ring
- ✧ Epitaxial construction
- ✧ Low forward voltage drop, low swithing losses
- ✧ High surge capacity
- ✧ For use in low voltage, high frequency inverters free wheeling, and polarity protection applications
- ✧ The plastic material carries U/L recognition 94V-0

## Mechanical Data

- ✧ **Case:** JEDEC TO-220AB, molded plastic body
- ✧ **Polarity:** As marked
- ✧ **Mounting Position:** Any
- ✧ **Weight:** 0.071 ounce, 2.006 grams



Dimensions in millimeters

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

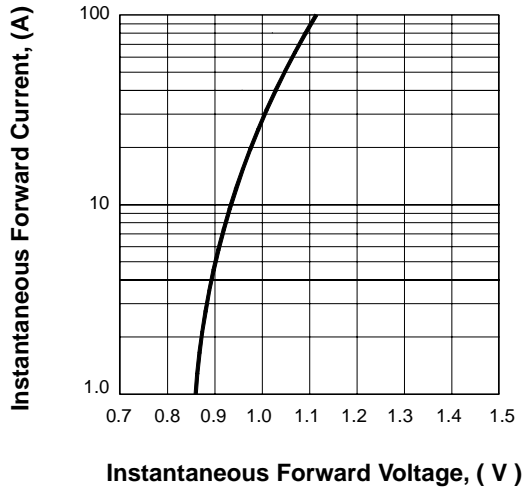
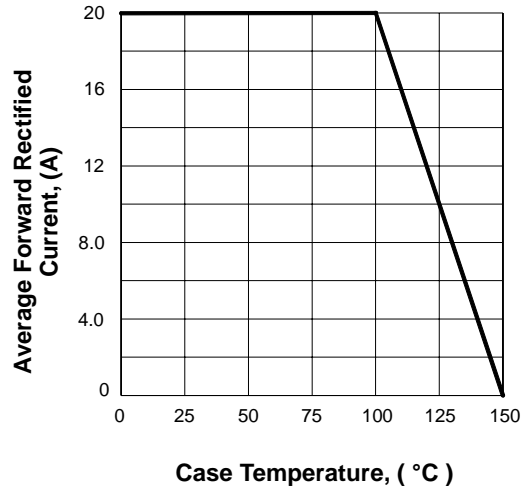
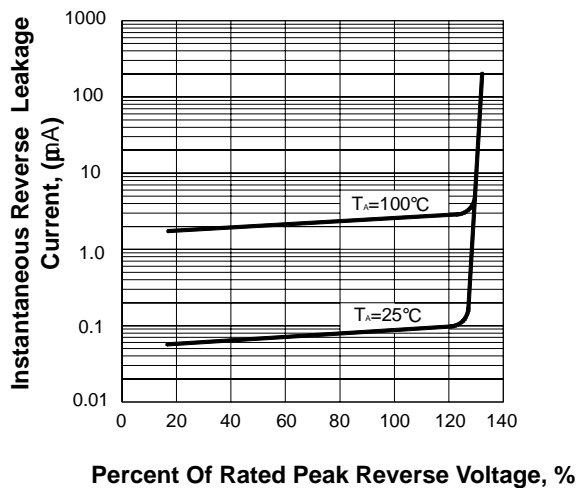
Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbol	MBR20150CT	MBR20200CT	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	150	200	V
Maximum RMS voltage	$V_{RWS}$	135	140	V
Maximum DC blocking voltage	$V_{DC}$	150	200	V
Maximum average forward total device rectified current @ $T_C=100^\circ\text{C}$	$I_{(AV)}$	20		A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	150		A
Maximum instantaneous forward voltage @10A	$V_F$	0.95		V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	$I_R$	0.2 50		mA
Maximum thermal resistance (Note1)	$R_{\theta JC}$	1.5		$^\circ\text{C/W}$
Operating junction temperature range	$T_J$	-55 --- +150		$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 --- +150		$^\circ\text{C}$

**NOTES:** 1. Thermal resistance from junction to case.

## Ratings AND Characteristic Curves

**FIG.1 TYPICAL FORWARD CHARACTERISTICS**

**FIG.2 FORWARD DERATING CURVE**

**FIG.3 TYPICAL REVERSE CHARACTERISTICS**

**FIG.4 PEAK FORWARD SURGE CURRENT**
