



**VOLTAGE RANGE: 70 - 100 V**  
**CURRENT: 20 A**

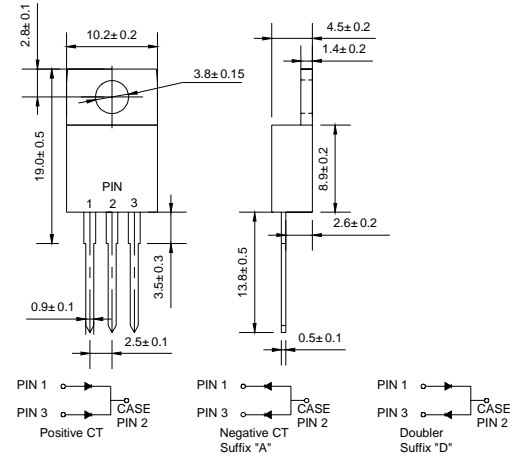
**TO-220AB**

## Features

- ◇ High surge capacity.
- ◇ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.
- ◇ Metal silicon junction, majority carrier conduction.
- ◇ High current capacity, low forward voltage drop.
- ◇ Guard ring for over voltage protection.

## Mechanical Data

- ◇ Case: JEDEC TO-220AB, molded plastic body
- ◇ Terminals: Solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Weight: 0.071 ounce, 2.006 grams
- ◇ Position: Any



Dimensions in millimeters

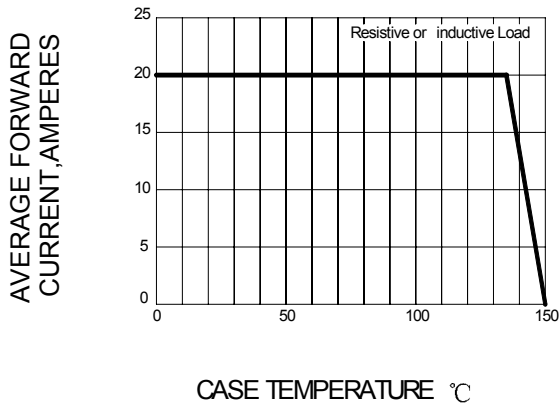
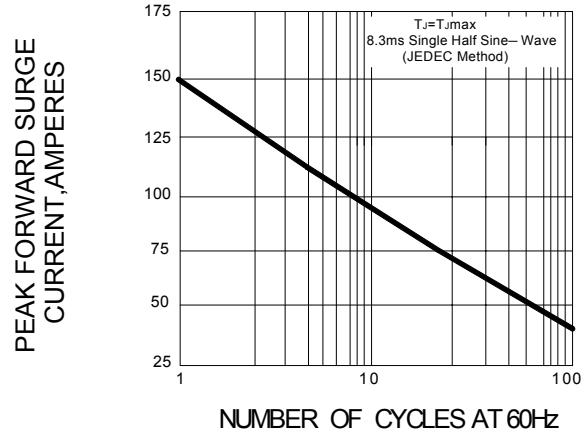
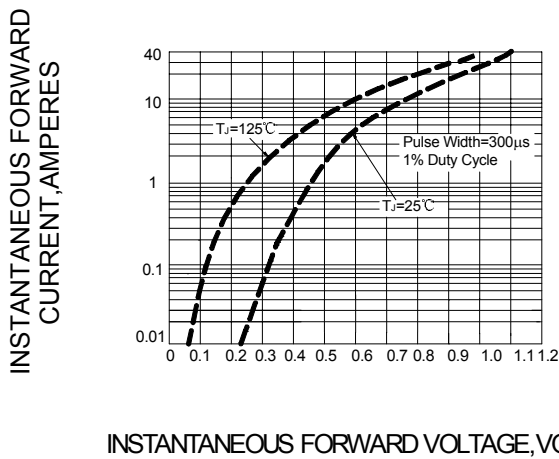
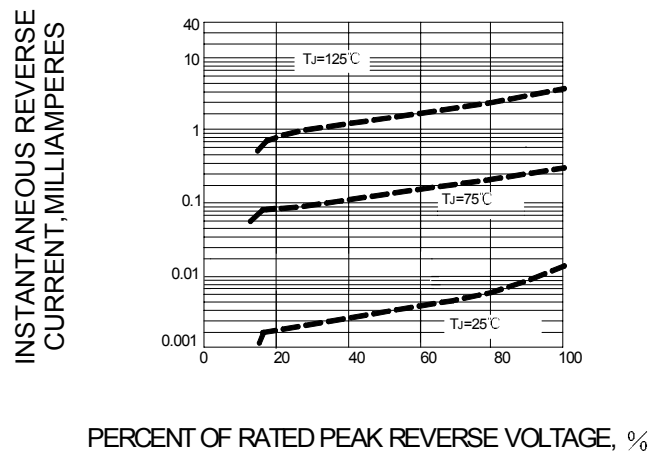
## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

		MBR2070CT	MBR2080CT	MBR2090CT	MBR20100CT	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	70	80	90	100	V
Maximum working peak reverse voltage	$V_{RWM}$	49	56	63	70	V
Maximum DC blocking voltage	$V_{DC}$	70	80	90	100	V
Maximum average forward total device rectified current @ $T_C = 133^\circ\text{C}$	$I_{F(AV)}$	20.0				A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	150.0				A
Maximum forward voltage per leg (NOTE 1)	$V_F$		0.85 0.70 0.95 0.85			V
Maximum reverse current at rated DC blocking voltage	$I_R$		0.1 6.0			mA
Maximum junction capacitance (NOTE2)	$C_T$		400			pF
Operating junction temperature range	$T_J$		- 55 ---- + 150			°C
Storage temperature range	$T_{STG}$		- 55 ---- + 175			°C

NOTE: 1. Pulse test: 300µs pulse width, 1% duty cycle.  
2.  $V_R = 5V_{DC}$ , (test signal range 100kHz to 1MHz)

## Ratings AND Characteristic Curves

**FIG.1 – FORWARD CURRENT DERATING CURVE**

**FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG**

**FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG**

**FIG.4 – TYPICAL REVERSE CHARACTERISTICS PER LEG**

**FIG.5-TYPICAL JUNCTION CAPACITANCE PER LEG**
