

# MBR2030CT-MBR2060CT

Schottky Barrier Rectifiers

**VOLTAGE RANGE: 30 - 60 V**

**CURRENT: 20 A**



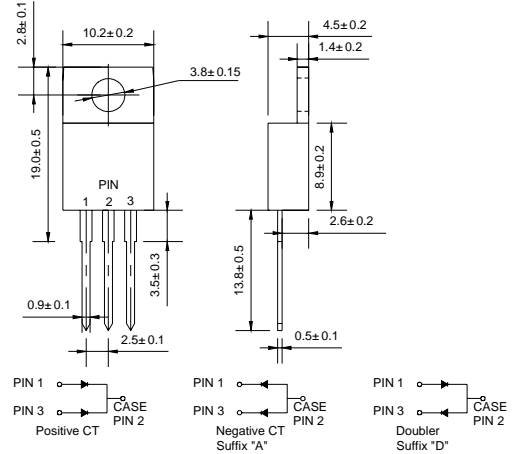
**ITO-220AB**

## 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
- ◇ Polarity: As marked
- ◇ 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%.

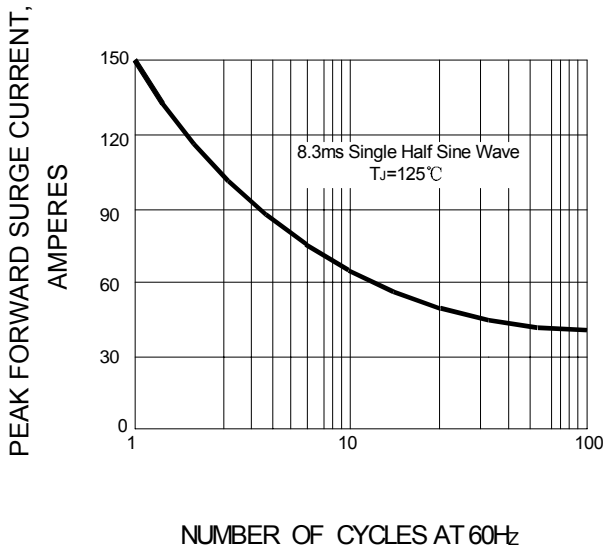
		MBR 2030CT	MBR 2035CT	MBR 2040CT	MBR 2045CT	MBR 2050CT	MBR 2060CT	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	30	35	40	45	50	60	V
Maximum RMS Voltage	$V_{RMS}$	21	25	28	32	35	42	V
Maximum DC blocking voltage	$V_{DC}$	30	35	40	45	50	60	V
Maximum average forward total device rectified current @ $T_c = 120^\circ\text{C}$	$I_{F(AV)}$	20						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	250						A
Maximum forward voltage (Note 1)	$V_F$	(I <sub>F</sub> =10A, T <sub>c</sub> =25 °C) - (I <sub>F</sub> =10A, T <sub>c</sub> =125 °C) 0.57 (I <sub>F</sub> =20A, T <sub>c</sub> =25 °C) 0.84 (I <sub>F</sub> =20A, T <sub>c</sub> =125 °C) 0.72				0.75 0.70 0.95 0.85		V
Maximum reverse current at rated DC blocking voltage	$I_R$	@ $T_c = 25^\circ\text{C}$ 0.1 @ $T_c = 100^\circ\text{C}$ 15				0.1 50		m A
Maximum thermal resistance (Note2)	$R_{\theta JC}$	2.0						°C/W
Operating junction temperature range	$T_J$	- 55 ---- + 150						°C
Storage temperature range	$T_{STG}$	- 55 ---- + 150						°C

NOTE: 1. Pulse test: 300µs pulse width, 1% duty cycle.

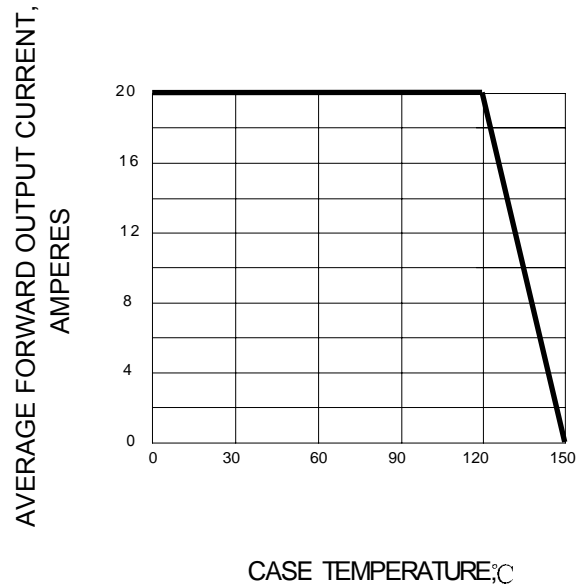
2. Thermal resistance from junction to case.

## Ratings AND Characteristic Curves

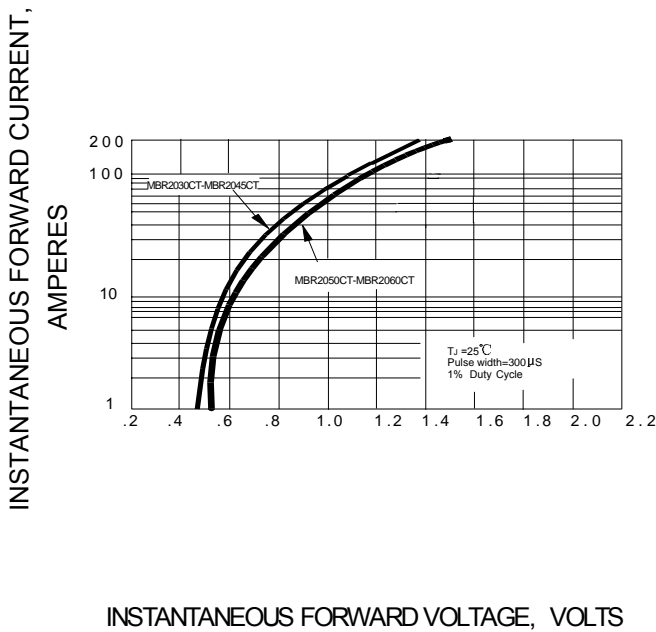
**FIG.1 – PEAK FORWARD SURGE CURRENT**



**FIG.2 – FORWARD DERATING CURVE**



**FIG.3 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.4 – TYPICAL REVERSE CHARACTERISTIC**

