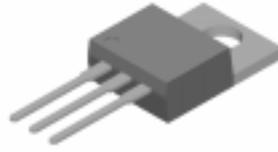




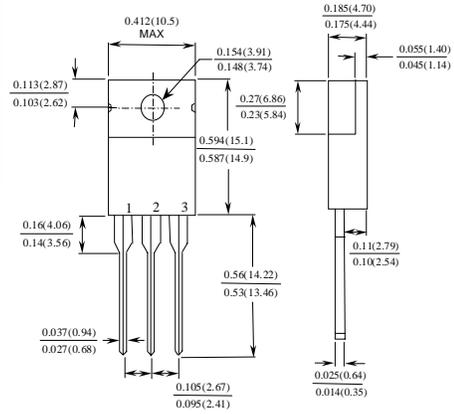
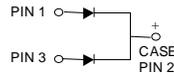
# MBR2535CT - MBR2560CT

## Features

- Low power loss, high efficiency.
- 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.



TO-220AB



Dimensions are in: inches (mm)

## 30 Ampere Schottky Barrier Rectifiers

### Absolute Maximum Ratings\*

$T_A = 25^\circ\text{C}$  unless otherwise noted

Symbol	Parameter	Value	Units
$I_O$	Average Rectified Current .375 " lead length @ $T_A = 130^\circ\text{C}$	30	A
$I_{f(\text{repetitive})}$	Peak Repetitive Forward Current (Rated $V_R$ , Square Wave, 20 KHz) @ $T_A = 130^\circ\text{C}$	30	A
$I_{f(\text{surge})}$	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	150	A
$P_D$	Total Device Dissipation Derate above $25^\circ\text{C}$	2.0 16.6	W mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	60	$^\circ\text{C}/\text{W}$
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	1.5	$^\circ\text{C}/\text{W}$
$T_{stg}$	Storage Temperature Range	-65 to +175	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	-65 to +150	$^\circ\text{C}$

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

### Electrical Characteristics

$T_A = 25^\circ\text{C}$  unless otherwise noted

Parameter	Device				Units
	2535CT	2545CT	2550CT	2560CT	
Peak Repetitive Reverse Voltage	35	45	50	60	V
Maximum RMS Voltage	24	31	35	42	V
DC Reverse Voltage (Rated $V_R$ )	35	45	50	60	V
Voltage Rate of Change (Rated $V_R$ )	10,000				V/ $\mu\text{s}$
Maximum Reverse Current @ rated $V_R$					
$T_A = 25^\circ\text{C}$	0.2		1.0		mA
$T_A = 125^\circ\text{C}$	40		50		mA
Maximum Forward Voltage					
$I_F = 15\text{ A}, T_C = 25^\circ\text{C}$	-		0.75		V
$I_F = 15\text{ A}, T_C = 125^\circ\text{C}$	-		0.65		V
$I_F = 30\text{ A}, T_C = 25^\circ\text{C}$	0.82		-		V
$I_F = 30\text{ A}, T_C = 125^\circ\text{C}$	0.73		-		V
Peak Repetitive Reverse Surge Current 2.0 $\mu\text{s}$ Pulse Width, $f = 1.0\text{ KHz}$	1.0		0.5		A

MBR2535CT - MBR2560CT

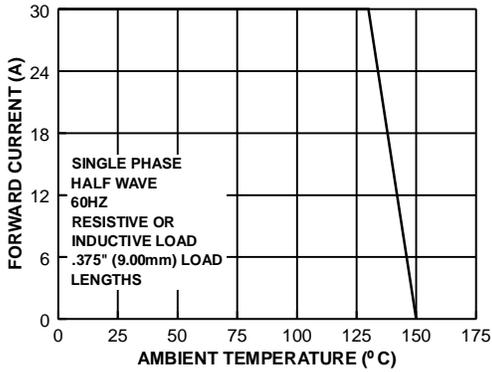
# Schottky Barrier Rectifier

(continued)

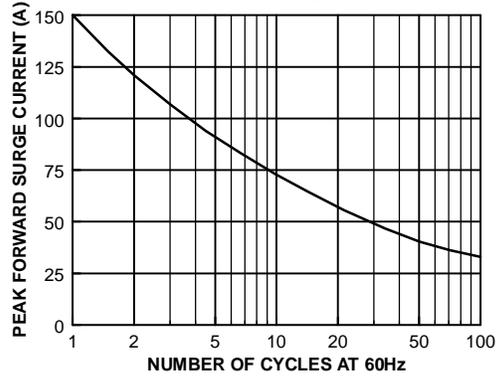
MBR2535CT - MBR2560CT

## Typical Characteristics

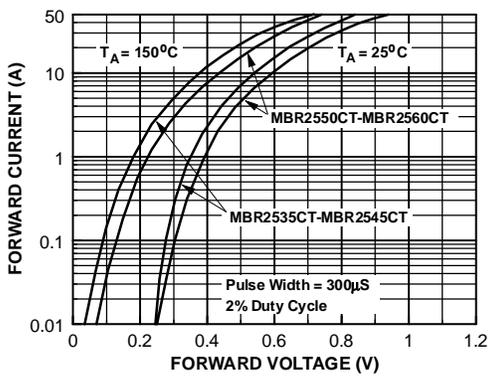
### Forward Current Derating Curve



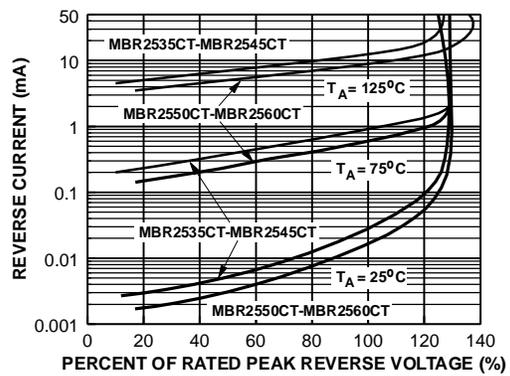
### Non-Repetitive Surge Current



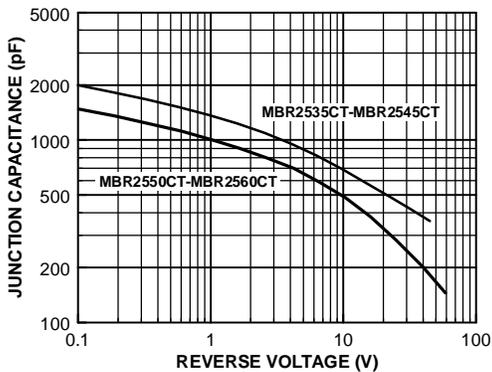
### Forward Characteristics



### Reverse Characteristics



### Typical Junction Capacitance



### Transient Thermal Impedance

