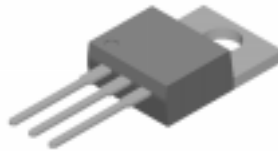


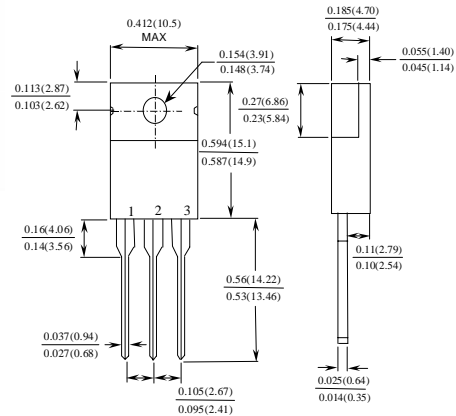
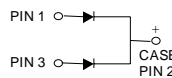
# MBR1535CT - MBR1560CT

## 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.
- Guarding for over voltage protection.



TO-220AB



## 15 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 @ $T_A = 105^\circ\text{C}$	15	A
$I_{f(\text{repetitive})}$	Peak Repetitive Forward Current (Rated $V_R$ , Square Wave, 20 KHz) @ $T_A = 105^\circ\text{C}$	15	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 $25^\circ\text{C}$	41.7 333	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	3.0	$^\circ\text{C}/\text{W}$
$T_{stg}$	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
	1535	1545	1550	1560	
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 $V_R$					
$T_A = 25^\circ\text{C}$	0.1		1.0		mA
$T_A = 125^\circ\text{C}$	15		50		mA
Maximum Forward Voltage					
$I_F = 7.5\text{ A}, T_C = 25^\circ\text{C}$	-		0.75		V
$I_F = 7.5\text{ A}, T_C = 125^\circ\text{C}$	0.57		0.65		V
$I_F = 15\text{ A}, T_C = 25^\circ\text{C}$	0.84		-		V
$I_F = 15\text{ A}, T_C = 125^\circ\text{C}$	0.72		-		V
Peak Repetitive Reverse Surge Current 2.0 $\mu\text{s}$ Pulse Width, $f = 1.0\text{ KHz}$	1.0		0.5		A

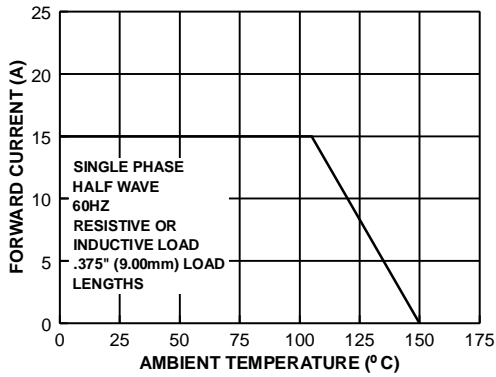
# Schottky Barrier Rectifier

(continued)

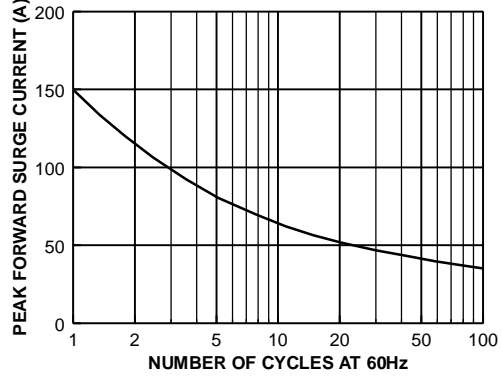
MBR1535CT - MBR1560CT

## Typical Characteristics

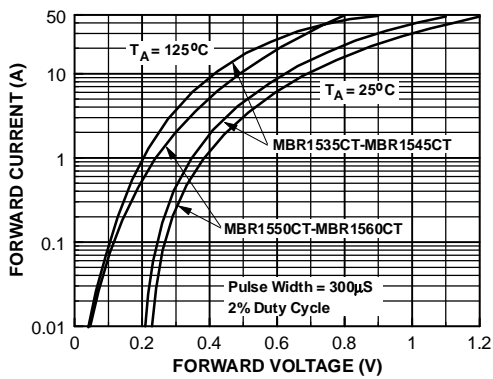
### Forward Current Derating Curve



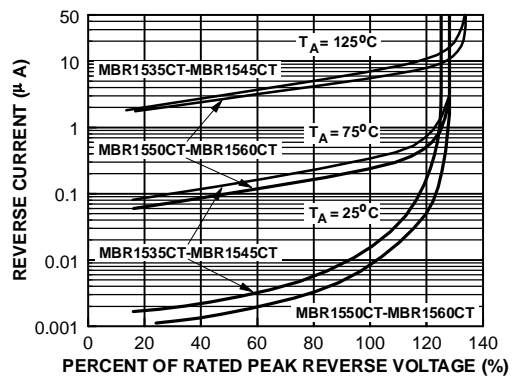
### Non-Repetitive Surge Current



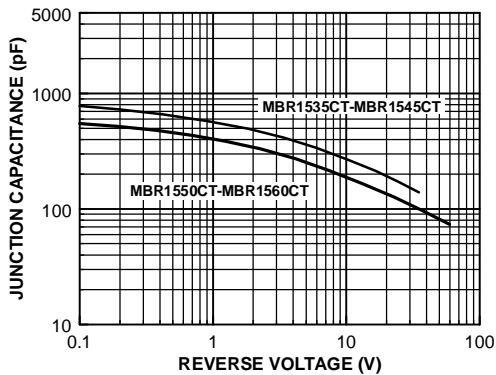
### Forward Characteristics



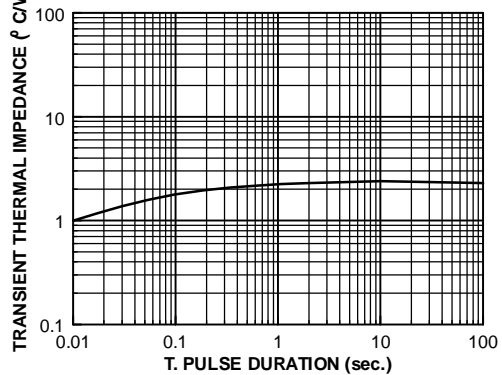
### Reverse Characteristics



### Typical Junction Capacitance



### Transient Thermal Impedance



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CROSSVOLT™	POP™
E <sup>2</sup> CMOS™	PowerTrench™
FACT™	QS™
FACT Quiet Series™	Quiet Series™
FAST®	SuperSOT™-3
FASTr™	SuperSOT™-6
GTO™	SuperSOT™-8
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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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