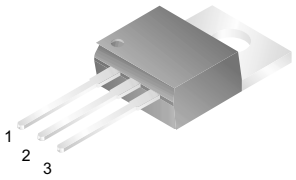
FAIRCHILD
SEMICONDUCTOR®

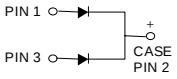
MBR1535CT - MBR1560CT

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



Schottky Rectifiers

Absolute Maximum Ratings*

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value				Units
		1535	1545	1550	1560	
V_{RRM}	Maximum Repetitive Reverse Voltage	35	45	50	60	V
$I_{F(AV)}$	Average Rectified Forward Current .375 " lead length @ T_A = 105°C	15				A
I_{FSM}	Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave	150				A
T_{stg}	Storage Temperature Range	-65 to +175				°C
T_J	Operating Junction Temperature	-65 to +150				°C

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

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	41.7	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	60	°C/W
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	3.0	°C/W

Electrical Characteristics

T_A = 25°C unless otherwise noted

Symbol	Parameter	Device				Units
		1535	1545	1550	1560	
V_F	Forward Voltage I_F = 7.5 A, T_C = 25°C	-		0.75		V
	I_F = 7.5 A, T_C = 125°C	0.57		0.65		V
	I_F = 15 A, T_C = 25°C	0.84		-		V
	I_F = 15 A, T_C = 125°C	0.72		-		V
I_R	Reverse Current @ rated V_R T_A = 25°C	0.1		1.0		mA
	T_A = 125°C	15		50		mA
I_{RRM}	Peak Repetitive Reverse Surge Current 2.0 us Pulse Width, f = 1.0 KHz	1.0		0.5		A

Typical Characteristics

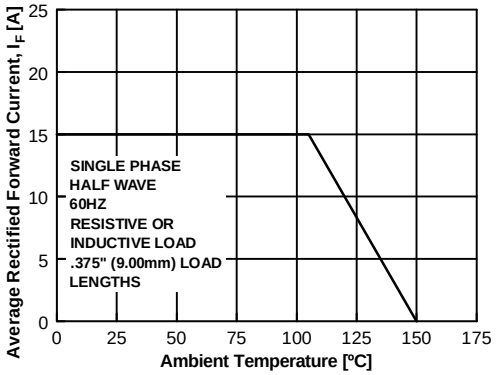


Figure 1. Forward Current Derating Curve

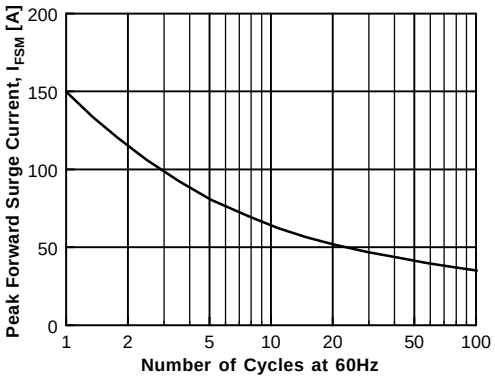


Figure 2. Non-Repetitive Surge Current

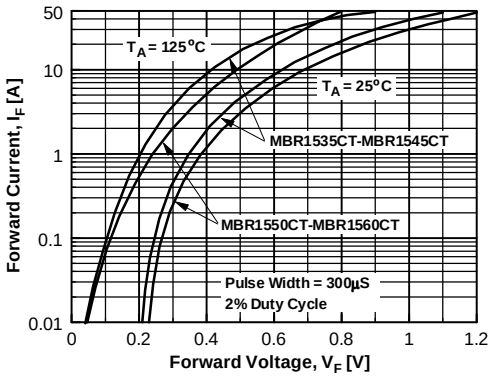


Figure 3. Forward Voltage Characteristics

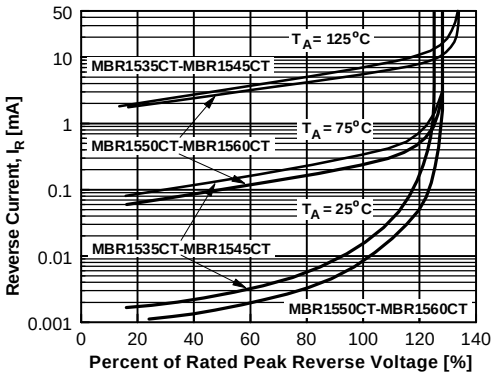


Figure 4. Reverse Current vs Reverse Voltage

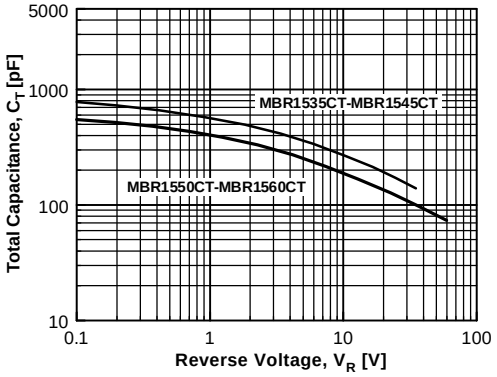


Figure 5. Total Capacitance

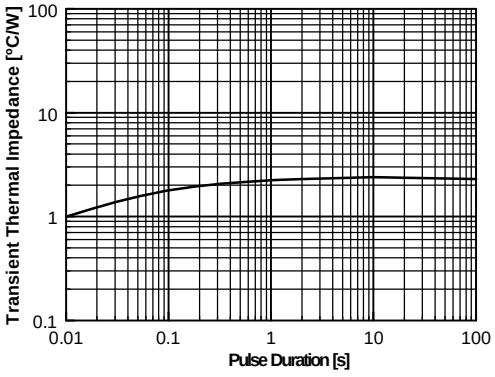


Figure 6. Thermal Impedance Characteristics

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DOME™	HiSeC™	PowerTrench	SuperSOT™-8	
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