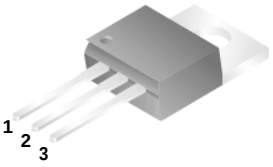
FAIRCHILD SEMICONDUCTOR®

August 2009

MBR2535CT-MBR2560CT
25 Ampere Schottky Barrier Rectifiers

- Low power loss, high efficiency.
- High surge capability.
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.
- Metal silicon junction, majority carrier conduction.
- High current capability, low forward voltage drop.
- Guardring for overvoltage protection.



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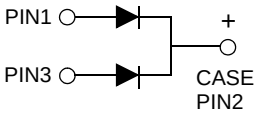


Absolute Maximum Ratings* T_A = 25°C unless otherwise noted

Symbol	Parameter	Value				Units
		2535CT	2545CT	2550CT	2560CT	
V_{RRM}	Maximum Repetitive Reverse Voltage	35	45	50	60	V
$I_{F(AV)}$	Average Rectified Forward Current .375 " lead length @ T_A = 130°C	25				A
I_{FSM}	Non-repetitive Peak Forward Surge Current. 8.3ms Single Half-Sine-Wave	200				A
T_{STG}	Storage Temperature Range	-65 to +175				°C
T_J	Operating Junction Temperature Range	-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	2.0	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	60	°C/W
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	1.5	°C/W

Electrical Characteritics T_A = 25°C unless otherwise specified

Symbol	Parameter	Value				Units
		2535CT	2545CT	2550CT	2560CT	
V_F	Forward Voltage I_F=12.5A, T_C=25°C I_F=12.5A, T_C=125°C I_F=25A, T_C=25°C I_F=25A, T_C=125°C	0.82 0.73		0.75 0.65 0.82 0.78		V
I_R	Maximum Reverse Current at rated V_{RRM} Per Diode @ T_A=25°C @ T_A=125°C	0.2 15.0		0.2 10.0		mA
I_{RRM}	Peak Repetitive Reverse Surge Current 2.0 μs Pulse Width, f = 1.0 KHz	1.0		0.5		A
C_j	Typical Junction Capacitance	600		460		pF

Typical Characteristics

Figure 1. Forward Current Derating Curve

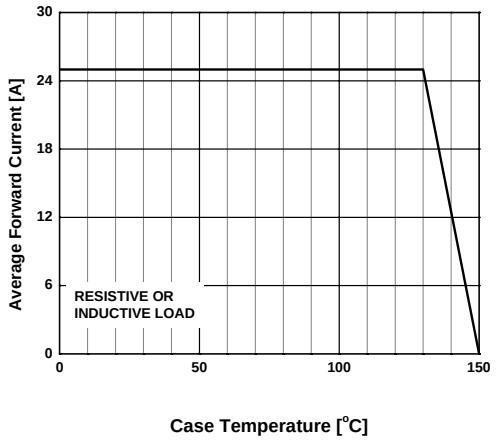


Figure 2. Non-Repetitive Surge Current

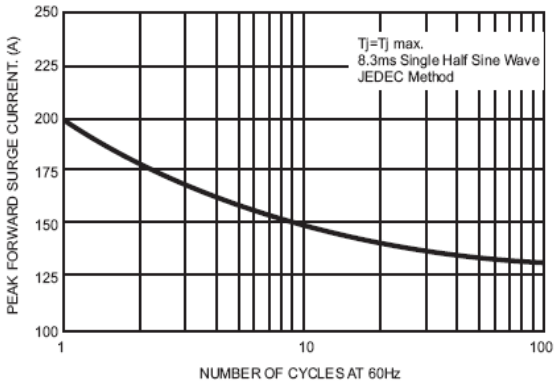


Figure 3. Forward Voltage Characteristics

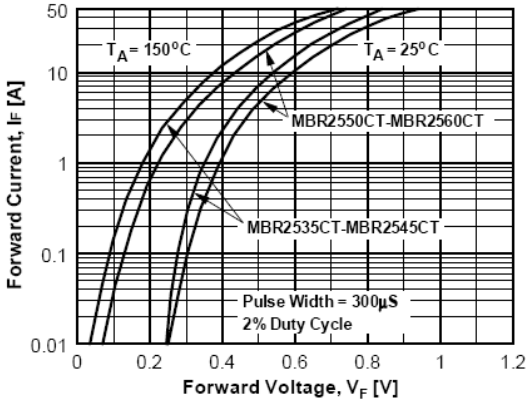


Figure 4. Reverse Current vs Reverse Voltage

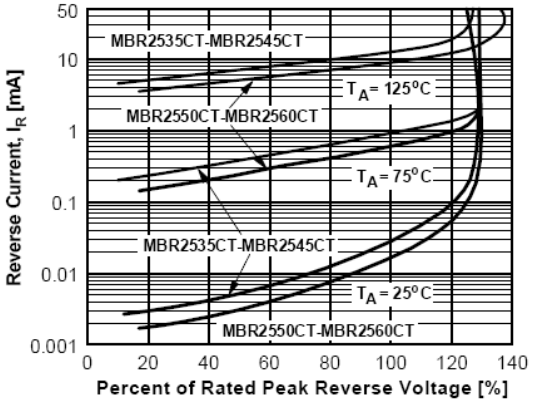


Figure 5. Total Capacitance

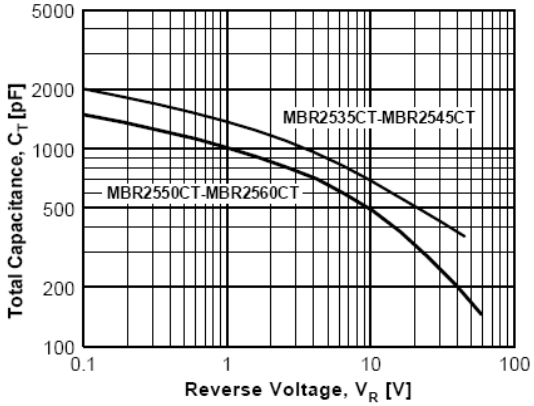
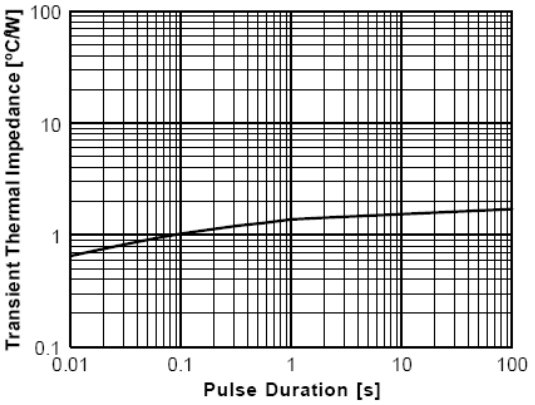


Figure 6. Thermal Impedance Characteristics



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