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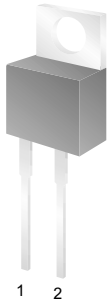
FAIRCHILD SEMICONDUCTOR®

MBR1635 - MBR1660

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-220AC

CASE Positive

Schottky Rectifiers

Absolute Maximum Ratings*

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value				Units
		1635	1645	1650	1660	
V_{RRM}	Maximum Repetitive Reverse Voltage	35	45	50	60	V
$I_{F(AV)}$	Average Rectified Forward Current .375 " lead length @ T_A = 125°C	16				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	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 Characteristics

T_A = 25°C unless otherwise noted

Symbol	Parameter	Device				Units
		1635	1645	1650	1660	
V_F	Forward Voltage I_F = 16 A, T_C = 25°C I_F = 16 A, T_C = 125°C	0.63 0.57		0.75 0.65		V V
I_R	Reverse Current @ rated V_R T_A = 25°C T_A = 125°C	0.2 40		1.0 50		mA mA
I_{RRM}	Peak Repetitive Reverse Surge Current 2.0 us Pulse Width, f = 1.0 KHz	1.0		0.5		A

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Typical Characteristics

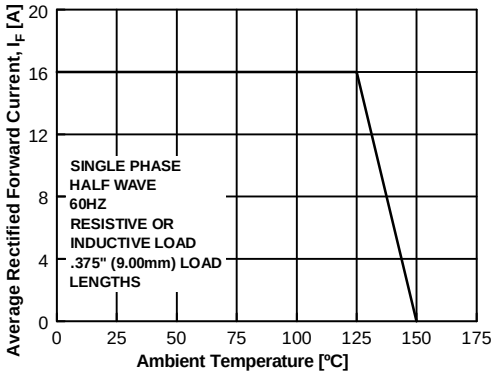

Figure 1. Forward Current Derating Curve

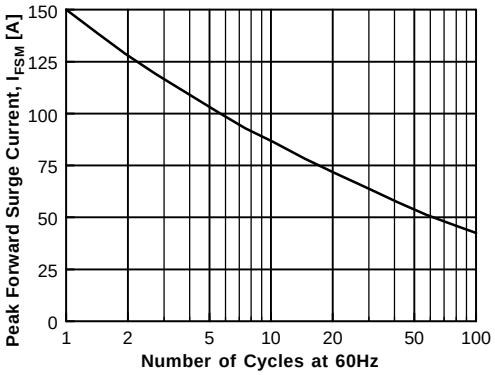

Figure 2. Non-Repetitive Surge Current

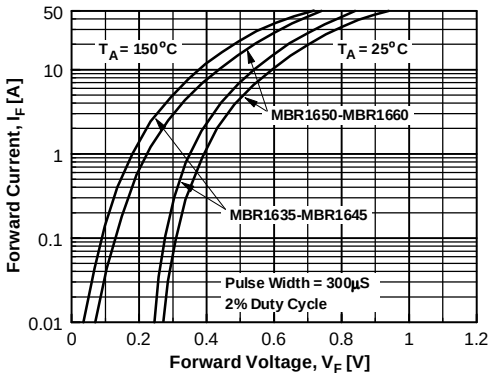

Figure 3. Forward Voltage Characteristics

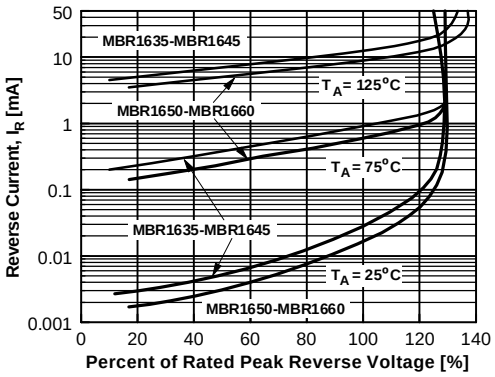

Figure 4. Reverse Current vs Reverse Voltage

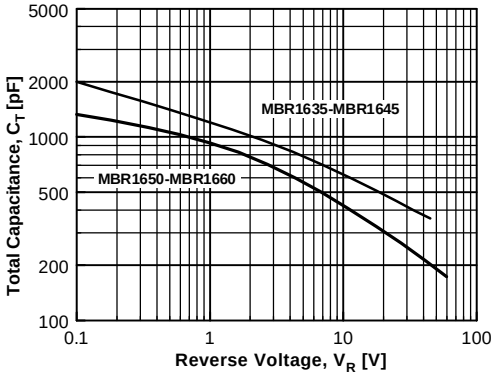

Figure 5. Total Capacitance

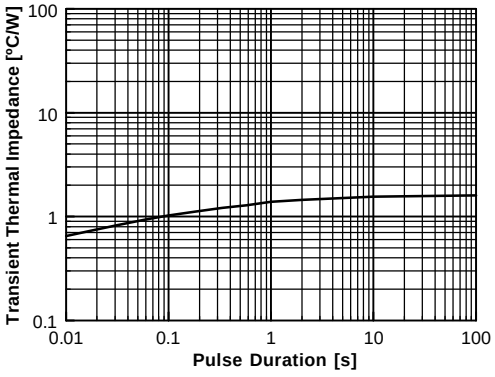

Figure 6. Thermal Impedance Characteristics

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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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