



## 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



### Schottky Rectifiers

#### Absolute Maximum Ratings\*

$T_A = 25^\circ\text{C}$  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 @ $T_A = 125^\circ\text{C}$			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		$^\circ\text{C}$
$T_J$	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.

### Thermal Characteristics

Symbol	Parameter	Value		Units
$P_D$	Power Dissipation	2.0		W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	60		$^\circ\text{C/W}$
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	1.5		$^\circ\text{C/W}$

### Electrical Characteristics

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

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

## Typical Characteristics

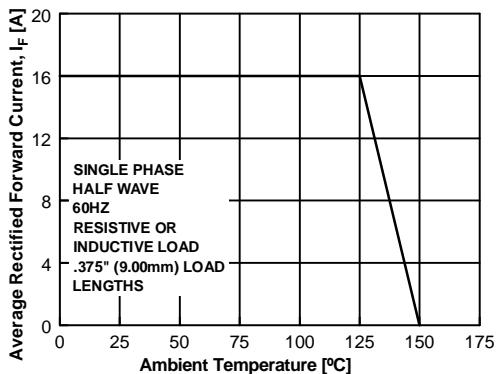


Figure 1. Forward Current Derating Curve

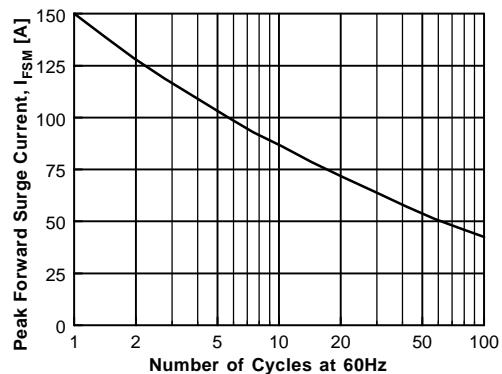


Figure 2. Non-Repetitive Surge Current

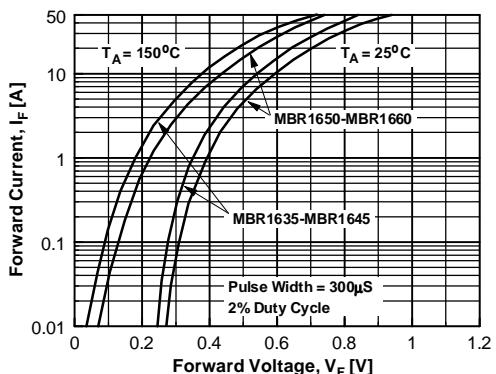


Figure 3. Forward Voltage Characteristics

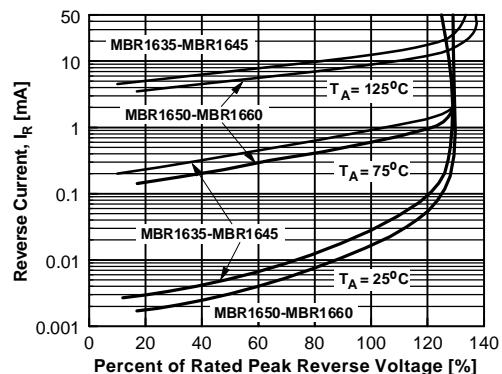


Figure 4. Reverse Current vs Reverse Voltage

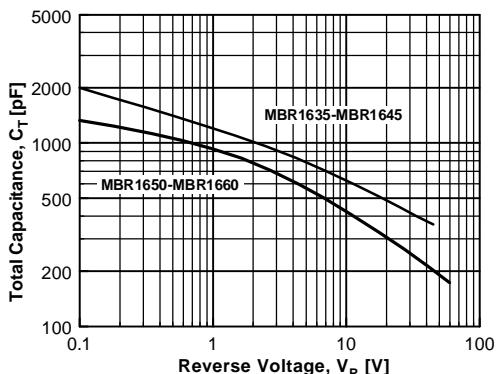


Figure 5. Total Capacitance

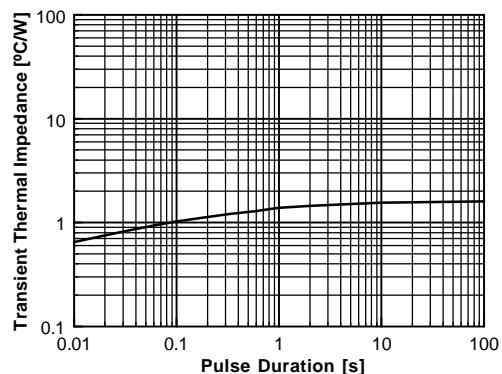


Figure 6. Thermal Impedance Characteristics

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