

# MBR1035 - MBR1060 Schottky Rectifiers

## 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



## Absolute Maximum Ratings\* $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value				Units
		1035	1045	1050	1060	
$V_{RRM}$	Maximum Repetitive Reverse Voltage	35	45	50	60	V
$I_{F(AV)}$	Average Rectified Forward Current	10				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	$^\circ\text{C}/\text{W}$
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	2.0	$^\circ\text{C}/\text{W}$

## Electrical Characteristics $T_a = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value				Units
		1035	1045	1050	1060	
$V_F$	Forward Voltage $I_F = 10\text{A}, T_C = 25^\circ\text{C}$ $I_F = 10\text{A}, T_C = 125^\circ\text{C}$ $I_F = 20\text{A}, T_C = 25^\circ\text{C}$ $I_F = 20\text{A}, T_C = 125^\circ\text{C}$	-		0.80		V
		0.57		0.70		V
		0.84		0.95		V
		0.72		0.85		V
$I_R$	Reverse Current @ rated $V_R$ $T_C = 25^\circ\text{C}$ $T_C = 125^\circ\text{C}$	0.1				mA
		15				mA
$I_{RRM}$	Peak Repetitive Reverse Surge Current 2.0 $\mu\text{s}$ Pulse Width, $f = 1.0\text{ KHz}$	1.0		0.5		A

### Typical Performance Characteristics

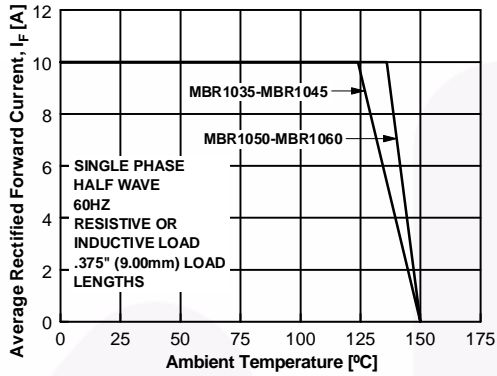


Figure 1. Forward Current Derating Curve

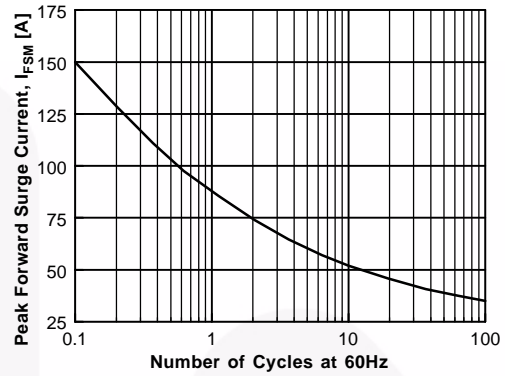


Figure 2. Non-Repetitive Surge Current

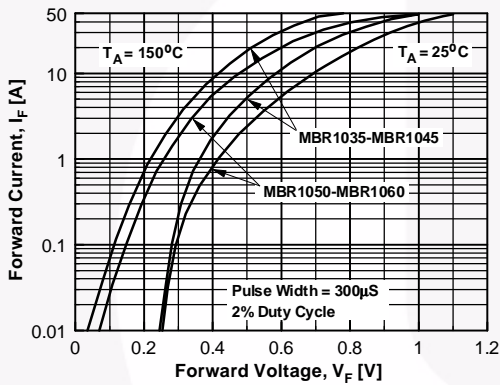


Figure 3. Forward Voltage Characteristics

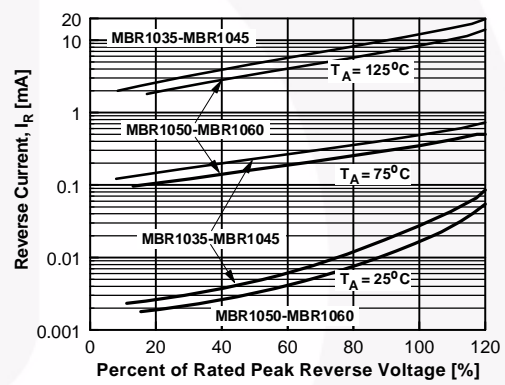


Figure 4. Reverse Current vs Reverse Voltage

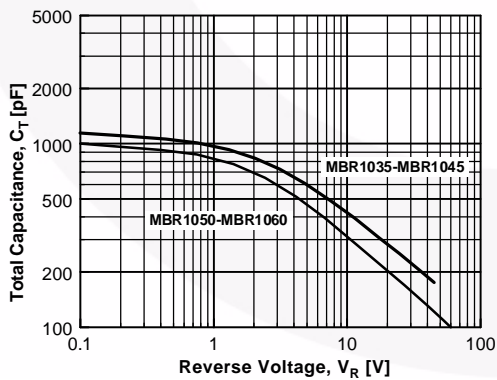


Figure 5. Total Capacitance

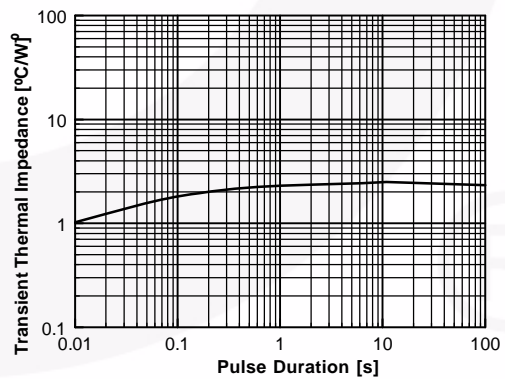





Figure 6. Thermal Impedance Characteristics



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