

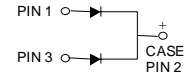
MBR4035PT - MBR4060PT

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-3P/TO-247AD



Schottky Rectifiers

Absolute Maximum Ratings*

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

Symbol	Parameter	Value				Units
		4035PT	4045PT	4050PT	4060PT	
V_{RRM}	Maximum Repetitive Reverse Voltage	35	45	50	60	V
$I_{F(AV)}$	Average Rectified Forward Current .375" lead length @ $T_A = 125^\circ\text{C}$	40				A
I_{FSM}	Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave	400				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	3.0	W
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	1.2	$^\circ\text{C/W}$

Electrical Characteristics

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

Symbol	Parameter	Device				Units
		4035PT	4045PT	4050PT	4060PT	
V_F	Forward Voltage $I_F = 20\text{ A}, T_C = 25^\circ\text{C}$	0.70		0.72		V
	$I_F = 20\text{ A}, T_C = 125^\circ\text{C}$	0.60		0.62		V
	$I_F = 40\text{ A}, T_C = 25^\circ\text{C}$	0.80		-		V
	$I_F = 40\text{ A}, T_C = 125^\circ\text{C}$	0.75		-		V
I_R	Reverse Current @ rated V_R $T_A = 25^\circ\text{C}$	1.0				mA
	$T_A = 125^\circ\text{C}$	100				mA
I_{RRM}	Peak Repetitive Reverse Surge Current 2.0 μs Pulse Width, $f = 1.0\text{ KHz}$	2.0		1.0		A

Typical Characteristics

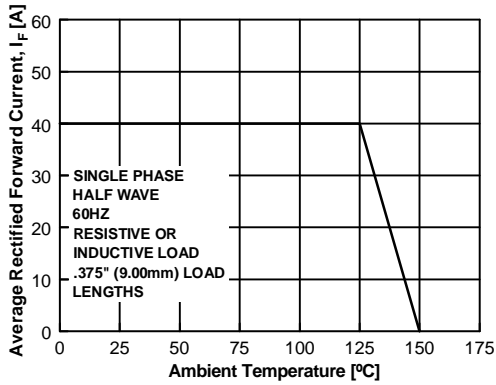


Figure 1. Forward Current Derating Curve

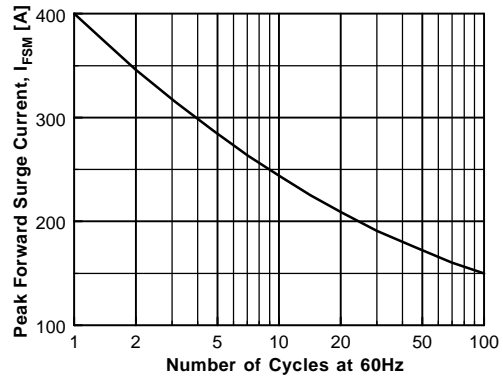


Figure 2. Non-Repetitive Surge Current

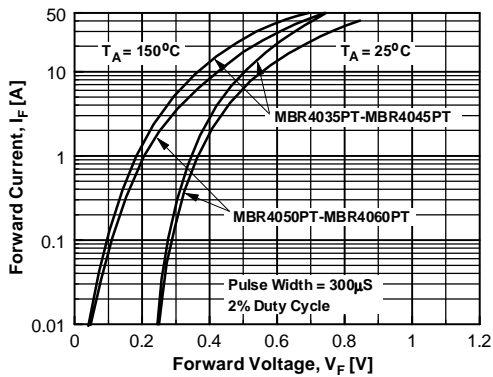


Figure 3. Forward Voltage Characteristics

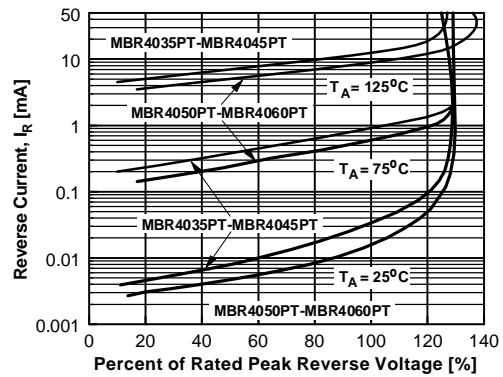


Figure 4. Reverse Current vs Reverse Voltage

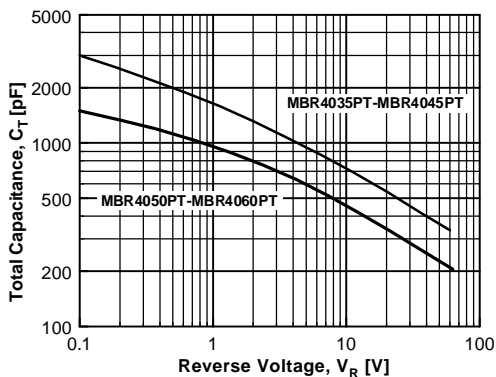


Figure 5. Total Capacitance

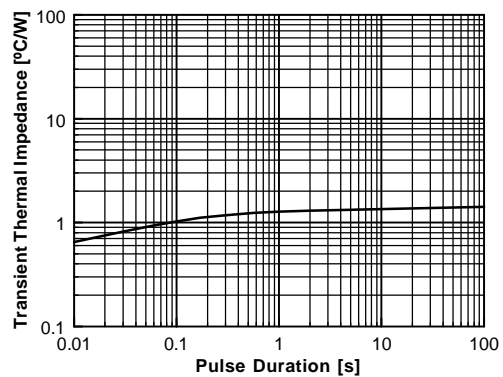


Figure 6. Thermal Impedance Characteristics

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