

ANTREX Electronics

Electronic Components Sourcing Information

Product Reference Information

Part Number: MBR1650
Manufacturer: onsemi
Package: TO-220-2
Availability: Please confirm with sales

Product Page:

<https://antrexco.com/product/details/onsemi/mbr1650.html>

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Supplier verification and packaging condition review

CoC / RoHS / REACH documents available on request

Secure sourcing support for OEM / EMS projects

Note:

This PDF includes an ANTREX product reference cover page.

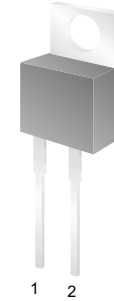
The original manufacturer datasheet follows from the next page.



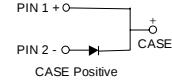
MBR1635 - MBR1660

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 μs Pulse Width, $f = 1.0\text{ KHz}$	1.0		0.5		A

Typical Characteristics

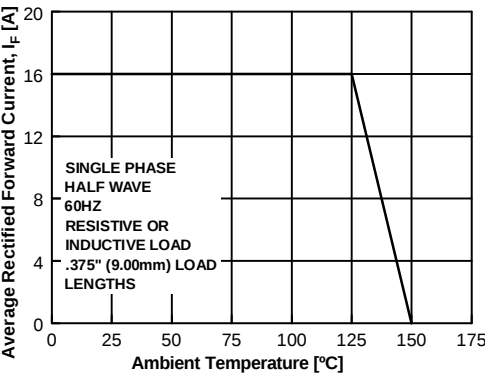


Figure 1. Forward Current Derating Curve

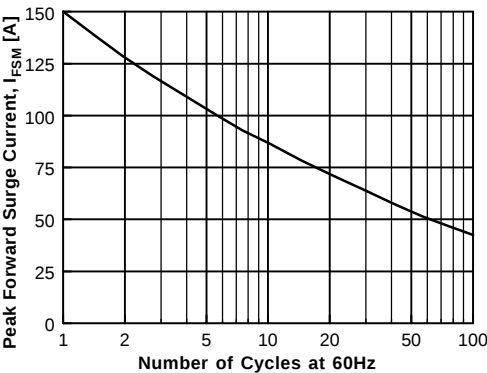


Figure 2. Non-Repetitive Surge Current

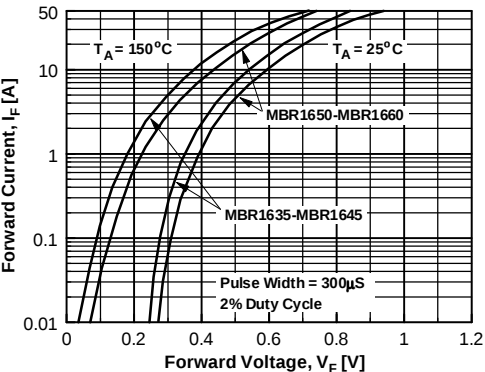


Figure 3. Forward Voltage Characteristics

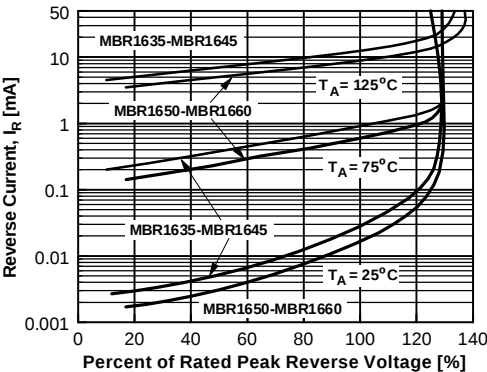


Figure 4. Reverse Current vs Reverse Voltage

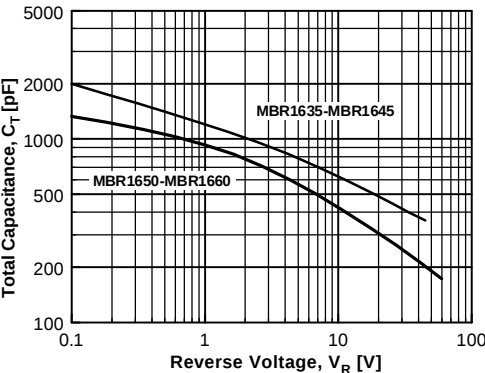


Figure 5. Total Capacitance

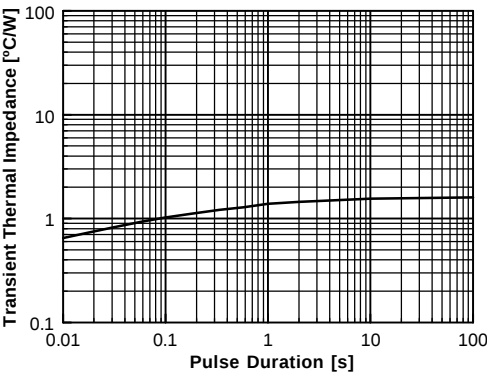


Figure 6. Thermal Impedance Characteristics

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Datasheet Identification	Product Status	Definition
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