

MMD180S160B

1600V 180A Rectifier Diode Module
RoHS Compliant

December 2009

PRODUCT FEATURES

- Glass Passivated Chip
- Aluminum Oxide Ceramic Isolated Metal Baseplate
- Low Reverse Recovery Loss
- Low Forward Voltage
- High Surge Current Capability
- Low Inductance Package

APPLICATIONS

- Field Supply For DC Motors
- Line Rectifiers For Transistorized AC Motor Controllers
- Non-controllable Rectifiers For AC/DC Converter

ABSOLUTE MAXIMUM RATINGS

$T_C=25^{\circ}\text{C}$ unless otherwise specified

Symbol	Parameter	Test Conditions	Max.	Unit
$I_{F(AV)}$	Average Forward Current	$T_C=85^{\circ}\text{C}$ Rectangular, $d=0.5$	180	A
$I_{F(RMS)}$	RMS Forward Current	$T_C=85^{\circ}\text{C}$ Rectangular, $d=0.5$	260	A
I_{FSM}	Non-Repetitive Surge Forward Current	$T_J=5^{\circ}\text{C}$, $t=10\text{ms}$, 50Hz Sine	6000	A
		$T_J=5^{\circ}\text{C}$, $t=8.8\text{ms}$, 60Hz Sine	6600	A
I^2t	I^2t (For Fusing)		80000	A^2s

T_J

ELECTRICAL AND THERMAL CHARACTERISTICS

$T_C=25^{\circ}\text{C}$ unless otherwise specified



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MECHANICAL CHARACTERISTICS

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Torque	Module-to-Sink	Recommended M6	3		5	N·m
Torque	Module Electrodes	Recommended M6	3		5	N·m

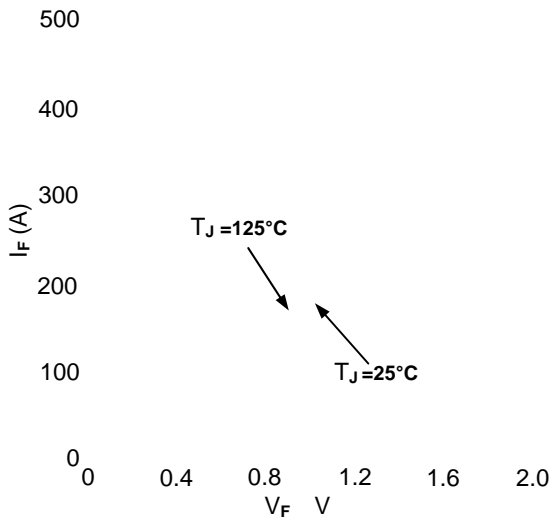


Figure1. Forward current vs.voltage drop per diode

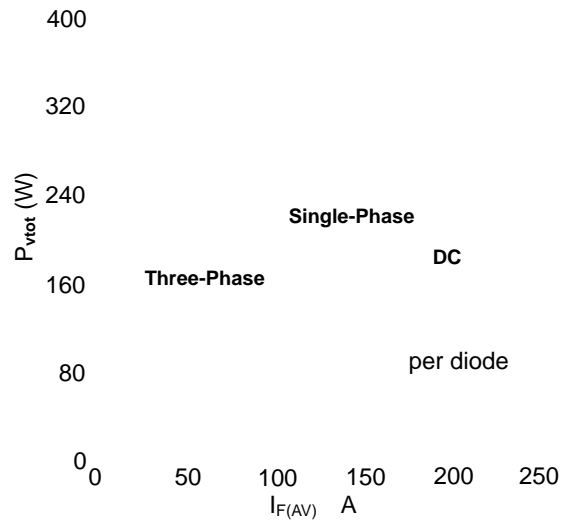


Figure2. Power dissipation vs. $I_{F(AV)}$

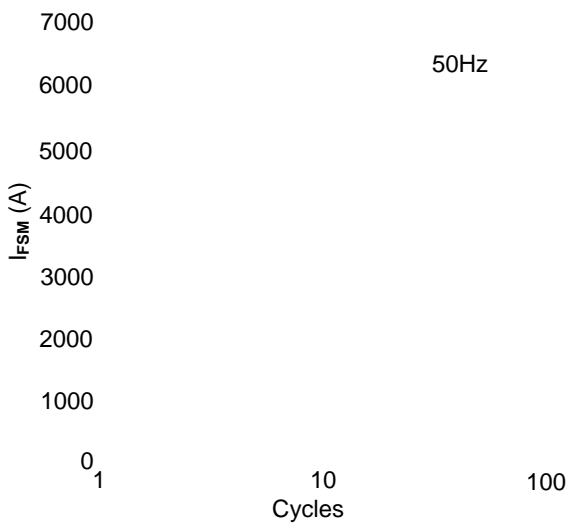


Figure3. Max Non-Repetitive Forward Surge Current

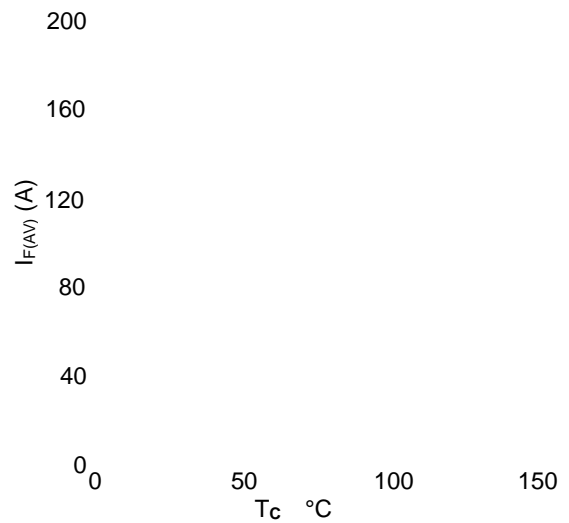


Figure4. Forward current vs. Case temperature

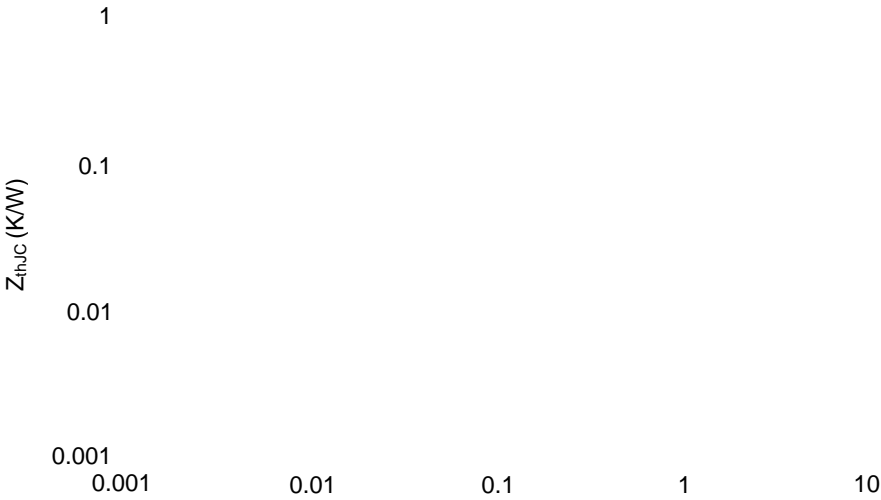


Figure5. Transient Thermal Impedance

Package Outline (Dimensions in mm)