



December 2009

PRELIMINARY

MMD180S120B

1200V 180A Rectifier Diode Module
RoHS Compliant

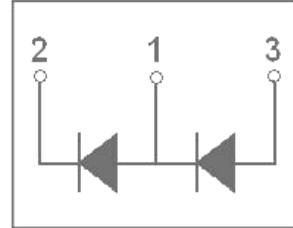
PRODUCT FEATURES

- 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
V_{RRM}	Repetitive Reverse Voltage		1200	V
$I_{F(AV)}$	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

P_D	Power Dissipation		735	W
T_J	Junction Temperature		-40 to +150	$^{\circ}\text{C}$
T_{STG}	Storage Temperature Range		-40 to +125	$^{\circ}\text{C}$
V_{isol}	Insulation Test Voltage	AC, 50Hz, $t=1\text{min}$	3000	V
Weight			161	g

ELECTRICAL AND THERMAL CHARACTERISTICS

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

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{RM}	Reverse Leakage Current	$V_R=1600\text{V}$	--	--	500	μA
		$V_R=1600\text{V}, T_J=125^{\circ}\text{C}$	--	--	10	mA
V_F	Forward Voltage	$I_F=400\text{A}$	--	1.23	1.55	V
		$I_F=400\text{A}, T_J=125^{\circ}\text{C}$	--	1.20	--	V
$R_{\theta JC}$	Thermal Resistance	Junction-to-Case	--	--	0.17	$^{\circ}\text{C}/\text{W}$

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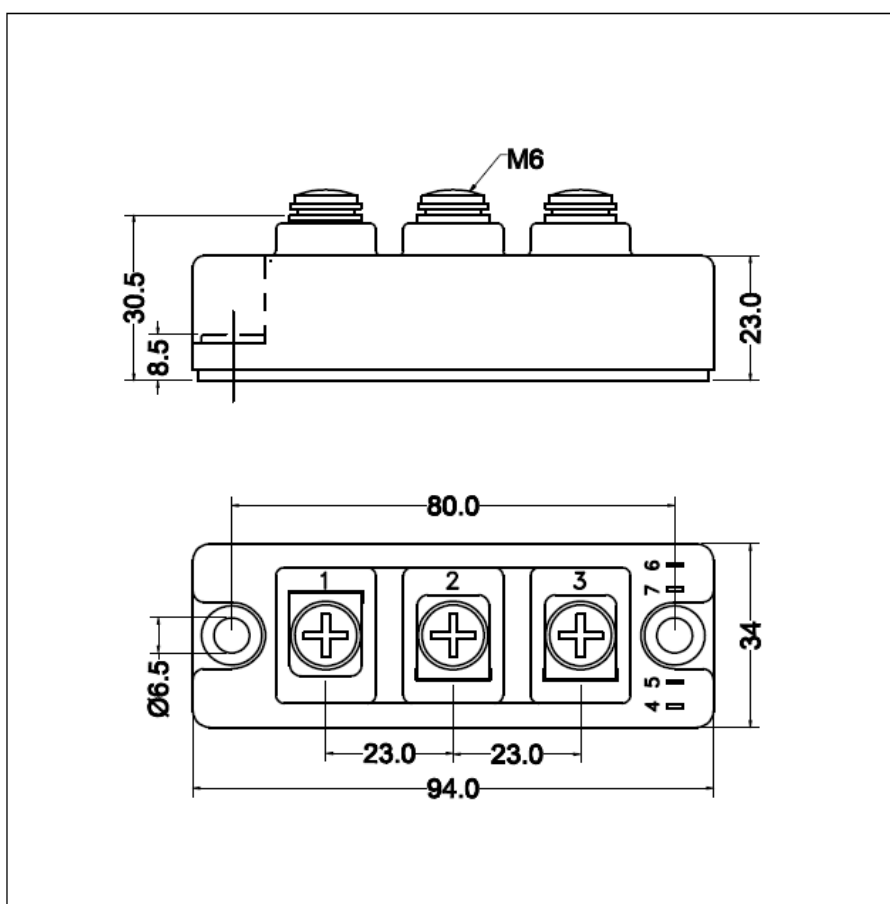
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MECHANICAL CHARACTERISTICS

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

DS Package Outline (Dimensions in mm)



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