



December 2009

PRELIMINARY

# MMD180S120DK

1200V 180A Rectifier Diode Module  
RoHS Compliant

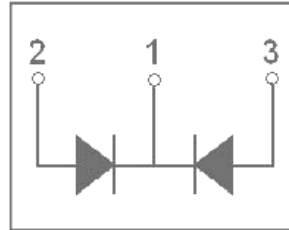
## PRODUCT FEATURES

- 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	$\mu\text{A}$
		$V_R=1600\text{V}, T_J=125^{\circ}\text{C}$	--	--	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
$R_{JC}$	Thermal Resistance	Junction-to-Case	--	--	0.17	$^{\circ}\text{C}/\text{W}$

MacMic Science & Technology Co., Ltd.

Add: #18, Hua Shan Zhong Lu, New District, Changzhou City, Jiangsu Province, P. R. of China

Tel.: +86-519-85163708 Fax: +86-519-85162291 Post Code: 213022 Website: [www.macmicst.com](http://www.macmicst.com)



# MMD180S120DK

1200V 180A Rectifier Diode Module  
RoHS Compliant

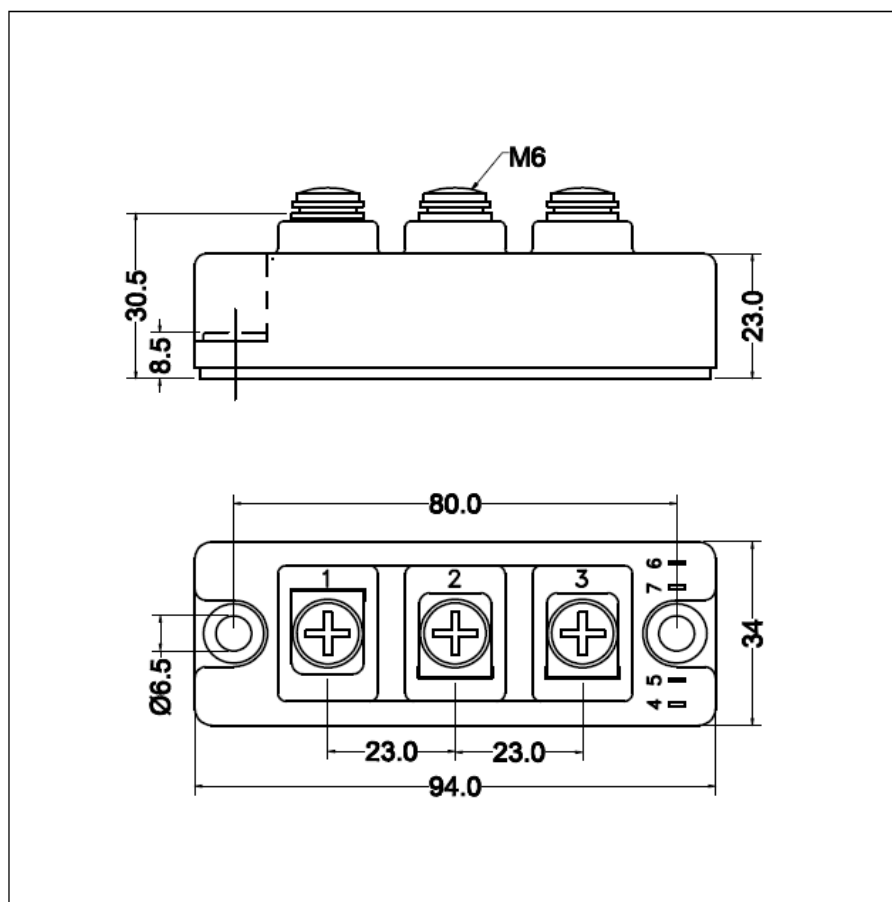
December 2009

PRELIMINARY

## 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)



MacMic Science & Technology Co., Ltd.

Add: #18, Hua Shan Zhong Lu, New District, Changzhou City, Jiangsu Province, P. R .of China

Tel.: +86-519-85163708 Fax: +86-519-85162291 Post Code: 213022 Website: [www.macmicst.com](http://www.macmicst.com)