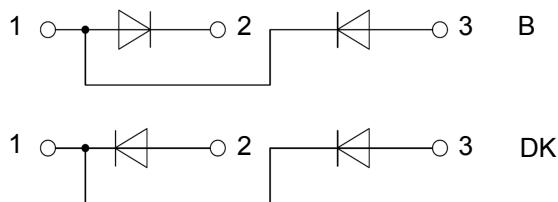


**PRODUCT FEATURES**

- Low Forward Voltage
- High Surge Current Capability
- Low Leakage Current
- Low Inductance Package

**APPLICATIONS**

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


**Module Type**

Module Type	$V_{RRM}$ Repetitive Peak Reverse Voltage	$V_{RSM}$ Non-Repetitive Peak Reverse Voltage	Unit
MMD200S180B	1800	1900	V

**ABSOLUTE MAXIMUM RATINGS( $T_c=25^\circ\text{C}$  unless otherwise specified)**

Symbol	Parameter/Test Conditions		Values	Unit
$I_{F(AV)}$	Average Forward Current	Single phase, half wave, 180° conduction, $T_c= 85^\circ\text{C}$	200	A
$I_{F(RMS)}$	R.M.S. Forward Current		310	
$I_{FSM}$	Non-Repetitive Surge Forward Current	1/2 cycle, 50HZ, peak value, $T_J = 45^\circ\text{C}$	6500	
		1/2 cycle, 60HZ, peak value, $T_J = 45^\circ\text{C}$	7000	
$I^2t$	For Fusing	1/2 cycle, 50HZ, peak value, $T_J = 45^\circ\text{C}$	211.2	KA <sup>2</sup> S
		1/2 cycle, 60HZ, peak value, $T_J = 45^\circ\text{C}$	203.3	
$P_D$	Power Dissipation		781	W
$T_J$	Junction Temperature		-40 to +150	°C
$T_{STG}$	Storage Temperature Range		-40 to +125	°C
$V_{ISO}$	Isolation Breakdown Voltage	AC, 50Hz(R.M.S), t=1minute	3000	V
Torque	Module to Sink	Recommended (M6)	3~5	Nm
Torque	Module Electrodes	Recommended (M6)	3~5	Nm
$R_{thJC}$	Junction to Case Thermal Resistance(per diode)		0.16	K/W
Weight			170	g

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# MMD200S180B

ELECTRICAL CHARACTERISTICS ( $T_C = 25^\circ\text{C}$  unless otherwise specified)

Symbol	Parameter/Test Conditions	Min.	Typ.	Max.	Unit
$I_{RM}$	Maximum Reverse Leakage Current	$V_R = V_{RRM}$		0.5	mA
				10	
$V_F$	Forward Voltage Drop	$I_F = 600\text{A}$		1.5	V
$V_{TO}$ $r_T$	For power loss calculations only , $T_J = 125^\circ\text{C}$			0.8	V
				1.0	$\text{m}\Omega$

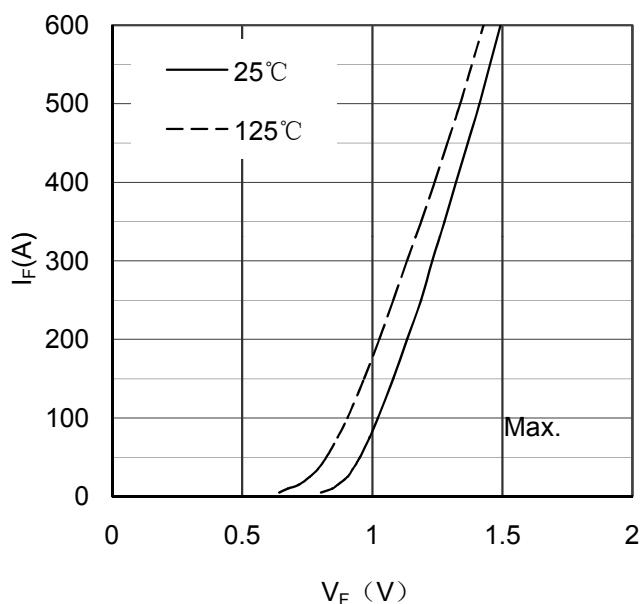


Figure 1. Forward Voltage Drop vs Forward Current

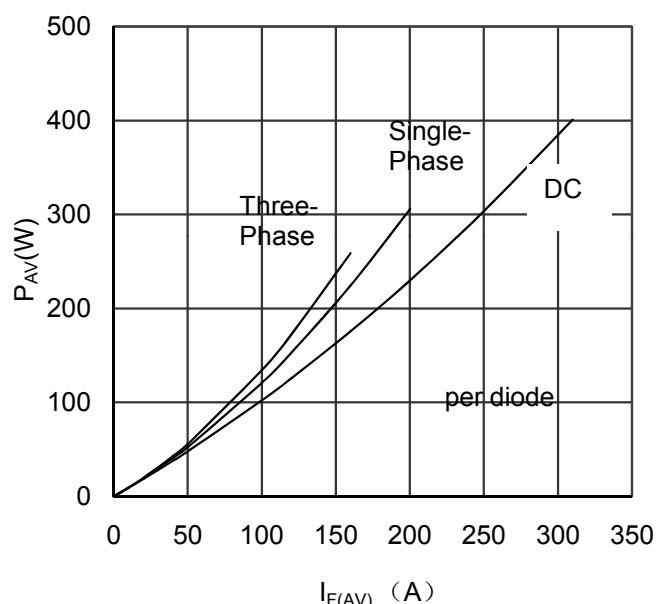


Figure 2. Power dissipation vs  $I_{F(AV)}$

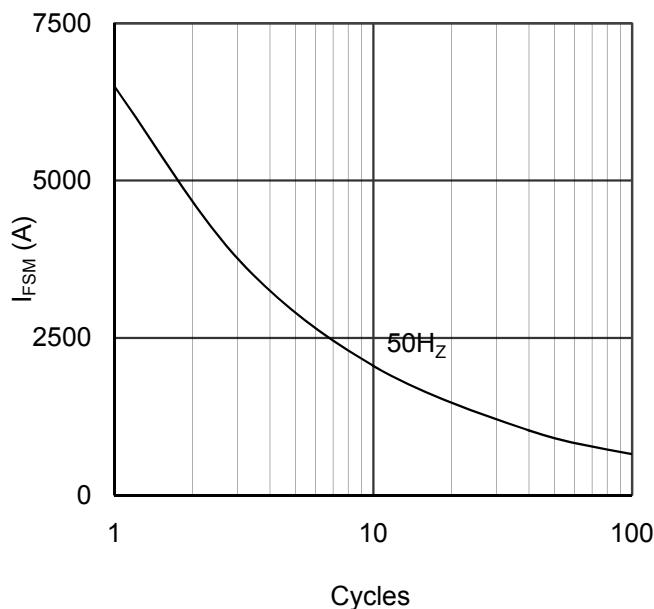


Figure 3. Max Non-Repetitive Forward Surge Current

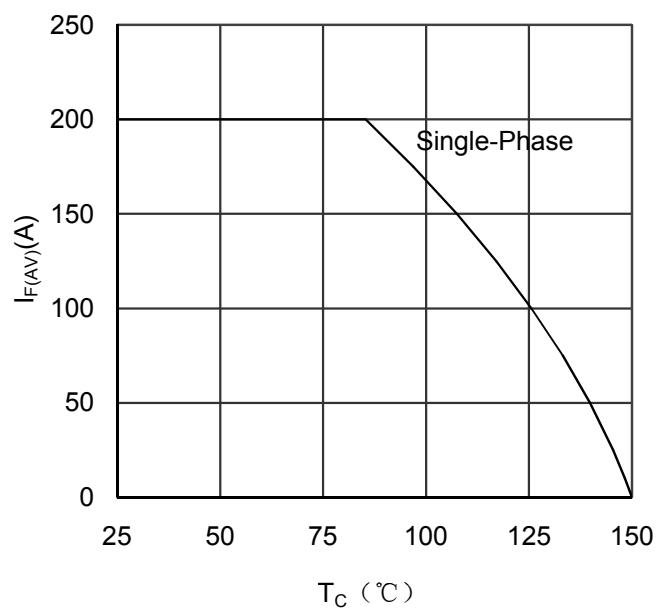
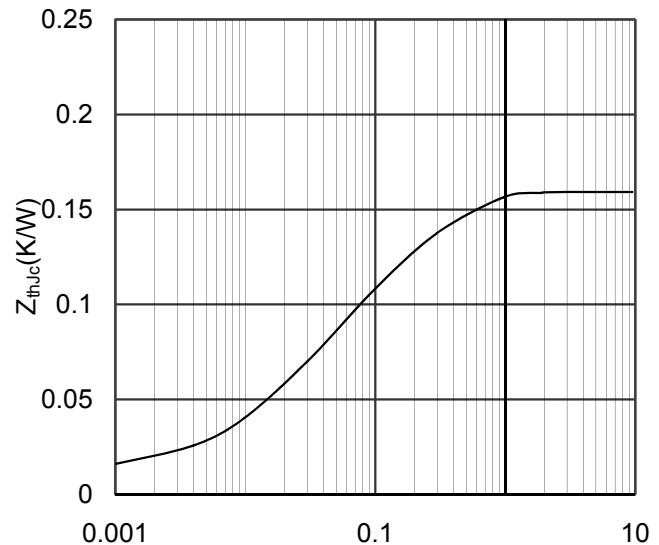
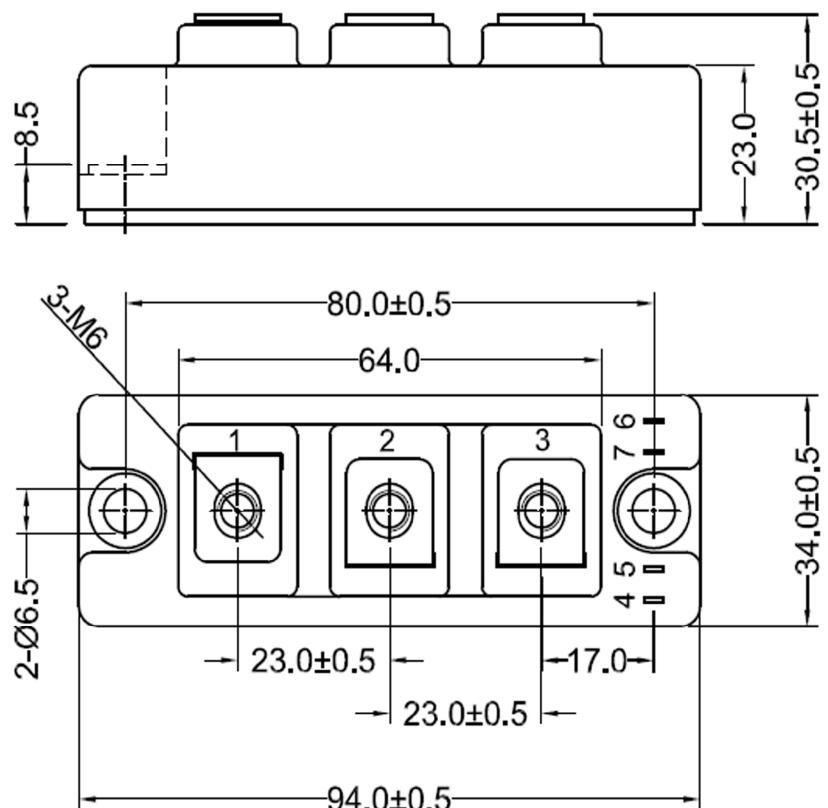


Figure 4. Average Forward Current vs Case temperature



Rectangular Pulse Duration(S)

Figure 5. Transient Thermal Impedance



Dimensions in (mm)

Figure 6. Package Outline