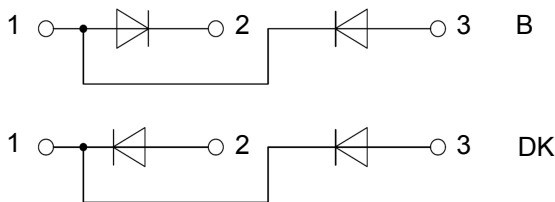


PRODUCT FEATURES

- ☐ 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		6500	
I^2t	For Fusing	1/2 cycle, 50HZ, peak value, $T_J=45^{\circ}\text{C}$	211.2	KA^2S
		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	$^{\circ}\text{C}$
T_{STG}	Storage Temperature Range		-40 to +125	$^{\circ}\text{C}$
V_{ISO}	Isolation Breakdown Voltage	AC, 50Hz(R.M.S), $t=1\text{minute}$	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

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
		$V_R = V_{RRM}, T_J = 125^{\circ}\text{C}$			10	
V_F	Forward Voltage Drop	$I_F=600\text{A}$			1.5	V
V_{TO}	For power loss calculations only, $T_J = 125^{\circ}\text{C}$				0.8	V
r_T					1.0	m Ω

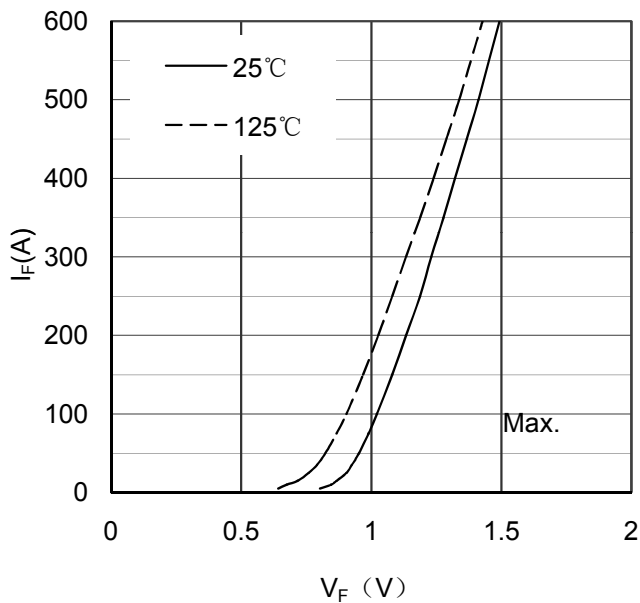


Figure 1. Forward Voltage Drop vs Forward Current

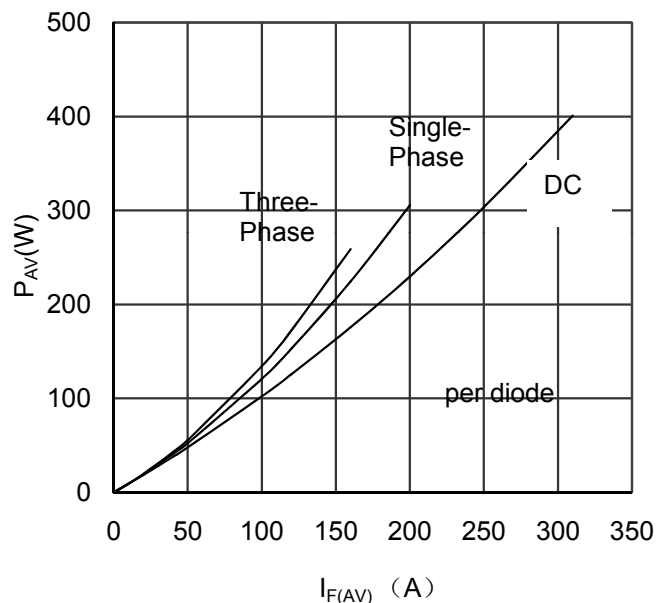


Figure 2. Power dissipation vs $I_{F(AV)}$

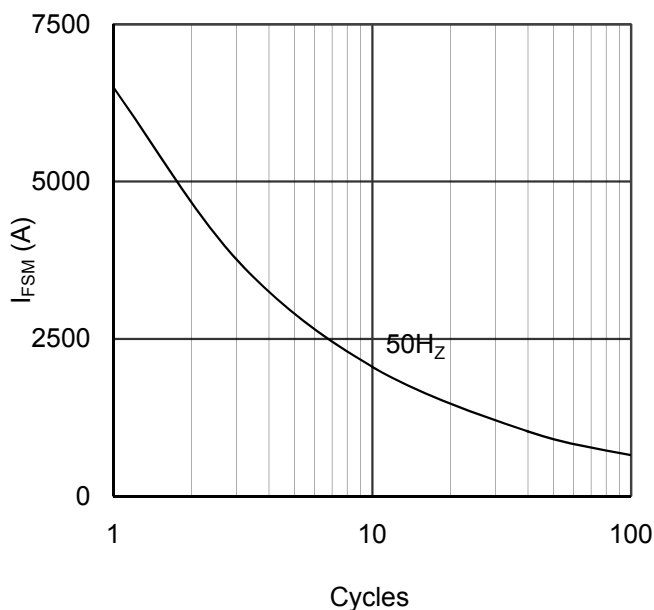


Figure 3. Max Non-Repetitive Forward Surge Current

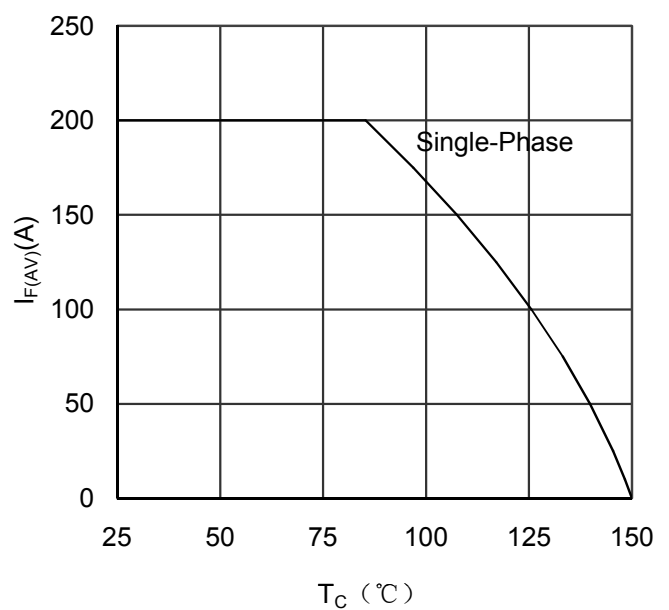
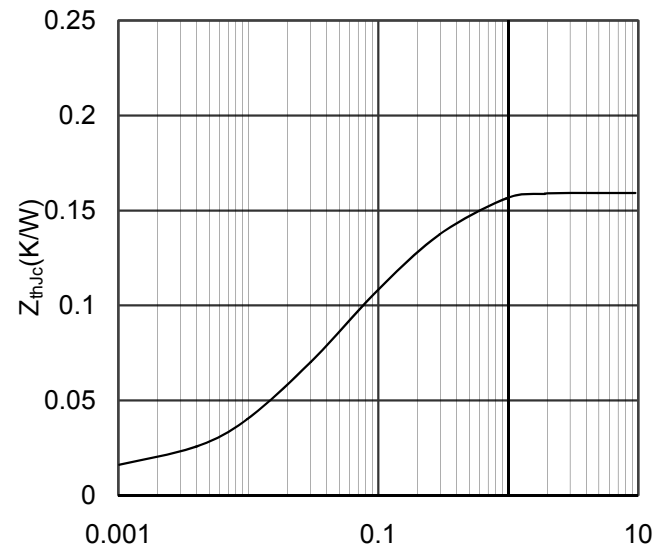
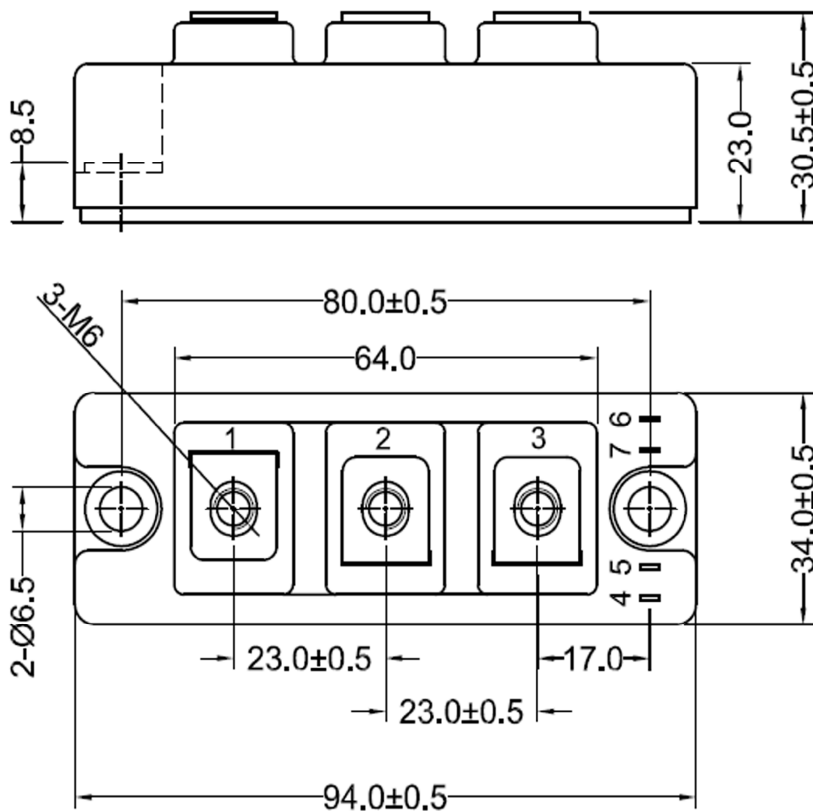


Figure 4. Average Forward Current vs Case temperature



Rectangular Pulse Duration(S)

Figure 5. Transient Thermal Impedance



Dimensions in (mm)

Figure 6. Package Outline