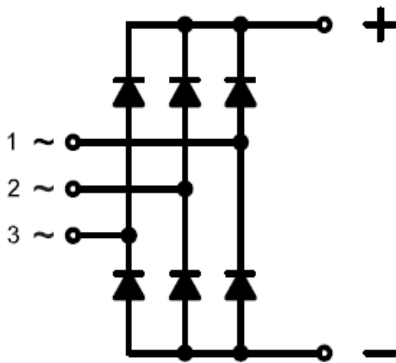


PRODUCT FEATURES

- 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
MMD150F200X	2000	2200	V

ABSOLUTE MAXIMUM RATINGS

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

Symbol	Parameter/Test Conditions		Values	Unit	
I_D	Output Current(D.C.)	Three phase, half wave, $T_C=95^{\circ}C$	150	A	
I_{FSM}	Non Repetitive Surge Forward Current	1/2 cycle, 50Hz, peak value, $T_C=45^{\circ}C$	1500		
		1/2 cycle, 60Hz, peak value, $T_C=45^{\circ}C$	1600		
I^2t	For Fusing	1/2 cycle, 50Hz, peak value, $T_C=45^{\circ}C$	11.2	KA ² S	
		1/2 cycle, 60Hz peak value, $T_C=45^{\circ}C$	10.6		
P_D	Power Dissipation		1136	W	
T_J	Junction Temperature		-40 to +150	$^{\circ}C$	
T_{STG}	Storage Temperature Range		-40 to +125	$^{\circ}C$	
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	0.63	K /W
			per module	0.11	
Weight			250	g	

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	$V_R = V_{RRM}$		1	mA
		$V_R = V_{RRM}, T_J = 125^\circ\text{C}$		10	
V_F	Forward Voltage Drop			1.45	V
V_{TO}	For power-loss calculations only, $T_J = 125^\circ\text{C}$			0.9	V
r_T				3.5	m Ω

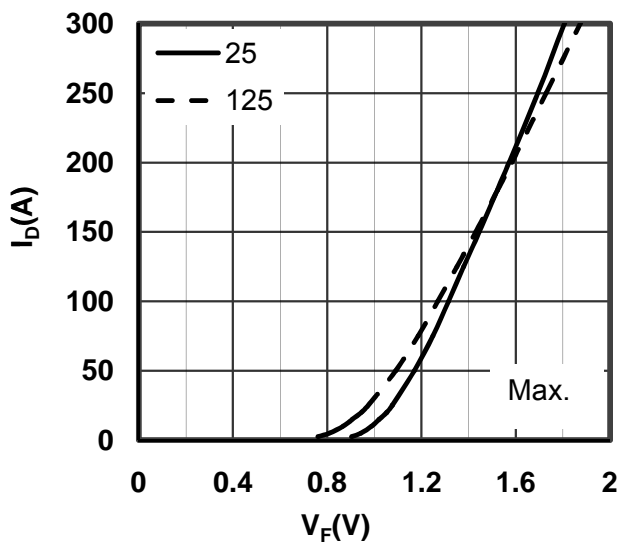


Figure 1. Forward Voltage Drop vs Output Current

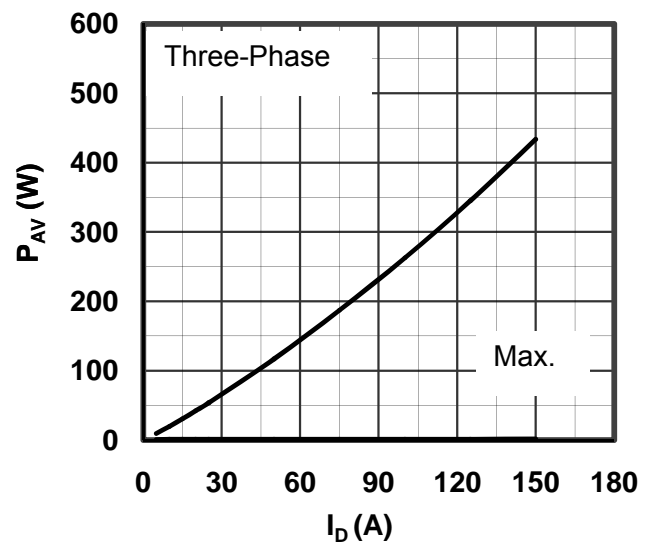


Figure 2. Power dissipation vs Output Current

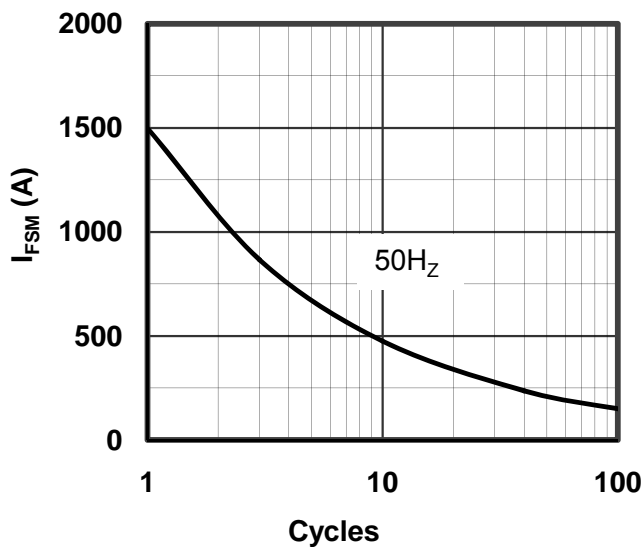


Figure 3. Max Non-Repetitive Forward Surge Current

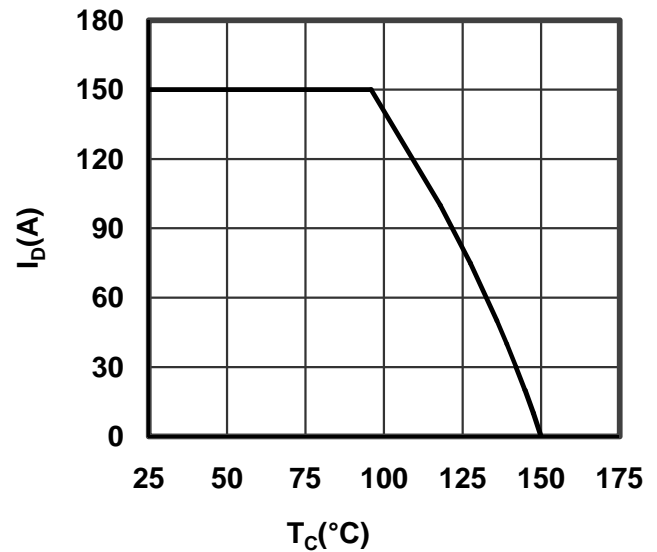


Figure 4. Output current vs Case temperature

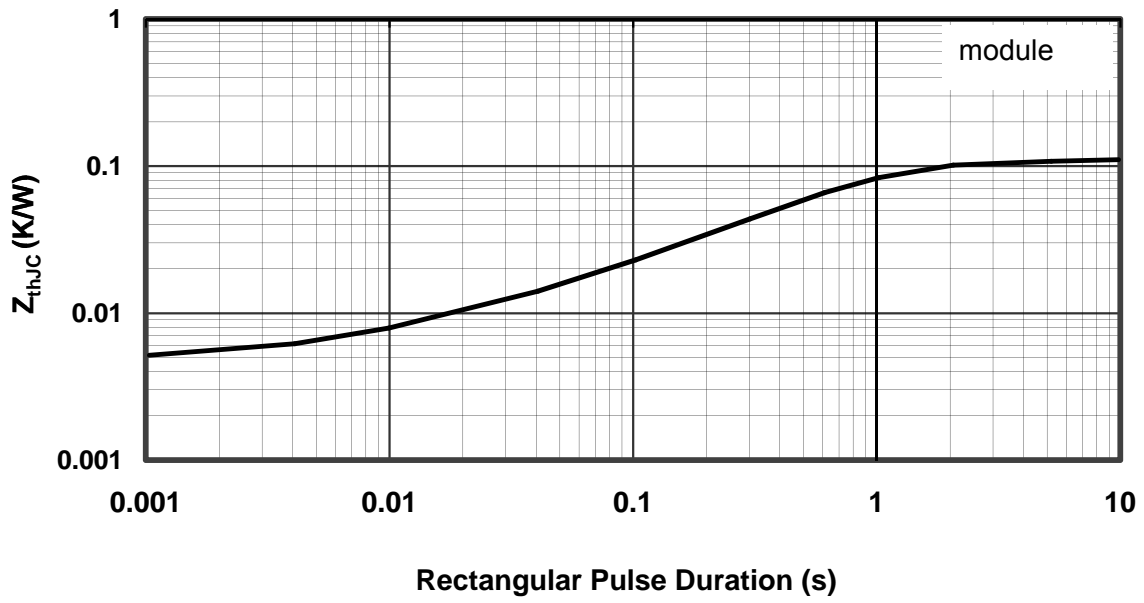
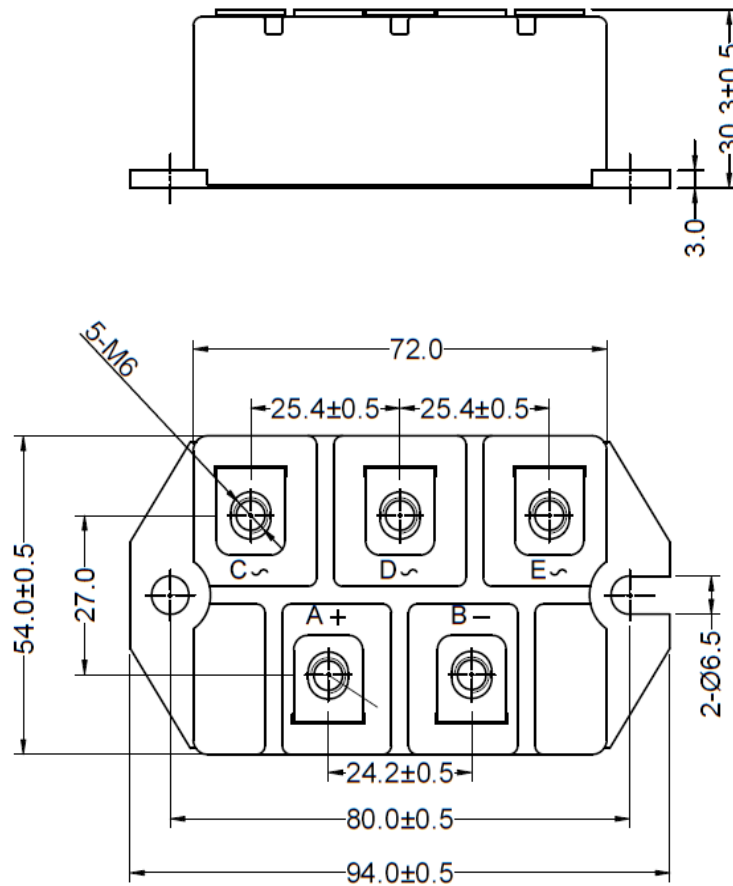


Figure 5. Transient Thermal Impedance



Dimensions in (mm)
Figure6. Package Outline