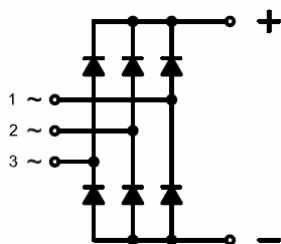


FEATURES

- 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
MMD150F120X	1200	1300	V
MMD150F140X	1400	1500	
MMD150F160X	1600	1700	
MMD150F180X	1800	1900	

ABSOLUTE MAXIMUM RATINGS

T_c=25°C unless otherwise specified

Symbol	Parameter	Test Conditions	Values	Unit
I _D	Output Current(D.C.)	Three phase, half wave, T _c = 95°C	150	A
I _{FSM}	Non-Repetitive Surge Forward Current	1/2 cycle, 50HZ, peak value T _c =45°C	1500	
		1/2 cycle, 60HZ, peak value T _c =45°C	1600	
I ² t	I ² t (For Fusing)	1/2 cycle, 50HZ, peak value T _c =45°C	11.2	KA ² s
		1/2 cycle, 60HZ, peak value T _c =45°C	10.6	KA ² s
P _D	Power Dissipation		1136	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	N.m
Torque	Module Electrodes	Recommended (M6)	3~5	N.m
R _{th (J-C)}	Junction-to-Case Thermal Resistance	Per diode	0.63	K/W
		Per module	0.11	
Weight			250	g

MMD150F

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

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{RM}	Max.Reverse Leakage Current	$V_R = V_{RRM}$			500	μA
		$V_R = V_{RRM}, T_J = 125^\circ\text{C}$			10	mA
V_F	Forward Voltage	$I_F = 150\text{A}$			1.45	V
V_{T0}	For power-loss calculations only				0.9	V
r_T	$T_J = 125^\circ\text{C}$				3.5	$\text{m}\Omega$

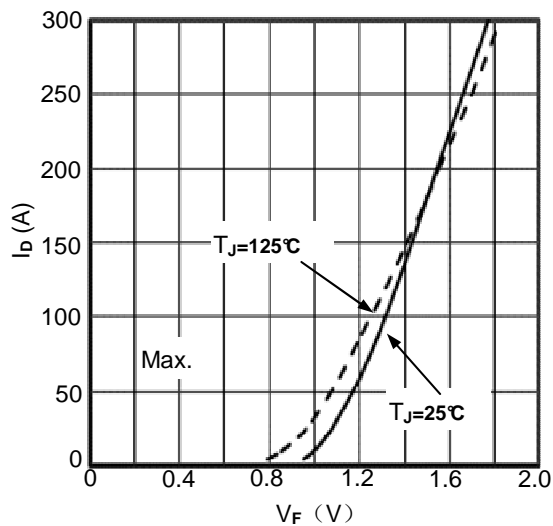


Figure1. Forward Voltage Drop vs Output Current

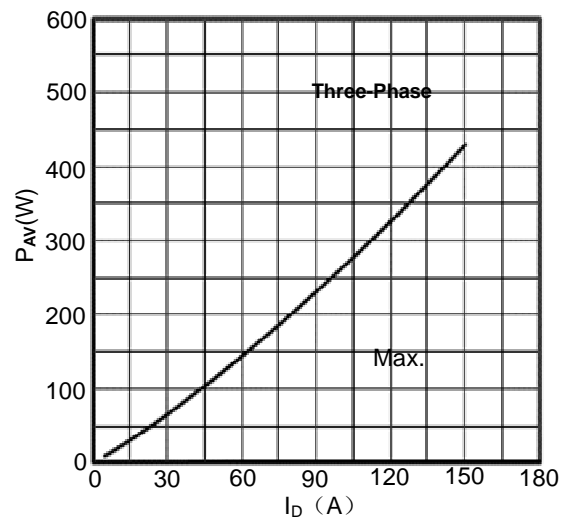


Figure2. Power dissipation vs. Output Current

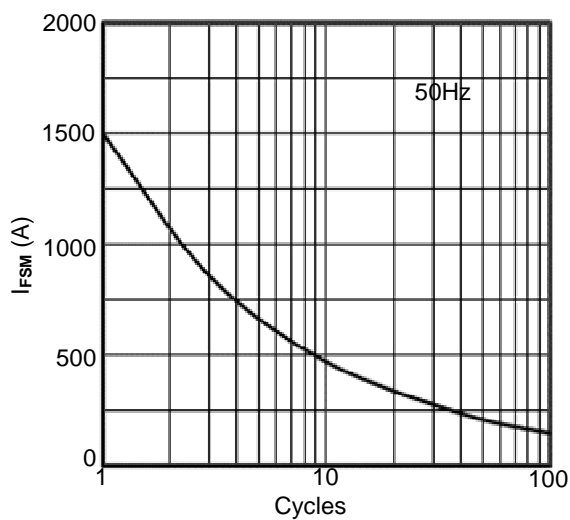


Figure3. Max Non-Repetitive Forward Surge Current

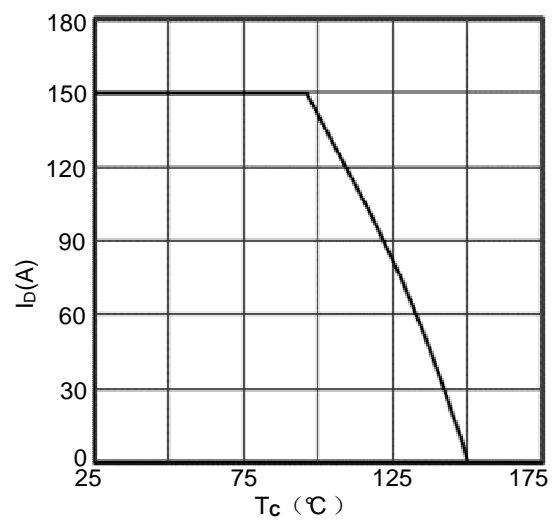
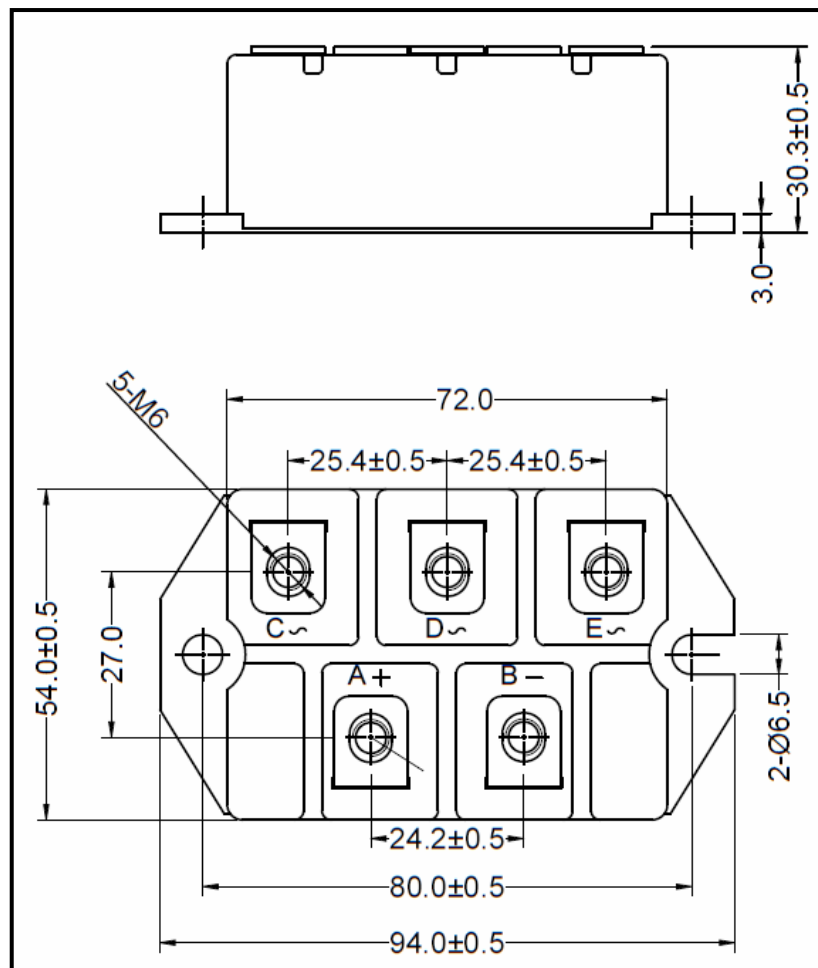
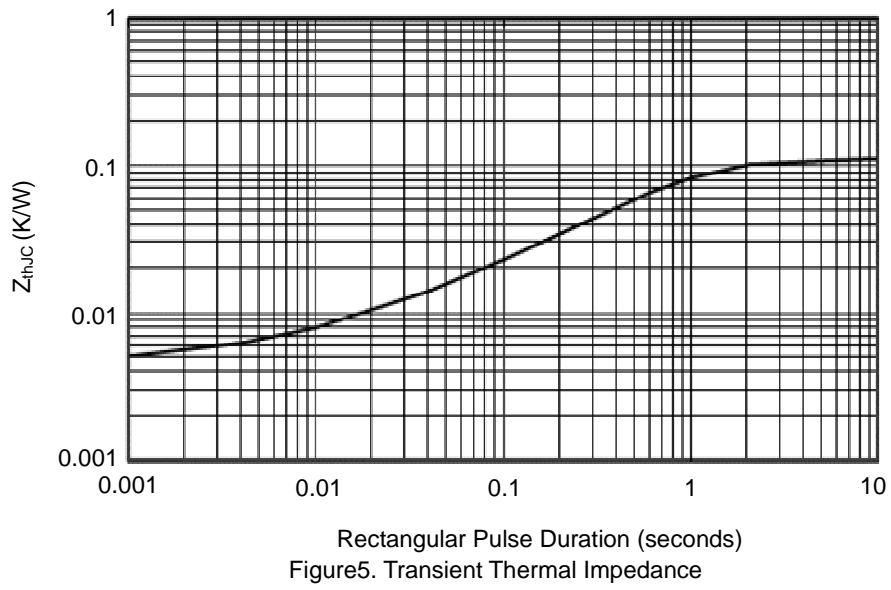


Figure4. Output Current vs. Case temperature



Dimensions in Millimeters
Figure 6. Package Outline