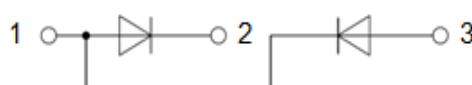


**PRODUCT FEATURES**

- 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	Circuit Diagram	$V_{RRM}$ (Repetitive Peak Reverse Voltage)	$V_{RSM}$ (Non-Repetitive Peak Reverse Voltage)	Unit
	B			
	MMD130A180B	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, $T_c = 95^\circ\text{C}$	130	A
$I_{F(RMS)}$	R.M.S. Forward Current		204	
$I_{FSM}$	Non-Repetitive Surge Forward Current	1/2 cycle, 50HZ, peak value, $T_J = 45^\circ\text{C}$	3500	
		1/2 cycle, 60HZ, peak value, $T_J = 45^\circ\text{C}$	3800	
$I^2t$	For Fusing	1/2 cycle, 50HZ, peak value, $T_J = 45^\circ\text{C}$	61.2	$\text{KA}^2\text{S}$
		1/2 cycle, 60HZ, peak value, $T_J = 45^\circ\text{C}$	60	
$P_D$	Power Dissipation		625	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=1minute	3000	V
Torque	Module to Sink	Recommended (M6)	3~5	Nm
Torque	Module Electrodes	Recommended (M5)	2.5~5	Nm
$R_{thJC}$	Junction to Case Thermal Resistance(per diode)		0.2	K/W
Weight			110	g

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# MMD130A180B

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	$I_F = 400\text{A}$			1.5	V
$V_{TO}$ $r_T$	For power loss calculations only, $T_J = 125^\circ\text{C}$				0.85	V
					1.6	$\text{m}\Omega$

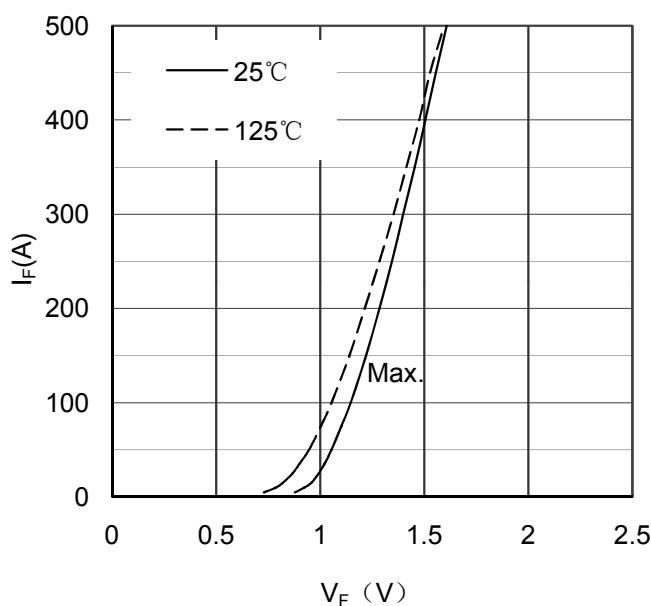


Figure 1. Forward Voltage Drop vs Forward Current

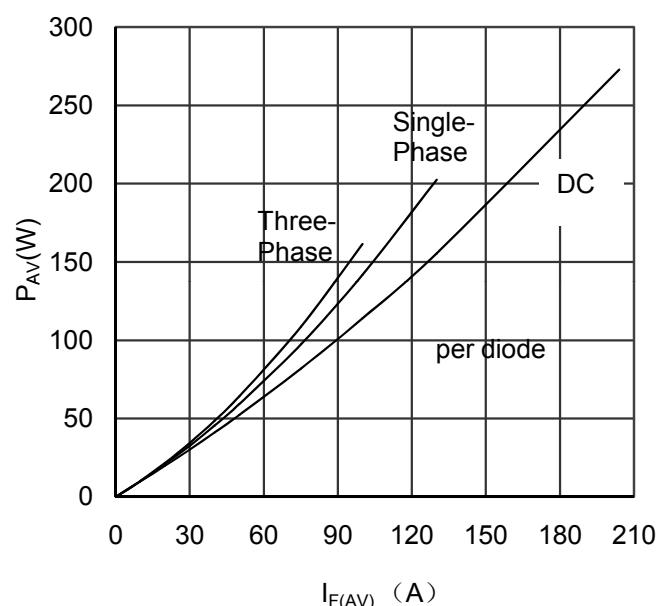


Figure 2. Power dissipation vs  $I_{F(AV)}$

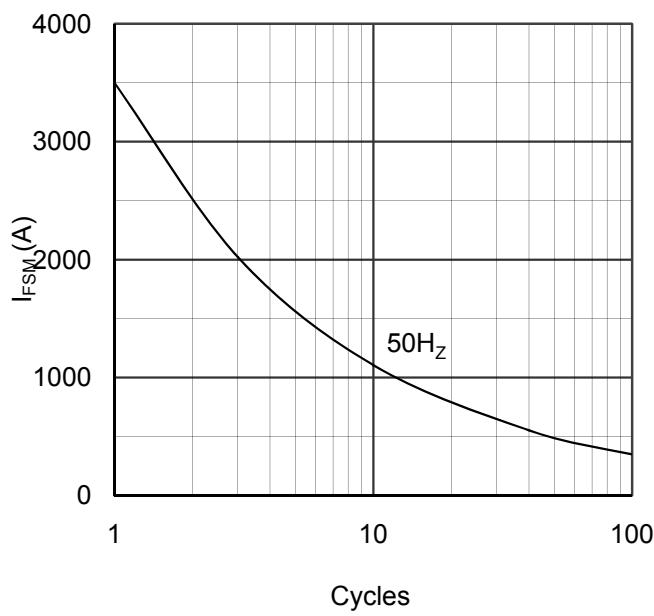


Figure 3. Max Non-Repetitive Forward Surge Current

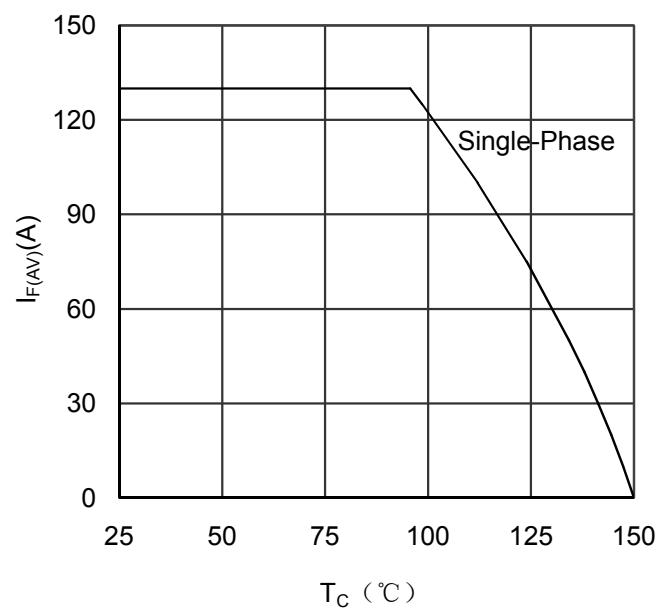
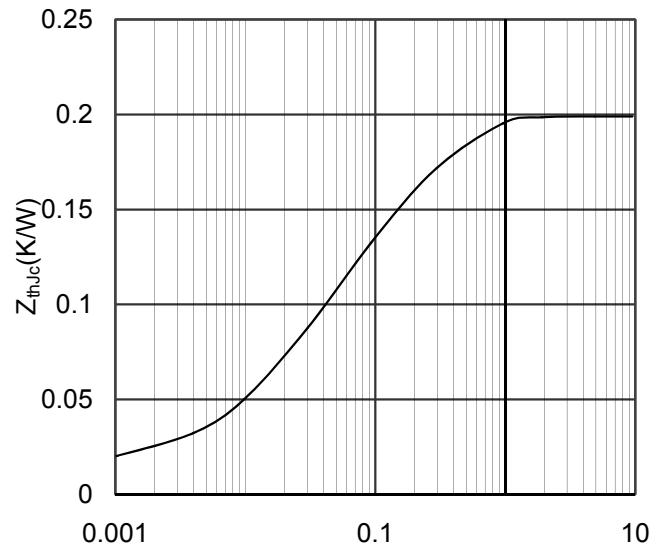
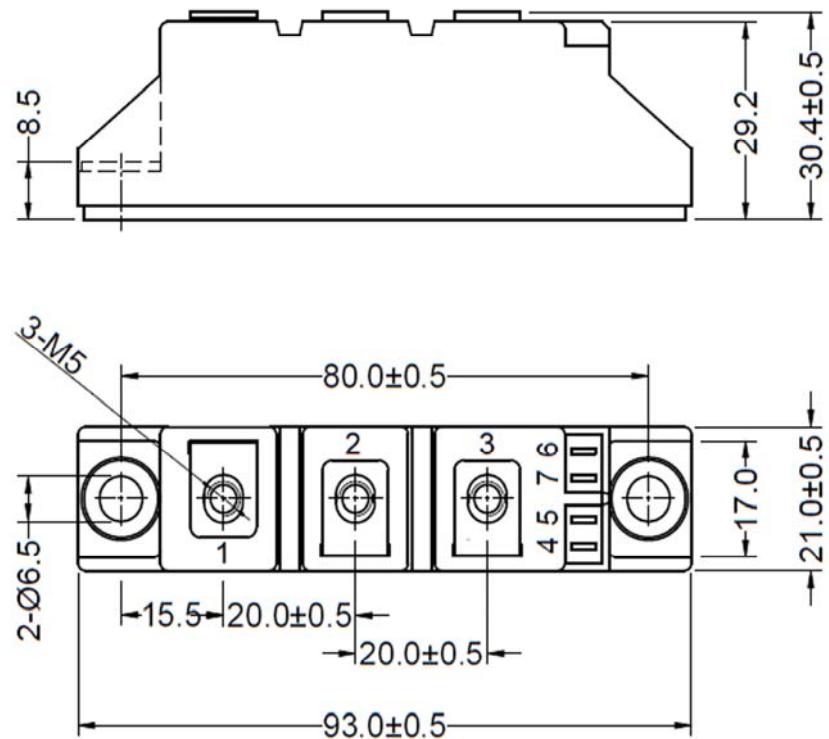


Figure 4. Average Forward Current vs Case temperature



Rectangular Pulse Duration(S)

Figure 5. Transient Thermal Impedance



Dimensions in (mm)

Figure 6. Package Outline