

**MM002-XX
 SERIES**

**600- 800 -1000 Volts
 150 Amps
 80 nsec to 5 nsec**

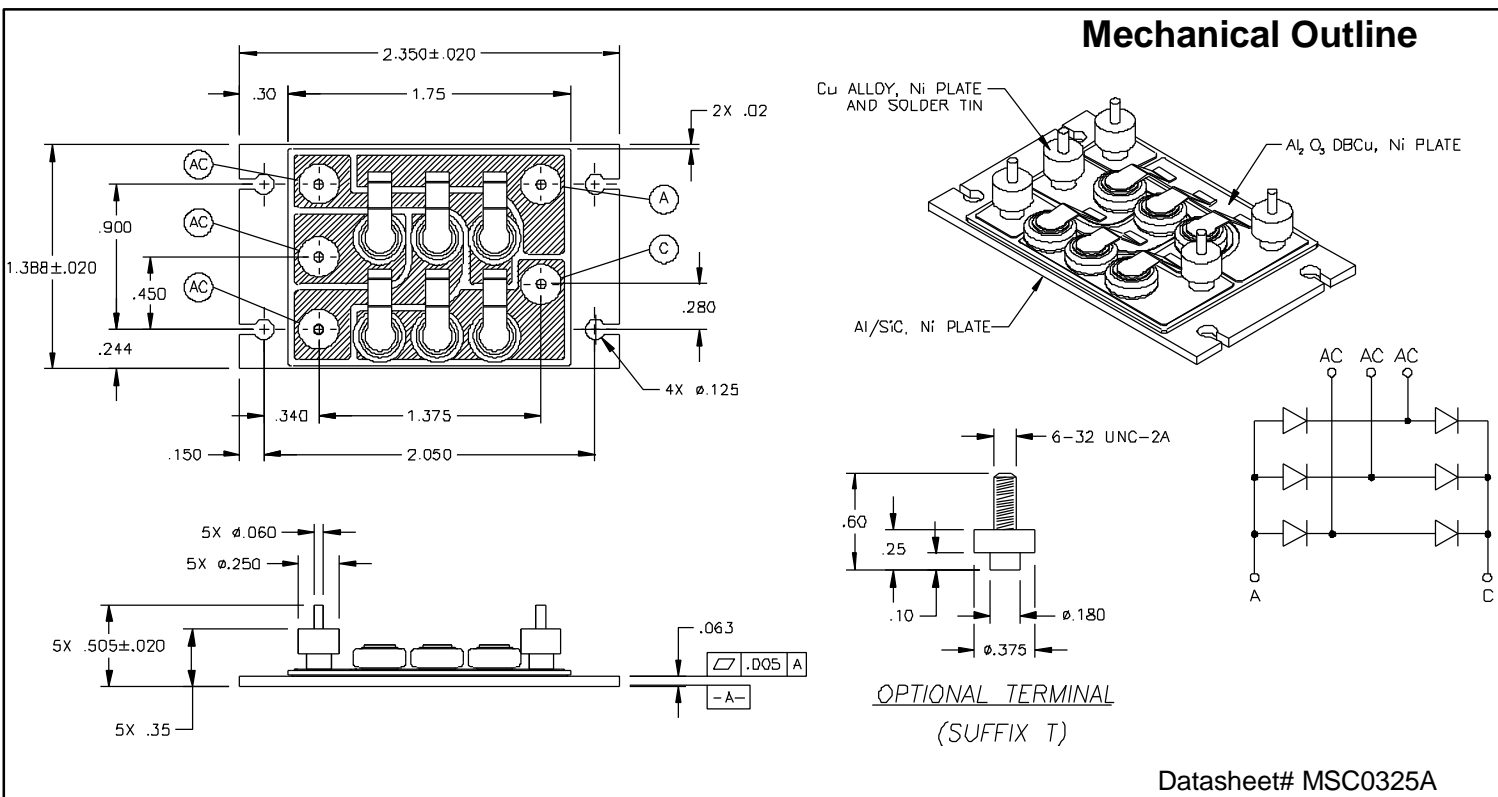
**3 PHASE DIODE
 BRIDGE**

Features

- Available in standard switching (low VF) as MM002-xx or ultrafast switching as MM002-xxU
- Compact and rugged construction offering weight and space savings
- Available with PC board solderable pins (see mechanical outline below) or threaded terminals (add "T" suffix to part number, see option below)
- HPM (Hermetic Power Module)
- Isolation voltage capability (in reference to the base) in excess of 3kV
- Very low thermal resistance
- Thermally matched construction provides excellent temperature and power cycling capability
- Additional voltage ratings or terminations available upon request

Maximum Ratings per leg @ 25°C (unless otherwise specified)

PART NUMBER	MM002-06	MM002-08	MM002-10
Peak Repetitive Reverse Voltage, V_{RRM}	600 V	800 V	1000 V
Peak Working Reverse Voltage, V_{RWM}			
DC Reverse Blocking Voltage, V_R			
Average Forward Current, I_O	50 A	50 A	50 A
Non-Repetitive Peak Surge Current, I_{FSM}	MM002-XX 200 A	350 A 175 A	350 A 175 A
Operating and Storage Junction Temperature Range	-55°C to +175°C	-55°C to +175°C	-55°C to +175°C
Thermal resistance, junction to base	per diode 1.5°C/W max 1°C/W typ. 0.3°C/W max.	per diode 1.5°C/W max 1°C/W typ. 0.3°C/W max.	per diode 1.5°C/W max 1°C/W typ. 0.3°C/W max.
	per module		



MM002-XX SERIES

Electrical Parameters per leg @ 25°C (unless otherwise specified)

DESCRIPTION		SYMBOL	CONDITIONS	MIN	TYP.	MAX	UNIT
Reverse Current,	MM002-06	I_{R1}	$V_R = 600\text{ V}$			10	μA
	MM002-08		$V_R = 800\text{ V}$			10	
	MM002-10		$V_R = 1000\text{ V}$			10	
	MM002-06U		$V_R = 600\text{ V}$			50	
	MM002-08U		$V_R = 800\text{ V}$			50	
	MM002-10U		$V_R = 1000\text{ V}$			50	
Reverse Current,	MM002-06	I_{R2}	$V_R = 600\text{ V}, T_A = 100\text{ }^\circ\text{C}$			5	mA
	MM002-08		$V_R = 800\text{ V}, T_A = 100\text{ }^\circ\text{C}$			5	
	MM002-10		$V_R = 1000\text{ V}, T_A = 100\text{ }^\circ\text{C}$			5	
	MM002-06U		$V_R = 600\text{ V}, T_A = 100\text{ }^\circ\text{C}$			5	
	MM002-08U		$V_R = 800\text{ V}, T_A = 100\text{ }^\circ\text{C}$			5	
	MM002-10U		$V_R = 1000\text{ V}, T_A = 100\text{ }^\circ\text{C}$			5	
Forward Voltage,	MM002-06	V_{F1}	$I_F = 5\text{ A}$			0.95	V
	MM002-08			0.95			
	MM002-10			1.0			
	MM002-06U			1.0			
	MM002-08U			1.0			
	MM002-10U			1.25			
Forward Voltage,	MM002-06	V_{F2}	$I_F = 50\text{ A}$			1.5	V
	MM002-08			1.5			
	MM002-10			2.1			
	MM002-06U			1.7			
	MM002-08U			1.7			
	MM002-10U			3			
Forward Voltage,	MM002-06	V_{F3}	$I_F = 5\text{ A}, T_A = -55\text{ }^\circ\text{C}$			1.05	V
	MM002-08			1.05			
	MM002-10			1.1			
	MM002-06U			1.1			
	MM002-08U			1.1			
	MM002-10U			1.35			
Reverse Recovery Time	MM002-06	t_{rr}	$I_F = 0.5\text{ A}; I_R = 1\text{ A};$ $I_{R(rec)} = 0.25\text{ A}$			5	μsec
	MM002-08			5			
	MM002-10			5			
	MM002-06U			60	nsec		
	MM002-08U			60			
	MM002-10U			80			
Junction Capacitance	MM002-06	C_j	$V_R = 10\text{ Vdc}; f = 1\text{ MHz};$ $V_{sig} = 50\text{ mV(pp)}, \text{max}$			550	pF
	MM002-08			550			
	MM002-10			250			
	MM002-06U			550			
	MM002-08U			550			
	MM002-10U			250			

Notes

(1) Pulse test, $t \leq 300\text{ ns}$, duty cycle $\leq 2\%$