

**MM002-XX  
 SERIES**

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

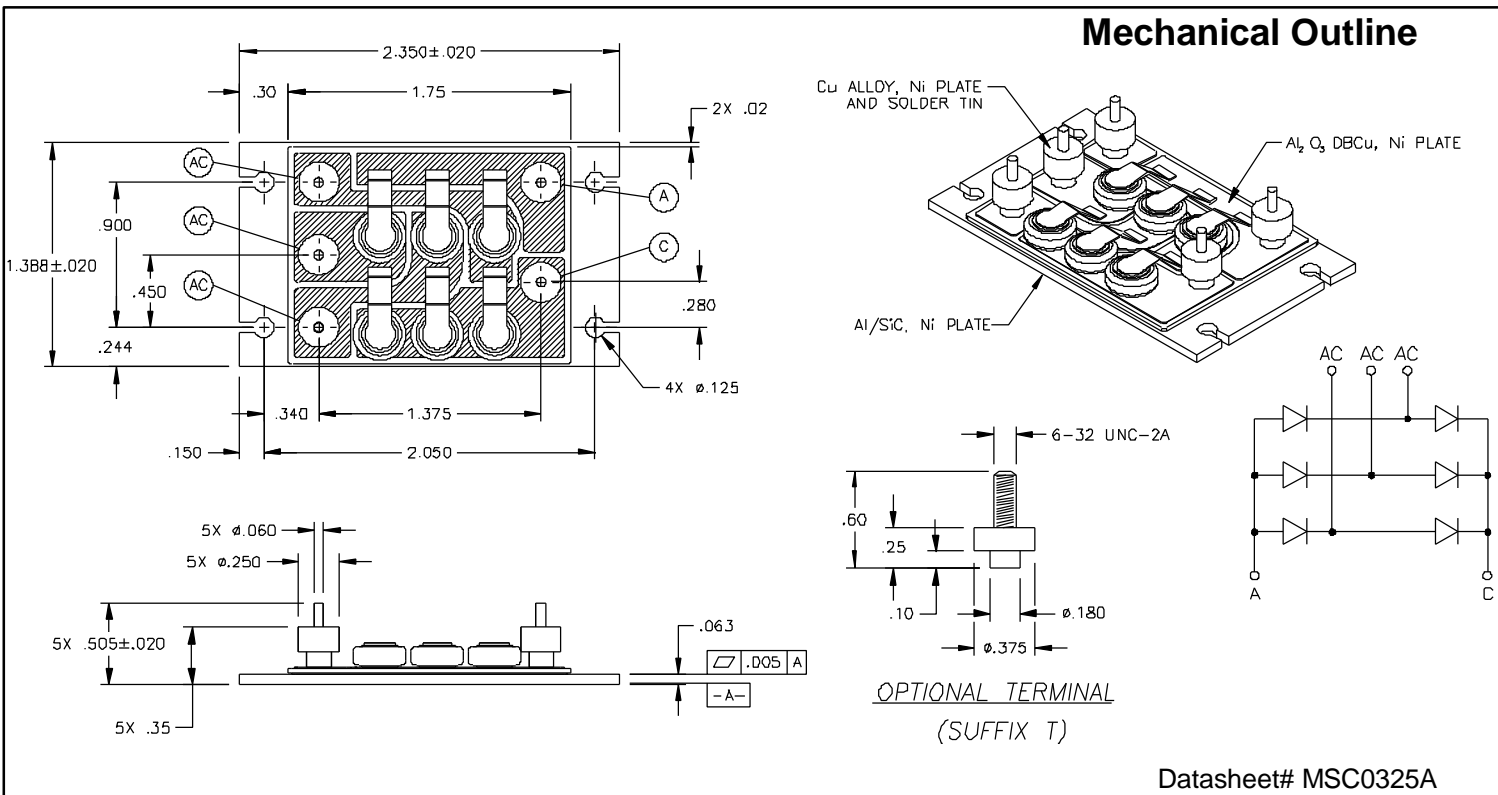
**3 PHASE DIODE  
 BRIDGE**

**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 MM002-XXU 350 A 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	$\mu\text{A}$	
	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	$\mu\text{sec}$	
	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  $\leq 2\%$