



SPECIFICATION

For

SWITCHING POWER SUPPLY

M/N: MPD-807H

Revision History

REV.	Mar. 28 th 2011	Updated safety approvals status.
REV.	Aug. 23 rd 2013	Add note at input voltage 9V “ Note: start up voltage is from 9.1VDC to 32VDC at rated load.”



FEATURES

- Wide range DC input 9-32V
- 100W with 8.6CFM forced air- cooling, 70W convection cooling
- Compact size with ATX output
- Power Good / Power Fail Signal
- +5V Stand by & Remote On/Off
- MTBF>130,000 hr. MIL-217F.

1. Description

MPD-807H is a compact size, DC / DC power supply with ATX output. The device utilizes a thermally efficient U channel chassis design. Designed to be convection cooling and could reach higher wattage with forced air-cooling.

Output Voltage	Min. Output Current	Rated Output Current	Max output Current ^(Note 1)	Line Regulation	Load Regulation	Ripple & Noise p-p ^(Note 2)	Initial Setting Accuracy
+5V	0.5A	5A	8A	1%	2%	50mV	5.08V to 5.13V
+12V	0A	1.75A	3A	1%	4%	120mV	11.4V to 12.6V
-12V	0A	0.5A		1%	5%	120mV	-11.4V to -12.6V
+3.3V	0A	4A	6A	1%	2%	50mV	3.10V to 3.50V
+5Vsb	0A	0.75A		1%	2%	120mV	4.80V to 5.20V

Total Output Power: 100W at 50°C environment temperature ^(Note 3).

Note: 1) The maximum total combined output power on the +3.3V and +5V rails is 40W.

2) Measured by a 20MHz bandwidth limited oscilloscope and the each output is connected with a 10µF Electrolytic Capacitor and a 0.1µF Ceramic Capacitor.

3)	Convection cooling		With 8.6CFM forced air-cooling	
	Input voltage	Output wattage	Input voltage	Output wattage
	9Vdc	60W	9Vdc	80W
	10-11Vdc	65W	10-11Vdc	90W
	12-32Vdc	70W	12-32Vdc	100W

2. Input Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Input Voltage	Continuous input range.	9 ^(note)	12/24	32	VDC
Hold Up Time	Nominal DC Input Voltage, rated load.	3			ms
Input Current	Nominal DC Input Voltage, rated load.			15	A
Inrush Current	Nominal DC Input Voltage, one cycle at 25°C.			30	A
Input Protect	Non-user serviceable internally located DC input line fuse.				

Note: Start up voltage is from 9.1VDC to 32VDC at rated load.

3. Output Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Efficiency	Nominal DC Input Voltage, rated load.		80		%
Minimum load					See Chart of Description
Ripple & Noise	Rated load, 20MHz bandwidth				See Chart of Description
Output Power	Continuous output power.				See Chart of Description
Line Regulation	Less than ±1% at rated load with ±10% changing in input voltage.				See Chart of Description
Load Regulation	Measured from 60% to 100% rated load and from 60% to 20% rated load (60% ±40% rated load).				See Chart of Description
Turn-on Delay	Time required for initial output voltage stabilization	0.3		4	Sec



4. Interface Signals and Internal Protection

Parameter	Conditions/Description
Power On/Off	The power supply will be turned on when the power On/Off pin is connected to secondary GND.
Power Good Signal	When power is turned on, the power good signal will go high 100ms to 500ms after all output DC voltages are within regulation limits.
Power Fail Signal	The power fail signal will go low at least 1 mS before any of the output voltages fall below the regulation limits.
Over Load Protection	Fully protected against output overload and short circuit. Automatic recovery upon of overload condition.
Over Voltage Protection	The build-in over voltage protection circuit will shut down the outputs to prevent damaging external circuits. The trigger point is about 5.8-6.8V at +5V. If the OVP occur, PSU will into latch off model.

5. Safety Approvals, EMI and EMS Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Safety Approvals	EN 60950-1: 2006+A1: 2009	CE (LVD) approved			
Hi-Pot	Input to output	500			VDC
Radiation	EN 55022 / CISPR 22 & FCC Part 15	B			Class
Conduction	EN 55022 / CISPR 22 & FCC Part 15	B			
EMS	IEC 61000-4-2, 8KV air discharge and 6KV contact discharge	3			Level
	IEC 61000-4-3, 3V/M	3			
	IEC 61000-4-4, 2KV line & PE	3			
	IEC 61000-4-5, ± 0.5 KV, Line to earth & Line to Line	1			
	IEC 61000-4-6, 10V	3			

6. Environment Specification

Parameter	Conditions/Description	Min.	Nom.	Max.	Units
Operating Temperature	Derate linearly above 50°C by 2.5% per °C At 100% load: to a maximum temperature of 70°C	0		50	°C
				At 50% load:	
Storage Temperature		-40		+70	°C
Relative Humidity	Non-condensing.	5		95	%RH
Altitude	Operating			10K	Feet
	Non-operating			40K	

7. Mechanical Specification

Parameter	Conditions/Description	
Dimension	128 x 81 x 40 mm, Tolerance +/- 0.4mm.	
Connector	CN1 --- DC input: 3 pin terminal block	
	CN2 --- DC output: Molex 5273-12A or equivalent.	
	CN3 --- DC output: Molex 5045-03A.	
Pin Assignment	CN1 Pin 1. Positive 2. Negative	
	CN2 Pin 1. 3.3V 4. GND 7. +5V 10. PG/PF	
		2. 3.3V 5. GND 8. +5V 11. +12V
		3. GND 6. GND 9. +5V 12. -12V
	CN3 Pin 1. +5Vsb 2. GND 3. PS on/off	

8. Options

Parameter	Conditions/Description
Cable (No. 866-806H)	ATX connector, HDD connector x 2, FDD connector x 1



Dimension

