

MPM-08MB Series

Single & Dual Output, 8W Miniature "Power Brick" AC/DC Power Supplies



Key Features:

- 8W Output Power
- Miniature Case
- Wide 90-305 VAC Input
- EN 60950 Approved (UL)
- Meets IEC Safety Class II
- Meets EN 55022 B
- Eight Standard Models
- >350 kHour MTBF



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Electrical Specifications

Specifications typical @ +25°C, 230 VAC input voltage & rated output current, unless otherwise noted. Specifications subject to change without notice.

Input						
Parameter	Conditions	Min.	Typ.	Max.	Units	
Input Voltage Range		90		305	VAC	
		120		430	VDC	
Input Frequency		47		440	Hz	
Input Current	See Model Selection Guide					
Inrush Current	115 VAC		25.0		A Pk	
	230 VAC		45.0			
Leakage Current				0.25	mA	
EMI	Meets CISPR Pub. 22/FCC Class B					
EMC	Meets EN 55024					
Output						
Parameter	Conditions	Min.	Typ.	Max.	Units	
Output Voltage	See Model Selection Guide					
Output Current	See Model Selection Guide					
Output Voltage Accuracy	See Note 1		±2.0		%	
Line Regulation, See Note 2	V _{IN} = Min to Max		±0.2		%	
Load Regulation, See Note 3	See Model Selection Guide					
Ripple (20 MHz), See Note 4	3.3, 5, 9 12, 15 Vout Models			100	mV P - P	
	24 Vout Models			150		
	Dual Output Models			100		
Noise	3.3, 5, 9 12, 15 Vout Models			150	mV P - P	
	24 Vout Models			200		
	Dual Output Models			150		
Hold-Up Time	115 VAC		10		mSec	
	230 VAC		75			
Temperature Coefficient			±0.02		% / °C	
Over Voltage Protection	Zener Diode Clamp		120		% of Vo	
Short Circuit Protection, See Note 5	Continuous (Autorecovery)					
Overload Protection		115	150		% of Io	
General						
Parameter	Conditions	Min.	Typ.	Max.	Units	
Isolation Voltage	Input to Output	3,000			VAC	
Isolation Resistance	500 VDC	100			MΩ	
EMI/RFI	Conducted	EN 55022 Level B				
EMC Compliance	Electrostatic Discharge (ESD)	EN 61000-4-2 Level B				
	RF Field Susceptibility	EN 61000-4-3				
	Electrical Fast Transients/Bursts On Mains	EN 61000-4-4 Level 3 2 kV				
	Surge	EN 61000-4-5 Level 3 1kV/2 kV				
Switching Frequency			132		kHz	
Environmental						
Parameter	Conditions	Min.	Typ.	Max.	Units	
Operating Temperature Range, Ambient	5.0/3.3 Vout Model	-25	+25	+70	°C	
	All Other Models	-40	+25	+70		
Storage Temperature Range		-40		+125	°C	
Cooling	Free Air Convection (See Derating Curves)					
Humidity	RH, Non-condensing			95	%	
Physical						
Case Size	1.44 x 1.06 x 1.04 Inches (36.5 x 27.0 x 26.4 mm)					
Case Material	Non-Conductive Plastic & Fiberglass (UL94-V0)					
Weight	1.58 Oz (45g)					
Reliability Specifications						
Parameter	Conditions	Min.	Typ.	Max.	Units	
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	350			kHours	
Vibration	10~55 Hz, 20G 1 min/1 Cycle. Period of 3 min each along X, Y & Z Axis					
Safety Approvals	UL, cUL; File No. E245422					
Safety Class	IEC 61140 Class II					

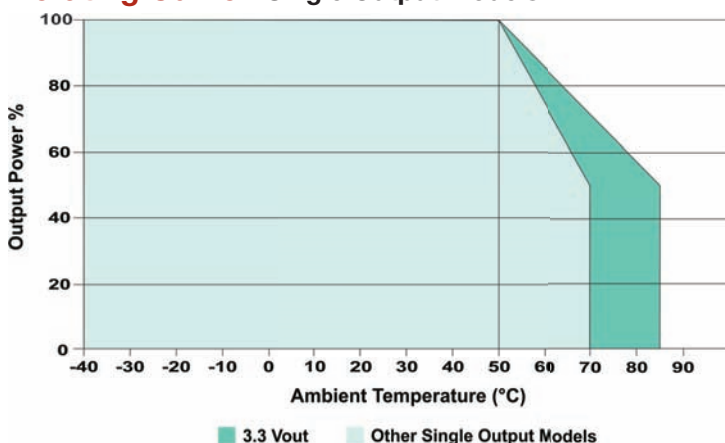
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Model Number	Input		Output			Load Regulation (% Max)	Maximum Capacitive Load (μF)	Maximum Output Power (W)	Efficiency (% Typ)
	Current (A)		Voltage (VDC)	Current					
	115 VAC	230 VAC		Max. (A)	Min. (%)				
MPM-08S-03MB	0.190	0.120	3.3	2.000	0.0	±3.0	26,000	6.60	72
MPM-08S-05MB	0.190	0.120	5.0	1.600	0.0	±2.0	6,000	8.00	78
MPM-08S-09MB	0.190	0.120	9.0	0.888	0.0	±0.5	2,300	8.00	79
MPM-08S-12MB	0.190	0.120	12.0	0.666	0.0	±0.5	1,050	8.00	79
MPM-08S-15MB	0.190	0.120	15.0	0.533	0.0	±0.5	440	8.00	80
MPM-08S-24MB	0.190	0.120	24.0	0.335	0.0	±0.5	180	8.00	81
MPM-08D-0503MB	0.200	0.125	5.0	1.600	25.0	±0.5	4,500	9.00	76
			3.3	0.310	25.0	±5.0	3,800		
MPM-08D-1205MB	0.200	0.125	12.0	0.666	25.0	±0.5	260	8.50	79
			5.0	0.100	25.0	±5.0	3,800		

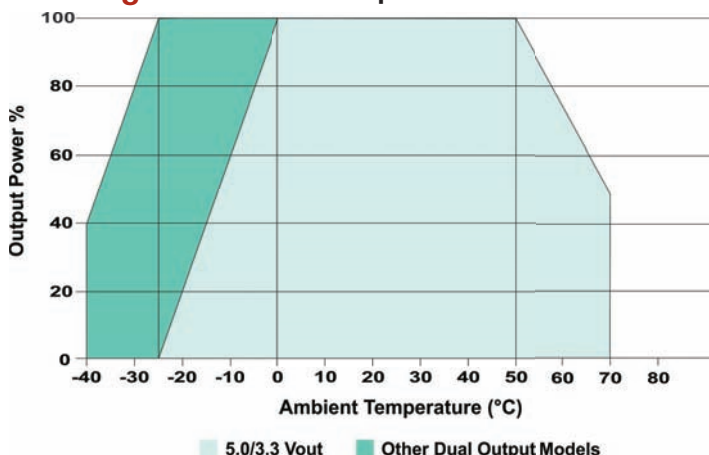
Notes:

- The output voltage accuracy of the V₂ output (pin 5) on dual outputs is $\pm 15\%$ for the **MPM-08D-0503MB**, and $\pm 10\%$ for the **MPM-08D-1205MB**.
- The line regulation of the dual output models is $\pm 2.0\%$ for the V₁ output (pin 4), and $\pm 3\%$ for the V₂ output (pin 5).
- Load regulation is measured from 10% load to 100% load.
- Ripple and noise are measured at 20 Mhz bandwidth with a 0.1 μ F and a 47 μ F capacitor connected in parallel as close to the unit output terminals as possible.
- Output short circuit protection is provided by a "hiccup mode" circuit. The unit recovers automatically when the fault condition is removed.
- Operation under no load conditions will not damage single output units. For dual output units, minimum load requirements are given in the table above.
- It is recommended that a fuse be used on the input of a power supply for protection. For the **MPM-08MB** series, a 2A/250 VAC slow blow should be used.

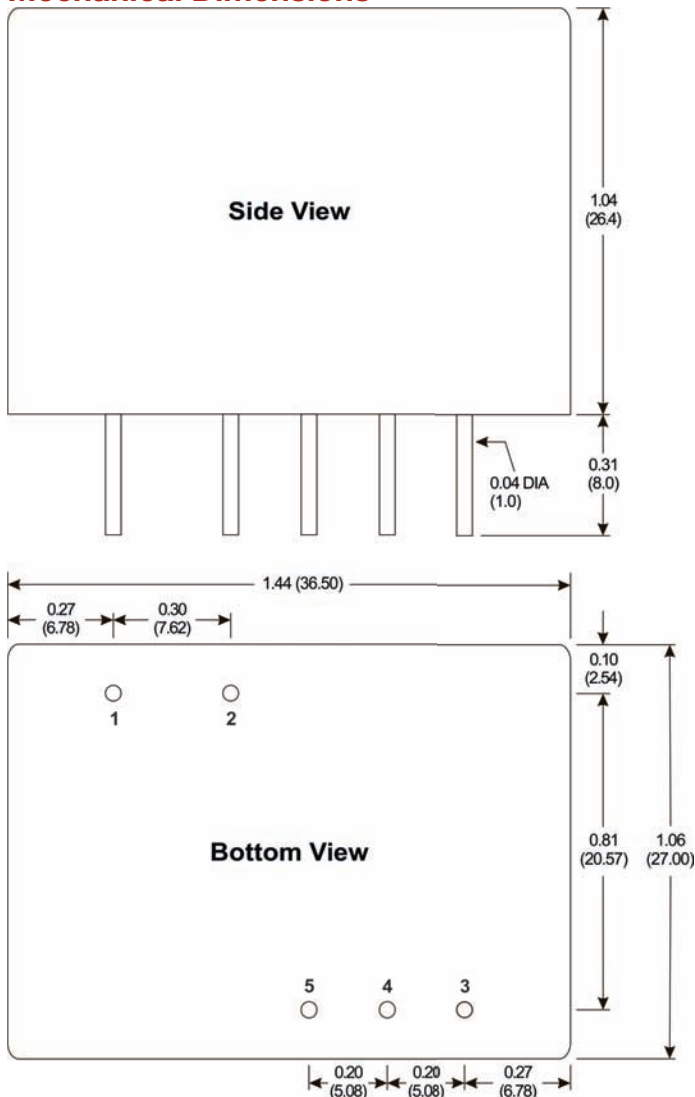
Derating Curve - Single Output Models



Derating Curve - Dual Output Models



Mechanical Dimensions



Notes:

- All dimensions are typical in inches (mm)
- Tolerance x.xx = ± 0.01 (± 0.25)

Pin Connections

Pin	Single	Dual
1	AC-Line	
2	AC-Neutral	
3	-Vout	Common
4	+Vout	Vout1
5	NC	Vout2

NC = No Connection



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