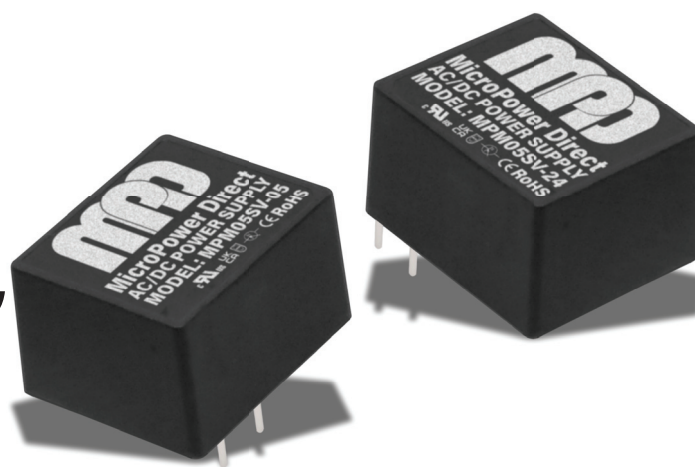


MPM-05SV

Miniature, Encapsulated, PC Board Mount, 5W AC/DC Power Supplies



Key Features:

- 5W Output Power
- Universal 90-305 VAC Input
- Very Compact Size
- EN 62368 Approved (UL)
- -40°C to +70°C Temp Range
- Meets EN 55032 B
- >400 kHour MTBF
- 4,000 VAC Isolation
- Efficiency to 86%
- Meets EN 60335
- Meets EN 61558



RoHS



MicroPower Direct

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Unit 1
Easton, MA 02375
USA

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E: sales@micropowerdirect.com
W: www.micropowerdirect.com



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			30.0	A Pk
	230 VAC			60.0	
Leakage Current				0.25	mA
Output					
Parameter	Conditions	Min.	Typ.	Max.	Units
Output Voltage Accuracy			±2.0		%
Line Regulation, VIN = Min to Max	3.3V & 5V Output		±0.2		%
	12V & 24V Output		±0.1		
Load Regulation, 0 to 100%	3.3V Output		±1.0		%
	5V & 12V & 24V Output		±0.5		
Ripple/Noise, See Note 1	3.3V & 5V Output			100	mVp-p
	15V Output			150	
	24V Output			200	
Hold-Up Time	230 VAC	15			mSec
Temperature Coefficient			±0.02		%/°C
Over Voltage Protection	Zener Diode Clamp				
Over Power Protection	Hiccup Mode (Autorecovery)				
Short Circuit Protection, See Note 2	Continuous (Autorecovery)				
General					
Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation Voltage	Input to Output	4,000			VAC
EMC	EMI (Conducted/Radiated Emmissions)	EN 55032 Level B			
	EMS (Noise Immunity)	EN 55035			
Environmental					
Parameter	Conditions	Min.	Typ.	Max.	Units
Operating Temperature Range	Ambient	-40	+25	+70	°C
Storage Temperature Range		-40		+85	°C
Cooling	Free Air Convection (See Derating Curve)				
Altitude			5,000		m
Humidity	RH, Non-condensing			95	%
Physical					
Case Size & Weight	See Mechanical Diagram (Page 2)				
Case Material	Non-Conductive Plastic Resin (UL94-V0)				
Reliability Specifications					
Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	450			kHours
Safety Standards	UL/cUL 62368-1 recognition (UL certificate)				
Vibration	IEC 60068-2-6, 10-500 Hz, 2G 10 min/1 cycle, 60 min each along X, Y, Z axis				
Shock	IEC 60068-2-27				

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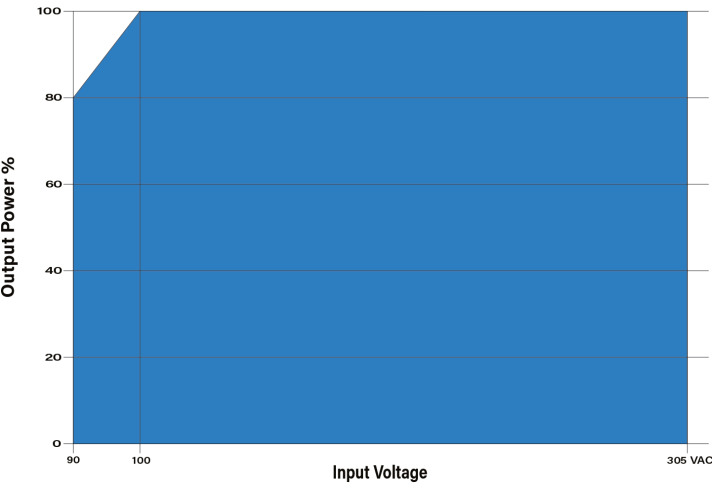
Model Selection Guide

Model Number	Input		Output		Capacitive Load (μF, Max)	Efficiency (230 VAC, %, Typ)	Fuse Rating Slow-Blow (See Note 3)
	Current (mA Max)		Voltage (VDC)	Current (mA Max)			
	115 VAC	230 VAC					
MPM-05SV-05	150.0	90.0	5.0	1,515	3,500	72	2.0A/300V
MPM-05SV-12	150.0	90.0	12.0	1,000	2,500	77	2.0A/300V
MPM-05SV-15	150.0	90.0	15.0	420	470	81	2.0A/300V
MPM-05SV-24	150.0	90.0	24.0	210	150	83	2.0A/300V

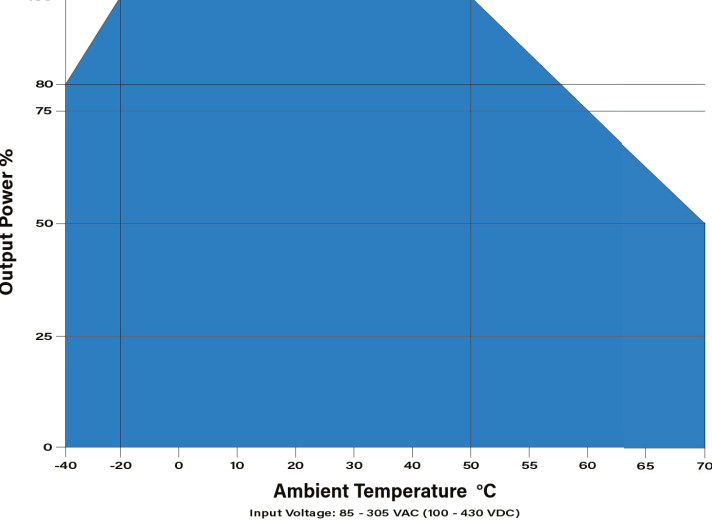
Notes:

1. Ripple and noise are measured at 20 Mhz bandwidth with a 0.1μF and a 47 μF capacitor connected in parallel as close to the unit output terminals as possible.
2. Output short circuit protection is provided by a “hiccup mode” circuit. The unit recovers automatically when the fault condition is removed.
3. When connecting the fuse to the input of the supply, care must be taken to ensure the fuse is at least 3.2mm away from the input connections.

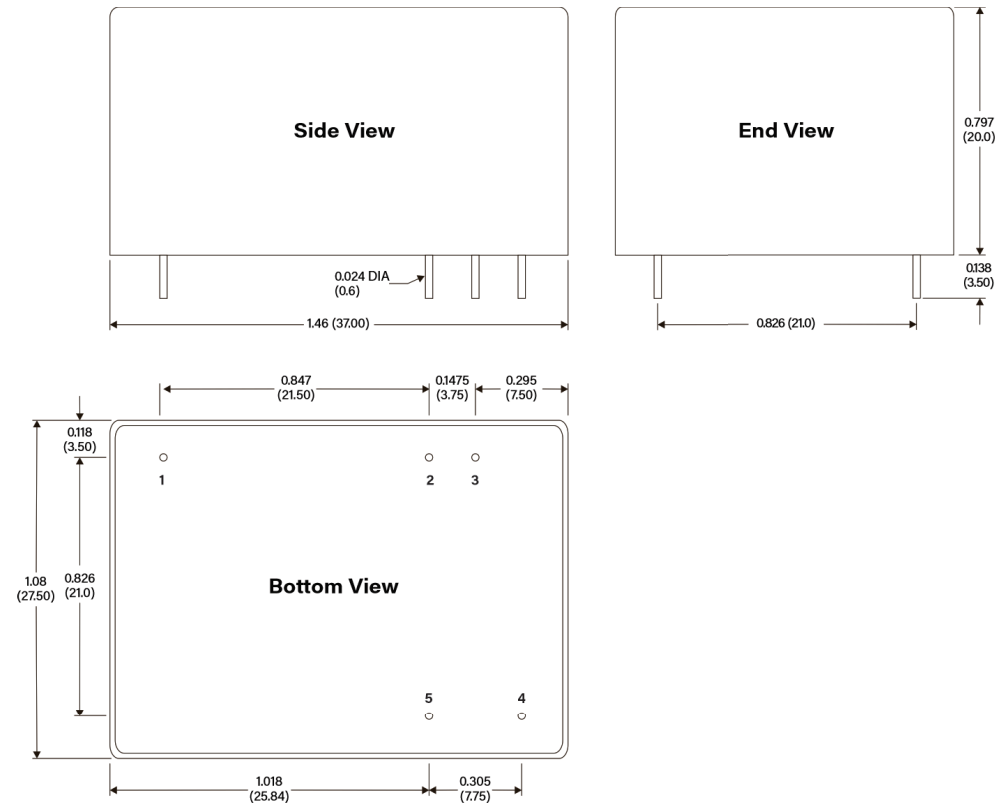
Power Derating Curve, Input Voltage



Power Derating Curve, Temperature



Mechanical Dimensions



Pin Connections

Pin	Function
1	No Connection
2	+VOUT
3	GND
4	AC-Line
5	AC-Neutral

Notes:

- All dimensions are typical in inches (mm)
- Tolerance x.xx = ±0.02 (±0.50)
- Module Weight is: 0.846 Oz (24g)