MPM-20PB Series

Single Output, 20W Compact "Power Brick" AC/DC Power Supplies

Key Features:

- 20W Output Power
- High Power Density Case
- Universal 90-264 VAC Input
- EN 60950 Approved (UL)
- Meets IEC Safety Class II
- Meets EN 55022 B
- Industry Standard Pin-Out
- >250 kHour MTBF

Chassis Mount Option Available!

RoHS

MicroPower Direct

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		264	VAC
		120		370	VDC
Input Frequency		47		440	Hz
Input Current	See Model Selection Guide				
Inrush Current	115 VAC		20.0		A Pk
	230 VAC		40.0		
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			±2.0		%
Line Regulation	V_{IN} = Min to Max		±0.5		%
Load Regulation	Io = 5% to 100%		±1.0		%
Ripple (20 MHz), See Note 1	3.3V & 5V Output Models		75		mV_{P-P}
	All Other Models		1.0		%Vout
Noise, See Note 1	3.3V & 5V Output Models		100		mV_{P-P}
	All Other Models		1.0		%Vout
Hold-Up Time	115 VAC		12		mSec
	230 VAC		56		
Temperature Coefficient			±0.02		%/°C
Over Voltage Protection	Zener Diode Clamp		120		% of V_O
Short Circuit Protection, See Note 2	Continuous (Autorecovery)				
Overload Protection		105	120		% 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			133		kHz

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)				
Humidity	RH, Non-condensing			95	%

Physical

Case Size	2.06 x 1.07 x 0.93 Inches (52.4 x 27.2 x 23.5 mm)
Case Material	Non-Conductive Plastic & Fiberglass (UL94-V0)
Weight	2.08 Oz (59g)

Reliability Specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	250			kHours
Safety Standards	UL 60950, EN 60950				
Safety Approvals	UL, cUL; File No. E245422				
Safety Class	IEC 61140 Class II				

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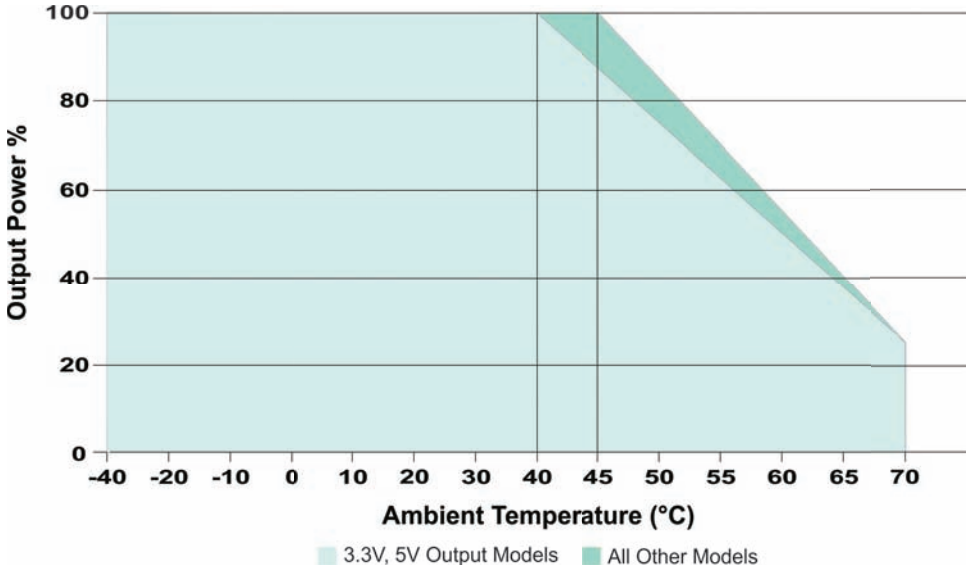
Model Selection Guide

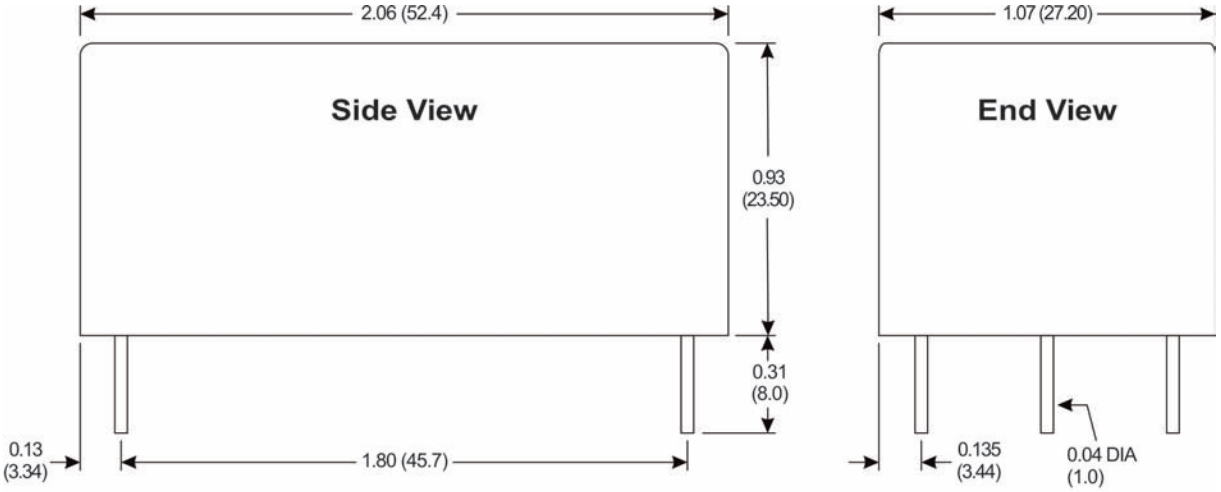
Model Number	Input Current (A)		Output Voltage (VDC)	Output Current		Maximum Capacitive Load (µF)	Maximum Output Power (W)	Efficiency (%, Typ)
	115 VAC	230 VAC		Max. (A)	Min. (%)			
MPM-20S-03PB	0.385	0.250	3.3	3.600	0.0	4,500	11.88	74
MPM-20S-05PB	0.385	0.250	5.0	3.600	0.0	3,500	18.00	78
MPM-20S-12PB	0.385	0.250	12.0	1.660	0.0	1,800	20.00	83
MPM-20S-15PB	0.385	0.250	15.0	1.330	0.0	1,500	20.00	84
MPM-20S-24PB	0.385	0.250	24.0	0.833	0.0	1,200	20.00	84

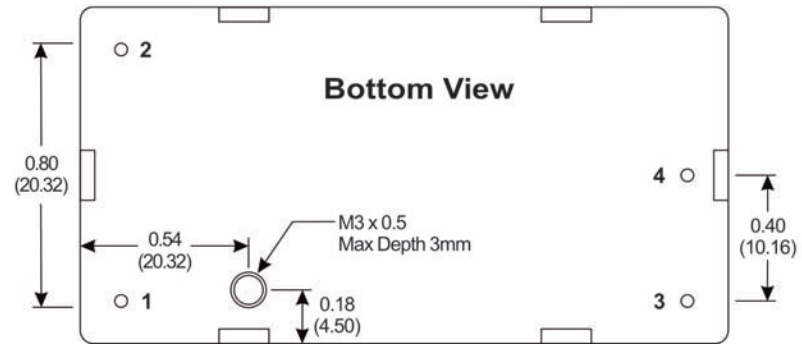
Notes:
1. Ripple and noise are measured at 20 Mhz bandwidth with a 0.1µF and a 47 µF capacitor connected in parallel as close to the unit output terminals as possible.
2. Output short circuit protection is provided by a "hiccup mode" circuit. The unit recovers automatically when the fault condition is removed.
3. Operation at under no load conditions will not damage these units.
4. It is recommended that a fuse be used on the input of a power supply for protection. For the **MPM-20PB** series, a 2A/250 VAC slow blow should be used.

Derating Curve



Mechanical Dimensions





Pin Connections

Pin	Function
1	AC-Neutral
2	AC-Line
3	+Vout
4	-Vout

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