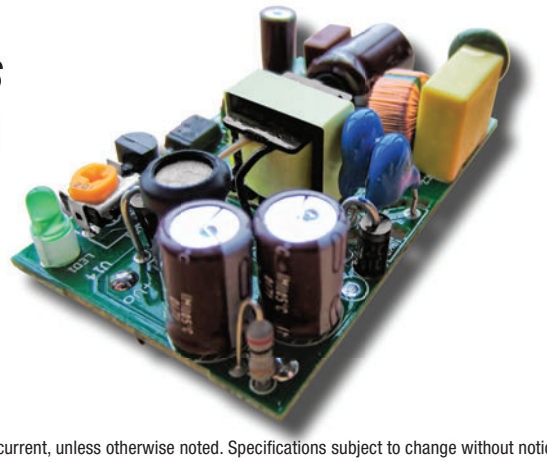
MPB-05S Series

Miniature PCB-Mount, 5W, Open Frame AC/DC Power Supplies



Key Features:

- 5W Output Power
- Universal 85-264 AC Input
- EN 60950 Approved (UL)
- PCB Mountable
- Meets IEC Safety Class II
- Meets EN 55022 B
- Efficiency To 80%
- >200 kHour MTBF

Electrical Specifications

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

Input

Parameter	Conditions	Min.	Typ.	Max.	Units
Input Voltage Range	Universal	85		264	VAC
		127		373	VDC
Input Frequency		47		63	Hz
Input Filter	Meets EN 55022 Class B				
Input Current	See Model Selection Guide				
Inrush Current	Cold Start, 115 VAC			25.0	A Pk
	Cold Start, 230 VAC			40.0	
Safety Ground Leakage Current	264 VAC			0.25	mA

Output

Parameter	Conditions	Min.	Typ.	Max.	Units
Output Voltage/Current	See Model Selection Guide				
Output Voltage Tolerance	See Note 1		±1.0		%
Line Regulation	Vin = 100 VAC to 240 VAC		±0.5		%
Load Regulation	Iout = 10% to 100%		±1.0		%
Ripple & Noise (20 MHz)	See Note 2		±1.0		%
Hold-Up Time	115 VAC		8		mSec
	230 VAC		60		
Temperature Coefficient			±0.05		%/°C
Short Circuit Protection	Continuous (Autorecovery)				
Overload Protection			170		%

General

Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation Voltage	Input to Output	3,000			VAC
Isolation Resistance	500 VDC		100		MΩ
Isolation Capacitance			1,100		pF
EMI/RFI	Conducted	EN 55022; EN 61000-3-2, -3			
EMC Compliance	Electrostatic Discharge (ESD)	IEC/EN 61000-4-2, -6, -8, -11			
	RF Field Susceptibility	IEC/EN 61000-4-3			
	Electrical Fast Transients/Bursts On Mains	IEC/EN 61000-4-4			
	Surge	IEC/EN 61000-4-5			
Switching Frequency	Fixed		66		kHz

Environmental

Parameter	Conditions	Min.	Typ.	Max.	Units
Operating Temperature Range	Ambient	0	+25	+70	°C
Storage Temperature Range		-20		+85	°C
Cooling	Free Air Convection (See Derating Curve)				
Humidity	RH, Non-condensing			93	%

Physical

Size	2.16 x 1.378 x 0.827 Inches (55.0 x 35.0 x 21.0 mm)
Weight	1.23 Oz (0.035 kg)

Reliability Specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	200			kHours
Safety Standards	UL 60950, EN 60950				
Vibration	Sinusoidal 50~500 Hz, 3.0 Grms, Period of 30 min each along X, Y & Z Axis				

MicroPower Direct
292 Page Street
Suite D
Stoughton, MA 02072
USA

T: (781) 344-8226
F: (781) 344-8481
E: sales@micropowerdirect.com
W: www.micropowerdirect.com

Model Selection Guide

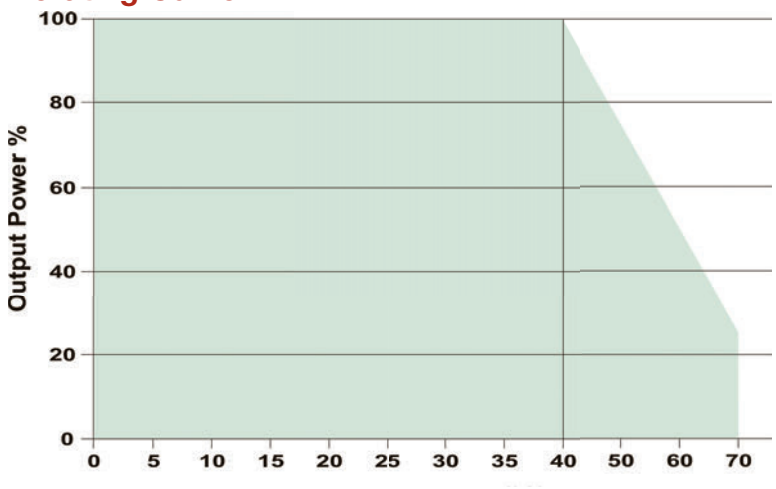
Model Number	Input		Output			Max Output Power (W)	Efficiency (%, Typ)
	Current (A)		Voltage (VDC)	Current (A)			
	115 VAC	230 VAC		Rated	% Min.		
MPB-05S-03	0.15	0.07	3.3	1.25	0.00	4.12	70
MPB-05S-05	0.15	0.07	5.0	1.00	0.00	5.00	73
MPB-05S-09	0.15	0.07	9.0	0.55	0.00	5.00	76
MPB-05S-12	0.15	0.07	12.0	0.42	0.00	5.00	77
MPB-05S-15	0.15	0.07	15.0	0.33	0.00	5.00	78
MPB-05S-18	0.15	0.07	18.0	0.28	0.00	5.00	78
MPB-05S-24	0.15	0.07	24.0	0.23	0.00	5.50	80

Other Models May Be Available. Contact The Factory For Details

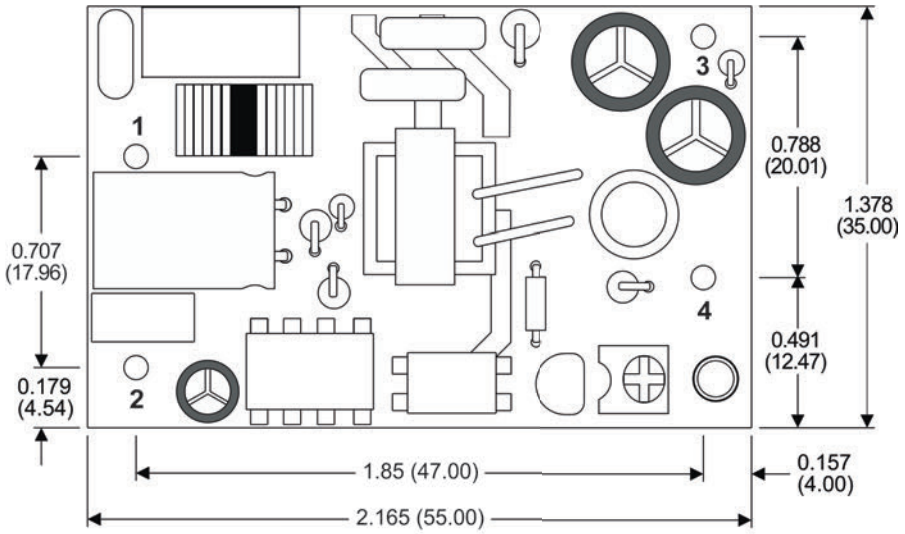
Notes:

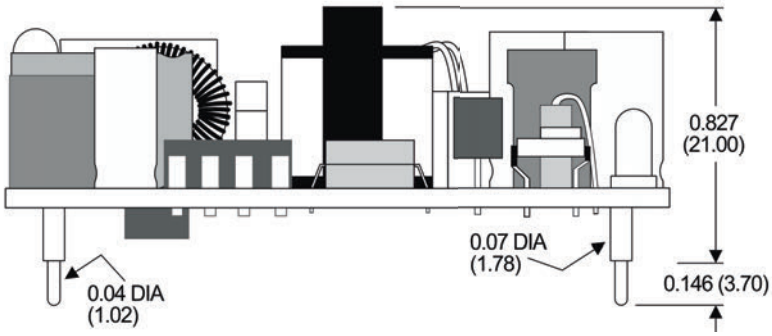
1. Output voltage tolerance is measured at nominal input and 75% load.
2. Output ripple is measured at 20 MHz bandwidth using 0.1 μF and 10 μF capacitors connected in parallel as close to the power supply terminals as possible.
3. These units will operate at no load without damage. For most applications however, **MPD** recommends that a minimum load always be used. Contact the factory for more information.
4. Each unit includes an input fuse (250V/1A). Since this fuse is not field replaceable, it is recommended that an external fuse of the same size be used on the input of the power supply for protection.

Derating Curve



Mechanical Dimensions





Pin Connections

Pin	Description
1	AC-Neutral
2	AC-Line
3	-V Output
4	+V Output

Notes:

- All dimensions are typical in inches (mm)
- Tolerance x.xx = ±0.02 (±0.50)

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