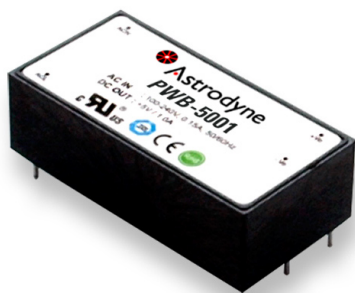




PowerBlock Micro-Miniature Modular Switching Power Supplies

PWB series



2"L x 1"W x 0.6"H

- Single 5 Watt Outputs
- 3.3VDC to 24VDC
- Universal 90 to 264VAC Input
- 3,000VAC Input to Output Isolation
- -25 to +70°C Operation
- High Efficiency



Model Number	Output Voltage	Output Amps	Output Watts	Size (inches)
PWB-5000	3.3 VDC	1.25	4W	1 x 2 x 0.6
PWB-5001	5 VDC	1	5W	1 x 2 x 0.6
PWB-5002	12 VDC	0.42	5W	1 x 2 x 0.6
PWB-5003	15 VDC	0.33	5W	1 x 2 x 0.6
PWB-5005	24 VDC	0.23	5W	1 x 2 x 0.6

Fully Approved
IEC60950
EN60950
UL60950-1
CSA22.2-60950-1



PowerBlock Micro-Miniature Modular Switching Power Supplies

PWB series

INPUT SPECIFICATIONS

Input Voltage, Nominal	90-264VAC
	Nominal: 100-240VAC
Input Frequency	47-63 Hz, 50-60Hz Nom.
Inrush Current	20A @ 100VAC, typ
	40A @ 200VAC, typ

OUTPUT SPECIFICATIONS

Output Voltage/Current	See Specific Model
Initial Accuracy	+/-1%, typ
Load Regulation	3.3V & 5V: +/-1%, typ
20%-FL	12V, 15V, & 24V: +/-0.5%, typ
Line Regulation	3.3V & 5V: +/-1%, typ
	12V, 15V, & 24V: +/-0.5%, typ
Temperature Coefficient	+/-0.03%/°C
Ripple/Noise(20Mhz BW)	200-250mV Pk-Pk, typ
Overvoltage Protection	Clamp, 130-150% *
Hold Up Time	30mS, typ
Short Circuit Protection	Continuous *
OverTemp Protection	Latching, Recovering
Current Limit	130% typ, Self-Reset Foldback

GENERAL SPECIFICATIONS

Input-Out Isolation	3000VAC
Output-Ground Isolation	1000VAC
Input-Ground Isolation	2500VAC
Operating Frequency	100 Khz, fixed, typ
Efficiency (@ Full Load)	75 - 80%, typ
Safety	EN60950, TUV File# B050122749064
	IEC60950, CB File# DE 3-51024
	UL60950-1, UL File# E167432

ENVIRONMENTAL SPECIFICATIONS

Oper. Temperature	-25 to +50°C FL
	Derate Linearly to 25%L @ 70°C
Relative Humidity	0-95%, Non-Condensing
Storage Temperature	-25 to +71°C *
MTBF	466,553 Hrs
	MIL-HDBK 217, Parts Count Method,
	25°C, Ground Benign

PHYSICAL SPECIFICATIONS

Case Material	Rynite, 94V-0 Rated
Construction	Encapsulated, Soft Pot
Weight	1.5 oz (42g)

All specifications are typical at nominal input, full load, and 25DegC unless otherwise noted

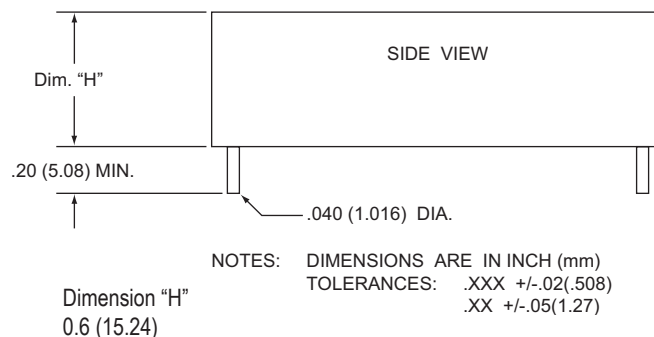
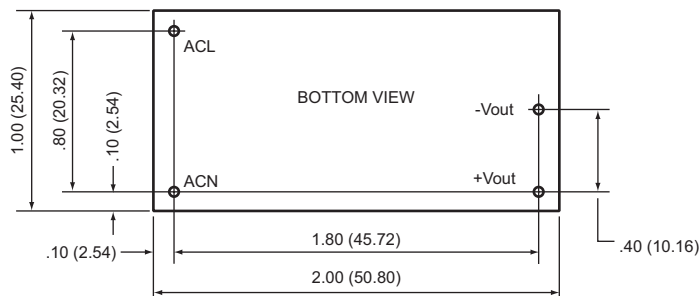
* These are stress ratings. Exposure of the devices to any of these conditions may adversely affect long term reliability. Proper operation under conditions other than the standard operating conditions is neither warranted nor implied.

Astrodyne products are not authorized or warranted for use as critical components in life support systems, equipment used in hazardous environments, nuclear controls systems, or other mission-critical applications.

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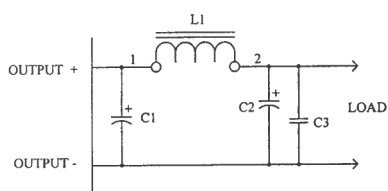
MECHANICAL SPECIFICATIONS



POWER BLOCK APPLICATION NOTES

Output Noise

The figure below is a sample diagram to reduce Output Ripple and Noise.



C1 = Electrolytic Capacitor
Capacitance = 22uF - 220uF
Voltage = Two times rated output voltage

L1 = 3uH - 10uH

C2 = Electrolytic Capacitor
Capacitance = 22uF - 47uF
Voltage = Two times rated output voltage

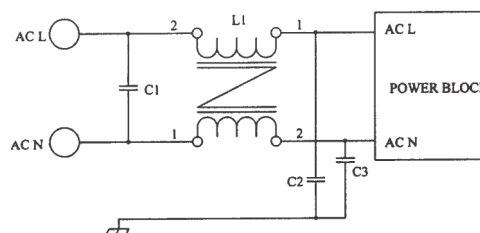
C3 = Ceramic Capacitor
Capacitance = 0.01uF - 0.1uF
Voltage = 50 volt

Notes:

1. The use of C1 alone may reduce noise to desired levels, if not use L1, C2 and C3 in addition to C1.
2. The figure above is a suggested circuit. Only by trying true application can levels be tested.

EMI

The figure below is a suggested diagram to reduce Electromagnetic Interference (EMI).



C1 = 0.22uF X Capacitor

L1 = 10mH - 30mH Common Mode, Choke

C2, C3 = 220pF Y Capacitors

Notes:

The diagram above is a recommended circuit, only by trying true application can levels be measured.

Inrush Current

If desired, the use of a Choke, NTC or Inrush Current Limiter may be used to reduce the Inrush Current