

SHB Standard Half Brick Family



The SHB Standard Converter series is a part of MagneTek's family of Advanced Modular Power Supply components. Featuring high reliability, these Modules are designed to reduce product development time and enhance system performance. Remote sensing and remote On/Off switching give ease of operation, while trim pins enable output voltage adjustment to meet specific system needs. Compact size coupled with low input/output noise, reduced radiated noise, industry-standard pinouts and input/output isolation, make these units ideally suited to the needs of Telecommunications, Industrial, Computer and Distributed Power System applications.

SPECIAL FEATURES

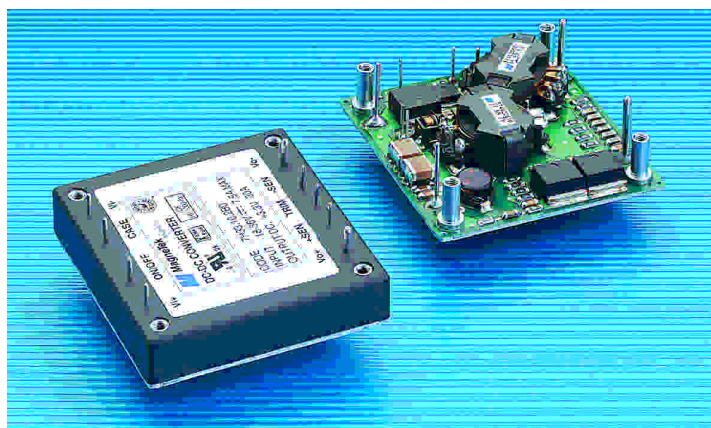
- High Efficiency, typically 84% at 5V Output
- High Power Density, up to 53.9W/inch³
- Input to Output Isolation at 500V
- Low Output Noise and Ripple
- Excellent Transient Response
- Complete Input and Output Filtering
- Remote Sensing
- Thermal Shutdown Protection
- Lockout Circuitry for Input Undervoltage
- Fixed Switching Frequency
- Baseplate Operation from -40 to +100°C
- Approvals Pending: UL, CSA, CE

PRODUCT ATTRIBUTES

Isolation	
-Voltage	500Vdc
-Capacitance	2000 pF
-Resistance	>10M
-Operating Case Temp.	-40/+100°C
-Storage Temperature	-50/+120°C
-Case Dimensions	2.40"L x 2.28"W x 0.5"H

INPUT CHARACTERISTICS

-Reflected Ripple Noise	20mAp-p (typ.)
-Ripple Rejection	60dB (typ.)



ELECTRICAL SPECIFICATIONS

Output Characteristics

Load Regulation		± 0.05%
Line Regulation		± 0.02%
Output Voltage Adjust Range		± 15% of Nominal Output
Output Ripple		
1.8V	Output	100mVp-p
2.2V	Output	40mVp-p
2.5V	Output	100mVp-p
3.3V, 5V	Output	50mVp-p
12V	Output	100mVp-p
15V	Output	100mVp-p

Efficiency (typ.) for 36-72 Input Voltage

Output Voltage	SHB50	SHB75	SHB100	SHB150
1.8V	71%			
2.2V	76%			
2.5V		77%		
3.3V	81%	81%	80%	
5V	83.5%	84%	84%	84%
12V	87%	88%	88%	88%
15V	87%	88%	88%	88%
18V	88%	88%	88%	88%
24V	88%	88.5%	88.5%	88%

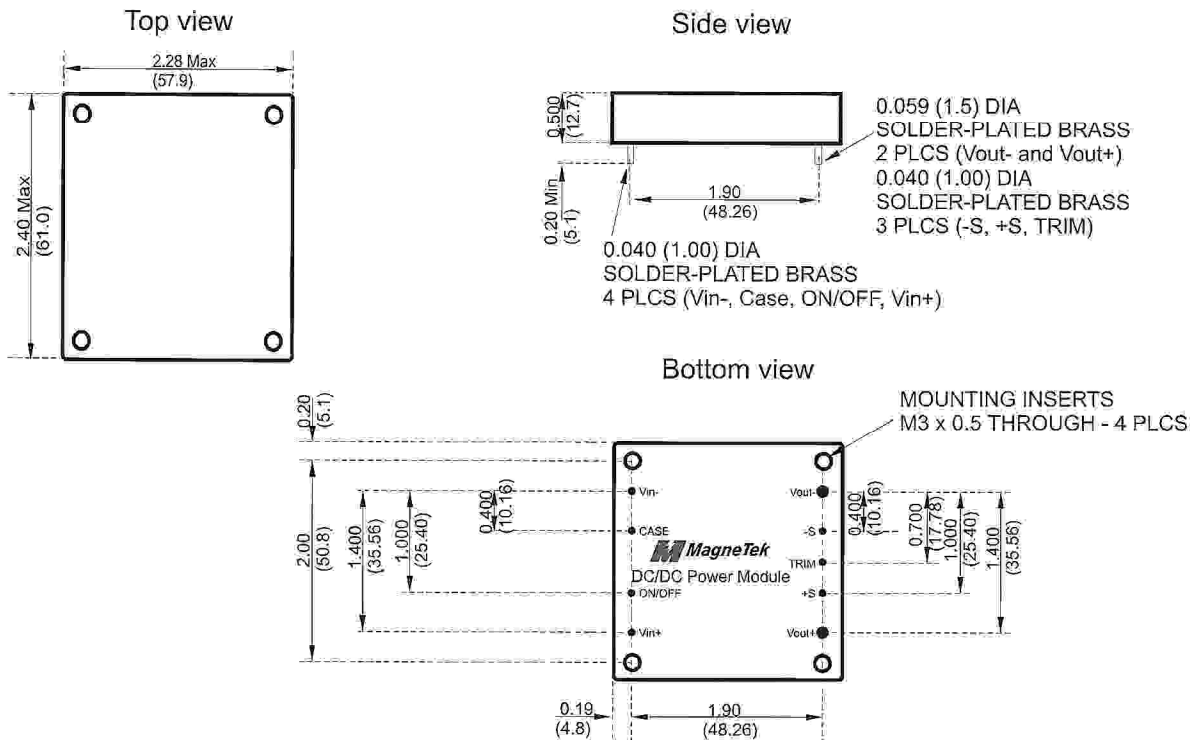
Efficiency (typ.) for 18-36 Input Voltage

Output Voltage	SHB50	SHB75	SHB100	SHB150
2.2V	76%			
3.3V	78%	78%	78%	
5V	82%	81%	81%	80%
12V	85%	82%	82%	81%
- Overvoltage Protection		120%		
- Current Limit Inception		130 %		

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Dimensions

Dimensions are in inches and (millimeters)
Copper paths must be routed beneath the power module standoffs
Tolerances: x.xx ± 0.02 in. (0.5 mm), x.xxx ± 0.010 in. (0.25 mm)



SELECTION CHART

Ordering Code	Output Power (watt)	Input Voltage (volt)	Output Voltage (volt)	Options ¹
	150 [150]	18-36 ² [24]	1.8 ³ [1.8]	[01]
	100 [100]	36-72 [W48]	2.2 ³ [2.2]	[02]
	75 [75]		2.5 ⁴ [2.5]	
	50 [50]		3.3 ⁵ [3.3]	
			5 [5]	
			12 [12]	
			15 [15]	
			18 [18]	
			24 [24]	
SHB	[] -	[] V	[] V	[]

Order Example: SHB50-W48V3.3V01 for 50 Watt Output Power Model with 36-72V Input Voltage, 3.3V Output Voltage and Option 01

¹ For Options type see Page 47; default option is [02]

² Only available between 1.8-12V Output Voltage

³ Only available for 50W Output Power

⁴ Only available for 75W Output Power

⁵ Not available for 150W Output Power