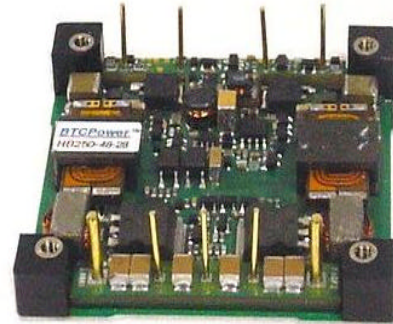


HBO PH Series

Up to 300W Half Bricks

Description

The HBO PH series of low cost DC/DC converters offer the different current levels and are comparable to existing half-bricks. With a wide input voltage range of 18-24V or 36-75V they are available with an output voltage of either 1.8, 2.5, 3.3, 5.0, 12, 15, 24 or 28 Volts. All models feature an input filter, output overvoltage and overtemperature protection, output current limiting and short circuit protection. The unique open frame construction with base plate design achieves efficient heat transfer with no hot spots. The use of patented Flat Transformer technology and other patent-pending design concepts facilitate maximum power delivered. The converters combine creative design concepts with highly derated power devices to achieve very high reliability, high performance and offer a low cost solution to systems designers that are challenged to maximize power and minimize board space.



Features

- Delivers up to 300W in Half Brick
- High efficiency patented topology
- Low profile of only 0.34 inch
- 1.8V, 2.5V, 3.3V, 5.0V, 12V, 15V, 24V or 28V output modules
- 100V/100ms Input transient capability
- -40°C to +85 °C ambient operation
- Meets Basic Insulation requirements of EN60950
- UL 1950 recognized, CAN / CSA C22.2 No. 950-95 Certified, and TUV EN60950 (pending)
- Meets conducted limits of FCC Class B and CEI IEC61204-3 Class B with external filter

Applications

- Telecommunications
- Data Communications
- Wireless Communications
- Networking Gear
- Servers, Switches and Data Storage
- Semiconductor Test Equipment
- Distributed Power Architecture

Specification Summary

- 80A @ 1.8V, 60A @ 2.5V, 60A @ 3.3V, 50A @ 3.3V, 50A @ 5.0V, 21A @ 12V
11A @ 24V, 11A @ 28V
- Tight output regulation, typical $\pm 2\%$
- No minimum load required
- Ripple & Noise (20Mhz BW) 100 mV (pk-pk) or 2% (pk-pk)
- Wide input operating range 18-24V or 36-75V
- On/Off pin and remote sense
- Output adjustment +/-10% range
- 1500V, 10M input-to-output isolation
- Frame construction with heat spreader for low temperature rise
- Output overcurrent and overvoltage protection
- Over Temperature protection
- Input Under voltage protection
- MTBF of 1,600,000 hours @ 50°C (Bellcore)

Part Number and Selection Information

Model Part Number		Input				Output		Efficiency 75% Load (%)
		Voltage (Volts)		Current (A)		Voltage (Volts)	Current (Amps)	
Positive Logic	Negative Logic	Nominal	Range	No load	Full load			
HBO60A-24-2.5P	HBO60A-24-2.5N	24	18-36	0.1	8.0	2.5	60	78
HBO50A-24-3.3P	HBO50A-24-3.3N	24	18-36	0.1	8.5	3.3	50	81
HBO50A-24-5P	HBO50A-24-5N	24	18-36	0.1	12.4	5.0	50	84
HBO21A-24-12P	HBO21A-24-12N	24	18-36	0.1	12.2	12.0	21	86
HBO17A-24-15P	HBO17A-24-15N	24	18-36	0.1	12.0	15.0	17	88
HBO11A-24-24P	HBO11A-24-24N	24	18-36	0.1	12.8	24.0	11	86
HBO11A-24-28P	HBO11A-24-28N	24	18-36	0.1	14.7	28.0	11	87
HBO80A-48-1.8P	HBO80A-48-1.8N	48	36-75	0.1	3.9	1.8	80	78
HBO60A-48-2.5P	HBO60A-48-2.5N	48	36-75	0.1	3.9	2.5	60	79
HBO60A-48-3.3P	HBO60A-48-3.3N	48	36-75	0.1	5.0	3.3	60	81
HBO50A-48-3.3P	HBO50A-48-3.3N	48	36-75	0.1	4.2	3.3	50	82
HBO50A-48-5P	HBO50A-48-5N	48	36-75	0.1	6.2	5.0	50	85
HBO21A-48-12P	HBO21A-48-12N	48	36-75	0.1	6.1	12.0	21	87
HBO17A-48-15P	HBO17A-48-15N	48	36-75	0.1	6.0	15.0	17	89
HBO11A-48-24P	HBO11A-48-24N	48	36-75	0.1	6.4	24.0	11	87
HBO11A-48-28P	HBO11A-48-28N	48	36-75	0.1	7.3	28.0	11	88

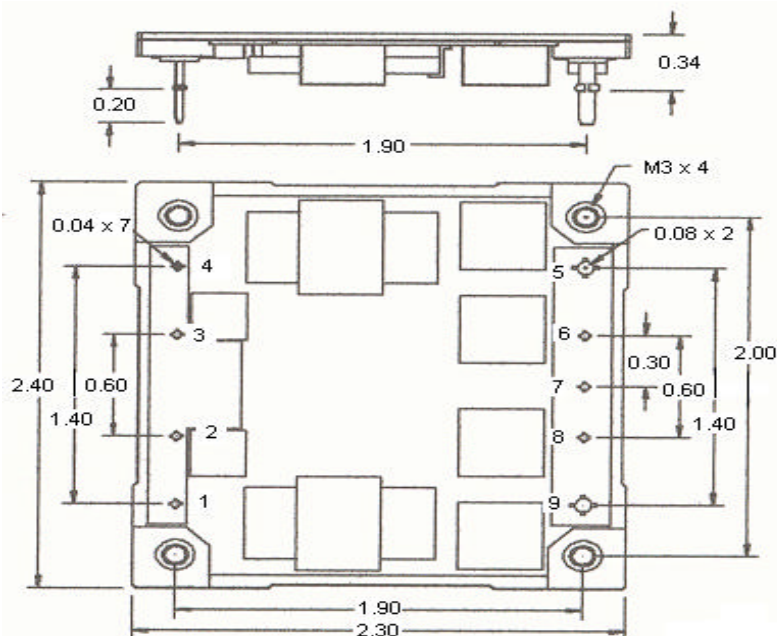
Typical at Ta= +25 °C under nominal line voltage and 75% load conditions, unless noted.

Consult factory for other output voltage configurations and optional accessories such as heatsinks and filters.

Outline Information and Pin-out

Pin Connection	
Pin#	Function
1	Vin +
2	On/Off
3	Case
4	Vin -
5	Vout -
6	Sense -
7	Trim
8	Sense +
9	Vout +

All dimensions are in inches [mm]
 Pin 5 and 9 are dia. 0.08 [2.03]
 All other pins are all dia. 0.040 [1.02]
 Pin material: Brass
 Pin finish: Tin/Lead plated
 Heat spreader (baseplate) material:
 Aluminum
 Weight: 50.5g



The information and specifications contained in this brief are believed to be accurate and reliable at the time of publication. Specifications are subject to change without notice. Refer to product specification sheet for performance characteristics and application guidelines.