

HBO or HBP CPH Series

Up to 350W/100A Half Bricks

Description

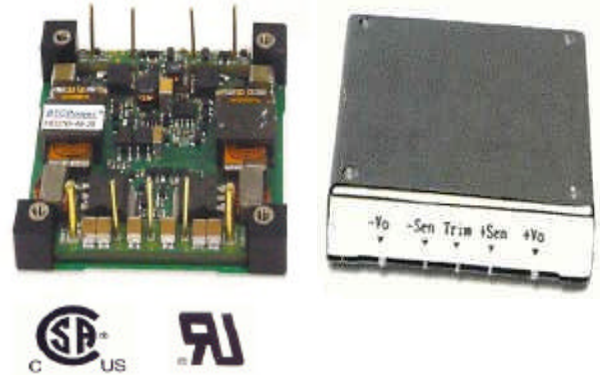
The HBO (open-frame) or HBP (enclosure-frame) CPH series of low cost DC/DC converters offer the different current levels and are comparable to existing half-bricks. With a wide input voltage range of 18-24V or 36-75V they are available with an output voltage of either 1.5, 1.8, 2.5, 3.3, or 5 Volts. All models feature an input filter, output overvoltage and overtemperature protection, output current limiting and short circuit protection. The HBO series open-frame construction with base-plate and HBP series enclosure frame achieve 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 350W / 100A in Half Brick
- High efficiency patented topology
- Low profile of only 0.36 inch
- 1.5V, 1.8V, 2.5V, 3.3V, or 5V output modules
- 100V/100ms (50V/100ms for 24V model) Input transient capability
- -40°C to +100 °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

- 100A @ 1.5V, 100A @ 1.8V, 80A @ 2.5V, 70A @ 3.3V, 70A @ 5.0V,
- 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 18-36V 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)

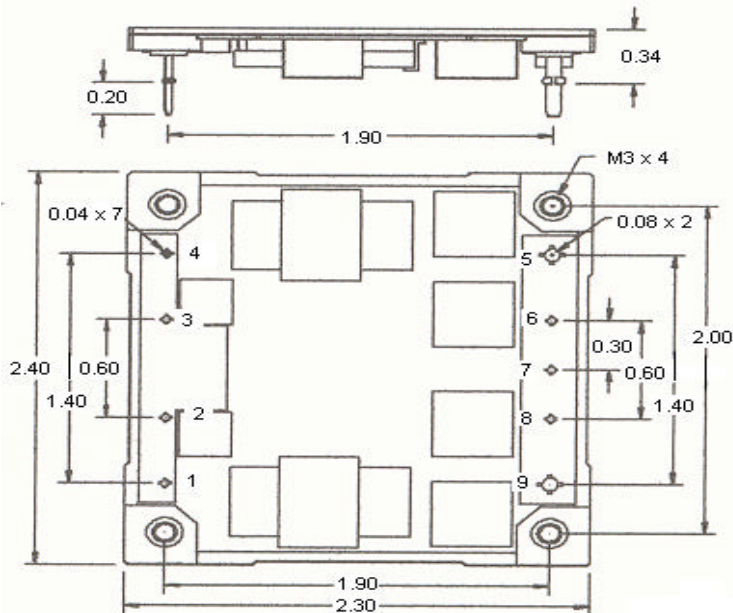
Part Number and Selection Information

| Model | | Input | | | | Output | | Efficiency |
|-----------------|-----------------|-----------------|-------|-------------|-----------|---------|---------|------------|
| Part Number | | Voltage (Volts) | | Current (A) | | Voltage | Current | 75% Load |
| Positive Logic | Negative Logic | Nominal | Range | No load | Full load | (Volts) | (Amps) | (%) |
| HBO100A-24-1.5P | HBO100A-24-1.5N | 24 | 18-36 | 0.1 | 7.5 | 1.5 | 100 | 83 |
| HBO100A-24-1.8P | HBO100A-24-1.8N | 24 | 18-36 | 0.1 | 8.9 | 1.8 | 100 | 84 |
| HBO80A-24-2.5P | HBO80A-24-2.5N | 24 | 18-36 | 0.1 | 9.5 | 2.5 | 80 | 87 |
| HBO70A-24-3.3P | HBO70A-24-3.3N | 24 | 18-36 | 0.1 | 10.9 | 3.3 | 70 | 88 |
| HBO70A-24-5P | HBO70A-24-5N | 24 | 18-36 | 0.1 | 16.3 | 5.0 | 70 | 89 |
| HBO100A-48-1.5P | HBO100A-48-1.5N | 48 | 36-75 | 0.1 | 3.7 | 1.5 | 100 | 84 |
| HBO100A-48-1.8P | HBO100A-48-1.8N | 48 | 36-75 | 0.1 | 4.4 | 1.8 | 100 | 85 |
| HBO80A-48-2.5P | HBO80A-48-2.5N | 48 | 36-75 | 0.1 | 4.7 | 2.5 | 80 | 88 |
| HBO70A-48-3.3P | HBO70A-48-3.3N | 48 | 36-75 | 0.1 | 5.4 | 3.3 | 70 | 89 |
| HBO70A-48-5P | HBO70A-48-5N | 48 | 36-75 | 0.1 | 8.1 | 5.0 | 70 | 90 |

Typical at Ta= +25 °C under nominal line voltage and 75% load conditions, unless noted.
 For encapsulated (epoxy enclosed) models, replace "HBO" in part no. with "HBP".

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.

Worldwide Headquarter:
Broadband TelCom Power, Inc.
 1719 S. Grand Avenue, Santa Ana, CA 92705 U.S.A.
 Tel.: 714-259-4888 Fax: 714-259-0840
 Email: sales@btcpower.com

European Headquarter:
Broadband TelCom Power Europe B. V.
 Dukaatstraat 14, 4879AD Etten-Leur, The Netherlands
 Tel.: 31-76-5038350 Fax: 31-76-5012038
 Email: info.europe@btcpower.com