

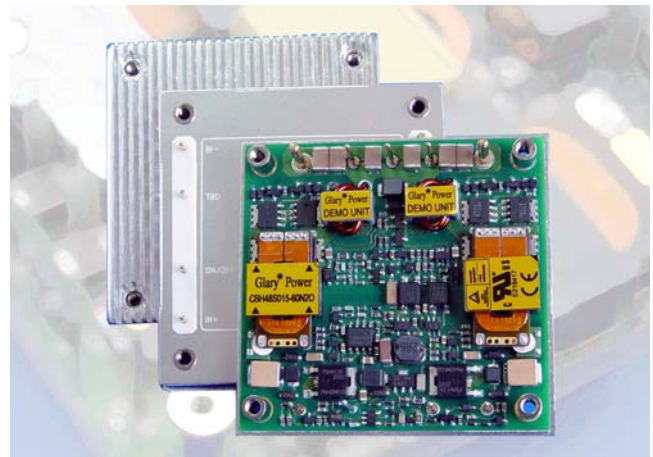
The CBH series provides up to 250W/60A outputs with industry standard half brick package. The efficient SR stage combining with patented "Buck Reset" topology reduce power loss to achieve 125W/in³ power density, the single component side board designed with Sink-Plate technology eliminate the hot spot gives converter better thermal performance. Modules are designed for Telecom, Servers, Networking equipments and other applications that use a 24V or 48V (36~75V) input bus.

Part Number *	Maximum Input	Maximum Output	Efficiency
CBH48120ABCDE-EF	36V~75V 390W	12V/21A 250W	90%
CBH48050ABCDE-EF	36V~75V 280W	5.0V/50A 250W	90%
CBH48033ABCDE-EF	36V~75V 186W	3.3V/50A 165W	89%
CBH48025ABCDE-EF	36V~75V 173W	2.5V/60A 150W	87%
CBH48018ABCDE-EF	36V~75V 127W	1.8V/60A 108W	85%
CBH48015ABCDE-EF	36V~75V 109W	1.5V/60A 90W	83%

* Options for **CBH Series** are listed as follows:

A (Enable Logic): **P**: Positive **N**: Negative
B (Pin Dimension): **0**: 0.12" **1**: 0.16" **2**: 0.20" **3**: 0.24"
C (Standoff Height): **0**: 0.02" **1**: 0.08" **2**: 0.16"
D (Base-Plate/Module Thickness): **M**: 1.0mm Metal Plate/0.34" **A**: 3.0mm Sink-Plate/0.42"
E: 1.0mm Metal Plate with Metal Enclosure/0.34"
EF (Output): **00** to **99** for output current rating

Example: **CBH48033N00A-50** is a **CBH** series half brick 48V to 3.3V/50A dc/dc converter with negative control logic, 0.12" pin length, 0.02" of standoff height and 3.0mm Sink-Plate. The total height of this module is 0.02"+0.42"+0.44"



- High efficiency 90% @ 5.0V/50A
..... 89% @ 3.3V/50A
..... 85% @ 1.8V/60A
- High useable current (with 3.0mm sink-Plate)
..... 5.0V/40A at 50°C 200LFM
..... 3.3V/48A at 60°C 200LFM
..... 1.8V/53A at 70°C 200LFM
- Sink-Plate (SP) flexible thermal managing capability (see drawing)

Part Number *	Maximum Input	Maximum Output	Efficiency
CBH24120ABCD-EF	18V~36V 334W	12V/21A 250W	90%
CBH24050ABCD-EF	18V~36V 280W	5.0V/50A 250W	90%
CBH24033ABCD-EF	18V~36V 186W	3.3V/50A 165W	89%
CBH24025ABCD-EF	18V~36V 173W	2.5V/60A 150W	87%
CBH24018ABCD-EF	18V~36V 127W	1.8V/60A 108W	85%
CBH24015ABCD-EF	18V~36V 109W	1.5V/60A 90W	83%



ABSOLUTE MAXIMUM RATINGS

Temperature	Operation	-40°C to +120°C
	Storage	-55°C to +125°C
Input Voltage Range	Operation:	
	24V Models	-0.5V to +40Vdc
	48V Models	-0.5V to +80Vdc
	Transient (100ms):	
	24V Models	50V Maximum
	48V Models	100V Maximum
Isolation Voltage	Input to Output	2.0KV Minimum
	Input to Case	1.0KV Minimum
	Output to Case	1.0KV Minimum
Remote Control Voltage		-0.5V to +12Vdc

GENERAL SPECIFICATIONS

Conversion Efficiency	Typical	See table
Switching Frequency	Typical	300KHz
MTBF	Bellcore	3.45×10 ⁶ hrs @GB.
OTP	Internal	115°C
Weight		1.9 oz or 3.2 oz
Size		2.30"x2.40"x0.36"

CONTROL FUNCTIONS

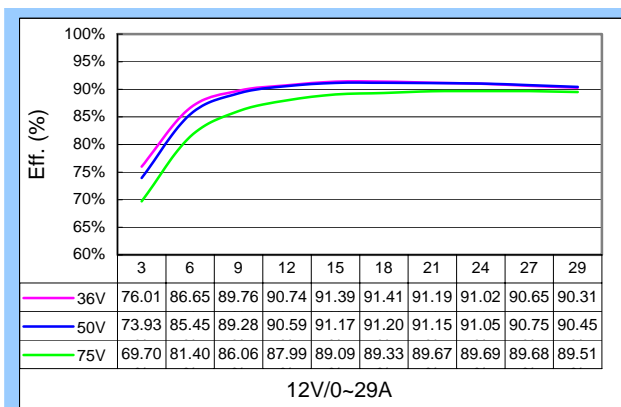
Remote Control	Logic High	+3.0V to +6.5V
	Logic Low	0V to +1.0V
Input Current of Remote Control Pin		-0.5mA ~ +1.5mA

INPUT SPECIFICATIONS

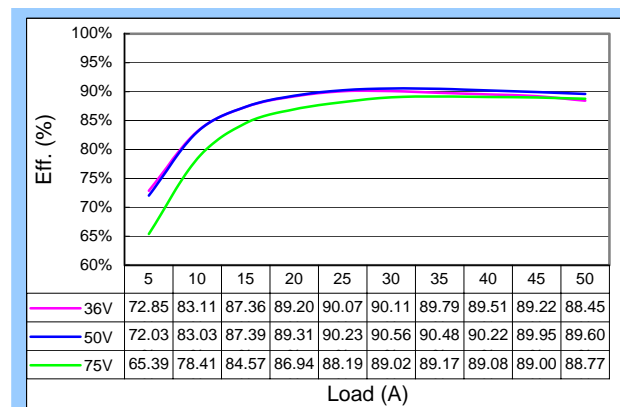
Operation Voltage Range	24V Models	+18V to +36Vdc
	48V Models	+36V to +75Vdc
Reflected Ripple Current	L _{EXT} = 10uH	20mA Max
Power ON Voltage Ranges	24V Models	+17.5V to +17.9Vdc
	48V Models	+35.0V to +35.8Vdc
Power OFF Voltage Ranges	24V Models	+17.0V to +17.4Vdc
	48V Models	+34.0V to +34.8Vdc
Off State Input Current	V _{NOM}	6mA Max
Latch-State Input Current	V _{NOM}	8mA Max
Input Capacitance	24V Models	33.0uF Max
	48V Models	6.8uF Max

OUTPUT SPECIFICATIONS

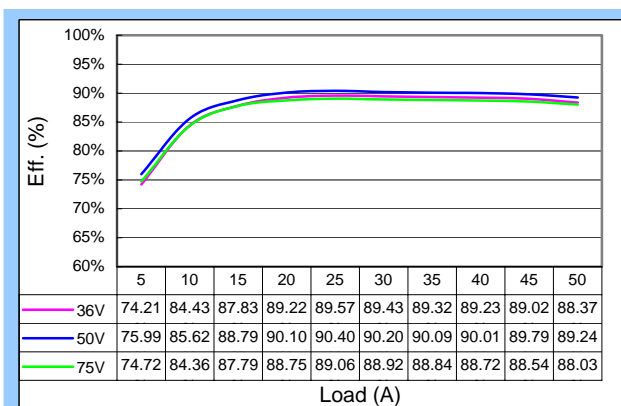
Voltage Accuracy	Typical	±1%
Line Regulation	Full Input Range	±0.2%
Load Regulation	10%~100%	±0.2%
Temperature Drift	-40°C ~ 100°C	±0.02%/°C
Output Tolerance Band	All Conditions	±3%
Ripple & Noise (20MHz)	Peak-Peak (RMS)	3% (1%) V _O
Over Voltage Protection	V _{NOM} , 10% Load	115~130 %V _O
Output Current Limits	V _{NOM}	105%~125%
Voltage Trim	V _{NOM} , 10% Load	±10%
Input Ripple Rejection (<1KHz)	V _{NOM} , Full Load	-50dB
Step Load (2.5A/uS)	50%~75% Load	300mV/500uS
Start-Up Delay Time	V _{NOM} , Full Load	20mS/250mS



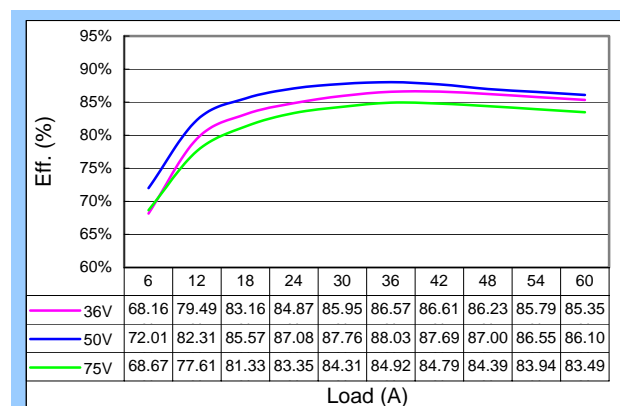
Efficiency Plot of CBH48120ABCD-21



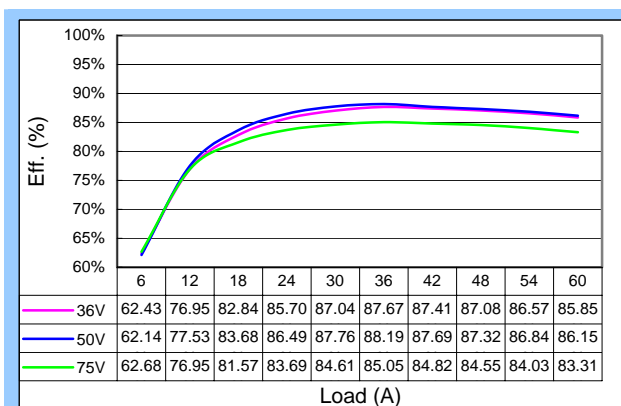
Efficiency Plot of CBH48050ABCD-50



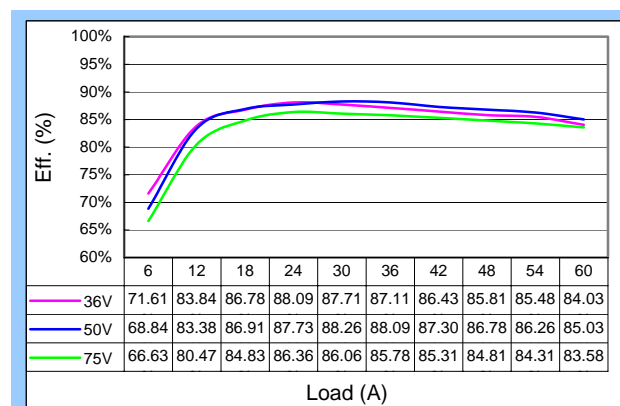
Efficiency Plot of CBH48033ABCD-50



Efficiency Plot of CBH48025ABCD-60



Efficiency Plot of CBH48018ABCD-60



Efficiency Plot of CBH48015ABCD-60

NOTE

1. 20MHz bandwidth current probe measured without an external filter.
2. Output ripple and noise is measured by using the proposed test method of Glary Power Technology Co. Ltd.
3. Input fusing is required and recommended to base on surge current and maximum input current.
4. Case and base-plate should be connected to AC ground to maintain good EMC performance.
5. Case and base-plate should be inaccessible to prevent the damage from highly operating temperature.
6. Contact Glary Power Technology for non-standard inquiry.