



# CHB100W SERIES

## 66 TO 100 WATT 4:1 INPUT DC-DC CONVERTERS SINGLE OUTPUT



### FEATURES

- \* 66-100W Isolated Output
- \* Efficiency to 89%
- \* 250KHz Switching Frequency
- \* 4 : 1 Input Range
- \* Regulated Outputs
- \* Continuous Short Circuit Protection
- \* Five-Sided Metal Case
- \* Half-Brick Size Meet Industrial Standard
- \* CE Mark Meets 2004/108/EC
- \* UL60950-1 Approval



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	Capacitor Load max.
			MIN.	MAX.	NO LOAD	FULL LOAD		
CHB100W-24S3V3	9-36 VDC	3.3VDC	0mA	20 A	35mA	3333mA	82.5	20000uF
CHB100W-24S05	9-36 VDC	5.0VDC	0mA	20 A	35mA	4931mA	84.5	20000uF
CHB100W-24S12	9-36 VDC	12 VDC	0mA	8.3 A	35mA	4854mA	85.5	8300uF
CHB100W-24S15	9-36 VDC	15 VDC	0mA	6.7 A	35mA	4813mA	87	6700uF
CHB100W-24S24	9-36 VDC	24 VDC	0mA	4.17 A	35mA	4766mA	87.5	1800uF
CHB100W-24S48	9-36 VDC	48 VDC	0mA	2.08 A	35mA	5042mA	82.5	470uF
CHB100W-48S3V3	18-75VDC	3.3VDC	0mA	20 A	30mA	1667mA	82.5	20000uF
CHB100W-48S05	18-75VDC	5.0VDC	0mA	20 A	30mA	2422mA	86	20000uF
CHB100W-48S12	18-75VDC	12 VDC	0mA	8.3 A	30mA	2371mA	87.5	8300uF
CHB100W-48S15	18-75VDC	15 VDC	0mA	6.7 A	30mA	2379mA	88	6700uF
CHB100W-48S24	18-75VDC	24 VDC	0mA	4.17 A	30mA	2343mA	89	2200uF
CHB100W-48S48	18-75VDC	48 VDC	0mA	2.08 A	30mA	2462mA	84.5	470uF

NOTE: 1. Nominal Input Voltage 24, 48VDC

# SPECIFICATIONS

All Specifications Typical At Nominal Line, Full Load, and 25°C Unless Otherwise Noted

## INPUT SPECIFICATIONS:

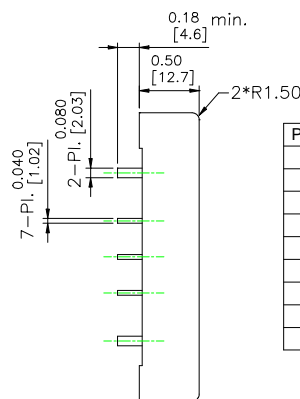
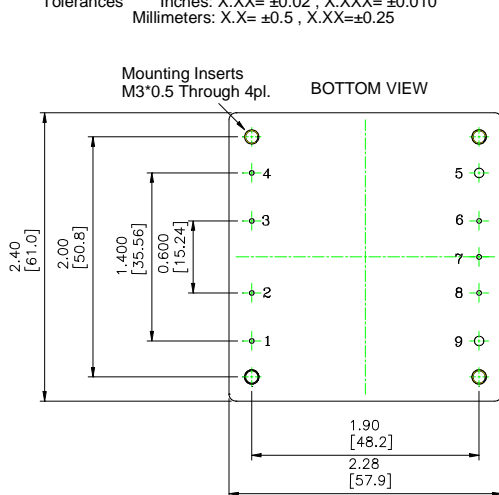
Input Voltage Range	24V	9-36V
	48V	18-75V
Input Surge Voltage (100ms max.)	24V	50Vdc max.
	48V	100Vdc max.
Under voltage lockout	24Vin power up	8.8V
	24Vin power down	8.0V
	48Vin power up	17V
	48Vin power down	16V
Positive Logic Remote ON/OFF (note 4 & 5)		
Input Filter		PI Type

## OUTPUT SPECIFICATIONS:

Voltage Accuracy(note 7):	±1.5% max.
Transient Response: 25% Step Load Change	<500u sec.
External Trim Adj. Range	±10%
Ripple & Noise, 20MHz BW(note 3)	
3.3V & 5V	40mV RMS, max. 100mV pk-pk, max.
12V & 15V	60mV RMS, max. 150mV pk-pk, max.
24V	100mV RMS, max. 240mV pk-pk, max.
48V	200mV RMS, max. 480mV pk-pk, max.
Temperature Coefficient	±0.03%/°C
Short Circuit Protection	Continuous
Line Regulation (note 1)	±0.2% max.
Load Regulation (note 2)	±0.2% max.
Over Voltage Protection trip Range, % Vo nom.	115-140%
Current Limit	110% ~140% Nominal Output
Start up time	25ms Typ.

## CASE HB

All Dimensions In Inches(mm)  
 Tolerances Inches: X.XX= ±0.02, X.XXX= ±0.010  
 Millimeters: X.X= ±0.5, X.XX=±0.25



Pin	Function
1	+Vin
2	ON/OFF
3	CASE
4	-Vin
5	-Vout
6	-Sense
7	Trim
8	+Sense
9	+Vout

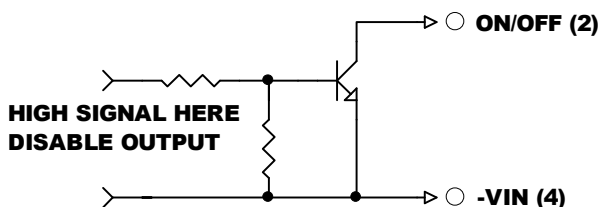
## GENERAL SPECIFICATIONS:

Efficiency	See Table
Isolation Voltage	Input/Output 1500VDC min. Input/Case 1500VDC min. Output/Case 1500VDC min.
Isolation Resistance	10 <sup>7</sup> ohm min.
Isolation Capacitance	1500pF Typ.
Switching Frequency	250KHz, Typ.
Operating Case Temperature	-40°C to 100°C
Storage Temperature	-55°C to +105°C
Thermal Shutdown, Case Temp.	105°C Typ.
Humidity	95% RH max. Non condensing
MTBF	MIL-HDBK-217F, GB, 25°C, Full Loa d. 700Khrs Typ.
Dimensions	2.28x2.40x0.50 inches (57.9x61.0x12.7 mm)
Case Material	Aluminum
Weight	95g

## NOTE :

- Measured From High Line to Low Line
- Measured From Full Load to Zero Load
- Output Ripple and Noise measured with 10uF tantalum and 1uF Ceramic capacitor across output
- Logic Compatibility ..... Open Collector ref to -Input  
 Module ON ..... > 3.5Vdc or Open Circuit  
 Module OFF ..... < 1.8Vdc
- Suffix "N" to the Model Number with Negative Logic Remote ON/OFF  
 Module ON ..... < 1.8Vdc  
 Module OFF ..... >3.5Vdc or Open Circuit
- Suffix "C" to the Model Number with Clear Mounting Insert (3.2mm DIA.)
- Require a 47uF Aluminum Capacitor Connected Between +Vout and -Vout for 48Vout Models

## REMOTE ON/OFF CONTROL



## EXTERNAL OUTPUT TRIM

