



# CHB100W SERIES

## 66 - 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 (Except 28 Vout)



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	3.3 VDC	0 mA	20 A	35 mA	3333 mA	82.5	20000uF
CHB100W-24S05	9-36 VDC	5.0 VDC	0 mA	20 A	35 mA	4931 mA	84.5	20000uF
CHB100W-24S12	9-36 VDC	12 VDC	0 mA	8.3 A	35 mA	4854 mA	85.5	8300uF
CHB100W-24S15	9-36 VDC	15 VDC	0 mA	6.7 A	35 mA	4813 mA	87	6700uF
CHB100W-24S24	9-36 VDC	24 VDC	0 mA	4.17 A	35 mA	4766 mA	87.5	1800uF
CHB100W-24S28	9-36 VDC	28 VDC	0 mA	3.57 A	50 mA	4845 mA	86	2200uF
CHB100W-24S48	9-36 VDC	48 VDC	0 mA	2.08 A	35 mA	5042 mA	82.5	470uF
CHB100W-48S3V3	18-75 VDC	3.3 VDC	0 mA	20 A	30 mA	1667 mA	82.5	20000uF
CHB100W-48S05	18-75 VDC	5.0 VDC	0 mA	20 A	30 mA	2422 mA	86	20000uF
CHB100W-48S12	18-75 VDC	12 VDC	0 mA	8.3 A	30 mA	2371 mA	87.5	8300uF
CHB100W-48S15	18-75 VDC	15 VDC	0 mA	6.7 A	30 mA	2379 mA	88	6700uF
CHB100W-48S24	18-75 VDC	24 VDC	0 mA	4.17 A	30 mA	2343 mA	89	2200uF
CHB100W-48S28	18-75 VDC	28 VDC	0 mA	3.57 A	50 mA	2422 mA	86	2200uF
CHB100W-48S48	18-75 VDC	48 VDC	0 mA	2.08 A	30 mA	2462 mA	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 (note4&5)

Input Filter ..... Pi Type

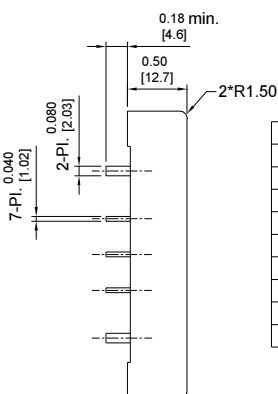
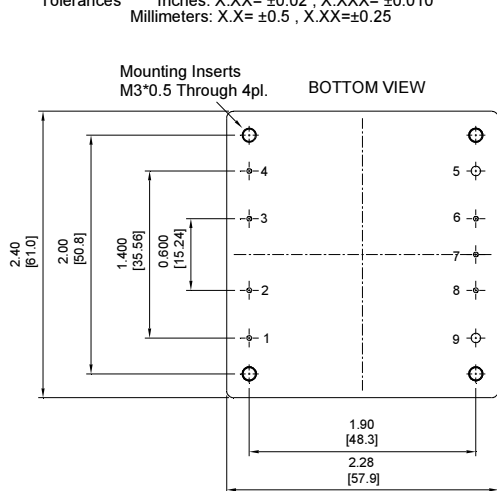
## OUTPUT SPECIFICATIONS:

Voltage Accuracy (note7)	±1.5% max.
Voltage Accuracy for 28V Models	±1.0% max.
Transient Response: 25% Step Load Change	<500µs
External Trim Adj. Range	±10%
Ripple & Noise, 20MHz BW (note3)	
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.
28V	100mV RMS max., 280mV pk-pk max.
48V	200mV RMS max., 480mV pk-pk max.
Temperature Coefficient	±0.03%/°C
Short Circuit Protection	Continuous
Line Regulation (note1)	±0.2% max.
Load Regulation (note2)	±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	+V Input
2	ON/OFF
3	CASE
4	-V Input
5	-VOutput
6	-Sense
7	Trim
8	+Sense
9	+VOutput

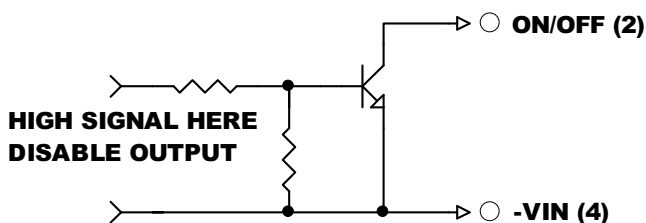
## GENERAL SPECIFICATIONS:

Efficiency	See Table
Isolation Voltage	Input/Output, Input/Case, 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 Load ... 700Khrs typ.
Dimensions	2.28x2.40x0.50 inches (57.9x61.0x12.7 mm)
Case Material	Aluminum
Weight	95g

## NOTE :

1. Measured from high line to low line.
2. Measured from full load to zero load.
3. Output ripple and noise measured with 10uF tantalum and 1uF ceramic capacitor across output. (48V: 0.1uF ceramic cap. only)
4. Logic Compatibility ..... open collector ref to -input  
 Module on ..... >3.5VDC or open circuit  
 Module off ..... <1.8VDC
5. Suffix "N" to the model number with negative logic remote on/off  
 Module on ..... <1.8VDC  
 Module off ..... >3.5VDC or open circuit
6. Suffix "-C" to the model number with clear mounting insert. (3.2mm DIA.)
7. Require a 47uF aluminum capacitor connected between +Vout and -Vout for 48Vout models.

## REMOTE ON/OFF CONTROL



## EXTERNAL OUTPUT TRIM

