




# CHB100 SERIES

## 50 TO 100 WATT WIDE INPUT DC-DC CONVERTERS SINGLE OUTPUT



### FEATURES

- \* 50 - 100W Isolated Output
- \* Efficiency to 89%
- \* 500KHz Switching Frequency
- \* 2 : 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
- \* Without Tantalum Capacitor inside  
(V2.X Only, with  Label)



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	Capacitor Load max.
			MIN.	MAX.	NO LOAD	FULL LOAD		
CHB100-24S25	18-36 VDC	2.5 VDC	0mA	20A	50 mA	2637 mA	79	20000uF
CHB100-24S33	18-36 VDC	3.3 VDC	0mA	20A	50 mA	3313 mA	83	20000uF
CHB100-24S05	18-36 VDC	5 VDC	0mA	20A	50 mA	4960 mA	84	20000uF
CHB100-24S12	18-36 VDC	12 VDC	0mA	8.3A	50 mA	4770 mA	87	8300uF
CHB100-24S15	18-36 VDC	15 VDC	0mA	6.7A	50 mA	4758 mA	88	6700uF
CHB100-24S24	18-36 VDC	24 VDC	0mA	4.17A	50 mA	4793 mA	87	4170uF
CHB100-48S25	36-75 VDC	2.5 VDC	0mA	20A	50 mA	1302 mA	80	20000uF
CHB100-48S33	36-75 VDC	3.3 VDC	0mA	20A	50 mA	1676 mA	82	20000uF
CHB100-48S05	36-75 VDC	5 VDC	0mA	20A	50 mA	2422 mA	86	20000uF
CHB100-48S12	36-75 VDC	12 VDC	0mA	8.3A	50 mA	2331 mA	89	8300uF
CHB100-48S15	36-75 VDC	15 VDC	0mA	6.7A	50 mA	2352 mA	89	6700uF
CHB100-48S24	36-75 VDC	24 VDC	0mA	4.17A	50 mA	2369 mA	88	4170uF

NOTE: 1. Nominal Input Voltage 24 or 48VDC

# SPECIFICATIONS

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

## INPUT SPECIFICATIONS:

Input Voltage Range..... 24V.....18-36V  
 48V.....36-75V  
 Input Surge Voltage (100ms max.) ..... 24V ..... 50Vdc max.  
 48V ..... 100Vdc max.

### Undervoltage lockout:

24Vin ..... power up -->17V, power down ---->16V  
 48Vin ..... power up -->34V, power down ---->32.5V  
 Positive Logic Remote ON/OFF (note 3 & 4 )  
 Input Filter ..... PI Type

## OUTPUT SPECIFICATIONS:

Voltage Accuracy: ..... ±1% max.  
 Transient Response:25% Step Load Change .....<500u sec.  
 External Trim Adj. Range .....  
 ± 1 0 %  
 Ripple & Noise, 20MHz BW(note 5)  
 2.5V & 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.

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 ..... 5ms Typ.

### CASE HB

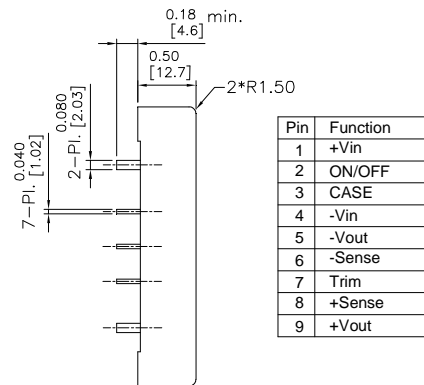
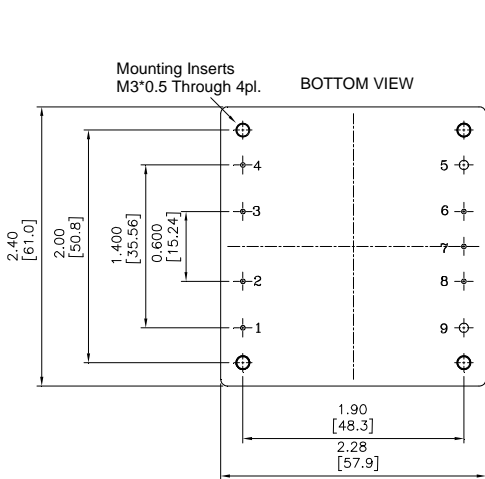
All Dimensions In Inches(mm)  
 Tolerances Inches: X.XX= ±0.02 , X.XXX= ±0.010  
 Millimeters: X.X= ±0.5 , X.XX=±0.25

## GENERAL SPECIFICATIONS:

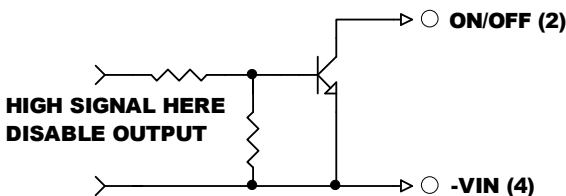
Efficiency ..... See Table  
 Isolation Voltage ..... Input/Output ..... 1500VDC min.  
 Input/Case ..... 1500VDC min.  
 Output/Case ..... 1500VDC min.  
 Isolation Resistance ..... 10<sup>7</sup> ohm min.  
 Isolation Capacitance ..... 1000pF Typ.  
 Switching Frequency ..... 500KHz Typ.  
 Operating Case Temperature ..... -40°C to +100°C  
 Storage Temperature ..... -40°C to +105°C  
 Thermal Shutdown, Case Temp. .... 100°C Typ.  
 Humidity ..... 95% RH max. Non condensing  
 MTBF ..... MIL-STD-217F, GB, 25°C, Full Load ..... 900khrs 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. Logic Compatibility .... Open Collector ref to -Input  
 Module ON ..... Open Circuit  
 Module OFF ..... < 0.8Vdc
4. Suffix "N" to the Model Number with Negative Logic Remote ON/OFF
5. Output Ripple and Noise measured with 10uF tantalum and 1uF ceramic capacitor across output
6. Suffix "-C" to the Model Number with Clear Mounting Insert (3.2mm DIA.)



## REMOTE ON/OFF CONTROL



## EXTERNAL OUTPUT TRIM

