




# CHB100 SERIES

## 66 - 100 WATT WIDE INPUT DC-DC CONVERTERS SINGLE OUTPUT



### FEATURES

- \* 66 - 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
  - \* 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		
CHB100-24S33	18-36 VDC	3.3 VDC	0 mA	20 A	50 mA	3313 mA	83	20000uF
CHB100-24S05	18-36 VDC	5 VDC	0 mA	20 A	50 mA	4960 mA	84	20000uF
<b>CHB100-24S12</b>	18-36 VDC	12 VDC	0 mA	8.3 A	50 mA	4770 mA	87	8300uF
CHB100-24S15	18-36 VDC	15 VDC	0 mA	6.7 A	50 mA	4758 mA	88	6700uF
CHB100-24S24	18-36 VDC	24 VDC	0 mA	4.17 A	50 mA	4793 mA	87	4170uF
CHB100-48S33	36-75 VDC	3.3 VDC	0 mA	20 A	50 mA	1676 mA	82	20000uF
CHB100-48S05	36-75 VDC	5 VDC	0 mA	20 A	50 mA	2422 mA	86	20000uF
CHB100-48S12	36-75 VDC	12 VDC	0 mA	8.3 A	50 mA	2331 mA	89	8300uF
CHB100-48S15	36-75 VDC	15 VDC	0 mA	6.7 A	50 mA	2352 mA	89	6700uF
CHB100-48S24	36-75 VDC	24 VDC	0 mA	4.17 A	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.  
 Under Voltage Lockout:  
 24Vin ..... Power Up ..... 17V, Power Down ..... 16V  
 48Vin ..... Power Up ..... 34V, Power Down ..... 32.5V

Positive Logic Remote On/Off (note3&4)

Input Filter ..... Pi Type

## OUTPUT SPECIFICATIONS:

Voltage Accuracy ..... ±1.0% max.  
 Transient Response:25% Step Load Change ..... <500µs  
 External Trim Adj. Range ..... ±10%  
 Ripple & Noise, 20MHz BW (note5)  
 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 max.  
 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 ..... 5ms typ.

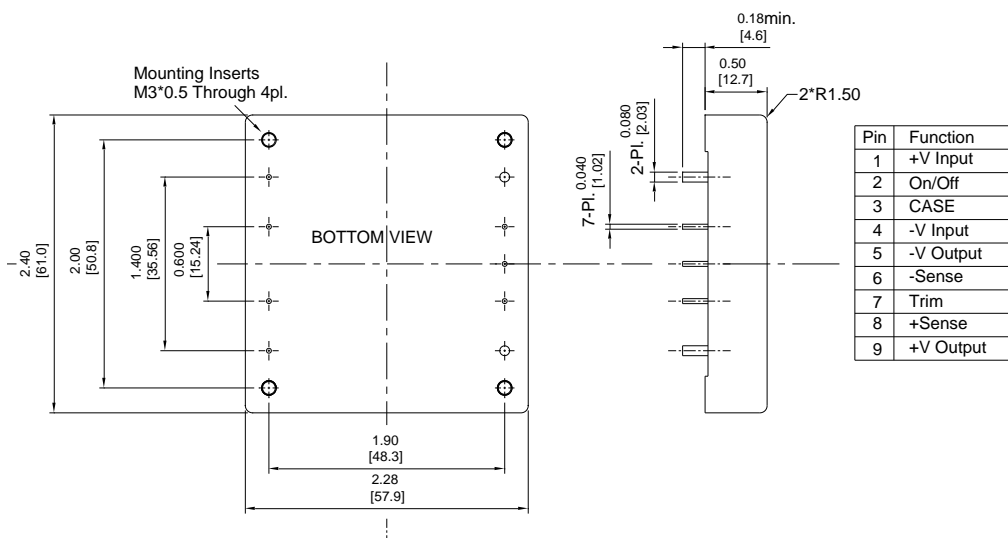
## GENERAL SPECIFICATIONS:

Efficiency ..... See Table  
 Isolation Voltage ..... Input/Output, Input/Case, Output/Case ..... 1500VDC min.  
 Isolation Resistance ..... 10<sup>7</sup> ohm min.  
 Isolation Capacitance ..... 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-HDBK-217F, GB, 25°C, Full Load ..... 900Khrs typ.  
 Dimensions ..... 2.28×2.40×0.50 inches (57.9×61.0×12.7 mm)  
 Case Material ..... Aluminum  
 Weight ..... 95g

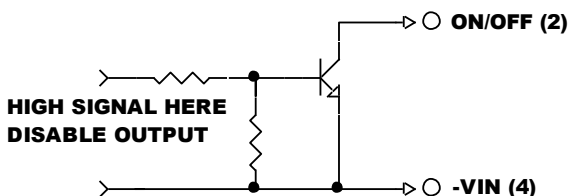
## NOTE:

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 to < 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.)

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



## REMOTE ON/OFF CONTROL



## EXTERNAL OUTPUT TRIM

