



# CHB100-110S SERIES

## 100 WATT

## DC-DC CONVERTERS



### FEATURES

- \* 100W Isolated Output
- \* Efficiency to 89%
- \* Low No Load Input Power
- \* 3:1 Input Range
- \* Regulated Outputs
- \* Remote On/Off
- \* Over Temperature Protection
- \* Over Voltage/Current Protection
- \* Continuous Short Circuit Protection
- \* Half Brick Size meet industrial standard
- \* Meet EN50155 With External Circuits
- \* Shock & Vibration Meet EN50155 (EN61373)
- \* Fire & Smoke meet EN45545-2
- \* 3000m Operating Altitude
- \* Meet UL60950-1
- \* LVD Approval



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	CAPACITOR LOAD MAX.
			MIN.	MAX.	NO LOAD	FULL LOAD		
CHB100-110S12	66-160 VDC	12 VDC	0 mA	8.3 A	5 mA	1050 mA	86.5	8300 $\mu$ F
CHB100-110S15	66-160 VDC	15 VDC	0 mA	6.7 A	5 mA	1040 mA	87.5	4170 $\mu$ F
CHB100-110S24	66-160 VDC	24 VDC	0 mA	4.17 A	5 mA	1040 mA	87.5	4170 $\mu$ F
CHB100-110S48	66-160 VDC	48 VDC	0 mA	2.08 A	5 mA	1020 mA	89	1500 $\mu$ F

NOTE: 1. Nominal Input Voltage 110VDC

# Specifications

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

## INPUT SPECIFICATIONS:

Input Voltage Range	110V	66-160V
Input Surge Voltage (100ms max.)		180Vdc max.
Under Voltage Lockout	Power up	62V
	Power down	56V
Positive Logic Remote On/Off:		
Logic Compatibility		Open Collector ref to -Input
Module On		Open Circuit
Module Off		0 to < 1.8Vdc
Input Filter		PI Type

## OUTPUT SPECIFICATIONS:

Voltage Accuracy	±1.0% max.
Transient Response: 25% Step Load Change	<500us
External Trim Adj. Range	±10%
Ripple & Noise, 20MHz BW(note3)	
12V, 15V	60mVRMS, 150mVpk-pk max.
24V	100mVRMS, 240mVpk-pk max.
48V	200mVRMS, 480mVpk-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% ~160% Nominal Output
Start up time	120ms typ.

## GENERAL SPECIFICATIONS:

Efficiency	See Table
Isolation Voltage	Input/Output 3000V <sub>rms</sub> min.
	Input/Case 1500V <sub>rms</sub> min.
	Output/Case 500V <sub>rms</sub> min.
Isolation Resistance	10 <sup>9</sup> Ohm min.
Isolation Capacitance	500pF 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 830Khrs typ.
Safety	meet UL60950-1
EMC(note 6)	EN50155(EN50121-3-2) with external filter
Shock/Vibration	EN50155 (EN 61373)
Environmental	meet EN50155(EN60068-2-1)
Dimensions	2.28x2.40x0.50 Inches (57.9x61.0x12.7 mm)
Case Material	Aluminum Baseplate with Plastic Case
Weight	95g

## NOTE:

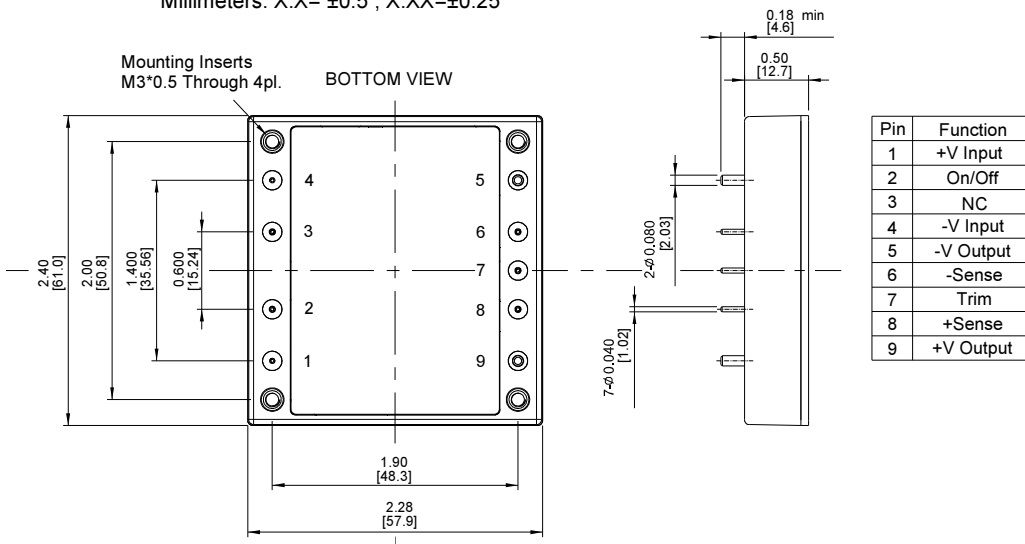
1. Measured from high line to low line.
2. Measured from full load to zero load.
3. Output ripple and noise measured with 10uF tantalum and 1uF ceramic capacitor across output.(48V: 1uF ceramic cap. only).
4. An external input capacitor 47uF for all models are recommended to reduce input ripple voltage.
5. Require a 47uF aluminum capacitor connected between +Vout and -Vout for 48Vout models.
6. For information about EN50155 and RIA12, refer to application note.

### CASE HB

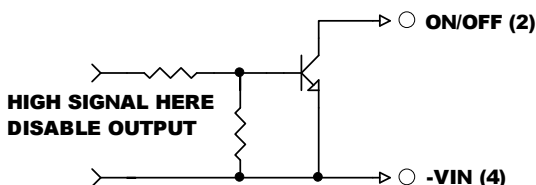
All Dimensions In Inches(mm)

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

