



## CHB300-300S SERIES 300 WATT 2:1 INPUT DC-DC CONVERTERS



### FEATURES

- \* 300W Isolated Output
- \* Efficiency to 90%
- \* Fixed Switching Frequency
- \* Input Under Voltage Protection
- \* Over Temperature Protection
- \* Low No Load Power Consumption
- \* Over Voltage/Current Protection
- \* Remote On/Off
- \* Half-Brick Size Meet Industrial standard
- \* UL60950-1 2<sup>nd</sup> (Reinforced Insulation) Approval
- \* CB Test Certificate IEC60950-1
- \* Safety Meets IEC/EN/UL 62368-1



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% Eff.	CAPACITIVE LOAD MAX.
			MIN.	MAX.	NO LOAD	FULL LOAD		
CHB300-300S05	180-425 VDC	5 VDC	0 mA	60 A	10 mA	1125 mA	89	10000uF
CHB300-300S12	180-425 VDC	12 VDC	0 mA	25 A	10 mA	1135 mA	88	10000uF
CHB300-300S24	180-425 VDC	24 VDC	0 mA	12.5 A	10 mA	1110 mA	90	6000uF
CHB300-300S28	180-425 VDC	28 VDC	0 mA	10.7 A	10 mA	1110 mA	90	6000uF
CHB300-300S48	180-425 VDC	48 VDC	0 mA	6.25 A	10 mA	1110 mA	90	3000uF

#### NOTE:

1. Nominal Input Voltage 300 VDC.
2. An External Input Capacitor 150uF for All Models are Recommended to Reduce Input Ripple Voltage.
3. Measure at Nominal Input Voltage.

# SPECIFICATIONS

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

## INPUT SPECIFICATIONS:

Input Voltage Range	300V	180-425V
Under voltage lockout	300Vin power up	170V
	300Vin power down	160V

Positive Logic Remote On/Off (note5&6)

Input Filter ..... Pi Type

## OUTPUT SPECIFICATIONS:

Voltage Accuracy	±1.0% max.
Transient Response:25% Step Load Change	<250us
External Trim Adj. Range	+10%, -20%
Ripple & Noise, 20MHz BW (note3)	
5V	60mV RMS max., 120mV pk-pk max.
12V	60mV RMS max., 150mV pk-pk max.
24V	120mV RMS max., 240mV pk-pk max.
28V	150mV RMS max., 280mV pk-pk max.
48V	200mV RMS max., 480mV pk-pk max.

Temperature Coefficient ..... ±0.02%/°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 ..... 105%-140% Nominal Output

Start up Time ..... 300ms typ.

## GENERAL SPECIFICATIONS:

Efficiency.....See Table

Isolation Voltage .....Input/Output..... 3000VAC min.

Input/Case.....2500VAC min.

Output/Case..... 500VAC min.

Isolation Resistance ..... 10<sup>8</sup> Ohm min.

Switching Frequency ..... 300KHz 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 ..... 5V ..... 470Khrs typ.

12V..... 590Khrs typ., Others ..... 760Khrs typ.

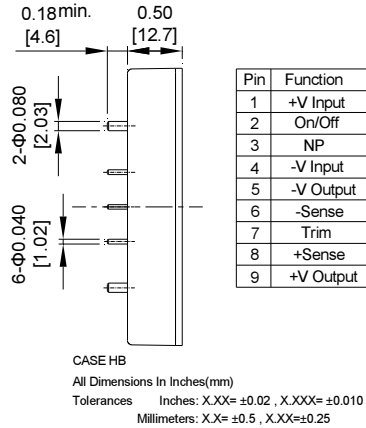
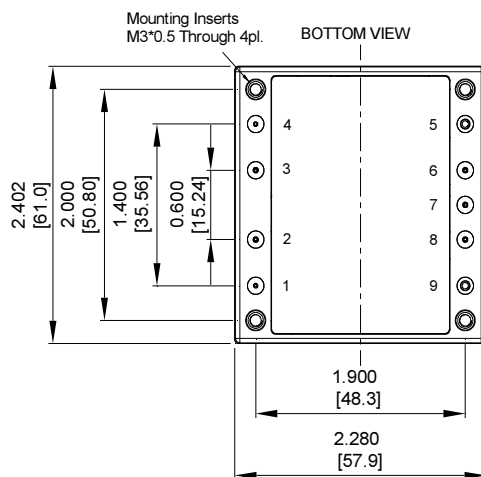
Dimensions ..... 2.28×2.40×0.50 inches (57.9×61.0×12.7 mm)

Case Material ..... Aluminum Baseplate with Plastic Case

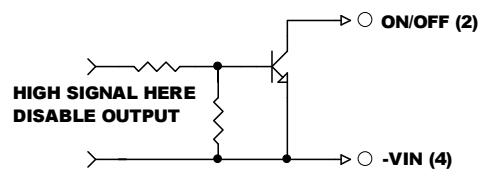
Weight ..... 90g

## NOTE:

- Measured from high line to low line.
- Measured from full load to zero load.
- Output ripple and noise measured with 10uF tantalum capacitor and 1uF ceramic capacitor across output.  
(5V: 47uF polymer tantalum capacitor and 1uF ceramic capacitor across output).  
(48V: 10uF aluminum capacitor and 1uF ceramic capacitor across output).
- Logic compatibility ..... open collector refer to -Input  
Module on ..... >3.5Vdc to 75Vdc or open circuit  
Module off ..... 0 to <1.2Vdc
- Suffix "N" to the model number with negative logic remote on/off  
Module on ..... 0 to <1.2Vdc  
Module off ..... >3.5Vdc to 75Vdc or open circuit



## Remote On/Off Control



## External Output Trim

