



## 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



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	1920 mA	89	10000uF
CHB300-300S12	180-425 VDC	12 VDC	0 mA	25 A	10 mA	1920 mA	88	10000uF
CHB300-300S24	180-425 VDC	24 VDC	0 mA	12.5 A	10 mA	1870 mA	90	6000uF
CHB300-300S28	180-425 VDC	28 VDC	0 mA	10.7 A	10 mA	1870 mA	90	6000uF
CHB300-300S48	180-425 VDC	48 VDC	0 mA	6.25 A	10 mA	1870 mA	90	3000uF

#### NOTE:

1. Nominal Input Voltage 300 VDC.
2. An External Input Capacitor 180uF 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

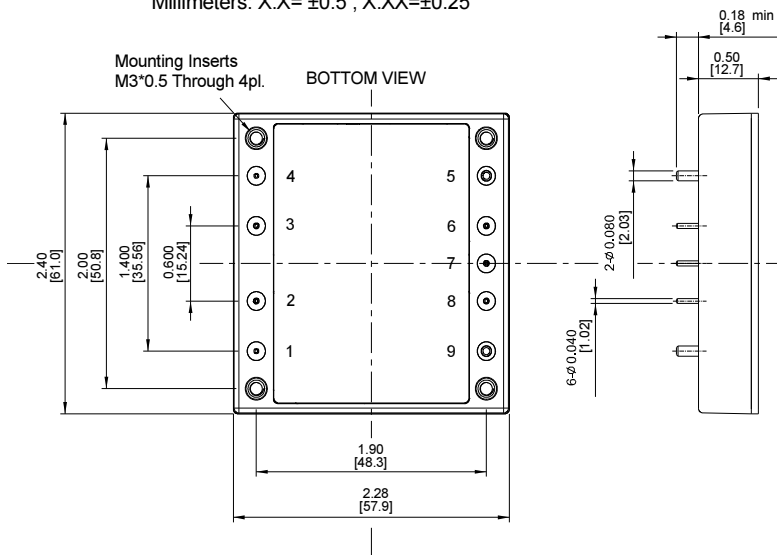
## NOTE :

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 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).
4. Logic compatibility ..... open collector refer to -Input  
Module on ..... >3.5Vdc to 75Vdc or open circuit  
Module off ..... 0 to <1.2Vdc
5. 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

## CASE HB

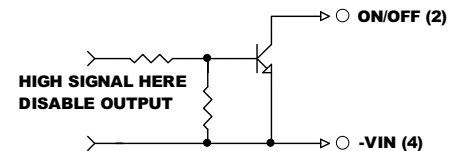
All Dimensions In Inches(mm)

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	NP
4	-V Input
5	-V Output
6	-Sense
7	Trim
8	+Sense
9	+V Output

## Remote On/Off Control



## External Output Trim

