

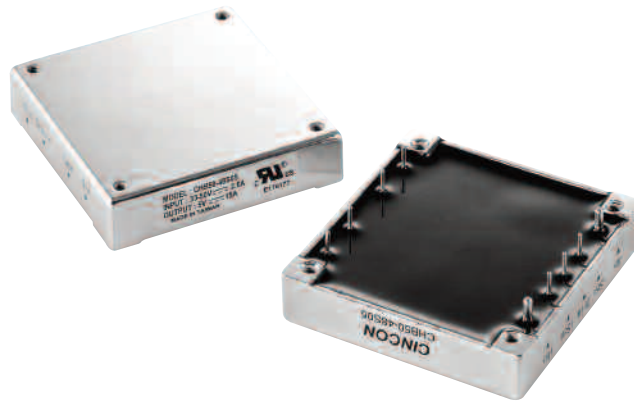
CHB Series

25-350 WATTS - DC/DC SINGLE OUTPUT

DC-DC PCB MOUNTED CONVERTERS & POWER MODULES

FEATURES

- Isolated Output
- Half Brick Package
- Regulated Outputs
- Five-Sided Shield Metal Case
- Continuous Short Circuit Protection
- Efficiency to 92%



SPECIFICATIONS

INPUT		
Voltage range	12V	9-18V
	24V	18-36V
	48V	36-75V
Under voltage lockout	12Vin power up	8.8V
	power down	8V
	24Vin power up	17V
	power down	16V
48Vin power up		34V
	power down	32.5V
Remote On/Off control	ON/OFF pins 2 & 4, positive logic	
Input Filter	Pi type	
Isolation	Input/Output	1500VDC min.
	Input/Case	1500VDC min.
	Output/Case	1500VDC min.
Isolation resistance	107 ohm min	
OUTPUT		
Output voltage	See table	
Output current	See table	
Voltage accuracy	±1% max	
Transient response	25% Step Load Change, <500µ sec	
External trim adj. range	±10%	
Ripple and noise 20MHz BW	2.5V & 3.3V & 5V	20mV RMS., max.
		75mV pk-pk, max
	12V & 15V	30mV RMS., max.
		100mV pk-pk, max.
24V	100mV RMS., max. 240mV pk-pk, max.	

Temperature coefficient	±0.03%/°C
Short circuit protection	Continuous
Line regulation 1	±0.2% max.
Load regulation 2	±0.2% max.
Over voltage protection trip range	115-140%, Vo nominal
Current limit	110% ~140% Nominal Output
Efficiency	See table
Switching frequency	12/24 Vin, 400KHz, Typ, CHB50 models
	48 Vin, 300KHz, Typ, CHB50 models
	24/48 Vin, 500KHz, Typ. CHB100 models

ENVIRONMENTAL

Operating temperature	-40°C to 100°C base plate
Storage temperature	-55°C to +105°C
Thermal shutdown	100°C, case temperature

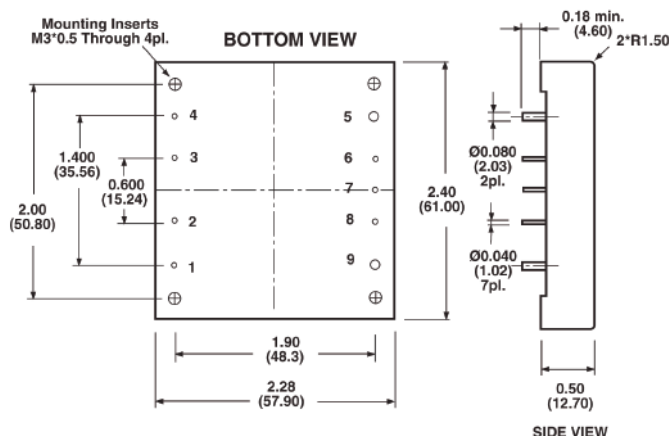
MECHANICAL

Dimensions	57.9 x 61.0 x 12.7 mm
Weight	88 - 95g, model dependant

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.

MODULE OUT LINE DRAWING



PIN CONNECTION

PIN	FUNCTION
1	+V Input
2	ON/OFF
3	CASE
4	-V Input
5	-V Output
6	-Sense
7	Trim
8	+Sense
9	+Vout

NOTE: Heatsink and cooling details contact Powerbox Sales

CHB Series

25-350 WATTS - DC/DC SINGLE OUTPUT

SELECTION TABLES

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT			SIZE
				NO LOAD	FULL LOAD	% EFF	
CHB50-12S25		2.5 VDC	10A		2740 mA	76	
CHB50-12S33		3.3 VDC	10A		3525 mA	78	
CHB50-12S05		5 VDC	10A		5145 mA	81	
CHB50-12S12	9-18 VDC	12 VDC	4.16A	50 mA	4950 mA	84	Half-Brick
CHB50-12S15		15 VDC	3.33A		4950 mA	84	
CHB50-12S24		24 VDC	2.08A		4950 mA	84	
CHB50-24S25		2.5 VDC	10A		1353 mA	77	
CHB50-24S33		3.3 VDC	10A		1740 mA	79	
CHB50-24S05	18-36 VDC	5 VDC	10A	50 mA	2540 mA	82	Half-Brick
CHB50-24S12		12 VDC	4.16A		2450 mA	85	
CHB50-24S15		15 VDC	3.33A		2450 mA	85	
CHB50-24S24		24 VDC	2.08A		2419 mA	86	
CHB50-48S25		2.5 VDC	10A		676 mA	77	
CHB50-48S33		3.3 VDC	10A		870 mA	79	
CHB50-48S05	36-75 VDC	5 VDC	10A	50 mA	1250 mA	82	
CHB50-48S12		12 VDC	4.16A		1220 mA	85	Half-Brick
CHB50-48S15		15 VDC	3.33A		1220 mA	85	
CHB50-48S24		24 VDC	2.08A		1209 mA	86	
CHB75-12S25		2.5 VDC	15A		4110 mA	76	
CHB75-12S33		3.3 VDC	15A		5290 mA	78	
CHB75-12S05		5 VDC	15A		7715 mA	81	
CHB75-12S12	9-18 VDC	12 VDC	6.25A	50 mA	7440 mA	84	Half-Brick
CHB75-12S15		15 VDC	5A		7440 mA	84	
CHB75-12S24		24 VDC	3.13A		7440 mA	84	
CHB75-24S25		2.5 VDC	15A		2029 mA	77	
CHB75-24S33		3.3 VDC	15A		2610 mA	79	
CHB75-24S05	18-36 VDC	5 VDC	15A	50 mA	3810 mA	82	Half-Brick
CHB75-24S12		12 VDC	6.25A		3675 mA	85	
CHB75-24S15		15 VDC	5A		3675 mA	85	
CHB75-24S24		24 VDC	3.13A		3640 mA	86	
CHB75-48S25		2.5 VDC	15A		1015 mA	77	
CHB75-48S33		3.3 VDC	15A		1305 mA	79	
CHB75-48S05	36-75 VDC	5 VDC	15A	50 mA	1883 mA	83	
CHB75-48S12		12 VDC	6.25A		1838 mA	85	Half-Brick
CHB75-48S15		15 VDC	5A		1838 mA	85	
CHB75-48S24		24 VDC	3.13A		1820 mA	86	
CHB100-24S25		2.5 VDC	20A	50 mA	2705 mA	77	
CHB100-24S33		3.3 VDC	20A		3480 mA	79	
CHB100-24S05	18-36 VDC	5 VDC	20A		5020 mA	83	Half-Brick
CHB100-24S12		12 VDC	8.3A		4880 mA	85	
CHB100-24S15		15 VDC	6.7A		4925 mA	85	
CHB100-24S24		24 VDC	4.17A		4905 mA	85	
CHB100-48S25		2.5 VDC	20A	50 mA	1335 mA	78	
CHB100-48S33		3.3 VDC	20A		1720 mA	80	
CHB100-48S05	36-75 VDC	5 VDC	20A		2480 mA	84	
CHB100-48S12		12 VDC	8.3A		2442 mA	85	Half-Brick
CHB100-48S15		15 VDC	6.7A		2463 mA	85	
CHB100-48S24		24 VDC	4.17A		2463 mA	85	
CHB150-48S25		2.5 VDC	30A		2.1A	74	
CHB150-48S33		3.3 VDC	30A		2.6A	79	
CHB150-48S05		5 VDC	30A		3.7A	83	Half-Brick
CHB150-48S12	36-75 VDC	12 VDC	12.5A	25 mA	3.6A	85	
CHB150-48S15		15 VDC	10A		3.6A	85	
CHB150-48S24		24 VDC	6.25A		3.6A	85	
CHB350-24S3V3		3.3 VDC	70A	130mA	10.94A	88	
CHB350-24S05		5 VDC	70A	250mA	16.29A	89.5	
CHB350-24S12	18-36VDC	12 VDC	29.2A	220mA	15.96A	91.5	Half-Brick
CHB350-24S24		24 VDC	14.6A	40mA	16.22A	90	
CHB350-24S28		28 VDC	12.5A	50mA	16.03A	91	
CHB350-48S3V3		3.3 VDC	70A	80mA	5.41A	89	
CHB350-48S05		5 VDC	70A	120mA	8.01A	91	
CHB350-48S12	36-75VDC	12 VDC	29.2A	100mA	7.89A	92.5	Half-Brick
CHB350-48S24		24 VDC	14.6A	40mA	7.98A	91.5	
CHB350-48S28		28 VDC	12.5A	30mA	7.88A	92.5	

Note 1: Capacity load max CHB350, 28Voutput 7000µF, 3.3V,5V,12,24Voutput 10000µF

Note 2: The output terminal of 28V models require a minimum capacitor 100 µF to maintain specific regulation