

# CHB200W

S E R I E S

## 132-200 WATT 4 : 1 INPUT DC-DC CONVERTERS



### Features

- 132-200W Isolated Output
- Half Brick Package
- 4 : 1 Input Range
- Regulated Output
- Efficiency to 89%
- Input Under Voltage Protection
- Over Temperature Protection
- Over Voltage/Current Protection
- Remote ON/OFF Control
- 1500VDC Isolation
- Continuous Short Circuit Protection
- CE Mark Meets 2004/108/EC
- UL60950-1 Approval

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	Capacitor Load max.
			MIN.	MAX.	NO LOAD	FULL LOAD		
CHB200W-24S3V3	10-36 VDC	3.3 VDC	0 mA	50 A	130 mA	7.90 A	87	10000µF
CHB200W-24S05	10-36 VDC	5.0 VDC	0 mA	40 A	150 mA	9.58 A	87	10000µF
CHB200W-24S12	10-36 VDC	12 VDC	0 mA	16.7 A	50 mA	9.71 A	86	2200µF
CHB200W-24S15	10-36 VDC	15 VDC	0 mA	13.3 A	50 mA	9.56 A	87	2200µF
CHB200W-24S24	10-36 VDC	24 VDC	0 mA	8.3 A	45 mA	9.54 A	87	2200µF
CHB200W-24S48	10-36 VDC	48 VDC	0 mA	4.2 A	60 mA	9.77 A	86	2200µF <sup>(2)</sup>
CHB200W-48S3V3	18-75 VDC	3.3 VDC	0 mA	40 A	80 mA	3.13 A	88	10000µF
CHB200W-48S05	18-75 VDC	5.0 VDC	0 mA	40 A	80 mA	4.68 A	89	10000µF
CHB200W-48S12	18-75 VDC	12 VDC	0 mA	16.7 A	60 mA	4.74 A	88	2200µF
CHB200W-48S15	18-75 VDC	15 VDC	0 mA	13.3 A	60 mA	4.72 A	88	2200µF
CHB200W-48S24	18-75 VDC	24 VDC	0 mA	8.3 A	60 mA	4.72 A	88	2200µF
CHB200W-48S48	18-75 VDC	48 VDC	0 mA	4.2 A	50 mA	4.83 A	87	2200µF <sup>(2)</sup>

NOTE : 1. Nominal Input Voltage 24, 48 VDC

2. The output terminal of 48Vout models required a minimum capacitor 47µF to maintain specified regulation.

## Specifications

### INPUT SPECIFICATIONS:

Input Voltage Range.....	24V.....	10-36V
	48V.....	18-75V
Input Surge Voltage (100ms max.) .....	24V .....	50Vdc max.
	48V .....	100Vdc max.
Undervoltage lockout .....	24Vin power up.....	9.5V
	24Vin power down .....	8.5V
	48Vin power up.....	17V
	48Vin power down .....	16V

Positive Logic Remote ON/OFF<sup>4,5</sup>

Input Filter ..... PI Type

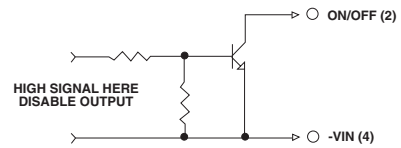
### OUTPUT SPECIFICATIONS:

Voltage Accuracy.....	±1.5% max
Transient Response: 25% Step Load Change.....	< 500µs
External Trim Adj. Range <sup>6</sup> .....	±10%
Ripple & Noise <sup>3</sup> , 20MHz BW <sup>3</sup>	
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.
48V.....	150mV RMS max./240mV pk-pk max.
Temperature Coefficient.....	±0.03%/°C max.
Short Circuit Protection.....	Continuous
Line Regulation <sup>1</sup> .....	±0.2% max.
Load Regulation <sup>2</sup> .....	±0.2% max.
Over Voltage Protection Trip Range, % Vo nom.....	115-140%
Current Limit.....	110 - 150% Nominal Output
Start up time .....	120ms typ.

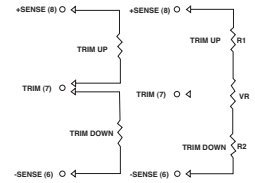
### GENERAL SPECIFICATIONS:

Efficiency.....	See Table
Isolation Voltage .....	Input/Output..... 1500VDC min.
	Input/Case..... 1500VDC min.
	Output/Case..... 1500VDC min.
Isolation Resistance .....	10 <sup>7</sup> Ohms
Isolation Capacitance .....	2000pF typ.
Switching Frequency .....	250KHz typ.
Operating Case Temperature.....	-40°C to +100°C
Storage Temperature .....	-55°C to +105°C
Thermal Shutdown, Case Temp.....	110°C typ.
Humidity .....	95% RH max. Non condensing
MTBF .....	MIL-STD-217F, GB, 25°C, Full Load ..... 600Khrs typ.
Dimensions .....	2.28x2.4x0.52 inches
	(57.9x61.0x13.2 mm)
Case Material.....	Aluminum Baseplate with Plastic Case
Weight .....	114g

### Remote On/Off Control



### External Output Trim



### NOTE:

1. Measured From High Line to low Line.
2. Measured From Full Load to Zero Load
3. Output Ripple and Noise measured with 10µF tantalum and 1µF Ceramic capacitor across output
4. Logic Compatibility.....Open Collector ref to low Input  
Module ON .....>3.5Vdc to 75Vdc or Open Circuit  
Module OFF .....<1.2Vdc
5. Suffix "N" to the model Number with Negative Logic Remote ON/OFF  
Module ON .....<1.2Vdc  
Module OFF .....>3.5Vdc to 75Vdc or Open Circuit
6. Trim-up.....Connect a Resistor Between the Trim Pin and+Sense  
Trim-Down.....Connect a Resistor Between the Trim Pin and-Sense
7. Suffix "-C" to the Model Number with Clear Mounting Insert (3.2mm DIA.)
8. An external input capacitor 470µF for 24Vin or 47µF for 48Vin models are recommended to reduce input ripple voltage.

### 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	+V Output

## CASE HB

All Dimensions In Inches(mm)  
Tolerance Inches: x.xx= ±0.02, x.xxx= ±0.010  
Millimeters: x.x= ±0.5, x.xx= ±0.25

