



CHB200W SERIES

165 - 200 WATT 4:1 INPUT DC-DC CONVERTERS

FEATURES

- * 165-200W 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
- * UL60950-1 Approval (Except 28 Vout & CHB200W-48S3V3)



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	3.3VDC	0 mA	50 A	130 mA	7.90 A	87	10000μF
CHB200W-24S05	10-36 VDC	5.0VDC	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-24S28	10-36 VDC	28 VDC	0 mA	7.14 A	55 mA	9.41 A	88.5	2200μF ⁽²⁾
CHB200W-24S48	10-36 VDC	48 VDC	0 mA	4.2 A	60 mA	9.77 A	86	2200μF ⁽³⁾
CHB200W-48S3V3	18-75 VDC	3.3VDC	0 mA	50 A	80 mA	3.91 A	88	10000μF
CHB200W-48S05	18-75 VDC	5.0VDC	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-48S28	18-75 VDC	28 VDC	0 mA	7.14 A	50 mA	4.68 A	89	2200μF ⁽²⁾
CHB200W-48S48	18-75 VDC	48 VDC	0 mA	4.2 A	50 mA	4.83 A	87	2200μF ⁽³⁾

NOTE:

1. Nominal Input Voltage 24, 48 VDC
2. The Output Terminal of 28Vout Models Required a Minimum Capacitor 100uF to Maintain Specified Regulation.
3. The Output Terminal of 48Vout Models Required a Minimum Capacitor 47uF to Maintain Specified Regulation.

SPECIFICATIONS

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

INPUT SPECIFICATIONS:

Input Voltage Range	24V	10-36V
	48V	18-75V
Input Surge Voltage (100ms max.)	24V	50Vdc max.
	48V	100Vdc max.
Under Voltage Lockout	24Vin Power Up	9.5V
	24Vin Power Down	8.5V
	48Vin Power Up	17V
	48Vin Power Down	16V
Positive Logic Remote On/Off (see note 4&5)		
Input Filter (note 8)	Pi Type	

OUTPUT SPECIFICATIONS:

Voltage Accuracy	±1.0% max.
Transient Response: 25% Step Load Change	<500µs
External Trim Adj. Range (note 6)	±10%
Ripple & Noise, 20MHz BW (note 3)	
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.
28V	100mV RMS max., 280mV pk-pk max.
48V	150mV RMS max., 480mV pk-pk max.
Temperature Coefficient	±0.03%/°C
Short Circuit Protection	Continuous
Line Regulation (note 1)	±0.2% max.
Load Regulation (note 2)	±0.2% max.
Over Voltage Protection Trip Range, % Vo nom.	115-140%
Current Limit	110%-150% Nominal Output
Start up time	120ms typ.

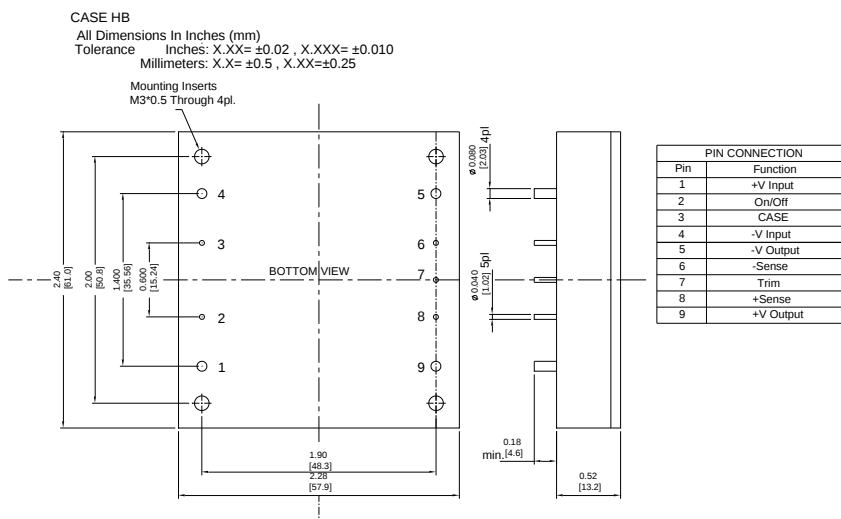
GENERAL SPECIFICATIONS:

Efficiency	See Table
Isolation Voltage ... Input/Output, Input/Case, Output/Case ..	1500VDC min.
Isolation Resistance	10 ⁷ Ohm min.
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-HDBK-217F, GB, 25°C, Full Load 600Khrs typ.
Dimensions	2.28x2.40x0.52 Inches(57.9x61.0x13.2 mm)
Case Material	Aluminum Baseplate with Plastic Case
Weight	114g

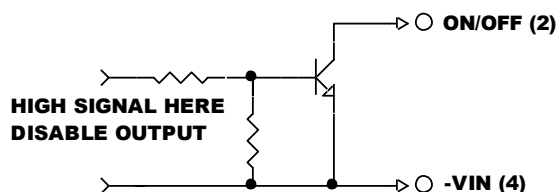
NOTE:

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. (48V: 10µF aluminum and 1µF ceramic capacitor across output).
4. Logic compatibility open collector ref 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
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.

CASE HB



Remote On/Off Control



External Output Trim

