

# CHB150W

S E R I E S

## 99-150 WATT 4 : 1 INPUT DC-DC CONVERTERS SINGLE OUTPUT



### Features

- 99-150W Isolated Output
- Efficiency to 91%
- 250KHz Switching Frequency
- 4 : 1 Input Range
- Regulated Outputs
- Remote ON/OFF
- Over Temperature Protection
- Over Voltage/Current Protection
- Continuous Short Circuit Protection
- Half-Brick size meet industrial standard
- 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		
CHB150W-24S3V3	9-36 VDC	3.3VDC	0mA	30 A	200 mA	4741 mA	87	30000µF
CHB150W-24S05	9-36 VDC	5.0VDC	0 mA	30 A	200 mA	7184 mA	87	30000µF
CHB150W-24S12	9-36 VDC	12 VDC	0 mA	12.5 A	100 mA	7102 mA	88	12500µF
CHB150W-24S15	9-36 VDC	15 VDC	0 mA	10 A	100 mA	7184 mA	87	10000µF
CHB150W-24S24	9-36 VDC	24 VDC	0 mA	6.5 A	100 mA	7386 mA	88	1800µF
CHB150W-48S3V3	18-75 VDC	3.3VDC	0 mA	30 A	100 mA	2344 mA	88	30000µF
CHB150W-48S05	18-75 VDC	5.0VDC	0 mA	30 A	100 mA	3472 mA	90	30000µF
CHB150W-48S12	18-75 VDC	12 VDC	0 mA	12.5 A	50 mA	3434 mA	91	12500µF
CHB150W-48S15	18-75 VDC	15 VDC	0 mA	10 A	50 mA	3472 mA	90	10000µF
CHB150W-48S24	18-75 VDC	24 VDC	0 mA	6.5 A	50 mA	3611 mA	90	2200µF

NOTE : 1. Nominal Input Voltage 24, 48 VDC

## Specifications

### INPUT SPECIFICATIONS:

Input Voltage Range.....	24V.....	9-36V
	48V.....	18-75V
Input Surge Voltage (100ms max.) .....	24V .....	50Vdc max.
	48V .....	100Vdc max.
Undervoltage lockout .....	24Vin power up.....	8.8V
	24Vin power down .....	8.0V
	48Vin power up.....	17V
	48Vin power down .....	16V

Positive Logic Remote ON/OFF<sup>4,5</sup>  
 Input Filter ..... PI Type

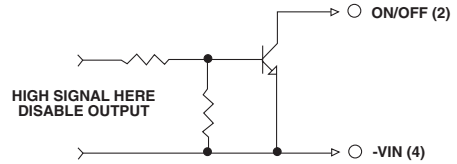
### OUTPUT SPECIFICATIONS:

Voltage Accuracy .....	±1.5% max.
Transient Response : 25% Step Load Change.....	< 500µs
External Trim Adj. Range .....	±10%
Ripple & Noise, 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.
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% -140% Nominal Output
Start up time .....	25ms typ.

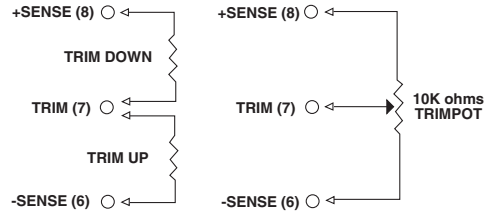
### GENERAL SPECIFICATIONS:

Efficiency.....	See Table
Isolation Voltage .....	Input/Output..... 1500VDC min.
	Input/Case..... 1500VDC min.
	Output/Case..... 1500VDC min.
Isolation Resistance .....	10 <sup>7</sup> ohm min.
Isolation Capacitance .....	1000pF 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 .....
	400Khrs typ.
Dimensions .....	2.28x2.40x0.52 inches
	(57.9x61.0x13.2 mm)
Case Material.....	Aluminum Base Plate with Pastic Case

### Remote On/Off Control



### External Output Trim



### 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

### 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 -Input  
 Module ON ..... > 3.5Vdc or Open Circuit  
 Module OFF ..... < 1.8Vdc
5. Suffix "N" to the Model Number with Negative Logic Remote ON/OFF  
 Module ON ..... < 1.8Vdc  
 Module OFF ..... > 3.5Vdc or Open Circuit
6. Suffix "-C" to the Model Number with Clear Mounting Insert (3.2mm DIA.)
7. An external input capacitor 220µF for 24Vin or 100µF for 48Vin models are recommended to reduce input ripple voltage.

## 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

