

# CHB50

S E R I E S

## 25-50 WATT 1/2 BRICK DC-DC CONVERTERS



### Features

- 25-50W Isolated Output
- Half Brick Package
- Regulated Outputs
- Efficiency to 86%
- 300KHz Switching Frequency
- Five-Sided Shield Metal Case
- Continuous Short Circuit Protection

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF.	SIZE
				NO LOAD	FULL LOAD		
CHB50-12S25	9-18 VDC	2.5 VDC	10A	50 mA	2740 mA	76	Half-Brick
CHB50-12S33		3.3 VDC	10A		3525 mA	78	
CHB50-12S05		5 VDC	10A		5145 mA	81	
CHB50-12S12		12 VDC	4.16A		4950 mA	84	
CHB50-12S15	15 VDC	3.33A	4950 mA	84			
CHB50-12S24	24 VDC	2.08A	4950 mA	84			
CHB50-24S25	18-36 VDC	2.5 VDC	10A	50 mA	1353 mA	77	Half-Brick
CHB50-24S33		3.3 VDC	10A		1740 mA	79	
CHB50-24S05		5 VDC	10A		2540 mA	82	
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	36-75 VDC	2.5 VDC	10A	50 mA	676 mA	77	Half-Brick
CHB50-48S33		3.3 VDC	10A		870 mA	79	
CHB50-48S05		5 VDC	10A		1250 mA	83	
CHB50-48S12		12 VDC	4.16A		1220 mA	85	
CHB50-48S15	15 VDC	3.33A	1220 mA	85			
CHB50-48S24	24 VDC	2.08A	1209 mA	86			

NOTE: 1. Nominal Input Voltage 12, 24 or 48 VDC

### Specifications

**INPUT SPECIFICATIONS:**

Input Voltage Range ..... 12V.....9-18V  
 24V.....18-36V  
 48V.....36-75V  
 Undervoltage lockout ..... 12Vin power up.....8.8V  
 power down.....8V  
 24Vin power up.....17V  
 power down.....16V  
 48Vin power up.....34V  
 power down.....32.5V

Positive Logic Remote ON/OFF<sup>1</sup> ..... PI Type  
 Input Filter ..... PI Type

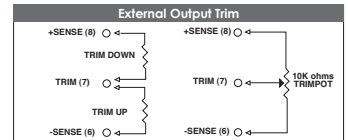
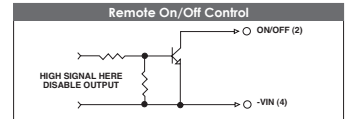
**OUTPUT SPECIFICATIONS:**

Voltage Accuracy ..... ±1% max.  
 Transient Response @25% Step Load Change ..... <500µ sec.  
 External Trim Adj. Range ..... ±10%  
 Ripple & 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 ..... ±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

**GENERAL SPECIFICATIONS:**

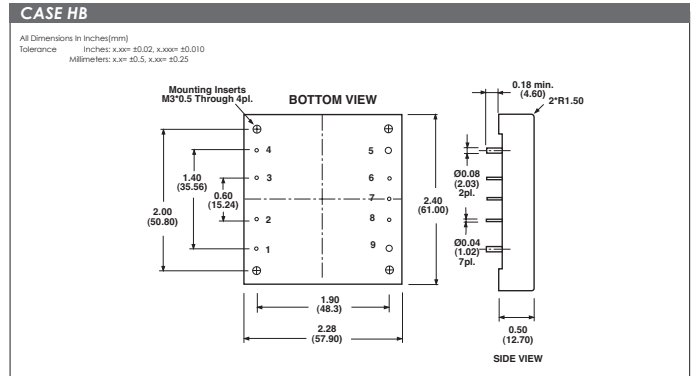
Efficiency ..... See Table  
 Isolation Voltage ..... Input/Output ..... 1500VDC min.  
 Input/Case ..... 1500VDC min.  
 Output/Case ..... 1500VDC min.  
 Isolation Resistance ..... 10<sup>9</sup> ohm min.  
 Switching Frequency ..... (12/24)Vin ..... 400KHz, Typ.  
 48Vin ..... 300KHz, Typ.  
 Operating Case Temperature ..... -40°C to 100°C  
 Storage Temperature ..... -55°C to +105°C  
 Thermal Shutdown, Case Temp. ..... 100°C Typ.  
 Line Regulation ..... 2.28±.40±.50 inches  
 Dimensions ..... (57.9x61.0x12.7 mm)  
 Case Material ..... Aluminum  
 Weight ..... .88g



### 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:**
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 ..... 48VDC
  4. Suffix 'N' to the Model Number with Negative Logic Remote ON/OFF.



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