CHB50 SERIES

25 TO 50 WATT WIDE INPUT DC-DC CONVERTERS SINGLE OUTPUT

E176177

FEATURES

* 25W-50W Isolated Output
* Efficiency to 89%
* 300KHz Switching Frequency
* 2 : 1 Input Range
* Regulated Outputs
* Continuous Short Circuit Protection
* Five-Sided Metal Case
* Half-Brick size meet industrial standard
* CE Mark Meets 2006/95/EC, 93/68/EEC, and 89/336/EEC
* Safety Meets UL60950-1, EN60950-1, and IEC60950-1
* UL60950-1 and EN60950-1 Approval

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	Capacitor Load max.
			MIN.	MAX.	NO LOAD	FULL LOAD		
CHB50-12S25	9 -18 VDC	2.5 VDC	0 mA	10 A	50 mA	2740 mA	76	10000uF
CHB50-12S33	9 -18 VDC	3.3 VDC	0 mA	10 A	50 mA	3481 mA	79	10000uF
CHB50-12S05	9 -18 VDC	5 VDC	0 mA	10 A	50 mA	5020 mA	83	10000uF
CHB50-12S12	9 -18 VDC	12 VDC	0 mA	4.16 A	50 mA	4781 mA	87	4000uF
CHB50-12S15	9 -18 VDC	15 VDC	0 mA	3.33 A	50 mA	4781 mA	87	2000uF
CHB50-12S24	9 -18 VDC	24 VDC	0 mA	2.08 A	50 mA	4781 mA	87	1500uF
CHB50-24S25	18-36 VDC	2.5 VDC	0 mA	10 A	50 mA	1335 mA	78	10000uF
CHB50-24S33	18-36 VDC	3.3 VDC	0 mA	10 A	50 mA	1698 mA	81	10000uF
CHB50-24S05	18-36 VDC	5 VDC	0 mA	10 A	50 mA	2450 mA	85	10000uF
CHB50-24S12	18-36 VDC	12 VDC	0 mA	4.16 A	50 mA	2363 mA	88	10000uF
CHB50-24S15	18-36 VDC	15 VDC	0 mA	3.33 A	50 mA	2363 mA	88	4000uF
CHB50-24S24	18-36 VDC	24 VDC	0 mA	2.08 A	50 mA	2363 mA	88	2000uF
CHB50-48S25	36-75 VDC	2.5 VDC	0 mA	10 A	50 mA	676 mA	77	10000uF
CHB50-48S33	36-75 VDC	3.3 VDC	0 mA	10 A	50 mA	848 mA	81	10000uF
CHB50-48S05	36-75 VDC	5 VDC	0 mA	10 A	50 mA	1240 mA	84	10000uF
CHB50-48S12	36-75 VDC	12 VDC	0 mA	4.16 A	50 mA	1181 mA	88	10000uF
CHB50-48S15	36-75 VDC	15 VDC	0 mA	3.33 A	50 mA	1181 mA	88	4000uF
CHB50-48S24	36-75 VDC	24 VDC	0 mA	2.08 A	50 mA	1168 mA	89	2000uF

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

SPECIFICATIONS

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

INPUT SPECIFICATIONS:

Input Voltage Range ..... 12V 9-18V
24V 18-36V
48V 36-75V

Input Surge Voltage (100ms max.) ..... 12V ..... 25Vdc max.
24V .....50Vdc max.
48V ..... 100Vdc max.

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 (see note 3 & 4)

Input Filter ..... PI Type

OUTPUT SPECIFICATIONS:

Voltage Accuracy: ..... ±1% max.

Transient Response:25% Step Load Change ..... <500u sec.

External Trim Adj. Range ..... ± 10 %

Ripple & Noise, 20MHz BW(see note 5)

2.5 & 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 (see note 1) ..... ±0.2% max.

Load Regulation (see note 2) ..... ±0.2% max.

Over Voltage Protection trip Range, % Vo nom. 115-140%

Current Limit ..... 110% ~150% Nominal Output

Start up time ..... 5ms Typ.

GENRAL SPECIFICATIONS:

Efficiency ..... See Table

Isolation Voltage ..... Input/Output ..... 1500VDC min.
Input/Case ..... 1500VDC min.
Output/Case ..... 1500VDC min.

Isolation Capacitance ..... 1000pF Typ.

Isolation Resistance ..... 10^7 ohm min.

Switching Frequency ..... (12/24)Vin. ..... 400KHz, Typ.
48Vin ..... 300KHz, Typ.

Operating Case Temperature ..... –40℃ to 100℃

Storage Temperature ..... -55℃ to +105℃

Thermal Shutdown, Case Temp. ..... 100℃ Typ.

Humidity ..... 95% RH max. Non condensing

MTBF ..... MIL-STD-217F, GB, 25℃, Full Load ..... 1000KHrs Typ.

Dimensions ..... 2.28×2.40x0.50 inches (57.9x61.0×12.7 mm)

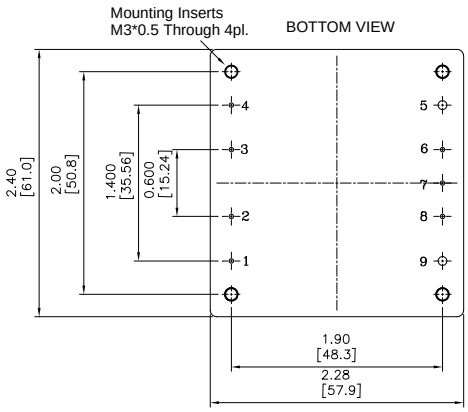
Case Material ..... Aluminum

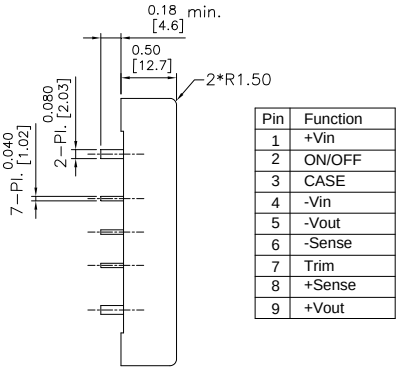
Weight 88g

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
5. Output Ripple and Noise measured with 10uF tantalum and 1uF Ceramic capacitor across output
6. Suffix "-C" to the Model Number with Clear Mounting Insert (3.2mm DIA.)

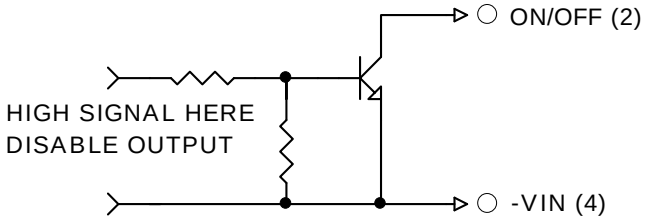
CASE HB
All Dimensions In Inches(mm)
Tolerances Inches: X.XX= ±0.02 , X.XXX= ±0.010
Millimeters: X.X= ±0.5 , X.XX=±0.25





Pin	Function
1	+Vin
2	ON/OFF
3	CASE
4	-Vin
5	-Vout
6	-Sense
7	Trim
8	+Sense
9	+Vout

REMOTE ON/OFF CONTROL



EXTERNAL OUTPUT TRIM