CHB100W SERIES

66 - 100 WATT 4:1 INPUT DC-DC CONVERTERS SINGLE OUTPUT

E176177

FEATURES

* 66-100W Isolated Output
* Efficiency to 89%
* 250KHz Switching Frequency
* 4:1 Input Range
* Regulated Outputs
* Continuous Short Circuit Protection
* Five-Sided Metal Case
* Half-Brick Size Meet Industrial Standard
* UL60950-1 Approval (Except 28 Vout)

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	CAPACITOR LOAD MAX.
			MIN.	MAX.	NO LOAD	FULL LOAD		
CHB100W-24S3V3	9-36 VDC	3.3 VDC	0 mA	20 A	35 mA	3333 mA	82.5	20000uF
CHB100W-24S05	9-36 VDC	5.0 VDC	0 mA	20 A	35 mA	4931 mA	84.5	20000uF
CHB100W-24S12	9-36 VDC	12 VDC	0 mA	8.3 A	35 mA	4854 mA	85.5	8300uF
CHB100W-24S15	9-36 VDC	15 VDC	0 mA	6.7 A	35 mA	4813 mA	87	6700uF
CHB100W-24S24	9-36 VDC	24 VDC	0 mA	4.17 A	35 mA	4766 mA	87.5	1800uF
CHB100W-24S28	9-36 VDC	28 VDC	0 mA	3.57 A	50 mA	4845 mA	86	2200uF
CHB100W-24S48	9-36 VDC	48 VDC	0 mA	2.08 A	35 mA	5042 mA	82.5	470uF
CHB100W-48S3V3	18-75 VDC	3.3 VDC	0 mA	20 A	30 mA	1667 mA	82.5	20000uF
CHB100W-48S05	18-75 VDC	5.0 VDC	0 mA	20 A	30 mA	2422 mA	86	20000uF
CHB100W-48S12	18-75 VDC	12 VDC	0 mA	8.3 A	30 mA	2371 mA	87.5	8300uF
CHB100W-48S15	18-75 VDC	15 VDC	0 mA	6.7 A	30 mA	2379 mA	88	6700uF
CHB100W-48S24	18-75 VDC	24 VDC	0 mA	4.17 A	30 mA	2343 mA	89	2200uF
CHB100W-48S28	18-75 VDC	28 VDC	0 mA	3.57 A	50 mA	2422 mA	86	2200uF
CHB100W-48S48	18-75 VDC	48 VDC	0 mA	2.08 A	30 mA	2462 mA	84.5	470uF

NOTE: 1. Nominal Input Voltage 24, 48VDC

SPECIFICATIONS

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

INPUT SPECIFICATIONS:

Input Voltage Range ..... 24V 9-36V
48V 18-75V
Input Surge Voltage (100ms max.) ..... 24V ..... 50Vdc max.
48V ..... 100Vdc max.
Under Voltage Lockout ..... 24Vin Power Up 8.8V
24Vin Power Down 8.0V
48Vin Power Up 17V
48Vin Power Down 16V
Positive Logic Remote On/Off (note 4&5)
Input Filter ..... Pi Type

OUTPUT SPECIFICATIONS:

Voltage Accuracy ..... ±1.0% max.
3.3V&48V (note7) ..... ±1.5% max.
Transient Response: 25% Step Load Change ..... <500μs
External Trim Adj. Range ..... ±10%
Ripple & Noise, 20MHz BW (note3)
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 ..... 200mV RMS max., 480mV pk-pk max.
Temperature Coefficient ..... ±0.03%/°C max.
Short Circuit Protection ..... Continuous
Line Regulation (note1) ..... ±0.2% max.
Load Regulation (note2) ..... ±0.2% max.
Over Voltage Protection Trip Range ,% Vo nom. 115-140%
Current Limit ..... 110% ~140% Nominal Output
Start up Time ..... 25ms typ.

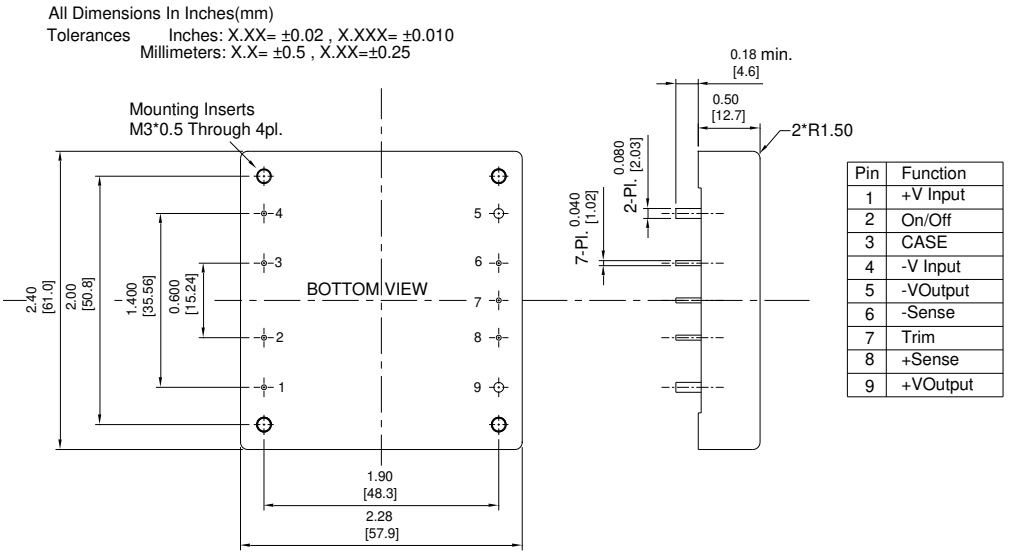
GENRAL SPECIFICATIONS:

Efficiency ..... See Table
Isolation Voltage .... Input/Output, Input/Case, Output/Case ... 1500VDC min..
Isolation Resistance ..... 10^7 ohm min.
Isolation Capacitance ..... 1500pF typ.
Switching Frequency ..... 250KHz typ.
Operating Case Temperature ..... -40℃ to 100℃
Storage Temperature ..... -55℃ to +105℃
Thermal Shutdown Case Temp. ..... 105℃ typ.
Humidity ..... 95% RH max. Non condensing
MTBF ..... MIL-HDBK-217F, GB, 25℃, Full Load ..... 700Khrs typ.
Dimensions ..... 2.28x2.40x0.50 inches (57.9x61.0x12.7 mm)
Case Material ..... Aluminum
Weight 95g

NOTE:

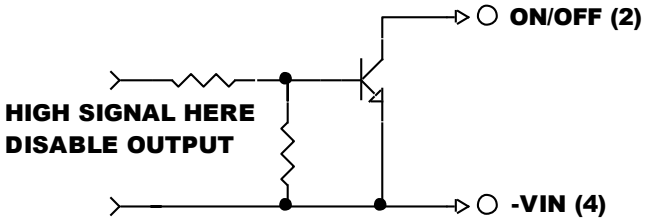
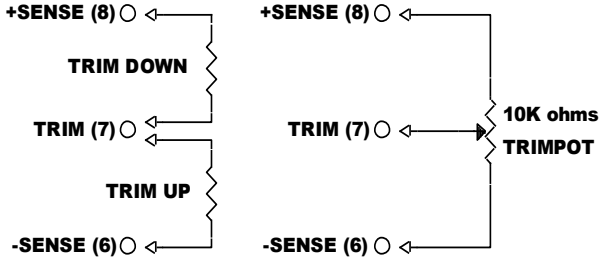
1. Measured from high line to low line.
2. Measured from full load to zero load.
3. Output ripple and noise measured with 10uF tantalum and 1uF ceramic capacitor across output. (48V: 0.1uF ceramic cap. only)
4. Logic Compatibility ..... open collector ref to -input
   Module on ..... >3.5VDC or open circuit
   Module off ..... 0 to<1.8VDC
5. Suffix "N" to the model number with negative logic remote on/off
   Module on ..... 0 to<1.8VDC
   Module off ..... >3.5VDC or open circuit
6. Suffix "-C" to the model number with clear mounting insert. (3.2mm DIA.)
7. Require a 47uF aluminum capacitor connected between +Vout and –Vout for 48Vout models.

CASE HB



Pin	Function
1	+V Input
2	On/Off
3	CASE
4	-V Input
5	-VOutput
6	-Sense
7	Trim
8	+Sense
9	+VOutput

REMOTE ON/OFF CONTROL



EXTERNAL OUTPUT TRIM