



CHB350 SERIES

231 TO 350 WATT 2:1 INPUT DC-DC CONVERTERS SINGLE OUTPUT

FEATURE

- *231 - 350W Isolated Output
- * Efficiency to 92.5%
- * Fixed Switching Frequency
- * Input under-voltage Protection
- * Over Temperature Protection
- * Over Voltage/Current Protection
- * Remote ON/OFF
- * Industry Standard Half-Brick Package
- * Fully Isolated 1500VDC



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		EFF. (%)	CAPACITIVE LOAD MAX.
			MIN.	MAX.	NO LOAD	FULL LOAD		
CHB350-24S3V3	18-36VDC	3.3VDC	0mA	70A	130mA	10.94A	88	10000µF
CHB350-24S05	18-36VDC	5VDC	0mA	70A	250mA	16.29A	89.5	10000µF
CHB350-24S12	18-36VDC	12VDC	0mA	29.2A	220mA	15.96A	91.5	10000µF
CHB350-24S24	18-36VDC	24VDC	0mA	14.6A	40mA	16.22A	90	10000µF
CHB350-24S28	18-36VDC	28VDC	0mA	12.5A	50mA	16.03A	91	7000µF ⁽²⁾
CHB350-48S3V3	36-75VDC	3.3VDC	0mA	70A	80mA	5.41A	89	10000µF
CHB350-48S05	36-75VDC	5VDC	0mA	70A	120mA	8.01A	91	10000µF
CHB350-48S12	36-75VDC	12VDC	0mA	29.2A	100mA	7.89A	92.5	10000µF
CHB350-48S24	36-75VDC	24VDC	0mA	14.6A	40mA	7.98A	91.5	10000µF
CHB350-48S28	36-75VDC	28VDC	0mA	12.5A	30mA	7.88A	92.5	7000µF ⁽²⁾

NOTE: 1. Nominal Input Voltage 24, 48 VDC

2. The output terminal of 28Vout models required a minimum capacitor 100uF 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	18-36V
	48V	36-75V
Input Surge Voltage (100ms max.)	24V	50Vdc max.
	48V	100Vdc max.
Under voltage lockout	24Vin power up	17V
	24Vin power down	16V
	48Vin power up	35V
	48Vin power down	33V

Positive Logic Remote ON/OFF (see note 4 & 5)

Input Filter PI Type

OUTPUT SPECIFICATIONS:

Voltage Accuracy:	±1.5% max.
Transient Response:25% Step Load Change	<500u sec.
External Trim Adj. Range, (note6)	±10%
Ripple & Noise, 20MHz BW	
3.3V & 5V	40mV RMS, max.
	100mV pk-pk, max.
12V	60mV RMS, max.
	120mV pk-pk, max
24V & 28V	100mV RMS, max.
	280mV 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	105% ~140% Nominal Output
Start up time	175ms typ.

GENERAL SPECIFICATIONS:

Efficiency	See Table
Isolation Voltage	Input/Output 1500VDC min.
	Input/Case, Output/Case 1500VDC min.
Isolation Resistance	10 ⁷ ohm min.
Isolation Capacitance	100pF Typ.
Switching Frequency	3V3&5V 300KHz Typ.
	12V&24V&28V 330kHz 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	T.B.D. hrs
Dimensions	2.28x2.40x0.52 inches (57.9x61.0x13.2 mm)
Case Material	Aluminum Baseplate with Plastic Case
Weight	114g

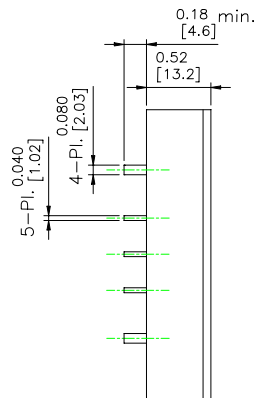
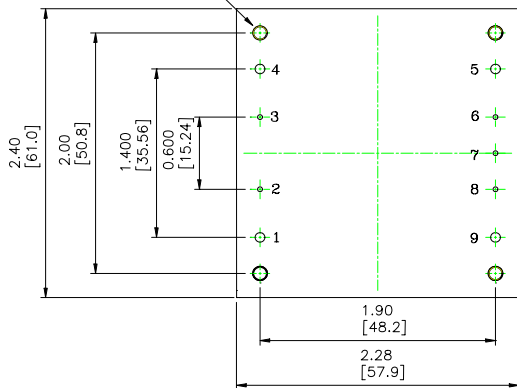
NOTE:

1. Measured From High Line to Low Line
2. Measured From Full Load to Zero Load
3. Output Ripple and Noise measured with 10uF tantalum and 1uF Ceramic capacitor across output
4. Logic Compatibility Open Collector ref to -Input
Module ON >3.5Vdc to 75Vdc or Open Circuit
Module OFF < 1.2Vdc
5. Suffix "N" to the Model Number with Negative Logic Remote ON/OFF
Module ON < 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. The input terminal recommend to parallel with 220uF for 48Vin and 470uF for 24Vin ESR<0.7Ω to reduce the input ripple voltage.

CASE HB

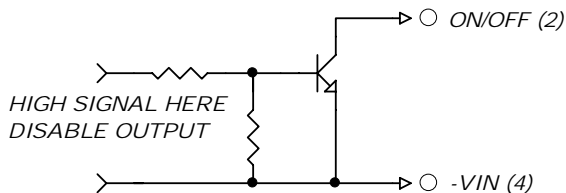
All Dimensions In Inches(mm)
Tolerances Inches: X.XX= ±0.02 , X.XXX= ±0.010
Millimeters: X.X= ±0.5 , X.XX=±0.25

Mounting Inserts
M3*0.5 Through 4pl. BOTTOM VIEW



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

