

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



### Features:

- 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

### Electrical Characteristics:

MODEL	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		%EFF	CAPACITOR LOAD MAX
			MIN	MAX	NO LOAD	FULL LOAD		
CHB350-24S3V3	18-36VDC	3.3VDC	0mA	70 A	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	12.5 A	50mA	16.03A	91	7000µF
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	29.2 A	100mA	7.89A	92.5	10000µF
CHB350-48S24	36-75VDC	24VDC	0mA	14.6 A	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.

## Specification

### 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.....	<500us.
External Trim Adj. Range (note 6).....	±10%
Load share Accuracy(5) .....	±10% at 50% to 100% Full Load
Auxiliary output voltage/current .....	10±3Vdc/20mA max
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(1) .....	±0.2% max.
Load Regulation(2) .....	±0.5% max.
Over Voltage Protection trip Range,% Vo nom. ....	115-140%
Current Limit .....	105% ~140% Nominal Output
Start up time .....	175ms typ.

## Specification

### 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 .....	3V3&5V .....
	12V&24V&28V .....
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, .....
Dimensions .....	2.28×2.40×0.52 inches (57.9×61.0×13.2 mm)
Case Material.....	Aluminum Baseplate with Plastic Case
Weight.....	114g

### NOTES:

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 .....

  - 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.

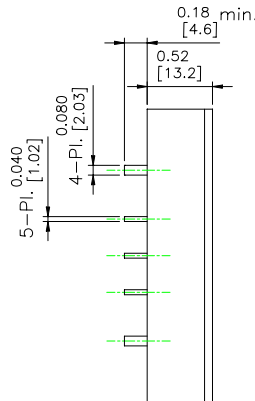
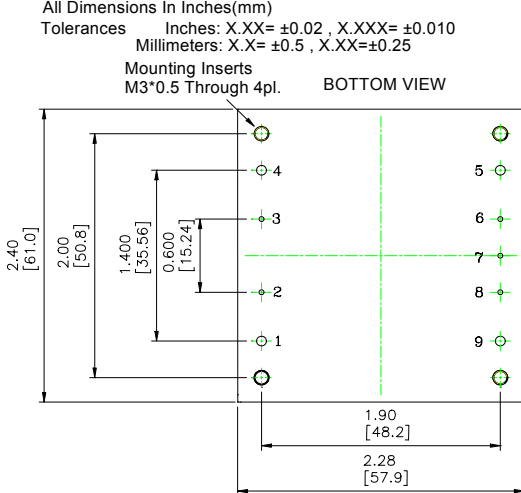
## CASE HB

All Dimensions In Inches(mm)

Tolerances Inches: X.XX= ±0.02 , X.XXX= ±0.010  
 Millimeters: X.X= ±0.5 , X.XX=±0.25

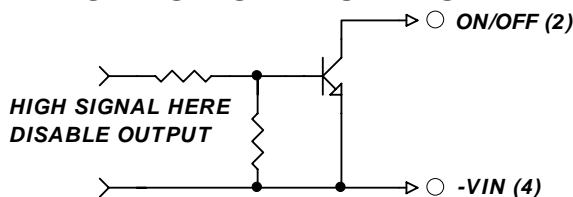
Mounting Inserts  
 M3\*0.5 Through 4pl.

BOTTOM VIEW

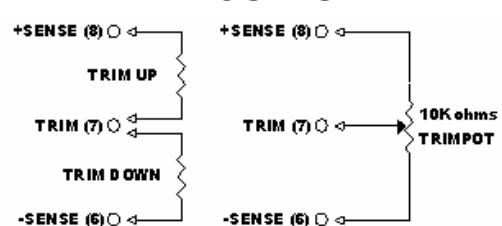


Pin	Function
1	+Vin
2	ON/OFF
3	CASE
4	-Vin
5	-Vout
6	-Sense
7	Trim
8	+Sense
9	+Vout

### REMOTE ON/OFF CONTROL



### EXTERNAL OUTPUT TRIM



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