

CHB350

S E R I E S

231-350 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
- UL60950-1 Approval
- High Power Density 123W/in³

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	Capacitor Load max.
			MIN.	MAX.	NO LOAD	FULL LOAD		
CHB350-24S3V3	18-36 VDC	3.3 VDC	0 mA	70 A	140 mA	10.94 A	88	10000µF
CHB350-24S05	18-36 VDC	5 VDC	0 mA	70 A	260 mA	16.39 A	89	10000µF
CHB350-24S12	18-36 VDC	12 VDC	0 mA	29.2 A	250 mA	16.13 A	90.5	10000µF
CHB350-24S24	18-36 VDC	24 VDC	0 mA	14.6 A	60 mA	16.40 A	89	10000µF
CHB350-24S28	18-36 VDC	28 VDC	0 mA	12.5 A	60 mA	16.11 A	90.5	7000µF ⁽²⁾
CHB350-48S3V3	36-75 VDC	3.3 VDC	0 mA	70 A	90 mA	5.41 A	89	10000µF
CHB350-48S05	36-75 VDC	5 VDC	0 mA	70 A	130 mA	8.01 A	91	10000µF
CHB350-48S12	36-75 VDC	12 VDC	0 mA	29.2 A	100 mA	7.89 A	92.5	10000µF
CHB350-48S24	36-75 VDC	24 VDC	0 mA	14.6 A	60 mA	7.98 A	91.5	10000µF
CHB350-48S28	36-75 VDC	28 VDC	0 mA	12.5 A	60 mA	7.93 A	92	7000µF ⁽²⁾

NOTE : 1. Nominal Input Voltage 24, 48 VDC

2. The output terminal of 28Vout models required a minimum capacitor 100µF to maintain specified regulation.

Specifications

INPUT SPECIFICATIONS:

Input Voltage Range.....	24V.....	18-36V
	48V.....	36-75V
Input Surge Voltage (100ms max.)	24V	50Vdc max.
	48V	100Vdc max.
Undervoltage lockout	24Vin power up.....	17V
	24Vin power down	1.6V
	48Vin power up.....	35V
	48Vin power down	33V
Positive Logic Remote ON/OFF ^{4,5}		
Logic Compatibility.....	Open Collector ref to -Input	
Module ON.....	>3.5Vdc to 75Vdc or Open Circuit	
Module OFF.....	<1.2Vdc	
Input Filter	PI Type	

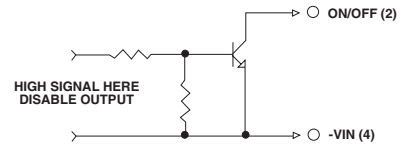
OUTPUT SPECIFICATIONS:

Voltage Accuracy.....	±1.5% max
Transient Response: 25% Step Load Change.....	< 500µs
External Trim Adj. Range ⁶	±10%
Ripple & Noise, 20MHz BW	
3.3V & 5V.....	40mV RMS max./100mV pk-pk max.
12V	60mV RMS max./120mV pk-pk max.
24V & 48V.....	100mV RMS max./280mV pk-pk max.
Temperature Coefficient.....	±0.03%/°C max.
Short Circuit Protection.....	Continuous
Line Regulation ¹	±0.2% max.
Load Regulation ²	±0.2% max.
Over Voltage Protection Trip Range, % Vo nom.....	115-140%
Current Limit.....	105 - 140% Nominal Output
Start up time	175ms typ.

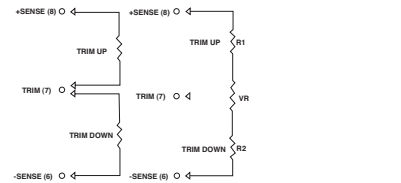
GENERAL SPECIFICATIONS:

Efficiency.....	See Table
Isolation Voltage	Input/Output.....1500VDC min.
	Input/Case.....1500VDC min.
	Output/Case.....1500VDC min.
Isolation Resistance	10 ⁷ ohm min.
Isolation Capacitance	2000pF typ.
Switching Frequency	3V3&5V
	12V&24V&28V
	300KHz typ.
	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, 25°C, Full Load
	T.B.D. hrs.
Dimensions ...Standard ...	2.28x2.40x0.52 inches (57.9x61.0x13.2 mm)
	Suffix "-L", "-IL"
	2.28x2.40x0.50 inches (57.9x61.0x12.7mm)
Case Material	Aluminum Baseplate with Plastic Case
Weight	1.14g

Remote On/Off Control



External Output Trim



NOTE:

1. Measured From High Line to Low Line
2. Measured From Full Load to Zero Load
3. Output Ripple and Noise measured with 10µF tantalum and 1µF Ceramic capacitor across output
4. 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
5. Suffix "-C" to the Model Number with Clear Mounting Insert(3.2mm DIA)
6. Suffix "-I" to the Model Number with thin input pin models (pin1 and pin4 =1.0mm) 48Vin models only
7. Trim-up.....connect a resistor between the trim pin and +Sense
Trim-down.....connect a resistor between the trim pin and -Sense
8. The input terminal recommend to parallel with 220µF for 48Vin and

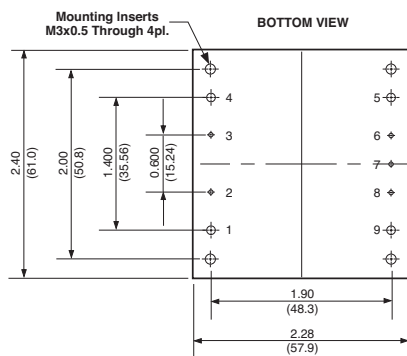
PIN CONNECTION

Pin	Function
1	+V Input
2	ON/OFF
3	CASE
4	-V Input
5	-V Output
6	-Sense
7	Trim
8	+Sense
9	+V Output

CASE HB

All Dimensions In Inches(mm)
Tolerance Inches: x.xx= ±0.02, x.xxx= ±0.010
Millimeters: x.x= ±0.5, x.xx= ±0.25

Standard Package



Suffix "-IL" Package

