



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:

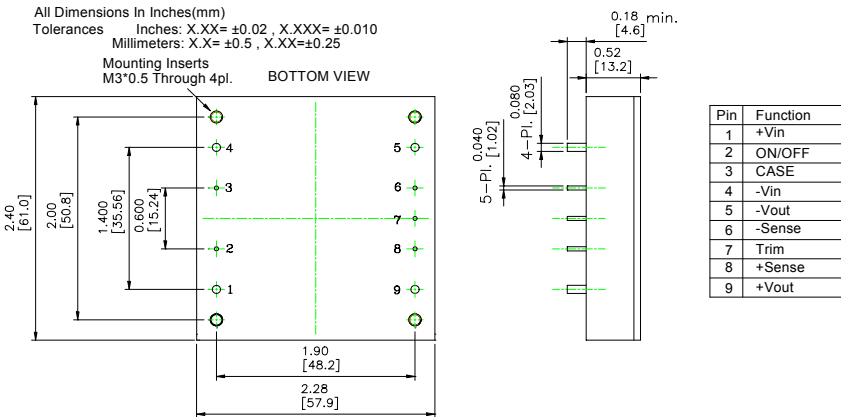
| | |
|-----------------------|--|
| Efficiency | See Table |
| Isolation Voltage | Input/Output 1500VDC min. |
| | Input/Case, Output/Case 1500VDC min. |
| Isolation Resistance | 10 ⁷ ohm min. |
| Isolation Capacitance | 1000pF Typ. |
| Switching Frequency | 3V3&5V 300KHz Typ. |
| | 12V&24V&28V 330KHz Typ. |

| | |
|-----------------------------|---|
| Operating Case Temperature | -40°C to 100°C |
| Storage Temperature | -55°C to +105°C |
| Thermal Shutdown, Case Temp | 110°C |
| 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 |

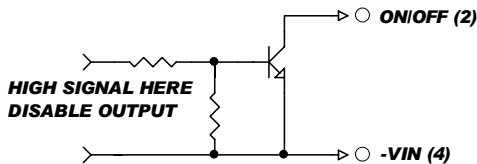
NOTE:

- Measured From High Line to Low Line
- Measured From Full Load to Zero Load
- Output Ripple and Noise measured with 10uF tantalum and 1uF Ceramic capacitor across output
- Logic Compatibility Open Collector ref to -Input
Module ON >3.5Vdc to 75Vdc or Open Circuit
Module OFF < 1.2Vdc
- 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
- Trim-up.....connect a resistor between the trim pin and +Sense
Trim-down.....connect a resistor between the trim pin and -Sense
- 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



REMOTE ON/OFF CONTROL



EXTERNAL OUTPUT TRIM

