CHB300W

S E R I E S

300 WATT 4 : 1 INPUT DC-DC CONVERTERS SINGLE OUTPUT

Features

- 300W Isolated Output
- Efficiency to 90%
- 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
- CE Mark Meets 2004/108/EC
- Safety Meets UL60950-1, EN60950-1, and IEC60950-1

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.		Capacitor Load max.
			MIN.	MAX.	NO LOAD	FULL LOAD	(2)	(3)	
CHB300W-48S05	18-75 VDC	5.0 VDC	0 mA	60 A	100 mA	6.94 A	89	90	10000μF
CHB300W-48S12	18-75 VDC	12 VDC	0 mA	25 A	100 mA	6.94 A	90.5	90	10000μF
CHB300W-48S24	18-75 VDC	24 VDC	0 mA	12.5 A	80 mA	6.98 A	90	89.5	4700μF
CHB300W-48S28	18-75 VDC	28 VDC	0 mA	10.7 A	80 mA	6.94 A	91	90	4700μF
CHB300W-48S48	18-75 VDC	48 VDC	0 mA	6.25 A	80 mA	7.02 A	90	89	2200μF(4)

NOTE: 1. Nominal Input Voltage 48 VDC
2. Measure at 24VDC for 48 Vin
3. Measure at Nominal Input Voltage
4. The output terminal of 48Vout models required a minimum capacitor 220uF to maintain specified regulation.
5. Output peak power 350W < 3 seconds with maximum duty cycle of 10%, average output power not to exceed 300W

Specifications

INPUT SPECIFICATIONS:

Input Voltage Range ..... 48V 18-75V
Input Surge Voltage (100ms max.) ..... 48V ..... 100Vdc max.
Under voltage lockout ..... 48Vin power up 17V
48Vin power down 16V
Positive Logic Remote ON/OFF[4,5]
Input Filter ..... PI Type

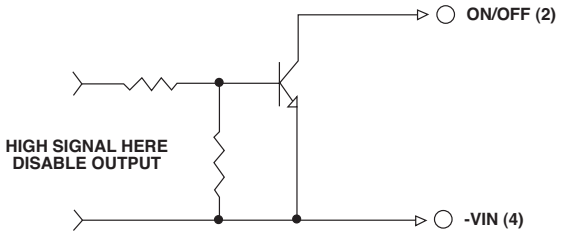
OUTPUT SPECIFICATIONS:

Voltage Accuracy..... ±1.5% max.
Transient Response: 25% Step Load Change ..... < 500µs
External Trim Adj. Range[6] ..... ±10%
Ripple & Noise, 20MHz BW
5.0V ..... 40mV RMS, 100mV pk-pk max.
12V ..... 60mV RMS, 120mVpk-pk max.
24V&28V ..... 100mV RMS, 280mVpk-pk max.
48V ..... 200mV RMS, 480mVpk-pk max.
Temperature Coefficient..... ±0.03%/°C
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 ..... 120% -160% Nominal Output
Start up time ..... 120ms typ.

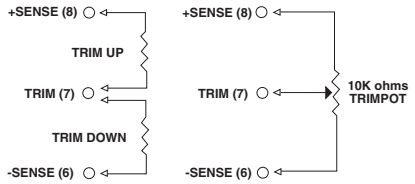
GENERAL SPECIFICATIONS:

Efficiency ..... See Table
Isolation Voltage .....Input/Output .....1500VDC min.
Input/Case, Output/Case .....1500VDC min.
Isolation Resistance ..... 10^7 ohm min.
Isolation Capacitance ..... 2000pF typ.
Switching Frequency ..... 220kHz typ.
Operating Case Temperature ..... -40°C to 100°C
Storage Temperature ..... -55°C to +105°C
Thermal Shutdown Case Temperature ..... 110°C typ.
Humidity ..... 95% RH max. Non condensing
MTBF .....MIL-STD-217F, GB, 25°C, Full Load ..... T.B.D. hrs
Dimensions ..... 2.28x2.40x0.50 inches (57.9x61.0x12.7 mm)
Case Material ..... Aluminum Baseplate with Plastic Case
Weight ..... 114 g

REMOTE ON/OFF CONTROL



EXTERNAL OUTPUT TRIM

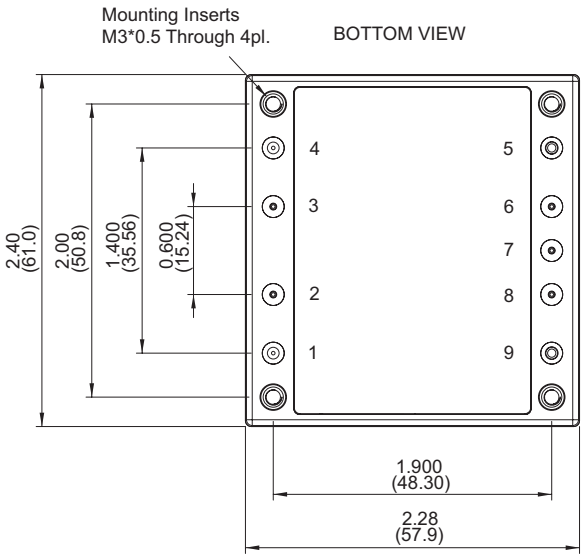


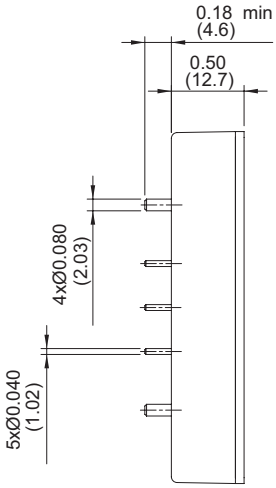
NOTE:

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. 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 220µF for 48Vin
   ESR<0.7Ω to reduce the input ripple voltage.
8. Suffix "-C" to the Model Number with Clear Mounting Insert(3.2mm DIA)

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





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