

CHB50W

S E R I E S



33-50 WATT WIDE INPUT DC-DC CONVERTERS SINGLE OUTPUT



Features

- 33W-50W Isolated Output
- Efficiency to 87%
- 300KHz Switching Frequency
- 4 : 1 Input Range
- Regulated Outputs
- Five-Sided Shield Metal Case
- Continuous Short Circuit Protection
- Half-Brick size meet industrial standard
- CE Mark Meets 2004/108/EC
- UL60950-1 Approval
- Safety Meets UL60960-1, 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		
CHB50W-24S33	9-36 VDC	3.3 VDC	0 mA	10 A	50 mA	1740 mA	79	10000uF
CHB50W-24S05		5 VDC	0 mA	10 A		2570 mA	81	10000uF
CHB50W-24S12		12 VDC	0 mA	4.16 A		2510 mA	83	4160uF
CHB50W-24S15		15 VDC	0 mA	3.33 A		2448 mA	85	3330uF
CHB50W-24S24		24 VDC	0 mA	2.08 A		2476 mA	84	2080uF
CHB50W-24S48		48 VDC	0 mA	1.04 A		2506 mA	83	4700uF
CHB50W-48S33	18-75 VDC	3.3 VDC	0 mA	10 A	50 mA	848 mA	81	10000uF
CHB50W-48S05		5 VDC	0 mA	10 A		1255 mA	83	10000uF
CHB50W-48S12		12 VDC	0 mA	4.16 A		1223 mA	85	4160uF
CHB50W-48S15		15 VDC	0 mA	3.33 A		1196 mA	87	3330uF
CHB50W-48S24		24 VDC	0 mA	2.08 A		1209 mA	86	2080uF
CHB50W-48S48		48 VDC	0 mA	1.04 A		1238 mA	84	4700uF

NOTE: 1. Nominal Input Voltage 24 or 48 VDC

Specifications

INPUT SPECIFICATIONS:

Input Voltage Range.....	24V.....	9-36V
	48V.....	18-75V
Input Surge Voltage (100ms max.)	24V	50Vdc max.
	48V	100Vdc max.
Undervoltage lockout	24Vin power up.....	8.8V
	power down	8V
	48Vin power up.....	17V
	power down	16V

Positive Logic Remote ON/OFF^{3,4}

Input Filter PI Type

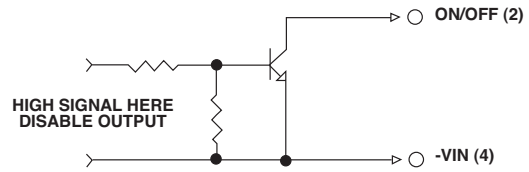
OUTPUT SPECIFICATIONS:

Voltage Accuracy	±1% max.
Transient Response : 25% Step Load Change.....	< 500µs
External Trim Adj. Range	±10%
Ripple & Noise, 20MHz BW ⁵	
3.3V & 5V.....	40mV RMS max./100mV pk-pk max.
12V & 15V.....	60mV RMS max./150mV pk-pk max.
24V.....	100mV RMS max./240mV pk-pk max.
48V.....	200mV RMS max./480mV 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	110% -160% Nominal Output
Start up time	5ms typ.

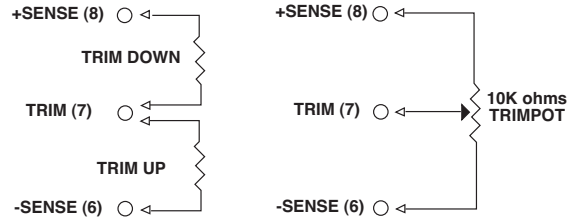
GENERAL SPECIFICATIONS:

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	1000pF typ.
Switching Frequency	300KHz typ.
Operating Case Temperature	-40°C to 100°C
Storage Temperature	-55°C to +105°C
Thermal Shutdown, Case Temp.	100°C typ.
Humidity	95% RH max. Non condensing
MTBF	MIL-STD-217F, GB, 25°C, Full Load
	1000Khrs typ.
Dimensions	2.28x2.40x0.50 inches
	(57.9x61.0x12.7 mm)
Case Material.....	Aluminum
Weight.....	.94g

Remote On/Off Control



External Output Trim



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

NOTE:

1. Measured From High Line to Low Line.
2. Measured From Full Load to Zero Load.
3. Logic Compatibility Open Collector ref. to -Input.
Module ONOpen Circuit
Module OFF..... <0.8Vdc
4. Suffix "N" to the Model Number with Negative Logic Remote ON/OFF.
5. Output Ripple and Noise measured with 10µF tantalum and 1µF ceramic capacitor across output
6. Suffix "-C" to the Model Number with Clear Mounting Insert (3.2mm DIA.)
7. Require a 47µF Aluminum Capacitor Connected Between +Vout and -Vout for 48Vout Models

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

