CQB150W 24(48)SXX SERIES

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

CE

FEATURES

* 150W Isolated Output
* Efficiency to 92%
* Fixed Switching Frequency
* 4:1 Input Range
* Regulated Outputs
* Remote On/Off
* Low No Load Power Consumption
* Over Temperature Protection
* Over Voltage/Current Protection
* Continuous Short Circuit Protection
* Quarter Brick Size Meet Industrial Standard
* CE Mark Meets 2014/30/EU
* Safety Meets UL60950-1, EN60950-1, and IEC60950-1
* Shock Vibration Meets MIL-STD-810F / EN61373

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.		CAPACITOR LOAD MAX.
			MIN.	MAX.	NO LOAD	FULL LOAD	(3)	(2)	
CQB150W-24S05	9-36 VDC	5 VDC	0 mA	30 A	10 mA	7.02 A	91	92	30000μF
CQB150W-24S12	9-36 VDC	12 VDC	0 mA	12.5 A	10 mA	7.02 A	91	92	12500μF
CQB150W-24S24	9-36 VDC	24 VDC	0 mA	6.3 A	10 mA	7.08 A	89.5	89.5	6300μF
CQB150W-24S28	9-36 VDC	28 VDC	0 mA	5.4 A	10 mA	7.08 A	90	90	5400μF
CQB150W-24S48	9-36 VDC	48 VDC	0 mA	3.2 A	10 mA	7.19 A	90.5	90.5	1000μF
CQB150W-48S05	18-75 VDC	5 VDC	0 mA	30 A	8 mA	3.47 A	92	92	30000μF
CQB150W-48S12	18-75 VDC	12 VDC	0 mA	12.5 A	8 mA	3.47 A	92	91	12500μF
CQB150W-48S24	18-75 VDC	24 VDC	0 mA	6.3 A	8 mA	3.50 A	91	90.5	6300μF
CQB150W-48S28	18-75 VDC	28 VDC	0 mA	5.4 A	8 mA	3.50 A	91.5	90.5	5400μF
CQB150W-48S48	18-75 VDC	48 VDC	0 mA	3.2 A	8 mA	3.56 A	92	91.5	1000μF

NOTE:

1. Nominal Input Voltage 24, 48 VDC
2. Measured at Nominal Input Voltage
3. Measured at 12VDC for 24Vin, 24VDC for 48Vin

SPECIFICATIONS

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

INPUT SPECIFICATIONS:

Input Voltage Range ..... 24V 9-36V
48V 18-75V
Input Surge Voltage (100ms max.) ..... 24V ..... 50Vdc max.
48V ..... 100Vdc max.
Under voltage lockout ..... 24Vin power up 8.8V
24Vin power down 8.0V
48Vin power up 17V
48Vin power down 16V
Positive Logic Remote On/Off (see note 4&5)
Input Filter ..... PI Type

OUTPUT SPECIFICATIONS:

Voltage Accuracy ..... ±1.0% max
Transient Response: 75% to 100% Step Load Change
Error Band ..... ±5% Vout
Recover Time ..... <250us
External Trim Adj. Range .....±10%
Ripple & Noise, 20MHz BW
5V ..... 40mV RMS, 100mV pk-pk max.
12V ..... 60mV RMS, 150mV pk-pk max.
24V&28V..... 100mV RMS, 280mV pk-pk max.
48V ..... 200mV RMS, 480mV pk-pk max.
Temperature Coefficient ..... ±0.02%/°C
Short Circuit Protection ..... Continuous
Line Regulation (note1) ..... ±0.2% max.
Load Regulation (note2) ..... ±0.2% max.
Over Voltage Protection trip Range ,% Vo nom. 115-140%
Current Limit ..... 110-160% Nominal Output
Start up time ..... 60ms typ.

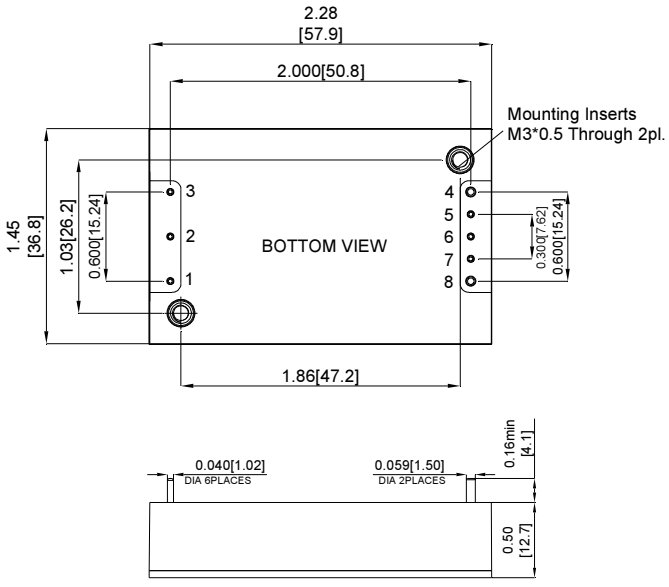
GENRAL SPECIFICATIONS:

Efficiency ..... See Table
Isolation Voltage ..... Input/Output ..... 2250VDC min.
Input/Case, Output/Case ..... 2250VDC min.
Isolation Resistance ..... 10^7 ohm min.
Isolation Capacitance ..... 1500pF typ.
Switching Frequency ..... 300KHz typ.
Operating Case Temperature ..... -40℃ to +105℃
Storage Temperature ..... -55℃ to +125℃
Thermal Shutdown, Case Temperature ..... 110℃ typ.
Humidity ..... 95% RH max. Non condensing
Shock/Vibration ..... Meet MIL-STD-810F/EN61373
MTBF ... MIL-STD-217F, GB, 25℃, Full Load ..... XXS05, XXS12 ..... 300Khrs typ.
Others ..... 560Khrs typ
Dimensions ..... 2.28×1.45x0.50 inches (57.9x36.8×12.7 mm)
Case Material ..... Aluminum Baseplate with Plastic Case
Weight 68g

NOTE:

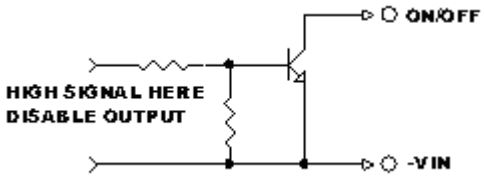
1. Measured from high line to low line.
2. Measured from full load to zero load.
3. Output ripple and noise measured with 10uF aluminum and 1uF ceramic capacitor across output for 48Vout and with 10uF tantalum and 1uF ceramic capacitor for others.
4. Logic Compatibility ..... open collector ref to -input
   Module on ..... >3.5Vdc to 75Vdc or open circuit
   Module off .....0 to < 1.2Vdc
5. Suffix "N" to the model number with negative logic remote on/off
   Module on .....0 to < 1.2Vdc
   Module off ..... >3.5Vdc to 75Vdc or open circuit
6. Suffix "-C" to the model number with clear mounting insert (3.2mm DIA.).
7. An external input capacitor 220uF for all models are recommended to reduce input ripple voltage.

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

REMOTE ON/OFF CONTROL



EXTERNAL OUTPUT TRIM