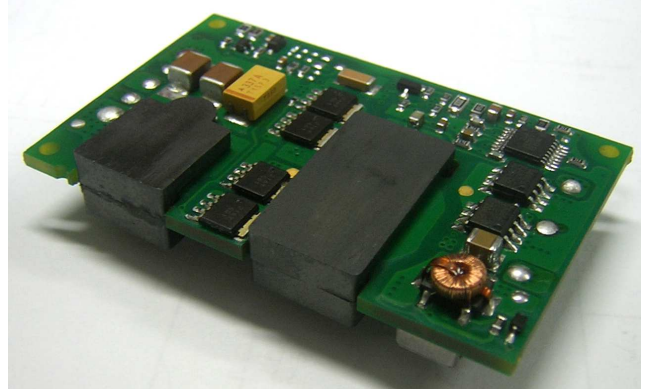




## CQB125 SERIES 100 TO 125 WATT 1/4 BRICK DC-DC CONVERTERS

### FEATURES

- \* 100 - 125W Isolated Output
- \* Quarter Brick Package
- \* Regulated Output
- \* Efficiency to 92%
- \* 1500VDC Isolation
- \* Input Under voltage Protection
- \* Over Current Protection
- \* Over Temperature Protection
- \* Remote ON/OFF
- \* Safety Meets UL60950-1



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	Capacitor Load max.
			MIN.	MAX.	NO LOAD	FULL LOAD		
CQB125-48S2V5	36-75 VDC	2.5 VDC	0 mA	40A	70 mA	2341mA	89	10000 $\mu$ F
CQB125-48S3V3	36-75 VDC	3.3 VDC	0 mA	35A	70 mA	2673mA	90	10000 $\mu$ F
CQB125-48S05	36-75 VDC	5.0 VDC	0 mA	25A	90 mA	2861mA	91	10000 $\mu$ F
CQB125-48S12	36-75 VDC	12 VDC	0 mA	10A	100 mA	2717mA	92	2200 $\mu$ F

NOTE: 1. Nominal Input Voltage 48VDC

# SPECIFICATIONS

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

## INPUT SPECIFICATIONS:

Input Voltage Range ..... 48V ..... 36 – 75V  
 Input Surge Voltage (100ms max.) ..... 48V ..... 100Vdc max.  
 Under voltage lockout ..... power up ..... 35V typ.  
 ..... power down ..... 33V typ.  
 Input Filter ..... PI Type  
 Positive Logic Remote on/off Control (see Note4 &5)

## OUTPUT SPECIFICATIONS:

Voltage Accuracy ..... ±1.0% max.  
 Transient Response: 25% Step Load Change ..... <500us  
 Ripple and Noise, 20MHz BW ..... 100mV p-p max.  
 ..... 5V/12Vout ..... 120mVp-p max.  
 Temperature Coefficient ..... ±0.03%/C max.  
 Short Circuit Protection.....Continuous/hiccup  
 Line Regulation, Note1 ..... ±0.2% max.  
 Load Regulation, Note2 ..... ±0.5% max.  
 Over Voltage Protection Trip Range, %Vo nom. .... 115%-140%  
 External Trim Adj. Range, Note6 ..... ±10%  
 Current Limit ..... 110% - 150% Nominal Output  
 Start up time ..... 150ms typ.

## GENERAL SPECIFICATIONS:

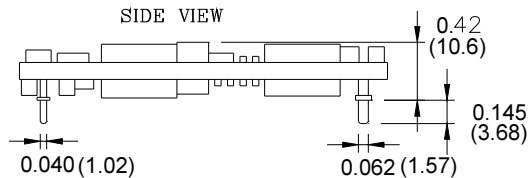
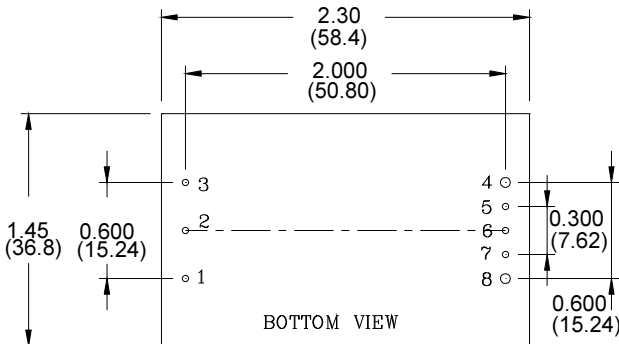
Efficiency ..... See Table  
 Isolation Voltage ..... 1500 VDC min.  
 Isolation Resistance ..... 10<sup>7</sup> Ohms min.  
 Isolation Capacitance ..... 1000pF typ.  
 Switching Frequency ..... 250KHz typ.  
 ..... 5V/12Vout ..... 300KHz typ.  
 Over Temperature Protection ..... 120°C typ.  
 Operating Ambient Temperature Range ..... -40°C to +85°C  
 Power De-rating Curve ..... refer to Application Note  
 Storage Temperature Range ..... -40°C to +125°C  
 Dimensions ..... 2.30 x 1.45 x 0.42 inches(58.4 x 36.8 x 10.6 mm)  
 Weight ..... 40g

## NOTE:

1. Measured From High Line to Low Line
2. Measured From Full Load to Zero Load
3. The output ripple and noise is measured with 10uF tantalum and 1uF Ceramic capacitor across output.
4. Logic Compatibility ..... Open Collector ref to -Input  
 Module ON ..... 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 ..... 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

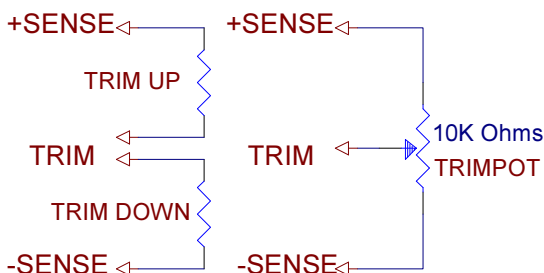
## SIZE QB Dimensions :

All Dimensions in Inches(mm)  
 Tolerances: X.XX in.±0.02 in.(X.X mm ±0.5mm)  
 X.XXX in.±0.010 in.(X.XX mm ±0.25 mm)



PIN CONNECTION	
Pin	Function
1	+ Vin
2	ON/OFF
3	- Vin
4	- Vout
5	-Sense
6	Trim
7	+Sense
8	+ Vout

## EXTERNAL OUTPUT TRIM



Typical Derating Curve for CQB125-48S3V3

