



**CE** preliminary  
**FEATURES**

# **CQB150-300 SERIES**

## **150 WATT 2:1 INPUT**

## **DC-DC CONVERTERS**

## **SINGLE OUTPUT**

TBD

- \* 150W Isolated Output
- \* Efficiency to 88%
- \* Fixed Switching Frequency
- \* 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 2004/108/EC
- \* UL/C-UL 60950 Certified
- \* Fully Isolated 3000VAC

| MODEL<br>NUMBER | INPUT<br>VOLTAGE | OUTPUT<br>VOLTAGE | OUTPUT<br>CURRENT |       | INPUT CURRENT |           | % EFF. | Capacitor<br>Load max. |
|-----------------|------------------|-------------------|-------------------|-------|---------------|-----------|--------|------------------------|
|                 |                  |                   | MIN.              | MAX.  | NO LOAD       | FULL LOAD |        |                        |
| CQB150-300S3V3  | 180-425VDC       | 3.3VDC            | 0mA               | 30A   | 10mA          | 0.4A      | 85     | 10000μF                |
| CQB150-300S05   | 180-425VDC       | 5VDC              | 0mA               | 30A   | 10mA          | 0.6A      | 85     | 10000μF                |
| CQB150-300S12   | 180-425VDC       | 12 VDC            | 0mA               | 12.5A | 10mA          | 0.6A      | 86     | 8800μF                 |
| CQB150-300S15   | 180-425VDC       | 15 VDC            | 0mA               | 10A   | 10mA          | 0.6A      | 86     | 8800μF                 |
| CQB150-300S24   | 180-425VDC       | 24 VDC            | 0mA               | 6.3A  | 10mA          | 0.6A      | 86     | 8800μF                 |
| CQB150-300S28   | 180-425VDC       | 28 VDC            | 0mA               | 5.4A  | 10mA          | 0.56A     | 88     | 2200μF                 |
| CQB150-300S48   | 180-425VDC       | 48 VDC            | 0mA               | 3.2A  | 10mA          | 0.56A     | 88     | 2200μF                 |

NOTE: 1. Nominal Input Voltage 300VDC

SPECIFICATIONS

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

INPUT SPECIFICATIONS:

Input Voltage Range.....300V..... 180-425V  
Input over voltage protection.....Module on.....428V  
Module off.....450V  
Under voltage lockout .....300Vin power up ..... 175V  
300Vin power down.....160V  
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 ..... ±10%  
Ripple & Noise, 20MHz BW  
3.3V& 5V ..... 100mV pk-pk, max.  
12V&15V..... 60mV RMS, 150mV pk-pk max.  
24V&28V..... 100mV RMS, 280mV pk-pk max.  
48V..... 200mV RMS, 480mV 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 ..... 110% ~160% Nominal Output  
Start up time ..... 60mS typ.

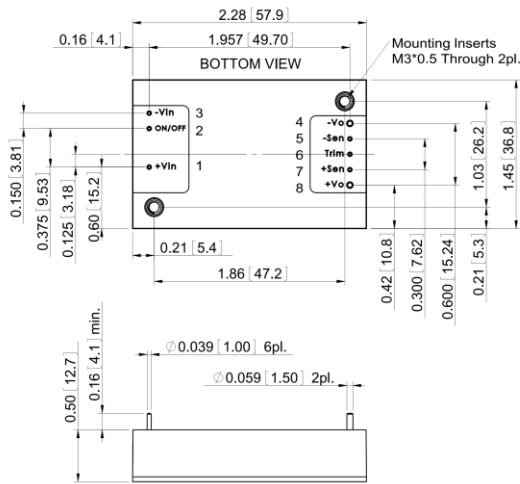
GENRAL SPECIFICATIONS:

Efficiency ..... See Table  
Isolation Voltage :  
Isolation Voltage .....Input/Output..... 3000VAC min.  
Input/Case.....2500VAC min.  
Output/Case..... 500VAC min.  
Isolation Resistance ..... 10<sup>7</sup> ohm min.  
Switching Frequency ..... 300KHz typ.  
Operating Ambient Temperature ..... -40°C to +105°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 ..... TBD hrs  
Dimensions ..... 2.28×1.45×0.50 inches (57.9×36.8×12.7 mm)  
Case Material .....Aluminum Base Plate with Plastic Case  
Weight ..... 68 g

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 tantalum and 1uF 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. 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

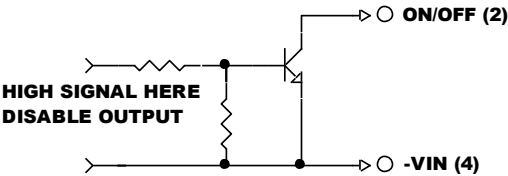
All Dimensions in Inches[mm]  
Tolerance Inches:x.xx=±0.02 ,x.xxx=±0.010  
Millimeters:x.x=±0.5 , x.xx=±0.25



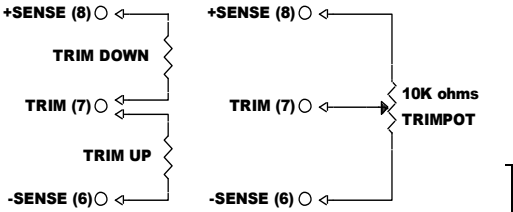
| PIN CONNECTION |           |
|----------------|-----------|
| Pin            | Function  |
| 1              | +V Input  |
| 2              | On/Off    |
| 3              | -V Input  |
| 4              | -V Output |
| 5              | -Sense    |
| 6              | Trim      |
| 7              | +Sense    |
| 8              | +V Output |

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REMOTE ON/OFF CONTROL



EXTERNAL OUTPUT TRIM



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| Revision<br>Version | Date      | Change Description | Signature |
|---------------------|-----------|--------------------|-----------|
| V01                 | 2014/10/6 | New release        | Lance     |
|                     |           |                    |           |
|                     |           |                    |           |