



# CQB150-300S SERIES

## 150 WATT 2:1 INPUT

### DC-DC CONVERTERS

### SINGLE OUTPUT



## FEATURES

- \* 150W Isolated Output
- \* Efficiency up to 89%
- \* 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
- \* UL62368-1 (Reinforced Insulation) Approval
- \* CB Test Certificate IEC62368-1
- \* Shock & Vibration Meets EN50155 (EN61373)
- \* Fire & Smoke Meets EN45545-2



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	CAPACITOR LOAD MAX.
			MIN.	MAX.	NO LOAD	FULL LOAD		
CQB150-300S05	180-425 VDC	5 VDC	0 mA	30 A	10 mA	580 mA	86	10000 $\mu$ F
CQB150-300S12	180-425 VDC	12 VDC	0 mA	12.5 A	10 mA	560 mA	89	8800 $\mu$ F
CQB150-300S15	180-425 VDC	15 VDC	0 mA	10 A	10 mA	560 mA	89	8800 $\mu$ F
CQB150-300S24	180-425 VDC	24 VDC	0 mA	6.3 A	10 mA	570 mA	88.5	3300 $\mu$ F
CQB150-300S28	180-425 VDC	28 VDC	0 mA	5.4 A	10 mA	570 mA	88.5	3300 $\mu$ F
CQB150-300S48	180-425 VDC	48 VDC	0 mA	3.2 A	10 mA	570 mA	89	1000 $\mu$ F

### NOTE:

1. Nominal Input Voltage 300 VDC.
2. Require a Ceramic Capacitor 1500pF Connected Between -Vin to Case for All Models.
3. An External Input Capacitor 68 $\mu$ F for All Models are Recommended to Reduce Input Ripple Voltage.
4. Measure at Nominal Input Voltage.

# 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	440V typ.
	module off	450V typ.
Under Voltage Lockout	300Vin power up	170V
	300Vin power down	160V
Positive Logic Remote On/Off (note 4&5)		
Input Filter (note7)		PI Type

## OUTPUT SPECIFICATIONS:

Voltage Accuracy	±1.0% max.
Transient Response: 75%-100% Step Load Change	
Error Band	±5% Vout
Recover Time	<250us
External Trim Adj. Range	+10%, -20%
Ripple & Noise, 20MHz BW (note3)	
5V	60mV RMS, 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	±0.02%/°C max.
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	280ms typ.

## GENERAL SPECIFICATIONS:

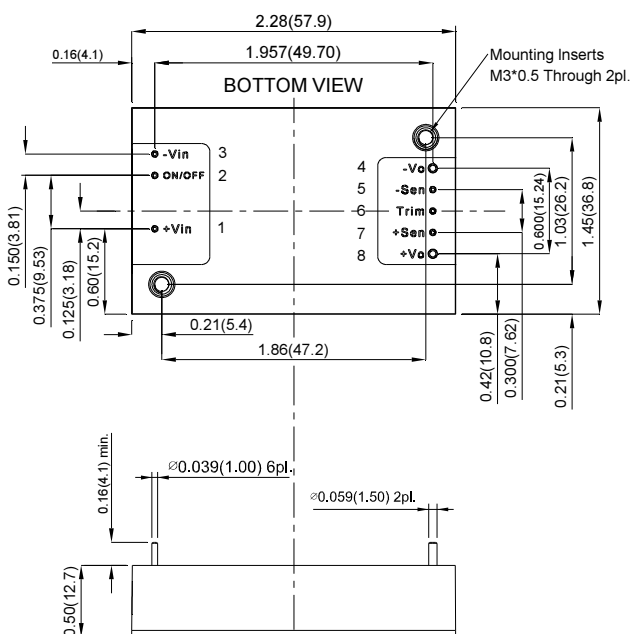
Efficiency	See Table
Isolation Voltage	Input/Output 3000VAC min.
	Input/Case 2500VAC min.
	Output/Case 500VAC min.
Isolation Resistance	10 <sup>8</sup> ohm min.
Switching Frequency	360KHz typ.
Operating Case Temperature	-40°C to +105°C
Storage Temperature	-55°C to +105°C
Thermal Shutdown. Case Temperature	110°C typ.
Humidity	95% RH max. Non Condensing
MTBF ... MIL-HDBK-217F. GB. 25°C. Full Load ... 48V	1000Khrs typ.
	Others ... .800Khrs typ.
Dimensions	2.28×1.45×0.50 inches(57.9×36.8×12.7 mm)
Case Material	Aluminum Base Plate with Plastic Case
Weight	65g

## 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 68uF for all models are recommended to reduce input ripple voltage.
8. Require a disc ceramic capacitor 1500pF (type KX Class X1 Y1 series Murata) connected between -vin to case for all models.

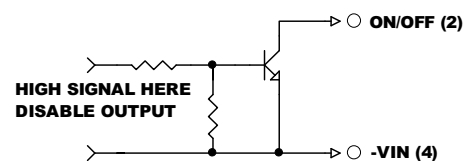
## QB Dimensions:

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

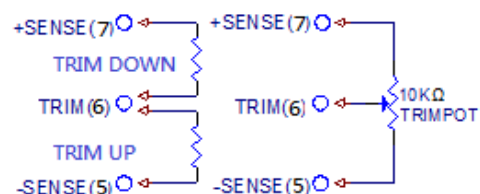


PIN CONNECTION	
PIN	Function
1	+V Input
2	On/Off
3	-V Input
4	-V Output
5	-Sense
6	Trim
7	+Sense
8	+V Output

## REMOTE ON/OFF CONTROL



## EXTERNAL OUTPUT TRIM



# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## Cincon:

[CQB150-300S12](#) [CQB150-300S15](#) [CQB150-300S24](#) [CQB150-300S28](#) [CQB150-300S48](#) [CQB150-300S05](#)  
[CQB150-300S05-C](#) [CQB150-300S48N](#) [CQB150-300S24N-C](#) [CQB150-300S28N](#) [CQB150-300S12N](#) [CQB150-](#)  
[300S28N-C](#) [CQB150-300S24-C](#) [CQB150-300S12-C](#) [CQB150-300S24N](#) [CQB150-300S28-C](#) [CQB150-300S15-C](#)  
[CQB150-300S15N-C](#) [CQB150-300S48-C](#) [CQB150-300S05N-C](#) [CQB150-300S12N-C](#) [CQB150-300S05N](#) [CQB150-](#)  
[300S48N-C](#) [CQB150-300S15N](#)