



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

CQB150-300S SERIES

150 WATT 2:1 INPUT

DC-DC CONVERTERS

SINGLE OUTPUT



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 μ F
CQB150-300S12	180-425 VDC	12 VDC	0 mA	12.5 A	10 mA	560 mA	89	8800 μ F
CQB150-300S15	180-425 VDC	15 VDC	0 mA	10 A	10 mA	560 mA	89	8800 μ F
CQB150-300S24	180-425 VDC	24 VDC	0 mA	6.3 A	10 mA	570 mA	88.5	3300 μ F
CQB150-300S28	180-425 VDC	28 VDC	0 mA	5.4 A	10 mA	570 mA	88.5	3300 μ F
CQB150-300S48	180-425 VDC	48 VDC	0 mA	3.2 A	10 mA	570 mA	89	1000 μ 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 μ 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:

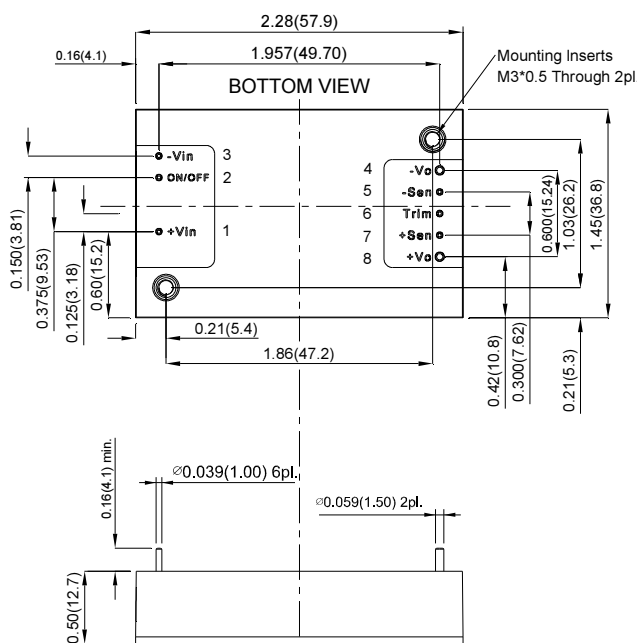
- Efficiency See Table
- Isolation Voltage Input/Output 3000VAC min.
 Input/Case 2500VAC min.
 Output/Case 500VAC min.
- Isolation Resistance 10⁸ ohm min.
- Switching Frequency 360KHz typ.
- Operating Case Temperature -40°C to +105°C
- Storage Temperature -55°C to +105°C
- Thermal Shutdown. Case Temperature 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:

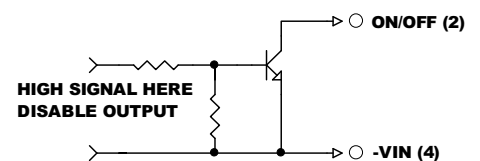
1. Measured from high line to low line.
2. Measured from full load to zero load.
3. Output ripple and noise measured with 10uF aluminum and 1uF ceramic capacitor across output for 48Vout and with 10uF tantalum and 1uF ceramic capacitor for others.
4. Logic compatibility open collector ref to -Input
 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:

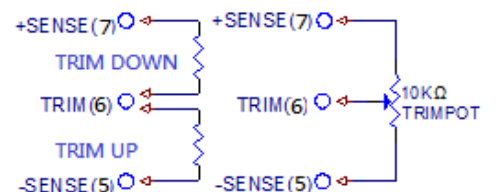
All Dimensions in Inches(mm)
 Tolerance Inches:x.xx=±0.02 , x.xxx=±0.010
 Millimeters:x.x=±0.5 , x.xx=±0.25



REMOTE ON/OFF CONTROL



EXTERNAL OUTPUT TRIM



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