

CQB60W-110S SERIES

60 WATT

DC-DC CONVERTERS



FEATURES

- * 60W Isolated Output
- * Efficiency to 92%
- * Low No Load Power Consumption
- * 4:1 Input Range
- * Regulated Outputs
- * Remote On/Off
- * Over Temperature/Voltage/Current Protection
- * Continuous Short Circuit Protection
- * Quarter Brick Size Meet Industrial Standard
- * UL60950-1 (Basic Insulation) Approval
- * Meets EN50155 with External Circuits
- * Shock & Vibration Meets EN50155 (EN61373)
- * Fire & Smoke Meets EN45545-2
- * 4000m Operating Altitude
- * Safety Meets IEC/EN/UL 62368-1



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	CAPACITOR LOAD MAX.
			MIN.	MAX.	NO LOAD	FULL LOAD		
CQB60W-110S05	43-160 VDC	5 VDC	0 mA	12 A	5 mA	600 mA	91	6800 μ F
CQB60W-110S12	43-160 VDC	12 VDC	0 mA	5 A	5 mA	593 mA	92	3300 μ F
CQB60W-110S15	43-160 VDC	15 VDC	0 mA	4 A	5 mA	606 mA	90	3300 μ F
CQB60W-110S24	43-160 VDC	24 VDC	0 mA	2.5 A	5 mA	606 mA	90	1200 μ F
CQB60W-110S28	43-160 VDC	28 VDC	0 mA	2.14 A	5 mA	606 mA	90	1200 μ F
CQB60W-110S48	43-160 VDC	48 VDC	0 mA	1.25 A	5 mA	613 mA	89	470 μ F

NOTE:

1. Nominal Input Voltage 110VDC

SPECIFICATIONS

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

INPUT SPECIFICATIONS:

Input Voltage Range 110V 43-160V
 Input Surge Voltage (100ms max.) 180Vdc max.
 Under Voltage Lockout power up 42V
 power down 38V

Positive Logic Remote On/Off (note 4&5)

Input Filter PI Type

OUTPUT SPECIFICATIONS:

Voltage Accuracy ±1.0% max.
 Transient Response (25% Step Load Change) <250µs
 External Trim Adj. Range ±10%
 Ripple & Noise, 20MHz BW (note 3)

5V 40mV RMS, 100mV pk-pk max.

12V/15V 60mV RMS, 150mV pk-pk max.

24V/28V 100mV RMS, 240mV pk-pk max.

48V 200mV RMS, 480mV pk-pk max.

Temperature Coefficient ±0.03%/°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% - 165% Nominal Output

Start up Time 15ms typ.

GENERAL SPECIFICATIONS:

Efficiency See Table

Isolation Voltage Input/Output 3000VDC min.

Input/Case 3000VDC min.

Output/Case 1500VDC min.

Isolation Resistance 10⁷ Ohm min.

Isolation Capacitance 1000pF typ.

Switching Frequency 200KHz typ.

Operating Case Temperature -40°C to +100°C

Storage Temperature -55°C to +105°C

Thermal Shutdown, Case Temp. 110°C typ.

Humidity 95% RH max. Non Condensing

Operating Altitude 4000m

MTBF MIL-HDBK-217F, GB, 25°C, Full Load 650Khrs typ.

Safety UL60950-1 2nd (Basic Insulation)

EMI EN50155 (EN50121-3-2) with External Filter

Shock/Vibration EN50155 (EN61373)

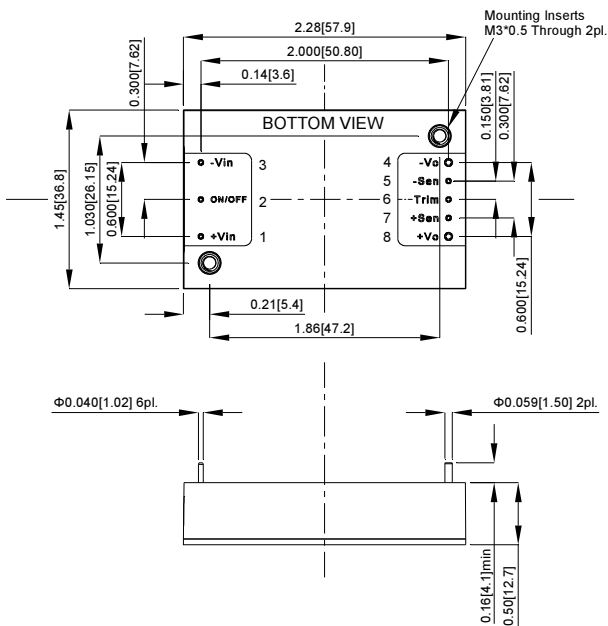
Dimensions 2.28×1.45×0.50 inches (57.9×36.8×12.7 mm)

Case Material Aluminum Baseplate with Plastic Case

Weight 61.5 g

NOTE:

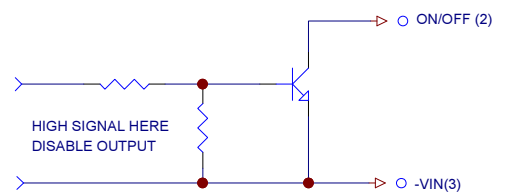
1. Measured from high line to low line.
2. Measured from full load to zero load.
3. Output ripple and noise measured with 10µF tantalum and 1µF ceramic capacitor across output.
4. Logic compatibility open collector ref to -Input
 Module on > 3.5VDC to 75VDC or open circuit
 Module off 0 to < 1.2 VDC
5. Suffix "N" to the model number with negative logic remote on/off
 Module on 0 to < 1.2 VDC
 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 68µF for all models are recommended to reduce input ripple voltage.
8. Design meets EN50155 and RIA12 refer to application note.



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

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

REMOTE ON/OFF CONTROL



EXTERNAL OUTPUT TRIM

