

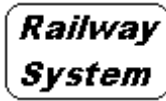


electronicsolutions

CQB100-110S SERIES

100 WATT

DC-DC CONVERTERS



FEATURES

- * 100W Isolated Output
- * Efficiency to 93%
- * 200KHz Switching Frequency
- * 3:1 Input Range
- * Regulated Outputs
- * Remote On/Off
- * Over Temperature Protection
- * Over Voltage/Current Protection
- * Continuous Short Circuit Protection
- * Quarter Brick Size Meets Industrial Standard
- * UL60950-1 Approval (Except 3.3 Vout)
- * Meets EN50155
- * 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		
CQB100-110S3V3	66-160 VDC	3.3 VDC	0 mA	25 A	40 mA	833 mA	90	10000 μ F
CQB100-110S05	66-160 VDC	5.0 VDC	0 mA	20 A	30 mA	983 mA	92.5	10000 μ F
CQB100-110S12	66-160 VDC	12 VDC	0 mA	8.4 A	40 mA	985 mA	93	8800 μ F
CQB100-110S24	66-160 VDC	24 VDC	0 mA	4.2 A	60 mA	996 mA	92	1500 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	66-160V
Input Surge Voltage (100ms max.)	180Vdc max.	
Under Voltage Lockout	power up	62V
	power down	56V
Positive Logic Remote On/Off:		
Logic Compatibility	Open Collector Ref. to -Input	
Module On	> 3.5Vdc to 75Vdc or Open Circuit	
Module Off	0 to < 1.8Vdc	
Input Filter	Pi Type	

OUTPUT SPECIFICATIONS:

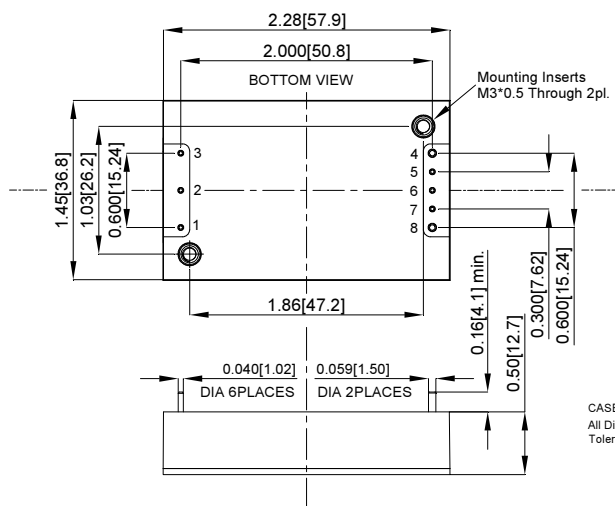
Voltage Accuracy	±1.0% max.
3.3V	±1.5% max.
Transient Response: 25% Step Load Change	<200µs
External Trim Adj. Range	±10%
Ripple & Noise, 20MHz BW (note3)	
3.3 & 5V	40mV RMS, 100mV pk-pk max.
12V	60mV RMS, 150mV pk-pk max.
24V	100mV RMS, 240mV pk-pk max.
Temperature Coefficient	±0.03%/°C max.
Short Circuit 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%-180% Nominal Output
Start up Time	45ms typ.

GENERAL SPECIFICATIONS:

Efficiency	See Table
Isolation Voltage	Input/Output, Input/Case 2250VDC min.
	Output/Case 1500VDC min.
Isolation Resistance	10 ⁷ 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.	105°C typ.
Humidity	95% RH max. Non Condensing
MTBF	MIL-HDBK-217F, GB, 25°C, Full Load ... XXS05 ... 240Khrs typ.
	XXS3V3 ... 400Khrs typ., Others ... 320Khrs typ.
Safety (Except 3.3 Vout)	UL60950-1 2 nd (Basic Insulation) Approval
EMC (note7)	Meet EN50155(EN50121-3-2) with External Filter
Shock/Vibration	Meets EN50155(EN61373)
Environmental	Meets EN50155 (EN60068-2-1)
Dimensions	2.28x1.45x0.50 inches (57.9x36.8x12.7 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. Suffix "N" to the model number with negative logic remote on/off
 - Module on 0 to < 1.8VDC
 - Module off >3.5VDC to 75VDC or open circuit
5. Suffix "-C" to the model number with clear mounting insert (3.2mm DIA.)
6. An external input capacitor 120µF for all models are recommended to reduce input ripple voltage.
7. Design meets EN50155 and RIA12 refer to application note.



EXTERNAL OUTPUT TRIM

