CQB75W SERIES

75 WATT 4:1 INPUT DC-DC CONVERTERS SINGLE OUTPUT

E176177

FEATURES

* 39.6-75W Isolated Output
* Efficiency to 87%
* Fixed Switching Frequency
* 4:1 Input Range
* Regulated Outputs
* Continuous Short Circuit Protection
* Industry Standard Quarter-Brick Package
* UL60950-1 2nd Approval
* 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		
CQB75W-24S3V3	9-36 VDC	3.3 VDC	0 mA	12 A	50 mA	2037 mA	81	12000uF
CQB75W-24S05	9-36 VDC	5.0 VDC	0 mA	12 A	50 mA	2976 mA	84	12000uF
CQB75W-24S12	9-36 VDC	12 VDC	0 mA	6.25 A	50 mA	3634 mA	86	6250uF
CQB75W-24S15	9-36 VDC	15 VDC	0 mA	5 A	50 mA	3634 mA	86	4400uF
CQB75W-24S24	9-36 VDC	24 VDC	0 mA	3.12 A	50 mA	3628 mA	86	1500uF
CQB75W-48S3V3	18-75 VDC	3.3 VDC	0 mA	12 A	30 mA	1006 mA	82	12000uF
CQB75W-48S05	18-75 VDC	5.0 VDC	0 mA	12 A	30 mA	1471 mA	85	12000uF
CQB75W-48S12	18-75 VDC	12 VDC	0 mA	6.25 A	30 mA	1817 mA	86	6250uF
CQB75W-48S15	18-75 VDC	15 VDC	0 mA	5 A	30 mA	1796 mA	87	4400uF
CQB75W-48S24	18-75 VDC	24 VDC	0 mA	3.12 A	30 mA	1796 mA	87	1500uF

NOTE: 1. Nominal Input Voltage 24, 48VDC

SPECIFICATIONS

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

INPUT SPECIFICATIONS:

Input Voltage Range..... 24V..... 9-36V
48V 18-75V
Input Surge Voltage (100ms max.) ..... 24V ..... 50Vdc max.
48V ..... 100Vdc max.
Under Voltage Lockout ..... 24Vin power up 8.8V
24Vin power down 8.0V
48Vin power up 17V
48Vin power down 16V
Positive Logic Remote On/Off (note 4&5)
Input Filter ..... PI Type

OUTPUT SPECIFICATIONS:

Voltage Accuracy: ..... ±1.0% max.
24(48)S33 ..... ±1.5% max.
Transient Response :75% to 100% Step Load Change
Error Band ..... ±5% Vout
Recover Time ..... <500us
External Trim Adj. Range ..... ±10%
Ripple & Noise, 20MHz BW (note3)
3.3V & 5V ..... 40mV RMS, max.
100mV pk-pk, max.
12V & 15V ..... 60mV RMS, max.
150mV pk-pk, max.
24V ..... 100mV RMS, max.
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%-150% Nominal Output
Start up Time ..... 20ms typ.

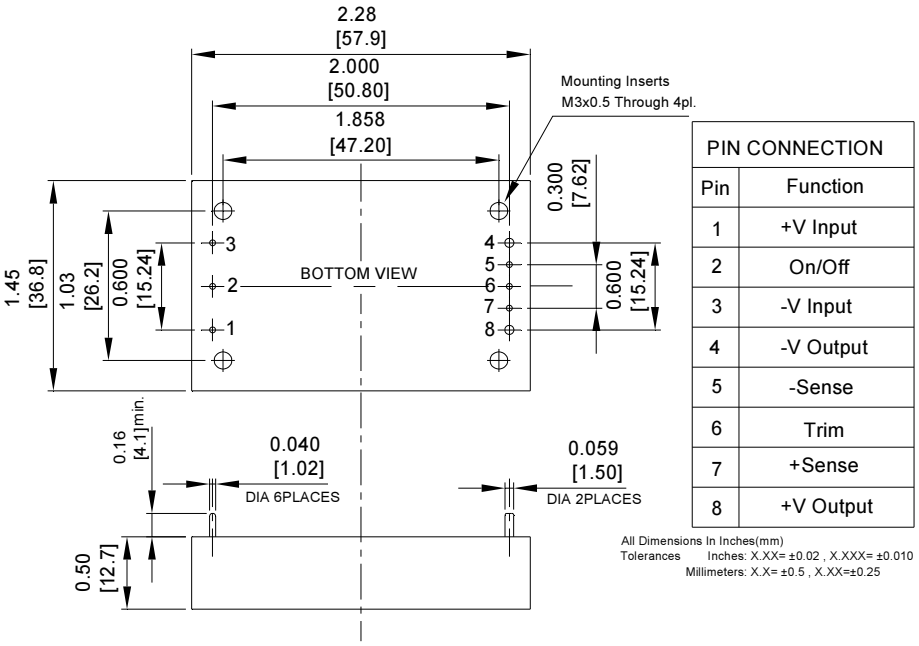
GENRAL SPECIFICATIONS:

Efficiency ..... See Table
Isolation Voltage ..... Input/Output ..... 1500VDC min.
Input/Case ..... 1500VDC min.
Output/Case ..... 1500VDC min.
Isolation Resistance ..... 10^7 Ohm min.
Isolation Capacitance ..... 1000pF typ.
Switching Frequency ..... 300KHz typ.
Operating Case Temperature ..... -40℃ to 100℃
Storage Temperature ..... -55℃ to +105℃
Humidity ..... 95% RH max. Non Condensing
MTBF ..... MIL-HDBK-217F, GB, 25℃, Full Load ..... 850Khrs typ.
Thermal Shutdown, Case Temp. ..... 105℃ typ.
Dimensions ..... 1.45 x 2.28 x 0.50 Inches(36.8 x 57.9 x 12.7 mm)
Case Material ..... Aluminum Base-plate with Plastic Case
Weight 63g

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 ..... 0 to < 1.8Vdc
5. 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
6. Suffix “-C” to the model number with clear mounting insert (3.1mm DIA.).

CASE QB



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

All Dimensions In Inches(mm)
Tolerances Inches: X.XX= ±0.02 , X.XXX= ±0.010
Millimeters: X.X= ±0.5 , X.XX=±0.25

External Output Trim

