



# CQB150-300S SERIES

## 150 WATT 2:1 INPUT

## ISOLATED DC-DC CONVERTER

### Features

- Efficiency Up to 89%
- Fixed Switching Frequency
- Regulated Outputs
- Remote On/Off
- Low No Load Power Consumption
- Fully Protected (OTP/OCP/OVP/UVLO)
- 3000Vac I/O Isolation
- Operating Case Temperature -40 to +105°C
- Quarter Brick Size Meet Industrial Standard 2.28"x1.45"x0.5"
- IEC/EN/UL 62368-1 (Reinforce Insulation) Approval
- CB Test Certificate IEC62368-1
- Shock & Vibration MIL-STD-810F(EN61373) Compliant
- Fire & Smoke EN45545 Compliant
- 2000m Operating Altitude
- -55°C Operating Available (Suffix "-M2")



| MODEL NUMBER  | INPUT VOLTAGE | OUTPUT VOLTAGE | OUTPUT CURRENT |        | INPUT CURRENT |           | % EFF. (2) | 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         | 10000μF             |
| CQB150-300S12 | 180-425 VDC   | 12 VDC         | 0 mA           | 12.5 A | 10 mA         | 560 mA    | 89         | 8800μF              |
| CQB150-300S15 | 180-425 VDC   | 15 VDC         | 0 mA           | 10 A   | 10 mA         | 560 mA    | 89         | 8800μF              |
| CQB150-300S24 | 180-425 VDC   | 24 VDC         | 0 mA           | 6.25 A | 10 mA         | 570 mA    | 88.5       | 3300μF              |
| CQB150-300S28 | 180-425 VDC   | 28 VDC         | 0 mA           | 5.4 A  | 10 mA         | 570 mA    | 88.5       | 3300μF              |
| CQB150-300S48 | 180-425 VDC   | 48 VDC         | 0 mA           | 3.2 A  | 10 mA         | 570 mA    | 89         | 1000μF              |

#### NOTE:

1. Nominal Input Voltage 300 VDC.
2. Measured at 300Vin.
3. Require a Ceramic Capacitor 1500pF Connected Between -Vin to Case for All Models.
4. An External Input Capacitor 68uF for All Models are Recommended to Reduce Input Ripple Voltage.
5. -55°C Start-up Screen per MIL-STD105E S1 Sampling Procedure for "-M2" Version.

### PART NUMBER

| Series  | Nominal Input Voltage | Number of Outputs | Nominal Output Voltage | Remote On/Off Logic                 | Mounting Inserts                                                              | Operating Case Temp. Range              |
|---------|-----------------------|-------------------|------------------------|-------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------|
| CQB150- | II                    | O                 | XX                     | L                                   | -Y (Option)                                                                   | -Z (Option)                             |
| CQB150  | 300 : 300 VDC         | S : Single        | 05 : 5.0VDC            | None : Positive<br><br>N : Negative | None : M3x0.5 Mounting Inserts<br><br>-C : Clear Mounting Insert (3.2mm DIA.) | None : -40~105°C<br><br>-M2 : -55~105°C |
|         |                       |                   | 12 : 12VDC             |                                     |                                                                               |                                         |
|         |                       |                   | 15 : 15 VDC            |                                     |                                                                               |                                         |
|         |                       |                   | 24 : 24VDC             |                                     |                                                                               |                                         |
|         |                       |                   | 28 : 28VDC             |                                     |                                                                               |                                         |
|         |                       |                   | 48 : 48VDC             |                                     |                                                                               |                                         |

#### Part Number Example:

**CQB150-300S12N-C-M2:** Quarter Brick, 150W, 2:1 180-425Vdc Input, Single 12Vdc Output, Negative Logic, Clear Mounting Insert  
-55~105°C Operating Case Temp. Range



# CQB150-300S Series

## TECHNICAL SPECIFICATIONS

(All specifications are typical at nominal input, full load at 25°C unless otherwise noted.)

### ABSOLUTE MAXIMUM RATINGS

| PARAMETER                  | NOTES and CONDITIONS                                                             | Device     | Min.       | Typ. | Max.       | Units           |
|----------------------------|----------------------------------------------------------------------------------|------------|------------|------|------------|-----------------|
| Input Voltage              | Continuous                                                                       | All        | -0.3       |      | 425        | V <sub>dc</sub> |
| Input Surge Voltage        | 100ms max.                                                                       | All        |            |      | 500        | V <sub>dc</sub> |
| Operating Case Temperature | At the center part of case plate (with Derating)<br>Suffix "-M2" (with Derating) | All<br>-M2 | -40<br>-55 |      | 105<br>105 | °C              |
| Storage Temperature        |                                                                                  | All        | -55        |      | 125        | °C              |

### INPUT CHARACTERISTICS

| PARAMETER                        | NOTES and CONDITIONS                      | Device                 | Min. | Typ. | Max. | Units            |
|----------------------------------|-------------------------------------------|------------------------|------|------|------|------------------|
| Operating Input Voltage          |                                           | All                    | 180  | 300  | 425  | V <sub>dc</sub>  |
| Input Under Voltage Lockout      |                                           |                        |      |      |      |                  |
| Turn-On Voltage Threshold        |                                           | All                    | 165  | 170  | 175  | V <sub>dc</sub>  |
| Turn-Off Voltage Threshold       |                                           | All                    | 155  | 160  | 165  | V <sub>dc</sub>  |
| Lockout Hysteresis Voltage       |                                           | All                    |      | 10   |      | V <sub>dc</sub>  |
| Input Over Voltage Lockout       |                                           |                        |      |      |      |                  |
| Turn-Off Voltage Threshold       |                                           | All                    |      | 500  |      | V <sub>dc</sub>  |
| Turn-On Voltage Threshold        |                                           | All                    |      | 440  |      | V <sub>dc</sub>  |
| Maximum Input Current            | V <sub>in</sub> =180V, Full load          | All                    |      | 1000 |      | mA               |
| No-Load Input Current            | V <sub>in</sub> =300V, I <sub>o</sub> =0A | See Model Number Table |      |      |      | mA               |
| Input Filter                     | Pi filter.                                | All                    |      |      |      |                  |
| Inrush Current (I <sub>t</sub> ) | As per ETS300 132-2                       | All                    |      |      | 0.1  | A <sup>2</sup> s |
| Input Reflected Ripple Current   | P-P thru 12uH inductor, 5Hz to 20MHz      | All                    |      | 30   |      | mA               |

### OUTPUT CHARACTERISTICS

| PARAMETER                                                | NOTES and CONDITIONS                                                                                                                                                                                                                                     | Device                 | Min.                      | Typ. | Max.  | Units |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------|------|-------|-------|
| Voltage Set Point Accuracy                               | V <sub>in</sub> =300V, Full load, T <sub>c</sub> =25°C                                                                                                                                                                                                   | All                    | -1.0                      |      | +1.0  | %     |
| Output Voltage Regulation                                |                                                                                                                                                                                                                                                          |                        |                           |      |       |       |
| Load Regulation                                          | Full load to no load                                                                                                                                                                                                                                     | All                    |                           |      | ±0.2  | %     |
| Line Regulation                                          | V <sub>in</sub> =High line to low line, full load                                                                                                                                                                                                        | All                    |                           |      | ±0.2  | %     |
| Temperature Coefficient                                  | T <sub>c</sub> = -40°C to 105°C                                                                                                                                                                                                                          | All                    |                           |      | ±0.02 | %/°C  |
| Output Voltage Ripple and Noise (5Hz to 20MHz bandwidth) |                                                                                                                                                                                                                                                          |                        |                           |      |       |       |
| Peak-to-Peak                                             | Output ripple and noise measured with an external MLCC 1000pF connected between -V <sub>in</sub> to Case, and 10uF aluminum and 1uF ceramic capacitor across output for 48V <sub>out</sub> , and with 10uF tantalum and 1uF ceramic capacitor for others | 05V <sub>o</sub>       |                           |      | 100   | mV    |
|                                                          |                                                                                                                                                                                                                                                          | 12V <sub>o</sub>       |                           |      | 150   |       |
|                                                          |                                                                                                                                                                                                                                                          | 15V <sub>o</sub>       |                           |      | 150   |       |
|                                                          |                                                                                                                                                                                                                                                          | 24V <sub>o</sub>       |                           |      | 280   |       |
|                                                          |                                                                                                                                                                                                                                                          | 28V <sub>o</sub>       |                           |      | 280   |       |
|                                                          |                                                                                                                                                                                                                                                          | 48V <sub>o</sub>       |                           |      | 480   |       |
| RMS.                                                     |                                                                                                                                                                                                                                                          | 05V <sub>o</sub>       |                           |      | 60    | mV    |
|                                                          |                                                                                                                                                                                                                                                          | 12V <sub>o</sub>       |                           |      | 60    |       |
|                                                          |                                                                                                                                                                                                                                                          | 15V <sub>o</sub>       |                           |      | 60    |       |
|                                                          |                                                                                                                                                                                                                                                          | 24V <sub>o</sub>       |                           |      | 100   |       |
|                                                          |                                                                                                                                                                                                                                                          | 28V <sub>o</sub>       |                           |      | 100   |       |
|                                                          |                                                                                                                                                                                                                                                          | 48V <sub>o</sub>       |                           |      | 200   |       |
| Output Current Range                                     | V <sub>in</sub> = 180 to 425V                                                                                                                                                                                                                            | See Model Number Table |                           |      |       | A     |
| Over Current Protection                                  | Hiccup mode. Auto recovery                                                                                                                                                                                                                               | All                    | 110                       | 125  | 160   | %     |
| Short Circuit Protection                                 |                                                                                                                                                                                                                                                          | All                    | Continuous, Auto Recovery |      |       |       |
| External Load Capacitance                                | Full load (resistive)                                                                                                                                                                                                                                    | See Model Number Table |                           |      |       | uF    |



# CQB150-300S Series

| PARAMETER                         | NOTES and CONDITIONS                                                            | Device | Min. | Typ. | Max. | Units |
|-----------------------------------|---------------------------------------------------------------------------------|--------|------|------|------|-------|
| Output Voltage Trim Range         | $P_o \leq \text{max. rated power, } I_o \leq I_{o\_max.}$                       | All    | -20  |      | +10  | %     |
| Output Voltage Remote Sense Range | $P_o \leq \text{max. rated power, } I_o \leq I_{o\_max.}$<br>% of nominal $V_o$ | All    |      |      | +10  | %     |
| Over Voltage Protection           | Limited voltage, % of nominal $V_o$                                             | All    | 115  | 125  | 140  | %     |

## EFFICIENCY

| PARAMETER | NOTES and CONDITIONS      | Device                 | Min. | Typ. | Max. | Units |
|-----------|---------------------------|------------------------|------|------|------|-------|
| 100% Load | $V_{in}=300V$ , Full load | See Model Number Table |      |      |      | %     |

## DYNAMIC CHARACTERISTICS

| PARAMETER                               | NOTES and CONDITIONS                                                                              | Device | Min. | Typ. | Max.    | Units |
|-----------------------------------------|---------------------------------------------------------------------------------------------------|--------|------|------|---------|-------|
| Output Voltage Current Transient        |                                                                                                   |        |      |      |         |       |
| Error Band                              | 75% to 100% of $I_{o\_max.}$ step load change<br>$dI/dt=0.1A/us$<br>(within 1% $V_{out}$ nominal) | All    |      |      | $\pm 5$ | %     |
| Recovery Time                           |                                                                                                   | All    |      |      | 250     | us    |
| Turn-On Delay and Rise Time             | Full load (constant resistive load)                                                               |        |      |      |         |       |
| Turn-On Delay Time, From On/Off Control | $V_{on/off}$ to 10% $V_{o\_set}$ Remote on                                                        | All    |      | 250  |         | ms    |
| Turn-On Delay Time, From Input          | $V_{in\_min}$ to 10% $V_{o\_set}$ , Power up                                                      | All    |      | 250  |         | ms    |
| Output Voltage Rise Time                | 10% $V_{o\_set}$ to 90% $V_{o\_set}$                                                              | All    |      | 30   |         | ms    |

## ISOLATION CHARACTERISTICS

| PARAMETER                                                | NOTES and CONDITIONS                  | Device | Min. | Typ.  | Max. | Units      |
|----------------------------------------------------------|---------------------------------------|--------|------|-------|------|------------|
| Isolation Voltage<br>(100% factory Hi-Pot tested @2sec.) | 1 Minute; input to output             | All    |      |       | 3000 | $V_{ac}$   |
|                                                          |                                       |        |      |       | 4200 | $V_{dc}$   |
|                                                          | 1 Minute; input to case (base plate)  | All    |      |       | 2500 | $V_{ac}$   |
|                                                          |                                       |        |      |       | 3500 | $V_{dc}$   |
|                                                          | 1 Minute; output to case (base plate) | All    |      |       | 500  | $V_{ac}$   |
|                                                          |                                       |        |      |       | 700  | $V_{dc}$   |
| Isolation Resistance                                     | Input to output                       | All    | 100  |       |      | M $\Omega$ |
| Isolation Capacitance                                    | Input to output                       | All    |      | None  |      | pF         |
|                                                          | Input to case (base plate)            | All    |      | None  |      |            |
|                                                          | Output to case (base plate)           | All    |      | 10000 |      |            |

## FEATURE CHARACTERISTICS

| PARAMETER                                                       | NOTES and CONDITIONS                              | Device        | Min.   | Typ. | Max.       | Units |
|-----------------------------------------------------------------|---------------------------------------------------|---------------|--------|------|------------|-------|
| Switching Frequency                                             | Pulse width modulation (PWM), fixed               | All           | 330    | 360  | 390        | KHz   |
| On/Off Control, Positive Remote On/Off Logic, Refer to -Vin Pin |                                                   |               |        |      |            |       |
| Logic Low (Module Off)                                          | $V_{on/off}$ at $I_{on/off}=1.0mA$                | -M2<br>Others | 0<br>0 |      | 1.0<br>1.2 | V     |
| Logic High (Module On)                                          | $V_{on/off}$ at $I_{on/off}=0.0uA$ , Pin open=on  | All           | 3.5    |      | 75         | V     |
| On/Off Control, Negative Remote On/Off Logic, Refer to -Vin Pin |                                                   |               |        |      |            |       |
| Logic High (Module Off)                                         | $V_{on/off}$ at $I_{on/off}=0.0uA$ , Pin open=off | All           | 3.5    |      | 75         | V     |
| Logic Low (Module On)                                           | $V_{on/off}$ at $I_{on/off}=1.0mA$                | -M2<br>Others | 0<br>0 |      | 1.0<br>1.2 | V     |
| On/Off Current (for Both Remote On/Off Logic)                   | $I_{on/off}$ at $V_{on/off}=0V$                   | All           |        | 0.3  | 1          | mA    |
| Leakage Current (for Both Remote On/Off Logic)                  | Logic high, $V_{on/off}=15V$                      | All           |        |      | 30         | uA    |



# CQB150-300S Series

| PARAMETER                   | NOTES and CONDITIONS                                       | Device | Min. | Typ. | Max. | Units |
|-----------------------------|------------------------------------------------------------|--------|------|------|------|-------|
| Off Converter Input Current | Shutdown input idle current                                | All    |      | 2.5  | 4    | mA    |
| Over Temperature Shutdown   | Temperature at the center part of base plate, non-latching | All    |      | 110  |      | °C    |
| Over Temperature Recovery   |                                                            | All    |      | 100  |      | °C    |

## GENERAL SPECIFICATIONS

| PARAMETER                               | NOTES and CONDITIONS                                                             | Device                                                                | Min.                                         | Typ. | Max. | Units            |
|-----------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------|------|------|------------------|
| MTBF                                    | I <sub>o</sub> =100% of I <sub>o_max</sub> ;<br>MIL-HDBK - 217F_Note 1, GB, 25°C | 300S05                                                                |                                              | 810  |      | K<br>hours       |
|                                         |                                                                                  | 300S12                                                                |                                              | 870  |      |                  |
|                                         |                                                                                  | 300S15                                                                |                                              | 930  |      |                  |
|                                         |                                                                                  | 300S24                                                                |                                              | 900  |      |                  |
|                                         |                                                                                  | 300S28                                                                |                                              | 790  |      |                  |
|                                         |                                                                                  | 300S48                                                                |                                              | 1100 |      |                  |
| Weight                                  |                                                                                  | All                                                                   |                                              | 65   |      | grams            |
| Case Material                           | Plastic, DAP, UL 94V-0                                                           |                                                                       |                                              |      |      |                  |
| Base plate Material                     | Aluminum                                                                         |                                                                       |                                              |      |      |                  |
| Potting Material                        | UL 94V-0                                                                         |                                                                       |                                              |      |      |                  |
| Pin Material                            | Base: Copper<br>Plating: Nickel with Matte Tin                                   |                                                                       |                                              |      |      |                  |
| Shock/Vibration                         | MIL-STD-810F/EN61373                                                             |                                                                       |                                              |      |      |                  |
| Humidity                                | 95% RH max. Non Condensing                                                       |                                                                       |                                              |      |      |                  |
| Altitude                                | 2000m Operating Altitude, 12000m Transport Altitude                              |                                                                       |                                              |      |      |                  |
| Thermal Shock                           | MIL-STD-810F                                                                     |                                                                       |                                              |      |      |                  |
| Fire & Smoke                            | EN45545-2 Compliant                                                              |                                                                       |                                              |      |      |                  |
| EMI                                     | Meets EN55032 & EN55022 Compliant (with external filter)                         |                                                                       |                                              |      |      | Class A          |
| ESD                                     | EN61000-4-2                                                                      | Level 3: Air ±8kV, Contact ±6kV                                       |                                              |      |      | Perf. Criteria A |
| Radiated immunity                       | EN61000-4-3                                                                      | Level 3: 80~1000MHz, 20V/m                                            |                                              |      |      | Perf. Criteria A |
| Fast Transient                          | EN61000-4-4                                                                      | Level 3: On power input port, ±2kV, external input capacitor required |                                              |      |      | Perf. Criteria A |
| Surge                                   | EN61000-4-5                                                                      | Level 4: Line to earth, ±4kV, Line to line, ±2kV                      |                                              |      |      | Perf. Criteria A |
| Conducted immunity                      | EN61000-4-6                                                                      | Level 3: 0.15~80MHz, 10V                                              |                                              |      |      | Perf. Criteria A |
| Power Frequency Magnetic Field immunity | EN61000-4-8                                                                      | 50/60Hz, 3A/m (r.m.s.)                                                |                                              |      |      | Perf. Criteria A |
| Application Note Link                   |                                                                                  |                                                                       | <a href="#">CQB150-300S Series App Notes</a> |      |      |                  |
| Packaging Information Link              |                                                                                  |                                                                       | <a href="#">Packaging Information</a>        |      |      |                  |

## Immunity to Environmental Conditions

| Phenomenon                    | Reference Clause                               | Reference Standard | Test Conditions                                                                                                                                                                                                                        | Result |
|-------------------------------|------------------------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Vibration Test                | MIL-STD-810F Table 514.5C-VIII Figure 514.5C-6 | MIL-STD-810F       | Unit are Non-Operating<br>Vibration Waveform: Random<br>Vibration Frequency: 15 ~ 2000 Hz<br>Vibration axis: X · Y · Z axis<br>Duration: 1hr / axis                                                                                    | Pass   |
| Shock Test                    | MIL-STD-810F 516.5 Table 516.5-I               | MIL-STD-810F       | Wave form: Sawtooth Wave<br>Test Category: Crash Hazard Test for Ground Equipment<br>Duration: 10 ms<br>Peak Acceleration: 75 G<br>Cross-Over Frequency: 80 Hz<br>No. of Shock : Each axis 3 times<br>Shock Direction: ±X, ±Y, ±Z axis | Pass   |
| Thermal Shock Cycling Test    | MIL-STD-810F 503.4 Figure 503.4-1              | MIL-STD-810F       | Temperature: -55°C to 105°C<br>Humidity: 95%RH<br>Duration: 8hrs/ 3 times cycling & 4hrs dwell time                                                                                                                                    | Pass   |
| Thermal Humidity Cycling Test | MIL-STD-810F Notice 3 Method 507.4             | MIL-STD-810F       | Temperature: 60°C to 30°C<br>Humidity: 95%RH<br>Duration: 240 hrs                                                                                                                                                                      | Pass   |



# CQB150-300S Series

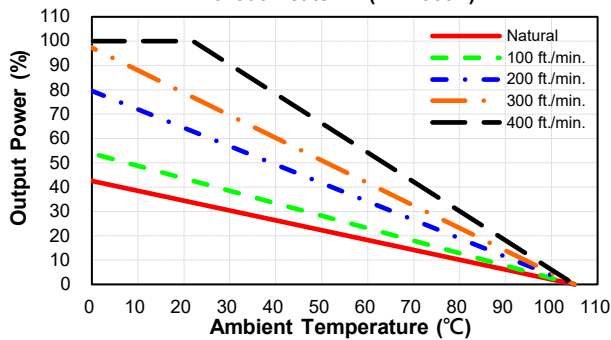
## EN45545-2 Fire & Smoke Test Conditions

| Item |                     | Standard                                 | Hazard Level  |
|------|---------------------|------------------------------------------|---------------|
| R22  | Oxygen Index Test   | EN 45545-2: 2013<br>EN ISO 4589-2: 2006  | HL1, HL2, HL3 |
|      | Smoke Density Test  | EN 45545-2: 2013<br>EN ISO 5659-2: 2013  | HL1, HL2, HL3 |
|      | Smoke Toxicity Test | EN 45545-2: 2013<br>NF X70-100: 2006     | HL1, HL2, HL3 |
| R23  | Oxygen Index Test   | EN 45545-2: 2013<br>EN ISO 4589-2: 2006  | HL1, HL2, HL3 |
|      | Smoke Density Test  | EN 45545-2: 2013<br>EN ISO 5659-2: 2013  | HL1, HL2, HL3 |
|      | Smoke Toxicity Test | EN 45545-2: 2013<br>NF X70-100: 2006     | HL1, HL2, HL3 |
| R24  | Oxygen Index Test   | EN45545-2: 2013<br>EN ISO 4589-2         | HL1, HL2, HL3 |
| R25  | Glow - Wire Test    | EN 45545-2:2013<br>EN 60695-2-11:2001    | HL1, HL2, HL3 |
| R26  | Vertical Flame Test | EN 45545-2: 2013<br>EN 60695-11-10: 2013 | HL1, HL2, HL3 |

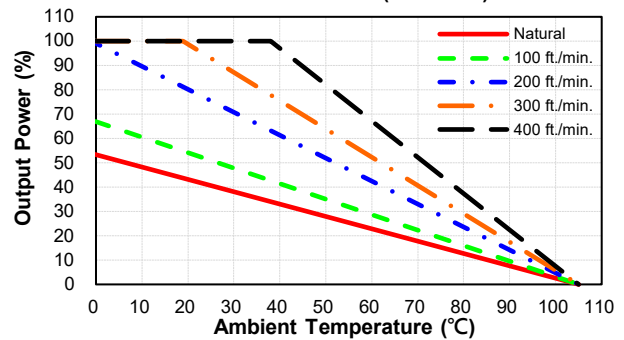
## CHARACTERISTIC CURVE

### Power Derating Curve

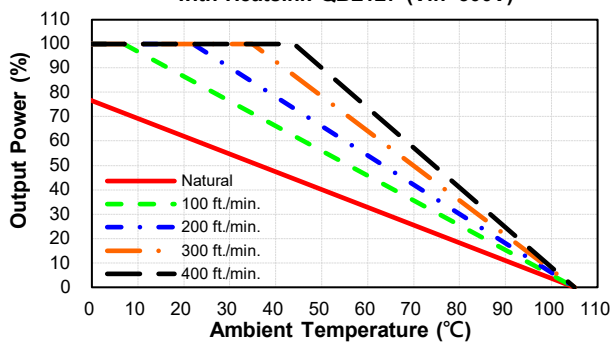
CQB150-300S05 Derating Curve  
without Heatsink (Vin=300V)



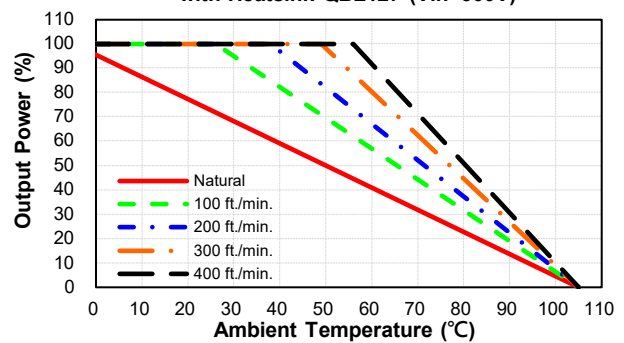
CQB150-300S12, 15, 24, 28, 48 Derating Curve  
without Heatsink (Vin=300V)



CQB150-300S05 Derating Curve  
with Heatsink QBL127 (Vin=300V)



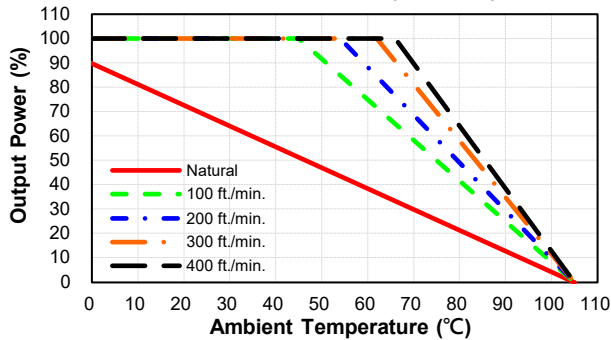
CQB150-300S12, 15, 24, 28, 48 Derating Curve  
with Heatsink QBL127 (Vin=300V)



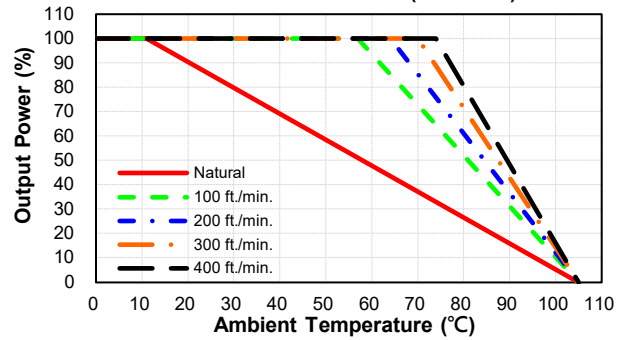


# CQB150-300S Series

**CQB150-300S05 Derating Curve with Heatsink QBT210 (Vin=300V)**

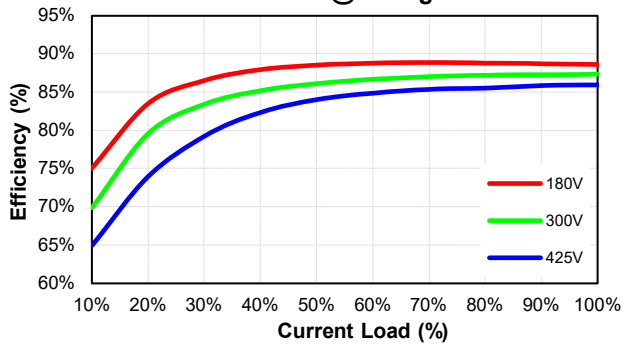


**CQB150-300S12, 15, 24, 28, 48 Derating Curve with Heatsink QBT210 (Vin=300V)**

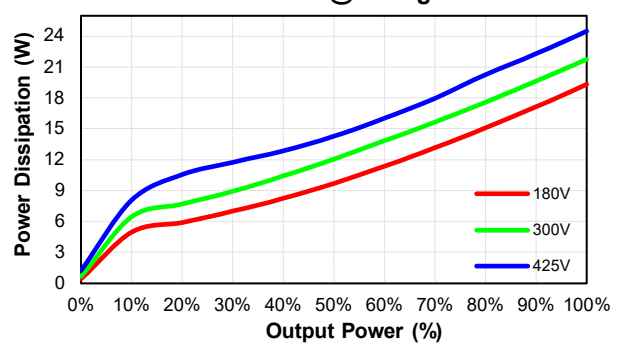


## Performance Data

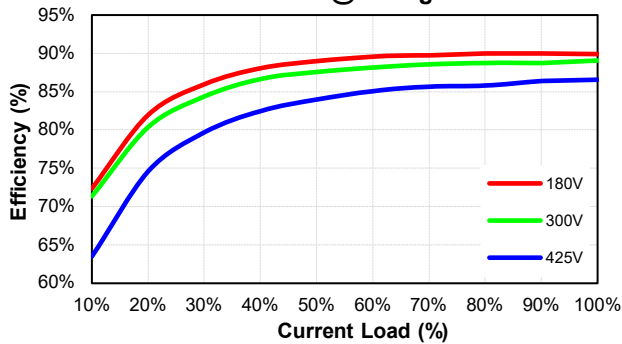
**CQB150-300S05 Eff Vs Io @25 Deg. C**



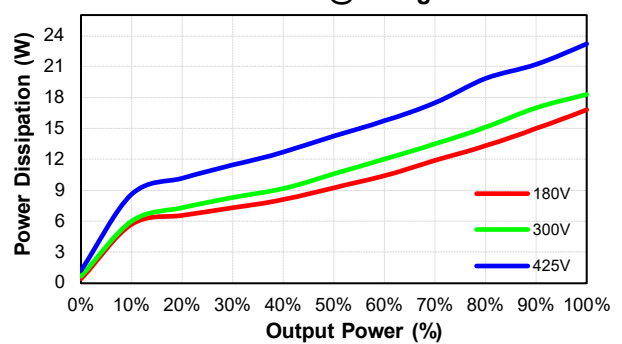
**CQB150-300S05 Pd Vs Po @25 Deg. C**



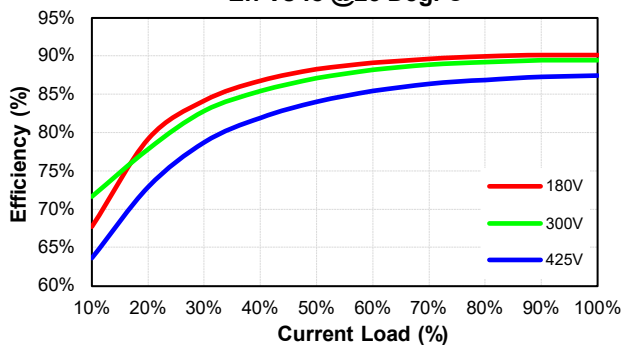
**CQB150-300S12 Eff Vs Io @25 Deg. C**



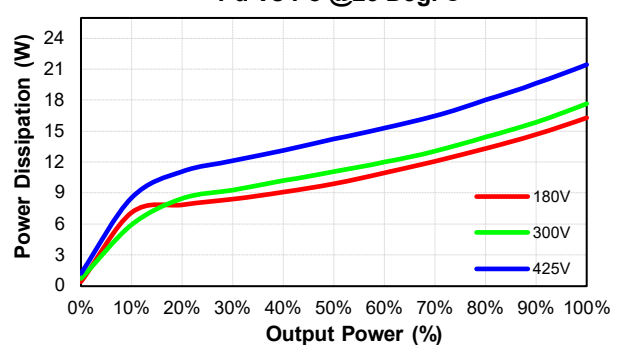
**CQB150-300S12 Pd Vs Po @25 Deg. C**



**CQB150-300S15 Eff Vs Io @25 Deg. C**



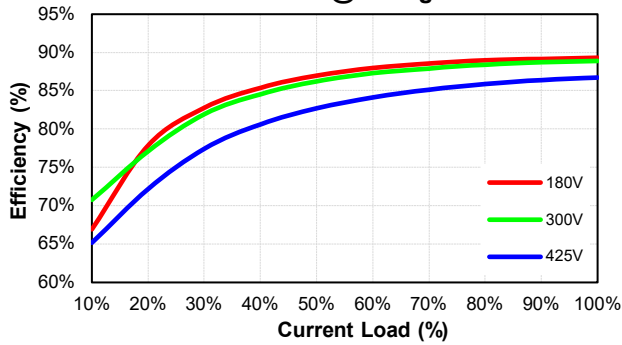
**CQB150-300S15 Pd Vs Po @25 Deg. C**



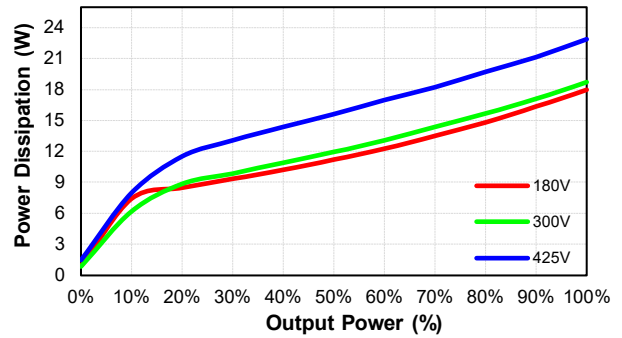


## CQB150-300S Series

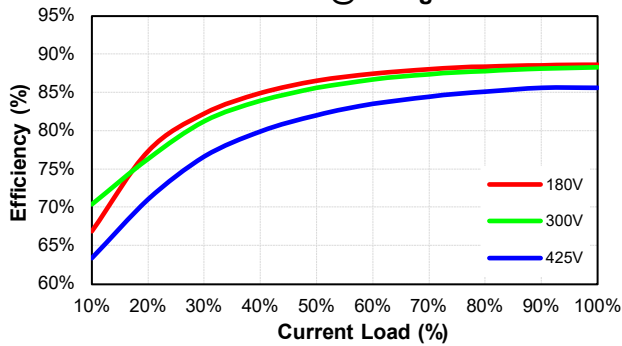
**CQB150-300S24**  
Eff Vs Io @25 Deg. C



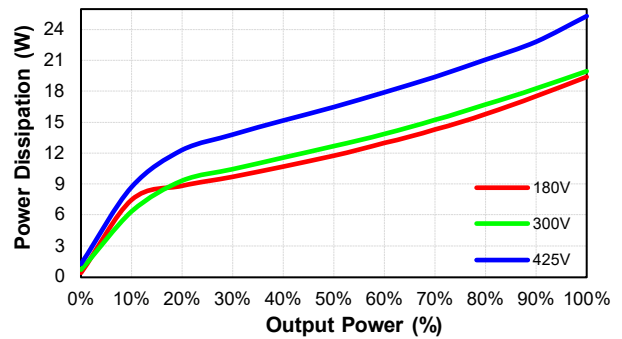
**CQB150-300S24**  
Pd Vs Po @25 Deg. C



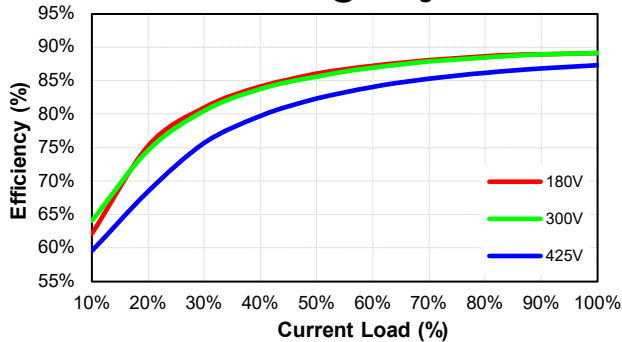
**CQB150-300S28**  
Eff Vs Io @25 Deg. C



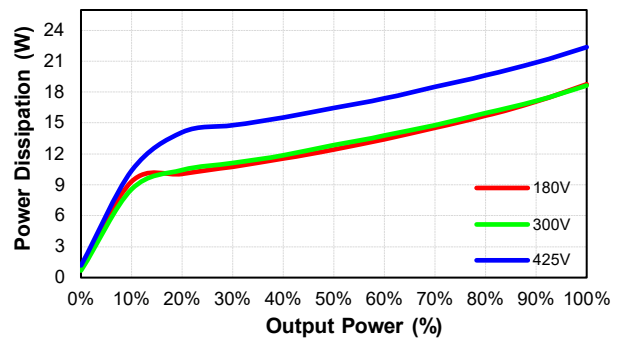
**CQB150-300S28**  
Pd Vs Po @25 Deg. C



**CQB150-300S48**  
Eff Vs Io @25 Deg. C



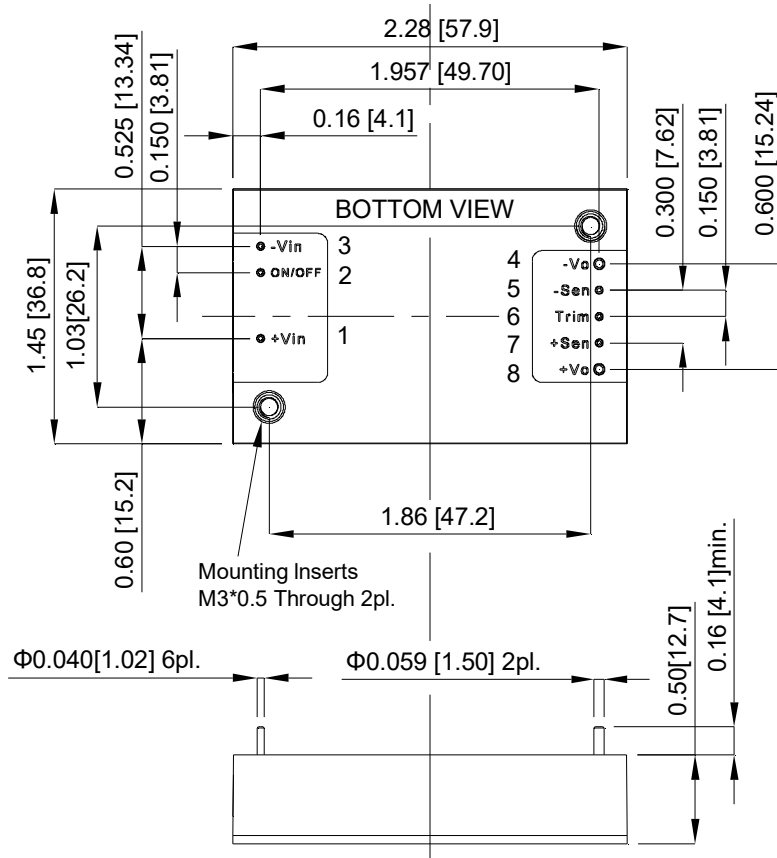
**CQB150-300S48**  
Pd Vs Po @25 Deg. C





# CQB150-300S Series

## MECHANICAL SPECIFICATION



| 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]  
Tolerance Inches:x.xx=±0.02 ,x.xxx=±0.010  
Millimeters:x.x=±0.5 , x.xx=±0.25