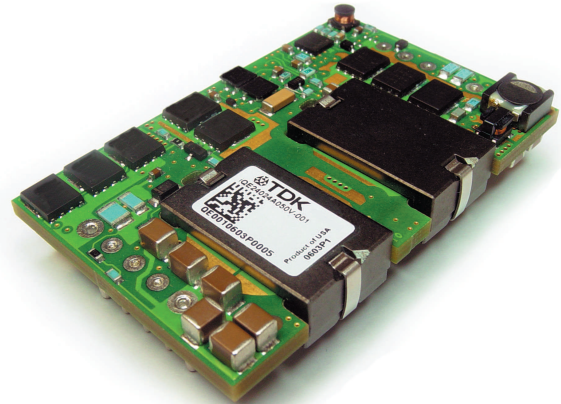


## 96 - 204W Quarter Brick Converter

### Features

- ◆ Standard Quarter Brick Footprint
- ◆ 18-36, 36-75VDC Inputs
- ◆ 3.3V 40A - 15V 10A Nominal Outputs
- ◆ Through Hole Mounting
- ◆ Low 10.41mm Profile
- ◆ 1500VDC Basic Isolation
- ◆ High operating efficiency (>90%)
- ◆ Constant switching frequency
- ◆ Low component count



### Key Market Segments & Applications



| Specifications                     |     |                                                                                                                          |             |             |               |               |
|------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------|-------------|-------------|---------------|---------------|
| Model                              |     |                                                                                                                          |             |             |               |               |
| Nominal Output Voltage             | VDC | 3.3                                                                                                                      | 5           | 8           | 12            | 15            |
| Input Voltage Range                | VDC | See Model Selector                                                                                                       |             |             |               |               |
| Input Current (max)                | A   | 10                                                                                                                       |             |             |               |               |
| Efficiency                         | -   | Typically 90% at full load                                                                                               |             |             |               |               |
| Output Voltage Tolerance           | VDC | 3.2 - 3.4                                                                                                                | 4.85 - 5.15 | 7.76 - 8.24 | 11.58 - 12.42 | 14.48 - 15.52 |
| Ripple & Noise (max)(pk to pk) (1) | mV  | 150                                                                                                                      | 150         | 150         | 150           | 150           |
| Line Regulation (max)              | mV  | 10                                                                                                                       | 15          | 25          | 30            | 30            |
| Load Regulation (max)              | mV  | 10                                                                                                                       | 30          | 25          | 30            | 30            |
| Overload Protection (typ)          | %   | Inception- 133-158% of rated output; Short circuit - auto recovery                                                       |             |             |               |               |
| Overvoltage Protection             | VDC | 3.8 - 4.6                                                                                                                | 5.7 - 6.7   | 8.9 - 11    | 13.6 - 16.5   | 16.7 - 21     |
| Remote Sense                       | -   | Yes                                                                                                                      |             |             |               |               |
| Remote On / Off                    | -   | Positive or Negative Logic available, see Model Selector                                                                 |             |             |               |               |
| Temperature (operating)            | °C  | -40 to 125                                                                                                               |             |             |               |               |
| Temperature (storage)              | °C  | -55 to 125                                                                                                               |             |             |               |               |
| Humidity (operating)               | -   | 20-95% RH Non condensing                                                                                                 |             |             |               |               |
| Humidity (storage)                 | -   | 10-95% RH Non condensing                                                                                                 |             |             |               |               |
| Cooling                            | -   | Convection or forced air                                                                                                 |             |             |               |               |
| Isolation Voltage                  | VDC | 1500                                                                                                                     |             |             |               |               |
| Vibration (non operating)          | -   | 5 to 50Hz @ 0.5g (4.9m/s <sup>2</sup> ), and 50 to 500Hz @ 1.5g (14.7m/s <sup>2</sup> ) per Bellcore TR-EOP-000063-5.4.4 |             |             |               |               |
| Shock                              | -   | 196.1m/s <sup>2</sup>                                                                                                    |             |             |               |               |
| Safety Agency Approvals            | -   | UL60950 (US and Canada), VDE0805 (IEC60950), CB scheme (IEC60950)                                                        |             |             |               |               |
| Weight (max)                       | g   | 50                                                                                                                       |             |             |               |               |
| Size                               | mm  | 57.9 x 36.8 x 10.41                                                                                                      |             |             |               |               |
| Warranty                           | -   | 3 Years                                                                                                                  |             |             |               |               |

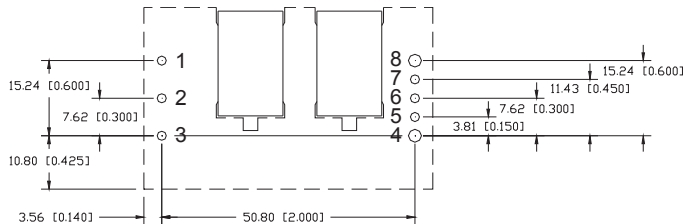
Notes: See website for detailed specifications

- (1) Measured across one 22μF and one 0.1μF ceramic capacitor;  
BW = 20MHz

## Model Selector

| Model               | Input Voltage (V) | Output Voltage (V) | Adjust Range (V) | Max. Curr. (A) | Max. Output Power (W) | On/Off Polarity | Pin Length |
|---------------------|-------------------|--------------------|------------------|----------------|-----------------------|-----------------|------------|
| iQE24030A033V-001-R | 18 - 36           | 3.3                | 2.97 - 3.63      | 30             | 99                    | Neg             | 0.145      |
| iQE24030A033V-007-R | 18 - 36           | 3.3                | 2.97 - 3.63      | 30             | 99                    | Neg             | 0.180      |
| iQE48040A033V-000-R | 36 - 75           | 3.3                | 2.97 - 3.63      | 40             | 132                   | Pos             | 0.145      |
| iQE48040A033V-001-R | 36 - 75           | 3.3                | 2.97 - 3.63      | 40             | 132                   | Neg             | 0.145      |
| iQE48040A033V-007-R | 36 - 75           | 3.3                | 2.97 - 3.63      | 40             | 132                   | Neg             | 0.180      |
| iQE24024A050V-001-R | 18 - 36           | 5                  | 4.5 - 5.5        | 24             | 120                   | Neg             | 0.145      |
| iQE24024A050V-007-R | 18 - 36           | 5                  | 4.5 - 5.5        | 24             | 120                   | Neg             | 0.180      |
| iQE48030A050V-000-R | 36 - 75           | 5                  | 4.5 - 5.5        | 30             | 150                   | Pos             | 0.145      |
| iQE48030A050V-001-R | 36 - 75           | 5                  | 4.5 - 5.5        | 30             | 150                   | Neg             | 0.145      |
| iQE24012A080V-001-R | 18 - 36           | 8                  | 7.2 - 8.8        | 12             | 96                    | Neg             | 0.145      |
| iQE24012A080V-007-R | 18 - 36           | 8                  | 7.2 - 8.8        | 12             | 96                    | Neg             | 0.180      |
| iQE48014A080V-001-R | 36 - 75           | 8                  | 7.2 - 8.8        | 14             | 112                   | Neg             | 0.145      |
| iQE24009A120V-001-R | 18 - 36           | 12                 | 10.8 - 13.2      | 9              | 108                   | Neg             | 0.145      |
| iQE24009A120V-007-R | 18 - 36           | 12                 | 10.8 - 13.2      | 9              | 108                   | Neg             | 0.180      |
| iQE4W011A120V-001-R | 18 - 60           | 12                 | 10.8 - 13.2      | 11             | 132                   | Neg             | 0.145      |
| iQE48017A120V-000-R | 36 - 75           | 12                 | 10.8 - 13.2      | 17             | 204                   | Pos             | 0.145      |
| iQE48017A120V-001-R | 36 - 75           | 12                 | 10.8 - 13.2      | 17             | 204                   | Neg             | 0.145      |
| iQE48017A120V-007-R | 36 - 75           | 12                 | 10.8 - 13.2      | 17             | 204                   | Neg             | 0.180      |
| iQE24007A150V-001-R | 18 - 36           | 15                 | 13.5 - 16.5      | 7              | 105                   | Neg             | 0.145      |
| iQE24007A150V-007-R | 18 - 36           | 15                 | 13.5 - 16.5      | 7              | 105                   | Neg             | 0.180      |
| iQE48010A150V-001-R | 36 - 75           | 15                 | 13.5 - 16.5      | 10             | 150                   | Neg             | 0.145      |
| iQE48010A150V-007-R | 36 - 75           | 15                 | 13.5 - 16.5      | 10             | 150                   | Neg             | 0.180      |

## Recommended Footprint (Top View)



## Pinout

| PIN | Function  |
|-----|-----------|
| 1   | Vin (+)   |
| 2   | On / Off  |
| 3   | Vin (-)   |
| 4   | Vout (-)  |
| 5   | Sense (-) |
| 6   | Trim      |
| 7   | Sense (+) |
| 8   | Vout (+)  |

For Additional Information, please visit  
[us.tdk-lambda.com/lp/products/iqe-series.htm](http://us.tdk-lambda.com/lp/products/iqe-series.htm)

