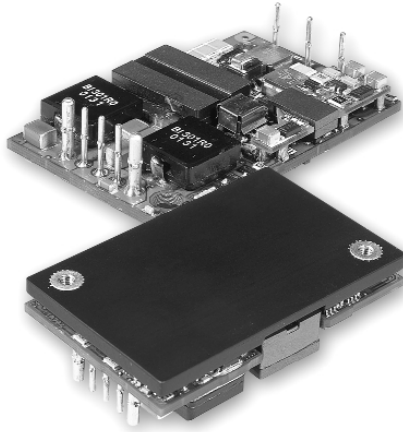


Quarter Brick DC/DC Converters

40 Amps KHQ040 Series

XPiQ inc.

Intelligent Design Quality Product



Low Voltage Outputs to 1.2 V

40 A Output High Power Density

High Efficiency - Up to 89%

International Safety Approvals

Low Profile 0.417"

Specification

Input

- Input Voltage Range • 36-75 VDC
- Input Current • 1.0 A - 3.1 A, See Table
- Input Reflected Ripple • 100 mA pk-pk
- No Load Input Current • 100 mA at 48 VDC in
- Remote On/Off • Shorted to -Vin (Logic Low) = ON
Open (Logic high) = OFF
Positive logic is available (see note 3)
- Input Reverse Voltage Protection • External components required
- Input Transient • Capable of withstanding 110 V for 100 mS
- Undervoltage lockout • Above 32 to 34 VDC = ON
Below 30 to 32.2 VDC = OFF

Output

- Output Voltage • 1.2 VDC to 3.3 VDC
- Voltage Adjustment • $\pm 10\%$
- Minimum Load • No minimum load required
- Line Regulation • $\pm 10\text{mV}$ or 0.5% whichever is greater
- Load Regulation • $\pm 10\text{mV}$ or 0.5% whichever is greater
- Setpoint Accuracy • ± 50 mV
- Ripple & Noise • 100 mV pk-pk maximum
- Transient Response • 200mV max deviation, 100 μs recovery time for a 25% load change
- Temperature Coefficient • 0.01%/°C
- Remote Sense • Compensates for up to 10% of Vout drop
- Overvoltage Protection • 120%-130%, recycle input to reset
- Overcurrent Protection • 110-135% auto restart

Short Circuit Protection

Overtemperature Protection

- Protected to short circuit conditions, hiccup mode
- Shutdown at 125°C auto restart

General

Efficiency
Isolation
Size

- 89% for 3.3 V out, See Table
- 1500 V DC Input to Output
- 2.280" x 1.450" x 0.417" (without baseplate)

Package Style
Weight
MTBF

- Open frame, baseplate option
- 35 g for open frame
- 2,000,000 hours demonstrated

Environmental

Operating Temperature (with 300 LFM)

- 40° C to +85 °C ambient see derating chart
Full power to 40°C

Storage Temperature
Humidity

- 55°C to +125°C
- 5-95% RH non-condensing

EMC & Safety

Safety Approvals

- UL 60950, IEC 60950, CSA 60950 per cUL, CE Marked for LVD

EMI/EMC

- FCC level B Part 15 with external filtering

Warranty

- 1 Year

OUTPUT VOLTAGE & CURRENT RATINGS

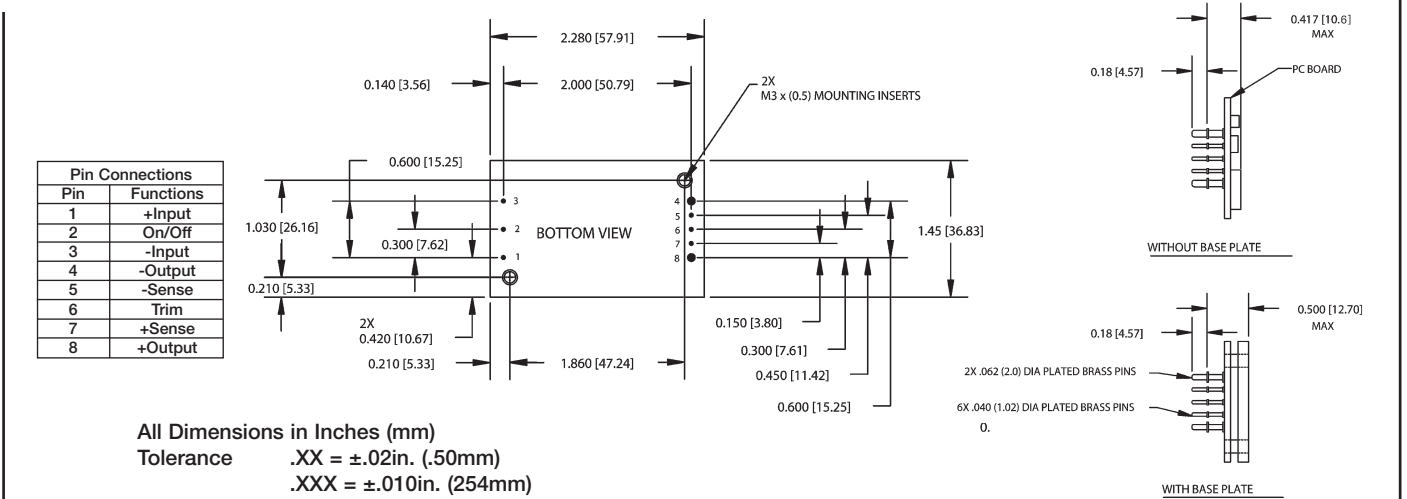
KHQ040

Output Power	Output Voltage	Output Current Maximum	Efficiency	Input Current	Model Number ⁽³⁾
48 W	1.2 V	40 A	81%	1.00 A	KHQ04048S1V2
60 W	1.5 V	40 A	83%	1.50 A	KHQ04048S1V5
72 W	1.8 V	40 A	85%	1.76 A	KHQ04048S1V8
100 W	2.5 V	40 A	87%	2.40 A	KHQ04048S2V5
132 W	3.3 V	40 A	89%	3.10 A	KHQ04048S3V3

Notes

- Standard product is open frame with negative logic.
- Baseplate versions are built to order.
- Please add one of the following suffix code to the part number when ordering:
AL = Open Frame/Negative logic, AH = Open Frame/Positive logic, BL = Baseplate/Negative logic, BH = Baseplate/Positive logic.
- For details of external filtering, contact technical sales.

Mechanical Details



Applications Information

