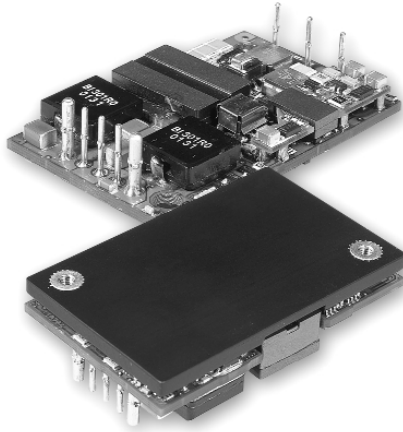


Quarter Brick DC/DC Converters

50 Amps KHQ050 Series

XPiQ inc.

Intelligent Design Quality Product



Low Voltage Outputs to 1.2 V

50 A Output High Power Density

High Efficiency - Up to 91%

International Safety Approvals

Low Profile 0.43"

Specification

Input

- Input Voltage Range • 36-75 VDC
- Input Current • 1.0 A - 3.4 A, See Table
- Input Reflected Ripple • 25 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 100 V for 100 mS
- Undervoltage lockout • Above 32 to 35 VDC = ON
Below 29 to 34 VDC = OFF

Output

- Output Voltage • 1.2 VDC to 5.0 VDC
- Output Voltage Adjustment • $\pm 10\%$
- Minimum Load • No minimum load required
- Line Regulation • ± 5 mV or 0.5% whichever is greater
- Load Regulation • ± 10 mV or 0.5% whichever is greater
- Setpoint Accuracy • ± 50 mV
- Ripple & Noise • 100 mV pk-pk maximum
- Transient Response • 150 mV max deviation, 100 μ s 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%-135%, recycle input to reset

Overcurrent Protection

Short Circuit Protection

Overtemperature Protection

General

Efficiency

Isolation

Size

Package Style

Weight

MTBF

Environmental

Operating Temperature (with 300 LFM)

Storage Temperature

Humidity

EMC & Safety

Safety Approvals

EMI/EMC

- 110-150% auto restart
- Protected to short circuit conditions, hiccup mode
- Shutdown at +125 °C auto restart
- 91% for 3.3 V out, See Table
- 1500 VDC Input to Output
- 2.28" x 1.45" x 0.43" (without baseplate)
- Open frame, baseplate option
- 42 g for open frame
- 1,000,000 hours per Bellcore

- -40 °C to +85 °C ambient see derating chart
- Full power to +60 °C

- -55 °C to +125 °C

- 5-95% RH non-condensing

- UL60950, IEC60950, CSA 60950 per cUL, CE Marked for LVD

- FCC level B Part 15 with external filtering

OUTPUT VOLTAGE & CURRENT RATINGS

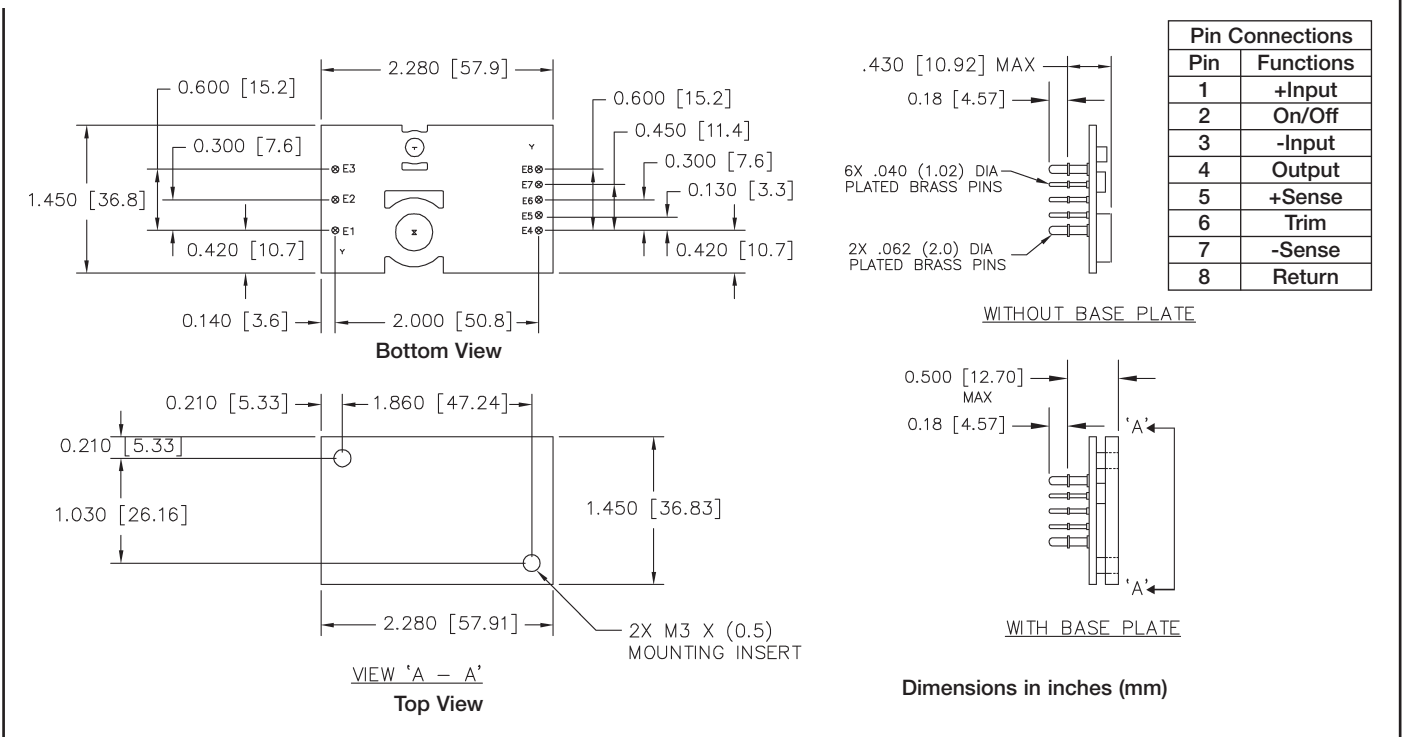
KHQ050

Output Power	Output Voltage	Output Current Maximum	Efficiency	Input Current	Model Number ⁽³⁾
60.0 W	1.2 V	50 A	84%	1.44 A	KHQ05048S1V2
75.0 W	1.5 V	50 A	85%	1.78 A	KHQ05048S1V5
90.0 W	1.8 V	50 A	89%	2.10 A	KHQ05048S1V8
112.5 W	2.5 V	45 A	89%	2.63 A	KHQ05048S2V5
148.5 W	3.3 V	45 A	91%	3.40 A	KHQ05048S3V3
135.0 W	5.0 V	27 A	91%	3.10 A	KHQ05048S05

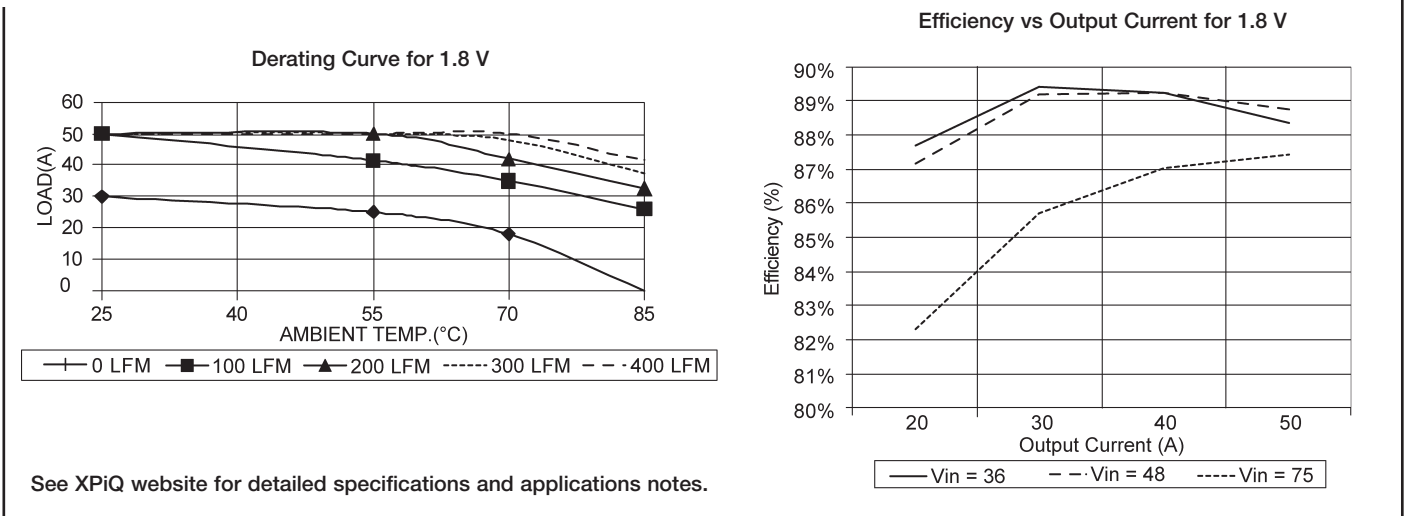
Notes

- 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



See XPiQ website for detailed specifications and applications notes.