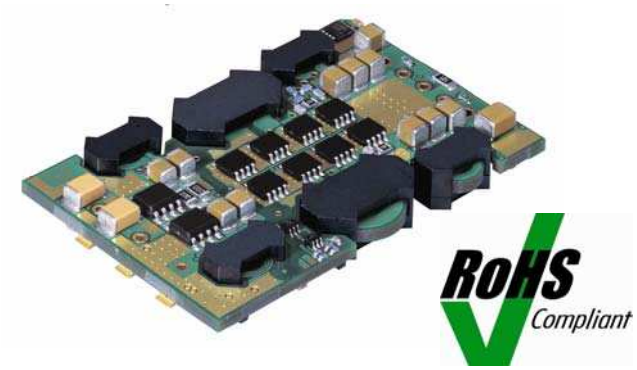
The QL48S30 family of low output voltage surface mount DC-DC converters offers unprecedented performance in the industry-standard quarter-brick format. This is accomplished through the use of patent pending circuit and packaging techniques to achieve ultra-high efficiency, excellent thermal performance, and a very low body profile.

Designed specifically to power low-voltage silicon devices, the QL48S30 converters provide high-efficiency single stage conversion directly from a 48 V bus to sub volt levels, eliminating the need for secondary conversion. Very low profile and the preclusion of heat sinks minimize airflow shadowing, thus enhancing cooling for downstream devices. The use of 100% surface-mount technologies for assembly, coupled with Power-One's advanced electric and thermal circuitry and packaging, result in products with extremely high quality and reliability.



QL48S30 Converter

Output Voltage	Efficiency[1] 15 A Load	30 A Load	Output Current 40ºC 100 LFM	70ºC 100 LFM
1.2 V	82.0%	81.0%	30.0 A	28.0 A
1.0 V	80.0%	78.0%	30.0 A	29.0 A
0.8 V	77.0%	75.5%	30.0 A	30.0 A

Vertical orientation, FETs ≤ 120°C. [1] Vin=54 V, 25°C, 300 LFM.

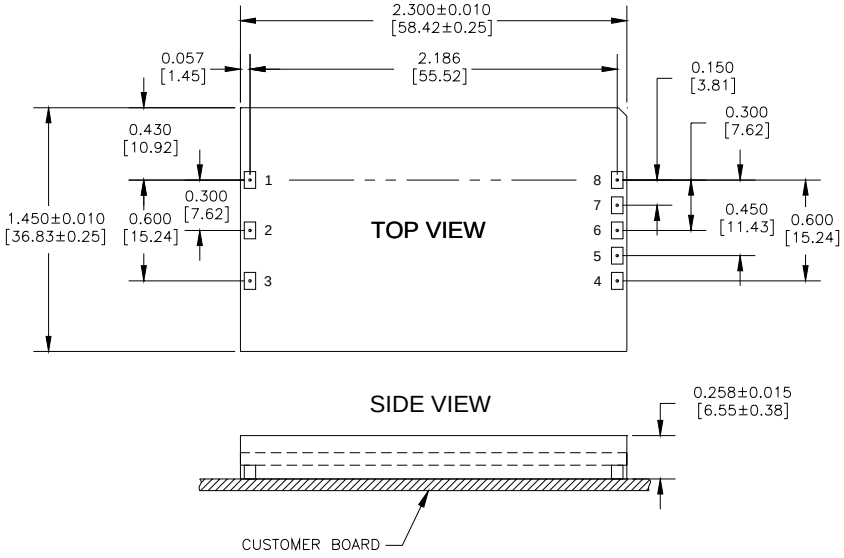
Applications

- Telecommunications
- Data communications
- Wireless
- Servers
- DSP's and microprocessors

Features

- RoHS lead-free solder and lead-solder-exempted products are available
- Delivers 30 A in an SMT package
- High efficiency
- No minimum load required
- No heat sink required
- Low profile: 0.26" (6.6 mm)
- Low weight: 28g (1oz)
- Industry-standard footprint: 1.45 "x 2.30"
- Meets Basic Insulation requirements of EN60950
- Withstands 100 V input transient for 100 ms
- On-board LC input filter
- Fixed-frequency operation
- Fully protected
- Remote output sense
- Output voltage trim range: ±10%
- Output trim via external resistor
- High reliability: calculated MTBF 2.6 million hours per Telcordia TR-332, Method I Case 1
- Positive or negative logic ON/OFF option
- UL 60950 Recognized in U.S. & Canada, and DEMKO certified per IEC/EN60950
- Meets conducted emissions requirements of FCC Class B and EN55022 Class B with external filter
- All materials meet UL94, V-0 flammability rating

Physical Information



Pin Connections	
Pin #	**Function**
1	Vin (+)
2	ON/OFF
3	Vin (-)
4	Vout (-)
5	SENSE(-)
6	TRIM
7	SENSE(+)
8	Vout (+)

- All dimensions are in inches [mm]
- Connector Material: Copper
- Connector Finish: Gold over Nickel
- Converter Weight: 1 oz [28 g] typical
- Recommended Surface-Mount Pads:
  Min. 0.080" x 0.112" [2.03 x 2.84]
  Max. 0.092" x 0.124" [2.34 x 3.15]

Converter Part Numbering Scheme

Product Series	Input Voltage	Mounting Scheme	Rated Load Current	Output Voltage		ON/OFF Logic	Maximum Height	Pin Length	Special Features
QL	**48**	**S**	**30**	**010**	**-**	**N**	**S**	**0**	**0**
Quarter-Brick Format, Low Output Voltage	36-75 V	Surface Mount	30 Adc	012 ⇒ 1.2 V 010 ⇒ 1.0 V 008 ⇒ 0.8 V		N ⇒ Negative P ⇒ Positive	S ⇒ 0.273"	0 ⇒ 0.00"	0 ⇒ STD

The example above describes P/N QL48S30010-NS00: 36-75 V input, surface mounting, 30 A @ 1.0 V output, negative ON/OFF logic. Please consult factory regarding availability of a specific version.

Models highlighted in yellow or shaded are not recommended for new designs.

RoHS Ordering Information:

- No RoHS suffix character is required for lead-solder-exemption compliance.
- For RoHS compliance to all six substances, add the letter "G" as the last letter of the part number.