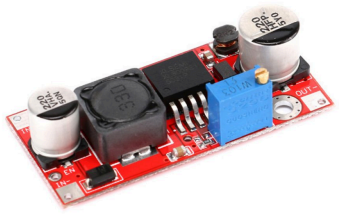
XL6009 DC-DC 5V to 48V Boost Step-Up Converter Power Supply Module



NOTE: This datasheet is for the **XL6009 BOOST** converter. If you are looking for the **BOOST/BUCK** datasheet, go here: XL6009 DC-DC 1.5V to 35V Boost Buck Step-Up Step-Down Converter Power Supply Module Datasheet

This versatile DC-DC boost power supply / converter module accepts an input voltage from 3V to 32V and boosts it to any level from 5V to 48V (the output voltage must be at least ~1.5V greater than input voltage). Based on the second-generation XLSEMI XL6009 chip, it offers higher efficiency and superior performance than older first-generation LM2577 solutions.

XL6009 Boost Converter Features

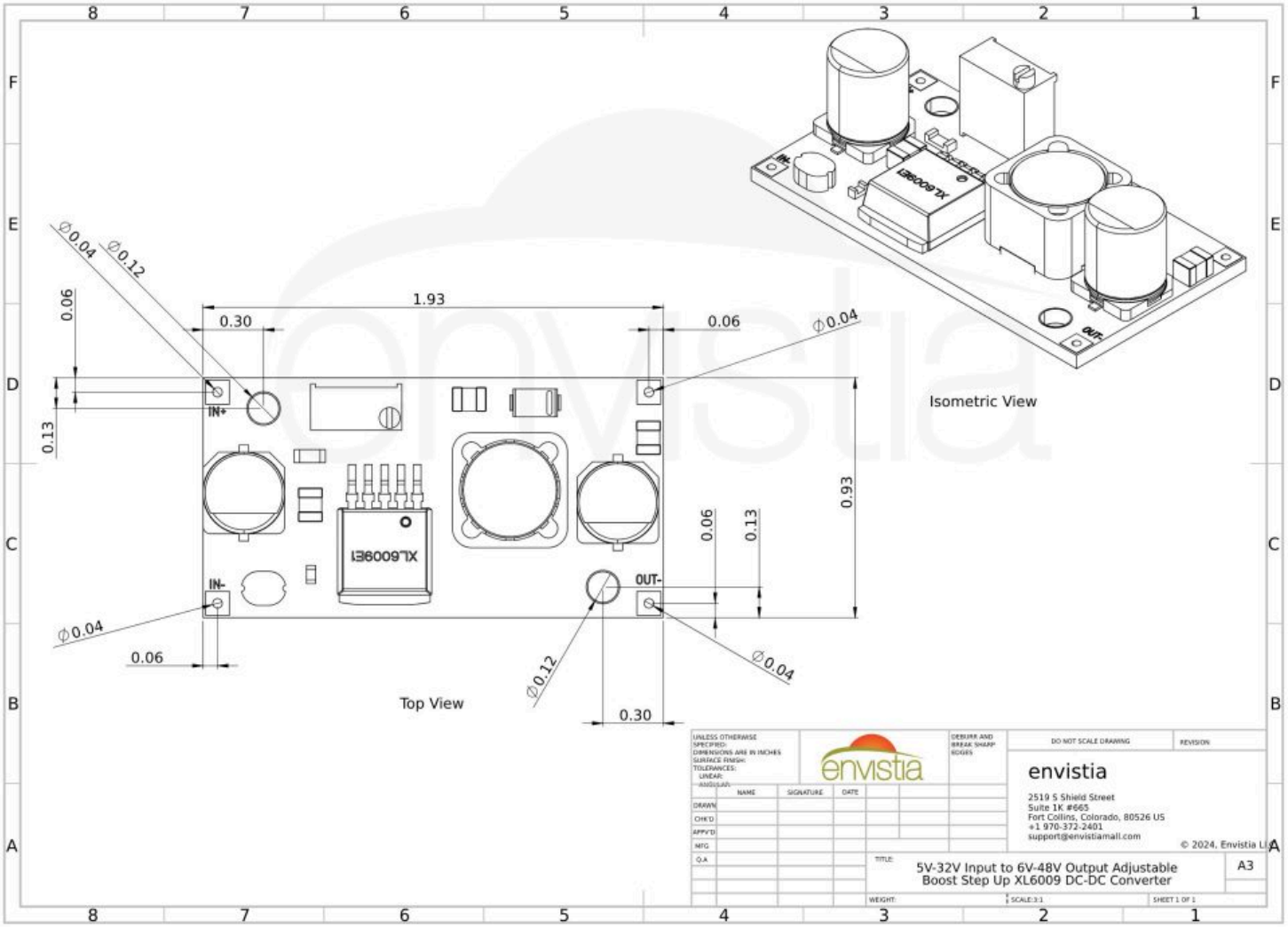
- Wide input voltage: 3V – 32V (Optimum 5V to 32V)
- Fully adjustable output voltage: 5V – 48V adjustable with onboard potentiometer
- MOSFET switching enables efficiency up to 94%
- High switching frequency of 400KHz for low ripple and fast response time

XL6009 Boost Converter Specifications

- Non-isolated step-up (Boost)
- Input voltage: 3-32V
- Input Current: 4A (Max), No-load 18mA
- Output voltage: 5-48V continuously adjustable
- Output current: 2.5A (Max)
- Output power: Natural cooling 15W, plus heat sink 25W (Max)
- Conversion efficiency: Up to 94%, varies with input voltage, output voltage and current
- Operating temperature: Industrial grade -40 C to + 85 C (If ambient temperature exceeds 40 C, power should be derated or additional heat sinking or forced air cooling used)
- Full load temperature rise: 45 C
- Operating frequency: 400khz
- Voltage regulation: ± 0.5%
- Output Ripple: 50mV (the higher the voltage, the greater the current, the greater the ripple)

- Load Regulation: ± 0.5%
- Voltage Regulation: ± 0.5%
- Short circuit protection: None (Please install fuse or protection circuit input)
- Input reverse polarity protection: None, please use a reverse protection diode in series with the input

Mechanical Drawing and Dimensions



CLICK HERE to download this XL6009 Boost Dimensional and Mechanical Drawing in PDF format.

XL6009 Boost Converter Operation

The 3V to 32V DC input voltage is connected to the solder pads labeled IN+ and IN-. The output voltage is connected to the load via the OUT+ and OUT- solder pads. Set output voltage using a voltmeter and onboard potentiometer before installing it in your circuit.