



DEMO BOARD 3991.31.1

Wide Input Linear Voltage Regulator

LDI55-ADEEN

Low Dropout | Adjustable | Enable Function
For Battery Powered Devices

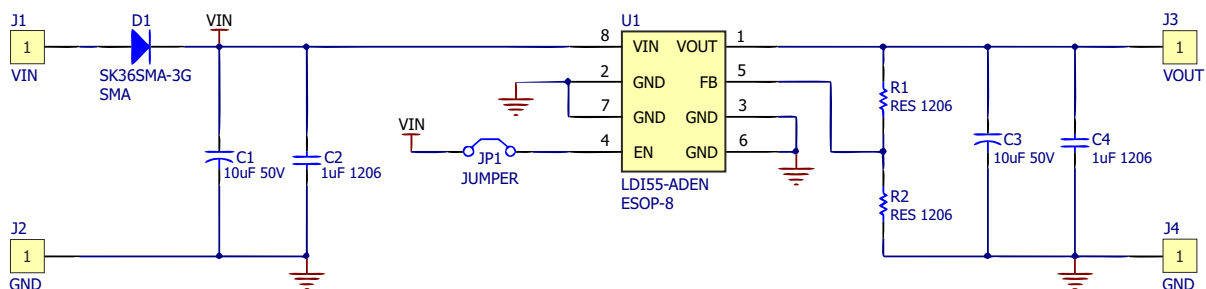
1. Description

This board is used to demonstrate the functionality of the LDI55-ADEEN linear regulator. It has wide input range up to 50V, low-dropout (LDO) voltage regulators with enable function and provides up to 1A of output current. Only two small ceramic capacitors are needed to implement the linear regulator solution. The features of low quiescent current as low as 3 μ A to 5 μ A and almost 0.5 μ A disable current is ideal for powering the battery equipment to a longer service. Simple device measurements such as line and load regulation, dropout, can be demonstrated with just a single voltage source, a voltmeter, an ammeter, and load resistor.

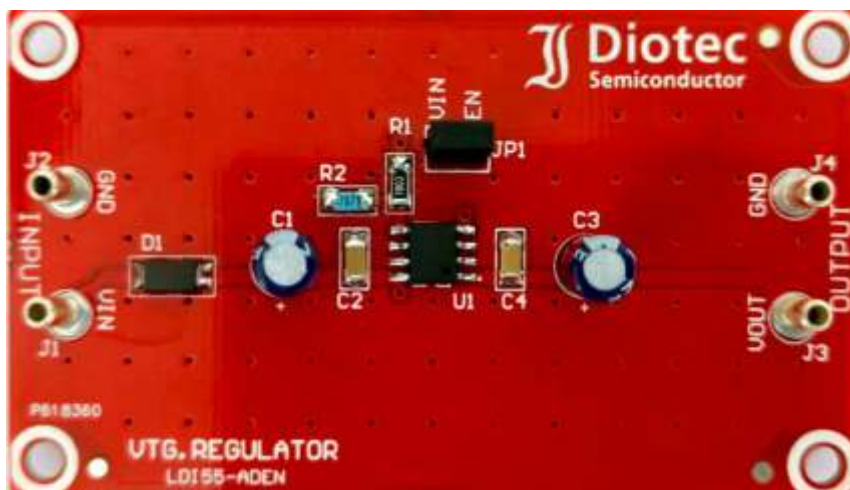
2. Features

- Input voltage range up to 50V
- Output current 1A
- Adjustable output voltage
- Low dropout voltage
- Integrated heat pad-low R_{th}
- Thermal overload protection
- Short circuit protection function

3. Evaluation Board Hardware and Schematic



4. PCB View

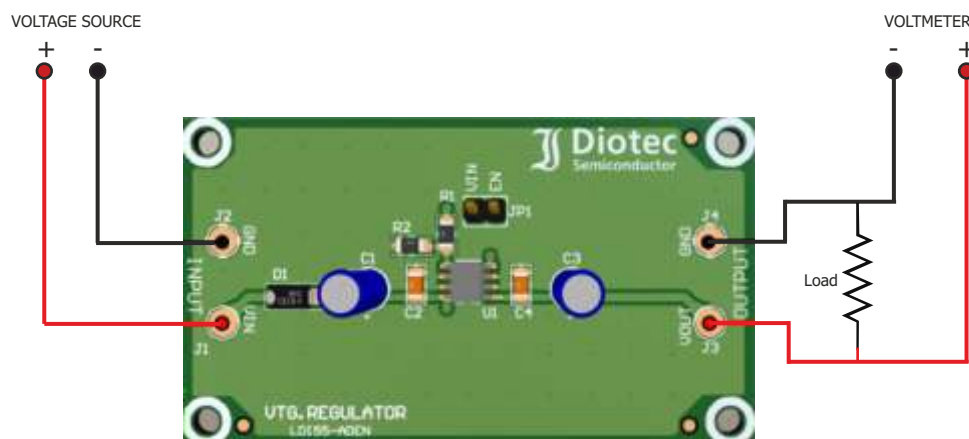


5. Test Points

Test point/ Pin name	Signal	Comment (expected waveforms or voltage levels on test points)
VOUT	Output voltage	Adjustable
GND	Ground	Ground
EN	Enable	Enable control input
VIN	Input voltage	Input voltage range = up to 50V

6. Operation

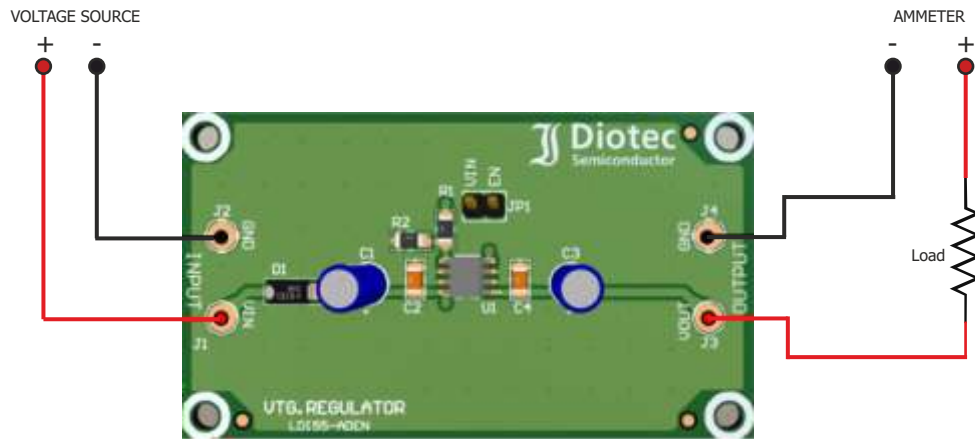
EVALUATION BOARD CONFIGURATIONS - How to measure the output voltage



Use the following steps to connect the evaluation board to a voltage source and voltmeter:

1. Connect the negative terminal (–) of the voltage source to one of the GND terminal on the evaluation board
2. Connect the positive terminal (+) of the voltage source to the VIN terminal on the evaluation board
3. Connect a load between the VOUT terminal and GND terminal
4. Connect the negative terminal (–) of the voltmeter to GND terminal
5. Connect the positive terminal (+) on the voltmeter to the VOUT terminal.

EVALUATION BOARD CONFIGURATIONS - How to measure the output current



Use the following steps to connect the evaluation boards to a voltage source and an ampere meter:

1. Connect the positive terminal (+) of the voltage source to the VIN terminal on the evaluation board
2. Connect the positive terminal (+) of the ammeter VIN terminal of the evaluation board
3. Connect the negative terminal (-) of the ammeter to the GND terminal (-)
4. Connect a load between the positive terminal (+) of the ammeter and the VOUT terminal of the evaluation board

Disclaimer

This demo board application note describes device and circuit proposals and shall not be considered as assured and proven solution for any application. No warranty or guarantee, expressed or implied is made regarding the capacity, performance or suitability of any device, circuit etc.

Don't hesitate to contact us for further questions:

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Datasheets of all mentioned products can be found at www.diotec.com