

How to measure the current on the solar container communication station side





Overview

What is cc2538 solar module level monitoring?

This design showcases a highly integrated solution for accurate voltage, current, and temperature monitoring along with ZigBee® communication using the CC2538 to enable solar module level monitoring.

What is the difference between I_C and P_{max} in a solar cell?

Short-circuit current (I_{sc}): Current flowing when the negative and positive electrodes of the solar cell are short-circuited. Maximum Power Point (P_{max}): The maximum value of the product of current and voltage on the IV curve. The inverter is controlled so that the solar cell always operates at this point.

How does a voltage sensing divider work?

The voltage sensing divider feeds a simple buffer amplifier, which shares a package with the current sensing amplifier. As in the current measurement system, a V_{REF} of 3.3 will be used on the ADC of the CC2538.

Can a digital multimeter be used to measure a PV module?

Due to the risk of flying arcs, direct measurement using the current terminal of a digital multimeter (DMM) is not recommended. An AC/DC clamp meter can be used to measure the I_{sc} of the PV module.



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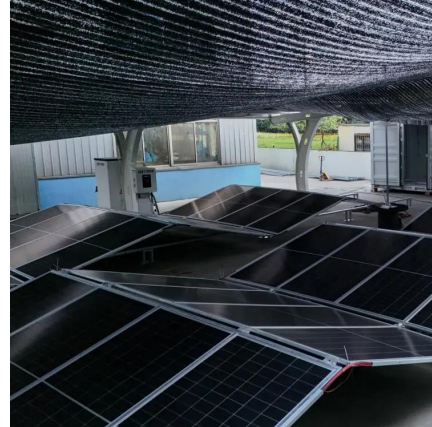


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1. Disconnect all cables from the PV test inputs (8 & 9 in figure 2).
2. Connect the current clamp to the red - black 4mm probe inputs.
3. Move the current clamp switch to the 40A position.
4. ...

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