

LED

IC

MEMS

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# SMA Sunny Boy 1.5 1.5kW Inverter

*Easy to install, to connect and to monitor, the Sunny Boy 1.5 is the SMA Solar newly developed inverter for residential PV systems.*



With a nominal power of 1.5KWAC, the transformer-less inverter, which provides one MPPT and a peak efficiency of 97.2%, offers a suitable solution for small size photovoltaic system owners. It enables grid-injection as well as self-consumption, following the new trend in solar inverters. Integrated Ethernet and WLAN interfaces offer multiple possibilities for communication and data monitoring. Delivered without display, the integrated user interface makes possible to monitor system data on any smartphone, tablet or PC.

The system integrates two electronic boards with electrolytic capacitors from Epcos and a specific power module from Vincotech.

The WLAN board integrates a SMD WiFi Module, a chip Antenna but also a 3-axis MEMS Accelerometer probably used to integrate an anti-theft protection inside the inverter.

Based on a complete teardown analysis, the reverse costing report of the SMA Sunny Boy SB1.5-1VL40 Inverter provides the bill-of-material of the product and an estimation of the production cost of the solar inverter.

A detailed analysis of the Vincotech power module is also included in this report (IGBTs, diodes: manufacturer, technology, cross-section, costs).

Title: 1.5kW SMA Solar Inverter

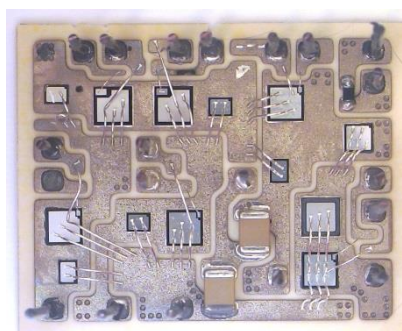
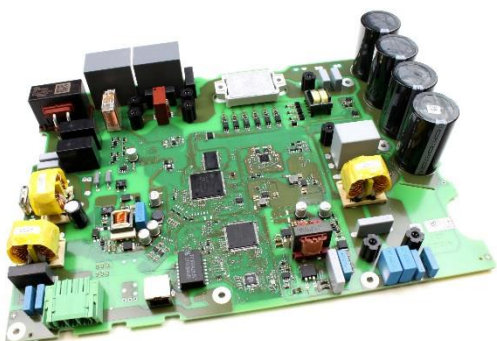
Pages: 104

Date: July 2015

Format: pdf + xls

#### COMPLETE TEARDOWN WITH:

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- Material Analysis
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Since 1998, Wilfried is in charge of costing analyses of Electronic Systems and Integrated Circuits.

He has significant experience in the modeling of the manufacturing costs of electronics systems and components.

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