

LED

IC

MEMS

IMAGING

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SYSTEM

POWER

Zolt/Avogy Laptop Charger Plus

A WBG Transistor inside the smallest and most performant Laptop Charger currently available.



Zolt is a subsidiary of Avogy which develops and manufactures GaN on GaN discrete semiconductor devices and modules.

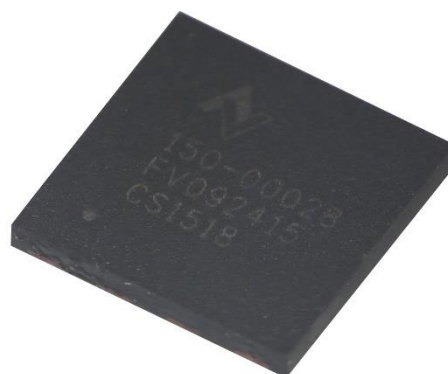
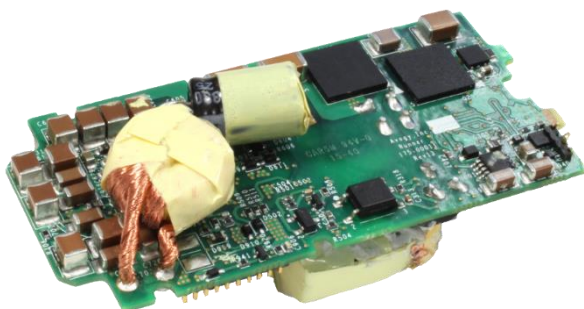
We have been surprised by the technical choice made by Avogy. Discover which substrate technology is used and who is the manufacturer of the Wide Band Gap (WBG) device.

Zolt Laptop Charger Plus is a 70-watt notebook charger which is also able to charge simultaneously two other USB mobile devices. Despite its small size (93x34mm) and its three outputs, Zolt guarantees a max skin temperature of 63°C without efficiency losses.

The system integrates three electronic boards. A first board, is dedicated to the AC/DC conversion. On the second board, the Avogy's Patented Resonant Switching technology allows the charger to work at very high switching frequencies. The use of Avogy high breakdown voltage transistor makes possible to increase the switching frequency thereby to reduce storage elements. Then the buck conversion stage is performed by transistors from Infineon. A last board is equipped with a MCU which analyzes and controls the optimal current delivered to each USB port. This makes the charger to be compatible with nearly 90% of the laptop computers.

Based on a complete teardown analysis of the Zolt Charger, the report provides the bill-of-material (BOM) and the manufacturing cost of the charger. A quick analysis of the conversion topology is also performed.

The physical and technical characteristics of the Avogy transistor are revealed.



Title: Zolt/Avogy Laptop Charger Plus

Pages: 73

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COMPLETE TEARDOWN WITH:

- Detailed Photos
- Material Analysis
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- Topology Analysis
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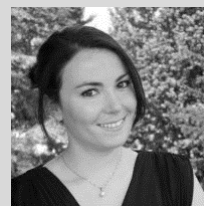
Estimated Price Analysis

- Estimation of the Manufacturing Price
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