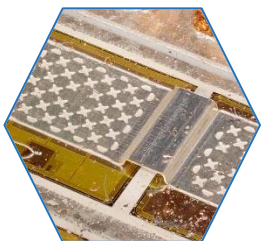
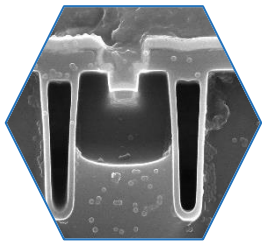


Vitesco Technologies Power Module in Jaguar I-PACE Inverter

Multiple optimized packaging innovations for this automotive power module from Vitesco Technologies.



The new environmental regulations to reduce average CO² emissions and automotive trends play in favor of greater vehicle electrification and faster deployment of Electric Vehicles/Hybrid Electric Vehicles (EV/HEVs). Yole Développement expects that the EV/HEV market will reach 41 million vehicles by 2026.

Innovations in power module design are continuously being developed for enhanced performance. We can find them in all power module structures, from the baseplate and substrate assembly down to the die attach, through the electrical connection.

In this context, System Plus Consulting provides a full reverse costing study of the Vitesco Technologies IGBT Power Module integrated in Jaguar’s I-PACE Inverter.

First of all, the module uses an innovative chip assembly process with double side sintering. Moreover, to enhance electrical performance, clip connections and substrates are optimized for silver sintering. In addition, the baseplate is designed specifically for strict automotive performance requirements.

Supported by a full teardown of the module, this report reveals Vitesco Technologies’ choices in packaging as well

as the designs of its IGBT and diode chips.

This report provides insights into technology data, manufacturing cost and selling price of the module. It includes an estimated manufacturing cost of all the module’s components and a selling price analysis.

The report also includes a comparison between the analyzed Vitesco Technologies power module with the Infineon HybridPACK™ Drive FS820R08A6P2B. These comparisons highlight differences in the packaging design and costs.

COMPLETE TEARDOWN WITH

- Detailed optical and SEM photos
- Precise measurements
- Materials analysis
- Manufacturing process flow
- Supply chain evaluation
- Manufacturing cost analysis
- Estimated selling price
- Technology and cost comparisons with Infineon’s HybridPACK™ Drive FS820R08A6P2B

Title: Vitesco Technologies Power Module in Jaguar I-PACE Inverter

Pages: 138

Date: May 2021

Format: PDF & Excel file

Price: EUR 3,990

Reference: SPR21610

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RELATED ANALYSES



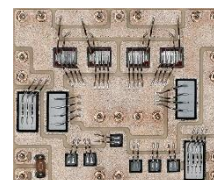
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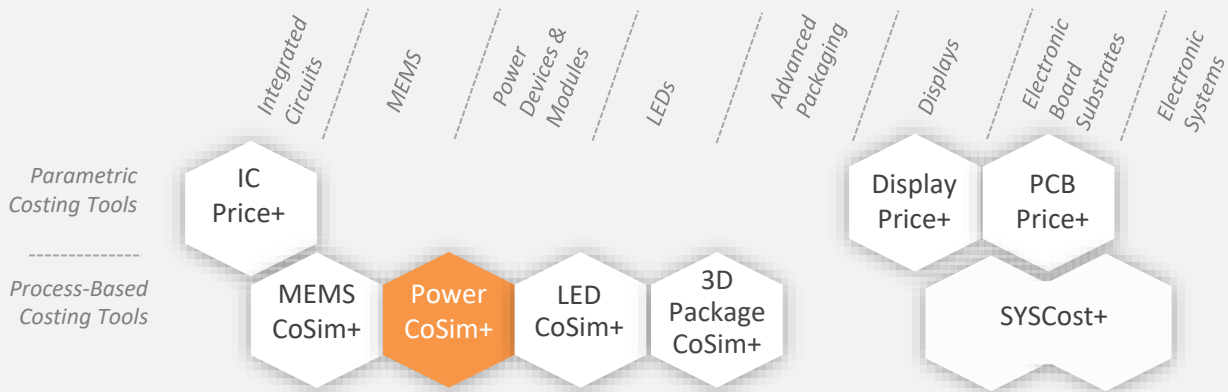
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EVs are driving the growth of power module packaging as going to mass production of EV/HEV changes the rules of game.
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COSTING TOOLS



Our analysis is performed with our costing tool Power CoSim+.

System Plus Consulting offers powerful costing tools to evaluate the production cost and selling price from single chip to complex structures.

Power CoSim+

Cost simulation tool to evaluate the cost of any Power Electronics process or device: from single chip to complex structures.

ABOUT SYSTEM PLUS CONSULTING

WHAT IS A REVERSE COSTING®?

Reverse Costing® is the process of disassembling a device (or a system) in order to identify its technology and calculate its manufacturing cost, using in-house models and tools.



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