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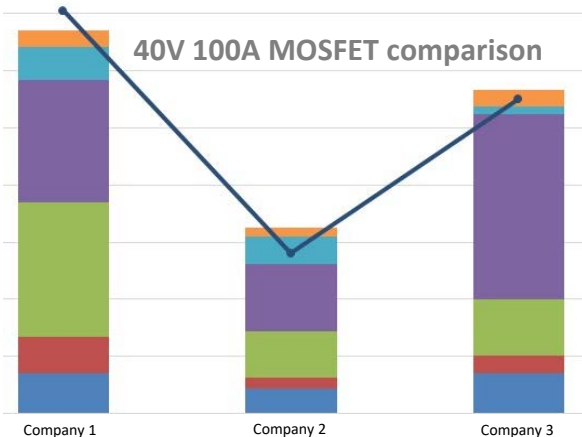
SYSTEM

POWER

# 40V Silicon MOSFETs Technology and Cost Review

*18 different 40V MOSFETs, five different manufacturers:  
Which is the most competitive?*

This report presents an in-depth analysis of the latest innovations in 40V MOSFET devices. It shows the differences between 18 selected devices from Infineon, International Rectifier (IR), Fairchild, ON Semiconductor and STMicroelectronics. For each device, the report details the manufacturing process and materials used, packaging structure, component design, die size, electrical performance and current density. It then compares the components' electrical performance, technical choices and cost structure.



40V silicon MOSFETs are standard devices commonly used in many applications, such as automotive, industry, computing and storage, home appliances and audio and imaging. According to Yole Développement, the overall market for MOSFETs rated up to 40V was worth \$2.64B in 2015.

In the report, we analyze products from the five main manufacturers. Among them Fairchild and IR have been recently acquired by ON Semiconductor and Infineon, respectively. These acquisitions will push the companies to choose, in the near future, between products in the portfolio, based on cost and performance.

We also show the technical choices in the design of the devices and find that the most common design is a gate trench with diode shield. However die dimensions vary widely, leading to cost differences.






ON Semiconductor



**Title:** 40V Silicon MOSFETs Technology and Cost Review

**Pages:** 175

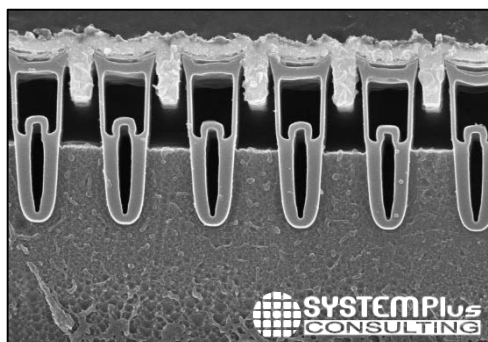
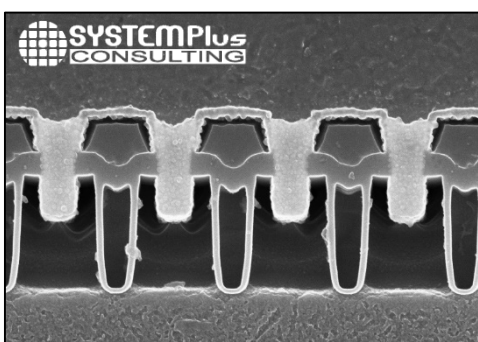
**Date:** November 2016

**Format:** pdf + xls

**PRICE:** Full report: EUR 4,490

#### COMPLETE TEARDOWN WITH:

- MOSFET market
- Detailed photos
- Precise measurements
- Package and die analysis
- Manufacturing process flow
- Supply chain evaluation
- Manufacturing cost analysis



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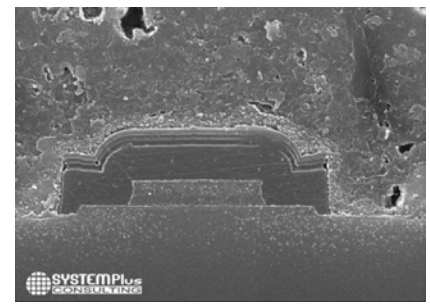
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