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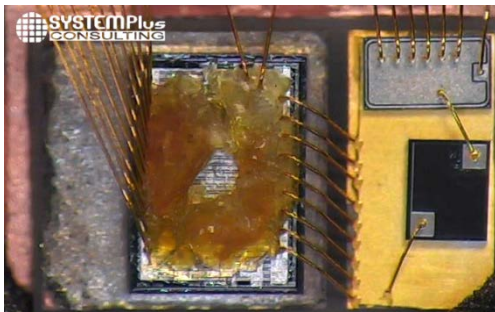
PACKAGING

SYSTEM

POWER

Transphorm GaN-on-Silicon HEMT TPH3206PS

Transphorm's new die design for its TPH3206PS GaN HEMT halves the cost per ampere compared to the previous model



Transphorm's TPH3206PS transistor has a new die design and manufacturing process. The die contacts are optimized on the die area to save space, and increase current density. The transistor metal contact and field plate structure have

also been changed from the previous version. These innovations halve the cost per ampere compared to the previous model.

The TPH3206PS is a 600V EZ-GaN™ HEMT for high frequency operation from Transphorm. Manufactured by Fujitsu and assembled in a TO220 package, it features the Quiet-Tab™ scheme, which increases switching speed.

The TPH3206PS combines a normally-on GaN-on-Silicon HEMT, which withstands high voltages, and a standard low voltage MOSFET, which drives high frequency, in a cascode configuration that ultimately yields a normally-off transistor.

Based on a complete teardown analysis, the report also provides an estimation of the production cost of the package, HEMT, MOSFET and resistor.

The report also proposes a comparison with the GaN Systems GS66504B 650V HEMT. This comparison highlights the huge differences in design and manufacturing process and their impact on device size and production cost.

Title: Transphorm GaN-on-Si HEMT TPH3206PS

Pages: 120

Date: December 2016

Format: PDF & Excel file

Price: Full report: EUR 3,290

COMPLETE TEARDOWN WITH:

- Detailed photos and identification
- SEM analysis of epitaxy layers and transistor structure
- Analysis of Quiet-Tab™ packaging from Transphorm
- Manufacturing process flow
- In-depth economic analysis
- Manufacturing cost breakdown
- Selling price estimation
- Comparison with TPH3002 and GaN Systems' GS66504B

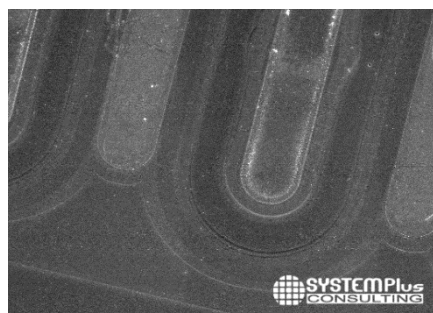
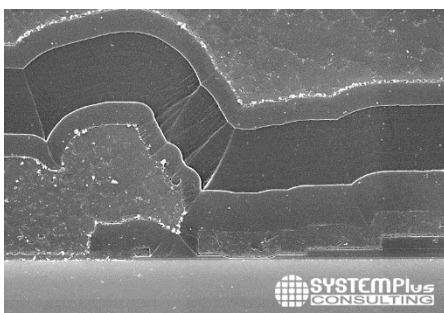


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Comparison with GaN System GS66504B

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Elena is in charge of costing analyses for MEMS, IC and Power Semi-conductors. She has a deep knowledge of Electronics R&D and Manufacturing environment. Elena holds a Master in Nanotechnologies and a PhD in Power Electronics.



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Yvon has joined System Plus Consulting in 2011, in order to set up the laboratory of System Plus Consulting. He previously worked during 25 years in Atmel Nantes Technological Analysis Laboratory as fab support in physical analysis, and 3 years at Hirex Engineering in Toulouse, in a DPA lab.

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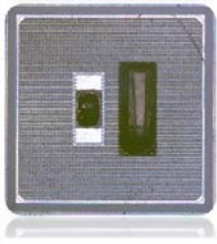
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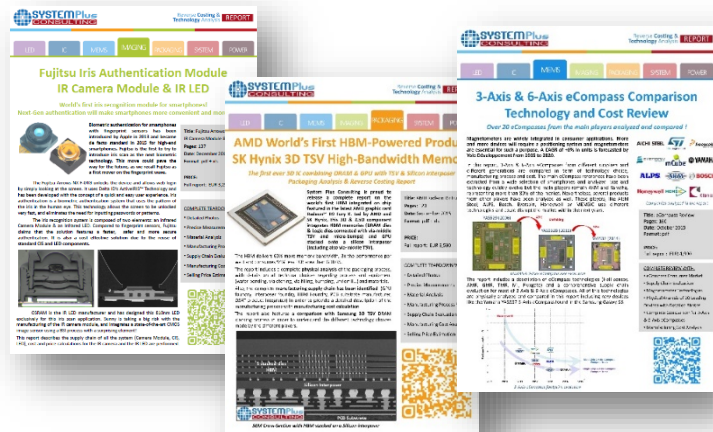
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2.2 Some weeks prior to the release date the Seller can propose a pre-release discount to the Buyer

The Seller shall by no means be responsible for any delay in respect of article 2.2 above, and including incases where a new event or access to new contradictory information would require for the analyst extra time to compute or compare the data in order to enable the Seller to deliver a high quality Products.

2.3 The mailing of the Product will occur only upon payment by the Buyer, in accordance with the conditions contained in article 3.

2.4 The mailing is operated through electronic means either by email via the sales department or automatically online via an email/password. If the Product's electronic delivery format is defective, the Seller undertakes to replace it at no charge to the Buyer provided that it is informed of the defective formatting within 90 days from the date of the original download or receipt of the Product.

2.5 The person receiving the Products on behalf of the Buyer shall immediately verify the quality of the Products and their conformity to the order. Any claim for apparent defects or for non-conformity shall be sent in writing to the Seller within 8 days of receipt of the Products. For this purpose, the Buyer agrees to produce sufficient evidence of such defects.

2.6 No return of Products shall be accepted without prior information to the Seller, even in case of delayed delivery. Any Product returned to the Seller without providing prior information to the Seller as required under article 2.5 shall remain at the Buyer's risk.

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