**GaN on Si HEMT vs SJ MOSFET: Technology and Cost comparison**

**Description:**

The report proposes an in-depth analysis of the latest innovations in 600/650V power devices showing the differences between SJ MOSFET and GaN HEMT from the technical and economical points of view.

It includes details on manufacturing process and materials, packaging structure, component design, die size, electrical performance, current density, etc...

Super Junction technology has been commercially released for the first time in 1998 by Infineon. While new players are entering the market, the historical players are willing to keep the lead by decreasing production cost as low as possible or by introducing different technologies.

On the other side, GaN on Si HEMT offers new capabilities, such as the possibility to work at higher frequencies and the more and more competitive manufacturing cost.

GaN on Si HEMTs are good candidates to enter the 600/650V power devices sector but, at the same time, the improvement of silicon SJ MOSFET will keep them on the market and drive towards a standardization and popularization of these devices.

More than 30 devices from different manufacturers have been opened and analyzed to understand SJ MOSFETs and GaN on Si HEMTs technology innovations. The report includes detailed pictures of devices structure and breakdown cost analysis of the manufacturing process.

**Contents:**

1. Overview / Introduction

2. Introduction & Market

3. SJ Mosfets
   - Technology Overview
   - List of analysed devices
   - SJ Mosfets Performances
     - Infineon Coolmos
       -- Infineon Performances
       -- Infineon Evolution
       -- SPW47N60C3
       -- IPB60R280C6
       -- IPD65R225C7
     - Toshiba DTMos
       -- Toshiba Performances
       -- Toshiba Evolution
       -- TK40J60T
       -- TK10A60W
       -- TK31E60W
     - STMicorelectronics MDMesh
       -- STMicro Performances
       -- STMicro Evolution
       -- STP16N65M5
       -- STL17N65M5
       -- STL18N65M5
       -- STP30N65M5

4. GaN HEMT
   - Technology Overview
   - List of analysed devices
   - HEMT Performances
   - GaN Systems HEMT
5. GAN HEMT vs SJ Mosfets
- Performances comparison:
  -- $R_{dson}$ evolution
  -- $Q_g \times R_{dso}$ FOM
  -- Current density
- Cost Comparison
  -- Devices supply chain
  -- Front end cost
  -- Back end cost
  -- Packaging cost
- Future Trends

Ordering:

Order Online - [http://www.researchandmarkets.com/reports/3641378/](http://www.researchandmarkets.com/reports/3641378/)

Order by Fax - using the form below

Order by Post - print the order form below and send to

Research and Markets,
Guinness Centre,
Taylors Lane,
Dublin 8,
Ireland.
Fax Order Form
To place an order via fax simply print this form, fill in the information below and fax the completed form to 646-607-1907 (from USA) or +353-1-481-1716 (from Rest of World). If you have any questions please visit
http://www.researchandmarkets.com/contact/

Order Information
Please verify that the product information is correct.

Product Name: GaN on Si HEMT vs SJ MOSFET: Technology and Cost comparison
Web Address: http://www.researchandmarkets.com/reports/3641378/
Office Code: SCBRFYS

Product Format
Please select the product format and quantity you require:

Quantity
Electronic (PDF) - Enterprisewide: USD 5204

Contact Information
Please enter all the information below in BLOCK CAPITALS

Title: Mr [] Mrs [] Dr [] Miss [] Ms [] Prof []
First Name: ___________________________ Last Name: ___________________________
Email Address: * ___________________________
Job Title: ___________________________
Organisation: ___________________________
Address: ___________________________
City: ___________________________
Postal / Zip Code: ___________________________
Country: ___________________________
Phone Number: ___________________________
Fax Number: ___________________________

* Please refrain from using free email accounts when ordering (e.g. Yahoo, Hotmail, AOL)
Payment Information

Please indicate the payment method you would like to use by selecting the appropriate box.

☐ Pay by credit card: You will receive an email with a link to a secure webpage to enter your credit card details.

☐ Pay by check: Please post the check, accompanied by this form, to:
Research and Markets,
Guinness Center,
Taylors Lane,
Dublin 8,
Ireland.

☐ Pay by wire transfer: Please transfer funds to:
Account number 833 130 83
Sort code 98-53-30
Swift code ULSBIE2D
IBAN number IE78ULSB98533083313083
Bank Address Ulster Bank,
27-35 Main Street,
Blackrock,
Co. Dublin,
Ireland.

If you have a Marketing Code please enter it below:

Marketing Code: ___________________________

Please note that by ordering from Research and Markets you are agreeing to our Terms and Conditions at http://www.researchandmarkets.com/info/terms.asp

Please fax this form to:
(646) 607-1907 or (646) 964-6609 - From USA
+353-1-481-1716 or +353-1-653-1571 - From Rest of World