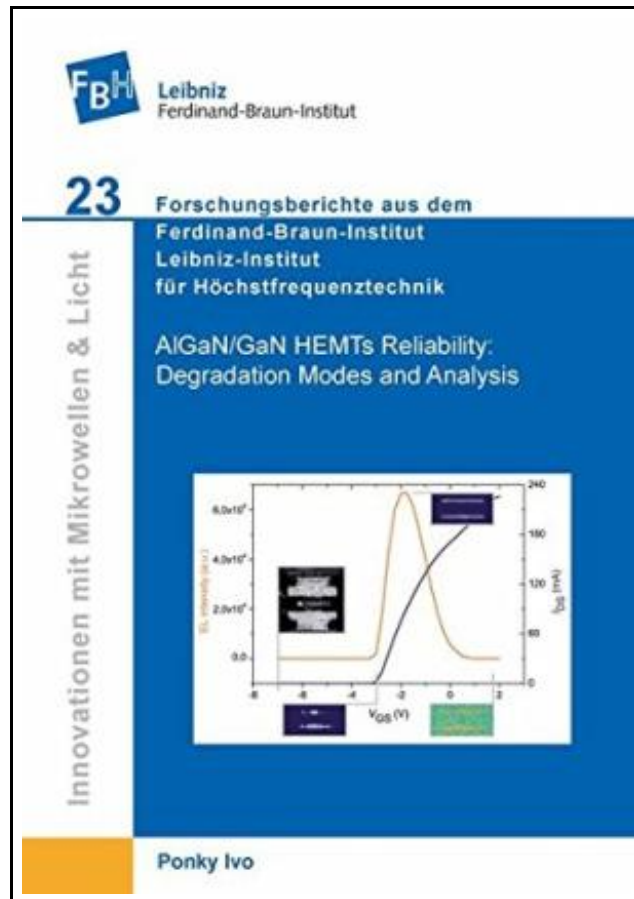


# AlGaIn/GaN HEMTs Reliability



Filesize: 2.89 MB

## Reviews

*This publication will be worth purchasing. It really is written in simple terms instead of difficult to understand. It's been designed in an exceptionally simple way and is particularly only right after I finished reading this ebook in which basically modified me, alter the way I believe.*

*(Prof. Loyce Runolfsson Jr.)*

## ALGAN/GAN HEMTS RELIABILITY



To save **AlGaIn/GaN HEMTs Reliability** eBook, remember to refer to the button under and download the file or get access to other information which are in conjunction with ALGAN/GAN HEMTS RELIABILITY book.

Cuvillier Verlag Okt 2012, 2012. Taschenbuch. Book Condition: Neu. 211x147x10 mm. Neuware - AlGaIn/GaN HEMTs reliability and stability issues were investigated in dependence on epitaxial design and process modification. DC-Step-Stress-Tests have been performed on wafers as a fast device robustness screening method. As a criterion of robustness they deliver a critical source-drain voltage for the onset of degradation. Several degradation modes were observed which depend on epi design, epi quality and process technology. Electrical and optical characterizations together with electric field simulations were performed to get insight into respective degradation modes. It has been found that AlGaIn/GaN HEMT devices with GaN cap show higher critical source-drain voltages as compared to non-capped devices. Devices with low Al concentration in the AlGaIn barrier layer also show higher critical source-drain voltages. Superior stability and robustness performance have been achieved from devices with AlGaIn backbarrier epi design grown on n-type SiC substrate. For the onset on any degradation modes the presence of high electrical fields is most decisive for ON- and OFF-state operation conditions. Therefore careful epi design to reduce high electric field is mandatory. It is also shown that epi buffer quality and growth process have a great impact on device robustness. Defects such as point defects and dislocations are assumed to be created initially during stressing and accumulated to larger defect clusters during device stressing. Electroluminescence (EL) measurements were performed to detect early degradation. Extended localized defects are resulting as bright spots at OFF-state conditions in conjunction with a gate leakage increase. AlGaIn/GaN HEMTs mit unterschiedlichen epitaktischen Designs und Prozessmodifikationen wurden auf ihre Zuverlässigkeit und Stabilität untersucht. DC-Stufenstresstests wurden als Screeningmethode für die Bauelementrobustheit durchgeführt. Mit dieser Methode erhält man eine kritische Source-Drain-Spannung, die den Beginn der Degradation kennzeichnet. Verschiedene Degradationsmodi wurden beobachtet, die vom epitaxialen Design, der epitaxialen Qualität und der Prozesstechnologie...



[Read AlGaIn/GaN HEMTs Reliability Online](#)



[Download PDF AlGaIn/GaN HEMTs Reliability](#)



[Download ePub AlGaIn/GaN HEMTs Reliability](#)

## See Also



### **[PDF] Psychologisches Testverfahren**

Follow the web link beneath to download and read "Psychologisches Testverfahren" file.

[Read eBook »](#)



### **[PDF] Programming in D**

Follow the web link beneath to download and read "Programming in D" file.

[Read eBook »](#)



### **[PDF] Adobe Indesign CS/Cs2 Breakthroughs**

Follow the web link beneath to download and read "Adobe Indesign CS/Cs2 Breakthroughs" file.

[Read eBook »](#)



### **[PDF] Have You Locked the Castle Gate?**

Follow the web link beneath to download and read "Have You Locked the Castle Gate?" file.

[Read eBook »](#)



### **[PDF] The Java Tutorial (3rd Edition)**

Follow the web link beneath to download and read "The Java Tutorial (3rd Edition)" file.

[Read eBook »](#)



### **[PDF] Oxford Reading Tree Read with Biff, Chip and Kipper: Phonics: Level 2: A Yak at the Picnic (Hardback)**

Follow the web link beneath to download and read "Oxford Reading Tree Read with Biff, Chip and Kipper: Phonics: Level 2: A Yak at the Picnic (Hardback)" file.

[Read eBook »](#)

**[PDF] Adult Coloring Book Birds: Advanced Realistic Bird Coloring Book for Adults (Paperback)**

Access the link beneath to read "Adult Coloring Book Birds: Advanced Realistic Bird Coloring Book for Adults (Paperback)" PDF file.

[Download eBook »](#)

**[PDF] Oxford Reading Tree Read with Biff, Chip, and Kipper: Phonics: Level 2: The Fizz-buzz (Hardback)**

Access the link beneath to read "Oxford Reading Tree Read with Biff, Chip, and Kipper: Phonics: Level 2: The Fizz-buzz (Hardback)" PDF file.

[Download eBook »](#)

**[PDF] Scherzo Capriccioso, Op.66 / B.131: Study Score (Paperback)**

Access the link beneath to read "Scherzo Capriccioso, Op.66 / B.131: Study Score (Paperback)" PDF file.

[Download eBook »](#)

**[PDF] Oxford Reading Tree Read with Biff, Chip and Kipper: Phonics: Level 2: Win a Nut! (Hardback)**

Access the link beneath to read "Oxford Reading Tree Read with Biff, Chip and Kipper: Phonics: Level 2: Win a Nut! (Hardback)" PDF file.

[Download eBook »](#)

**[PDF] Oxford Reading Tree Read with Biff, Chip, and Kipper: Phonics: Level 2: The Red Hen (Hardback)**

Access the link beneath to read "Oxford Reading Tree Read with Biff, Chip, and Kipper: Phonics: Level 2: The Red Hen (Hardback)" PDF file.

[Download eBook »](#)

**[PDF] Write Better Stories and Essays: Topics and Techniques to Improve Writing Skills for Students in Grades 6 - 8: Common Core State Standards Aligned (Paperback)**

Access the link beneath to read "Write Better Stories and Essays: Topics and Techniques to Improve Writing Skills for Students in Grades 6 - 8: Common Core State Standards Aligned (Paperback)" PDF file.

[Download eBook »](#)