

Fiabilité électronique

STMicroelectronics Introduces High-Performance GaN Family - GlobeNewswire

2021-05-06 - www.globenewswire.com

P4361A -- May 6 2021 -- STI2GaN_IMAGE New product family to combine Power GaN with intelligence for smaller and more highly integrated system solutions...

[Lire la suite](#)

Power modules combine 600-V GaN switches with gate drivers

2021-05-04 - www.powerelectronicstips.com

Power switches based on the wide bandgap (WBG) material gallium nitride (GaN) enable excellent efficiency and high switching frequency, starting a new era in power electronics. To support this development, Infineon Technologies AG adds the new CoolGaN IPS family of integrated power stage (IPS) products to its broad portfolio of WBG power devices. The initial [...]

The post Power modules combine 600-V GaN switches with gate drivers appeared first on Power Electronic Tips .

[Lire la suite](#)

Application of Artificial Intelligence in the Process of Ecological Water Environment Governance and Its Impact on Economic Growth

2021-05-03 - www.hindawi.com

With the increasing pollution of the ecological water environment, the treatment of the ecological water environment has become the focus of everyone's attention. At present, there are many research results on water environment governance, but the effect is not ideal. In order to effectively control the ecological water environment and promote sustainable economic growth, this research combines artificial intelligence algorithms and applies them to the governance process to explore its application effects and its impact on economic growth. First, the environmental sensor of the corresponding module is designed according to the water environment factor, and the data of dissolved oxygen content, water temperature, turbidity, temperature and humidity, and smoke concentration in the water environment are collected. Then the dynamic time-varying exponential smoothing prediction method is used to predict water quality, and a water quality prediction model is established. Then use support vector machine (SVM) to train the collected data samples, use the decision tree-based SVM classification method to classify the data samples, establish a water quality evaluation model, and use particle swarm optimization algorithm to optimize the evaluation model. Put the sensors and predictive evaluation models established in this research design into

[Lire la suite](#)

JEDEC Wide Bandgap Power Semiconductor Committee Publishes a Milestone Document for Bias Temperature Instability of Silicon Carbide (SiC) MOS Devices - Business Wire

2021-04-30 - www.businesswire.com

JEDEC publishes JEP184, a new guideline from its JC-70.2 Wide Bandgap Silicon Carbide (SiC) subcommittee. For free download visit www.jedec.org.

[Lire la suite](#)

Dallas Invents: 117 Patents Granted for Week of April 6 " Dallas Innovates - dallasinnovates.com

2021-04-20 - dallasinnovates.com

Dallas-Fort Worth ranked No. 9 for patents out of 250 metros.

[Lire la suite](#)

A Double-side Cooled SiC MOSFET Power Module with Sintered-silver Interposers: I. Design, Simulation, Fabrication, and Performance Characterization

2021-04-20 - ieeexplore.ieee.org

Planar, double-side cooled power modules are emerging in electric-drive inverters because of their low profile, better heat extraction, and lower package parasitic inductances. However, there is still concern about their reliability due to the rigid interconnection between the device chips and two substrates of the power module. In this paper, a porous interposer made of low-temperature sintered silver is introduced to reduce the thermo-mechanical stresses in the module. A double-side cooled half-bridge module consisting of two 1200 V, 149 A SiC MOSFETs was designed, fabricated, and characterized. By using the sintered-Ag instead of solid copper interposers, our simulation results showed that at a total power loss of 200 W, the thermo-mechanical stress at the most vulnerable interfaces (interposer-attach layer) was reduced by 42 % and in the SiC MOSFET by 50 % with a trade-off of only 3.6 % increase in junction temperature. The sintered-Ag interposers were readily fabricated into desired dimensions without post-machining and did not require any surface finishing for die-bonding and substrate interconnection by silver sintering. The porous interposers were also deformable under a low force or pressure, which helped to accommodate chip thickness and/or substrate-to-substrate gap variations in the planar module structure, thus simplifying module fabrication.

[Lire la suite](#)

Le ministère des Armées veut développer une filière de semi-conducteurs à base de Nitrure de Gallium

2021-04-17 - www.opex360.com

Ces dernières années, l'opportunité de recréer ou non une filière de munitions de petit calibre afin de sécuriser l'approvisionnement des forces françaises a régulièrement fait l'objet de débats, notamment au Parlement, la question des matériaux critiques, pourtant essentiels à la fabrication d'équipements de pointe, a été plus rarement évoquée. Et pourtant, elle est essentielle. Ainsi,...

Cet article [Le ministère des Armées veut développer une filière de semi-conducteurs à base de Nitrure de Gallium](#) est apparu en premier sur [Zone Militaire](#) .

[Lire la suite](#)

NIGaMIL : l'Agence de l'innovation de défense s'allie avec UMS pour développer une filière européenne de Nitrure de Gallium

2021-04-15 - www.defense.gouv.fr

Les technologies à base de nitrure de gallium (GaN) ont fait ces dernières années l'objet d'études qui ont confirmé leur aptitude à apporter de véritables gains en puissance, compacité, efficacité, rendement et fiabilité jusqu'alors inaccessibles. L'objectif du projet de technologies de défense NIGaMIL " NITrure de Gallium pour applications MILLimétriques " est de développer la première technologie européenne à base de Nitrure de Gallium (GaN) sur substrat carbure de Silicium (SiC). Lancé par la Direction générale de l'armement (DGA) en 2015, ce projet a été confié à la société United Monolithic Semiconductors (UMS).

[Lire la suite](#)