Fiabilité électronique

Les HEMT GaN de 150V gagnent en fiabilité et en simplicité de contrôle

2021-05-29 - vipress.net

Grâce à une structure originale permettant de porter la tension de claquage de grille des HEMT 150V en GaN à 8V contre 6V habituellement, le Japonais Rohm rend ces composants plus fiables et plus simples à contrôler. De quoi favoriser l'adoption du GaN à plus grande échelle dans les applications de puissance. Dans le domaine […]
Cet article Les HEMT GaN de 150V gagnent en fiabilité et en simplicité de contrôle a été publié par VIPress.net .

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Study of the thermomechanical strain induced by current pulses in SiC-based Power MOSFET.

2021-05-25 - ieeexplore.ieee.org

Power SiC MOSFETs are going to substitute Si devices by to their significantly better performances that make them much suitable in power switching applications such as electric/hybrid vehicles. The increasingly use of these devices in critical mission profiles requires an ever-higher reliability, whereas the increase of the dissipated power during high-speed working cycling due to short current pulses leads to unavoidable thermal and mechanical stress. Here, we propose a direct method to evaluate the mechanical stress due to current pulses. This method highlights that high Power SiC-based MOSFET undergoes to almost two different thermomechanical processes with completely different time scale. The results allow a link between the thermo-mechanical stress and the device failure conditions, with special focus on the current pulses effects on metal surface, as this is a main power devices weakness.

Lire la suite

GaN FET USB-C power adapter reference design boasts 30 W/in3 power density

2021-05-18 - www.powerelectronictips.com

Transphorm, Inc. announced a world-class GaN power adapter reference design. The solution is an open frame, 65W USB-C Power Delivery (PD) charger that combines Transphorm's SuperGaN Gen IV platform with Silanna Semiconductor's proprietary Active Clamp Flyback (ACF) PWM controller. Together, the technologies yield an unprecedented peak efficiency of 94.5 percent with an uncased power density […]
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