

- Presentation title:

- **Joint SAE/JEDEC Power GaN and SiC Working Group**

- Abstract:

- Power Gallium Nitride (GaN) and Silicon Carbide (SiC) devices are emerging technologies in the semiconductor industry that are used for power conversion applications. According to a report by Semiconductor News in 2022, GaN is projected to have a compounded annual growth rate (CAGR) of 59% from 2021 to 2027, while SiC is expected to have a CAGR of 34% during the same period, as stated in Yole's development report. The market for GaN on Silicon technology is particularly competitive, serving both the commercial and aerospace sectors. The defense and aerospace industry recognize the advantages of these technologies and has been employing customized methods to assess the reliability of the devices in harsh environmental conditions. To streamline this process, a joint initiative by the SAE/JEDEC committee and aerospace subcontractors has been launched to develop a standardized methodology, eliminating the need for individual customizations. This collaborative effort involves original chip manufacturers (OCM) and original equipment manufacturers (OEM) from the aerospace industry, who have formed a task group to address this issue. In this presentation, we will examine the tests and screening procedures currently under review by the committee, along with the underlying rationales supporting their implementation.

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