

Power Semiconductor Reliability Testing

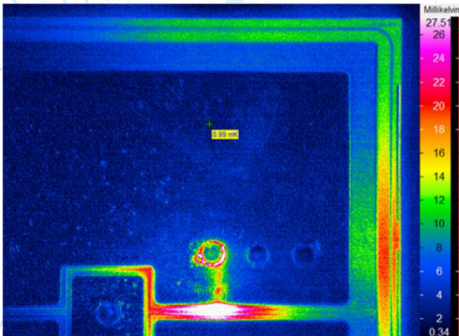


GE RESEARCH'S RELIABILITY TEST LAB FOR POWER SEMICONDUCTORS

GE Research offers reliability testing of power semiconductor devices. Our in-depth expertise in high temperature and high voltage testing, environmental testing, failure analysis, root cause determination, and mitigation solutions enables us to fully characterize and analyze the performance of your parts. Due to our extensive industry experience with SiC, we also have significant know-how in SiC MOSFET reliability testing with equipment and tooling tailored for higher temperature SiC discrete and module packages.

OUR CAPABILITIES

- Reliability testing services to assess robustness of power semiconductor devices
 - HTRB, HTGB, IOL, PC, H3TRB
 - Environmental tests (thermal cycling, etc.)
 - Parametric verification
 - Unclamped inductive switching, short circuit, and other dynamic tests
- High temperature testing up to 200°C, extendable up to 250°C
- High voltage stress testing up to 3.0 kV
- Extensive failure analysis and engineering expertise
- Ability to determine root cause and recommend mitigations
- Access to full suite of characterization tools (FIB, micro-CT, XRF, etc.)
- Testing to AEC, JEDEC, and MIL standards
- ISO 9001:2015 certification



ELECTRONICS & SENSING

... A Track Record of Innovation to Production

For over 60 years, our Electronics and Sensing division has been an innovation engine for GE, our strategic partners, and the government. We have expertise in semiconductors, microelectronics, MEMS, photonics, microsystems, microfluidics, and advanced packaging. We are a dedicated team that is focused on and passionate about solving our customers' toughest challenges from concept to production.

We offer the opportunity to work with us in a collaborative R&D arrangement, flexible to your business, or more directly through one of our core services.

END TO END SOLUTIONS

We offer end to end solutions that span innovation to production. Our wide range of capabilities enables us to tailor solutions to your needs. We start by understanding the application requirements that impact system and component specifications and supply chain ecosystems. The team dives deep into each level of the system to architect a solution that fits all constraints, from performance to cost to reliability.

CORE SERVICES

- Foundry services in our ISO 9001 certified Class 100 cleanroom from unit step to full flow
- Long term supply of devices and packaging in MEMS, wide bandgap semiconductors, Optoelectronics and Microfluidics
- Test solutions and services in MEMS and Harsh Environment Electrical Reliability

FOUNDRY SERVICES

The Electronics and Sensing cleanroom is a 28,000 sq. ft. Class 100 facility containing more than 200 pieces of semiconductor, MEMS and multi-layer flex process equipment. Our highly diverse processing capabilities allows for the creation of tailored solutions to meet the unique needs from breakthrough R&D to low volume production under the ISO standard. GE Research has:

- 700+ years of combined experience between our expert engineers and process technicians
- Equipment that can handle various size substrates and materials
- Capability to provide individual process steps to full device flows
- Expertise to transfer process to external volume manufacturing facilities

CONTACT US:

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