eurofins | EAG Laboratories

Burn-In & Reliability Qualification

Our world-class labs can provide you with all the reliability qualification data you need

Eurofins | EAG Laboratories' world class Burn-in & Reliability Qualification labs have over 75 chambers & ovens, tight ESD safety controls, routine audits, and a dedicated engineering staff to provide you with all of the burn-in, package qualification, process qualification, and other reliability data you need. Our lab service procedures are ISO 17025 accredited and DSCC certified. We follow industry standards, such as JEDEC, Mil-Std, AEC, as well as customer specific requirements. All equipment uses N.I.S.T. traceable tooling and monitored, calibrated profiles.

Reliability qualification is an important step in the product development cycle and demonstrates the fitness of a product for use in the field and helps our clients understand the fundamental wear out mechanisms, detect design marginality combined with parameter drift and determine failure rated due to latent manufacturing defects. Whether you need a specific reliability test or complete outsourced services, our experienced Reliability Engineers can create qualification plans and perform testing to meet your requirements.

Why Eurofins | EAG Laboratories?

Eurofins | EAG Laboratories provides the specialized support and services you need to accelerate time to market, fill equipment and expertise gaps, and manage risk associated with product development.

- Expertise in burn-in, reliability and qualification
- Identify and detect failure mechanisms early
- Over 75 chambers and ovens with a dedicated engineering staff
- Customized test plans to meet your specific product needs
- Comprehensive failure analysis capability to identify root cause quickly

Stress-Based Testing

Stress based qualification methodology provides a broad approach to identifying IC failure mechanisms and is a powerful tool to help engineers identify devices that may fail under normal use conditions. Thermal cycling, bias/humidity stress testing are conditions which many products experience and test conditions are designed to accelerate failures compared to field conditions.

Burn-In Testing

Burn-in testing is an important technique used to accelerate the conditions that stress semiconductor devices and help you screen infant mortality and reduce your failure rate in the field. Our advanced burn-in equipment can support high power devices with excellent test and temperature control. Our in-house engineering team can design custom solutions to meet your specific needs and create solutions for the most challenging projects. We also have in-house PCB design to develop your burn-in boards, allowing us to support turnkey projects and deliver all the associated hardware required.

Testing Methods

- Moisture/reflow sensitivity classification
- Preconditioning
- HTOL (High Temperature Operating Life Test)
- LTOL (Low Temperature Operating Life Test)
- HTSL (High-Temperature Storage Life Test)
- LTSL (Low Temperature Storage Life Test)
- Temperature Cycling (TC) Air to Air
- Power Temperature Cycling (PTC)
- Thermal Shock (TS) Liquid to Liquid
- Temperature Humidity Bias (THB) Life Test 85°C/85% relative humidity
- HAST (Highly Accelerated Temperature and Humidity Stress Test) biased and unbiased
- Autoclave or pressure cooker test
- Gate leakage

Quality

- MDSCC MIL-STD-833: Method 1005.8, Method 1008, Method 1010.7, Method 1011.9
- ASE 17025:2005
- ISO 900

Engineering Sciences

- ATE Test Development and Pilot / Production Test
- Burn-in and Reliability Qualification
- ESD and Latch-up Testing
- Debug and FIB Circuit Edit
- Failure Analysis
- Advanced Microscopy (SEM, TEM, FIB/SEM)
- PCB Design and Hardware

Eurofins | EAG Laboratories delivers comprehensive design, development, test, analysis and debug services that are differentiated by expert engineering capability and comprehensive capital equipment and processes.