

RELIANT LABS

Accelerated Stress Testing by

Reliant Labs improves product design and manufacturing processes while driving costs down and ensuring customer satisfaction. Using state of the art testing methods to expose latent defects, Reliant Labs effectively determines your products' operating margins and develops solutions that provide measurable results and positive impact to your bottom line.

POWER SUPPLY EVALUATION SERVICES

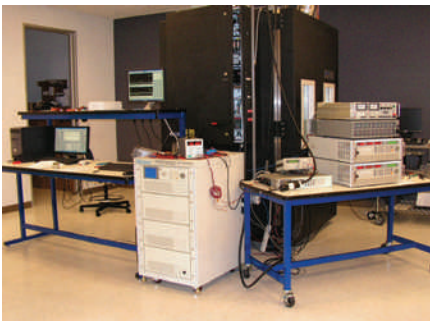
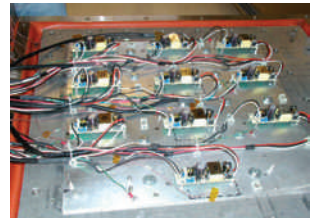
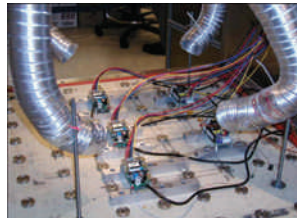
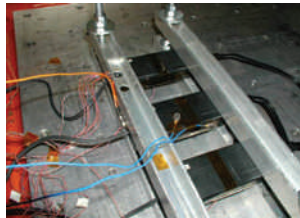
Ensuring power supply reliability, one of the most critical components in systems design, will generate results by

- reducing field failures
- building customer satisfaction
- lowering warranty costs

and yield further benefits by allowing you to

- expedite design requirements
- free up valuable engineering resources
- close the loop on power conversion products

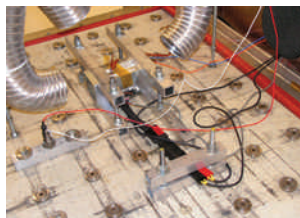
Incorporating data obtained from HALT (Highly Accelerated Life Testing) and power supply pre-testing reduces time to market and improves your product's DFM. Reliant Labs engineers have the tools to evaluate, test, and provide root-cause failure analysis of your products to meet key engineering milestones.



PERFORMANCE TEST, CHARACTERATION, and EVALUATION

Pre-HALT Power Supply Test (PSP) subjects power supplies to specified environmental and operational conditions to evaluate the system prior to HALT testing and establishes detailed performance data to be used as a benchmark when evaluating failures found during HALT.

- PSP establishes a gold unit by validating power supply conformance to customer's specification.
- PSP reduces re-testing costs by assuring the product meets operational and functional specifications prior to the initiation of HALT.
- PSP generates a detailed power supply characterization for comparison against a customer's or manufacturer's functional specifications.



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Reliant Labs is an innovative reliability testing provider dedicated to partnering with customers to make their products last longer, to lower warranty costs, and to boost customer satisfaction. Reliant Labs' commitment to unmatched flexibility, responsiveness, and personalized support has helped companies improve their products, manufacturing processes, and profitability since 2002.

Serving technical and equipment providers and manufacturers with operations in the United States, Mexico, Asia, Europe, and Canada, Reliant Labs offers a wide range of reliability testing services including:

HALT (Highly Accelerated Life Testing)
HASS (Highly Accelerated Stress Screen Development)
NTF (No Trouble Found) Verification
Temperature and Humidity
Power Supply HALT, HASS, and Comparison Testing
Root-Cause Failure Analysis

As one of the largest and busiest HALT labs in the world, Reliant Labs quickly and accurately delivers knowledge resources, technical skills, and practical experience along with the most comprehensive test reports in the industry – confidentially, on time and within budget.

SPECIFICATION DEVELOPMENT and DESIGN REVIEW

Reliant Labs creates functional and performance specifications, evaluates existing specifications, and provides independent power supply design reviews. A specification that does not match the required functionality and performance may negatively impact costs by resulting in field failures, customer dissatisfaction, redesign, and re-testing.

Power-Supply HALT and HASS (Highly Accelerated Stress Screen)

Testing - By performing HALT, we can help facilitate and evaluate the reliability of your power supply. By implementing HASS we can monitor outgoing product quality and detect manufacturing weaknesses before the power supplies are shipped to your customer. HALT and HASS can significantly reduce failure rates, lower warranty costs, build customer satisfaction, and improve your bottom line.

Power Supply Comparison Testing - A quick and effective way to select the right manufacturer for your power supply requirements. Side-by-side comparison testing rapidly evaluates different manufacturers' varying input voltage and load conditions during the HALT process.

IR Thermography Thermal Characterization and Analysis - Thermal imaging fault isolation techniques employed by Reliant Labs provide a comprehensive thermal analysis of your power supply. Thermography quickly scans for potential hot spots and is a great tool for fault isolation during HALT and HASS testing.

Root-Cause Failure Analysis - Understanding failure mechanisms is critical to power supply reliability improvement and requires a thorough investigation into the failure. After the failure mechanism is defined a plan for redesign and follow-up is generated.

LABORATORY FEATURES

- Full-service HALT and HASS testing facility
- MTBF predictions, thermal cycling, humidity, and RDT
- Comprehensive inventory of test equipment including a 9kW AC power source, 12kW DC source, DC electronic loads, oscilloscope, power harmonics analyzer, and more
- Custom fixture design and fabrication
- Extensive inventory of connectors and cable harness fixturing

