TEKTRONIX TESTING SERVICES

VIBRATION, SHOCK, TEMPERATURE AND PACKAGE TESTING

Tektronix®

TESTING SERVICES OVERVIEW

Tektronix has the right equipment, the right standards and the right people to meet your critical testing needs.

As a third-party test provider, we offer customers a diverse knowledge base that comes from testing a range of products and components for a variety of industries for over 65 years. Our experienced engineers and technicians are ideally suited to recommend the best solution for each customer and project.
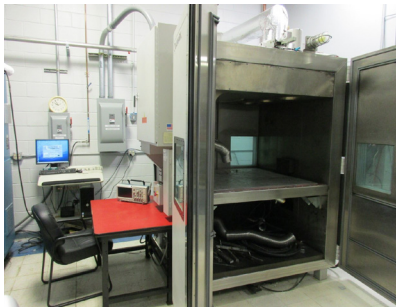

Vibration and Shock Testing

Package Testing

Environmental and Climatic Testing

HALT & HASS Testing

NEMA Testing

DLA Suitable Testing

In addition to being accredited to ISO/IEC 17025 for testing, Tektronix provides DLA suitable testing for defense and aerospace electronic systems. Our military standard (MIL-STD) testing is designed to help you manage risk, improve safety and ensure product quality in any environment. We test for a wide array of conditions encountered during the use of military equipment in all stages of operational life.

Tektronix Laboratory Accreditations:

- ISO 9001: 2015 Registered
- ISTA Certified
- ISO/IEC 17025 Accredited
- DLA Suitabilities to MIL STD's 202, 750, 810 & 883

Vibration and Shock Testing

Our vibration and shock testing services simulate real world vibration that occurs during transport or in the intended environment of a product to help identify weaknesses and avoid rapid fatigue or failure. Our fully-equipped testing labs offer a wide selection of both random and sine vibration testing along with shock testing, allowing you to make informed decisions and comply with your industry's regulatory requirements.

Tektronix has multiple electro-dynamic and hydraulic vibration systems with the following capabilities:
- Slip table for 3-axes testing
- Up to 23,600 lbs-force vibration, 50,000 lbs-force shock
- Up to 3000 Hz frequency range
- Combined environments

Tektronix offers a breadth of vibration testing services, including:

Vibration

- Sinusoidal
- Random
- Gunfire
- Sine on Random
- Random on Random
- Mixed Mode
- Transportation

Shock

- Half-Sine
- Sawtooth
- Square Wave/Trapazoidal
- Pyro/SRS

Acceleration

- Crash Hazard
- Constant

Vibration and Shock Testing Standards (partial list):

Military:
- MIL-STD-202
- MIL-STD-810
- MIL-STD-750
- MIL-STD-883
- MIL-STD-167
- MIL-STD-331
- MIL-STD-901

Commercial/Automotive:
- ASTM
- Telcordia
- ANSI
- JEDEC
- NEMA
- IEC
- RTCA/DO-160

Package Testing

Package testing simulates the process of distribution and storage of products traveling from the manufacturer to the end user. Tektronix is able to simulate virtually every condition packages will undergo during the warehouse or distribution process, enabling our customers to make effective interpretations about the integrity of their packaging.

To determine which tests are appropriate for your package system, it is important to consider a variety of factors including, regulatory requirements, applicable standards or test procedures, mode of transport, type of product, size, shape and material makeup of the container.

Industries

We provide package testing services to the following industry sectors:

- Consumer Products
- Point-of-Purchase Displays
- Medical Device Manufacturers

Service Capabilities

Tektronix offers a wide array of product testing services, including:

- Compression, Machine
- Compression, Dead Weight
- Drop Test
- Vehicle Simulation
- Fragility
- Storage Test
- Accelerated Aging
- Random Vibration
- Thermal Shipper Validation
- Shipping
- Label Rub & Peel
- Stacking
- Vibration (sinusoidal/random)
- Rotary Vibration

Package Testing Standards:

- ISTA
- ASTM
- IEC 68-2
- MIL-STD-810
- GR-63

Environmental and Climatic Testing

Tektronix offers environmental and climatic testing designed to reduce costs, limit liability and improve consumer satisfaction. These testing services consist of simulating natural environments such as temperature and humidity to ensure products will perform optimally in their intended environment.

Environmental testing increases product reliability and protects your business from costly product failures, recalls and other losses incurred by defective products. With the simulation of extreme environmental conditions and rapid cycling of temperature, pressure and humidity, Tektronix can effectively test the limits and durability of your products, materials and components.

Real-World Conditions Simulation

Tektronix tests for a wide variety of environmental conditions, including, but not limited to:

- Temperature / Altitude
- Temperature Shock
- Solar Simulation
- Hose Down / Ingress
- Sand and Dust
- Icing / Freezing Rain
- Temperature Cycling
- Wind / Rain
- Accelerated Aging
- Moisture Resistance
- Fungus
- Temperature/Humidity
- Explosive Atmosphere
- Storage
- Shelf Life
- Salt Spray/SO2

Environmental Testing Standards (partial list):

Commercial/Automotive:

- ASTM
- Telcordia
- ANSI
- JEDEC
- NEMA
- IEC
- RTCA/DO-160

Military:

- MIL-STD-202
- MIL-STD-810
- MIL-STD-750
- MIL-STD-883
- MIL-STD-331

Halt & Hass Testing

Build reliable products, speed your time to market and lower warranty costs with Highly Accelerated Life Testing (HALT) & Highly Accelerated Stress Screening (HASS) from Tektronix. These tests can be used in pre-market development to enhance product reliability by simulating product stress events and identifying potential design and manufacturing weaknesses. For products that have already been introduced into the market, HALT & HASS testing can be used to audit product reliability when component, supplier or manufacturing process changes occur.

HALT & HASS testing provides you with a competitive edge in the marketplace through improved product design and effective management of risks associated with warranty services and product recalls after release.

Fortune 500 companies in the military, aerospace, telecom, medical and semiconductor industries rely upon Tektronix to satisfy their component-through-product level test requirements.

Why is HALT & HASS Testing Important?

- Eliminate field product failures.
- Increase product design and reliability.
- Reduce product development time.
- Easily determine failure root cause and corrective action.

- Build consumer confidence with durable products.
- Keep customers and increase product profitability.

NEMA Testing

Tektronix is your product test service provider for National Electrical Manufacturer Association (NEMA) TS-1 and TS-2 compliance testing. These services ensure that traffic control enclosures are protected against the ingress of foreign objects.

Customers who choose Tektronix for NEMA TS-1 and TS-2 compliance testing benefit from our more than sixty years of product testing experience - and from the precision, rigor and exceptional service that have become hallmarks of Tektronix products and services.

NEMA Compliant Tests

- Controller Unit Tests
- Non-Destruct Transient Immunity
- High-Repetition Noise Transients
- Low-Repetition High-Energy Transients
- Input-Output Terminal Transients
- Power Service Transients

- Power Interruption Tests
- Shock (Impact) Test
- Temperature, Voltage, and Humidity Transients
- Vibration Test
- Supplemental Environmental Tests

ABOUT TEKTRONIX

Tektronix is the world's leading provider of calibration, repair, and testing services. Tektronix provides:

- Wide range of capabilities - vibration, shock, environmental and package testing to your specifications.
- Superior quality — ISO/IEC 17025 accredited testing services.
- Expertise - over 65 years of experience testing to rigid industry standards.

For more information about Tektronix testing services, contact us today at 973-628-1363 or visit tek.com/testing-services.

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