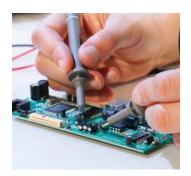


NTS Facility Spotlight: Anaheim, California

Specialists in Electronics, Components and Materials Testing



Our electrical testing services find attributes critical to the performance of your product



Determine if materials or parts are suitable for application with mechanical testing



Over 30 years industry knowledge and experience in PCB testing

About NTS Anaheim

NTS Anaheim, formerly Microtek Laboratories, specializes in electronics and materials conformance, qualification and reliability testing to all levels of the supply chain. NTS Anaheim has an unparalleled reputation for the highest level of customer service and reliable independent test results. The laboratory is fully certified under UL's Third-Party Test Data Program (TPTDP), Data Acceptance Program (DAP) and Client Agent Program (CAP). It is also A2LA and ISO 17025 accredited and a recognized IPC training center.

Electronic and Electrical Testing

Electrical testing and analysis is a core capability of NTS Anaheim with more than 30 years' experience servicing the electronics and circuit board industries. Our engineers routinely provide test program insight and development allowing customers the flexibility to enhance and/or structure programs to their specifications.

Mechanical Testing

Our mechanical test department utilizes tensile test machines, impact testers, bend and fatigue machines and computers with state-of-the-art programmable software to run programs for clients in industries such as electonics, composites, plastics, aerospace, automotive, medical, commercial and defense.

Failure Analysis

NTS Anaheim's failure analysis program can provide detailed information regarding the performance of materials and devices for their end-use application as well as root-cause analysis. This will allow you to identify design, selection, test and process deficiencies then take corrective action to enhance product reliability and performance. Our unbiased analysis converts your failure into an asset, resulting in production of higher quality products.

Printed Circuit Board Testing (PCB)

Our highly-qualified staff of mechanical and electrical engineers can perform physical, mechanical, electrical, visual/dimensional testing and verification at the bare board level, on raw materials as well as assembled PCBA's. This includes evaluation to both military and commercial standards including IPC certifications and test methods MIL-PRF-55110, MIL-PRF-31032, MIL-PRF-50884, ASTM and IFC.

Polymer, Plastic and Rubber Materials Testing

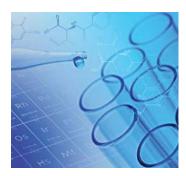
NTS Anaheim can assess the mechanical strength and integrity of these materials in your product and provide the required data to properly evaluate the application performance.

Environmental Testing

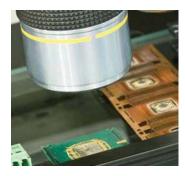
We have a wide range of environmental testing services to meet your specific requirements. Environmental simulation or accelerated aging can be performed as an independent conditioning or in conjunction with electrical testing.



Environmental testing is a critical part of product reliability



NTS Anaheim can test advanced polymer formulations for military and commercial applications



Our technicians will find the root cause of your test failure



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Test specifications and methods include:

- ► Accelerated aging
- ► Adhesion
- ► Arc resistance
- ▶ Ball sheer/die sheet
- ▶ Ball pressure test
- ► Barcol hardness
- ▶ Bond strength
- ► Break strength
- ▶ Capacitance
- ► Comparative Tracking Index (CTI)
- ► Compressive strength
- ► Conductivity
- ► Conductive anodic filament (CAF)
- ► Conformance and reliability
- ► Corrosion
- ► Curve trace
- ▶ DC resistance insulating materials
- ► Dielectric breakdown/strength
- ► Decapsulation
- ► Deflection temperature
- ► Design of experiments (DOE)
- ► Density determination
- ▶ Dielectric constant (DC) and dissipation factor (DF)
- ► Dieletric breakdown voltage and strength
- ► Differential scanning calorimetry (DSC)
- ► Dimensional inspection/verification
- ► Ductility
- ▶ Durability
- ► Dynamic mechanical analysis (DMA)
- ► Electrical characterization
- ► Electromigration resistance
- ► Elongation
- ► Environmental stress screening (ESS)
- ► External package analysis
- ► Flammabillity
- ► Flexibility endurance
- ► Flexural bend/fatigue/strength/flexibility
- ► Flexural properties
- ► Fourier transform interferometry (FTIR)
- ► Fracture evaluation
- ► Fracture toughness
- ► Glow-wire flammability
- ► Heat aging of plastics

- ► High current arc ignition (HAI)
- ► Hi-Pot
- ► High temperature storage
- ► High-voltage, low current dry arc
- ► Hot impact test
- ► Humidity
- ► Immersion
- ► Insulation/interconnection/ moisture resistance (CSAM/SEM)
- ► Izod impact
- ► Level 1 analysis
- ► Microsectional analysis
- ► Permittivity and Loss
- ► Surface insulation resistance (SIR)
- ► Volume/surface resistivity
- ▶ Wrapper resistance analysis
- ► Lap shear
- ► Material characterization
- ► Mechanical properties
- ► Optical inspection
- ▶ Peel/sheer/tensile/terminal strength
- ▶ Physical inspection
- ▶ Pressure vessel
- ► Rework simulation
- ► Salt Fog
- ► Scanning acoustic/electron microscopy
- ▶ Solderability
- ▶ Steam aging
- ► Temperature aging/cycling
- ► Tensile impact
- ► Tension and compression
- ► Thermal shock/cycling
- ► Thermal stress
- ► Thermo gravimetric analysis (TGA)
- ▶ UL short-term properties
- ► UL long-term thermal aging (LTTA)
- ► Vicat softening point
- ► Water absorbtion
- ► Dielectric withstanding voltage (DWV)
- ► Wire bond pull testing
- ▶ Wire ignition
- ► X-Ray and X-Ray flourescence (XRF)
- ► Young's modulus

About NTS

NTS provides test, inspection and certification services to help clients build better, stronger, safer, more reliable products. Our engineers and technicians have extensive knowledge of current test and conformity requirements, both domestic and international. With a nationwide network of laboratories, we bring a unified solution to a global market.