



## Analysis & Testing Laboratory

*IEC Electronics Analysis & Testing Laboratory has solutions for your most complex design or supply chain challenges. From one-time testing to fully integrated turn-key supply chain management, we provide services to solve challenges, minimize risk, and deliver solutions customized to your needs.*



### Solve Challenges

#### **Electronics Manufacturing Experience**

Unique analysis due to end use application knowledge

#### **Multi-disciplinary Approach**

On-site engineering and supply chain expertise

#### **Forensic-style Investigation**

Methodical and detailed approach to finding the right solution



### Minimize Risk

#### **High-quality Testing Standards**

Only EMS with on-site lab approved by the DLA for their QTSL program

#### **Tailored Testing Plan**

State-of-the-art equipment to develop a custom approach to your specific needs

#### **Expert Team**

Staff members with over 25 years of counterfeit component risk mitigation and methodology experience



### Deliver Solutions

#### **Quick Turnaround Time**

Dedicated staff to respond to your urgent needs

#### **Flexible Solutions**

Services available for electronic components, integrated circuits, or printed circuit boards

#### **Seamless Integration with Manufacturing**

Lab on-site with 72,000 square foot EMS facility



### Root-Cause Failure Analysis

*Identify the source of quality and reliability issues.*

#### **Solutions for:**

Product Design Failure, Low Yields, Poor Performance, Degradation



### Inspection & Authenticity Testing

*Validate quality and integrity of components against approved devices and minimize risk to your supply chain.*

#### **Capabilities:**

Counterfeit Component Detection, Lot Acceptance, Construction Analysis, Obsolescence Management



### Reliability & Qualification Services

*Ensure the fitness of a device for use in the field.*

#### **Capabilities:**

Up-screening, Destructive Physical Analysis (DPA), Environmental & Accelerated Life Testing, Burn-In, Construction Analysis



## Analysis & Testing Laboratory

### Laboratory Accreditations

ISO/IEC 17025:2005

DLA QTSL Services

IPC Validation Certified

ANSI/ESD S20.20:2007

### Staff Certifications

J-STD-001 w/ Space Addendum

IPC-A-600

IPC-A-610

IPC-6012

IPC-7111/IPC-7721

### Non Destructive Testing

#### TESTING PROCEDURE

Up-screening

Optical Inspection

X-Ray Inspection

Scanning Acoustic Microscopy

X-Ray Fluorescence

Seal Testing

Scanning Electron Microscope/EDS

Particle Impact Noise Detection

FTIR Spectroscopy

Solderability Testing

Thermal Cycling

Electrical Testing

HAST

Reflow Profiling

#### APPLICABLE METHODS

MIL-STD-202

MIL-STD-883, 750, AS6081

MIL-STD-883, 750, 202

IPC/JEDEC J-STD-005

AS6081, JEDS213, IPC-4552

MIL-STD-883, 750, 202

MIL-STD-883, 750

MIL-STD-883, 750

ASTM E 334, ASTM E 1131

J-STD

MIL-STD-883, 750

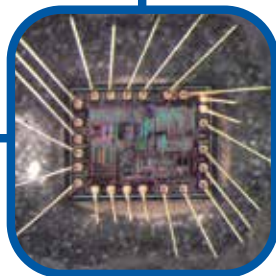
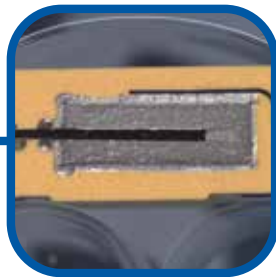
AS6081, MIL-STD-883

Customized per Application

Customized per Application

X-RAY

CROSS SEC.



SEM

DECAP

### Destructive Testing

#### TESTING PROCEDURE

Cross-section Analysis

Mechanical Decapsulation

Chemical Decapsulation

Wire Bond Pull

Die Shear

Dye Penetrant

Resistance to Solvents

Black Top Evaluation

TGA Analysis

Coupon Testing

Die Cross-section

Component removal from board

#### APPLICABLE METHODS

Customized per Application

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MIL-STD-883, 750, AS6081/6171

MIL-STD-883, 750, AS6081/6171

Customized per Application

Customized per Application

IDEA 1010, AS6081/6171

IDEA 1010, AS6081/6171

ASTM E 334, ASTM E 1131

Customized per Application

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