



# Electromagnetic Compatibility (EMC) Testing Services



## Electromagnetic Compatibility (EMC) Testing

Trace's three-meter semi-anechoic chamber can perform full scan radiated emission testing at frequencies up to 18 GHz. Using absorbing material to cover the reflected ground plane in the semi-anechoic chamber, we can perform radiated immunity testing at frequencies of up to 18 GHz and field intensities of up to 200 V/m. The facility utilizes state-of-the-art instrumentation and automated testing to provide accurate, reliable, and consistent test results.

## Full Compliance Radiated Emissions and Immunity Testing for:

- FCC Part 15
- CISPR11/EN-55011
- SAE J1113
- CISPR22/EN-55022
- ISO 11452-2
- CISPR25
- IEC/EN 61000-4-3
- AEMCLRP Accreditation in Process



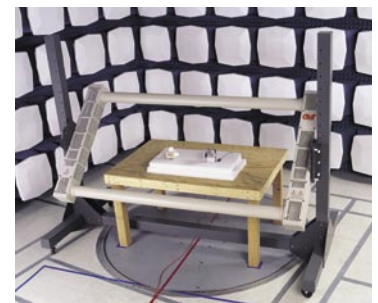
## Test Capabilities

- Radiated Emissions
- Conducted Emissions
- Radiated Immunity
- Conducted Immunity
- Electrostatic Discharge
- Conducted Transient Immunity
- Surge
- Electrical Fast Transient and Bursts
- Immunity to Magnetic Fields
- Power Dips/Interrupts
- Customer-Defined Transients
- Bulk Current Injection
- NARTE EMC Director

## Custom Testing Services

Trace's custom testing service capabilities are put into action with one phone call. Trace works with each customer to define specific test requirement, and keeps the customer involved throughout the testing process by providing regular updates. In addition, the customer has the opportunity to observe the testing as it is being performed. Trace will provide test results and a thorough explanation of what the results mean.

- Explosion Proofing
- Acceleration
- DSCC, DGSC, and DISC
- Failure Analysis
- Solder Joint Reliability



**Internationally Accredited Independent Testing Services**

**[www.tracelabs.com](http://www.tracelabs.com)**

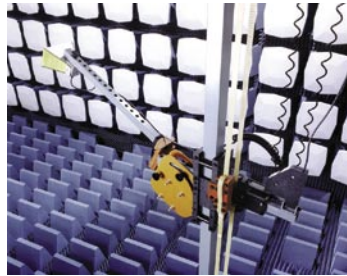


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## **Boresighting**

As system clock speeds increase, the upper-end frequency that must be tested also increases.

EMC is now often tested up to 40 GHz. The FCC requires testing of frequencies through the 5th harmonic of the highest clock frequency. At these frequencies, the test antennas must be tilted, or boresighted, towards the product, to accurately measure the emissions. Our automated tower can be used in either conventional or boresight mode to provide the most accurate and repeatable test results.



## **EMC Test Standards Covered**

- MIL-STD-461/462
- MIL-STD-704
- RTCA/DO-160
- GM 9100P
- GMW3100/3097
- SAE J1113
- ISO 7637
- ISO 11452
- Harley Davidson GES 22601/22603
- CISPR25
- Annex VIII and IX of 95/54/EC
- Mitsubishi ES-X82010
- Toyota
- Nissan
- EMC Directive 89/33/EEC
- FCC Part 15



Testing is performed in strict accordance with the standards and customer-specific requests. The lab is also available on a per-day basis for preliminary testing and troubleshooting.

Trace is an A2LA Accredited Laboratory.

**For more information, or for a quote on specific test requirements, contact:**

### **Trace Laboratories - Central**

1150 West Euclid Avenue  
Palatine, IL 60067  
Phone: 847-934-5300  
Fax: 847-934-4600

### **Trace Laboratories - East**

5 North Park Drive  
Hunt Valley, MD 21030  
Phone: 410-584-9099  
Fax: 410-584-9117

Email: [info@tracelabs.com](mailto:info@tracelabs.com)

## **Independent, Internationally Accredited Testing Services**

- ✓ **Chemical Testing**
- ✓ **Electrical Testing**
- ✓ **EMC**  
(Electromagnetic Compatibility)
- ✓ **Environmental Testing**
- ✓ **Failure Analysis/Contamination**
- ✓ **HALT (Highly Accelerated Life Test)**
- ✓ **Material Properties**
- ✓ **Mechanical Testing**
- ✓ **Printed Circuit Board Testing**
- ✓ **Reliability/Durability/Qualification**
- ✓ **Thermal Analysis**
- ✓ **UL Testing**
- ✓ **Vibration Testing**
- ✓ **Water Testing**

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