

Automotive EMC Testing

Accreditations and Services



Valued Quality. Delivered.



Intertek delivers decades of EMC and Automotive industry expertise, maintaining a network of 23 EMC test lab facilities around the world.

Service Features:

- **Fast Report Turnaround** - Raw data available within 24 hrs of test completion (reports in 48 hrs)
- **Secure Website** - Clients can view a secure website where data / reports are posted for their convenience
- **Remote Monitoring** - We will provide a method of monitoring tests based on the client's needs

EMC Testing:

- SAE J1113-4 Conducted Immunity (BCI)
- SAE J1113-11 Immunity to Conducted Transients on Power Leads
- SAE J1113-12 Electrical Interference by Conduction and Coupling
- SAE J1113-13 Immunity to Electrostatic Discharge
- SAE J1113-22 Immunity to Radiated Magnetic Fields from Power Lines
- SAE J1113-41 Test Limits and Methods of Measurement of Radio Disturbance Characteristics from Vehicle Components and Modules
- SAE J1113-42 Conducted Transient Emissions
- SAE J551
- OEM Specific Requirements as well, including GMW3100 GS, Nissan 28400 NDS, Mazda MES PA 66920
- ISO 7637 Series (-1, 2, 3) Electrical disturbance by conduction and coupling
- ISO 11452-4 Bulk Current Injection (BCI)
- ISO 11452-2 Radiated RF Immunity (ALSE)
- ISO 10605 Electrostatic Discharge (ESD)
- European Directive 2004/104/EC (VCA Technical Service)

Quick Intertek Facts

- As experts in the industries of our customers, we provide a complete quality and safety solution with the services that they need.
- Intertek Group plc is listed on the London Stock Exchange – FTSE 100
- We operate in more than 100 countries with over 30,000 employees



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Emissions Tests:

- Radiated Emissions
- CISPR 25, Nissan, Ford, ISO, SAE, Fiat, Audi, GM, Chrysler, Honda and many others
- Use R+S Receiver ESIB and ESU 40 with low-loss cables
- Measurements in our 3m, 5m, 10m Anechoic Chamber from 10 kHz to 40 GHz
- Reverb Chamber, 100 MHz to 18 GHz
- Conductive / Non-conductive table top
- 8' diameter turntable capable of handling 5000 lbs max
- Line Conducted Emissions, including horizontal and vertical ground planes/5m Chamber

Environmental Testing:

- Temp / Humidity Chambers - 27 cubic feet; fully programmable 3°C/min ramp rates
- Thermal Aging
- Thermal Cycling
- Thermal Shock- 16 cu. Ft. each chamber, 3 chambers (2-hot, 1-cold), chamber to chamber transfer time <5sec
 - Temperature Range Hot Chamber: 71°C to 210°C (160°F to 375°F)
 - Cold Chamber: -75°C to 190°C (-103°F to 375°F)
 - Refrigeration: 25 to 30 horsepower

Immunity Testing

- Electrostatic Discharge (ESD)
- Bulk Current Injection (BCI)
- Radiated Electromagnetic Fields (RF)

Frequency Ranges	Field Strength V/m	Antenna
10 kHz to 30 MHz	>200	E Field
30 MHz to 2 GHz	>200	Bi Log @ 1m distance
200 MHz to 18 GHz	>200	Horn @ 1m distance

5m EMC Chamber Specifications

- Certified from 10 kHz - 40GHz
- Radiated Immunity from 80MHz - 18GHz @ 200 V/m CW
- Calibrated Uniform field all 16 points from 26MHz - 18GHz
- Radiated Emissions capable of 3m and 5m measurements
- Interior working dimensions of 30.1 feet x 18.1 feet x 18 feet
- Shielding performance greater than 100dB from 1kHz - 40GHz
- 2m diameter turntable rated for 5,000 lbs
- Isolated shielded support room for clients support equipment
- Separate shielded control room and isolated shielded amplifier room
- 8 foot by 8 foot door opening
- Meets and exceeds requirements for 16 different standards

- CISPR 25 ground studs 90cm off floor
- Air pressure @ 300PSI
- Water/ Drain available @ street pressure
- 200V/m fiber optic CCTV (Have access to viewing the product with a fiber optic camera system that shows no effect due to the high field strength produced)
- Fiber optically controlled mast and turntable
- Automated Radiated Immunity and Radiated Emissions testing capability

Available power (independently filtered)

- 100 amps @ 120VAC 60 Hz single phase
- 100 amps @ 208VAC 60 Hz three phase
- 30 amps @ VARIABLE DC power
- 30 amps @ VARIABLE AC power
- 30 amps @ 480VAC 60 Hz three phase
- 30 amps @ 230VAC 60 Hz single phase

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