



ELECTROMAGNETIC COMPATIBILITY/ INTERFERENCE

NATC is a leader in providing advanced large scale Electromagnetic Interference and Electromagnetic Compatibility testing environments. NATC supports a wide variety of vehicle, equipment and component system EMI/EMC/ESD tests, engineering design and problem solving. The testing and analysis abilities of NATC cover the complete spectrum of product development through final production for vehicle, equipment, and component evaluations and certifications.



Commercial/Military Microwave EMI Testing

NATC's capabilities include the use of a Hewlett Packard 8572A EMI Measurement System. NATC can perform military and commercial EMI measurements for 20 Hz to 22 GHz quickly and easily. NATC's receiver is optimized for military EMI measurements, performing both peak and average detection measurements using impulse bandwidths. NATC has built-in microwave amplifiers (1 to 26.5 GHz) which can be switched in as needed for optimum sensitivity. In addition, NATC has a dedicated low-frequency input port (20 Hz to 50 MHz) with built-in limiter and rugged attenuator, ideal for conducted emissions measurement.



EMC Pre-Production Compliance Evaluation

NATC's pre-production EMC compliance evaluation testing will save time and money in product development by providing initial evaluations of a product's EMC compliance and by providing corrective actions for the product to meet the compliance standards. It is often difficult for a new or existing product to meet the increasing number of EMC compliance standards in the first compliance test. NATC has the experience to support pre-compliance EMC design evaluations and to assist in establishing grounding and shielding configurations that will enable the manufacturer to meet these compliance standards. NATC can provide testing and certification to meet all international EMC compliance standards, allowing the tested and certified product to be marketed internationally.



Operational EMC Degradation

Operation of the vehicle can degrade its ability to meet EMC compliance standards. EMC seals and configurations, to meet EMC requirements, must have the flexibility to function in the full range of operational environments. NATC understands the environmental conditions and vehicle operations that can degrade the performance of the system and its ability to meet the EMC requirements. Accelerated life cycle tests, including environmental cycles and shock and vibration testing, can be performed to simulate real world operations in a short period of time. The effect of these operations in degrading the EMC performance of the system can then be evaluated. NATC provides salt fog, low and high temperature and other corrosive environments to evaluate the rate of degradation of EMC seals.

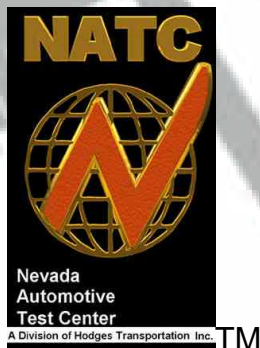
Compliance Standards

NATC personnel have over thirty years of experience in complex system EMI/EMC testing, design and engineering. NATC emissions and susceptibility (immunity) testing meet the following standards for radiated emissions, conducted emissions, radiated susceptibility, and conducted susceptibility: MIL-STD-461A, B, C and D, FCC, VDE, VFG, DOC, VCCI, MDS 201.0004 (U.S. Medical), SAE, EC-92 (European Economic Community) directive 89/336/EEC (old CISPR and IEC). In addition, NATC can perform tests to the following standards: MIL-STD-285, attenuation measurement for enclosures, MIL-STD-220A, insertion loss measurements, MIL-STD-464, electromagnetic environmental effects requirements for systems, MIL-STD-1275A, DC electrical systems in military vehicles, and MIL-STD-1377, shielding effectiveness.



One-Stop Testing

EMC testing at NATC can easily be coordinated with other required testing such as environmental, shock and vibration, and transportability. Taking advantage of the full range of capabilities and resources available at NATC can produce substantial time savings and major reductions in the overall cost of testing, transportation and logistics.



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