



ELECTRICAL RESEARCH AND DEVELOPMENT ASSOCIATION



**EMI/EMC TEST FACILITY
(10M-SEMI ANECHOIC CHAMBER)**

ERDA'S EMI/EMC LABORATORY: A CAPABILITY PROFILE

ERDA offers world class EMI-EMC Test facility for product tests and evaluation for Electromagnetic Compatibility as per various National/ International Standards like IS, IEC, CISPR and MIL. EMI-EMC Test services offered by the laboratory in house and on-site testing are NABL accredited, in accordance with ISO/IEC 17025.

Equipped with state of the art measuring and test equipment and 10m Semi-anechoic chamber, EMI-EMC Lab offers product compliance testing services for customers at competitive pricing. Highly transparent test procedures are followed and the reports issued enjoy global recognition.

IN HOUSE TESTING - MIL STANDARD

Testing as per Department of Defence (DoD) Test Codes: (As per MIL-STD-461 E/F Standard)

- CE 101 Conducted Emission, power leads: 30 Hz to 10 kHz
- CE 102 Conducted Emission, power leads: 10 kHz to 10 Mhz
- RE 101 Radiated emission, magnetic field, 30 Hz to 100 kHz
- RE 102 Radiated Emission-electric field: 10 kHz to 18 Ghz
- CS 101 Conducted Susceptibility, power leads: 30 Hz to 150 kHz
- CS 114 Conducted Susceptibility: bulk cable injection: 10 kHz to 200 Mhz
- CS 115 Conducted Susceptibility bulk cable injection impulse excitation
- CS 116 Conducted Susceptibility: Damped sinusoid transients, cable & power leads: 10 kHz to 100 Mhz
- RS 101 Radiated Susceptibility, magnetic field, 30 Hz to 100 kHz
- RS 103: Radiated Susceptibility: electric field- 10 kHz to 18 Ghz



IN HOUSE TESTING - COMMERCIAL STANDARD

- Radio Interference/ Disturbance Measurement: CISPR 11, CISPR 14, CISPR 15, CISPR 32, ISO 7637 up to 6GHz
- Electrostatic Discharge Immunity test: IEC 61000-4-2, ISO 10605
- Radiated, Radio Frequency, Electro-Magnetic Field Immunity test up to 6GHz: IEC 61000-4-3
- Electrical Fast Transient/ Burst Immunity test: IEC 61000-4-4
- Surge/ Impulse Immunity test: IEC 61000-4-5
- Immunity to Conducted Disturbances, Induced by Radio Frequency Fields: IEC 61000-4-6
- Power Frequency Pulse and Damp Oscillatory Magnetic Field Immunity Test: IEC 61000-4-8, 9 & 10
- AC & DC Voltage Dips and Interruption: IEC 61000-4-11 & 29
- Damp Oscillatory & Ring Wave Test Facility: IEC 61000-4-12 & 18
- Electromagnetic Compatibility - Type Test on Relay: IEC 60255-26
- Harmonics Measurement: IEC 61000-3-2, IEC 61000-3-12
- Flicker Measurement: IEC 61000-3-3, IEC 61000-3-11

ON SITE TESTING

- Test of immunity to Electrostatic Discharge (IEC 61000-4-2)
- Fast Transient Burst Test (IEC 61000-4-4)
- Radio Interference Measurement (Conducted Emission (CE) Radiated Emission (RE) Measurement) (CISPR 11, EN50121-3-1)
- Surge Immunity Test (IEC 61000-4-5)
- Immunity to conducted disturbances induced by Frequency Field (IEC 61000-4-6)
- Damp Oscillatory & Ring Wave Test Facility (IEC 61000-4-12 & 18)
- Power Frequency, Pulse and Damp Oscillatory Magnetic Field Immunity Test (IEC 61000-4-8, 9 & 10)
- Harmonics Measurements & Flicker Measurements (IEC 61000-3-2 & IEC 61000-3-3)
- Touch Current (IEC 60950, IEC 60990)

LIST OF EQUIPMENT

- EMI Test Receivers - 9 kHz to 2.75 GHz & 20Hz to 26.5 GHz
- Artificial Mains Network - 100 A, 9kHz to 30MHz
- Signal Generators - 9kHz to 1.1 GHz, 1 GHz to 22 GHz
- Power Amplifier : 10kHz to 250MHz, 500W, 0.2GHz to 1GHz, 250W, 1GHz to 6GHz, 75W/45W, 6GHz to 18GHz, 4W
- Antenna - 10kHz to 18GHz
- Absorbing Clamp - 30MHz to 1000MHz
- Isotropic E Field Probe - 10kHz to 40GHz, 800V/m

Laboratory Accreditation / Recognitions

- Integrated Headquarters, Ministry of Defence (Navy) for EMI/EMC testing of Naval Equipment
- National Accreditation Board for Testing and Calibration Laboratories (NABL)
- Bureau of Indian Standards (BIS)
- Telecommunication Engineering Centre (TEC)

Partial List of products Tested for EMI/EMC Compliance

- Energy Meters, Relays, Timers, Assemblies for Rocket Launcher, VDSL - Ethernet Modem, Control Panel for Window Wiper with RCU (Remote Control Unit), 150kVA UPS System, ECS (Electric Control System) for Air Inflation System, Alarm Annunciator, Gunner Console



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web: www.erda.org | Email: bd@erda.org

Head Office:

ERDA Road, GIDC, Makarpura,
Vadodara - 390 010, Gujarat
Tel: +91-265-2642942, 2642377, 3043128-3043131
Fax : +91-0265-2638382 | Email: erda@erda.org
Toll Free No.: 1800 233 2668

ERDA (North) Laboratory:

CBIP Centre of Excellence,
Plot No: 21, Sector 32, Gurgaon - 122 001, Haryana.
M.: +91-9999320346 | Tel: +91 (0124) 2580021
Email.: erdadel@erda.org

Registered Office & ERDA (West) Laboratory:

R-336, TTC Industrial Area,
Near Rabale Railway Station,
Navi Mumbai - 400 701, Maharashtra.
Tel: +91-22-27606212-14
M: +91-9820719041 | Email: erdarab@erda.org

ERDA (South) Laboratory:

Plot No: 57A, Auto Nagar, AP Industrial Infrastructure Corp.,
Rajahmundry - 533 106, Andhra Pradesh.
M.: +91-9966947999 | Email: erdarjm@erda.org