

Electromagnetic Interference (EMI) rules and regulations are a requirement in order to meet compliance testing for the United States Department of Defense. These regulations apply to any electronic equipment designed to intentionally generate and emit RF energy by radiation or induction.

San Diego EMI Test Lab and Avalon Test Equipment operate a semi-anechoic chamber for EMC/EMI testing, measurement and qualification. The test chamber measures 16'x16'x12' and is constructed with steel-clad panels that deliver 100dB shielding (1 MHz to 18 GHz) to control ambient RF emissions. Whether you're performing pre-compliance or compliance testing, our engineers provide accurate and repeatable tests for MIL-STD-461 and RTCA DO-160.

MIL-STD 461 D, E, F & G Test Capabilities

Method	Description
CE101	Power Leads, 30 Hz to 10 kHz
CE102	Power Leads, 10 kHz to 10 MHz
CE106	Antenna Terminal, 10 kHz to 40 GHz
CS101	Power Leads, 30 Hz to 50 kHz
CS106	Conducted Transient Susceptibility
CS109	Structure Current, 60 Hz to 100 kHz
CS114	Bulk Cable Injection, 10 kHz to 400 MHz Curve 1 through 5
CS115	Bulk Cable Injection, Impulse Excitation
CS116	Damped Sinusoidal Transients, Cables Power Leads, 10 kHz to 100 MHz
RE101	Magnetic Field, 30 Hz to 100 kHz
RE102	Electric Field, 10 kHz to 40 GHz
RS101	Magnetic Field, 30 Hz to 100 kHz
RS103	Electric Field, 10 kHz to 40 GHz – 200V/m

RTCA DO-160 Test Capabilities

Method	Description																
Section 15	Magnetic Effect [All]																
Section 16	[Partial] Power Input [All Subsections, All Categories]																
Section 17	[Sub-contracted] Voltage Spike [All Categories]																
Section 18	Audio Freq Conducted Susceptibility - Power Inputs [AC & DC Line, All Categories]																
Section 19	[Sub-contracted] Induced Signal Susceptibility [From: E-Field, H-Field, and Spikes, All Categories]																
Section 20	Radio Frequency Susceptibility - Radiated and Conducted																
Section 21	Emission of Radio Frequency Energy [From both Conduced and Radiated Sources, All Categories]																
Section 22	Lightning Induced Transient Susceptibility <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Waveform</th> <th style="text-align: left;">Level</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>level 1 - 5</td> </tr> <tr> <td>2</td> <td>level 1 - 5</td> </tr> <tr> <td>3</td> <td>level 1 - 5</td> </tr> <tr> <td>4</td> <td>level 1 - 5</td> </tr> <tr> <td>5B</td> <td>level 1 - 5</td> </tr> <tr> <td>5A</td> <td>level 1 - 5</td> </tr> <tr> <td>3H/6H</td> <td>level 1 - 5</td> </tr> </tbody> </table>	Waveform	Level	1	level 1 - 5	2	level 1 - 5	3	level 1 - 5	4	level 1 - 5	5B	level 1 - 5	5A	level 1 - 5	3H/6H	level 1 - 5
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Section 25	Electrostatic Discharge [All categories]																

Immunity Test System featuring the Thermo Scientific LTS

All wave forms to level 5 intensity.



Things to keep in mind when going to any Test Lab

1. How will you communicate with your product or monitor the health of your product during susceptibility testing?
2. Do you already have the support equipment you need to communicate/monitor your product before you get to the test lab?
3. How will you design your test cables to interface with your product, the EMI chamber and your support equipment plus still meet the MIL-STD-461 or RTCA DO-160 requirements?
4. What tests do you need to perform?
5. Will you require 50 μ H LISN's or 5 μ H LISN's
6. Do you have a test plan written?