



Overview

Commonwealth Technology, Inc. (CTI), a MacAulay-Brown, Inc. company, performs in-house development and final verification and validation testing of all its products. Our test engineers implement DoD and customer-specific tests utilizing an array of test equipment. This testing capability reduces product development time, improves product performance in anticipated operating environments and provides the ability to test sensitive items in a quick-reaction setting. We can perform many MIL-STD-810G and custom "suitability" tests as an integral part of a development project or as a standalone service for GFE or OEM equipment. Our engineers develop test plans to utilize both internal capabilities and manage extended testing through third-party labs, including those with security accreditation. Subject matter experts follow industry best practices in developing test procedures, conducting tests and reporting test results to our clients.

In-House Core Environmental Testing Capabilities

Temperature	T&H Chamber: -73°C to 150°C, 48"W x 48"H x 120"D Temp Chamber: -65°C to 177°C, 20"W x 18"H x 16"D Stabilization Chamber: Ambient + 10°C to 99°C
Humidity	T&H Chamber: 20% to 95% RH
Drop	Steel Drop Surface: 48" x 48" x 2" with 2.0 meter Drop Height Concrete Drop Surface: 72" x 72" with 2.5 meter Drop Height
Shock & Vibration	Sinusoidal Force: 1035 lbf / Random Force: 735 lbf Shock Force: 735 lbf / Travel: 1" peak-to-peak Max Frequency: 3000 Hz / Max Acceleration: 90g Test Profiles: Sinusoidal, Random, Sine on Random, Classic Shock
Submersion	Submersion depth to 72" in water tank, simulated deep submersion under pressure
UV Exposure	Accelerated UV exposure evaluation
Salt Fog	Salt Fog Chamber ~1M ³ internal volume
ESD Simulation	8 kV Contact or 15 kV Air Discharge compass
MIL-STD-810G or Customer-Specific	Tests conducted in-house or by an A2LA accredited outside lab.
Life Cycle Tests	Automated testing in accelerated test environments
Automated Testing	Automated test solutions using NI Labview software



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