

VCS UI Overview

Random excitation is often used to simulate real-world vibration. The purpose of the random vibration control system is to generate a true random drive signal such that, when the signal is applied via an amplifier/shaker to the device under test, the resulting shaker output spectrum will match the user-specified test profile. VCS also has the capability to perform Sine on Random (SoR) and Random on Random (RoR) testing.

Unlike Random testing which generates many frequencies at once over the band of interest, Swept Sine testing generates energy at one frequency and sweeps this frequency through a preset range.

A Shock test outputs a series of pulses to excite the structure under test. The response is measured at one or more locations on the structure and a spectral analysis is used to determine its response and resonance characteristics. This pulse response approximates the impulse response, the theoretical response to an infinitely tall and narrow spike function with an area of unity.

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