

VIBRATION LABORATORY

Experts in Shock and Vibration Tests (Sine and Random)

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Vibration testing is performed to validate the reliability, performance and structural integrity of a device during its transportation and useful life, avoiding life failure in space.

Vibration testing mimics the conditions such as those encountered during a rocket launch to verify mechanical robustness.

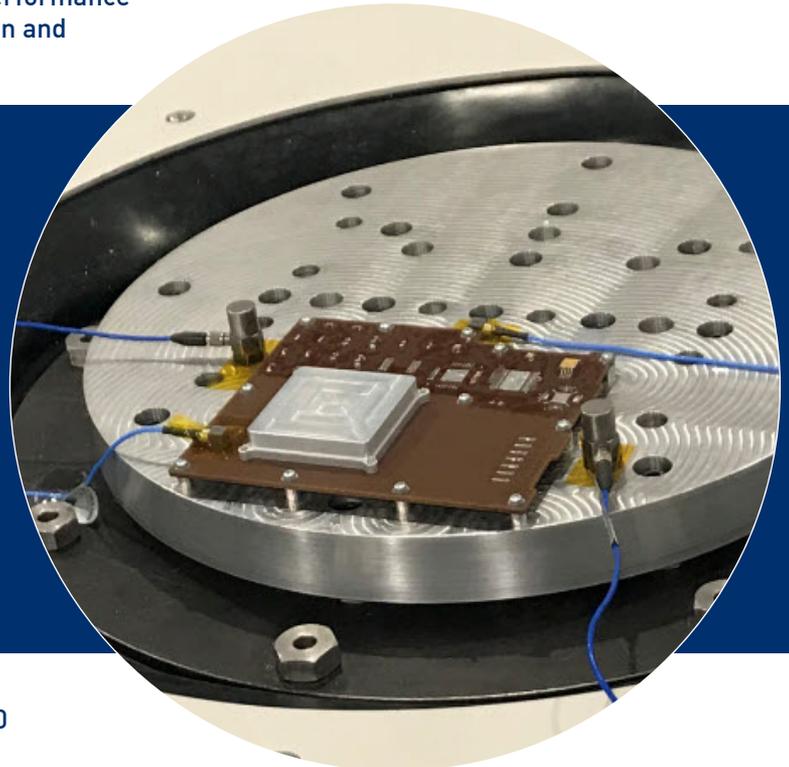
OUR VIBRATION TESTS:

- Components
- PCBs
- Equipments



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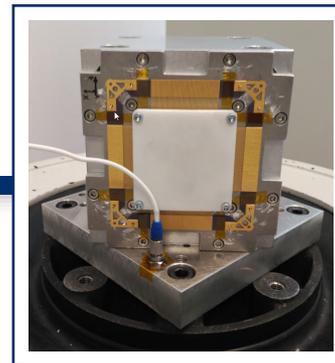
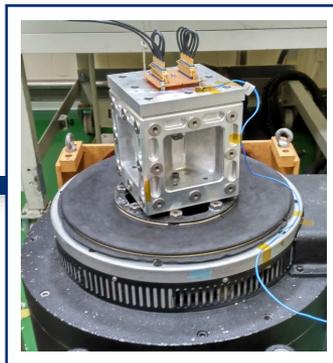
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ENGINEERING EXPERTISE

- In house design and manufacturing of test fixtures to adapt the components to the shaker.
- PCBs testing for assembly verification.
- High frequency vibration for passive components.
- In-situ electrical monitoring during test execution for functional validation.
- Acceleration monitoring with triaxial accelerometers.

MAIN TEST SERVICES

- Design and analysis of test fixtures
- Range of shock and vibration tests with SRS table and shaker.
- PIND test – Particle Impact Noise Detection



Performance Parameters	SHAKER LDS V875	SHAKER LDS V804	SHAKER LDS V780
Armature Diameter	440 mm (17.3 in)	235 mm (9.25 in)	180 mm (7.09 in)
Sine Force (peak)	36.6 kN (8000 lbf)	13.32 kN (3000 lbf)	5.12 kN (1150 lbf)
Random Force (rms)	36.6 kN (8000 lbf)	13.32 kN (3000 lbf)	4.23 kN (950 lbf)
Armature Resonance (fn), nominal	2100 Hz	2400 Hz	2950 Hz
Usable Frequency Range	d.c. to 3000 Hz	d.c. to 3000 Hz	d.c. to 4000 Hz
Effective Mass of Moving Element (raised inserts)	32.9 kg (72.5 lb)	11.6 kg (25.52 lb)	4.7 Kg (10.36 lb)
Velocity (sine peak) full field	1.8 m/s (70.9 in/s)	1.78 m/s (70 in/s)	1.9 m/s (74.8 in/s)
Acceleration (sine peak)	1078.7 m/s ² (110 g)	1147.38 m/s ² (117g)	1088 m/s ² (111g)
Displacement (pk - pk) continuous	76.2 mm (3.0 in)	25.4 mm (1 in)	25.4 mm (1 in)
LDS Amplifier	SPA40K	DPA-K	HPAK