



| TEST EQUIPMENT

HSKT10 Mechanical Shock Tester

High-acceleration shock test system for IEC 60068-2-27, IEC 62133-2 and UN 38.3 T.4 applications



Model	HSKT10
Test Application	Controlled high-acceleration mechanical shock testing
Peak Acceleration	20-1500 G
Pulse Duration	0.5-11 ms
Maximum Specified Load	10 kg
Shock Table	200 x 200 mm
Waveform	Half-sine; other pulse shapes depending on configuration
The HSKT10 is a shock generation and measurement system. Final suitability depends on the required shock profile, DUT/fixture mass, waveform and mounting condition.	

Technical Specifications

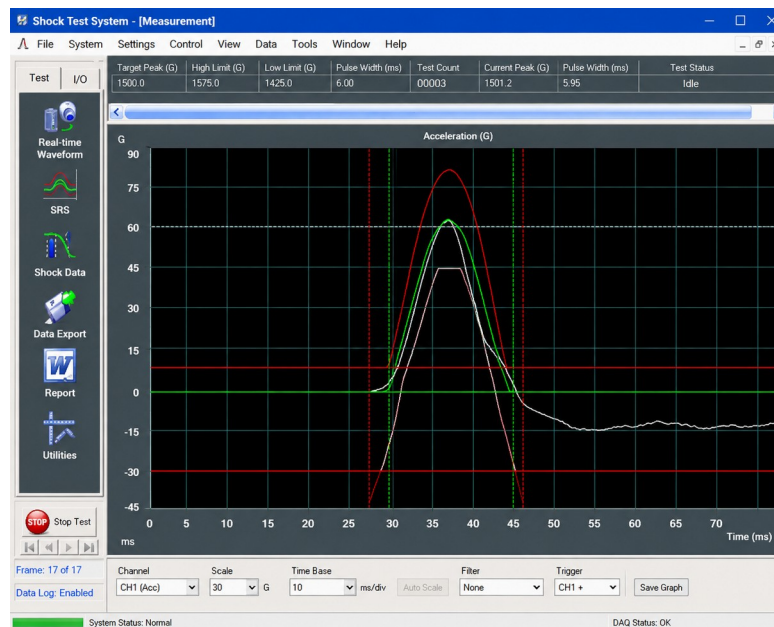
Mechanical Shock System

Parameter	Specification
Operating Platform	200 x 200 mm
Maximum Specified Load	10 kg
Peak Acceleration	20-1500 G
Pulse Duration	0.5-11 ms
Shock Principle	Free-drop mechanical shock
Lifting System	Hydraulic lifting
Equipment Dimensions	560 x 670 x 2390 mm
Equipment Weight	Approx. 650 kg
Power Supply	220 VAC +/-10%, 50 Hz
Required Electrical Capacity	2 kVA

Engineering note: maximum load and maximum acceleration should not be treated as a guaranteed simultaneous operating point. DUT mass, fixture mass, pulse duration and waveform must be considered together.

Shock Measurement System

Parameter	Specification
Input Channels	2 channels
Sampling Frequency	192 kHz
Communication Interface	USB 2.0
Measurement Object	Acceleration-time shock waveform
Main Functions	Shock waveform acquisition, storage and analysis
Control Computer	Included in the original system configuration



Shock measurement software interface - acceleration waveform capture and pulse analysis

Measurement Sensor and Test Principle

Acceleration Sensor

Parameter	Specification
Brand / Model	LAB 23108
Output Type	Charge type
Sensitivity	3.93 pC/g
Frequency Range	0.5-12 kHz
Acceleration Range	+/-2500 G
Operating Temperature	-40 degC to +160 degC

How the Mechanical Shock Test Works

1. Identify the applicable standard or customer-defined shock profile.
2. Mount the DUT securely to the shock table using a suitable fixture.
3. Configure the required peak acceleration, pulse duration and waveform.
4. Generate the controlled transient mechanical shock pulse.
5. Measure the actual acceleration-time response with the accelerometer and acquisition system.
6. Compare the measured pulse with the required test profile and evaluate the DUT according to the applicable acceptance criteria.

Shock Pulse Configuration

- Half-sine: primary pulse shape supported by the HSKT-series design; confirmed HSKT10 pulse duration range is 0.5-11 ms.
- Final-peak sawtooth: available when the corresponding waveform-generation arrangement is selected.
- Trapezoidal: available with the appropriate waveform-generation configuration.

System Configuration

Equipment	Model / Description	Qty.
Mechanical Shock Tester	HSKT10	1 set
Controller	SKC-1	1 set
Shock Measurement Device	ST-2	1 set
Acceleration Sensor	LAB	1 pc
Control Computer	Test control and data processing	1 set
Waveform Generator	HB01	1 set
Safety Device	Audible and visual alarm	1 set
Accessories	Tools, clamps, instructions and related accessories	1 set

Standards, Applications and Installation

Applicable Test Methods / Applications

Standard / Application	Scope
IEC 60068-2-27 - Test Ea: Shock	General mechanical shock testing for specimens subjected to specified repetitive or non-repetitive shock profiles.
IEC 62133-2 - Clause 7.3.8.2 Shock	Mechanical shock testing for portable sealed secondary lithium cells and batteries, subject to the required test profile and specimen configuration.
UN 38.3 - Test T.4 Shock	Lithium cell and battery transport shock testing. The HSKT10 addresses the applicable shock portion, not the complete UN 38.3 test sequence.
MIL-STD / GJB / customer-defined profiles	Project-specific application subject to exact standard revision, method, acceleration, pulse duration, waveform and mounted load.

Typical Test Objects

- Electronic components, modules and assemblies
- Lithium battery cells and small battery assemblies
- Automotive electronics, sensors and control modules
- Transportation and aerospace-related components
- Industrial products requiring controlled mechanical shock qualification

Installation Requirements

- Power: 220 V +/-10%, 50 Hz; 2 kVA
- Independent isolated power supply
- Compressed air: 0.5-0.8 MPa
- Ambient: room temperature to 35 degC
- Relative humidity: 0-85% RH
- Flat floor; low dust; no surrounding corrosive gas

Configuration Information to Provide

- Applicable standard, edition and test method
- Required shock profile: acceleration, duration and waveform
- DUT type, dimensions and mass
- DUT and fixture weight
- Number of shocks, axes and directions
- Mounting interface / fixture drawing
- Measurement, analysis, calibration and documentation needs



Typical laboratory installation of the HSKT10 mechanical shock test system

For formal compliance testing, the applicable standard edition, test profile, measurement configuration and required calibration/traceability documentation should be defined as part of the laboratory test program.

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