

Win475 Drop-Shock Calibration System Secondary Calibration of High-g Shock Transducers

Overview:

The Win475 Drop-Shock Calibration System from MB Dynamics provides highly accurate, repeatable calibrations of high-g shock accelerometers, including IEPE, voltage mode, capacitive and MEMS types. The system can also excite heavier non-shock accelerometers, up to and including to their mechanical shock limits.

Features:

- Repeatable generation of shock pulses between 100 g and 13,000 g
- Shock event pulse durations of 0.05 ms to 3 ms
- Typical repeatability: $\pm 2.5\%$ of average acceleration amplitudes for a series of five successive pulses
- Calibrates:
 - o Charge, differential charge, IEPE, voltage mode, PR, capacitive, and MEMS accelerometers
 - o Devices Under Test (DUT) with masses up to 225 grams and dimensions to 40 mm³
 - o Difficult-to-mount “tripod-style” accelerometers with amplitude limits up to 5000 g
 - o DUT masses from 1 to 100 grams for a full range of pulse events
- Amplitude linearity checks performed at 100, 200, 500, 1000, 2000, 5000, 10000, and 13000 g’s pk
- Shock REF: IEPE; 0.5 mV/g sensitivity; $\pm 13,000$ g’s F.S.; >90 kHz natural frequency; 5.4 gm weight
- Includes test instrument mounting fixtures (TIMFs) for DUTs with 10-32, 1/4-28 and 3-screw configurations
- Sensor excitation and data acquisition provided by MB Model 405-X Signal Conditioner
- Compact design; floor standing unit measures just 0.6 m x 0.5 m x 2.8 m
- Win475 software computes shock-pulse deviations from nominal sensitivity at 100 Hz or 160 Hz via sine excitation; DUT and REF signal processing from time domain to extract shock event duration and amplitude data; computation of sensitivity values similar to Win475 sine calibration methods
- Pulse rep rate or duty cycle: 1 pulse every 10 to 15 seconds



MB Win475 Drop-Shock Calibration System

MB Dynamics, Inc.

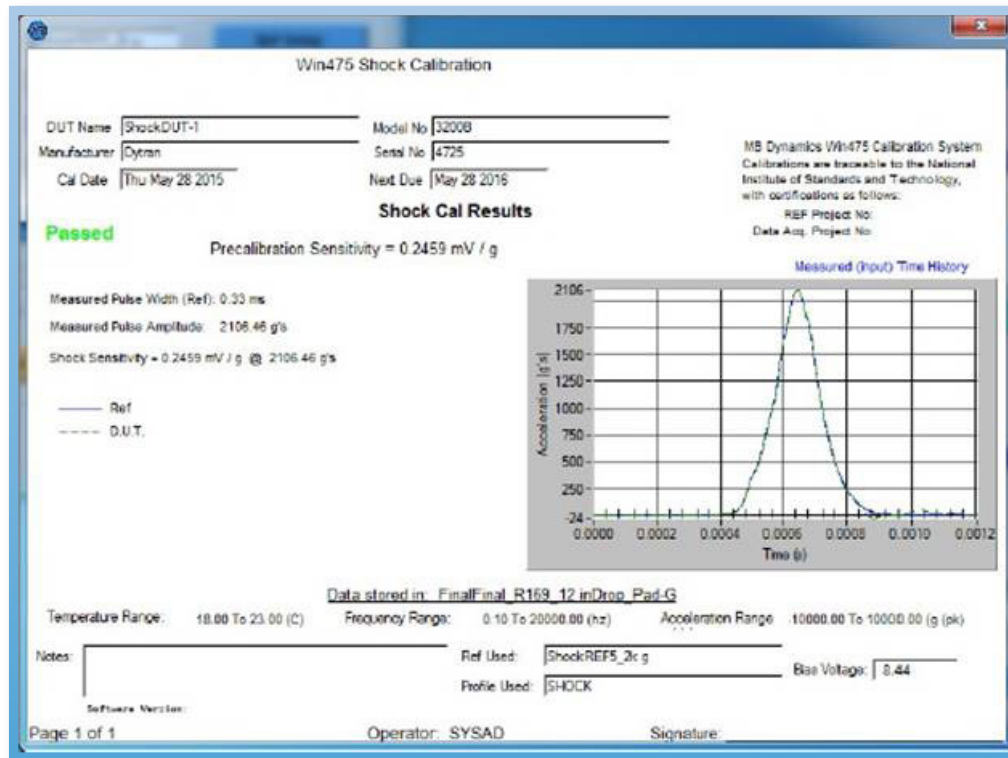
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MB-WIN475-DropShock-1118



MB Win475 Drop-Shock Calibration System Software

MB Dynamics Test Engineering Services:

- 80-year experts in automotive testing
- Test equipment specification assistance
- Test methodology and operating procedure development
- Applications troubleshooting assistance
- Dynamic testing; results interpretation; design and production verifications
- Road load data acquisition and processing
- Joint testing projects
- New test system installation and validation
- Full applications engineering support
- Customer technical support teams in more than a dozen countries
- Field service and on-site training
- Test laboratory support

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