



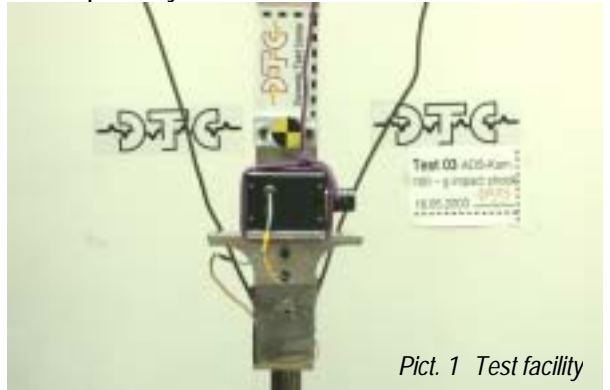
Dynamic Test Center
 Centrum für Dynamische Tests
 Centre de Tests Dynamiques

Certificate of 100 g / 15 ms impact shock tests

Impact shock tests with a digital high-speed high-g camera from AOS to improve the robust design. The VITcam has been stressed with a half-sine 100 g pulse during 15 ms, while the camera was recording with 1000 frames per second. The VITcam was stressed with the impact shock pulse separately:

- forward and backward
- sideways left and right
- downward

Date of Tests: 16.05.2003
 Test-Report: 213MRR39
 Camera manufacturer: AOS Technologies AG
 CH-5405 Baden-Dättwil
 VITcam CTC Serial No.: V02000065



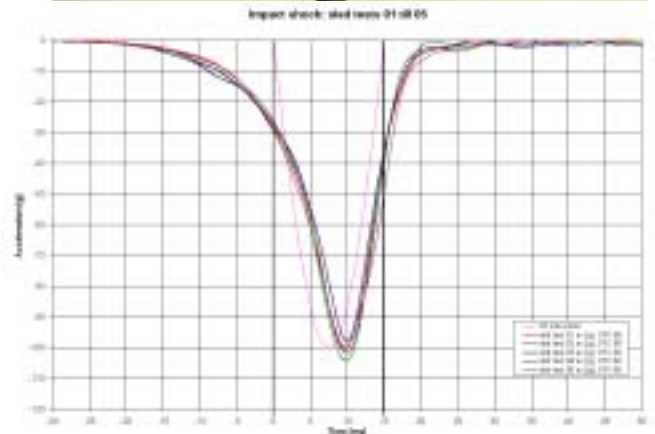
Pict. 1 Test facility

Impact shock pulse:

Acceleration: 100 g peak
 Duration: 15 ms
 Curve: ½ sine
 Velocity change: not less than 9.3 m/s
 (area below curve) $\rightarrow \int a_{(x)} dt$

Standard According to:

- ASAM (Arbeitskreis deutscher Automobilhersteller)
- recommended by SAE



Pict. 2 Impact shock pulses

Test results:

- AOS VITcam worked during the impact shock tests properly
- no recorded data were lost
- picture quality maintained during the acceleration stress

The tested AOS VITcam high speed camera fulfils the requirements according ASAM standard for 100 g impact shocks.

Accepted and certified by:

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Pict. 1 Comparison picture quality, e.g. during test 04 after 100 g