

Nuremberg, 11th September 2002

Bavaria country trade institution post office box 3022 90014 Nuremberg

KONTRON
Elektronik
System Integration (RD-R)
Mr R. J. Wagner
Oskar-von-Miller-Str. 1

85286 Eching

TEST REPORT no.: E 2.304

Task: Sinusoidal vibration test and shock tests according to company requirements

Order.no.: personally by Mr. Wagner on Aug. 1st 2002

Test Samples: 1 monitor KFM21_e serial no. 137 86 8003



1. Parameters for sinusoidal vibration test (n operation)
with resonance recording

Frequency range:	10 Hz 500 Hz
Rate of frequency change:	1 Okt./min.
Dislocation:	0,15 mm
Acceleration :	1g
Transition frequency:	58 Hz

For frequencies below the transition frequency the dislocation is kept constant, whereas for frequency above the transition frequency the acceleration kept constant.

Number of axes:	3 (x, y and z)
Test duration/axis:	10 Sweeps

2. Parameters for shock test (in operation)

Shock pulse :	half sinusiodal
Shock acceleration amplitude:	15 g (1 g = 9,81 m/s ²)
Duration of the nominal shock:	11 ms
Number of the directions:	6 ($\pm x$, $\pm y$, $\pm z$)
Number of the shocks:	3, for a total of 18 shocks

3. Remarks:

A representative of the company Kontron is overseeing all tests.

During all tests the EUT is in operation mode. Functional tests of the EUT are carried out before and during all tests.

A final full functional test will be carried out through the company Kontron.

4. Testing procedure

During all tests a total of four acceleration sensors in used.

Chan 2:	Control sensor
Chan 3:	sensor at the display (Axis X)
Chan 4:	sensor at the display (Axis Z)
Chan 5:	sensor at the display (Axis Y)



5. Final results

The EUT shows no visible damages, i.e. material breaks, crucks or deformations.

LGA - Produkt Devison Produkte
Competence centre EMA - UMS

Environmental simulation

i.A.

Dipl.-Ing. G. Windmoeller
Head, Competence center

Results apply only to the EUT specified.

This report may not be reproduced neither in whole nor in part.

Appendix

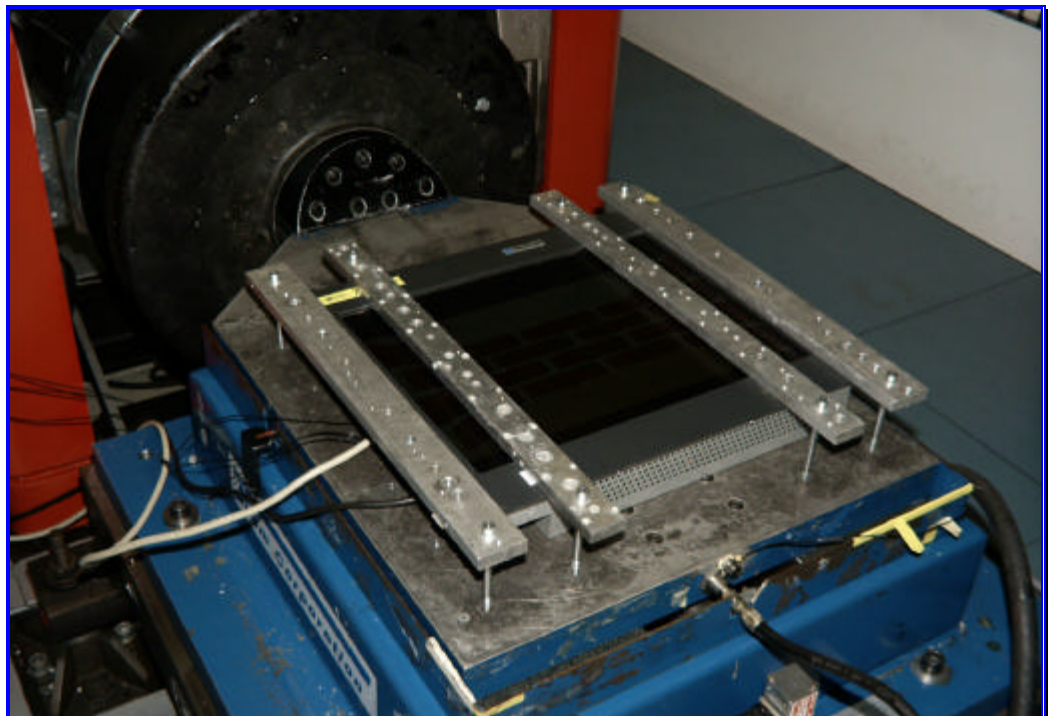
1. Experimental setup
2. Diagramm for vibration
3. Diagramm for shock

Appendix 1

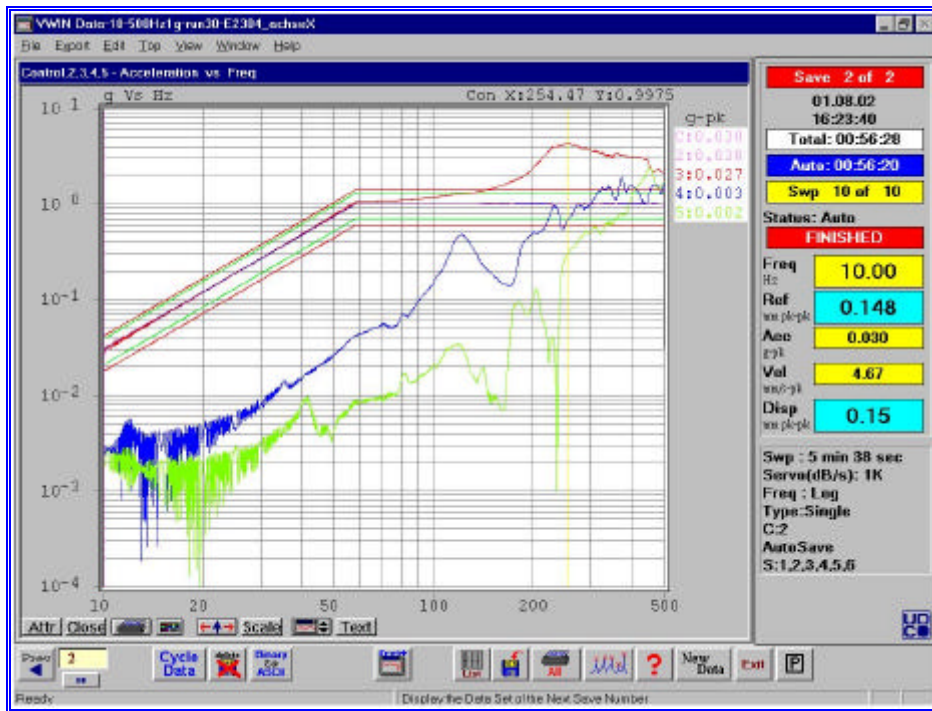
Experimental setup



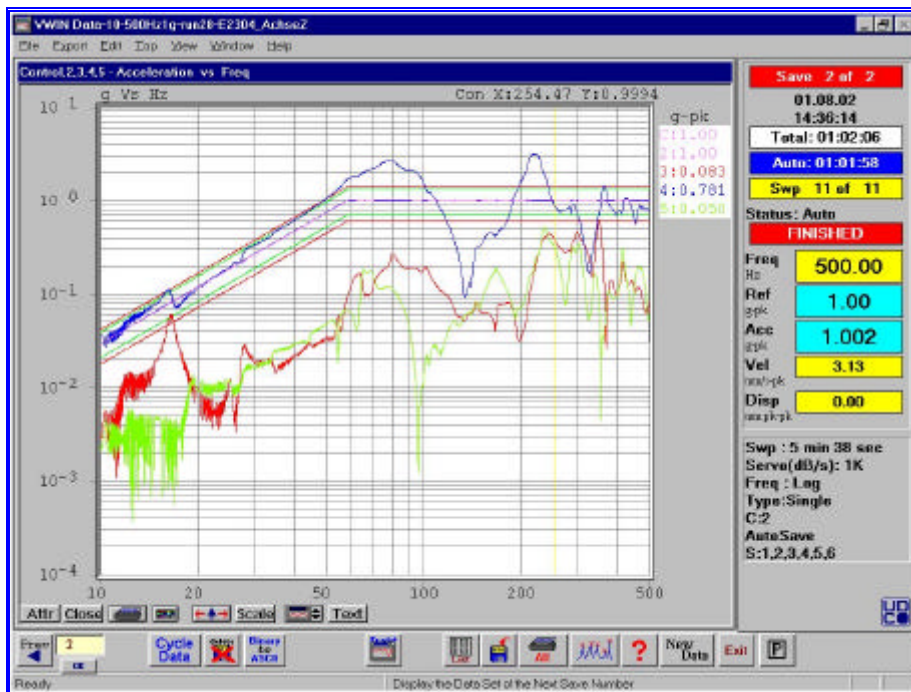
Definition of test axis



Appendix 2 Vibration test
X-Axis

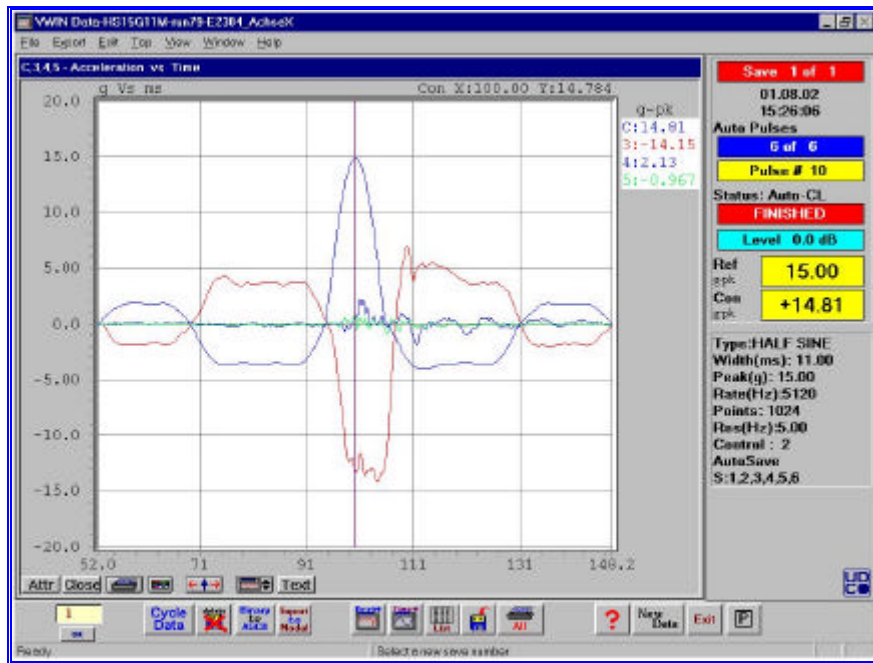


Z-axis

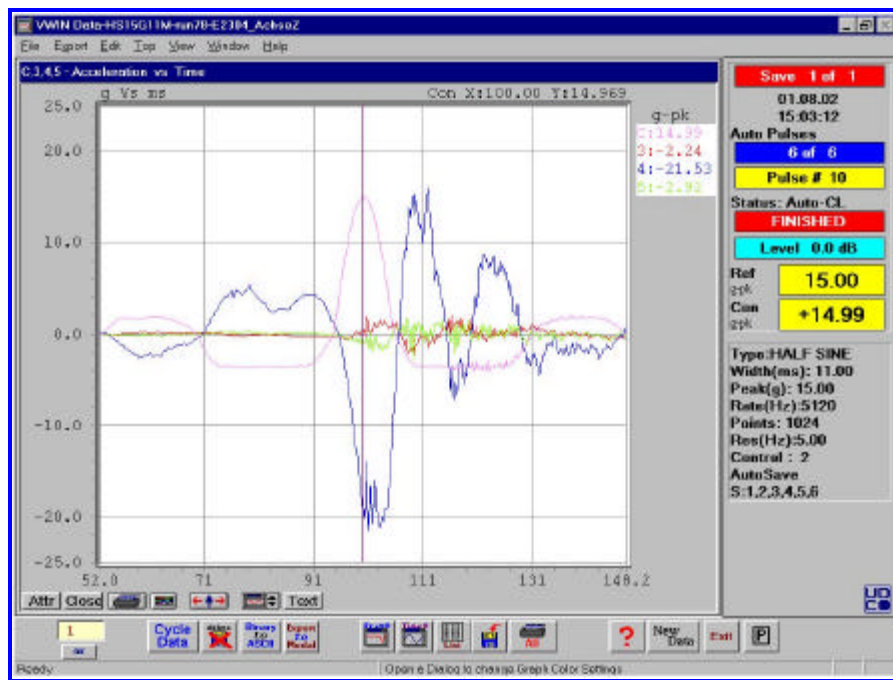


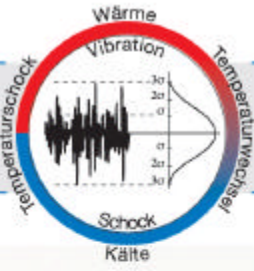
Appendix 3 shock test

X-Axis



Z-axis





Umweltsimulation

Feldmessung • Kalibrierung

