



Test Report for
Vibration Testing per MIL-STD 801F, Method 514.5 Proc. 1
&
Shock Testing per SP6000-SWMLU-9333-ERS

On product
CAP001589 – WIRING SCHEME

report no.

20040325-04-MILSP

Provided for evaluation by

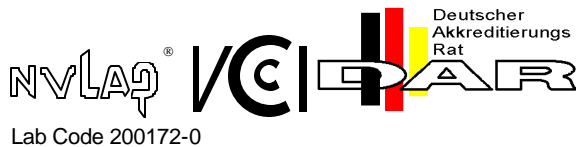
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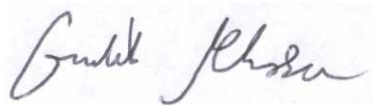
Part 1 General Information

Product:	CAP001589 – WIRING SCHEME	
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Test & Report Numbers: Test & Issue Date: Technical Author: Principal Engineer:	20040325-01-MILSP March, 30 th , 2004 Gurjit Khosa Michael Gbadebo	20040325-01-MILSP March 31 st , 2004
Total Number of Pages:	15	

The results and conclusions of this report apply to the specified samples tested under stated test setup and conditions. However, there is no warranty expressed or implied with this report and ITC is in no way responsible for the client's use of the data contained herein.

Report generated by:

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Gurjit Khosa
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Michael Gbadebo, P.E
Chief Engineer

Declaration/Disclaimer

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Part 2 Vibration Test

A. Purpose of Test and Product Specification

To verify functionality and structural integrity of EUT during and after vibration test events per MIL-STD 801F, Method 514.5 Proc. 1.

B. Test Setup

The equipment under test was secured to a table by means of its normal attachment points via suitable test fixture. All vibration tests were conducted with the equipment powered off.

C. Test Procedures

Step 1: Performed a visual inspection of the test item.

Step 2: Mounted the test item to the test fixture in a manner dynamically representative of the life cycle event simulated.

Step 3: Installed sufficient transducers on or near the test item/fixture/vibration exciter combination to measure vibration at the test item/fixture interface, to control the vibration exciter as required by the control strategy.

Step 4: Performed a visual inspection of the test item.

Step 5: Applied low level vibration to the test item/fixture interface.

Step 6: Verified that the vibration exciter, fixture, and instrumentation system functions as required.

Step 7: Applied the required vibration levels to the test item/fixture interface.

Step 8: Verified that vibration levels at test item/fixture interface are as specified immediately after full levels are first applied, and immediately before scheduled shut down.

Step 9: Monitored vibration levels continuously through the exposure.

Step 10: When the required duration had been achieved, stopped the vibration.

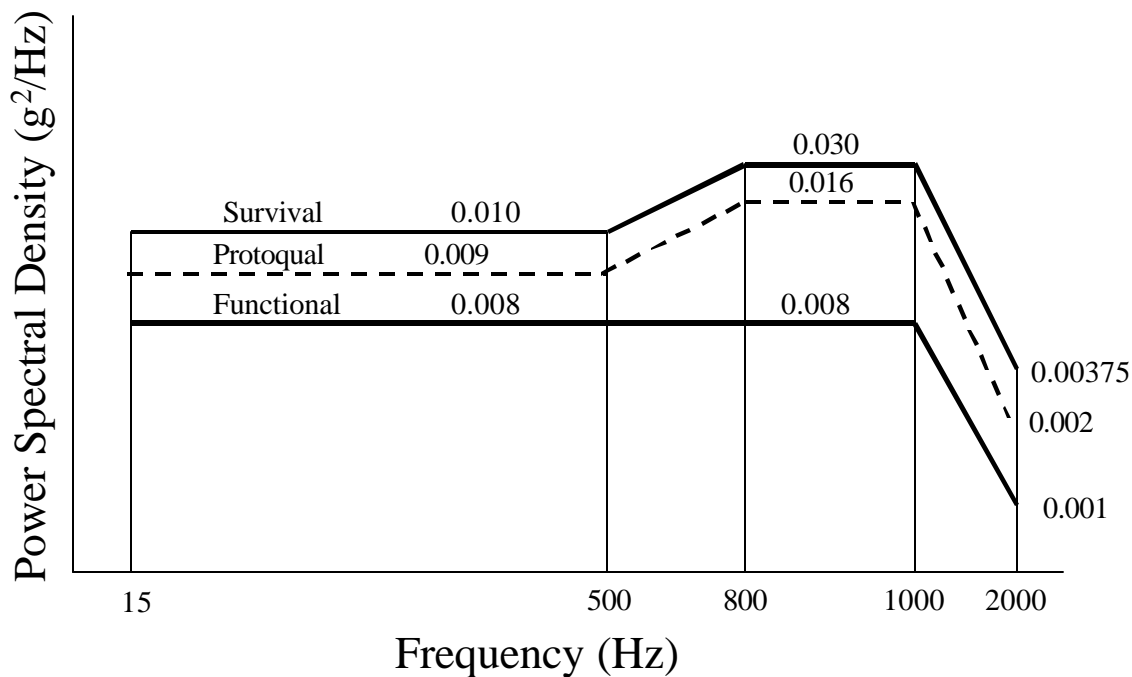
Step 11: Inspected the test item, fixture, vibration exciter, and instrumentation.

Step 12: Repeated steps 1 through 11 for each excitation axis.

Step 13: Removed the test item from the fixture and inspected the test item and mounting hardware.

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D. Protoqual Vibration Curve

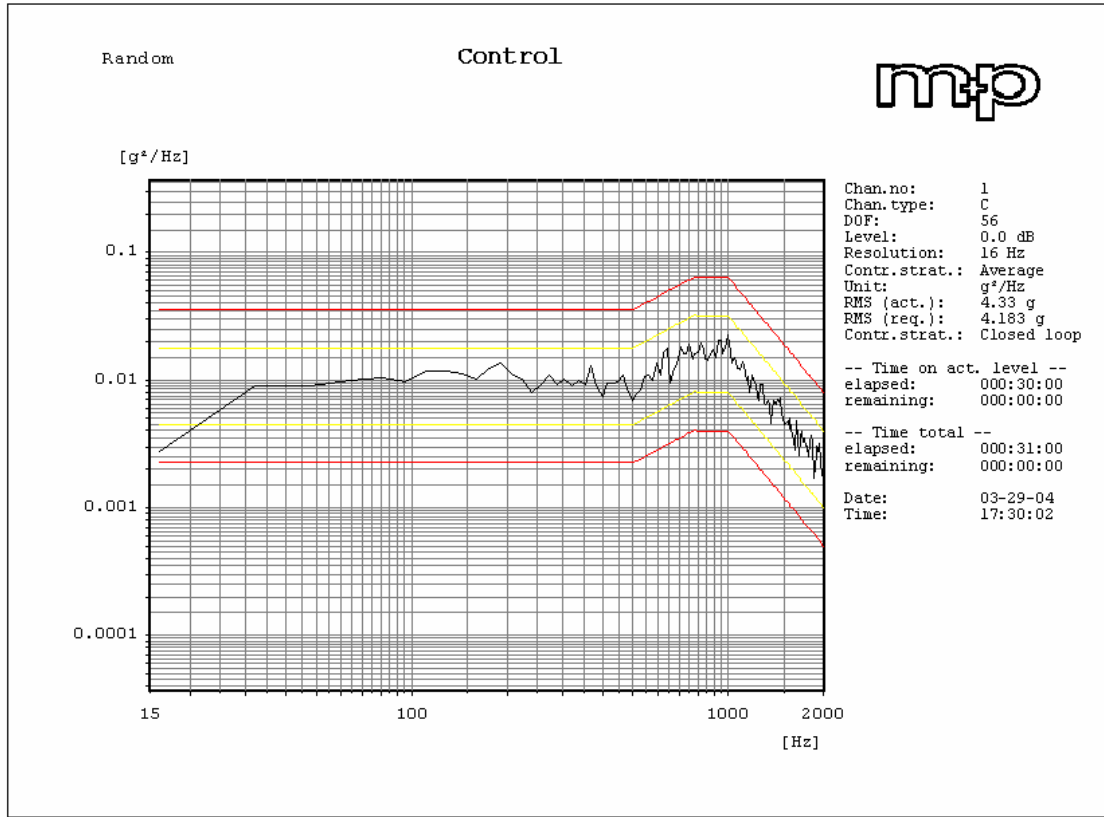


D. Equipment Used for Testing

Test Name: Vibration					Test Date(s): to
MET ID #	EQUIPMENT	MANUFACTURER	MODEL #	LAST CAL	CAL DUE
2U500	VIBRATION CONTROL SYSTEM	M&P INTERNATIONAL	VCX9000	19-NOV-03	19-NOV-04
2U546	ACCELEROMETER	DYTRAN	3100B	15-OCT-03	15-OCT-04
2U653	ACCELEROMETER	DYTRAN INSTRUMENTS, INC.	3157A	07-MAY-03	07-MAY-04
2U554	VIBRATION SYSTEM	LING DYNAMIC SYSTEMS	PIC2	SEE NOTE	SEE NOTE
2U570	SHAKER	LING DYNAMIC SYSTEMS INC	V984LS	SEE NOTE	SEE NOTE

Note: Functionally tested equipment is verified using calibrated instrumentation at the time of testing.

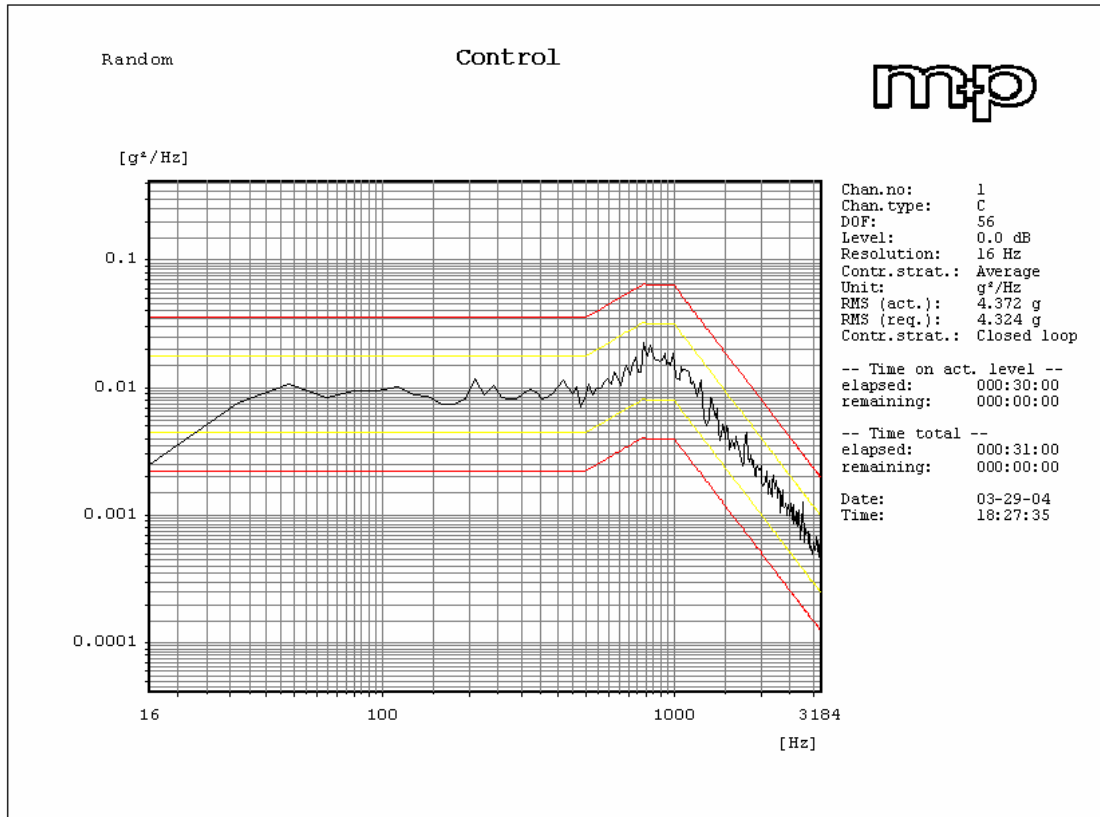
E. Test Data



C:\WcpNT\Daten\WCP9000 Setups\15317-L-monov vibs 001.rtm

Figure 1: Vibration Test (Long)

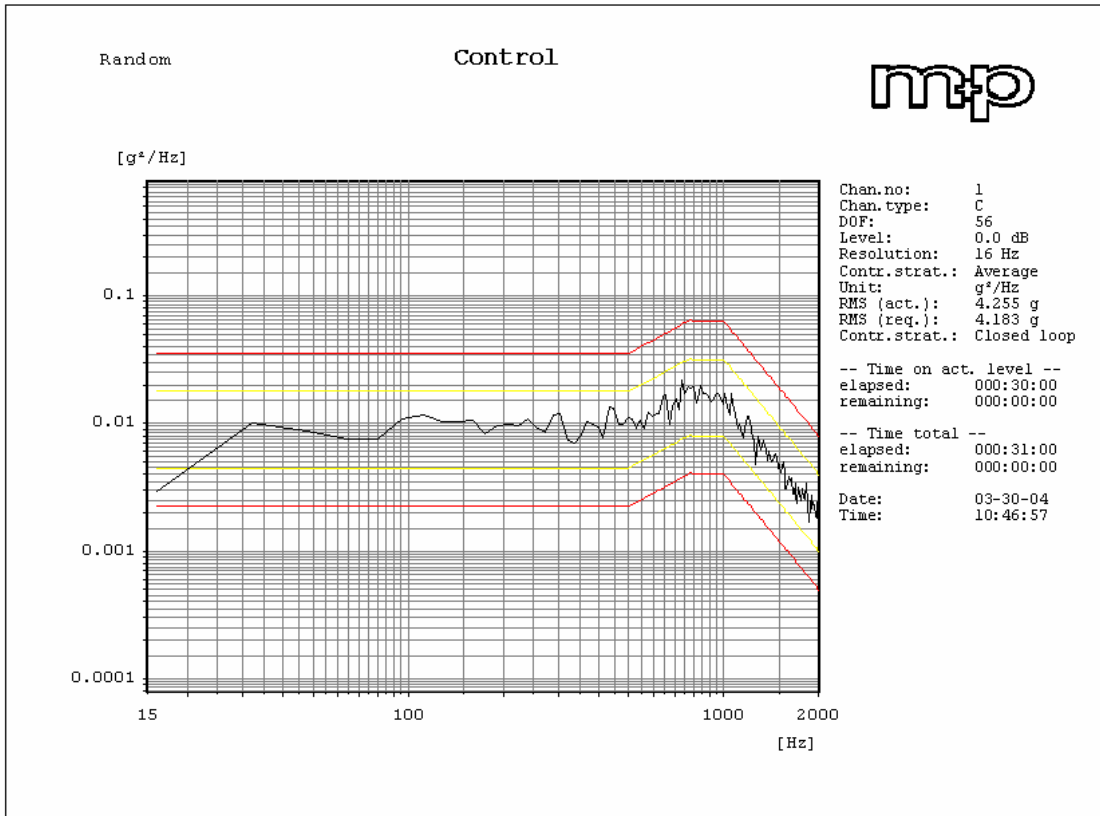
Test Data (cont.)



C:\VcpMT\Daten\WCP9000 Setups\15317-T-nom vib 003.rrn

Figure 2: Vibration Test (Transverse)

Test Data (cont.)



C:\VcpMT\Daten\VCP9000 Setups\15317-V-nonob vibs 002.rrn

Figure 3: Vibration Test (Vertical)

F. Test Remarks

Test Completed and no damage observed.

Part 3 Shock Test

A. Purpose of Test and Product Specification

To verify functionality and structural integrity of EUT during and after shock test events per SP6000-SWMLU-9333-ERS.

B. Test Setup

The equipment under test was secured to the shock table by means of its normal attachment points via suitable test fixture. All shock tests were performed with the equipment powered off.

C. Test Procedures

Eighteen shocks were applied to the equipment (3 axes in 6 directions each) as defined in the table below

NO	Direction of Shock	Half Sine Shock Pulse Amplitude (g)	Half Sine Shock Pulse Duration (ms)
1	X, Left to Right	15	11
2	X, Left to Right	15	11
3	X, Left to Right	15	11
4	X, Right to Left	15	11
5	X, Right to Left	15	11
6	X, Right to Left	15	11
7	Y, Front to Back	15	11
8	Y, Front to Back	15	11
9	Y, Front to Back	15	11
10	Y, Back to Front	15	11
11	Y, Back to Front	15	11
12	Y, Back to Front	15	11
13	Z, Bottom to Top	15	11
14	Z, Bottom to Top	15	11
15	Z, Bottom to Top	15	11
16	Z, Top to Bottom	15	11
17	Z, Top to Bottom	15	11
18	Z, Top to Bottom	15	11

E. Test Data

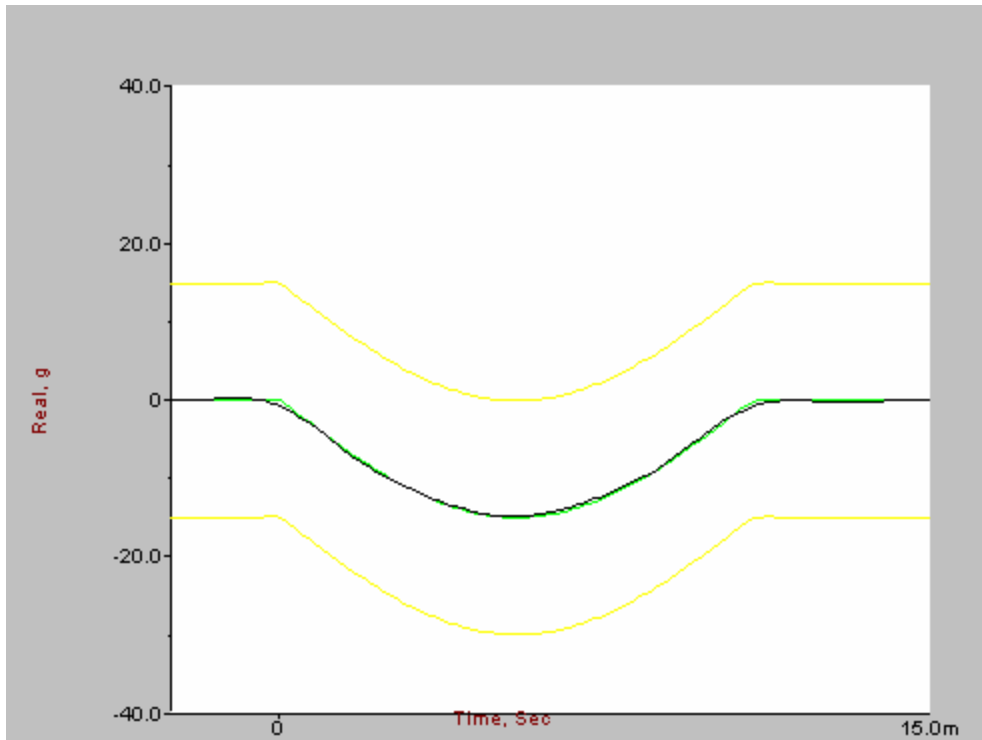


Figure 4: Long Shock Test (-)

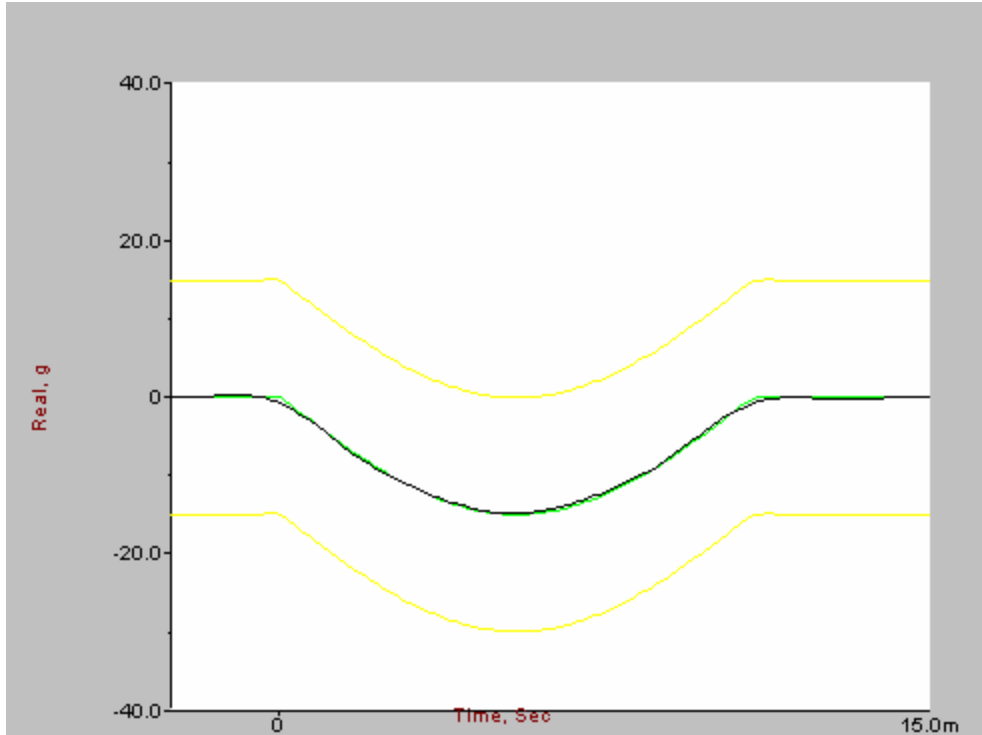


Figure 5: Long Shock Test (+)

Test Data (cont.)

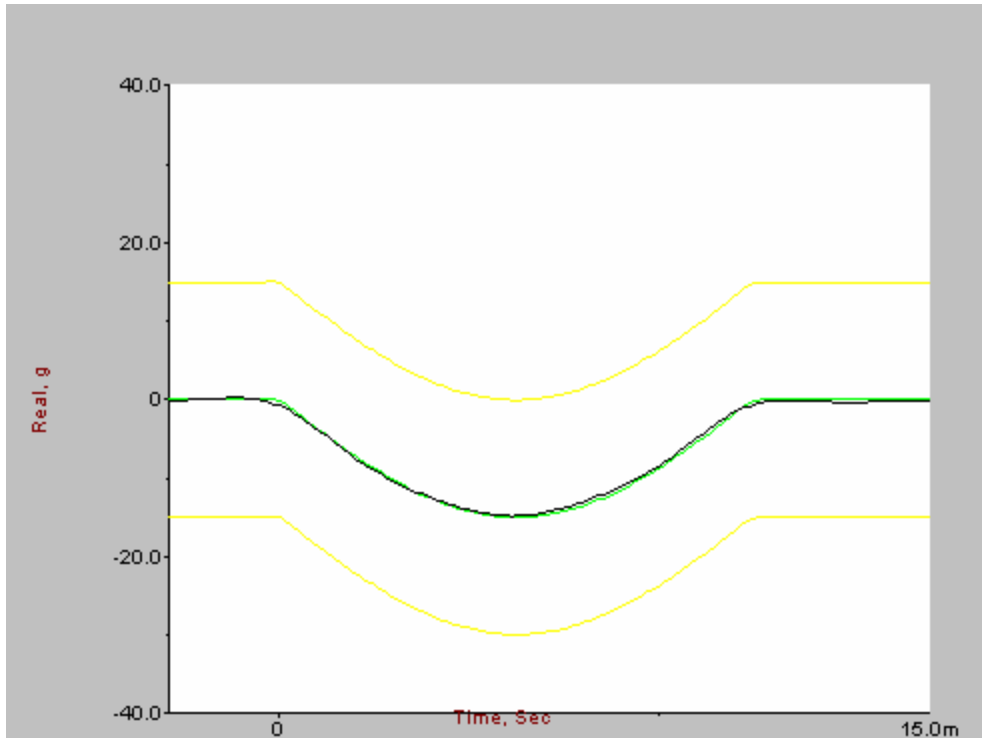


Figure 6: Transverse Shock Test (-)

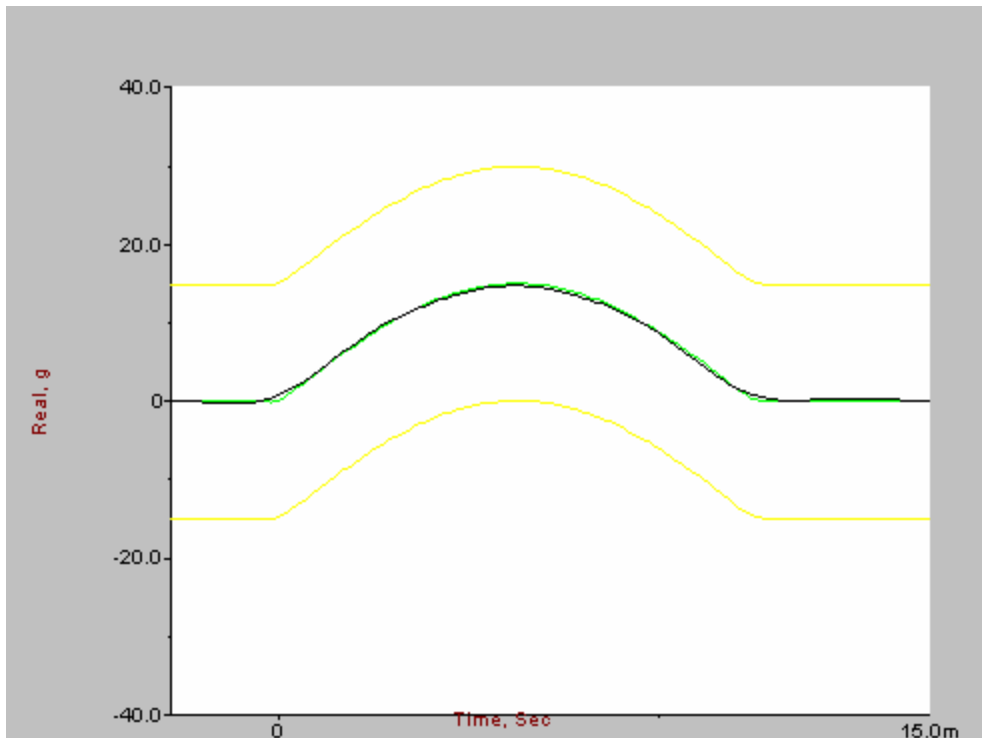


Figure 7: Transverse Shock Test (+)

Test Data (cont.)

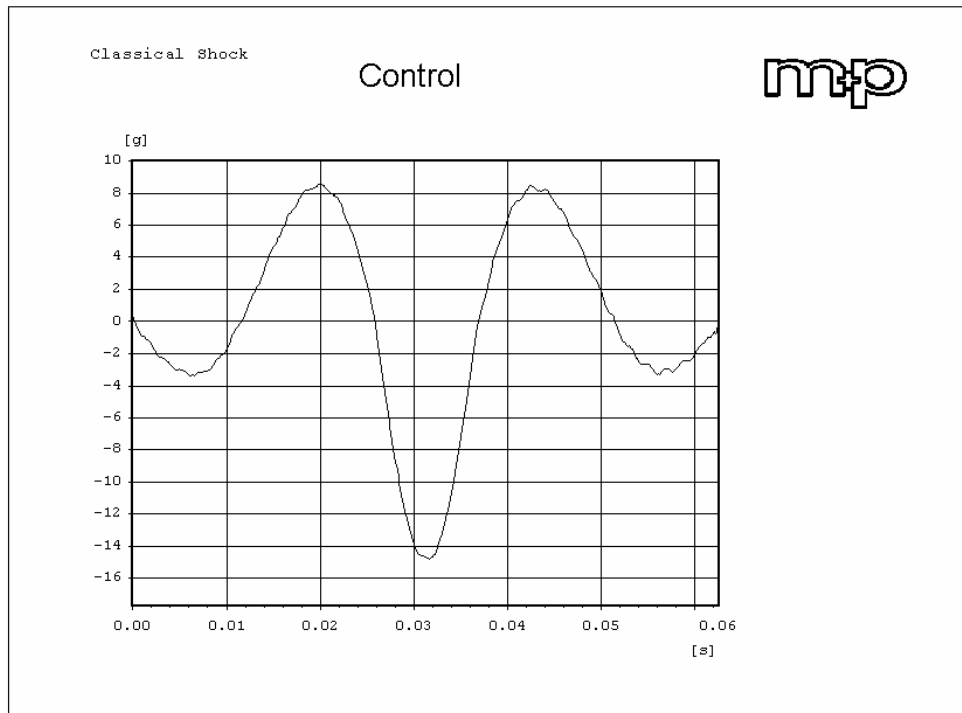


Figure 8: Vertical Shock Test (-)

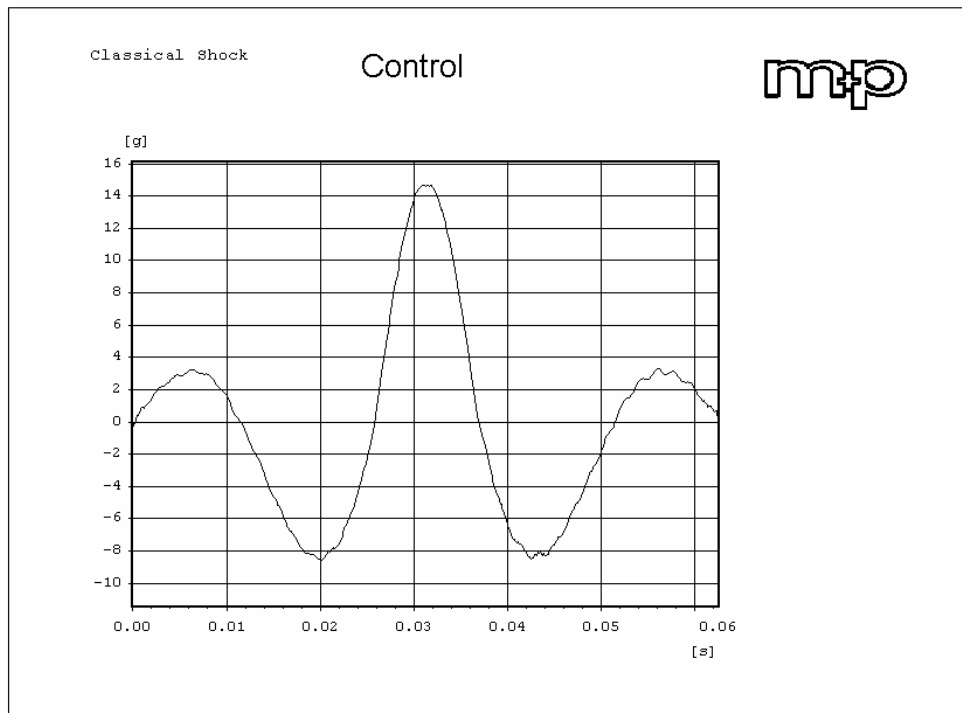


Figure 9: Vertical Shock Test (+)

F. Test Remarks

Test Completed and no damage observed.

Part 4 EUT Test Photos

Test Photos



Figure 10: Transverse Vibration and Shock Test Setup

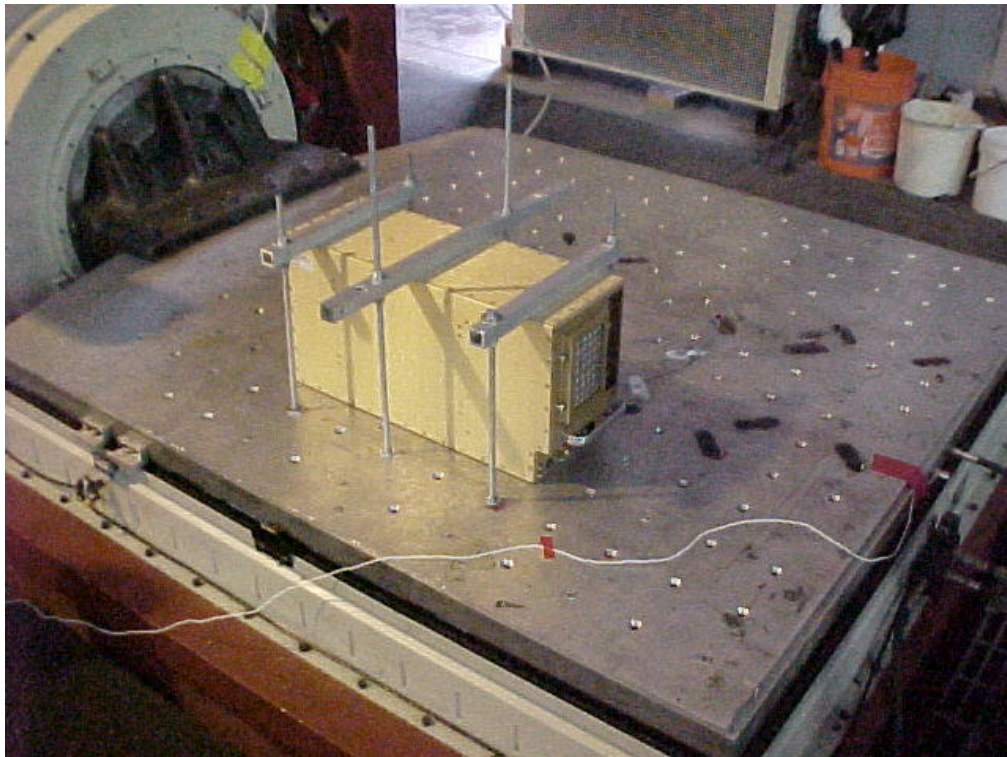
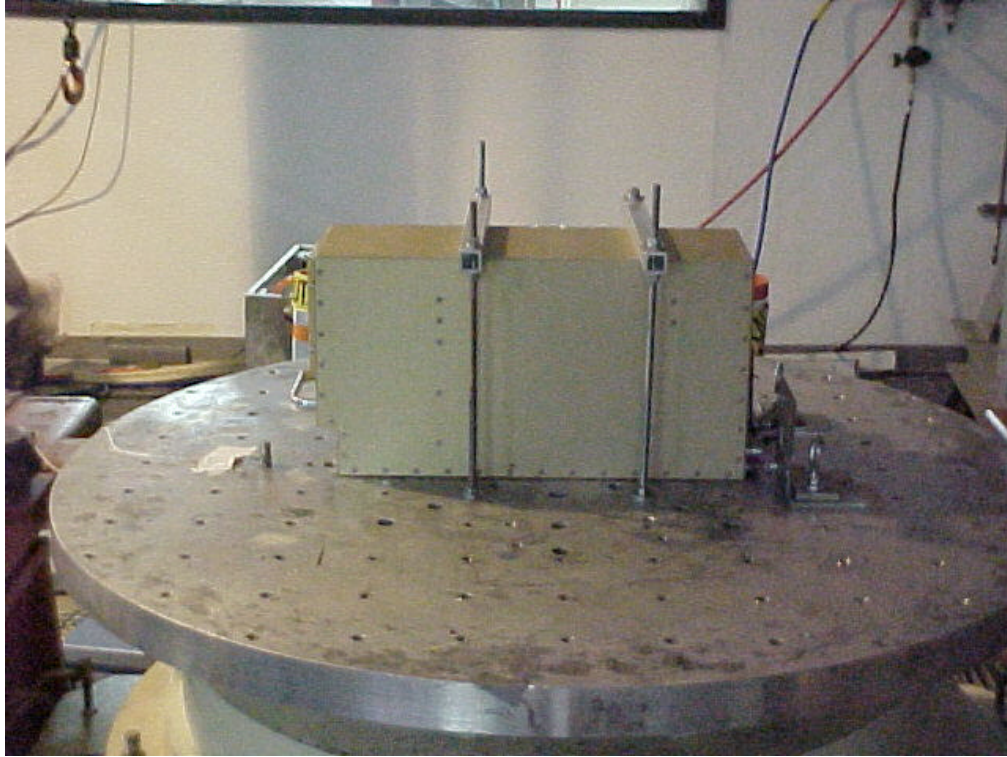


Figure 11: Long Vibration and Shock Test Setup

Test Photos (cont.)**Figure 12: Vertical Vibration and Shock Test Setup**