



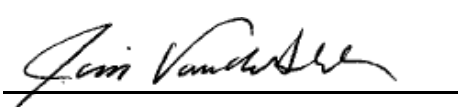
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Kentwood, MI 49512

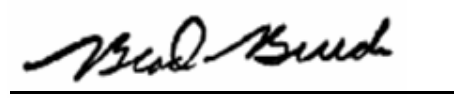
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SUMMIT TECHNOLOGY  
Date: December 23, 2010  
P.O. No.: P1011121

Report No.: G100269149GRR-001B  
Page 1 of 13

**Test Report For:**  
**Summit Technology Corporation**  
**Mechanical Shock**

  
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Project Engineer  
Performance Group

  
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Page 2 of 13

Attention: Ken Kious  
SUMMIT TECHNOLOGY CORPORATION  
2717 N. Main St. #15  
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**DATE RECEIVED:** 12/20/10  
**DATES TESTED:** 12/20/10 to 12/21/10

**DESCRIPTION OF SAMPLES:**

Part Name Powersight power meter  
Part Number: PS4500, PS3500 and PS2500  
Material Submitted: Two Meters of each part number (6 Total)  
Condition of Test Sample: Production

**WORK REQUESTED / APPLICABLE DOCUMENTS:**

Mechanical shock in accordance MIL-PRF-28800F

**CONCLUSIONS:**

All meters passed the mechanical shock test fully functional.

**TEST EQUIPMENT:**

Dynamic Solutions Shaker: Asset 130185  
Dynamic Solutions Amp: Asset 130185.1  
Dynamic Solutions Controller: Asset 130136  
Accelerometers: Assets 130038, 130130

**MECHANICAL SHOCK TESTING:**

Date Received: 12/20/10  
Dates Tested: 12/20/10 to 12/21/10

Description of Samples:

Part Name Powersight power meter  
Part Number: PS4500, PS3500 and PS2500  
Sample Number: 25003, 25004, 35001, 35002, 45001, 45003  
Sampling: Two of each part number (6 Total).

Test Procedure:

Test specification: MIL-PRF-28800F

Program the vibration controller using the following profile:

Pulse Type: half sine  
Pulse duration: 11 milliseconds  
Pulse Level: 30.0 G's  
Pulse direction: Positive and Negative  
Number of Pulses: 3 positive and 3 negative

The test samples were powered and setup to log both AC voltage and current. The test samples were setup in the vertical axis initially. The mechanical shock profile was run while voltage and current data was logged every one (1) second for each test sample. The mechanical shock profile was repeated for the other two mutually perpendicular axes while the power meters were operational. The shock data was recorded at the end of each axis and the temperature range was noted.

The meter orientation and accelerometer placements for each axis are shown in Figure 1 through Figure 3.

Client witnessed test and log data from each test sample while powered during the test.

Deviations:

None

Acceptance Criteria:

None stated.

Results:

The temperature range during testing was 21 to 25 deg C. All six (6) meters completed three (3) positive and three (3) negative mechanical shocks in each axis for a total of 18 mechanical shocks. No failures were observed during the tests.

Mechanical shock plots including test levels are shown in Figure 4 through Figure 9.

Remarks:

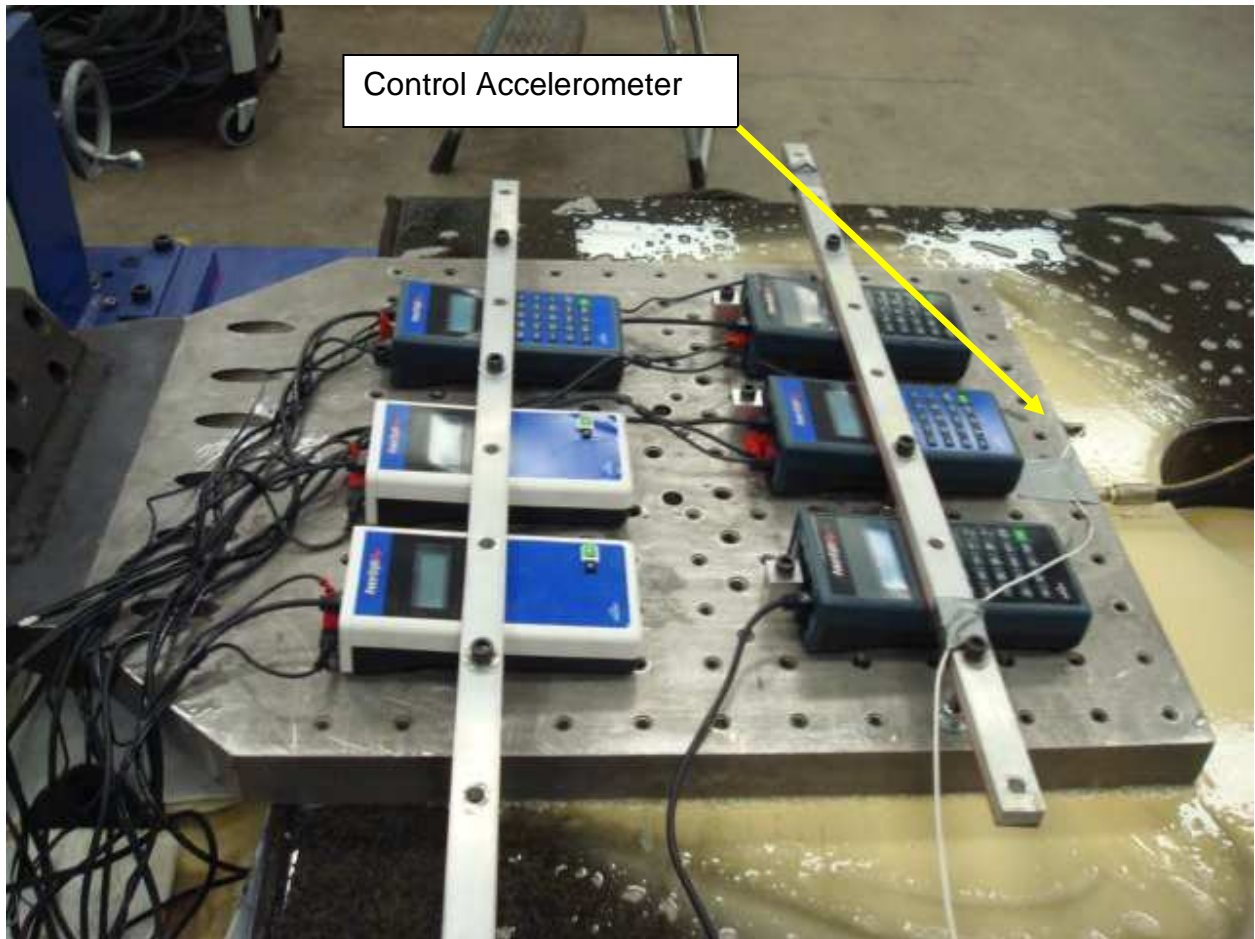
Client was present during all testing and performed all operational setup requirements of the test samples. The client also logged all data and checked Bluetooth wireless communications of each unit before during and after tests.

Disposition of Test Specimens/Samples:

The client left Intertek with all test samples and support equipment provided by Summit Technology for this testing.



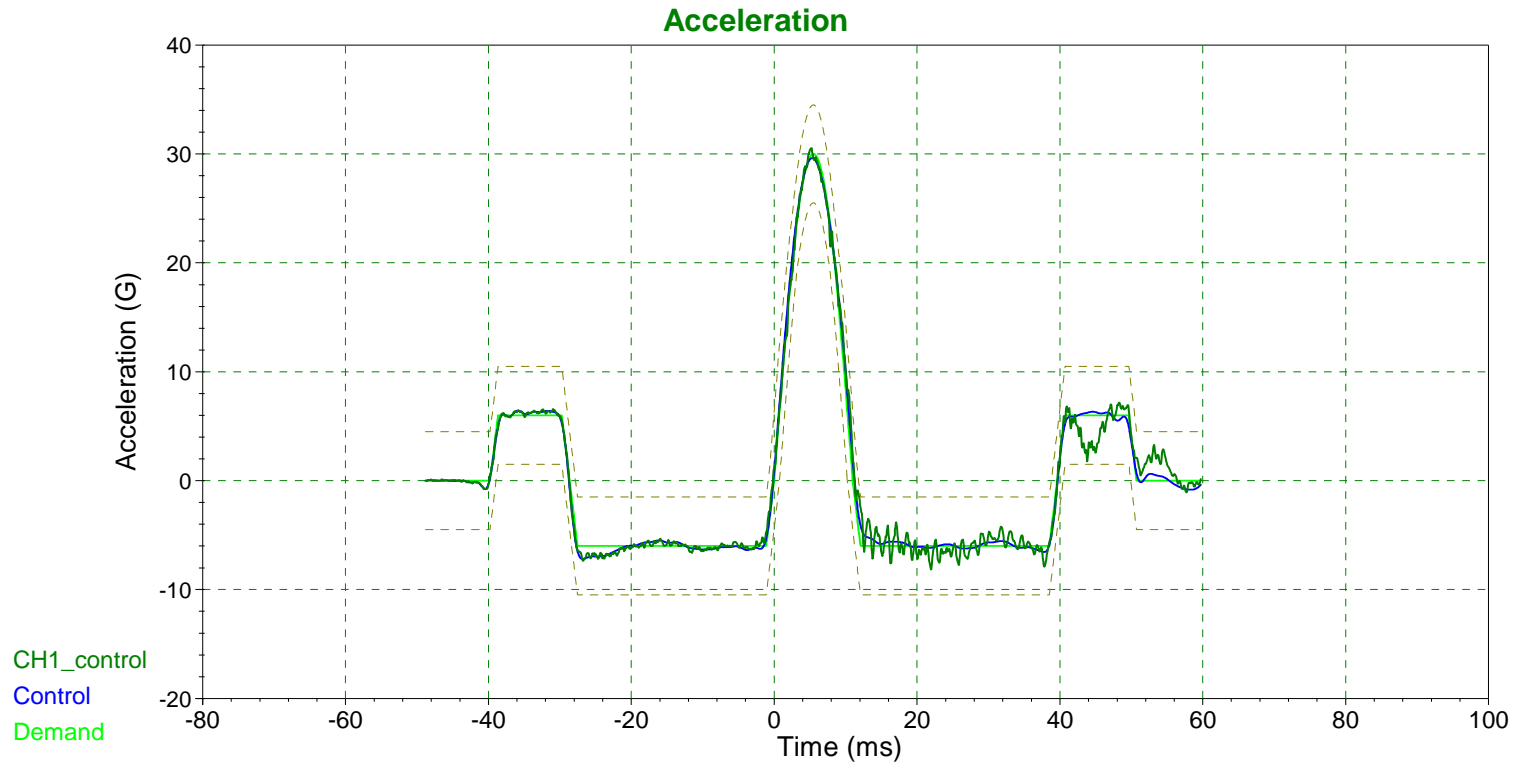
**Figure 1: Samples Mounted in Vertical Axis**



**Figure 2: Samples Mounted in Longitudinal Axis**



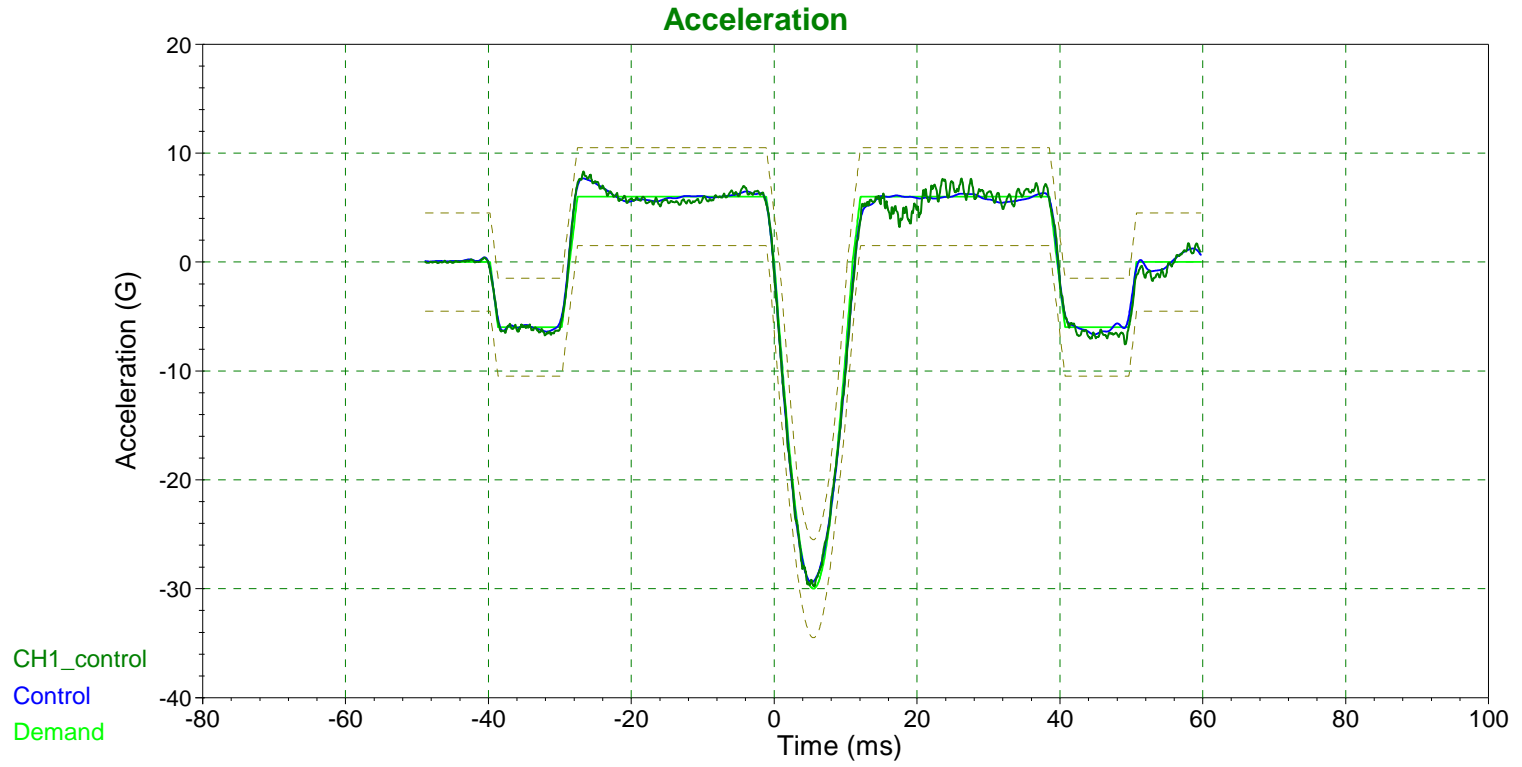
**Figure 3: Samples Mounted in Lateral Axis**



Dec 20, 2010 12:53:18	Level 1) 100 %	Output: 2.98 Volts peak	Summit Technology G100269149
Demand: 30 G			Shock Vertical Negative
Control: 29.62 G	Pulse: 3 of 3	End of Test	Sample #

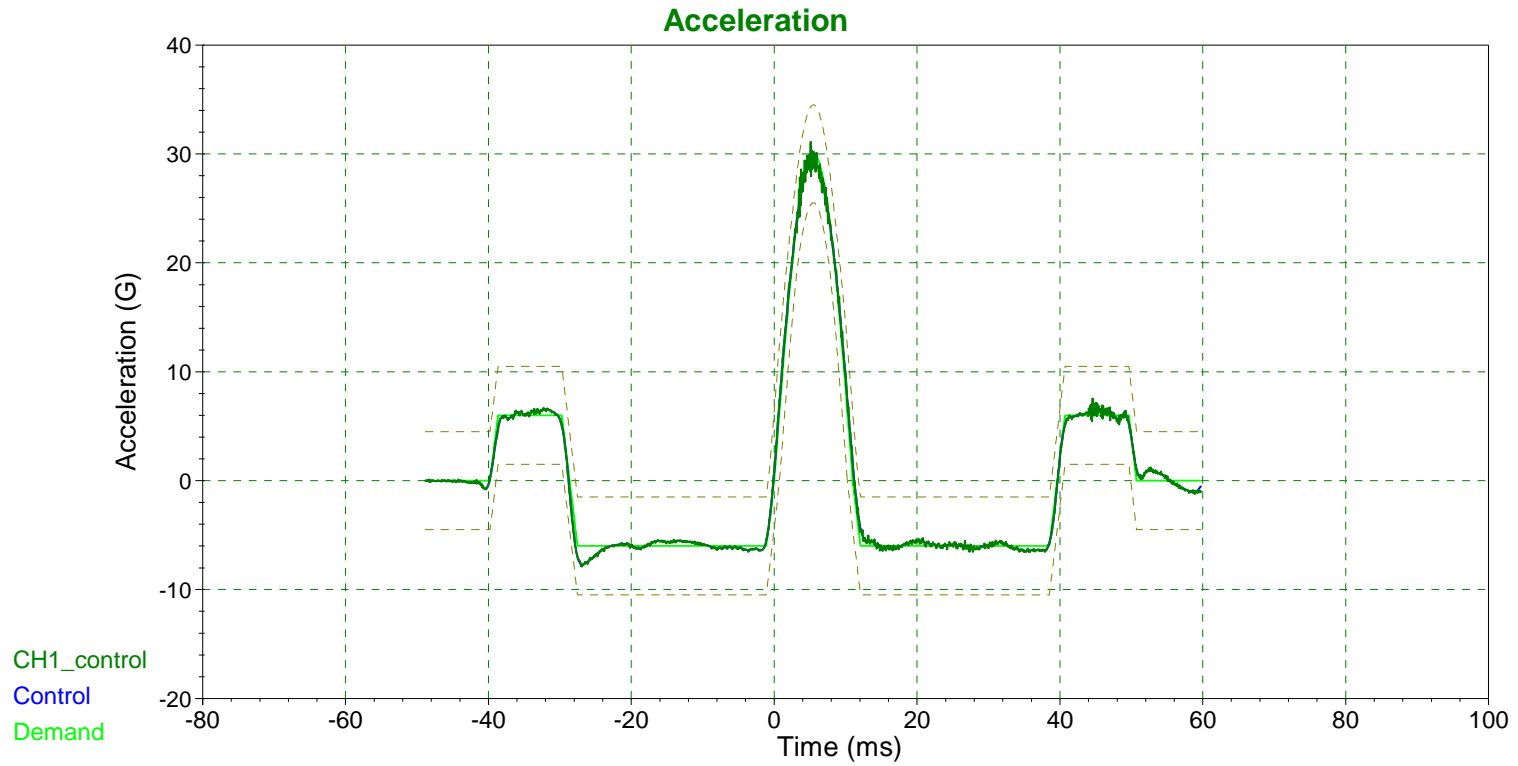
**Figure 4: Positive Vertical Axis Shock Profile**





Dec 20, 2010 12:56:03	Level 1) 100 %	Output: 2.961 Volts peak	Summit Technology G100269149
Demand: 30 G			Shock Vertical Negative
Control: 29.4 G	Pulse: 3 of 3	End of Test	Sample #

**Figure 5: Negative Vertical Axis Shock Profile**



Dec 20, 2010 14:43:18

Level 1) 100 %

Output: 2.833 Volts peak

Summit Technology G100269149

Demand: 30 G

Shock Longitudinal Positive

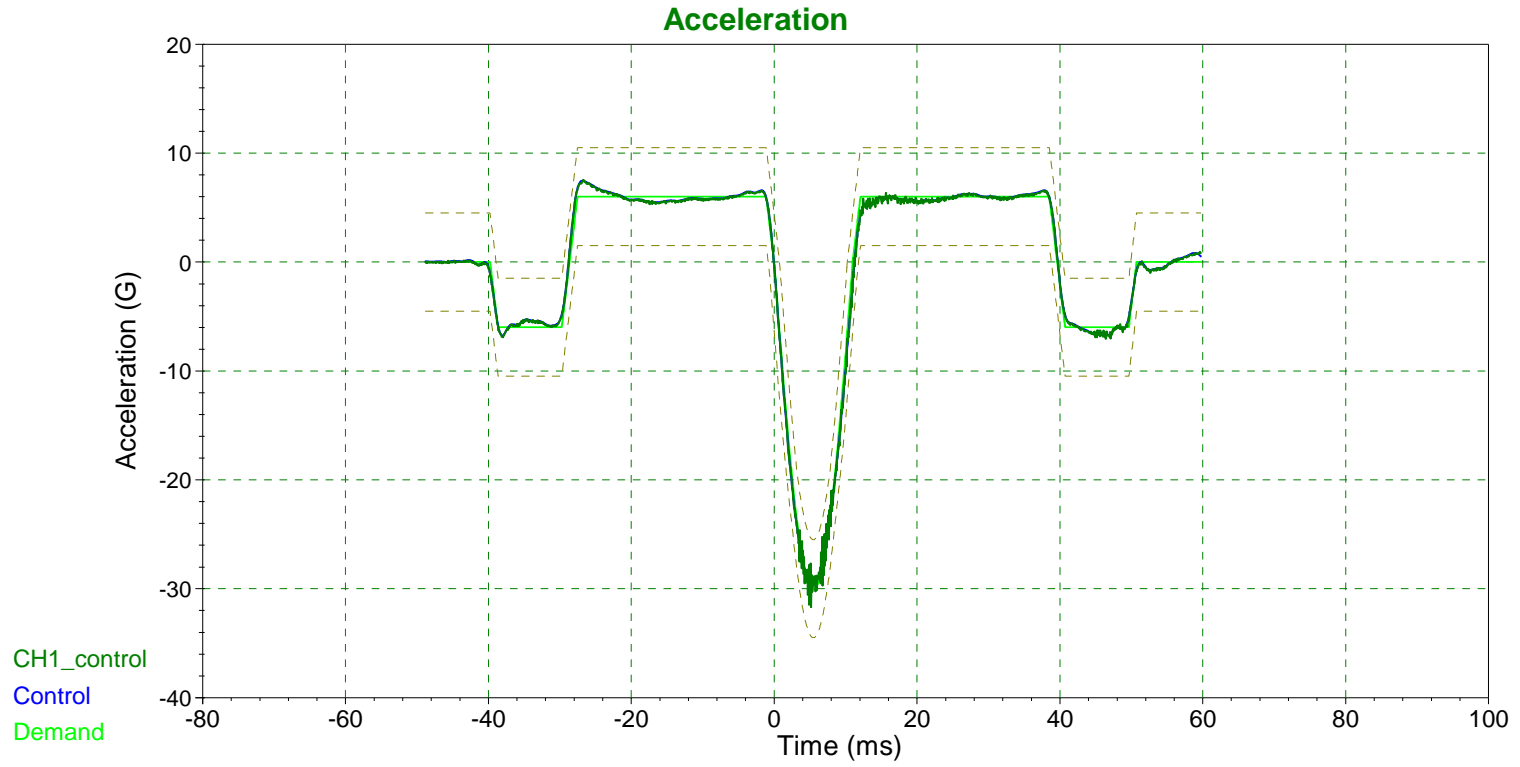
Control: 29.59 G

Pulse: 3 of 3

End of Test

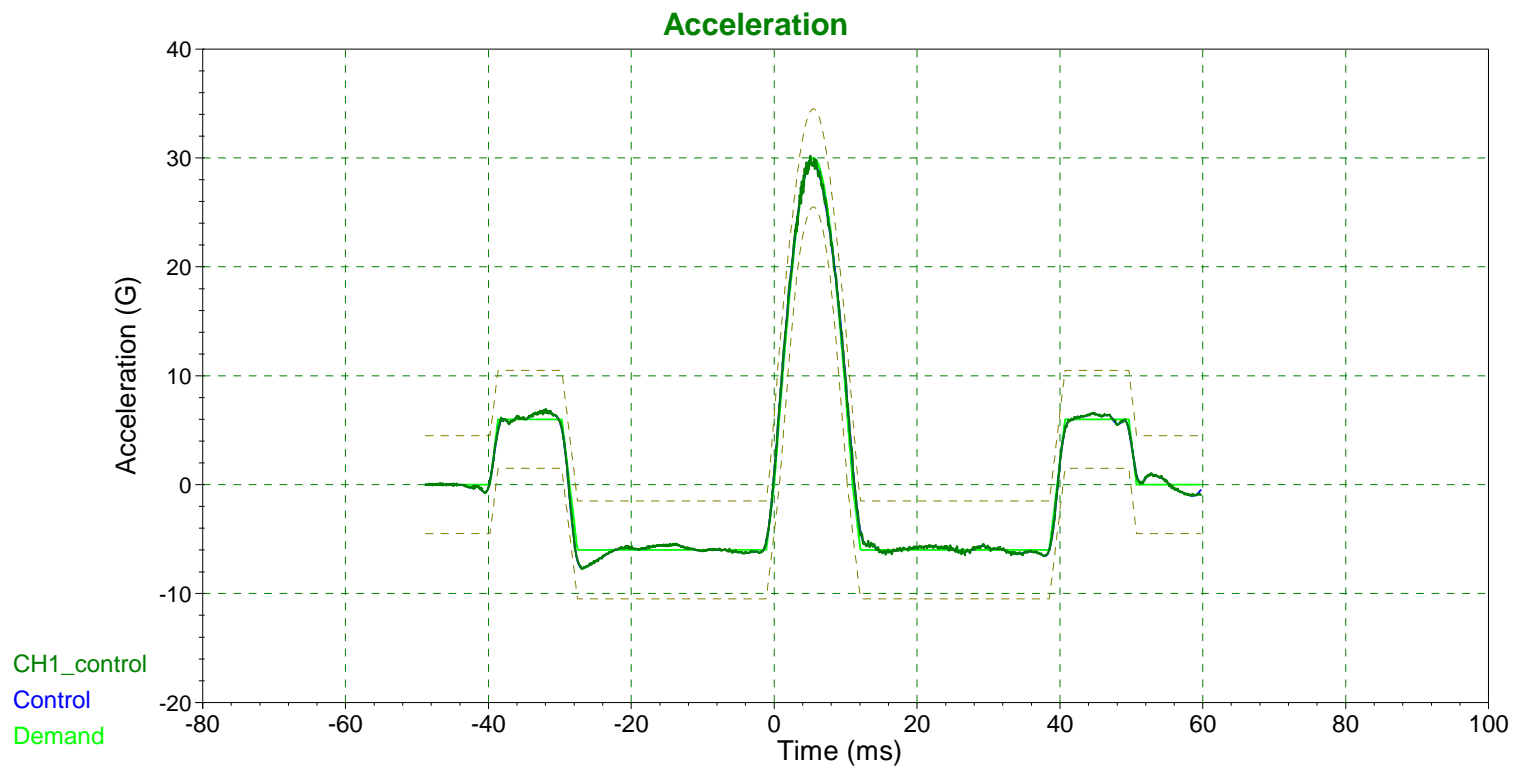
Sample #

**Figure 6: Positive Longitudinal Axis Shock Profile**



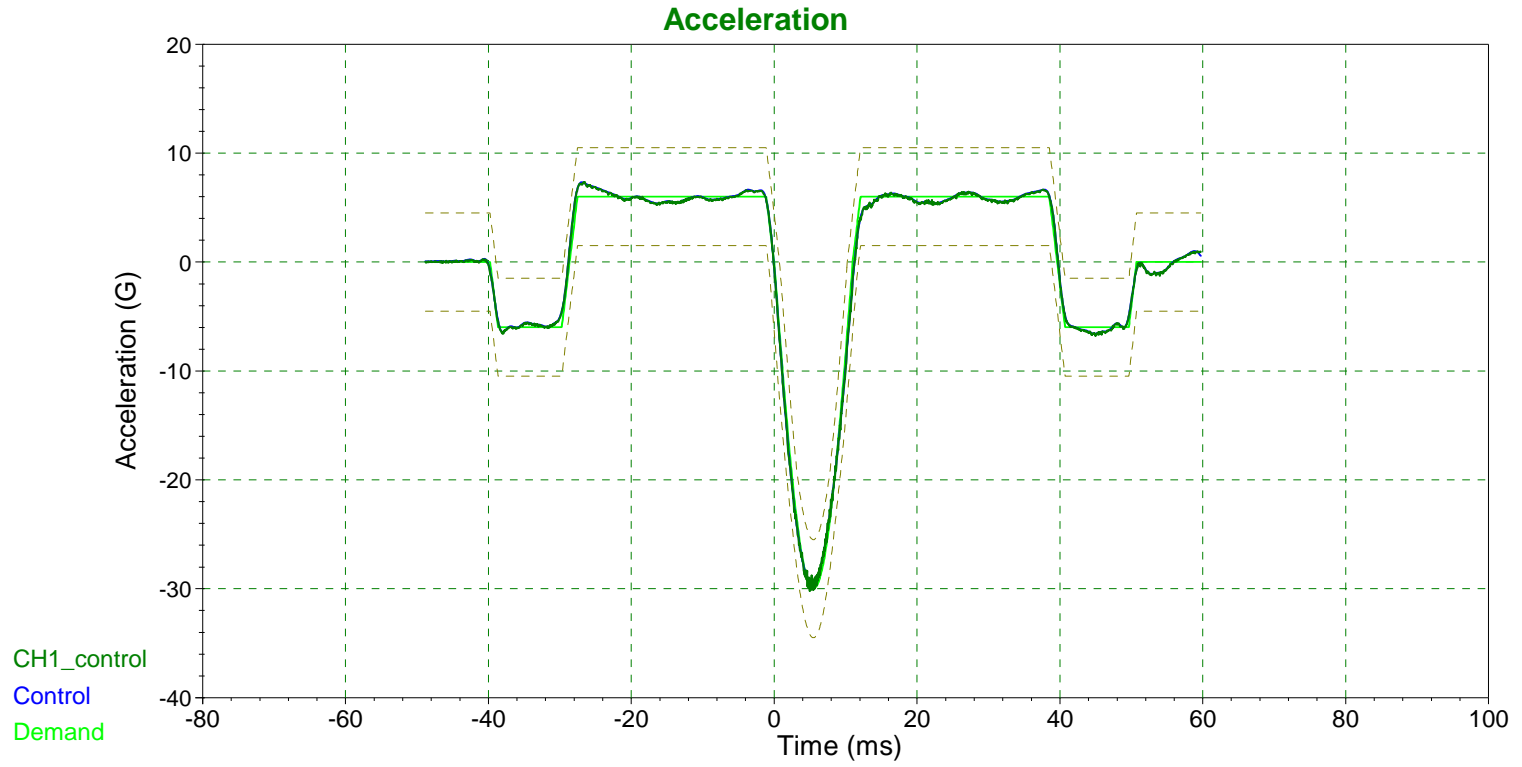
Dec 20, 2010 14:45:23	Level 1) 100 %	Output: 2.778 Volts peak	Summit Technology G100269149
Demand: 30 G			Shock Longitudinal Negative
Control: 29.57 G	Pulse: 3 of 3	End of Test	Sample #

**Figure 7: Negative Longitudinal Axis Shock Profile**



Dec 20, 2010 13:56:09	Level 1) 100 %	Output: 2.858 Volts peak	Summit Technology G100269149
Demand: 30 G			Shock Lateral Positive
Control: 29.55 G	Pulse: 3 of 3	End of Test	Sample #

**Figure 8: Positive Lateral Axis Shock Profile**



Dec 20, 2010 13:57:02	Level 1) 100 %	Output: 2.798 Volts peak	Summit Technology G100269149
Demand: 30 G			Shock Lateral Positive
Control: 29.62 G	Pulse: 3 of 3	End of Test	Sample #

**Figure 9: Negative Lateral Axis Shock Profile**