

# Element Materials Technology Boxborough Test Report for Earthquake (Seismic) Testing of the Enclosure

**Prepared For**  
Martin International Enclosures  
14 Woodworkers Way  
Seabrook, NH 03874

**Prepared By**  
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### Revision History

Rev.	Description	Issue Date
0	Initial Release	June 24, 2024

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### 1.0 Introduction

This document presents the test procedures used and the results obtained during the performance of an Earthquake (Seismic) test program at Element Materials Technology Boxborough (hereafter referred to as “Element”). The test program was conducted to assess the ability of the specified Equipment Under Test (EUT) to successfully satisfy the requirements defined in the test specification.

### 2.0 References

The following references listed below form a part of this document to the extent specified herein.

- Test Specification: GR-63-CORE, Issue 5, *NEBS Requirements: Physical Protection*, dated 12/2017
- Martin International Enclosures Purchase Order 0030390, dated 05/31/2024
- Element Quotation OP0654248-0, dated 02/12/2024
- ISO/IEC 17025:2017(E) *General Requirements for the Competence of Testing and Calibration Laboratories*, dated 11/2017

### 3.0 Product Selection and Description

Martin International Enclosures selected and provided the following test sample to be used as the Equipment Under Test.

**Table 3.0-1: Product Identification – Equipment Under Test (EUT)**

Item	Qty.	Name/Description	Part Number	Serial Number
1	1	Enclosure	EUT1	01

### 3.1 Security Classification

Non-classified

### 4.0 General Test Requirements

#### 4.1 Test Equipment

The instrumentation used in the performance of these tests is periodically calibrated and standardized within manufacturer's rated accuracies and are traceable to the National Institute of Standards and Technology. The calibration procedures and practices are in accordance with ISO 17025:2017. Certification of calibration is on file subject to inspection by authorized personnel.

## 5.0 Test Description and Results

**Table 5.0-1: Summary of Test Information & Results**

Section	Test	Specification	Test Facility	Test Date	Part #	Serial #	Test Result
5.1	Earthquake (Seismic)	GR-63-CORE, Issue 5, Sections 4.4.1 and 5.4.1	Boxborough Test Labs	June 11 – 13, 2024	EUT1	01	Refer to Section 5.1.2

**5.1 Earthquake (Seismic)**

**5.1.1 Test Procedure**

The EUT was tested according to the requirements of GR-63-CORE, Issue 5, Sections 4.4.1 and 5.4.1.

**5.1.2 Test Result**

After testing was complete loosened hardware was found, but the EUT showed no physical or visual damage.

**5.1.3 Test Datasheets**

**Earthquake (Seismic) Profile Datasheet**

GR-63 Zone 4 Seismic Profile	
Frequency (Hz)	G's
0.3	0.2
0.6	2
2	5
5	5
15	1.6
50	1.6
<b>Tolerances</b>	
+30%/-0%, Best effort above 7Hz, TE = 30	

Comments:

One Enclosure was subjected to the above parameters in all three axes. After testing, loosened hardware was found, but no physical damage to the enclosure itself was noted.

Test Operator:	Carlton Francis
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COR Form 21.12 Rev 0

**Sine Survey Profile Datasheet**

<b>Frequency Range (Hz)</b>	<b>g's</b>	<b>In/Sec</b>	<b>Disp. p-p (in)</b>
1 - 50	0.2	-	-
Sweep Rate	1 oct/min	# of Sweeps	1
Duration	5m39s	# of Axes Tested	3
Test Started: 6/12/2024		Test Completed: 6/13/2024	
<b>Summary</b>	<b>Y</b>	<b>N</b>	<b>Comments</b>
Fixture Equalization	X		
Fixture Evaluation	X		
Inert Unit Used	X		
Test Anomalies		X	
Physical Damage Noted:		X	
UUT Functional Testing:		X	
<b>Comments:</b>			
One Enclosure was subjected to the above parameters in all three axes. After testing, loosened hardware was found, but no physical damage to the enclosure itself was noted.			
Test Operator:		Carlton Francis	

COR Form 21.7 Rev 0

**Test Log Datasheet**

Test Log			
Date	Time	Log Entry	Tech
6/11/2024	8:00	<b>No visible damage noted before testing.</b>	C.F.
	14:30	Test#01 - Axis- Z - Earthquake(Seismic) - GR-63-CCORE Zone 4 - Calibration	C.F.
6/12/24	12:04	Test#02 - Axis- Z - Sine Survey	C.F.
	12:18	Test#03 - Axis- Z - Earthquake(Seismic) - GR-63-CCORE Zone 4	C.F.
	12:25	Test#04 - Axis- Z - Sine Survey	C.F.
	15:20	Rotated Setup to Horizontal	C.F.
	15:44	Test#05 - Axis- X-Y - Earthquake(Seismic) - GR-63-CCORE Zone 4	C.F.
	16:44	Setup EUT	C.F.
6/13/24	8:19	Test#06 - Axis- Y - Sine Survey	C.F.
	8:37	Test#07 - Axis- Y - Earthquake(Seismic) - GR-63-CCORE Zone 4	C.F.
	8:54	Test#08 - Axis- Y - Sine Survey	C.F.
	11:48	Test#09 - Axis- X - Sine Survey	C.F.
	12:29	Test#10 - Axis- X - Earthquake(Seismic) - GR-63-CCORE Zone 4	C.F.
	12:36	Test#11 - Axis- X - Sine Survey	C.F.
	14:00	<b>No visible damage noted after testing.</b>	C.F.
		Testing Complete.	

5.1.4 Test Photographs



EUT as Received (1)



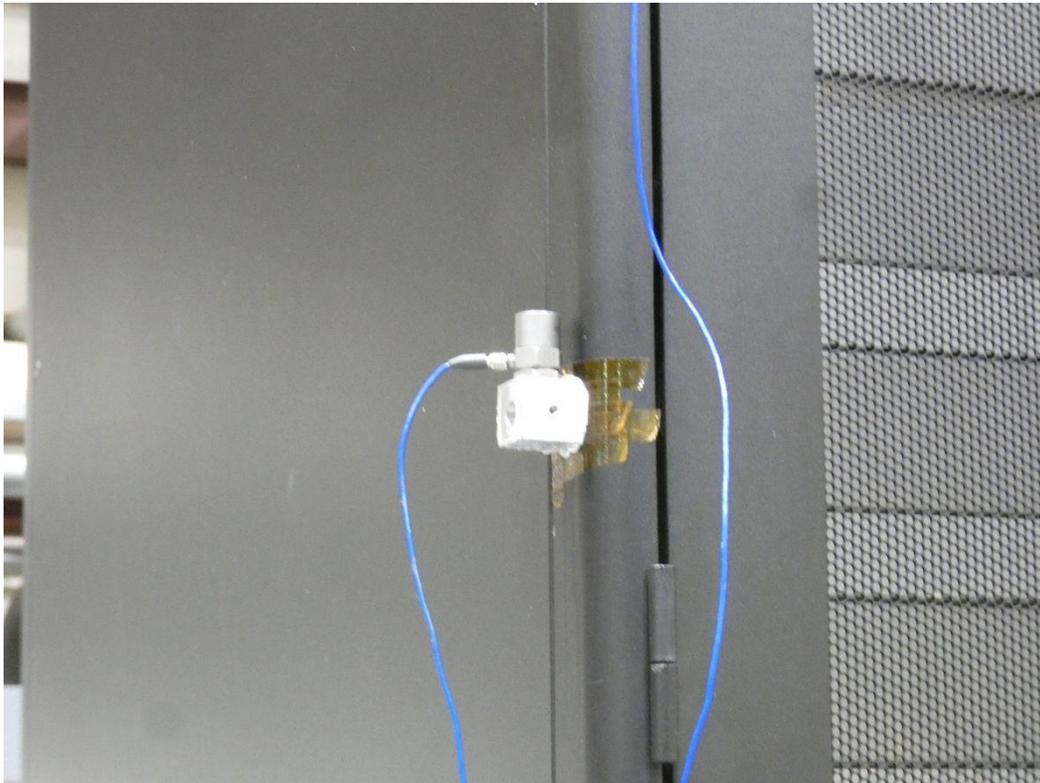
EUT as Received (2)



EUT Pre-Test (1)



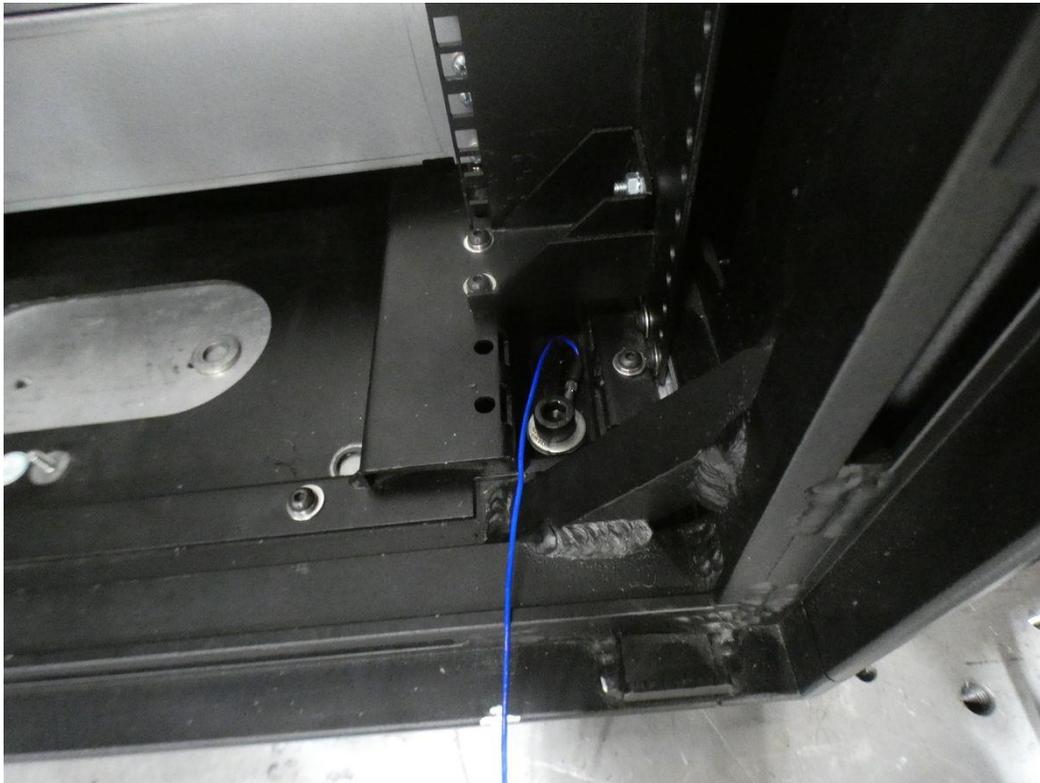
EUT Pre-Test (2)



Response Middle Accelerometer Location



Response Top Accelerometer Location



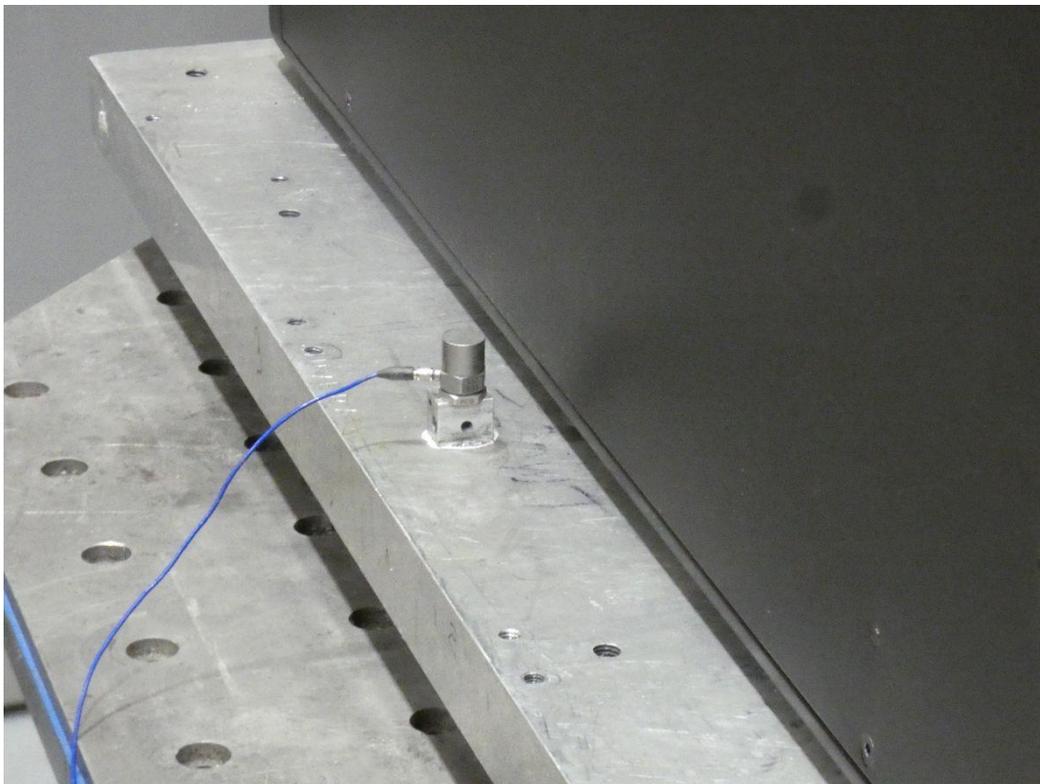
Load Ring Location



LVDT Setup



Z Axis Calibration Setup



Z Axis Control Accelerometer Location



Z Axis Setup (1)



Z Axis Setup (2)



X and Y Axes Calibration Setup



X and Y Axes Control Accelerometer Location



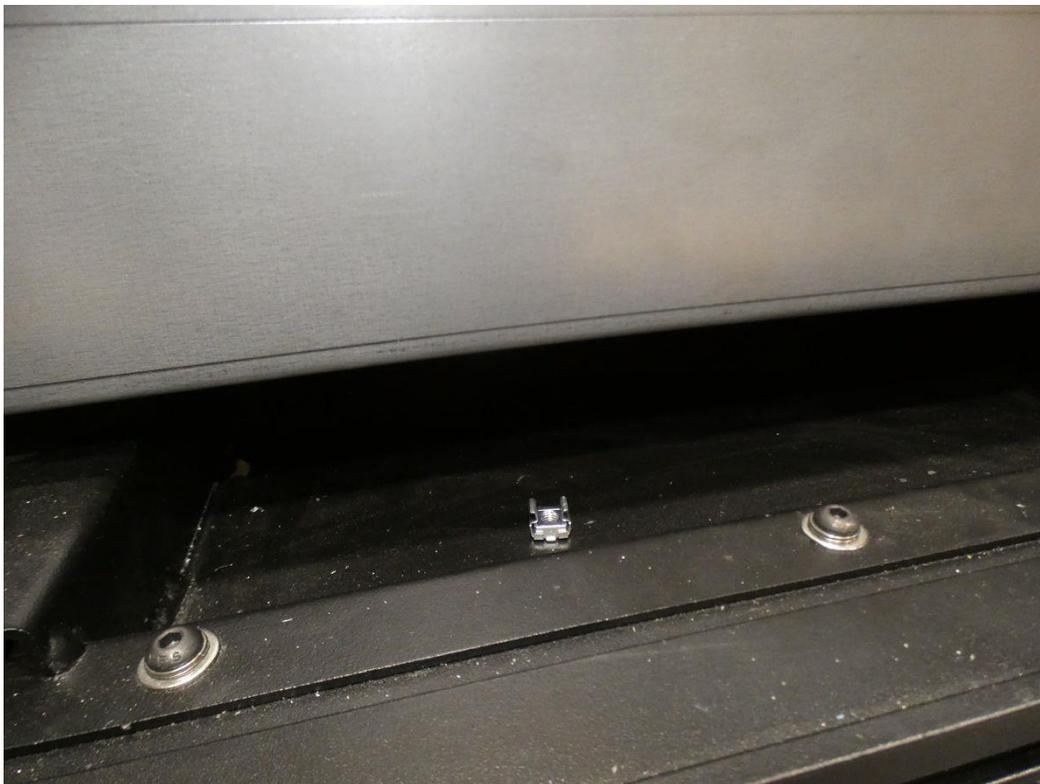
X Axis Setup



Y Axis Setup (1)



Y Axis Setup (2)



Post-Test Loosened Hardware



EUT Post-Test (1)



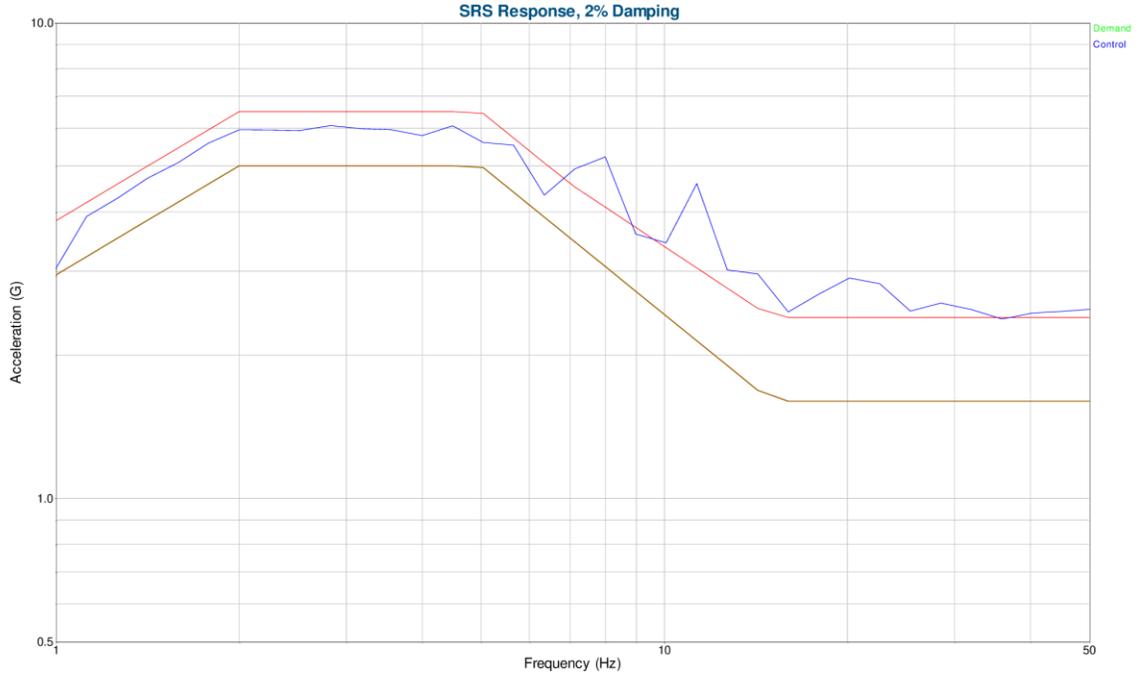
EUT Post-Test (2)

### 5.1.5 Test Data

Test Level: 0 dB  
Control: 2.18 G  
Pulse Width: 30.72 sec

Pulse Type: SRS  
Pulse: 1 of 1

Jun 11, 2024 14:30:57  
Polarity: Positive



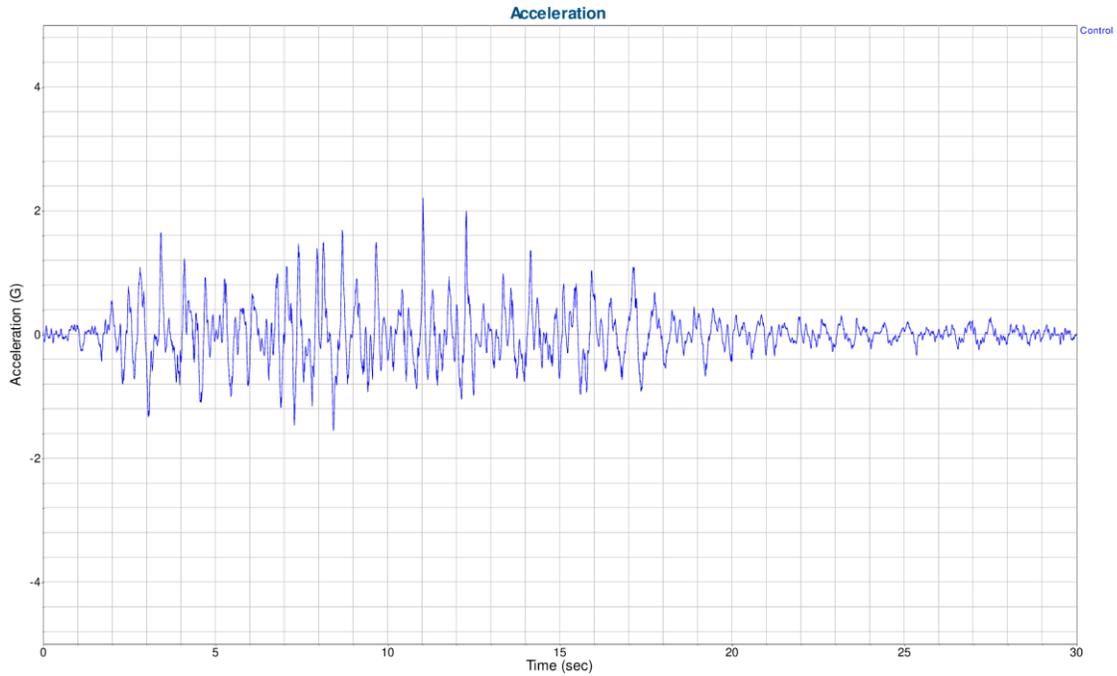
PR183799 - Martin International Enclosures - Enclosure  
Test#01 - Axis: Z - Earthquake(Seismic) - GR-63-CCORE Zone 4 - Calibration

Data Location: C:\VibrationVIEW\Data\Martin International Enclosures\data

Test Level: 0 dB  
Control: 2.18 G  
Pulse Width: 30.72 sec

Pulse Type: SRS  
Pulse: 1 of 1

Jun 11, 2024 14:30:57  
Polarity: Positive

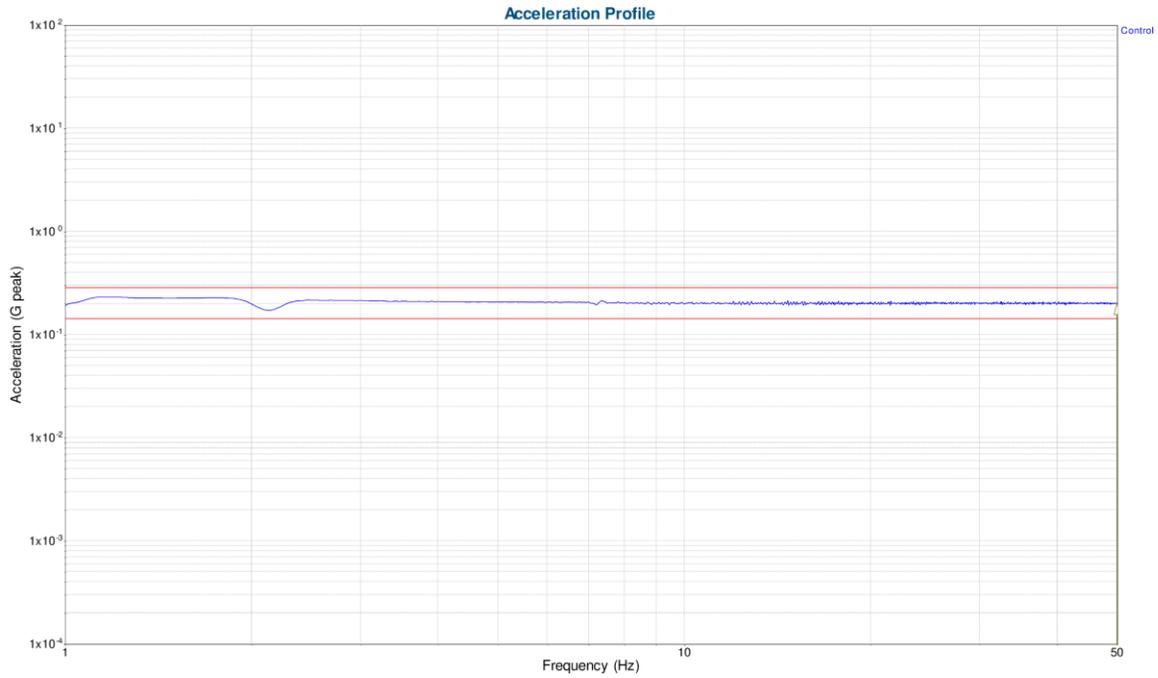


PR183799 - Martin International Enclosures - Enclosure  
Test#01 - Axis: Z - Earthquake(Seismic) - GR-63-CCORE Zone 4 - Calibration

Data Location: C:\VibrationVIEW\Data\Martin International Enclosures\data

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 12, 2024 12:04:19  
Points Per Sweep: 2000 points

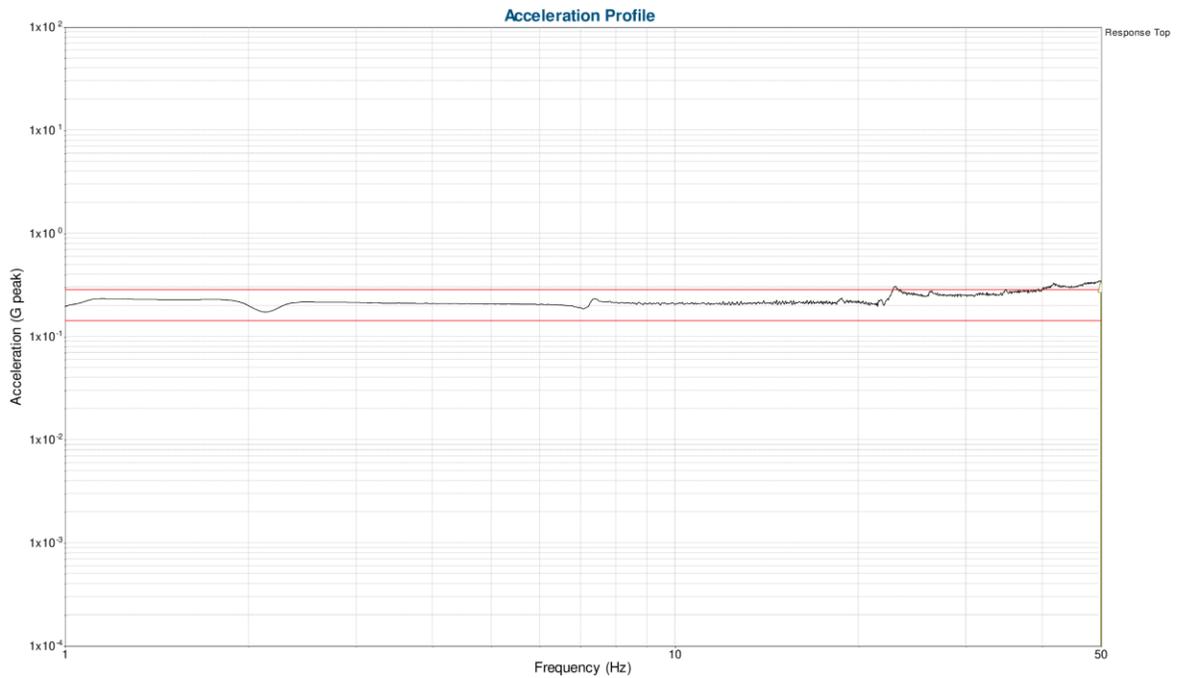


PR183799 - Martin International Enclosures - Enclosure  
Test#02 - Axis: Z - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 12, 2024 12:04:19  
Points Per Sweep: 2000 points

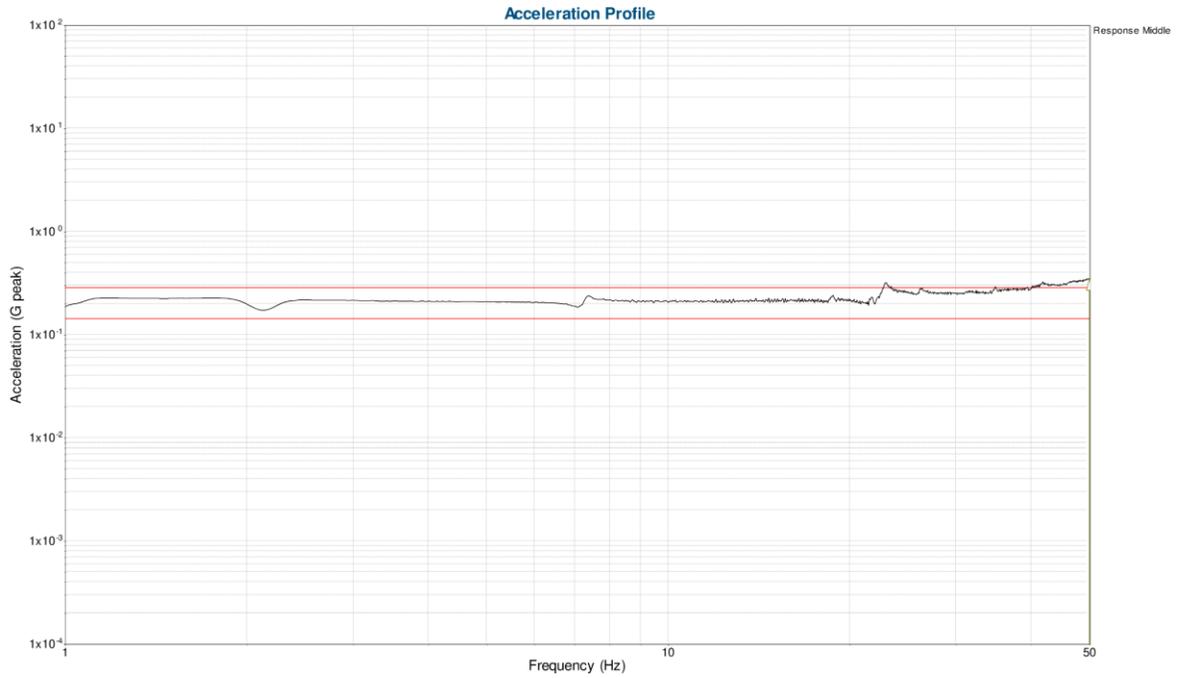


PR183799 - Martin International Enclosures - Enclosure  
Test#02 - Axis: Z - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min    Jun 12, 2024 12:04:19  
Points Per Sweep: 2000 points

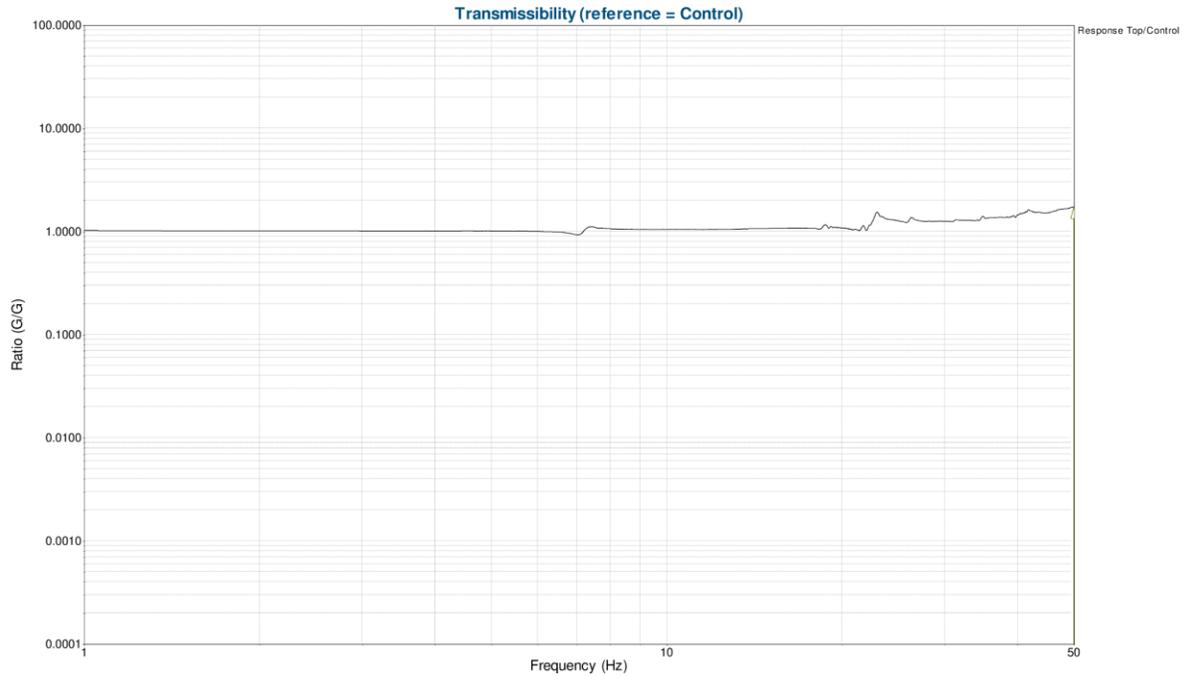


PR183799 - Martin International Enclosures - Enclosure  
Test#02 - Axis: Z - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
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Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 12, 2024 12:04:19  
Points Per Sweep: 2000 points

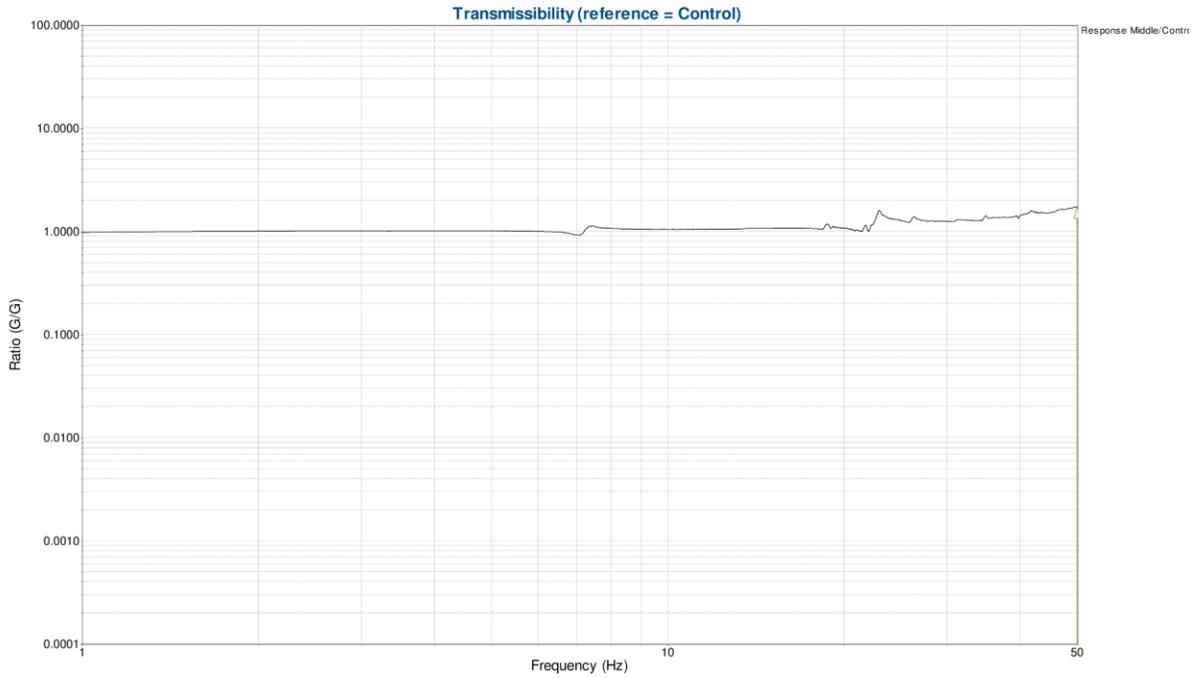


PR183799 - Martin International Enclosures - Enclosure  
Test#02 - Axis: Z - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
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Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 12, 2024 12:04:19  
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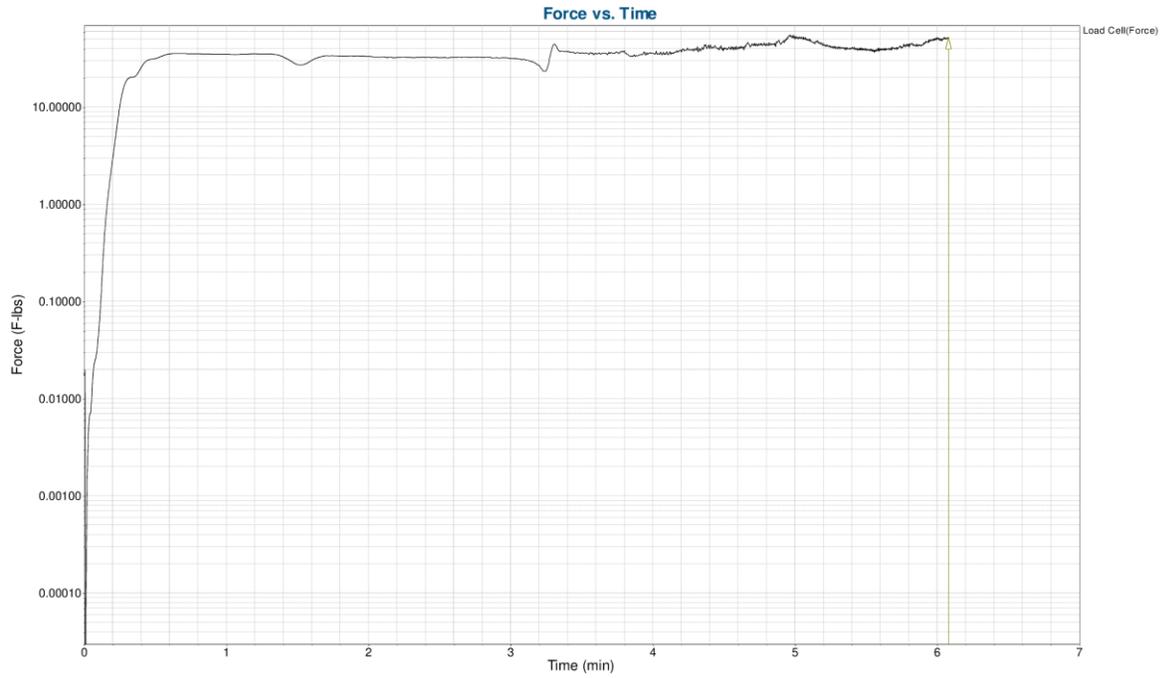


PR183799 - Martin International Enclosures - Enclosure  
Test#02 - Axis: Z - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
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Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 12, 2024 12:04:19  
Points Per Sweep: 2000 points



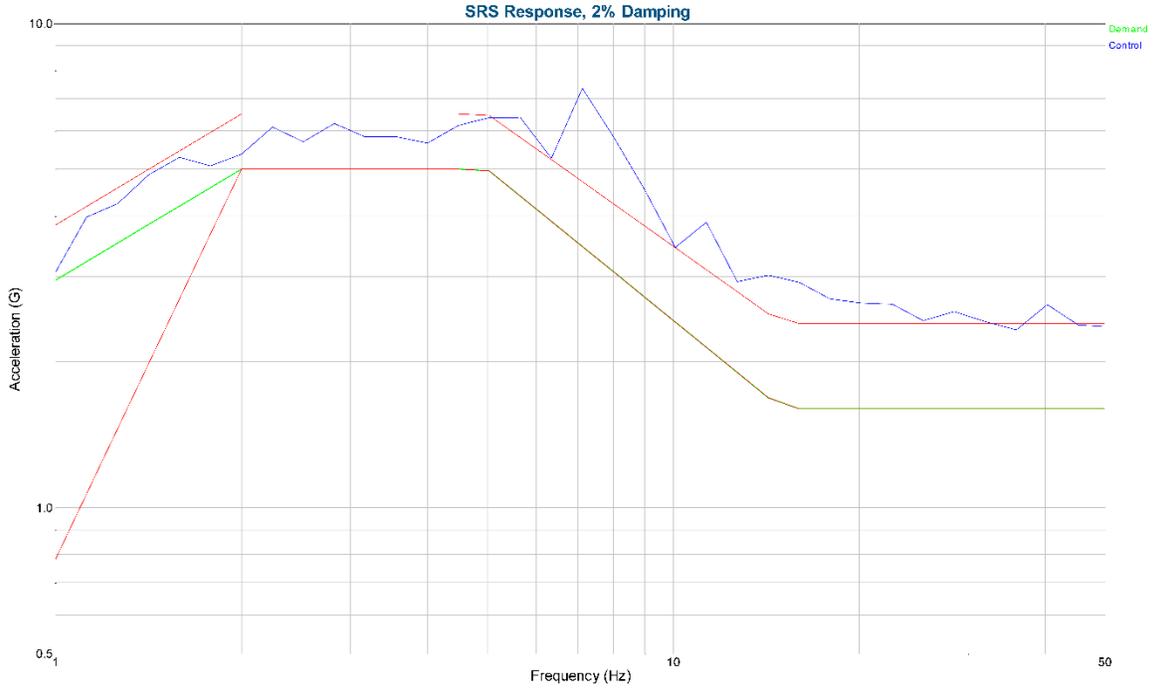
PR183799 - Martin International Enclosures - Enclosure  
Test#02 - Axis: Z - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Test Level: 0 dB  
Demand: 1.65 G peak  
Pulse Width: 30.72 sec

Synthesis Method: Unknown synthesis type  
Pulse: 1 of 1  
Te: 27590 ms

Jun 12, 2024 12:18:39  
Polarity: Positive  
Percent Above Demand: 97.22 %



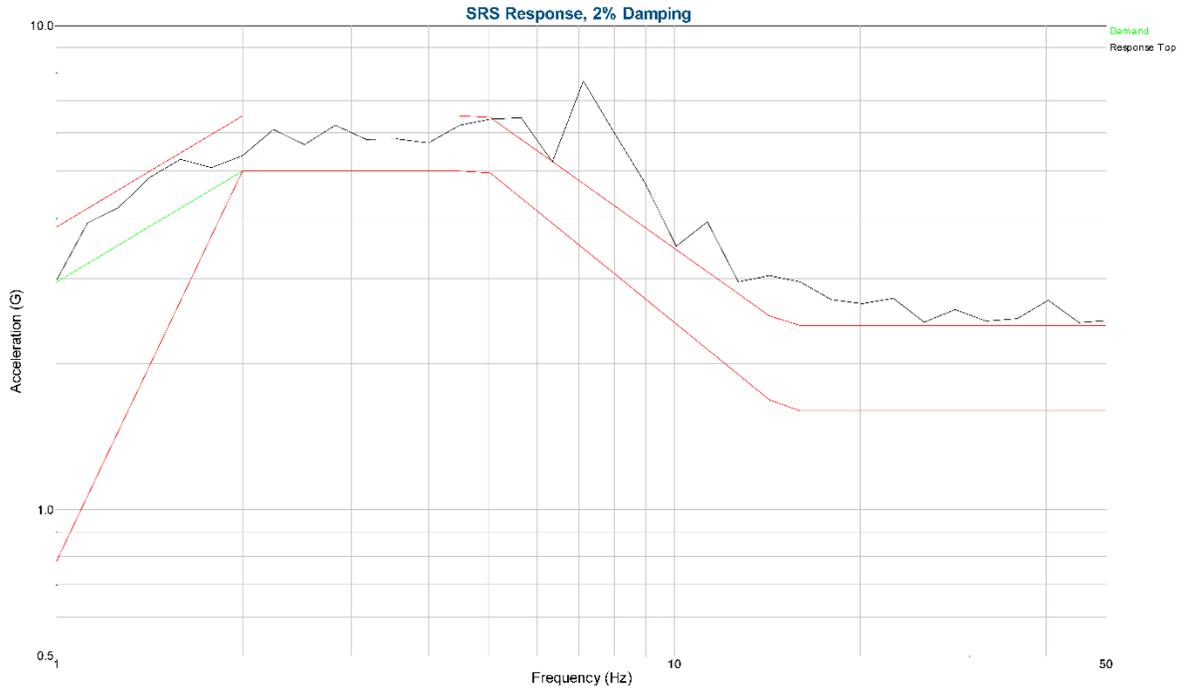
PR183799 - Martin International Enclosures - Enclosure  
Test#03 - Axis: Z - Earthquake(Seismic) - GR-63-CCORE Zone 4

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Earthquake - Zone 4.vkp

Test Level: 0 dB  
Demand: 1.65 G peak  
Pulse Width: 30.72 sec

Synthesis Method: Unknown synthesis type  
Pulse: 1 of 1  
Te: 27590 ms

Jun 12, 2024 12:18:39  
Polarity: Positive  
Percent Above Demand: 97.22 %



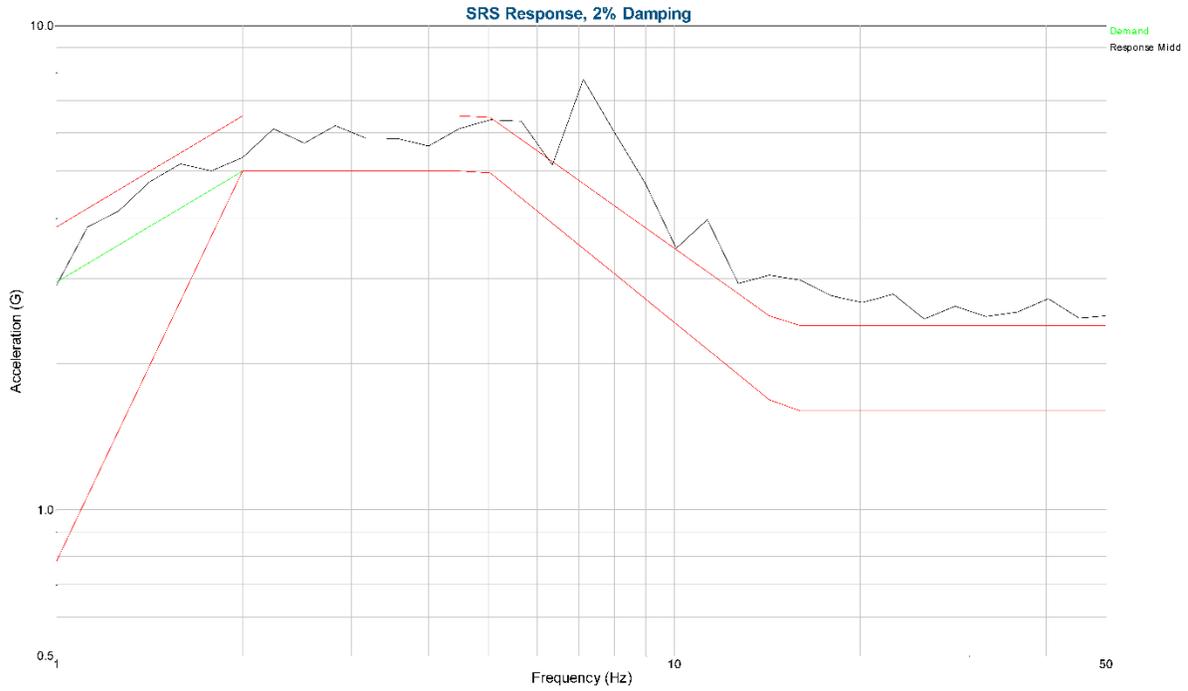
PR183799 - Martin International Enclosures - Enclosure  
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Jun 12, 2024 12:18:39  
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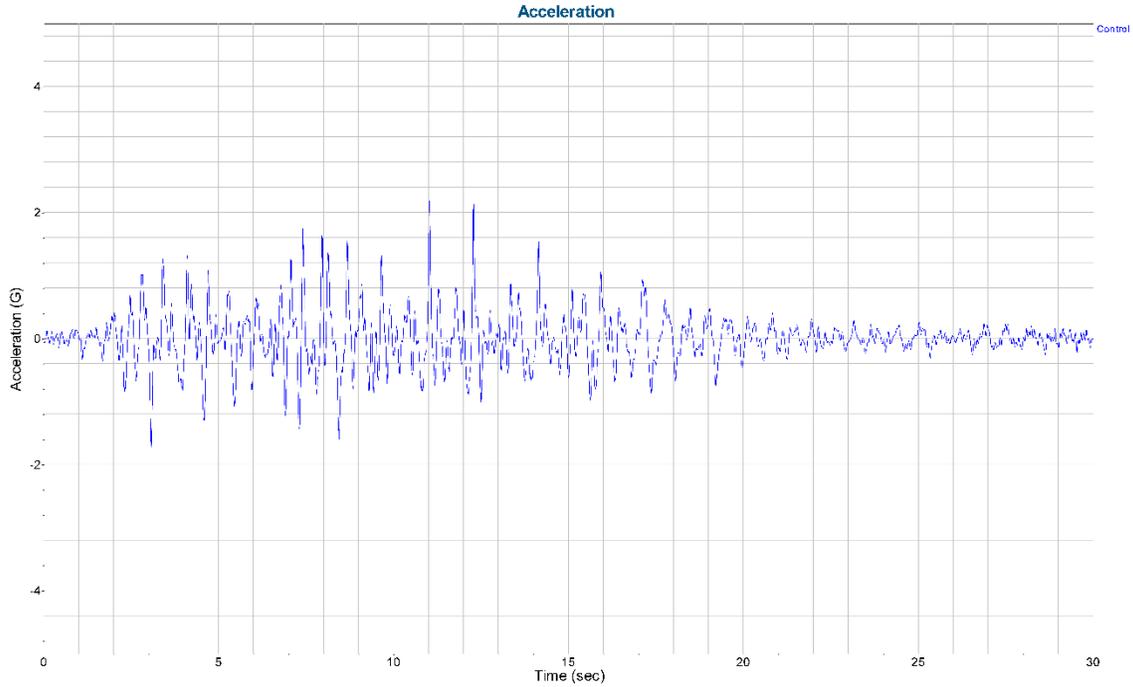
PR183799 - Martin International Enclosures - Enclosure  
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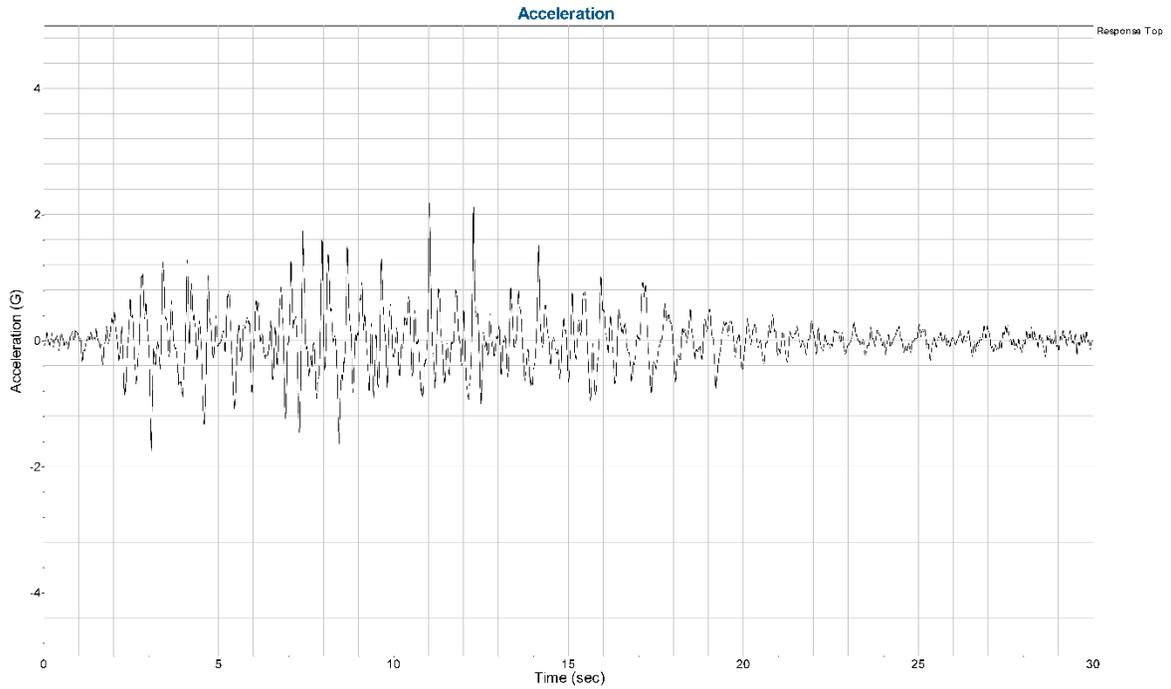
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Polarity: Positive  
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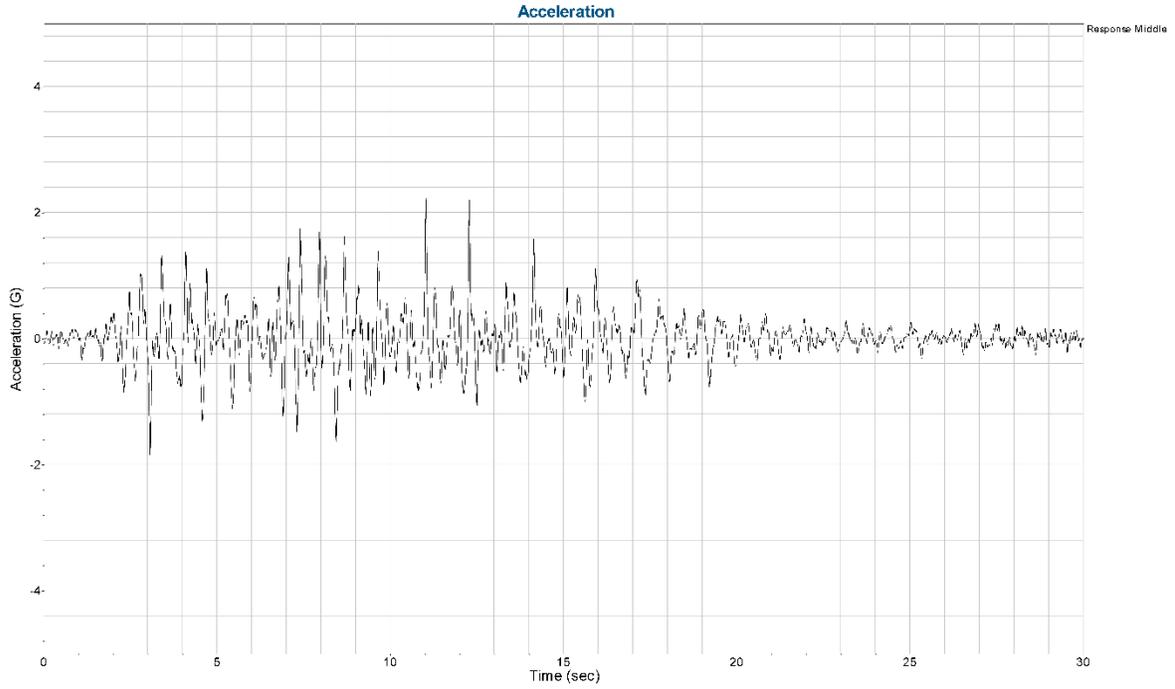
PR183799 - Martin International Enclosures - Enclosure  
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Demand: 1.65 G peak  
Pulse Width: 30.72 sec

Synthesis Method: Unknown synthesis type  
Pulse: 1 of 1  
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Jun 12, 2024 12:18:39  
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Percent Above Demand: 97.22 %



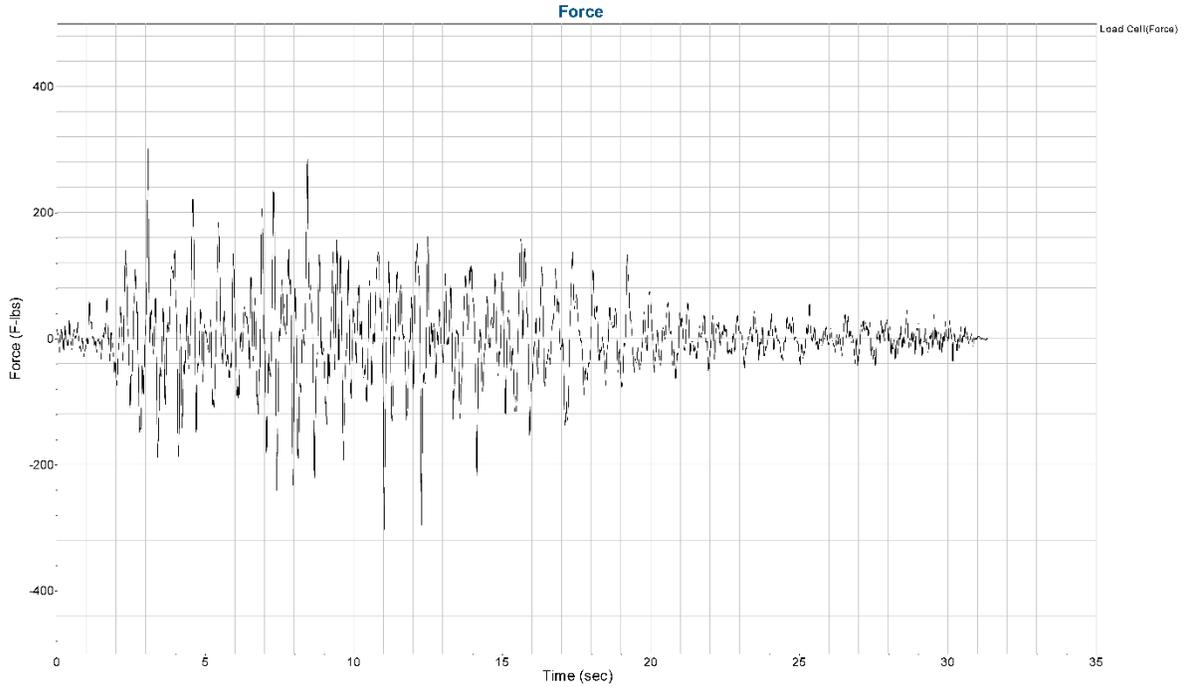
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Jun 12, 2024 12:18:39  
Polarity: Positive  
Percent Above Demand: 97.22 %

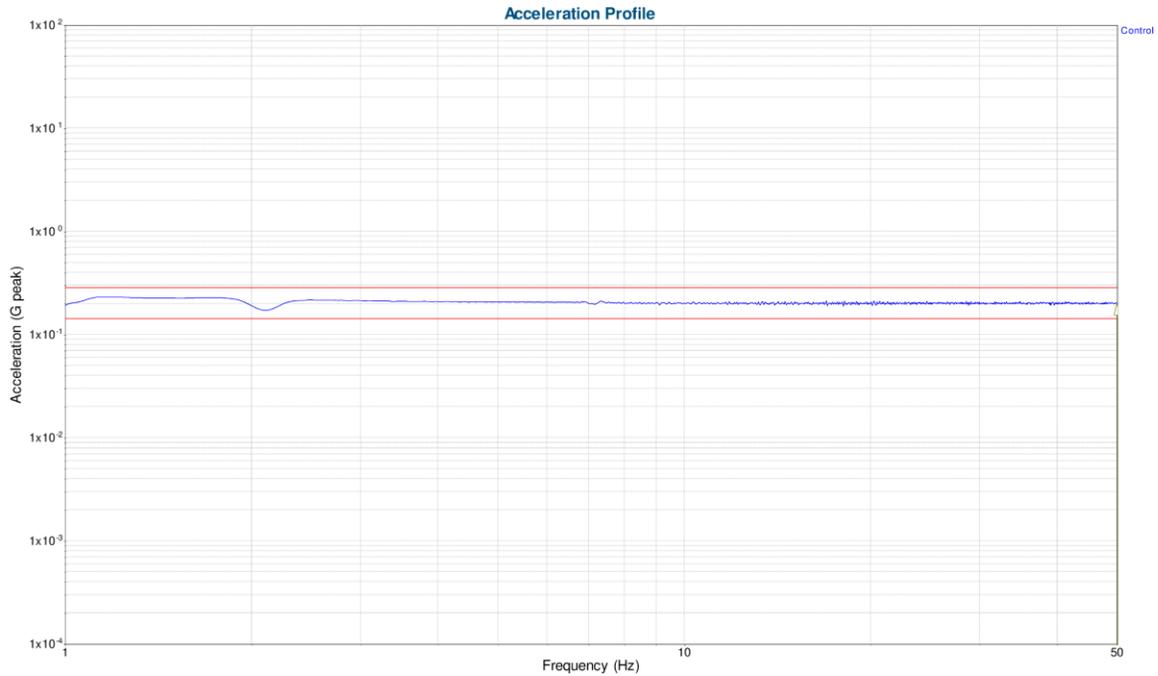


PR183799 - Martin International Enclosures - Enclosure  
Test#03 - Axis: Z - Earthquake(Seismic) - GR-63-CCORE Zone 4

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Earthquake - Zone 4.vkp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 12, 2024 12:25:25  
Points Per Sweep: 2000 points

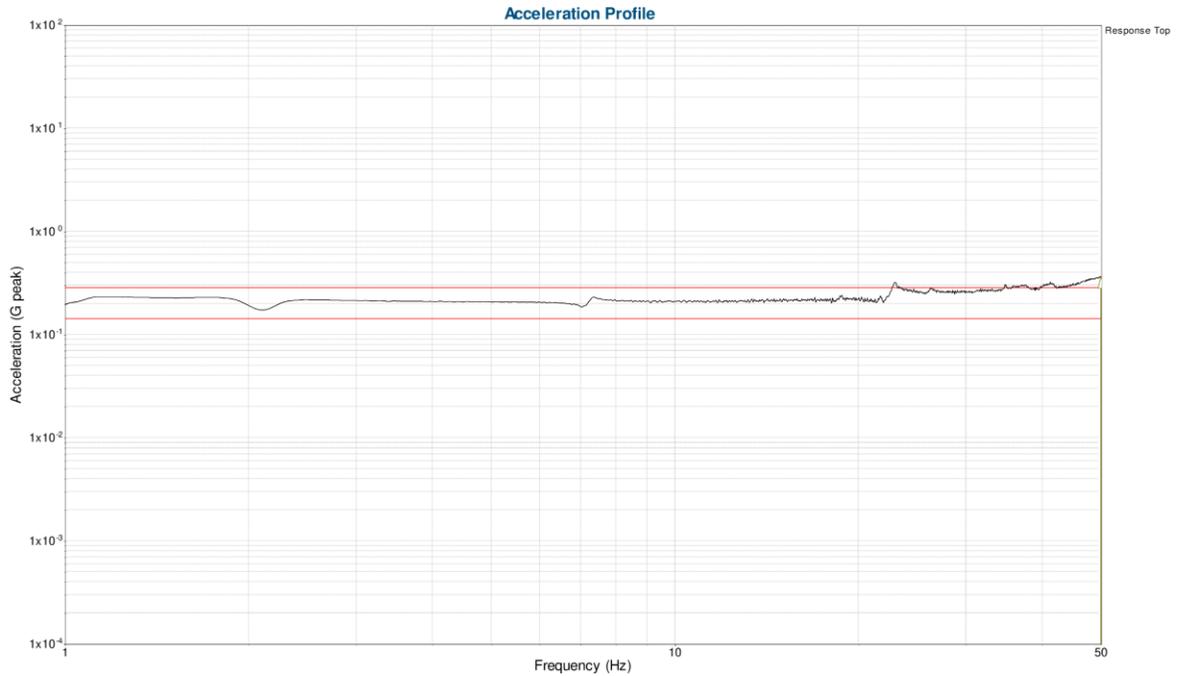


PR183799 - Martin International Enclosures - Enclosure  
Test#04 - Axis: Z - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min    Jun 12, 2024 12:25:25  
Points Per Sweep: 2000 points

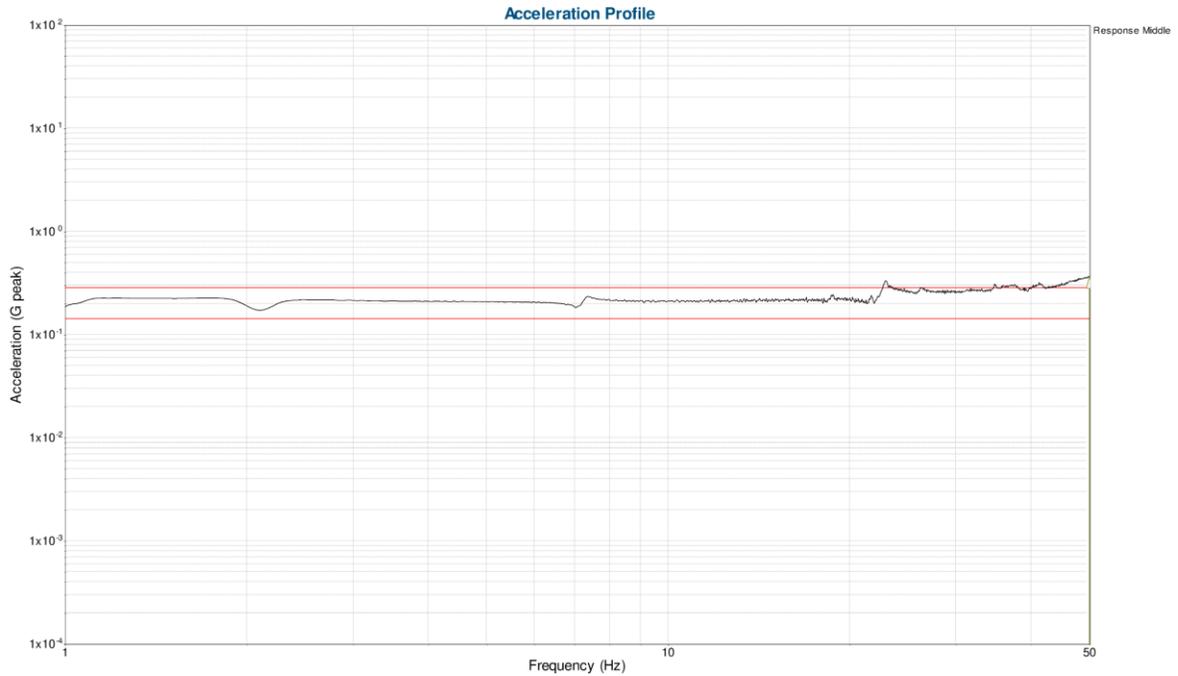


PR183799 - Martin International Enclosures - Enclosure  
Test#04 - Axis: Z - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

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Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 12, 2024 12:25:25  
Points Per Sweep: 2000 points

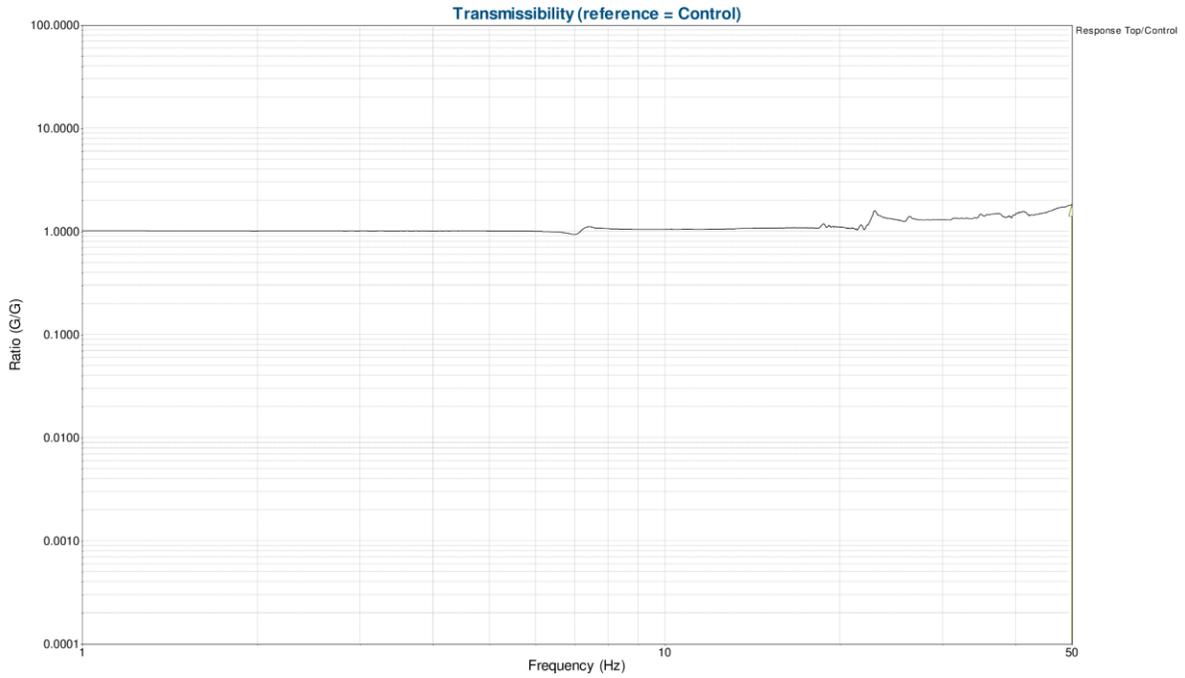


PR183799 - Martin International Enclosures - Enclosure  
Test#04 - Axis: Z - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
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Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 12, 2024 12:25:25  
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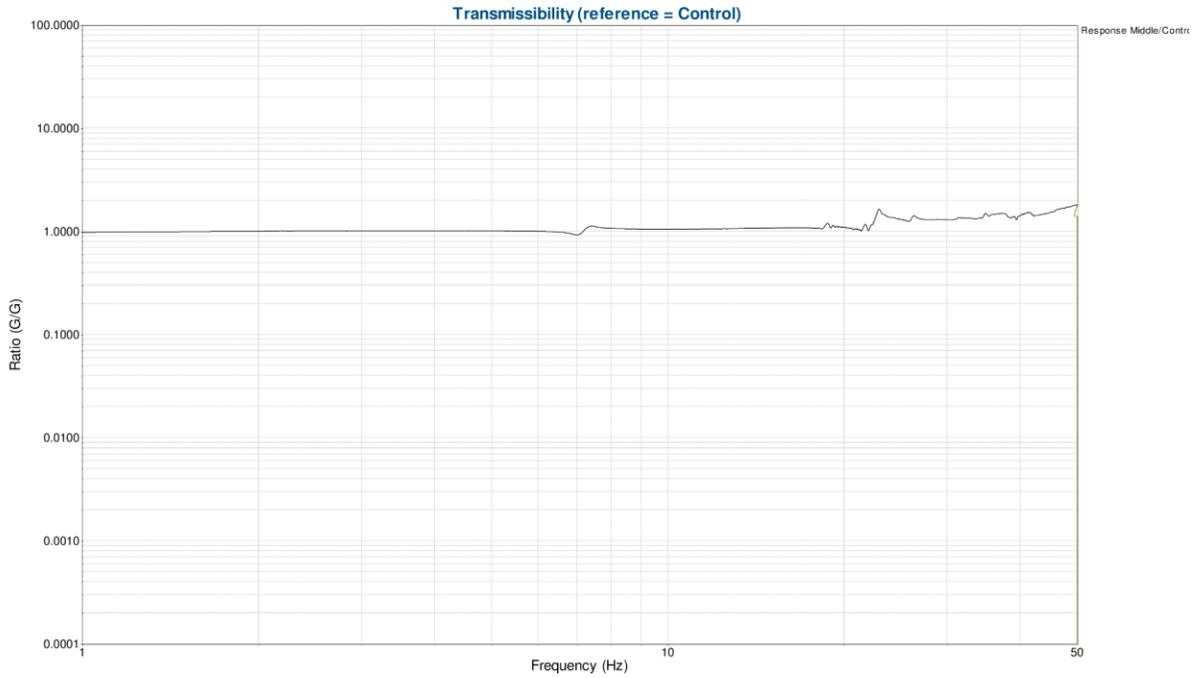


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Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 12, 2024 12:25:25  
Points Per Sweep: 2000 points

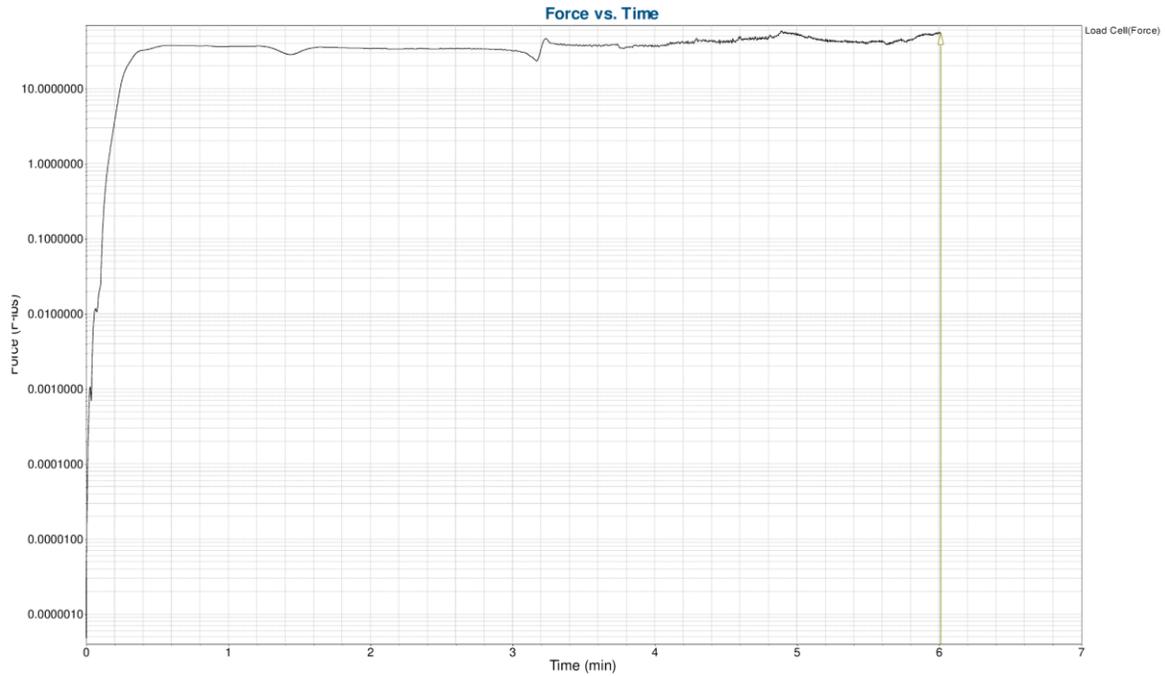


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Test#04 - Axis: Z - Sine Survey

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Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 12, 2024 12:25:25  
Points Per Sweep: 2000 points



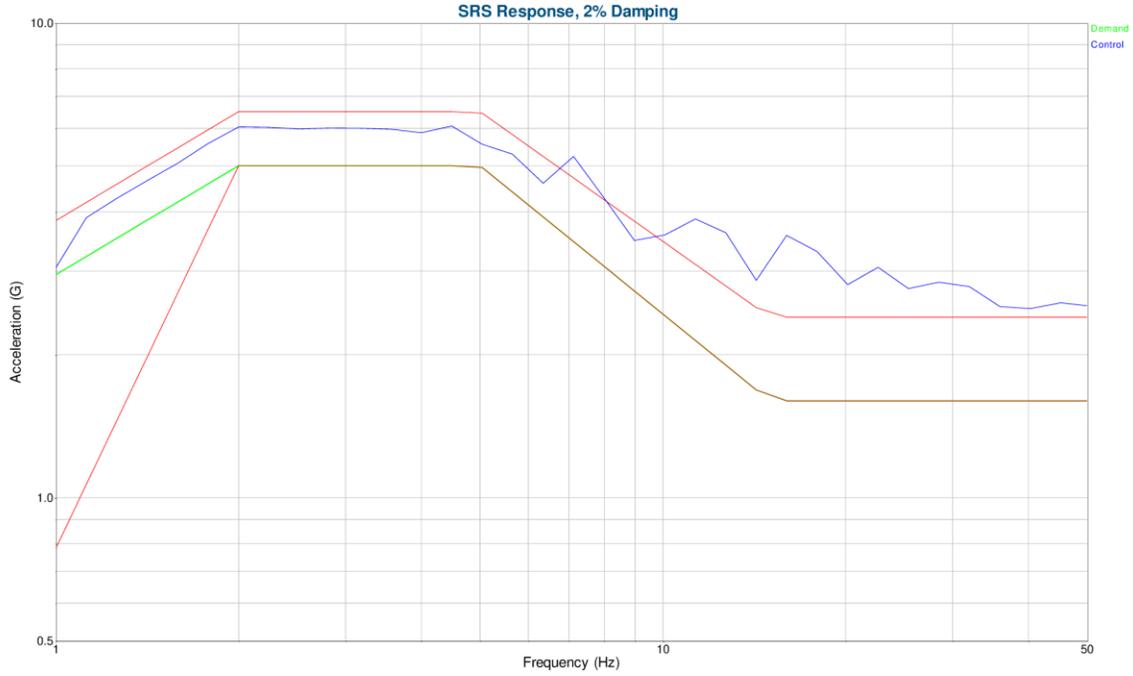
PR183799 - Martin International Enclosures - Enclosure  
Test#04 - Axis: Z - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Test Level: 0 dB  
Demand: 1.65 G peak  
Pulse Width: 30.72 sec

Synthesis Method: Unknown synthesis type  
Pulse: 1 of 1  
Te: 27590 ms

Jun 12, 2024 15:44:37  
Polarity: Positive  
Percent Above Demand: 97.22 %



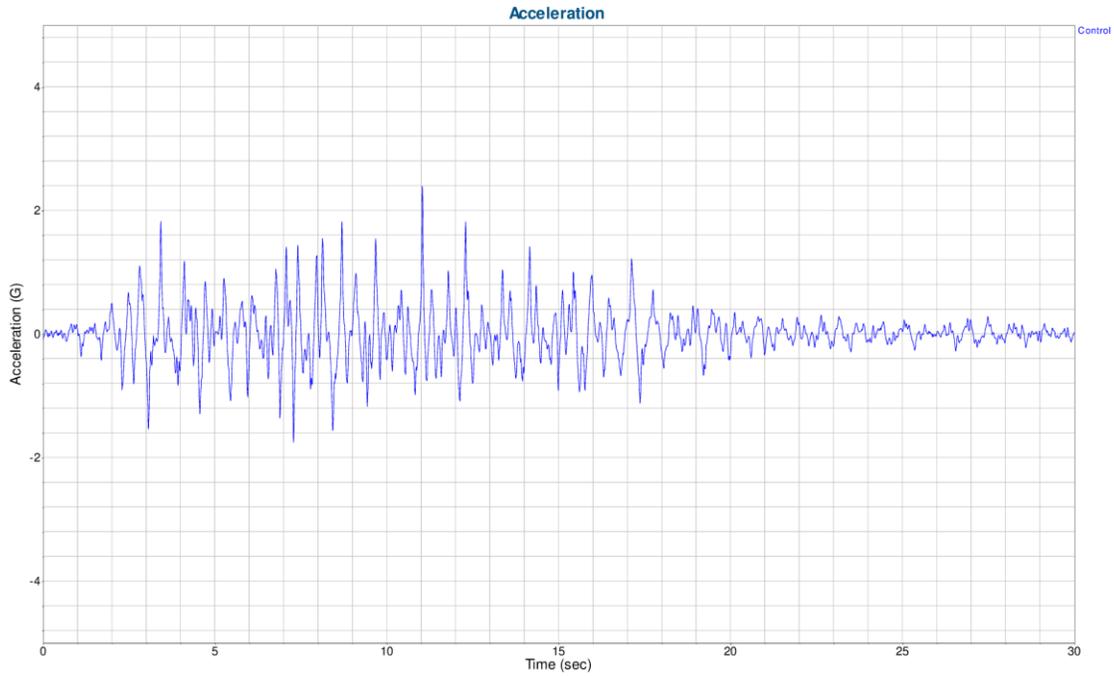
PR183799 - Martin International Enclosures - Enclosure  
Test#05 - Axis: X-Y - Earthquake(Seismic) - GR-63-CCORE Zone 4 - Calibration

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Earthquake - Zone 4.vkp

Test Level: 0 dB  
Demand: 1.65 G peak  
Pulse Width: 30.72 sec

Synthesis Method: Unknown synthesis type  
Pulse: 1 of 1  
Te: 27590 ms

Jun 12, 2024 15:44:37  
Polarity: Positive  
Percent Above Demand: 97.22 %

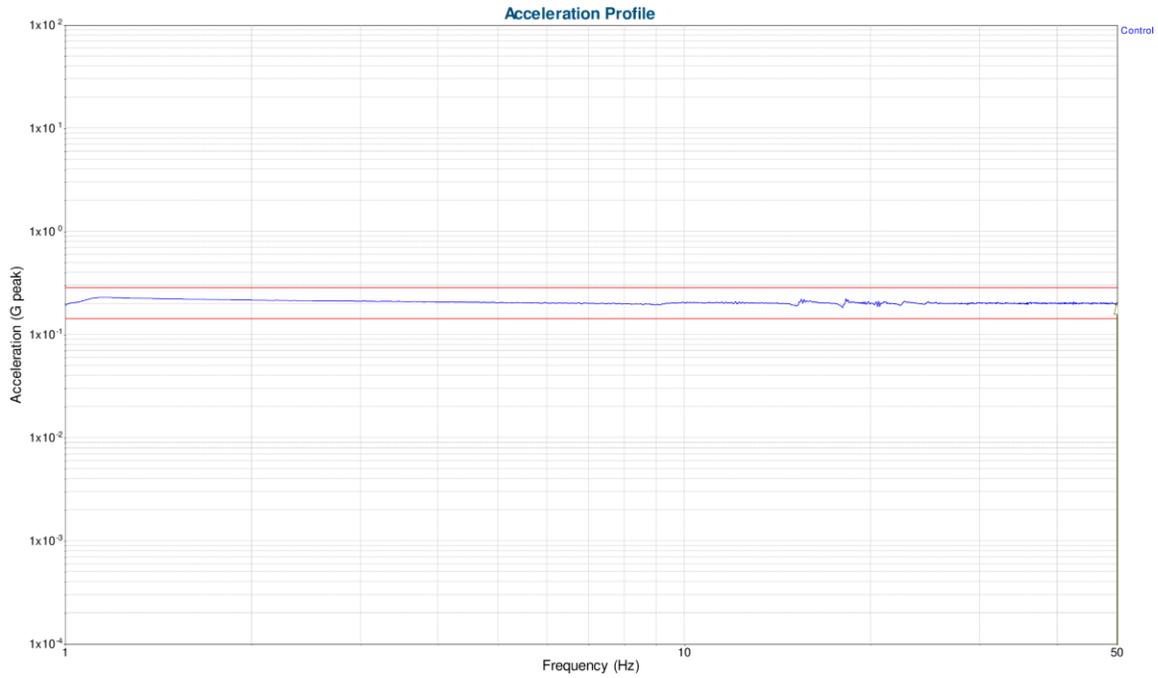


PR183799 - Martin International Enclosures - Enclosure  
Test#05 - Axis: X-Y - Earthquake(Seismic) - GR-63-CCORE Zone 4 - Calibration

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Earthquake - Zone 4.vkp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min    Jun 13, 2024 08:19:14  
Points Per Sweep: 2000 points

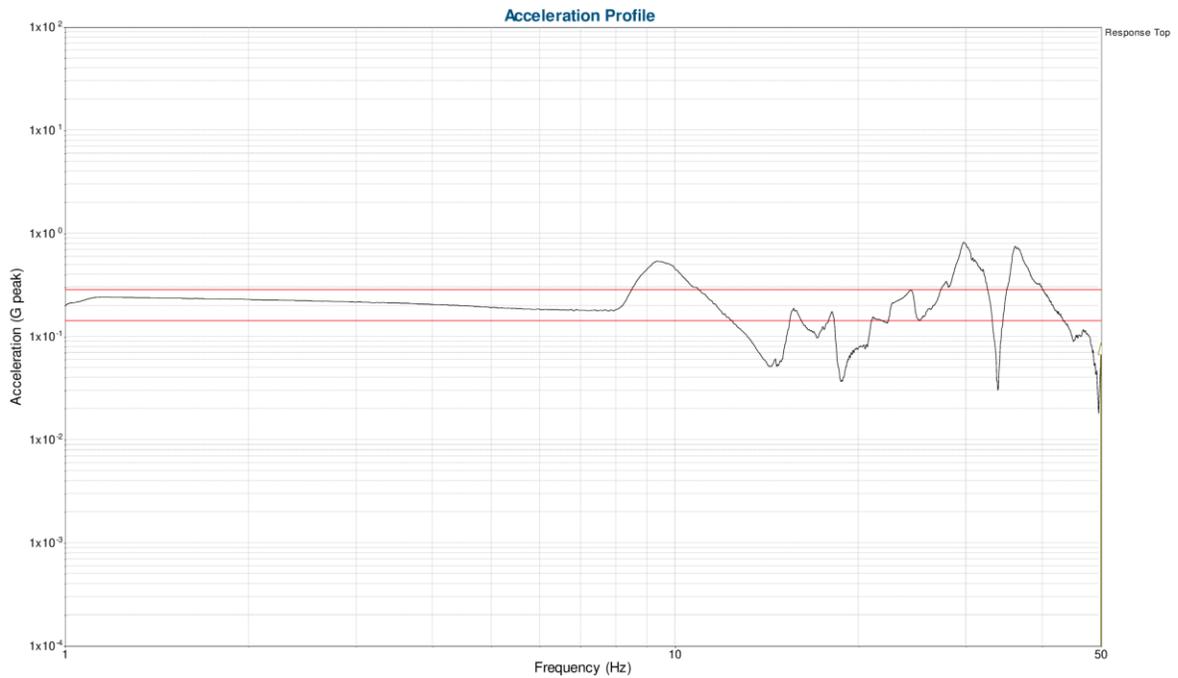


PR183799 - Martin International Enclosures - Enclosure  
Test#06 - Axis: Y - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 13, 2024 08:19:14  
Points Per Sweep: 2000 points

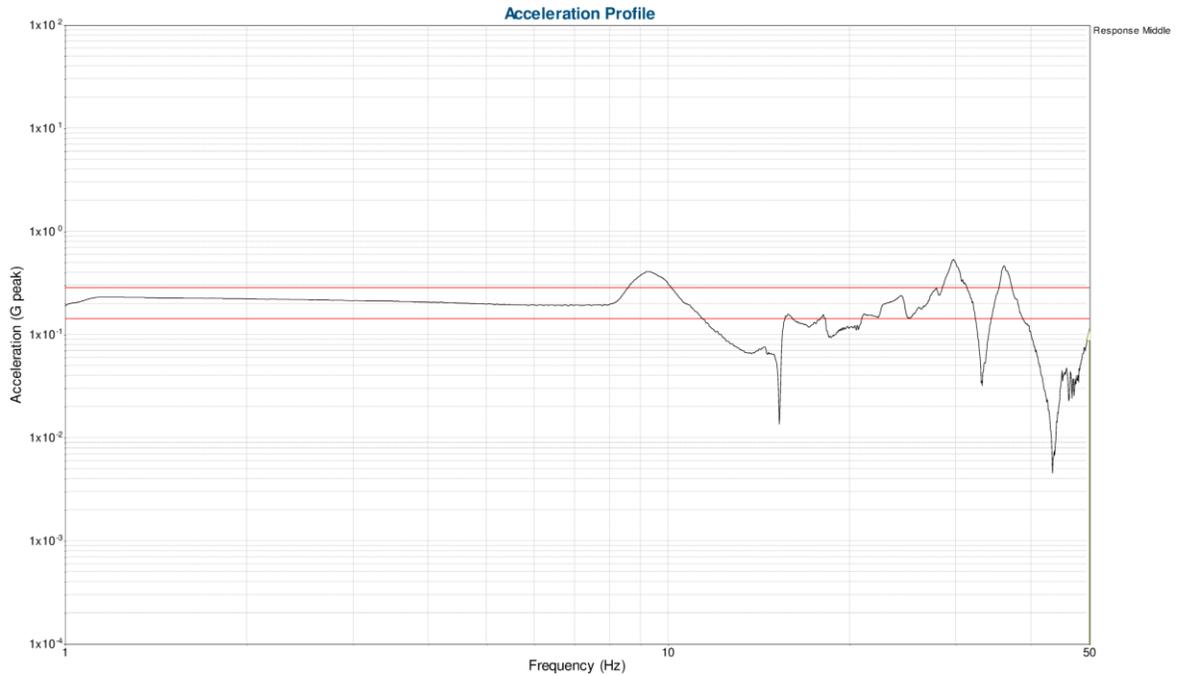


PR183799 - Martin International Enclosures - Enclosure  
Test#06 - Axis: Y - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min    Jun 13, 2024 08:19:14  
Points Per Sweep: 2000 points

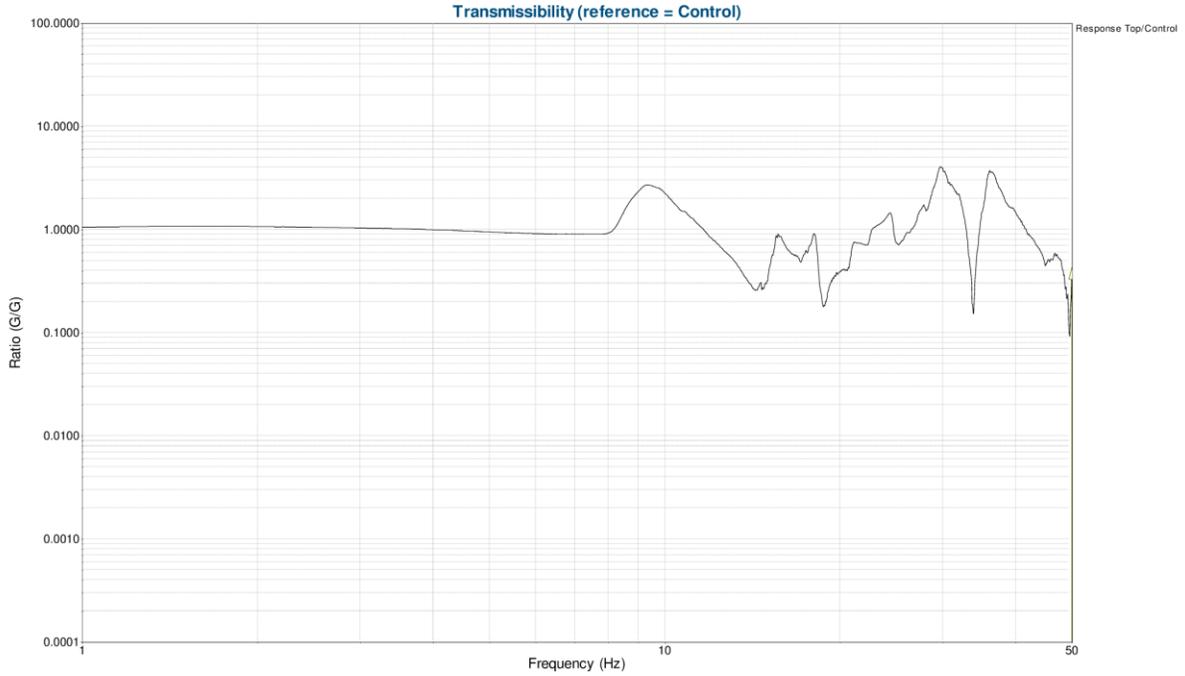


PR183799 - Martin International Enclosures - Enclosure  
Test#06 - Axis: Y - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 13, 2024 08:19:14  
Points Per Sweep: 2000 points

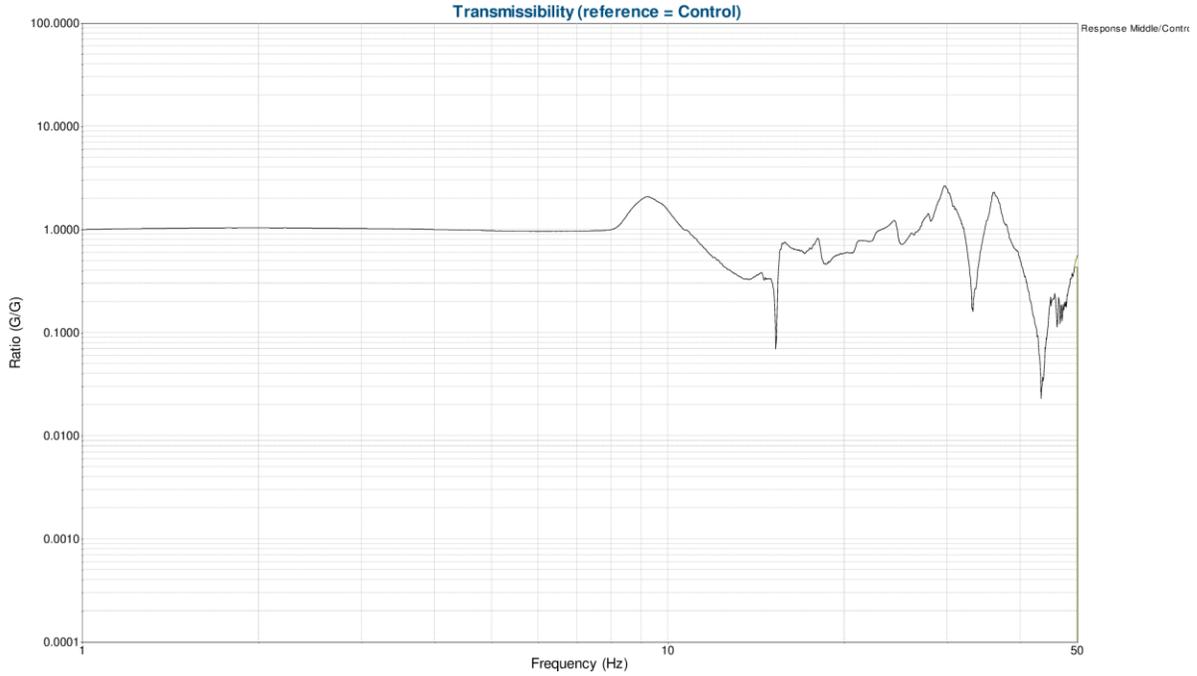


PR183799 - Martin International Enclosures - Enclosure  
Test#06 - Axis: Y - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 13, 2024 08:19:14  
Points Per Sweep: 2000 points

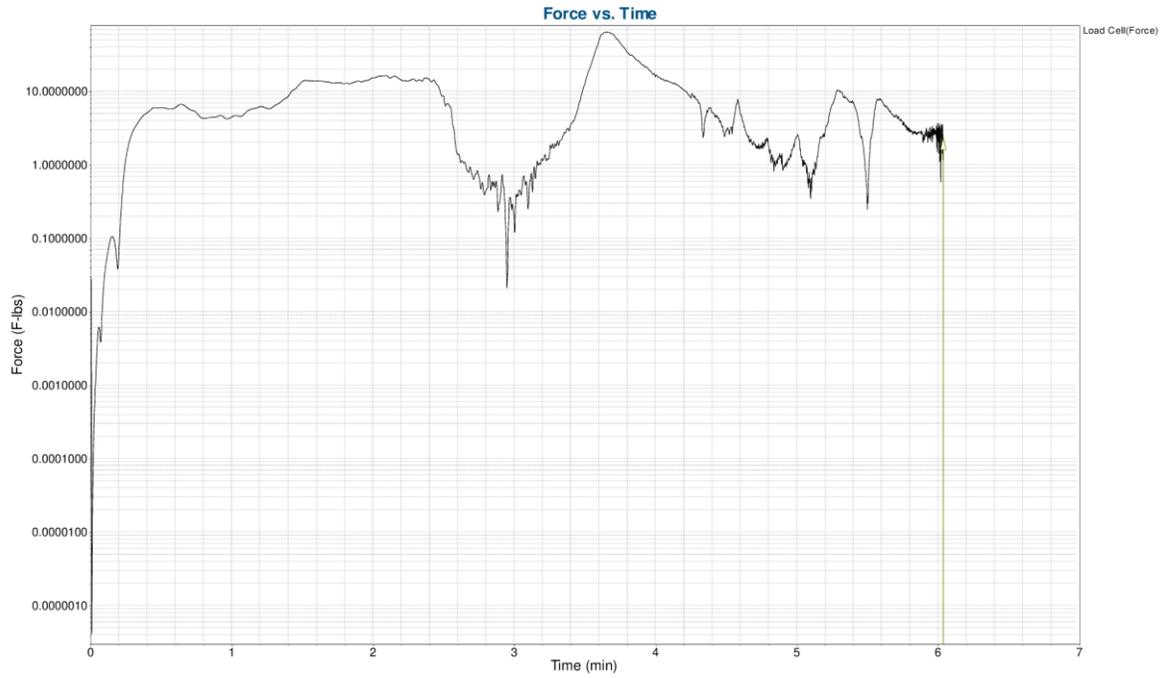


PR183799 - Martin International Enclosures - Enclosure  
Test#06 - Axis: Y - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 13, 2024 08:19:14  
Points Per Sweep: 2000 points

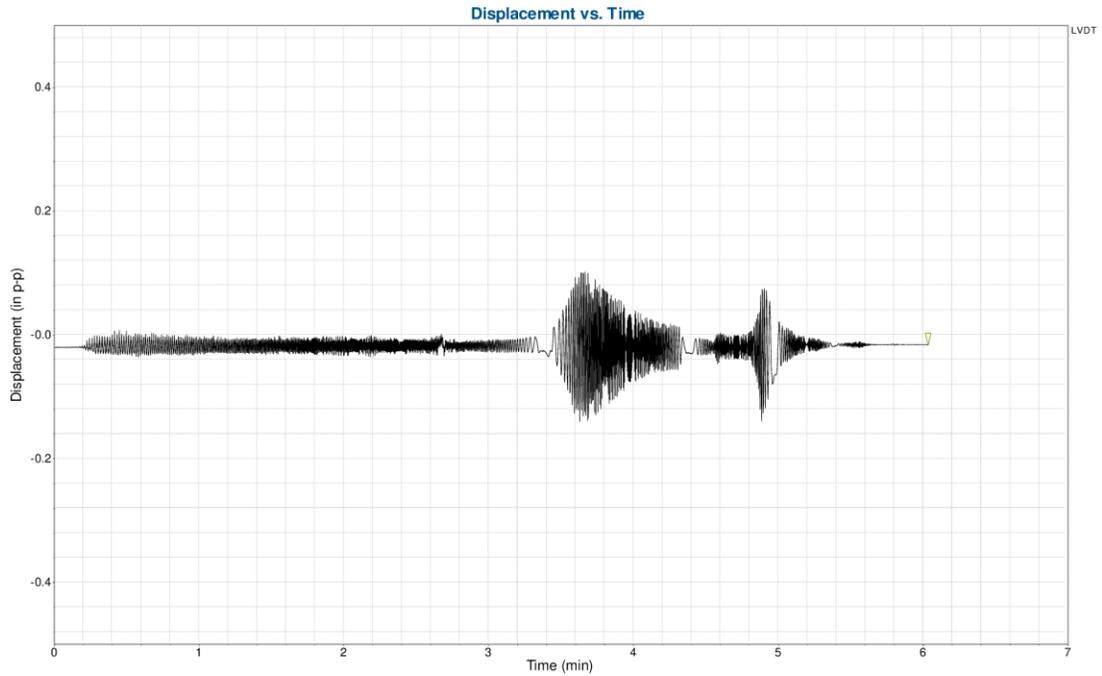


PR183799 - Martin International Enclosures - Enclosure  
Test#06 - Axis: Y - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 13, 2024 08:19:14  
Points Per Sweep: 2000 points



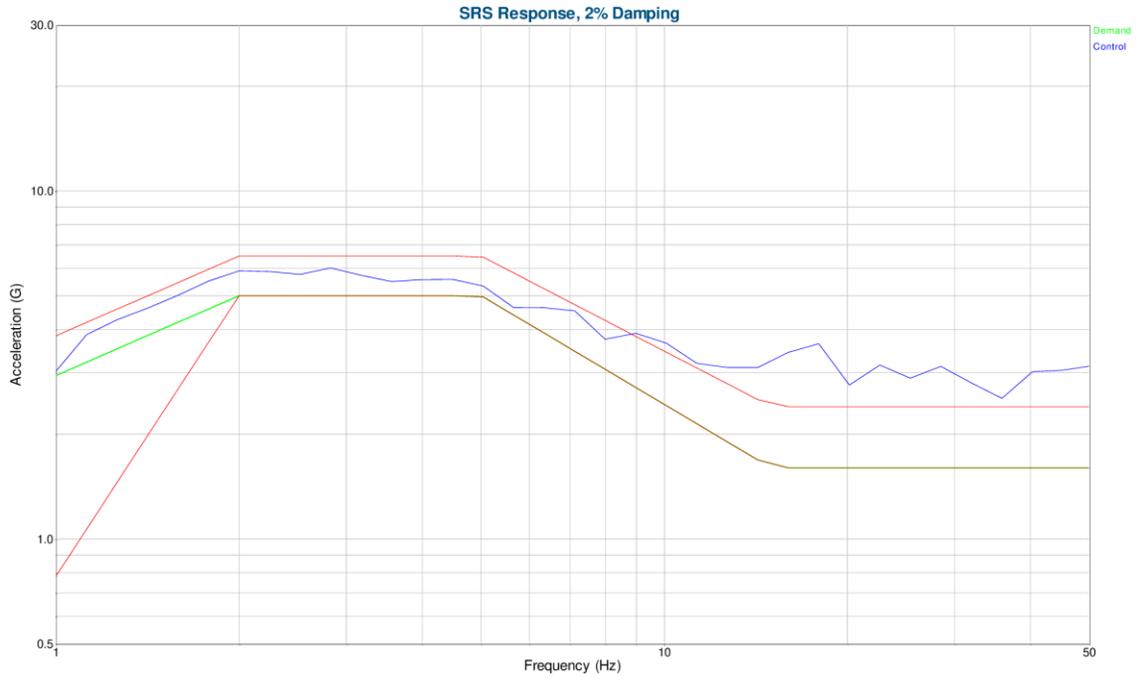
PR183799 - Martin International Enclosures - Enclosure  
Test#06 - Axis: Y - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Test Level: 0 dB  
Demand: 1.65 G peak  
Pulse Width: 30.72 sec

Synthesis Method: Unknown synthesis type  
Pulse: 1 of 1  
Te: 27590 ms

Jun 13, 2024 08:37:59  
Polarity: Positive  
Percent Above Demand: 97.22 %



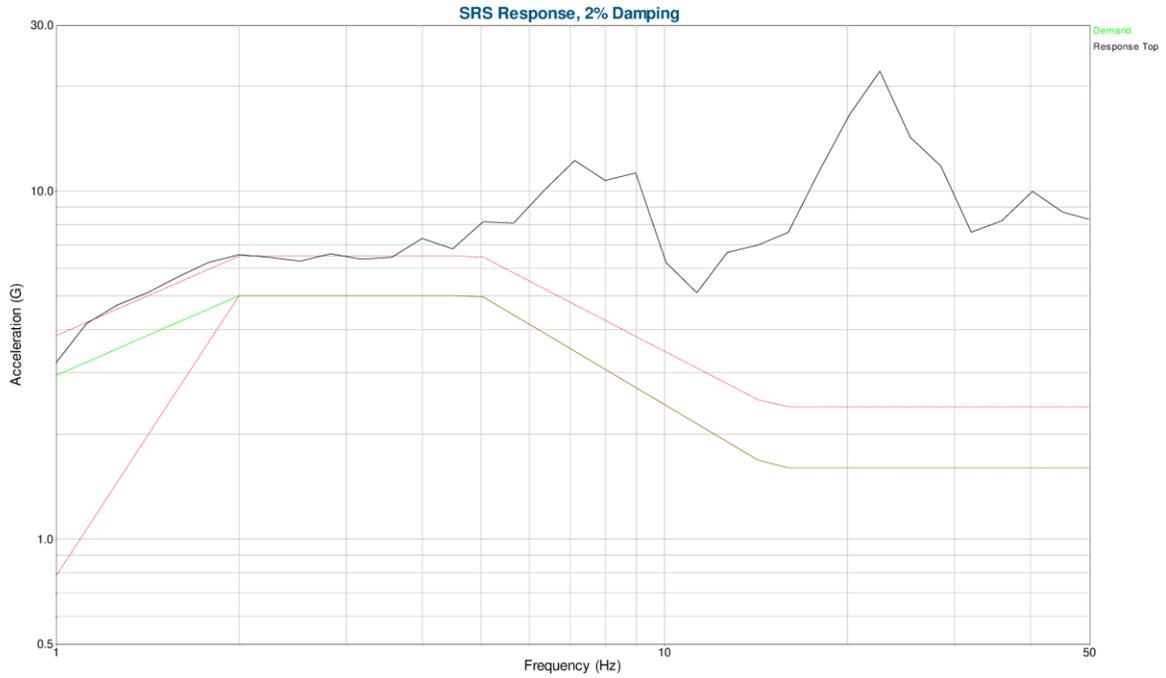
PR183799 - Martin International Enclosures - Enclosure  
Test#07 - Axis: Y - Earthquake(Seismic) - GR-63-CCORE Zone 4

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Earthquake - Zone 4.vkp

Test Level: 0 dB  
Demand: 1.65 G peak  
Pulse Width: 30.72 sec

Synthesis Method: Unknown synthesis type  
Pulse: 1 of 1  
Te: 27590 ms

Jun 13, 2024 08:37:59  
Polarity: Positive  
Percent Above Demand: 97.22 %



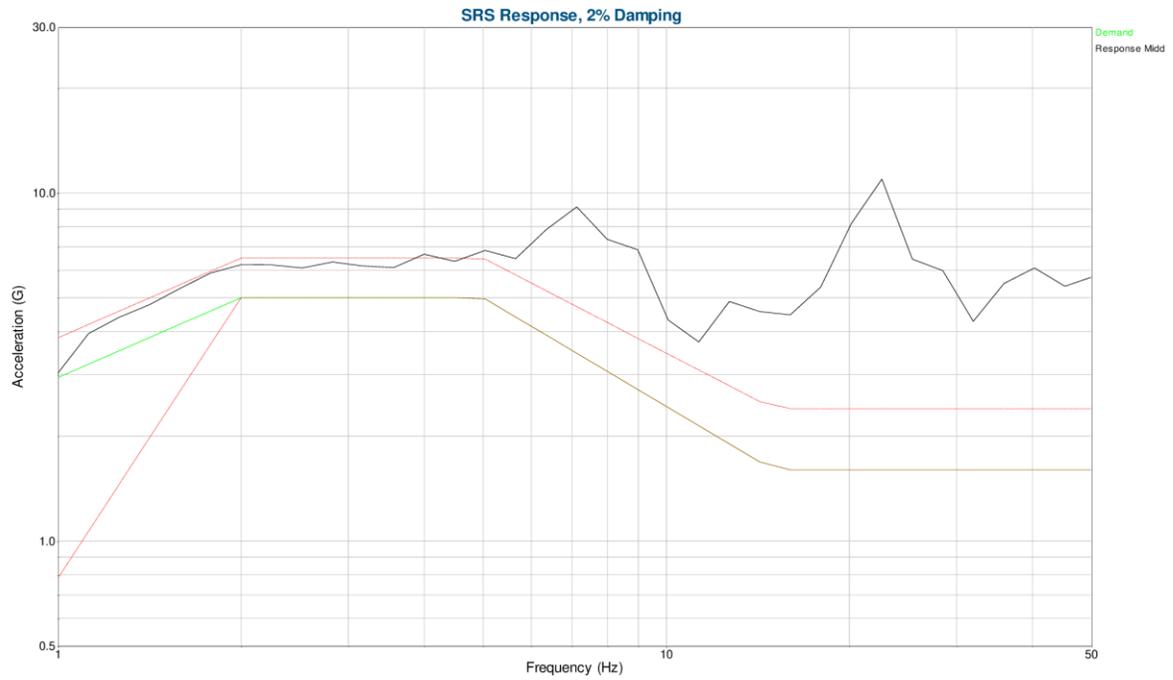
PR183799 - Martin International Enclosures - Enclosure  
Test#07 - Axis: Y - Earthquake(Seismic) - GR-63-CCORE Zone 4

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Earthquake - Zone 4.vkp

Test Level: 0 dB  
Demand: 1.65 G peak  
Pulse Width: 30.72 sec

Synthesis Method: Unknown synthesis type  
Pulse: 1 of 1  
Te: 27590 ms

Jun 13, 2024 08:37:59  
Polarity: Positive  
Percent Above Demand: 97.22 %



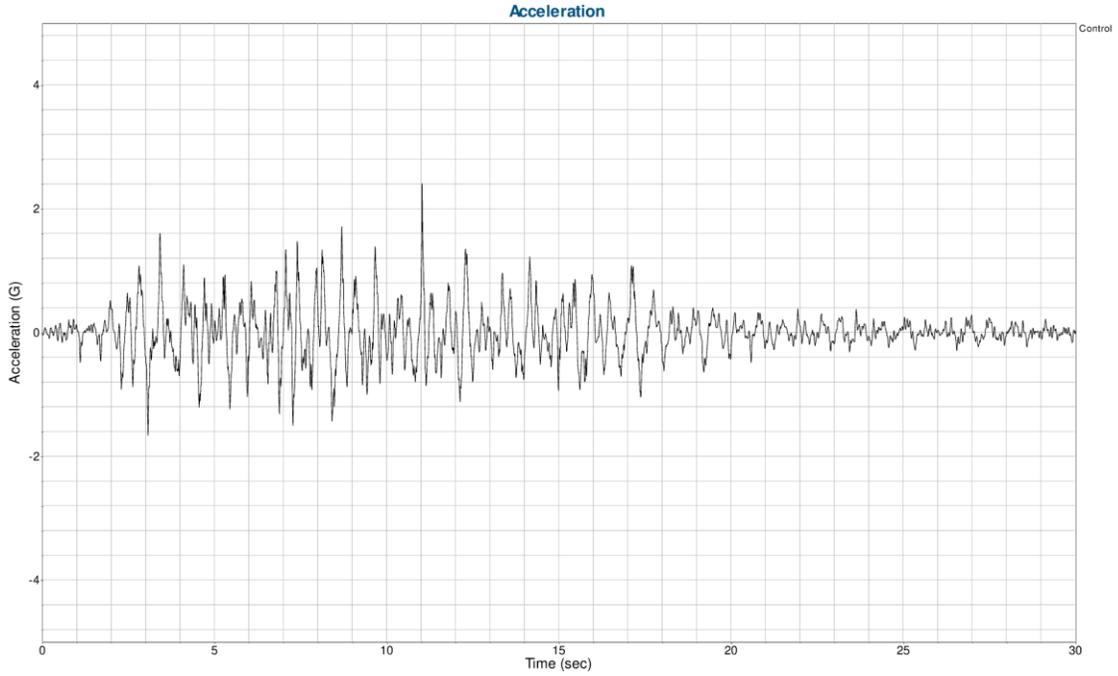
PR183799 - Martin International Enclosures - Enclosure  
Test#07 - Axis: Y - Earthquake(Seismic) - GR-63-CCORE Zone 4

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Earthquake - Zone 4.vkp

Test Level: 0 dB  
Demand: 1.65 G peak  
Pulse Width: 30.72 sec

Synthesis Method: Unknown synthesis type  
Pulse: 1 of 1  
Te: 27590 ms

Jun 13, 2024 08:37:59  
Polarity: Positive  
Percent Above Demand: 97.22 %



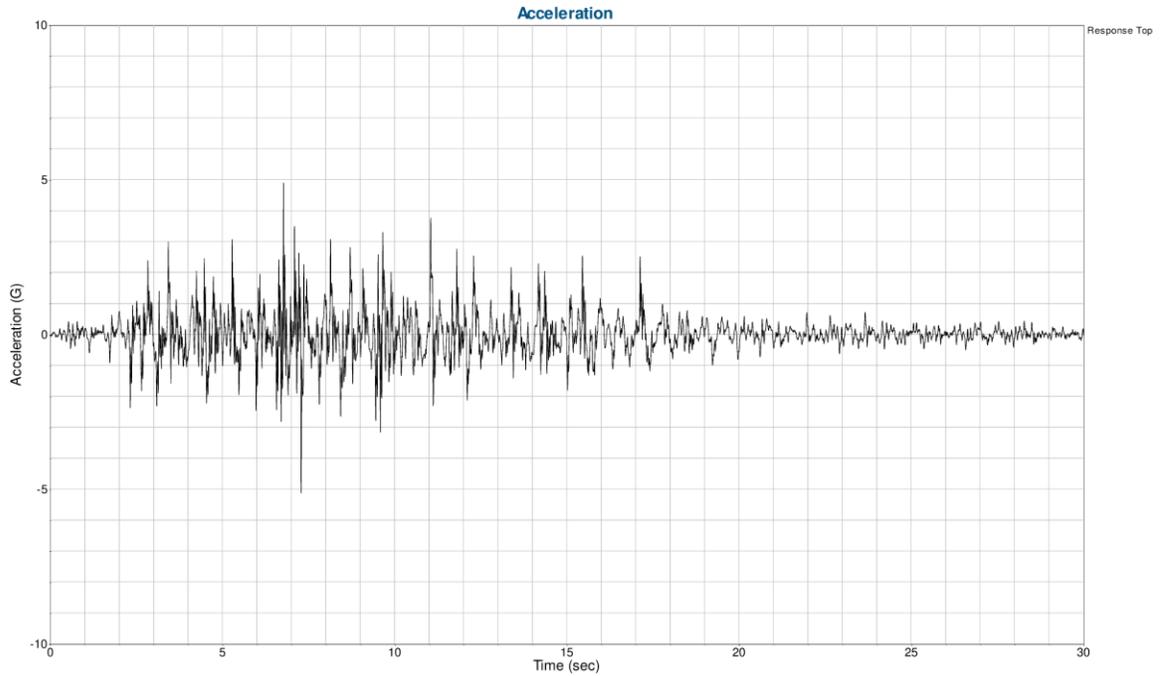
PR183799 - Martin International Enclosures - Enclosure  
Test#07 - Axis: Y - Earthquake(Seismic) - GR-63-CCORE Zone 4

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Earthquake - Zone 4.vkp

Test Level: 0 dB  
Demand: 1.65 G peak  
Pulse Width: 30.72 sec

Synthesis Method: Unknown synthesis type  
Pulse: 1 of 1  
Te: 27590 ms

Jun 13, 2024 08:37:59  
Polarity: Positive  
Percent Above Demand: 97.22 %



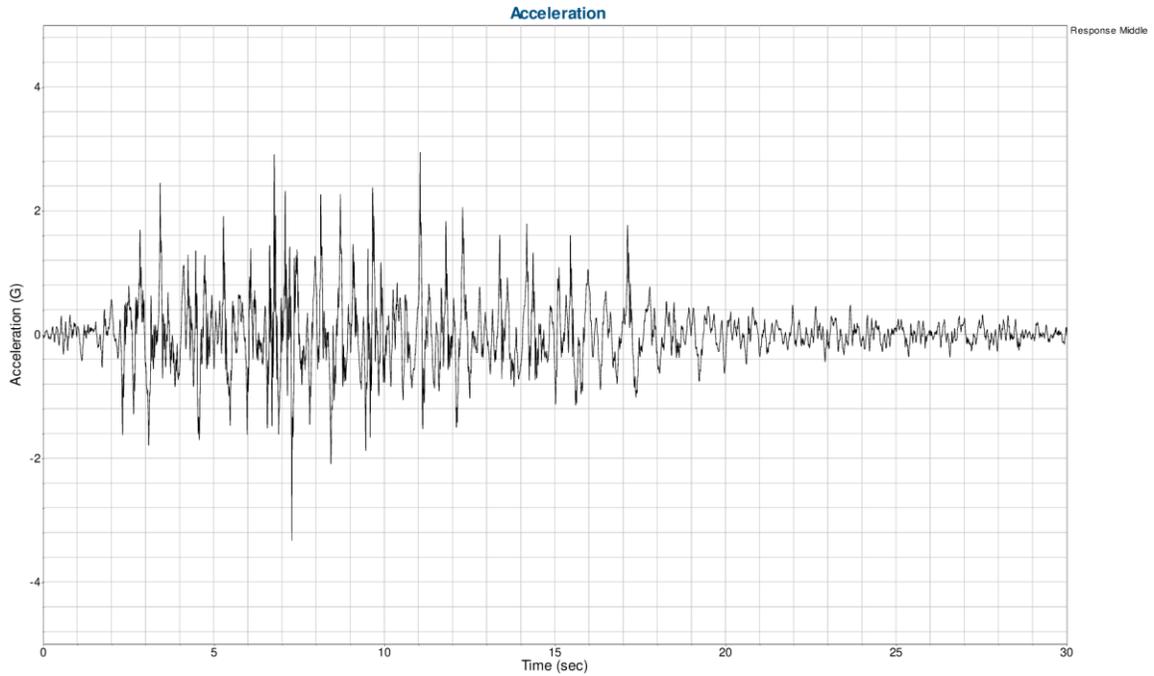
PR183799 - Martin International Enclosures - Enclosure  
Test#07 - Axis: Y - Earthquake(Seismic) - GR-63-CCORE Zone 4

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Earthquake - Zone 4.vkp

Test Level: 0 dB  
Demand: 1.65 G peak  
Pulse Width: 30.72 sec

Synthesis Method: Unknown synthesis type  
Pulse: 1 of 1  
Te: 27590 ms

Jun 13, 2024 08:37:59  
Polarity: Positive  
Percent Above Demand: 97.22 %



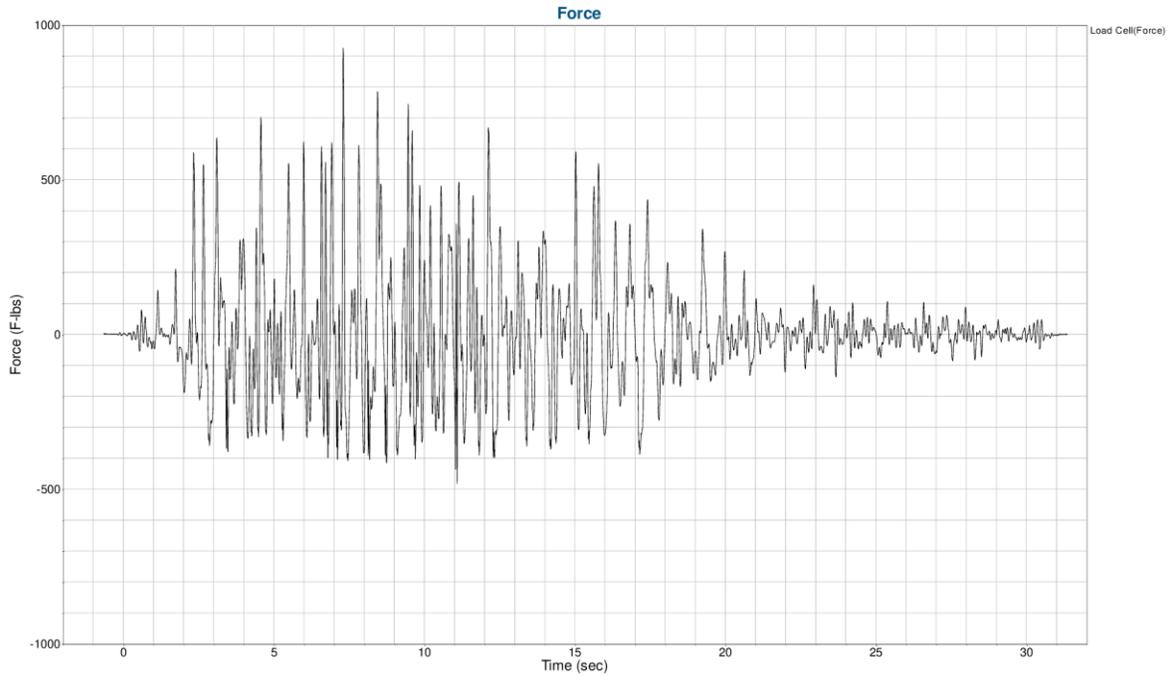
PR183799 - Martin International Enclosures - Enclosure  
Test#07 - Axis: Y - Earthquake(Seismic) - GR-63-CCORE Zone 4

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Earthquake - Zone 4.vkp

Test Level: 0 dB  
Demand: 1.65 G peak  
Pulse Width: 30.72 sec

Synthesis Method: Unknown synthesis type  
Pulse: 1 of 1  
Te: 27590 ms

Jun 13, 2024 08:37:59  
Polarity: Positive  
Percent Above Demand: 97.22 %



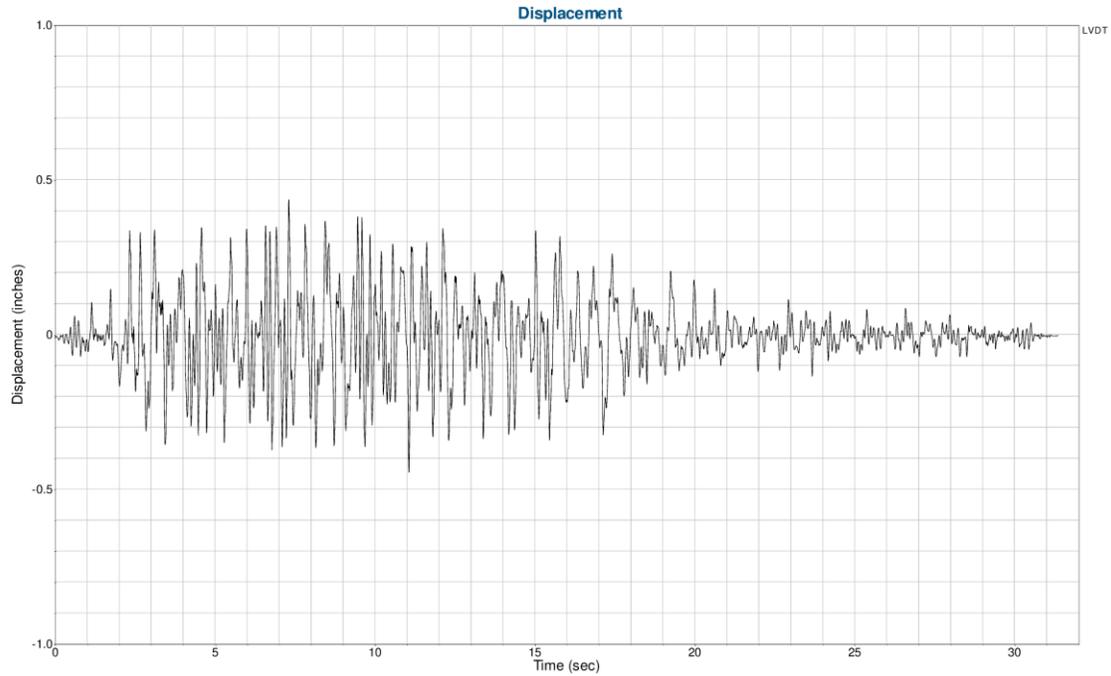
PR183799 - Martin International Enclosures - Enclosure  
Test#07 - Axis: Y - Earthquake(Seismic) - GR-63-CCORE Zone 4

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Earthquake - Zone 4.vkp

Test Level: 0 dB  
Demand: 1.65 G peak  
Pulse Width: 30.72 sec

Synthesis Method: Unknown synthesis type  
Pulse: 1 of 1  
Te: 27590 ms

Jun 13, 2024 08:37:59  
Polarity: Positive  
Percent Above Demand: 97.22 %

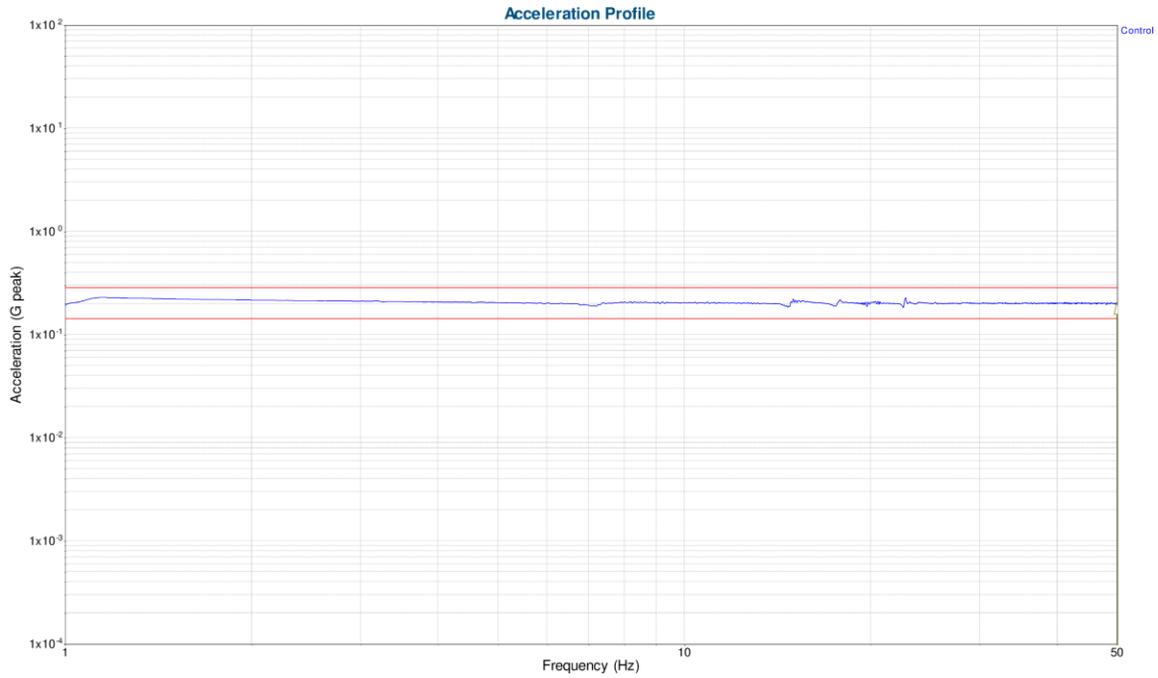


PR183799 - Martin International Enclosures - Enclosure  
Test#07 - Axis: Y - Earthquake(Seismic) - GR-63-CCORE Zone 4

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Earthquake - Zone 4.vkp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 13, 2024 08:54:05  
Points Per Sweep: 2000 points

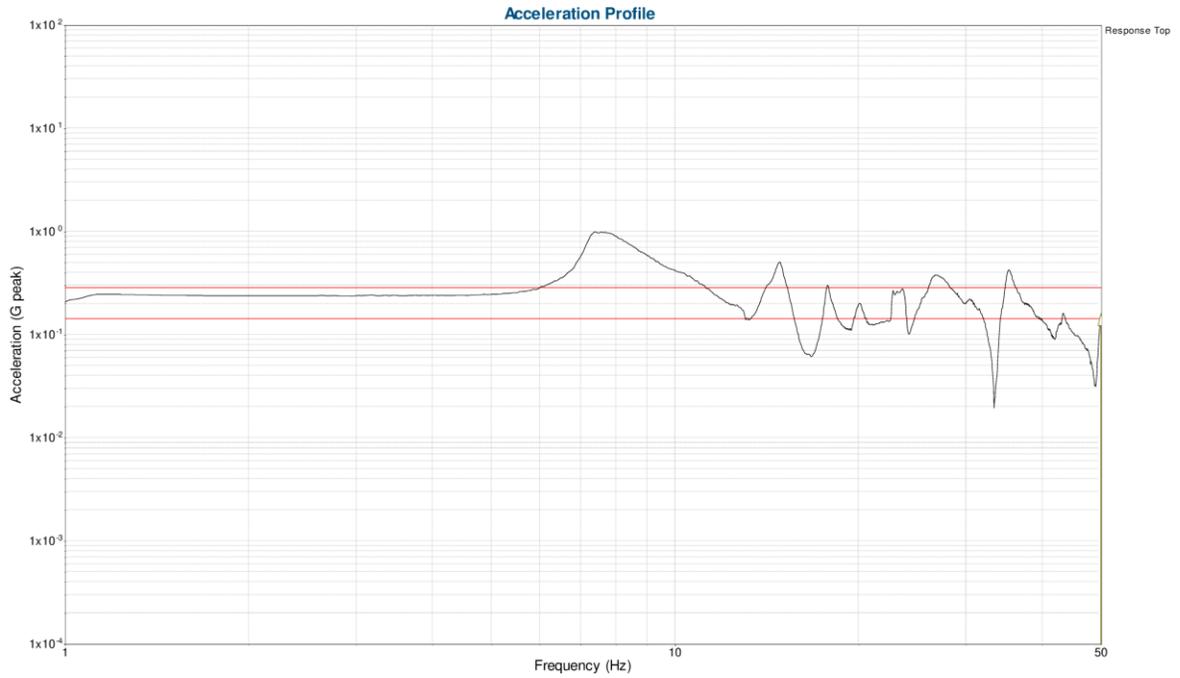


PR183799 - Martin International Enclosures - Enclosure  
Test#08 - Axis: Y - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min    Jun 13, 2024 08:54:05  
Points Per Sweep: 2000 points

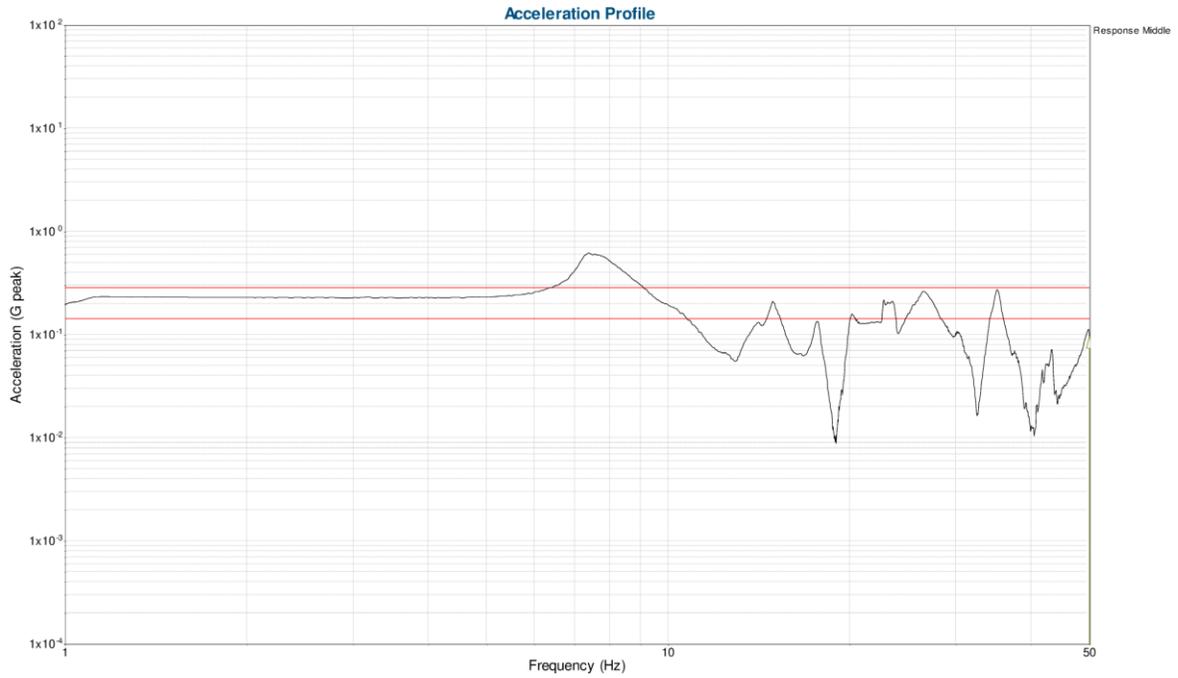


PR183799 - Martin International Enclosures - Enclosure  
Test#08 - Axis: Y - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 13, 2024 08:54:05  
Points Per Sweep: 2000 points

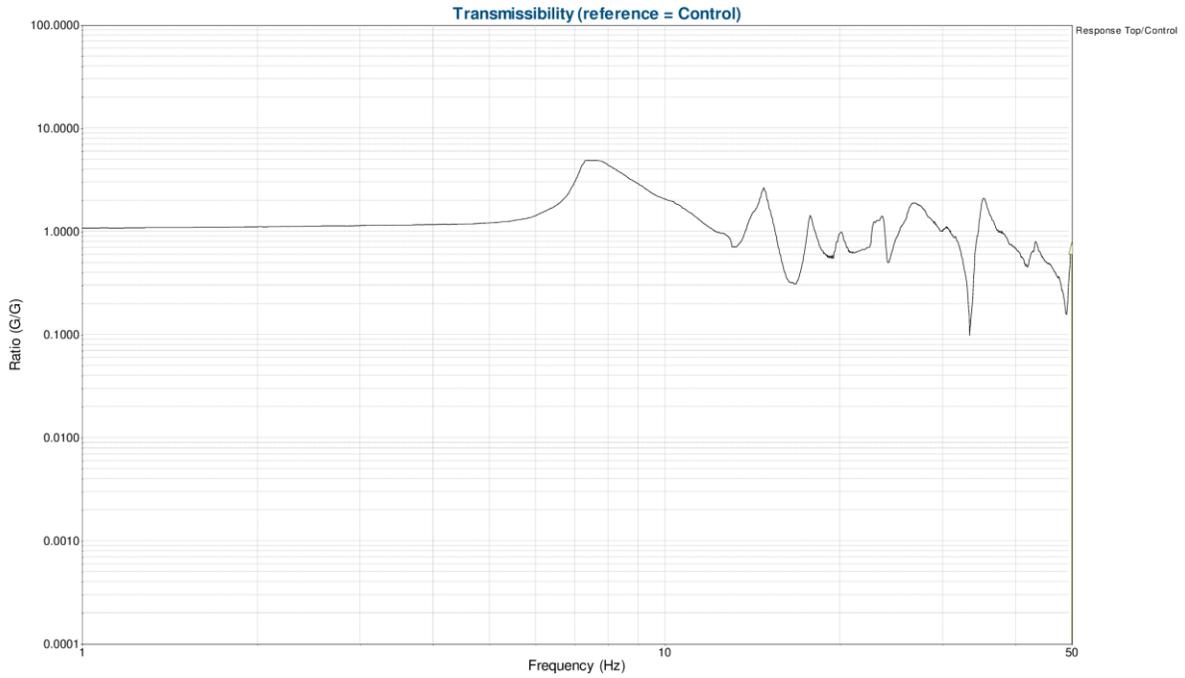


PR183799 - Martin International Enclosures - Enclosure  
Test#08 - Axis: Y - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 13, 2024 08:54:05  
Points Per Sweep: 2000 points

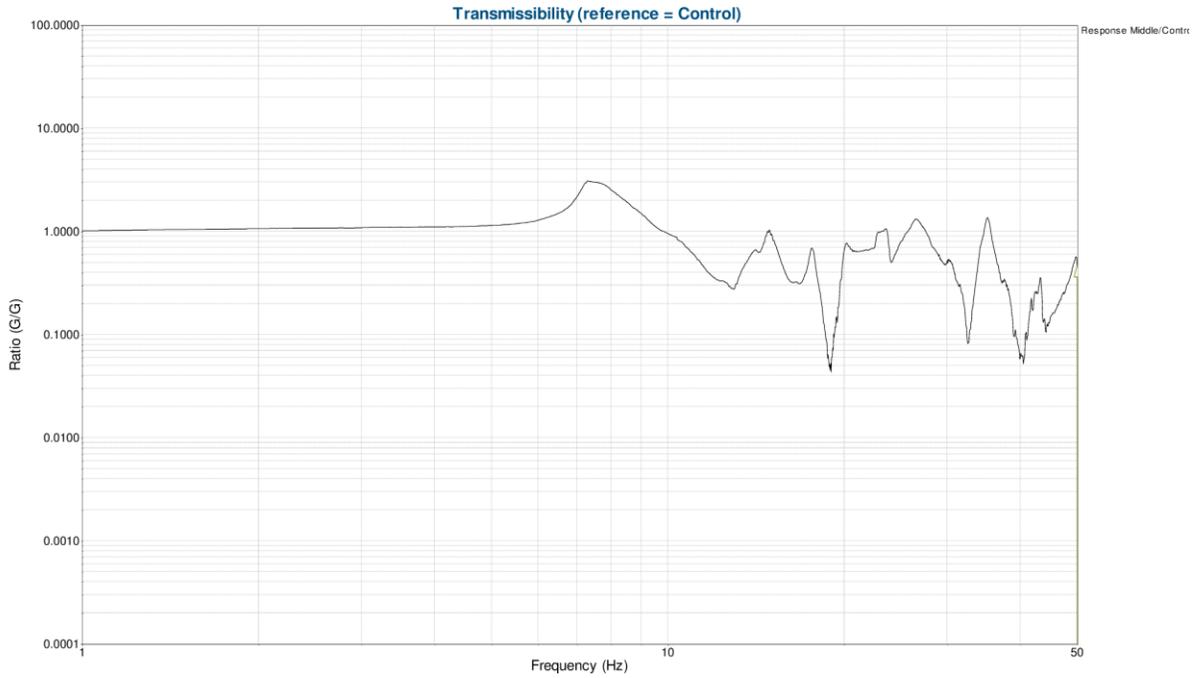


PR183799 - Martin International Enclosures - Enclosure  
Test#08 - Axis: Y - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 13, 2024 08:54:05  
Points Per Sweep: 2000 points

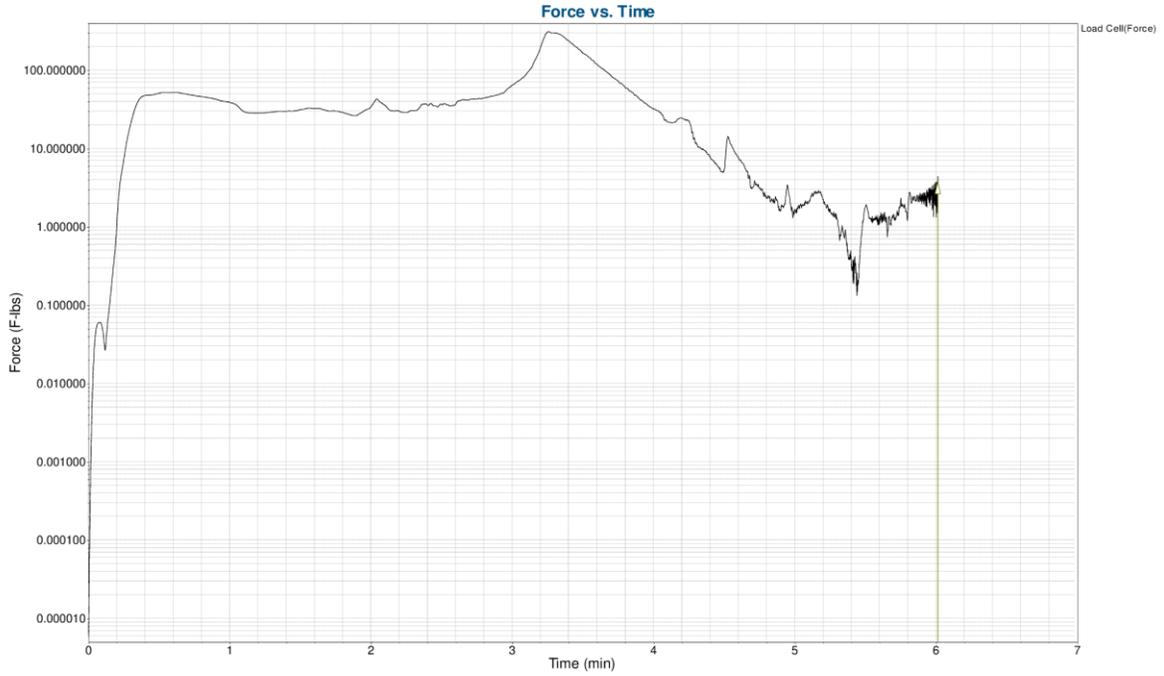


PR183799 - Martin International Enclosures - Enclosure  
Test#08 - Axis: Y - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 13, 2024 08:54:05  
Points Per Sweep: 2000 points

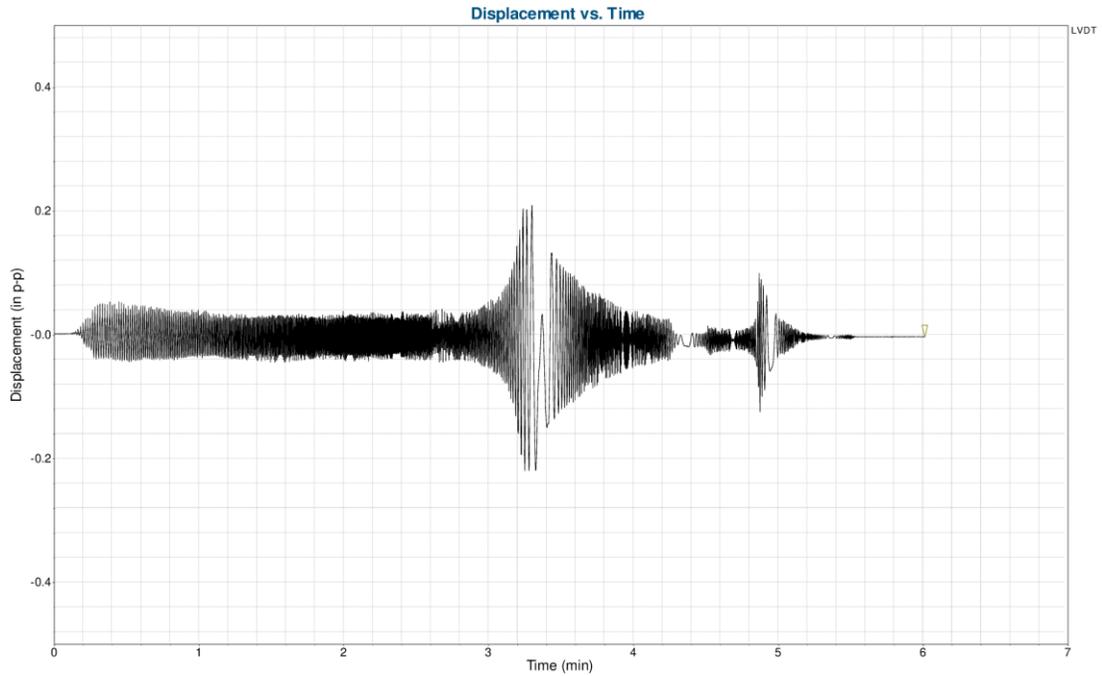


PR183799 - Martin International Enclosures - Enclosure  
Test#08 - Axis: Y - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min    Jun 13, 2024 08:54:05  
Points Per Sweep: 2000 points

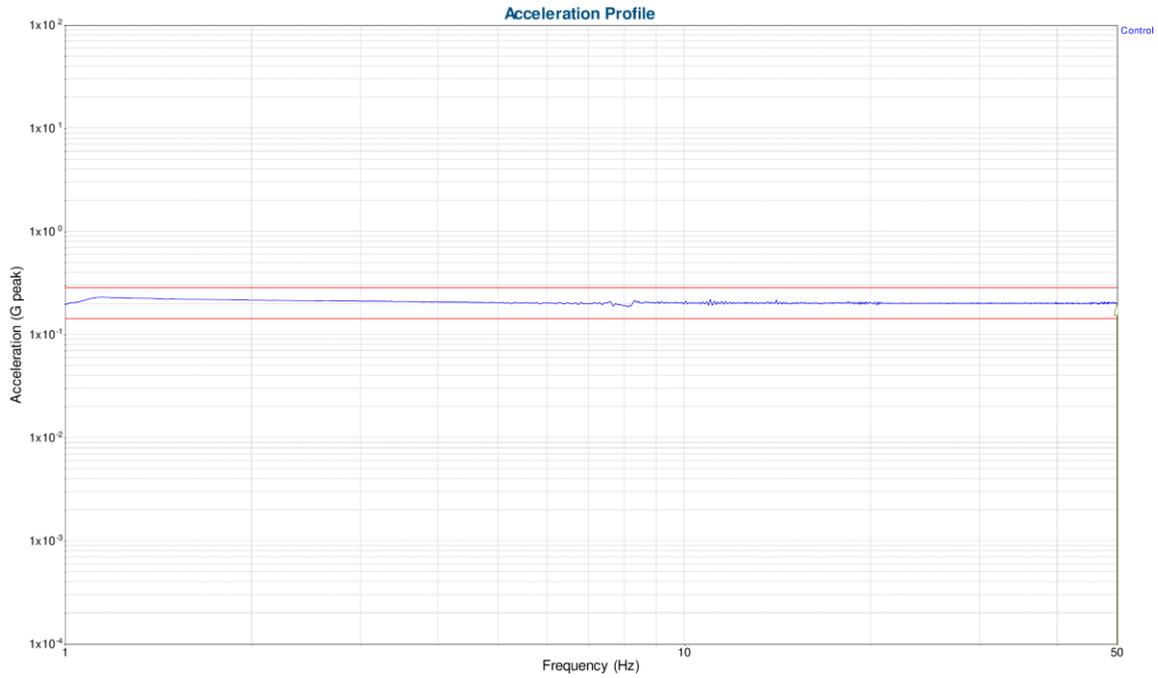


PR183799 - Martin International Enclosures - Enclosure  
Test#08 - Axis: Y - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min    Jun 13, 2024 11:48:30  
Points Per Sweep: 2000 points

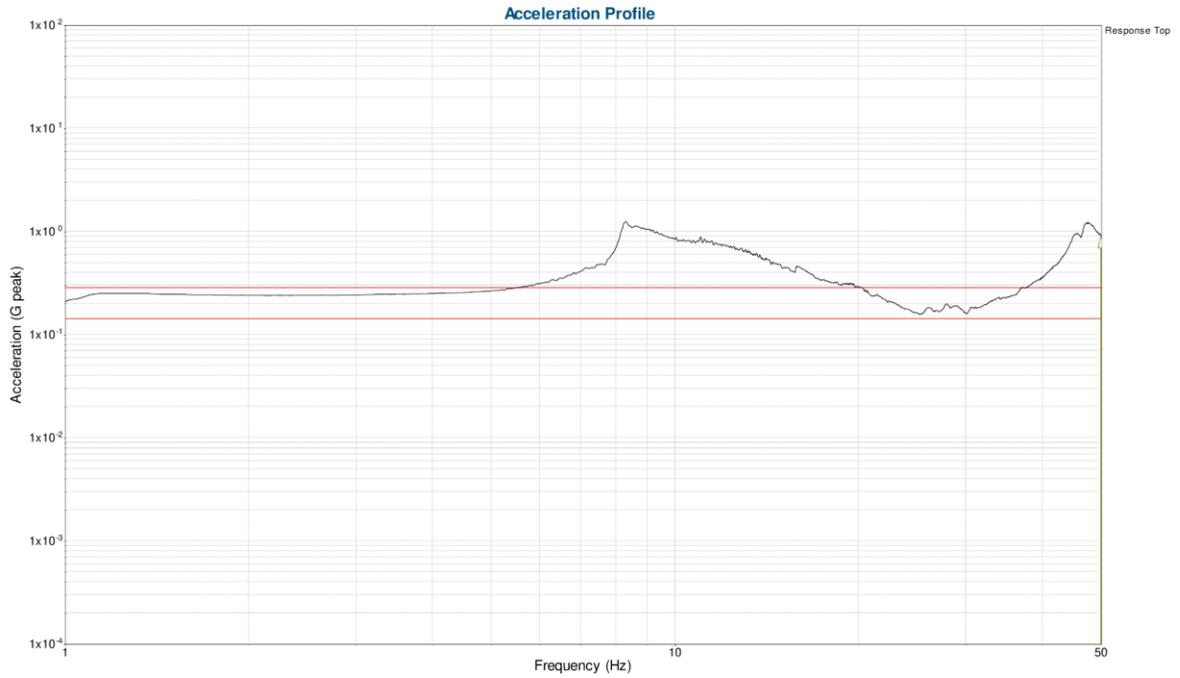


PR183799 - Martin International Enclosures - Enclosure  
Test#09 - Axis: X - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min    Jun 13, 2024 11:48:30  
Points Per Sweep: 2000 points

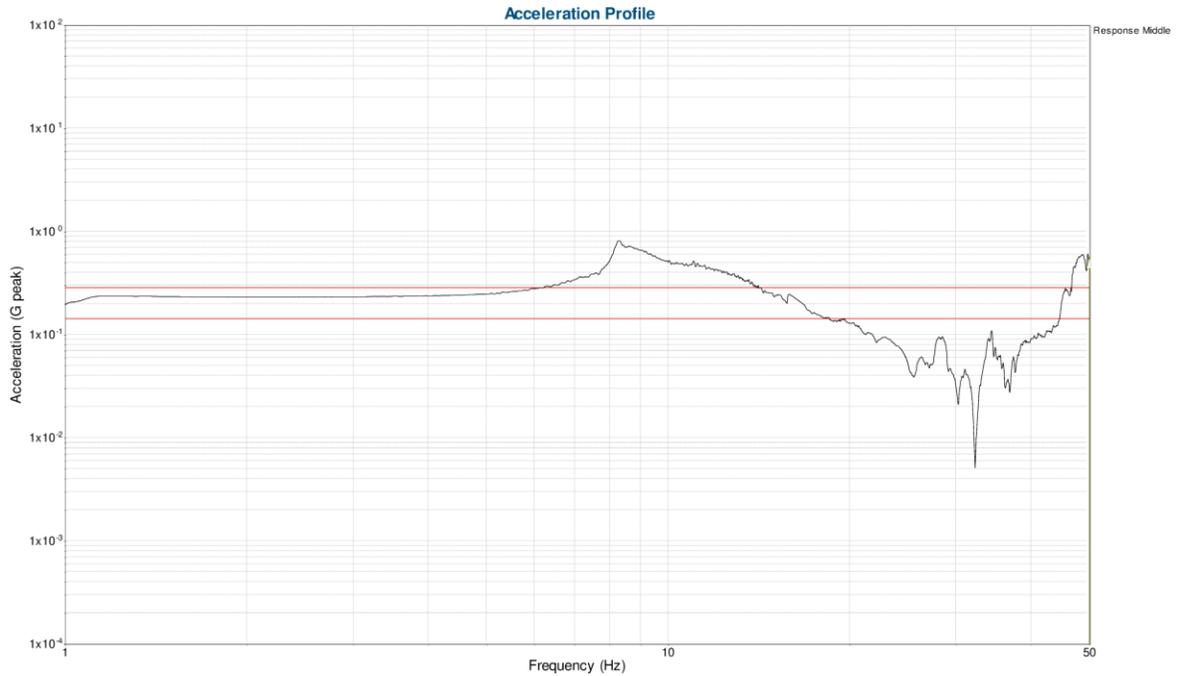


PR183799 - Martin International Enclosures - Enclosure  
Test#09 - Axis: X - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 13, 2024 11:48:30  
Points Per Sweep: 2000 points

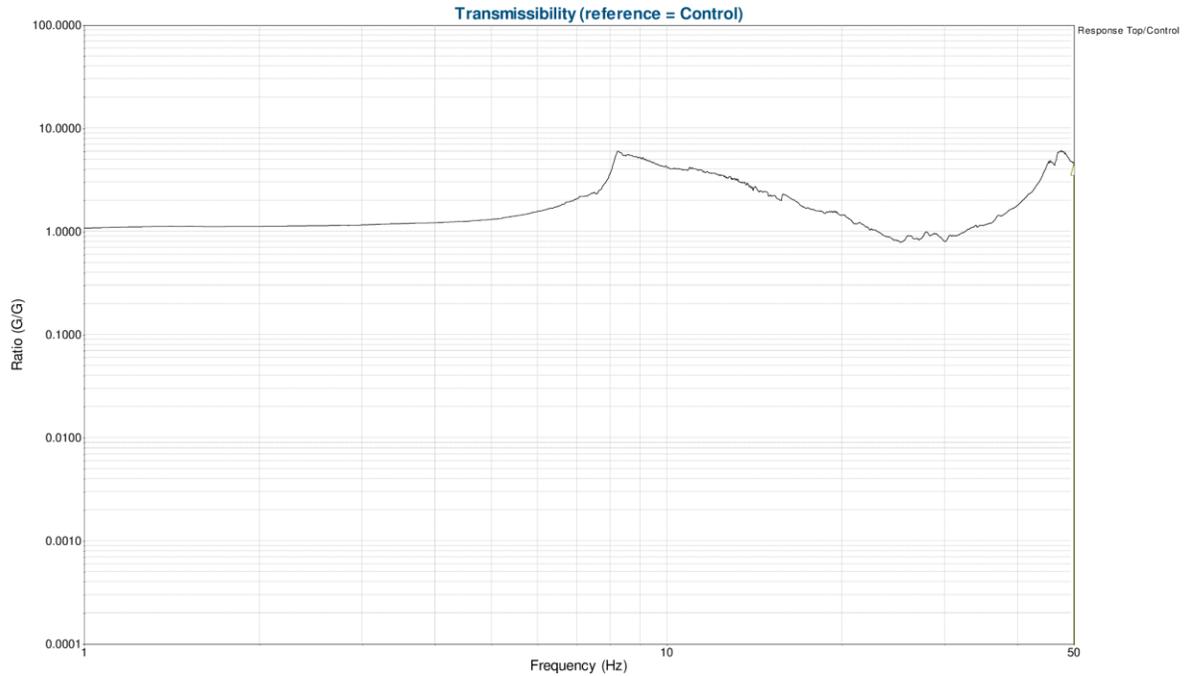


PR183799 - Martin International Enclosures - Enclosure  
Test#09 - Axis: X - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 13, 2024 11:48:30  
Points Per Sweep: 2000 points

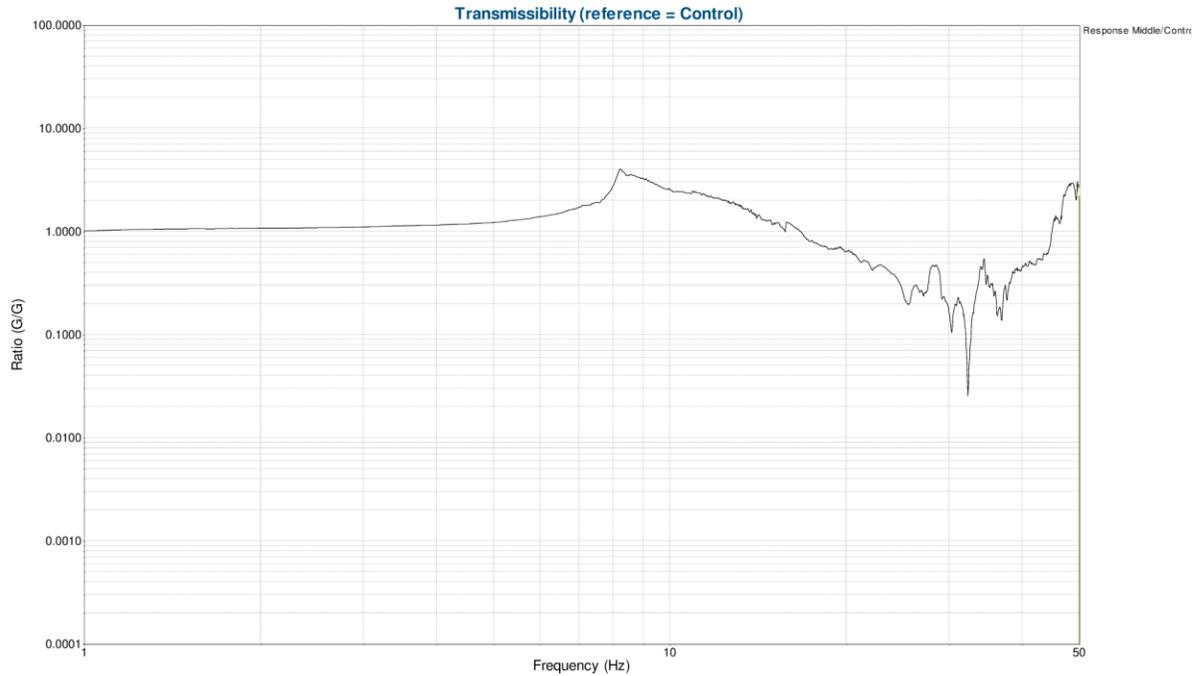


PR183799 - Martin International Enclosures - Enclosure  
Test#09 - Axis: X - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 13, 2024 11:48:30  
Points Per Sweep: 2000 points

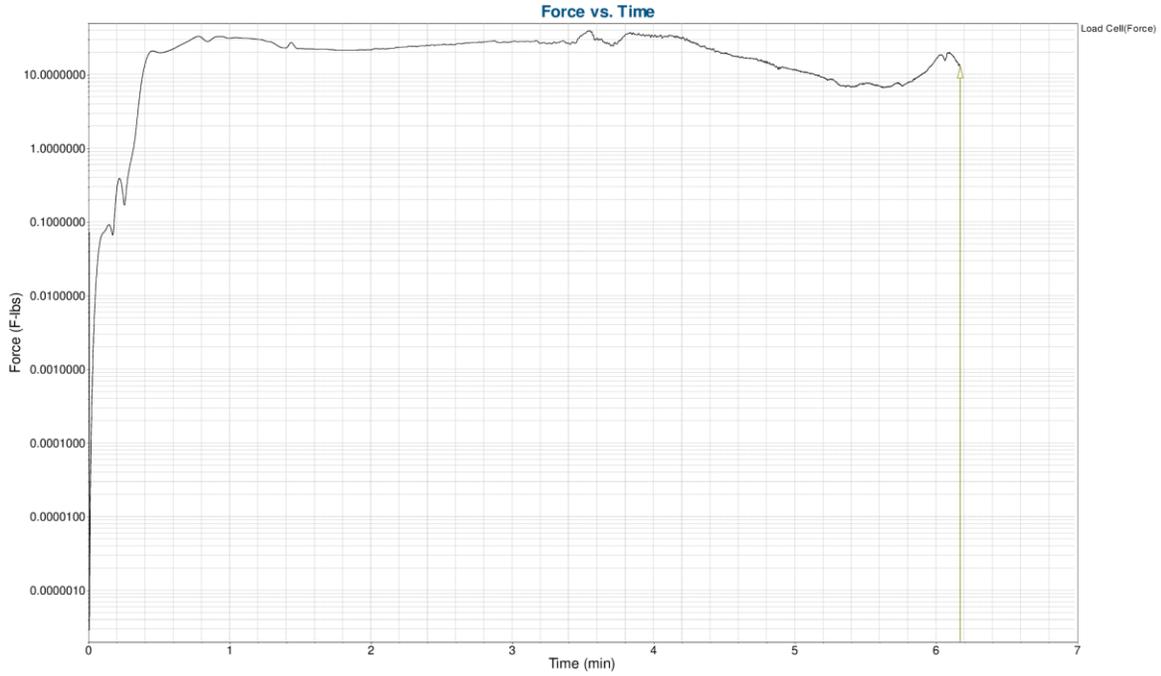


PR183799 - Martin International Enclosures - Enclosure  
Test#09 - Axis: X - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 13, 2024 11:48:30  
Points Per Sweep: 2000 points

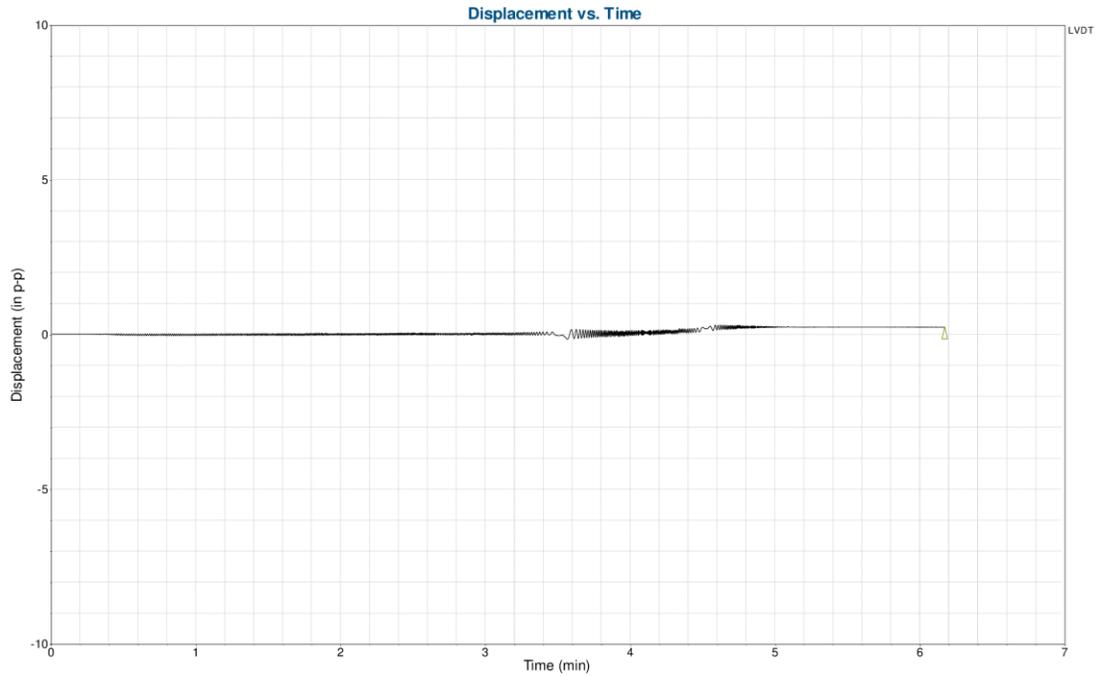


PR183799 - Martin International Enclosures - Enclosure  
Test#09 - Axis: X - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min    Jun 13, 2024 11:48:30  
Points Per Sweep: 2000 points



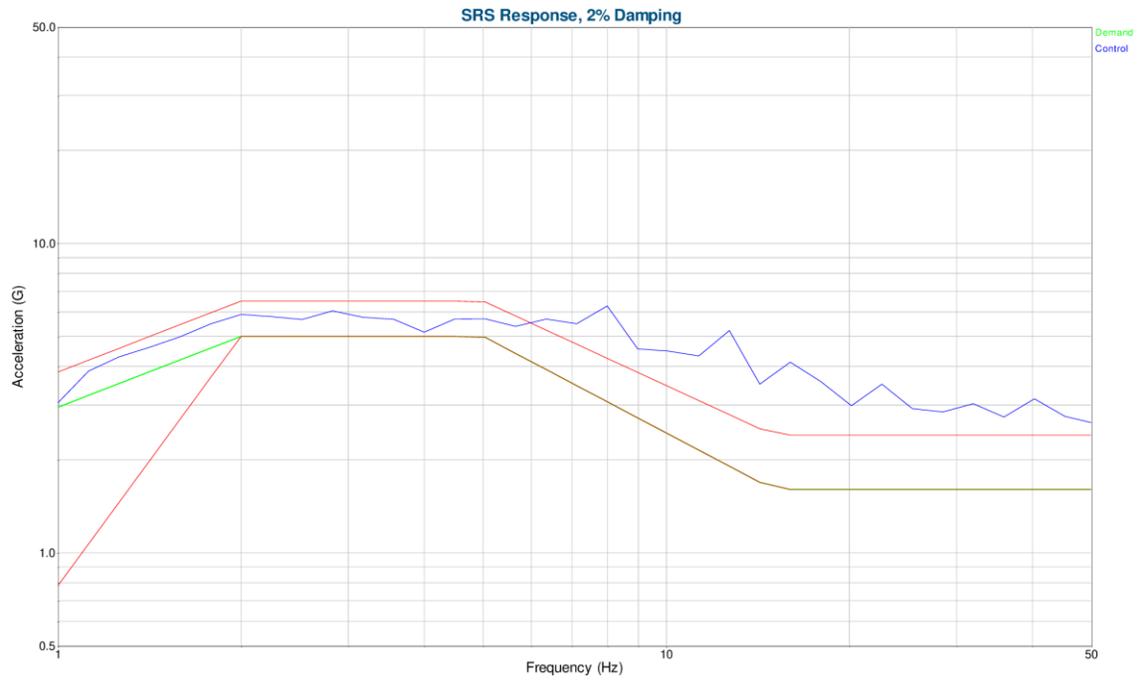
PR183799 - Martin International Enclosures - Enclosure  
Test#09 - Axis: X - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Test Level: 0 dB  
Demand: 1.65 G peak  
Pulse Width: 30.72 sec

Synthesis Method: Unknown synthesis type  
Pulse: 1 of 1  
Te: 27590 ms

Jun 13, 2024 12:29:01  
Polarity: Positive  
Percent Above Demand: 97.22 %



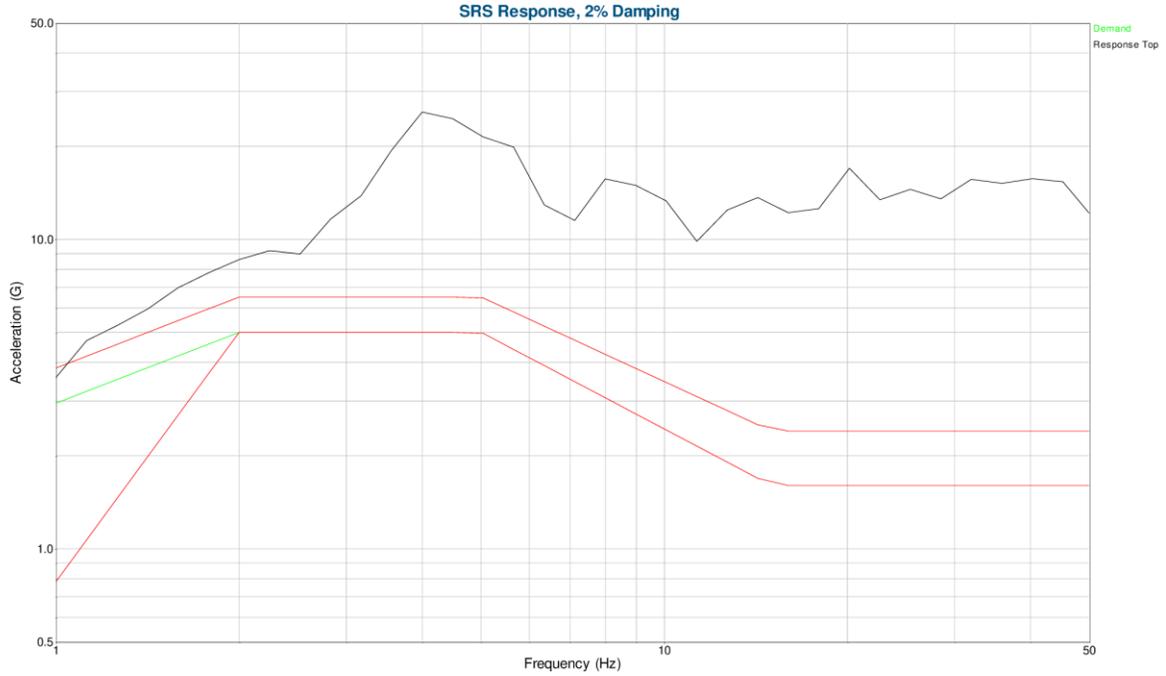
PR183799 - Martin International Enclosures - Enclosure  
Test#10 - Axis: X - Earthquake(Seismic) - GR-63-CCORE Zone 4

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Earthquake - Zone 4.vkp

Test Level: 0 dB  
Demand: 1.65 G peak  
Pulse Width: 30.72 sec

Synthesis Method: Unknown synthesis type  
Pulse: 1 of 1  
Te: 27590 ms

Jun 13, 2024 12:29:01  
Polarity: Positive  
Percent Above Demand: 97.22 %



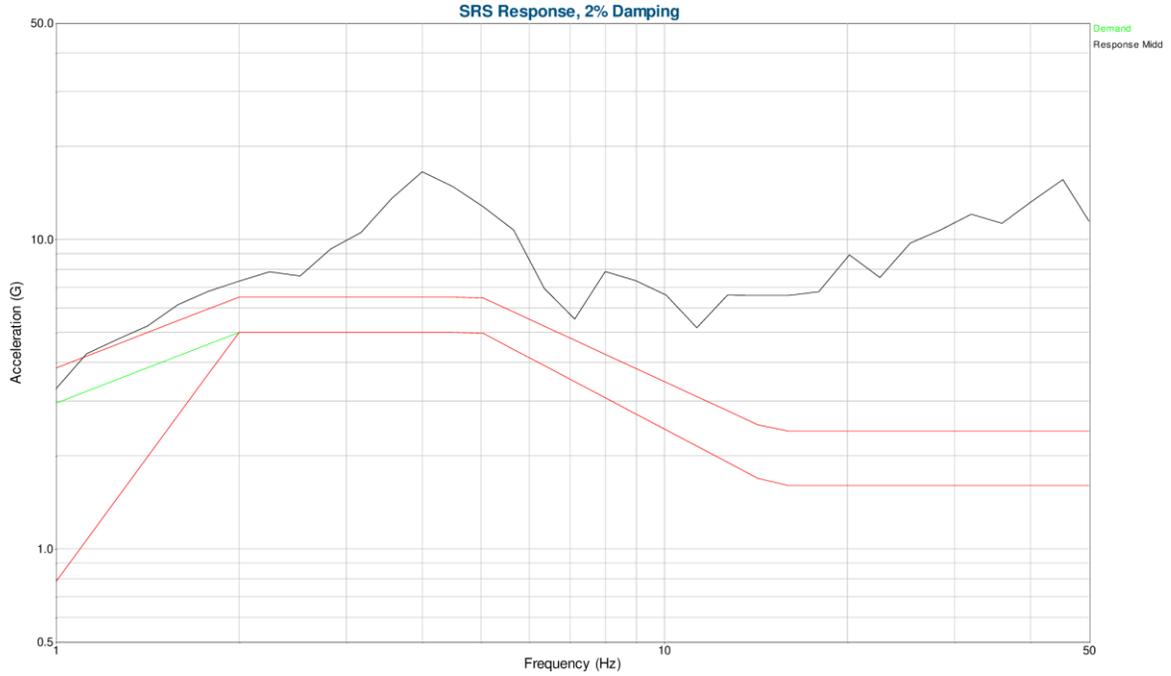
PR183799 - Martin International Enclosures - Enclosure  
Test#10 - Axis: X - Earthquake(Seismic) - GR-63-CCORE Zone 4

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Earthquake - Zone 4.vkp

Test Level: 0 dB  
Demand: 1.65 G peak  
Pulse Width: 30.72 sec

Synthesis Method: Unknown synthesis type  
Pulse: 1 of 1  
Te: 27590 ms

Jun 13, 2024 12:29:01  
Polarity: Positive  
Percent Above Demand: 97.22 %



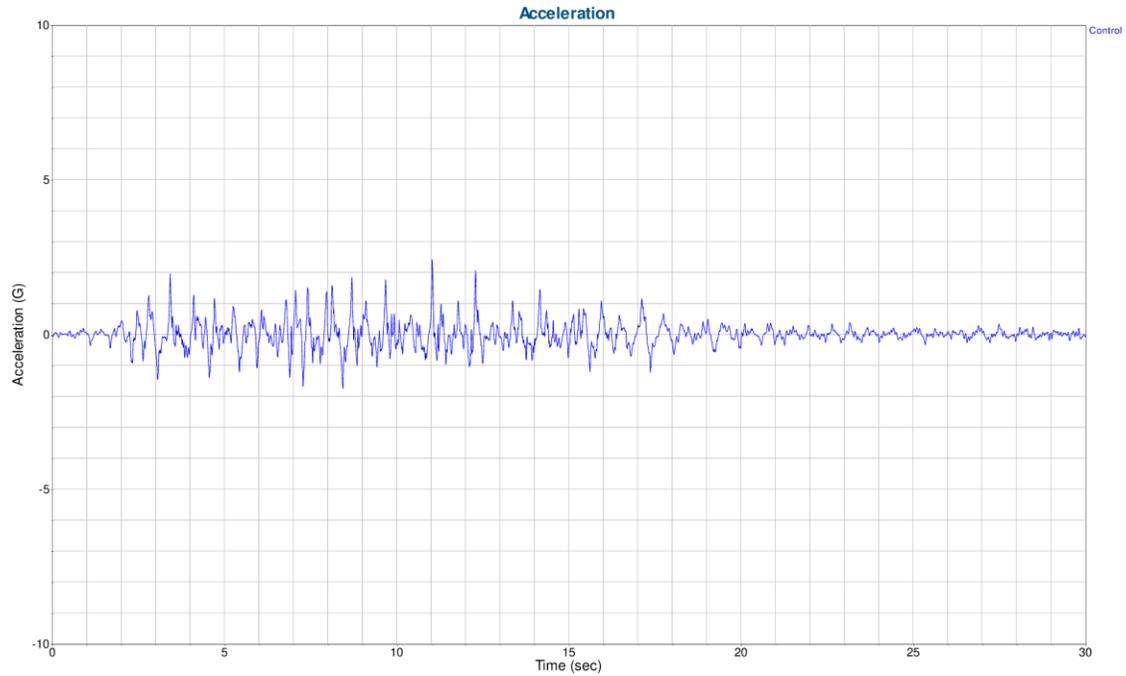
PR183799 - Martin International Enclosures - Enclosure  
Test#10 - Axis: X - Earthquake(Seismic) - GR-63-CCORE Zone 4

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Earthquake - Zone 4.vkp

Test Level: 0 dB  
Demand: 1.65 G peak  
Pulse Width: 30.72 sec

Synthesis Method: Unknown synthesis type  
Pulse: 1 of 1  
Te: 27590 ms

Jun 13, 2024 12:29:01  
Polarity: Positive  
Percent Above Demand: 97.22 %



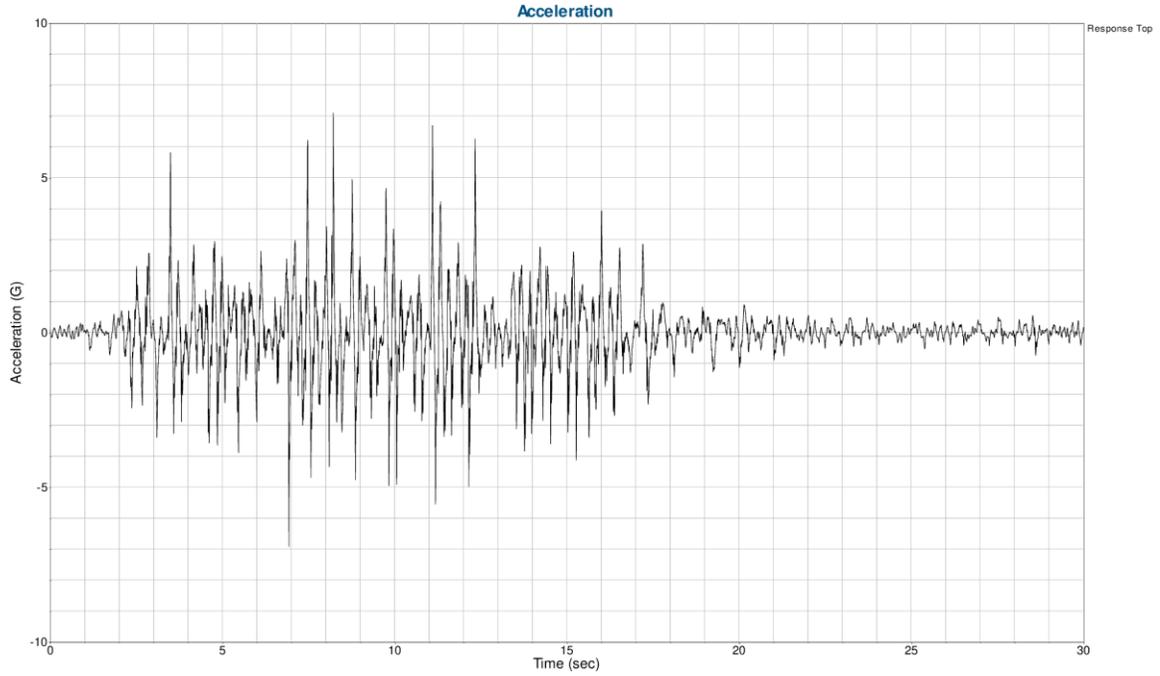
PR183799 - Martin International Enclosures - Enclosure  
Test#10 - Axis: X - Earthquake(Seismic) - GR-63-CCORE Zone 4

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Earthquake - Zone 4.vkp

Test Level: 0 dB  
Demand: 1.65 G peak  
Pulse Width: 30.72 sec

Synthesis Method: Unknown synthesis type  
Pulse: 1 of 1  
Te: 27590 ms

Jun 13, 2024 12:29:01  
Polarity: Positive  
Percent Above Demand: 97.22 %



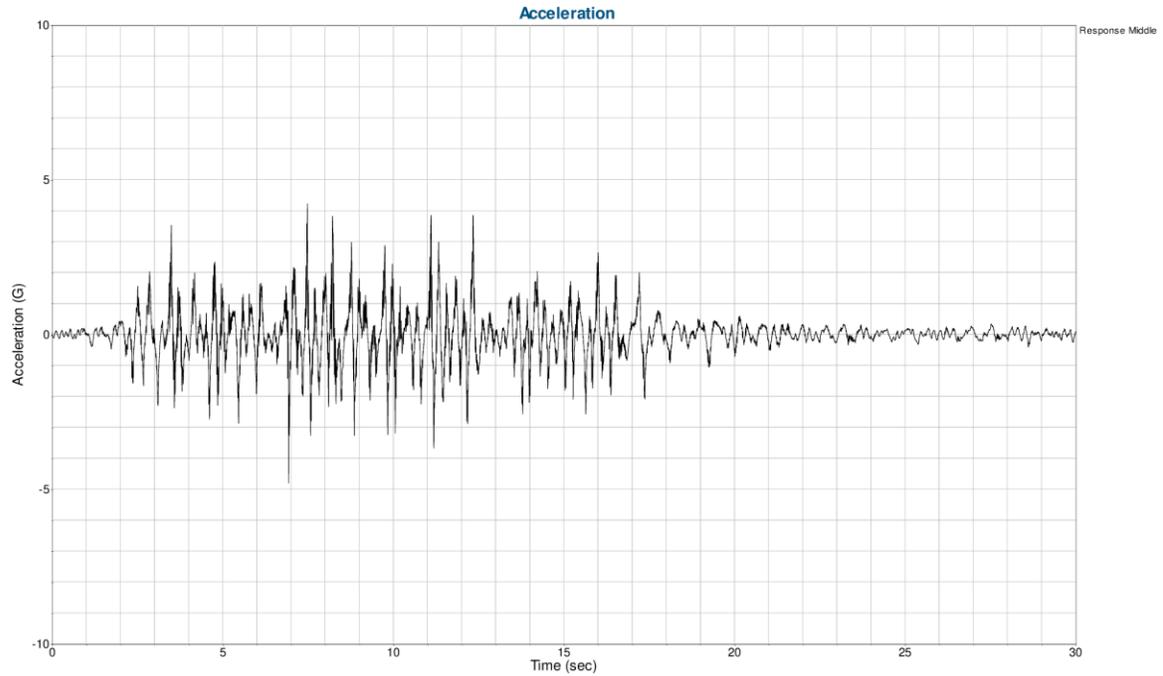
PR183799 - Martin International Enclosures - Enclosure  
Test#10 - Axis: X - Earthquake(Seismic) - GR-63-CCORE Zone 4

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Earthquake - Zone 4.vkp

Test Level: 0 dB  
Demand: 1.65 G peak  
Pulse Width: 30.72 sec

Synthesis Method: Unknown synthesis type  
Pulse: 1 of 1  
Te: 27590 ms

Jun 13, 2024 12:29:01  
Polarity: Positive  
Percent Above Demand: 97.22 %



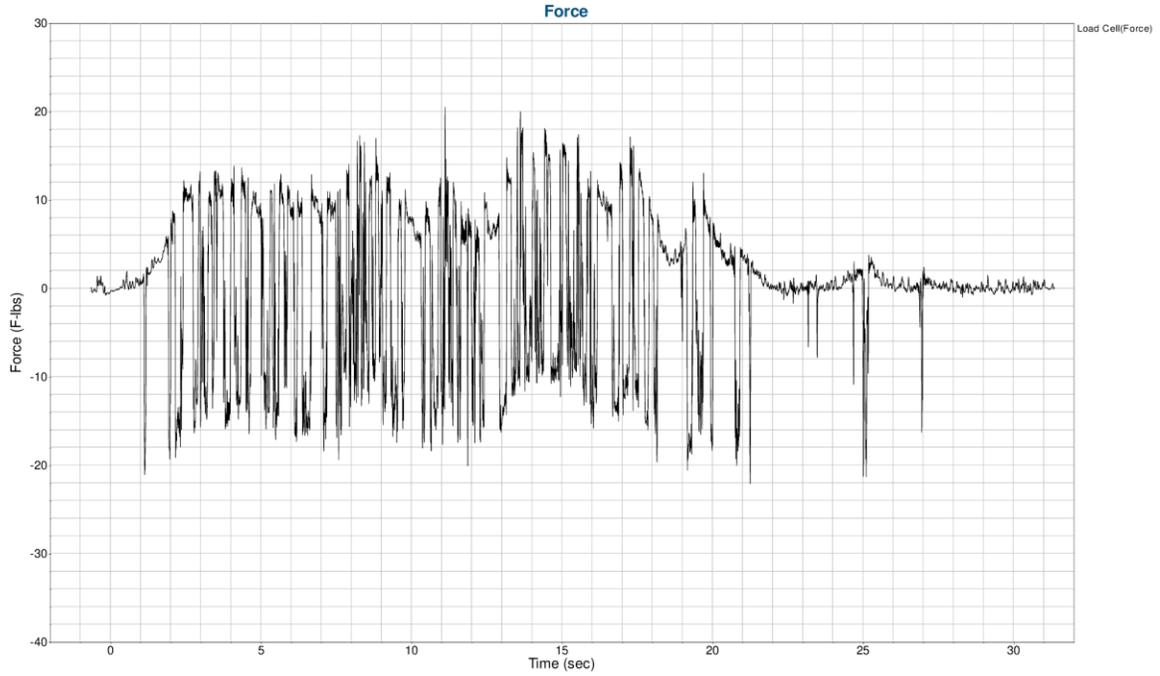
PR183799 - Martin International Enclosures - Enclosure  
Test#10 - Axis: X - Earthquake(Seismic) - GR-63-CCORE Zone 4

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Earthquake - Zone 4.vkp

Test Level: 0 dB  
Demand: 1.65 G peak  
Pulse Width: 30.72 sec

Synthesis Method: Unknown synthesis type  
Pulse: 1 of 1  
Te: 27590 ms

Jun 13, 2024 12:29:01  
Polarity: Positive  
Percent Above Demand: 97.22 %



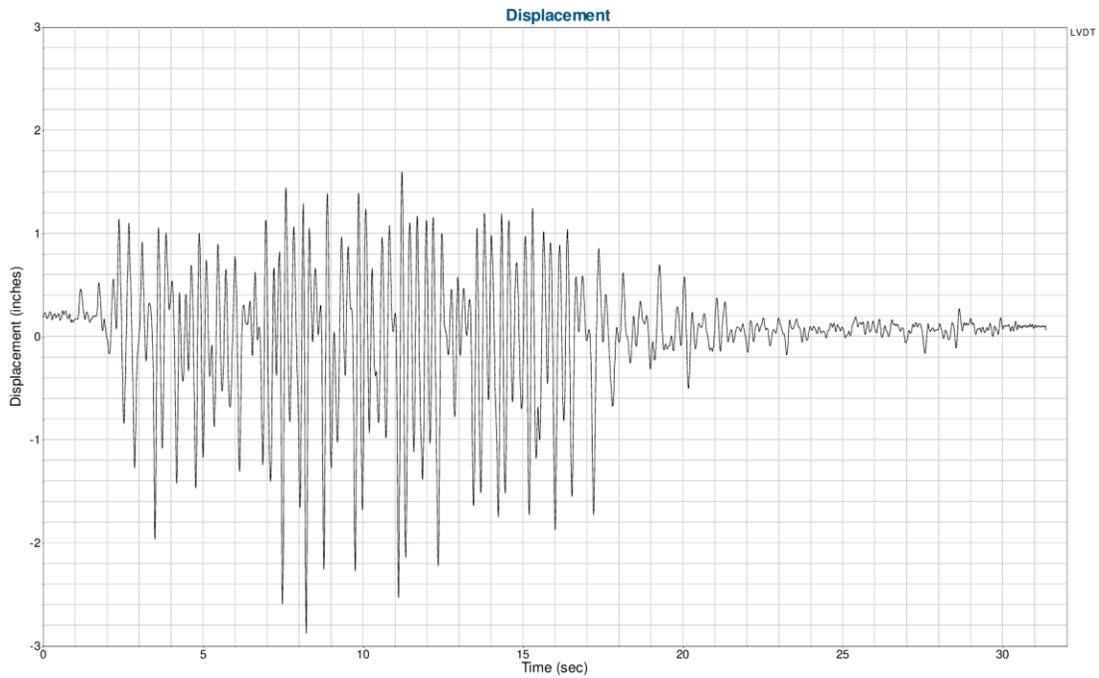
PR183799 - Martin International Enclosures - Enclosure  
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Jun 13, 2024 12:29:01  
Polarity: Positive  
Percent Above Demand: 97.22 %

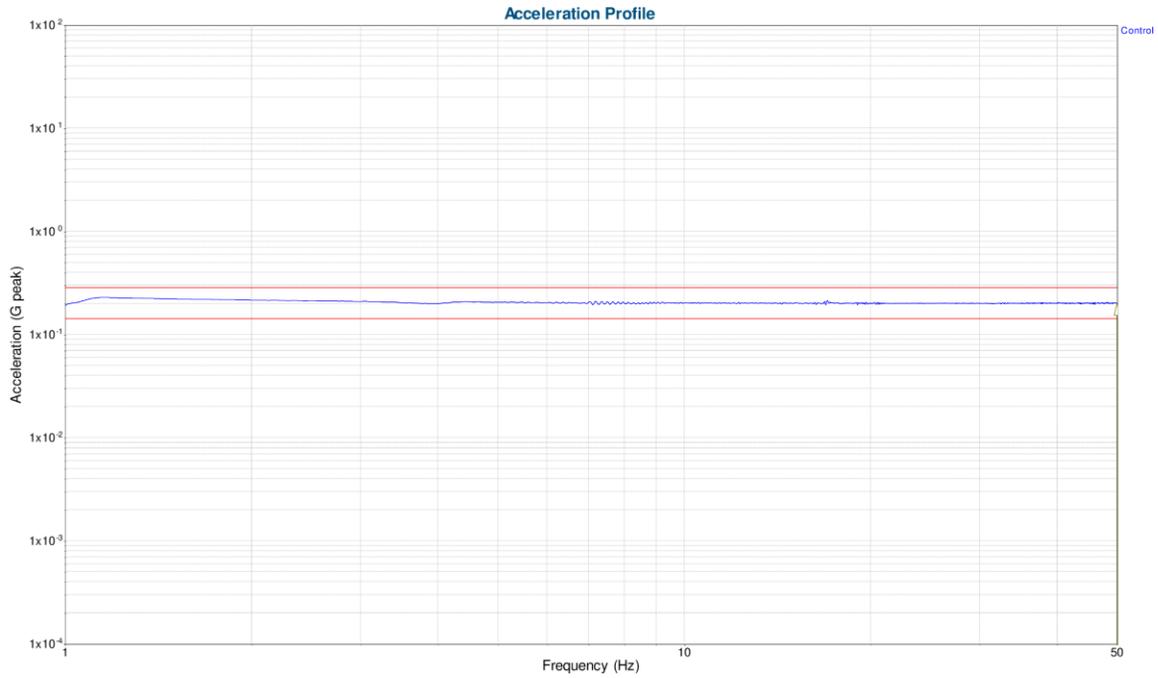


PR183799 - Martin International Enclosures - Enclosure  
Test#10 - Axis: X - Earthquake(Seismic) - GR-63-CCORE Zone 4

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Earthquake - Zone 4.vkp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 13, 2024 12:36:44  
Points Per Sweep: 2000 points

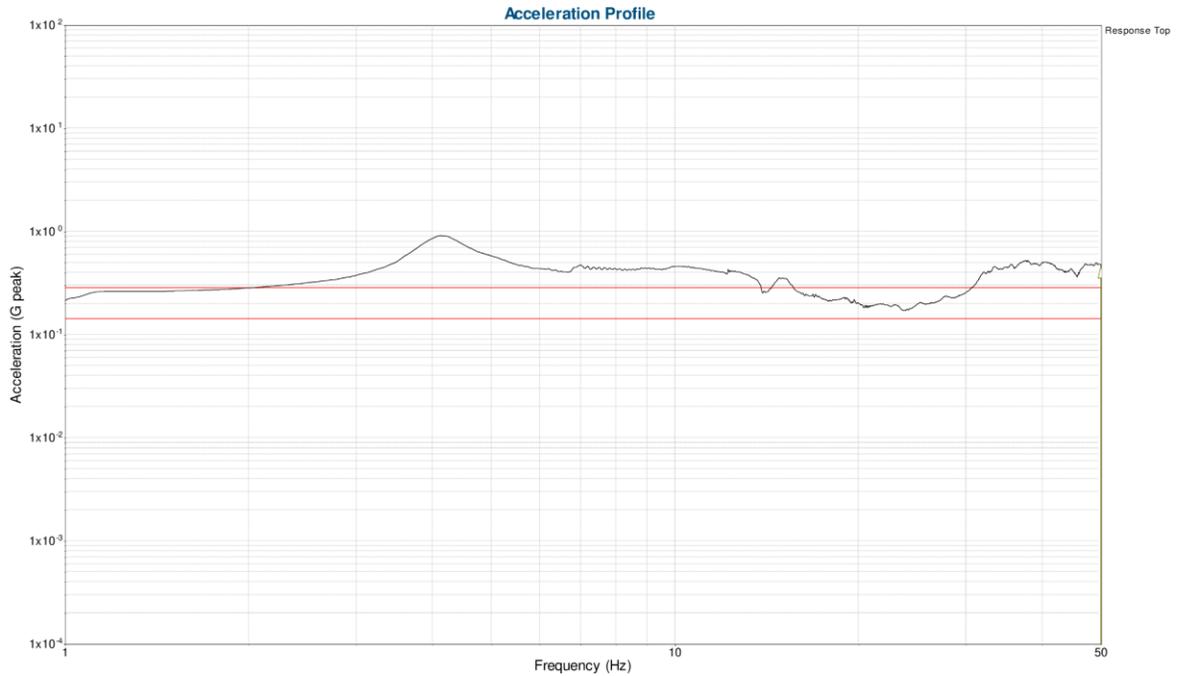


PR183799 - Martin International Enclosures - Enclosure  
Test#11 - Axis: X - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
Elapsed Test Time: 0:05:39  
Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min    Jun 13, 2024 12:36:44  
Points Per Sweep: 2000 points

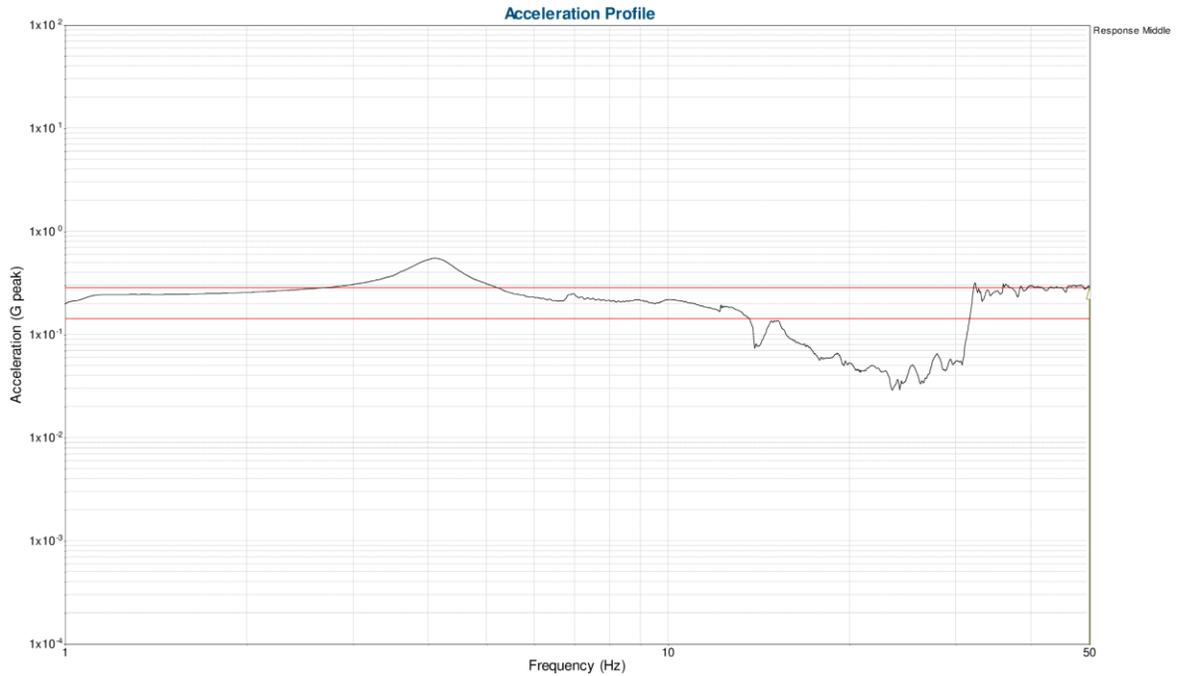


PR183799 - Martin International Enclosures - Enclosure  
Test#11 - Axis: X - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
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Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 13, 2024 12:36:44  
Points Per Sweep: 2000 points

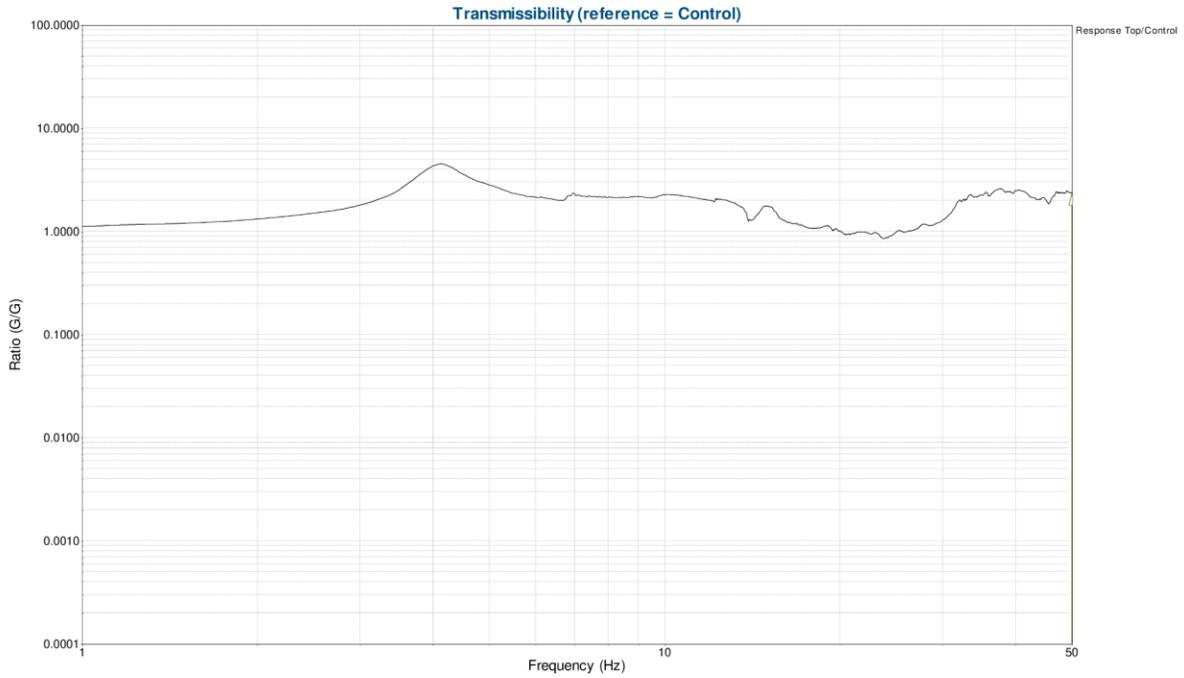


PR183799 - Martin International Enclosures - Enclosure  
Test#11 - Axis: X - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
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Points Per Sweep: 2000 points

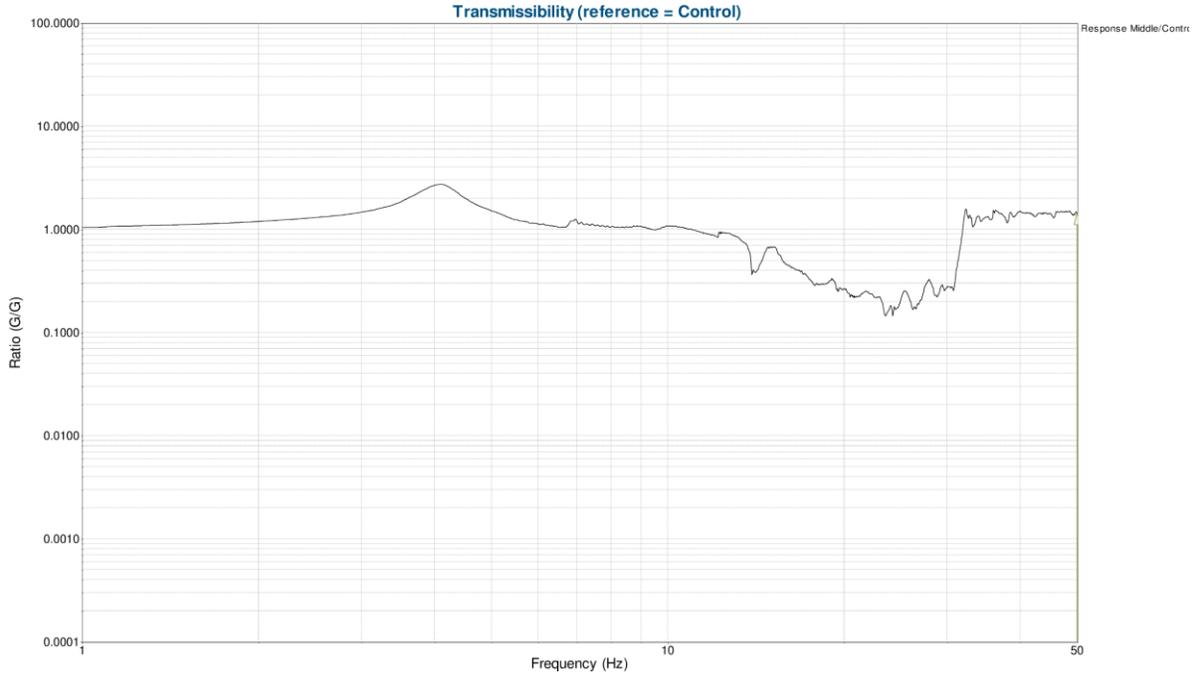


PR183799 - Martin International Enclosures - Enclosure  
Test#11 - Axis: X - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

Remaining Test Time: 0 sweeps  
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Sweep Number: 1 sweeps

Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min      Jun 13, 2024 12:36:44  
Points Per Sweep: 2000 points

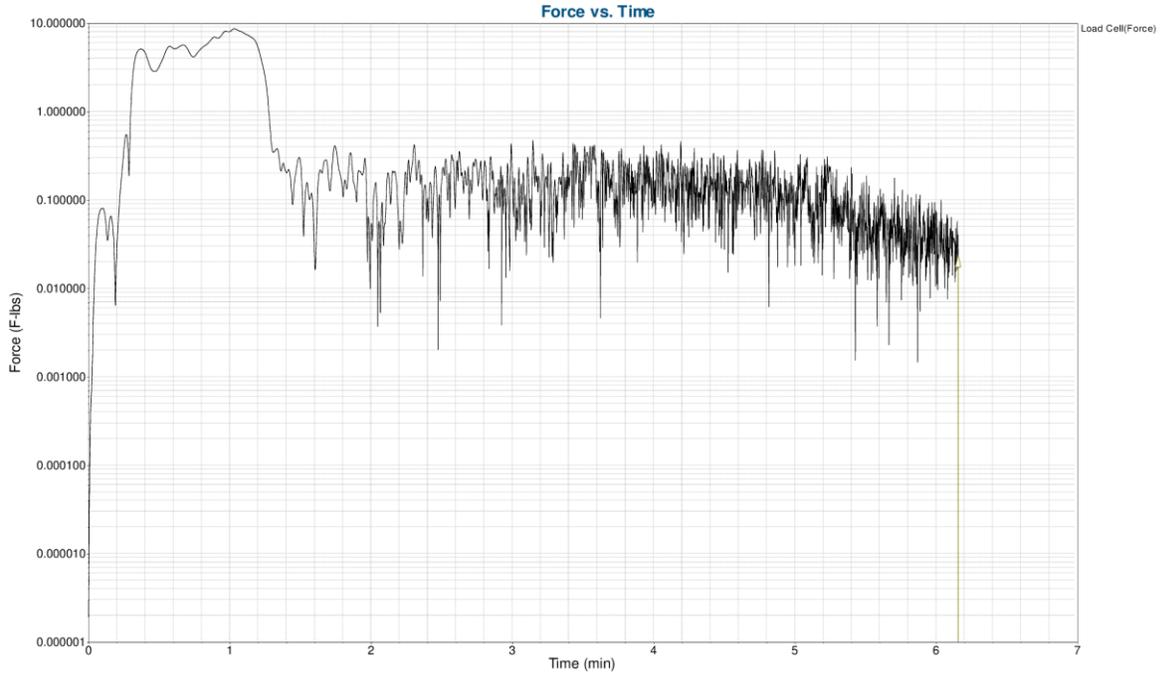


PR183799 - Martin International Enclosures - Enclosure  
Test#11 - Axis: X - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

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Points Per Sweep: 2000 points

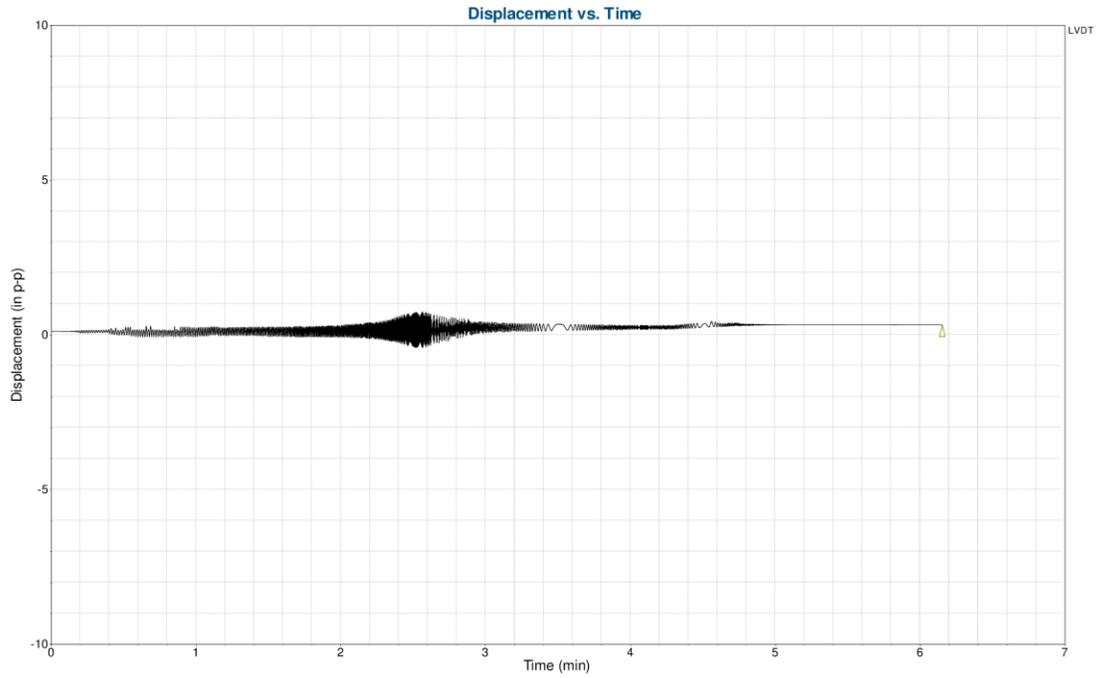


PR183799 - Martin International Enclosures - Enclosure  
Test#11 - Axis: X - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

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Sweep Rate: Sweep between 1 Hz and 50 Hz at 1 Oct/min    Jun 13, 2024 12:36:44  
Points Per Sweep: 2000 points



PR183799 - Martin International Enclosures - Enclosure  
Test#11 - Axis: X - Sine Survey

Test Name: C:\VibrationVIEW\Data\Martin International Enclosures\Sine Survey.vsp

### 5.1.6 Test Equipment List

**Table 5.1-1: Earthquake (Seismic) Test Equipment List**

Asset Number	Asset Type	Manufacturer	Model	Calibrated	Due
WC005896	Power Supply (DC)	Sorensen	DCS150-7E	NCR	NCR
WC058614	Shaker (Hydraulic)	Team Corporation	488.48-16	NCR	NCR
WC000567	Accelerometer (Seismic)	PCB Piezotronics	Q353B33	09/14/2023	09/14/2024
WC000606	Accelerometer (Seismic)	PCB Piezotronics	353B33	04/18/2024	04/18/2025
WC000609	Accelerometer (Seismic)	PCB Piezotronics	353B33	06/23/2023	06/23/2024
WC001812	Load Cell (Torque)	PCB Piezotronics	203B	09/11/2023	09/11/2024
WC063928	Controller (Vibration)	Vibration Research	VR9500 Revolution	05/10/2024	05/10/2025
WC064178	Controller (Vibration)	Vibration Research	VR9500 Revolution	04/04/2024	04/04/2025
WC067680	Transducer (Linear Voltage Displacement)	Celesco	PT1DC-20UP-Z10-M6	04/17/2024	04/17/2025

#### Calibration Abbreviations

CAL: Calibration

NCR: No Calibration Required

**End of Test Report**