

VIBRATION SOURCE TECHNOLOGY CO., LTD.

Vibration Testing Laboratory

**Add: No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864,
Taiwan (R.O.C.)**

Tel: 886-2-2688-0999 Fax: 886-2-2688-0977

E-mail: info@vibsource.com

Report No.: VS-TV-121219-01

Test Report

Date of Issue: 2023 / 12 / 19

Specimen	EAC-5000
Applicant Name	Vecow Co., Ltd.
Applicant Address	3F., No.10, Jiankang Rd., Zhonghe Dist., New Taipei City 23586, Taiwan

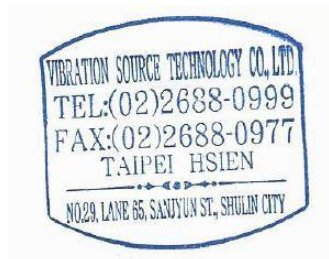
The result of this test report, performed by

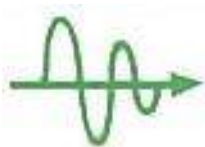
VIBRATION SOURCE TECHNOLOGY CO., LTD. is specified in this report.

When the cover and the following 19 pages are separated, the validity of this report no longer exists.

Without the consent of the laboratory, this test report shall not be copied excerpts, but except for full-text copy.

Signature





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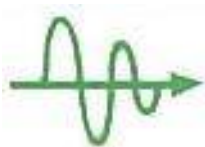
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Report No.: VS-TV-121219-01

I - Test Information

Test Report NO.	VS-TV-121219-01
Company name	Vecow Co., Ltd.
Company address	3F., No.10, Jiankang Rd., Zhonghe Dist., New Taipei City 23586, Taiwan
Product Name	Edge AI Computing System
Model No	EAC-5000
PCIe Expansion card	PE-8004MX
CPU	NVIDIA® Jetson AGX Orin™ 64GB
GPU	2048-core Ampere™ GPU with 56 Tensor Cores
RAM	64GB LPDDR5 DRAM
Quantity	1PCS
Series Model No	EAC-5000 Series, EAC-5XXXXXXXXXXXXXXXXX (“X” can be 0-9, A-Z, - or blank for marketing purpose)
Date of Test	Dec 15 ~ 18, 2023



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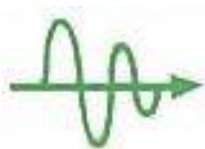
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Report No.: VS-TV-121219-01

Test Item	Test 1: Random Vibration Test																																																										
Test Standard	Vibration : MIL-STD-810G, Method 514.6, Category 4																																																										
Sample Condition	Operating																																																										
Test Condition	<p>Waveform: Random Wave</p> <p>Frequency Range: (10~ 500) Hz</p> <p>Acceleration & PSD:</p> <table border="1" data-bbox="678 741 1447 1077"> <thead> <tr> <th colspan="2">Vertical (Z)</th> <th colspan="2">Transverse(X)</th> <th colspan="2">Longitudinal(Y)</th> </tr> <tr> <th>Frequency, Hz</th> <th>PSD g²/Hz</th> <th>Frequency, Hz</th> <th>PSD g²/Hz</th> <th>Frequency, Hz</th> <th>PSD g²/Hz</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>0.01500</td> <td>10</td> <td>0.00013</td> <td>10</td> <td>0.00650</td> </tr> <tr> <td>40</td> <td>0.01500</td> <td>20</td> <td>0.00065</td> <td>20</td> <td>0.00650</td> </tr> <tr> <td>500</td> <td>0.00015</td> <td>30</td> <td>0.00065</td> <td>120</td> <td>0.00020</td> </tr> <tr> <td colspan="2" rowspan="5">rms =1.04G</td> <td>78</td> <td>0.00002</td> <td>121</td> <td>0.00300</td> </tr> <tr> <td>79</td> <td>0.00019</td> <td>200</td> <td>0.00300</td> </tr> <tr> <td>120</td> <td>0.00019</td> <td>240</td> <td>0.00150</td> </tr> <tr> <td>500</td> <td>0.00001</td> <td>340</td> <td>0.00003</td> </tr> <tr> <td colspan="2">rms =0.204 G</td> <td>500</td> <td>0.00015</td> <td colspan="2">rms =0.740 G</td> </tr> </tbody> </table> <p>Vibration Axial: X, Y, Z</p> <p>Single Axis Time: 1 hour</p> <p>Total Time: 3 hours</p> <p>FIG 1.1 ~ 1.4: X axis direction mounted</p> <p>FIG 2: X axis test screen</p> <p>FIG 3: Y axis direction mounted</p> <p>FIG 4: Y axis test screen</p> <p>FIG 5.1 ~ 5.4: Z axis direction mounted</p> <p>FIG 6: Z axis test screen</p>					Vertical (Z)		Transverse(X)		Longitudinal(Y)		Frequency, Hz	PSD g ² /Hz	Frequency, Hz	PSD g ² /Hz	Frequency, Hz	PSD g ² /Hz	10	0.01500	10	0.00013	10	0.00650	40	0.01500	20	0.00065	20	0.00650	500	0.00015	30	0.00065	120	0.00020	rms =1.04G		78	0.00002	121	0.00300	79	0.00019	200	0.00300	120	0.00019	240	0.00150	500	0.00001	340	0.00003	rms =0.204 G		500	0.00015	rms =0.740 G	
Vertical (Z)		Transverse(X)		Longitudinal(Y)																																																							
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Test Result	<p>Appearance: Pass, No external physical damage</p> <p>Function: Pass.</p>																																																										



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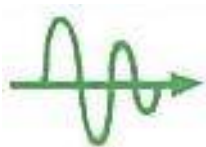
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Report No.: VS-TV-121219-01

Test Item	Test 2 : Shock Test
Test Standard	Shock : MIL-STD-810 G, Method 516.7, Procedure I, Functional Shock test
Sample Condition	Operating
Test Condition	<p>Waveform: Final Peak Sawtooth Wave</p> <p>Acceleration: 20 G</p> <p>Duration Time: 11 ms</p> <p>Vibration Axial: 3 Axis , 6 Faces</p> <p>Shock Times: 3 time</p> <p>Total Time: 18 times</p> <p>FIG 7.1 ~ 7.2: +X axis direction mounted</p> <p>FIG 8: +X axis test screen</p> <p>FIG 9.1 ~ 9.2: -X axis direction mounted</p> <p>FIG 10: -X axis test screen</p> <p>FIG 11.1 ~ 11.2: +Y axis direction mounted</p> <p>FIG 12: +Y axis test screen</p> <p>FIG 13.1 ~ 13.2: -Y axis direction mounted</p> <p>FIG 14: -Y axis test screen</p> <p>FIG 15.1 ~ 15.2: +Z axis direction mounted</p> <p>FIG 16: +Z axis test screen</p> <p>FIG 17.1 ~ 17.2: -Z axis direction mounted</p> <p>FIG 18: -Z axis test screen</p> <p>FIG 19.1 ~ 19.6: Posterior check.</p>



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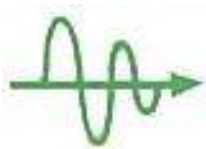
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Test Result	Appearance: Pass, No external physical damage Function: Pass.	
Test Conducted By		Report Prepared By
<i>Archie Chen</i> <i>Archie Chen</i>		Jane <i>Jane</i>



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Test 1: Random Vibration Test (MIL-STD-810H, Table 514.8C-I. Category 4)

FIG 1.1: X axis direction mounted

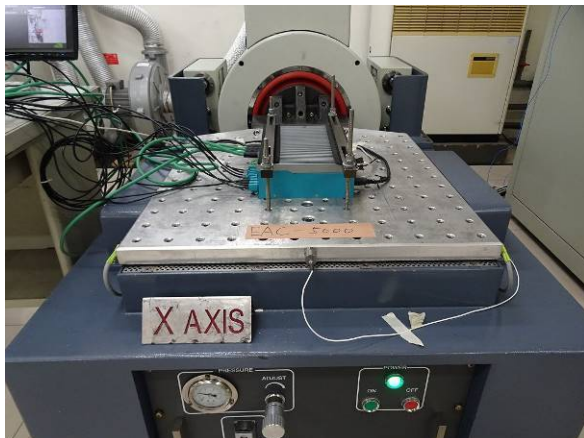


FIG 1.2: X axis direction mounted

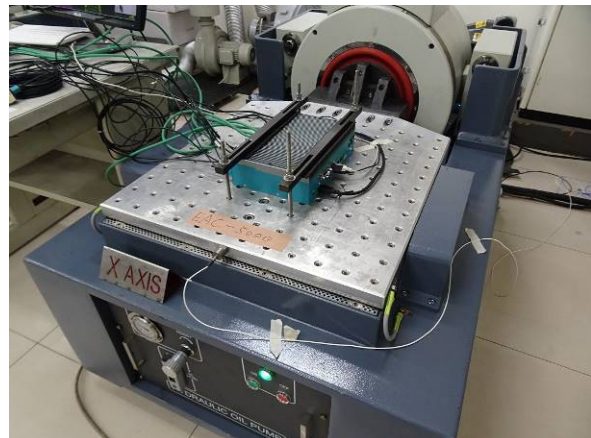


FIG 1.3: X axis direction mounted

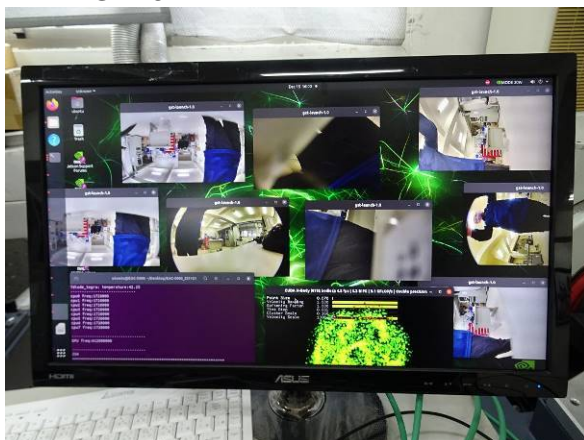
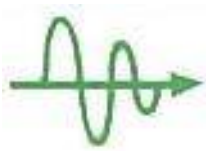


FIG 1.4: X axis direction mounted





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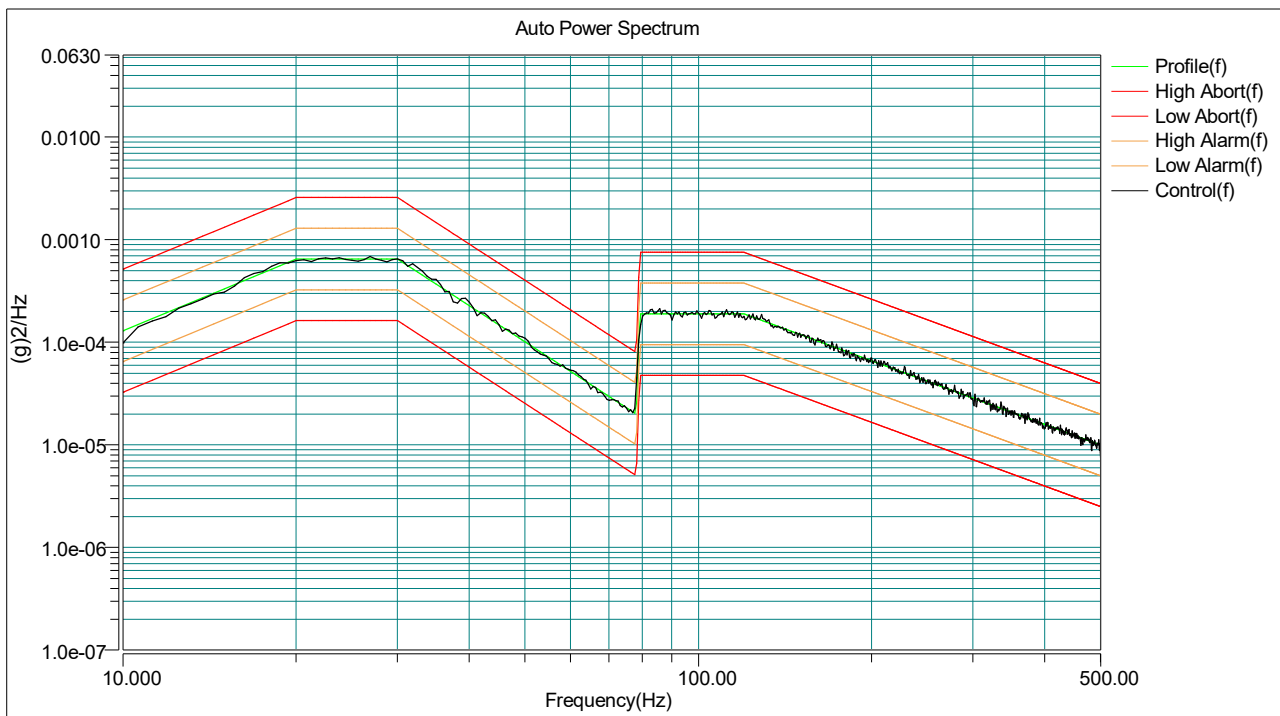
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FIG 2: X axis test screen



Current Level: 100 %

Demand RMS:0.203188 g

Control RMS: 0.203558 g

Frame Time:1.600000 (s)

Lines:800

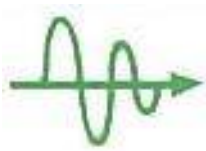
dF:0.625000 Hz

DOF:300

Test Elapsed:01:00:19

Remaining Time:00:00:00

Data was saved as a file at time:2023-12-15 PM 05:08:22



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FIG 3.1: Y axis direction mounted



FIG 3.2: Y axis direction mounted

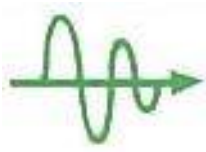


FIG 3.3: Y axis direction mounted



FIG 3.4: Y axis direction mounted





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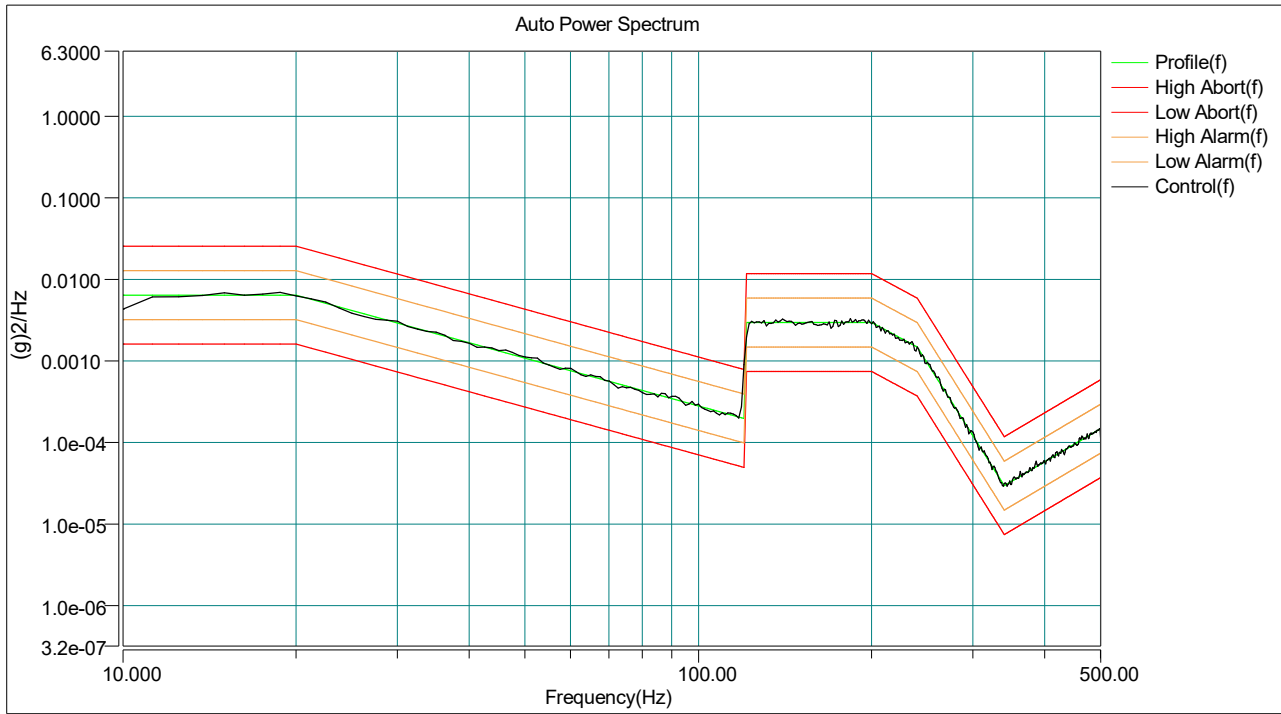
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Report No.: VS-TV-121219-01

FIG 4: Y axis test screen



Current Level: 100 %

Demand RMS:0.739402 g

Control RMS: 0.737464 g

Frame Time:0.800000 (s)

Lines:400

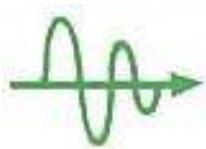
dF:1.250000 Hz

DOF:300

Test Elapsed:01:00:19

Remaining Time:00:00:00

Data was saved as a file at time:2023-12-18 PM 12:17:24



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FIG 5.1: Z axis direction mounted

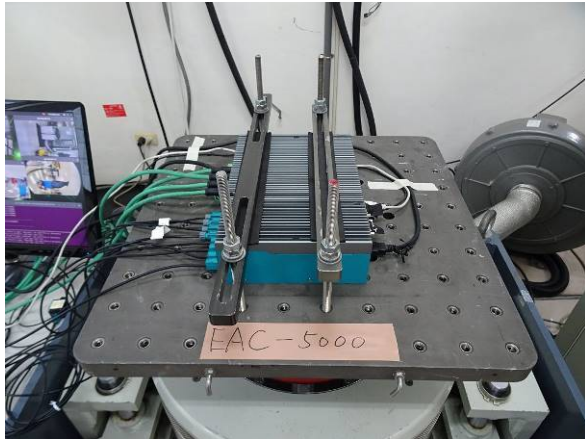


FIG 5.2: Z axis direction mounted

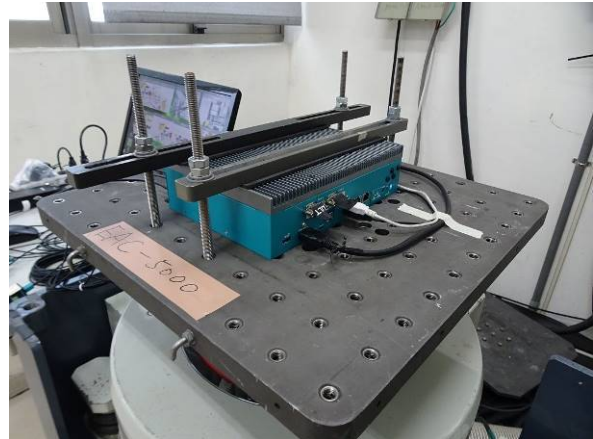
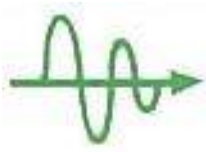


FIG 5.3: Z axis direction mounted



FIG 5.4: Z axis direction mounted





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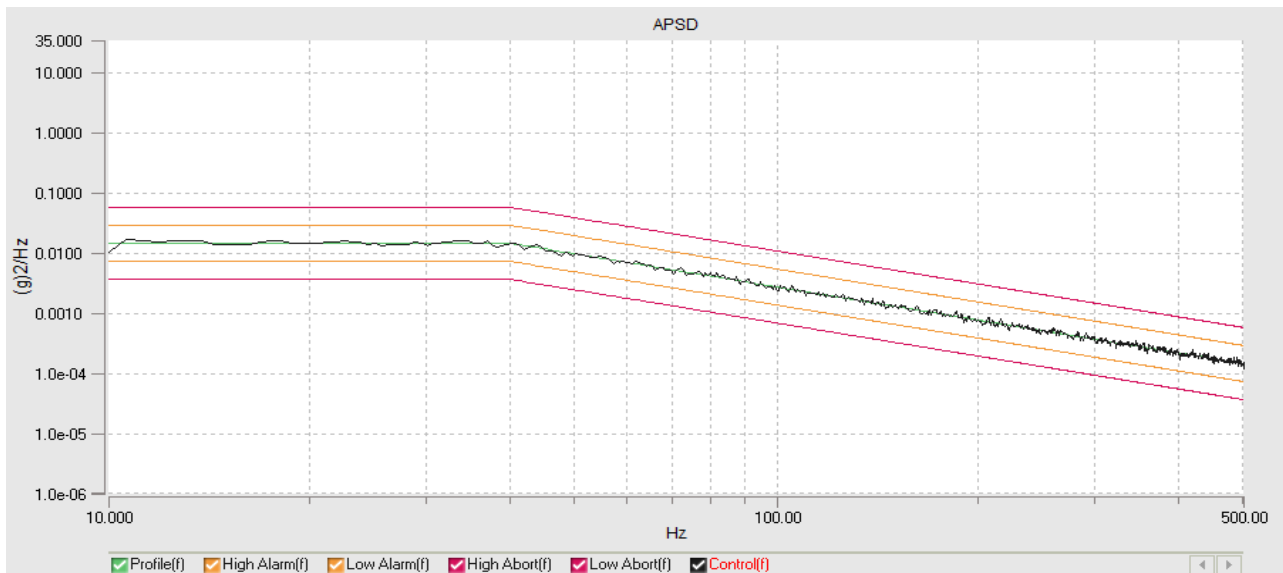
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FIG 6: Z axis test screen



Current Level: 100.00 %

Demand RMS: 1.043 g

Control RMS: 1.046 g

Frame Time: 1.6000 (s)

Lines: 800

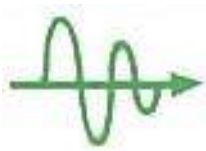
dF: 0.6 Hz

DOF: 312

Current Level Time: 01:00:00

Remaining Time: 00:00:00

Data was saved as a file at time: 2023-12-15 PM 02:53:29



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Test 2 : Shock Test

FIG 7.1: +X axis direction mounted



FIG 7.2: +X axis direction mounted



FIG.8 : +X Axis Test screen.



Shock Type:Final Peak Saw Tooth

Amplitude:20.000000 g

Pulse Duration:11.000001 ms

Current level:100 %

Demand peak:20.000000 g

Control peak:19.880947 g

Block Size:2048

Frame Time:0.682667 s

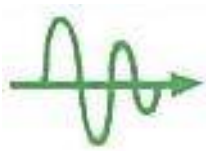
dT:0.000333 s

Tested pulses: 6

Output pulses:13

Remain pulses: 0

Data was saved as a file at time:2023-12-18 AM 10:44:19



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Report No.: VS-TV-121219-01

FIG 9.1: -X axis direction mounted



FIG 9.2: -X axis direction mounted



FIG.10 : -X Axis Test screen.



Shock Type:Final Peak Saw Tooth

Amplitude:20.000000 g

Pulse Duration:11.000001 ms

Current level:100 %

Demand peak:20.000000 g

Control peak:18.448366 g

Block Size:2048

Frame Time:0.682667 s

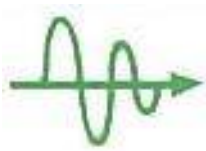
dT:0.000333 s

Tested pulses: 6

Output pulses:13

Remain pulses: 0

Data was saved as a file at time: 2023-12-18 AM 11:02:15



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Report No.: VS-TV-121219-01

FIG 11.1: +Y axis direction mounted



FIG 11.2: +Y axis direction mounted



FIG.12 : +Y Axis Test screen.



Shock Type:Final Peak Saw Tooth

Amplitude:20.000000 g

Pulse Duration:11.000001 ms

Current level:100 %

Demand peak:20.000000 g

Control peak:20.166544 g

Block Size:2048

Frame Time:0.682667 s

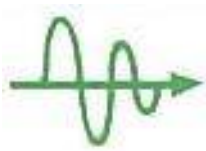
dT:0.000333 s

Tested pulses: 6

Output pulses:13

Remain pulses: 0

Data was saved as a file at time:2023-12-18 PM 01:25:49



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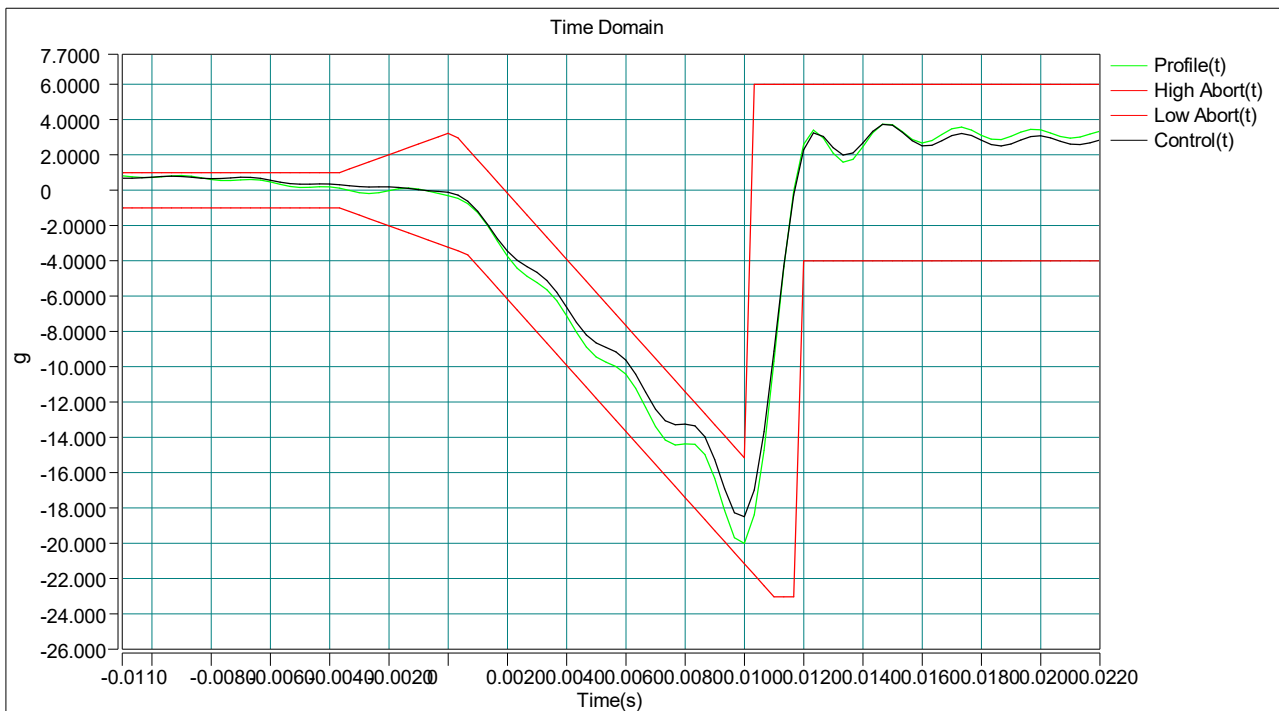
FIG 13.1: -Y axis direction mounted



FIG 13.2: -Y axis direction mounted



FIG.14 : -Y Axis Test screen.



Shock Type:Final Peak Saw Tooth

Amplitude:20.000000 g

Pulse Duration:11.000001 ms

Current level:100 %

Demand peak:20.000000 g

Control peak:18.488779 g

Block Size:2048

Frame Time:0.682667 s

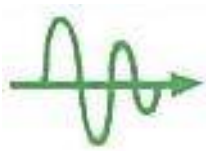
dT:0.000333 s

Tested pulses: 8

Output pulses:14

Remain pulses: 0

Data was saved as a file at time: 2023-12-18 PM 01:29:57



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FIG 15.1: +Z axis direction mounted

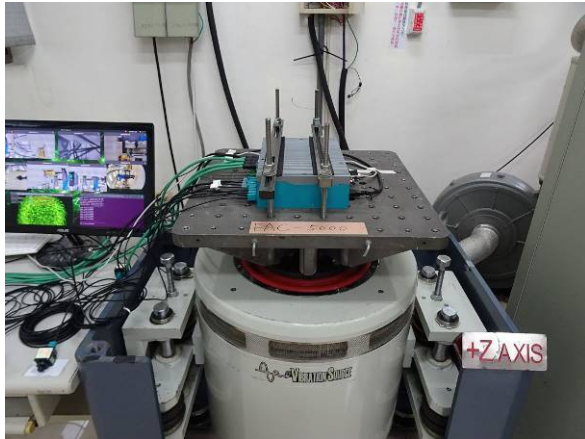
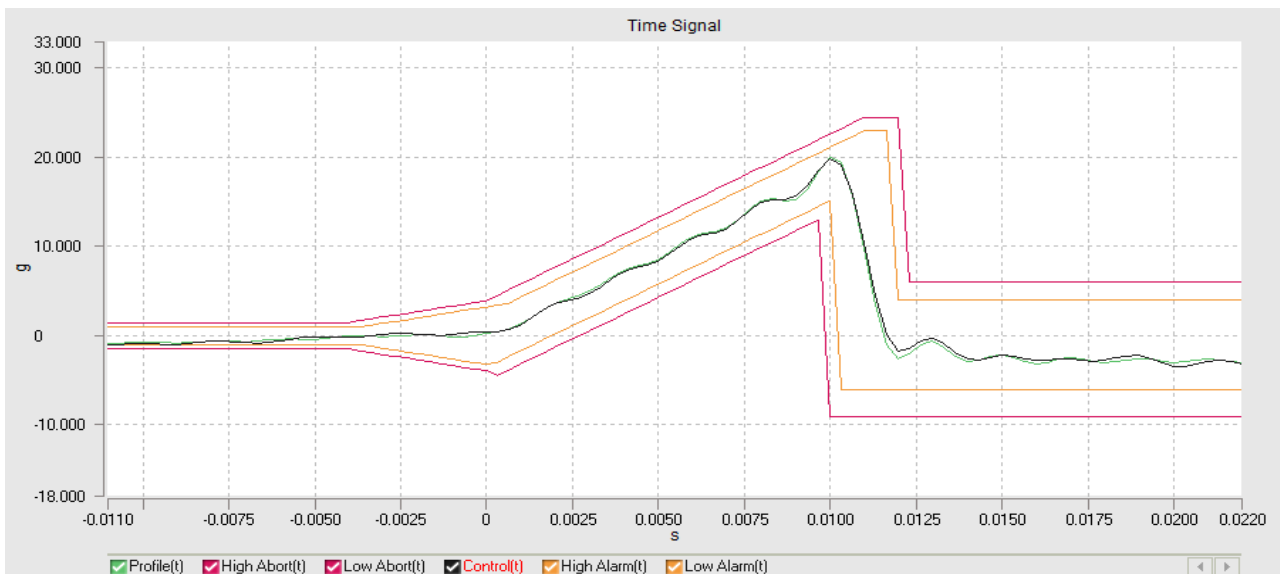


FIG 15.2: +Z axis direction mounted



FIG.16 : +Z Axis Test screen.



Shock Type:Final Peak Saw Tooth

Mag:20.00 g

Pulse Duration:11 ms

Current level:100 %

Demand peak:20.000 g

Control peak:19.907 g

Block Size: 2048

Frame Time:0.6827 s

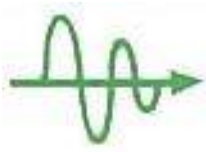
dT:0.000333333 s

Current Pulses: 3

Output pulses:12

Remain pulses: 0

Data was saved as a file at time:2023-12-15 PM 03:29:05



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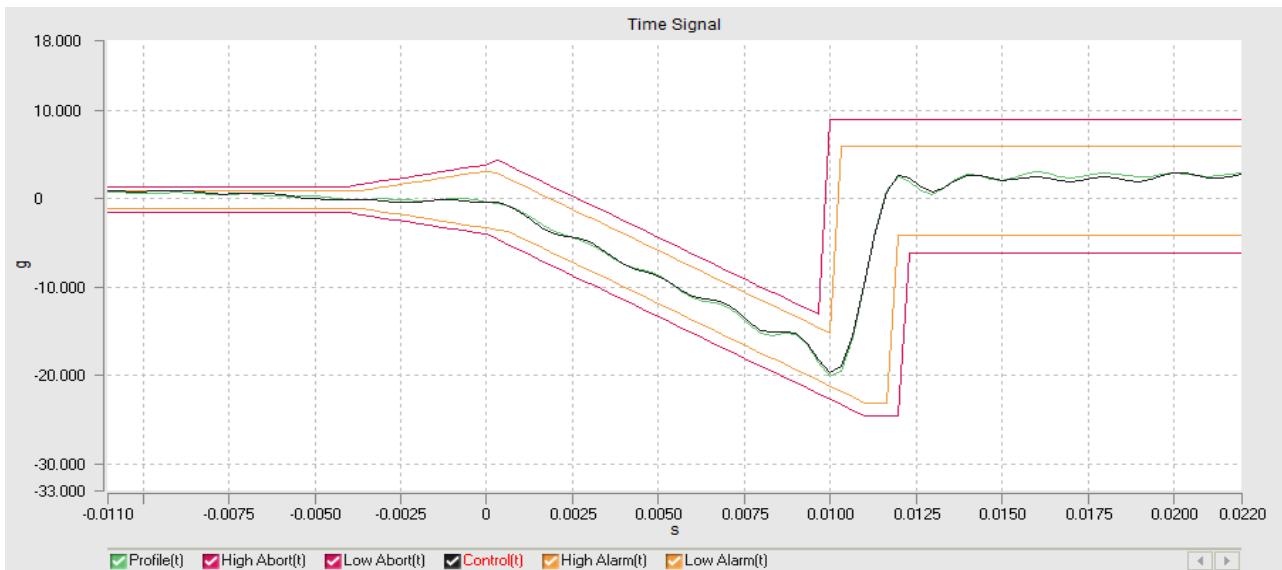
FIG 17.1: -Z axis direction mounted



FIG 17.2: -Z axis direction mounted



FIG.18 : -Z Axis Test screen.



Shock Type:Final Peak Saw Tooth

Mag:20.00 g

Pulse Duration:11 ms

Current level:100 %

Demand peak:20.000 g

Control peak:19.541 g

Block Size: 2048

Frame Time:0.6827 s

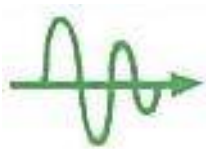
dT:0.000333333 s

Current Pulses: 3

Output pulses:12

Remain pulses: 0

Data was saved as a file at time:2023-12-15 PM 03:31:07



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Add: No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864,
Taiwan (R.O.C.)

Tel: 886-2-2688-0999 Fax: 886-2-2688-0977

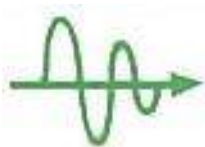
E-mail: info@vibsource.com

Report No.: VS-TV-121219-01

Posterior check.

FIG.19.1 ~ 19.6





VIBRATION SOURCE TECHNOLOGY CO., LTD.

Vibration Testing Laboratory

Add: No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)

Tel: 886-2-2688-0999 Fax: 886-2-2688-0977

E-mail: info@vibsource.com

Report No.: VS-TV-121219-01

II 、 Test Description

1. Date of Test

This test was performed on Dec 15 ~ 18, 2023

2. Test Location

This test was performed on NO. 29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan.

3. Test Methods

This test was carried out according to the following documents: (VS-LP-TS-01)V3.1.

4. Test standard instruments

Test standard instruments and matching accelerometer, as below:

Specimen	Manufacturer	Model	Serial NO.	Calibration Date	Validity Date
Electrodynamics Type Vibration Tester	Vibration Source Technology CO., LTD	VS-600VH	6693	2023/01/04	2024/01/03
Accelerometer	PCB	J352C34	146404		

Calibration and Traceability to Vibration Source Technology CO., TD.
Vibration Calibration Laboratory (TAF 2465)
(Calibration Report No.: VS-CV-120104-01)

Specimen	Manufacturer	Model	Serial NO.	Calibration Date	Validity Date
Electrodynamics Type Vibration Tester	Vibration Source Technology CO., LTD	VS-1000V	T1001	2023/01/18	2024/01/17
Accelerometer	PCB	353B34	LW230575		

Calibration and Traceability to Vibration Source Technology CO., TD.
Vibration Calibration Laboratory (TAF 2465)
(Calibration Report No.: VS-CV-120118-01)

III 、 Reference

1. Vibration testing procedures (VS-LP-TV-01)V3.1.

VIBRATION SOURCE TECHNOLOGY CO., LTD.

The End.