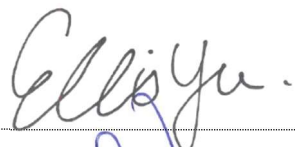
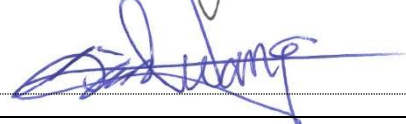


<b>TEST REPORT</b> <b>IEC 60068 Environmental Testing –</b> <b>Part 2-1 : Test A : Cold</b> <b>Part 2-78 : Test Cab : Damp heat, steady state</b> <b>Part 2-64 : Test Fh : Vibration, broadband random and guidance</b> <b>Part 2-27 : Test Ea and guidance: Shock</b>	
<b>Report Number</b> .....	<b>: 2411012</b>
<b>Date of issue</b> .....	<b>: 2024-11-18</b>
<b>Total number of pages</b> .....	<b>: 17</b>
<b>Tested by</b> (name, function, signature) .....	Ellis Yu / Engineer
<b>Approved by</b> (name, function, signature).....	David Wang / Reviewer
 	
<b>Testing Laboratory</b>	
<b>Name</b> .....	Universal Certification Technology Co. Ltd.
<b>Address</b> .....	13F-5, No. 93, Sec. 1, Xintai 5th Rd., Xizhi Dist., New Taipei City 221, Taiwan.
<b>Test Location</b> .....	See page 3
<b>Applicant</b>	
<b>Name</b> .....	Vecow Co., Ltd.
<b>Address</b> .....	3F., No.10, Jiankang Rd., Zhonghe Dist., New Taipei City 23686, Taiwan (R.O.C.)
<b>Test item description</b>	
<b>Product name</b> .....	Ultra-compact Fanless Embedded System
<b>Trade mark(s)</b> .....	Vecow
<b>Model /Type reference</b> .....	SPC-9100
<b>Rating</b> .....	DC Power from Power adaptor
<b>Test specification</b>	
<b>Standard</b> .....	<input checked="" type="checkbox"/> IEC 60068-2-1: Edition 6.0: 2007 <input checked="" type="checkbox"/> IEC 60068-2-78: Edition 2.0: 2012 <input checked="" type="checkbox"/> IEC 60068-2-64: Edition 2.1: 2019 <input checked="" type="checkbox"/> IEC 60068-2-27: Edition 4.0: 2008
<b>Test procedure</b> .....	- Examine the appearance of specimen by visual check and perform functional check after the tes
<b>Test Result</b> .....	<b>No visible Damage and Functional check Normal</b>

**General disclaimer**

The test results presented in this report relate only to the object tested.

This report shall not be reproduced, except in full, without the written approval of the Issuing Testing Laboratory.

**Testing :**

Dates of receipt of test item ..... : 2024-10-15

Date(s) of performance of tests ..... : 2024-10-24~2024-11-06

All test items completed on Universal Certification Technology Co. Ltd. except Mechanical Shock Test via Intertek Testing Services Taiwan Ltd.

**General product information and other remarks :**

1. Dimension of test object : 150.4mm x 106.2mm x 57.0mm (5.92" x 4.18" x 2.24")

2. Weight of test object : 1.3 kg (2.87 lb)

3. Interior Parts:

CPU: Intel® Core™ Ultra7 165U @1.70GHz

RAM: Transcend DDR5 SODIMM 32GB PC5-5600B-SB0-1010-IT

SSD: Innodisk M.2 (P80) 4TG2-P 1TB

4. Test sample :

Complete enclosure.

Individually section of enclosure (see below test method)

5. During test the EUT was operating.

6. The test sample was a pre-production sample without serial number.

7. (Client's declaration) The Configuration of Specimen(s) as shown Below : N/A

**Summary of compliance with standard:**

We have tested the submitted sample(s) as requested and the following results were obtained :

**Test Required : (According to client's test specification , please see following sheets in detail.)**

**1. Low Temperature Test**

**2. Damp Heat Test**

**3. Vibration Test**

**4. Mechanical Shock Test**

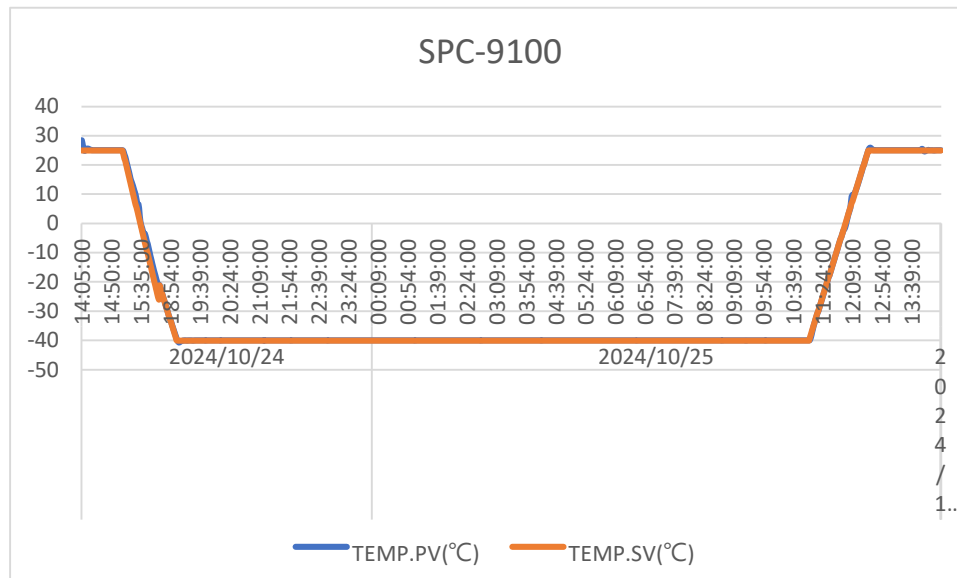
**Test Results :**

- Please see attached Sheets

**1. Low Temperature Test**

Test Equipment :			
Name	Brand	Model	Serial No.
Programmable Temperature & Humidity Chamber	Giant Force	GTH-408-60-CP-AR	MAA2308-003
Test Laboratory Environment Condition :			
Temperature ( °C)	Relative humidity (%)	Air pressure (kPa)	
15 ~ 35	25 ~ 75	86 ~ 106	
Test Location :			
13F-5, No. 93, Sec. 1, Xintai 5th Rd., Xizhi Dist., New Taipei City 221, Taiwan.			
Test Method / Specification :			
IEC 60068-2-1 Edition 6.0: 2007 and client's request			

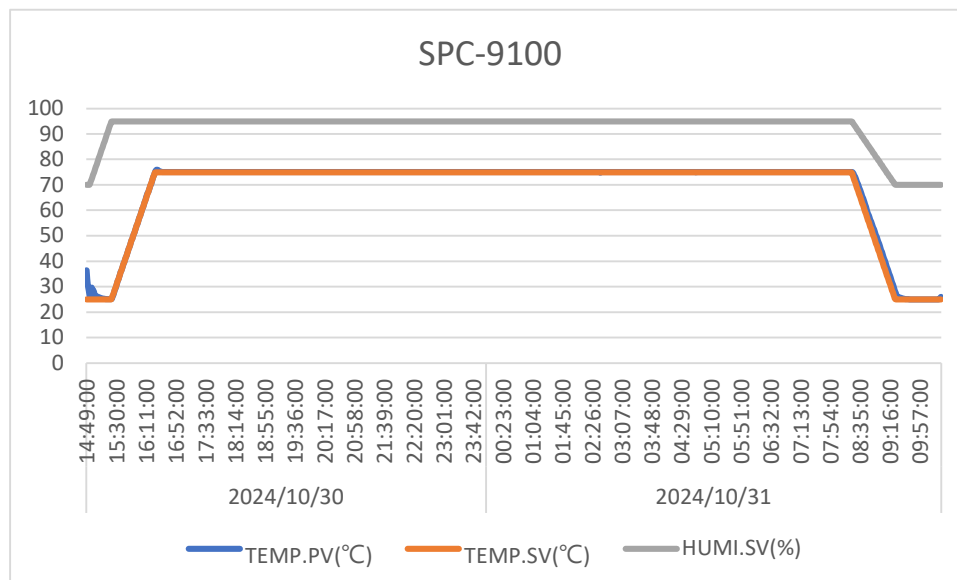
TABLE: Low Temperature Test		
Test temperature	Durations	Curve Chart
-40°C	16hr	during testing



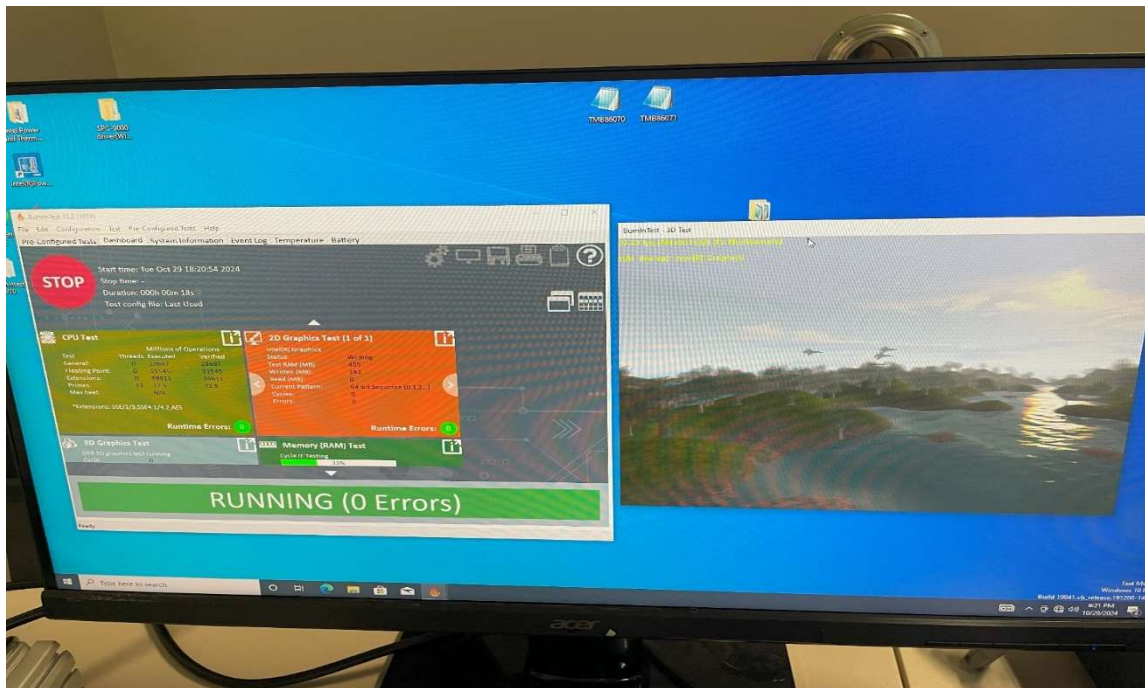
## 2. Damp Heat Test

Test Equipment :			
Name	Brand	Model	Serial No.
Programmable Temperature & Humidity Chamber	Giant Force	GTH-408-60-CP-AR	MAA2308-003
Test Laboratory Environment Condition :			
Temperature (°C)	Relative humidity (%)	Air pressure (kPa)	
15 ~ 35	25 ~ 75	86 ~ 106	
Test Location :			
13F-5, No. 93, Sec. 1, Xintai 5th Rd., Xizhi Dist., New Taipei City 221, Taiwan.			
Test Method / Specification :			
IEC 60068-2-78 Edition 2.0: 2012 and client's request			

TABLE: Damp Heat Test			
Test temperature	Test Humidity	Durations	Curve Chart
75°C	95% RH	16hr	during testing



**Test photos:**



**Functional Check**

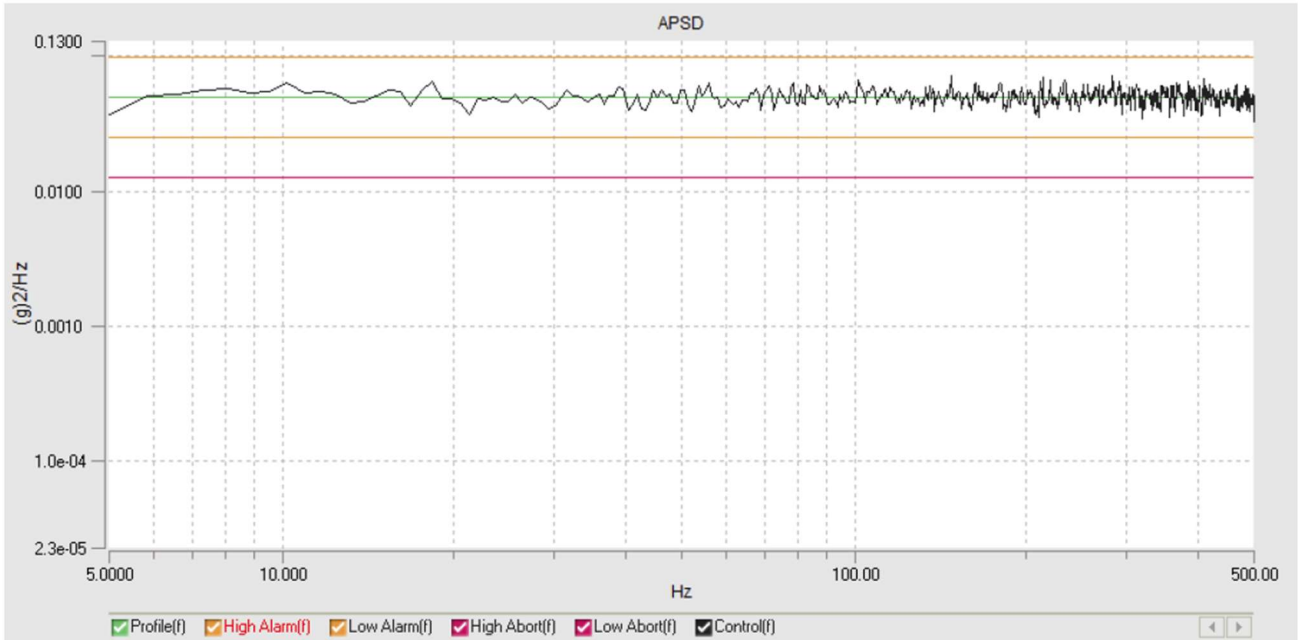
### 3. Vibration Test

<b>Test Equipment :</b>			
<b>Name</b>	<b>Brand</b>	<b>Model</b>	<b>Serial No.</b>
Vibration Tester	Vibration Source	ZVS-600VH-51	E113006
Controller	Vibration Source	VST-9008	395352176
<b>Test Laboratory Environment Condition :</b>			
Temperature (°C)	Relative humidity (%)	Air pressure (kPa)	
15 ~ 35	25 ~ 75	86 ~ 106	
<b>Test Location :</b>			
13F-5, No. 93, Sec. 1, Xintai 5th Rd., Xizhi Dist., New Taipei City 221, Taiwan.			
<b>Test Method / Specification :</b>			
<b>IEC 60068-2-64: Edition 7.0: 2007 and client's request</b> <b>Vibration – operation</b> <b>Wave form: Random</b> <b>Test Frequency: (5~500 Hz)</b>			
<b>Frequency (Hz)</b>	<b>Left Slope(dB/Oct)</b>	<b>PSD(g<sup>2</sup>/Hz)</b>	<b>Right Slope (dB/Oct.)</b>
5	-	0.0504951	0
500	0	0.0504951	-
➔equivalent to 5.0 grms			
<b>Direction: X, Y, Z axis (see photo 1 ~ 3)</b> <b>Duration: 30 minute / axis</b>			
<b>Test Procedure:</b>			
<ul style="list-style-type: none"> <li>- Check the samples' appearance before the test.</li> <li>- Install the samples on the testing table and set up testing condition.</li> <li>- After testing, take off samples from table and put them in the storage area.</li> <li>- Observe the samples and record for any visible change after testing.</li> </ul>			
<b>Summary:</b>			
<ul style="list-style-type: none"> <li>- No visible damage was found on sample appearance after the test.</li> <li>- Sample photo after the test:</li> </ul>			

**Test profile: X axis**

Test Name: IEC600~1.UCN Object name: Object Type:

Test Type: Random Test Project Name: 00~1.UCN.ucn



Current Level: 100.00 % Demand RMS: 4.999 g Control RMS: 4.999 g

Frame Time: 1.3653 (s) Lines: 800 dF: 0.7 Hz

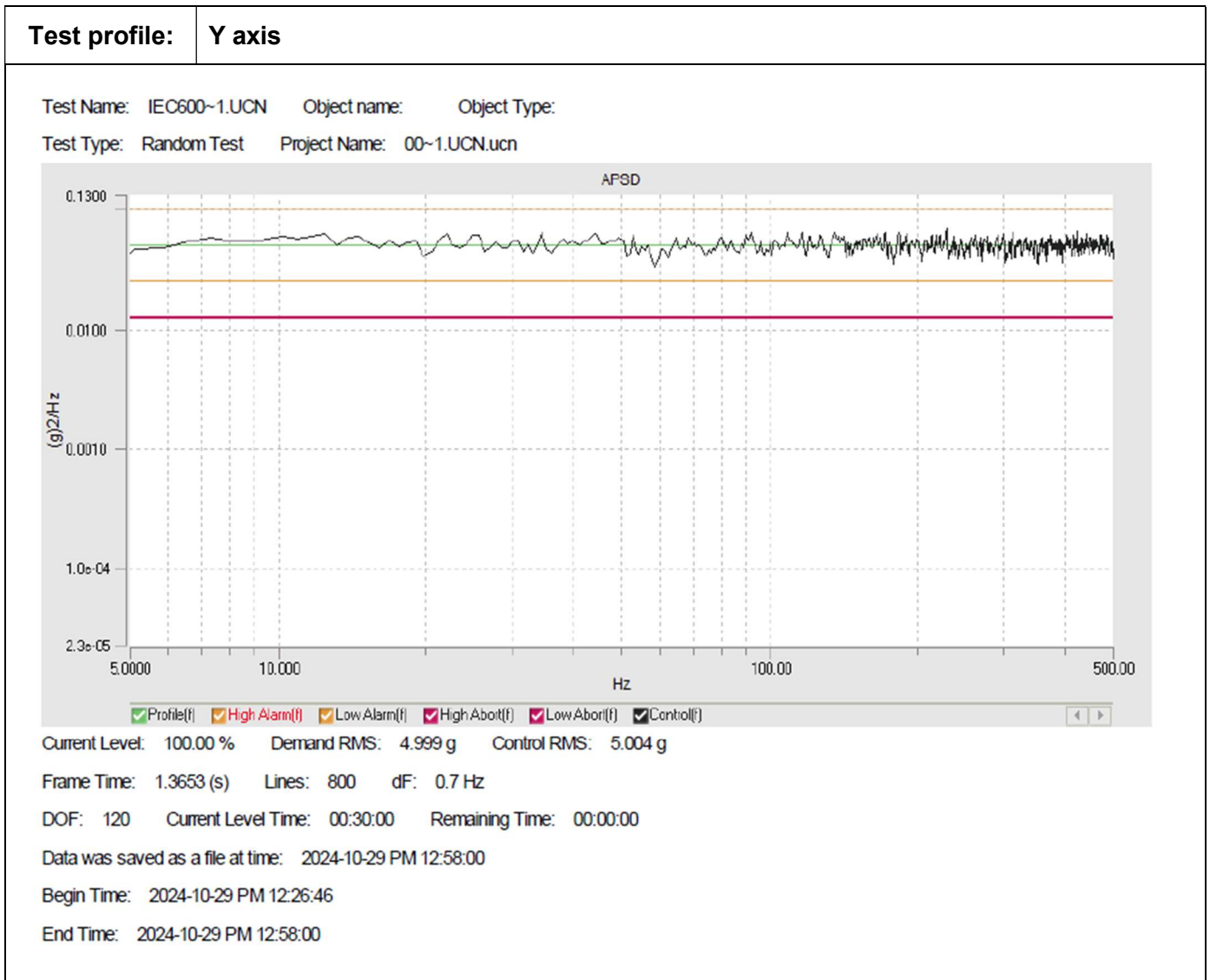
DOF: 120 Current Level Time: 00:30:00 Remaining Time: 00:00:00

Data was saved as a file at time: 2024-10-29 PM 01:42:24

Begin Time: 2024-10-29 PM 01:10:58

End Time: 2024-10-29 PM 01:42:24

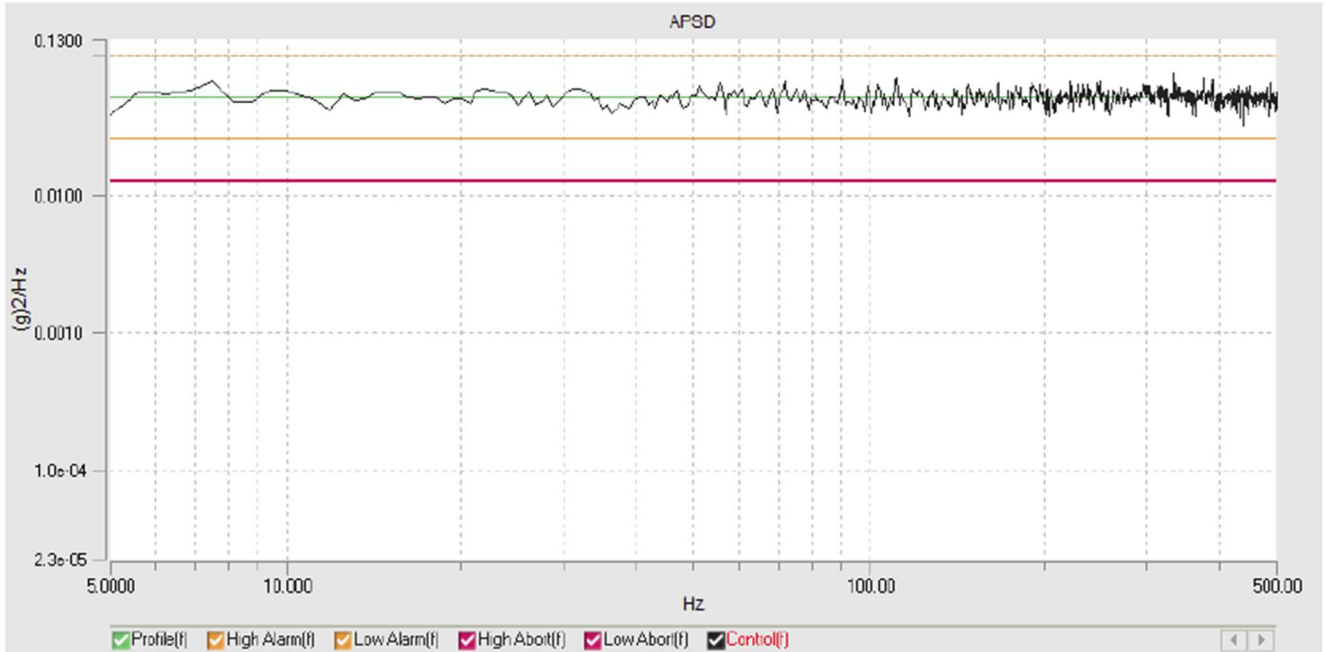




**Test profile: Z axis**

Test Name: 5-500H~1.UCN Object name: Object Type:

Test Type: Random Test Project Name: 0H-1.UCN.ucn



Current Level: 100.00 % Demand RMS: 4.999 g Control RMS: 4.993 g

Frame Time: 1.6000 (s) Lines: 800 dF: 0.6 Hz

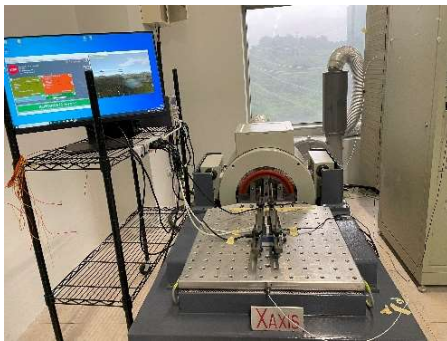
DOF: 120 Current Level Time: 00:30:00 Remaining Time: 00:00:00

Data was saved as a file at time: 2024-10-28 PM 04:28:53

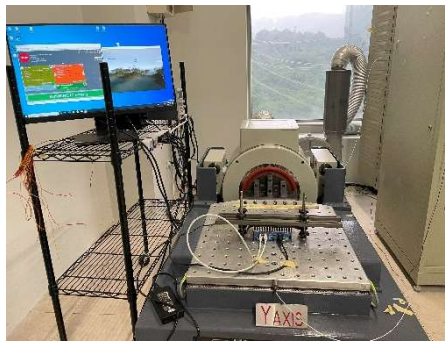
Begin Time: 2024-10-28 PM 03:56:59

End Time: 2024-10-28 PM 04:28:53

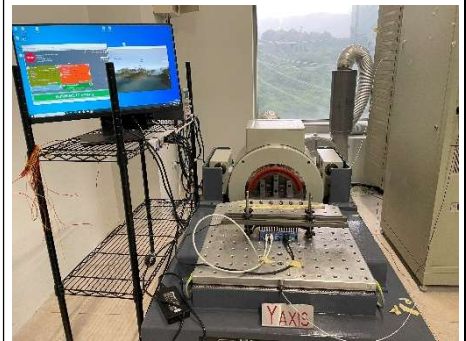
**Test photos:**



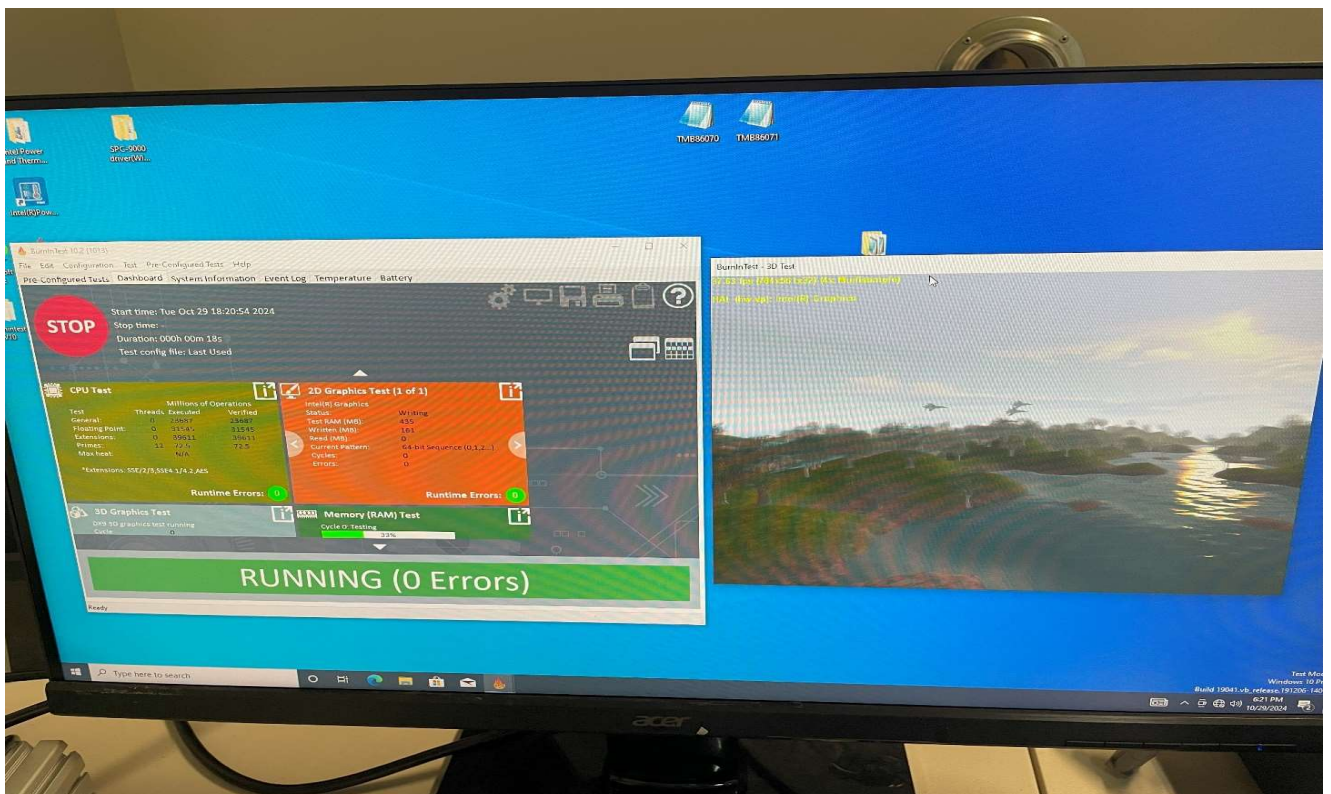
1. X axis



2. Y axis



3. Z axis



**Functional Check**

#### 4. Operating Mechanical Shock Test

<b>Test Equipment :</b>			
<b>Name</b>	<b>Brand</b>	<b>Model</b>	<b>Serial No.</b>
Shock Tester	Yoshida	ASQ-700	RL002
<b>Test Laboratory Environment Condition :</b>			
Temperature (°C)	Relative humidity (%)	Air pressure (kPa)	
15 ~ 35	25 ~ 75	86 ~ 106	
<b>Test Location :</b>			
Intertek Testing Services Taiwan Ltd., 5F, No. 423 Ruiguang Rd., Neihu Dist., Taipei 11492, Taiwan			
<b>Test Method / Specification :</b>			
<p><b>IEC 60068-2-27: Edition 4.0: 2008 and client's request</b></p> <p><b>Sample condition: Operating</b></p> <p><b>Pulse shape: Half-sine</b></p> <p><b>Acceleraiion : 50g</b></p> <p><b>Pulse duration: 11 ms</b></p> <p><b>Shock direction: 6 faces (<math>\pm X</math>, <math>\pm Y</math>, <math>\pm Z</math> axis, see photo 4 ~9)</b></p> <p><b>No. Of shock: 3 shocks/axis (total 18 shocks)</b></p>			

**Test profile:** +X axis and -X axis

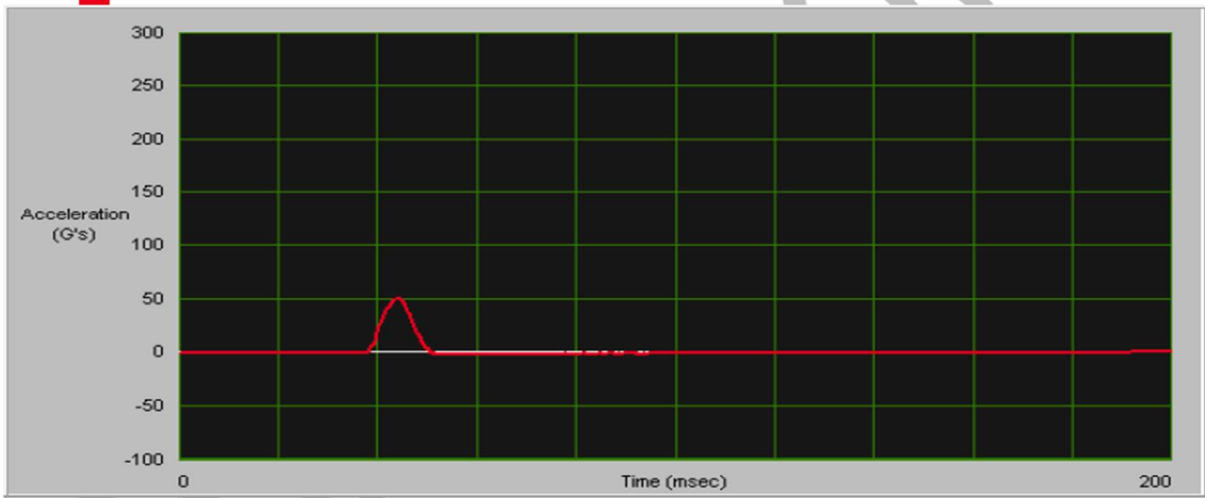
-Test profile:  
+X axis-1

11:17:26 AM  
Nov-06-2024



**Acceleration vs Time**

Channel Description:	G's	msec	In/S	Filter Hz	Max G's	Min G's
Ch1 <span style="color:red">■</span> Table	50.06	11.20	132.38	500.00	50.06	-2.51



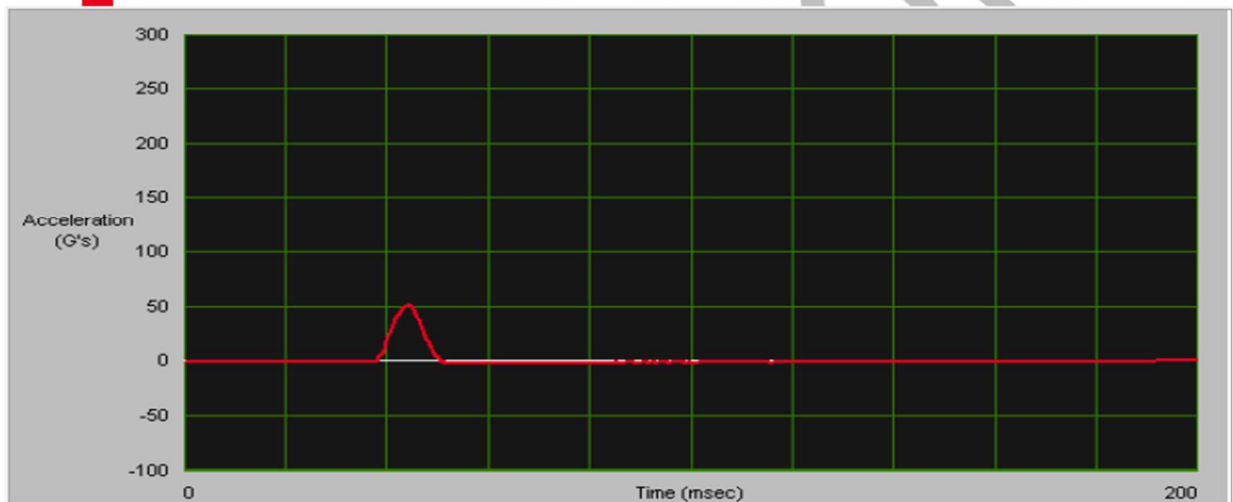
-Test profile:  
-X axis-2

11:23:06 AM  
Nov-06-2024



**Acceleration vs Time**

Channel Description:	G's	msec	In/S	Filter Hz	Max G's	Min G's
Ch1 <span style="color:red">■</span> Table	50.86	11.20	133.42	500.00	50.86	-2.59



**Test profile:** +Y axis and -Y axis

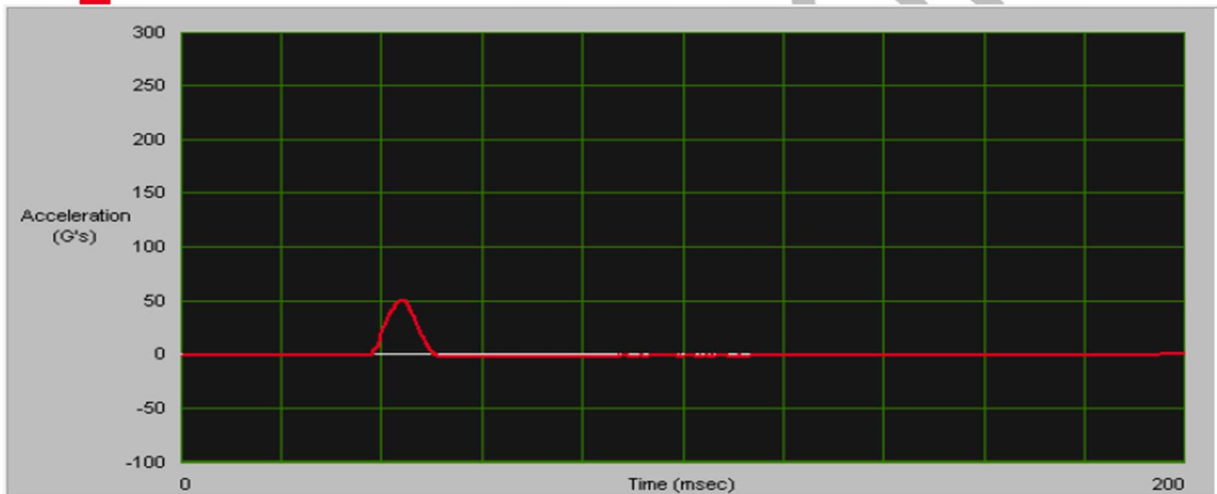
-Test profile:  
+Y axis-1

11:28:24 AM  
Nov-06-2024



**Acceleration vs Time**

Channel Description:	G's	msec	In/S	Filter Hz	Max G's	Min G's
Ch1 Table	50.35	11.20	132.28	500.00	50.35	-2.56



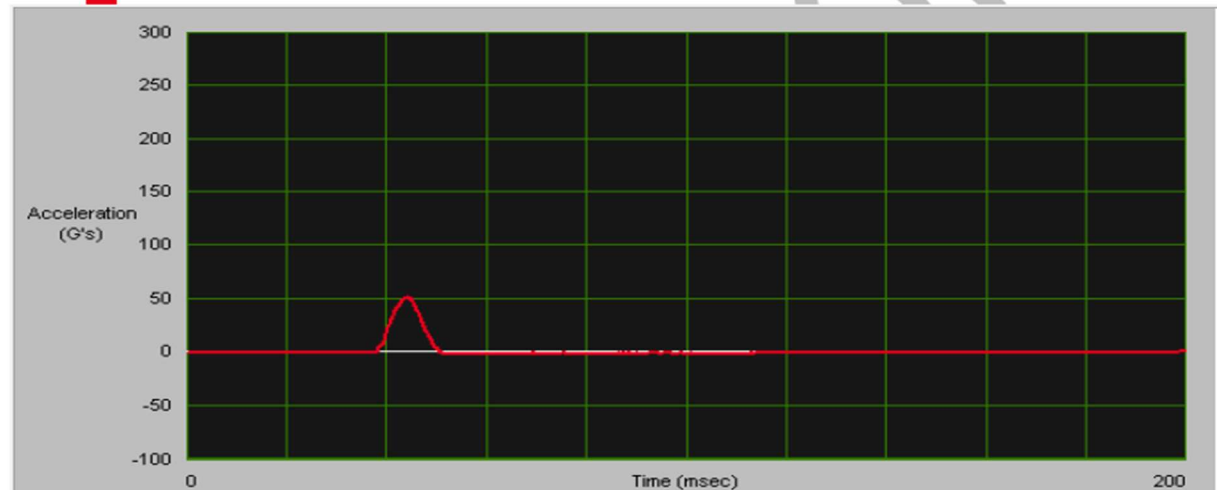
-Test profile:  
-Y axis-1

11:33:51 AM  
Nov-06-2024



**Acceleration vs Time**

Channel Description:	G's	msec	In/S	Filter Hz	Max G's	Min G's
Ch1 Table	50.33	11.20	132.63	500.00	50.33	-2.68



**Test profile:** +Z axis and -Z axis

-Test profile:  
+Z axis-1

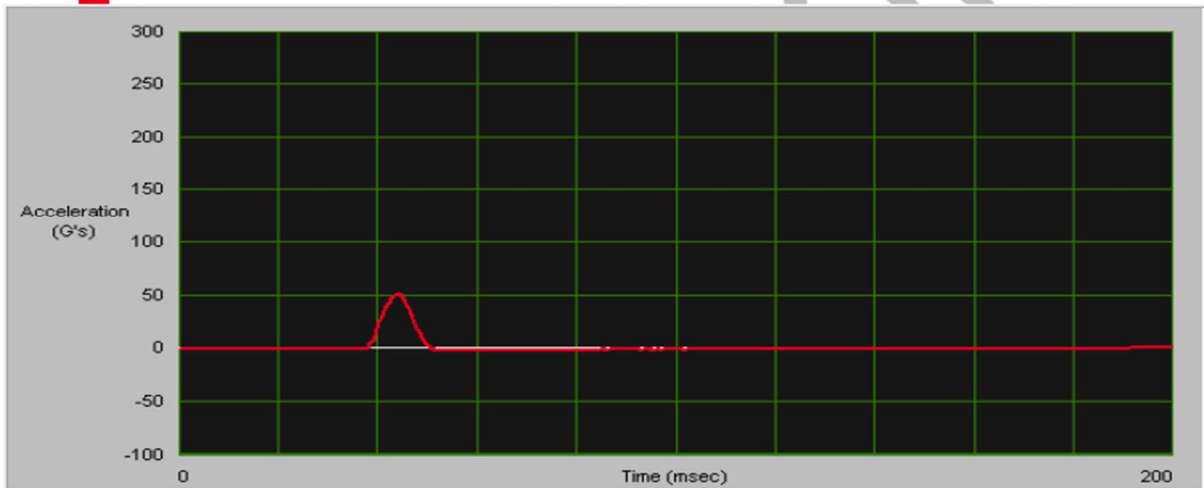
11:44:22 AM  
Nov-06-2024



**TEST PARTNER**


**Acceleration vs Time**

Channel Description:	G's	msec	In/S	Filter Hz	Max G's	Min G's
Ch1 Table	50.63	11.20	133.05	500.00	50.63	-2.43



-Test profile:  
-Z axis-1

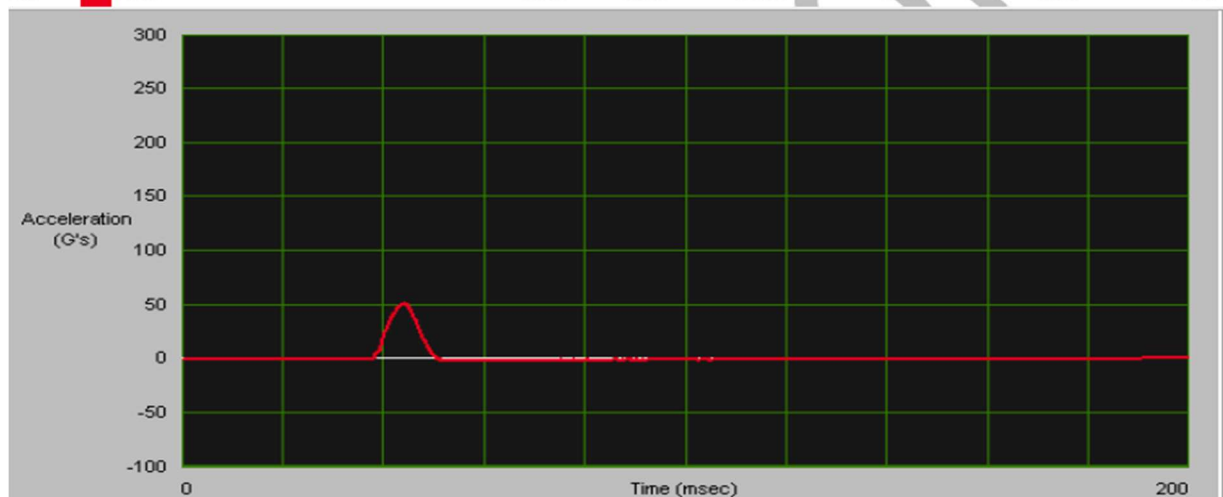
11:51:14 AM  
Nov-06-2024



**TEST PARTNER**

**Acceleration vs Time**

Channel Description:	G's	msec	In/S	Filter Hz	Max G's	Min G's
Ch1 Table	50.65	11.20	132.82	500.00	50.65	-2.38



**Test photos:**



4. +X axis



5. -X axis



6. +Y axis



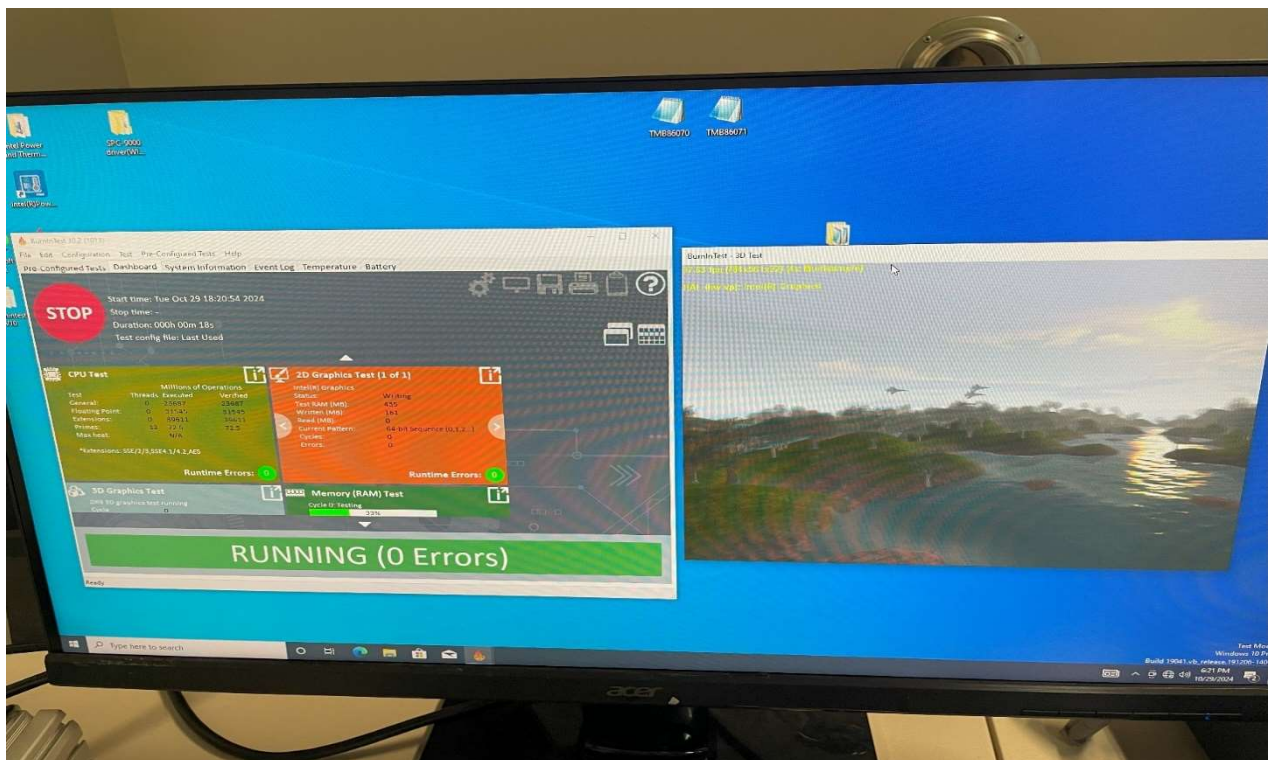
7. -Y axis



8. +Z axis



9. -Z axis



**Functional Check**





EUT Photographs

----- The End of Test Report -----