Test Report

Vibration Test
Mechanical Shock Test
Temperature Test

Applicant
Vecow Co., Ltd

Product name
Expandable AI Computing System

Model name
EVS－3100

Antek Certification Inc.,
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Neihu Dist., Taipei 114, Taiwan

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Test Report

Report No…….. :	TWK2502014-001
Project Reference No. …… :	SO25010342 ~ SO25010345
Tested by (+ signature). .....:	Miao
Approved by (+ signature).....:	Simon Lu
Date of issue .....:	2025/02/10
Total number of pages .....:	22

Applicant's name.....:	Vecow Co., Ltd
Address .....:	3F, No. 10, Jiankang Rd., Zhonghe Dist., New Taipei City 23586, Taiwan

Testing Laboratory Name .....:	AnTek Certification Inc.
Laboratory Address .....:	7F, No. 351, Yangguang St. Taipei 11491 Taiwan
Testing Location.....:	No. 21, Gongjian Rd. Keelung City 20647 Taiwan

Test specification	
Standard……:	(As requested by the applicant, for details please refer to attached pages.)
Test procedure .....:	Same as above
Date of receipt of test item …...:	2025/01/16
Date (s) of performance of test..:	2025/01/20 to 2025/01/24
The report relates only to the object tested.	
Test item description	
Item name ……..:	Expandable AI Computing System
Model name ……..……:	EVS－3100
Quantity ……..……:	1
Test result ……..……:	See test conducted.

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Product	Expandable AI Computing System
Brand	Vecow
Model	EVS-3100
Series Model	EVS-3XXXXXXXXXX ("X" can be 0-9, A-Z or blank)
Model Differences	The models are electrically identical, different models no. are for marketing purpose. The series model information is provided by client.
CPU	Intel® Core™ i7-13700TE 1.10 GHz
RAM	Innodisk 48GB DDR5 5600 W/T SODIMM *2
SSD	M.2 Innodisk P-80 4TG2-P 1TB
	Innodisk 2.5” SATA SSD 3TE7 512GB *2
GPU	T1000

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Content

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Vibration Test

Tested Sample:
Sample quantity: 1 unit

Test Equipment:

Equipment	Vibration Shaker
Manufacturer	SHINKEN
Model Number	G22-310S
Date of Calibration	Jul. 02, 2024

Equipment	Vibration Shaker
Manufacturer	SHINKEN
Model Number	G-0230NS
Date of Calibration	Apr. 18, 2024

Laboratory Ambiance Condition:

Temperature	15 ~ 35 ℃
Humidity	25 ~ 75 %RH
Air Pressure	86 ~ 106 kPa

Reference Document:

The test was performed with reference to MIL-STD-810H:2019, Method 514.8.

Test Condition:

- Pulse Shape: Random wave
- Operating: Input electrical power to operate during the test.
- Frequency Range: 10 Hz to 500 Hz
- Acceleration: 0.204 Grms for X axis, 0.74 Grms for Y axis and 1.04 Grms for Z axis.
- Duration: 1 hour/axis
- Direction: X, Y and Z axes
- Spectrum:

<table>
<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>
<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 rowspan="5" colspan="2">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 rowspan="2" colspan="2">rms =0.204 G</td><td>500</td><td>0.00015</td></tr>
<tr><td colspan="2">rms =0.740 G</td></tr>
</table>

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Test Procedure:

- Check the sample's appearance before the test.
- Install the sample on testing table and set up testing condition.
- After testing, take off sample from table and put it in the storage area.
- Observe the sample and record for any visible change after testing.

Test Summary:

- No visible damage was found on sample appearance after the test.
- The function was normal after the test.

Test Photos:

Sample photo before the test:

Function check before the test:

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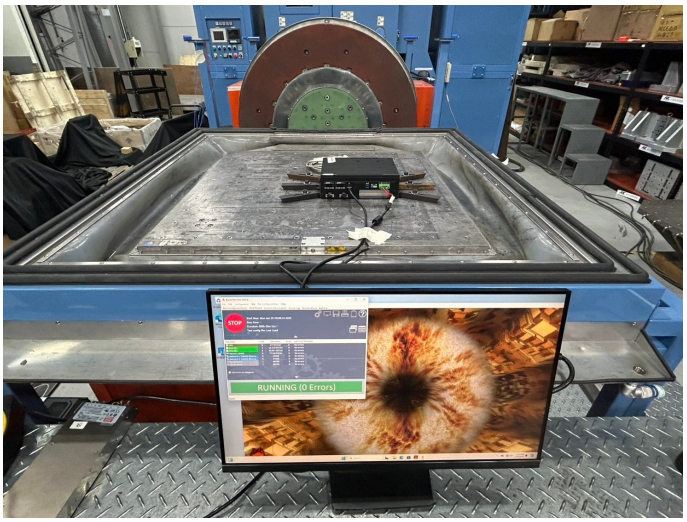
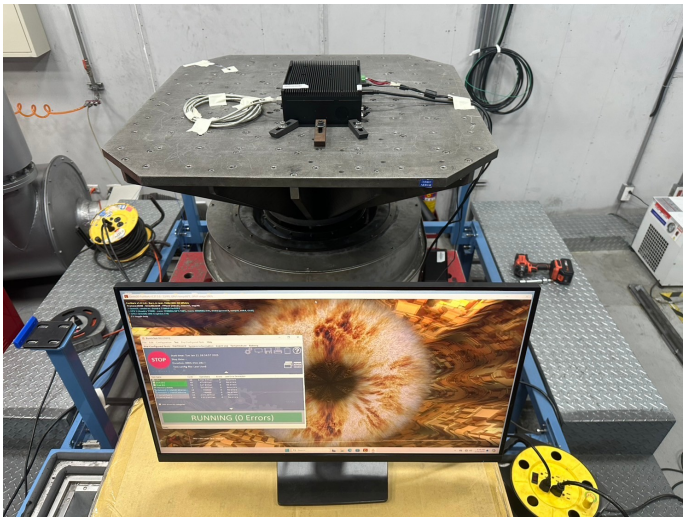
Setup photo:

X axis

Y axis



Z axis



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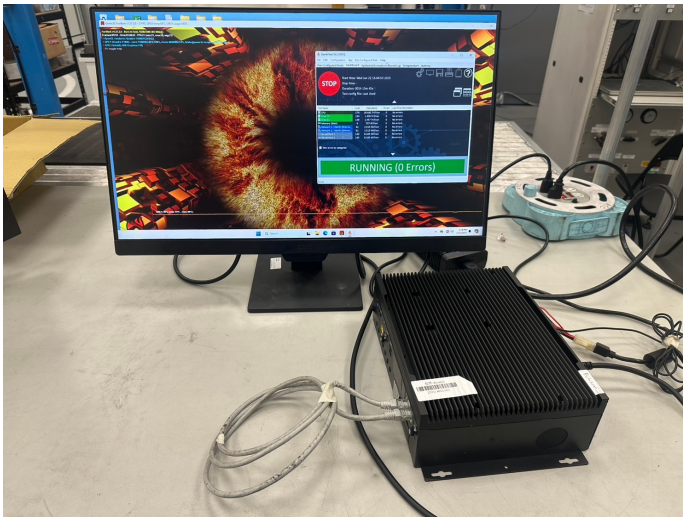
Sample photo after the test:

Function check after the test:



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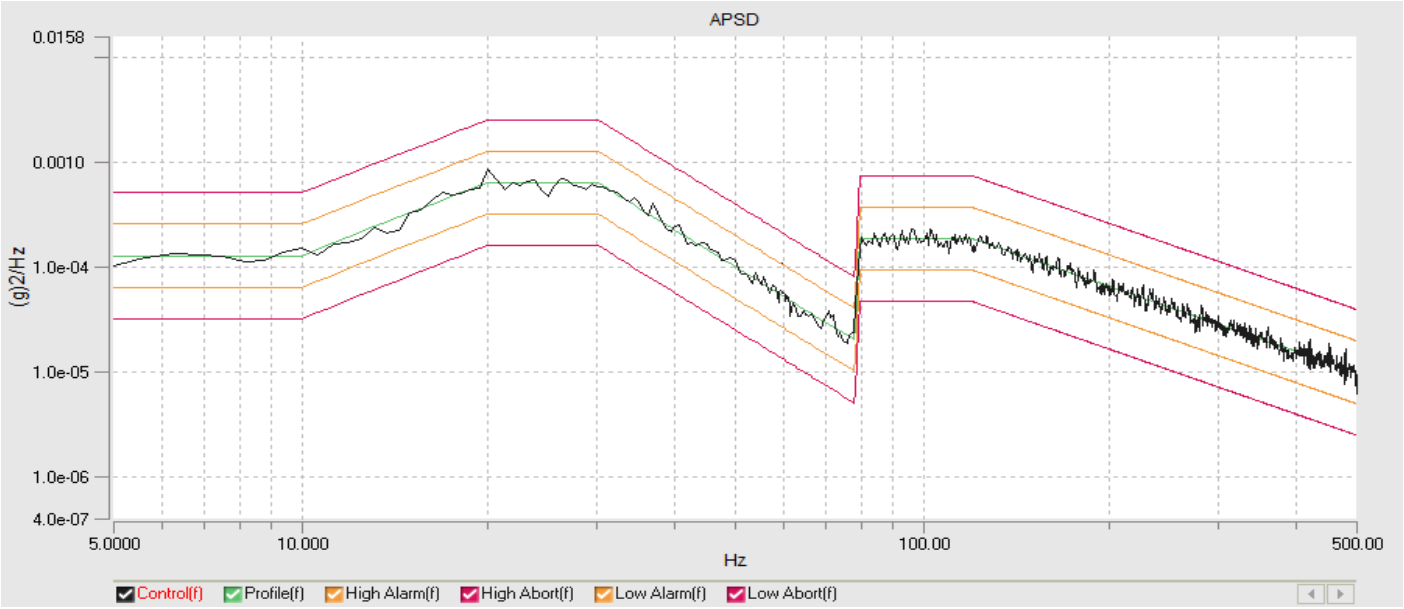
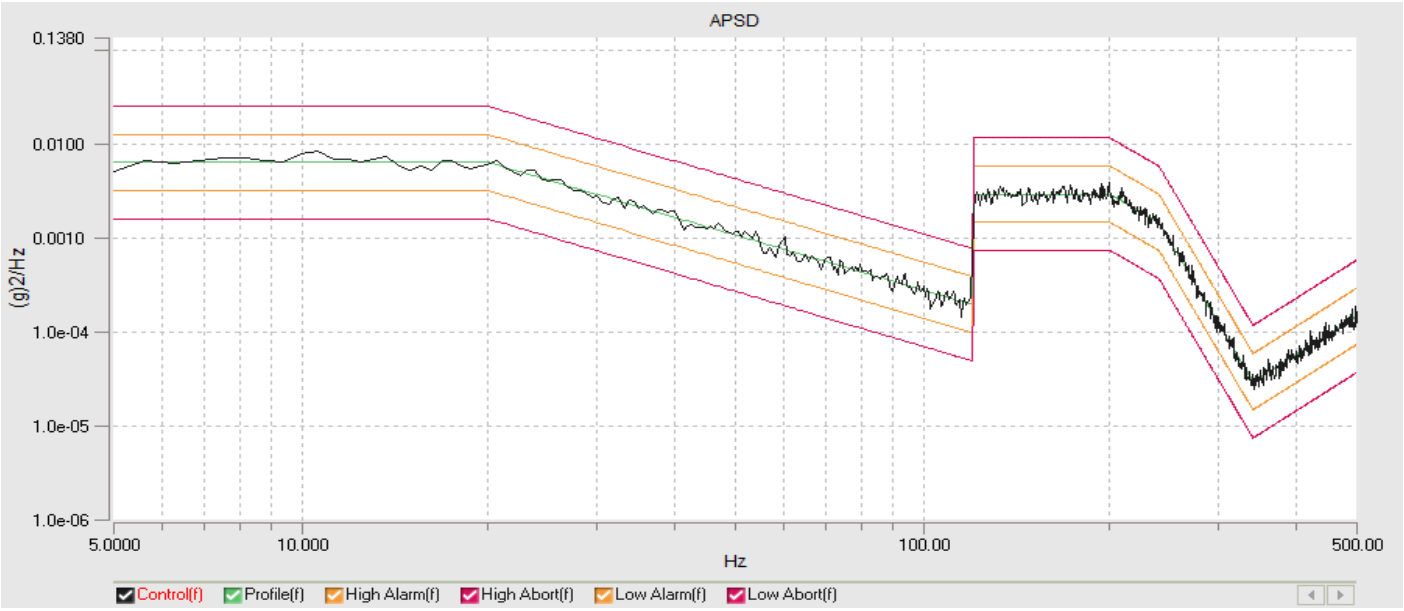
Test Profile:

X axis



Demand RMS: 0.205 g
Current Level Time: 01:00:00
Data was saved as a file at time:2025-1-20 PM 10:54:54
Begin Time: 2025-1-20 PM 09:54:00
End Time: 2025-1-20 PM 10:54:48

Y axis



Demand RMS: 0.762 g
Current Level Time: 01:00:00
Data was saved as a file at time:2025-1-20 PM 09:36:44
Begin Time: 2025-1-20 PM 08:35:43
End Time: 2025-1-20 PM 09:36:38

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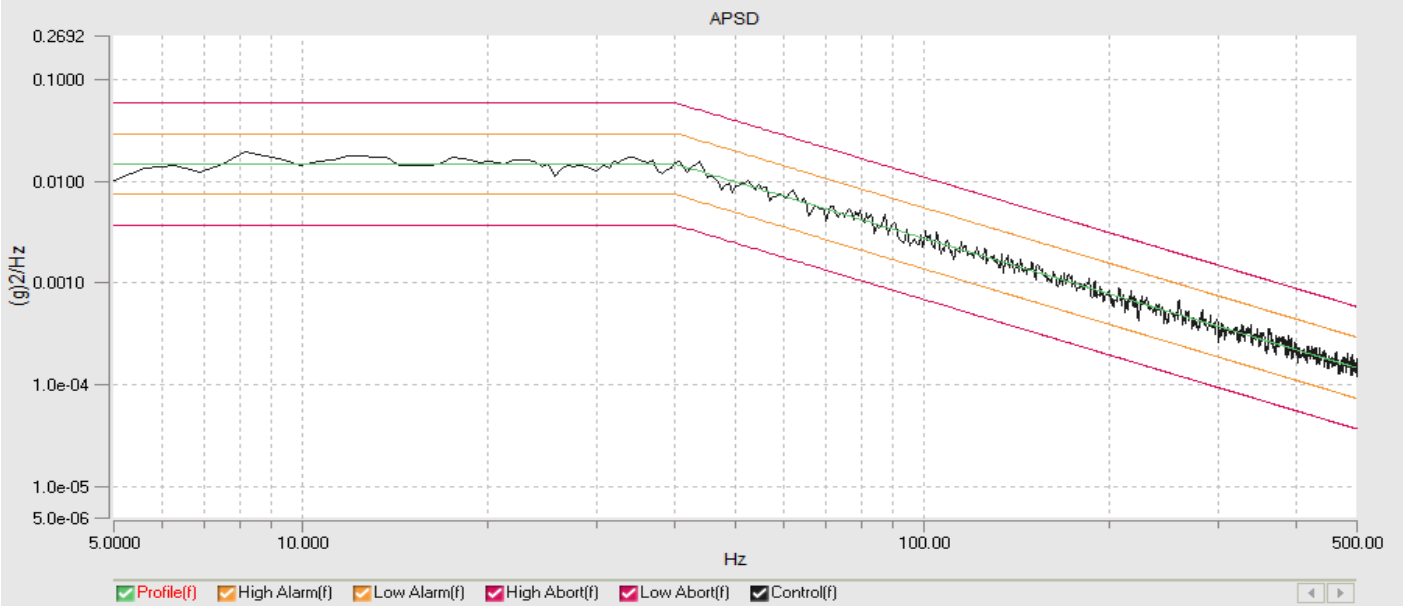
Z axis



Demand RMS: 1.078 g
Current Level Time: 01:00:00
Data was saved as a file at time:2025-1-21 PM 08:43:49
Begin Time: 2025-1-21 PM 07:31:50
End Time: 2025-1-21 PM 08:34:09

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Mechanical Shock Test

Tested Sample:

Sample quantity: 1 unit

Test Equipment:

Equipment	Vibration Shaker
Manufacturer	SHINKEN
Model Number	G22-310S
Date of Calibration	Jul. 02, 2024

Laboratory Ambiance Condition:

Temperature	15 ~ 35 ℃
Humidity	25 ~ 75 %RH
Air Pressure	86 ~ 106 kPa

Reference Document:

The test was performed with reference to MIL-STD-810H:2019,Method 516.8, Procedure I.

Test Condition:

- Operating: Input electrical power to operate during the test.
- Pulse shape: Sawtooth wave
- Acceleration: 20 G
- Pulse duration: 11 ms
- Test face:

Test axis	Shock Times
+X axis	3
-X axis	3
+Y axis	3
-Y axis	3
+Z axis	3
-Z axis	3

Test Procedure:

- Check the sample's appearance before the test.
- Install the sample on testing table and set up testing condition.
- After testing, take off sample from table and put it in the storage area.
- Observe the sample and record for any visible change after testing.

Test Summary:

- No visible damage was found on sample appearance after the test.
- The function was normal after the test.

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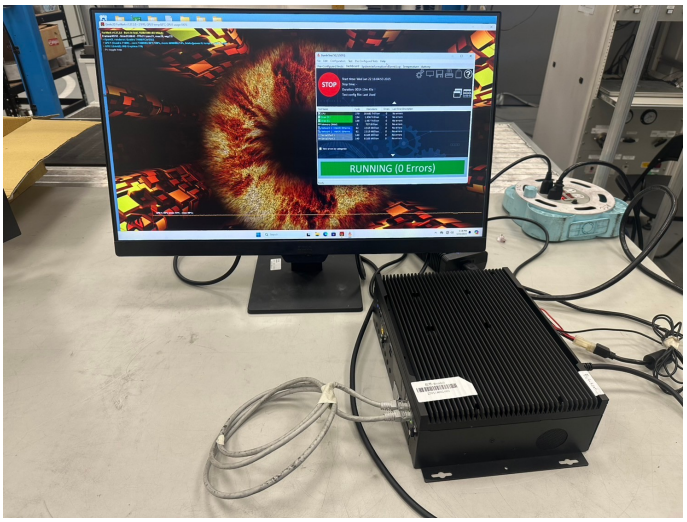
Test Photos:

Sample photo before the test:

Function check after the test:



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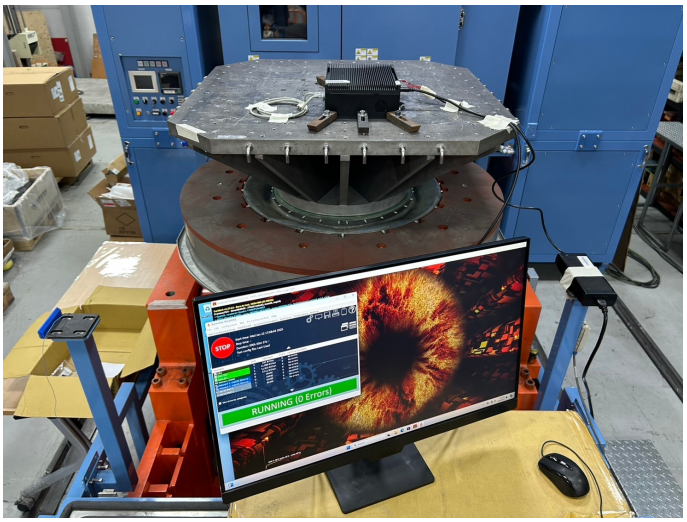
Setup photo:

±X axis

±Y axis

±Z axis



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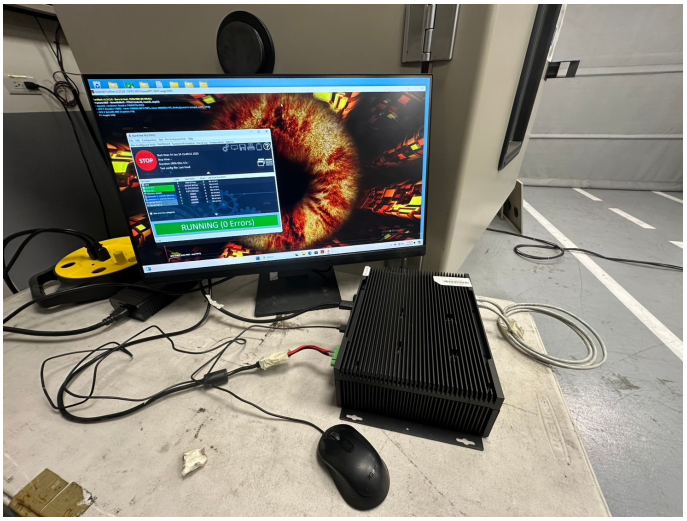
Sample photo after the test:

Function check after the test:



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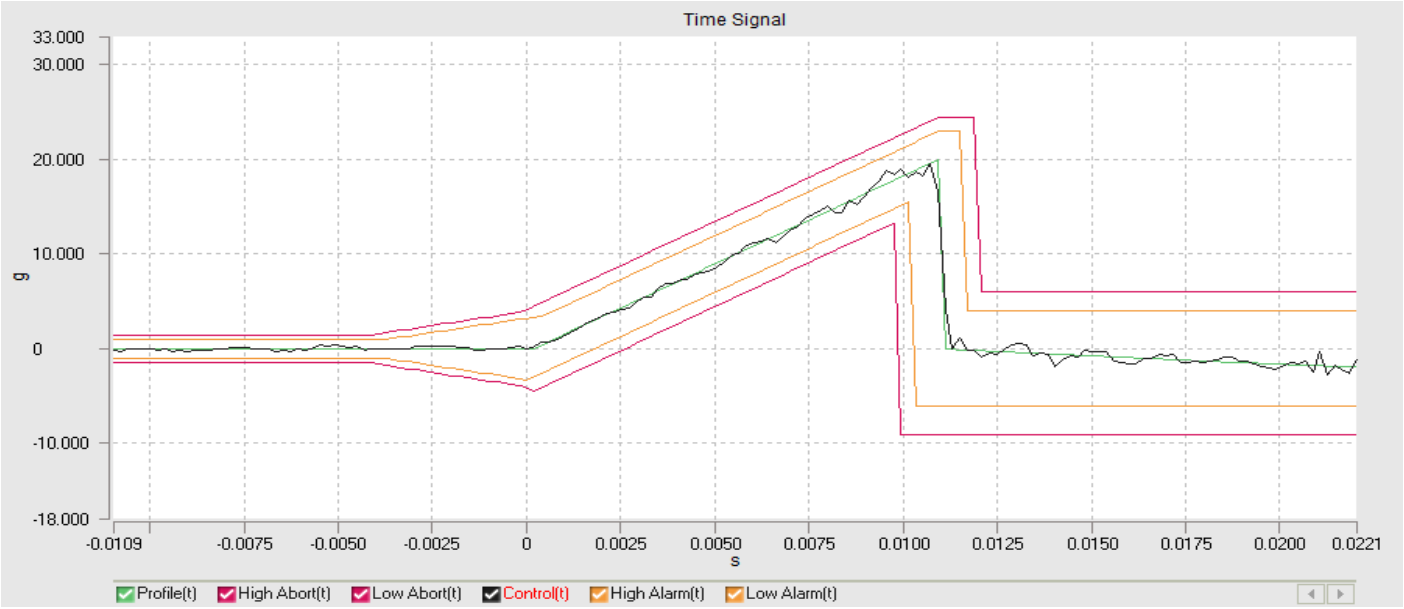
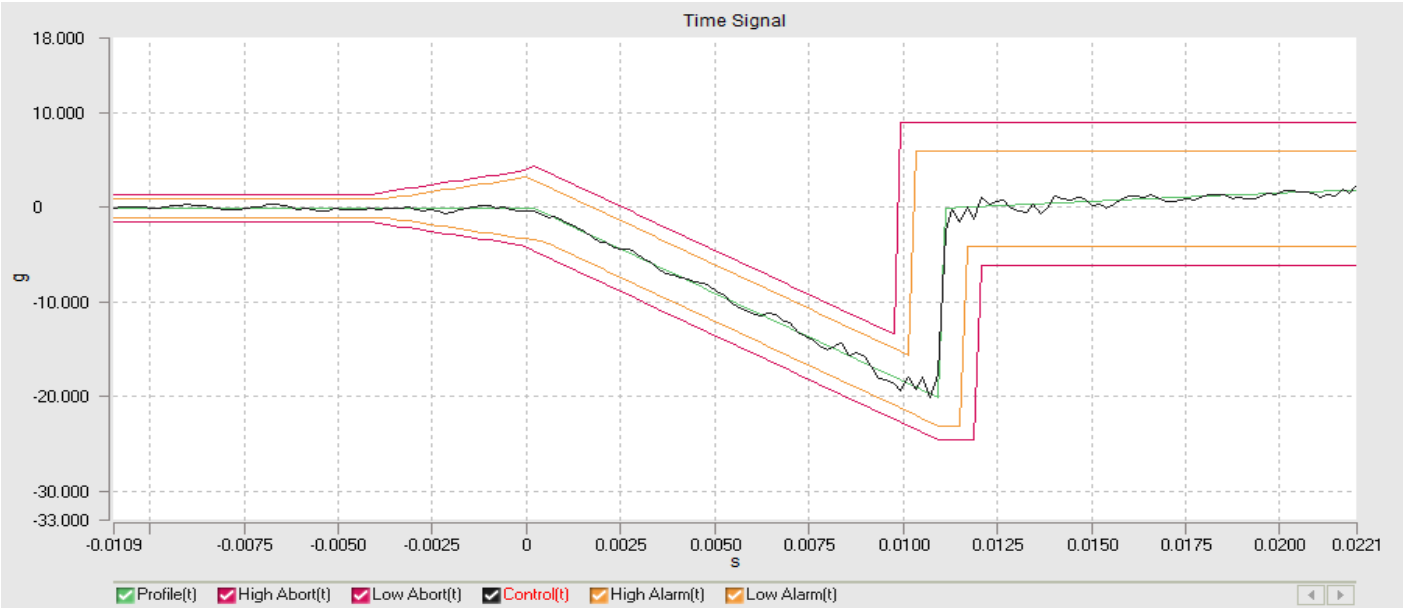
Test Profile:

+X axis



Shock Type: Final Peak Saw Tooth
Pulse Duration: 11 ms
Demand peak: 20.000 g
Current Pulses: 3
Begin Time: 2025-1-21 PM 09:41:46
End Time: 2025-1-21 PM 09:43:09

-X axis



Shock Type: Final Peak Saw Tooth
Pulse Duration: 11 ms
Demand peak: 20.000 g
Current Pulses: 3
Begin Time: 2025-1-21 PM 09:44:03
End Time: 2025-1-21 PM 09:45:38

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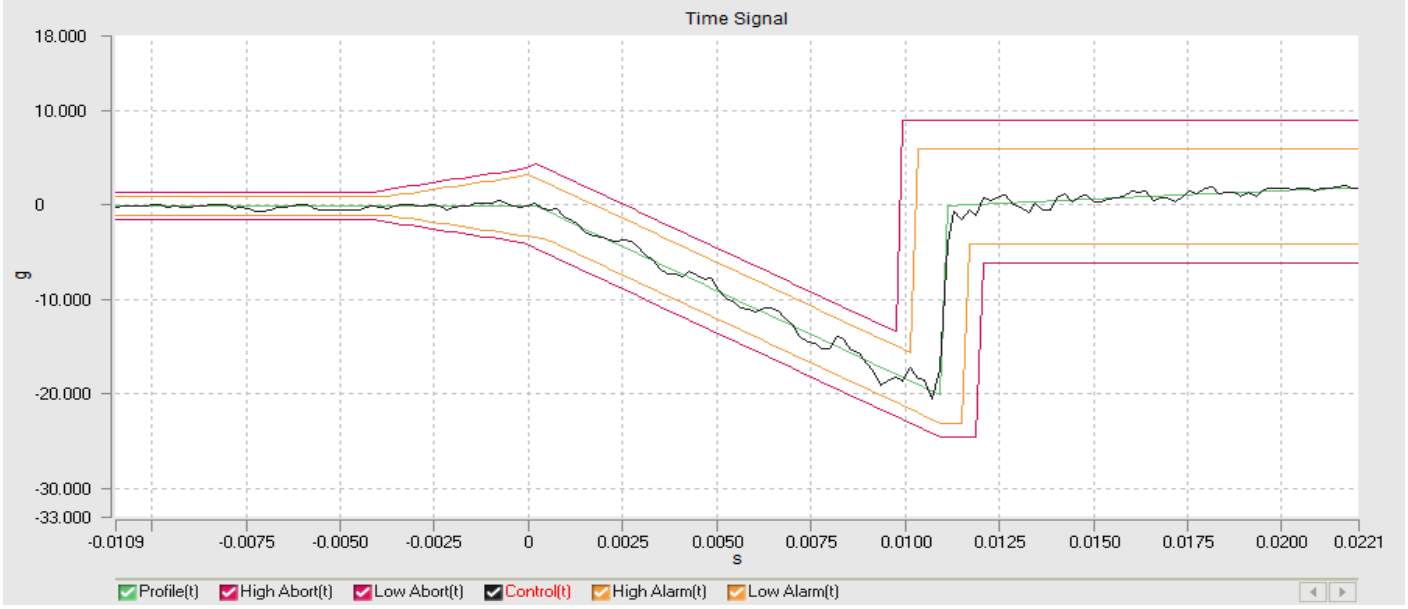
+Y axis

Shock Type: Final Peak Saw Tooth
Pulse Duration: 11 ms
Demand peak: 20.000 g
Current Pulses: 3
Begin Time: 2025-1-21 PM 09:58:15
End Time: 2025-1-21 PM 10:00:23

-Y axis



Shock Type: Final Peak Saw Tooth
Pulse Duration: 11 ms
Demand peak: 20.000 g
Current Pulses: 3
Begin Time: 2025-1-21 PM 10:01:08
End Time: 2025-1-21 PM 10:02:58

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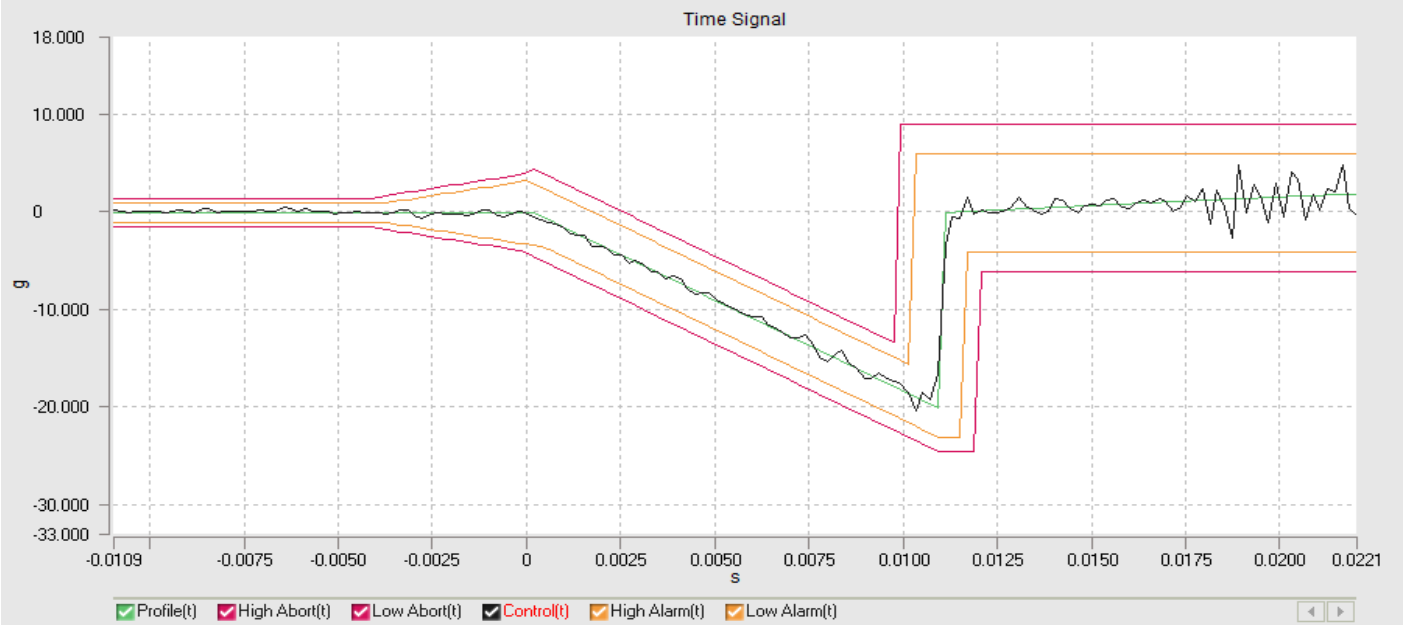
+Z axis

Shock Type: Final Peak Saw Tooth
Pulse Duration: 11 ms
Demand peak: 20.000 g
Current Pulses: 3
Begin Time: 2025-1-22 PM 06:02:10
End Time: 2025-1-22 PM 06:04:13

-Z axis



Shock Type: Final Peak Saw Tooth
Pulse Duration: 11 ms
Demand peak: 20.000 g
Current Pulses: 3
Begin Time: 2025-1-22 PM 06:05:40
End Time: 2025-1-22 PM 06:07:09

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Temperature Test

Tested Sample:
Sample quantity: 1 unit

Test Equipment:

Equipment	Temperature Test Chamber
Manufacturer	KSON
Model Number	THS-D4T-100
Date of Calibration	Jul. 10, 2024

Laboratory Ambiance Condition:

Temperature	15 ~ 35 ℃
Humidity	25 ~ 75 %RH
Air Pressure	86 ~ 106 kPa

Reference Document:

The test was performed with reference to IEC 60068-2-1:2007 and IEC 60068-2-2 :2007.

Test Condition:

Test 1

- Operation test: Input electrical power to operate during the test.
- Temperature: 55 ℃
- Duration: 16 hours

Test 2

- Operation test: Input electrical power to operate during the test.
- Temperature: -25 ℃
- Duration: 16 hours

Test Procedure:

- Check the sample's appearance before the test.
- Install the sample on testing table and set up testing condition.
- After testing, take off sample from table and put it in the storage area.
- Observe the sample and record for any visible change after testing.

Test Summary:

- No visible damage was found on sample appearance after the test.
- The function was normal after the test.

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Test Photos:

Sample photo before the test:

Function check before the test:

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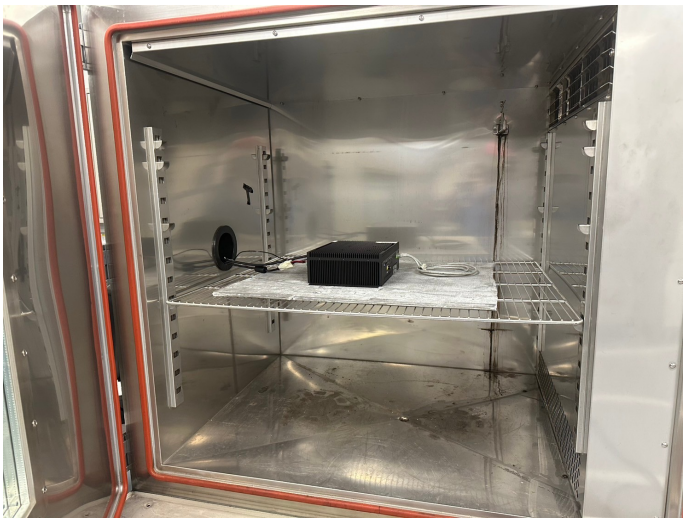
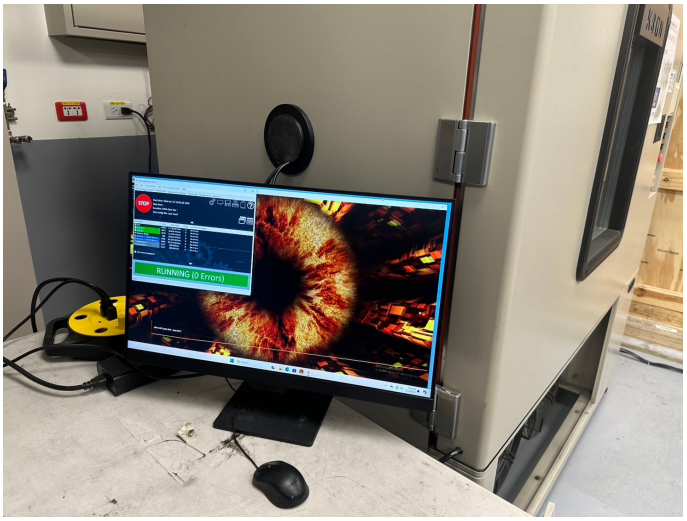
Setup photo:
Test 1 and Test 2





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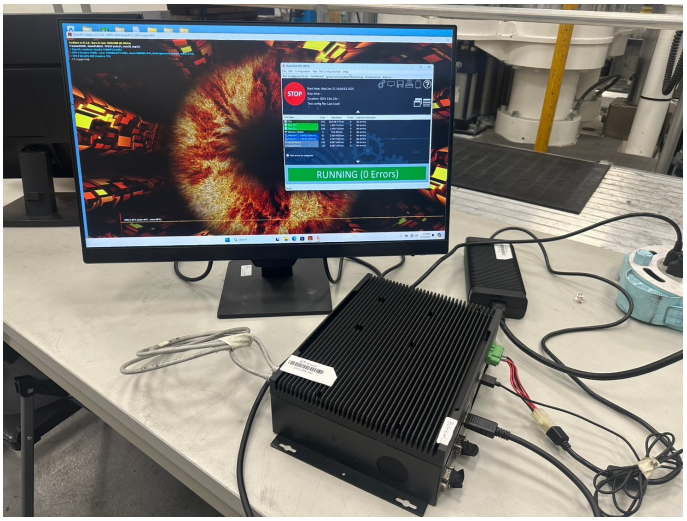
Sample photo after the test:

Function check after the test:



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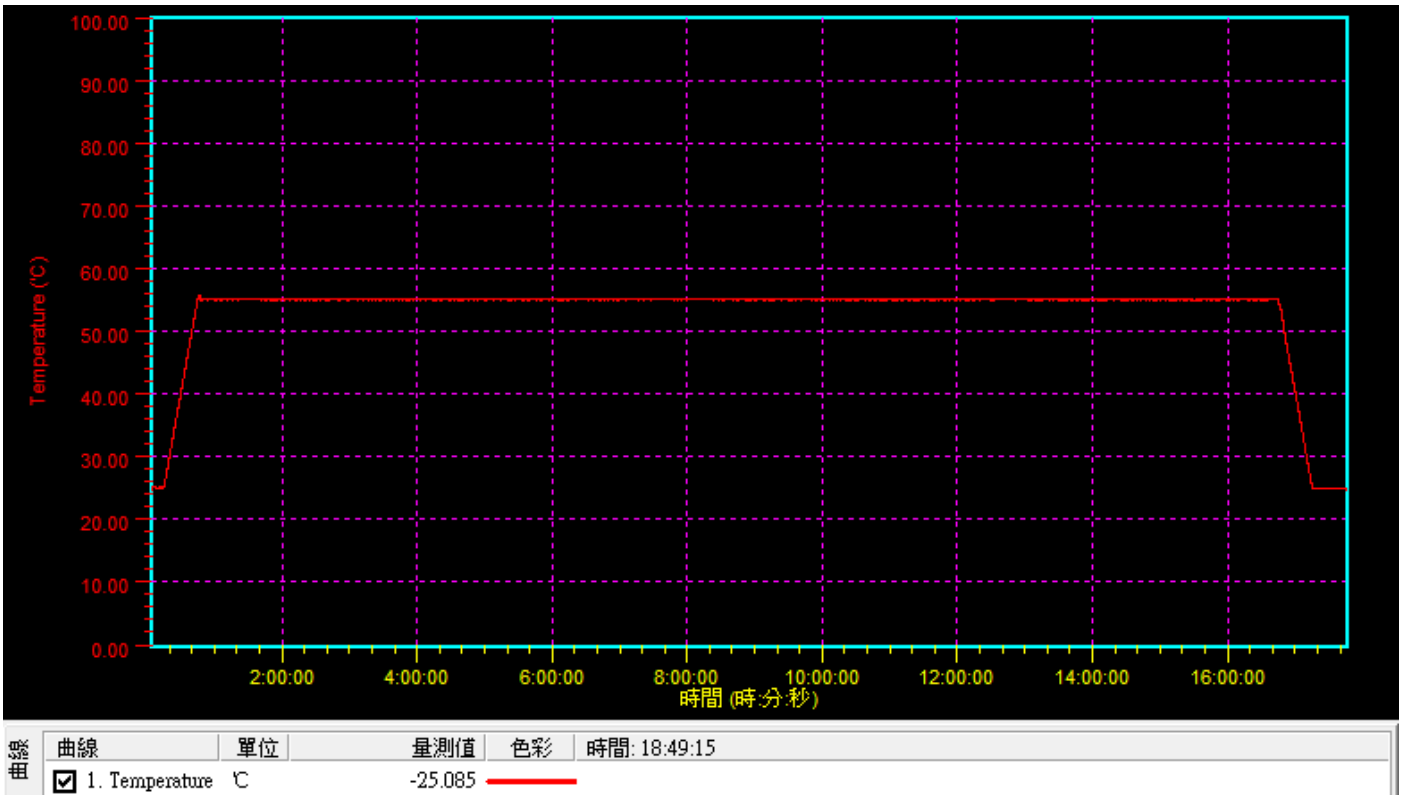
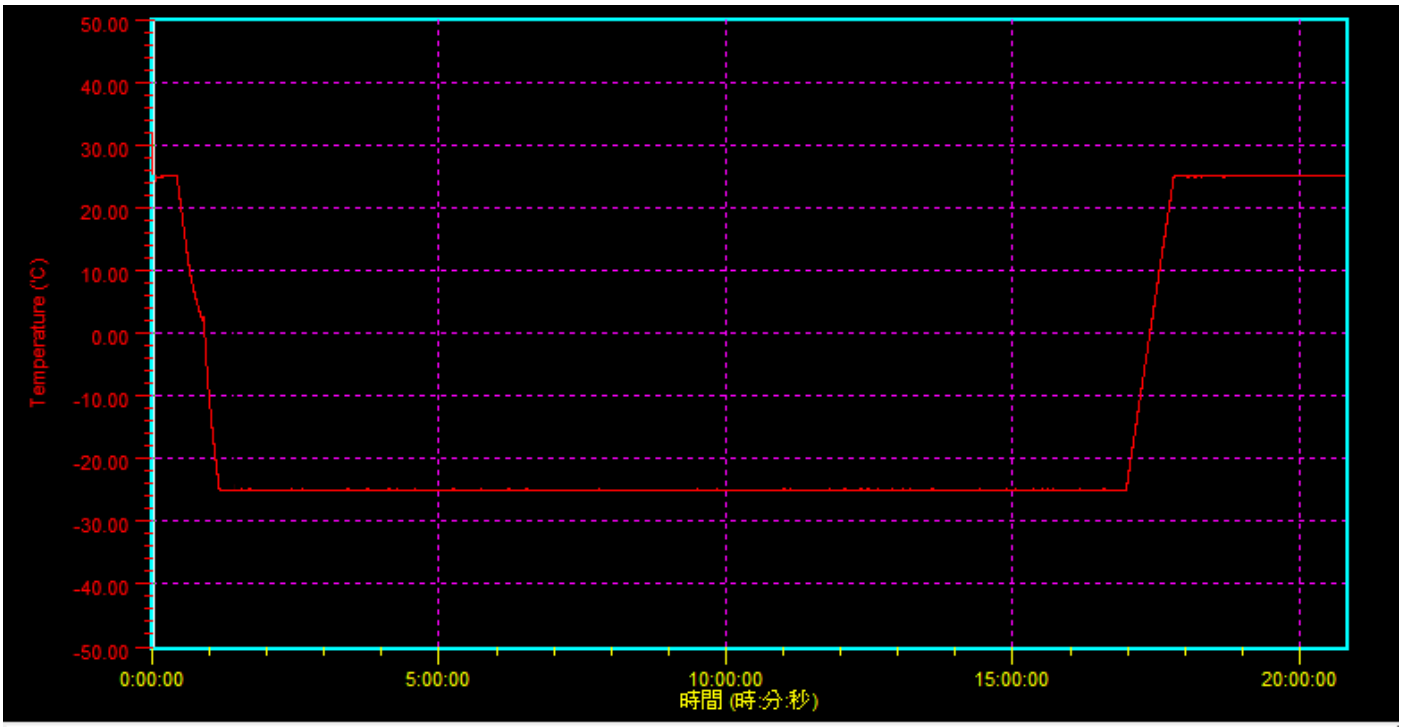
Test Profile:

Test 1



曲線	單位	量測值	色彩	時間: 18:49:15
1. Temperature	℃	-25.085		

Test 2



曲線	單位	量測值	色彩	時間: 0:01:52
1. Temperature	℃	24.884		

--- END OF REPORT ---