

TEST REPORT



CTK Co., Ltd.

5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si,
Gyeonggi-do, Republic of Korea
Tel: +82-31-339-9970
Fax: +82-31-624-9501

REPORT No.:
CTK-2024-00688-1
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1. Applicant

- Name : Hanwha Vision Co., Ltd
- Address : 6 Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, 13488 KOREA
- Date of Receipt : 01 24, 2024

2. Manufacturer

- Name : Hanwha Vision Co., Ltd

3. Use of Report :

Quality control

4. Test sample / Model :

Barcode Reader / TNS-9050IBC

5. Date(s) of test :

02 14, 2024

6. Test Standard (Method) used :

Refer to IEC/EN 60068-2-27:2008

7. Testing Environment :

Temperature: (25 ±10) °C, Humidity: (50 ±25) % R.H.
Pressure: (96 ±10) kPa

8. Test Results :

Clause 4. Refer to the test results

9. Location of Test :

☒ Permanent Testing Lab ☐ On Site Testing
(5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si,
Gyeonggi-do, Republic of Korea)

The results shown in this test report refer only to the sample(s) tested unless otherwise stated.
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Approval	Tested by	Technical Manager
	Name: Min-Gi Moon (Signature)	Name: HoHyun Lee (Signature)

Remark. This report is not related to KOLAS accreditation and relevant regulation.

08 07, 2024

CTK Co., Ltd.



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1. Testing Laboratory

1.1 Testing laboratory information

Lab. Name	CTK Co., Ltd.
Address	5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of Korea
Tel.	+82-31-339-9970
Fax.	+82-31-624-9501
E-Mail	ctk@e-ctk.com
Website	e-ctk.com

1.2 Testing laboratory accreditation status

Country	Classification	Accreditation Number	Logo
International	KOLAS	TESTING NO. KT119	

2. Product description and Equipment information

2.1 Product description

Product Name	Model Name	Quantity	Comment
Barcode Reader	TNS-9050IBC	1 EA	-

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Manufacturer's name

Name and address of factory (ies)	1) HANWHA VISION VIETNAM COMPANY LIMITED Lot O-2, Que Vo Industrial Zone extended area, Nam Son ward, Bac Ninh city, Bac Ninh province, Vietnam 2) D-TECH CO.,LTD. 173-25, Saneop-ro, Gwonseon-gu, Suwon-si, Gyeonggi- do, Korea (Suwon Industrial Complex)
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Model description

Basic Model:	TNS-9050IBC
Series model:	TNS-9040IBC
Model differences:	Use of the same external shape and materials (case, finishing material, PCB, cable, etc.), differences in SW.

2.2 Equipment information

Testing equipment	Model Name	Manufacturer	Manufacturing Number	Calibration Date
VIBRATION TESTING SYSTEM	LT1010	FAMTECH	D2012335	N/A
Acceleration sensor	8703A250M5	KISTLER	5830236	2024-03-27

2.3 Pre-test product images



Top



Bottom



Front



Back



Left side



Right side

2.4 Testing equipment images



LT1010 / VTH-1205-5K-VH



8703A250M5

3. Test conditions and methods

3.1 Test duration, Environmental conditions, and Location

3.1.1 Test Date : 02 14, 2024

3.1.2 Measured Environmental Conditions

Item	Temperature (°C)	Humidity (% R.H.)	Pressure (kPa)
Measurement	25.3	45.2	89.1

3.2 Test conditions

3.2.1 Shock test #1(Refer to IEC/EN 60068-2-27:2008)

- Sample status : unpackaged / not in operation
- Number of samples : 1 EA
- Applied waveform : Half sine
- Acceleration(G) : 15
- Amplitude (ms) : 11
- Applied axis : $\pm$ X, Y, Z axis
- Test time (item) : All 18(Each axis 3)
- Evaluations Criteria
 - Confirmation of visual changes and normal operation before and after testing.

3.2.2 Shock test #2(Refer to IEC/EN 60068-2-27:2008)

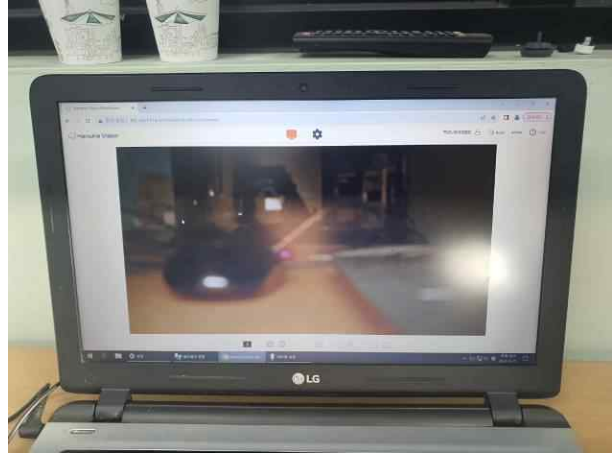
- Sample status : unpackaged / not in operation
- Number of samples : 1 EA
- Applied waveform : Half sine
- Acceleration(G) : 30
- Amplitude (ms) : 11
- Applied axis : $\pm$ X, Y, Z axis
- Test time (item) : All 18(Each axis 3)
- Evaluations Criteria
 - Confirmation of visual changes and normal operation before and after testing.

3.3 Testing Image

3.3.1 Verification of Normal Operation before testing

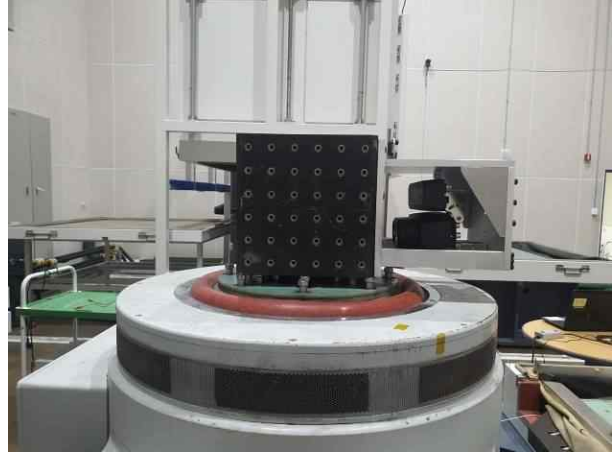
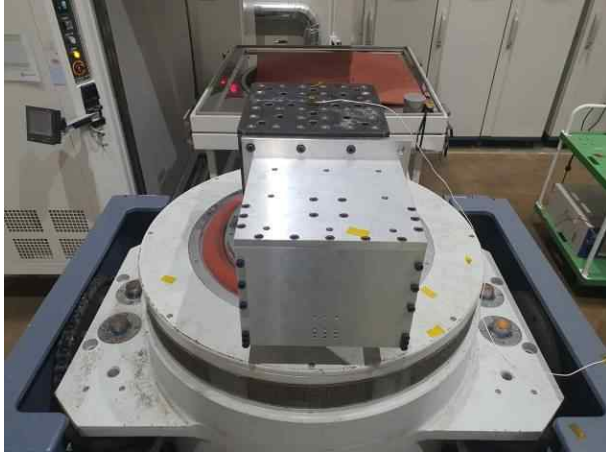


Verification of operation before testing #1

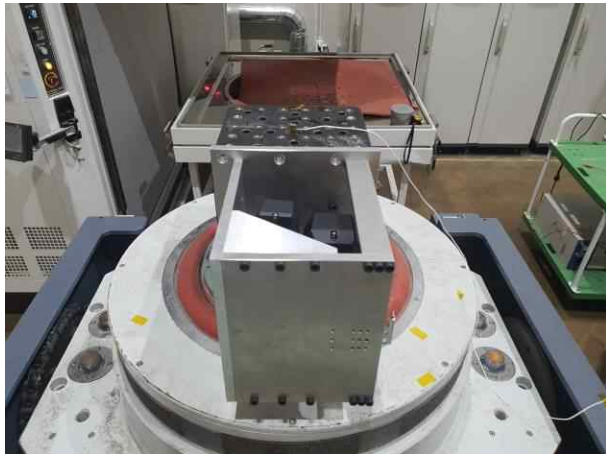


Verification of operation before testing #2

3.3.2 Test Environment Set-up Images



Shock Test #1(Refer to IEC/EN 60068-2-27:2008) – X axis, Shock Test #2 Same configuration



Shock Test #1(Refer to IEC/EN 60068-2-27:2008) – Y axis, Shock Test #2 Same configuration



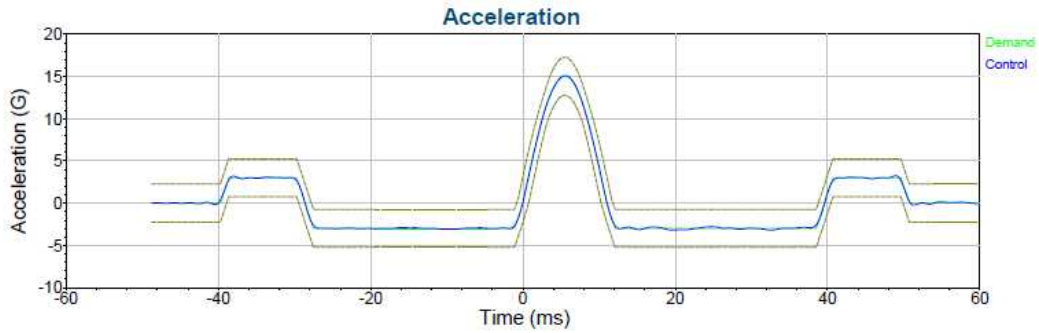
Shock Test #1(Refer to IEC/EN 60068-2-27:2008) – Z axis, Shock Test #2 Same configuration

4. Test result

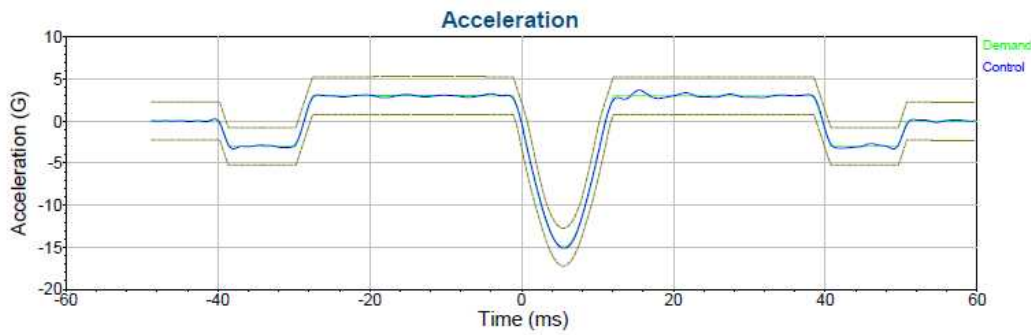
4.1 Test Result Table

Evaluation Criteria		Test Results	Comment
Shock Test #1(Refer to IEC/EN 60068-2-27:2008)	Before	Pass	
	After	Pass	
Shock Test #2(Refer to IEC/EN 60068-2-27:2008)	Before	Pass	
	After	Pass	

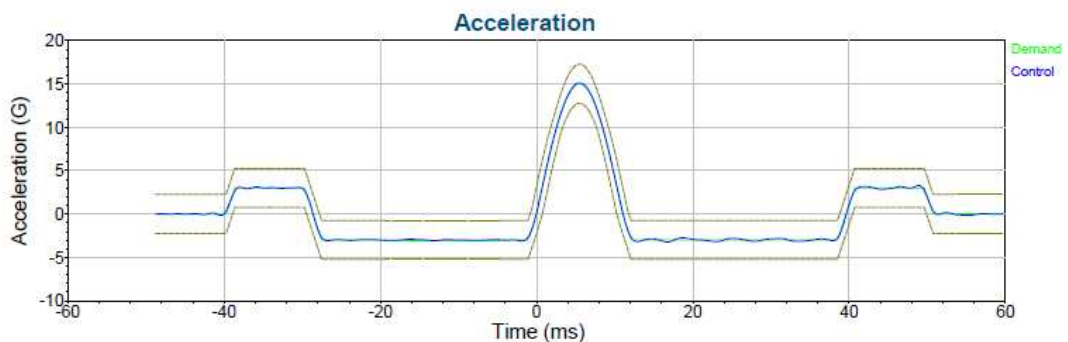
4.2 Data



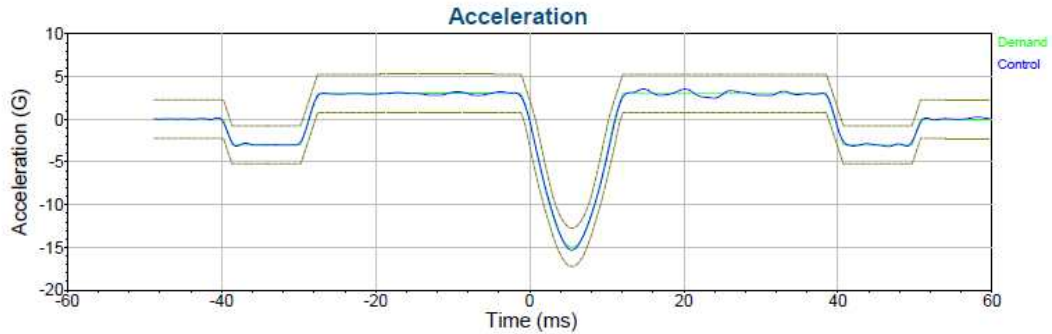
Shock Test #1(Refer to IEC/EN 60068-2-27:2008) - +X axis



Shock Test #1(Refer to IEC/EN 60068-2-27:2008) - -X axis

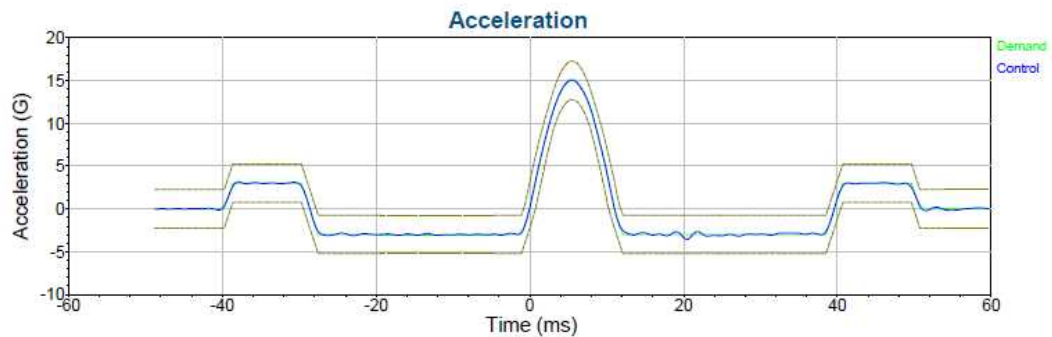


Shock Test #1(Refer to IEC/EN 60068-2-27:2008) - +Y axis



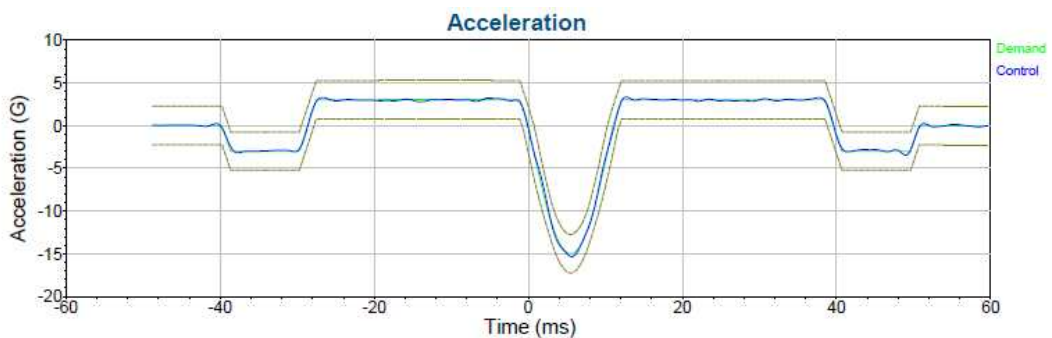
2 14, 2024 15:56:57 Level 2) 100 % Output: 0.6437 Volts peak 20240214 한화비전 충격
Demand: 15 G
Control: 15.33 G Pulse: 3 of 3 End of Test

Shock Test #1(Refer to IEC/EN 60068-2-27:2008) - -Y axis



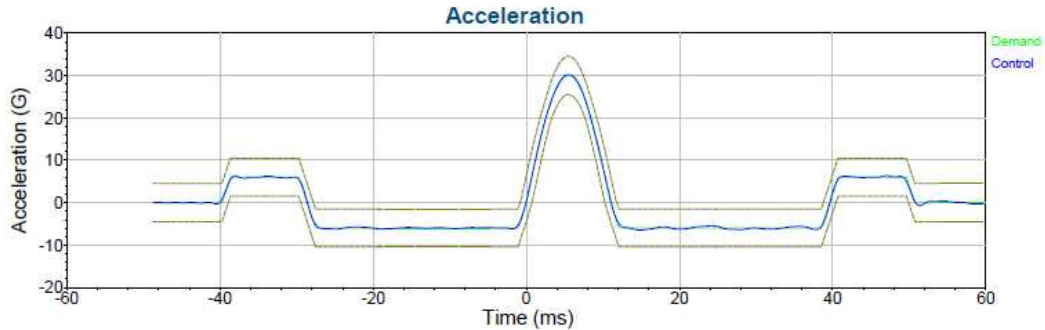
2 14, 2024 16:11:35 Level 1) 100 % Output: 0.6394 Volts peak 20240214 한화비전 충격
Demand: 15 G
Control: 15.08 G Pulse: 3 of 3 Running

Shock Test #1(Refer to IEC/EN 60068-2-27:2008) - +Z axis



2 14, 2024 16:11:44 Level 2) 100 % Output: 0.6396 Volts peak 20240214 한화비전 충격
Demand: 15 G
Control: 15.35 G Pulse: 3 of 3 End of Test

Shock Test #1(Refer to IEC/EN 60068-2-27:2008) - -Z axis



2 14, 2024 16:31:43

Level 1) 100 %

Output: 1.265 Volts peak

20240214 한화비전 충격

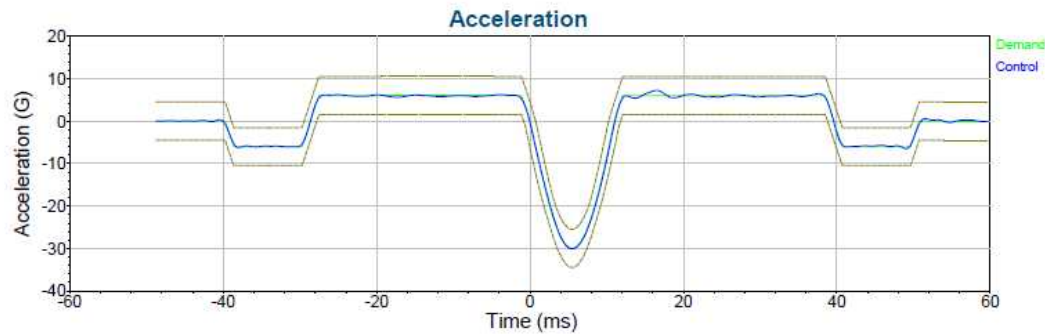
Demand: 30 G

Control: 30.2 G

Pulse: 3 of 3

Running

Shock Test #2(Refer to IEC/EN 60068-2-27:2008) - +X axis



2 14, 2024 16:31:52

Level 2) 100 %

Output: 1.269 Volts peak

20240214 한화비전 충격

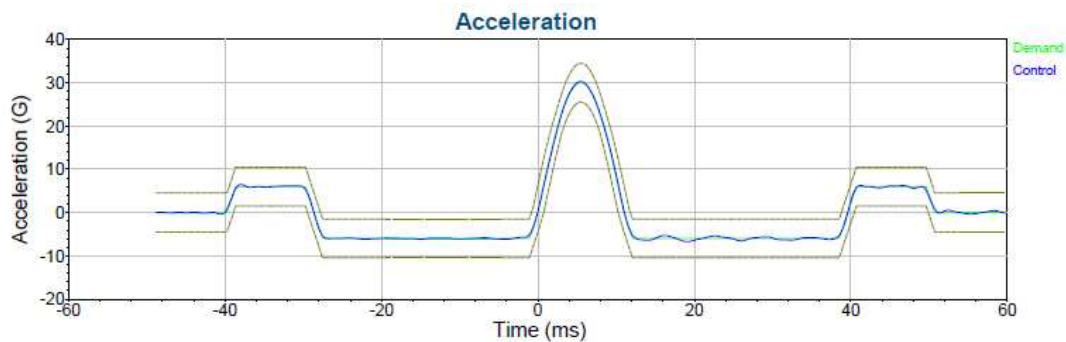
Demand: 30 G

Control: 30.12 G

Pulse: 3 of 3

End of Test

Shock Test #2(Refer to IEC/EN 60068-2-27:2008) - -X axis



2 14, 2024 16:47:47

Level 1) 100 %

Output: 1.264 Volts peak

20240214 한화비전 충격

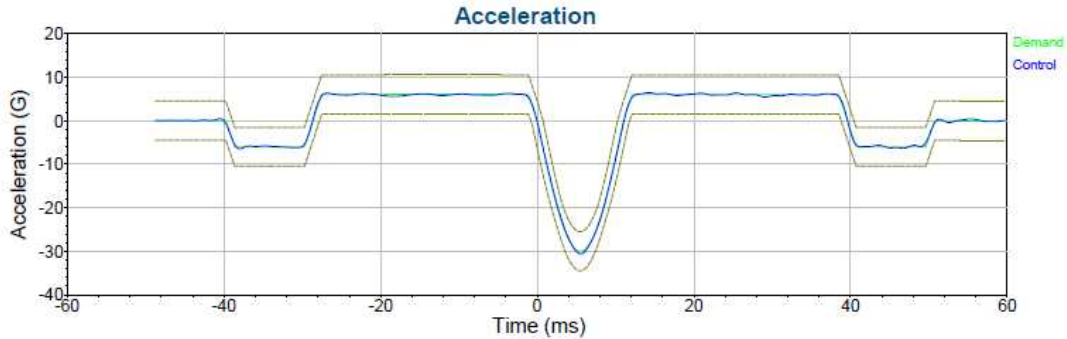
Demand: 30 G

Control: 30.25 G

Pulse: 3 of 3

Running

Shock Test #2(Refer to IEC/EN 60068-2-27:2008) - +Y axis



2 14, 2024 16:47:56

Level 2) 100 %

Output: 1.271 Volts peak

20240214 한화비전 충격

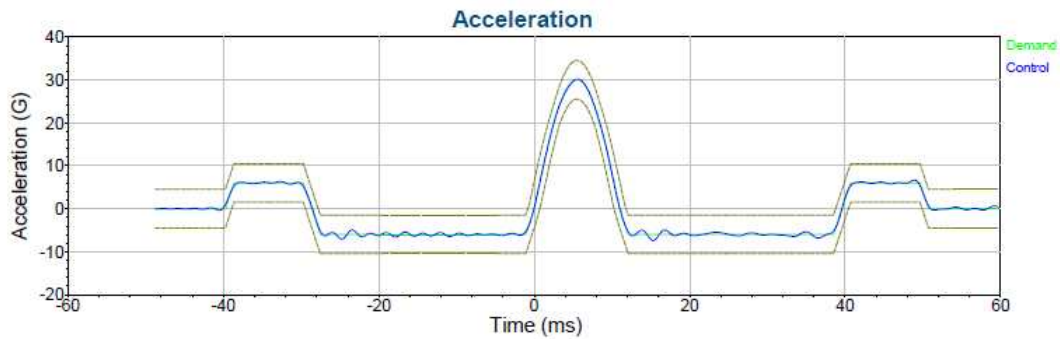
Demand: 30 G

Control: 30.61 G

Pulse: 3 of 3

End of Test

Shock Test #2(Refer to IEC/EN 60068-2-27:2008) - -Y axis



2 14, 2024 16:57:34

Level 1) 100 %

Output: 1.252 Volts peak

20240214 한화비전 충격

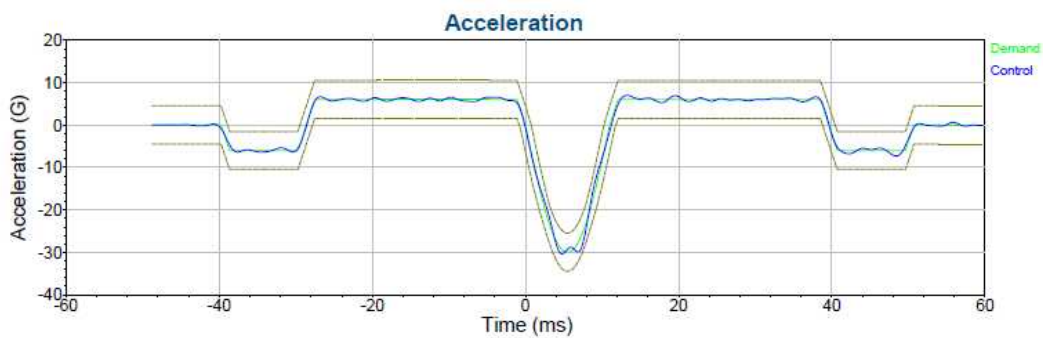
Demand: 30 G

Control: 30.14 G

Pulse: 3 of 3

Running

Shock Test #2(Refer to IEC/EN 60068-2-27:2008) - +Z axis



2 14, 2024 17:01:22

Level 1) 100 %

Output: 1.26 Volts peak

20240214 한화비전 충격

Demand: 30 G

Control: 30.41 G

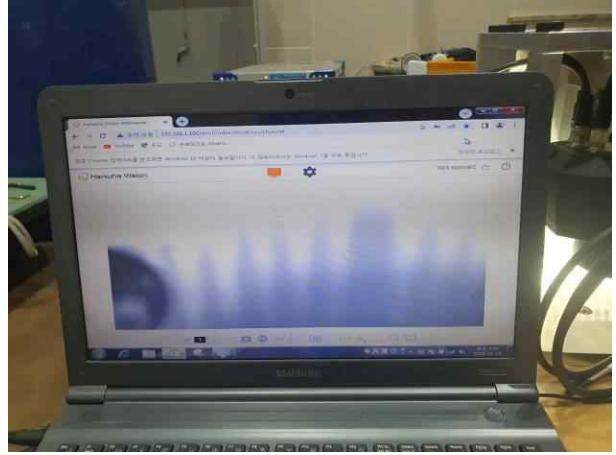
Pulse: 3 of 3

End of Test

Shock Test #2(Refer to IEC/EN 60068-2-27:2008) - -Z axis

4.3 Post-Test Product Images

4.3.1 Verification of Normal Operation after testing



Verification of Normal Operation after testing #1

- End -