

# TEST REPORT



## CTK Co., Ltd.

5, Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-shi  
Gyeonggi-do KOREA, REPUBLIC OF  
Tel: +82-31-339-9970  
Fax: +82-31-624-9501

REPORT No.:  
CTK-2022-01030  
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### 1. Client

- Name .....: Hanwha Techwin Co., Ltd.
- Address.....: Hanwha Techwin R&D center, 6 Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, 13488 KOREA
- Date of Receipt .....: 2022-03-10

### 2. Manufacturer

- Name .....: Hanwha Techwin Co., Ltd

### 3. Use of Report .....: Quality control

### 4. Test sample / Model .....: NETWORK CAMERA / TNM-C4940TD

### 5. Date(s) of test .....: 2022-03-16 to 2022-03-17

### 6. Test Standard (Method) used ...: Specifications presented by the sponsor (reference NEMA TS 2.2.9)

### 7. Testing Environment.....: Temperature: (25.0 ± 1.0) °C, Humidity: (27.0 ± 1.0) %R.H.,



### 8. Results .....: Refer to each test result

### 9. Location of Test : Permanent Testing Lab On Site Testing

(Address : Dongbu-ro 142, Cheoin-gu, Yongin-shi Gyeonggi-do KOREA, REPUBLIC OF )

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:
	WonJae Hwang  (Signature)	WonHyeon Choi  (Signature)

2022-04-04



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## 1. Resonant search

### 1.1. Test equipment

Test equipment	Model	Manufacturer	Serial	Calibration date
Vibration testing system	GT1000M	FAMTECH	D1803072-1	Not applicable
Vibration VIEW	2017.1.2 Unicode 64-bit	Vibration Research Corp.	9526607B	Not applicable
Acceleration sensor	8703A250M5	KISTLER	5241941	2022-11-01

### 1.2. Test condition

- Acceleration : 10 G
- Test axis :  $\pm X$ ,  $\pm Y$ ,  $\pm Z$
- Number of impacts : 1 per direction (total 6)

### 1.3. Test Result

- No mechanical damage.

### 1.4. Test Result

- Pass

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**Manufacturer's name**

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

Basic Model .....	TNM-C4940TD
Series model .....	TNM-C4950TD, TNM-C4960TD
Model differences .....	Use of the same external shape and materials (case, finishing material, PCB, cable, etc.), differences in electronic parts inside the product.



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## 2. Endurance Test

### 2.1. Products

< Photo 1 > Product External view

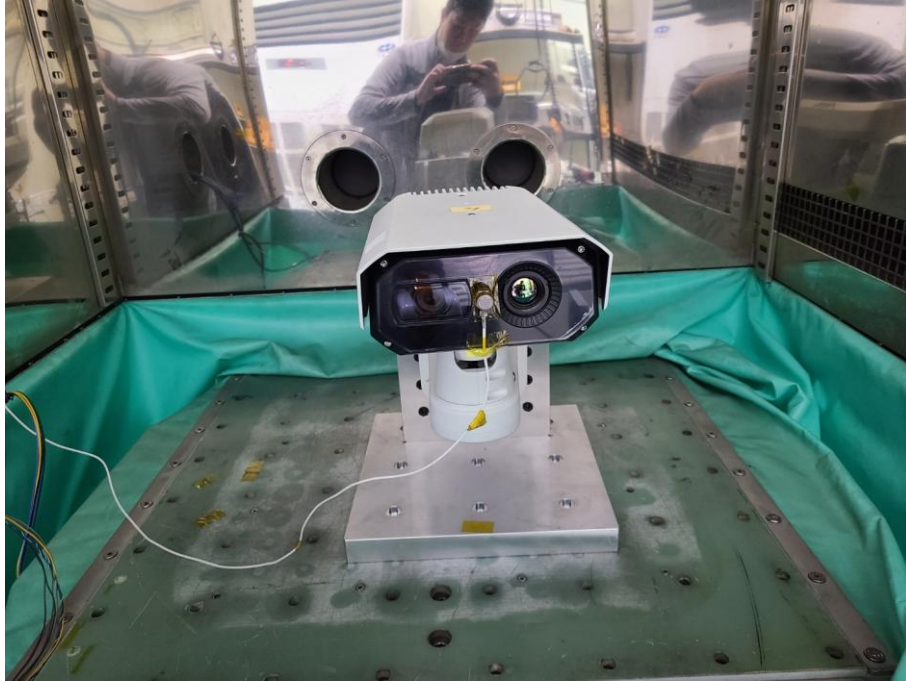


< Photo 2 > Product External view

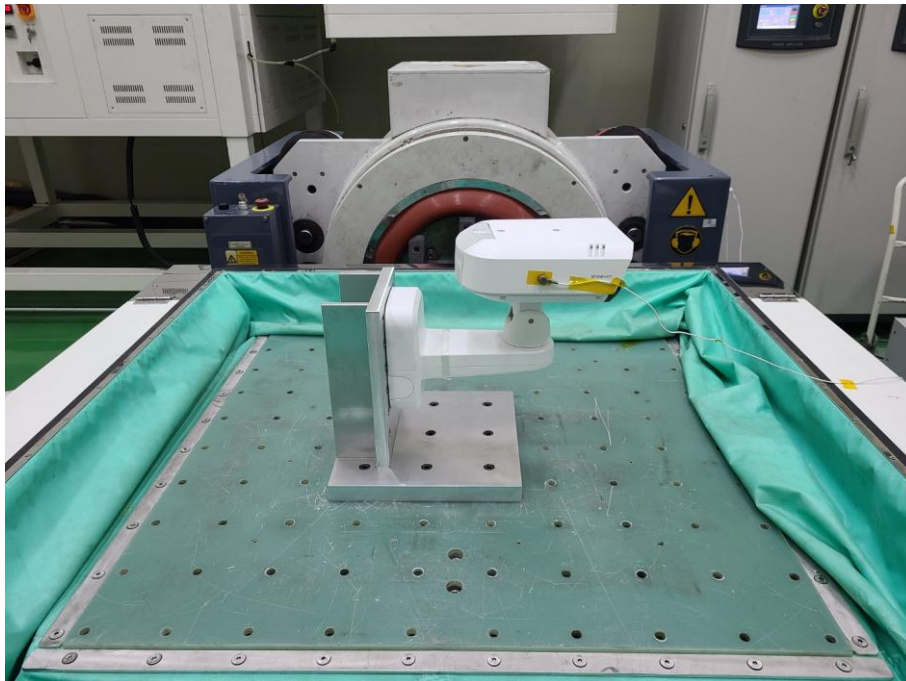


## 2.2. Test photos

[X axis]



[Y axis]

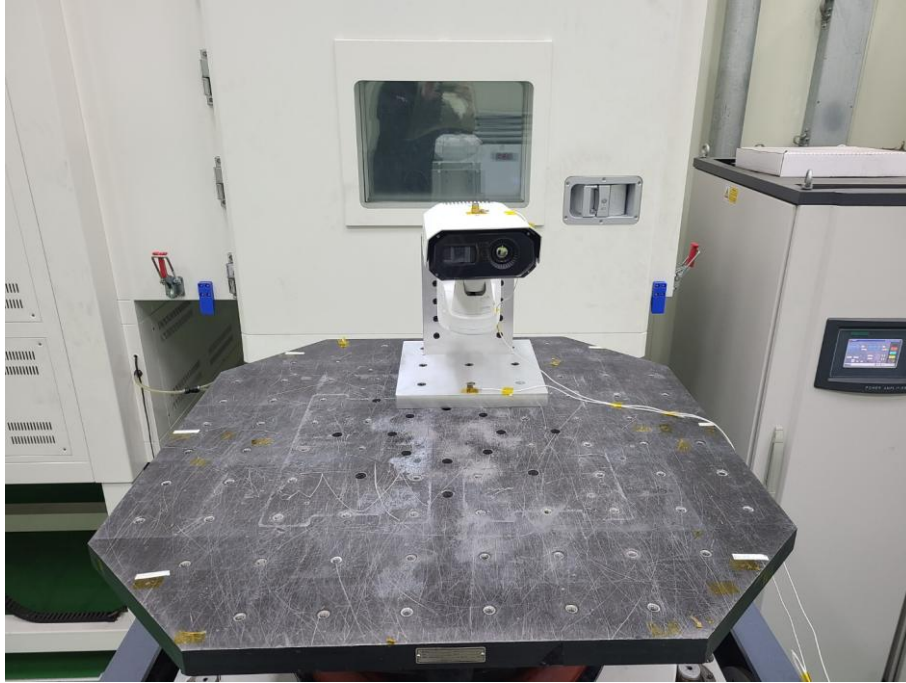




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[Z axis]





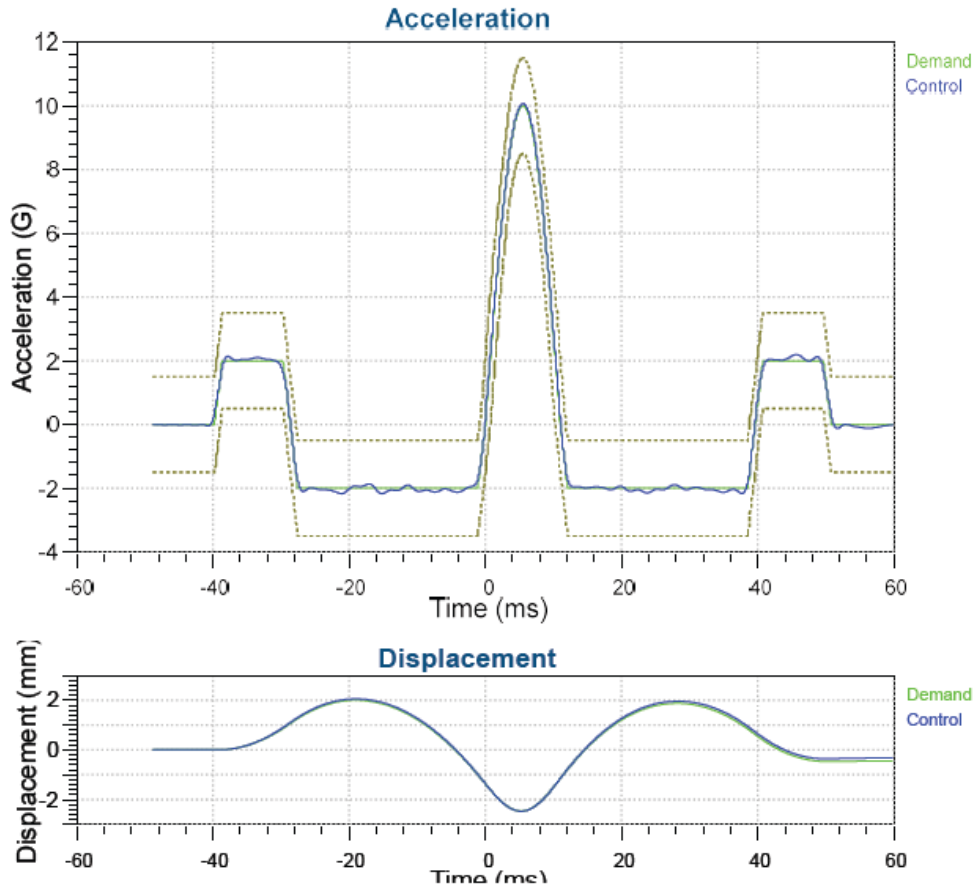
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## 2.3. Data

[Shock]



3/24, 2022 09:43:1 Level 1) 100 %

Output: 0.6825 Volts pea 10G\_11m:

Demand: 10 C

Control: 10.07 C Pulse: 1 of 1

Running

[X+ axis]

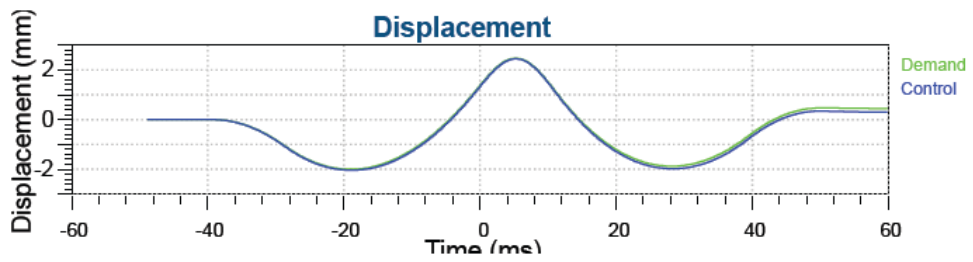
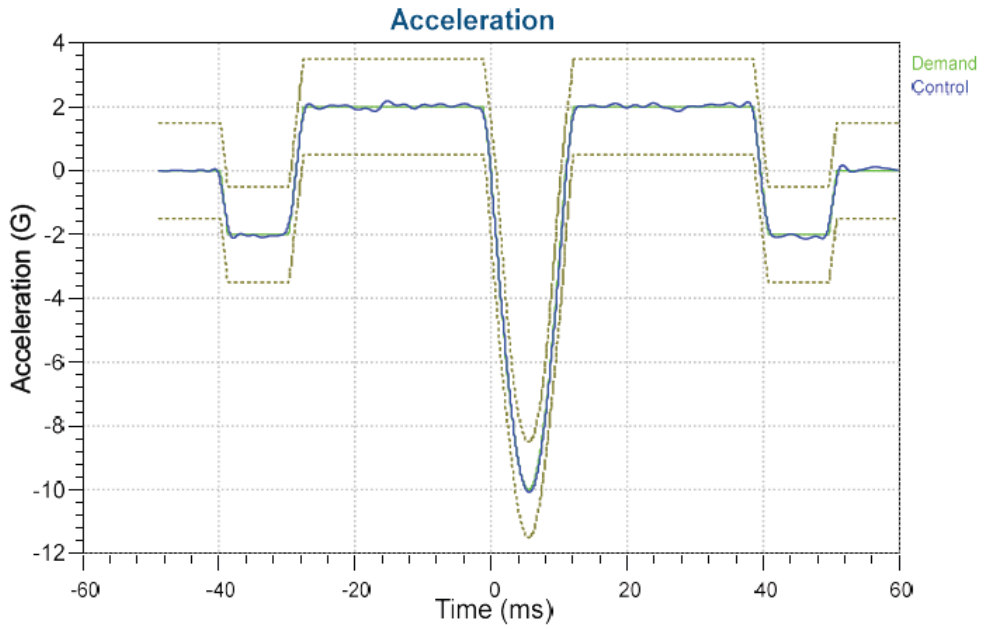


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### [Shock]



3 24, 2022 09:43:1 Level 2) 100 %

Output: 0.6805 Volts pea 10G\_11m:

Demand: 10 C

Control: 10.08 C

Pulse: 1 of 1

End of Test

**[X- axis]**



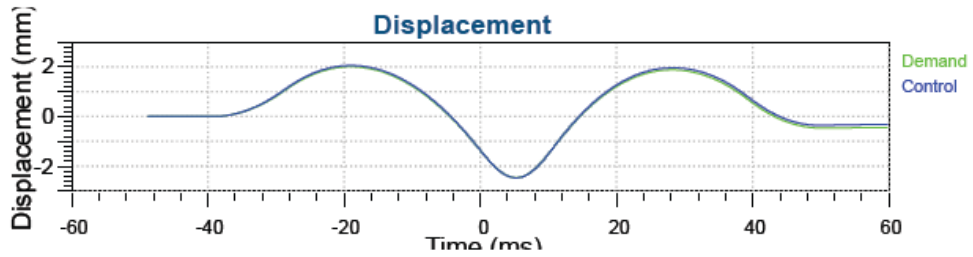
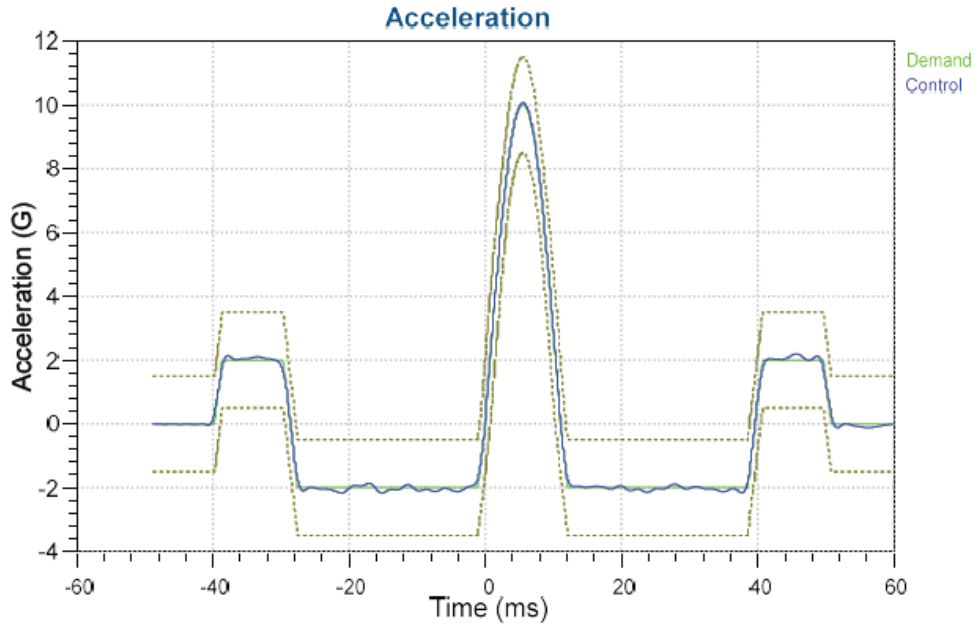


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[Shock]



3/24, 2022 09:43:1 Level 1) 100%

Output: 0.6825 Volts peak 10G\_11m

Demand: 10 C

Control: 10.07 C Pulse: 1 of 1

Running

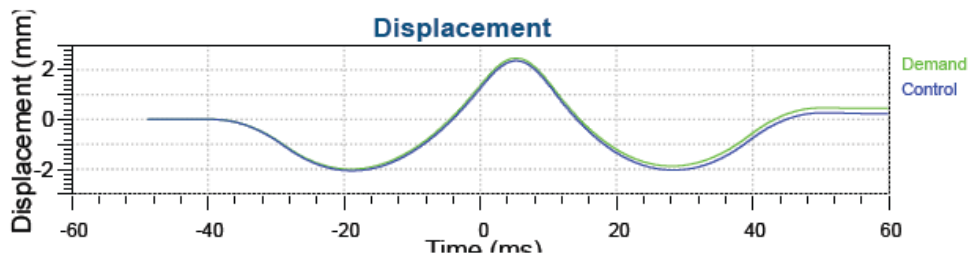
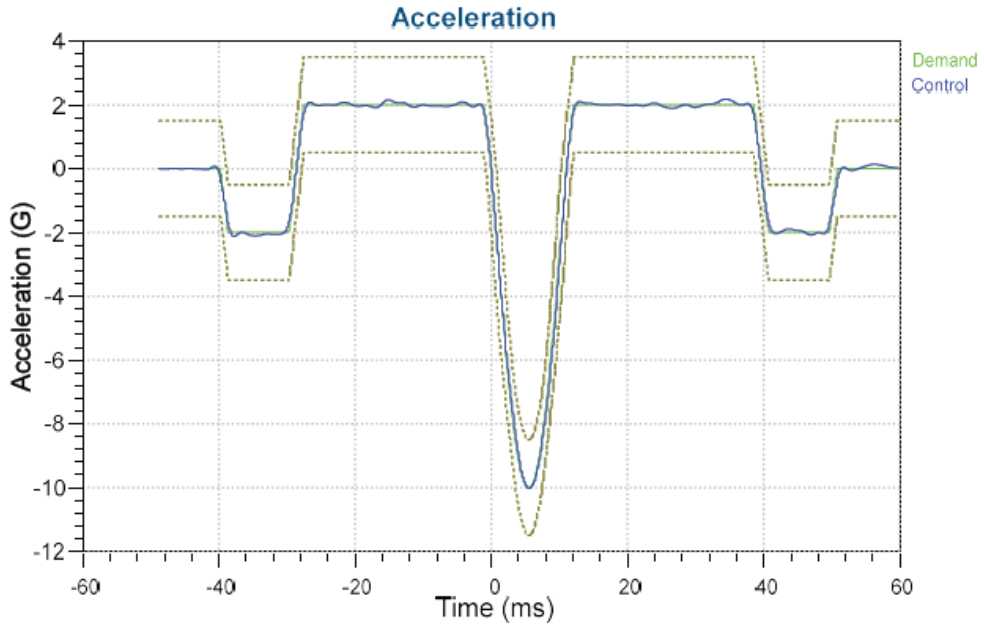
[Y+ axis]



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[Shock]



3/24/2022 10:00:4 Level 2) 100 %

Output: 0.6782 Volts peak 10G\_11m

Demand: 10 C

Control: 10.02 C Pulse: 1 of 1

End of Test

[Y-axis]

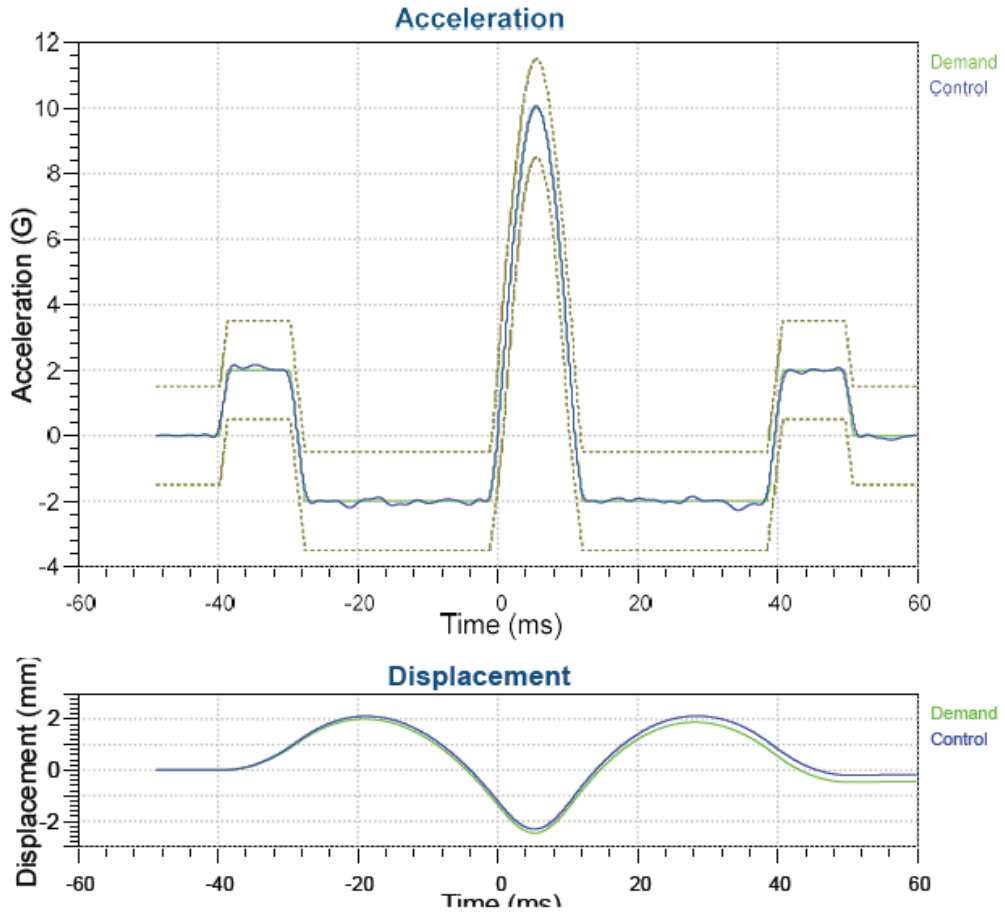


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[Shock]



3/24, 2022 14:14:2 Level 1) 100%

Output: 0.6767 Volts peak 10G\_11m:

Demand: 10 C

Control: 10.06 C

Pulse: 1 of 1

Running

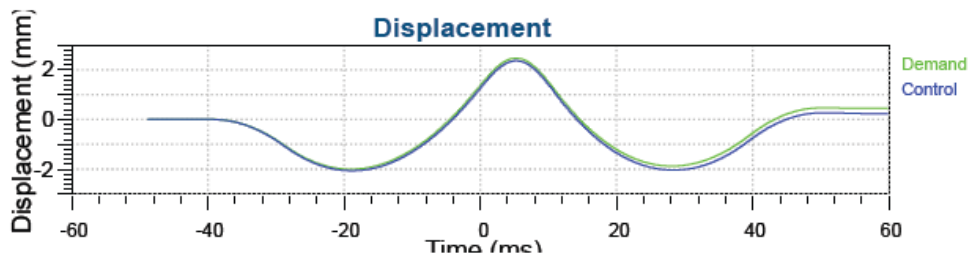
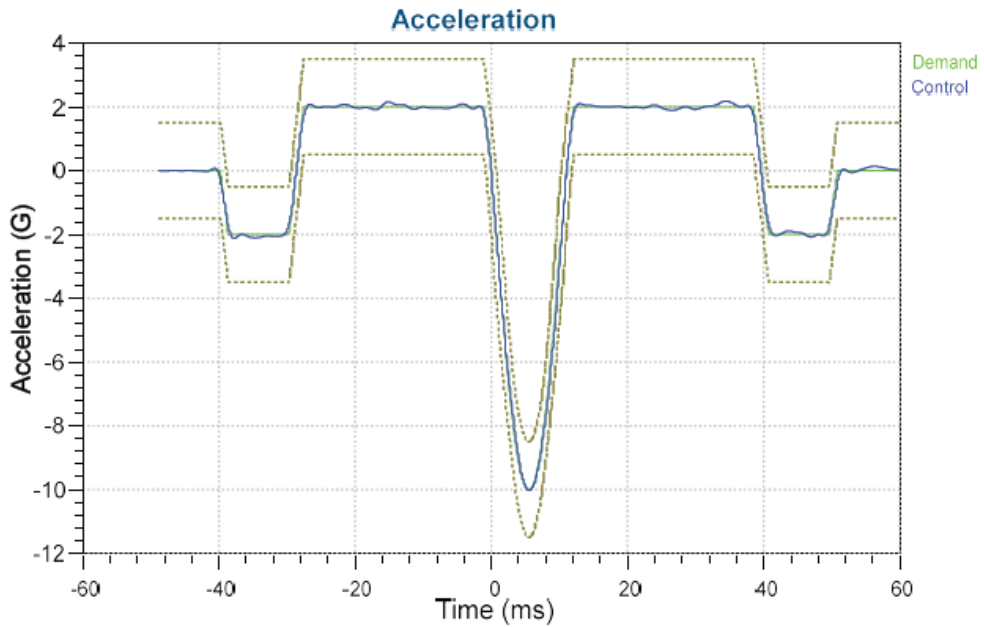
[Z+ axis]



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[Shock]



3/24, 2022 14:14:2 Level 2) 100%

Output: 0.6782 Volts peak 10G\_11m

Demand: 10 G

Control: 10.02 G Pulse: 1 of 1

End of Test

[Z- axis]  
- End -