

# JAPAN BUSINESS LOGISTICS PACKAGING TEST REPORT

**TEST PURPOSE** : ISTA 6 FedEx- A  
Evaluation test for the product & packaging

**CLIENT** : Panasonic Corporation

**SPECIMEN** : VIXELL : AE-V06GXR/AE-V06C5R

**TEST LABORATORY** : Japan Business Logistics Co., Ltd.

**TEST DATE** : Mar. 4, 2022

**ISSUE DATE** : Mar. 31, 2022

**OPERATOR** : Takehiko Iwahori


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T. Iwahori  
Packaging Solution  
Japan Business Logistics Co., Ltd.

Approved by : K. Omata  
K. Omata  
Manager of Packaging Solution  
Japan Business Logistics Co., Ltd.

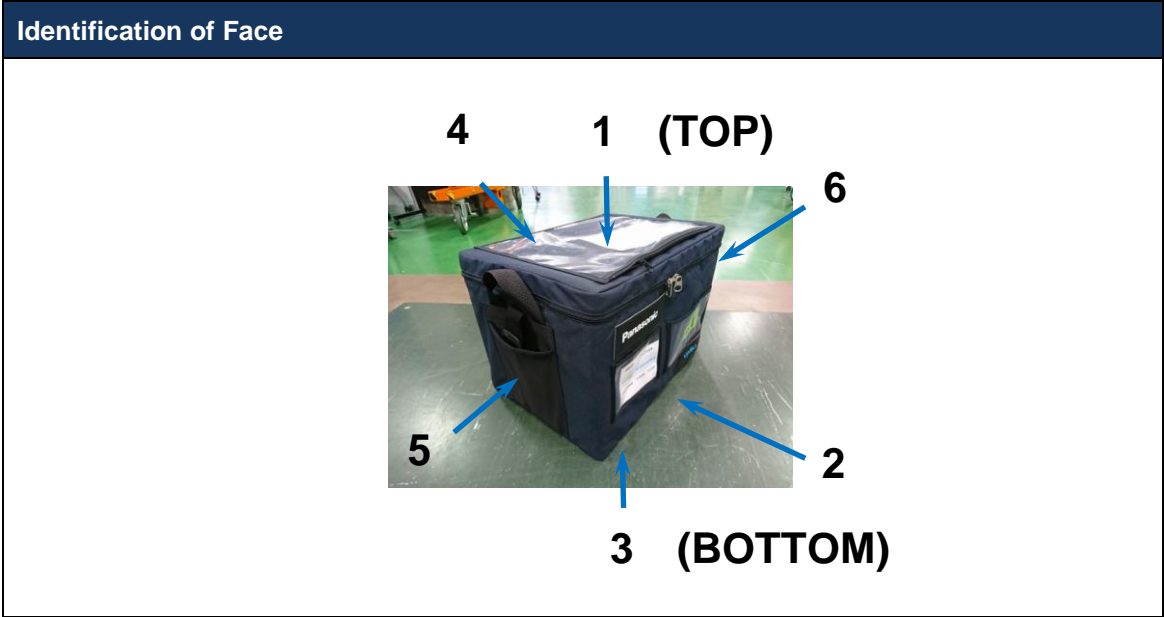


Member ID: ST-9785

## 1.0 TEST DESCRIPTION

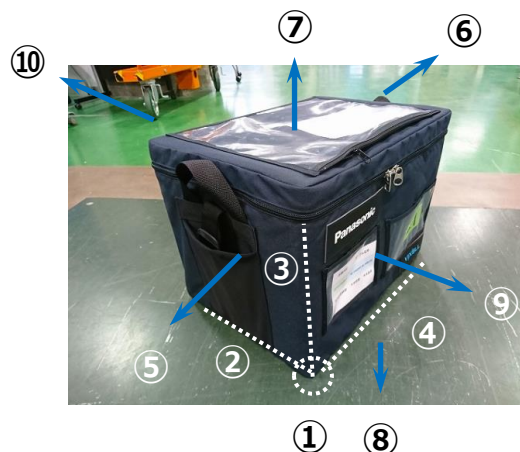
<b>TEST PURPOSE</b>	To assess the capability of the product & packaging to withstand types of vibration and shock levels encountered during the normal shipping cycle in accordance with ISTA 6 FedEx- A	
<b>TEST SPECIMENS</b>	<b>VIXELL : AE-V06GXR/AE-V06C5R</b>	
	Package Type : Plastic Case	<p style="text-align: center;"><b>TEST SPECIMEN</b></p> 
	Packaged Size: 480 x 350 x 355(H) mm	
	Packaged-Weight : 12.6 kg	
Number of Test Specimen : 1 pc		
<b>TEST SEQUENCE</b>	<b>TEST STANDARD : ISTA 6 FedEx-A</b>	
	1、 Shock (Drop )	
	2、 Compression	
	3、 Vibration	
	4、 Shock (Drop )	
<b>Acceptance Criteria</b>	Criteria	Product is damage-free
	Method used to determine Pass/Fail	Pass/fail result will be determined by visual inspection and function test after the all test schedule is conducted.
	Decision Person	Panasonic Corporaion

## 2.0 TEST DESCRIPTION



1.0 Shock (Drop)				
Number of drops	10 times			
Conditions	Drop No,	Drop Height (mm)	Orientation	
	No.1	762	Most fragile corner	Corner 2-3-5
	No.2	762	Shortest edge radiating from the drop corner	Edge 3-5
	No.3	762	Medium edge radiating from the drop corner	Edge 2-5
	No.4	762	Longest edge radiating from the drop corner	Edge 2-3
	No.5	762	Flat one of the smallest faces	Face 5
	No.6	762	Flat one of the opposite small face	Face 6
	No.7	762	Flat one of the medium faces	Face 1
	No.8	762	Flat one of the opposite medium face	Face 3
	No.9	762	Flat one of the largest faces	Face 2
	No.10	762	Flat one of the opposite large face	Face 4
Test Date	Mar. 4, 2022			
Equipment	Free Fall Drop Tester (Lansmont Model: PDT-56ED)			
Calibration date	Nov 24, 2021 (Calibration due: Nov 24, 2022)			

① ~ ⑩ : Drop Number



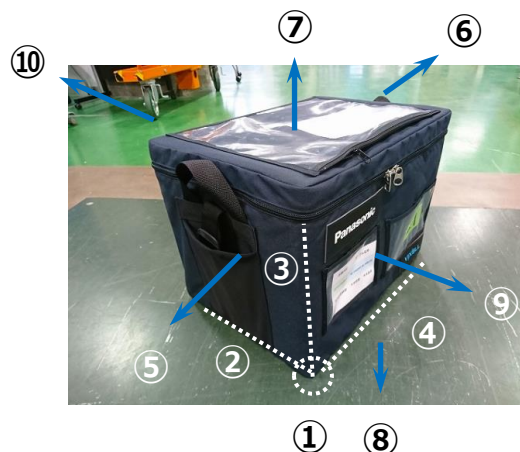
2.0 Compression	
Number of Compression	1 time
Direction	Vertical
Speed	12.7 mm / min (0.5 in / min)
Compression Load	<p><b><u>Compression Load (pounds) = 0.007 × (108-H) × L × W × F</u></b></p> <p>H: Height of shipping unit (inches)  L: Length of shipping unit (inches)  W: Width of shipping unit (inches)  F: factor = "3"</p> <p>= 0.007 × (108-14) × 18.9 × 13.8 × 3  = 514 pounds  = 233 kgf</p>
Test Date	Mar. 4, 2022
Equipment	Orientec CTM-1-5000
Calibration date	Oct. 25, 2021 (Calibration due: Oct. 25, 2022 )

3.0 Vibration																
Test Method	ASTM D4728-2017															
Truck PSD	<table border="1"> <thead> <tr> <th>Frequency (Hz)</th> <th>ASD/PSD (G<sup>2</sup>/Hz)</th> </tr> </thead> <tbody> <tr><td>1</td><td>0.00005</td></tr> <tr><td>4</td><td>0.01</td></tr> <tr><td>16</td><td>0.01</td></tr> <tr><td>40</td><td>0.001</td></tr> <tr><td>80</td><td>0.001</td></tr> <tr><td>200</td><td>0.00001</td></tr> </tbody> </table> <p>0.52 Grms</p>	Frequency (Hz)	ASD/PSD (G <sup>2</sup> /Hz)	1	0.00005	4	0.01	16	0.01	40	0.001	80	0.001	200	0.00001	
	Frequency (Hz)	ASD/PSD (G <sup>2</sup> /Hz)														
1	0.00005															
4	0.01															
16	0.01															
40	0.001															
80	0.001															
200	0.00001															
	Duration : 30 minutes	Direction : Vertical														
Air PSD	<table border="1"> <thead> <tr> <th>Frequency (Hz)</th> <th>ASD/PSD (G<sup>2</sup>/Hz)</th> </tr> </thead> <tbody> <tr><td>2</td><td>0.0002</td></tr> <tr><td>12</td><td>0.01</td></tr> <tr><td>100</td><td>0.01</td></tr> <tr><td>300</td><td>0.00001</td></tr> </tbody> </table> <p>1.06 Grms</p>	Frequency (Hz)	ASD/PSD (G <sup>2</sup> /Hz)	2	0.0002	12	0.01	100	0.01	300	0.00001					
	Frequency (Hz)	ASD/PSD (G <sup>2</sup> /Hz)														
2	0.0002															
12	0.01															
100	0.01															
300	0.00001															
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40	0.001															
80	0.001															
200	0.00001															
	Duration : 30 minutes	Direction : Vertical														

<b>Duration</b>	<u>International Shipments_Regular</u> 90 minutes (Truck_30 min. → Air_30 min. → Truck_30min.)
<b>Test Date</b>	Mar. 4, 2022
<b>Equipment</b>	Vibration Tester (Shinken Co.,Ltd. Model: G-9250L)
<b>Calibration date</b>	Jul. 28, 2021 (Calibration due: Jul. 28, 2022)

4.0 Shock (Drop)				
Number of drops	10 times			
Conditions	Drop No,	Drop Height (mm)	Orientation	
	No.1	762	Most fragile corner	Corner 2-3-5
	No.2	762	Shortest edge radiating from the drop corner	Edge 3-5
	No.3	762	Medium edge radiating from the drop corner	Edge 2-5
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	No.10	762	Flat one of the opposite large face	Face 4
Test Date	Mar. 4, 2022			
Equipment	Free Fall Drop Tester (Lansmont Model: PDT-56ED)			
Calibration date	Nov 24, 2021 (Calibration due: Nov 24, 2022)			

② ~ ⑩ : Drop Number





### 3.0 TEST RESULT


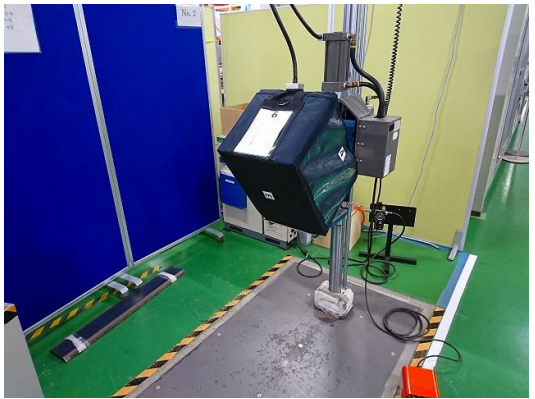
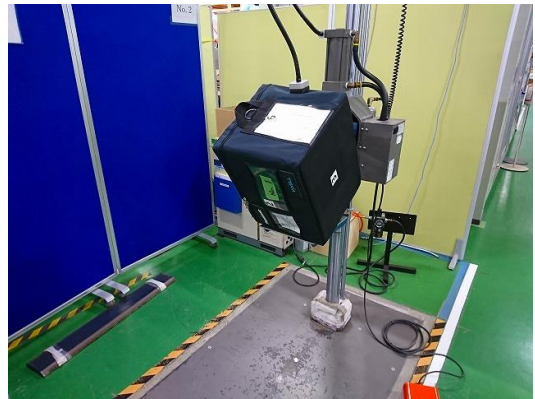



<p><b>PACKAGE Condition after testing</b></p>	<p>Visual inspection was conducted after all test schedules were completed. No physical damage was found on the plastic case.</p>
<p><b>PRODUCT Condition after testing</b></p>	<p>Final inspection will be conducted by Panasonic Corporation.</p>
<p><b>Test result</b></p>	<p>After the final inspection by Panasonic Corporation, the result was a pass.</p>

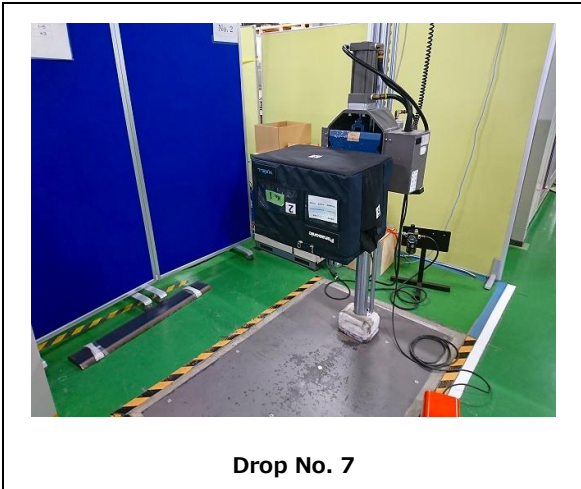
**Inspection results**

 <p style="text-align: center;"><b>Before test</b></p>	 <p style="text-align: center;"><b>After test</b></p>
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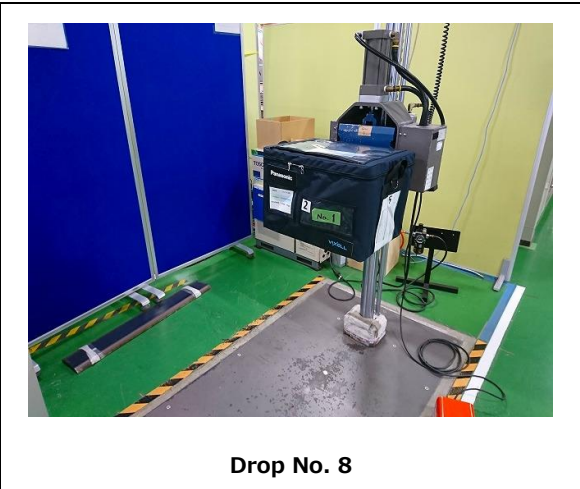
# 4.0 PHOTO

**Shock (Drop)**

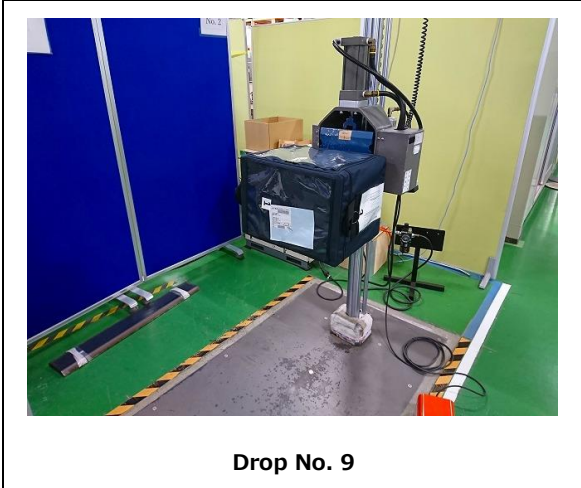
	
<p><b>Drop No. 1</b></p>	<p><b>Drop No. 2</b></p>
	
<p><b>Drop No. 3</b></p>	<p><b>Drop No. 4</b></p>
	
<p><b>Drop No. 5</b></p>	<p><b>Drop No. 6</b></p>



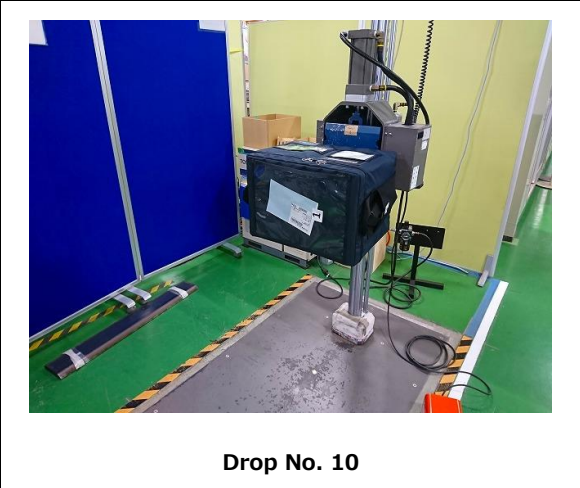
Drop No. 7



Drop No. 8

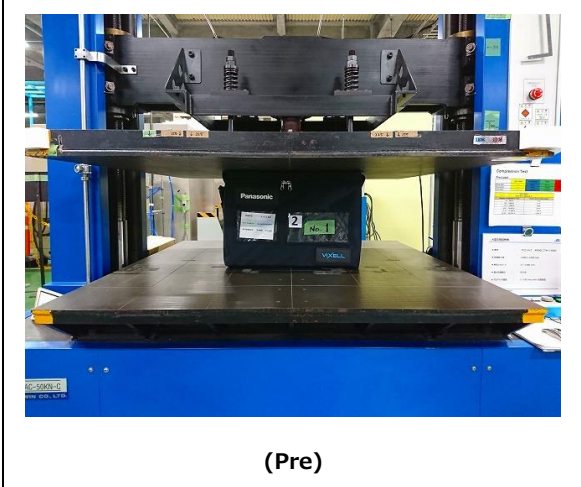


Drop No. 9



Drop No. 10

**Compression**



(Pre)



(Test)

Vibration



After Test

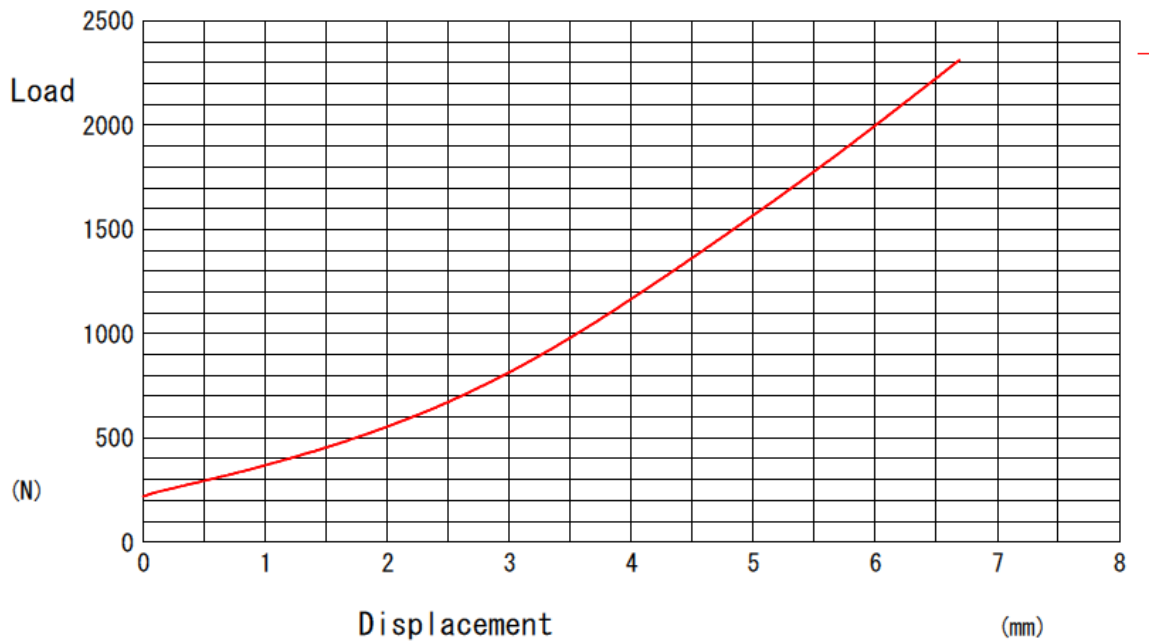


## 5.0 TEST DATA

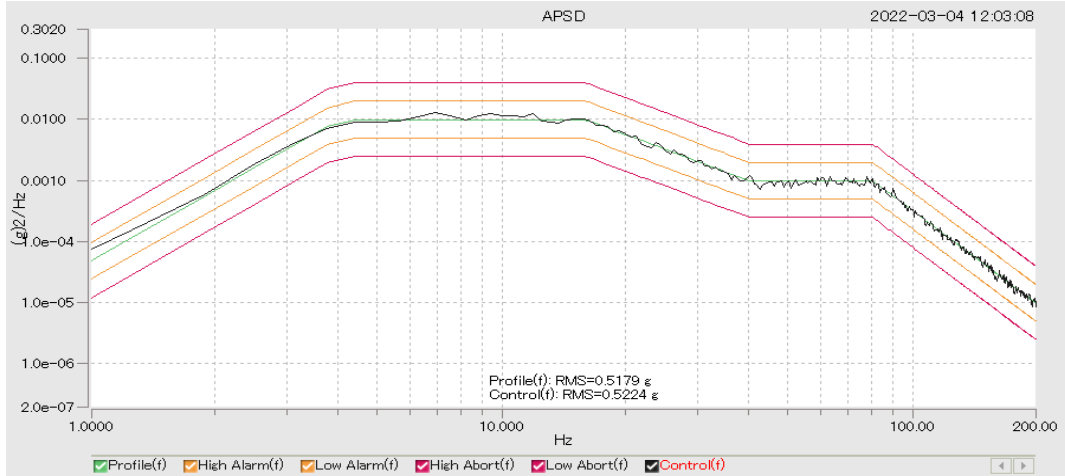
### Compression

Name	AE-V06GXR/AE-V06C5R			Lot	Apply & Release
Date	2022年03月04日 10:26	File No.	S28-043	Tester	S. Kojima

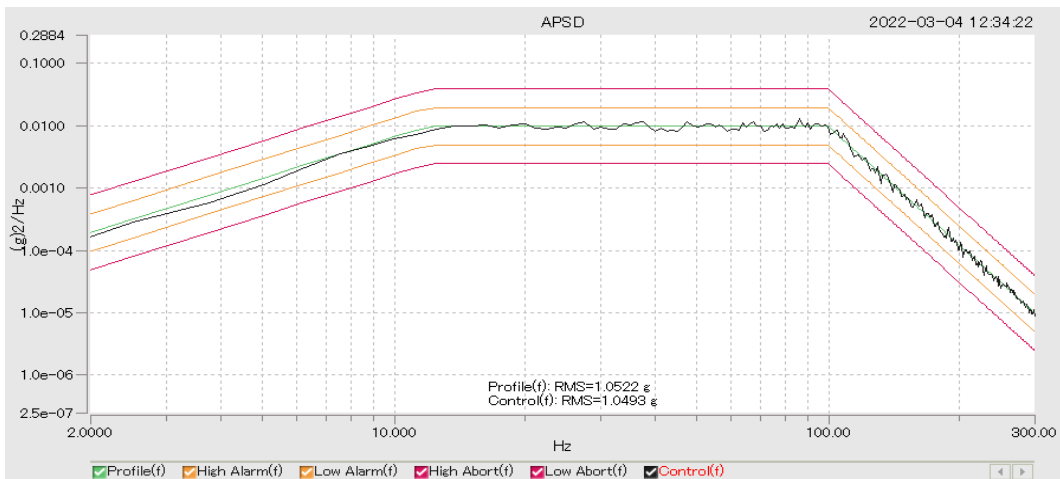
No.	Max Load (kgf)	Max Load (N)	Max Displacement (mm)
1	235.85	2312.9	6.6900



### Vibration Truck Random (30 min)



### Air Random (30 min)



### Truck Random (30 min)

