

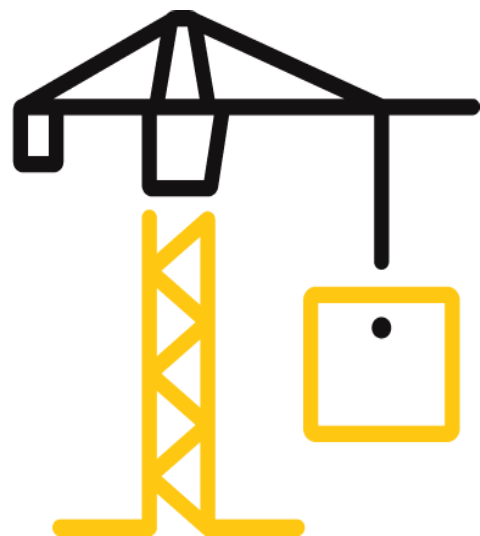
Multi-Pod (NZ) Limited

TEST REPORT

REPORT NUMBER
190910159GZU-004

ISSUE DATE
2019/11/13

PAGES
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Test Report

Issue Date: 2019/11/13 Intertek Report No. 190910159GZU-004

Applicant: Multi-Pod (NZ) Limited

Applicant Address: 20 Oxford Street, Richmond, Nelson, 7020, New Zealand

Attn: Mr. Tony Frost

Manufacturer: ZhongShan BuildHome Building Materials Co., Ltd

Manufacturer Address: No.29 ShunJing Industrial Rd., BanFu Town ZhongShan GuangDong China 528459

Attn: Jacky Zhong

SUBJECT: Performance testing
<100mm Hinged Door Opening Inward>

Dear Sir,

This test report for represents the results of our evaluation of the above referenced product(s) to the requirements contained in the following standards:

TEST METHODS AND STANDARDS
Refer to NZS 4211: 2008 - Specification for performance of windows (Amdt 1-2014)

SAMPLE ID	MODEL	SPECIFICATION
S190910159-004	BHDQ-3-HD-2	1700 mm (Width) x2400 mm (Height) x 113 mm (Thickness)

SAMPLE RECEIVED: 2019/9/10
TESTED FROM: 2019/9/10 TO 2019/9/11

Test lab address: Room 4103 & 4203, No. 63, Punan Road, Huangpu District, Guangzhou, Guangdong Province, China

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Test Items, Method and Results:

1 Test Samples

A full scale sample of was provided by the manufacturer that was not weathered nor conditioned.

The description of the samples given below has been prepared from information provided by the sponsor of the test. All values quoted are nominal, unless tolerances are given.

Table 1 Product Information

1	Product Name	100mm Hinged Door Opening Inward
2	Model	BHDQ-3-HD-2
3	Dimension of Door Frame	1700 mm (Width) x2400 mm (Height) x 113 mm (Thickness)
4	Dimension of Sash	Operable Sash: 774mm (Width) x 2279 mm (Height) x 83.5mm (Thickness) quantity: 2
5	Aluminum Profile	Model:SPEC100 Manufacturer: Guangdong xingfa
6	Frame Corner Construction Details: Joinery type	Mechanically assembled: Glued & screwed
7	Reinforcement	Not applicable
8	Glazing	Dimension: 628(Width) x 2133 mm (Height) quantity: 2 Structure: 5mm+1.14PVB+5mm+12A+6mm tempered double glazing Supplier: Guangdong SunGlass
9	Hardware	Specify type: Swing door handle Model: MZS22 Supplier: KING LONG
10	Weather-strip	None
11	Thermal Break	Model : GRJ01 Supplier: Ke Yuan
12	Drainage	Sizes: 50mmx 8mm (Width x Height) quantity: 4

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13	Gasket (between leaf and frame)	Model: GA101, EP4855A, EP5052D Material: EPDM Supplier: WINGKAY
14	Sealant of Glass	Model: SS550 Material: silicone sealant Supplier: GuangDong BaiYun
15	Installation	The exterior perimeter of the test specimen was sealed with silicon sealant.

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Test Items, Method and Results:

2 Test Result

Table 2 Test Results

Test Description	Test Result		Rating	Verdict	
Serviceability Design Wind Pressure AS/NZS 4420.1-2016 section 3	± 3600 Pa		/	Pass	
Deflection / Span Ratio Framing member 1	Stile at handle side	1/260			
Deflection / Span Ratio Framing member 2	Sash bottom rail	1/287			
Operating Force AS/NZS 4420.1-2016 section 4	Initial Movement	Open	12 N	Not Applicable	Only record
		Close	75 N		
	Maintain Movement	Open	12 N		
		Close	12 N		
Air Infiltration at ±150 Pa Overall area: 4.08 m ² AS/NZS 4420.1-2016 section 5	at +150Pa	10.44 L/s	Non air conditioned	Pass	
	at -150Pa	10.86 L/s			
Water Penetration AS/NZS 4420.1-2016 section 6	No water penetration at:	375 Pa	Very High	Pass	
	Description: No water penetration at 375 Pa.				
Ultimate Strength Test AS/NZS 4420.1-2016 section 7	± 5000 Pa with no collapse		/	Pass	
	Description: No significant breakage, permanent deformation or operational malfunction after ultimate strength was released.				
Torsional Strength NZS 4211-2008 section 11 and appendix A	Maximum deflection	/ mm	Not Applicable	N/A	

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Appendix A: Test Data and Sample Drawings:

A.1 Deflection Test – Test method AS/NZS 4420.1-2016

Test Pressure (Serviceability design wind pressure), P=3600 Pa.

Unless a smaller value of allowable deflection is separately specified for windows that are subject to specific design, in buildings requiring specific design, the maximum deflection due to bending of any structural member, including the outer window frame, measured relative to the end of the member at the serviceability limit state shall not exceed span/200 of the span.

Table 3 Test Data of Deflection Test

Member (mm)		Test Pressure (Pa)	Deflection(mm)			Actual Deflection	Deflection/Span Ratio
Item	Span Length		1	2	3		
Stile at handle side	2160	+P/4=900	4.0	2.5	1.4	1.3	/
		+2P/4=1800	10.7	5.6	2.5	4.1	/
		+3P/4=2700	16.8	10.1	4.2	6.3	/
		+4P/4=3600	22.4	14.4	5.9	8.3	1:260
		0	0.1	0.1	0.1	<0.1	/
Stile at handle side	2160	-P/4=-900	3.3	3.8	1.7	1.3	/
		-2P/4=-1800	5.1	6.3	2.6	2.5	/
		-3P/4=-2700	6.7	8.8	3.4	3.8	/
		-4P/4=-3600	8.1	11.2	4.2	5.1	1:424
		0	0.2	0.2	0.1	0.1	/

Table 4 Test Data of Deflection Test

Member (mm)		Test Pressure (Pa)	Deflection(mm)			Actual Deflection	Deflection/Span Ratio
Item	Span Length		3	4	5		
Sash bottom rail	660	+P/4=900	1.4	0.9	0.1	0.7	/
		+2P/4=1800	2.5	1.7	0.4	1.1	/
		+3P/4=2700	4.2	3.0	0.8	1.7	/
		+4P/4=3600	5.9	4.1	1.4	2.3	1:287
		0	0.1	0.0	0.0	0.1	/
Sash bottom rail	660	-P/4=-900	1.7	1.3	0.2	0.8	/
		-2P/4=-1800	2.6	2.0	0.5	1.1	/
		-3P/4=-2700	3.4	2.6	0.8	1.3	/
		-4P/4=-3600	4.2	3.2	1.0	1.6	1:413
		0	0.1	0.1	0.1	<0.1	/

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A.2 Air infiltration test – Test method AS/NZS 4420.1-2016

Overall area: 4.08 m²

Joint Length: 7.50 m

Table 6 Test Data of Air Infiltration Test

Test pressure of 150 Pa	Infiltration rate (positive direction)	10.44 L/s
	Exfiltration rate (negative direction)	10.86 L/s
	Average air leakage rate	10.65 L/s
	Rating	Non air conditioned
	Requirement: Geometric mean	22.12 L/s

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A.3 Sample Drawings

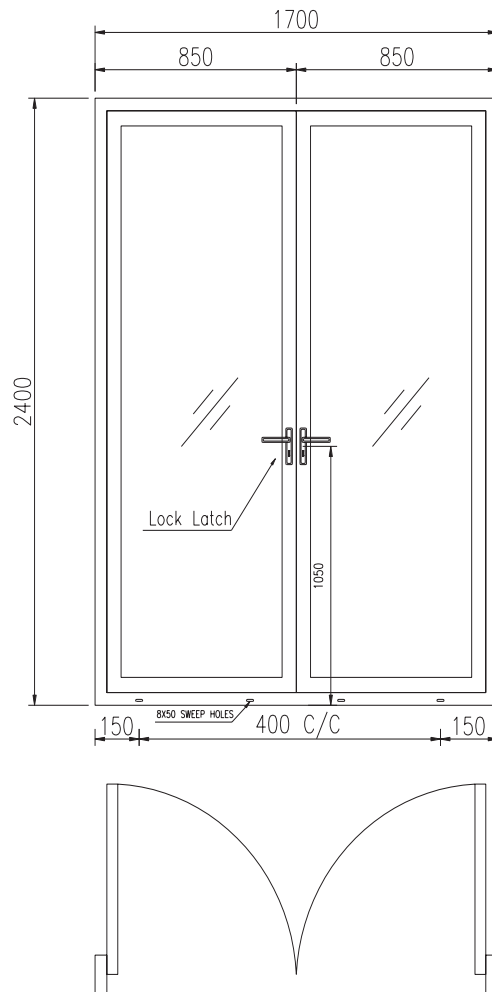


Fig.1 Drawing of Representative Sample

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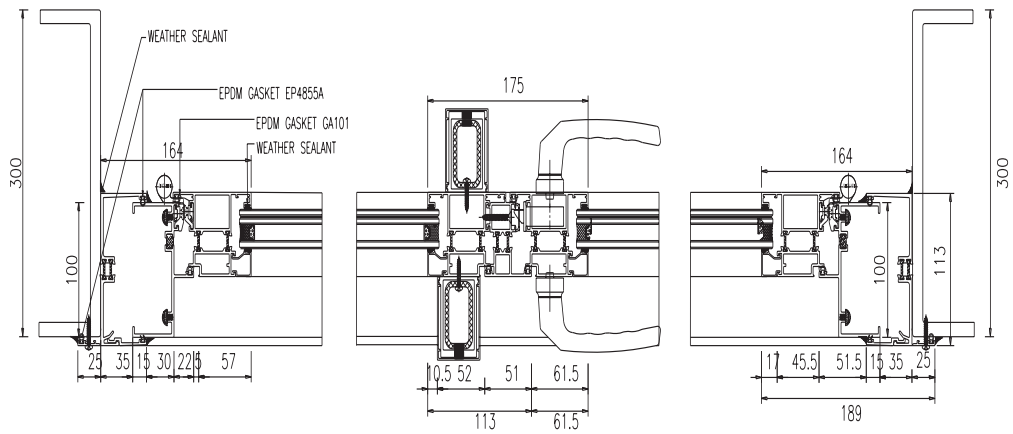


Fig.2 Drawing of Representative Sample

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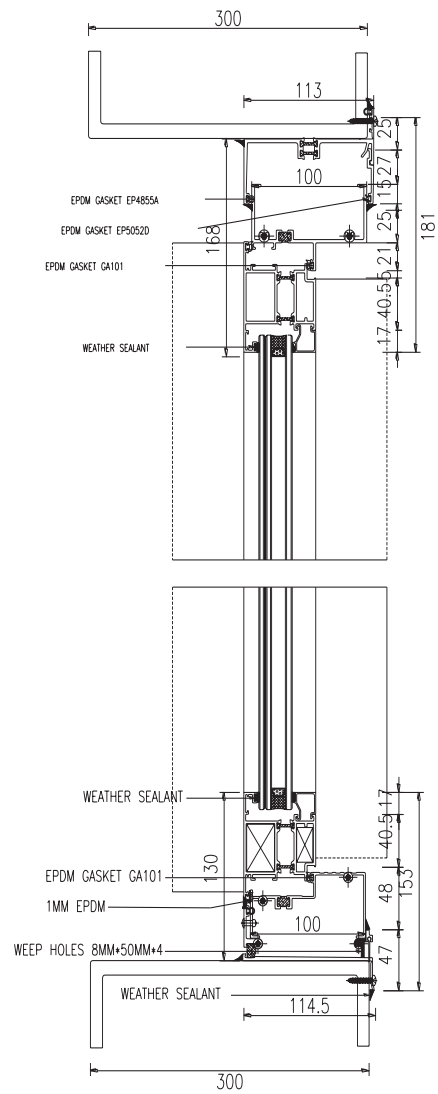


Fig.3 Drawing of Representative Sample

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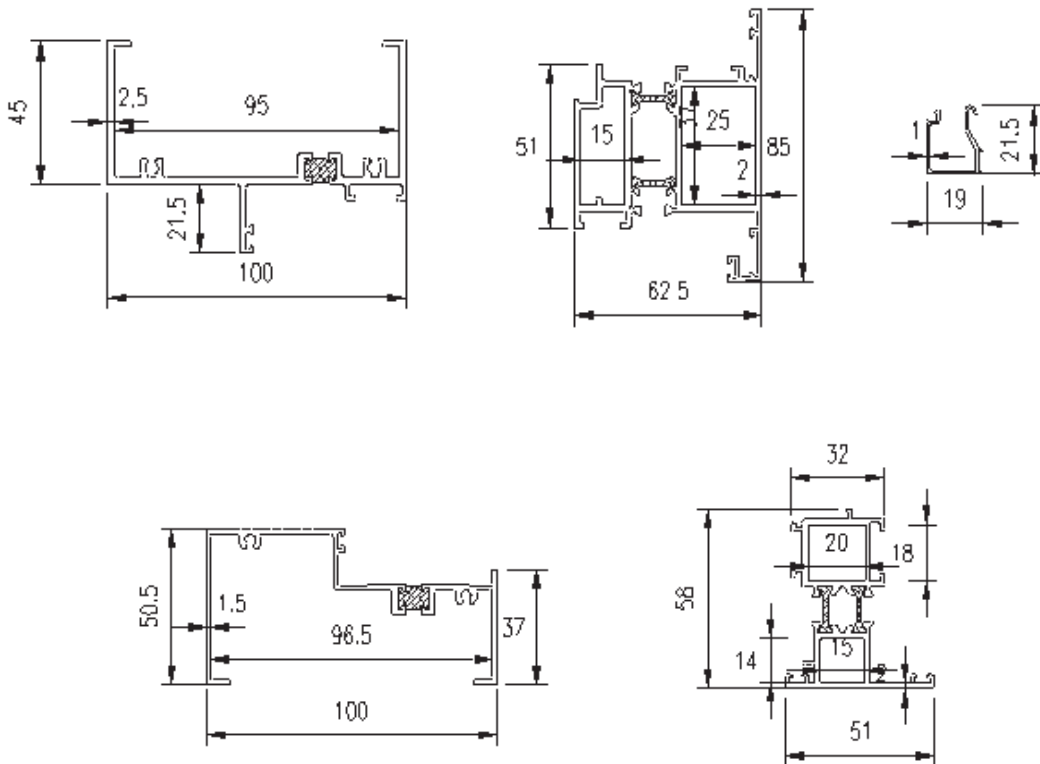


Fig.4 Drawing of Representative Sample

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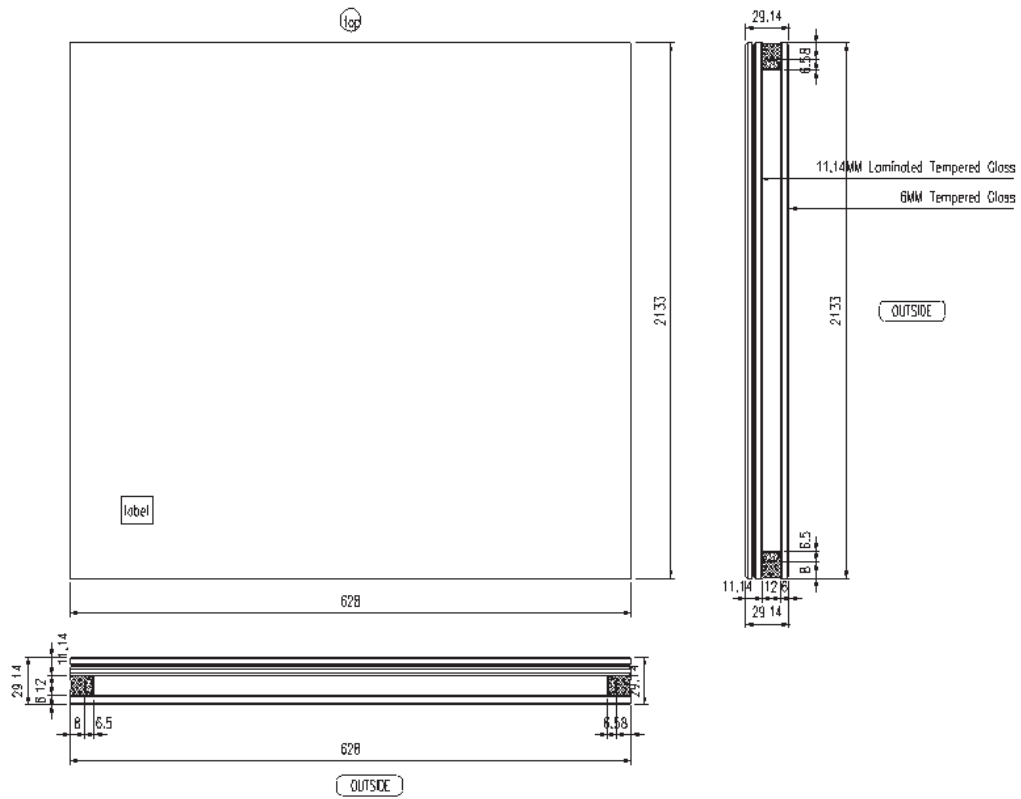


Fig.5 Drawing of Glazing Structure

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MZS22

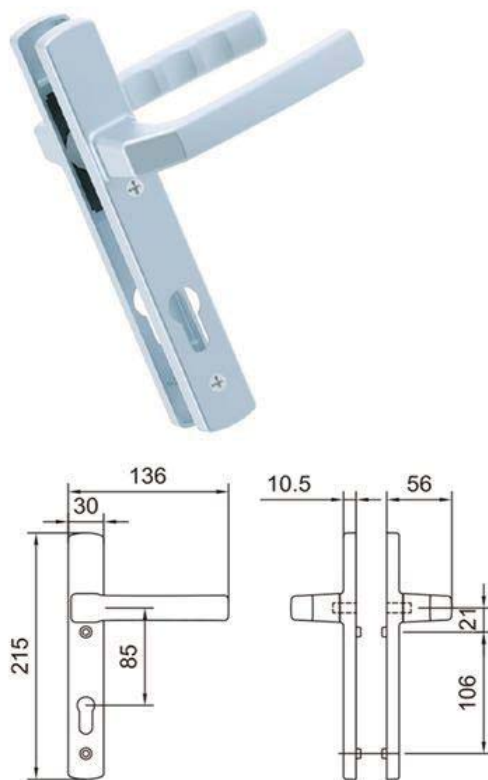


Fig.6 Drawing of Representative Sample

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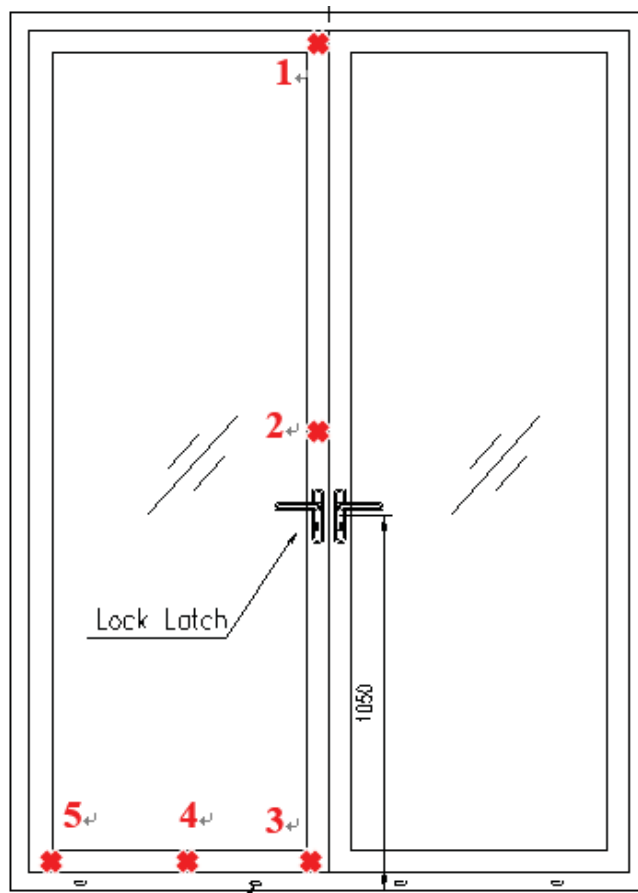
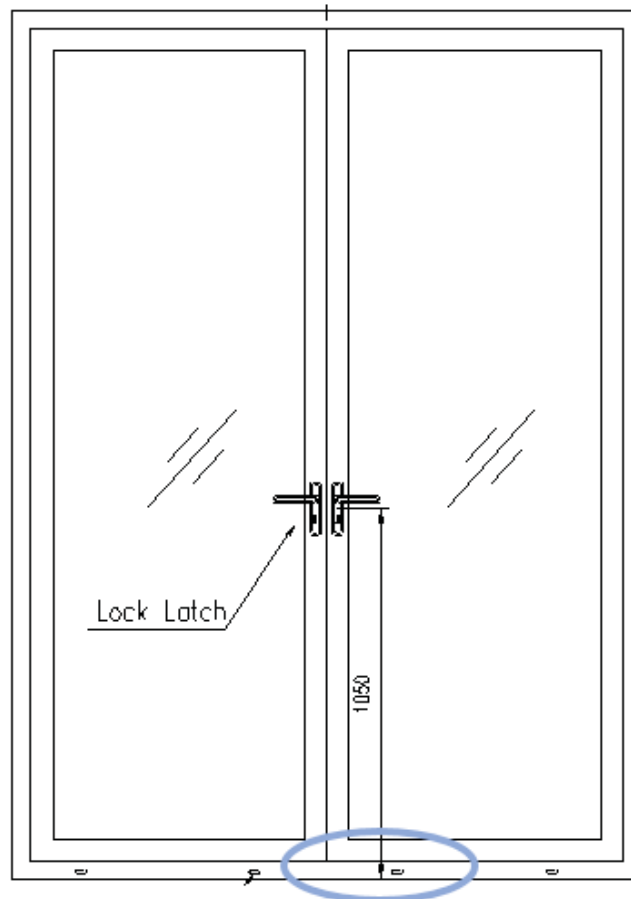


Fig.7 Locations of Displacement Measuring Devices

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○ : Water penetration position

Fig.8 Location of Water Penetration

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APPENDIX : SAMPLE RECEIVED PHOTO



REPORT AUTHORIZED

When signed with physical or electronic signature, the contents of this report have been prepared and approved per Intertek's quality process in accordance with ISO 17025.

Approved by:

Prepared by:

Oliver zhu

Ziqing chen

Name: Oliver Zhu

Name: Ziqing Chen

Title: Reviewer

Title: Project Engineer

Revision:

Report NO.	DATE	Revision Reason	Revision Summary	AUTHOR	REVIEWER
190910159GZU-004	2019/11/13	0	First issue	Ziqing Chen	Oliver Zhu

End of Test Report