



Specification for Approval

Part name	Antenna
Part No.	ARY196-2011-007-00
Customer Part No.	1029-0000188

1		2		3		4		Customer Drawing				
RoHS Compliant								REV	DATE	DESCRIPTION	ECN NO.	NAME
								A1	22.08.11	PROPOSAL		DAVID
								A2	22.12.21	△MODIFY CABLE LENGTH		LIEF
								A3	22.12.23	△MODIFY CABLE LENGTH		DAVID
								A4	23.05.18	△MODIFY LOGO		DAVID

1

△

12±0.3

35±0.3

82.5±3

3

2

2

3

1

2

3

4

Release Paper Break

TAPE

										CUST NO.: 1029-0000188	
										PART NO.: ARY196-2011-007-00	
										WIESON TECHNOLOGIES CO., LTD WIESON	
										TITLE: Antenna	
④	Tape	3M9448HK , Size:35 x 12mm	1	DRAWN BY		DAVID(WST)		DRAWING NO.		ARY196-2011-007-00	
③	Connector	MHF I Plug For 1.13mm Cable , Gold Plated	1	CHECKED BY				DRAWING SIZE		A4	
②	Cable	1.13mm Normal Coaxial Cable , FEP Black Jacket	1	APPROVED BY				UNIT		mm	
①	FPC	FPC , Size: 35 x 12mm	1	SORTING NO.		WSC		PAGE		1 OF 1	
NO.	ITEM	DESCRIPTION	QTY								

 WIESON TECHNOLOGIES CO., LTD.	SPECIFICATION LIST	TYPE OF PRODUCT
		RF ANTENNA

ITEM	INDEX	PAGE
1.	THE SPECIFICATION LIST	1
2.	BOM.....	2
3.	TEST REPORT.....	3-26



				Approvals	
Rev	Date	Description	Edited by	Prepared :	WAH
01	2022/09/06	ISSUE	Mars	Checked :	FOUNTAIN
02	2023/05/19	MODIFY SPEC	Mars	Approved :	ROX
03	2023/07/04	MODIFY TEST REPORT	WAH	Issued No :	03
				Sheet :	1 OF 27



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BILL OF MATERIAL

Cust.		TITLE	Antenna				
Cust.P/N	1029-0000188	WIESON P/N	ARY196-2011-007-00				
NO.	DESCRIPTION	SUPPLIER	SUPPLIER PART NO.	UL NO.	AVL	QUANTITY	REMARK
1	FPC , Size: 35 x 12mm		/	/	/	PCS	
2	1.13mm Normal Coaxial Cable , FEP Black Jacket		/	/	/	MM	
3	MHF I Plug For 1.13mm Cable , Gold Plated		/	/	/	PCS	
4	3M9448HK , Size:35 x 12mm		/	/	/	PCS	
5			/	/	/		
6			/	/	/		
7			/	/	/		
8			/	/	/		
9			/	/	/		
10			/	/	/		
11			/	/	/		
12			/	/	/		

APPROVED BY: ROX

CHECKD BY: FOUNTAIN

DESIGNED BY: MARS



SV510M-86

Engineer :BZ

Report date : 2023/06/28 DVT



Revision History

Revision	Date	Engineer	Description
01	2023/05/04	Jane	New Release
02	2023/06/28	BZ	Update Active Test

Antenna Specification

ANT	
Item	Specification
Operating Frequency(MHz)	2400-2500
Bandwidth	100MHz (Min.)
Return Loss	10dB (Min.)
Polarization	Linear
Azimuth Bandwidth	Omni-directional
Antenna Type	Dipole
Peak Gain	2.75 dBi (Max)
Impedance	50Ω
Material	FPC
Maximum Power	1W
V.S.W.R	2: 1
Radiation	Omni directional
Efficiency	56% (Max.)
Connector	MHF 1
Cable type	OD 1.13
Operating Temperature	-10~60°C
Storage temp	-10~70°C

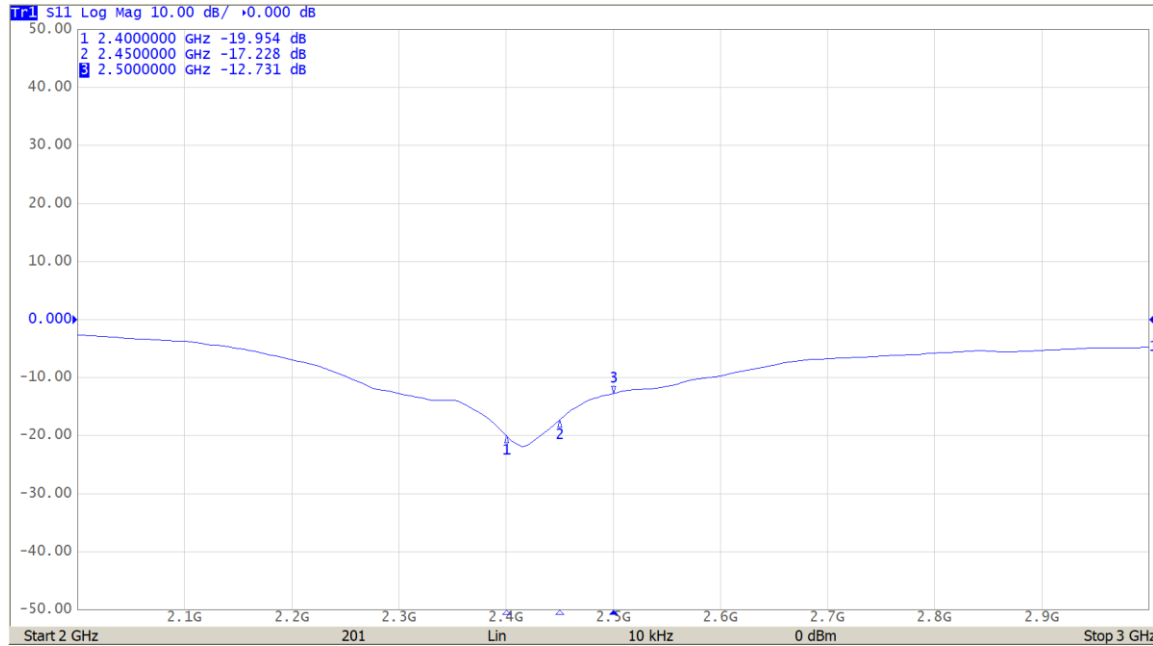
Bluetooth performance (line of sight) testing

Result	G: Good (During walking and stand still without music drop out)
	NG : stand still with music drop out more than 5 time, but recover with normal playback in short timein.

[illegible]

Antenna Measurement Vector Network Analyzer

Return Loss



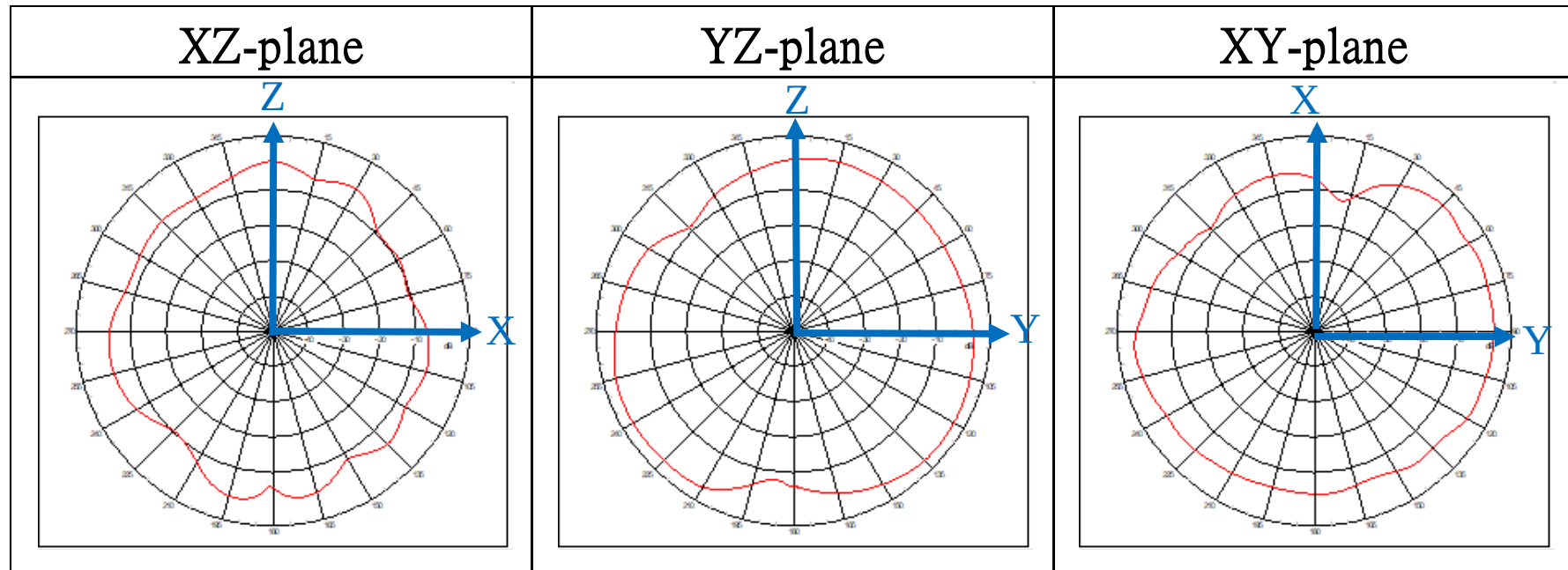
Frequency (MHz)	2400	2450	2500
S11(dB)	-19.9	-17.2	-12.7

3D Gain Total

Ant			
Frequency (GHz)	Peak Gain (dBi)	3D-avg Gain (dBi)	Efficiency (%)
2.4	2.06	-2.52	56
2.41	2.17	-2.91	51
2.42	2.4	-2.7	54
2.43	2.4	-2.68	54
2.44	2.51	-2.66	54
2.45	2.68	-2.54	56
2.46	2.7	-2.51	56
2.47	2.75	-2.52	56
2.48	2.41	-2.84	52
2.49	2.1	-3.07	49
2.5	2.05	-3	50

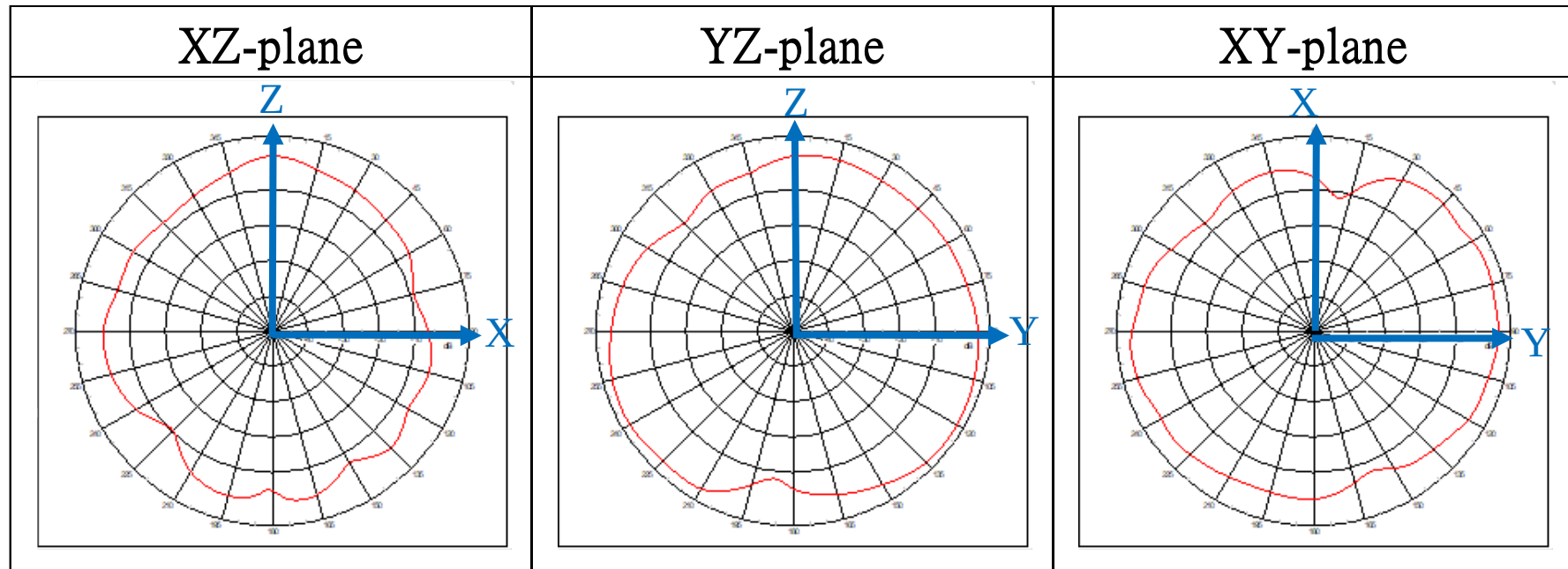
Antenna Pattern

2400MHz



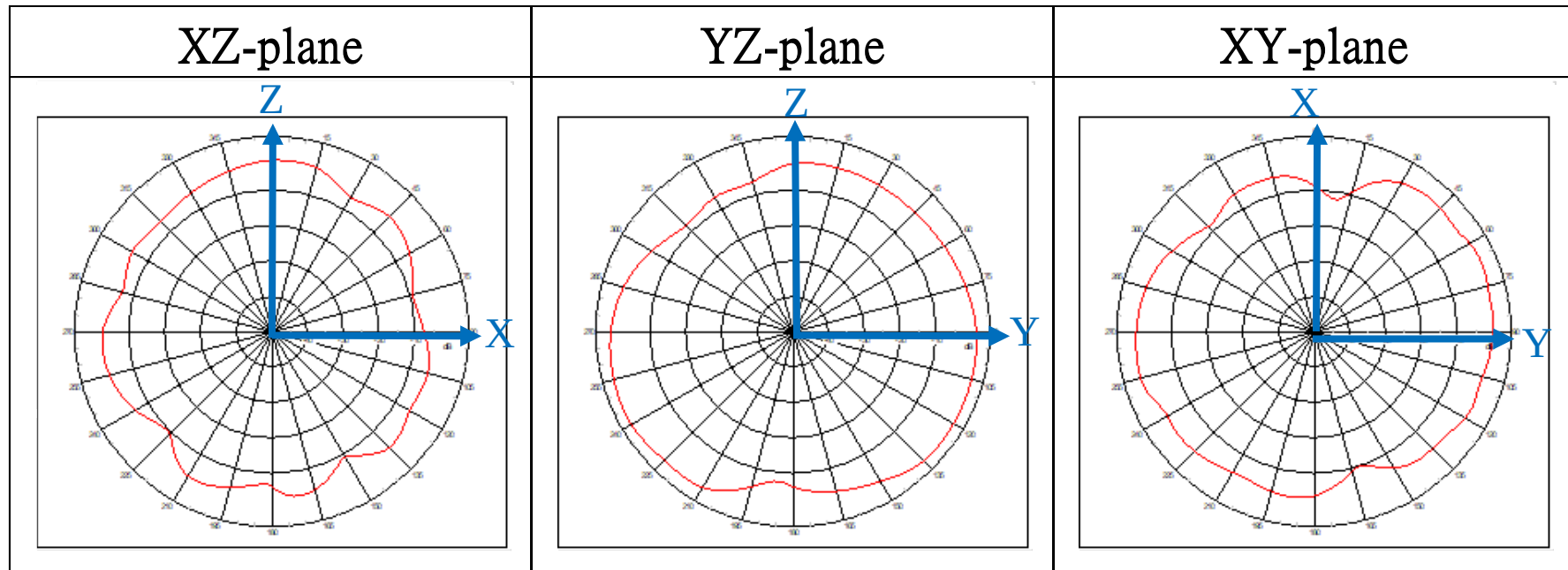
Antenna Pattern

2450MHz



Antenna Pattern

2500MHz



Conclusion

- This test environment is a DVT machine.
- The overall VSWR of the antenna is less than 2 and the average efficiency is greater than 50%, which can be used on SV510M-86.
- Measured distance: After connecting with Iphone12, playing bluetooth music can reach 70 meters without continuous sound.



MAKING THE PERFECT CONNECTION

www.wieson.com



TEST REPORT

Report No.	: WSC-23T-185
Applicant	: I21008
Commodity	: RF Antenna
Model No.	ARY196-2011-007-00
Quantity	: 5 pcs
Date of Testing	: May.22,2023~ May.23,2023
Measure Environment	: Temp. : $23\pm 3^{\circ}\text{C}$, R.H.: 35%~75%
Test Item	: Refer to paragraph 1, Test Group.

- Note: 1. The results of the testing report relate only to the items tested.
2. The testing report shall not be reproduced except in full, without the written approval of WIESON.

Checked by:	Tested and Prepared by:
<i>Fan Shigang</i>	<i>Yang zhangyi</i>

WIESON ELECTRONIC CO., LTD.

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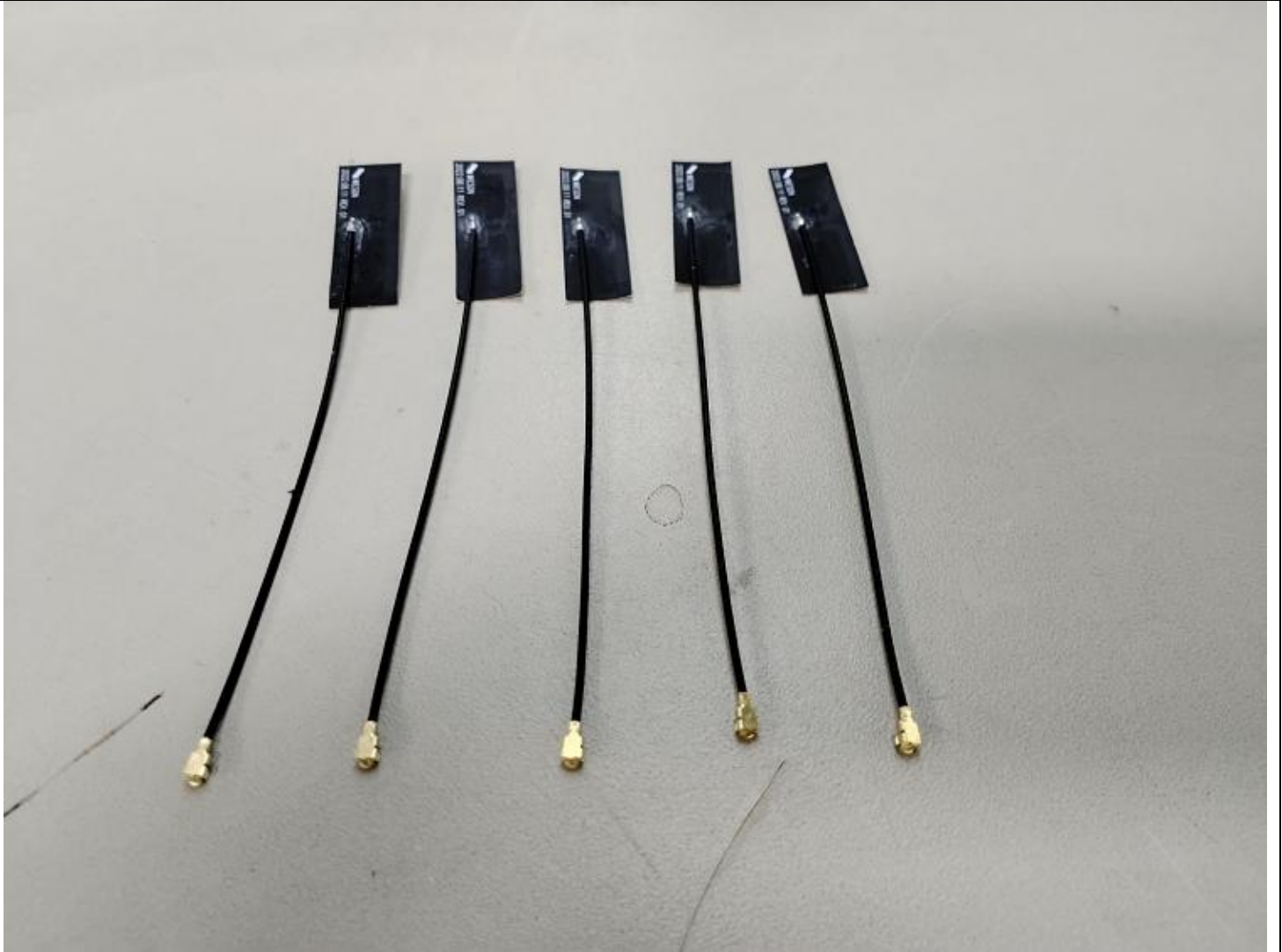
WIESON TECHNOLOGIES CO., LTD.

QUALIFICATION TEST REPORT

REPORT NO. : WSC-23T-185

Test Specimen:

ARY196-2011-007-00



WIESON TECHNOLOGIES CO., LTD.

QUALIFICATION TEST REPORT

REPORT NO. : WSC-23T-185

Test Items:

No.	Test Description
1	Salt Spray

WIESON TECHNOLOGIES CO., LTD.

QUALIFICATION TEST REPORT

REPORT NO. : WSC-23T-185

Test Group process:

Test Description Sequence	Test Group
	1
Examination of Product	1,3
Salt Spray	2
Sample Size per Test Group	5

Note: Test specimen(s) shall be prepared in accordance with approval sheets and shall be selected at random.

WIESON TECHNOLOGIES CO., LTD.

QUALIFICATION TEST REPORT

REPORT NO. : WSC-23T-185

Test Result Summary:

Test Group	Test Result
Group 1	PASS

WIESON TECHNOLOGIES CO., LTD.

QUALIFICATION TEST REPORT

REPORT NO. : WSC-23T-185

1. Test Group 1[Salt Spray]:

1.1 Test Item & Test method:

	Test Item	Test Method
1	Salt Spray	According to method EIA 364-26B

1.2 Test condition:

1.2.1 Salt Spray: Temp : 35±2℃, solution: 5%, PH value: 6.5 ~ 7.2

Humidity: 95 ~ 98 %(R.H.)

Duration:24 hours.

1.3 Test Request:

1.3.1 Salt Spray:

a No evidence of damage.

b.No rust or corrosion

1.4 Test Value:

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Visual Inspection	PASS	PASS	PASS	PASS	PASS
Salt Spray	24H	24H	24H	24H	24H
Visual Inspection	PASS	PASS	PASS	PASS	PASS

1.5 Test Result:

Comment	PASS
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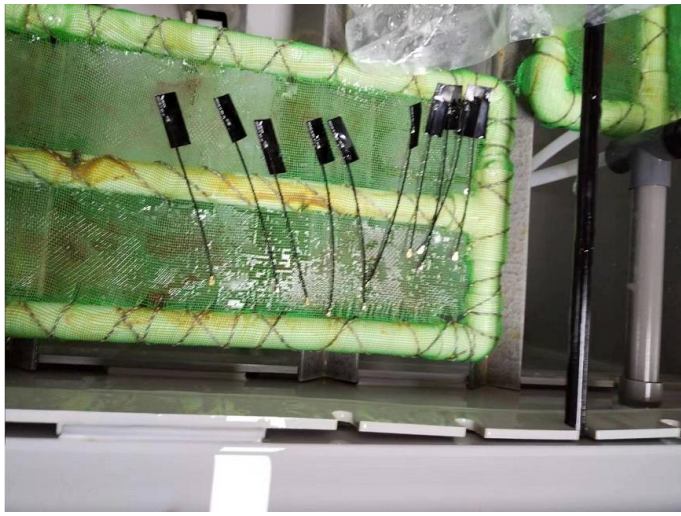
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QUALIFICATION TEST REPORT

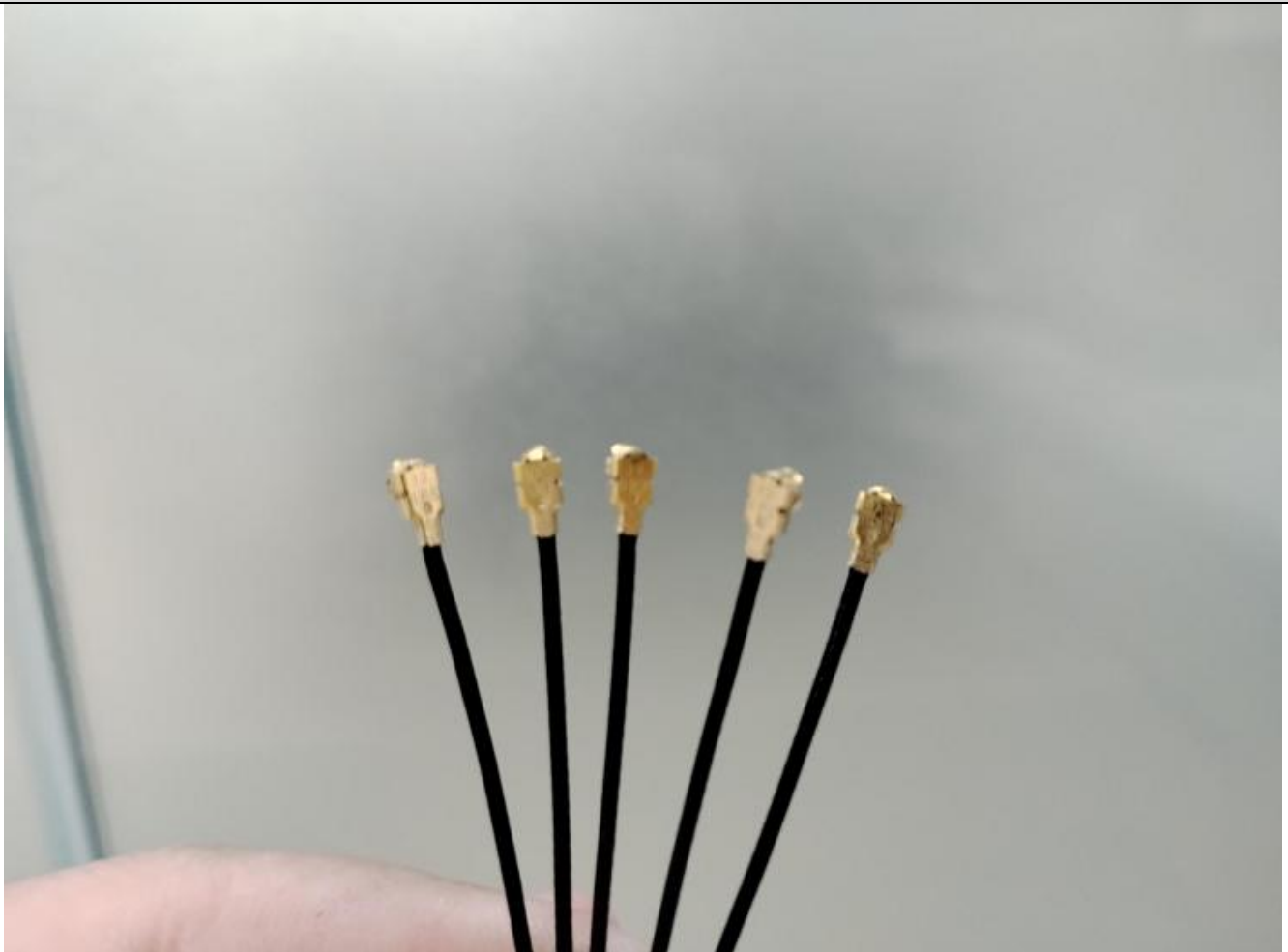
REPORT NO. : WSC-23T-185

Test Photos:

Salt Spray



after test



WIESON TECHNOLOGIES CO., LTD.

QUALIFICATION TEST REPORT

REPORT NO. : WSC-23T-185

Testing Equipment:

Instrument	Model
Vision Measurement Inspection System	PAO-I / QC-2000
Salt Spray Tester	TIEH MU JEN / HT-8052

UNDER BLANK