Antenna Passive Test Report

Product Name: Mesh12X Antenna

Product Stage: Engineering Machine

Test information

product	Mesh12X ANT	product No.	
test category	Antenna passive test	test the venue	S Parameters (laboratory) radiation parameters
test date	2020.12.1	Testers	Xiao Pengcheng
environment	temperature: 24℃-28℃	Relative humidity: 56%-58%	Atmospheric pressure: 100kPa-101kPa
test project	Room temperature electrical properties: √Return loss √Gain √ pattern√ port isolation		
Test foundation	Test report, see test attached		
Test overview	The normal temperature electrical performance of the antenna was tested, and the S-parameter and radiation parameters of the antenna were mainly tested.		
test in conclusion	Antenna performance meets requirements		

Room temperature electrical performance test results

2.4G ANT1						
No.	Test items	unit	performance requirements	test result		Judgment
1	Frequency Range	MHz	2412-2483	2412-2483		OK
2	Gain	dBi	3	2412	3.78	OK
				2450	3.80	OK
				2483	3.78	OK
3	return loss	dB	≤-10	2412	-16	OK
				2450	-15	OK
				2483	-14	OK
4	Antenna efficiency		≥60%	2412	75%	OK
				2450	76%	OK
				2483	77%	OK

2.4G ANT2						
No.	Test items	unit	performance requirements	test result		Judgment
1	Frequency Range	MHz	2412-2483	2412-2483		OK
2	Gain	dBi	3	2412	3.72	OK
				2450	3.77	OK
				2483	3.75	OK
3	return loss	dB	≤-10	2412	-18	OK
				2450	-18	OK
				2483	-16	OK
4	Antenna efficien		≥60%	2412	77%	OK
				2450	78%	OK
				2483	79%	OK

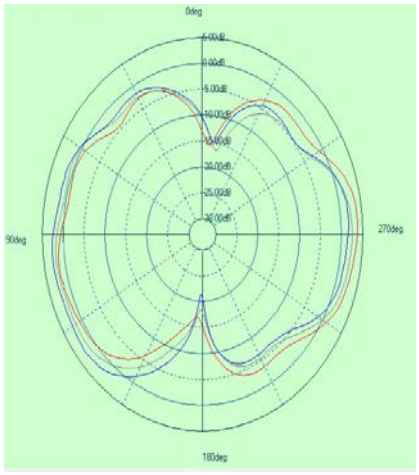
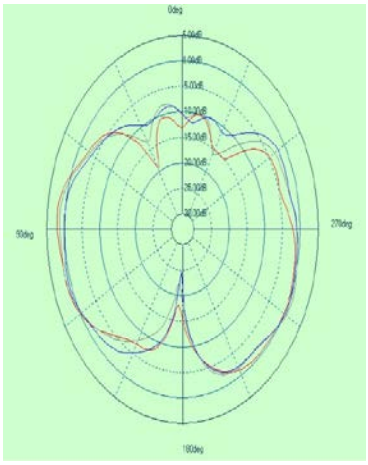
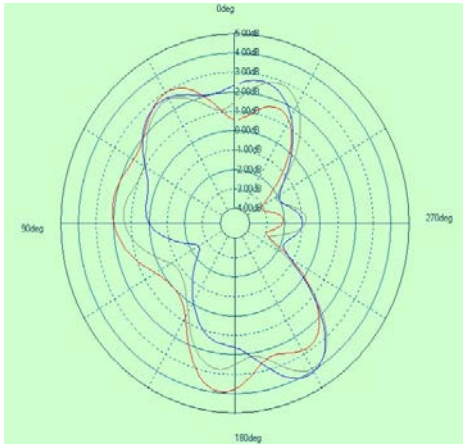
5G-Low band ANT1						
No.	Test items	unit	performance requirements	test result		Judgment
1	Frequency Range	MHz	5150-5350	5150-5350		OK
2	Gain	dBi	4.5	5150	4.12	OK
				5250	4.5	OK
				5350	4.21	OK
3	return loss	dB	≤-10	5150	-14	OK
				5250	-15	OK
				5350	-13	OK
4	Antenna efficien		≥60%	5150	69%	OK
				5250	71%	OK
				5350	72%	OK

5G-Low band ANT2						
No.	Test items	unit	performance requirements	test result		Judgment
1	Frequency Range	MHz	5150-5350	5150-5350		OK
2	Gain	dBi	4.5	5150	4.05	OK
				5250	4.5	OK
				5350	4.41	OK
3	return loss	dB	≤-10	5150	-15	OK
				5250	-15	OK
				5350	-13	OK
4	Antenna efficiency		≥60%	5150	74%	OK
				5250	72%	OK
				5350	71%	OK

5G-high band ANT1						
No.	Test items	unit	performance requirements	test result		Judgment
1	Frequency Range	MHz	5700-5850	5700-5850		OK
2	Gain	dBi	4.5	5700	4.5	OK
				5750	4.5	OK
				5850	4.31	OK
3	return loss	dB	≤-10	5700	-18	OK
				5750	-30	OK
				5850	-25	OK
4	Antenna efficiency		≥60%	5700	65%	OK
				5750	67%	OK
				5850	69%	OK

5G-high band ANT2						
No.	Test items	unit	performance requirements	test result		Judgment
1	Frequency Range	MHz	5700-5850	5700-5850		OK
2	Gain	dBi	3	5700	4.5	OK
				5750	4.5	OK
				5850	4.41	OK
3	return loss	dB	≤-10	5700	-24	OK
				5750	-19	OK
				5850	-16	OK
4	Antenna efficien		≥60%	5700	66%	OK
				5750	69%	OK
				5850	72%	OK

Radiation parameter testing

2.4G ANT1		
2D Radiation pattern		
Phi=0	Phi=90	Theta=90
		

2.4G ANT2		
2D Radiation pattern		
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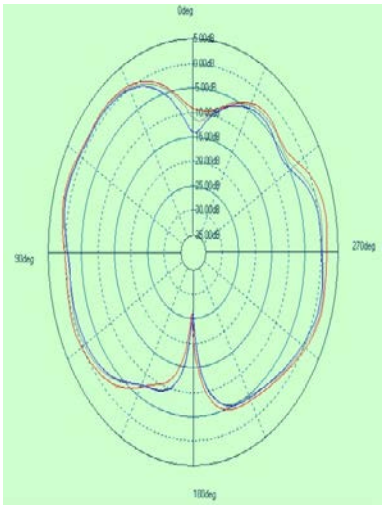
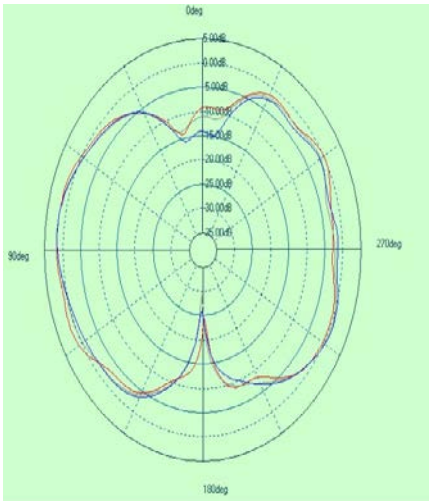
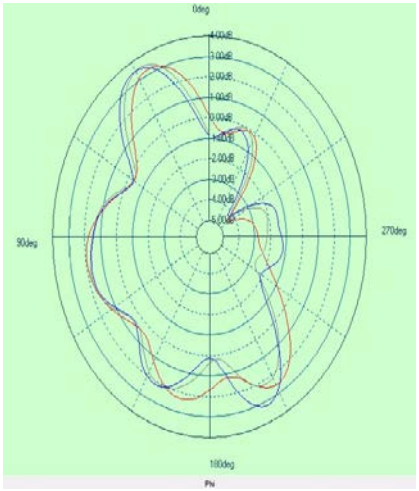
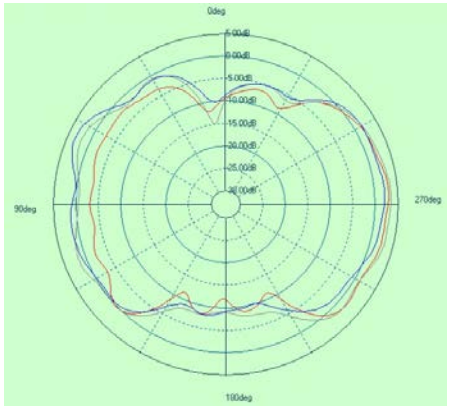
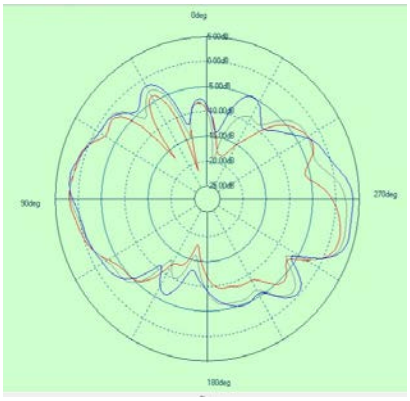
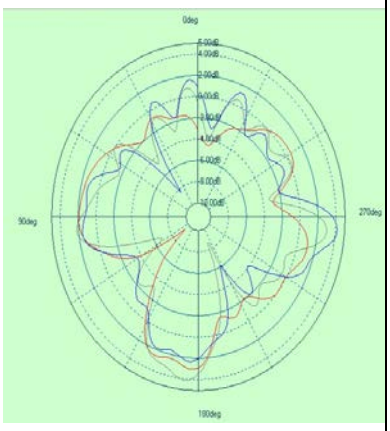
		

5G-Low band ANT1		
2D Radiation pattern		
Phi=0	Phi=90	Theta=90
		

5G-Low band ANT2		
2D Radiation pattern		
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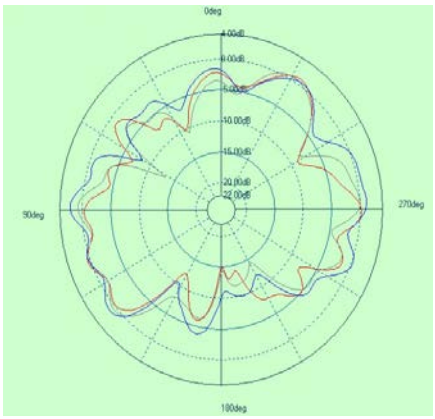
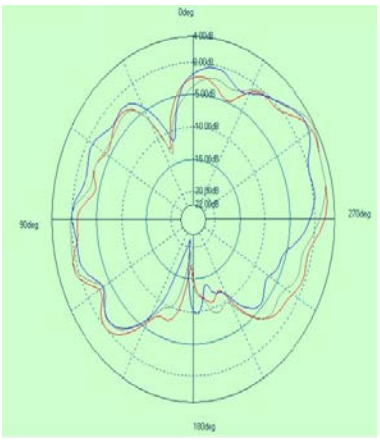
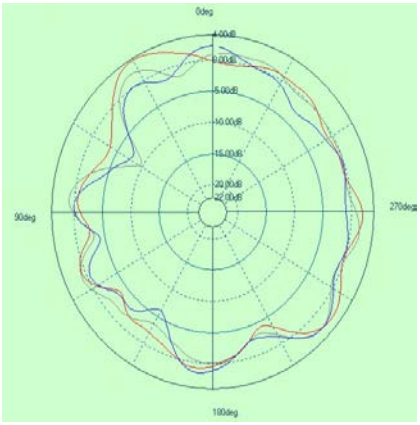
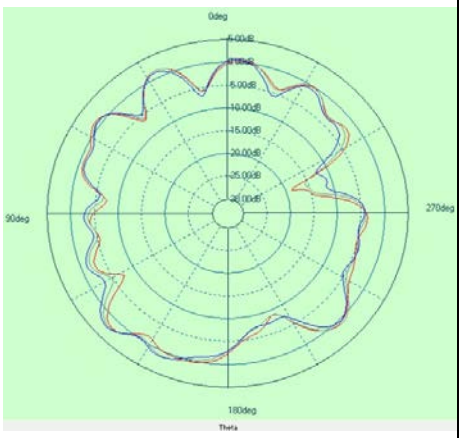
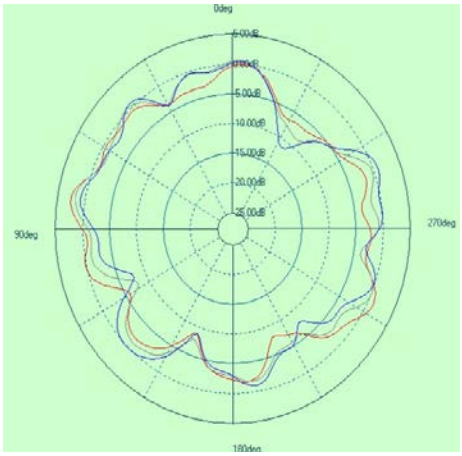
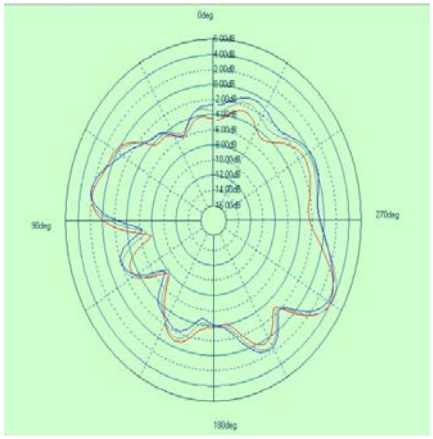
		

5G-high band ANT1		
2D Radiation pattern		
Phi=0	Phi=90	Theta=90
		

5G-high band ANT2		
2D Radiation pattern		
Phi=0	Phi=90	Theta=90