

specification

Specification

customer name:
 CUSTOMER : Ruijie Network Co., Ltd
 Customer No. : _____
 CUSTOMER P /N : _____
 Customer name: _____
 DESCRIPTION : _____
 Jie Lei material number:
 JL P /N : C 168-JL -4440
 Jeremy name: _____
 PART NO : The NDM-WIFI 2.4G WIFI 5G-AP680-A
 edition: antenna
 Revision : V 1.0

approval	examine and verify	authorized strength
Fran k	E ason	Zhang Xian
2020. 12. 04	2020. 12. 04	2020. 12. 04

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Fuzhou JieLei Electronic Technology Co
.Ltd .



catalogue

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editio

date	ratify	edition	description
2020-12-04		V 1.0	editio princeps

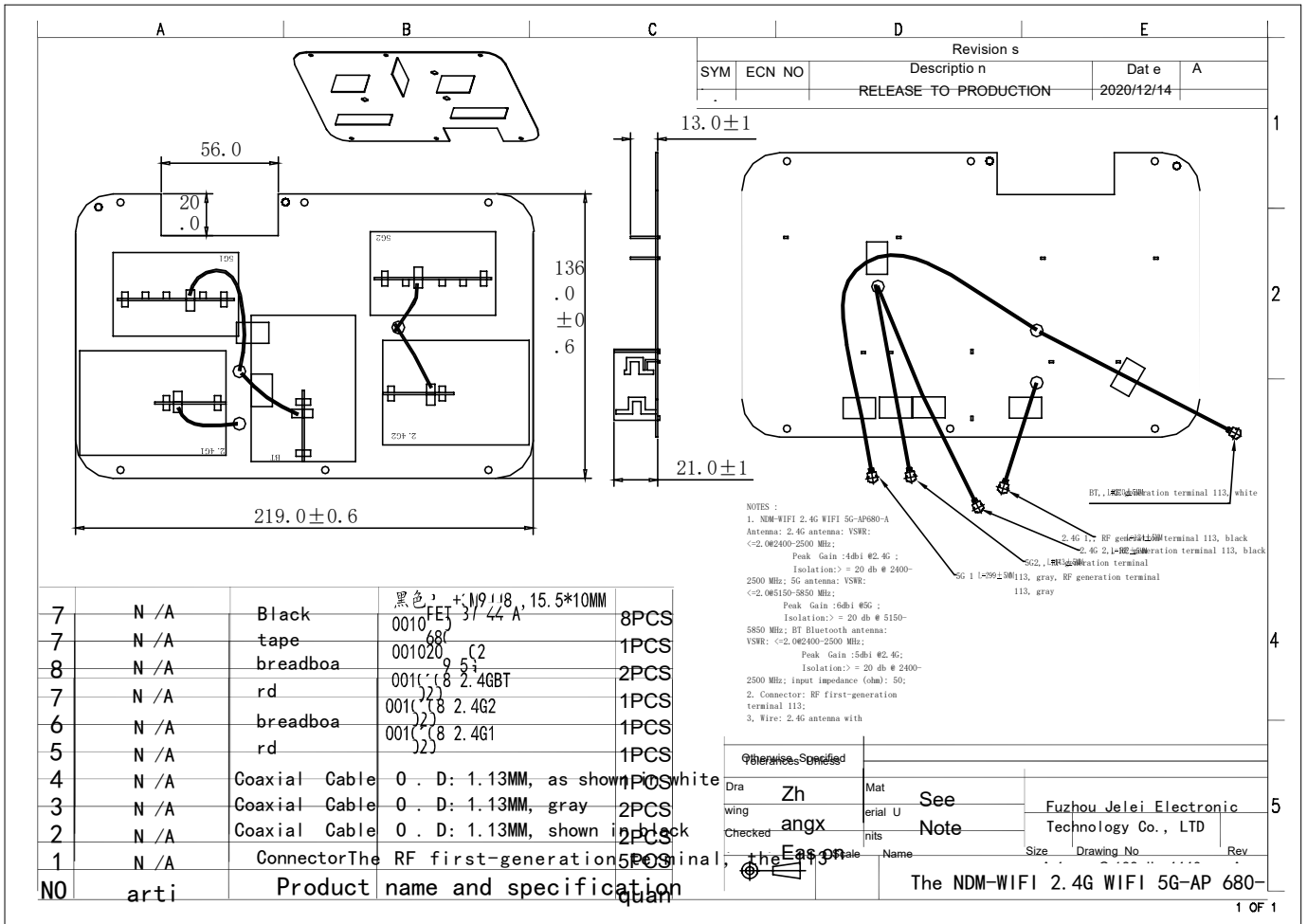
1. Product Performance

Electrical performance index / Electrical specifications					
Antenna type / Antenna type	2.4G antenna	2.4G antenna	5G antenna	5G antenna	BLE antenna
Antenna number (see the drawing)	2.4G1	2.4G2	5G1	5G2	BLE
Frequency Range (MHz) / Frequency range (MHz)	2400~2500		5150~5850		2400~2500
Voltage standing wave ratio / VSWR	≤2.0				
Input impedance (Ohm) / Impedance (Ohm)	50				
Gain (dBi) / Peak Gain (dBi)	4		6		5
Polarized form / Polarization Type	Vertical				
Segregation degree / Isolation (dB)	≥20				
Mechanical index / Mechanical specifications					
Antenna size (mm) / Dimensions (mm)	219*136*21				
Connector type / Connector Type	RF 1 terminal 113				
Cable type / Cable Type	RF 1.13				
Operating temperature (°C) / Operation Temperature (°C)	-40~70				
Storage temperature (°C) / Storage Temperature (°C)	-40~70				

2. Environmental Performance Test

NO	project Item	Test condition, Test Condition	Specification requirements Requirement	conclusion
1	High temperature test / High temperature test	Refer to GB-T 2423.2 specification, temperature of 70°C, test time of 24 hours. Refer to GB -T 2423.2, the temperature is 70 °C and the time is 24 hours .	After drying at room temperature, check the appearance of the sample without deformation, stripping, cracks, wrinkles anisochromatic, fish scale lines. After drying at room temperature, check appearance, samples without deformation, stripping, cracks, wrinkles, different color, fish scale lines .	Pass qualified / Pass / Fail not applicable / NA□□
2	Low temperature test / Low temperature test	Refer to the GB-T 2423.2 specification, temperature-40°C, and the test time is 24 hours. Refer to GB -T 2423.2, the temperature is -40 °C and the time is 24 hours .	After drying at room temperature, check the appearance of the sample without deformation, stripping, cracks, wrinkles anisochromatic, fish scale lines. After drying at room temperature, check appearance, samples without deformation, stripping, cracks, wrinkles, different color, fish scale lines .	Pass qualified / Pass / Fail not applicable / NA□□

3. Mechanical Dimension Drawing



Revision s				
SYM	ECN NO	Description	Date	A
		RELEASE TO PRODUCTION	2020/12/14	

Dimensions: 56.0, 20.0, 136.0 ± 0.6, 219.0 ± 0.6, 13.0 ± 1, 21.0 ± 1

Notes:

1. NDM-WIFI 2.4G WIFI 5G-AP680-A
Antenna: 2.4G antenna: VSWR: <2.0@2400-2500 MHz;
Peak Gain: <4dbi @2.4G;
Isolation: >= 20 db @ 2400-2500 MHz; 5G antenna: VSWR: <2.0@5150-5850 MHz;
Peak Gain: <5dbi @5G;
Isolation: >= 20 db @ 5150-5850 MHz; BT Bluetooth antenna: VSWR: <2.0@2400-2500 MHz;
Peak Gain: <5dbi @2.4G;
Isolation: >= 20 db @ 2400-2500 MHz; input impedance (ohm): 50;
2. Connector: RF first-generation terminal 113;
3. Wire: 2.4G antenna with

NO	arti	Material	Specification	Quantity
7	N/A	Black	黑色, 尺寸: 19.18, 15.5*10MM	8PCS
7	N/A	tape	FET 3744 A	1PCS
8	N/A	breadboa	001020 (2)	2PCS
7	N/A	rd	001020 (2) 2.4GBT	1PCS
6	N/A	breadboa	001020 (2) 2.4G2	1PCS
5	N/A	rd	001020 (2) 2.4G1	1PCS
4	N/A	Coaxial Cable	0. D: 1.13MM, as shown in drawing	2PCS white
3	N/A	Coaxial Cable	0. D: 1.13MM, gray	2PCS
2	N/A	Coaxial Cable	0. D: 1.13MM, shown in drawing	2PCS black
1	N/A	Connector	The RF first-generation terminal, the first-generation terminal	5PCS

BT, RF generation terminal 113, white

2.4G 1: RF generation terminal 113, black

2.4G 2: RF generation terminal 113, black

5G 1: RF generation terminal 113, gray

5G 2: RF generation terminal 113, gray

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Checked	angx	Serial U	Note
Checked	angx	Units	Note
Checked	angx	Name	Note

Fuzhou Jelei Electronic Technology Co., LTD

The NDM-WIFI 2.4G WIFI 5G-AP 680-

1 OF 1



Jielei Technology OTA laboratory test report

Record form of the test results

Sample name		Model of prototype		Application form number	
Detection basis	Guo Biao	sample size	A	Sample number	
surveillance project	passive	detection device	E5071C	testing conditions	22.2°C/43%
Detection purpose					

Record of the test results

Please people / send samples	\	software release		Hardware version	
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Sample machine information (Including S / N number)			<p>H: xoy</p> <p>E1: xoz</p> <p>E2: zoy</p>
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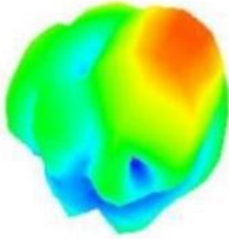
Note instructions

Freg (MHz)	Effi (%)	Max (dB)	Freg (MHz)	Effi (%)	Max (dB)	Freg (MHz)	Effi (%)	Max (dB)	
2400	61.14	3.85	2440	60.01	3.81	2480	50.12	3.87	
2410	60.65	3.67	2450	62.12	3.89	2490	53.52	3.89	
2420	58.77	3.47	2460	56.76	3.92	2500	52.7	3.78	
2430	57.59	3.25	2470	52.14	3.93				
2.4G									
Test person / date		/20190912							

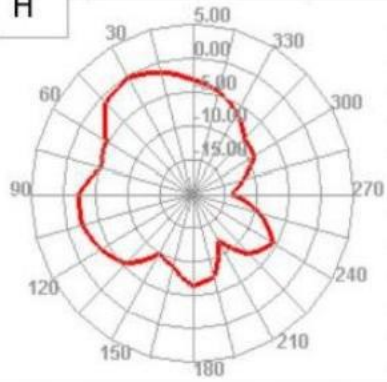


Jielei Technology OTA laboratory test report

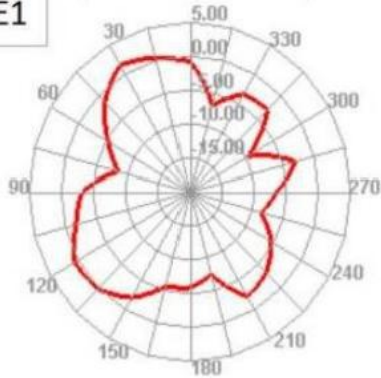
2450MHZ



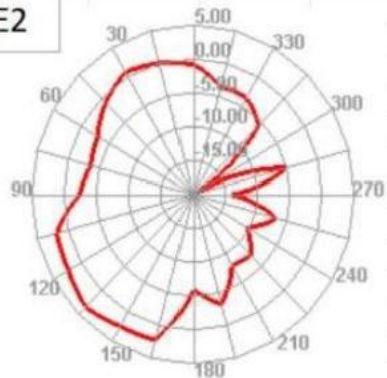
H



E1



E2





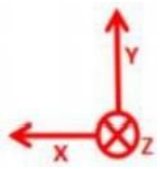

Record form of the test results

Sample name		Model of prototype		Application form number	
Detection basis	Guo Biao	sample size	A	Sample number	
surveillance project	passive	detection device	E5071C	testing conditions	22.2°C/43%
Detection purpose					

Record of the test results

Please people / send samples	1	software release		Hardware version	-
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Sample machine information (Including S / N number)

H: xoy

E1: xoz

E2: zoy

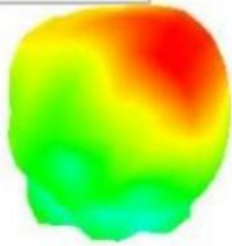
Remarks									
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Freg (MHz)	Effi (%)	Max (dB)	Freg (MHz)	Effi (%)	Max (dB)	Freg (MHz)	Effi (%)	Max (dB)	
2400	57.97	3.46	2440	60.44	3.46	2480	58.78	3.76	
2410	58.25	3.55	2450	63.87	3.56	2490	62.91	3.9	
2420	57.04	3.49	2460	59.62	3.29	2500	58.81	3.5	
2430	56.59	3.38	2470	58.55	3.31				
2.4G									

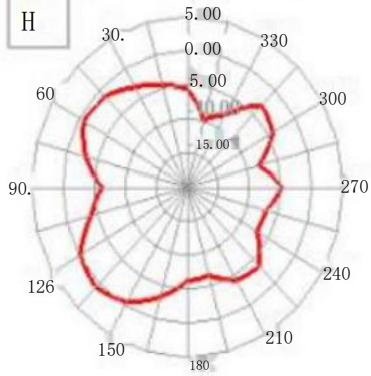
Test person / date	/20190912								
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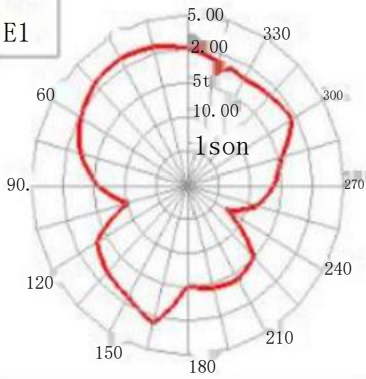
2450MHZ



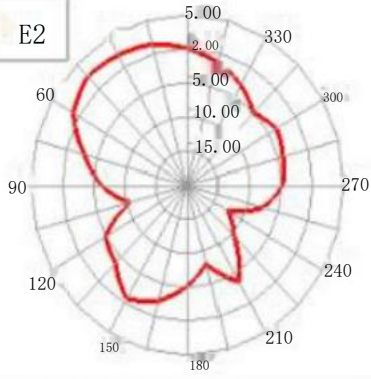
H



E1



E2



Jielei Technology OTA laboratory test report

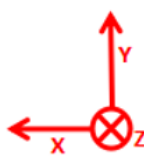

Heavy-lifting of electrons

Record form of the test results

Sample name		Model of prototype		Application form number	
Detection basis	Guo Biao	sample size	A	Sample number	
surveillance project	passive	detection device	E5071C	testing conditions	22.2℃/43 %
Detection purpose					

Record of the test results

Applicant / sample sender	I	software release		Hardware version	
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Sample machine information (Including S / N number)			<p>H: xoy</p> <p>E1: xoz</p> <p>E2: zoy</p>
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Note instructions									
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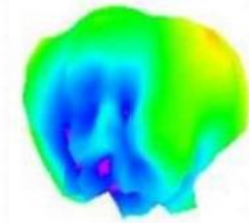
Freg (MHz)	Effi (%)	Max (dB)	Freo (MHz)	Effi (%)	Max (dB)	Freo (MHz)	Effi (%)	Max (dB)	
2400	47.44	3.88	2440	44.1	3.51	2480	47.02	4.02	
2410	45.61	3.6	2450	45.62	3.76	2490	53.69	4.83	
2420	42.91	3.13	2460	43.79	3.68	2500	52.31	4.79	
2430	41.42	3.11	2470	46.55	4.1				

BLE

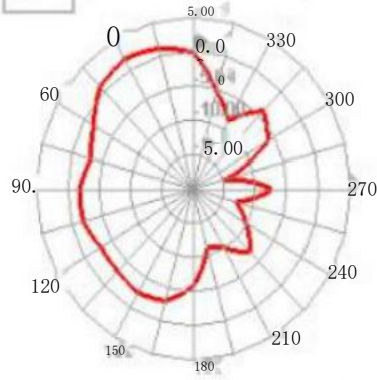
Test person / date	/20190912								
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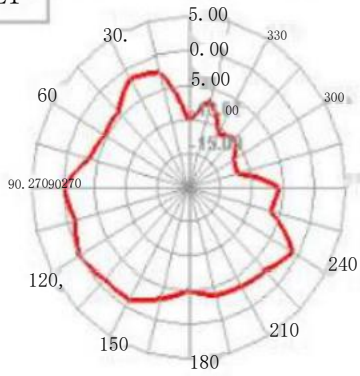
2450MHZ



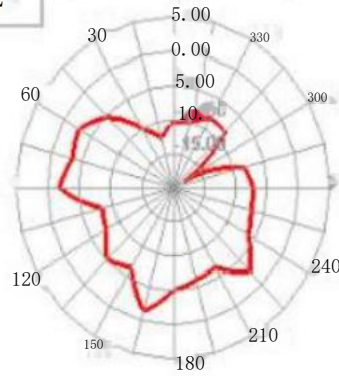
H



E1



E2





Jielei Technology OTA laboratory test report

Record form of the test results

Sample name		Model of prototype		Application form number	
Detection basis	Guo Biao	sample size	A	Sample number	
surveillance project	passive	detection device	E5071C	testing conditions	22.2°C/43%
Detection purpose					

Record of test results

Applicant / sample sender	\	software release		Hardware version	-
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Sample machine information (Including S / N number)			<p>H: xoy</p> <p>E1: xoz</p> <p>E2: zoy</p>
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Note instructions

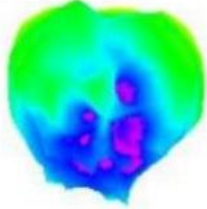
Frec (MHZ)	Effi (%)	Max (dB)	Freg (MHz)	Effi (%)	Max (dB)	Freg (MHz)	Effi (%)	Max (dB)	
5150	47.85	5.01	5430	62.8	5.94	5710	40.38	5.46	
5160	46.01	5	5440	52.74	5.54	5720	48.93	5.62	
5170	49.27	5.02	5450	51.78	5.31	5730	44.08	5.89	
5180	50.31	5.06	5460	46.25	5.19	5740	48.45	5.82	
5190	43.69	5.34	5470	54.29	5.55	5750	51.74	5.63	
5200	46.02	5.01	5480	55.63	5.59	5760	45.38	5.76	
5210	40.57	5.61	5490	52.8	5.41	5770	42.1	5.57	
5220	49.04	5.7	5500	48.18	5.03	5780	44.77	5.75	
5230	44.22	5.81	5510	48.93	5.08	5790	45.59	5.94	
5240	44.93	5.94	5520	57.03	5.54	5800	43.17	5.79	
5250	49.95	5.51	5530	49.63	5.2	5810	51.25	5.87	
5260	42.83	5.75	5540	56.63	5.52	5820	53.87	5.79	
5270	45.89	5.17	5550	44.22	5.08	5830	48.47	5.97	
5280	40.74	5.26	5560	54.43	5.51	5840	42.74	5.82	
5290	46.23	5.54	5570	48.93	5.34	5850	48.1	5.49	
5300	40.75	5.01	5580	63.96	5.89				
5310	46.14	5.33	5590	69.99	5.95				
5320	42.82	5.45	5600	53.81	5.57				
5330	46.95	5.66	5610	61.41	5.96				
5340	45.56	5.8	5620	51.03	5.64				
5350	55.45	5.16	5630	55.61	5.97				
5360	50.47	5.15	5640	47.45	5.8				
5370	51.41	5.4	5650	62.88	5.93				
5380	49.49	5.21	5660	44.18	5.79				
5390	46.55	5.08	5670	49.3	5.82				
5400	62.62	5.92	5680	54.72	5.82				
5410	56.21	5.89	5690	54.54	5.79				

5420	58.22	5.97	5700	47.49	5.58		
5G							
Test person / date	20190912						

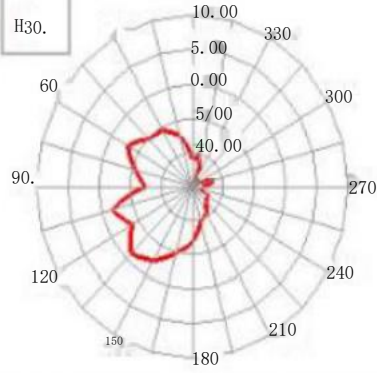


Jielei Technology OTA laboratory test report

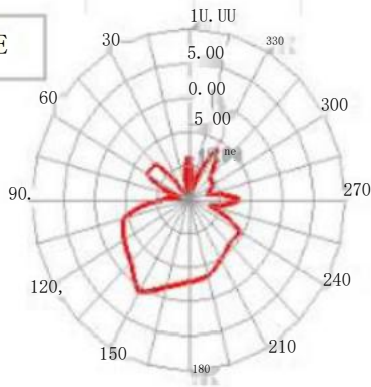
5500MHZ



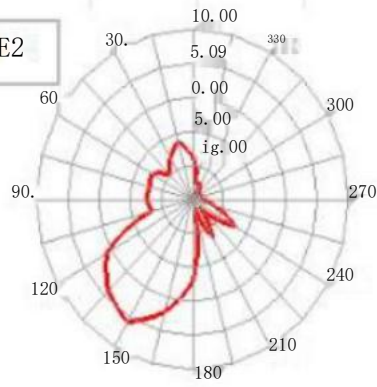
H30.



E



E2





Mielei Technology OTA laboratory test report
 捷雷电子 .ectronics

Record form of the test results

Sample name		Model of prototype		Application form number	
Detection basis	Guo Biao	sample size	A	Sample number	
surveillance project	passive	detection device	E5071C	testing conditions	22.2°C/43%
Detection day					

Record of test results

Applicant / sample sender	I	software release		Hardware version	—
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Sample machine information (Including S / N number)

H: xoy
 E1: xoz
 E2: zoy

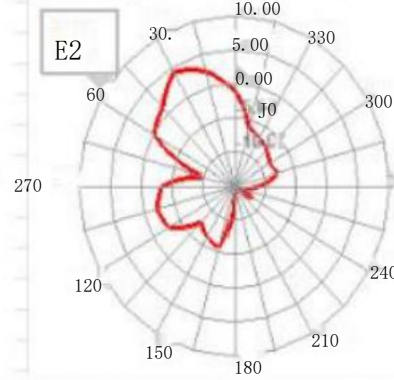
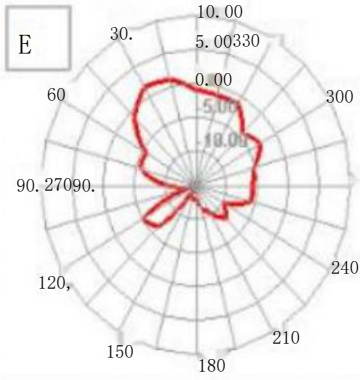
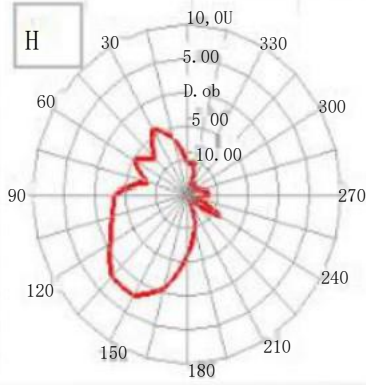
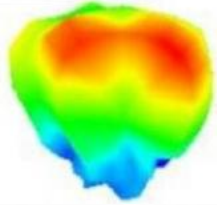
Note instructions

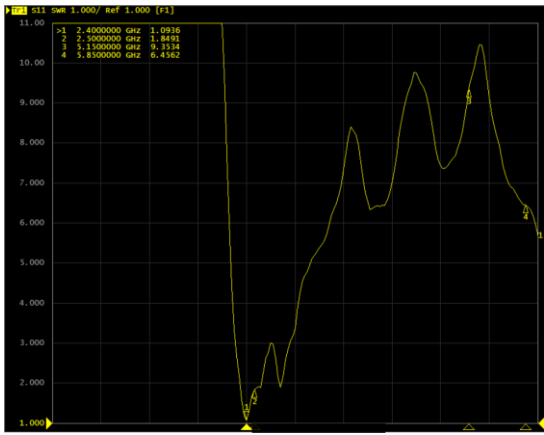
Freq (MHz)	Effi (%)	Max (dB)	Freq (MHz)	Effi (%)	Max (dB)	Freq (MHz)	Effi (%)	Max (dB)
5150	40.47	4.14	5430	64.55	5.77	5710	45.56	5.05
5160	48.31	3.94	5440	54.29	5.44	5720	55.7	5.54
5170	42.19	4.06	5450	53.93	5.35	5730	50.4	5.32
5180	43.37	4.16	5460	47.61	5.06	5740	55.36	5.74
5190	47.08	4.38	5470	56.56	5.75	5750	59.41	5.83
5200	48.48	3.87	5480	58.67	5.78	5760	52.27	5.58
5210	42.7	4.12	5490	56.49	5.97	5770	48	5.48
5220	41.03	4.07	5500	51.43	5.56	5780	51.28	5.55
5230	46.75	4.33	5510	51.91	5.58	5790	52.57	5.7
5240	47.76	4.37	5520	61.06	5.89	5800	49.55	5.45
5250	41.64	3.96	5530	53.96	5.61	5810	59.53	5.78
5260	45.05	4.2	5540	61.68	5.99	5820	62.92	5.86
5270	48.22	4.13	5550	47.67	5.2	5830	56.69	5.58
5280	43.55	4.52	5560	58.33	5.69	5840	49.83	5.51
5290	48.87	4.95	5570	52.24	5.35	5850	44.44	5.2
5300	42.42	4.74	5580	68.39	5.87			
5310	48.77	5.11	5590	74.87	5.79			
5320	44.36	5.18	5600	57.36	5.69			
5330	48.31	5.42	5610	65.64	5.98			
5340	46.62	5.48	5620	54.36	5.34			
5350	56.42	5.97	5630	59.91	5.7			
5360	50.67	5.72	5640	51.65	5.33			
5370	51.24	5.49	5650	69.36	5.78			
5380	49.42	5.2	5660	48.59	5.16			
5390	46.26	4.92	5670	55.65	5.55			
5400	62.76	5.89	5680	62.1	5.82			
5410	56.33	5.69	5690	62.13	5.94			
5420	59.31	5.74	5700	54.23	5.51			

5G							
Test person / date	/20190912						

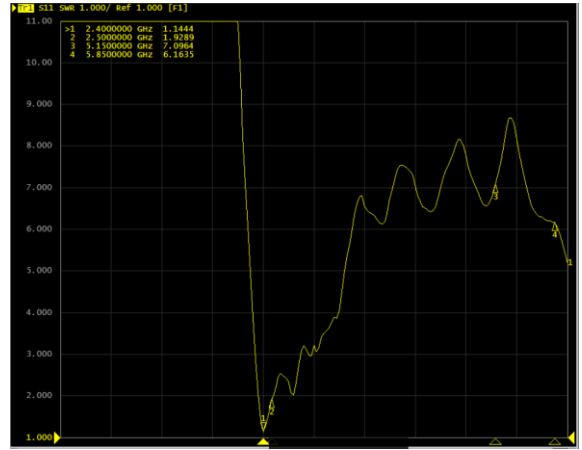


5500MHZ

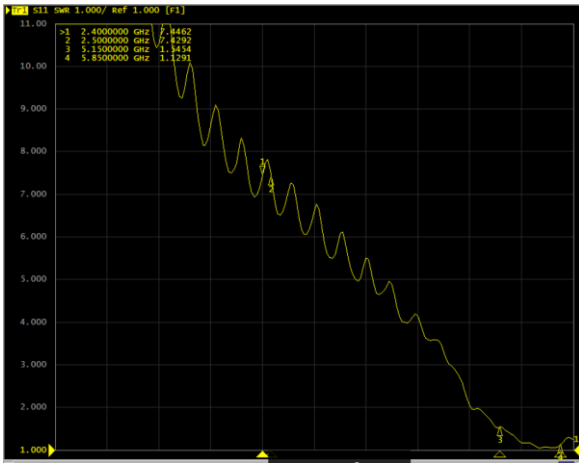




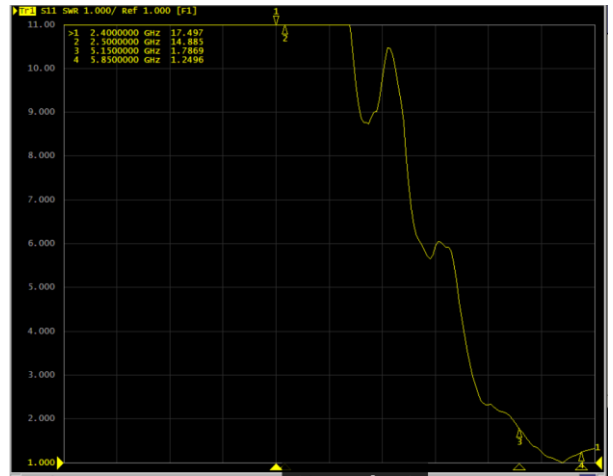
2.4G1



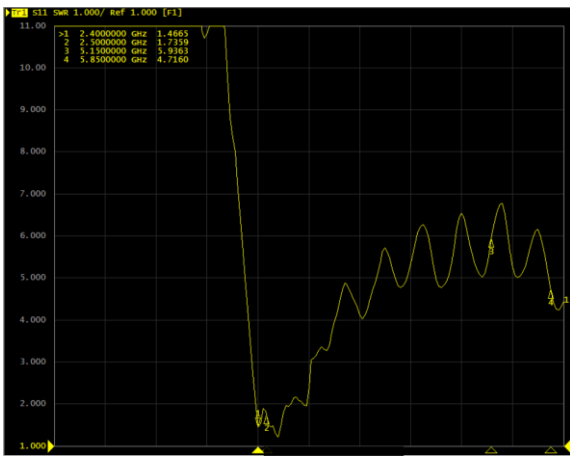
2.4G2



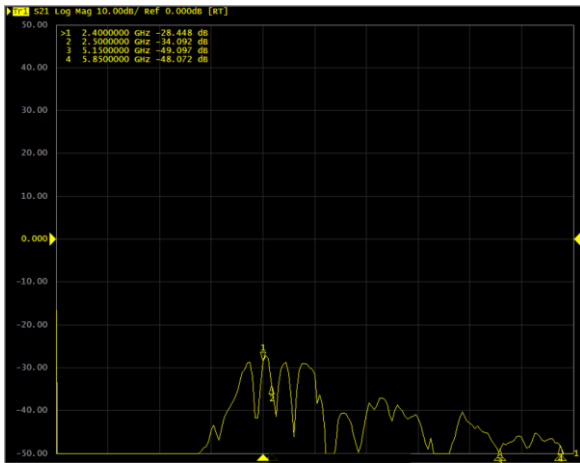
5G1



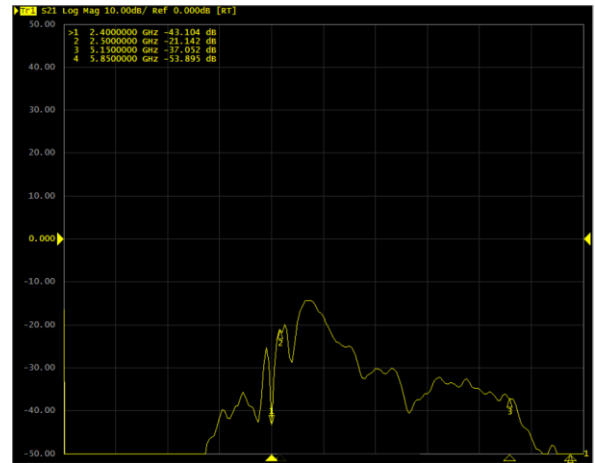
5G2



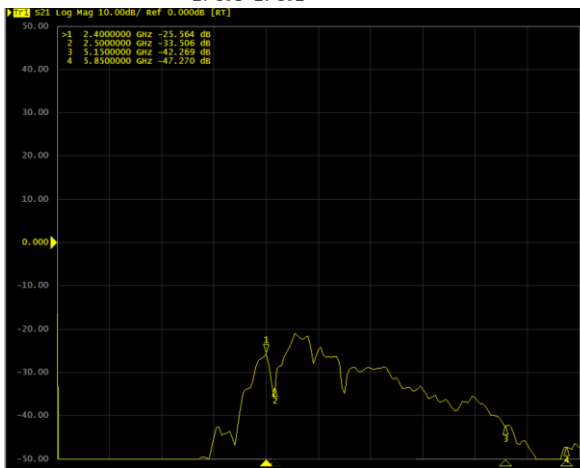
BT



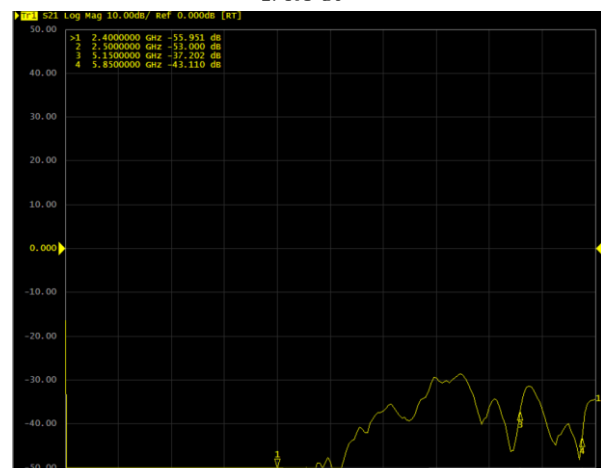
2.4G1-2.4G2



2.4G1-BT



2.4G2-BT



5G1-5G2