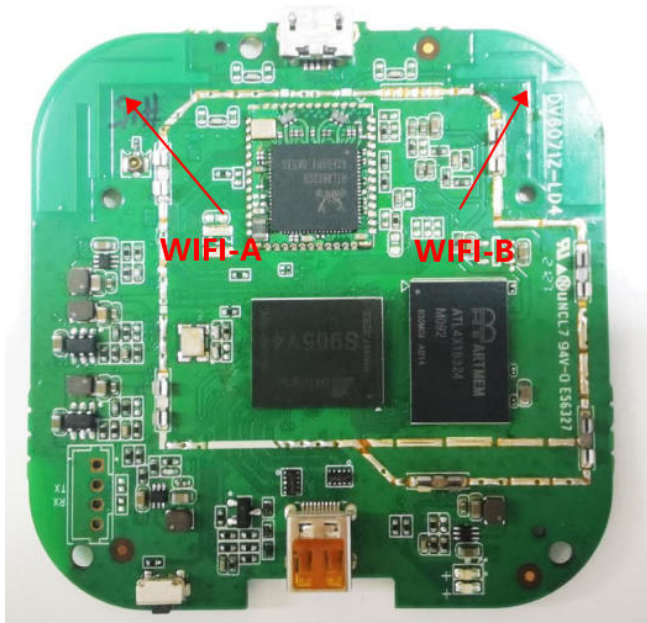




DV6071Z Wi-Fi Antenna Test Report

Project : DV6071Z



Version: V 1.0

Date: 2020-08-04

Directory

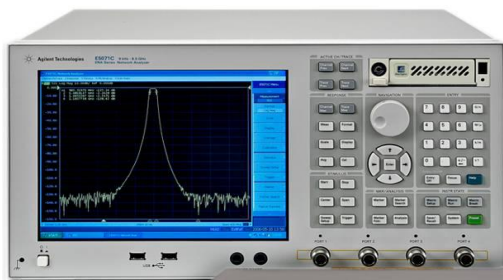
1. Project Description
2. Commissioning equipment and design description
3. Electrical performance test data of antenna
4. Isolation between antennas
5. Throughput test data

1. Project description

1.1 The operating frequency is 2.4G-2.5G、 5.15-5.85G;

1.2 This report is for YijiaXinSheng to debug the performance of the onboard Antenna.

2. Design specification



Agilent Network analyzer

ETS AMS 8500 OTA

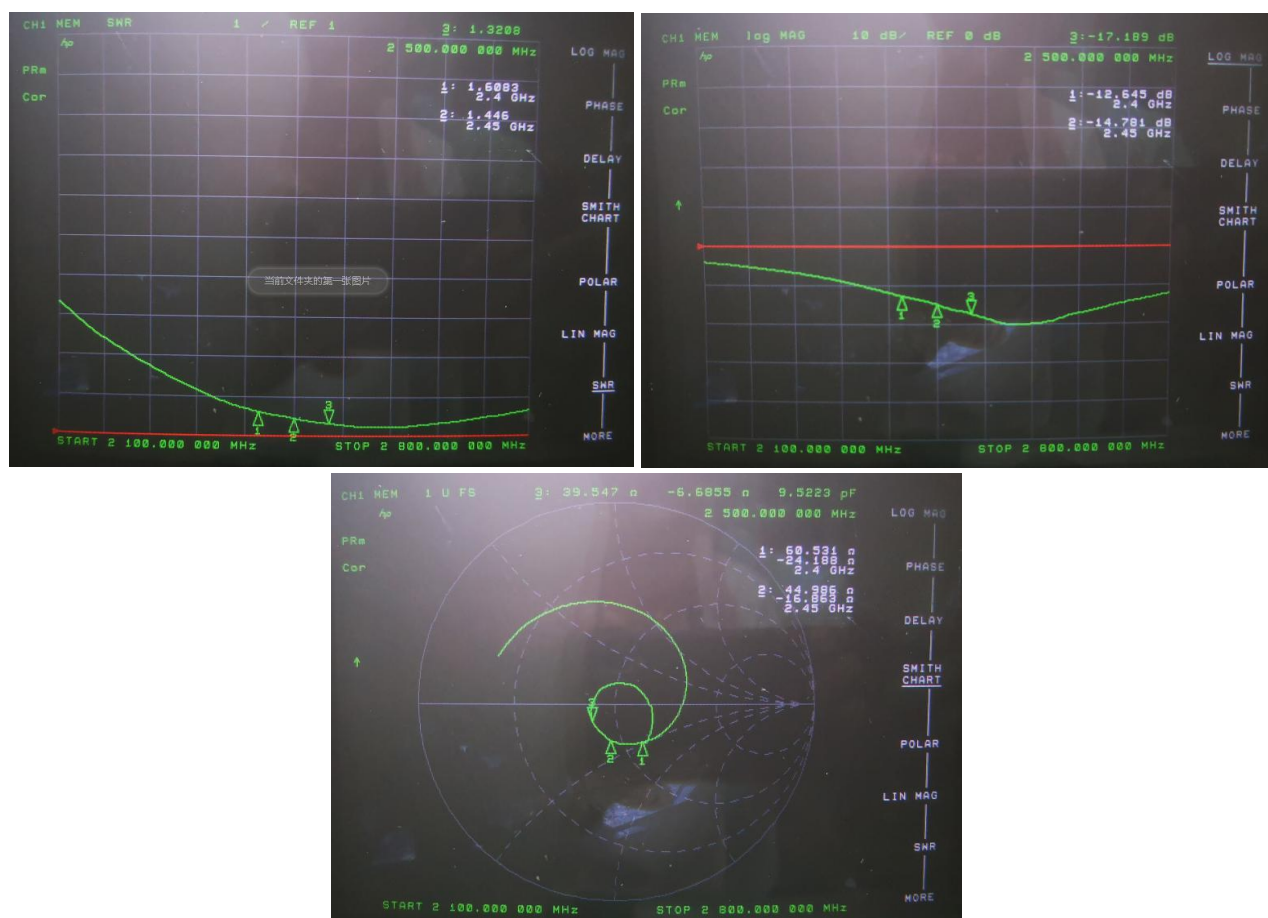
Chamber

3. Electrical performance test data of antenna

WIFI-A antenna: 2.4G:

Electrical Properties	
Frequency	2.4G-2.5G
Impedance	50 ohm Nominal
V.S.W.R	1:1.32 Max
Return Loss	-17.18dBMax
Radiation	Omni-directional
Polarization	Linear, Vertical

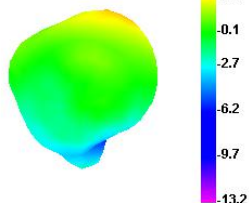
VSWR&Return Loss&Smith Chart:



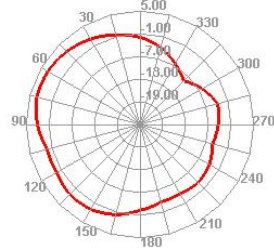
Efficiency, Gain and Direction diagram of WIFI-A antenna 2.4G:

Passive Test For 2.4G_wifi						
Freq	Effi	Effi	Gain	Gain	Max	Min
(MHz)	(%)	(dB)	(dBi)	(dBd)	(dB)	(dB)
2400	58.11	-0.23	1.81	-0.34	1.81	-13.2
2440	58.85	-0.18	1.92	-0.23	1.92	-13.71
2500	59.86	-1.61	2.14	-0.01	2.14	-17.67

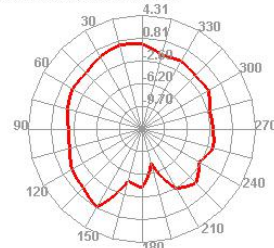
2400.000MHz



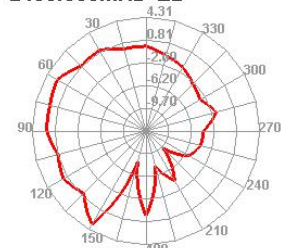
2400.000MHz H



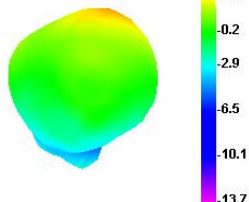
2400.000MHz E1



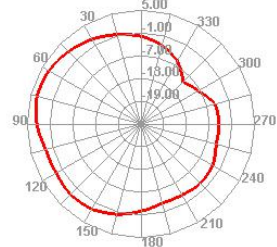
2400.000MHz E2



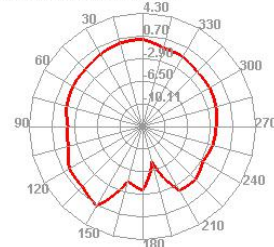
2440.000MHz



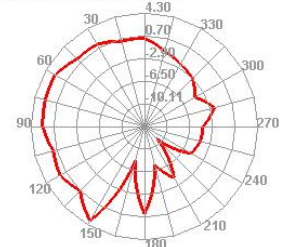
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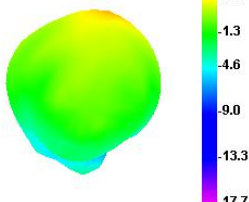
2440.000MHz E1



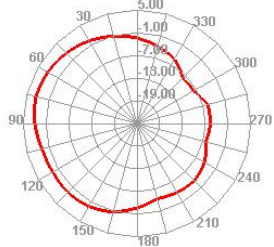
2440.000MHz E2



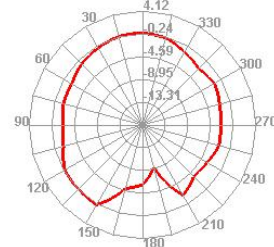
2500.000MHz



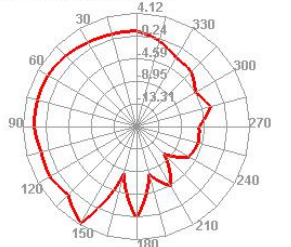
2500.000MHz H



2500.000MHz E1



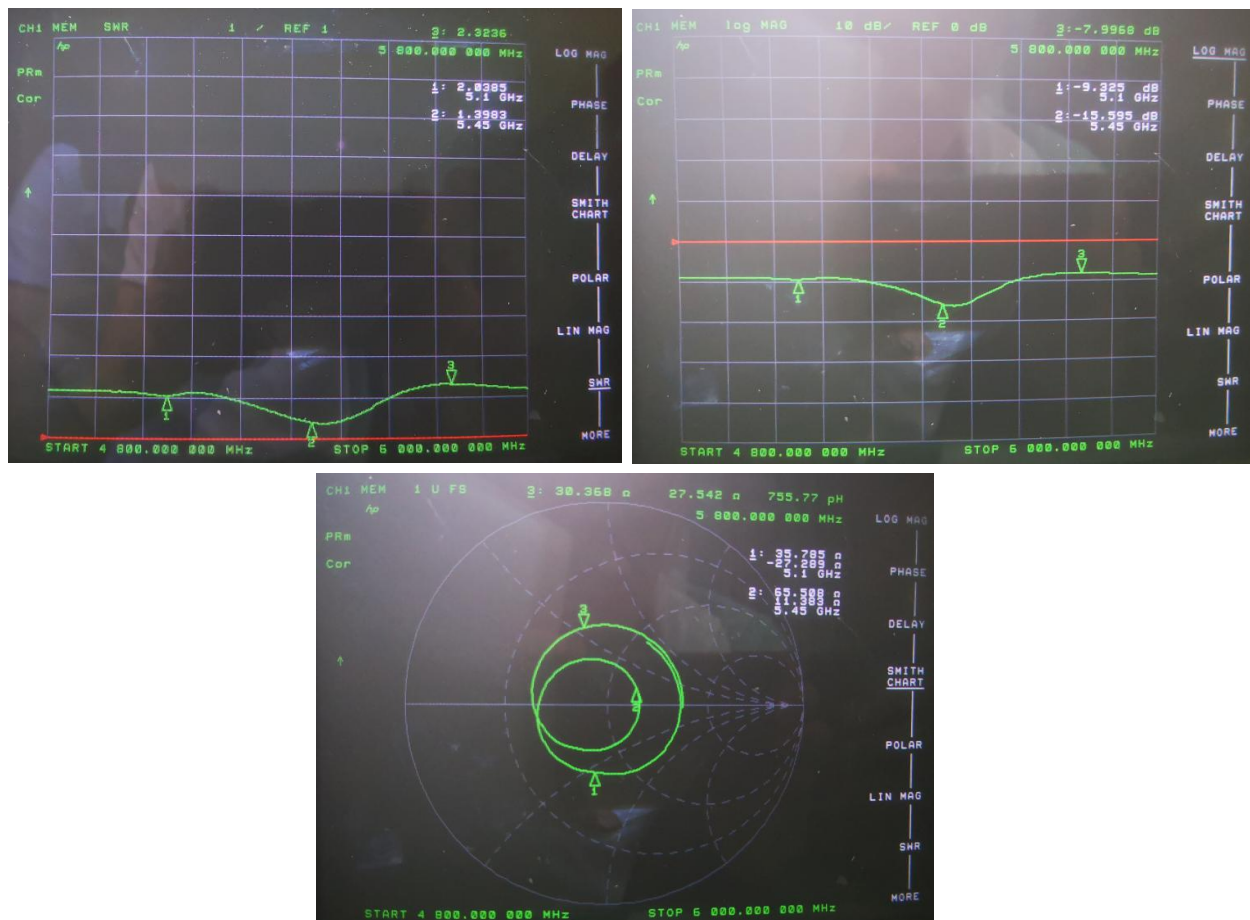
2500.000MHz E2



WIFI-A antenna 5G:

Electrical Properties	
Frequency	5.15G–5.85G
Impedance	50 ohm Nominal
V.S.W.R	1:1.39 Max
Return Loss	−15.59dBMax
Radiation	Omni-directional
Polarization	Linear, Vertical

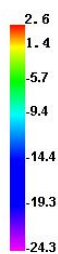
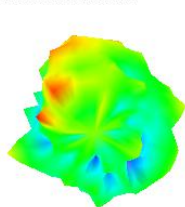
VSWR&Return Loss&Smith Chart:



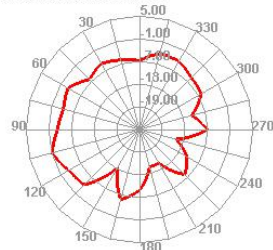
Efficiency, Gain and Direction diagram of WiFi-A antenna 5G:

Passive Test For wifi 5G						
Freq	Effi	Effi	Gain	Gain	Max	Min
(MHz)	(%%)	(dB)	(dBi)	(dBd)	(dB)	(dB)
5100	57.14	-3.74	2.61	0.46	2.61	-17.24
5500	58.22	-3.16	2.72	0.57	2.72	-16.38
5900	56.62	-4.21	2.57	0.42	2.57	-18.21

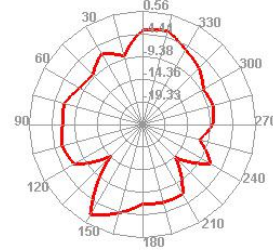
5100.000MHz



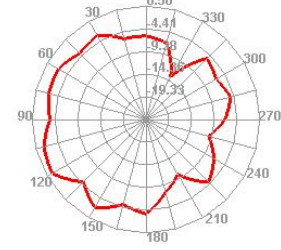
5100.000MHz H



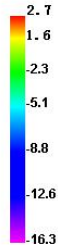
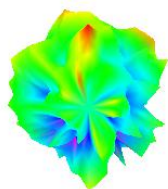
5100.000MHz E1



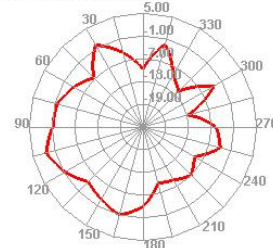
5100.000MHz E2



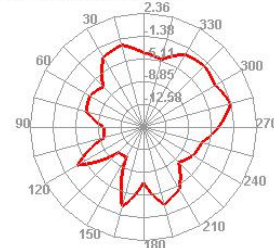
5500.000MHz



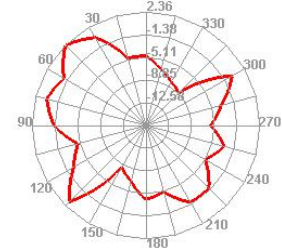
5500.000MHz H



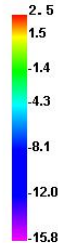
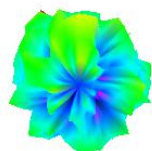
5500.000MHz E1



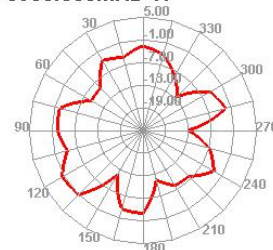
5500.000MHz E2



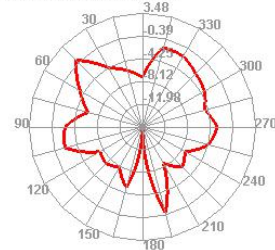
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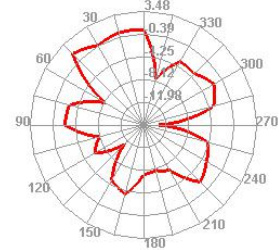
5900.000MHz H



5900.000MHz E1



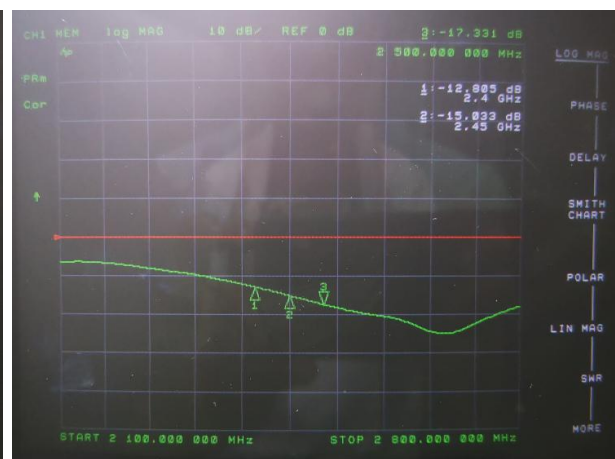
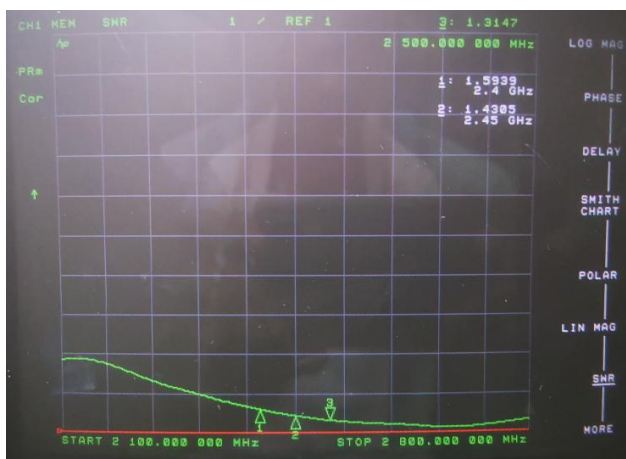
5900.000MHz E2



WIFI-B antenna 2.4G:

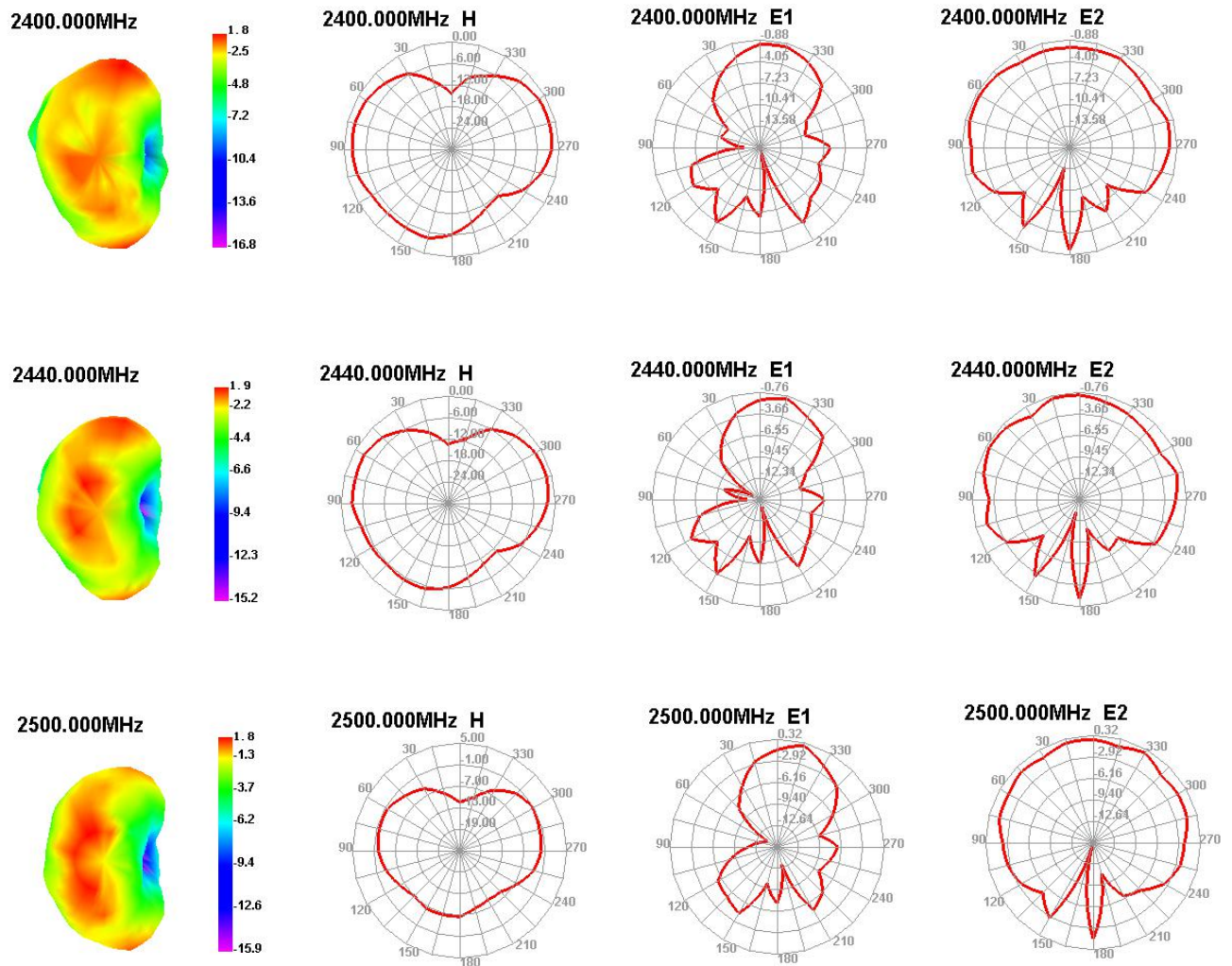
Electrical Properties	
Frequency	2.4G–2.5G
Impedance	50 ohm Nominal
V.S.W.R	1:1.31 Max
Return Loss	-17.33dBMax
Radiation	Omni-directional
Polarization	Linear, Vertical

VSWR&Return Loss&Smith Chart:



Efficiency, Gain and Direction diagram of WiFi-B antenna 2.4G:

Passive Test For 2.4G_wifi						
Freq	Effi	Effi	Gain	Gain	Max	Min
(MHz)	(%%)	(dB)	(dBi)	(dBd)	(dB)	(dB)
2400	58.24	-3.12	1.79	-0.36	1.79	-17.12
2440	61.33	-2.35	1.87	-0.28	1.87	-15.24
2500	57.61	-3.64	1.81	0.34	1.81	-17.83



WIFI-B antenna 5G:

Electrical Properties	
Frequency	5.15G–5.85G
Impedance	50 ohm Nominal
V.S.W.R	1:1.39 Max
Return Loss	−15.59dBMax
Radiation	Omni-directional
Polarization	Linear, Vertical

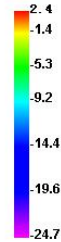
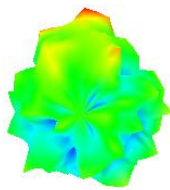
VSWR&Return Loss&Smith Chart:



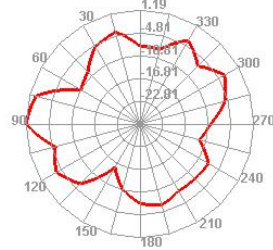
Efficiency, Gain and Direction diagram of WiFi-B antenna 5G:

Passive Test For 5G_wifi						
Freq	Effi	Effi	Gain	Gain	Max	Min
(MHz)	(%%)	(dB)	(dBi)	(dBd)	(dB)	(dB)
5100	57.61	-3.46	2.36	0.21	2.36	-18.53
5500	58.26	-4.15	2.42	0.27	2.42	-18.29
5900	58.57	-4.61	2.33	0.18	2.33	-19.72

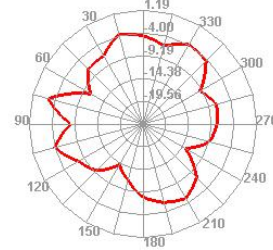
5100.000MHz



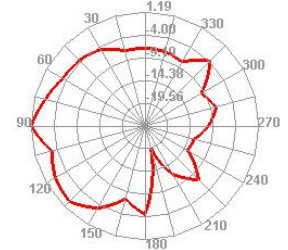
5100.000MHz H



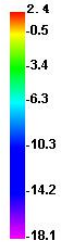
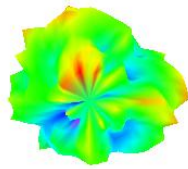
5100.000MHz E1



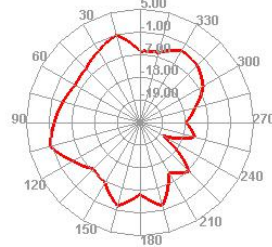
5100.000MHz E2



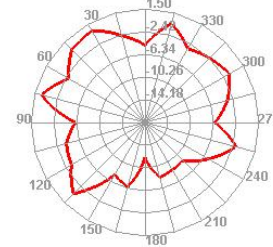
5500.000MHz



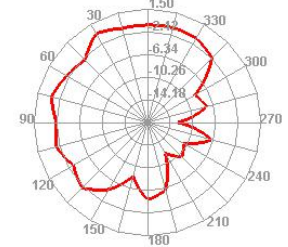
5500.000MHz H



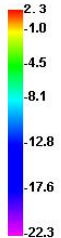
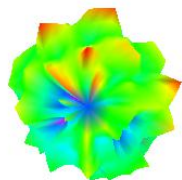
5500.000MHz E1



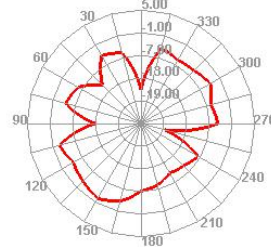
5500.000MHz E2



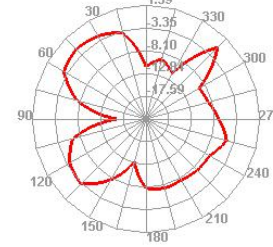
5900.000MHz



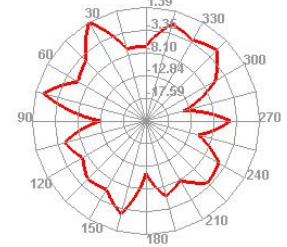
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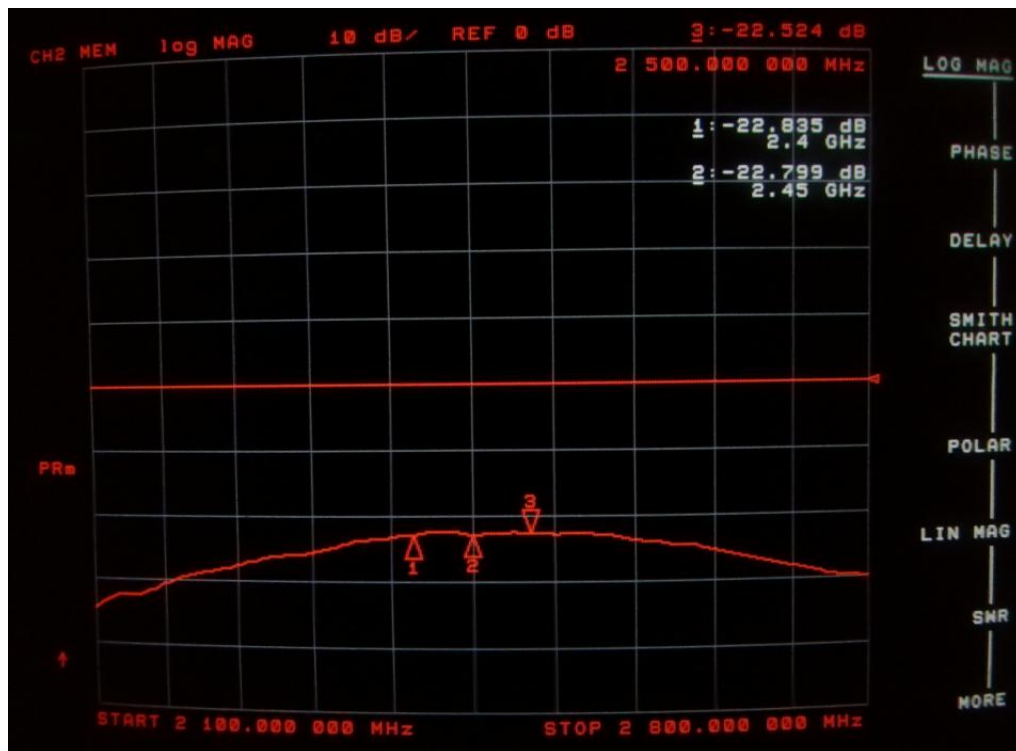
5900.000MHz E1



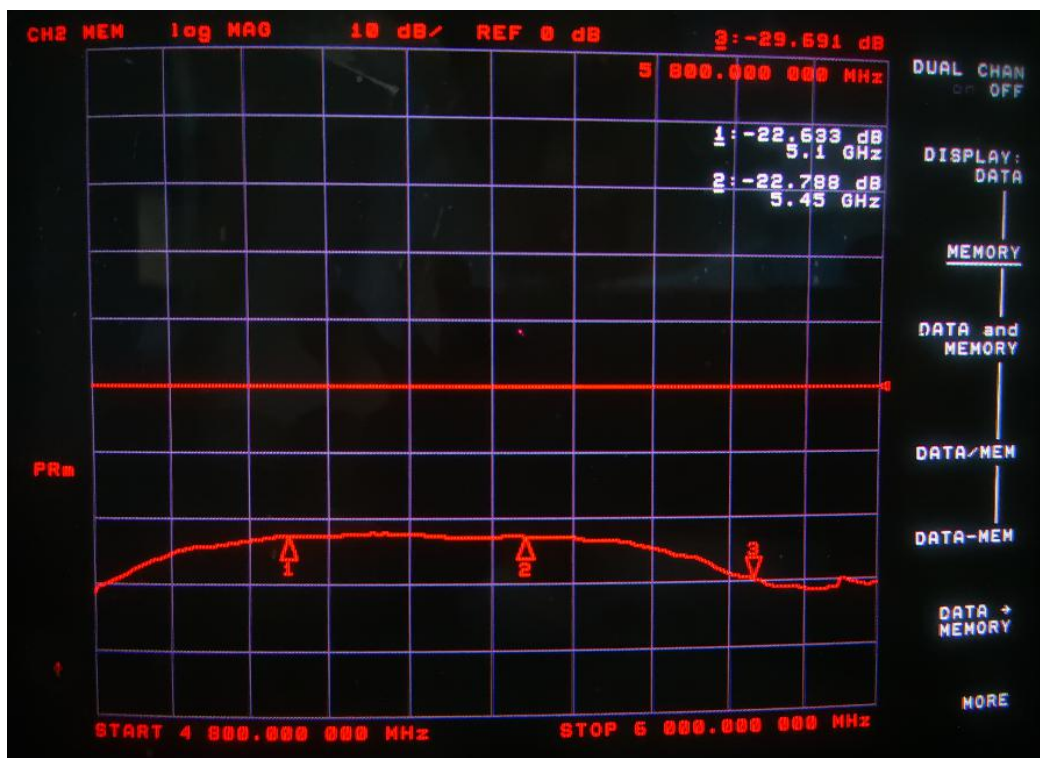
5900.000MHz E2



2.Isolation between antennas



Isolation of WiFi-A and WiFi-B antenna (2.4G)



Isolation of WiFi-A and WiFi-B antenna (5G)