Bluetooth and WIFI antenna specification

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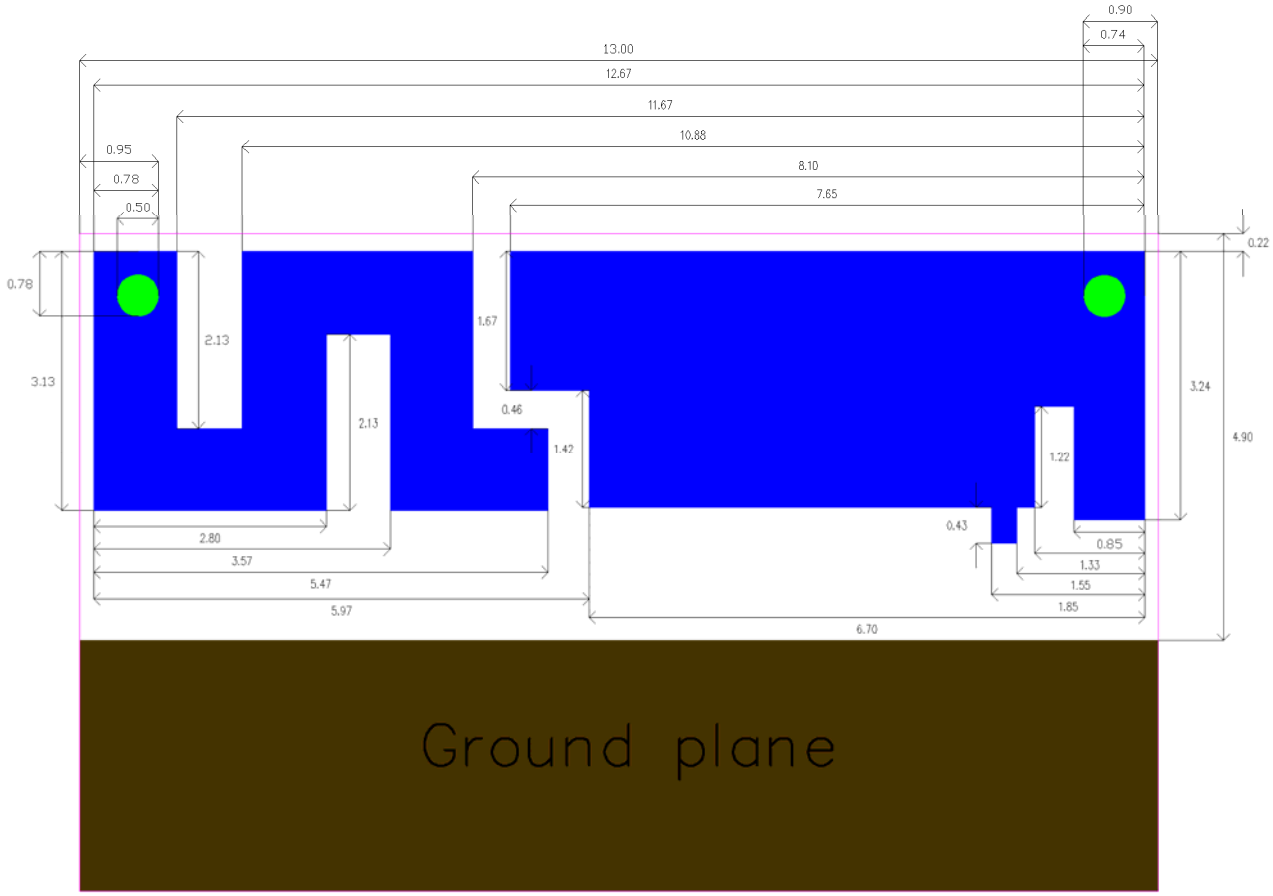
2，Spec Drawing

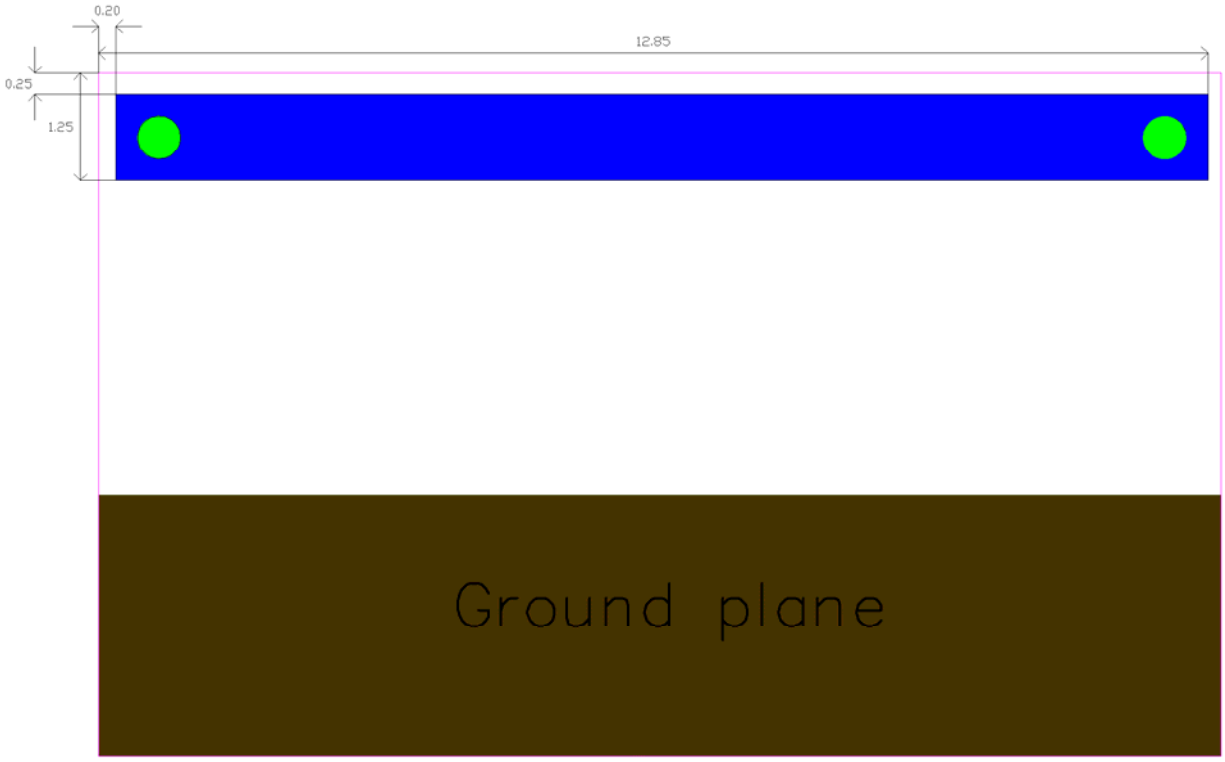
Unit：mm

RF4 sheet thickness：0.8mm

Top view



Bottom view

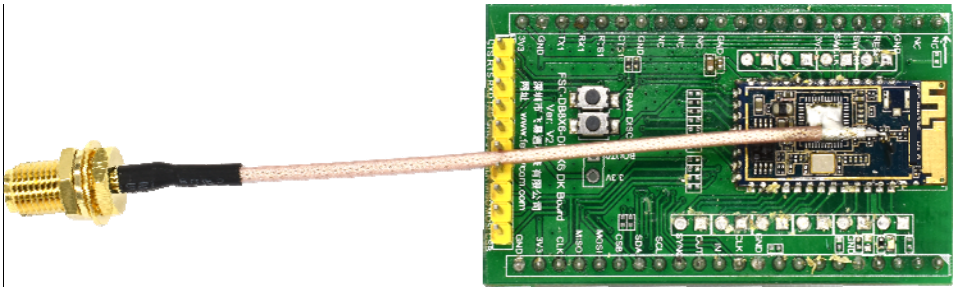


3，Specification

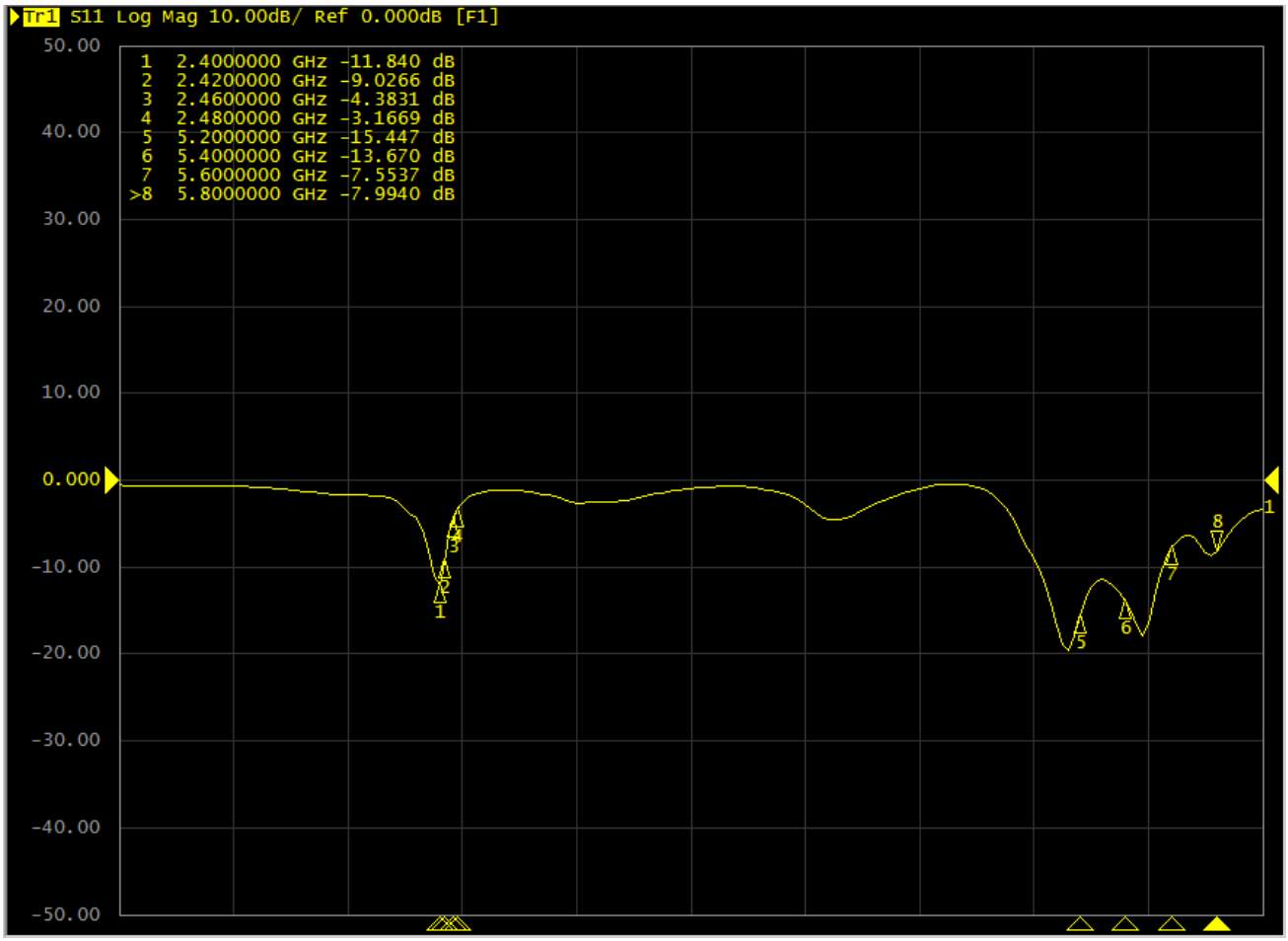
Product Number: 2.4GHZ FPC antenna
Sample Photo:

A. Electrical Characteristics	
Bluetooth Frequency	2400 ~ 2500 MHz
WIFI Frequency（2.4GHZ）	2400 ~ 2500 MHz
WIFI Frequency（5GHZ）	5180 ~ 5850 MHz
S.W.R.	<=3.0
Gain	0 dBi
Efficiency	~ 30%
Polarization	Linear
Impedance	50 Ohm
B. Material & Mechanical Characteristics	
Material of Radiator	copper
C. Environmental	
Operation Temperature	- 40℃ ~ + 85℃
Storage Temperature	- 40℃ ~ + 105℃

4，Antenna On Test Board

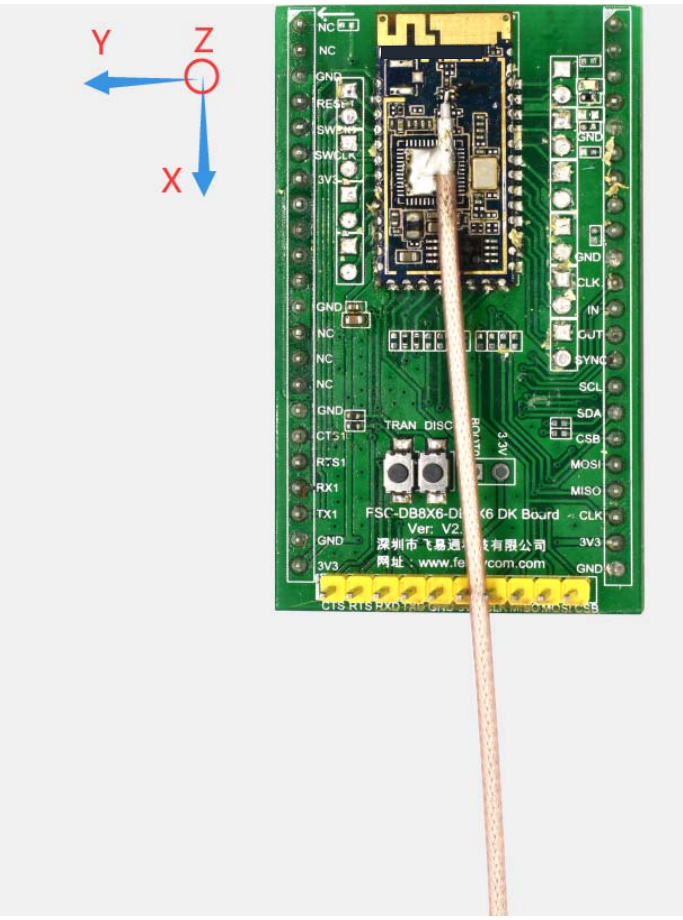


5， Return Loss



6，Radiation Pattern

Radiation Pattern and Gain were dependent on measurement board design. The specification of coil antenna was measur ed based on the PCB size and installation position as shown in the below figure Test Board.

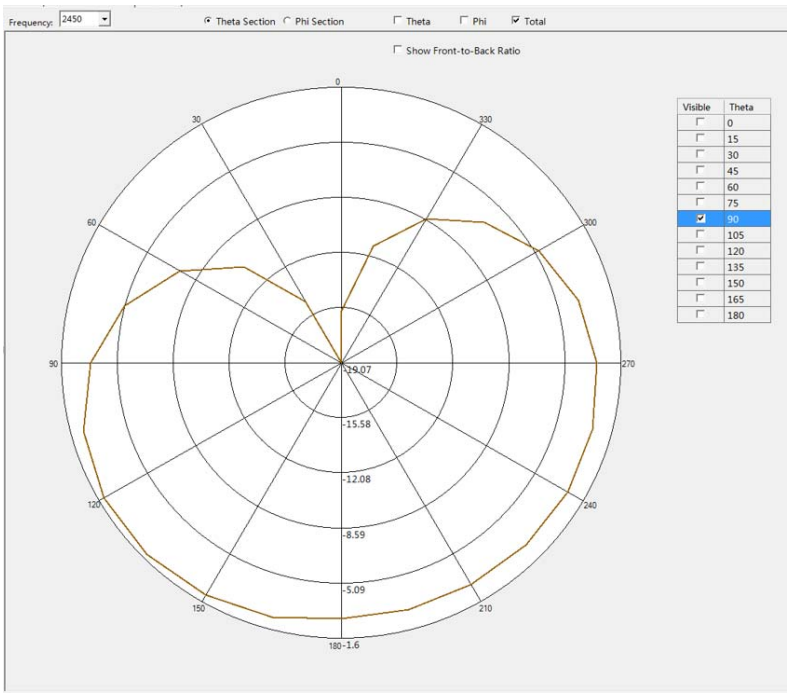


6.1，Gain and Efficiency

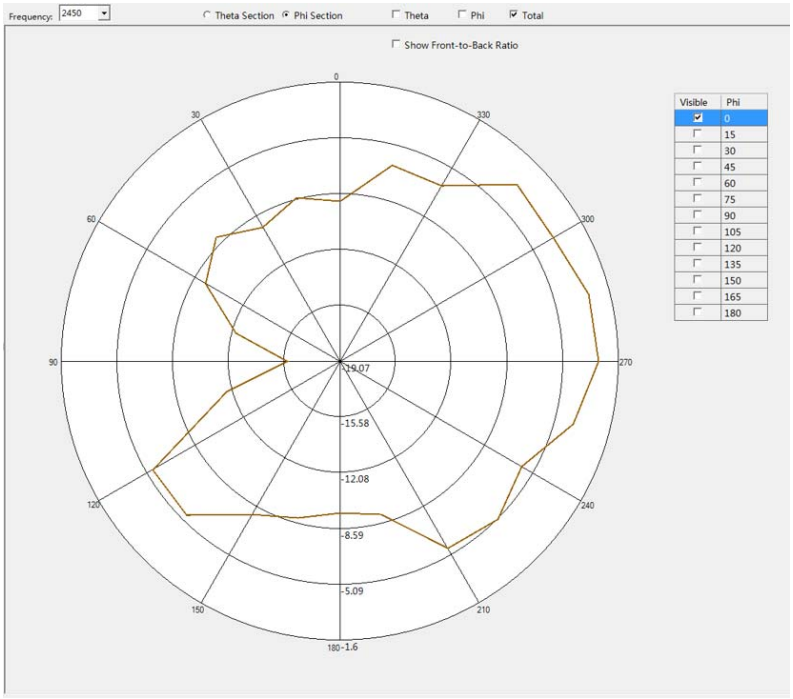
Frequency	Gain(dBi)	Efficiency	Frequency	Gain(dBi)	Efficiency
2400	-2.49	26.54	5100	-2.68	17.21
2410	-1.9	29.34	5200	-2.01	20.24
2420	-1.83	29.58	5300	-2.42	20.42
2430	-1.73	30.29	5400	-1.81	22.4
2440	-1.56	30.65	5500	-2.83	17.93
2450	-1.59	30.32	5600	-5.65	12.01
2460	-1.67	30.05	5700	-2.23	19.69
2470	-1.79	29.19	5800	-2.35	22.95
2480	-1.93	26.84	5900	-2.78	22.07

6.2，Bluetooth 2D Radiation Pattern

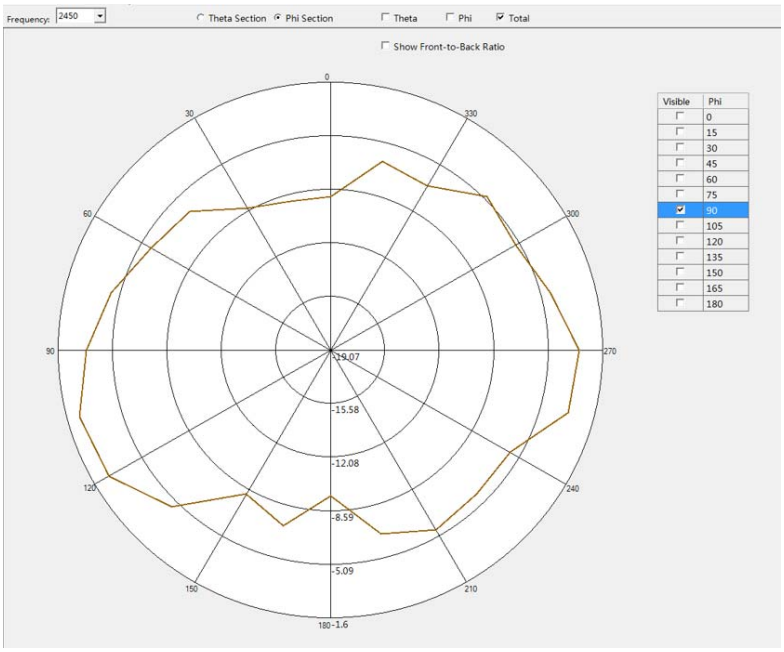
Theta=90°



Phi=0°

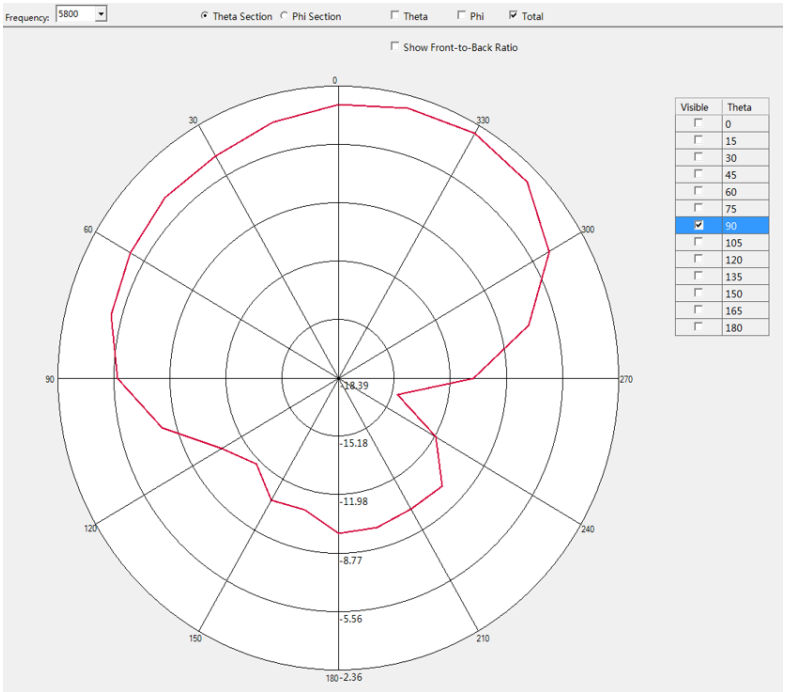


Phi=90°

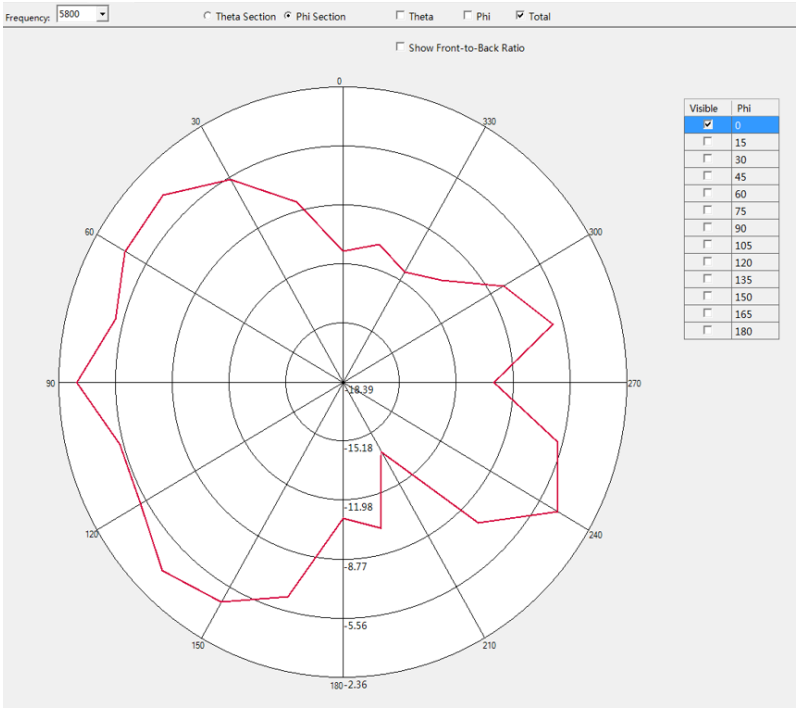


6.3，WIFI 2D Radiation Pattern

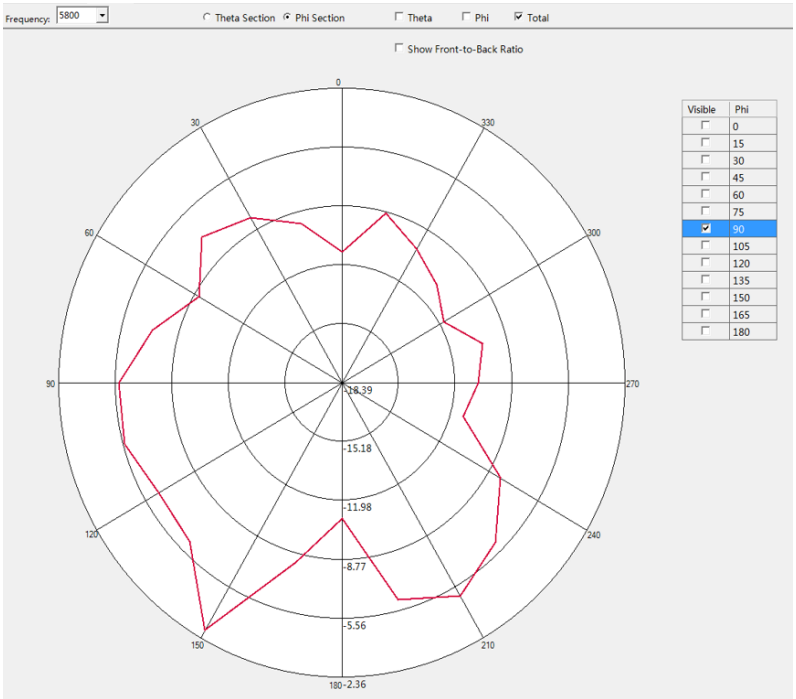
Theta=90°



Phi=0°


Frequency: 5800
Theta Section
Phi Section
Theta
Phi
Total
Show Front-to-Back Ratio
0
30
330
60
300
90
270
120
240
150
210
180
-18.39
-15.18
-11.98
-8.77
-5.56
-2.36
Visible
Phi
0
15
30
45
60
75
90
105
120
135
150
165
180

Phi=90°


Frequency: 5800
Theta Section
Phi Section
Theta
Phi
Total
Show Front-to-Back Ratio
0
30
330
60
300
90
270
120
240
150
210
180
-18.39
-15.18
-11.98
-8.77
-5.56
-2.36
Visible
Phi
0
15
30
45
60
75
90
105
120
135
150
165
180