

# U10 WLAN

## Antenna Test Report

RD Manager	Supervisor	RD engineer	Sales engineer
Tim	Johnson	Henry	Jerry



Well Green Technology Co., Ltd.

Well Green Technology (Shang Hai) Co., Ltd.

TEL: +886-3-420-6428

TEL: 021-59114456

; FAX: +886-3-420-6418

; FAX: 021-59114457



## 1 Voltage Standing Wave Ratio [WGT\\_U10\\_C1\\_WLAN\\_L\\_Main](#)

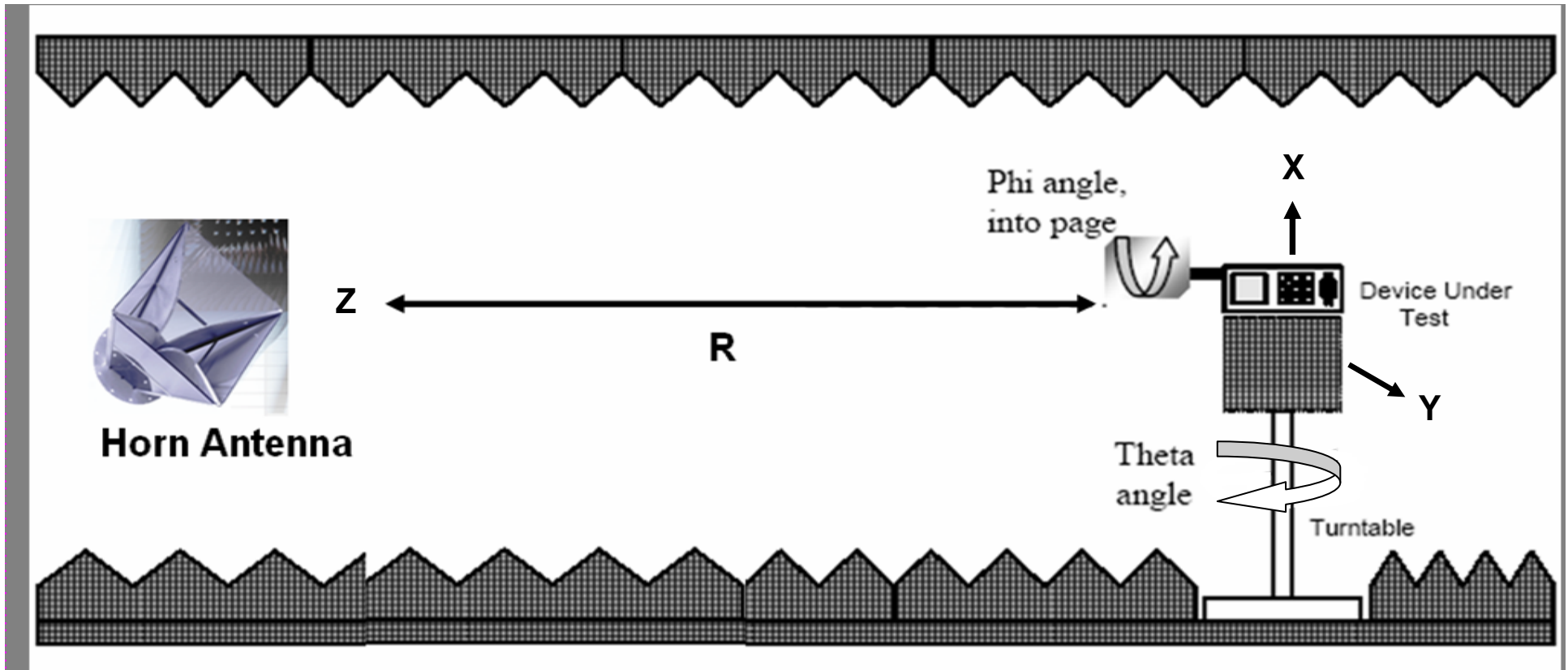
	2.40	2.45	2.50	5.15	5.25	5.35	5.47	5.5975	5.725	5.785	5.85
<u>VSWR</u>	1.70	1.19	1.22	1.98	1.29	1.97	1.21	1.91	1.32	1.99	2.29
<u>Return LOSS</u>	-11.76	-21.76	-19.73	-9.55	-17.82	-9.72	-21.04	-10.04	-17.20	-9.67	-7.96
Peak dBi	-0.92	1.77	1.37	1.14	2.29	1.5	0.69	0.84	0.56	0.09	0.31
Avg dBi	-3.88	-2.64	-3.85	-3.83	-3.59	-3.42	-2.88	-2.83	-3.35	-3.77	-3.98

## 2 Voltage Standing Wave Ratio [WGT\\_U10\\_C1\\_WLAN\\_R\\_Aux](#)

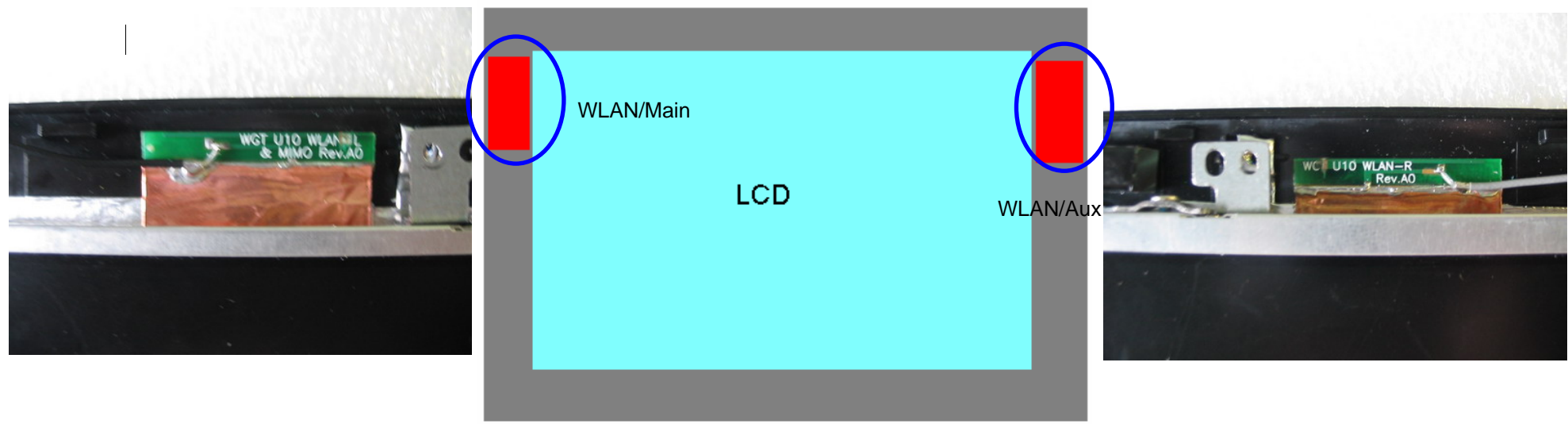
	2.40	2.45	2.50	5.15	5.25	5.35	5.47	5.5975	5.725	5.785	5.85
<u>VSWR</u>	1.35	1.26	1.26	1.46	1.55	1.47	1.27	1.46	1.56	1.39	1.52
<u>Return LOSS</u>	-16.35	-18.44	-18.47	-14.5	-13.23	-14.37	-18.24	-14.51	-13.18	-15.75	-13.58
Peak dBi	-1.17	-1.06	-0.04	-0.29	2.6	1.43	1.89	0.86	0.51	0.85	1.12
Avg dBi	-3.93	-3.4	-4.16	-3.77	-3.52	-3.21	-2.89	-2.99	-3.4	-3.44	-3.86

I 、 Antenna Testing Conditions:

1. Testing set up:



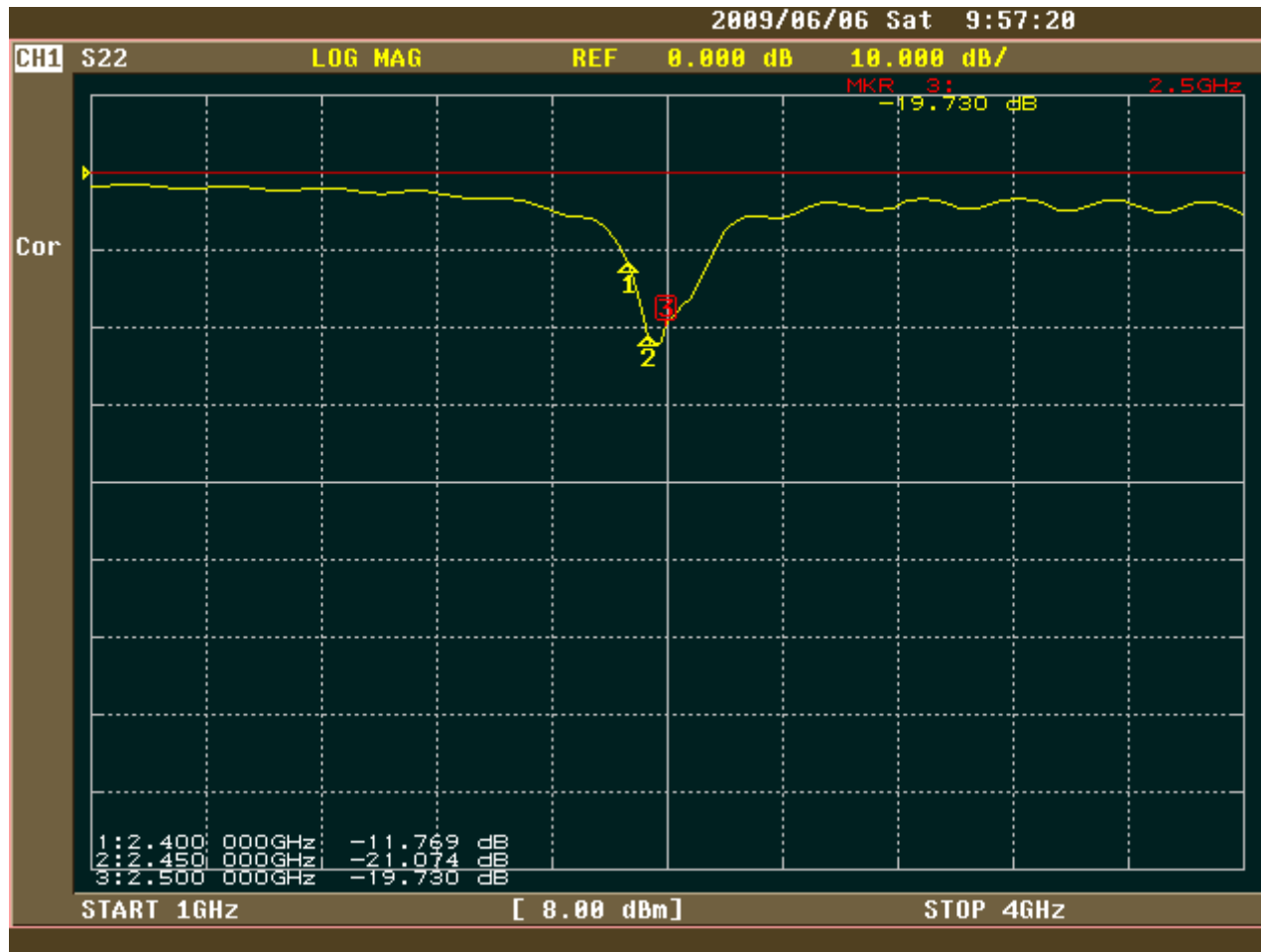
## 2. Mechanical dimensions



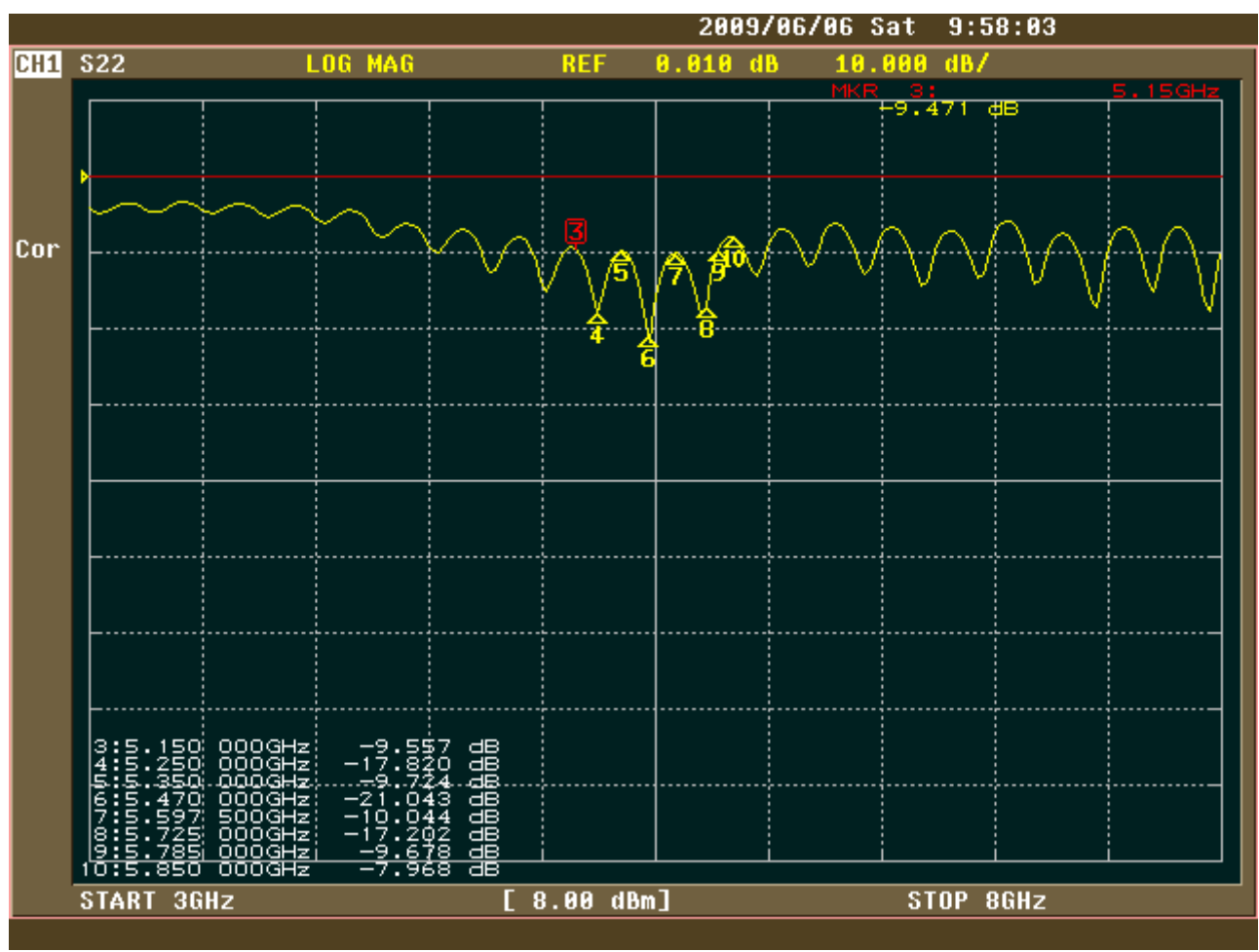
## II. Test results

WGT_U10_C1_WLAN_L Main	<a href="#">Left up</a>	<a href="#">Cable diameter : 1.13mm</a>
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### 1. Return Loss (2.4GHz-2.5GHz)



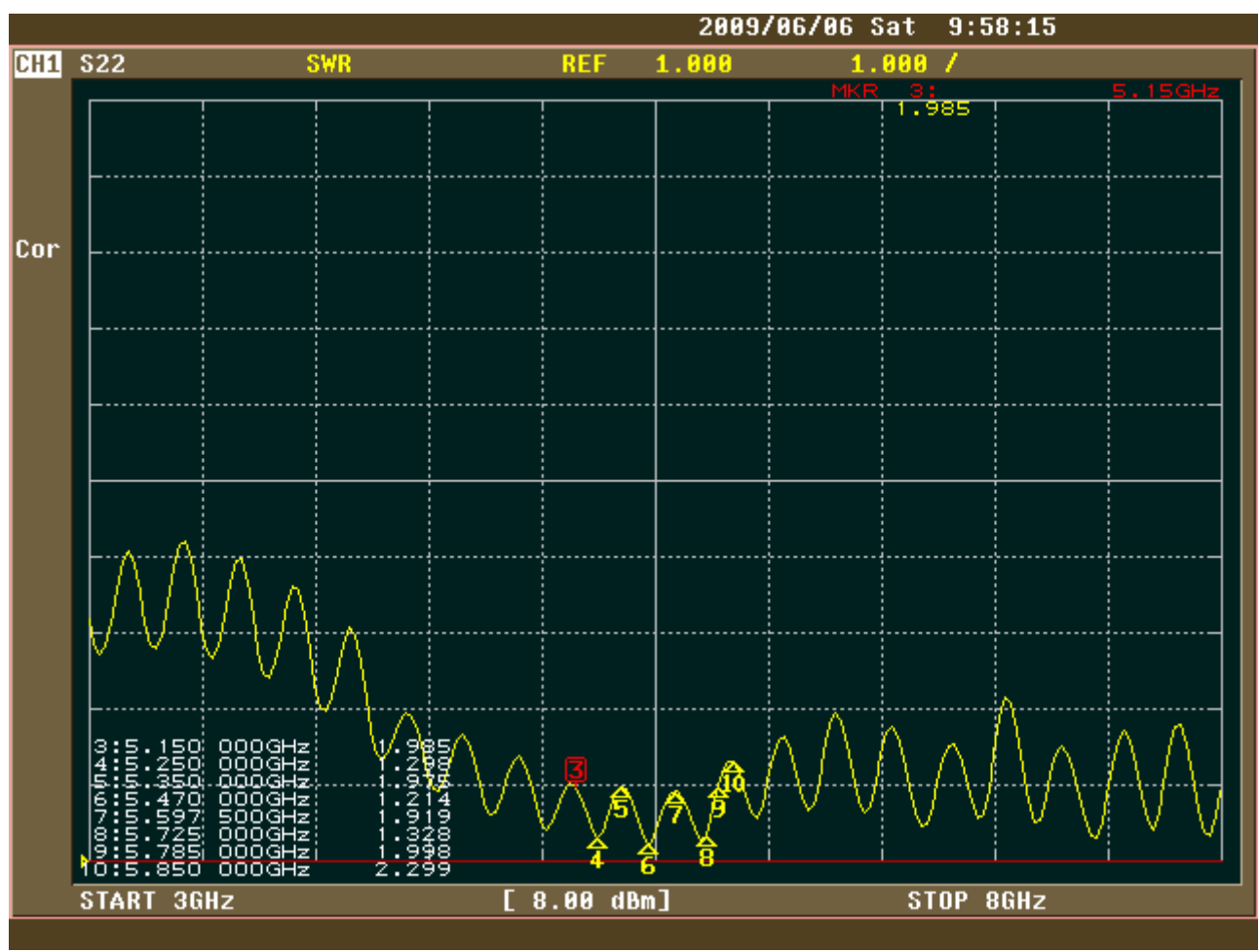
1-1 Return Loss ( 5.15GHz-5.85GHz)



## 2. VSWR (2.4GHz-2.5GHz)

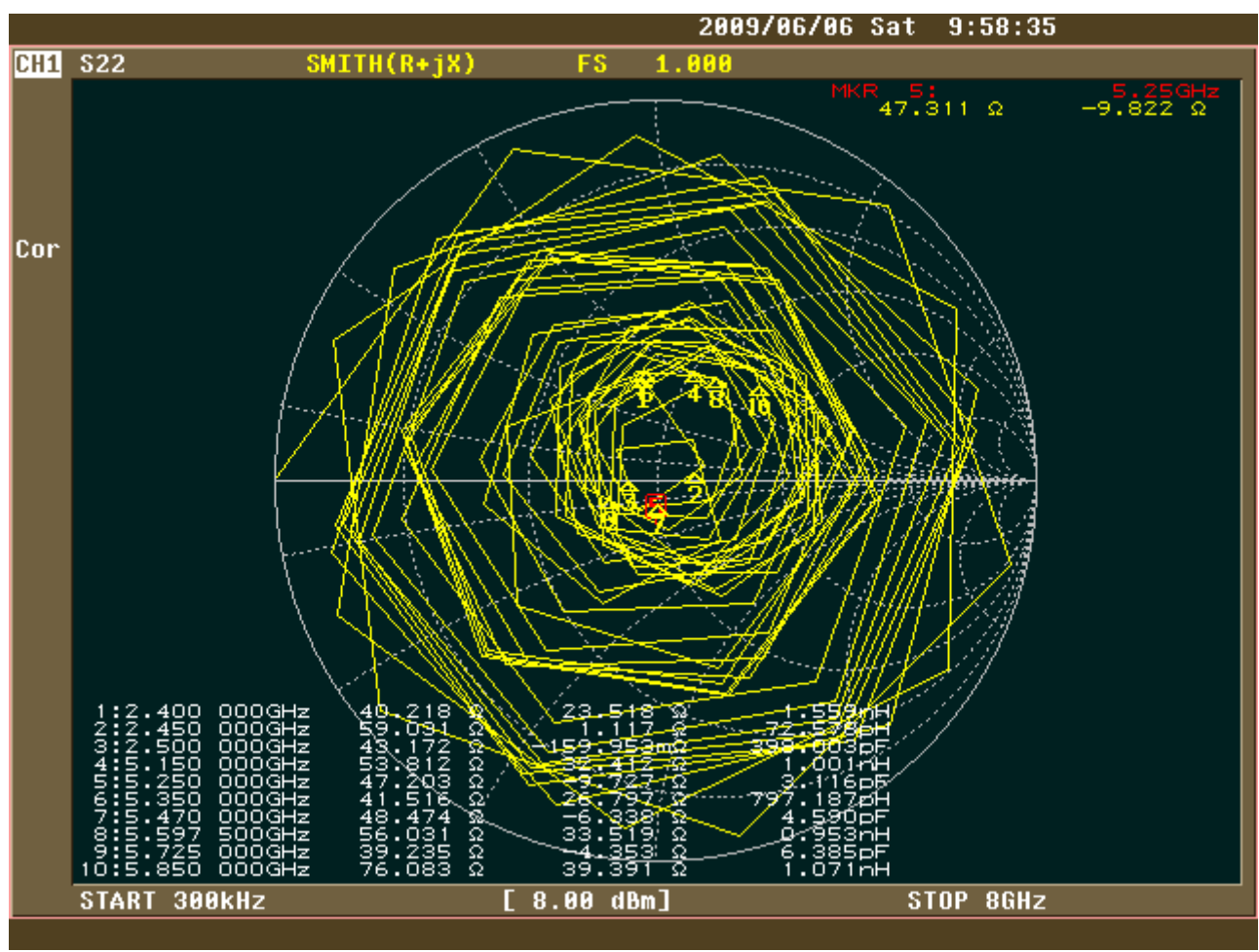


2-2 VSWR ( 5.15GHz-5.85GHz)

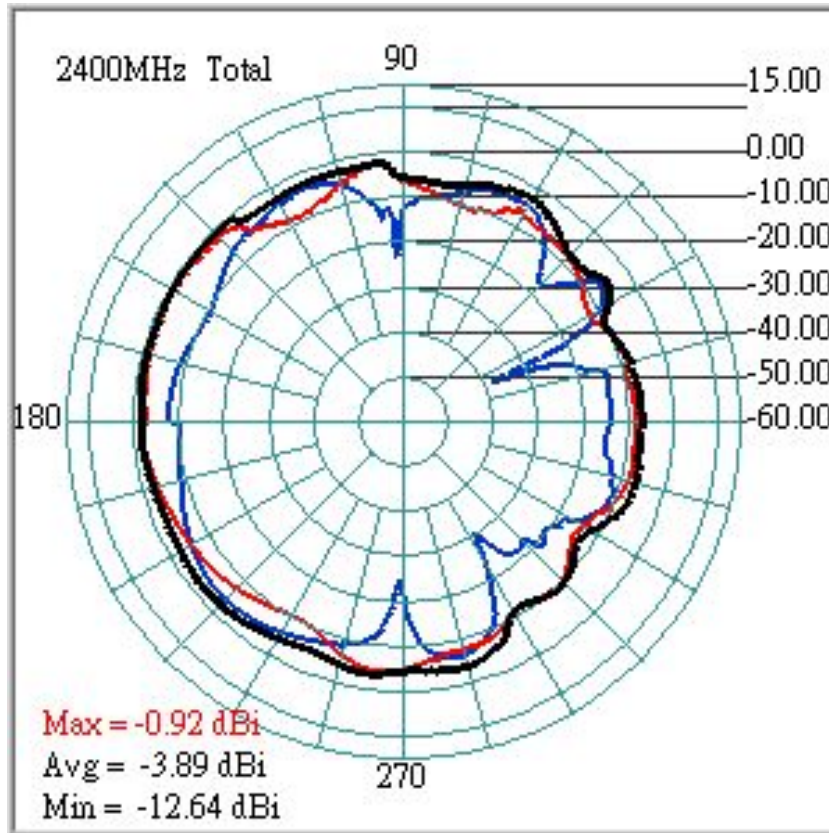





### 3. Smith Chart 2.4~2.5GHz & 5.15GHz~5.85GHz



#### 4. Radiation Pattern of XY Plane(Azimuth)-(Open)



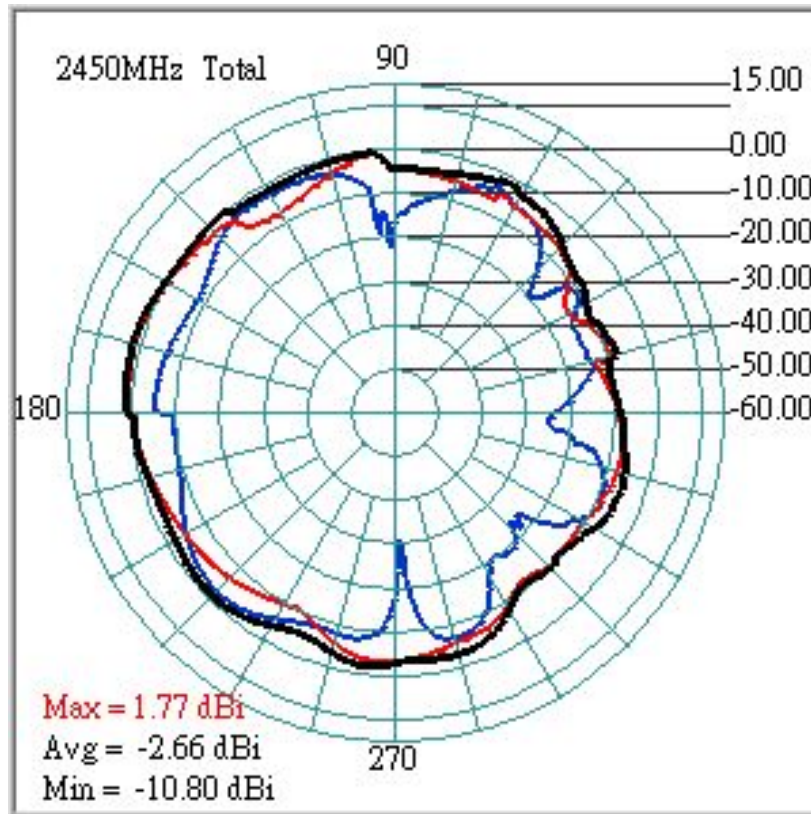
plot color  **Horizontal**

plot color  **Vertical**

plot color  **H+V**

Center Frequency	2400 MHz
Vertical peak Gain (dBi)	-3.52
Vertical Average Gain (dBi)	-8.28
Horizontal peak Gain (dBi)	-1.42
Horizontal Average Gain (dBi)	-5.85
Hori+Vert peak Gain (dBi)	-0.92
Hori+Vert Average Gain (dBi)	-3.88

### 5. Radiation Pattern of XY Plane(Azimuth)-(Open)



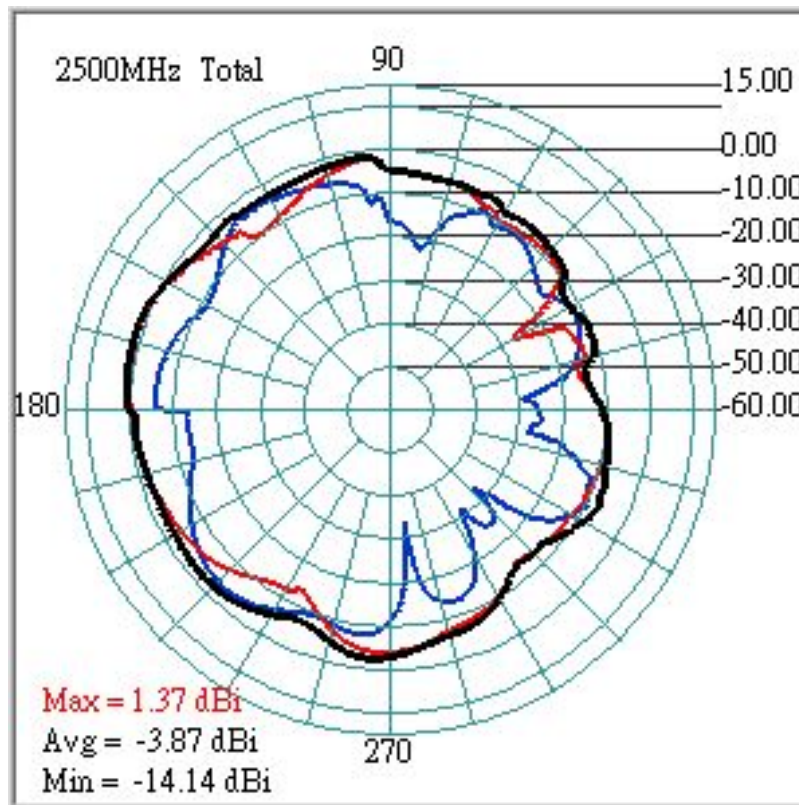
plot color  **Horizontal**


plot color  **Vertical**

plot color  **H+V**

Center Frequency	2450 MHz
Vertical peak Gain (dBi)	-2.39
Vertical Average Gain (dBi)	-7.32
Horizontal peak Gain (dBi)	1
Horizontal Average Gain (dBi)	-4.44
Hori+Vert peak Gain (dBi)	1.77
Hori+Vert Average Gain (dBi)	-2.64

## 6. Radiation Pattern of XY Plane(Azimuth)-(Open)



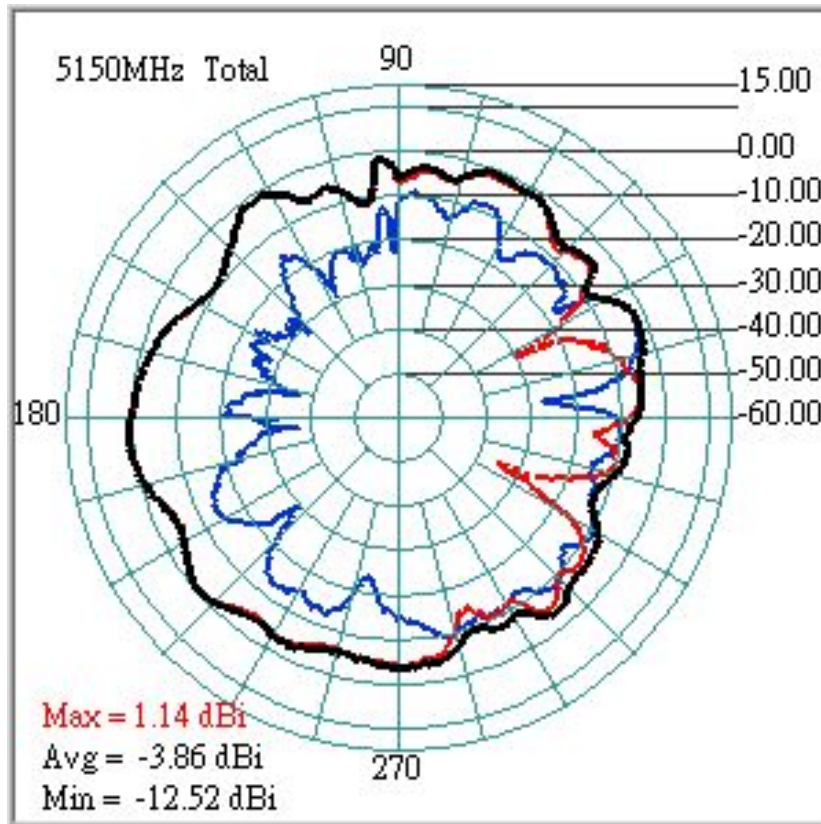
plot color  **Horizontal**

plot color  **Vertical**

plot color  **H+V**

Center Frequency	2500 MHz
Vertical peak Gain (dBi)	-3.69
Vertical Average Gain (dBi)	-9.3
Horizontal peak Gain (dBi)	0.71
Horizontal Average Gain (dBi)	-5.3
Hori+Vert peak Gain (dBi)	1.37
Hori+Vert Average Gain (dBi)	-3.85

## 7. Radiation Pattern of XY Plane(Azimuth)-(Open)



plot color  **Horizontal**

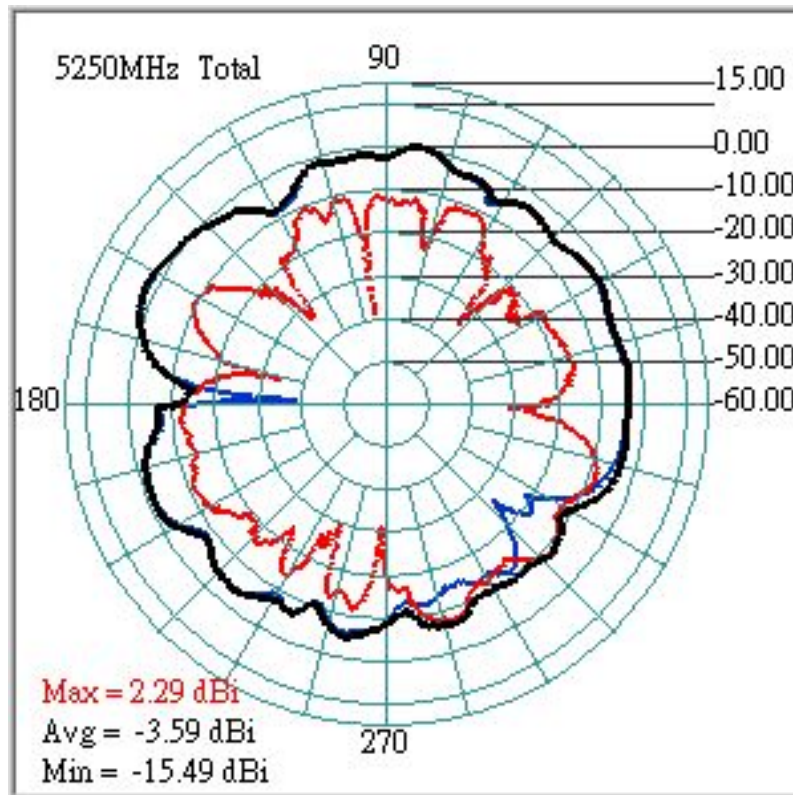
plot color  **Vertical**

plot color  **H+V**

Center Frequency	<b>5150 MHz</b>
Vertical peak Gain (dBi)	-2.27
Vertical Average Gain (dBi)	-11.88
Horizontal peak Gain (dBi)	1.14
Horizontal Average Gain (dBi)	-4.58
Hori+Vert peak Gain (dBi)	1.14
Hori+Vert Average Gain (dBi)	-3.83



### 8. Radiation Pattern of XY Plane(Azimuth)-(Open)



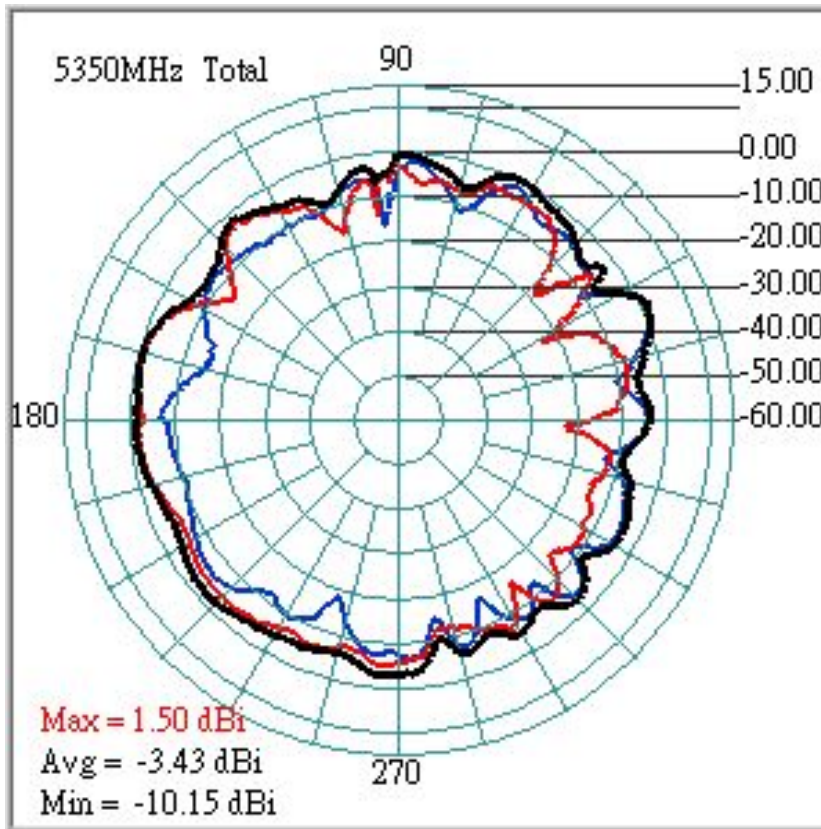
plot color  **Horizontal**


plot color  **Vertical**


plot color  **H+V**


Center Frequency	5250 MHz
Vertical peak Gain (dBi)	1.99
Vertical Average Gain (dBi)	-4.08
Horizontal peak Gain (dBi)	-6.94
Horizontal Average Gain (dBi)	-13.35
Hori+Vert peak Gain (dBi)	2.29
Hori+Vert Average Gain (dBi)	-3.59

### 9. Radiation Pattern of XY Plane(Azimuth)-(Open)



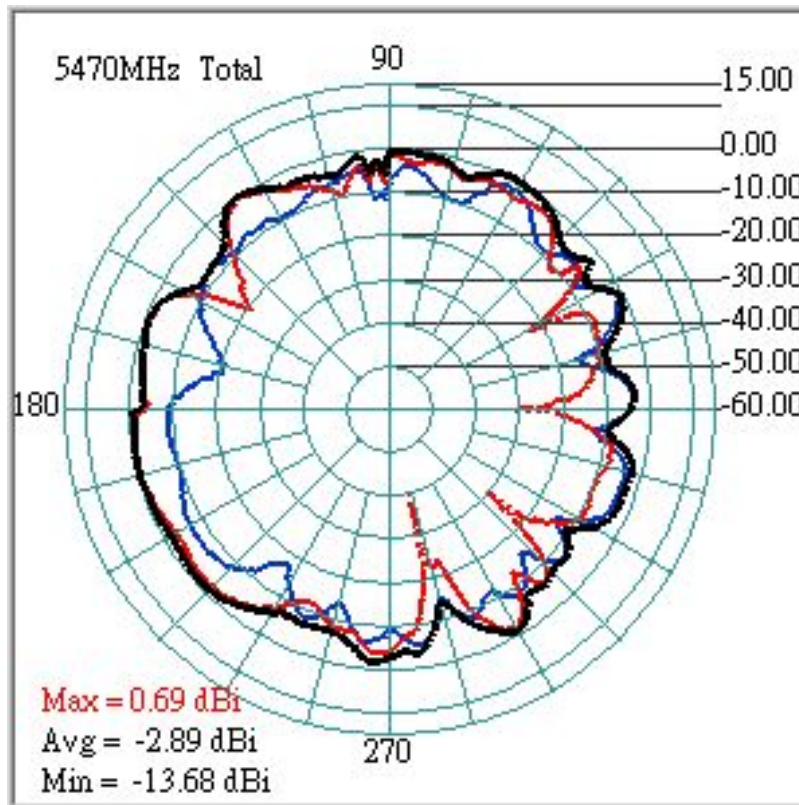
plot color  **Horizontal**

plot color  **Vertical**

plot color  **H+V**

Center Frequency	5350 MHz
Vertical peak Gain (dBi)	1.4
Vertical Average Gain (dBi)	-6.75
Horizontal peak Gain (dBi)	-0.97
Horizontal Average Gain (dBi)	-6.13
Hori+Vert peak Gain (dBi)	1.5
Hori+Vert Average Gain (dBi)	-3.42

### 10. Radiation Pattern of XY Plane(Azimuth)-(Open)



plot color  **Horizontal**

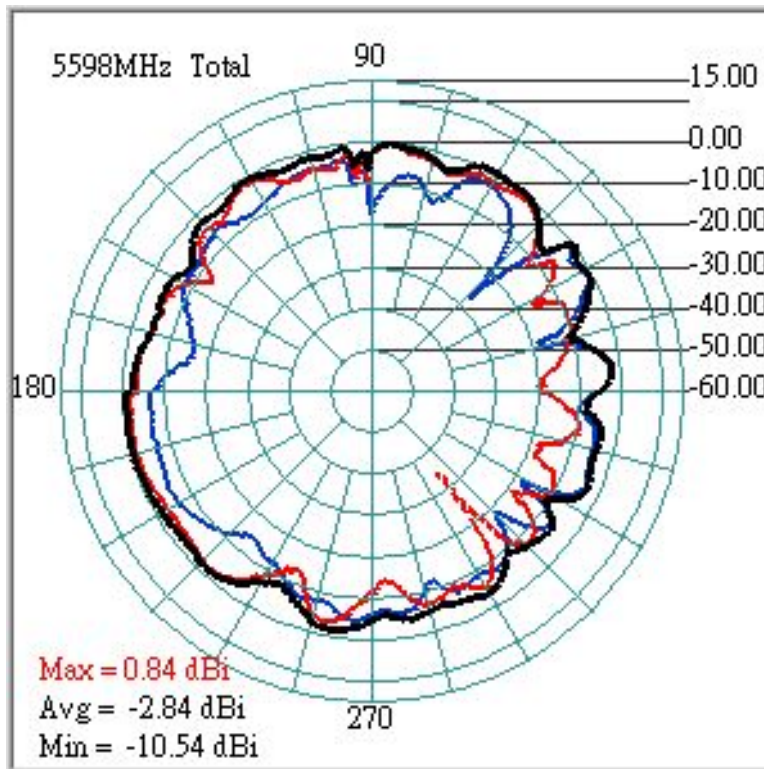
plot color  **Vertical**

plot color  **H+V**

Center Frequency	<b>5470 MHz</b>
Vertical peak Gain (dBi)	-1.17
Vertical Average Gain (dBi)	-7.34
Horizontal peak Gain (dBi)	-0.41
Horizontal Average Gain (dBi)	-4.81
Hori+Vert peak Gain (dBi)	0.69
Hori+Vert Average Gain (dBi)	-2.88



### 11. Radiation Pattern of XY Plane(Azimuth)-(Open)



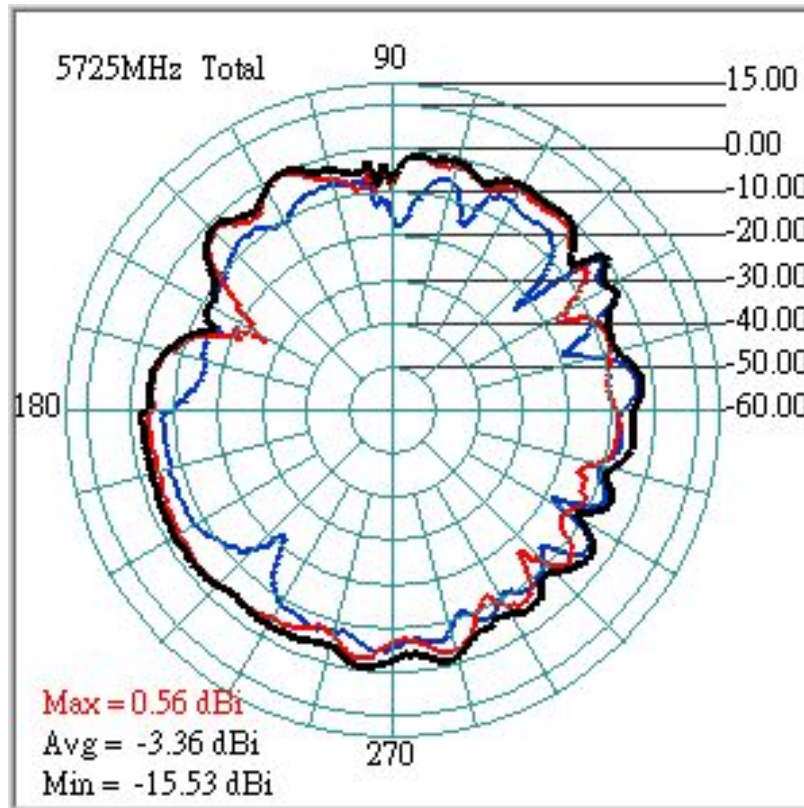
plot color  **Horizontal**

plot color  **Vertical**

plot color  **H+V**

Center Frequency	<b>5597.5 MHz</b>
Vertical peak Gain (dBi)	-0.81
Vertical Average Gain (dBi)	-6.79
Horizontal peak Gain (dBi)	-0.43
Horizontal Average Gain (dBi)	-5.06
Hori+Vert peak Gain (dBi)	0.84
Hori+Vert Average Gain (dBi)	-2.83

## 12. Radiation Pattern of XY Plane(Azimuth)-(Open)



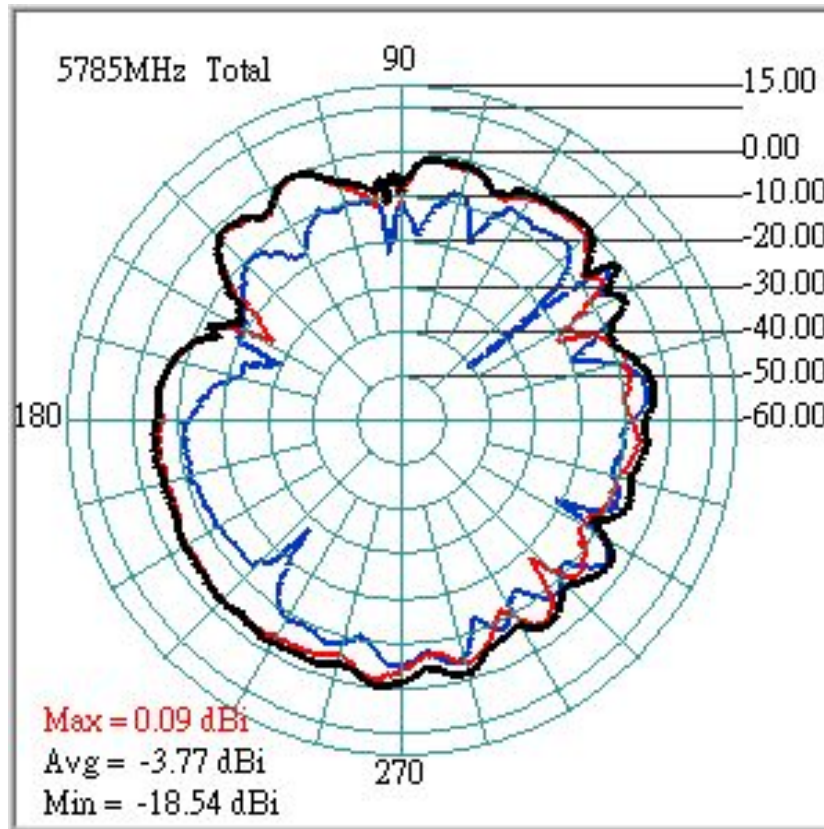
plot color  **Horizontal**


plot color  **Vertical**


plot color  **H+V**


Center Frequency	5725 MHz
Vertical peak Gain (dBi)	-1.07
Vertical Average Gain (dBi)	-7.89
Horizontal peak Gain (dBi)	-0.63
Horizontal Average Gain (dBi)	-5.24
Hori+Vert peak Gain (dBi)	0.56
Hori+Vert Average Gain (dBi)	-3.35

### 13. Radiation Pattern of XY Plane(Azimuth)-(Open)



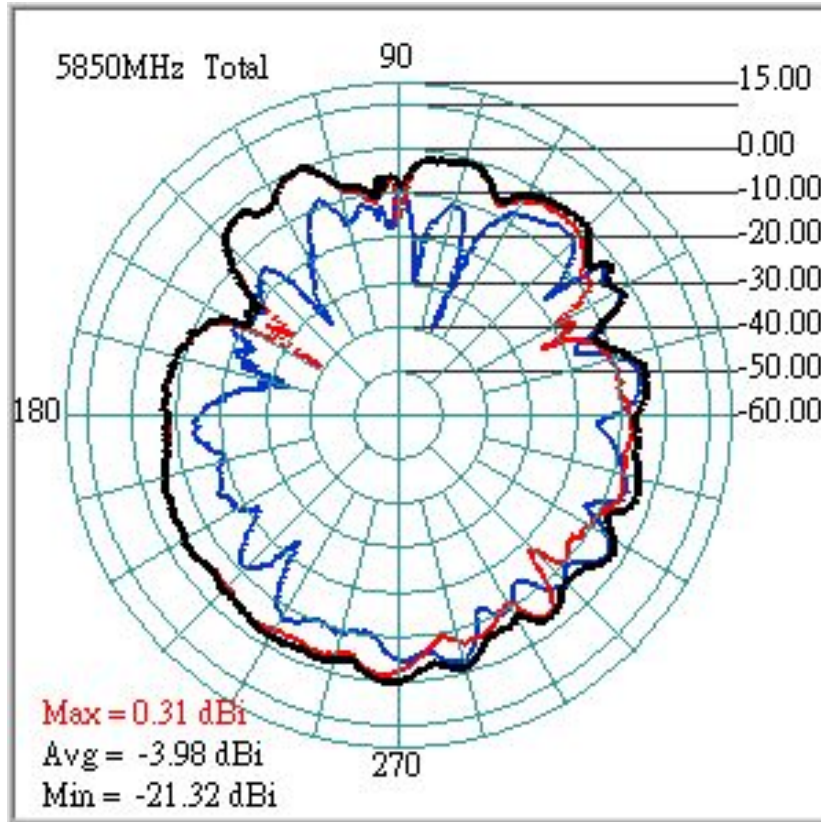
plot color  **Horizontal**

plot color  **Vertical**

plot color  **H+V**

Center Frequency	5785 MHz
Vertical peak Gain (dBi)	-2.86
Vertical Average Gain (dBi)	-9.34
Horizontal peak Gain (dBi)	-0.47
Horizontal Average Gain (dBi)	-5.18
Hori+Vert peak Gain (dBi)	0.09
Hori+Vert Average Gain (dBi)	-3.77

### 14. Radiation Pattern of XY Plane(Azimuth)-(Open)



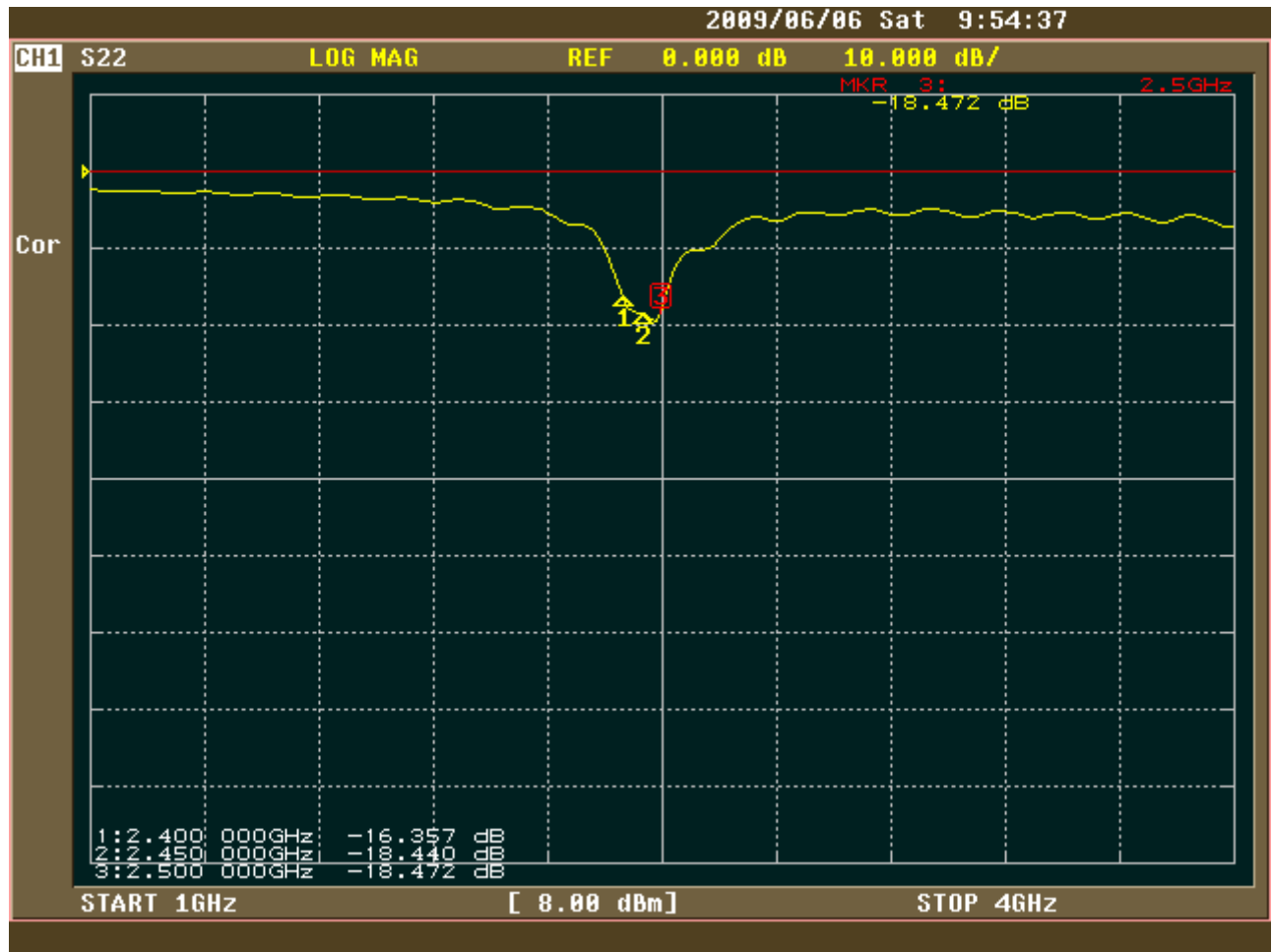
- plot color **Horizontal**
- plot color **Vertical**
- plot color **H+V**

Center Frequency	<b>5850 MHz</b>
Vertical peak Gain (dBi)	-2.36
Vertical Average Gain (dBi)	-9.19
Horizontal peak Gain (dBi)	-0.68
Horizontal Average Gain (dBi)	-5.53
Hori+Vert peak Gain (dBi)	0.31
Hori+Vert Average Gain (dBi)	-3.98

### III. Test results

WGT_U10_C1_WLAN_R_Aux	<a href="#">Left up</a>	<a href="#">Cable diameter : 1.13mm</a>
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#### 1. Return Loss (2.4GHz-2.5GHz)

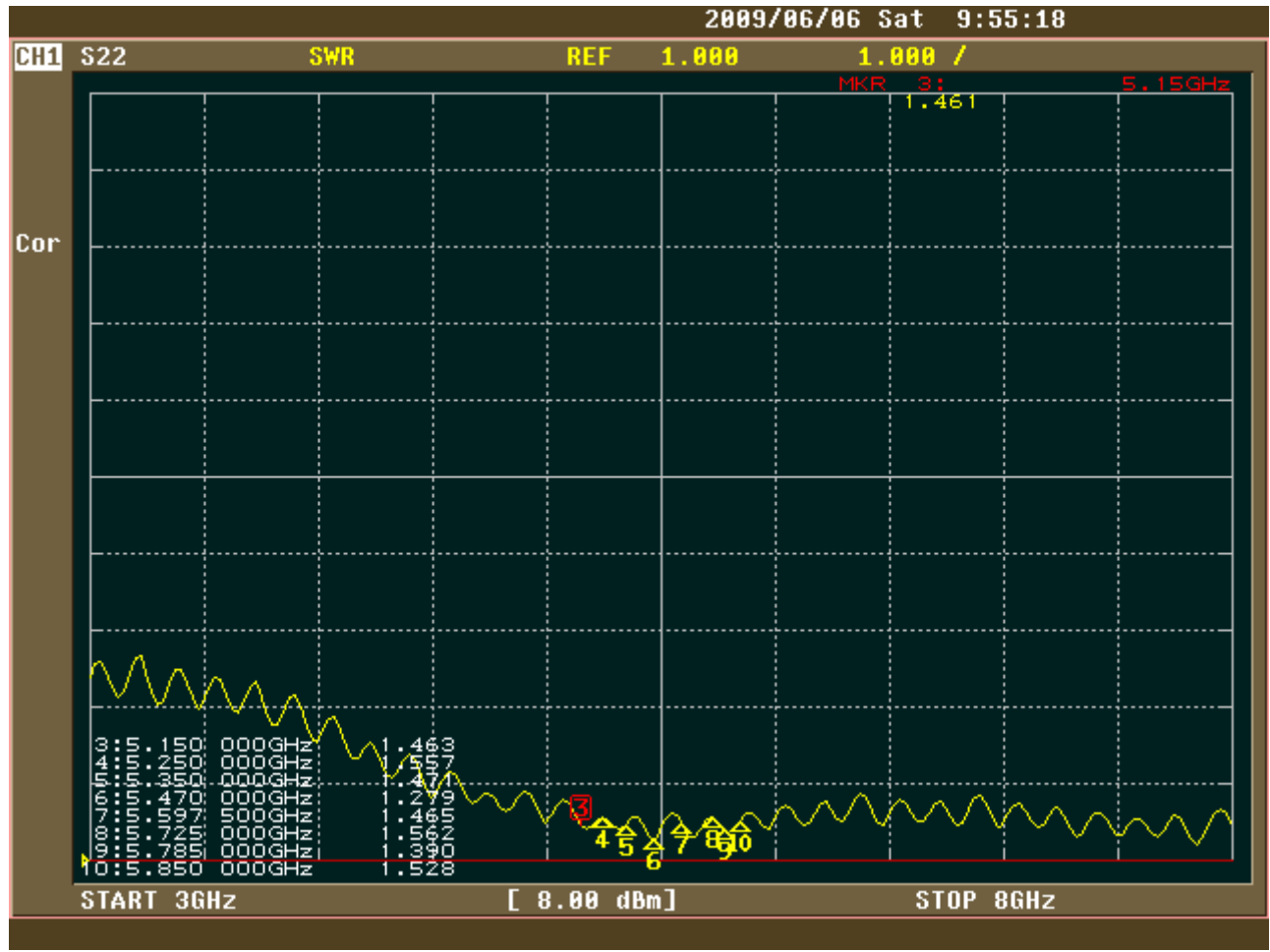




2. VSWR (2.4GHz-2.5GHz)

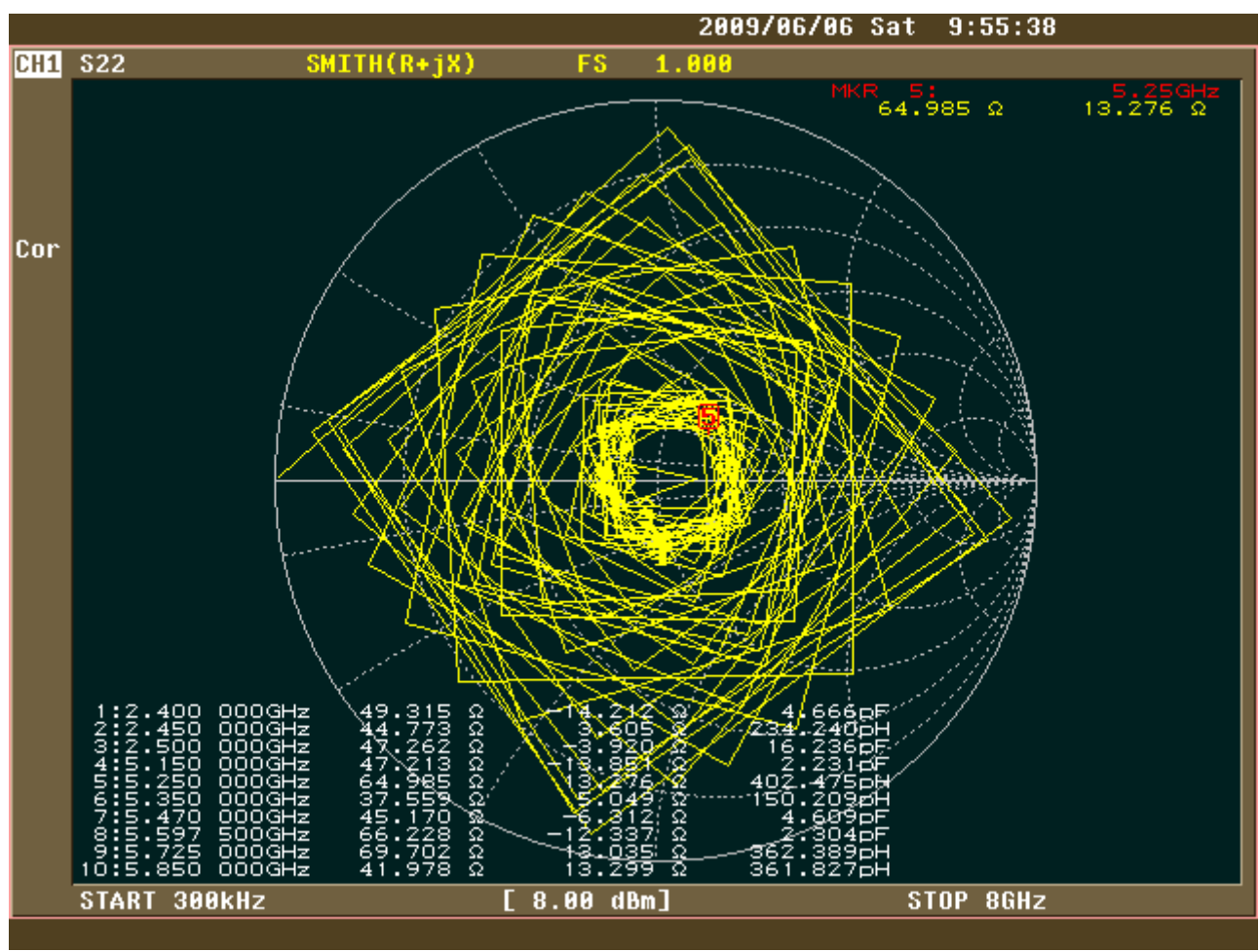


2-2 VSWR ( 5.15GHz-5.85GHz)

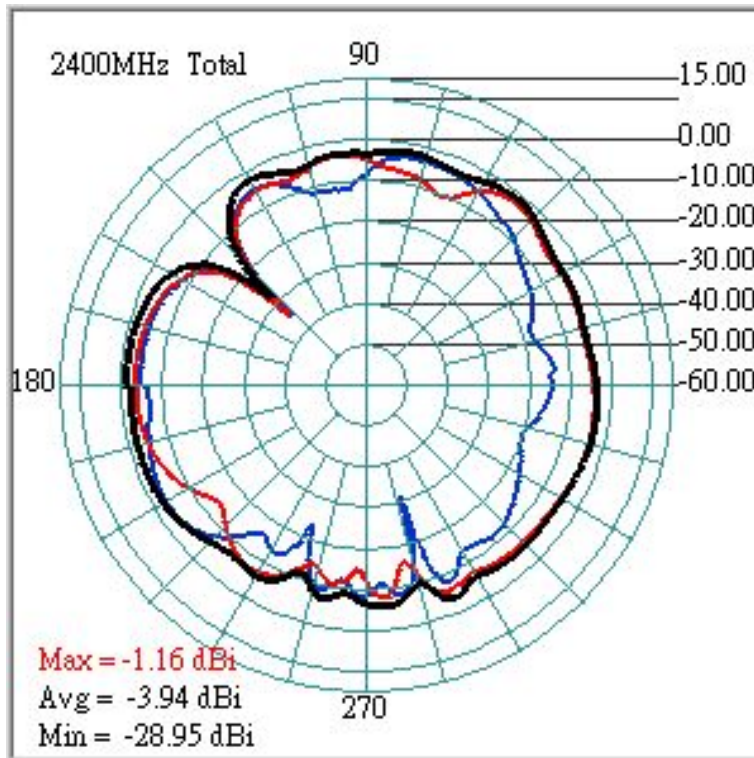






3. Smith Chart 2.4~2.5GHz & 5.15GHz~5.85GHz




#### 4. Radiation Pattern of XY Plane(Azimuth)-(Open)



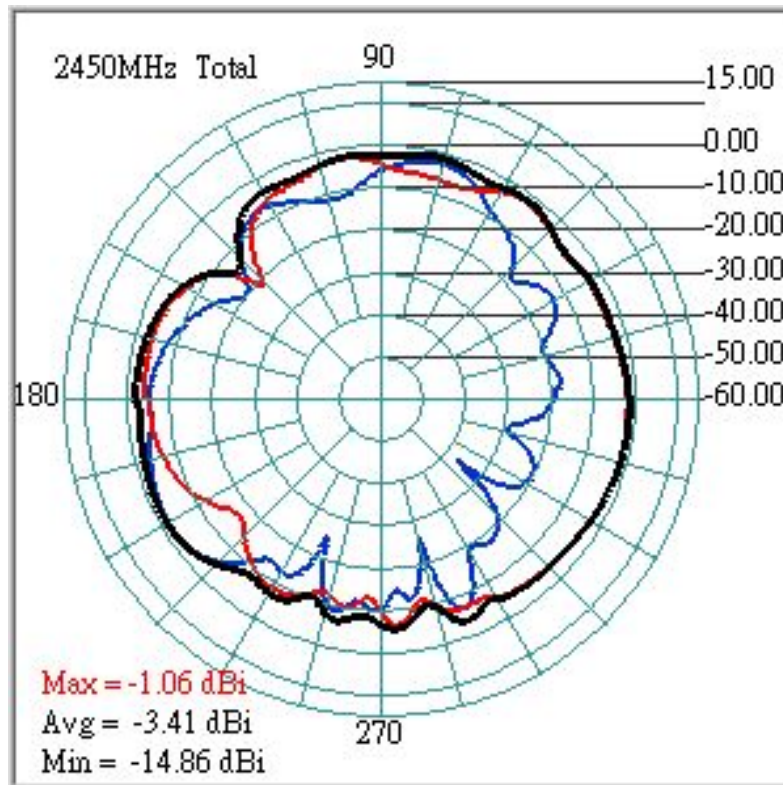
plot color  **Horizontal**

plot color  **Vertical**

plot color  **H+V**

Center Frequency	<b>2400 MHz</b>
Vertical peak Gain (dBi)	-3.4
Vertical Average Gain (dBi)	-8.18
Horizontal peak Gain (dBi)	-2.33
Horizontal Average Gain (dBi)	-5.97
Hori+Vert peak Gain (dBi)	-1.17
Hori+Vert Average Gain (dBi)	-3.93

### 5. Radiation Pattern of XY Plane(Azimuth)-(Open)



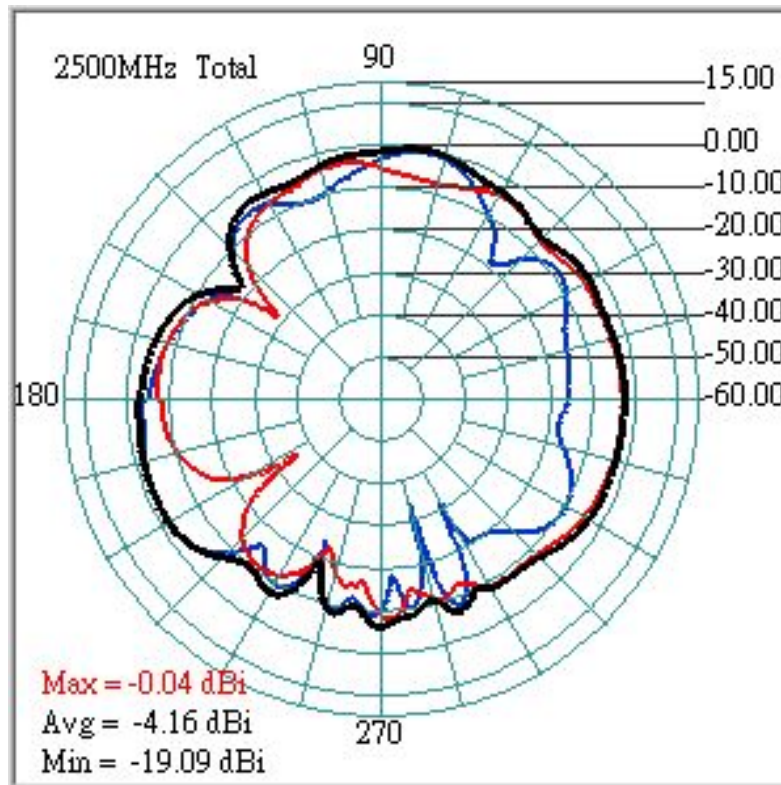
plot color  **Horizontal**


plot color  **Vertical**

plot color  **H+V**

Center Frequency	2450 MHz
Vertical peak Gain (dBi)	-1.78
Vertical Average Gain (dBi)	-8.39
Horizontal peak Gain (dBi)	-1.21
Horizontal Average Gain (dBi)	-5.06
Hori+Vert peak Gain (dBi)	-1.06
Hori+Vert Average Gain (dBi)	-3.4

## 6. Radiation Pattern of XY Plane(Azimuth)-(Open)



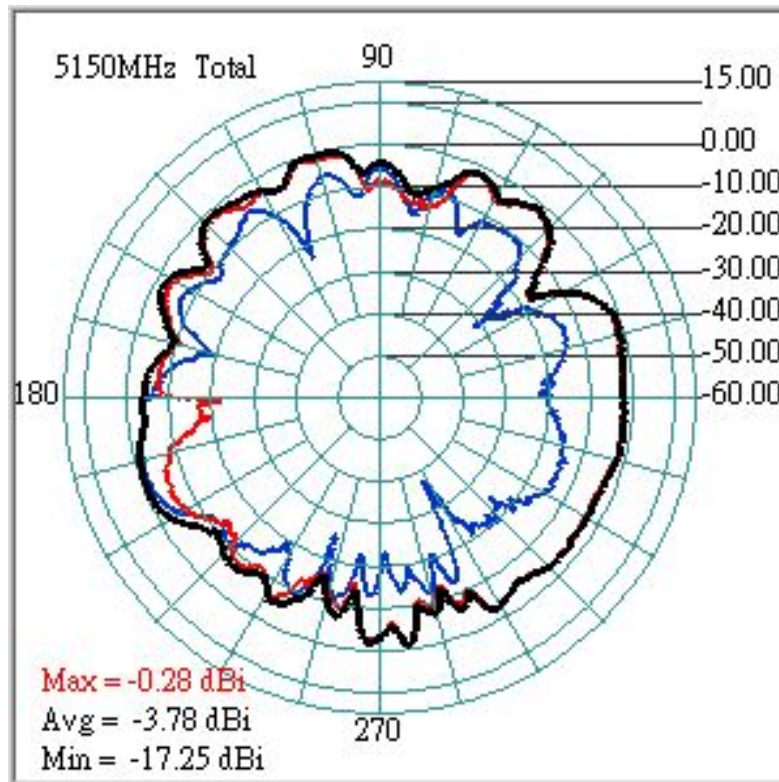
plot color  **Horizontal**

plot color  **Vertical**

plot color  **H+V**

Center Frequency	2500 MHz
Vertical peak Gain (dBi)	-0.93
Vertical Average Gain (dBi)	-7.44
Horizontal peak Gain (dBi)	-2.55
Horizontal Average Gain (dBi)	-6.91
Hori+Vert peak Gain (dBi)	-0.04
Hori+Vert Average Gain (dBi)	-4.16

## 7. Radiation Pattern of XY Plane(Azimuth)-(Open)



plot color  **Horizontal**

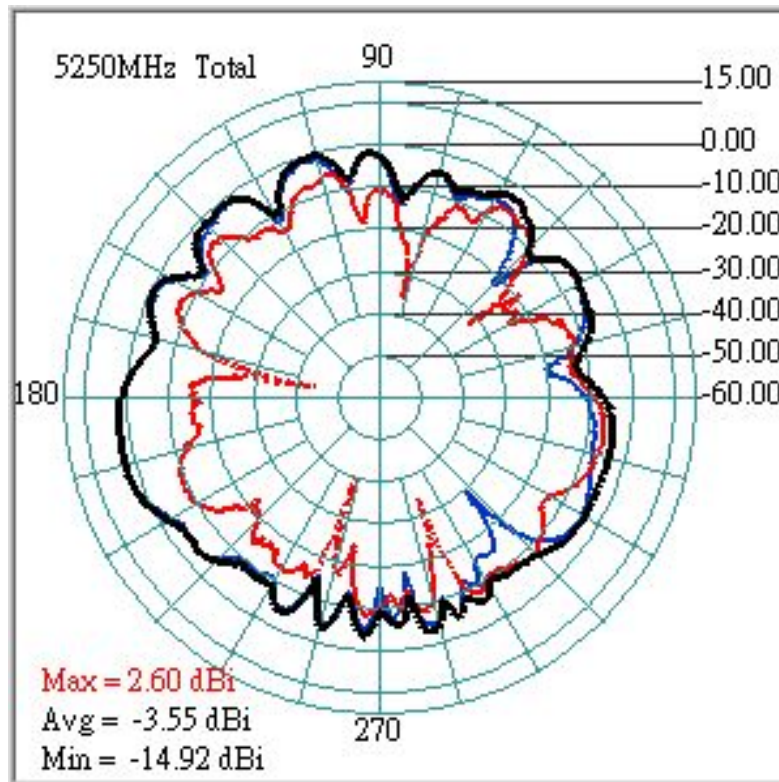
plot color  **Vertical**

plot color  **H+V**

Center Frequency	<b>5150 MHz</b>
Vertical peak Gain (dBi)	-1.54
Vertical Average Gain (dBi)	-9.86
Horizontal peak Gain (dBi)	-0.91
Horizontal Average Gain (dBi)	-5
Hori+Vert peak Gain (dBi)	-0.29
Hori+Vert Average Gain (dBi)	-3.77



### 8. Radiation Pattern of XY Plane(Azimuth)-(Open)



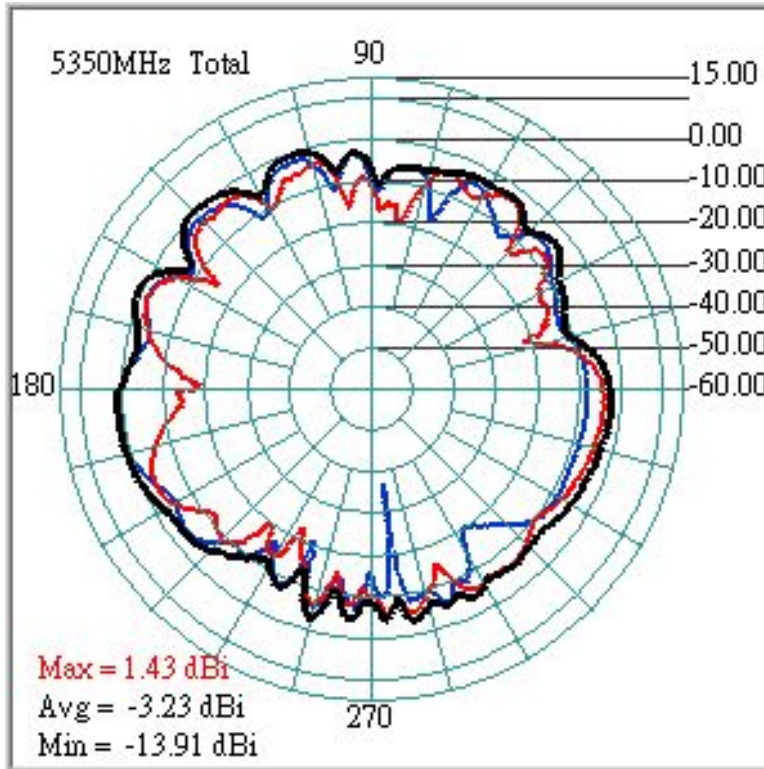
plot color  **Horizontal**

plot color  **Vertical**

plot color  **H+V**

Center Frequency	5250 MHz
Vertical peak Gain (dBi)	2.51
Vertical Average Gain (dBi)	-4.43
Horizontal peak Gain (dBi)	-5.57
Horizontal Average Gain (dBi)	-10.75
Hori+Vert peak Gain (dBi)	2.6
Hori+Vert Average Gain (dBi)	-3.52

### 9. Radiation Pattern of XY Plane(Azimuth)-(Open)



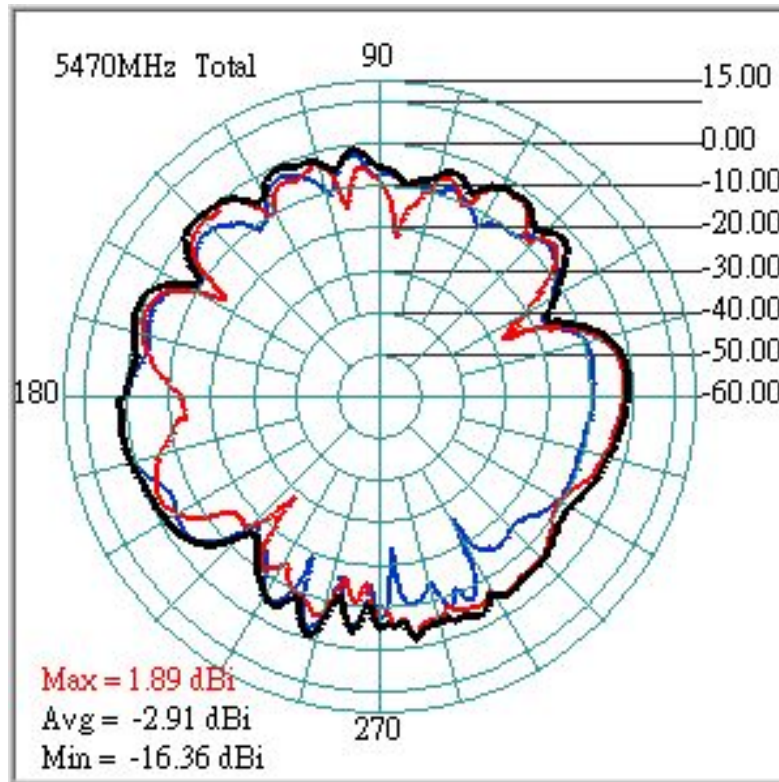
plot color  **Horizontal**

plot color  **Vertical**

plot color  **H+V**

Center Frequency	5350 MHz
Vertical peak Gain (dBi)	1.3
Vertical Average Gain (dBi)	-5.6
Horizontal peak Gain (dBi)	-2.08
Horizontal Average Gain (dBi)	-6.95
Hori+Vert peak Gain (dBi)	1.43
Hori+Vert Average Gain (dBi)	-3.21

### 10. Radiation Pattern of XY Plane(Azimuth)-(Open)



plot color  **Horizontal**

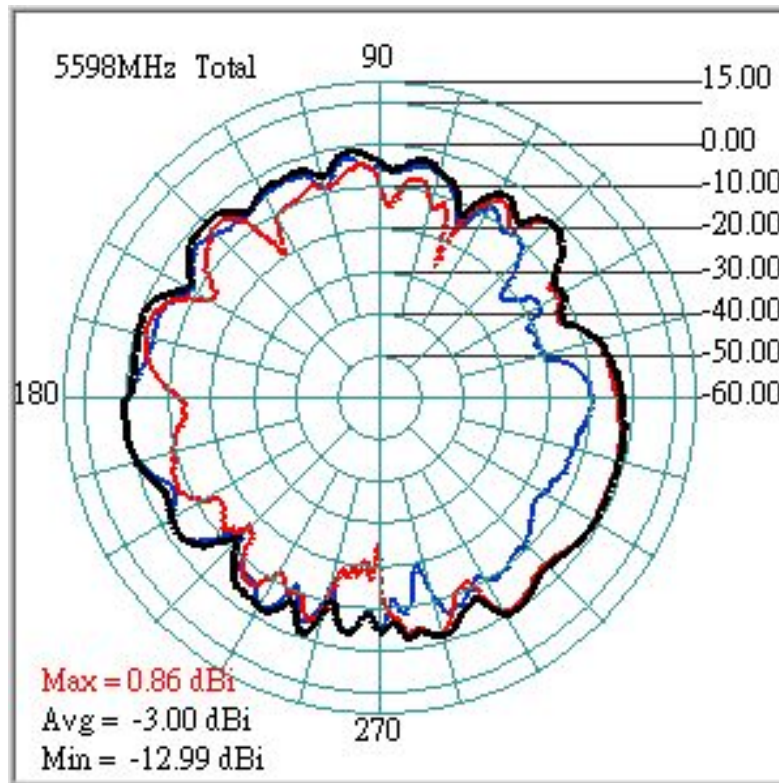
plot color  **Vertical**

plot color  **H+V**

Center Frequency	<b>5470 MHz</b>
Vertical peak Gain (dBi)	1.72
Vertical Average Gain (dBi)	-6.01
Horizontal peak Gain (dBi)	-1.05
Horizontal Average Gain (dBi)	-5.8
Hori+Vert peak Gain (dBi)	1.89
Hori+Vert Average Gain (dBi)	-2.89



### 11. Radiation Pattern of XY Plane(Azimuth)-(Open)



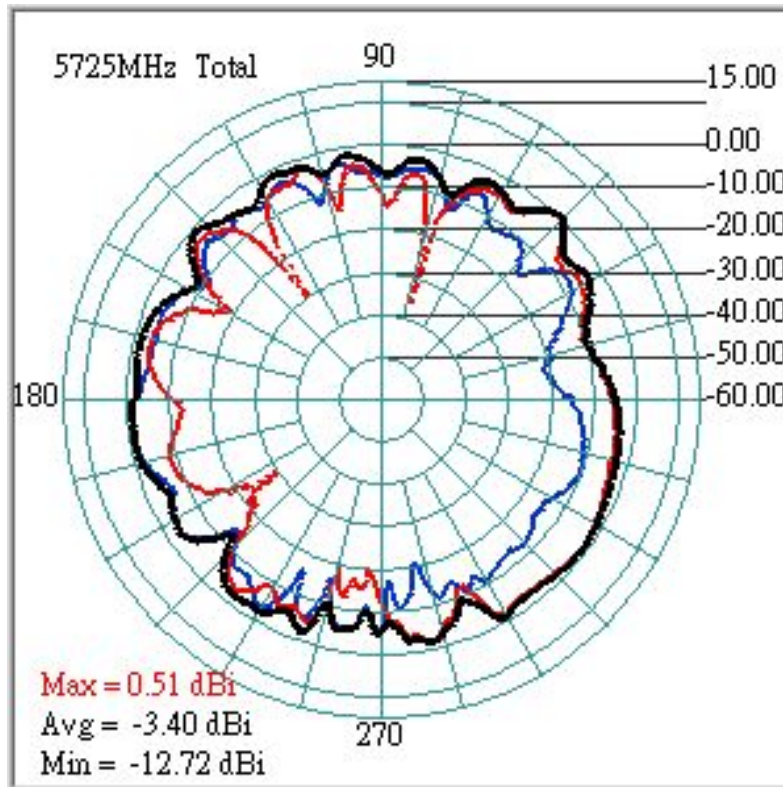
plot color  **Horizontal**

plot color  **Vertical**

plot color  **H+V**

Center Frequency	<b>5597.5 MHz</b>
Vertical peak Gain (dBi)	0.66
Vertical Average Gain (dBi)	-6.26
Horizontal peak Gain (dBi)	-0.25
Horizontal Average Gain (dBi)	-5.76
Hori+Vert peak Gain (dBi)	0.86
Hori+Vert Average Gain (dBi)	-2.99

## 12. Radiation Pattern of XY Plane(Azimuth)-(Open)



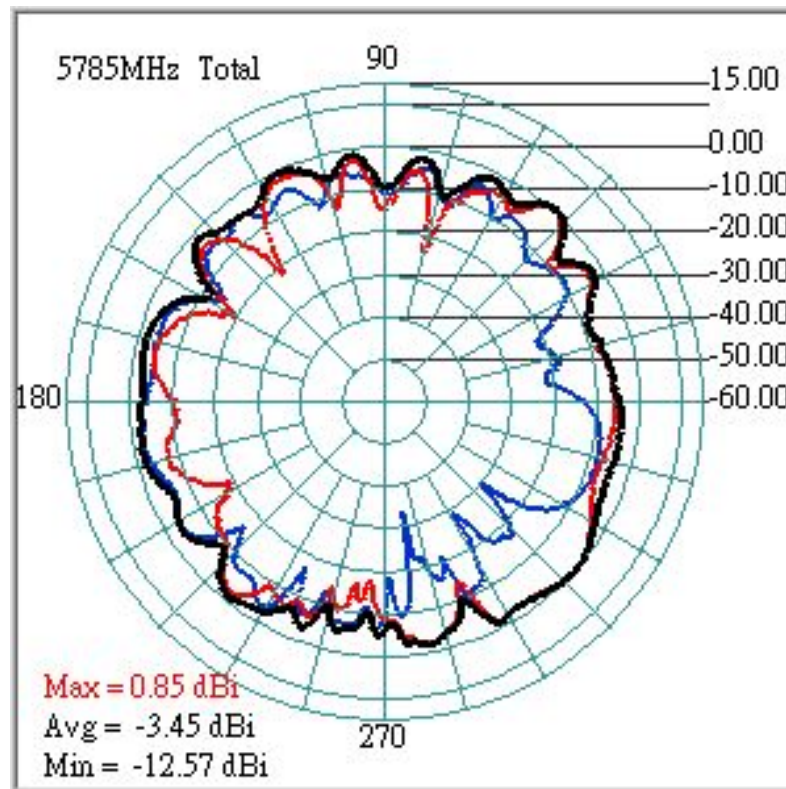
plot color  **Horizontal**

plot color  **Vertical**

plot color  **H+V**

Center Frequency	5725 MHz
Vertical peak Gain (dBi)	-1.28
Vertical Average Gain (dBi)	-7.27
Horizontal peak Gain (dBi)	0.25
Horizontal Average Gain (dBi)	-5.69
Hori+Vert peak Gain (dBi)	0.51
Hori+Vert Average Gain (dBi)	-3.4

### 13. Radiation Pattern of XY Plane(Azimuth)-(Open)



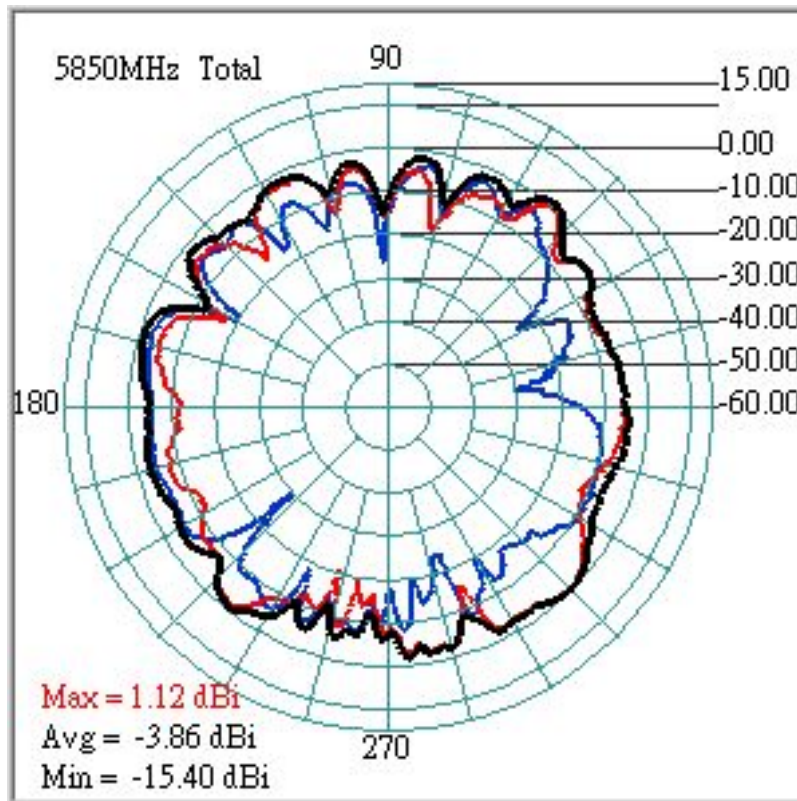
plot color  **Horizontal**

plot color  **Vertical**

plot color  **H+V**

Center Frequency	5785 MHz
Vertical peak Gain (dBi)	-2.63
Vertical Average Gain (dBi)	-7.76
Horizontal peak Gain (dBi)	0.38
Horizontal Average Gain (dBi)	-5.45
Hori+Vert peak Gain (dBi)	0.85
Hori+Vert Average Gain (dBi)	-3.44

### 14. Radiation Pattern of XY Plane(Azimuth)-(Open)



plot color  **Horizontal**

plot color  **Vertical**

plot color  **H+V**

Center Frequency	<b>5850 MHz</b>
Vertical peak Gain (dBi)	-3.1
Vertical Average Gain (dBi)	-8.26
Horizontal peak Gain (dBi)	0.03
Horizontal Average Gain (dBi)	-5.81
Hori+Vert peak Gain (dBi)	1.12
Hori+Vert Average Gain (dBi)	-3.86