Product specification

	Antenna module on the system board	
Frequenc Range	2400 ~ 2500MHz	
Ant. Port Input Pwr. (dBm)	0 (Typ. BT class 2 output power)	
Tot. Rad. Pwr. (dBm)	-1.2 (Input pwr – loss pwr)	
Peak EIRP(dBm)	1.2	
Directivity (dBi)	1 (all direction antenna)	
Efficiency (dB)	6 0.2 %	
Gain (dBi)	1.9 (Peak Gain XY-plane)	
Maximum Power (dBm)	1.7 (XY-plane)	
Minimum Power (dBm)	-4(XY-plane)	
Avg. Power (dBm)	-0.5(XY-plane)	
Input Impendence(ohm)	50	
Polarization Type	V ertical & Horizontal	
V . S .W . R	< 1.4	

All the technical data and information contained herein are subject to change without prior notice
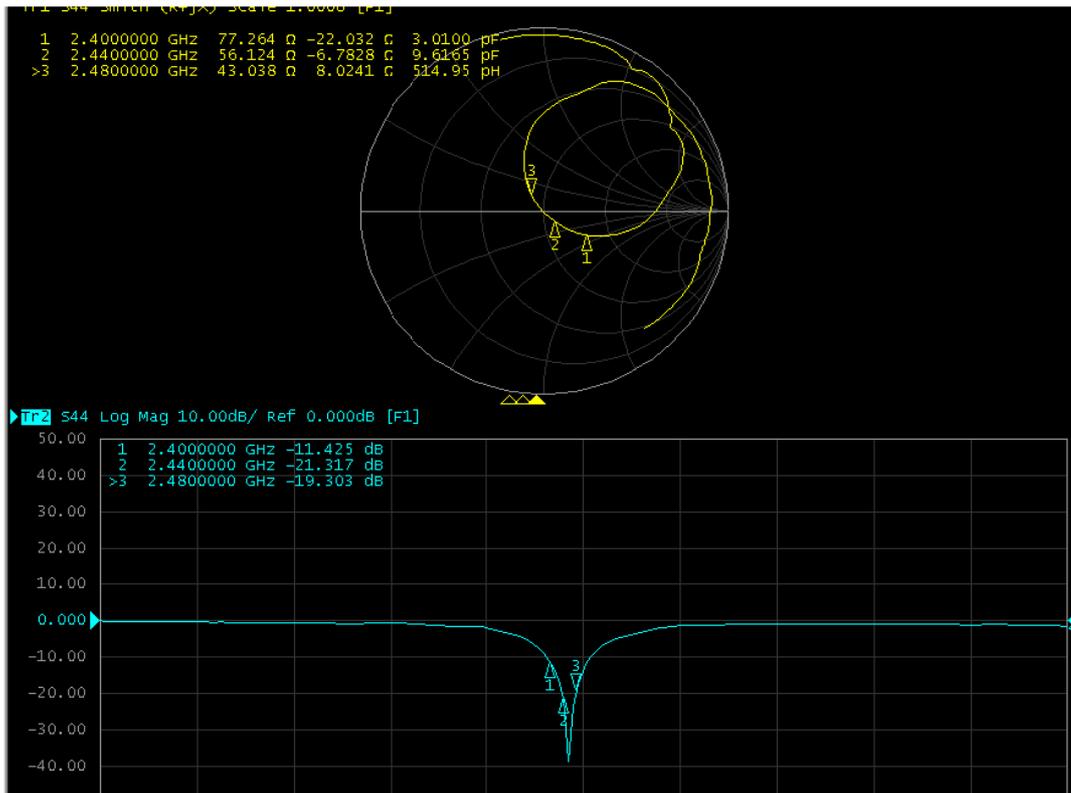
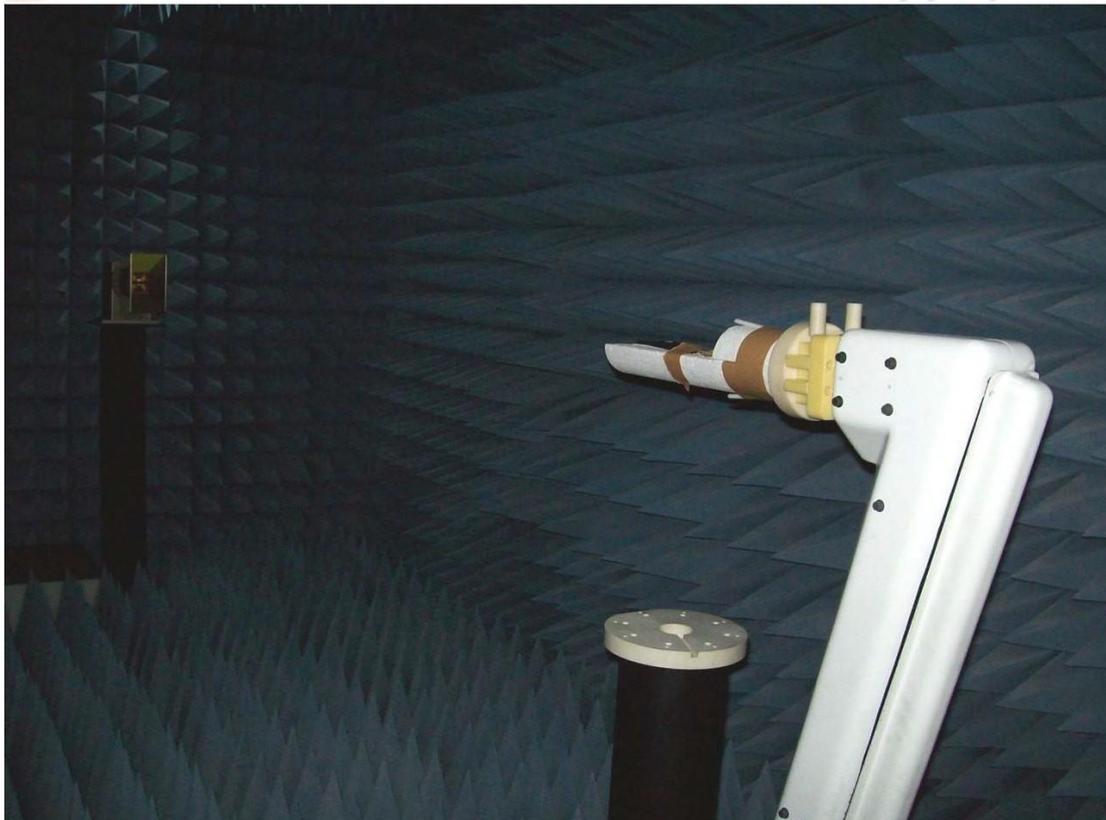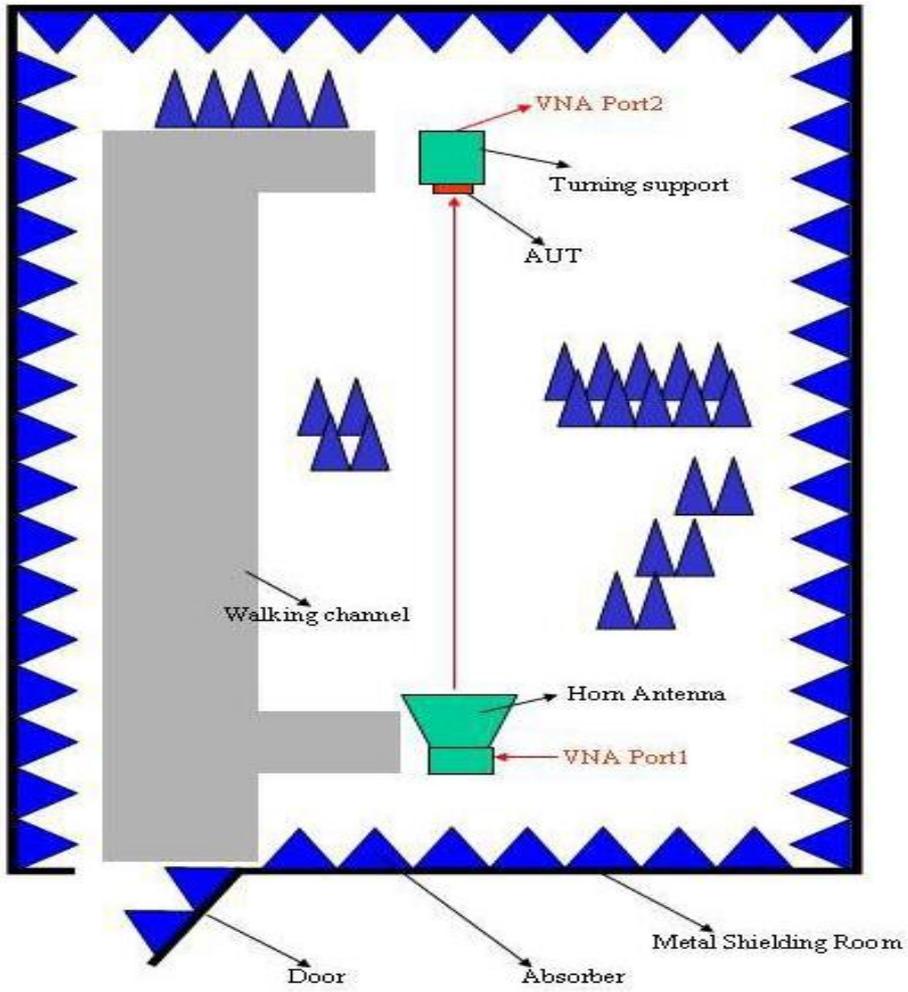## Antenna Layout & module on the system board
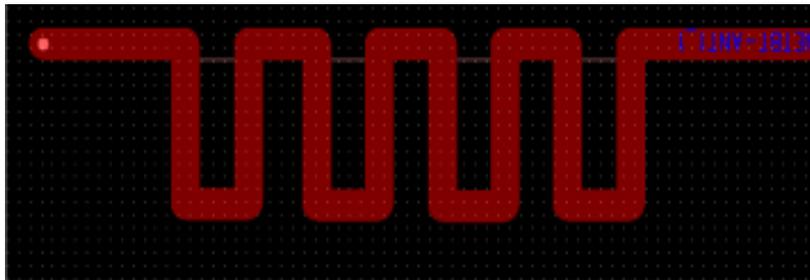
Antenna Gain

Gain Table

Unit in dBi @2.44GHz	XY-plane		XZ-plane		YZ-plane		Efficiency
	Peak	Avg.	Peak	Avg.	Peak	Avg.	
Module Board	1.2	-0.5	1.9	-3.6	1.1	-3.0	6 0.2 %

Return Loss

Tr 1 S44 Smith (R+jX) Scale 1.000U [F1]

```
1   2.4000000 GHz   77.264 Ω  -22.032 Ω   3.0100 pF
2   2.4400000 GHz   56.124 Ω  -6.7828 Ω   9.6165 pF
>3  2.4800000 GHz   43.038 Ω   8.0241 Ω   514.95 pH
```

Tr 2 S44 Log Mag 10.00dB/ Ref 0.000dB [F1]

```
50.00
40.00
30.00
20.00
10.00
 0.000
-10.00
-20.00
-30.00
-40.00
```

```
1   2.4000000 GHz  -11.425 dB
2   2.4400000 GHz  -21.317 dB
>3  2.4800000 GHz  -19.303 dB
```
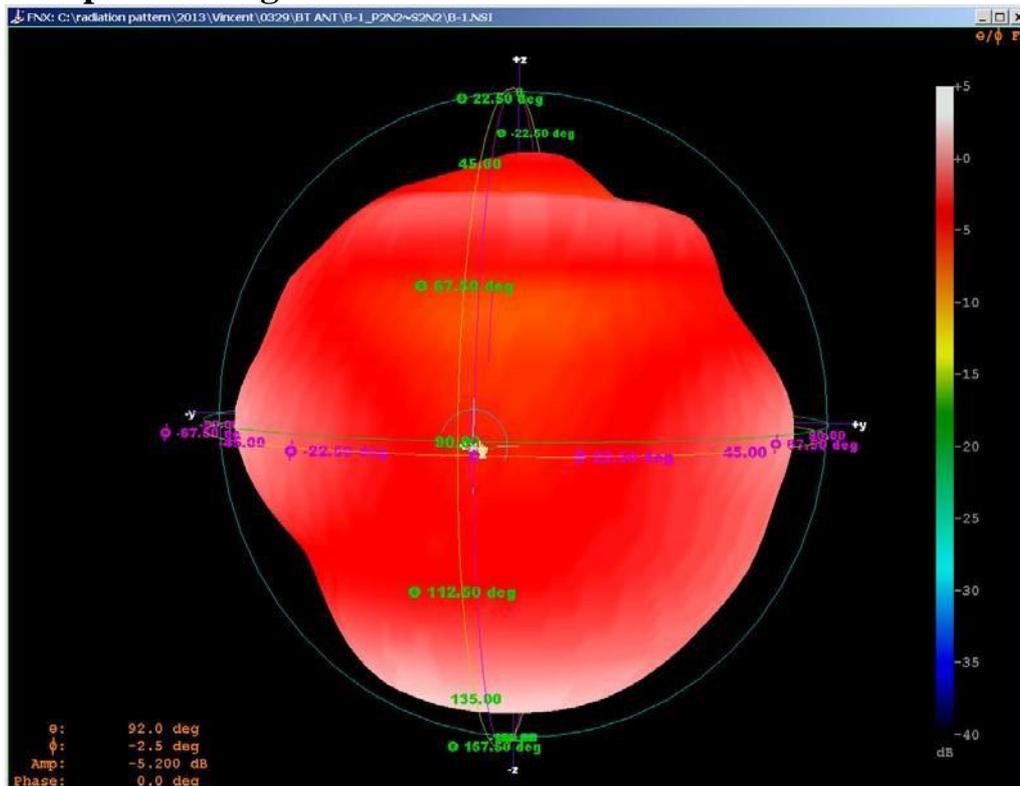
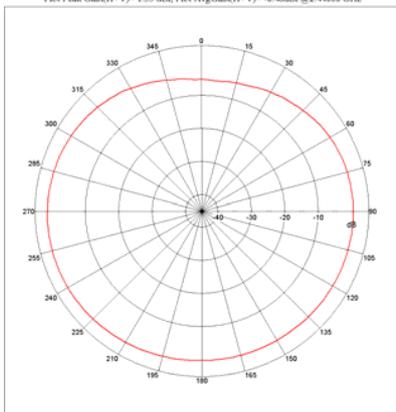# The Environment of Antenna Radiation Pattern

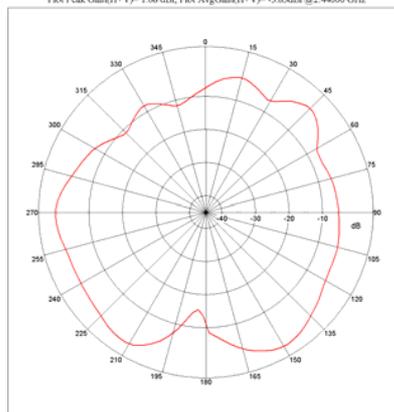# 3D radiation pattern diagram

XY-plane
Far-field Power Distribution(H+V) on X-Y Plane
Plot Peak Gain(H+V)= 1.35 dBi; Plot AvgGain(H+V)= -0.48dBi @2.44000 GHz

XZ-plane
Far-field Power Distribution(H+V) on X-Z Plane
Plot Peak Gain(H+V)= 1.68 dBi; Plot AvgGain(H+V)= -3.83dBi @2.44000 GHz

YZ-plane
Far-field Power Distribution(H+V) on Y-Z Plane
Plot Peak Gain(H+V)= 1.11 dBi; Plot AvgGain(H+V)= -2.99dBi @2.44000 GHz