# Product specification

## Quick Reference Date

| | | |
|---|---|---|
| | Antenna module on the system board | |
| Frequency | 2.45GHz[*1] | |
| Ant. Port Input Pwr. (dBm) | 0 (Typ. BT class 2 output power) | |
| Tot. Rad. Pwr. (dBm) | -2.3 (Input pwr – loss pwr) | |
| Peak EIRP(dBm) | 1.3 | |
| Directivity (dBi) | 1 (all direction antenna) | |
| Efficiency (dB) | -2.3 (58.5%) | |
| Gain (dBi) | 1.3 (Peak Gain XY-plane) | |
| Maximum Power (dBm) | 1.3 (XY-plane) | |
| Minimum Power (dBm) | -4(XY-plane) | |
| Avg. Power (dBm) | -0.5(XY-plane) | |
| Max/Min Ratio (dB) | 5.3(XY-plane) | |
| Max/Avg Ratio (dB) | 1.8(XY-plane) | |
| Min/Avg Ratio (dB) | -3.5(XY-plane) | |
| Average Gain (dB) | -0.5 (Avg Gain XY-plane) | |

All the technical data and information contained herein are subject to change without prior notice

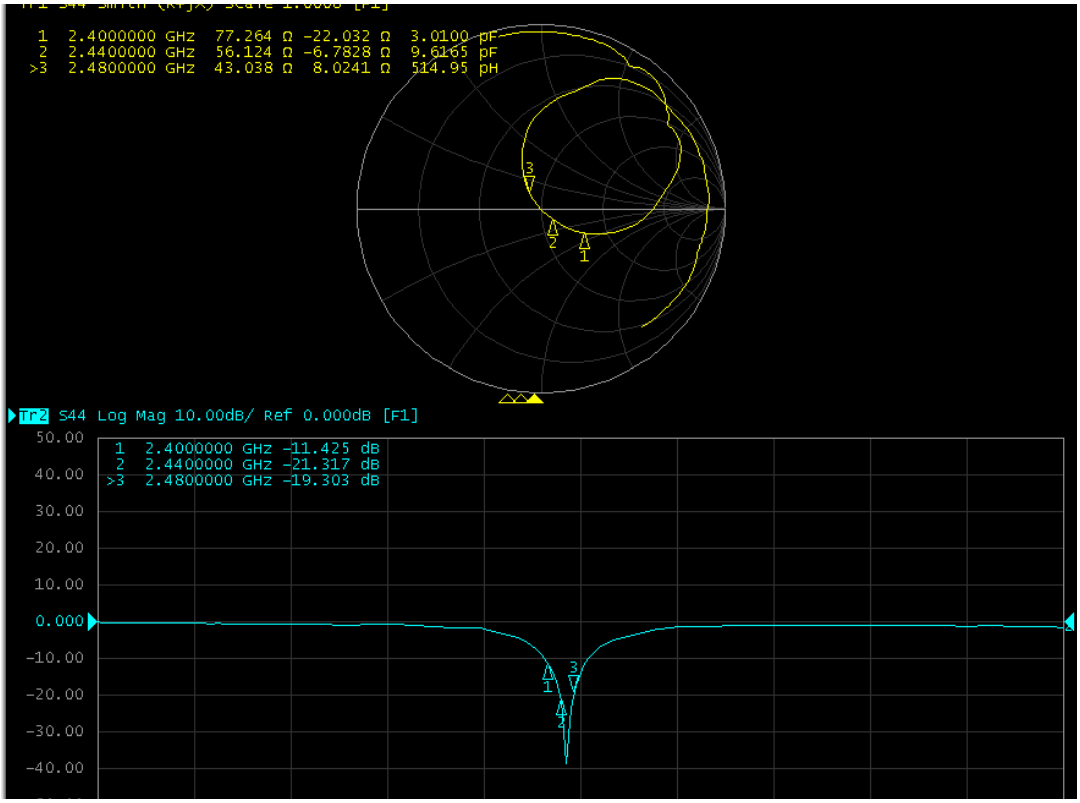
## Antenna Layout & module on the system board

## Antenna Gain

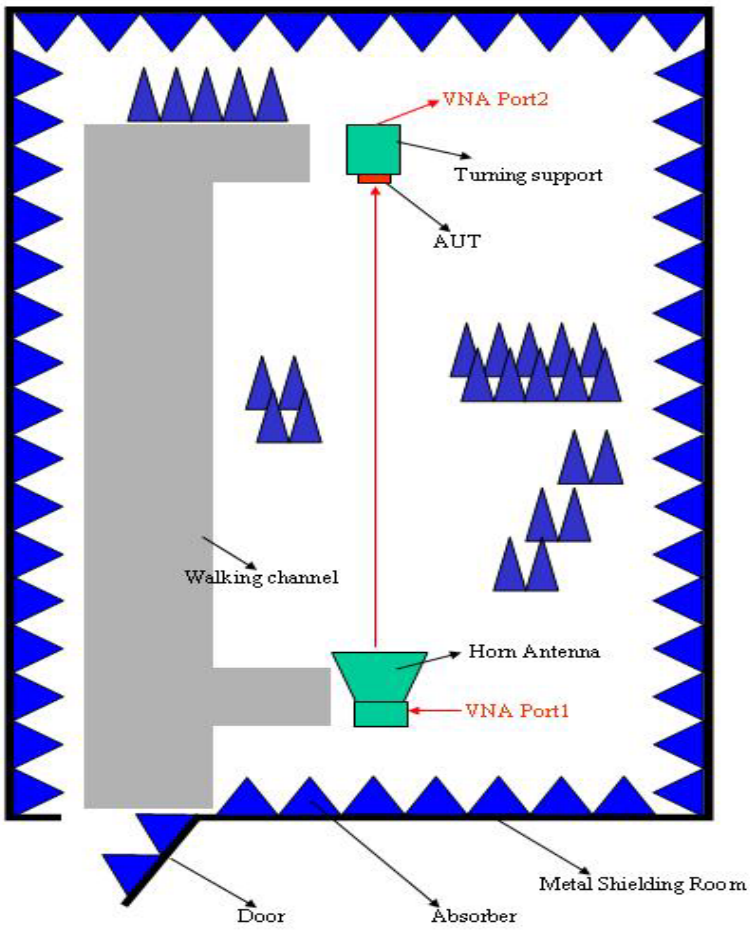
Gain Table

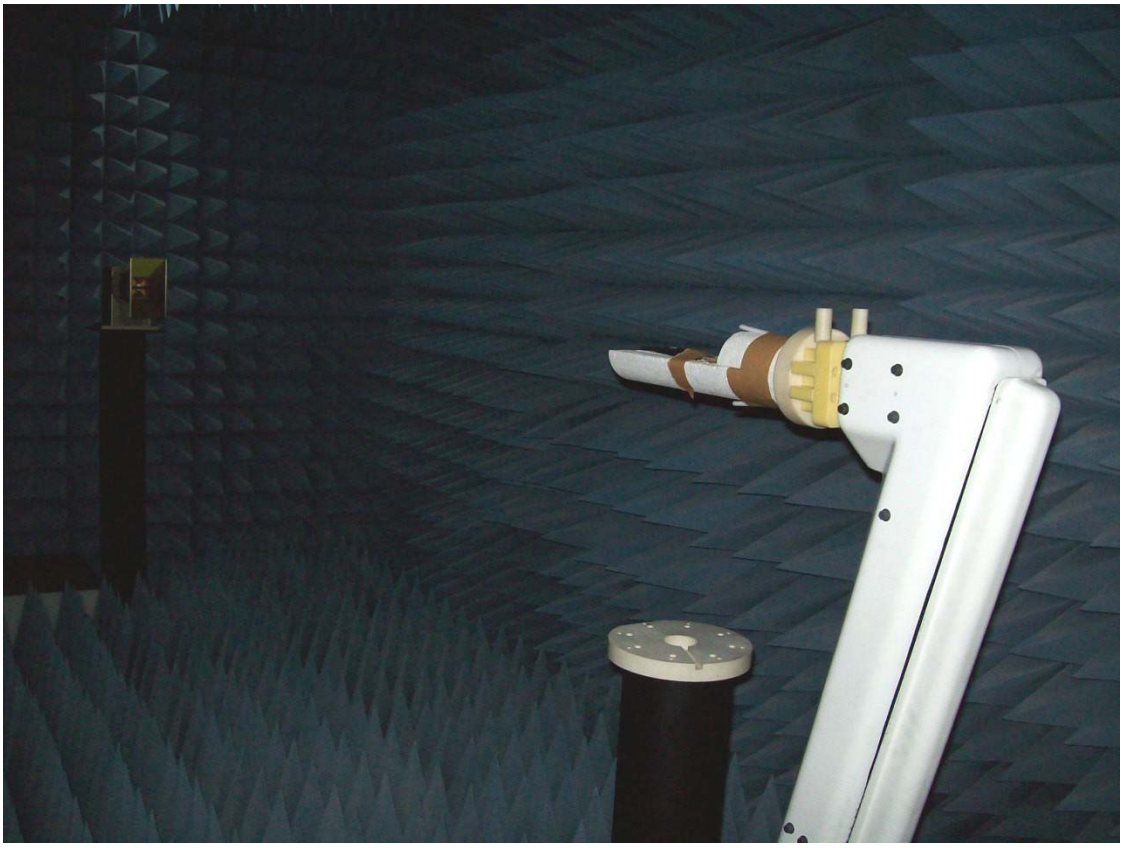
| Unit in dBi @2.44GHz | XY-plane | | XZ-plane | | YZ-plane | | Efficiency |
|---|---|---|---|---|---|---|---|
| | Peak | Avg. | Peak | Avg. | Peak | Avg. | |
| Module Board | 1.3 | -0.5 | 1.7 | -3.8 | 1.1 | -3.0 | 58.5% |

# Return Loss

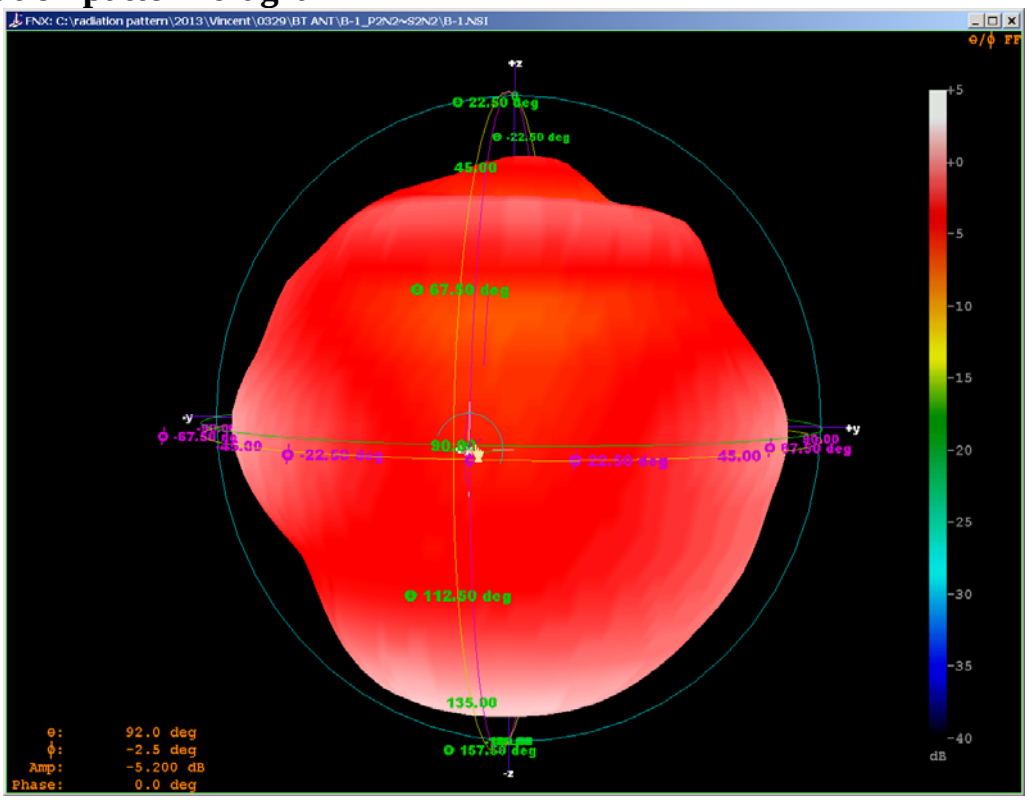

1 2.4000000 GHz 77.264 Ω -22.032 Ω 3.0100 pF
2 2.4400000 GHz 56.124 Ω -6.7828 Ω 9.6165 pF
>3 2.4800000 GHz 43.038 Ω 8.0241 Ω 514.95 pH
Tr2 S44 Log Mag 10.00dB/ Ref 0.000dB [F1]
1 2.4000000 GHz -11.425 dB
2 2.4400000 GHz -21.317 dB
>3 2.4800000 GHz -19.303 dB
50.00
40.00
30.00
20.00
10.00
0.000
-10.00
-20.00
-30.00
-40.00

# The Environment of Antenna Radiation Pattern

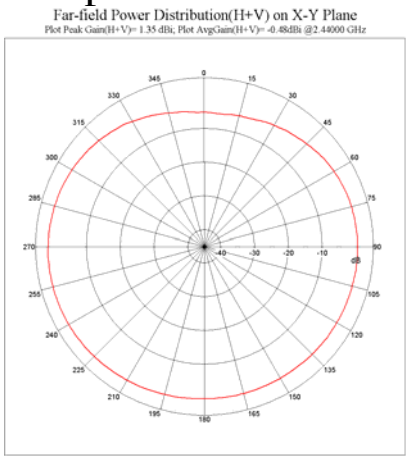


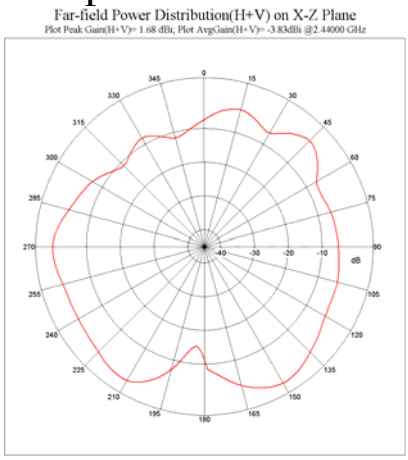
## 3D radiation pattern diagram

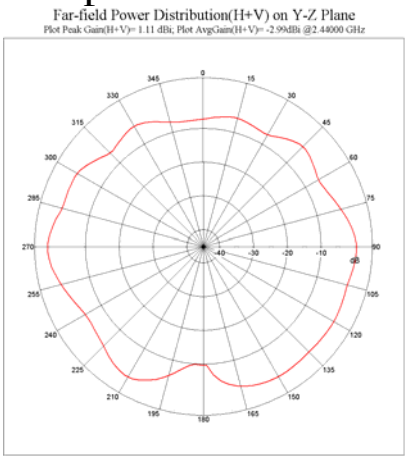



## XY-plane




## XZ-plane




## YZ-plane