

## Product specification

### Quick Reference Data

|                            |                                    |  |
|----------------------------|------------------------------------|--|
|                            | Antenna module on the system board |  |
| Frequency                  | 2.45GHz <sup>*1</sup>              |  |
| 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)                 | 1.7                                |  |
| 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 on the Module board



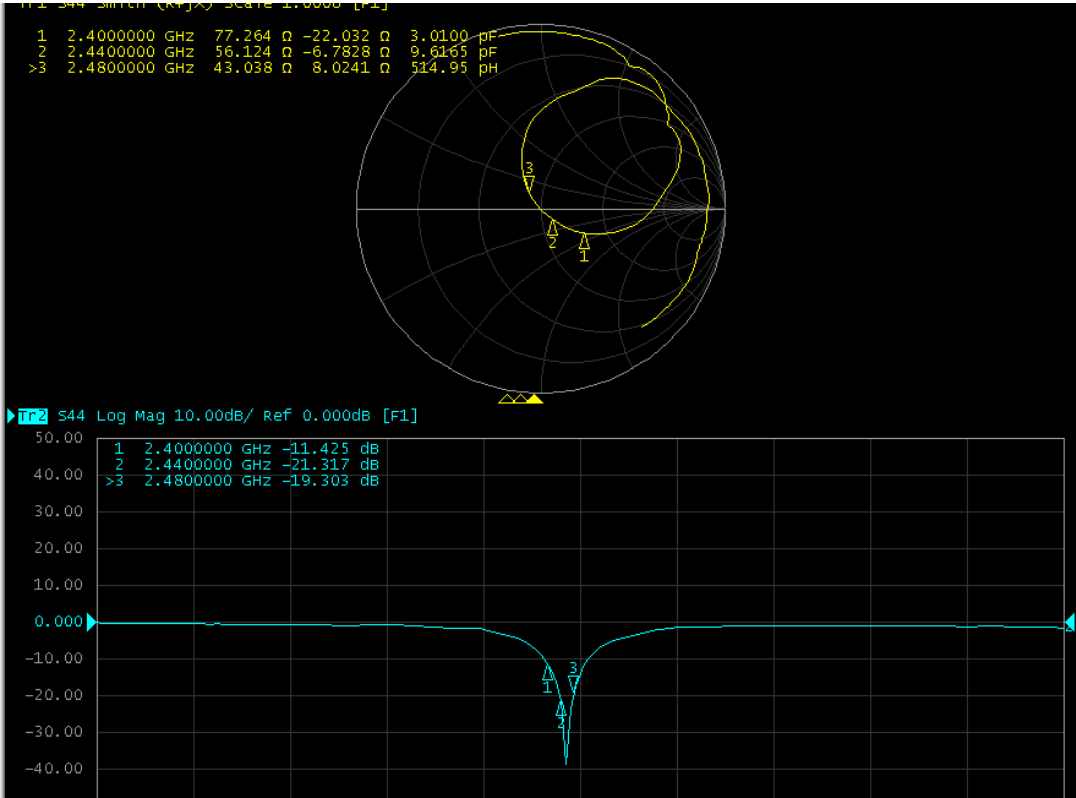
### Antenna Gain

Gain Table

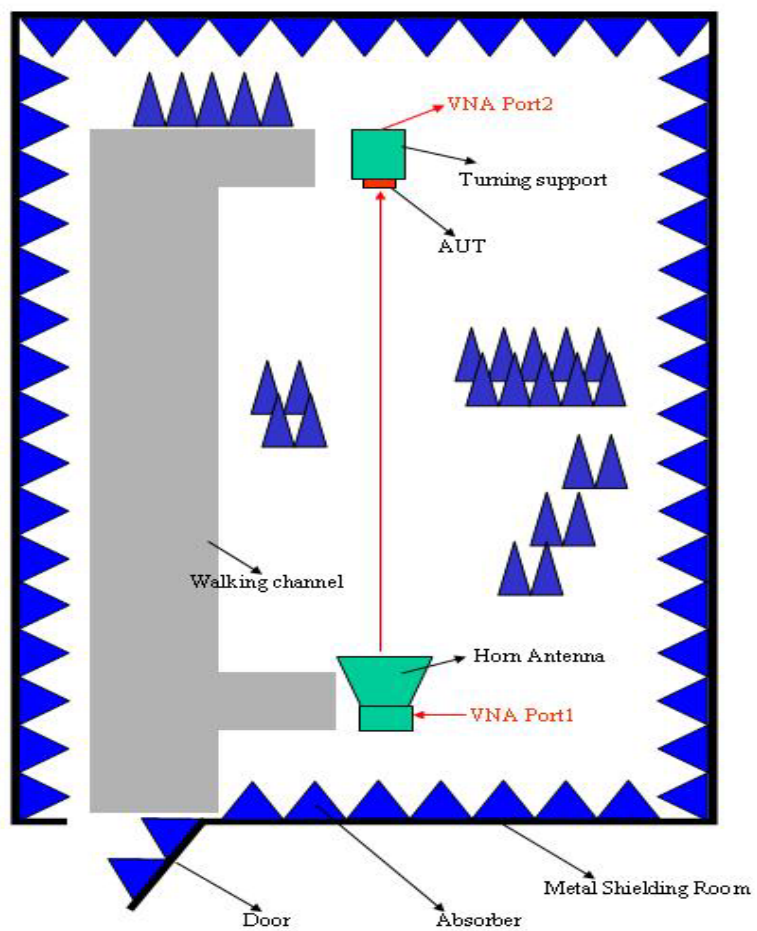
| Unit in dBi @2.44GHz | XY-plane |      | XZ-plane |      | YZ-plane |      | Efficiency |
|----------------------|----------|------|----------|------|----------|------|------------|
|                      | Peak     | Avg. | Peak     | Avg. | Peak     | Avg. |            |

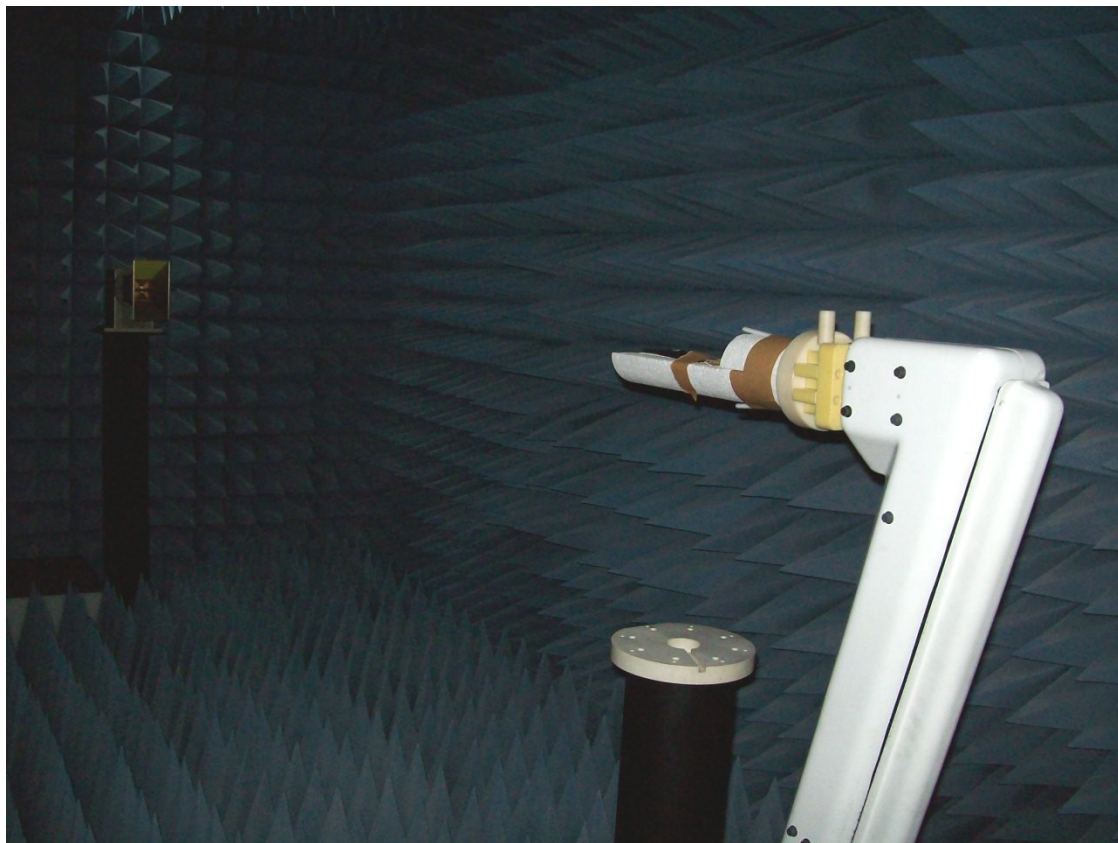
|              |     |      |     |      |     |      |       |
|--------------|-----|------|-----|------|-----|------|-------|
| Module board | 1.3 | -0.5 | 1.7 | -3.8 | 1.1 | -3.0 | 58.5% |
|--------------|-----|------|-----|------|-----|------|-------|

Return Loss

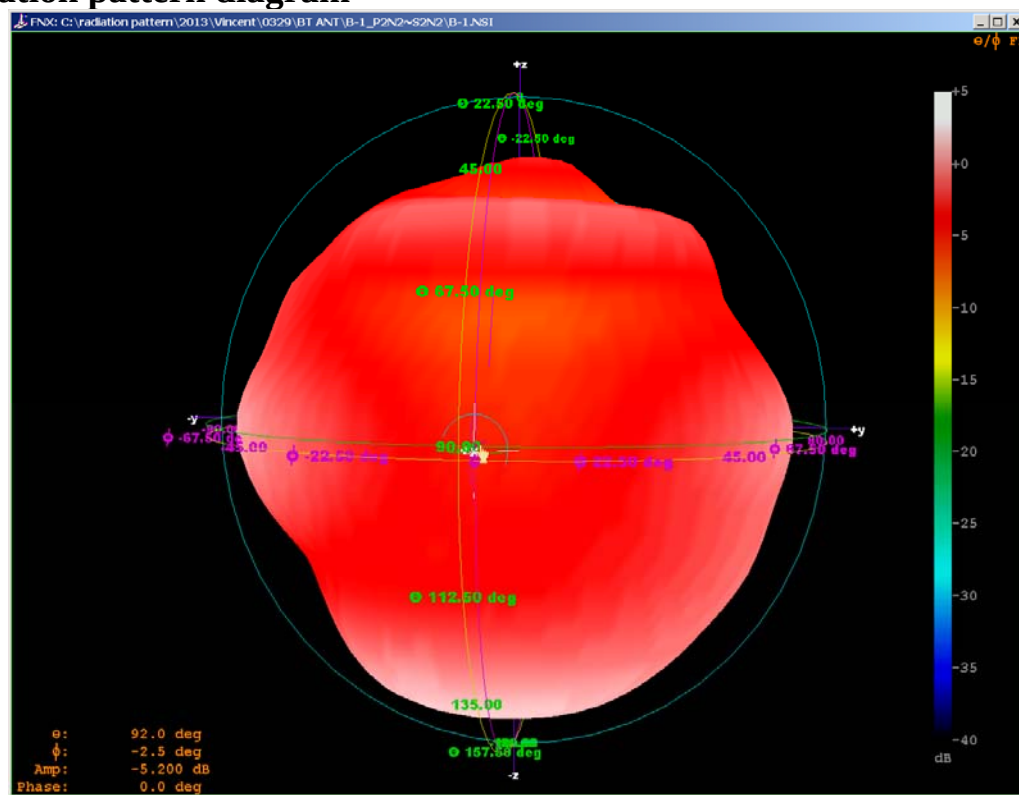


## The Environment of Antenna Radiation Pattern





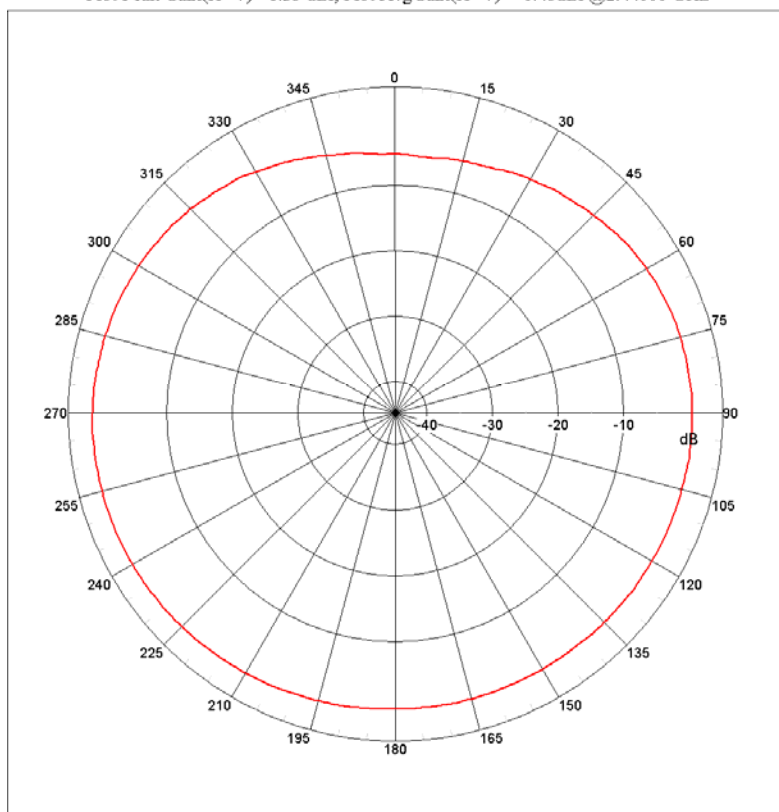
### 3D radiation pattern diagram



XY-plane

### Far-field Power Distribution(H+V) on X-Y Plane

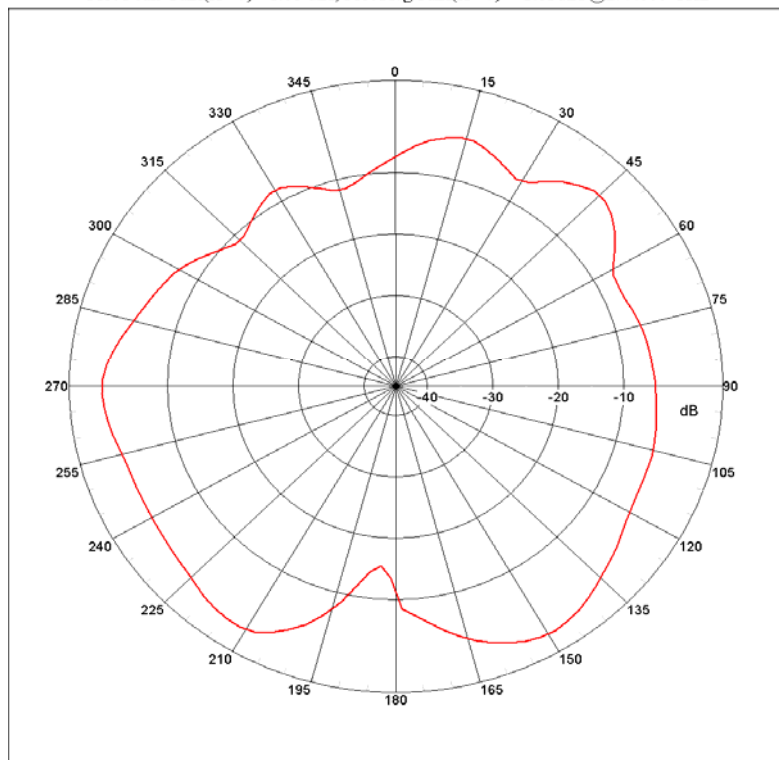
Plot Peak Gain(H+V)= 1.35 dBi; Plot AvgGain(H+V)= -0.48dBi @2.44000 GHz



## XZ-plane

### Far-field Power Distribution(H+V) on X-Z Plane

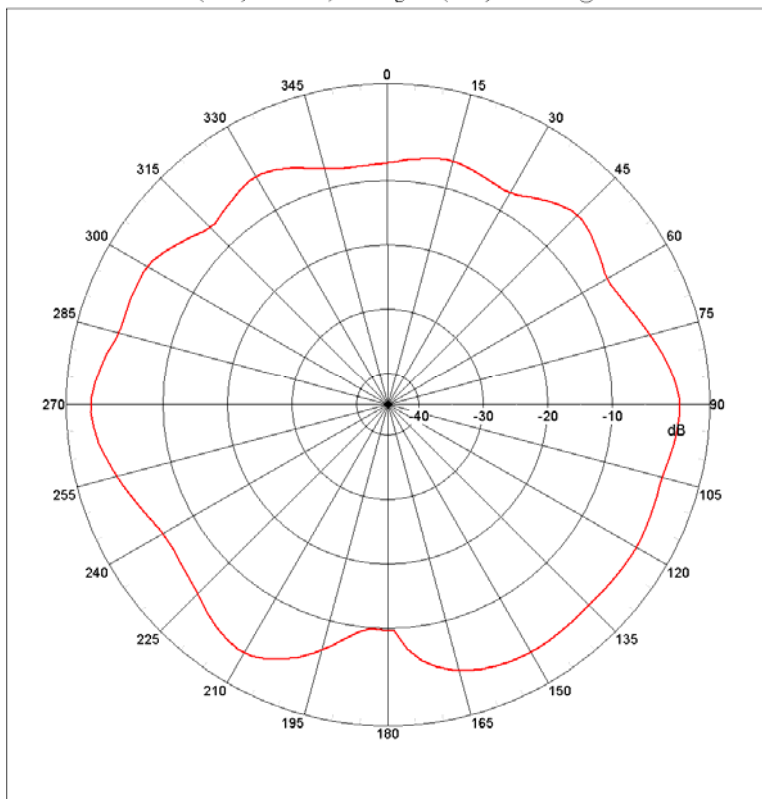
Plot Peak Gain(H+V)= 1.68 dBi; Plot AvgGain(H+V)= -3.83dBi @2.44000 GHz



# 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



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