

# module antenna test report

— ANT manufacturer

公司名称：深圳市聆动智能科技有限公司

Company name: Shenzhen Lingdong Intelligent  
Technology Co., Ltd

地址：深圳市南山区西丽街道西丽社区打石一路深圳国际  
创新谷1栋B座1501

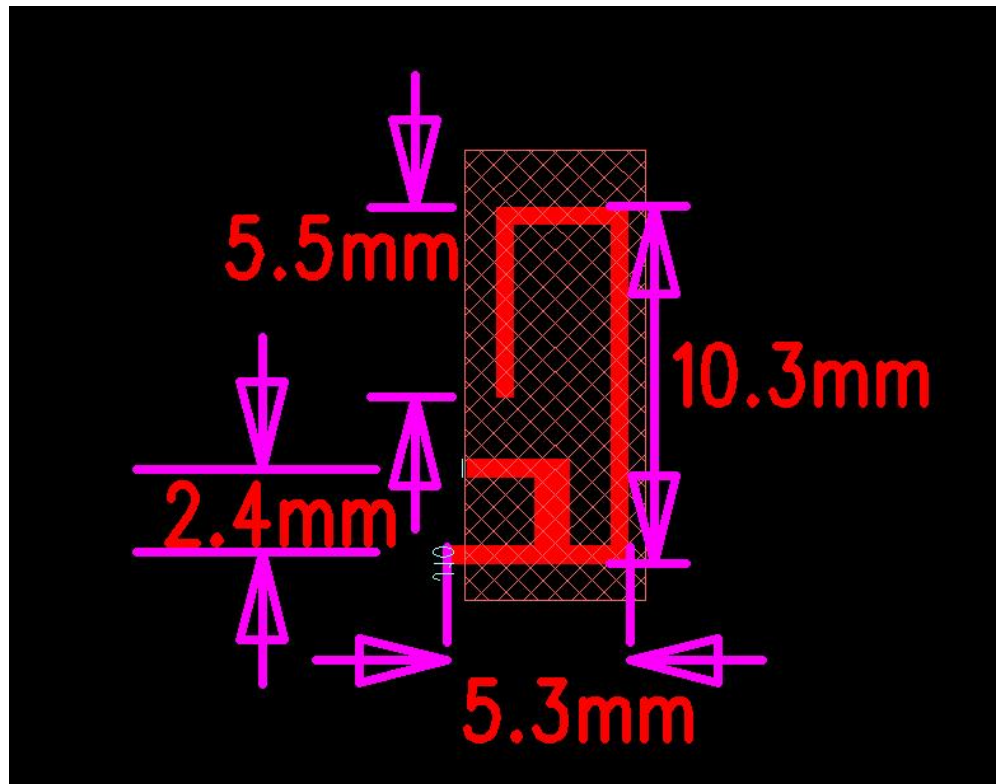
address: 1501, Block B, Building 1, Shenzhen  
International Innovation Valley, Dashi 1st Road, Xili  
Community, Xili Street, Nanshan District, Shenzhen

Model : PI FA

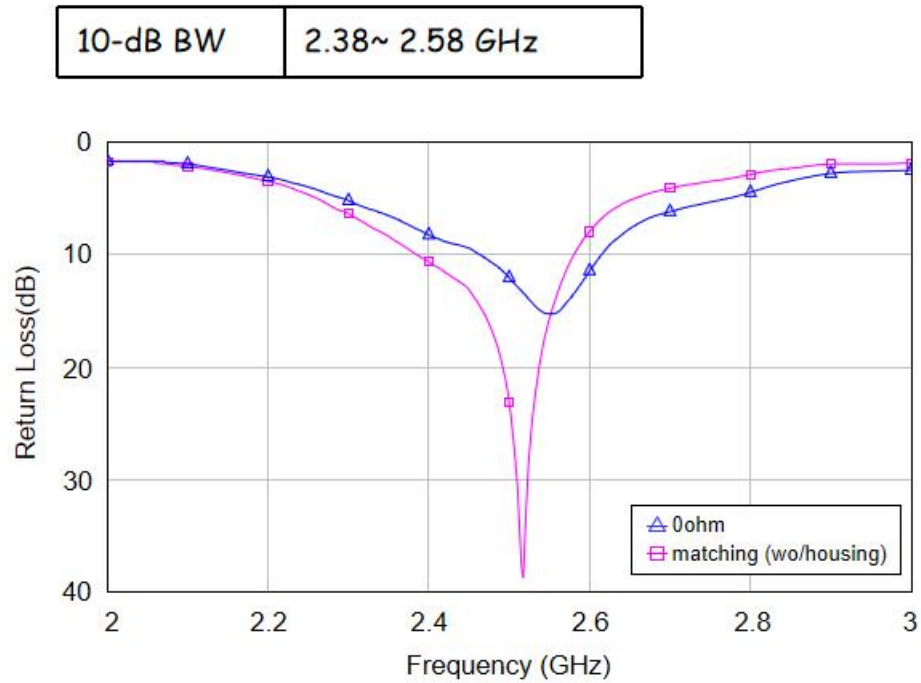
- Antenna structure

- Photo

ANT



- Return Loss



# Radiation Patterns

Frequency : 2400MHz, 2450MHz and 2480MHz

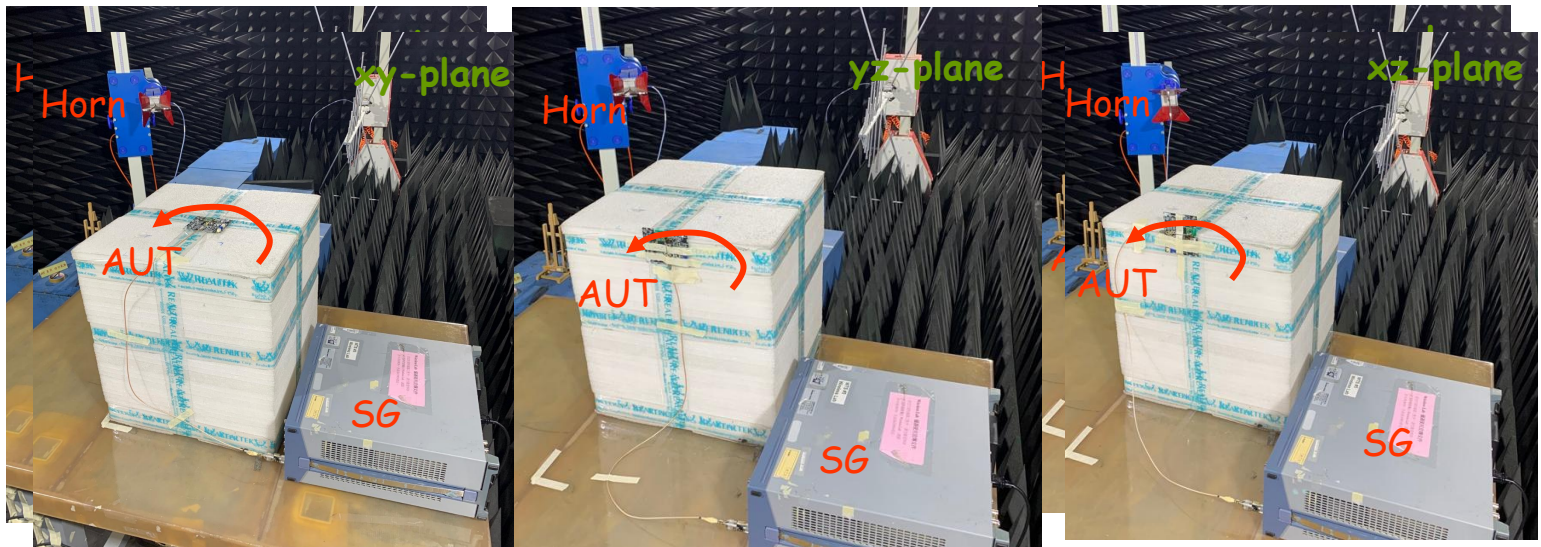
Test plane : xy-plane, xz-plane and yz-plane

Input power : SG 0dBm

Place: RTK 4F chamber

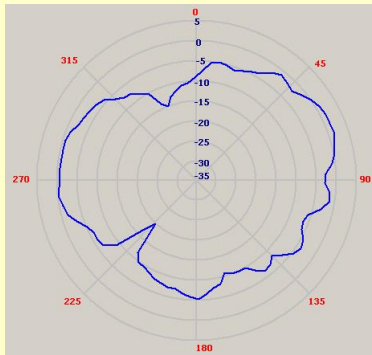
Horn h: horizontal polarization

Horn v: vertical polarization



# Radiation Patterns — 2400MHz (2n2 wo/housing)

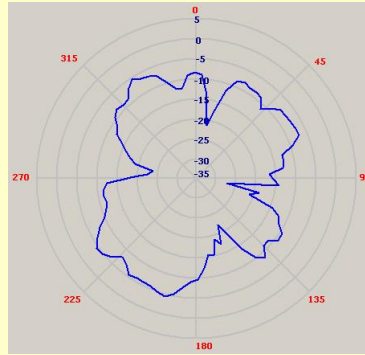
xy-plane



horizontal

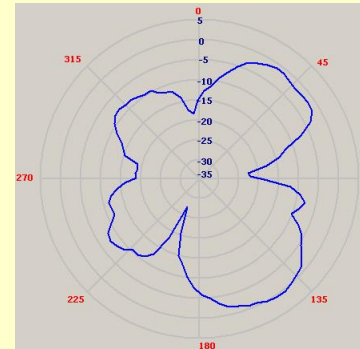
| Pol. | Peak | avg. |
|------|------|------|
| h    | +1.4 | -3.6 |

xz-plane



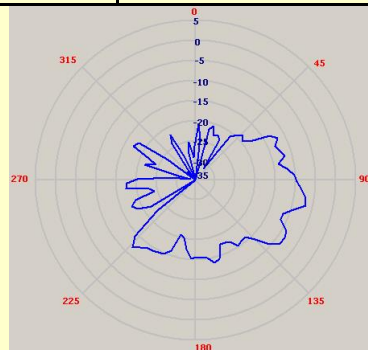
| Pol. | peak | avg. |
|------|------|------|
| h    | -4.6 | -9.3 |

yz-plane

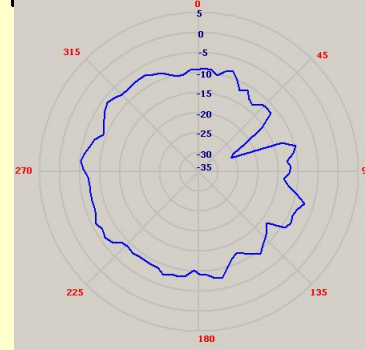


| Pol. | peak | avg. |
|------|------|------|
| h    | +0.4 | -5.8 |

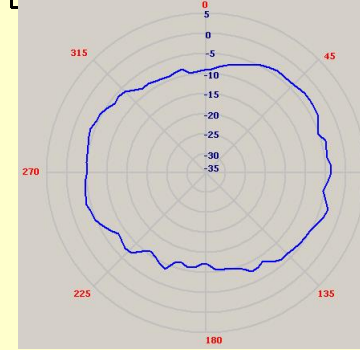
vertical



| Pol. | peak | avg.  |
|------|------|-------|
| v    | -6.9 | -14.8 |



| Pol. | peak | avg. |
|------|------|------|
| v    | -5.4 | -8.8 |

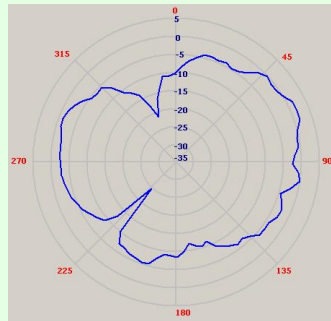


| Pol. | peak | avg. |
|------|------|------|
| v    | -3.2 | -5.9 |

# Radiation Patterns — 2450MHz (2n2 wo/housing)

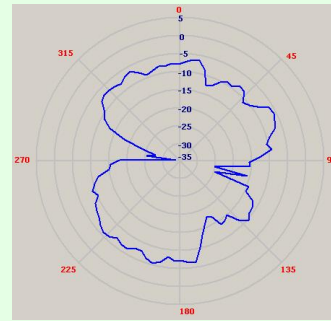
horizontal

xy-plane



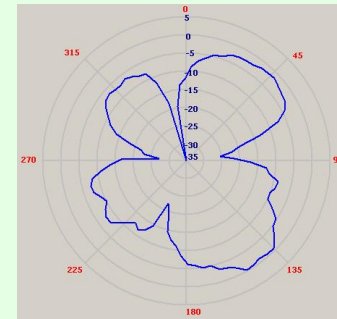
| Pol. | Peak | avg. |
|------|------|------|
| h    | +1.5 | -3.8 |

xz-plane



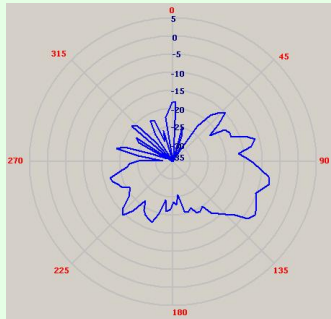
| Pol. | peak | avg. |
|------|------|------|
| h    | -5.7 | -9.0 |

yz-plane

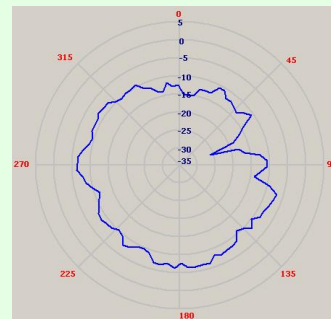


| Pol. | peak | avg. |
|------|------|------|
| h    | -0.5 | -6.2 |

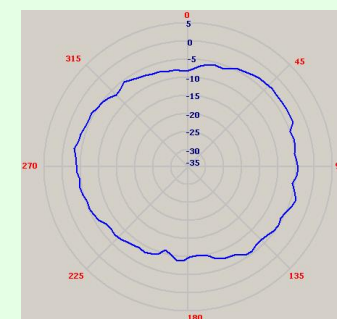
vertical



| Pol. | peak | avg.  |
|------|------|-------|
| v    | -7.5 | -15.8 |

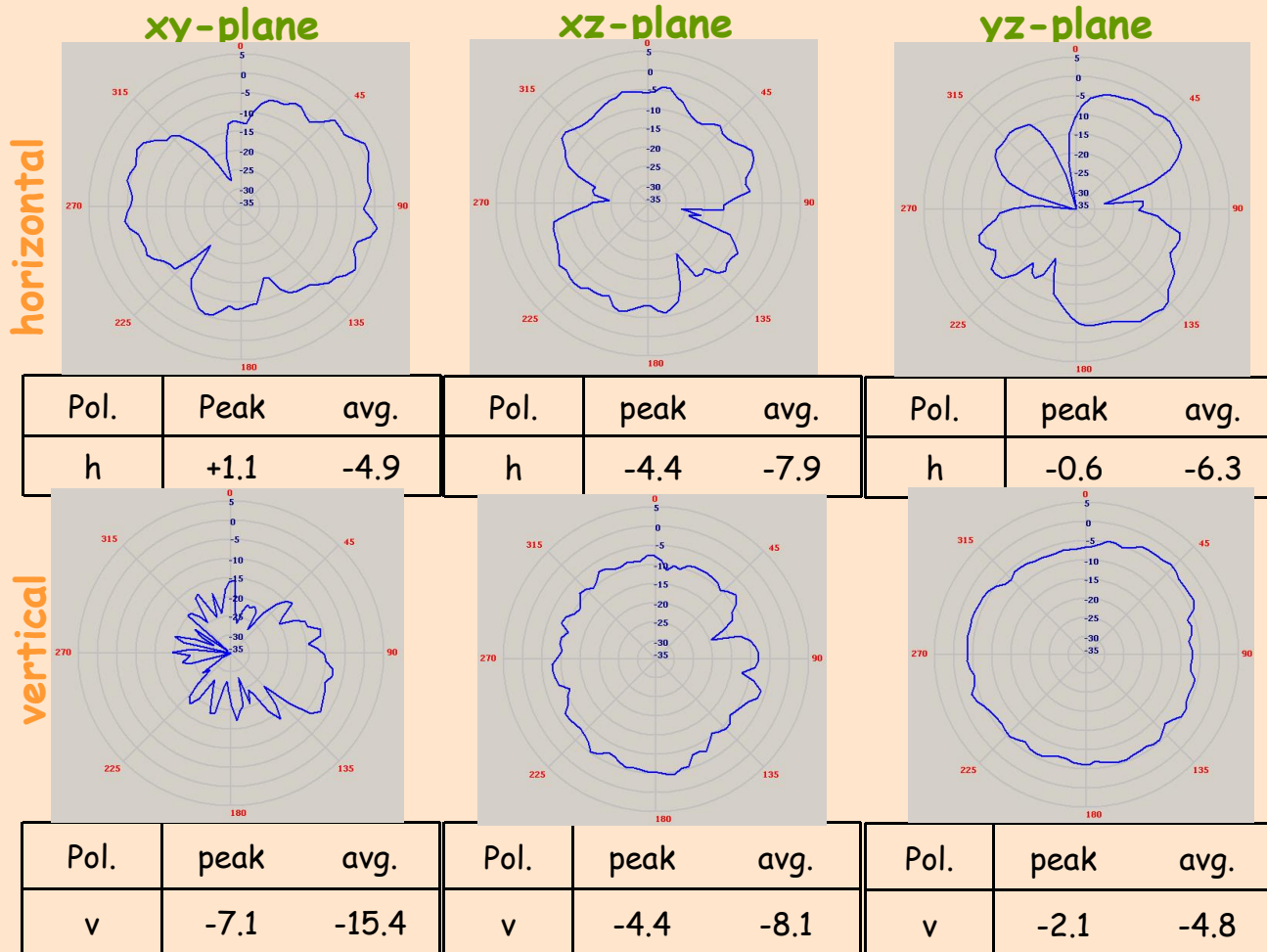


| Pol. | peak | avg. |
|------|------|------|
| v    | -6.4 | -9.4 |



| Pol. | peak | avg. |
|------|------|------|
| v    | -3.3 | -5.5 |

# Radiation Patterns — 2480MHz (2n2 wo/housing)





# Antenna gain table

| Freq.      | 2400MHz  |      |      |       |          |      |      |      |          |      |      |      | Efficiency (%) |
|------------|----------|------|------|-------|----------|------|------|------|----------|------|------|------|----------------|
| Plane      | xy-plane |      |      |       | xz-plane |      |      |      | yz-plane |      |      |      |                |
| Pol.       | h        |      | v    |       | h        |      | v    |      | h        |      | v    |      |                |
| Gain (dBi) | peak     | avg. | peak | avg.  | peak     | avg. | peak | avg. | peak     | avg. | peak | avg. |                |
|            | +1.4     | -3.6 | -6.9 | -14.8 | -4.6     | -9.3 | -5.4 | -8.8 | +0.4     | -5.8 | -3.2 | -5.9 | 41.3           |

| Freq.      | 2450MHz  |      |      |       |          |      |      |      |          |      |      |      | Efficiency (%) |
|------------|----------|------|------|-------|----------|------|------|------|----------|------|------|------|----------------|
| Plane      | xy-plane |      |      |       | xz-plane |      |      |      | yz-plane |      |      |      |                |
| Pol.       | h        |      | v    |       | h        |      | v    |      | h        |      | v    |      |                |
| Gain (dBi) | peak     | avg. | peak | avg.  | peak     | avg. | peak | avg. | peak     | avg. | peak | avg. |                |
|            | +1.5     | -3.8 | -7.5 | -15.8 | -5.7     | -9.0 | -6.4 | -9.4 | -0.5     | -6.2 | -3.3 | -5.5 | 40.1           |

| Freq.      | 2480MHz  |      |      |       |          |      |      |      |          |      |      |      | Efficiency (%) |
|------------|----------|------|------|-------|----------|------|------|------|----------|------|------|------|----------------|
| Plane      | xy-plane |      |      |       | xz-plane |      |      |      | yz-plane |      |      |      |                |
| Pol.       | h        |      | v    |       | h        |      | v    |      | h        |      | v    |      |                |
| Gain (dBi) | peak     | avg. | peak | avg.  | peak     | avg. | peak | avg. | peak     | avg. | peak | avg. |                |
|            | +1.1     | -4.9 | -7.1 | -15.4 | -4.4     | -7.9 | -4.4 | -8.1 | -0.6     | -6.3 | -2.1 | -4.8 | 41.1           |