

# 承 認 書

## SPECIFICATION FOR APPROVAL

客戶名稱  
 CUSTOMER : LUCKY SOUND TECHNOLOGY CO.,LTD

客戶料號  
 CUSTOMER'S P/N :

料號  
 PART NUMBER : WAN3216F245W36

規格  
 DESCRIPTION : Chip Antenna 3216 M-Ant 2.45G Type 36

版本  
 VERSION : V2.2

日期  
 ISSUE DATE : 2018/01/30

|                           |
|---------------------------|
| 客戶承認<br>CUSTOMER APPROVED |
|                           |

| 工 程 部<br>R&D CENTER |               |             |
|---------------------|---------------|-------------|
| 承認<br>APPROVAL      | 確認<br>CHECKED | 製作<br>DRAWN |
| Ray                 | James         | Thor        |



萬誠科技股份有限公司

112 台北市北投區中央南路二段 36 號 3 樓

電話: (02) 2898-2220

傳真: (02) 2898-5055

OneWave Electronic Co., Ltd.

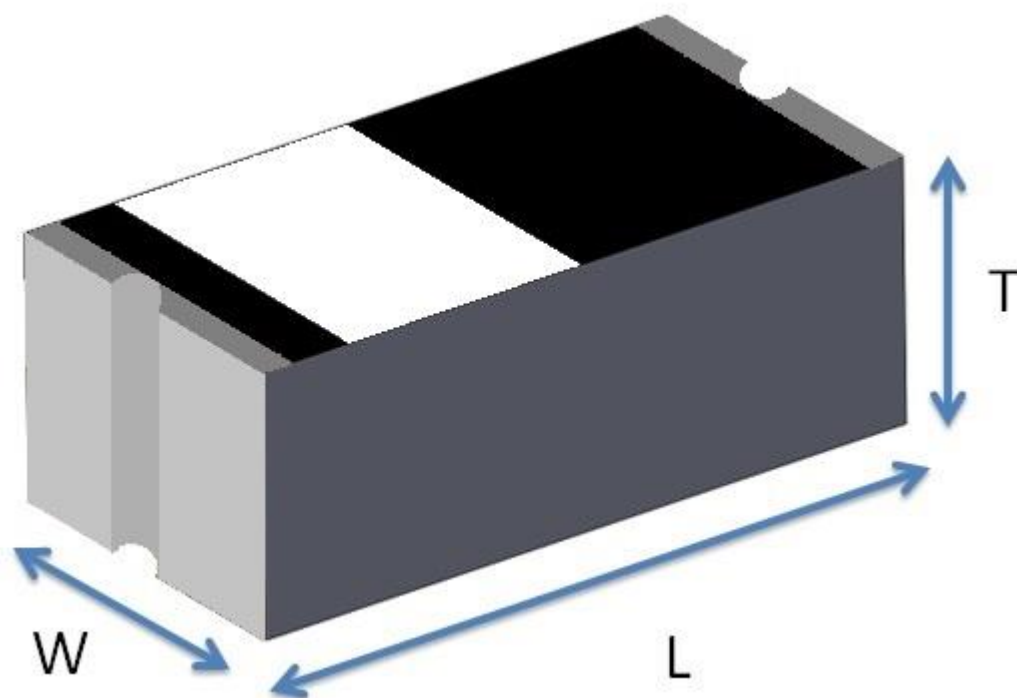
2F., No.163, Sec. 1, Xi'an St., Beitou Dist.,  
Taipei City 112, Taiwan

TEL: +886 2 2898-2220

FAX: +886 2 2898-5055

# 3216 Chip antenna

For Bluetooth / WLAN Applications



P/N: WAN3216F245W36

|   | Dimension (mm)  |
|---|-----------------|
| L | $3.23 \pm 0.20$ |
| W | $1.66 \pm 0.20$ |
| T | $1.23 \pm 0.20$ |

## Part Number Information

WAN   3216   F   245   W   36  
 A                      B                      C                      D                      E                      F

|   |                   |                           |
|---|-------------------|---------------------------|
| A | Product Series    | Antenna                   |
| B | Dimension L x W   | 3.2X1.6mm (+-0.2mm)       |
| C | Material          | High K material           |
| D | Working Frequency | 2.4 ~ 2.5GHz              |
| E | Feeding mode      | Monopole & Single Feeding |
| F | Antenna type      | Type=36                   |

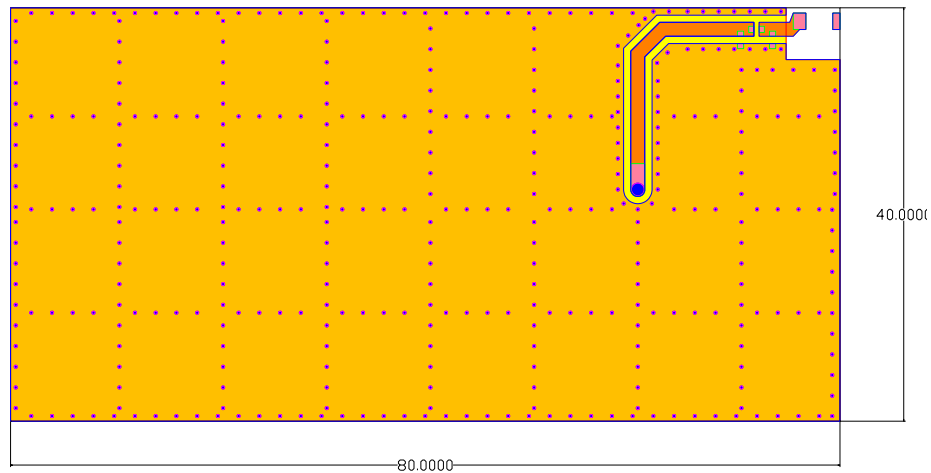
### 1. Electrical Specification

| Specification                 |                    |      |
|-------------------------------|--------------------|------|
| Part Number                   | WAN3216F245W36     |      |
| Central Frequency             | 2450               | MHz  |
| Bandwidth                     | 100 (Min.)         | MHz  |
| Return Loss                   | -6.5 (Max)         | dB   |
| Peak Gain                     | 2.71               | dBi  |
| Impedance                     | 50                 | Ohm  |
| Operating Temperature         | -40 ~ +85          | °C   |
| Maximum Power                 | 4                  | W    |
| Resistance to Soldering Heats | 10 ( @ 260°C )     | sec. |
|                               |                    |      |
| Polarization                  | Linear             |      |
| Azimuth Beamwidth             | Omni-directional   |      |
| Termination                   | Cu / Sn (Leadless) |      |

Remark : Bandwidth & Peak Gain was measured under evaluation board of next page

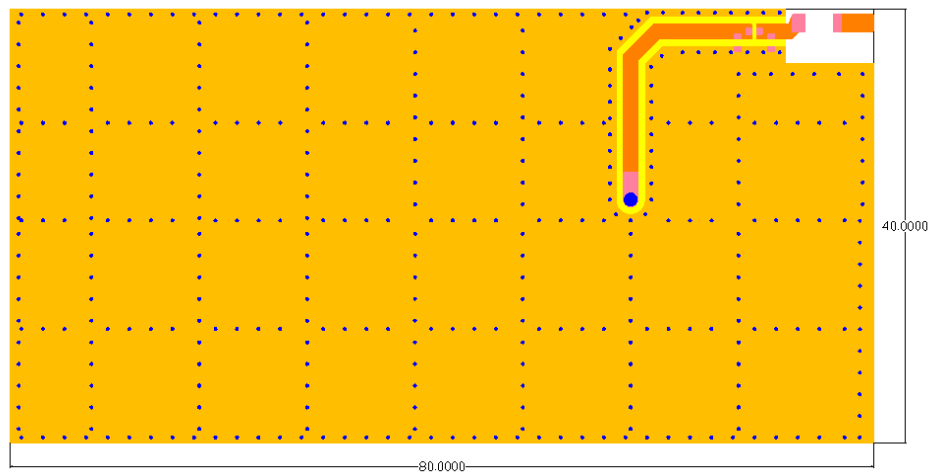
## 2. Recommended PCB Pattern

### 1.Evaluation Board Dimension



### 2.Evaluation Board Dimension

(若淨空區夠大，建議使用此 Layout，效能較佳)



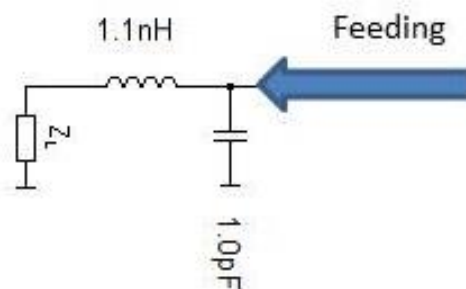
Unit : mm



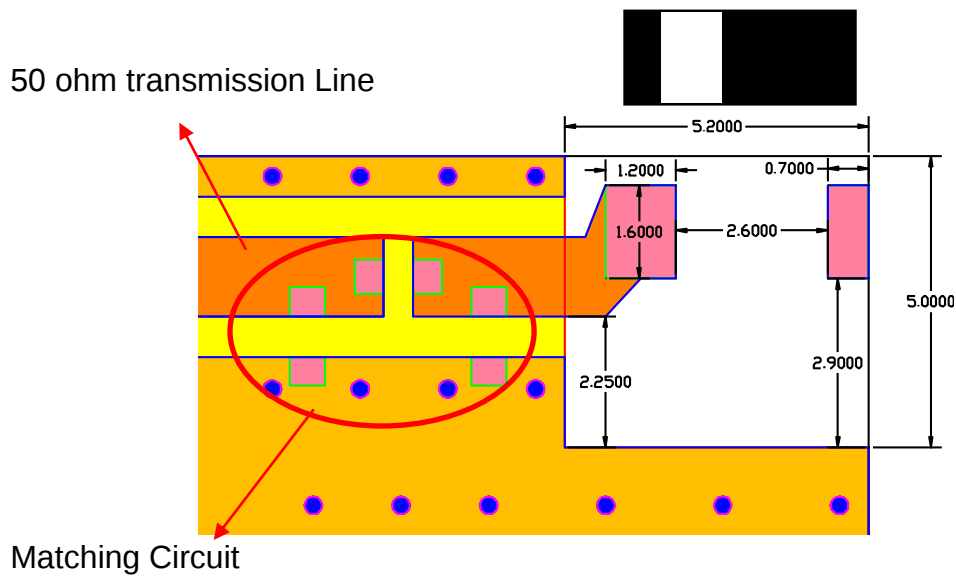
### Suggested Matching

重要資訊：

匹配元件建議使用精準度±1%以下的電感、電容、電阻

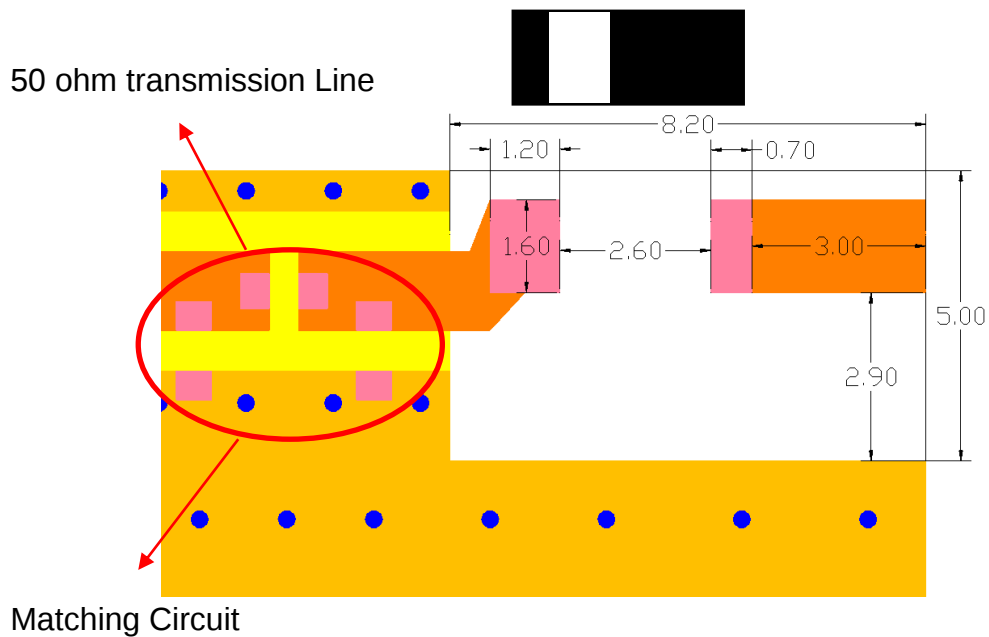


# 1.Layout Dimensions in Clearance area(Size=5.2\*5.0mm)

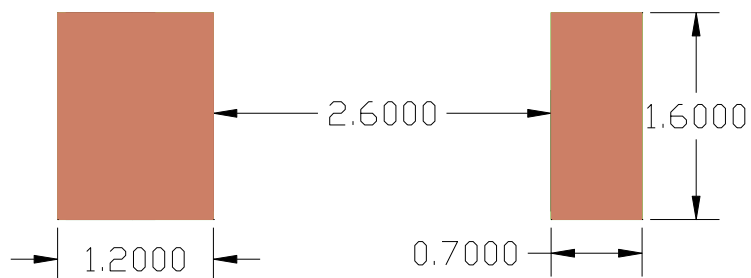


# 2.Layout Dimensions in Clearance area(Size=8.2\*5.0mm)

(若淨空區夠大，建議使用此 Layout，效能較佳)

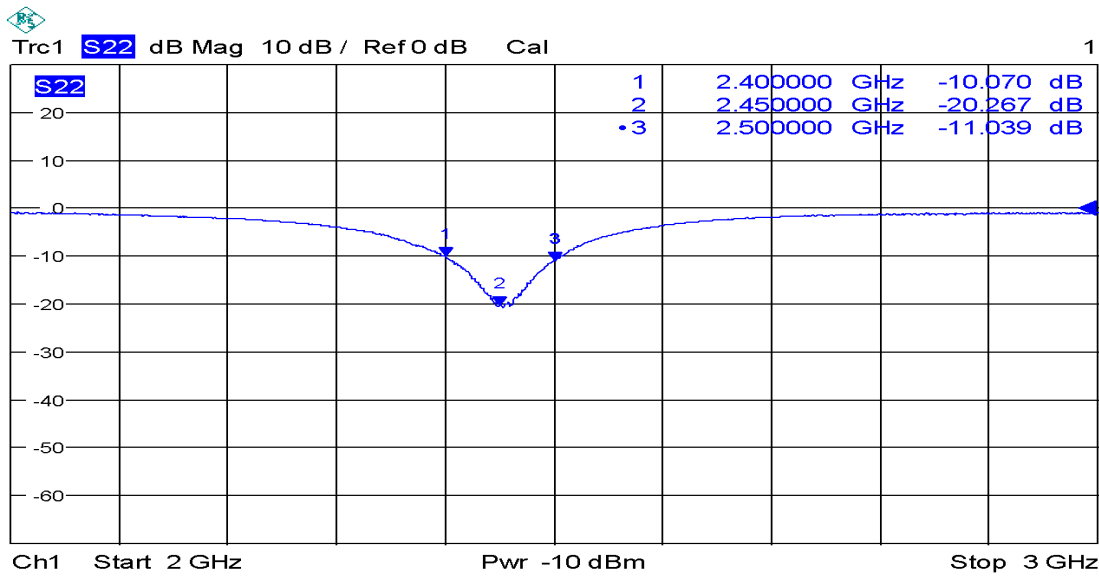


FootPrint (Unit : mm)



3. Measurement Results

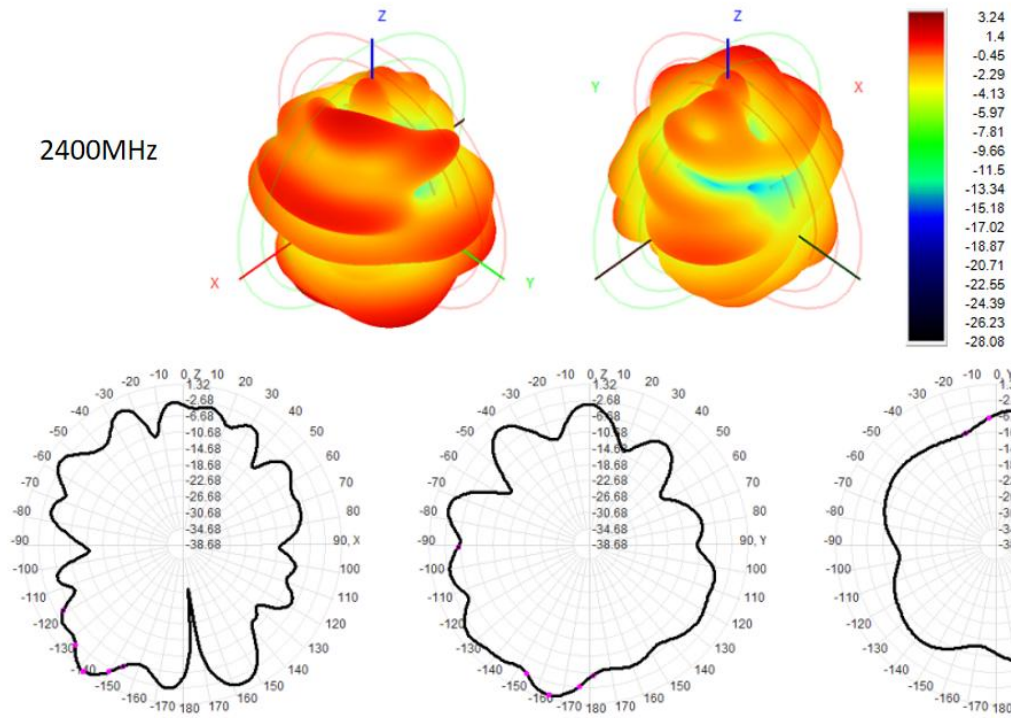
Return Loss



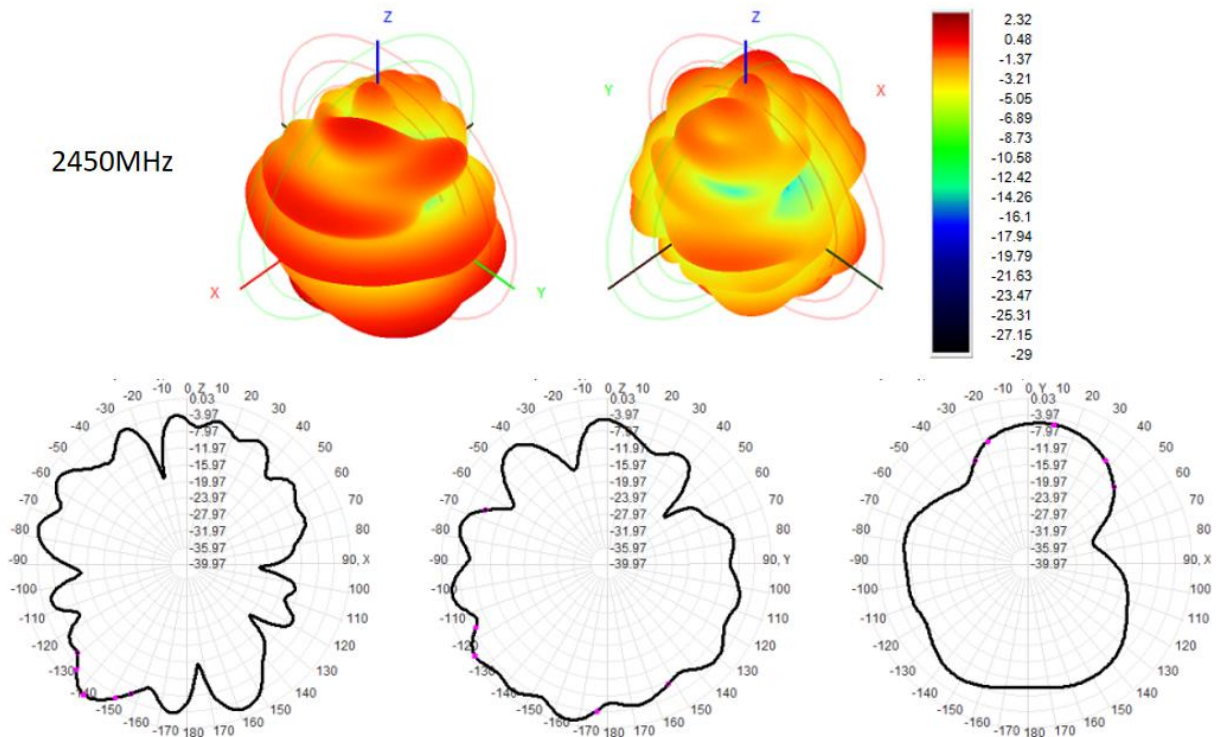
# Radiation Pattern

**ONEWAVE**

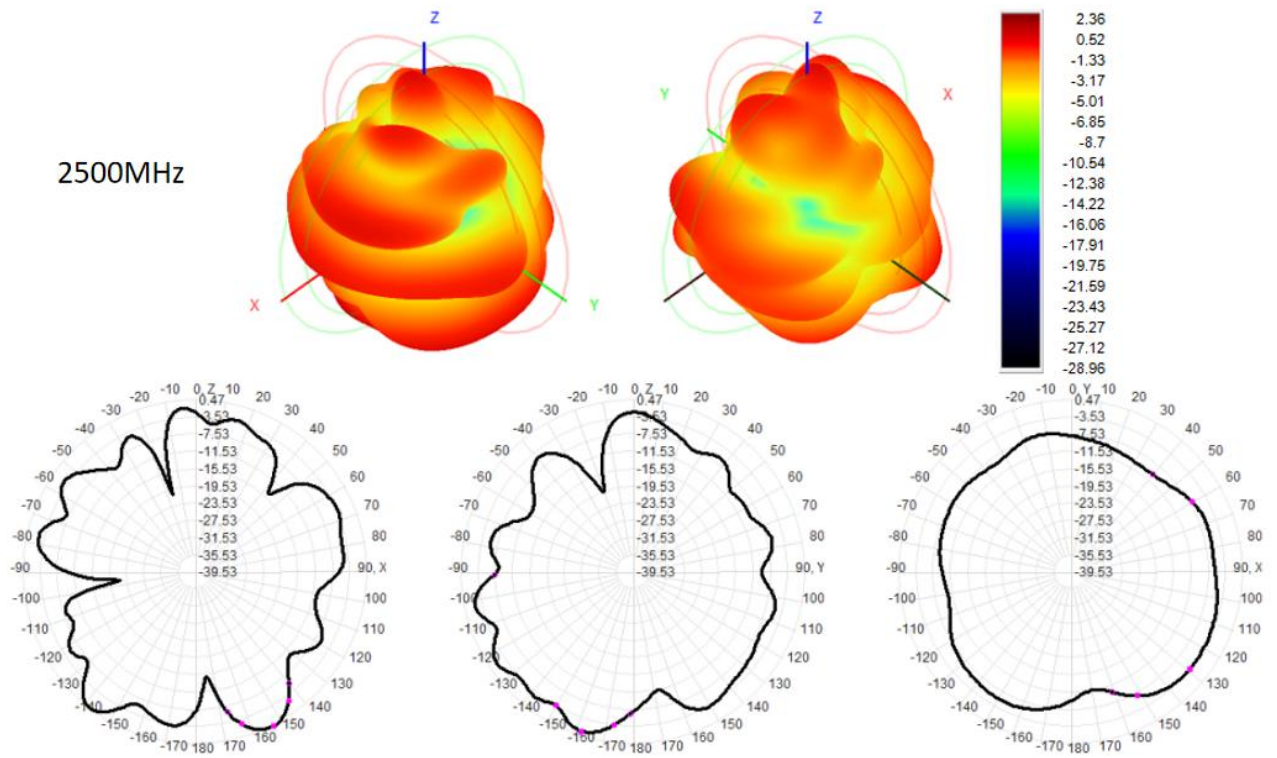
2400MHz



2450MHz

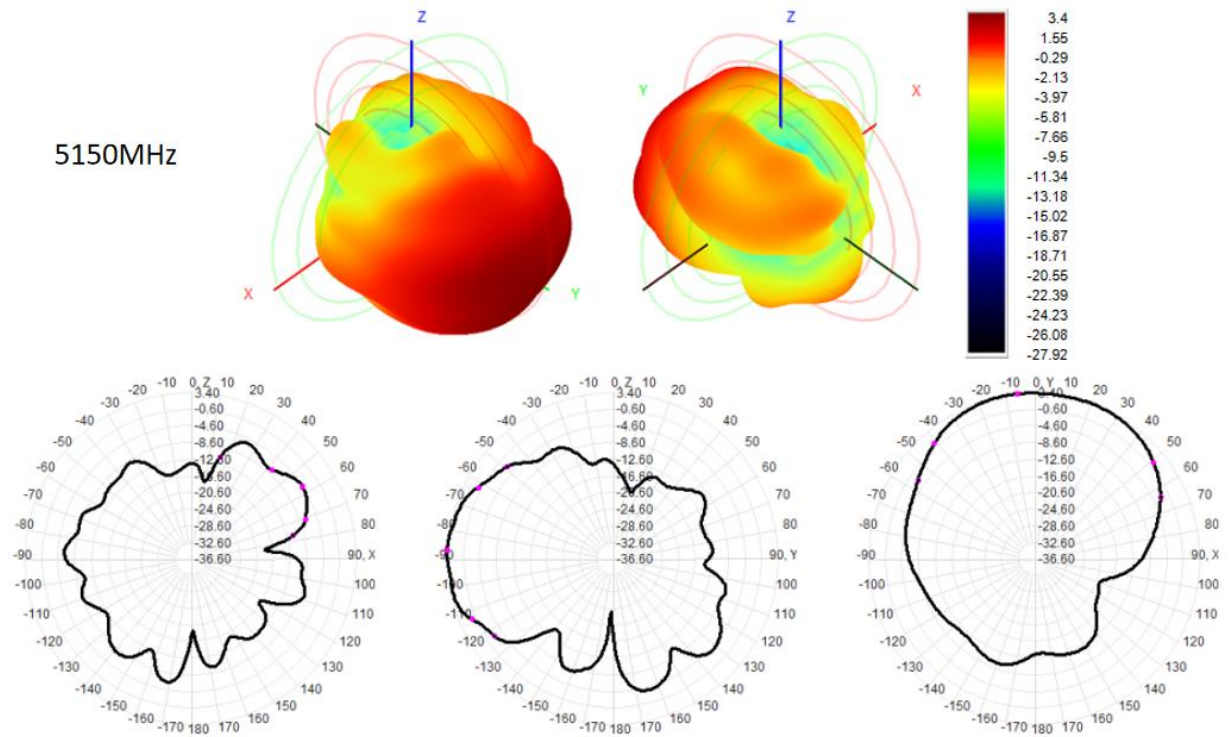


2500MHz

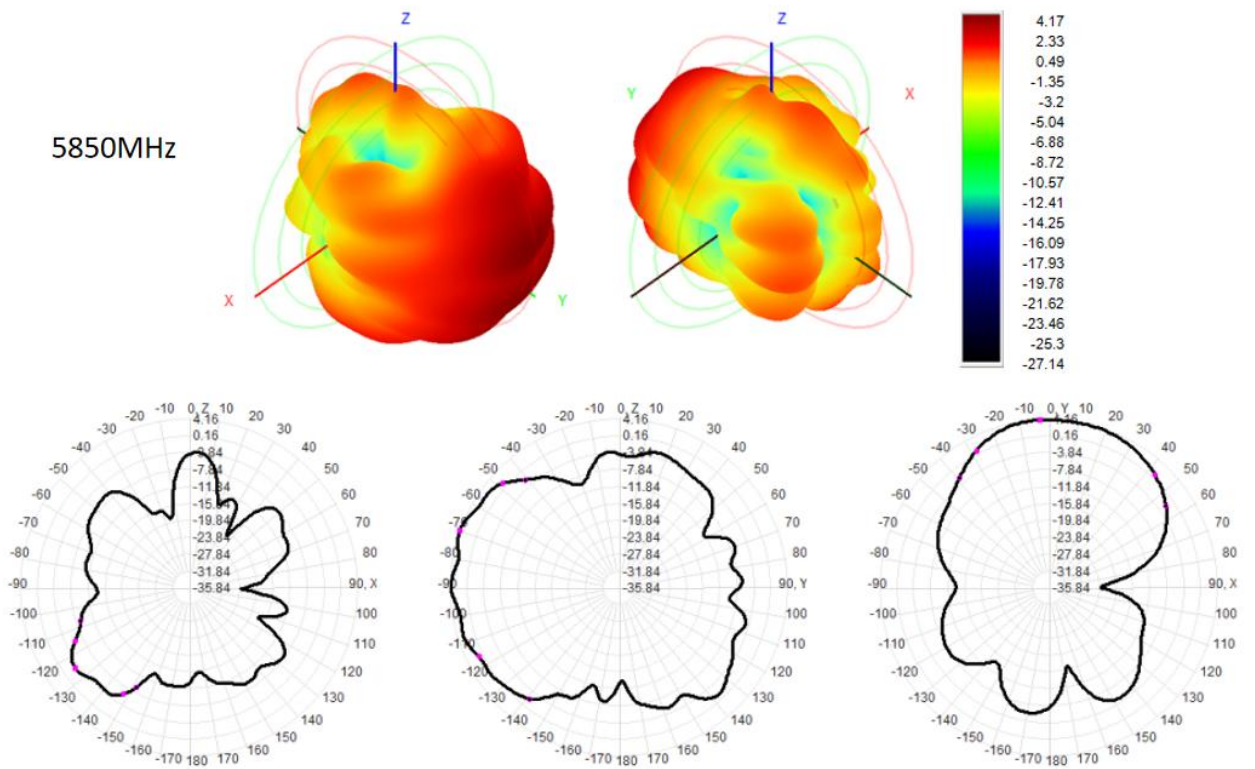


|         | Efficiency | Peak Gain | Directivity |
|---------|------------|-----------|-------------|
| 2400MHz | 55.21 %    | 1.45 dBi  | 5.32 dBi    |
| 2450MHz | 66.45 %    | 2.71 dBi  | 5.21 dBi    |
| 2500MHz | 57.53 %    | 1.98 dBi  | 5.29 dBi    |

5150MHz



5850MHz



|         | Efficiency | Peak Gain | Directivity |
|---------|------------|-----------|-------------|
| 5150MHz | 32.45 %    | 1.94dBi   | 4.48 dBi    |
| 5850MHz | 40.68 %    | 2.02 dBi  | 4.19dBi     |