



# Antenna Test Report

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# Test equipment

Wireless communications test set: CMW500

Network Analyzer: Agilent 5071B

Anechoic Chamber : SATIMO SG24

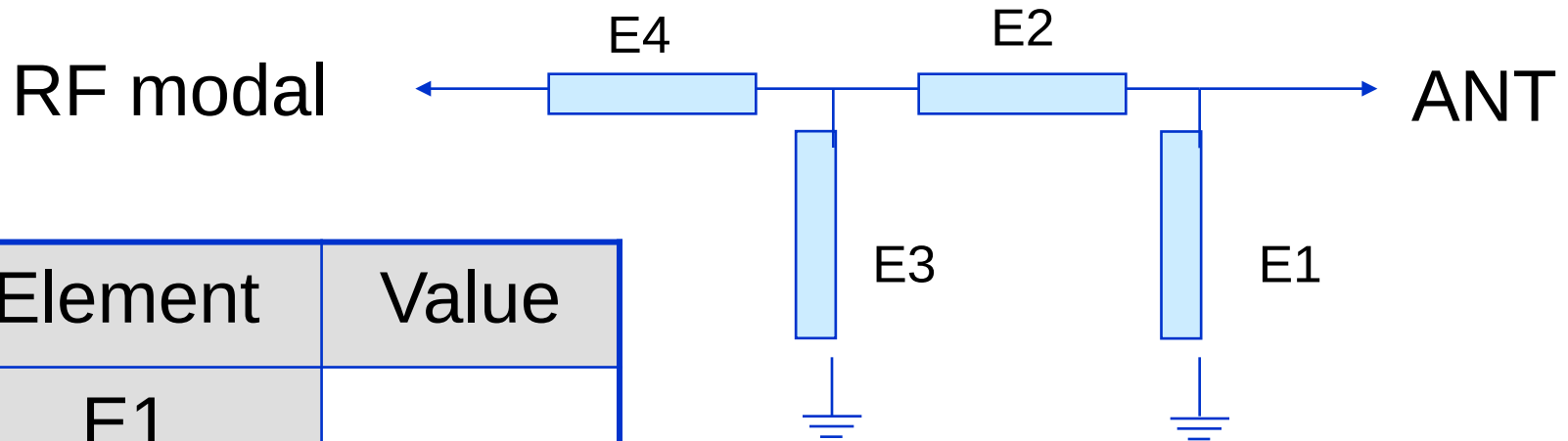


# Antenna information

|               |                                                                                            |
|---------------|--------------------------------------------------------------------------------------------|
| Customer      | Boat of wealth                                                                             |
| Antenna model | FPC                                                                                        |
| Antenna type  | PIFA                                                                                       |
| Antenna band  | GSM900/1800/850/1900<br>WCDMA-B1/B2/B4/B5/B8<br>LTE-B1/2/3/4/5/7/8/12/13/17/28/66/38/40/41 |

|                          |         |           |           |
|--------------------------|---------|-----------|-----------|
| frequency range<br>(MHz) | 703–960 | 1710–2170 | 2300–2690 |
| VSWR                     | <3.5    | <3.5      | <3.5      |

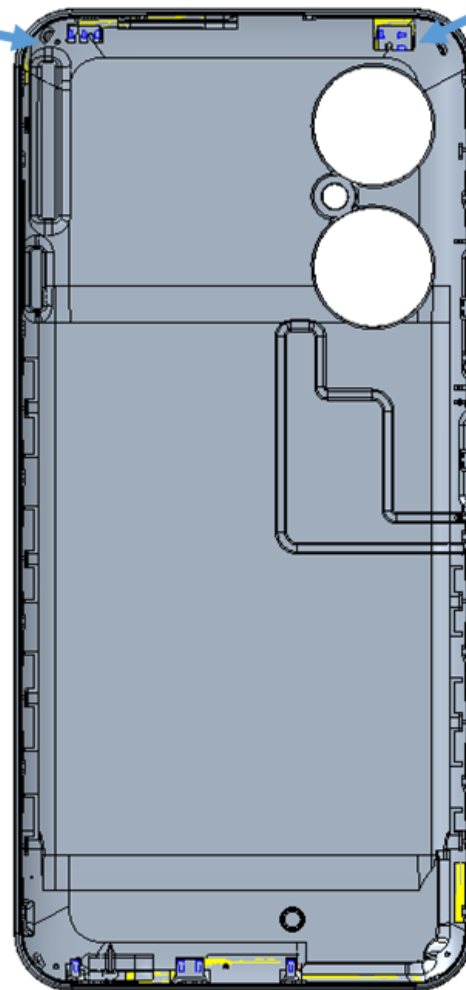
# Matching circuit (No modification)



| Element | Value |
|---------|-------|
| E1      |       |
| E2      |       |
| E3      |       |
| E4      |       |

4G Diversity antenna(PIFA)

GPS/WIFI/BT (PIFA)



2G/3G/4G Main Antenna(PIFA)

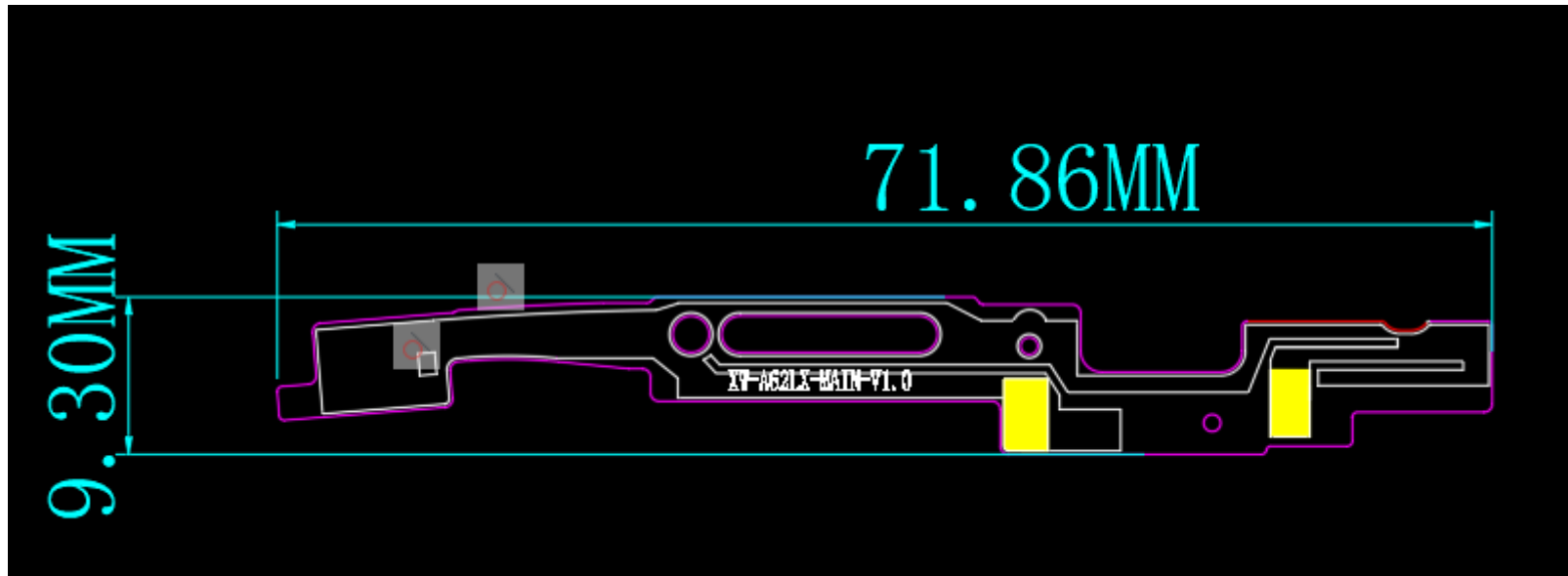
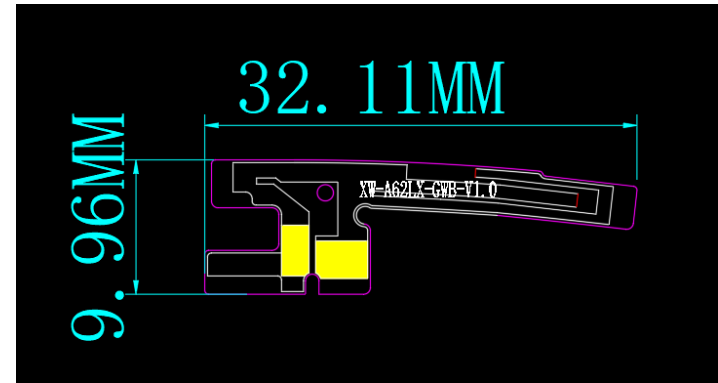
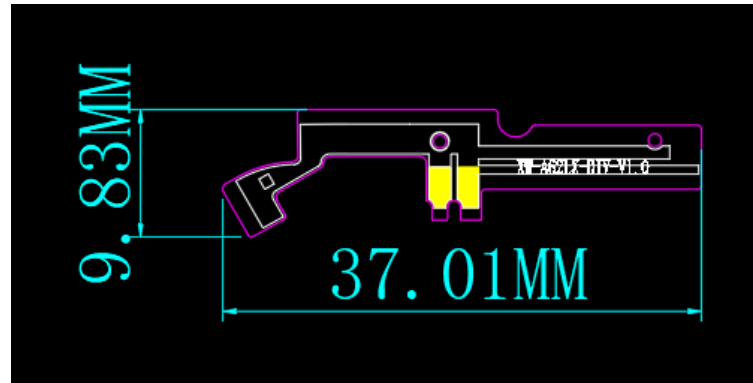
# LTE Antenna gain

All of Implementation antenna  
Main antenna(Antenna Label:A):  
LTE B5/B7/B8/B12/B13/B17/B28/B38/B41 RX&TX  
WCDMA B5/B8 RX&TX  
GSM B5/B8 RX&TX  
DIV antenna(Antenna Label:B):  
LTE B1/B2/B3/B4/B40/B66 RX&TX  
LTE B7/B38/B41 RX  
WCDMA B1/B2/B3/B4 RX&TX  
GSM B2/B3 RX&TX  
WiFi/BT 2.4~2.5G/5.1~5.8G/2412MHz~2472MHz&/5100MHz~5800MHz  
GPS: 1575.42 MHz

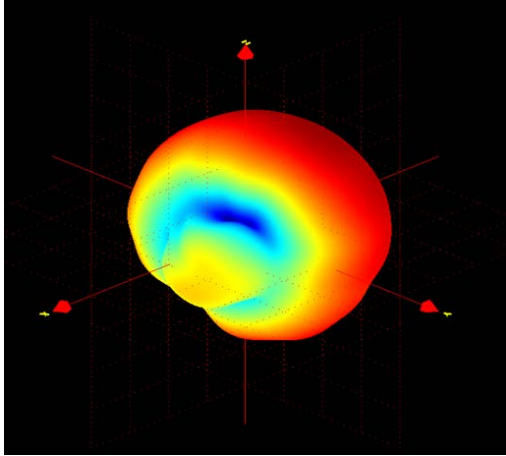
Antenna Max. Peak Gain:

|                                   |                                     |
|-----------------------------------|-------------------------------------|
| EGSM900 (880-960MHz) :-1.11dBi    | LTE-B8 (880-960MHz) :-1.11dBi       |
| GSM850 (824-894MHz) :-1.12dBi     | LTE-B12 (699-746MHz) :-1.31dBi      |
| DCS1800 (1710-1880MHz) :-0.78dBi  | LTE-B13 (777-756MHz) :-1.28dBi      |
| PCS1900 (1850-1990MHz) :-0.71dBi  | LTE-B17 (880-746MHz) :-1.31dBi      |
| WCDMA-B1 (1920-2170MHz) :-0.83dBi | LTE-B28 (703-803MHz) :-1.33dBi      |
| WCDMA-B2 (1850-1990MHz) :-0.71dBi | LTE-B38 (2570-2620MHz) :-1.22dBi    |
| WCDMA-B4 (1710-2155MHz) :-0.73dBi | LTE-B40 (2300-2400MHz) :-1.83dBi    |
| WCDMA-B5 (824-894MHz) :-1.12dBi   | LTE-B41 (2496-2690MHz) :-1.22dBi    |
| WCDMA-B8 (880-960MHz) :-1.11dBi   | LTE-B66 (1710-2200MHz) :-0.78dBi    |
| LTE-B1 (1920-2170MHz) :-0.83dBi   | WIFI(5G) (5180-5850MHz) :-1.77dBi   |
| LTE-B2 (1850-1990MHz) :-0.71dBi   | WIFI(2.4G) (2412-2472MHz) :-1.16dBi |
| LTE-B3 (1710-1880MHz) :-0.78dBi   | BT (2400-2500MHz) :-1.18dBi         |
| LTE-B4 (1710-2155MHz) :-0.78dBi   | GPS (1570-1620MHz) :-1.26dBi        |
| LTE-B5 (824-894MHz) :-1.12dBi     |                                     |
| LTE-B7 (2500-2690MHz) :-1.22dBi   |                                     |

# Antenna dimension drawing



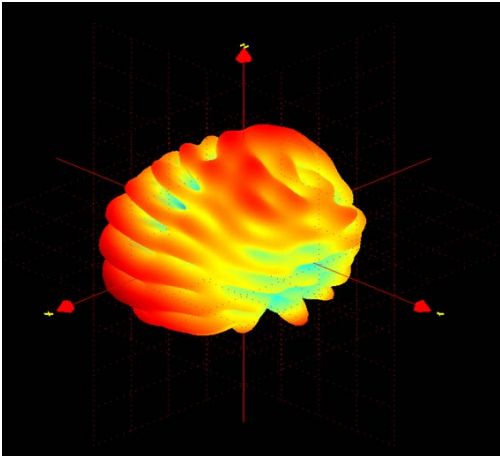
## 2.3 Main antenna Peak Gain(880~960M)



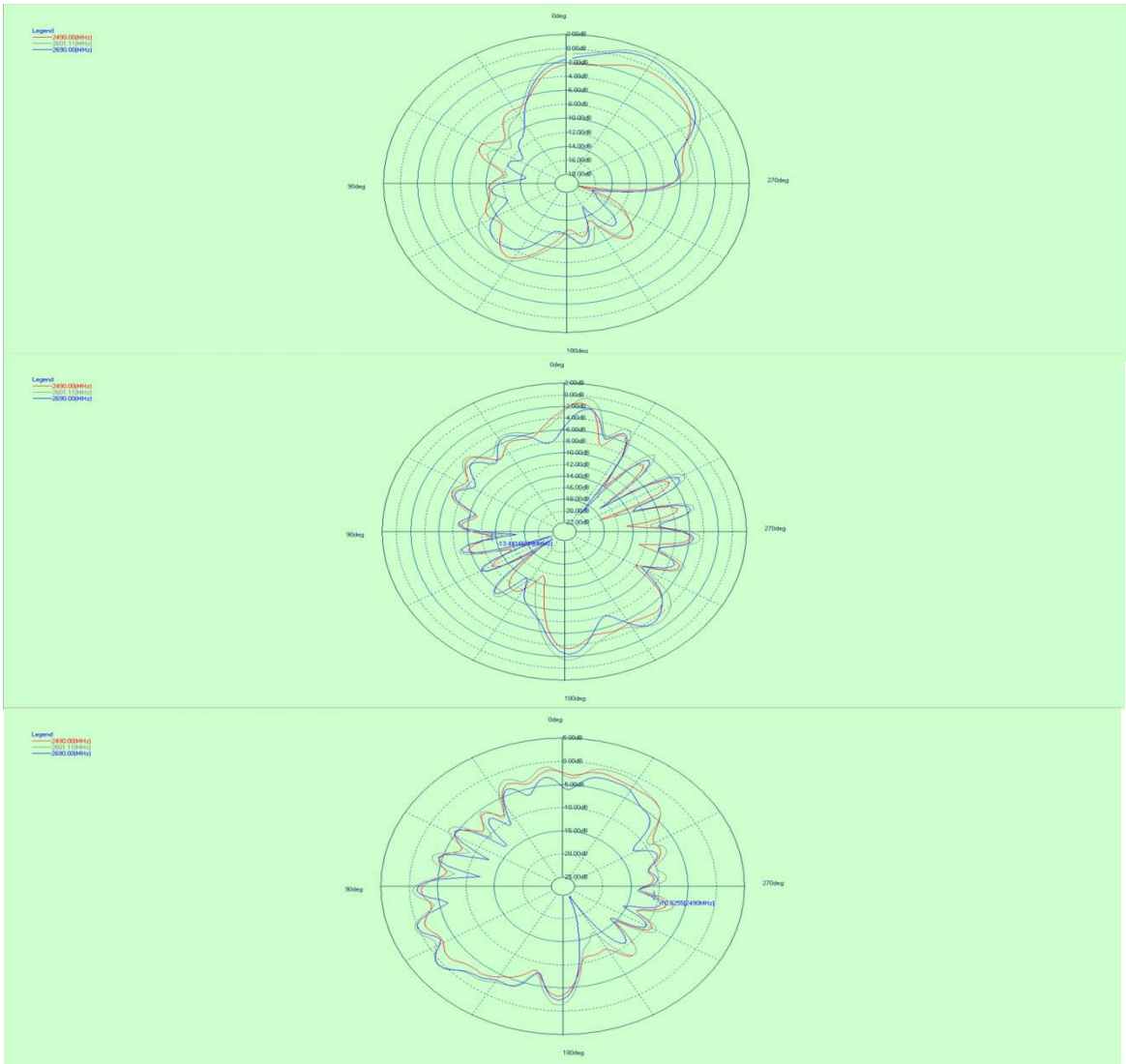
| Freq<br>(MHZ) | Effi<br>(%) |
|---------------|-------------|
| 960           | 27.3        |



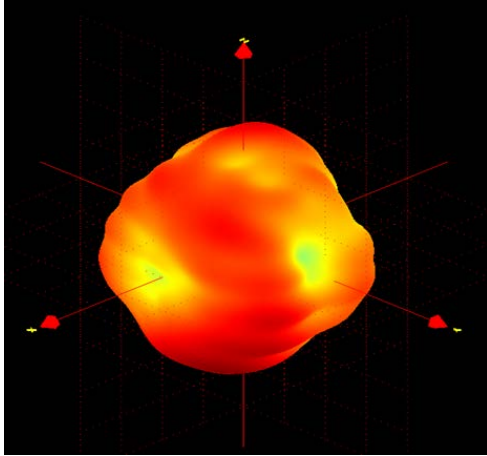
# 2.3 Main antenna Peak Gain(2490~2690M)



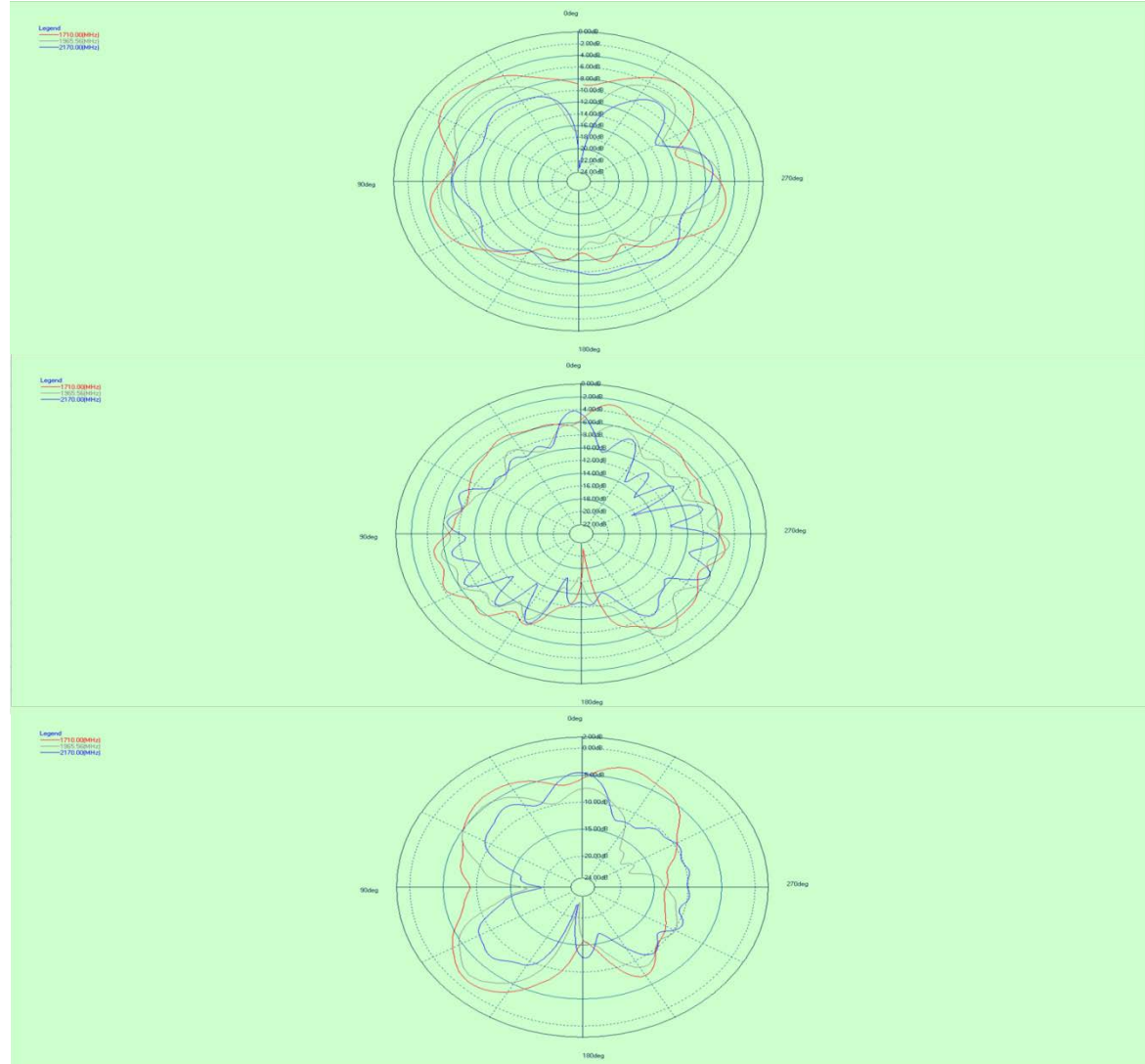
| Freq<br>(MHZ) | Effi<br>(%) |
|---------------|-------------|
| 2590          | 32.4        |



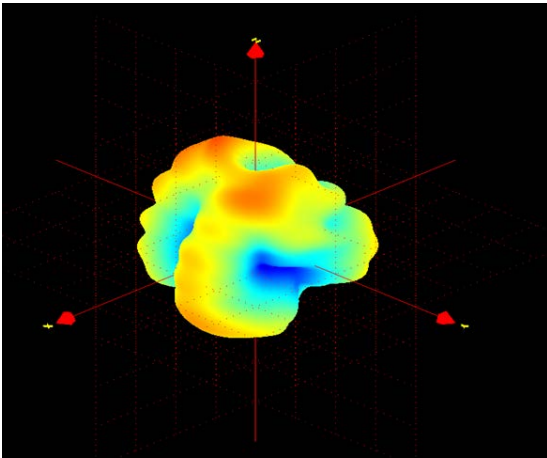
## 2.3 DIV antenna Peak Gain(1710~2170M)



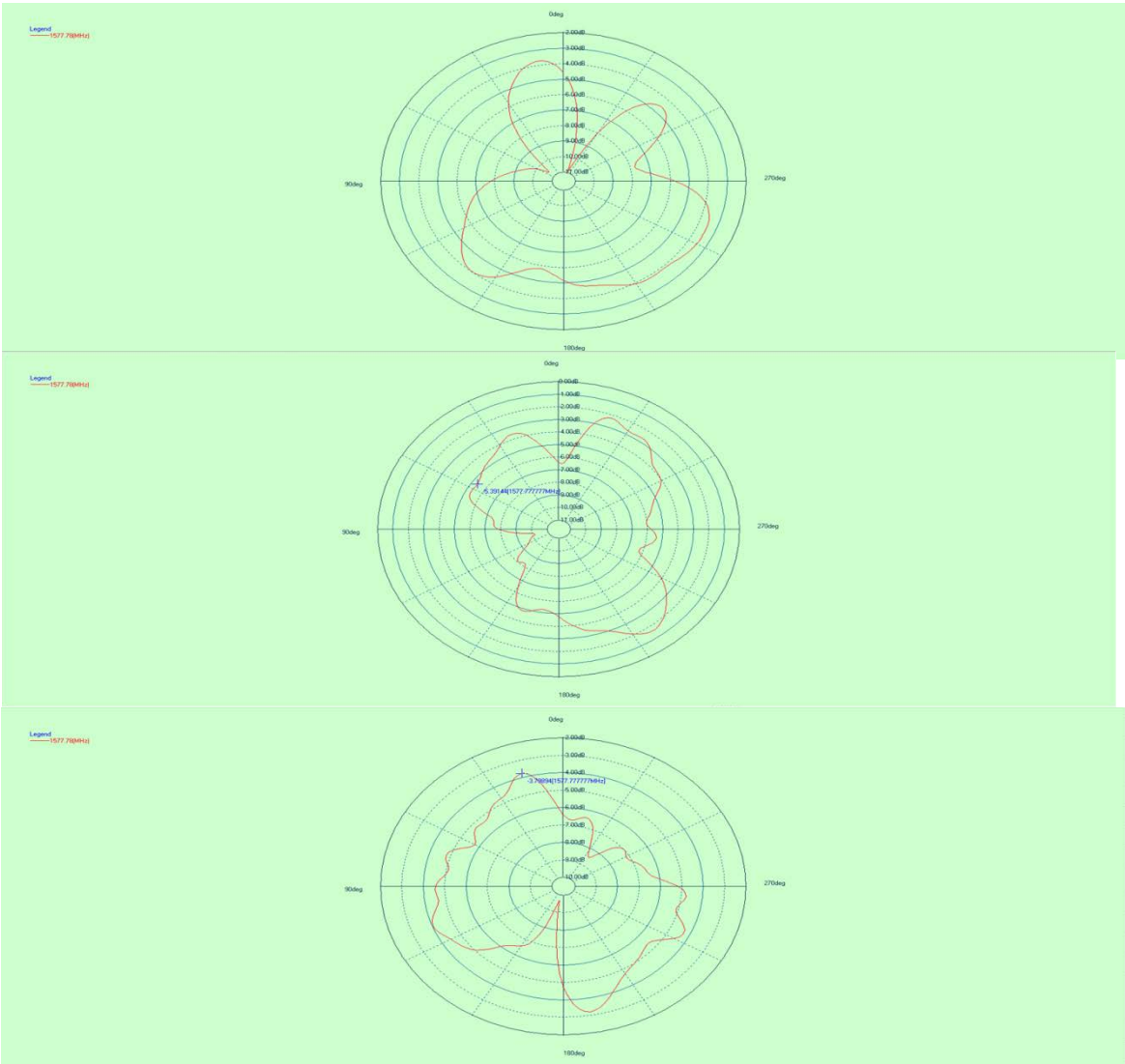
| Freq<br>(MHZ) | Effi<br>(%) |
|---------------|-------------|
| 1880          | 31.5        |
| 1990          | 30.1        |
| 2110          | 28.6        |



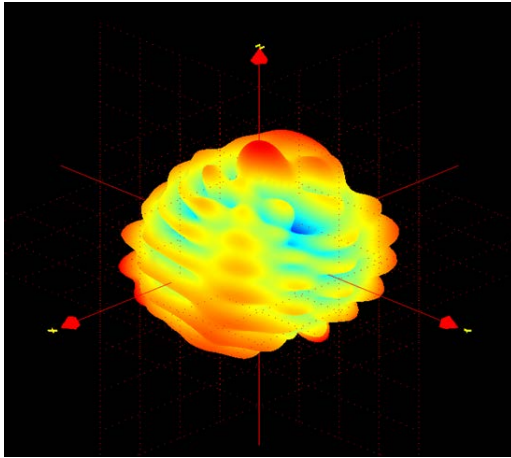
# 2.3 G/W/B antenna Peak Gain(1575M)



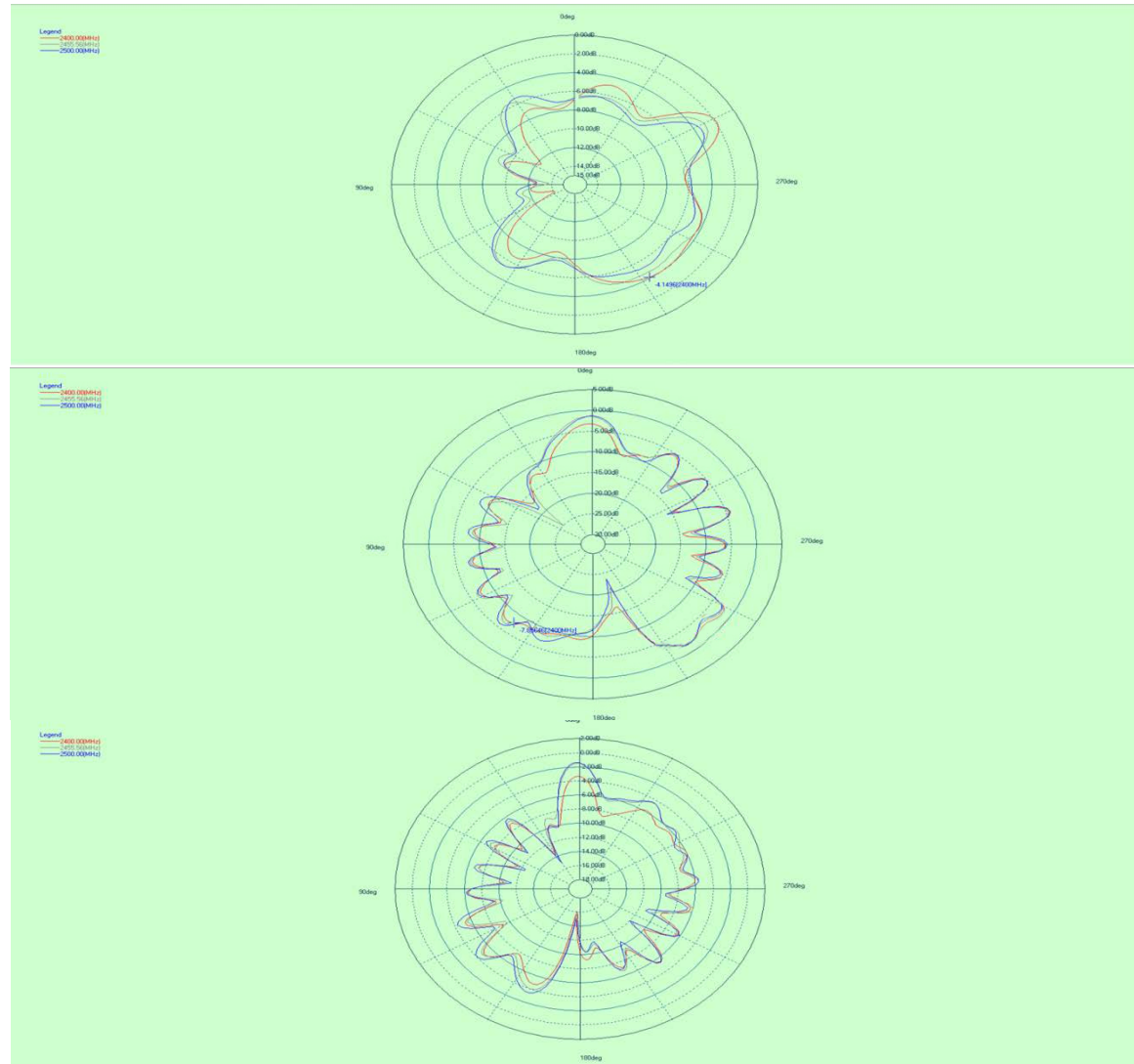
| Freq<br>(MHZ) | Effi<br>(%) |
|---------------|-------------|
| 1575          | 33.5        |



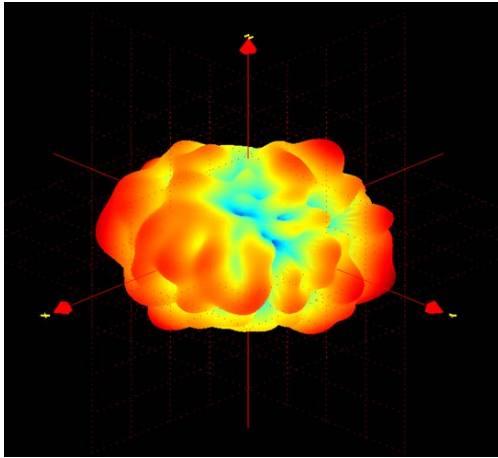
## 2.3 G/W/B antenna Peak Gain(2400-2500M)



| Freq<br>(MHZ) | Effi<br>(%) |
|---------------|-------------|
| 2450          | 25.6        |



## 2.3 G/W/B antenna Peak Gain(5100-5800M)



| Freq<br>(MHZ) | Effi<br>(%) |
|---------------|-------------|
| 5525          | 26.8        |

