



# Antenna Part Specification

|                       |                                                                                                |
|-----------------------|------------------------------------------------------------------------------------------------|
| Project name:         | RZ-T3 earphones                                                                                |
| Antenna name:         | BT antenna                                                                                     |
| Antenna type:         | PIFA                                                                                           |
| Manufacturer:         | Shenzhen Cicent Communication Technology Co., Ltd.                                             |
| Manufacturer address: | 505-506 ,A Block,Donglian Building,Chuangye 2 road,Baoan District,Shenzhen,Guangdong,P.R china |
| Version:              | V1.0                                                                                           |
| Date:                 | 2025.11.28                                                                                     |



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| Change record            |                   |                 |         |
|--------------------------|-------------------|-----------------|---------|
| Compile /<br>change date | Reason for change | Changed content | Version |
| 2025.11.28               | First edition     | First edition   | V1.0    |
|                          |                   |                 |         |
|                          |                   |                 |         |
|                          |                   |                 |         |

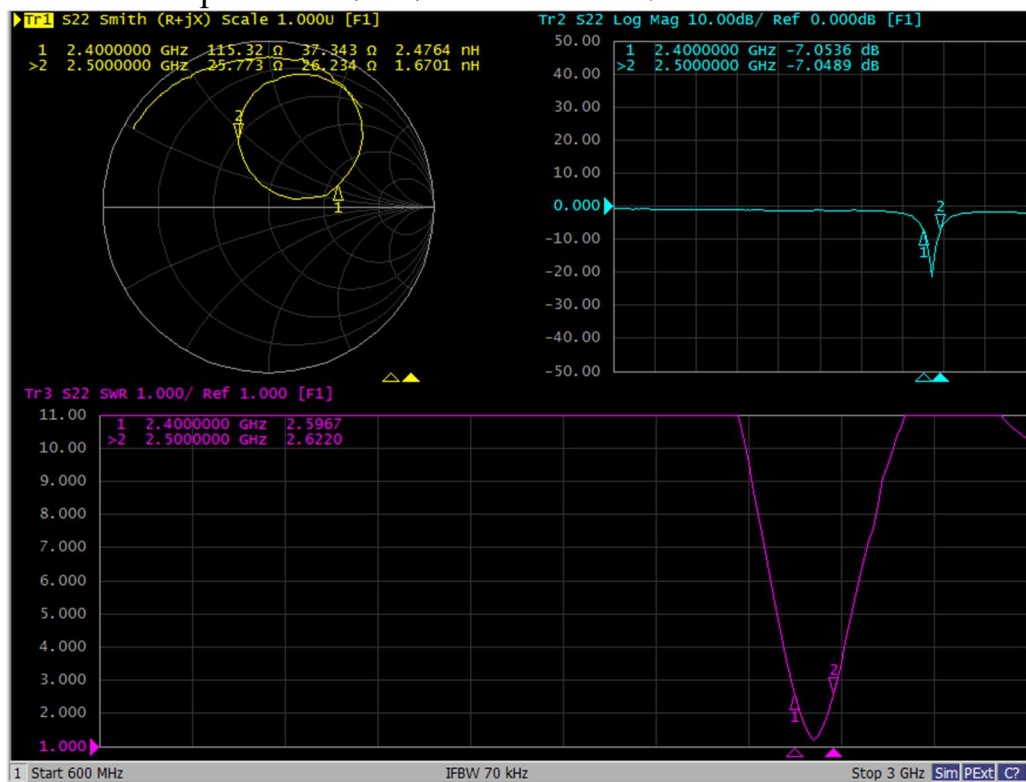


I: The report of passive data



Angilent E5071C

antenna S11 parameter: (Left Ear - Free)

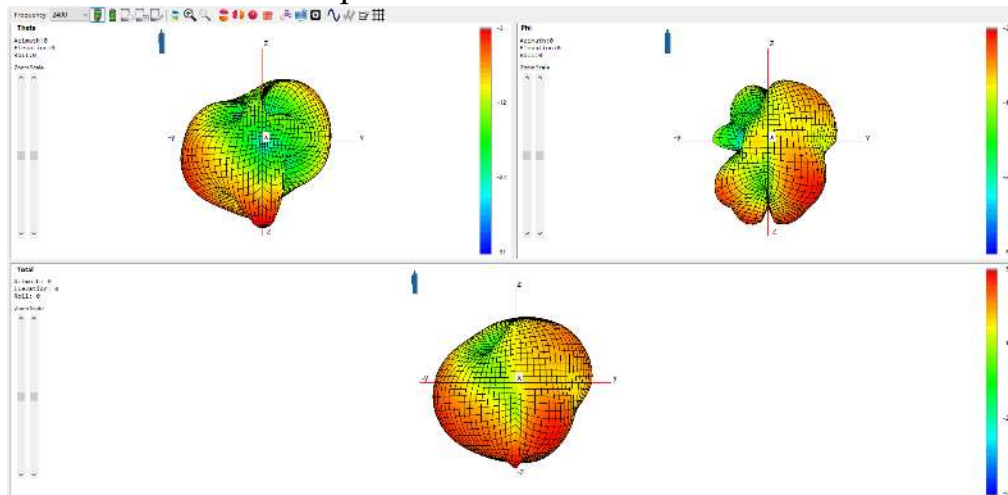




Efficiency: (Left Ear - Free)

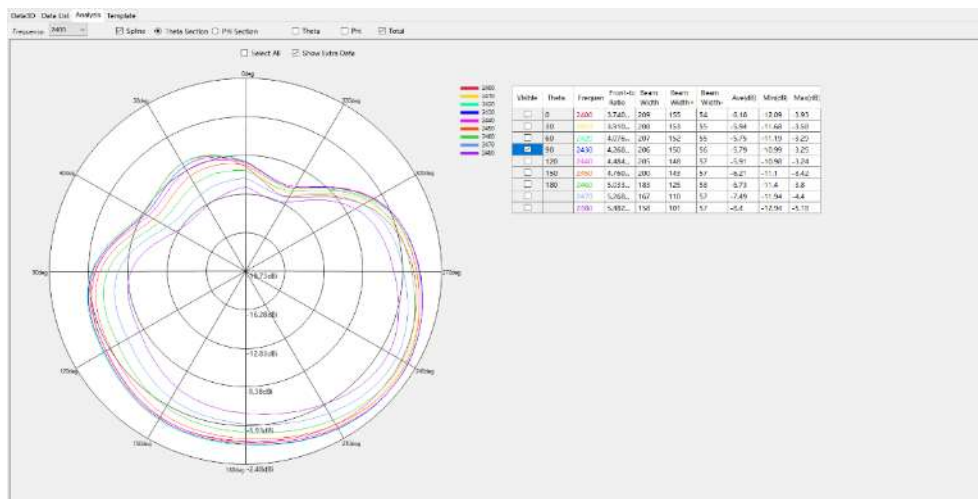
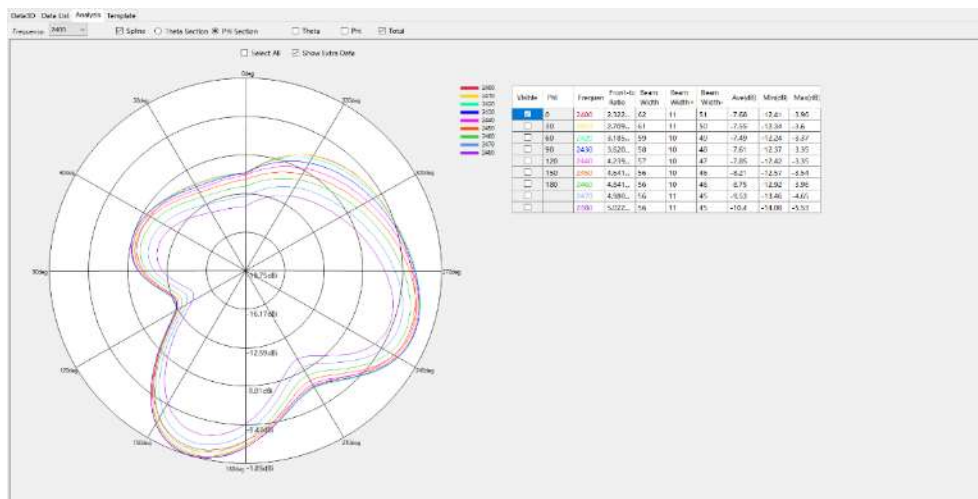
| Frequency<br>(MHz) | Gain<br>(dBi) | Efficiency<br>(dB ) | Efficiency<br>(%) |
|--------------------|---------------|---------------------|-------------------|
| 2400               | -3.2          | -6.9                | 20.4              |
| 2410               | -2.9          | -6.7                | 21.6              |
| 2420               | -2.6          | -6.5                | 22.4              |
| 2430               | -2.6          | -6.4                | 23.1              |
| 2440               | -2.6          | -6.1                | 24.3              |
| 2450               | -2.8          | -6.2                | 23.8              |
| 2460               | -3.2          | -6.3                | 23.5              |
| 2470               | -4.0          | -6.5                | 22.4              |
| 2480               | -4.8          | -6.7                | 21.4              |
| AVG                | -3.2          | -6.5                | 22.6              |

3D Antenna radiation pattern: (Left Ear - Free)

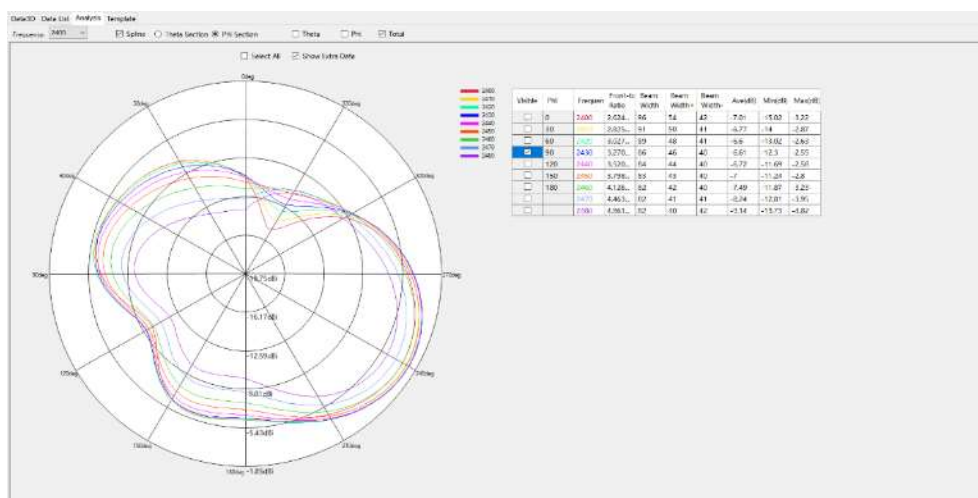


## 2D Antenna radiation pattern: (Left Ear - Free)

Theta=90°

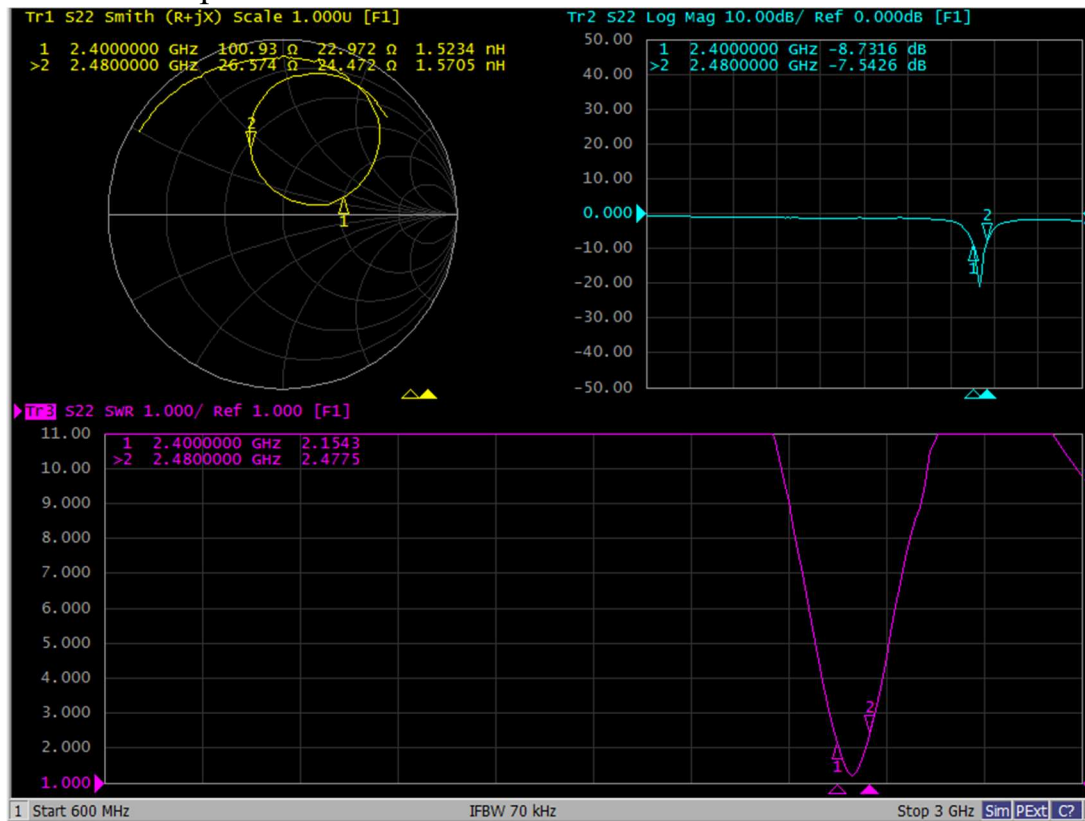
 $\Phi=0^\circ$ 

Phi=90°





antenna S11 parameter: (Left Ear - Head)

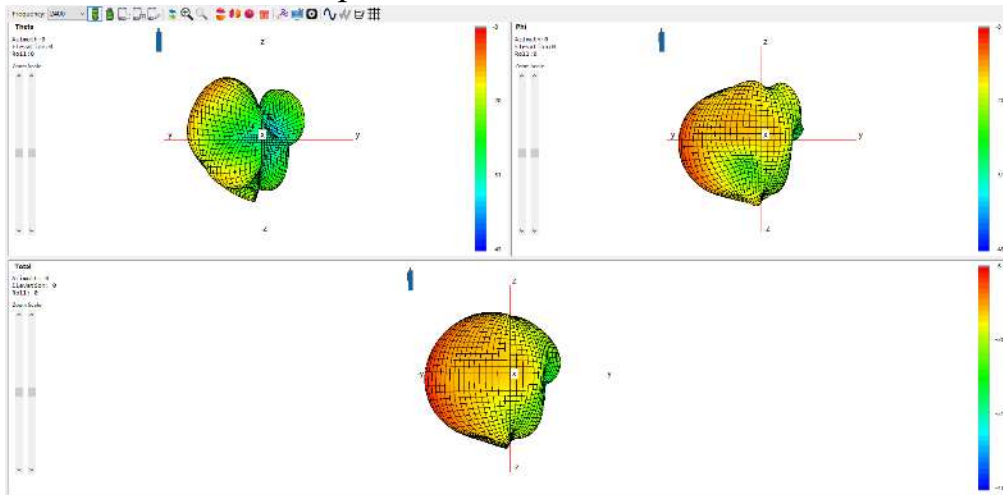


Efficiency: (Left Ear - Head)

| Frequency<br>(MHz) | Gain<br>(dBi) | Efficiency<br>(dB ) | Efficiency<br>(%) |
|--------------------|---------------|---------------------|-------------------|
| 2400               | -8.2          | -11.5               | 7.1               |
| 2410               | -7.5          | -11.2               | 7.6               |
| 2420               | -6.8          | -10.9               | 8.2               |
| 2430               | -6.6          | -10.7               | 8.4               |
| 2440               | -6.5          | -10.7               | 8.6               |
| 2450               | -6.6          | -10.7               | 8.5               |
| 2460               | -6.9          | -10.8               | 8.2               |
| 2470               | -7.4          | -11.1               | 7.8               |
| 2480               | -7.9          | -11.3               | 7.4               |
| AVG                | -7.2          | -11.0               | 8.0               |

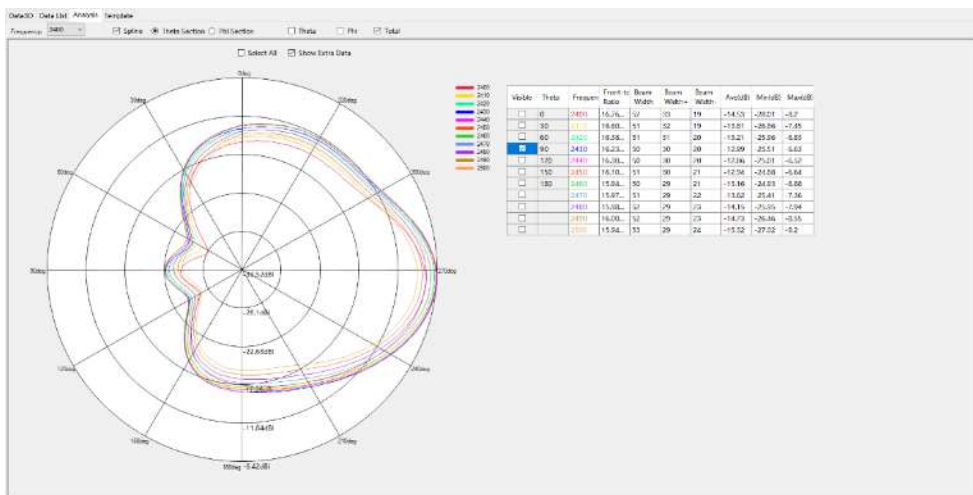


### 3D Antenna radiation pattern: (Left Ear - Head)

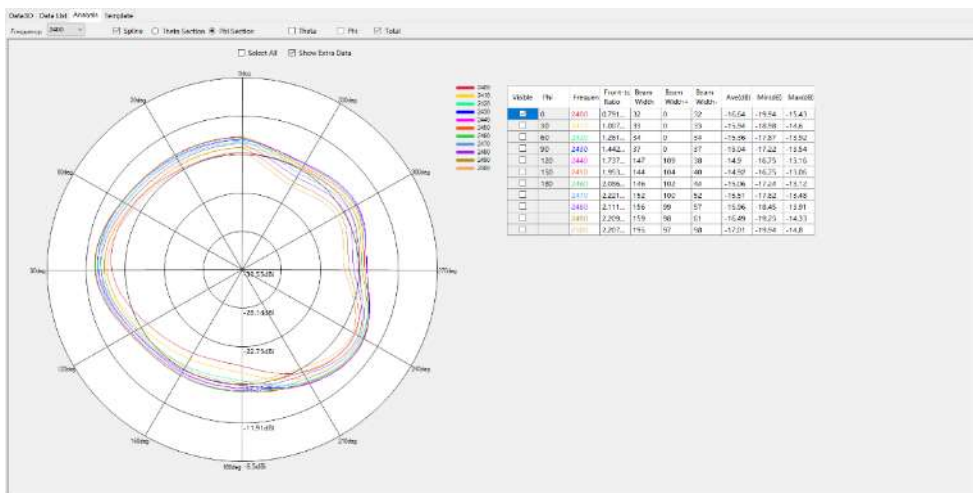


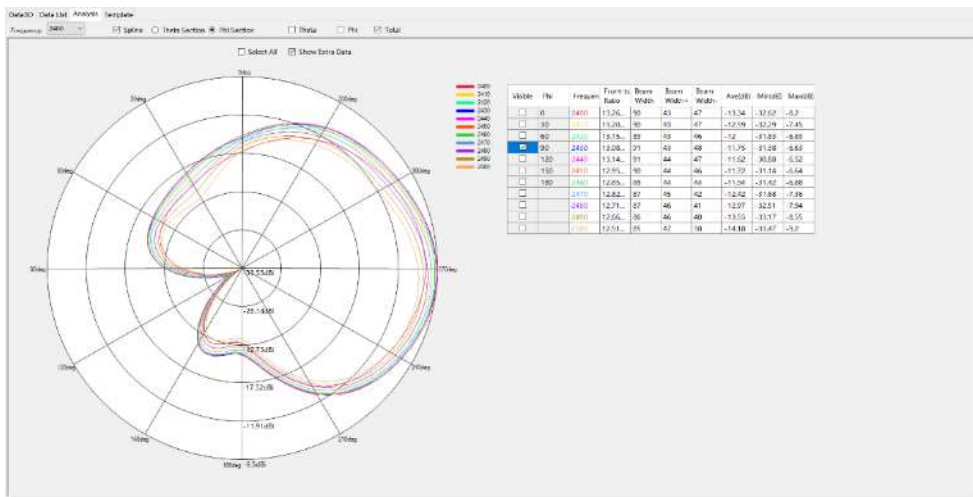
### 2D Antenna radiation pattern: (Left Ear - Head)

Theta=90°

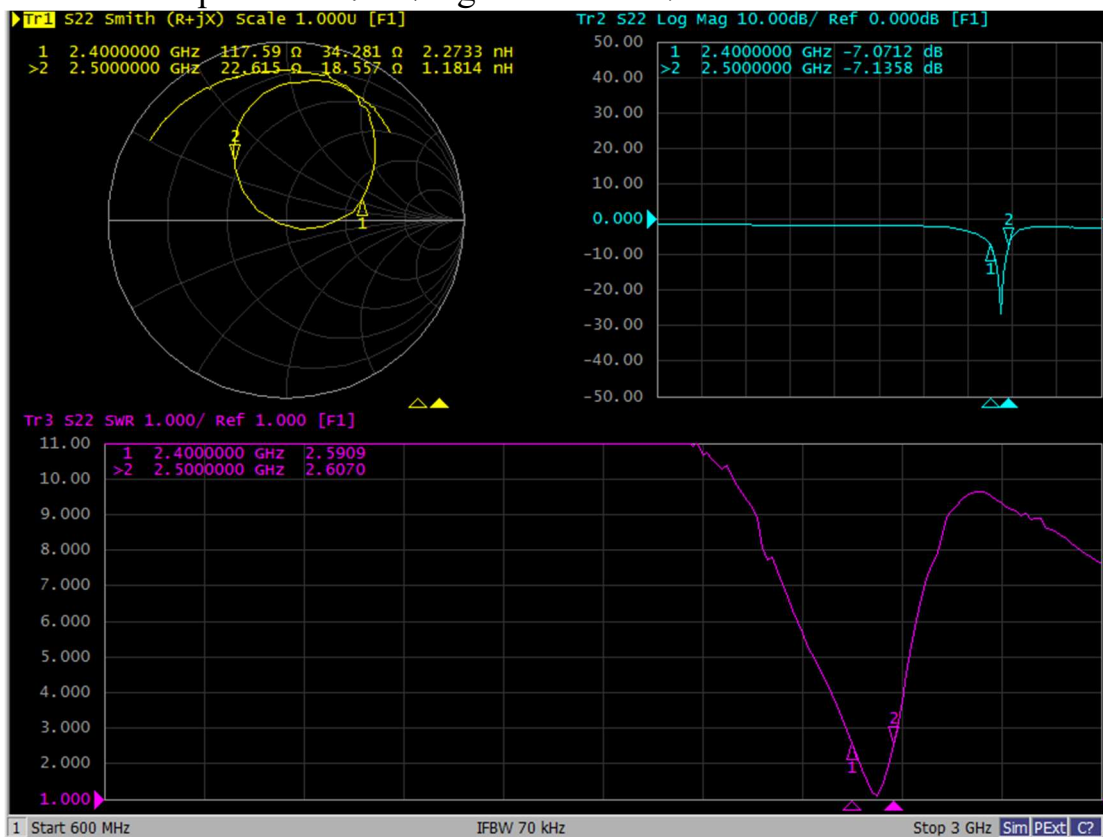


Phi=0°



$\Phi = 90^\circ$ 

antenna S11 parameter: (Right Ear - Free)

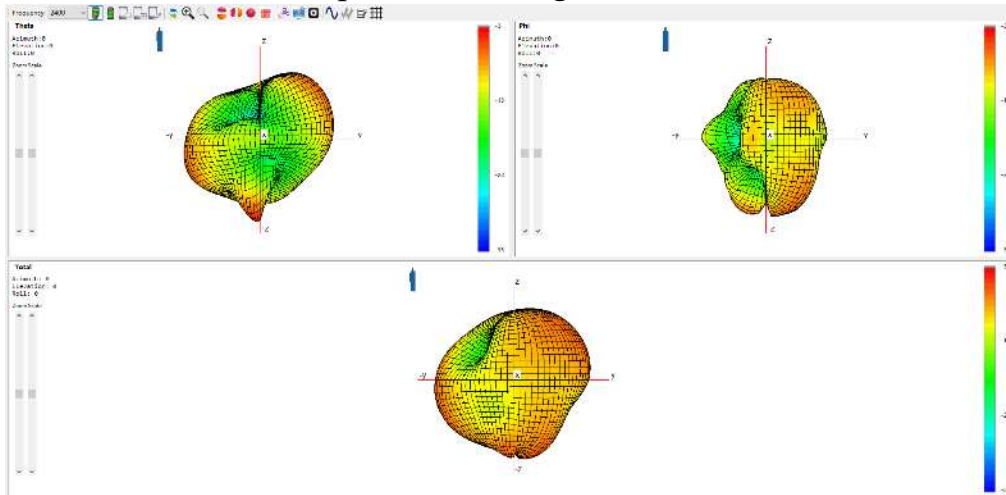




Efficiency: (Right Ear - Free)

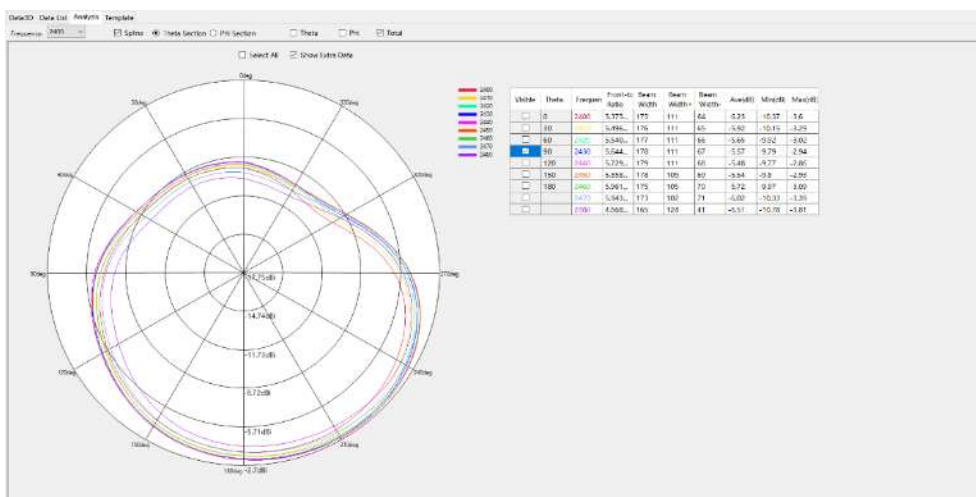
| Frequency<br>(MHz) | Gain<br>(dBi) | Efficiency<br>(dB ) | Efficiency<br>(%) |
|--------------------|---------------|---------------------|-------------------|
| 2400               | -3.6          | -6.9                | 20.2              |
| 2410               | -3.3          | -6.6                | 21.7              |
| 2420               | -3.0          | -6.4                | 22.9              |
| 2430               | -2.9          | -6.1                | 24.4              |
| 2440               | -2.8          | -5.9                | 25.6              |
| 2450               | -2.7          | -6.0                | 25.3              |
| 2460               | -2.8          | -6.1                | 24.4              |
| 2470               | -3.0          | -6.4                | 22.9              |
| 2480               | -3.4          | -6.6                | 21.9              |
| AVG                | -3.1          | -6.3                | 23.2              |

3D Antenna radiation pattern: (Right Ear - Free)

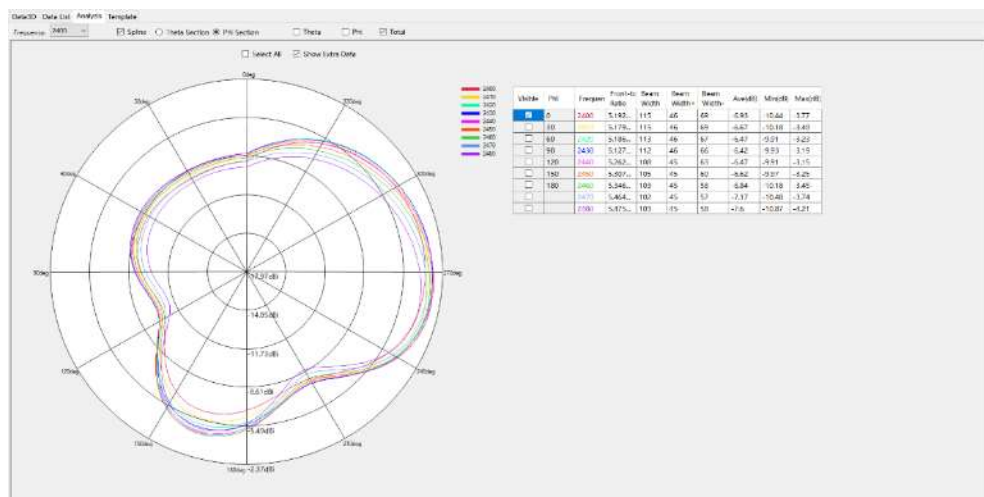
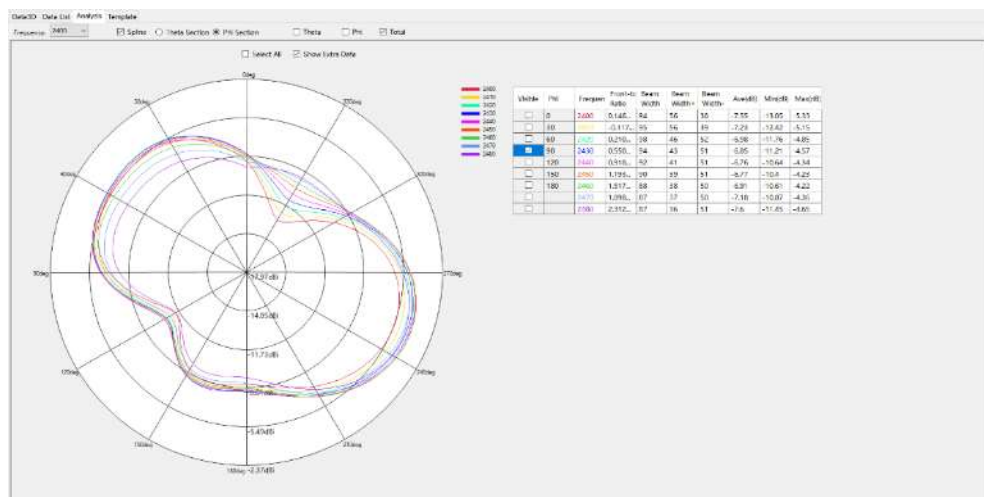


2D Antenna radiation pattern: (Right Ear - Free)

Theta=90°

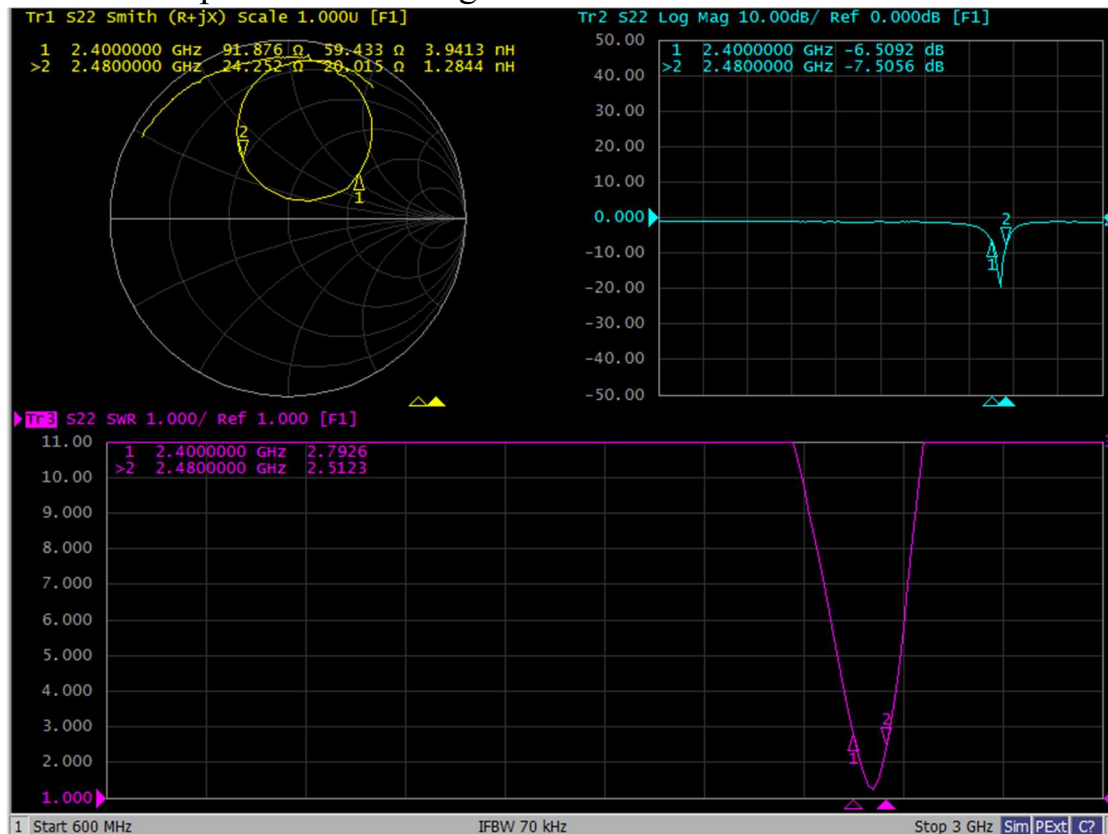


CC-JL-RD-36V1.0

$\Phi = 0^\circ$  $\Phi=90^\circ$ 



antenna S11 parameter: (Right Ear - Head)

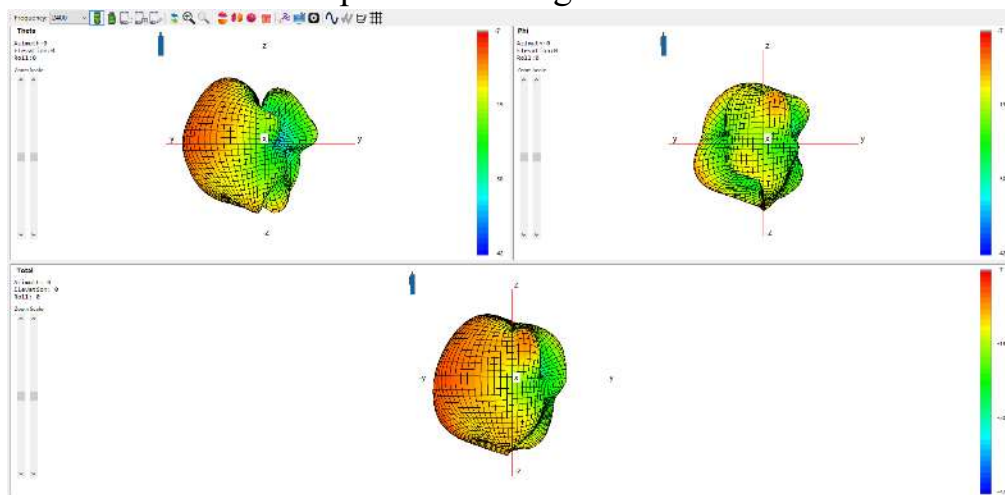


Efficiency: (Right Ear - Head)

| Frequency (MHz) | Gain (dBi) | Efficiency (dB ) | Efficiency (%) |
|-----------------|------------|------------------|----------------|
| 2400            | -7.9       | -11.1            | 7.8            |
| 2410            | -7.6       | -11.0            | 8.0            |
| 2420            | -7.4       | -10.8            | 8.3            |
| 2430            | -7.3       | -10.8            | 8.4            |
| 2440            | -7.0       | -10.7            | 8.5            |
| 2450            | -6.9       | -10.7            | 8.6            |
| 2460            | -6.8       | -10.7            | 8.4            |
| 2470            | -6.8       | -10.8            | 8.3            |
| 2480            | -6.9       | -10.9            | 8.1            |
| AVG             | -7.2       | -10.8            | 8.3            |

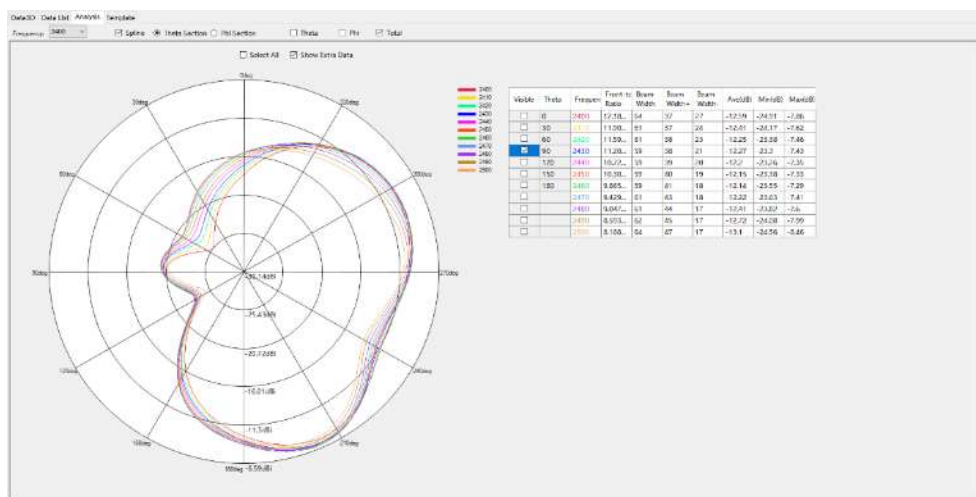


### 3D Antenna radiation pattern: (Right Ear - Head)

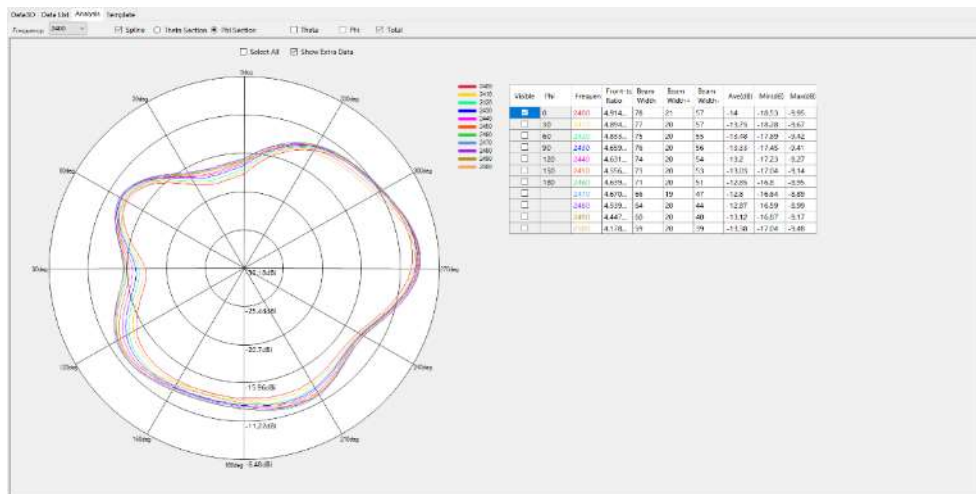


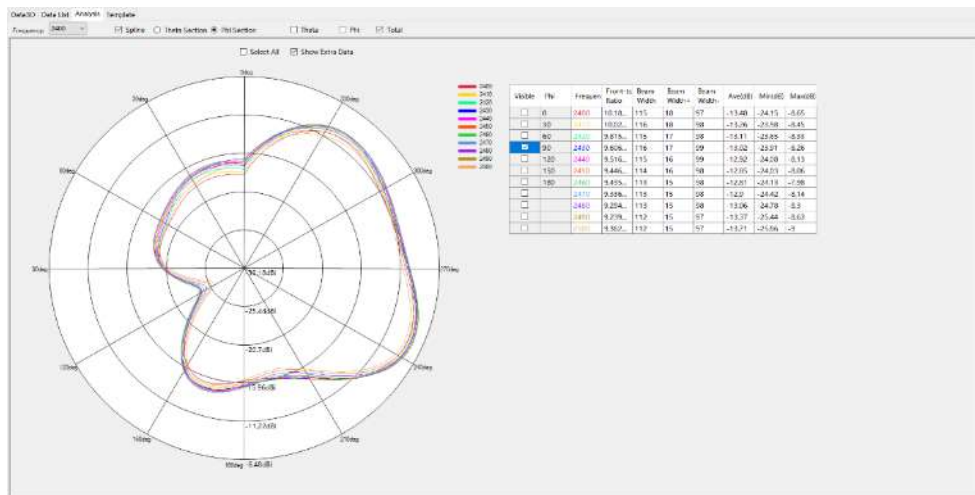
### 2D Antenna radiation pattern: (Right Ear - Head)

Theta=90°



Phi=0°

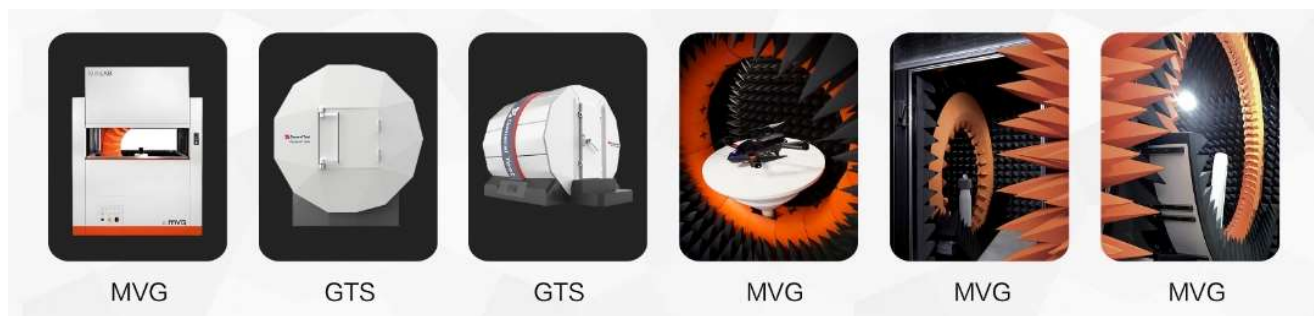


$\Phi = 90^\circ$ 

## II: 3D Active test report of antenna

| 44:5E:CD:7C:58:D9 |         | Free      |           | Head      |           |
|-------------------|---------|-----------|-----------|-----------|-----------|
| 5#                | Channel | TRP (dBm) | TIS (dBm) | TRP (dBm) | TIS (dBm) |
| L                 | CH 0    | 3.6       | -89.1     | -0.8      | -85.1     |
|                   | CH 39   | 4.1       | -89.5     | 0.7       | -85.1     |
|                   | CH 78   | 3.4       | -89.2     | -0.3      | -84.9     |
|                   | AVG     | 3.7       | -89.3     | -0.1      | -85.0     |

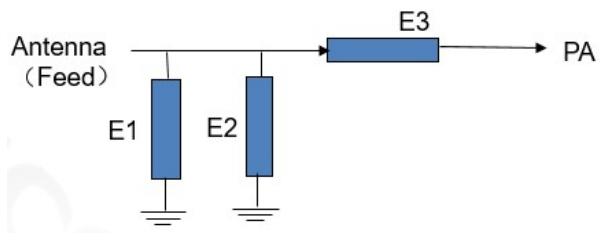
| 44:5E:CD:7C:58:06 |         | Free      |           | Head      |           |
|-------------------|---------|-----------|-----------|-----------|-----------|
| 5#                | Channel | TRP (dBm) | TIS (dBm) | TRP (dBm) | TIS (dBm) |
| R                 | CH 0    | 4.2       | -89.0     | -0.6      | -84.6     |
|                   | CH 39   | 4.5       | -89.4     | 0.4       | -85.4     |
|                   | CH 78   | 3.4       | -88.8     | -0.4      | -85.0     |
|                   | AVG     | 4.0       | -89.0     | -0.2      | -85.0     |



OTA Standard Chamber



### III: Matching circuit



| Element | value |
|---------|-------|
| E1      | ESD   |
| E2      | N/C   |
| E3      | 0Ω    |



V: Antenna structure diagram file

