



Shenzhen Yingjiachuang Electronic Technology Co., LTD

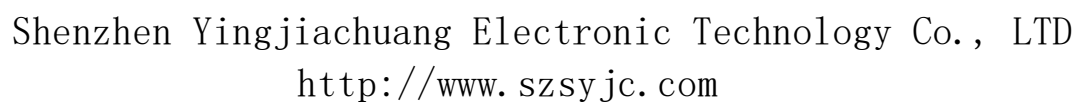
<http://www.szsyjc.com>

# APPROVAL SHEET

|                   |                                                               |             |
|-------------------|---------------------------------------------------------------|-------------|
| CUSTOMER NAME     | Shenzhen Zidoo Technology Co.,Ltd                             |             |
| CUSTOMER P/N      | H. DZ. SJ. TX. 00037                                          |             |
| PART NAME         | 2.4G/5G black PCB built-in antenna 1.13<br>black wire L=245MM |             |
| P/ N              | YJC-6N245-B11                                                 |             |
| APPROVAL REV.     | A0                                                            |             |
| DELIVERY DATE     | March 22, 2025                                                |             |
| PREPARED BY       | Yin Feijie                                                    |             |
| CHECKED BY        | Fang Wenfeng                                                  |             |
| APPROVED BY       | Chauhan                                                       |             |
| Customer Approved |                                                               |             |
| Prepared By       | Checked By                                                    | Approved By |
|                   |                                                               |             |

Address: Building C, Hongyu Guangming Valley, No. 11, Youma Gang Road, Ma Tian Street, Guangming District, Shenzhen  
Dongguan Branch: Yingjiachuang Industrial Park, No. 2 Yinhe 3rd Road, Shishuikou, Qiaotou Town, Dongguan City  
Hangzhou Office: 212, Building B, Dahua Jianghong International Innovation Park, 369 Internet of Things Street, Binjiang District, Hangzhou  
Mianyang Office: No. 4F-34 Wanxiang High-tech International, No. 35 Mianxing East Road, Mianyang High-tech Zone, Sichuan

Province telephone: 0755-27810060 fax: 0755-27810057 website: <http://www.szsyjc.com>

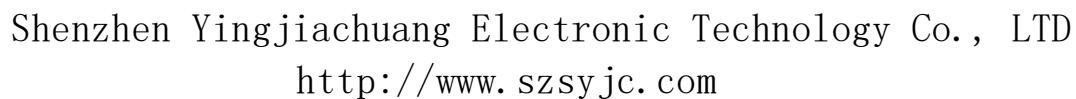


|    |                                                                  |      |
|----|------------------------------------------------------------------|------|
| 1、 | cove                                                             | 1    |
| 2、 | catalogue                                                        | 2    |
| 3、 | resum e                                                          | 3    |
| 4、 | Antenna floor plan                                               | 4    |
| 5、 | Antennatechnicalparameters and environmental performance tests   | 5    |
| 6、 | Thephysicaldiagramoftheantennaandthediagramofitsattachedposition | 5    |
| 7、 | Antenna performance test diagram                                 | 6-7  |
| 8、 | 2D.3D (2.4G/5G) test data                                        | 8-13 |
| 9、 | ROHS Material Control Report                                     | 14   |



Resume:

| Version | Change content and reasons for the change | Date           | Issue |
|---------|-------------------------------------------|----------------|-------|
| A/0     | First edition release                     | March 22, 2025 |       |
|         |                                           |                |       |
|         |                                           |                |       |
|         |                                           |                |       |
|         |                                           |                |       |
|         |                                           |                |       |
|         |                                           |                |       |
|         |                                           |                |       |
|         |                                           |                |       |
|         |                                           |                |       |
|         |                                           |                |       |



| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | B                                              | C                                       | D                                     | E                                                              | F                                              | G                                       |                                                                |                                                |                                         |                                       |                                                                |                                                |                                         |                                       |                  |     |           |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|-----------------------------------------|---------------------------------------|----------------------------------------------------------------|------------------------------------------------|-----------------------------------------|----------------------------------------------------------------|------------------------------------------------|-----------------------------------------|---------------------------------------|----------------------------------------------------------------|------------------------------------------------|-----------------------------------------|---------------------------------------|------------------|-----|-----------|-----|
| <div style="float: right; border: 1px solid black; padding: 2px; margin-bottom: 10px;"> <b>RoHS</b> </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>NAME</th> </tr> </thead> <tbody> <tr> <td>A0</td> <td>2025-03-22</td> <td>New version released</td> <td>Yin Feijie</td> </tr> <tr> <td>A1</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                |                                         |                                       |                                                                |                                                |                                         | REV                                                            | DATE                                           | DESCRIPTION                             | NAME                                  | A0                                                             | 2025-03-22                                     | New version released                    | Yin Feijie                            | A1               |     |           |     |
| REV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | DATE                                           | DESCRIPTION                             | NAME                                  |                                                                |                                                |                                         |                                                                |                                                |                                         |                                       |                                                                |                                                |                                         |                                       |                  |     |           |     |
| A0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2025-03-22                                     | New version released                    | Yin Feijie                            |                                                                |                                                |                                         |                                                                |                                                |                                         |                                       |                                                                |                                                |                                         |                                       |                  |     |           |     |
| A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                |                                         |                                       |                                                                |                                                |                                         |                                                                |                                                |                                         |                                       |                                                                |                                                |                                         |                                       |                  |     |           |     |
| <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 45%;"> <p>1.13 Black line</p> <p>The first-generation line end</p> <p>*245<sup>+5</sup><sub>-3</sub></p> <p>*31.9±0.5</p> <p>*10.5±0.3</p> <p>*0.6±0.1</p> <p>Hand-form position</p> <p>Double-sided tape is attached to the back of the PCB board</p> <p>The outer box must be affixed with a material identification card 1 piece each of the RoHS label</p> </div> <div style="width: 50%;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Frequency Range</td> <td>2400~2500/5150~5850MHz</td> </tr> <tr> <td>Gain</td> <td>3.0dBi</td> </tr> <tr> <td>VSWR</td> <td>&lt;1.92</td> </tr> <tr> <td>Polarization</td> <td>Linear, Vertical</td> </tr> <tr> <td>Max power rating</td> <td>50W</td> </tr> <tr> <td>Impedance</td> <td>50Ω</td> </tr> </table> </div> </div> |                                                |                                         |                                       |                                                                |                                                |                                         | Frequency Range                                                | 2400~2500/5150~5850MHz                         | Gain                                    | 3.0dBi                                | VSWR                                                           | <1.92                                          | Polarization                            | Linear, Vertical                      | Max power rating | 50W | Impedance | 50Ω |
| Frequency Range                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2400~2500/5150~5850MHz                         |                                         |                                       |                                                                |                                                |                                         |                                                                |                                                |                                         |                                       |                                                                |                                                |                                         |                                       |                  |     |           |     |
| Gain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3.0dBi                                         |                                         |                                       |                                                                |                                                |                                         |                                                                |                                                |                                         |                                       |                                                                |                                                |                                         |                                       |                  |     |           |     |
| VSWR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <1.92                                          |                                         |                                       |                                                                |                                                |                                         |                                                                |                                                |                                         |                                       |                                                                |                                                |                                         |                                       |                  |     |           |     |
| Polarization                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Linear, Vertical                               |                                         |                                       |                                                                |                                                |                                         |                                                                |                                                |                                         |                                       |                                                                |                                                |                                         |                                       |                  |     |           |     |
| Max power rating                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 50W                                            |                                         |                                       |                                                                |                                                |                                         |                                                                |                                                |                                         |                                       |                                                                |                                                |                                         |                                       |                  |     |           |     |
| Impedance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 50Ω                                            |                                         |                                       |                                                                |                                                |                                         |                                                                |                                                |                                         |                                       |                                                                |                                                |                                         |                                       |                  |     |           |     |
| <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Requirement:</p> <ol style="list-style-type: none"> <li>The finished product must be tested 100% to ensure that the conduction is OK</li> <li>The finished products must pass 100% full inspection.</li> <li>Adopt environmentally friendly manufacturing processes. Finished product</li> <li>Comply with RoHS requirements.</li> <li>For unspecified tolerances, please refer to the general tolerances.</li> <li>* Mark the dimensions as key points.</li> </ol> </div> <div style="width: 50%;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> </table> </div> </div>                                     |                                                |                                         |                                       |                                                                |                                                |                                         |                                                                |                                                |                                         |                                       |                                                                |                                                |                                         |                                       |                  |     |           |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |                                         |                                       |                                                                |                                                |                                         |                                                                |                                                |                                         |                                       |                                                                |                                                |                                         |                                       |                  |     |           |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |                                         |                                       |                                                                |                                                |                                         |                                                                |                                                |                                         |                                       |                                                                |                                                |                                         |                                       |                  |     |           |     |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"> <p>Product Name</p> <p>2.4G/5G black PCB</p> <p>2025-03-22</p> </td> <td style="width: 15%;"> <p>Product Specification</p> <p>2025-03-22</p> </td> <td style="width: 15%;"> <p>Product No.</p> <p>YJC-6N245-B11</p> </td> <td style="width: 15%;"> <p>Product Date</p> <p>2025-03-22</p> </td> <td style="width: 15%;"> <p>Product Name</p> <p>2.4G/5G black PCB</p> <p>2025-03-22</p> </td> <td style="width: 15%;"> <p>Product Specification</p> <p>2025-03-22</p> </td> <td style="width: 15%;"> <p>Product No.</p> <p>YJC-6N245-B11</p> </td> <td style="width: 15%;"> <p>Product Date</p> <p>2025-03-22</p> </td> </tr> </table>                                                                                                                                                                         |                                                |                                         |                                       |                                                                |                                                |                                         | <p>Product Name</p> <p>2.4G/5G black PCB</p> <p>2025-03-22</p> | <p>Product Specification</p> <p>2025-03-22</p> | <p>Product No.</p> <p>YJC-6N245-B11</p> | <p>Product Date</p> <p>2025-03-22</p> | <p>Product Name</p> <p>2.4G/5G black PCB</p> <p>2025-03-22</p> | <p>Product Specification</p> <p>2025-03-22</p> | <p>Product No.</p> <p>YJC-6N245-B11</p> | <p>Product Date</p> <p>2025-03-22</p> |                  |     |           |     |
| <p>Product Name</p> <p>2.4G/5G black PCB</p> <p>2025-03-22</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p>Product Specification</p> <p>2025-03-22</p> | <p>Product No.</p> <p>YJC-6N245-B11</p> | <p>Product Date</p> <p>2025-03-22</p> | <p>Product Name</p> <p>2.4G/5G black PCB</p> <p>2025-03-22</p> | <p>Product Specification</p> <p>2025-03-22</p> | <p>Product No.</p> <p>YJC-6N245-B11</p> | <p>Product Date</p> <p>2025-03-22</p>                          |                                                |                                         |                                       |                                                                |                                                |                                         |                                       |                  |     |           |     |



## Antenna technical parameters and environmental testing:

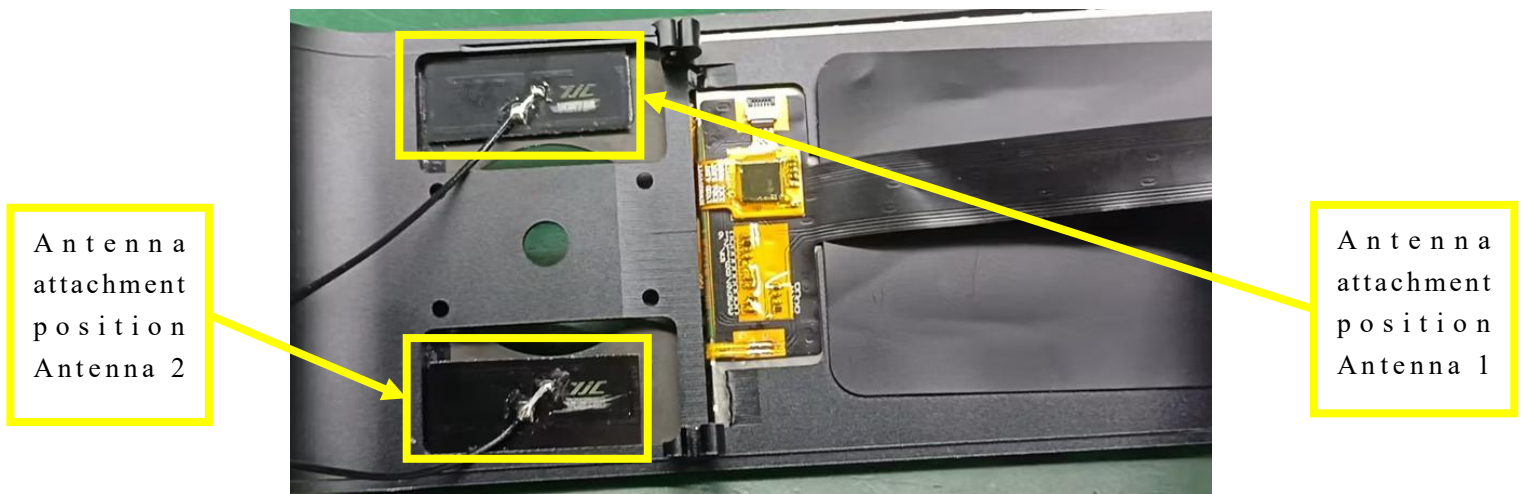
| Electrical technical parameter |                         |                           |           |
|--------------------------------|-------------------------|---------------------------|-----------|
| Electrical Specifications      |                         | Mechanical Specifications |           |
| Frequency Range                | 2400-2500/5150-5850M Hz | Wire Color                | Black     |
| VSWR                           | <1.92                   | Input connector           | XD        |
| Input Impedance                | 50 $\Omega$             | Wire Length               | 245MM     |
| Direction                      | All                     | Working Temperature       | -20℃~+70℃ |
| Gain                           | 3.0dBi                  | Working Humidity          | 20%~80%   |

## Environmental performance test:

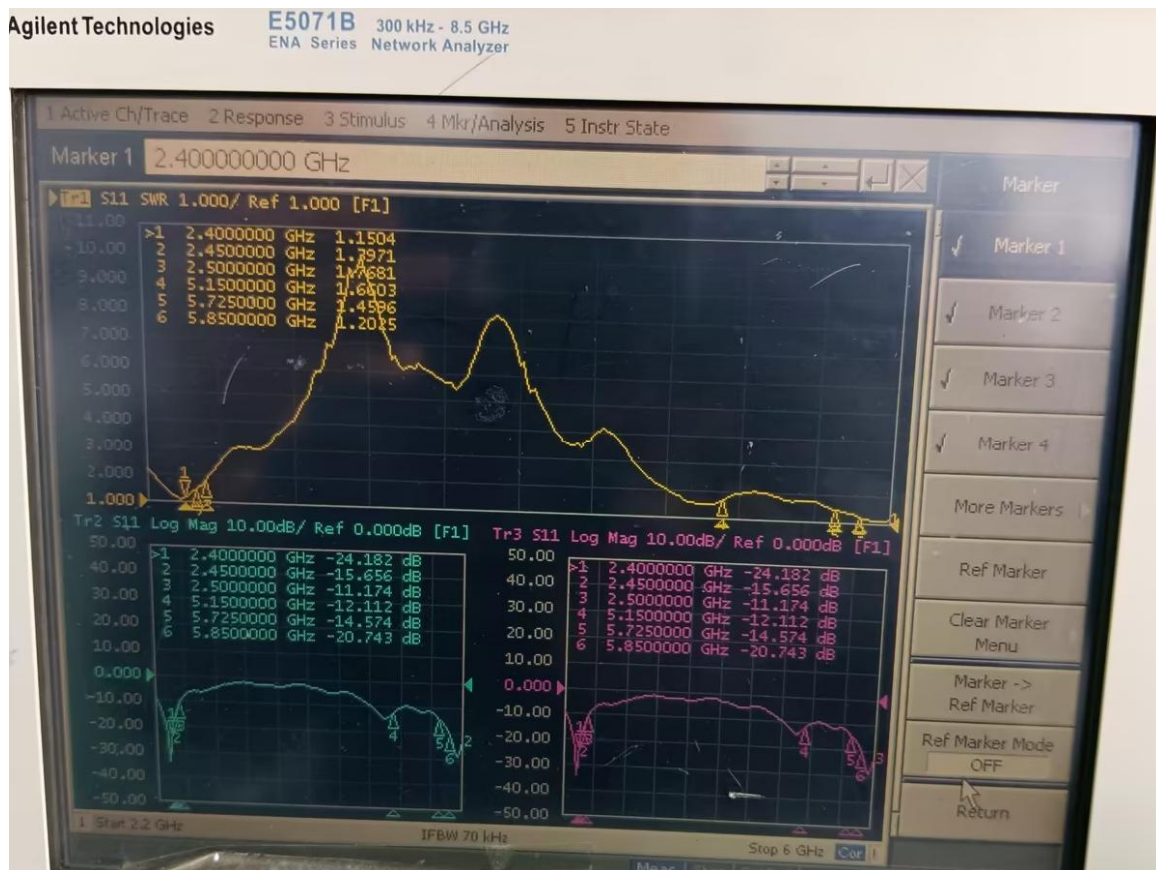
| Project                               | Test condition                                                                                                                                                                                                            | Standard                                                                             |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Storage Conditions                    | In the absence of specified test temperature, humidity, air pressure is as follows::<br>1. Temperature is - 30 ℃ ~ + 80 ℃<br>2. Relative humidity of 45% to 45%<br>3. Air pressure is 86 kpa to 106 kpa                   | Electrical and mechanical performace is normal                                       |
| High and low temperature test         | Between 70 ℃ and -20 ℃ for 5 loops, then 1-2 h under normal conditions, check the appearance quality.                                                                                                                     | Size should meet the requirements and meet the performance of mechnery and electric. |
| Constant damp and hot resistance test | 95 + / - 3% relative humidity, temperature test: 40 ℃. Lasts 2 h after, try to take out the determination of electrical properties, within 5 min after try 1-2 h under article normal thing, check the appearance quality | Size should meet the requirements and meet the performance of mechnery and electric. |
| vibration test                        | 10-55 hz, vibration frequency range of displacement amplitude: 0.35 MM, acceleration amplitude: 50.0 M/S, sweep cycles: 30 times                                                                                          | Electrical and mechanical performace is normal                                       |
| Fall down test                        | 1 m high altitude in accordance with the perpendicular axis free drop 3 times                                                                                                                                             | Electrical and mechanical performace is normal                                       |



The physical diagram of the antenna and the diagram of its attached position:

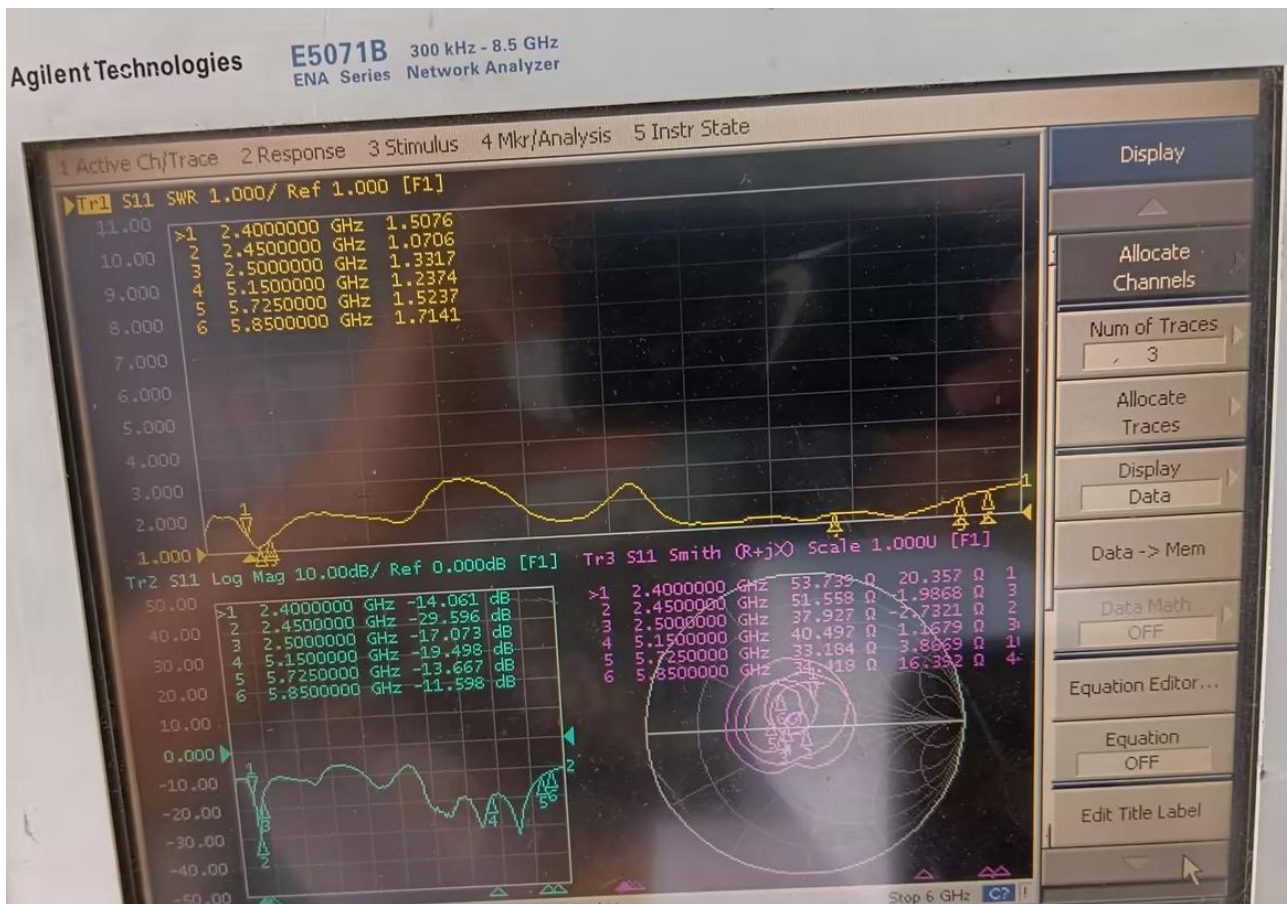


Antenna performance test diagram: Antenna 1





## Antenna performance test diagram: Antenna 2

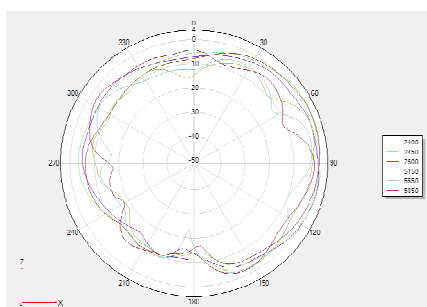




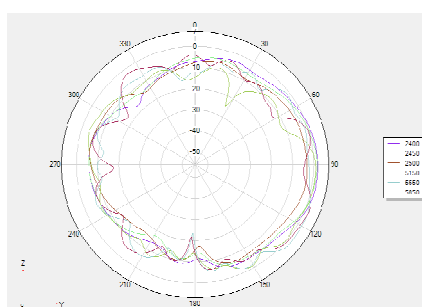
## 2D and 3D test data (2.4G/5G) : Antenna 1

| Frequency | Efficiency (%) | Gain. (dBi) |
|-----------|----------------|-------------|
| 2400MHz   | 57.65          | 1.82        |
| 2410MHz   | 52.42          | 1.76        |
| 2420MHz   | 52.75          | 1.59        |
| 2430MHz   | 50.05          | 1.64        |
| 2440MHz   | 52.7           | 1.67        |
| 2450MHz   | 55.88          | 1.95        |
| 2460MHz   | 56.37          | 1.87        |
| 2470MHz   | 56.89          | 1.64        |
| 2480MHz   | 56.02          | 1.82        |
| 2490MHz   | 57.83          | 1.77        |
| 2500MHz   | 57.96          | 1.83        |
| 5150MHz   | 46.81          | 3.11        |
| 5250MHz   | 50.07          | 3.02        |
| 5350MHz   | 51.14          | 3.09        |
| 5450MHz   | 46.79          | 2.89        |
| 5550MHz   | 46.96          | 2.7         |
| 5650MHz   | 47.53          | 3.21        |
| 5750MHz   | 51.54          | 2.95        |
| 5850MHz   | 48.33          | 2.86        |

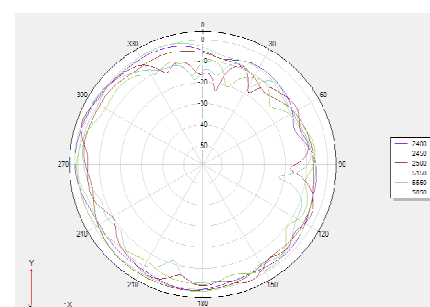
Phi 0 2D



Phi 90 2D

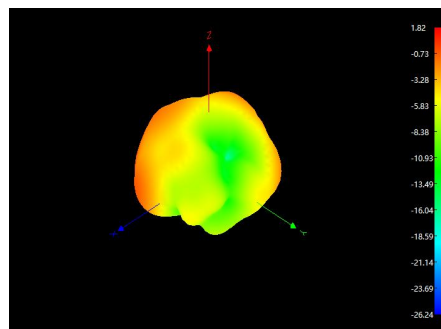
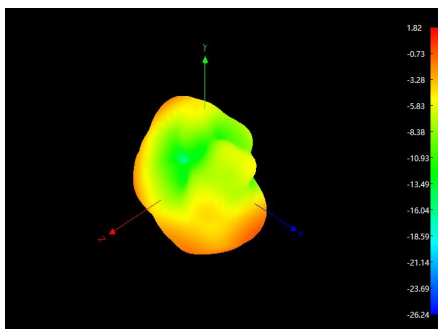
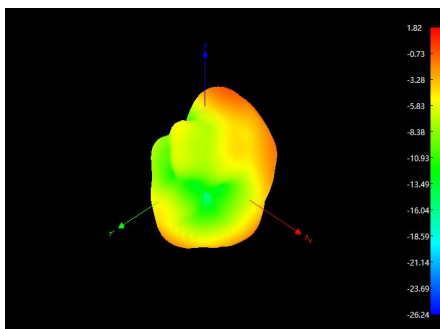


Theta 90 2D

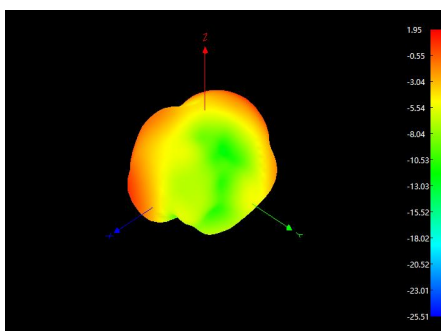
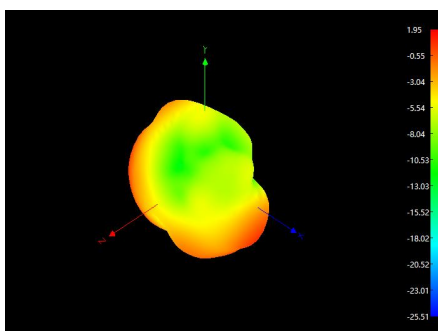
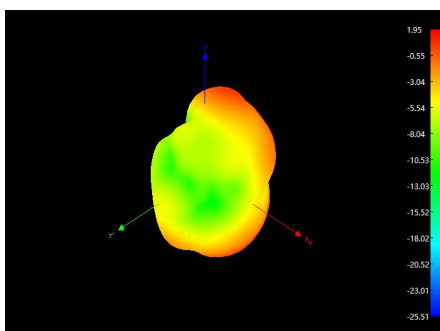




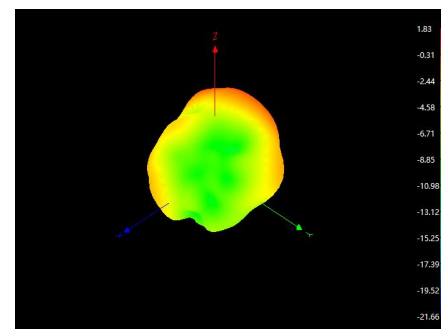
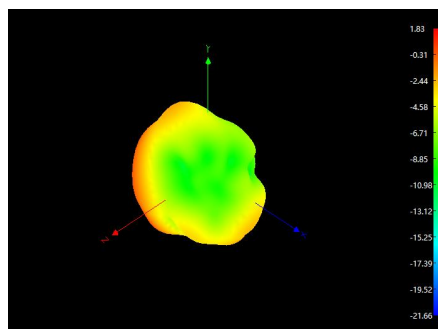
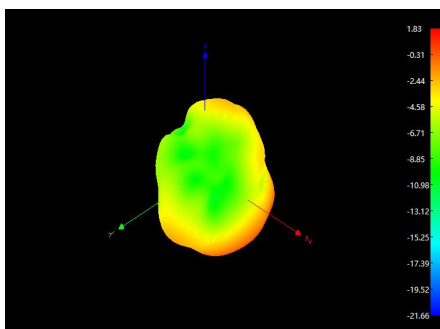
3D 2400:



3D 2450:

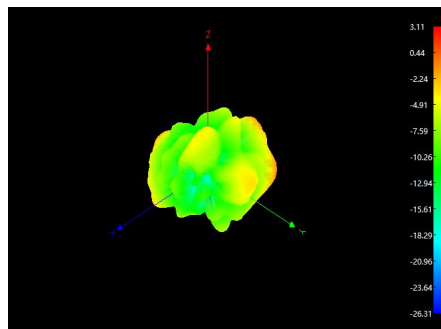
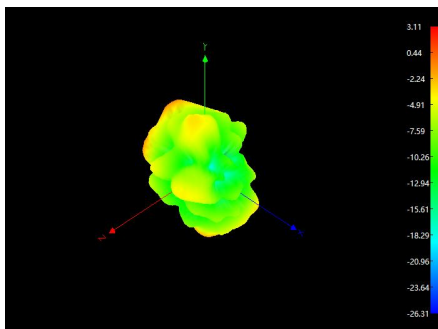
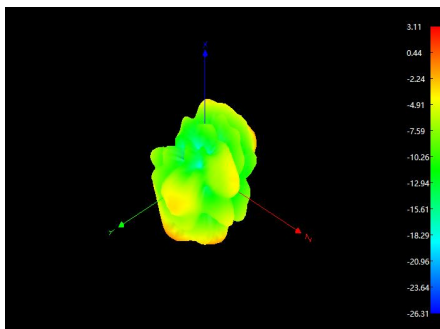


3D 2500:

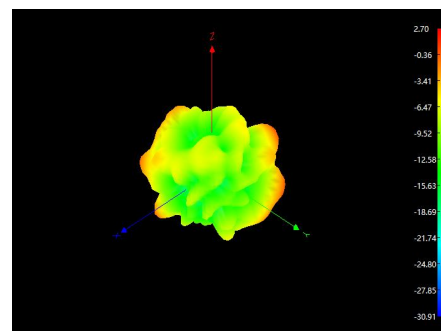
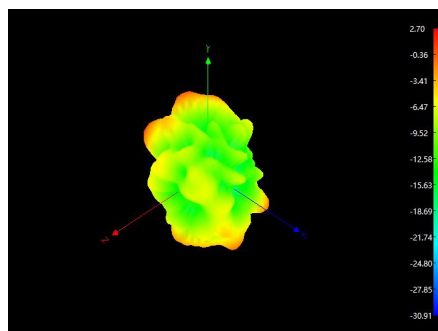
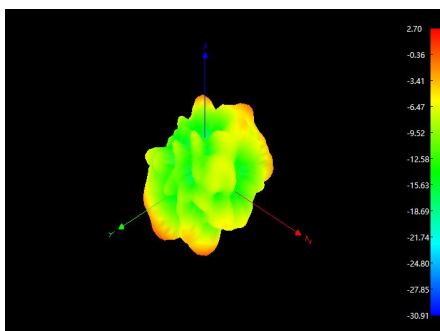




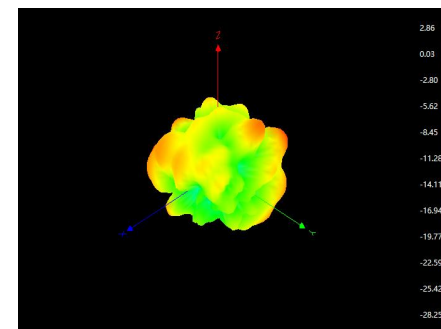
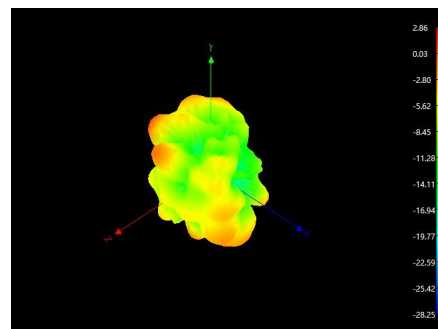
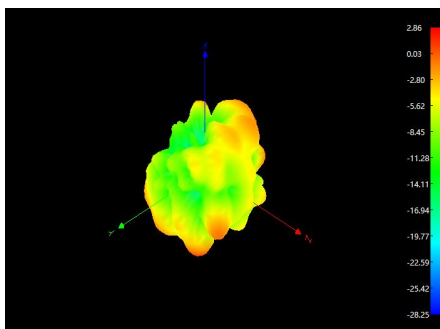
3D 5150:



3D 5550:



3D 5850:

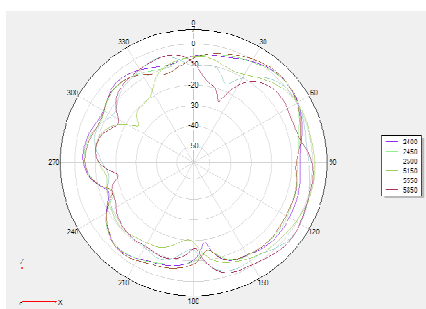




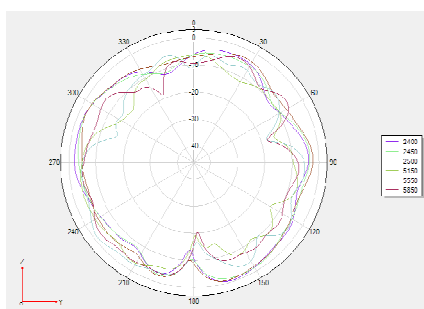
## 2D and 3D test data (2.4G/5G) : Antenna 2

| Frequency | Efficiency (%) | Gain. (dBi) |
|-----------|----------------|-------------|
| 2400MHz   | 55.1           | 1.93        |
| 2410MHz   | 56.86          | 1.88        |
| 2420MHz   | 59.61          | 1.76        |
| 2430MHz   | 53.75          | 1.64        |
| 2440MHz   | 56.86          | 1.91        |
| 2450MHz   | 56.57          | 1.89        |
| 2460MHz   | 55.23          | 1.68        |
| 2470MHz   | 55.68          | 1.69        |
| 2480MHz   | 54.88          | 1.73        |
| 2490MHz   | 52.46          | 1.85        |
| 2500MHz   | 54.81          | 1.9         |
| 5150MHz   | 47.98          | 3.19        |
| 5250MHz   | 47.72          | 3.21        |
| 5350MHz   | 48.09          | 3.1         |
| 5450MHz   | 50.53          | 2.87        |
| 5550MHz   | 49.95          | 2.97        |
| 5650MHz   | 49.54          | 2.81        |
| 5750MHz   | 46.45          | 2.98        |
| 5850MHz   | 44.98          | 2.93        |

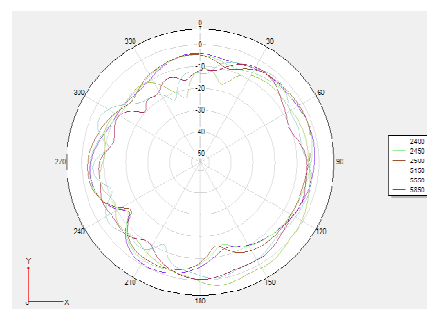
Phi 0 2D



Phi 90 2D

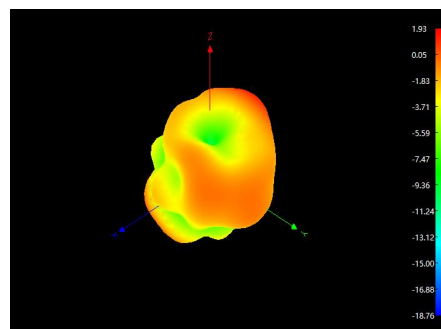
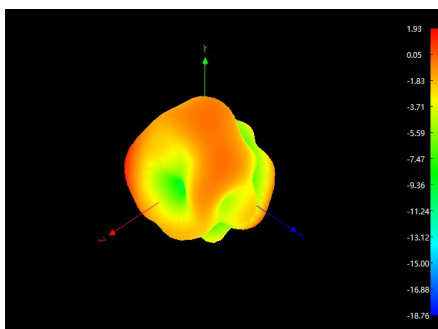
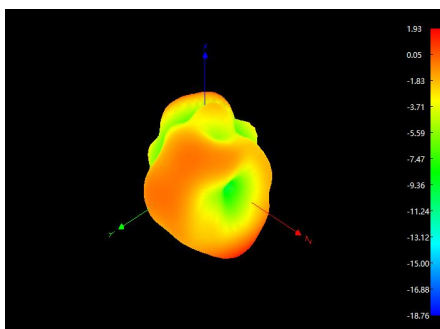


Theta 90 2D

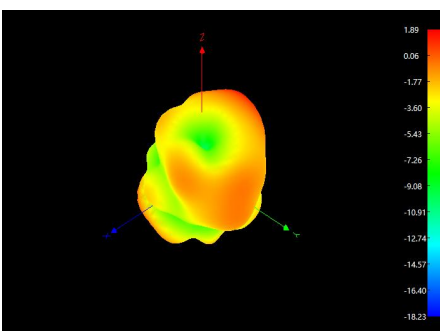
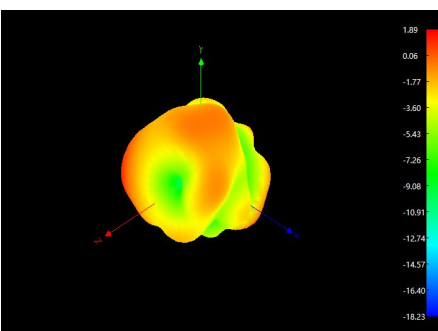
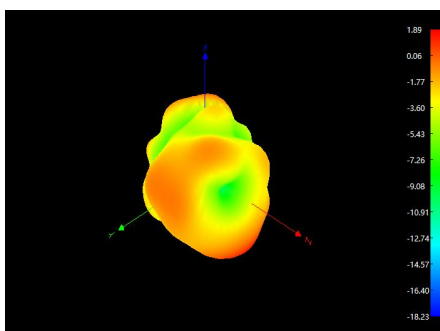




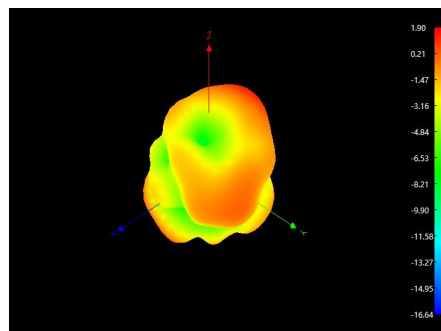
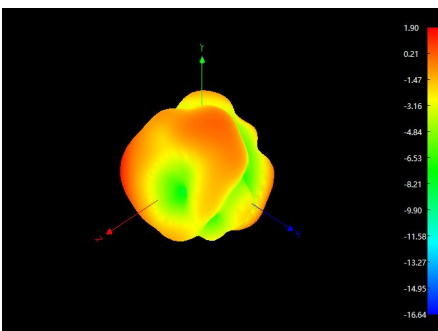
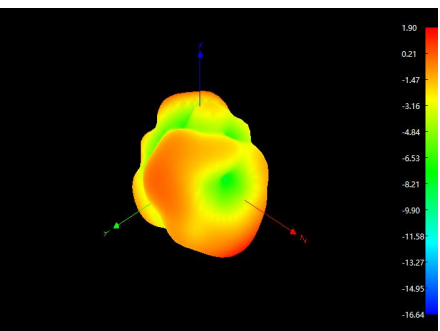
3D 2400:



3D 2450:

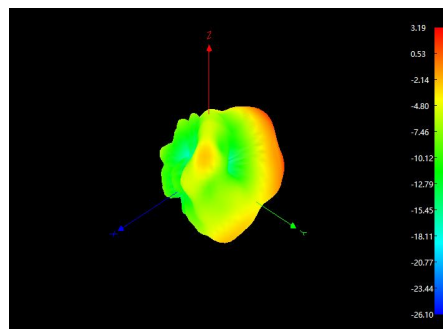
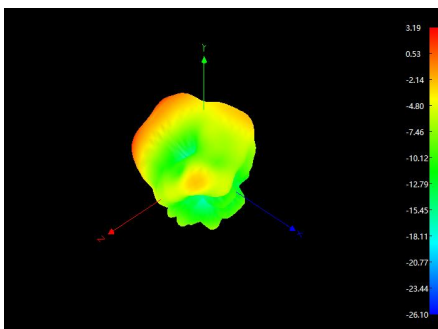
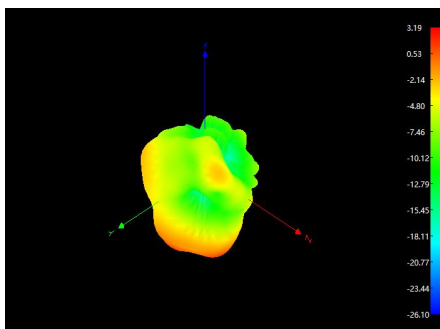


3D 2500:

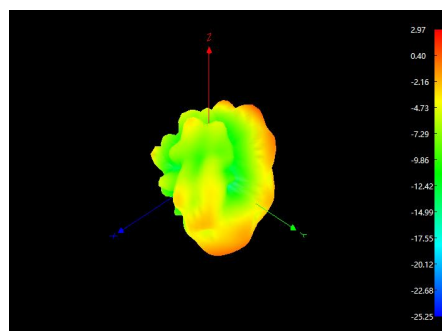
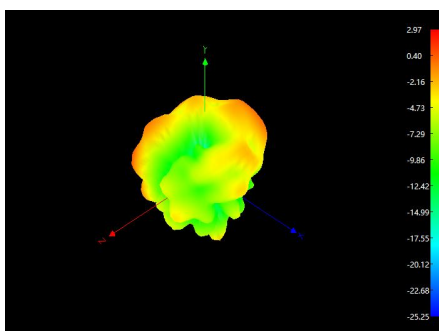
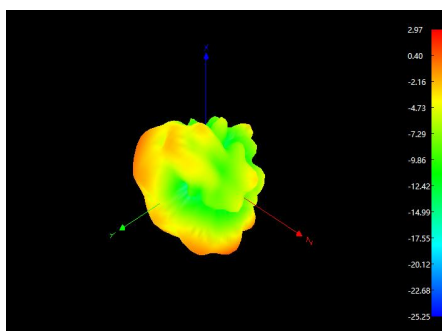




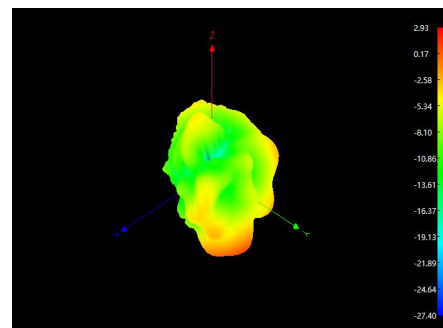
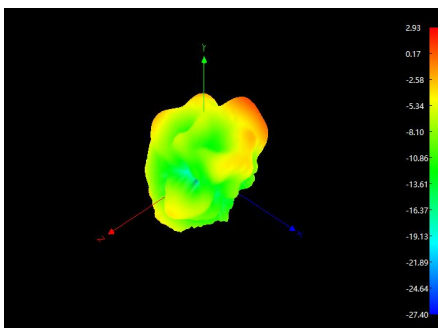
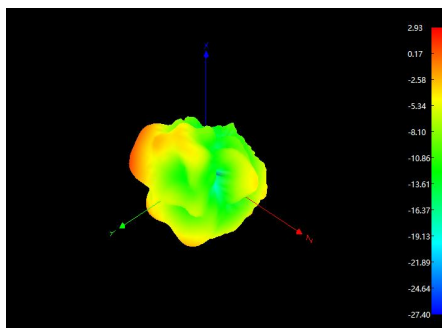
3D 5150:



3D 5550:



3D 5850:





Material RoHS conformity declaration form

This is to certify that the delivery to your company's components, raw materials, auxiliary materials used and the additives in the production engineering are accord with RoHS environmental requirements of the restrictions on the use of hazardous substances directive (RoHS directive 2011/65 / EU)

About components used raw materials, packaging materials, auxiliary materials and additives used in the production process such as composition of the report is as follows:

| Component<br>/Part Name                     | Material<br>Composition                     | ICP report #       | Test Org. | Test Date | Content of harmful substances (ppm) |    |    |                  |     |      | PASS? |
|---------------------------------------------|---------------------------------------------|--------------------|-----------|-----------|-------------------------------------|----|----|------------------|-----|------|-------|
|                                             |                                             |                    |           |           | Cd                                  | Pb | Hg | Cr <sup>6+</sup> | PBB | PBDE | PASS  |
| Wire rod                                    | Coaxial<br>cable                            | NGBPC24007471212   | SGS       | 24/12/23  | ND                                  | ND | ND | ND               | ND  | ND   | PASS  |
| Terminal                                    | Phosphor<br>bronze                          | CANEC24029407216   | SGS       | 25/01/08  | ND                                  | 4  | ND | ND               | ND  | ND   | PASS  |
|                                             | Gold<br>coating                             | A2240410234101001E | CTI       | 24/07/16  | ND                                  | ND | ND | ND               | ND  | ND   | PASS  |
|                                             | Rubber<br>core                              | ETR24705722        | CTI       | 24/08/05  | ND                                  | ND | ND | ND               | ND  | ND   | PASS  |
| Environment<br>ally<br>friendly<br>tin wire | Environmen<br>tally<br>friendly<br>tin wire | SHAEC24006459102   | SGS       | 24/04/10  | ND                                  | 78 | ND | ND               | ND  | ND   | PASS  |
| PCB                                         | PCB                                         | CANEC24019790710   | SGS       | 24/09/14  | ND                                  | 17 | ND | ND               | ND  | ND   | PASS  |
| 3M                                          | 3M9448A                                     | CANEC24028865442   | SGS       | 25/01/03  | ND                                  | 14 | ND | ND               | ND  | ND   | PASS  |