# Antenna Specification

| | |
|---|---|
| Applicant: | Chipsea Technology (Shenzhen) Co., Ltd. |
| Sample Name: | Bluetooth module |
| Model: | CSM92F25 |
| Trademark: | N/A |
| Brand: | N/A |
| Test Standards: | GB/T 9410-2008 |
| Date Of Receipt: | 2022-09-06 |
| Test Date: | 2022-09-07 |
| Issue Date: | 2022-09-13 |

prepared by: _____
Fang Jinshan

Issue: _____
Chi Shide

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| Change Log | | |
|---|---|---|
| Version | date | Reason for change |
| 1.0 | 2022-09-13 | First edition |
| | | |

# 1.Basic information

ote: Provided by the applicant and manufacturer.

## 1.1.Applicant and manufacturer information

| | |
|---|---|
| Applicant: | Chipsea Technology (Shenzhen) Co., Ltd. |
| Applicant Address: | 3rd Floor, Building T4, Shenzhen Bay Innovation and Technology Center, Nanshan District, Shenzhen |
| Manufacturer: | N/A |
| Manufacturer Address: | N/A |

## 1.2.Sample information

| | |
|---|---|
| Frequency Range: | 2400MHz-2500MHz |
| Polarization: | N/A |
| **IMEI:** | N/A |
| Sample No.: | 2# |

Remark:

1. For detailed information on the samples, please refer to the instructions for use provided by the applicant or manufacturer.

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# 2.Test results

## 2.1.References

ain reference documents for the test:

| No. | Document Name | Document Title |
|---|---|---|
| 1 | GB/T 9410-2008 | General technical specifications for mobile communication antennas |

## 2.2. Sample test conditions

During testing, environmental conditions were within the listed ranges:

| | |
|---|---|
| temperature(°C): | 10 - 30 |
| Relative humidity(%): | 25 - 75 |

## 2.3.Measurement uncertainty

The measurement uncertainty is calculated according to the "Guide to the Expression of Uncertainty in Measurement" (GUM) issued by ISO. When the test result is a critical value, our company will issue the measurement uncertainty and give the judgment result based on the 95% confidence interval.

| item | Measurement uncertainty(dB) |
|---|---|
| Gain | ±0.5 |
| VSWR | ±0.2 |
| The expanded uncertainty is expressed using a K=2 coverage factor and a 95% confidence interval. | |

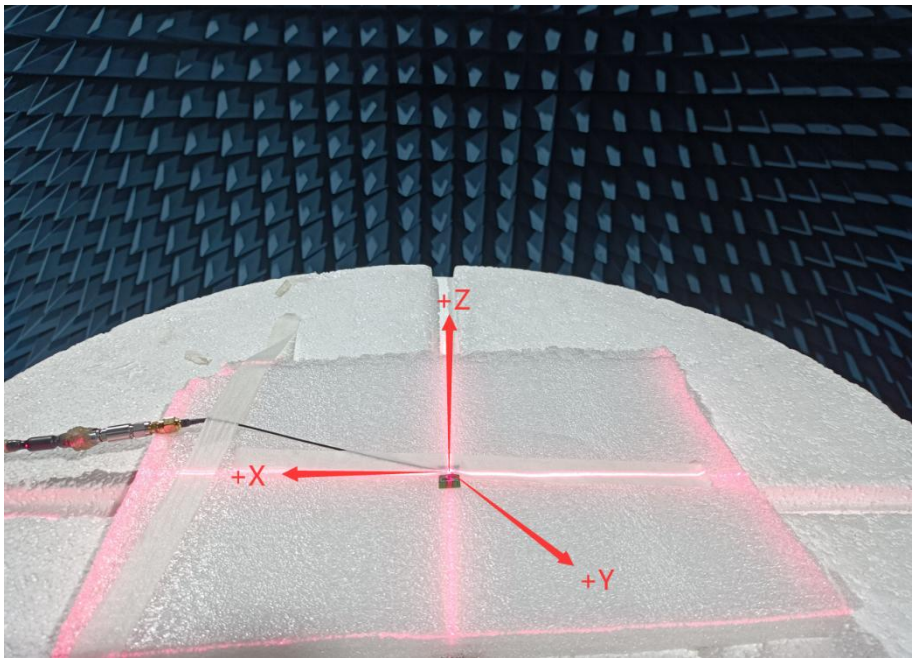
# 3.Test results

## 3.1.Gain

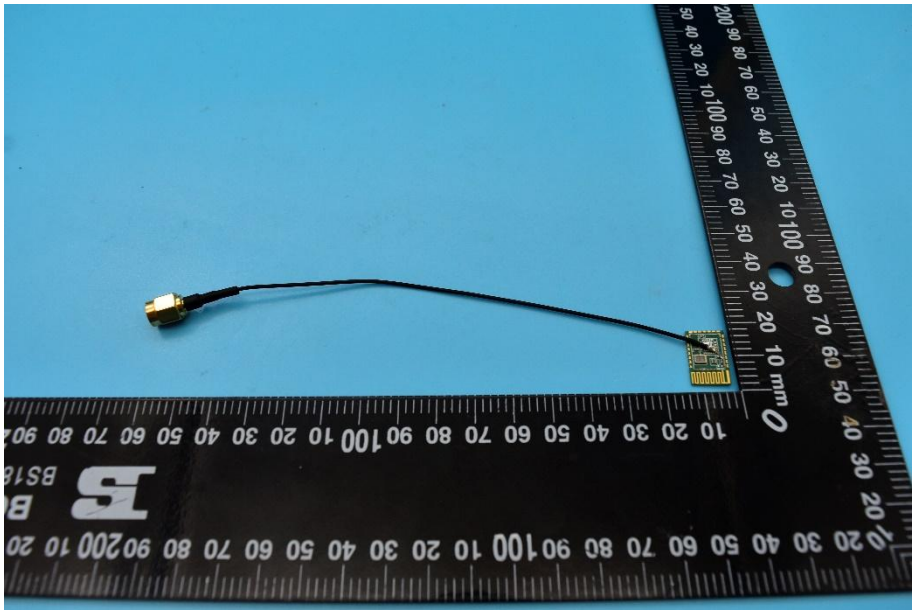
| Frequency(MHz) | Gain(dBi) |
|---|---|
| 2400 | -1.84 |
| 2410 | 0 |
| 2420 | -1.24 |
| 2430 | -0.92 |
| 2440 | -0.81 |
| 2450 | -0.60 |
| 2460 | -0.28 |
| 2470 | -0.15 |
| 2480 | -0.65 |
| 2490 | -1.11 |
| 2500 | -1.47 |

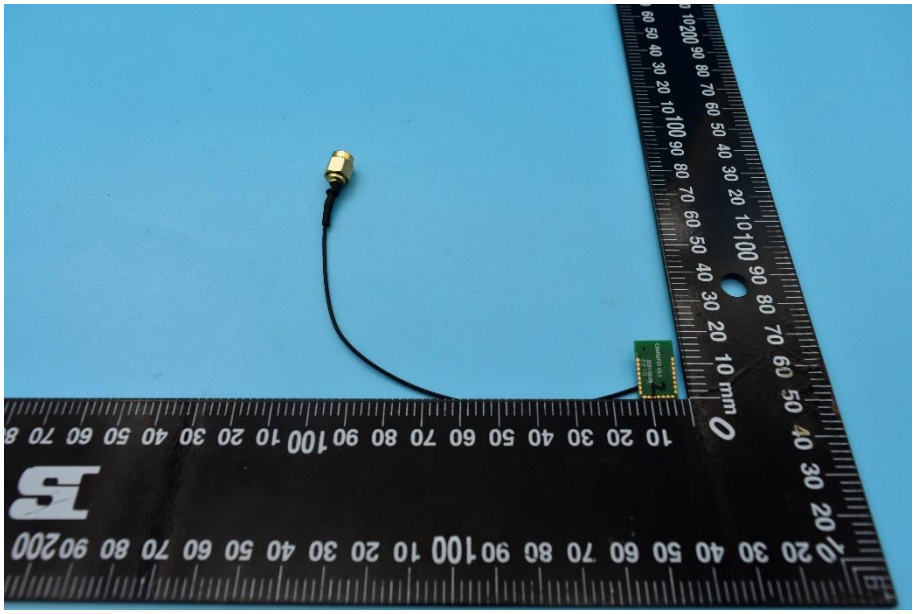
# Appendix A Sample photos

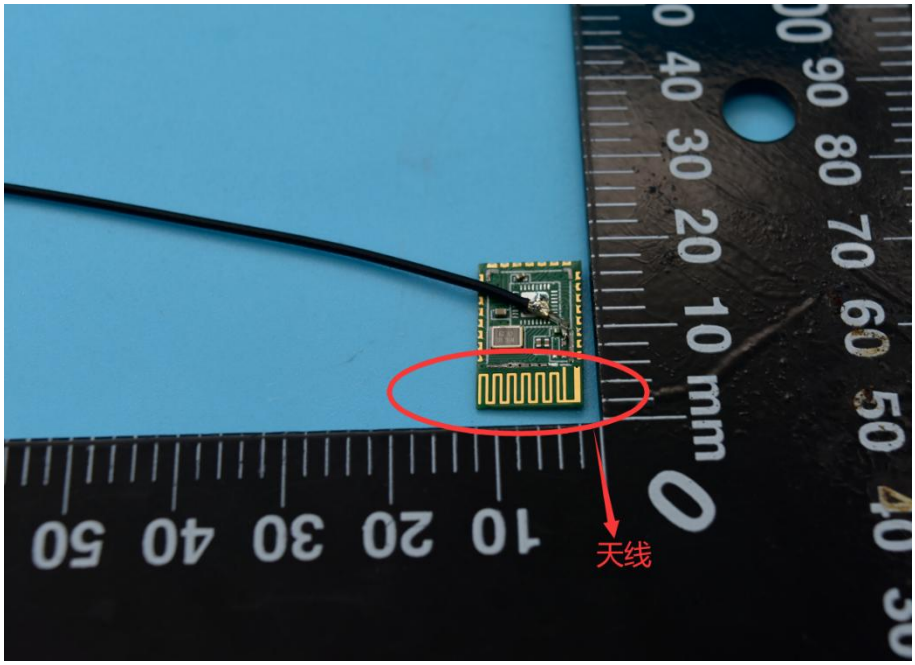
1. Test photos




2. Test photos



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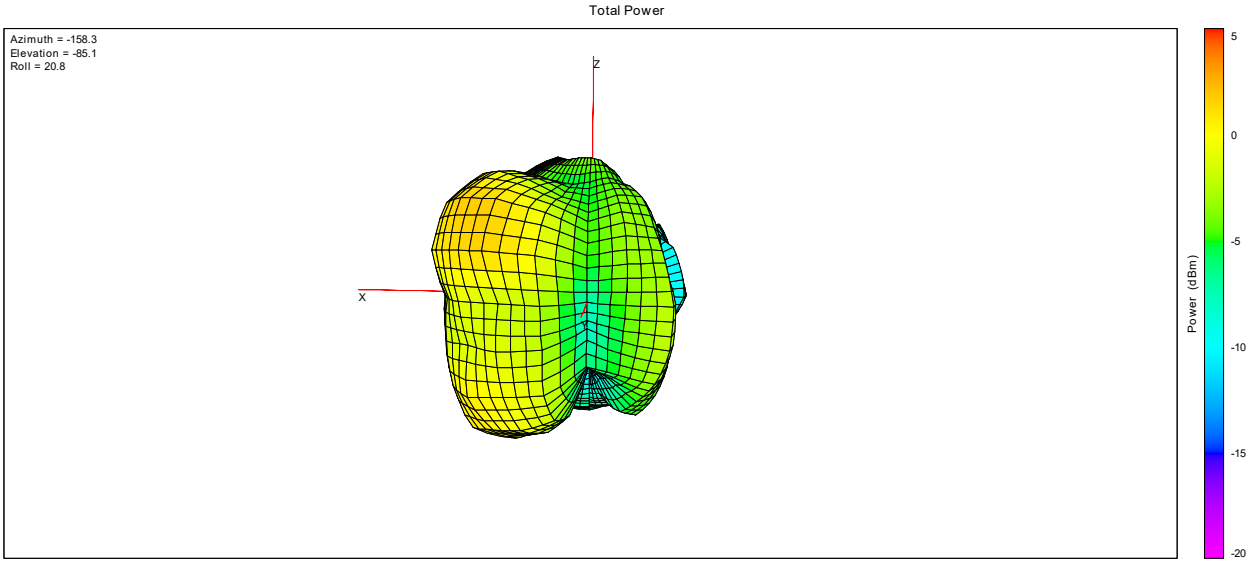
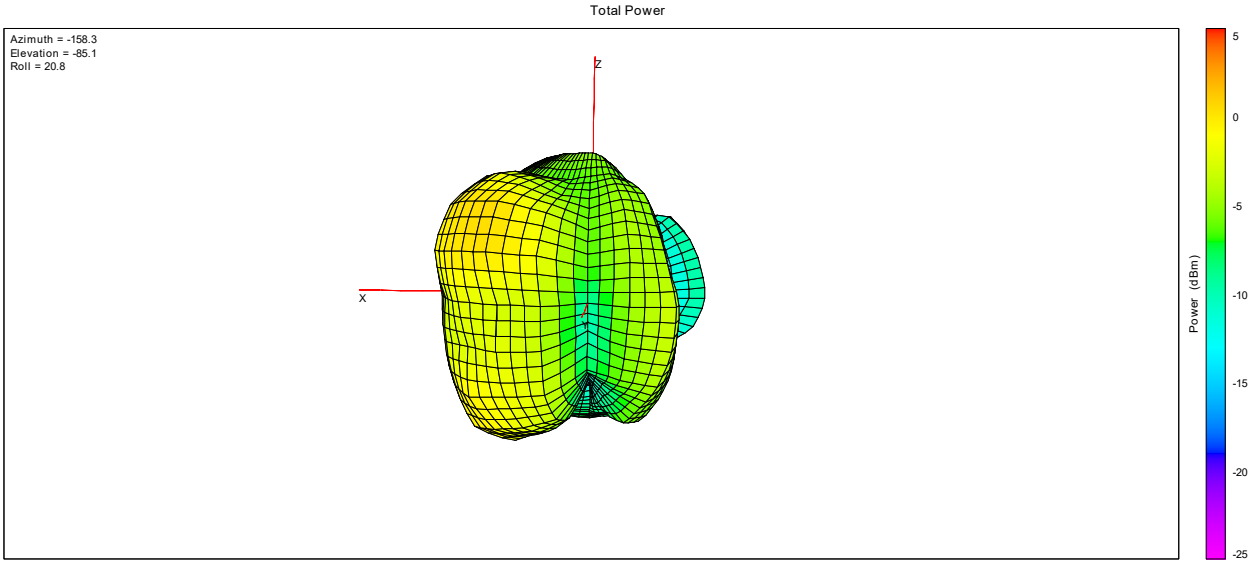
# Appendix B Radiation diagram

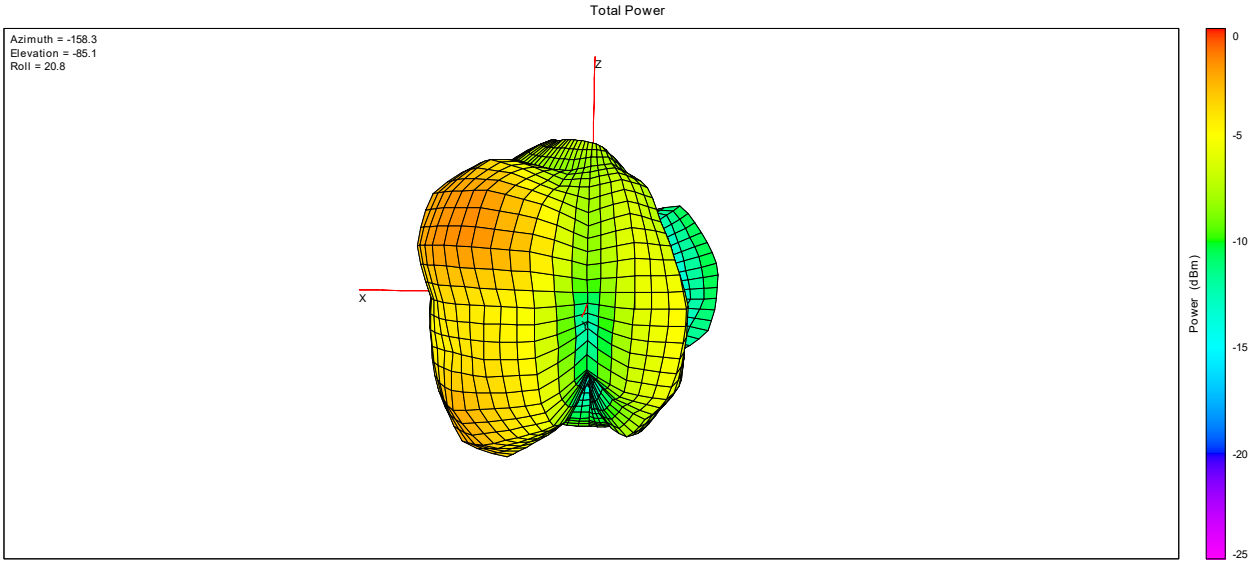
a) 3D diagram




2400MHz

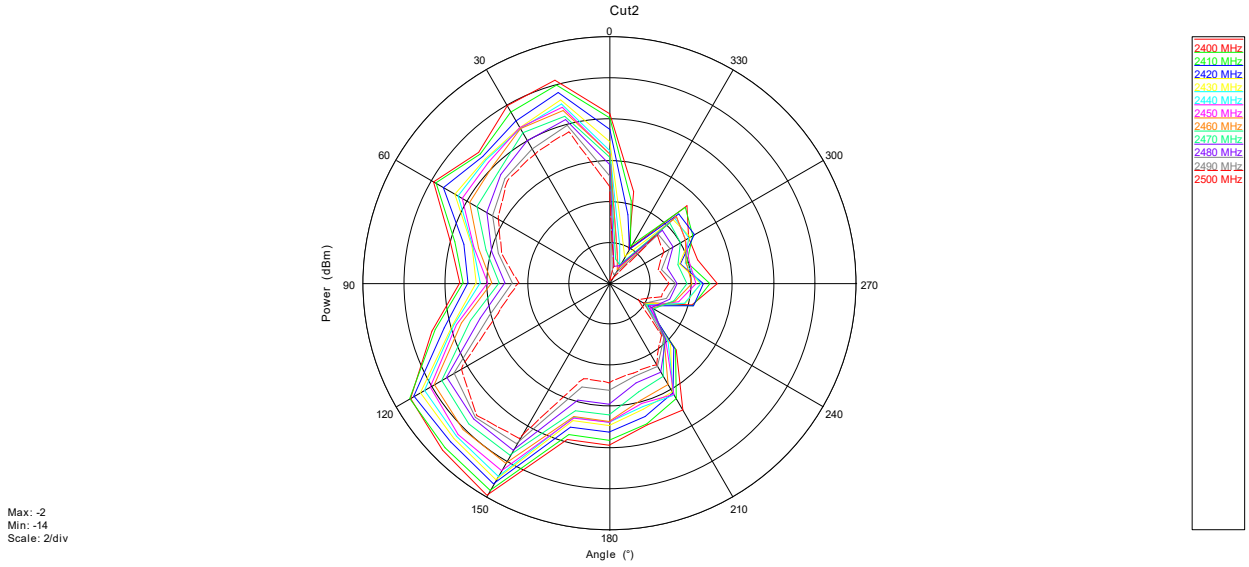



2450MHz

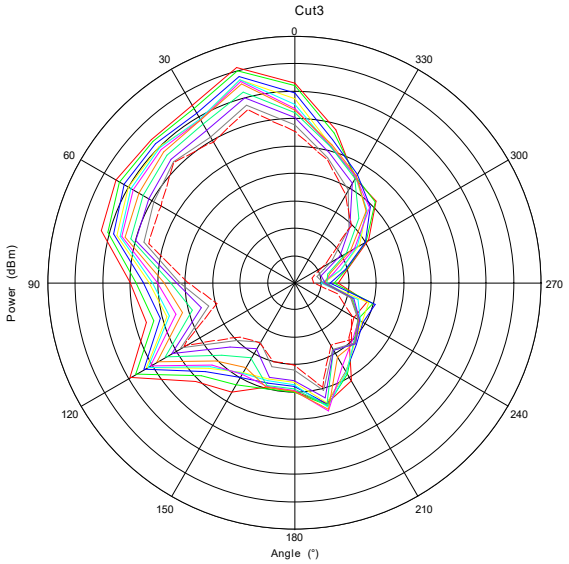



2500MHz

b) 2D diagram

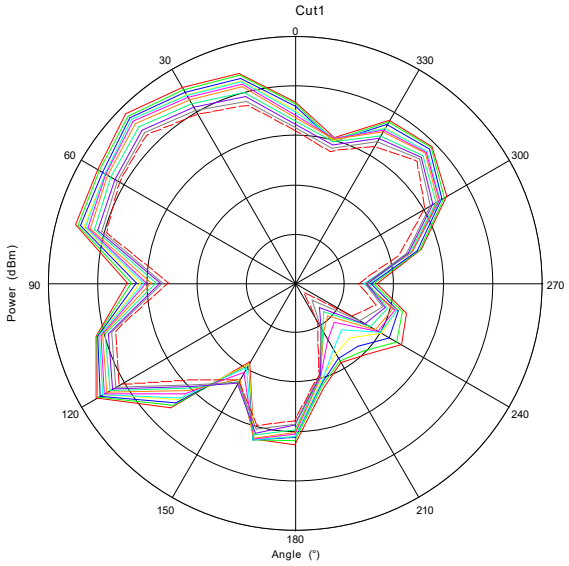



Phi=0°




Max: -2
Min: -20
Scale: 2/div

Phi=90°




Max: 0
Min: -25
Scale: 5/div

Theta=90°

# Appendix C Testing agency information

**1.** Test equipment list

| Device Name | Manufacturer | model | Serial Number | Calibration date | Effective Date |
|---|---|---|---|---|---|
| Network Analyzer | Agilent | E5071C | MY46110140 | 2022.07.04 | 2023.07.03 |
| 4*4*4 fully anechoic chamber | ETS | AMS-8923-150 | N/A | 2020.01.06 | 2023.01.05 |
| Antenna Test System | ETS | EMQ-100 | N/A | N/A | N/A |

# Precautions

1. The report is invalid without the seal of the testing unit.
2. The report is invalid without the signature of the compiler and issuer.
3. The report is invalid if it is altered.
4. If you have any objection to the test report, please submit it to the testing unit within 15 days from the date of receipt of the report.
5. "P" means "the test results meet the requirements", "F" means "the test results do not meet the requirements", "N/A" means "the requirements do not apply to the product", and "/" means "not tested".

End of report