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| 客户 Customer | |
| 项目名 Project | SW52 |
| 料号 Part NO. | |
| 规格 Specification | BT Antennas |

| APPROVAL | | | |
|--------------|----------|----------|------------|
| QiXinTongDa: | | | |
| RF Check | ME Check | QC Check | Confirm By |
| | | | |
| Customer: | | | |
| EE Check | PM Check | QC Check | Confirm By |
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1 Antenna description

BT antenna' s frequency band is: 2402-2480MHz.

BT antenna' s type is: **wire Cable**

Bluetooth model: LE, LE support 1Mbps/2Mbps

Antenna Average Gain: **-7.53dBi**

PCBA Power: 3dbm

Frequency: 2402~2480MHz

Bluetooth type: GFSK, Pi/4 DQPSK

1.1 Antenna pictures



2 Electrical Performance

2.1 Specification

Frequency Range: **2402MHz~2480MHz**

2.2 Measurement Set-up

2.2.1 VSWR and Return Loss

VSWR measurements (S_{11}) were performed using an Agilent ENA series Network Analyzer and the previously described test fixture. Coaxial chokes were used to mitigate surface currents on the outside of the cabling. The testing was performed in free space.

2.2.2 Efficiency and Gain

The gain of the antenna was measured in OPO' s 3D anechoic chamber in Shenzhen, China. The chamber is a ETS system capable of doing tests from 380MHz to 6GHz. Coaxial chokes on the feed cable were used to mitigate surface currents during passive tests. The measurement results are calibrated using dipole standards. For TRP and TIS the chamber uses a 8960 / MT8820C to establish the connection with the mobile device and read the power.

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3 Reference measurement data

3.1 Passive



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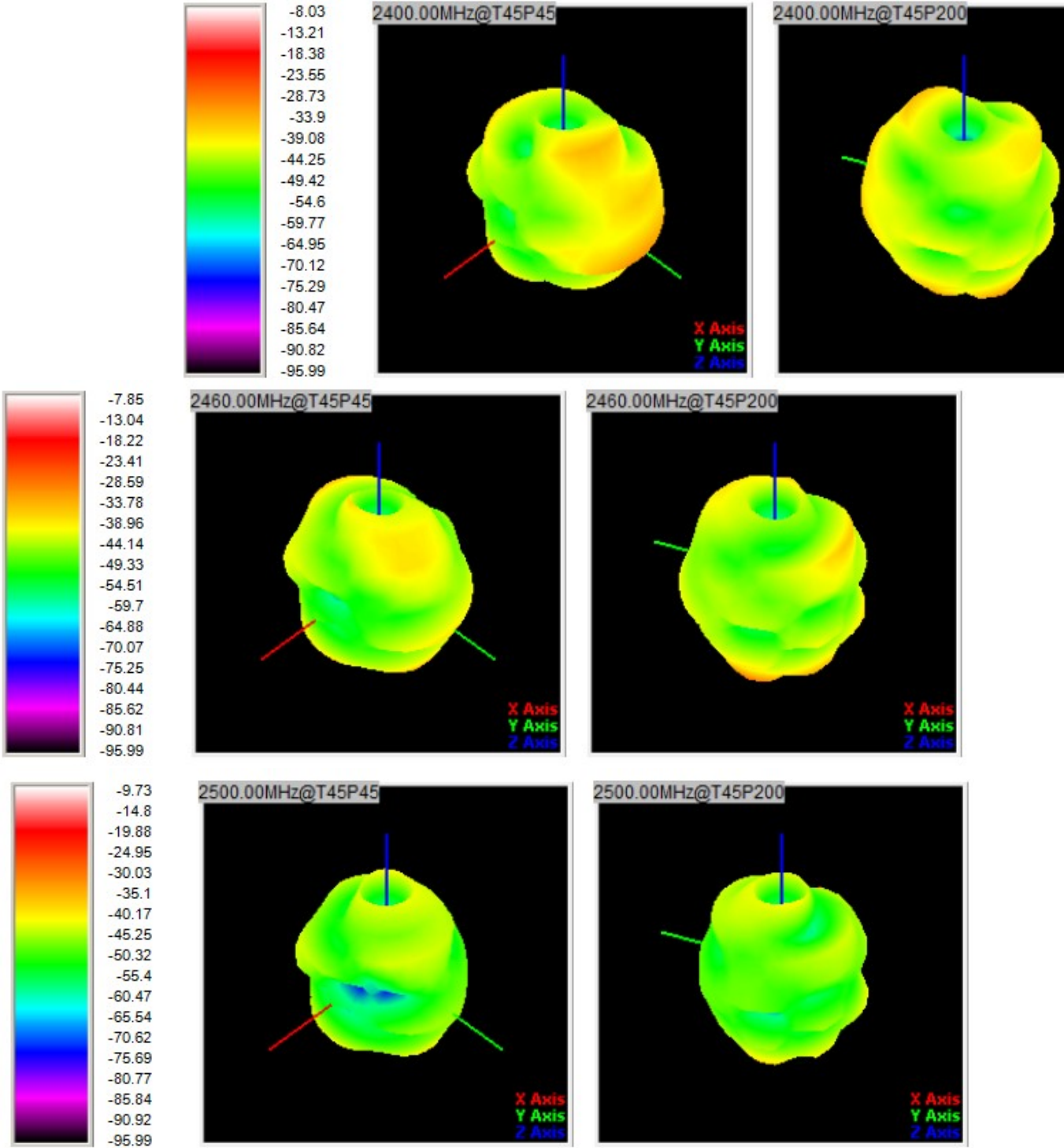
3.2 Active

| passive Test For2.4 | | | | |
|---------------------|-------------|----------------|-----------------|------------|
| Test Point ID | Freq. (MHz) | Efficiency (%) | Efficiency (dB) | Gain (dBi) |
| <u>1</u> | 2400.0 | 4.50 | -13.47 | -8.03 |
| <u>2</u> | 2410.0 | 3.90 | -14.05 | -8.55 |
| <u>3</u> | 2420.0 | 4.00 | -13.99 | -8.42 |
| <u>4</u> | 2430.0 | 4.30 | -13.67 | -7.94 |
| <u>5</u> | 2440.0 | 4.40 | -13.55 | -7.68 |
| <u>6</u> | 2450.0 | 4.30 | -13.62 | -7.53 |
| <u>7</u> | 2460.0 | 3.90 | -14.08 | -7.85 |
| <u>8</u> | 2470.0 | 3.60 | -14.39 | -8.10 |
| <u>9</u> | 2480.0 | 3.50 | -14.50 | -8.34 |
| <u>10</u> | 2490.0 | 3.50 | -14.53 | -8.51 |
| <u>11</u> | 2500.0 | 2.80 | -15.50 | -9.73 |

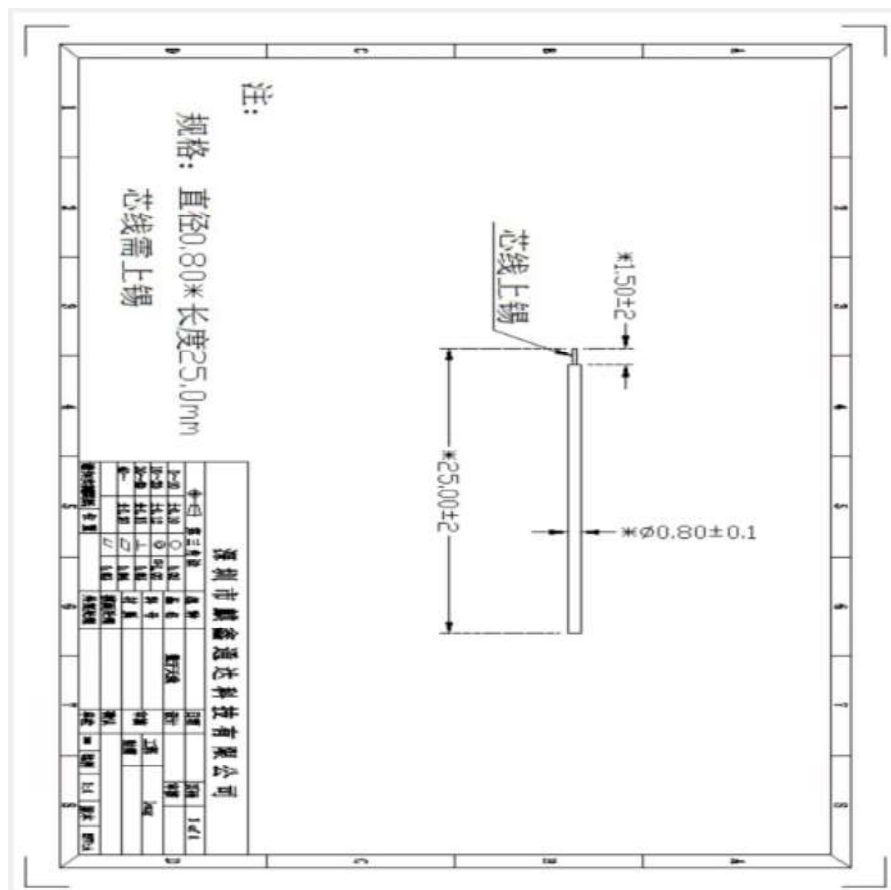
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Mechanical description

4.1 Drawings



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