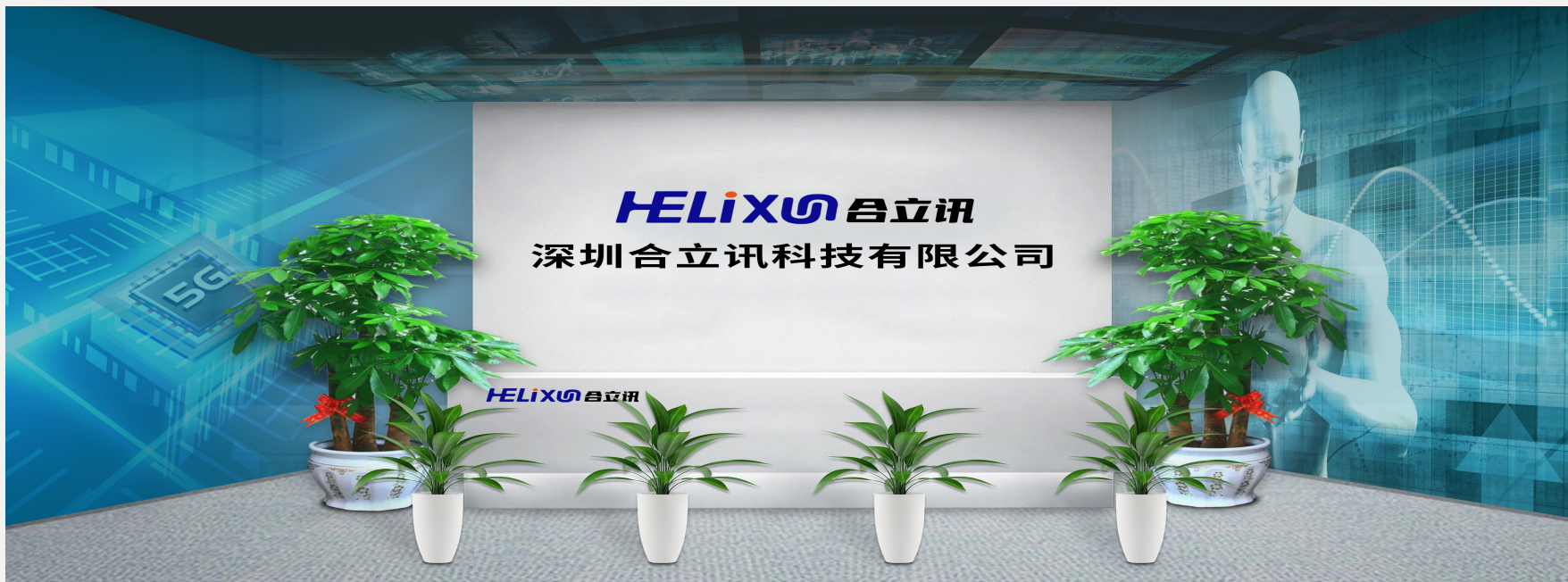


Antenna Test Report



| | |
|------------------|--------------|
| Customer | 雅刚电子（惠州）有限公司 |
| Project | PCB Antenna |
| Antenna Revision | A0 |
| Prepared by | 18607523041 |
| Checked by | 17507525285 |
| Date: | 2023. 07. 21 |

Purpose

This report is to measure the performance of antenna for P C B Antenna Th e antenna operating frequency at 2400-2500MHz, All test data are showed as below.

Content

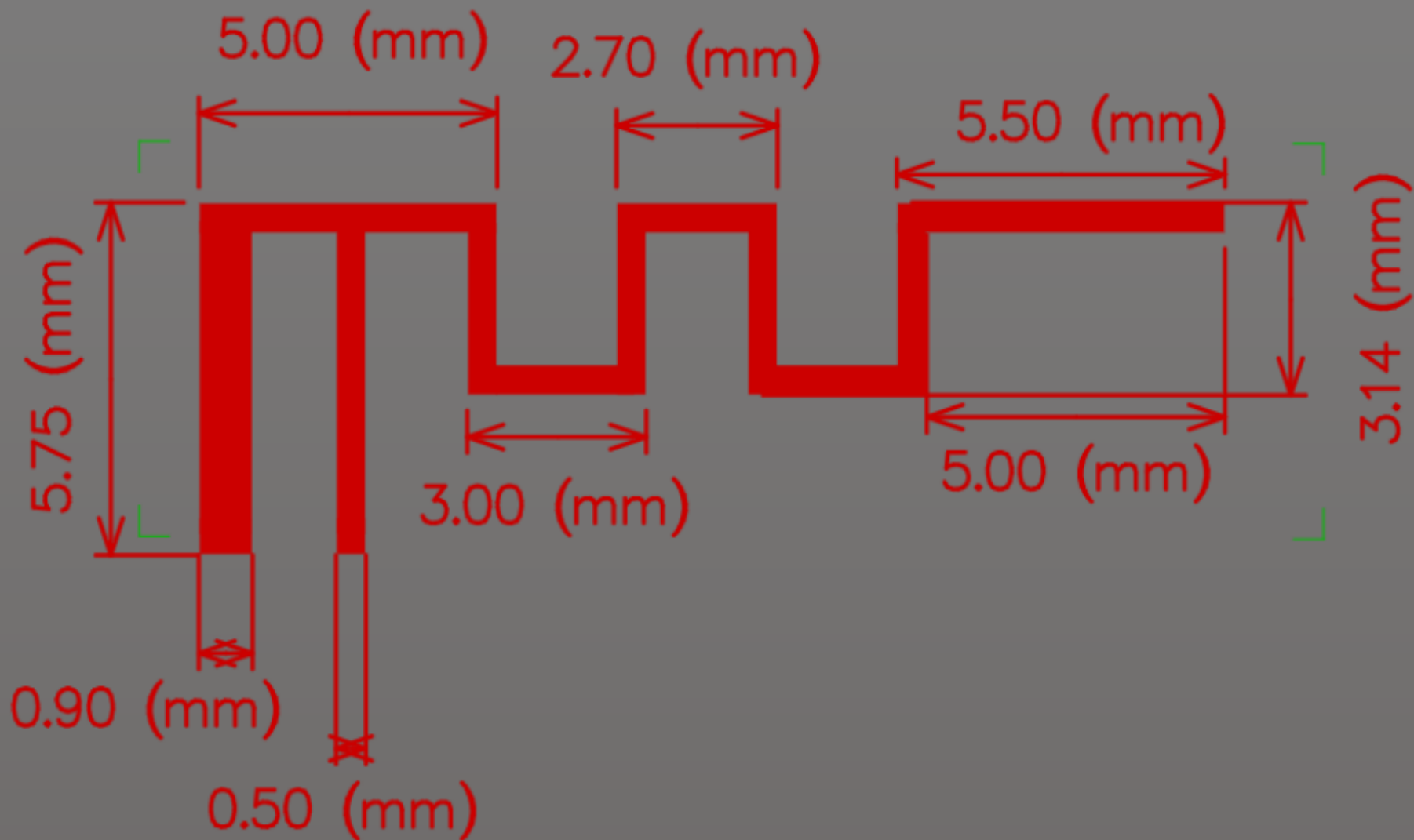
1. est system
- 2.Product Overview Dimension
3. Test Result
 - 3.1 S11 Parameter
 - 3.2 Gain & Efficiency
 - 3.3 2D Pattern

1. Test System

| Sequence Number | Test Item | equipment |
|-------------------|-------------------|-------------------------------|
| S parameter | VSWR | Agilent 5071C & Agilent 5071B |
| OTA Test | TRP&TIS | Agilent 8960 & CMW500 STIMO |
| Gain & Efficiency | Gain & Efficiency | SATIMO Agilent 5071C |

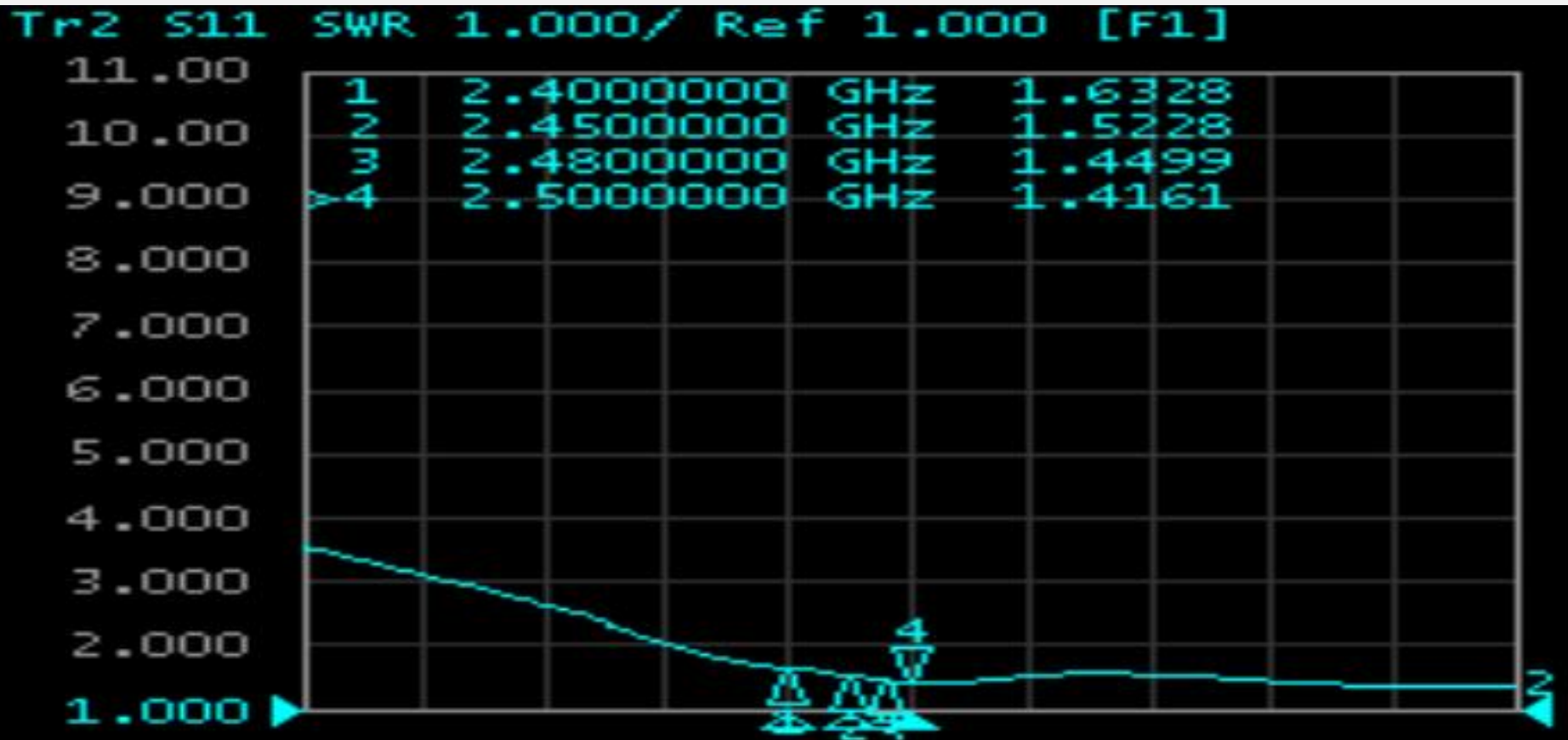


2. Product Overview & Dimension



3. Test Result

3.1 S11 Parameter-VSWR



| | | | | |
|----------------|------|------|------|------|
| requency (MHz) | 2400 | 2450 | 2480 | 2500 |
| VSWR | 1.63 | 1.52 | 1.44 | 1.41 |

3. Test Result

3.1 S11 Parameter-Log Mag



| | | | | |
|-----------------|--------|--------|--------|--------|
| Frequency (MHz) | 2400 | 2450 | 2480 | 2500 |
| Log Mag | -12.38 | -13.67 | -14.72 | -15.27 |

3.Test Result

3.1 S11 Parameter-Smith

Tr3 S11 Smith (R+jX) Scale 1.000U [F1]

| | | | | | |
|----|-----------|-----|-----------------|------------------|-----------|
| 1 | 2.4000000 | GHz | 31.332 Ω | -5.9786 Ω | 11.092 pF |
| 2 | 2.4500000 | GHz | 33.535 Ω | -5.4663 Ω | 11.884 pF |
| 3 | 2.4800000 | GHz | 35.454 Ω | -5.9950 Ω | 10.705 pF |
| >4 | 2.5000000 | GHz | 36.661 Ω | -6.8004 Ω | 9.3615 pF |



| | | | | |
|-------------------|-------|-------|-------|-------|
| Frequency (MHz) | 2400 | 2450 | 2480 | 2500 |
| Smith(Ω) | 31.33 | 33.53 | 35.45 | 36.66 |

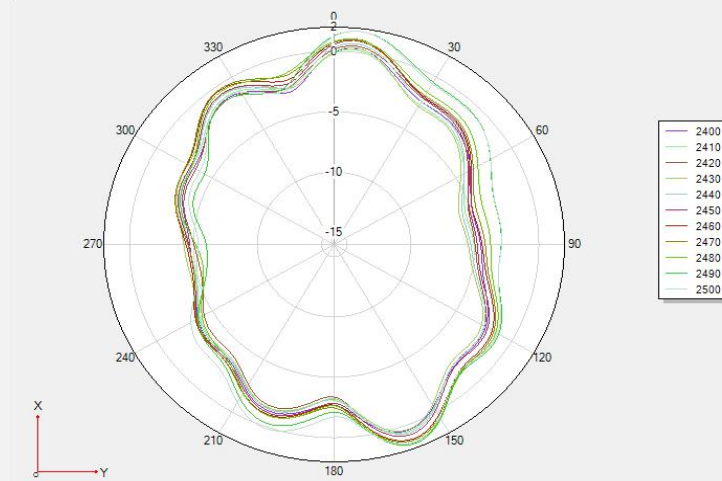
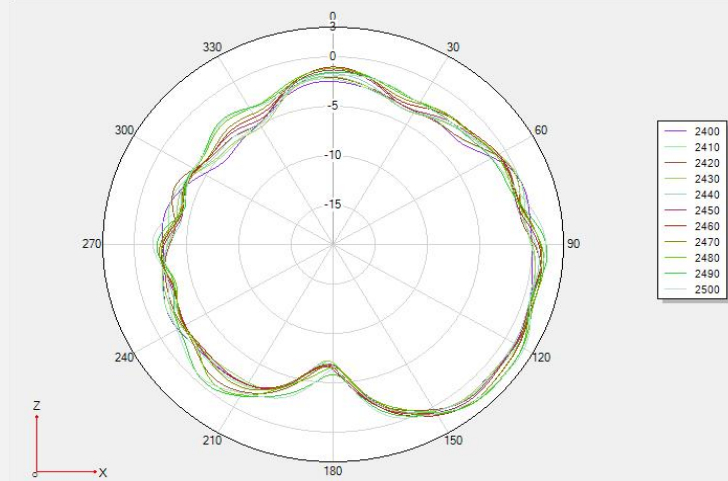
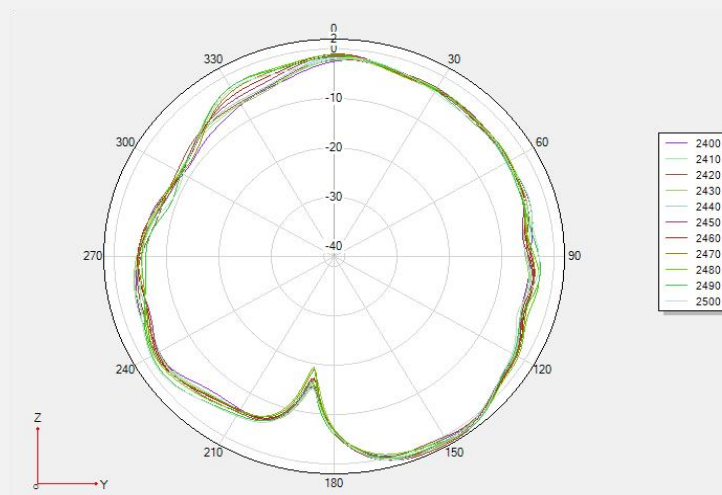
3. Test Result

3.2 Gain & Efficiency——ANT

| Frequency (MHz) | Efficiency (%) | Max GAIN (dBi) |
|-----------------|----------------|----------------|
| 2400 | 55.85 | -1.32 |
| 2410 | 57.02 | -1.19 |
| 2420 | 56.89 | -0.73 |
| 2430 | 56.49 | -0.49 |
| 2440 | 57.15 | -0.36 |
| 2450 | 59.29 | 0 |
| 2460 | 61.52 | -0.28 |
| 2470 | 59.98 | -0.34 |
| 2480 | 60.67 | -0.39 |
| 2490 | 60.26 | -0.47 |
| 2500 | 59.98 | -0.78 |

3. Test Result

3.3 2D Pattern — BT ANT



Thank you!