Antenna Test Report

产品名称: AUX-BT/WIFI FPC ANT
PRODUCT NAME

客户名称: GUANGDONG UNION TECHNOLOGY CO., LTD
CUSTOMER NAME

料号: T408-13MB-185

深圳市星源创科技有限公司

SHENZHEN Xingyuanchuang TECHNOLOGY CO.,LTD

1.Purpose

Standardize product specifications and test methods for mobile communication terminal antennas produced by OnePlus to avoid errors caused by differences in test conditions and methods.

2.Overview of product categories and product models

2.1 Product model overview

This report mainly outlines the electrical results of the antenna designed for the KST103SD_J project. The design frequency band of this antenna is: 2.4G WIFI segment.

3.Description of basic parameters and experimental equipment

3.1 Basic parameters

Product electrical performance index	
Operating frequency	2400-2480MHz 4800-5850 MHz
VSWR	2400-2480 MHz: < 2.0 4800-5850 MHz: < 1.35
Antenna gain	2400-2480 MHz: 1.5dBi Max 4800-5850 MHz: 1.09dBi Max
Radiation efficiency	2400-2480 MHz: > 30% 4800-5850 MHz: > 38%
impedance	50 ohm
Product material description	
FPC	**Electrolytic copperPI**
coaxial	Braided wire + terminal
Product Environmental Description	
Operating temperature	- 30˚C ~ + 85 ˚C
stored temperature	- 30˚C ~ + 85 ˚C

3.2 Experimental equipment description

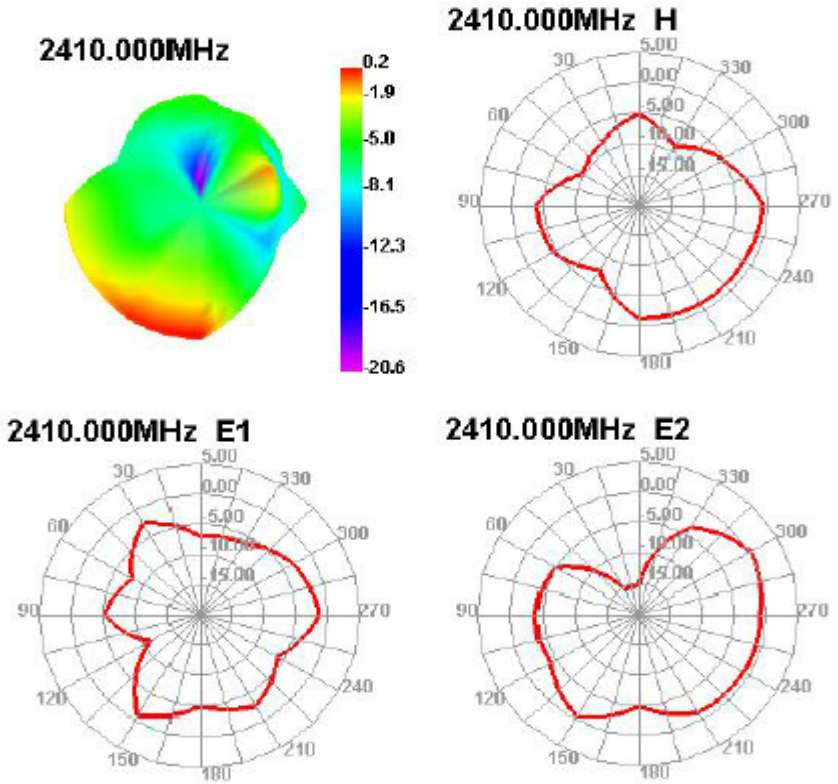
List	Testing project	Equipment
1. S Parameters	1.Return loss 2. VSWR at	Network analyzer: Agilent 8753ES
2. Coupling power test	1. Transmission power 2. Receiving sensitivity	Comprehensive tester: Agilent 8960 E5515C
3. Radiation pattern and gain	1. Radiation pattern 2. Antenna gain	1. Darkroom： 7x4x3 m (3D) 2. Network analyzer ： Agilent 8753ES

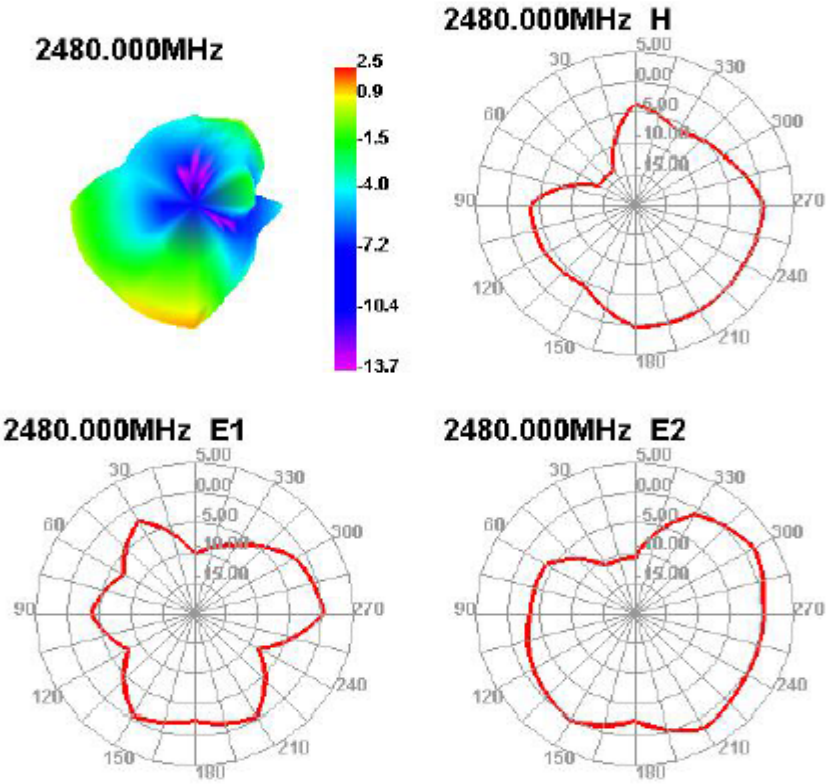
4.Antenna Test Data

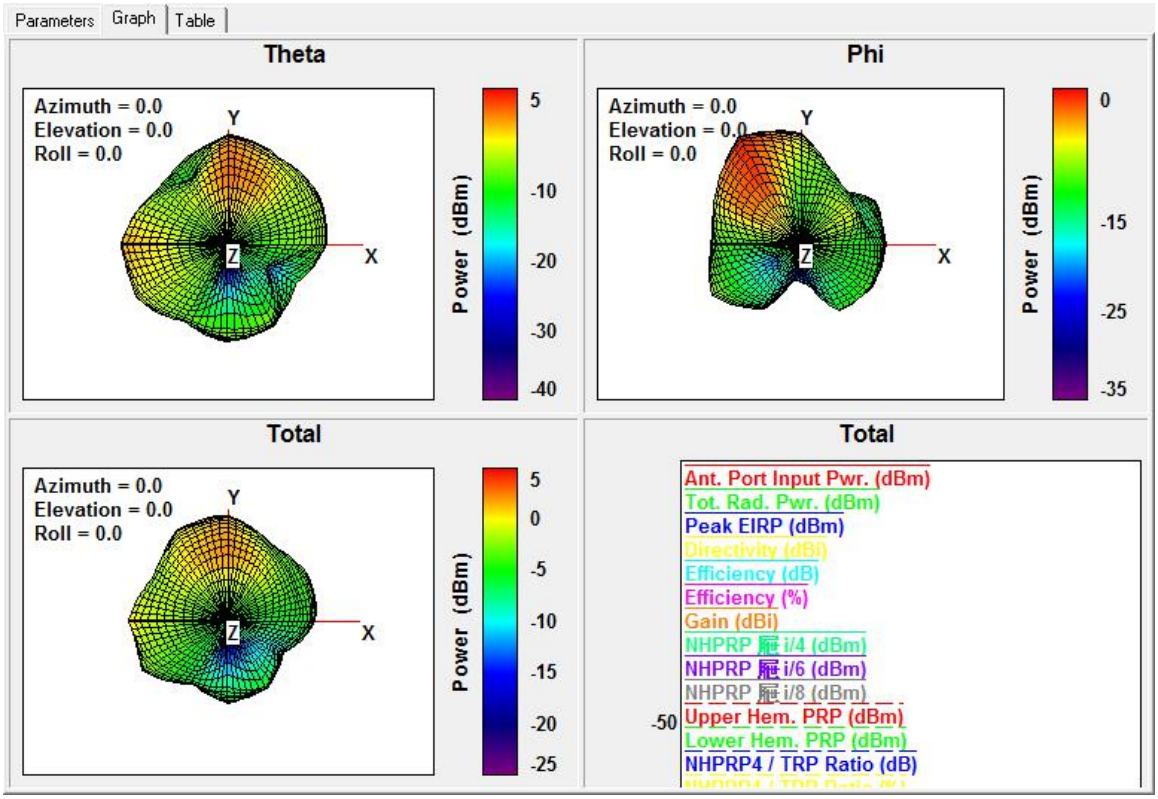
4.1 Efficiency/Gain

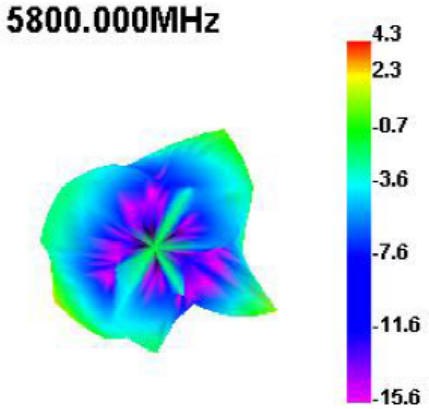
Fre.(Mhz)	Efficiency(%)	Gain(dBi)
2400	52.25	1.24
2410	51.41	1.10
2420	53.25	1.30
2430	55.47	1.28
2440	55.63	1.41
2450	58.47	2.0
2460	54.63	1.45
2470	53.25	1.33
2480	53.67	1.14
4850	37.62	1.35
5850	38.12	1.16

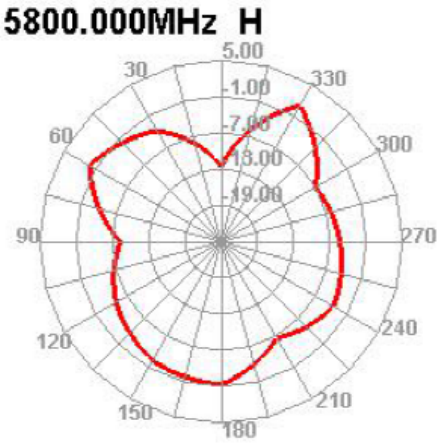
5.1 test chart

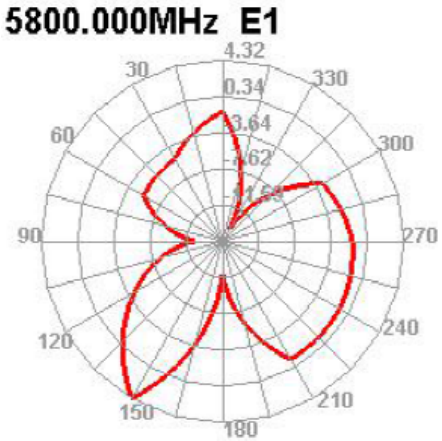


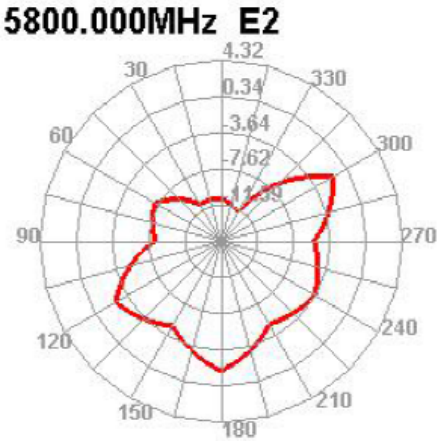

2480.000MHz
2.5
0.9
-1.5
-4.0
-7.2
-10.4
-13.7
2480.000MHz H
2480.000MHz E1
2480.000MHz E2


Parameters
Graph
Table
Theta
Azimuth = 0.0
Elevation = 0.0
Roll = 0.0
Power (dBm)
5
-10
-20
-30
-40
Phi
Azimuth = 0.0
Elevation = 0.0
Roll = 0.0
Power (dBm)
0
-15
-25
-35
Total
Azimuth = 0.0
Elevation = 0.0
Roll = 0.0
Power (dBm)
5
0
-5
-10
-15
-20
-25
Total
Ant. Port Input Pwr. (dBm)
Tot. Rad. Pwr. (dBm)
Peak EIRP (dBm)
Directivity (dBi)
Efficiency (dB)
Efficiency (%)
Gain (dBi)
NHPRP 屈i/4 (dBm)
NHPRP 屈i/6 (dBm)
NHPRP 屈i/8 (dBm)
Upper Hem. PRP (dBm)
Lower Hem. PRP (dBm)
NHPRP4 / TRP Ratio (dB)
-50

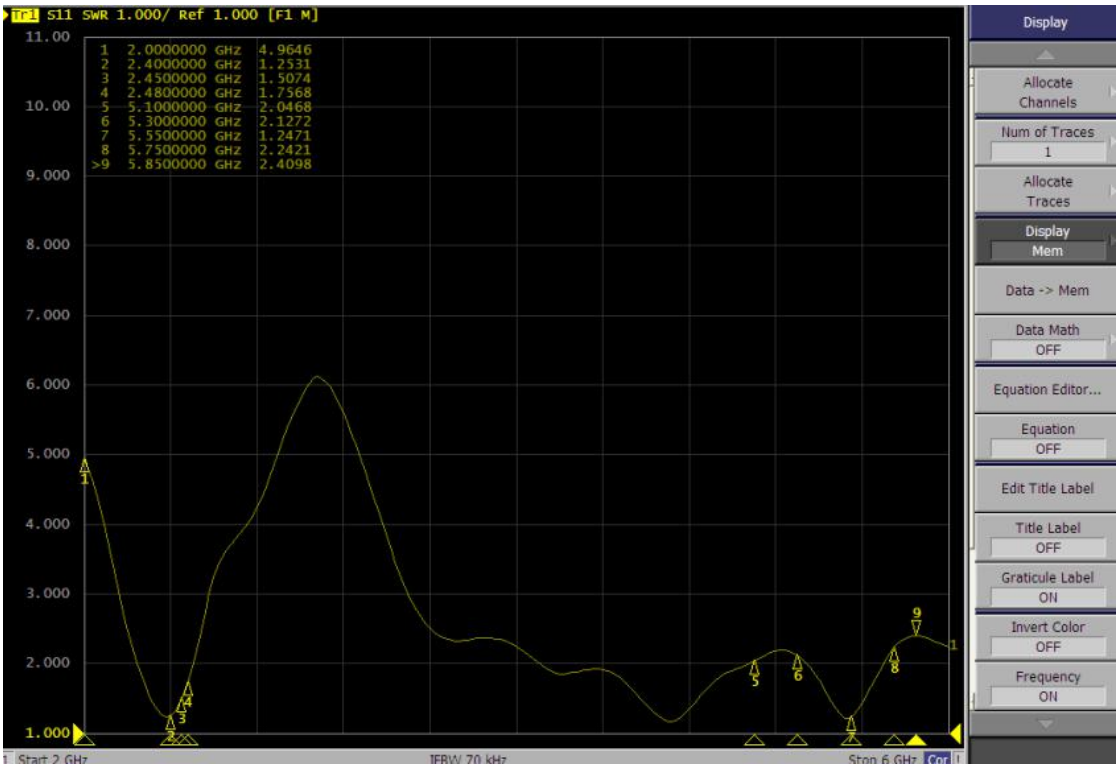

5800.000MHz
4.3
2.3
-0.7
-3.6
-7.6
-11.6
-15.6


5800.000MHz H
5.00
-1.00
-7.00
-13.00
-19.00
30
330
60
300
90
270
120
240
150
210
180


5800.000MHz E1
4.32
0.34
-3.64
-7.62
-11.59
30
330
60
300
90
270
120
240
150
210
180


5800.000MHz E2
4.32
0.34
-3.64
-7.62
-11.59
30
330
60
300
90
270
120
240
150
210
180

6.1 VSWR


Tr1 S11 SWR 1.000/ Ref 1.000 [F1 M]
1 2.0000000 GHz 4.9646
2 2.4000000 GHz 1.2531
3 2.4500000 GHz 1.5074
4 2.4800000 GHz 1.7568
5 5.1000000 GHz 2.0468
6 5.3000000 GHz 2.1272
7 5.5500000 GHz 1.2471
8 5.7500000 GHz 2.2421
>9 5.8500000 GHz 2.4098
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
Start 2 GHz
IFBW 70 kHz
Stop 6 GHz
Display
Allocate Channels
Num of Traces 1
Allocate Traces
Display Mem
Data -> Mem
Data Math OFF
Equation Editor...
Equation OFF
Edit Title Label
Title Label OFF
Graticule Label ON
Invert Color OFF
Frequency ON