

ANTENNA TEST REPORT

Applicant: LINWEAR

Product Name: Smart Watch

1. GENERAL INFORMATION

1.1 Test Location

Company: Shenzhen Qianmu Communication Technology Co.,Ltd.

Address: No. 425.443, 4th floor, block a, Huafeng Zhigu Hangcheng hi tech Industrial Park, Hangcheng Road, Sanwei community, Hangcheng street, Bao'an District, Shenzhen,China

1.2 Test item and results

Test detailed items/section as below:

NO	Items
1	Gain
2	Efficiency
3	2-D/3-D pattern

1.3 Laboratory Environment

Temperature	Min.=18℃	Max.=25℃
Relative humidity	Min.=30%	Max.=70℃
Shield effect	0.5-10GHZ	> 100dB
Ground resistance	<0.4 Ω	

1.4 Test Equipments List

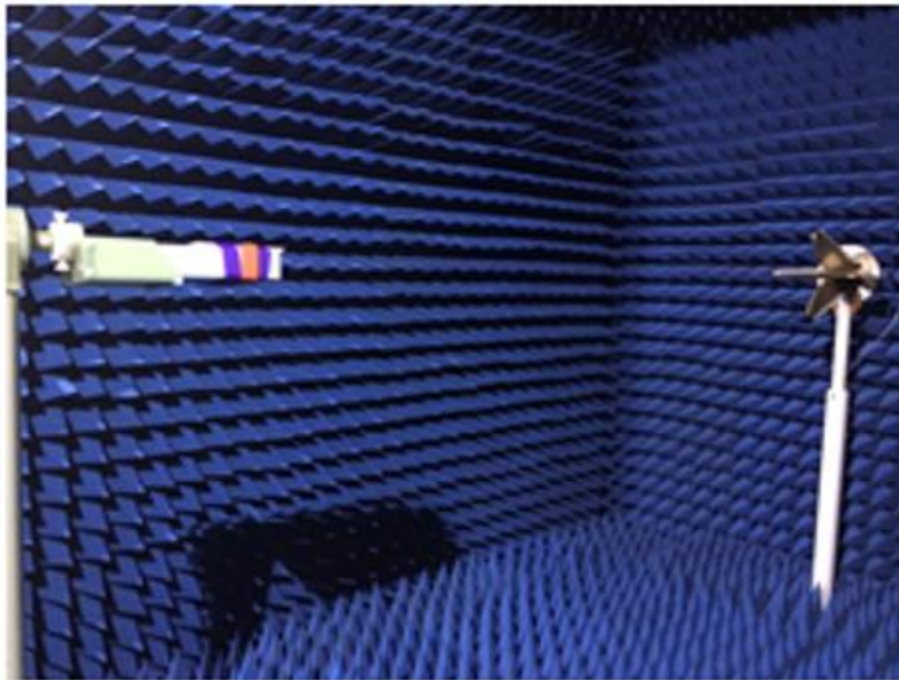
Equipment Name	Model NO.	Manufacture	Calibration	Valid Period
Network Analyzer	E5071B	Keysight	2022-06-30	One year
Chamber	/	ETS	2022-06-30	One year

1.5 Measurement Uncertainty

Item	2.4GHZ-2.5GHZ(dBi)
Gain	0.3
Efficiency	0.3

2. OTA MEASUREMENTS SYSTEM CONFIGURATION

The system is designed for fully-compliant radiated wireless antenna measurements over the frequency range from 700 MHz to 6 GHz with a 1.95-meter path length. The system includes a multi-antenna array with twenty-three (23) dual-polarized measurement antennas spaced every 15° , The chamber size is 5m*5m*5m



OTA measurement System Configuration

Note: Phi(The turntable) is from $0^\circ \sim 180^\circ$,Theta(the ring, multiple antennas) is from $-165^\circ \sim 165^\circ$, Rotate the AUT and multi-antenna array record the data ,the step of rotation is 15 degree.

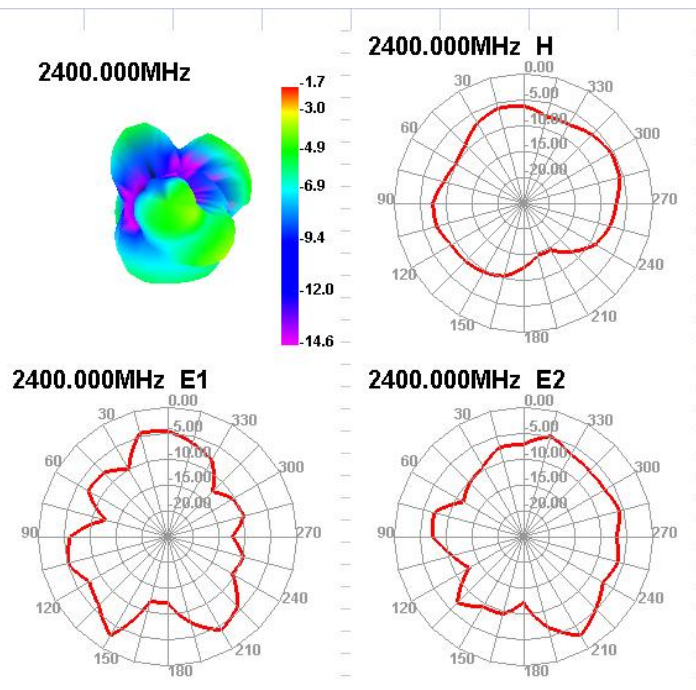
3. TEST RESULTS

3.1 Efficiency & Gain

Frequency (Mhz)	Efficiency (dB)	Efficiency (%)	Gain (dBi)
2400	-6.85	21.23	-2.13
2410	-6.79	20.96	-2.76
2420	-6.36	23.11	-2.07
2430	-6.23	23.82	-1.98
2440	-6.39	22.98	-1.93
2450	-6.43	22.77	-1.78
2460	-6.65	21.64	-1.69
2470	-6.65	21.64	-1.74
2480	-6.54	22.19	-1.82
2490	-6.04	24.62	-1.42
2500	-5.98	25.24	-0.94

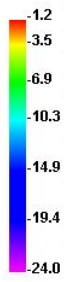
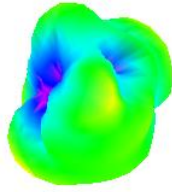
3.2 2-D /3-D antenna pattern

2400MHz

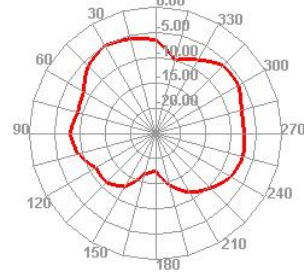


2450MHz

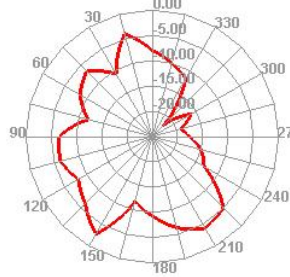
2450.000MHz



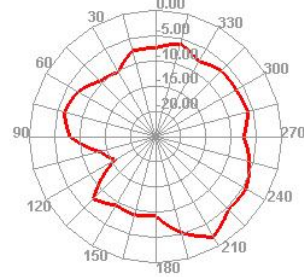
2450.000MHz H



2450.000MHz E1

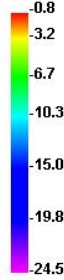
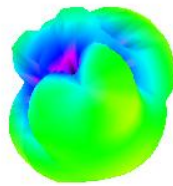


2450.000MHz E2

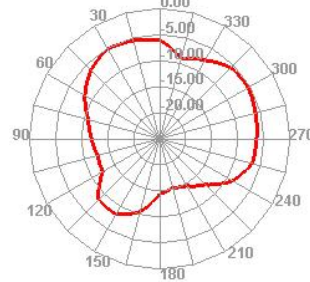


2500MHz

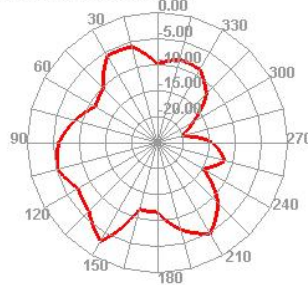
2500.000MHz



2500.000MHz H



2500.000MHz E1



2500.000MHz E2

