

Dongguan Lixinwei Electronics Co., Ltd

Antenna test report

Customer Name: Meijiixin Innovative Technology Co.,Ltd

Product Name: 2.4G antenna length 36

Product Name: _____

Part NO.: C14-33-3

Write By: Zhou Min

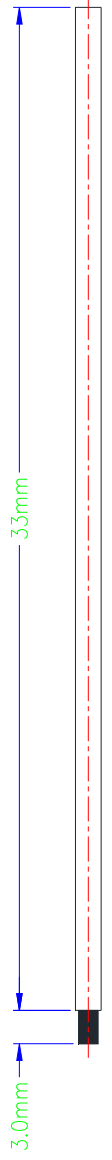
Issued Date: 2022-6-25

Customer :

R&D Dept	Business Dept	Approved By

Supplier

R&D Dept	Engineer Dept	Approval
<i>Harry</i>	<i>Jimmy</i>	<i>Jimmy Zhang</i>



Lixinwei Electronic Technology Co., Ltd

requirement:
 1, Those marked with tolerance are important dimensions,
 and those without tolerance shall be ± 0.15 .

PART TITLE	24GANT	MATERIAL	19PINx0.12x1.4	UNIT	mm	SCALE	5:1	VER.	01
PART NO.	19Px0.12x1.4	DRWING	Mr. Zhou	DATE	2019/3/09	CHECKING	SUPPLIER CFM	SUPPLIER	

Test Equipment & Conditions

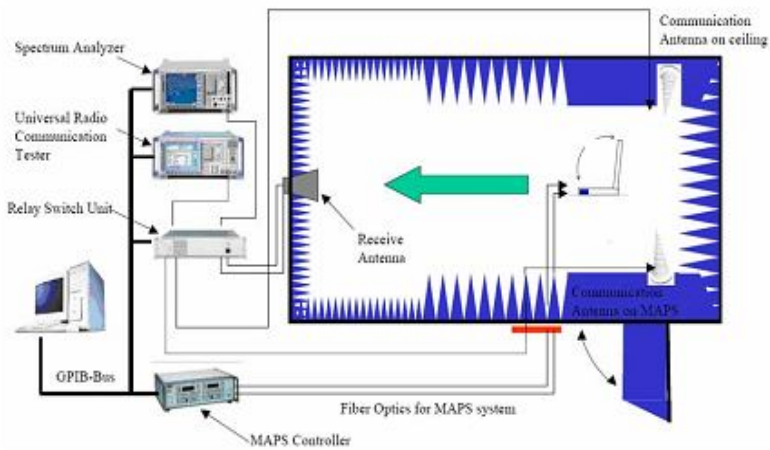
1. Network Analyzers :

Agilent 8753D 5071B

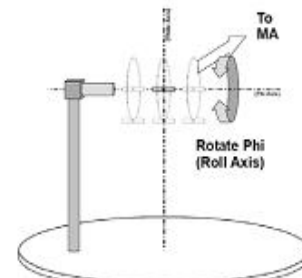
2. Communications Test Set:

Agilent E5515C

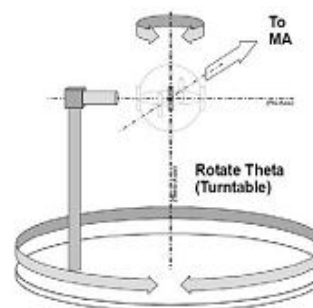
3. 3D Chamber Test System



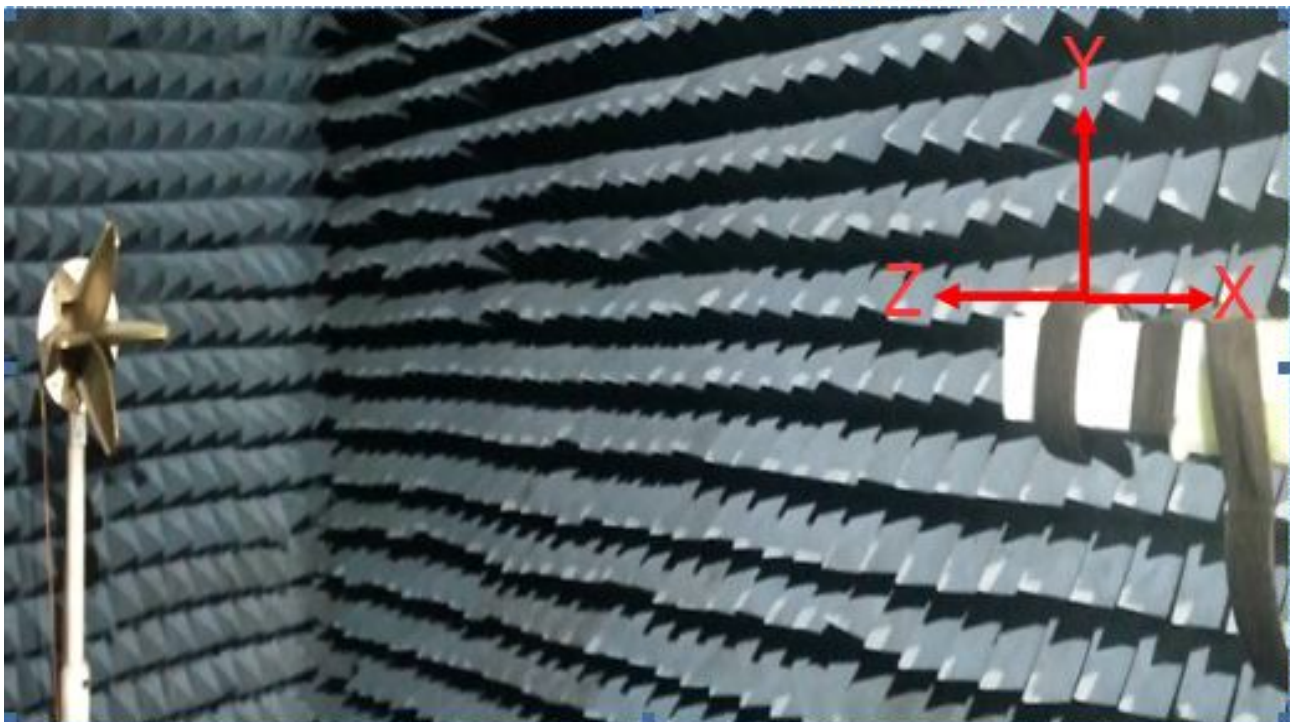
(Testing by 3D anechoic chamber)



Phi axis test



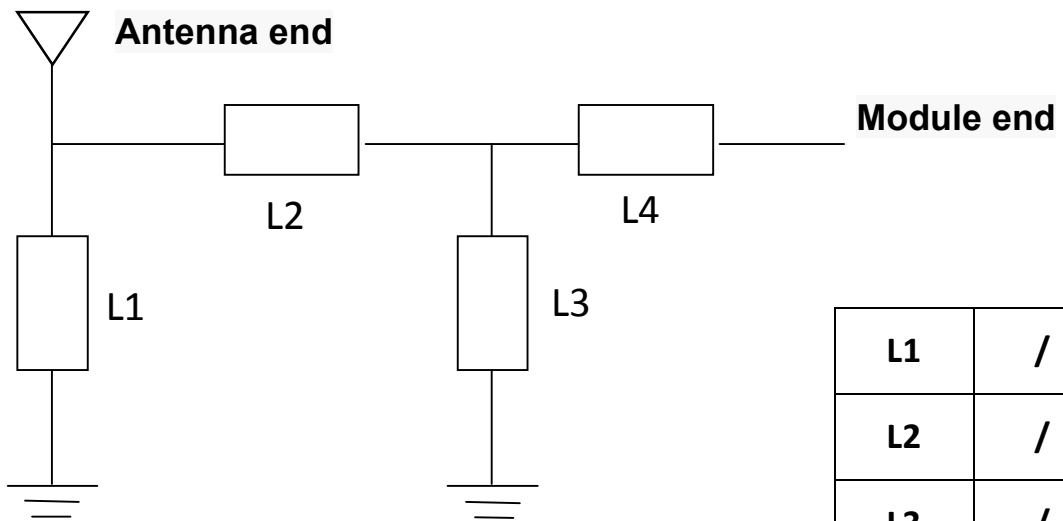
Theta axis test



Specification Overview

electrical characteristics	
frequency	2400MHz ~2500MHz
Return loss	<-10dB
productiveness	>27%
gain	0.59 dbi
impedance	50 ohm
Polarization mode	linear polarization
Material and mechanical properties	
material	/
Wire type	Wire diameter 1.4 mm
Terminal type	/
Drawing size	See drawing for details
silk-screen printing	/
Environmental characteristics	
Storage temperature	- 30 °C ~ + 85 °C
FPCwelding temperature	/
RF wire welding temperature	320±5°C 2-3 s

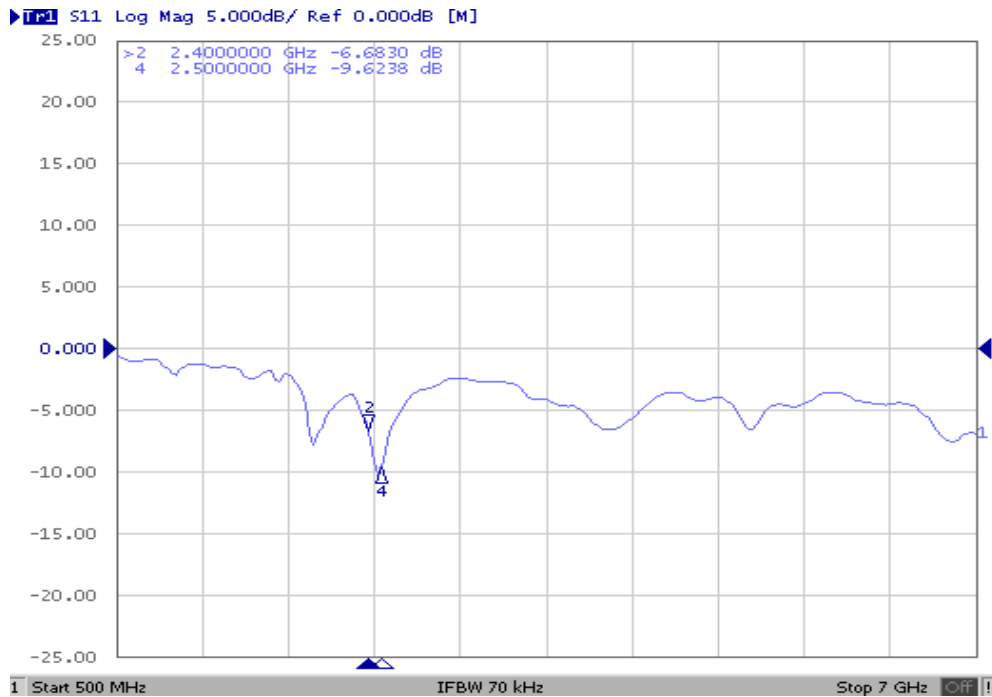
Matching circuit



The matching circuit of the original main board

L1	/
L2	/
L3	/
L4	/

Return Loss

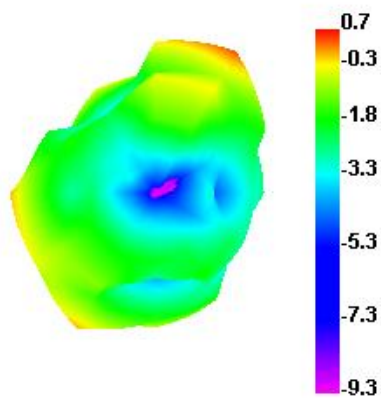


Efficiency & Gain

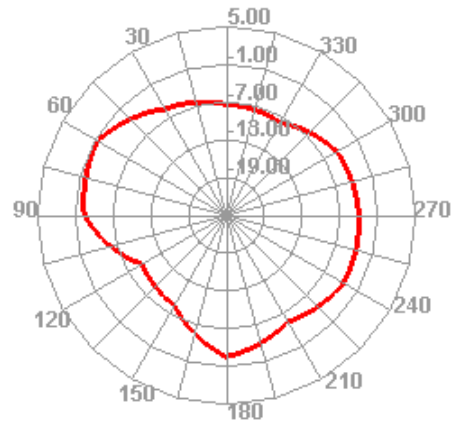
Freq (MHz)	Effi (%)	Gain (dBi)
2400	23.66	0.47
2410	23.19	0.38
2420	23.03	0.49
2430	22.41	0.42
2440	21.67	0.45
2450	20.24	0.52
2460	20.61	0.51
2470	21.41	0.59
2480	23.89	0.56
2490	26.46	0.53
2500	25.73	0.46

Radiation Pattern

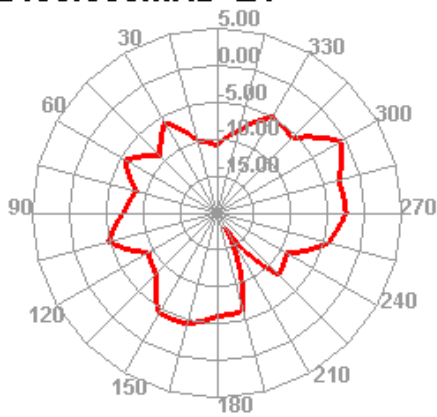
2400.000MHz



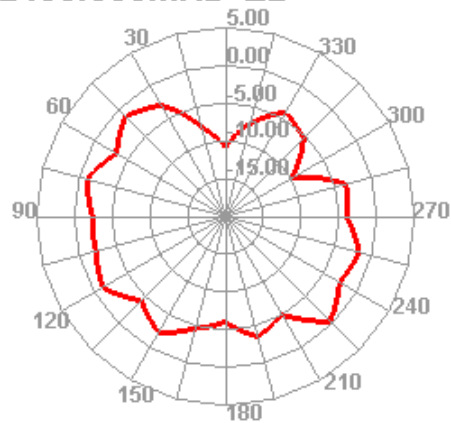
2400.000MHz H



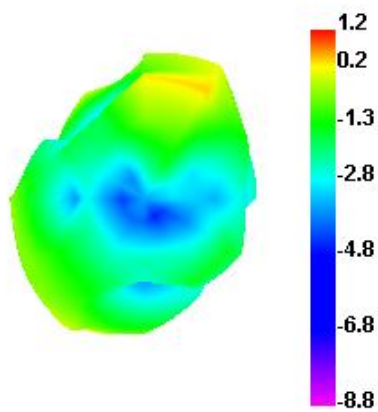
2400.000MHz E1



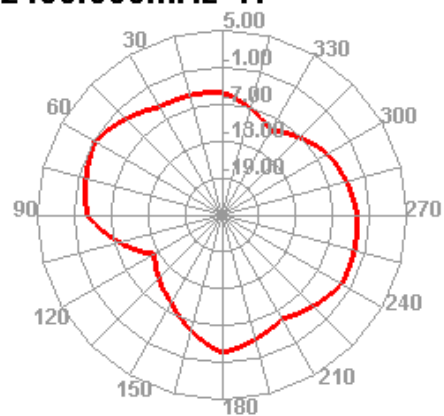
2400.000MHz E2



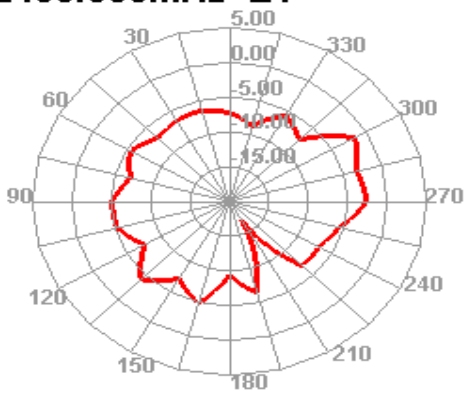
2450.000MHz



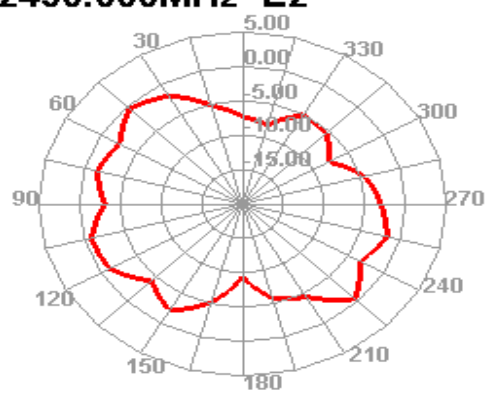
2450.000MHz H



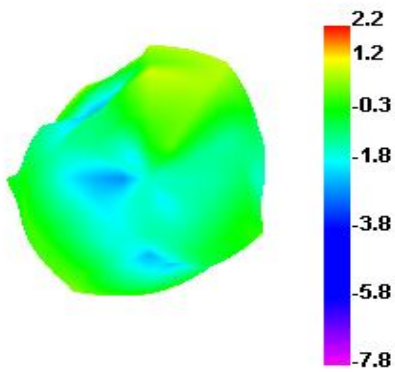
2450.000MHz E1



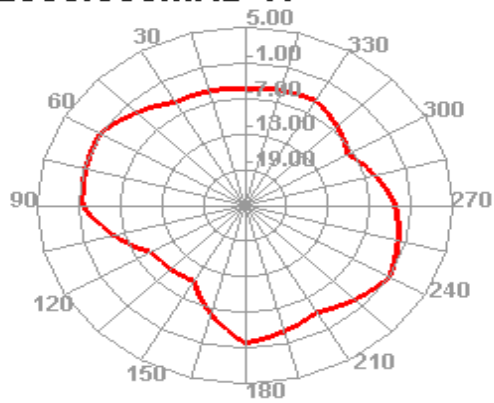
2450.000MHz E2



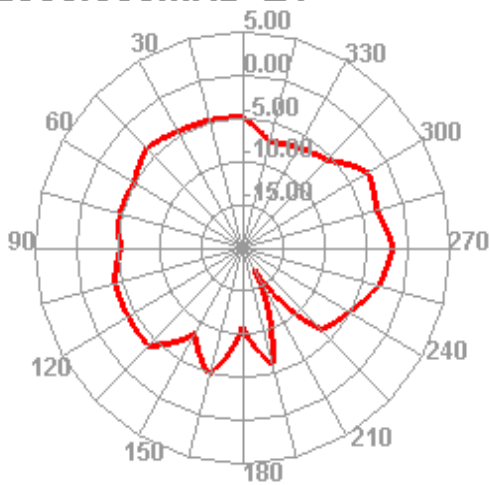
2500.000MHz



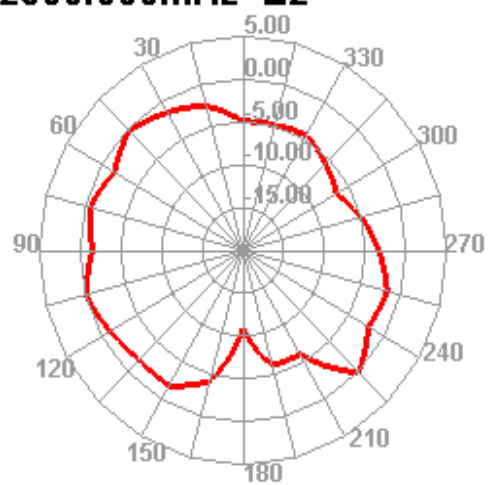
2500.000MHz H



2500.000MHz E1



2500.000MHz E2



Reliability test

Test items	Test conditions	equipment	standard	result	
1	Low temperature test	<p>Temperature: - 30 °C, humidity: 65%, time: 48 hours</p> <p>Test conditions:</p> <p>Place the antenna in a high and low temperature test box, keep the temperature at 25 °C and humidity at 65% for 1 hour, then reduce the temperature to - 30 °C within 1 hour, keep it for 44 hours, and then raise the temperature to 25 °C, keep it for 2 hours</p>	High and low temperature tester	<p>Material deformation is not allowed</p> <p>Good electronic performance</p>	pass
2	hot test	<p>Temperature: 85 °C, humidity: 85%, time: 48 hours</p> <p>Test conditions:</p> <p>Place the antenna in a high and low temperature test box, keep the temperature at 25 °C and the humidity at 65% for 1 hour, and then raise the temperature to 80 °C and the humidity at 85% for 44 hours within 1 hour, and then lower the temperature to 25 °C for 2 hours.</p>	High and low temperature tester	<p>Material deformation is not allowed</p> <p>Good electronic performance</p>	pass
3	Salt spray test	<p>Salt spray test:</p> <p>Place the antenna in the salt spray tester</p> <p>Set up the test environment:</p> <p>Temperature 35 ± 2 °C</p> <p>Humidity 85%</p> <p>Salt spray: $5 \pm 1\%$</p> <p>PH value 6.5~7.2</p> <p>Time: 24 hours</p>	Salt spray tester	<p>No color change</p> <p>No rust</p>	pass