

Tianpin Intelligent Internet Technology (Shenzhen) Co., LTD.

Client: HENZHEN DATAMAX TECHNOLOGY CO., LTD

Material code :

Product name : Double copper antenna (2.4&5.8GHz)

Specification

Outlet length 45mm, ϕ 1.13mm, black, with one generation terminal, copper tube size ϕ 5.20*22.0mm ,

Copper pipes are covered with black heat shrink tubing

Date: 2022-07-19

Customer confirmation/Date

Department (R&D Audit/Date

ADD: Room 1002, 10th Floor, Building 6, Zone A, Pingtaichang
Science Park, Yongnan Industrial Zone,

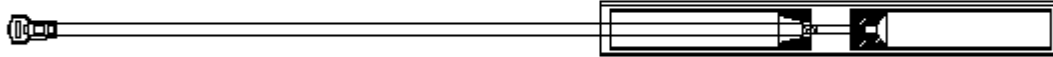
目 录

1. Overview of Specifications.....	3
2. Appearance	3
3. Electrical performance	3
3.1. Antenna frequency band.....	3
3.2. Match circuit	3
3.3. Impedance requirement.....	3
3.4. Antenna passive test data	4
4. Position of antenna attachment	8
5. Structure of antenna	9

1. Summary of Admission

The letter describes the WIFI condition of DATAMAX dual copper antenna, whose frequency band is 2.4G/5GHz, and the manufacturer is Tianpin Intelligent Internet Technology (Shenzhen) Co., LTD.

2. External view

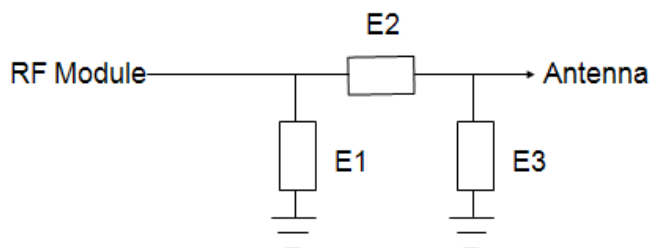


3. Electrical performance

3.1 Antenna frequency band

Transmit/receive frequency band (GHz)	WIFI	
	2.4G~2.5G	5.1G~5.9G

3.2 Matching circuit



Element	Value
E1(0402)	原匹配
E2(0402)	原匹配
E3(0402)	原匹配

3.3 Impedance requirement

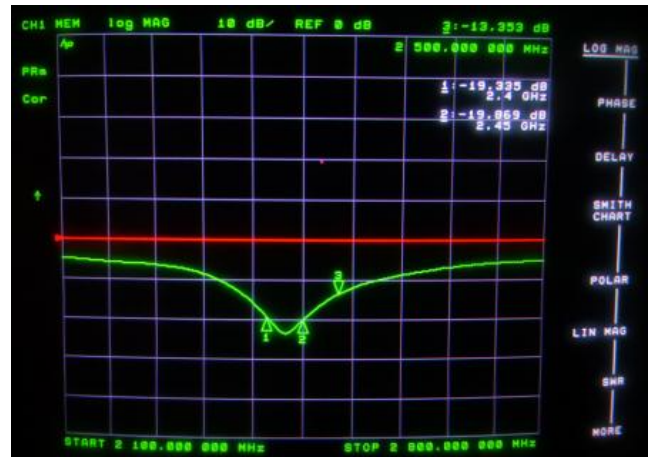
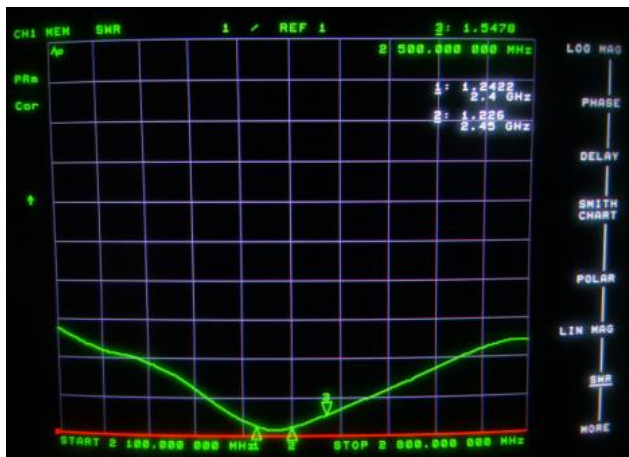
50 ohm

3.4 Antenna passive test data:

2.4G data:

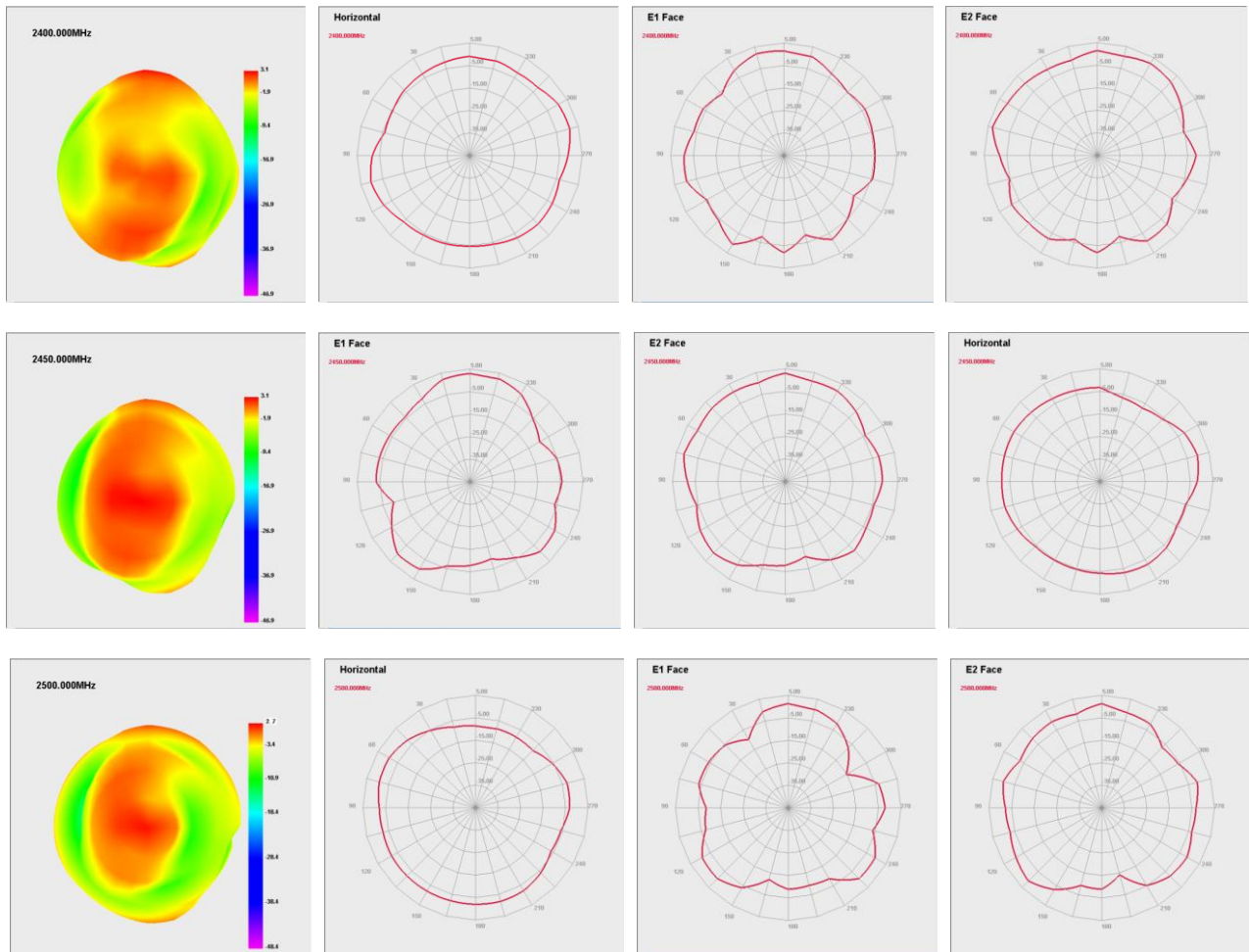
Electrical Properties	
Frequency	2.4GHz-2.5GHz
Impedance	50 ohm Nominal
V. S. W. R	1: 1.22 Max
Return Loss	-19.86dB Max
Radiation	Omni-directional
Polarization	Linear, Vertical

VSWR&Return Loss&Smith Chart:



Efficiency, gain, directivity:

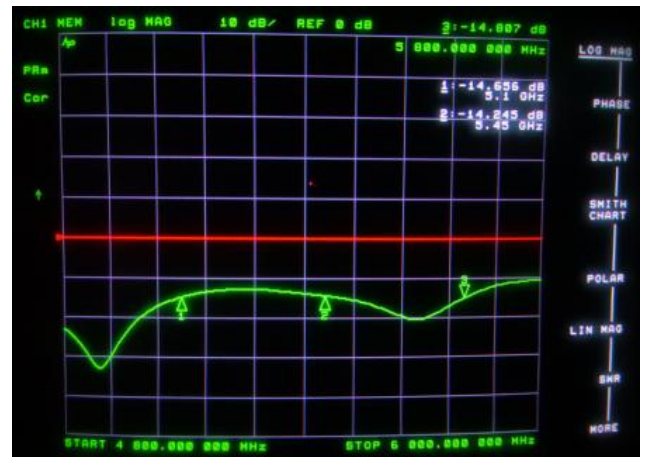
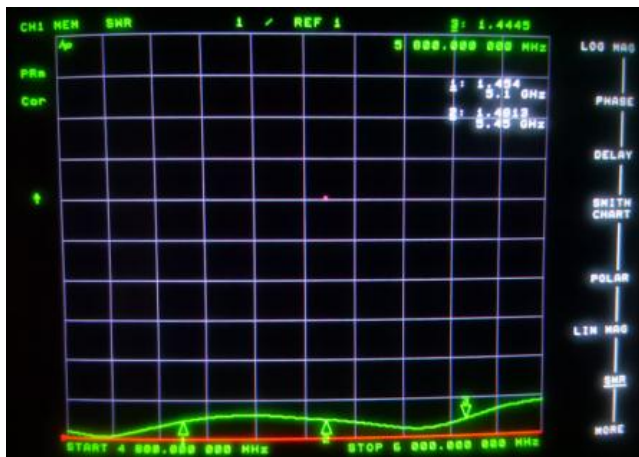
Passive Test For 2.4G-WIFI							
Freq	Effi	Gain	Gain	UHS	DHIS	Max	Min
(MHz)	(%)	(dBi)	(dBd)	(%)	(%)	(dB)	(dB)
2400	62.34	3.05	0.90	31.435	28.462	3.05	-21.11
2450	63.27	3.09	0.94	32.462	26.468	3.09	-15.99
2500	59.61	2.71	0.56	33.158	29.135	2.71	-17.84



5G data:

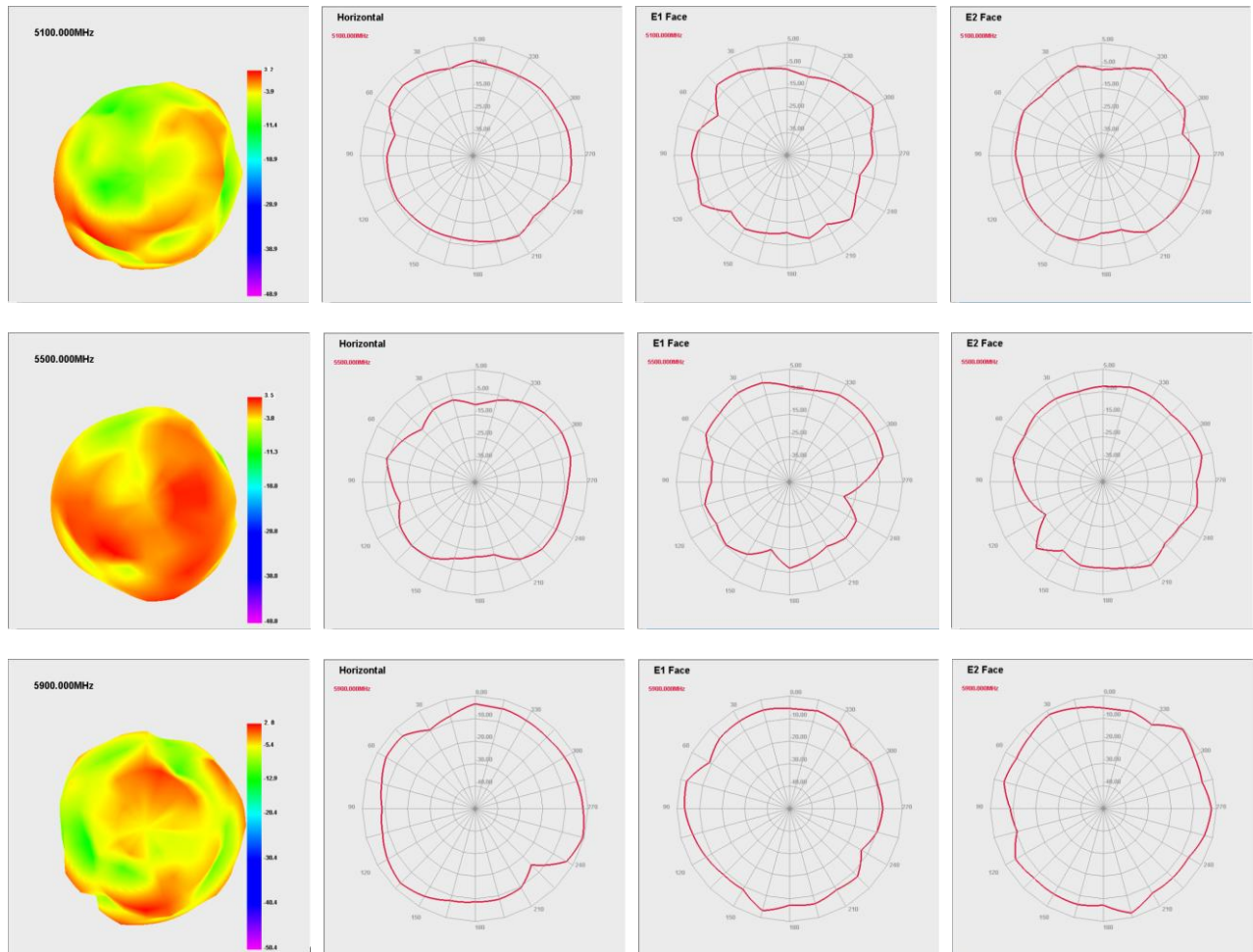
Electrical Properties	
Frequency	5.1GHz-5.9GHz
Impedance	50 ohm Nominal
V. S. W. R	1: 1.44 Max
Return Loss	-14.80dB Max
Radiation	Omni-directional
Polarization	Linear, Vertical

VSWR&Return Loss&Smith Chart:



Efficiency, gain, directivity:

Passive Test For 5G-WIFI							
Freq	Effi	Gain	Gain	UHS	DHIS	Max	Min
(MHz)	(%)	(dBi)	(dBd)	(%)	(%)	(dB)	(dB)
5100	62.13	3.21	1.06	22.134	17.284	3.21	-21.19
5500	63.11	3.50	1.35	23.258	19.462	3.50	-16.24
5900	58.46	2.82	0.67	24.139	18.437	0.82	-21.53



4. Antenna placement position (Outlet corrected to 45mm)



5. Antenna structure

