



Percsson Communication Equipment Co., Ltd

Antenna OTA Test Report

For

ESP-ANT-C

Customer	深圳四博智联科技有限公司	Demo	ESPC5-12
Band	2.4G&5G	Color	Black
PRS PN		Version	V1.0
Issued by	Jason	Checked by	Mem
Confirmed by	Zhang	Date	2025.06.18

一. TEST INSTRUMENTATION

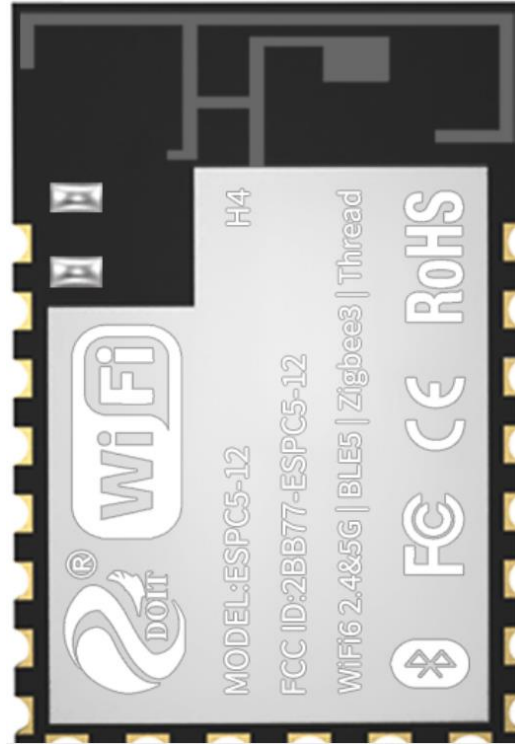
CHAMBER	SATIMO Chamber
Wireless Networking Test Set	Agilent E5071C
NETWORK ANALYZER	Agilent 8753D
TEMPERATURE	20±3℃
HUMIDITY	50±20%rh
GROUND RESISTANCE	<0.5R

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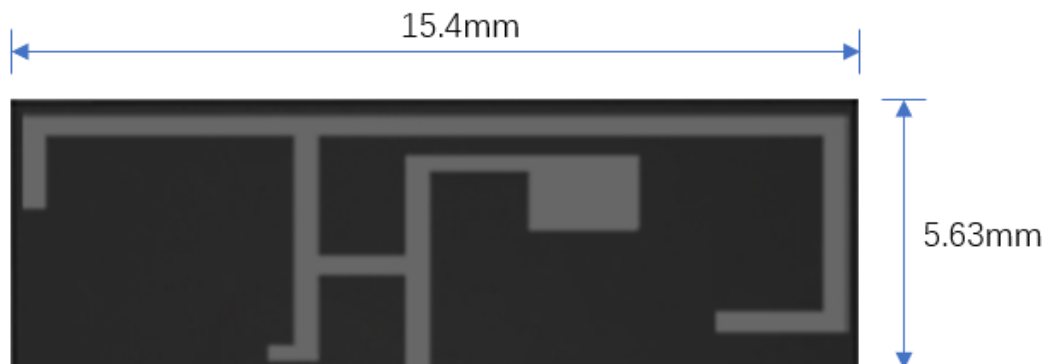
Add: 2nd Floor, No. 6, Caoyi Xingtai South Road, Guzhen Town, Zhongshan City, Guangdong Province



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ESP5-12 WiFi Module



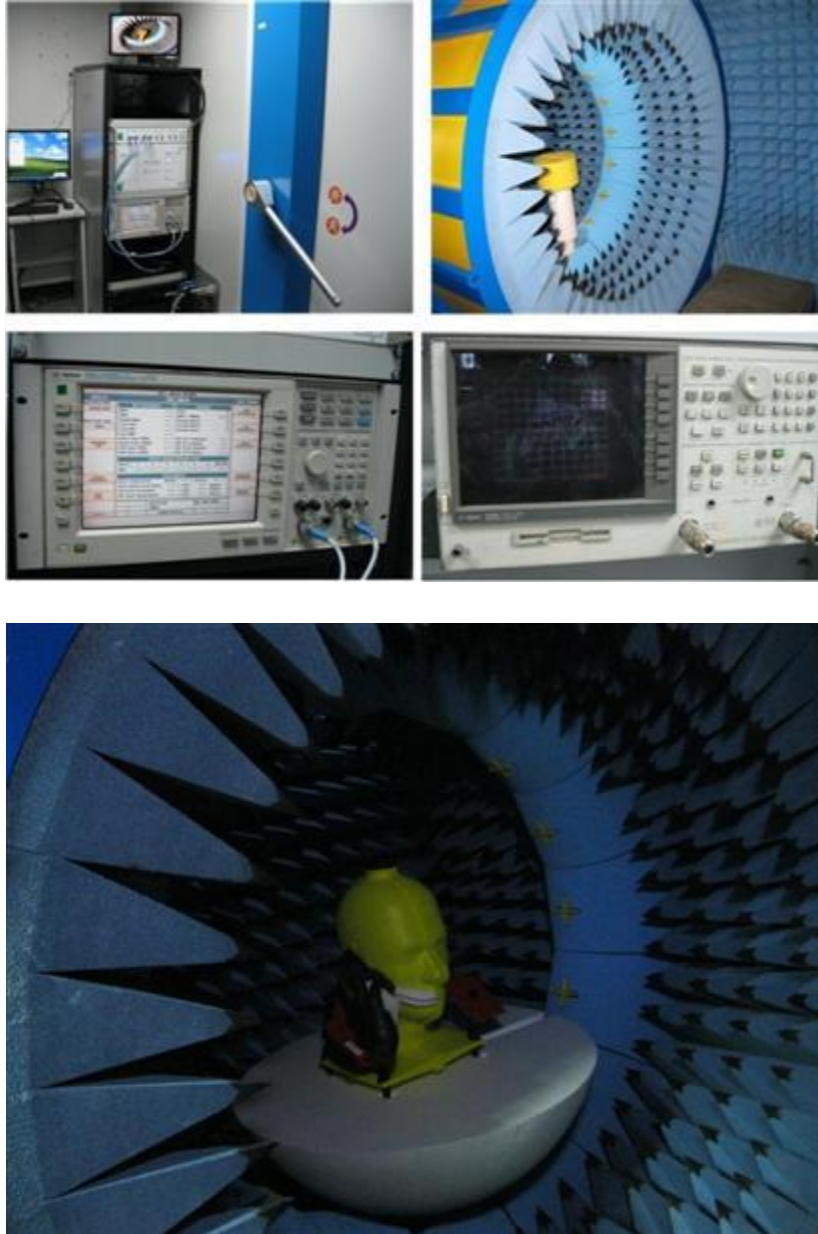
Antenna Size

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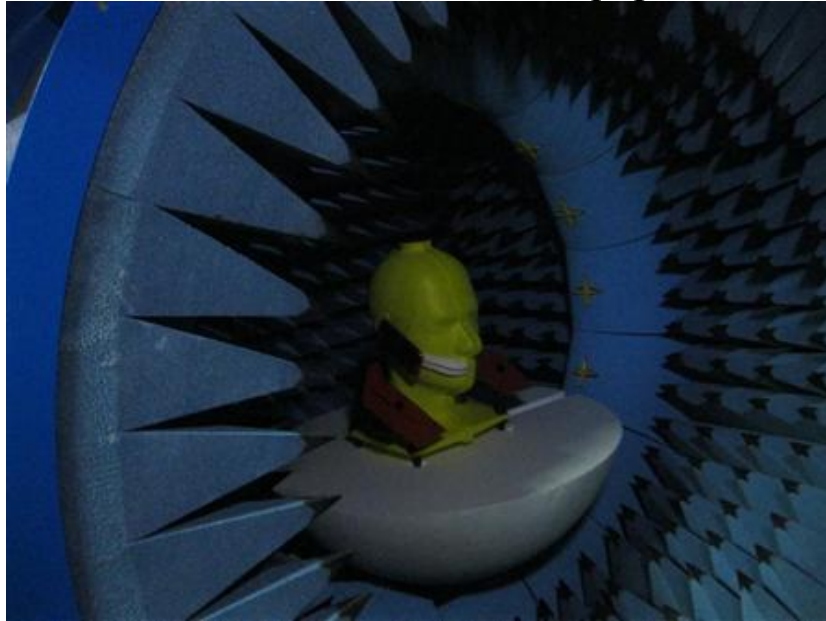


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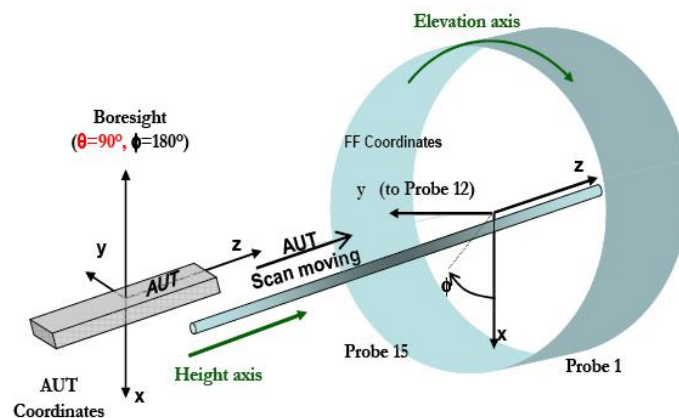
Test devices is shown as below.



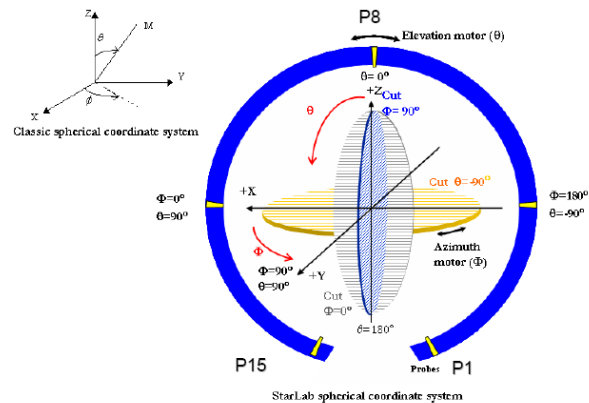
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Coordinate system – Cylindrical geometry



Coordinate system – Spherical geometry



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二. Test Results

2.1 Gain and Efficiency

Test Item	Freq (MHz)	Efficiency (%)	Gain (dBi)
Gain	2370	28.01	3.06
	2380	28.07	3.17
	2390	30.22	2.55
	2400	38.55	2.89
	2410	35.34	2.89
	2420	41.24	2.80
	2430	41.70	2.76
	2440	42.10	2.87
	2450	42.20	2.88
	2460	41.70	3.12
	2470	43.20	3.22
	2480	42.80	3.24
	2490	41.95	3.24
	2500	43.33	3.43

Test Item	Freq (MHz)	Efficiency (%)	Gain (dBi)
Gain	5150	32.38	1.02
	5180	32.75	1.07
	5210	34.64	1.07
	5240	32.45	1.45
	5270	31.16	1.84
	5300	32.52	1.83
	5330	31.17	1.92
	5360	32.91	2.33
	5400	36.04	2.53
	5450	39.68	2.64
	5500	43.43	3.01
	5550	47.06	3.29
	5600	51.94	3.42

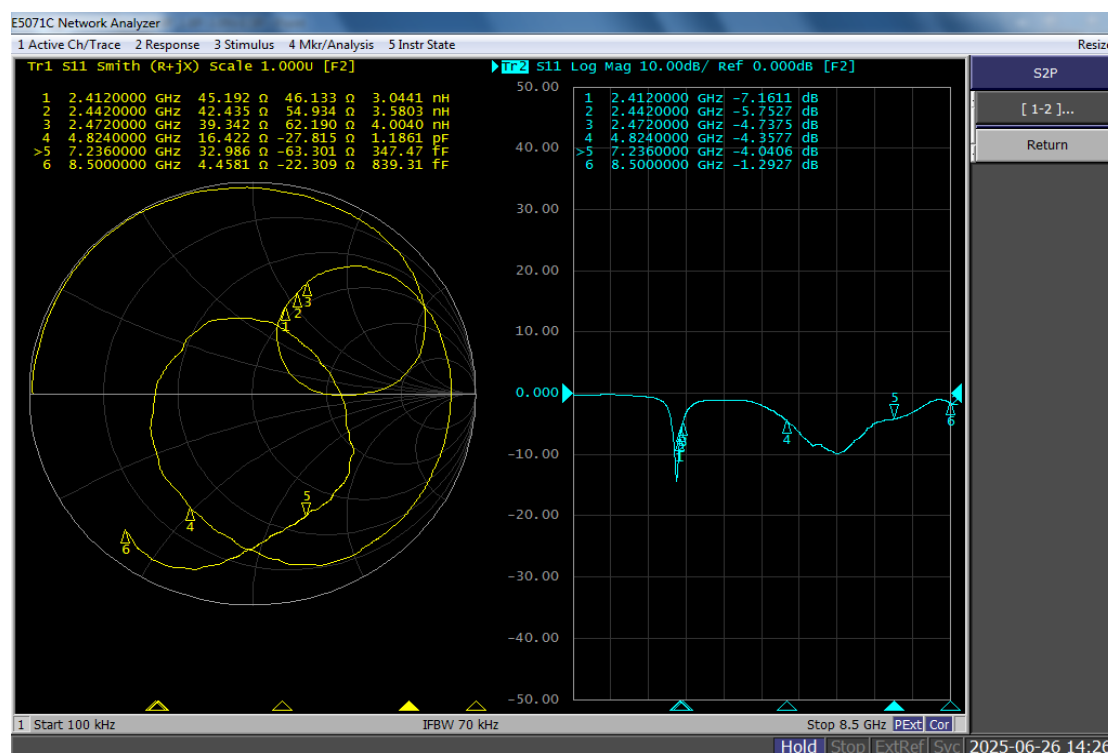
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	5650	56.67	3.34
	5700	45.63	3.33
	5750	45.31	2.82
	5800	49.17	2.90
	5850	41.45	2.91

2.2 Antenna S11

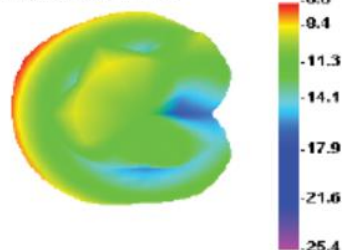


Frequency(MHz)	2412	2442	4824	7236
S11 (dB)	-7.16	-5.75	-4.33	-4.04

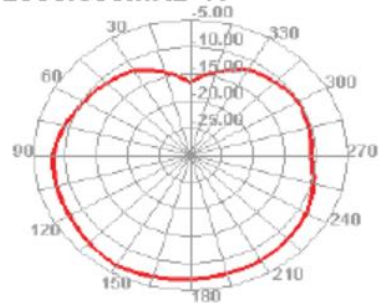
三. 3-D pattern Plots

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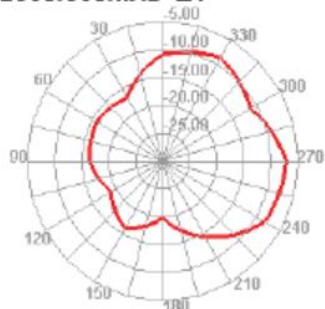
2300.000MHz



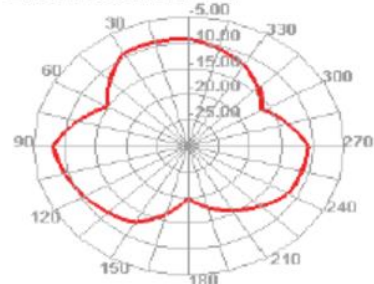
2300.000MHz H



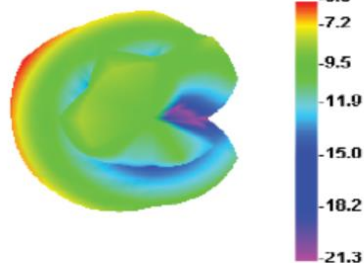
2300.000MHz E1



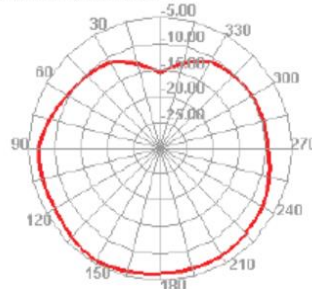
2300.000MHz E2



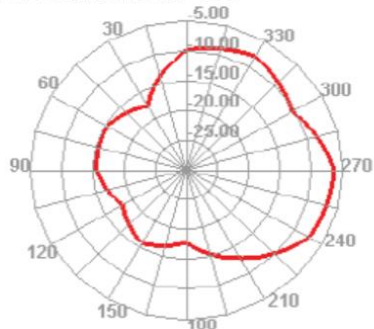
2310.000MHz



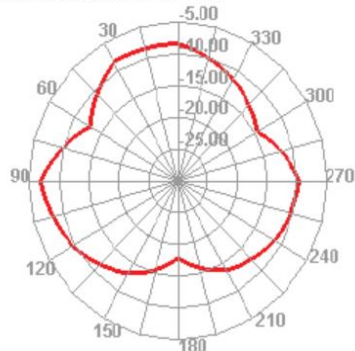
2310.000MHz H



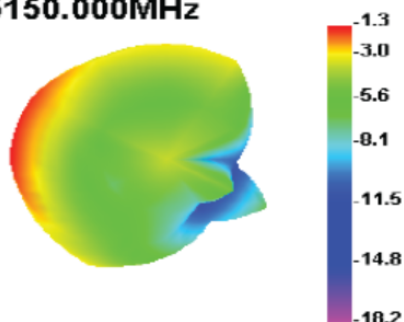
2310.000MHz E1



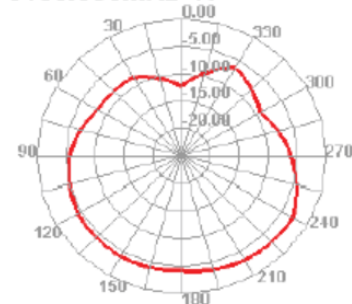
2310.000MHz E2



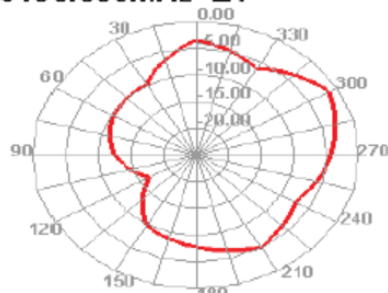
5150.000MHz



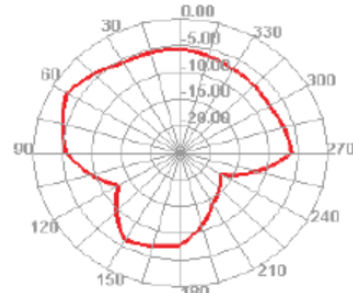
5150.000MHz H



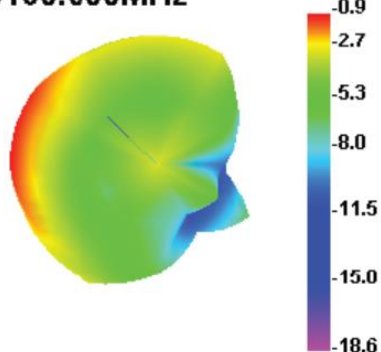
5150.000MHz E1



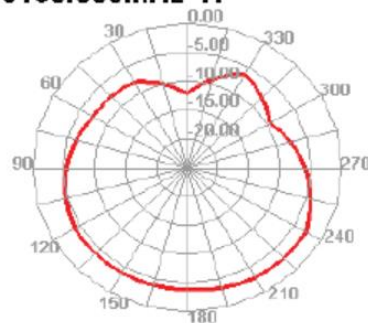
5150.000MHz E2



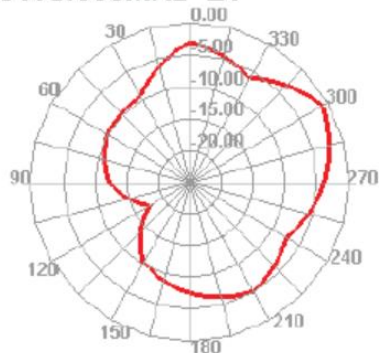
5160.000MHz



5160.000MHz H



5160.000MHz E1



5160.000MHz E2

