

Performance Test Report of QM-03S Module Antenna

Rev.: 1.0

ShenZhen Qesan Co., Ltd.

302, Building 21, Dawangshan Second Industrial Zone, Dawangshan Community, Shajing
Street, Bao'an District, Shenzhen

Contents

1 Abstract 1

2 Preparations..... 1

3 Passive Testing..... 2

 3.1 Electrical Performance Test 2

 3.2 OTA Test 3

 3.3 Radiation Pattern..... 4

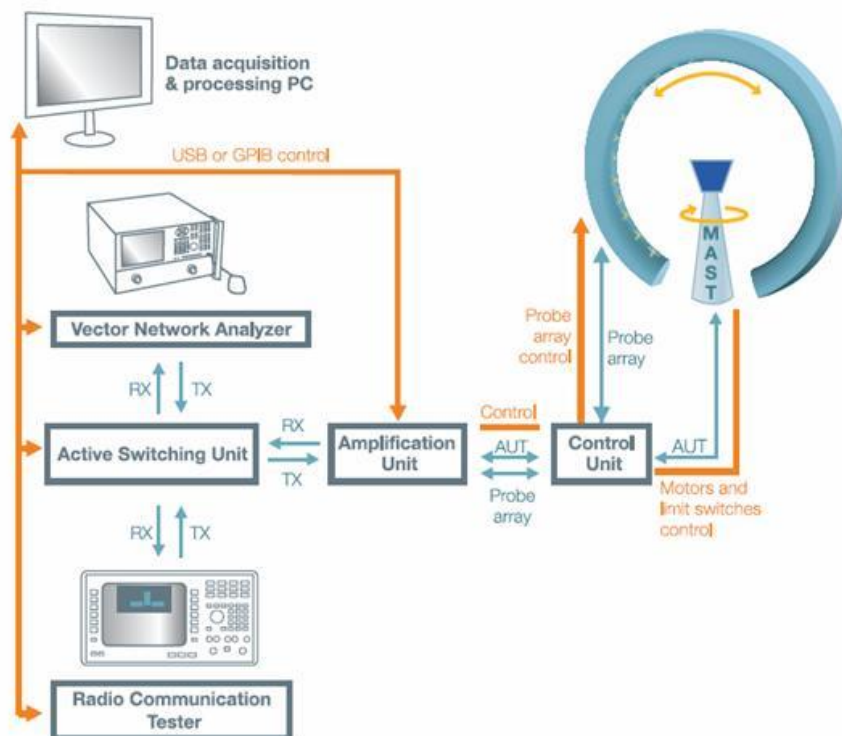
1 Abstract

This report is intended to clearly demonstrate the RF performance of the on-board 2.4GHz antenna integrated into the ESP-12F Wi-Fi module.

2 Preparations

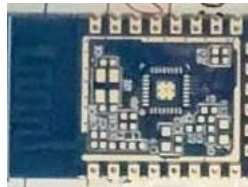
Instruments:

3D Anechoic Chamber、Agilent5071B Network Analyzer



Hardware:

QM-03S Bare PCB *1

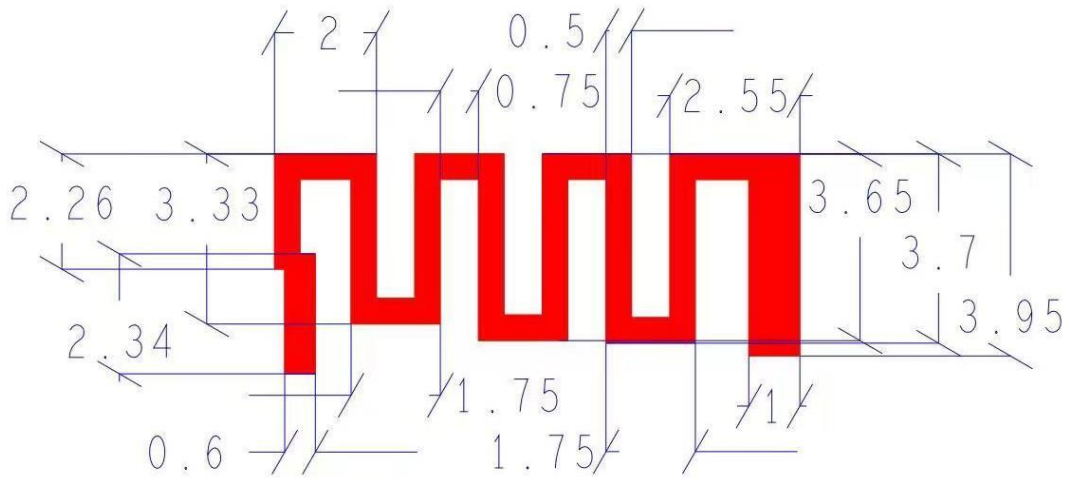


Environment:

Antenna Laboratory, Temperature 23.1℃, Humidity: 46%

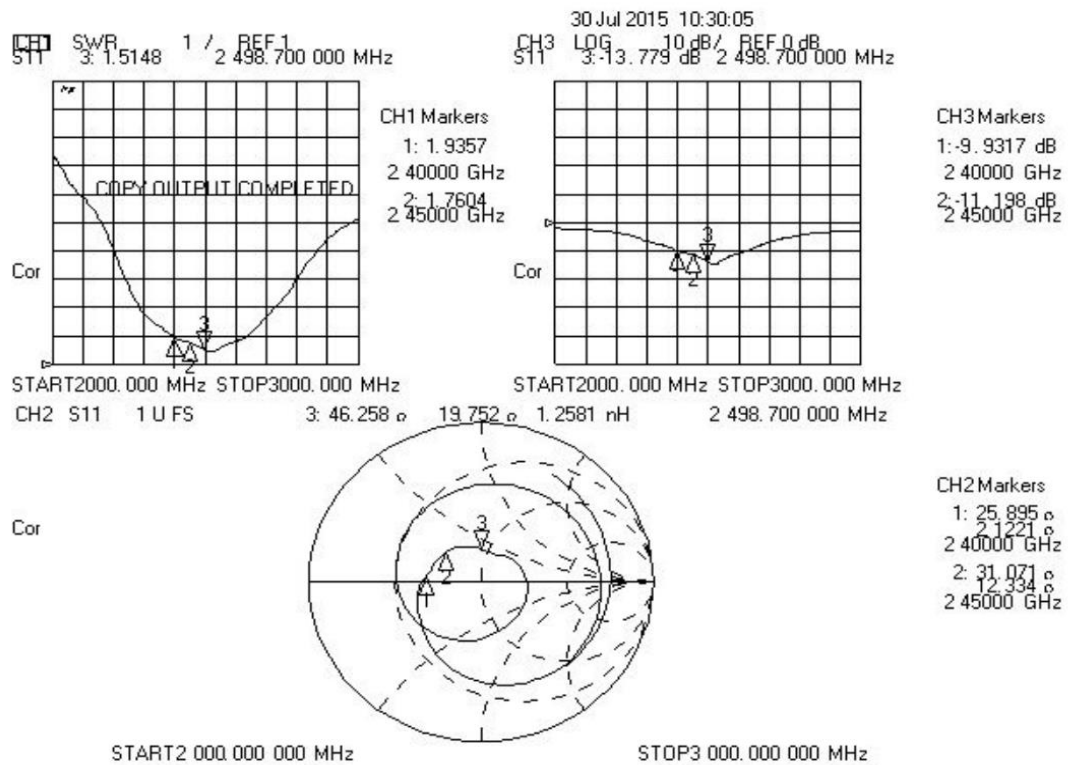
ShenZhen Qesan Co., Ltd.

302, Building 21, Dawangshan Second Industrial Zone, Dawangshan Community, Shajing Street, Bao'an District, Shenzhen



3 Passive Testing

3.1 Electrical Performance Test



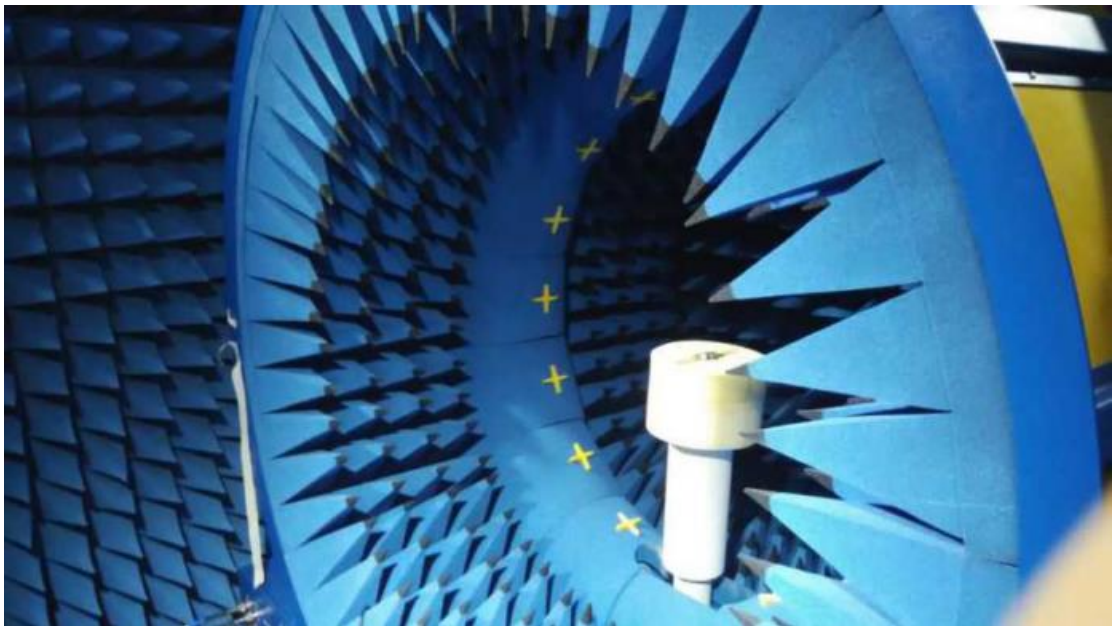
Electrical Performance Testing Parameter

Freq(MHz)	2400	2450	2500
VSWR	1.93	1.76	1.51
RL(dB)	-9.93	-11.19	-13.77

ShenZhen Qesan Co., Ltd.

302, Building 21, Dawangshan Second Industrial Zone, Dawangshan Community, Shajing Street,
Bao'an District, Shenzhen

3.2 OTA Test



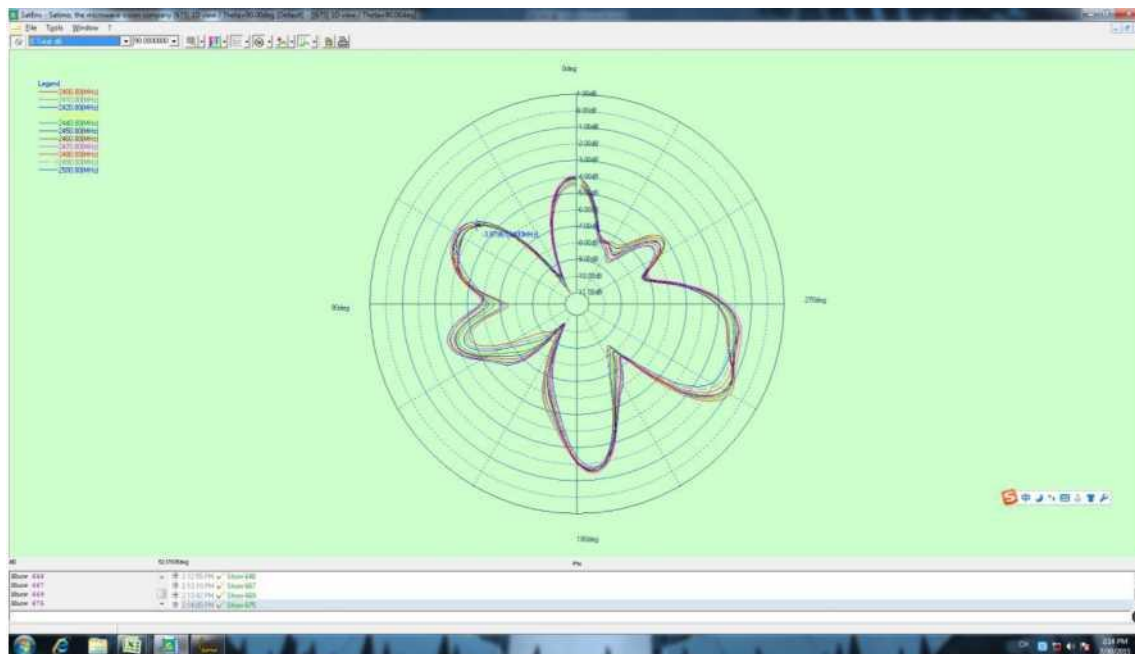
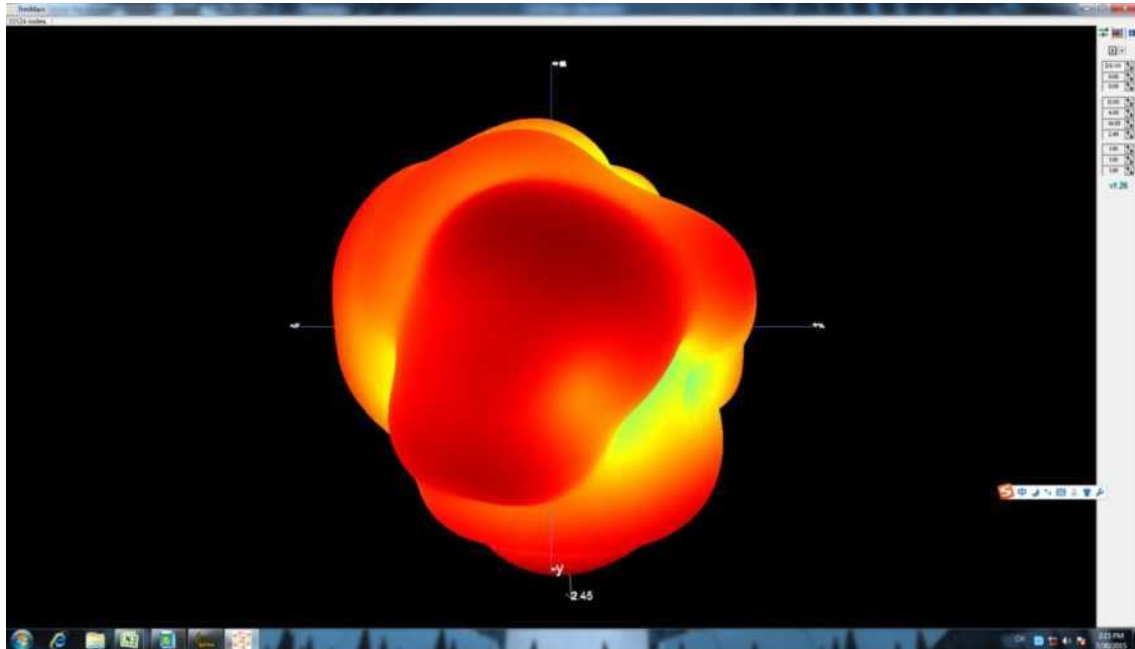
Gain & Efficiency

Frequency(MHz)	#4 Antenna	
	Gain(dBi)	Efficiency
2400	2.30	47%
2410	2.23	47%
2420	2.30	47%
2430	2.46	49%
2440	2.42	49%
2450	2.44	49%
2460	2.56	50%
2470	2.83	51%
2480	2.65	50%
2490	2.62	49%
2500	2.72	50%

ShenZhen Qesan Co., Ltd.

302, Building 21, Dawangshan Second Industrial Zone, Dawangshan Community, Shajing Street,
Bao'an District, Shenzhen

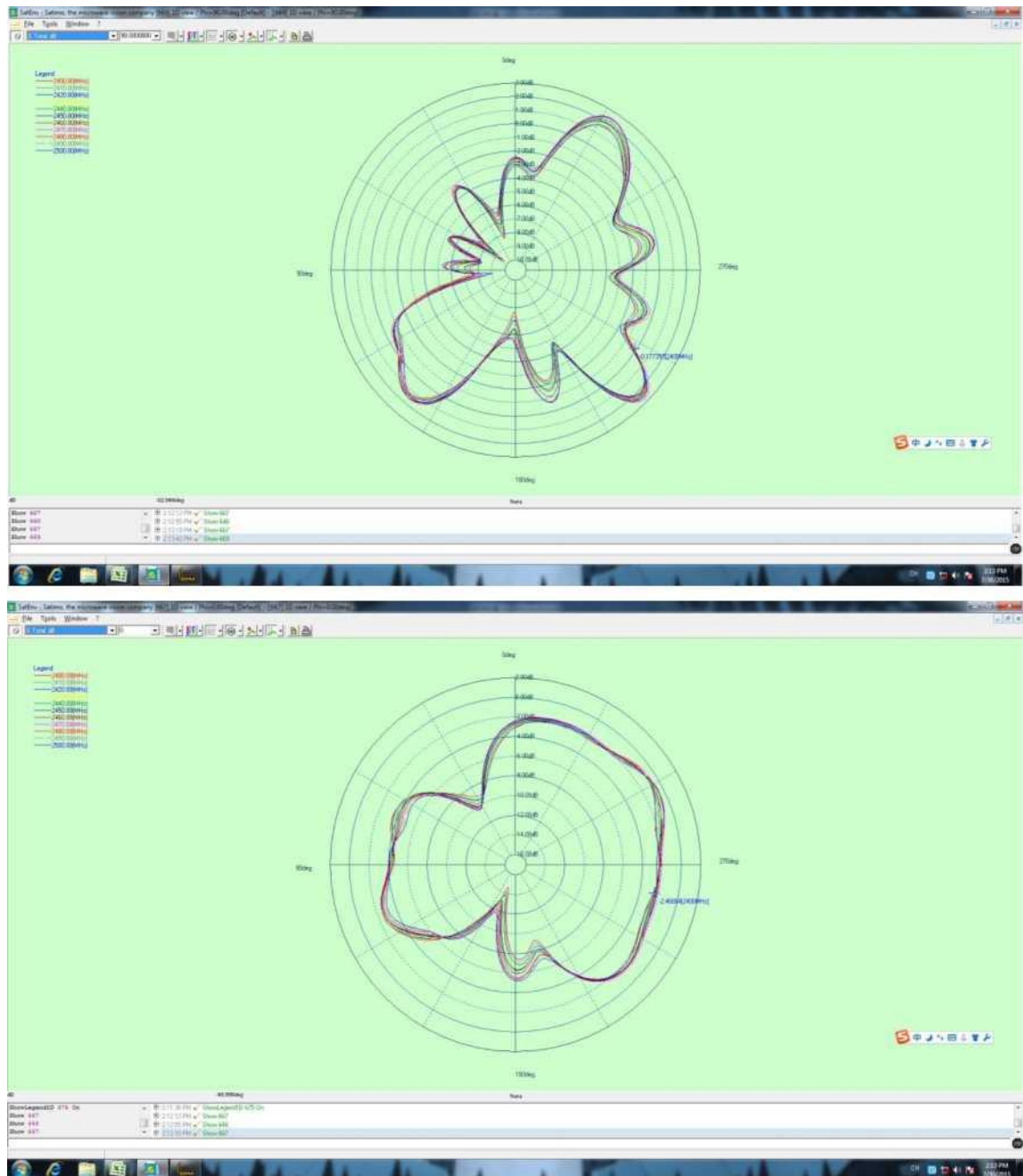
3.3 Radiation Pattern



ShenZhen Qesan Co., Ltd.

302, Building 21, Dawangshan Second Industrial Zone, Dawangshan Community, Shajing Street,
Bao'an District, Shenzhen

Performance Test Report of QM-03S Module Antenna V1.0



ShenZhen Qesan Co., Ltd.

302, Building 21, Dawangshan Second Industrial Zone, Dawangshan Community, Shajing Street,
Bao'an District, Shenzhen