# Antenna OTA Test Report

# For

# **ESP-ANT-A**

Customer	广云物联网科技(广州)有限 公司	Demo	GY-SUC3A2
Band	2.4G	Color	蓝色
PRS PN		Version	V1.0
Issued by	Jason	Checked by	Mem
<b>Confirmed by</b>	Zhang	Date	2022.03.18

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Manufacturer: Percsson Communication Equipment Co., Ltd ADD: Kui Qiao Road, Fouth Village ,Tang Xia Town, Dongguan, Guangdong, China

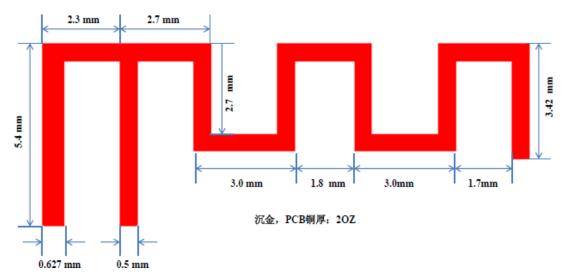


### 一、TEST INSTRUMENTATION

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



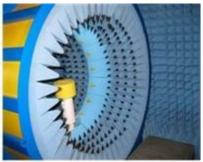
GY-SUC3A2 WiFi Module



Antenna Dimension for ESP-C20

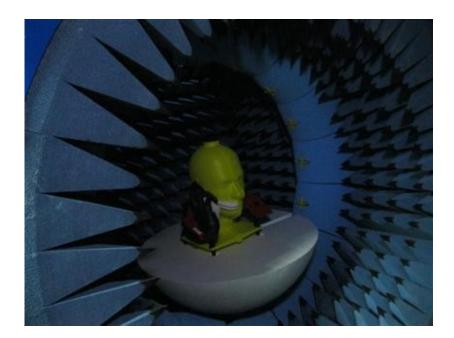




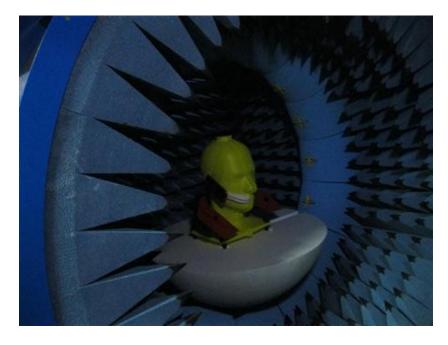




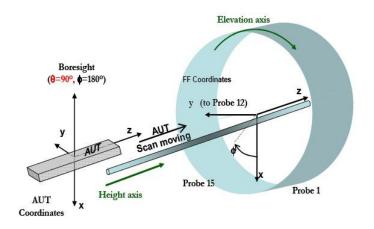




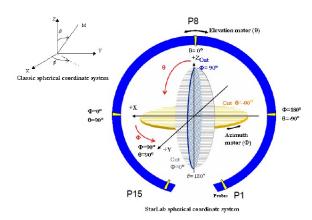




### Coordinate system – Cylindrical geometry



#### Coordinate system - Spherical geometry





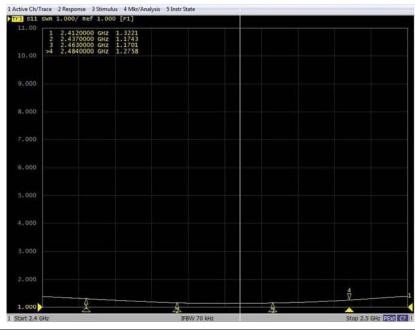
### 二、Test Results

### 2.1 Gain and Efficiency

Test Item	Freq (MHz)	Efficiency (%)	Gain (dBi)	Note
	2400	71. 32	2.72	Vertical 30°
	2412	70.68	3. 21	
	2417	76. 51	2.88	
	2422	77. 78	2. 67	
	2427	80. 76	2.89	
	2432	80.11	2.80	
	2437	75. 32	2. 64	
Gain	2442	75. 23	2. 93	
	2447	72. 99	2. 78	
	2452	70.01	3. 12	
	2457	72. 34	3. 13	
	2462	71. 32	3. 28	
	2467	72. 33	3. 24	
	2472	75. 67	3. 33	
	2477	72. 12	3. 42	
	2482	80. 23	3. 57	
	2500	79.65	3. 22	

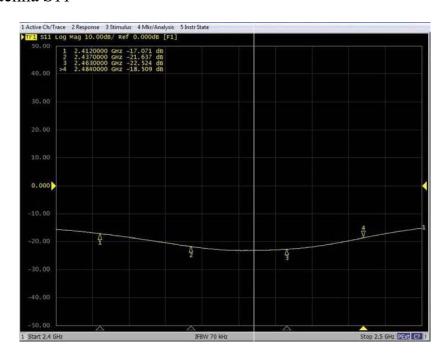


### 2.2 VSWR (Voltage Standing Wave Ration)



Frequency(MHz)	2412	2437	2463	2484
VSWR	1.31	1.17	1.16	1.29

#### 2.3 Antenna S11





Frequency(MHz)	2412	2437	2463	2484
S11 (dB)	-17.01	-21.65	-22.52	-18.51

# $\equiv$ **2-D** pattern Plots

