

# Testing Report


Customer Name: Shenzhen Svakom Technology Co., Ltd

Product Name: Pulse Lite Neo

Sample Model: SX013A

Reference Standard: *GB/T 9410-2008; ANSI/IEEE Std 149-1979*

Issue Date: 2022.10.10

Engineer: <i>Jeremy</i>	Date: <i>2022.10.9</i>	
Auditor: <i>Eason</i>	Date: <i>2022.10.10</i>	
Approver: <i>Aaron</i>	Date: <i>2022.10.10</i>	

## Version

Version No.	Date	Description	Formulate	Approval
A0	2022.10.10	For the first time, formulate	Jeremy	Eason

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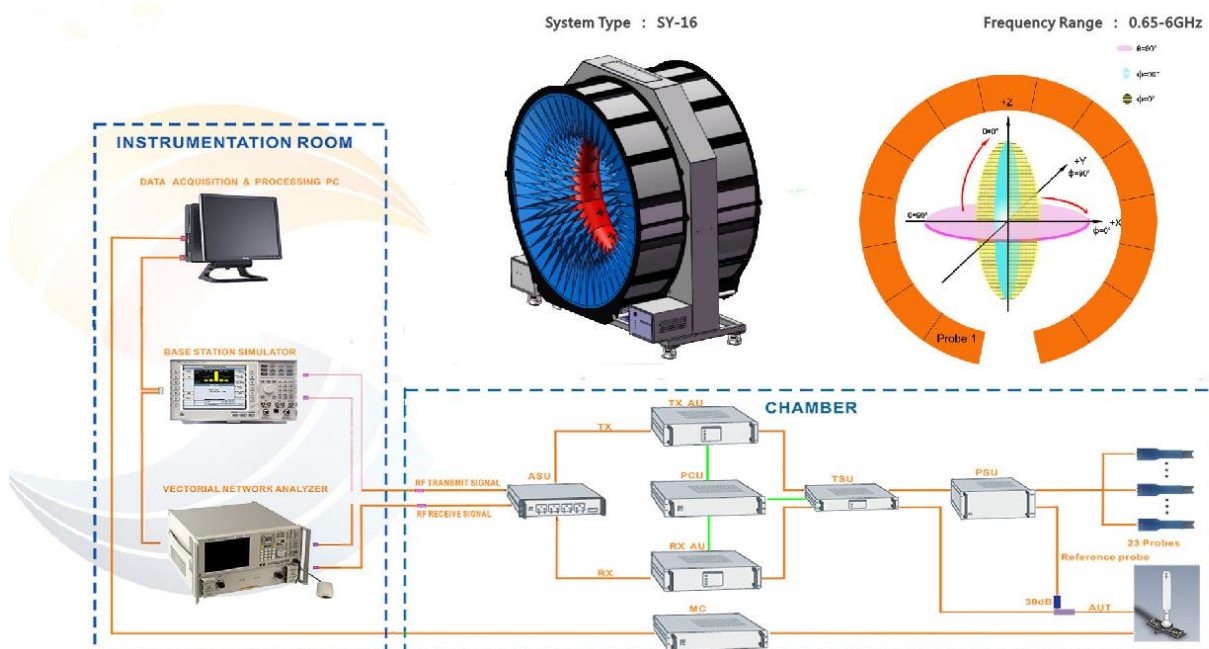
# 1.General Information

## 1.1 General information of testing institutions

<b>Name</b>	Shenzhen RFI-LAB Communication Technology Co., Ltd.
<b>Address</b>	10/F A, Lingyun Bld, Liufang Rd, Baoan District, SZ
<b>Tel</b>	13798473001
<b>E-mail</b>	lait@tech-now.com
<b>Equipment</b>	All the equipment used in the report is fixed in 10/F A, Lingyun Bld, Liufang Rd, Baoan District, SZ

## 1.2 Testing principle

### Multi-Probe OTA Measurement System



### 1.3 Test equipment

Equipment	Model No.	Serial No.	Manufacturer	Calibration date	Next calibration date
16 probe microwave chamber	3*3*2.5	RFI-LAB-RF-A00	SUNYIELD	2021.3.15	2023.3.14
Network Analyzer	E5071C	RFI-LAB-RF-A02	Agilent	2022.4.29	2023.4.28

### 1.4 Test environment

Temperature	24.1℃
Humidity	59%RH
Pressure	100.13kPa

### 1.5 Statement

- (1) The test results in the report are only applicable to the tested samples and the tested samples work under the environment described in the report.
- (2) Only Shenzhen RFI-LAB Communication Technology Co., Ltd. have the right to modify the report, and the modification information shall be annotated in the revision form.
- (3) Any objection to this report shall be raised within 30 days after formal confirmation of the report.
- (4) This report is invalid if there is any evidence that the sample information provided is falsified.
- (5) The report is invalid without the signature of the auditor and approver.

## 2.Sample Information

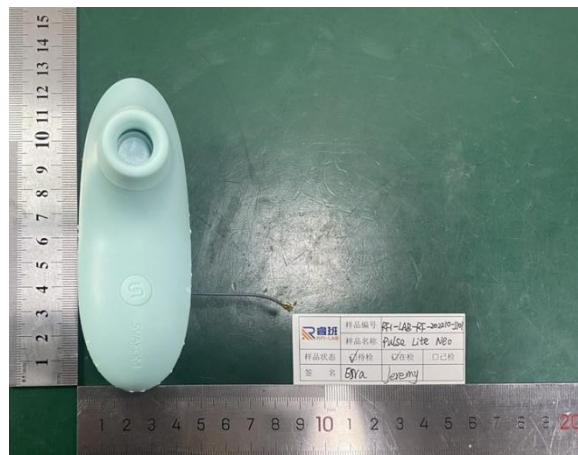
### 2.1 Client information

<b>Name</b>	Shenzhen Svakom Technology Co., Ltd
<b>Address</b>	Zone B, 2nd floor, building h, gangzhilong business center, Qinglong Road, Longhua street, Longhua New District, Shenzhen
<b>Contacts</b>	Mr.Xiao
<b>Tel</b>	13538218145
<b>E-mail</b>	m13538218145@163.com
<b>manufacturer</b>	Dongguan Qianhe Electronic Technology Co., Ltd.

### 2.2 Description of EUT(S)

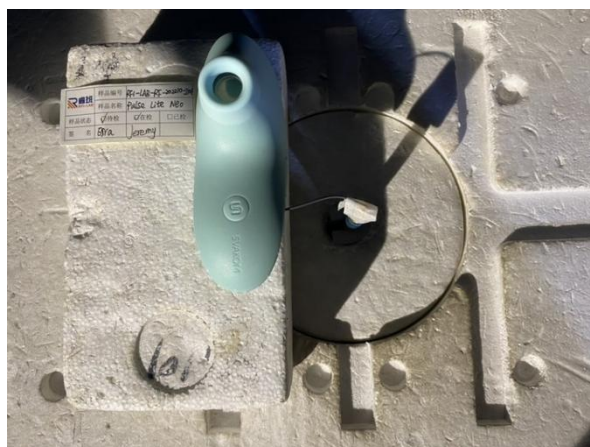
<b>Product Name</b>	Pulse Lite Neo
<b>Sample Model</b>	SX013A
<b>Size</b>	/
<b>Serial No.</b>	/
<b>Test Item</b>	Gain; Efficiency; Radiation pattern
<b>Frequency Range</b>	2400-2500MHz
<b>Received Date</b>	2022.10.9
<b>Test Date</b>	2022.10.10
<b>Remark</b>	/

## 2.3 EUT appearance

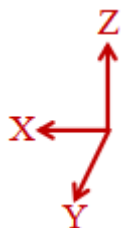
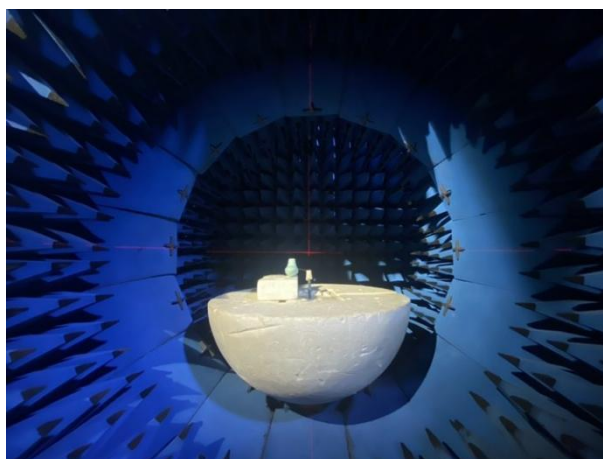


## 2.4 DUT setup photo of free space OTA testing

Planform



Front view



## 3. Test Results

### 3.1 Test standard

Name	Parameter	Method	Standard no.
Mobile communication antenna	Antenna gain	Generic specification for antennas used in the mobile communications	GB/T 9410-2008
	Radiation pattern		
Antenna	Radiation efficiency	IEEE Standard Test Procedures for Antennas	ANSI/IEEE Std 149-1979
	Gain and directivity		

### 3.2 Test uncertainty

The uncertainty was calculated on the basis of the GUM published by ISO, using the inclusion factor of K=2 and the 95% confidence level to express the extended uncertainty.

Item	Uncertainty
Antenna gain	$\pm 1\text{dB}$
Radiation efficiency	$\pm 10\%$

### 3.3 Test data

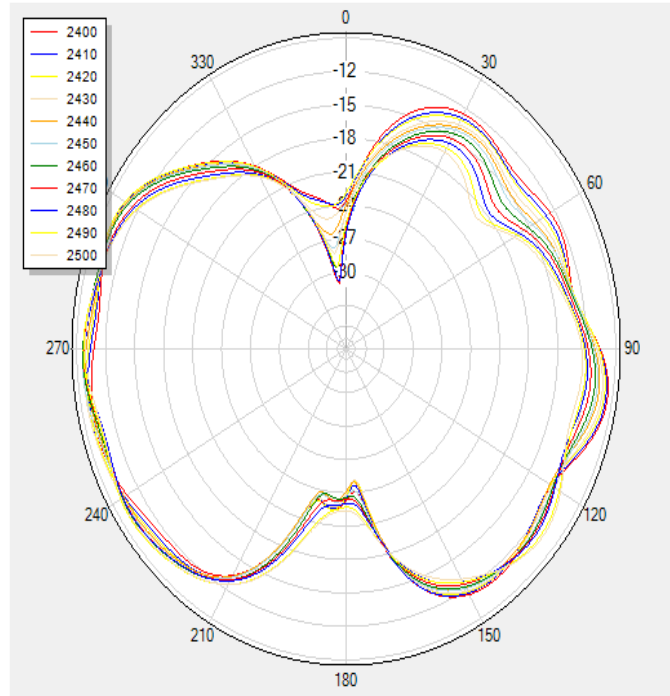
#### 3.3.1 Typical free space efficiency and gain

Frequency/MHz	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Peak Gain/dBi	-6.89	-6.76	-6.74	-6.64	-6.86	-6.64	-6.62	-6.72	-6.9	-6.7	-6.86
Efficiency/%	7.57	7.59	7.60	7.60	7.34	7.54	7.47	7.23	7.03	7.26	7.16

### 3.3.2 Typical free space radiation pattern

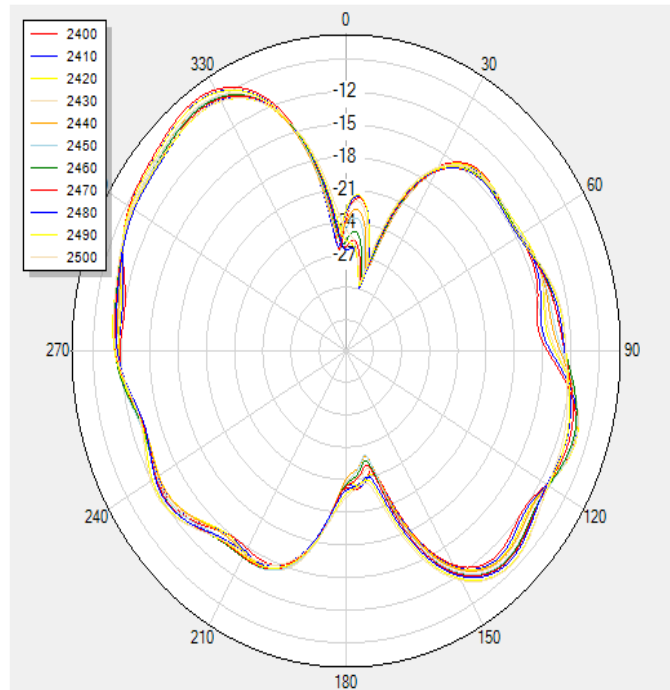
(1) 2400-2500MHz X-Z Plane:

**V Phi=0**



(2) 2400-2500MHz Y-Z Plane:

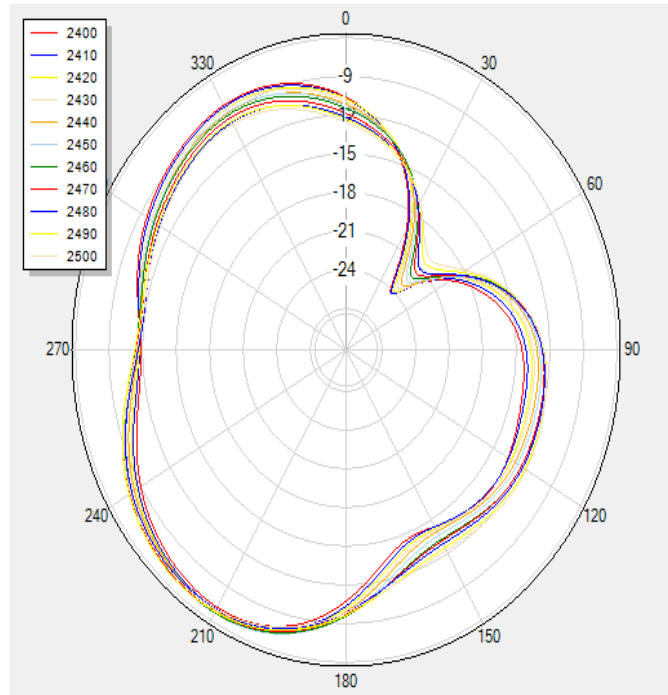
**V Phi=90**



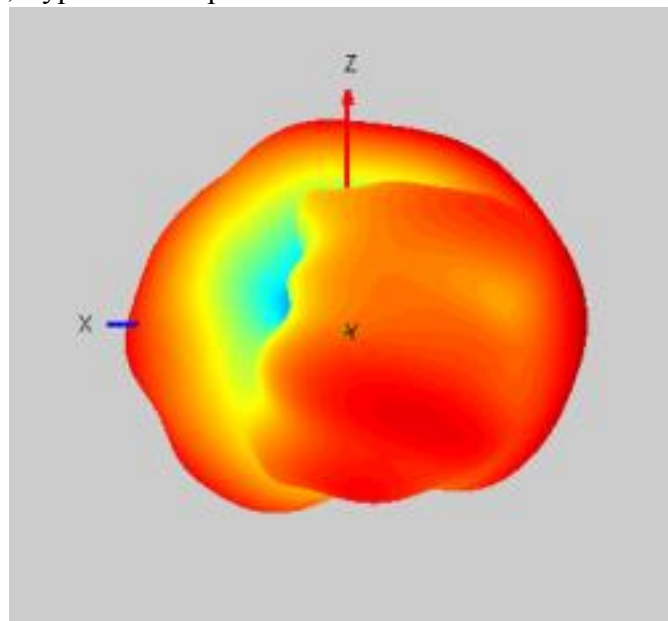


(3) 2400-2500MHz X-Y Plane:

### H Theta=90



(4) Typical Free Space 3D Radiation Pattern at 2.45GHz:



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