

Approval sheet of

Victa Lane

Internal Antenna

Antenna Product
Specification

Entry Name	Victa Lane WIFI
Frequency Channel	NA SKU: LTE:B2/B4/B5/B7/B12/B13/B14/B17/B25/B26/B41/B66/B71 WCDMA:WB2/WB4/WB5 WIFI/BT/GPS EU SKU: LTE:B1/B2/B3/B4/B5/B7/B7/B10/B20/B28/B38/B40/B41/B66 WCDMA:WB1/WB2/WB4/WB5/WB8 GSM: 850/900/1800/1900 WIFI/BT/GPS
Supplier Name	Shenzhen Speed Wireless Technology Co., Ltd
Supplier Address	202, Building A, countrymen Communication Building, No. 5, Keji Middle Third Road, Maling Community, Yuehai Street, Nanshan District, Shenzhen, Guangdong
Antenna part number	01. WF7. A1POS2SBD03

Prepared by	Signed by	Approved by Customer
RF Engineer	Xie Shuhai	Xie Shuhai
ME Engineer	Huang Teyan	
Reviewed by	Xu Weiwei	
RF Manager	Xu Weiwei	
ME Manager	Huang Teyan	
Project Manager	Zou Wenxaing	

Project:Victa Lane	Author: Xie Shuhai	File Name:victa lane WIFI PEAK GAIN REPORT
Date: 2025-07-23		
Language: English	Check: Xu Weiwei	
Document No.:		
Address : Yidao Building, Pingshan District, Shenzhen, Guangdong		

1 Antenna Description

WIFI Antenna Structure
Insert Molding Antenna+FPC Antenna
Antenna Type: PIFA Antenna

2 Product Specification

2.1 S11 (Return Loss)

The S11 over the frequencies stated in Table 1 below shall be measured at the connector end of the cable for each antenna assembly. The S11 are measured with the antennas installed on platform. The S11 shall be 100% tested in production.

Test Parameter	600MHz to 3000 MHz
S11:	-5dB Max

2.2 Test environment

The radiation pattern and antenna gain shall be tested either with a conventional far field anechoic chamber or a near field anechoic chamber such as a Satimo SG24-L.

For a far field anechoic chamber, the gain measurements shall be made within an RF anechoic chamber with at least 3-meter separation from the receive antenna to the antenna under test (AUT). The RF anechoic chamber must be lined with absorptive material rated as a minimum

frequency range from 400MHz to 10GHz. The notebook with the antenna assemblies installed shall be placed on a non-conductive structure at a sufficient height to be in the ‘quiet zone’ of the chamber. All test equipment including horn antennas, adapters, cables, network analyzers, and receivers shall be calibrated per manufacturer’s minimum calibration requirements. For a near field anechoic chamber, the AUT test must be place in the center (and within the admissible offset) of the probe array elements. The RF anechoic chamber must be lined with absorptive material rated as a minimum frequency range from 400MHz to 10GHz. The notebook with the antenna assemblies installed shall be placed on a non-conductive structure.

2.3 Antenna radiation measurement

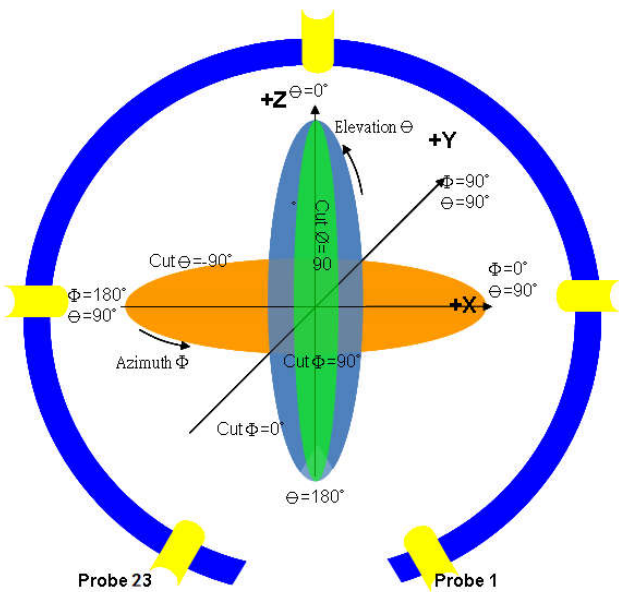
In order to ensure compliance with network carrier specifications, it is required to measure a 3-D gain measurement for WIFI Antenna.

Table below specifies the details of the 3-D gain measurement points

Theta Start: 0°	Phi Start: 0°
Theta Stop: 150°	Phi Stop: 330°
Theta increment: 30°	Phi Increment: 30°

The table above specifies the minimum 23 measurement points (x2 polarizations) for each measurement frequency.

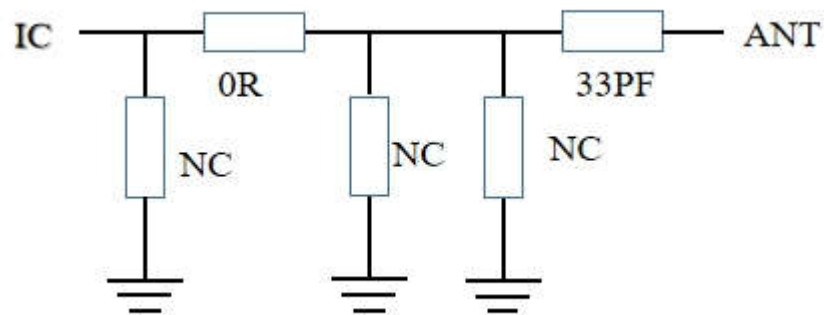
The test environment for gain measurements are outlined in below Figures.



Calibration certificate
Instrument number: CT1012326B5.25
Calibration date: 2024.12.28
Next calibration date: 2027.12.27
Calibrator: Hu mo

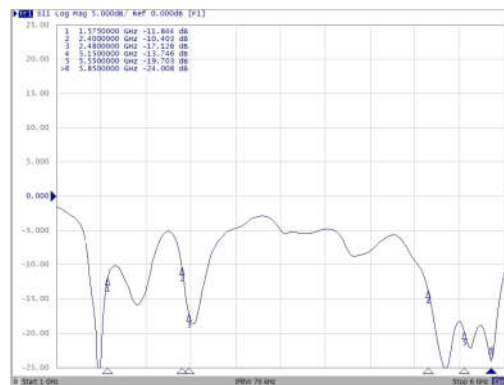
3 Antenna Performance Test

3.1 Matching Circuit Description



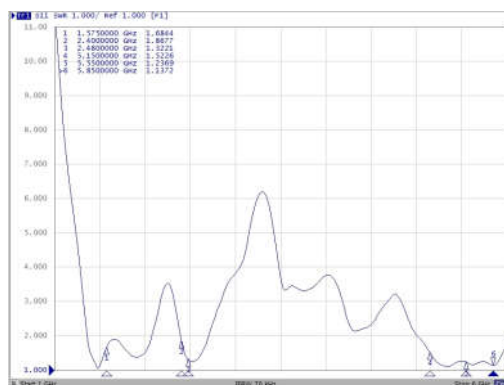
Main Match

3.2 S11 of WIFI Antenna



WIFI S11

3.2 VSWR of WIFI Antenna



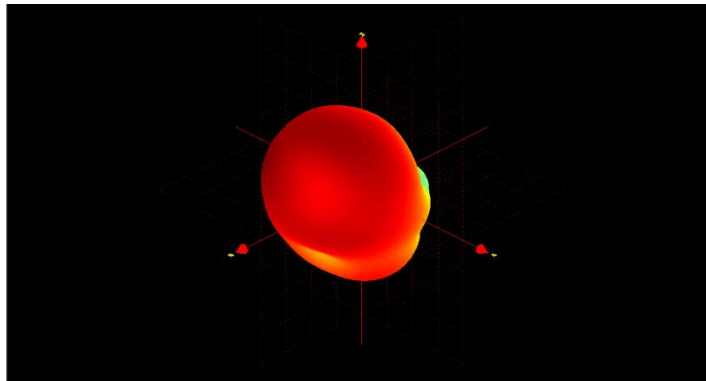
WIFI VSWR

3.2 Antenna Radiated Efficiency

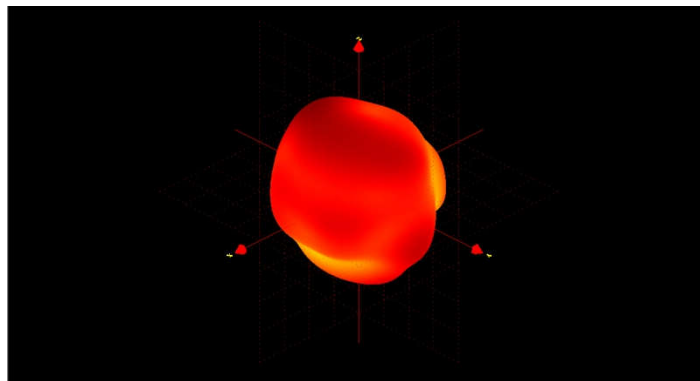
Antenna	Gain (dBi)
GPS	-1.57
WIFI 2.4G/BT	0.41
WIFI 5G/B1	-1.12
WIFI 5G/B2	-0.87
WIFI 5G/B3	-0.76
WIFI 5G/B4	-0.75

3.3 Radiation Pattern

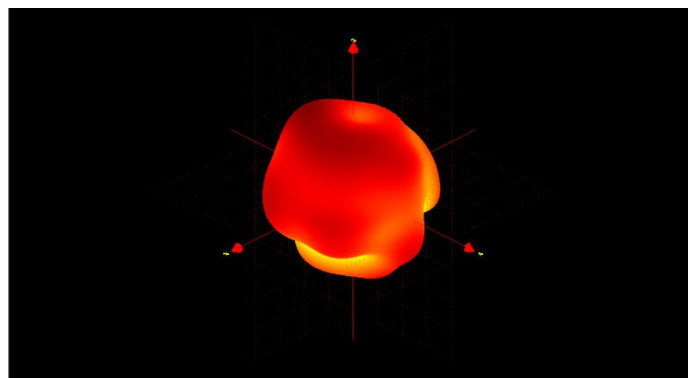
WIFI antenna



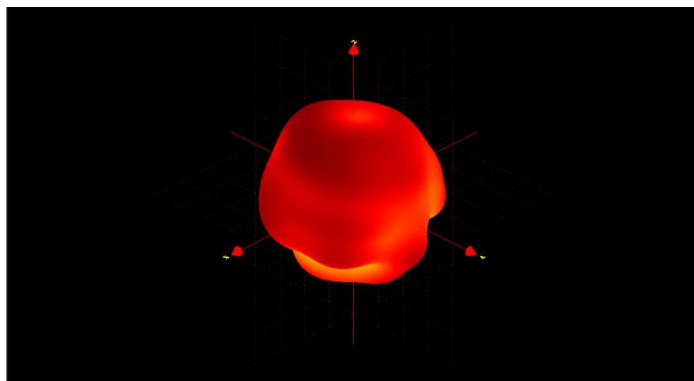
1570MHz



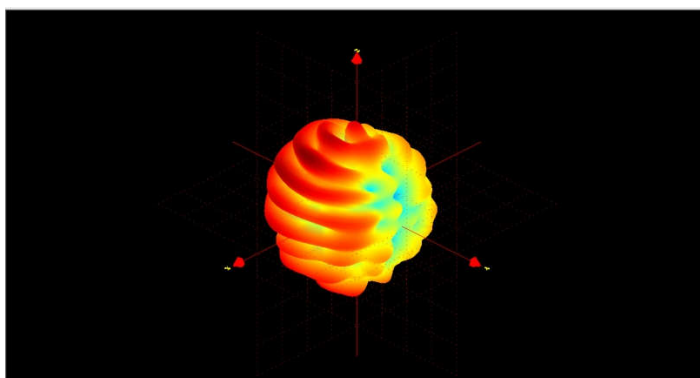
2400MHz



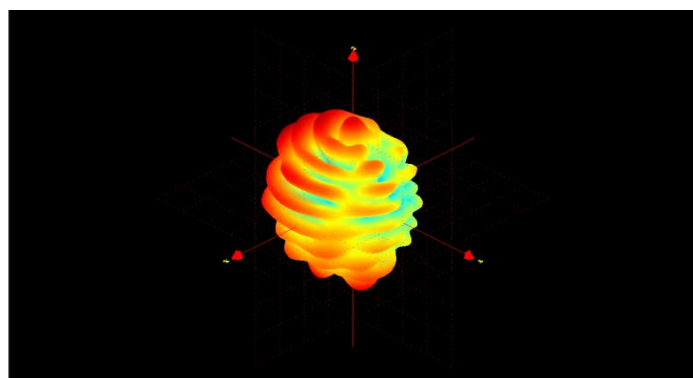
2450MHz



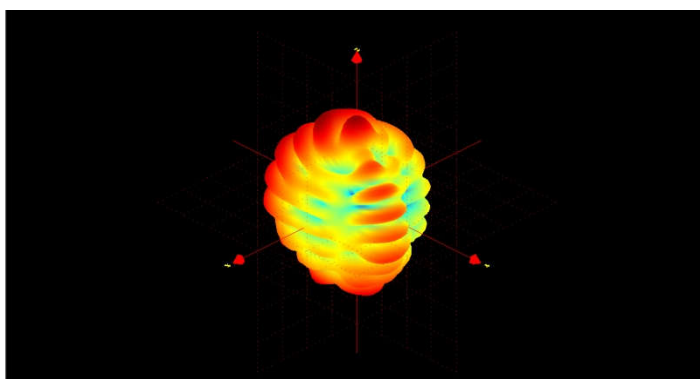
2480MHz



5150MHz



5550MHz



5850MHz

Victa Lane

NFC Antenna Spec

Antenna Product Specification

Entry Name	Victa Lane NFC
Supplier Name	Shenzhen Speed Wireless Technology Co., Ltd
Frequency	13.56MHz
Supplier Address	202, Building A, countrymen Communication Building, No. 5, Keji Middle Third Road, Maling Community, Yuehai Street, Nanshan District, Shenzhen, Guangdong
Antenna part number	F-2Y-DK-0001-004-B0

Prepared by	Signed by	Approved by Customer
RF Engineer	Xie Shuhai	Xie Shuhai
ME Engineer	Huang Teyan	
Reviewed by	Xu Weiwei	
RF Manager	Xu Weiwei	
ME Manager	Huang Teyan	
Project Manager	Zou Wenxaing	

Project:Victa Lane	Author: Xie Shuhai	File Name:victa lane NFC REPORT
Date: 2025-10-31		
Language: English	Check: Xu Weiwei	
Document No.:		
Address : Yidao Building, Pingshan District, Shenzhen, Guangdong		

1 Antenna Description

NFC Antenna Structure
FPC Antenna + Ferrite
Antenna Type: Loop Antenna

2. NFC Antenna Performance Test

2.1 Matching Circuit Description

	C0	C1	C2
Match value	560pf+56pf	56pf+10pf	150pf

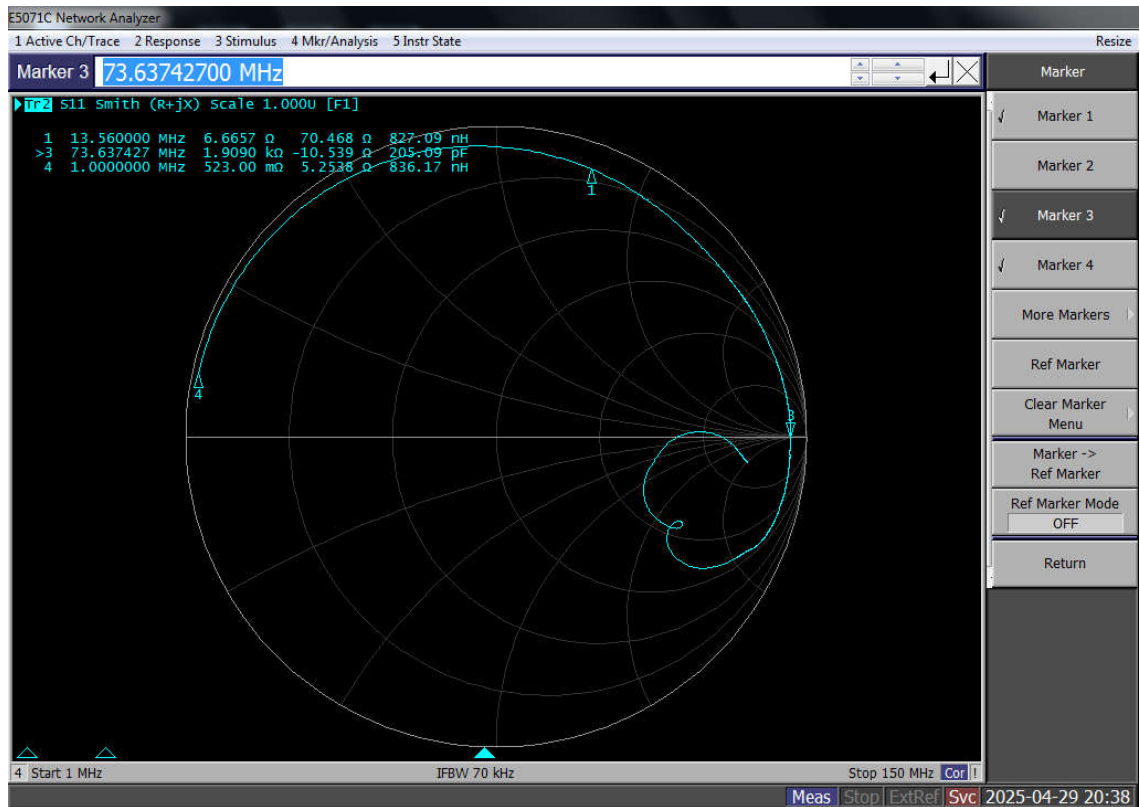
Main Match

2.2 Antenna Introduction

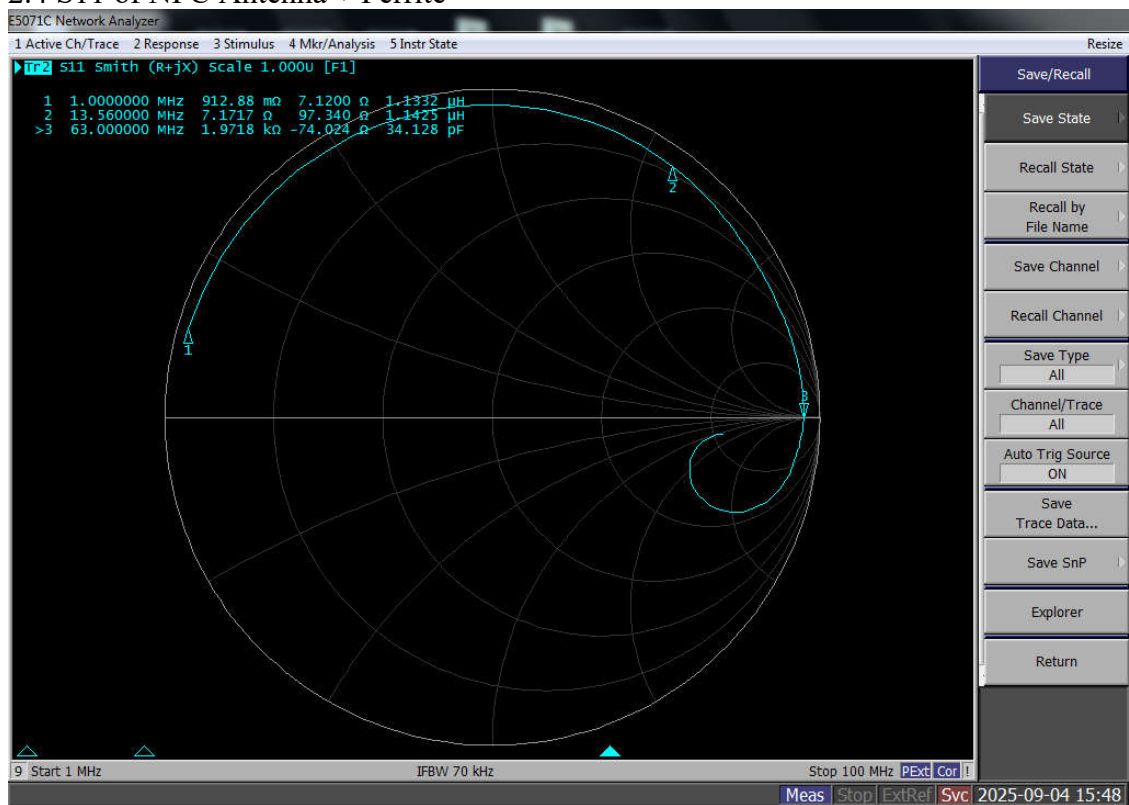
Vickt Lane-NFCAntenna					
Frequency	La	Rs	Rp	Fra	Q
13.56MHZ	400~1000uH	<2Ohm	>1K	>25M	>10

Step 4	2 nd Iteration: Measurement of Antenna parameter L_a , R_s , R_p , f_{ra}			
	Antenna:	linear view	unit	annotation
	(等效串联电感) L_a =	1.140E-06	[H]	
	(等效串联电阻) R_s =	9.128E-01	[Ω]	
	(等效并联电阻) R_p =	1.979E+03	[Ω]	at self resonance frequency
	(谐振频率) f_{ra} =	6.303E+07	[Hz]	self resonance frequency of the antenna
	R_p (13.56MHz) =	4.266E+03		Skin effect included
	R_a =	3.122	[Ω]	
	C_a =	5.596E-12	[F]	
	(品质因素) Q_a =	31.095		

2.3 S11 of NFC Antenna



2.4 S11 of NFC Antenna + Ferrite



2.5 Impedance Measuremetn with MB of NFC Antenna

