



东莞市联频电子科技有限公司
Dongguan Link-Freq Electronic Technology Co.,Ltd

Specification Approval SPECIFICATION FOR APPROVAL

guest household
CUSTOMER:

Customer part number
CUSTOMER NO:

Taste **name** 2.4G WiFi ANTENNA

PART NAME: _____

Supplier part number LF-CW2913B183-P01

SUPPLIER NO: _____

dateDate: March 20, 2025

Customer confirmationCUSTOMER APPROVED BY		
APPROVAL	CHIEF	SUPERVISOR

Supplier confirmationSUPPLIER SIGNATURE		
APPROVAL	CHECK	DESIGN
Darren	Jerry	Patrick

SH-RD-F04-A

**Address:Room 1410, Building 1, No. 21Qinyuan Road, Songshan Lake Park,
Dongguan City, Guangdong Province**





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1.Product Specifications (Product Specification)

Product images (Product Photo)	
	
A.Electrical parameters (Electrical Characteristics)	
frequency(Frequency)	2400 ~ 2500 MHz
Voltage standing wave ratio (VSWR)VSWR	<= 2.0 @ 2400 ~ 2500 MHz
Return loss (Return Loss)	<=-10dB @ 2400 ~ 2500 MHz
Antenna gain (Antenna Gain)	2.13dBi @ 2400 ~ 2500 MHz
Radiation efficiency (Radiation Efficiency)	60% ~ 70% @ 2400 ~ 2500 MHz
polarization mode (Polarization)	Linear (Linear)
impedance(Impedance)	50 Ohm
Antenna type (Antenna Type)	Bipolar (Dipole)
B.Material and mechanical properties (Material & Mechanical Characteristics)	
Radiant material (Material of Radiator)	copper(Cu)
Wire type (Cable Type)	1.13Black wire (OD 1.13 mm Black Cable)
Connector type (Connector Type)	First generation terminal (Connector for OD 1.13mm Coaxial Cable)
Tensile test (Pull Test)	>= 1.0 Kg
C.Environmental factors (Environmental)	
Operating temperature (Operating Temperature)	- 40 C° ~ + 80 C°
Storage temperature (Storage Temperature)	- 40 C° ~ + 95 C°

Antenna type:Copper tube Antenna

2. Network parameter test data (S Parameter Test Data)



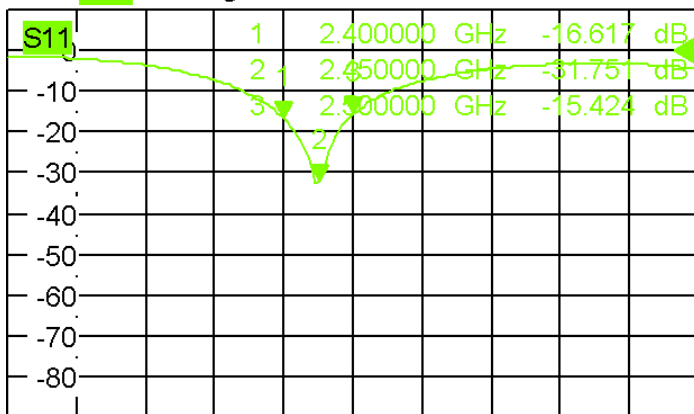
(ROHDE & SCHWARZ) ZVL Vector Network Analyzer

Test frequency range: 9kHz-6GHz

Testing capabilities: VSWR, Return Loss, Smith, etc.



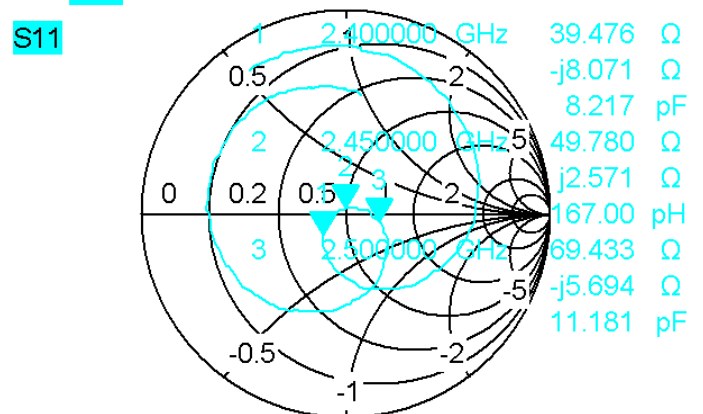
Trc1 **S11** dB Mag 10 dB / Ref 0 dB



Ch1 Center 2.5 GHz wr -10 dBm

Span 1 GHz

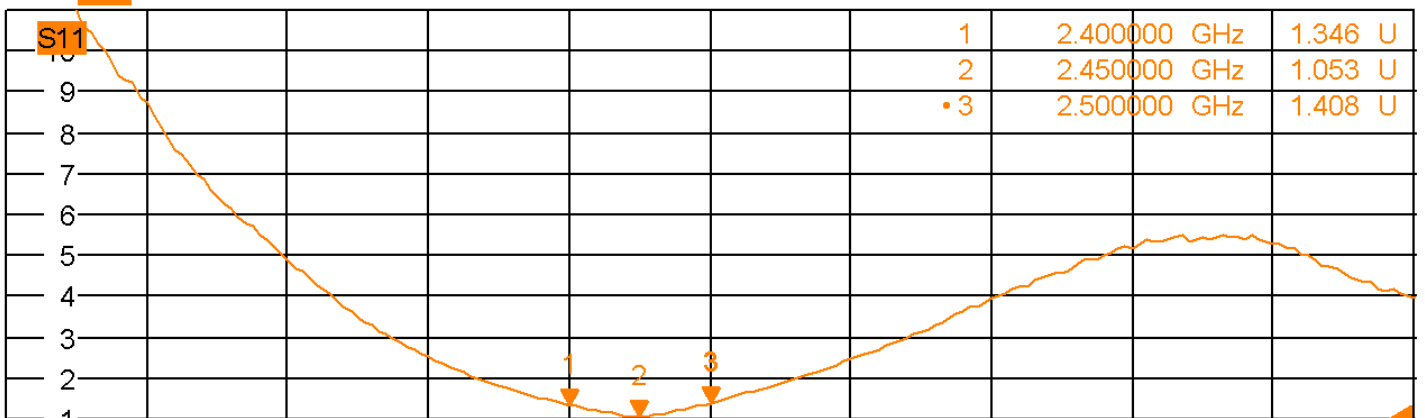
Trc2 **S11** Smith Ref 1 U



Ch1 Center 2.5 GHz wr -10 dBm

Span 1 GHz

Trc3 **S11** SWR 1 U / Ref 1 U



Ch1 Center 2.5 GHz

Pwr -10 dBm

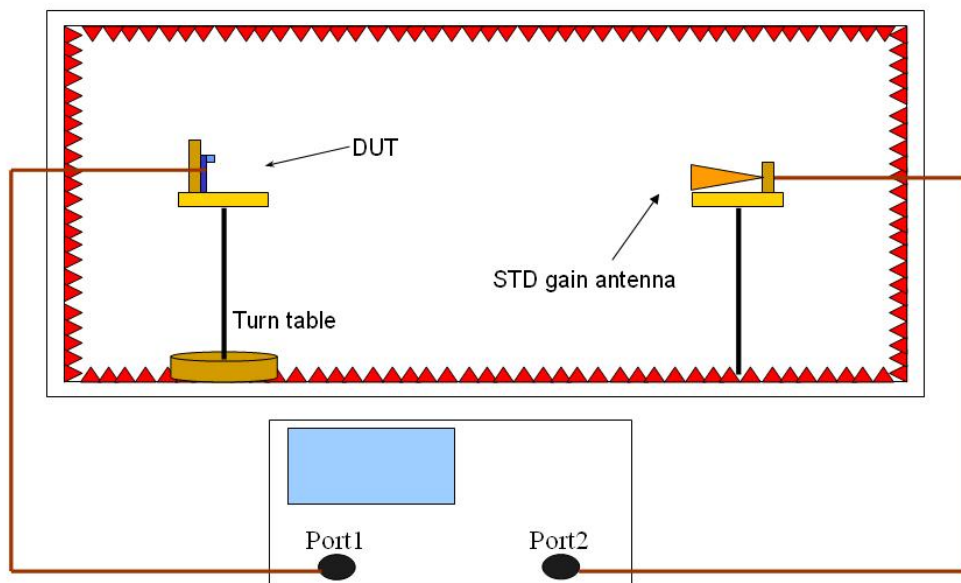
Span 1 GHz

3. Antenna radiation pattern test (Antenna - Radiation Pattern Test)

Test equipment specifications (Testing Equipment Specification):

Antenna microwave anechoic chamber dimensions (Antenna Anechoic Chamber Dimension): 6 x 3 x 3 m
Shielding performance (Isolation) : >100dB @ 1 MHz ~ 10 GHz
Test equipment (Testing Equipment): (ROHDE & SCHWARZ) ZVL Vector Network Analyzer
Receiving Antenna (Received Antenna): 0.7 ~ 6.0 GHz Bipolar horn calibration antenna

(0.7 ~ 6.0 GHz for Gain Calibration Double Ridged Horn Antenna)



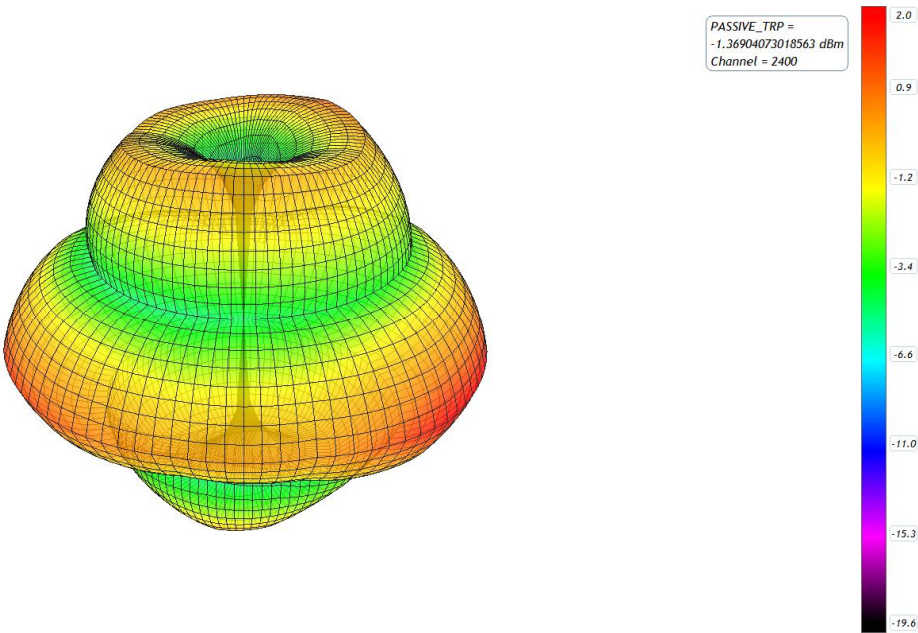
Test Schematic



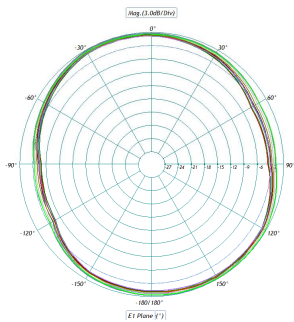
4.Efficiency and gain test data (Efficiency and Gain Test Data)

PASSIVE	Para.\Freq.(mhz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
	Gain(dBi)	2.03	2.13	2.11	1.85	1.6	1.31	1.58	1.64	1.46	1.72	2.04
	Efficiency (dB)	- 1.37	- 1.29	- 1.32	- 1.59	- 1.9	- 2.23	- 1.97	- 1.97	- 2.24	- 2.16	- 1.93
	Efficiency (%)	72.95	74.3	73.79	69.34	64.57	59.84	63.53	63.53	59.7	60.81	64.12

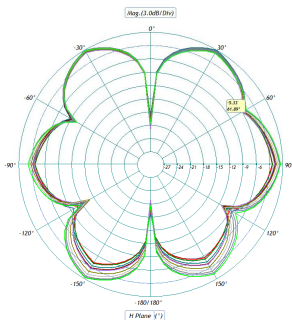
Theta: 60°
Phi: 75°



3DRadiation field type

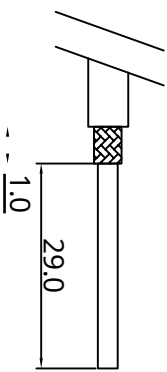
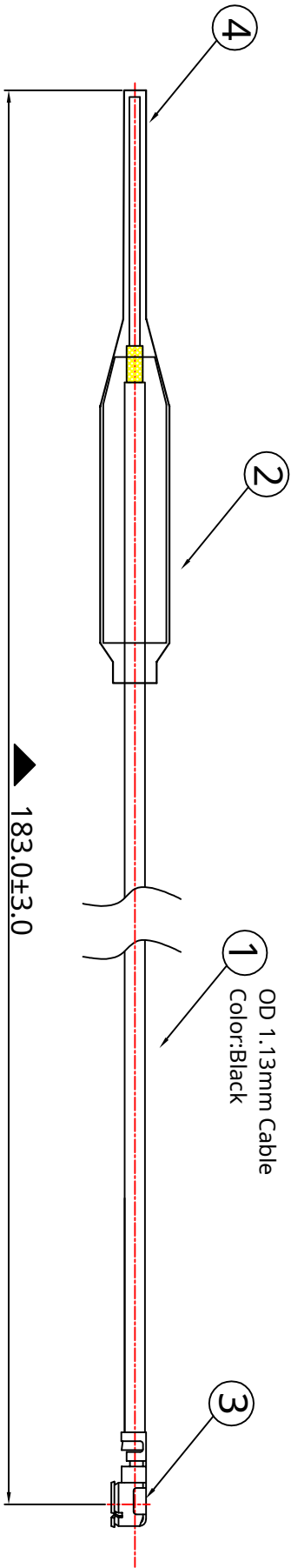


Max: 2.03 dBm (2400)
Min: -1.37 dBm (2400)
Max: 2.13 dBm (2410)
Min: -1.29 dBm (2410)
Max: 2.11 dBm (2420)
Min: -1.32 dBm (2420)
Max: 1.85 dBm (2430)
Min: -1.59 dBm (2430)
Max: 1.6 dBm (2440)
Min: -1.9 dBm (2440)
Max: 1.31 dBm (2450)
Min: -2.23 dBm (2450)
Max: 1.58 dBm (2460)
Min: -1.97 dBm (2460)
Max: 1.64 dBm (2470)
Min: -1.97 dBm (2470)
Max: 1.46 dBm (2480)
Min: -2.24 dBm (2480)
Max: 1.72 dBm (2490)
Min: -2.16 dBm (2490)
Max: 2.04 dBm (2500)
Min: -1.93 dBm (2500)

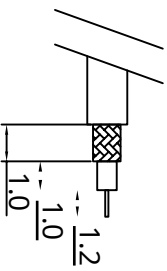


Max: 2.03 dBm (2400)
Min: -1.37 dBm (2400)
Max: 2.13 dBm (2410)
Min: -1.29 dBm (2410)
Max: 2.11 dBm (2420)
Min: -1.32 dBm (2420)
Max: 1.85 dBm (2430)
Min: -1.59 dBm (2430)
Max: 1.6 dBm (2440)
Min: -1.9 dBm (2440)
Max: 1.31 dBm (2450)
Min: -2.23 dBm (2450)
Max: 1.58 dBm (2460)
Min: -1.97 dBm (2460)
Max: 1.64 dBm (2470)
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Max: 1.46 dBm (2480)
Min: -2.24 dBm (2480)
Max: 1.72 dBm (2490)
Min: -2.16 dBm (2490)
Max: 2.04 dBm (2500)
Min: -1.93 dBm (2500)

2DRadiation field type



Cu STRIPPING DIM'S



I-PEX STRIPPING DIM'S

Remark:

1. The cable is RF1.13 black cable with a characteristic impedance of 50 Ohms.
- Network testing:

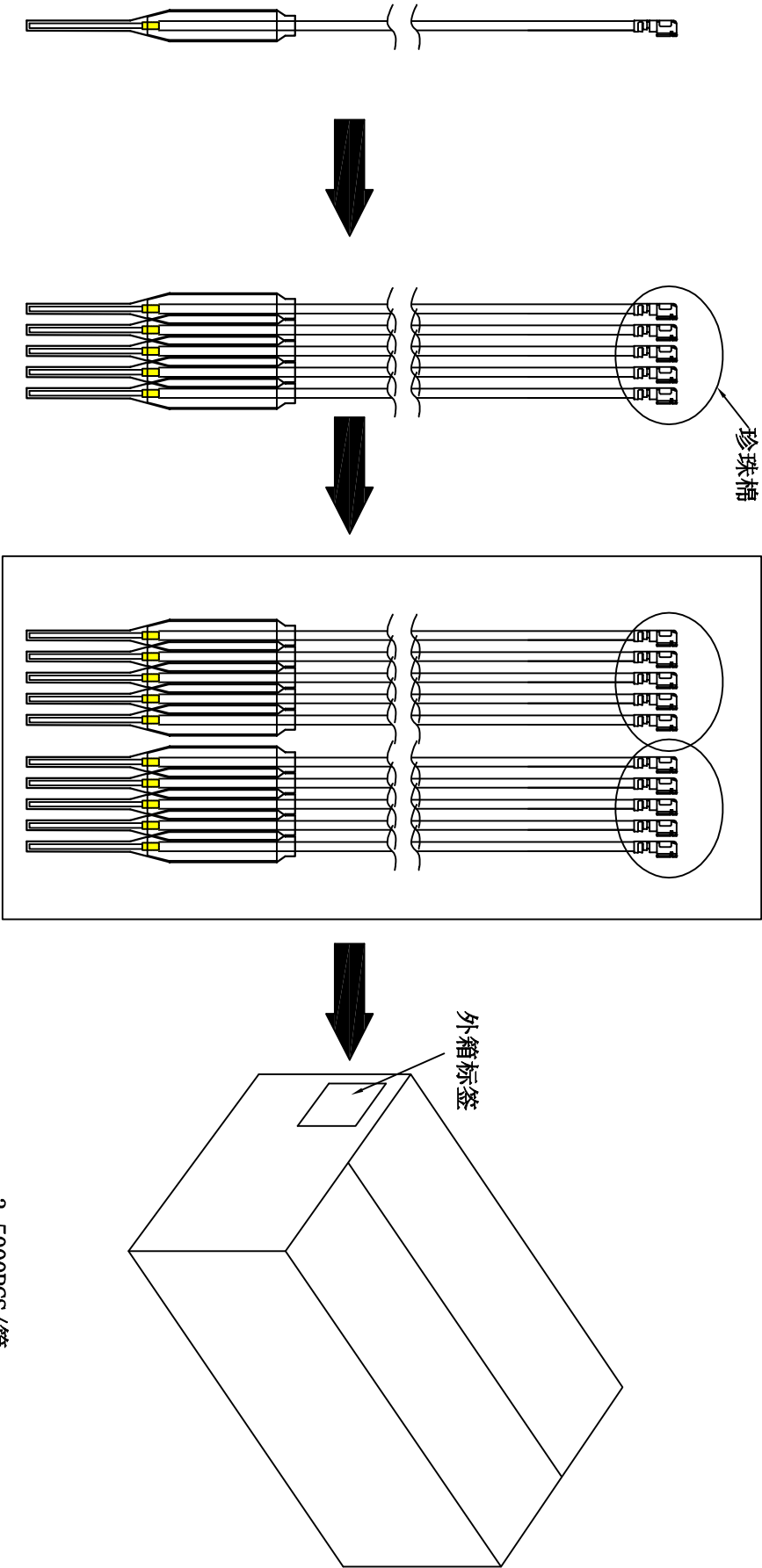
Test frequency band: 2.4~2.5GHz;

VSWR: 2.0MAX

RETURN: -10 or Less

RETURN:-10 or Less									
					 东莞市联频电子科技有限公司 DONGGUAN LINK-FREQ ELECTRONIC TECHNOLOGY CO., LTD				
CUSTOMER									
PART NO									
TITLE					2.4G WIFI ANTENNA				
S. H P/NO					LF-CW2913B183-P01				
SIZE		DRAWED		CHECKED		APPROVED			
A4		Colin		Jerry		Darren			
SCALE: 1/1					DATE: 2025-03-20				
UNIT: mm		TOLERANCE UNLESS OTHERWISE SPECIFIED							
ANGLES		±0.5°		X. ±2.0					
SHEET: 1/1		X. XX ±0.2		XX. ±5.0					
SCALE: 1/1		X. X ±0.5		DATE: 2025-03-20					

包装说明



1. 50PCS/扎

2. 200PCS/袋

3. 5000PCS/箱

实际包装数量视客户订单量而定

DONGGUAN LINK-FREQ ELECTRONIC TECHNOLOGY CO., LTD 东莞市联频电子科技有限公司				CUSTOMER	
				PART NO	
				TITLE	2.4G WIFI ANTENNA
				S. H P/NO	LF-CW2913B183-P01
TOLERANCE UNLESS OTHERWISE SPECIFIED		SIZE	DRAWED	CHECKED	APPROVED
UNIT:mm	ANGLES	±0.5°	X.	±2.0	
SHEET: 1/1	X.XX	±0.2	XX.	±5.0	
SCALE: 1/1	X.X	±0.5	DATE:2025-03-20	Colin	Jerry
				Darren	