

Shenzhen Yunding Communication Electronics Co., LTD

TEL: +86 0755-23073599

FAX: +86 0755-23097189

E-mail:wht0809@163.com

APPROVAL SHEET

Xun Long

CUSTOMER:

YD-Orange Pi Neo

DESCRIPTION:

PART NO.:

CUS PART NO.:

2025-3-31

D A T E:

Yunding signature

ENGINEERING DEPARTMENT	Q C DEPARTMENT	SALES DEPARTMENT

Customer signature

ENGINEERING DEPARTMENT	Q C DEPARTMENT	PURCHASING DEPARTMENT

TEL: 0755 23073599

✂ Approval in duplicate, please signed by your company.

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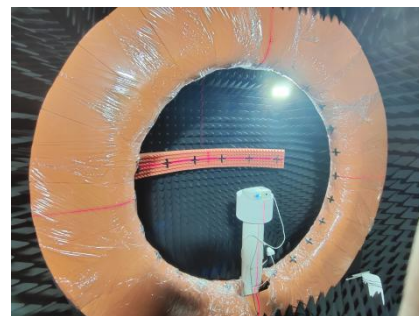
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1.Test items and equipment

	Test items	Equipment
1. S11-parameter	1. Return Loss 2. VSWR	network analyzer: Agilent E5071B HP 8753D
2.Active test	1. Transmitting power 2. Receiving sensitivity	1. Darkroom: ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2.general-purpose tester : Agilent 8960 E5515B ×2 StarPoint SP6011 Cmw500
3.Passive test	1.Gain 2.Efficiency	1. Darkroom: ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2. network analyzer: Agilent E5071B HP 8753D



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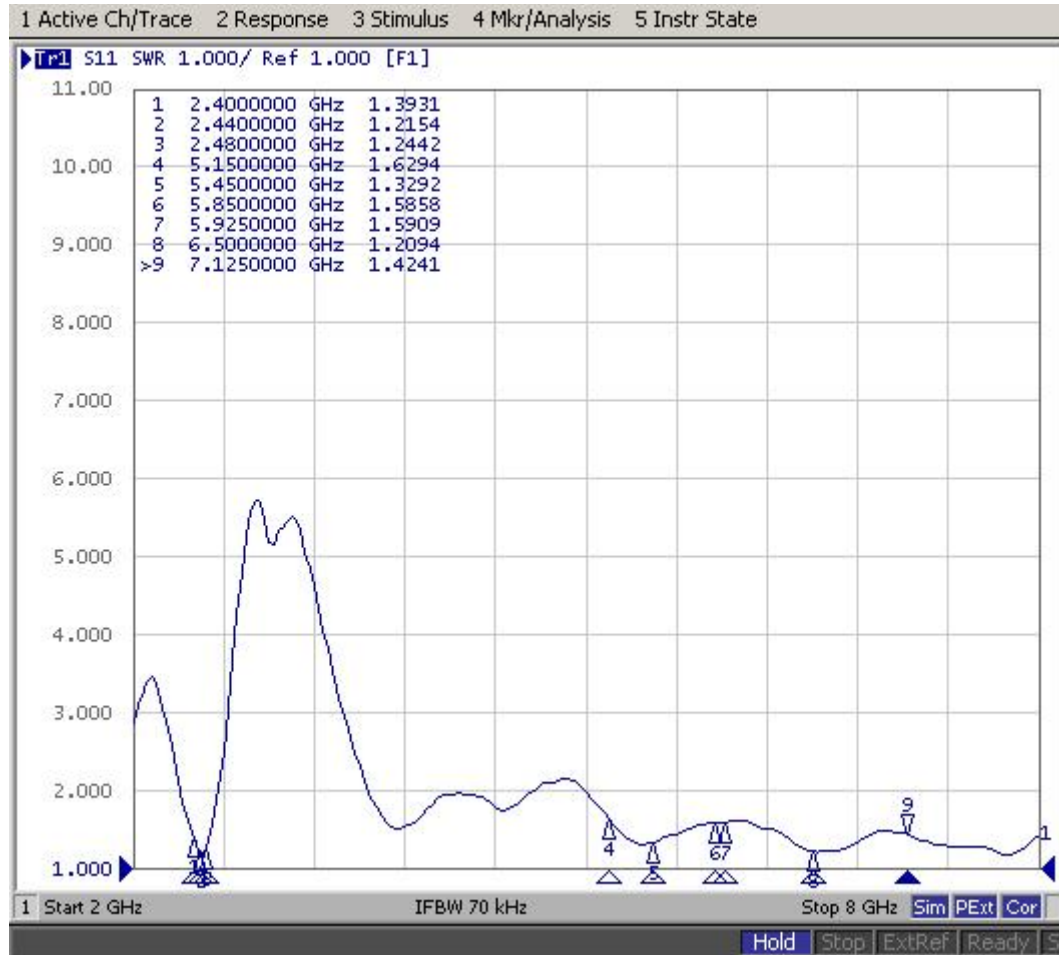
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2. Antenna performance

SWR



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3. Antenna OTA test data: transmit power, TRP/receive sensitivity, TIS

Item	Measurement	Standard	Band	Channel	Frequency	Total
1	TRP	WIFI (AP)	WIFI_B (11M)	1	2412	10.62
2	TIS(EIRP)	WIFI (AP)	WIFI_B (11M)	1	2412	-81.16
3	TRP	WIFI (AP)	WIFI_B (11M)	6	2437	11.02
4	TIS(EIRP)	WIFI (AP)	WIFI_B (11M)	6	2437	-82.11
5	TRP	WIFI (AP)	WIFI_B (11M)	11	2462	10.75
6	TIS(EIRP)	WIFI (AP)	WIFI_B (11M)	11	2462	-79.73
7	TRP	WIFI (AP)	WIFI_A (54M)	36	5180	10.72
8	TIS(EIRP)	WIFI (AP)	WIFI_A (54M)	36	5180	-73.14
9	TRP	WIFI (AP)	WIFI_A (54M)	64	5320	10.61
10	TIS(EIRP)	WIFI (AP)	WIFI_A (54M)	64	5320	-72.78
11	TRP	WIFI (AP)	WIFI_A (54M)	165	5825	13.35
12	TIS(EIRP)	WIFI (AP)	WIFI_A (54M)	165	5825	-71.72

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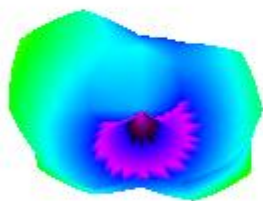
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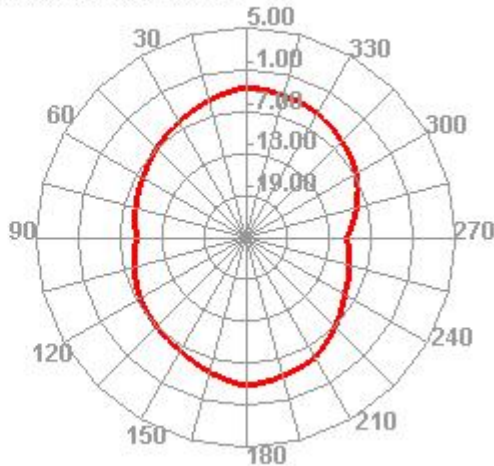
4.Antenna efficiency and gain

Passive Test For WIFI2.4		
Freq (MHz)	Effi (%)	Gain (dBi)
2400	42.94	1.8
2410	41.4	1.67
2420	38.8	1.49
2430	38.88	1.61
2440	40.92	1.9
2450	43.21	2.23
2460	44.92	2.48
2470	46.67	2.6
2480	46.4	2.54
2490	47.8	2.58
2500	49.74	2.75

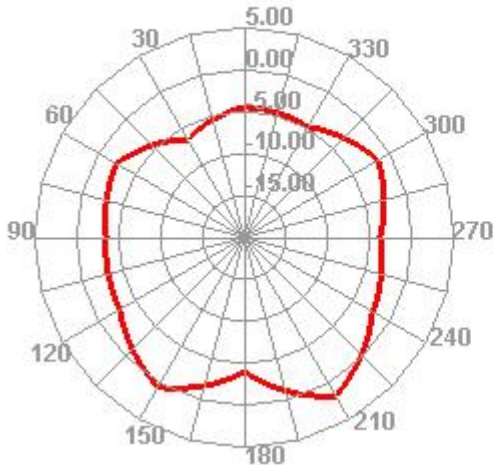
2400.000MHz



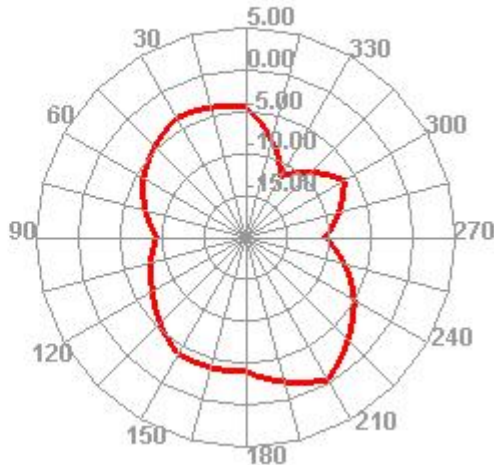
2400.000MHz H



2400.000MHz E1



2400.000MHz E2



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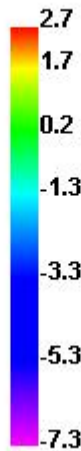
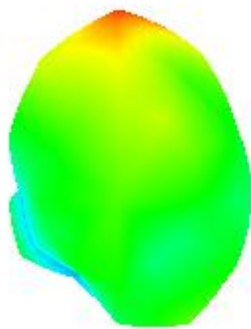
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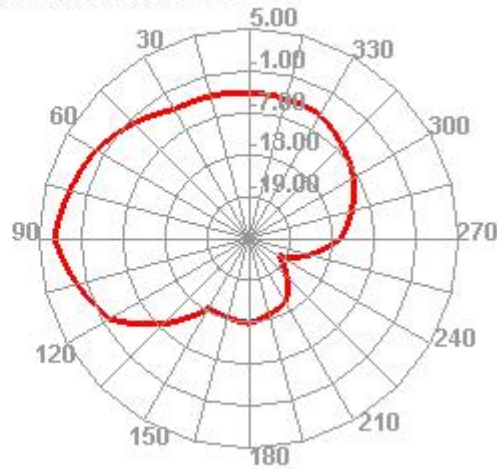
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Passive Test For WIFI5.8		
Freq (MHz)	Effi (%)	Gain (dBi)
5150	41.24	2.75
5200	48.46	2.33
5250	40.91	1.96
5300	44.57	2.21
5400	52.51	2.14
5450	45.75	1.61
5500	47.54	1.82
5550	49.24	2.12
5600	48.218	2.1
5650	44.58	1.66
5700	44.54	1.62
5750	45.45	1.77
5800	47.6	1.51
5850	44.07	1.67

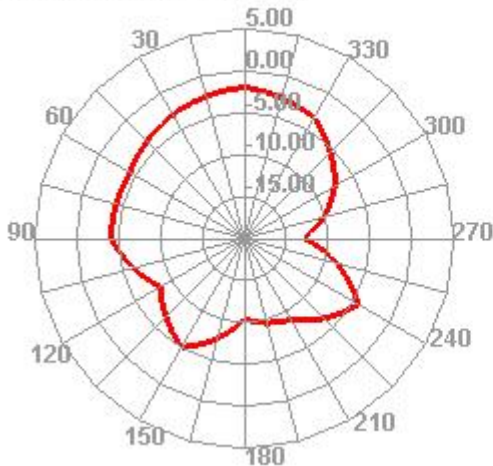
5150.000MHz



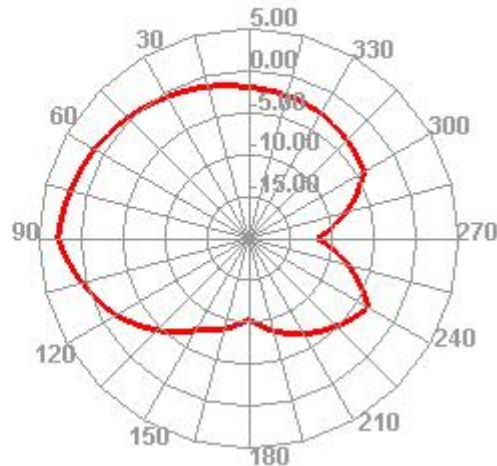
5150.000MHz H



5150.000MHz E1



5150.000MHz E2



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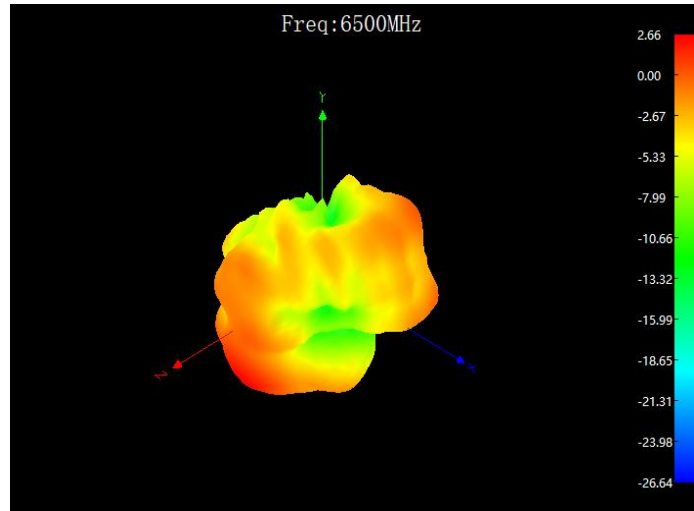
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Passive Test For WIFI6E

Freq (MHz)	Effi (%)	Gain (dBi)
5950	47.86	2.13
6000	42.07	0.59
6050	40.83	0.39
6100	41.69	0.76
6150	42.17	1.03
6200	41.21	0.96
6250	41.69	1.12
6300	42.56	1.3
6350	41.02	1.6
6400	42.27	2.11
6450	40.83	2.25
6500	40.36	2.66
6550	40.93	2.86
6600	41.21	2.73
6650	41.98	2.84
6700	41.88	3.14
6750	42.85	3.32
6800	44.98	3.1
6850	42.36	2.46
6900	42.66	2.03
6950	42.95	1.63
7000	42.27	1.2
7050	43.65	1.77
7100	45.08	1.85
7150	45.6	1.94
7200	47.21	1.98



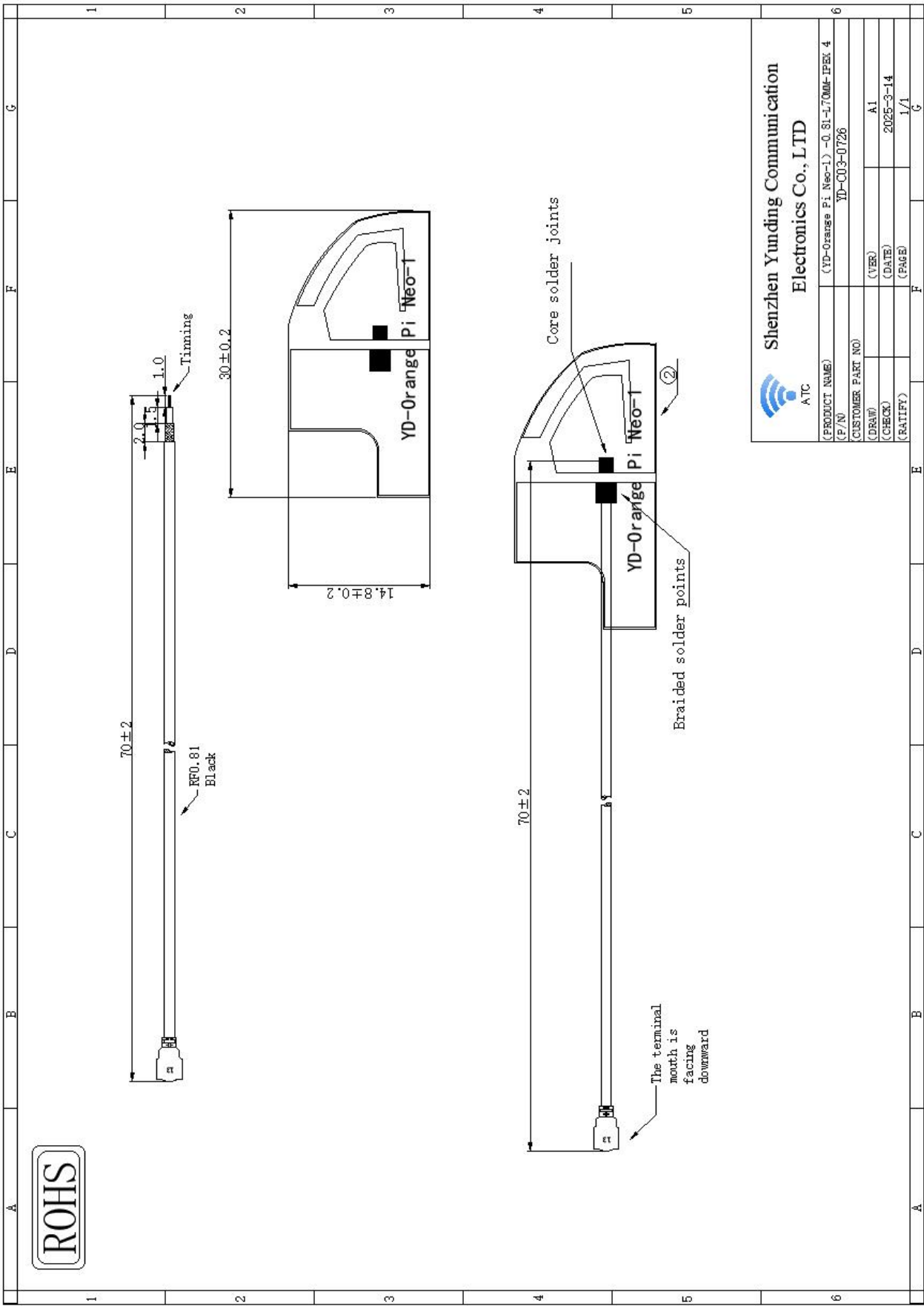
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5. Antenna structure diagram:

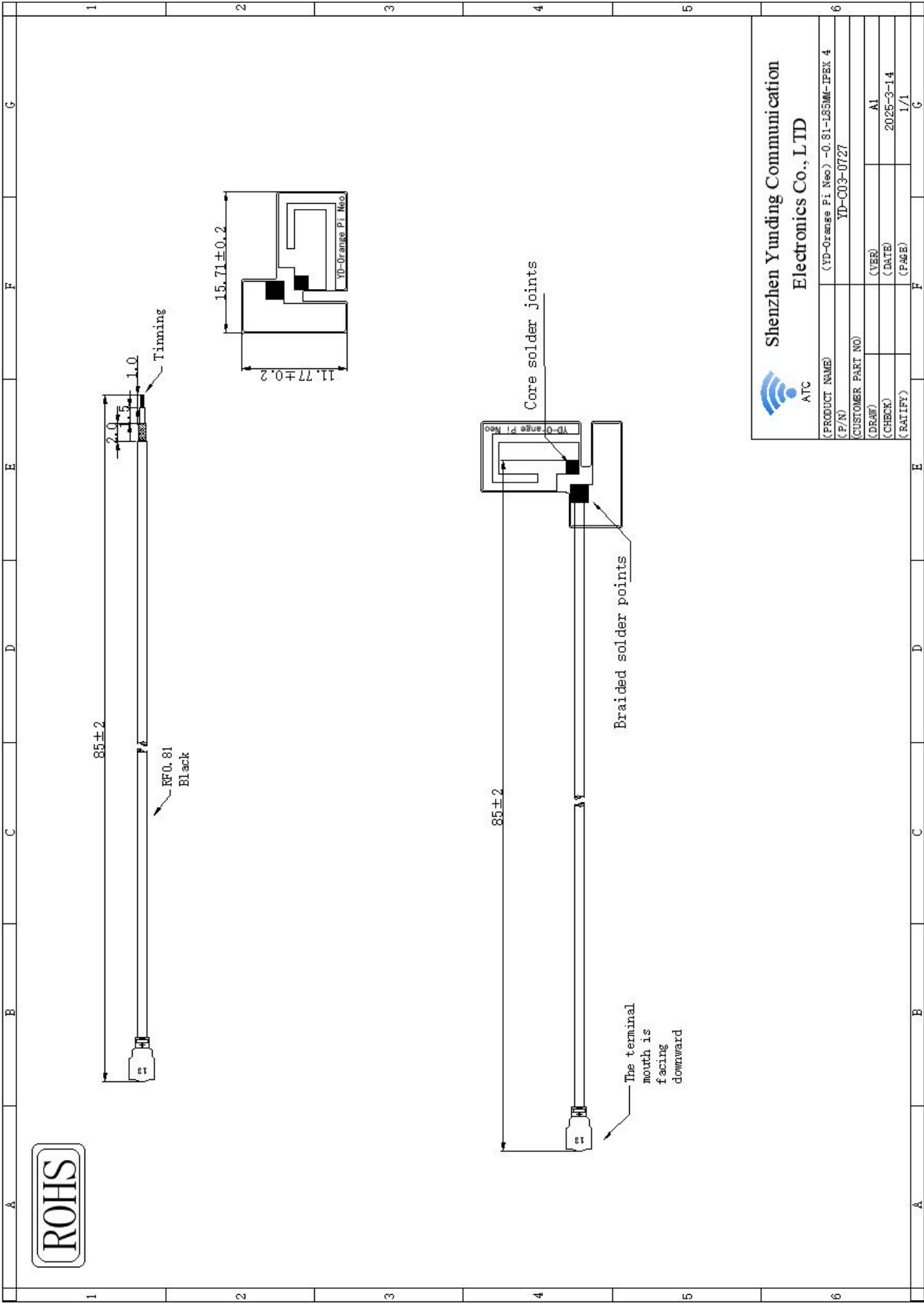


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(PRODUCT NAME)	ATC	(YD-Orange Pi Neo) -0.81-L35MM-IPX 4
(P/N)		YD-C03-0727
(CUSTOMER PART NO)		
(DRAW)	(VER)	A1
(CHECK)	(DATE)	2025-3-14
(RATIFY)	(PAGE)	1/1

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Technical parameters of electrical appliances

Electrical Specifications

Frequency Range	2400~2500/5100~7200MHz
VSWR	≤ 2.0
Input Impedance	50 Ω
Gain	3.3 DBI

Mechanical Specifications

Wire color	Black
Input connector	IPEX 4
Cable length	70/85mm
Working Temperature	-40℃~+85℃
Working Humidity	20~80%

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Environment performance test:

Project	Test condition	Test results
Storage environment	Test temperature, humidity, pressure without stated condition as follwings :1.Temperature: -30 °C ~ +80 °C ;2.Relative humidity: 45%-85%;3,Pressure: 86kpa-106kpa	Electrical and mechanical performance normal
High and low temperature test	Having 5 times cycle between -40°C to 70°C,Then in common condition 1-2 hours test exterior quality.	Measurement satisfied with electrical and mechanical performance normal.
Resistance constant hot and humid test	Relative humidity:95±3%,Test temperature: 40°C,last 2 hours ,put it after 5 min test the electrical function . Test products during common condition 1-2 hours ,Then test exterior quality.	Measurement satisfied with electrical and mechanical performance normal.
Vibration test	Vibrate Frequency:10-55HZ; Distance :0.35mm;Acceleration :50.0m/s;Sweep frequency cycle:30 times	Electrical and mechanical performance normal
Fall test	From 1 mheight fall down 3 times freely (vertical direction)	Electrical and mechanical performance normal