

有力®

深圳有力科技有限公司

Shenzhen Powerful Technology Co., Ltd.

Acknowledgement of antenna

Customer name	Shenzhen Jianyida Electronic Technology Co., Ltd.			Material name	2.4G/5G WiFi antenna
Customer item number	424-00007-0351	Material number	YL1157-A0	Material type	Solder PCB coaxial line
project	HL003	version number	V2.0	Material color	black
Sampling quantity	1PCS	date	2022-1009	Is it environmentally friendly	yes

Material description

WIFI antenna, coaxial welded PCB hard board, shared by 2.4G and 5G, IPEX-1 L=50MM wire diameter 1.13 black

Supplier confirmation

organization	compile	confirm	approve
sign			
date			

Customer confirmation

organization	manager	quality	approve
sign			
date			

Provide a name: Shenzhen Powerful Technology Co., Ltd.

Provide address: Shenzhen Nanshan District High-tech Middle Road Wanhe Medicine Park Building A

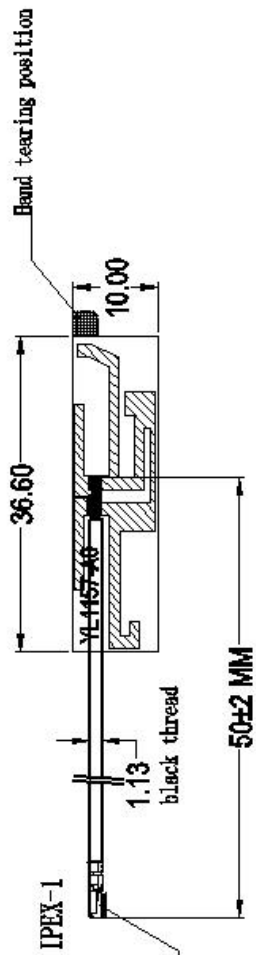
Telephone:0755-86717102

catalogue

- 1、 front cover
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Surface black oil
 Bright white characters
 Reverse adhesive

2. 4G/5G WIFI



According to the drawing,
 the terminal faces 90°

Note:

1. MATERIAL :FR4 T=0.8mm. The white line in the figure shows the outline of the copper layer, and the red line shows the shape.
2. Tolerance requirements not specified: a. Copper foil to copper foil \pm 0.05h. Copper foil to shape \pm 0.15 (special requirements)
3. Tolerance from hole to shape \pm 0.15 (\pm 0.10 for special requirements)
4. Dimension tolerance of aperture \pm 0.05e. Resistance tolerance \pm 0.30f. Shape to shape \pm 0.15 (special requirements \pm 0.1) g. Distance tolerance between punching holes \pm 0.1 h. Hole to copper foil \pm 0.15.
5. Ink: black oil characters are bright and white.
6. The surface has no crush, scratch, oil stain, spot, blackening and other defects;
7. The first batch of mold samples: 5pcs were randomly selected for full-size measurement, and the report and samples should be forwarded to the quality department;
8. Size requirements:
9. 1. SF size: the minimum measurement is the size of any 85 products selected from 500 for opt analysis;
10. 2. # Size is the key control size;
11. Any modification of materials must be approved in writing by YL Engineering Department and passed various tests of quality department;
12. Products must meet ROHS/RE/REACH standards;

Legend

■ OSP ▨ copper

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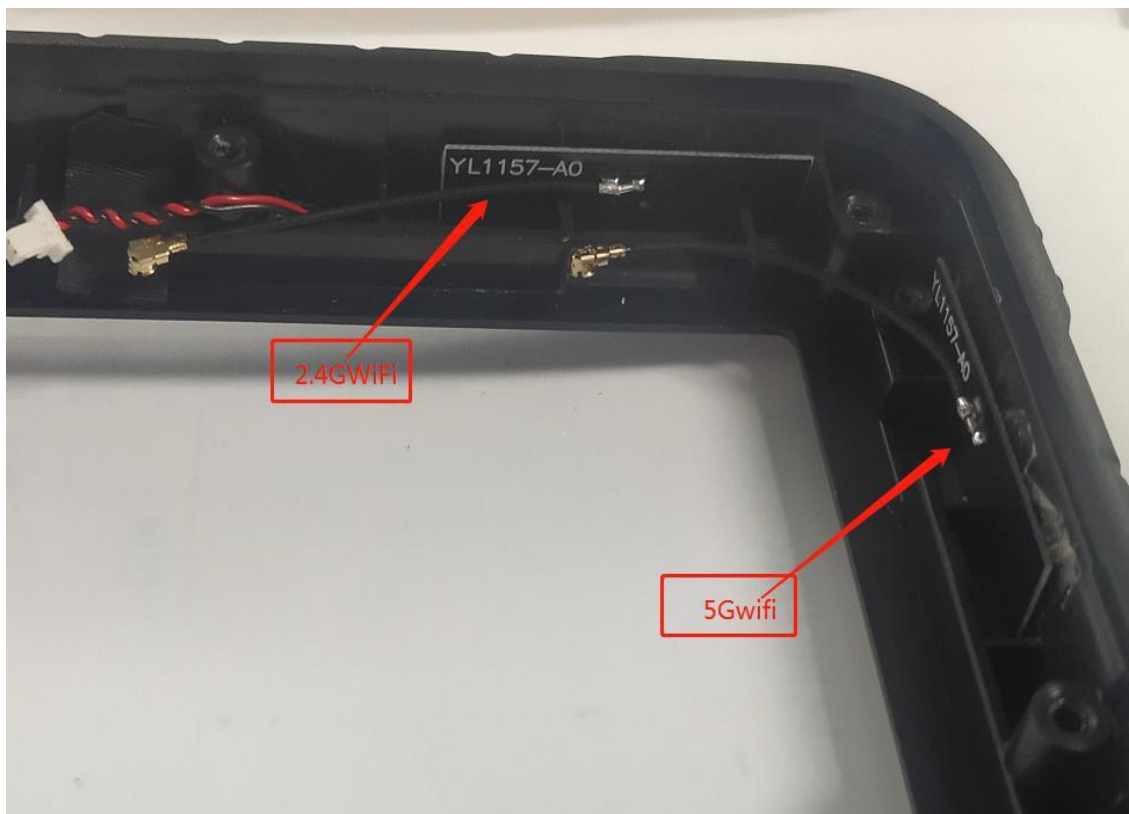
	Name:	YL1157
	Type:	2. 4/5G WIFI
	Material number:	YL1157-40
	UNIT: mm	SCALE: 1:1
	COLOUR:	A

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Description of antenna mounting position

Description:

1. The position shown in the figure below is the mounting position of YL1157 2.4G/5G WiFi antenna.



5.1 electrical performance

5.1-1 Specifications: YL1157-WiFi antenna: 2.4G/5G WiFi antenna, 1st generation RF terminal welded PCB antenna board, IPEX-I L=50MM wire diameter. 1.13.

5.2-2 Test settings:

Standing wave ratio (SWR) testing devices are connected as follows:
E5071B network analyzer → 50 ohm coaxial Cable → 150mm long copper pipe → test fixture. Treatment of test fixture: lead SMA-J connector from the 50 ohm test point of antenna on the equipment with a hard cable, connect it with the copper tube with choke coil, and then connect it with other devices in turn. .

5.2-3 Technical specifications:

频率范围 Frequency Range (MHz)	2400-2500MHz 5150-5850MHz
最大增益 Max Gain	2400-2500MHz@ MAX 3.66dBi 5150-5850MHz@ MAX 4.43dBi
驻波比 VSWR/50 Ohms	≤2.0
输入阻抗 Impedance	50 Ω
接头 Termination	1 generation terminal 1.13 black line L=50mm
Working temperature (°C)	-30~+65

5. 2-4 Test physical drawing of equipment:

Please refer to 'Antenna set up photo' for details.

5.2-5-Trp & tis test result:

2.4G TRP			
Test	Wifi 2.4G TRP		
Result	1	7	13
Frequency (MHz)	2412	2442	2472
TRP (dBm)	12.26	14.44	14.2

2.4G Tis			
Test	Wifi 2.4G TIS		
Result	1	7	13
Frequency (MHz)	2412	2442	2472
TIS (dBm)	-79.42	-78.23	-78.79

5G TRP			
Test	Wifi 5G TRP		
Result	30	64	161
Frequency (MHz)	5180	5320	5805
TRP (dBm)	16.65	8.03	12.6

5G TIS			
Test	Wifi 5G TIS		
Result	36	64	161
Frequency (MHz)	5180	5320	5805
TIS (dBm)	-88.72	-84.9	-84.72

5.2-6-Passive test results:

Passive Test For 2.4G		
Freq (MHz)	Effi (%)	Gain (dBi)
2400	72.36	3.25
2405	78.68	3.31
2410	63.32	3.2
2415	63.49	2.66
2420	64.22	3.12
2425	63.37	3.22
2430	53.01	3.14
2435	62.08	3.34
2440	65.61	3.12
2445	59.2	2.95
2450	51.91	2.73
2455	61.21	3.01
2460	63.42	3.17
2465	60.79	3.29
2470	49.54	2.5
2475	58.12	3.66
2480	63.13	2.65
2485	57.67	2.66
2490	50	2.84
2495	55.23	2.74
2500	67.43	3.3

Passive Test For 5G		
Freq (MHz)	Effi (%)	Gain (dBi)
5150	60.78	2.61
5200	64.06	3.92
5250	68.91	3.56
5300	61.54	3.81
5350	60.51	3.56
5400	50.96	2.95
5450	49.25	2.65
5500	44.27	2.92
5550	56.73	3.89
5600	60.98	3.75
5650	72.68	4.38
5700	66.06	4.33
5750	75.86	3.07
5800	71.23	4.43
5850	75.03	4.22

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Sample size test report

client	Shenzhen Jianyida Electronic Technology Co., Ltd.	product name	2.4G/5G WiFi					type				
supplier	/	Product number	YL1157-A0									
version	A0	unit	mm									
project	standard	measure					result	instrument				
		1	2	3	4	5						
1 exterior	Bad phenomenon	OK	OK	OK	OK	OK	OK	visual				
figure	★	10.00	±	0.15	10.05	10.10	10.02	10.03	10.02	OK	PM	
	★	36.60	±	0.15	36.62	36.65	36.58	36.67	36.60	OK	PM	
	★	50.00	±	2.00	50.20	50.30	50.15	50.05	50.15	OK	PM	
	The following blanks											

decide: OK NG

Brief description of appearance defects:
 A— copper leakage, B— wrinkle, C— scratch, D— color mixing, E— adhesive backing, F— color difference, G— virtual welding, H— dirt, I— hole position skew, J— flaring, K— indentation, L— deformation, L— shrinkage, N— broken foot, O— white top, P— corrosion, Q— poor electroplating, R— no bump. Testing instrument abbreviation: PG—plug (round hole) gauge, RG—R gauge, SG—block gauge, LG—ring gauge DC—digital caliper PM—secondary coordinate projector version: A.0.

Inspection: Zhao Xuanxuan

Audit: Qiu Xing

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Shenzhen Powerful Technology Co., Ltd.

Salt spray test

Date: August 19th, 2020

name	YL1157 2.4G/5G WiFi	Customer name	Shenzhen Jianyida Electronic Technology Co., Ltd.
supplier	Shenzhen Powerful Technology Co., Ltd.	national standard	GB/T 2423.2-2008
Sample situation	Sample quantity: 5PCS		
	Base material: FR4 black		Surface treatment: osp
Test duration	24h		
Test type:	<input checked="" type="checkbox"/> NSS	<input type="checkbox"/> ASS	<input type="checkbox"/> CASS
test condition	Salt: 5%		PH:7.0
	Temperature in the cabinet: 35°		Relative humidity: 85%
	Spray mode: <input checked="" type="checkbox"/> continuously <input type="checkbox"/> intermission		Compressed air pressure: 1kg/cm ²
	Salt spray sedimentation rate: 1-2ml/80cm ² /h		Liquid collection: 1.4ml/80cm ² /h
	Test period: 1 cycle.		Spray time: 24 h
test result	Appearance after the test: the appearance is intact and has no obvious change.		
	No peeling and corrosion on the surface.		
	Surface spraying and silk screen printing: no peeling and no bubbles.		
Description: 1. the salt spray test operation standard is in accordance with People's Republic of China (PRC) national standard GB/T2423.17-2008. 2. The judgment standard of test piece results shall be in accordance with the national standard GB/T6461-02 of People's Republic of China (PRC).			
ester/Date: Zhao Xuanxuan		Audit/Date: Qiu Xing	

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Package

General requirements:

1. State the customer name, project name and model.
2. The picture shows the inner and outer boxes, the packing method when shipping, the number of layers, the number of single layers, etc.
3. Fill in the name and quantity of packing materials in the remarks column.



1: PE self-sealing bag packs a bag of 100PCS/200pcs.



2: Put a partition at the bottom of the cartoon box first.



3: Shape of outer packing box



4. Labeling

Material number:	YL1157-WIFI	
Name:	2.4G/5.8G -WiFi	
version:	A1	
PE bag+outer box		
outside	inside	4000 PCS