

W510 Project antenna specification

Customer name: 360

Customer name: W510

Product name: W510-FPC+ coaxial line welding

Product specification: WIFI(2.4G)

Material code:

Change Content CV:

order number	edition	state	Start and end date	person liable	page number	remarks
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The Supplier acknowledges the signature that:

Responsible person / date		IQC/ date	Review / Date	Approval / Date
MD				
RF				

The Demander acknowledges the signature (please send it back after confirmation):

The demander's judgment result: ☐ qualified ☐ unqualified			
Development & Design Engineer / Date	SQE Engineer / Date	Purchasing Leader / Date	Development Manager approval / date

catalogue

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1. Overview

1.1 Scope of application

This requirement specifies the antenna technical requirements and material requirements specifications for W510 products.

This requirement applies to the W510 Antenna type selection, test, and acceptance.

1.2 Project basic information

Antenna name:	<u>W510</u>
Antenna frequency:	WIFI: 2.4G
Antenna material:	FPC+ coaxial line welding

2. Technical index requirements

2.1 Introduction of test items and equipment

inventory	test item	equipment
Active test	TRP,TIS	Integrated tester, microwave darkroom

2.2 Active Reporting

2.2.1 Test instructions

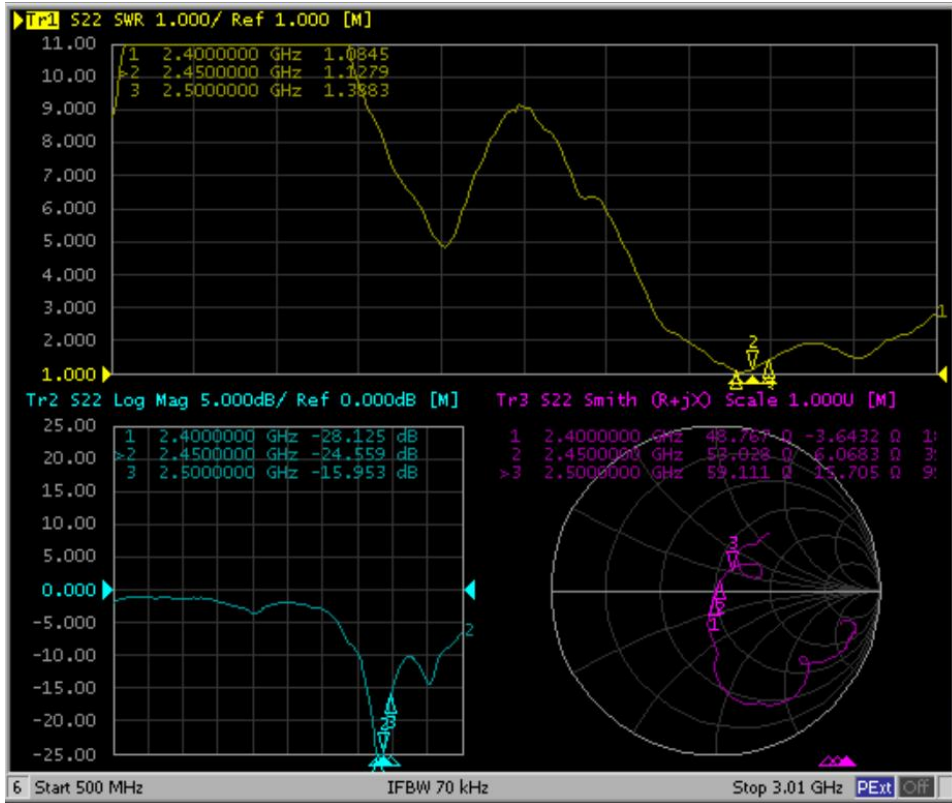
Test tools: Agilent8960 instrument, R & SCMW500, full wave far field ETS dark room, high precision positioning system and its controller and computer with automatic test program

Test environment: temperature $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$, humidity $50\% \pm 15\%$

Test method: DUT is fixed in the center of the turntable with H plane, on the same horizontal line as the center of the horn antenna.

The positioning system enables the DUT to rotate in the whole sphere to satisfy the high-precision 3 D positioning. Each RF instrument and turntable controller communicate with the PC with automatic test software through the GPIB interface.

2.2.2 Antenna passive parameters



Freq	Effi (%)	Gain (dBi)
2400.0	54.0%	1.44
2410.0	55.7%	1.57
2420.0	56.6%	1.89
2430.0	56.7%	2.19
2440.0	57.6%	2.21
2450.0	57.3%	2.15
2460.0	56.2%	2.37
2470.0	55.4%	2.23
2480.0	54.6%	2.10
2490.0	53.3%	2.11
2500.0	52.7%	1.98

2.2.3 Antenna environment rectification



3.structural drawings

1

2

3

4

5

6

DATE

Modify the content

Version

Revise

First generation terminal

Black

1.13±0.05

*2.70±0.30

*1.00±0.30

*1.30±0.30

*52±1.0

The terminal opening is facing upwards.

skills requirements:

Pt substrate:

1.0mil

Electrolytic copper:

0.5oz(OD)

Double-sided tape:

3M-9471US

2.Electroplating specifications:

QF antirust treatment;

Surface ink color:

Matt black

Printing font color:

White

Printing font height:

According to drawings

4.Reliability requirements:

1. Reliability test: salt spray test(water friction test)(alcohol resistance test)(100 grid test.
2. The front ink, the surface of the ink is required to be folded in half without cracking, scratching, etc.

5.Tolerance requirements:

1. Shape tolerance ±0.15;
2. Copper foil circuit tolerance ±0.05;
3. The position of the copper foil to the shape is ±0.15;
4. Hole-to-hole position tolerance ±0.10; hole-to-shape position tolerance ±0.15;
5. The size tolerance of gold finger is ±0.20;
6. For other unmarked dimensions, refer to 2D drawings.

6.Key control size:

The dimensions marked with numbers are regarded as important dimensions and the others refer to 2D drawings

7.Environmental requirements:

Parts meet MSL2、0PF/Reach/QP environmental protection requirements

8.Packaging requirements:

Single PCS shipment

离型纸切断线

TH0T-M510-WIFI-V0.5

*32.85±0.15

*24.98±0.15

ShenZhen Yu Sheng Communication Equipment Co.,Ltd.

ModelW510

DATE20241220

NameWIFI assembly diagram

DesignBYZ

Part NO233079-JA-TA

ReviewMDFTJW

角度±1°

confirmRf

Material qualityElectrolytic copper

UNITmmproportionFITterseR:A

4. Bill Of Material

233079 (W510) -BOM

Edition : T:A

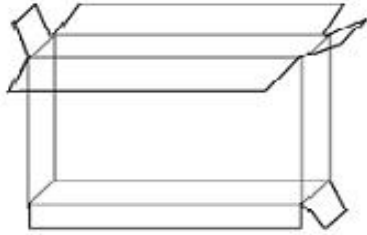
client : 233

Type of airTCft : 233079

Set a date : 2024/12/20

Item number	*Material code	*Material name	name	*Machine type	Specification and model	colour	*UNIT.	dosage	remark
1	233079-IA-TA	WIFI antenna		W510	WIFI-FPC welding coaxial line	black	PCS	1	
1.1	233079-IA-01-TA	WIFI-FPC		W510	WIFI-FPC electrolytic copper 1 half white character 32.85*24.98*0.12 mm	black	PCS	1	
1.2	233079-IA-02-TA	WIFI-CABLE		W510	Single-head first-generation terminal $\Phi 1.13 \times 52.00$ mm	black	PCS	1	
1.3	233079-IA-03-TA	Assemble		W510	weld	black	PCS	1	
1.4	233079-IA-04-TA	Test		W510	Network Analyzer Test	black	PCS	1	
verify :			examine :			manufacture : BYZ			

5. Packaging diagram

Packaging method diagram		
product name	FPC+ coaxial line welding	
P / N	233079	
Project model	<u>W510</u>	
File details	Carton Size 1: 270*260*200MM Carton Size 2: 260*200*200MM Carton Size 3: Depending on the order quantity / volume	
	Boating method	Packaging by order quantity
	Total number of binning	Packaging by order quantity
labeling requirement	Tag Size 1: Universal use 100 * 100mm Tag Size 2: According to customer requirements	
matters need attention		
1. Due to the limitation of order quantity, the packing method of each material is the size of the box according to the total quantity of the order or the physical volume		
2. Storage temperature: room temperature		
3. Preservation conditions: store them in a cool and dry place		

(This figure is only a packaging diagram, subject to the actual mass production)