



# Specifications

## Specification

client's name:

CUSTOMER:

Ruijie Networks Co., Ltd.

Customer part number:

CUSTOMER P/N:

Customer product name:

DESCRIPTION:

JieLei material number:

JL P/N:

C168-JL-6065

JieLei product name:

PART NO

NDS-2.4G-WX-21

Version:

Revision:

V1.0

approve	Review	prepared by
Frank	WenSen	GYP
2021.08.19	2021.08.19	2021.08.19

© 2020-2021 Fu Zhou Jie Lei Corporation. All rights reserved.

All content, materials, and programs in this document, including all code, text, graphics, and logos, unless otherwise noted, are the property of Jie Lei Corporation and cannot be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without the express written permission of Jie Lei Corporation.

Jie Lei Corporation may have patents or pending patent applications, trademarks, copyrights, or other intellectual property rights covering subject matter in this document.

The furnishing of this document does not give you any license to these patents, trademarks, copyrights, or other intellectual property rights except expressly provided in any written license agreement from Jie Lei.



Fuzhou JieLei Electronic Technology Co., Ltd.

Fuzhou JieLei Electronic Technology Co., Ltd.

Table of contents

1. Product Performance.....	2
2. Environmental Performance Test.....	3
3. Mechanical Dimension Drawing.....	5
4. Sample Test Report.....	6
5. QC Engineering Table.....	7
6. Packing Specification.....	8

Version description

date	Approval	version	description
_____			
_____			
_____			
_____			
2021-08-19		V1.0	<u>first version</u>



Fuzhou JieLei Electronic Technology Co., Ltd.

Fuzhou JieLei Electronic Technology Co., Ltd.

## 1. Product Performance

Electrical specifications/Electrical specifications	
Antenna type/Antenna type	2.4G antenna
Antenna number (see drawing) Frequency range (MHz)/Frequency range(MHz)	0031072 2400~2500
Voltage standing wave ratio/VSWR	≤2.0
input impedance (Ohm)/Impedance(Ohm)	50
Gain(dBi)/Peak Gain(dBi)	4.39
Mechanical specifications/Mechanical specifications	
Antenna size (mm)/Dimensions(mm)	42.2*18.8*12.0
Connector Type/Connector Type	RF generation terminal 113
Cable Type/Cable Type	1.13, L=120mm, gray
Operating Temperature (°C)/Operation Temperature(°C)	-20~65
Storage temperature (°C)/Storage Temperature(°C)	-20~85



## 2. Environmental Performance Test

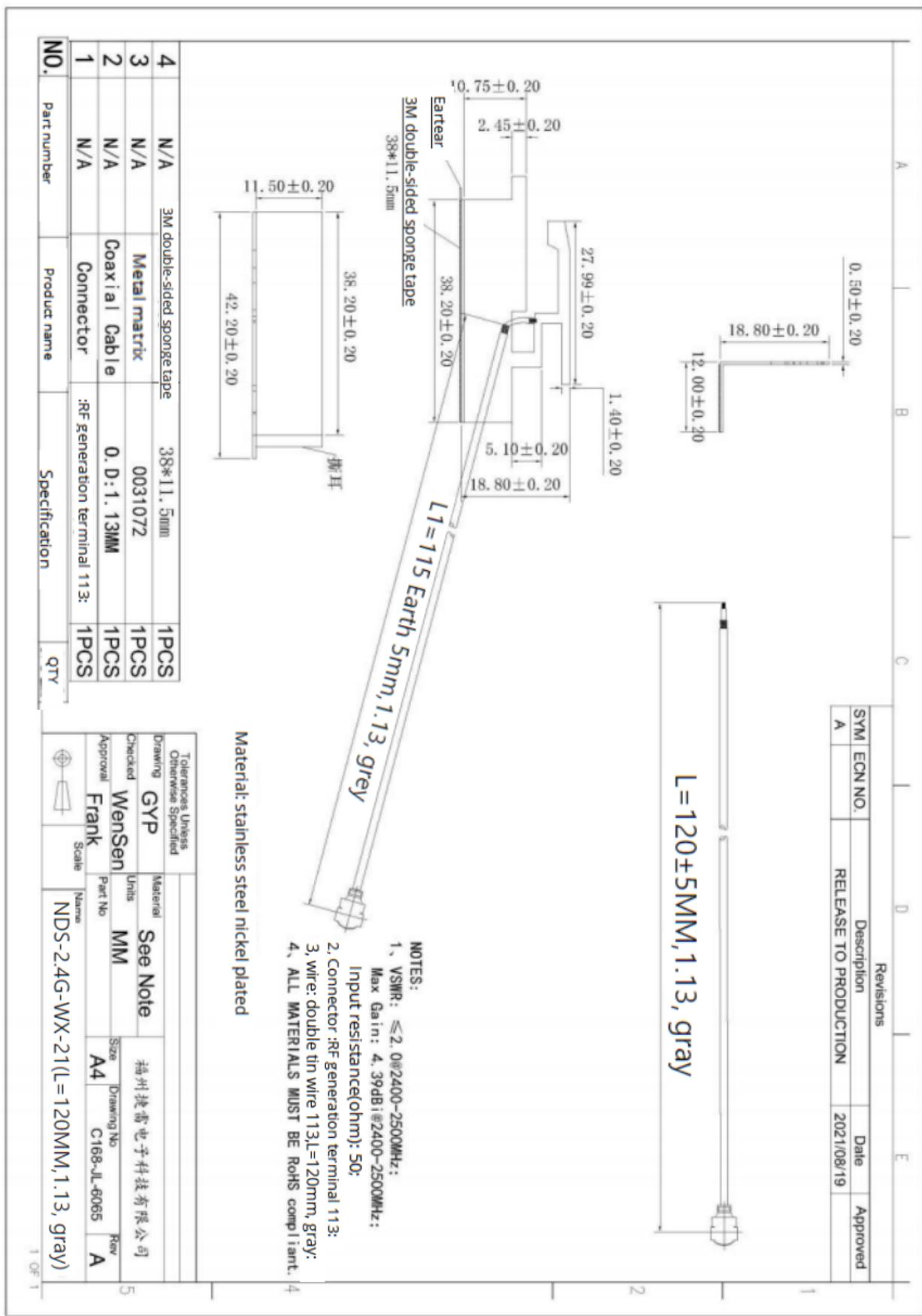
NO	Item	Test Condition	Test Condition	Specification requirements	Requirement 1.	in conclusion
1	Exterior Appearance	Visual inspection by eye Light:ÿ1.0 Lighting Lamp:200~300Lx Visual distance Space:0.3~0.6m		<p>There should be no obvious scars, dents, cracks or deformation on the surface of plastic parts that would affect use.</p> <p>Plastic part: smooth and flat surface without discolor, broken, crack distortion defects is acceptable</p> <p>2. The surface of metal parts has no obvious mechanical damage and other defects.</p> <p>Metal part: No obvious mechanical damage and other defects on the surface</p> <p>3. The surface of the circuit board (or flexible circuit board) has no dirt, damage, oxidation, no obvious mechanical damage and other defects, and the silk screen is clear.</p> <p>PCB (or FPCB): The surface is free of dirt, damage, oxidation, no obvious mechanical damage and other defects, screen printing clear.</p> <p>4. The surface of the conductors is clean and has no defects such as damage.</p> <p>Wire:clearing surface without discolor,broken defects.</p>		<p>ÿPass ÿ</p> <p>Unsatisfied/Fail ÿ</p> <p>Not applicable/NA</p>
2	Terminal fixing force /Terminal Retention Force	Fix the connector or load cell and apply the specified pulling force in the direction of the connector axis at a speed not greater than 25mm/min.				<p>ÿPass ÿ</p> <p>Unsatisfied/Fail ÿ</p> <p>Not applicable/NA</p>
3	Welding fixation force /Solder Retention Force	Apply axial pull out force at the speed rate of not more 25mm/min on the pin assembled in the housing. Refer to GB-T2423.17		12NMIN _		<p>ÿPass ÿ</p> <p>Unsatisfied/Fail ÿ</p> <p>Not applicable/NA</p>
4	Salt spray resistance test /Salt spray test	specification, 5% sodium chloride (NaCl) solution; pH value 6.5-7.2; temperature 35ÿ, test time 24H. Refer to GB-T2423.17, NACL		<p>After drying at room temperature, check the appearance. There is no obvious corrosion or other abnormal phenomena on the surface of the sample or as required by the drawing specifications.</p> <p>After drying at room temperature, check appearance, the sample surface has no obvious corrosion and other abnormal phenomena or</p>		<p>ÿPass ÿ</p> <p>Unsatisfied/Fail ÿ</p> <p>Not applicable/NA</p>



		solution with 5% concentration, pH 6.5-7.2, temperature 35 °, test time <b>24</b> hours.	according to the drawing specifications.	
5	High temperature test /High temperature test	Refer to GB-T2423.2 specification, temperature 70 °, test time <b>28</b> hours. Refer to GB-T2423.2, the temperature is 70 ° and the time is <b>28</b> hours.	After drying at room temperature, check the appearance to see if the sample has no deformation. Peeling, cracks, wrinkles, discoloration, fish scales. After drying at room temperature, check appearance, samples without deformation, stripping, cracks, wrinkles, different color, fish scale lines.	ÿPass ÿUnqualified/Fail ÿNot applicable/NA
6	Low temperature test /Low temperature test	Refer to GB-T2423.1 specification, temperature -40 °, test time <b>28</b> hours. Refer to GB-T2423.1, the temperature is -40 ° for <b>28</b> hours.	After drying at room temperature, check the appearance to see if the sample has no deformation. Peeling, cracks, wrinkles, discoloration, fish scales. After drying at room temperature, check appearance, samples without deformation, stripping, cracks, wrinkles, different color, fish scale lines.	ÿPass ÿUnqualified/Fail ÿNot applicable/NA
7	High temperature and high humidity measurement Try/High temperature and high humidity test	Refer to GB-T2423.3 specification, temperature 70 °, humidity 95%, test time <b>48</b> hours. Refer to GB-T2423.3 specification, temperature 70 °, humidity 95%, time 48H.	After drying at room temperature, check the appearance to see if the sample has no deformation. Peeling, cracks, wrinkles, discoloration, fish scales. After drying at room temperature, check appearance, samples without deformation, stripping, cracks, wrinkles, different color, fish scale lines.	ÿPass ÿUnqualified/Fail ÿNot applicable/NA
8	Temperature shock test try /Temperature shock test	Refer to GB-T2423.3 specification, temperature -30 °, 1 hour, temperature 75 °, 1 hour, <b>22</b> cycles in total. Refer to GB-T2423.3 specification, temperature -30 °, 1 hour, temperature 75 °, 1 hour, total <b>22</b> cycles.	After drying at room temperature, check the appearance to see if the sample has no deformation. Peeling, cracks, wrinkles, discoloration, fish scales. After drying at room temperature, check appearance, samples without deformation, stripping, cracks, wrinkles, different color, fish scale lines.	ÿPass ÿUnqualified/Fail ÿNot applicable/NA
9	Drop test /Drop test	One corner, three sides, six sides 1M high altitude Free fall. One corner, three edges, six sides, free fall at an altitude of 1M.	The electrical and mechanical properties are normal. Electrical and mechanical properties are normal.	ÿPass ÿUnqualified/Fail ÿNot applicable/NA
10	Simulated transportation vibration move	Tested according to ISTA standards. Testing according to ISTA standards	The electrical and mechanical properties are normal. Electrical and mechanical properties are normal.	ÿPass ÿUnqualified/Fail ÿNot applicable/NA



### 3. Mechanical Dimension Drawing

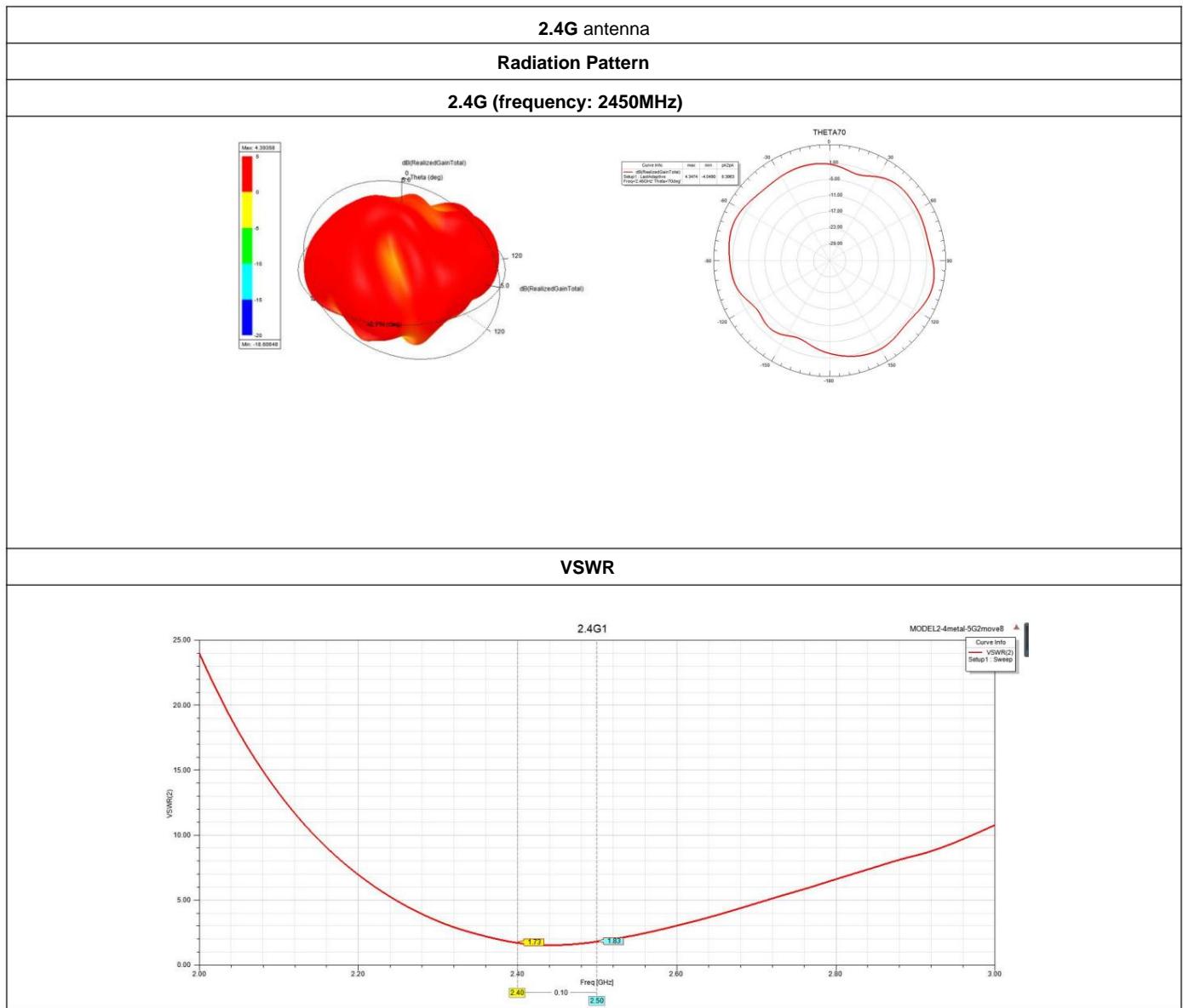




Fuzhou Jielei Electronic Technology Co., Ltd.

Fuzhou JieLei Electronic Technology Co.,Ltd.

## 4. Sample Test Report





## 5.QC Engineering Table

Control type	Process flow	equipment	Focus of control		method			Person in charge	Control record	Exception handling
			NO	peculiarity	Specification requirement	Inspection method	Sampling plan			
Incoming material	Material reception		1	Incoming material inspection	Coming material check specification	According to inspection requirements	GBT2828.1-2003	Each batch of incoming materials	OQC	Incoming material inspection report
			2	specimen	According to product drawing	Test tool	On request	In necessity	ENGINEERING	Come to the department for trial production
	Material storage		3	Material storage	Warehouse Management System				Warehouse keeper	Incoming materials registration form
Forming process	Cut line	Wire cutting machine	4	Wire diameter, length, color	Refer to SOP	Visual measurement, scale weight	First piece	Progressive tense	LEADS	Production line self-inspection
							inspection		IPQC	IPQC Inspection records
	Wire stripping	Threading machine	5	Stripping dimension	Refer to SOP	Weight scale	First piece	Progressive tense	LEADS	Equipment point check list
							inspection		IPQC	IPQC Inspection records
	Kamitin	tin-pot	6	Tinning position, effect, tin furnace temperature	Refer to SOP	Visual, temperature meter	First piece	Progressive tense	LEADS	Tin furnace temperature point check table
							inspection		IPQC	IPQC Inspection records
	End cutting	Terminal machine	7	Shape appearance, tension	Refer to SOP, generation end tension<=12N, third generation end tension<=8N	Visual, tension meter	First piece	Each batch	LEADS	Terminal tension recording
							inspection		IPQC	IPQC Inspection records
	weld	Welding stand	8	Welding effect, temperature	The welding position is correct, uniform and full, no pull point, no false welding. Temperature parameter SOP	Visual, tension meter	100%	self-inspection	operator	Spot check of welding station temperature
							inspection		IPQC	IPQC Inspection records
	Sticking auxiliary material		9	Copper, aluminum foil, conductive cloth, glue	Stick position correct, firm, size reference BZSOP	Visual inspection	100%	self-inspection	operator	Production line self-inspection
							inspection		IPQC	IPQC Inspection records
inspect	Electrical testing	Net division	10	S11、VSR	Refer to SOP	Mesh detection	100%	self-inspection	operator	Equipment point check list
	Look at the appearance		11	Appearance, dimension and length of finished product	Refer to SOP	Visual measurement, ruler measurement	100%	self-inspection	operator	Production line self-inspection
Package and ship	package	Sealing machine, binding	12	Packaging bag, label, foam, outer box	Refer to SOP	Visual inspection, weighing	100%	self-inspection	operator	Production line self-inspection
							inspection		IPQC	IPQC Inspection records
	Outgoing inspection	Correlative instrument	13	Electrical performance, appearance, packaging	Outgoing inspection specification	According to shipment inspection requirements	GBT2828.1-2003	Each batch	OQC	Production line self-inspection
	Deliver goods		14	Shipping, express bill	Safe, smooth, record			Each batch	shipment	



Fuzhou JieLei Electronic Technology Co., Ltd.

Fuzhou JieLei Electronic Technology Co., Ltd.

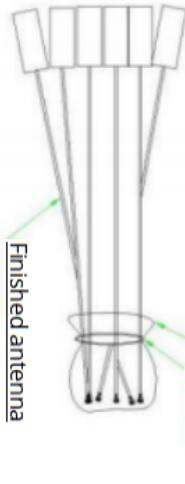
## 6. Packing Specification

### Packing method reference

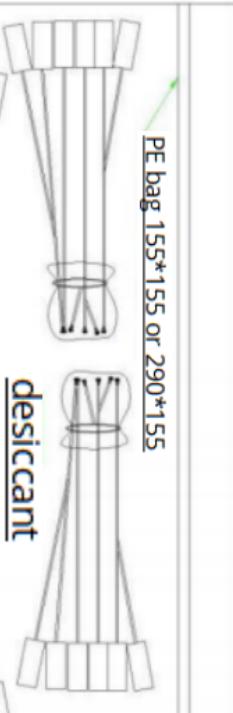
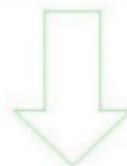
SYM	ECN NO.	Revisions	Date	Approved
A		Newly established	2020/09/09	

Newly established

2020/09/09



Arrange the terminals neatly, wrap them with pearl cotton, and secure them with rubber bands.



The finished product and 1PCS desiccant are packed into 1 small PE bag and sealed by the sealer.

Finished product

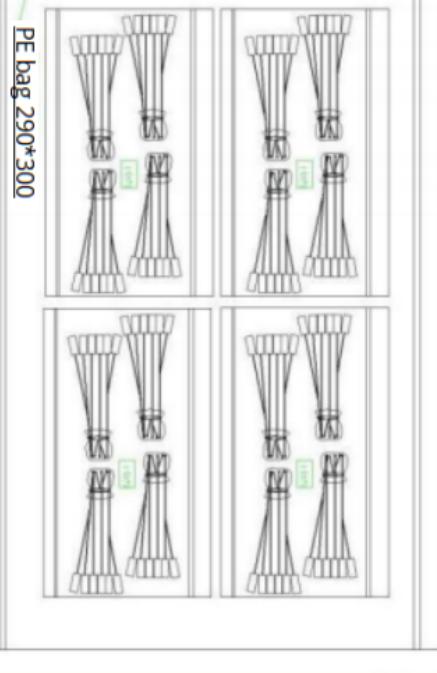
### Note:

#### Technical requirements:

1. The quantity must be weighed and confirmed to avoid short packing.
2. The short line can be wrapped with the same piece of pearl cotton.
3. Seal the PE bag mouth tightly.
4. The first piece needs to be confirmed by the team leader, and the operator is trained to work.

A large PE bag is put into 5 or 10 small PE bags (according to the size of the finished product, and the PE bag is full), neatly discharged, and sealed by the sealing machine.

PE bag 290\*300



Tolerances Unless Otherwise Specified		Material	See Note	福州捷雷电子科技有限公司			
Drawing	Liya						
Checked	WenSen	Units	MM				
Approval	Frank	Part No	A4	Scale	Name	WIFI antenna packaging specification	5