规 格 书

Specification

客户名称：
CUSTOMER：

客户料号：
CUSTOMER P/N:

客户品名：
DESCRIPTION：

捷雷料号：
JL P/N: C168-JL-6272

捷雷品名：
PART NO: NDS-WIFI 双频天线_ANT2

版 本：
Revision: V1.1

核准	审核	编制
Frank	Wensen	Lyra
2023.03.29	2023.03.29	2023.03.29

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版本描述

日期	批准	版本	描述
2023-03-29		V1.1	补充客户料号、双面胶资料、UL 资料等
2023-02-16		V1.0	初版

1. Product Performance

电性能指标/Electrical specifications	
天线类型/Antenna type	WIFI 双频天线
天线编号（见图纸）	0011020 V1.2
频率范围(MHz)/Frequency range(MHz)	2400~2500 5150~5850
电压驻波比/VSWR	2.0@2400-2500MHz 2.0@5150~5850MHz
输入阻抗 (Ohm)/Impedance(Ohm)	50
增益(dBi)/Peak Gain(dBi)	3.98@2400-2500MHz 6.36@5150~5850MHz
机械指标/Mechanical specifications	
天线尺寸（mm）/Dimensions(mm)	29.93*9.3*1.0
连接器类型/Connector Type	RF 一代端子接 1.13
电缆类型/Cable Type	1.13，L=34mm，黑色
工作温度（℃）/Operation Temperature（℃）	-40~85
存储温度（℃）/Storage Temperature（℃）	-40~85

2. Environmental Performance Test

NO	项目 Item	测试条件 Test Condition	规格要求 Requirement	结论
1	外观 Appearance	目测 Visual by eye 视力 Light:＞1.0 照明 Lamp:200~300Lx 目测距离 Space:0.3~0.6m	1、塑胶件表面无明显疤痕、凹陷、开裂及影响使用变形。 Plastic part:smooth and flat surface without discolor,broken,crack distortion defects is acceptable 2、金属件表面无明显机械损伤等缺陷。 Metal part:No obvious mechanical damage and other defects on the surface 3、线路板(或柔性线路板）表面无脏污、破损、氧化、无明显的机械损伤等缺陷，丝印清晰。 PCB (or FPCB) ： The surface is free of dirt, damage, oxidation, no obvious mechanical damage and other defects, screen printing clear. 4、导线表面清洁、无破损等缺陷。 Wire:clearing surface without discolor,broken defects.	☑合格/Pass ☐不合格/Fail ☐不适用/NA
2	端子固定力/Terminal Retention Force	固定连接器或测力计，在连接器轴线方向施加规定的拉力，速度不大于 25mm/min。 Apply axial pull out force at the speed rate of not more 25mm/min on the pin assembled in the housing.	12N MIN	☑合格/Pass ☐不合格/Fail ☐不适用/NA
3	焊接固定力/Solder Retention Force	固定连接器或测力计，在连接器轴线方向施加规定的拉力，速度不大于 25mm/min。 Apply axial pull out force at the speed rate of not more 25mm/min on the pin assembled in the housing.	15N MIN	☑合格/Pass ☐不合格/Fail ☐不适用/NA
4	耐盐雾测试/Salt spray test	参考 GB-T2423.17 规范，浓度 5%之氯化钠(NaCl)溶液；PH 值 6.5-7.2；温度 35℃，测试时间 24H。 Refer to GB-T2423.17, NACL	静置常温干燥后，检查外观，样品表面无明显腐蚀等异常现象或依图面规格需求。 After drying at room temperature, check appearance, the sample surface no obvious corrosion and other abnormal phenomena or	☑合格/Pass ☐不合格/Fail ☐不适用/NA

		solution with 5% concentration, PH 6.5-7.2, temperature 35 ℃, test time 24 hours.	according to the drawing specifications.	
5	高温测试/High temperature test	参考 GB-T2423.2 规范，温度 70℃，测试时间 28 小时。Refer to GB-T2423.2, the temperature is 70 ℃ and the time is 28 hours.	静置常温干燥后，检查外观，样品无变形、剥离、裂纹、皱纹异色、鱼鳞纹。After drying at room temperature, check appearance, samples without deformation, stripping, cracks, wrinkles, different color, fish scale lines.	☑合格/Pass ☐不合格/Fail ☐不适用/NA
6	低温测试/Low temperature test	参考 GB-T2423.1 规范，温度 -40℃，测试时间 28 小时。Refer to GB-T2423.1, the temperature is-40 ℃ for 28 hours.	静置常温干燥后，检查外观，样品无变形、剥离、裂纹、皱纹异色、鱼鳞纹。After drying at room temperature, check appearance, samples without deformation, stripping, cracks, wrinkles, different color, fish scale lines.	☑合格/Pass ☐不合格/Fail ☐不适用/NA
7	高温高湿测试/High temperature and high humidity test	参考 GB-T2423.3 规范，温度 70℃，湿度 95%，测试时间 48 小时。Refer to GB-T2423.3 specification, temperature 70℃, humidity 95% , time 48H.	静置常温干燥后，检查外观，样品无变形、剥离、裂纹、皱纹异色、鱼鳞纹。After drying at room temperature, check appearance, samples without deformation, stripping, cracks, wrinkles, different color, fish scale lines.	☑合格/Pass ☐不合格/Fail ☐不适用/NA
8	温度冲击测试/Temperature shock test	参考 GB-T2423.3 规范，温度 -30℃，1 小时，温度 75℃，1 小时，共 22 循环。Refer to GB-T2423.3 specification, temperature-30 ℃, 1 hour, temperature 75℃, 1 hour, total 22 cycles.	静置常温干燥后，检查外观，样品无变形、剥离、裂纹、皱纹异色、鱼鳞纹。After drying at room temperature, check appearance, samples without deformation, stripping, cracks, wrinkles, different color, fish scale lines.	☑合格/Pass ☐不合格/Fail ☐不适用/NA
9	跌落试验/Drop test	一角、三棱、六面 1M 高空自由跌落。One corner, three edges, six sides, free fall at an altitude of 1M.	电气机械性能正常。Electrical and mechanical properties are normal.	☑合格/Pass ☐不合格/Fail ☐不适用/NA
10	模拟运输振动	依据 ISTA 标准测试。Testing according to ISTA standards	电气机械性能正常。Electrical and mechanical properties are normal.	☑合格/Pass ☐不合格/Fail ☐不适用/NA
11	天线拉拔力/Drawing Force	PCB 天线用双面海绵胶贴在支架上，固定 PCB 或测力计，在 PCB 轴线方向施加拉力	>20N	☑合格/Pass ☐不合格/Fail ☐不适用/NA

2-1 双面海绵胶规格

样品材料图纸

备注:

品名: 3M9448HK

料号: HCXG20230531001

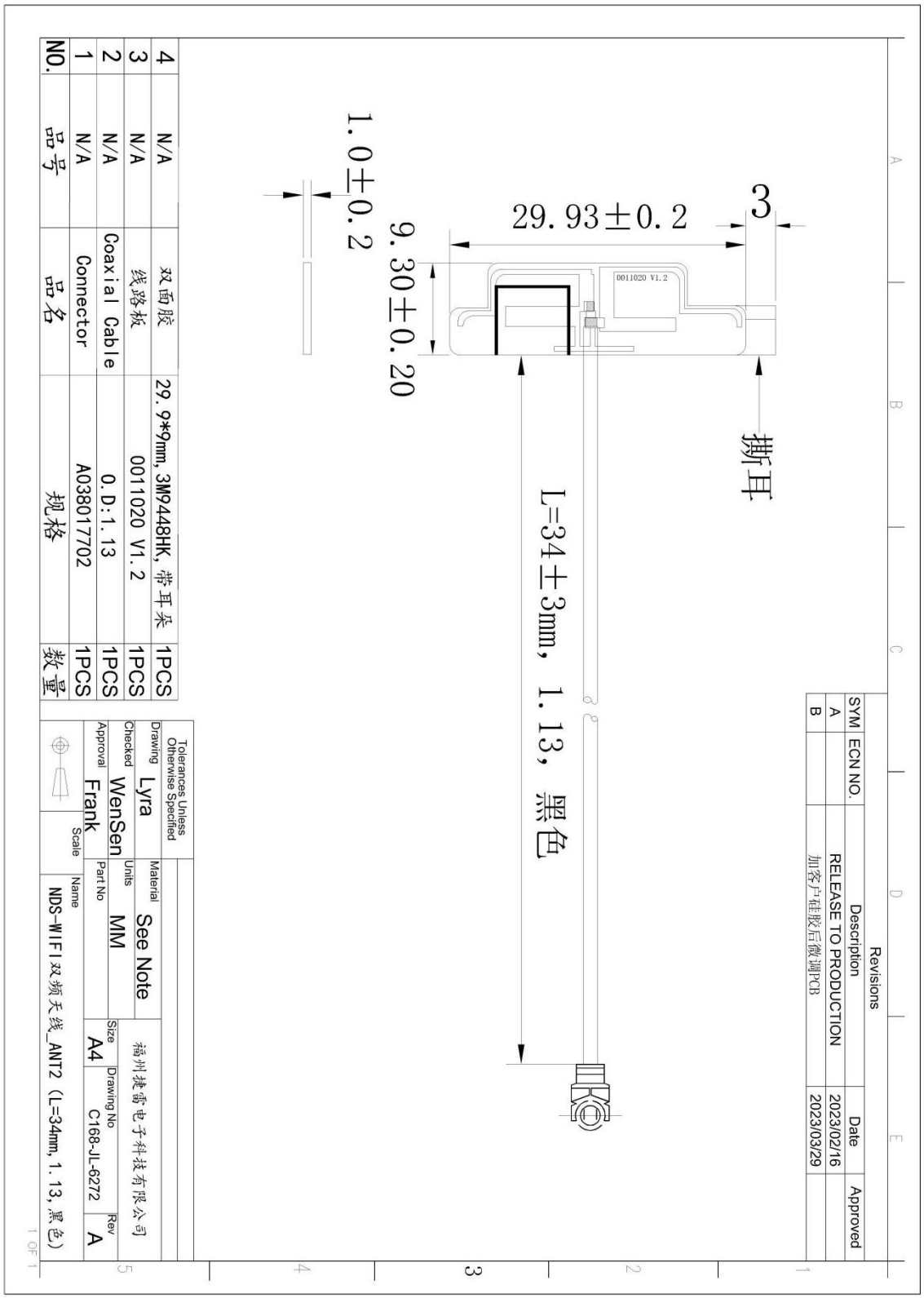
规格: 29.9*9mm

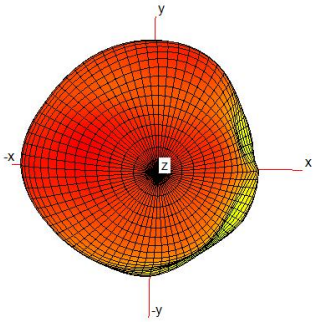
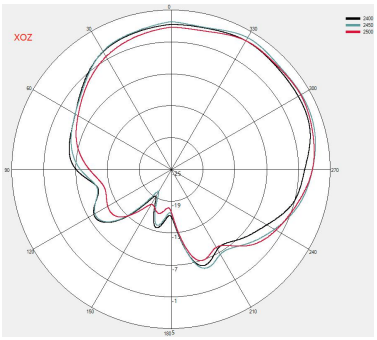
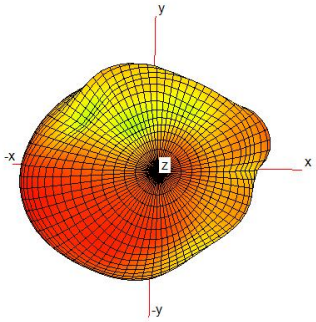
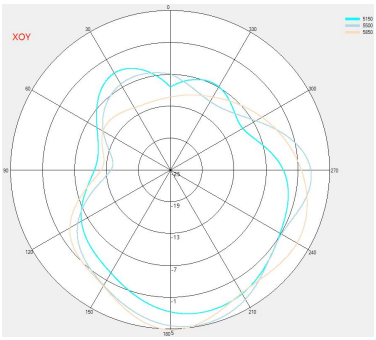
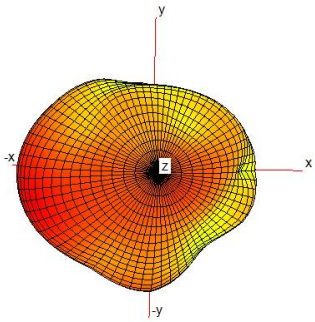
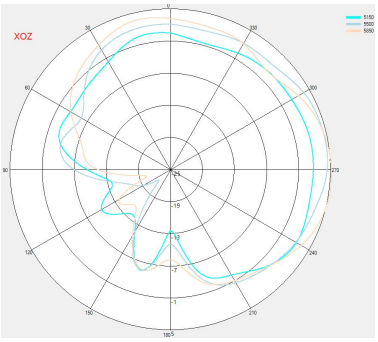
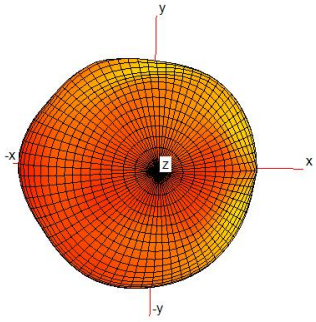
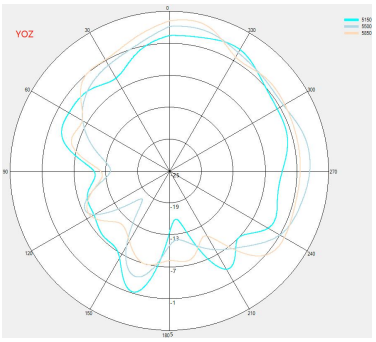
厚度: 0.15mm

材质: 3M9448HK

設　計	林连杰
审　核	洪顺发
公司簽章處	

3. Mechanical Dimension Drawing



Ant1	
Radiation Pattern	
2.4G(频率：2450MHz）	**5G（频率：5150MHz）**
 	 
5G(频率：5500MHz）	**5G（频率：5850MHz）**
 	 

4.UL

Component - Plastics

File Number: E56070

CHI MEI CORPORATION
59-1 SAN CHIA, JEN TE, TAINAN 717 TW

Wonderloy: PC-540(Y)(a)

Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS), pellets

(a) - Ball pressure temperature is in accordance with IEC 60695-10-2 Method B.
(Y) - Optional suffix; may be suffixed with one or two alphabet but except H, unconcerned with formula or constituent changed.

Flammability	Value	Test Method
Flame Rating		
0.75 mm, ALL	HB	UL 94
0.8 mm, ALL	V-2	UL 94 IEC 60695-11-10, -20
1.5 mm, ALL	V-0	UL 94 IEC 60695-11-10, -20
2.0 mm, ALL	V-0, 5VB	UL 94 IEC 60695-11-10, -20
2.5 mm, ALL	V-0, 5VA	UL 94 IEC 60695-11-10, -20
3.0 mm, ALL	V-0, 5VA	UL 94 IEC 60695-11-10, -20
0.75 mm, ALL	HB75	IEC 60695-11-10, -20
Glow Wire Flammability Index		IEC 60695-2-12
1.5 mm	960°C	
3.0 mm	960°C	
Glow Wire Ignition Temperature		IEC 60695-2-13
1.5 mm	800°C	
3.0 mm	750°C	
Electrical	**Value**	**Test Method**
Hot-wire Ignition (HWI)		UL 746
0.75 mm	PLC 3	
0.8 mm	PLC 3	
1.5 mm	PLC 3	
2.0 mm	PLC 3	
2.5 mm	PLC 3	
3.0 mm	PLC 3	
High Amp Arc Ignition (HAI)		UL 746
0.75 mm	PLC 3	
0.8 mm	PLC 3	
1.5 mm	PLC 3	
2.0 mm	PLC 3	
2.5 mm	PLC 3	
3.0 mm	PLC 2	
Comparative Tracking Index (CTI)	PLC 2	UL 746
Dielectric Strength	32 kV/mm	ASTM D149 IEC 60243-1
High Voltage Arc Tracking Rate (HVTR)	PLC 3	UL 746
Volume Resistivity	1.0E+14 ohms·cm	ASTM D257 IEC 60093

Component - Plastics
File Number: E56070

Electrical	Value	Test Method
Arc Resistance	PLC 5	ASTM D495
Thermal	**Value**	**Test Method**
RTI Elec		UL 746
0.75 mm	60.0°C	
0.8 mm	60.0°C	
1.5 mm	85.0°C	
2.0 mm	85.0°C	
2.5 mm	85.0°C	
3.0 mm	85.0°C	
RTI Imp		UL 746
0.75 mm	60.0°C	
0.8 mm	60.0°C	
1.5 mm	80.0°C	
2.0 mm	80.0°C	
2.5 mm	80.0°C	
3.0 mm	80.0°C	
RTI Str		UL 746
0.75 mm	60.0°C	
0.8 mm	60.0°C	
1.5 mm	80.0°C	
2.0 mm	80.0°C	
2.5 mm	80.0°C	
3.0 mm	80.0°C	
Ball Pressure Test (90°C, 3.00 mm)	Pass	IEC 60695-10-2
Physical	**Value**	**Test Method**
Dimensional Stability	0.0 %	ASTM D1042 ISO 2796

QMFZ2 Component - Plastics	Friday, October 24, 2003	E107536

SHINKONG SYNTHETIC FIBERS CORP
223 YEN PING RD SEC 3 PIN CHENG TAOYUAN HSIEN 324 TW

Material Designation: D201G30

Product Description: Polybutylene Terephthalate (PBT), glass reinforced, furnished as pellets.

Color	Min. Thick. (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str	IEC GWIT	IEC GWFI
ALL	0.71	HB	4	0	140	120	140	-	-
	1.5	HB	2	0	140	130	140	-	-
	3.0	HB	1	1	140	130	140	-	-

CTI: 1	**IEC CTI** (V): -	**HVTR:** 0	**D495:** 5	**IEC Ball Pressure** (°C): -

Dielectric Strength (kV/mm): 20	**Volume Resistivity** (10^9ohm-cm): 12	**Dimensional Stability** (%): 0
ISO Tensile Strength (MPa): -	**ISO Flexural Strength** (MPa): -	**ISO Heat Deflection** (°C): -
ISO Tensile Impact (kJ/m^2): -	**ISO Izod Impact** (kJ/m^2): -	**ISO Charpy Impact** (kJ/m^2): -

Report Date: 7/13/1987	Underwriters Laboratories Inc®	

UL94 small-scale test data does not pertain to building materials, furnishings and related contents. UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in components and parts of end-product devices and appliances, where the acceptability of the combination is determined by ULI.

ONLINE CERTIFICATIONS DIRECTORY

AVLV2.E318898
Appliance Wiring Material - Component

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Appliance Wiring Material - Component

See General Information for Appliance Wiring Material - Component

SHENYU COMMUNICATION TECHNOLOGY INC E318898
275 E Waihuan Rd
Jiangyin, Jiangsu 214400 CHINA

Table of Recognized Styles							
Single-conductor, thermoplastic insulation.							
1007	1333	1589	1723	1858	1901	10111	
1226	1354	1591	1726	1859	1927	10248	
1227	1371	1592	1727	1860	10005	10362	
1330	1538	1708	1766	1882	10011	10518	
1331	1571	1709	1847	1886	10064	11149	
1332	1577	1710	1857	1887	10072		
Multiple-conductor, thermoplastic insulation.							
2464	2725	20276	21100				

Marking: Company name, voltage rating, temperature rating, conductor size, conductor material if other than copper, and use.
Last Updated on 2016-06-13

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ONLINE CERTIFICATIONS DIRECTORY

ZPMV2.E320042
Wiring, Printed - Component

For enhanced search functionality, please visit UL's iQ™ Family of Databases.
Click on a product designation for complete information.

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Wiring, Printed - Component

See General Information for Wiring, Printed - Component

TOP TECH KNW ELECTRONIC CO LTD E320042
No.78 Dongning Road
Jianghai District
Jiangmen, Guangdong 529000 CHINA

	Cond Width				Max			Max			
		Min	Cond	SS/	Area	Solder		Oper		Meets	C
	Min	Edge	Thk	DS/	Diam	Limits		Temp	Flame	UL796	T
Type	mm(in)	mm(in)	mic(mil)	DSO	mm(in)	C	sec	C	Class	DSR	I
Multilayer printed wiring boards.											
KNW-2	0.1 (0.004)	0.1 (0.004)	17 (0.67) Int:68	DS	50.8 (2.0)	288	10	130	V-0	All	*
Single layer printed wiring boards.											
KNW-1	0.1 (0.004)	0.1 (0.004)	17 (0.67)	DS	50.8 (2.0)	288	10	130	V-0	All	*

* - CTI marking is optional and may be marked on the printed wiring board.

Marking: Company name or trademark KNW or file number and type designation. May be followed by a suffix to denote factory identification or burning test classification.
Last Updated on 2017-01-05

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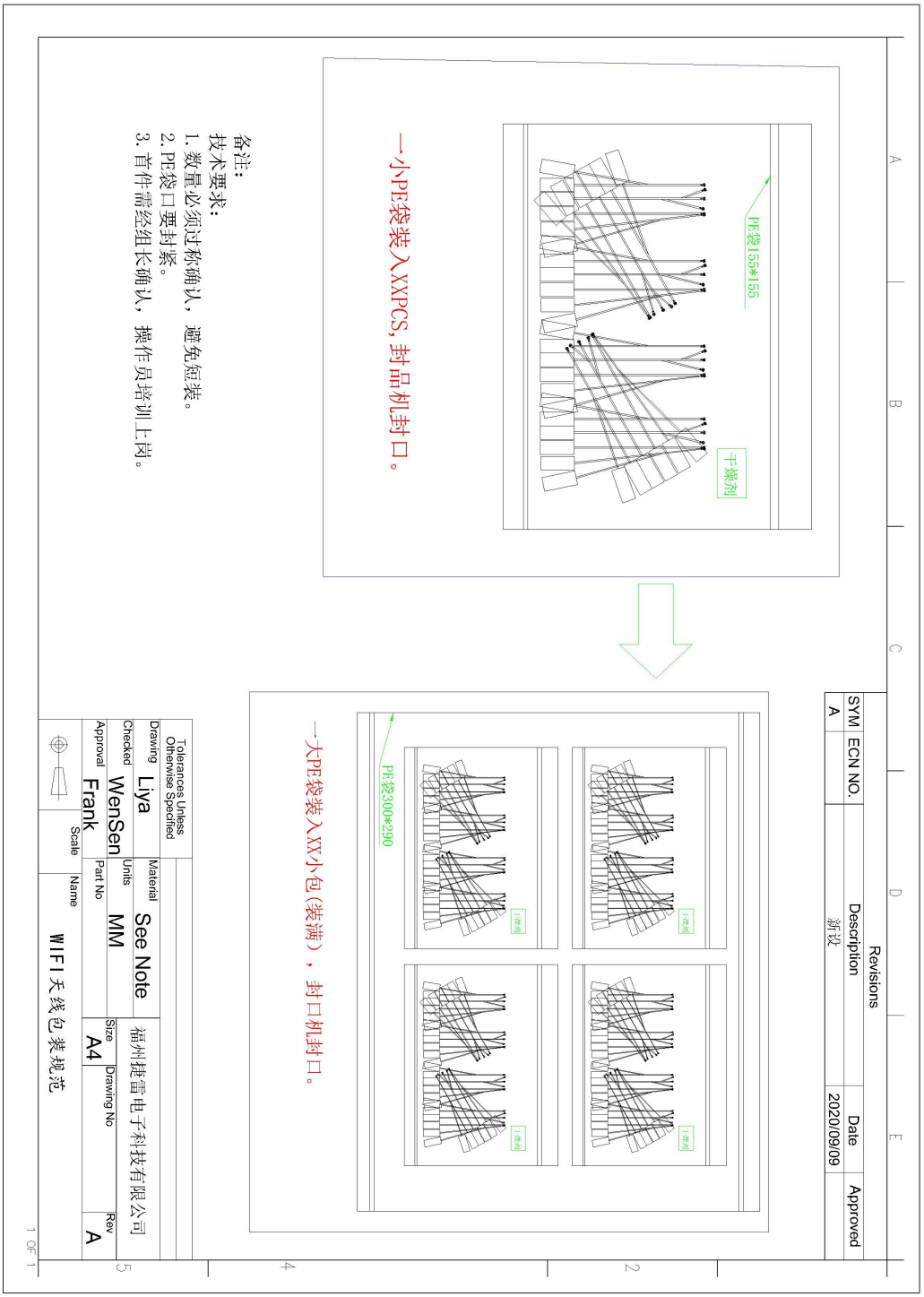
5.Packing Specification



Packing 参照图