

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



© 2020-2030 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.

目录

1. Product Performance	3
2. Environmental Performance Test	4
3. Mechanical Dimension Drawing	13
4. UL	14
5. Packing Specification	18

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 (°C) /Operation Temperature (°C)	-40~85
存储温度 (°C) /Storage Temperature (°C)	-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.	<input checked="" type="checkbox"/> 合格/Pass <input type="checkbox"/> 不合格/Fail <input type="checkbox"/> 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	<input checked="" type="checkbox"/> 合格/Pass <input type="checkbox"/> 不合格/Fail <input type="checkbox"/> 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	<input checked="" type="checkbox"/> 合格/Pass <input type="checkbox"/> 不合格/Fail <input type="checkbox"/> 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, NA CL	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	<input checked="" type="checkbox"/> 合格/Pass <input type="checkbox"/> 不合格/Fail <input type="checkbox"/> 不适用/NA

		solution with 5% concentration, PH 6.5-7.2, temperature 35 °C, 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°C, 测试时间 28 小时。 Refer to GB-T2423.2, the temperature is 70 °C 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.	<input checked="" type="checkbox"/> 合格/Pass <input type="checkbox"/> 不合格/Fail <input type="checkbox"/> 不适用/NA
6	低温测试 /Low temperature test	参考 GB-T2423.1 规范, 温度 -40°C, 测试时间 28 小时。 Refer to GB-T2423.1, the temperature is -40 °C 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.	<input checked="" type="checkbox"/> 合格/Pass <input type="checkbox"/> 不合格/Fail <input type="checkbox"/> 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°C, 湿度 95%, 测试时间 48 小时。 Refer to GB-T2423.3 specification, temperature 70°C, 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.	<input checked="" type="checkbox"/> 合格/Pass <input type="checkbox"/> 不合格/Fail <input type="checkbox"/> 不适用/NA
8	温度冲击测试 /Temperature shock test	参考 GB-T2423.3 规范, 温度 -30°C, 1 小时, 温度 75°C, 1 小时, 共 22 循环。 Refer to GB-T2423.3 specification, temperature -30 °C, 1 hour, temperature 75°C, 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.	<input checked="" type="checkbox"/> 合格/Pass <input type="checkbox"/> 不合格/Fail <input type="checkbox"/> 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.	<input checked="" type="checkbox"/> 合格/Pass <input type="checkbox"/> 不合格/Fail <input type="checkbox"/> 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.	<input checked="" type="checkbox"/> 合格/Pass <input type="checkbox"/> 不合格/Fail <input type="checkbox"/> 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	<input checked="" type="checkbox"/> 合格/Pass <input type="checkbox"/> 不合格/Fail <input type="checkbox"/> 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

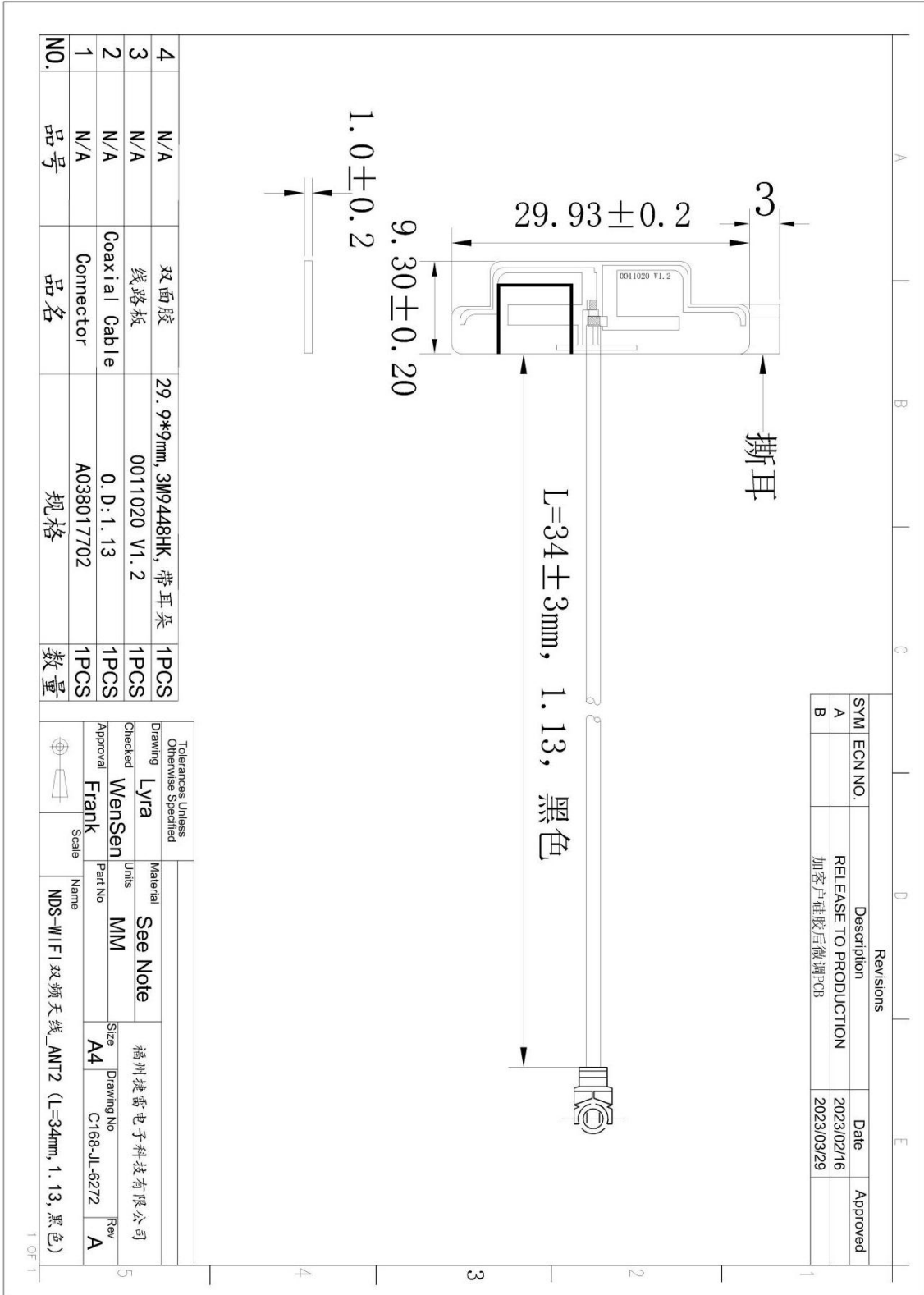
规格: 29.9*9mm

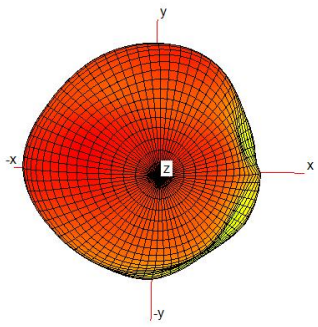
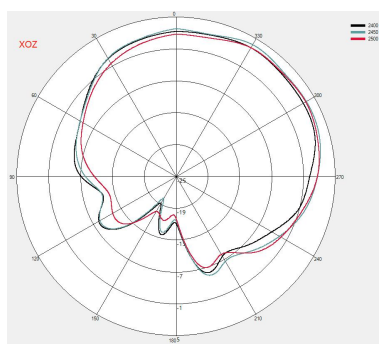
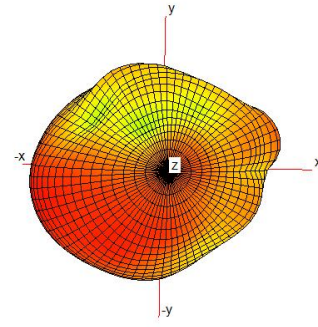
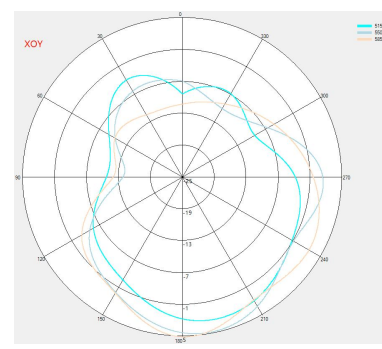
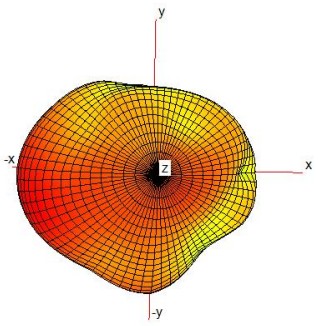
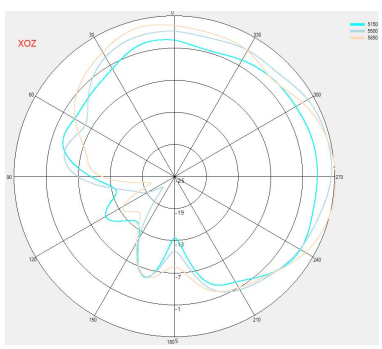
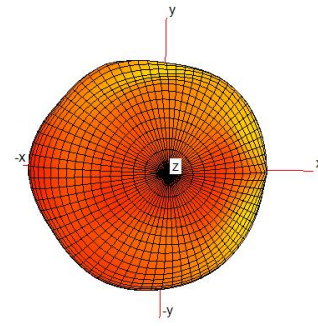
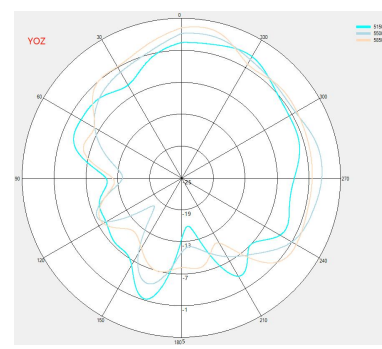
厚度: 0.15mm

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 ¹⁰ ohm-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 ULL.										



**AVLV2.E318898
 Appliance Wiring Material - Component**

[Page Bottom](#)

Appliance Wiring Material - Component

[See General Information for Appliance Wiring Material - Component](#)

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

E318898

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

[Questions?](#)

[Print this page](#)

[Terms of Use](#)

[Page Top](#)

© 2016 UL LLC

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2016 UL LLC".



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.

[Page Bottom](#)

Wiring, Printed - Component

[See General Information for Wiring, Printed - Component](#)


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

E320042

Type	Cond Width		Cond	SS/ DS/	Area Diam	Solder		Oper		Meets	C
	Min	Edge				Thk	DS/	Diam	Limits		
	mm(in)	mm(in)	mic(mil)	DSO	mm(in)	C	sec	C	Class	UL796	T
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  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

[Questions?](#)

[Print this page](#)

[Terms of Use](#)

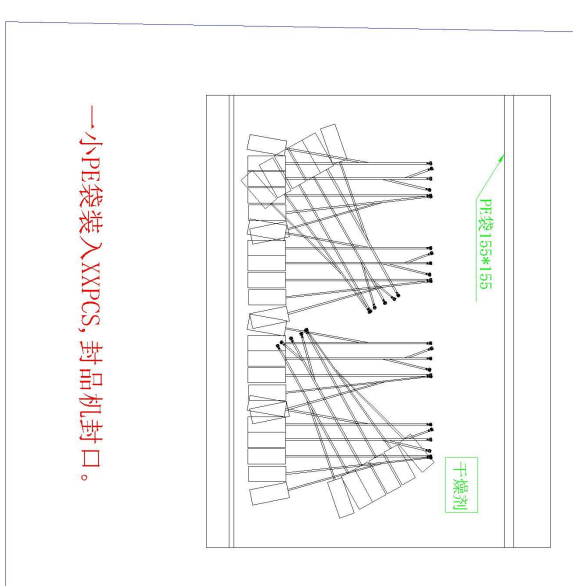
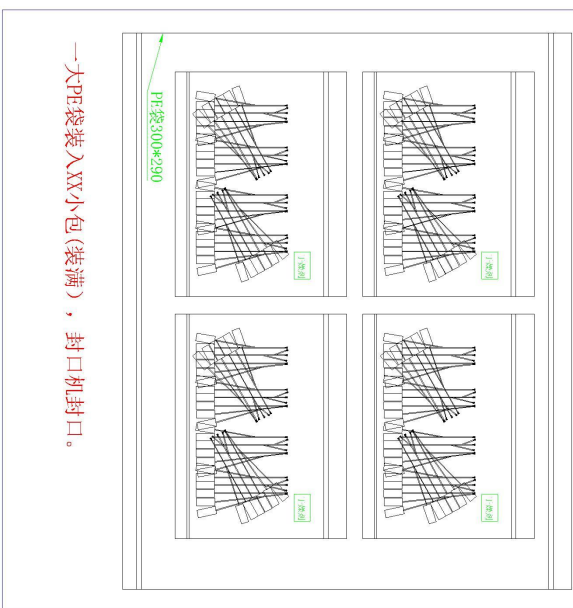
[Page Top](#)

◆ 2017 UL LLC

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2017 UL LLC".

5.Packing Specification

A	B	C	D	E																														
 <p style="color: red; font-weight: bold;">—小PE袋装入XXPCS, 封口机封口。</p>			 <p style="color: red; font-weight: bold;">—大PE袋装入XX小包 (装满)，封口机封口。</p>																															
<p>备注： 技术要求： 1. 数量必须过称确认，避免短装。 2. PE袋口要封紧。 3. 首件需经组长确认，操作员培训上岗。</p>																																		
<p style="font-size: small;">Tolerances Unless Otherwise Specified</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Drawing</td> <td colspan="2">Liya</td> <td style="width: 20%;">Material</td> <td>See Note</td> </tr> <tr> <td>Checked</td> <td colspan="2">WenSen</td> <td>Units</td> <td>福州捷雷电子科技有限公司</td> </tr> <tr> <td>Approval</td> <td colspan="2">Frank</td> <td>Part No</td> <td>MM</td> </tr> <tr> <td>Scale</td> <td colspan="2"></td> <td>Size</td> <td>A4</td> </tr> <tr> <td colspan="3"></td> <td>Drawing No</td> <td></td> </tr> <tr> <td colspan="3"></td> <td>Name</td> <td>WiFi 天线包装规范</td> </tr> </table>					Drawing	Liya		Material	See Note	Checked	WenSen		Units	福州捷雷电子科技有限公司	Approval	Frank		Part No	MM	Scale			Size	A4				Drawing No					Name	WiFi 天线包装规范
Drawing	Liya		Material	See Note																														
Checked	WenSen		Units	福州捷雷电子科技有限公司																														
Approval	Frank		Part No	MM																														
Scale			Size	A4																														
			Drawing No																															
			Name	WiFi 天线包装规范																														
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">Revisions</th> <th>Date</th> <th>Approved</th> </tr> </thead> <tbody> <tr> <td>SYM</td> <td>ECN NO.</td> <td>Description</td> <td>2020/09/09</td> <td></td> </tr> <tr> <td>A</td> <td></td> <td>新设</td> <td></td> <td></td> </tr> </tbody> </table>					Revisions			Date	Approved	SYM	ECN NO.	Description	2020/09/09		A		新设																	
Revisions			Date	Approved																														
SYM	ECN NO.	Description	2020/09/09																															
A		新设																																
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center;">1</td> <td style="width: 10%; text-align: center;">OF</td> <td style="width: 10%; text-align: center;">1</td> </tr> </table>					1	OF	1																											
1	OF	1																																



Packing 参照图