

# 深圳市亿圣邦科技有限公司

Shenzhen Yishengbang Technology Company Limited

## 零件规格承认书

Approval Specification

正式 ☒ / 条件 ☐

客户物料名称: Part Name: \_\_\_\_\_

供方物料编码: Part Name: SLK-T3010-L-XI-B

客户图号: Part Number: \_\_\_\_\_

发行日期 Issued Date: 2020-8-19

文件编号 Document NO.: YSB20200819002

核准 Approval by	审核 Check by	撰写 Prepared by
林美财	黄震	陈仕联

### 客 户 确 认

品质管理项目组 Quality Project Management Tea			
会签 Signature	核 准 Approval by	审 查 Check by	承 认 Prepared by

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## 修订履历

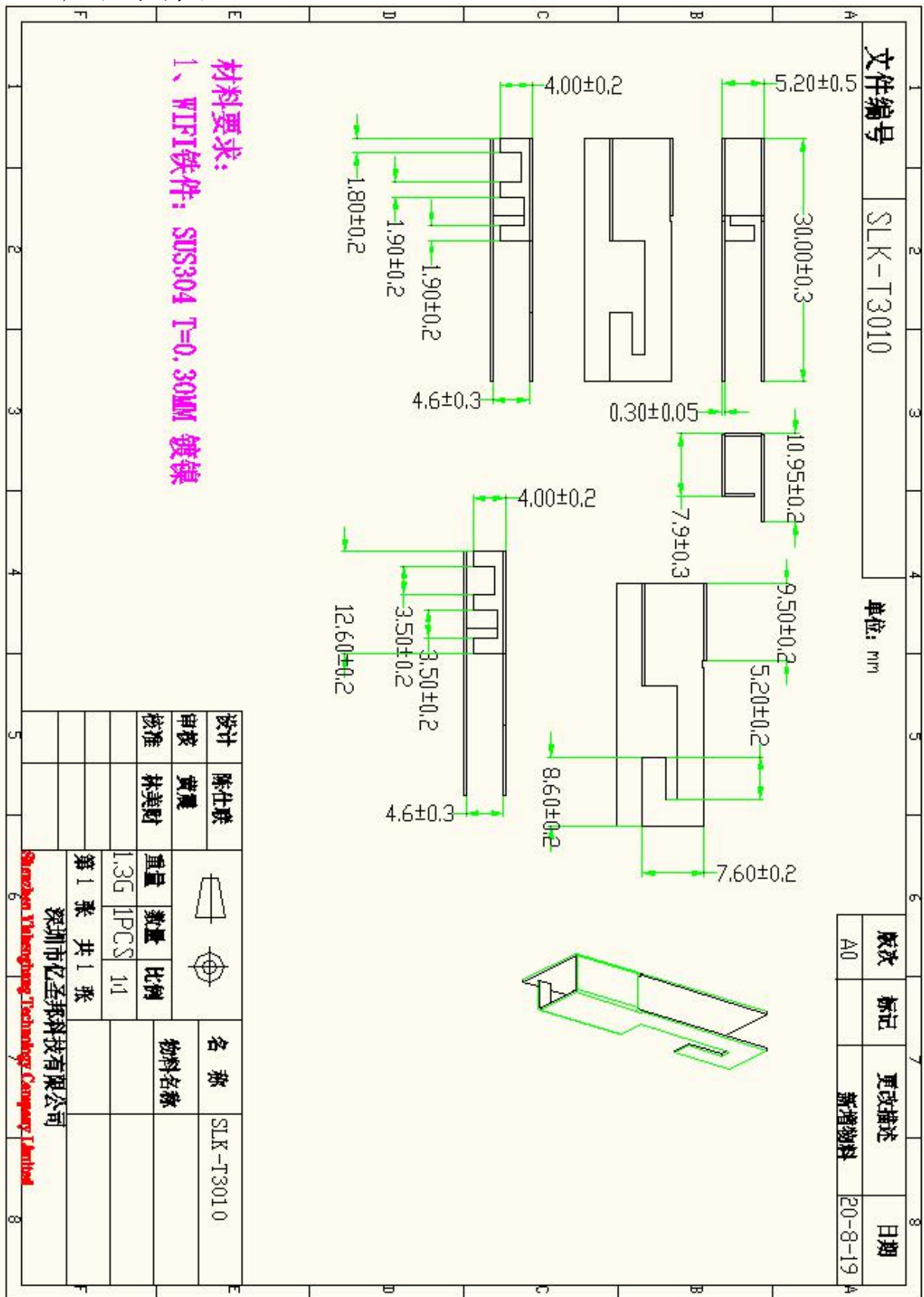
版本 REVISION	修改项次 DESCRIPTION	修改日期 DATE
A0	首次制定	2020.08.19

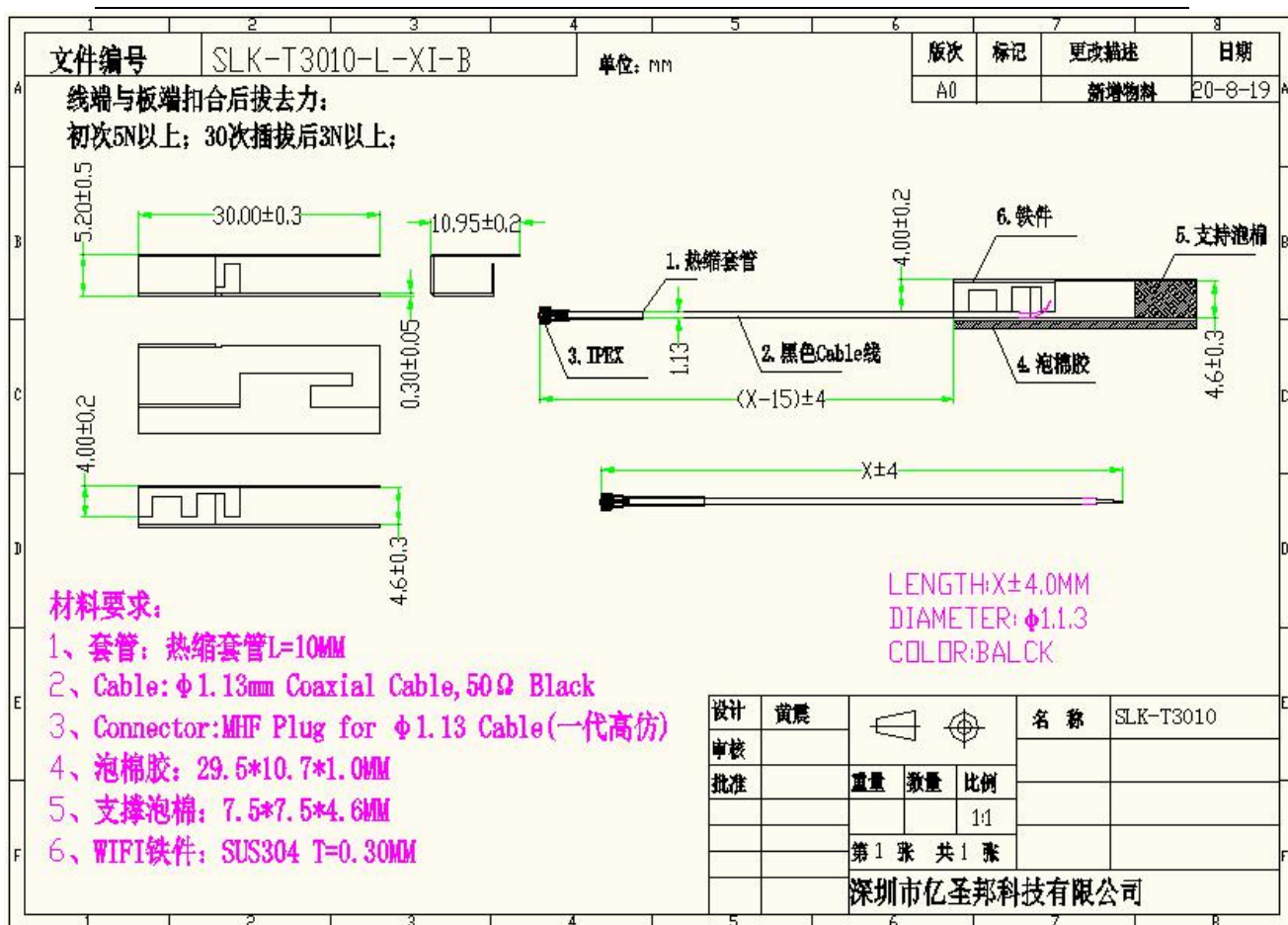
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## 4. 产品图档





## 附: 料号说明

**SLK-T3010-L-XI-B**

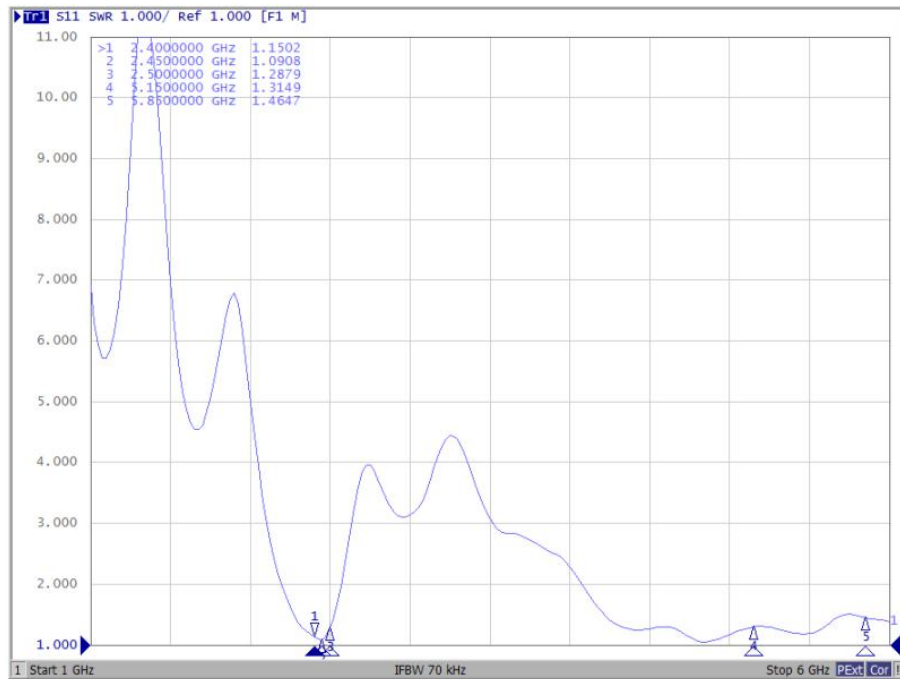
1 2 3 4

- (1) Project:  
T3010: SLK-T3010 (WIFI antenna)
- (2) Welding Position  
L: Left
- (3) Cable Length:  
XI: X\*1.13MM一代端子
- (4) Cable Color  
B: Black

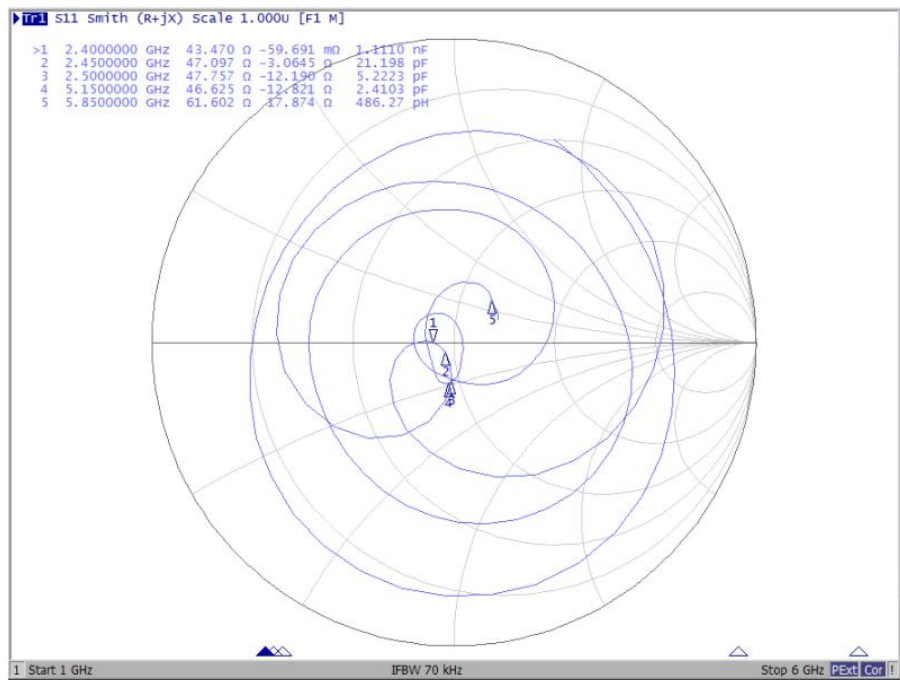
## 5.性能参数

特性	规格	单位
外形尺寸	<b>30X10.95X5.2 T=0.3</b>	<b>mm</b>
频率范围	<b>2.4-2.5/5.15-5.85</b>	<b>GHz</b>
驻波比	<b>3max</b>	
输入阻抗	<b>50</b>	<b>Ω</b>
天线类型	<b>PIFA Antenna</b>	
线损	<b>/</b>	<b>dB</b>
匹配参数	<b>N/A</b>	
线长	<b>X±4</b>	<b>MM</b>
同轴电缆	<b>黑色 1.13 线</b>	<b>MM</b>
维持力	<b>1Kg</b>	<b>Kg</b>
工作温度	<b>-30℃~65℃</b>	<b>℃</b>
存储温度	<b>-30℃~65℃</b>	<b>℃</b>

## VSWR



## Smith Chart

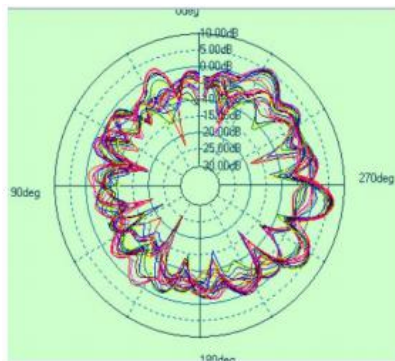


## 线损

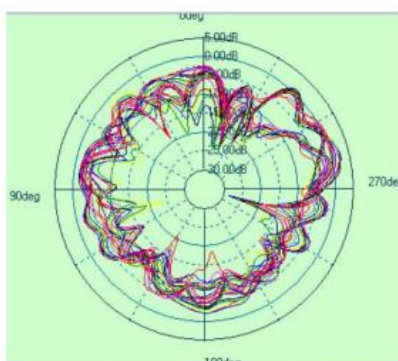
线长 (MM)	线损 (dB)	屏蔽层覆盖率
X	/	>90%

### WIFI Antenna Gain/Efficiency/3D

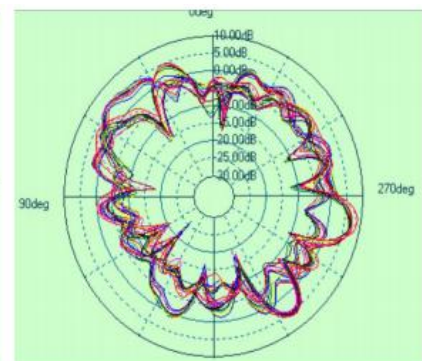
Freq. (MHz)	Peak Gain (dBi)	Effi (%)	Effi (dB)
2400	1.42	44	-3.57
2450	1.72	48	-3.19
2500	1.65	45	-3.47
5150	2.34	51	-2.92
5850	2.57	66	-1.80



Theta 90deg



Phi 0deg



Phi 90deg



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## 6.可靠性报告

### 6.1 样品重点尺寸检查

日期：2020-8-19

测试员：黄秀琴

审核：黄震

客户名称					
产品型号	SLK-T3010-L-XI-B				
序号	外观	尺寸			
		铁件长度	铁件宽度	铁件高度	Cable 线长
1	OK	30.03	10.98	5.24	X
2	OK	30.03	10.97	5.22	X
3	OK	30.02	10.95	5.23	X
4	OK	30.02	10.97	5.22	X
5	OK	30.03	10.96	5.21	X
备注：尺寸公差按图纸规范。					

## 6.2 盐雾测试

测试项目	盐雾测试																			
产品规格型号	SLK-T3010-L-XI-B	检测数量：5PCS																		
检测时间：2020-8-11		完成时间 2020-8-13																		
<b>试验/检验设备：</b> 1. HY-60D 盐雾测试仪 2. HP-8753ES 网络分析仪																				
<b>试验/检验条件：</b>  1. 盐雾箱内温度为 $35\pm 2^{\circ}\text{C}$ ；试验室温度 $22-30^{\circ}\text{C}$  2. 盐雾沉降速度经48H喷雾后每80cm <sup>2</sup> 面积上为1-2ML/h氯化钠浓度为 $50\pm 10\text{g/L}$ ，PH值为6.5/7.2																				
<b>判定标准：</b> 1. 电气测试符合标准要求：电压驻波比测试合格； 2. 金属表面镀层无氧化、剥落、裂痕、分离等不良；非金属部分无变色、变形、脱胶、开裂等不良																				
<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>样品编号</th> <th>评价等级</th> <th>不良描述</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>合格</td> <td>无</td> </tr> <tr> <td>2</td> <td>合格</td> <td>无</td> </tr> <tr> <td>3</td> <td>合格</td> <td>无</td> </tr> <tr> <td>4</td> <td>合格</td> <td>无</td> </tr> <tr> <td>5</td> <td>合格</td> <td>无</td> </tr> </tbody> </table>			样品编号	评价等级	不良描述	1	合格	无	2	合格	无	3	合格	无	4	合格	无	5	合格	无
样品编号	评价等级	不良描述																		
1	合格	无																		
2	合格	无																		
3	合格	无																		
4	合格	无																		
5	合格	无																		
试验/检验判定： <input checked="" type="checkbox"/> 合格 <input type="checkbox"/> 不合格 <input type="checkbox"/> 不作判定																				
测试：黄顺琴 <span style="float: right;">审核：黄震</span>																				

### 6.3 恒温恒湿测试

测试项目	恒温恒湿测试																			
产品规格型号	SLK-T3010-L-XI-B	检测数量：5PCS																		
检测时间：2020-8-11		完成时间 2020-8-12																		
试验/检验设备： 1. 可编程恒温恒湿试验箱 2. HP-8753ES 网络分析仪																				
试验/检验条件：  1. 常温25℃，湿度65%环境下测试  2. +80±2℃ 85-90%RH /-30±2℃ 0%RH 2 小时一个循环 时间 24H																				
判定标准： 1. 电气测试符合标准要求：电压驻波比测试合格； 2. 金属表面镀层无氧化、剥落、裂痕、分离等不良；非金属部分无变色、变形、脱胶、开裂等不良																				
<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>样品编号</th> <th>评价等级</th> <th>不良描述</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>合格</td> <td>无</td> </tr> <tr> <td>2</td> <td>合格</td> <td>无</td> </tr> <tr> <td>3</td> <td>合格</td> <td>无</td> </tr> <tr> <td>4</td> <td>合格</td> <td>无</td> </tr> <tr> <td>5</td> <td>合格</td> <td>无</td> </tr> </tbody> </table>			样品编号	评价等级	不良描述	1	合格	无	2	合格	无	3	合格	无	4	合格	无	5	合格	无
样品编号	评价等级	不良描述																		
1	合格	无																		
2	合格	无																		
3	合格	无																		
4	合格	无																		
5	合格	无																		
试验/检验判定： <input checked="" type="checkbox"/> 合格 <input type="checkbox"/> 不合格 <input type="checkbox"/> 不作判定																				
测试：黄顺琴 <span style="float: right;">审核：黄震</span>																				

## 6.4 拉力测试

测试项目	拉力测试																						
产品规格型号	SLK-CH-T3010-L-XI-B				检测数量：5PCS																		
检测时间：2020-8-11					完成时间 2020-8-11																		
试验/检验设备： 1. 拉力测试计																							
试验/检验条件：  1. 温度：18-25℃  2. 湿度≤70%RH																							
测试结果：合格																							
<table border="1"> <tr> <td>项目 条件</td> <td colspan="5">端子与射频线缆之间的维持力≥1kgf</td> </tr> <tr> <td>测试次数</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>测试结果</td> <td>1.14</td> <td>1.3</td> <td>1.14</td> <td>1.17</td> <td>1.18</td> </tr> </table>	项目 条件	端子与射频线缆之间的维持力≥1kgf					测试次数	1	2	3	4	5	测试结果	1.14	1.3	1.14	1.17	1.18					
项目 条件	端子与射频线缆之间的维持力≥1kgf																						
测试次数	1	2	3	4	5																		
测试结果	1.14	1.3	1.14	1.17	1.18																		
试验/检验判定： <input checked="" type="checkbox"/> 合格 <input type="checkbox"/> 不合格 <input type="checkbox"/> 不作判定																							
测试：黄顺琴			审核：黄震																				



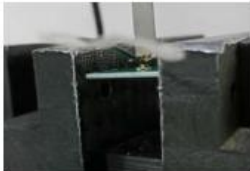

## 6.5 拔去力测试

### Test Summary

Un-mating force test (单位: N)

Project Matching mode	Result		PASS FAIL
Pullout force Initial 4N Min	DATA	Pullout force	PASS
	1	13.68	PASS
	2	13.53	PASS
	3	14.70	PASS
	4	12.59	PASS
	5	10.22	PASS
Pullout force 30 Cycles 2N Min	1	4.06	PASS
	2	3.92	PASS
	3	5.00	PASS
	4	4.46	PASS
	5	5.41	PASS

### Test Photo

Initial Pullout force		Initial Result	
30 Cycles Pullout force		30 Cycles Result	

### Testing equipment

Serial number	Name	Specification Model	Control Number	Term of validity
1	Plug-and-pull machine	1220S	CCT-NJ-006	2020/8/25


## 7.材料成分及有害物质表

编号	材料名称	描述	检测机构	认证编码	报告测试日期	状态
1	SUS304	SUS304 T=0.3	SGS	NGBML2000286708	2020-1-20	有效
2	EVA 泡棉	EVA 泡棉 硬度 38 度	SGS	CANEC2001834614	2020-1-8	有效
3	3M300 背胶	3M300 背胶	SGS	CANEC1925631402	2019-12-27	有效
4	热缩管	热缩管	SGS	CANEC1925862106	2020/1/2	有效
5	锡线	锡线	SGS	A2200029811101001	2020-3-3	有效
6	1.13 射频线	屏蔽层覆盖率>90%	SGS	XMNEC2000163404	2020-3-11	有效
7	RF 端子	镀镍层	CTI	A2190318223101001E	2019-11-30	有效
		金镀层 (厚度 $\geq 1\mu\text{m}$ )	CTI	A2190318585101001E	2019-11-30	有效
		PBT	SGS	CE/2019/82288	2019-08-21	有效
		锡磷青铜: C5191	SGS	CANEC2001588102	2020-2-28	有效

## 8. 原材料构成与说明

物料代码	SLK-T3010-L-XI-B		产品名称	WIFI 天线
序号	材料名称	规格型号	合格供应商	备注
1	射频线	1.13 黑色	金信诺/凯博/微波通/神宇	
2	端子	一代端子	科信诚/彩美/泽普	
3	EVA 泡棉胶	EVA 泡棉胶	恒富美	
4	SUS304	SUS304	宇桐	

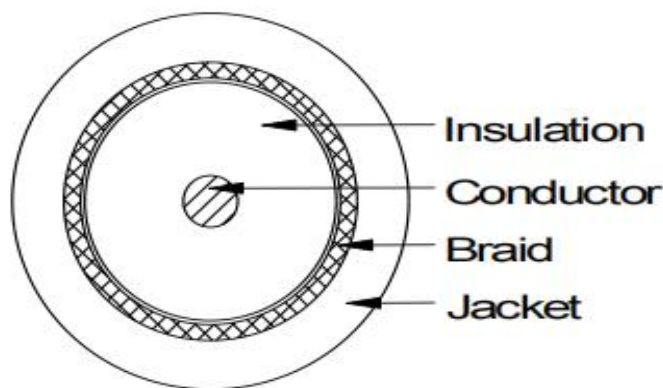
### 8.1 射频线



**金信诺**  
Kingsignal



**东莞金信诺电子有限公司**  
DONGGUAN KINGSIGNAL ELECTRONICS CO., LTD  
**CABLE SPECIFICATION(线材规格书)**

Customer			Sample No.	
Description	RF CABLE 50Ω OD:1.13 32AWG		Rev.	
	Item (项目)	Unit	Specification(规格值)	
	Awg(线规)	Awg	#32	
	No.of conductor(芯线数)	p.c	1C	
Conductor 导体	Material(材质)	---	Tinned Copper Wire (镀锡铜线)	
	Filer(填充)	---	-----	
	Construction(结构)	No./mm	7/0.08+0.003-0.001	
Insulation 绝缘	Material(材质)	---	FEP	
	Nom. Thickness(厚度)	mm	0.22	
	Diameter(线径)	mm	0.71±0.04	
	Color(颜色)	---	Nature(本色)	
Braid Shield 编织	Material(材质)	---	Tinned Copper Wire(镀锡铜线) 16/4/0.05+0.003-0.001mm	
	Coverage(遮蔽率)	%	90 ↑	
Jacket 外被	Material(材质)	---	FEP	
	Min. Thickness(厚度)	mm	0.13	
	O.D(外径)	mm	1.13±0.05	
	Color(颜色)	---	黑/白/灰	

(结构图)





 <b>金信诺</b> Kingsignal		<b>东莞金信诺电子有限公司</b> DONGGUAN KING SIGNAL ELECTRONICS CO., LTD CABLE SPECIFICATION(线材规格书)	
Customer		Sample No.	
Description	RF CABLE 50Ω OD:1.13 32AWG	Rev.	
<b>Electric Characters:</b>			
电容(pF/m) Capacitance(pF/m)	98		
速率(%) Velocity(%)	70		
阻抗(Ω) Impedance(Ω)	50±2		
驻波比 Standing wave ratio	≤1.3@0~6GHz		
最大工作电压(V) Max.operating voltage(V)	1000		
最大工作频率(GHz) Max.operating frequency(GHz)	6		
衰减(衰减) Attenuation(衰减)	频率 Frequency	标准值 Standard value 单位 Unit: dB/m	
	1.0	≤2.32	
	2.0	≤3.27	
	3.0	≤4.01	
	4.0	≤4.64	
	5.0	≤5.17	
	6.0	≤5.69	
<b>Dependability:</b>			
项目 Item	单位 Unit	标准值 Standard value	
最小弯曲半径(一次) Min.bending radius static	mm	4	
最小弯曲半径(重复) Min.bending radius repeated	mm	-	
工作温度范围 Operating temperature	℃	-55~+200	
<b>Use tips:</b>			
存储环境 Storage environment	温度：30℃以下；湿度：20%~65%		
最佳保存周期 The best save cycle	2个月；2个月以上作业性下降，如上锡效果变差,但电性能不受影响。夏季高温高湿环境开封后需尽快流转		
加工温度 Processing temperature	260℃的极限情况下，可短时间承受；300℃以上分子通常带有的等端基会分解；400℃以上发生显著的热分解		
铁氟龙收缩 Teflon Shrink	固有材料特性。绝缘：0.2mm以下；护套：0.3mm以下		
护套窜动 Jacket traverse	加工长度（护套残留长度）低于5cm易发生		
<b>包装（Packing mode）</b>	单位 Unit		
每盘长度 Packing mode	1000米		
每盘接头数 The length of each plate	≤4		
每盘最短长度 The shortest length of each root	≥50米		
			
Approved by	Reviewed by	Prepared by	
于国庆	陈福彬	陈月红	



DOCUMENT NAME: PRODUCT SPECIFICATION	SUBJECT: RF I PLUG $\Phi$ 1.13 CONNECTOR	DOCUMENT NO: SPEC-ANC-1001			
		PAGE	3 OF 12	REV	A

## 1. Scope

Micro series micro coaxial connector is a wire to board connector for RF I 1.13. coaxial cable.

## 2. Objectives

This specification covers the requirements for product performance and test methods of MHF series micro coaxial connector.

## 3. Part No., construction, material and finish

- (1) Part No. Plug: ANC\*113\*-\*\*\*, Receptacle: ANB0200\*-12\*
- (2) Construction, material and finish of the connector are covered as each drawing.

## 4. Applicable cable

4-1 Part No. ANC\*113\*-\*\*\*

### (1) Description

Inner conductor : AWG#32 (7/0.08)

Silver plating annealed copper wire or silver plating tin-copper alloy

Dielectric core: Fluoro-plastics, diameter 0.68 (+0.04, -0.02) mm, nominal thickness 0.22mm

Outer conductor: 8/5/0.05, nominal diameter 0.93mm, silver plating annealed copper wire

Jacket: Fluoro-plastics, diameter 1.13 (+0.04, -0.02) mm, nominal thickness 0.1mm

### (2) Requirements

Characteristic impedance: 50 (+2, -2) ohm by TDR method

Nominal capacitance (Reference value) : 97 pF/m

Conductor resistance of inner conductor at 293K (20°C) (Reference value) : 520 ohm/km

Insulation resistance: 1500 mega-ohm.km MIN.

Dielectric withstand voltage: no breakdown at AC 500V for 1 minutes.

DOCUMENT NAME: PRODUCT SPECIFICATION	SUBJECT: RF I PLUG Ø 1.13 CONNECTOR	DOCUMENT NO: SPEC-ANC-1001			
		PAGE	4 OF 12	REV	A

## 5. Ratings

Rated voltage	AC60Vrms
Nominal characteristic Impedance	50 ohm
Frequency	DC~6GHz
VSWR	Plug: 0.1~3GHZ 1.3Max 3~6GHZ 1.5Max Receptacle: 0.1~3GHZ 1.3Max 3~6GHZ 1.4Max
Service Temperature	233K~363K(-40℃~90℃)

## 6. Test and Performance

### Test Condition

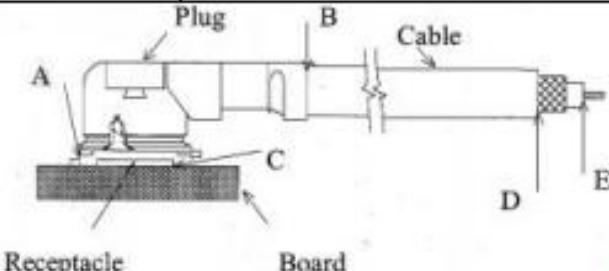
Unless otherwise specified, all tests and measurements shall be performed under the following condition in accordance with MIL-STD-202G.

Temperature ----288K~308K(15℃~35℃)

Humidity -----45~75%R.H.

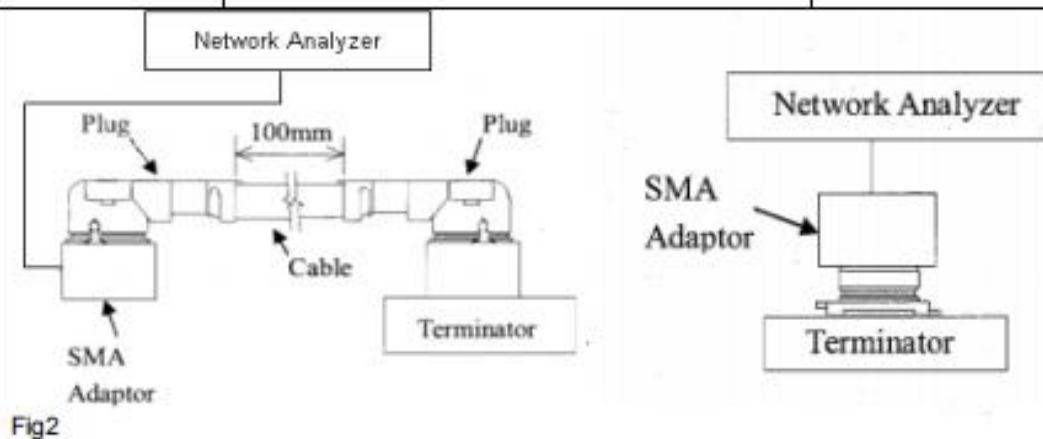
DOCUMENT NAME: PRODUCT SPECIFICATION	SUBJECT: RF I PLUG Φ 1.13 CONNECTOR	DOCUMENT NO: SPEC-ANC-1001			
		PAGE	5 OF 12	REV	A

## 6-1 Electrical Performance

NO	Item	Test conditions	Specifications
1	Contact resistance	<p>Subject the receptacle connector to the test board and mate the plug connector together, then measure the contact resistance as shown in Fig.1 by the four terminal method. Apply the low level condition in accordance with MIL-STD-202G, Method307.</p> <p>Open circuit voltage: 20mV MAX</p> <p>Circuit current voltage : 10mA MAX (DC or AC1kHz)</p> <p>Contact resistance of inner contact &lt; resistance of A-E &gt; &lt; resistance of B-E &gt;</p> <p>Contact resistance of inner contact &lt; resistance of C-D &gt; &lt; resistance of B-D &gt;</p>	<p>Contact resistance of inner contact Initial: 20 mΩ Max. After testing: 25 mΩ Max.</p> <p>Contact resistance of inner contact Initial: 10 mΩ Max. After testing: 15 mΩ Max.</p>
		 <p style="text-align: center;">Fig1</p>	
2.	Insulation Resistance	Mate the receptacle and plug connector together, and then apply DC 100V between the inner contact and the ground contact in accordance with MIL-STD-202G, Method 302.	<p>Initial :500MΩ MIN</p> <p>After testing :100 MΩ MIN</p>

DOCUMENT NAME: PRODUCT SPECIFICATION	SUBJECT: RF I PLUG $\Phi$ 1.13 CONNECTOR	DOCUMENT NO: SPEC-ANC-1001			
		PAGE	6 OF 12	REV	A

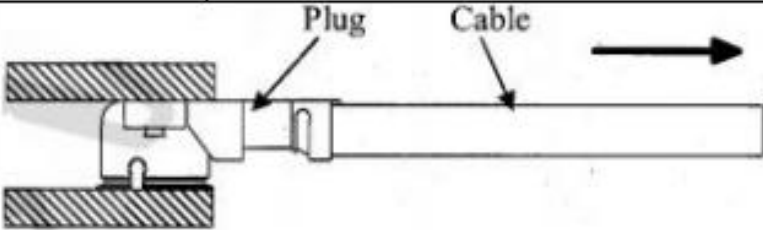
NO	Item	Test conditions	Specifications
3	Dielectric Withstanding Voltage	Mate the receptacle and plug connector together, and then apply AC 200V rms between the inner contact and the ground contact for a minute in accordance with MIL-STD-202G, Method 301.	No creeping discharge, flashover, no insulator breakdown shall occur.
4.	VSWR	Measure the VSWR as shown in Fig2 by the network analyzer. Frequency: 100M~6GHz	1.3MAX. at 0.1~3GHz 1.5MAX .at 3~6GHz





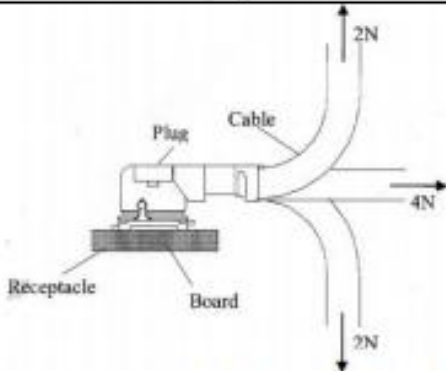
DOCUMENT NAME: PRODUCT SPECIFICATION	SUBJECT: RF I PLUG Φ 1.13 CONNECTOR	DOCUMENT NO: SPEC-ANC-1001			
		PAGE	7 OF 12	REV	A

## 6-2 Mechanical Performance

NO	Item	Test conditions	Specifications
1	Un-mating force	Un-mate the receptacle connector ( solder to the test board ) and plug at a speed $25\pm 3\text{mm/minutes}$ along the mating by the push-on / pull-off machine.	Total un-mating force Initial :4N MIN After 30 cycles:2N MIN Un-mating force of inner contact Initial :0.15N MIN After 30 cycles:0.10N MIN
2	Crimp strength	Pull the cable as shown in Fig3 at speed $25\pm 3\text{mm/minutes}$ by tensile strength machine.	10N MIN
 <p>Fig.3</p>			
3	Durability	Mate and un-mate the receptacle connector(soldered to the test board) and plug connector 30 cycles at speed $25\pm 3\text{mm/minutes}$ along the mating by the push-on / pull-off machine.	[ Appearance ] No abnormality [ Contact Resistance ] Shall meet 6.1.1

N	Item	Test conditions	Specifications
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DOCUMENT NAME: PRODUCT SPECIFICATION	SUBJECT: RF I PLUG $\Phi$ 1.13 CONNECTOR	DOCUMENT NO: SPEC-ANC-1001			
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O			
4	Contact resistance with force on the cable	<p>Apply force on the cable as shown in Fig4</p> <p>During the testing, run 100mA DC to check electrical discontinuity.</p>	<p>[ Appearance ] Looseness between the parts, chipping, breakage or other abnormality shall not occur.</p> <p>[ Electrical discontinuity ] No electrical discontinuity grater than 1<math>\mu</math>s shall occur.</p> <p>[ Contact Resistance ] Shall meet 6.1.1</p>
 <p style="text-align: center;"><b>Fig.4</b></p>			
5	Vibration	<p>Apply the following vibration to the mating connector.</p> <p>During the testing, run 100mA DC to check electrical discontinuity.</p> <p>Frequency: 10Hz → 100 Hz → 10Hz/approx 20 minutes.</p> <p>Half amplitude, Peak value of acceleration : 1.5mm or 59m/s<sup>2</sup>(6G)</p> <p>Directions, cycle: 3 mutually perpendicular direction, 3 cycles about each direction.</p>	<p>[ Appearance ] Looseness between the parts, chipping, breakage or other abnormality shall not occur.</p> <p>[ Electrical discontinuity ] No electrical discontinuity grater than 1<math>\mu</math>s shall occur.</p> <p>[ Contact Resistance ] Shall meet 6-1-1</p>
6	Shock	<p>Apply the following vibration to the mating connector.</p> <p>During the testing, run 100mA DC to check electrical discontinuity.</p> <p>Peak value of acceleration: 735 m/s<sup>2</sup>(75G)</p> <p>Duration : 11msec</p> <p>Wave Form : half sinusoidal</p> <p>Direction, cycle : 6 mutually perpendicular direction, 3 cycle about each direction.</p>	<p>[ Appearance ] Looseness between the parts, chipping, breakage or other abnormality shall not occur.</p> <p>[ Electrical discontinuity ] No electrical discontinuity grater than 1<math>\mu</math>s shall occur.</p> <p>[ Contact Resistance ] Shall meet 6-1-1</p>

DOCUMENT NAME: PRODUCT SPECIFICATION	SUBJECT: RF I PLUG Φ 1.13 CONNECTOR	DOCUMENT NO: SPEC-ANC-1001			
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### 6-3 Environmental Performance

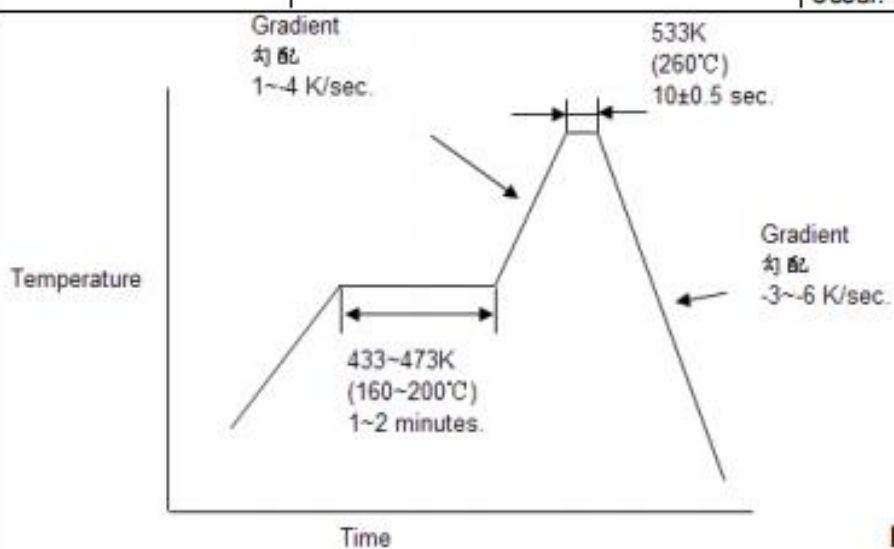
NO	Item	Test conditions	Specifications
1	Thermal Shock	Apply the following environment to the mating connector in accordance with MIL-STD-202G, Method 107G, Condition A. Temperature : 218K (-55℃) →358K(85℃): 30min Transition time : 5min. MAX No. of cycles : 5 cycles	[ Appearance ] Looseness between the parts, chipping, breakage or other abnormality shall not occur. [ Contact Resistance ] Shall meet 6-1-1 [ Insulation Resistance ] Shall meet 6-1-2
2	Humidity (Steady State)	Apply the following environment to the mating connector in accordance with MIL-STD-202G, Method 103, Condition B. Temperature : 313±2K (40±2℃) Humidity : 90 ~ 95%RH Duration : 96 hours	[ Appearance ] Looseness between the parts, chipping, breakage or other abnormality shall not occur. [ Contact Resistance ] Shall meet 6-1-1 [ Insulation Resistance ] Shall meet 6-1-2.
3	Salt Water Spray	Apply the following environment to the mating connector in accordance with MIL-STD-202G, Method 101E, Condition B. Temperature : 308±2K (35±2℃) Salt water density : 5±1%(by weight) Duration : 48 hours	[ Appearance ] No abnormality Adversely affecting the performance shall occur.
4	High Temperature Life	Apply the following environment to the mating connector Temperature : 363±2K (90±2℃) Duration : 96 hours	[ Appearance ] Looseness between the parts, chipping, breakage or other abnormality shall not occur. [ Contact Resistance ] Shall meet 6-1-1

### 6-4 Soldering



DOCUMENT NAME: PRODUCT SPECIFICATION	SUBJECT: RF I PLUG Φ 1.13 CONNECTOR	DOCUMENT NO: SPEC-ANC-1001			
		PAGE	10 OF 12	REV	A

NO	Item	Test conditions	Specifications
1	Solder ability	Dip the solder tine of the contacts in the solder bath at $518 \pm 5K(245 \pm 5^{\circ}C)$ for $5 \pm 0.5$ seconds after immersing the tine in the flux of RMA type for 5 to 10 seconds in accordance with MIL-STD-202, Method 208.	More than 95% of the dipped surface shall be evenly wet.
2	Soldering Heat Resistance	Put on the receptacle connector to PCB, apply the heat 2 cycles as shown in Fig.5	[ Appearance ] No abnormality Adversely affecting the performance shall occur.



**Fig.5**



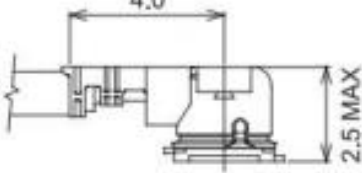
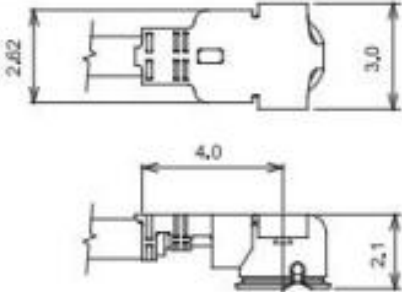
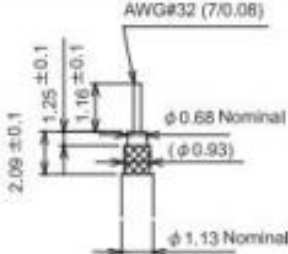
<b>DOCUMENT NAME:</b> <b>PRODUCT SPECIFICATION</b>	<b>SUBJECT:</b> <b>RF I PLUG Ø 1.13</b> <b>CONNECTOR</b>	<b>DOCUMENT NO:</b> SPEC-ANC-1001			
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**Table II: Test Sequence and Sample Quantity**

Test: Measurement or Examination	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1.Contact Resistance				1,3	1,3	1,3	1,3	1,5	1,5	1,3	1,3	1,3		
2.Insulation Resistance								2,6	2,6					
3.Dielectric Withstanding Voltage								3,7	3,7					
4.VSWR	1													
5.Un-mating force		1												
6.Crimp strength			1											
7.Durability				2										
8.Contact resistance with force on the cable					2									
9.Vibration						2								
10.Shock							2							
11. Thermal Shock								4						
12. Humidity									4					
13. Salt Water Spray										2				
14. High Temperature Life											2			
15. Solder ability												2		
16.Soldering Heat Resistance													1	
Sample QTY.	10	10	10	10	10	10	10	10	10	10	10	10	10	10

DOCUMENT NAME: PRODUCT SPECIFICATION	SUBJECT: RF I PLUG $\Phi$ 1.13 CONNECTOR	DOCUMENT NO: SPEC-ANC-1001			
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Table III: Relevant Data

型号	Mating height 合高	Dimensional drawing 尺寸图	Applicable cable size 剥线尺寸
RF I 代 1.13	2.5mmMAX 		





# High Strength Double Coated Tapes with Adhesive 300LSE

9495LE • 9474LE • 9490LE

Technical Data

September, 2004

**Product Description** 3M™ Double Coated Tapes 9495LE, 9474LE and 9490LE with 3M™ Adhesive 300LSE provides high bond strength to most surfaces, including many low surface energy plastics such as polypropylene and powder coated paints. The acrylic adhesive also provides excellent adhesion to surfaces contaminated lightly with oil typically used with machine parts. 3M tape 9490LE offers the added feature of 3M™ Adhesive 300MP on one side to provide excellent bond strength to a variety of foam and fabric materials.

Construction	Product Number	Faceside <sup>1</sup> Adhesive Type/ Thickness	Carrier Type/ Thickness	Backside <sup>2</sup> Adhesive Type/ Thickness	Liner Color, Type, Print	Liner Caliper	Total Tape Thickness (w/o liner)
	3M™ Double Coated Tape 9495LE <sup>4</sup>	300LSE/ 0.0028" (0.071mm)	Clear PET <sup>3</sup> 0.0005" (0.013mm)	300LSE/ 0.0034" (0.086mm)	Tan, 58#, Polycoated Kraft, "3M 300LSE"	0.0042" (0.11mm)	0.0067" (0.17mm)
	3M™ Double Coated Tape 9474LE	300LSE/ 0.0028" (0.071mm)	Clear PET 0.0005" (0.013mm)	300LSE/ 0.0034" (0.086mm)	<sup>5</sup> Faceside Liner/ Tan, 58# Polycoated Kraft, no print Backside liner/ Tan, 58#, Polycoated Kraft, "3M 300LSE"	0.0042" (0.11mm)/ 0.0042" (0.11mm)	0.0067" (0.17mm)
	3M™ Double Coated Tape 9490LE <sup>4</sup>	300MP/ 0.0028" (0.071mm)	Clear PET 0.0005" (0.013mm)	300LSE/ 0.0034" (0.086mm)	Tan, 58#, Polycoated Kraft, "3M 300LSE"	0.0042" (0.11mm)	0.0067" (0.17mm)

Note 1: Faceside (FS) adhesive is on the interior of the roll, exposed when unwound.

Note 2: Backside (BS) adhesive is on the exterior of the roll, exposed when liner is removed.

Note 3: PET (Polyester).

Note 4: The caliper listed is based on a calculation from manufacturing controlled adhesive coat weights using a density of 1.012 g/cc. While past data pages have listed a nominal caliper of 6.0 mills for these tapes, the coat weight has not changed.

Note 5: Backside liner is primary (stays with die cut part); Faceside is secondary (removed first).

## 3M™ High Strength Double Coated Tapes with Adhesive 300LSE 9495LE • 9474LE • 9490LE

Typical Physical Properties and Performance Characteristics	Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.		
	Product Number	3M™ Double Coated Tapes 9495LE, 9474LE	3M™ Double Coated Tape 9490LE
Adhesion to stainless steel ASTM D3330 - 90 degree		Oz/in (N/100 mm)	Oz/in (N/100 mm)
	- 15 minutes RT (FS/BS)	34/68 (37/74)	26/61 (28/66)
	- 72 hour RT (FS/BS)	128/142 (139/154)	124/142 (135/154)
	- 72 hour 158°F (FS/BS)	67/75 (73/82)	127/60 (138/66)
	3) Adhesion to other surfaces* ASTM D3330 - 90 degree, 2 mil al foil, 72 hour RT		
	ABS (FS/BS)	60/80 (66/88)	40/60 (44/66)
	Polypropylene (FS/BS)	35/50 (38/55)	25/60 (27/66)
	Polycarbonate (FS/BS)	117/75 (127/82)	
	Shear Strength - ASTM D3654 modified - (.5 inch <sup>2</sup> sample size)		
	1000 grams at 72°F	>10,000 min	>10,000 min
	500 grams at 158°F	>10,000 min	>10,000 min
Relative High Temperature Operating Ranges:			
	Long Term (days, weeks)	200°F	200°F
	Short Term (minutes, hours)	300°F	300°F
Relative Solvent Resistance		Very Good	Very Good

Available Sizes	Roll length, width, slitting tolerance, core size.		
		3M tapes 9495LE, 9490LE	3M tape 9474LE
Maximum Length in:			
	1/2" to 63/64"	180 yds. (164 m)	—
	1" to 3"	360 yds. (329 m)	—
	3" to 48"	360 yds. (329 m)	—
	48" to 54"	360 yds. (329 m)	—
Tolerance		± 1/32 in. (0.08 mm)	
Core ID		3.0 in. (76.2 mm)	—
Sheet Size		Not Available	24" x 36"



## 3M™ High Strength Double Coated Tapes with Adhesive 300LSE 9495LE • 9474LE • 9490LE

<b>Features</b>	<ul style="list-style-type: none"> <li>• These tapes have a moisture resistant polycoated kraft liner which can withstand high humidity conditions with minimal cockling or wrinkling.</li> <li>• These tapes have a film carrier which can add dimensional stability to foams and other substrates and also makes it easier to handle the tape during slitting and die-cutting.</li> <li>• 3M™ Double Coated Tape 9474LE features a dual liner for ease in selective die cutting.</li> <li>• The bond strength of 3M™ Adhesive 300LSE increases as a function of time and temperature, and has very high initial adhesion.</li> </ul>																		
<b>Application Techniques</b>	<p>Bond strength is dependent upon the amount of adhesive-to-surface contact developed. Firm application pressure and moderate heat, from 100°F (38°C) to 130°F (54°C), will assist the adhesive in developing intimate contact with the bonding surface.</p> <p>To obtain optimum adhesion, the bonding surfaces must be clean, dry and well unified. Some typical surface cleaning solvents are isopropyl alcohol or heptane.*</p> <p>Ideal tape application temperature range is 70°F to 100°F (21°C to 38°C). Initial tape application to surfaces at temperatures below 50°F (10°C) is not recommended because the adhesive becomes too firm to adhere readily. However, once properly applied, low temperature holding is generally satisfactory.</p> <p><b>*Note:</b> Carefully read and follow the manufacturer's precautions and directions for use when working with solvents. These cleaning recommendations may not be compliant with the rules of certain Air Quality Management Districts in California; consult applicable rules before use.</p>																		
<b>Environmental Performance</b>	<p><b>Humidity Resistance:</b> High humidity has minimal effect on adhesive performance. No significant reduction in bond strength is observed after exposure for 7 days at 90°F (32°C) and 90% relative humidity.</p> <p><b>UV Resistance:</b> When properly applied, nameplates and decorative trim parts are not adversely affected by exposure.</p> <p><b>Water Resistance:</b> Immersion in water has no appreciable effect on the bond strength. After 100 hours at room temperature, the high bond strength is maintained.</p> <p><b>Temperature Cycling Resistance:</b> High bond strength is maintained after cycling four times through:</p> <ul style="list-style-type: none"> <li>4 hours at 158°F (70°C)</li> <li>4 hours at -20°F (-29°C)</li> <li>4 hours at 73°F (22°C)</li> </ul> <p><b>Chemical Resistance:</b> When properly applied, nameplate and decorative trim parts will hold securely after exposure to numerous chemicals including oil, mild acids and alkalis.</p>																		
<b>Liner Configuration Guide</b>	<table border="0"> <tr> <td>General purpose steel rule die-cutting</td><td>58# PCK</td></tr> <tr> <td>Steel rule cutting many nameplates on common sheet</td><td>83# PCK</td></tr> <tr> <td>Kiss cutting, steel rule</td><td>83# PCK</td></tr> <tr> <td>Rotary die-cutting</td><td>PET</td></tr> <tr> <td>Selective die-cutting (cut adhesive before laminate)</td><td>Double-lined</td></tr> <tr> <td>Thermoforming</td><td>HDPE</td></tr> <tr> <td>Part inspection</td><td>HDPE, PET</td></tr> <tr> <td>Embossed metal parts</td><td>White PP, HDPE</td></tr> <tr> <td>Metal parts (punch press)</td><td>PET</td></tr> </table>	General purpose steel rule die-cutting	58# PCK	Steel rule cutting many nameplates on common sheet	83# PCK	Kiss cutting, steel rule	83# PCK	Rotary die-cutting	PET	Selective die-cutting (cut adhesive before laminate)	Double-lined	Thermoforming	HDPE	Part inspection	HDPE, PET	Embossed metal parts	White PP, HDPE	Metal parts (punch press)	PET
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## 3M™ High Strength Double Coated Tapes with Adhesive 300LSE

9495LE • 9474LE • 9490LE

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### Adding Liners for 3M™ Double Coated Tapes with Adhesive 300LSE

1. Rotary processing, tape only, on a densified (outside of #4994) kraft liner. In this process, the tape waste will stay with the 58# PCK liner, leaving adhesive die-cuts dispensable from the #4994 (densified kraft) liner.
2. Rotary processing for finished parts. If a densified kraft (DK) liner is necessary, the adhesive should be first laminated to the substrate with pressure. After lamination, remove the 58# PCK liner and laminate the outside of the #4994 (DK) liner.

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### Application Ideas

- Foam to powder coated painted surfaces.
- Low surface energy plastic adhesion.

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### Application Equipment

To apply adhesives in a wide web format, lamination equipment is required to ensure acceptable quality. To learn more about working with pressure-sensitive adhesives please refer to technical bulletin, Lamination Techniques for Converters of Laminating Adhesives (70-0704-1430-8).

For additional dispenser information, contact your local 3M sales representative, or the toll free 3M sales assistance number at 1-800-362-3550.

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### Storage

Store in original cartons at 70°F (21°C) and 50% relative humidity.

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### Shelf Life

If stored under proper conditions, product retains its performance and properties for two years from date of manufacture.

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### Product Use

All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

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### Warranty and Limited Remedy

Unless stated otherwise in 3M's product literature, packaging inserts or product packaging for individual products, 3M warrants that each 3M product meets the applicable specifications at the time 3M ships the product. Individual products may have additional or different warranties as stated on product literature, package inserts or product packages. 3M MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's application. If the 3M product is defective within the warranty period, your exclusive remedy and 3M's and seller's sole obligation will be, at 3M's option, to replace the product or refund the purchase price.

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Industrial Business  
Converters Markets  
Industrial Adhesives and Tapes Division

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St. Paul, MN 55144-1000  
800-223-7427 • 651-778-4244 (fax)  
[www.3M.com/converter](http://www.3M.com/converter)



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ISO 9001:2000

This Industrial Adhesives and Tapes Division product was manufactured under a 3M quality system registered to ISO 9001:2000 standards.





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深圳市亿圣邦科技有限公司									
Shenzhen Yishengbang Technology Company Limited									
我司料号		客户型号		版本		工序名称		工时	
SLK-T3010		WCOD-15		A0		包装装箱		YSB-BZ-D15	
图1 点数/用泡棉包裹端子扎橡皮筋		图2 装袋/贴标签 (标签按客户需求制作)		图3 按订单装箱		图4 封箱/贴外标签			
									
1. 每100PCS产品整齐，使用泡棉包裹端子然后橡皮筋包扎，用PE封口胶袋包装，贴标签（产品名称、料号、数量等信息）		2. 将包装好的每小包装入纸箱（49*29*31CM）中，每箱能4000PCS。尾数其他规格纸箱包装。		3. 外箱指定位置贴好外箱标签，标签内容跟据客户要求进一步完善修改。		4. 用胶带以“工”字型进行封箱。			
注意事项：		1. 确保每扎和每箱数量正确，杜绝少数漏放情况。		2. 注意标签格式，有无漏贴和箱子外观					
所需物料：		PE封口袋		330*220MM					
		橡皮筋		透明橡皮筋					
		纸箱		490*290*310MM					
		标签		待定					
		泡棉		若干					