深圳市新领科技术有限公司

Shenzhen New Lingk Technology Co.,Ltd

样品规格书

ANTENNA APPROVAL SHEET

客户：TES

Customer:

项目：IDC-15

Project:

料号 **Part number**		审核 **Audit**	
射频工程师 **RF Engineer**		结构工程师 **Structural Engineer**	
地址 **address**	深圳南山区高新科技园北区第五工业区办公大楼五楼 The fifth floor of the office building of the Fifth Industrial Zone, North District, High-tech Park, Nanshan District, Shenzhen		
电话 **Phone**	13902948715	网站 **site**	www.kpantenna.com
公司邮箱 **Company email address**	sales@kpanenna.com	联系人 Contact	李鹏 Li Peng

客户硬件 **Customer hardware**		客户项目 **Customer projects**	
客户结构/MD **Customer Structure/MD**		客户品质 **Customer quality**	

本承认书为调试金机数据，只针对金机负责，建议贵司在我司保留金机一台，我司对与金机物料及软件等相同的量产机器保证天线性能.

This acknowledgment is the debugging of the gold machine data, only for the gold machine is responsible, it is recommended that your company keep a gold machine in our company, and our company will have the same amount as the gold machine materials and software The production machine guarantees the antenna performance.

project: ：IDC-15		write: Zhang hai dong	file name TES IDC-15NFC Antenna specification
Antenna model：			
date: 2026.05.20			
version	V2	to examine: liufang	
Mold products			
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1.概述 Overview

此报告主要描述新领科给 TES 机器调试天线的性能。IDC-15 NFC 项目，使用频率范围为 13.56MHzNFC,该机天线为 PIFA 形式，位于机器内部。

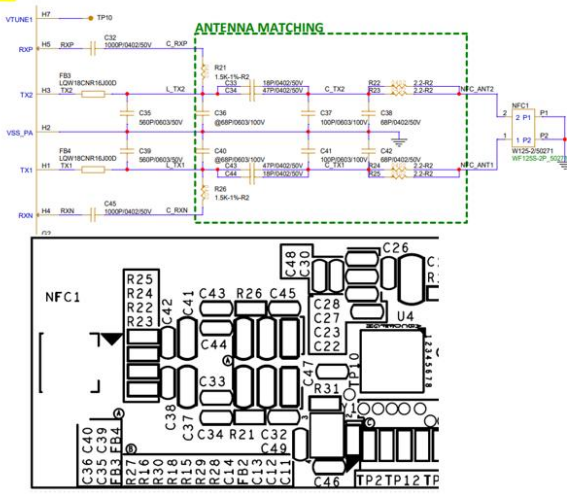
This report primarily details the antenna performance of the TES machine calibrated by New Link Technology. The TES IDC-15 NFC project operates at a frequency range of 13.56MHz NFC, with its antenna designed as a PIFA type and housed internally within the machine.

2.详细介绍 Detailed introduction

2.1 匹配电路 Matching circui

原匹配电路图如图所示，将对应元器件换成表格中值，其他元器 件值未改变，元器件品牌使用Murata，容差值为±5 。

	位号	调试值
Lo	F83/F84	160NH
$C0_1$	C35/C39	470PF
$C0_2$	C36/C40	330PF
Cs1	C33/C44	68PF
Cs2	C34/C43	82PF
Cp1	C37/C41	82PF
Cp2	C38/C42	NC



3.调试设置 Debug the settings

3.1 天线无源数据 Antenna passive data

Z@13.56MHz=16.59Ω

Fr/w=13.65MHz

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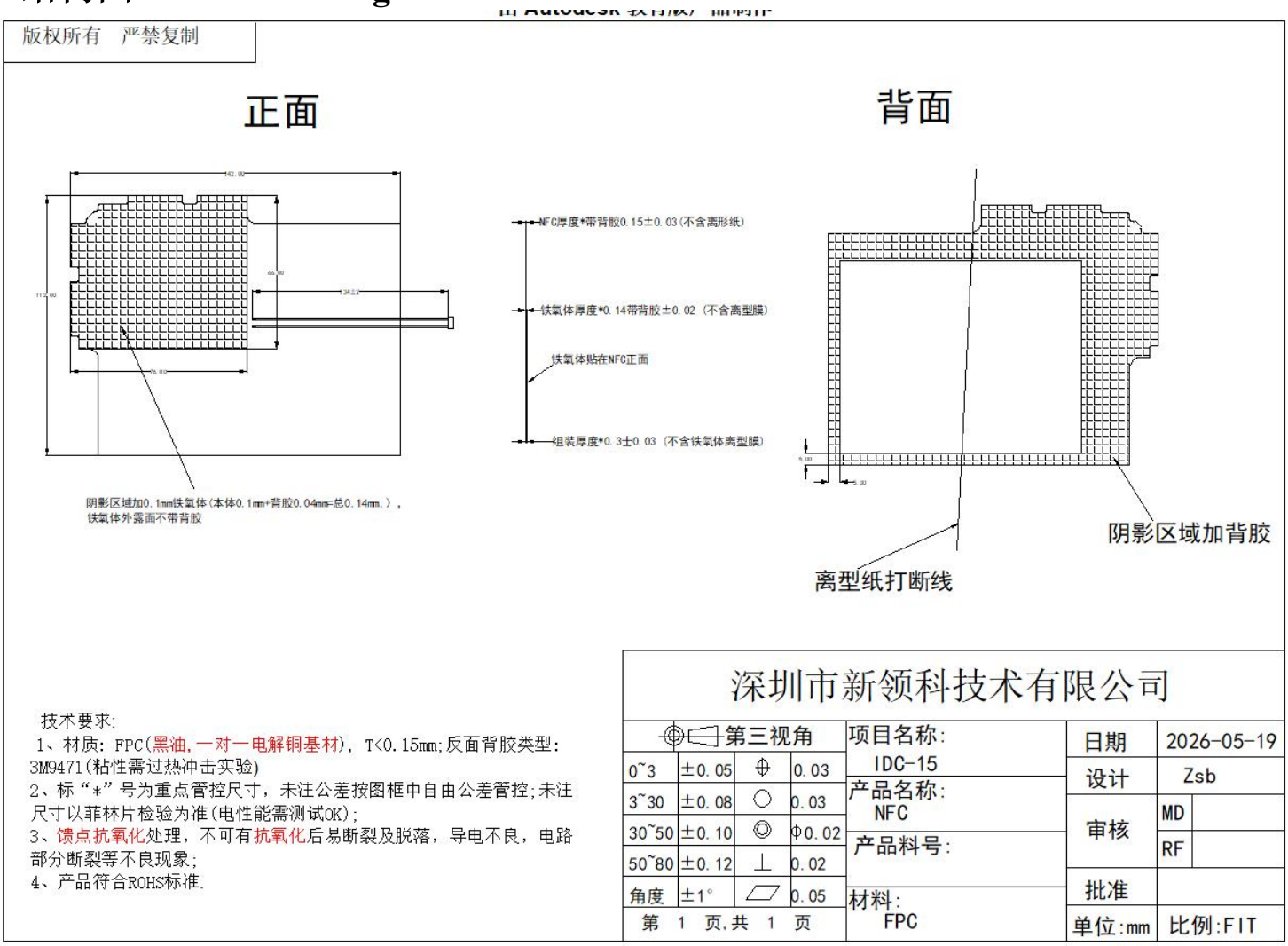
4.结构图 Structural diagram



5.盐雾检测报告 Structural diagram

产品型号 Product model	IDC-15			测试数量 Number of tests	5PCS		
测试标准 Test Standards	GB2423.17			货品素材 Product materials	FPC		
测试项目 Test items	要求标准 Requirement Standards	实际数值 Actual values	判定 decision	测试项目 Test items	要求标准 Requirement Standards	实际数值 Actual values	判定 decision

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测试仪器规格 Test Instrument Specifications	KD-60	KD-60	OK	测试时间 Test time	24H	24H	OK
盐雾测试类型 Types of salt spray tests	NSS 中性 NSS neutral	NSS 中性 NSS neutral	OK	盐雾箱温度 Salt spray box temperature	35°C	35℃	OK
盐水 PH 值 SALINE PH	6.5-7.2	6.8	OK	盐雾沉降量（H.80C） Salt spray sedimentation	1-2ml	1.8ml	OK
喷雾方式 Spray method	连续喷雾 Spray continuously	连续喷雾 Spray continuously	OK	货品材质 Material of the goods	FPC	FPC	OK
盐水成份 Brine ingredients	5%/NaCL	5%/NaCL	OK	压缩空气节压力 Compressed air section pressure	1 ± 0.1KG/CM2	1	OK
饱和温度 Saturation temperature	47°C	47℃	OK	试样放置角度 Specimen placement angle	90°	90°	OK
测试观察时间 Test observation time	观察现象 Observe the phenomenon						
4H	无异常 No anomalies						
12H	无异常 No anomalies						
24H	无异常 No anomalies						
判定标准：依国标 5944-86 评级方法判定，9 级以上为合格 Judging criteria: According to the national standard 5944-86 rating method, grade 9 or above is qualified							

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最终判定结果 Final Judgment	合格√ Eligible √			不合格 Unqualified	
测试人员 Tester	何本源 He Yuanyuan	审核 Audit	王爱兵 Wang Aibing	审批 Approval	

备注：常用的盐雾试验方法有：NSS 中惦盐雾试验，AASS 乙酸盐雾试验，CASS 铜乙酸加速试验.
Note: The commonly used salt spray test methods are: NSS medium salt spray test, AASS acetate spray test, CASS copper acetic acid accelerated test.

OQC 检验测试报告
OQC inspection and test report

订单号 report		客户料号 Customer part number		检测 项目 Detection items	抽样计划 Sampling plan		AQL	AC	RE	判定 decision
客户型号 Customer model	**IDC-15**			外观 appearance	**CR**	**0.15**	**0.15**	**0**	**1**	
数量 quantity	出货数量 ： Pcs Shipment quantity				**MAJ**	**0.4**	**0.4**	**2**	**3**	合格 qualified
	抽样数量: Pcs Number of samples				**MIN**	**0.65**	**0.65**	**3**	**4**	

1. 开路 Open	NIL	10.凹坑/压伤 Pits/crushes	NIL	19.离型纸未切断 The release liner is not cut	NIL
2. 短路 short circuit	NIL	11.电镀粗脏、金面水印 Plating coarse and dirty, gold watermark	NIL	20.金面氧化 Oxidation of the gold surface	NIL
3. 线路起翘 The line is warped	NIL	12.金面针孔、缺口 Gold pinholes, notches	NIL	21.冲偏/露铜 Offset / exposed copper	NIL
4. 线路损坏 Damaged lines	NIL	13.胶层气泡 Glue line bubbles	NIL	22.未冲断 Not broken	NIL
5. 擦/刮花 Rub/scratch	NIL	14.油墨颜色 Ink color	NIL	23.掉金/甩金 Drop gold/throw gold	NIL
6. 露铜/镍 Exposed copper/nickel	NIL	15.字符不清 Unclear characters	NIL	24.弯曲/变形 Bending/deformation	NIL
7. 掉油 Lose oil	NIL	16.垃圾/异物 Garbage/foreign objects	NIL	25.外形缺口 Form factor notch	NIL

8. 氧化/变色 Oxidation/discoloration	NIL	17 溢胶/流胶 Overflowing/flowing glue	NIL	26.堆胶/缺胶 Glue stacking/lack of glue	NIL
9. 表面脏污 The surface is dirty	NIL	18.皱褶 pucker	NIL	27.补强不良 Poor reinforcement	NIL
判定： Decision:	√合格 □不合格 □特采出货 √ qualified □ unqualified □ special picking				

备注：请将本产品储存在低温、低湿（温度 18-28℃，湿度 35%-75%RH）无腐蚀性气体的环境下，建议开包后一周内使用完。

Note: Please store this product in a low temperature, low humidity (temperature 18-28°C, humidity 35%-75%RH) non-corrosive gas environment, it is recommended to use it within one week after opening.

可靠性测试 Reliability testing		
项目名称 The name of the project	要 求 requirements	实 测 Measurements
热冲击实验 Thermal shock experiments	288℃*10S'*3 次	288℃*10S'*3 次无分层、起泡 288℃*10S'*3 times without delamination and blistering
抗剥离实验 Anti-peel experiment	≥1.0 kg f/c ㎡	1.112 kg f/c ㎡
油墨拉力测试 Ink pull test	3M600 胶带垂直拉起 The 3M600 tape is pulled up vertically	无掉油墨现象 No ink dropping

生产及检测设备清单 List of production and testing equipment		
生产设备 Production equipment	检测设备 1 Testing equipment 1	检测设备 2 Testing equipment 2
蚀刻外形机 Etching profile machine	二次元摄影机 Two-dimensional camera	千分尺 micrometer

检验员：
Inspectors:

审核：
Audit:

材料成份宣告表

Material Composition Declaration Form

序号 serial number	材料名称 The name of the material	材料型号 Material type	材料供应商 Material Suppliers	环保报告或声明编号 Environmental report or declaration number	报告日期 Report date	备注 remark

1	电解铜 Electrolytic copper	一对一材料 One-on-one materials	蔡伦格蒂 Cailenghetti	SHAEC24028809006	2025/12/08	1-8 页 Pages 1-8
2	背胶 Adhesive backing	3M9471LE	3M	SHAEC24032493501	2025/12/12	1-8 页 Pages 1-8
3	油墨 printing ink	黑色 BLACKINK Black BLACKINK	优立 Youli	ETR25501383	2025/05/20	1-73 页 Pages 1-73
4	电金 Electricity gold	检测 detect	鑫达昇	A2250164855101001E	2025/03/21	1-7 页 Pages 1-7
5	铁氧体 ferrite		威斯东山 West East Hill	A2260028046101001E	2026/01/12	1-10 页 Pages 1-10
6	紫外光固化胶 UV-curing adhesive	KJ-3030	科聚伟成 Kojewei Cheng	SZXEC25003291601	2026/09/09	1-7 页 Pages 1-7
7	镀锡铜 tin-coated copper		嘉元隆源 Jiayuan Longyuan	SZXEC25003804302	2026/10/17	1-7 页 Pages 1-7
8	塑料粒子 plastic particle	GSM A66VO HF-01	侨斯曼新材料 Qiaosiman new material	A2250085823101001C	2025/02/24	1-7 页 Pages 1-7
9	C5191 高精磷铜带 C5191 high-precision phosphor bronze strip		中环铜业 Central Copper	NGBEC25000953508	2025/02/26	1-7 页 Pages 1-7

出货方式

Shipping method

物料类别 The item category	包装方式 Packing	举例图示 Illustration of an example

FPC	1、 PET 塑胶袋包装 1、PET plastic bag packaging	

备注：请将本产品储存在低温、低湿（温度 18-28℃，湿度 35%-75%RH）无腐蚀性气体的环境下，建议开包后一周内使用完,使用中请尽量不要让产品 3M 胶有指纹，以免影响粘着力。

Note: Please store this product in a low temperature, low humidity (temperature 18-28 °C, humidity 35%-75%RH) non-corrosive gas environment, it is recommended to use it within a week after opening the package, please try not to let the product 3M glue have fingerprints during use, so as not to affect the adhesion.