Insta360影石

影石创新科技股份有限公司

_TC1_规格承认书

客户名称 / Customer	INSTA360
客户料号 / Customer P/N.	QA.A001301
供应商 / Supplier	深圳市中天迅通信技术股份有限公司 Shenzhen ZTX Communication Technology Co., Ltd
供方料号 / Supplier P/N.	2.00005667
时间 / Time	25-Nov-22
版本 / Version	A2

供应商会签 Approval			
批准 Approval	品质承认 QA Approval	工程承认 E Approval	研发承认 RD Approval
GUOHUA ZOU	ZHAO ZHANG	LIPING LIU	JINPING GU

客户承认 Customer Approval			
批准 Approval	品质承认 QA Approval	研发承认 RD Approval	采购承认 PUR Approval

注：会签必须手工签字确认；

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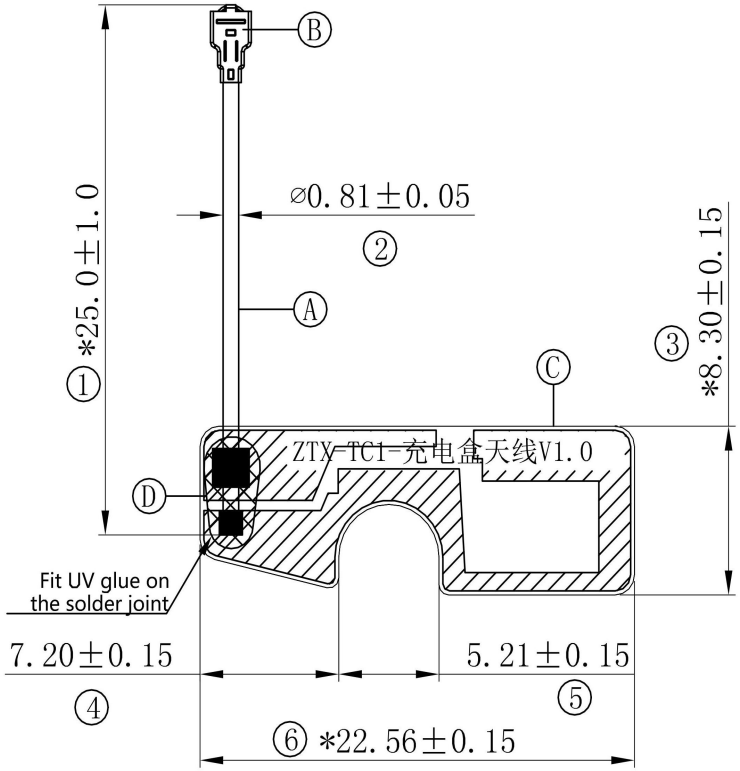
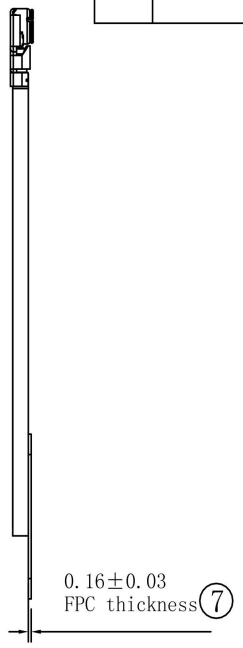
Rev 版本	Description 描述	Designed 制图	Date 日期
A1	first issue	LIPING LIU	2022.11.11





Remarks:

1. All dimensions are required measurements for IQC,the dimension with "*" is the IQC must be measured for each lots.
2 . The coaxial cable should be soldered firmly, the solder joint should be smooth, and there should be no virtual welding, welding leakage, short circuit and other problems;
3. The tension of terminal and wire after riveting is 15N > Ø 0.81 > 8 N;
4. Products should not be damaged during processing, packaging and transportation;
5 .Without the confirmation of ZTX Company, the material cannot be changed at will, and meet the environmental requirements of ROHS2.0.

Component:

ITEM	PART NAME	TREATMENT	P/N
Ⓐ	Cable	GRAY/FEP/灰色/	SY081/50-004
Ⓑ	Connector	bronze(gold-plated)	TX-20448-001R-08
Ⓒ	WIFI-fpc	PI+CU foil +tesa8854	
Ⓓ	UV-glue	oubo:AU-6021C	Usage:0.005g/PCS

ZTX 深圳市中天迅通信技术股份有限公司
Shenzhen ZHONGTIANXUN Communication Technology Shares Co.,Ltd

General Tolerance		
Dim \ Grade	A	B
5-10	±0.10	±0.20
10-20	±0.15	±0.30
20-40	±0.20	±0.40
40>	±0.25	±0.50

Date 日期: 2022.11.11	Unit 单位: mm	Rev 版本: A1	Scale 比例: 1:1	Project Name. 项目名称: TC1(T03E)
Designed 设计: LIPING LIU	Material 材料:			Product Name 产品名称: CHARGE BOX ANTENNA
Checked 审核: JINPING GU	Process 工艺:			Material Code 物料编码: 2.00005667
Approval 批准: GUOHUA ZOU	Third Angle 第三视角			Drawing Name. 图纸编号: ZTX-QR-RD-013

Process Capability index Evaluation report

Customer name :INSTA360 Product Model Number:TC1 (T03E) CHARGE BOX ANTENNA Product type :FPC+ coaxial line Date :2022/9/1											Approved by		Checked by:		Name of operator:
											Xiaohua Deng		Ailing Yi		Lihua Li
spec	25.00		8.30		22.56										Comments
(NO)	1.00	1.00	0.15	0.15	0.15	0.15									
1	25.00		8.28		22.51										
2	25.00		8.29		22.52										
3	25.00		8.31		22.49										
4	24.50		8.32		22.51										
5	25.00		8.30		22.50										
6	25.00		8.32		22.49										
7	24.50		8.33		22.53										
8	25.00		8.31		22.53										
9	25.00		8.30		22.51										
10	25.00		8.28		22.53										
11	25.00		8.33		22.48										
12	25.00		8.33		22.49										
13	25.00		8.31		22.52										
14	25.50		8.31		22.54										
15	25.00		8.33		22.52										
16	25.00		8.29		22.57										
17	25.00		8.32		22.51										
18	25.00		8.27		22.49										
19	25.00		8.32		22.53										
20	25.00		8.33		22.47										
21	25.00		8.31		22.52										
22	25.50		8.29		22.48										
23	25.00		8.33		22.53										
24	25.00		8.30		22.52										
25	25.00		8.32		22.51										
26	25.00		8.28		22.53										
27	25.50		8.33		22.51										
28	25.00		8.32		22.51										
29	25.00		8.31		22.53										
30	25.00		8.33		22.49										
31	25.00		8.27		22.51										
32	25.00		8.31		22.47										
MAX	25.50		8.33		22.57		0.00		0.00		0.00		0.00		1. Batch production can be carried out if the CPK value is "satisfied", but inspection needs to be strengthened. 2. When CPK values are "very satisfied", sampling inspection can be carried out during mass production. 3. If one of the CPK values fails to meet the requirement of "meet", the reasons should be analyzed and improved.
MIN	24.5		8.27		22.47		0		0		0		0		
X	25.02		8.31		22.51		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		
M	26.00		8.45		22.71		0.00		0.00		0.00		0.00		
CP	1.665		2.636		2.283		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		
SN-1	0.200		0.019		0.022		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		
K	0.0156		0.0583		0.3273		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		
CPK/determine	1.639	meet	2.483	Be very content	1.535	meet	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
Total judgment	The CPK value is "very satisfied" with the production conditions and can be mass produced.														

FAI test report

Customer name	INSTA360	Name of Product	TC1 (T03E) CHARGE BOX ANTENNA	number	10
Material of product	FPC+ acetate tape + coaxial line + terminal	Color of material	black	date	2022/9/1

Product Type: ■ New Appearance ☐ Changed Appearance ☐ Mass Production ☐ Trial production sample

NO	type	Specifications and Dimensions	Tolerance on top	Down tolerance	Measured size										determine	note
					1	2	3	4	5	6	7	8	9	10		
1	*	**25.00**	**1**	**1**	25.00	26.00	26.00	25.00	25.00	26.00	25.00	25.00	25.00	26.00	OK	
2		**0.81**	**0.05**	**0.05**	0.81	0.82	0.81	0.81	0.82	0.81	0.81	0.82	0.81	0.81	OK	
3	*	**8.30**	**0.15**	**0.15**	8.37	8.40	8.35	8.36	8.37	8.35	8.36	8.37	8.35	8.36	OK	
4		**7.20**	**0.15**	**0.15**	7.22	7.25	7.30	7.27	7.26	7.25	7.26	7.25	7.24	7.25	OK	
5		**5.21**	**0.15**	**0.15**	5.28	5.26	5.24	5.20	5.21	5.23	5.24	5.22	5.27	5.25	OK	
6	*	**22.56**	**0.15**	**0.15**	22.55	22.60	22.61	22.58	22.57	22.55	22.58	22.57	22.57	22.56	OK	
7																
8																
9																
10																
11																
12																
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14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																
25																

appearance: OK

other:/OK

Total judgment:

■ OK ☐ NG

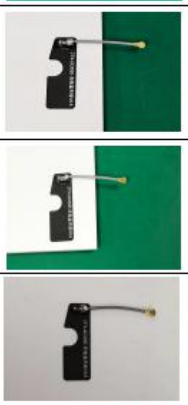
Approved by: Xiaohua Deng Checked by: Ailing Yi Name of operator: Lihua Li

note:

Form number :ZTX-QR-QA-016 Version: A1

测试报告(Test Report)

样品名称 (Product name)	CHARGE BOX ANTENNA	样品型号 (Part Model)	TC1（TO3E）	环境温度 (Ambient temperature)	20±5℃	测试日期 (Date of test)	2022/10/10
样品数量 (Specimens quantity)	12PCS	客户料号 (Customer number)	QAA001301	相对温度 (Relative humidity)	50-60%RH	委托单位 (Client/Dept)	Quality Department
测试原因 (Test reasons)	■新型号/材料验证 New model/material verification			测试依据 (Test documentation)	■天线可靠性检验基准书 ■Reference book for antenna reliability inspection		

序号 (NO)	测试项目 (Test project)	样品数 (Samples Qty.)	测试仪器 (Test equipment)	测试条件与要求 (Test comdition and note)	测试结果 (Test result)	结论 (Conclude) (Pass/Fail)	样品图片/实测值 Sample picture/measured value
1	Salt spray test	3	Salt spray testing machine	Conditions: 1. Place the product in the test chamber at 30 ° ±5 ° 2. Adjust the parameters of the test chamber: NaCl (no water); Concentration 5%±1%; pH value: 6.5 ~ 7.2; Laboratory temperature: 32-38℃; Compressed air pressure :1.0±0.01(KG/M2) spray volume :1.0 ~ 2.0ML/80CM2/H. Relative humidity :85%±2%; Test product placement Angle :30 degrees +/-10 degrees 3. The storage time is 48 hours. 4. After cleaning, place in room temperature for 2 hours for observation Requirements: plating (coating) layer without falling off, foaming, corrosion, oxidation and other adverse phenomena; The surface of the product shall not have rust spots and other undesirable phenomena	No coating shedding and oxidation occurred.	Pass	
2	High temperature test	3	High and low temperature alternating humidity and heat test chamber	1. Put the sample into a high temperature environment of 85 ℃ for 48 hours and take it out 2. Store at room temperature for 2 hours.	After the test, the product has no deformation, no discoloration, no falling off, and the electrical function is intact	Pass	
3	Low temperature test	3	Low temperature refrigerator	1. Put the sample into a low temperature -40 ℃ environment for 48 hours and take it out 2. Store at room temperature for 2 hours.	After the test, the product has no deformation, no discoloration, no falling off, and the electrical function is intact	Pass	
4	High temperature and high humidity storage test	3	High and low temperature alternating humidity and heat test chamber	1. Sample 3pcs 2. Put the test sample in the test chamber (temperature 70±2℃, humidity 90% ~ 95%RH), and take it out for inspection after 48H.	After the test, the product has no deformation, no discoloration, no falling off, and the electrical function is intact	Pass	

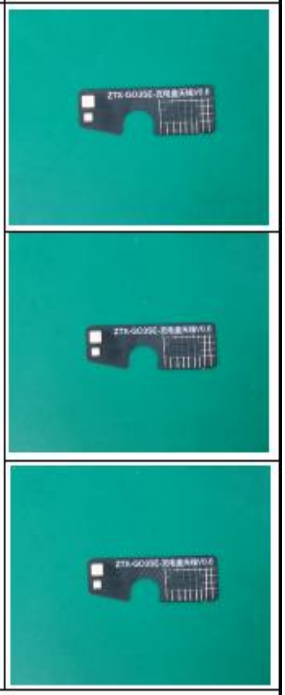
备注(Comments):

核准(Approved by): 邓孝华　　审核(Checked by): 易爱玲　　测试(Name of operator): 李丽华

表单编号：ZTX-QR-QA-076 版本：A1

测试报告(Test Report)

样品名称 (Product name)	CHARGE BOX ANTENNA	样品型号 (Part Model)	TC1（T03E）	环境温度 (Ambient temperature)	20±5℃	测试日期 (Date of test)	2022/10/10
样品数量 (Specimens quantity)	3PCS	客户料号 (Customer number)	QAA001301	相对温度 (Relative humidity)	50-60%RH	委托单位 (Client/Dept)	Quality Department
测试原因 (Test reasons)	■新型号/材料验证 New model/material verification			测试依据 (Test documentation)	■天线可靠性检验基准书 ■Reference book for antenna reliability inspection		

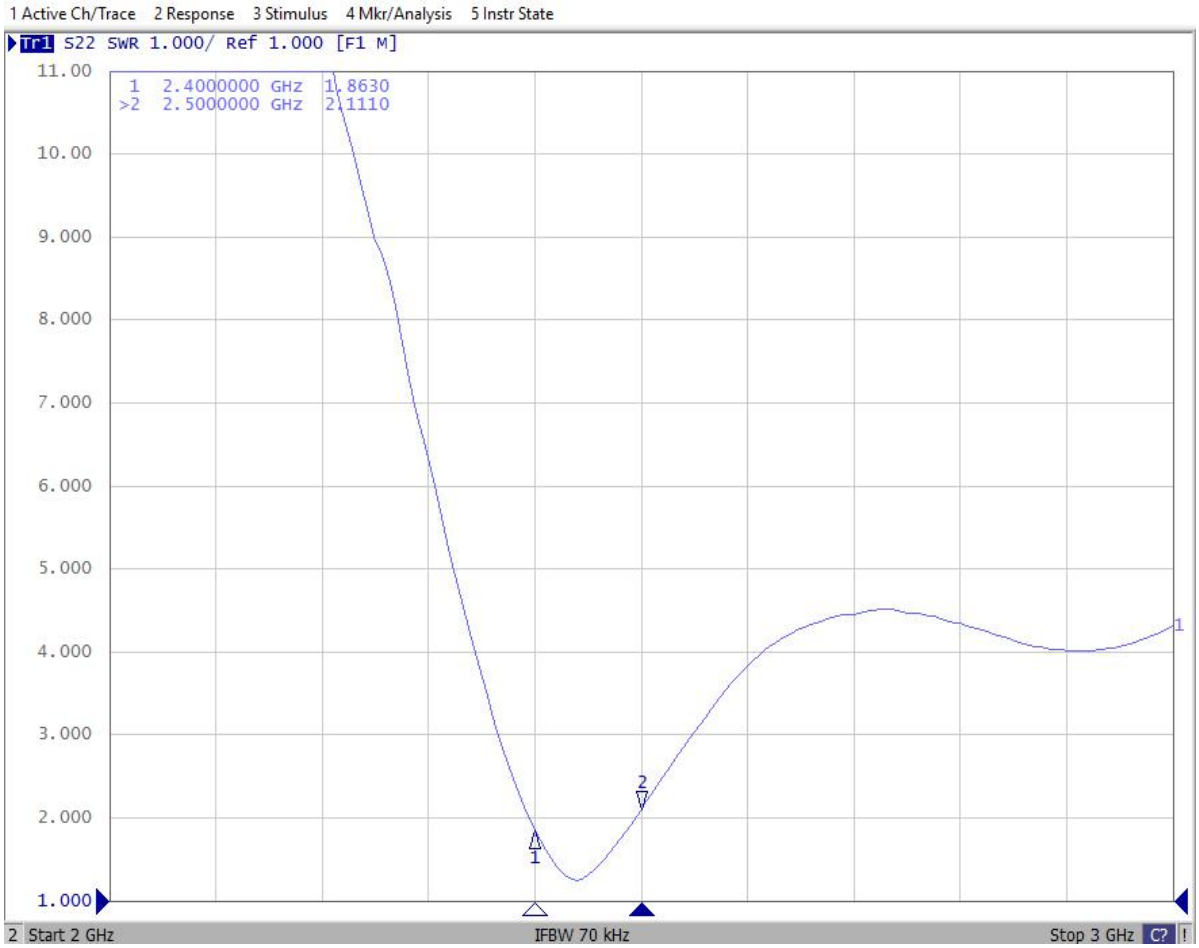
序号 (NO)	测试项目 (Test project)	样品数 (Samples Qty.)	测试仪器 (Test equipment)	测试条件与要求 (Test comdition and note)	测试结果 (Test result)	结论 (Conclude) (Pass/Fail)	样品图片/实测值 Sample picture/measured value
1	Hundred cell test	3	Hundred check knife	With 100 grid knife in the test sample surface ≥10m square meters of the place to draw 10×10 (100)1mm×1mm small grid, each line should be deep and the bottom of the ink layer; Brush the test area five times in each diagonal direction with a brush to clean up the debris; Firmly stick the small grid under test with 3M600 glue, and wipe the tape with a rubber to increase the contact area and strength between the tape and the tested area; Grab one end of the tape with your hand and pull it off quickly at 90 degrees. Coating shedding area ≤5% is qualified, such as > 5% is not qualified	The coating did not fall off after the test.	Pass	

备注(Comments):

核准(Approved by):邓孝华　　审核(Checked by):易爱玲　　测试(Name of operator): 李丽华

表单编号：ZTX-QR-QA-076 版本：A1

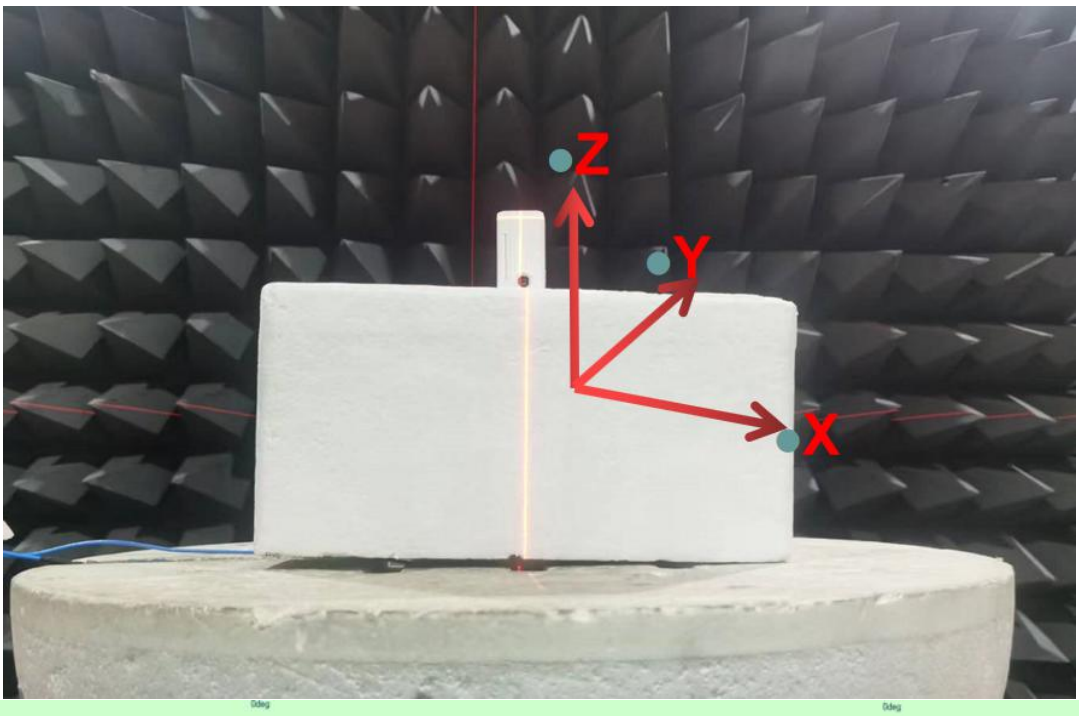
VSWR

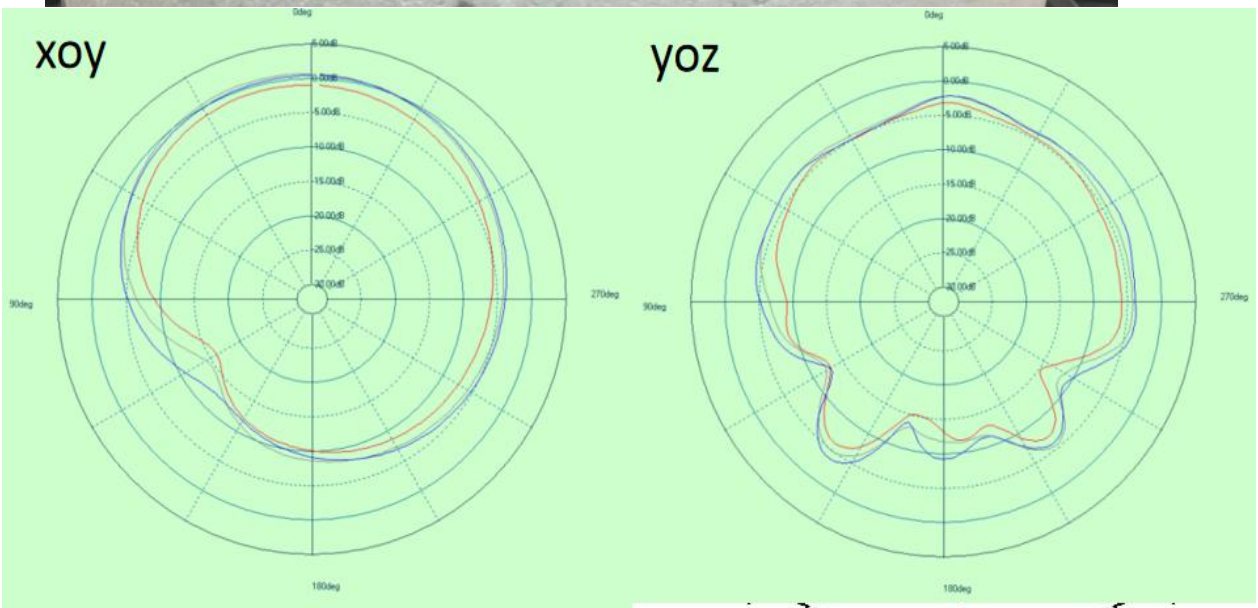


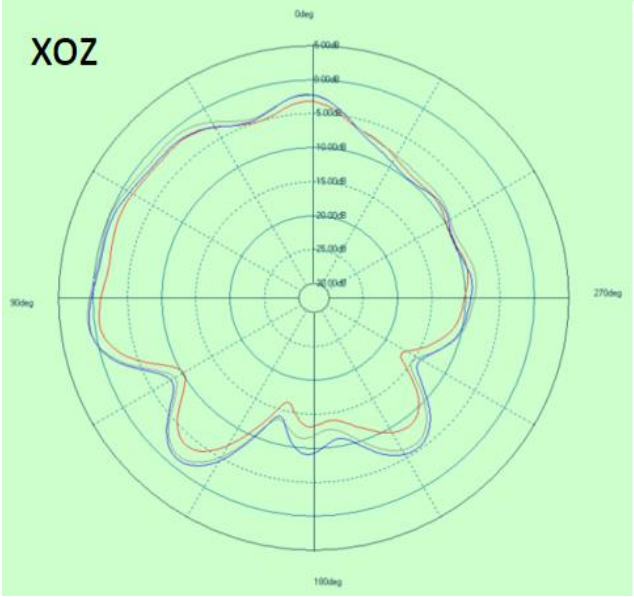
No-source test data

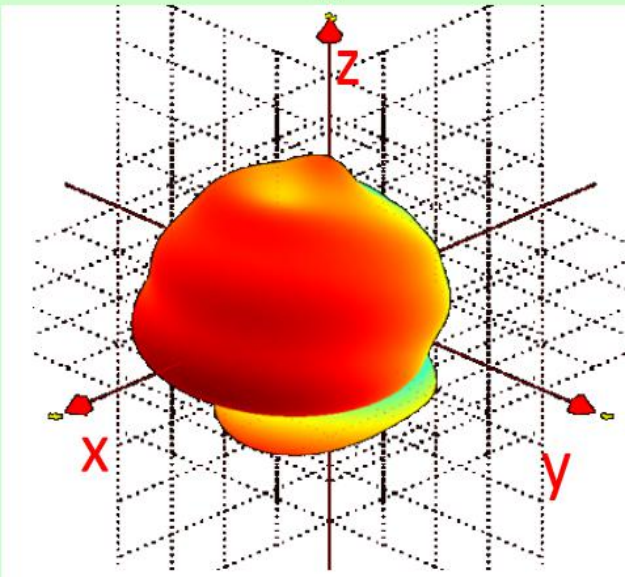
Frequency	Efficiency	Efficiency . dB	Gain . dB
2400MHz	38%	-4.22	0.85
2410MHz	40%	-3.95	0.93
2420MHz	39%	-4.12	0.99
2430MHz	40%	-4.03	0.92
2440MHz	41%	-3.85	1.09
2450MHz	40%	-3.95	1.32
2460MHz	41%	-3.84	1.33
2470MHz	42%	-3.75	1.36
2480MHz	42%	-3.82	1.28
2490MHz	42%	-3.74	1.31
2500MHz	39%	-4.08	1.03

2D/3D Radiation Pattern Results

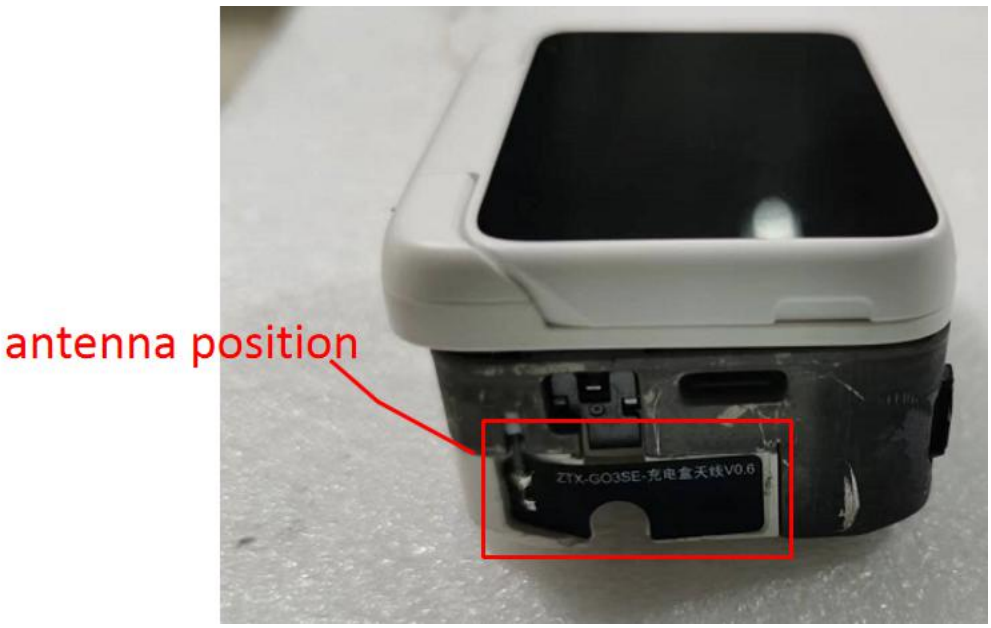








Environment treatment



深圳市中天迅通信技术股份有限公司
Shenzhen ZTX Communication Technology Co., Ltd

QC engineering drawing

Product number	general	To formulate department	Quality department	Disposal measures for	ZTX-QD-SP-082	approval	audit	To formulate
The product name	Coaxial line +FPC	Set the date	2022/11/15	Release date	2022/11/15	Xiaohua Deng	ailing yi	dengshan yang

NO.	process	The name of the process	The key working	Control method							Operating standards	Equipment and tooling	Exception handling	Disposal measures for nonconfo
				Main control item	Description of criteria	Check the method	Measuring tool	The tester	record	Save the				
1	Receive the goods	Receive the goods		1. Material label check of delivery note 2. Quantity 3. Check product packaging method	1. The quantity/material number/product name of the PURCHASE order shall be consistent with the delivery note and the physical object 2. The incoming material is not damaged and short 3. Confirm that the packing method of materials meets the requirements	100% inspection	Visual/electronic scale	warehouse keeper	< Incoming acceptance list & GT;	3 year	< Product handling, storage, packaging and delivery control procedures & GT; < Storage work guidelines & GT; , & lt; Supplier packaging requirements specification & GT;	Trolley, turnover box electronic scale	1. If the quantity/material number/product name of the purchase order is inconsistent with the delivery note and material object, report the abnormality to the purchase and reject the material 2. Short/damaged incoming materials, keep the site and take photos, report abnormal to purchase	Return of the goods
2	Incoming inspection	Incoming inspection		1. Key dimensions or parameters specified in drawings or inspection instructions 2. Acceptance criteria: Major AQL=0.4, minor AQL= 1.03. Reliability test: high and low temperature/salt spray test / Hundred Bar test	1. Material material/size should be consistent with the drawing 2. Appearance must conform to incoming inspection benchmark 3. Meet the requirements of drawing approval test	1. Appearance AQL= MA:1.0/ MI:0.4. Size: 10PCS 3. Reliability: 3PCS	Visual/secondary optical measuring instrument	IQC	< Incoming acceptance list & GT;	3 year	< Incoming material inspection control procedure & GT; , & lt; Nonconformity control procedure & GT; , & lt; Incoming inspection Standard & GT;	secondary optical measuring instrument/Hundred Bar test/salt mist machine/high and low temperature alternating humid heat experimental box, etc	Organize MRB to judge and reject the defective batches that are controversial, have unclear impact or are in urgent need of production. 2. Issue &lt to the supplier in case of serious shortage in continuous delivery; Supplier corrective and preventive Action Improvement Report & GT;	Quarantine/return/selection/special selection
3	Put in storage	Put in storage		1. The account corresponds with the real thing 2. The materials meet the 5S standard	1. The warehouse shall check and store the qualified materials inspected by IQC 2. Check unqualified products and put them into the warehouse, and inform the purchaser to arrange return 3. Arrange and place the materials on corresponding shelves or areas, and do a good job. Material transceiver card & GT; Incoming and outgoing account management	100% inspection	Visual/electronic scale	warehouse keeper	< Purchase order & GT; < Returns a single & gt;	3 year	< Product handling, storage, packaging and delivery control procedures & GT; < Warehouse Work Guidelines & GT; < Nonconformity control procedure & GT;	Trolley, turnover box, electronic scale	Find material shortage/damage, keep the site and take photos, report abnormal supervisor and inform IQC/ purchase to the site for investigation	Return of the goods
4	Distribution of materials	Distribution of materials		1. Prepare materials 2. Check materials 3. Supporting materials	1. Prepare materials required by work order 2 hours in advance according to production plan; 2. The material object, the material number of the material sheet, the name of the product, the specification, the quantity are consistent/the material is not damaged; 3. After receiving materials, check whether the materials are in uniform	N/A	Visual/electronic scale	warehouse keeper/Monitor of the class	< Shipment schedule & GT; < Material requisition & gt;	3 year	< Production control operation procedure & GT; < Product handling, storage, packaging and delivery control procedures & GT; < Material list & GT;	Trolley, turnover box, electronic scale	1. Work order is short of material, reply < Shipment schedule & GT; 2. Check with the warehouse keeper in time if incorrect or short materials are found when ordering materials. If there is any difference between the two parties, contact the respective supervisor to solve it.	Back to the warehouse
5	Production preparation	Production preparation		1. Data preparation 2. Production tools preparation 3. Spot inspection/calibration of tools and instruments 4. Hanging at SOP station 5. Making the first piece	1. Have standard documents such as SOP prepared before production; 2. Whether the corresponding products are equipped with treatment tools; 3. Equipment maintenance spot inspection 4. Place the material at the station corresponding to SOP before it goes online 5. Meet the requirements of specifications, drawings and SOP	the first piece	Visual/testing tools/network analyzer	Clerk/Monitor of the class/PE/IPQC	< Machine maintenance inspection list & GT; < First Inspection Report & GT;	3 year	< Monitoring and measuring device control procedures & GT; , & lt; Production control operation procedure & GT; , SOP, drawing	secondary optical measuring instrument	1. If the material does not correspond to the material required by the production model, check with the warehouse keeper in time to see if it is consistent with the BOM, and ask engineering personnel for confirmation; 2. Confirm with engineering personnel and correct immediately if the SOP version or	Confirm, change

6	Automatic wire	Strip the cable/hit the terminal/test/dip the tin	▲	1. Material confirmation 2. Strip wire size 3. Notch 4. Performance 5. Tin immersion 6. Terminal appearance/reliability	1. The material model must be consistent with the BOM and drawings. 2. The stripping size of the wire shall be consistent with the drawing. 3. The skin/insulation layer of the wire shall be completely cut without burr. The cut of the core wire is bent 90 degrees twice without fracture. 4.300V high voltage on-off test. Immersion tin twice in 5.2-4 seconds. The insulation layer/core should be full and bright. 6. The scratch of the terminal must not expose the base material or have burrs. The second grip of the terminal should grasp the outer cortex, the tension between the terminal and the wire. 9.8N, the integrated pulling force of terminal and board end > 5N	First inspection 3PCS/100% self-inspection, inspection (appearance 20PCS/2H, reliability 1PCS/2H)	visual	Operator /IPQC	< First inspection report > < IPQC spot inspection report >		< Process inspection control Procedure > , related model SOP, drawings	Tin stove/wire stripper/ terminal machine/tension meter	Stop production and adjust parameters	rework
7	Welding coaxial	welding	▲	1. Solder 2. Appearance 3. Terminal orientation	1. The welding points should be smooth, and there should be no pointed points, virtual welding, and the height of the solder joint should be consistent with the drawing 2. Do not stain, conductive cloth do not burn/stick tin	First inspection 3PCS/100% self-inspection, inspection (appearance 20PCS/2H, reliability 1PCS/2H)	Visual/silicone	Operator /IPQC	< First inspection report > < IPQC spot inspection report >	3 years	< Process inspection control Procedure > < , drawings, related model SOP	Soldering iron	Stop production	rework
8	laminating	Stick on auxiliary material		1. Apply acetic acid cloth 2. Mounting position 2. Maintain pressure	1. Do not warp or leak the paste. 2. Stick to the positioning line according to the requirements of the drawing 3. Pressure holding time with fingers after fitting :2S	First inspection 3PCS/100% self-inspection, inspection (appearance 20PCS/2H, reliability 1PCS/2H)	Visual/silicone	Operator /IPQC	< First inspection report > < IPQC spot inspection report >	3 years	< Process inspection control Procedure > < , drawings, related model SOP	tweezers	Stop production	rework
9	Test	Test	▲	1. Consistency test	It is consistent with the research and development sample test	100% inspection	Testing and moulding tool	FQC	< FQC inspection report >	3 years	SOP and test reference book for each model	Testing and moulding tool	Stop production	rework
10	inspection	inspection	▲	1. Appearance inspection 2. Performance/reli	1. Refer to product SOP/ inspection reference book	100% inspection	Eye/shake	FQC	< FQC inspection report >	3 years	SOP and test reference book for each model	Caliper/straighted ge / Testing	Stop production	rework
11	packaging	packaging		1. Quantity checking 2. Packing method	1. The quantity is consistent with the label 2. Meet SOP requirements	100% inspection	visual	operator	< Daily production report >	3 years	< Packaging specification > , related model SOP	Heat sealing machine / Scale of	Stop production	rework
12	Put in storage	Put in storage		1: Quantity 2: Packing	1. The quantity is consistent with the actual product 2. Packing and warehousing as required	100% inspection	visual	Store clerk/storekeeper	< Warehousing order >	3 years	< Product handling, storage, packaging and delivery control procedures > , & lt; Process inspection control Procedure >	Trolley/turnover box/electronic scale	Stop storage	rework
13	OQC inspection	OQC inspection		1. Appearance 2.Packaging/label	1. Consistent with the sample 2. Consistent with the drawing requirements 3. Shipment packing method meets customer's requirements	1. Appearance AQL= MA:1.0/ MI:0.4 2. Size: 10PCS	Visual/caliper/quadratic element	QA	< Shipment report >	3 years	< Final inspection control procedure > , & lt; Nonconformity control procedures >	Caliper/straighted ge / Testing and moulding	Stop shipping	rework
14	shipment	shipment		1: Quantity 2: Packing	1. The quantity is consistent with the actual product 2. Packing and warehousing as required	100% inspection	visual	Store clerk/storekeeper	< Order of Shipment >	3 years	< Product handling, storage, packaging and delivery control procedures > , & lt; Process inspection control Procedure >	Trolley/turnover box/electronic scale	Stop shipping	rework

gend Description Start of process Inspection and determination Production process Material transport turnover In/out

Thetitle	FPC+ copper axis SIP	Document number	ZTX-QD-SP-025		
Department of Formulation	Quality Department	Date of establishment	2021/11/15	version	A3

I. Inspection basis:

1. Specifications and limit samples recognized by the customer
2. Engineering drawing file/acknowledgement letter/sample
3. Appearance inspection standard of parts

Ii. Sampling level:

According to the need, the sampling number can be divided into special sampling and GB/T2828.1-2012 sampling level.

a. According to the normal inspection, the appearance sampling shall adopt the single scheme of GB/T2828.1-2012 sampling level (II level).

b. N=10 and C=0 shall be used for size sampling according to normal inspection

Iii. Inspection Conditions:

1. Lighting & vision: lighting degree ≥800Lux corrected visual acuity above 1.0
2. Visual time: Confirm defects within 10 seconds
3. Visual distance: the distance between the naked eye and the measured object is 30cm to 45cm
4. Visual Angle: within 30 to 45 degrees of the measured object

Iv. Comparison table of defect codes

Name (unit)	diameter (mm)	length (mm)	area (mm2)	number (pcs)	width (mm)	distance (mm)	Height and depth(mm)
code	D	L	S	N	W	DS	H

Five, homework content:

project	Scope of inspection		level	Criterion of judgment	Tool of inspection	Grade of defect
appearance	all	The color difference	△	Not allowed/according to color limit sample	visual	MI
		The dirt	△	L≤3mm or W≤2mm and not visible to the naked eye at 30cm.	visual	MI
material		The material is inconsistent with the sample and drawing	▲	Not allowed	Visual/material report inspection	MA
appearance	FPC	The FPC surface is exposed to copper	▲	Not allowed	visual	MA
		Coating oxidation/corrosion	△	Not allowed	Visual/Filinka	MI
		Uneven cutting edge (extra material, missing material)	△	L≤0.2mm, W≤0.1mm		MI
		A cut on Goldfinger	△	Not allowed	visual	MI
		Granular, spotty defects	△	S≤0.1mm, allow, S≤0.3mm, N≤2, DS≥30mm;	Visual/Filinka	MI
		The scratch	△	Scratch: W≤0.15mm, L≤3mm, N≤2 No bottom, does not affect the performance		MI
		Poor screen printing	△	Screen printing content is consistent, clear does not affect the identification	visual	MI
		The back adhesive	▲	The back adhesive meets the requirements. The detached paper can not fall off naturally or adhere to each other		MI
	terminal	Defect, coating off	▲	Not allowed	visual	MA
		Cup mouth deformation	▲	Not allowed		MA
		Width of opening	△	It is not allowed to exceed the cup diameter of the drawing	caliper	MI
		Indentation/scratch	△	No underwood is allowed	visual	MI
		Batch of front	△	Do not affect the assembly, do not scratch hands, do not hurt hands (height ≤0.05mm)	Visual/Filinka	MI
		Direction of terminal	△	Consistent with the drawing requirements, internal control of deviation (≤100MM±30℃, ≤350MM±45℃, >350MM Out of control)	visual	MI
	wire	The terminal falls off after riveting	▲	Not allowed, the third gripper height (see the antenna terminal rivet height reference table), each batch of pull value qualified	CCD/ tension meter	MA
		Outer skin damage	△	Do not break the skin and expose the base material	visual	MI
		Hard line	△	L≤8mm	Visual/ruler	MI
		Middle stripping confirmation	▲	Bend 90 degrees and pull the wire from one end to the other to check whether there is a middle strip	visual	MA
	welding	Virtual welding/fake welding	▲	Not allowed	visual	MA
		Tin residue/rosin	△			MI
		Tip of solder joint	△			MI
		Height of solder joint	▲	Solder joint height ≤1.7mm	Visual/caliper	MA
		Cut wire core confirmation	▲	After welding, bend at 60 degrees between the two solder joints, the wire core can not be broken, and the pad can not fall off	visual	MA

size	measurement	Length, width and thickness (dimensions not included in specifications)	▲	It's not allowed. For the specific size, refer to the corresponding material number drawing, and measure the size according to the requirements	Quadratic element/micrometer/caliper, etc	MA
performance	performance	Performance test	▲	Test product VSWR according to frequency range specified by SOP	RF radio frequency tester	CR
包装 packaging	Package information compliance	1. Confirm whether the ticket label and two-dimensional code of the product in the outer box are consistent with the material number of the delivery bill 2. Check whether the barcode on the label is blurred, damaged, or dirty 3. The outer box is damaged and deformed	△	1. Information such as material number/quantity must be consistent 2. The bar code is not allowed to have blurred print, damage, dirty, can not affect the scanning identification. 3. No puncture is allowed for damage, and the deformation degree is less than 3cm	Visual/scan gun	MI
	数量 The number	1. Check whether the quantity of unpacked materials is consistent with that on the label 2. Each box misses weighing or misses pasting weighing barcode 3. The mantissa label is omitted	▲	1. The actual quantity must be consistent with the label 2. Weigh according to SOP requirements, and attach the weighing bar code 3. Mantissa packaging and outer boxes should be labeled with mantissa	Visual/scan gun	MA
	Environmental protection Label	External box leakage paste corresponding ROHS label	△	Not allowed	visual	MI
reliability	Terminal tension	1, the terminal grip riveting height 2. Terminal tension		1, (see antenna terminal riveting height reference table) 2, customer requirements, no requirements according to our standards (such as Φ1.13: tension :> 9.8 N)	Tensile force meter	MA
	Terminal pulling force	Terminal comprehensive pull out force		⩾5N at the first time, ⩾3N after 30 times	Tensile force meter	MA
	Conventional reliability	Salt spray test/hot and cold shock test/high temperature test/low temperature test, etc		According to customer requirements, if the customer does not require, according to our antenna reliability test base book, file number: ZTX-QD-SP-018 send test	Salt spray testing machine/hot and cold impact test chamber/constant temperature and humidity test chamber	MA
Environmental protection	HSF	HSF compliance	▲	1. The environmental report shall meet the requirements of RoHS2.0 within the validity period or the material content 2, all packaging RoHS label is not clear or not allowed	spectrograph	CR

Note: "▲" is the key feature; △ is an important feature

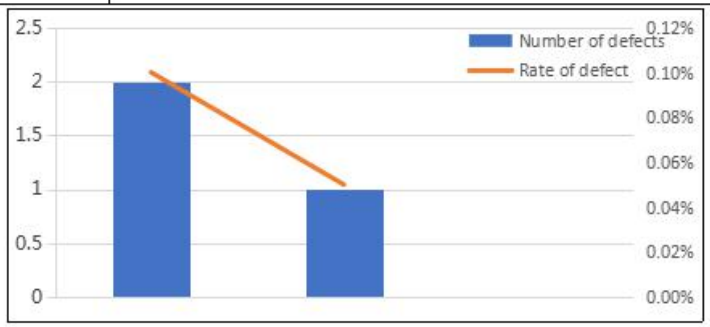
1. Three minor defects accumulate to be a minor defect, and three minor defects accumulate to be a major defect.
2, according to the customer's requirements on the appearance, can be appropriate to adjust the inspection standards to meet customer requirements.
3. Key inspection items: bracket buckle, screw hole, motor assembly, horn assembly, camera assembly and other assembly positions.

General settlement of trial production report

Name of Product	TC1	Class don't	FPC+Axis of symmetry	Name of Customer	INSTA360	Product Number	2.00005667
Trial production quantity	2000	Number of trial production	1	Ring is protected	/	Date of completion of trial	2022/10/24

	process	Number of inputs	Number of good quality	yield	Analysis of defects	/	/	/
DVT01	ncoming mat	2000	2000	100.00%				
	welding	2000	2000	100.00%				
	dispensing	2000	2000	100.00%				
	oints plat	2000	2000	100.00%				
	Test	2000	2000	100.00%				
	appearance	2000	1997	99.85%	FPC copper leakage *2, FPC fold *1			
	packaging	1997	1997	100.00%				
			Rate of direct passage	99.85%				

Top Five Bad	Bad name	ber of defe	Rate of defect
	Leakage of copper	2	0.10%
	FPC fold	1	0.05%



Top 5 Bad solutions	category	Bad name	Bad description	Root cause	Improvement Measures	ne of complet	Person in charge
	TOP 1	Leakage of copper	The FPC is leaking copper	Copper leakage from incoming FPC	Supplier incoming materials improved	Before the next trial production	liu sun qiao
	TOP 2	fold	FPC has creases	The FPC was squeezed during the turnover	1. Elongate publicity material turnover related matters needing attention.	Before the next trial production	li da xi
	TOP 3						
	TOP 4						
	TOP 5						
	TOP 6						

note	
Trial production results	☑ Qualified in trial production ☐ The trial production is not

Creation/time: Arvin Audit/Time: yang deng shan Approval/Time:

Form Number: ZTX-QR-RD-031 version: A2

Instruction of operation

Product Model Number	Name of Product	version	Process number/name	Working time (S)	Document number
TC1 (T03E)	CHARGE BOX ANTENNA	A1	packaging	/	ZTX-QD-WI-ASSY-358

Figure 1: Product image

Figure 2: Sealed PE bag packing/labeling (picture for reference)

Figure 4: Attached outer box label/Attached shipment inspection report

Figure 3: Packing (picture is for reference only)

Figure 5: Box sealing

Operation method & operation parameters (After self-check the operation of this process is qualified, it can be transferred to the next process)

Sampling baggin

1. Each 50pcs of products should be packed with open pocket staples, affixed with small labels, and filled with product name, material number, quantity, cycle and other information;

Bagging and labelin

2. Independently packaged products. Put 10 bags into (330*230mm) PE plastic bags and pack (500PCS) PE bags. Attach small labels and fill in product name, material number, quantity, cycle and other information;

packing

3. Packing, carton size (45*32.5*21cm), cardboard spacing, put 20 bags per box, excluding the last number of each box (10000pcs), and attached a copy of inspection report;

Attach the outer box

4. The label shall be affixed to the upper right corner of the outer box. The content of the label shall be subject to customer's requirements.

sealing

5. The labeled boxes are sealed with adhesive paper in the shape of "work";

Instrument calibration and requirements:

1. Test equipment must be grounded;
2. After reconnecting the interface or when the connection test is unstable, the instrument needs to be corrected;
3. When testing products, ensure that the antenna is su

Operation protection requirements:

1. Operators need to wear finger covers to work (specia
2. Handle the tested products gently during the testing
3. When operating the test fixture, use it in strict ac

6S Requirements:

1. Keep the surface clean and clean, free of dust, wate
2. Materials are neatly placed and clearly marked;

Note: 1. Customer material code and quantity are correct, label must be printed by machine 2. The contents of inner label, outer label, shipping report and delivery note should be consistent.

3. In case of trial production materials or changes, corresponding labels shall be affixed. The final number of boxes shall be affixed with the final number of labels, and the inspection report shall be attached

Material Name	Material code	specifications	The dosage	note
PE pocket opening	1.12.000030	240*160*0.05mm	50/bag	
PE seal pocket	1.12.000029	330*230*mm	10/bag	
The cardboard	1.13.000003	42*30cm	2sheets/case	
The cartons	1.12.000086	45*32.5*21cm	1/box	10000pcs/Box

version	Content of Revision			Date of Amendment	Person of revision
A1	First Edition Release			2022/11/4	
To formulate	Arvin	audit	yi ao ling	\	dang fei fei

表单编号：ZTX-QR-RD-028 版本：A1

Raw Material Detection List
原材料检测清单

序号	组成部件或零件Parts or Components	材料名称或型号 Style/ltem NO.	Pb 铅	Cd 镉	Hg 汞	Cr6+ 六价铬	PBBs 多溴联苯	PBDEs 多溴联苯醚	邻苯二甲酸二(2-乙基已)酯 DEHP	邻苯二甲酸二丁酯 DBP	邻苯二甲酸丁苄酯 BBP	邻苯二甲酸二异丁酯DIBP	Br	Cl	测试报告编号 Test Report NO.	Test Lab 测试机构名称	测试报告日期	测试报告有效期限	RoHS Report RoHS报告
1	FPC	base material	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	SHAEC2202460504	SGS	2022/2/21	2023/2/20	
		The Ink-based PS-800	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	253	ETR22705905	SGS	2022/8/5	2023/8/4	
		Text Ink ZSR-150	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ETR22A01347M01	SGS	2022/10/17	2023/8/5	
		Ni	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	A2210529607101003E	CTI	2021/12/15	2022/12/14	
		OSP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	SZXEC2200260402 SZXEC2200316202	SGS	2022/2/16	2023/2/15	
		Desa 8854	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	SHAEC2206380517	SGS	2022/4/8	2023/2/16	
2	cable	Coaxial line _ Tin-plated copper wire	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	SHAEC2127051115	SGS	2021/12/16	2023/2/17	
		Coaxial line _ Insulation FEP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NGBML2200124301	SGS	2022/1/27	2023/1/26	
		Coaxis _ knitting	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	A2220186128101ER1	SGS	2022/5/24	2023/5/23	
		Coaxial line _ sheath FEP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	SHAEC2200415801	SGS	2022/1/15	2023/1/14	
		Coaxial _ Color mother Gray	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	SHAEC2203756813	SGS	2022/3/9	2023/3/8	
3	IPEX 4	C5210	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ETR22803072M01	SGS	2022/9/1	2023/8/31	
		Ni	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10545111(2)	SGS	2022/9/8	2023/9/7	
		Au	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10545111(1)	SGS	2022/9/8	2023/9/7	
		PBT white	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ETR22801117	SGS	2022/8/10	2023/8/9	
4	UV glue	AU-6021C	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	CANML2212053501	SGS	2022/6/20	2023/6/19	