
Product performance and specification approval letter

Manufacturer: Shenzhen Maya Communication Equipment Co., Ltd.

Manufacturer's Address: Room 205, Building 1, AI Digital Valley,
Taoyuan Community, Dalang Street, Longhua District, Shenzhen
City

Material name: X73A

Sample color: black

Sample type: FPC

Customer model:_____

☐ Open sample ☐ Other

Version: R.A

fiction	structure	character	ratify	Date of sample submission
				2024.9.26

department	affirm	date	state	sign and seal
electron				
structure				
character				
project				

special clause

1. About performance and structure confirmation

★ Please effectively confirm the appearance and performance of the product before signing the confirmation letter.

★ Please provide the final trial production machine to our company or take it back to our company for verification before mass production.

★ Since the products of this letter of recognition are highly sensitive objects, please be sure to keep the test gold machine for subsequent traceability.

★ Since this product is a custom item with strong specificity, when customers replace materials or use them for non-designated projects, please ensure to send the changed materials or machines for non-designated projects back to our company for RF performance verification. Otherwise, it may lead to serious risks of discrepancies between the actual usage and design states. We will seal and debug the sample units to confirm their functions, ensuring that the debugging samples function properly to prevent functional abnormalities from causing antenna performance errors.

2. About product storage

★ Since the surface printing ink of this product, the back is coated with back glue, and there are electroplated objects, please be sure to confirm that the temperature is between 23°C-27°C, the relative humidity is below 60%, and the storage or transportation is in an environment without strong acid, sulfur and oxygen.

★ Because the back adhesive of this product has strict environmental requirements, customers must assemble the product within the optimal service life of the product after receiving the product to ensure the reliability of the product.

3. Agreement on product use

★ Due to the unique structure of this product, it is essential to ensure full contact with the object being adhered. The object must not have any chemical residues (such as release agents) or should avoid using raw materials that contain release agents. To maintain the product's optimal performance, clean the surface of the object before applying the product to ensure it is free of any chemical residues.

4. Quality statement of the product

★ Due to the above factors, it is recommended that the optimal use period of this product is 12

months. If overdue, the use effect of the product will be affected. Our company provides lifelong consultation and paid replacement service for this product.

★ This product is a special customized device. Please check the appearance, quantity and performance of the product within 7 days after receiving the product according to the standards agreed in this "Product Performance and Specifications Acknowledgment Letter". If overdue, it shall be deemed that the quality of the product meets the agreed standards of both parties.

★ Verification method: compare the engineering seal sample with the letter of recognition.

catalogue

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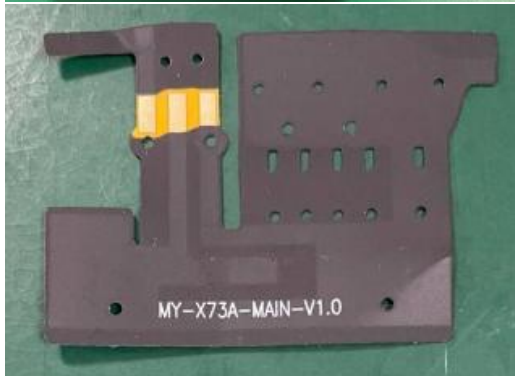
1. Customer antenna debugging design requirements frequency band

frequency	frequency range
2G	GSM900/850/1800/1900
3G	WCDMA B1/2/4/5/8
4G	LTE B1/2/3/4/5/7/12/17/19/20/25/28/34/38/39/40/41
else	WIFI/BT/GPS NFC

2. Product phone and antenna diagram



Product image



4G main antenna



4G diversity



WIFI/BT/GPS



NFC antenna

3. Electrical performance

3.1 Active OTA TRP/TIS data

标准	BAND	GSM900			DCS1800		
2G	CHANNEL	1	62	124	512	699	885
	TRP	28.1	28.1	28.0	26.5	26.5	26.7
	TIS			-105.3			-105.7
	BAND	GSM850			PCS1900		
	CHANNEL	128	192	251	512	661	810
	TRP	29.1	29.4	29.3	27.2	27.2	27.2
	TIS			-105.2			-104.2

标准	BAND	WCDMA-B1			WCDMA-B2		
3G	CHANNEL	Low	Medium	High	Low	Medium	High
	TRP	20.4	20.2	20.4	20.2	20.3	20.3
	TIS			-106.6			-106.3
	BAND	WCDMA-B4			WCDMA-B5		
	CHANNEL	Low	Medium	High	Low	Medium	High
	TRP	20.7	20.7	20.5	19.5	19.5	19.4
	TIS			-106.2			-107.6

标准	BAND	WCDMA-B8					
3G	CHANNEL	Low	Medium	High			
	TRP	20.3	20.5	20.2			
	TIS			-107.5			

标准	BAND	LTE-B1			LTE-B2		
4G	CHANNEL	Low	Medium	High	Low	Medium	High
	TRP	20.5	20.4	19.7	20.2	20.4	20.5
	TIS			-93.1			-93.4
	BAND	LTE-B3			LTE-B4		
	CHANNEL	Low	Medium	High	Low	Medium	High
	TRP	20.2	20.0	20.2	19.6	19.8	19.2
	TIS			-94.2			-93.3

标准	BAND	LTE-B5			LTE-B7		
4G	CHANNEL	Low	Medium	High	Low	Medium	High
	TRP	19.4	19.5	19.7	16.0	16.2	16.1
	TIS			-94.1			-93.1
	BAND	LTE-B8			LTE-B12		
	CHANNEL	Low	Medium	High	Low	Medium	High
	TRP	20.6	20.7	20.5	15.5	16.3	16.1
	TIS			-94.0			-90.5

标准	BAND	LTE-B17			LTE-B19		
4G	CHANNEL	Low	Medium	High	Low	Medium	High
	TRP	16.4	16.5	16.3	19.2	19.4	19.5
	TIS			-90.2			-94.2
	BAND	LTE-B20			LTE-B28		
	CHANNEL	Low	Medium	High	Low	Medium	High
	TRP	19.2	19.2	19.5	16.2	17.4	17.6
	TIS			-94.6			-92.9

标准	BAND	LTE-B34			LTE-B38		
4G	CHANNEL	Low	Medium	High	Low	Medium	High
	TRP	18.7	18.9	18.9	15.5	15.5	15.5
	TIS			-92.4			-92.4
	BAND	LTE-B39			LTE-B40		
	CHANNEL	Low	Medium	High	Low	Medium	High
	TRP	20.7	20.6	20.7	18.2	18.1	16.4
	TIS			-92.1			-90.8

标准	BAND	LTE-B41			LTE-B25		
4G	CHANNEL	Low	Medium	High	Low	Medium	High
	TRP	15.4	15.5	16.0	20.6	20.8	20.6
	TIS			-92.9			-93.5

标准	BAND	WiFi_B			WiFi_G		
自由空间	CHANNEL	L	M	H	L	M	H
	TRP	12.0	11.4	11.5	10.3	10.1	10.0
	TIS亮屏			-81.3			-68.2
	BAND	WiFi_N			WiFi_A		
	CHANNEL	L	M	H	L	M	H
	TRP	10.0	9.7	9.5	9.4	9.2	10.3
	TIS亮屏			-63.2			-70.0
	BAND	WiFi_AC					
	CHANNEL	L	M	H			
	TRP	9.3	9.3	10.0			
	TIS亮屏			-64.5			

测试距离用的垫片

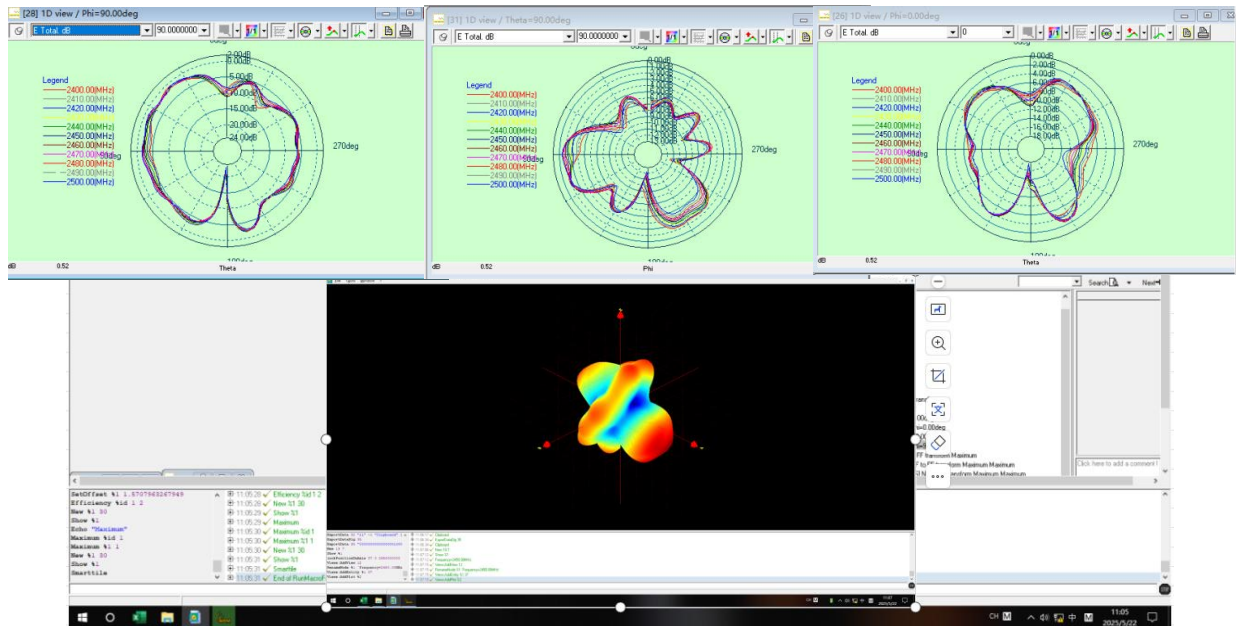
	NFC通讯距离
Type1	3.8cm
Type2	3.5cm
Type3	2.5cm
Type4	1.4cm



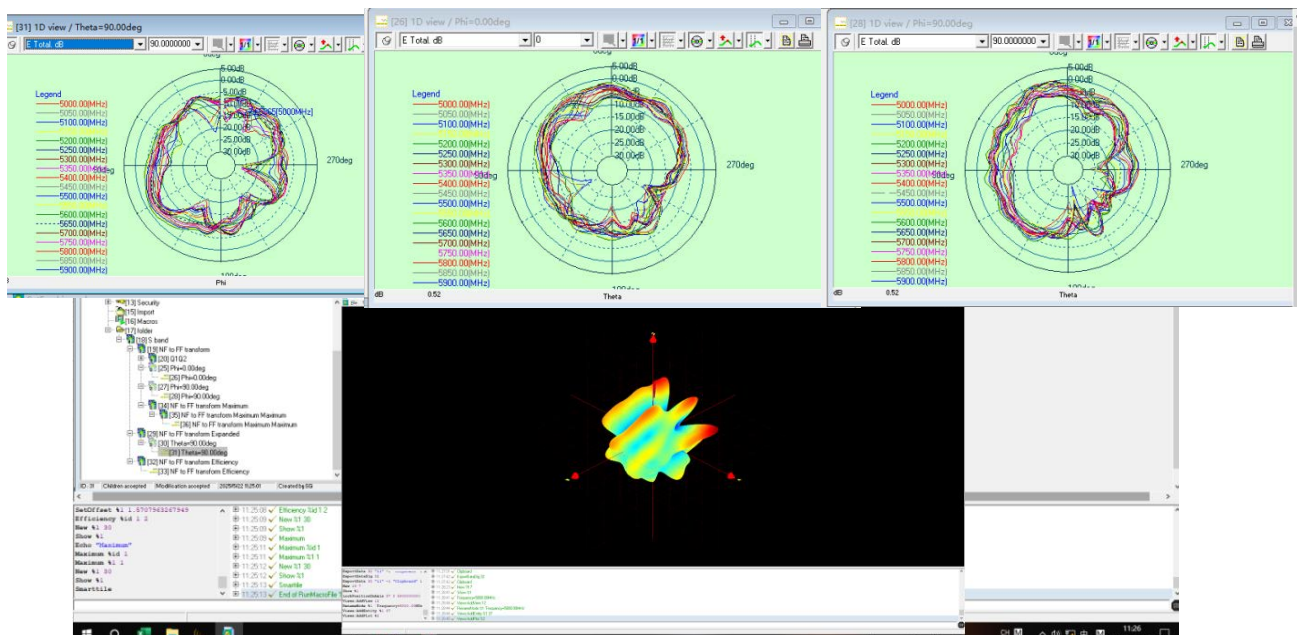
3.2 Efficiency gain data

1		1	
Frequency	Efficiency	Frequency	Gain . dBi
2400000000	31.64%	2400000000	-0.289986516
2410000000	31.56%	2410000000	-0.399449875
2420000000	31.96%	2420000000	-0.510242374
2430000000	31.65%	2430000000	-0.64893523
2440000000	31.46%	2440000000	-0.75354479
2450000000	31.22%	2450000000	-0.87548505
2460000000	31.00%	2460000000	-1.068922129
2470000000	30.47%	2470000000	-1.254244333
2480000000	29.91%	2480000000	-1.162423541
2490000000	29.28%	2490000000	-1.101937327
2500000000	28.51%	2500000000	-1.110791069
1		1	
Frequency	Efficiency	Frequency	Gain . dBi
5000000000	29.55%	5000000000	0.082928433
5050000000	27.14%	5050000000	-0.116982426
5100000000	24.70%	5100000000	-0.606286886
5150000000	23.75%	5150000000	-0.53839876
5200000000	23.24%	5200000000	-0.547062573
5250000000	24.30%	5250000000	-0.073274943
5300000000	24.31%	5300000000	-0.05867342
5350000000	22.29%	5350000000	-1.121523484
5400000000	21.25%	5400000000	-2.3023947
5450000000	21.27%	5450000000	-3.381262242
5500000000	22.38%	5500000000	-4.157426346
5550000000	23.11%	5550000000	-4.053326271
5600000000	24.32%	5600000000	-3.488725223
5650000000	24.61%	5650000000	-3.167572381
5700000000	25.33%	5700000000	-2.798608897
5750000000	26.65%	5750000000	-2.27985313
5800000000	29.59%	5800000000	-1.395460792
5850000000	32.07%	5850000000	-0.867347696
5900000000	34.21%	5900000000	-0.273450548
5950000000	36.44%	5950000000	0.273596311
6000000000	38.10%	6000000000	0.568237869

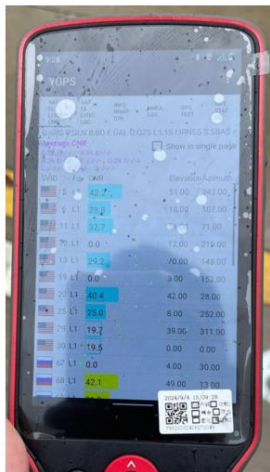
WIFI2.4/BT Direction diagram



WIFI5.8 Directional diagram



GPS、WIFI实测效果



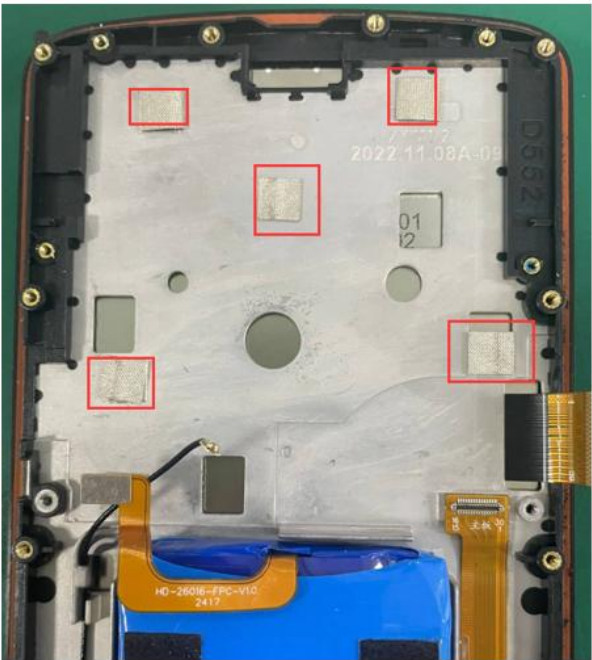
白天，公司楼下停车场，冷启动119S内定位，最佳方位最大星值42.2



距离路由器8M信号强度

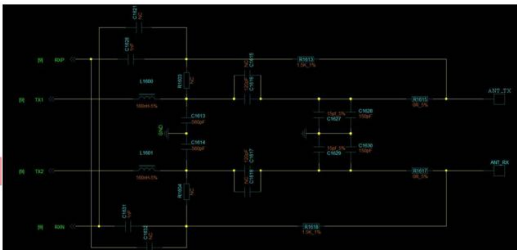
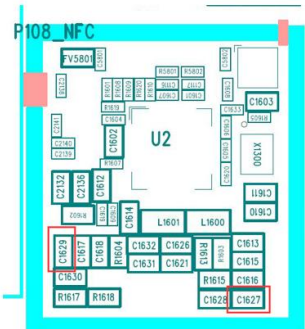
4. Environmental processing and matching circuit

红框处贴导电泡棉使主板接地。

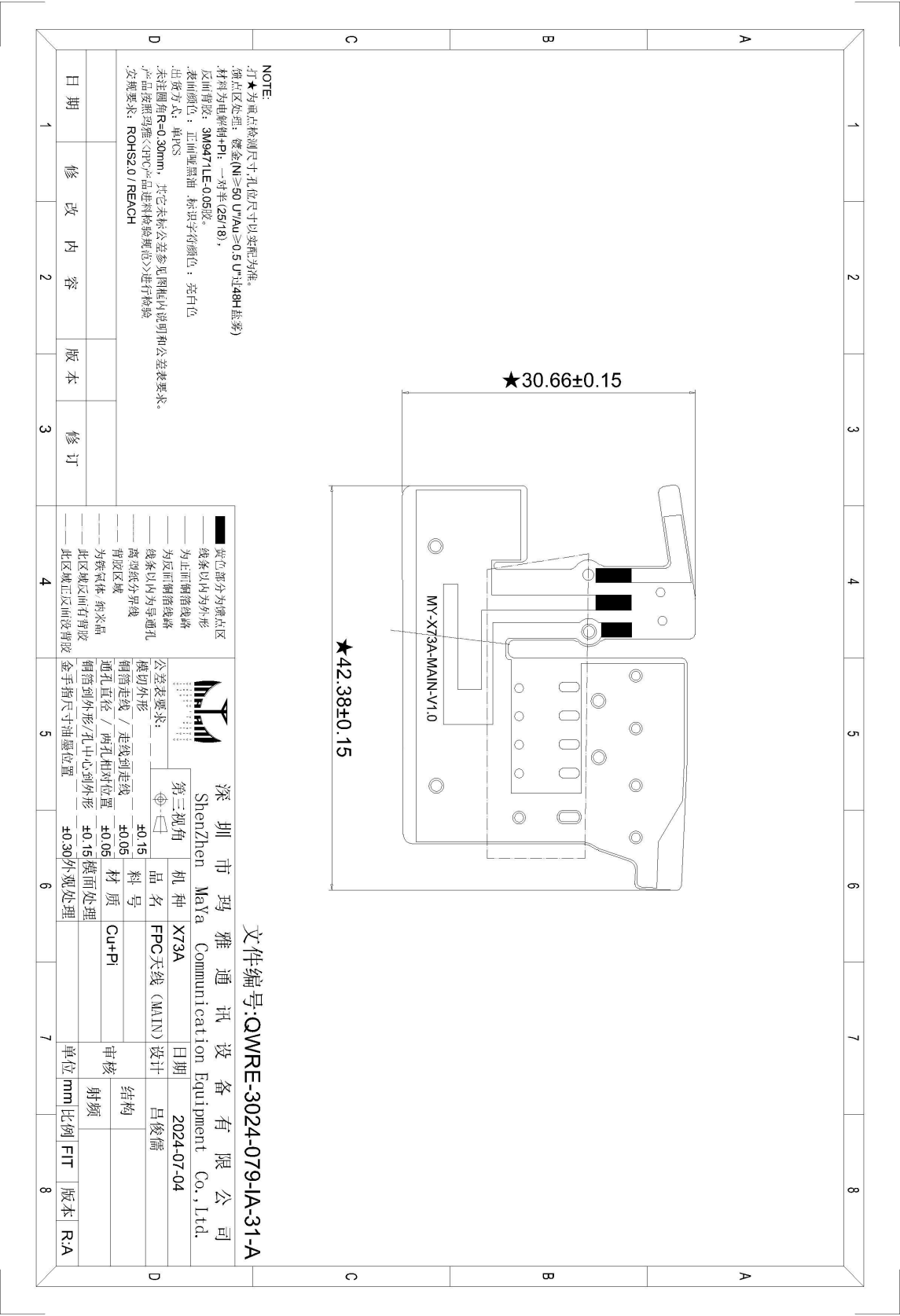


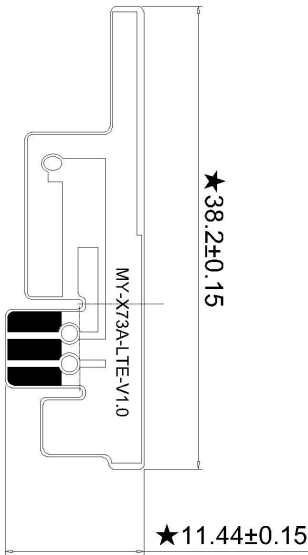
注：4G主分集，三合一天线匹配电路未更改。
NFC匹配电路有更改。

元件 Element	更改前	更改后
C1629(0402):	15pF	NC
C1627(0402):	15pF	NC



5. Structural drawings



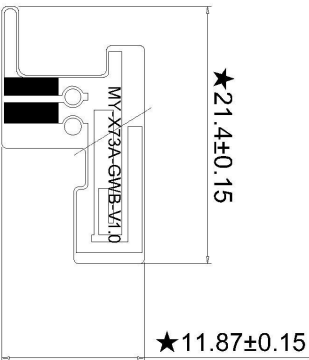


NOTE:
打★为重点检测尺寸,孔位尺寸以装配为准。
.微点区处理: 镀金(NI≥50 U"/Au≥0.5 U"/48H 盐雾)
.材料为电铸铜+PI: 一对半 (2S/18),
.反面背胶: 3M947LE-0.05胶。
.表面颜色: 正面哑黑油, 标识字有颜色: 亮白色
.出货方式: 单PCS
.未注圆角R=0.30mm, 其它未标公差参见图框内说明和公差表要求。
.产品按照玛雅《FPC产品制程检验规范》进行检验
.规范要求: ROHS2.0 / REACH

日期		修改内容	版本	修订
1		2	3	

- 黄色部分为微点区
- 线条以内为外形
- 为正面铜箔线路
- 为反面铜箔线路
- 线条以内为导通孔
- 离边纸分界线
- 背胶区域
- 为铁氧体, 铜发晶
- 此区域反面有背胶
- 此区域正反面没背胶

										深圳市玛雅通讯设备有限公司 Shenzhen Maya Communication Equipment Co., Ltd.									
公差表要求: _____										第三视角									
模切外形																			
铜箔走线 / 走线到走线										机种									
通孔直径 / 两孔相对位置										品名									
铜箔到外形/孔中心到外形										X73A									
金手指尺寸/油墨位置										FPC天线 (LTE)									
±0.15										料号									
±0.05										材质									
±0.15										Cu+PI									
±0.15										模面处理									
±0.30										外观处理									
单位										日期									
mm										2024-07-04									
比例										设计									
FIT										吕俊儒									
版本										结构									
RA										射频									



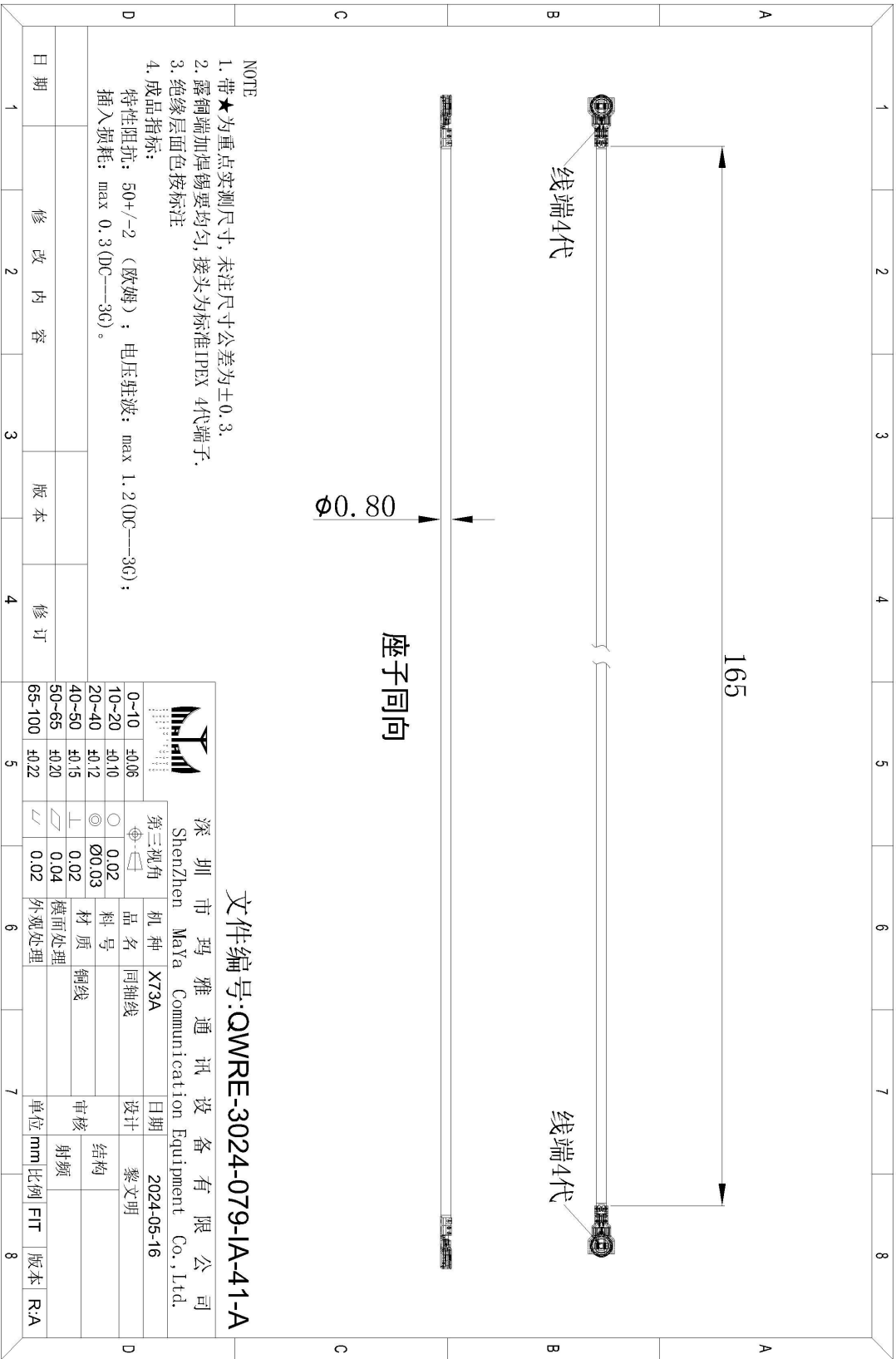
				1	2	3	4	5	6	7	8																				
A																															
B																															
C																															
NOTE: 打★为重点检测尺寸,孔位尺寸以实配为准。 镀点区处理: 镀金(NI≥50 U7Au≥0.5 U748H盐雾) .材料为电铸铜+PI: 一对半 (2S/1B), 反面背胶: 3M947LE-0.05胶。 .表面颜色: 正面哑黑油, 标识字符颜色: 亮白色 出货方式: 真空 未注圆角R=0.30mm, 其它未标公差参见图框内说明和公差表要求。 .产品按照玛雅<CHC产品进材料检验规范>进行检测。 .安规要求: ROHS2.0 / REACH																															
				■ 黄色部分为镀点区 —— 线条以内为外形 —— 为正面铜箔线路 —— 为反面铜箔线路 —— 线条以外为导通孔 —— 离型纸分界线 —— 背胶区域 —— 为纸壳体 绑水晶 —— 此区域反面有背胶 —— 此区域正反面没背胶 深 圳 市 玛 雅 通 讯 设 备 有 限 公 司 Shenzhen MaYa Communication Equipment Co., Ltd. 第三视角 公差表要求: 模切外形 ±0.15 铜箔走线 / 走线到走线 ±0.06 通孔直径 / 两孔相对位置 ±0.06 铜箔到外形/孔中心到外形 ±0.15 金手指尺寸油墨位置 ±0.30外观处理																											
				<table><tr><td>机 种</td><td>品 名</td><td>材 质</td><td>审 核</td><td>结 构</td></tr><tr><td>X73A</td><td>FPC天线 (GWB)</td><td>Cu+PI</td><td>吕俊儒</td><td>射频</td></tr></table>												机 种	品 名	材 质	审 核	结 构	X73A	FPC天线 (GWB)	Cu+PI	吕俊儒	射频						
机 种	品 名	材 质	审 核	结 构																											
X73A	FPC天线 (GWB)	Cu+PI	吕俊儒	射频																											
				<table><tr><td>日 期</td><td>日 期</td><td>单 位</td><td>mm</td><td>比 例</td><td>FIT</td><td>版 本</td><td>R.A</td></tr><tr><td>2024-07-04</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>												日 期	日 期	单 位	mm	比 例	FIT	版 本	R.A	2024-07-04							
日 期	日 期	单 位	mm	比 例	FIT	版 本	R.A																								
2024-07-04																															
				1	2	3	4	5	6	7	8																				
				日 期	修 改 内 容	版 本	修 订																								

★21.4±0.15

★11.87±0.15

MY-X73A-GWB-V1.0

文件编号:QWRE-3024-079-IC-31-A



NOTE

1. 带★为重点实测尺寸, 未注尺寸公差为 ± 0.3 .
 2. 露铜端加焊锡要均匀, 接头为标准 IPEX 4代端子.
 3. 绝缘层面色按标注
 4. 成品指标:
- 特性阻抗: $50+/-2$ (欧姆); 电压驻波: max 1.2 (DC—3G);
插入损耗: max 0.3 (DC—3G)。

日期	修 改 内 容	版 本	修 订	5				6		7		8	
				65-100				外观处理		单位 mm		比例 FIT	
				50~65				模面处理		审核		射频	
				40~50				材 质		铜线			
				20~40				料 号					



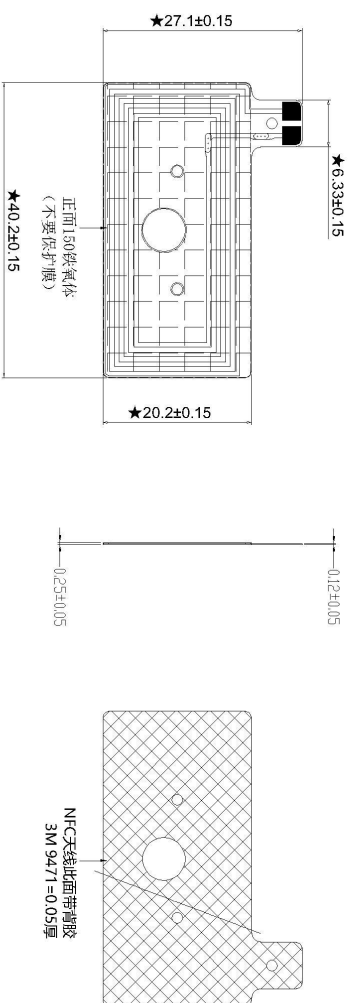
深 圳 市 玛 雅 通 讯 设 备 有 限 公 司
Shenzhen MaYa Communication Equipment Co., Ltd.

第三视角		机 种		品 名		日期		设计		黎文明	
0~10		X73A		同轴线		2024-05-16					

10~20											
20~40											

40~50											
50~65											

65~100											



NOTE:

打★为重点检测尺寸,孔位尺寸以实配为准。

镀点区处理: 镀金($\text{Ni} \geq 50 \text{ U}^\circ/\text{Au} \geq 0.5 \text{ U}^\circ$ 过48H盐雾)

材料为电解铜+PI: (18/13/18),

反面背胶: 3M9471-0.05胶。

·表面颜色： 单面黑
·出货方式： 微粘膜

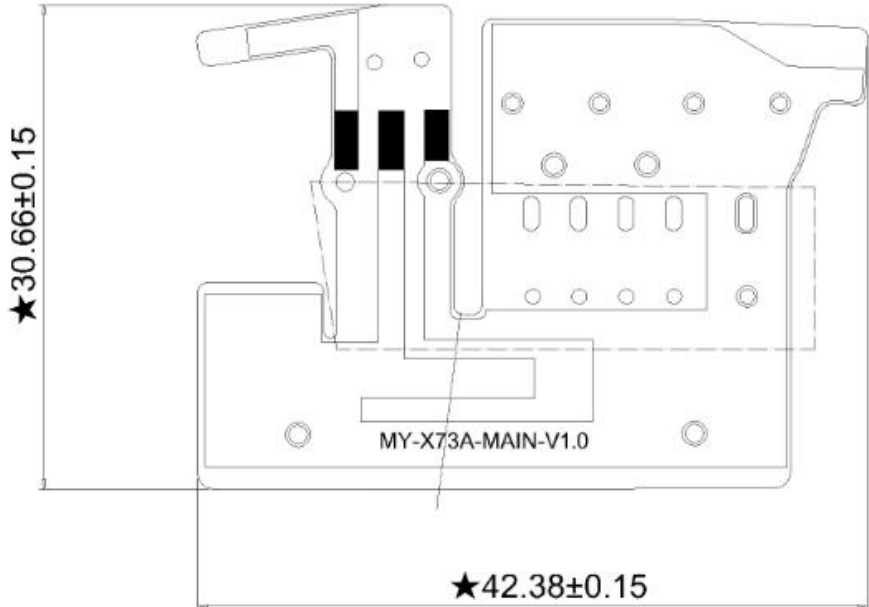
未注圆角 $R=0.30\text{mm}$, 其它未标公差参见图框内说明和公差表要求。

产品按照玛雅<IPC>产品进料检验规范>进行检验

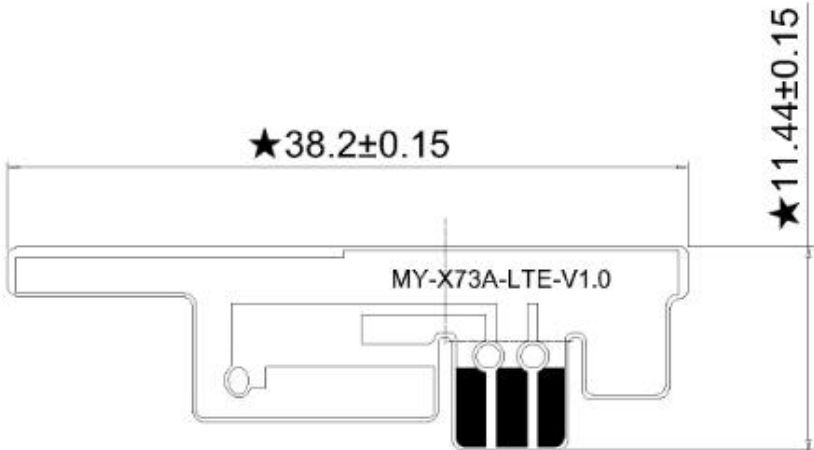
安規要求: ROHS2.0

D									
材料为电镀锌+P1 (18/13/18), 反面覆胶: CM9471-0.05胶。 表面颜色: 单面黑油,标识字符颜色: 无 出板方式: 微蚀版 未注圆角R=0.3mm, 其它未标公差参照图框内说明和公差要求。 产品按照雅驰<PC2+产品进料检验规范>进行检验。 其他要求: ROHS2.0									
日期	修	改	内	容	版	本	修	订	
1			2				3		
4									
黄色部分为镀点区 线条以内为外形 为正而侧留线路 为反面侧留线路 线条以外为导通孔 黄底纸分界线 背胶区域 为胶水体,约水晶 此区域反面有背胶 此区域正反面没背胶									
5									
6									
7									
8									
D									

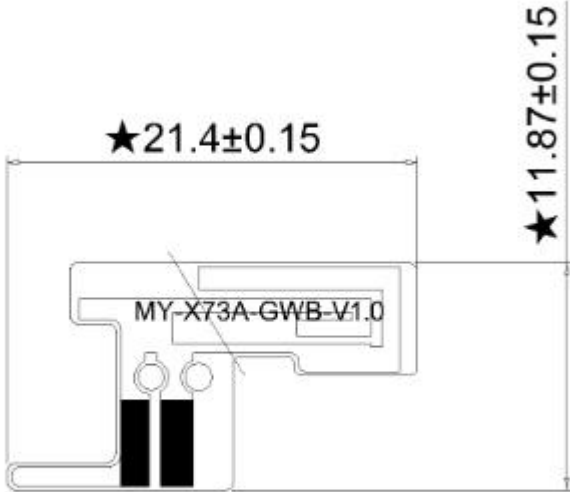
6. Size measurement report

material quality	FPC antenna			graphic: 					
project name	X73A								
Number of samples	5PCS								
Sample date	2024.9.26								
1. Appearance inspection:									
Visual inspection items	casual inspection	checkout bear fruit							
1. Surface impurities and dirt	5PCS	OK							
2. Overflow of glue		OK							
3. Waste		OK							
4. Tear		OK							
5. Golden oxidation		OK							
6. Ink (black)		OK							
Ii. Reliability test (randomly selected 5PCS):									
test item	standard		1	2	3	4	5	result	
1. Adhesion test	The ink should not fall off		not have	not have	not have	not have	not have	OK	
2. Salt spray test condition	The gold surface is not corroded		not have	not have	not have	not have	not have	OK	
3. Wear resistance test	Do not omit the base material							OK	
4. Screen printing content	MY-X73A-MAIN-V1.0							OK	
3. Size measurement (randomly selected 5PCS):									
position	base line value (mm)	common difference +(mm)	common difference -(mm)	1	2	3	4	5	detection result
1	30.66	0.15	0.15	30.61	30.63	30.64	30.68	30.69	OK
2	42.38	0.15	0.15	42.33	42.35	42.39	42.40	42.42	OK
3									
4									

5									
6									
7									
8									
9									
10									

material quality	FPC antenna			graphic: 					
project name	X73A								
Number of samples	5PCS								
Sample date	2024.9.26								
1. Appearance inspection:									
Visual inspection items	casual inspection	checkout bear fruit							
1. Surface impurities and dirt	5PCS	OK							
2. Overflow of glue		OK							
3. Waste		OK							
4. Tear		OK							
5. Golden oxidation		OK							
6. Ink (black)		OK							
Ii. Reliability test (randomly selected 5PCS):									
test item	standard		1	2	3	4	5	result	
1. Adhesion test	The ink should not fall off		not have	not have	not have	not have	not have	OK	
2. Salt spray test condition	The gold surface is not corroded		not have	not have	not have	not have	not have	OK	
3. Wear resistance test	Do not omit the base material							OK	
4. Screen printing content	MY-X73A-LTE-V1.0							OK	
3. Size measurement (randomly selected 5PCS):									
position	base line value	commo n	commo n	1	2	3	4	5	detectio n result

	(mm)	differen ce +(mm)	differen ce-(mm)						
1	38.2	0.15	0.15	38.15	38.16	38.19	38.23	38.25	OK
2	11.4	0.15	0.15	11.36	11.37	11.39	11.42	11.44	OK
3									
4									
5									
6									
7									
8									
9									
10									

material quality	FPC antenna			graphic: 					
project name	X73A								
Number of samples	5PCS								
Sample date	2024.9.26								
1. Appearance inspection:									
Visual inspection items		casual inspection	checkout bear fruit						
1. Surface impurities and dirt		5PCS	OK						
2. Overflow			OK						
3. Waste			OK						
4. Tearing			OK						
5. Golden oxidation			OK						
6. Ink (black)			OK						
Ii. Reliability test (randomly selected 5PCS):									
test item	standard			1	2	3	4	5	result

1. Adhesion test	The ink should not fall off	not have	not have	not have	not have	not have	not have	OK	
2. Salt spray test condition	The gold surface is not corroded	not have	not have	not have	not have	not have	not have	OK	
3. Wear resistance test	Do not omit the base material							OK	
4. Screen printing content	MY-X73A-GWB-V1.0							OK	
3. Size measurement (randomly selected 5PCS):									
position	base line value (mm)	common difference +(mm)	common difference-(mm)	1	2	3	4	5	detection result
1	21.4	0.15	0.15	21.35	21.36	21.38	21.42	21.43	OK
2	11.87	0.15	0.15	11.83	11.84	11.86	11.89	11.90	OK
3									
4									
5									
6									
7									
8									
9									
10									

material quality	FPC antenna			graphic:
project name	X73A			
Number of samples	5PCS			
Sample date	2024.9.26			
1. Appearance inspection:				
Visual inspection items	casual inspection	checkout bear fruit		
1. Surface impurities and dirt	5PCS	OK		
2. Overflow of glue		OK		

3. Waste		OK	
4. Tearing		OK	
5. Golden oxidation		OK	
6. Ink (black)		OK	
Ii. Reliability test (randomly selected 5PCS):			

test item	standard	1	2	3	4	5	result
1. Adhesion test	The ink should not fall off	not have	not have	not have	not have	not have	OK
2. Salt spray test condition	The gold surface is not corroded	not have	not have	not have	not have	not have	OK
3. Wear resistance test	Do not omit the base material						OK
4. Screen printing content							OK

3. Size measurement (randomly selected 5PCS):

position	base line value (mm)	common difference +(mm)	common difference -(mm)	1	2	3	4	5	detection result
1	6.33	0.15	0.15	6.28	6.29	6.31	6.35	6.36	OK
2	27.1	0.15	0.15	27.05	27.06	27.09	27.12	27.15	OK
3	40.2	0.15	0.15	40.14	40.15	40.16	40.23	40.24	OK
4	20.2	0.15	0.15	20.16	20.18	20.19	20.21	20.23	OK
5									
6									
7									
8									
9									
10									

7. Reliability test report

Salt spray test report

No.20231023

customer name	Langdon	production order direct labor cost summary		1			
product name	FPC	Number of tests		3			
Product part number	X73A	testing standard		GB.24.23.17			
proving time	2024.09.24	Goods materials		FPC			
Test time: 2024.09.24 8:00 2024.09.26 8:00							
test item	Set standards	actual numerical value	judg e	test item	Set standards	actual numerical value	judg e
Test instrument specifications	PS-60	PS-60	OK	testing time	48H	48H	OK
Salt spray test category	NSS neutral	NSS neutral	OK	Salt spray chamber temperature	35±1	35α	OK
Saline PH	6.5-7.0	6.9	OK	Salt spray deposition (H.80C)	1-2ML	1-2ML	0K
Spray method	Continuo us spraying	Continuo us spraying	OK	Material of goods	electrolytic copper +PI	electrolytic copper +PI	0K
Saline composition	5±1%	5%	OK	Reduce air pressure	1.00±0.01	1	OK
saturation temperature	47℃	47℃	OK	Sample placement Angle	90℃	90℃	OK
Test observation time	Observe the phenomenon						
4H	NA						
8H	NA						
12H	NA						
16H	NA						
24H	NA						
28H	NA						

32H	NA				
36H	NA				
40H	NA				
44H	NA				
48H	NA				
Determination criteria: according to the national standard 5944-86 rating method, grade 9 and above are qualified					
Final determination results				unqualified ☐	
tester	Gao Yuelan	examine and verify	Xiaobing	examine and approve	
Note: Common salt spray test methods include: NSS salt spray test, AASS acetate salt spray test, CASS copper acetate accelerated test.					

8. Cpk report

CPK-指数报告

客户名称： 玛雅通讯										审核	确认	制作
機種品名： X73A										吕俊儒	夏兵	胡悦
规格 序号	30.66		42.38									备注
	0.15	0.15	0.15	0.15								
1	30.60	42.34										
2	30.61	42.35										
3	30.62	42.36										
4	30.62	42.36										
5	30.56	42.34										
6	30.57	42.30										
7	30.58	42.30										
8	30.59	42.36										
9	30.59	42.30										
10	30.60	42.39										
11	30.61	42.36										
12	30.62	42.37										
13	30.57	42.39										
14	30.58	42.39										
15	30.59	42.39										
16	30.59	42.38										
17	30.58	42.38										
18	30.56	42.38										
19	30.57	42.36										
20	30.59	42.37										
21	30.57	42.39										
22	30.58	42.39										
23	30.59	42.40										
24	30.56	42.39										
25	30.57	42.45										
26	30.59	42.39										
27	30.59	42.36										
28	30.58	42.38										
29	30.57	42.39										
30	30.57	42.34										
MAX	30.62	42.45	0.00									
MIN	30.56	42.30	0.00									
X	30.59	42.37	#DIV/0!									
M	30.81	42.53	0.00									
CP	2.817	1.565	#DIV/0!									
SN-1	0.018	0.032	#DIV/0!									
K	0.4956	0.0778	#DIV/0!									
CPK/判定	1.421	满足	1.443	满足	#DIV/0!	#DIV/0!						

CPK-指数报告

客户名称： 玛雅通讯										审核		确认		制作			
機種品名： X73A										日 期： 2024-9-26		吕俊儒		夏兵		胡悦	
规格 序号	38.20		11.44												备注		
	0.15	0.15	0.15	0.15													
1	38.15		11.40														
2	38.16		11.38														
3	38.15		11.41														
4	38.22		11.39														
5	38.15		11.36														
6	38.23		11.39														
7	38.18		11.38														
8	38.23		11.35														
9	38.19		11.36														
10	38.19		11.37														
11	38.20		11.36														
12	38.23		11.34														
13	38.16		11.36														
14	38.17		11.38														
15	38.18		11.35														
16	38.18		11.35														
17	38.14		11.37														
18	38.14		11.38														
19	38.15		11.39														
20	38.15		11.39														
21	38.16		11.38														
22	38.15		11.39														
23	38.14		11.38														
24	38.15		11.45														
25	38.16		11.38														
26	38.13		11.39														
27	38.15		11.39														
28	38.18		11.36														
29	38.19		11.39														
30	38.18		11.38														
MAX	38.23		11.45		0.00												
MIN	38.13		11.34		0.00												
X	38.17		11.38		#DIV/0!												
M	38.35		11.59		0.00												
CP	1.747		2.325		#DIV/0!												
SN-1	0.029		0.022		#DIV/0!												
K	0.1911		0.4111		#DIV/0!												
CPK/判定	1.413	满足	1.369	满足	#DIV/0!	#DIV/0!											

CPK-指数报告

客户名称： 玛雅通讯										审核		确认		制作			
機種品名： X73A										日期： 2024-9-26		吕俊儒		夏兵		胡悦	
规格 序号	21.40		11.87												备注		
	0.15	0.15	0.15	0.15													
1	21.36		11.82														
2	21.37		11.84														
3	21.38		11.82														
4	21.42		11.85														
5	21.40		11.81														
6	21.41		11.82														
7	21.43		11.86														
8	21.45		11.80														
9	21.39		11.82														
10	21.43		11.88														
11	21.43		11.80														
12	21.45		11.80														
13	21.46		11.82														
14	21.46		11.85														
15	21.38		11.89														
16	21.39		11.90														
17	21.41		11.82														
18	21.45		11.83														
19	21.47		11.85														
20	21.38		11.82														
21	21.39		11.83														
22	21.38		11.84														
23	21.38		11.84														
24	21.39		11.83														
25	21.41		11.88														
26	21.42		11.89														
27	21.35		11.85														
28	21.41		11.86														
29	21.45		11.80														
30	21.35		11.82														
MAX	21.47		11.90		0.00												
MIN	21.35		11.80		0.00												
X	21.41		11.84		#DIV/0!												
M	21.55		12.02		0.00												
CP	1.464		1.750		#DIV/0!												
SN-1	0.034		0.029		#DIV/0!												
K	0.0556		0.2133		#DIV/0!												
CPK/判定	1383	满足	1376	满足	#DIV/0!	#DIV/0!											

CPK-指数报告

客户名称： 玛雅通讯										审核	确认	制作
機種品名： X73A										吕俊儒	夏兵	胡悦
规格 序号	6.33	27.10	40.20	20.20								备注
	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15				
1	6.28	27.06	40.15	20.16								
2	6.29	27.08	40.16	20.17								
3	6.28	27.08	40.15	20.15								
4	6.30	27.09	40.22	20.22								
5	6.34	27.13	40.19	20.16								
6	6.30	27.09	40.19	20.17								
7	6.28	27.11	40.21	20.23								
8	6.30	27.13	40.22	20.24								
9	6.31	27.14	40.15	20.18								
10	6.35	27.14	40.16	20.18								
11	6.36	27.13	40.25	20.19								
12	6.30	27.15	40.18	20.23								
13	6.37	27.15	40.19	20.24								
14	6.35	27.14	40.16	20.24								
15	6.35	27.08	40.26	20.18								
16	6.36	27.09	40.15	20.26								
17	6.38	27.16	40.16	20.19								
18	6.30	27.16	40.15	20.18								
19	6.31	27.08	40.18	20.19								
20	6.39	27.09	40.18	20.23								
21	6.32	27.08	40.16	20.26								
22	6.32	27.09	40.16	20.21								
23	6.35	27.11	40.19	20.25								
24	6.39	27.08	40.18	20.27								
25	6.38	27.07	40.21	20.18								
26	6.39	27.04	40.22	20.19								
27	6.30	27.12	40.25	20.18								
28	6.29	27.15	40.18	20.21								
29	6.32	27.16	40.18	20.22								
30	6.32	27.13	40.24	20.23								
MAX	6.39	27.16	40.26	20.27								
MIN	6.28	27.04	40.15	20.15								
X	6.33	27.11	40.19	20.21								
M	6.48	27.25	40.35	20.35								
CP	1.378	1.480	1.507	1.480								
SN-1	0.036	0.034	0.033	0.034								
K	0.0044	0.0689	0.0822	0.0422								
CPK/判定	1.372	满足	1.378	满足	1.383	满足	1.418	满足				

9.BOM list

项次	品 名	规格/材质/工艺	单位	数量
1	FPC天线 (MAIN)	HHD01-42.4×30.7×0.10, 黑色, 丝印MY-X73A-MAIN-V1.0	PCS	1
2	FPC天线 (LTE)	HHD01-38.2×11.4×0.10, 黑色, 丝印MY-X73A-LTE-V1.0	PCS	1
3	FPC天线 (DIV)	HHD01-21.4×11.9×0.10, 黑色, 丝印MY-X73A-GWB-V1.0	PCS	1
4	同轴线	HLT01-φ0.81×165 CABLE线 (不含端子), IPEX 4代, 黑色, 两头端子 (同向)	PCS	1
5	FPC天线 (NFC)	HHD01-40.2×27.1×0.25, 电解铜+PI/T=0.10mm, 正面150铁氧体	PCS	1

11.SGS Report



检测报告

编号: SHAEC24000428806

日期: 2024 年 01 月 12 日

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客户名称: 苏州蔡伦格蒂电子材料有限公司
客户地址: 江苏省太仓市太平北路 168 号

样品名称: 电解柔性覆铜箔基材
以上样品及信息由客户提供。

SGS 工作编号: SHP24-000434
样品接收时间: 2024 年 01 月 08 日
检测周期: 2024 年 01 月 08 日 ~ 2024 年 01 月 12 日
检测要求: 根据客户要求检测。
检测方法: 见后续页。
检测结果: 见后续页。

检测要求	结论
欧盟 RoHS 指令 2011/65/EU 附录 II 的修正指令(EU) 2015/863-铅、汞、镉、六价铬、多溴联苯 (PBB)、多溴二苯醚 (PBDE)、邻苯二甲酸二(2-乙基己基)酯 (DEHP)、邻苯二甲酸丁苄酯 (BBP)、邻苯二甲酸二丁酯 (DBP)和邻苯二甲酸二异丁酯 (DIBP)	符合
卤素	见检测结果

通标标准技术服务(上海)有限公司
授权签名

盛雯舒

Sue Sheng 盛雯舒
批准签署人

scan to see the report



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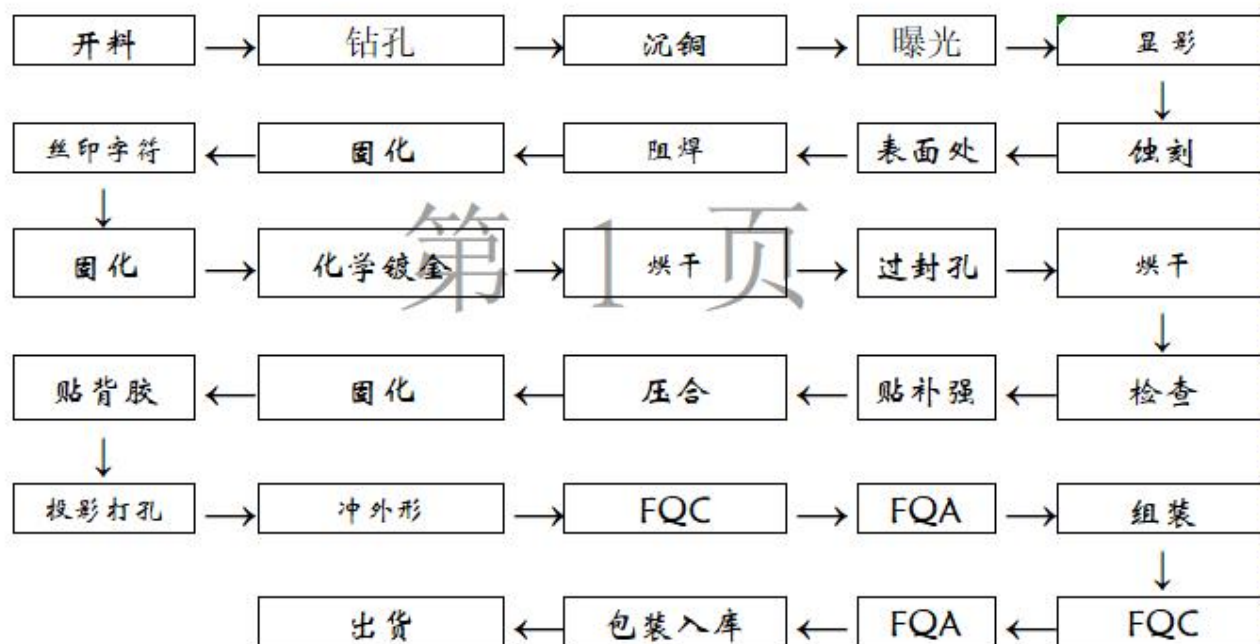
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中国·上海·徐汇区宜山路889号3号楼 邮编: 200233 TEL (86-21) 61402594 FAX (86-21) 61156899 e sgs.china@sgs.com

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12. Process flow chart

工艺流程



13. Quality control flow chart

输入	相关单位	流程	输出	相关单位	备注说明
收料单	仓库	<pre> graph TD A[收料单] --> B[确认抽样数] B --> C{包装外观检查} C -- 合格 --> D[抽样] C -- 不合格 --> E[ROHS检查] D --> F[内包装检查] F --> G[外观及丝印检查] G --> H[尺寸/性能检] H --> I[实装检验] I --> J{结果判定} J -- 合格 --> K[盖IQC PASS章] J -- 不合格 --> L{各部门会签} L -- 可让步接收 --> M[贴特采标签] L -- 不合格 --> N[贴不良品标签] M --> O[仓库入库] N --> P[回复不合格品处理单] P --> Q{效果确认} Q -- 合格 --> R[结束] Q -- 不合格 --> N </pre>	待检物料	IQC	
数量/抽样标准	IQC		样本量	IQC	根据收料单确认抽样数量
原物料	IQC		外包装检验结果记录	IQC	1. 确认外包装是否破损, 受潮, 是否统一; 2. 确认是否有包装贴纸; 3. 供应商名称, 物料编码; 物料编码等是否清晰可辨;
数量/抽样标准	IQC		样本物料	IQC	1. 抽样数量按照抽样标准; 2. 抽样方式为对角线型或者S型;
物料规格书/检验工具/检验记录表	IQC		检验记录	IQC	1. 在检验记录表的检验依据中必须注明物料所在的产品名称或编码或BOM编码; 2. 所有物料包括样品都要有检验记录; 3. 所有的物料必须依据规格书或书面文档为依据; 4. 所有物料的检验数据必须及时记录;
检验记录/检验标准	IQC		检验记录/不合格品处理单	IQC	1. 对于轻微缺陷依据AQL接受标准自行判定; 2. 对于性能不良, 或外观严重不良的项目开不合格品处理单, 给品质主管进行确认, 并给其他相关部门会签;
不合格品处理单	IQC		不合格品处理单	品质/技术开发/采购	各个部门负责人依据实际情况进行裁决, 最终由品质经理判定;
IQA判定标签	IQC		检验后物料	IQC	1. 检验合格物料必须盖QC Pass章到物料外箱及最小包装标签上; 特采的贴黄色标签; 判退的贴红色标签并要求仓库隔离存放; 2. 对于有不良现象的物料开不良品合格处理单
不合格品处理单	IQC/供应商		厂商回复	IQC/QE确认	1. 给厂商的不合格品处理单要求供应商及时回复, 一般限时24小时; 2. 供应商回复太牵强的应判退, 重新回复。
检验后的物料	仓库		入库单	仓库	