Admit it

The product description:	The manufacturer:	Welletronics Communication Technology Limited	Project type:	IDS01
	The name of the material:	Bluetooth RF antenna	Specification/Color:	white
	Material code:	3.01.IDS01F1000	Sign the sample date:	2023.03.28
	The version number:	V1.0	note:	
The attachment:	■ Description of electrical and mechanical properties (Specification) ■ Manufacturing flow chart ■ QCEngineering drawing ■ The sample ■ CPK report ■ Full size measurement report ■ Reliability test report ■ The packing way ■ Raw material list report /RoHS report/HF/REACH			
Supplier sign and approve	artificial:	audit:	approval:	

The above shall be filled in by the supplier and the following shall be filled in by Aidu

	department	**Confirm the content**				**Verify the results**	**Confirm person/date**
Technical confirmation column	Supplier quality	☐ RoHS material ☐ no RoHS material	☐Meet REACH requirements	☐ Meet halogen-free requirements	☐Other Environmental Requirements		
	ID of Design Department	☐The customer request ID	☐Color confirmation	☐Surface process confirmation	☐Shell, hardware, key material		
	Structural engineer	☐ Confirm the size of 2D drawing files ☐Specifications and technical requirements	☐Focus on size marking control ☐Electrical performance parameter	☐Adapter validation ☐function	☐Shell, hardware, key material ☐The effect		
	Hardware engineer	☐ Confirm the size of 2D drawing files ☐Specifications and technical requirements	☐Focus on size marking control ☐Electrical performance parameter	☐Adapter validation ☐function	☐Shell, hardware, key material ☐The effect		
	R&d quality	☐Test standard confirmation ☐appearance	☐Standardization of dimension marking (key dimensions)	☐ Reliability verification ☐Adapter validation	☐function ☐The effect		
Final confirmation	Project Manager	☐Acknowledge the completeness of the documents ☐Standardization of dimension marking (key dimensions)	☐Specifications and technical requirements ☐appearance	☐Electrical performance parameter	☐function ☐The effect		
Admitted conditions:	☐ Official recognition ☐ Set limit to admit ☐ Refuse to admit						
Distribution department:	☐ IQC ☐ supplier ☐ The customer ☐ after-sales ☐ SQE/ Document control ☐ other _____						

Catalog

Three 、Change history

Change of resume

Serial number	Date of change	entry name	Edition	Change content	Remarks
1	Mar 28, 2023	IDS01 BT antenna	V1.0	nothing	New issue

Four、 Electrical characteristics

1.Antenna Structure

Figure antenna structure

2.Test Results

BT-Return Loss/VSWR

Test Repor **No source by space test efficiency/pattern**

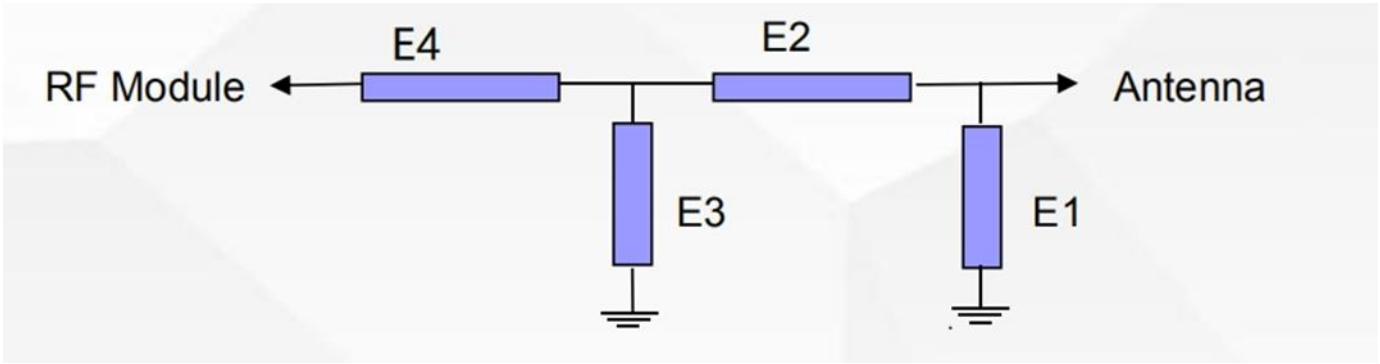
Free space

Freq	Efficiency_dB	Efficiency_Pcent	Gain dBi
2400	-5.71	26.84	-1.86
2410	-5.48	28.34	-1.83
2420	-5.23	30.01	-1.93
2430	-5.09	30.98	-1.81
2440	-5.49	28.26	-2.08
2450	-5.59	27.63	-2.07
2460	-5.83	26.13	-2.36
2470	-5.92	25.58	-2.38
2480	-6.17	24.17	-2.49
2490	-6.45	22.63	-2.74
2500	-6.59	21.93	-2.96

Add the arm

Freq	Efficiency_dB	Efficiency_Pcent	Gain dBi
2400	-9.9	10.23	-2.96
2410	-10.34	9.25	-3.54
2420	-10.45	9.01	-3.88
2430	-10.66	8.59	-4.24
2440	-10.69	8.53	-4.38
2450	-10.83	8.25	-4.68
2460	-10.99	7.95	-4.99
2470	-10.9	8.13	-5
2480	-10.8	8.31	-5.14
2490	-10.75	8.42	-5.23
2500	-10.96	8.02	-5.53

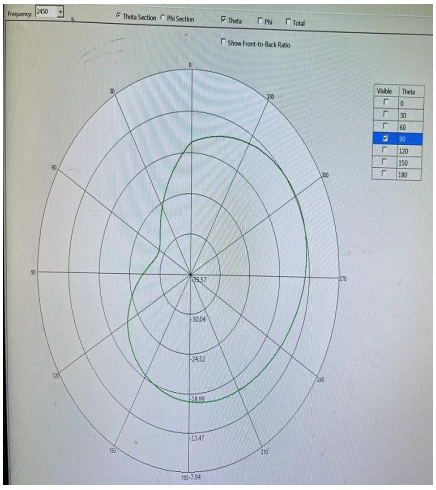
Match

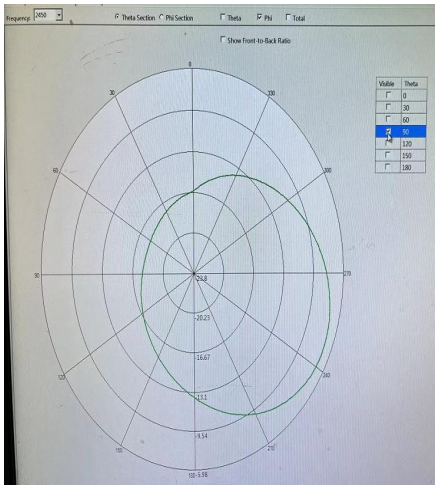


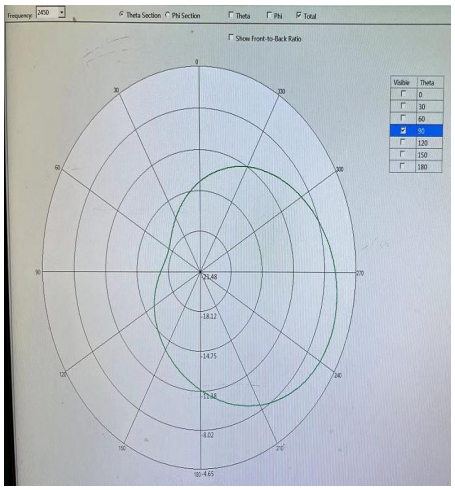
	Element	Value
Antenna	E1	
	E2	0 Ω
	E3	
	E4	0 Ω

3.The direction of figure

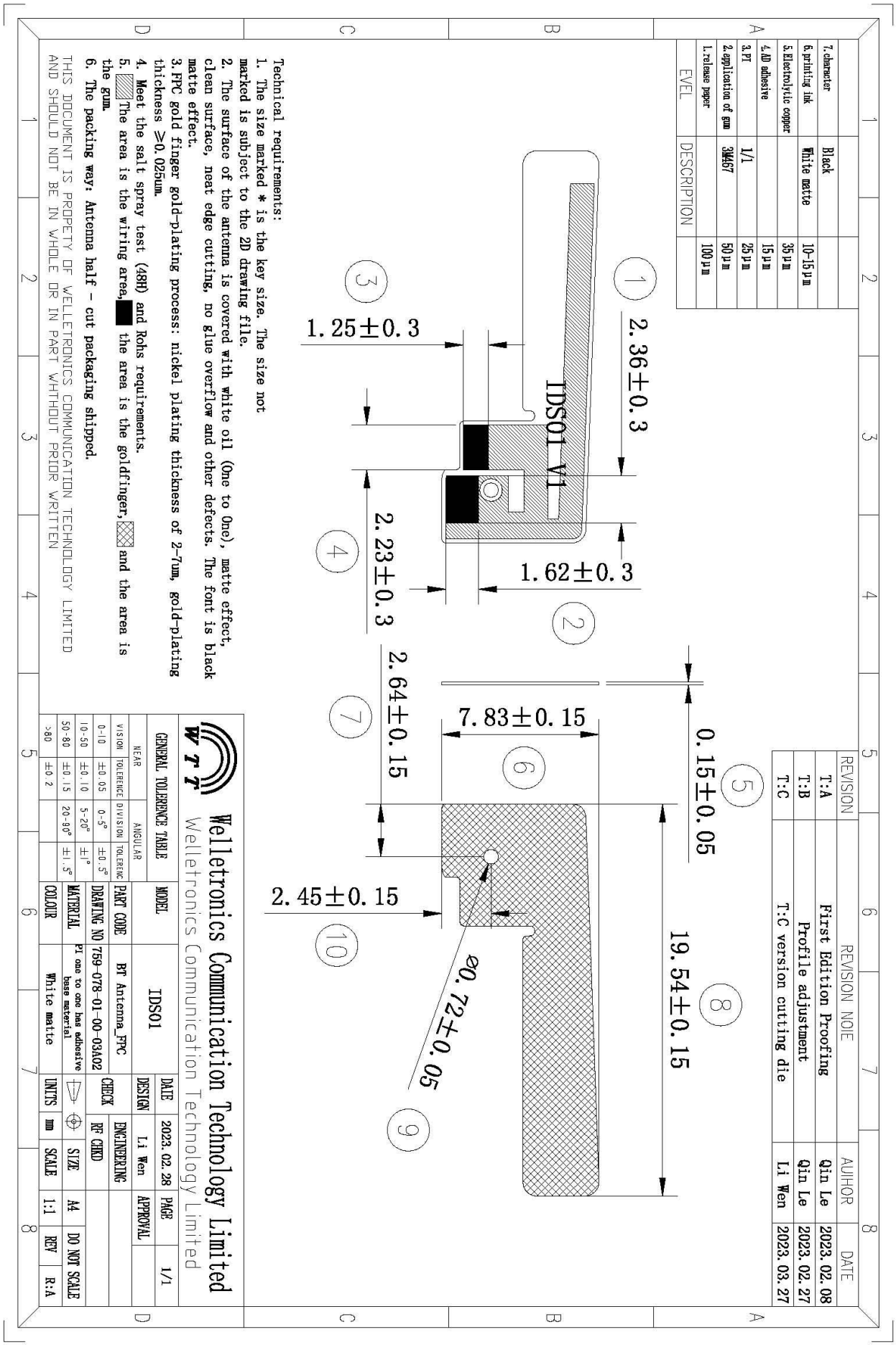
BT Arm pattern







Five、The 2D drawings



Six、Full-scale measurement report

Full-scale measurement report

Vendor		Material name	FPC	Part NO	759-078-03A02	Tool Number		Cav. Number		Unit		Comments
WTT		Material Code		Part Name	IDS01-BT antenna-FPC			Rev	R:A	☐INCHES ☑MILLIMETERS		
Date	28-Mar-23			MEASURED DIMENSION			% TOLERANCE USED		DISPOSITION			ACCEPTABLE VARIANCE

DIM. #	DIMENSION	DRAWING ZONE	+ TOL.	- TOL.	NOTE	SAMPLE 1	SAMPLE 2	SAMPLE 3	SAMPLE 4	SAMPLE 5	UPPER	LOWER	0%-25%	25%-50%	50%-75%	75%-100%	100%+	Re-Measure	Accept	Fix Tool	Accept With Variance	DIMENSION	+ TOL.	- TOL.
1	2.36		0.30	0.30		2.34	2.35	2.34	2.33	2.37	3%	10%	X											
2	1.62		0.30	0.30		1.64	1.65	1.67	1.63	1.60	17%	7%	X											
3	1.25		0.30	0.30		1.26	1.27	1.24	1.23	1.22	7%	10%	X											
4	2.23		0.30	0.30		2.25	2.26	2.27	2.28	2.22	17%	3%	X											
5	0.15		0.05	0.05		0.15	0.15	0.15	0.15	0.15	0%	0%	X											
6	7.83		0.15	0.15		7.85	7.84	7.82	7.81	7.88	33%	13%		X										
7	2.64		0.15	0.15		2.65	2.67	2.62	2.63	2.64	20%	13%	X											
8	19.54		0.15	0.15		19.55	19.56	19.57	19.52	19.53	20%	13%	X											
9	0.72		0.05	0.05		0.73	0.71	0.72	0.73	0.74	40%	20%		X										
10	2.45		0.15	0.15		2.46	2.47	2.48	2.44	2.43	20%	13%	X											

Seven、Cpk Report

CPK Report

Part Number	759-078-03A02		Vendor	WTT	
Description	IDS01-BT antenna-FPC		Inspected		
Tool Number			Inches/MM	mm	
Cavity			Material Name	FPC	
			Material Code		
Revision	R:A		Date	28-Mar-23	
Dim. Designator	1	4			
Nominal	2.36	2.23			
+ Tolerance(A11	0.30	0.30			
- Tolerance	-0.30	-0.30			
Upper Limit	2.66	2.53			
Lower Limit	2.06	1.93			
1	2.34	2.25			
2	2.35	2.26			
3	2.34	2.27			
4	2.33	2.28			
5	2.37	2.40			
6	2.40	2.39			
7	2.60	2.30			
8	2.50	2.27			
9	2.40	2.40			
10	2.39	2.27			
11	2.33	2.30			
12	2.34	2.34			
13	2.41	2.30			
14	2.42	2.29			
15	2.40	2.31			
16	2.40	2.38			
17	2.54	2.35			
18	2.50	2.30			
19	2.40	2.29			
20	2.41	2.34			
21	2.42	2.30			
22	2.41	2.37			
23	2.41	2.30			
24	2.42	2.40			
25	2.40	2.45			
26	2.39	2.29			
27	2.33	2.28			
28	2.34	2.31			
29	2.42	2.27			
30	2.45	2.35			
MAX.	2.60	2.45			
MIN.	2.33	2.25			
AVERAGE	2.41	2.32			
STDEV	0.06	0.05			
CP	1.58	1.94			
Cpk	1.34	1.36			
TOOLING	CMM	CMM			

Approved By: Kun Yao

Written By: Li Yu Er

Eight 、The RoHS report

Welletronics Communication TechnologyCO.,Ltd

Environment-Concerned Stbstance report

supplier' s Name : Welletronics Communication Technology CO.,Ltd

(Raw material Manufacturer) : Welletronics Communication Technology CO.,Ltd

Names of material and type : IDS01-BT antenna-FPC

RoHS test report NO.

	Name of hazardous substance	Threshold value ppm (mg/Kg)	If yes, which products/part numbers	Do you products contain this substance (Yes or No)	How much ppm (mg/kg)	Implement schedule
	Cadminm and its compounds	100	759-078-03A02	NO	/	28-Mar-23
	Lead and its compounds	1000		NO	/	28-Mar-23
	Chromium VI and its compounds	1000		NO	/	28-Mar-23
	Mercury and its compounds	1000		NO	/	28-Mar-23
	Poly bramjnated Biphenyls (PBBS)	1000		NO	/	28-Mar-23
	Poly bramjnated Diphenyl ethers(PBDES)	1000		NO	/	28-Mar-23

(Contact Person) : Tianhua Liu

(Position) : Quality Manager

(TEL): 0755-33870801-617

e-Mail: qc1@wtt-china.com

(Date) : 28-Mar-23

Nine、Salt spray test

Salt spray test

Customer	AiDu	Written By	Li Yu Er	Orig. Date	28-Mar-23		
Part Number	759-078-03A02	Revised By	Kun Yao	Revised Date	28-Mar-23		
Description1	IDS01-BT antenna-FPC	Approved By	TianHua Liu	Approved Date	28-Mar-23		
Date of trial	Starting at 09.00 on Mar 26, 2023						
	And end at 09.00 on Mar 28, 2023						
	A total of 48 hours of continuous spray						
Experimental operation	1、Test operation status					OK	
	2、Test box temperature					35℃	
	3、Saturated Air Bucket Temperature					47℃	
	4、Specific gravity of salt spray test					5%	
	5、Specimen supported angle					30°	
	6、Compressed air pressure					1kg/cm²	
	Time	Testing time	Laboratory thermometer (℃)	Saturated Air Barrel Temperature (℃)	compressed air pressure (kg/cm2)	Machine running condition	Remarks
	17:00 on Mar 26	8	35	47	1kg/cm²	OK	
	1:00 on Mar 27	16	35	47	1kg/cm²	OK	
	9:00 on Mar 27	24	35	47	1kg/cm²	OK	
	17:00 on Mar 27	32	35	47	1kg/cm²	OK	
	1:00 on Mar 28	40	35	47	1kg/cm²	OK	
	9:00 on Mar 28	48	35	47	1kg/cm²	OK	
NO	Post-test status					Determine	Remarks
1	No oxidation on coating surface and no foammg and falling off of ink					OK	
2							
3							
4							
Remarks:							

Approved By：Kun Yao　　Written By：Li Yu Er

Ten、 High and Low Temperature Testing

High and Low Temperature Testing

Customer	AiDu	Written By	Li Yu Er	Orig. Date	28-Mar-23
Part Number	759-078-03A02	Revised By	Kun Yao	Revised Date	28-Mar-23
Description1	IDS01-BT antenna-FPC	Approved By	TianHua Liu	Approved Date	28-Mar-23

Test time	Starting at 08:30 on 20 Mar ,2023	Hot test (80℃)
	Ending at 08:30 on 22 Mar ,2023	
	Starting at 08:35 on 22 Mar ,2023	Room temperature test(20℃)
	Ending at 10:35 on 22 Mar ,2023	
	Starting at 10:40 on 22 Mar ,2023	low temperature test(-40℃)
	Ending at 10:40 on 23 Mar ,2023	
	Starting at 10:45 on 23 Mar ,2023	Room temperature test(20℃)
	Ending at 12:45 on 23 Mar ,2023	
	Starting at 12:50 on 23 Mar ,2023	High Temperature and Humidity Test(80℃)
	Ending at 12:50 on 25 Mar ,2023	
	Starting at 12:55 on 25 Mar ,2023	Room temperature test(20℃)
	Ending at 14:55 on 25 Mar ,2023	
	Total 150H Test	

Experimental operation	Time		Test time(h/m)	Test box temperature(℃)	Air humidity intest box(%)	Machine running condition	Remarks
	19-Mar-23	08 :30 A.M	24	79.91℃		OK	High temperature section
	21-Mar-23	08:30 A.M	48	80.01℃		OK	
	21-Mar-23	10 :35 A.M	2	20.07℃		OK	normal temperature section
	22-Mar-23	10:40 A.M	24	-39.91		OK	low temperature section
	23-Mar-23	10 :40 A.M	48	-40.02		OK	
	23-Mar-23	12 :45 P.M	2	19.97		OK	normal temperature section
	24-Mar-23	12 :50 P.M	24	79.92		OK	High temperature and high humidity section
	24-Mar-23	12 :50 P.M	48	80.04	95.07	OK	
	24-Mar-23	14 :55 P.M	2	20.01	95.10	OK	normal temperature section

NO	Post-test status	Determine	Remarks
1	No Foaning Abnormality On Ink Surface	OK	
2			
3			
4			

Revised By：Kun Yao　　Written By：Li Yu Er

Eleven、Material quality proves

Material quality proves

Customer	AiDu	Written By	Li Yu Er			Orig. Date	28-Mar-23
Part Number	759-078-03A02	Revised By	Kun Yao			Revised Date	28-Mar-23
Description1	IDS01-BT antenna-FPC	Approved By	TianHua Liu			Approved Date	28-Mar-23

The serial number	Subpart Name	Material Name	Material supplier	Test Report No. of Hazardous Material	Hazardous substance content									Inspection date	Note	MSDS
					Cd	Pb	Hg	Cr+6	PBB	PBDE	DIBP	DEHP	DBP	BBP			
1	Base material	Electrolytic copper	Cai Lungti	ROHS/SHAEC2300104910 6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2023-2-15	基材-塞伦倍蒂电解铜-ROHS.pdf	塞伦倍蒂-基材-MSDS.pdf
2	Resistance welding	PSM-800 FSDM-A/ SMH-800	You Li	ROHS/ETR22705905 HF/ETR22705913 SVHC/ETR21805831A02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2022-8-5	阻焊-依立PSM-800FSDM-A SMH-_RoHS.pdf 阻焊-依立PSM-800FSDM-A SMH-_RoHS.pdf	阻焊-依立PSM-800FSDM-A SMH-_MSDS.pdf 阻焊-依立PSM-800FSDM-A SMH-_MSDS.pdf
3	The back glue	467 of gum	3m	ROHS/CANEC2205384301 HF/CANEC2205384302	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2022-9-14	HF背胶-467.pdf RoHS-背胶-467.pdf	467 468 9657 P668 MSDS报告
4	character	FCR-1000A	Ao Kai	ROHS/A2220584091101001E	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2023-1-6	PAHs15项.pdf RoHS.pdf	安全资料表.afety Data Sheet.pdf
5	electroplate	Nickel plated gold	Jiahongtai	ROHS/A2220171849101001C	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2022-5-14	A2220171849101001C(1).pdf	物质安全数据.pdf

Twelve、Shipment packaging

Packing

General requirements:

1.State customer name, project name, model number,

2.The pictures show the inner and outer cases, the packing method when shipping, the number of layers, the quantity of single layer, etc

3.Fill in the name and quantity of packing materials in the remarks column

4.Signature of quality supervisor, date

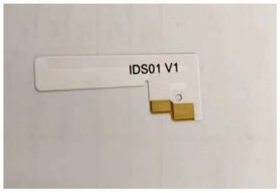


Figure 1: single layer blister tray or other forms

Figure 2: basic packing method of inner box

Figure 3: packing case

Figure 4: outer packing label

Figure 5: stacking of packing cases.

Product material no:	759-078-03A02	
The product name:	IDS01 BT antenna-FPC	
Product version:	R:A	
The packing way:	Full page half cut package shipping	
Blister tray	very dish:	1000pcs/bag
carton	Each box number:	20000pcs/bag
note:		

Put each 1000pcs into PE bag with protective film protection;20 bags in one case, 20000pcs.

Signature:Li Wen