

Admit it

The product description:	The manufacturer: Welletronics Communication Technology Limited The name of the material: Bluetooth RF antenna Material code: 3.01.208BTF1000 The version number: V1.0	Project type: ID208BT Specification/Color: black Sign the sample date: 2022.01.20 note:			
The attachment:	☒ Description of electrical and mechanical properties (Specification) ☒ Manufacturing flow chart ☒ QC Engineering 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:	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 _____				

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Three 、 Change history**Change of resume**

Serial number	Date of change	entry name	Edition	Change content	Remarks
1	Jan 20, 2022	ID208BT BT antenna	V1.0	nothing	New issue

Four、 Electrical characteristics

1. Antenna Structure



Figure antenna structure

2. Test Results

BT-Return Loss/VSWR



3. Test Repor No source by space test efficiency/pattern

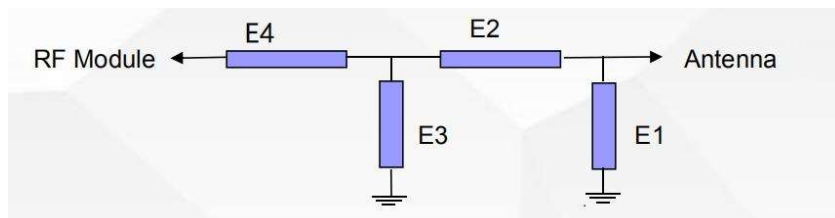
Free space

Add the arm

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	23.32	-6.32	-1.71
2410	24.02	-6.19	-1.56
2420	25.19	-5.99	-1.33
2430	26.09	-5.83	-1.08
2440	26.39	-5.79	-1.02
2450	25.96	-5.86	-1.04
2460	26.18	-5.82	-0.83
2470	25.9	-5.87	-0.75
2480	25.08	-6.01	-0.61
2490	23.98	-6.2	-0.85
2500	23.3	-6.33	-0.7

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	6.94	-11.59	-6.72
2410	7.16	-11.45	-6.88
2420	7.44	-11.29	-6.91
2430	7.39	-11.31	-6.95
2440	7.31	-11.36	-7.18
2450	7.43	-11.29	-7.18
2460	7.39	-11.31	-7.31
2470	7.41	-11.3	-7.46
2480	7.35	-11.34	-7.61
2490	7.44	-11.28	-7.6
2500	7.47	-11.27	-7.57

Match hasn't changed

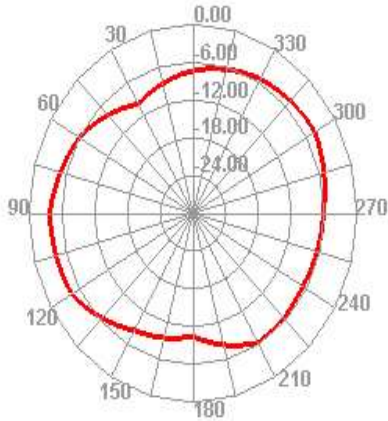


The antenna	Element	Value
	E1	NC
	E2	OR
	E3	NC
	E4	

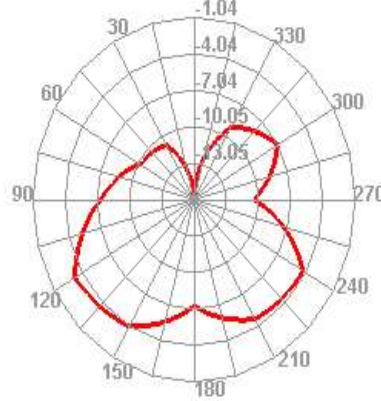
4. The direction of figure

Free space

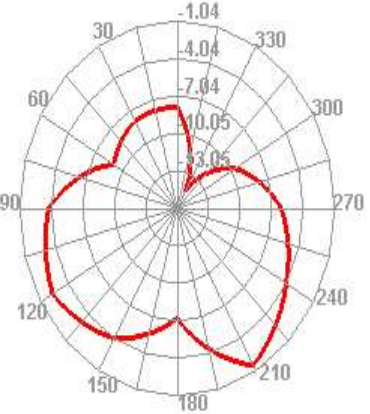
2450.000MHz H



2450.000MHz E1

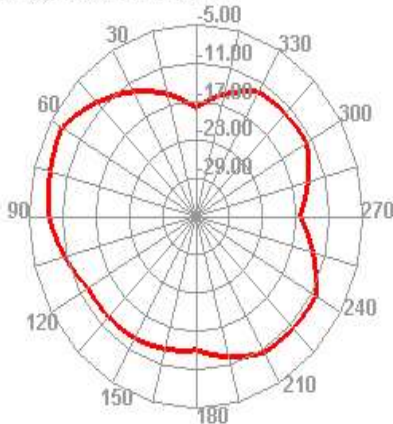


2450.000MHz E2

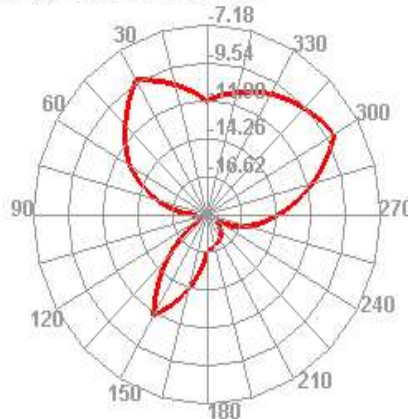


Add the arm

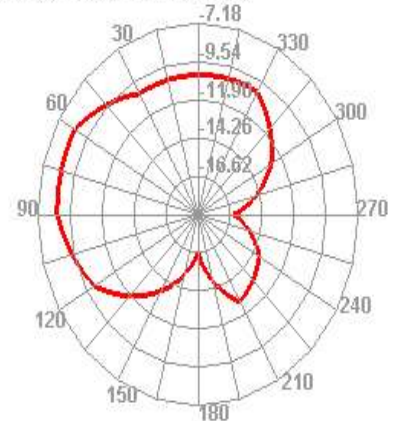
2450.000MHz H



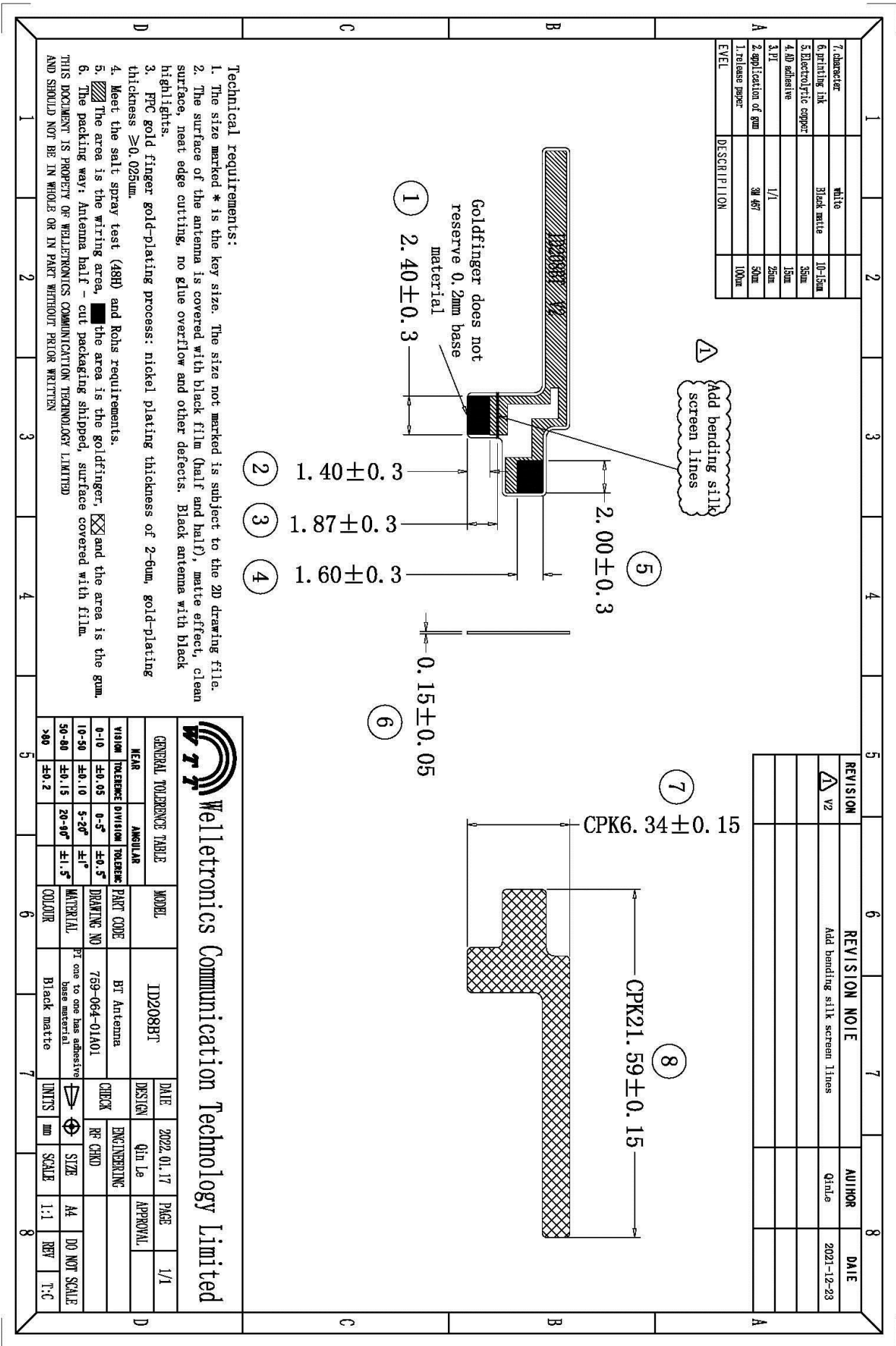
2450.000MHz E1



2450.000MHz E2



Five、The 2D drawings



Six、Full-scale measurement report

Vendor		Material name		FPC		Part NO		759-064-01A01		Tool Number		Cav. Number		Unit		Comments								
WTT		Material Code				Part Name		ID208BT BT antenna				Rev												
Date		16/Nov/21				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	DIMEN STON	+ TOL.	- TOL.
1	2.40		0.30	0.30		2.45	2.44	2.40	2.35	2.48	27%	17%		X										
2	1.40		0.30	0.30		1.45	1.40	1.48	1.37	1.46	27%	10%		X										
3	1.87		0.30	0.30		1.87	1.85	1.90	1.92	1.80	17%	23%	X											
4	1.60		0.30	0.30		1.64	1.66	1.58	1.60	1.53	20%	23%	X											
5	2.00		0.30	0.30		2.05	2.00	2.03	1.98	2.10	33%	7%		X										
6	0.15		0.05	0.05		0.13	0.15	0.14	0.16	0.15	20%	40%		X										
7	6.34		0.15	0.15		6.32	6.30	6.30	6.30	6.38	27%	27%		X										
8	21.59		0.15	0.15		21.62	21.60	21.58	21.56	21.60	20%	20%	X											
9																								
10																								
11																								
12																								
13																								
14																								
15																								
16																								
17																								
18																								
19																								
20																								
21																								

Full-scale measurement report

Seven、Cpk Report

CPK Report

Part Number	759-064-01A01		Vendor	WTT	
Description	ID208BT BT antenna		Inspected		
Tool Number			Inches/MM	mm	
Cavity			Material Name	FPC	
			Material Code		
Revision	T:C		Date	18-Jan-22	
Dim. Designator	7	8	3	4	5
Nominal	6.34	21.59			
+ Tolerance (All	0.15	0.15			
- Tolerance	-0.15	-0.15			
Upper Limit	6.49	21.74			
Lower Limit	6.19	21.44			
1	6.32	21.62			
2	6.30	21.60			
3	6.30	21.58			
4	6.30	21.56			
5	6.38	21.60			
6	6.30	21.62			
7	6.33	21.55			
8	6.35	21.63			
9	6.38	21.60			
10	6.33	21.65			
11	6.38	21.60			
12	6.30	21.55			
13	6.33	21.58			
14	6.32	21.63			
15	6.31	21.65			
16	6.33	21.56			
17	6.35	21.60			
18	6.38	21.62			
19	6.37	21.55			
20	6.35	21.63			
21	6.42	21.60			
22	6.33	21.65			
23	6.32	21.60			
24	6.37	21.55			
25	6.31	21.53			
26	6.33	21.60			
27	6.40	21.55			
28	6.30	21.58			
29	6.41	21.60			
30	6.39	21.52			
MAX.	6.42	21.65			
MIN.	6.30	21.52			
AVERAGE	6.34	21.59			
STDEV	0.04	0.04			
CP	1.37	1.39			
Cpk	1.34	1.37			
TOOLING	CMM	CMM	CMM	CMM	CMM

Approved By: Kun Yao

Written By: Jie Xiao



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 : ID208BT BT antenna 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
	Cadmium and its compounds	100	759-064-01A01	NO	/	16/Nov/21
	Lead and its compounds	1000		NO	/	16/Nov/21
	Chromium VI and its compounds	1000		NO	/	16/Nov/21
	Mercury and its compounds	1000		NO	/	16/Nov/21
	Poly braminated Biphenyls (PBBS)	1000		NO	/	16/Nov/21
	Poly braminated Diphenyl ethers(PBDES)	1000		NO	/	16/Nov/21

(Contact Person) : Tianhua Liu (Position) : Quality Manager (TEL): 0755-33870801-617

e-Mail: qc1@wt-china.com (Date) : 18/Jan/22

Nine、Salt spray test

Salt spray test

Customer	AiDu	Written By	Jie Xiao	Orig. Date	18-Jan-22		
Part Number	759-064-01A01	Revised By	Kun Yao	Revised Date	18-Jan-22		
Description	ID208BT BT antenna	Approved By	TianHua Liu	Approved Date	18-Jan-22		
Date of trial	Starting at 09.00 on Jan 16, 2022						
	And end at 09.00 on Jan 18, 2022						
	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/cm ²	
	Time	Testing time	Laboratory thermometer (℃)	Saturated Air Barrel Temperature (℃)	compressed air pressure (kg/cm ²)	Machine running condition	Remarks
	17:00 on Jan 16	8	35	47	1kg/cm ²	OK	
	1:00 on Jan 17	16	35	47	1kg/cm ²	OK	
	9:00 on Jan 17	24	35	47	1kg/cm ²	OK	
	17:00 on Jan 17	32	35	47	1kg/cm ²	OK	
	1:00 on Jan 18	40	35	47	1kg/cm ²	OK	
	9:00 on Jan 18	48	35	47	1kg/cm ²	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: Jie Xiao

Ten、 High and Low Temperature Testing

High and Low Temperature Testing

Customer	AiDu		Written By	Jie Xiao	Orig. Date	18-Jan-22	
Part Number	759-064-01A01		Revised By	Kun Yao	Revised Date	18-Jan-22	
Description1	ID208BT BT antenna		Approved By	TianHua Liu	Approved Date	18-Jan-22	
Test time	Starting at 08:30 on 12 Jan ,2022					Hot test (80℃)	
	Ending at 08:30 on 14 Jan, 2022						
	Starting at 08:35 on 14 Jan, 2022					Room temperature test (20℃)	
	Ending at 10:35 on 14 Jan, 2022						
	Starting at 10:40 on 14 Jan, 2022					low temperature test (-40℃)	
	Ending at 10:40 on 16 Jan, 2022						
	Starting at 10:45 on 16 Jan ,2022					Room temperature test (20℃)	
	Ending at 12:45 on 16 Jan, 2022						
	Starting at 12:50 on 16 Jan ,2022					High Temperature and Humidity Test (80℃)	
	Ending at 12:50 on 18 Jan, 2022						
	Starting at 12:55 on 18 Jan ,2022					Room temperature test (20℃)	
	Ending at 14:55 on 18 Jan, 2022						
	Total 150H Test						
	Experimental operation	Time		Test time (h/m)	Test box temperature (℃)	Air humidity in test box (%)	Machine running condition
13/Jan/22		08 :30 A.M	24	79.91℃		OK	High temperature section
14/Jan/22		08:30 A.M	48	80.01℃		OK	
14/Jan/22		10 :35 A.M	2	20.07℃		OK	normal temperature section
15/Jan/22		10:40 A.M	24	-19.91		OK	low temperature section
16/Jan/22		10 :40 A.M	48	-20.02		OK	
16/Jan/22		12 :45 P.M	2	19.97		OK	normal temperature section
17/Jan/22		12 :50 P.M	24	79.92		OK	High temperature and high humidity section
18/Jan/22		12 :50 P.M	48	80.04	95.07	OK	
18/Jan/22	14 :55 P.M	2	20.01	95.10	OK	normal temperature section	
NO	Post-test status				Determine	Remarks	
1	No Foaming Abnormality On Ink Surface				OK		
2							
3							
4							

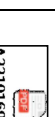
Revised By: Kun Yao

Written By: Jie Xiao

Eleven、Adhesion Tester

Peeling strength test report						
Tape model		3M467	Number of parking		5PCS	
Experimental environment		23±1°	Relative humidity		50±5% RH	
Gummed paper specification		100mm*20mm	Copper foil specifications		150mm*25mm	
The test conditions	1.Stripping Angle 90°2.Peeling speed: 50mm/ min					
Decision criteria	Pressure sensitive adhesive acuity 0.5 KGF/cm					
The device under test	Peel strength testing machine					
The test results	The serial number	Actual test conditions and phenomena			determine (OK/NG)	note
		The Angle	speed	Stripping degree		
	1	90°	50 mm/min	0.71kgf	OK	
	2	90°	50 mm/min	0.67kgf	OK	
	3	90°	50 mm/min	0.70kgf	OK	
	4	90°	50 mm/min	0.68kgf	OK	
	5	90°	50 mm/min	0.70kgf	OK	

Twelve、Material quality proves

Customer		AiDu		Written By		Jie Xiao		Orig. Date									
Part Number		759-064-01A01		Revised By		Kun Yao		Revised Date									
Description1		ID208BT BT antenna		Approved By		Tianhua Liu		Approved Date									
The serial number	Part name	The name of the material	manufacturers	Test Report No.	Hazardous substance content								Inspection date	Note	MSDS		
					Cd	Pb	Hg	Cr+6	PBB	PBDE	DIBP	DEHP				DBP	BBP
1	Base material	Electrolytic copper	CailunGedi	SHAEC2013249004/03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2021. 3. 3	 RoHS检测报告 PDF	 最新MSDS 20201.pdf
2	ink	Black solder resist	YouLi	ETR21805816	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2021. 9. 6	 ETR21805816R 黑色锡膏.pdf  ETR21805816R 黑色锡膏.pdf	 最新MSDS 20201年MSDS.pdf
3	The back glue	467 of gum	3m agents	SHAEC2118728904	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2021. 9. 4	 2470 555-467M 黄色MSDS.pdf  2470 555-467M 黄色MSDS.pdf	 最新MSDS 20201年MSDS.pdf
4	Text ink	Text white	ChuanYu	ETR21A04957M01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2021. 10. 29	 ETR21A04957M 白色墨水.pdf  ETR21A04957M 白色墨水.pdf	 400W-MSDS N EW 11.pdf
5	electroplating	Nickel plating	Jia HongTai	A2210169276101001E	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2021. 5. 10	 A221016927610 1001E.pdf	 中文版PCBA综合MSDS 202101

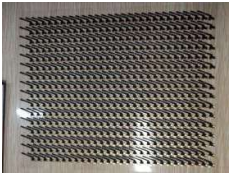
Material quality proves

Thirteen、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	Product material no:	759-064-01A01	
	The product name:	ID208BT BT antenna	
	Product version:	T:C	
	The packing way:	Full page half cut package shipping	
	Blister tray	very dish:	1000pcs/bag
	carton	Each box number:	20000pcs/bag
	note:		
 Figure 3: packing case  Figure 4: outer packing label  Figure 5: stacking of packing cases.	Put each 1000pcs into PE bag with protective film protection;20 bags in one case, 20000pcs. Signature:		