

样品规格书
SPECIFICATION

Product name : NO25-BT&GPS Antenna

Model : 816-002-01A01

Date : 25/11/2022

R&D Engineer _____ Hardware Engineer _____ Person in charge _____

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Three. Change the resume

Serial number	Change date	Project name	version	Change content	Remarks
1	2022.11.25	N025-BT&GPS antenna	V1.0	There is no	New edition

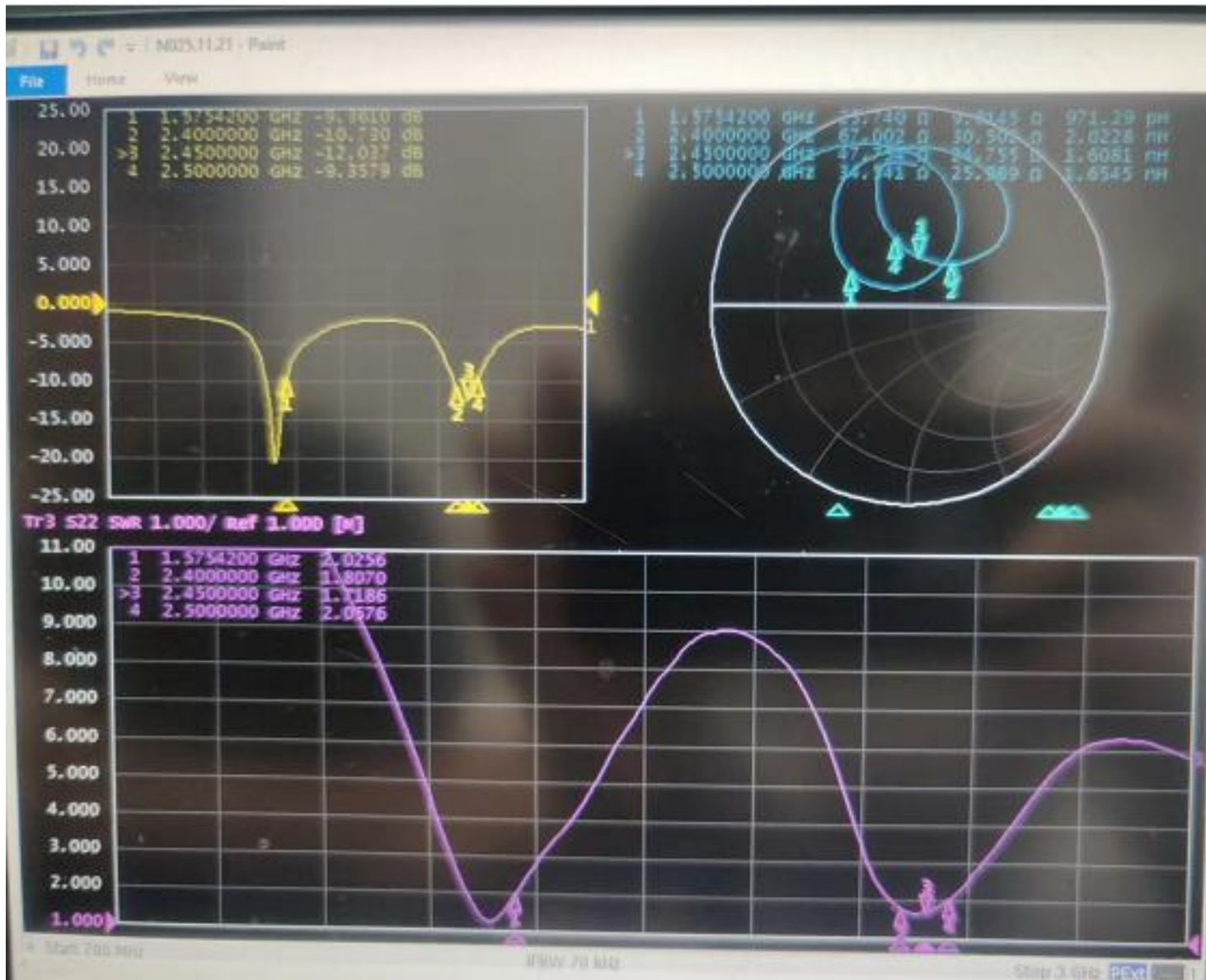
Four. Electrical characteristic

1. Antenna Structure



Figure antenna structure

2. Passive parameter



3. Passive efficiency and gain

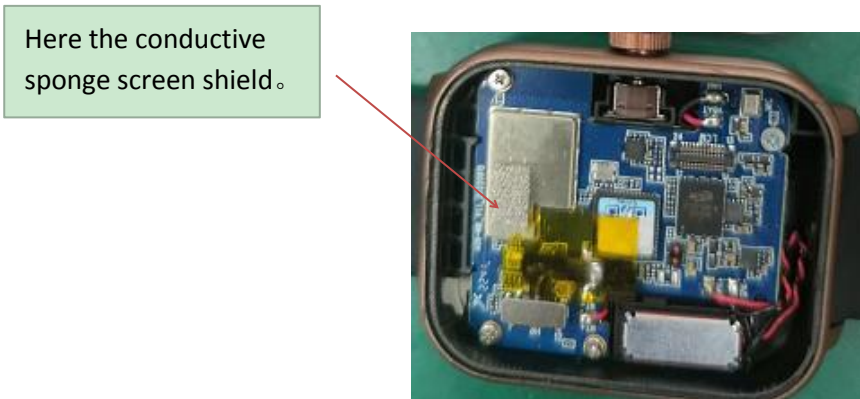
Passive efficiency - Loose								
Freq (MHz)	Effi (dB)	Effi (%)	Gain (dBi)		Freq (MHz)	Effi (dB)	Effi (%)	Gain (dBi)
1525	-4.75	33.47	-1.34		2400	-4.32	36.95	-2.05
1535	-4.61	34.62	-1.27		2410	-4.75	33.51	-2.51
1545	-4.69	33.93	-1.22		2420	-4.81	33.02	-2.5
1555	-4.72	33.75	-1.19		2430	-4.99	31.67	-2.68
1565	-5.04	31.34	-1.58		2440	-4.97	31.88	-2.43
1575	-5.27	29.7	-1.77		2450	-5.1	30.87	-2.24
1585	-5.51	28.12	-2.03		2460	-5.42	28.7	-2.56
1595	-5.76	26.54	-2.26		2470	-5.51	28.15	-2.62
1605	-5.48	28.34	-1.87		2480	-5.65	27.25	-2.81
1615	-5.65	27.23	-2.19		2490	-5.78	26.42	-2.95
1625	-6.06	24.76	-2.4		2500	-6.13	24.39	-3.18
Passive efficiency - Arm								
Freq (MHz)	Effi (dB)	Effi (%)	Gain (dBi)		Freq (MHz)	Effi (dB)	Effi (%)	Gain (dBi)
1525	-11.07	7.81	-5.97		2400	-10.58	8.74	-3.46
1535	-11.29	7.43	-5.54		2410	-10.65	8.61	-3.57
1545	-11.2	7.58	-5.65		2420	-10.79	8.33	-3.53
1555	-11.36	7.32	-6.04		2430	-10.83	8.25	-3.82
1565	-11.38	7.28	-5.99		2440	-11.11	7.74	-3.91
1575	-11.68	6.8	-6.23		2450	-11.15	7.67	-3.93
1585	-11.82	6.58	-6.3		2460	-11.32	7.37	-4
1595	-11.91	6.44	-6.46		2470	-11.29	7.43	-4.03
1605	-12.14	6.11	-6.21		2480	-11.46	7.14	-4.22
1615	-12.17	6.07	-6.87		2490	-11.74	6.69	-4.47
1625	-12.3	5.89	-6.91		2500	-11.86	6.52	-4.62

4. OTA data

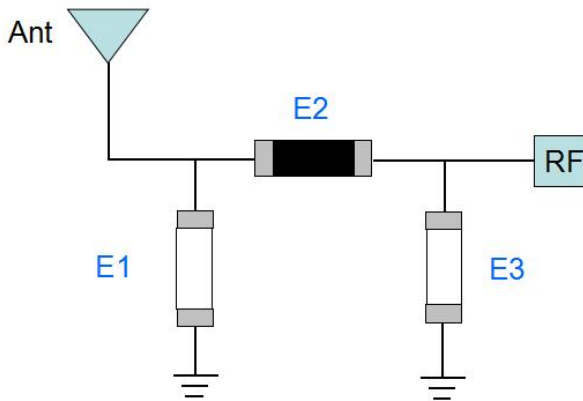
GPS/arm	-144.74
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BT-arm			
Test	BT		
Result	0	39	78
TRP (dBm)	-4.09	-4.5	-4.51
TIS (dBm)	-82.22	-82.35	-82.09

5. Environmental treatment



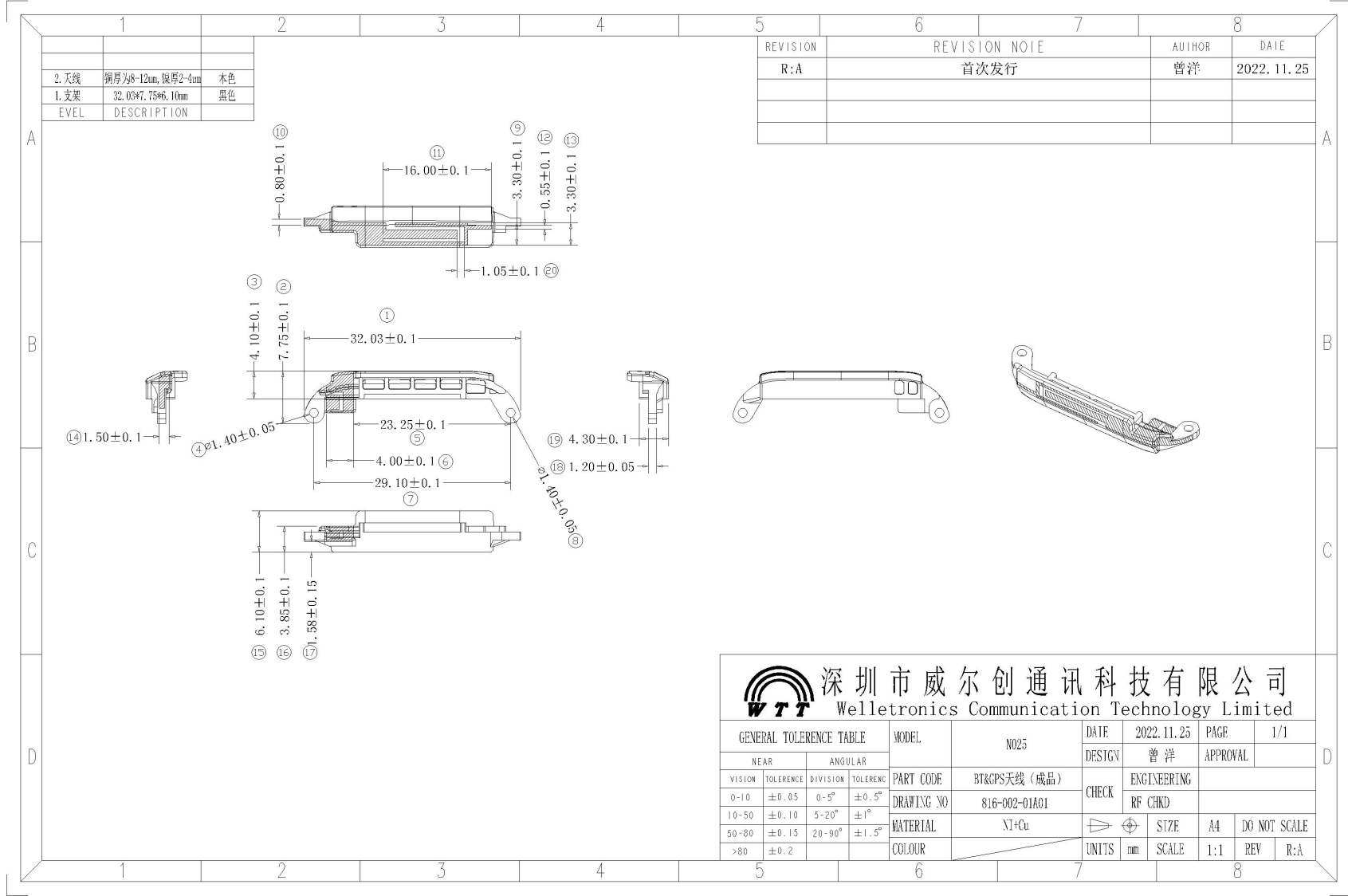
6. Antenna matching



BT信号点匹配	
Element	Value
E1 (0201)	N/A
E2 (0201)	0Ω
E3 (0201)	N/A

Note: The match is unchanged

Five. 2D diagram of antenna structure



Six.Key material list &BOM form

Key material list &BOM form					
Customer	Zhouhai	Written By	Xiaojie	Orig. Date	2022-11-22
Part Number	816-002-01A01	Revised By	Yaokun	Revised Date	2022-11-22
Description	N025 BT&GPS天线	Approved By	Liutianhua	Approved Date	2022-11-22
Subpart Name		Material Name		Material supplier	
material		LDS		Charber	
plating		Copper plating (CU)		Zhong rui	
plating		Nickel plating (NI)		Zhong rui	

Seven.Full size Measurement Report

Full-size Measurement Report

Vendor(供应商)		Material Name 材质名称		FPC antenna	Part NO	816-002-01A01					Tool Number		Cav. Number		Unit			Comments						
WTT		Material Mark			Part Name	N025 BT&GPS天线									<input type="checkbox"/> INCHES <input type="checkbox"/> MILLIMETERS									
Date		2022-11-22			MEASURED DIMENSION					% TOLERANCE USED		DISPOSITION					ACCEPTABLE VARIANCE							
DJM.#	DIMENSION	DRAWING ZONE	+ TOL.	- TOL.	NOTE	SAMPLE 1	SAMPLE 2	SAMPLE 3	SAMPL E 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	32.03		0.15	0.15		32.01	31.99	32.01	32.07	32.05	26%	26%	X											
2	7.75		0.15	0.15		7.73	7.76	7.71	7.73	7.75	7%	27%	X											
3	4.10		0.15	0.15		4.13	4.09	4.11	4.07	4.11	20%	20%	X											
4	1.40		0.10	0.10		1.41	1.41	1.40	1.41	1.36	10%	40%	X											
5	23.25		0.10	0.10		23.21	23.25	23.26	23.22	23.27	20%	40%	X											
6	4.00		0.10	0.10		3.97	4.00	3.97	3.98	4.01	10%	30%	X											
7	29.10		0.15	0.15		29.07	29.14	29.06	29.11	29.13	27%	27%	X											
8	1.40		0.10	0.10		1.43	1.39	1.44	1.44	1.42	40%	10%	X											
9	3.84		0.10	0.10		3.85	3.80	3.81	3.80	3.86	20%	40%	X											
10	0.80		0.10	0.10		0.81	0.81	0.81	0.80	0.81	10%	0%	X											
11	16.00		0.10	0.10		16.05	15.96	16.03	16.02	15.94	50%	60%	X	X										
12	0.55		0.10	0.10		0.57	0.59	0.61	0.52	0.51	60%	40%		X										
13	3.30		0.10	0.10		3.31	3.30	3.30	3.32	3.29	20%	10%	X											
14	1.50		0.10	0.10		1.52	1.49	1.51	1.51	1.48	20%	20%	X											
15	6.10		0.15	0.15		6.10	6.10	6.13	6.13	6.07	20%	20%	X											
16	3.85		0.15	0.15		3.82	3.81	3.84	3.86	3.81	7%	27%	X											
17	1.58		0.10	0.10		1.61	1.58	1.56	1.57	1.55	30%	30%	X											
18	4.30		0.15	0.15		4.31	4.34	4.34	4.30	4.27	27%	20%	X											
19	1.05		0.10	0.10		1.02	1.07	1.08	1.04	1.05	30%	30%	X											

Eight.Cpk report

CPK Report

Part Number	816-002-01A01		Vendor	WTT
Description	N025 BT&GPSantenna		Inspected	Xiaojie
Tool Number			Inches/MM	mm
Cavity			Material Name	FPC
			Material Code	
Revision	R:A		Date	2022-11-22
Dim. Designator	1	2		
Nominal	32.03	7.75		
+ Tolerance	0.15	0.15		
- Tolerance	-0.15	-0.15		
Upper Limit	32.18	7.90		
Lower Limit	31.88	7.60		
1	32.01	7.73		
2	31.99	7.76		
3	32.01	7.71		
4	32.07	7.73		
5	32.05	7.75		
6	32.00	7.70		
7	32.05	7.75		
8	32.00	7.73		
9	32.05	7.70		
10	32.10	7.78		
11	32.00	7.76		
12	32.01	7.80		
13	32.05	7.70		
14	32.05	7.71		
15	32.00	7.75		
16	32.05	7.72		
17	32.08	7.70		
18	32.05	7.73		
19	32.00	7.70		
20	32.03	7.75		
21	32.06	7.73		
22	31.99	7.70		
23	31.98	7.78		
24	31.96	7.76		
25	32.03	7.80		
26	32.10	7.70		
27	32.06	7.71		
28	32.00	7.70		
29	32.01	7.76		
30	32.00	7.79		
MAX.	32.10	7.80		
MIN.	31.96	7.70		
AVERAGE	32.03	7.74		
STDEV	0.04	0.03		
CP	1.40	1.53		
Cpk	1.38	1.39		
TOOLING	CMM	CMM		

audit: Yaokun

tabulation: Xiaojie