

SPECIFICATION FOR APPROVAL

CUSTOMER: _____

CUS PARTNO: _____

PARTNAME: _____ Built-in antenna

TPTPART NO: _____ WWXL6012681

VERSION: _____ 1.0

CUS STAMP:

DATE:

Purchasing Dept	Engineering Dept	Approval

WWXL:

Date: January 30, 2026

Engineering Dept	Sales Dept	Approval
Dai Hongbo		Tong Xiaoyan



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Please return one specification or one copy of it with your chop and signature of approval and retain the others for your record. In the event of an order being placed for this part number before the chop and signed with specification (or copy) is returned and without special explanation, it will be assumed that full approval have beengiven.

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Add: Hubei Xiangyang Gucheng County 1-3 Shuang Yang Road Taoyuan Street, All things connected industrial park,

Cell phone: 136 6268 4409

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Specification for Antenna

1、Test parameters

Name: WIFI antenna (WWXL6012681)		ModelType	
ELECTRICAL SPECTFICATIONS		MECHANICAL SPECTFICATIONS	
FrequencyRange 700-960/1710-2700MHz		Dimensions	126*50.3*0.2mm
Impedance	50 Ω	IPEX	IPEX
VSWR	Reference standing wave diagram	Coaxial-cable	RG1.13 black L=115 $\pm$ 2mm
Gain	3.35/4.0dBi	WorkingTemperature	-45°C - +85°C
Polarization	linear Vertical	Limit Temperature	-45°C~+85°C
Radiation	Omnidirectional		

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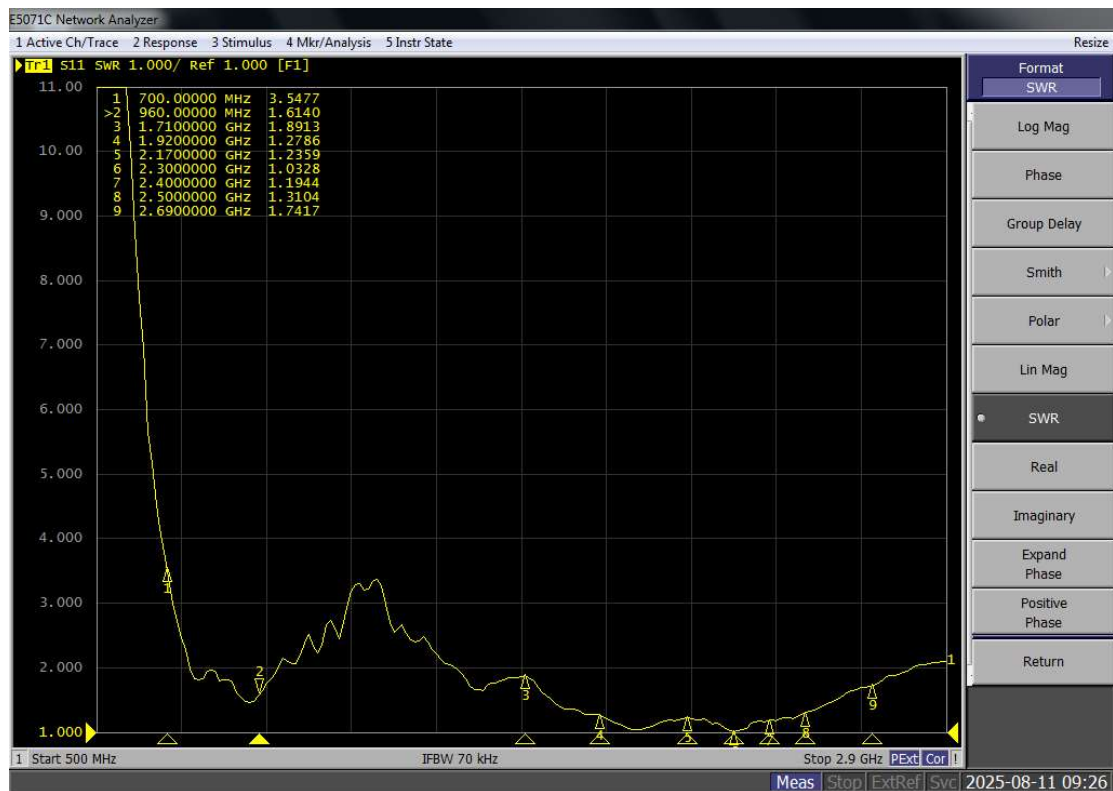
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2、Antenna Passive Parameters:

a. VSWR



b、Gain and Efficiency:

Gain&Efficiency&PhaseCenter								
frequency (MHz)	gain (dBi)	efficiency (%)	frequency (MHz)	gain (dBi)	efficiency (%)	frequency (MHz)	gain (dBi)	efficiency (%)
700	4.31	56.62	830	2.98	78.89	960	2.15	56.1
710	4.31	63.1	840	2.82	76.03	1700	4.89	67.61
720	3.69	62.66	850	2.61	73.45	1730	5.33	66.68
730	3.12	61.24	860	2.89	71.78	1760	4.28	67.76
740	3.66	66.22	870	2.76	71.45	1790	4.05	68.71
750	3.77	69.18	880	2.79	69.34	1820	4.09	69.5
760	4.16	72.61	890	2.86	65.77	1850	4.61	71.94
770	4.84	77.27	900	2.78	63.24	1880	3.51	74.82
780	4.85	80.35	910	2.87	62.23	1910	4.88	74.64
790	5.37	82.79	920	2.92	64.42	960	2.15	56.1
800	2.98	77.27	930	3.07	64.71	1700	4.89	67.61
810	3.29	79.8	940	3.18	63.39	1730	5.33	66.68
820	2.93	81.1	950	2.41	59.98	1760	4.28	67.76

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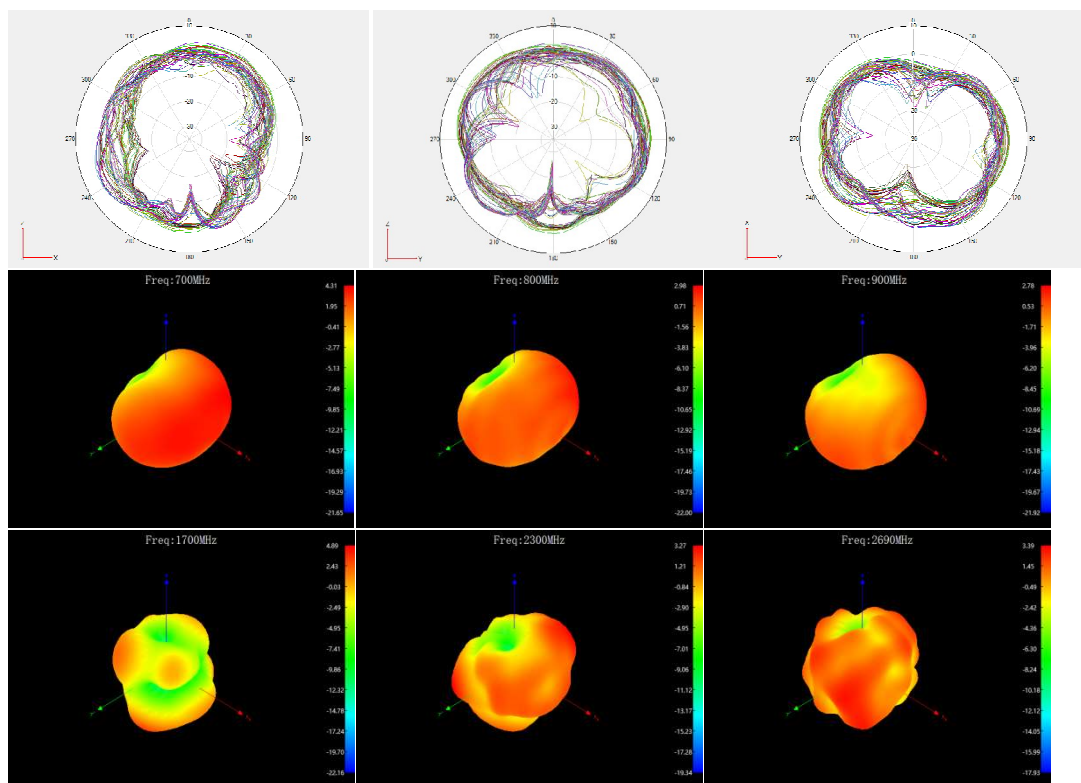
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1790	4.05	68.71	2120	3.91	74.82	2450	3.85	80.17
1820	4.09	69.5	2150	3.97	73.11	2480	3.54	75.34
1850	4.61	71.94	2180	4.3	72.78	2510	3.95	77.98
1880	3.51	74.82	2210	3.99	70.96	2540	3.71	74.13
1910	4.88	74.64	2240	3.8	71.12	2570	3.71	76.03
1940	5.52	79.07	2270	3.53	72.78	2600	3.84	71.61
1970	4.65	76.91	2300	3.27	73.28	2630	3.57	74.13
2000	3.94	79.43	2330	3.56	77.27	2660	3.31	71.78
2030	3.99	74.13	2360	3.52	76.38	2690	3.39	70.47
2060	4.39	78.34	2390	3.67	79.8			
2090	4.01	76.21	2420	3.78	76.56			

c、2D/3D directional



d. Active data::

Item	Measurement	Azimuths	Elevations	Standard	Band	Channel	Frequency	Max	Min	Total
1	TRP	Every90	Every45	FDD_LTE	FDD_B1(10MHz)	18300	1950	27.16	6.83	21.23
2	TRP	Every90	Every45	FDD_LTE	FDD_B1(10MHz)	18550	1975	26.64	7.17	20.82
3	TIS(RSSI)	Every90	Every45	FDD_LTE	FDD_B1(10MHz)	550	2165	-84.85	-98.45	-95.42
4	TRP	Every90	Every45	FDD_LTE	FDD_B2(10MHz)	18650	1855	25.28	5.66	21.43
5	TRP	Every90	Every45	FDD_LTE	FDD_B2(10MHz)	18900	1880	25.26	4.44	21.14

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6	TRP	Every90	Every45	FDD_LTE	FDD_B2(10MHz)	19150	1905	26.21	11.06	21.67
7	TIS(RSSI)	Every90	Every45	FDD_LTE	FDD_B2(10MHz)	1150	1985	-87.89	-102.02	-97.23
8	TRP	Every90	Every45	FDD_LTE	FDD_B3(10MHz)	19250	1715	26.5	2.69	20.65
9	TRP	Every90	Every45	FDD_LTE	FDD_B3(10MHz)	19575	1747.5	26.87	7.63	21.5
10	TRP	Every90	Every45	FDD_LTE	FDD_B3(10MHz)	19900	1780	26.76	8.04	21.67
11	TIS(RSSI)	Every90	Every45	FDD_LTE	FDD_B3(10MHz)	1900	1875	-77.94	-98.67	-94.69
12	TRP	Every90	Every45	FDD_LTE	FDD_B4(10MHz)	20000	1715	26.04	1.53	20.33
13	TRP	Every90	Every45	FDD_LTE	FDD_B4(10MHz)	20175	1732.5	26.47	7.29	20.78
14	TRP	Every90	Every45	FDD_LTE	FDD_B4(10MHz)	20350	1750	26.14	6.89	20.75
15	TIS(RSSI)	Every90	Every45	FDD_LTE	FDD_B4(10MHz)	2350	2150	-81.73	-96.69	-93.75
16	TRP	Every90	Every45	FDD_LTE	FDD_B5(10MHz)	20450	829	22.28	6.01	18.15
17	TRP	Every90	Every45	FDD_LTE	FDD_B5(10MHz)	20525	836.5	24.14	7.43	20.24
18	TRP	Every90	Every45	FDD_LTE	FDD_B5(10MHz)	20600	844	22.87	5.13	18.97
19	TIS(RSSI)	Every90	Every45	FDD_LTE	FDD_B5(10MHz)	2525	881.5	-72.59	-88	-84.73
20	TRP	Every90	Every45	FDD_LTE	FDD_B7(10MHz)	20800	2505	24.91	14.36	21.49
21	TRP	Every90	Every45	FDD_LTE	FDD_B7(10MHz)	21100	2535	24.62	11.01	21.19
22	TRP	Every90	Every45	FDD_LTE	FDD_B7(10MHz)	21400	2565	23.72	11.2	20.4
23	TIS(RSSI)	Every90	Every45	FDD_LTE	FDD_B7(10MHz)	3400	2685	-81.32	-98	-93.86
24	TRP	Every90	Every45	FDD_LTE	FDD_B8(10MHz)	21500	885	20.13	4.78	17.26
25	TRP	Every90	Every45	FDD_LTE	FDD_B8(10MHz)	21625	897.5	21.1	-0.27	18.59
26	TRP	Every90	Every45	FDD_LTE	FDD_B8(10MHz)	21750	910	21.71	8.54	19.91
27	TIS(RSSI)	Every90	Every45	FDD_LTE	FDD_B8(10MHz)	3625	942.5	-74.07	-87.4	-84.01
28	TRP	Every90	Every45	FDD_LTE	FDD_B12(5MHz)	23035	701.5	19.31	9.68	16.43
29	TRP	Every90	Every45	FDD_LTE	FDD_B12(5MHz)	23095	707.5	23.06	12.23	20.3
30	TRP	Every90	Every45	FDD_LTE	FDD_B12(5MHz)	23155	713.5	22.15	10.27	19.44
31	TIS(RSSI)	Every90	Every45	FDD_LTE	FDD_B12(5MHz)	5095	737.5	-78.19	-90.81	-87.82
32	TRP	Every90	Every45	FDD_LTE	FDD_B12(10MH	23060	704	19.74	11	16.85
33	TRP	Every90	Every45	FDD_LTE	FDD_B12(10MH	23095	707.5	23.46	13.69	20.44
34	TRP	Every90	Every45	FDD_LTE	FDD_B12(10MH	23130	711	22.01	12.19	19.17
35	TIS FAST	Every90	Every45	FDD_LTE	FDD_B12(10MH	5130	741	-79.86	-90.95	-87.9
36	TRP	Every90	Every45	FDD_LTE	FDD_B13(10MH	23230	782	22.98	11.49	19.66
37	TIS FAST	Every90	Every45	FDD_LTE	FDD_B13(10MH	5230	751	-78.69	-89.15	-86
38	TRP	Every90	Every45	FDD_LTE	FDD_B19(10MH	24050	835	22.48	6.64	19.27
39	TRP	Every90	Every45	FDD_LTE	FDD_B19(10MH	24075	837.5	23.2	8.48	19.55
40	TRP	Every90	Every45	FDD_LTE	FDD_B19(10MH	24100	840	20.41	7.5	17.17
41	TIS(RSSI)	Every90	Every45	FDD_LTE	FDD_B19(10MH	6075	882.5	-72.15	-84.6	-80.72
42	TRP	Every90	Every45	FDD_LTE	FDD_B20(10MH	24200	837	20.67	5.26	17.4
43	TRP	Every90	Every45	FDD_LTE	FDD_B20(10MH	24300	847	20.74	7.93	17.32
44	TRP	Every90	Every45	FDD_LTE	FDD_B20(10MH	24400	857	21.74	9.17	18.01
45	TIS(RSSI)	Every90	Every45	FDD_LTE	FDD_B20(10MH	6300	806	-70.69	-83.68	-80.39
46	TRP	Every90	Every45	FDD_LTE	FDD_B25(5MHz)	26065	1852.5	25.77	8.42	21.61
47	TRP	Every90	Every45	FDD_LTE	FDD_B25(5MHz)	26365	1882.5	25.75	7.92	21.77
48	TRP	Every90	Every45	FDD_LTE	FDD_B25(5MHz)	26665	1912.5	25.91	11.06	21.13
49	TIS(RSSI)	Every90	Every45	FDD_LTE	FDD_B25(5MHz)	8365	1962.5	-90.13	-102.97	-97.72
50	TRP	Every90	Every45	FDD_LTE	FDD_B26(5MHz)	26715	816.5	21.85	6.75	18.57
51	TRP	Every90	Every45	FDD_LTE	FDD_B26(5MHz)	26865	831.5	22.09	6.4	18.71
52	TRP	Every90	Every45	FDD_LTE	FDD_B26(5MHz)	27015	846.5	21.91	9.2	18.37
53	TIS(RSSI)	Every90	Every45	FDD_LTE	FDD_B26(5MHz)	8865	876.5	-77.09	-88.86	-85.16
54	TRP	Every90	Every45	FDD_LTE	FDD_B28(10MH	27260	708	20.73	11.47	17.99
55	TRP	Every90	Every45	FDD_LTE	FDD_B28(10MH	27435	725.5	21.32	11.31	18.47
56	TRP	Every90	Every45	FDD_LTE	FDD_B28(10MH	27610	743	23.02	11.99	20.13
57	TIS(RSSI)	Every90	Every45	FDD_LTE	FDD_B28(10MH	9435	780.5	-76.39	-88.2	-84.54
58	TRP	Every90	Every45	TDD_LTE	TDD_B34(20MH	36300	2020	25.57	12.76	22.2
59	TRP	Every90	Every45	TDD_LTE	TDD_B34(20MH	36275	2017.5	25.89	14.1	22.24
60	TRP	Every90	Every45	TDD_LTE	TDD_B34(20MH	36250	2015	24.83	13.88	21.91

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61	TIS(RSSI)	Every90	Every45	TDD_LTE	TDD_B34(20MH	36275	2017.5	-84.24	-96.56	-93.08
62	TRP	Every90	Every45	TDD_LTE	TDD_B38(20MH	37850	2580	24.69	8.04	20.5
63	TRP	Every90	Every45	TDD_LTE	TDD_B38(20MH	38000	2595	25.68	7.32	21.29
64	TRP	Every90	Every45	TDD_LTE	TDD_B38(20MH	38150	2610	24.74	6.69	20.31
65	TIS(RSSI)	Every90	Every45	TDD_LTE	TDD_B38(20MH	38000	2595	-81.64	-97.83	-93.3
66	TRP	Every90	Every45	TDD_LTE	TDD_B39(20MH	38350	1890	25.47	3.84	21.45
67	TRP	Every90	Every45	TDD_LTE	TDD_B39(20MH	38450	1900	26.06	7.42	21.7
68	TRP	Every90	Every45	TDD_LTE	TDD_B39(20MH	38550	1910	25.28	9.74	20.49
69	TIS(RSSI)	Every90	Every45	TDD_LTE	TDD_B39(20MH	38450	1900	-77.71	-97.37	-92.79
70	TRP	Every90	Every45	TDD_LTE	TDD_B40(20MH	38750	2310	26.4	12.67	21.88
71	TRP	Every90	Every45	TDD_LTE	TDD_B40(20MH	39150	2350	25.3	13.84	21.71
72	TRP	Every90	Every45	TDD_LTE	TDD_B40(20MH	39550	2390	25.1	14.73	21.92
73	TIS(RSSI)	Every90	Every45	TDD_LTE	TDD_B40(20MH	39150	2350	-84.11	-96.14	-91.92
74	TRP	Every90	Every45	TDD_LTE	TDD_B41(20MH	39750	2506	25.17	13.27	21.12
75	TRP	Every90	Every45	TDD_LTE	TDD_B41(20MH	40620	2593	25.63	9.18	21.06
76	TRP	Every90	Every45	TDD_LTE	TDD_B41(20MH	41490	2680	24.47	5.48	19.88
77	TIS(RSSI)	Every90	Every45	TDD_LTE	TDD_B41(20MH	40620	2593	-81.06	-97.33	-92.84

3、Product characteristics

- Choose high-quality FPC and radio frequency cable, self-attenuation;
- Stable performance, long life;
- The standing wave in frequency band is good.

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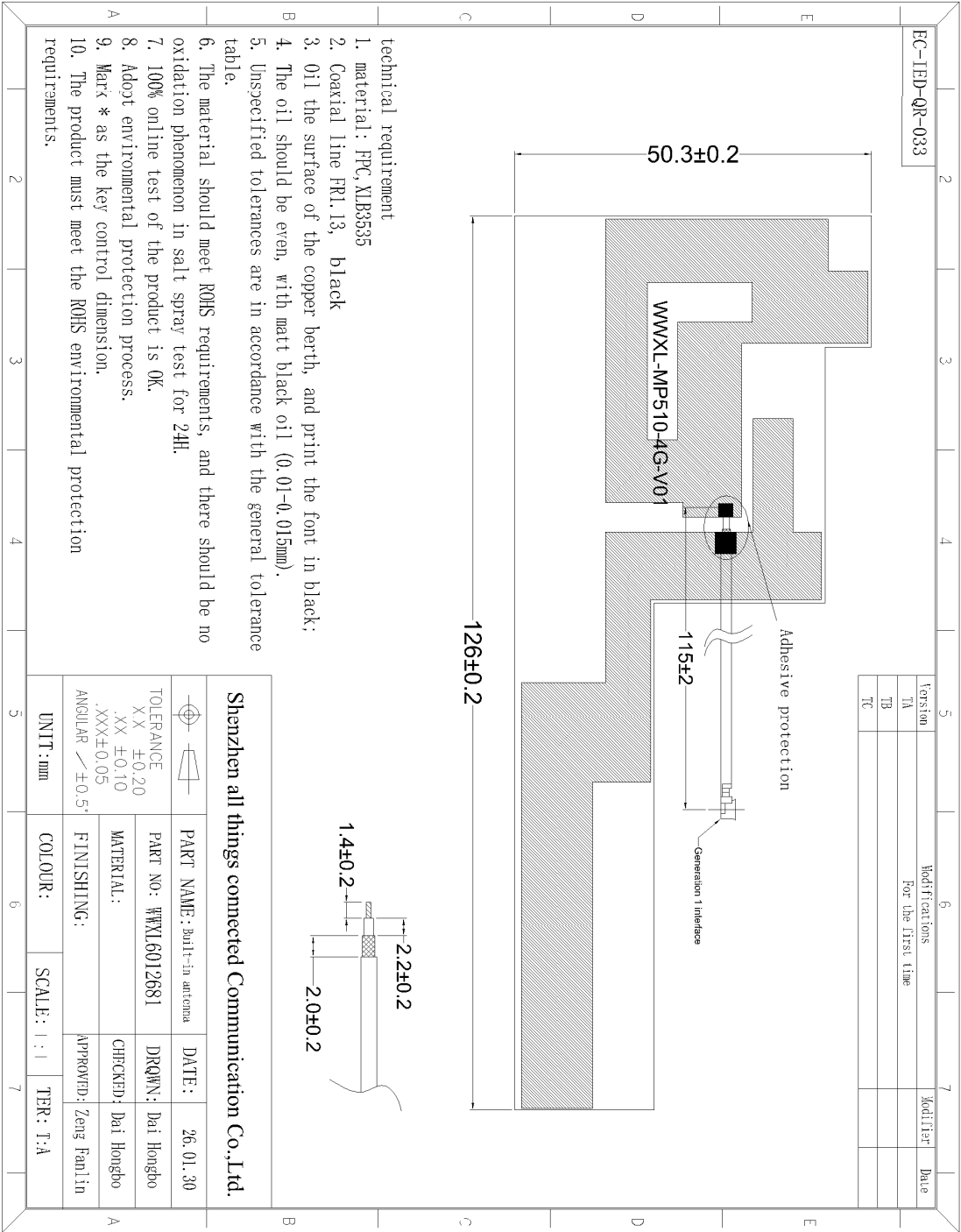
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4、Drawing

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5、Reliability testing

a、Environmental experiment

High and low temperature and humidity test report						
test project	High temperature, low temperature and constant humidity test					
name	Built-in antenna (WWXL6012681)		date		2026.01.30	
device	Constant temperature and humidity test box network analyzer		Quantity		5PCS	
Inspectin standards	1. There are no defects such as peeling off, cracks, wrinkles, etc. on the metal surface; non-metal parts must not have defects such as discoloration, cracking, deformation, degumming. 2. The electrical test meets the design requirements; the voltage standing wave ratio test is satisfactory.					
Test name		request	experiment method	Actual test data	result	
					sample	Assessm ent result
High temperature test	Temperature (°C) Test sample temperature stabilization time (H) Test duration (h) Recovery time (h)	+85±3 1 2 1	9 according to GB2423. 1-89 Method	+87 1.2 2.3 1	1	qualified
					2	qualified
					3	qualified
					4	qualified
					5	qualified
Low temperature test	Temperature (°C) Test sample temperature stabilization time (h) Test duration (h) Recovery time (h)	-45±3 1 2 1	8th in accordance with GB2423. 1-89 Method	-46 1.2 2.4 1.1	1	qualified
					2	qualified
					3	qualified
					4	qualified
					5	qualified
Constant Damp Heat Test	Temper ature (°C) Relative humidity (%)	+40±2 90-95 21 1	According to GB2423. 3-93 Section 5 Method	+42 92 22 1.1	1	qualified
					2	qualified
					3	qualified
					4	qualified

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	Test duration (h) Recovery time (h)				5	qualified
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b. Salt spray test

Salt fog test report				
Test item	Salt spray test			
Name	Built-in antenna (WWXL6012681)		date of observation	2026.01.30
Device name	Salt spray corrosion test box		Test quantity	5 PCS
Test method	The test samples were put into the modulated salt solution test chamber and salt spray corrosion chamber for continuous spray test			
Salt solution concentration	52g/L	PH Value of Salt Solution: 6.5-7.2		Test cycle: 24h
Actual test data	55g/L	PH Value of Salt Solution: 6.8		Test cycle: 26h
Test standard	Tests were carried out according to GB/T10125 "Artificial Atmosphere Corrosion Test and Salt Spray Test"; Results According to GB/T6461-2002 "Metal and other inorganic coatings on metal substrates after corrosion test are samples and specimens"			
Test result				
NO	Corrosion resistance grade	Actual test data	Assessment result	Remarks
1	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	
2	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	
3	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	
4	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	
5	Rp/Ra=10/10vsB	Rp/Ra=10/10vsB	qualified	

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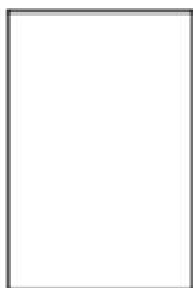
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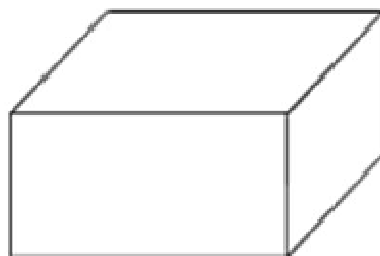
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6. Packing instructions



100PCS/Pouch



30Pouch/1Caron