



Approval Sheet

Customer	LingTuo	Data	2026/05/11
Product	WIFI/BT Antenna	Models	L5
P/N	F1200N-13RB-050	Customer P/N	
Specifications	Black FPC; RF0.81 three-generation terminal Black coaxial line : L=050mm		

Vender Approved By	Customer Approved By
Checked By:	Checked By:
Approval By:	Approval By:

Document Revision Resume

Version	Revise The Content	Revused	Approval	Date	Note



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Specification

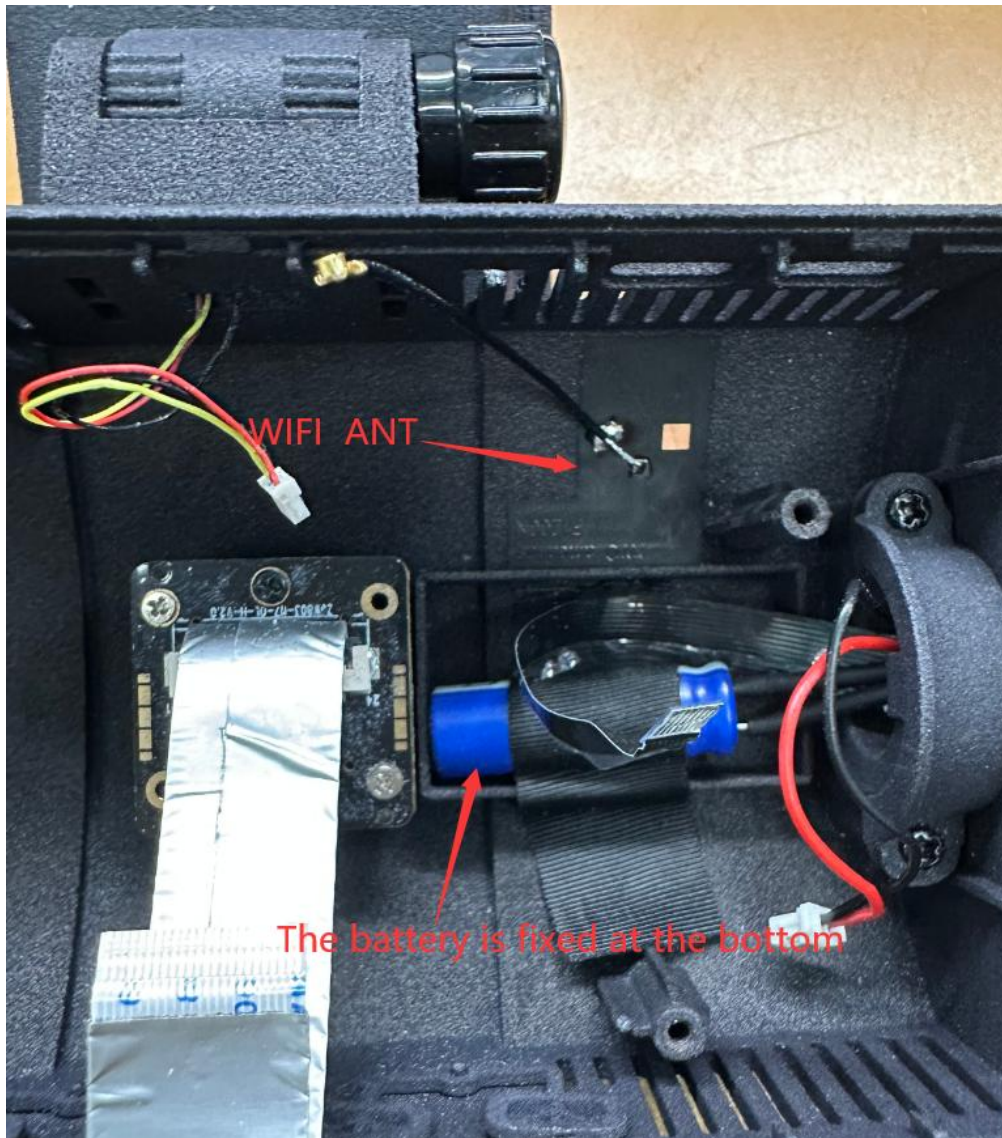
1.1 Electrical Properties

Characteristics	Specifications
Working Band	2.4G WiFi/BT; 5G WiFi
Antenna From	PIFA
Impedance	50 Ω
Polarization	Linear
Peak Effi	49%@2.4G; 56%@5G
Peak Gain	2.2dBi@2.4G; 3.6dBi@5G

1.2 Physical Properties

Characteristics	Specifications
Operating Temp	-10°C~+60°C
Storage Temp	-10°C~+70°C
Humidity	10~95%RH

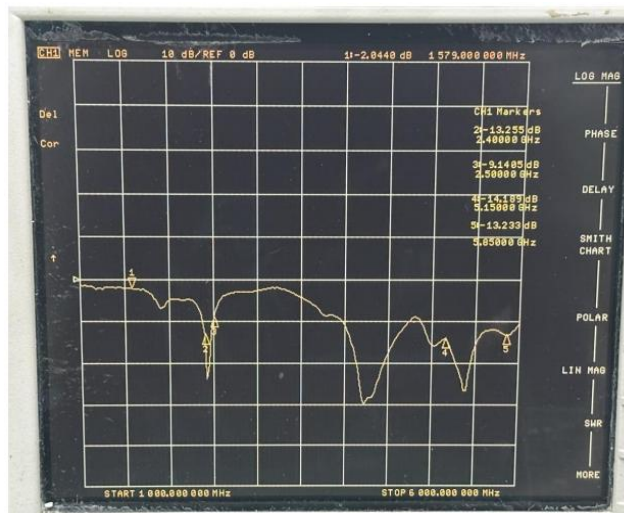
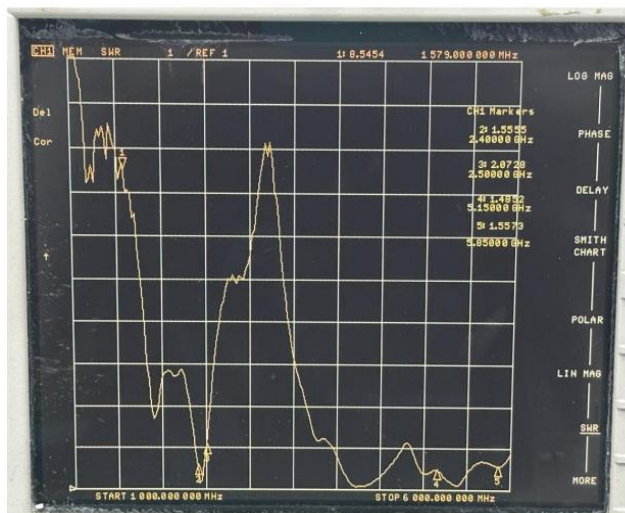
Antenna Placement





Test Data

S11 Parameter-VSWR



Frequency (MHZ)	2400	2500	5150	5850
VSWR	1.55	2.07	1.48	1.55
Return Loss (DB)	-13.25	-9.14	-14.18	-13.23

Efficiency Table (2.4G)

Passive Test For WIFI2.4

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)
2400	48.99	-3.1	2.28	0.13	19.453	29.538	2.28	-11.5
2410	48.29	-3.16	2.19	0.04	19.119	29.175	2.19	-12.22
2420	48.21	-3.17	2.15	0	19.427	28.78	2.15	-12.13
2430	48.77	-3.12	2.08	-0.07	19.64	29.128	2.08	-12.51
2440	49.97	-3.01	2.06	-0.09	20.003	29.965	2.06	-13.22
2450	49.04	-3.09	1.84	-0.31	19.6	29.442	1.84	-13.12
2460	45.9	-3.38	1.58	-0.57	18.483	27.414	1.58	-13.7
2470	49.58	-3.05	1.96	-0.19	20.026	29.552	1.96	-13.29
2480	48	-3.19	1.95	-0.2	19.662	28.334	1.95	-13.5
2490	40.44	-3.93	1.34	-0.81	16.91	23.53	1.34	-14.33
2500	37.9	-4.21	1.23	-0.92	16.171	21.725	1.23	-15.83

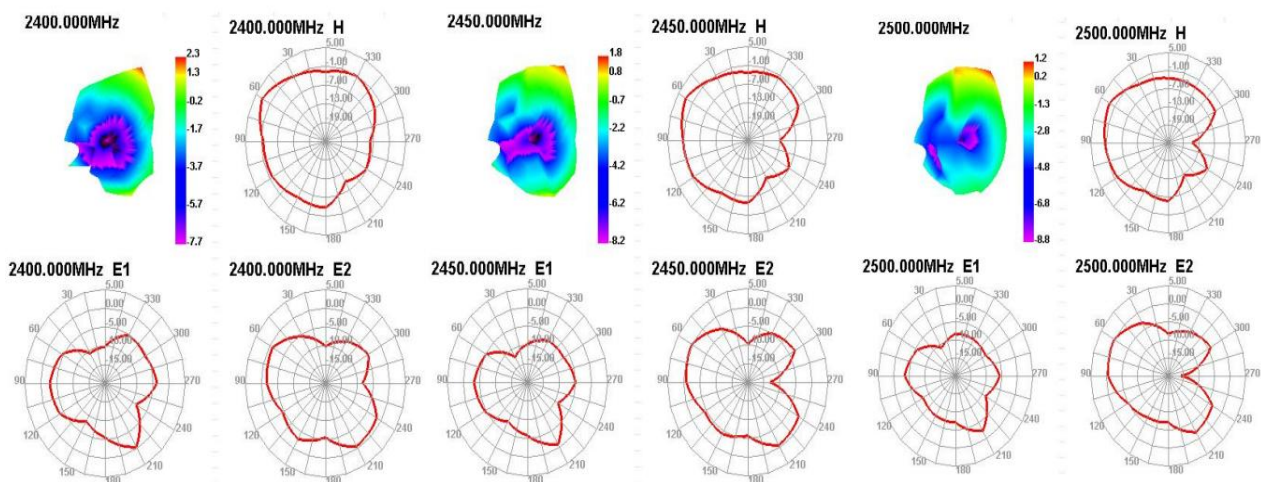


Efficiency Table (5G)

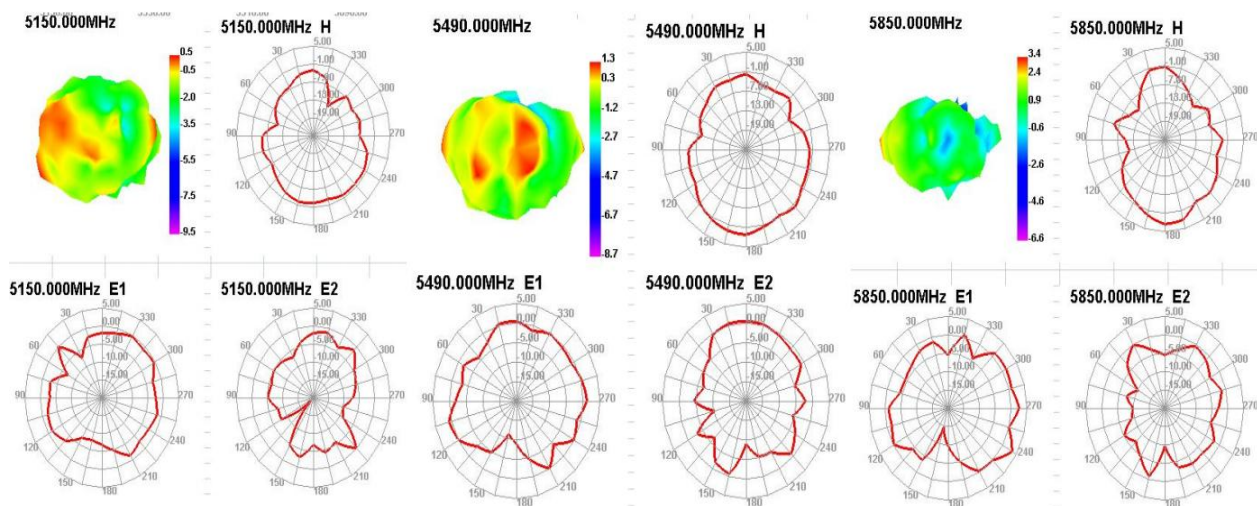
Passive Test For WIFI5G								
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHIS (%)	Max (dB)	Min (dB)
5150	43.35	-3.63	0.48	-1.67	23.721	19.629	0.48	-20.47
5170	42.41	-3.73	0.49	-1.66	23.509	18.903	0.49	-18.27
5190	43.98	-3.57	0.51	-1.64	24.645	19.337	0.51	-19.44
5210	41.39	-3.83	0.37	-1.78	23.576	17.815	0.37	-20.5
5230	44.69	-3.5	1.24	-0.91	25.828	18.862	1.24	-18.84
5250	42.59	-3.71	1.13	-1.02	24.828	17.759	1.13	-18.26
5270	46.98	-3.28	1.66	-0.49	27.473	19.506	1.66	-17.51
5290	48.71	-3.12	2.1	-0.05	28.565	20.145	2.1	-17.82
5310	47.7	-3.21	2.15	0	28.058	19.646	2.15	-16.95
5330	49.03	-3.1	2.02	-0.13	28.725	20.3	2.02	-17.91
5350	51.36	-2.89	2.43	0.28	29.775	21.586	2.43	-19.62
5370	49.58	-3.05	2.12	-0.03	28.47	21.115	2.12	-19.74
5390	47.48	-3.24	1.63	-0.52	27.193	20.284	1.63	-20.16
5410	57.86	-2.38	2.36	0.21	32.947	24.917	2.36	-21.03
5430	55.05	-2.59	1.98	-0.17	30.949	24.099	1.98	-19.35
5450	55.51	-2.56	1.81	-0.34	30.806	24.705	1.81	-15.72
5470	55.34	-2.57	1.37	-0.78	30.703	24.637	1.37	-15.4
5490	54.15	-2.66	1.31	-0.84	30.062	24.084	1.31	-15.5
5510	53.3	-2.73	1.28	-0.87	29.174	24.129	1.28	-14.9
5530	53.69	-2.7	2.06	-0.09	28.997	24.694	2.06	-16.92
5550	53.17	-2.74	2.29	0.14	28.71	24.456	2.29	-20.09
5570	52.92	-2.76	2.26	0.11	28.576	24.342	2.26	-19.94
5590	51.92	-2.85	2.53	0.38	27.662	24.261	2.53	-20.74
5610	50.81	-2.94	2.96	0.81	26.705	24.103	2.96	-20.81
5630	49.46	-3.06	2.9	0.75	25.987	23.473	2.9	-17.44
5650	51.12	-2.91	2.97	0.82	26.952	24.164	2.97	-18.49
5670	50.16	-3	3.15	1	26.213	23.948	3.15	-22.22
5690	48.33	-3.16	3.27	1.12	24.934	23.395	3.27	-19.29
5710	51.24	-2.9	3.6	1.45	26.482	24.753	3.6	-18.1
5730	49.38	-3.06	3.18	1.03	25.765	23.619	3.18	-18.41
5750	51.38	-2.89	3.25	1.1	26.809	24.571	3.25	-17.13
5770	49.41	-3.06	3.2	1.05	25.678	23.735	3.2	-15.55
5790	50.35	-2.98	3.33	1.18	26.271	24.079	3.33	-16.04
5810	52.02	-2.84	3.29	1.14	27.48	24.539	3.29	-17.19
5830	56.58	-2.47	3.6	1.45	30.04	26.537	3.6	-15.21
5850	54.01	-2.68	3.43	1.28	28.541	25.468	3.43	-14.69



Radiation Pattern(2.4G)



Radiation Pattern(5G)





Antenna Assembly

