

Antenna specification for approval

Customer name:Chuangruixin

Antenna type :WIFI antenna

Antenna frequency band: 2.4G/5.8G

Material : FPC

Color : Black

Material Number:F1386A-1R24B-400-A

Production date:2023-12-28

Version: A

Admit that signature			
Confirmation Signature		Customer Approved	
Responsible		Responsible	
QC		Engineer	
Approve		Approve	
Date		Date	

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This approval sheet supports for MID project. FPC antennas include in this project. This report is for the performance of WIFI antenna.

- Antenna shape size: Meet the requirement of MID project
- Antenna band: 2400MHz~2500MHz
- Antenna material: Antenna material meet the requirement of MID
- Adhesive performance: Adhesive performance meet the requirement of MID

Antenna performance SPEC overview

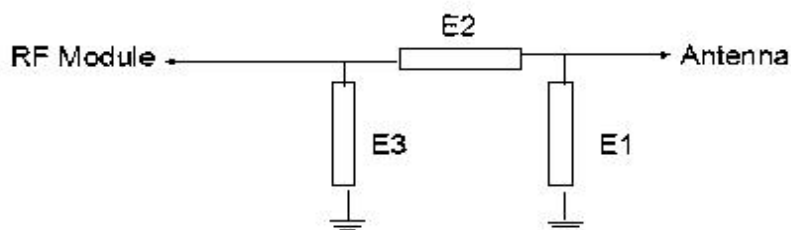
Description	2.4GHz~2.5GHz	Units
VSWR	≤ 2.0	
Average Antenna Gain	≥ 1.0	dB
Antenna Efficiency	≥ 40	%
Feed Impedance	50 ohms	
Operating Temperature	-40 to +85 deg C	
Polarization / Azimuth	Linear / Omni-directional	

• Mechanical Information

Mechanical Dimension	
Cable Length	400/415mm/Black/Gray
Description	WIFI antenna
Material	FPC
Coaxial Cable	50Ohm/O.D.0.81mm
Environmental	
Operation Temperature	-40 to +85 deg C
Storage Temperature	-40 to +85 deg C

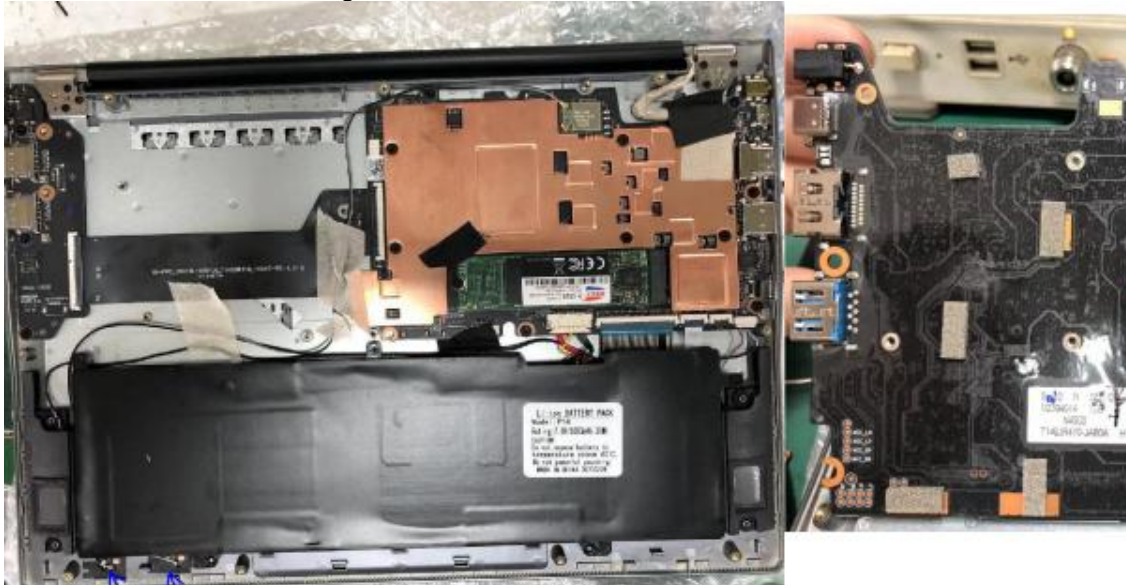
2:Match the circuit diagram, antenna images

2.1 Match the circuit diagram

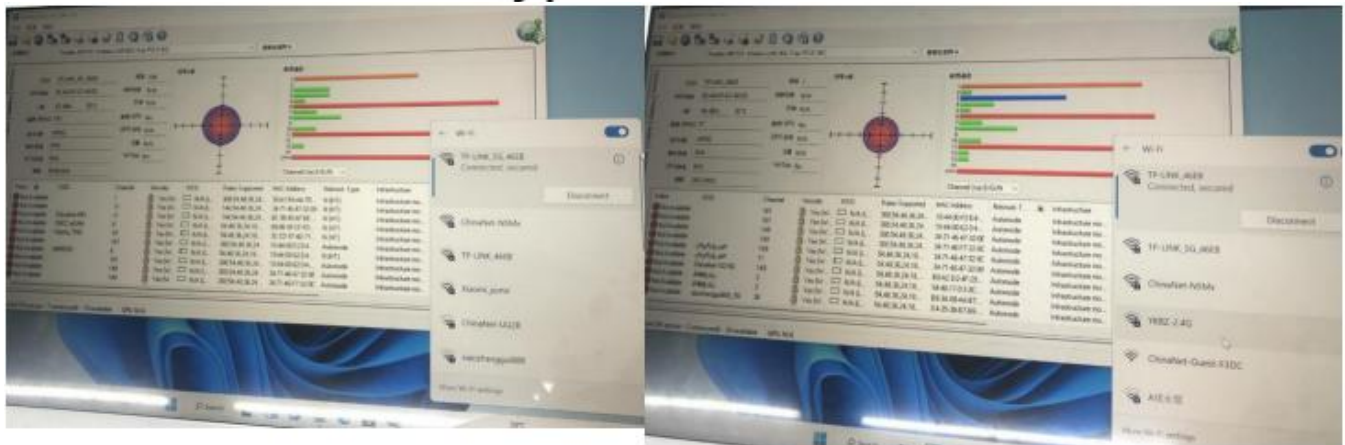


Our company did not modify the antenna matching

2.2 Machine and Antenna images



**As shown in the figure:
antenna assembly position**



3: VSWR、Efficiency

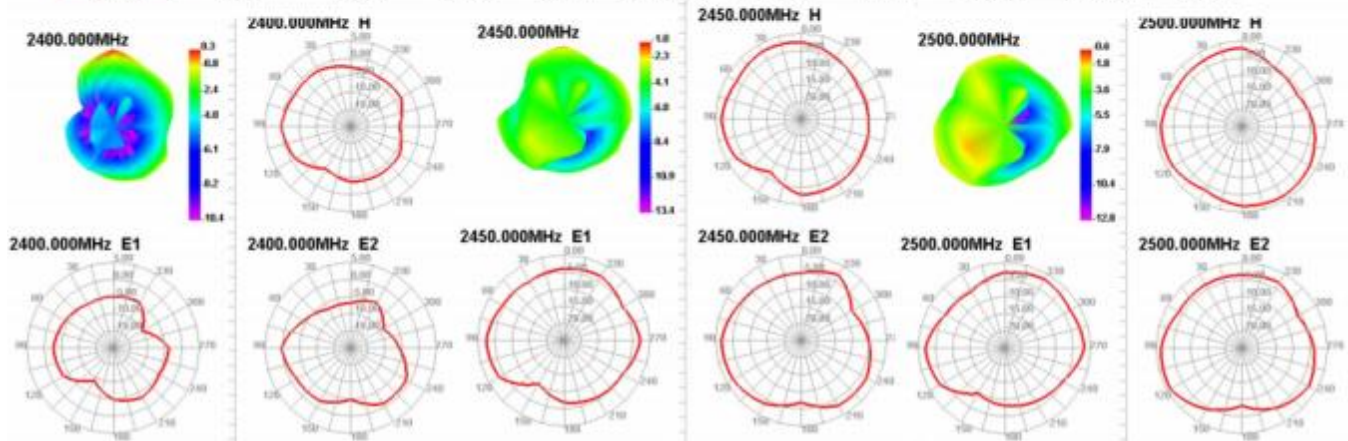
3.1 VSWR



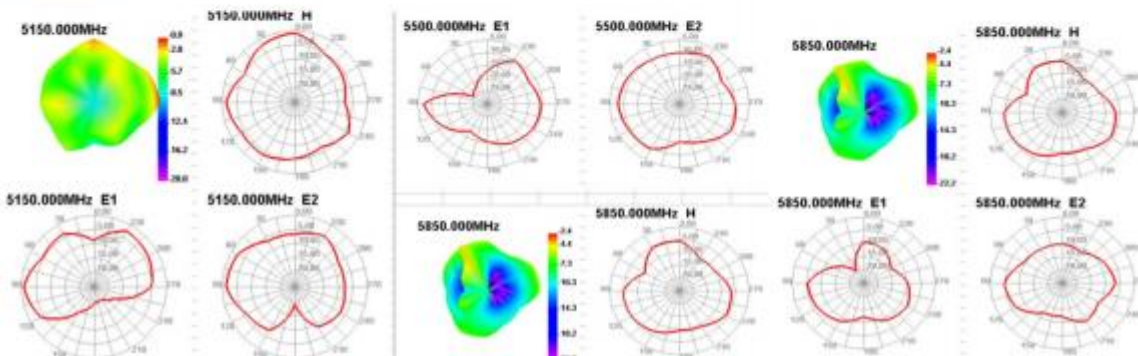
3.2 Efficiency

Application Information				Application Information			
04Version		5.230.336		04Version		5.230.336	
TotalTime		20m 5s 129ms		TotalTime		18m 27s 710ms	
AdditionalInfor		802.11b : 11Mbps		AdditionalInfor		802.11a : 54Mbps	
Test	Wifi 2G TRP			Test	Wifi 5G TRP		
Result	1	7	13	Result	36	64	149
Frequency (MHz)	2412	2442	2472	Frequency (MHz)	5180	5320	5745
TRP (dBm)	10.9	11.4	11.79	TRP (dBm)	9.97	12.38	12.26
NHPRP (dBm)	9.5	9.84	9.3	NHPRP (dBm)	9.15	11.26	11.47
MAX (dBm)	15.26	16.31	15.71	MAX (dBm)	15.25	16.66	18.15
EIRP peak	15.26	16.31	15.71	EIRP peak	15.25	16.66	18.15
Min (dBm)	-13.78	-1.78	-1.8	Min (dBm)	-1.21	0.98	1.37
Attenuation Horizontal	20.68	20.8	21.12	Attenuation Horizontal	30.11	29.33	30.42
Attenuation Vertical	21.16	21.06	21.2	Attenuation Vertical	29.54	28.25	30.38
Test	ifi 2G TIS			Test	ifi 5G TIS		
Result	13			Result	149		
Frequency (MHz)	2472			Frequency (MHz)	5745		
TIS (dBm)	-76.23			TIS (dBm)	-69.77		
NHPIS (dBm)	-72.48			NHPIS (dBm)	-68.98		
RSSIAve	11.9			RSSIAve	12.43		
MaxPosRSSI	15.33			MaxPosRSSI	17.64		
MaxPosSens	-79.66			MaxPosSens	-74.99		
MAX (dBm)	16.42			MAX (dBm)	18.37		
EIS peak	16.42			EIS peak	18.37		
Min (dBm)	4.09			Min (dBm)	1.62		
Attenuation Horizontal	20.96			Attenuation Horizontal	30.68		
Attenuation Vertical	21.05			Attenuation Vertical	30.42		

Passive Test For WIFI2.4										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Attenuat Hor	Attenuat Ver
2400	44.21	-3.54	0.25	-1.9	16.605	27.604	0.25	-10.35	48.04	48.09
2410	39.03	-4.09	-0.44	-2.59	15.195	23.837	-0.44	-11.02	47.59	47.64
2420	39.89	-3.99	-0.53	-2.68	16.292	23.602	-0.53	-11.48	47.92	48.01
2430	36.47	-4.38	-1.13	-3.28	15.596	20.871	-1.13	-12.63	47.46	47.57
2440	37.27	-4.29	-1.17	-3.32	16.512	20.759	-1.17	-13	47.72	47.88
2450	38.96	-4.09	-1.03	-3.18	17.723	21.235	-1.03	-13.36	47.65	47.81
2460	39.43	-4.04	-0.93	-3.08	18.274	21.154	-0.93	-13.6	47.84	47.97
2470	39.91	-3.99	-0.89	-3.04	18.795	21.114	-0.89	-13.29	47.92	48.04
2480	41.41	-3.83	-0.75	-2.9	19.716	21.691	-0.75	-13.09	47.86	47.88
2490	44.99	-3.47	-0.5	-2.65	21.689	23.3	-0.5	-12.64	48.2	48.18
2500	44.23	-3.54	-0.58	-2.73	21.449	22.785	-0.58	-12.85	48.05	47.98



Passive Test For 5G										
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHS (%)	DHS (%)	Max (dB)	Min (dB)	Attenuat Hor	Attenuat Ver
5150	39.95	-3.99	0.98	-1.17	17.888	22.057	0.98	-9.58	56.53	55.96
5220	43.1	-3.65	0.42	-1.73	20.86	22.244	0.42	-9.55	56.24	52.95
5290	42.26	-1.41	1.54	-0.61	35.272	36.984	1.54	-7.38	53.06	55.9
5360	49.89	-0.98	2.24	0.09	39.81	40.08	2.24	-6.06	50.76	54.48
5430	47.94	-1.08	1.4	-0.75	39.666	38.272	1.4	-8.06	50.75	51.52
5500	49.58	-1.58	0.64	-1.51	34.054	35.525	0.64	-4.65	53.4	48.88
5570	48.53	-1.64	1.68	-0.47	34.641	33.888	1.68	-7.85	57.3	52.96
5640	43.44	-0.29	1.75	-0.4	47.511	45.933	1.75	-2.08	52.43	55.52
5710	40.46	-2.19	0.43	-1.72	30.983	29.475	0.43	-7.25	56.54	51.3
5780	41.45	-0.89	1.55	-0.6	40.741	40.706	1.55	-5.64	53.07	55.3
5850	46.15	-1.18	1.03	-1.12	36.912	39.237	1.03	-3.35	54.32	50.56



4:Structural drawings

