

Soward Antenna Debugging Report

Customer Name: Hengchen

Project name: DPF1086 (10 inch plastic case-MT8167)

Date: 2025.07.07

Project Contact Information

Customer contact:

Hand machine :

post chest :

Sovard structure:

Hand machine :

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Sovard Radio Frequency: Xiao Chunyan

Hand machine :

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project brief

1 Project Description

Number of project antennas	Type of machine
1	wifi photo frame
Whole machine shell material: 10 inch plastic shell	

2. Brief Description of the Antenna

Antenna number	name	Working frequency band/MHZ	Material/structure
1	WIFI & BT	2400MHZ / 2500MHZ	FPC

Active data for WIFI antenna (Bluetooth is off))

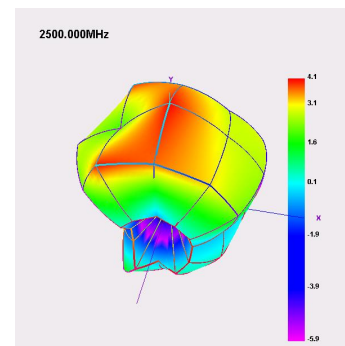
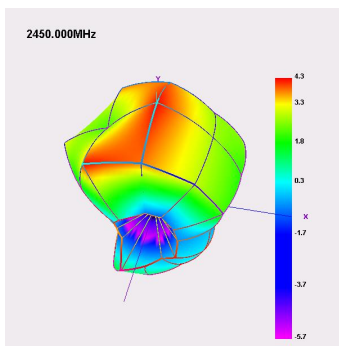
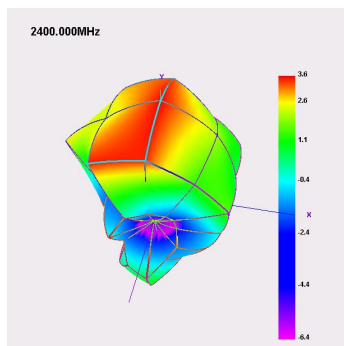
pattern	Machine status/channel	Bright screen Minimum brightness	
		power	sensitivity
b pattern (11MHz)	1	15.98	-79.25
	7	17.03	-81.73
	13	17.39	-82.51
g pattern (54MHz)	1	15.08	-70.4
	7	15.74	-70.6
	13	14.99	-70.4
n pattern (MCS7)	1	16.05	-67.98
	7	15.34	-67.99
	13	16.13	-68.61

WIFI&BT antenna S11

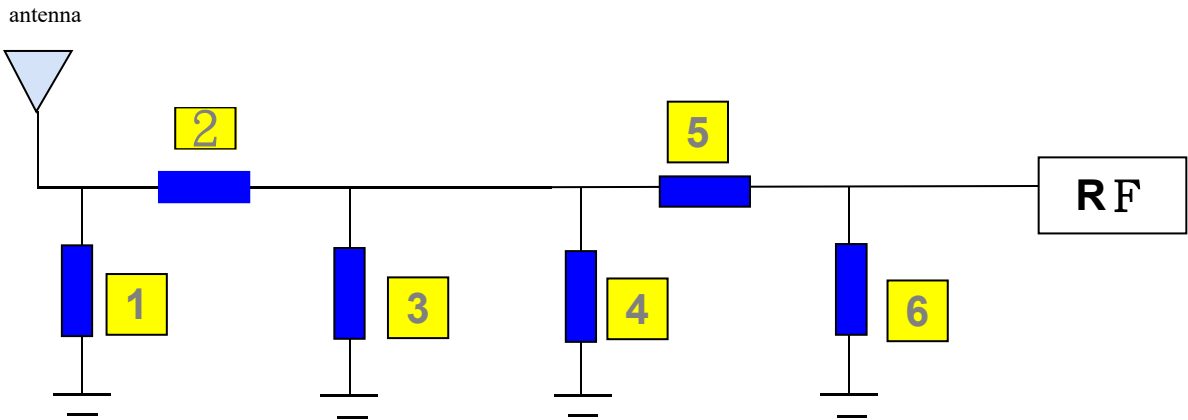


WIFI&BT antenna efficiency

Passive Test For 2.4Gwifi						
Freq	Effi	Effi	Gain	Gain	Max	Min
(MHz)	(%)	(dB)	(dBi)	(dBd)	(dB)	(dB)
2400	53.83	-2.69	3.57	1.42	3.57	-15.3
2410	53.26	-2.74	3.63	1.48	3.63	-16.52
2420	57.6	-2.4	4.22	2.07	4.22	-16.9
2430	54.89	-2.61	4.59	2.44	4.59	-16.65
2440	52.16	-2.83	4.73	2.58	4.73	-17.01
2450	43.89	-3.58	4.28	2.13	4.28	-17.28
2460	44.59	-3.51	4.21	2.06	4.21	-16.99
2470	42.48	-3.72	3.68	1.53	3.68	-17.59
2480	44.61	-3.51	3.51	1.36	3.51	-18.42
2490	41.08	-3.86	3.65	1.5	3.65	-19.33
2500	35.5	-4.5	4.07	1.92	4.07	-20.31



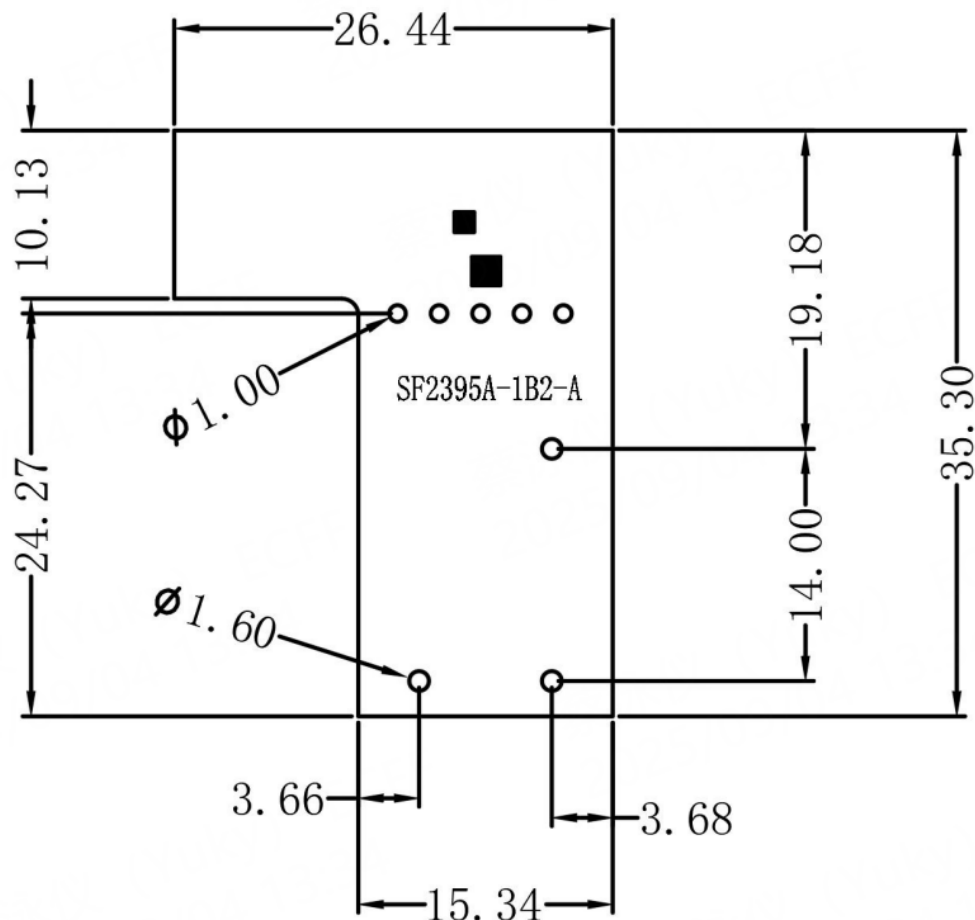
Antenna Loading Coil



The antenna match has not been changed.

main antenna	1	2	3	4	5	6	remarks
Original match							
Change matching							

Antenna Profile



It is recommended to add positioning columns accordingly.

Note: 1. This report is based on the actual debugging and testing of the debugging prototype, in which the environmental treatment, antenna position and assembly position of each device cannot be changed at will;

2. If there is any change in the materials used in the prototype, please give feedback to our company for re-verification;

3.List of sensitive components:

TP (material, coating, routing, etc.)

Screen (amplifier circuit, LED, wiring design, etc.)

Shell material (antenna assembly mode, structural interference, shell material, antenna position height and area, etc.)

Mainboard (mainboard conduction, RF circuit matching, PA, dual power supply, filter, LNA, power supply circuit, etc.) camera, battery, motor, MIC, fingerprint recognition module, etc

4. Due to the small number of debugging prototypes or only one, some probabilistic problems can not be completely found out. It is recommended to conduct a small batch trial production before mass production to troubleshoot the problem points (such as flash screen and flower screen, speaker noise, TP jump point, black screen and crash, signal dive, etc.)