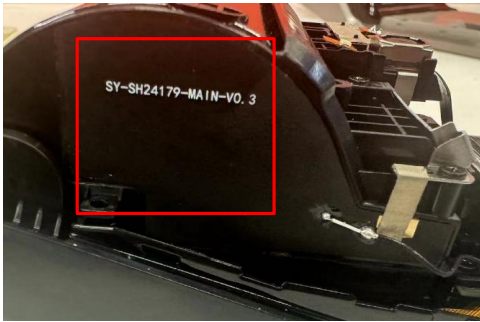




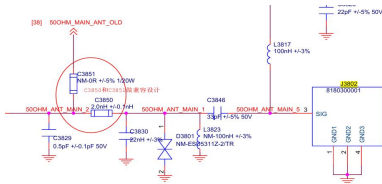
Antenna Passive Test Report

Project Name	SM03		Engineer	lilei	Checker	
HW Version	DVT		Prototype(S/N)	VA03E49140089	Software Version	
Temperature/Humidity	25°C/50%		Test Equipment	OTA	Test Date	2024/9/24
Conclusion:			Remarks			
Standard	Fre(Mhz)	Effi(%) (Min~Max)	Probiem Description and Next Step Plan			
Main Antenna	600~800	12%-41%				
	800~960	19%-35%				
	1700~2170	30%-38%				
	2300~2400	39%-45%				
	2500~2700	40%-50%				
Div Antenna	600~800	3%-14%				
	800~960	8%-20%				
	1700~2170	25%-35%				
	2300~2400	38%-40%				
	2500~2700	25%-30%				
WiFi	2.4G	30%-40%				
	5G	25%-35%				
GPS	L5	30%				

Fixture Picture

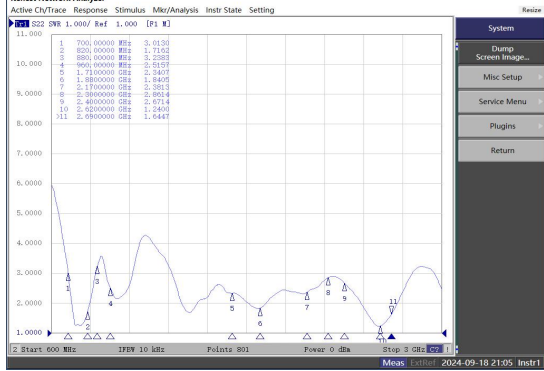


Matching Circuit, Switch Logic Schematic(CAD and Tag Number Diagram)



Element	原始匹配	更改后四配
L3817	100nH	100nH
C3846	33pF	33pF
L3823	100nH	100nH
D3801	N/C	N/C
C3830	22nH	N/C
C3850	2nH	0欧姆
C3851	N/C	N/C
C3829	0.5pF	N/C

S Parameter (Return Loss, Smith)

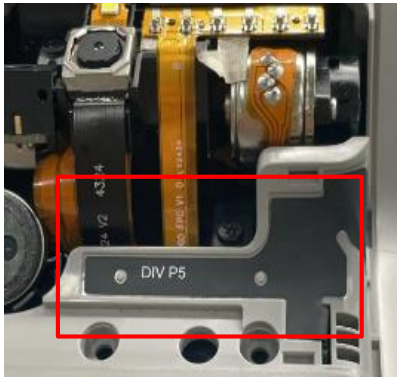


Passive Performance (Efficiency, Gain)

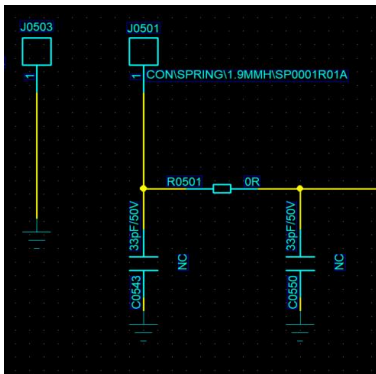
Frequency (MHz)	Efficiency (dB)	Gain (dB)	Efficiency (%)
600	-7.06	-0.40	19.68
610	-6.87	-0.02	20.56
620	-6.74	-0.34	21.18
630	-6.39	-3.53	22.96
640	-6.31	-4.34	23.39
650	-6.39	-3.67	22.96
660	-6.29	-0.09	23.50
670	-6.00	-0.04	25.12
680	-5.76	-0.62	26.55
690	-6.15	-2.26	24.27
700	-6.24	-2.01	23.77
710	-6.30	-1.51	23.44
720	-6.60	-3.04	21.88
730	-7.00	-3.27	19.95
740	-7.22	-3.21	18.97
750	-7.21	-1.94	19.01
760	-7.16	-2.35	19.23
770	-5.94	-2.19	25.47
780	-4.51	-1.00	35.40
790	-3.94	-0.20	40.36
800	-3.40	-0.15	45.71
810	-3.60	0.50	43.65
820	-3.84	-0.04	41.30
830	-4.37	-1.05	36.56
840	-5.08	-1.81	31.05
850	-5.85	-2.00	26.00
860	-6.41	-2.55	22.86
870	-7.18	-3.64	19.14
880	-7.89	-3.82	16.26
890	-8.41	-2.56	14.42
900	-8.56	-2.37	13.93
910	-8.35	-2.57	14.62
920	-7.71	-2.45	16.94

2560	-2.89	3.59	51.40
2570	-2.97	3.20	50.47
2580	-3.06	3.28	49.43
2590	-3.00	3.56	50.12
2600	-2.94	3.29	50.82
2610	-2.80	3.84	52.48
2620	-2.55	4.53	55.59
2630	-2.49	4.29	56.36
2640	-2.55	4.36	55.59
2650	-2.53	5.01	55.85
2660	-2.75	3.90	53.09
2670	-2.98	5.13	50.35
2680	-2.60	4.29	54.95
2690	-2.77	4.63	52.84

Fixture Picture

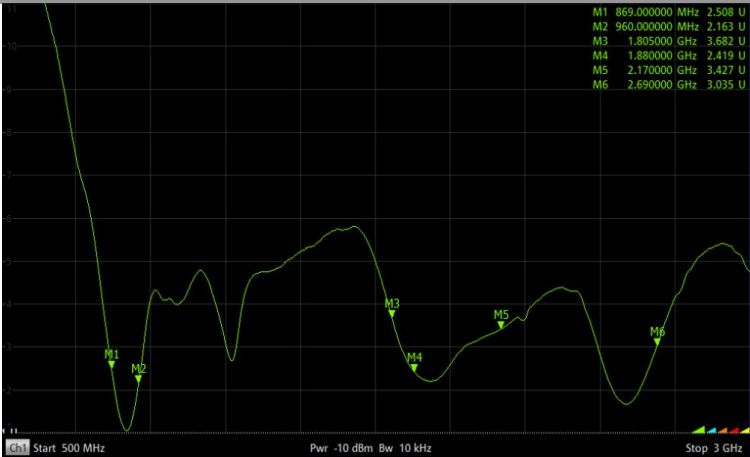


Matching Circuit, Switch Logic Schematic(CAD and Tag Number Diagram)



Element	Matching

S Parameter (Return Loss, Smith)



Passive Performance (Efficiency, Gain)

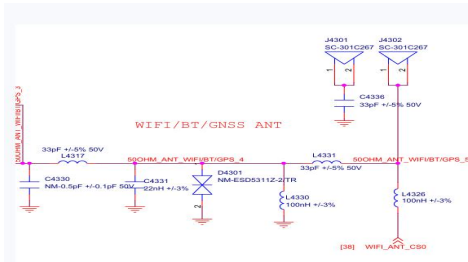
frequency (MHz)	Gain(dB)	Efficiency (dB)	Efficiency (%)
617	-17.26	-21.49	0.71
663	-15.32	-20.33	0.93
704	-15.22	-19.47	1.13
729	-15.03	-18.73	1.34
746	-14.76	-18.39	1.45
751	-14.43	-18.33	1.47
756	-14.34	-18.15	1.53
777	-14.17	-17.93	1.61
791	-14.28	-17.62	1.73
806	-13.76	-18.45	1.43
815	-13.26	-16.45	2.27
821	-12.20	-14.60	3.47
824	-11.57	-14.07	3.91
832	-11.21	-14.50	3.55
836	-9.72	-12.24	5.97
847	-9.23	-11.89	6.47
849	-7.16	-8.51	14.09
862	-6.97	-7.60	17.38
869	-3.07	-5.90	25.71
880	-1.88	-5.54	27.93
881	-1.55	-5.22	30.05

894	-0.24	-3.85	41.21
897	-0.34	-3.78	41.85
915	-2.47	-5.49	28.24
925	-2.84	-6.03	24.96
942	-3.14	-6.81	20.84
960	-2.40	-6.25	23.73
1805	0.03	-5.63	27.37
1880	1.24	-5.41	28.80
1920	0.38	-5.06	31.19
1980	-2.98	-5.08	31.06
2155	-2.72	-6.28	23.57
2170	-3.10	-6.53	22.24
2200	-3.05	-6.47	22.55
2300	-3.17	-6.23	23.85
2350	-0.68	-5.61	27.47
2400	1.47	-4.81	33.06
2500	-0.05	-4.36	36.62
2535	-0.76	-4.53	35.26
2570	-1.68	-5.13	30.70
2593	-2.16	-5.79	26.38
2595	-2.04	-5.68	27.05
2620	-2.95	-5.73	26.72
2655	-2.73	-6.10	24.56
2690	-2.38	-6.31	23.40

Fixture Picture

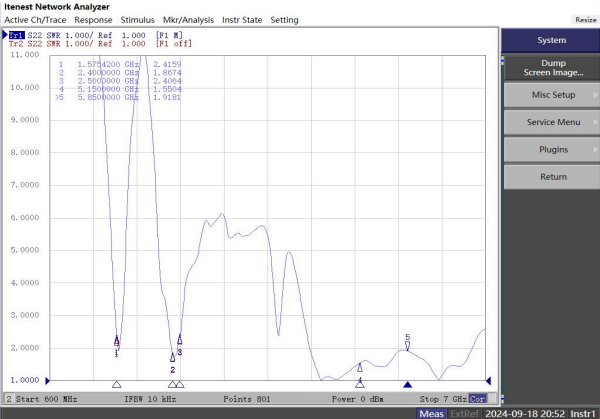


Matching Circuit, Switch Logic Schematic(CAD and Tag Number Diagram)



Element	原始匹配	更改后匹配
L4326	100nH	100nH
L4331	33pF	33pF
L4330	100nH	100nH
D4301	N/C	N/C
C4331	22nH	N/C
L4317	33pF	0欧姆
C4330	0.5pF	N/C
C4336	33pF	33pF

S Parameter (Return Loss, Smith)

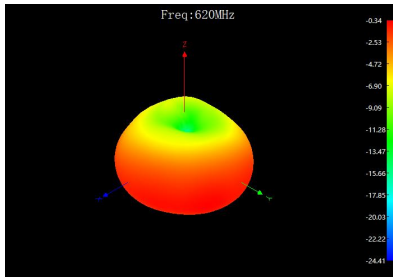


Passive Performance (Efficiency, Gain)

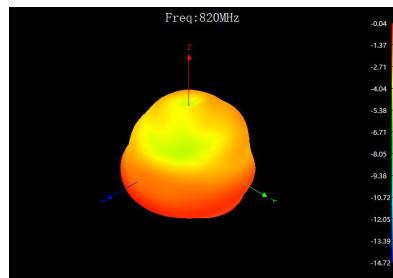
frequency (MHz)	Efficiency (dB)	Gain (dB)	Efficiency (%)
1550	-6.60	0.25	21.88
1555	-6.53	0.40	22.23
1560	-6.35	0.36	23.18
1565	-6.18	0.75	24.09
1570	-5.95	0.90	25.39
1575	-5.62	0.79	27.39
1580	-5.64	1.34	27.27
1585	-5.57	1.41	27.72
1590	-5.45	1.43	28.53
1595	-5.39	1.63	28.88
1600	-5.40	1.95	28.82
1605	-5.56	1.68	27.77
1610	-5.61	1.08	27.49
2400	-4.81	-0.56	33.04
2410	-4.83	-1.56	32.89
2420	-4.88	-1.18	32.51
2430	-4.84	-0.18	32.81
2440	-4.82	-1.45	32.96
2450	-4.78	-0.73	33.27
2460	-4.79	-0.97	33.19
2470	-4.78	-0.64	33.27
2480	-4.77	-0.67	33.34
2490	-4.77	-0.84	33.34
2500	-4.86	-2.11	32.66
5150	-5.20	0.21	30.20

5200	-4.96	1.20	31.92
5250	-5.70	0.77	26.92
5300	-5.68	1.53	27.04
5350	-4.74	1.92	33.57
5400	-4.80	1.96	33.11
5450	-4.55	2.45	35.08
5500	-3.98	2.78	39.99
5550	-3.94	2.41	40.36
5600	-4.20	1.72	38.02
5650	-3.74	1.65	42.27
5700	-4.04	1.76	39.45
5750	-4.45	1.41	35.89
5800	-4.69	0.69	33.96
5850	-5.07	0.70	31.12

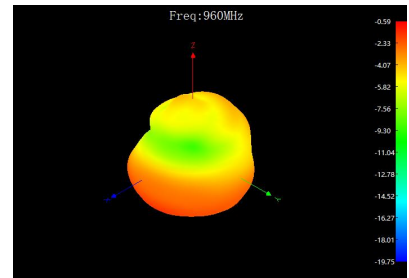
MAIN ANT 3D Pattern



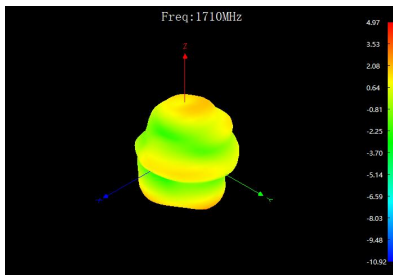
617MHz



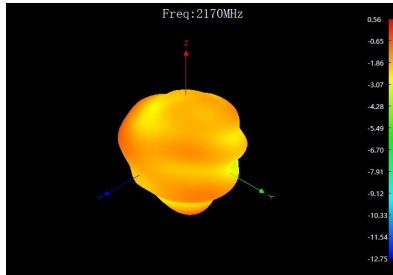
824MHz



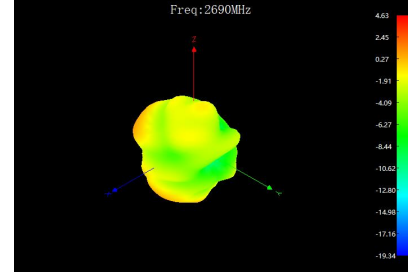
960MHz



1710MHz

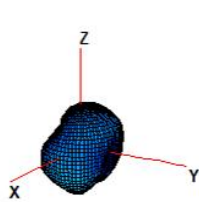


2170MHz

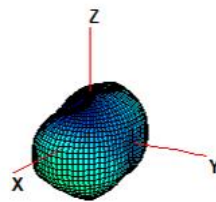


2690MHz

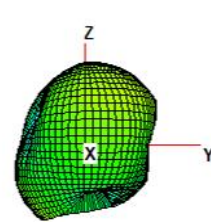
DIVERSITY ANT 3D Pattern



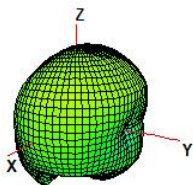
617MHz



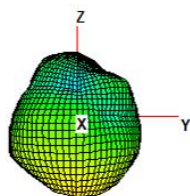
824MHz



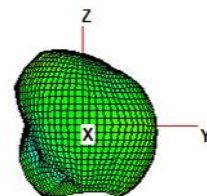
960MHz



1805MHz

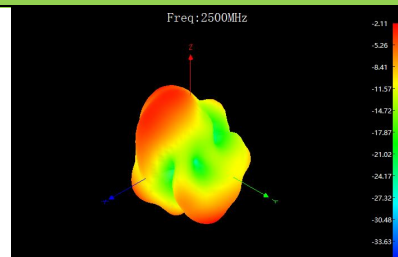
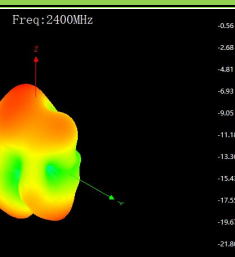
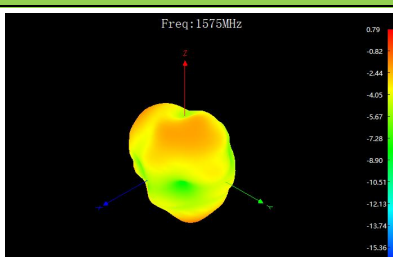


2170MHz



2690MHz

WIFI ANT 3D Pattern





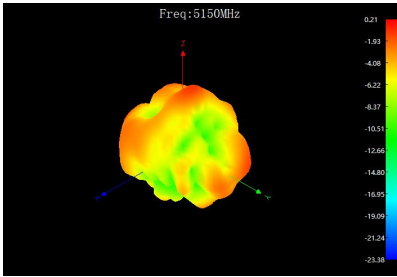
1575MHz



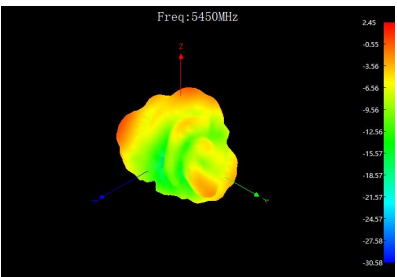
2400MHz



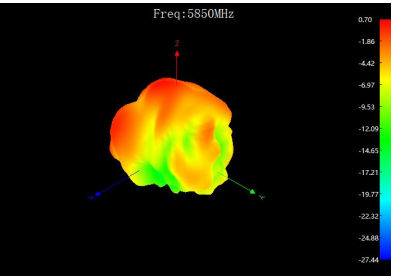
2500MHz



5150MHz



5470MHz



5850MHz