



DK062 - Antenna Test Report

Date: 2023.06.12

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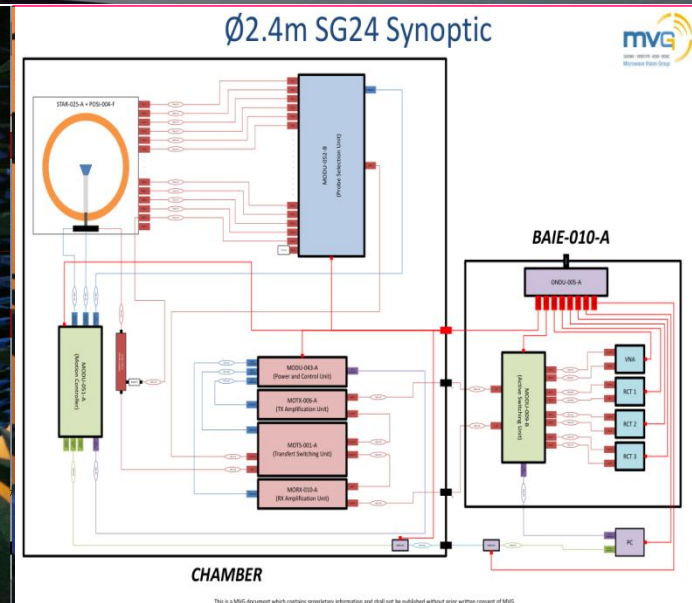
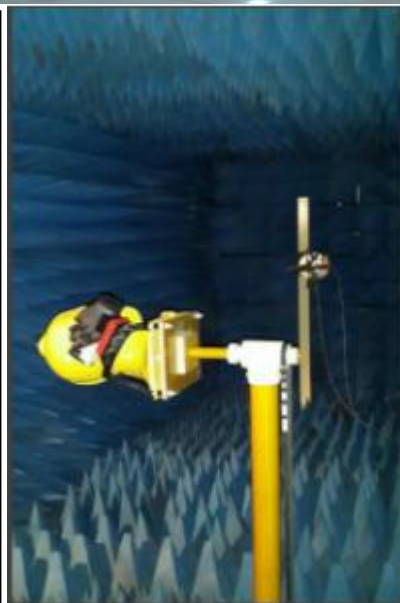
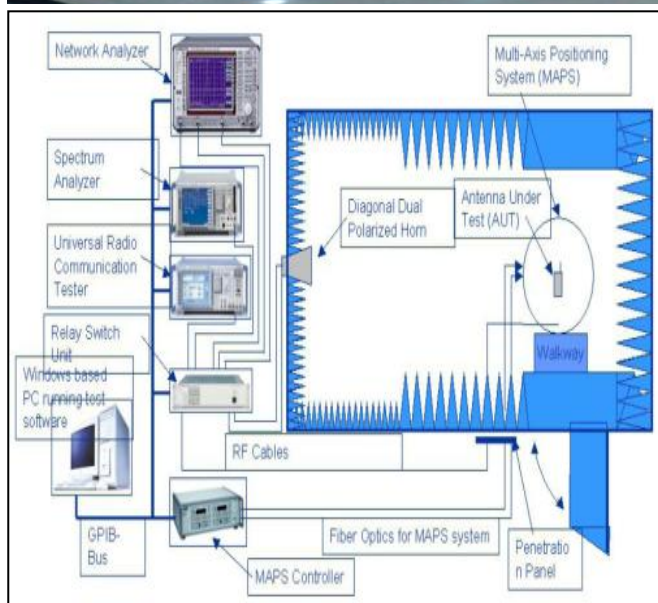


Project Overview



Main antenna design spectrum	GSM:B2/B3/B5/B8 WCDMA:B1/8 LTE:B1/3/7/8/20/40	Repor version:	Date	Content
Type of antenna	PIFA	V2.0	2023.06.12	Antenna test report
Deputy antenna design spectrum	WIFI/GPS/BT			
Type of antenna	PIFA			
Frequency diversity antenna	LTE:B1/3/7/8/20/40			
Type of antenna	PIFA			

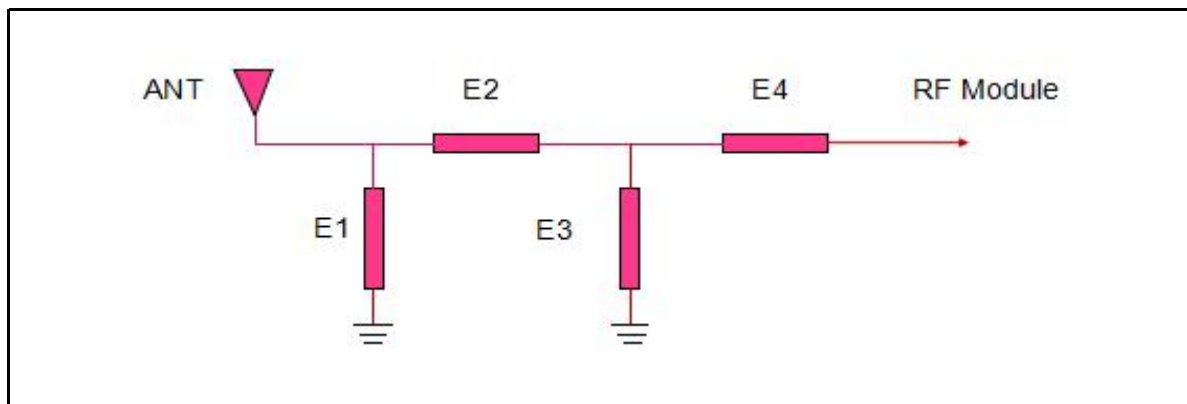
Test Environment



Darkroom system : MVE SG24LT (Satmio)

Matching Circuit

main antenna design	
Element	Value
E1(0201):	/
E2(0201):	/
E3(0201):	/



Note: The matching circuit has not changed.

Figure: The motherboard is grounded with a conductive sponge.

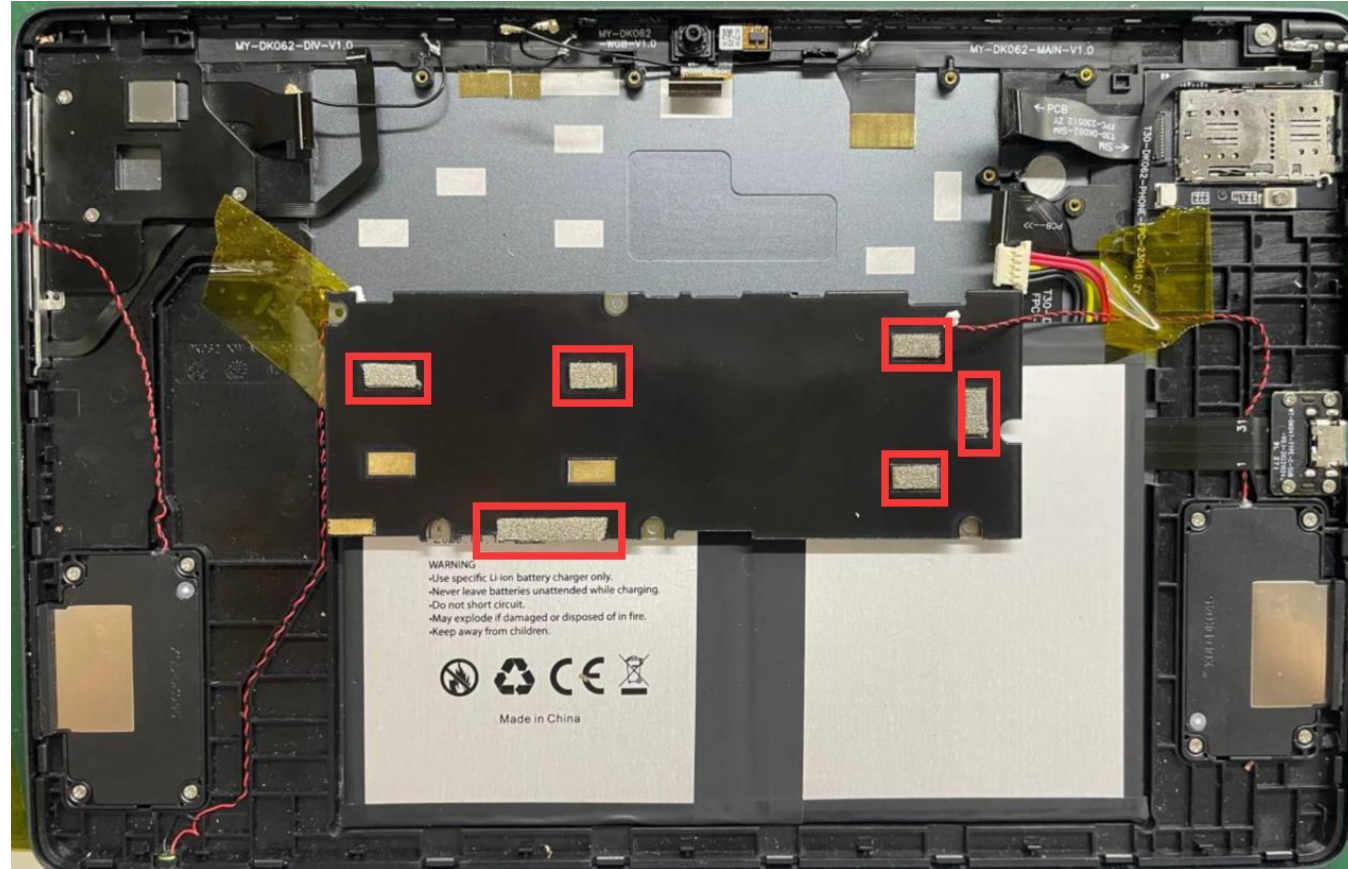
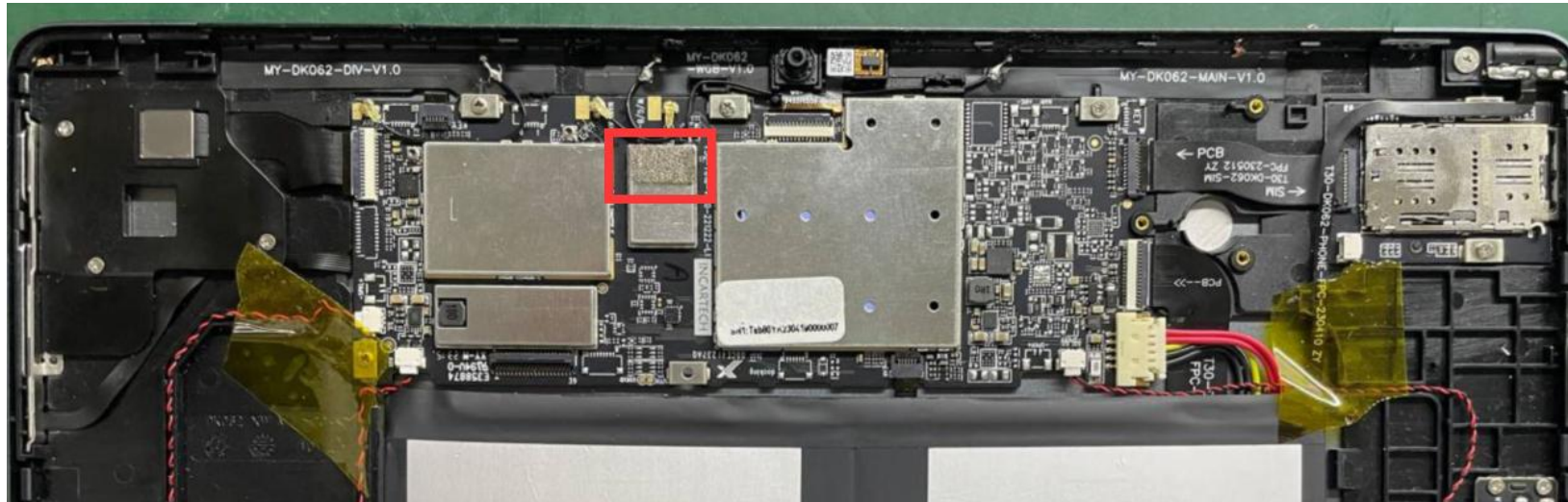


Figure: The motherboard is grounded with a conductive sponge.

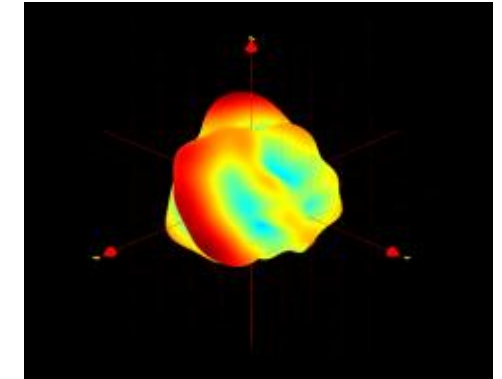


WIFI/GPS/BT passive Efficiency, Gain

1			1		1			1	
Frequency	Efficiency	Efficiency . dB	Frequency	Gain . dB	Frequency	Efficiency	Efficiency . dB	Frequency	Gain . dB
1570000000	46.44%	-3.33154	1570000000	2.504158	5200000000	51.85%	-2.85278	5200000000	2.180177
1571000000	46.42%	-3.33263	1571000000	2.470963	5231000000	47.24%	-3.25725	5231000000	2.389043
1572000000	46.33%	-3.34116	1572000000	2.411333	5262000000	46.44%	-3.33109	5262000000	2.94749
1573000000	46.17%	-3.3562	1573000000	2.35751	5293000000	42.66%	-3.69929	5293000000	2.90619
1574000000	46.00%	-3.3721	1574000000	2.323019	5324000000	36.88%	-4.33157	5324000000	2.083425
1575000000	45.91%	-3.38055	1575000000	2.320818	5355000000	32.96%	-4.82066	5355000000	0.9651
1576000000	45.97%	-3.37537	1576000000	2.354589	5386000000	32.24%	-4.91668	5386000000	0.273831
1577000000	46.17%	-3.35672	1577000000	2.375369	5417000000	34.98%	-4.56154	5417000000	0.11498
1578000000	46.42%	-3.33269	1578000000	2.407195	5448000000	37.57%	-4.25106	5448000000	0.054676
1579000000	46.62%	-3.31402	1579000000	2.40858	5479000000	36.62%	-4.36223	5479000000	0.597329
1580000000	46.67%	-3.3097	1580000000	2.362068	5510000000	39.54%	-4.0292	5510000000	2.089126
					5541000000	42.77%	-3.68884	5541000000	3.238236
1			1		5572000000	44.52%	-3.51473	5572000000	3.421737
Frequency	Efficiency	Efficiency . dB	Frequency	Gain . dB	5603000000	42.24%	-3.74259	5603000000	3.597993
2400000000	31.77%	-5.01059	2400000000	1.217841	5634000000	37.94%	-4.20936	5634000000	3.120519
2410000000	33.15%	-4.80709	2410000000	1.321614	5665000000	34.70%	-4.59673	5665000000	2.843595
2420000000	34.53%	-4.61333	2420000000	1.588559	5696000000	34.16%	-4.66435	5696000000	3.233447
2430000000	37.16%	-4.26542	2430000000	1.703456	5727000000	36.45%	-4.38335	5727000000	3.537377
2440000000	37.38%	-4.2129	2440000000	1.666511	5758000000	40.28%	-3.94862	5758000000	3.970075
2450000000	38.34%	-4.1956	2450000000	1.709886	5789000000	38.37%	-4.16065	5789000000	3.754274
2460000000	39.90%	-4.01337	2460000000	1.802983	5820000000	39.12%	-4.07592	5820000000	3.538877
2470000000	40.22%	-3.95606	2470000000	1.843543					
2480000000	40.94%	-3.87882	2480000000	1.639658					
2490000000	41.96%	-3.77169	2490000000	1.573798					
2500000000	43.82%	-3.58293	2500000000	1.713244					

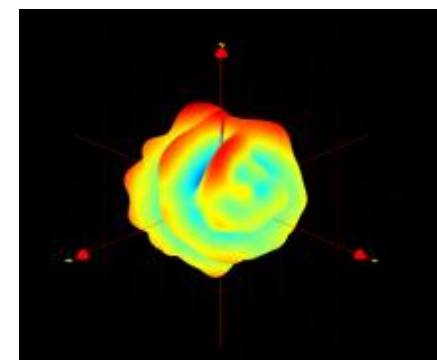
Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)

2.4G Passive pattern



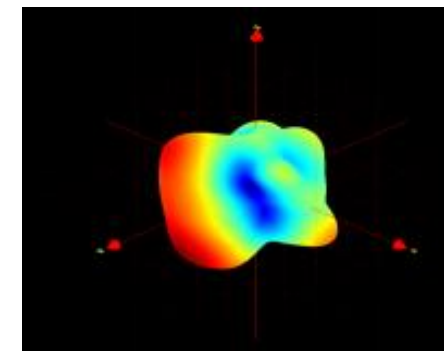
Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)

5.8G Passive pattern



Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)

GPS Passive pattern



Measuring instrument : Agilent Technologies E5071B 300kHz-8.5GHz ENA Series Network Analyzer Darkroom system : MVG SG24LT (Satmio)



	BAND	GSM900			DCS1800		
3D	CHANNAL	1	62	124	512	699	885
	TRP	27. 27	27. 18	27. 04	25. 49	25. 77	25. 78
	TIS			-100. 47			-103. 78
	BAND	GSM850			PCS1900		
	CHANNAL	128	190	251	512	661	810
	TRP	26. 56	26. 57	26. 82	26. 24	26. 47	26. 59
	TIS			-102. 79			-102. 24



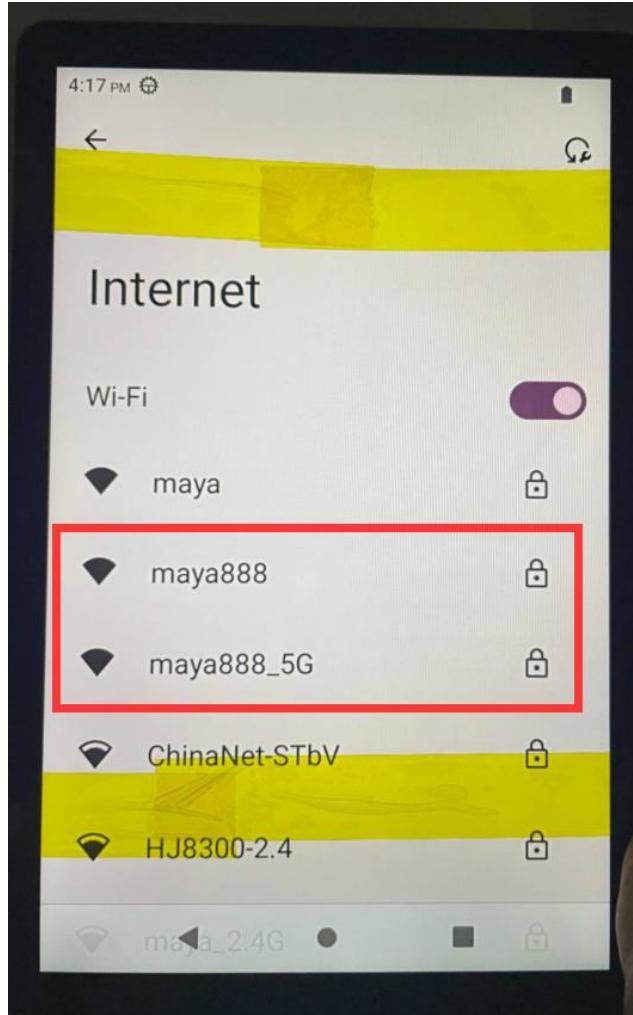
	BAND	WCDMA-B1			WCDMA-B8		
3D	CHANNAL	L	M	H	L	M	H
	TRP	18. 57	18. 28	17. 81	17. 51	17. 82	18. 05
	TIS			-105. 35			-102. 26
	BAND	LTE-B1			LTE-B3		
	CHANNAL	L	M	H	L	M	H
	TRP	18. 31	18. 06	17. 97	17. 58	18. 46	18. 72
	TIS			-94. 01			-93. 42



	BAND	LTE-B7			LTE-B8		
3D	CHANNAL	L	M	H	L	M	H
	TRP	17.08	17.35	17.18	18.05	18.46	18.56
	TIS			-92.57			-90.48
	BAND	LTE-B20			LTE-B40		
	CHANNAL	L	M	H	L	M	H
	TRP	15.52	16.12	16.59	16.53	16.39	16.05
	TIS			-87.71			-88.54



	BAND	WiFi_B			WiFi_G		
3D	CHANNAL	L	M	H	L	M	H
	TRP	12. 23	13. 12	13. 69	10. 76	11. 03	11. 27
	TIS			-80. 74			-69. 08
	BAND	WiFi_N			WiFi_A		
	CHANNAL	L	M	H	L	M	H
	TRP	9. 37	10. 22	10. 87	10. 66	10. 53	10. 32
	TIS			-65. 45			-69. 16
	BAND	WiFi_AC					
	CHANNAL	L	M	H			
	TRP	9. 21	9. 12	9. 11			
	TIS			-64. 13			



WiFi measurement: Signal strength 12M away from the router.

BT measurement

Front barrier distance: 15 meters, distance from the human body: 10 meters. The call lasted 3 minutes without noise.



GPS measurement: Measured in the company's downstairs parking lot in the evening within two minutes of positioning, the maximum star value 42.





Conclusion



1. This report is the sample antenna test results .
2. If you have any questions, please call.

THANK YOU



If you have any questions, please contact us
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 website : www.mayaant.com

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