

OUTLINE

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1. Measurement Information

1.1 Experimental Setup



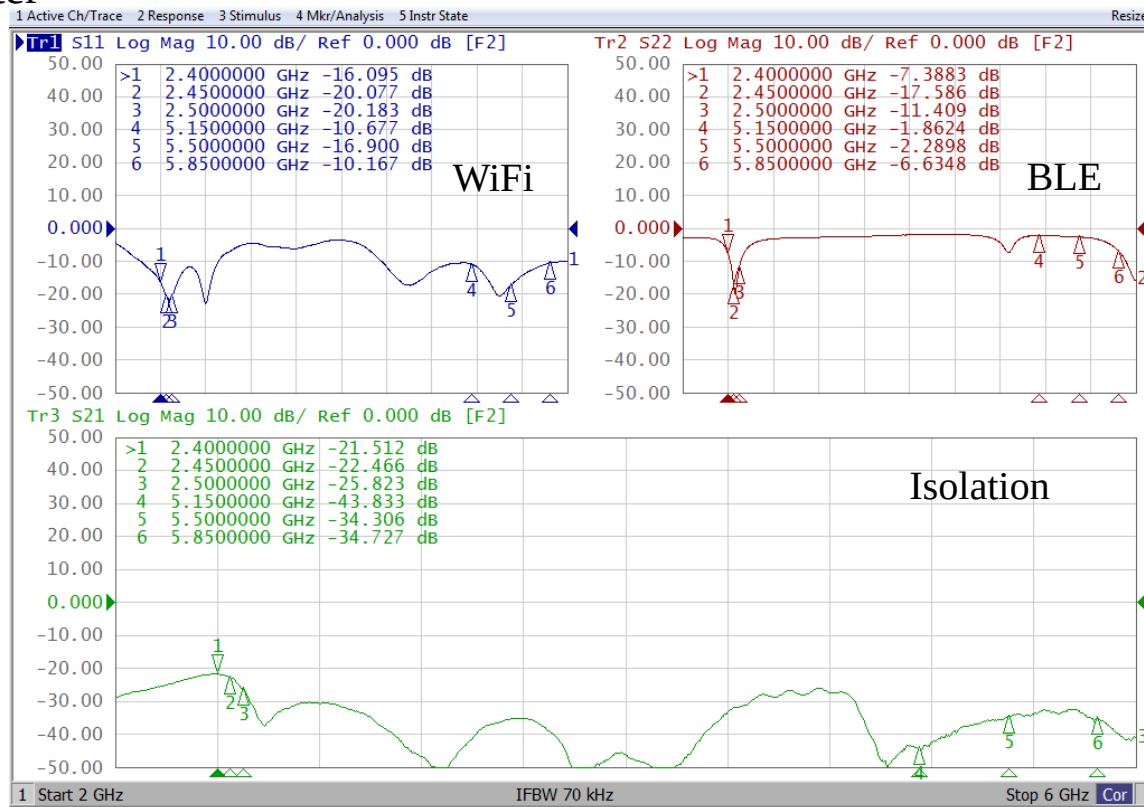
1. Measurement Information

1.2 Antenna Solution Detail



2. Antenna Characteristics

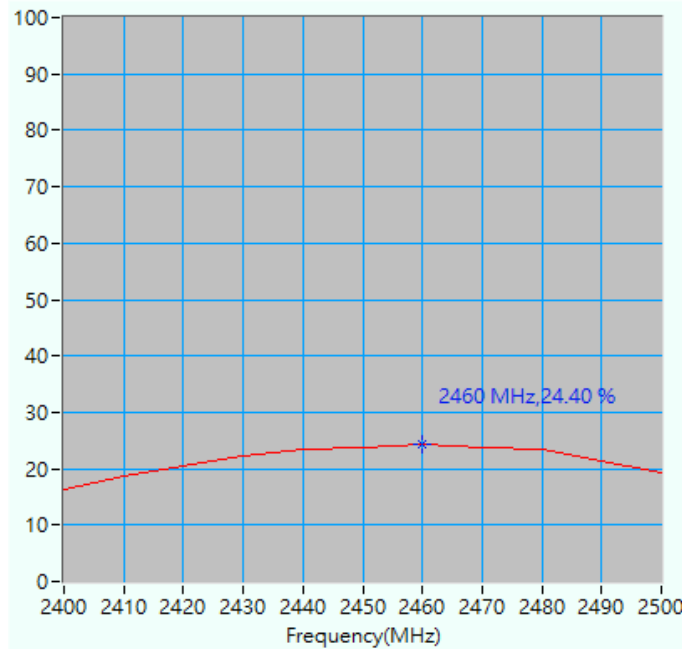
2.1 S-Parameter



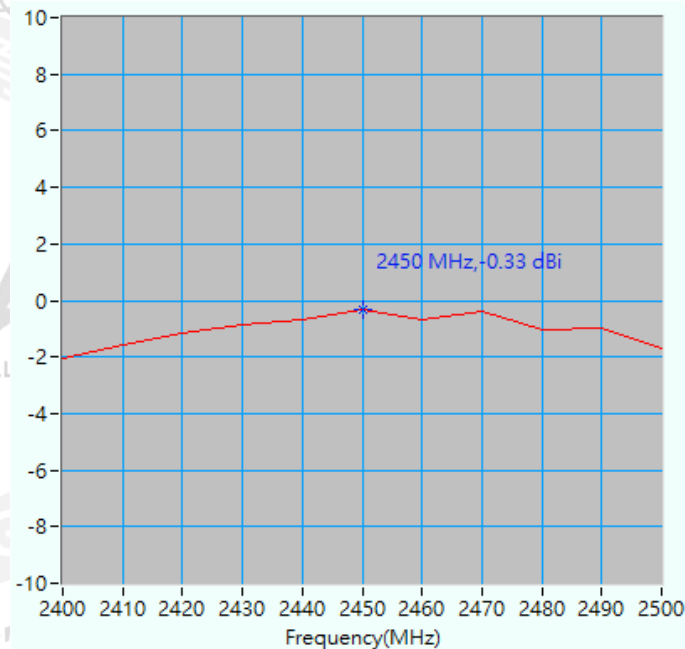
2. Antenna Characteristics

BLE

2.2 Antenna Efficiency and Peak Gain



Maximum Efficiency at 2460 MHz : 24.40 %

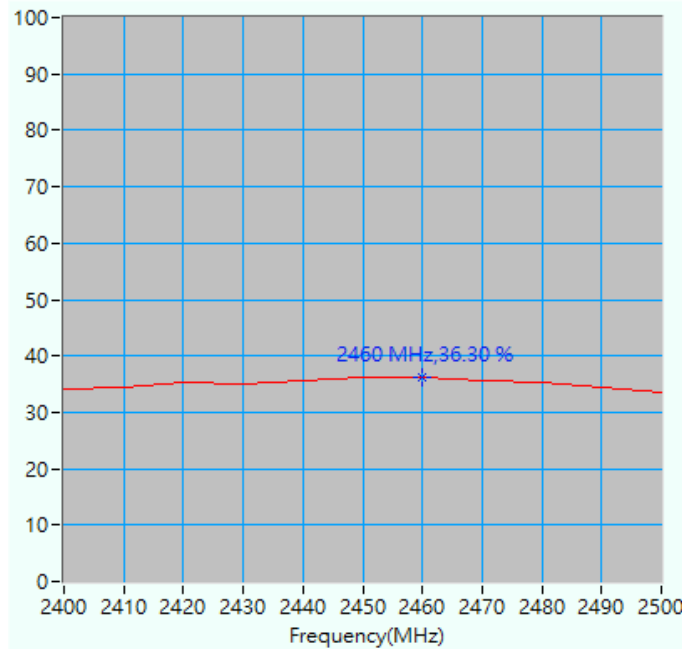


Maximum Peak Gain at 2450 MHz : -0.33 dBi

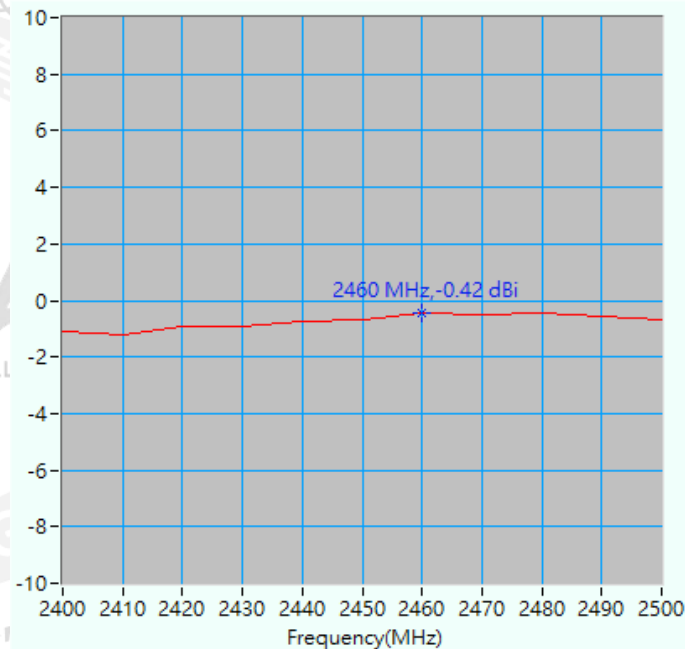
2. Antenna Characteristics

WiFi 2G

2.2 Antenna Efficiency and Peak Gain



Maximum Efficiency at 2460 MHz : 36.30 %

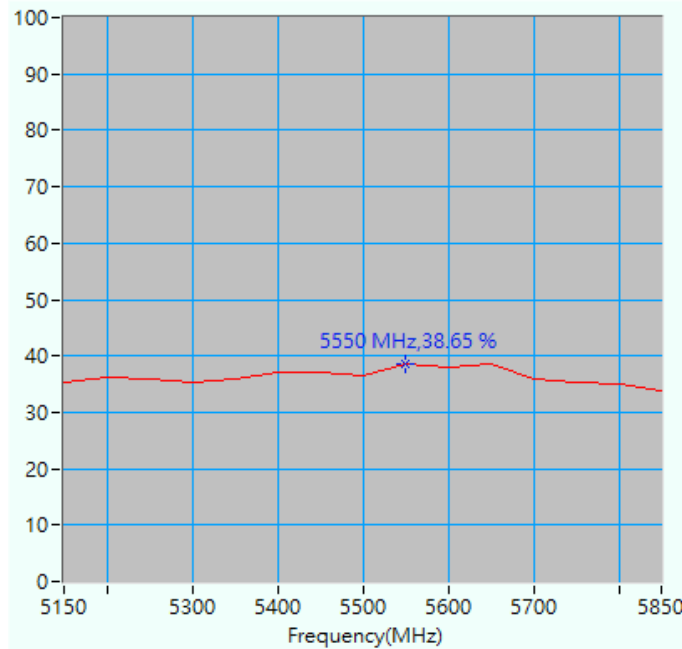


Maximum Peak Gain at 2460 MHz : -0.42 dBi

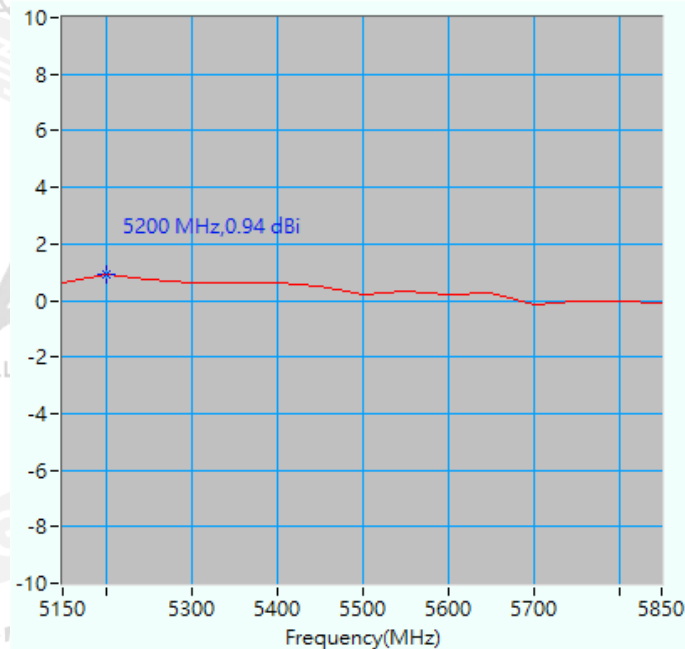
2. Antenna Characteristics

WiFi 5G

2.2 Antenna Efficiency and Peak Gain



Maximum Efficiency at 5550 MHz : 38.65 %



Maximum Peak Gain at 5200 MHz : 0.94 dBi

2. Antenna Characteristics

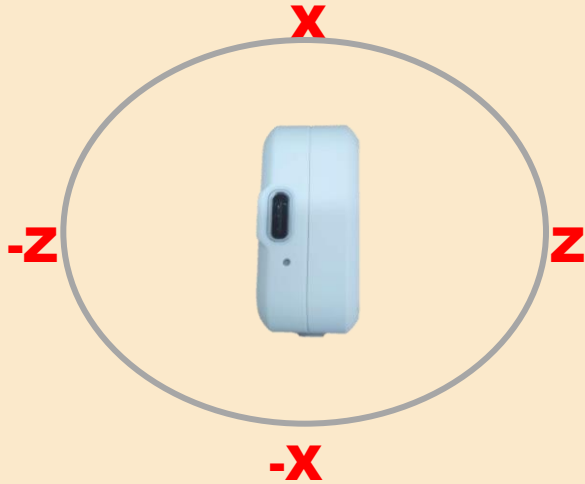
2.2 Antenna Efficiency and Peak Gain

	BLE (Chip)			WiFi (FPC)		
Frequency (MHz)	Efficiency (%)	Average gain (dBi)	Peak gain (dBi)	Efficiency (%)	Average gain (dBi)	Peak gain (dBi)
2400	16.36	-7.86	-2.05	34.27	-4.65	-1.08
2450	23.86	-6.22	-0.33	36.24	-4.41	-0.71
2500	19.24	-7.16	-1.71	33.52	-4.75	-0.70
5150				35.45	-4.50	0.63
5500				36.46	-4.38	0.23
5850				33.73	-4.72	-0.07

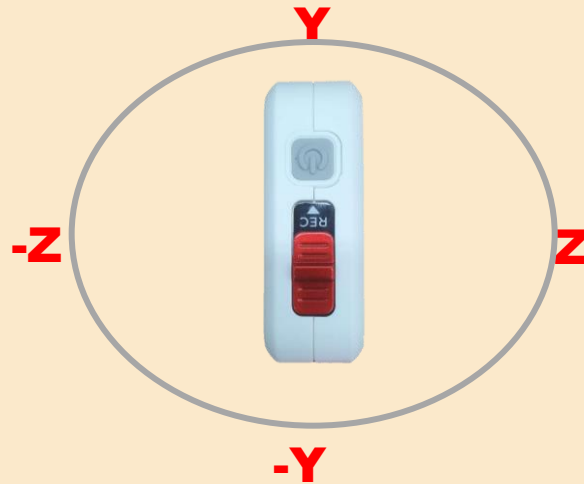
2. Antenna Characteristics

2.3 3 views of antenna

X-Z plane



Y-Z plane



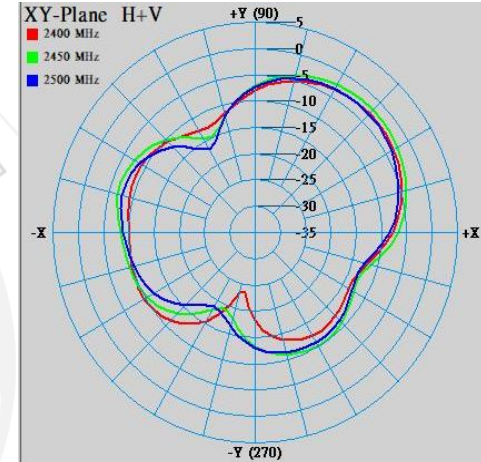
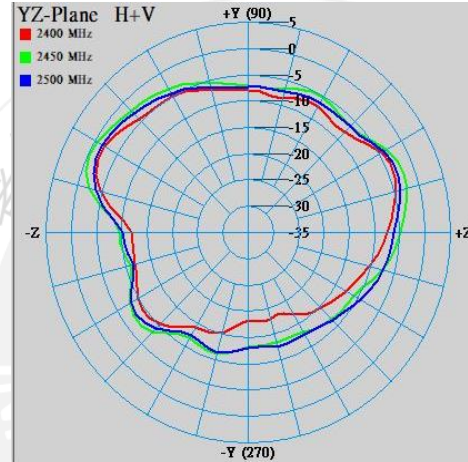
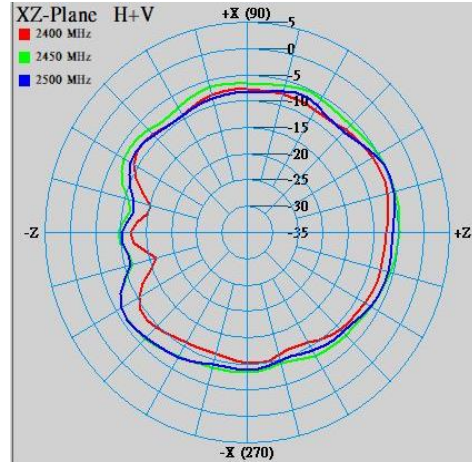
X-Y plane



2. Antenna Characteristics

BLE

2.3 2D Radiation Patterns

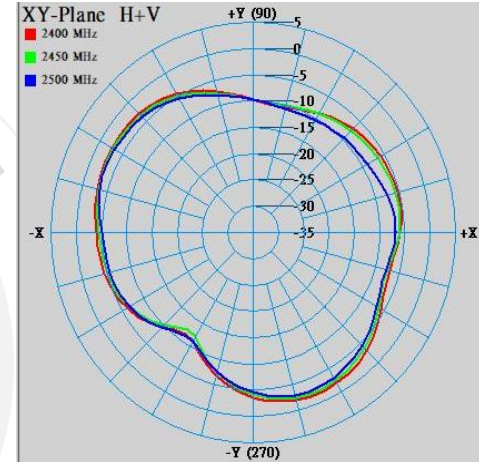
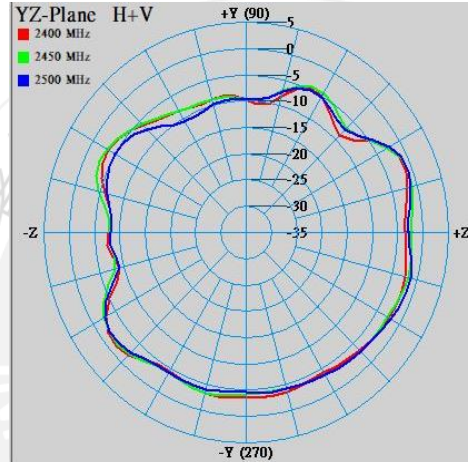
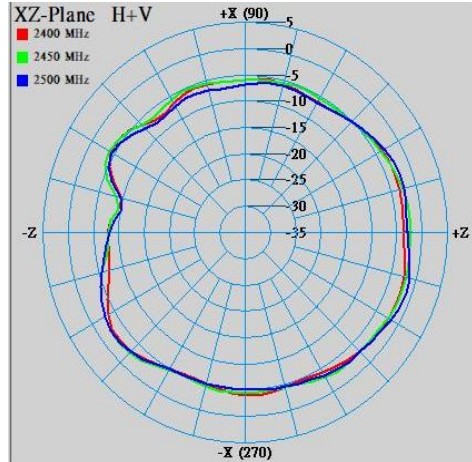


Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
2400	-6.09	-8.96	-2.06	-7.85	-2.99	-8.39
2450	-4.66	-6.95	-0.33	-5.94	-1.99	-7.36
2500	-4.83	-7.80	-1.72	-6.70	-3.15	-8.40

2. Antenna Characteristics

WiFi 2G

2.3 2D Radiation Patterns

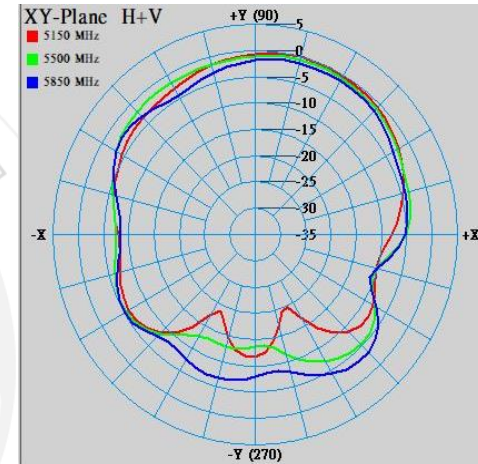
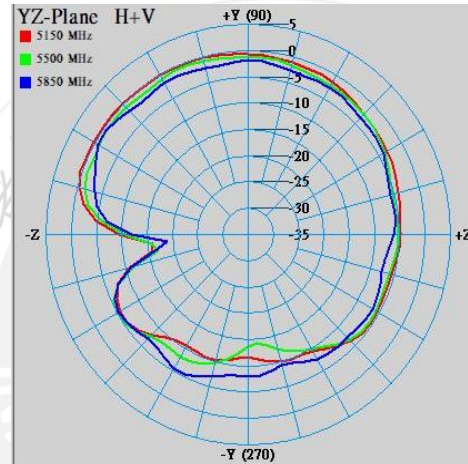
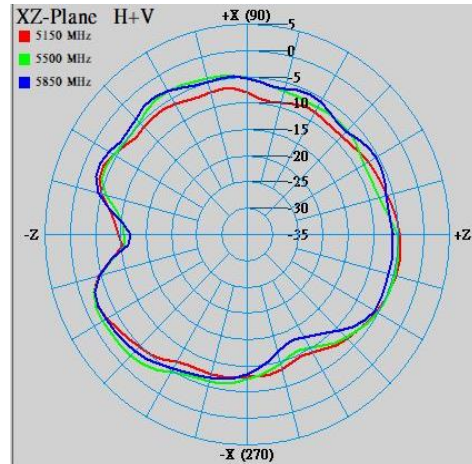


	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
2400	-2.15	-4.67	-1.31	-4.45	-1.77	-5.11
2450	-1.98	-4.27	-0.81	-4.14	-2.32	-5.58
2500	-1.08	-4.44	-0.75	-4.44	-2.80	-6.10

2. Antenna Characteristics

WiFi 5G

2.3 2D Radiation Patterns

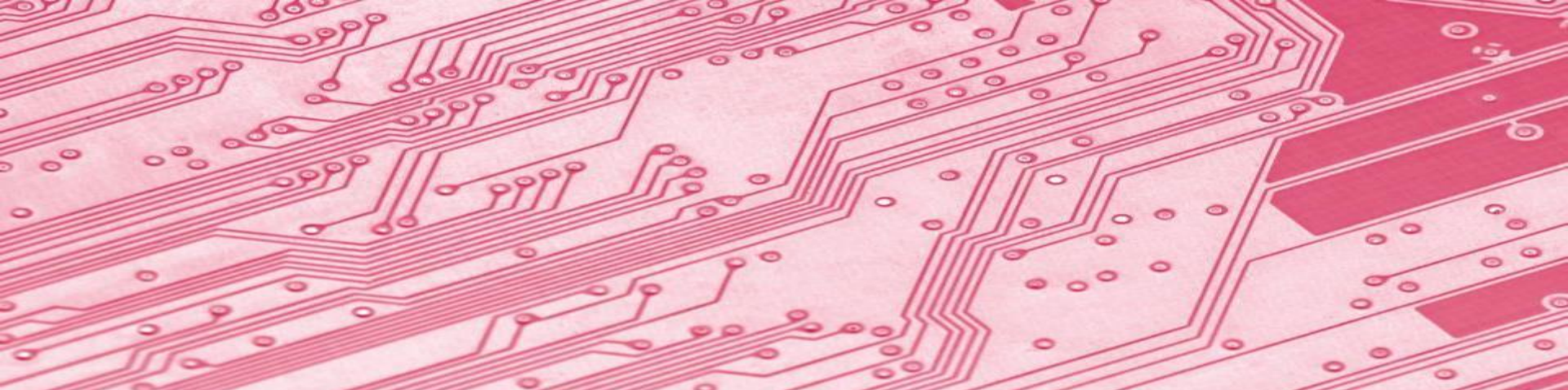


	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]	Max Value [dBi]	Average [dBi]
5150	-2.37	-6.34	0.29	-3.44	-0.03	-4.66
5500	-2.04	-5.58	-0.63	-4.11	-0.59	-4.23
5850	-2.55	-5.71	-0.60	-4.59	-1.29	-4.50

3. Summary

- The performance of antennas is shown in table

	BLE (Chip)	WiFi (2G)	WiFi (5G)
Maximum Efficiency (%)	24.40	36.30	38.65
Maximum Gain (dBi)	-0.33	-0.42	0.94



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Content Details

PASSIVE SYSTEM ALLIANCE
INPAQ TECHNOLOGY CO., LTD.

Thank you

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