2.4GHz 2400~2483.5MHz

WIFI 802.11 ax HE20 Full (Harmonic @ 3m)

WIFI Ant. 6+7	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		4824	45.57	-28.43	74	33.62	32.4	13.05	33.5	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
802.11ax													H
HE20 Full													H
CH 01		4824	46	-28	74	34.05	32.4	13.05	33.5	-	-	P	V
2412MHz													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 6+7	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		4874	50.21	-23.79	74	38.08	32.55	13.07	33.49	322	331	P	H
		4874	38.35	-15.65	54	26.22	32.55	13.07	33.49	322	331	A	H
		7311	59.42	-14.58	74	41.76	37.5	16	35.84	125	285	P	H
		7311	47.6	-6.4	54	29.94	37.5	16	35.84	125	285	A	H
													H
													H
													H
													H
													H
													H
802.11ax													H
HE20 Full													H
CH 06		4874	47.47	-26.53	74	35.34	32.55	13.07	33.49	299	33	P	V
2437MHz		4874	36.63	-17.37	54	24.5	32.55	13.07	33.49	299	33	A	V
		7311	62.76	-11.24	74	45.1	37.5	16	35.84	100	315	P	V
		7311	50.66	-3.34	54	33	37.5	16	35.84	100	315	A	V
													V
													V
													V
													V
													V
													V
													V

WIFI Ant. 6+7	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		4924	46.41	-27.59	74	34.14	32.65	13.1	33.48	-	-	P	H
		7386	56.61	-17.39	74	38.98	37.43	16.09	35.89	310	319	P	H
		7386	45.09	-8.91	54	27.46	37.43	16.09	35.89	310	319	A	H
													H
													H
													H
													H
													H
													H
													H
802.11ax													H
HE20 Full													H
CH 11		4924	45.44	-28.56	74	33.17	32.65	13.1	33.48	-	-	P	V
2462MHz		7386	55.99	-18.01	74	38.36	37.43	16.09	35.89	110	319	P	V
		7386	42.33	-11.67	54	24.7	37.43	16.09	35.89	110	319	A	V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.
3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.

2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE20 Partial 106 (Band Edge @ 3m)

WIFI Ant. 6+7	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		2388.225	68.08	-5.92	74	55.15	26.92	18.36	32.35	100	300	P	H
		2388.645	45.85	-8.15	54	32.93	26.91	18.36	32.35	100	300	A	H
	*	2412	116.84	-	-	103.83	26.98	18.4	32.37	100	300	P	H
802.11ax	*	2412	107.71	-	-	94.7	26.98	18.4	32.37	100	300	A	H
HE20													H
Partial													H
106/53		2390	72.57	-1.43	74	59.66	26.9	18.36	32.35	148	93	P	V
CH 01		2389.695	50.45	-3.55	54	37.54	26.9	18.36	32.35	148	93	A	V
2412MHz	*	2412	119.56	-	-	106.55	26.98	18.4	32.37	148	93	P	V
	*	2412	110.85	-	-	97.84	26.98	18.4	32.37	148	93	A	V
													V
													V
	*	2462	115.99	-	-	103.1	26.8	18.49	32.4	143	305	P	H
	*	2462	107.4	-	-	94.51	26.8	18.49	32.4	143	305	A	H
		2488.16	63.29	-10.71	74	50.26	26.9	18.54	32.41	143	305	P	H
802.11ax		2483.52	44.64	-9.36	54	31.62	26.9	18.53	32.41	143	305	A	H
HE20													H
Partial													H
106/54	*	2462	116.35	-	-	103.46	26.8	18.49	32.4	100	93	P	V
CH 11	*	2462	108.19	-	-	95.3	26.8	18.49	32.4	100	93	A	V
2462MHz		2483.72	71.66	-2.34	74	58.64	26.9	18.53	32.41	100	93	P	V
		2483.52	49.81	-4.19	54	36.79	26.9	18.53	32.41	100	93	A	V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Emission below 1GHz

WIFI 802.11b (LF)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
6+7		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz WIFI 802.11b LF		33.51	25.17	-14.83	40	33.81	23.15	0.93	32.75	-	-	P	H
		112.62	30.21	-13.29	43.5	44.01	17.01	1.85	32.72	-	-	P	H
		128.01	27.66	-15.84	43.5	40.68	17.65	1.97	32.71	-	-	P	H
		759.2	30.81	-15.19	46	30.23	28.3	4.79	32.64	-	-	P	H
		860.7	33.09	-12.91	46	30.69	29.28	5.07	32.13	-	-	P	H
		954.5	35.04	-10.96	46	29.85	31	5.35	31.36	-	-	P	H
													H
													H
													H
													H
													H
													H
		32.97	31.82	-8.18	40	40.14	23.48	0.92	32.75	-	-	P	V
		39.99	30.35	-9.65	40	41.98	20.03	1.05	32.74	-	-	P	V
		110.73	29.39	-14.11	43.5	43.3	16.91	1.84	32.72	-	-	P	V
		757.1	31.11	-14.89	46	30.51	28.32	4.79	32.64	-	-	P	V
		897.1	33.57	-12.43	46	31.16	29.02	5.2	31.87	-	-	P	V
		962.2	34.95	-19.05	54	29.66	30.98	5.38	31.28	-	-	P	V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against limit line.
3. The emission position marked as “-” means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.

<Sample 2>

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
6+7		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 11 2462MHz	*	2462	107.46	-	-	94.57	26.8	18.49	32.4	100	56	P	H
	*	2462	104.32	-	-	91.43	26.8	18.49	32.4	100	56	A	H
		2486.4	54.09	-19.91	74	41.06	26.9	18.54	32.41	100	56	P	H
		2486.72	44.6	-9.4	54	31.57	26.9	18.54	32.41	100	56	A	H
													H
													H
	*	2462	115.17	-	-	102.28	26.8	18.49	32.4	131	92	P	V
	*	2462	112	-	-	99.11	26.8	18.49	32.4	131	92	A	V
		2483.52	54.8	-19.2	74	41.78	26.9	18.53	32.41	131	92	P	V
		2483.52	46.83	-7.17	54	33.81	26.9	18.53	32.41	131	92	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

WIFI Ant. 6+7	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		4924	54.33	-19.67	74	42.06	32.65	13.1	33.48	100	339	P	H
		4924	50.46	-3.54	54	38.19	32.65	13.1	33.48	100	339	A	H
		7386	49.32	-24.68	74	31.69	37.43	16.09	35.89	-	-	P	H
		7386	39.99	-14.01	54	22.36	37.43	16.09	35.89	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
802.11b CH 11 2462MHz													H
		4920	50.71	-23.29	74	38.46	32.64	13.09	33.48	311	298	P	V
		4920	45.59	-8.41	54	33.34	32.64	13.09	33.48	311	298	A	V
		7386	49.66	-24.34	74	32.03	37.43	16.09	35.89	-	-	P	V
		7386	40.95	-13.05	54	23.32	37.43	16.09	35.89	-	-	A	V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.
3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.

Emission below 1GHz

2.4GHz WIFI 802.11b (LF)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
6+7		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11b LF		32.97	26.75	-13.25	40	35.07	23.48	0.95	32.75	-	-	P	H
		122.88	26.73	-16.77	43.5	39.88	17.56	2.01	32.72	-	-	P	H
		132.6	31.51	-11.99	43.5	44.51	17.66	2.05	32.71	-	-	P	H
		867.7	32.58	-13.42	46	30.16	29.26	5.24	32.08	-	-	P	H
		954.5	34.6	-11.4	46	29.41	31	5.55	31.36	-	-	P	H
		985.3	35.24	-18.76	54	29.92	30.65	5.69	31.02	-	-	P	H
													H
													H
													H
													H
													H
													H
		32.7	31.3	-8.7	40	39.45	23.66	0.94	32.75	100	313	Q	V
		38.64	26.99	-13.01	40	37.97	20.71	1.05	32.74	100	32	Q	V
		133.14	31.79	-11.71	43.5	44.79	17.65	2.06	32.71	-	-	P	V
		856.5	32.54	-13.46	46	30.21	29.24	5.24	32.15	-	-	P	V
		940.5	34.36	-11.64	46	29.98	30.38	5.49	31.49	-	-	P	V
		976.2	35.29	-18.71	54	29.93	30.83	5.65	31.12	-	-	P	V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against limit line.
3. The emission position marked as “-” means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.

<Sample 3>

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
6+7		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 11 2462MHz	*	2462	116.9	-	-	104.01	26.8	18.49	32.4	144	93	P	H
	*	2464	113.78	-	-	100.88	26.8	18.5	32.4	144	93	A	H
		2483.52	56.33	-17.67	74	43.31	26.9	18.53	32.41	144	93	P	H
		2483.5	52.13	-1.87	54	39.11	26.9	18.53	32.41	144	93	P	H
													H
													H
	*	2462	106.95	-	-	94.06	26.8	18.49	32.4	100	68	P	V
	*	2462	104	-	-	91.11	26.8	18.49	32.4	100	68	A	V
		2483.6	54.07	-19.93	74	41.05	26.9	18.53	32.41	100	68	P	V
		2483.52	46	-8	54	32.98	26.9	18.53	32.41	100	68	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI Ant. 6+7	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 11 2462MHz		4924	53.22	-20.78	74	40.95	32.65	13.1	33.48	100	11	P	H
		4924	49	-5	54	36.73	32.65	13.1	33.48	100	11	A	H
		7386	48.79	-25.21	74	31.16	37.43	16.09	35.89	-	-	P	H
		7386	40.93	-13.07	54	23.3	37.43	16.09	35.89	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
													H
		4924	52.07	-21.93	74	39.8	32.65	13.1	33.48	298	278	P	V
		4924	47.88	-6.12	54	35.61	32.65	13.1	33.48	298	278	A	V
		7386	49.03	-24.97	74	31.4	37.43	16.09	35.89	-	-	P	V
		7386	40.03	-13.97	54	22.4	37.43	16.09	35.89	-	-	A	V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.
3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.

Emission below 1GHz

2.4GHz WIFI 802.11b (LF)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
6+7		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11b LF		33.51	26.18	-13.82	40	34.82	23.15	0.96	32.75	-	-	P	H
		112.89	29.86	-13.64	43.5	43.64	17.02	1.92	32.72	-	-	P	H
		137.46	27.66	-15.84	43.5	40.72	17.56	2.08	32.7	-	-	P	H
		799.8	30.71	-15.29	46	30.22	27.94	5.04	32.49	-	-	P	H
		889.4	32.93	-13.07	46	30.64	28.96	5.25	31.92	-	-	P	H
		985.3	35.16	-18.84	54	29.84	30.65	5.69	31.02	-	-	P	H
													H
													H
													H
													H
													H
													H
		34.05	32.15	-7.85	40	41.1	22.83	0.96	32.74	100	130	Q	V
		38.37	32.44	-7.56	40	43.29	20.84	1.05	32.74	-	-	P	V
		74.82	30.33	-9.67	40	48.38	13.15	1.53	32.73	-	-	P	V
		663.3	29.81	-16.19	46	31.71	26.35	4.56	32.81	-	-	P	V
		857.9	33.02	-12.98	46	30.66	29.26	5.24	32.14	-	-	P	V
		954.5	35.37	-10.63	46	30.18	31	5.55	31.36	-	-	P	V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against limit line.
3. The emission position marked as “-” means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.

Note symbol

*	**Fundamental Frequency** which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is **Margin** line.
P/A	**P**eak or **A**verage
H/V	**H**orizontal or **V**ertical

A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
6+7		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) =

Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

3. Margin (dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Margin (dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

2. Margin (dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

Both peak and average measured complies with the limit line, so test result is "PASS".

Appendix D. Radiated Spurious Emission Plots

Test Engineer :	BANK Lin, Fred Tseng and Karl Hou	**Temperature :**	21.5~24.9°C
		Relative Humidity :	50.1~60.9%

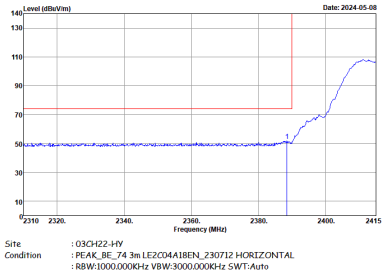
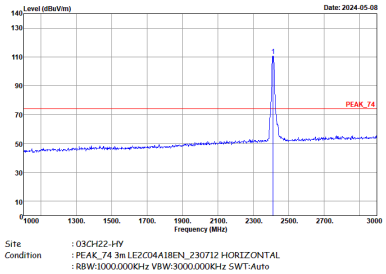
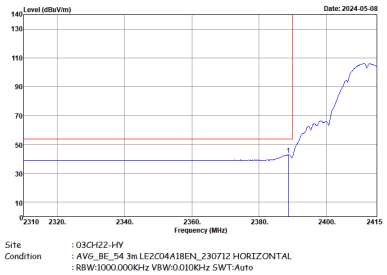
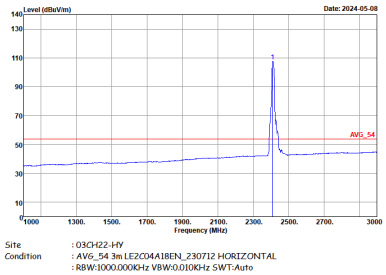
Note symbol

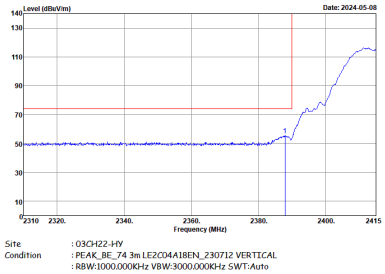
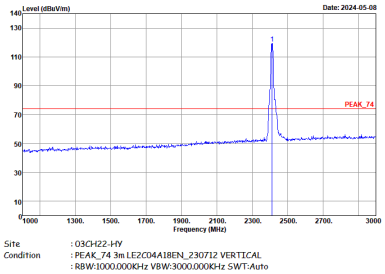
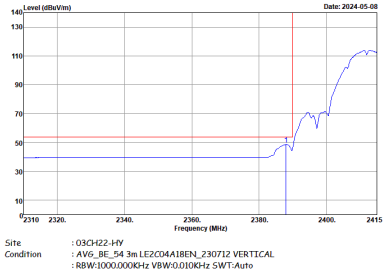
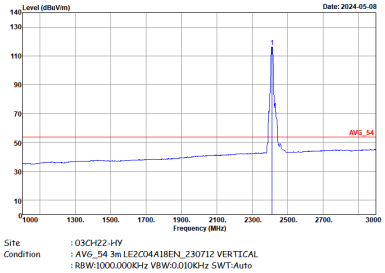
-L	**Low channel location**
-R	**High channel location**

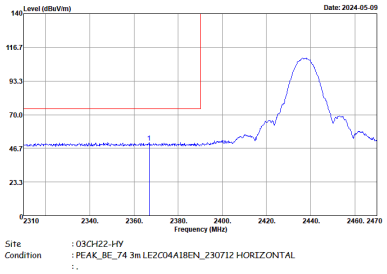
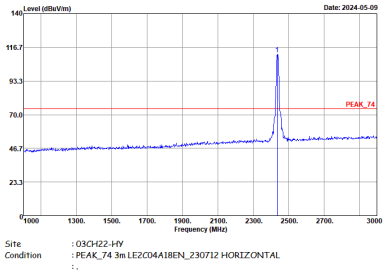
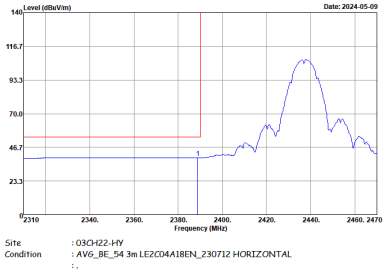
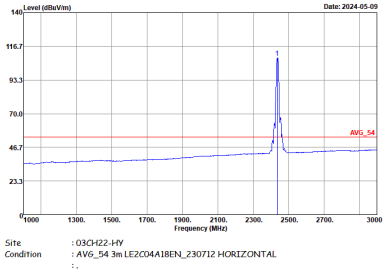
<Sample 1>

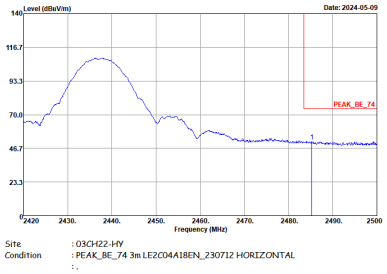
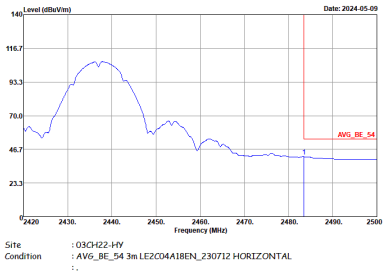
2.4GHz 2400~2483.5MHz

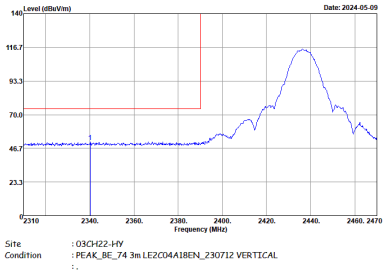
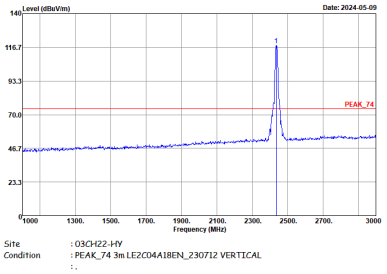
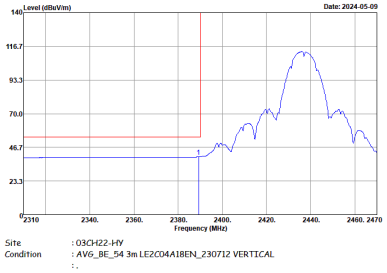
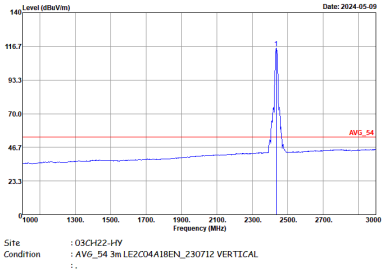
WIFI 802.11b (Band Edge @ 3m)

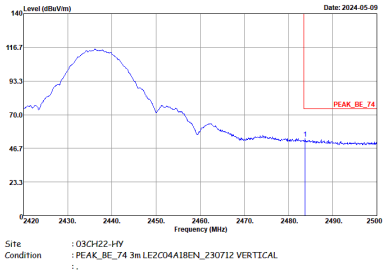
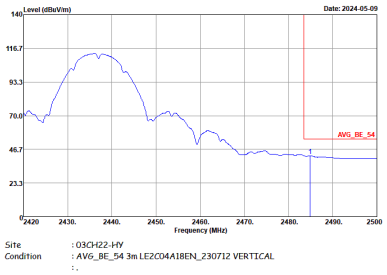
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
6+7	Horizontal	Fundamental
Peak		
Avg.		

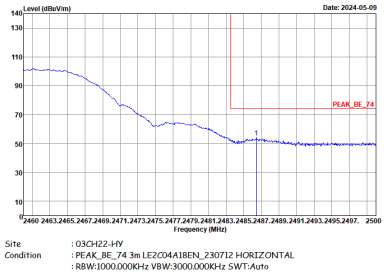
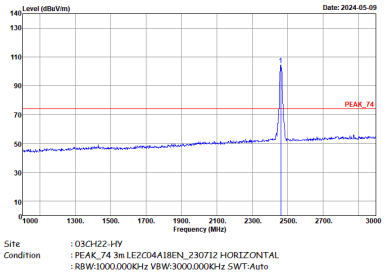
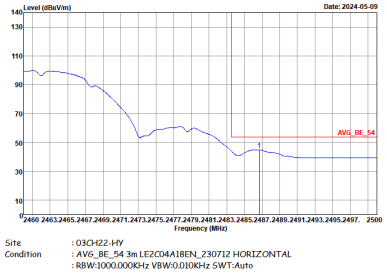
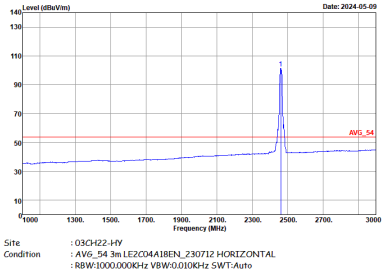
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
6+7	Vertical	Fundamental
Peak		
Avg.		

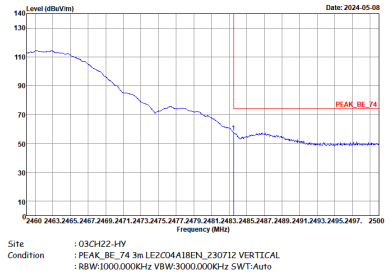
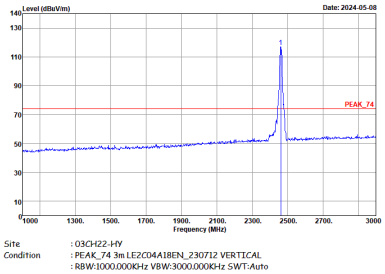
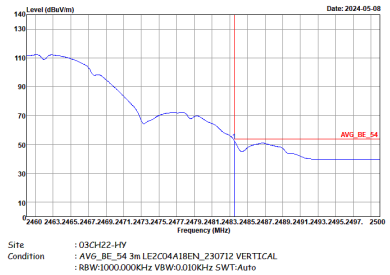
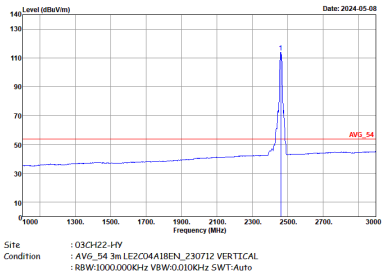
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH22-HY Condition : PEAK_BE_74 3m LE2C04A18EN_230712 HORIZONTAL : .	 Site : 03CH22-HY Condition : PEAK_74 3m LE2C04A18EN_230712 HORIZONTAL : .
Avg.	 Site : 03CH22-HY Condition : AVG_BE_54 3m LE2C04A18EN_230712 HORIZONTAL : .	 Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL : .

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
6+7	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
6+7	Vertical	Fundamental
Peak		
Avg.		

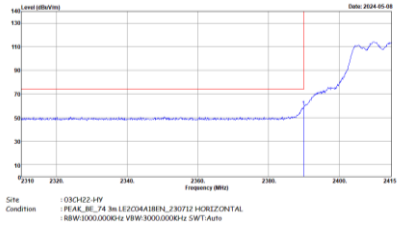
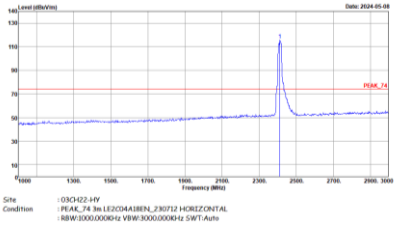
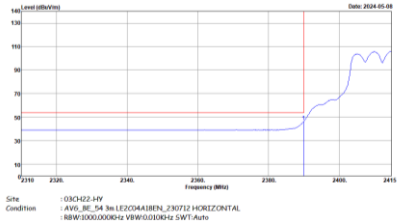
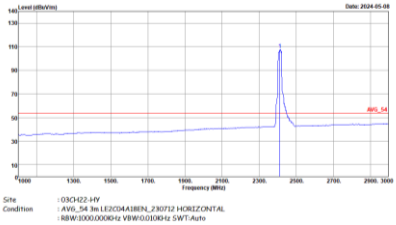
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
6+7	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

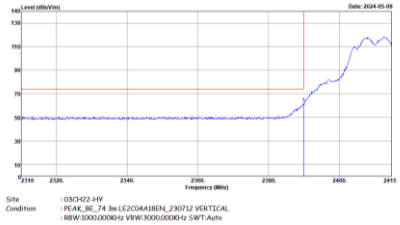
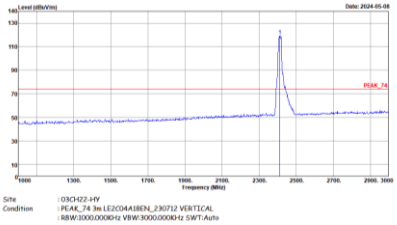
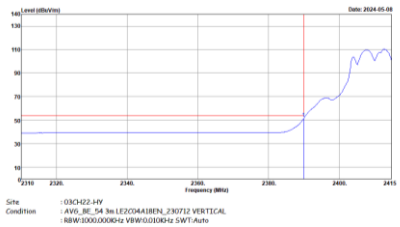
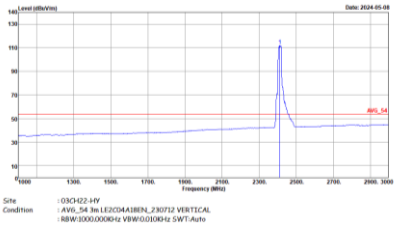
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH22-HY Condition : PEAK_BE_74 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH22-HY Condition : PEAK_74 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH22-HY Condition : AVG_BE_54 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

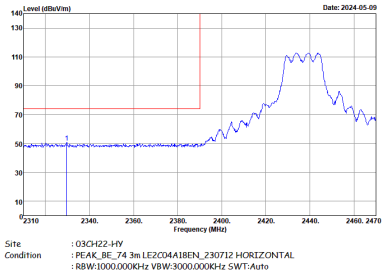
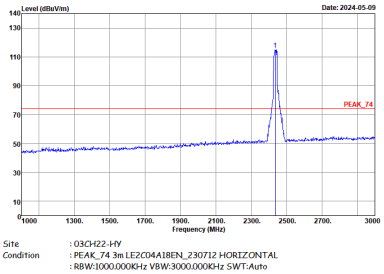
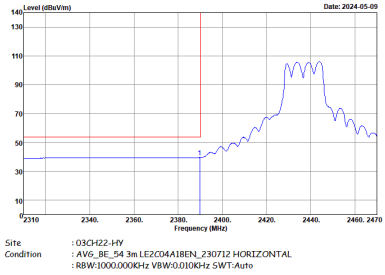
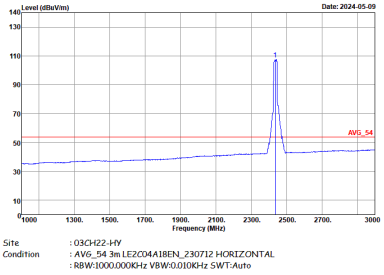
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
6+7	Vertical	Fundamental
Peak	 Site : 03CH22-HY Condition : PEAK_BE_74 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH22-HY Condition : PEAK_74 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH22-HY Condition : AVG_BE_54 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

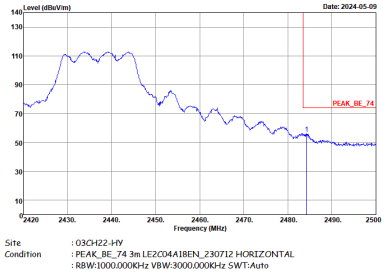
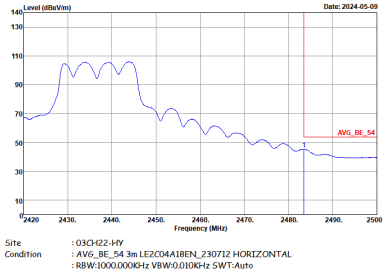
2.4GHz 2400~2483.5MHz

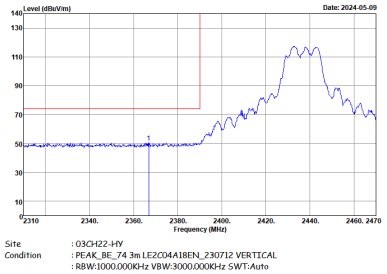
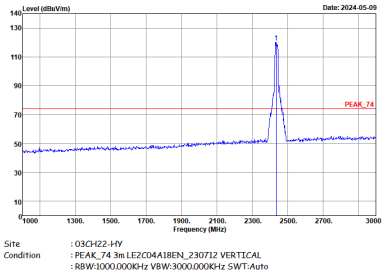
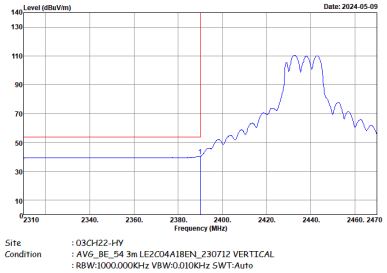
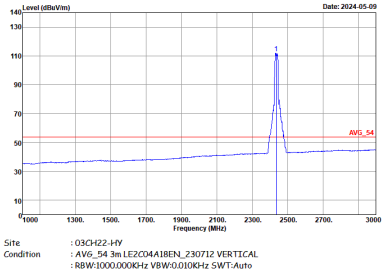
WIFI 802.11g (Band Edge @ 3m)

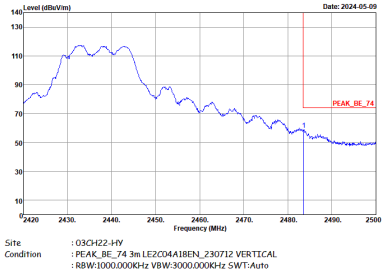
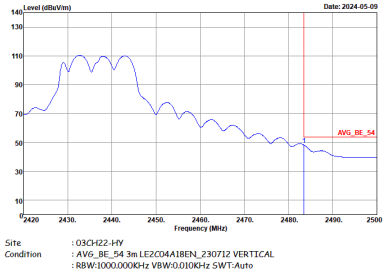
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
6+7	Horizontal	Fundamental
Peak		
Avg.		

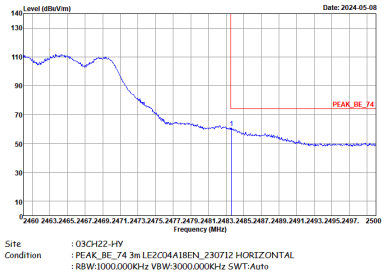
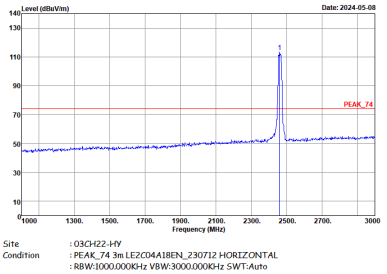
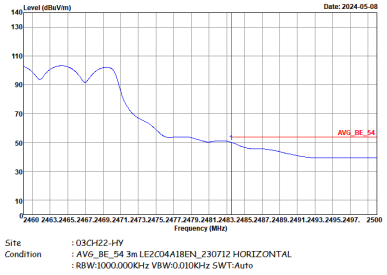
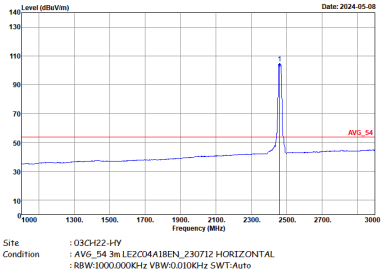
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
6+7	Vertical	Fundamental
Peak		
Avg.		

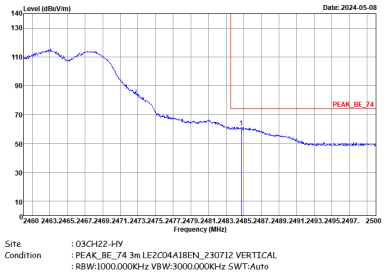
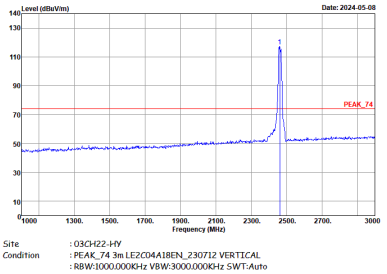
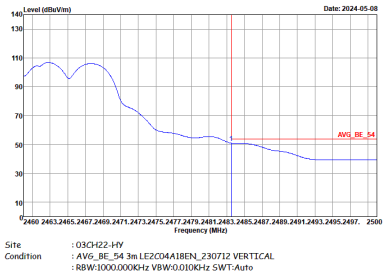
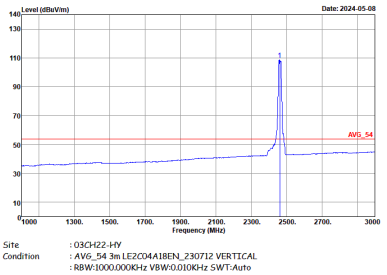
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH22-HY Condition : PEAK_BE_74 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH22-HY Condition : PEAK_74 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH22-HY Condition : AVG_BE_54 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
6+7	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
6+7	Vertical	Fundamental
Peak		
Avg.		

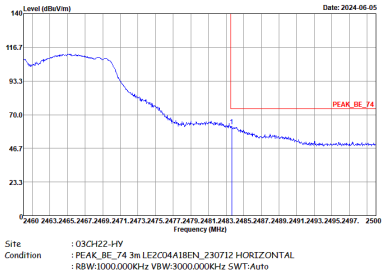
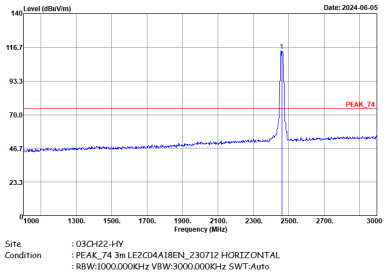
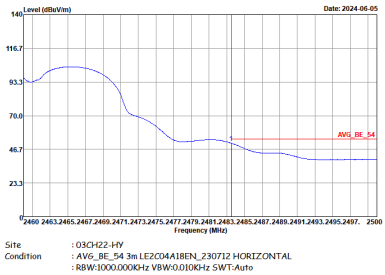
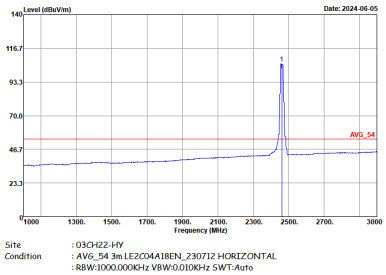
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
6+7	Vertical	Fundamental
Peak		Left Blank
Avg.		Left Blank

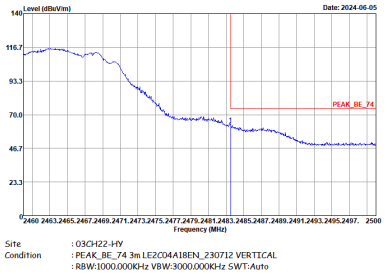
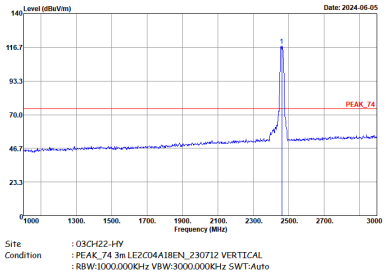
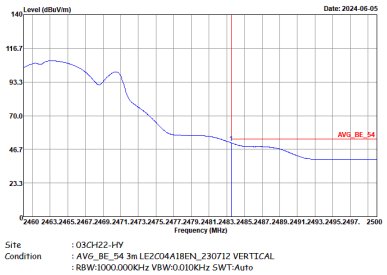
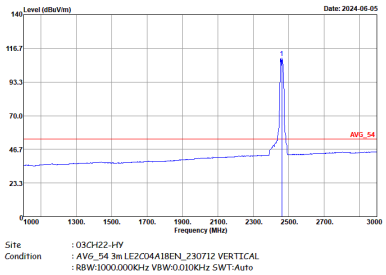
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH22-HY Condition : PEAK_BE_74 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH22-HY Condition : PEAK_74 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH22-HY Condition : AVG_BE_54 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
6+7	Vertical	Fundamental
Peak	 Site : 03CH22-HY Condition : PEAK_BE_74 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH22-HY Condition : PEAK_74 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH22-HY Condition : AVG_BE_54 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

2.4GHz 2400~2483.5MHz

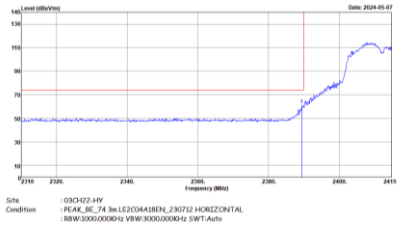
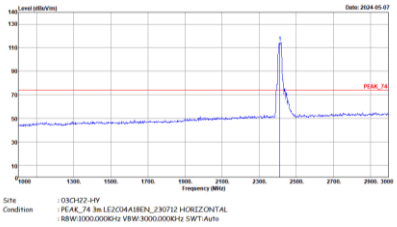
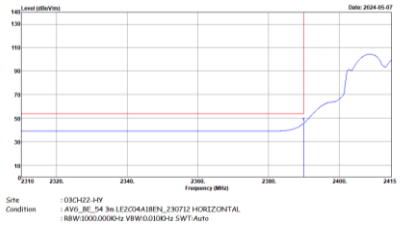
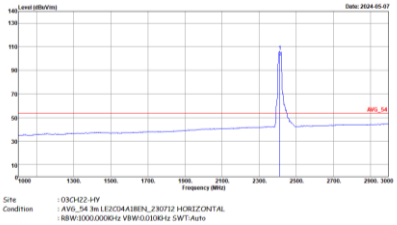
WIFI 802.11ac VHT20 (Band Edge @ 3m)

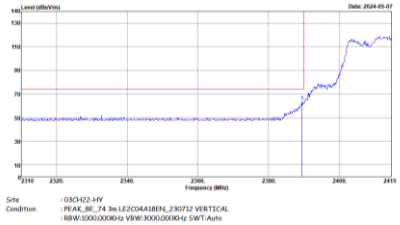
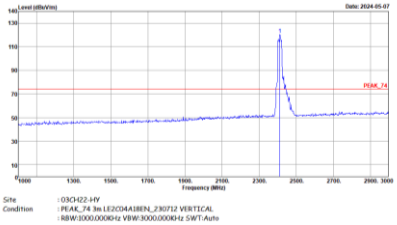
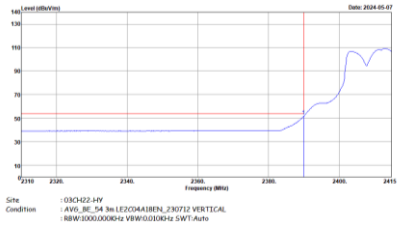
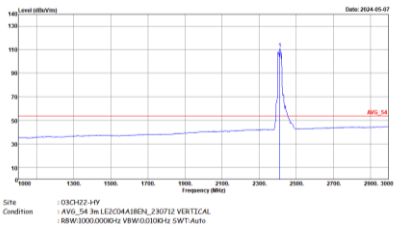
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH20 CH11 2462MHz	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH22-HY Condition : PEAK_BE_74 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH22-HY Condition : PEAK_74 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH22-HY Condition : AVG_BE_54 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

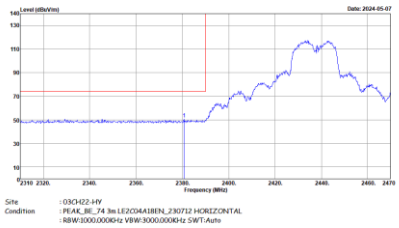
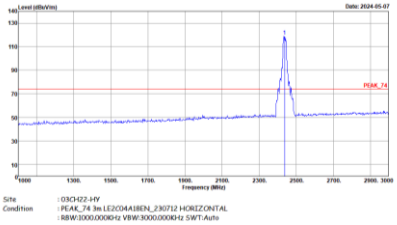
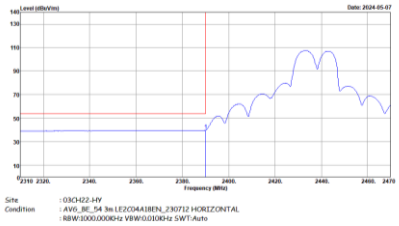
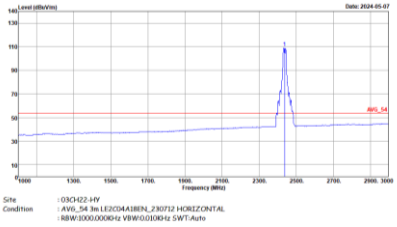
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH20 CH11 2462MHz	
6+7	Vertical	Fundamental
Peak	 Site : 03CH22-HY Condition : PEAK_BE_74 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH22-HY Condition : PEAK_74 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH22-HY Condition : AVG_BE_54 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

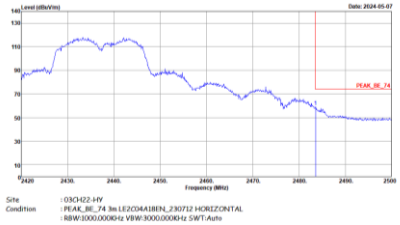
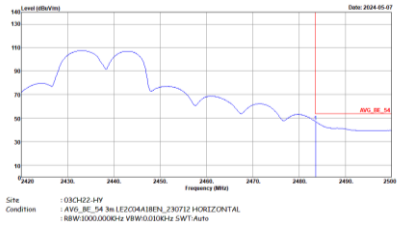
2.4GHz 2400~2483.5MHz

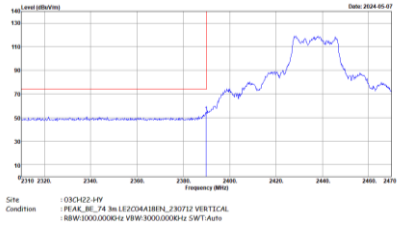
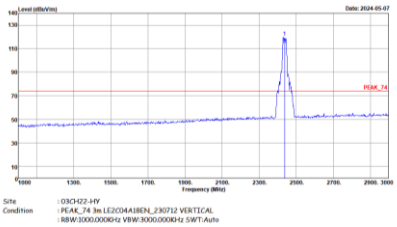
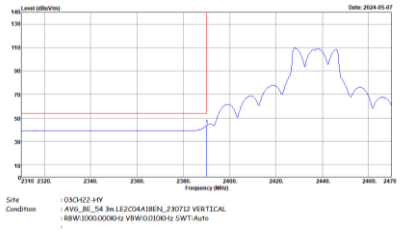
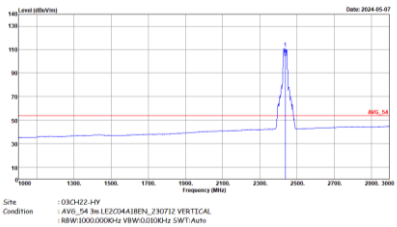
WIFI 802.11ax HE20 Full (Band Edge @ 3m)

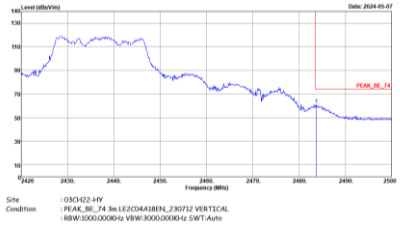
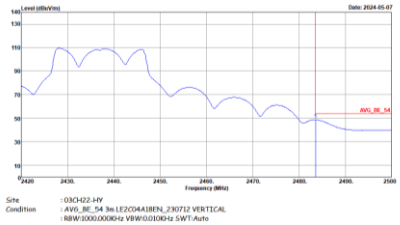
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH01 2412MHz	
6+7	Horizontal	Fundamental
Peak		
Avg.		

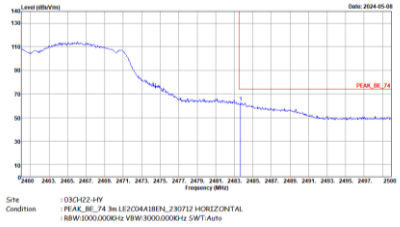
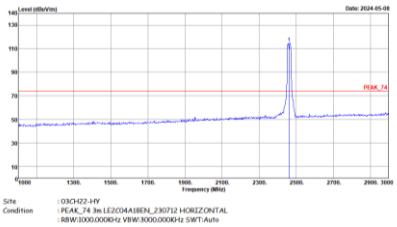
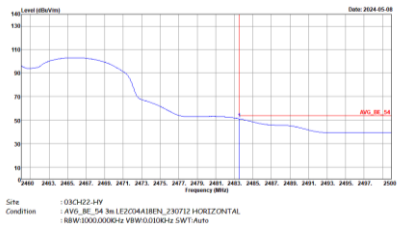
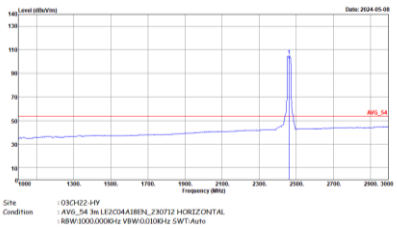
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH01 2412MHz	
6+7	Vertical	Fundamental
Peak		
Avg.		

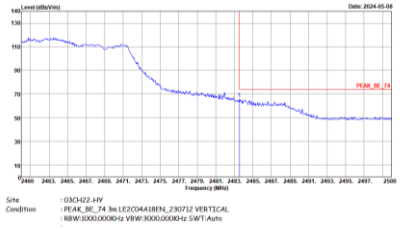
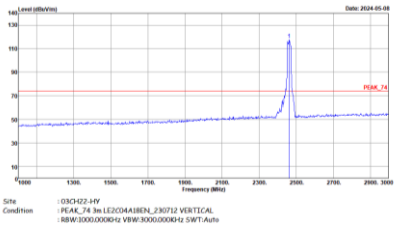
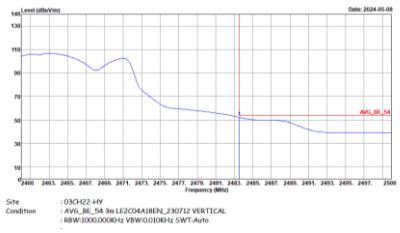
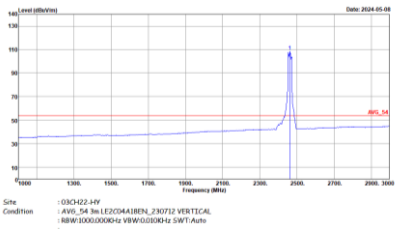
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - L	
6+7	Horizontal	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - R	
6+7	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - L	
6+7	Vertical	Fundamental
Peak		
Avg.		

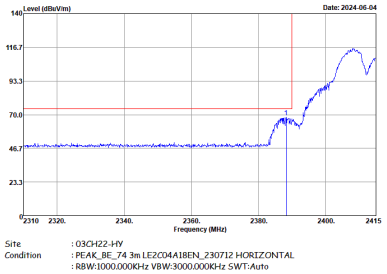
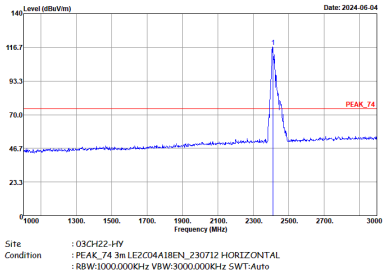
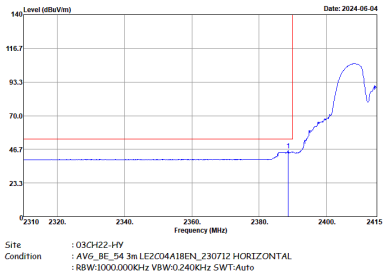
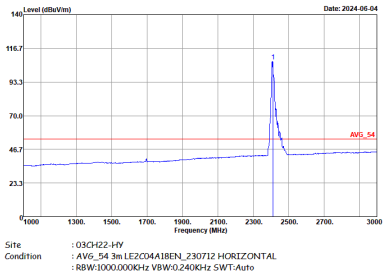
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - R	
6+7	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

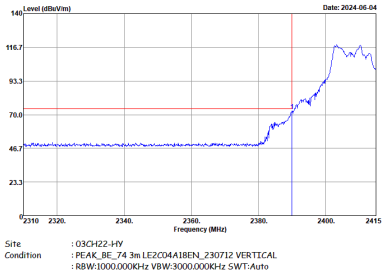
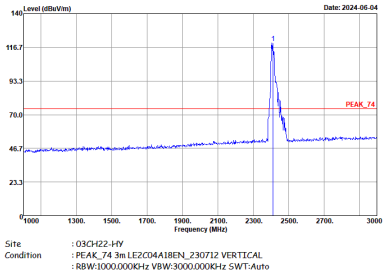
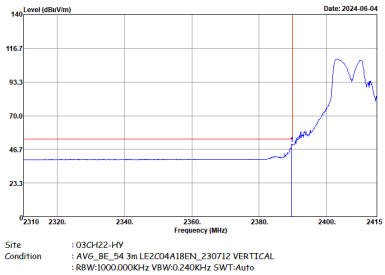
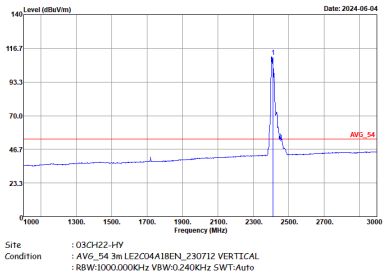
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH11 2462MHz	
6+7	Horizontal	Fundamental
Peak		
Avg.		

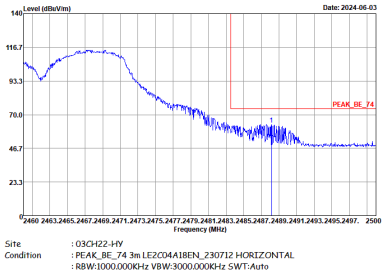
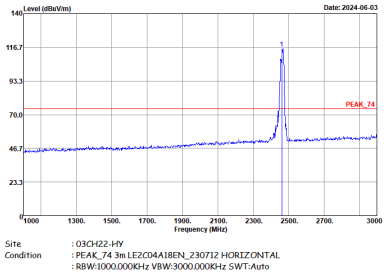
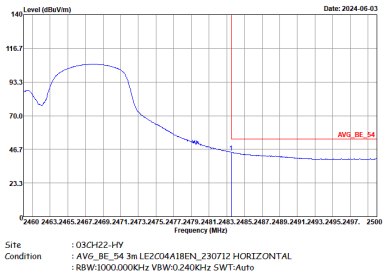
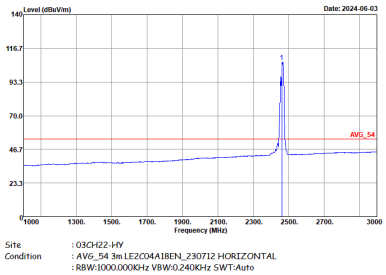
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH11 2462MHz	
6+7	Vertical	Fundamental
Peak		
Avg.		

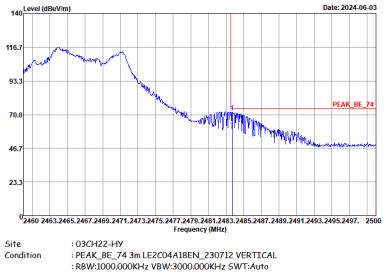
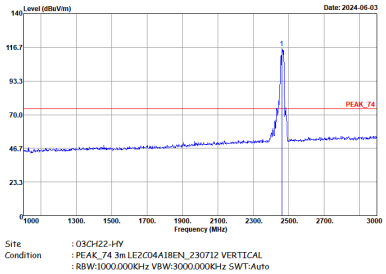
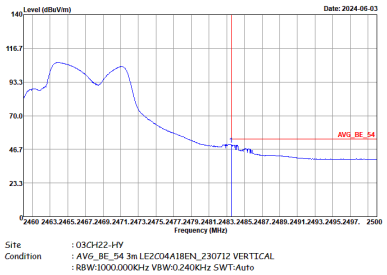
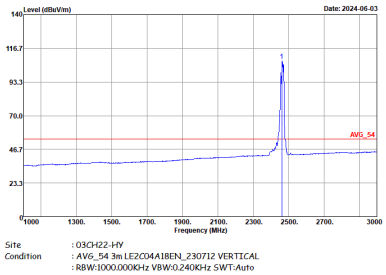
2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE20 Partial 106 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 106/53 CH01 2412MHz	
6+7	Horizontal	Fundamental
Peak		
Avg.		

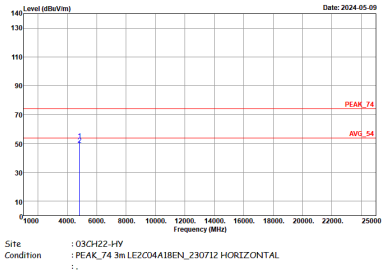
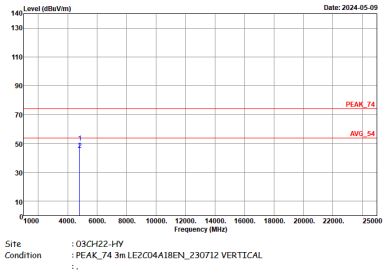
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 106/53 CH01 2412MHz	
6+7	Vertical	Fundamental
Peak	 Site : 03CH22-HY Condition : PEAK_BE_74 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH22-HY Condition : PEAK_74 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH22-HY Condition : AVG_BE_54 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.240KHz SWT:Auto	 Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.240KHz SWT:Auto

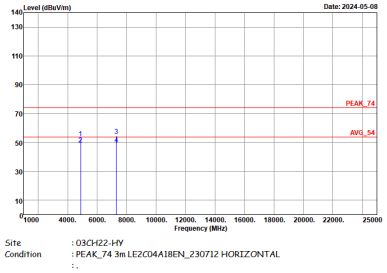
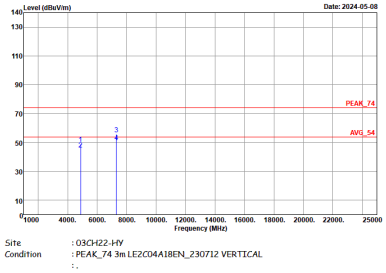
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 106/54 CH11 2462MHz	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH22-HY Condition : PEAK_BE_74 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH22-HY Condition : PEAK_74 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH22-HY Condition : AVG_BE_54 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.240KHz SWT:Auto	 Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 HORIZONTAL : RBW:1000.000KHz VBW:0.240KHz SWT:Auto

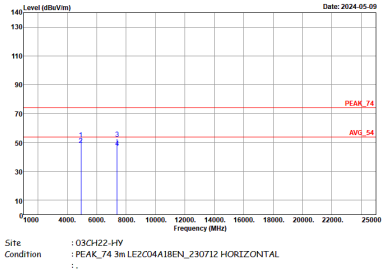
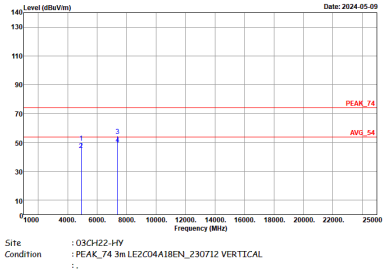
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 106/54 CH11 2462MHz	
6+7	Vertical	Fundamental
Peak	 Site : 03CH22-HY Condition : PEAK_BE_74 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH22-HY Condition : PEAK_74 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH22-HY Condition : AVG_BE_54 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.240KHz SWT:Auto	 Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.240KHz SWT:Auto

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

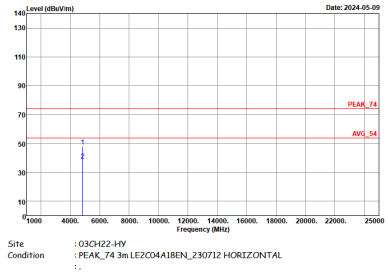
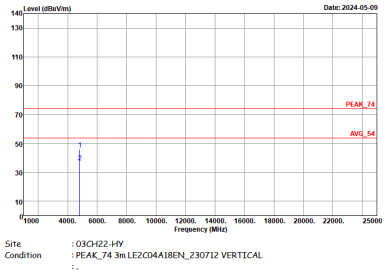
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
6+7	Horizontal	Vertical
Peak Avg.		

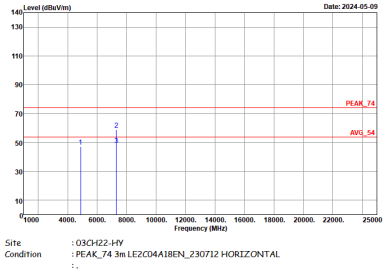
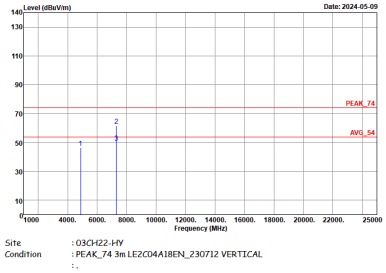
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
6+7	Horizontal	Vertical
Peak Avg.		

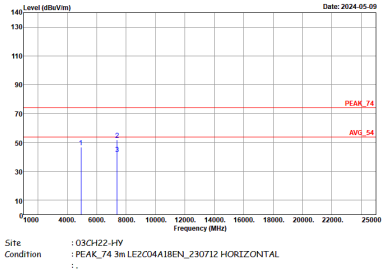
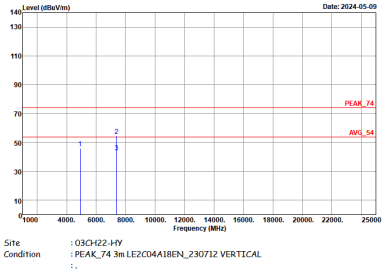
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
6+7	Horizontal	Vertical
Peak Avg.		

2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

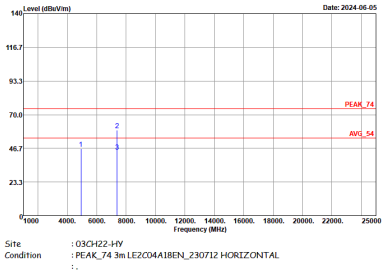
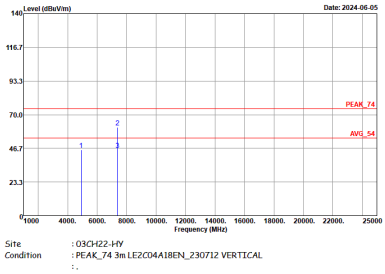
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
6+7	Horizontal	Vertical
Peak Avg.		

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
6+7	Horizontal	Vertical
Peak Avg.		

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
6+7	Horizontal	Vertical
Peak Avg.	 Site : 03CH22-HY Condition : PEAK_74 3m LE2C04A18EN_230712 HORIZONTAL : .	 Site : 03CH22-HY Condition : PEAK_74 3m LE2C04A18EN_230712 VERTICAL : .

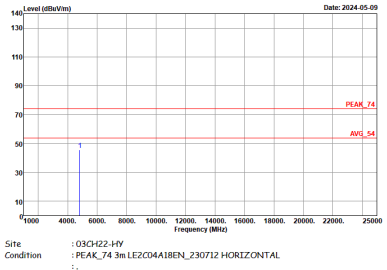
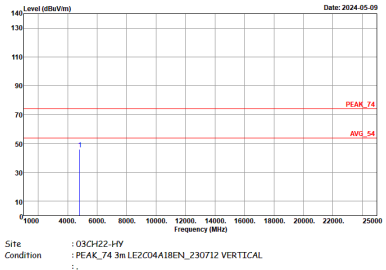
2.4GHz 2400~2483.5MHz

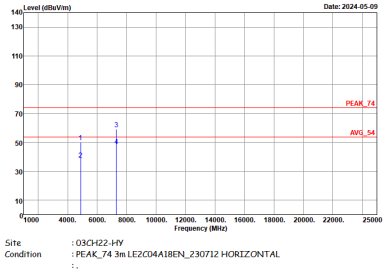
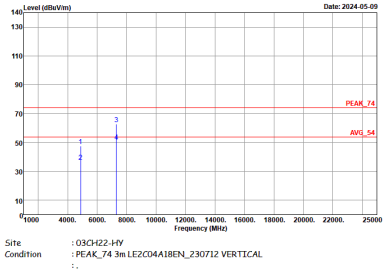
WIFI 802.11ac VHT20 (Harmonic @ 3m)

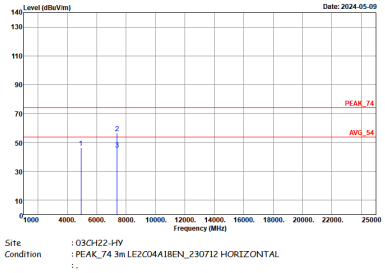
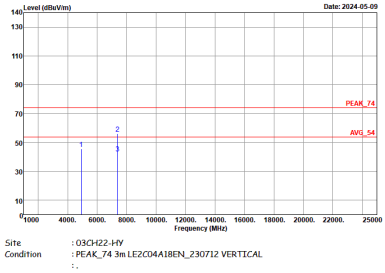
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH11 2462MHz	
6+7	Horizontal	Vertical
Peak Avg.		

2.4GHz 2400~2483.5MHz

WIFI 802.11 ax HE20 Full (Harmonic @ 3m)

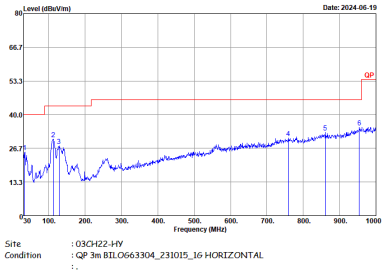
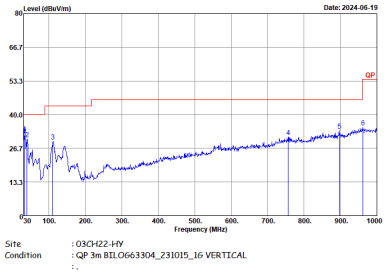
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE20 Full CH01 2412MHz	
6+7	Horizontal	Vertical
Peak Avg.		

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE20 Full CH06 2437MHz	
6+7	Horizontal	Vertical
Peak Avg.		

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE20 Full CH11 2462MHz	
6+7	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

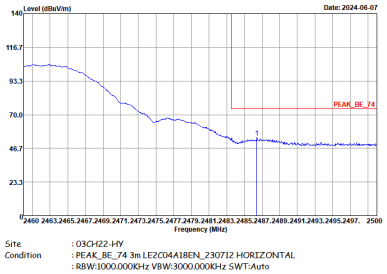
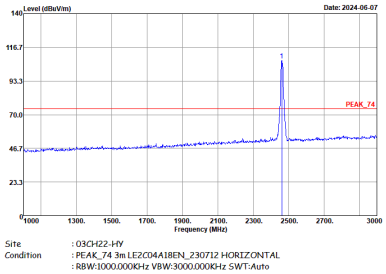
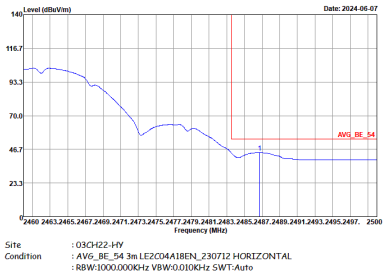
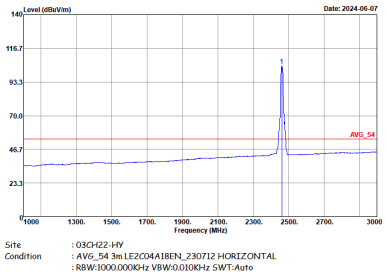
2.4GHz WIFI 802.11b (LF)

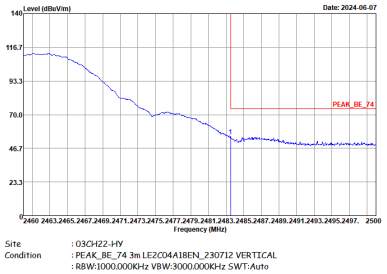
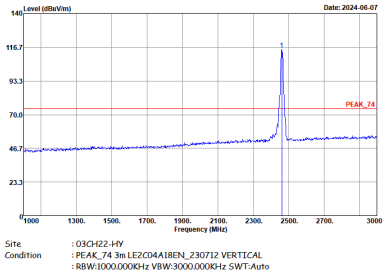
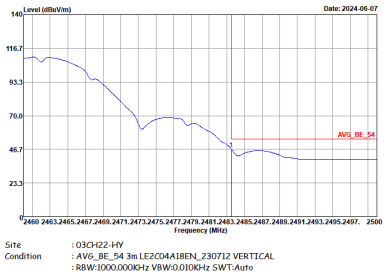
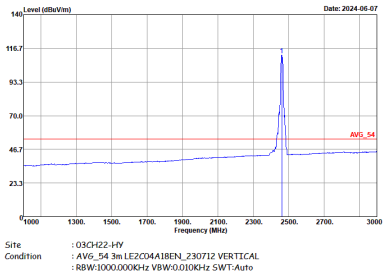
WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11b LF	
6+7	Horizontal	Vertical
QP / Peak		

<Sample 2>

2.4GHz 2400~2483.5MHz

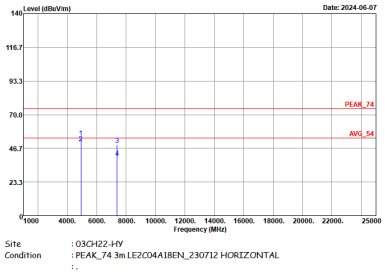
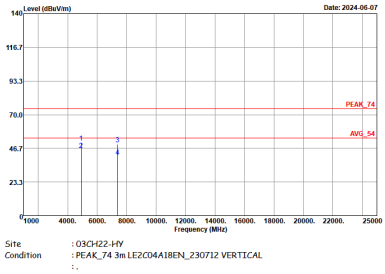
WIFI 802.11b (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
6+7	Horizontal	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
6+7	Vertical	Fundamental
Peak	 Site : 03CH22-HY Condition : PEAK_BE_74 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH22-HY Condition : PEAK_74 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH22-HY Condition : AVG_BE_54 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

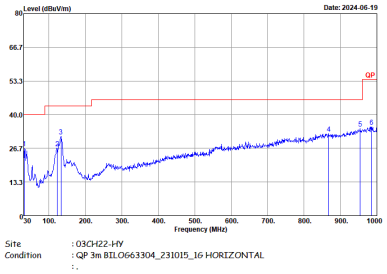
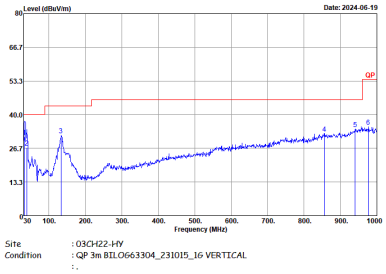
2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
6+7	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

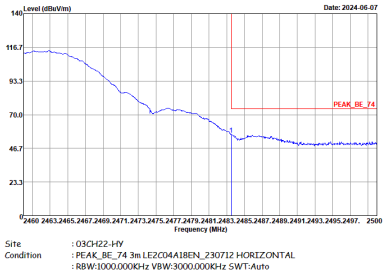
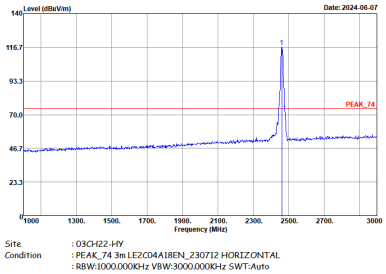
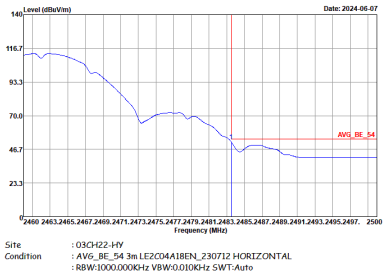
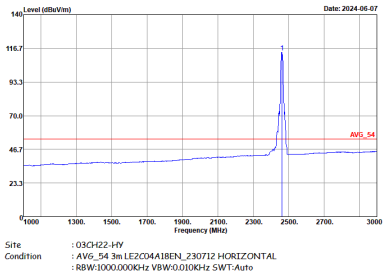
2.4GHz WIFI 802.11b (LF)

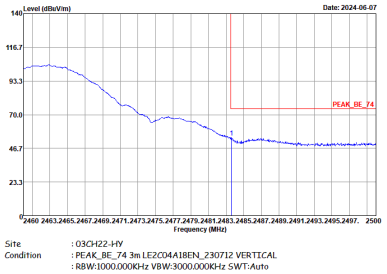
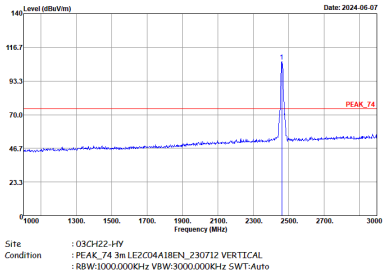
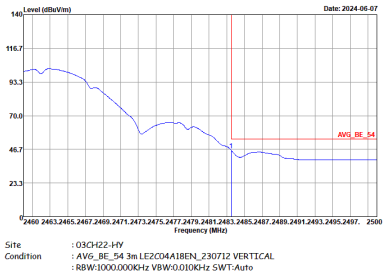
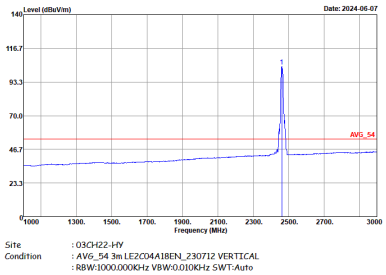
WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11b LF	
6+7	Horizontal	Vertical
QP / Peak		

<Sample 3>

2.4GHz 2400~2483.5MHz

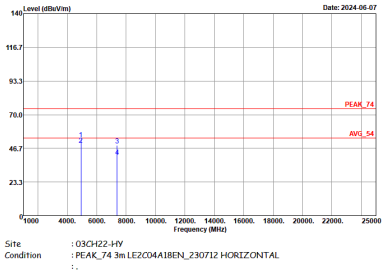
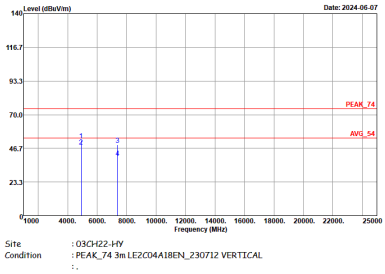
WIFI 802.11b (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
6+7	Horizontal	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
6+7	Vertical	Fundamental
Peak	 Site : 03CH22-HY Condition : PEAK_BE_74 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH22-HY Condition : PEAK_74 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH22-HY Condition : AVG_BE_54 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH22-HY Condition : AVG_54 3m LE2C04A18EN_230712 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

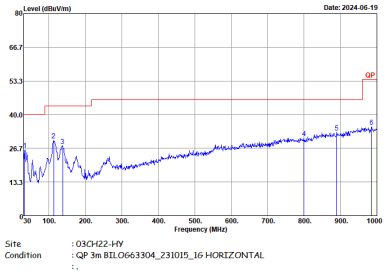
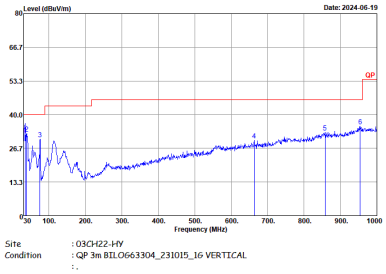
2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
6+7	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

2.4GHz WIFI 802.11b (LF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11b LF	
6+7	Horizontal	Vertical
QP / Peak		

Appendix E. Duty Cycle Plots

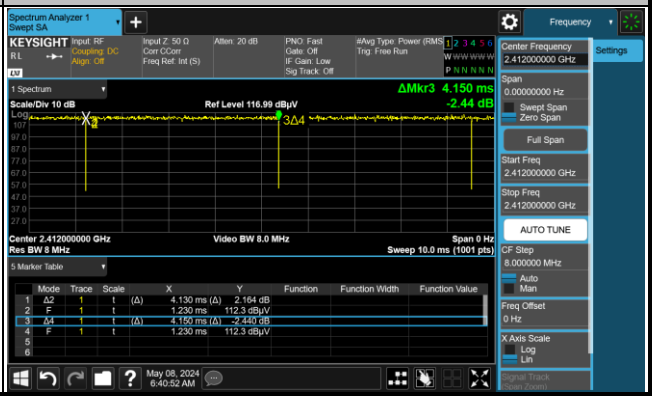
<Sample 1>

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
6+7	802.11b	98.89	-	-	10Hz
6+7	802.11g	99.52	-	-	10Hz
6+7	2.4GHz 802.11ac VHT20	100.00	-	-	10Hz
6+7	2.4GHz 802.11ax HE20 Full RU	100.00	-	-	10Hz
6+7	2.4GHz 802.11ax HE20 106 RU	97.74	4585	0.22	240Hz

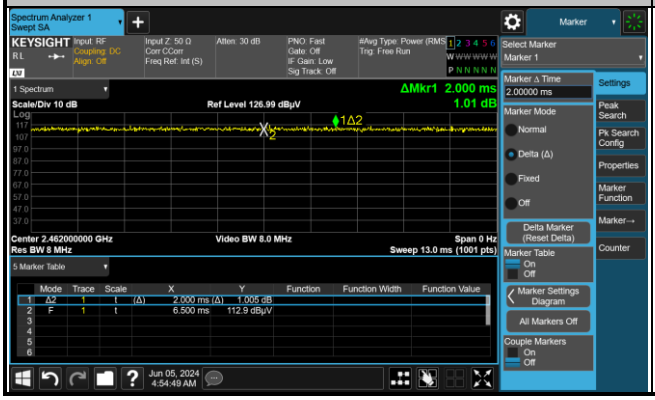
MIMO <Ant. 6+7>

802.11b

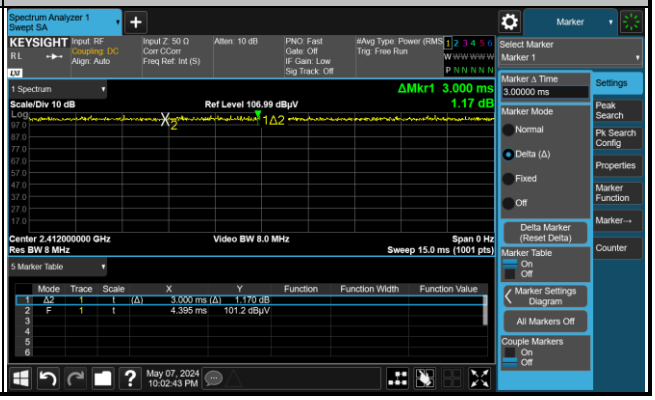
802.11g



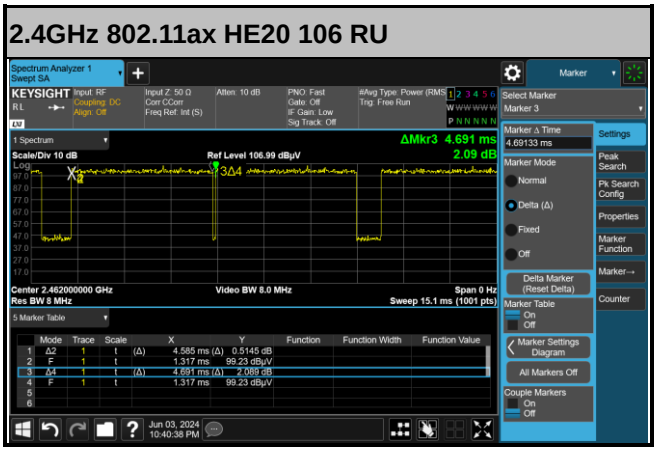
2.4GHz 802.11ac VHT20



2.4GHz 802.11ax HE20 Full RU



2.4GHz 802.11ax HE20 106 RU

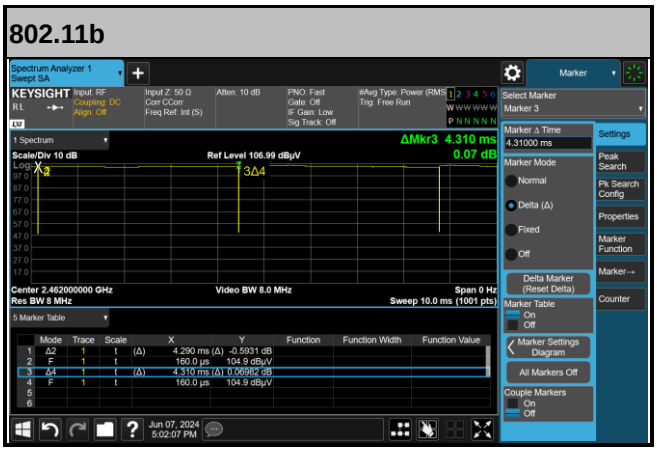


<Sample 2>

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
6+7	802.11b	99.54	-	-	10Hz

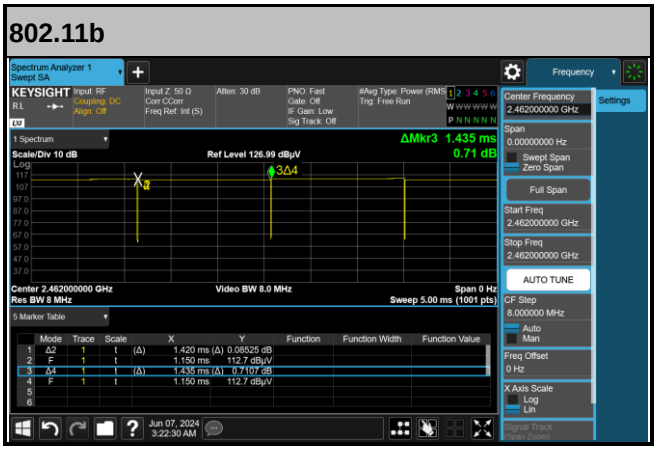
MIMO <Ant. 6+7>

802.11b



<Sample 3>

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
6+7	802.11b	98.95	-	-	10Hz

MIMO <Ant. 6+7>

802.11b