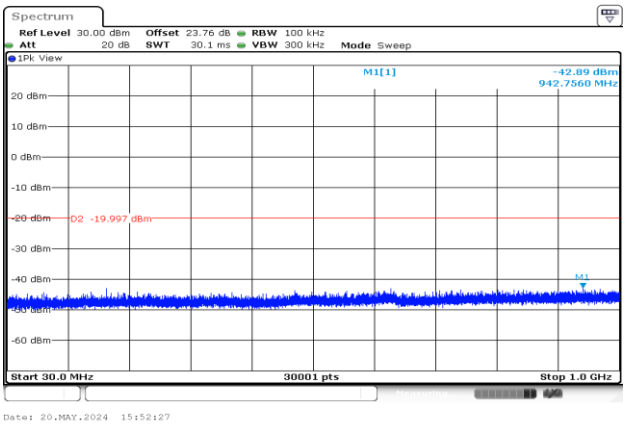
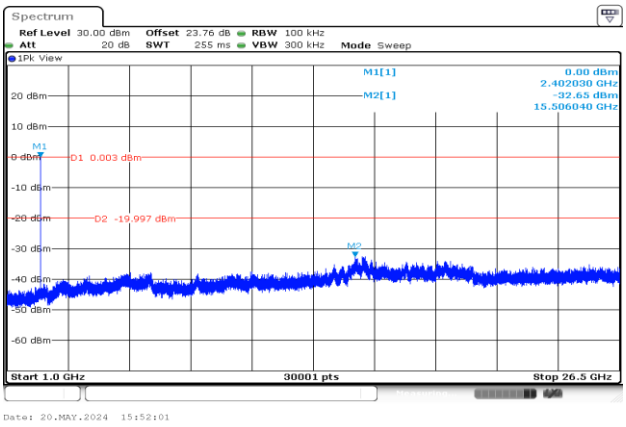
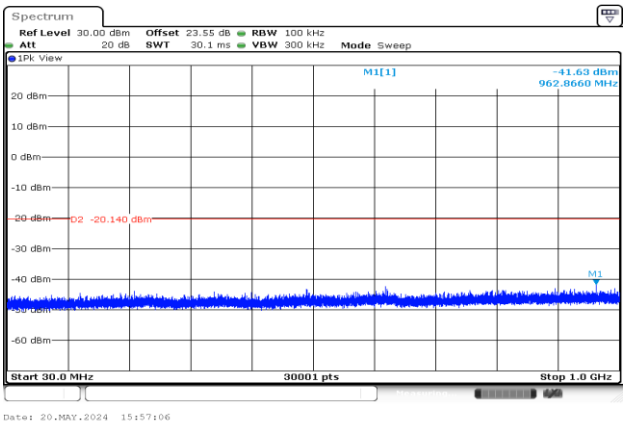
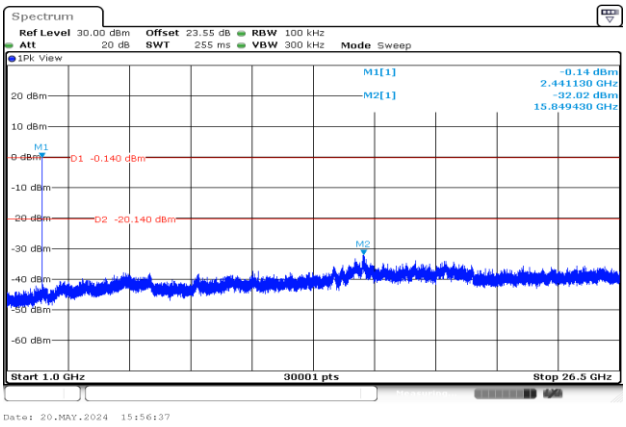
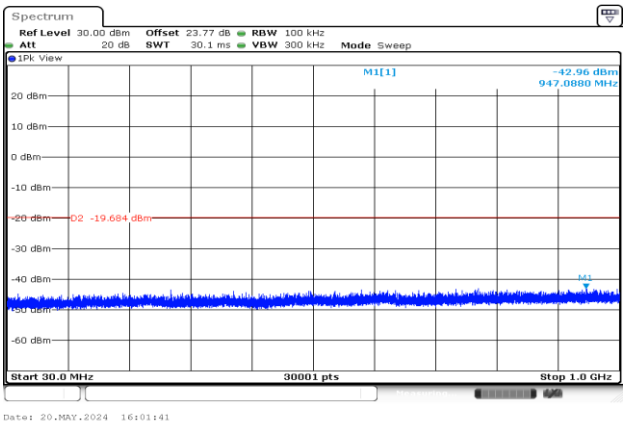
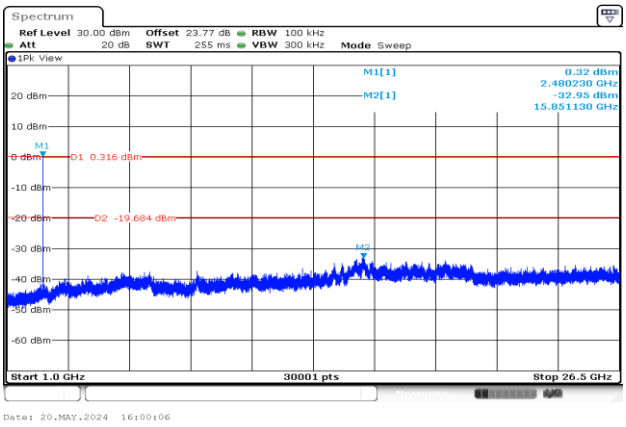
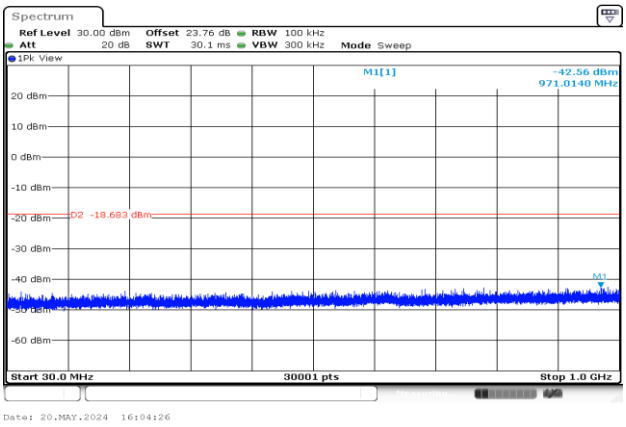
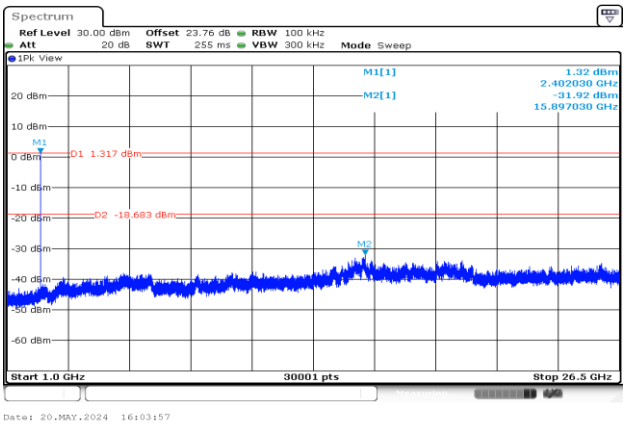
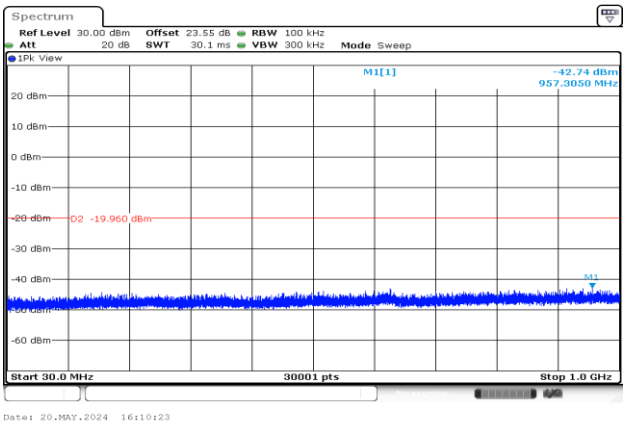
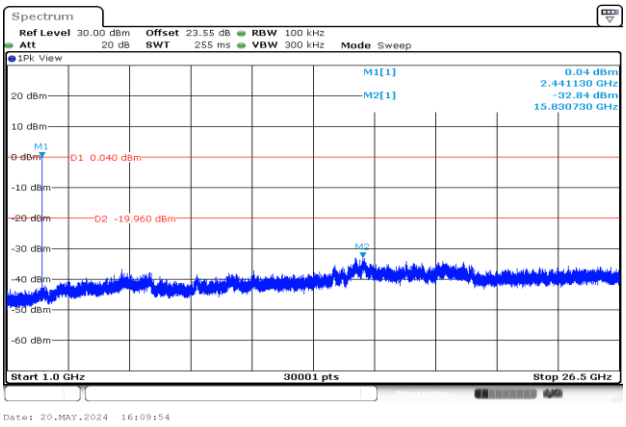
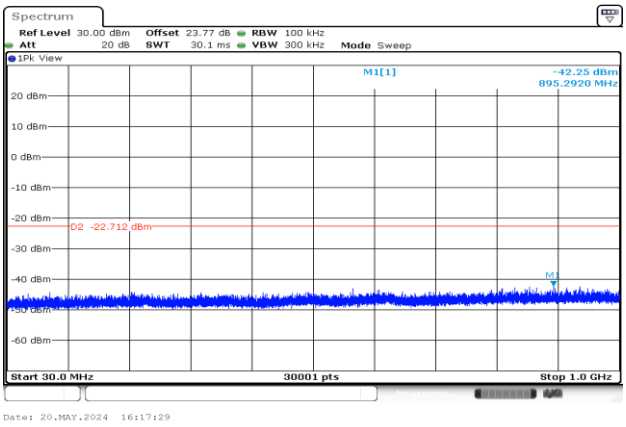
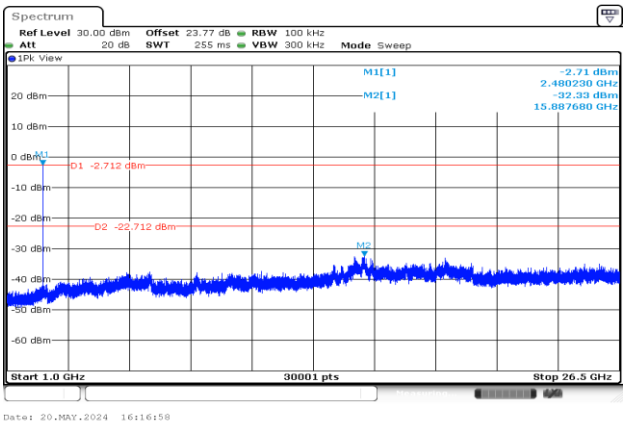
<2Mbps>

CSE Plot on Low Ch between 30MHz ~ 1 GHz	CSE Plot on Low Ch between 1GHz ~ 26.5GHz
	
CSE Plot on Mid. Ch between 30MHz ~ 1 GHz	**CSE Plot on Mid. Ch between 1GHz ~ 26.5GHz**
	
CSE Plot on High Ch between 30MHz ~ 1 GHz	**CSE Plot on High Ch between 1GHz ~ 26.5GHz**
	

<3Mbps>

CSE Plot on Low Ch between 30MHz ~ 1 GHz	CSE Plot on Low Ch between 1GHz ~ 26.5GHz
	
CSE Plot on Mid. Ch between 30MHz ~ 1 GHz	**CSE Plot on Mid. Ch between 1GHz ~ 26.5GHz**
	
CSE Plot on High Ch between 30MHz ~ 1 GHz	**CSE Plot on High Ch between 1GHz ~ 26.5GHz**
	

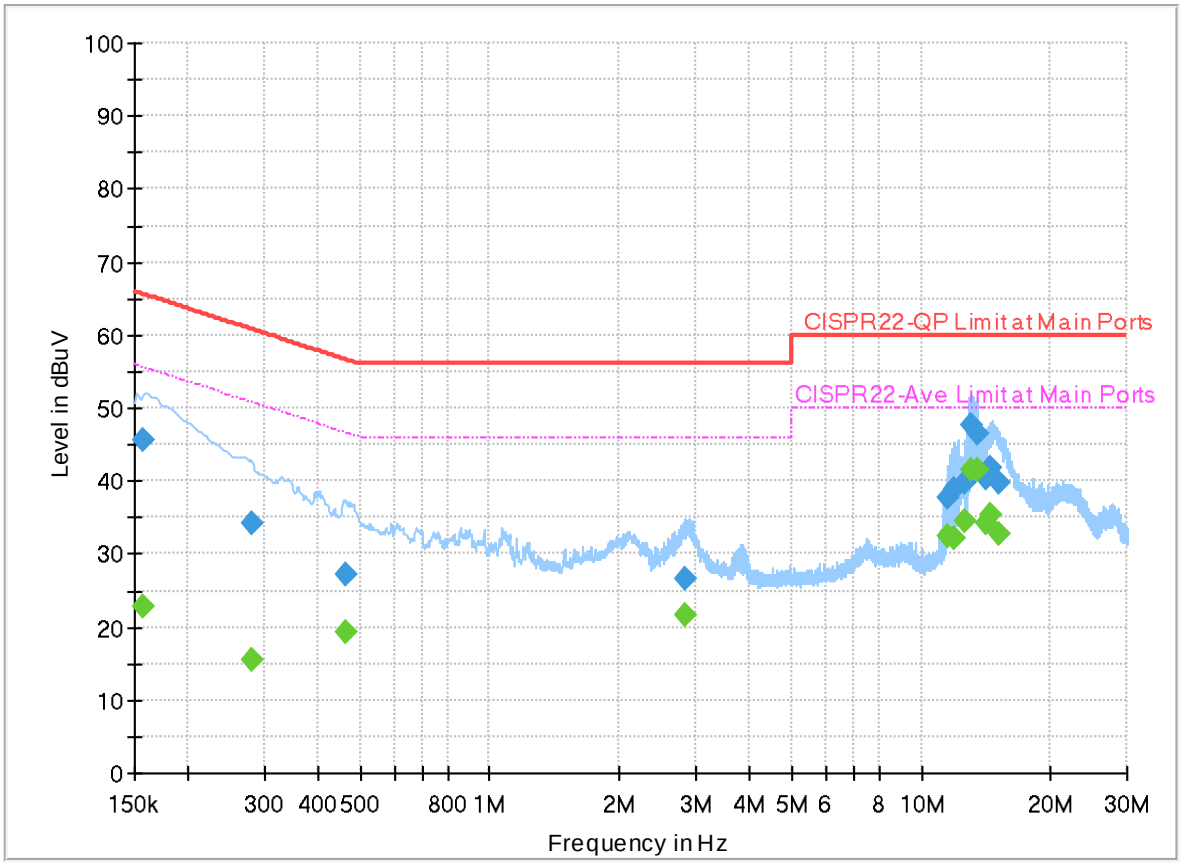
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Louis Chung	**Temperature :**	22.3~24.7℃
		Relative Humidity :	40.4~48.9%

EUT Information

Report NO :	450112
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Line

Full Spectrum



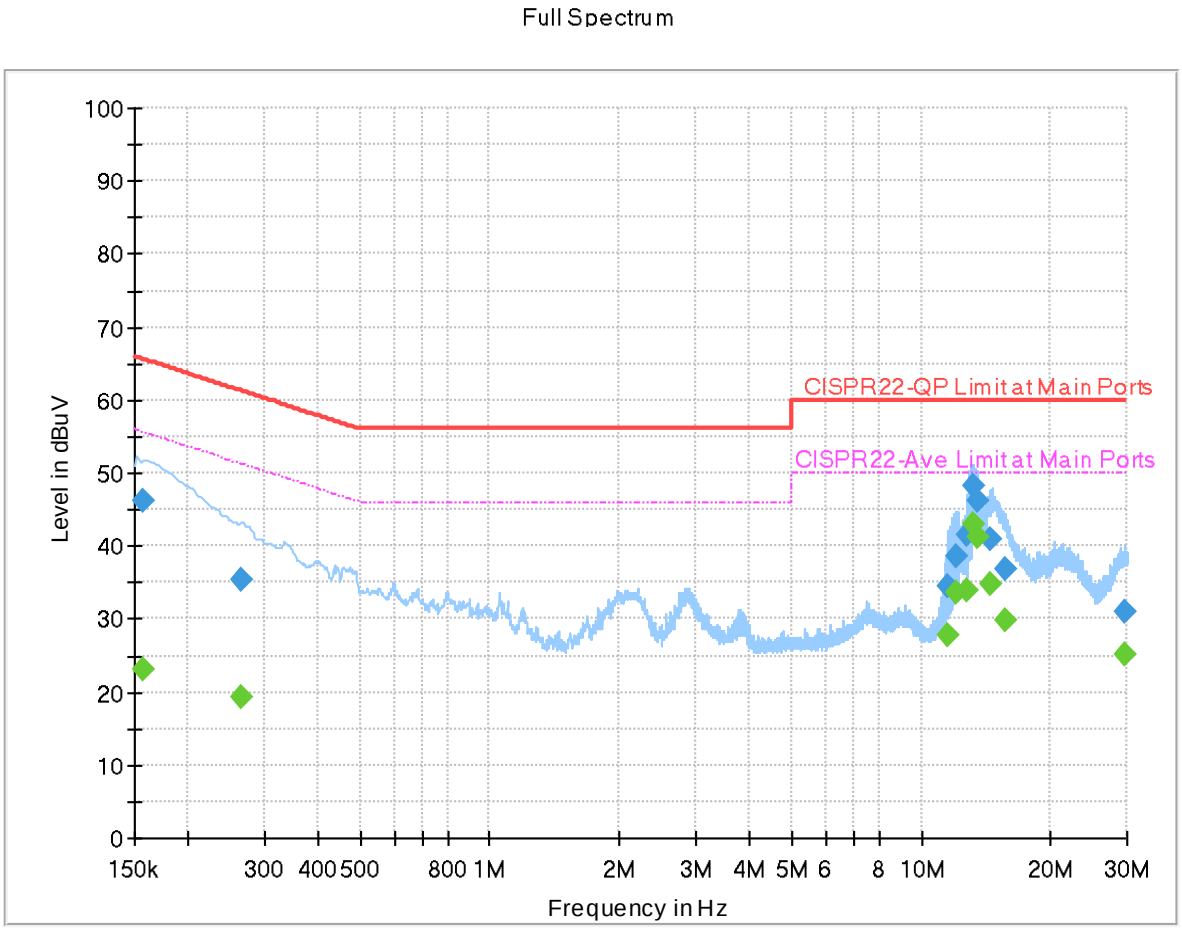
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.156750	---	22.86	55.63	32.77	L1	OFF	19.9
0.156750	45.74	---	65.63	19.89	L1	OFF	19.9
0.280770	---	15.55	50.79	35.24	L1	OFF	19.9
0.280770	34.26	---	60.79	26.53	L1	OFF	19.9
0.462840	---	19.18	46.64	27.46	L1	OFF	19.9
0.462840	27.05	---	56.64	29.59	L1	OFF	19.9
2.835150	---	21.54	46.00	24.46	L1	OFF	20.0
2.835150	26.52	---	56.00	29.48	L1	OFF	20.0
11.564070	---	32.34	50.00	17.66	L1	OFF	20.1
11.564070	37.63	---	60.00	22.37	L1	OFF	20.1
11.936670	---	32.07	50.00	17.93	L1	OFF	20.1
11.936670	38.96	---	60.00	21.04	L1	OFF	20.1
12.659730	---	34.51	50.00	15.49	L1	OFF	20.1
12.659730	39.76	---	60.00	20.24	L1	OFF	20.1
13.059870	---	41.41	50.00	8.59	L1	OFF	20.1
13.059870	47.53	---	60.00	12.47	L1	OFF	20.1
13.558920	---	41.46	50.00	8.54	L1	OFF	20.1
13.558920	46.47	---	60.00	13.53	L1	OFF	20.1
14.155440	---	34.12	50.00	15.88	L1	OFF	20.1

14.155440	**40.20**	**---**	**60.00**	**19.80**	**L1**	**OFF**	**20.1**
14.550000	**---**	**35.43**	**50.00**	**14.57**	**L1**	**OFF**	**20.1**
14.550000	**41.81**	**---**	**60.00**	**18.19**	**L1**	**OFF**	**20.1**
15.148500	**---**	**32.88**	**50.00**	**17.12**	**L1**	**OFF**	**20.1**
15.148500	**39.68**	**---**	**60.00**	**20.32**	**L1**	**OFF**	**20.1**

EUT Information

Report NO :	450112
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Neutral



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.156750	---	23.01	55.63	32.62	N	OFF	19.9
0.156750	46.26	---	65.63	19.37	N	OFF	19.9
0.264750	---	19.36	51.28	31.92	N	OFF	19.9
0.264750	35.40	---	61.28	25.88	N	OFF	19.9
11.571000	---	27.77	50.00	22.23	N	OFF	20.1
11.571000	34.50	---	60.00	25.50	N	OFF	20.1
12.032610	---	33.48	50.00	16.52	N	OFF	20.1
12.032610	38.62	---	60.00	21.38	N	OFF	20.1
12.766830	---	33.82	50.00	16.18	N	OFF	20.1
12.766830	41.44	---	60.00	18.56	N	OFF	20.1
13.152570	---	42.98	50.00	7.02	N	OFF	20.1
13.152570	48.27	---	60.00	11.73	N	OFF	20.1
13.561710	---	41.23	50.00	8.77	N	OFF	20.1
13.561710	46.12	---	60.00	13.88	N	OFF	20.1
14.550000	---	34.93	50.00	15.07	N	OFF	20.1
14.550000	41.02	---	60.00	18.98	N	OFF	20.1
15.744750	---	29.80	50.00	20.20	N	OFF	20.2
15.744750	36.90	---	60.00	23.10	N	OFF	20.2
29.617350	---	25.04	50.00	24.96	N	OFF	20.2

29.617350	**30.97**	**---**	**60.00**	**29.03**	**N**	**OFF**	**20.2**

Appendix C. Radiated Spurious Emission

Test Engineer :	Ken Kuo, BANK Lin, Fred Tseng, and Karl Hou	Temperature :	20.8~24.8°C
		Relative Humidity :	52.4~63.8%

2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT Ant	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BT CH00 2402MHz		2376.885	45.66	-28.34	74	42.51	27	8.5	32.35	100	51	P	H
		2376.885	20.87	-33.13	54	-	-	-	-	-	-	A	H
	*	2402	103.59	-	-	100.41	27	8.54	32.36	100	51	P	H
	*	2402	78.8	-	-	-	-	-	-	-	-	A	H
													H
		2374.995	43.81	-30.19	74	40.66	27	8.49	32.34	278	360	P	V
		2374.995	19.02	-34.98	54	-	-	-	-	-	-	A	V
	*	2402	98.13	-	-	94.95	27	8.54	32.36	278	360	P	V
	*	2402	73.34	-	-	-	-	-	-	-	-	A	V
													V
BT CH 39 2441MHz		2375.66	45.66	-28.34	74	42.52	27	8.49	32.35	103	50	P	H
		2375.66	20.87	-33.13	54	-	-	-	-	-	-	A	H
	*	2441	104.27	-	-	101.23	26.81	8.61	32.38	103	50	P	H
	*	2441	79.48	-	-	-	-	-	-	-	-	A	H
		2498.04	41.08	-32.92	74	37.8	26.98	8.72	32.42	103	50	P	H
		2498.04	16.29	-37.71	54	-	-	-	-	-	-	A	H
		2375.1	42.19	-31.81	74	39.05	27	8.49	32.35	283	360	P	V
		2375.1	17.4	-36.6	54	-	-	-	-	-	-	A	V
	*	2441	99.57	-	-	96.53	26.81	8.61	32.38	283	360	P	V
	*	2441	74.78	-	-	-	-	-	-	-	-	A	V
		2500	41.81	-32.19	74	38.51	27	8.72	32.42	283	360	P	V
		2500	17.02	-36.98	54	-	-	-	-	-	-	A	V

BT Ant 1	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)
BT CH 78 2480MHz	*	2480	102.8	-	-	99.63	26.9	8.68	32.41	100	47	P	H
	*	2480	78.01	-	-	-	-	-	-	-	-	A	H
		2483.68	46.69	-27.31	74	43.51	26.9	8.69	32.41	100	47	P	H
		2483.68	21.9	-32.1	54	-	-	-	-	-	-	A	H
													H
													H
	*	2480	99.71	-	-	96.54	26.9	8.68	32.41	255	0	P	V
	*	2480	74.92	-	-	-	-	-	-	-	-	A	V
		2483.64	43.53	-30.47	74	40.35	26.9	8.69	32.41	255	0	P	V
		2483.64	18.74	-35.26	54	-	-	-	-	-	-	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

BT (Harmonic @ 3m)

BT Ant 1	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)
BT CH 00 2402MHz		1264	57.71	-16.29	74	59.02	24.3	6.18	31.79	100	51	P	H
		1264	32.92	-21.08	54	-	-	-	-	-	-	A	H
		1410	51.74	-22.26	74	52.26	24.8	6.49	31.81	100	51	P	H
		1410	26.95	-27.05	54	-	-	-	-	-	-	A	H
		4804	43.81	-30.19	74	31.96	32.32	13.03	33.5	-	-	P	H
		4804	19.02	-34.98	54	-	-	-	-	-	-	A	H
													H
													H
													H
													H
													H
													H
		1040	46.34	-27.66	74	49.09	23.4	5.6	31.75	278	360	P	V
		1040	21.55	-32.45	54	-	-	-	-	-	-	A	V
		1262	51.73	-22.27	74	53.05	24.3	6.17	31.79	278	360	P	V
		1262	26.94	-27.06	54	-	-	-	-	-	-	A	V
		4804	43.69	-30.31	74	31.84	32.32	13.03	33.5	-	-	P	V
		4804	18.9	-35.1	54	-	-	-	-	-	-	A	V
													V
													V
													V
													V
													V
													V

BT Ant 1	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)
		1262	54.43	-19.57	74	55.75	24.3	6.17	31.79	103	50	P	H
		1262	29.64	-24.36	54	-	-	-	-	-	-	A	H
		1410	51.65	-22.35	74	52.17	24.8	6.49	31.81	103	50	P	H
		1410	26.86	-27.14	54	-	-	-	-	-	-	A	H
		4882	45.29	-28.71	74	33.15	32.56	13.07	33.49	-	-	P	H
		4882	20.5	-33.5	54	-	-	-	-	-	-	A	H
		7323	50.28	-23.72	74	32.61	37.5	16.02	35.85	-	-	P	H
		7323	25.49	-28.51	54	-	-	-	-	-	-	A	H
													H
													H
													H
													H
BT CH 39 2441MHz		1262	50.98	-23.02	74	52.3	24.3	6.17	31.79	283	360	P	V
		1262	26.19	-27.81	54	-	-	-	-	-	-	A	V
		1410	47.83	-26.17	74	48.35	24.8	6.49	31.81	283	360	P	V
		1410	23.04	-30.96	54	-	-	-	-	-	-	A	V
		4882	44.97	-29.03	74	32.83	32.56	13.07	33.49	-	-	P	V
		4882	20.18	-33.82	54	-	-	-	-	-	-	A	V
		7323	50.12	-23.88	74	32.45	37.5	16.02	35.85	-	-	P	V
		7323	25.33	-28.67	54	-	-	-	-	-	-	A	V
													V
													V
													V
													V

BT Ant 1	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)
BT CH 78 2480MHz		1262	56.08	-17.92	74	57.4	24.3	6.17	31.79	100	47	P	H
		1262	31.29	-22.71	54	-	-	-	-	-	-	A	H
		1412	52.03	-21.97	74	52.54	24.8	6.5	31.81	100	47	P	H
		1412	27.24	-26.76	54	-	-	-	-	-	-	A	H
		4960	44.79	-29.21	74	32.45	32.7	13.11	33.47	-	-	P	H
		4960	20	-34	54	-	-	-	-	-	-	A	H
		7440	49.03	-24.97	74	31.49	37.32	16.15	35.93	-	-	P	H
		7440	24.24	-29.76	54	-	-	-	-	-	-	A	H
													H
													H
													H
													H
		1114	46.39	-27.61	74	48.37	23.98	5.8	31.76	255	0	P	V
		1114	21.6	21.6	-	-	-	-	-	-	-		V
		1262	49.78	-24.22	74	51.1	24.3	6.17	31.79	255	0	P	V
		1262	24.99	24.99	-	-	-	-	-	-	-		V
		4960	44.23	-29.77	74	31.89	32.7	13.11	33.47	-	-	P	V
		4960	19.44	19.44	-	-	-	-	-	-	-		V
		7440	49.16	-24.84	74	31.62	37.32	16.15	35.93	-	-	P	V
		7440	24.37	24.37									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 above 18GHz

2.4GHz BT (SHF)

BT	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz BT SHF		23831	37.99	-36.01	74	40.08	38.7	19.18	59.97	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		20310	39.79	-34.21	74	48.12	37.84	16.82	62.99	-	-	P	V
													V
													V
													V
													V
													V
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													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 with sufficient margin against limit line or noise floor only.

Emission below 1GHz

2.4GHz BT (LF)

BT	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz BT LF		45.12	26.98	-13.02	40	41.3	17.25	1.15	32.72	-	-	P	H
		149.88	31.18	-12.32	43.5	44.68	17.03	2.18	32.71	-	-	P	H
		224.94	38.73	-7.27	46	53.18	15.58	2.64	32.67	-	-	P	H
		440.7	37.38	-8.62	46	43.6	22.77	3.75	32.74	-	-	P	H
		675.2	39.88	-6.12	46	41.68	26.39	4.61	32.8	-	-	P	H
		881.7	36.95	-9.05	46	34.58	29.1	5.25	31.98	-	-	P	H
													H
													H
													H
													H
													H
													H
		45.39	33.92	-6.08	40	48.36	17.12	1.16	32.72	-	-	P	V
		146.91	34.37	-9.13	43.5	47.67	17.25	2.16	32.71	-	-	P	V
		224.94	39.32	-6.68	46	53.77	15.58	2.64	32.67	-	-	P	V
		440.7	42.16	-3.84	46	48.38	22.77	3.75	32.74	100	171	Q	V
		675.2	39.57	-6.43	46	41.37	26.39	4.61	32.8	-	-	P	V
		882.4	38.2	-7.8	46	35.83	29.08	5.26	31.97	-	-	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.

2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BT CH00 2402MHz		2376.885	46.63	-27.37	74	43.48	27	8.5	32.35	357	32	P	H
		2376.885	21.84	-32.16	54	-	-	-	-	-	-	A	H
	*	2402	102.04	-	-	98.86	27	8.54	32.36	357	32	P	H
	*	2402	77.25	-	-	-	-	-	-	-	-	A	H
													H
													H
		2375.835	46.61	-27.39	74	43.46	27	8.5	32.35	232	0	P	V
		2375.835	21.82	-32.18	54	-	-	-	-	-	-	A	V
	*	2402	102.17	-	-	98.99	27	8.54	32.36	232	0	P	V
	*	2402	77.38	-	-	-	-	-	-	-	-	A	V
													V
													V
BT CH 39 2441MHz		2375.24	45.88	-28.12	74	42.74	27	8.49	32.35	389	60	P	H
		2375.24	21.09	-32.91	54	-	-	-	-	-	-	A	H
	*	2441	101.35	-	-	98.31	26.81	8.61	32.38	389	60	P	H
	*	2441	76.56	-	-	-	-	-	-	-	-	A	H
		2486.14	40.64	-33.36	74	37.45	26.9	8.7	32.41	389	60	P	H
		2486.14	15.85	-38.15	54	-	-	-	-	-	-	A	H
		2375.38	50.06	-23.94	74	46.92	27	8.49	32.35	135	4	P	V
		2375.38	25.27	-28.73	54	-	-	-	-	-	-	A	V
	*	2441	102.95	-	-	99.91	26.81	8.61	32.38	135	4	P	V
	*	2441	78.16	-	-	-	-	-	-	-	-	A	V
		2486.7	40.68	-33.32	74	37.49	26.9	8.7	32.41	135	4	P	V
		2486.7	15.89	-38.11	54	-	-	-	-	-	-	A	V

BT Ant 2	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)
BT CH 78 2480MHz	*	2480	101.72	-	-	98.55	26.9	8.68	32.41	369	59	P	H
	*	2480	76.93	-	-	-	-	-	-	-	-	A	H
		2483.56	47	-27	74	43.82	26.9	8.69	32.41	369	59	P	H
		2483.56	22.21	-31.79	54	-	-	-	-	-	-	A	H
													H
													H
	*	2480	100.04	-	-	96.87	26.9	8.68	32.41	218	0	P	V
	*	2480	75.25	-	-	-	-	-	-	-	-	A	V
		2483.6	42.26	-31.74	74	39.08	26.9	8.69	32.41	218	0	P	V
		2483.6	17.47	-36.53	54	-	-	-	-	-	-	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

BT (Harmonic @ 3m)

BT Ant 2	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)
BT CH 00 2402MHz		1262	55.15	-18.85	74	56.47	24.3	6.17	31.79	357	32	P	H
		1262	30.36	-23.64	54	-	-	-	-	-	-	A	H
		1338	49.61	-24.39	74	50.65	24.42	6.34	31.8	357	32	P	H
		1338	24.82	-29.18	54	-	-	-	-	-	-	A	H
		4804	43.85	-30.15	74	32	32.32	13.03	33.5	-	-	P	H
		4804	19.06	-34.94	54	-	-	-	-	-	-	A	H
													H
													H
													H
													H
													H
													H
		1144	45.58	-28.42	74	47.26	24.2	5.89	31.77	232	0	P	V
		1144	20.79	-33.21	54	-	-	-	-	-	-	A	V
		1262	42.55	-31.45	74	43.87	24.3	6.17	31.79	232	0	P	V
		1262	17.76	-36.24	54	-	-	-	-	-	-	A	V
		4804	43.57	-30.43	74	31.72	32.32	13.03	33.5	-	-	P	V
		4804	18.78	-35.22	54	-	-	-	-	-	-	A	V
													V
													V
													V
													V
													V
													V

BT Ant 2	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)
		1262	48.94	-25.06	74	50.26	24.3	6.17	31.79	389	60	P	H
		1262	24.15	-29.85	54	-	-	-	-	-	-	A	H
		1336	50.39	-23.61	74	51.42	24.44	6.33	31.8	389	60	P	H
		1336	25.6	-28.4	54	-	-	-	-	-	-	A	H
		4882	45.11	-28.89	74	32.97	32.56	13.07	33.49	-	-	P	H
		4882	20.32	-33.68	54	-	-	-	-	-	-	A	H
		7323	49.31	-24.69	74	31.64	37.5	16.02	35.85	-	-	P	H
		7323	24.52	-29.48	54	-	-	-	-	-	-	A	H
													H
													H
													H
BT CH 39 2441MHz													H
		1262	56.91	-17.09	74	58.23	24.3	6.17	31.79	135	4	P	V
		1262	32.12	-21.88	54	-	-	-	-	-	-	A	
		1336	48.44	-25.56	74	49.47	24.44	6.33	31.8	135	4	P	V
		1336	23.65	-30.35	54	-	-	-	-	-	-	A	V
		4882	44.93	-29.07	74	32.79	32.56	13.07	33.49	-	-	P	V
		4882	20.14	-33.86	54	-	-	-	-	-	-	A	V
		7323	50.01	-23.99	74	32.34	37.5	16.02	35.85	-	-	P	V
													V
													V
													V
													V
													V

BT Ant 2	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)
BT CH 78 2480MHz		1262	47.82	-26.18	74	49.14	24.3	6.17	31.79	369	59	P	H
		1262	23.03	-30.97	54	-	-	-	-	-	-	A	H
		1410	49.83	-24.17	74	50.35	24.8	6.49	31.81	369	59	P	H
		1410	25.04	-28.96	54	-	-	-	-	-	-	A	H
		4960	45.06	-28.94	74	32.72	32.7	13.11	33.47	-	-	P	H
		4960	20.27	-33.73	54	-	-	-	-	-	-	A	H
		7440	49.46	-24.54	74	31.92	37.32	16.15	35.93	-	-	P	H
		7440	24.67	-29.33	54	-	-	-	-	-	-	A	H
													H
													H
													H
													H
		1336	48.03	-25.97	74	49.06	24.44	6.33	31.8	218	0	P	V
		1336	23.24	23.24	-	-	-	-	-	-	-		V
		2154	50.47	-23.53	74	48.2	26.4	8.08	32.21	218	0	P	V
		2154	25.68	25.68	-	-	-	-	-	-	-		V
		4960	45.44	-28.56	74	33.1	32.7	13.11	33.47	-	-	P	V
		4960	20.65	20.65	-	-	-	-	-	-	-		V
		7440	49.32	-24.68	74	31.78	37.32	16.15	35.93	-	-	P	V
		7440	24.53	24.53									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 above 18GHz

2.4GHz BT (SHF)

BT	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz BT SHF		24818	38.1	-35.9	74	38.9	39.37	19.69	59.86	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		24615	38.38	-35.62	74	39.68	39.37	19.6	60.27	-	-	P	V
													V
													V
													V
													V
													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 with sufficient margin against limit line or noise floor only.

Emission below 1GHz

2.4GHz BT (LF)

BT	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz BT LF		45.12	26.98	-13.02	40	41.3	17.25	1.15	32.72	-	-	P	H
		149.88	31.18	-12.32	43.5	44.68	17.03	2.18	32.71	-	-	P	H
		224.94	38.73	-7.27	46	53.18	15.58	2.64	32.67	-	-	P	H
		440.7	37.38	-8.62	46	43.6	22.77	3.75	32.74	-	-	P	H
		675.2	39.88	-6.12	46	41.68	26.39	4.61	32.8	-	-	P	H
		881.7	36.95	-9.05	46	34.58	29.1	5.25	31.98	-	-	P	H
													H
													H
													H
													H
													H
													H
		45.39	33.92	-6.08	40	48.36	17.12	1.16	32.72	-	-	P	V
		146.91	34.37	-9.13	43.5	47.67	17.25	2.16	32.71	-	-	P	V
		224.94	39.32	-6.68	46	53.77	15.58	2.64	32.67	-	-	P	V
		440.7	42.16	-3.84	46	48.38	22.77	3.75	32.74	100	171	Q	V
		675.2	39.57	-6.43	46	41.37	26.39	4.61	32.8	-	-	P	V
		882.4	38.2	-7.8	46	35.83	29.08	5.26	31.97	-	-	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:

BT	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BT CH 00 2402MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	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)

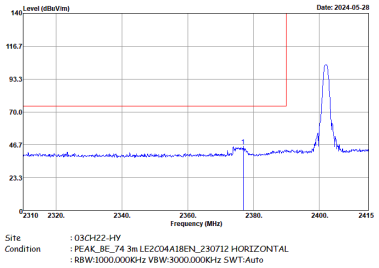
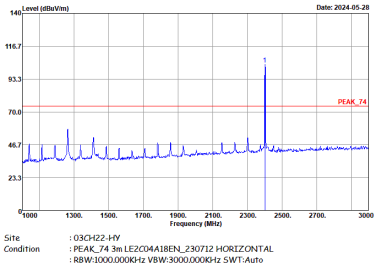
Peak measured complies with the limit line, so test result is “PASS”.

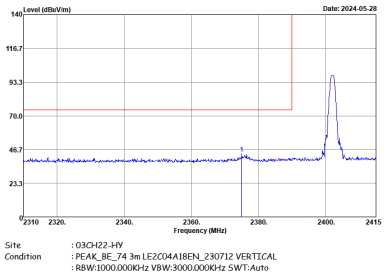
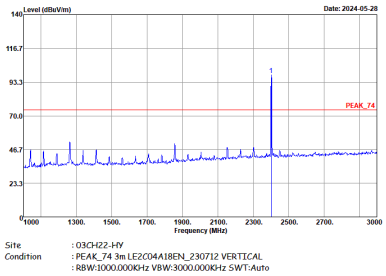
Appendix D. Radiated Spurious Emission Plots

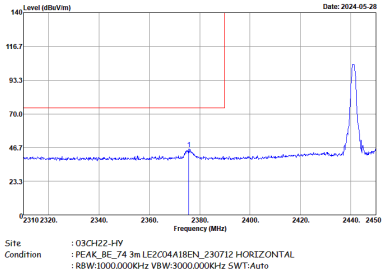
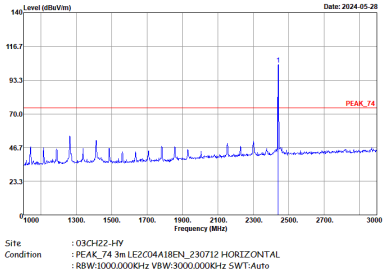
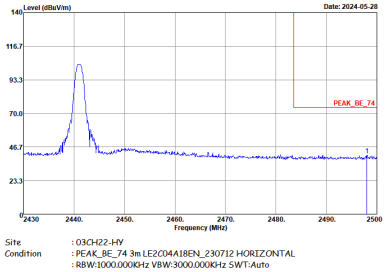
Test Engineer :	Ken Kuo, BANK Lin, Fred Tseng, and Karl Hou	**Temperature :**	20.8~24.8°C
		Relative Humidity :	52.4~63.8%

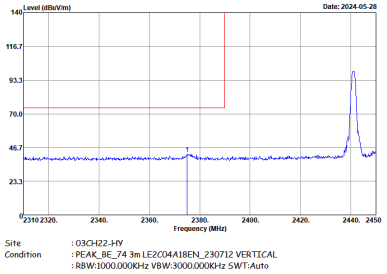
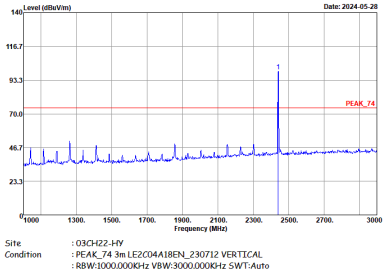
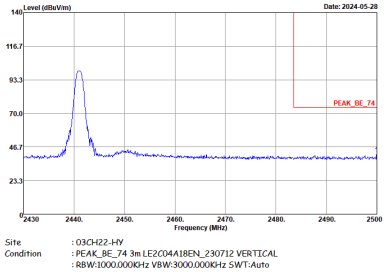
2.4GHz 2400~2483.5MHz

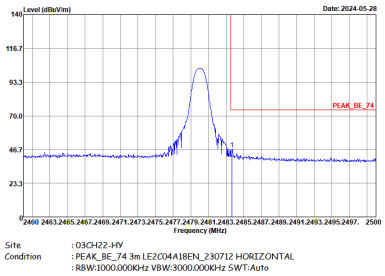
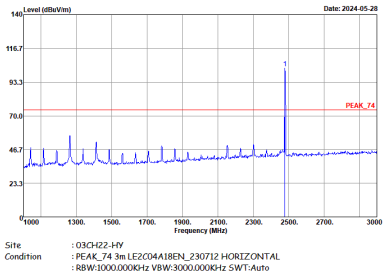
BT (Band Edge @ 3m)

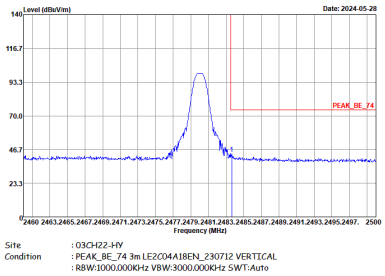
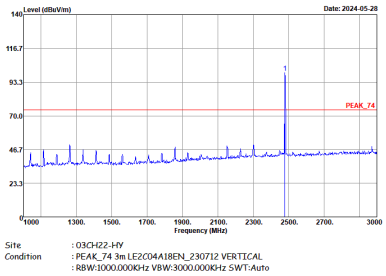
BT	**2.4GHz 2400~2483.5MHz Band Edge @ 3m**	
ANT	**BT CH00 2402MHz**	
1	**Horizontal**	**Fundamental**
Peak		

BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
1	Vertical	Fundamental
Peak		

BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
1	Horizontal	Fundamental
Peak		
Peak		Left blank

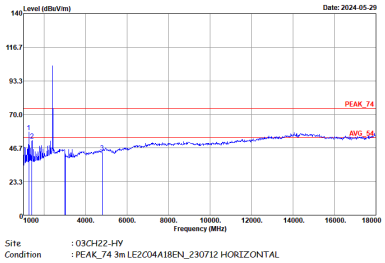
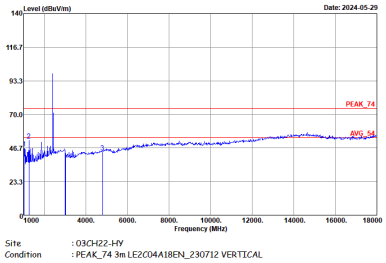
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
1	Vertical	Fundamental
Peak		
Peak		Left blank

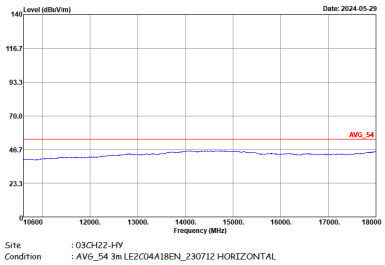
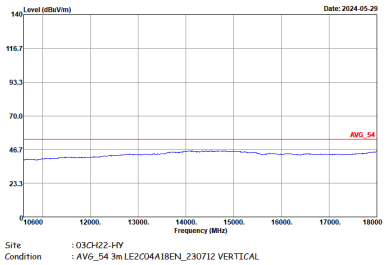
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
1	Horizontal	Fundamental
Peak		

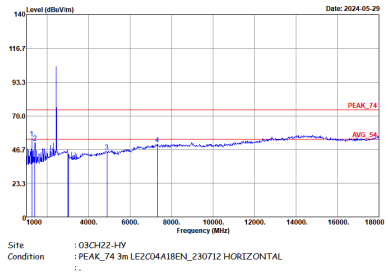
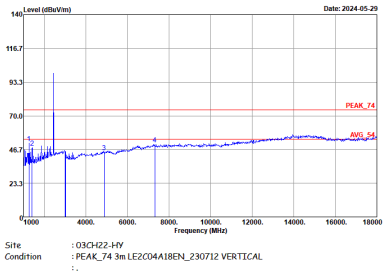
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
1	Vertical	Fundamental
Peak		

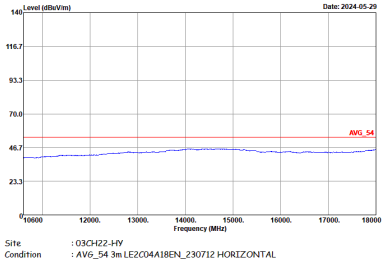
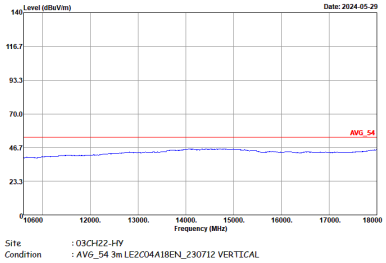
2.4GHz 2400~2483.5MHz

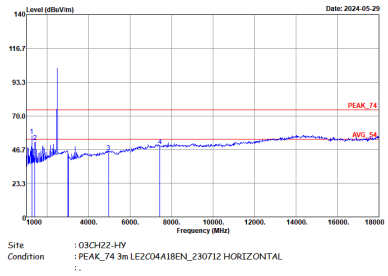
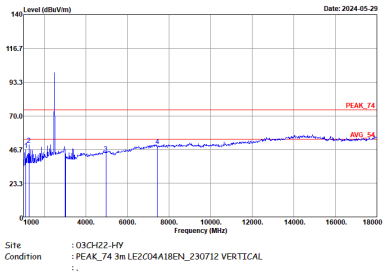
BT (Harmonic @ 3m)

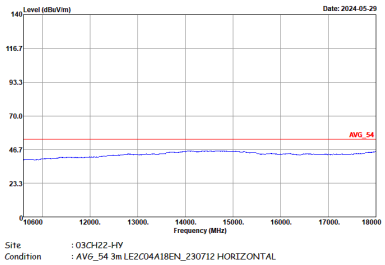
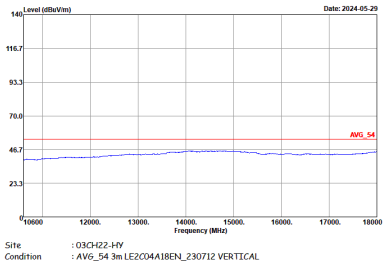
BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH00 2402MHz	
1	Horizontal	Vertical
Peak Avg.		

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH00 2402MHz	
1	Horizontal	Vertical
10.6G ~18G Avg.		

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH39 2441MHz	
1	Horizontal	Vertical
Peak Avg.		

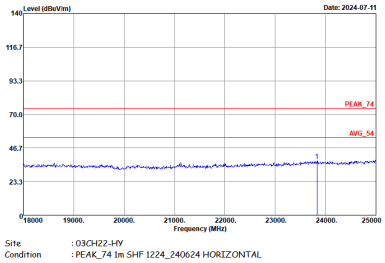
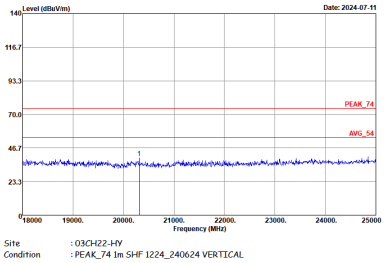
BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH39 2441MHz	
1	Horizontal	Vertical
10.6G ~18G Avg.		

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH78 2480MHz	
1	Horizontal	Vertical
Peak Avg.		

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH78 2480MHz	
1	Horizontal	Vertical
10.6G ~18G Avg		

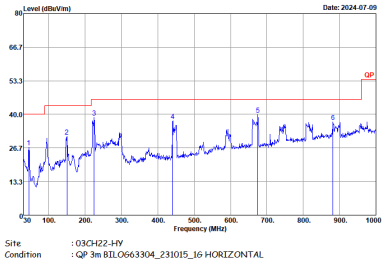
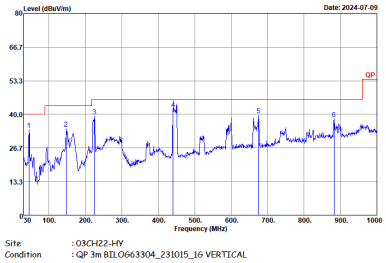
Emission above 18GHz

2.4GHz BT (SHF @ 1m)

BT	2.4GHz 2400~2483.5MHz	
ANT	BT SHF	
1	Horizontal	Vertical
Peak Avg.		

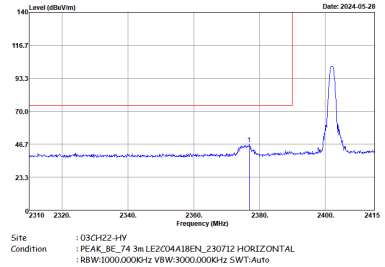
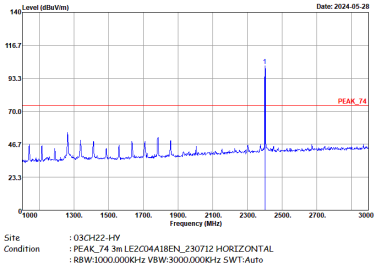
Emission below 1GHz

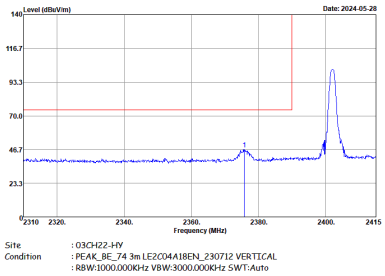
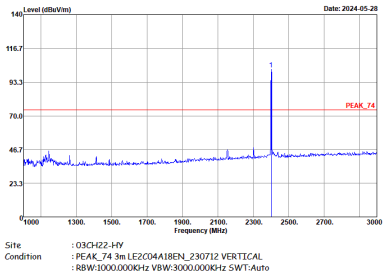
2.4GHz BT (LF)

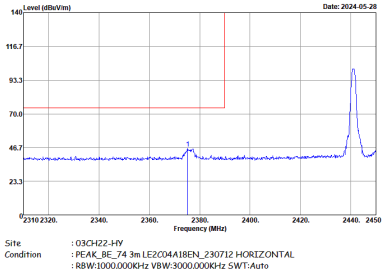
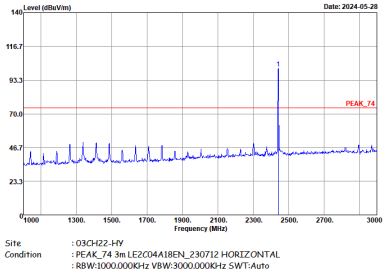
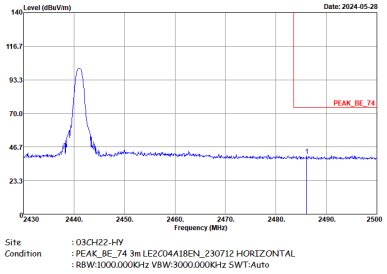
BT	2.4GHz 2400~2483.5MHz	
ANT	BT LF	
1	Horizontal	Vertical
QP / Peak		

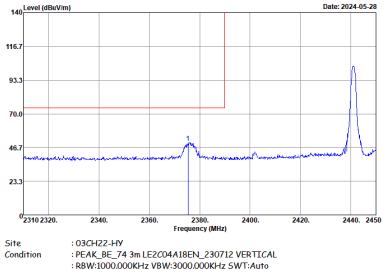
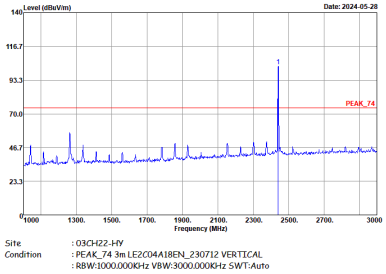
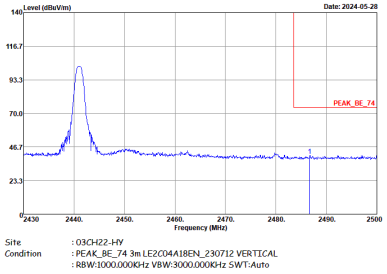
2.4GHz 2400~2483.5MHz

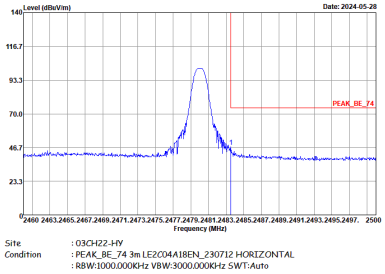
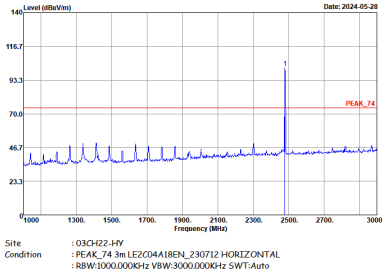
BT (Band Edge @ 3m)

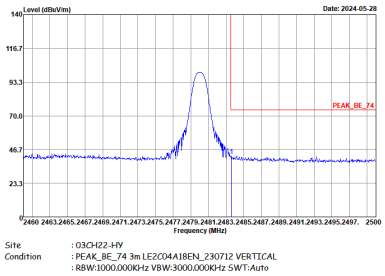
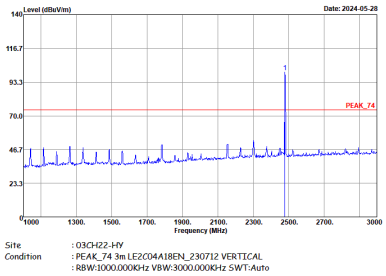
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
2	Horizontal	Fundamental
Peak		

BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
2	Vertical	Fundamental
Peak		

BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
2	Horizontal	Fundamental
Peak		
Peak		Left blank

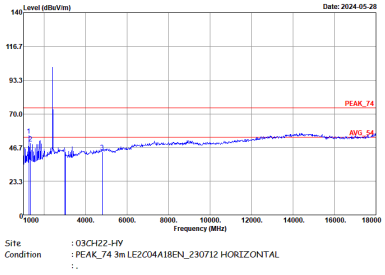
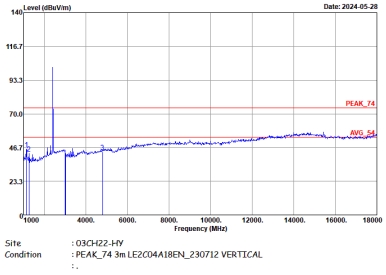
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
2	Vertical	Fundamental
Peak		
Peak		Left blank

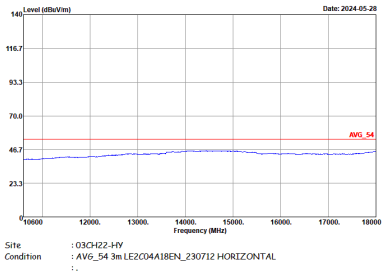
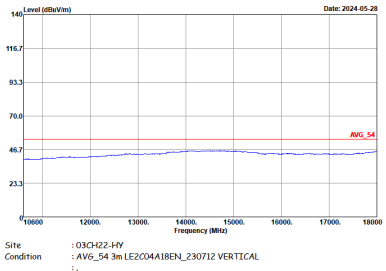
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
2	Horizontal	Fundamental
Peak		

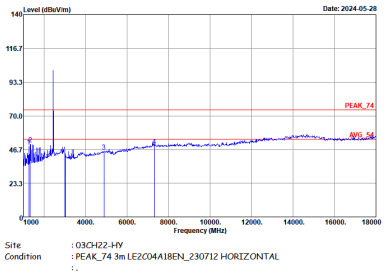
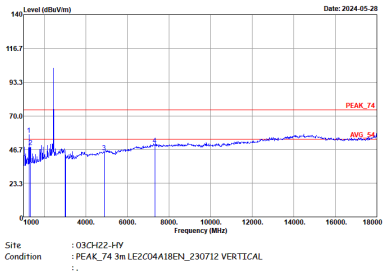
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
2	Vertical	Fundamental
Peak		

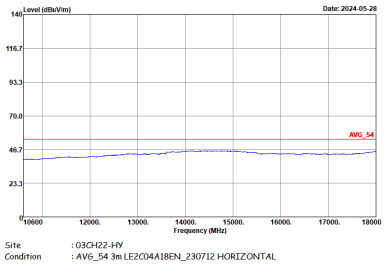
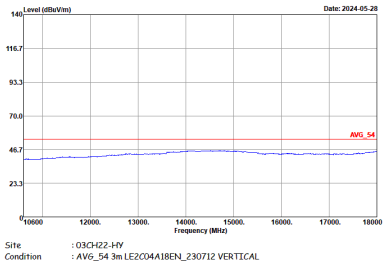
2.4GHz 2400~2483.5MHz

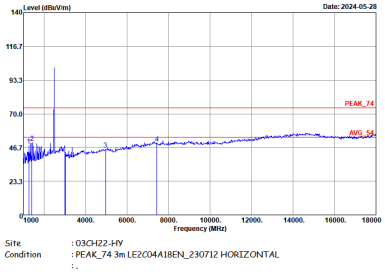
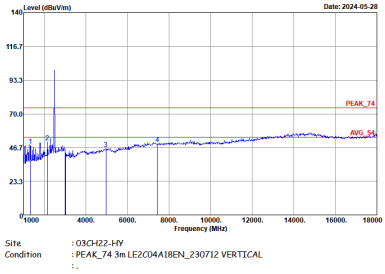
BT (Harmonic @ 3m)

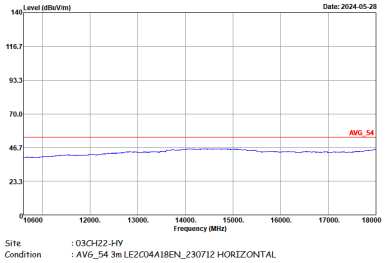
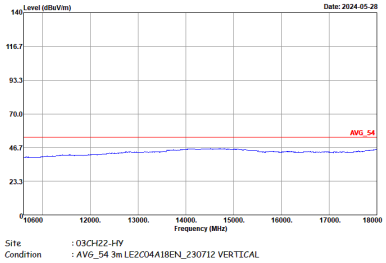
BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH00 2402MHz	
2	Horizontal	Vertical
Peak Avg.		

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH00 2402MHz	
2	Horizontal	Vertical
10.6G ~18G Avg.		

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH39 2441MHz	
2	Horizontal	Vertical
Peak Avg.		

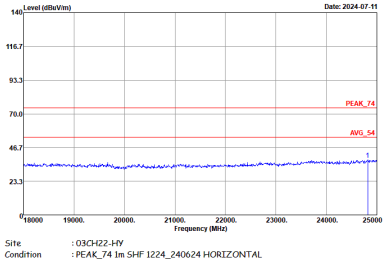
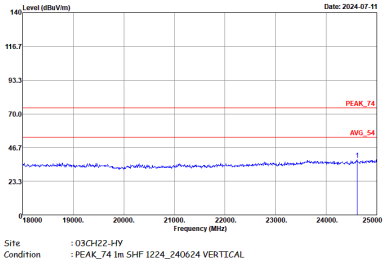
BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH39 2441MHz	
2	Horizontal	Vertical
10.6G ~18G Avg.		

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH78 2480MHz	
2	Horizontal	Vertical
Peak Avg.		

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH78 2480MHz	
2	Horizontal	Vertical
10.6G ~18G Avg.		

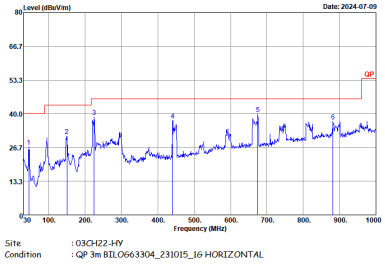
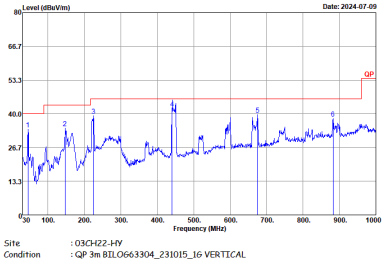
Emission above 18GHz

2.4GHz BT (SHF @ 1m)

BT	2.4GHz 2400~2483.5MHz	
ANT	BT SHF	
2	Horizontal	Vertical
Peak Avg.		

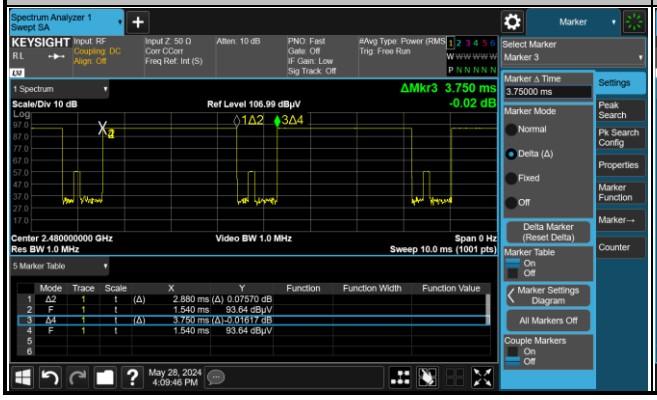
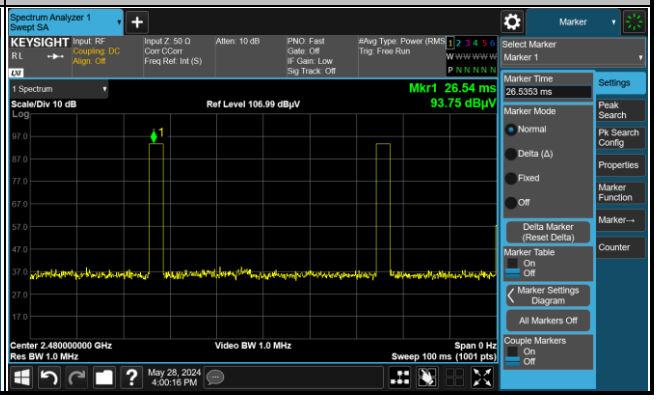
Emission below 1GHz

2.4GHz BT (LF)

BT	2.4GHz 2400~2483.5MHz	
ANT	BT LF	
2	Horizontal	Vertical
QP / Peak		

Appendix E. Duty Cycle Plots

<Ant. 1>

DH5 on time (One Pulse) Plot on Channel 78	on time (Count Pulses) Plot on Channel 78
	

Note:

1. Worst case Duty cycle = on time/100 milliseconds = 2 * 2.88 / 100 = 5.76 %
2. Worst case Duty cycle correction factor = 20*log(Duty cycle) = -24.79 dB
3. DH5 has the highest duty cycle worst case and is reported.

Duty Cycle Correction Factor Consideration for AFH mode:

Bluetooth normal hopping rate is 1600Hz and reduced to 800Hz in AFH mode; due to the reduced number of hopping frequencies, with the same packet configuration the dwell time in each channel frequency within 100msec period is longer in AFH mode than normal mode.

In AFH mode, the minimum hopping frequencies are 20, to get the longest dwell time DH5 packet is observed; the on time period to have DH5 packet completing one hopping sequence is

2.88 ms x 20 channels = 57.6 ms

There cannot be 2 complete hopping sequences within 100ms period, considering the random hopping behavior, maximum 2 hops can be possibly observed within the period. [100 ms / 57.6 ms] = 2 hops

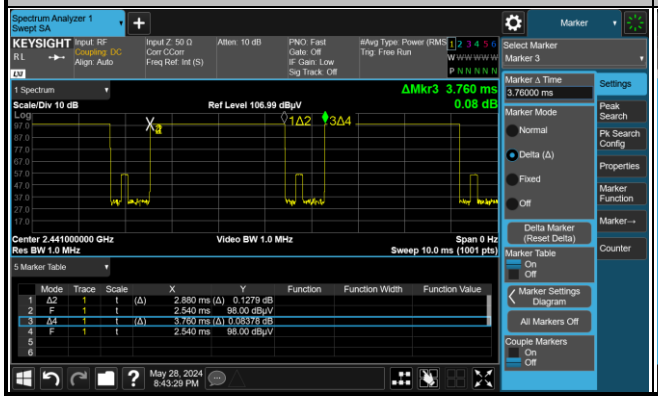
Thus, the maximum possible ON time:

2.88 ms x 2 = 5.76 ms

Worst case Duty Cycle Correction factor, which is derived from the maximum possible ON time,

20 x log(5.76 ms/100 ms) = -24.79 dB

<Ant. 2>

DH5 on time (One Pulse) Plot on Channel 39	on time (Count Pulses) Plot on Channel 39
	

Note:

4. Worst case Duty cycle = on time/100 milliseconds = 2 * 2.88 / 100 = 5.76 %
5. Worst case Duty cycle correction factor = 20*log(Duty cycle) = -24.79 dB
6. DH5 has the highest duty cycle worst case and is reported.

Duty Cycle Correction Factor Consideration for AFH mode:

Bluetooth normal hopping rate is 1600Hz and reduced to 800Hz in AFH mode; due to the reduced number of hopping frequencies, with the same packet configuration the dwell time in each channel frequency within 100msec period is longer in AFH mode than normal mode.

In AFH mode, the minimum hopping frequencies are 20, to get the longest dwell time DH5 packet is observed; the on time period to have DH5 packet completing one hopping sequence is

2.88 ms x 20 channels = 57.6 ms

There cannot be 2 complete hopping sequences within 100ms period, considering the random hopping behavior, maximum 2 hops can be possibly observed within the period. [100 ms / 57.6 ms] = 2 hops

Thus, the maximum possible ON time:

2.88 ms x 2 = 5.76 ms

Worst case Duty Cycle Correction factor, which is derived from the maximum possible ON time,

20 x log(5.76 ms/100 ms) = -24.79 dB