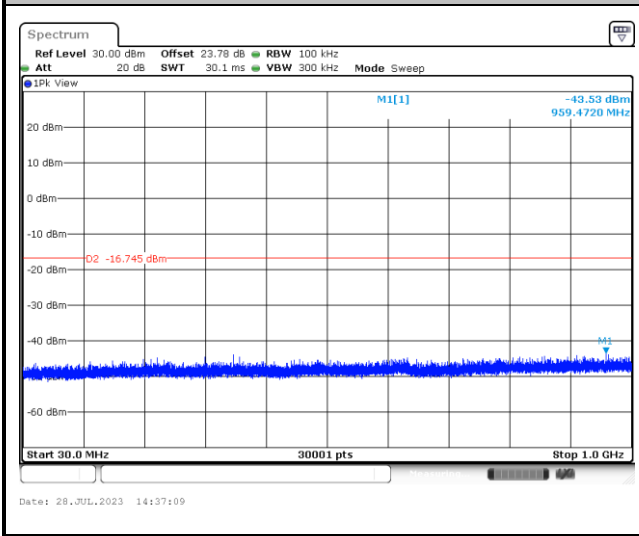
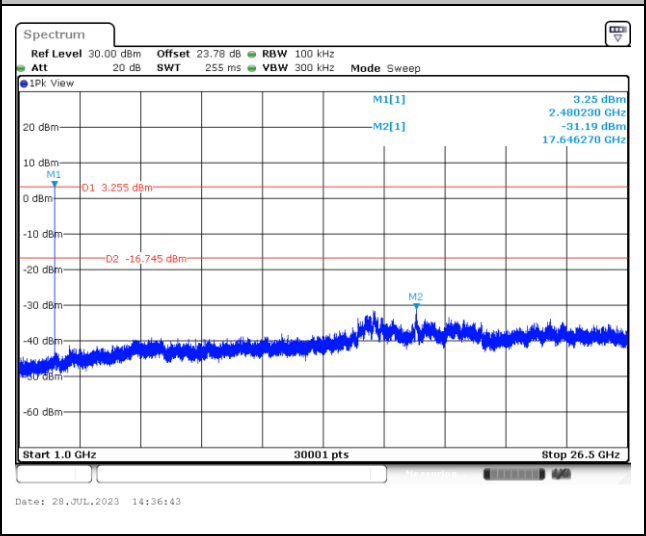




CSE Plot on Ch 78 between 30MHz ~ 1 GHz

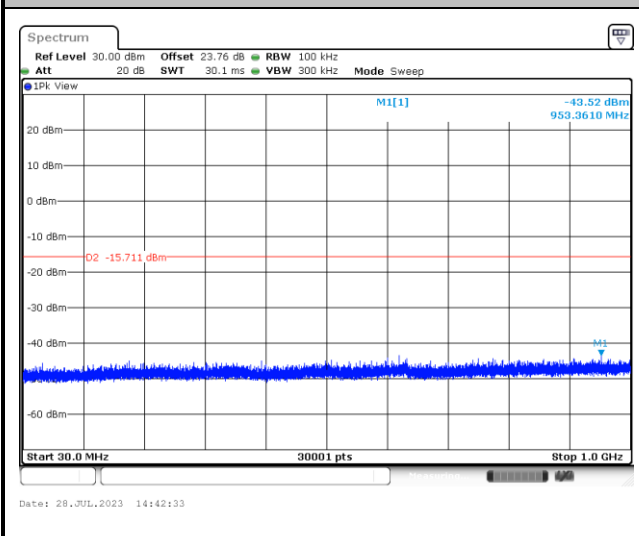


CSE Plot on Ch 78 between 1 GHz ~ 26.5 GHz

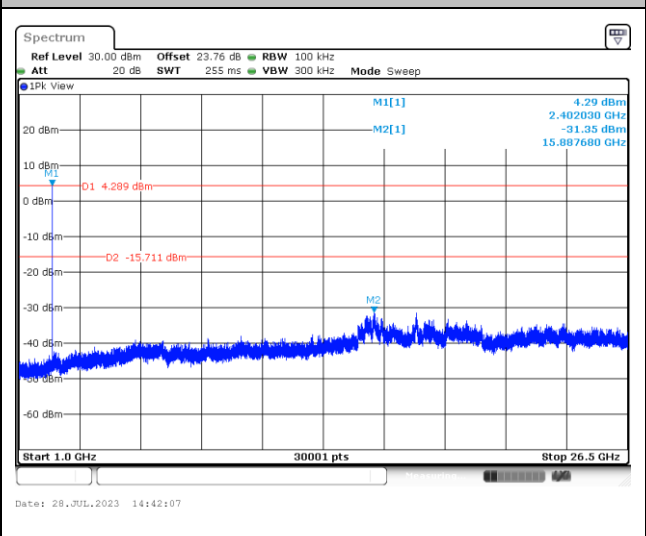


<2Mbps>

CSE Plot on Ch 00 between 30MHz ~ 3 GHz

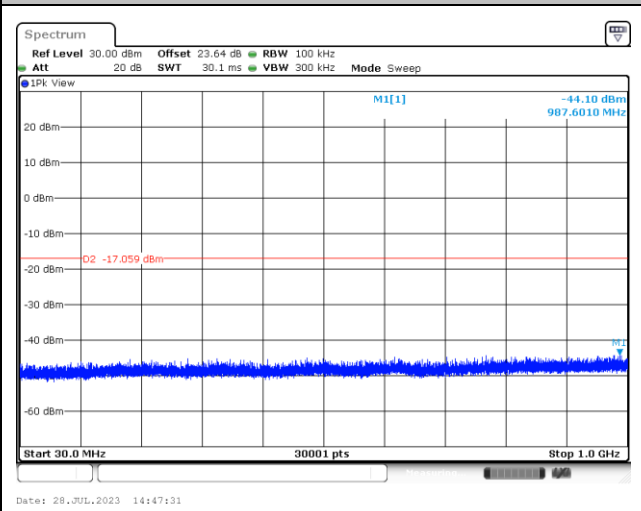


CSE Plot on Ch 00 between 1 GHz ~ 26.5 GHz

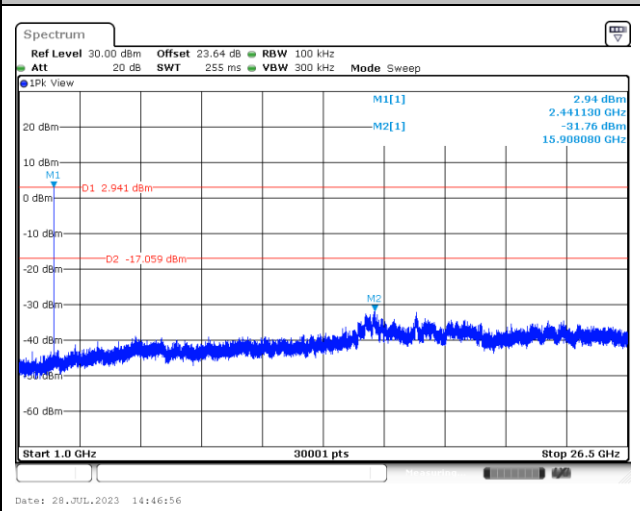




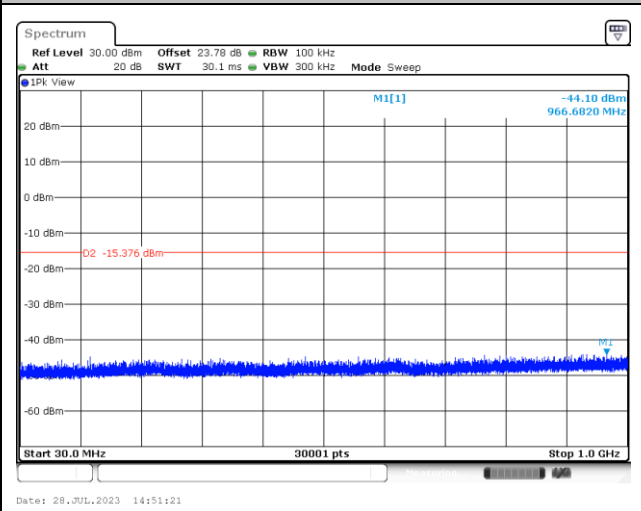
CSE Plot on Ch 39 between 30MHz ~ 1 GHz



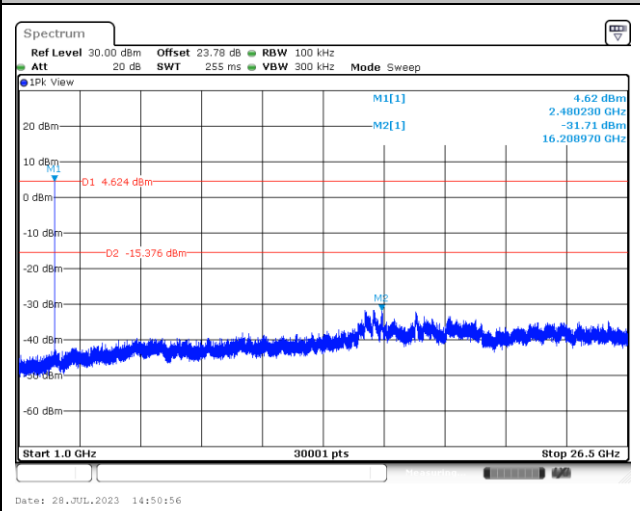
CSE Plot on Ch 39 between 1 GHz ~ 26.5 GHz



CSE Plot on Ch 78 between 30MHz ~ 1 GHz



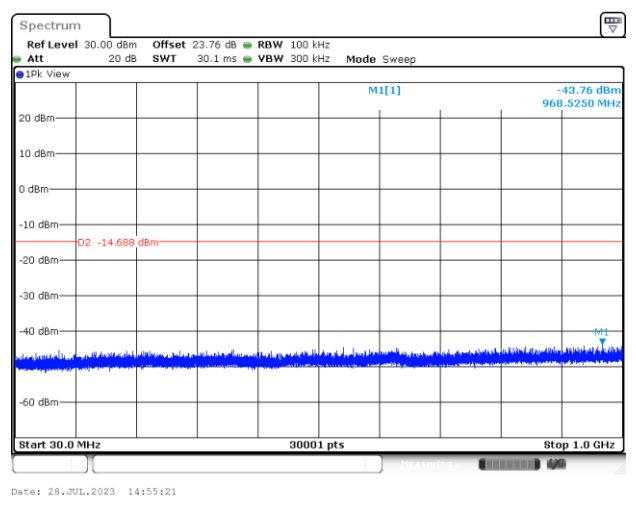
CSE Plot on Ch 78 between 1 GHz ~ 26.5 GHz



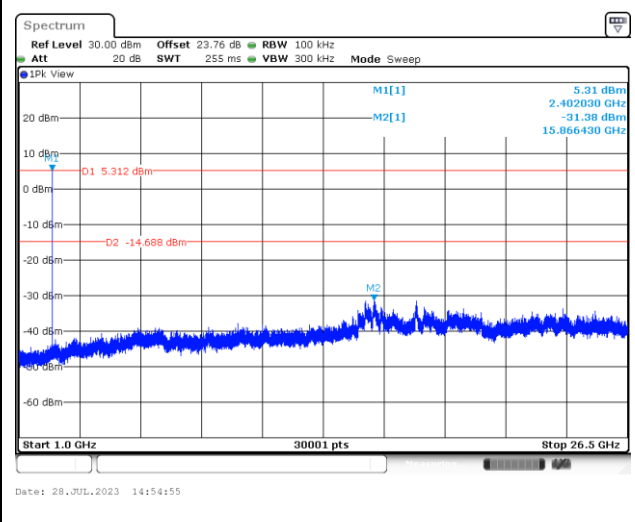


<3Mbps>

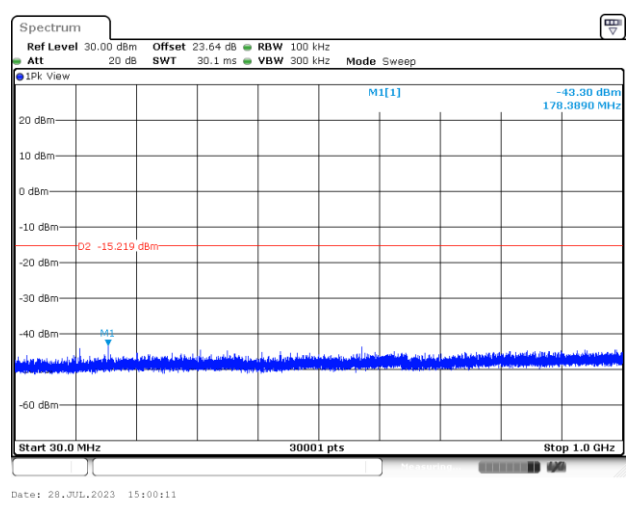
CSE Plot on Ch 00 between 30MHz ~ 1 GHz



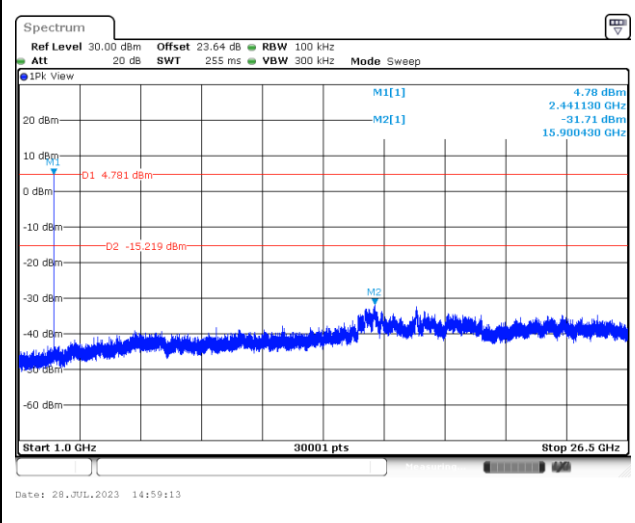
CSE Plot on Ch 00 between 1 GHz ~ 26.5 GHz



CSE Plot on Ch 39 between 30MHz ~ 1 GHz

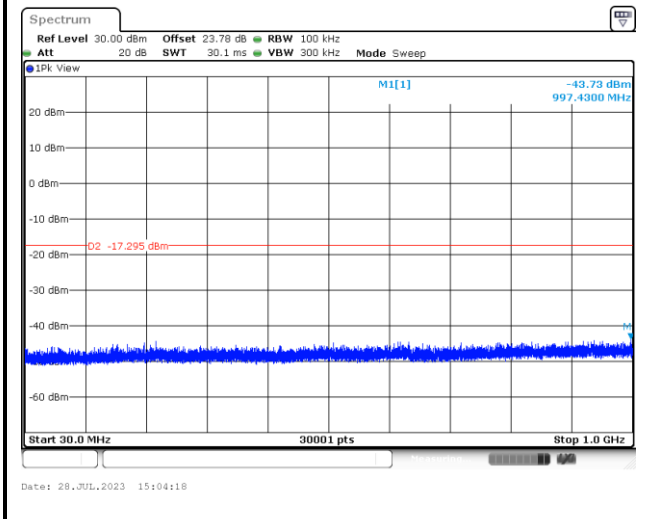


CSE Plot on Ch 39 between 1 GHz ~ 26.5 GHz

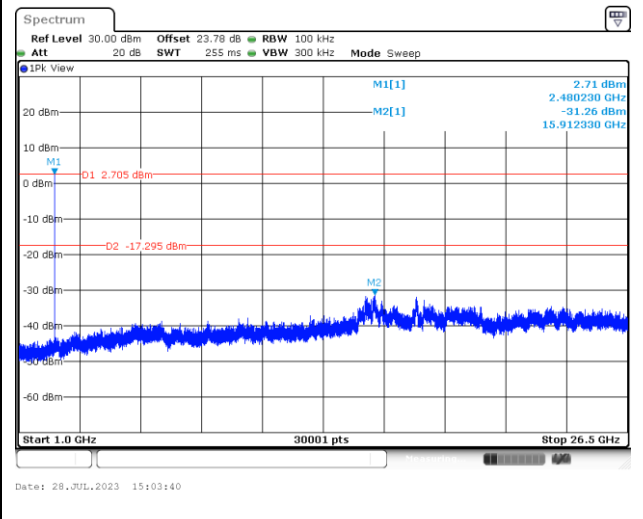




CSE Plot on Ch 78 between 30MHz ~ 1 GHz



CSE Plot on Ch 78 between 1 GHz ~ 26.5 GHz





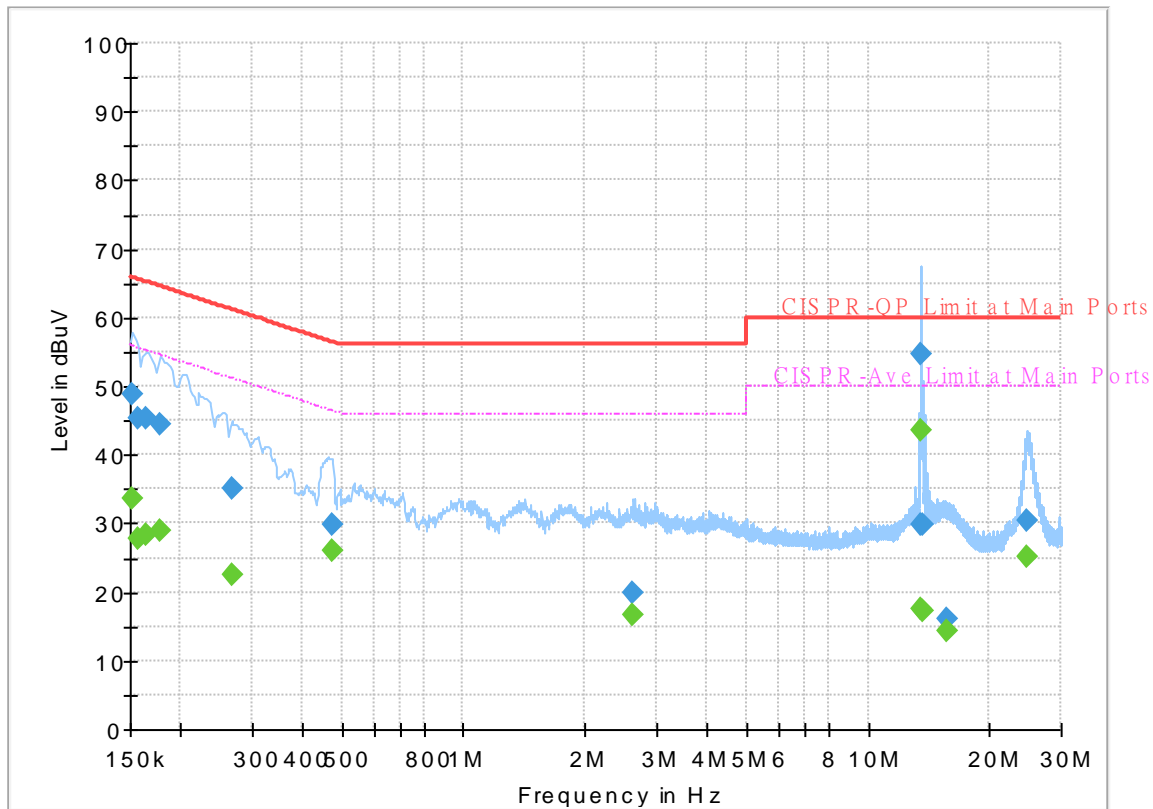
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Yan-Xun, Li	Temperature :	23~26°C
		Relative Humidity :	45~55%

EUT Information

Report NO : 371211
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Line

Full Spectrum



Final_Result

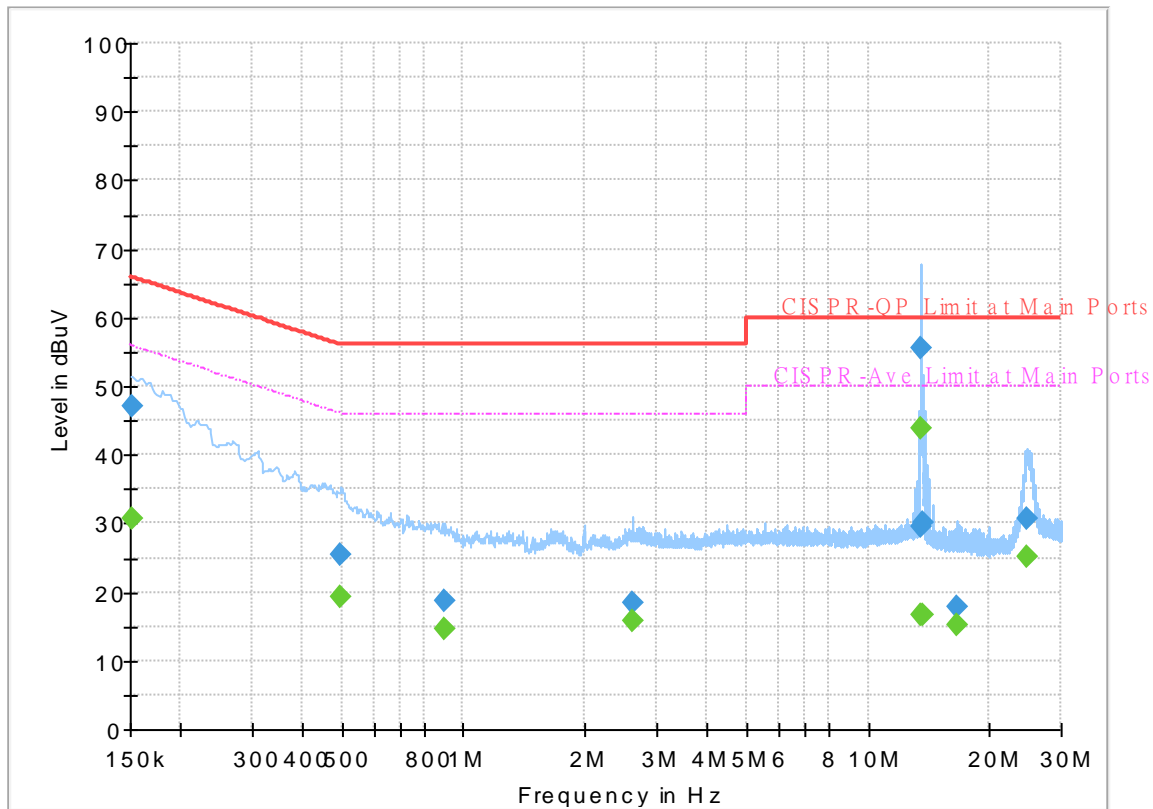
Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	33.60	55.88	22.28	L1	OFF	19.8
0.152250	48.70	---	65.88	17.18	L1	OFF	19.8
0.156750	---	27.84	55.63	27.79	L1	OFF	19.8
0.156750	45.33	---	65.63	20.30	L1	OFF	19.8
0.163500	---	28.31	55.28	26.97	L1	OFF	19.8
0.163500	45.30	---	65.28	19.98	L1	OFF	19.8
0.177000	---	29.01	54.63	25.62	L1	OFF	19.8
0.177000	44.41	---	64.63	20.22	L1	OFF	19.8
0.269250	---	22.57	51.14	28.57	L1	OFF	19.8
0.269250	35.16	---	61.14	25.98	L1	OFF	19.8
0.474000	---	25.91	46.44	20.53	L1	OFF	19.8
0.474000	29.92	---	56.44	26.52	L1	OFF	19.8
2.634000	---	16.64	46.00	29.36	L1	OFF	19.9
2.634000	19.79	---	56.00	36.21	L1	OFF	19.9
13.454250	---	17.57	50.00	32.43	L1	OFF	19.9
13.454250	29.85	---	60.00	30.15	L1	OFF	19.9
13.560000	---	43.57	50.00	6.43	L1	OFF	19.9
13.560000	54.76	---	60.00	5.24	L1	OFF	19.9
13.665750	---	17.26	50.00	32.74	L1	OFF	19.9
13.665750	29.73	---	60.00	30.27	L1	OFF	19.9
15.708750	---	14.36	50.00	35.64	L1	OFF	19.9

15.708750	16.08	---	60.00	43.92	L1	OFF	19.9
24.742500	---	25.18	50.00	24.82	L1	OFF	19.9
24.742500	30.35	---	60.00	29.65	L1	OFF	19.9

EUT Information

Report NO : 371211
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	30.60	55.88	25.28	N	OFF	19.8
0.152250	47.14	---	65.88	18.74	N	OFF	19.8
0.496500	---	19.20	46.06	26.86	N	OFF	19.8
0.496500	25.54	---	56.06	30.52	N	OFF	19.8
0.901500	---	14.72	46.00	31.28	N	OFF	19.8
0.901500	18.84	---	56.00	37.16	N	OFF	19.8
2.625000	---	15.65	46.00	30.35	N	OFF	19.8
2.625000	18.36	---	56.00	37.64	N	OFF	19.8
13.454250	---	16.76	50.00	33.24	N	OFF	20.0
13.454250	29.58	---	60.00	30.42	N	OFF	20.0
13.560000	---	43.87	50.00	6.13	N	OFF	20.0
13.560000	55.62	---	60.00	4.38	N	OFF	20.0
13.665750	---	16.59	50.00	33.41	N	OFF	20.0
13.665750	29.98	---	60.00	30.02	N	OFF	20.0
16.579500	---	15.18	50.00	34.82	N	OFF	20.0
16.579500	17.92	---	60.00	42.08	N	OFF	20.0
24.657000	---	25.22	50.00	24.78	N	OFF	20.1
24.657000	30.82	---	60.00	29.18	N	OFF	20.1



Appendix C. Radiated Spurious Emission

Test Engineer :	Jesse Wang, Stan Hsieh and Ken Wu	Temperature :	23.3~26.4°C
		Relative Humidity :	43.7~62.5%

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.		
7		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)	
BT CH00 2402MHz		2356.935	45.93	-28.07	74	39.92	32.1	8.1	34.19	399	350	P	H	
		2356.935	21.14	-32.86	54	-	-	-	-	-	-	A	H	
	*	2402	102.73	-	-	96.63	32.1	8.2	34.2	399	350	P	H	
	*	2402	77.94	-	-	-	-	-	-	-	-	A	H	
													H	
														H
			2319.135	45.88	-28.12	74	40.15	31.91	8	34.18	300	295	P	V
			2319.135	21.09	-32.91	54	-	-	-	-	-	-	A	V
	*		2402	100.69	-	-	94.59	32.1	8.2	34.2	300	295	P	V
	*		2402	75.9	-	-	-	-	-	-	-	-	A	V
														V
														V
BT CH 39 2441MHz		2339.96	45.71	-28.29	74	39.86	32.04	8	34.19	169	357	P	H	
		2339.96	20.92	-33.08	54	-	-	-	-	-	-	A	H	
	*	2441	101.91	-	-	95.82	32.02	8.28	34.21	169	357	P	H	
	*	2441	77.12	-	-	-	-	-	-	-	-	A	H	
			2490.62	45.6	-28.4	74	39.46	32	8.36	34.22	169	357	P	H
			2490.62	20.81	-33.19	54	-	-	-	-	-	-	A	H
			2347.52	45.32	-28.68	74	39.32	32.09	8.1	34.19	182	265	P	V
			2347.52	20.53	-33.47	54	-	-	-	-	-	-	A	V
	*		2441	101.34	-	-	95.25	32.02	8.28	34.21	182	265	P	V
	*		2441	76.55	-	-	-	-	-	-	-	-	A	V
			2486.77	45.06	-28.94	74	38.92	32	8.36	34.22	182	265	P	V
			2486.77	20.27	-33.73	54	-	-	-	-	-	-	A	V



BT CH 78 2480MHz	*	2480	101.24	-	-	95.1	32	8.36	34.22	297	353	P	H
	*	2480	76.45	-	-	-	-	-	-	-	-	A	H
		2489.08	45.29	-28.71	74	39.15	32	8.36	34.22	297	353	P	H
		2489.08	20.5	-33.5	54	-	-	-	-	-	-	A	H
													H
													H
	*	2480	99.47	-	-	93.33	32	8.36	34.22	162	257	P	V
	*	2480	74.68	-	-	-	-	-	-	-	-	A	V
		2488.16	45.74	-28.26	74	39.6	32	8.36	34.22	162	257	P	V
		2488.16	20.95	-33.05	54	-	-	-	-	-	-	A	V
													V
													V
Remark	<ol style="list-style-type: none"> 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

BT (Harmonic @ 3m)

BT ANT 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)
BT ANT 7		4804	40.88	-33.12	74	52.89	34.02	13.01	59.04	-	-	P	H
		4804	16.09	-37.91	54	-	-	-	-	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
													H
BT CH 00 2402MHz		4804	44.44	-29.56	74	56.45	34.02	13.01	59.04	-	-	P	V
		4804	19.65	-34.35	54	-	-	-	-	-	-	A	V
													V
													V
													V
													V
													V
													V
													V
													V



BT ANT 7	Note	Frequency (MHz)	Level (dB μ V/m)	Margin (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	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		4960	41.63	-32.37	74	53.07	34.3	13.04	58.78	-	-	P	H	
		4960	16.84	-37.16	54	-	-	-	-	-	-	A	H	
		7440	41.02	-32.98	74	47.74	35.6	15.38	57.7	-	-	P	H	
		7440	16.23	-37.77	54	-	-	-	-	-	-	A	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			4960	41.83	-32.17	74	53.27	34.3	13.04	58.78	-	-	P	V
			4960	17.04	-36.96	54	-	-	-	-	-	-	A	V
			7440	41.66	-32.34	74	48.38	35.6	15.38	57.7	-	-	P	V
			7440	16.87	-37.13	54	-	-	-	-	-	-	A	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 BT (LF)

BT	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.	
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)	
2.4GHz BT LF		30	22.52	-17.48	40	26.73	24.51	1.36	30.08	-	-	P	H	
		63.75	24.53	-15.47	40	41.14	11.8	1.52	29.93	-	-	P	H	
		121.26	26.65	-16.85	43.5	37.32	17.36	1.94	29.97	-	-	P	H	
		852.3	31.36	-14.64	46	26.96	28.82	4.86	29.28	-	-	P	H	
		892.9	31.42	-14.58	46	26.86	28.59	5.03	29.06	-	-	P	H	
		958	32.98	-13.02	46	25.98	30.65	5.14	28.79	-	-	P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			30	33.04	-6.96	40	37.25	24.51	1.36	30.08	-	-	P	V
			64.02	22.56	-17.44	40	39.16	11.81	1.52	29.93	-	-	P	V
			120.45	23.16	-20.34	43.5	33.85	17.34	1.94	29.97	-	-	P	V
			859.3	31.2	-14.8	46	26.67	28.91	4.86	29.24	-	-	P	V
			916.7	31.55	-14.45	46	26.61	28.81	5.09	28.96	-	-	P	V
			954.5	33.26	-12.74	46	26.36	30.57	5.14	28.81	-	-	P	V
													V	
												V		
												V		
												V		
												V		
												V		

Remark

- No other spurious found.
- All results are PASS against limit line.
- 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.		
8		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)	
BT CH00 2402MHz		2375.835	45.69	-28.31	74	39.69	32.1	8.1	34.2	137	272	P	H	
		2375.835	20.9	-33.1	54	-	-	-	-	-	-	A	H	
	*	2402	97.59	-	-	91.49	32.1	8.2	34.2	137	272	P	H	
	*	2402	72.8	-	-	-	-	-	-	-	-	A	H	
													H	
														H
			2387.175	48.21	-25.79	74	42.11	32.1	8.2	34.2	206	334	P	V
			2387.175	23.42	-30.58	54	-	-	-	-	-	-	A	V
	*		2402	100.25	-	-	94.15	32.1	8.2	34.2	206	334	P	V
	*		2402	75.46	-	-	-	-	-	-	-	-	A	V
														V
														V
BT CH 39 2441MHz		2375.66	45.09	-28.91	74	39.09	32.1	8.1	34.2	306	105	P	H	
		2375.66	20.3	-33.7	54	-	-	-	-	-	-	A	H	
	*	2441	98.99	-	-	92.9	32.02	8.28	34.21	306	105	P	H	
	*	2441	74.2	-	-	-	-	-	-	-	-	A	H	
			2494.75	45.51	-28.49	74	39.37	32	8.36	34.22	306	105	P	H
			2494.75	20.72	-33.28	54	-	-	-	-	-	-	A	H
			2353.96	45.15	-28.85	74	39.14	32.1	8.1	34.19	151	357	P	V
			2353.96	20.36	-33.64	54	-	-	-	-	-	-	A	V
	*		2441	98.4	-	-	92.31	32.02	8.28	34.21	151	357	P	V
	*		2441	73.61	-	-	-	-	-	-	-	-	A	V
			2483.83	44.97	-29.03	74	38.83	32	8.36	34.22	151	357	P	V
			2483.83	20.18	-33.82	54	-	-	-	-	-	-	A	V



BT CH 78 2480MHz	*	2480	98.82	-	-	92.68	32	8.36	34.22	100	249	P	H
	*	2480	74.03	-	-	-	-	-	-	-	-	A	H
		2496.32	45.4	-28.6	74	39.26	32	8.36	34.22	100	249	P	H
		2496.32	20.61	-33.39	54	-	-	-	-	-	-	A	H
													H
													H
	*	2480	97.08	-	-	90.94	32	8.36	34.22	168	330	P	V
	*	2480	72.29	-	-	-	-	-	-	-	-	A	V
		2491.16	45.72	-28.28	74	39.58	32	8.36	34.22	168	330	P	V
		2491.16	20.93	-33.07	54	-	-	-	-	-	-	A	V
													V
													V
Remark	<ol style="list-style-type: none"> 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

BT (Harmonic @ 3m)

BT ANT 8	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		4804	41.44	-32.56	74	53.45	34.02	13.01	59.04	-	-	P	H
		4804	16.65	-37.35	54	-	-	-	-	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
			4804	42.51	-31.49	74	54.52	34.02	13.01	59.04	-	-	P
		4804	17.72	-36.28	54	-	-	-	-	-	-	A	V
													V
													V
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													V



BT ANT 8	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 39 2441MHz		4882	41.7	-32.3	74	53.44	34.14	13.03	58.91	-	-	P	H	
		4882	16.91	-37.09	54	-	-	-	-	-	-	A	H	
		7323	42.72	-31.28	74	49.24	35.7	15.36	57.58	-	-	P	H	
		7323	17.93	-36.07	54	-	-	-	-	-	-	A	H	
													H	
													H	
													H	
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													H	
													H	
													H	
			4882	41.87	-32.13	74	53.61	34.14	13.03	58.91	-	-	P	V
			4882	17.08	-36.92	54	-	-	-	-	-	-	A	V
			7323	42.36	-31.64	74	48.88	35.7	15.36	57.58	-	-	P	V
			7323	17.57	-36.43	54	-	-	-	-	-	-	A	V
														V
														V
														V
													V	
													V	
													V	



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.		
8		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)	
2.4GHz BT LF		31.35	22.98	-17.02	40	27.84	23.84	1.36	30.06	-	-	P	H	
		63.75	25.7	-14.3	40	42.31	11.8	1.52	29.93	-	-	P	H	
		122.61	26.71	-16.79	43.5	37.33	17.41	1.94	29.97	-	-	P	H	
		857.2	31.2	-14.8	46	26.69	28.9	4.86	29.25	-	-	P	H	
		898.5	31.81	-14.19	46	27.15	28.66	5.03	29.03	-	-	P	H	
		953.8	33.18	-12.82	46	26.32	30.53	5.14	28.81	-	-	P	H	
														H
														H
														H
														H
														H
														H
			30.54	33.18	-6.82	40	37.62	24.27	1.36	30.07	-	-	P	V
			63.21	23.37	-16.63	40	40	11.77	1.52	29.92	-	-	P	V
			121.26	22.76	-20.74	43.5	33.43	17.36	1.94	29.97	-	-	P	V
			859.3	31.08	-14.92	46	26.55	28.91	4.86	29.24	-	-	P	V
			904.8	31.32	-14.68	46	26.5	28.73	5.09	29	-	-	P	V
			958	32.43	-13.57	46	25.43	30.65	5.14	28.79	-	-	P	V
														V
														V
													V	
													V	
													V	
													V	

Remark

- No other spurious found.
- All results are PASS against limit line.
- 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	Peak or Average
H/V	Horizontal or Vertical



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.
		(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
		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 :	Jesse Wang, Stan Hsieh and Ken Wu	Temperature :	23.3~26.4°C
		Relative Humidity :	43.7~62.5%

2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
7	Horizontal	Fundamental
Peak	<p>Site Condition : 03CH07-HY : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site Condition : 03CH07-HY : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
7	Vertical	Fundamental
Peak	<p>Date: 2023-07-27</p> <p>Site : 09CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075963 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Date: 2023-07-27</p> <p>Site : 09CH07-HY Condition : PEAK_74 3m HF_ANT_00075963 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
7	Horizontal	Fundamental
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	Left blank



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
7	Vertical	Fundamental
Peak	<p>Date: 2023-07-27</p> <p>Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWTA:Auto</p>	<p>Date: 2023-07-27</p> <p>Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWTA:Auto</p>
Peak	<p>Date: 2023-07-27</p> <p>Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWTA:Auto</p>	Left blank



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
7	Horizontal	Fundamental
Peak	<p>Date: 2023-07-27</p> <p>Site : 09CH07-HY Condition : :PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL :RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Date: 2023-07-27</p> <p>Site : 09CH07-HY Condition : :PEAK_74 3m HF_ANT_00075962 HORIZONTAL :RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>

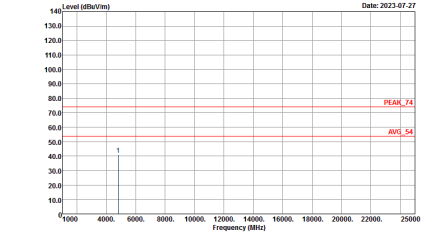
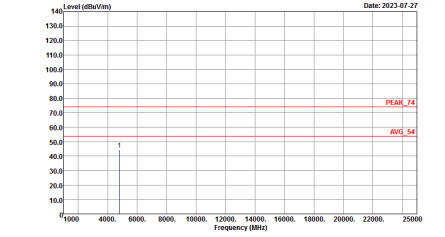


BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
7	Vertical	Fundamental
Peak	<p>Date: 2023-07-27</p> <p>Site : 09CH07-HY Condition : PEAK_B6_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Date: 2023-07-27</p> <p>Site : 09CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>

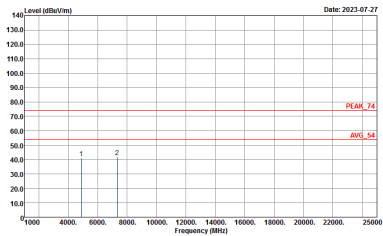
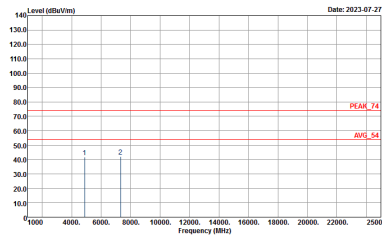


2.4GHz 2400~2483.5MHz

BT (Harmonic @ 3m)

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH00 2402MHz	
7	Horizontal	Vertical
<p>Peak</p> <p>Avg.</p>	 <p>Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL</p>	 <p>Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL</p>



BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH39 2441MHz	
7	Horizontal	Vertical
<p>Peak</p> <p>Avg.</p>	 <p>Site : 09CH07-HY Condition : PEAK_24 3m HF_ANT_00075962 HORIZONTAL - - - - -</p>	 <p>Site : 09CH07-HY Condition : PEAK_24 3m HF_ANT_00075962 VERTICAL - - - - -</p>



BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH78 2480MHz	
7	Horizontal	Vertical
Peak Avg.	<p>Site : 09CH07-HY Condition : PEAK_24 3m HF_ANT_00075962 HORIZONTAL</p>	<p>Site : 09CH07-HY Condition : PEAK_24 3m HF_ANT_00075962 VERTICAL</p>



Emission below 1GHz

2.4GHz BT (LF)

BT	2.4GHz 2400~2483.5MHz	
ANT	BT LF	
7	Horizontal	Vertical
QP / Peak	<p>Site : 03CH07-HY Condition : QP 3m LF-ANT-35413(6) HORIZONTAL</p>	<p>Site : 03CH07-HY Condition : QP 3m LF-ANT-35413(6) VERTICAL</p>



2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
8	Horizontal	Fundamental
Peak	<p>Site : 03CH07-HY Condition : PEAK_85_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWTA:Auto</p>	<p>Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWTA:Auto</p>

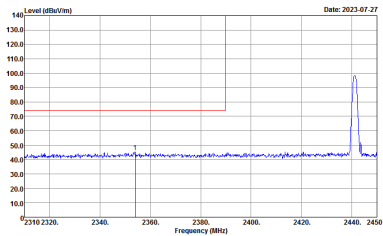
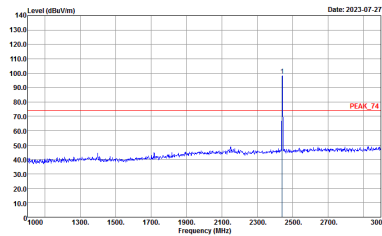
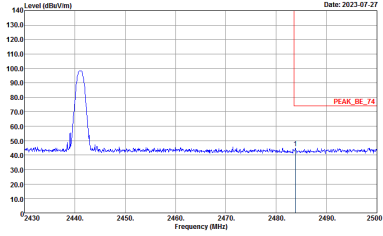


BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
8	Vertical	Fundamental
Peak	<p>Site : 09CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075963 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 09CH07-HY Condition : PEAK_74 3m HF_ANT_00075963 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
8	Horizontal	Fundamental
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>
Peak	<p>Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	Left blank



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
8	Vertical	Fundamental
Peak	 <p>Date: 2023-07-27</p> <p>Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWTA:Auto</p>	 <p>Date: 2023-07-27</p> <p>Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWTA:Auto</p>
Peak	 <p>Date: 2023-07-27</p> <p>Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWTA:Auto</p>	Left blank



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
8	Horizontal	Fundamental
Peak	<p>Site : 09CH07-HY Condition : :PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL :RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 09CH07-HY Condition : :PEAK_74 3m HF_ANT_00075962 HORIZONTAL :RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
8	Vertical	Fundamental
Peak	<p>Site : 09CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075963 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 09CH07-HY Condition : PEAK_74 3m HF_ANT_00075963 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>



2.4GHz 2400~2483.5MHz

BT (Harmonic @ 3m)

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH00 2402MHz	
8	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL</p>	<p>Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL</p>



BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH39 2441MHz	
8	Horizontal	Vertical
<p>Peak</p> <p>Avg.</p>		



BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH78 2480MHz	
8	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL</p>	<p>Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL</p>



Emission below 1GHz

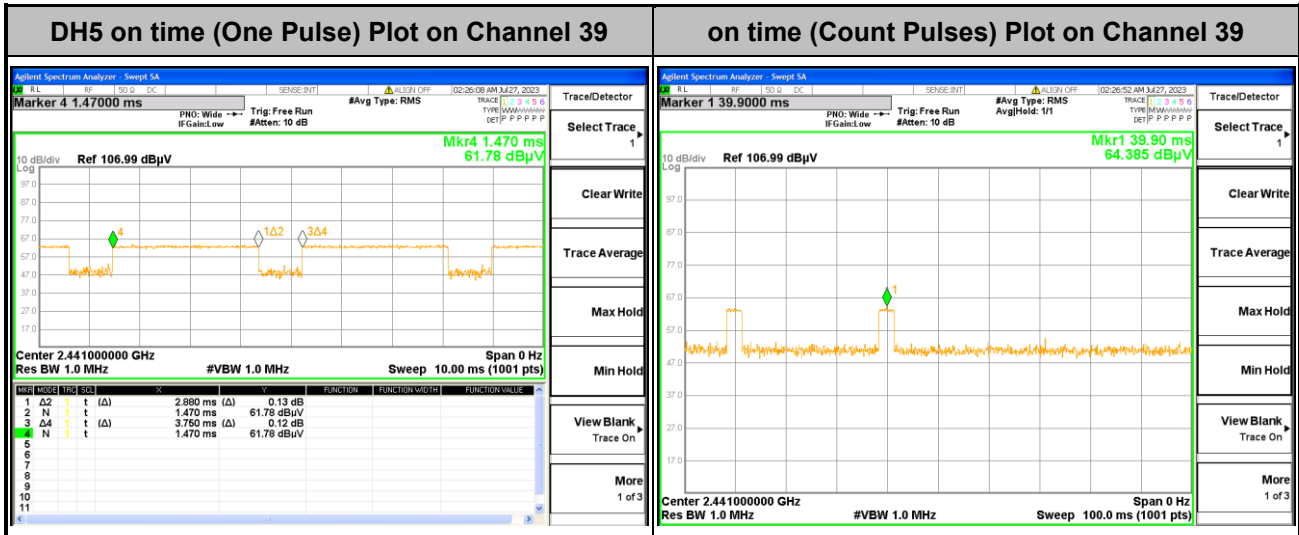
2.4GHz BT (LF)

BT	2.4GHz 2400~2483.5MHz	
ANT	BT LF	
8	Horizontal	Vertical
QP / Peak	<p>Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(g) HORIZONTAL</p>	<p>Site : 03CH07-HY Condition : QP 3m LF-ANT-35419(g) VERTICAL</p>



Appendix E. Duty Cycle Plots

<Ant.7>



Note:

1. Worst case Duty cycle = on time/100 milliseconds = $2 * 2.88 / 100 = 5.76 \%$
2. Worst case Duty cycle correction factor = $20 * \log(\text{Duty cycle}) = -24.79 \text{ dB}$
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

$$2.88 \text{ ms} \times 20 \text{ channels} = 57.6 \text{ ms}$$

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. $[100 \text{ ms} / 57.6 \text{ ms}] = 2 \text{ hops}$

Thus, the maximum possible ON time:

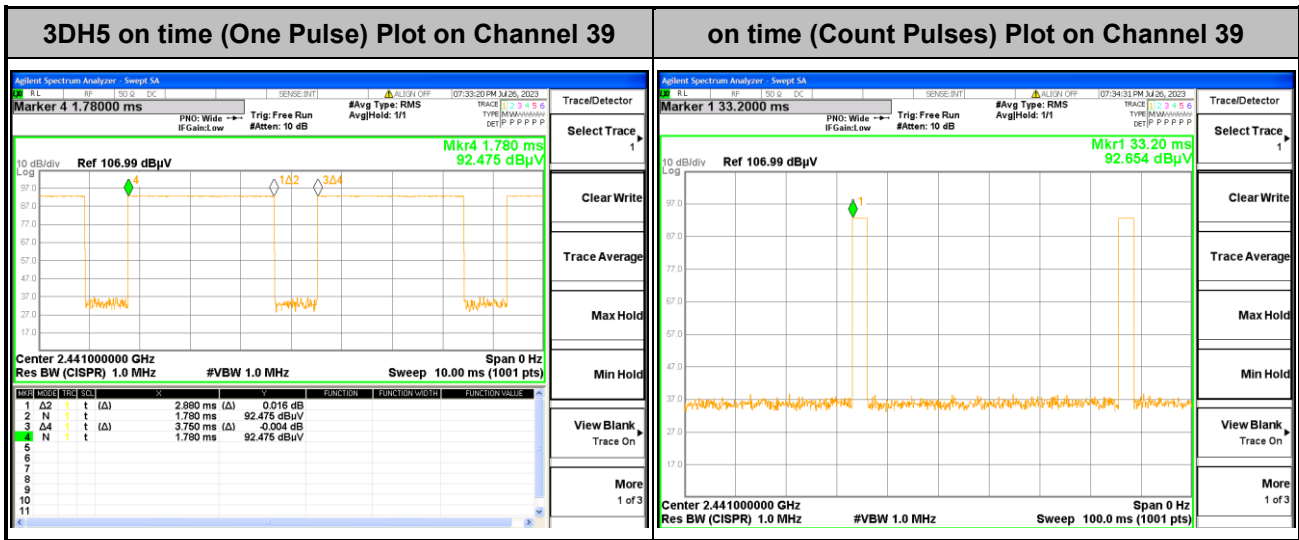
$$2.88 \text{ ms} \times 2 = 5.76 \text{ ms}$$

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

$$20 \times \log(5.76 \text{ ms}/100 \text{ ms}) = -24.79 \text{ dB}$$



<Ant.8>



Note:

1. Worst case Duty cycle = on time/100 milliseconds = $2 * 2.88 / 100 = 5.76 \%$
2. Worst case Duty cycle correction factor = $20 * \log(\text{Duty cycle}) = -24.79 \text{ dB}$
3. **3DH5** 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

$$2.88 \text{ ms} \times 20 \text{ channels} = 57.6 \text{ ms}$$

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. $[100 \text{ ms} / 57.6 \text{ ms}] = 2 \text{ hops}$

Thus, the maximum possible ON time:

$$2.88 \text{ ms} \times 2 = 5.76 \text{ ms}$$

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

$$20 \times \log(5.76 \text{ ms}/100 \text{ ms}) = -24.79 \text{ dB}$$