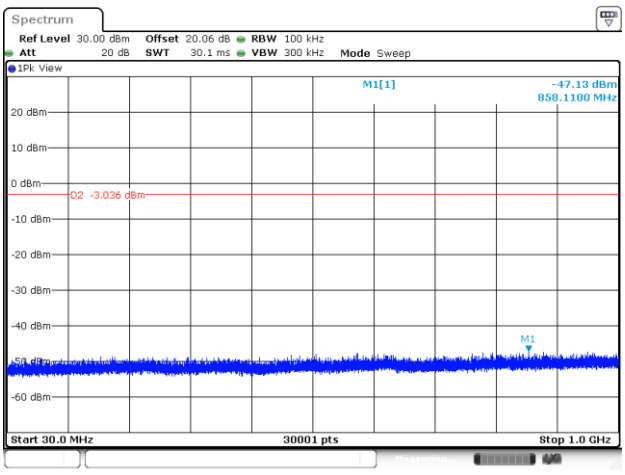
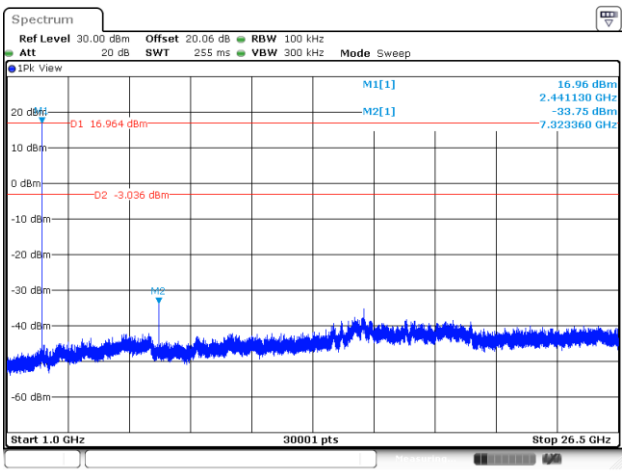
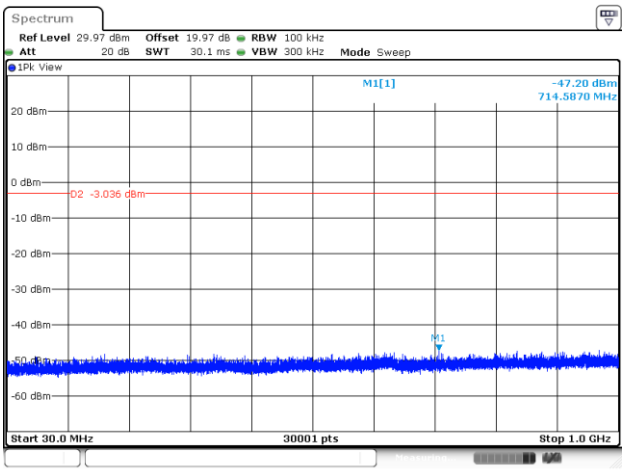
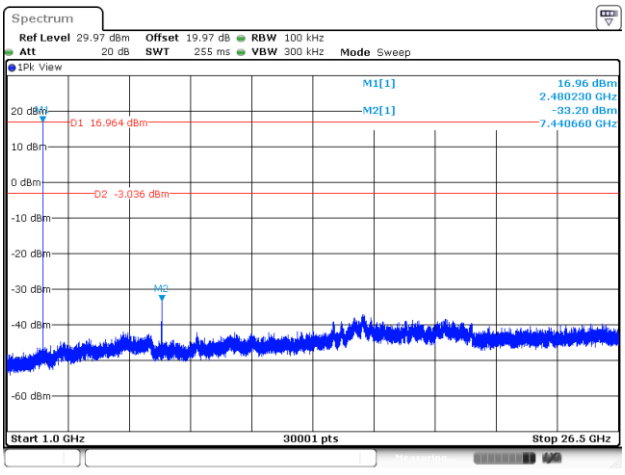
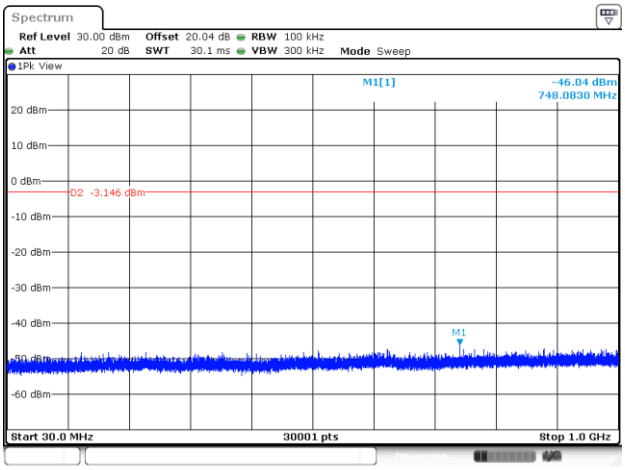
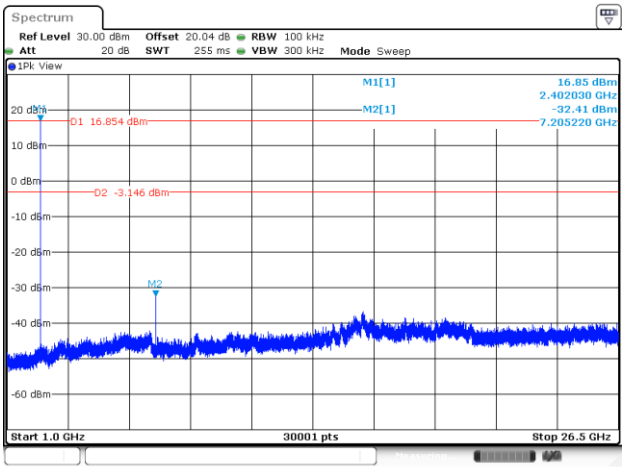
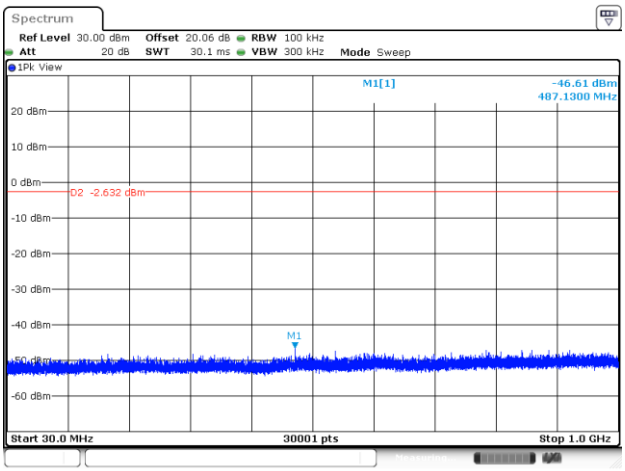
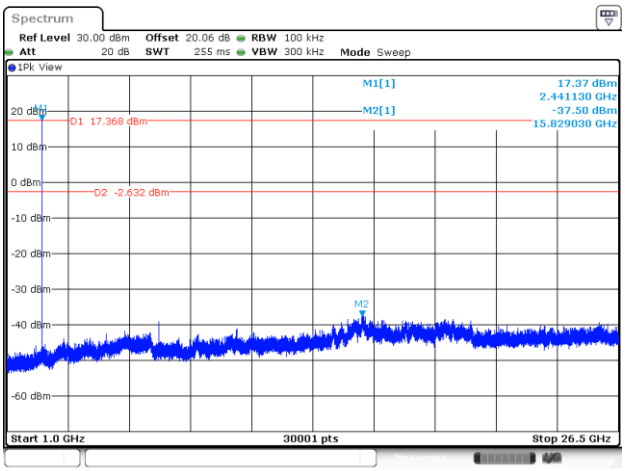
<2Mbps>	
CSE Plot on Ch 39 between 30MHz ~ 1 GHz	**CSE Plot on Ch 39 between 1 GHz ~ 26.5 GHz**
	
CSE Plot on Ch 78 between 30MHz ~ 1 GHz	**CSE Plot on Ch 78 between 1 GHz ~ 26.5 GHz**
	

<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**
	

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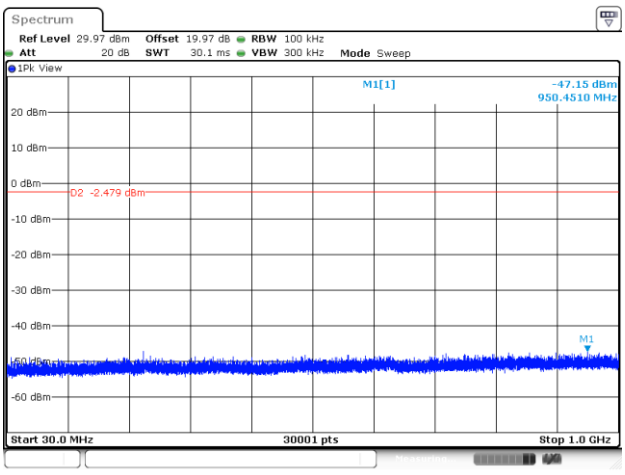
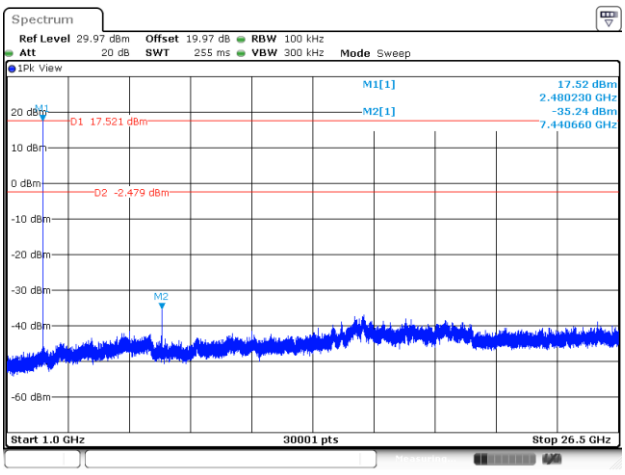
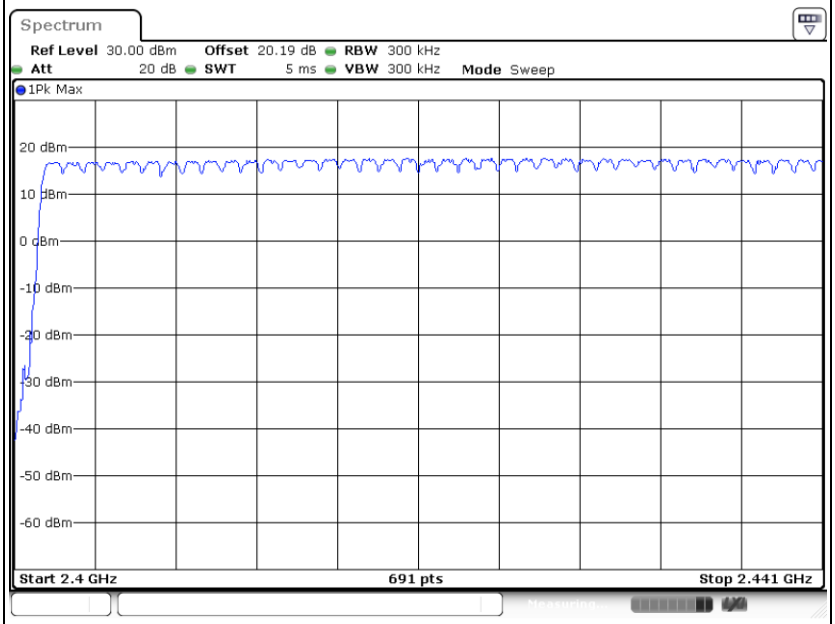
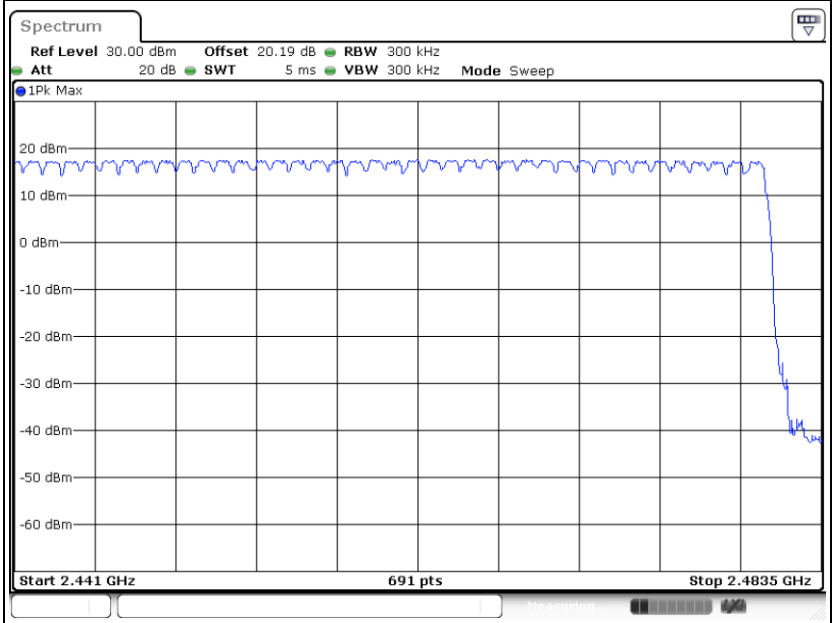
CSE Plot on Ch 78 between 30MHz ~ 1 GHz	CSE Plot on Ch 78 between 1 GHz ~ 26.5 GHz
	

<HR 2Mbps Ant.3>

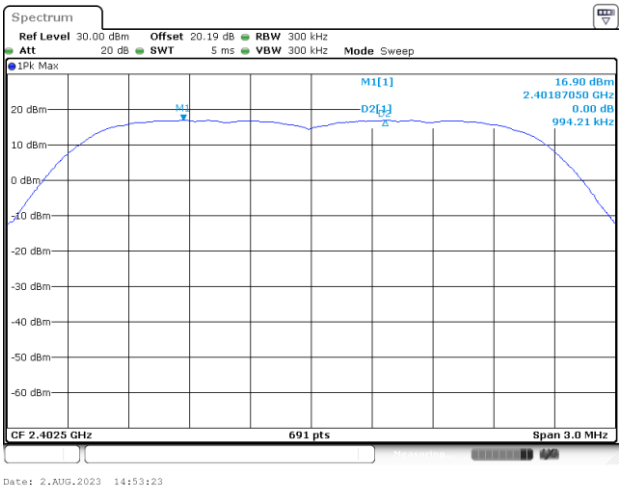
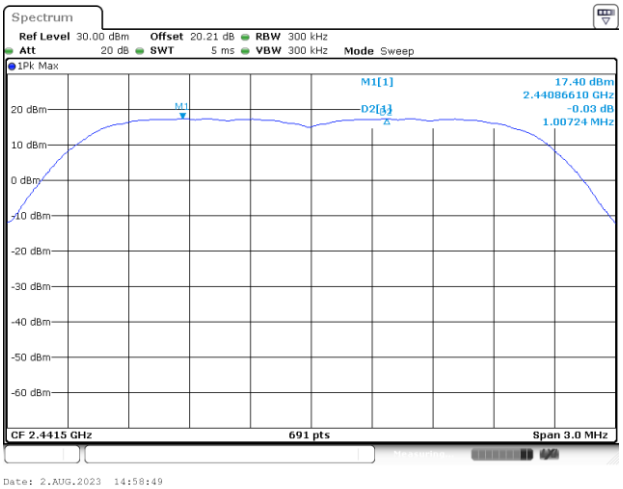
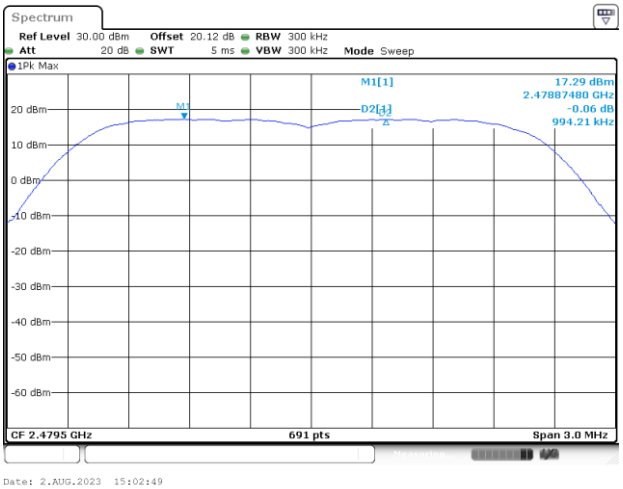
Number of Hopping Frequency

Number of Hopping Channel Plot on Channel 00 - 78



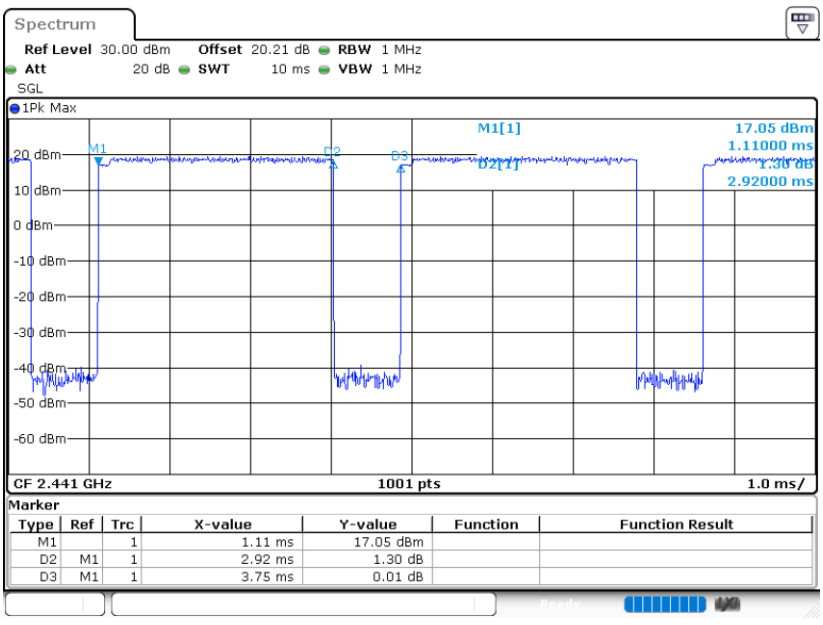


Hopping Channel Separation

<HR 2Mbps>	
Channel Separation Plot on Channel 00 - 01	**Channel Separation Plot on Channel 39 - 40**
	
Channel Separation Plot on Channel 77 - 78	
	

Dwell Time

Package Transfer Time Plot



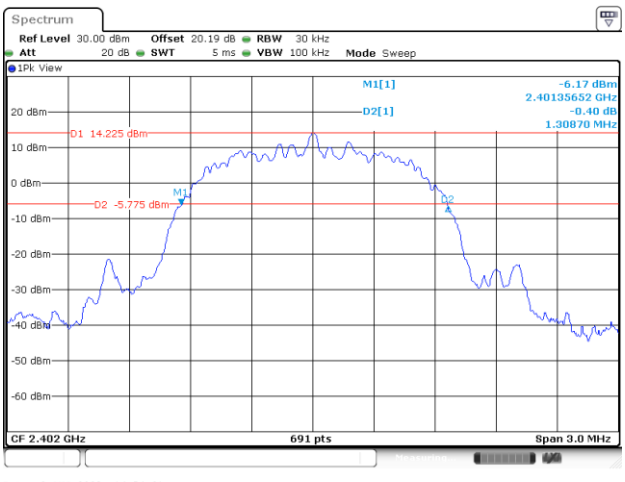
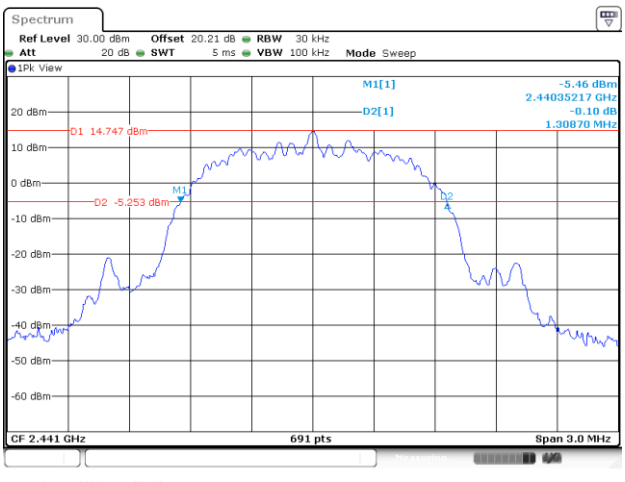
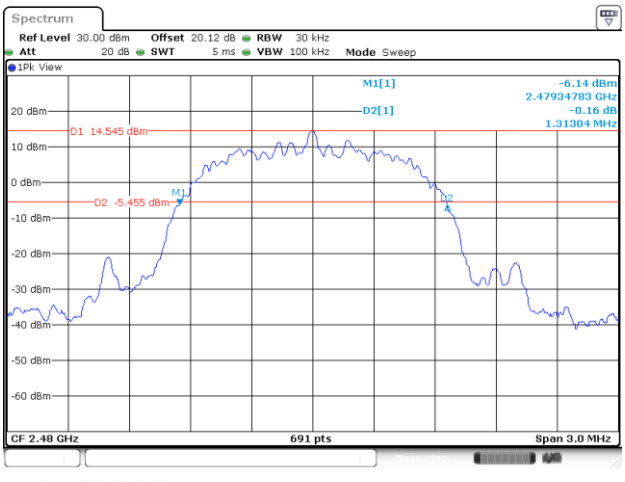
Remark:

1. In normal mode, hopping rate is 1600 hops/s with 6 slots in 79 hopping channels. With channel hopping rate (1600 / 6 / 79) in Occupancy Time Limit (0.4 x 79) (s),Hops Over Occupancy Time comes to (1600 / 6 / 79) x (0.4 x 79) = 106.67 hops.

2. In AFH mode, hopping rate is 800 hops/s with 6 slots in 20 hopping channels. With channel hopping rate (800 / 6 / 20) in Occupancy Time Limit (0.4 x 20) (s), Hops Over Occupancy Time comes to (800 / 6 / 20) x (0.4 x 20) = 53.33 hops.

3. Dwell Time(s) = Hops Over Occupancy Time (hops) x Package Transfer Time

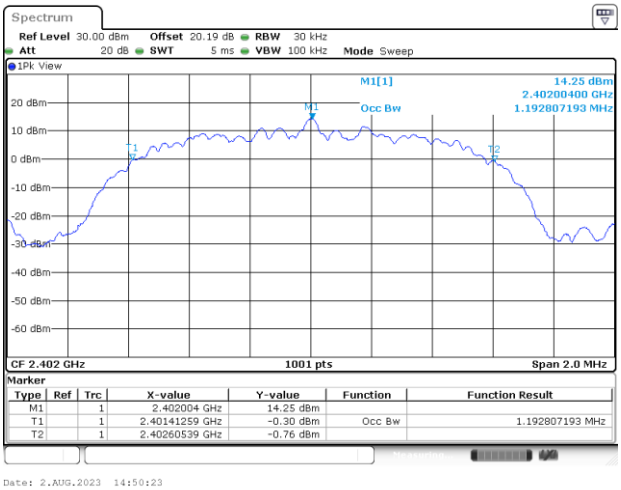
20dB Bandwidth

<HR 2Mbps>	
20 dB Bandwidth Plot on Channel 00	**20 dB Bandwidth Plot on Channel 39**
	
20 dB Bandwidth Plot on Channel 78	
	

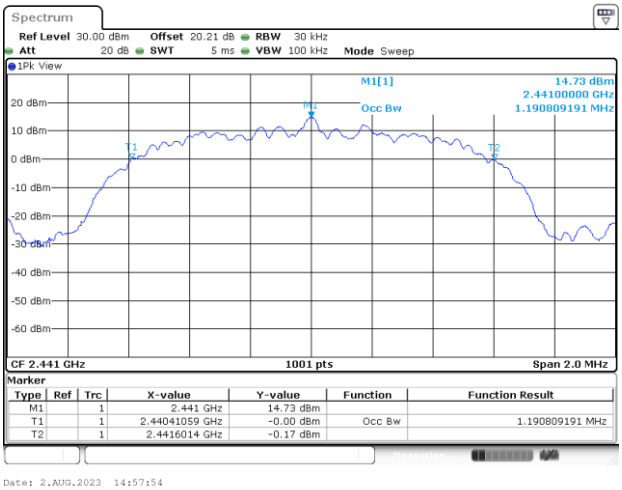
99% Occupied Bandwidth

<HR 2Mbps>

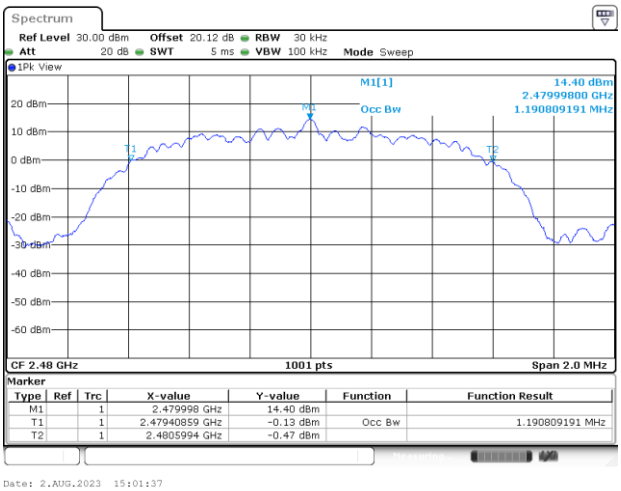
99% Occupied Bandwidth on Channel 00



99% Occupied Bandwidth on Channel 39

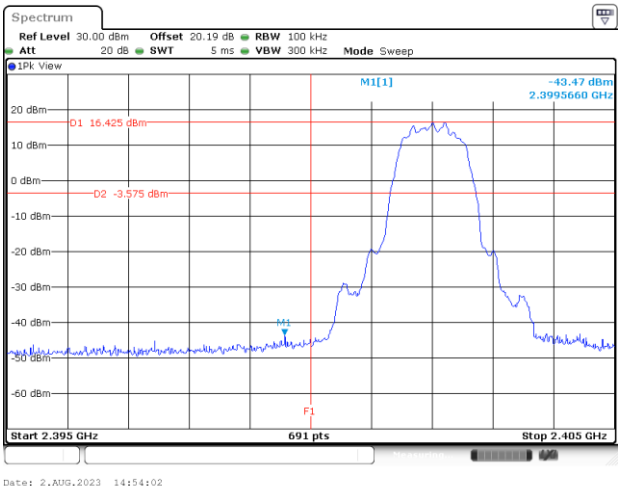
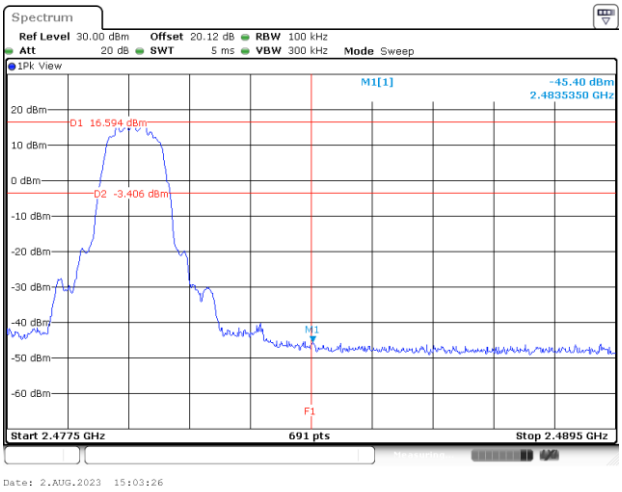


99% Occupied Bandwidth on Channel 78

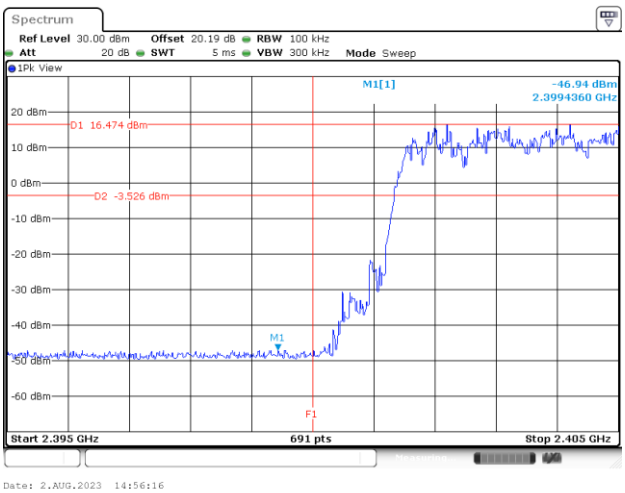
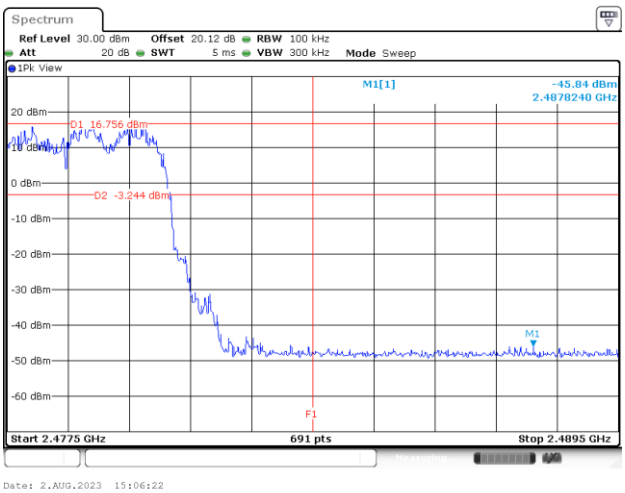


Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

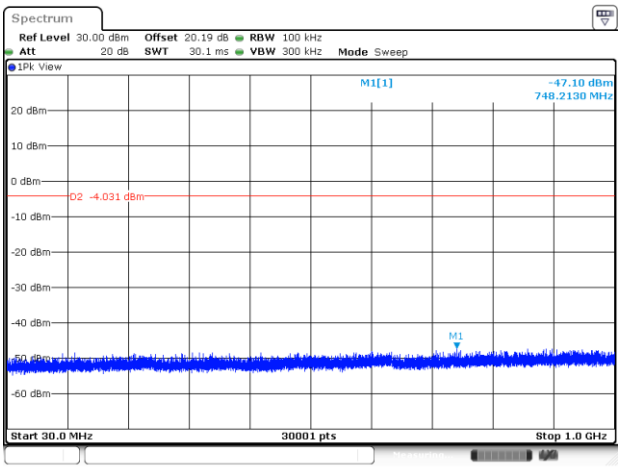
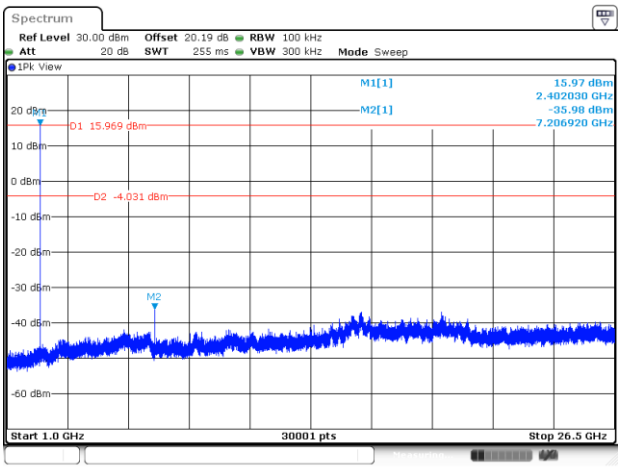
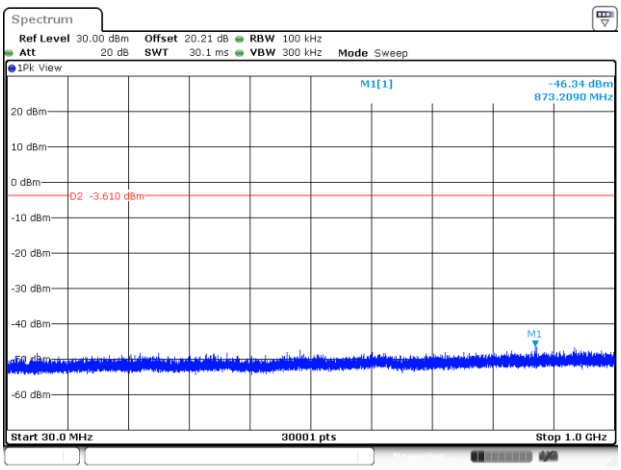
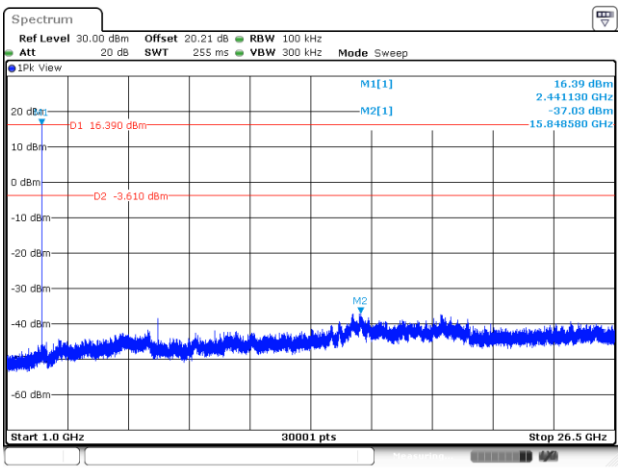
Band Edges

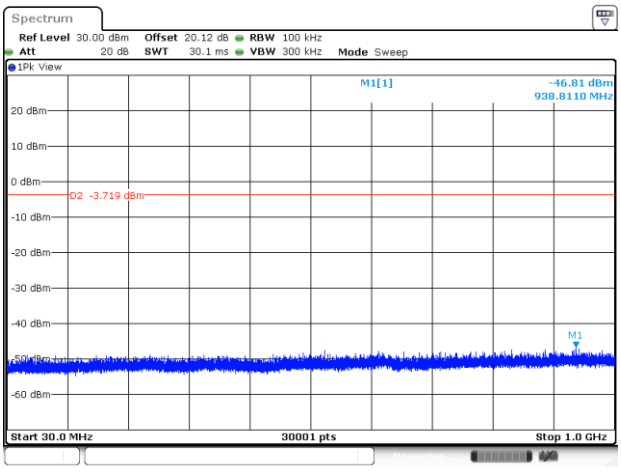
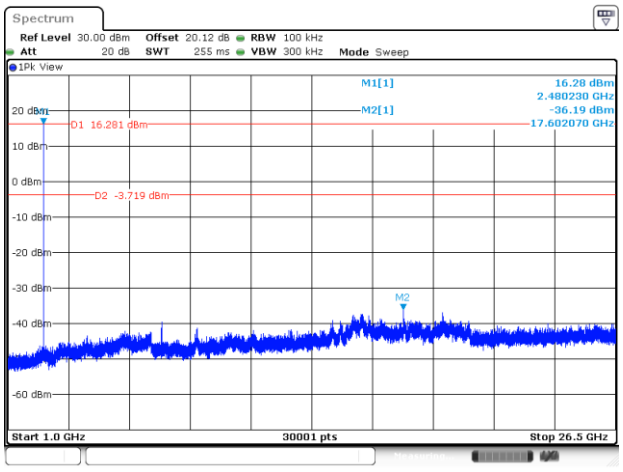
<HR 2Mbps>	
Low Band Edge Plot on Channel 00	**High Band Edge Plot on Channel 78**
	

Hopping Mode Band Edges

<HR 2Mbps>	
Hopping Mode Low Band Edge Plot	**Hopping Mode High Band Edge Plot**
	

Spurious Emission

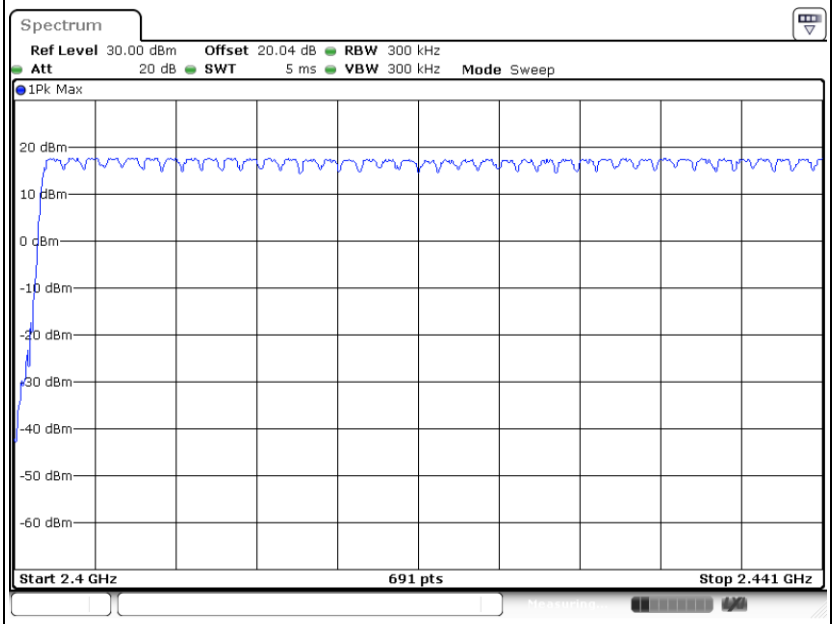
<HR 2Mbps>	
CSE Plot on Ch 00 between 30MHz ~ 1 GHz	**CSE Plot on Ch 00 between 1 GHz ~ 26.5 GHz**
	
CSE Plot on Ch 39 between 30MHz ~ 1 GHz	**CSE Plot on Ch 39 between 1 GHz ~ 26.5 GHz**
	

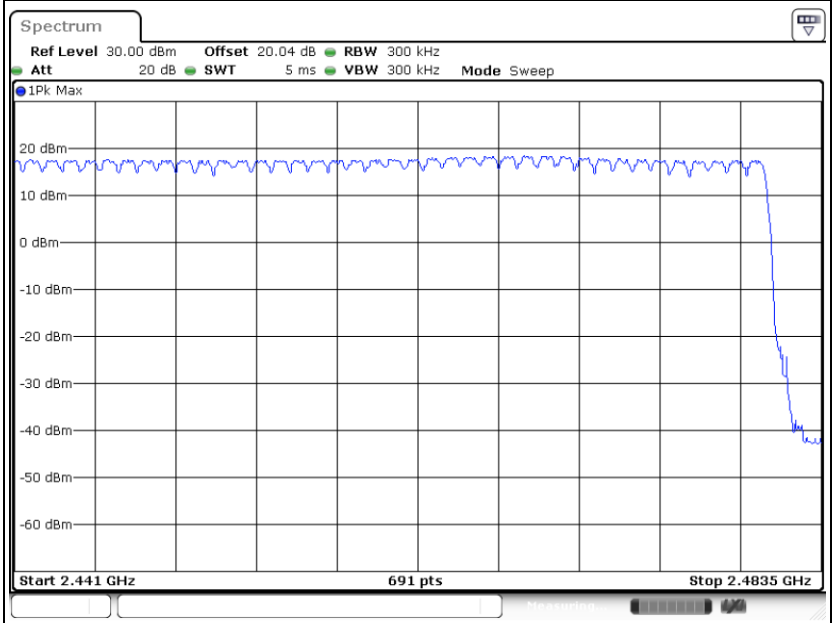
<HR 2Mbps>	
CSE Plot on Ch 78 between 30MHz ~ 1 GHz	**CSE Plot on Ch 78 between 1 GHz ~ 26.5 GHz**
	

<HR 2Mbps Ant.4>

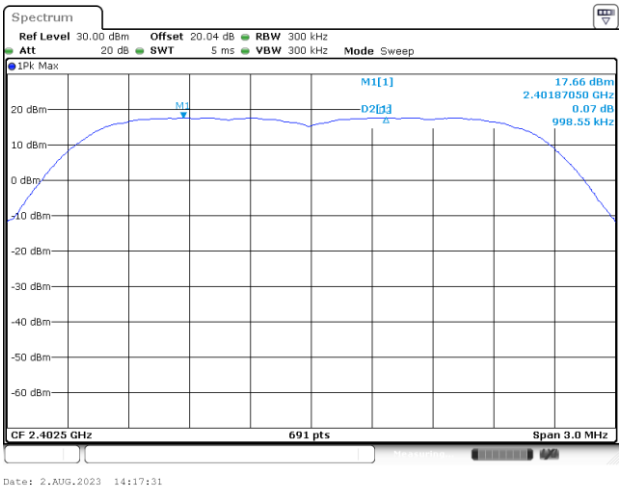
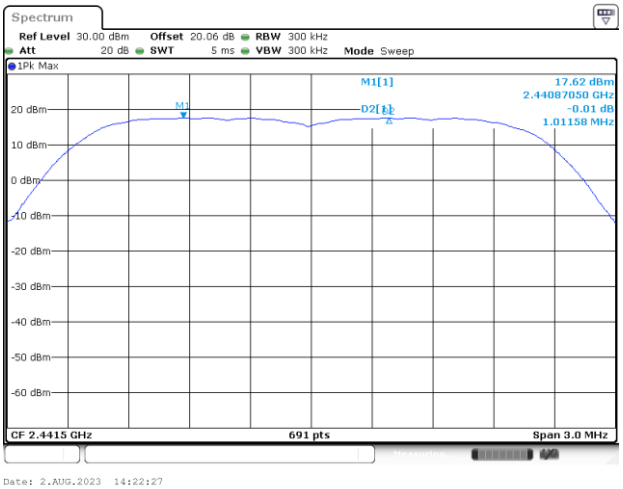
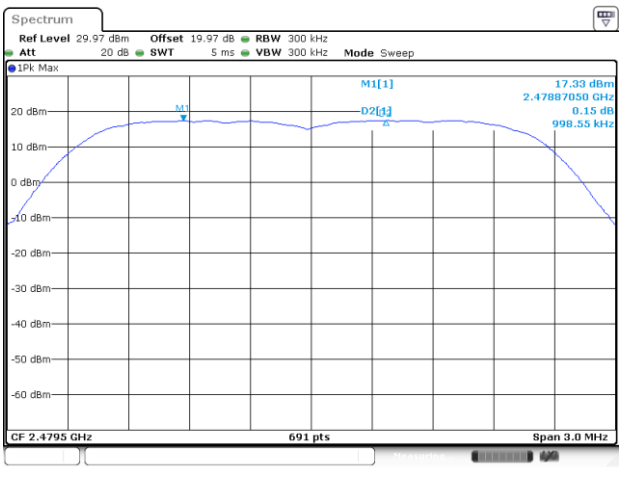
Number of Hopping Frequency

Number of Hopping Channel Plot on Channel 00 - 78



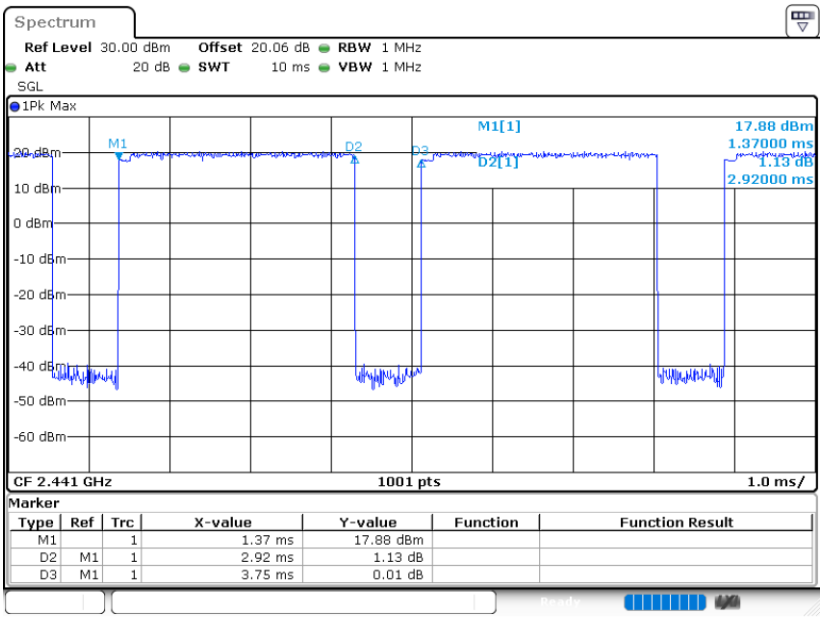


Hopping Channel Separation

<HR 2Mbps>	
Channel Separation Plot on Channel 00 - 01	**Channel Separation Plot on Channel 39 - 40**
	
Channel Separation Plot on Channel 77 - 78	
	

Dwell Time

Package Transfer Time Plot



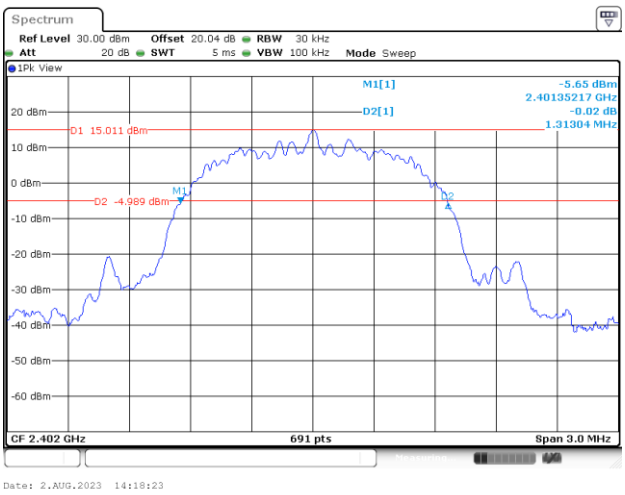
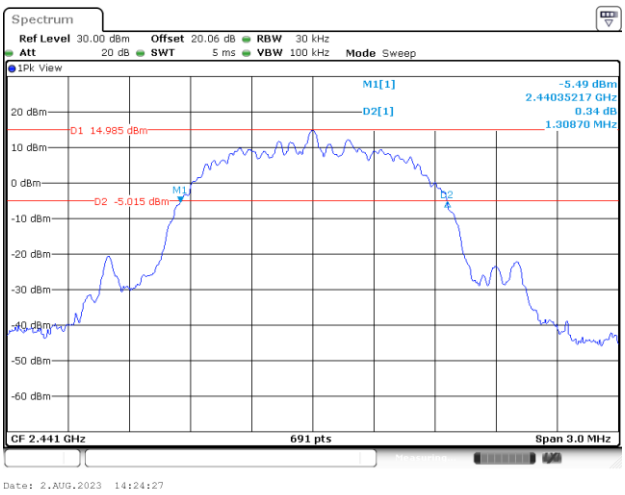
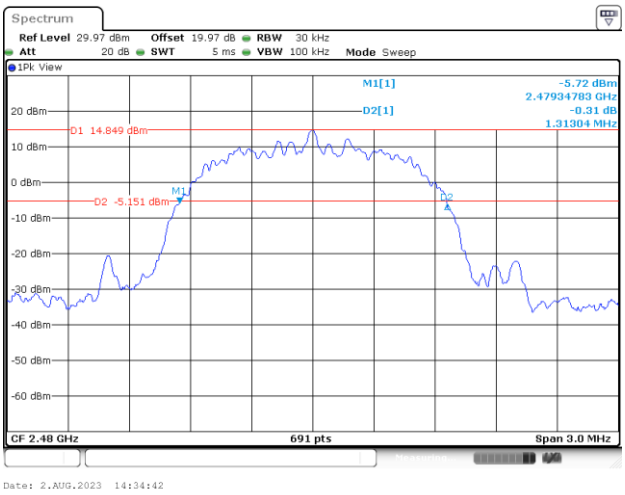
Remark:

1. In normal mode, hopping rate is 1600 hops/s with 6 slots in 79 hopping channels. With channel hopping rate (1600 / 6 / 79) in Occupancy Time Limit (0.4 x 79) (s),Hops Over Occupancy Time comes to (1600 / 6 / 79) x (0.4 x 79) = 106.67 hops.

2. In AFH mode, hopping rate is 800 hops/s with 6 slots in 20 hopping channels. With channel hopping rate (800 / 6 / 20) in Occupancy Time Limit (0.4 x 20) (s), Hops Over Occupancy Time comes to (800 / 6 / 20) x (0.4 x 20) = 53.33 hops.

3. Dwell Time(s) = Hops Over Occupancy Time (hops) x Package Transfer Time

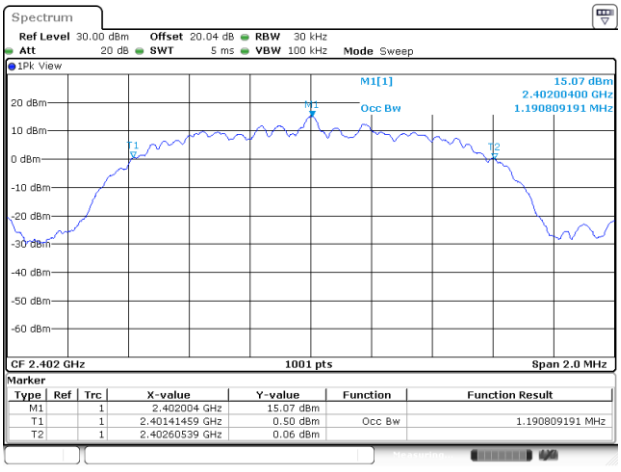
20dB Bandwidth

<HR 2Mbps>	
20 dB Bandwidth Plot on Channel 00	**20 dB Bandwidth Plot on Channel 39**
	
20 dB Bandwidth Plot on Channel 78	
	

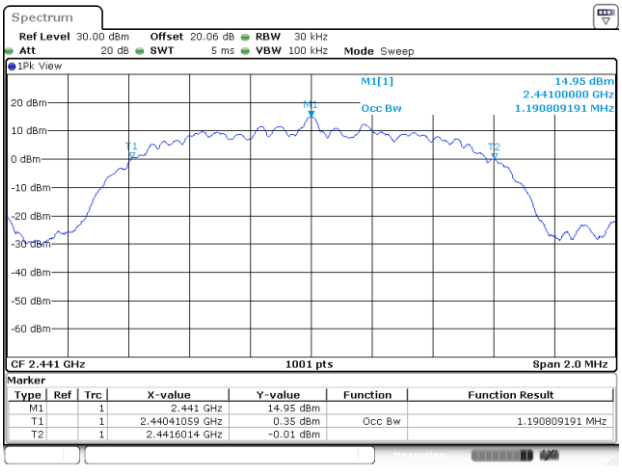
99% Occupied Bandwidth

<HR 2Mbps>

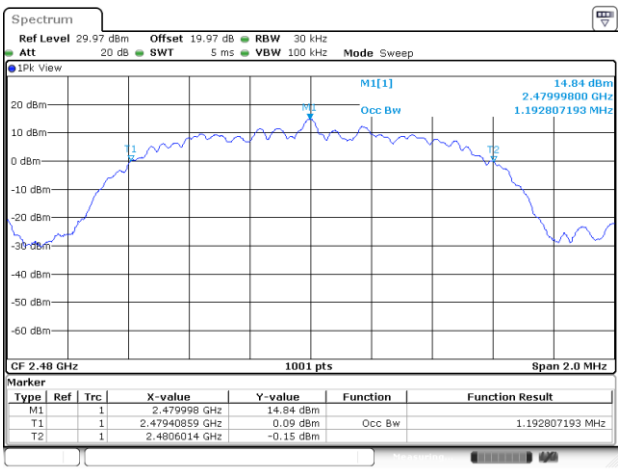
99% Occupied Bandwidth on Channel 00



99% Occupied Bandwidth on Channel 39

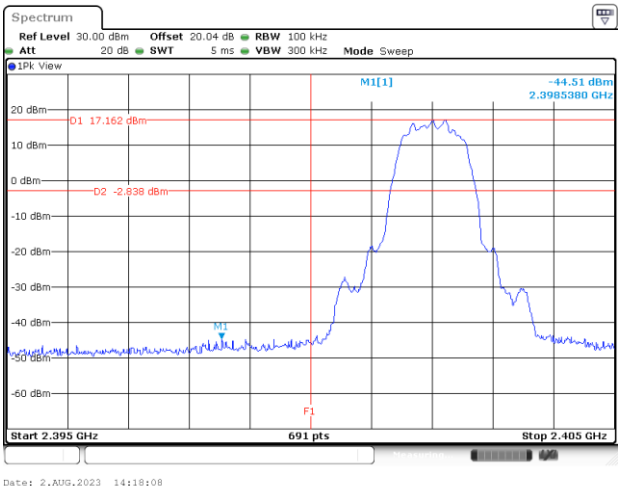
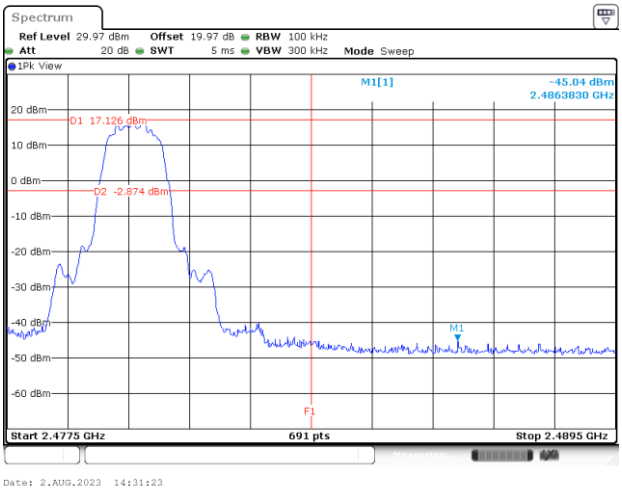


99% Occupied Bandwidth on Channel 78

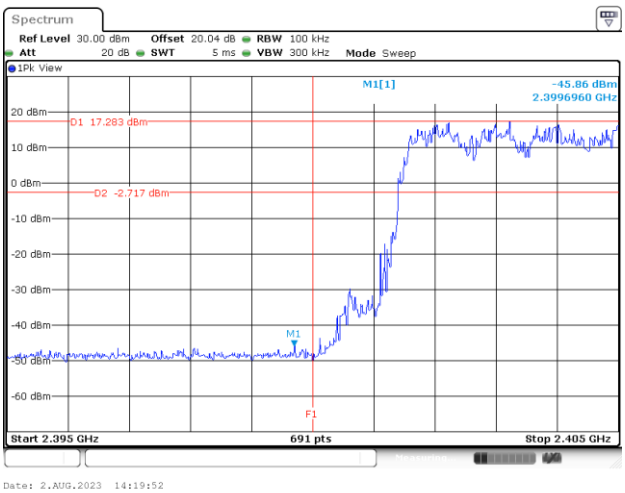
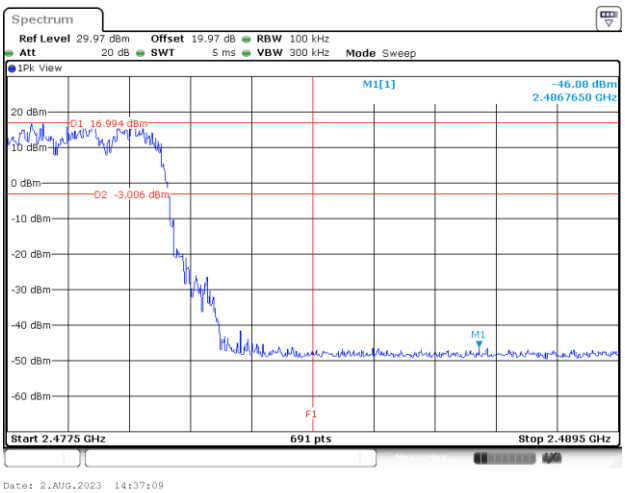


Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

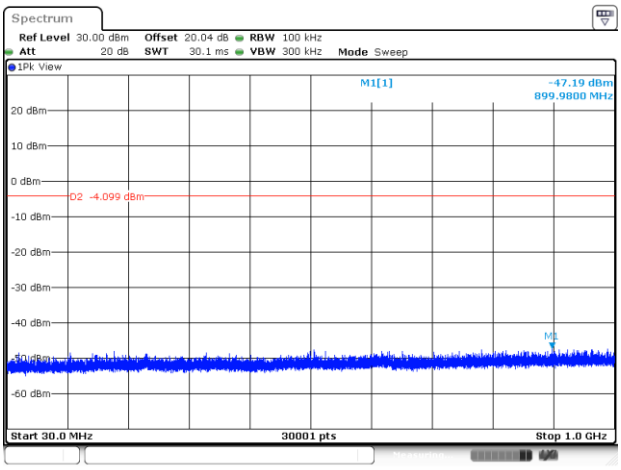
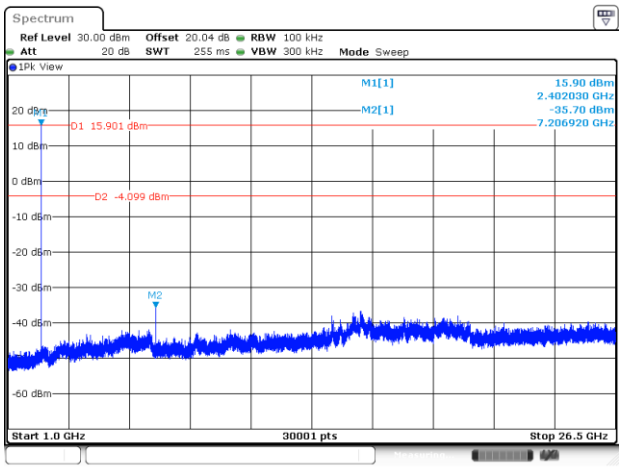
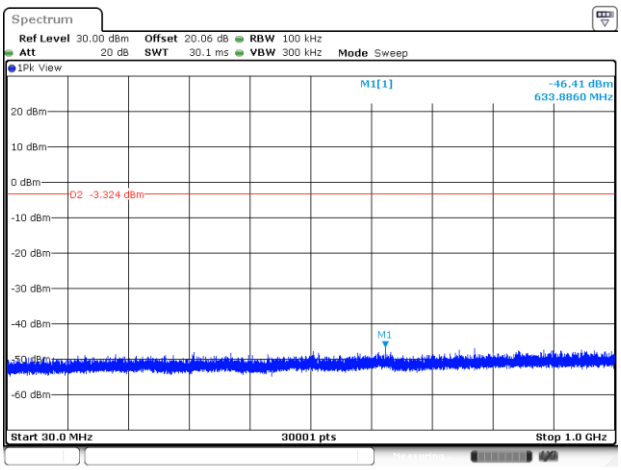
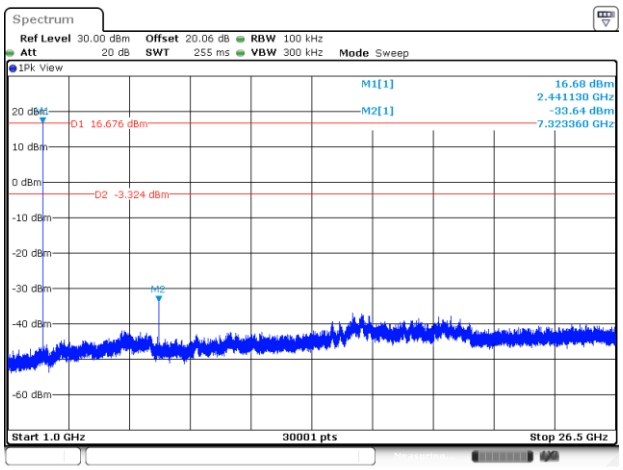
Band Edges

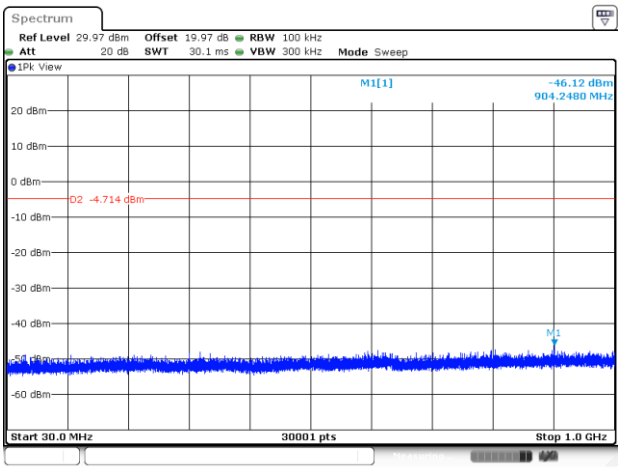
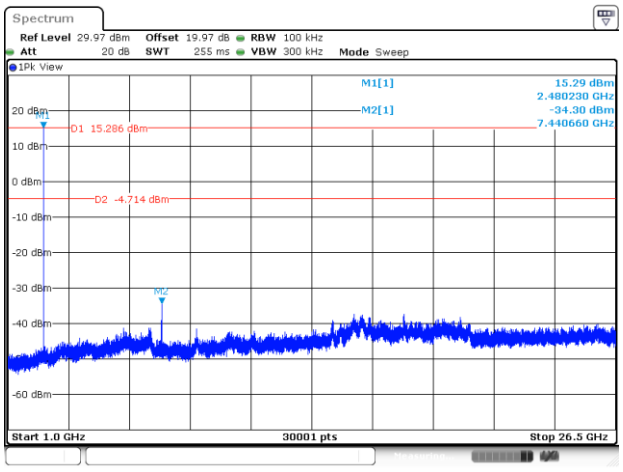
<HR 2Mbps>	
Low Band Edge Plot on Channel 00	**High Band Edge Plot on Channel 78**
	

Hopping Mode Band Edges

<HR 2Mbps>	
Hopping Mode Low Band Edge Plot	**Hopping Mode High Band Edge Plot**
	

Spurious Emission

<HR 2Mbps>	
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**
	

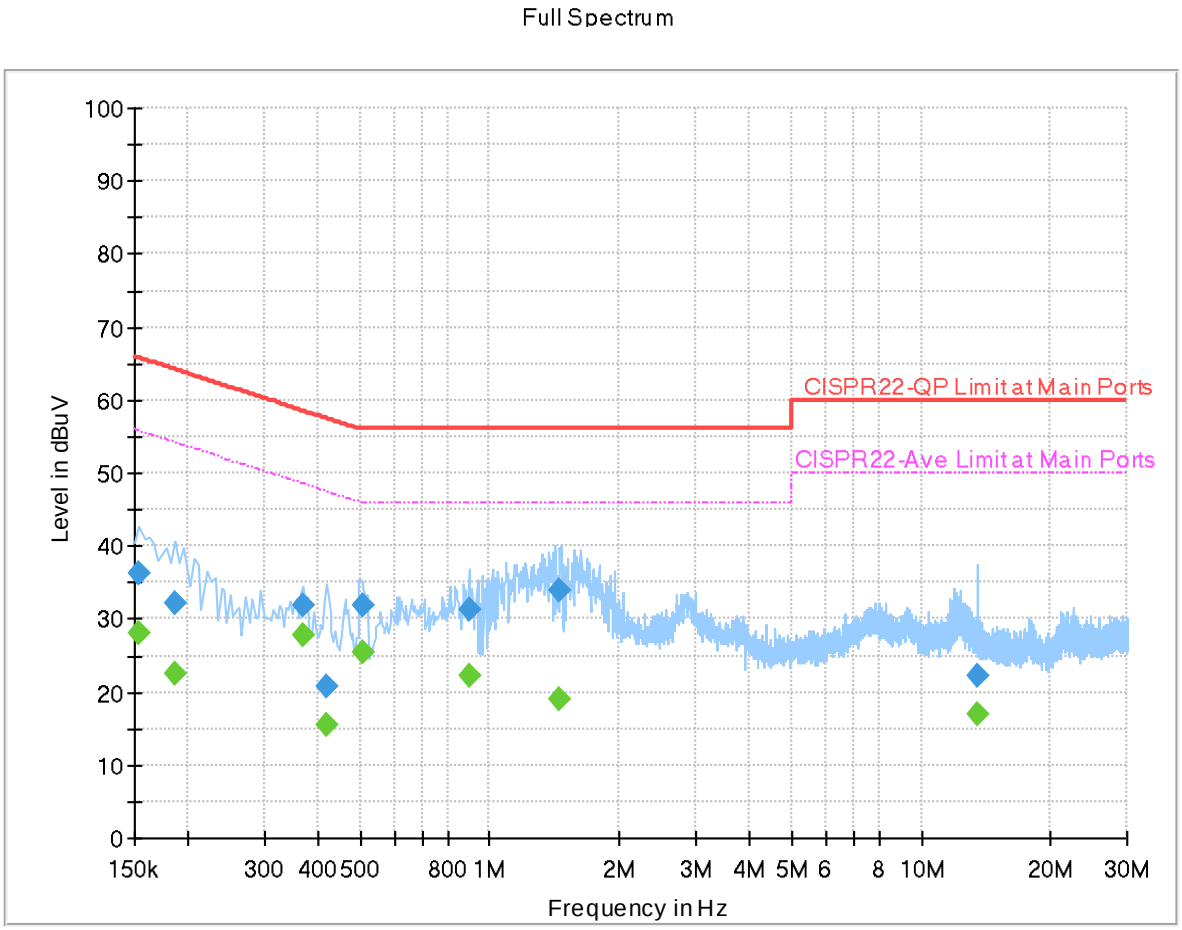
<HR 2Mbps>	
CSE Plot on Ch 78 between 30MHz ~ 1 GHz	**CSE Plot on Ch 78 between 1 GHz ~ 26.5 GHz**
	

Appendix B. AC Conducted Emission Test Results

Test Engineer :	Louis Chung	**Temperature :**	23.4~26.7℃
		Relative Humidity :	62.3~67.1%

EUT Information

Report NO :	380307
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Line

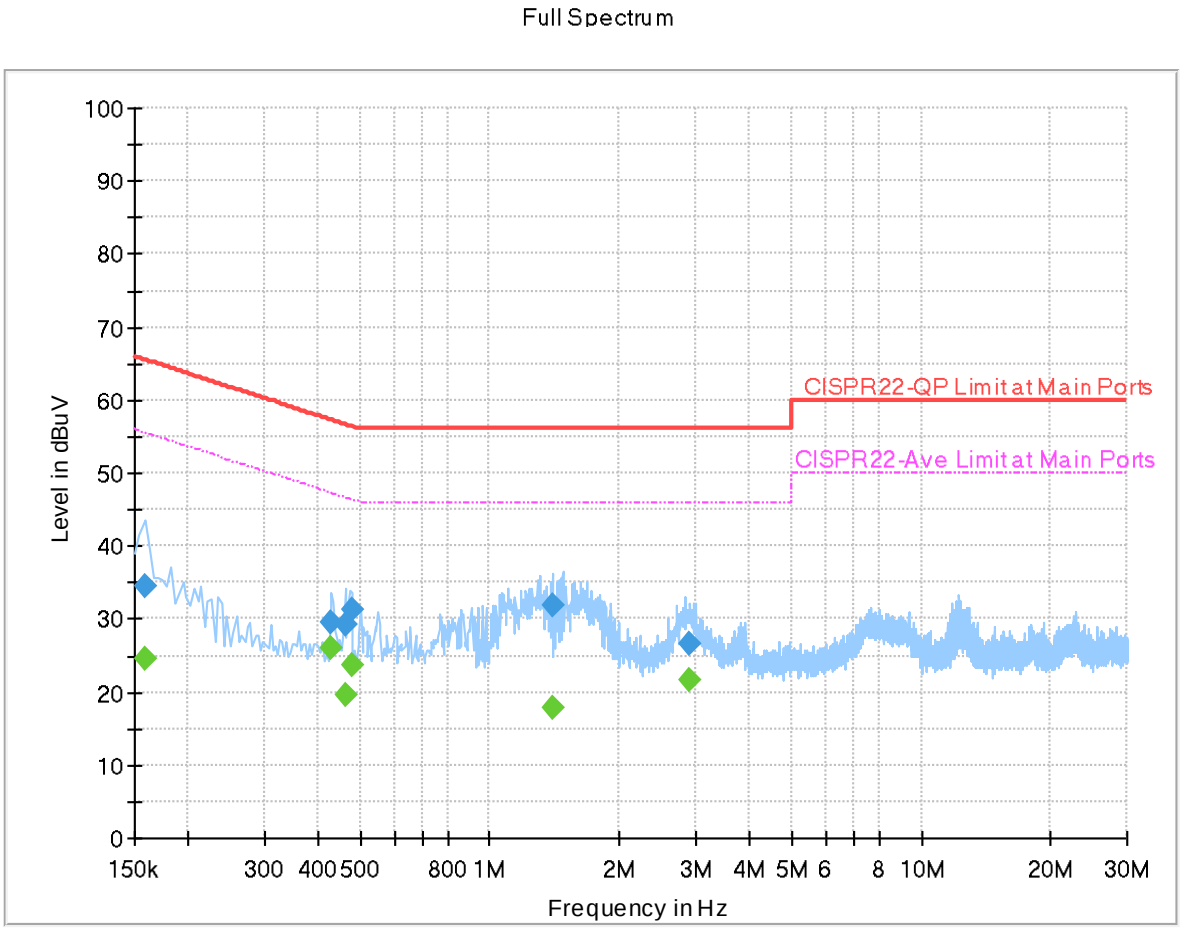


Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.154000	---	27.93	55.78	27.85	L1	OFF	19.9
0.154000	36.38	---	65.78	29.40	L1	OFF	19.9
0.186000	---	22.66	54.21	31.55	L1	OFF	19.9
0.186000	32.02	---	64.21	32.19	L1	OFF	19.9
0.370000	---	27.81	48.50	20.69	L1	OFF	19.9
0.370000	31.87	---	58.50	26.63	L1	OFF	19.9
0.418000	---	15.58	47.49	31.91	L1	OFF	20.0
0.418000	20.65	---	57.49	36.84	L1	OFF	20.0
0.506000	---	25.51	46.00	20.49	L1	OFF	20.0
0.506000	31.94	---	56.00	24.06	L1	OFF	20.0
0.894000	---	22.20	46.00	23.80	L1	OFF	20.0
0.894000	31.25	---	56.00	24.75	L1	OFF	20.0
1.454000	---	19.14	46.00	26.86	L1	OFF	20.0
1.454000	33.87	---	56.00	22.13	L1	OFF	20.0
13.566000	---	17.05	50.00	32.95	L1	OFF	20.1
13.566000	22.25	---	60.00	37.75	L1	OFF	20.1

EUT Information

Report NO :	380307
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)
0.158000	---	24.50	55.57	31.07	N	OFF	19.9
0.158000	34.36	---	65.57	31.21	N	OFF	19.9
0.430000	---	25.90	47.25	21.35	N	OFF	20.0
0.430000	29.60	---	57.25	27.65	N	OFF	20.0
0.462000	---	19.61	46.66	27.05	N	OFF	20.0
0.462000	29.31	---	56.66	27.35	N	OFF	20.0
0.478000	---	23.57	46.37	22.80	N	OFF	20.0
0.478000	31.19	---	56.37	25.18	N	OFF	20.0
1.394000	---	17.79	46.00	28.21	N	OFF	20.0
1.394000	31.80	---	56.00	24.20	N	OFF	20.0
2.918000	---	21.73	46.00	24.27	N	OFF	20.0
2.918000	26.65	---	56.00	29.35	N	OFF	20.0

Appendix C. Radiated Spurious Emission

Test Engineer :	Bigshow Wang, Quentin Liu, and Danel Lee	Temperature :	21.0~26.0°C
		Relative Humidity :	45~60%

<BR + EDR Ant.3>

2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BT CH00 2402MHz		2336.355	50.23	-23.77	74	44.29	27.27	15.45	36.78	174	260	P	H
		2336.355	25.47	-28.53	54	-	-	-	-	-	-	A	H
	*	2402	116.04	-	-	109.86	27.41	15.54	36.77	174	260	P	H
	*	2402	91.28	-	-	-	-	-	-	-	-	A	H
													H
		2338.77	49.86	-24.14	74	43.9	27.28	15.46	36.78	329	312	P	V
		2338.77	25.1	-28.9	54	-	-	-	-	-	-	A	V
	*	2402	109.49	-	-	103.31	27.41	15.54	36.77	329	312	P	V
	*	2402	84.73	-	-	-	-	-	-	-	-	A	V
													V
BT CH 39 2441MHz		2385.46	50.65	-23.35	74	44.53	27.37	15.52	36.77	195	258	P	H
		2385.46	25.89	-28.11	54	-	-	-	-	-	-	A	H
	*	2441	115.3	-	-	108.92	27.56	15.59	36.77	195	258	P	H
	*	2441	90.54	-	-	-	-	-	-	-	-	A	H
		2484.53	50.74	-23.26	74	44.13	27.74	15.64	36.77	195	258	P	H
		2484.53	25.98	-28.02	54	-	-	-	-	-	-	A	H
		2327.36	50.41	-23.59	74	44.5	27.25	15.44	36.78	361	303	P	V
		2327.36	25.65	-28.35	54	-	-	-	-	-	-	A	V
	*	2441	111.37	-	-	104.99	27.56	15.59	36.77	361	303	P	V
	*	2441	86.61	-	-	-	-	-	-	-	-	A	V
		2490.41	50.63	-23.37	74	44	27.76	15.64	36.77	361	303	P	V
		2490.41	25.87	-28.13	54	-	-	-	-	-	-	A	V

BT	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	114.56	-	-	107.98	27.72	15.63	36.77	100	213	P	H
	*	2480	89.8	-	-	-	-	-	-	-	-	A	H
		2483.84	55.22	-18.78	74	48.61	27.74	15.64	36.77	100	213	P	H
		2483.84	30.46	-23.54	54	-	-	-	-	-	-	A	H
													H
													H
	*	2480	113.98	-	-	107.4	27.72	15.63	36.77	358	302	P	V
	*	2480	89.22	-	-	-	-	-	-	-	-	A	V
		2483.72	54.97	-19.03	74	48.37	27.73	15.64	36.77	358	302	P	V
		2483.72	30.21	-23.79	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	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	40.22	-33.78	74	57.37	32.12	8.49	57.76	-	-	P	H
		4804	15.46	-38.54	54	-	-	-	-	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		4804	40.2	-33.8	74	57.35	32.12	8.49	57.76	-	-	P	V
		4804	15.44	-38.56	54	-	-	-	-	-	-	A	V
													V
													V
													V
													V
													V
													V
													V
													V
													V

BT	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	39.84	-34.16	74	56.47	32.59	8.56	57.78	-	-	P	H
		4882	15.08	-38.92	54	-	-	-	-	-	-	A	H
		7323	44.4	-29.6	74	56.05	36.66	10.35	58.66	-	-	P	H
		7323	19.64	-34.36	54	-	-	-	-	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
													H
		4882	41.91	-32.09	74	58.54	32.59	8.56	57.78	-	-	P	V
		4882	17.15	-36.85	54	-	-	-	-	-	-	A	V
		7323	44.24	-29.76	74	55.89	36.66	10.35	58.66	-	-	P	V
		7323	19.48	-34.52	54	-	-	-	-	-	-	A	V
													V
													V
													V
													V
													V
													V
													V

BT	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		4960	44.37	-29.63	74	60.53	33	8.63	57.79	-	-	P	H
		4960	19.61	-34.39	54	-	-	-	-	-	-	A	H
		7440	42.61	-31.39	74	54.77	36.12	10.47	58.75	-	-	P	H
		7440	17.85	-36.15	54	-	-	-	-	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
													H
		4960	45.02	-28.98	74	61.18	33	8.63	57.79	-	-	P	V
		4960	20.26	-33.74	54	-	-	-	-	-	-	A	V
		7440	42.52	-31.48	74	54.68	36.12	10.47	58.75	-	-	P	V
		7440	17.76	-36.24	54	-	-	-	-	-	-	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 above 18GHz

2.4GHz BT (SHF)

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)
2.4GHz BT SHF		23634	44.18	-29.82	74	61.66	39.1	-2.63	53.95	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		23688	43.21	-30.79	74	60.65	39.1	-2.62	53.92	-	-	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.
					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)
2.4GHz BT LF		30	24.23	-15.77	40	31.49	24.41	0.72	32.39	-	-	P	H
		52.32	23.83	-16.17	40	42.01	13.33	0.95	32.46	-	-	P	H
		59.16	24.51	-15.49	40	44.19	11.72	1.03	32.43	-	-	P	H
		89.4	27.62	-15.88	43.5	44.18	14.59	1.26	32.41	-	-	P	H
		99.66	27.66	-15.84	43.5	42.79	15.97	1.31	32.41	-	-	P	H
		945.49	33.24	-12.76	46	30.27	30.28	3.74	31.05	-	-	P	H
													H
													H
													H
													H
													H
													H
		30	31.95	-8.05	40	39.21	24.41	0.72	32.39	-	-	P	V
		39.18	28.89	-11.11	40	40.43	20.07	0.81	32.42	-	-	P	V
		52.32	32.98	-7.02	40	51.16	13.33	0.95	32.46	-	-	P	V
		58.98	32.12	-7.88	40	51.8	11.72	1.03	32.43	-	-	P	V
		92.28	29.63	-13.87	43.5	45.68	15.09	1.27	32.41	-	-	P	V
		947.07	32.8	-13.2	46	29.73	30.37	3.74	31.04	-	-	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.

<BR + EDR Ant.4>

2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BT CH00 2402MHz		2365.545	50.32	-23.68	74	44.28	27.33	15.49	36.78	130	91	P	H
		2365.545	25.65	-28.35	54	-	-	-	-	-	-	A	H
	*	2402	114.23	-	-	108.05	27.41	15.54	36.77	130	91	P	H
	*	2402	89.56	-	-	-	-	-	-	-	-	A	H
													H
													H
		2351.475	49.66	-24.34	74	43.67	27.3	15.47	36.78	297	301	P	V
		2351.475	24.99	-29.01	54	-	-	-	-	-	-	A	V
	*	2402	108.63	-	-	102.45	27.41	15.54	36.77	297	301	P	V
	*	2402	83.96	-	-	-	-	-	-	-	-	A	V
													V
													V
BT CH 39 2441MHz		2347.66	50.25	-23.75	74	44.26	27.3	15.47	36.78	245	94	P	H
		2347.66	25.46	-28.54	54	-	-	-	-	-	-	A	H
	*	2441	115.71	-	-	109.33	27.56	15.59	36.77	245	94	P	H
	*	2441	90.92	-	-	-	-	-	-	-	-	A	H
		2494.19	50.54	-23.46	74	43.88	27.78	15.65	36.77	245	94	P	H
		2494.19	25.75	-28.25	54	-	-	-	-	-	-	A	H
		2329.04	50.25	-23.75	74	44.33	27.26	15.44	36.78	362	294	P	V
		2329.04	25.46	-28.54	54	-	-	-	-	-	-	A	V
	*	2441	110.82	-	-	104.44	27.56	15.59	36.77	362	294	P	V
	*	2441	86.03	-	-	-	-	-	-	-	-	A	V
		2494.96	51.32	-22.68	74	44.66	27.78	15.65	36.77	362	294	P	V
		2494.96	26.53	-27.47	54	-	-	-	-	-	-	A	V

BT	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	116.73	-	-	110.15	27.72	15.63	36.77	142	88	P	H
	*	2480	91.94	-	-	-	-	-	-	-	-	A	H
		2483.76	58.2	-15.8	74	51.59	27.74	15.64	36.77	142	88	P	H
		2483.76	33.41	-20.59	54	-	-	-	-	-	-	A	H
													H
													H
	*	2480	109.61	-	-	103.03	27.72	15.63	36.77	351	290	P	V
	*	2480	84.82	-	-	-	-	-	-	-	-	A	V
		2483.64	54.01	-19.99	74	47.41	27.73	15.64	36.77	351	290	P	V
		2483.64	29.22	-24.78	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	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	40.1	-33.9	74	57.25	32.12	8.49	57.76	-	-	P	H
		4804	15.31	-38.69	54	-	-	-	-	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		4804	40.41	-33.59	74	57.56	32.12	8.49	57.76	-	-	P	V
		4804	15.62	-38.38	54	-	-	-	-	-	-	A	V
													V
													V
													V
													V
													V
													V
													V
													V
													V

BT	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	39.7	-34.3	74	56.33	32.59	8.56	57.78	-	-	P	H
		4882	14.91	-39.09	54	-	-	-	-	-	-	A	H
		7323	43.71	-30.29	74	55.36	36.66	10.35	58.66	-	-	P	H
		7323	18.92	-35.08	54	-	-	-	-	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
													H
		4882	40.69	-33.31	74	57.32	32.59	8.56	57.78	-	-	P	V
		4882	15.9	-38.1	54	-	-	-	-	-	-	A	V
		7323	43.95	-30.05	74	55.6	36.66	10.35	58.66	-	-	P	V
		7323	19.16	-34.84	54	-	-	-	-	-	-	A	V
													V
													V
													V
													V
													V
													V
													V

BT	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		4960	41.02	-32.98	74	57.18	33	8.63	57.79	-	-	P	H
		4960	16.23	-37.77	54	-	-	-	-	-	-	A	H
		7440	41.7	-32.3	74	53.86	36.12	10.47	58.75	-	-	P	H
		7440	16.91	-37.09	54	-	-	-	-	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
													H
		4960	41.31	-32.69	74	57.47	33	8.63	57.79	-	-	P	V
		4960	16.52	-37.48	54	-	-	-	-	-	-	A	V
		7440	41.78	-32.22	74	53.94	36.12	10.47	58.75	-	-	P	V
		7440	16.99	-37.01	54	-	-	-	-	-	-	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 above 18GHz

2.4GHz BT (SHF)

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)
2.4GHz BT SHF		24516	43.93	-30.07	74	60.12	39.69	-2.49	53.39	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		23616	42.66	-31.34	74	60.14	39.1	-2.63	53.95	-	-	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.
					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)
2.4GHz BT LF		52.86	25.35	-14.65	40	43.8	13.05	0.95	32.45	-	-	P	H
		58.8	26.03	-13.97	40	45.67	11.76	1.03	32.43	-	-	P	H
		87.6	25.64	-14.36	40	42.37	14.43	1.25	32.41	-	-	P	H
		774.85	29.92	-16.08	46	30.63	28.08	3.35	32.14	-	-	P	H
		860.96	31.48	-14.52	46	30.61	29.1	3.5	31.73	-	-	P	H
		950.23	33.32	-12.68	46	30.06	30.52	3.75	31.01	-	-	P	H
													H
													H
													H
													H
													H
													H
		30	31.92	-8.08	40	39.18	24.41	0.72	32.39	-	-	P	V
		39.36	28.53	-11.47	40	40.16	19.98	0.81	32.42	-	-	P	V
		52.68	32.34	-7.66	40	50.7	13.14	0.95	32.45	-	-	P	V
		58.08	31.79	-8.21	40	51.32	11.89	1.02	32.44	-	-	P	V
		864.91	31.02	-14.98	46	30.19	29.03	3.51	31.71	-	-	P	V
		947.07	32.95	-13.05	46	29.88	30.37	3.74	31.04	-	-	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.

<HR 2Mbps Ant.3>

2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BT CH00 2402MHz		2342.97	50.64	-23.36	74	44.67	27.29	15.46	36.78	375	217	P	H
		2342.97	25.97	-28.03	54	-	-	-	-	-	-	A	H
	*	2402	114.15	-	-	107.97	27.41	15.54	36.77	375	217	P	H
	*	2402	89.48	-	-	-	-	-	-	-	-	A	H
													H
													H
		2353.365	50.85	-23.15	74	44.84	27.31	15.48	36.78	376	303	P	V
		2353.365	26.18	-27.82	54	-	-	-	-	-	-	A	V
	*	2402	112.33	-	-	106.15	27.41	15.54	36.77	376	303	P	V
	*	2402	87.66	-	-	-	-	-	-	-	-	A	V
													V
													V
BT CH 39 2441MHz		2315.74	50.54	-23.46	74	44.66	27.23	15.43	36.78	321	220	P	H
		2315.74	25.87	-28.13	54	-	-	-	-	-	-	A	H
	*	2441	114.65	-	-	108.27	27.56	15.59	36.77	321	220	P	H
	*	2441	89.98	-	-	-	-	-	-	-	-	A	H
		2486.49	51.23	-22.77	74	44.61	27.75	15.64	36.77	321	220	P	H
		2486.49	26.56	-27.44	54	-	-	-	-	-	-	A	H
		2382.8	50.44	-23.56	74	44.32	27.37	15.52	36.77	361	303	P	V
		2382.8	25.77	-28.23	54	-	-	-	-	-	-	A	V
	*	2441	111.98	-	-	105.6	27.56	15.59	36.77	361	303	P	V
	*	2441	87.31	-	-	-	-	-	-	-	-	A	V
		2485.93	50.68	-23.32	74	44.07	27.74	15.64	36.77	361	303	P	V
		2485.93	26.01	-27.99	54	-	-	-	-	-	-	A	V

BT	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	114.97	-	-	108.39	27.72	15.63	36.77	345	219	P	H
	*	2480	90.3	-	-	-	-	-	-	-	-	A	H
		2483.88	55.78	-18.22	74	49.17	27.74	15.64	36.77	345	219	P	H
		2483.88	31.11	-22.89	54	-	-	-	-	-	-	A	H
													H
													H
	*	2480	113.21	-	-	106.63	27.72	15.63	36.77	400	302	P	V
	*	2480	88.54	-	-	-	-	-	-	-	-	A	V
		2483.52	54.12	-19.88	74	47.52	27.73	15.64	36.77	400	302	P	V
		2483.52	29.45	-24.55	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	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	40.33	-33.67	74	57.48	32.12	8.49	57.76	-	-	P	H
		4804	15.57	-38.43	54	-	-	-	-	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		4804	39.45	-34.55	74	56.6	32.12	8.49	57.76	-	-	P	V
		4804	14.69	-39.31	54	-	-	-	-	-	-	A	V
													V
													V
													V
													V
													V
													V
													V
													V
													V

BT	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)
		4882	39.87	-34.13	74	56.5	32.59	8.56	57.78	-	-	P	H
		4882	15.2	-38.8	54	-	-	-	-	-	-	A	H
		7323	43.41	-30.59	74	55.06	36.66	10.35	58.66	-	-	P	H
		7323	18.74	-35.26	54	-	-	-	-	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
BT CH 39 2441MHz													H
		4882	40.64	-33.36	74	57.27	32.59	8.56	57.78	-	-	P	V
		4882	15.97	-38.03	54	-	-	-	-	-	-	A	V
		7323	44.66	-29.34	74	56.31	36.66	10.35	58.66	-	-	P	V
		7323	19.99	-34.01	54	-	-	-	-	-	-	A	V
													V
													V
													V
													V
													V
													V
													V
													V

BT	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		4960	42.1	-31.9	74	58.26	33	8.63	57.79	-	-	P	H
		4960	17.34	-36.66	54	-	-	-	-	-	-	A	H
		7440	43.25	-30.75	74	55.41	36.12	10.47	58.75	-	-	P	H
		7440	18.49	-35.51	54	-	-	-	-	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
													H
		4960	41.22	-32.78	74	57.38	33	8.63	57.79	-	-	P	V
		4960	16.46	-37.54	54	-	-	-	-	-	-	A	V
		7440	41.91	-32.09	74	54.07	36.12	10.47	58.75	-	-	P	V
		7440	17.15	-36.85	54	-	-	-	-	-	-	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.

<HR 2Mbps Ant.4>

2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BT CH00 2402MHz		2328.165	50.13	-23.87	74	44.21	27.26	15.44	36.78	131	87	P	H
		2328.165	25.46	-28.54	54	-	-	-	-	-	-	A	H
	*	2402	114.5	-	-	108.32	27.41	15.54	36.77	131	87	P	H
	*	2402	89.83	-	-	-	-	-	-	-	-	A	H
													H
													H
		2361.66	50.23	-23.77	74	44.2	27.32	15.49	36.78	334	301	P	V
		2361.66	25.56	-28.44	54	-	-	-	-	-	-	A	V
	*	2402	108.74	-	-	102.56	27.41	15.54	36.77	334	301	P	V
	*	2402	84.07	-	-	-	-	-	-	-	-	A	V
													V
													V
BT CH 39 2441MHz		2344.16	49.96	-24.04	74	43.99	27.29	15.46	36.78	242	91	P	H
		2344.16	25.29	-28.71	54	-	-	-	-	-	-	A	H
	*	2441	115.48	-	-	109.1	27.56	15.59	36.77	242	91	P	H
	*	2441	90.81	-	-	-	-	-	-	-	-	A	H
		2483.69	50.74	-23.26	74	44.14	27.73	15.64	36.77	242	91	P	H
		2483.69	26.07	-27.93	54	-	-	-	-	-	-	A	H
		2346.4	50.42	-23.58	74	44.44	27.29	15.47	36.78	365	297	P	V
		2346.4	25.75	-28.25	54	-	-	-	-	-	-	A	V
	*	2441	110.53	-	-	104.15	27.56	15.59	36.77	365	297	P	V
	*	2441	85.86	-	-	-	-	-	-	-	-	A	V
		2490.13	50.93	-23.07	74	44.3	27.76	15.64	36.77	365	297	P	V
		2490.13	26.26	-27.74	54	-	-	-	-	-	-	A	V

BT	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	115.5	-	-	108.92	27.72	15.63	36.77	180	90	P	H
	*	2480	90.83	-	-	-	-	-	-	-	-	A	H
		2483.64	57.08	-16.92	74	50.48	27.73	15.64	36.77	180	90	P	H
		2483.64	32.41	-21.59	54	-	-	-	-	-	-	A	H
													H
													H
	*	2480	110.47	-	-	103.89	27.72	15.63	36.77	353	291	P	V
	*	2480	85.8	-	-	-	-	-	-	-	-	A	V
		2483.68	53.95	-20.05	74	47.35	27.73	15.64	36.77	353	291	P	V
		2483.68	29.28	-24.72	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	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	39.2	-34.8	74	56.35	32.12	8.49	57.76	-	-	P	H
		4804	14.53	-39.47	54	-	-	-	-	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		4804	40.61	-33.39	74	57.76	32.12	8.49	57.76	-	-	P	V
		4804	15.94	-38.06	54	-	-	-	-	-	-	A	V
													V
													V
													V
													V
													V
													V
													V
													V
													V

BT	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)
		4882	38.92	-35.08	74	55.55	32.59	8.56	57.78	-	-	P	H
		4882	14.25	-39.75	54	-	-	-	-	-	-	A	H
		7323	43.88	-30.12	74	55.53	36.66	10.35	58.66	-	-	P	H
		7323	19.21	-34.79	54	-	-	-	-	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
BT CH 39 2441MHz													H
		4882	39.64	-34.36	74	56.27	32.59	8.56	57.78	-	-	P	V
		4882	14.97	-39.03	54	-	-	-	-	-	-	A	V
		7323	43.61	-30.39	74	55.26	36.66	10.35	58.66	-	-	P	V
		7323	18.94	-35.06	54	-	-	-	-	-	-	A	V
													V
													V
													V
													V
													V
													V
													V

BT	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		4960	40.55	-33.45	74	56.71	33	8.63	57.79	-	-	P	H
		4960	15.88	-38.12	54	-	-	-	-	-	-	A	H
		7440	42.03	-31.97	74	54.19	36.12	10.47	58.75	-	-	P	H
		7440	17.36	-36.64	54	-	-	-	-	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
													H
		4960	41.2	-32.8	74	57.36	33	8.63	57.79	-	-	P	V
		4960	16.53	-37.47	54	-	-	-	-	-	-	A	V
		7440	41.76	-32.24	74	53.92	36.12	10.47	58.75	-	-	P	V
		7440	17.09	-36.91	54	-	-	-	-	-	-	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.

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 **over limit** 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	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
				Limit	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. Over Limit(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. Over Limit(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”.

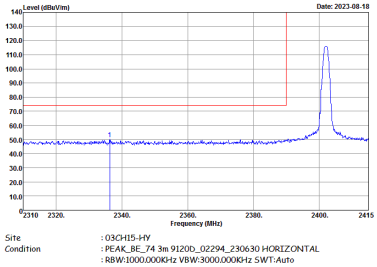
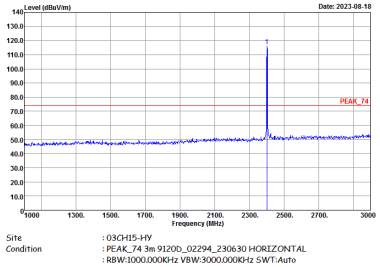
Appendix D. Radiated Spurious Emission Plots

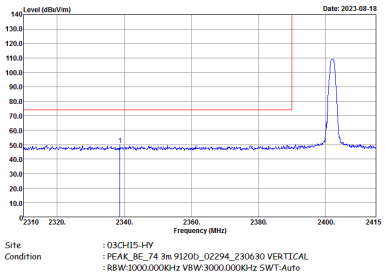
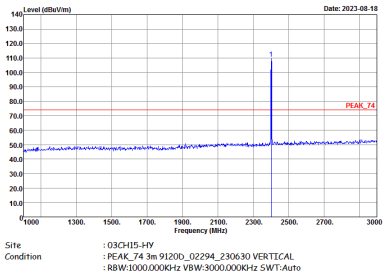
Test Engineer :	Bigshow Wang, Quentin Liu, and Danel Lee	**Temperature :**	21.0~26.0°C
		Relative Humidity :	45~60%

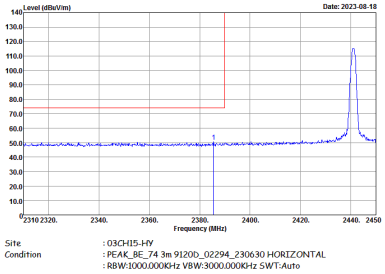
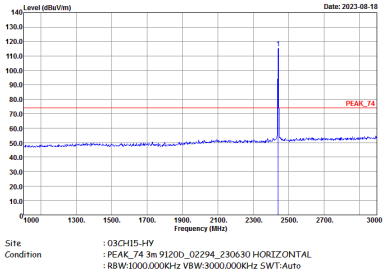
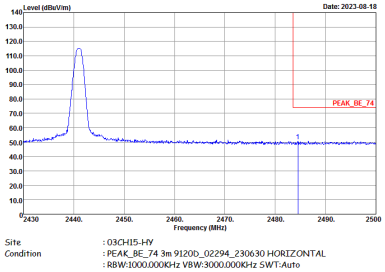
<BR + EDR Ant.3>

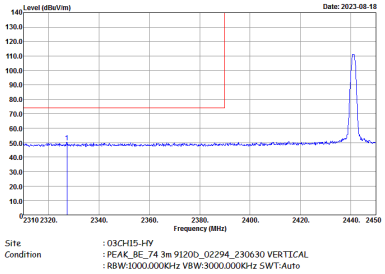
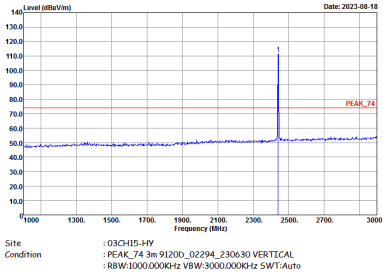
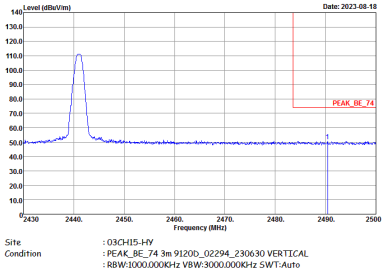
2.4GHz 2400~2483.5MHz

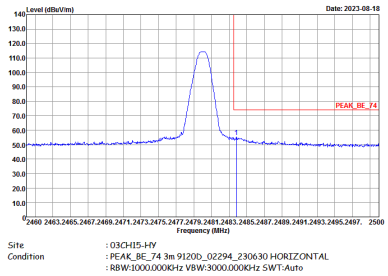
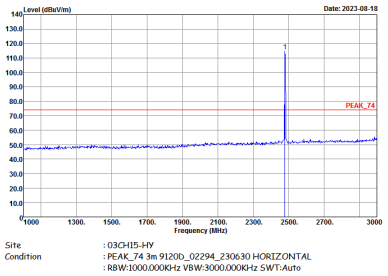
BT (Band Edge @ 3m)

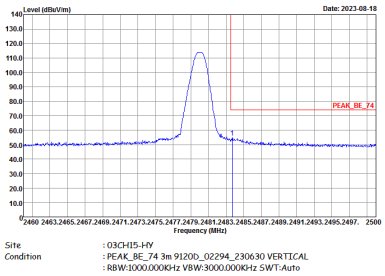
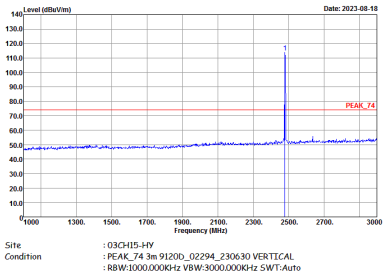
BT	**2.4GHz 2400~2483.5MHz Band Edge @ 3m**	
	BT CH00 2402MHz	
	Horizontal	**Fundamental**
Peak		

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

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

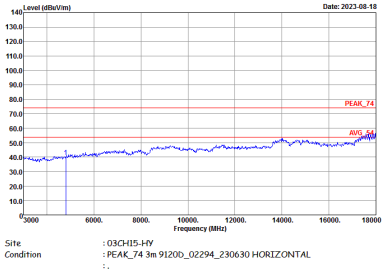
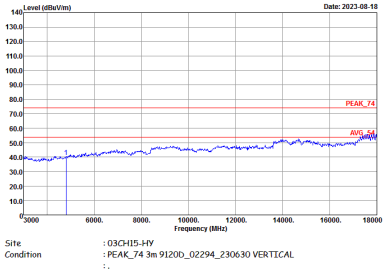
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH39 2441MHz	
	Vertical	Fundamental
Peak		
Peak		Left blank

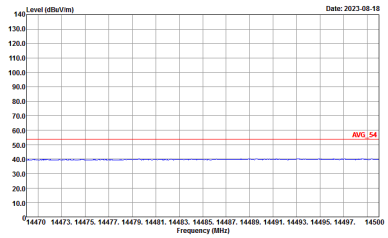
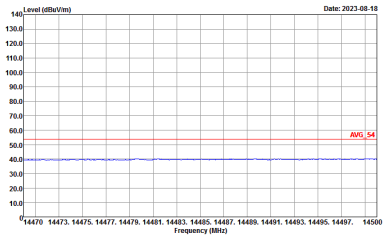
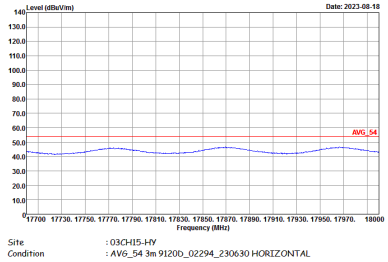
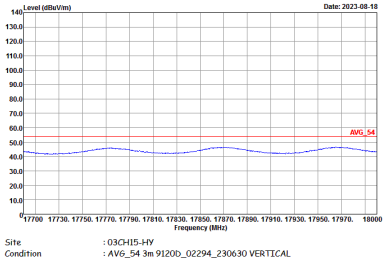
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH78 2480MHz	
	Horizontal	Fundamental
Peak		

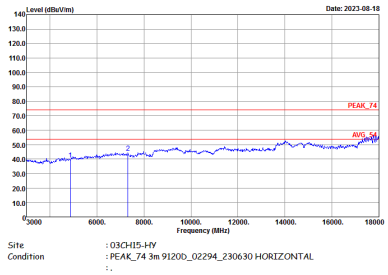
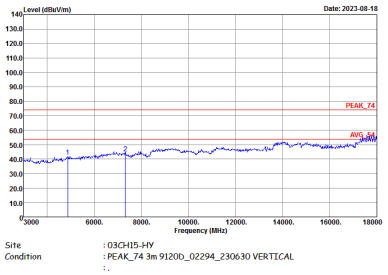
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH78 2480MHz	
	Vertical	Fundamental
Peak		

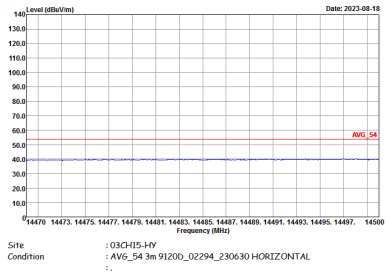
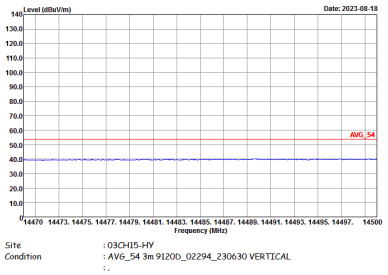
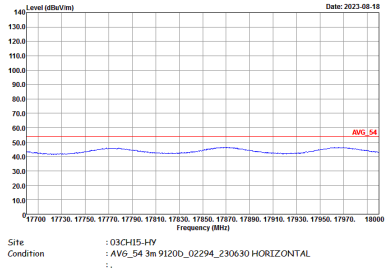
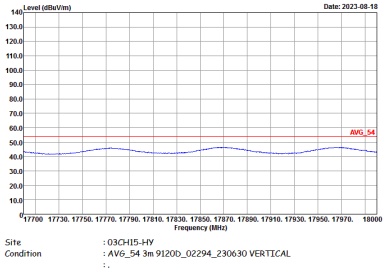
2.4GHz 2400~2483.5MHz

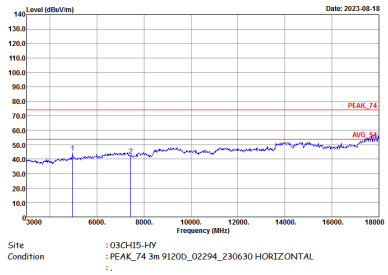
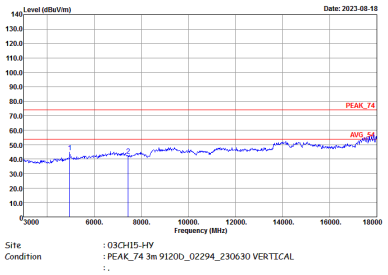
BT (Harmonic @ 3m)

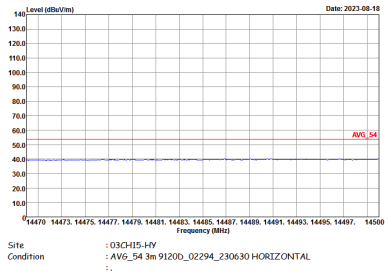
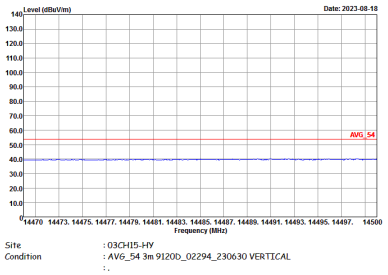
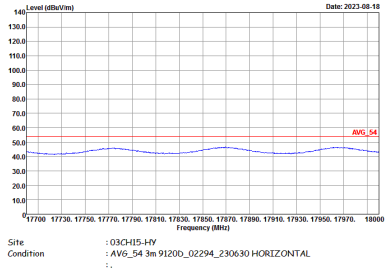
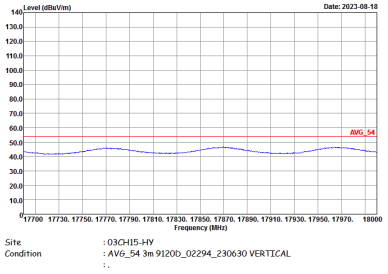
BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH00 2402MHz	
	Horizontal	Vertical
Peak Avg.		

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH00 2402MHz	
	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg		

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

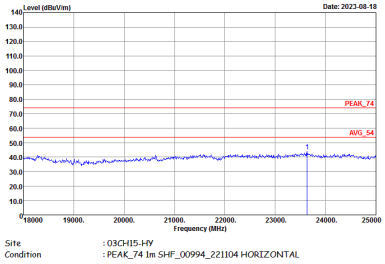
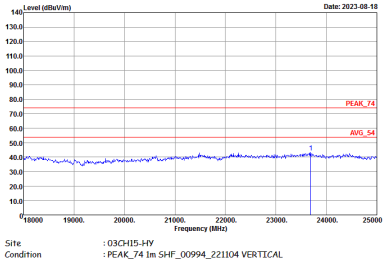
BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH39 2441MHz	
	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg		

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

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH78 2480MHz	
	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg		

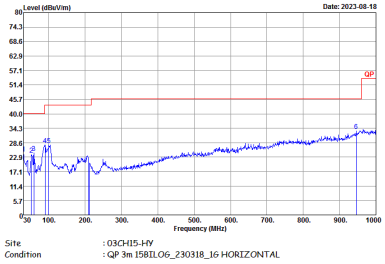
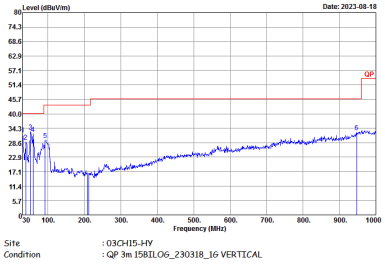
Emission above 18GHz

2.4GHz BT (SHF @ 1m)

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

Emission below 1GHz

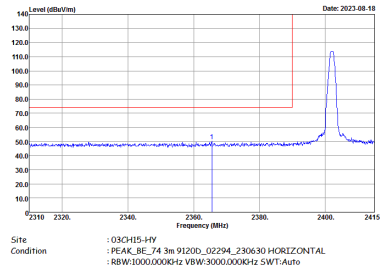
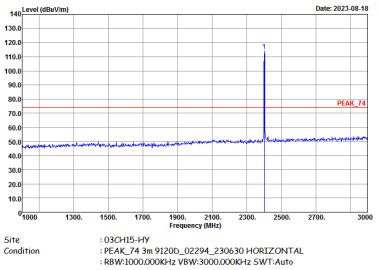
2.4GHz BT (LF)

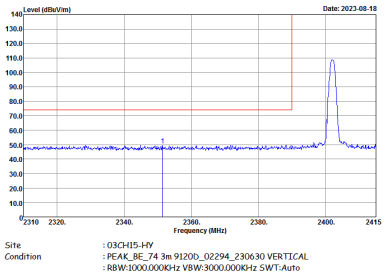
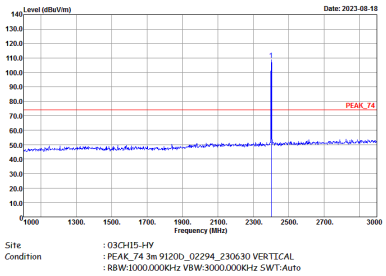
BT	2.4GHz 2400~2483.5MHz	
	BT LF	
	Horizontal	Vertical
QP / Peak		

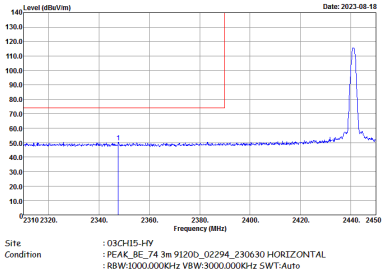
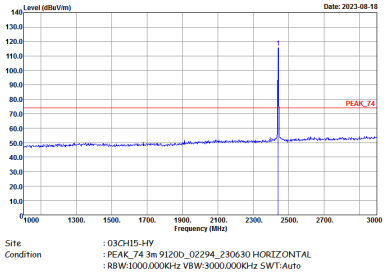
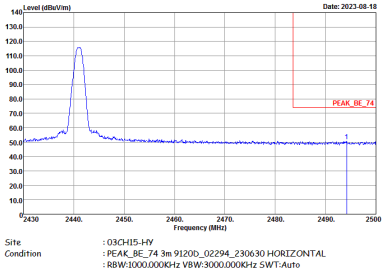
<BR + EDR Ant.4>

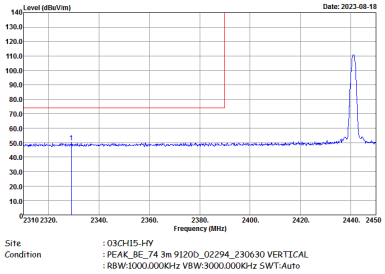
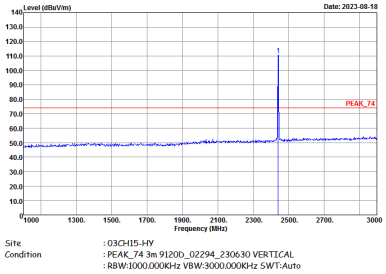
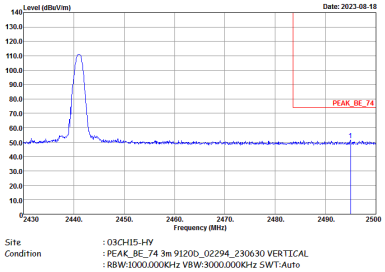
2.4GHz 2400~2483.5MHz

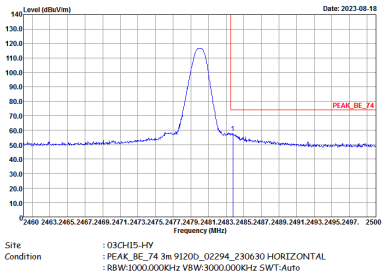
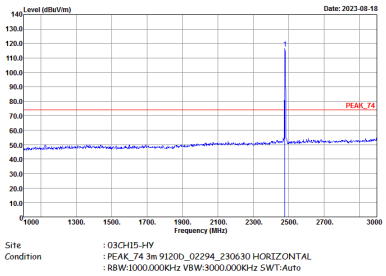
BT (Band Edge @ 3m)

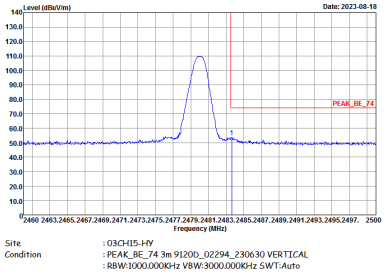
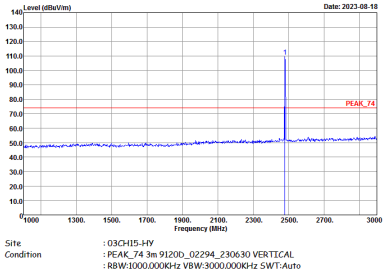
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH00 2402MHz	
	Horizontal	Fundamental
Peak		

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

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

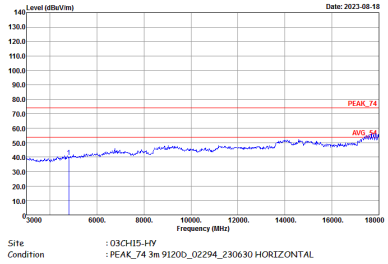
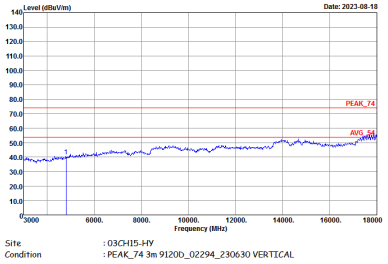
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH39 2441MHz	
	Vertical	Fundamental
Peak		
Peak		Left blank

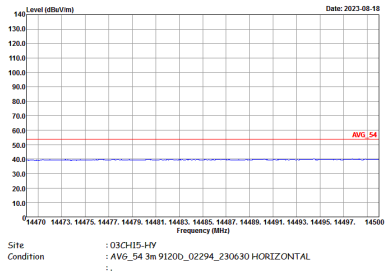
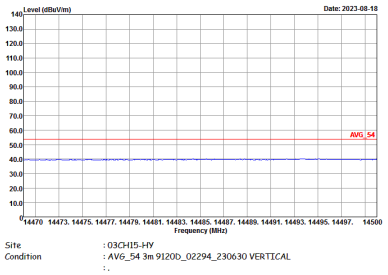
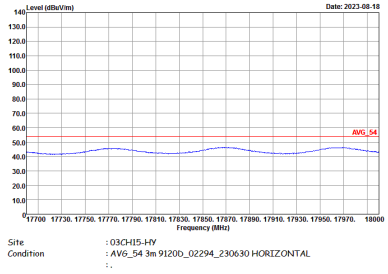
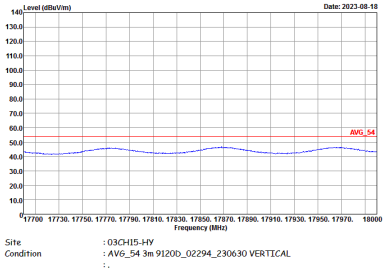
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH78 2480MHz	
	Horizontal	Fundamental
Peak		

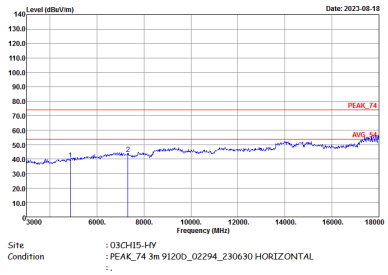
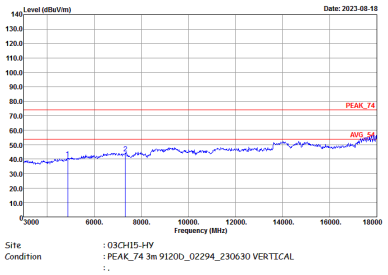
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH78 2480MHz	
	Vertical	Fundamental
Peak		

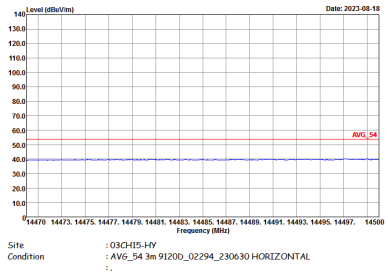
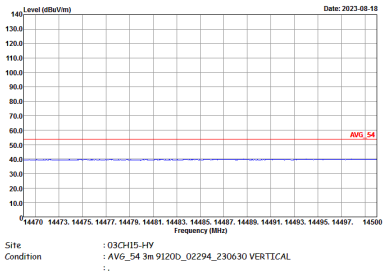
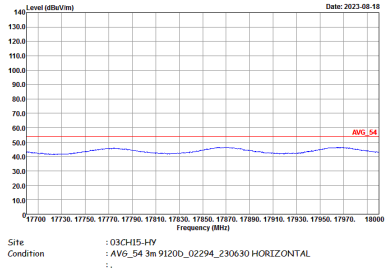
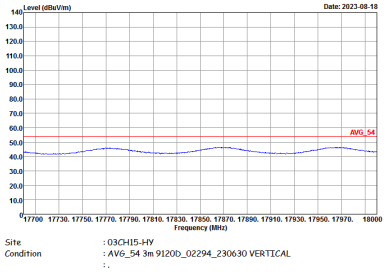
2.4GHz 2400~2483.5MHz

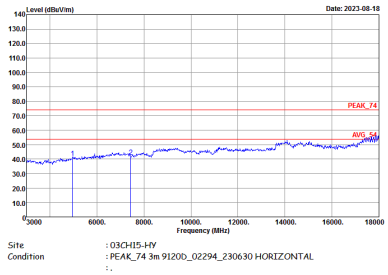
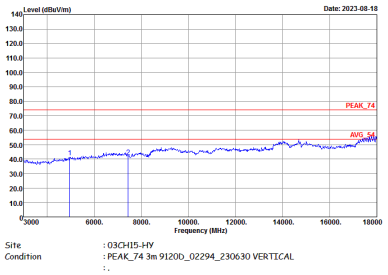
BT (Harmonic @ 3m)

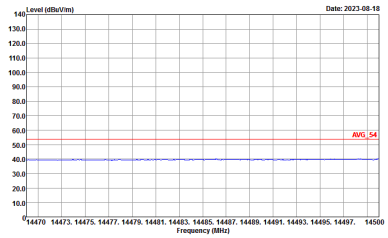
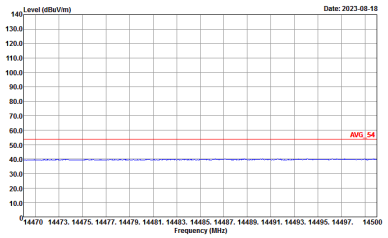
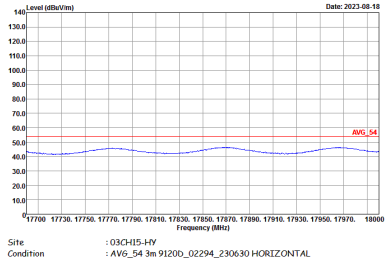
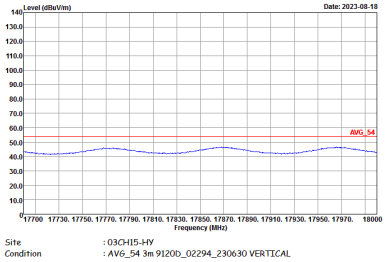
BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH00 2402MHz	
	Horizontal	Vertical
Peak Avg.		

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH00 2402MHz	
	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg		

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

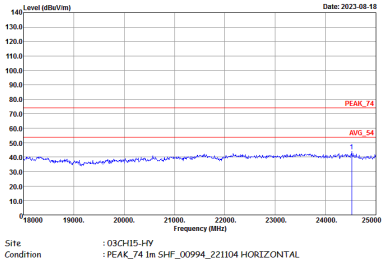
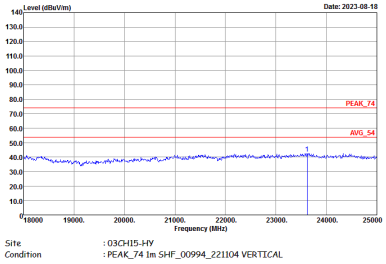
BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH39 2441MHz	
	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg		

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

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH78 2480MHz	
	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg		

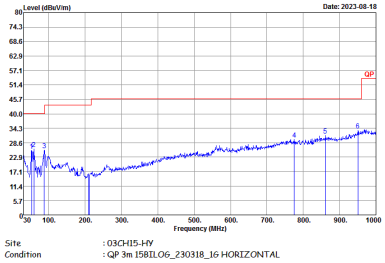
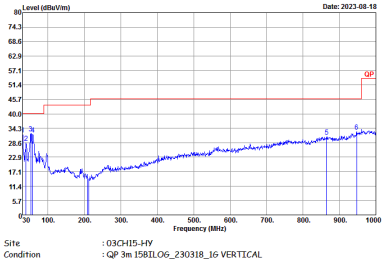
Emission above 18GHz

2.4GHz BT (SHF @ 1m)

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

Emission below 1GHz

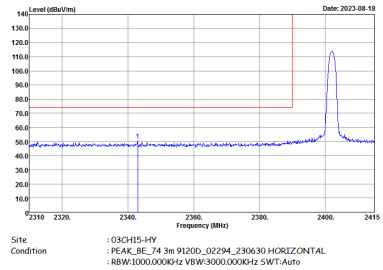
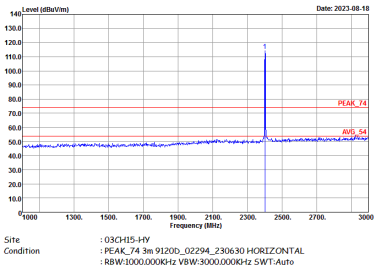
2.4GHz BT (LF)

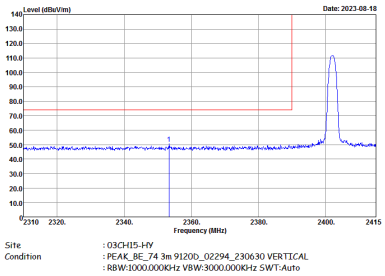
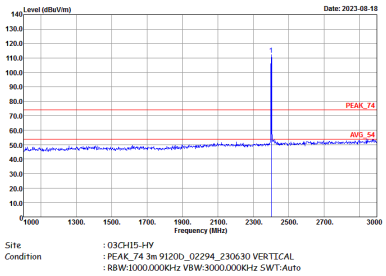
BT	2.4GHz 2400~2483.5MHz	
	BT LF	
	Horizontal	Vertical
QP / Peak		

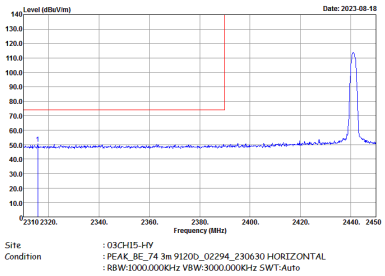
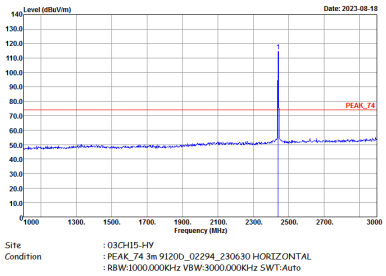
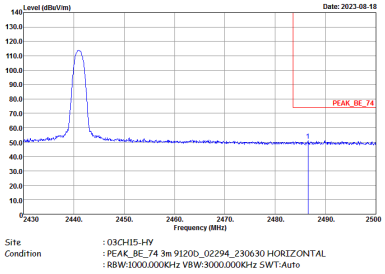
<HR 2Mbps Ant.3>

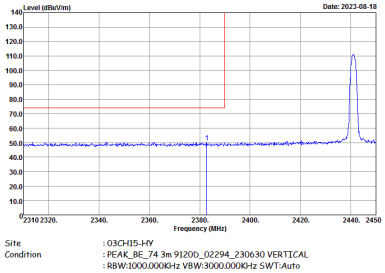
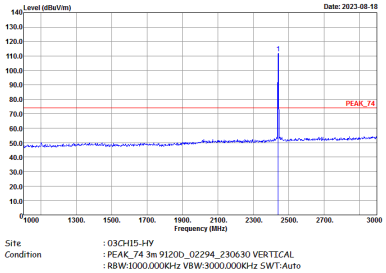
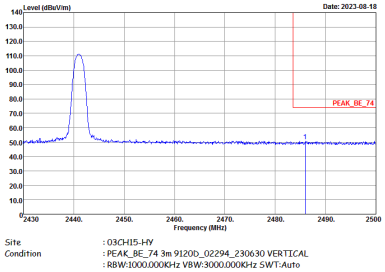
2.4GHz 2400~2483.5MHz

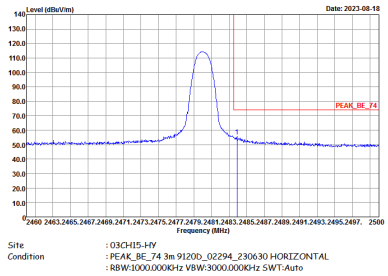
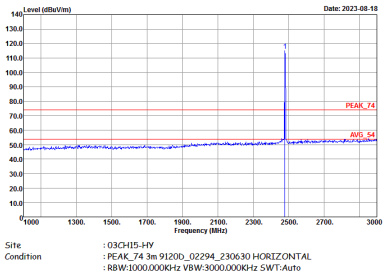
BT (Band Edge @ 3m)

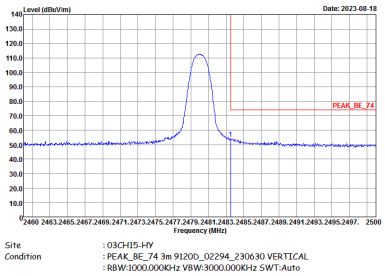
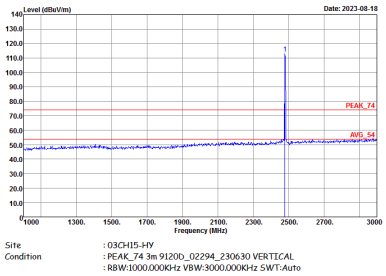
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH00 2402MHz	
	Horizontal	Fundamental
Peak		

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

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

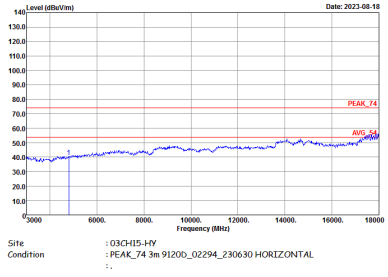
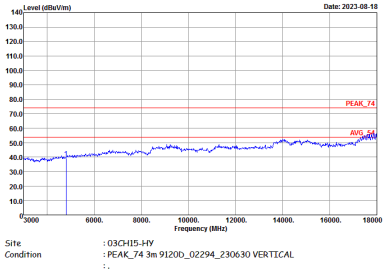
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH39 2441MHz	
	Vertical	Fundamental
Peak		
Peak		Left blank

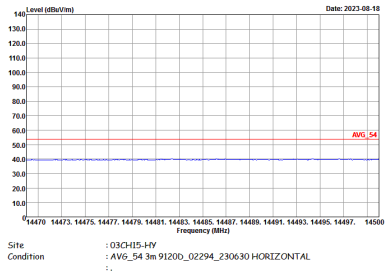
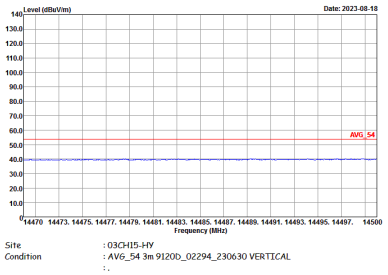
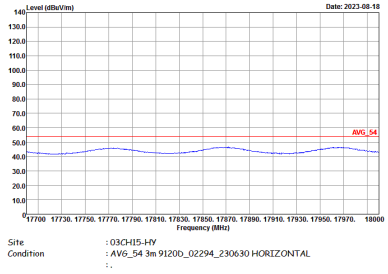
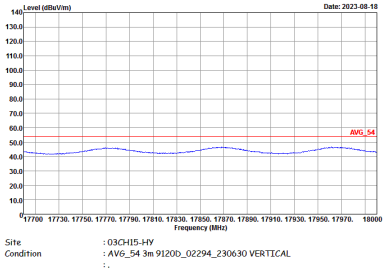
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH78 2480MHz	
	Horizontal	Fundamental
Peak		

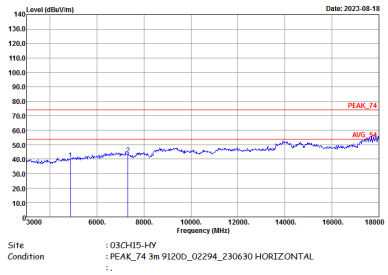
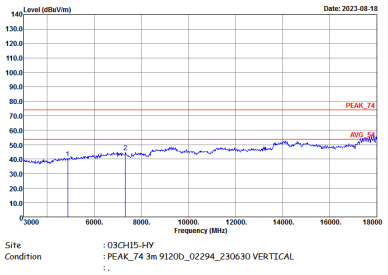
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH78 2480MHz	
	Vertical	Fundamental
Peak		

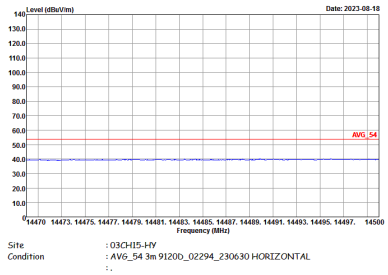
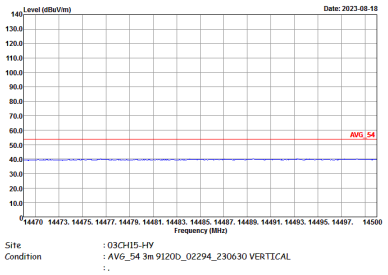
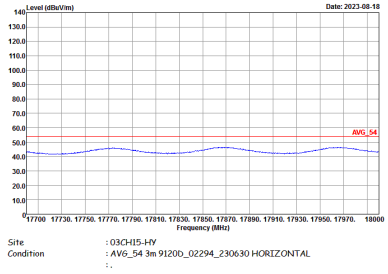
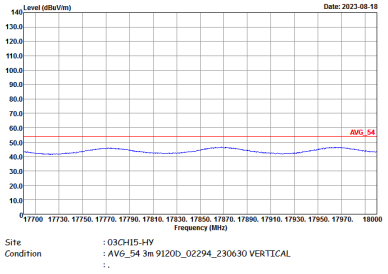
2.4GHz 2400~2483.5MHz

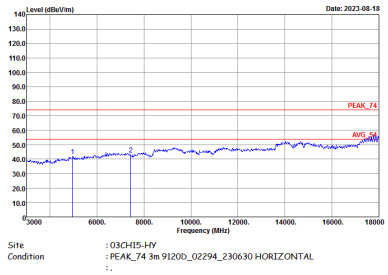
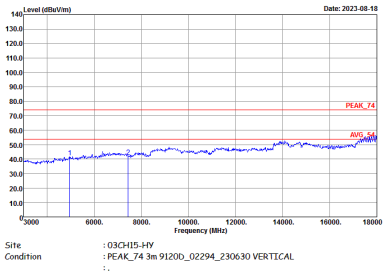
BT (Harmonic @ 3m)

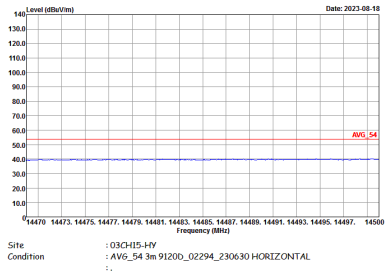
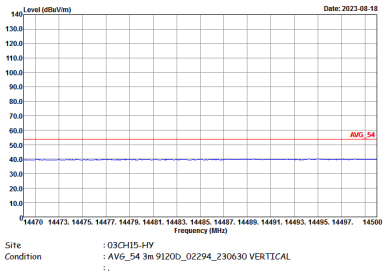
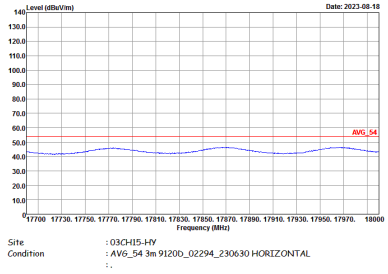
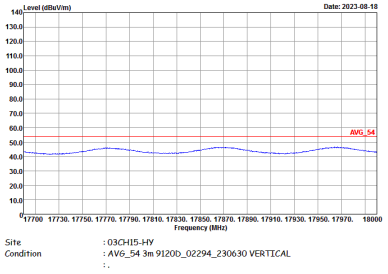
BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH00 2402MHz	
	Horizontal	Vertical
Peak Avg.		

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH00 2402MHz	
	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg.		

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

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH39 2441MHz	
	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg.		

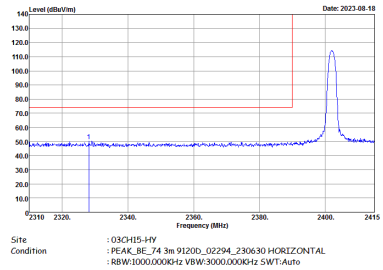
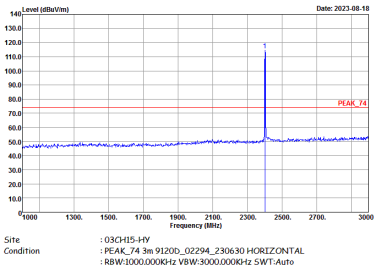
BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH78 2480MHz	
	Horizontal	Vertical
Peak Avg.		

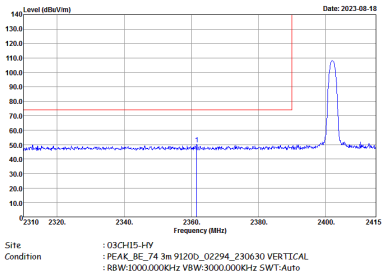
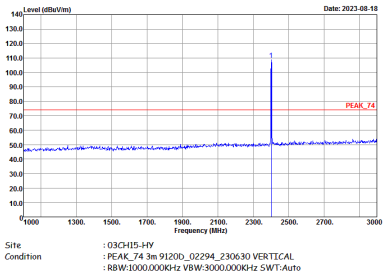
BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH78 2480MHz	
	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg.		

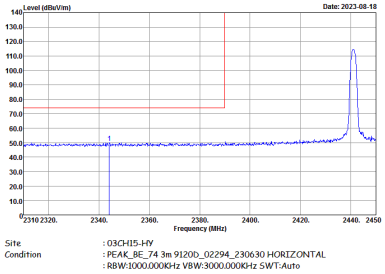
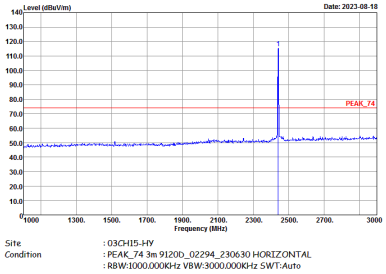
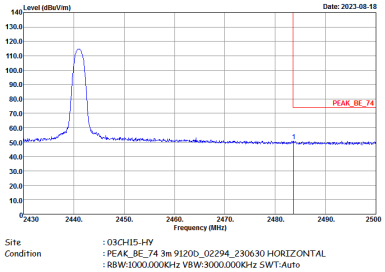
<HR 2Mbps Ant.4>

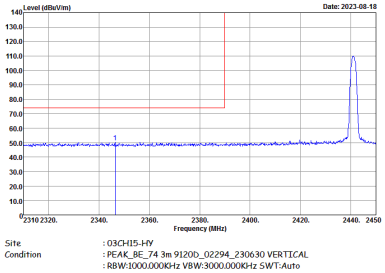
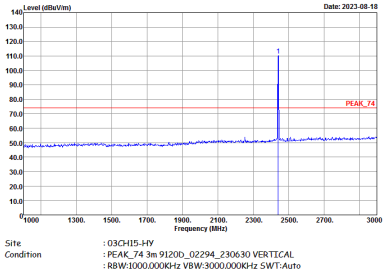
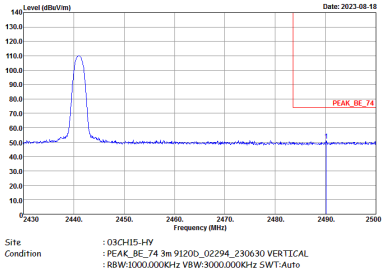
2.4GHz 2400~2483.5MHz

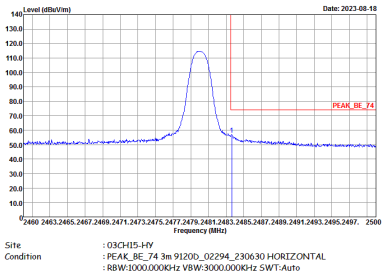
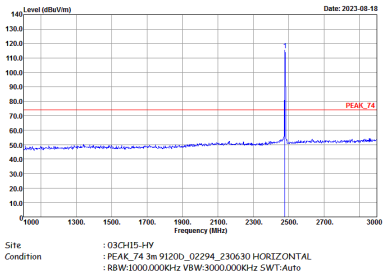
BT (Band Edge @ 3m)

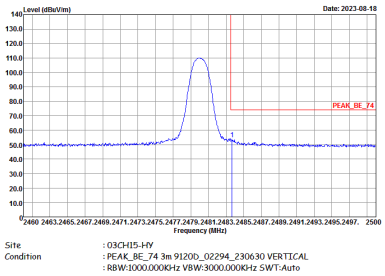
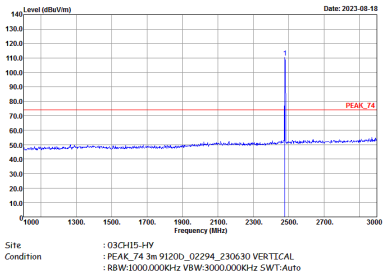
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH00 2402MHz	
	Horizontal	Fundamental
Peak		

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

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

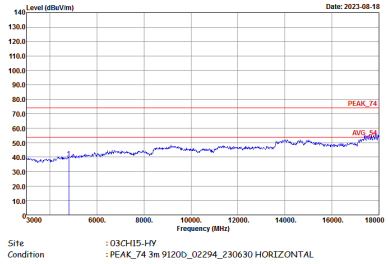
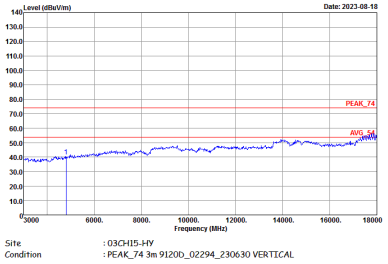
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH39 2441MHz	
	Vertical	Fundamental
Peak		
Peak		Left blank

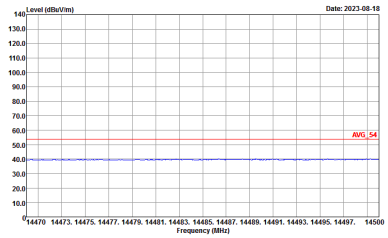
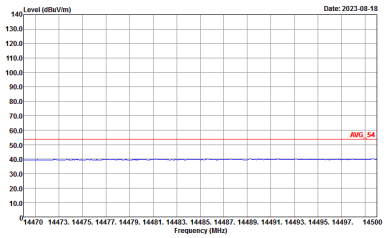
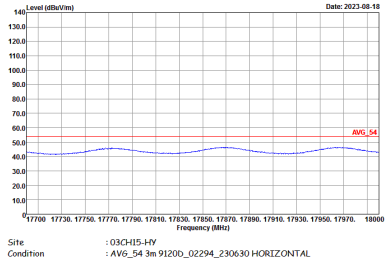
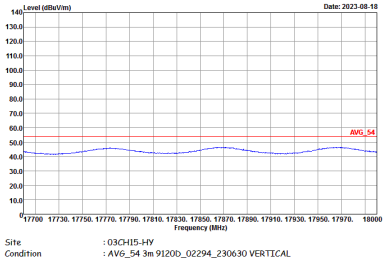
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH78 2480MHz	
	Horizontal	Fundamental
Peak		

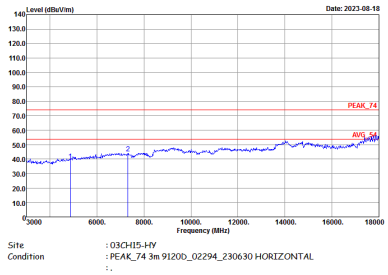
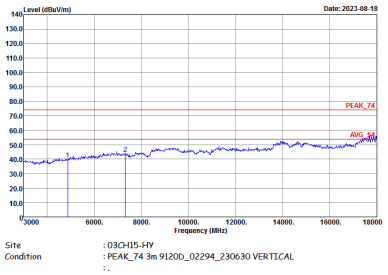
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH78 2480MHz	
	Vertical	Fundamental
Peak		

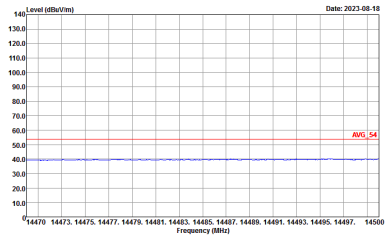
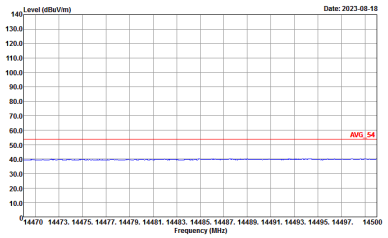
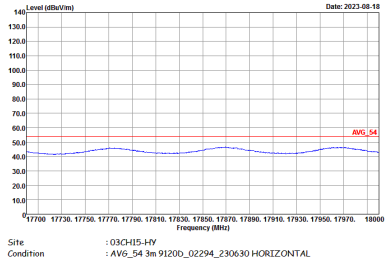
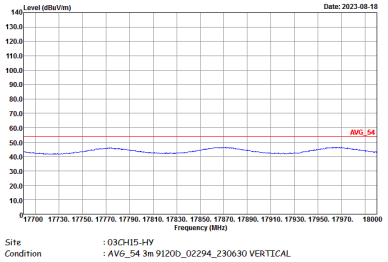
2.4GHz 2400~2483.5MHz

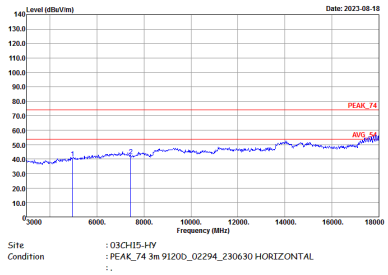
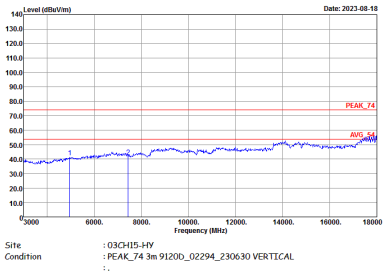
BT (Harmonic @ 3m)

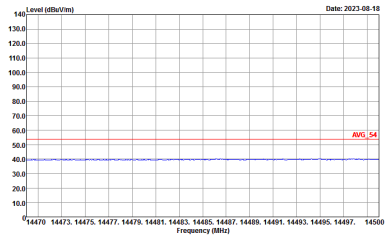
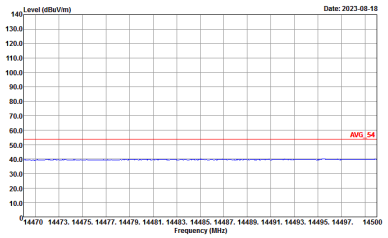
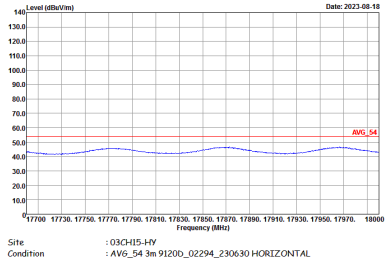
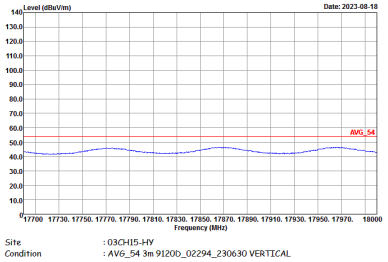
BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH00 2402MHz	
	Horizontal	Vertical
Peak Avg.		

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH00 2402MHz	
	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg.		

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

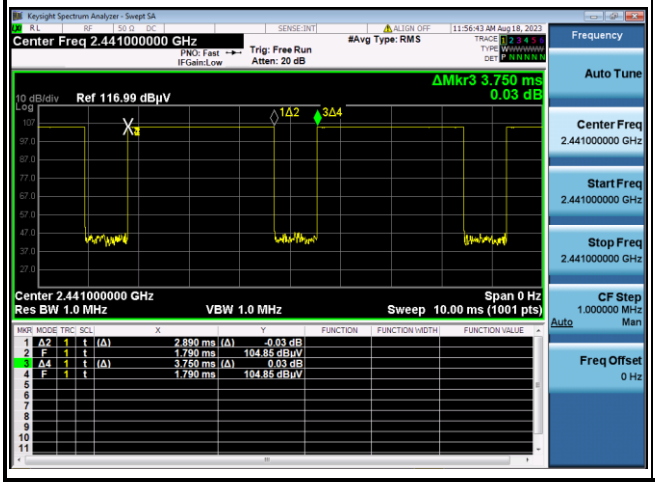
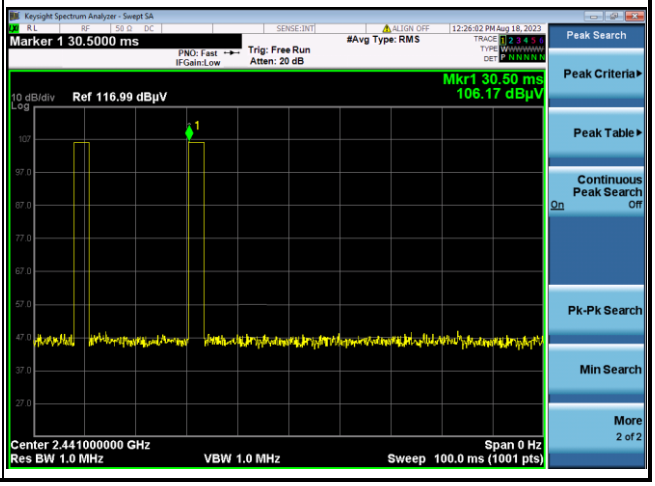
BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH39 2441MHz	
	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg.		

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

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH78 2480MHz	
	Horizontal	Vertical
14.47G ~14.5G Avg.		
17.7G ~18G Avg.		

Appendix E. Duty Cycle Plots

<BR + EDR Ant.3>

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

Note:

1. Worst case Duty cycle = on time/100 milliseconds = 2 * 2.89 / 100 = 5.78 %
2. Worst case Duty cycle correction factor = 20*log(Duty cycle) = -24.76 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

2.89 ms x 20 channels = 57.8 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 / 57.8 ms] = 2 hops

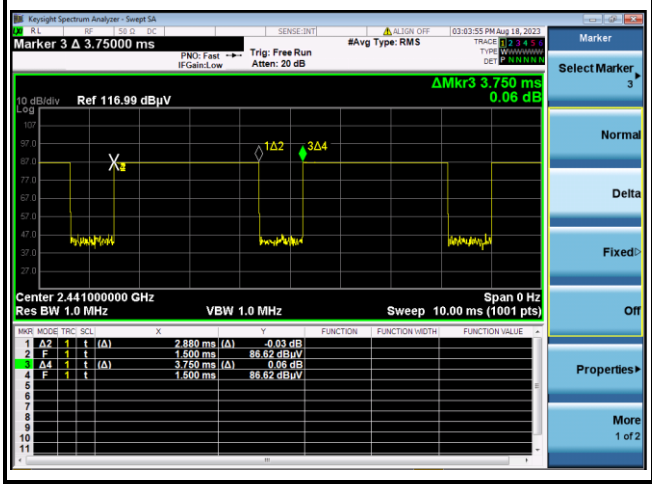
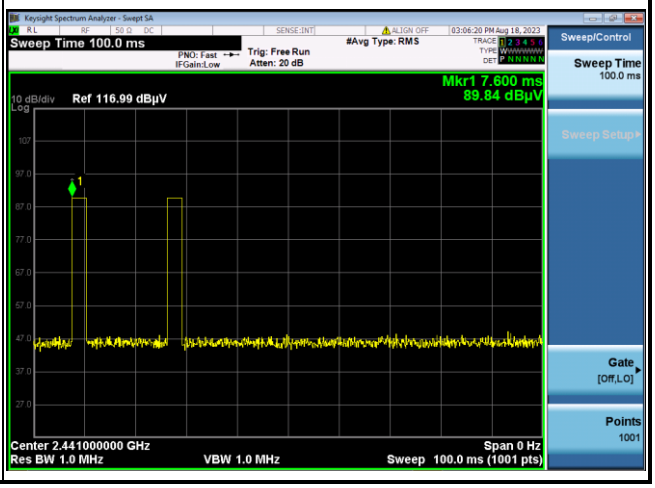
Thus, the maximum possible ON time:

2.89 ms x 2 = 5.78 ms

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

20 x log(5.78 ms/100 ms) = -24.76 dB

<BR + EDR Ant.4>

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

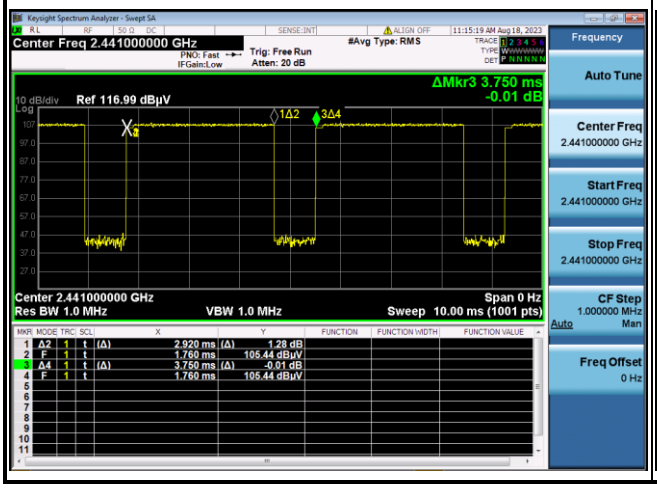
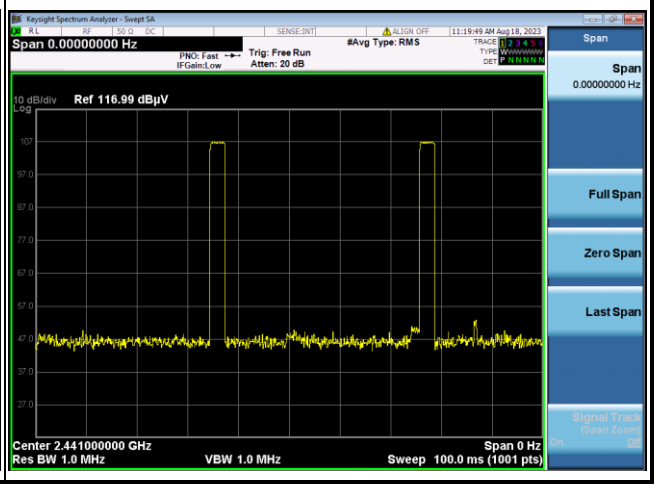
Thus, the maximum possible ON time:

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

<HR 2Mbps Ant.3>

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

Note:

7. Worst case Duty cycle = on time/100 milliseconds = 2 * 2.92 / 100 = 5.84 %
8. Worst case Duty cycle correction factor = 20*log(Duty cycle) = -24.67 dB
9. 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

2.92 ms x 20 channels = 58.4 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 / 58.4 ms] = 2 hops

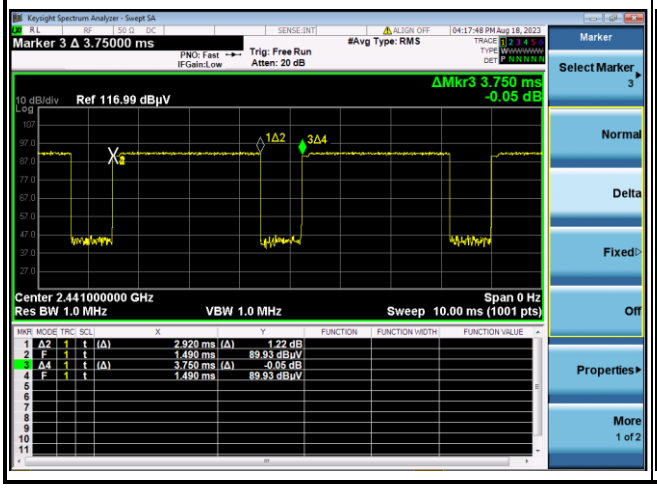
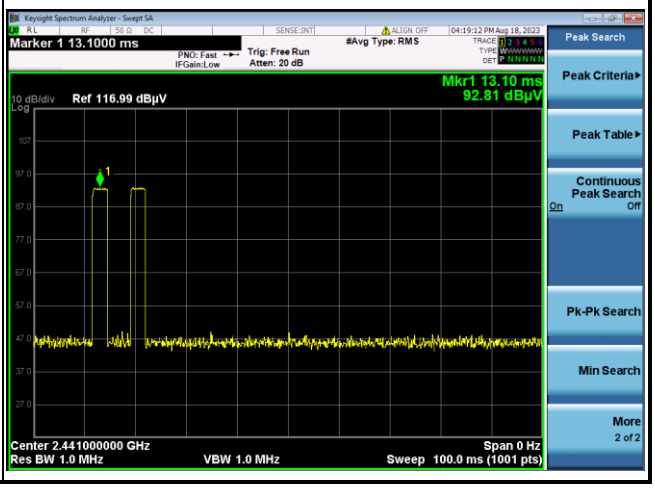
Thus, the maximum possible ON time:

2.92 ms x 2 = 5.84 ms

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

20 x log(5.84 ms/100 ms) = -24.67 dB

<HR 2Mbps Ant.4>

2DH5 on time (One Pulse) Plot on Channel 39	on time (Count Pulses) Plot on Channel 39
	

Note:

10. Worst case Duty cycle = on time/100 milliseconds = 2 * 2.92 / 100 = 5.84 %
11. Worst case Duty cycle correction factor = 20*log(Duty cycle) = -24.67 dB
12. 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

2.92 ms x 20 channels = 58.4 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 / 58.4 ms] = 2 hops

Thus, the maximum possible ON time:

2.92 ms x 2 = 5.84 ms

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

20 x log(5.84 ms/100 ms) = -24.67 dB

———THE END———