

Annex for FCC Bluetooth BR&EDR

Test Report No. : CTL2103245011-WF01

Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.966	2401.526	2402.492	---	PASS
		2441	0.963	2440.526	2441.489	---	PASS
		2480	0.966	2479.523	2480.489	---	PASS
2DH5	Ant1	2402	1.320	2401.334	2402.654	---	PASS
		2441	1.296	2440.355	2441.651	---	PASS
		2480	1.296	2479.355	2480.651	---	PASS
3DH5	Ant1	2402	1.302	2401.343	2402.645	---	PASS
		2441	1.305	2440.343	2441.648	---	PASS
		2480	1.305	2479.343	2480.648	---	PASS

Test Graphs

DH5_Ant1_2402



DH5_Ant1_2441



DH5_Ant1_2480



2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.86124	2401.564	2402.426	---	PASS
		2441	0.85929	2440.563	2441.422	---	PASS
		2480	0.85945	2479.561	2480.421	---	PASS
2DH5	Ant1	2402	1.1688	2401.411	2402.579	---	PASS
		2441	1.1690	2440.409	2441.578	---	PASS
		2480	1.1695	2479.408	2480.578	---	PASS
3DH5	Ant1	2402	1.1764	2401.403	2402.579	---	PASS
		2441	1.1767	2440.402	2441.579	---	PASS
		2480	1.1781	2479.401	2480.579	---	PASS

Test Graphs

DH5_Ant1_2402



DH5_Ant1_2441



DH5_Ant1_2480



2DHS_Ant1_2402



2DHS_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



Appendix C: Maximum conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	3.97	<=20.97	PASS
		2441	4.67	<=20.97	PASS
		2480	4.85	<=20.97	PASS
2DH5	Ant1	2402	6.49	<=20.97	PASS
		2441	7.18	<=20.97	PASS
		2480	7.3	<=20.97	PASS
3DH5	Ant1	2402	6.77	<=20.97	PASS
		2441	7.43	<=20.97	PASS
		2480	7.57	<=20.97	PASS

Test Graphs

DH5_Ant1_2402



DH5_Ant1_2441



DH5_Ant1_2480



2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.86	≥ 0.644	PASS
2DH5	Ant1	Hop	1.306	≥ 0.880	PASS
3DH5	Ant1	Hop	1.144	≥ 0.870	PASS

Test Graphs

DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop



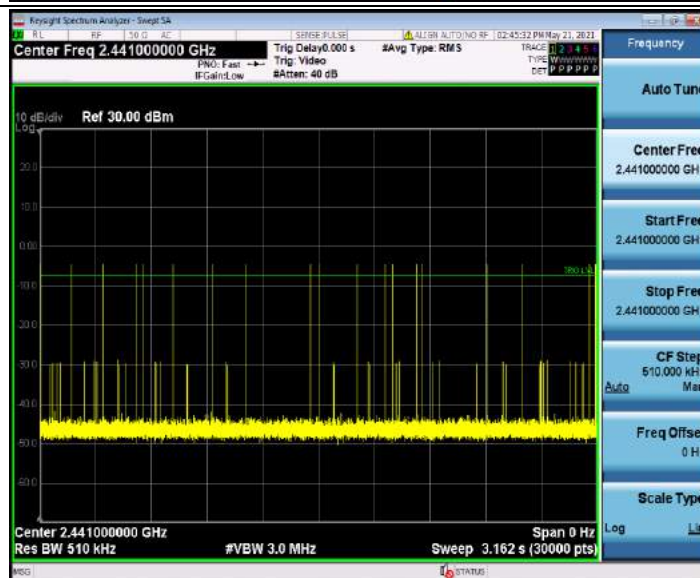
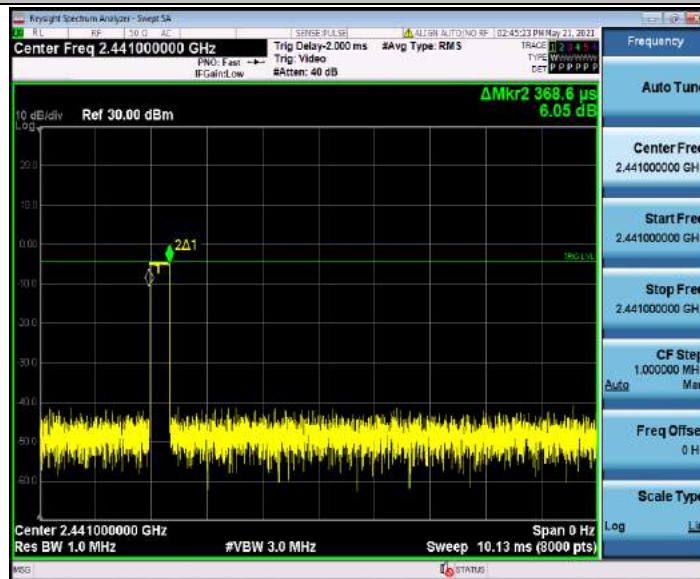
Appendix E: Time of occupancy

Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.37	190	0.07	<=0.4	PASS
DH3	Ant1	Hop	1.63	170	0.276	<=0.4	PASS
DH5	Ant1	Hop	2.87	120	0.345	<=0.4	PASS
2DH1	Ant1	Hop	0.38	130	0.049	<=0.4	PASS
2DH3	Ant1	Hop	1.63	130	0.212	<=0.4	PASS
2DH5	Ant1	Hop	2.88	110	0.316	<=0.4	PASS
3DH1	Ant1	Hop	0.38	150	0.057	<=0.4	PASS
3DH3	Ant1	Hop	1.63	140	0.228	<=0.4	PASS
3DH5	Ant1	Hop	2.88	90	0.259	<=0.4	PASS

Test Graphs

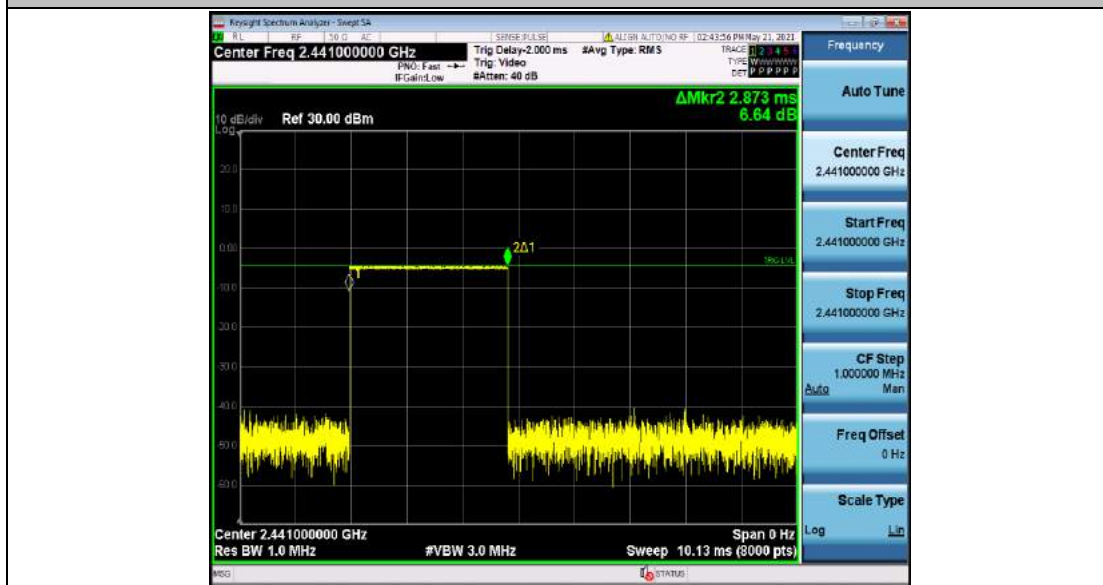
DH1_Ant1_Hop

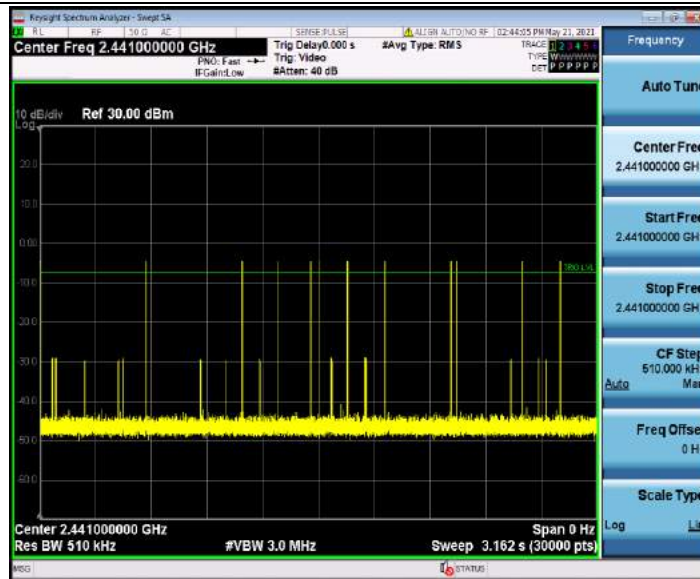


DH3_Ant1_Hop

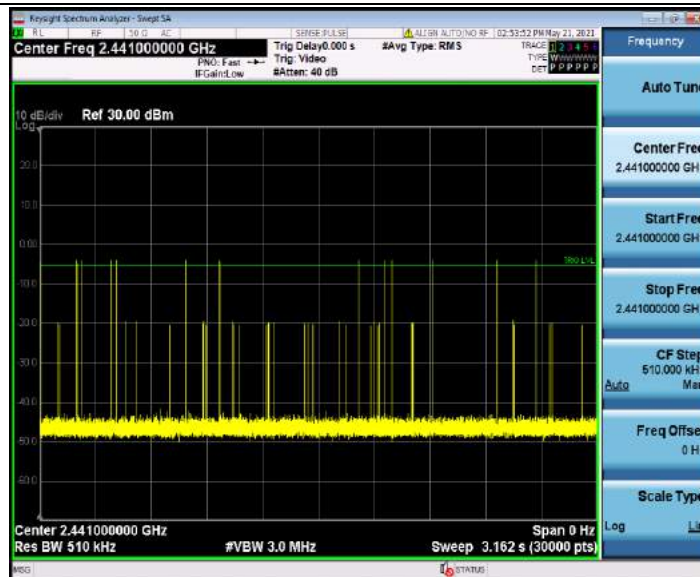
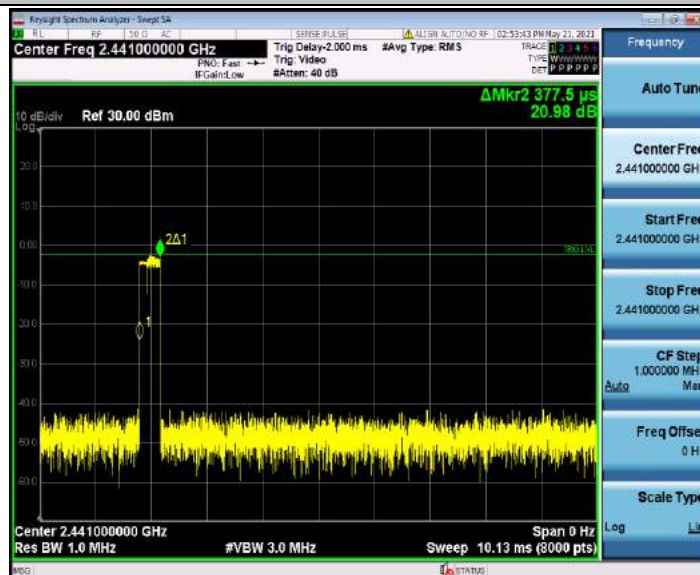


DH5_Ant1_Hop

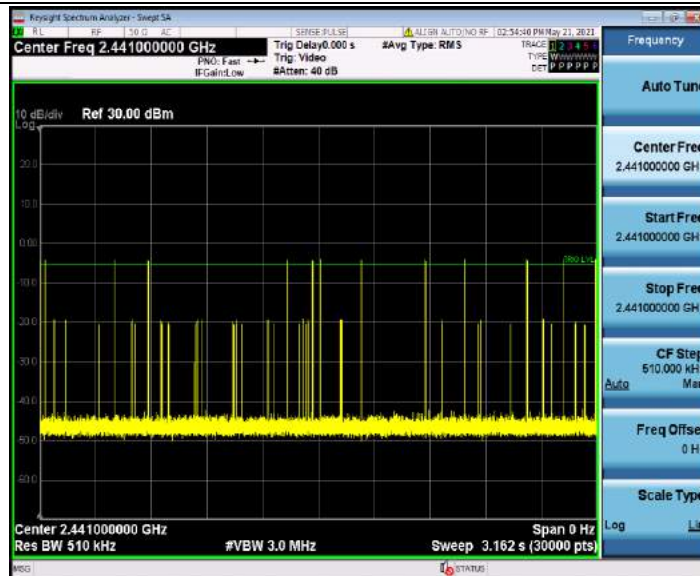
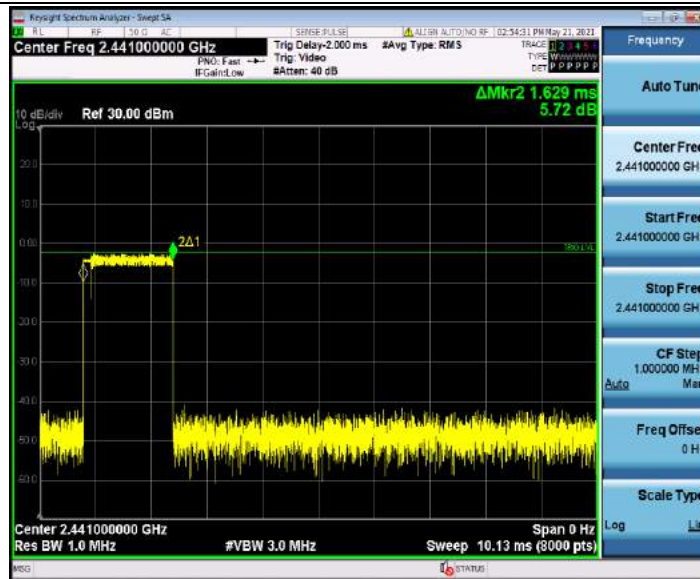




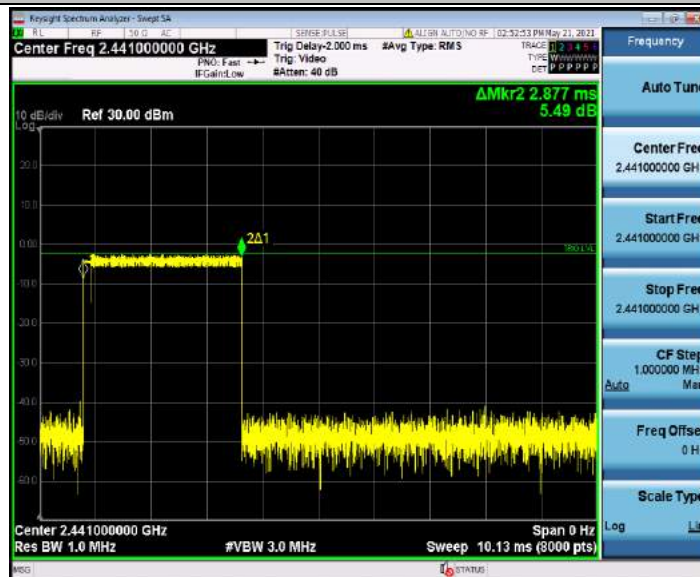
2DH1_Ant1_Hop

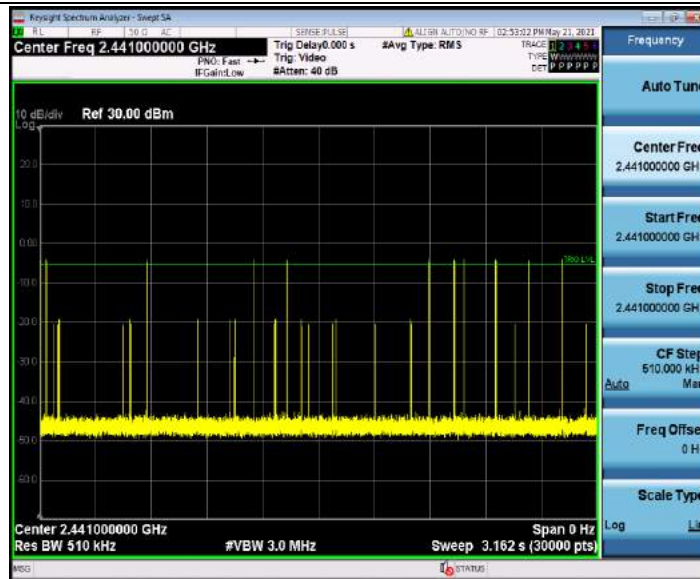


2DH3_Ant1_Hop

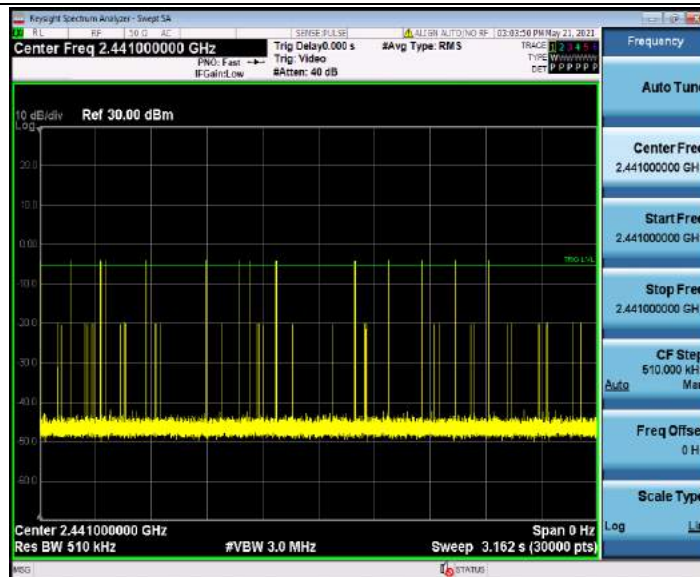
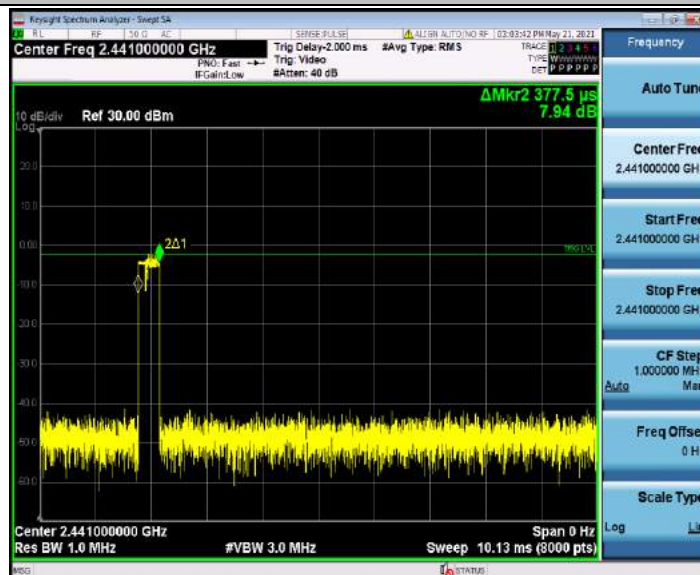


2DH5_Ant1_Hop

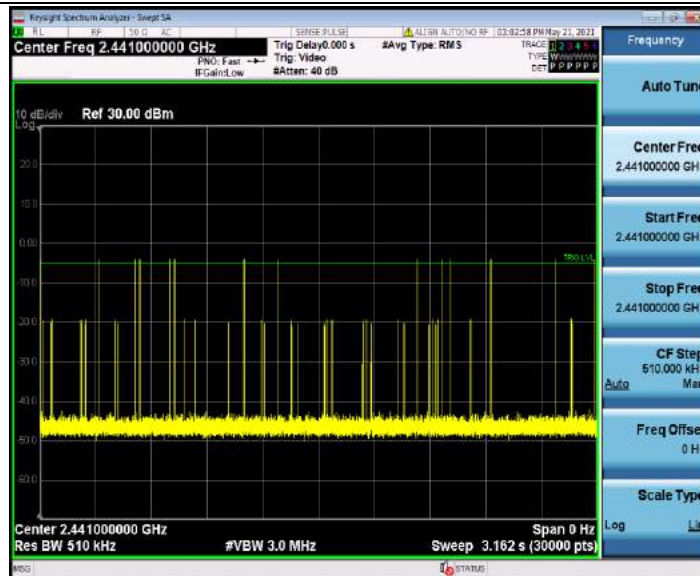
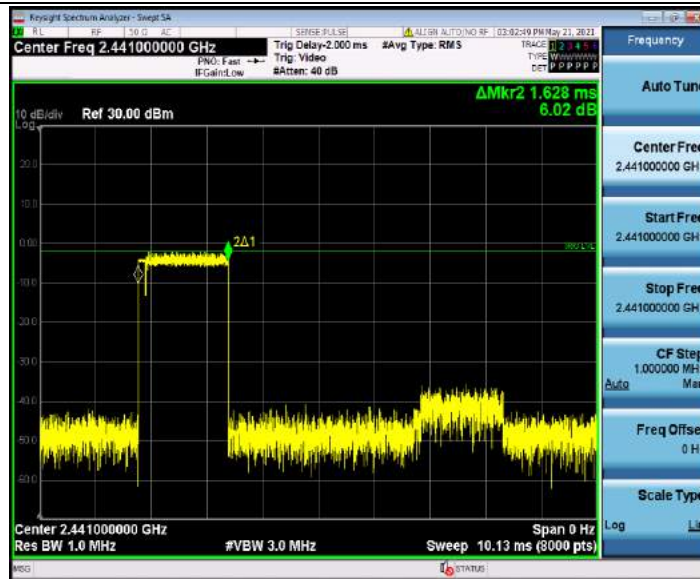




3DH1_Ant1_Hop

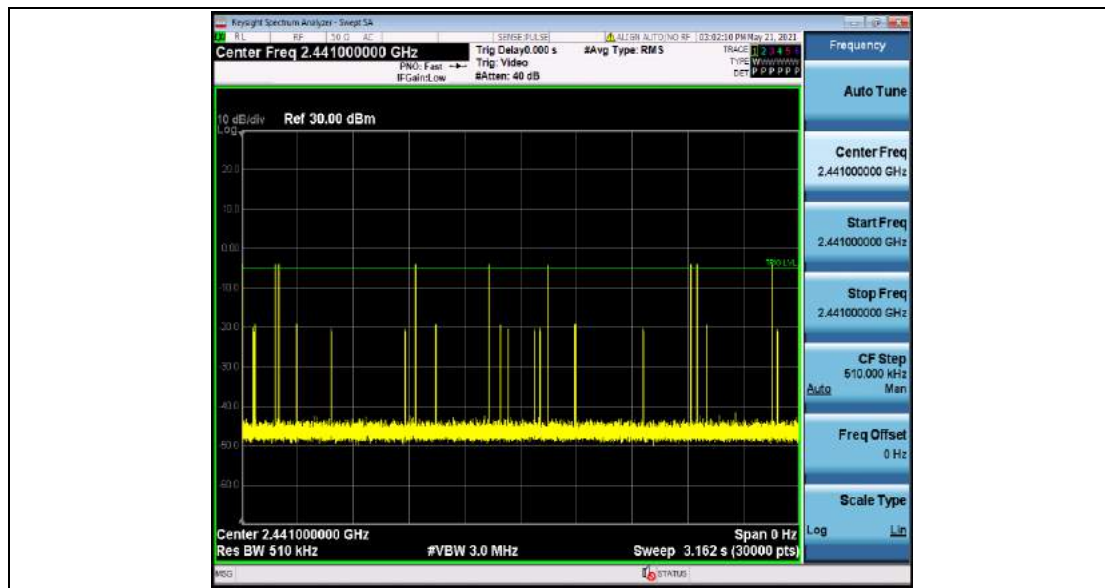


3DH3_Ant1_Hop



3DH5_Ant1_Hop





Appendix F: Number of hopping channels

Test Result

TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	>=15	PASS
2DH5	Ant1	Hop	79	>=15	PASS
3DH5	Ant1	Hop	79	>=15	PASS

Test Graphs

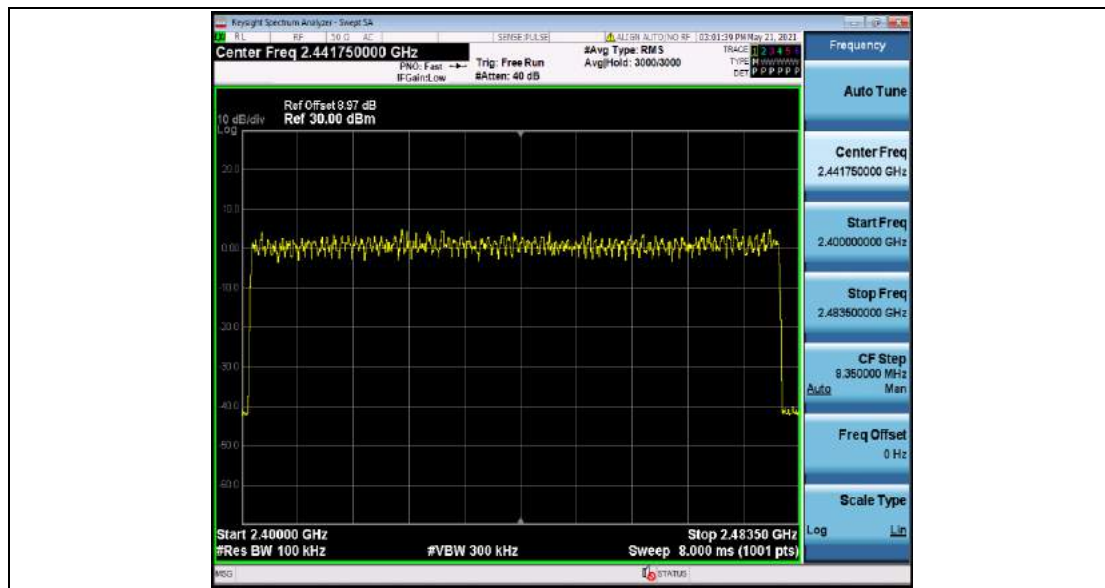
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop



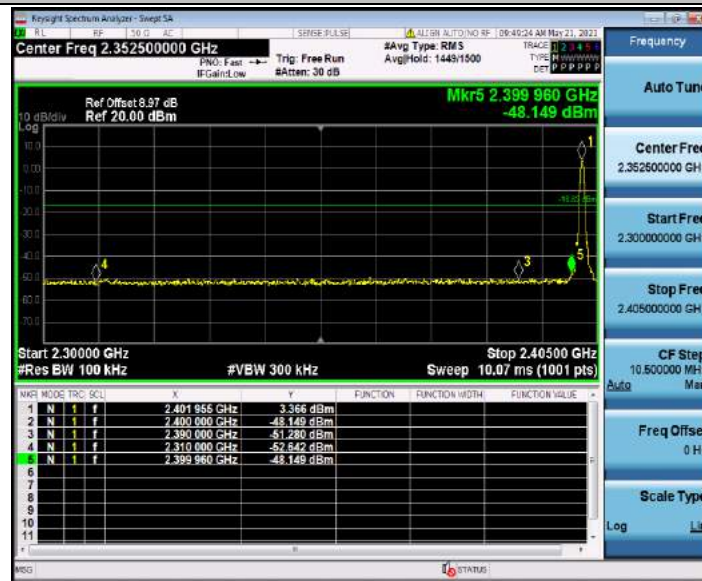
Appendix G: Band edge measurements

Test Result

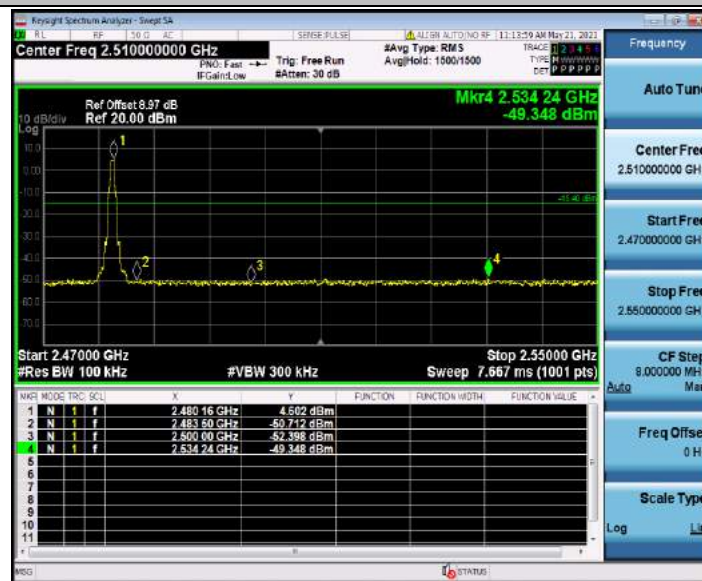
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	3.37	-48.15	<=-16.63	PASS
		High	2480	4.60	-49.35	<=-15.4	PASS
		Low	Hop_2402	3.62	-49.79	-16.38	PASS
		High	Hop_2480	4.68	-48.89	-15.33	PASS
2DH5	Ant1	Low	2402	3.95	-49.67	<=-16.05	PASS
		High	2480	4.67	-49.19	<=-15.33	PASS
		Low	Hop_2402	3.06	-49.79	-16.94	PASS
		High	Hop_2480	4.93	-49.31	-15.07	PASS
3DH5	Ant1	Low	2402	4.07	-49.34	<=-15.93	PASS
		High	2480	4.98	-48.87	<=-15.02	PASS
		Low	Hop_2402	3.42	-49.77	-16.59	PASS
		High	Hop_2480	4.72	-49.22	-15.28	PASS

Test Graphs

DH5_Ant1_Low_2402



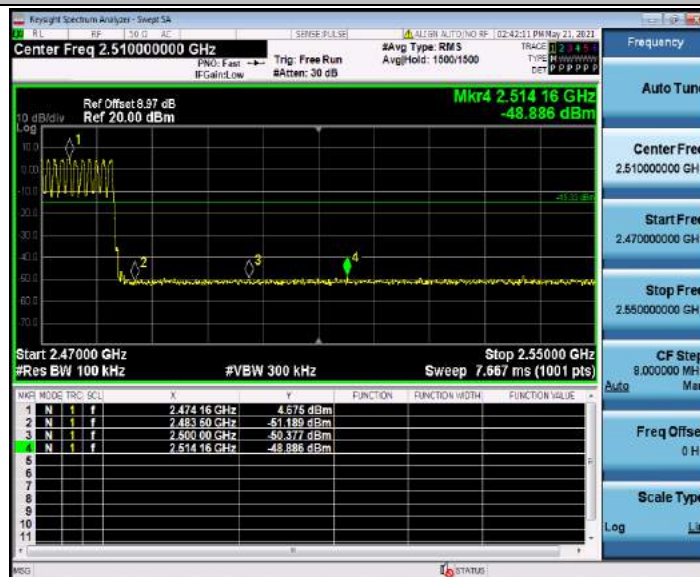
DH5_Ant1_High_2480



DH5_Ant1_Low_Hop_2402



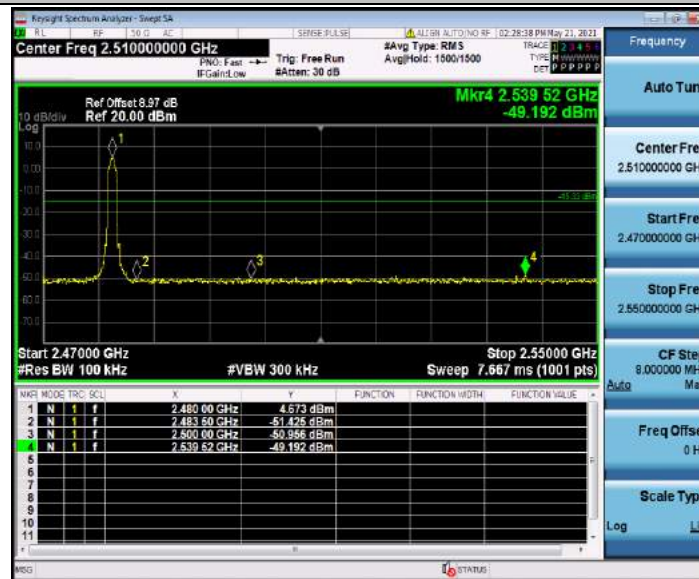
DH5_Ant1_High_Hop_2480



2DH5_Ant1_Low_2402



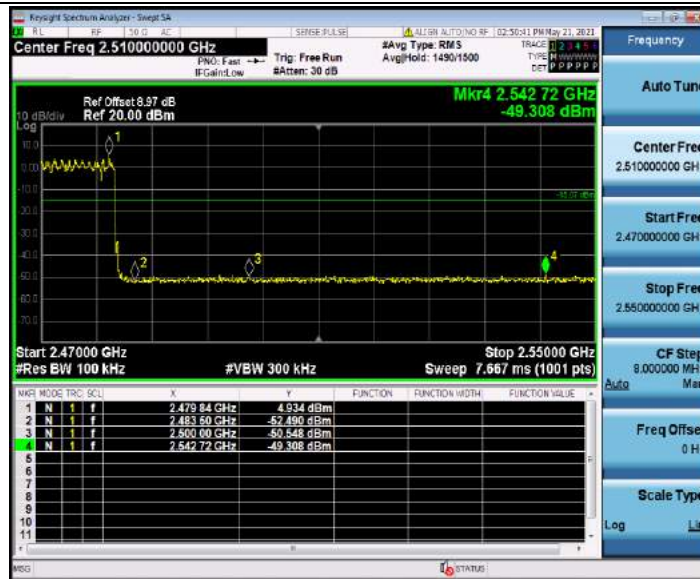
2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



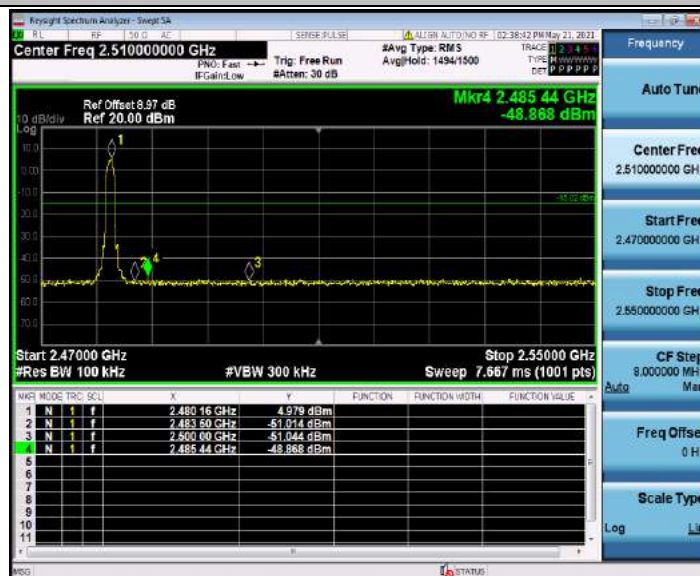
2DH5_Ant1_High_Hop_2480



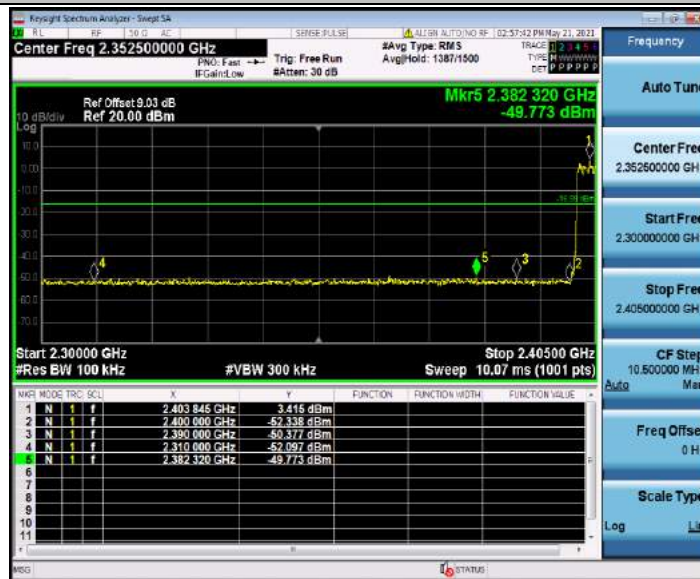
3DH5_Ant1_Low_2402



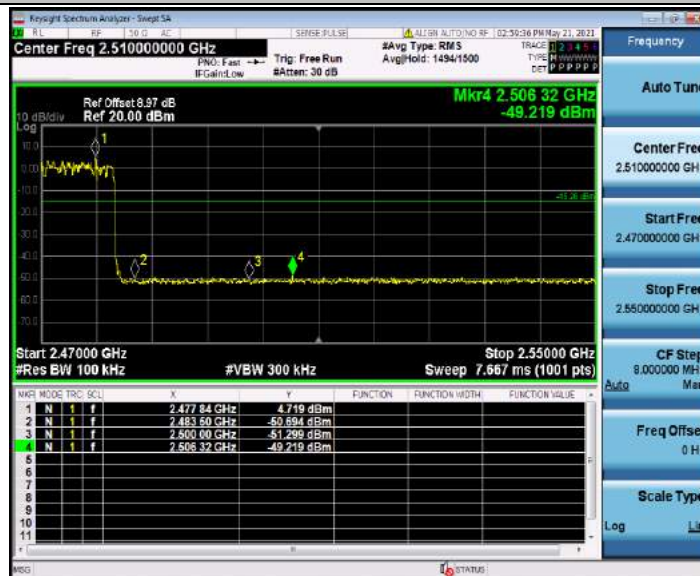
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480

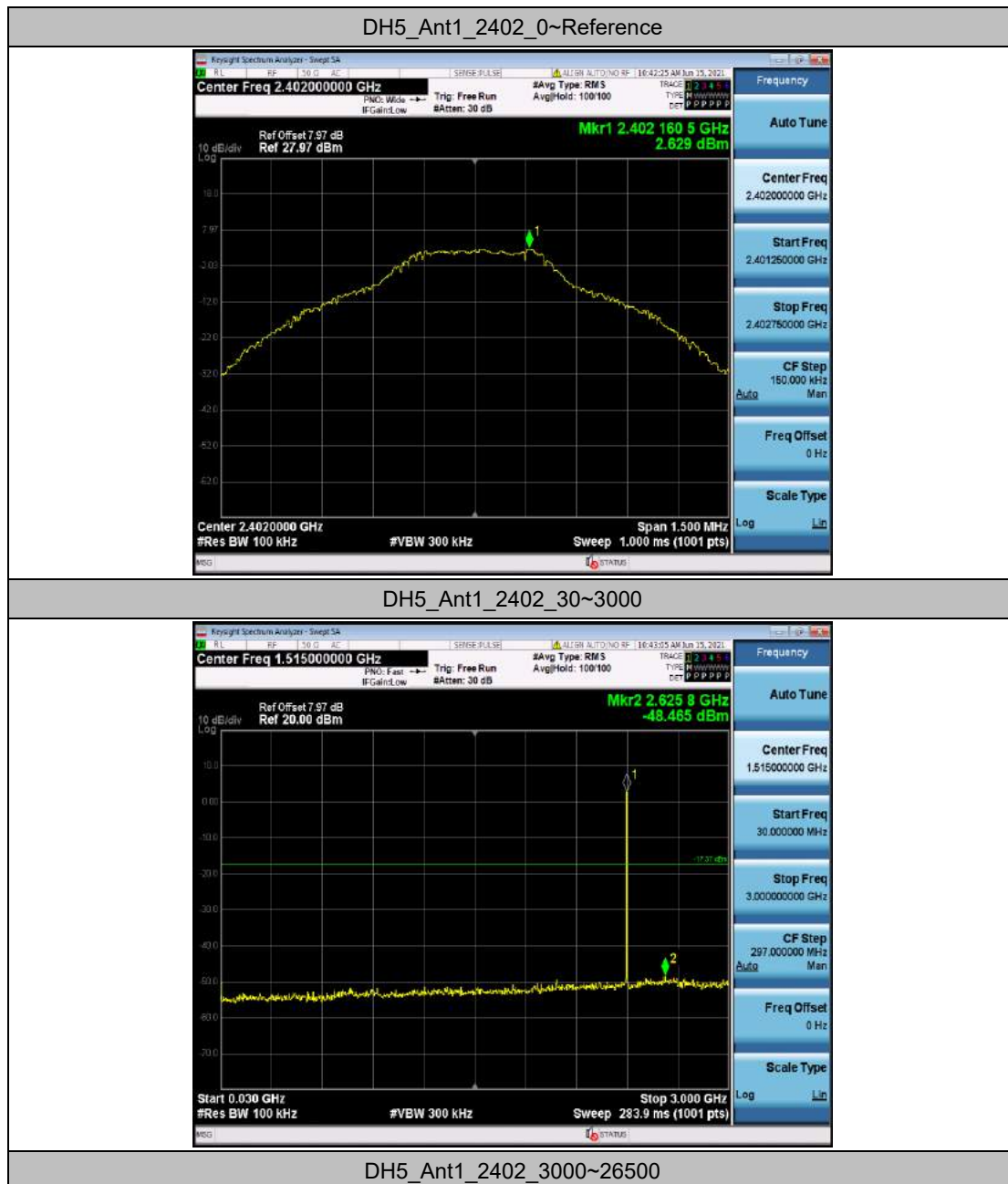


Appendix H: Conducted Spurious Emission

Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	2.63	2.63	---	PASS
			30~3000	2.63	-48.47	<=-17.37	PASS
			3000~26500	2.63	-38.48	<=-17.37	PASS
		2441	Reference	2.96	2.96	---	PASS
			30~3000	2.96	-48.43	<=-17.04	PASS
			3000~26500	2.96	-38.26	<=-17.04	PASS
		2480	Reference	3.67	3.67	---	PASS
			30~3000	3.67	-47.95	<=-16.33	PASS
			3000~26500	3.67	-38.1	<=-16.33	PASS
2DH5	Ant1	2402	Reference	3.15	3.15	---	PASS
			30~3000	3.15	-48.45	<=-16.85	PASS
			3000~26500	3.15	-38.29	<=-16.85	PASS
		2441	Reference	3.77	3.77	---	PASS
			30~3000	3.77	-48.86	<=-16.23	PASS
			3000~26500	3.77	-37.83	<=-16.23	PASS
		2480	Reference	3.95	3.95	---	PASS
			30~3000	3.95	-48.99	<=-16.05	PASS
			3000~26500	3.95	-38.29	<=-16.05	PASS
3DH5	Ant1	2402	Reference	3.28	3.28	---	PASS
			30~3000	3.28	-48.5	<=-16.72	PASS
			3000~26500	3.28	-38.01	<=-16.72	PASS
		2441	Reference	3.95	3.95	---	PASS
			30~3000	3.95	-48.01	<=-16.06	PASS
			3000~26500	3.95	-38.05	<=-16.06	PASS
		2480	Reference	2.99	2.99	---	PASS
			30~3000	2.99	-47.83	<=-17.01	PASS
			3000~26500	2.99	-36.67	<=-17.01	PASS

Test Graphs





DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~3000



DH5_Ant1_2441_3000~26500



DH5_Ant1_2480_0~Reference



DH5_Ant1_2480_30~3000



DH5_Ant1_2480_3000~26500



2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~3000



2DH5_Ant1_2402_3000~26500



2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~3000



2DH5_Ant1_2441_3000~26500



2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~3000



2DH5_Ant1_2480_3000~26500



3DH5_Ant1_2402_0~Reference



3DH5_Ant1_2402_30~3000



3DH5_Ant1_2402_3000~26500



3DH5_Ant1_2441_0~Reference



3DH5_Ant1_2441_30~3000



3DH5_Ant1_2441_3000~26500



3DH5_Ant1_2480_0~Reference



3DH5_Ant1_2480_30~3000



3DH5_Ant1_2480_3000~26500

