

FCC Appendix RF Test Data for BT

FCC ID : 2BUEV-M29

Company : Shenzhen NovaCross Toys Co., LTD

EUT : M29 Amplifier

Model Number : M29

Report No. : CTA25123101702

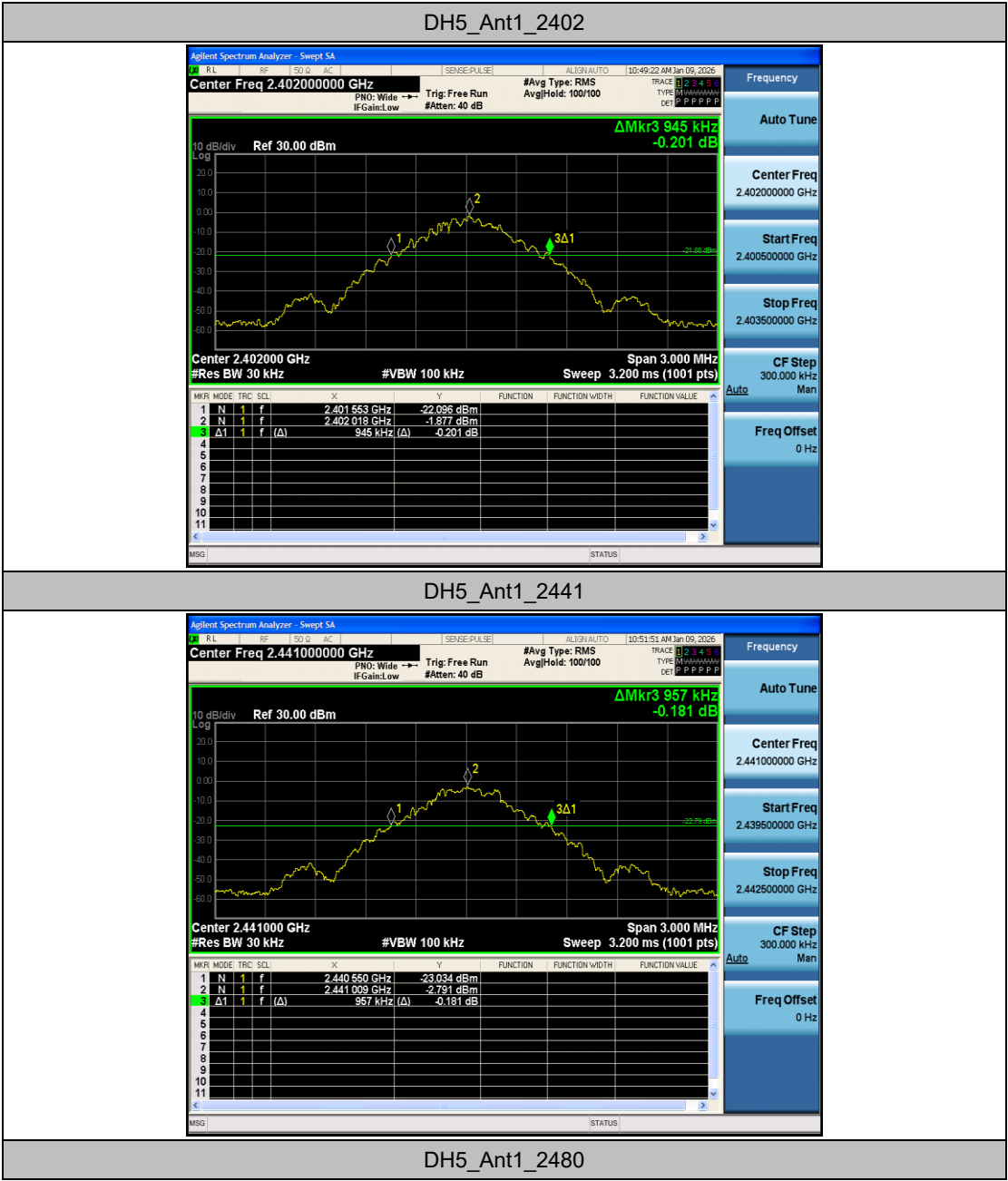
Reviewed By : Eric Wang

Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.945	2401.553	2402.498	---	---
		2441	0.957	2440.550	2441.507	---	---
		2480	0.960	2479.547	2480.507	---	---
2DH5	Ant1	2402	1.332	2401.343	2402.675	---	---
		2441	1.287	2440.379	2441.666	---	---
		2480	1.317	2479.355	2480.672	---	---

Test Graphs





2DHS_Ant1_2402



2DHS_Ant1_2441



2DH5_Ant1_2480



Appendix B: Occupied Channel Bandwidth

Test Result

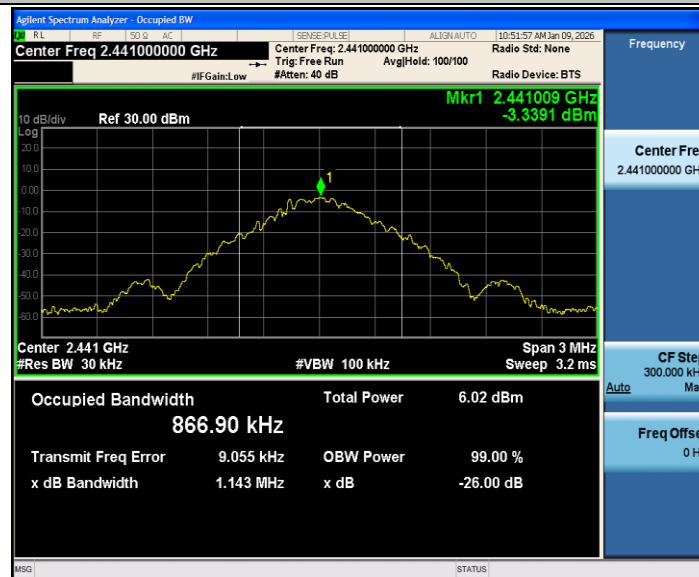
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.86936	2401.5795	2402.4488	---	---
		2441	0.86690	2440.5756	2441.4425	---	---
		2480	0.85793	2479.5835	2480.4414	---	---
2DH5	Ant1	2402	1.1875	2401.4190	2402.6065	---	---
		2441	1.1892	2440.4169	2441.6061	---	---
		2480	1.1868	2479.4178	2480.6046	---	---

Test Graphs

DH5_Ant1_2402



DH5_Ant1_2441



DH5_Ant1_2480



2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



Appendix C: Maximum conducted output power

Test Result Peak

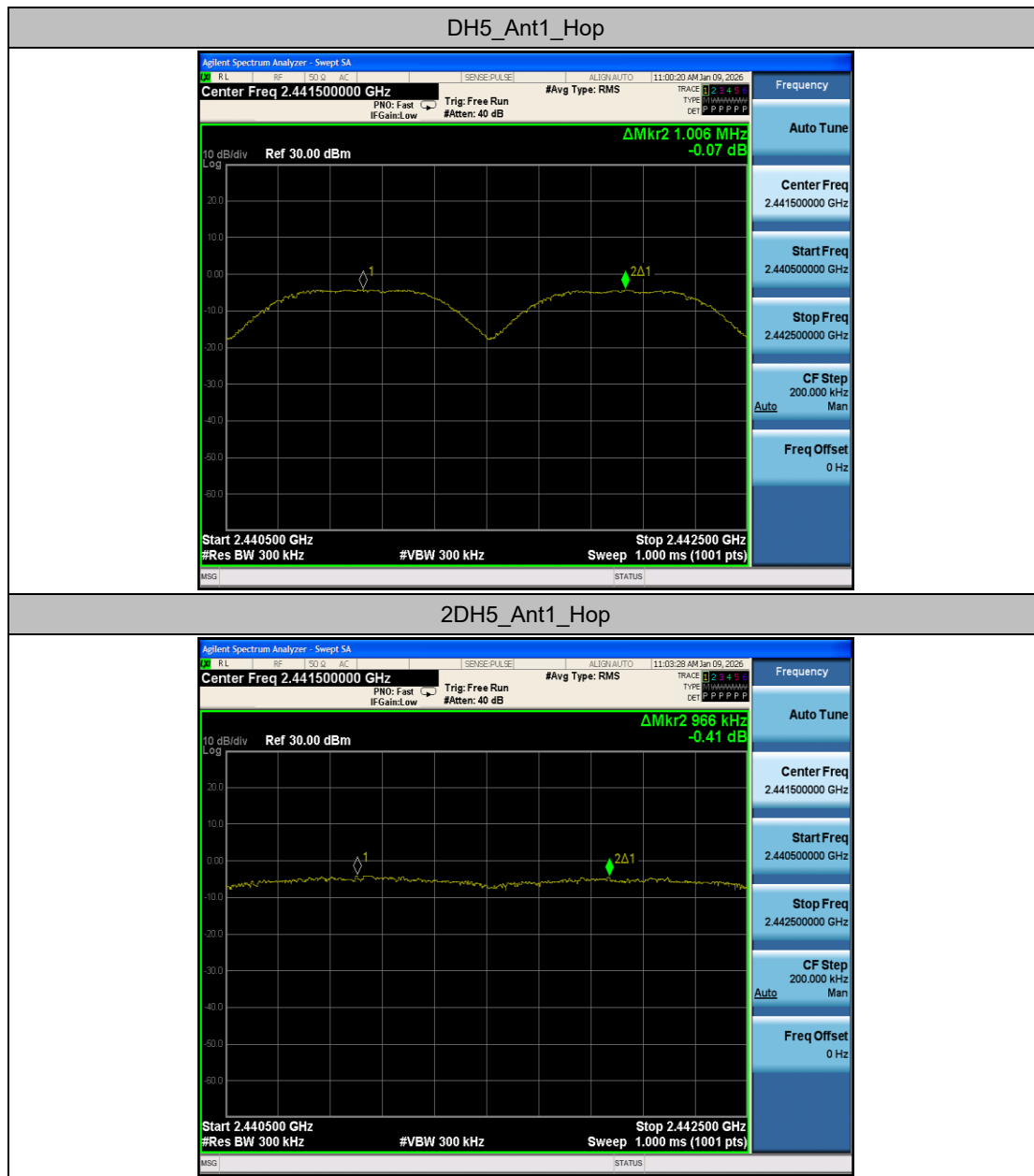
Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	-0.13	≤20.97	PASS
		2441	-0.44	≤20.97	PASS
		2480	-0.40	≤20.97	PASS
2DH5	Ant1	2402	-0.97	≤20.97	PASS
		2441	-1.29	≤20.97	PASS
		2480	-1.29	≤20.97	PASS

Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.006	≥ 0.960	PASS
2DH5	Ant1	Hop	0.966	≥ 0.888	PASS

Test Graphs

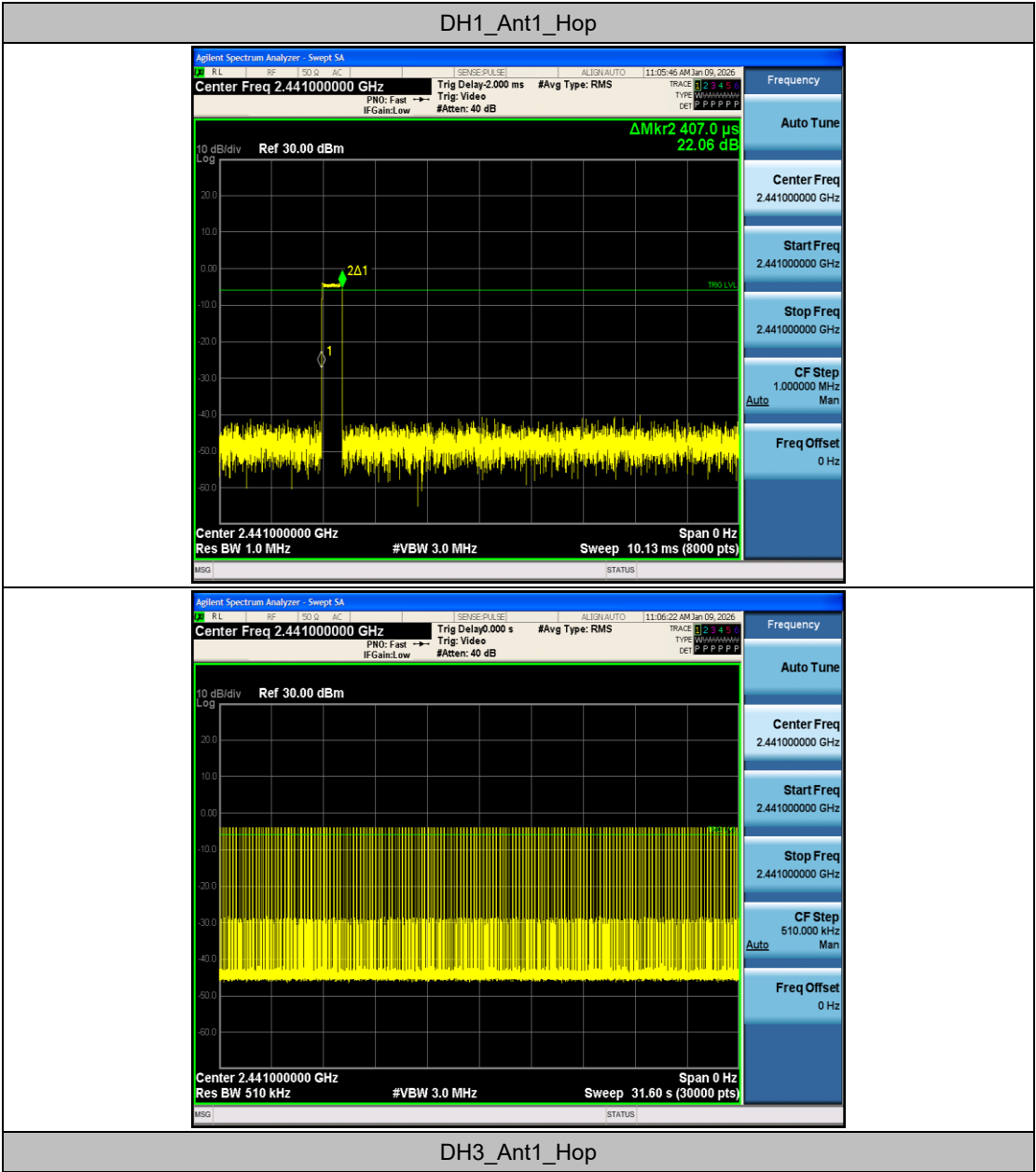


Appendix E: Time of occupancy

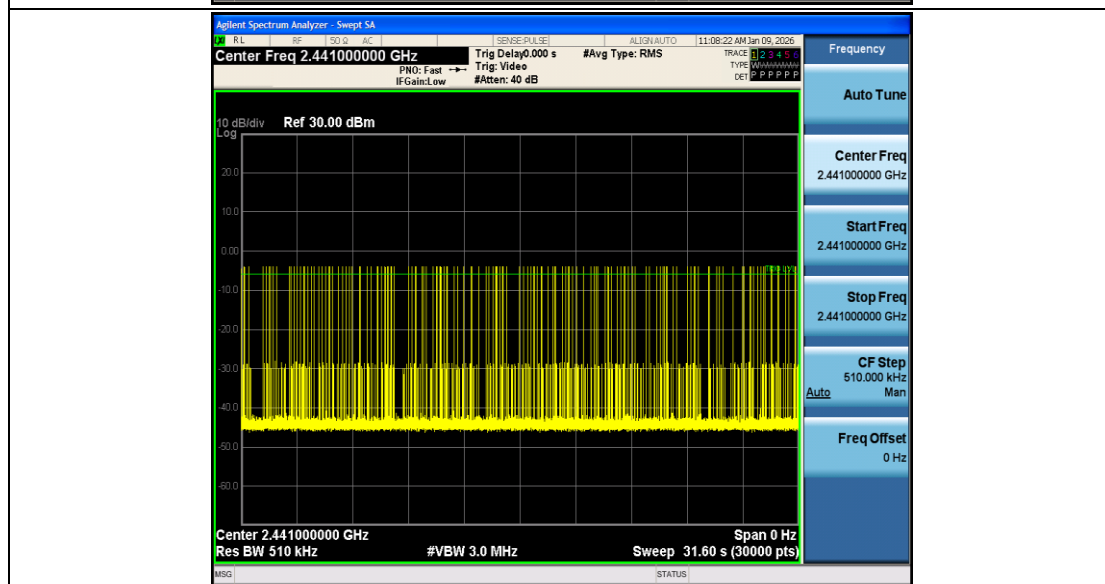
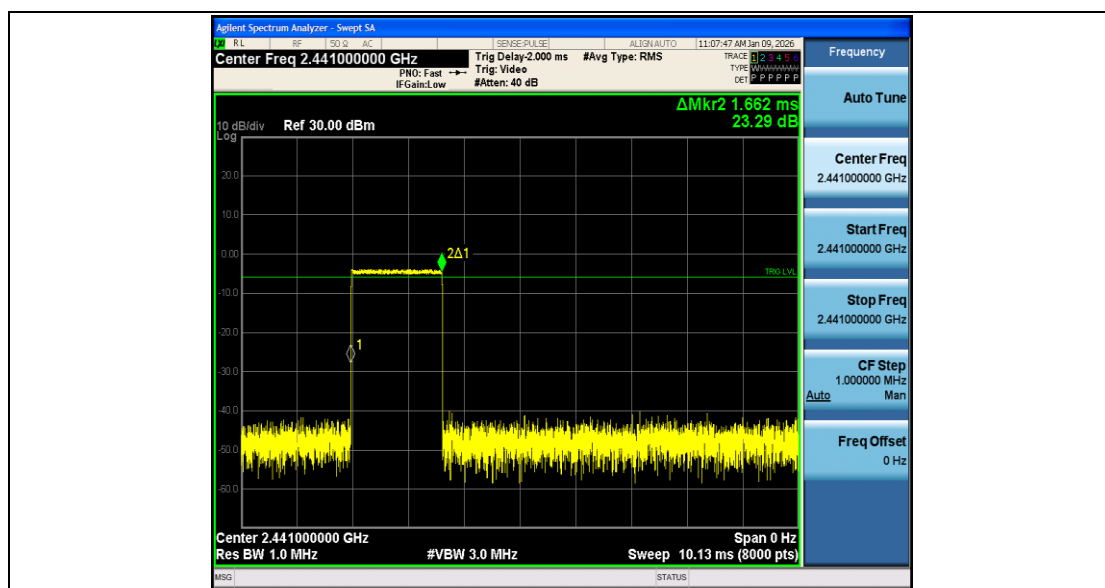
Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.407	318	0.129	≤0.4	PASS
DH3	Ant1	Hop	1.662	144	0.239	≤0.4	PASS
DH5	Ant1	Hop	2.910	109	0.317	≤0.4	PASS
2DH1	Ant1	Hop	0.405	319	0.129	≤0.4	PASS
2DH3	Ant1	Hop	1.662	158	0.263	≤0.4	PASS
2DH5	Ant1	Hop	2.915	114	0.332	≤0.4	PASS

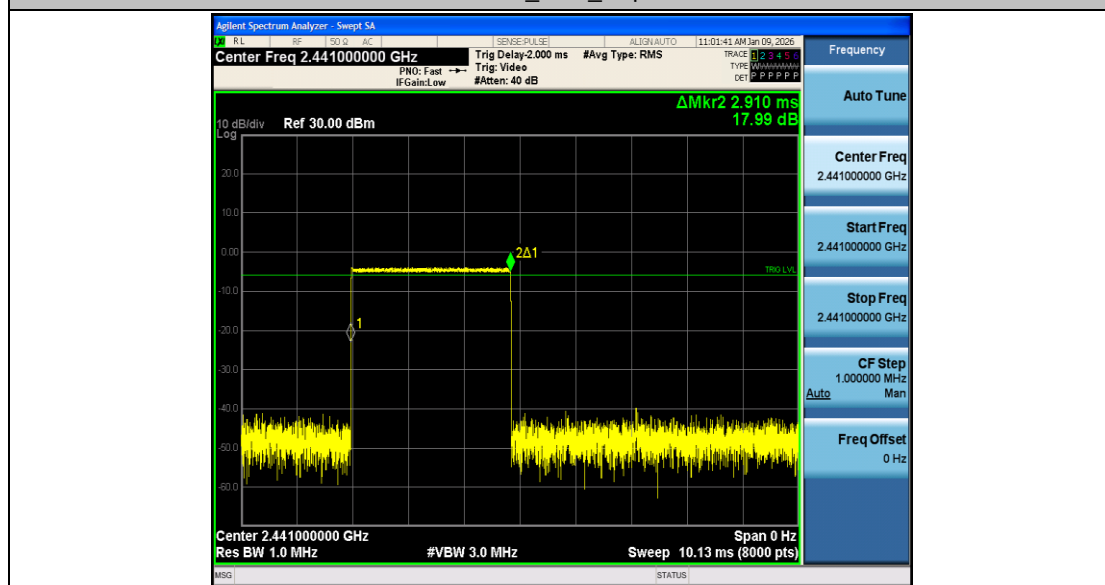
Test Graphs

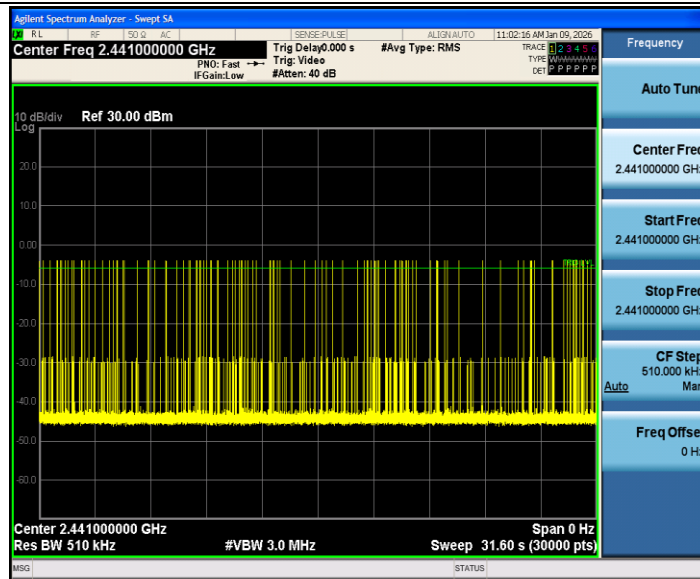


DH3_Ant1_Hop

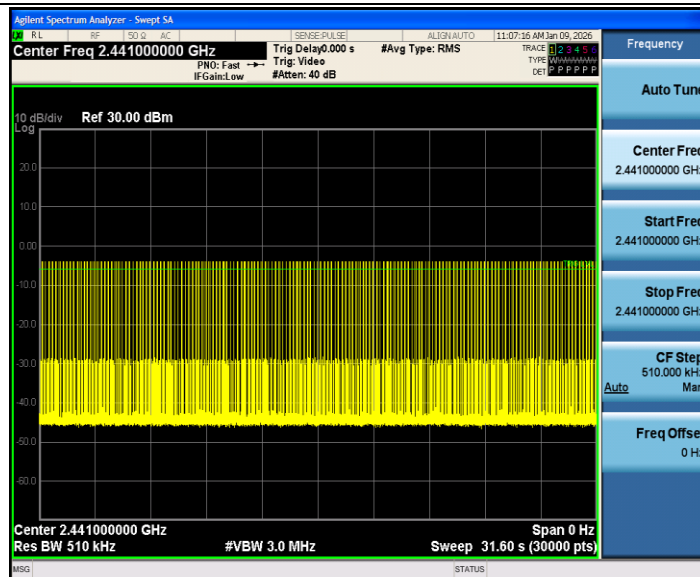
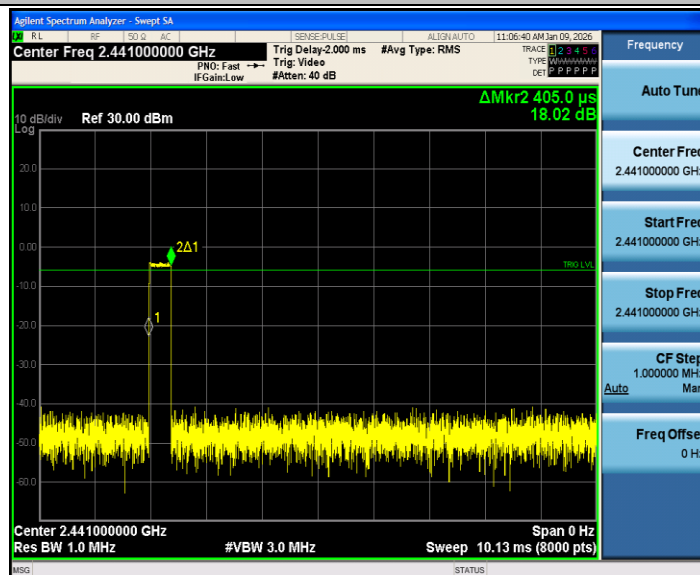


DH5_Ant1_Hop

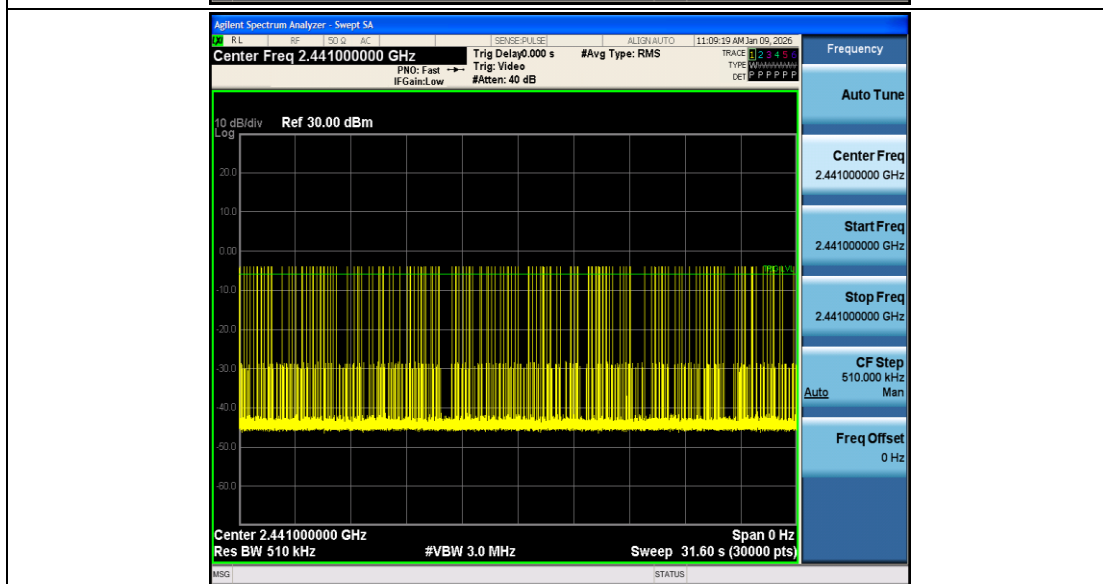
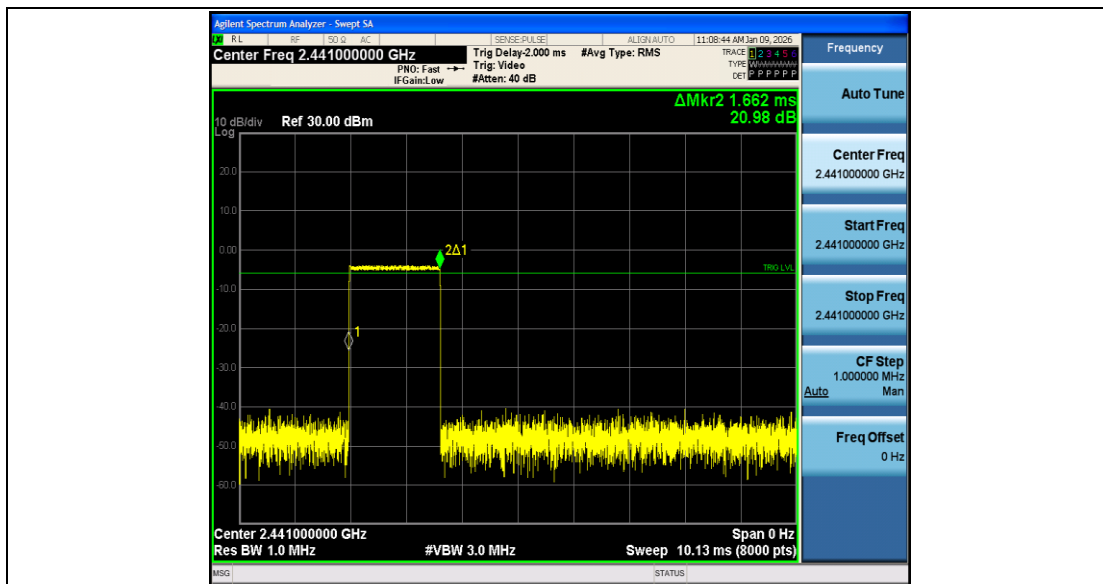




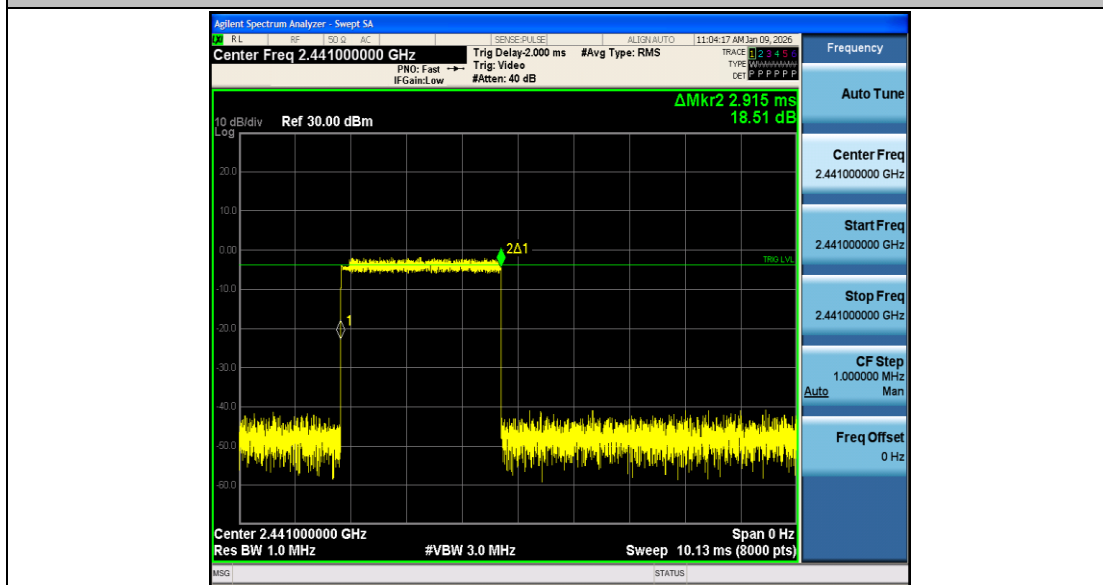
2DH1_Ant1_Hop

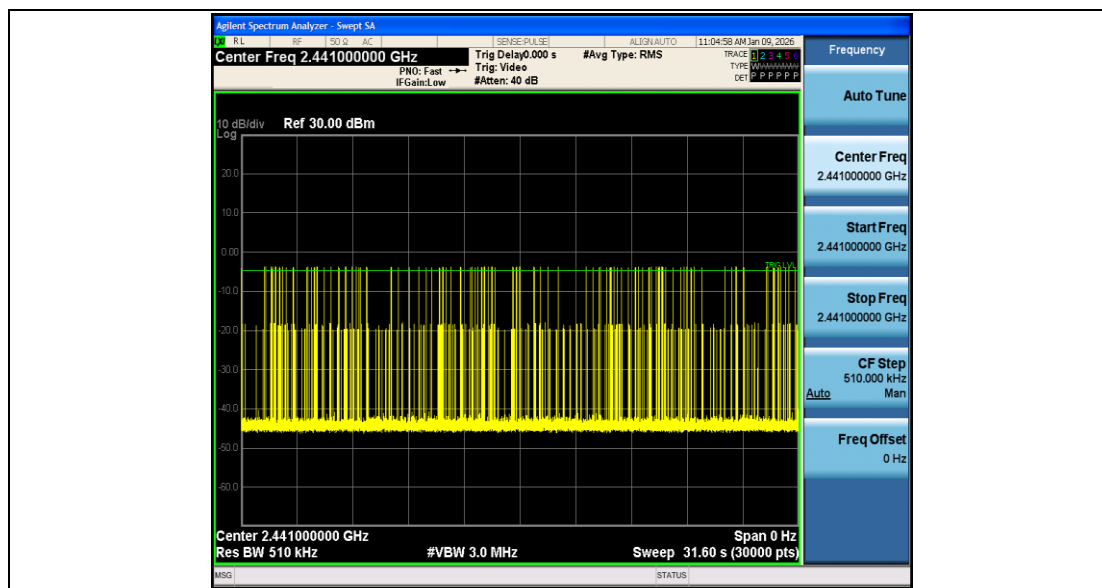


2DH3_Ant1_Hop



2DH5_Ant1_Hop





Appendix F: Number of hopping channels

Test Result

TestMode	Antenna	Freq(MHz)	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS

Test Graphs

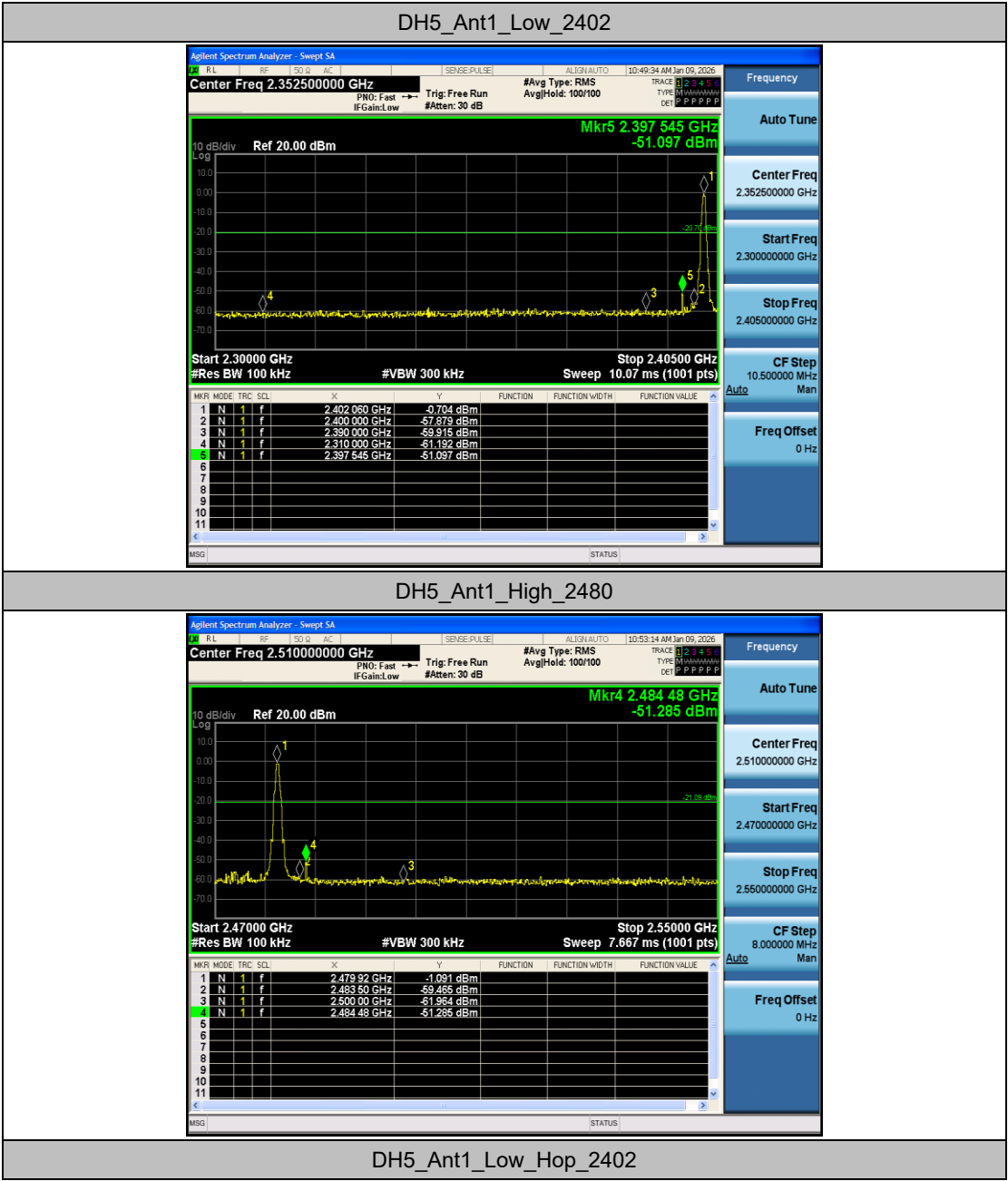


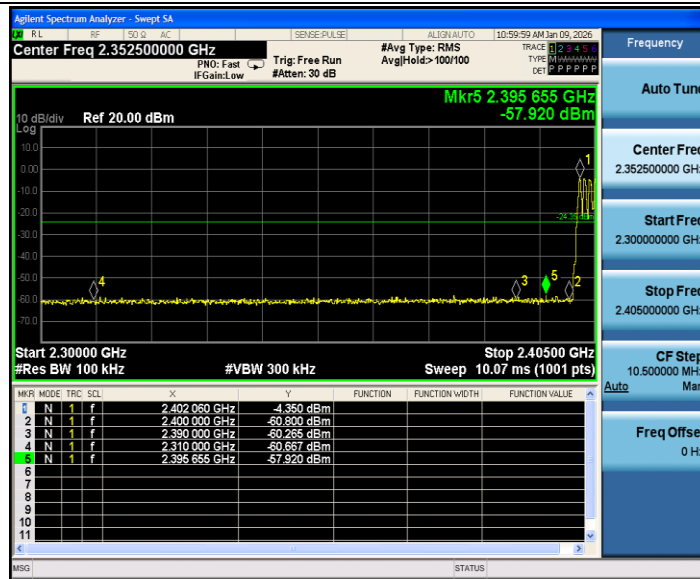
Appendix G: Band edge measurements

Test Result

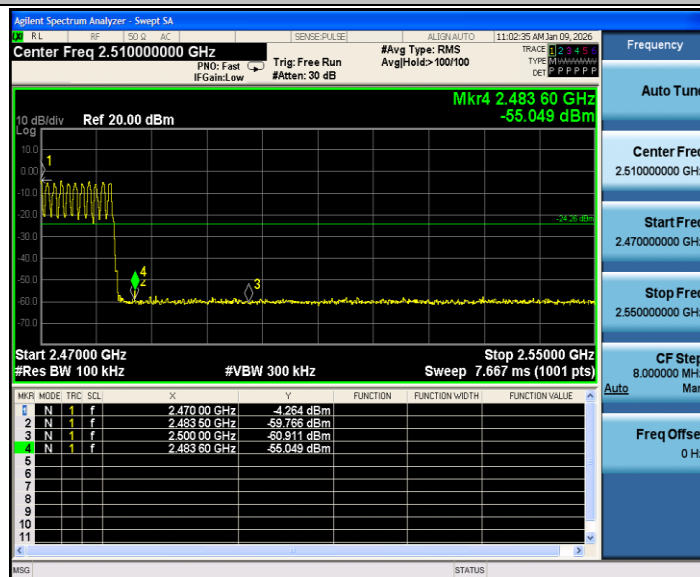
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.70	-51.1	≤ -20.7	PASS
		High	2480	-1.09	-51.29	≤ -21.09	PASS
		Low	Hop_2402	-4.35	-57.92	≤ -24.35	PASS
		High	Hop_2480	-4.26	-55.05	≤ -24.26	PASS
2DH5	Ant1	Low	2402	-4.92	-57.64	≤ -24.92	PASS
		High	2480	-5.59	-54.7	≤ -25.59	PASS
		Low	Hop_2402	-6.70	-58.11	≤ -26.7	PASS
		High	Hop_2480	-3.93	-57.22	≤ -23.93	PASS

Test Graphs

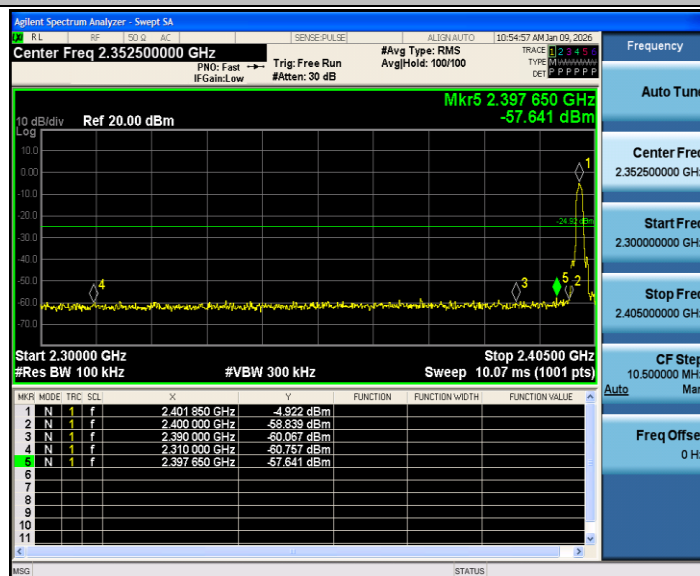




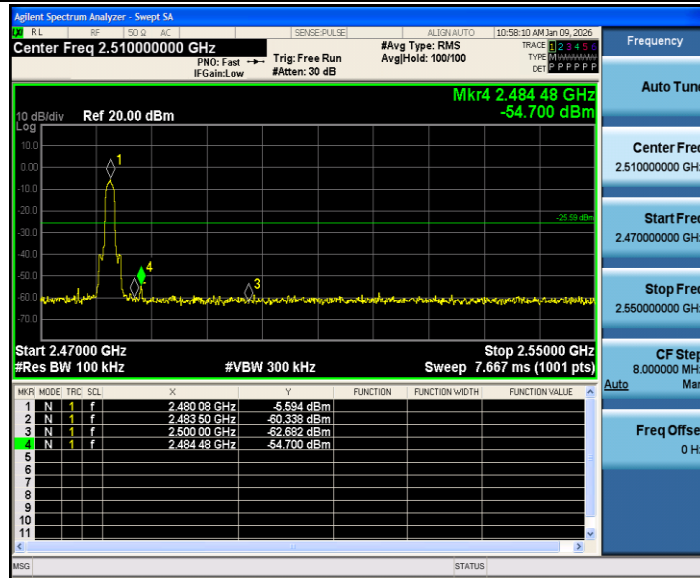
DH5_Ant1_High_Hop_2480



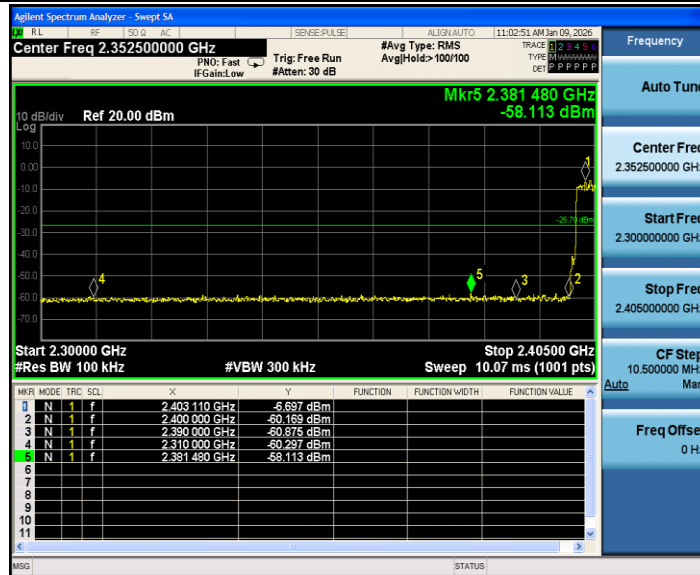
2DH5_Ant1_Low_2402



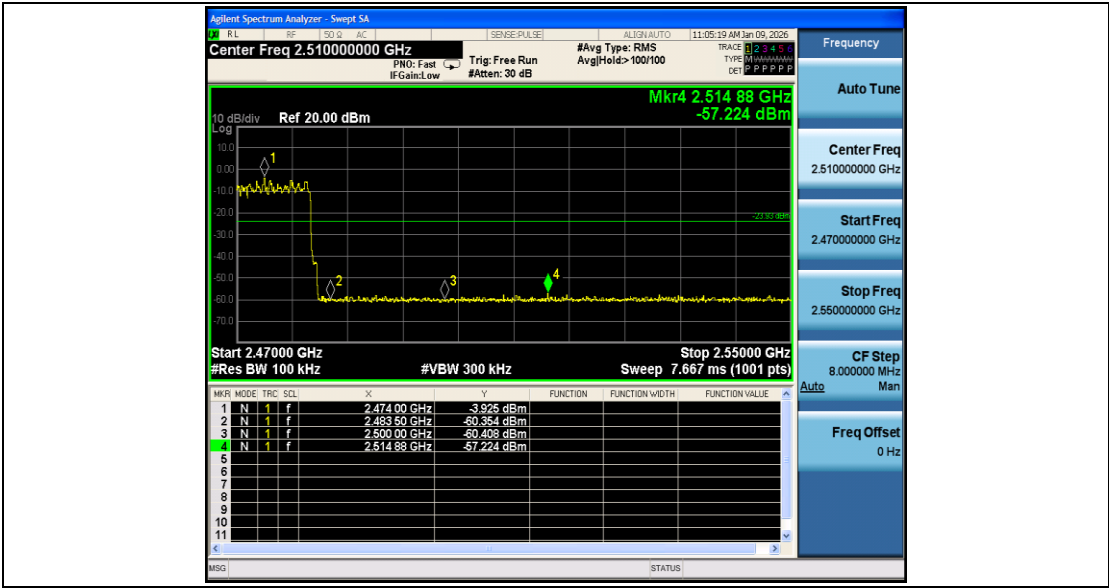
2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



2DH5_Ant1_High_Hop_2480

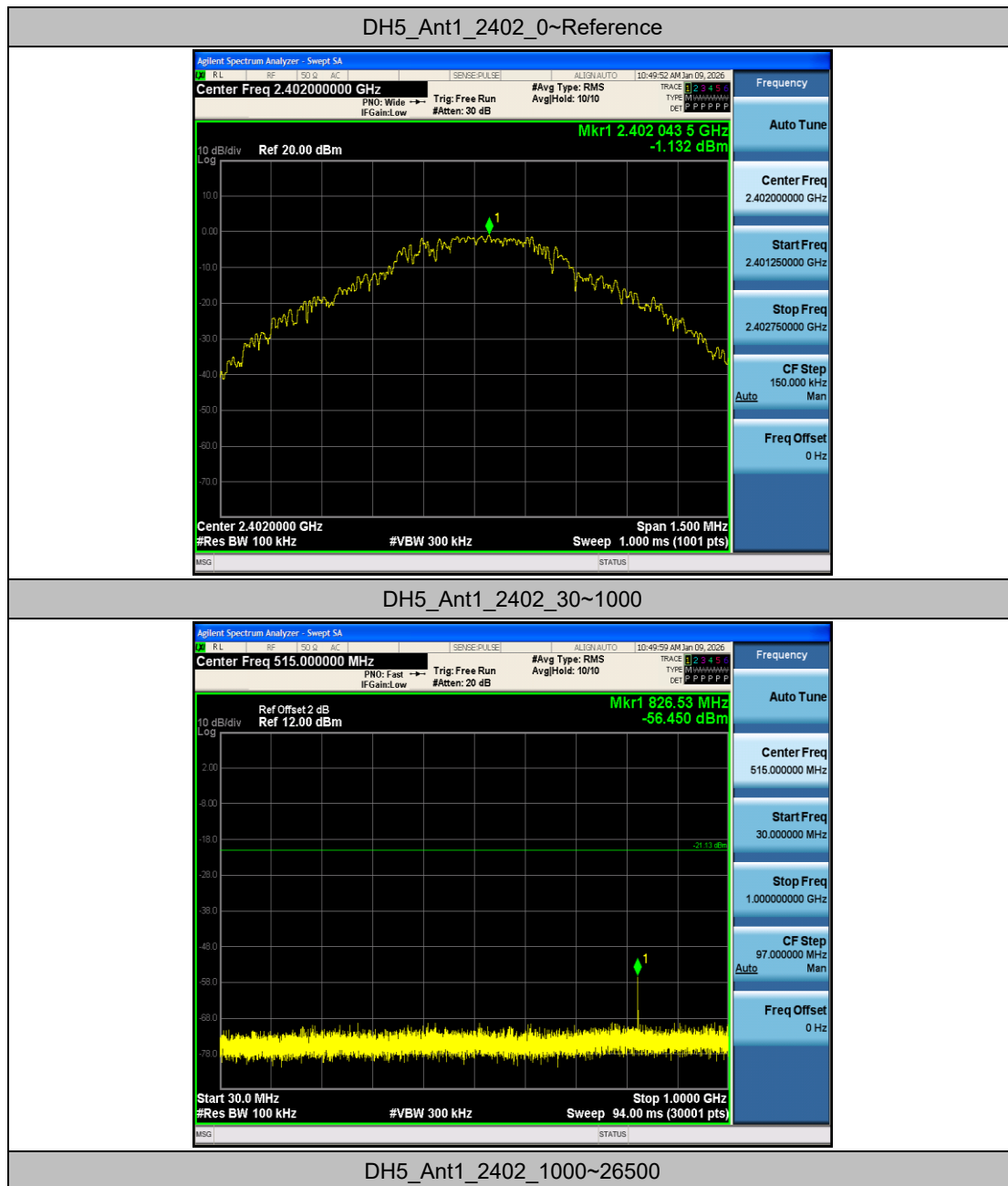


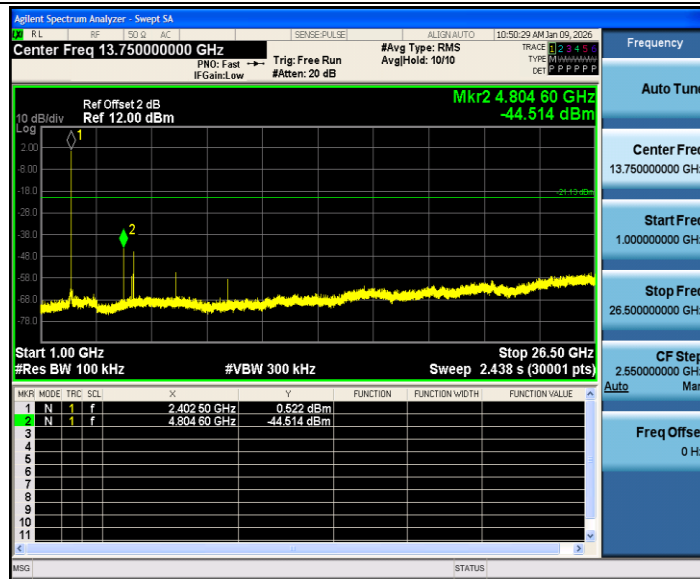
Appendix H: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-1.13	-1.13	---	PASS
			30~1000	-1.13	-56.45	≤-21.13	PASS
			1000~26500	-1.13	-44.51	≤-21.13	PASS
		2441	Reference	-1.85	-1.85	---	PASS
			30~1000	-1.85	-68.52	≤-21.85	PASS
			1000~26500	-1.85	-44.23	≤-21.85	PASS
		2480	Reference	-1.54	-1.54	---	PASS
			30~1000	-1.54	-68.63	≤-21.54	PASS
			1000~26500	-1.54	-43.83	≤-21.54	PASS
2DH5	Ant1	2402	Reference	-6.52	-6.52	---	PASS
			30~1000	-6.52	-68.56	≤-26.52	PASS
			1000~26500	-6.52	-45.35	≤-26.52	PASS
		2441	Reference	-5.84	-5.84	---	PASS
			30~1000	-5.84	-68.07	≤-25.84	PASS
			1000~26500	-5.84	-49.18	≤-25.84	PASS
		2480	Reference	-5.12	-5.12	---	PASS
			30~1000	-5.12	-68.66	≤-25.12	PASS
			1000~26500	-5.12	-49.84	≤-25.12	PASS

Test Graphs

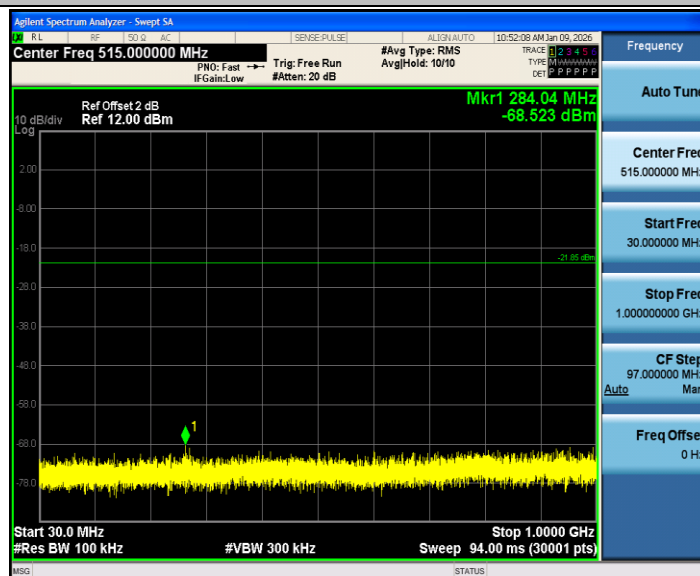




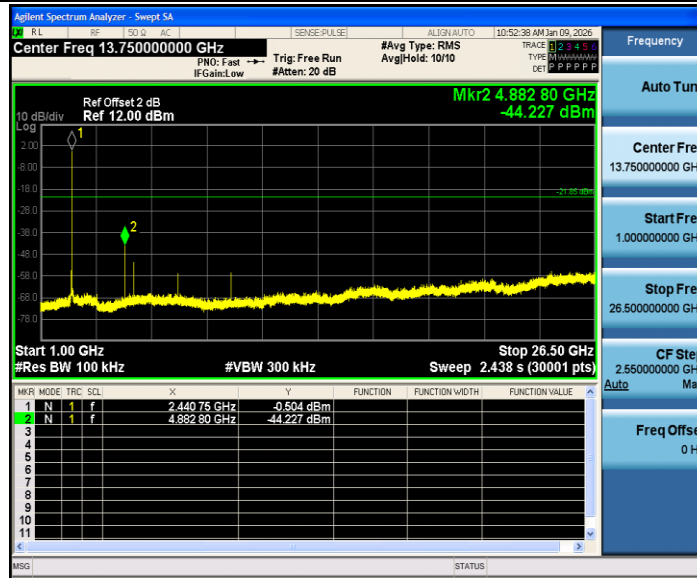
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



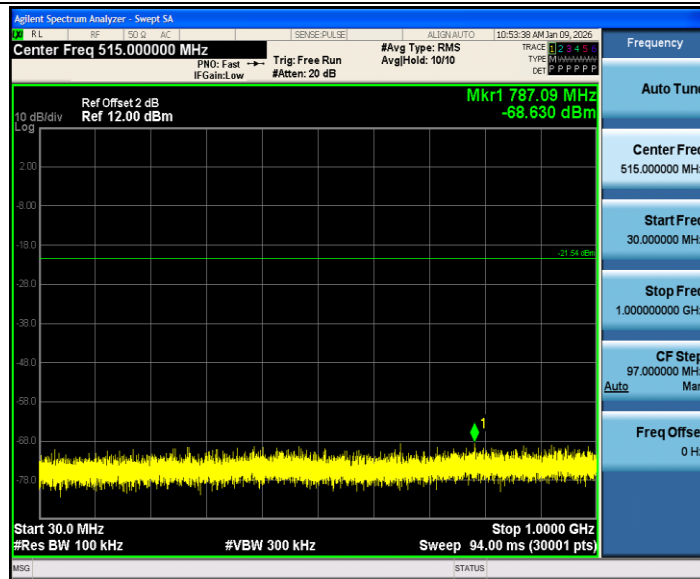
DH5_Ant1_2441_1000~26500



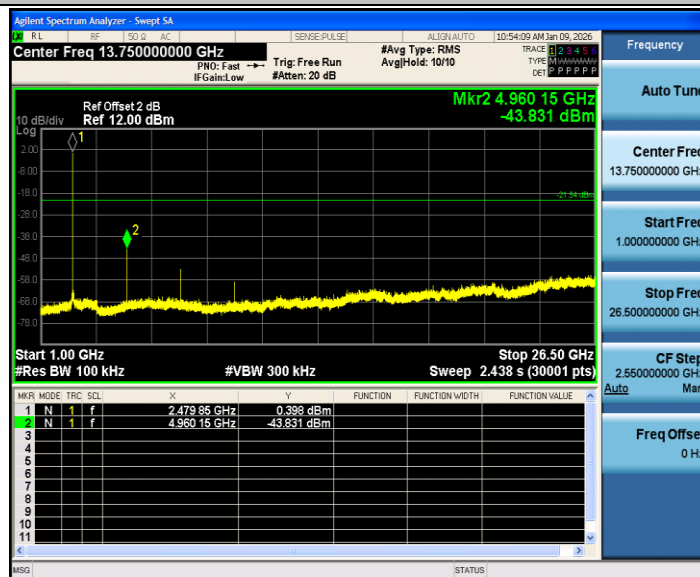
DH5_Ant1_2480_0~Reference



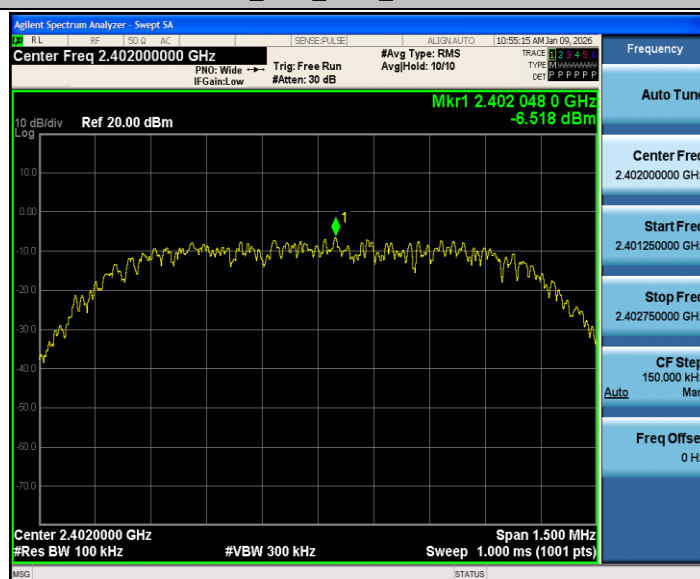
DH5_Ant1_2480_30~1000



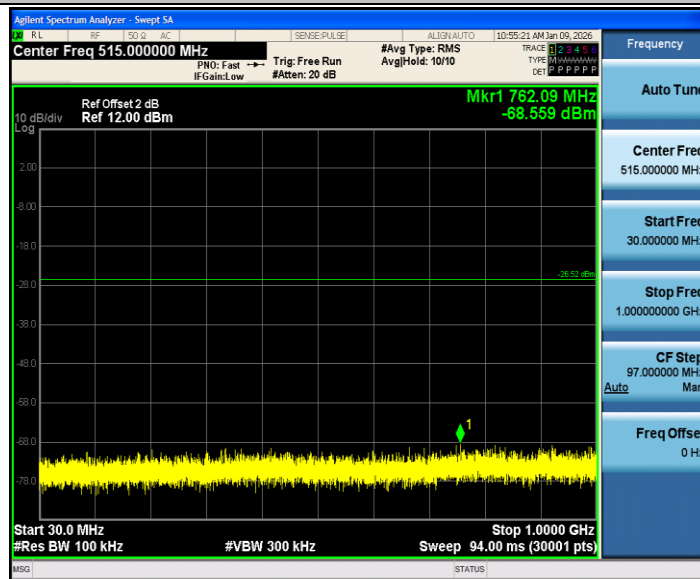
DH5_Ant1_2480_1000~26500



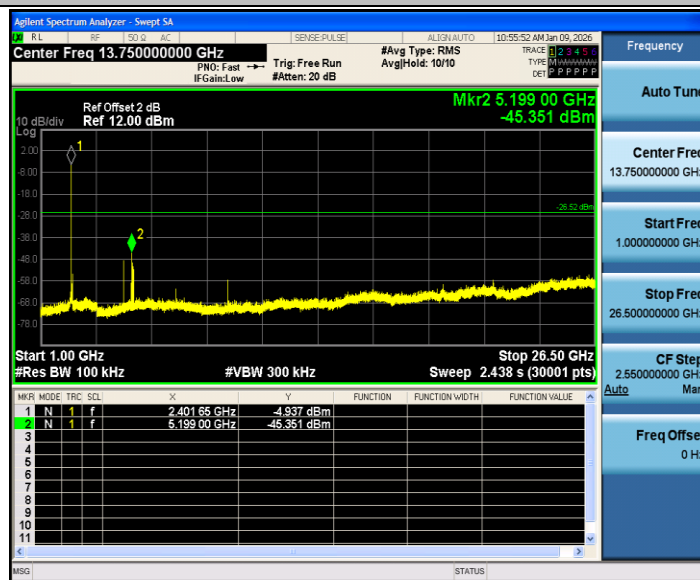
2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



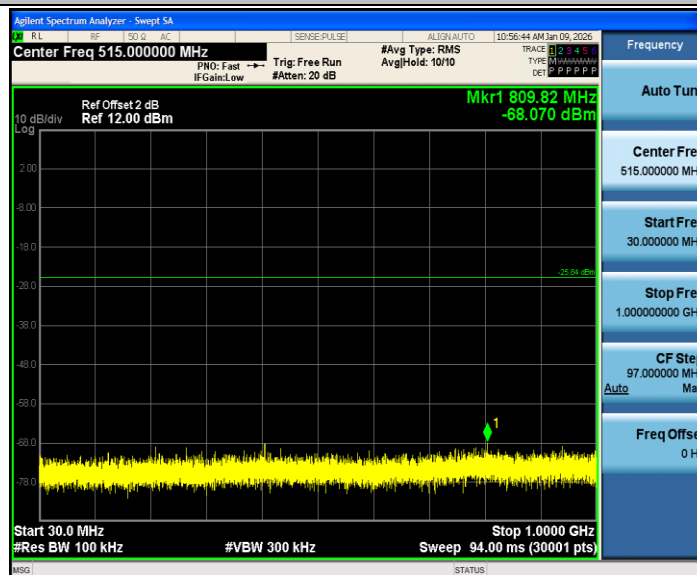
2DH5_Ant1_2402_1000~26500



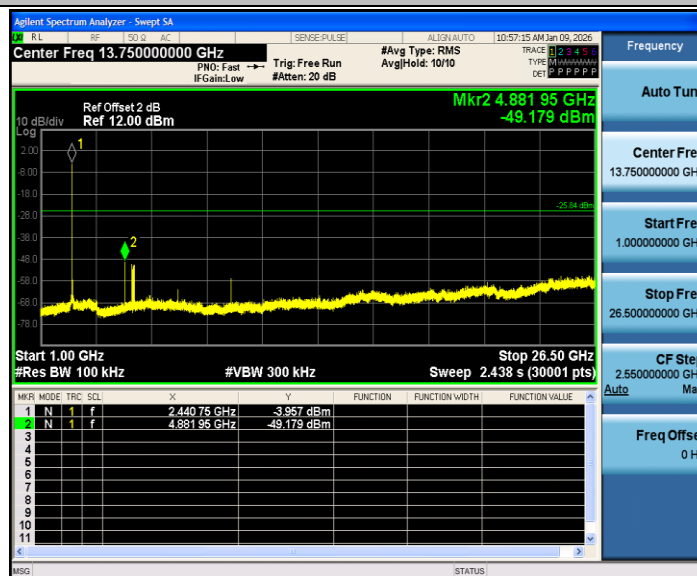
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000



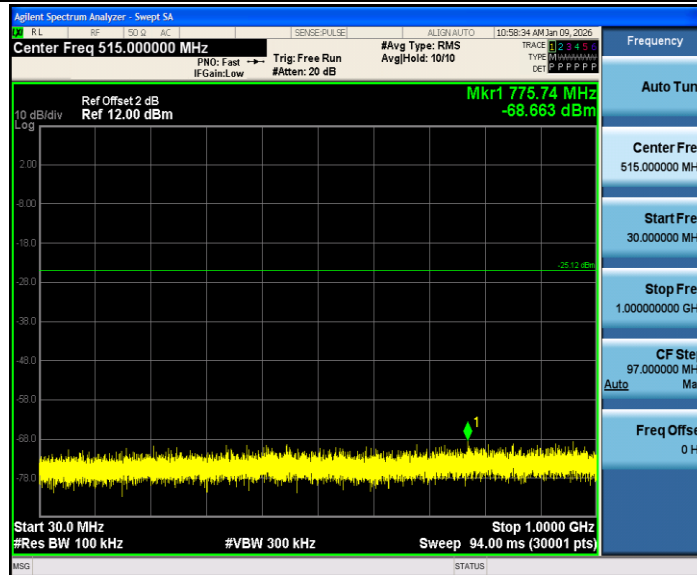
2DH5_Ant1_2441_1000~26500



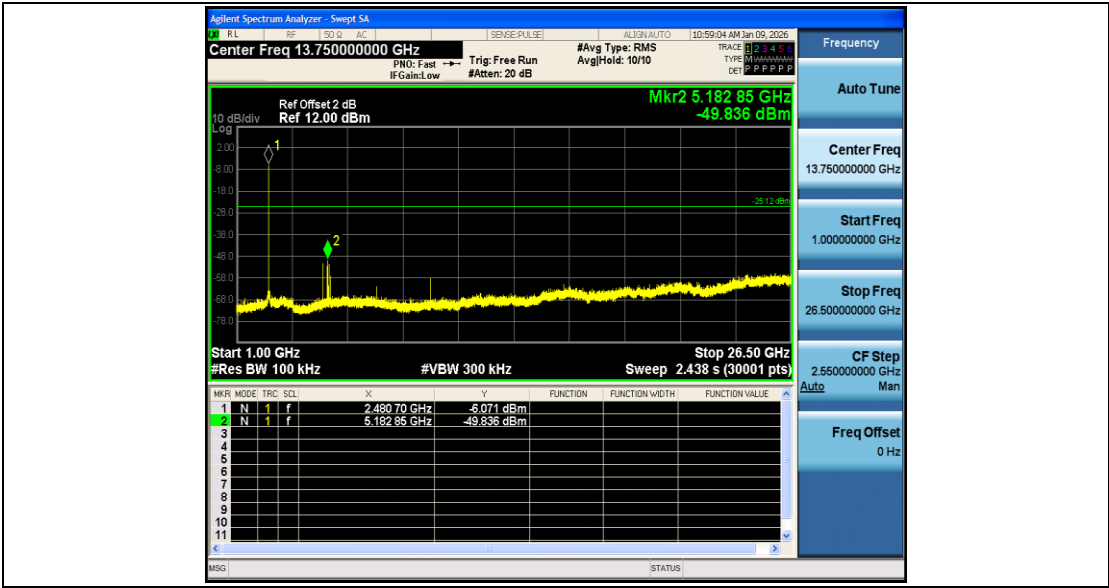
2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000



2DH5_Ant1_2480_1000~26500



Appendix I: Duty Cycle

Test Result

TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	DC [%]	xFactor	Limit	Verdict
DH5	Ant1	2402	2.92	3.76	77.66	1.10	---	---
		2441	2.91	3.75	77.60	1.10	---	---
		2480	2.91	3.75	77.60	1.10	---	---
2DH5	Ant1	2402	2.92	3.75	77.87	1.09	---	---
		2441	2.92	3.75	77.87	1.09	---	---
		2480	2.91	3.75	77.60	1.10	---	---