

FCC Appendix RF Test Data for BT

FCC ID : 2BDO6-X30

Company : WITSLISM TECHNOLOGY CO.,LIMITED

EUT : BLUETOOTH SPEAKER

Model Number : X30

Report No. : CTA26033003701

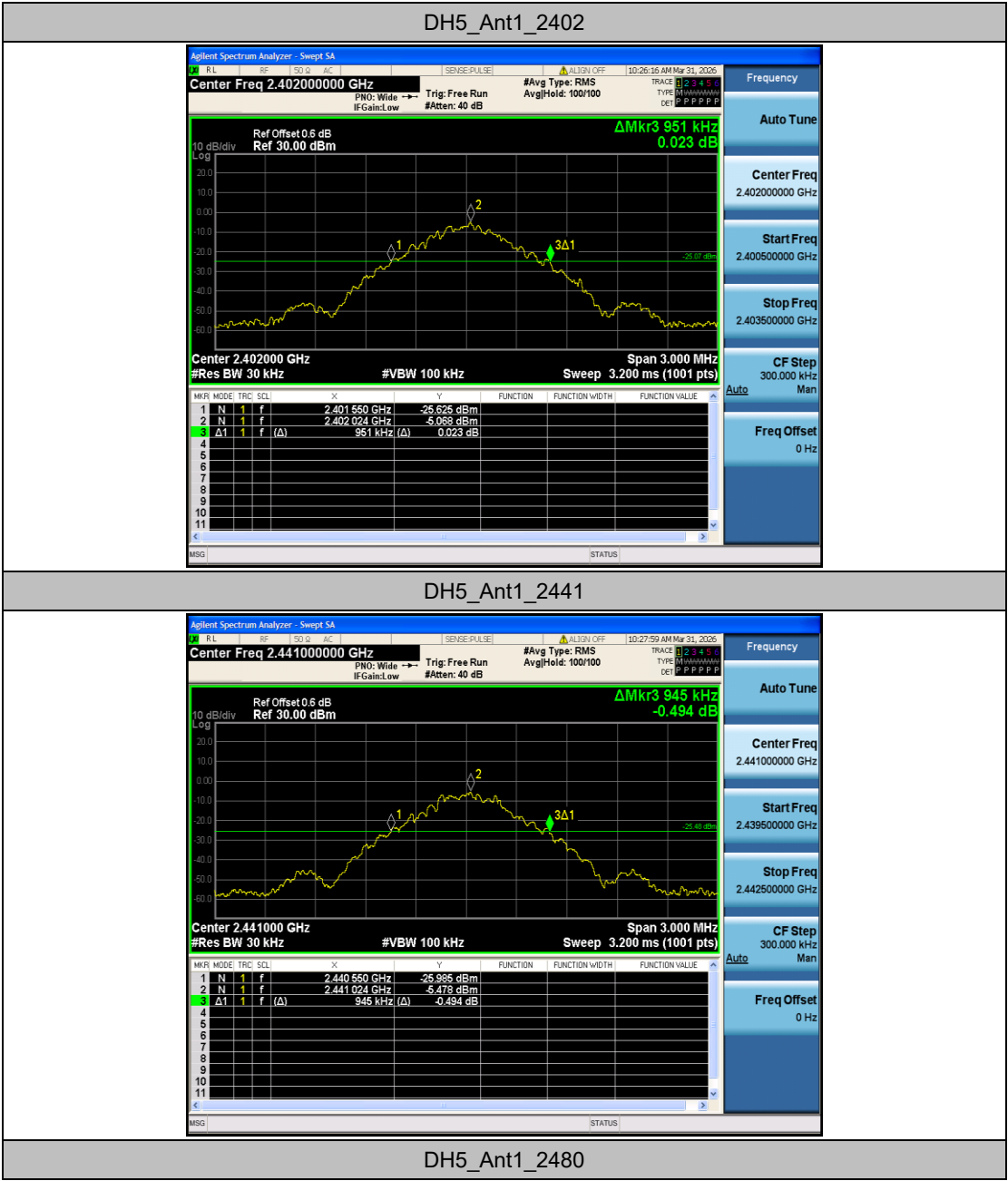
Reviewed By : Eric Wang

Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.951	2401.550	2402.501	---	---
		2441	0.945	2440.550	2441.495	---	---
		2480	0.948	2479.553	2480.501	---	---
2DH5	Ant1	2402	1.281	2401.382	2402.663	---	---
		2441	1.344	2440.340	2441.684	---	---
		2480	1.347	2479.337	2480.684	---	---

Test Graphs





2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480

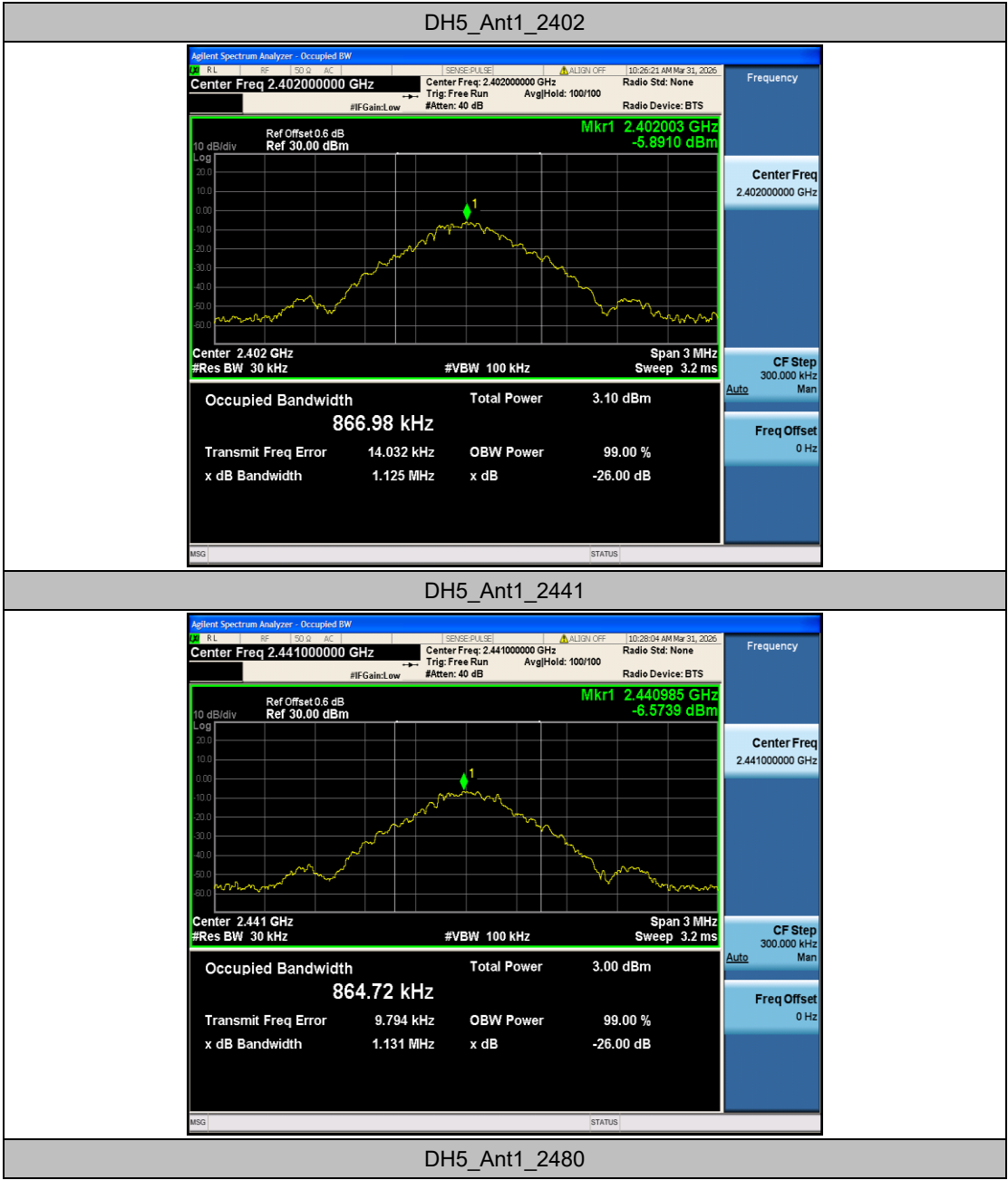


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.86698	2401.5805	2402.4475	---	---
		2441	0.86472	2440.5774	2441.4422	---	---
		2480	0.86179	2479.5801	2480.4419	---	---
2DH5	Ant1	2402	1.1850	2401.4169	2402.6019	---	---
		2441	1.1935	2440.4159	2441.6094	---	---
		2480	1.1868	2479.4187	2480.6055	---	---

Test Graphs





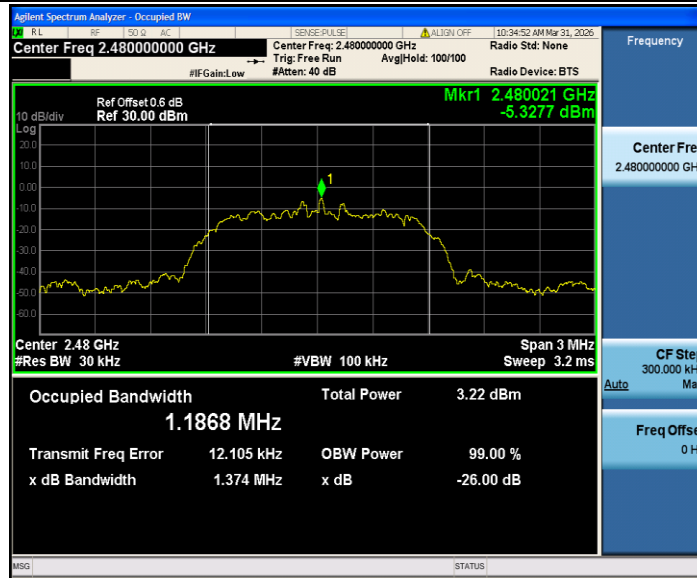
2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



Appendix C: Maximum conducted output power

Test Result Peak

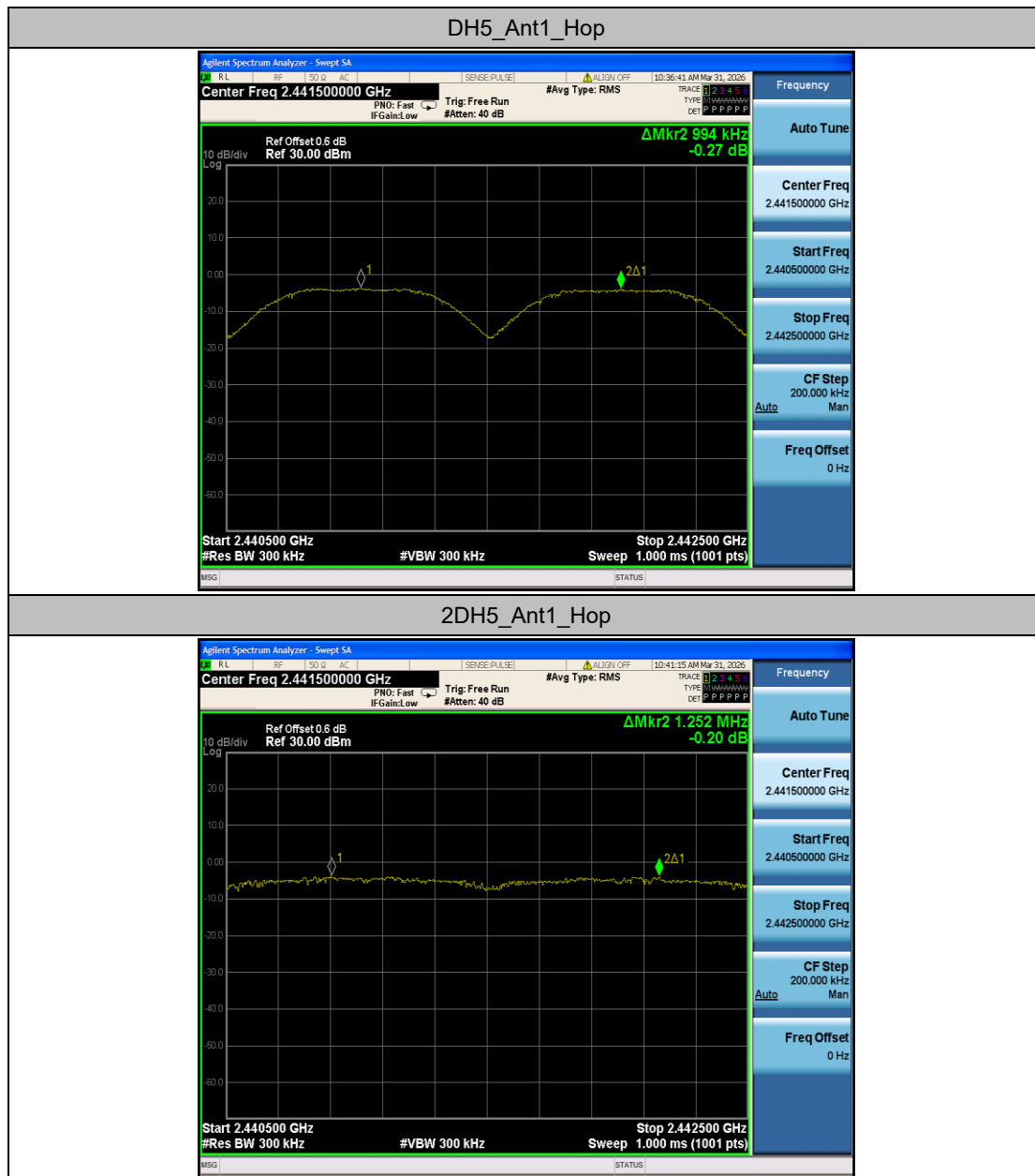
Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	-3.21	≤20.97	PASS
		2441	-3.46	≤20.97	PASS
		2480	-3.55	≤20.97	PASS
2DH5	Ant1	2402	-0.63	≤20.97	PASS
		2441	-0.93	≤20.97	PASS
		2480	-0.92	≤20.97	PASS

Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.994	≥ 0.951	PASS
2DH5	Ant1	Hop	1.252	≥ 0.898	PASS

Test Graphs

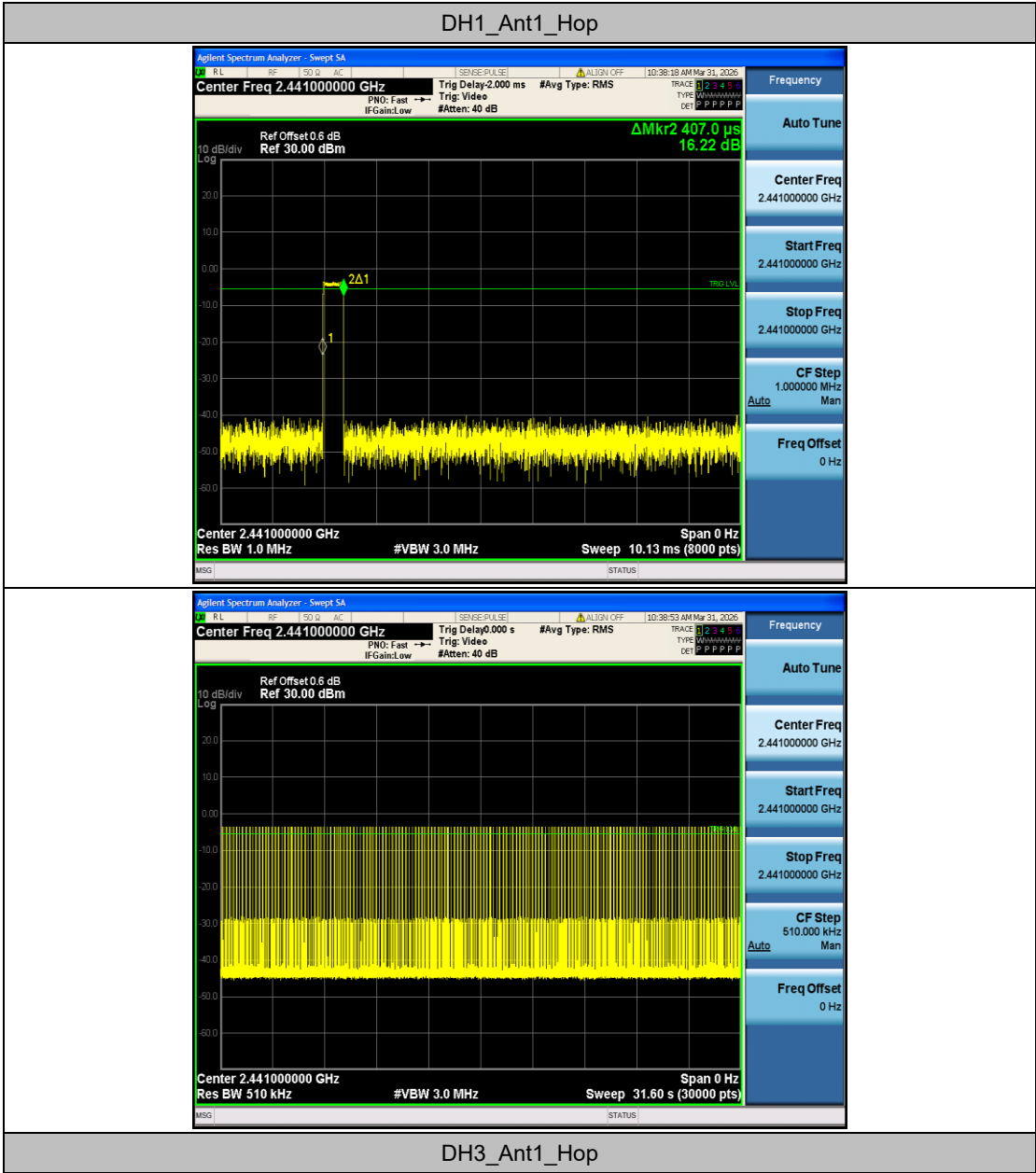


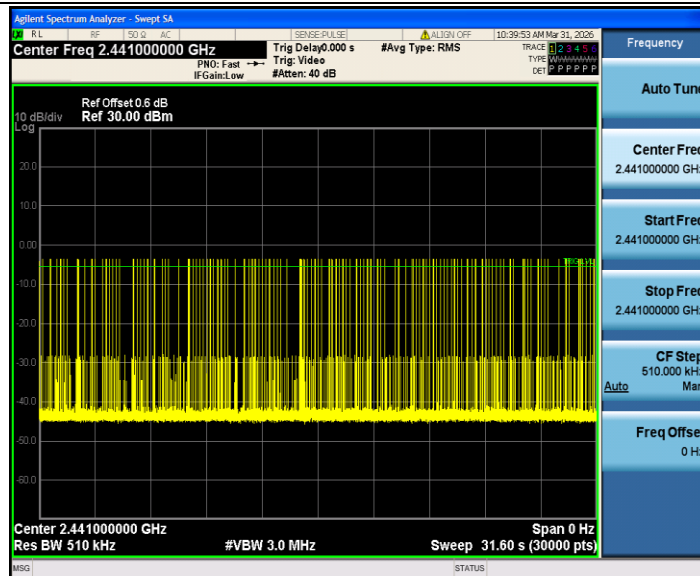
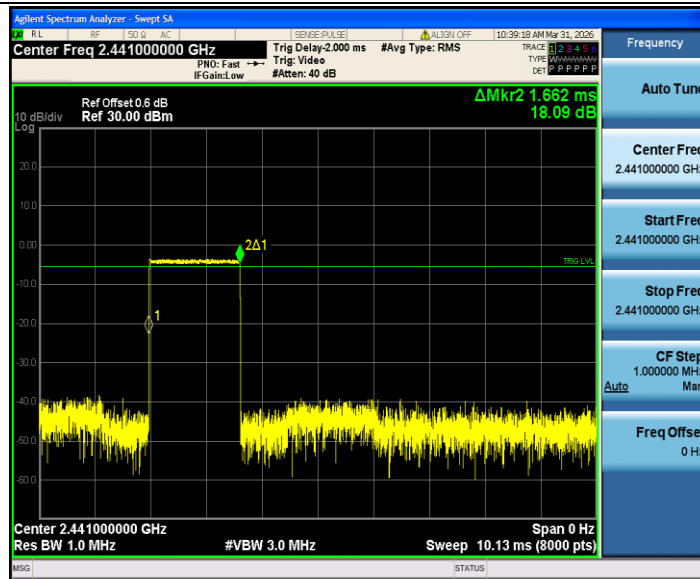
Appendix E: Time of occupancy

Test Result

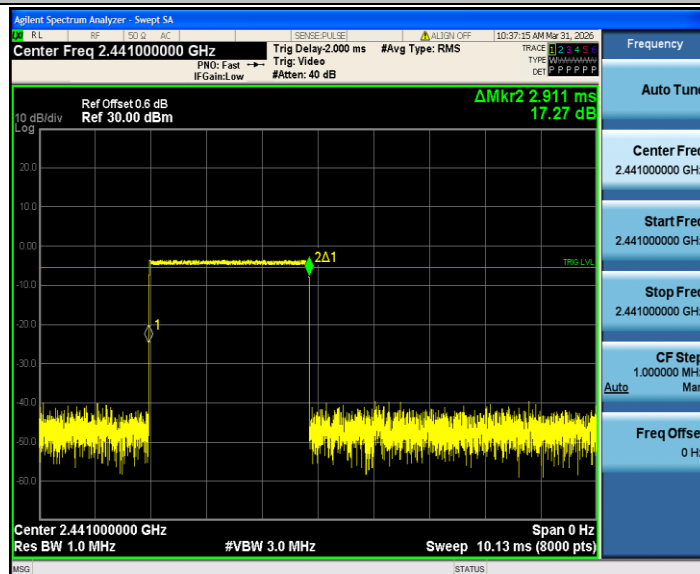
TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.407	319	0.13	≤0.4	PASS
DH3	Ant1	Hop	1.662	159	0.264	≤0.4	PASS
DH5	Ant1	Hop	2.911	120	0.349	≤0.4	PASS
2DH1	Ant1	Hop	0.415	320	0.133	≤0.4	PASS
2DH3	Ant1	Hop	1.667	155	0.258	≤0.4	PASS
2DH5	Ant1	Hop	2.916	94	0.274	≤0.4	PASS

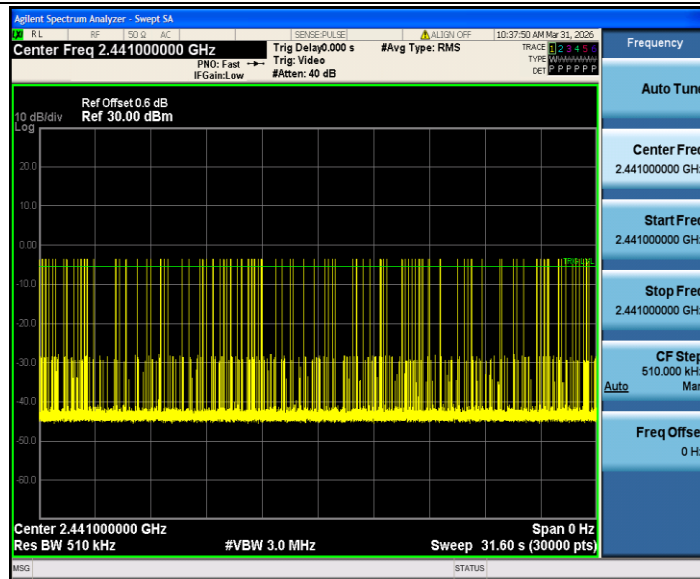
Test Graphs



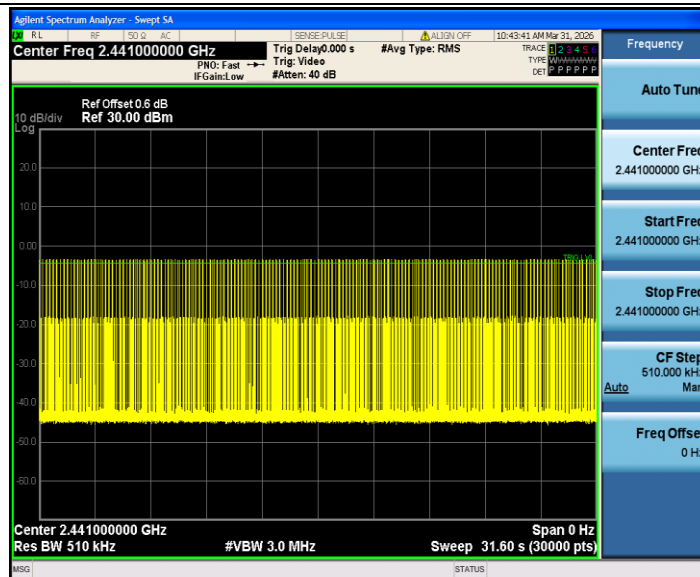
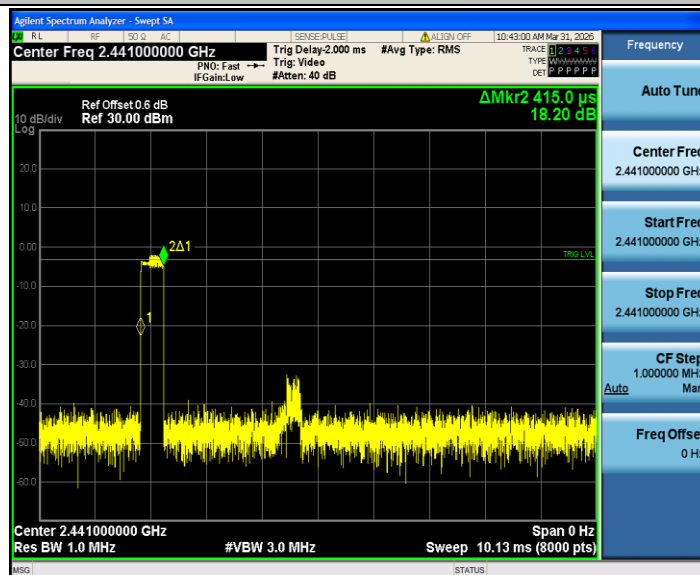


DH5_Ant1_Hop

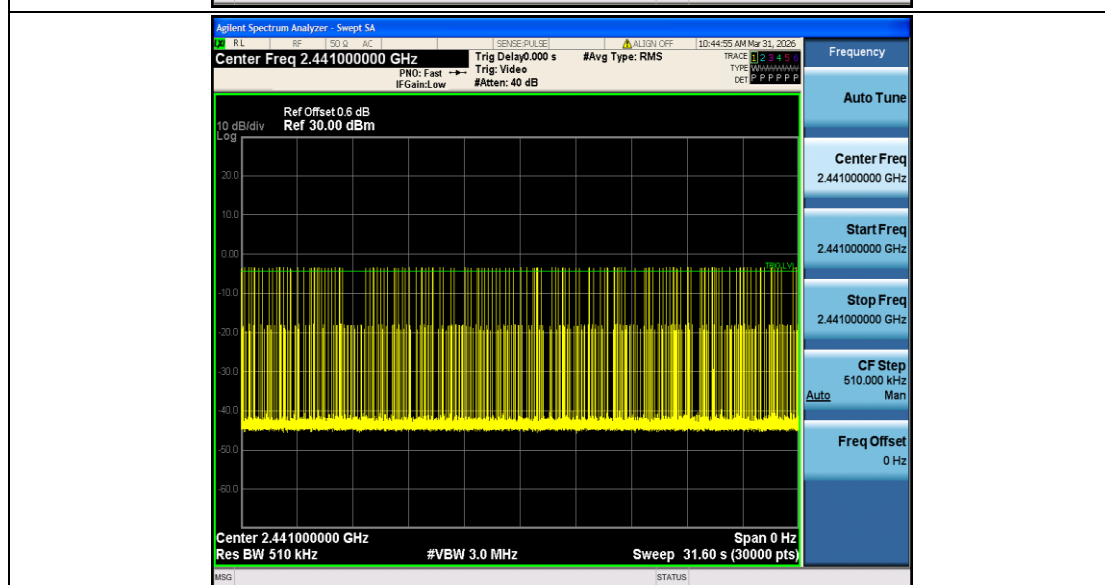
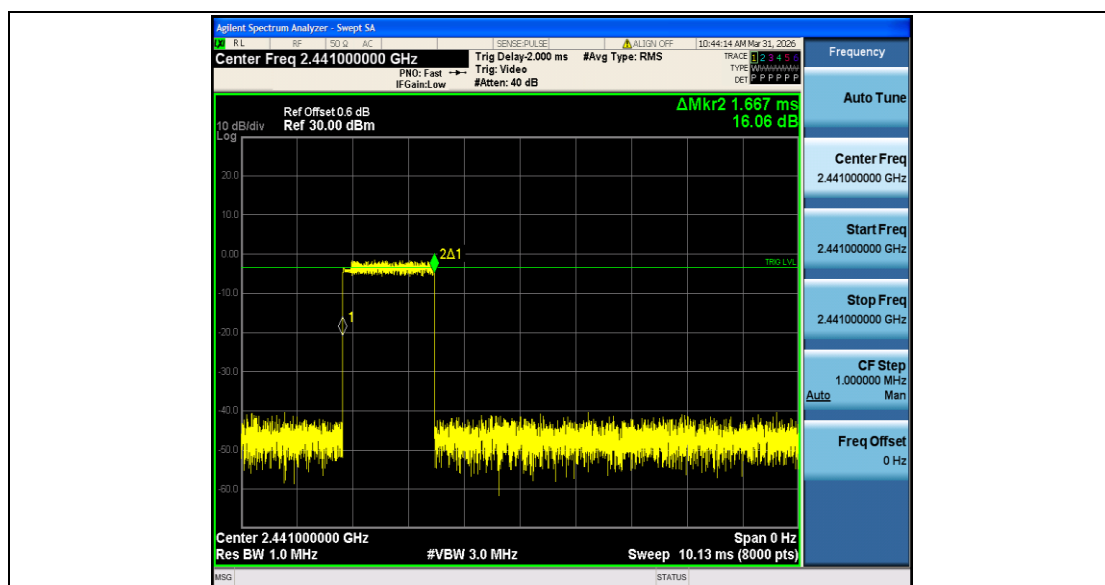




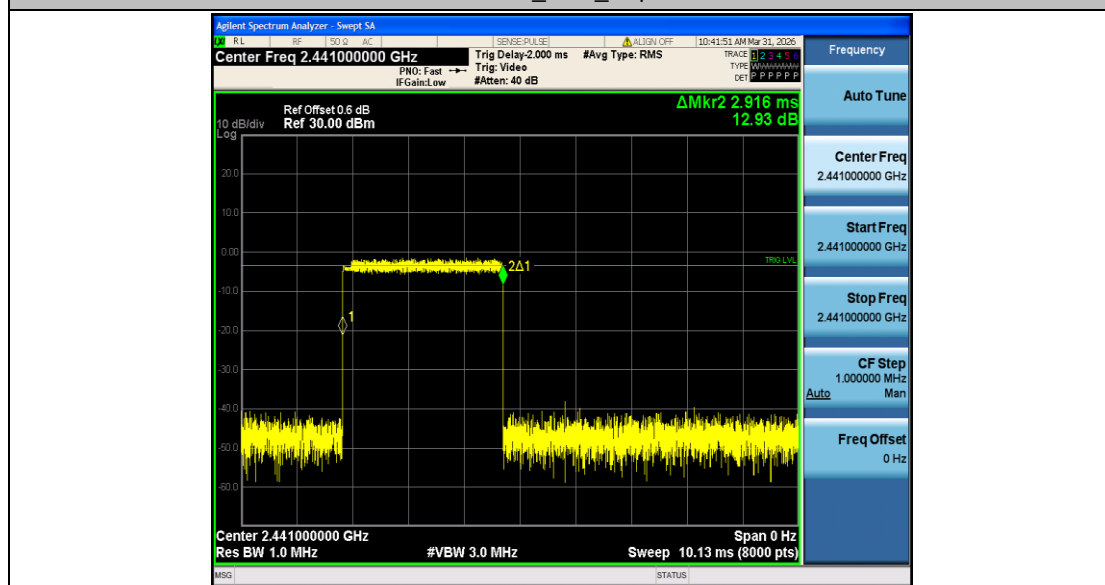
2DH1_Ant1_Hop

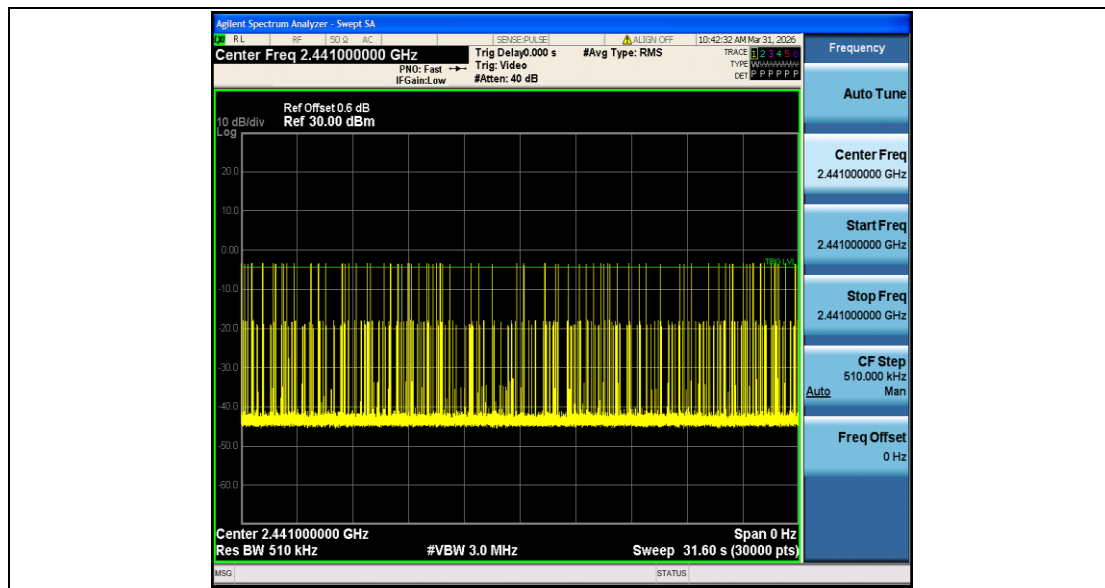


2DH3_Ant1_Hop



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

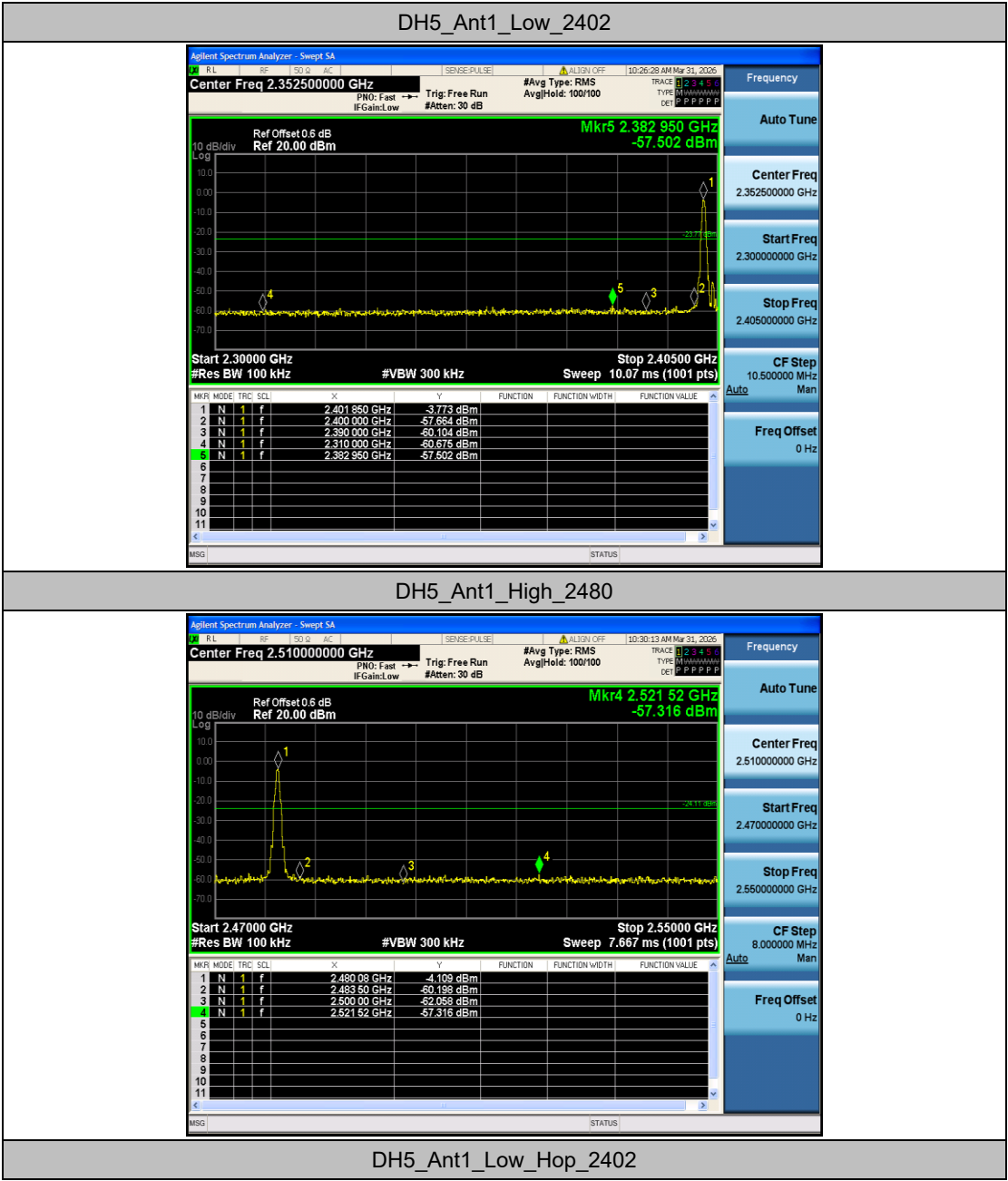


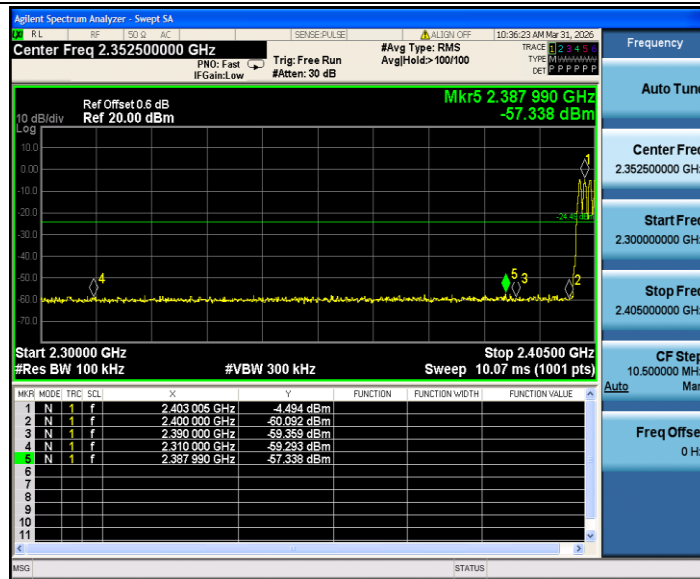
Appendix G: Band edge measurements

Test Result

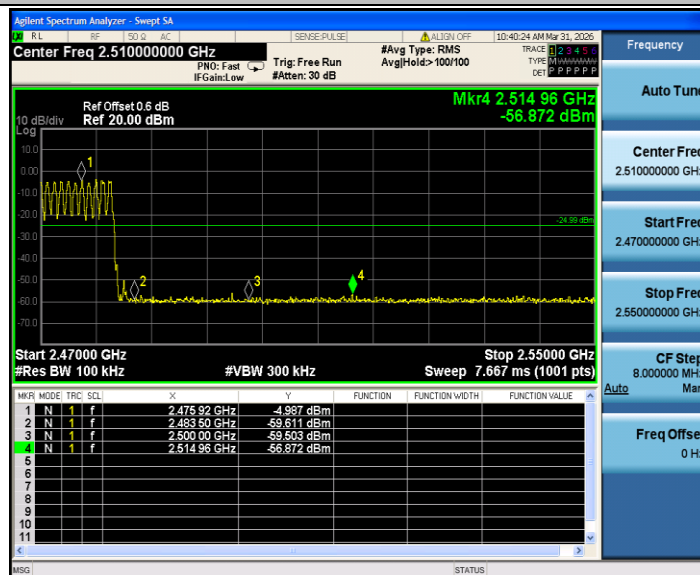
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-3.77	-57.5	≤-23.77	PASS
		High	2480	-4.11	-57.32	≤-24.11	PASS
		Low	Hop_2402	-4.49	-57.34	≤-24.49	PASS
		High	Hop_2480	-4.99	-56.87	≤-24.99	PASS
2DH5	Ant1	Low	2402	-6.04	-55.61	≤-26.04	PASS
		High	2480	-4.63	-57.69	≤-24.63	PASS
		Low	Hop_2402	-8.06	-57.54	≤-28.06	PASS
		High	Hop_2480	-6.50	-56.75	≤-26.5	PASS

Test Graphs

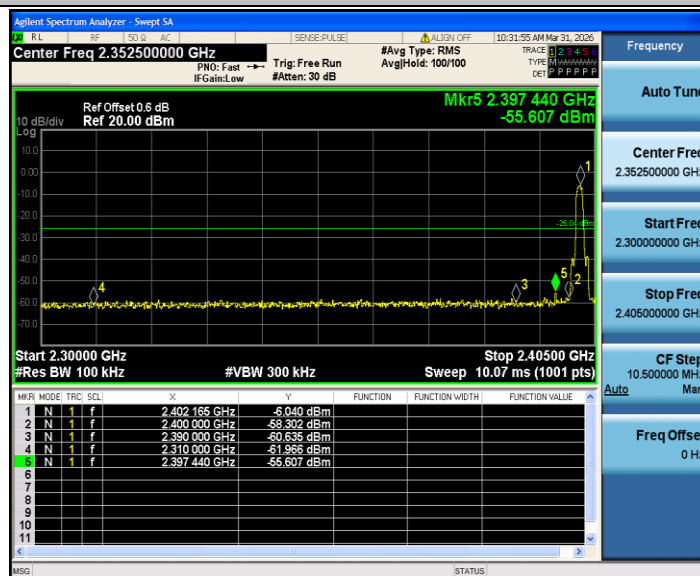




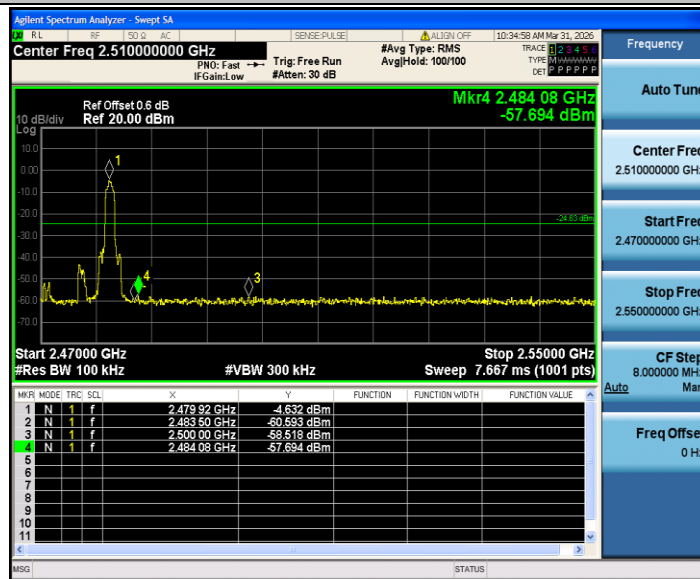
DH5_Ant1_High_Hop_2480



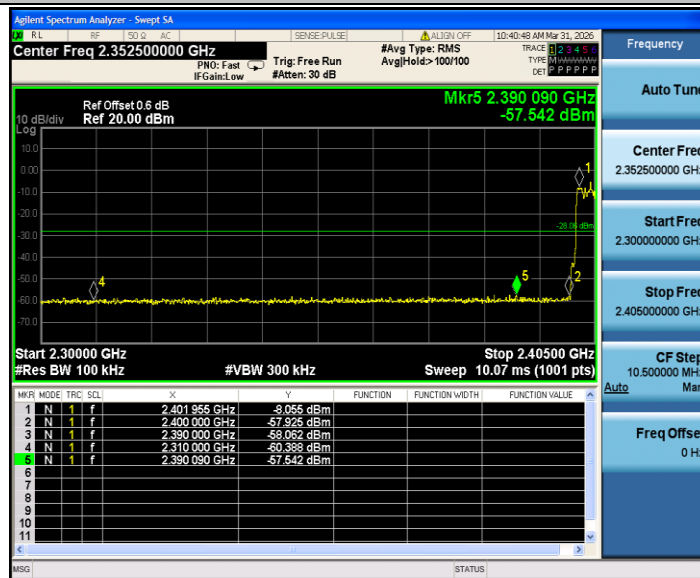
2DH5_Ant1_Low_2402



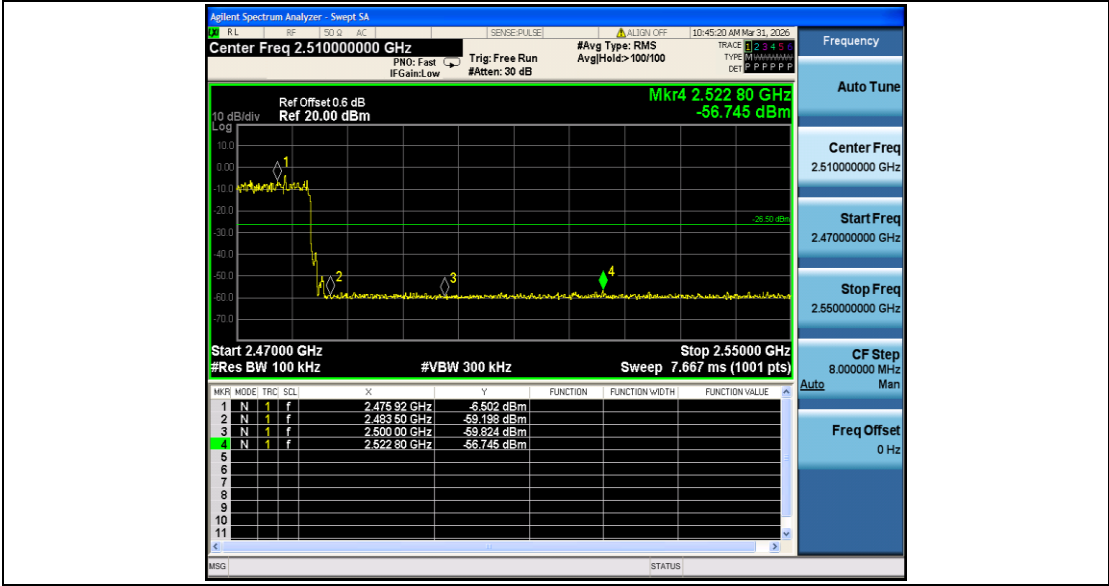
2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



2DH5_Ant1_High_Hop_2480

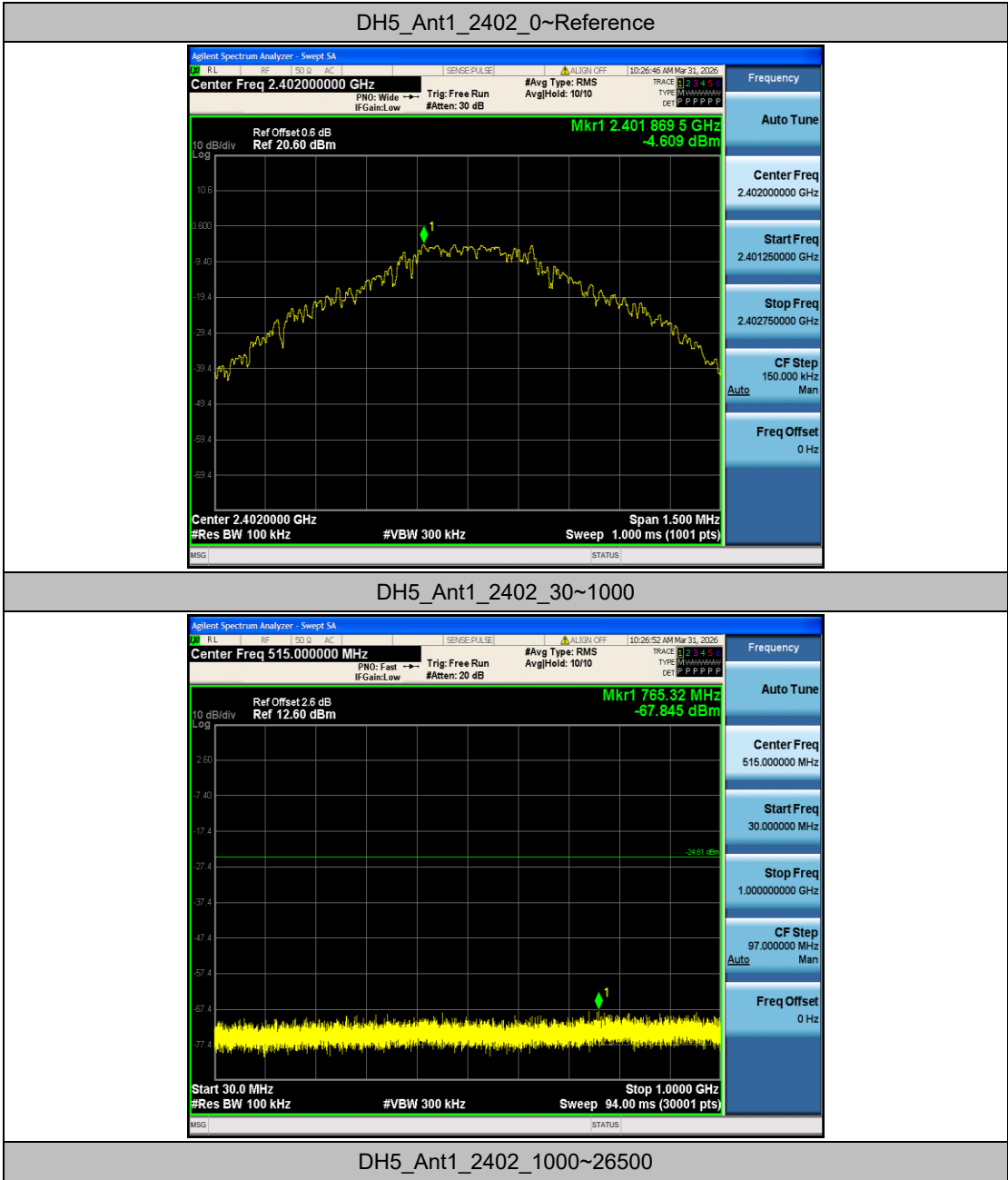


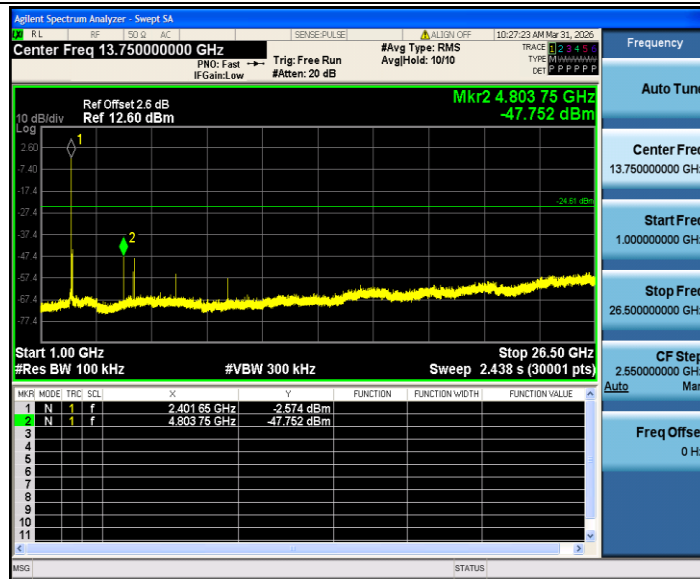
Appendix H: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-4.61	-4.61	---	PASS
			30~1000	-4.61	-67.85	≤-24.61	PASS
			1000~26500	-4.61	-47.75	≤-24.61	PASS
		2441	Reference	-4.18	-4.18	---	PASS
			30~1000	-4.18	-67.83	≤-24.18	PASS
			1000~26500	-4.18	-46.11	≤-24.18	PASS
		2480	Reference	-4.16	-4.16	---	PASS
			30~1000	-4.16	-67.37	≤-24.16	PASS
			1000~26500	-4.16	-46.91	≤-24.16	PASS
2DH5	Ant1	2402	Reference	-3.89	-3.89	---	PASS
			30~1000	-3.89	-59.1	≤-23.89	PASS
			1000~26500	-3.89	-47.62	≤-23.89	PASS
		2441	Reference	-4.48	-4.48	---	PASS
			30~1000	-4.48	-67.36	≤-24.48	PASS
			1000~26500	-4.48	-48	≤-24.48	PASS
		2480	Reference	-6.76	-6.76	---	PASS
			30~1000	-6.76	-67.06	≤-26.76	PASS
			1000~26500	-6.76	-49.5	≤-26.76	PASS

Test Graphs

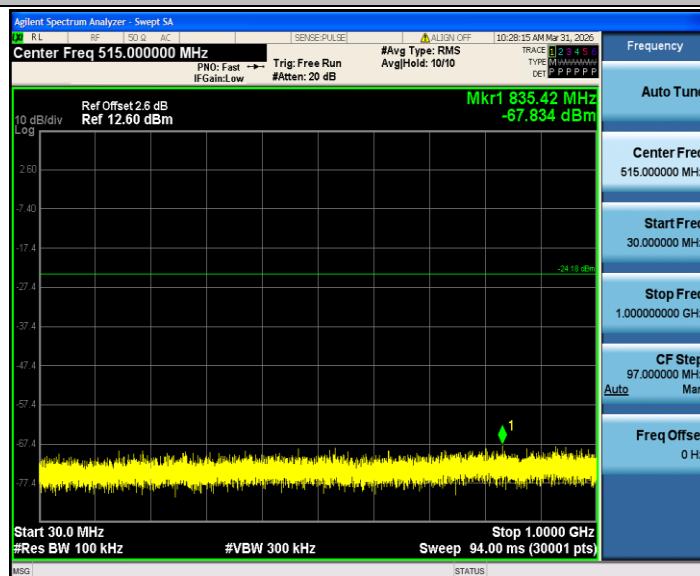




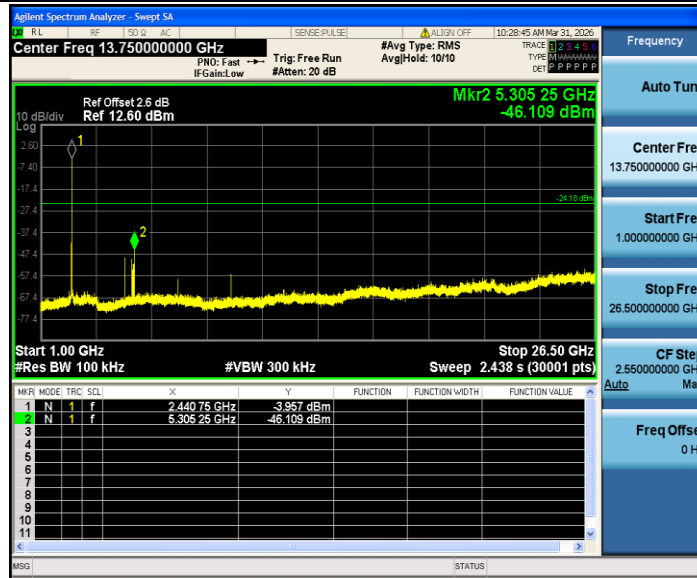
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



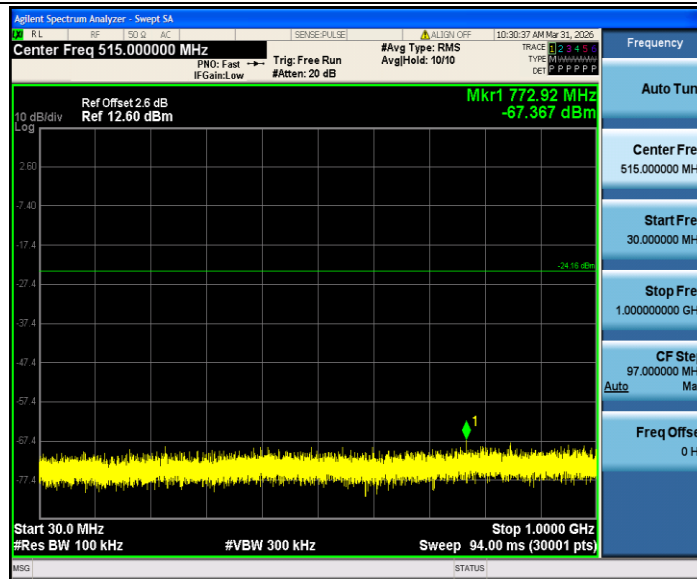
DH5_Ant1_2441_1000~26500



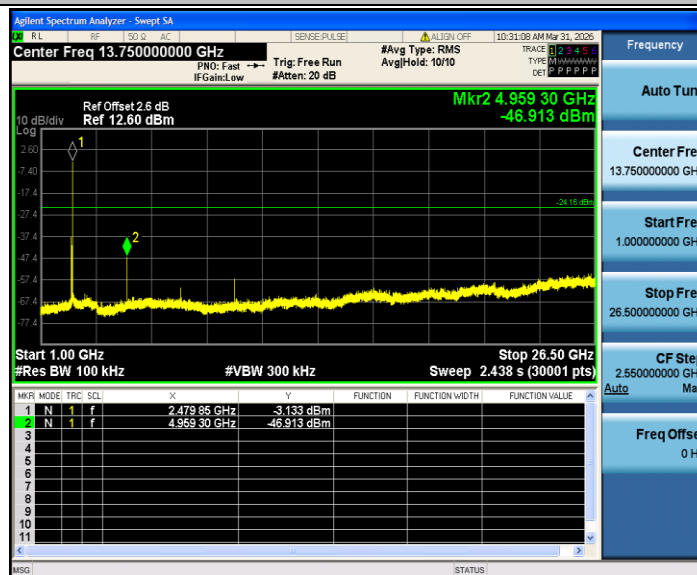
DH5_Ant1_2480_0~Reference



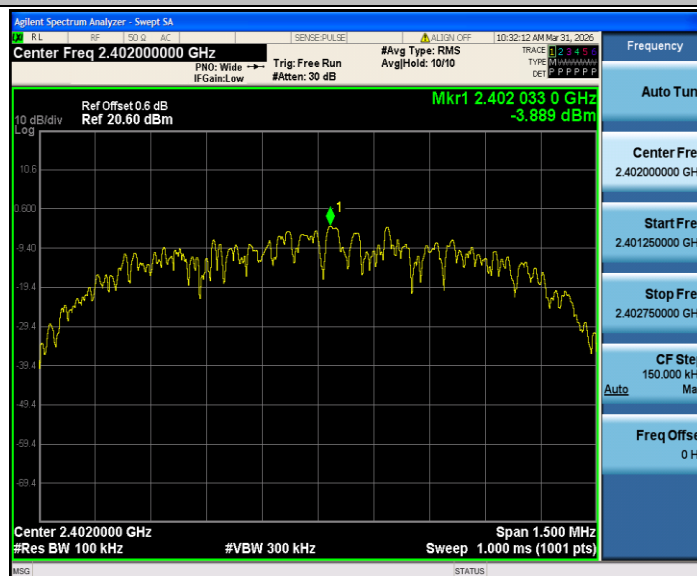
DH5_Ant1_2480_30~1000



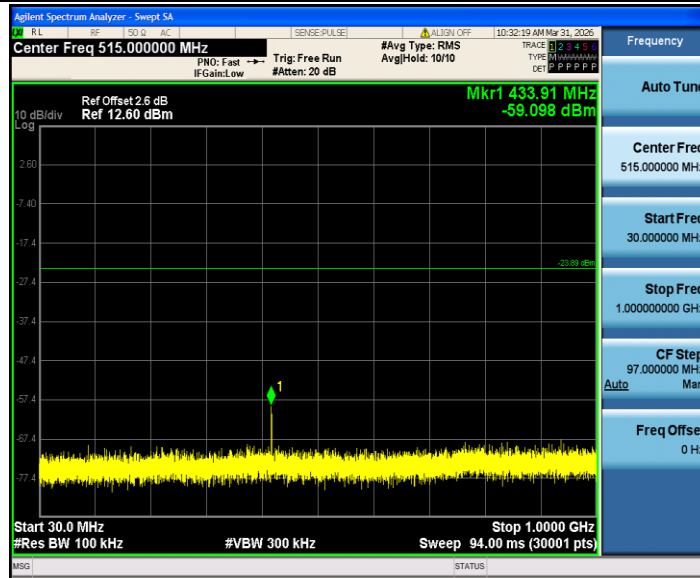
DH5_Ant1_2480_1000~26500



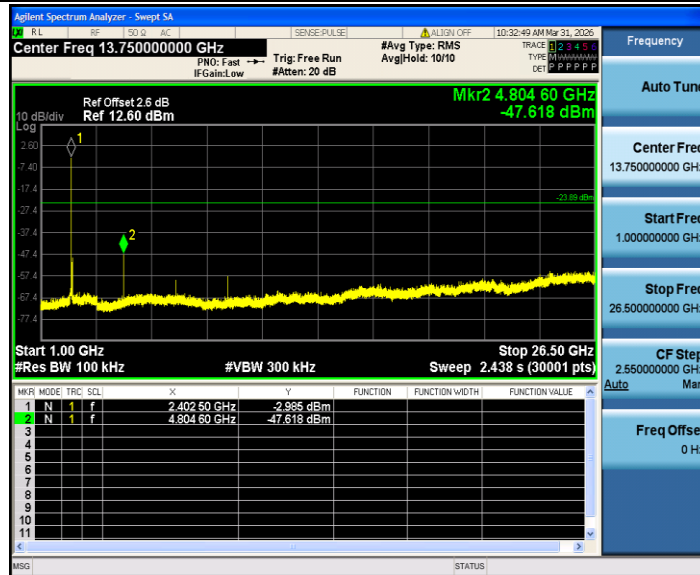
2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



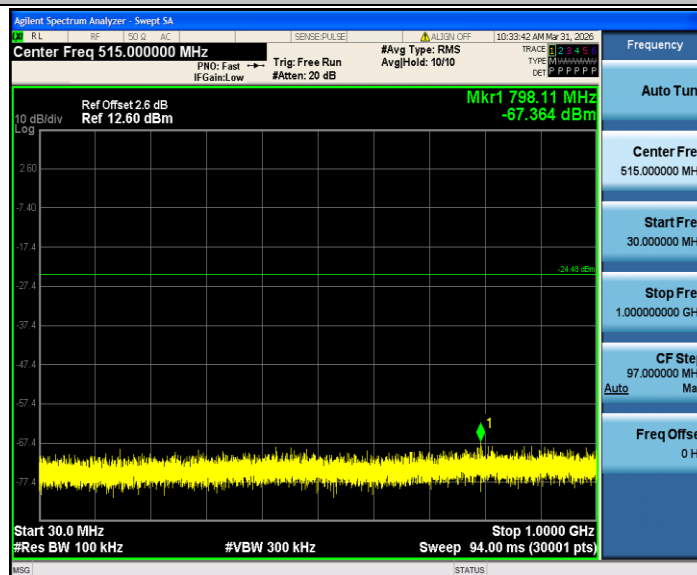
2DH5_Ant1_2402_1000~26500



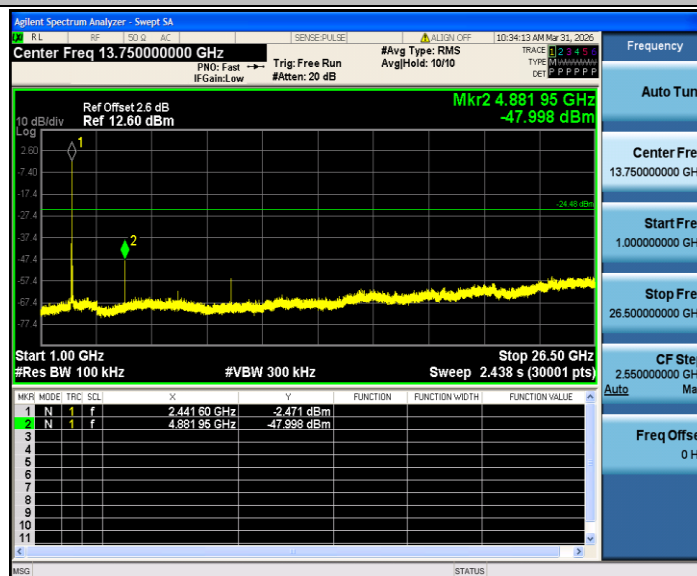
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000



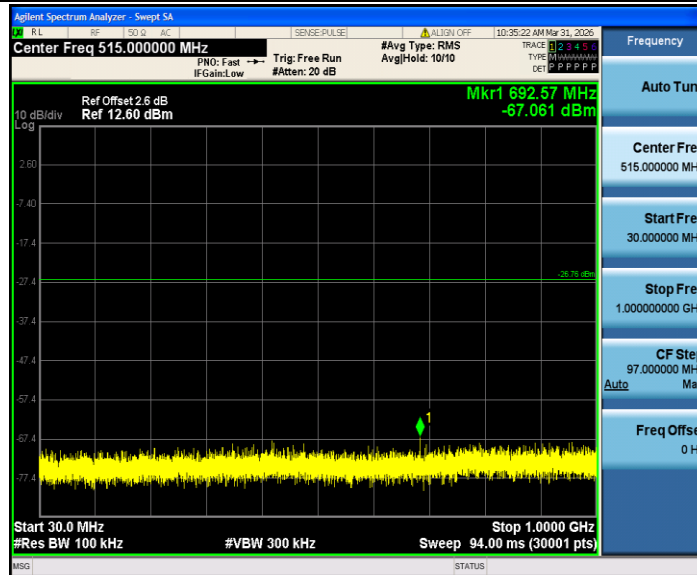
2DH5_Ant1_2441_1000~26500



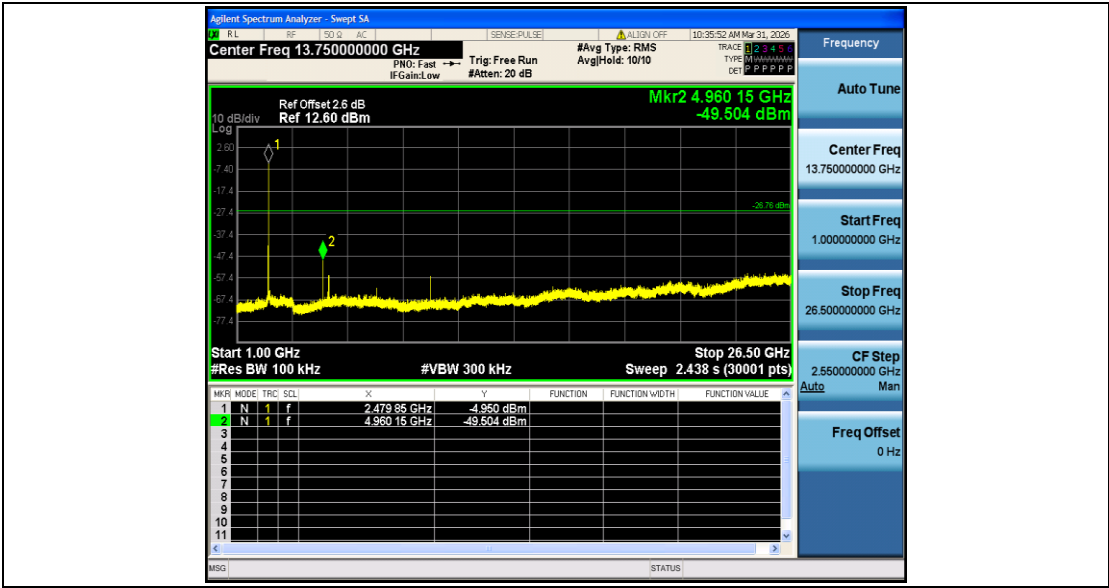
2DH5_Ant1_2480_0~Reference



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	2.91	3.75	77.60	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	2.92	3.75	77.87	1.09	---	---