

FCC Appendix RF Test Data for BT

FCC ID : 2BKDL-LC80

Company : Shenzhen Jinruihuan Technology Co., LTD

EUT : Outdoor sports Bluetooth call smartwatch

Model Number : LC80

Report No. : CTA26050700801

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	0.960	2401.547	2402.507	---	---
		2441	0.942	2440.553	2441.495	---	---
		2480	0.960	2479.547	2480.507	---	---
2DH5	Ant1	2402	1.281	2401.385	2402.666	---	---
		2441	1.278	2440.382	2441.660	---	---
		2480	1.338	2479.340	2480.678	---	---

[illegible]



2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480

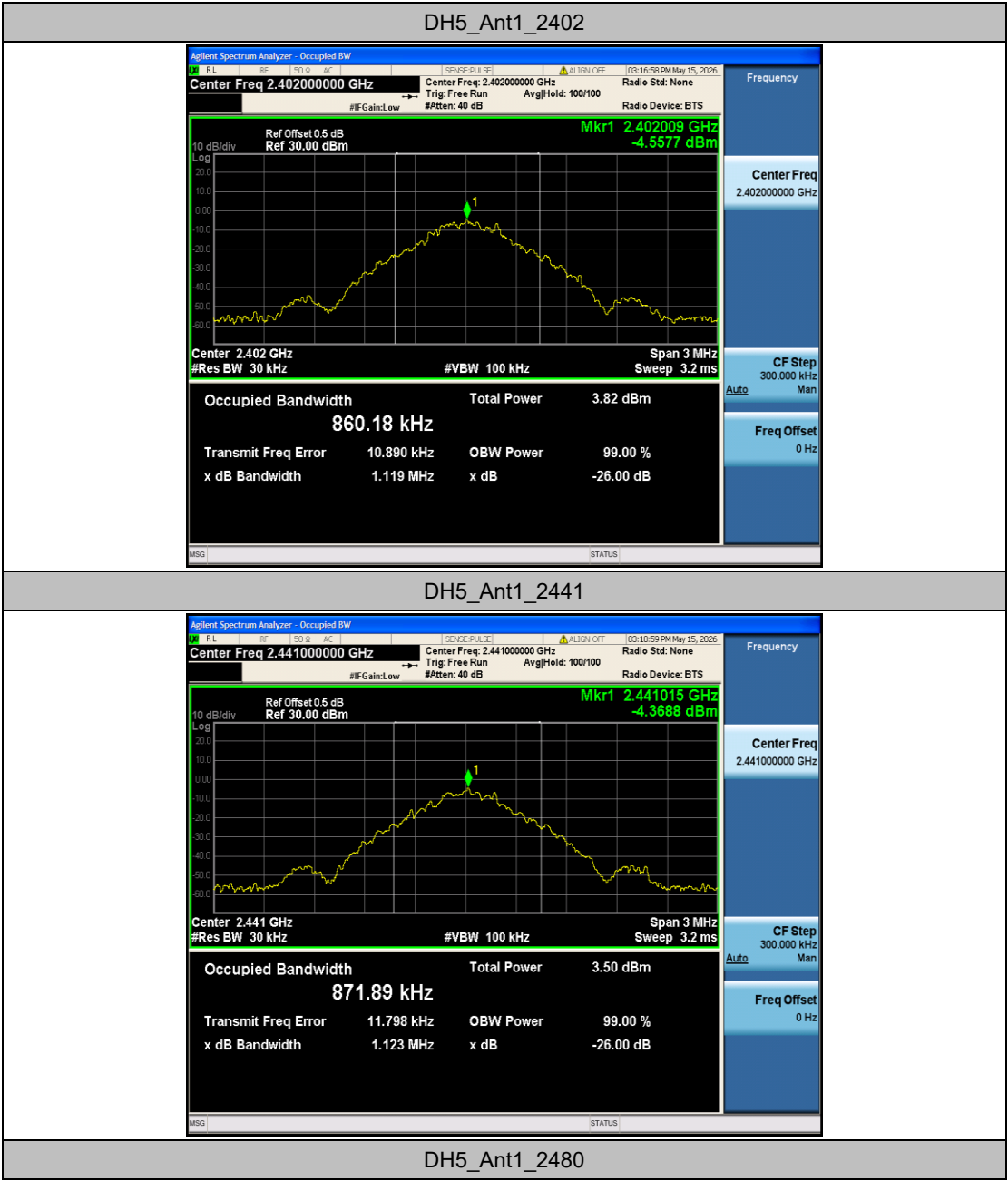


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.86018	2401.5808	2402.4410	---	---
		2441	0.87189	2440.5759	2441.4477	---	---
		2480	0.86477	2479.5775	2480.4422	---	---
2DH5	Ant1	2402	1.1921	2401.4171	2402.6092	---	---
		2441	1.1848	2440.4177	2441.6025	---	---
		2480	1.1800	2479.4207	2480.6007	---	---

Test Graphs

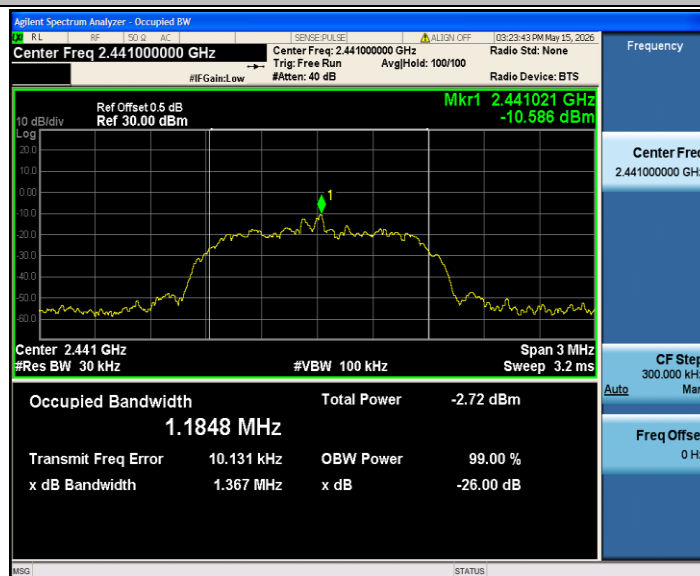




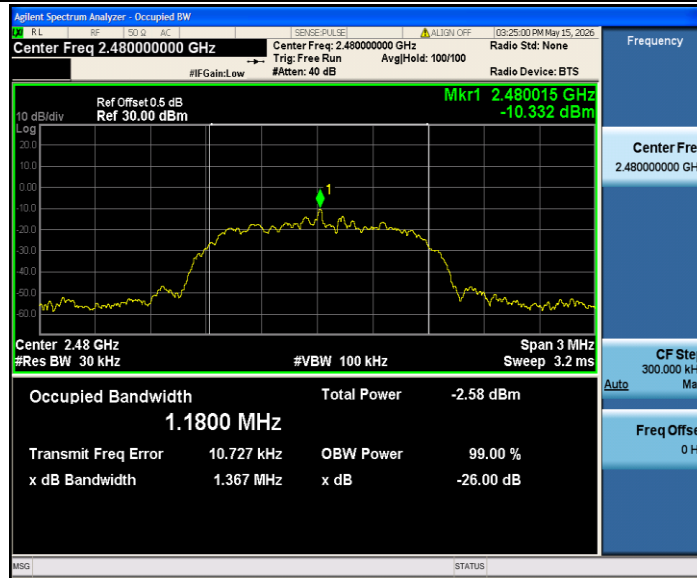
2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



Appendix C: Maximum conducted output power

Test Result Peak

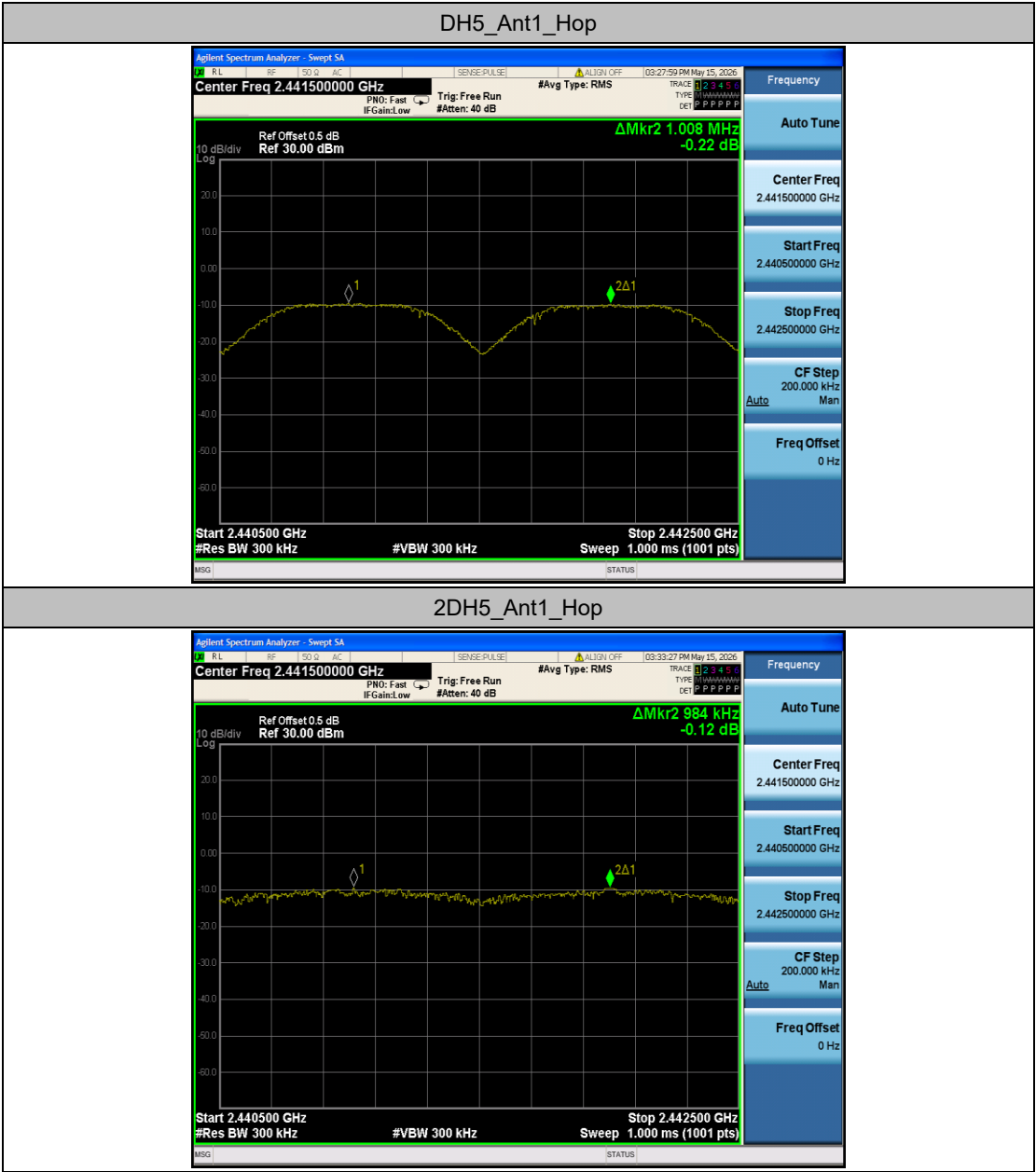
Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	-2.74	≤20.97	PASS
		2441	-2.80	≤20.97	PASS
		2480	-2.76	≤20.97	PASS
2DH5	Ant1	2402	-6.80	≤20.97	PASS
		2441	-6.90	≤20.97	PASS
		2480	-6.81	≤20.97	PASS

Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.008	≥ 0.960	PASS
2DH5	Ant1	Hop	0.984	≥ 0.892	PASS

Test Graphs



Appendix E: Time of occupancy

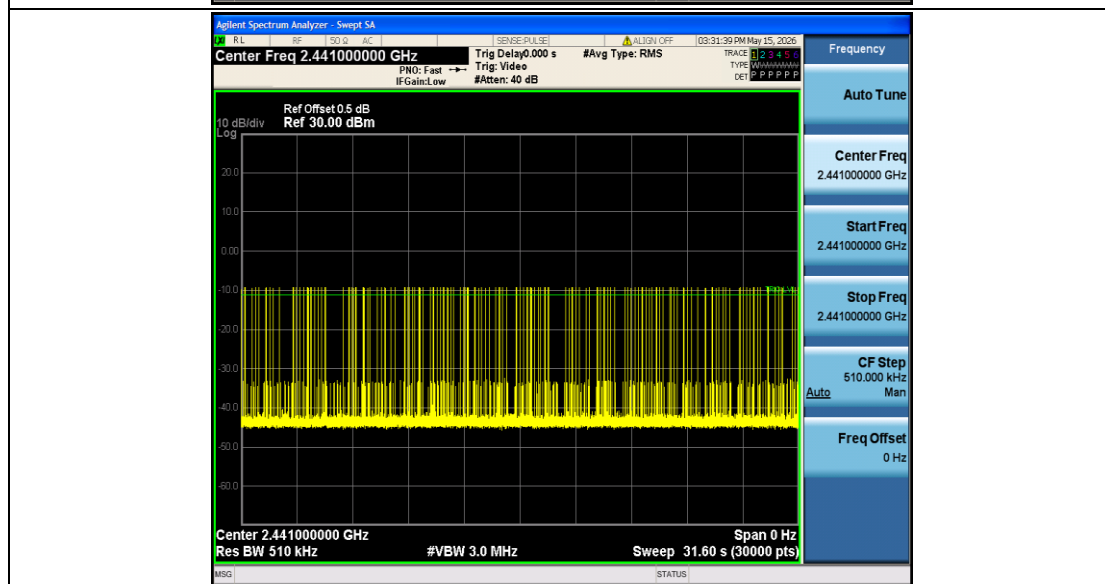
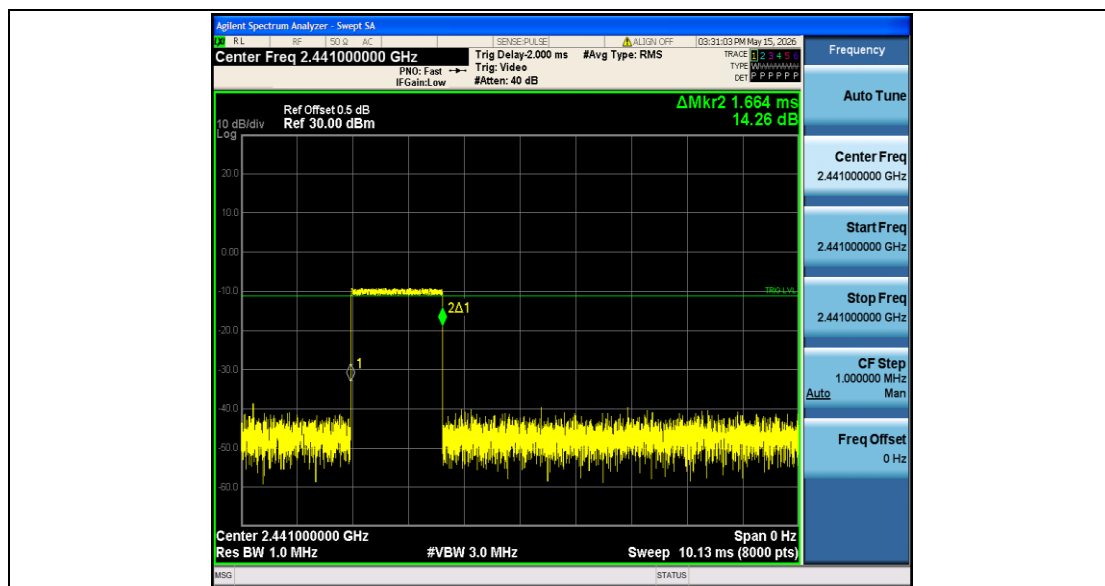
Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.408	313	0.128	≤0.4	PASS
DH3	Ant1	Hop	1.664	159	0.265	≤0.4	PASS
DH5	Ant1	Hop	2.912	111	0.323	≤0.4	PASS
2DH1	Ant1	Hop	0.415	317	0.132	≤0.4	PASS
2DH3	Ant1	Hop	1.668	161	0.269	≤0.4	PASS
2DH5	Ant1	Hop	2.916	105	0.306	≤0.4	PASS

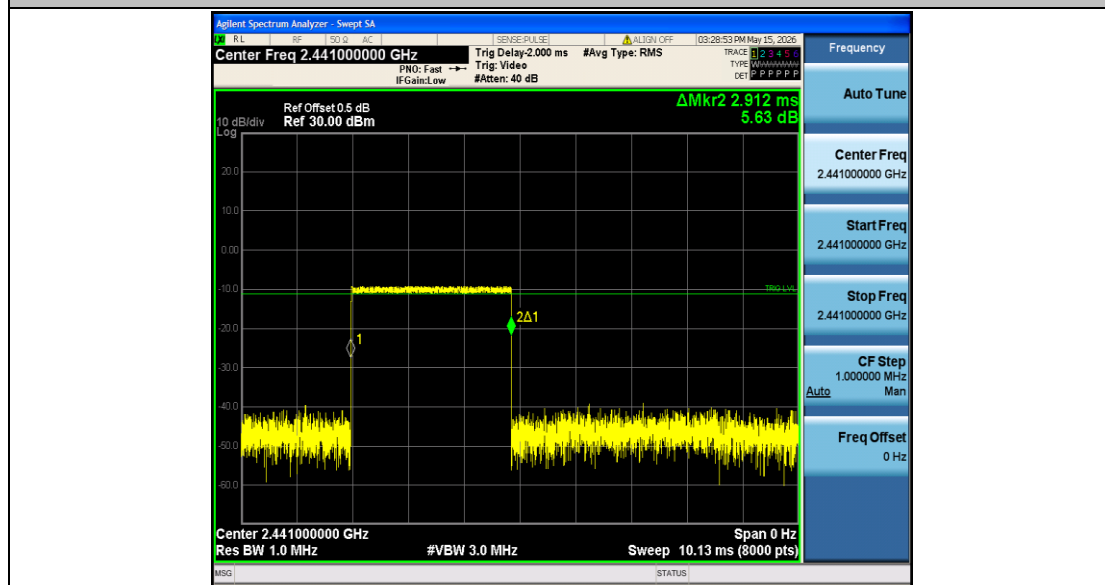
Figure 10 shows two screenshots of the Agilent Spectrum Analyzer interface, illustrating the setup for measuring the frequency response of the DH1_Ant1_Hop and DH3_Ant1_Hop.

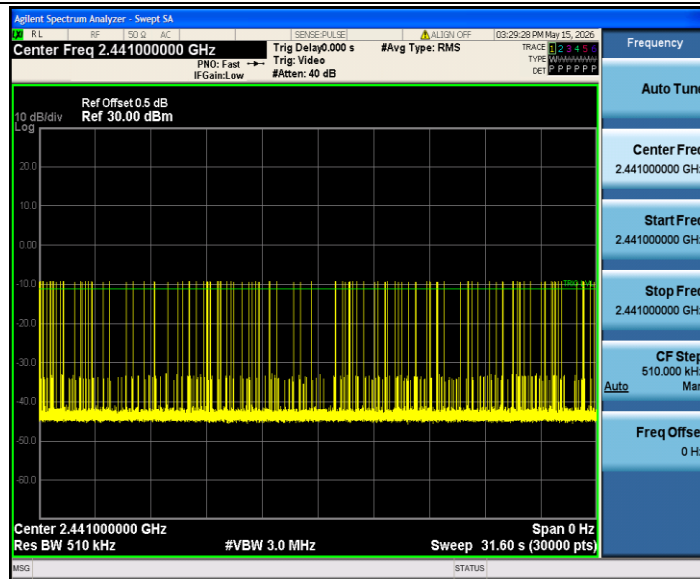
The top screenshot displays the Spectrum Analyzer setup for the DH1_Ant1_Hop. The center frequency is 2.441000000 GHz, the resolution bandwidth (Res BW) is 1.0 MHz, and the video bandwidth (VBW) is 3.0 MHz. The span is 0 Hz. The reference level is 30.00 dBm, and the reference offset is 0.5 dB. The trigger delay is 2.000 ms, and the trigger type is Video. The average type is RMS. The frequency offset is 0 Hz. The measurement shows a sharp peak at 2.441000000 GHz, with a peak level of 14.86 dB. The peak is labeled with a green '1' and a green '2'. The peak is also labeled with a green '1' and a green '2'.

The bottom screenshot displays the Spectrum Analyzer setup for the DH3_Ant1_Hop. The center frequency is 2.441000000 GHz, the resolution bandwidth (Res BW) is 510 kHz, and the video bandwidth (VBW) is 3.0 MHz. The span is 0 Hz. The reference level is 30.00 dBm, and the reference offset is 0.5 dB. The trigger delay is 0.000 s, and the trigger type is Video. The average type is RMS. The frequency offset is 0 Hz. The measurement shows a sharp peak at 2.441000000 GHz, with a peak level of 31.60 dB. The peak is labeled with a green '1' and a green '2'.

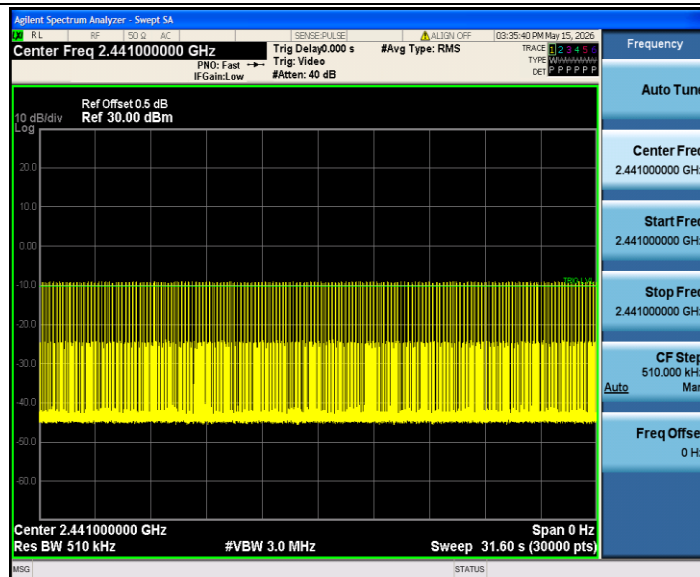
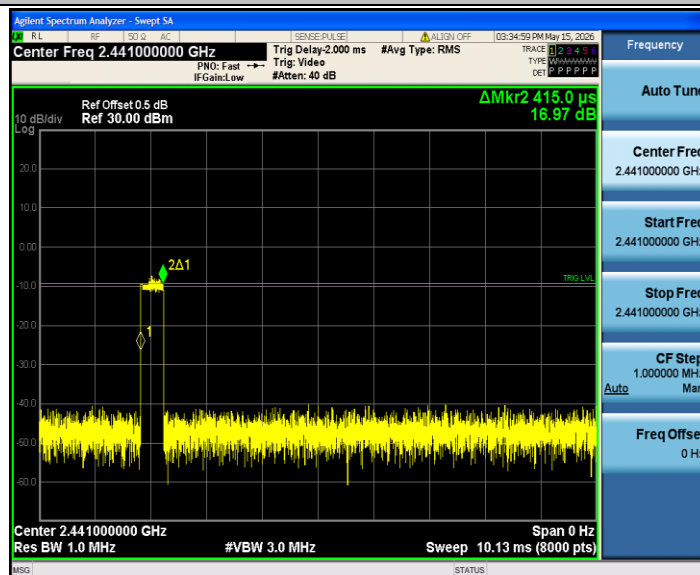


DH5_Ant1_Hop

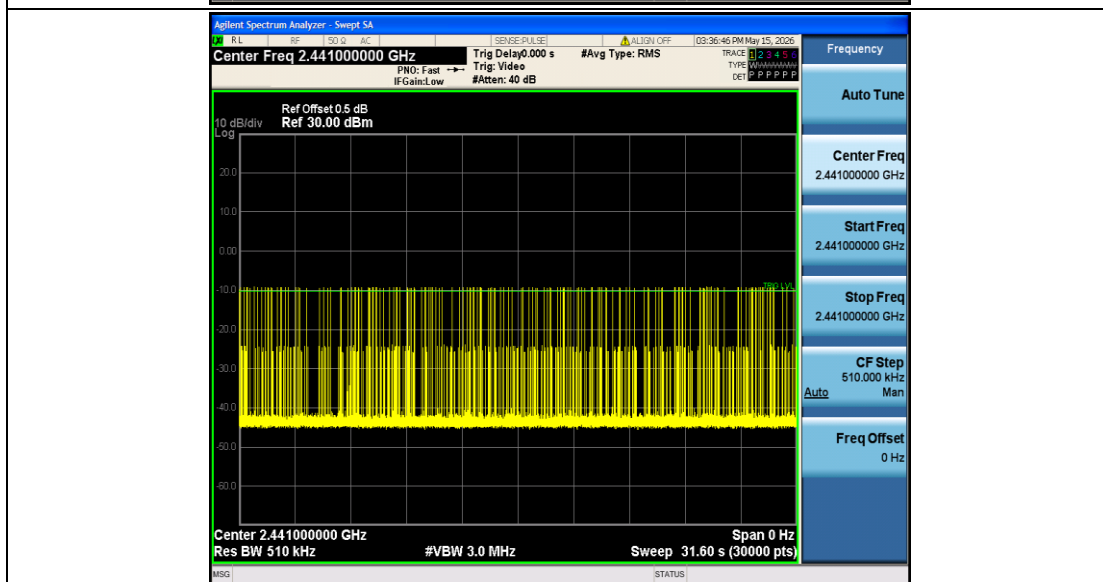
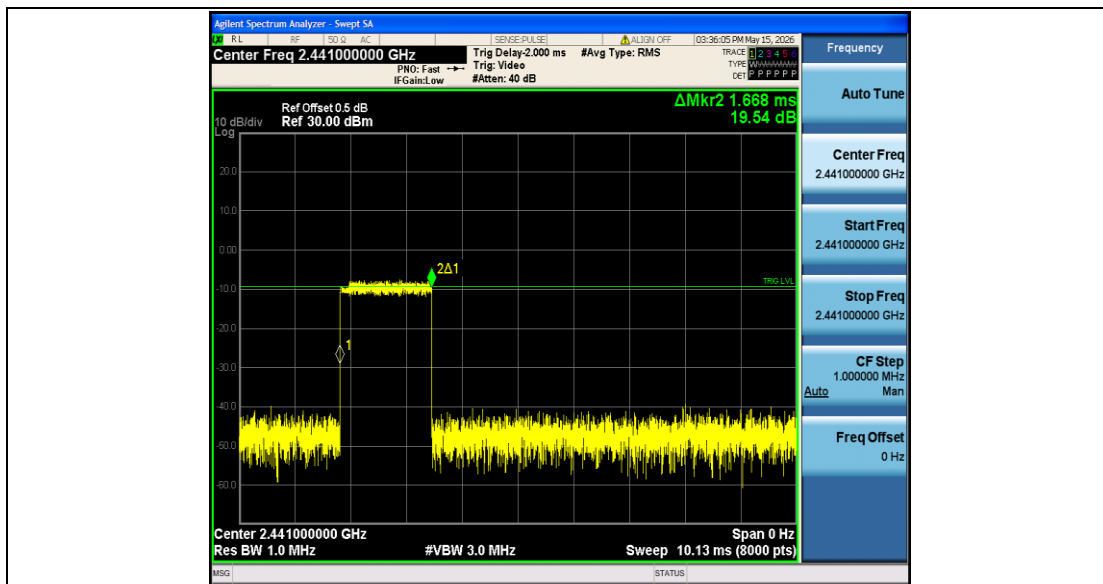




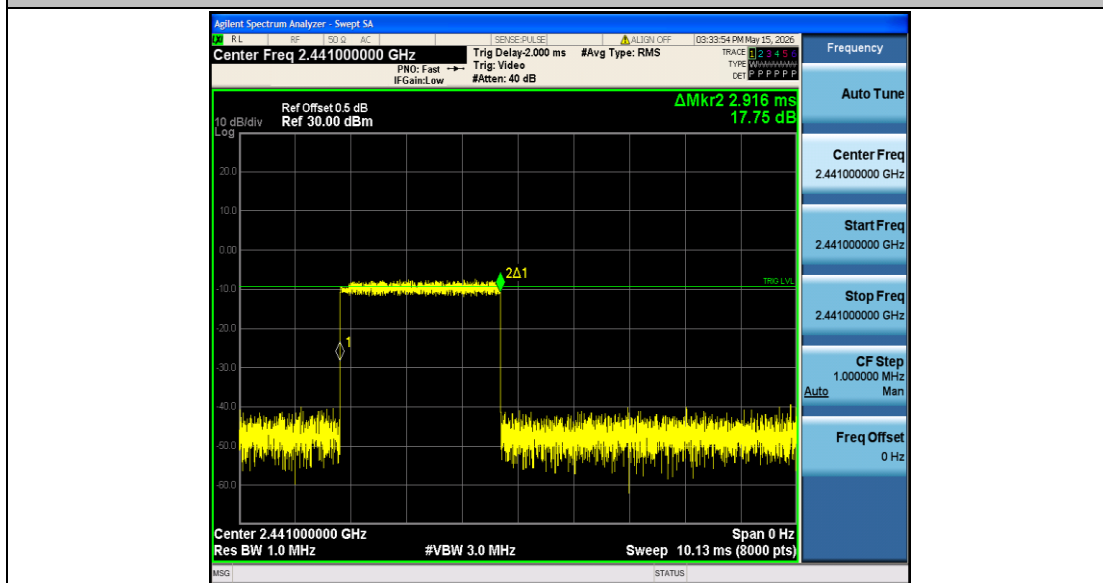
2DH1_Ant1_Hop

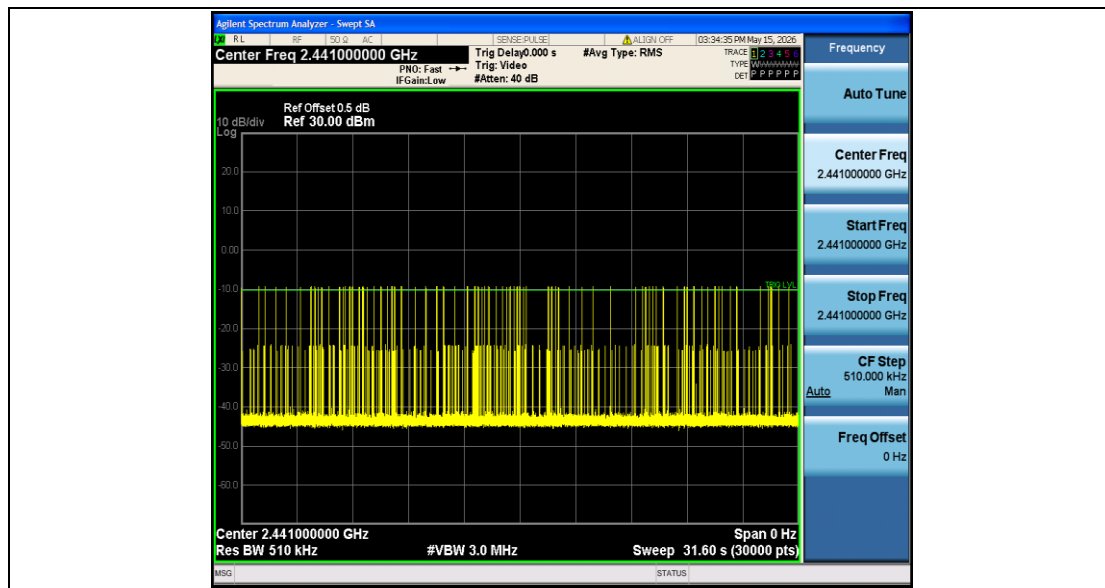


2DH3_Ant1_Hop



2DH5_Ant1_Hop



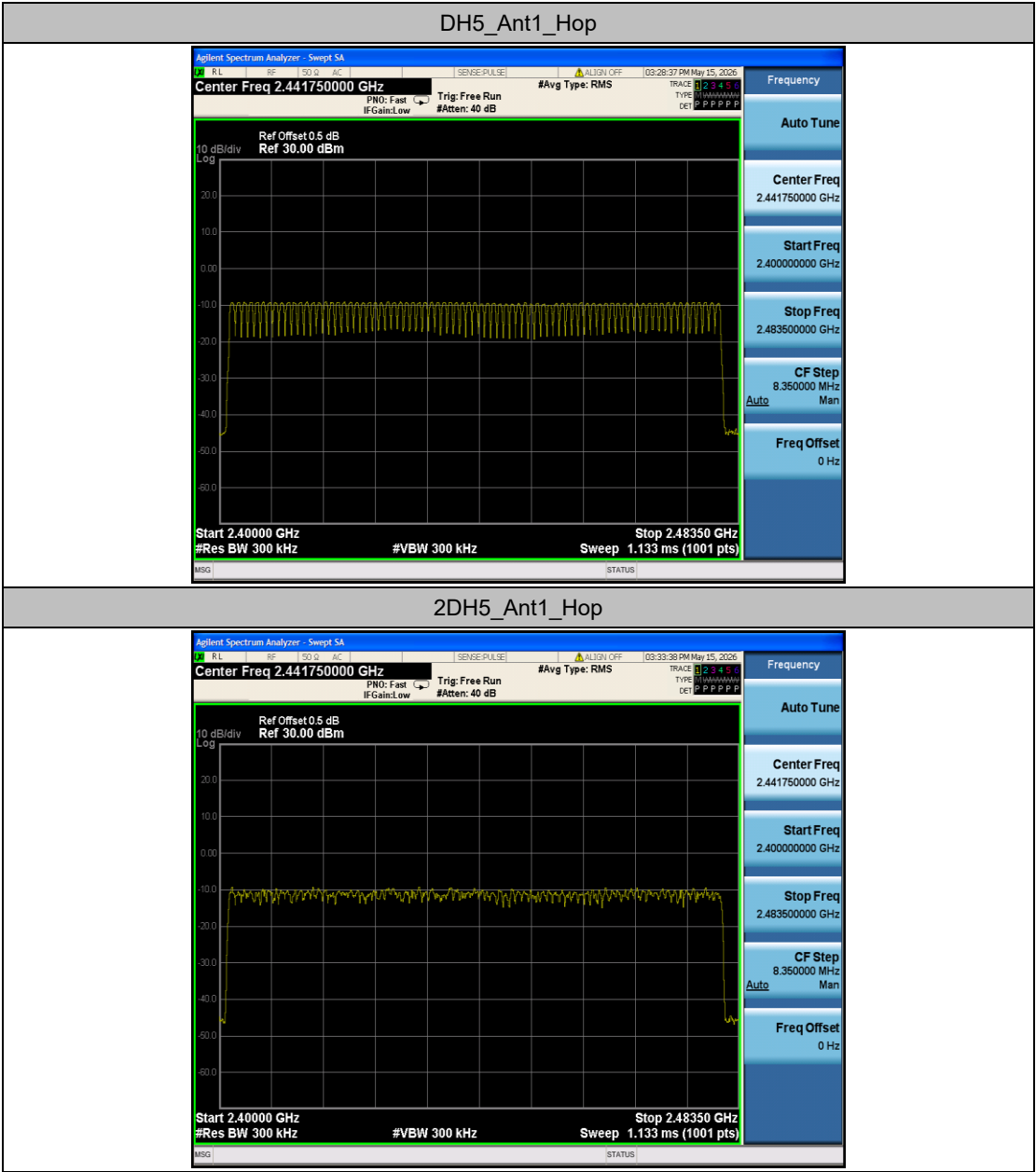


Appendix F: Number of hopping channels

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

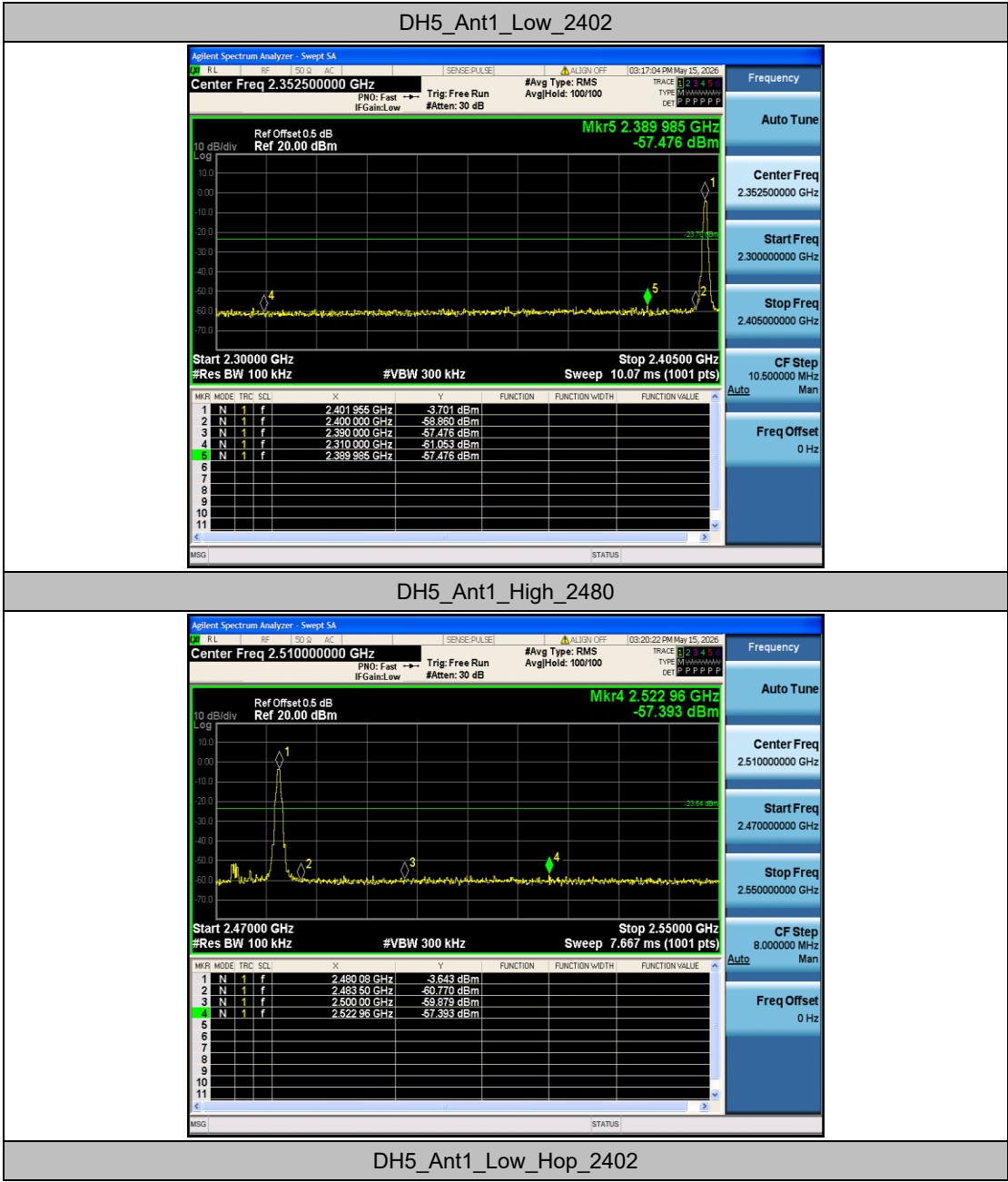


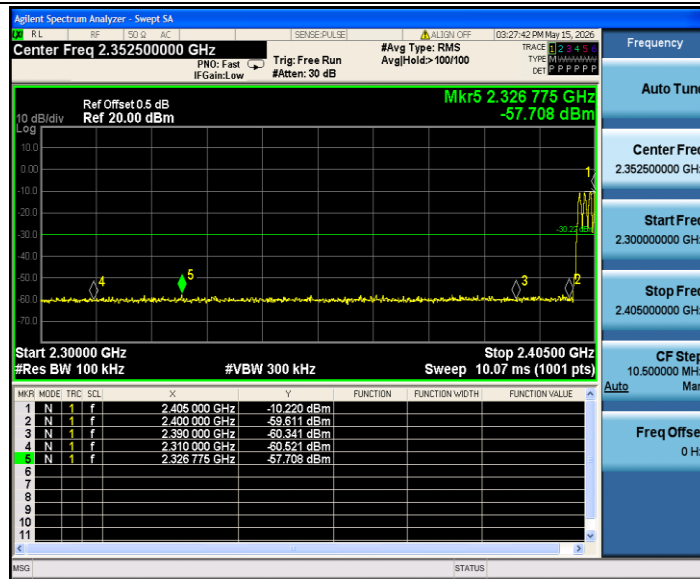
Appendix G: Band edge measurements

Test Result

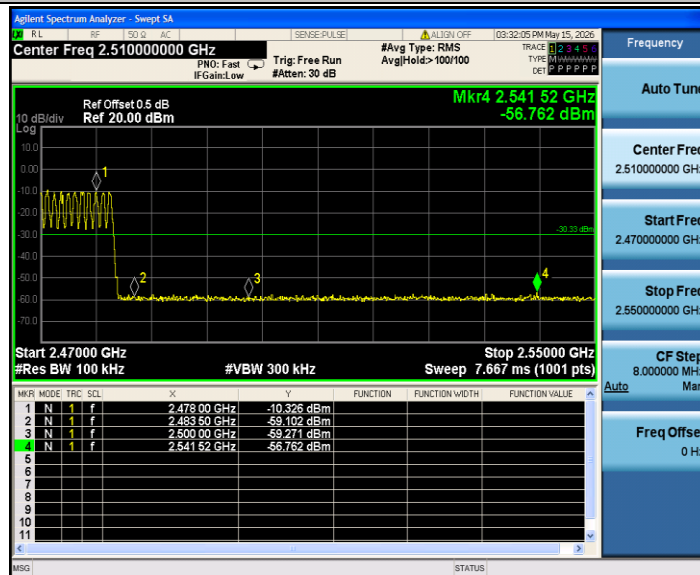
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-3.70	-57.48	≤-23.7	PASS
		High	2480	-3.64	-57.39	≤-23.64	PASS
		Low	Hop_2402	-10.22	-57.71	≤-30.22	PASS
		High	Hop_2480	-10.33	-56.76	≤-30.33	PASS
2DH5	Ant1	Low	2402	-10.86	-57.93	≤-30.86	PASS
		High	2480	-9.74	-57.54	≤-29.74	PASS
		Low	Hop_2402	-10.34	-57.23	≤-30.34	PASS
		High	Hop_2480	-10.65	-56.91	≤-30.65	PASS

Test Graphs

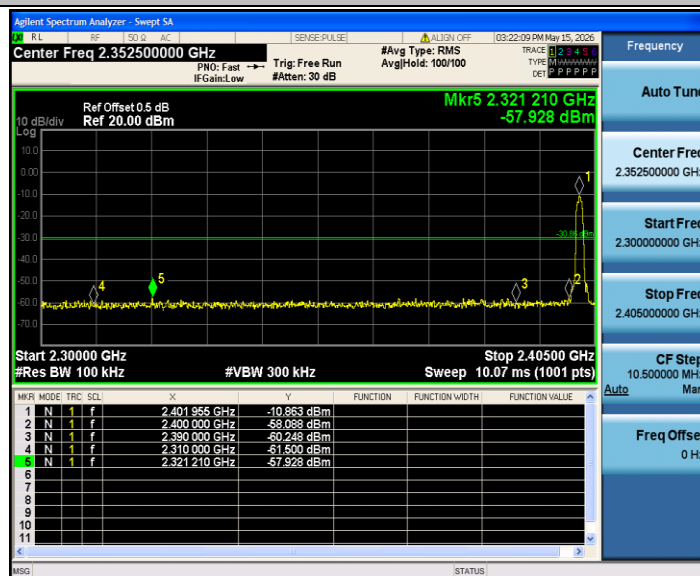




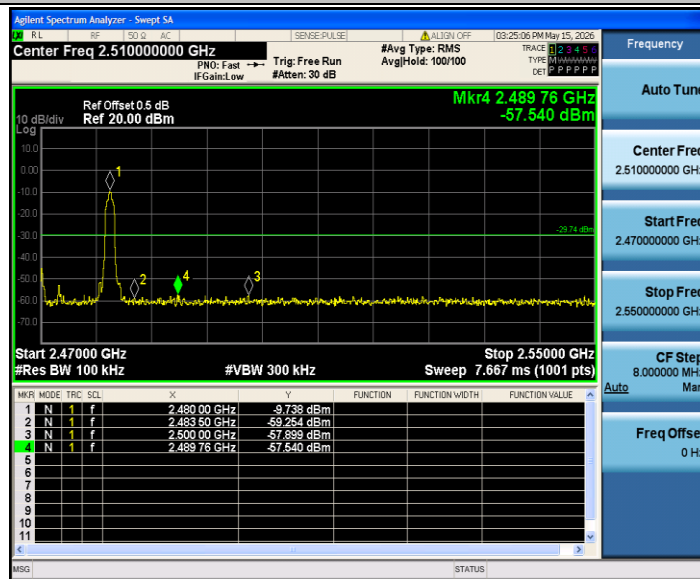
DH5_Ant1_High_Hop_2480



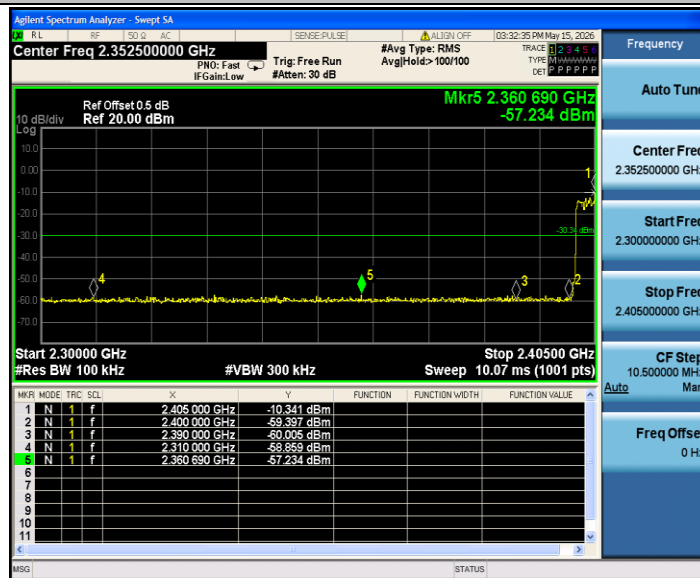
2DH5_Ant1_Low_2402



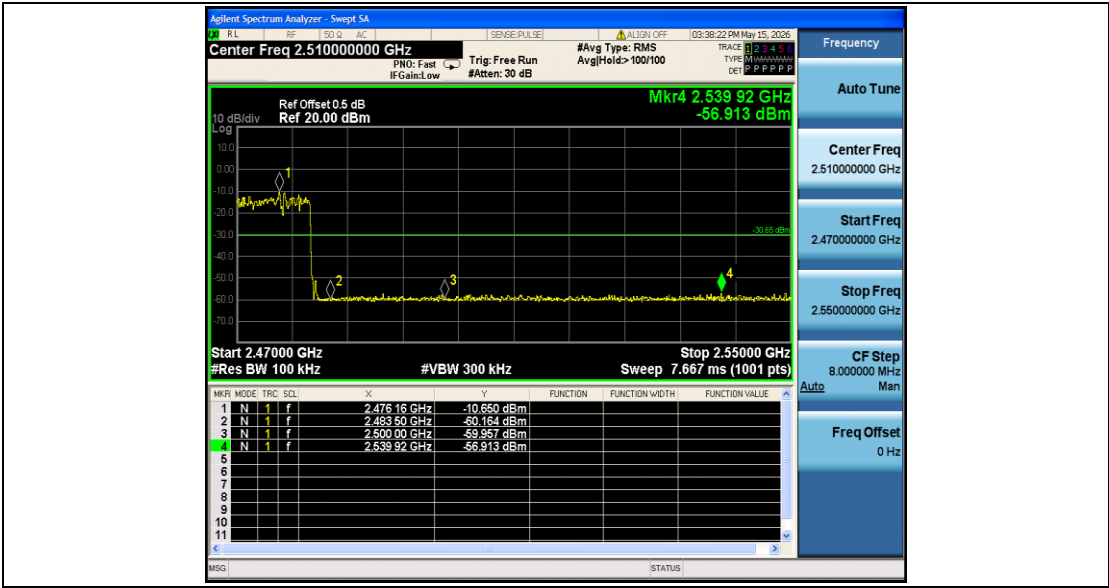
2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



2DH5_Ant1_High_Hop_2480



Appendix H: Conducted Spurious Emission

Test Result

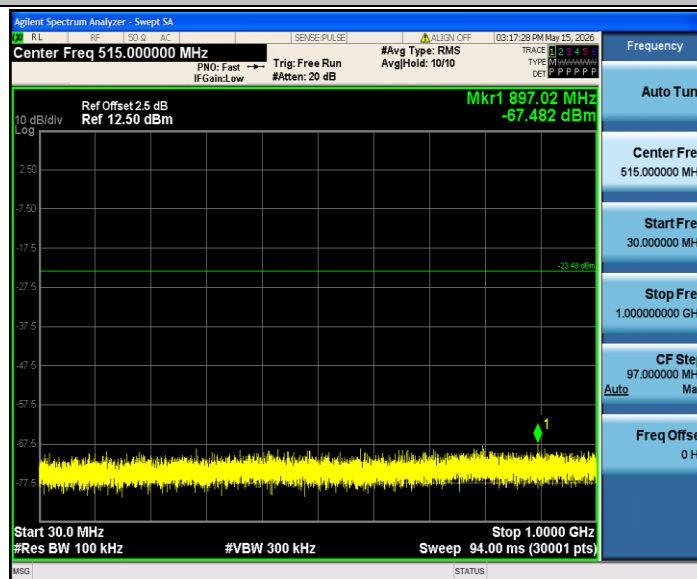
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-3.48	-3.48	---	PASS
			30~1000	-3.48	-67.48	≤-23.48	PASS
			1000~26500	-3.48	-45.36	≤-23.48	PASS
		2441	Reference	-3.76	-3.76	---	PASS
			30~1000	-3.76	-67.84	≤-23.76	PASS
			1000~26500	-3.76	-41.72	≤-23.76	PASS
		2480	Reference	-3.62	-3.62	---	PASS
			30~1000	-3.62	-68.44	≤-23.62	PASS
			1000~26500	-3.62	-46.3	≤-23.62	PASS
2DH5	Ant1	2402	Reference	-13.09	-13.09	---	PASS
			30~1000	-13.09	-67.88	≤-33.09	PASS
			1000~26500	-13.09	-55.88	≤-33.09	PASS
		2441	Reference	-11.99	-11.99	---	PASS
			30~1000	-11.99	-68.14	≤-31.99	PASS
			1000~26500	-11.99	-54.94	≤-31.99	PASS
		2480	Reference	-11.21	-11.21	---	PASS
			30~1000	-11.21	-67.64	≤-31.21	PASS
			1000~26500	-11.21	-55.94	≤-31.21	PASS

Test Graphs

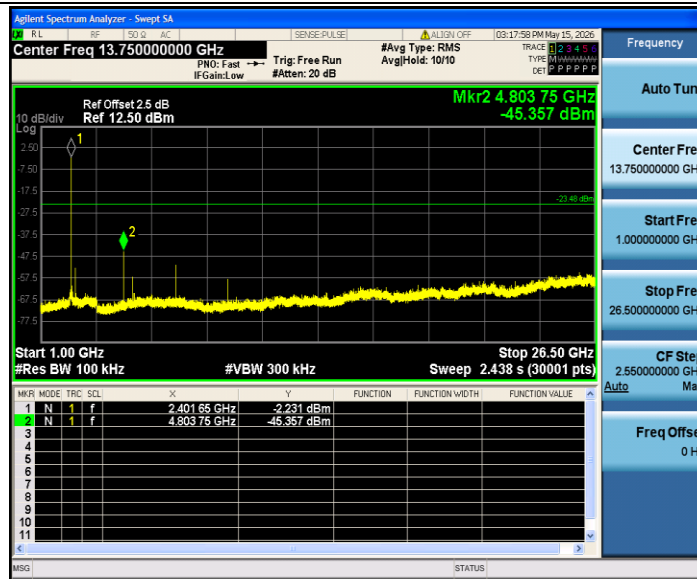
DH5_Ant1_2402_0~Reference



DH5_Ant1_2402_30~1000



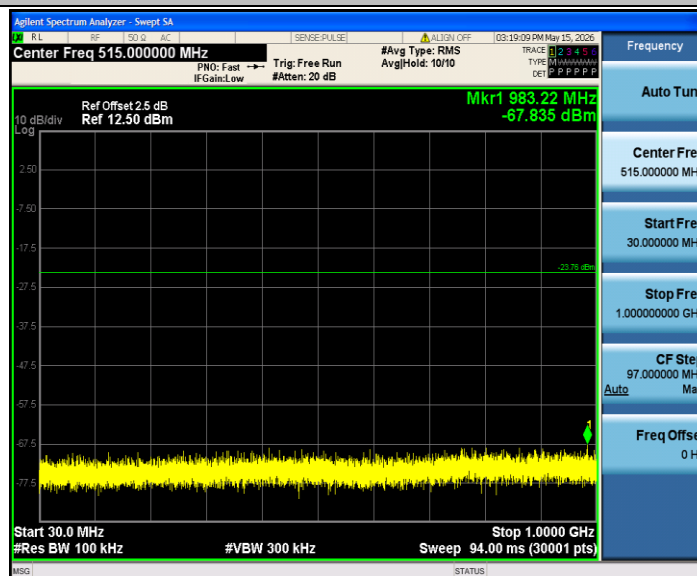
DH5_Ant1_2402_1000~26500



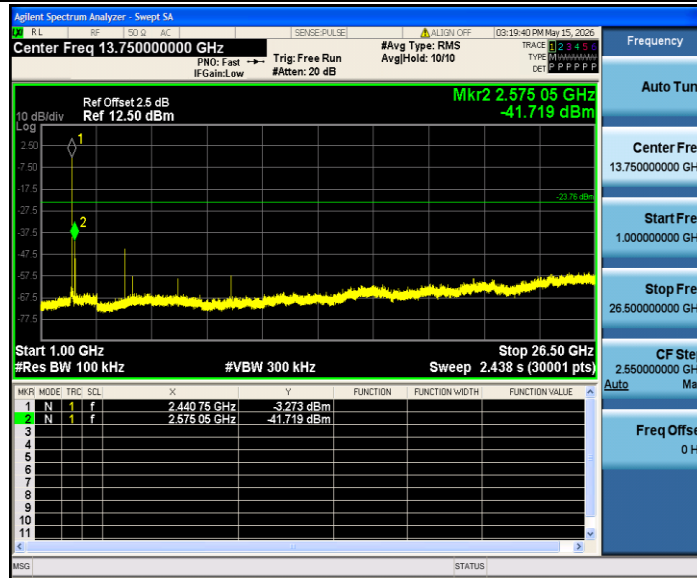
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



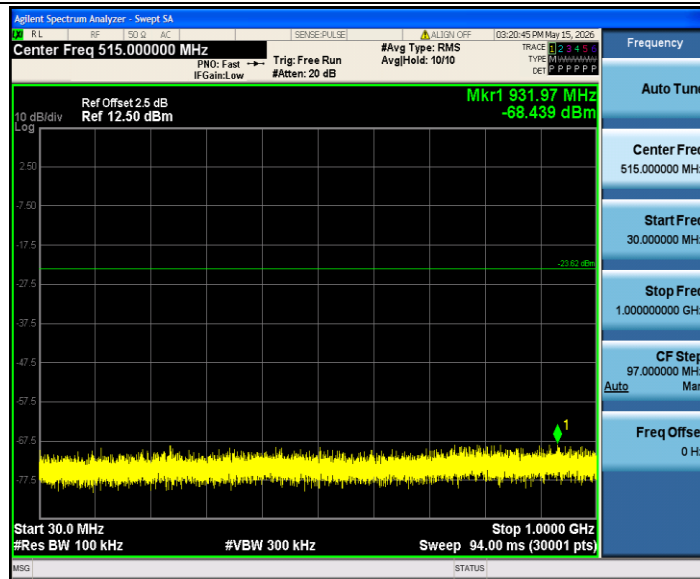
DH5_Ant1_2441_1000~26500



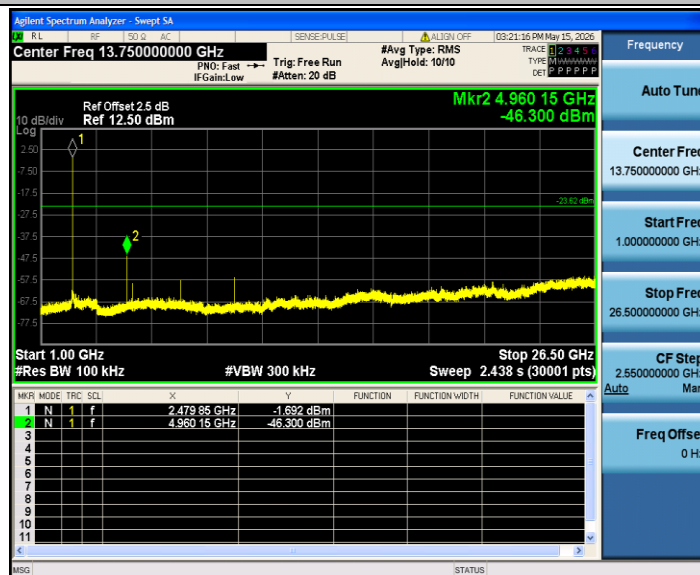
DH5_Ant1_2480_0~Reference



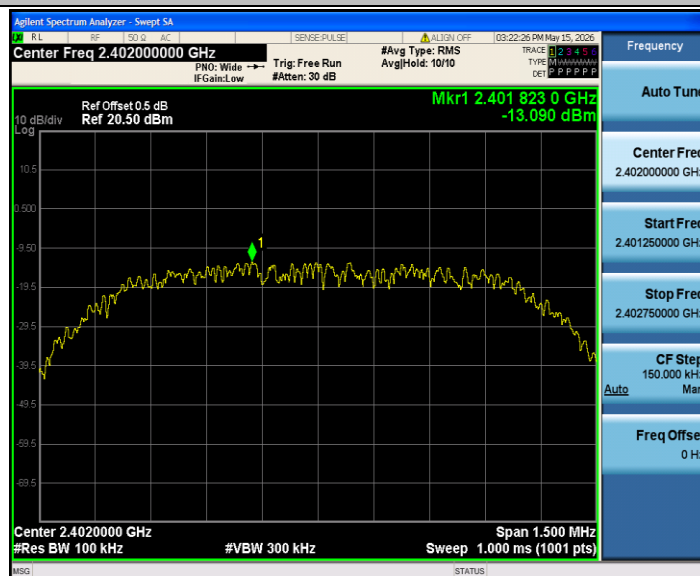
DH5_Ant1_2480_30~1000



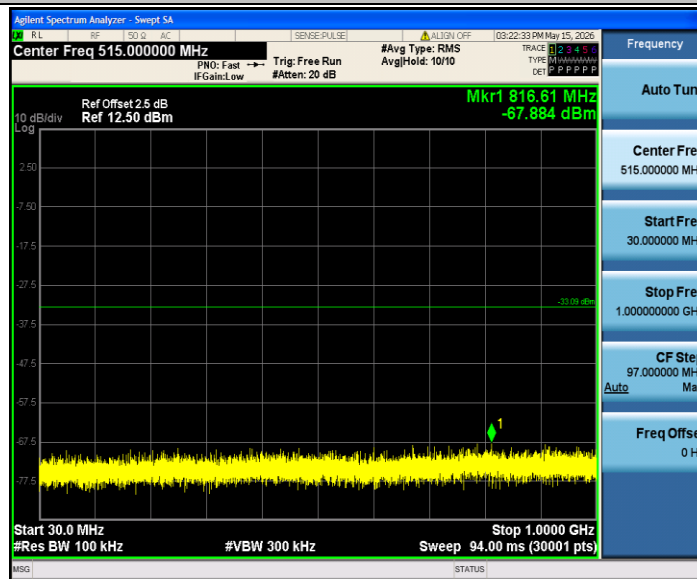
DH5_Ant1_2480_1000~26500



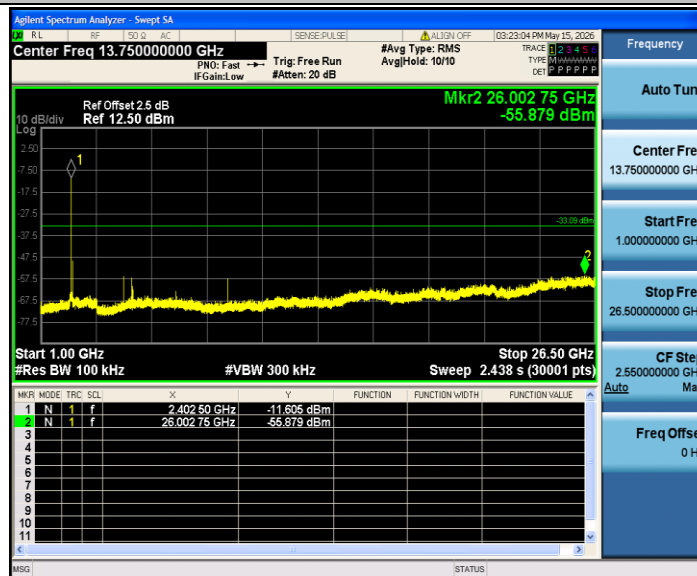
2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



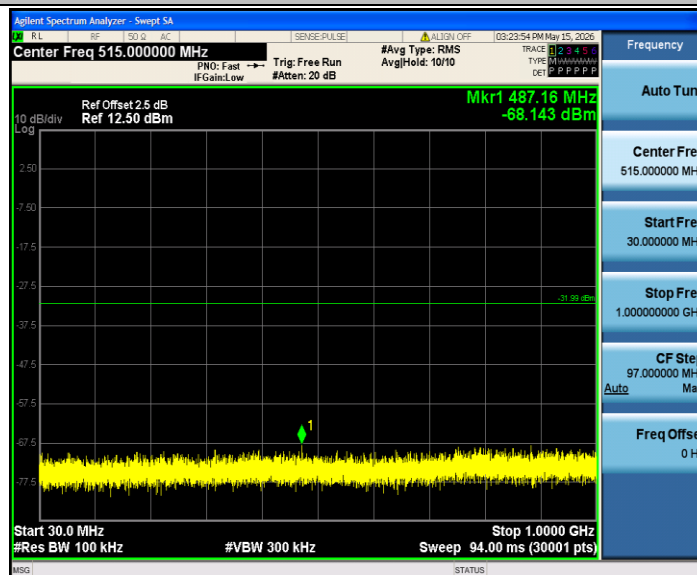
2DH5_Ant1_2402_1000~26500



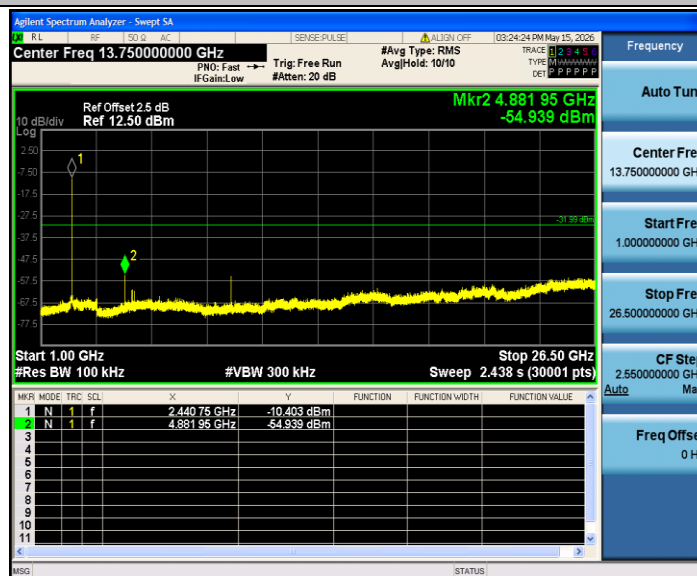
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000



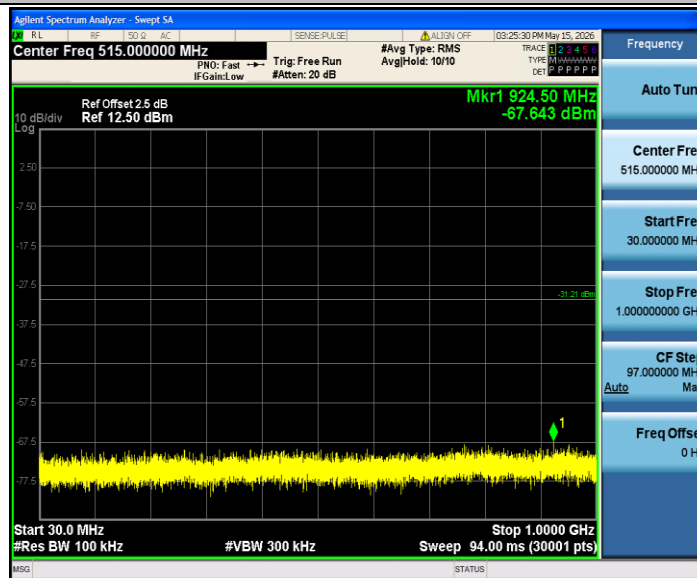
2DH5_Ant1_2441_1000~26500



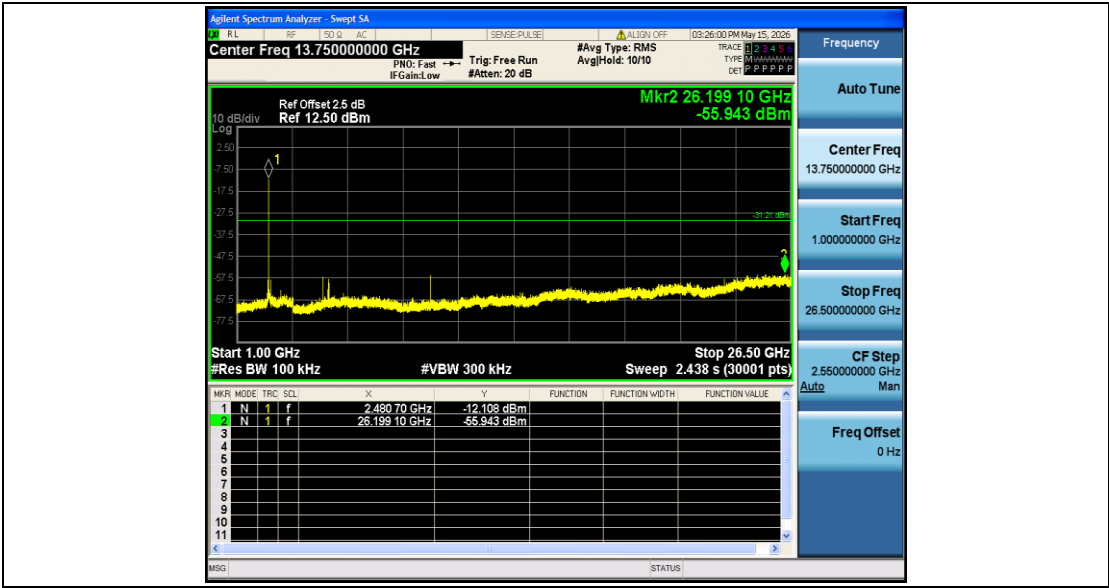
2DH5_Ant1_2480_0~Reference



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	3.74	78.07	1.08	---	---
		2480	2.92	3.75	77.87	1.09	---	---