

Appendix Test Data for BT(BDR/EDR) (Conducted Measurement)

Product Name: RGB Portable Wireless Speakers

Trade Mark: N/A

Test Model: KS11

FCC ID: WWE-2CMSK1941

Environmental Conditions

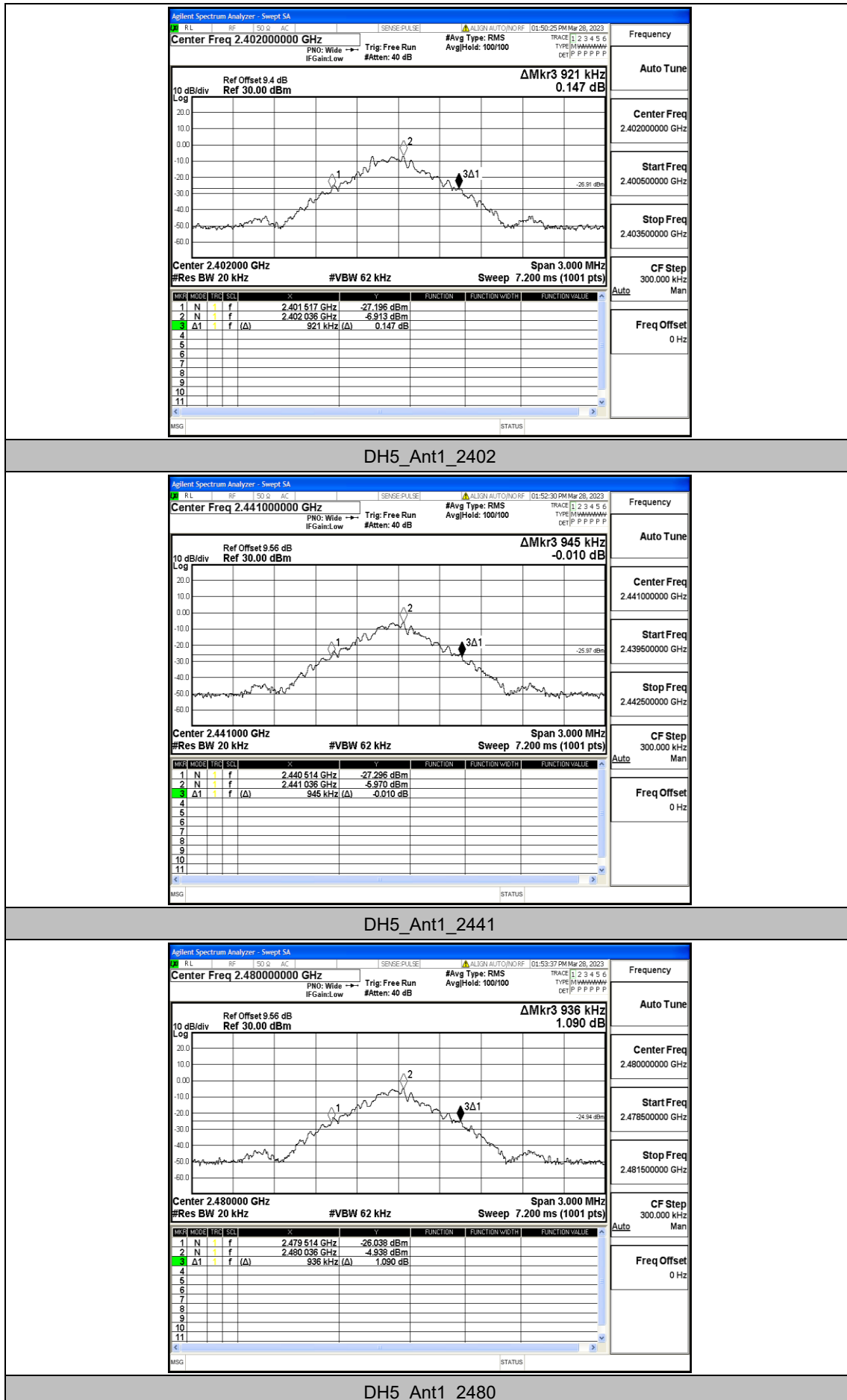
Temperature:	25.5°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

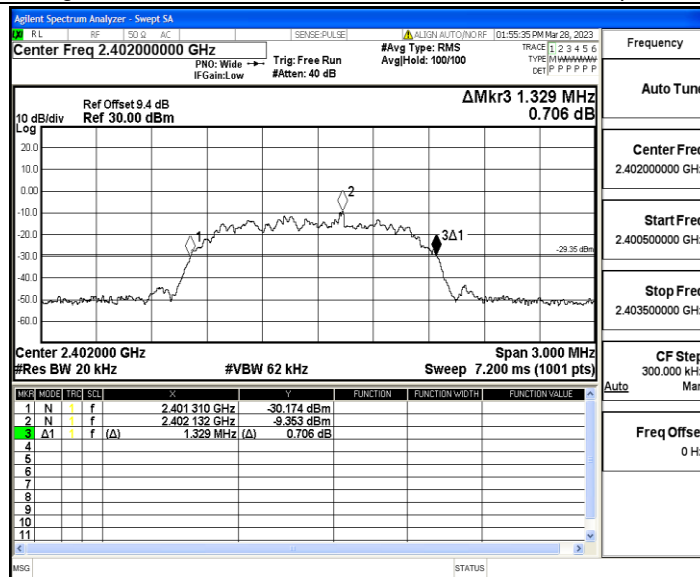
Appendix A: 20dB Emission Bandwidth

Test Result

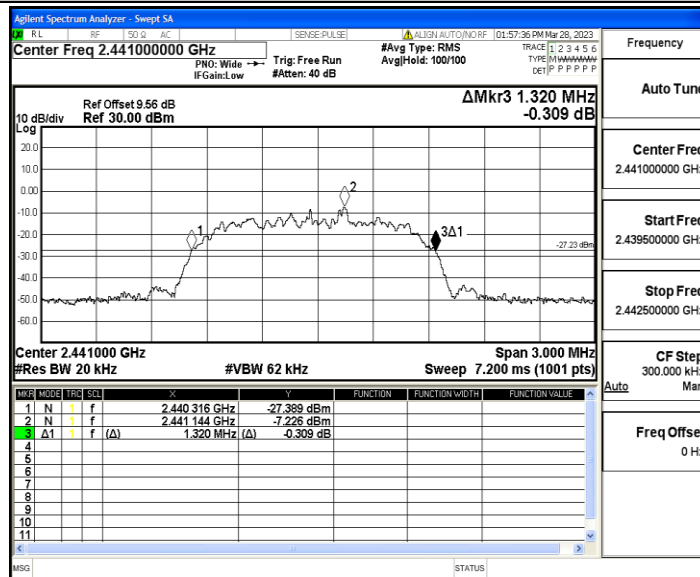
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.921	2401.517	2402.438	---	---
		2441	0.945	2440.514	2441.459	---	---
		2480	0.936	2479.514	2480.450	---	---
2DH5	Ant1	2402	1.329	2401.310	2402.639	---	---
		2441	1.320	2440.316	2441.636	---	---
		2480	1.326	2479.313	2480.639	---	---

Test Graphs

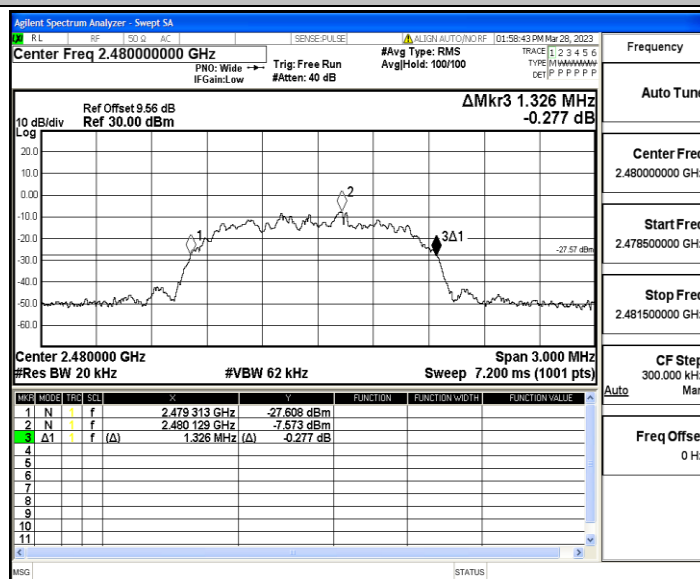




2DH5_Ant1_2402



2DH5_Ant1_2441



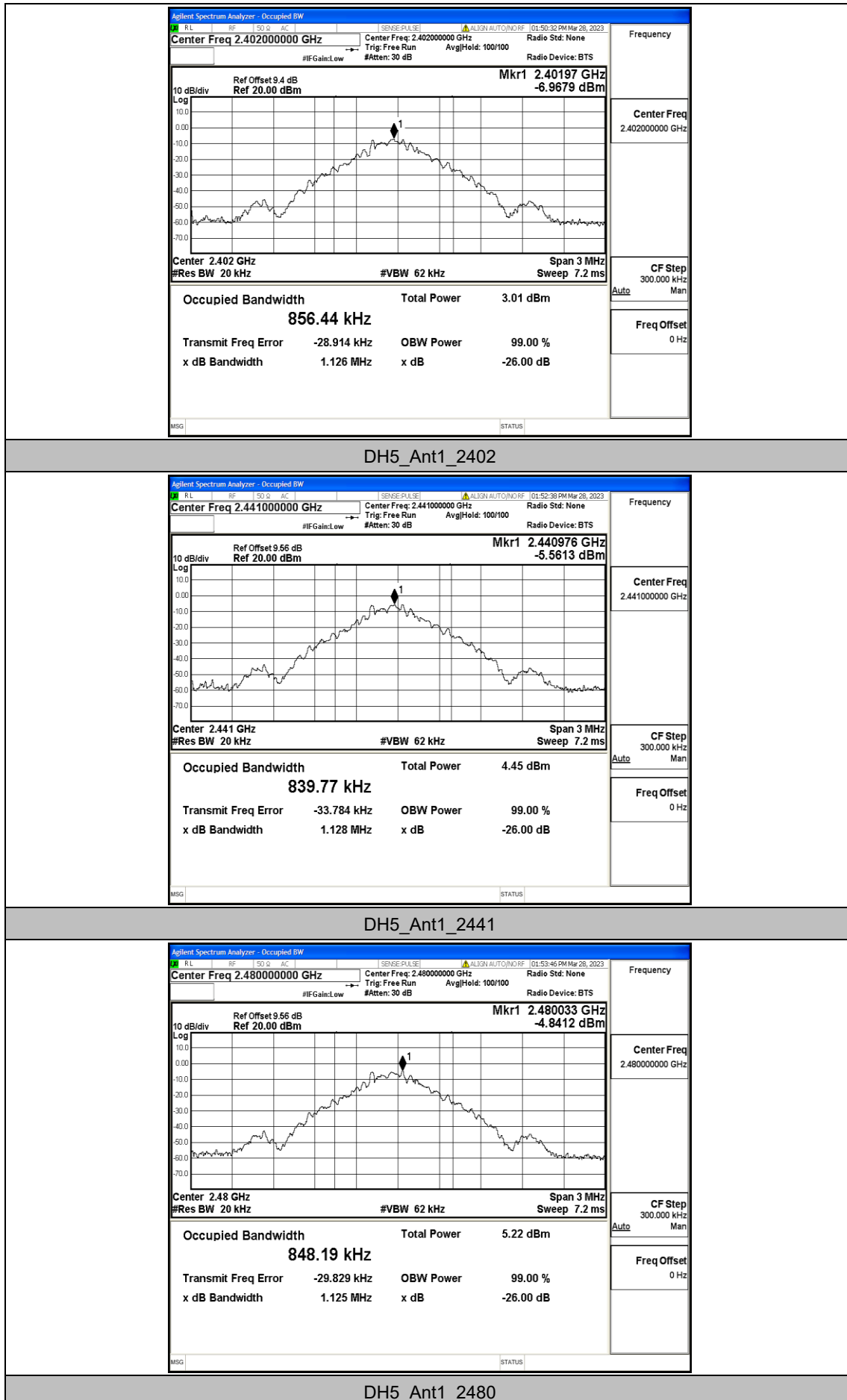
2DH5_Ant1_2480

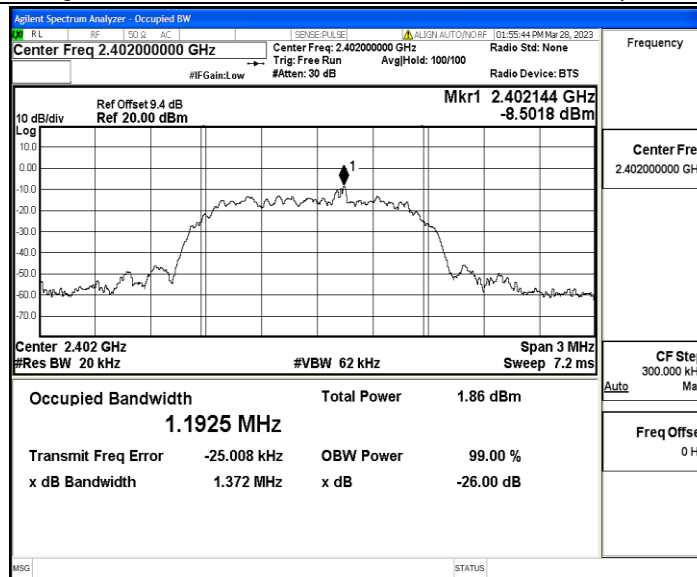
Appendix B: Occupied Channel Bandwidth

Test Result

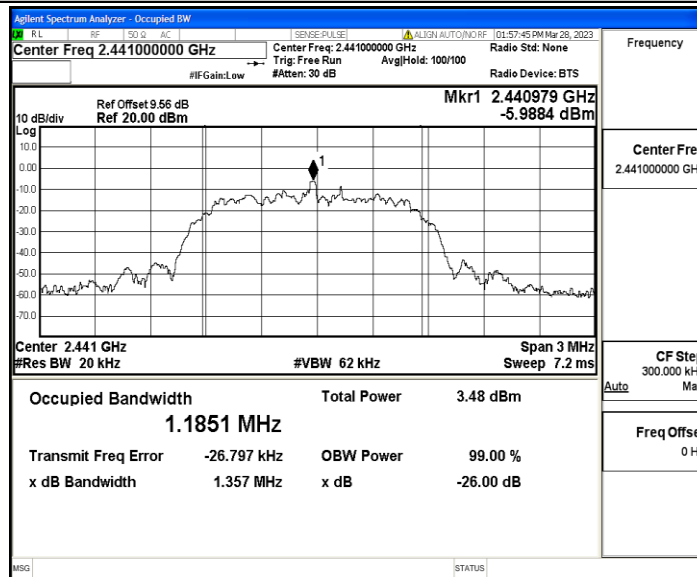
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.85644	2401.5429	2402.3993	---	---
		2441	0.83977	2440.5463	2441.3861	---	---
		2480	0.84819	2479.5461	2480.3943	---	---
2DH5	Ant1	2402	1.1925	2401.3787	2402.5712	---	---
		2441	1.1851	2440.3807	2441.5658	---	---
		2480	1.1854	2479.3820	2480.5674	---	---

Test Graphs

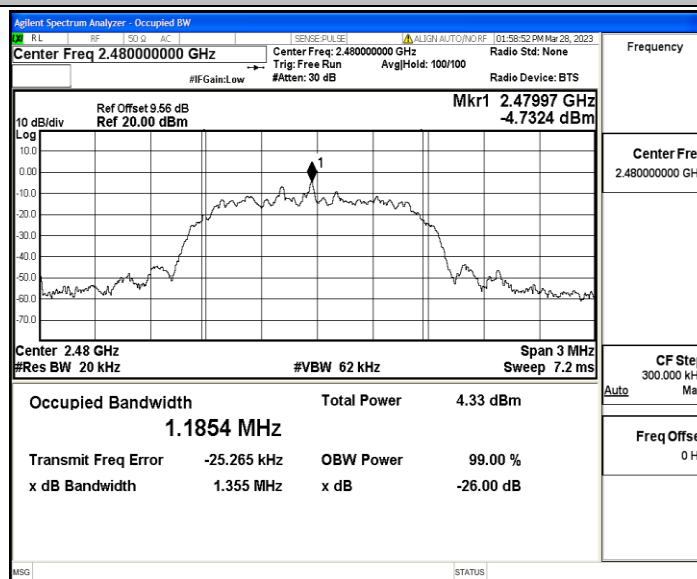




2DH5_Ant1_2402



2DH5_Ant1_2441



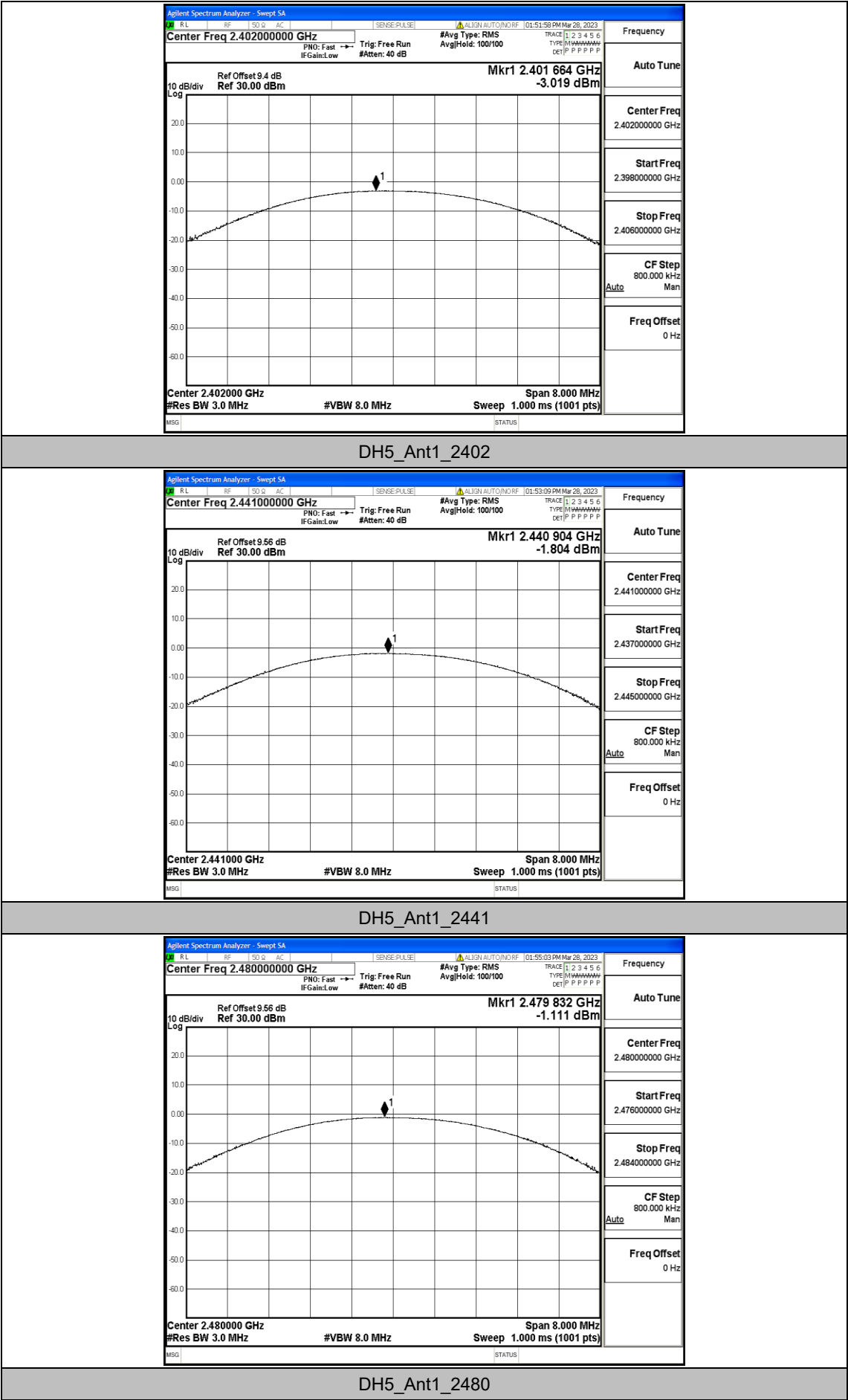
2DH5_Ant1_2480

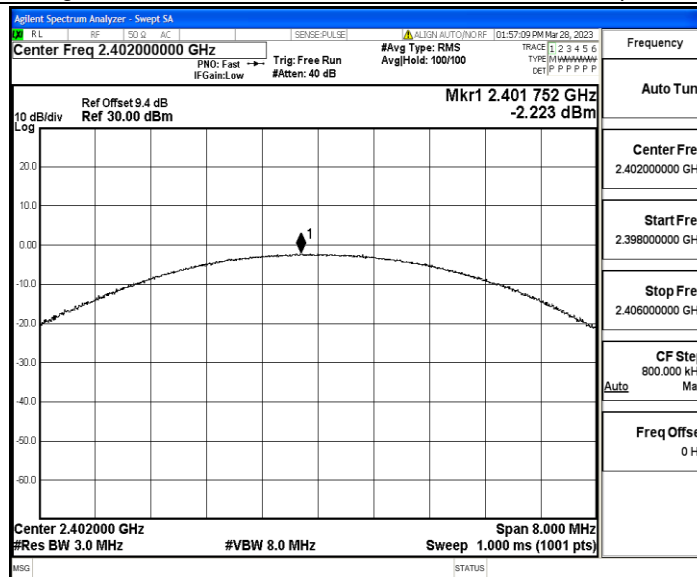
Appendix C: Maximum Peak conducted output power

Test Result

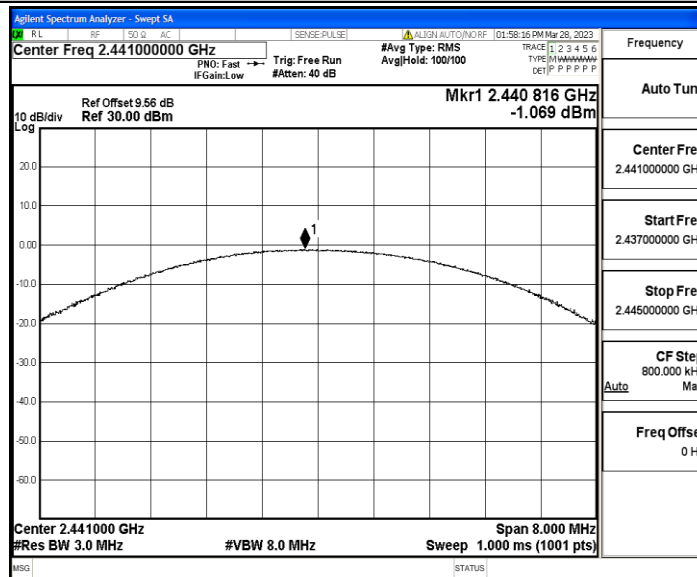
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	-3.02	≤30	PASS
		2441	-1.8	≤30	PASS
		2480	-1.11	≤30	PASS
2DH5	Ant1	2402	-2.22	≤20.97	PASS
		2441	-1.07	≤20.97	PASS
		2480	-0.37	≤20.97	PASS

Test Graphs

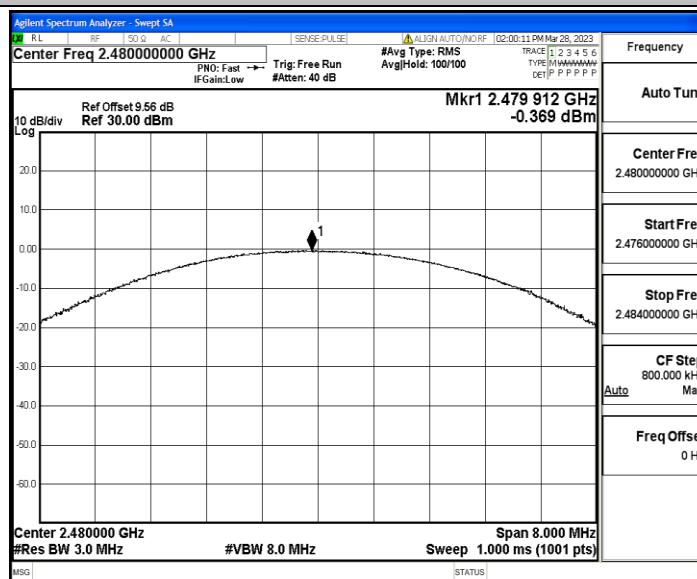




2DH5_Ant1_2402



2DH5_Ant1_2441



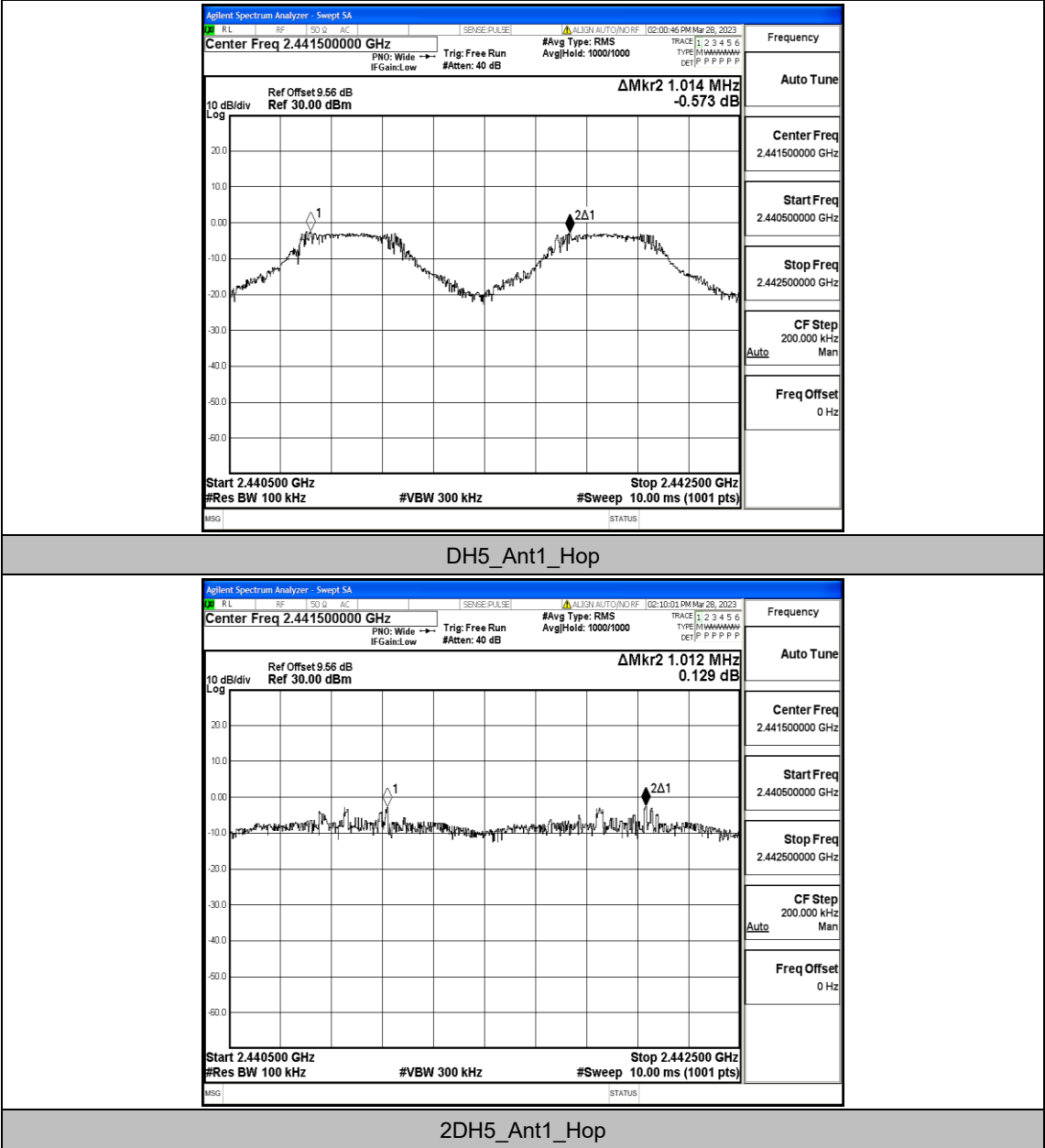
2DH5_Ant1_2480

Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.014	≥ 0.945	PASS
2DH5	Ant1	Hop	1.012	≥ 0.886	PASS

Test Graphs



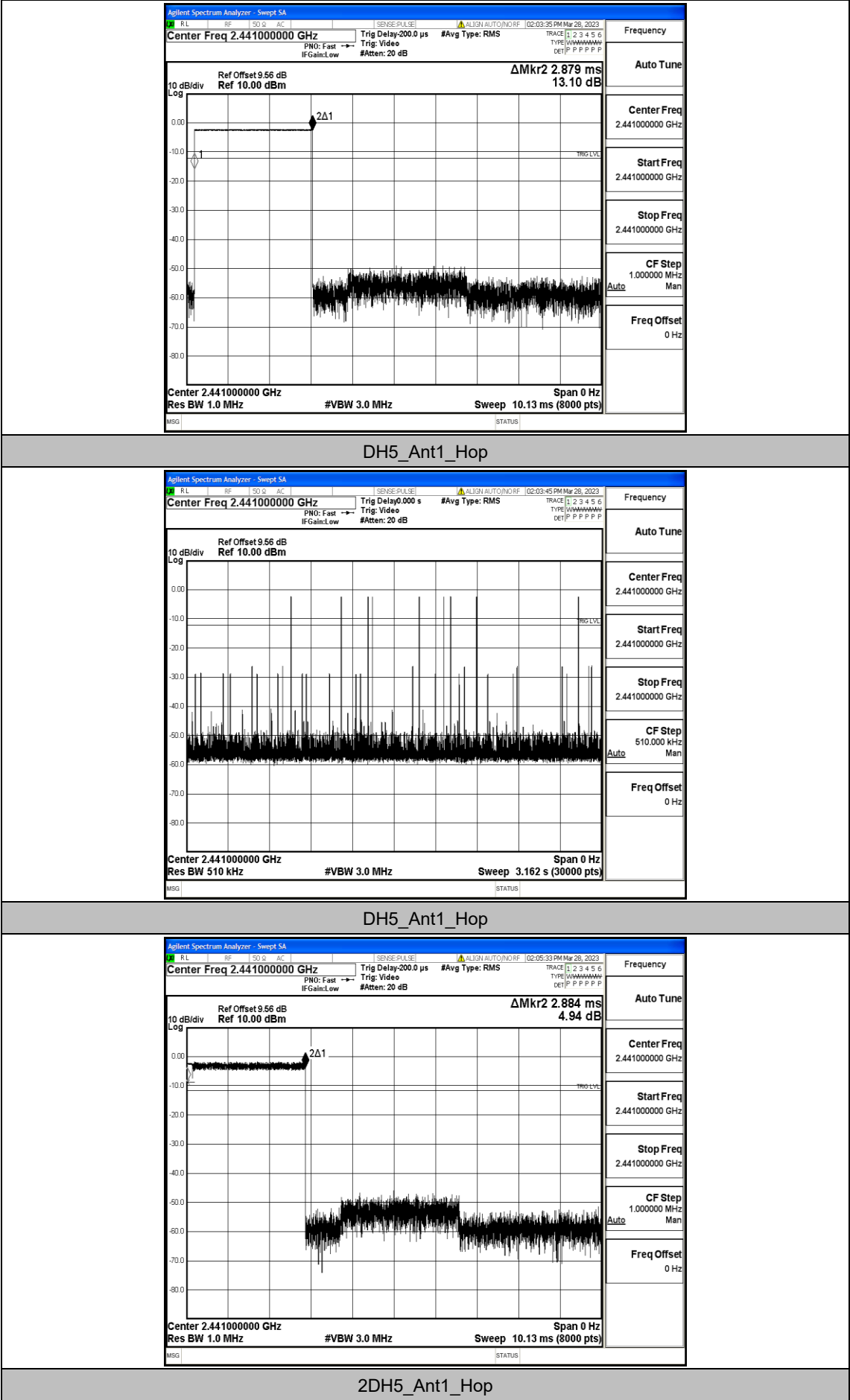
2DH5_Ant1_Hop

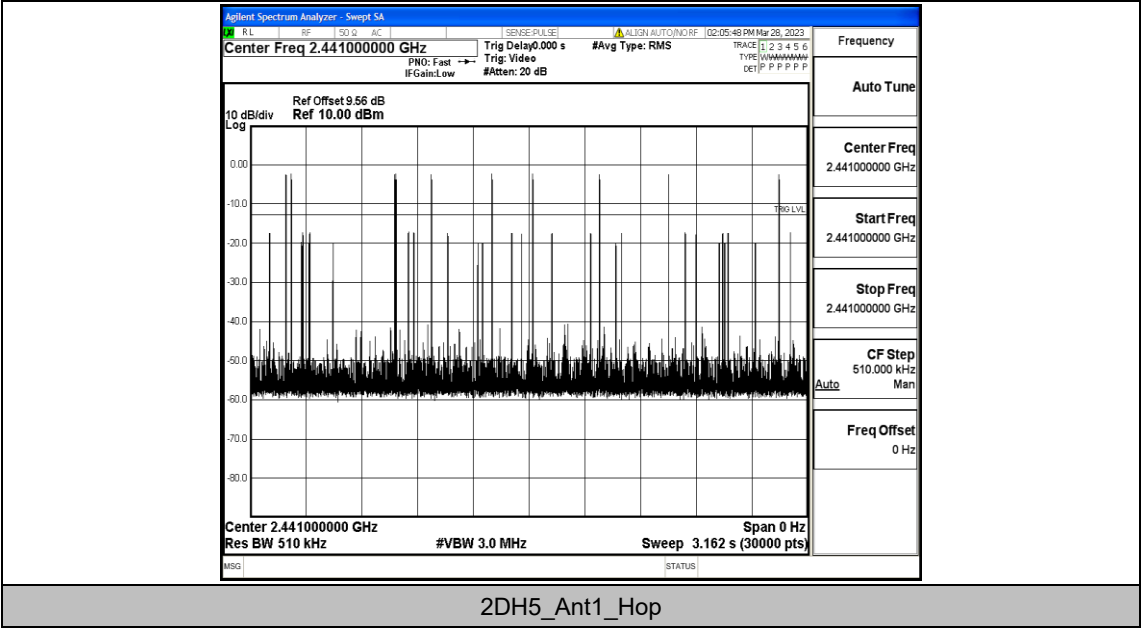
Appendix E: Time of occupancy

Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.879	100	0.288	≤0.4	PASS
2DH5	Ant1	Hop	2.884	110	0.317	≤0.4	PASS

Test Graphs



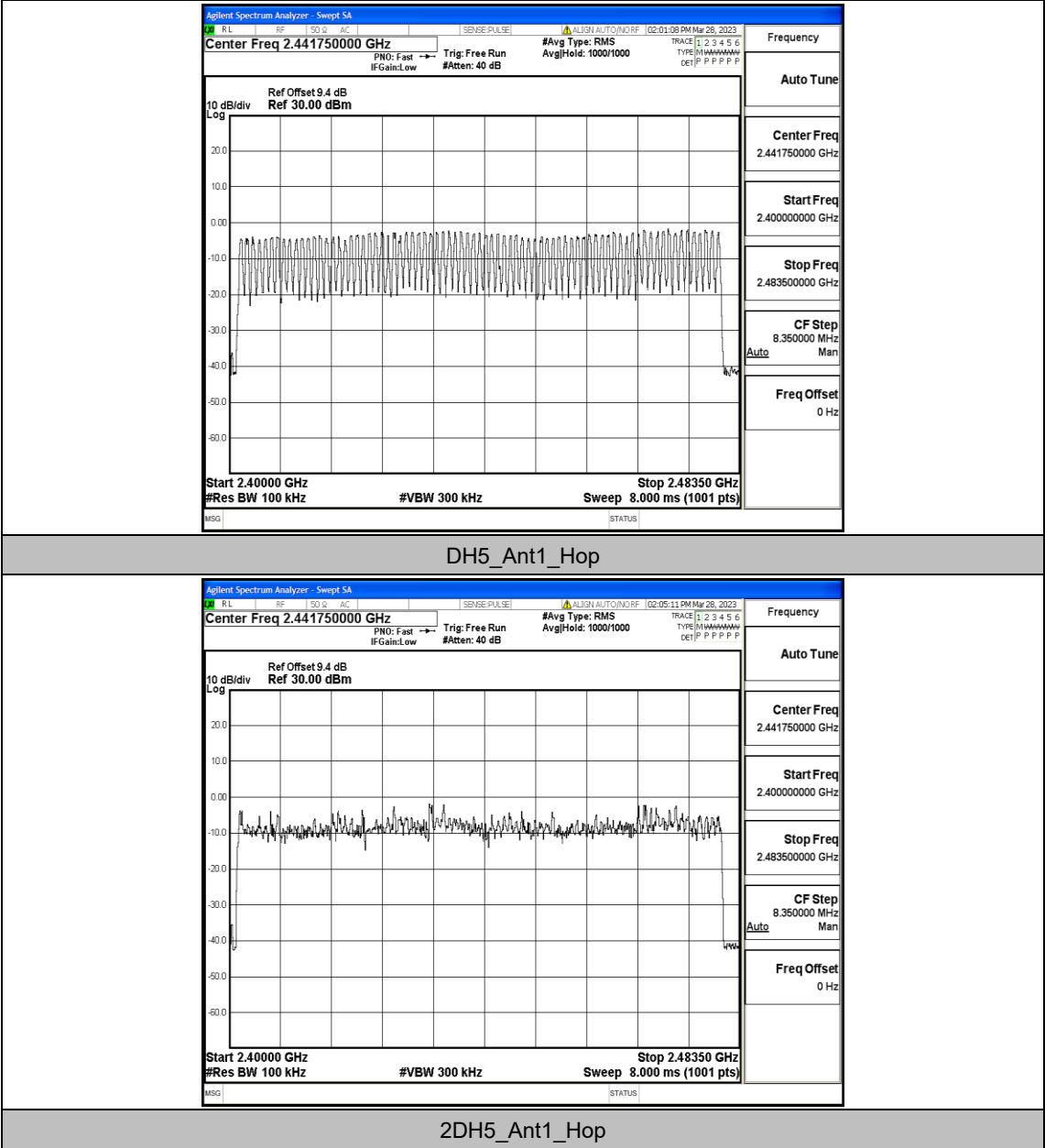


Appendix F: Number of hopping channels

Test Result

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

Test Graphs

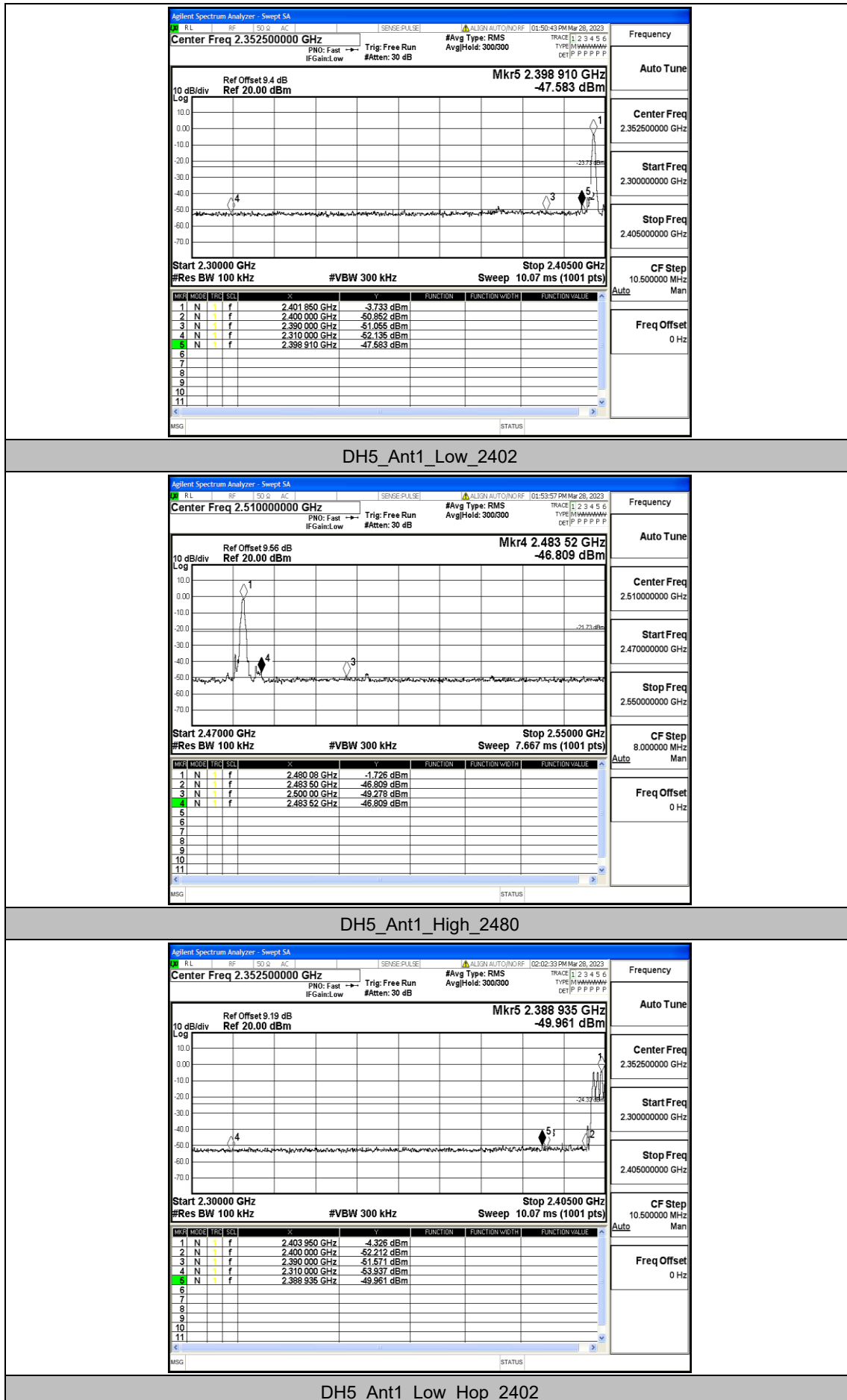


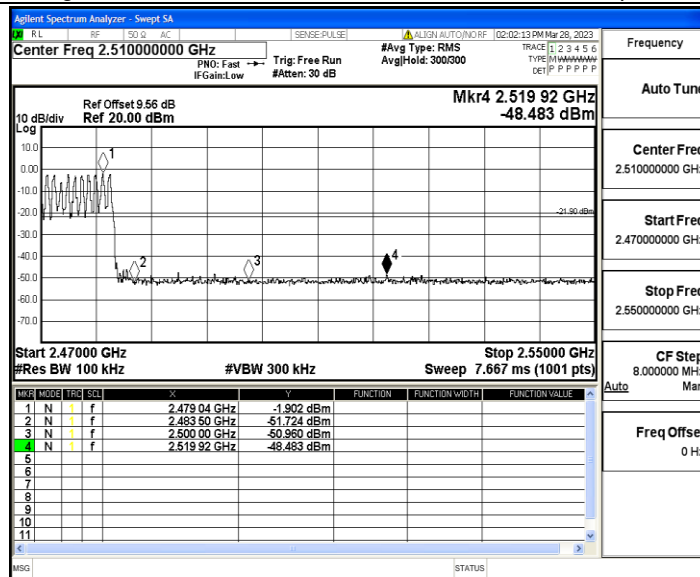
Appendix G: Band edge measurements

Test Result

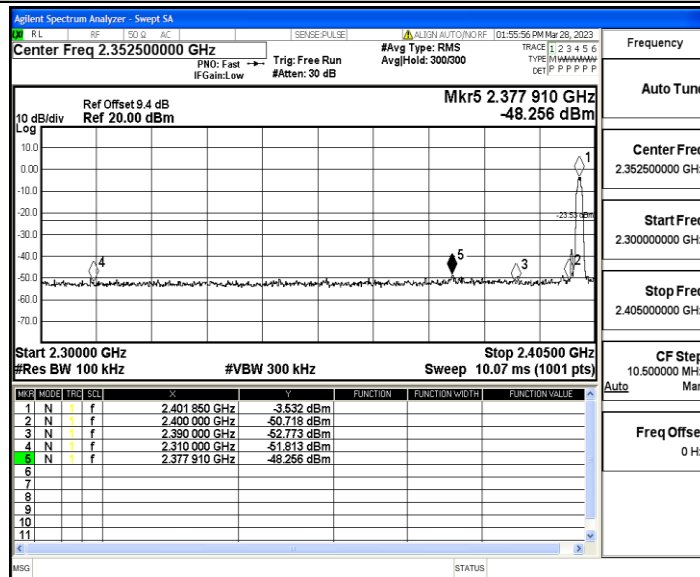
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-3.73	-47.58	≤ -23.73	PASS
		High	2480	-1.73	-46.81	≤ -21.73	PASS
		Low	Hop_2402	-4.33	-49.96	≤ -24.33	PASS
		High	Hop_2480	-1.90	-48.48	≤ -21.9	PASS
2DH5	Ant1	Low	2402	-3.53	-48.26	≤ -23.53	PASS
		High	2480	-2.10	-48.47	≤ -22.1	PASS
		Low	Hop_2402	-6.94	-49.46	≤ -26.94	PASS
		High	Hop_2480	-4.80	-49.06	≤ -24.8	PASS

Test Graphs

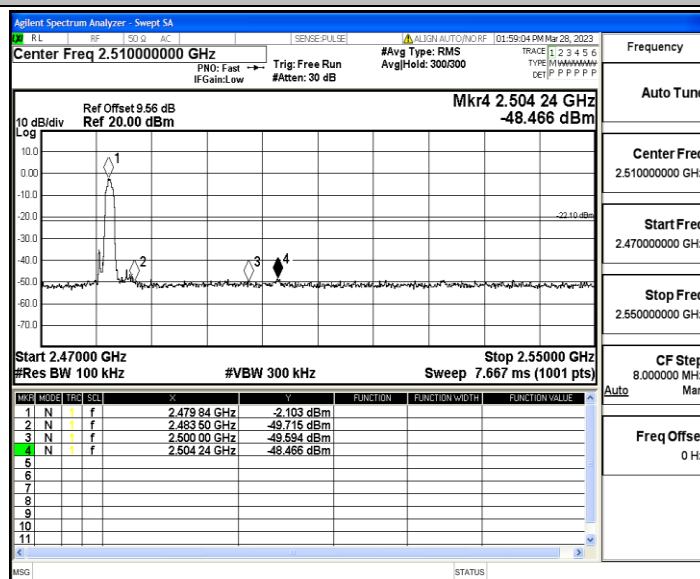




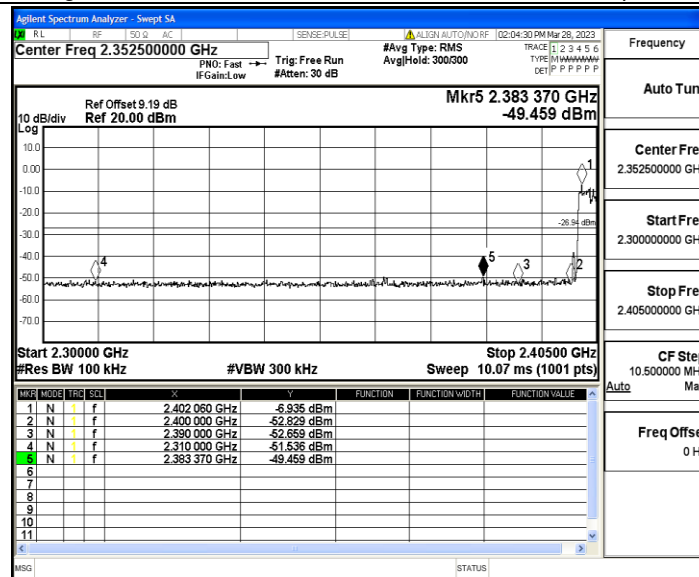
DH5_Ant1_High_Hop_2480



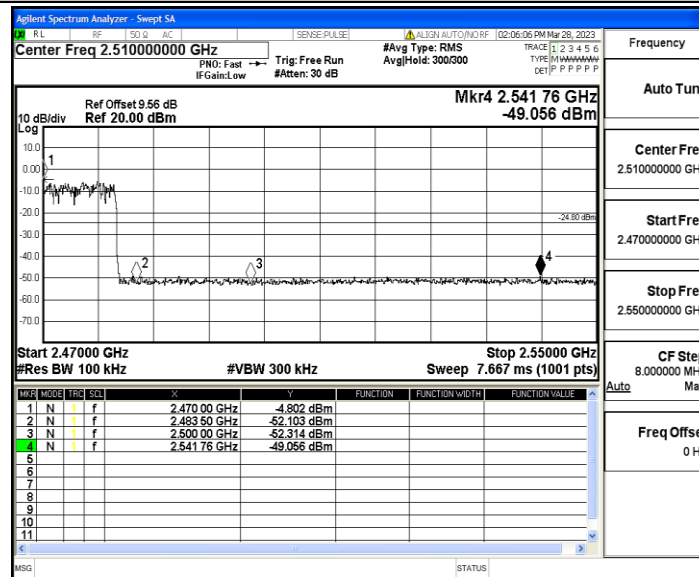
2DH5_Ant1_Low_2402



2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



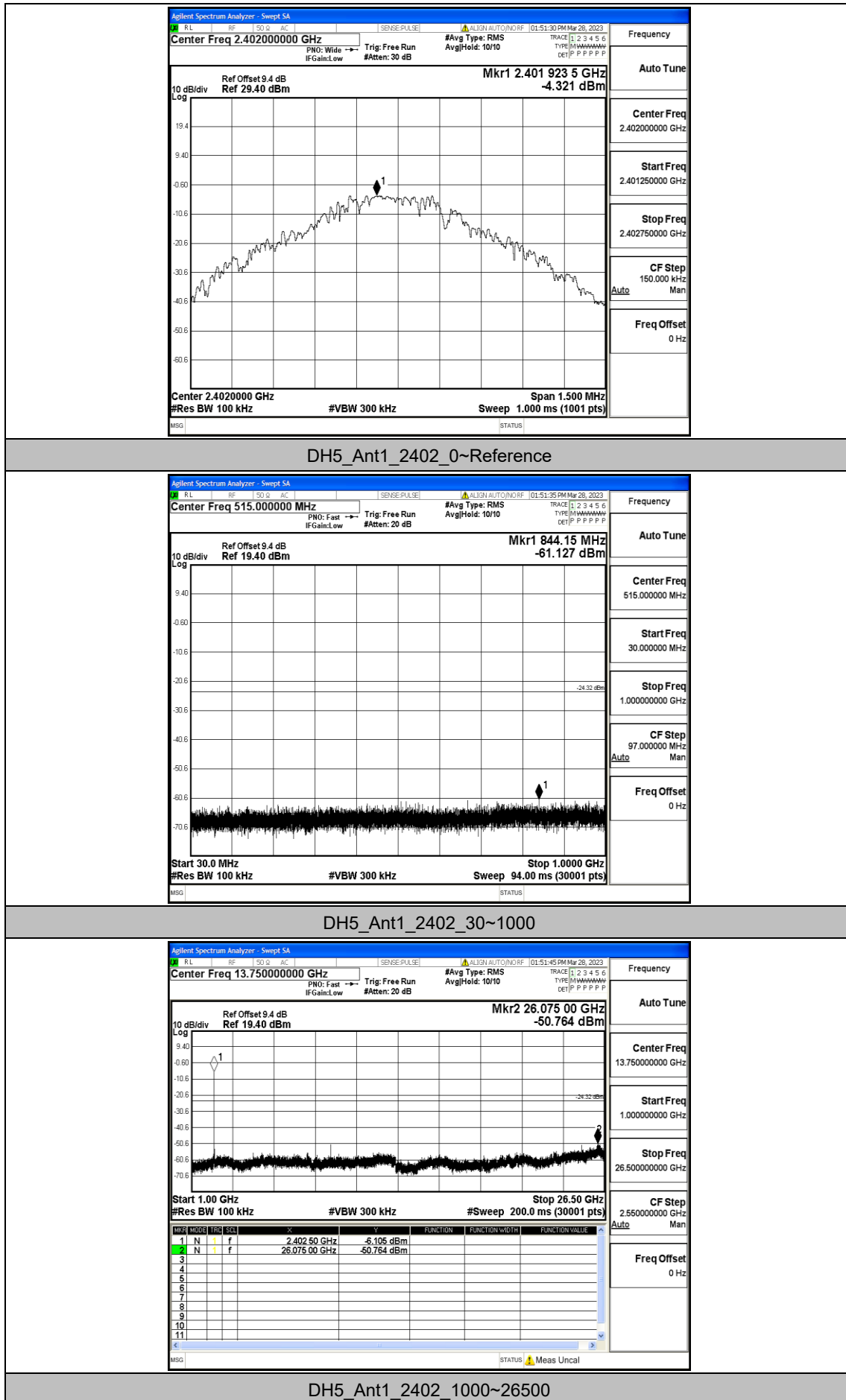
2DH5_Ant1_High_Hop_2480

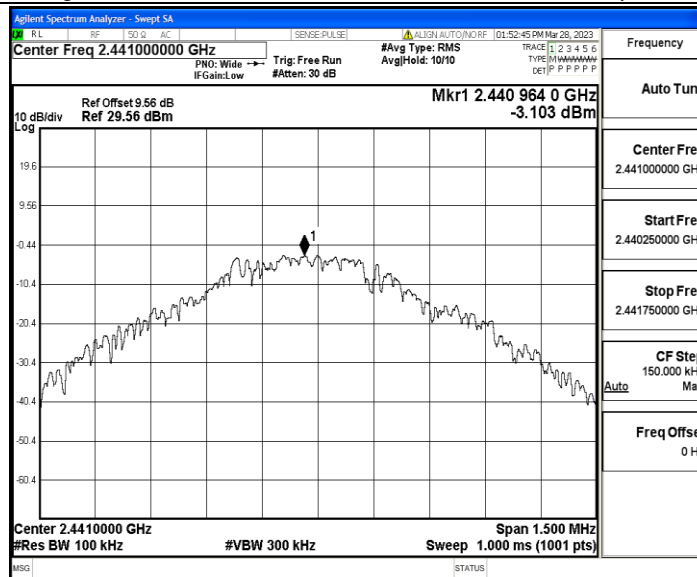
Appendix H: Conducted Spurious Emission

Test Result

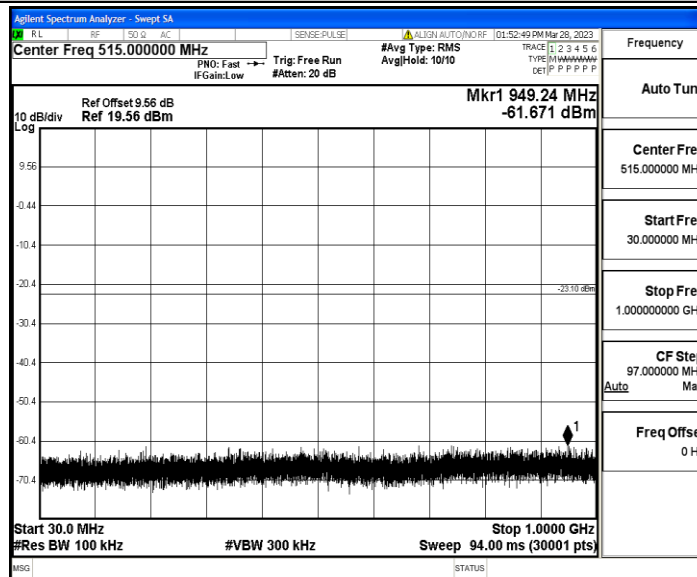
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-4.32	-4.32	---	PASS
			30~1000	-4.32	-61.13	≤-24.32	PASS
			1000~26500	-4.32	-50.76	≤-24.32	PASS
		2441	Reference	-3.10	-3.10	---	PASS
			30~1000	-3.10	-61.67	≤-23.1	PASS
			1000~26500	-3.10	-51.19	≤-23.1	PASS
		2480	Reference	-2.28	-2.28	---	PASS
			30~1000	-2.28	-61.56	≤-22.28	PASS
			1000~26500	-2.28	-51.09	≤-22.28	PASS
2DH5	Ant1	2402	Reference	-3.65	-3.65	---	PASS
			30~1000	-3.65	-61.26	≤-23.65	PASS
			1000~26500	-3.65	-51.41	≤-23.65	PASS
		2441	Reference	-6.33	-6.33	---	PASS
			30~1000	-6.33	-61.39	≤-26.33	PASS
			1000~26500	-6.33	-48.94	≤-26.33	PASS
		2480	Reference	-5.13	-5.13	---	PASS
			30~1000	-5.13	-60.65	≤-25.13	PASS
			1000~26500	-5.13	-51.52	≤-25.13	PASS

Test Graphs

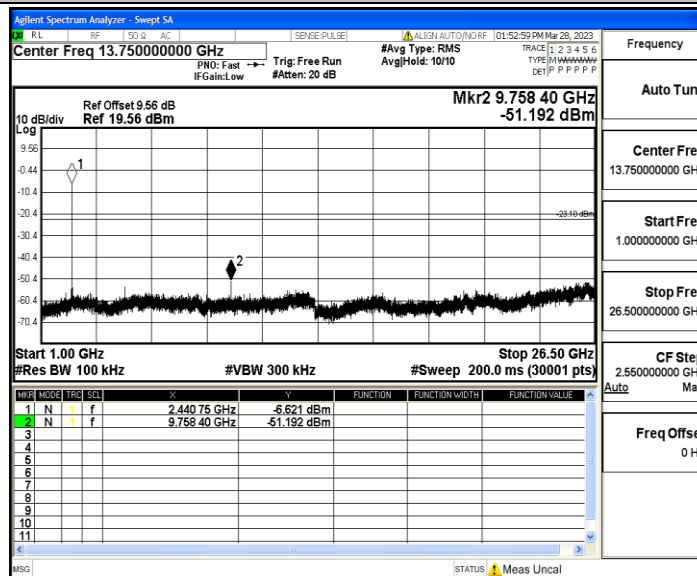




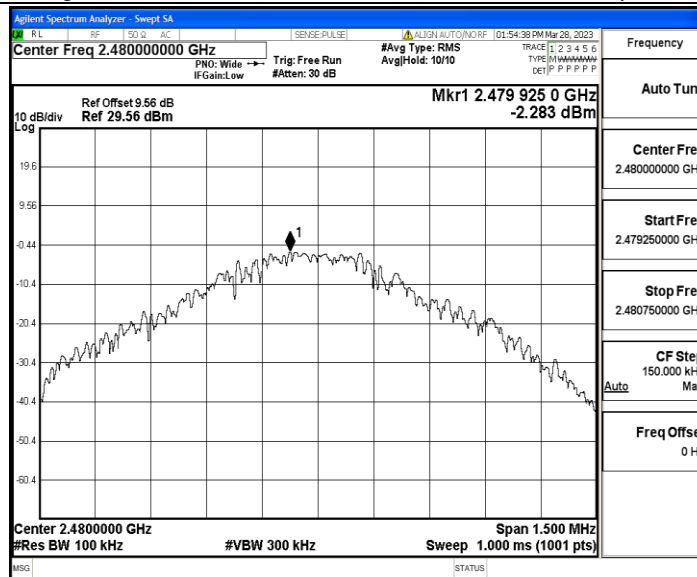
DH5_Ant1_2441_0~Reference



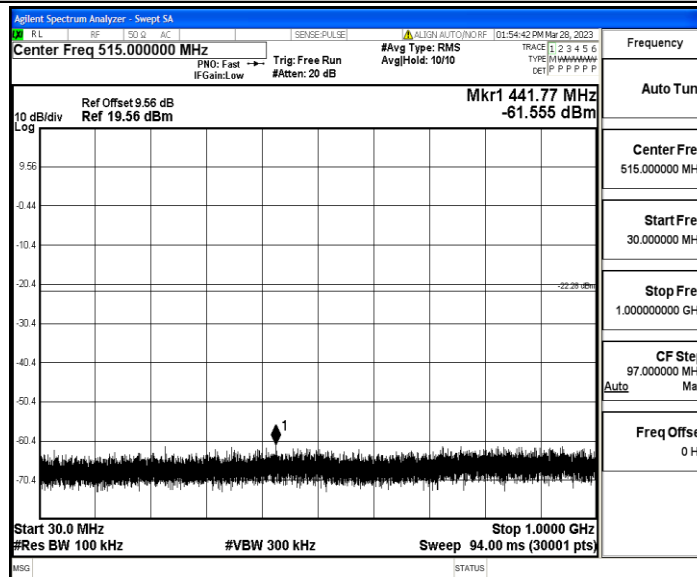
DH5_Ant1_2441_30~1000



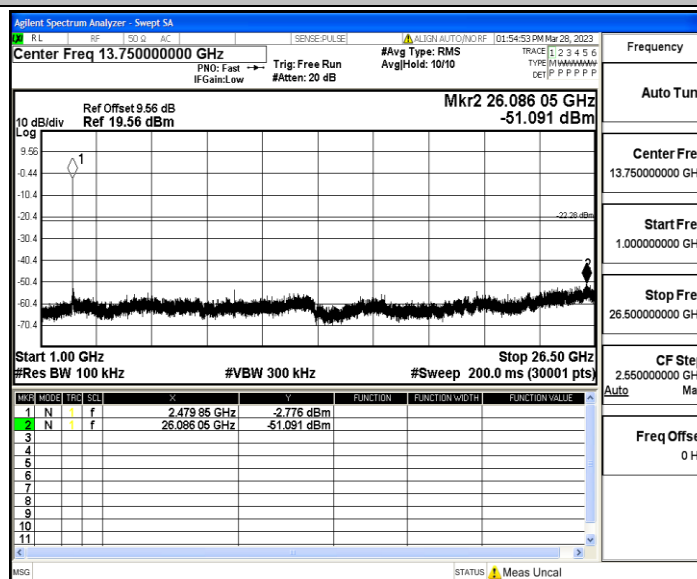
DH5_Ant1_2441_1000~26500



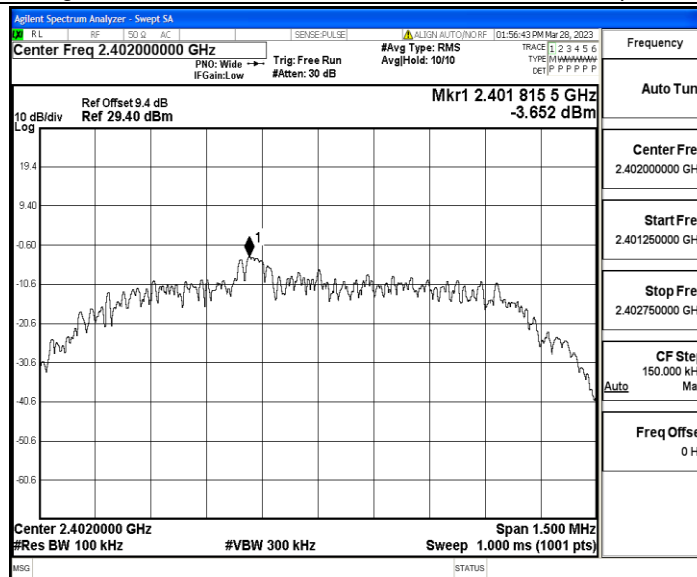
DH5_Ant1_2480_0~Reference



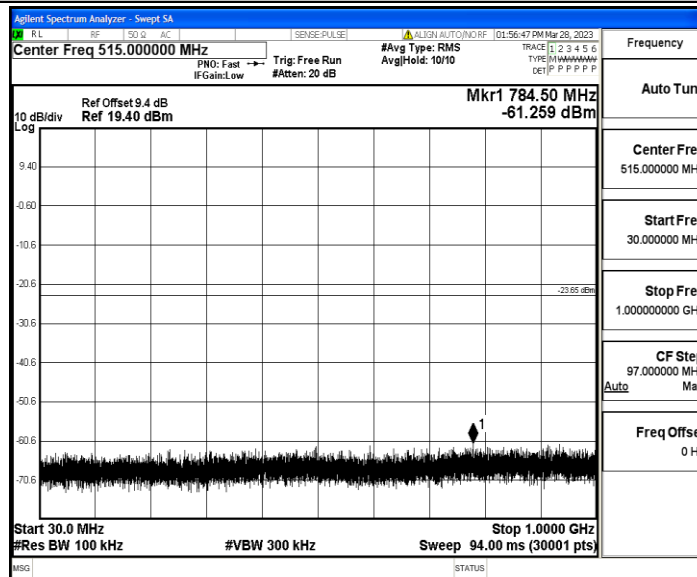
DH5_Ant1_2480_30~1000



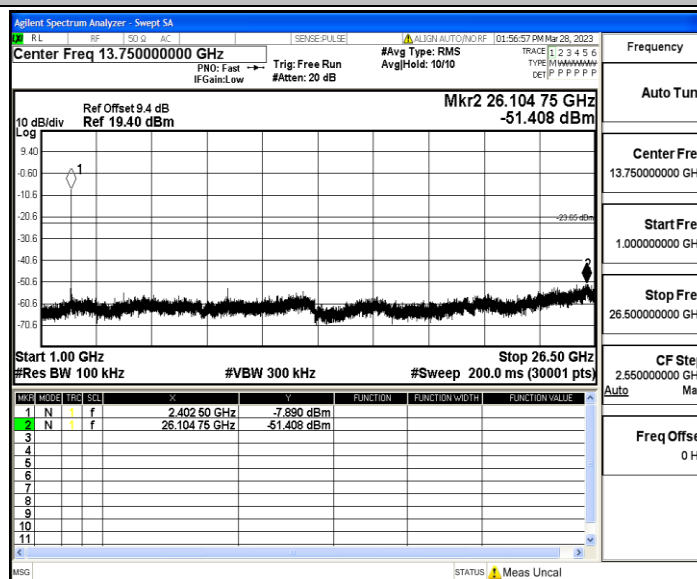
DH5_Ant1_2480_1000~26500



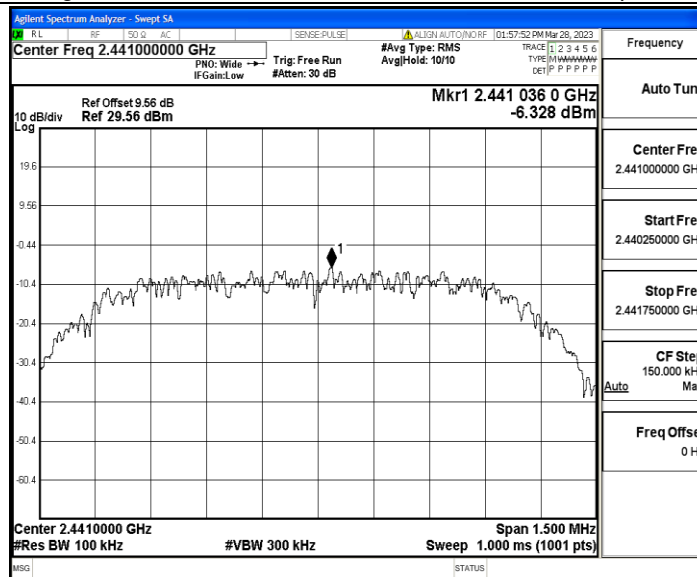
2DH5_Ant1_2402_0~Reference



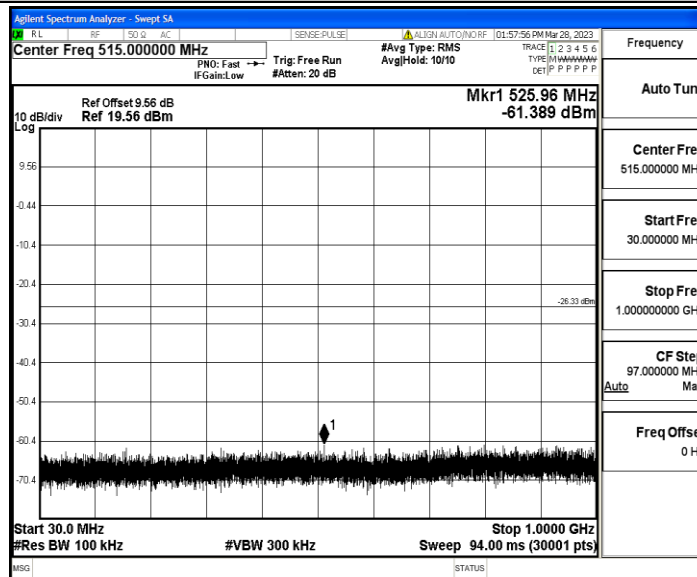
2DH5_Ant1_2402_30~1000



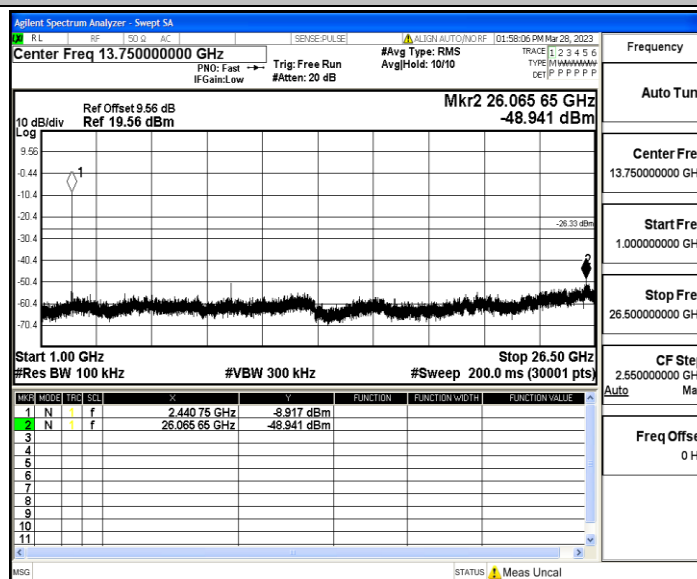
2DH5_Ant1_2402_1000~26500



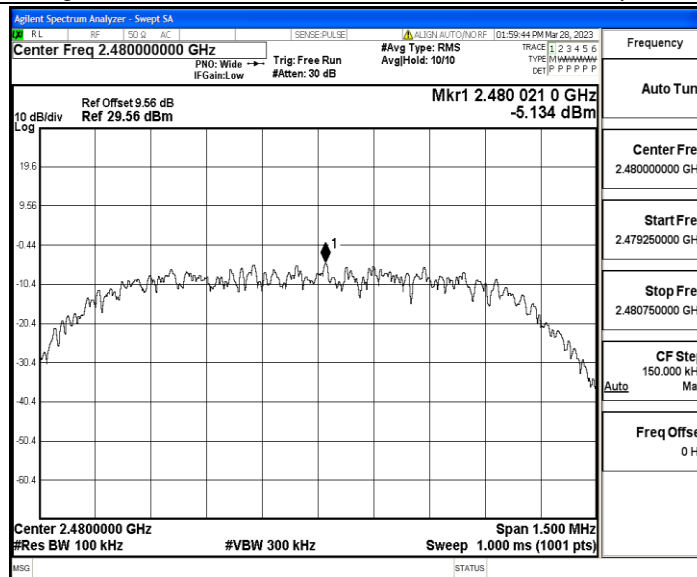
2DH5_Ant1_2441_0~Reference



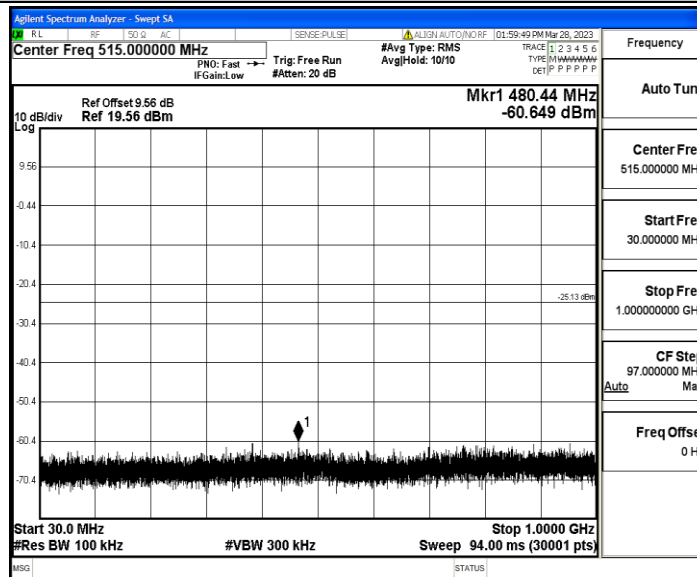
2DH5_Ant1_2441_30~1000



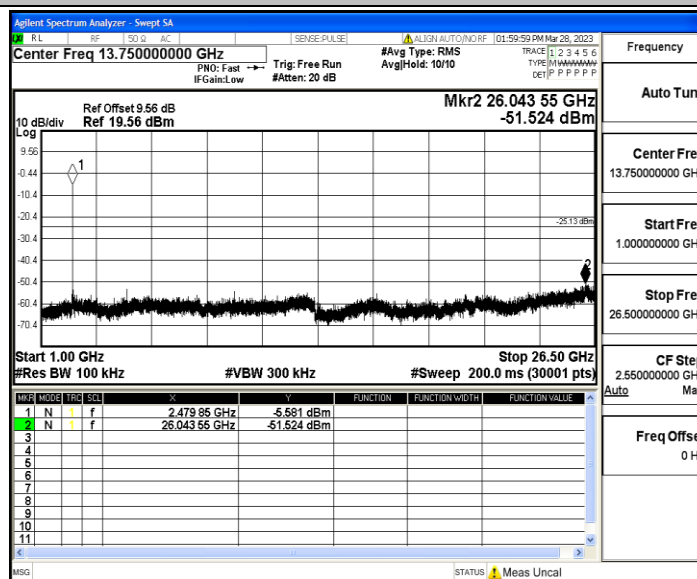
2DH5_Ant1_2441_1000~26500



2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000



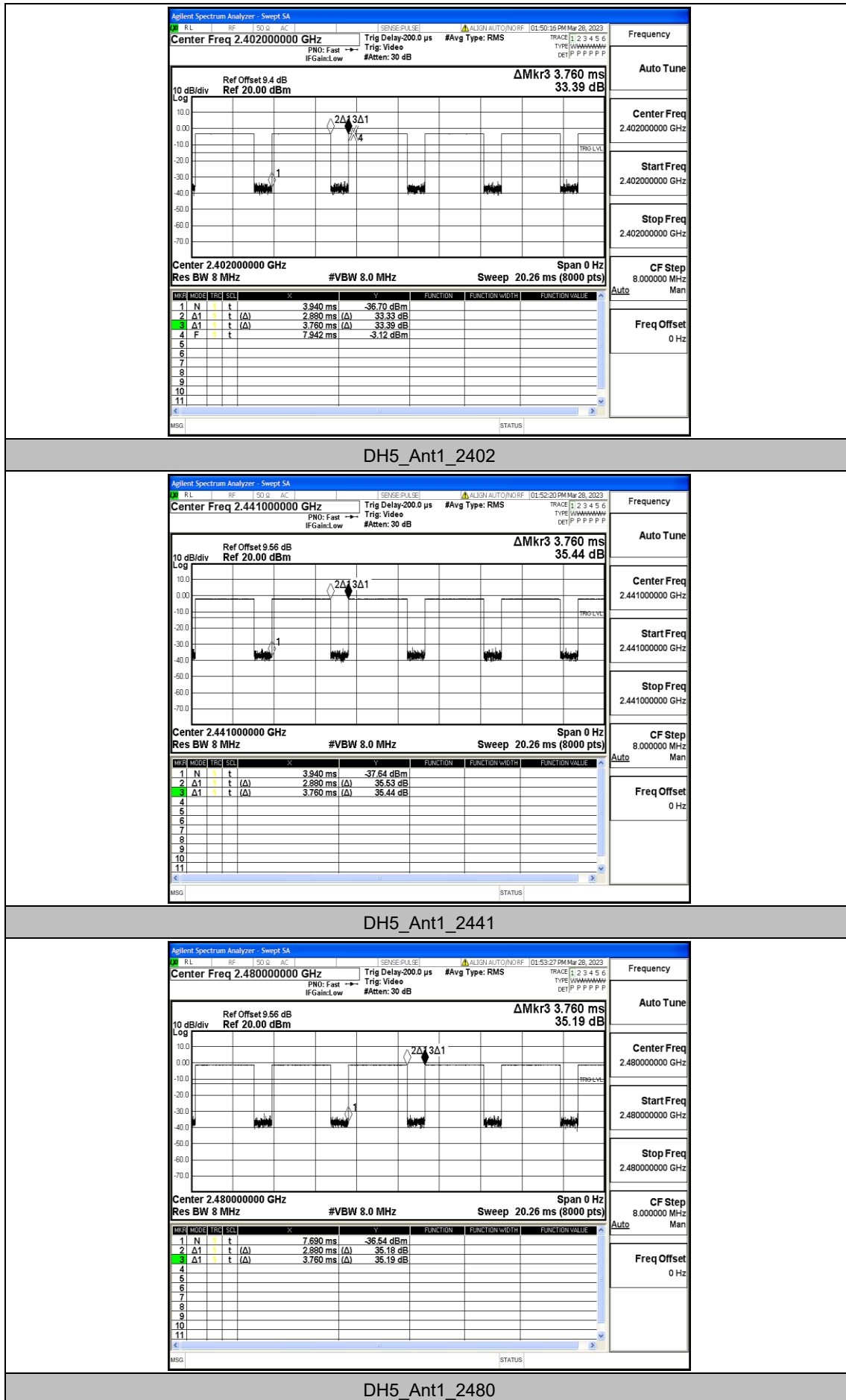
2DH5_Ant1_2480_1000~26500

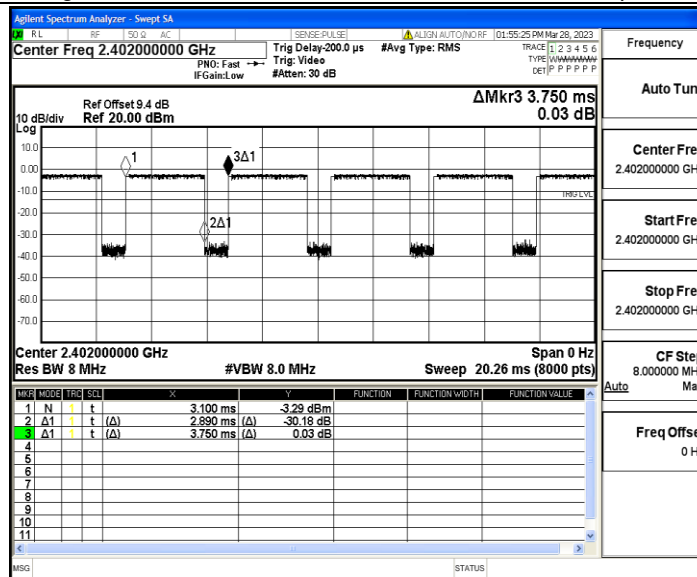
Appendix I: Duty Cycle

Test Result

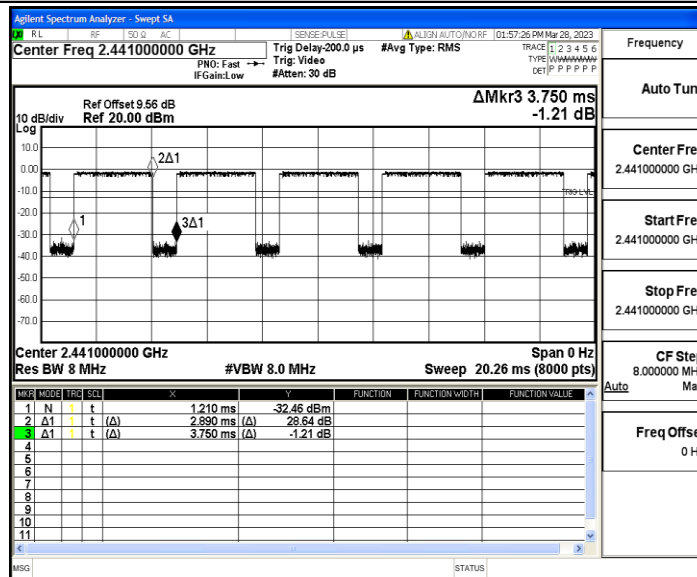
TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T[kHz]
DH5	Ant1	2402	2.88	3.76	76.60	0.35
		2441	2.88	3.76	76.60	0.35
		2480	2.88	3.76	76.60	0.35
2DH5	Ant1	2402	2.89	3.75	77.07	0.35
		2441	2.89	3.75	77.07	0.35
		2480	2.89	3.75	77.07	0.35

Test Graphs

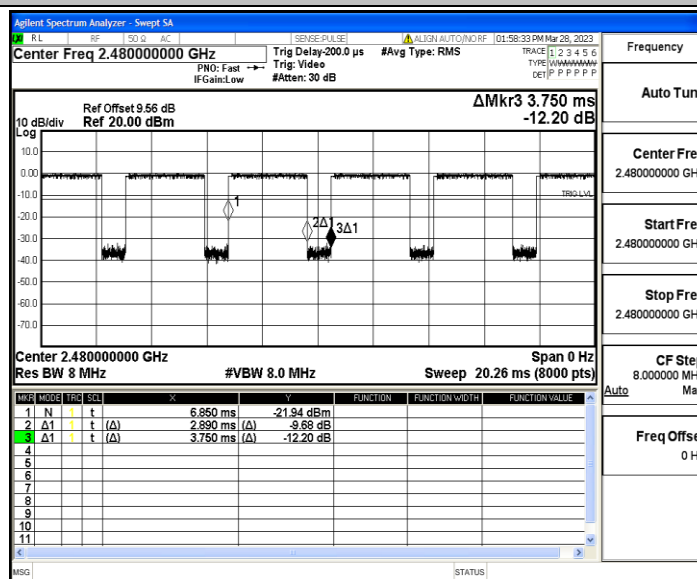




2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480

Appendix J: Emissions in Restricted Bands

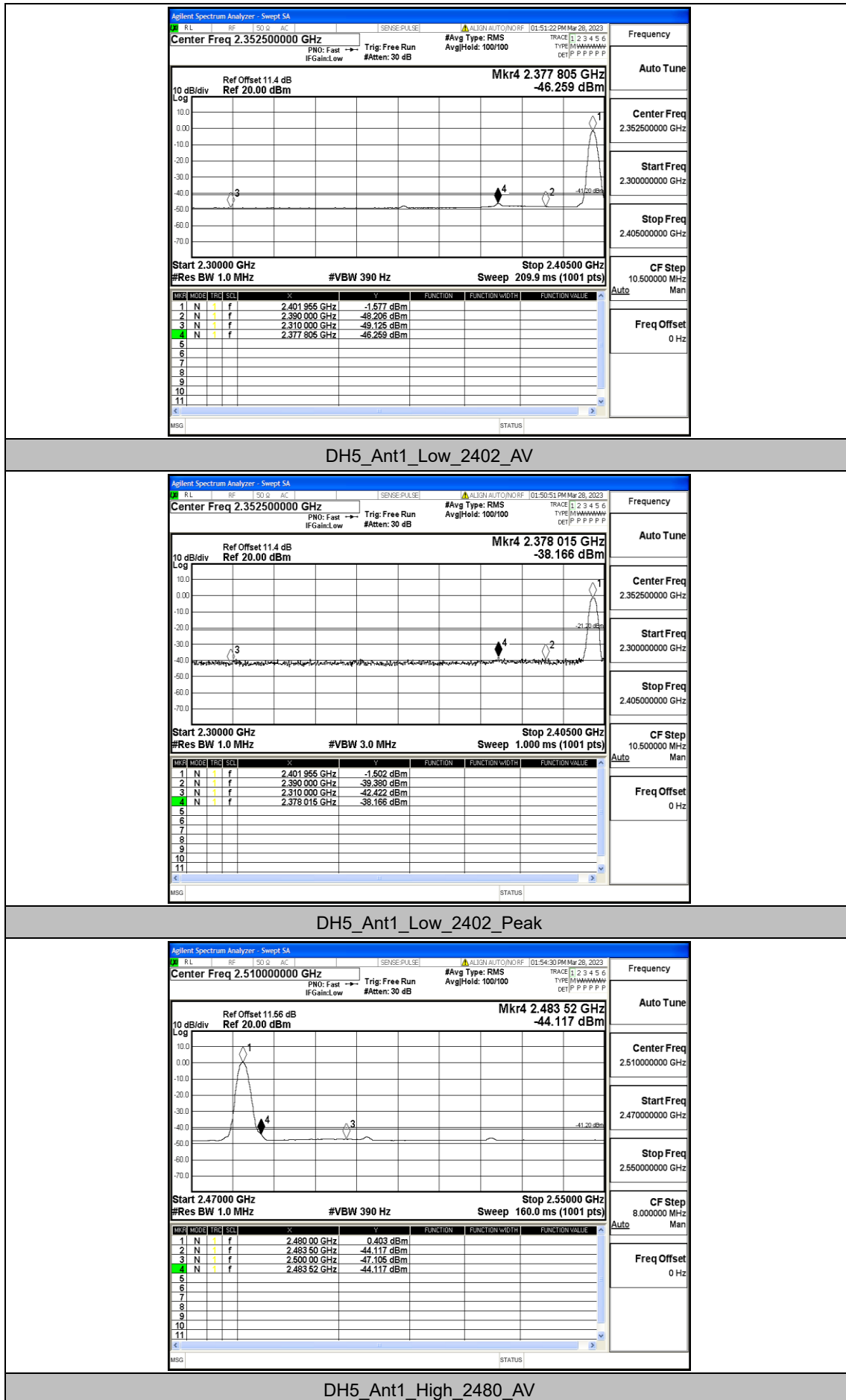
Test Result

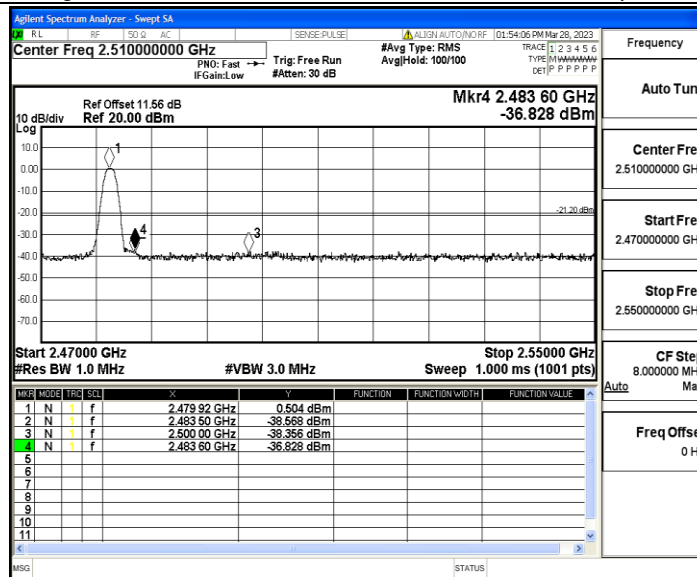
TestMode	Antenna	ChName	Channel	Detector	Freq(MHz)	Result(dBm)	Limit(dBm)	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-49.13	≤-41.20	PASS
				AV	2377.805	-46.26	≤-41.20	PASS
				AV	2390.000	-48.21	≤-41.20	PASS
				Peak	2310.000	-42.42	≤-21.20	PASS
				Peak	2378.015	-38.17	≤-21.20	PASS
				Peak	2390.000	-39.38	≤-21.20	PASS
		High	2480	AV	2483.500	-44.12	≤-41.20	PASS
				AV	2483.520	-44.12	≤-41.20	PASS
				AV	2500.000	-47.11	≤-41.20	PASS
				Peak	2483.500	-38.57	≤-21.20	PASS
				Peak	2483.600	-36.83	≤-21.20	PASS
				Peak	2500.000	-38.36	≤-21.20	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-49.09	≤-41.20	PASS
				AV	2378.120	-46.76	≤-41.20	PASS
				AV	2390.000	-48.25	≤-41.20	PASS
				Peak	2310.000	-41.48	≤-21.20	PASS
				Peak	2337.275	-36.91	≤-21.20	PASS
				Peak	2390.000	-41.86	≤-21.20	PASS
		High	2480	AV	2483.500	-45.53	≤-41.20	PASS
				AV	2483.520	-45.53	≤-41.20	PASS
				AV	2500.000	-47.18	≤-41.20	PASS
				Peak	2483.500	-39.6	≤-21.20	PASS
				Peak	2499.360	-36.36	≤-21.20	PASS
				Peak	2500.000	-39.56	≤-21.20	PASS

Note:

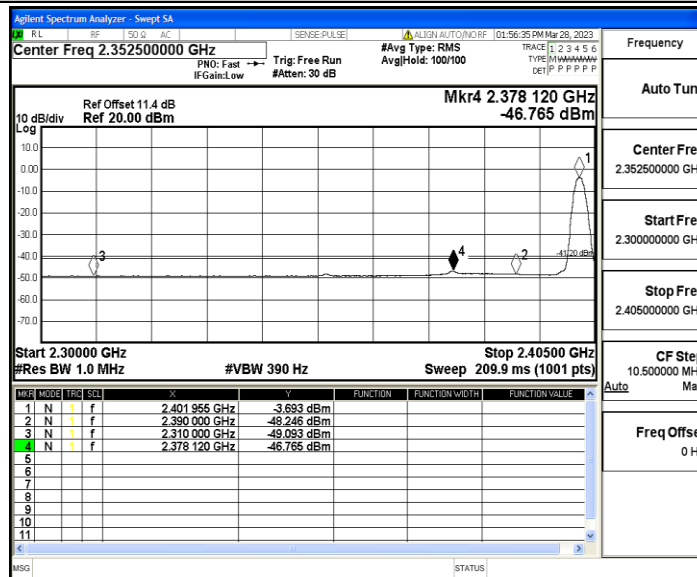
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

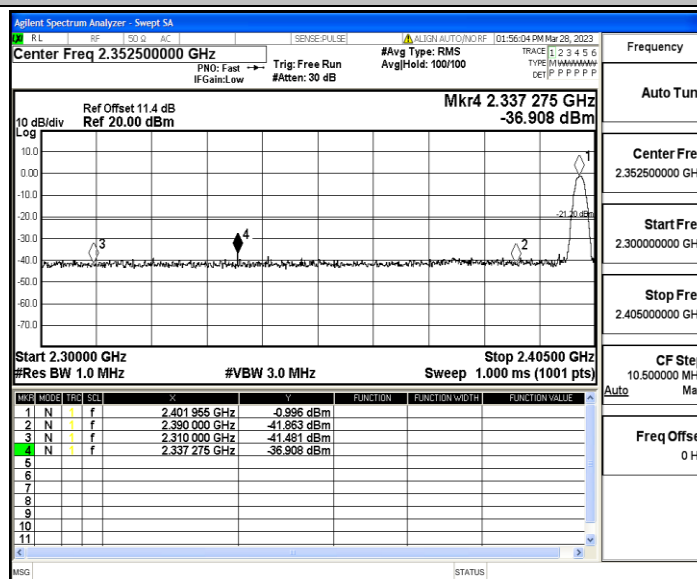




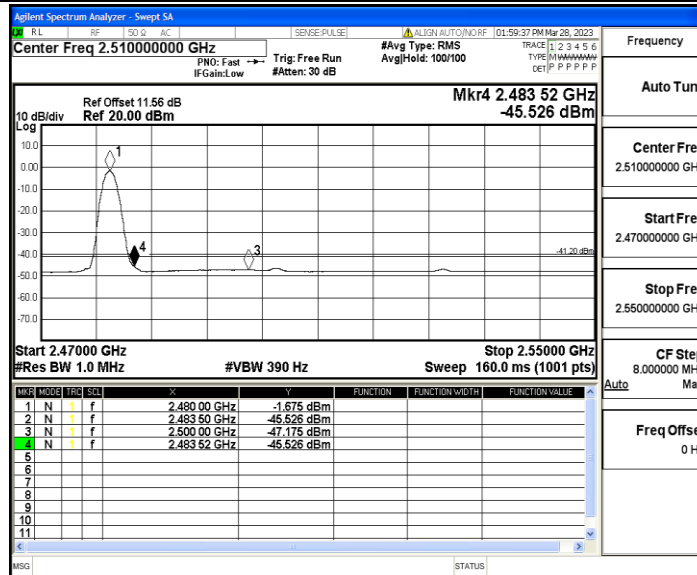
DH5_Ant1_High_2480_Peak



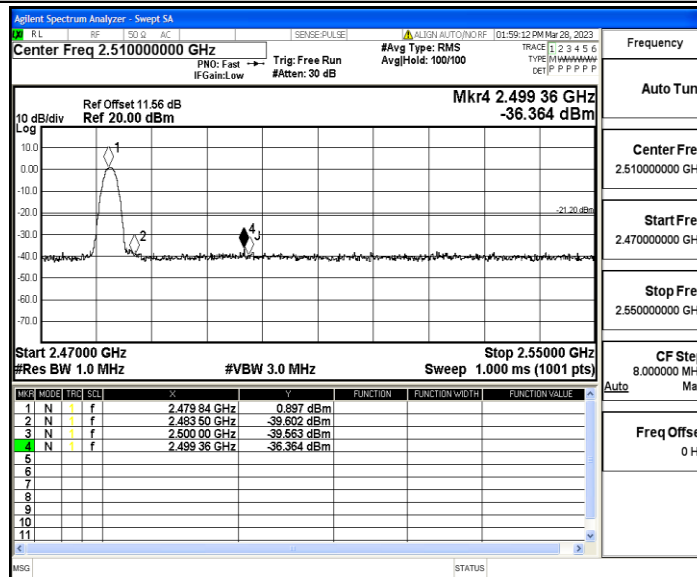
2DH5_Ant1_Low_2402_AV



2DH5_Ant1_Low_2402_Peak



2DH5_Ant1_High_2480_AV



2DH5_Ant1_High_2480_Peak