

FCC Appendix RF Test Data for BT

FCC ID : 2A9G7-AI00750

Company : EJEK TECHNOLOGY CO.,LTD.

EUT : BT5.1 Music Bluetooth Module

Model Number : AI00750

Report No. : CTA26010901902

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	0.939	2401.670	2402.609	---	---
		2441	0.945	2440.670	2441.615	---	---
		2480	0.960	2479.664	2480.624	---	---
2DH5	Ant1	2402	1.287	2401.493	2402.780	---	---
		2441	1.314	2440.469	2441.783	---	---
		2480	1.281	2479.499	2480.780	---	---

Test Graphs

DH5_Ant1_2402



DH5_Ant1_2441



DH5_Ant1_2480



2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480

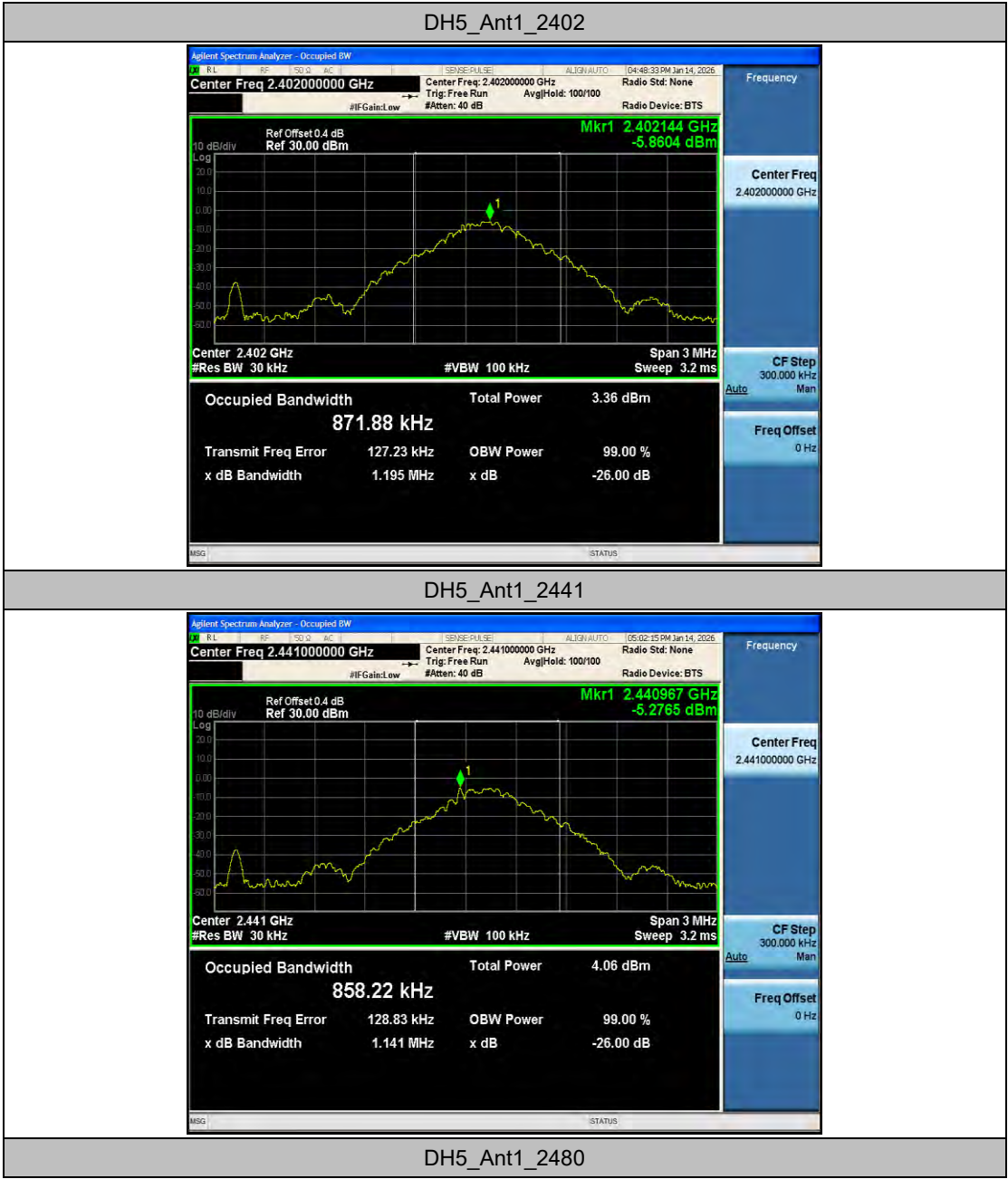


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.87188	2401.6913	2402.5632	---	---
		2441	0.85822	2440.6997	2441.5579	---	---
		2480	0.86471	2479.6987	2480.5634	---	---
2DH5	Ant1	2402	1.1767	2401.5365	2402.7132	---	---
		2441	1.1851	2440.5342	2441.7193	---	---
		2480	1.1712	2479.5417	2480.7129	---	---

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	-3.10	≤20.97	PASS
		2441	-2.57	≤20.97	PASS
		2480	-2.63	≤20.97	PASS
2DH5	Ant1	2402	-2.35	≤20.97	PASS
		2441	-1.75	≤20.97	PASS
		2480	-1.82	≤20.97	PASS

Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.982	≥ 0.960	PASS
2DH5	Ant1	Hop	1.078	≥ 0.876	PASS

DH5_Ant1_Hop

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.441500000 GHz

Ref Offset 0.4 dB
Ref 30.00 dBm

Trig: Free Run
#Ave Type: RMS
#Att: 40 dB

Start 2.440500 GHz
#Res BW 300 kHz
#VBW 300 kHz

Stop 2.442500 GHz
Sweep 1.000 ms (1001 pts)

Frequency

Auto Tune

Center Freq
2.441500000 GHz

Start Freq
2.440500000 GHz

Stop Freq
2.442500000 GHz

CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz

MSG (STATUS)

2DH5_Ant1_Hop

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.441500000 GHz

Ref Offset 0.4 dB
Ref 30.00 dBm

Trig: Free Run
#Ave Type: RMS
#Att: 40 dB

Start 2.440500 GHz
#Res BW 300 kHz
#VBW 300 kHz

Stop 2.442500 GHz
Sweep 1.000 ms (1001 pts)

Frequency

Auto Tune

Center Freq
2.441500000 GHz

Start Freq
2.440500000 GHz

Stop Freq
2.442500000 GHz

CF Step
200.000 kHz
Auto Man

Freq Offset
0 Hz

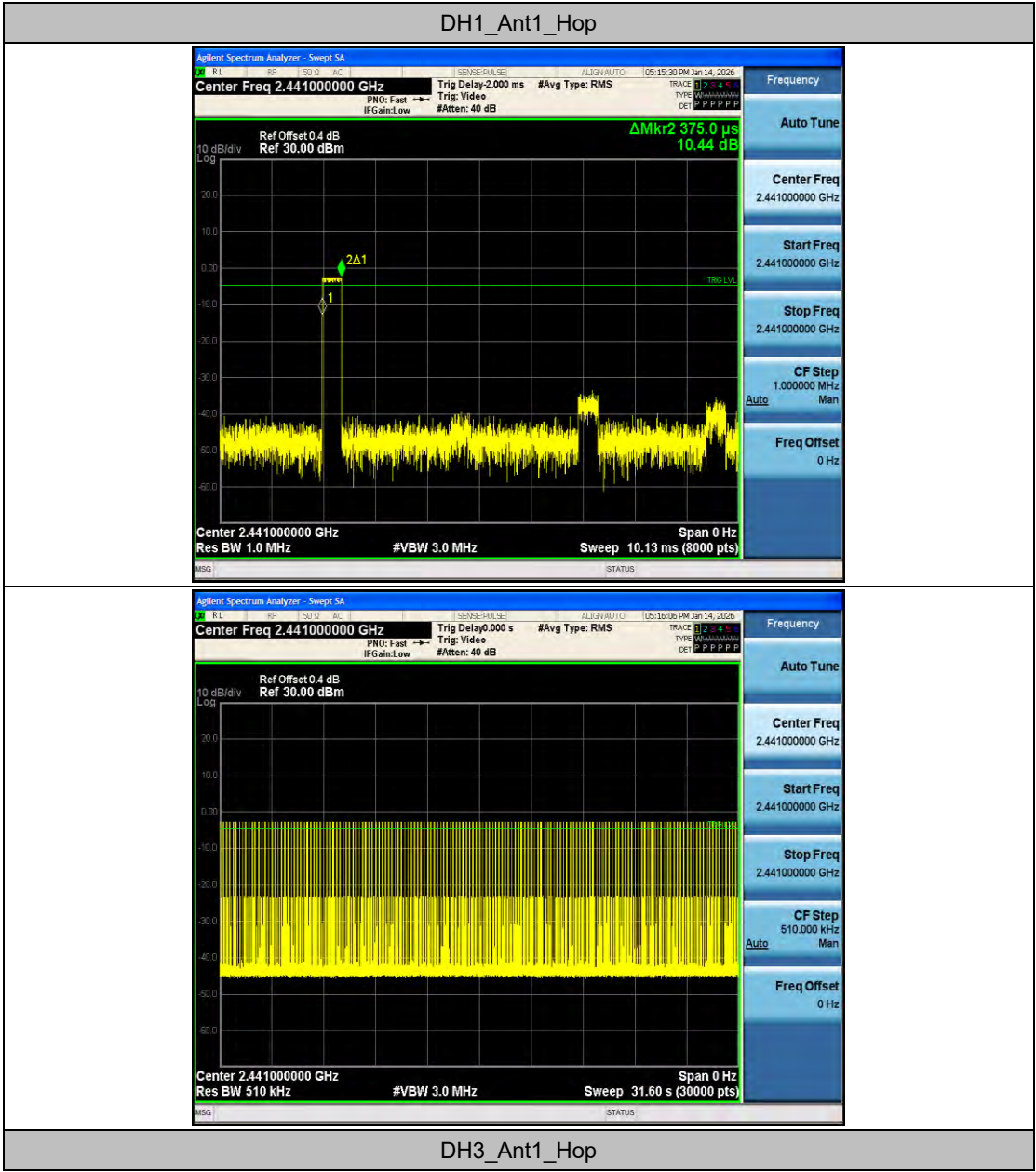
MSG (STATUS)

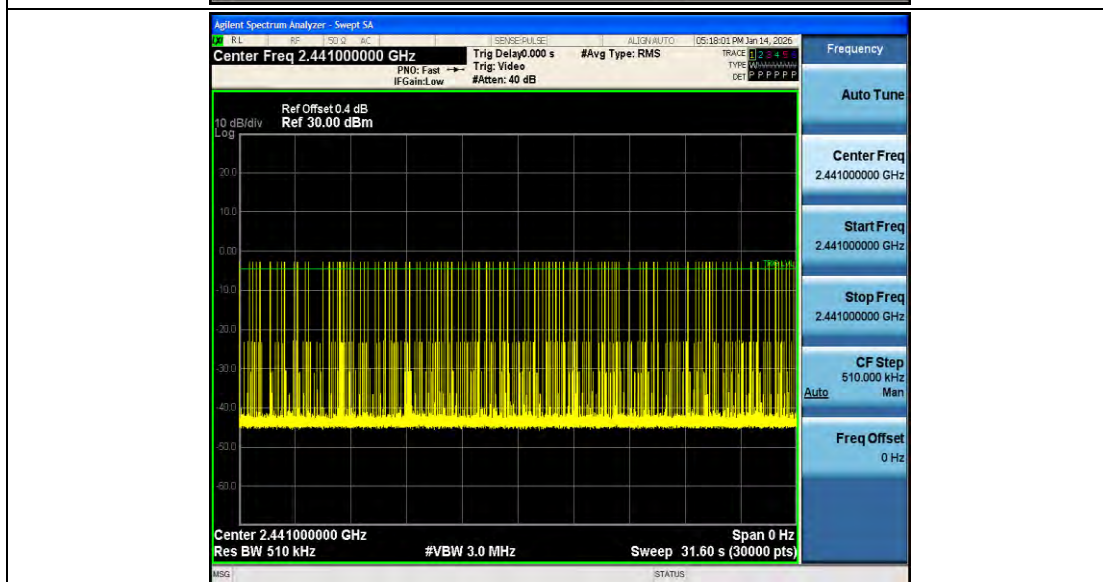
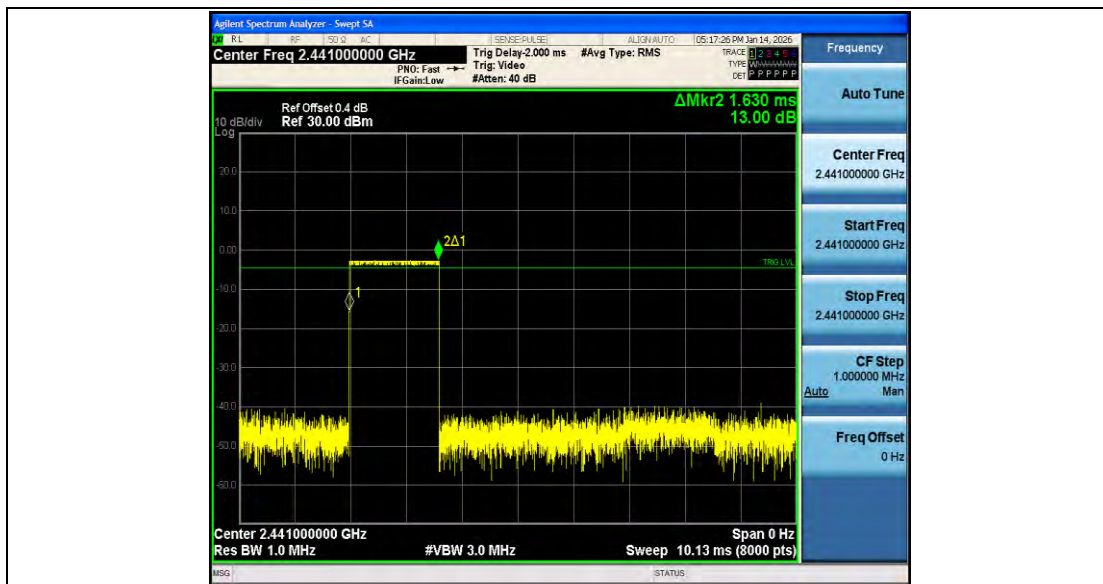
Appendix E: Time of occupancy

Test Result

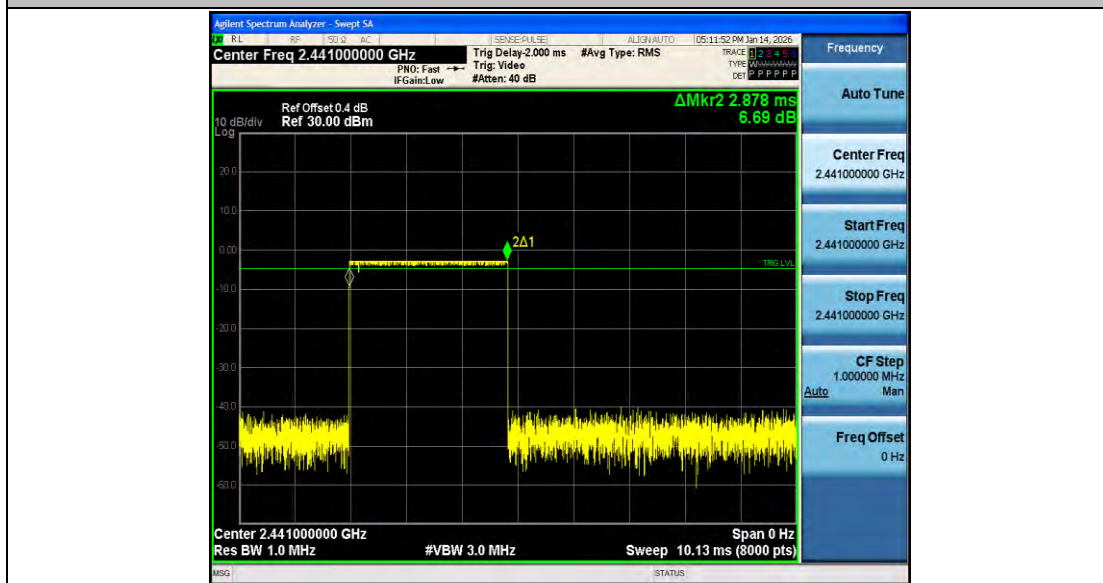
TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.375	320	0.12	≤0.4	PASS
DH3	Ant1	Hop	1.630	150	0.245	≤0.4	PASS
DH5	Ant1	Hop	2.878	116	0.334	≤0.4	PASS
2DH1	Ant1	Hop	0.375	318	0.119	≤0.4	PASS
2DH3	Ant1	Hop	1.630	158	0.258	≤0.4	PASS
2DH5	Ant1	Hop	2.884	99	0.286	≤0.4	PASS

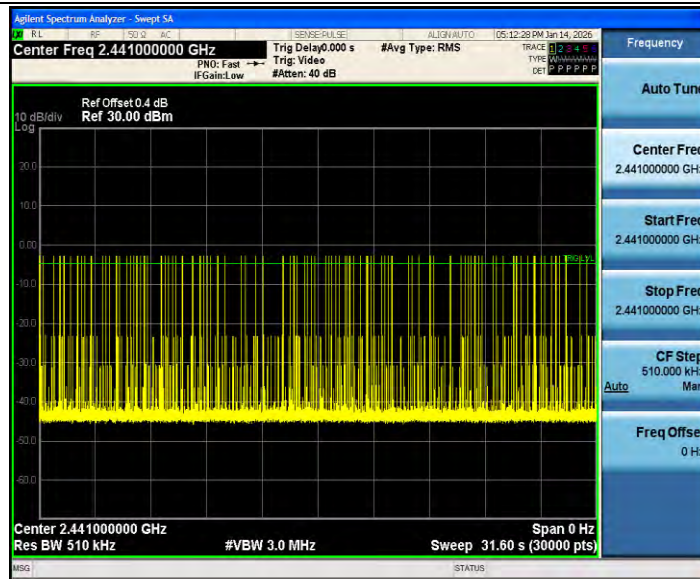
Test Graphs



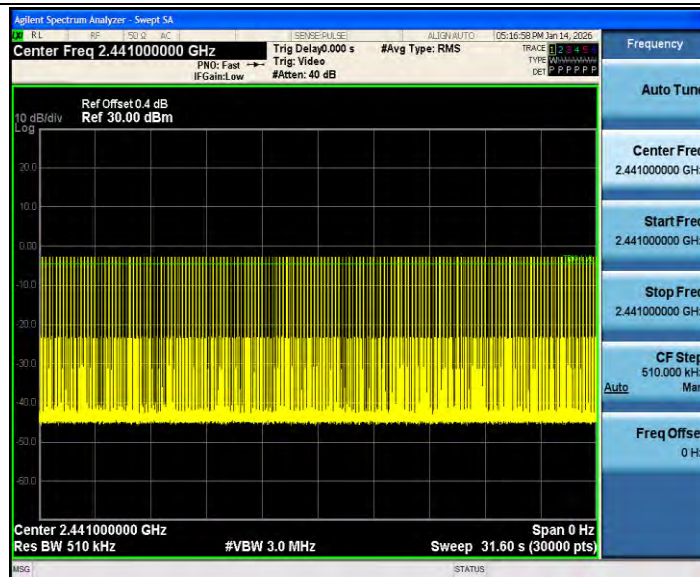
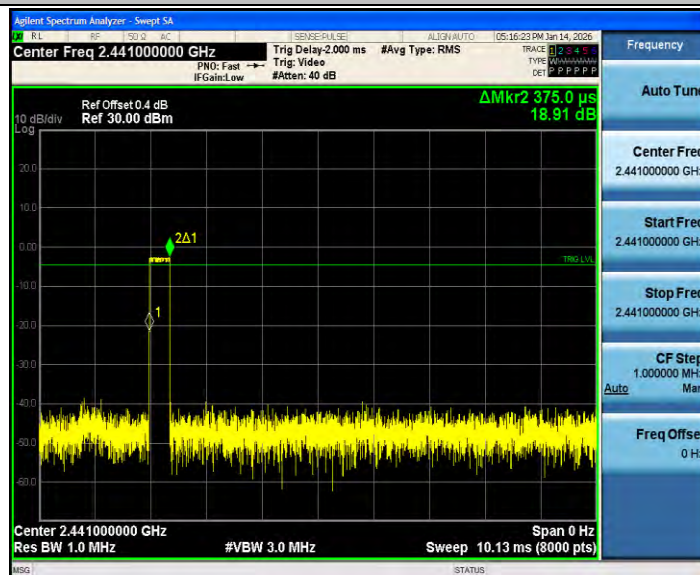


DH5_Ant1_Hop

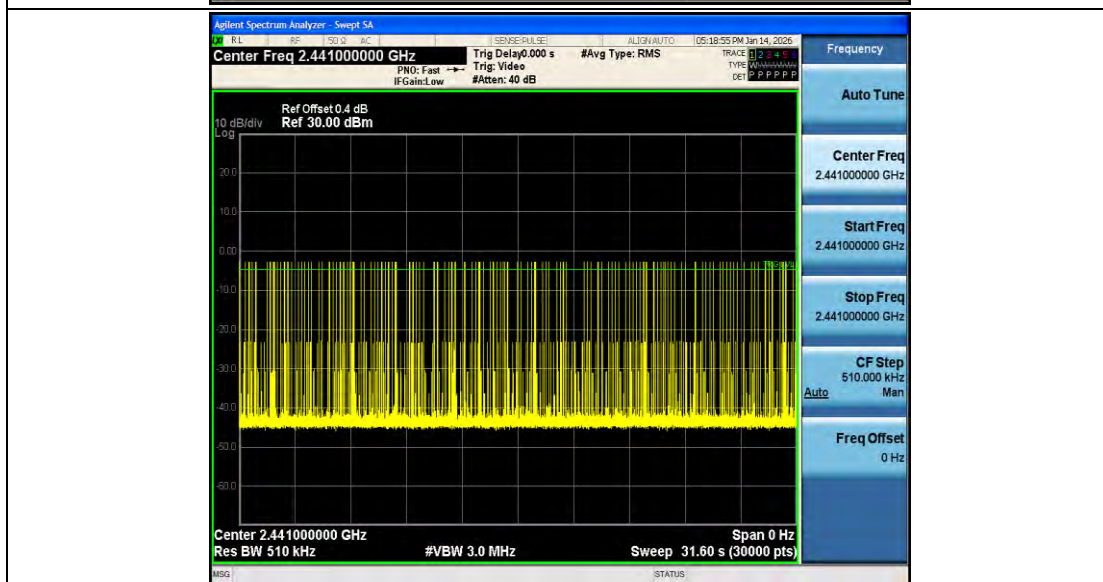
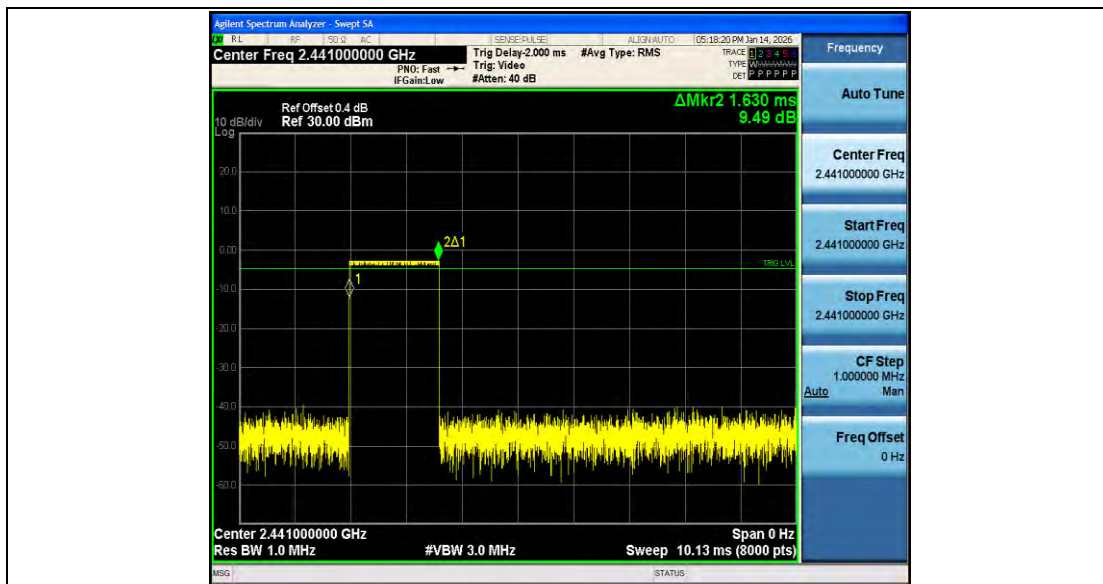




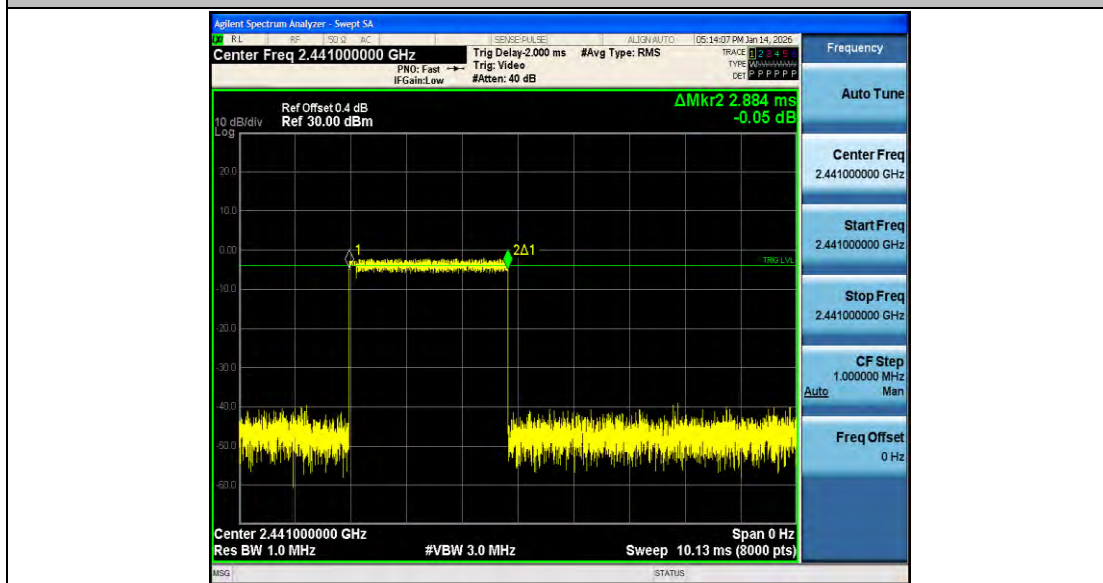
2DH1_Ant1_Hop

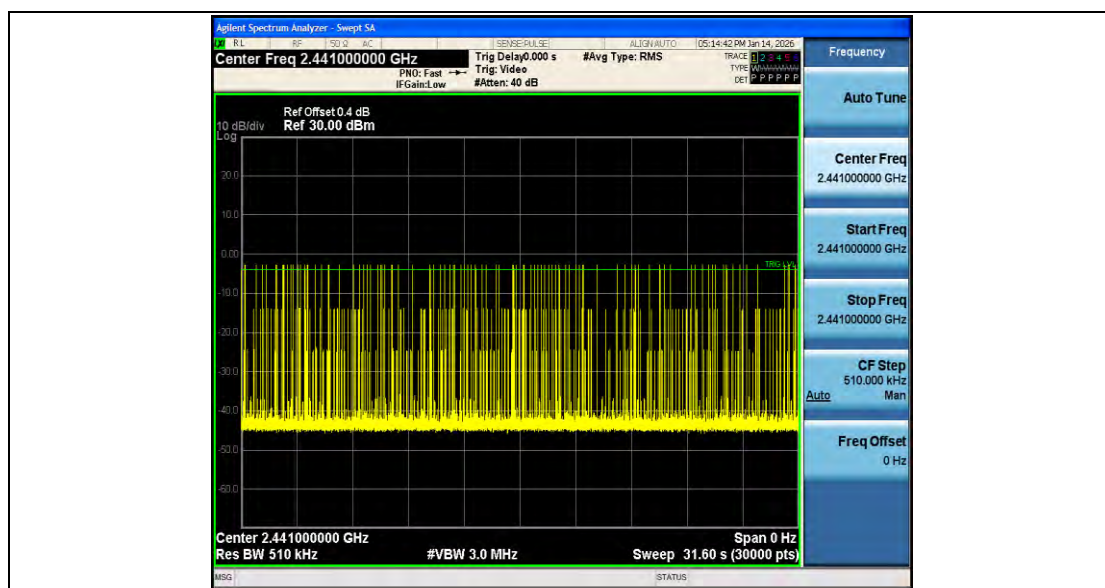


2DH3_Ant1_Hop



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

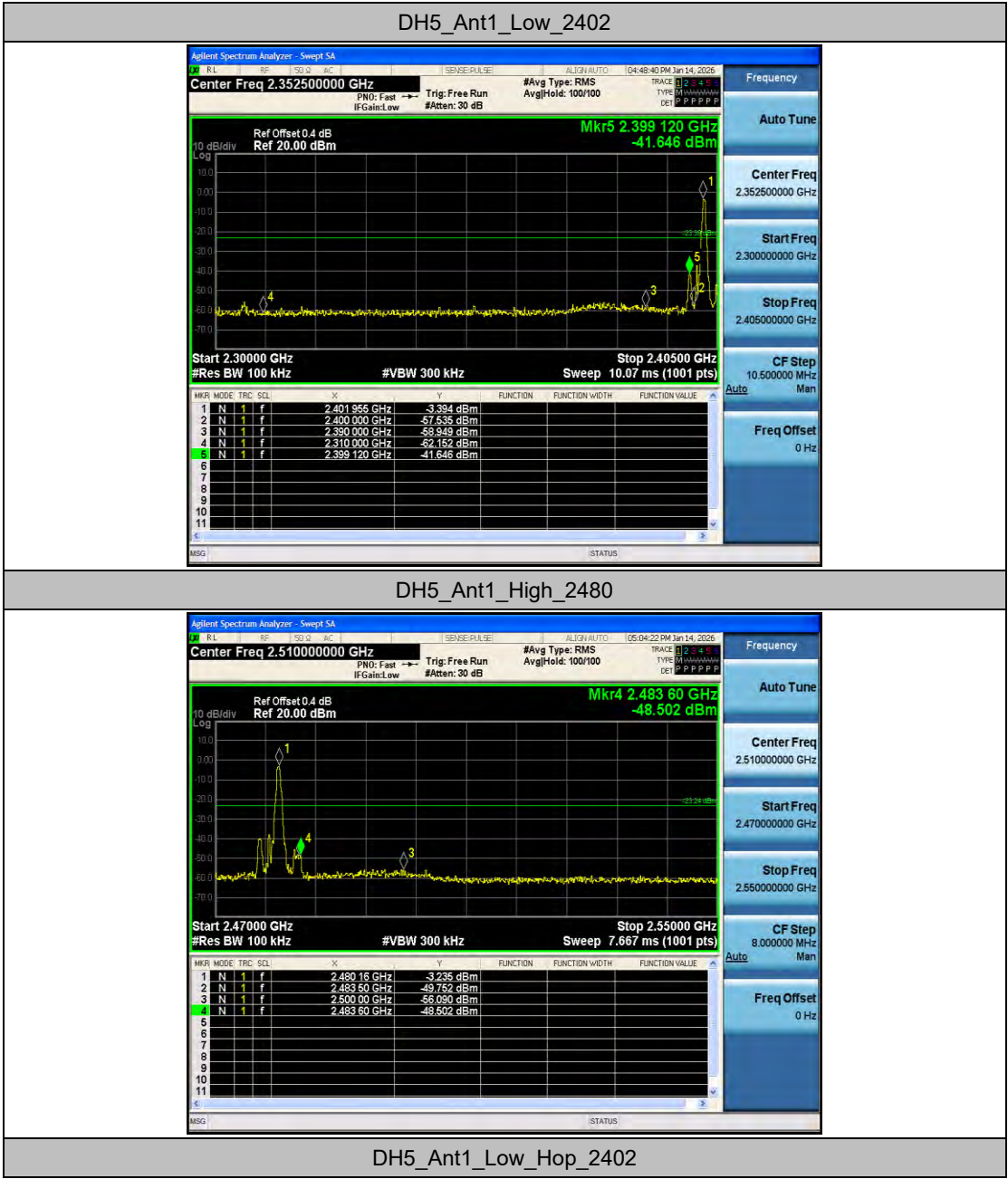


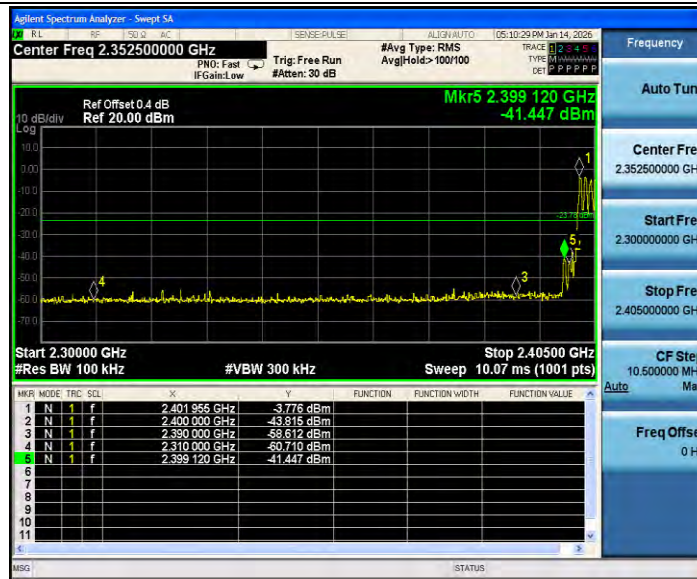
Appendix G: Band edge measurements

Test Result

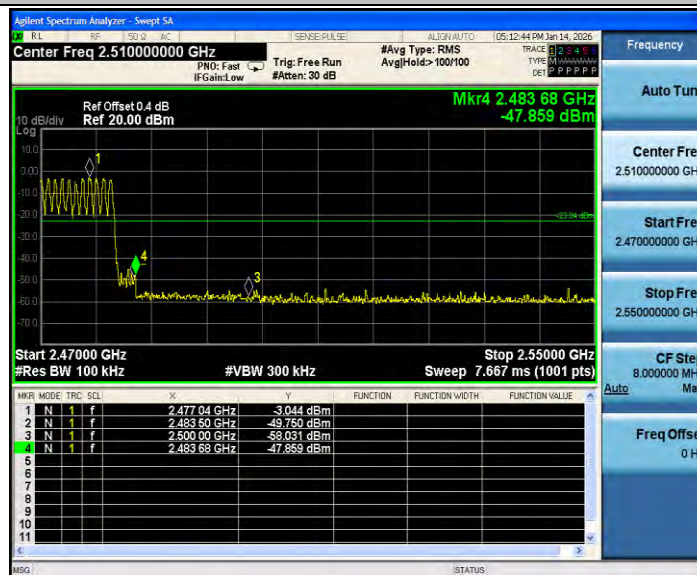
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-3.39	-41.65	≤-23.39	PASS
		High	2480	-3.24	-48.5	≤-23.24	PASS
		Low	Hop_2402	-3.78	-41.45	≤-23.78	PASS
		High	Hop_2480	-3.04	-47.86	≤-23.04	PASS
2DH5	Ant1	Low	2402	-4.67	-41.39	≤-24.67	PASS
		High	2480	-3.92	-48.64	≤-23.92	PASS
		Low	Hop_2402	-5.92	-41.24	≤-25.92	PASS
		High	Hop_2480	-3.68	-52.41	≤-23.68	PASS

Test Graphs

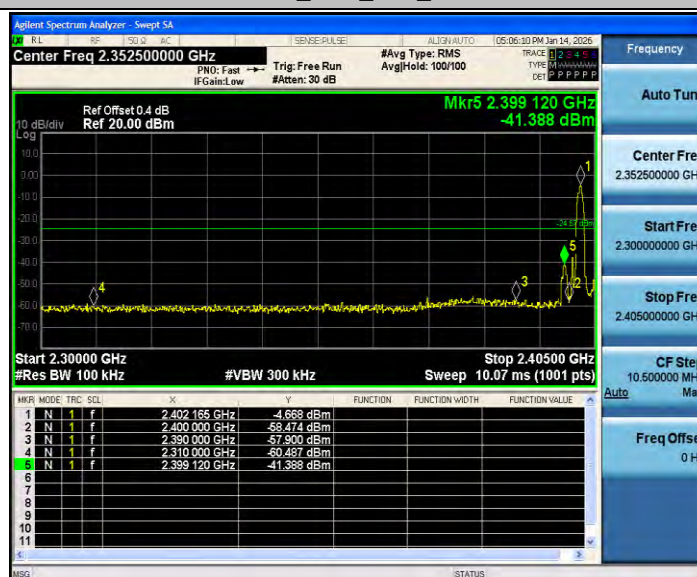




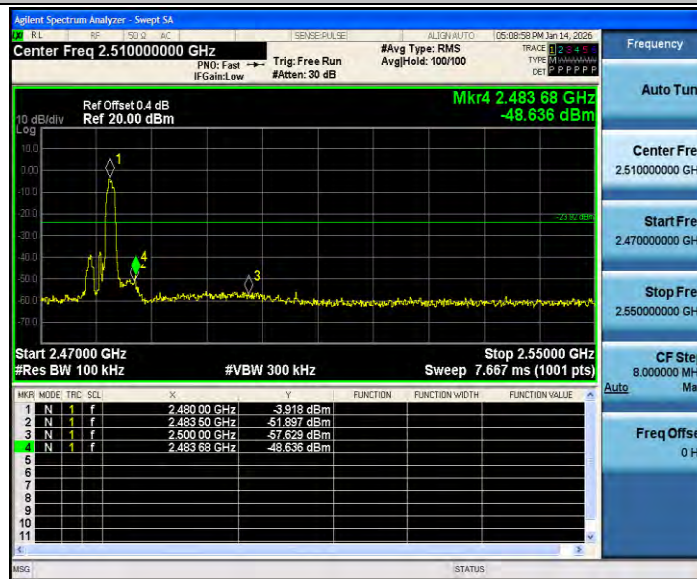
DH5_Ant1_High_Hop_2480



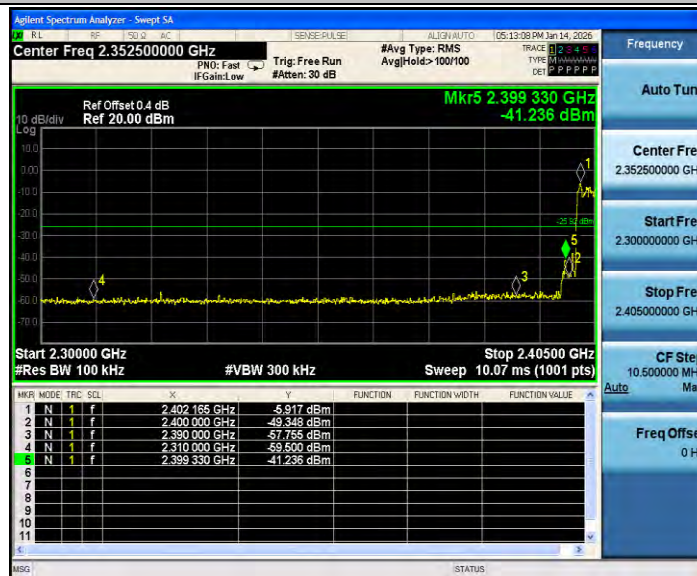
2DH5_Ant1_Low_2402



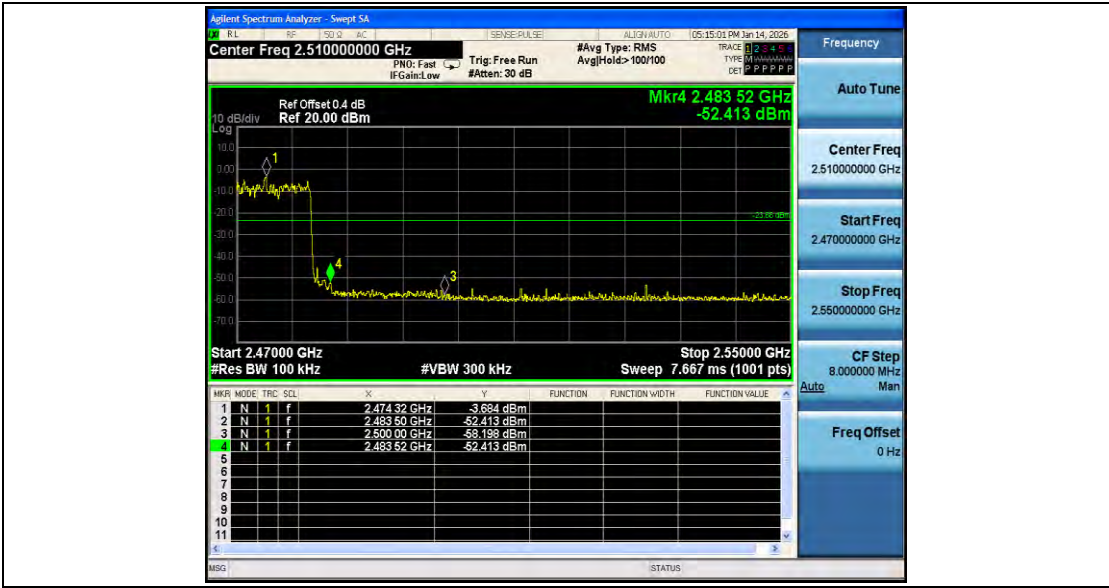
2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



2DH5_Ant1_High_Hop_2480

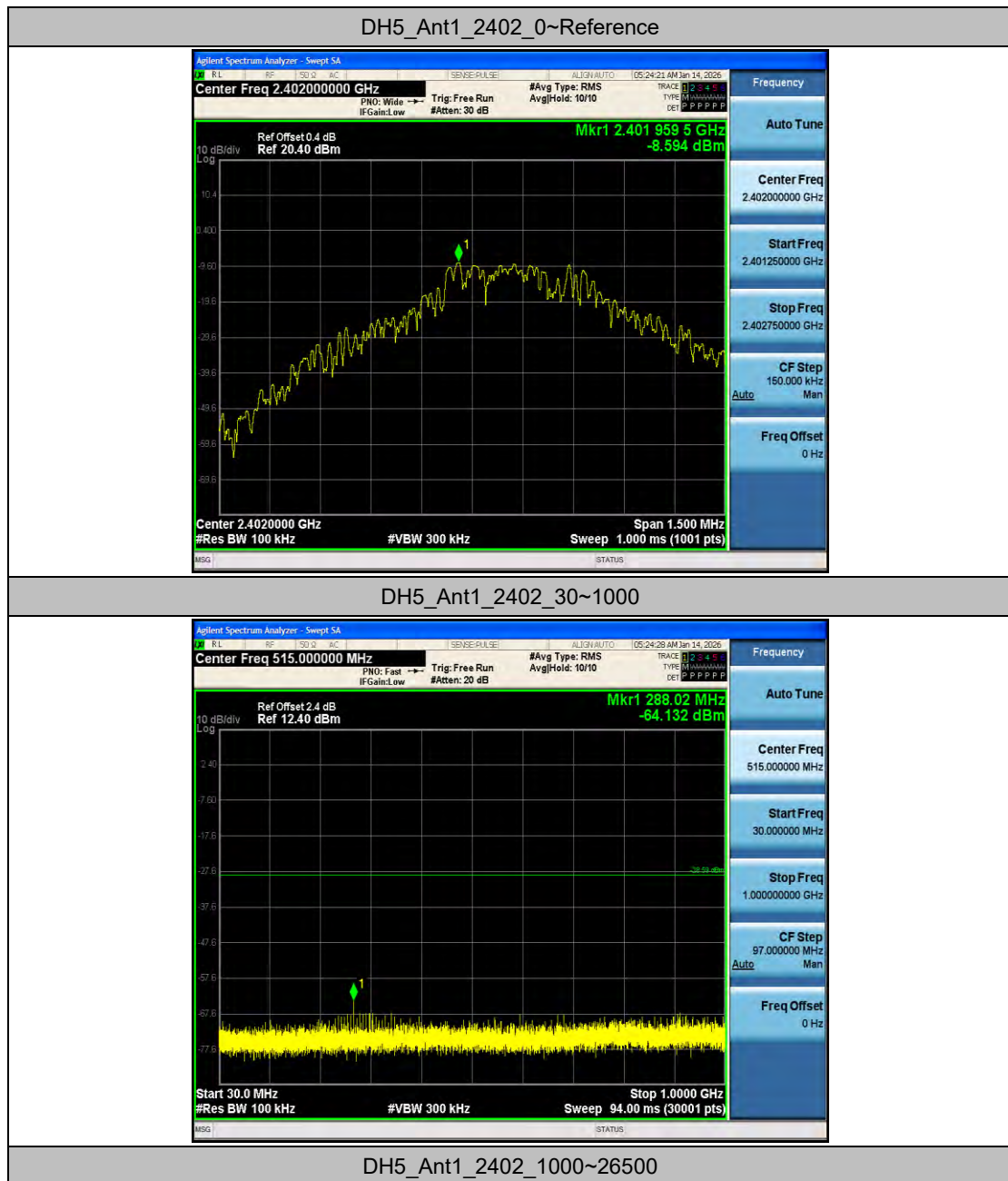


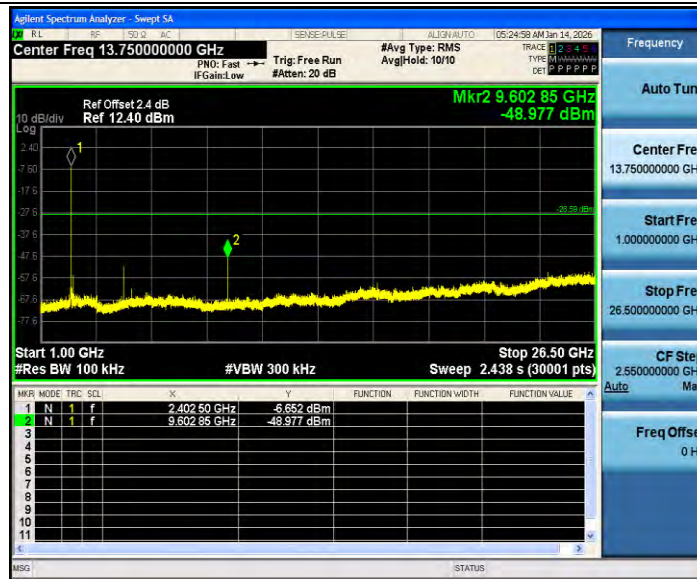
Appendix H: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-8.59	-8.59	---	PASS
			30~1000	-8.59	-64.13	≤-28.59	PASS
			1000~26500	-8.59	-48.98	≤-28.59	PASS
		2441	Reference	-2.90	-2.90	---	PASS
			30~1000	-2.90	-65.62	≤-22.9	PASS
			1000~26500	-2.90	-47.02	≤-22.9	PASS
		2480	Reference	-3.80	-3.80	---	PASS
			30~1000	-3.80	-65.49	≤-23.8	PASS
			1000~26500	-3.80	-47.27	≤-23.8	PASS
2DH5	Ant1	2402	Reference	-7.55	-7.55	---	PASS
			30~1000	-7.55	-65.52	≤-27.55	PASS
			1000~26500	-7.55	-46.78	≤-27.55	PASS
		2441	Reference	-6.88	-6.88	---	PASS
			30~1000	-6.88	-65.58	≤-26.88	PASS
			1000~26500	-6.88	-47.18	≤-26.88	PASS
		2480	Reference	-4.80	-4.80	---	PASS
			30~1000	-4.80	-66.24	≤-24.8	PASS
			1000~26500	-4.80	-47.07	≤-24.8	PASS

Test Graphs

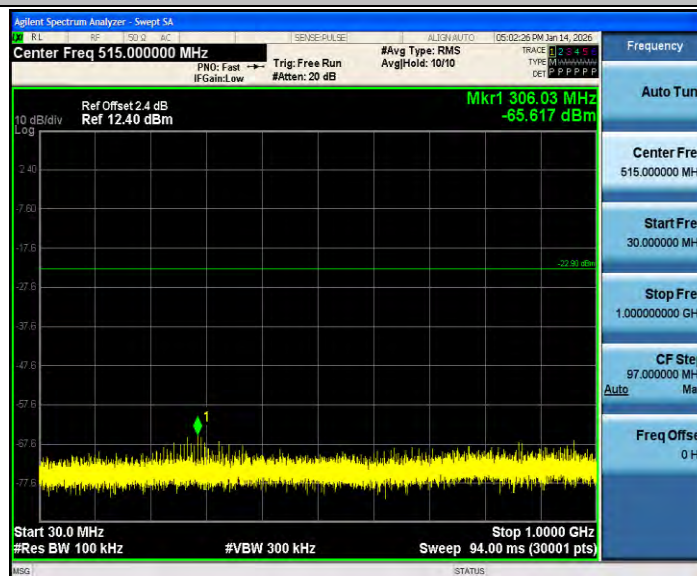




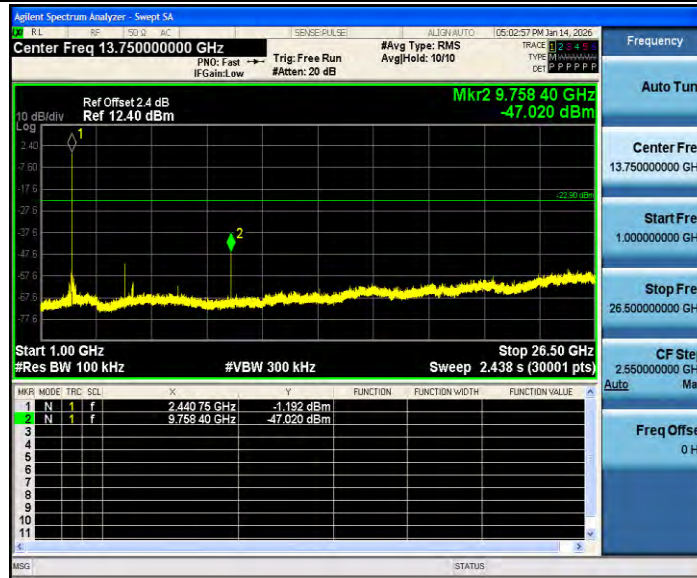
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



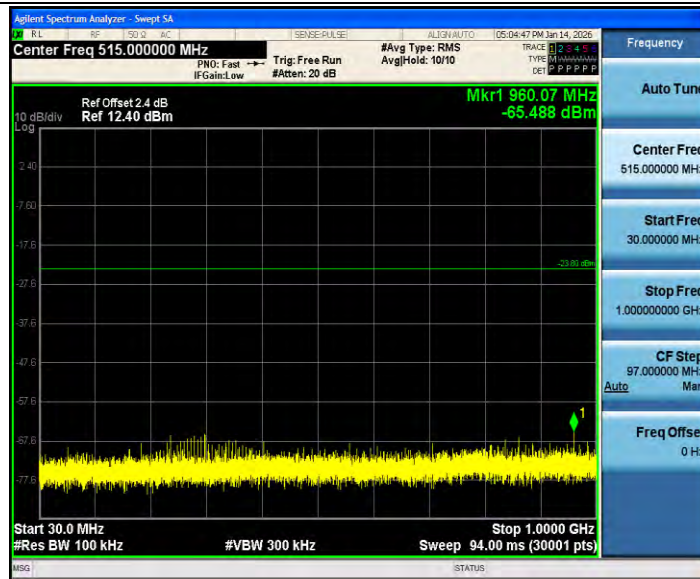
DH5_Ant1_2441_1000~26500



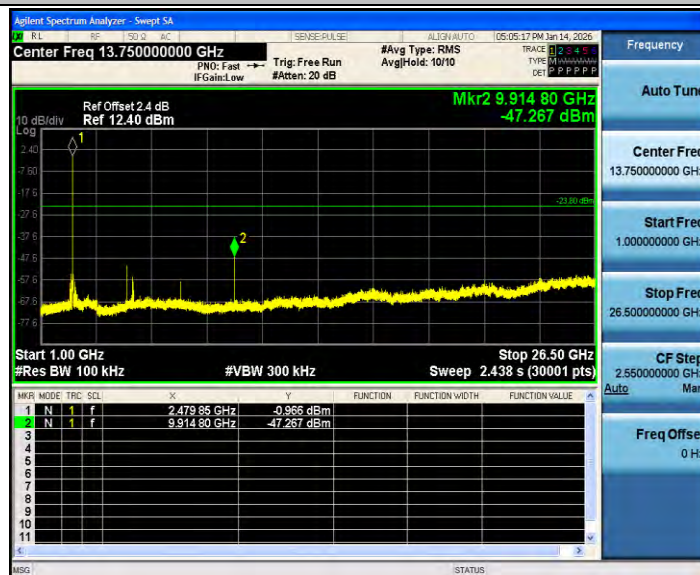
DH5_Ant1_2480_0~Reference



DH5_Ant1_2480_30~1000



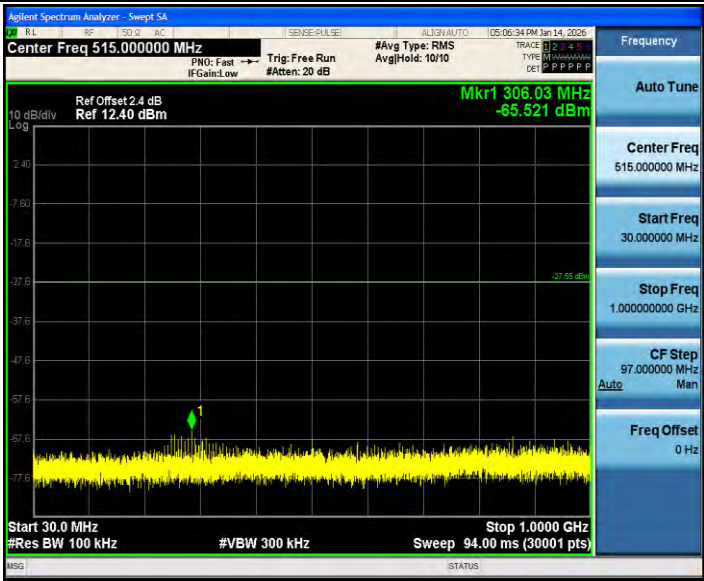
DH5_Ant1_2480_1000~26500



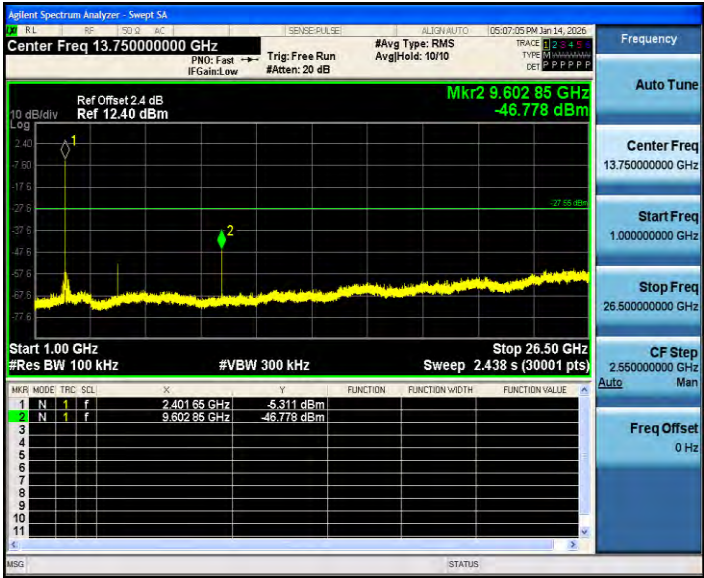
2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



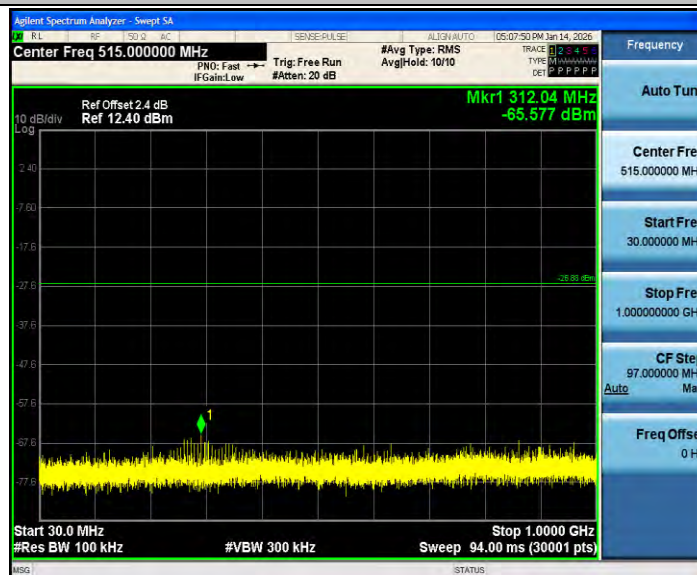
2DH5_Ant1_2402_1000~26500



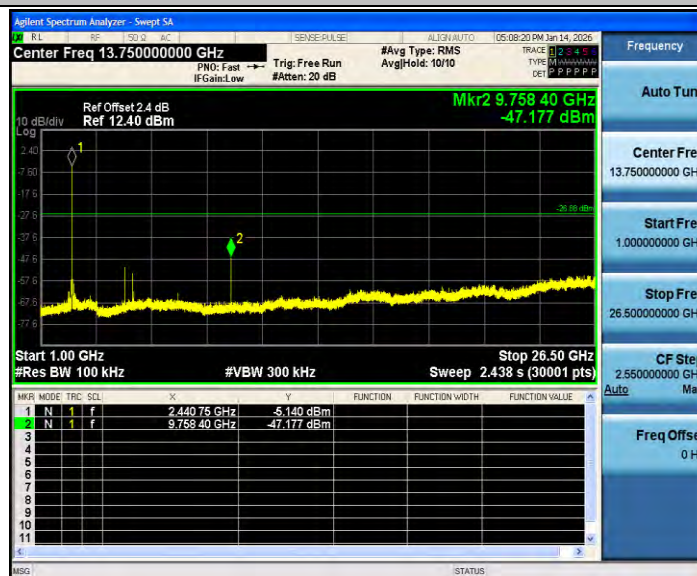
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000



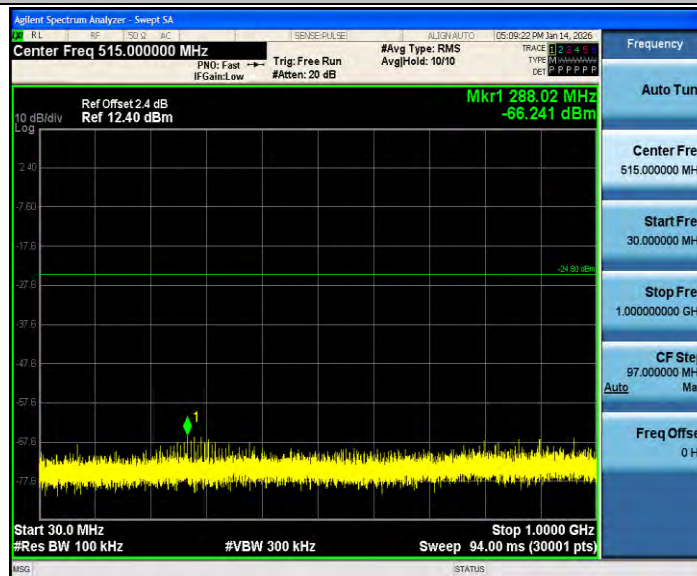
2DH5_Ant1_2441_1000~26500



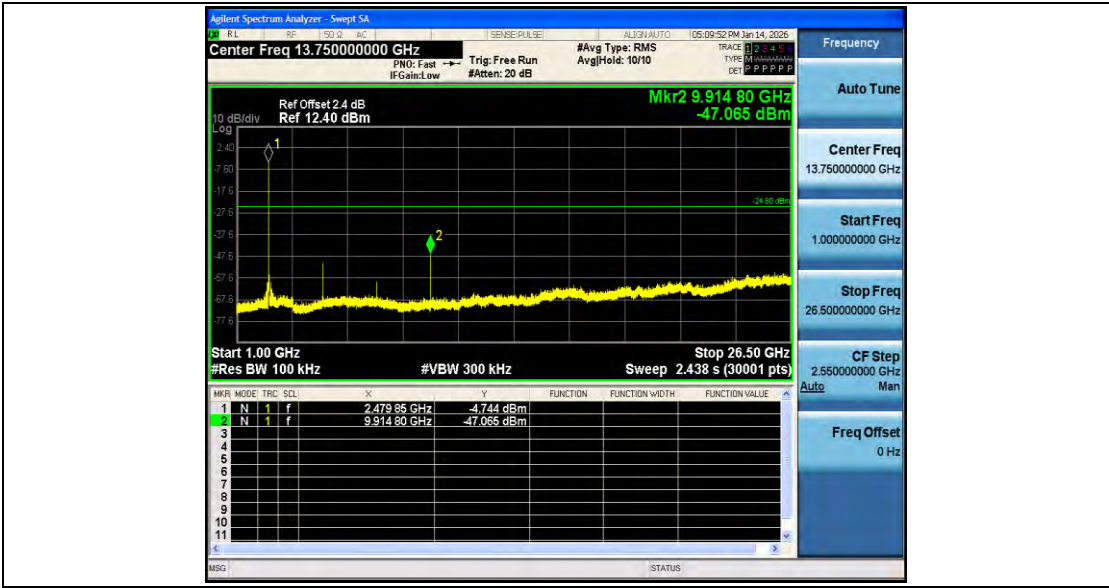
2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000



2DH5_Ant1_2480_1000~26500

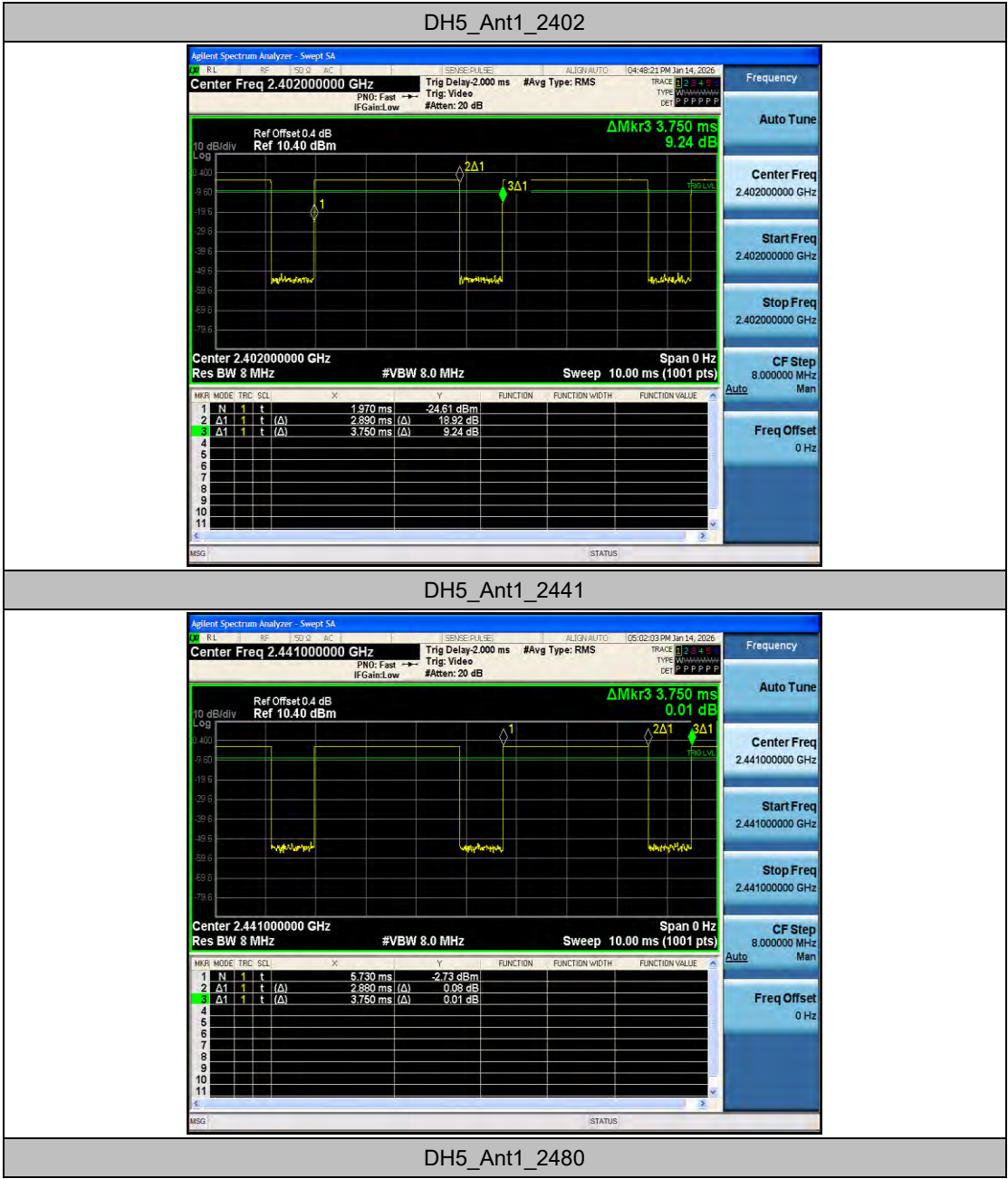


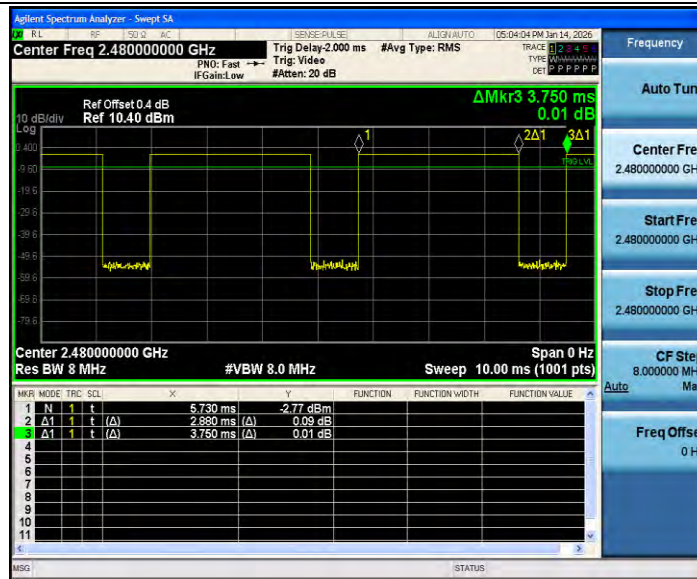
Appendix I: Duty Cycle

Test Result

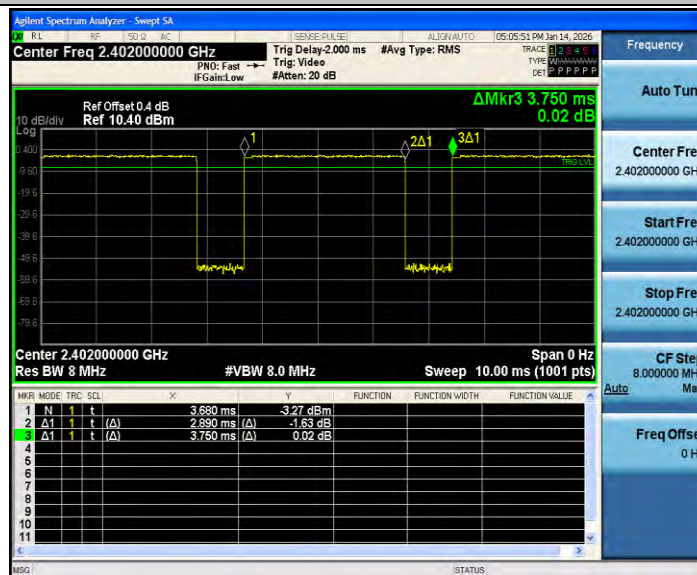
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	DC [%]	xFactor	Limit	Verdict
DH5	Ant1	2402	2.89	3.75	77.07	1.13	---	---
		2441	2.88	3.75	76.80	1.15	---	---
		2480	2.88	3.75	76.80	1.15	---	---
2DH5	Ant1	2402	2.89	3.75	77.07	1.13	---	---
		2441	2.88	3.75	76.80	1.15	---	---
		2480	2.89	3.75	77.07	1.13	---	---

Test Graphs

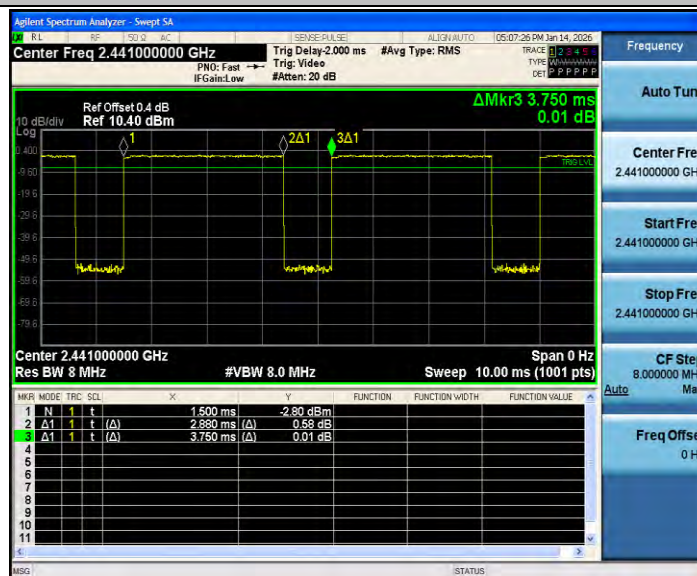




2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



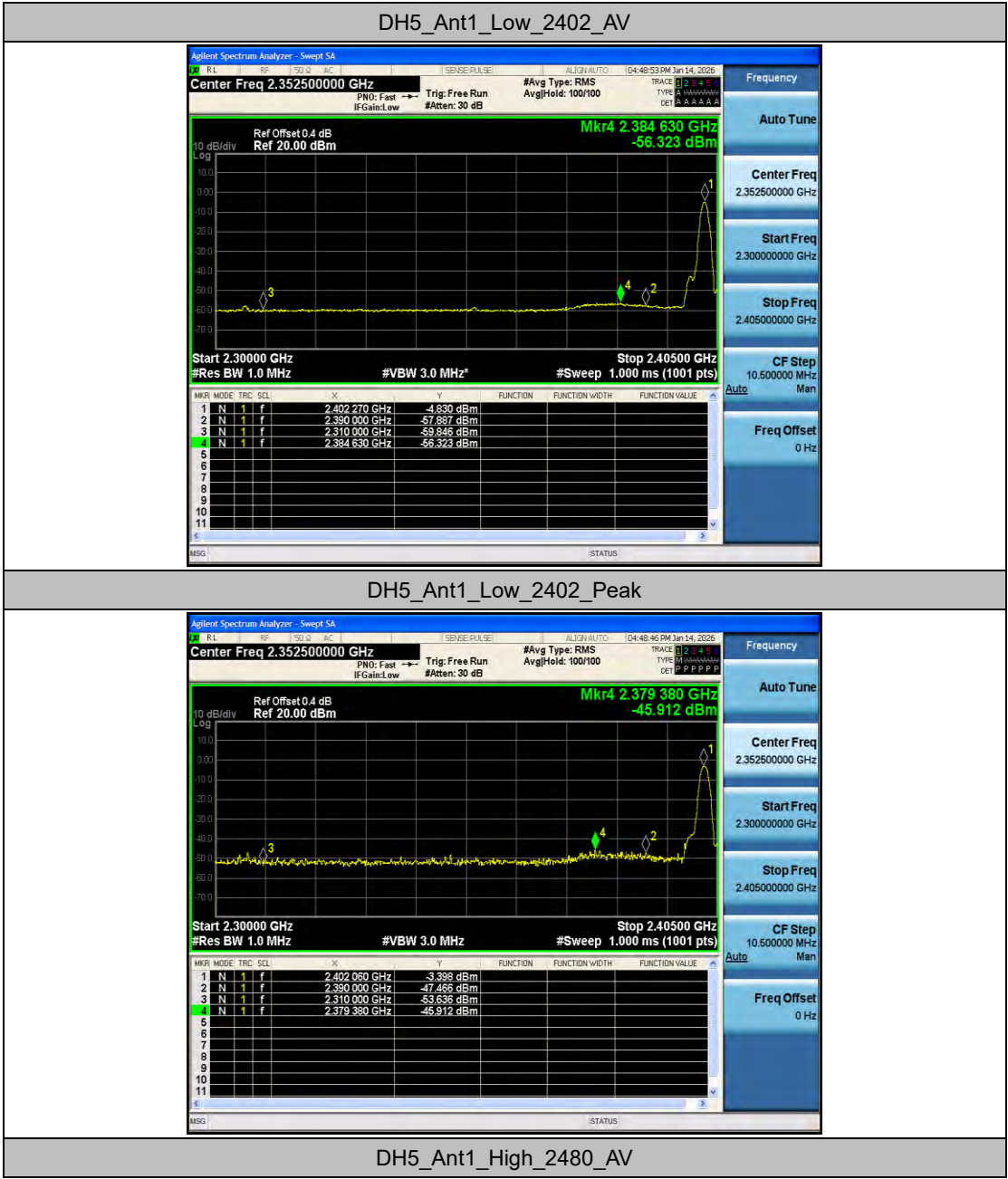
Appendix J: Emissions in Restricted Bands

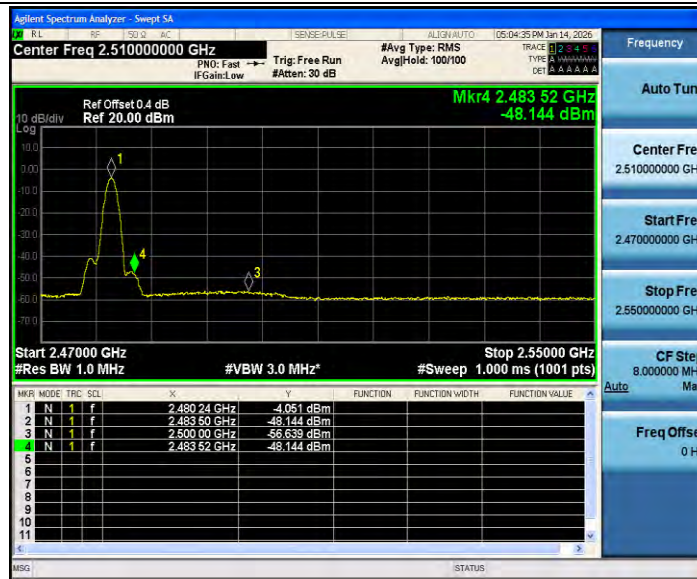
Test Result

TestMod e	Antenn a	ChNam e	Freq(MH z)	Detector	Freq [MHz]	Result [dBm]	Gain [dB]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-59.85	2.00	1.13	38.48	≤54	PASS
				AV	2384.630	-56.32	2.00	1.13	42.01	≤54	PASS
				AV	2390.000	-57.89	2.00	1.13	40.44	≤54	PASS
				Peak	2310.000	-53.64	2.00	0.00	43.56	≤74	PASS
				Peak	2379.380	-45.91	2.00	0.00	51.29	≤74	PASS
				Peak	2390.000	-47.47	2.00	0.00	49.73	≤74	PASS
		High	2480	AV	2483.500	-48.14	2.00	1.15	50.21	≤54	PASS
				AV	2483.520	-48.14	2.00	1.15	50.21	≤54	PASS
				AV	2500.000	-56.64	2.00	1.15	41.71	≤54	PASS
				Peak	2483.500	-42.49	2.00	0.00	54.71	≤74	PASS
				Peak	2483.600	-42.03	2.00	0.00	55.17	≤74	PASS
				Peak	2500.000	-46.59	2.00	0.00	50.61	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-60.01	2.00	1.13	38.32	≤54	PASS
				AV	2380.640	-56.27	2.00	1.13	42.06	≤54	PASS
				AV	2390.000	-57.68	2.00	1.13	40.65	≤54	PASS
				Peak	2310.000	-51.12	2.00	0.00	46.08	≤74	PASS
				Peak	2380.325	-46.51	2.00	0.00	50.69	≤74	PASS
				Peak	2390.000	-49.08	2.00	0.00	48.12	≤74	PASS
		High	2480	AV	2483.500	-50.98	2.00	1.13	47.35	≤54	PASS
				AV	2483.600	-50.45	2.00	1.13	47.88	≤54	PASS
				AV	2500.000	-56.74	2.00	1.13	41.59	≤54	PASS
				Peak	2483.500	-44.18	2.00	0.00	53.02	≤74	PASS
				Peak	2483.840	-43.44	2.00	0.00	53.76	≤74	PASS
				Peak	2500.000	-47.74	2.00	0.00	49.46	≤74	PASS

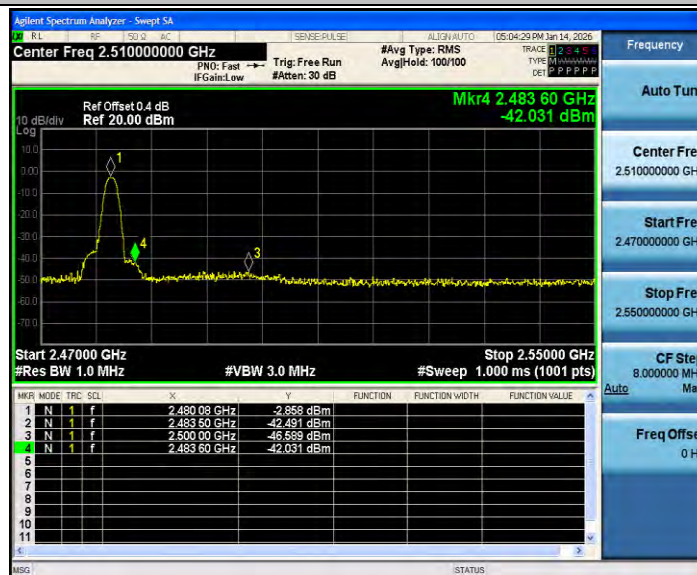
Note: The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs





DH5_Ant1_High_2480_Peak



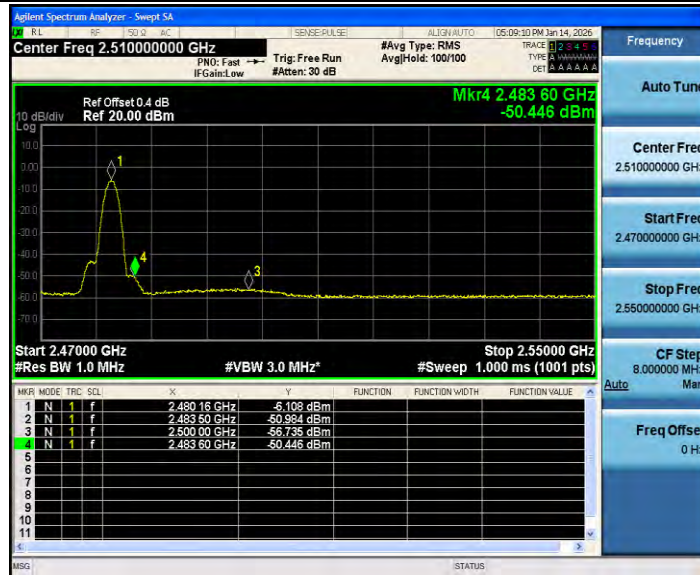
2DH5_Ant1_Low_2402_AV



2DH5_Ant1_Low_2402_Peak



2DH5_Ant1_High_2480_AV



2DH5_Ant1_High_2480_Peak

