

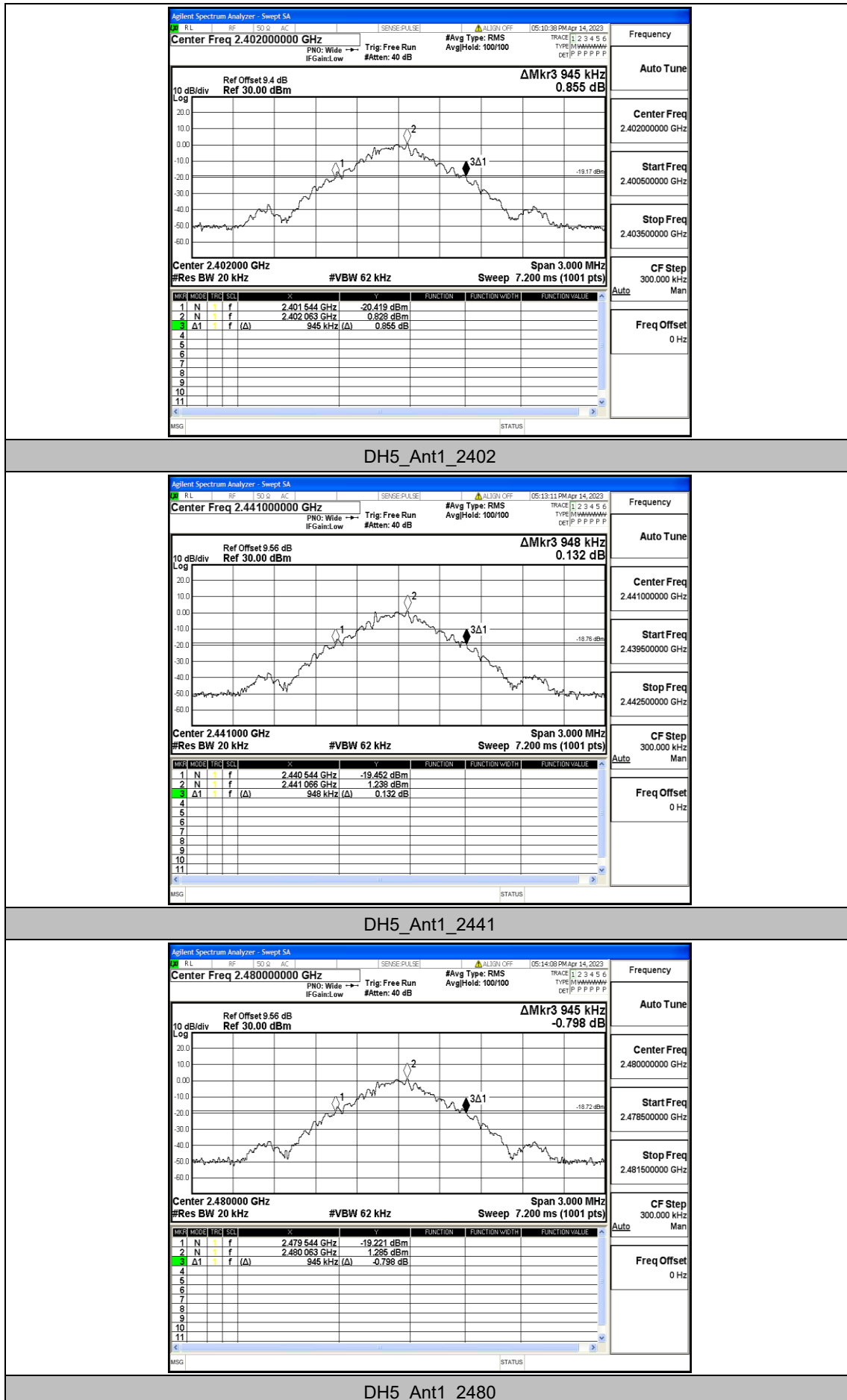
Appendix Test Data for BT(BDR/EDR) (Conducted Measurement)**Product Name: NucBox****Trade Mark: GMKtec****Test Model: G1****FCC ID: 2AXUD-G1****Environmental Conditions**

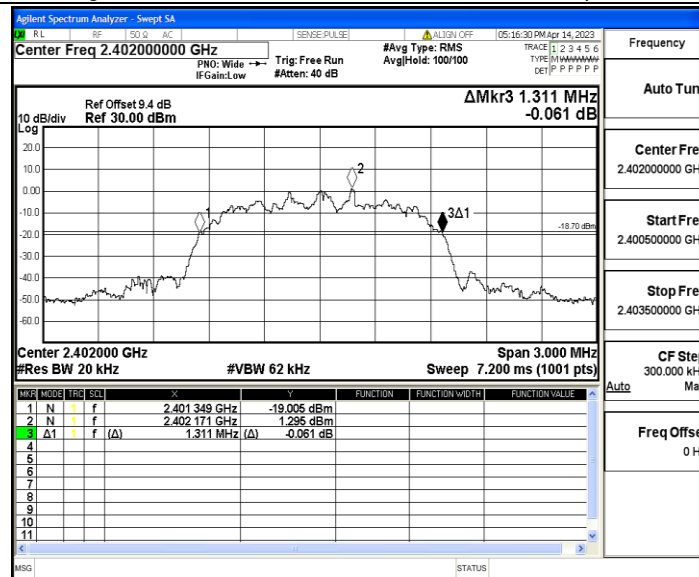
Temperature:	25.5°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: 20dB Emission Bandwidth**Test Result**

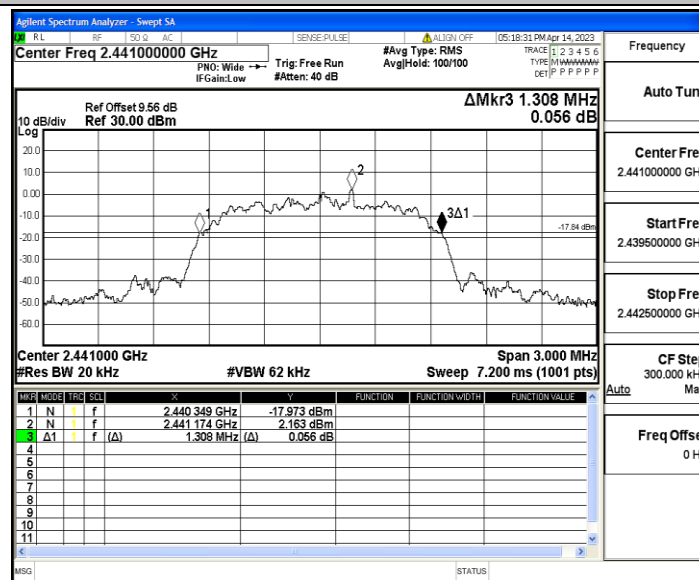
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.945	2401.544	2402.489	---	---
		2441	0.948	2440.544	2441.492	---	---
		2480	0.945	2479.544	2480.489	---	---
2DH5	Ant1	2402	1.311	2401.349	2402.660	---	---
		2441	1.308	2440.349	2441.657	---	---
		2480	1.314	2479.346	2480.660	---	---
3DH5	Ant1	2402	1.275	2401.358	2402.633	---	---
		2441	1.281	2440.355	2441.636	---	---
		2480	1.305	2479.355	2480.660	---	---

Test Graphs

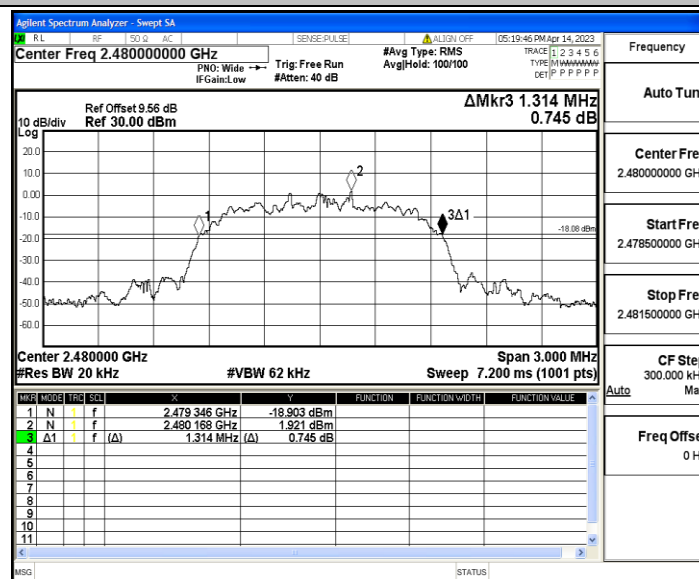




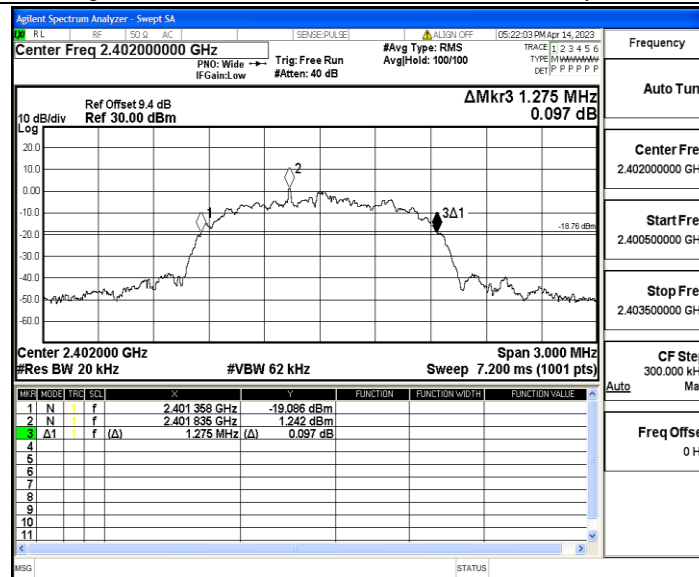
2DH5_Ant1_2402



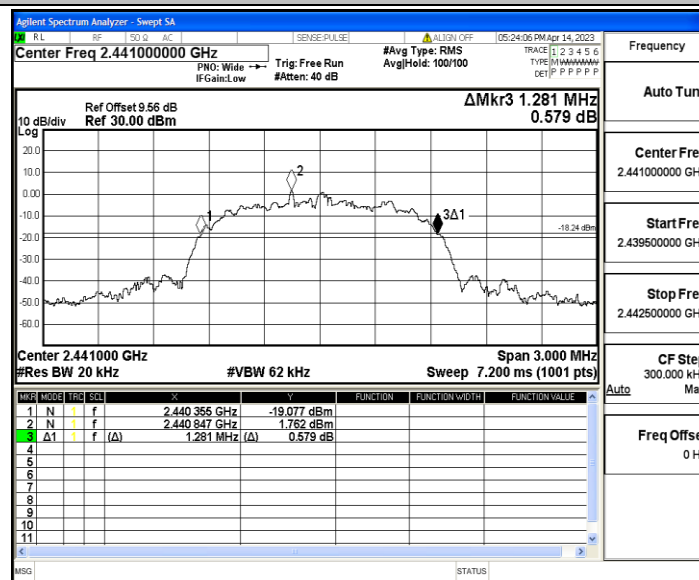
2DH5_Ant1_2441



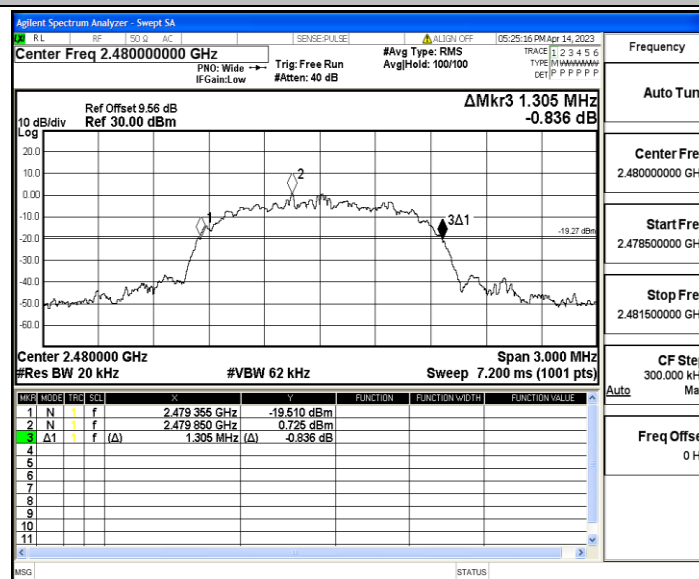
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



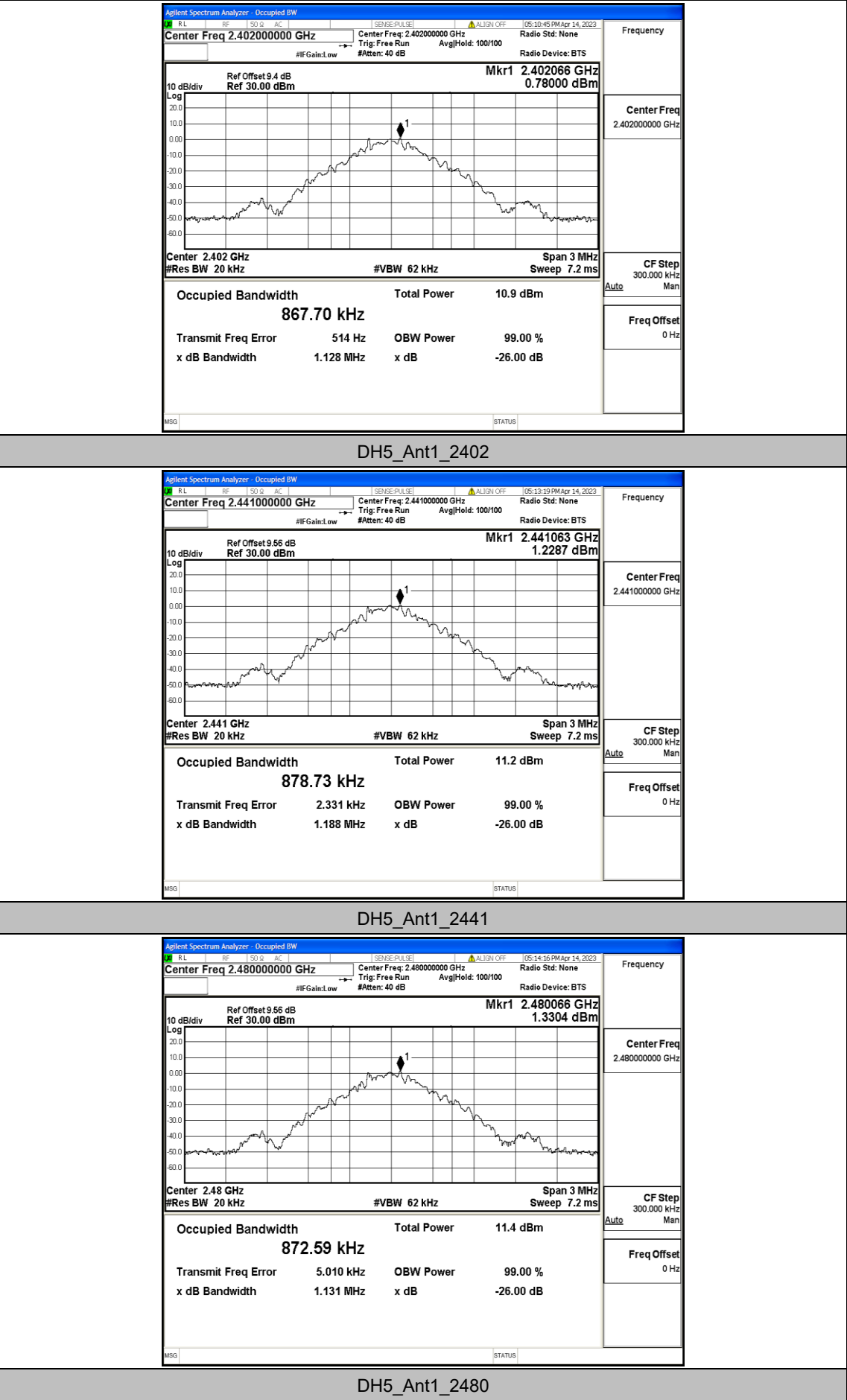
3DH5_Ant1_2480

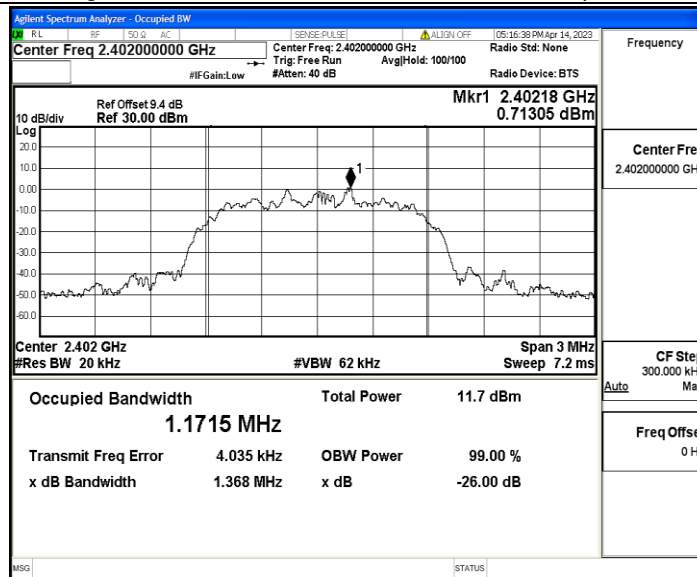
Appendix B: Occupied Channel Bandwidth

Test Result

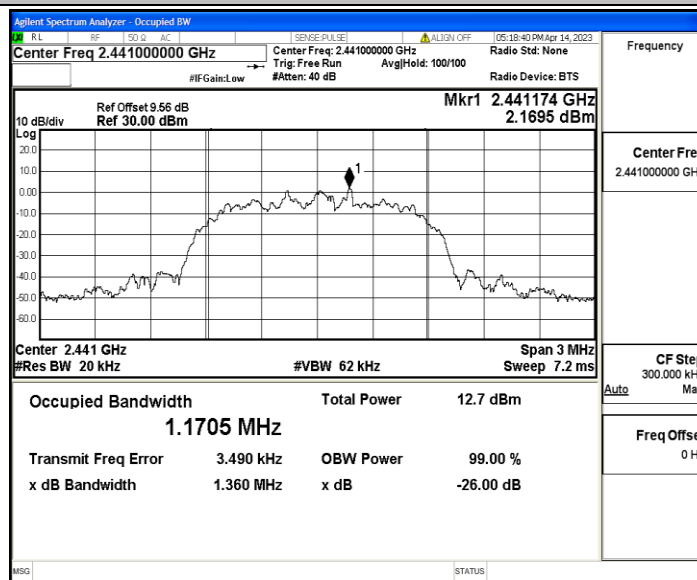
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.86770	2401.5667	2402.4344	---	---
		2441	0.87873	2440.5630	2441.4417	---	---
		2480	0.87259	2479.5687	2480.4413	---	---
2DH5	Ant1	2402	1.1715	2401.4183	2402.5898	---	---
		2441	1.1705	2440.4182	2441.5887	---	---
		2480	1.1714	2479.4176	2480.5890	---	---
3DH5	Ant1	2402	1.1729	2401.4150	2402.5879	---	---
		2441	1.1826	2440.4077	2441.5903	---	---
		2480	1.1797	2479.4105	2480.5902	---	---

Test Graphs

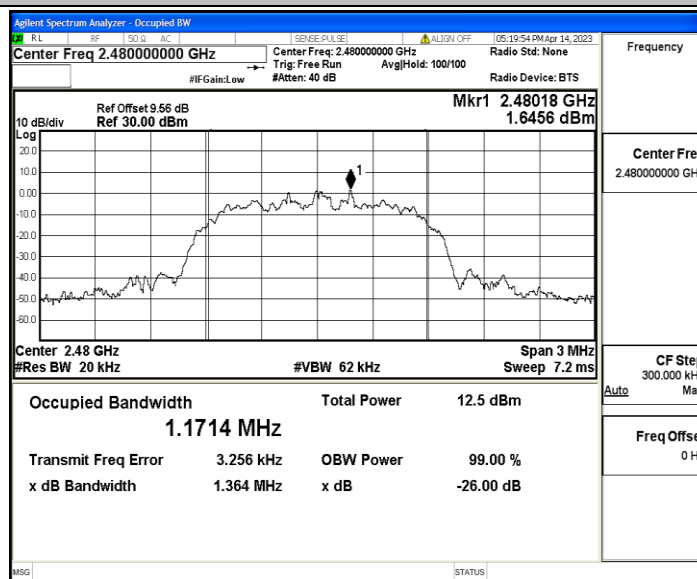




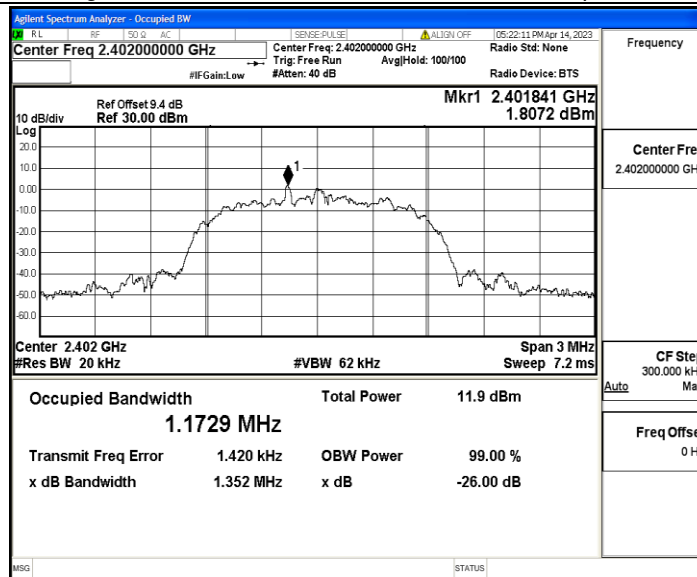
2DH5_Ant1_2402



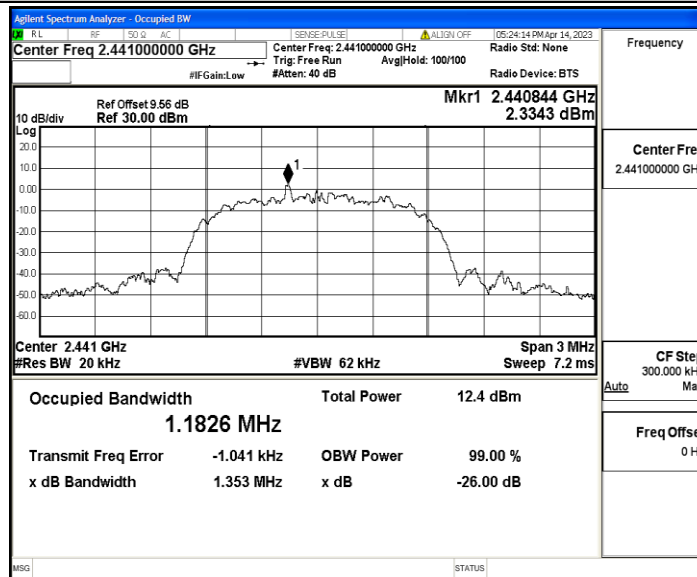
2DH5_Ant1_2441



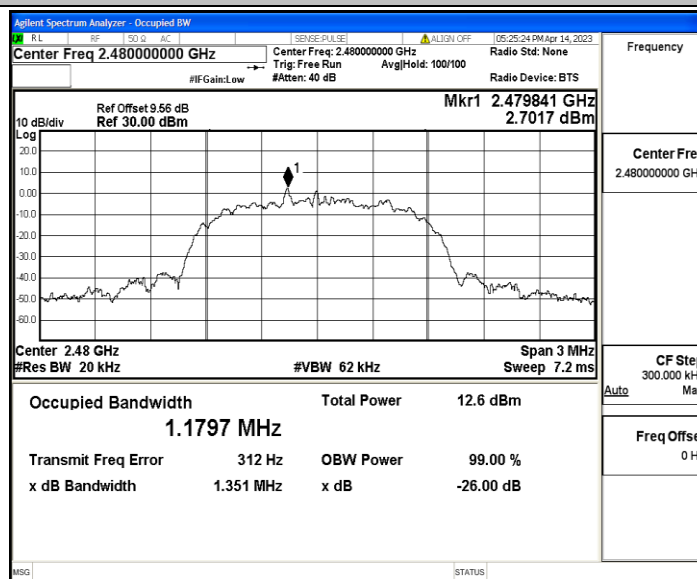
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



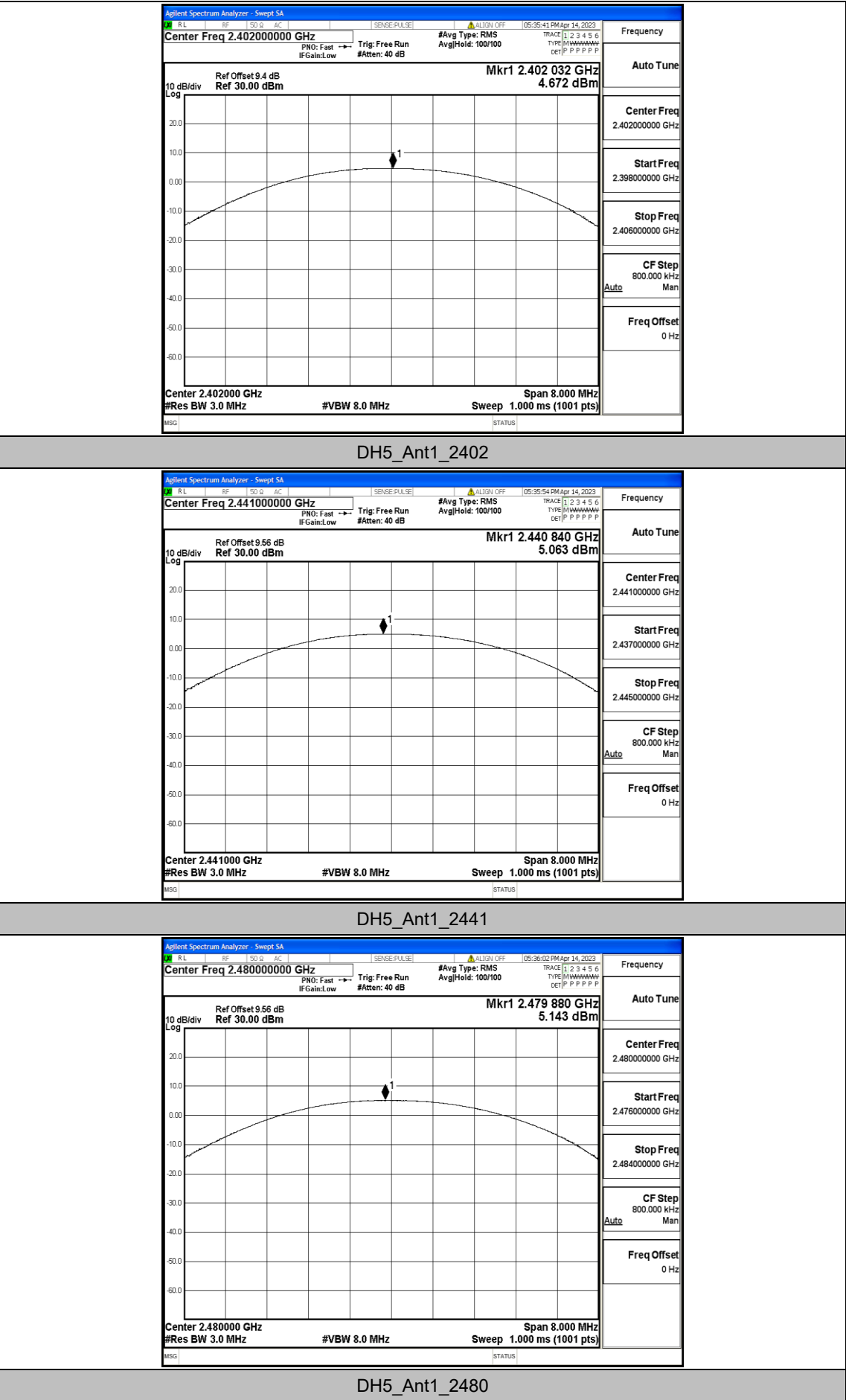
3DH5_Ant1_2480

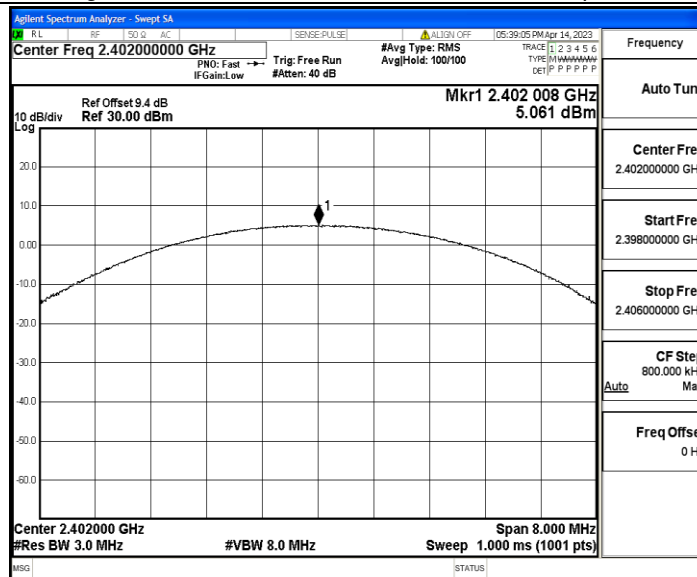
Appendix C: Maximum Peak conducted output power

Test Result

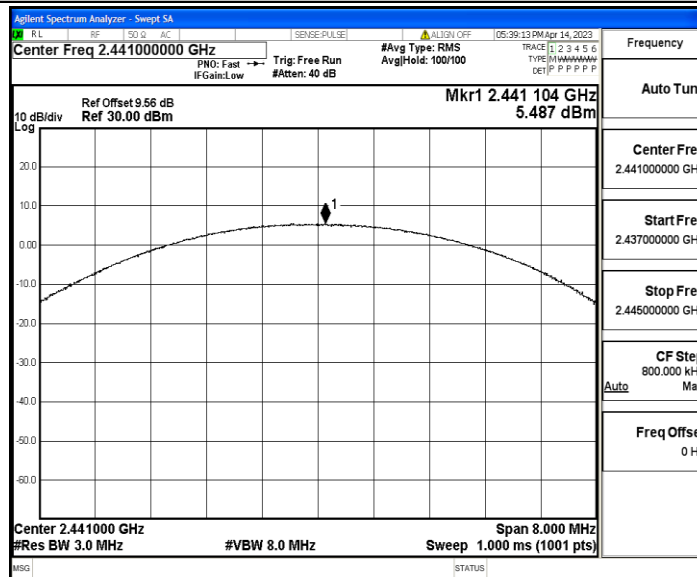
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	4.67	≤20.97	PASS
		2441	5.06	≤20.97	PASS
		2480	5.14	≤20.97	PASS
2DH5	Ant1	2402	5.06	≤30.0	PASS
		2441	5.49	≤30.0	PASS
		2480	5.53	≤30.0	PASS
3DH5	Ant1	2402	5.66	≤30.0	PASS
		2441	5.98	≤30.0	PASS
		2480	6.00	≤30.0	PASS

Test Graphs

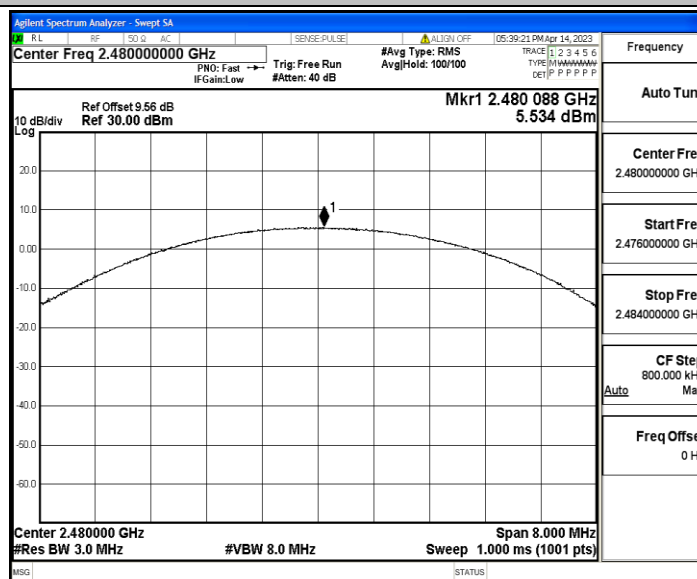




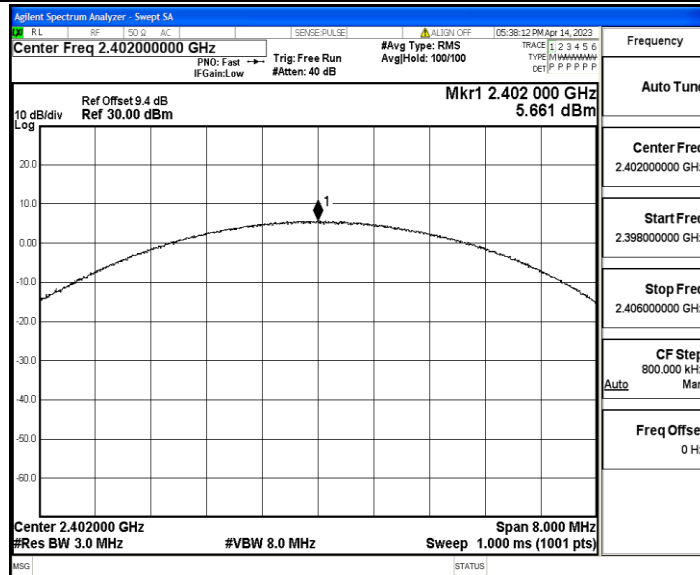
2DH5_Ant1_2402



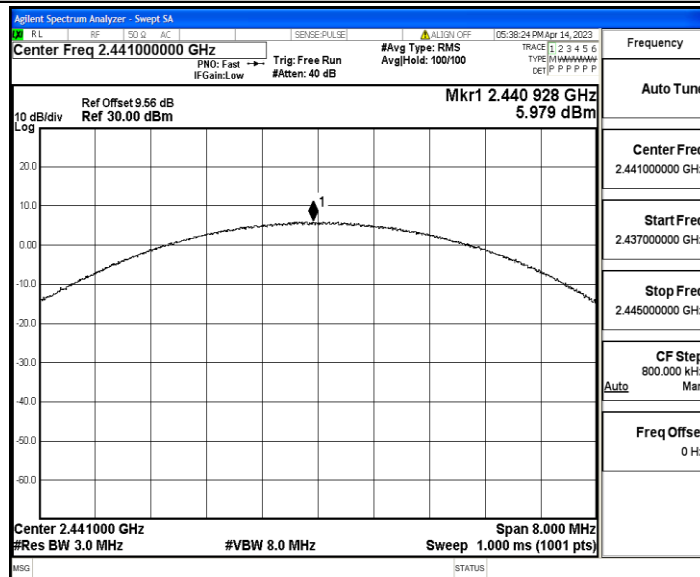
2DH5_Ant1_2441



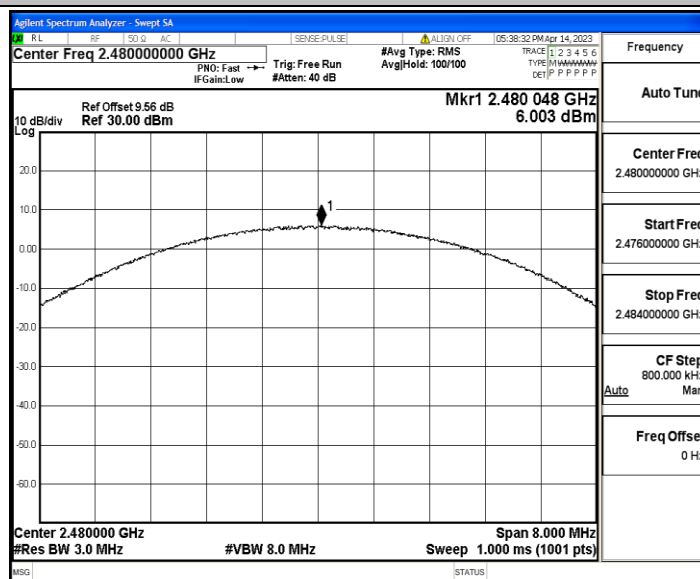
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



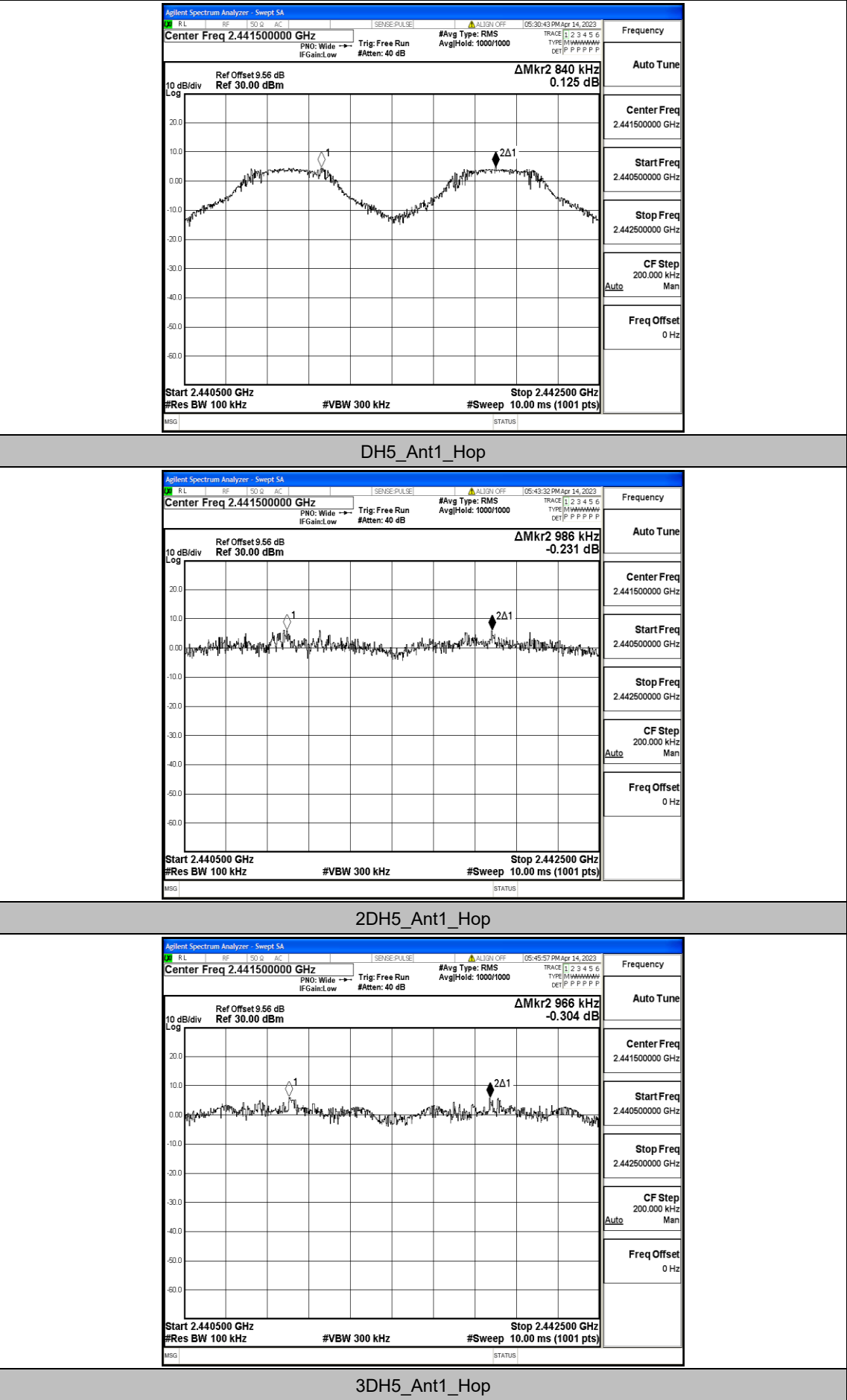
3DH5_Ant1_2480

Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.84	≥ 0.632	PASS
2DH5	Ant1	Hop	0.986	≥ 0.876	PASS
3DH5	Ant1	Hop	0.966	≥ 0.870	PASS

Test Graphs

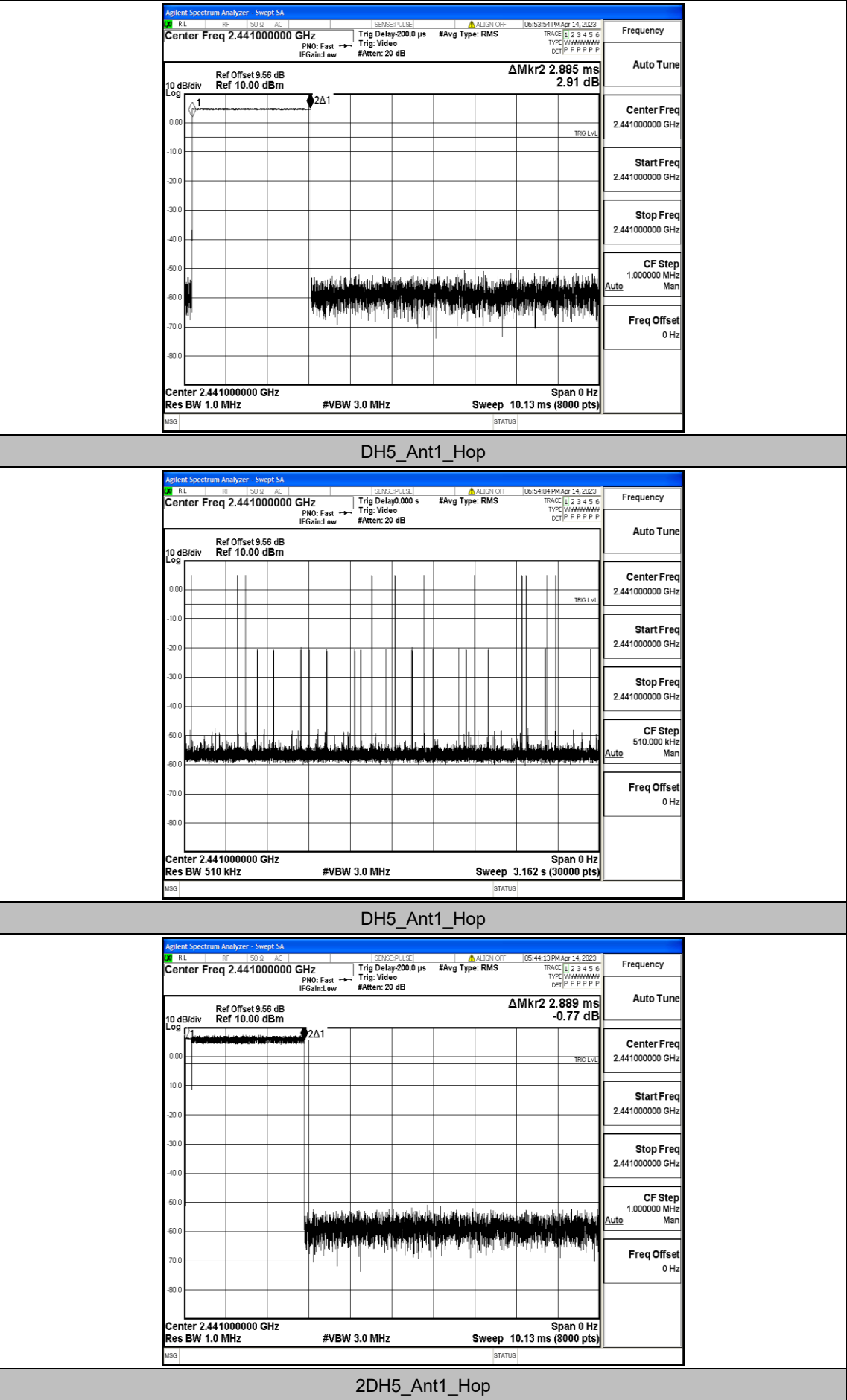


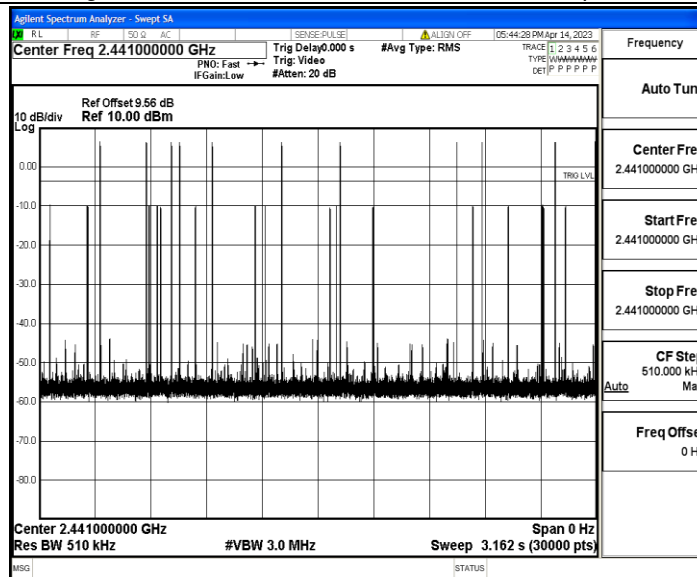
Appendix E: Time of occupancy

Test Result

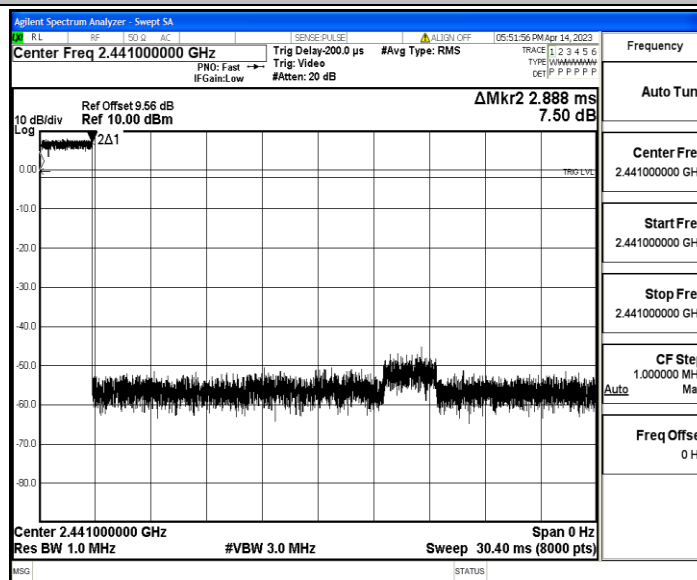
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.885	120	0.346	≤0.4	PASS
2DH5	Ant1	Hop	2.889	120	0.347	≤0.4	PASS
3DH5	Ant1	Hop	2.888	100	0.289	≤0.4	PASS

Test Graphs

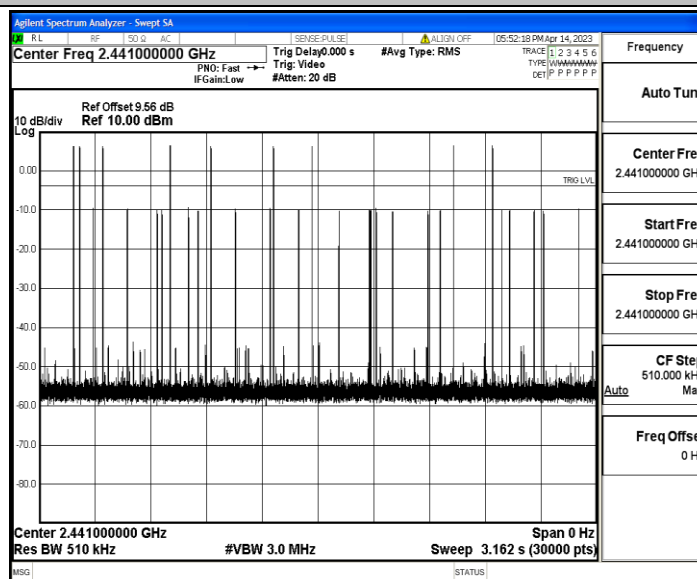




2DH5_Ant1_Hop



3DH5_Ant1_Hop



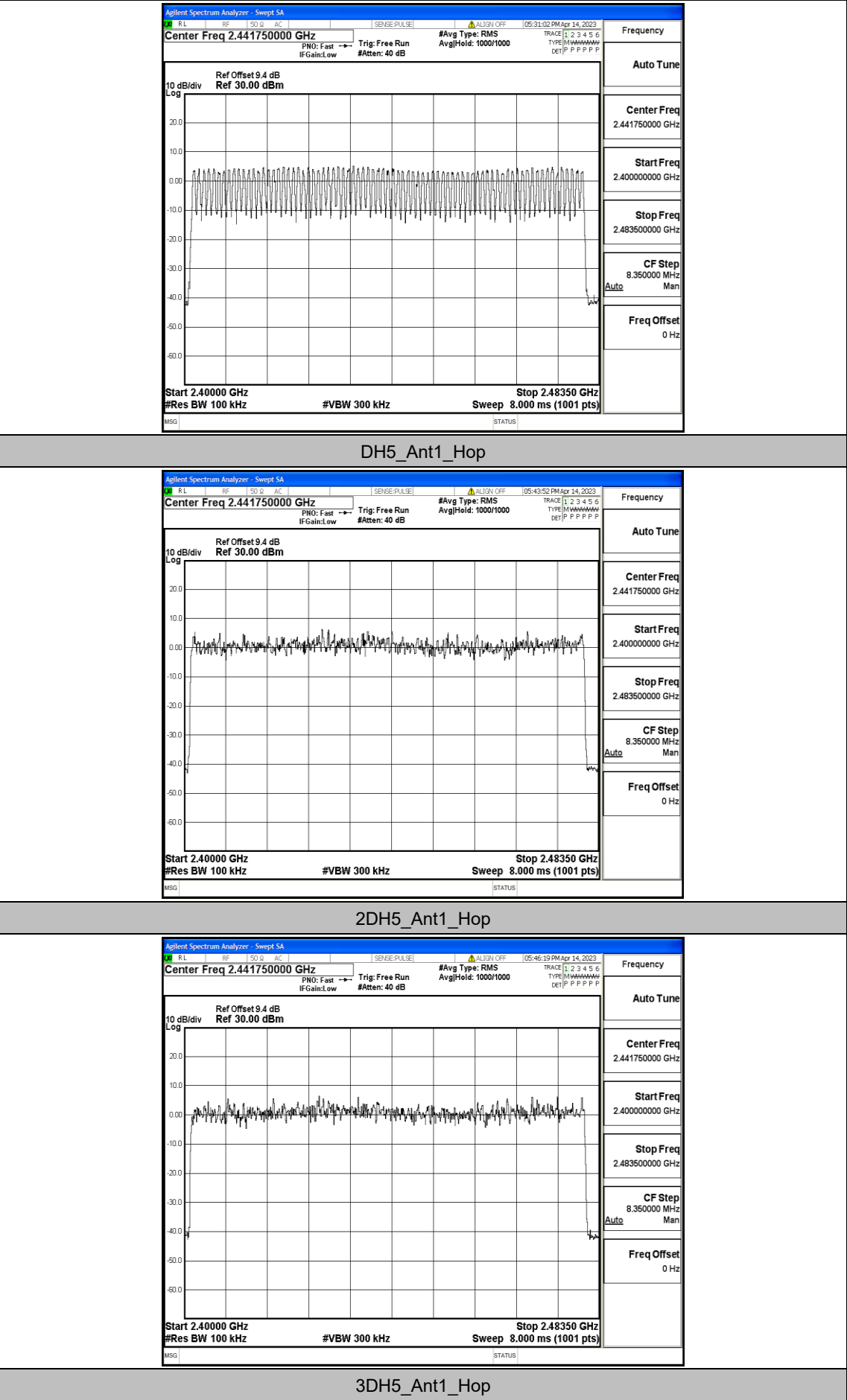
3DH5_Ant1_Hop

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
3DH5	Ant1	Hop	79	≥15	PASS

Test Graphs

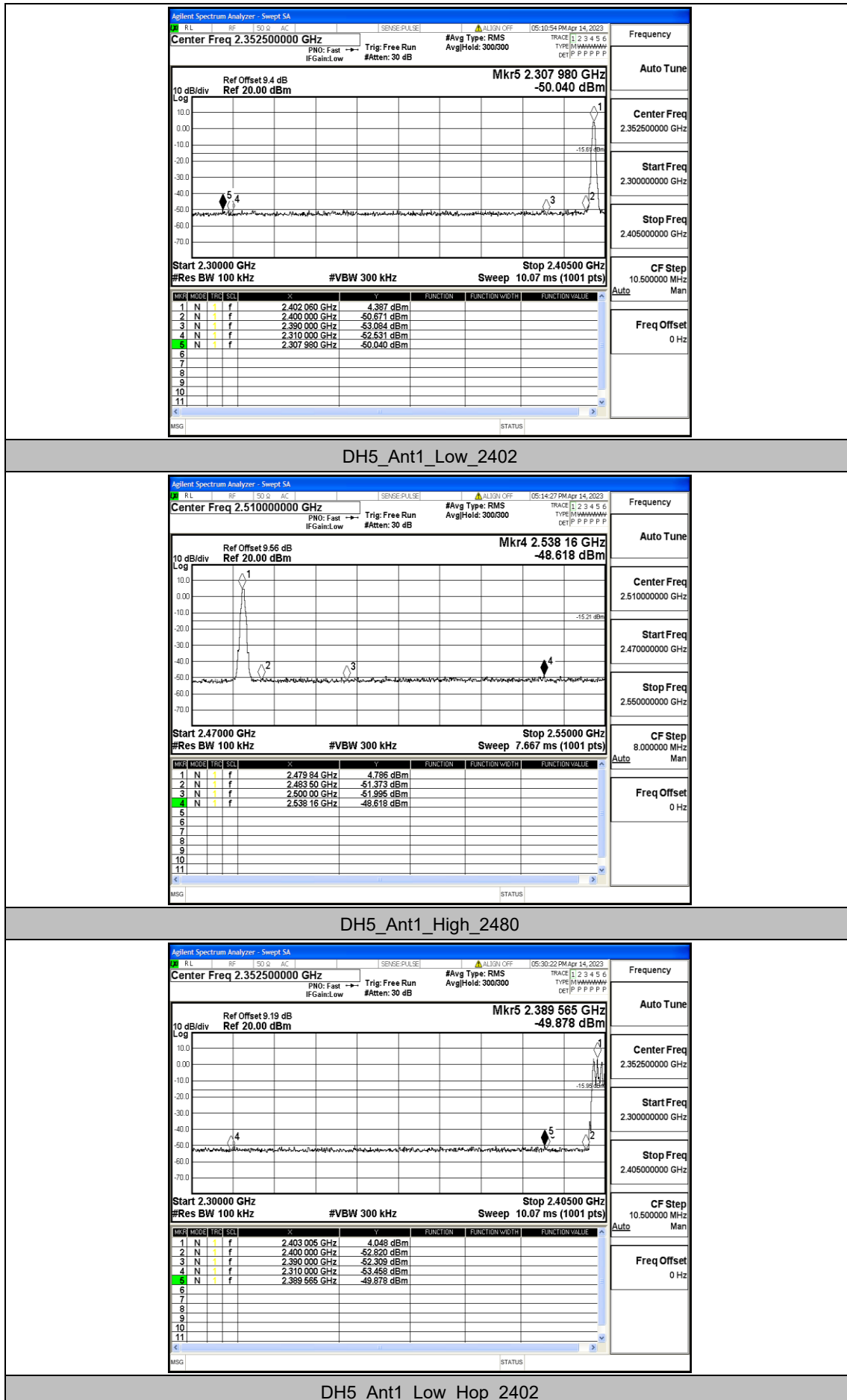


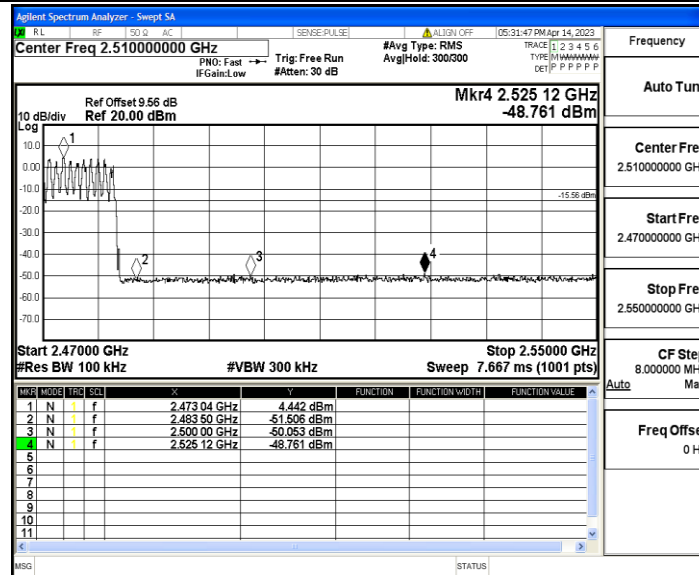
Appendix G: Band edge measurements

Test Result

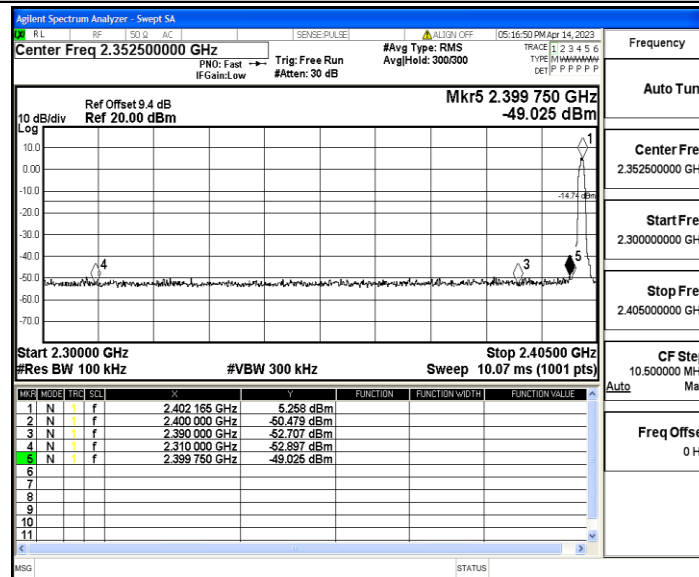
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	4.39	-50.04	≤ -15.61	PASS
		High	2480	4.79	-48.62	≤ -15.21	PASS
		Low	Hop_2402	4.05	-49.88	≤ -15.95	PASS
		High	Hop_2480	4.44	-48.76	≤ -15.56	PASS
2DH5	Ant1	Low	2402	5.26	-49.03	≤ -14.74	PASS
		High	2480	6.25	-48.7	≤ -13.75	PASS
		Low	Hop_2402	3.95	-49.71	≤ -16.05	PASS
		High	Hop_2480	4.81	-48.86	≤ -15.19	PASS
3DH5	Ant1	Low	2402	4.84	-49.99	≤ -15.16	PASS
		High	2480	6.26	-48.9	≤ -13.74	PASS
		Low	Hop_2402	2.18	-49.93	≤ -17.83	PASS
		High	Hop_2480	3.45	-48.81	≤ -16.55	PASS

Test Graphs

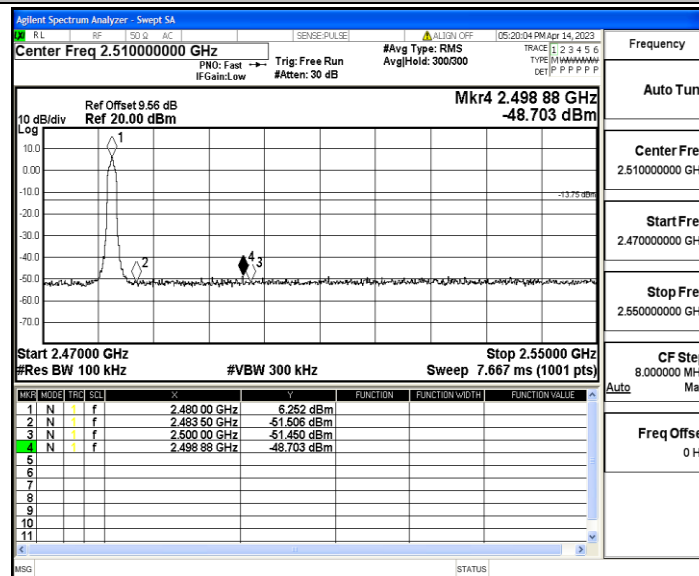




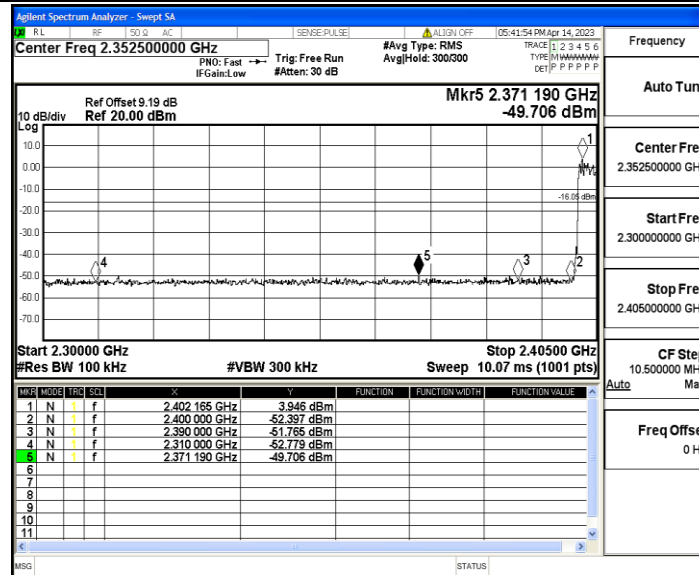
DH5_Ant1_High_Hop_2480



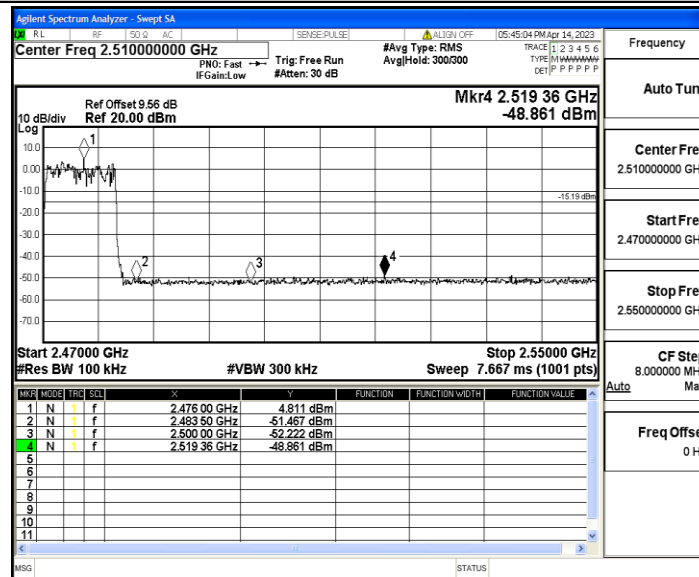
2DH5_Ant1_Low_2402



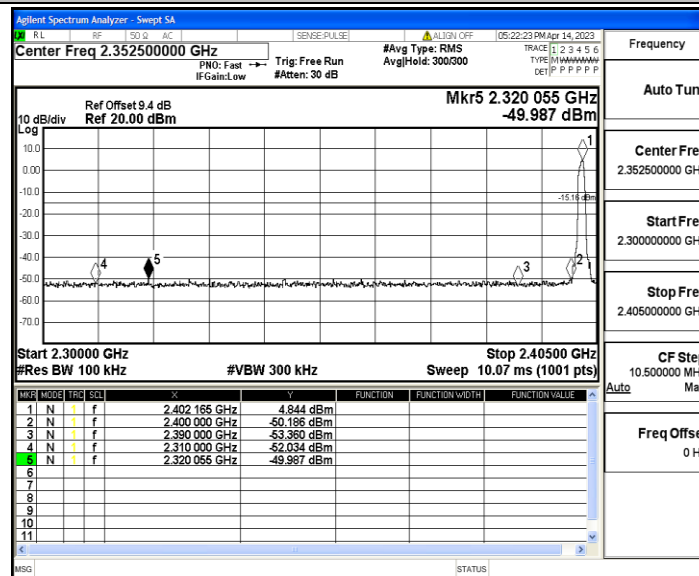
2DH5_Ant1_High_2480



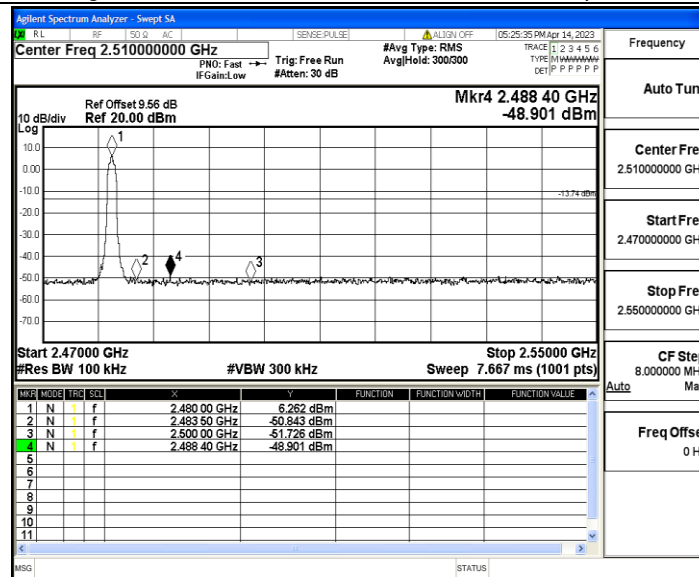
2DH5_Ant1_Low_Hop_2402



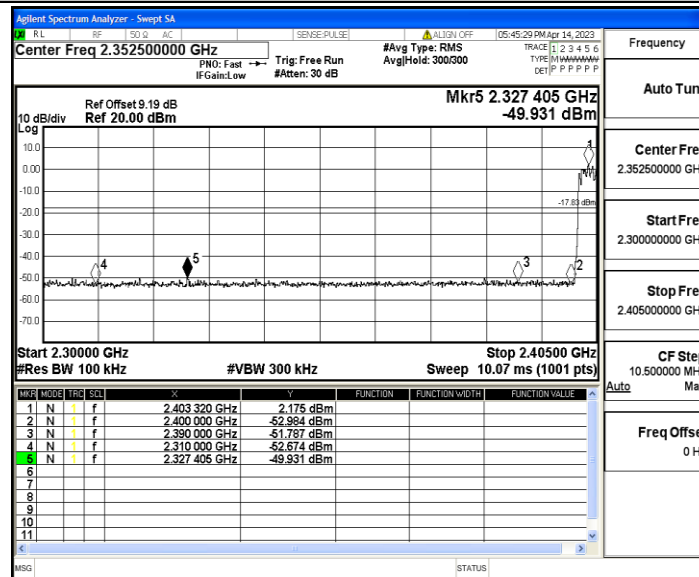
2DH5_Ant1_High_Hop_2480



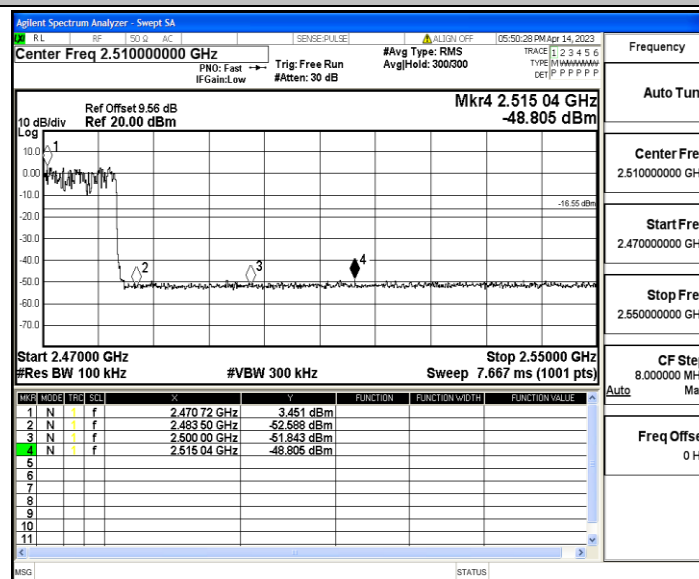
3DH5_Ant1_Low_2402



3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_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	3.87	3.87	---	PASS
			30~1000	3.87	-61.27	≤-16.13	PASS
			1000~26500	3.53	-50.04	≤-16.47	PASS
		2441	Reference	3.96	3.96	---	PASS
			30~1000	3.96	-60.66	≤-16.04	PASS
			1000~26500	3.96	-49.71	≤-16.04	PASS
		2480	Reference	4.02	4.02	---	PASS
			30~1000	4.02	-61.49	≤-15.98	PASS
			1000~26500	4.02	-50.78	≤-15.98	PASS
2DH5	Ant1	2402	Reference	1.76	1.76	---	PASS
			30~1000	1.76	-61.34	≤-18.24	PASS
			1000~26500	1.76	-51.22	≤-18.24	PASS
		2441	Reference	4.92	4.92	---	PASS
			30~1000	4.92	-60.78	≤-15.08	PASS
			1000~26500	4.92	-50.25	≤-15.08	PASS
		2480	Reference	6.15	6.15	---	PASS
			30~1000	6.15	-61.05	≤-13.85	PASS
			1000~26500	6.15	-51.01	≤-13.85	PASS
3DH5	Ant1	2402	Reference	4.02	4.02	---	PASS
			30~1000	4.02	-61.28	≤-15.98	PASS
			1000~26500	4.02	-50.7	≤-15.98	PASS
		2441	Reference	4.51	4.51	---	PASS
			30~1000	4.51	-61.67	≤-15.49	PASS
			1000~26500	4.51	-50.32	≤-15.49	PASS
		2480	Reference	5.60	5.60	---	PASS
			30~1000	5.60	-60.95	≤-14.4	PASS
			1000~26500	5.60	-50.74	≤-14.4	PASS

Agilent Spectrum Analyzer - Swept SA

IN L RF ISO AC SENSE:PLUSE

Center Freq 2.402000000 GHz PNO: Wide -> IF Gain: Low Trig: Free Run #Att: 30 dB

#Avg Type: RMS Avg/Hold: 10/10

05:34:25 PM Apr 14, 2023

TRAC: 1 2 3 4 5

TYPE: M M M M M M M M

DEP: P P P P P P P

Frequency

Auto Tun

Center Freq 2.402000000 GHz

Start Freq 2.401250000 GHz

Stop Freq 2.402750000 GHz

CF Step 150.000 kHz

Auto

Freq Offset 0 Hz

10 dB/div Log

Ref Offset 9.4 dB

Ref 29.40 dBm

Mkr1 2.402 045 0 GHz

3.869 dBm

Center 2.4020000 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 1.500 MHz

Sweep 1.000 ms (1001 pts)

MSG STATUS

Agilent Spectrum Analyzer - Sweep SA

IF IL RF IF SO G AC SENSE: PULSE ALIGN: OFF (05:34:30 PM Apr 14, 2023)

Center Freq 515.000000 MHz #Avg Type: RMS AvgHold: 10/10 Trg: Free Run IF Gain: Low #Atten: 20 dB

Ref Offset 9.4 dB Ref 19.40 dBm

Mkr1 772.15 MHz -61.265 dBm

10 dB/div Log

9.40
-0.60
-10.6
-20.6
-30.6
-40.6
-50.6
-60.6
-70.6

-16.13 dBm

Start 30.0 MHz #Res BW 100 kHz #VBW 300 kHz Stop 1.0000 GHz

MSG STATUS

Auto

CF Step 97.000000 MHz

Freq Offset 0 Hz

The screenshot displays a spectrum analyzer interface. The main display area shows a frequency spectrum with a noise floor at approximately -70.6 dBm. A marker is placed at 772.15 MHz, indicating a power level of -61.265 dBm. The y-axis is labeled '10 dB/div' and 'Log'. The x-axis represents frequency, with 'Start 30.0 MHz' and 'Stop 1.0000 GHz' indicated. The interface includes various control buttons and labels such as 'Center Freq 515.000000 MHz', 'Ref Offset 9.4 dB', 'Ref 19.40 dBm', 'Mkr1 772.15 MHz', and 'Auto'. The status bar at the bottom shows 'MSG' and 'STATUS'.

Agilent Spectrum Analyzer - Sweep SA

Hz R L RF SO G AC SENSE PULSE ALIGN OFF 05:11:56 PM Apr 14, 2023

Center Freq 13.750000000 GHz PNO: Fast Trg: Free Run #Avg Type: RMS #Att: 20 dB
IF Gain: Low AvgHld: 10/10 TRACE [1, 2, 3, 5, 6] TYPEN: NAWMMWJ
DE P P P P P P P

Frequency Auto Tun

Center Freq 13.750000000 GHz

Start Freq 1.000000000 GHz

Stop Freq 26.500000000 GHz

CF Step 2.550000000 GHz

Auto Mar

Freq Offset 0 Hz

Ref Offset 9.4 dB
Ref 19.40 dBm

Mkr2 26.084 35 GHz
-50.040 dBm

10 dB/div
Log

Start 1.00 GHz
#Res BW 100 kHz

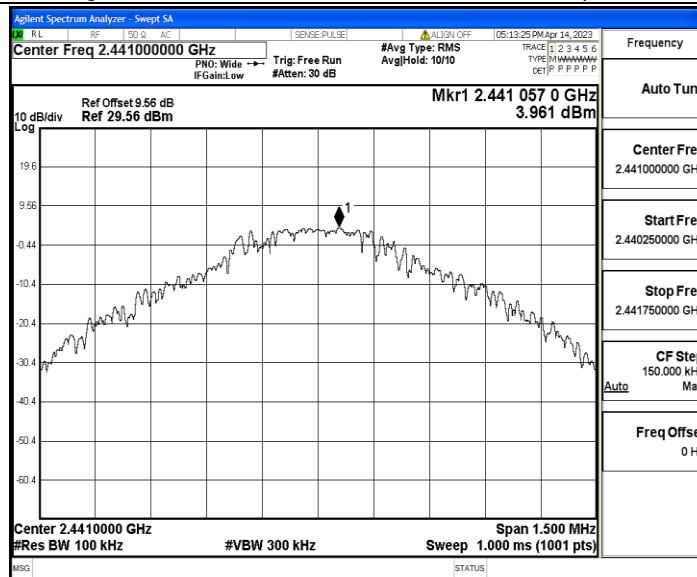
Stop 26.50 GHz
#VBW 300 kHz

#Sweep 200.0 ms (30001 pts)

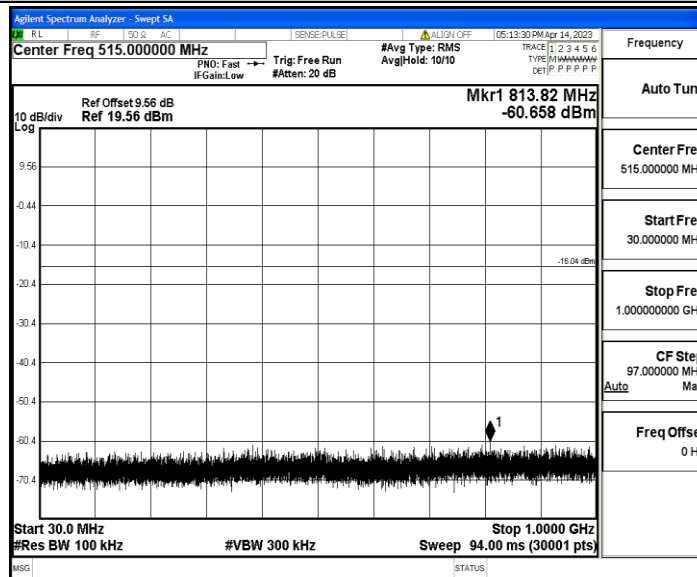
MkR	MODE	TRG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f	f	2.401 65 GHz	-1.385 dBm			
2	N	f	f	26.084 35 GHz	-50.040 dBm			
3								
4								
5								
6								
7								
8								
9								
10								
11								

STATUS Measures Uncal

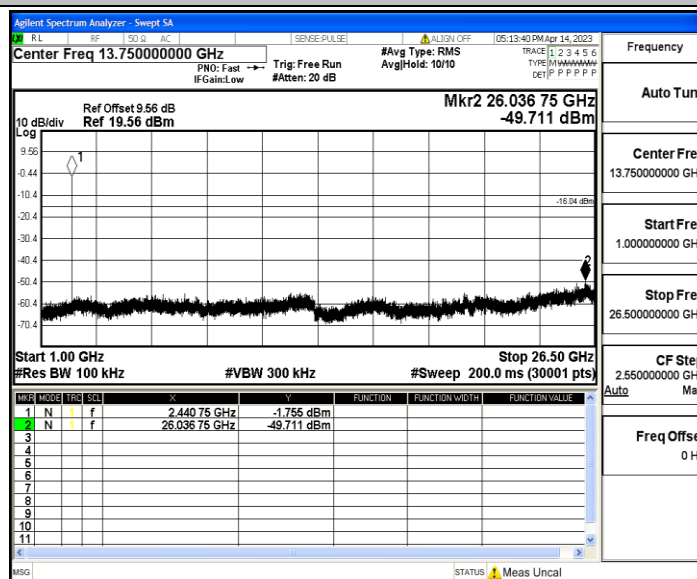
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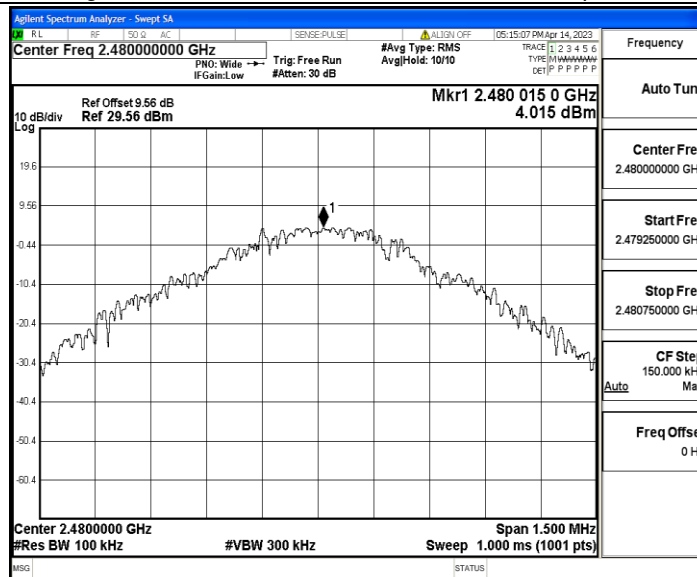
DH5_Ant1_2441_0~Reference



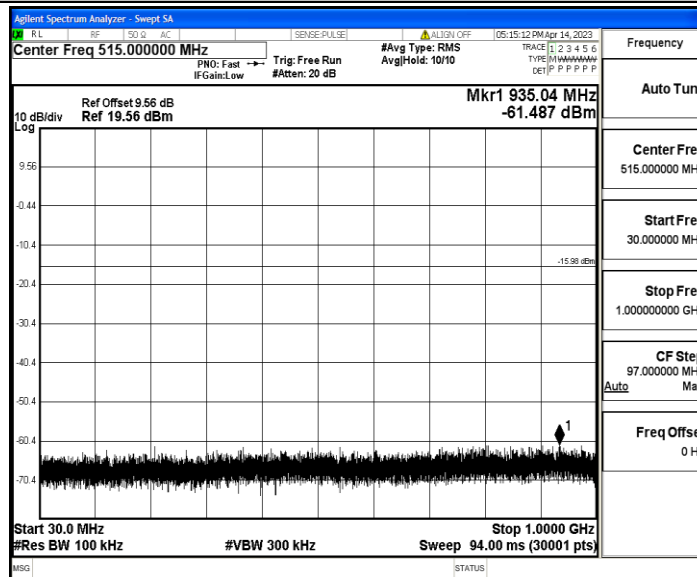
DH5_Ant1_2441_30~1000



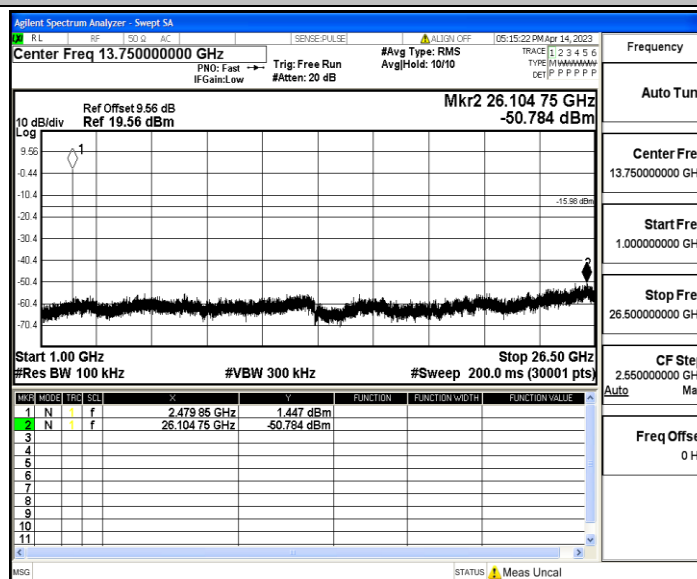
DH5_Ant1_2441_1000~26500



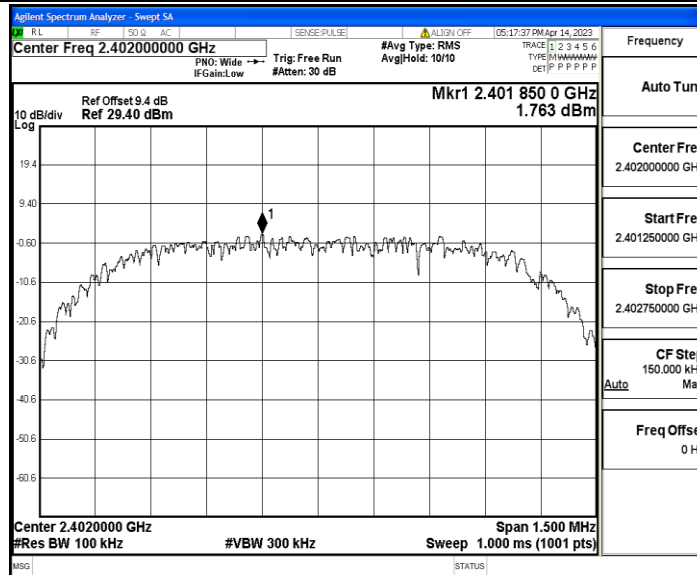
DH5_Ant1_2480_0~Reference



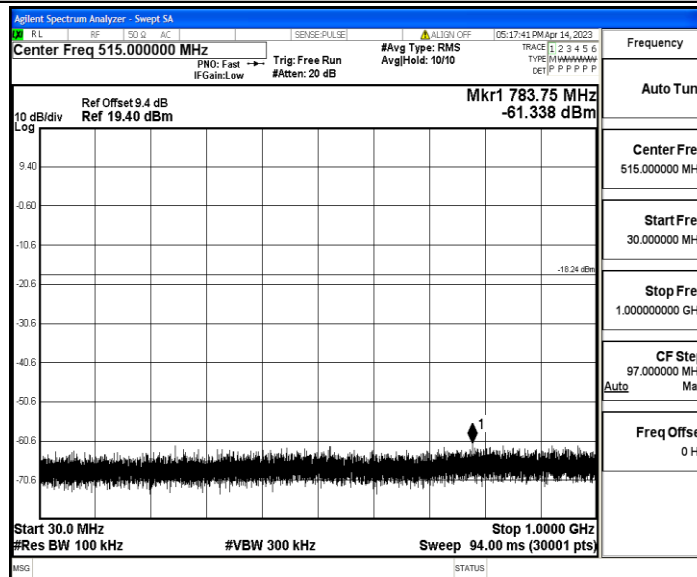
DH5_Ant1_2480_30~1000



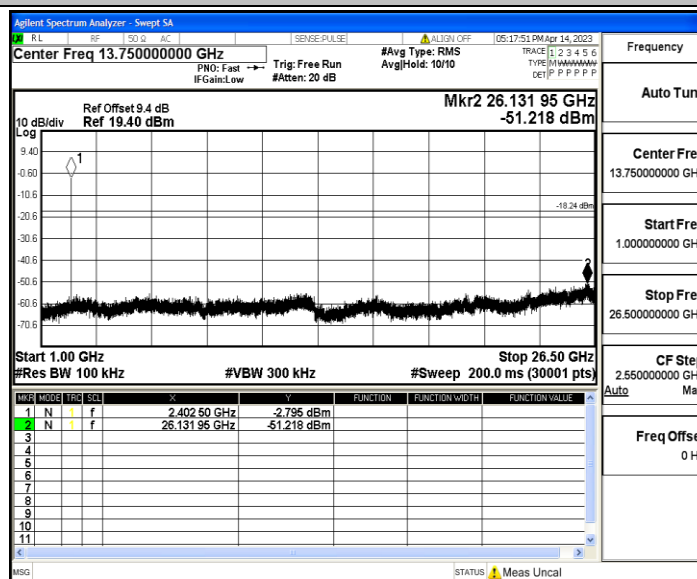
DH5_Ant1_2480_1000~26500



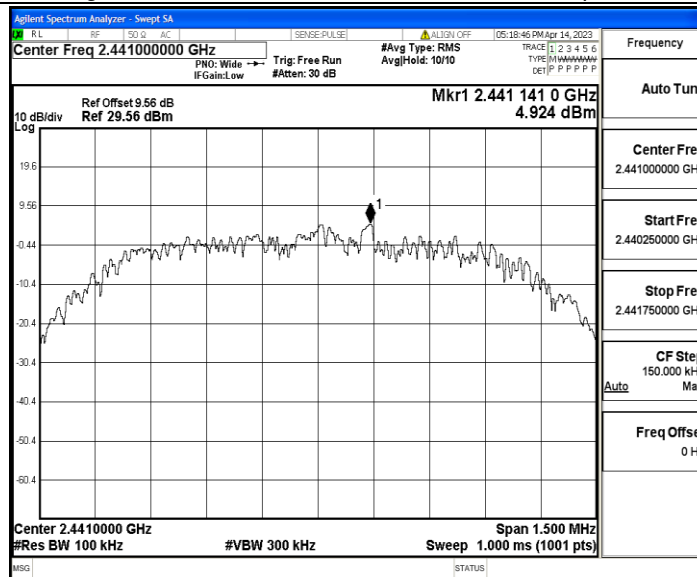
2DH5_Ant1_2402_0~Reference



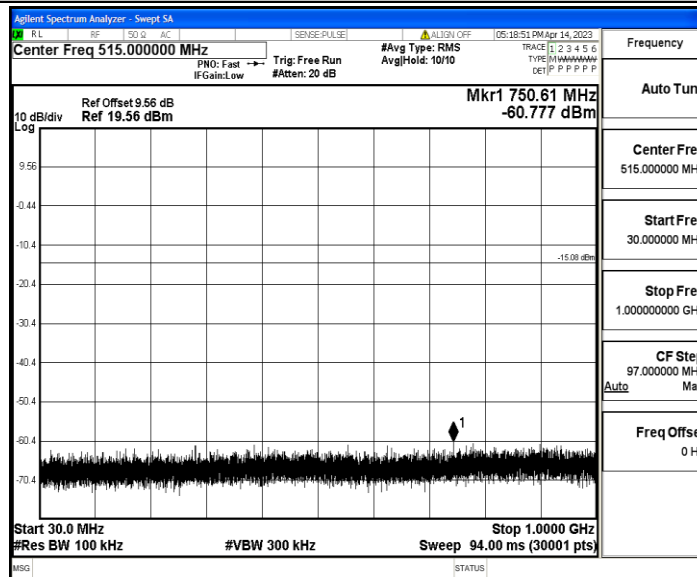
2DH5_Ant1_2402_30~1000



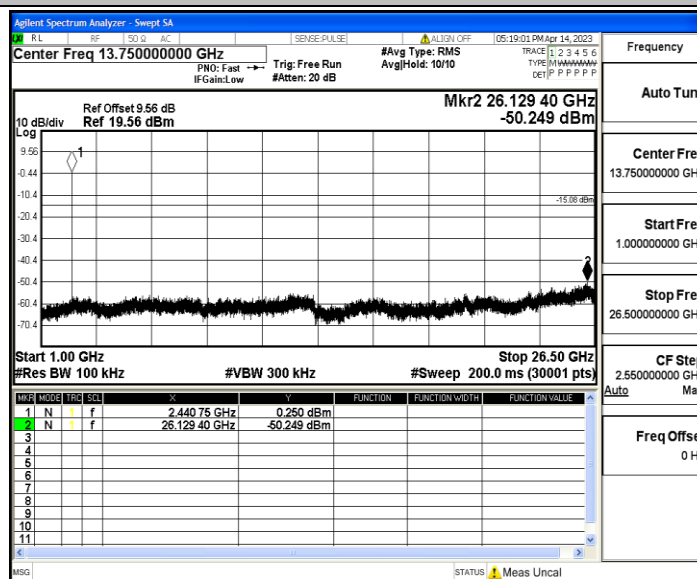
2DH5_Ant1_2402_1000~26500



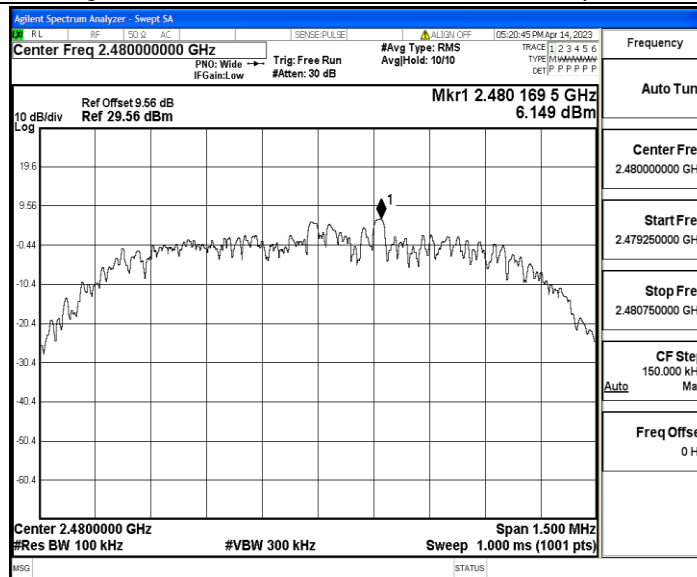
2DH5_Ant1_2441_0~Reference



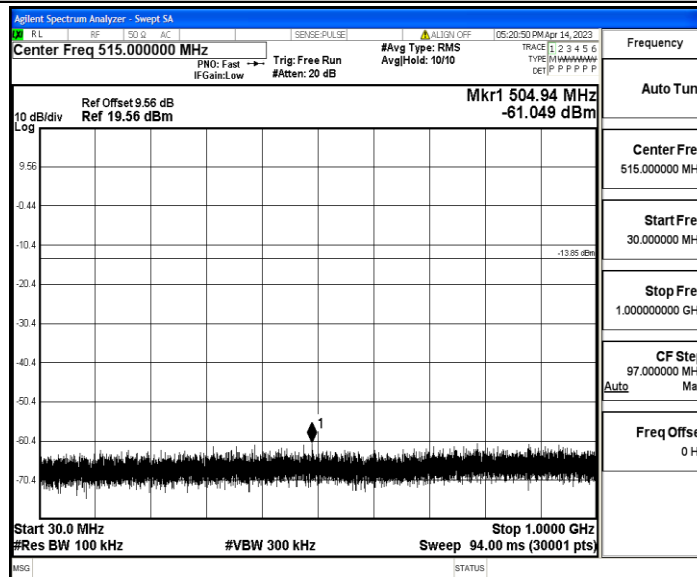
2DH5_Ant1_2441_30~1000



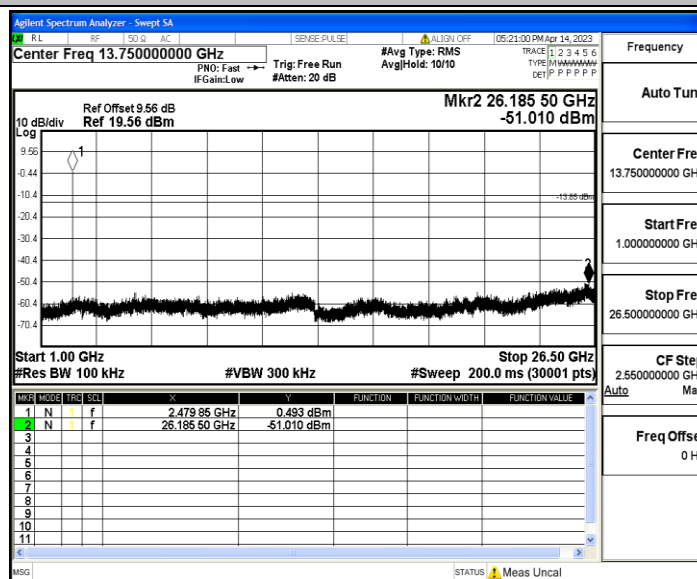
2DH5_Ant1_2441_1000~26500



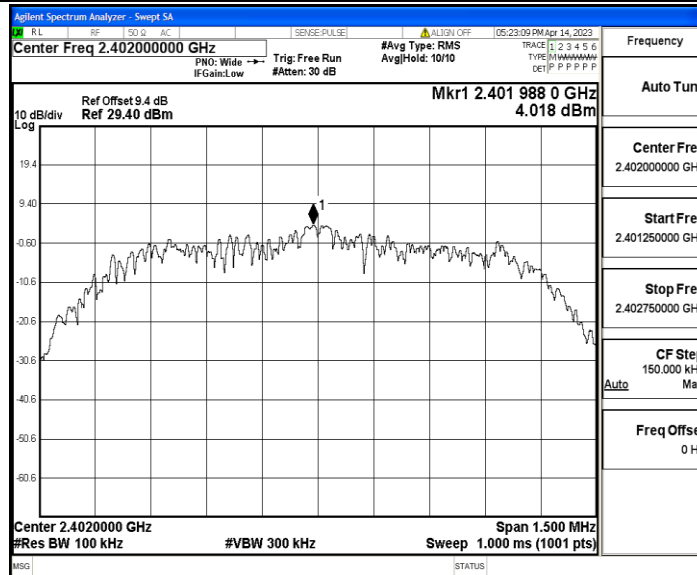
2DH5_Ant1_2480_0~Reference



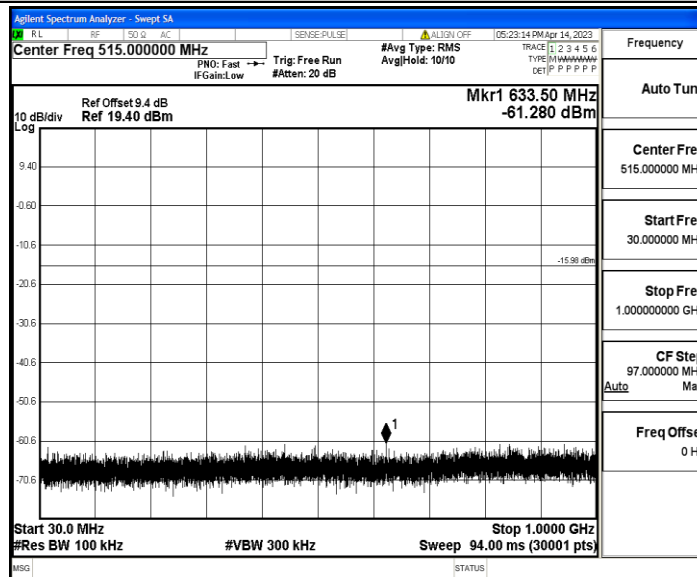
2DH5_Ant1_2480_30~1000



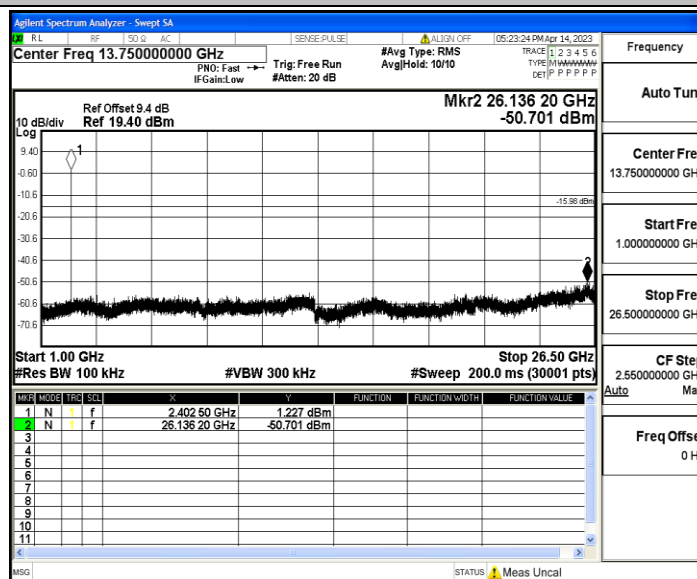
2DH5_Ant1_2480_1000~26500



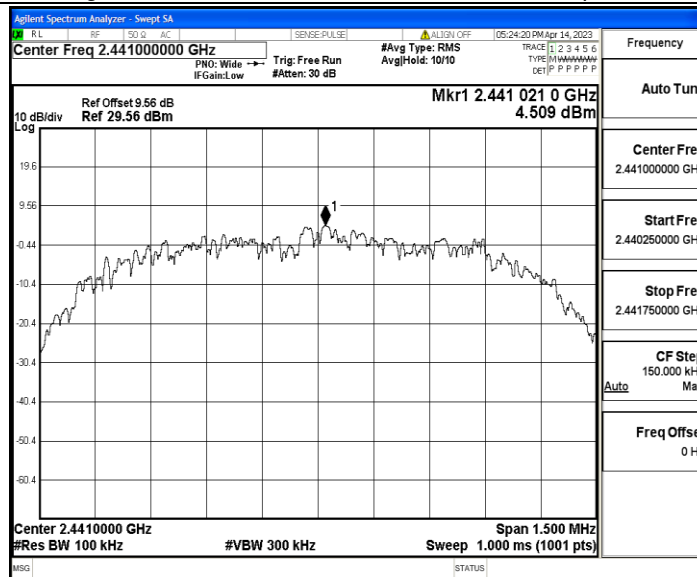
3DH5_Ant1_2402_0~Reference



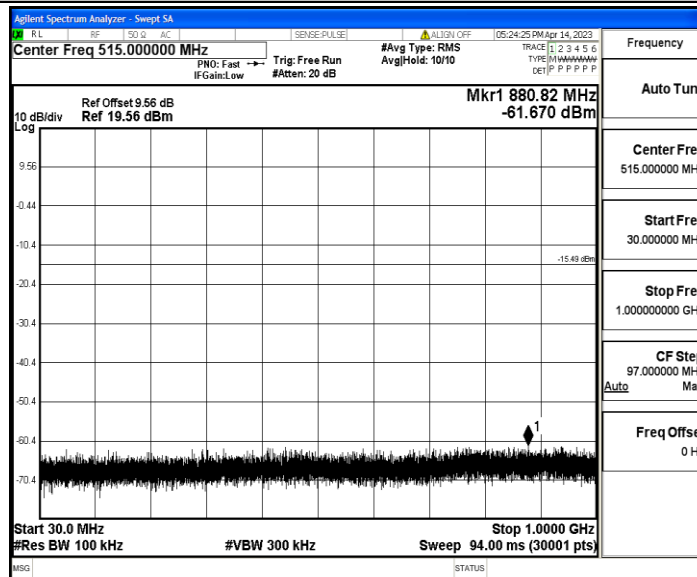
3DH5_Ant1_2402_30~1000



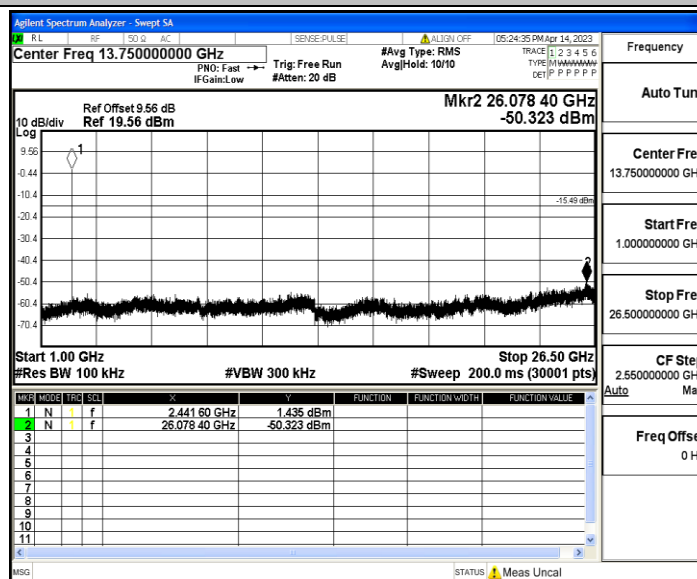
3DH5_Ant1_2402_1000~26500



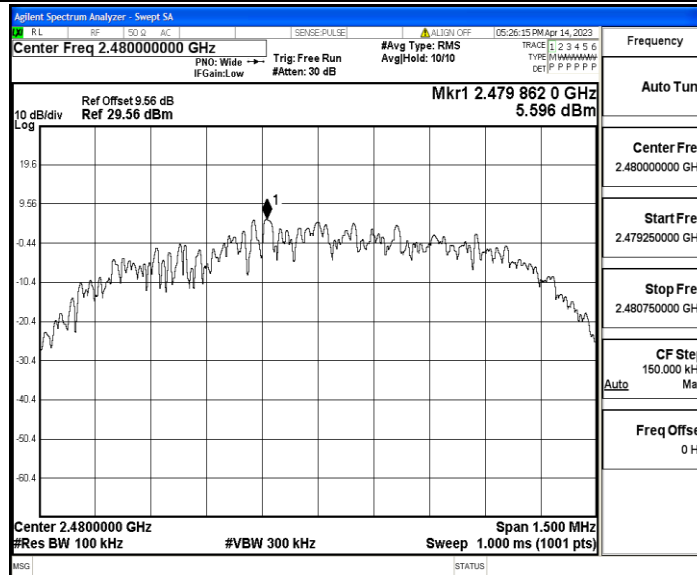
3DH5_Ant1_2441_0~Reference



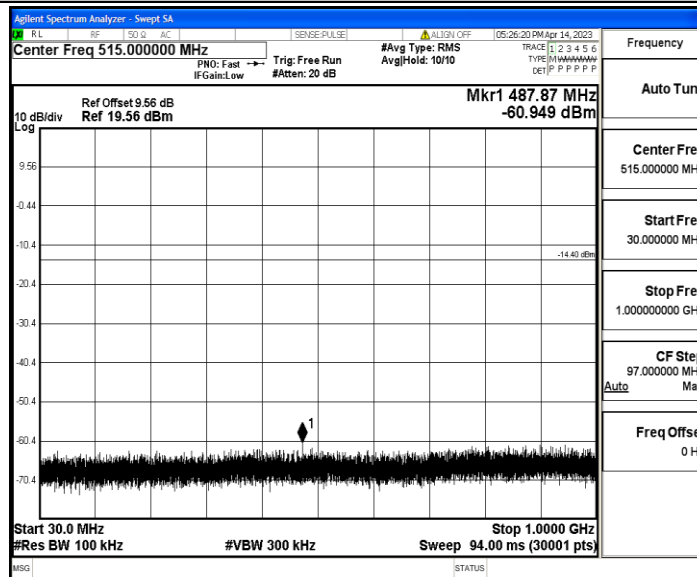
3DH5_Ant1_2441_30~1000



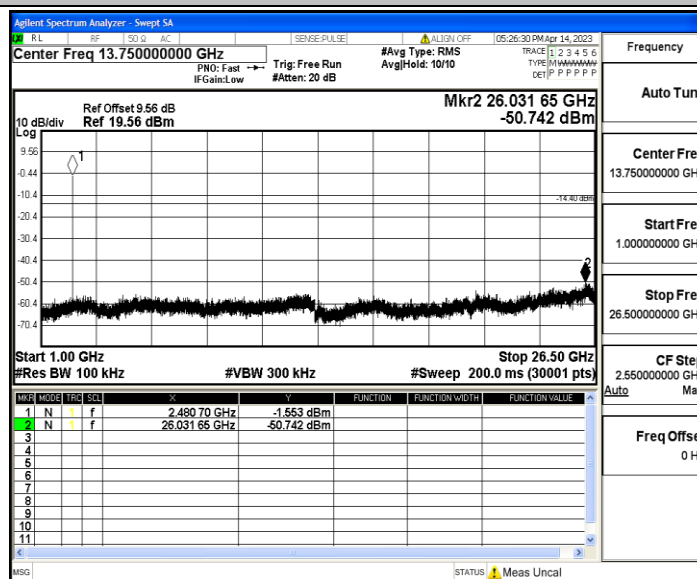
3DH5_Ant1_2441_1000~26500



3DH5_Ant1_2480_0~Reference



3DH5_Ant1_2480_30~1000



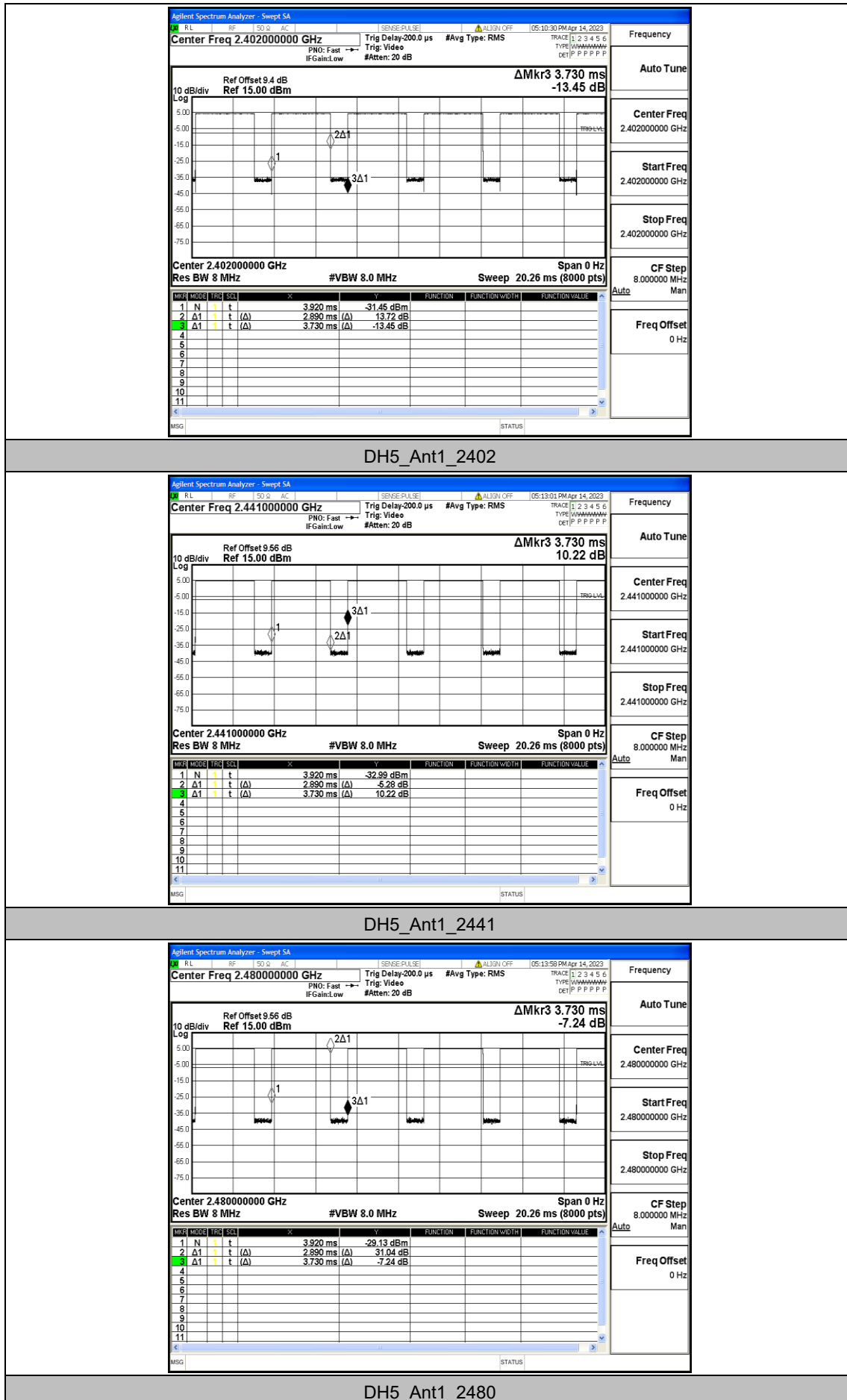
3DH5_Ant1_2480_1000~26500

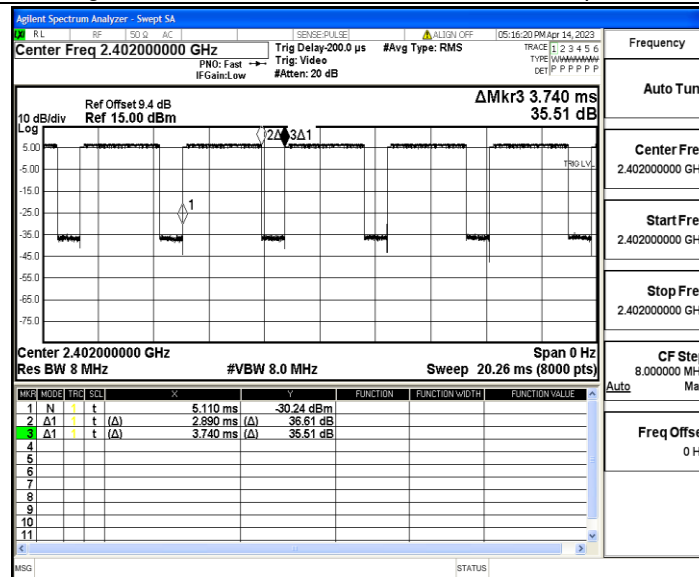
Appendix I: Duty Cycle

Test Result

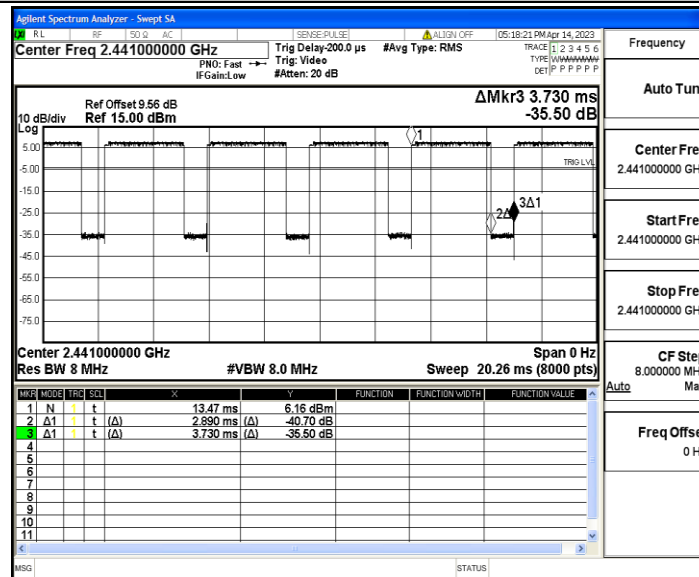
TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T[kHz]
DH5	Ant1	2402	2.89	3.73	77.48	0.35
		2441	2.89	3.73	77.48	0.35
		2480	2.89	3.73	77.48	0.35
2DH5	Ant1	2402	2.89	3.74	77.27	0.35
		2441	2.89	3.73	77.48	0.35
		2480	2.89	3.73	77.48	0.35
3DH5	Ant1	2402	2.89	3.73	77.48	0.35
		2441	2.89	3.74	77.27	0.35
		2480	2.89	3.73	77.48	0.35

Test Graphs

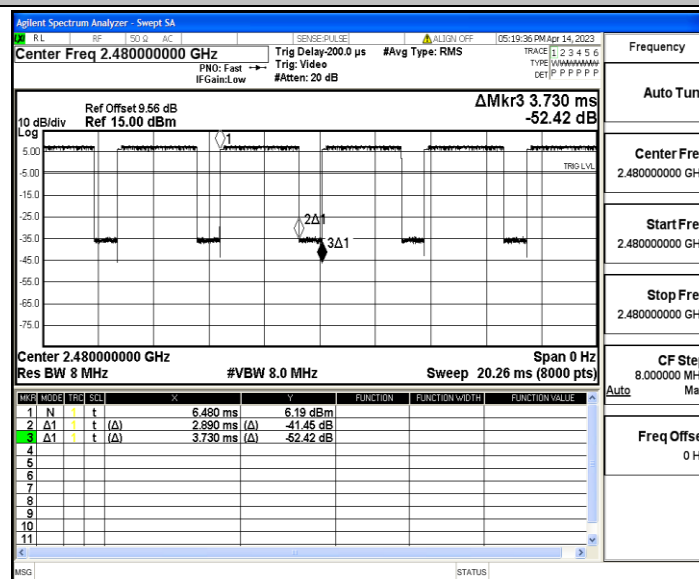




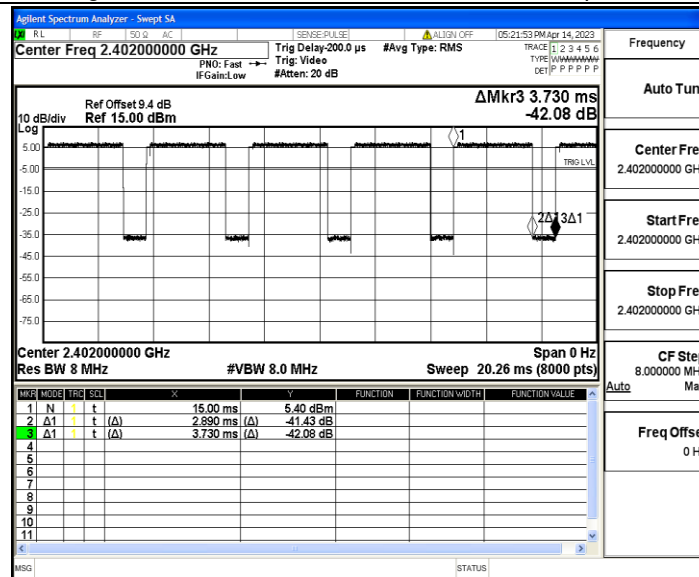
2DH5_Ant1_2402



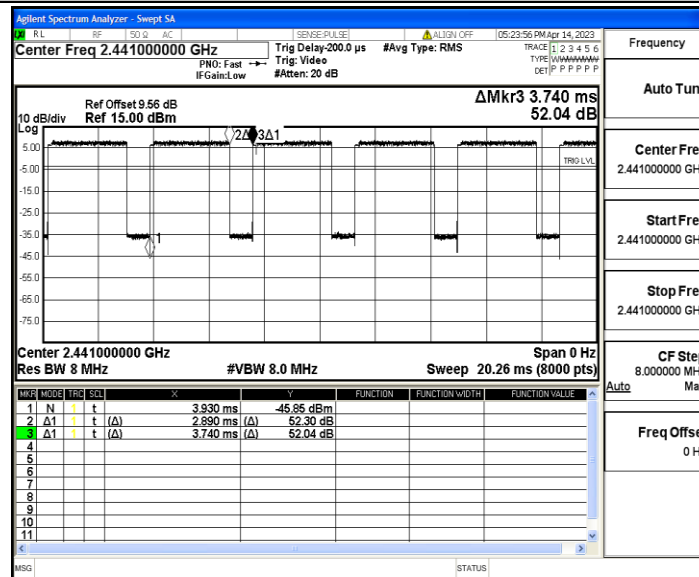
2DH5_Ant1_2441



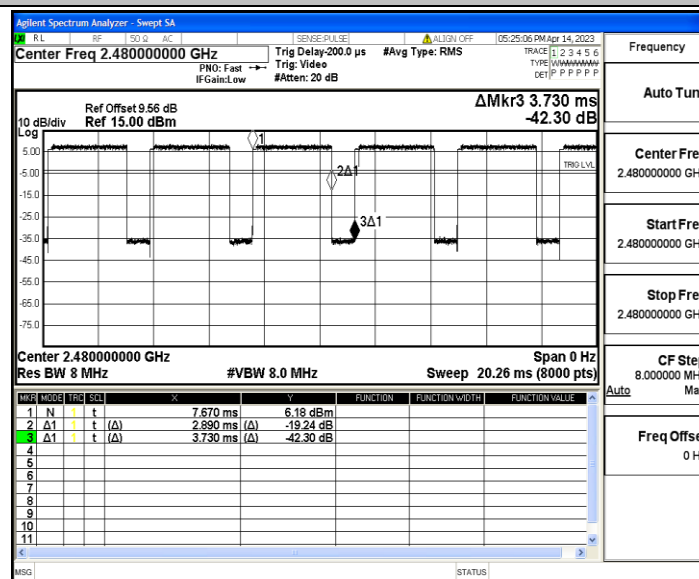
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_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	-49.02	≤-41.20	PASS
				AV	2389.880	-48.58	≤-41.20	PASS
				AV	2390.000	-48.6	≤-41.20	PASS
				Peak	2310.000	-40.62	≤-21.20	PASS
				Peak	2376.545	-38.67	≤-21.20	PASS
				Peak	2390.000	-39.85	≤-21.20	PASS
		High	2480	AV	2483.500	-47.35	≤-41.20	PASS
				AV	2483.520	-47.35	≤-41.20	PASS
				AV	2500.000	-48.04	≤-41.20	PASS
				Peak	2483.500	-39.75	≤-21.20	PASS
				Peak	2498.480	-38.45	≤-21.20	PASS
				Peak	2500.000	-41.2	≤-21.20	PASS
		Low	Hop_2402	Peak	2310.000	-41.68	≤-21.20	PASS
				Peak	2354.075	-38.41	≤-21.20	PASS
				Peak	2390.000	-42.02	≤-21.20	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-49.03	≤-41.20	PASS
				AV	2376.335	-48.63	≤-41.20	PASS
				AV	2390.000	-48.69	≤-41.20	PASS
				Peak	2310.000	-41.96	≤-21.20	PASS
				Peak	2387.360	-38.95	≤-21.20	PASS
				Peak	2390.000	-42.52	≤-21.20	PASS
		High	2480	AV	2483.500	-46.4	≤-41.20	PASS
				AV	2483.520	-46.4	≤-41.20	PASS
				AV	2500.000	-48.09	≤-41.20	PASS
				Peak	2483.500	-39.95	≤-21.20	PASS
				Peak	2485.440	-39.02	≤-21.20	PASS
				Peak	2500.000	-40.65	≤-21.20	PASS
3DH5	Ant1	Low	2402	AV	2310.000	-49.02	≤-41.20	PASS
				AV	2386.940	-48.58	≤-41.20	PASS
				AV	2390.000	-48.74	≤-41.20	PASS
				Peak	2310.000	-41.3	≤-21.20	PASS
				Peak	2386.205	-39.18	≤-21.20	PASS
				Peak	2390.000	-41.32	≤-21.20	PASS
		High	2480	AV	2483.500	-46.42	≤-41.20	PASS
				AV	2483.520	-46.42	≤-41.20	PASS
				AV	2500.000	-48.05	≤-41.20	PASS
				Peak	2483.500	-39.58	≤-21.20	PASS
				Peak	2483.600	-37.58	≤-21.20	PASS
				Peak	2500.000	-40.46	≤-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.