

FCC Appendix RF Test Data for BT

FCC ID : 2BUJQ-MILEPOP1

Company : shenzhenshiaoguokeyiyouxiangongsi

EUT : Dirt ebike

Model Number : MilePop1

Report No. : CTA26011901101

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	0.957	2401.547	2402.504	---	---
		2441	0.960	2440.544	2441.504	---	---
		2480	0.942	2479.550	2480.492	---	---
2DH5	Ant1	2402	1.281	2401.376	2402.657	---	---
		2441	1.281	2440.382	2441.663	---	---
		2480	1.287	2479.379	2480.666	---	---

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.40200000 GHz

Ref Offset 0.3 dB
Ref 30.00 dBm

Trig: Free Run
#Atten: 40 dB

#Avg Type: RMS
Avg/Hold: 100/100

Span 3.000 MHz
Sweep 3.200 ms (1001 pts)

#Res BW 30 kHz
#VBW 100 kHz

Auto Tune

Center Freq 2.40200000 GHz

Start Freq 2.400500000 GHz

Stop Freq 2.403500000 GHz

CF Step 300.000 kHz

Freq Offset 0 Hz

ΔMkr3 957 kHz
-0.762 dB

1 2 3Δ1

10 dB/div
Log

20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0

Center 2.402000 GHz

#Res BW 30 kHz

#VBW 100 kHz

Span 3.000 MHz

Sweep 3.200 ms (1001 pts)

MNR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.401547 GHz	-23.833 dBm			
2	N	1	f	2.402030 GHz	-2.763 dBm			
3	Δ1	1	f (Δ)	957 kHz (Δ)	-0.762 dB			

MSO

STATUS

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.441000000 GHz

Ref Offset 0.3 dB
Ref 30.00 dBm

Trig: Free Run
#Atten: 40 dB

#Avg Type: RMS
Avg/Hold: 100/100

Span 3.000 MHz
Sweep 3.200 ms (1001 pts)

#Res BW 30 kHz
#VBW 100 kHz

Auto Tune

Center Freq 2.441000000 GHz

Start Freq 2.439500000 GHz

Stop Freq 2.442500000 GHz

CF Step 300.000 kHz

Freq Offset 0 Hz

ΔMkr3 960 kHz
0.513 dB

1 2 3Δ1

10 dB/div
Log

20.0
10.0
0.0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0

Center 2.441000 GHz

#Res BW 30 kHz

#VBW 100 kHz

Span 3.000 MHz

Sweep 3.200 ms (1001 pts)

MNR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.440544 GHz	-23.697 dBm			
2	N	1	f	2.441006 GHz	-2.906 dBm			
3	Δ1	1	f (Δ)	960 kHz (Δ)	0.513 dB			

MSO

STATUS



2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480

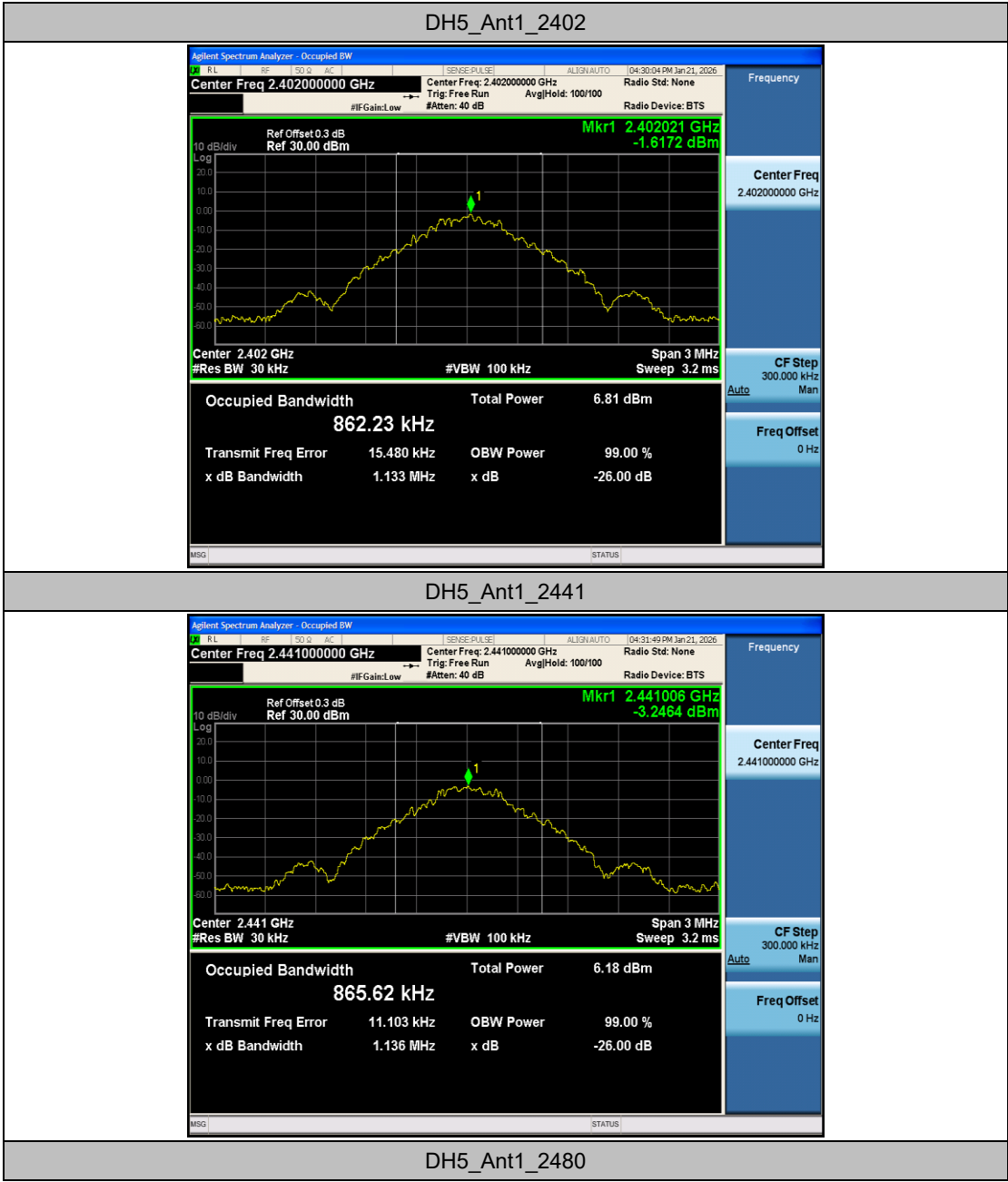


Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.86223	2401.5844	2402.4466	---	---
		2441	0.86562	2440.5783	2441.4439	---	---
		2480	0.87538	2479.5751	2480.4505	---	---
2DH5	Ant1	2402	1.1847	2401.4210	2402.6057	---	---
		2441	1.1817	2440.4216	2441.6033	---	---
		2480	1.1865	2479.4192	2480.6057	---	---

Test Graphs





2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



Appendix C: Maximum conducted output power

Test Result Peak

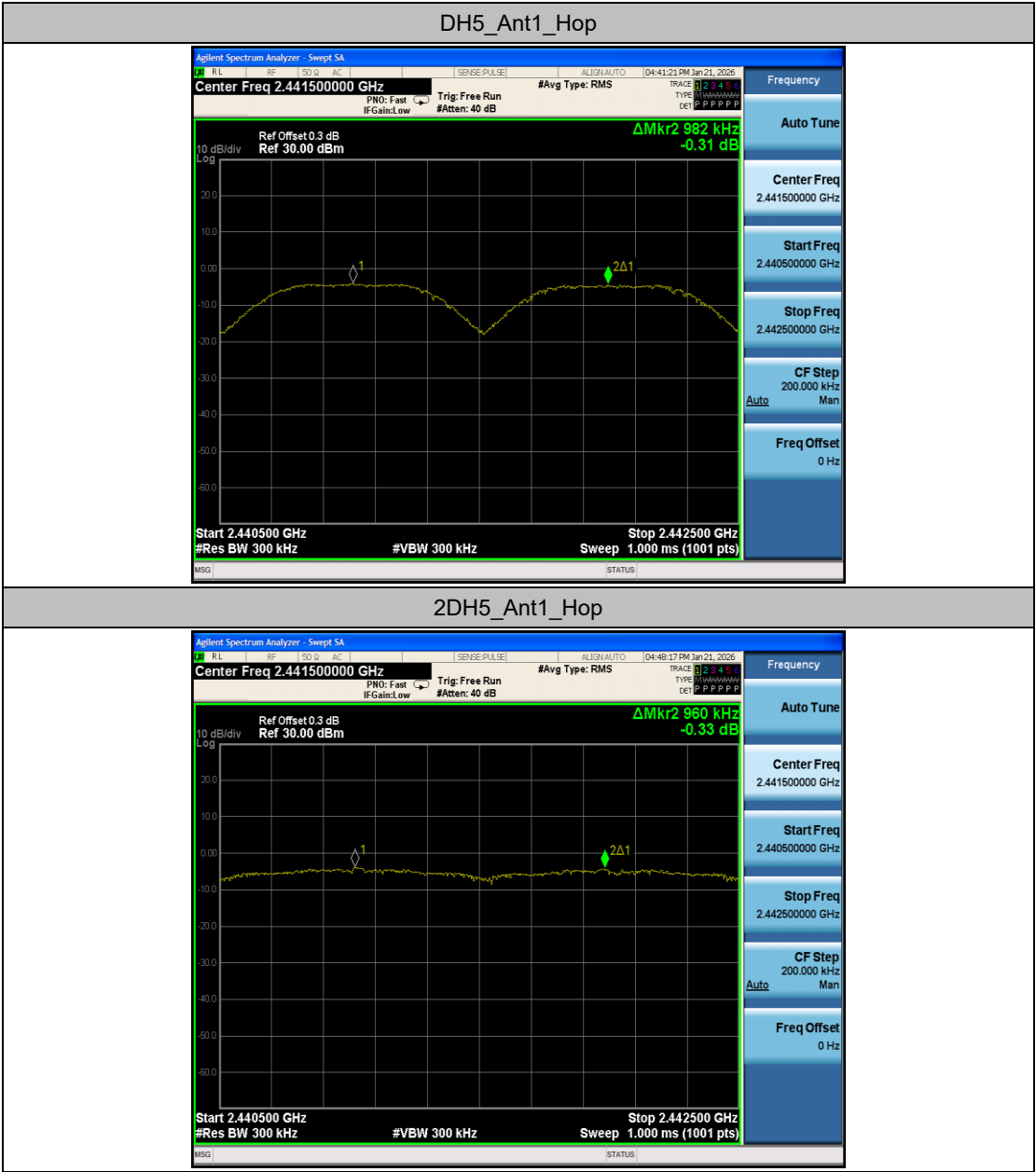
Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.20	≤20.97	PASS
		2441	-0.43	≤20.97	PASS
		2480	-0.67	≤20.97	PASS
2DH5	Ant1	2402	-0.70	≤20.97	PASS
		2441	-1.35	≤20.97	PASS
		2480	-1.54	≤20.97	PASS

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	0.96	≥ 0.858	PASS

Test Graphs

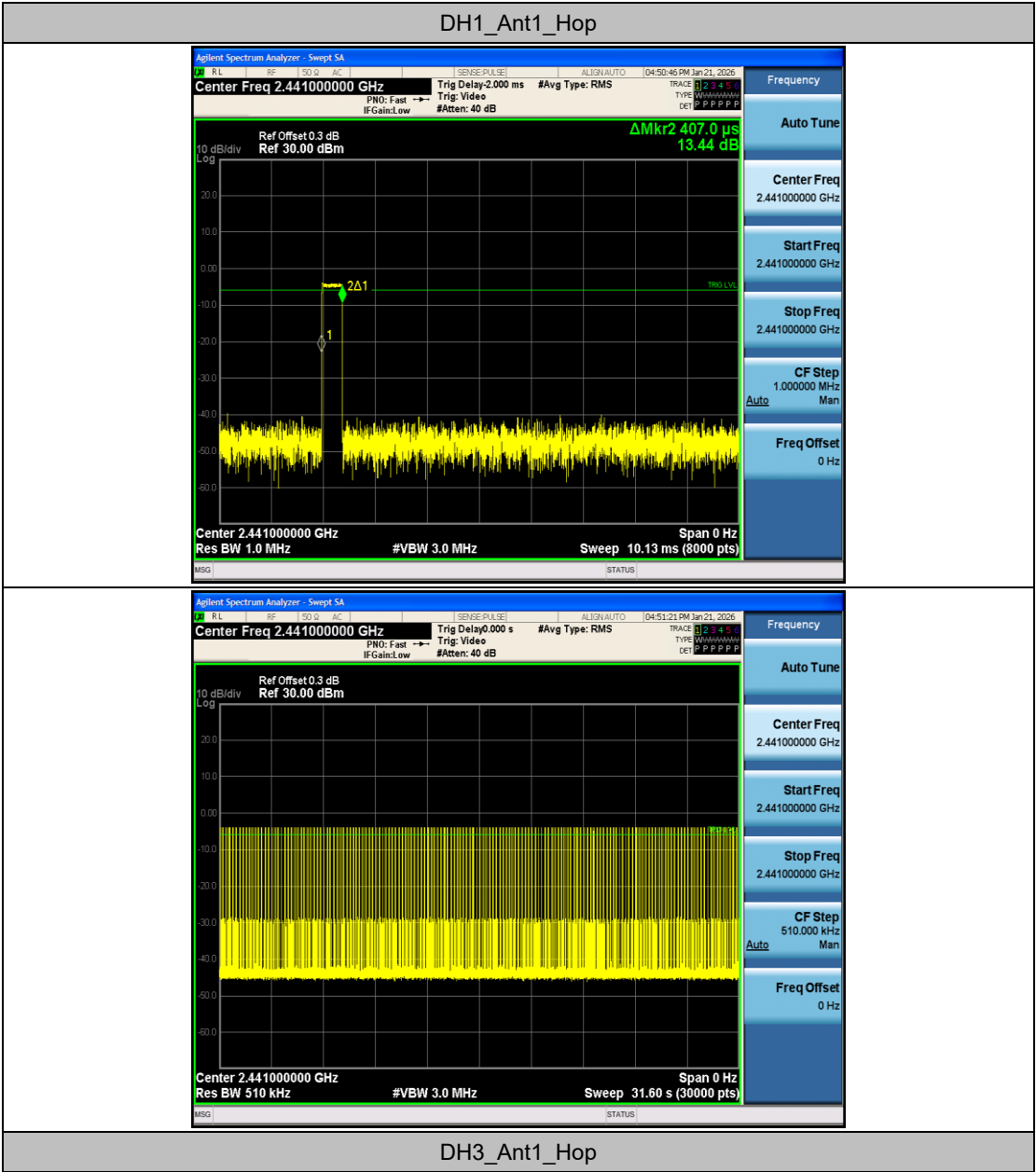


Appendix E: Time of occupancy

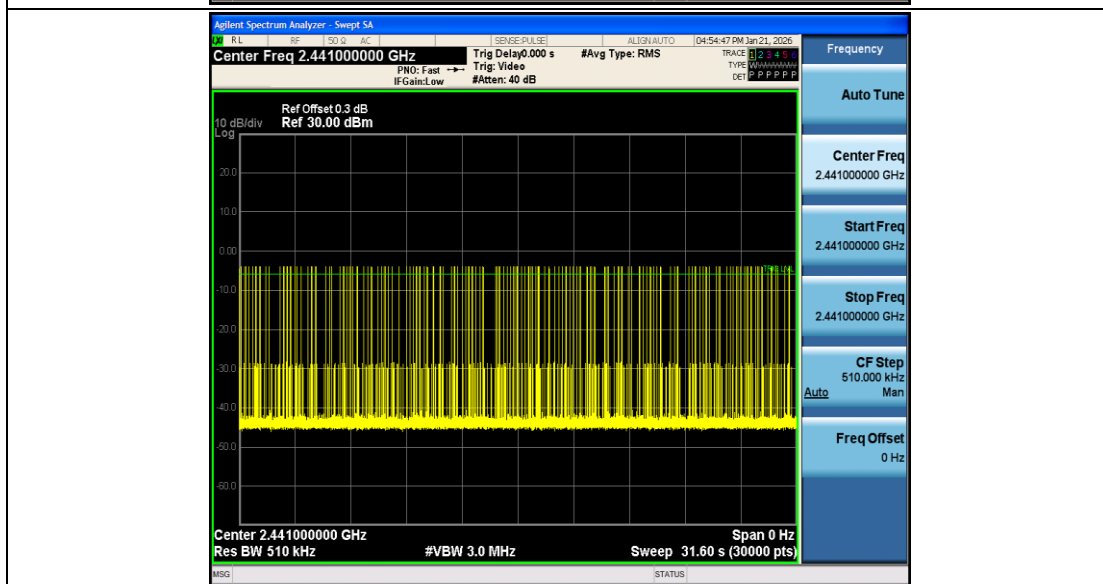
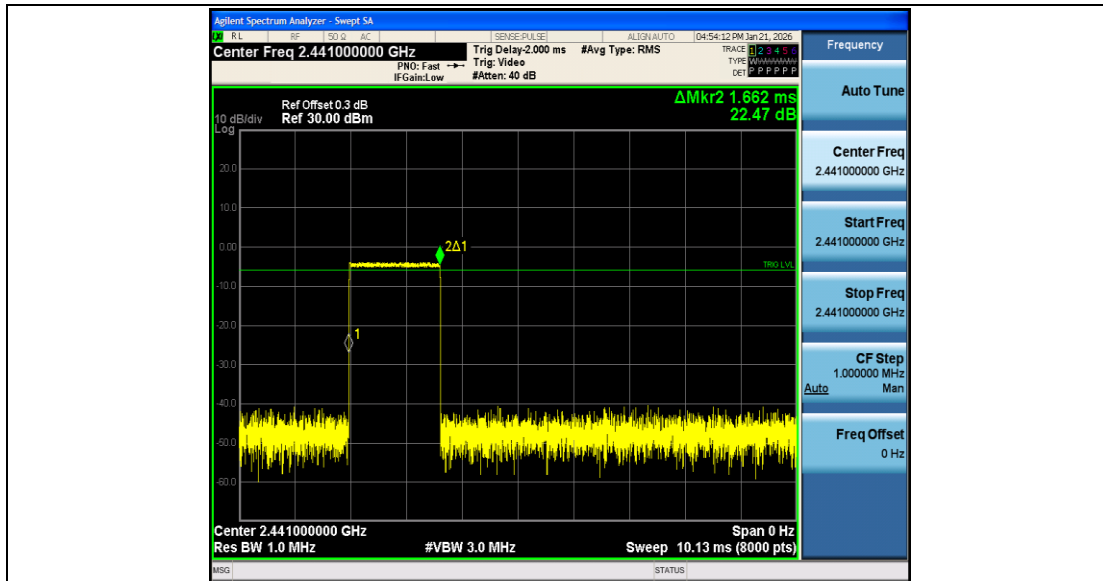
Test Result

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	167	0.278	≤0.4	PASS
DH5	Ant1	Hop	2.910	119	0.346	≤0.4	PASS
2DH1	Ant1	Hop	0.405	318	0.129	≤0.4	PASS
2DH3	Ant1	Hop	1.662	153	0.254	≤0.4	PASS
2DH5	Ant1	Hop	2.916	97	0.283	≤0.4	PASS

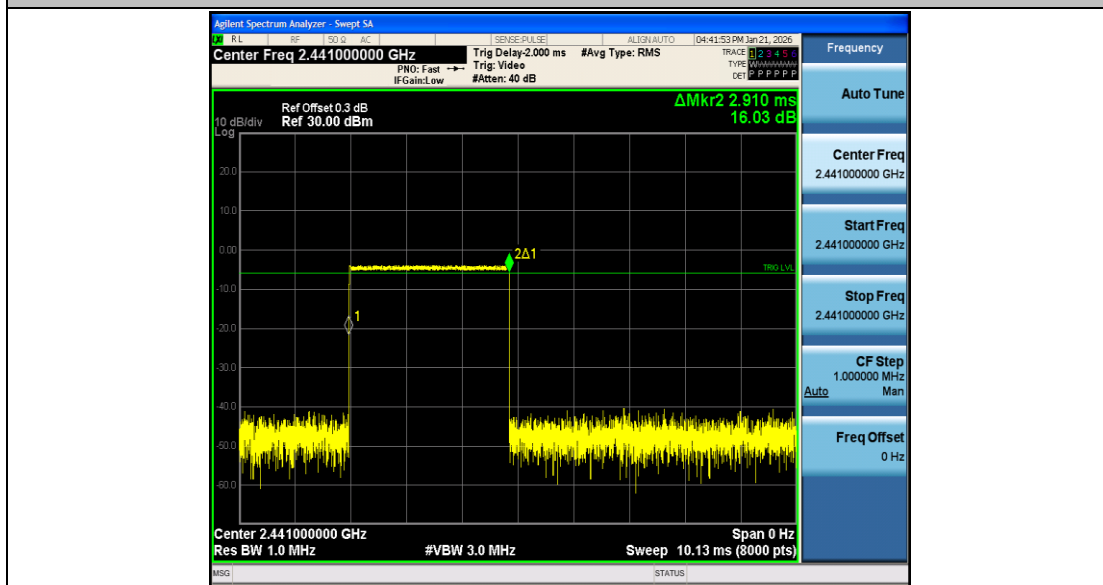
Test Graphs

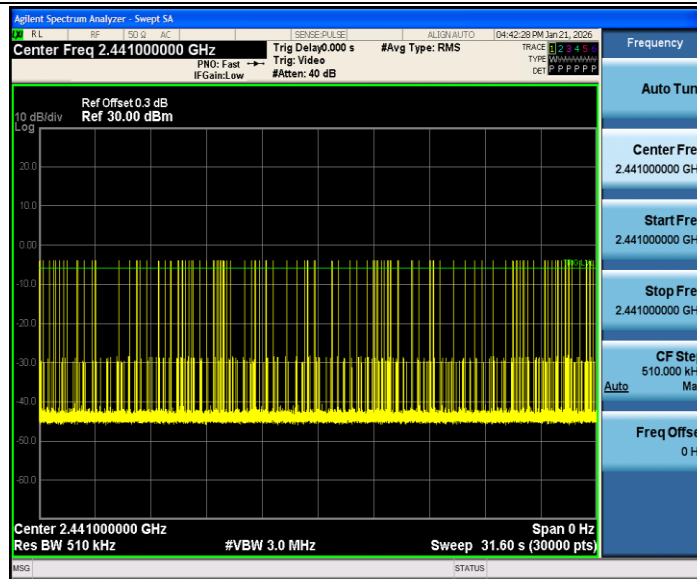


DH3_Ant1_Hop

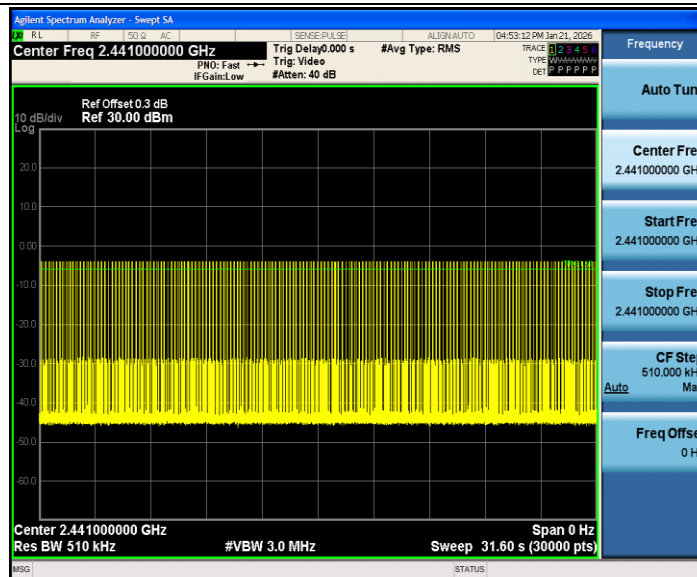
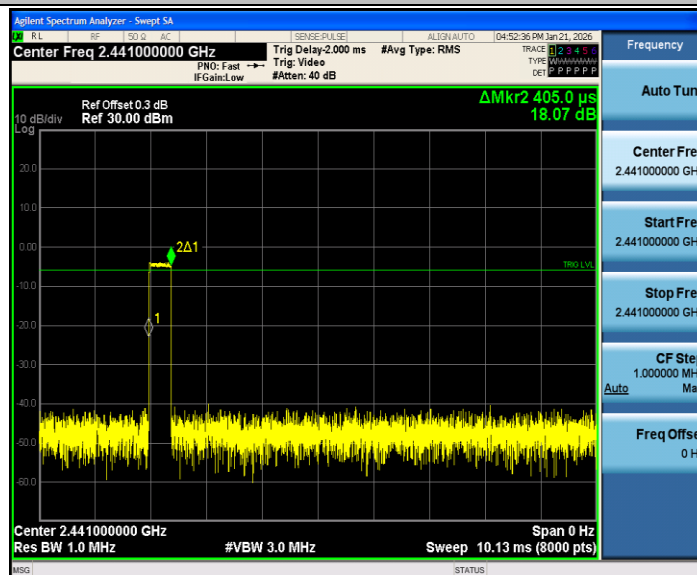


DH5_Ant1_Hop

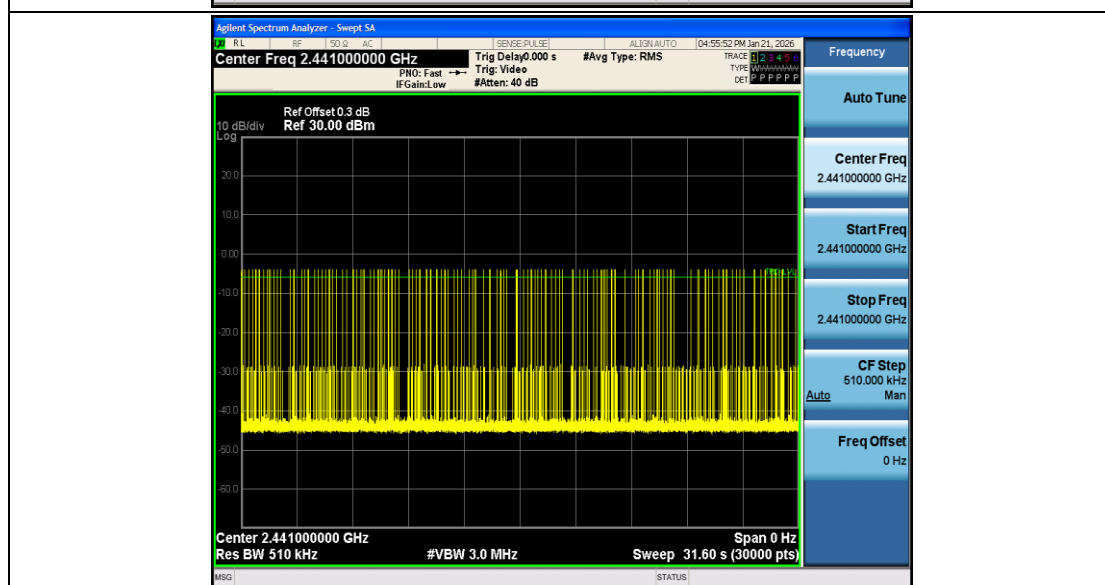
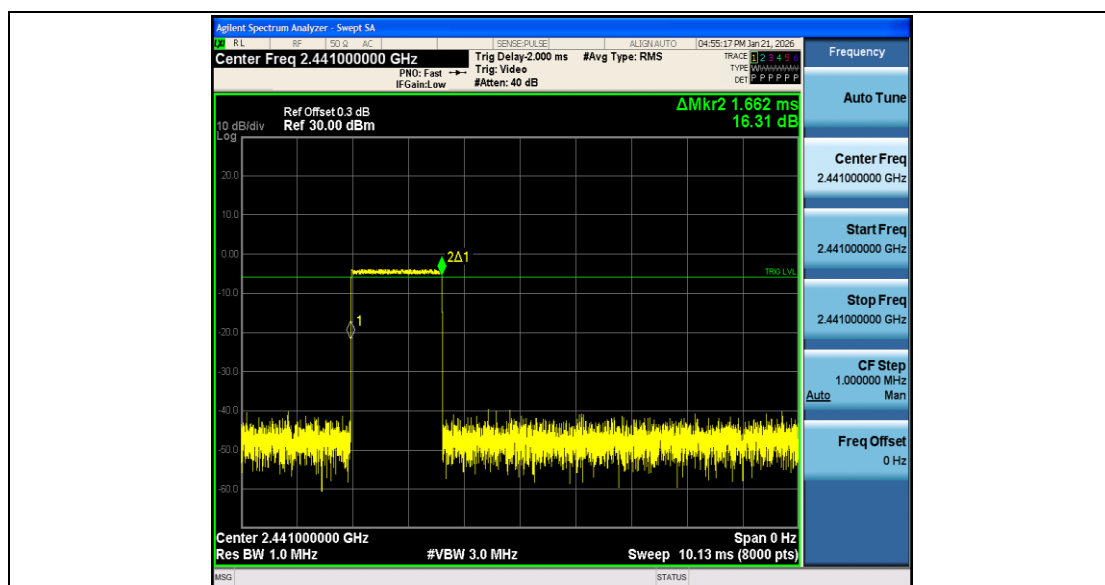




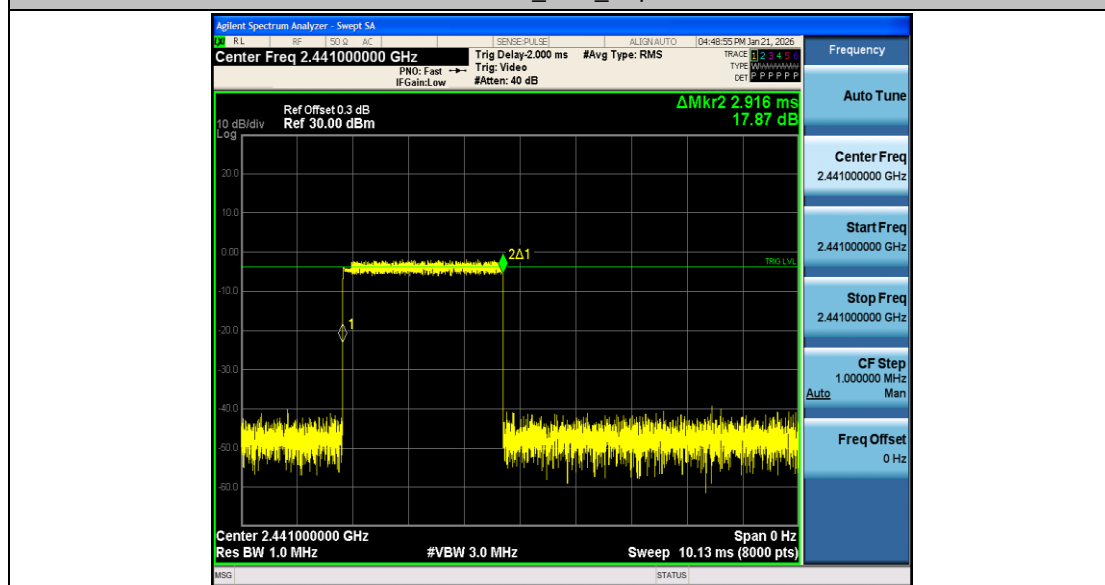
2DH1_Ant1_Hop

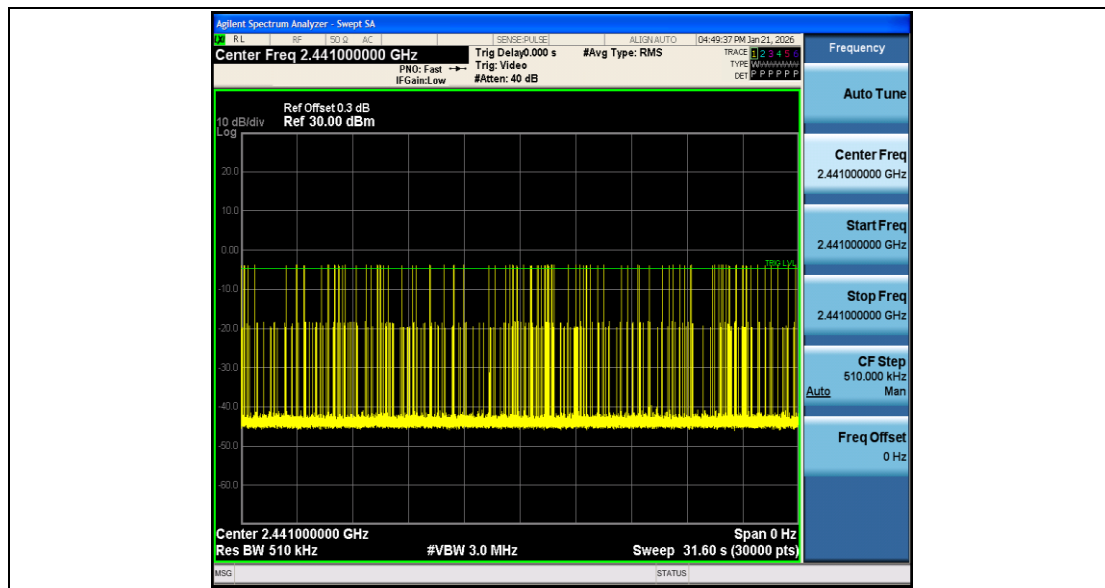


2DH3_Ant1_Hop



2DH5_Ant1_Hop



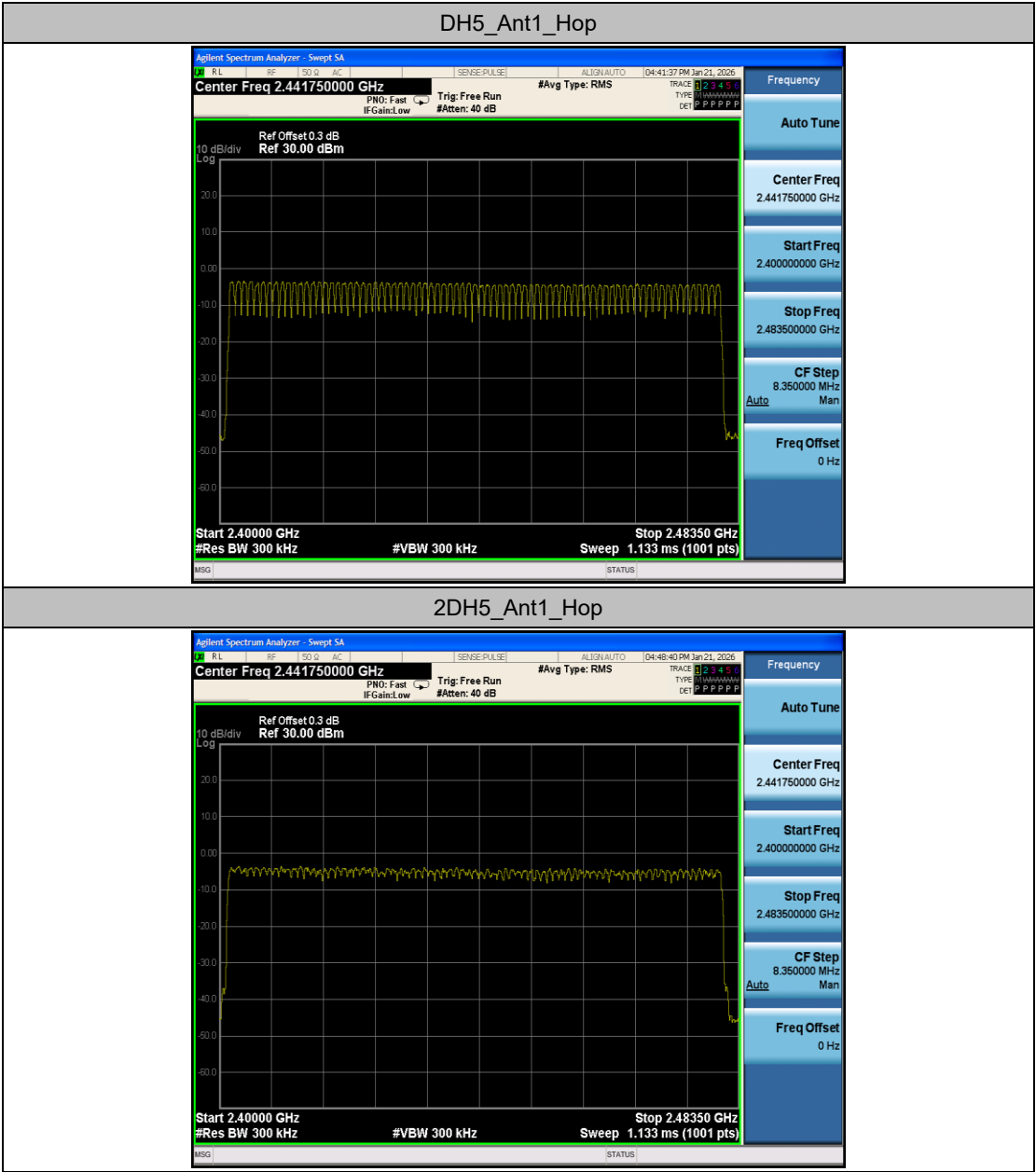


Appendix F: Number of hopping channels

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

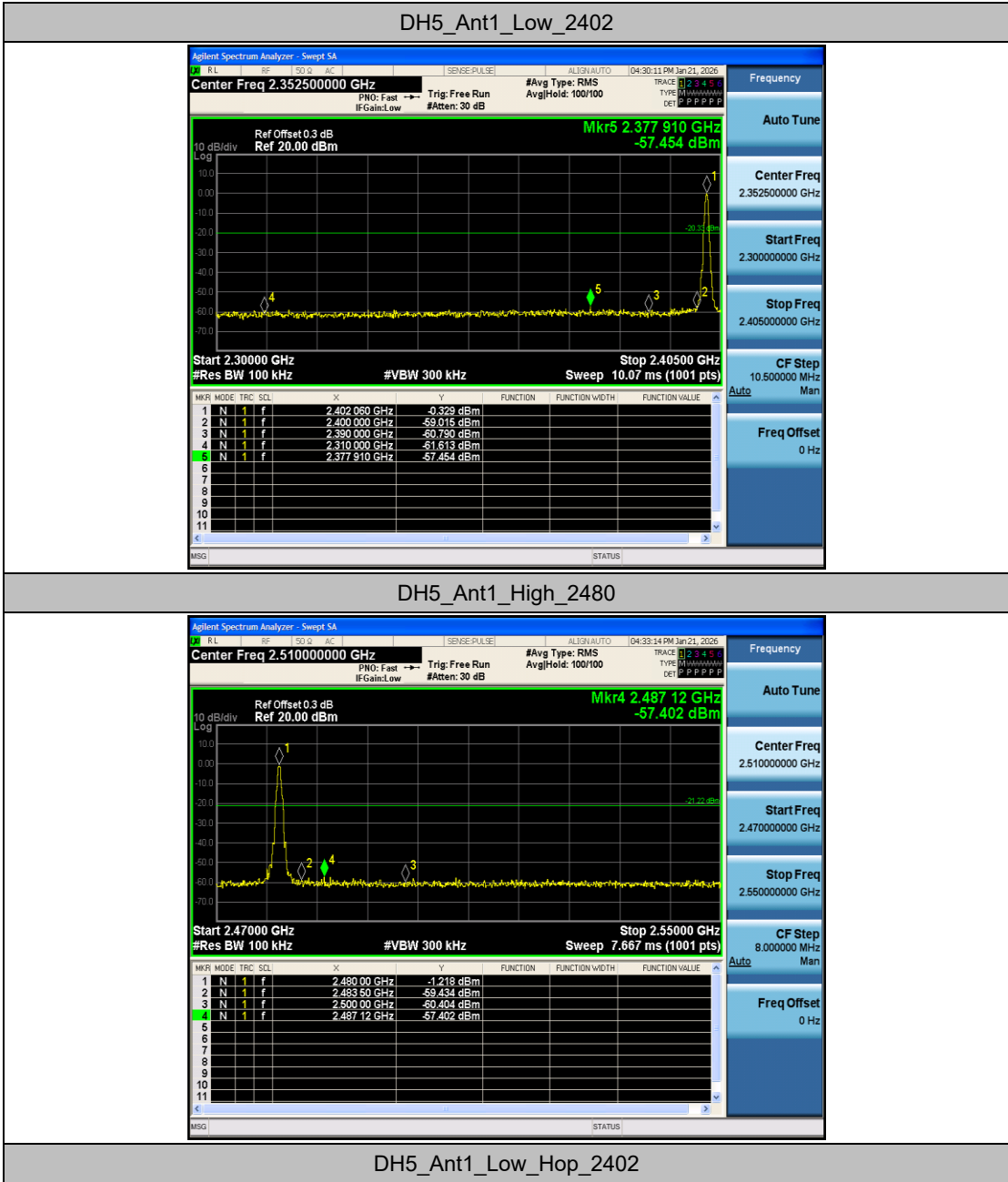


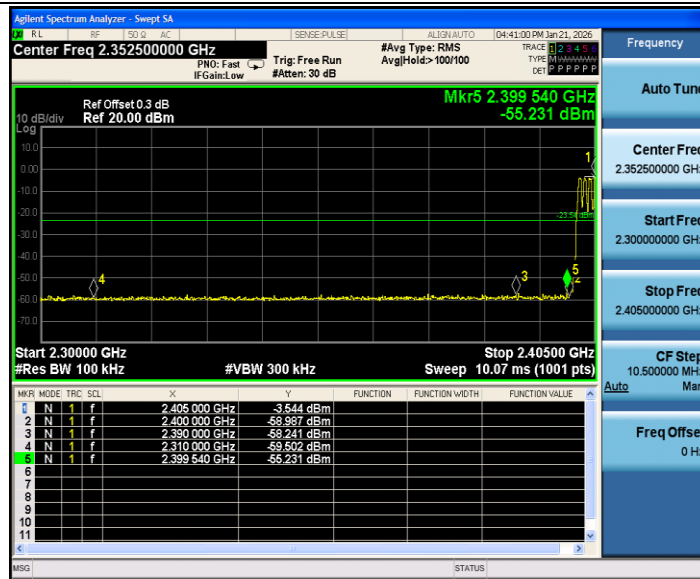
Appendix G: Band edge measurements

Test Result

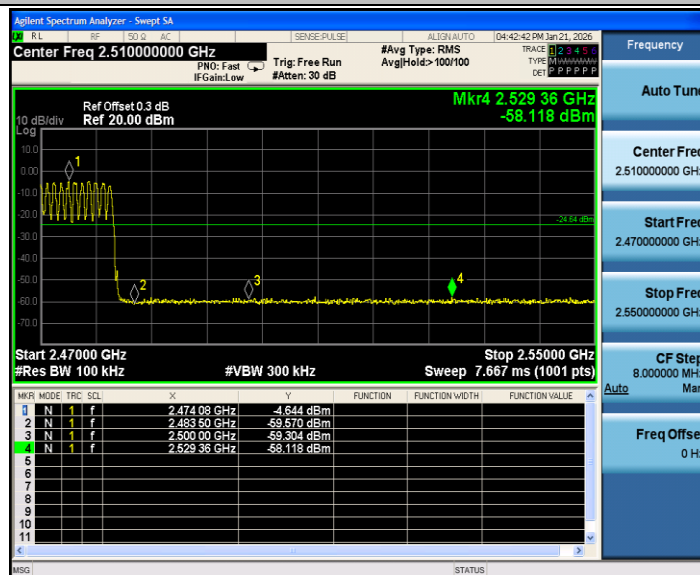
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.33	-57.45	≤-20.33	PASS
		High	2480	-1.22	-57.4	≤-21.22	PASS
		Low	Hop_2402	-3.54	-55.23	≤-23.54	PASS
		High	Hop_2480	-4.64	-58.12	≤-24.64	PASS
2DH5	Ant1	Low	2402	-5.52	-57.69	≤-25.52	PASS
		High	2480	-6.72	-57.97	≤-26.72	PASS
		Low	Hop_2402	-3.60	-53.17	≤-23.6	PASS
		High	Hop_2480	-5.35	-57.79	≤-25.35	PASS

Test Graphs

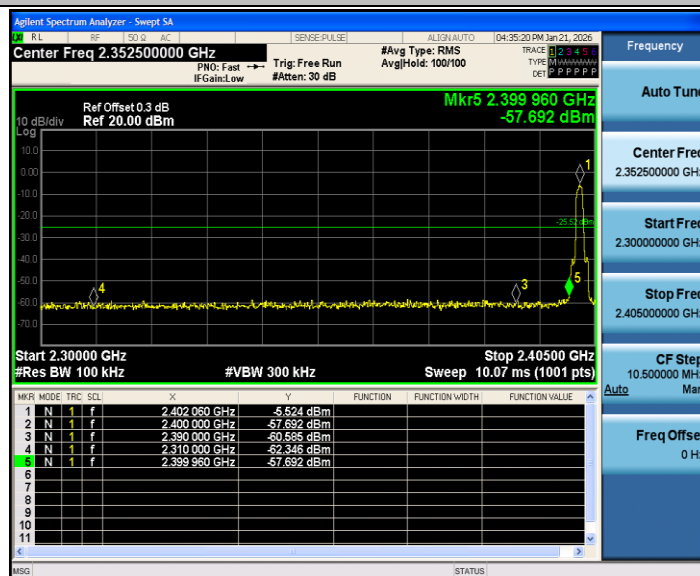




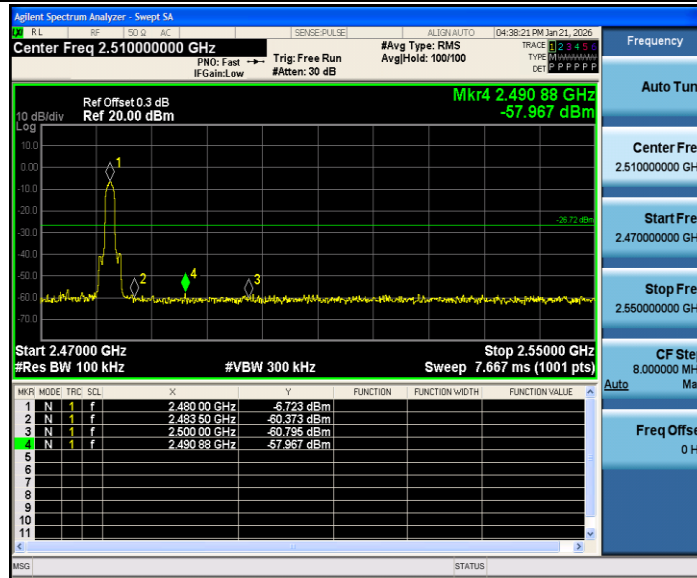
DH5_Ant1_High_Hop_2480



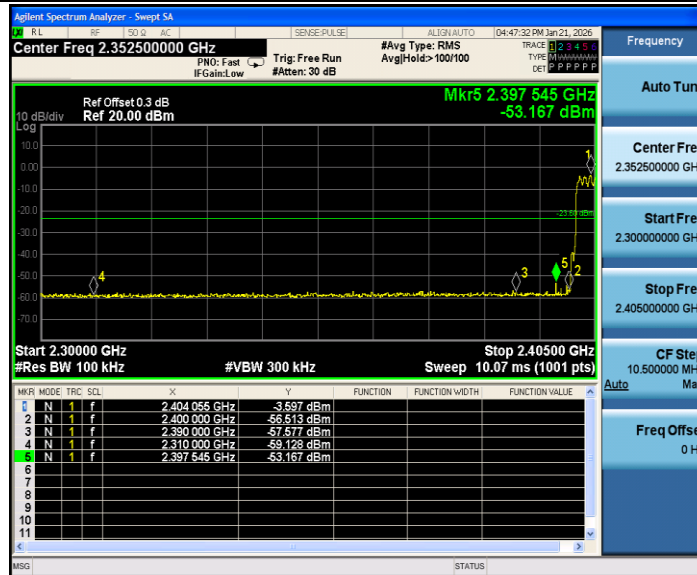
2DH5_Ant1_Low_2402



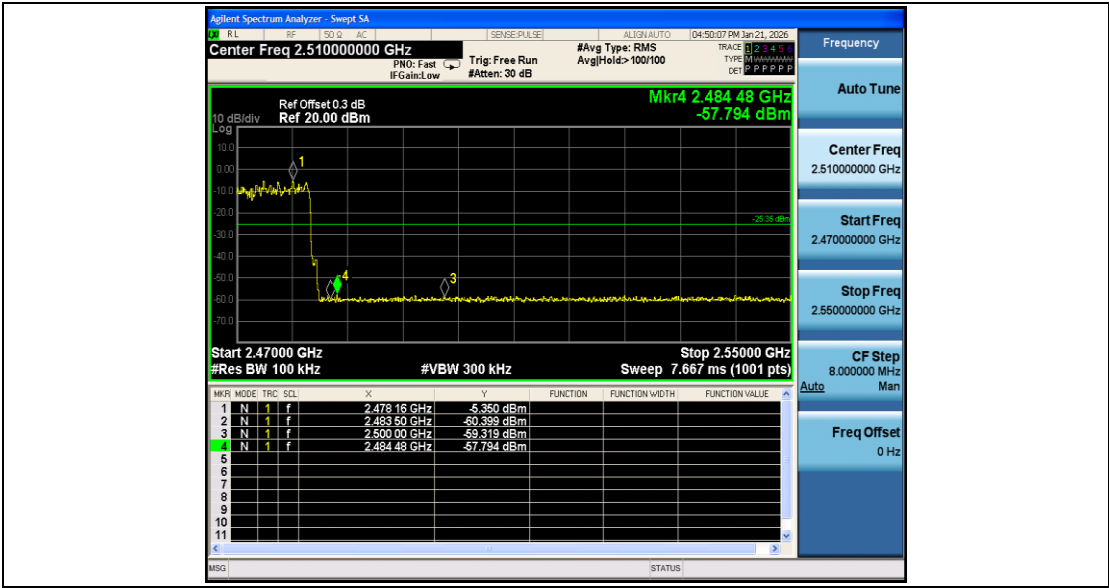
2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



2DH5_Ant1_High_Hop_2480

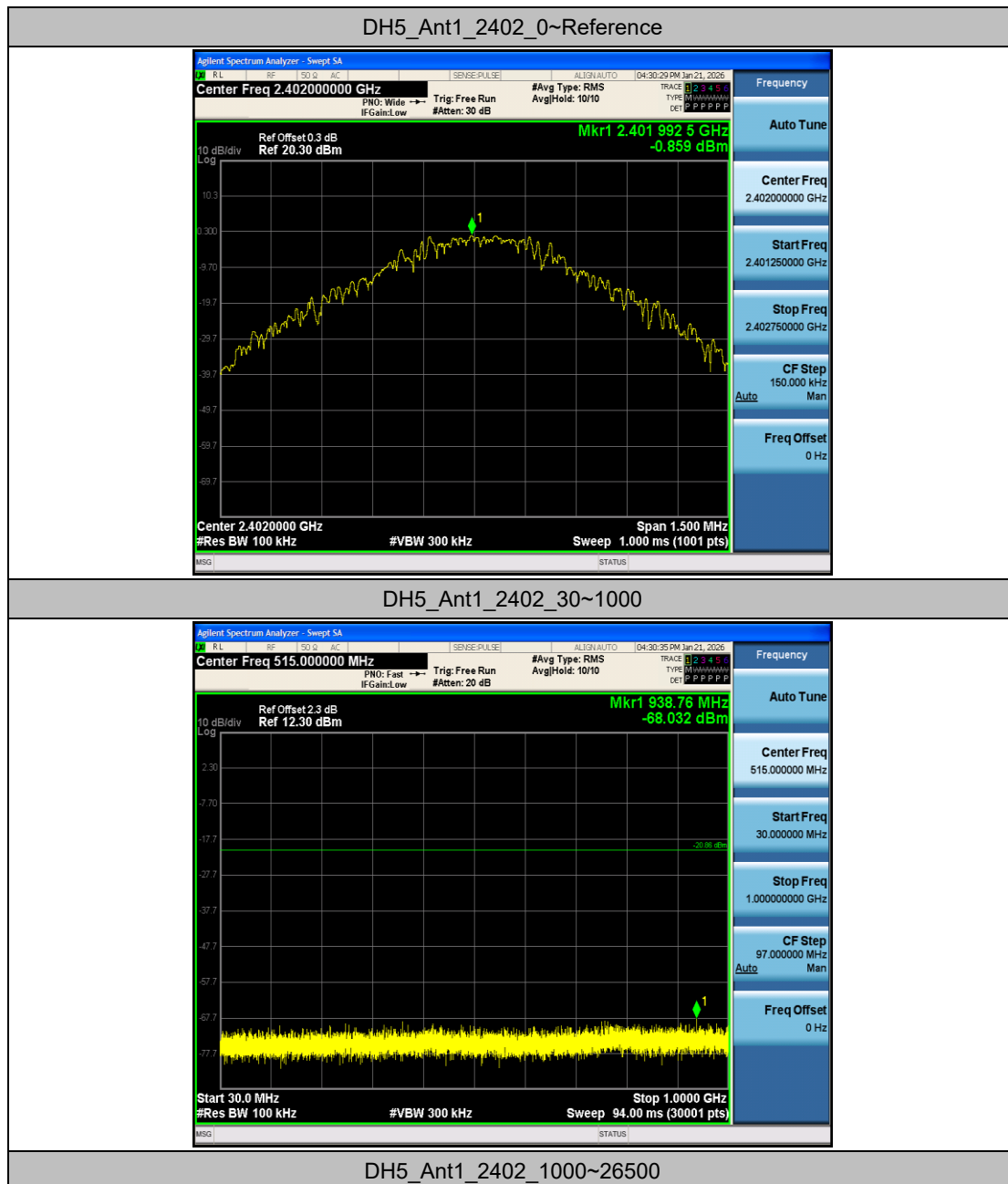


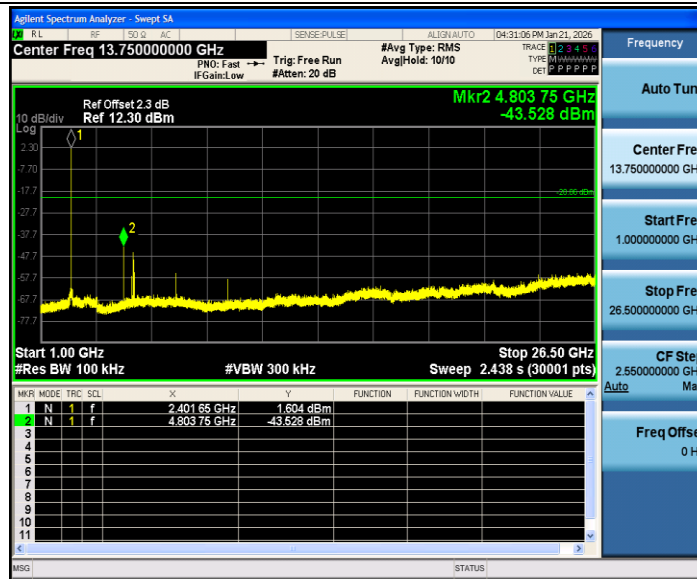
Appendix H: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-0.86	-0.86	---	PASS
			30~1000	-0.86	-68.03	≤-20.86	PASS
			1000~26500	-0.86	-43.53	≤-20.86	PASS
		2441	Reference	-1.74	-1.74	---	PASS
			30~1000	-1.74	-68.95	≤-21.74	PASS
			1000~26500	-1.74	-44.82	≤-21.74	PASS
		2480	Reference	-1.73	-1.73	---	PASS
			30~1000	-1.73	-67.06	≤-21.73	PASS
			1000~26500	-1.73	-42.06	≤-21.73	PASS
2DH5	Ant1	2402	Reference	-4.96	-4.96	---	PASS
			30~1000	-4.96	-63.38	≤-24.96	PASS
			1000~26500	-4.96	-50.16	≤-24.96	PASS
		2441	Reference	-6.03	-6.03	---	PASS
			30~1000	-6.03	-68.77	≤-26.03	PASS
			1000~26500	-6.03	-50.32	≤-26.03	PASS
		2480	Reference	-7.56	-7.56	---	PASS
			30~1000	-7.56	-65.44	≤-27.56	PASS
			1000~26500	-7.56	-44.57	≤-27.56	PASS

Test Graphs

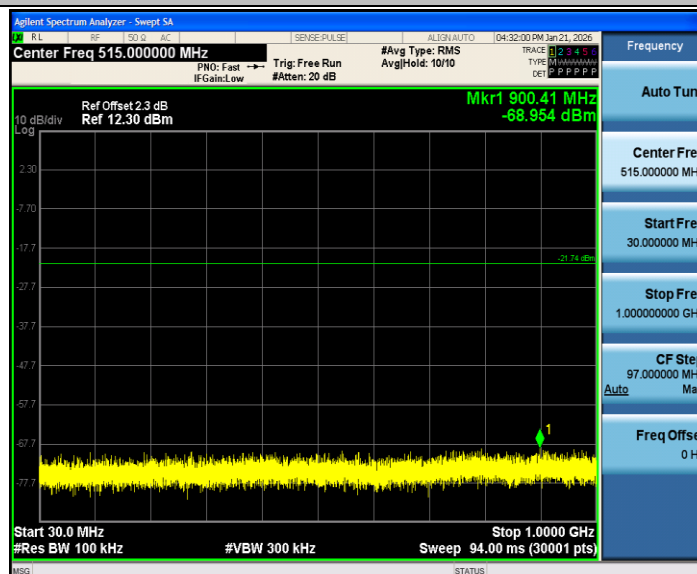




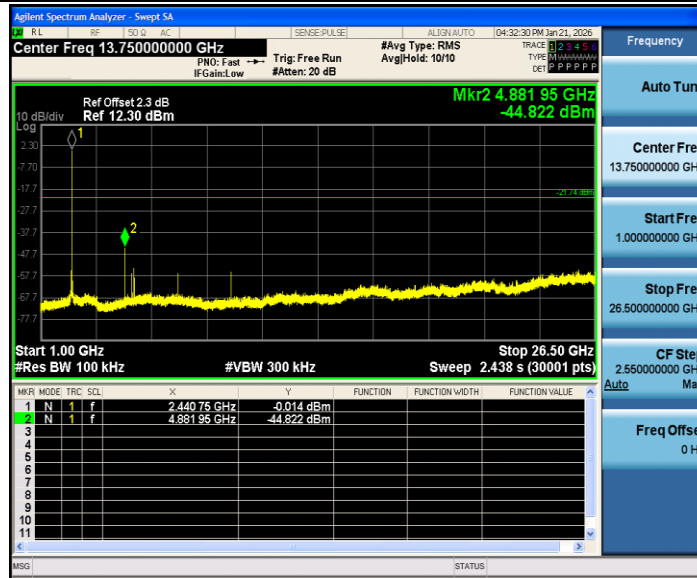
DH5_Ant1_2441_0~Reference



DH5_Ant1_2441_30~1000



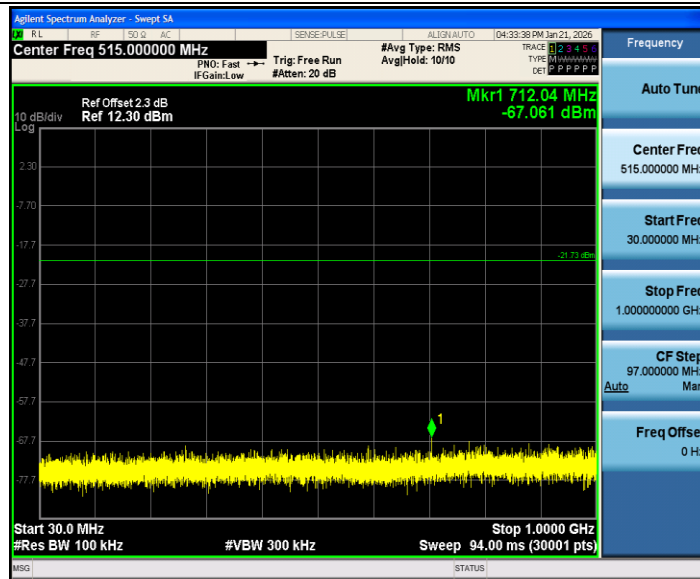
DH5_Ant1_2441_1000~26500



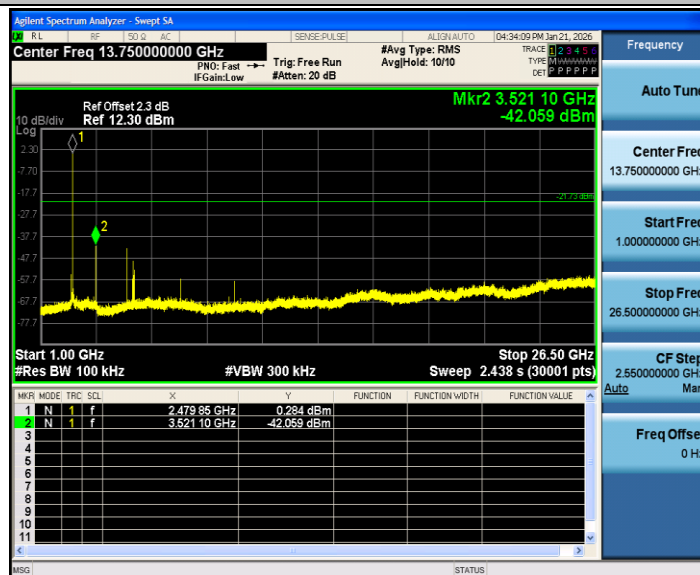
DH5_Ant1_2480_0~Reference



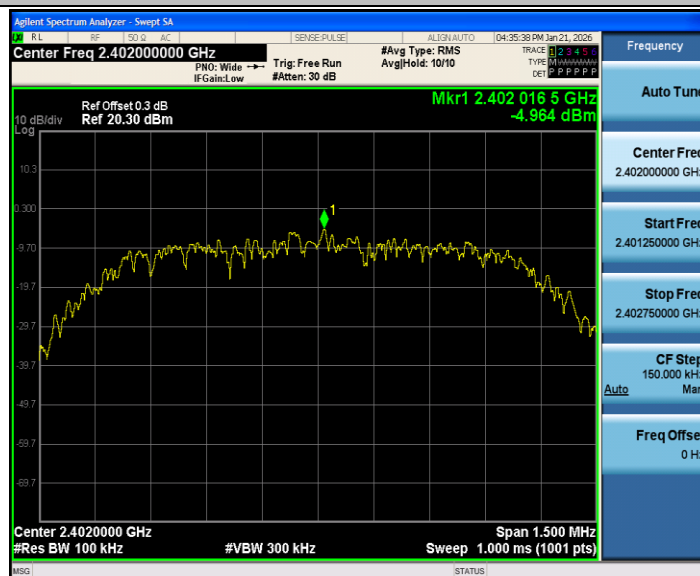
DH5_Ant1_2480_30~1000



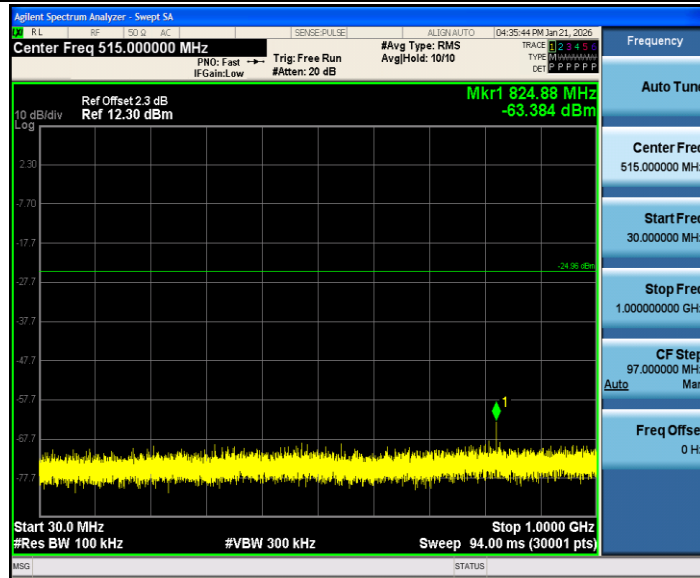
DH5_Ant1_2480_1000~26500



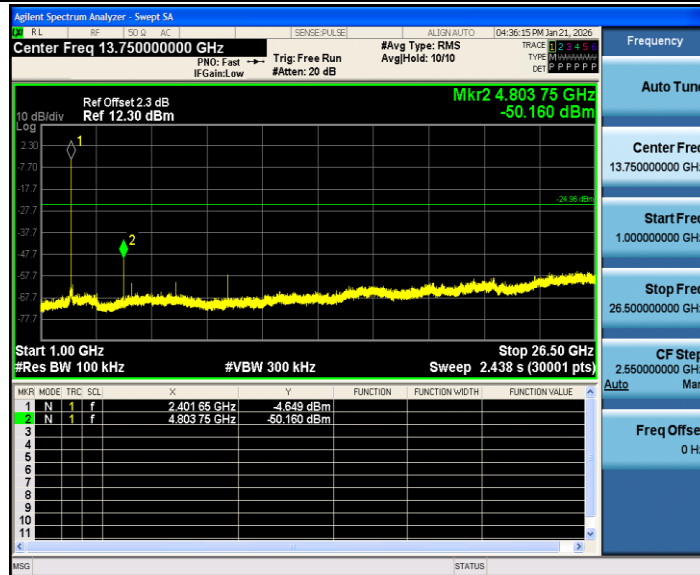
2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



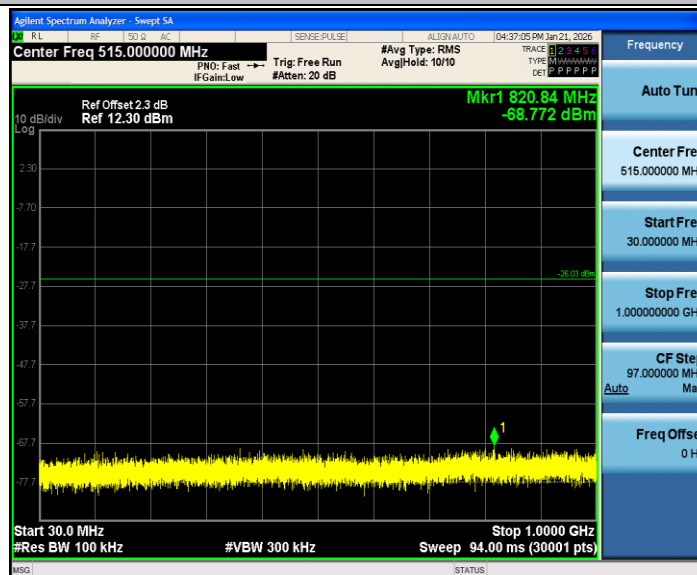
2DH5_Ant1_2402_1000~26500



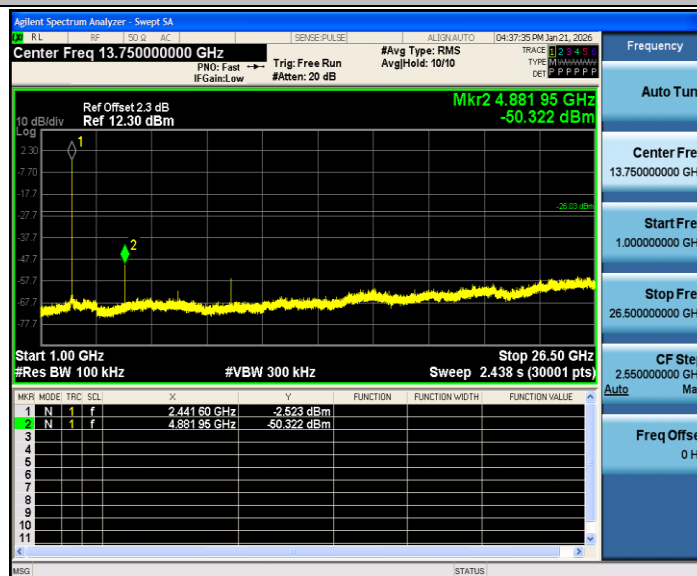
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000



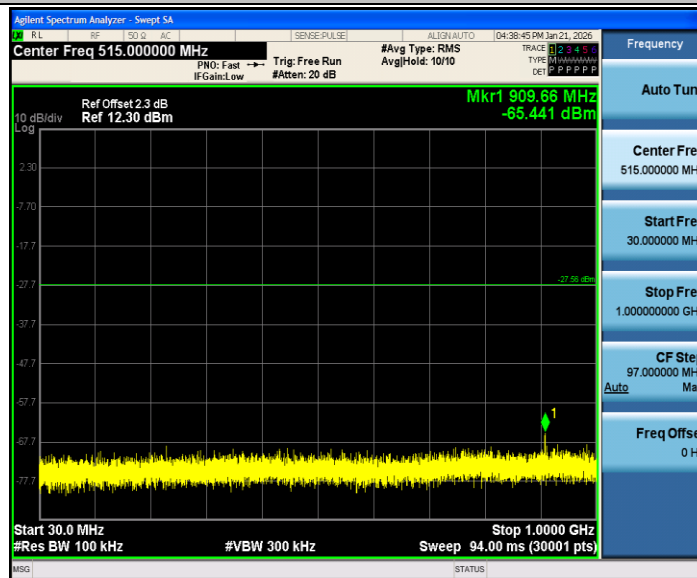
2DH5_Ant1_2441_1000~26500



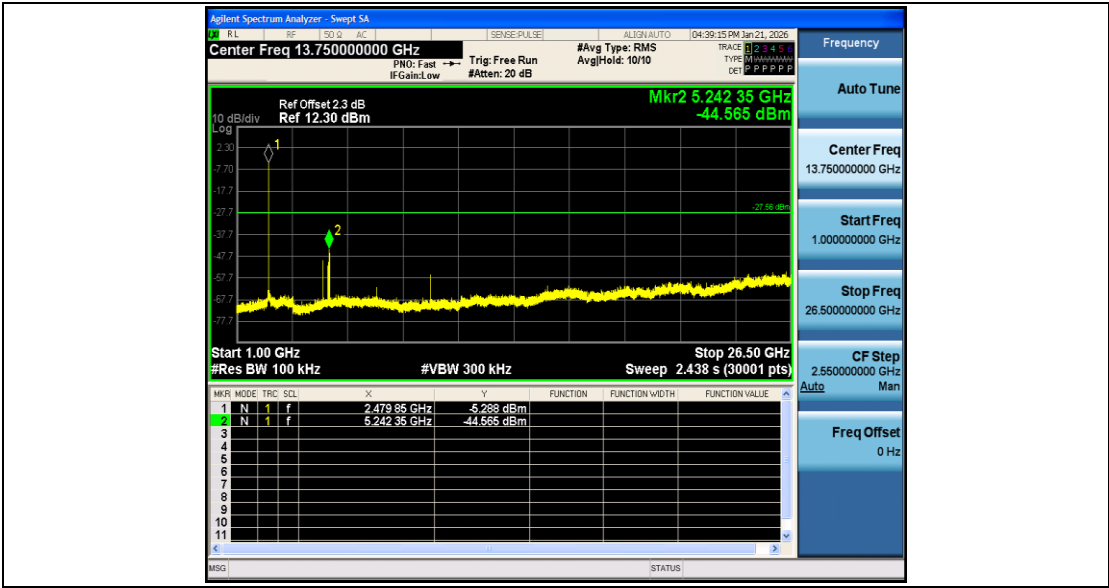
2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000



2DH5_Ant1_2480_1000~26500

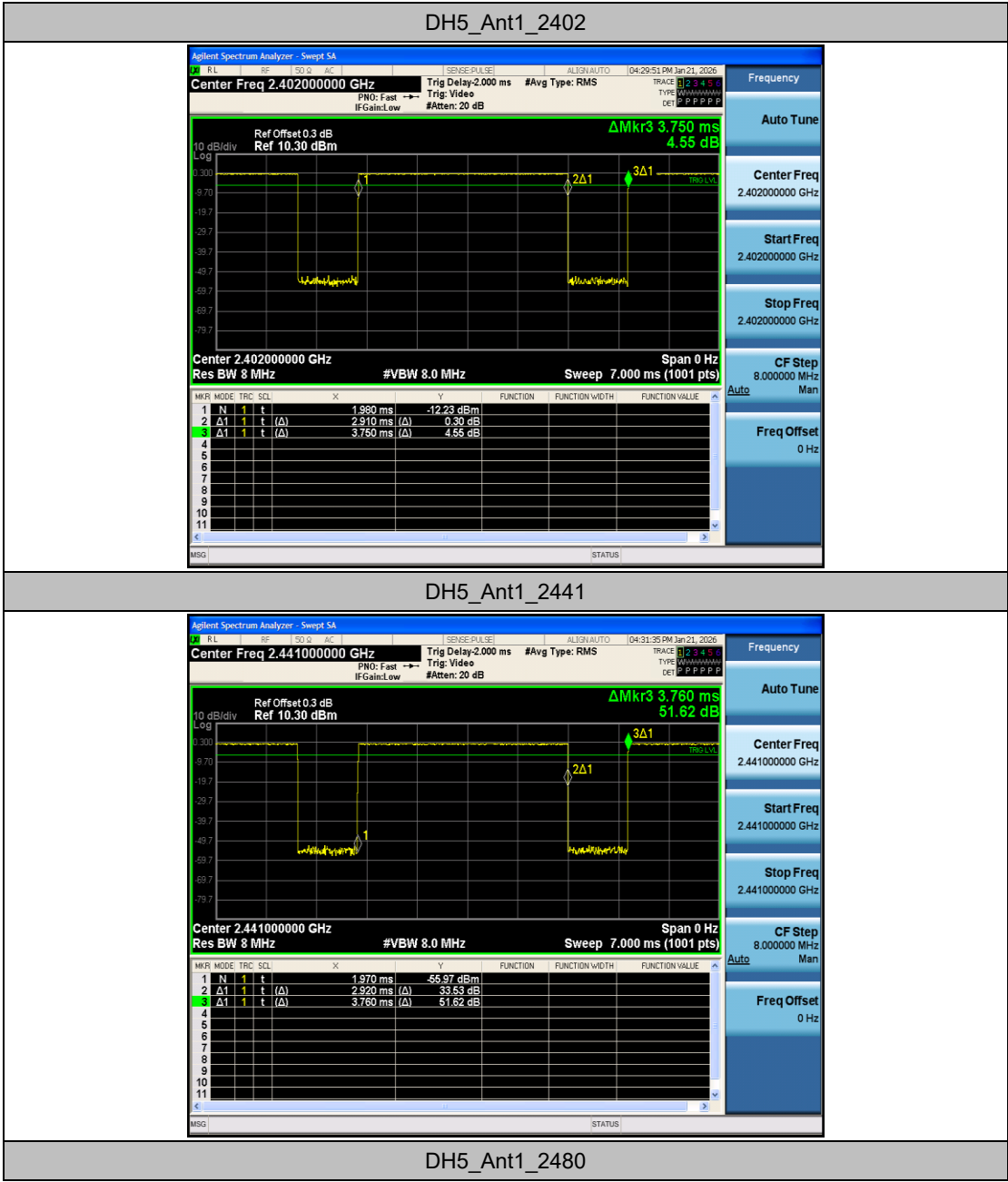


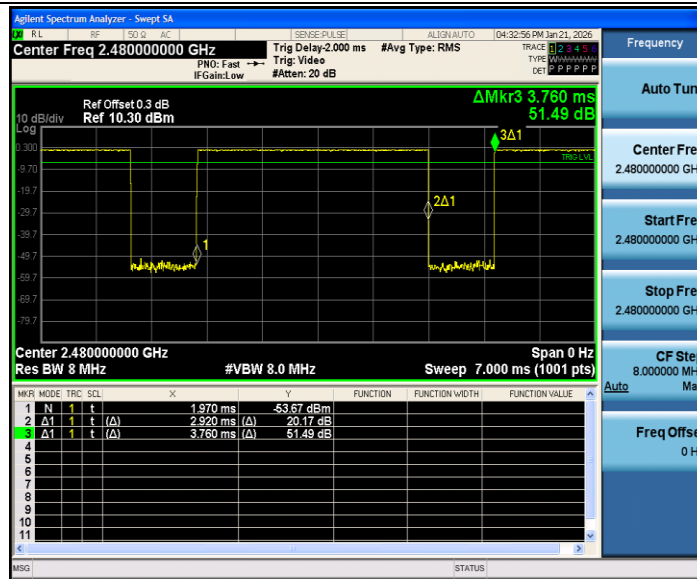
Appendix I: Duty Cycle

Test Result

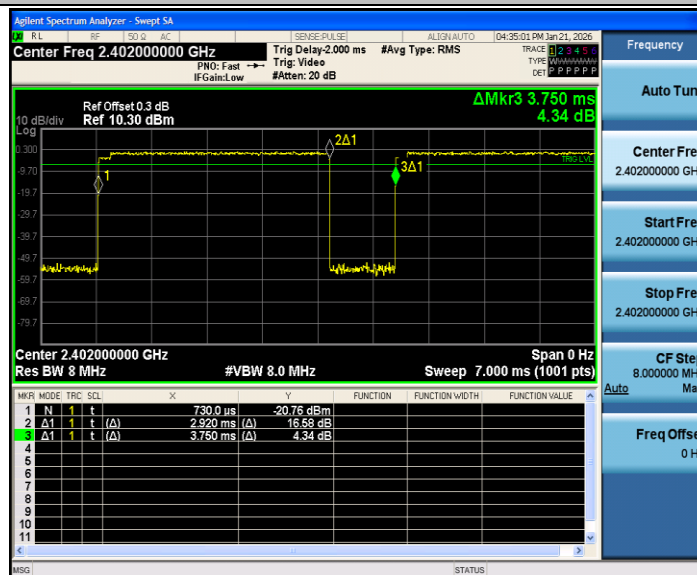
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	DC [%]	xFactor	Limit	Verdict
DH5	Ant1	2402	2.91	3.75	77.60	1.10	---	---
		2441	2.92	3.76	77.66	1.10	---	---
		2480	2.92	3.76	77.66	1.10	---	---
2DH5	Ant1	2402	2.92	3.75	77.87	1.09	---	---
		2441	2.92	3.74	78.07	1.08	---	---
		2480	2.92	3.75	77.87	1.09	---	---

Test Graphs

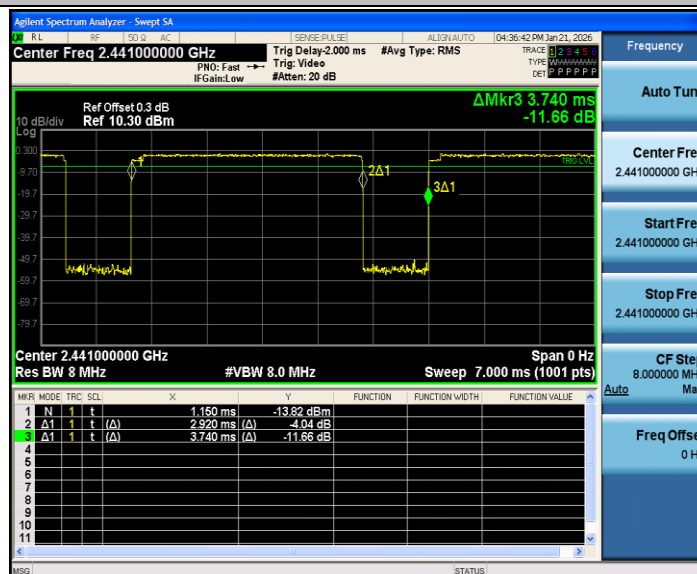




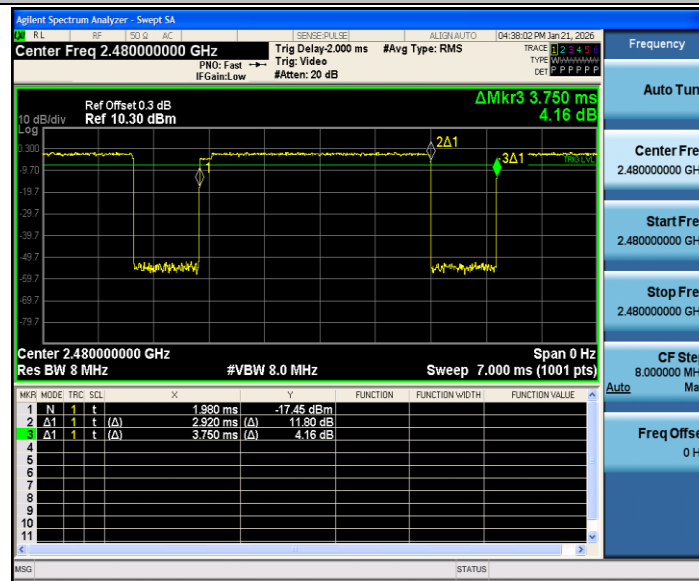
2DH5_Ant1_2402



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	-60.59	2.00	1.10	37.71	≤54	PASS
				AV	2381.165	-58.62	2.00	1.10	39.68	≤54	PASS
				AV	2390.000	-59.24	2.00	1.10	39.06	≤54	PASS
				Peak	2310.000	-49.65	2.00	0.00	47.55	≤74	PASS
				Peak	2376.335	-48.25	2.00	0.00	48.95	≤74	PASS
				Peak	2390.000	-51.31	2.00	0.00	45.89	≤74	PASS
		High	2480	AV	2483.500	-58.94	2.00	1.10	39.36	≤54	PASS
				AV	2484.560	-58.02	2.00	1.10	40.28	≤54	PASS
				AV	2500.000	-59.78	2.00	1.10	38.52	≤54	PASS
				Peak	2483.500	-50.05	2.00	0.00	47.15	≤74	PASS
				Peak	2492.560	-48.38	2.00	0.00	48.82	≤74	PASS
				Peak	2500.000	-51.35	2.00	0.00	45.85	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-60.56	2.00	1.09	37.73	≤54	PASS
				AV	2364.680	-58.64	2.00	1.09	39.65	≤54	PASS
				AV	2390.000	-59.66	2.00	1.09	38.63	≤54	PASS
				Peak	2310.000	-50.88	2.00	0.00	46.32	≤74	PASS
				Peak	2352.605	-48.99	2.00	0.00	48.21	≤74	PASS
				Peak	2390.000	-51.38	2.00	0.00	45.82	≤74	PASS
		High	2480	AV	2483.500	-59.04	2.00	1.09	39.25	≤54	PASS
				AV	2483.840	-58.8	2.00	1.09	39.49	≤54	PASS
				AV	2500.000	-59.65	2.00	1.09	38.64	≤54	PASS
				Peak	2483.500	-49.52	2.00	0.00	47.68	≤74	PASS
				Peak	2485.600	-48.88	2.00	0.00	48.32	≤74	PASS
				Peak	2500.000	-52.5	2.00	0.00	44.70	≤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

