

Appendix A: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	1.020	2401.487	2402.507	---	---
		2441	1.035	2440.466	2441.501	---	---
		2480	1.041	2479.463	2480.504	---	---
2DH5	Ant1	2402	1.356	2401.310	2402.666	---	---
		2441	1.359	2440.307	2441.666	---	---
		2480	1.359	2479.307	2480.666	---	---
3DH5	Ant1	2402	1.323	2401.328	2402.651	---	---
		2441	1.320	2440.328	2441.648	---	---
		2480	1.317	2479.328	2480.645	---	---

Test Graphs



DH5_Ant1_2441

Spectrum Analyzer 1
Swept SA

KEYSIGHT Input: RF
Coupling: DC
Align: Auto

Input Z: 50 Ω
Corrections: Off
Freq Ref: Int (S)

#Atten: 40 dB

PNO: Best Wide
Gate: Off
IF Gain: Low
Sig Track: Off

#Avg Type: Power (RMS)
Trig: Free Run

1 2 3 4 5 6
M M M M M M
P P P P P P

Center Frequency
2.441000000 GHz

Span
3.000000000 MHz

Sweep Span
Zero Span

Full Span

Start Freq
2.439500000 GHz

Stop Freq
2.442500000 GHz

AUTO TUNE

CF Step
300.000 kHz

Auto
Man

Freq Offset
0 Hz

X Axis Scale
Log
Lin

Signal Track
(Span Zoom)

1 Spectrum

Ref Lvl Offset 11.75 dB
Ref Level 30.00 dBm

Δ Mkr3 1.035 MHz
0.02 dB

Log

20.0

10.0

0.00

-10.0

-20.0

-30.0

-40.0

-50.0

-60.0

Center 2.441000 GHz

#Video BW 100 kHz

Span 3.000 MHz

#Res BW 30 kHz

Sweep 3.20 ms (1001 pts)

5 Marker Table

	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.440466 GHz	-14.06 dBm			
2	N	1	f	2.441153 GHz	6.421 dBm			
3	Δ 1	1	f	(Δ)	1.035 MHz (Δ)	0.02199 dB		
4								
5								
6								

Nov 25, 2024
4:23:39 PM

DH5_Ant1_2480



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

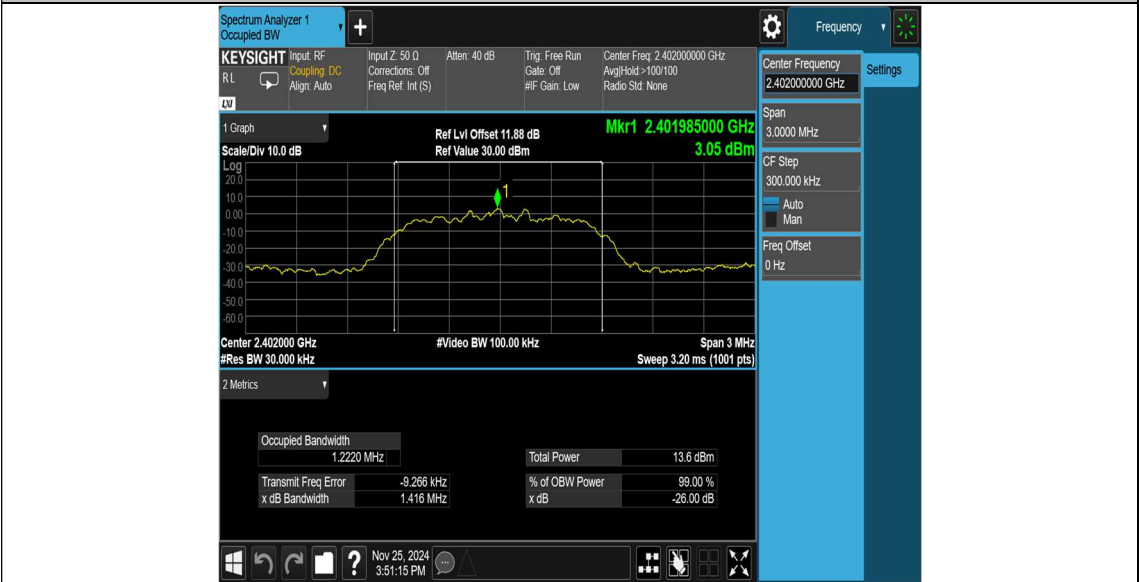
TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.93846	2401.5176	2402.4560	---	---
		2441	0.93435	2440.5116	2441.4460	---	---
		2480	0.93833	2479.5115	2480.4498	---	---
2DH5	Ant1	2402	1.2231	2401.3790	2402.6021	---	---
		2441	1.2290	2440.3744	2441.6034	---	---
		2480	1.2237	2479.3745	2480.5982	---	---
3DH5	Ant1	2402	1.2287	2401.3683	2402.5970	---	---
		2441	1.2331	2440.3640	2441.5971	---	---
		2480	1.2275	2479.3654	2480.5929	---	---

Test Graphs

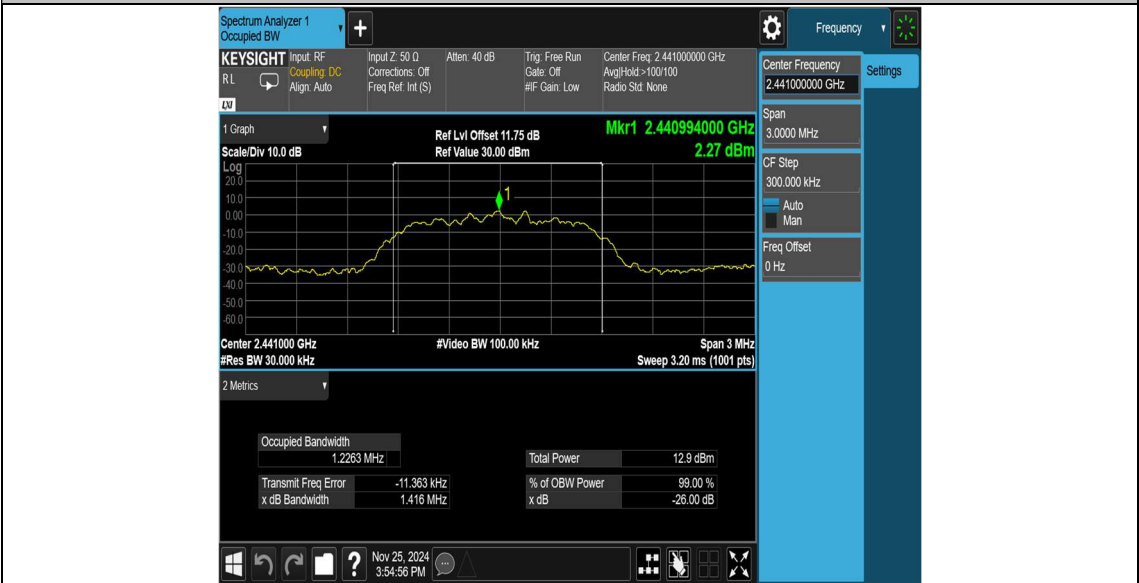




2DH5_Ant1_2402



2DH5_Ant1_2441



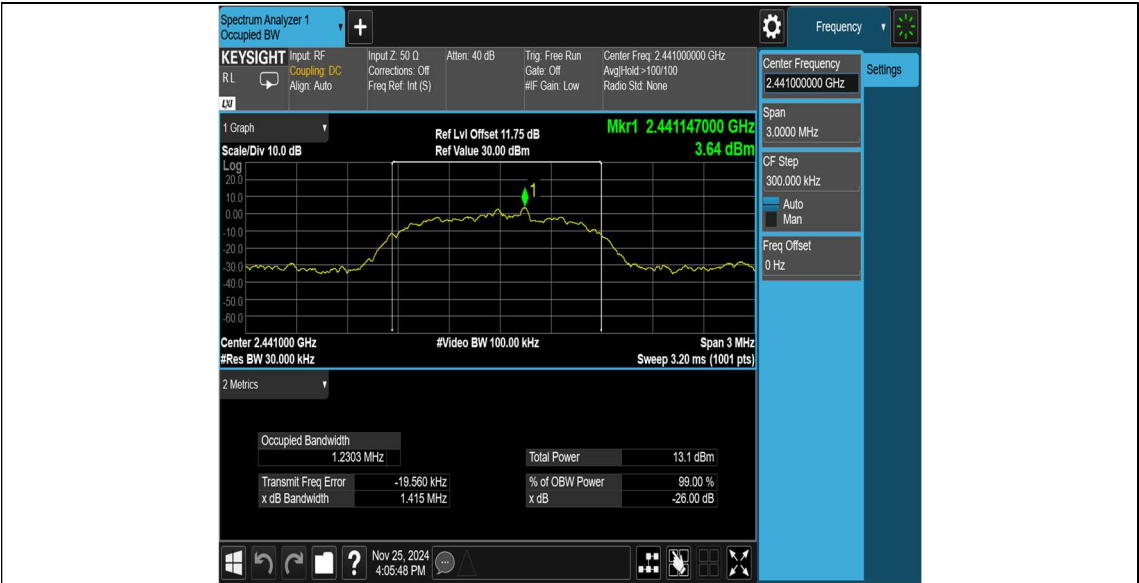
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



Appendix C: Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	9.46	≤ 20.97	PASS
		2441	8.86	≤ 20.97	PASS
		2480	7.53	≤ 20.97	PASS
2DH5	Ant1	2402	7.90	≤ 20.97	PASS
		2441	7.19	≤ 20.97	PASS
		2480	5.39	≤ 20.97	PASS
3DH5	Ant1	2402	8.19	≤ 20.97	PASS
		2441	7.49	≤ 20.97	PASS
		2480	5.63	≤ 20.97	PASS

Test Graphs



DH5_Ant1_2441

Spectrum Analyzer 1
Swept SA

KEYSIGHT
Input: RF
Coupling: DC
Align: Auto

Input Z: 50 Ω
Corrections: Off
Freq Ref: Int (S)

#Atten: 40 dB

PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off

#Avg Type: Power (RMS)
Trig: Free Run

1 2 3 4 5 6
M M M M M M
P P P P P P

Center Frequency
2.44100000 GHz

Span
8.00000000 MHz

Swept Span
Zero Span

Full Span

Start Freq
2.437000000 GHz

Stop Freq
2.445000000 GHz

AUTO TUNE

CF Step
800.000 kHz

Auto
Man

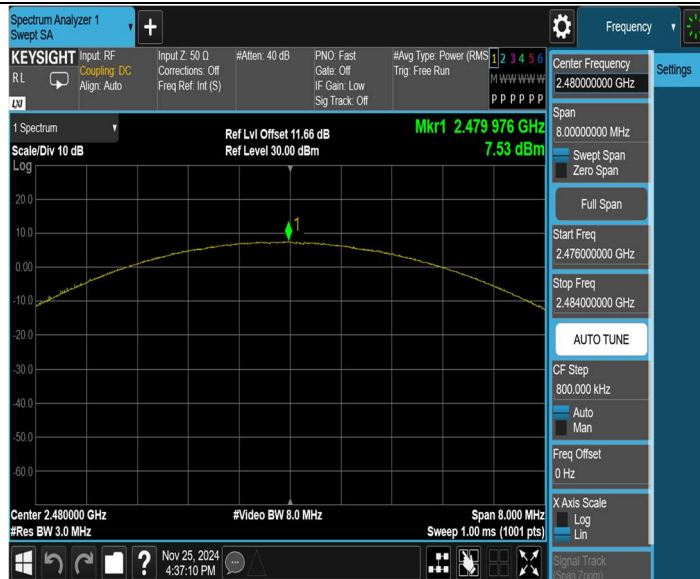
Freq Offset
0 Hz

X Axis Scale
Log
Lin

Signal Track
(Span Zoom)

1 Spectrum
Scale/Div 10 dB
Log
Ref Lvl Offset 11.75 dB
Ref Level 30.00 dBm
Mkr1 2.440992 GHz
8.86 dBmCenter 2.441000 GHz
#Res BW 3.0 MHz
#Video BW 8.0 MHz
Span 8.000 MHz
Sweep 1.00 ms (1001 pts)Nov 25, 2024
4:36:28 PM

DH5_Ant1_2480



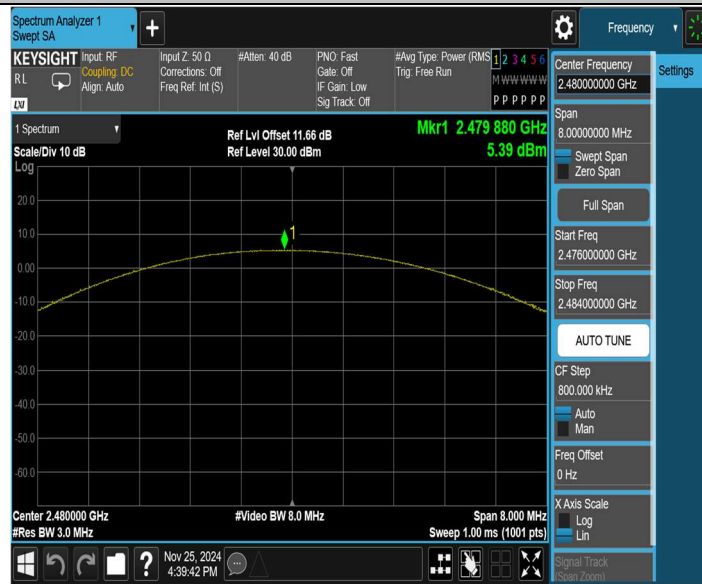
2DH5_Ant1_2402



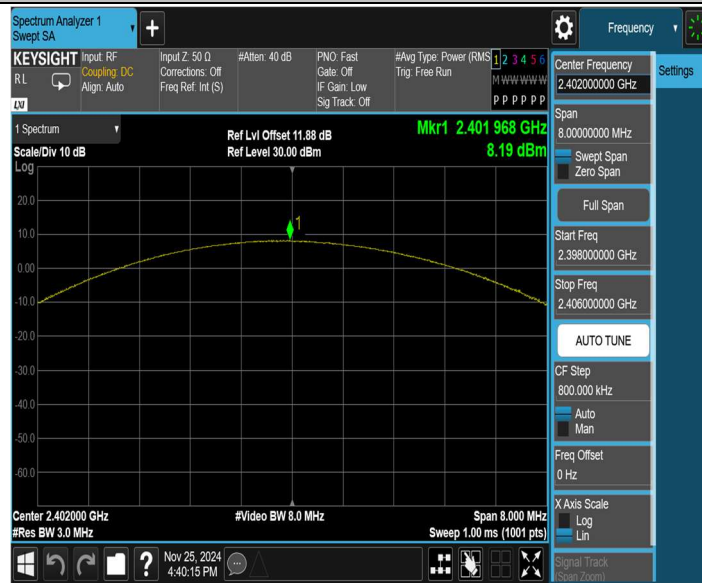
2DH5_Ant1_2441



2DH5_Ant1_2480



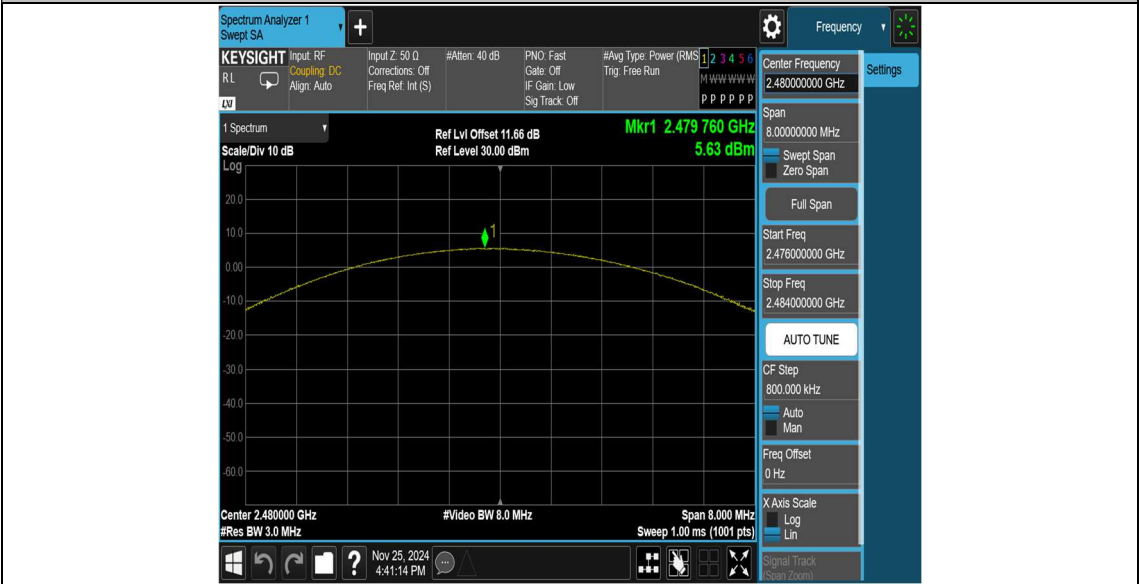
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



Appendix D: Carrier frequency separation

Test Result

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.002	≥ 0.694	PASS
2DH5	Ant1	Hop	1.006	≥ 0.906	PASS
3DH5	Ant1	Hop	0.98	≥ 0.882	PASS

Test Graphs





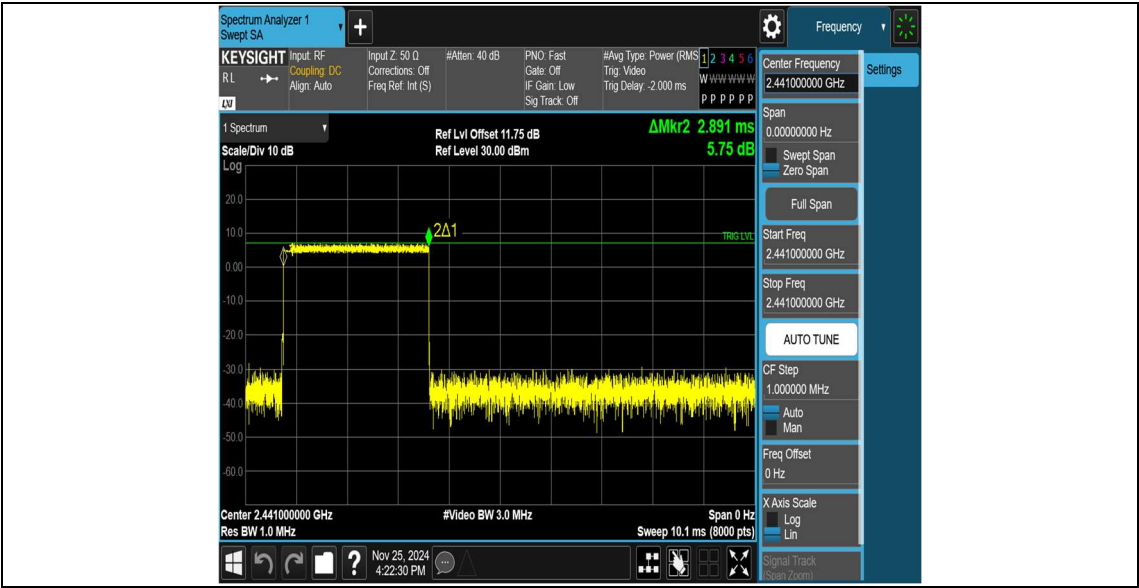
Appendix E: Time of occupancy

Test Result

TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.887	106.67	0.308	≤0.4	PASS
2DH5	Ant1	Hop	2.888	106.67	0.308	≤0.4	PASS
3DH5	Ant1	Hop	2.891	106.67	0.308	≤0.4	PASS

Test Graphs





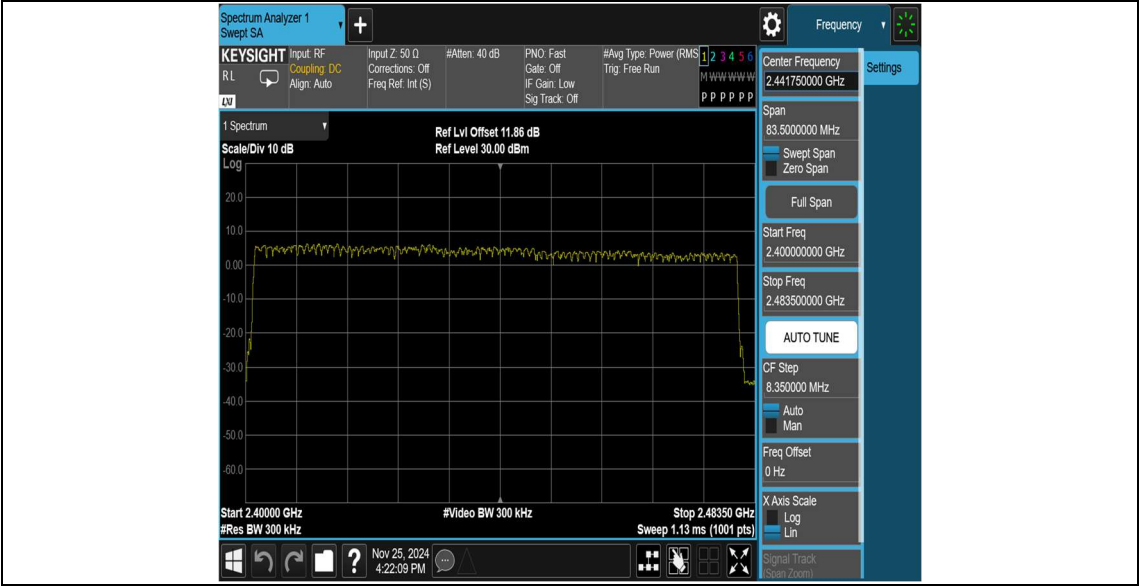
Appendix F: Number of hopping channels

Test Result

TestMode	Antenna	Frequency[MHz]	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





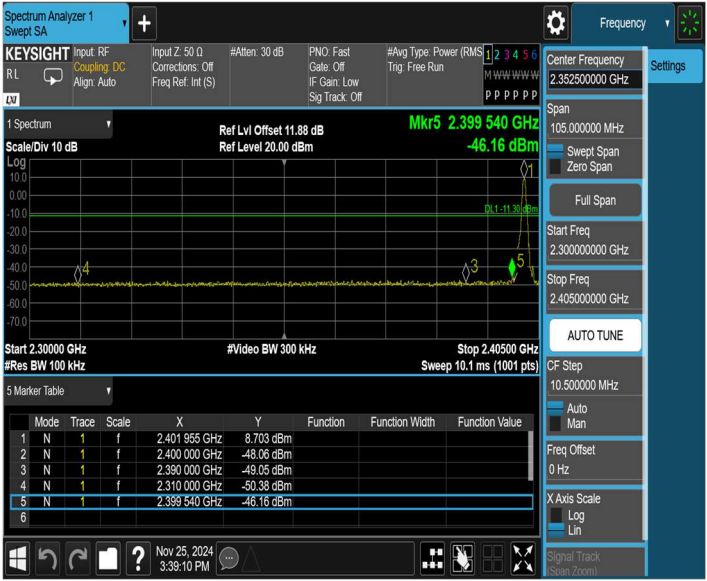
Appendix G: Band edge measurements

Test Result

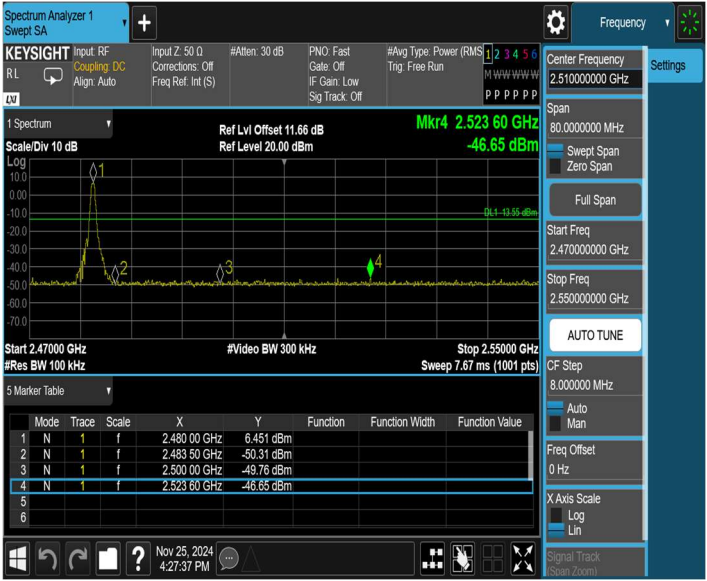
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	8.70	-46.16	≤-11.3	PASS
		High	2480	6.45	-46.65	≤-13.55	PASS
		Low	Hop_2402	7.64	-47.11	≤-12.36	PASS
		High	Hop_2480	6.77	-44.67	≤-13.23	PASS
2DH5	Ant1	Low	2402	5.40	-41.42	≤-14.61	PASS
		High	2480	3.17	-46.56	≤-16.83	PASS
		Low	Hop_2402	4.47	-45.62	≤-15.54	PASS
		High	Hop_2480	3.06	-45.89	≤-16.94	PASS
3DH5	Ant1	Low	2402	5.59	-40.04	≤-14.41	PASS
		High	2480	2.99	-47.01	≤-17.01	PASS
		Low	Hop_2402	4.31	-41.52	≤-15.69	PASS
		High	Hop_2480	3.27	-46.22	≤-16.73	PASS

Test Graphs

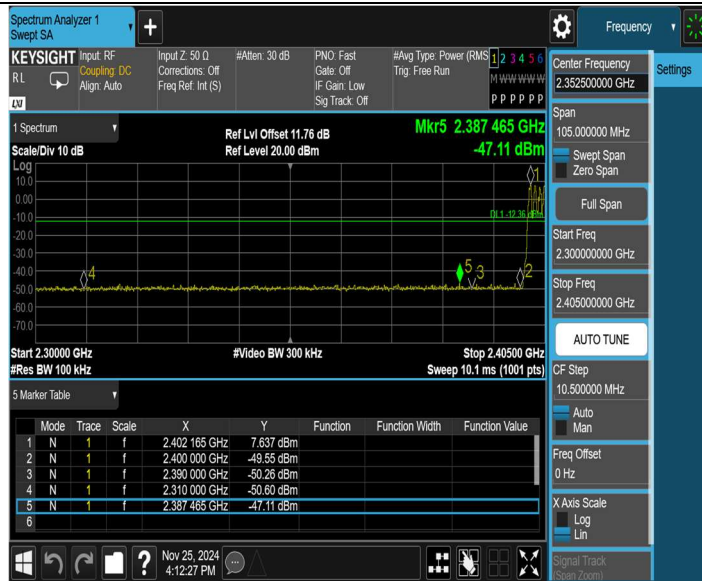
DH5_Ant1_Low_2402



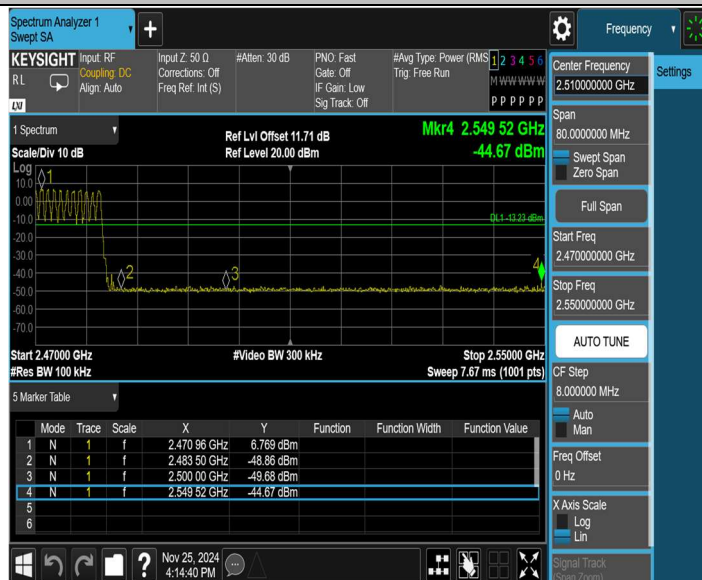
DH5_Ant1_High_2480



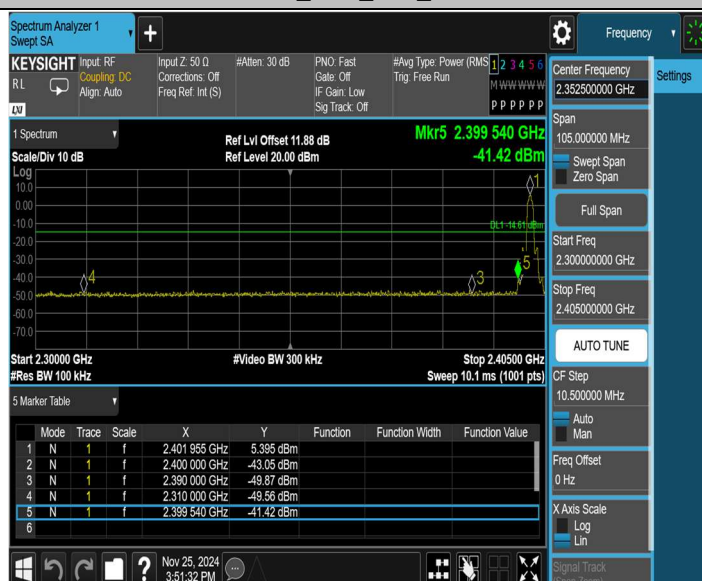
DH5_Ant1_Low_Hop_2402



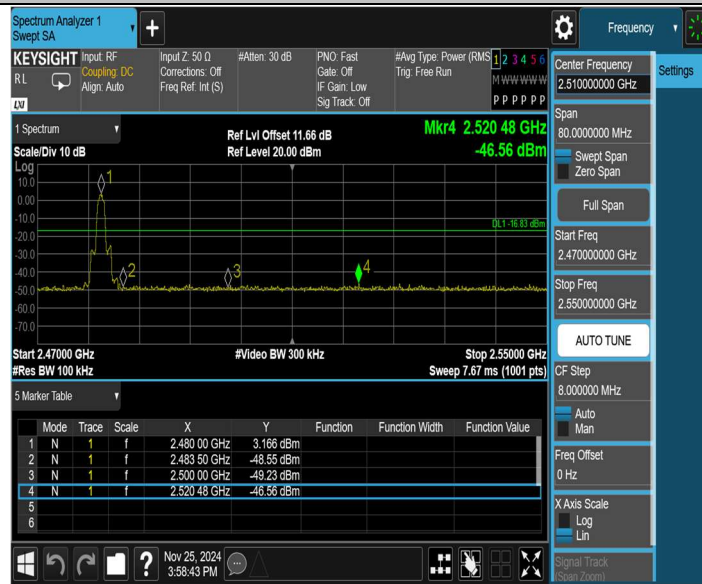
DH5_Ant1_High_Hop_2480



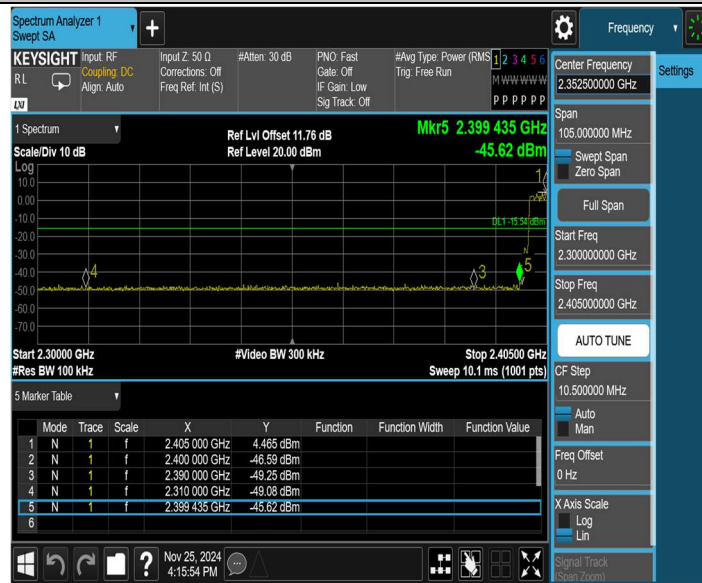
2DH5_Ant1_Low_2402



2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



2DH5_Ant1_High_Hop_2480