Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Turntable Player

Test Model: HP-H014

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Luo
Supervised by:	Nick Peng

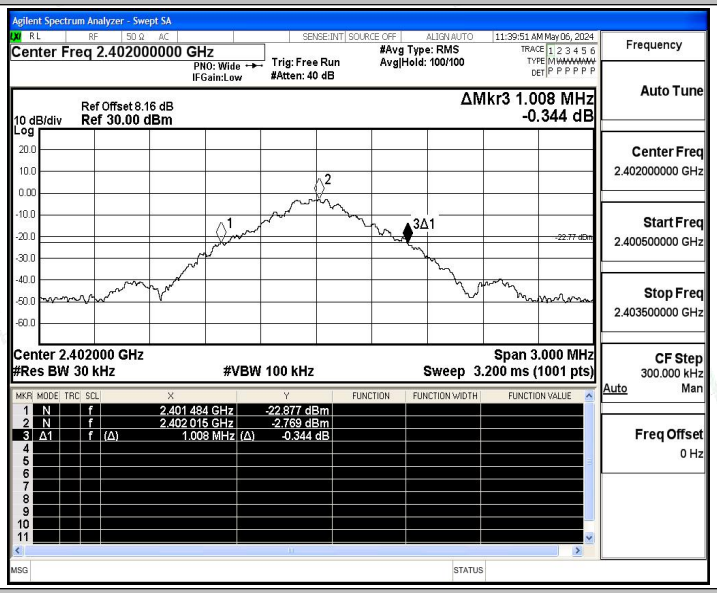
A.1 20dB Emission Bandwidth

Test Result

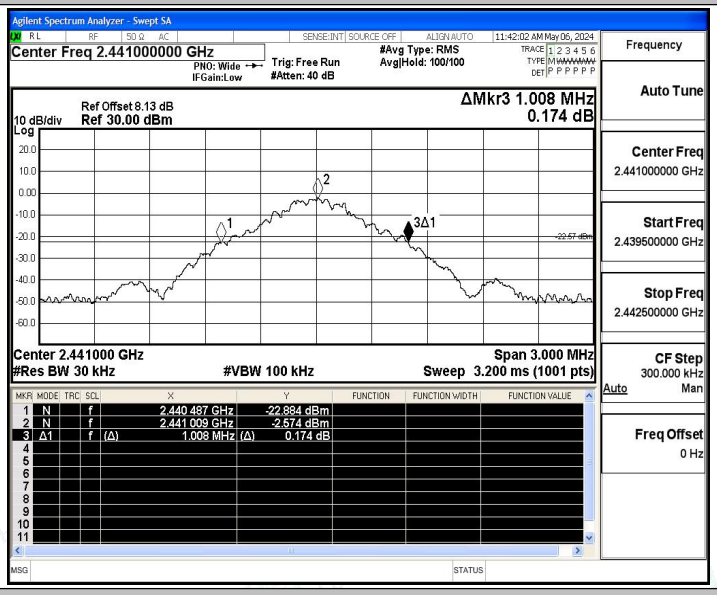
TestMode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	1.008	2401.484	2402.492	---	---
		2441	1.008	2440.487	2441.495	---	---
		2480	0.999	2479.481	2480.480	---	---
2DH5	Ant1	2402	1.293	2401.358	2402.651	---	---
		2441	1.308	2440.340	2441.648	---	---
		2480	1.296	2479.355	2480.651	---	---
3DH5	Ant1	2402	1.293	2401.346	2402.639	---	---
		2441	1.281	2440.349	2441.630	---	---
		2480	1.293	2479.346	2480.639	---	---

Test Graphs

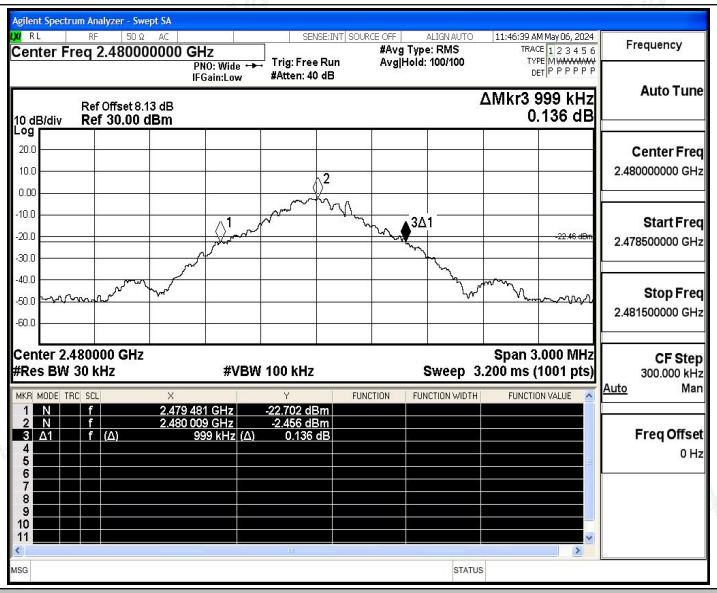
DH5_Ant1_2402



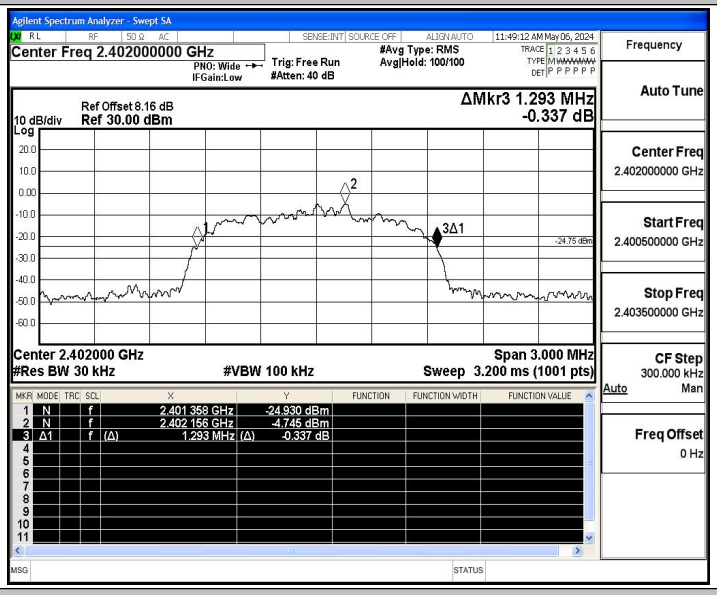
DH5_Ant1_2441



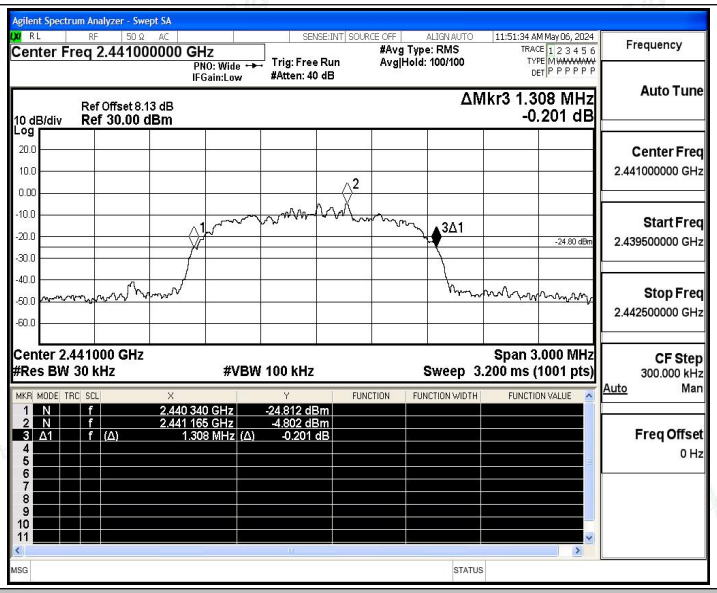
DH5_Ant1_2480



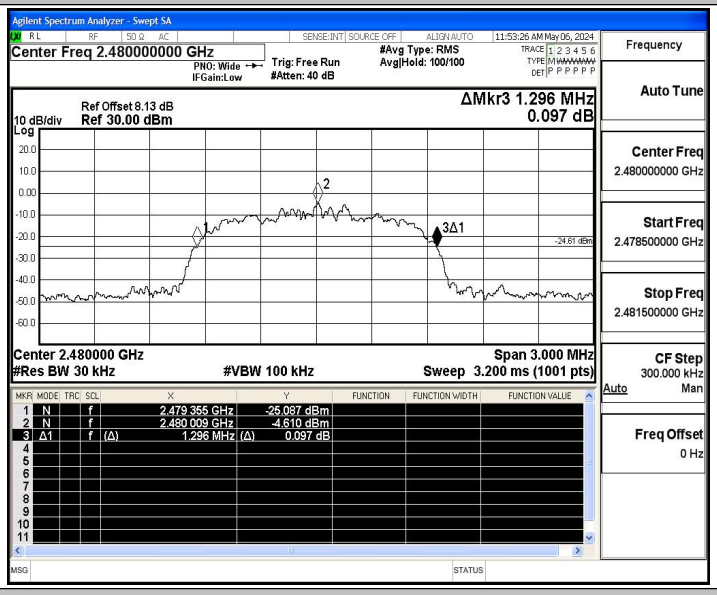
2DH5_Ant1_2402



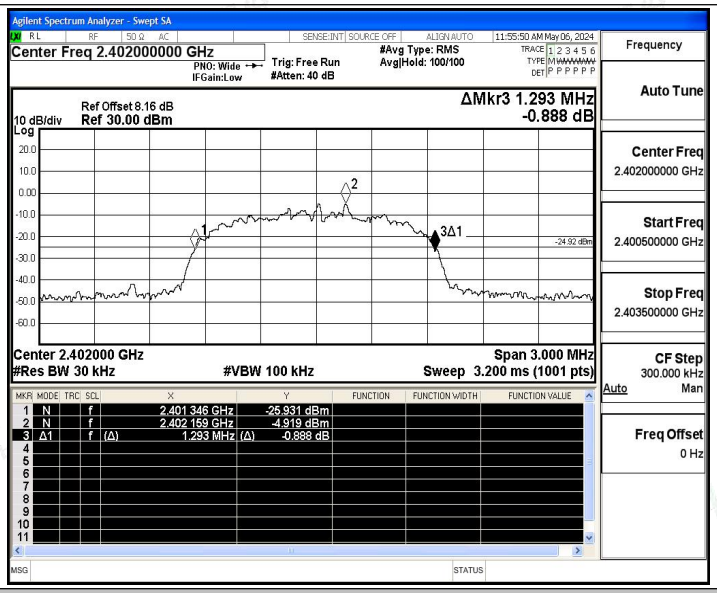
2DH5_Ant1_2441



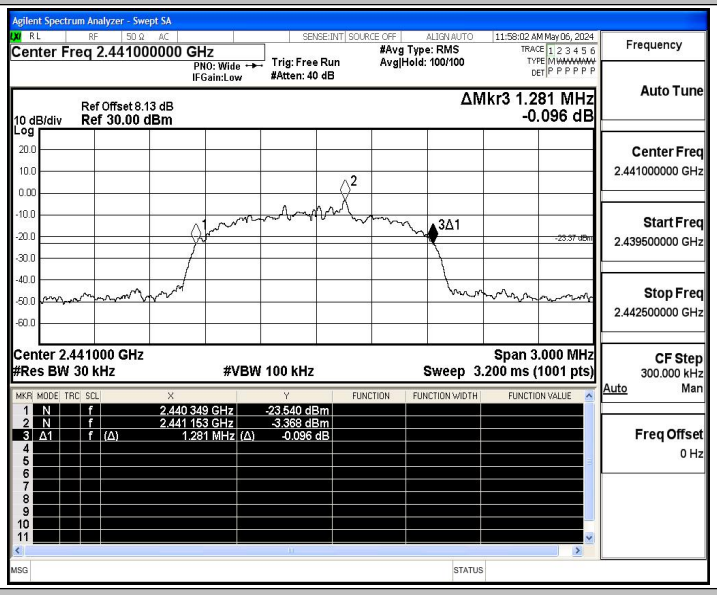
2DH5_Ant1_2480



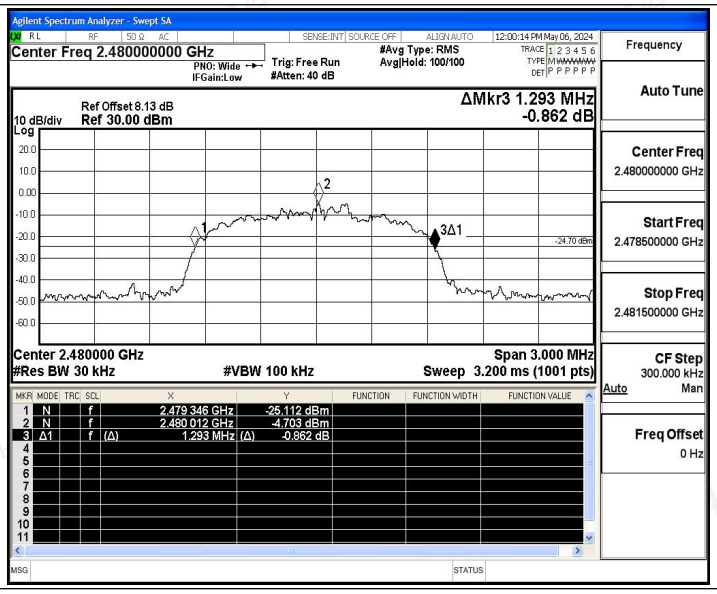
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 40 dB
#Avg Type: RMS
Avg|Hold: 100/100
12:00:14 PM May 06, 2024
Ref Offset 8.13 dB
10 dB/div
Ref 30.00 dBm
ΔMkr3 1.293 MHz
-0.862 dB
-24.70 dBm
Center 2.480000 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3.000 MHz
Sweep 3.200 ms (1001 pts)
1 N 1 f 2.479 346 GHz -25.112 dBm
2 N 1 f 2.480 012 GHz -4.703 dBm
3 Δ1 1 f (Δ) 1.293 MHz (Δ) -0.862 dB
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.478500000 GHz
Stop Freq
2.481500000 GHz
CF Step
300.000 kHz
Auto
Man
Freq Offset
0 Hz

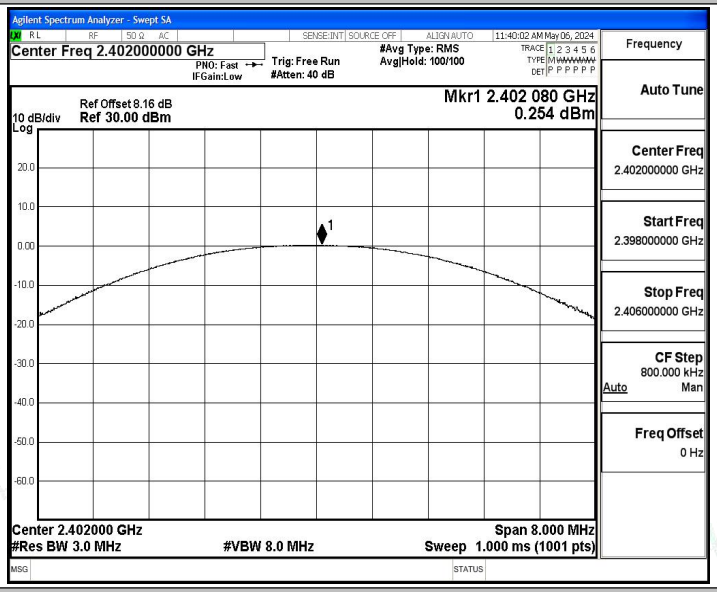
A.2 Maximum conducted output power

Test Result Peak

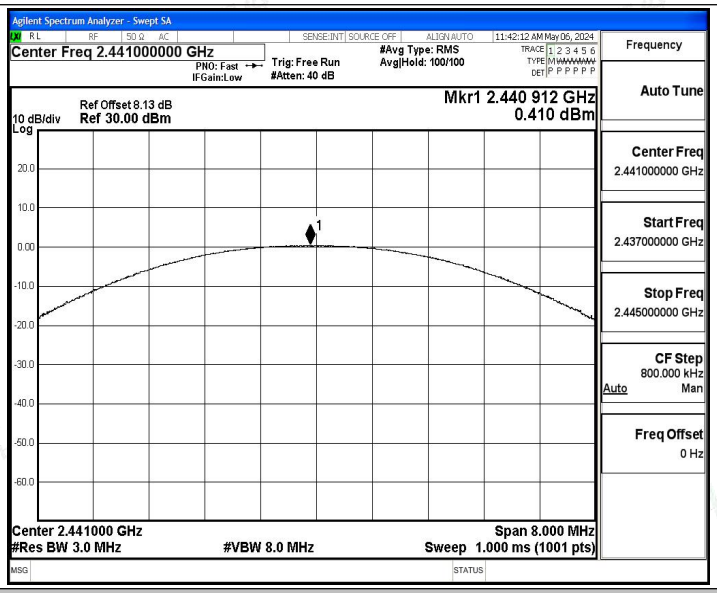
Test Mode	Antenna	Frequency[MHz]	Conducted Peak Powert[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.25	≤20.97	PASS
		2441	0.41	≤20.97	PASS
		2480	0.54	≤20.97	PASS
2DH5	Ant1	2402	-0.14	≤20.97	PASS
		2441	0.07	≤20.97	PASS
		2480	0.21	≤20.97	PASS
3DH5	Ant1	2402	0.01	≤20.97	PASS
		2441	0.25	≤20.97	PASS
		2480	0.37	≤20.97	PASS

Test Graphs

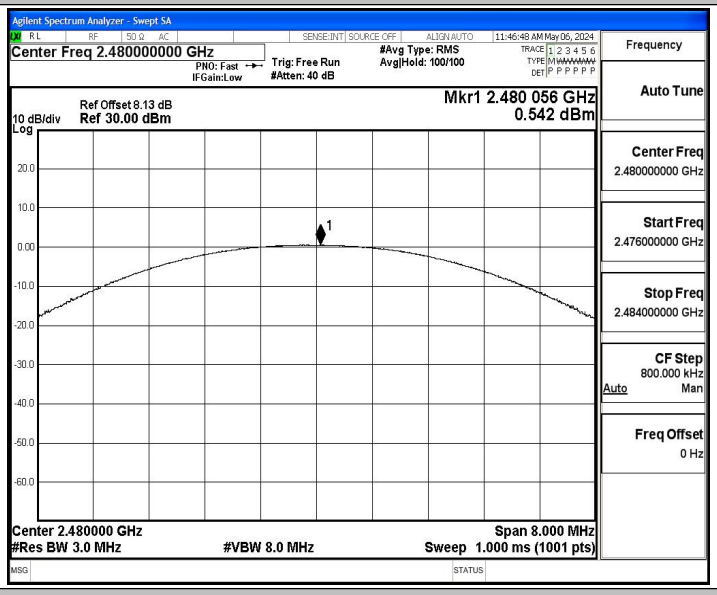
DH5_Ant1_2402



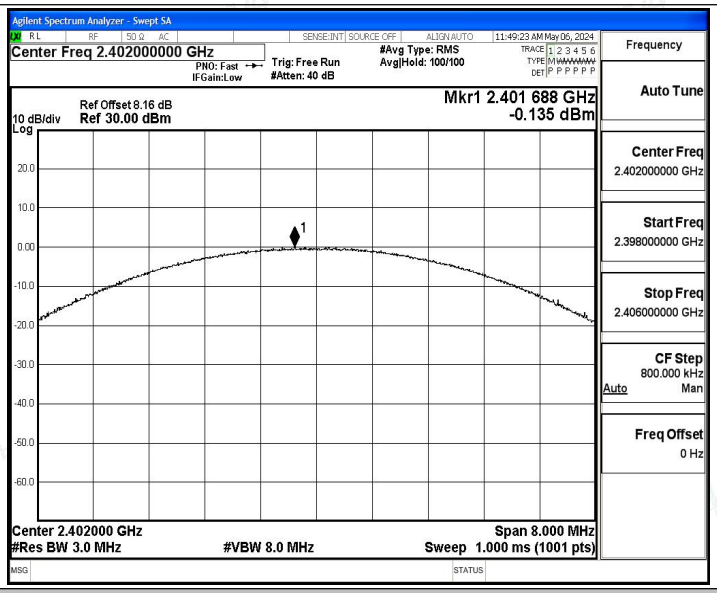
DH5_Ant1_2441



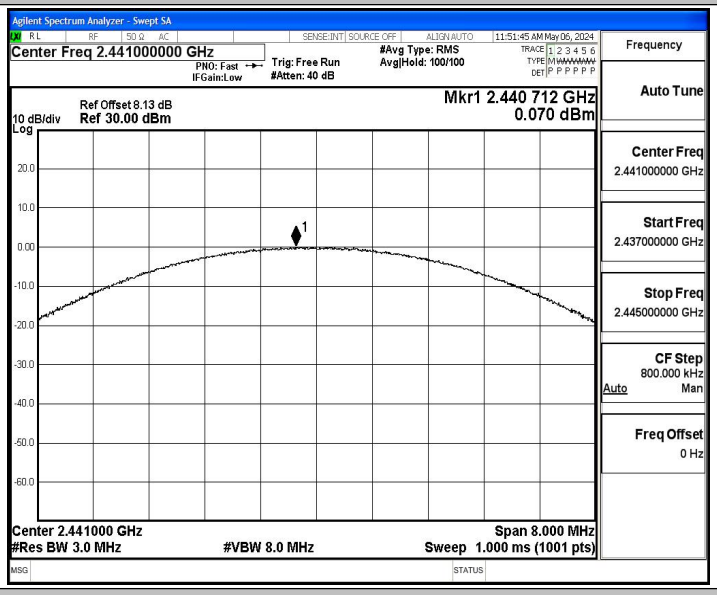
DH5_Ant1_2480



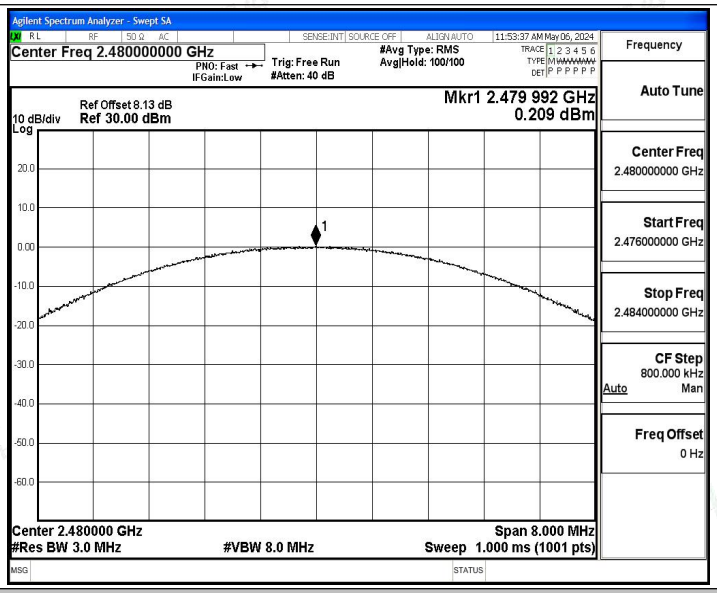
2DH5_Ant1_2402



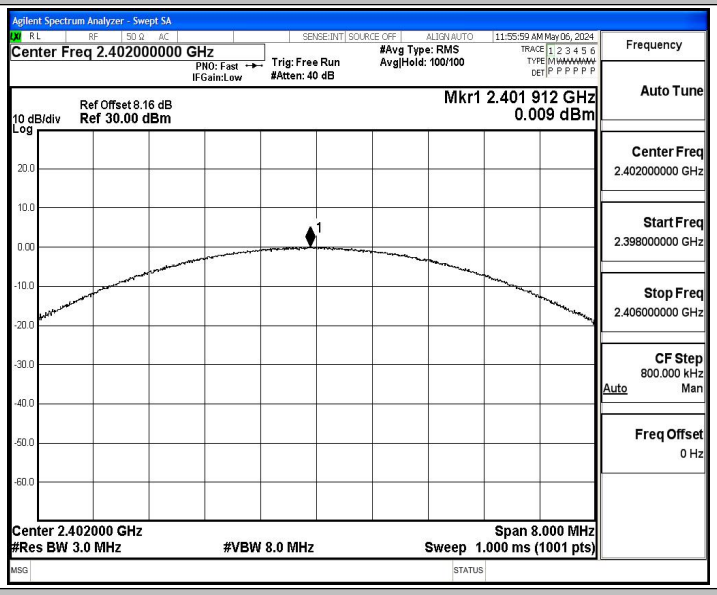
2DH5_Ant1_2441



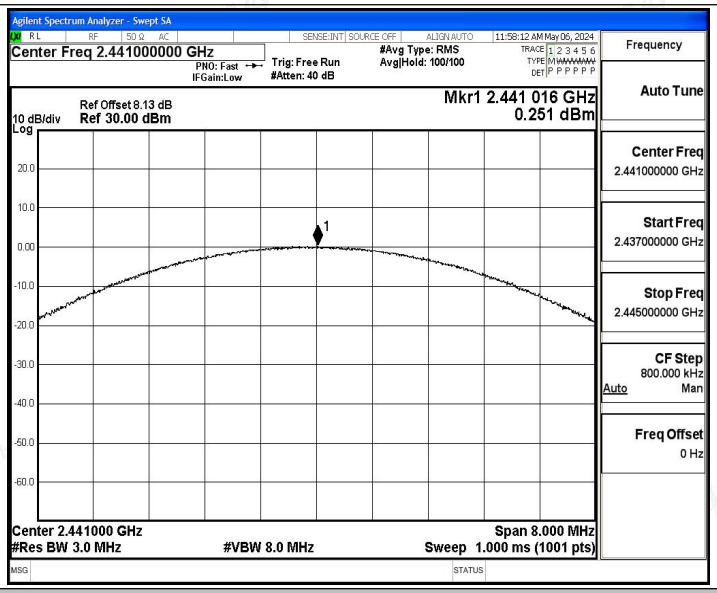
2DH5_Ant1_2480



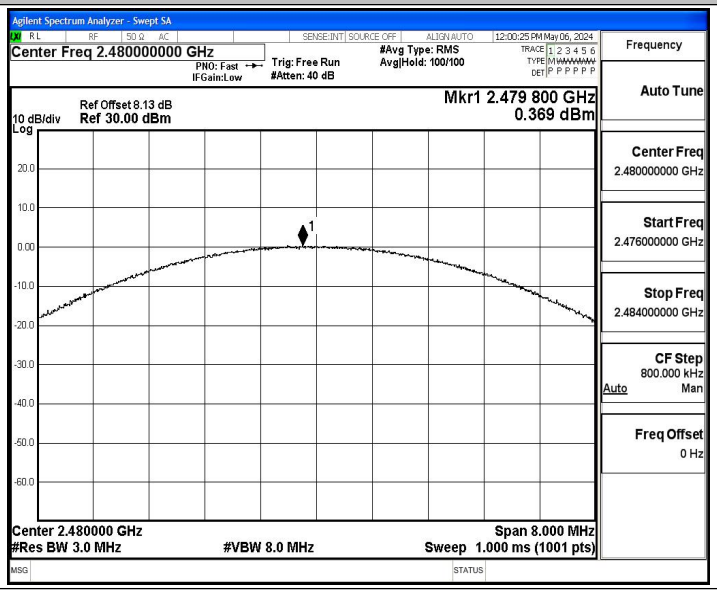
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



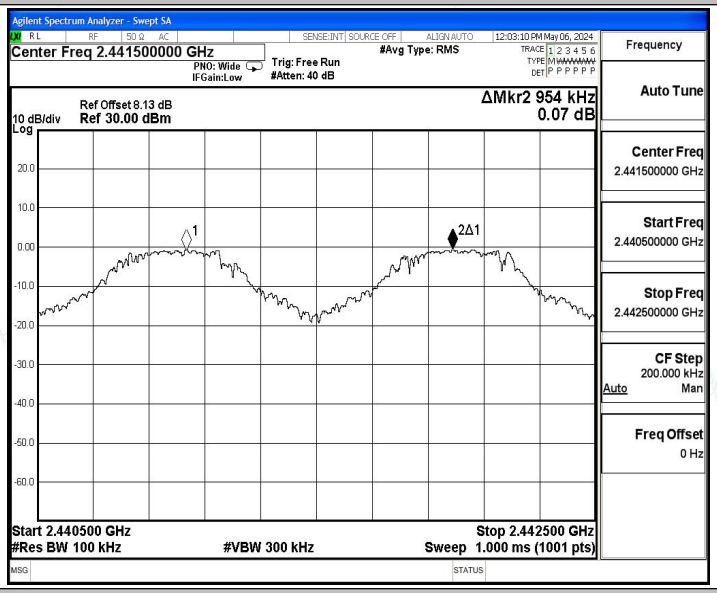
A.3 Carrier frequency separation

Test Result

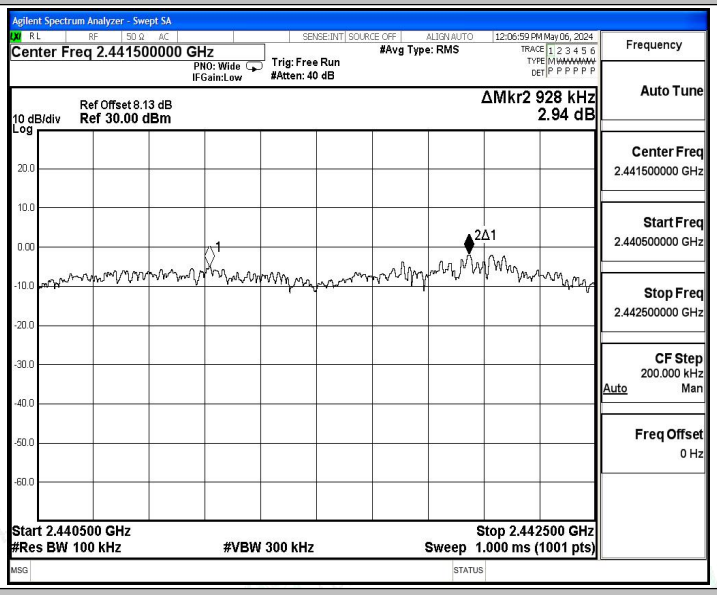
TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.954	≥0.672	PASS
2DH5	Ant1	Hop	0.928	≥0.872	PASS
3DH5	Ant1	Hop	1.22	≥0.862	PASS

Test Graphs

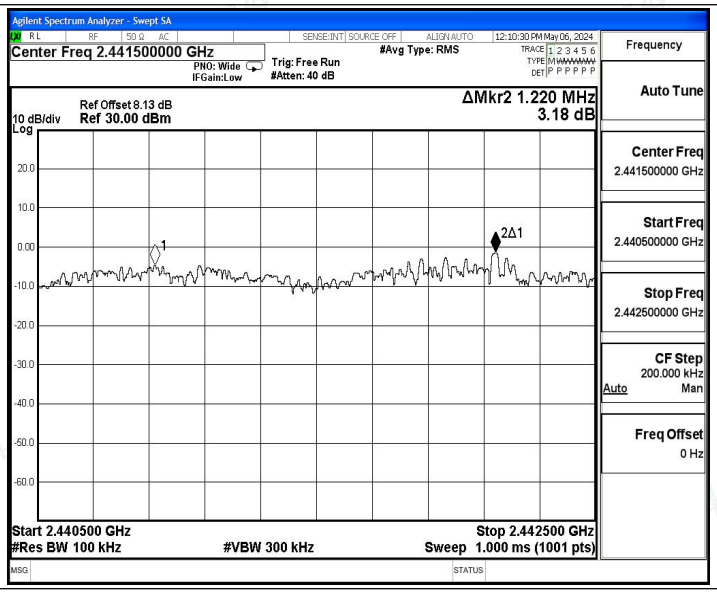
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441500000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 40 dB
#Avg Type: RMS
12:10:30 PM May 06, 2024
Ref Offset 8.13 dB
10 dB/div
Log
Ref 30.00 dBm
ΔMkr2 1.220 MHz
3.18 dB
Start 2.440500 GHz
#Res BW 100 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

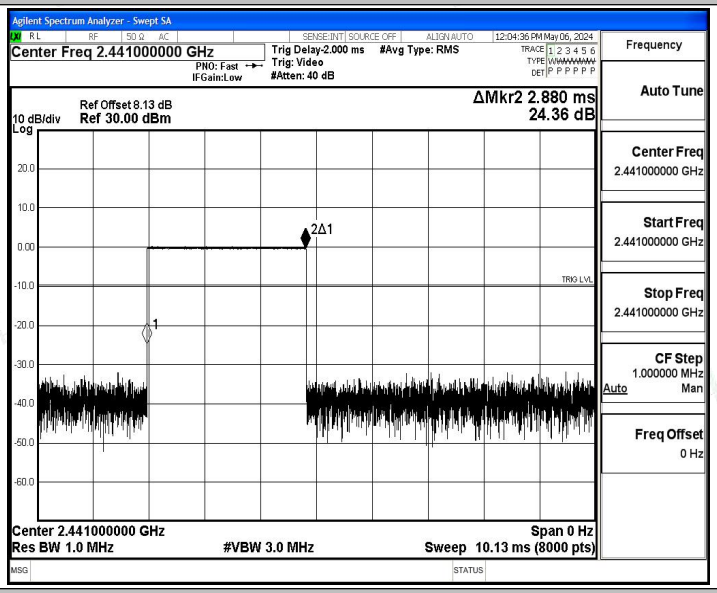
A.4 Time of occupancy

Test Result

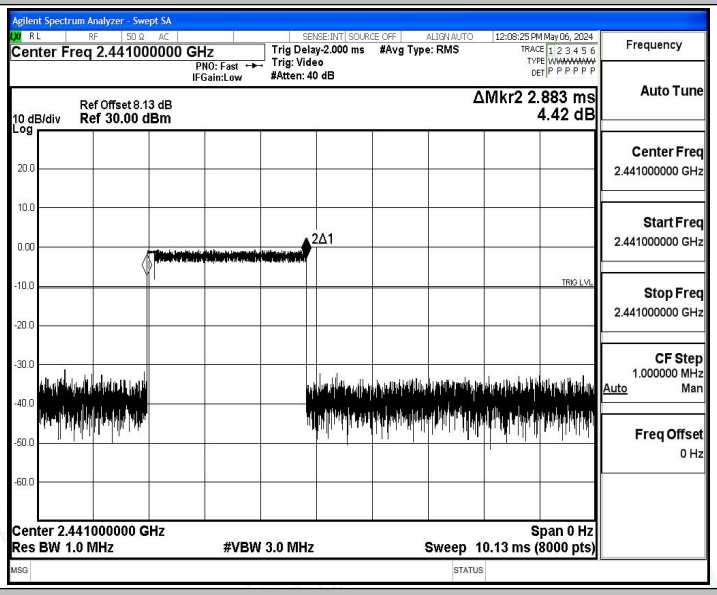
TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.880	106.67	0.307	≤0.4	PASS
2DH5	Ant1	Hop	2.883	106.67	0.308	≤0.4	PASS
3DH5	Ant1	Hop	2.885	106.67	0.308	≤0.4	PASS

Test Graphs

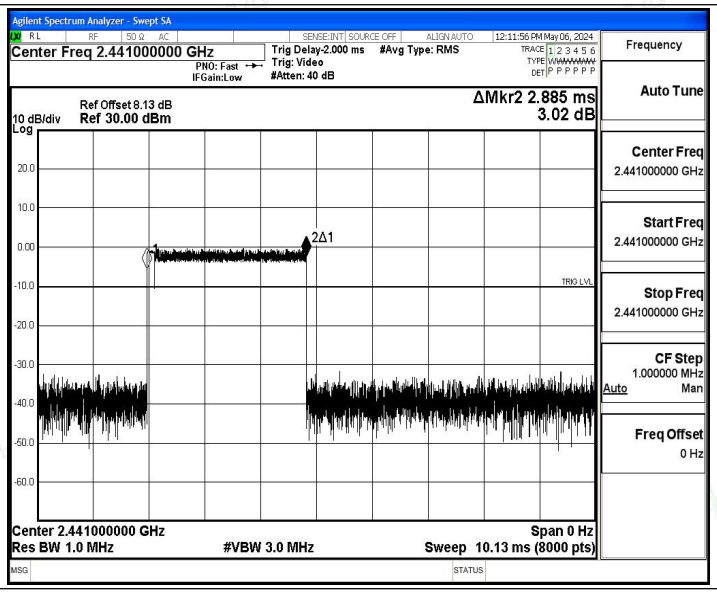
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
PNO: Fast
IFGain:Low
Trig Delay-2.000 ms
Trig: Video
#Avg Type: RMS
#Atten: 40 dB
12:11:56 PM May 06, 2024
Ref Offset 8.13 dB
10 dB/div Ref 30.00 dBm
Log
ΔMkr2 2.885 ms
3.02 dB
2Δ1
TRIG LVL
Center 2.441000000 GHz
Res BW 1.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 10.13 ms (8000 pts)
Frequency
Auto Tune
Center Freq
2.441000000 GHz
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
CF Step
1.000000 MHz
Auto
Man
Freq Offset
0 Hz

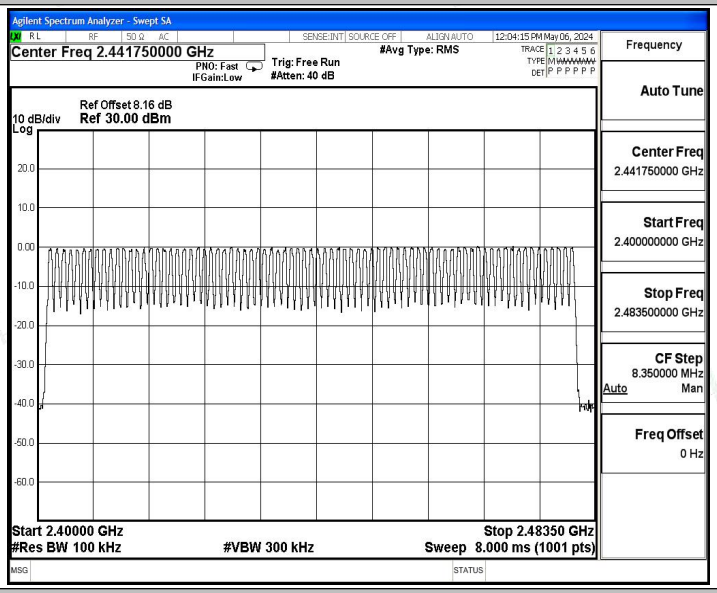
A.5 Number of hopping channels

Test Result

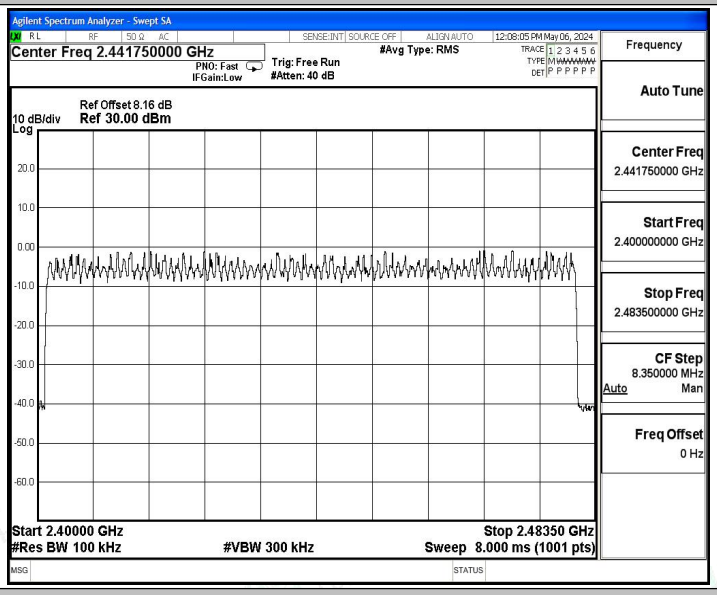
TestMode	Antenna	Frequency[MHz]	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

Test Graphs

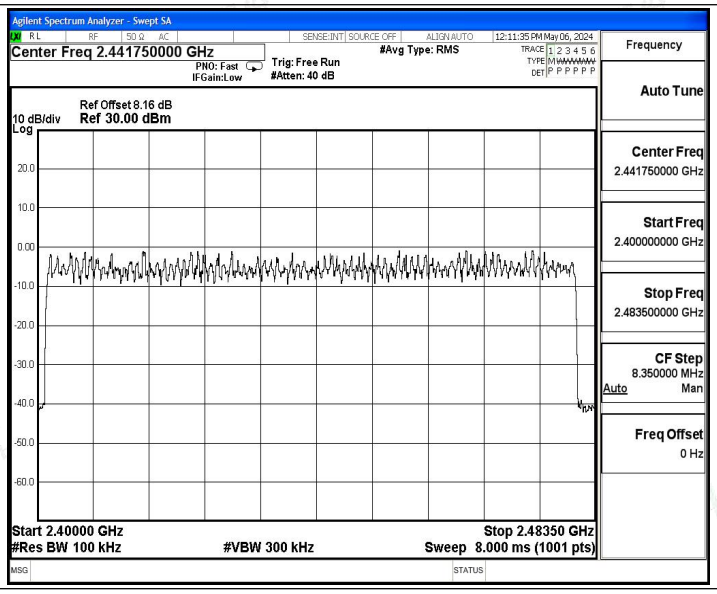
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441750000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
#Avg Type: RMS
12:11:35 PM May 06, 2024
Ref Offset 8.16 dB
10 dB/div
Log
Ref 30.00 dBm
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Start 2.40000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.48350 GHz
Sweep 8.000 ms (1001 pts)
Frequency
Auto Tune
Center Freq
2.441750000 GHz
Start Freq
2.400000000 GHz
Stop Freq
2.483500000 GHz
CF Step
8.350000 MHz
Auto
Man
Freq Offset
0 Hz

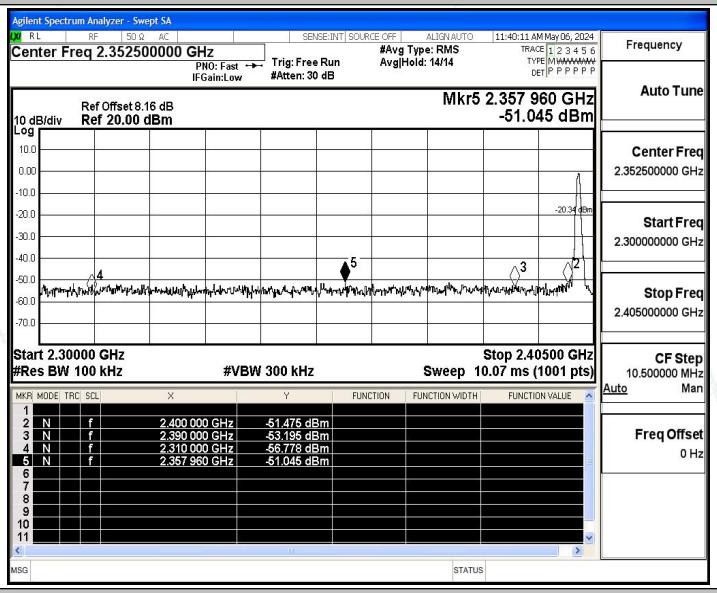
A.6 Band edge measurements

Test Result

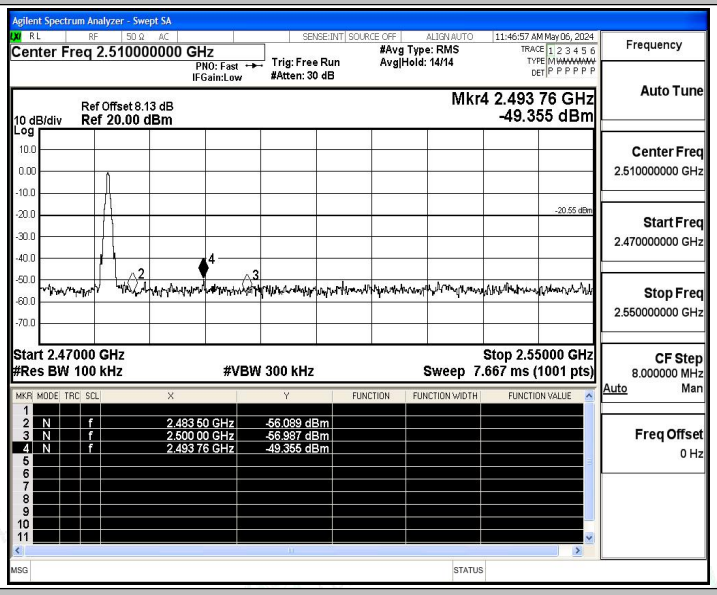
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.34	-51.05	≤-20.34	PASS
		High	2480	-0.55	-49.36	≤-20.55	PASS
		Low	Hop_2402	-0.86	-49.95	≤-20.86	PASS
		High	Hop_2480	-0.01	-49.22	≤-20.01	PASS
2DH5	Ant1	Low	2402	-1.56	-51	≤-21.56	PASS
		High	2480	-1.73	-51.05	≤-21.73	PASS
		Low	Hop_2402	-1.93	-49.92	≤-21.93	PASS
		High	Hop_2480	-2.59	-49.39	≤-22.59	PASS
3DH5	Ant1	Low	2402	-1.49	-50.67	≤-21.49	PASS
		High	2480	-1.06	-49.62	≤-21.06	PASS
		Low	Hop_2402	-1.91	-49.63	≤-21.91	PASS
		High	Hop_2480	-1.23	-49.25	≤-21.23	PASS

Test Graphs

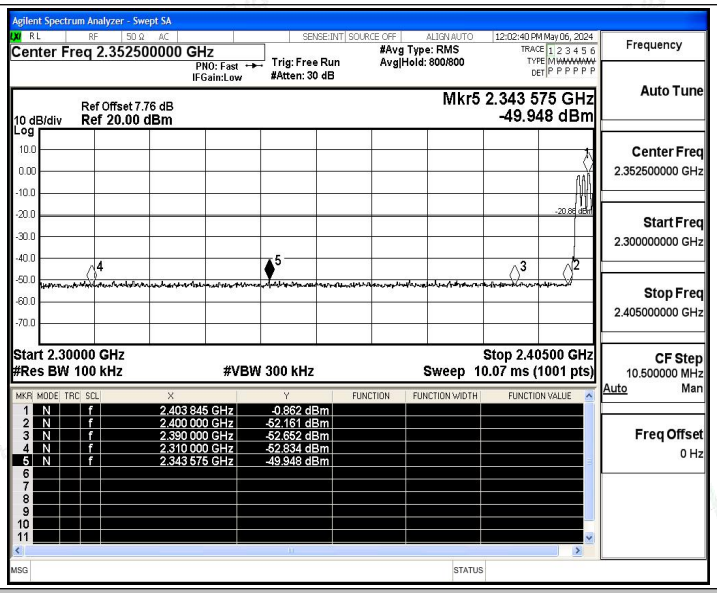
DH5_Ant1_Low_2402



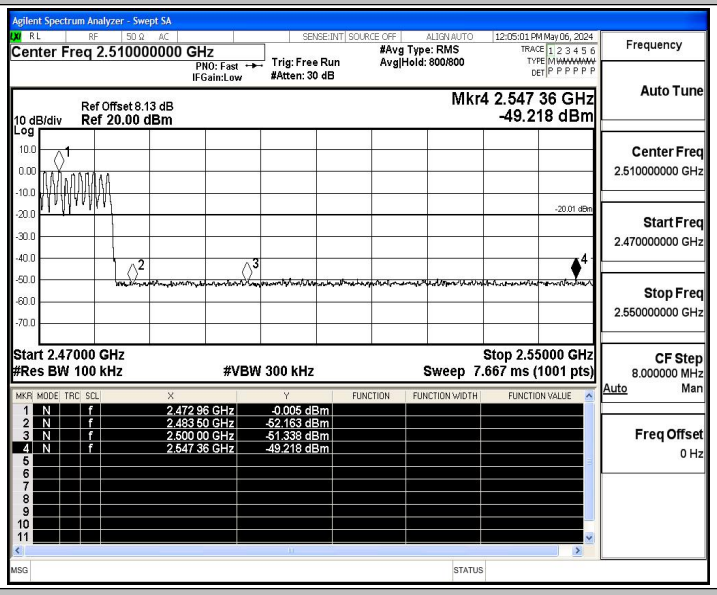
DH5_Ant1_High_2480



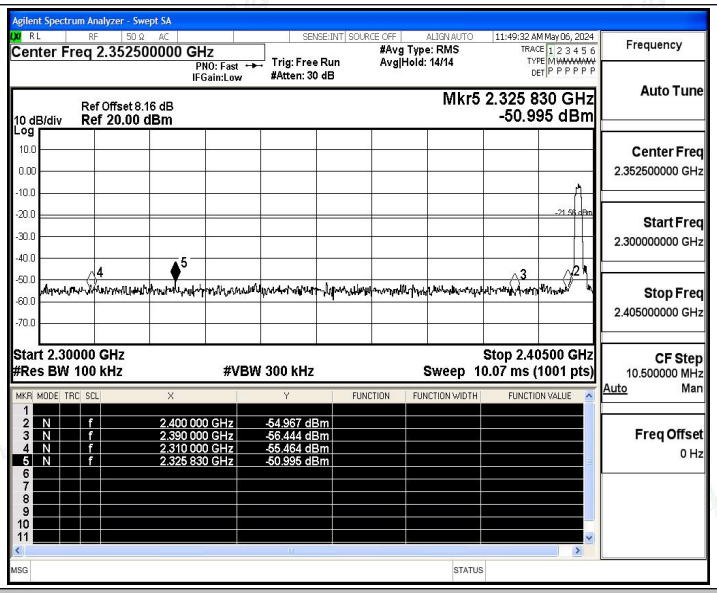
DH5_Ant1_Low_Hop_2402



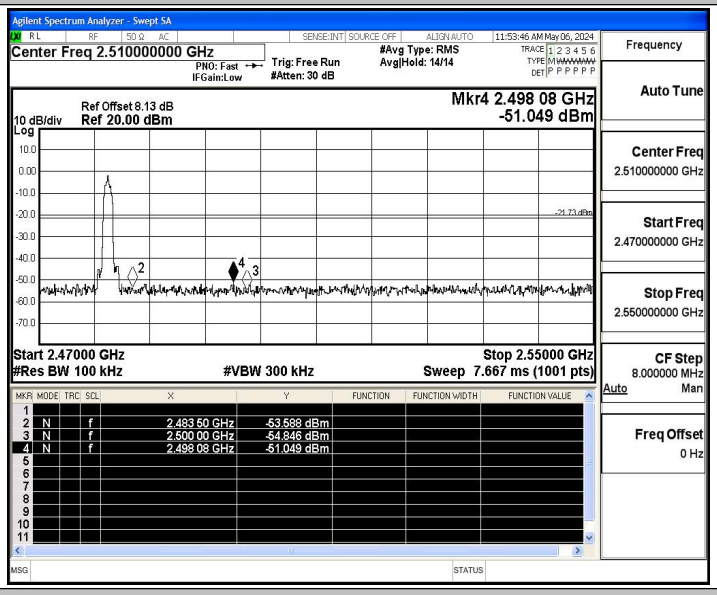
DH5_Ant1_High_Hop_2480



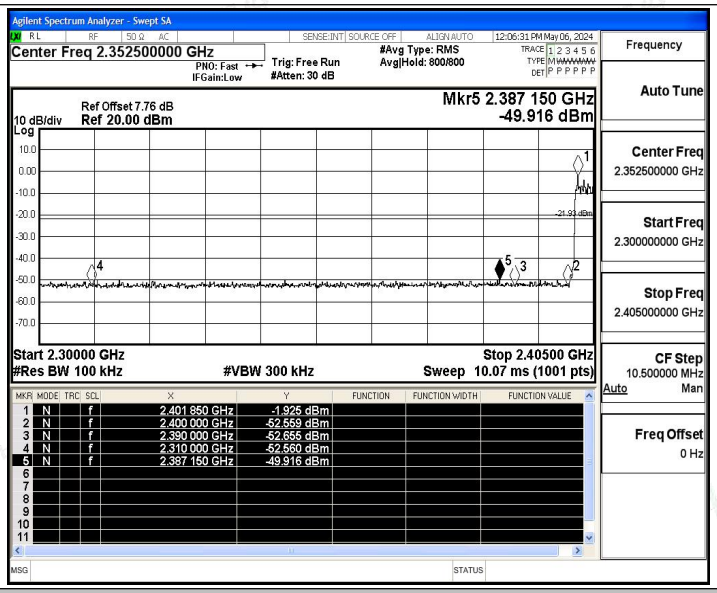
2DH5_Ant1_Low_2402



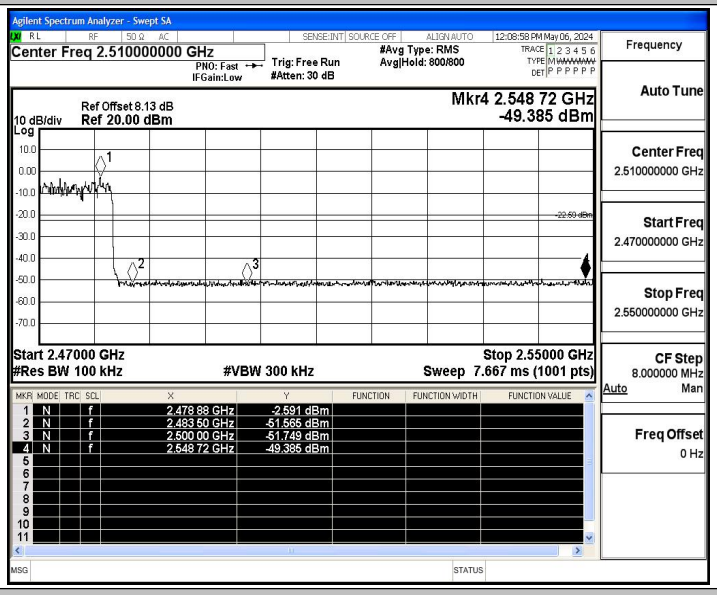
2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



2DH5_Ant1_High_Hop_2480



3DH5_Ant1_Low_2402