Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Bluetooth Speaker

Test Model: A SPEAKER06

Environmental Conditions

Temperature:	23.5 ° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Monkey Li
Supervised by:	Li Huan

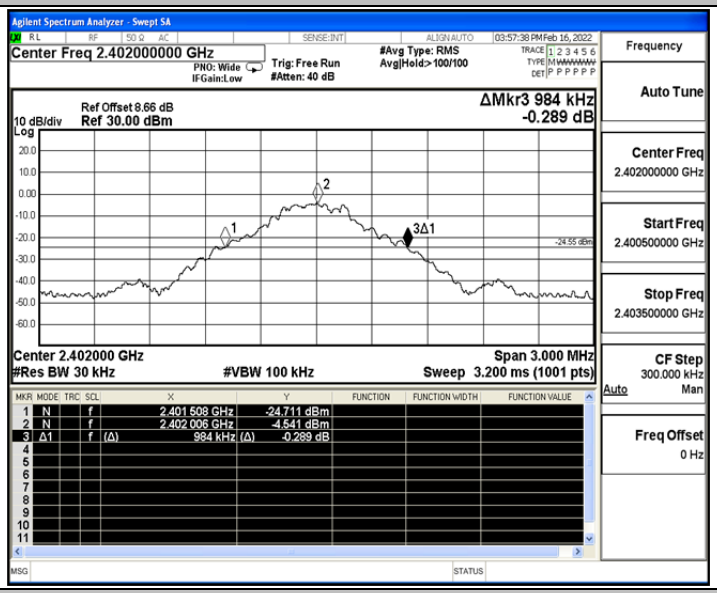
A.1 20dB Emission Bandwidth

Test Result

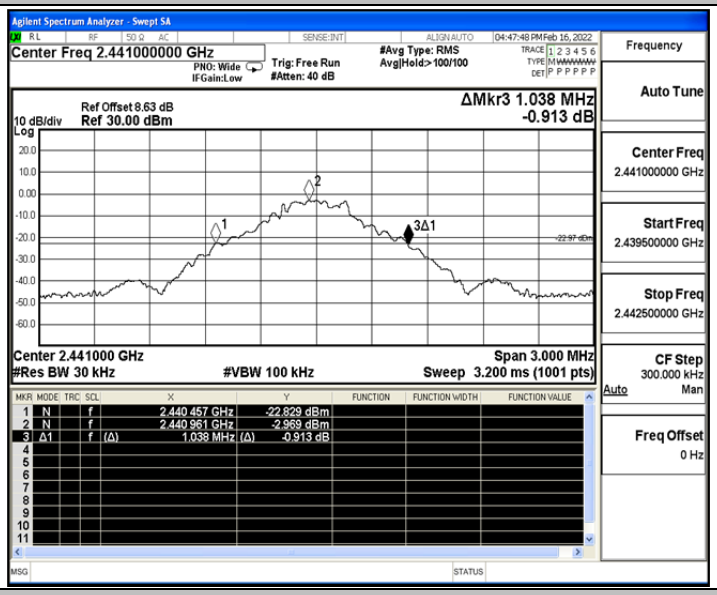
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.984	2401.508	2402.492	---	---
		2441	1.038	2440.457	2441.495	---	---
		2480	1.041	2479.448	2480.489	---	---
2DH5	Ant1	2402	1.296	2401.349	2402.645	---	---
		2441	1.323	2440.325	2441.648	---	---
		2480	1.317	2479.328	2480.645	---	---
3DH5	Ant1	2402	1.296	2401.337	2402.633	---	---
		2441	1.296	2440.337	2441.633	---	---
		2480	1.308	2479.334	2480.642	---	---

Test Graphs

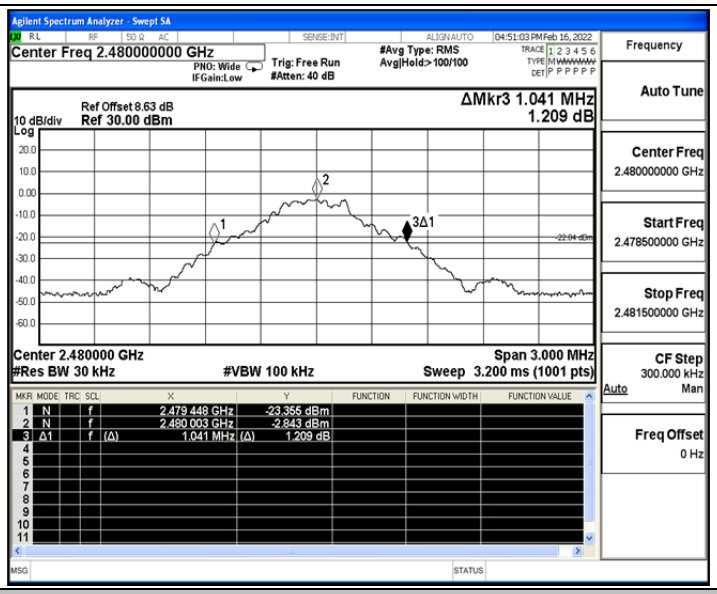
DH5_Ant1_2402



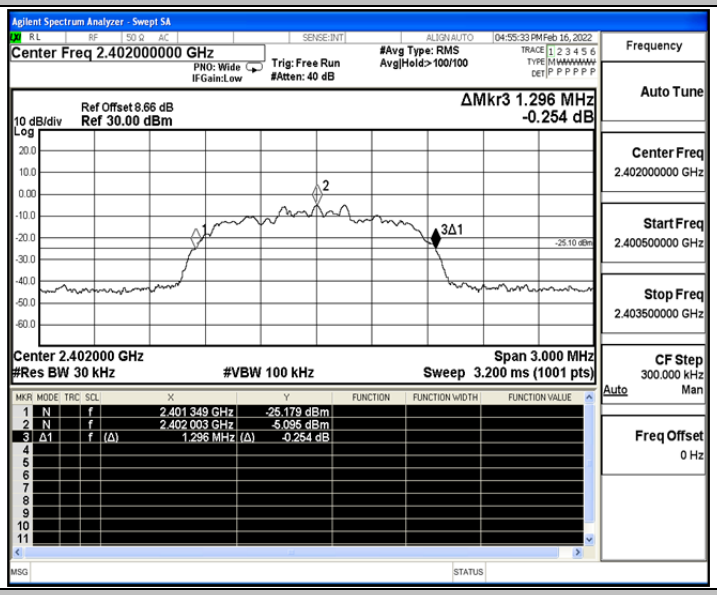
DH5_Ant1_2441



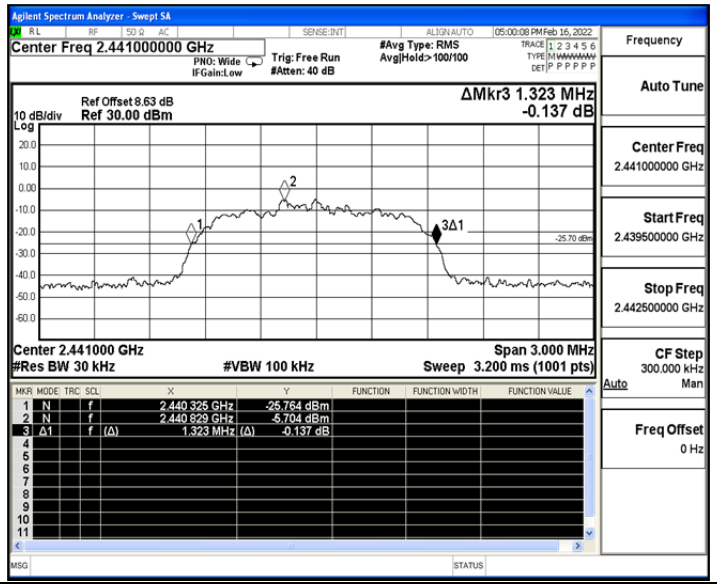
DH5_Ant1_2480



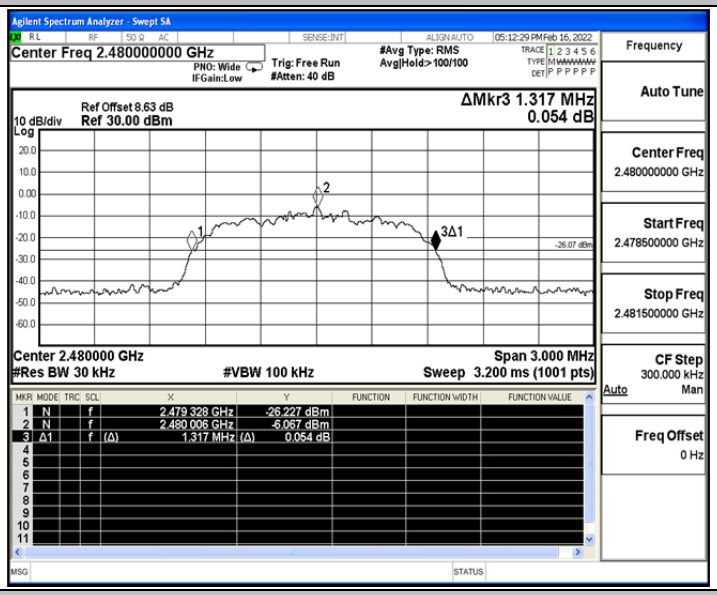
2DH5_Ant1_2402



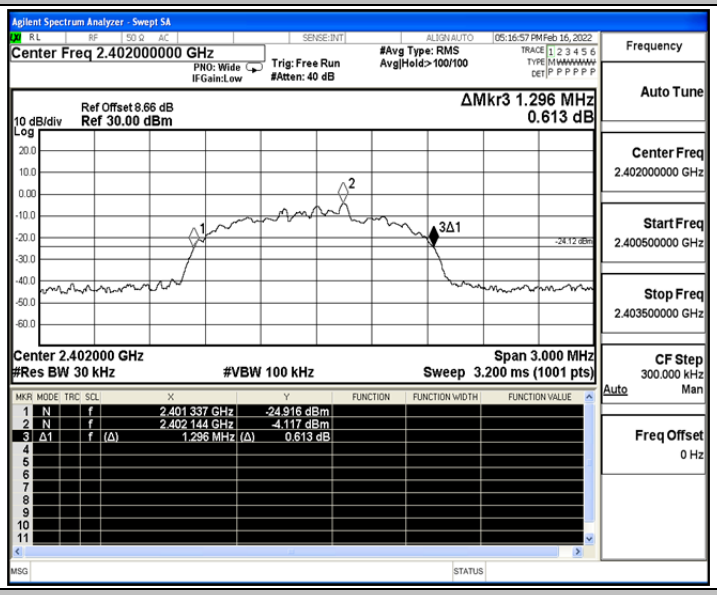
2DH5_Ant1_2441



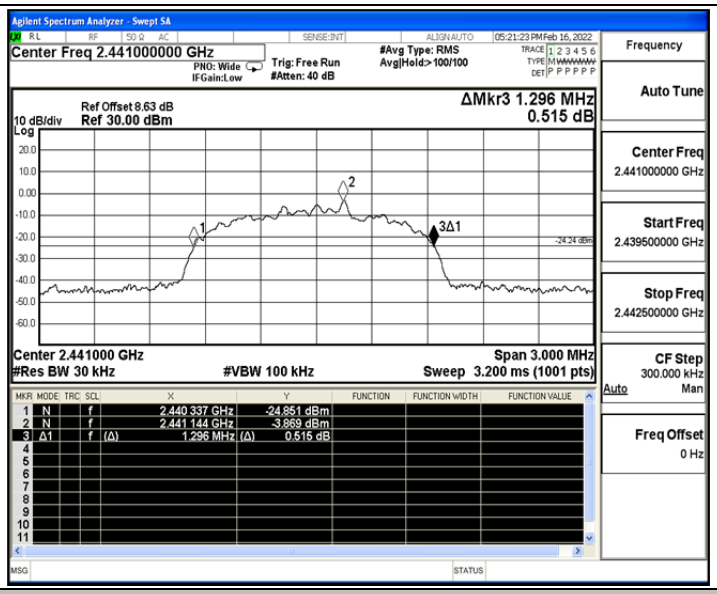
2DH5_Ant1_2480



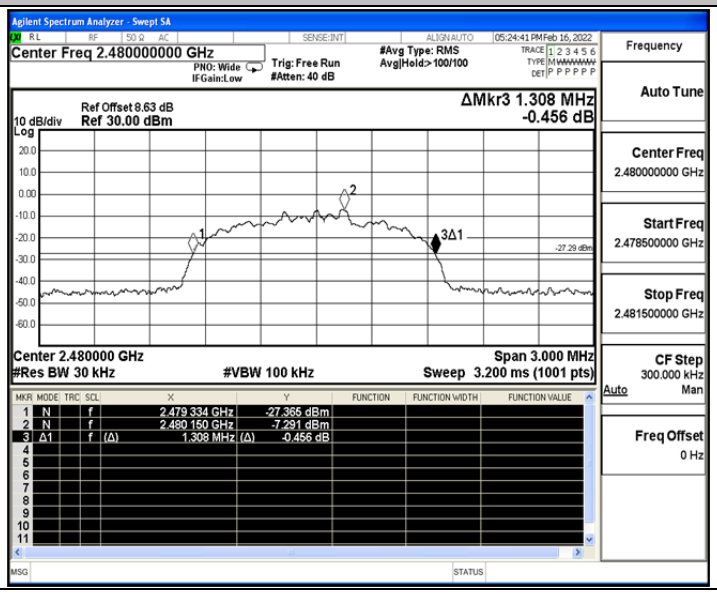
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



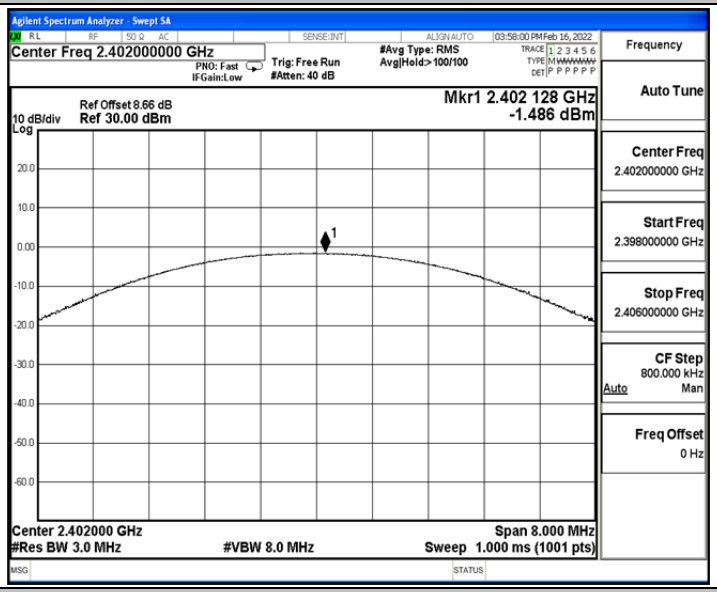
A.2 Maximum peak conducted output power

Test Result

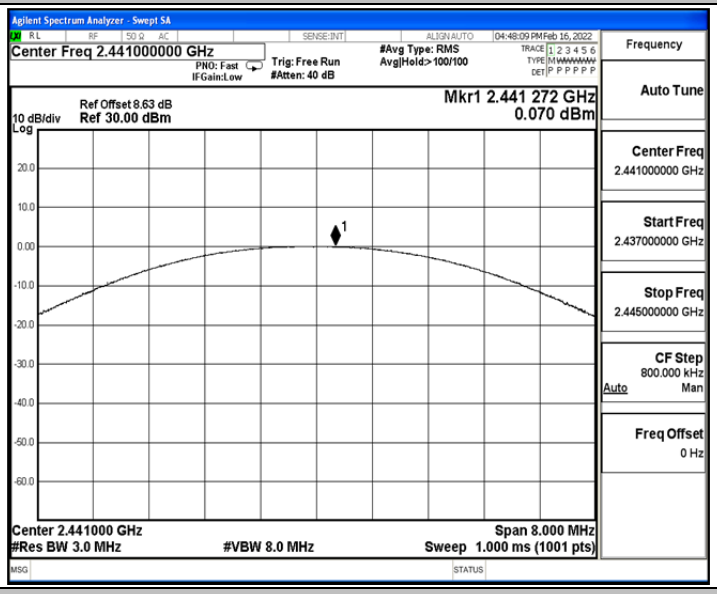
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	-1.49	≤20.97	PASS
		2441	0.07	≤20.97	PASS
		2480	-0.27	≤20.97	PASS
2DH5	Ant1	2402	-0.34	≤20.97	PASS
		2441	0.2	≤20.97	PASS
		2480	-0.84	≤20.97	PASS
3DH5	Ant1	2402	-0.43	≤20.97	PASS
		2441	0.28	≤20.97	PASS
		2480	-1.99	≤20.97	PASS

Test Graphs

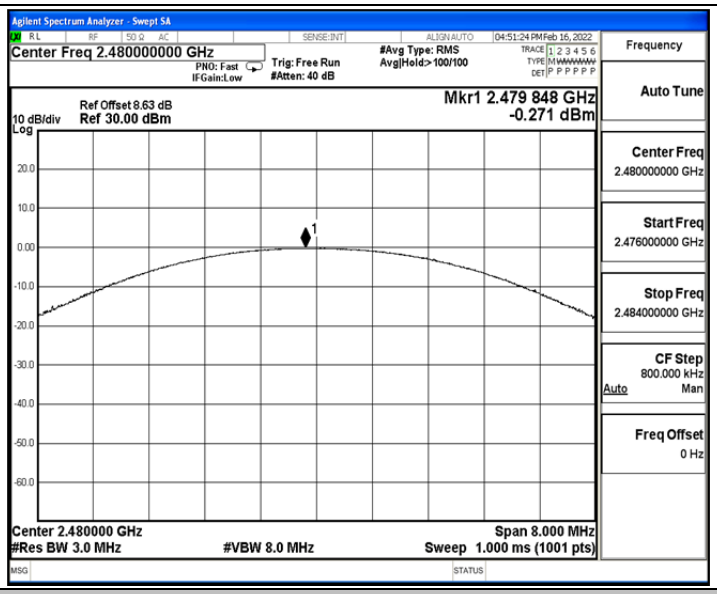
DH5_Ant1_2402



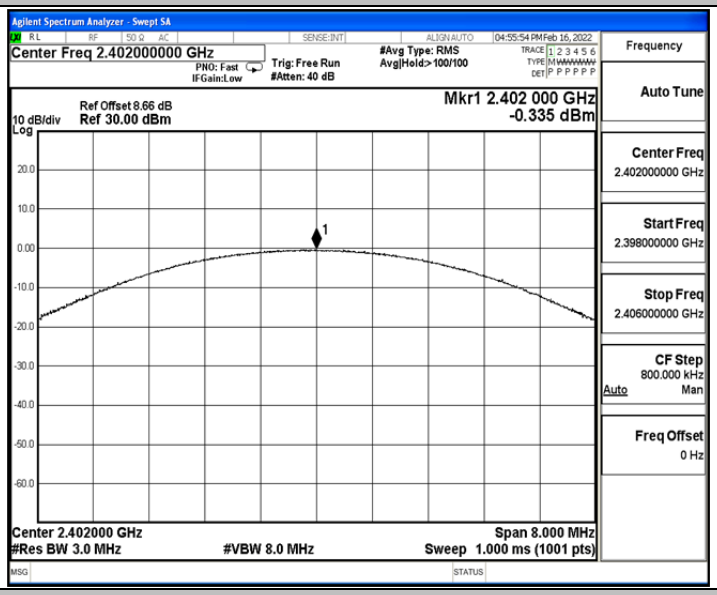
DH5_Ant1_2441



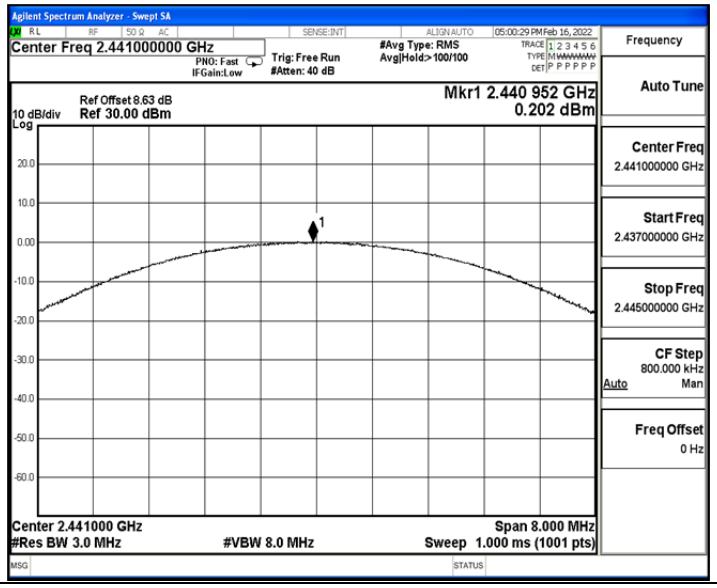
DH5_Ant1_2480



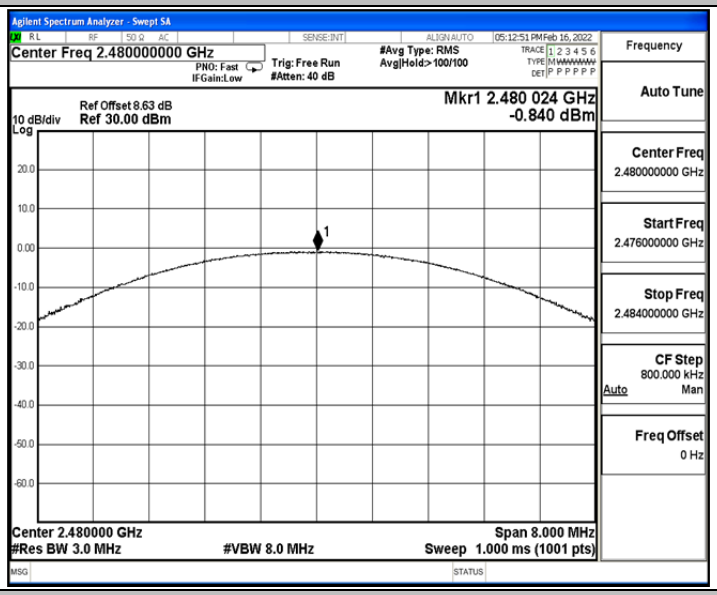
2DH5_Ant1_2402



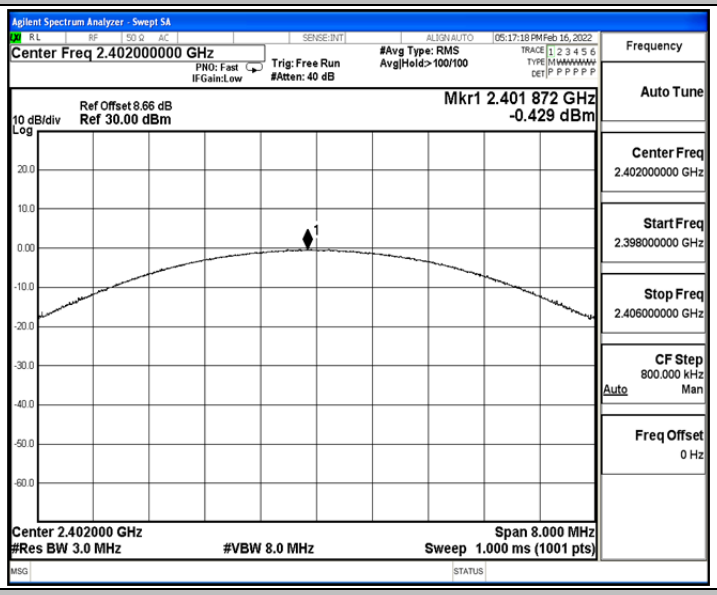
2DH5_Ant1_2441



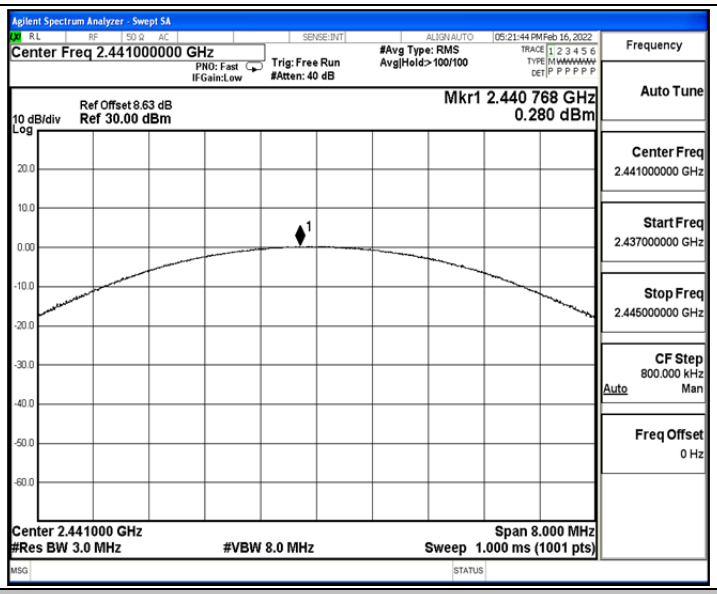
2DH5_Ant1_2480



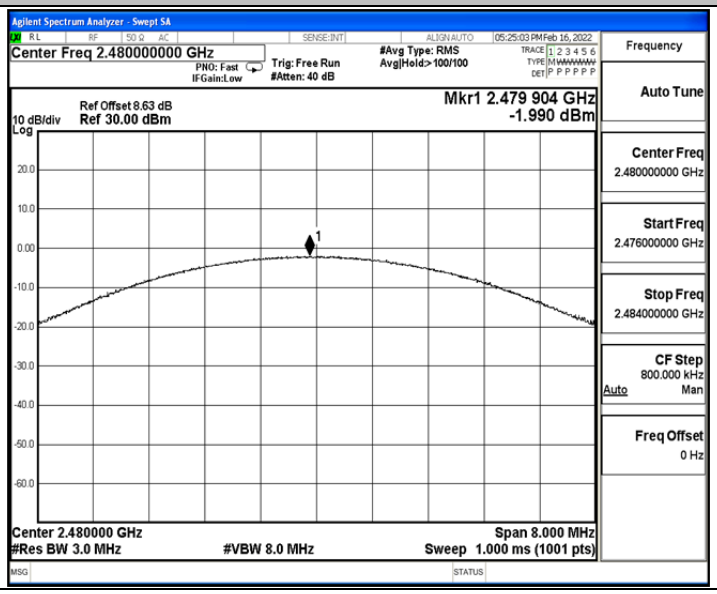
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480

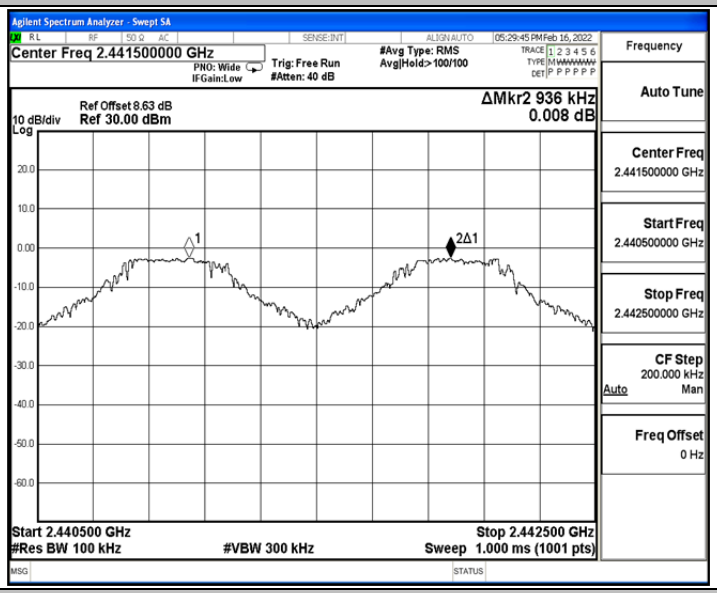


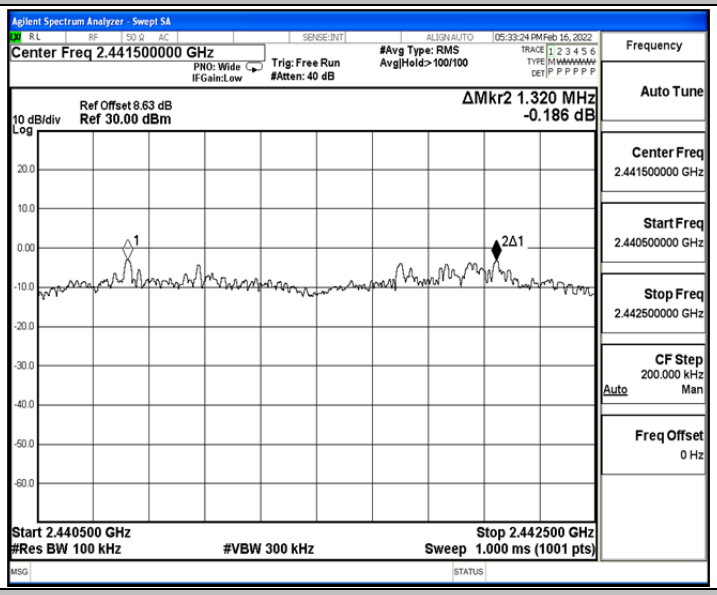
A.3 Carrier frequency separation

Test Result

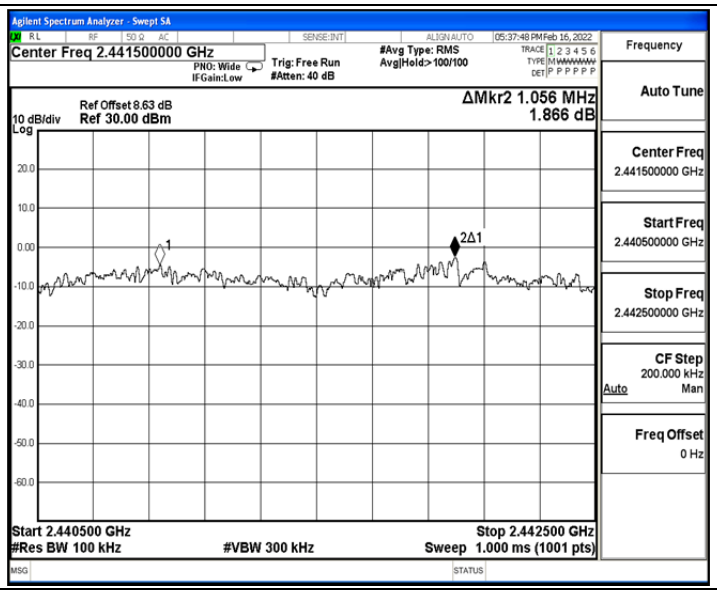
TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.936	≥0.694	PASS
2DH5	Ant1	Hop	1.32	≥0.882	PASS
3DH5	Ant1	Hop	1.056	≥0.872	PASS

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
Avg|Hold:>100/100
05:37:48 PM Feb 16, 2022
Ref Offset 8.63 dB
10 dB/div
Ref 30.00 dBm
Log
ΔMkr2 1.056 MHz
1.866 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

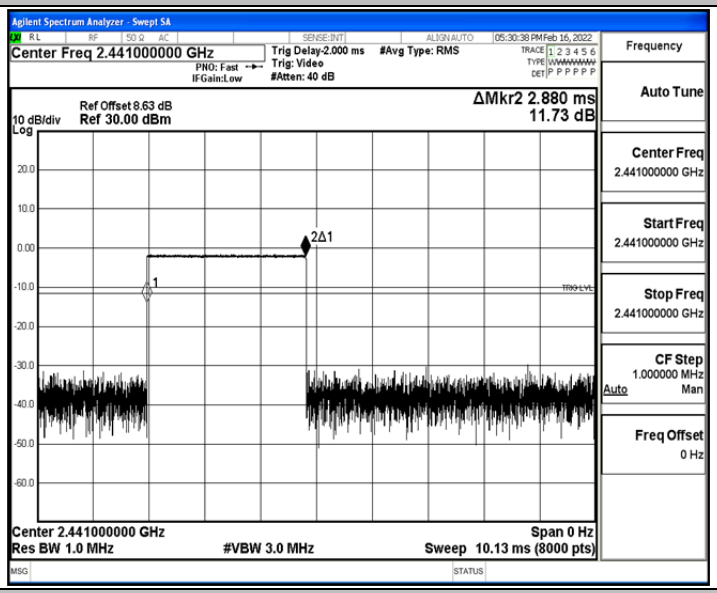
A.4 Time of occupancy

Test Result

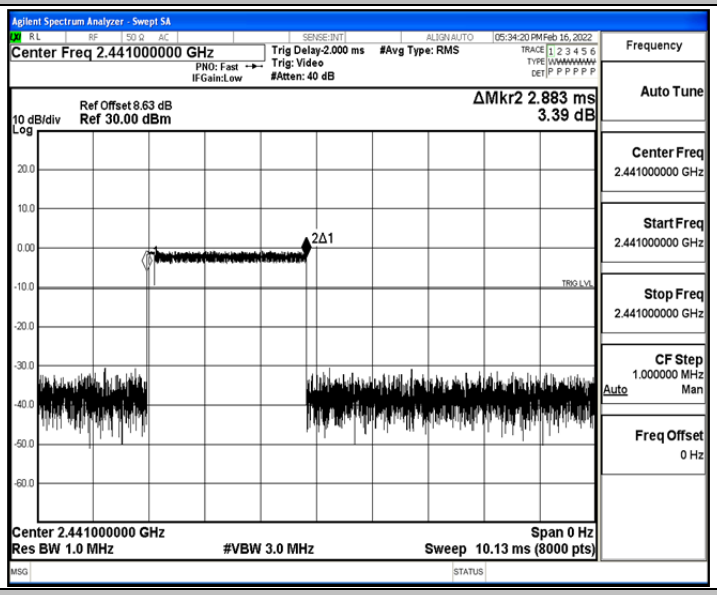
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.88	106.67	0.307	≤0.4	PASS
2DH5	Ant1	Hop	2.88	106.67	0.308	≤0.4	PASS
3DH5	Ant1	Hop	2.89	106.67	0.308	≤0.4	PASS

Test Graphs

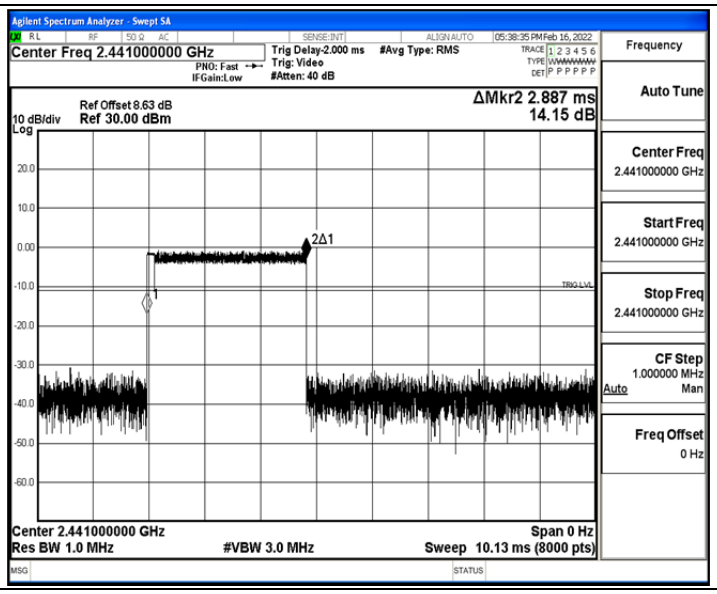
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
Trig Delay-2.000 ms
Trig: Video
#Atten: 40 dB
#Avg Type: RMS
05:38:35 PM Feb 16, 2022
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
Ref Offset 8.63 dB
10 dB/div
Ref 30.00 dBm
Log
ΔMkr2 2.887 ms
14.15 dB
2Δ1
Center 2.441000000 GHz
Span 0 Hz
Res BW 1.0 MHz
#VBW 3.0 MHz
Sweep 10.13 ms (8000 pts)

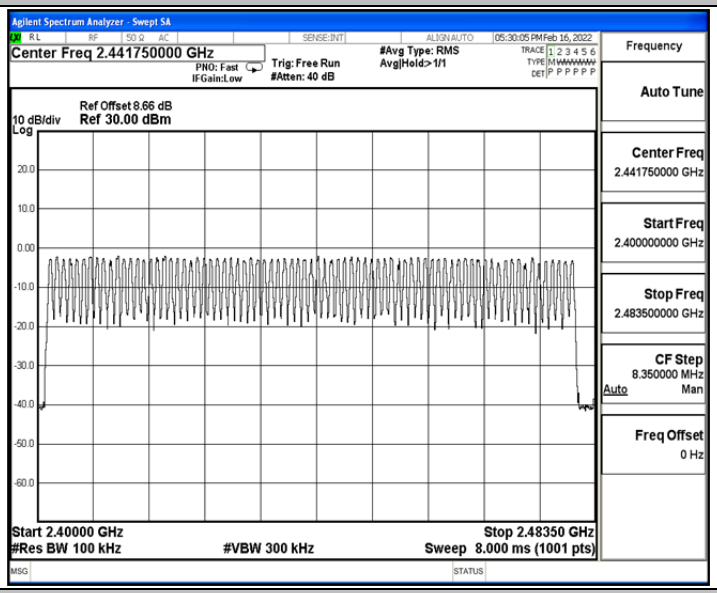
A.5 Number of hopping channels

Test Result

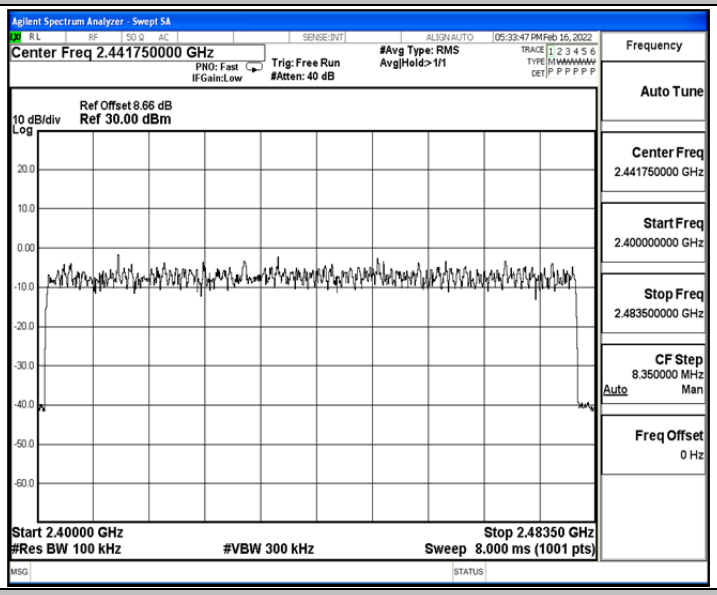
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

Test Graphs

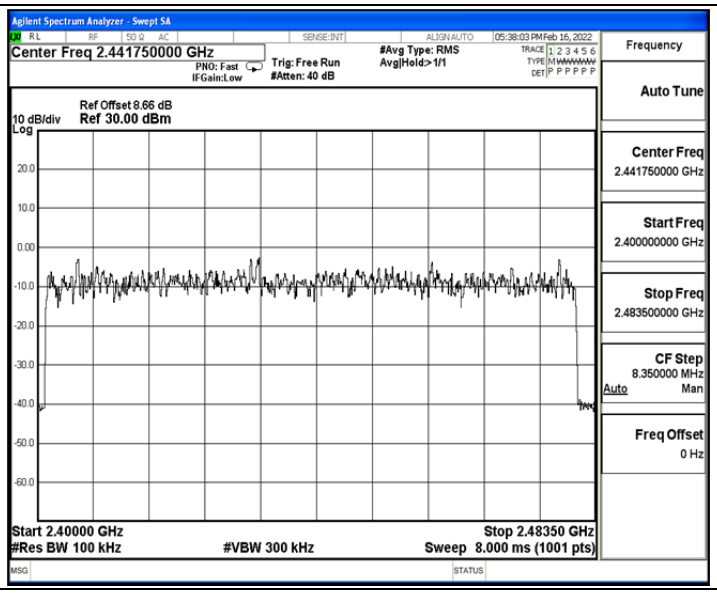
DH5_Ant1_Hop



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
Avg|Hold:>1/1
05:38:03 PM Feb 16, 2022
Ref Offset 8.66 dB
10 dB/div
Ref 30.00 dBm
Log
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

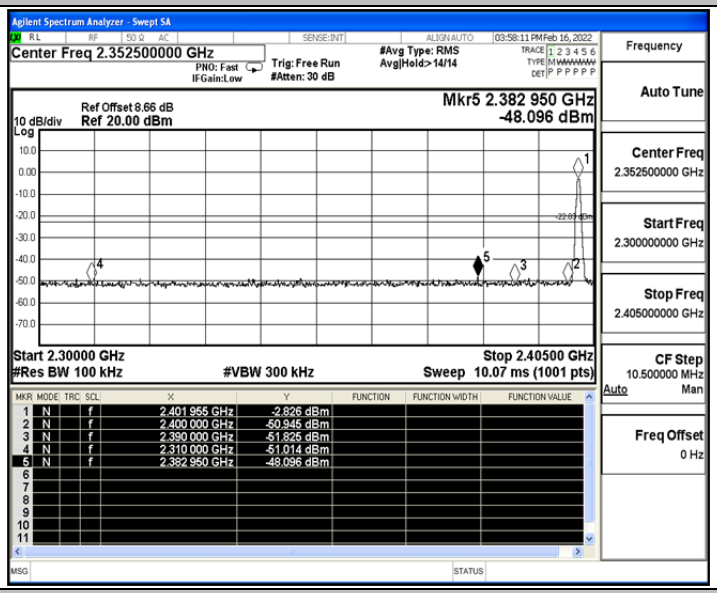
A.6 Band edge measurements

Test Result

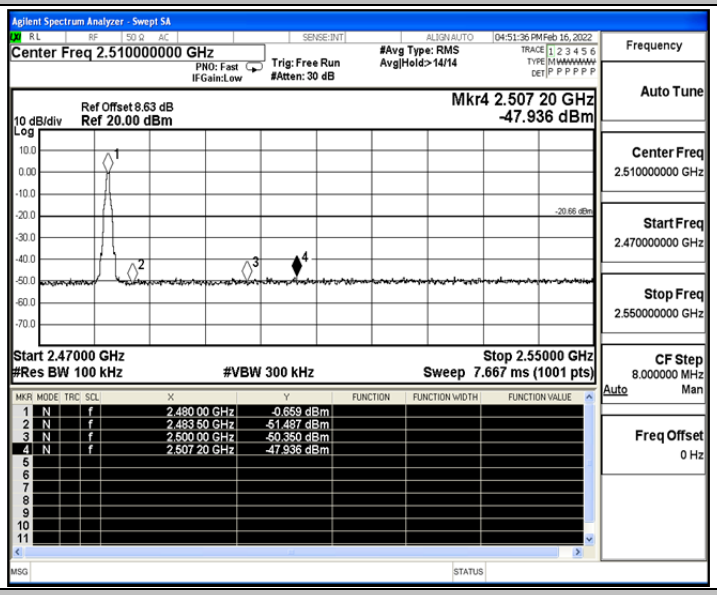
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-2.83	-48.1	≤-22.83	PASS
		High	2480	-0.66	-47.94	≤-20.66	PASS
		Low	Hop_2402	-2.44	-48.84	≤-22.44	PASS
		High	Hop_2480	-2.87	-48.2	≤-22.87	PASS
2DH5	Ant1	Low	2402	-5.13	-49.28	≤-25.13	PASS
		High	2480	-2.17	-48.05	≤-22.17	PASS
		Low	Hop_2402	-8.00	-49.04	≤-28	PASS
		High	Hop_2480	-3.14	-48.26	≤-23.14	PASS
3DH5	Ant1	Low	2402	-2.90	-48.92	≤-22.9	PASS
		High	2480	-3.36	-48.07	≤-23.36	PASS
		Low	Hop_2402	-5.84	-49.55	≤-25.84	PASS
		High	Hop_2480	-2.69	-47.85	≤-22.69	PASS

Test Graphs

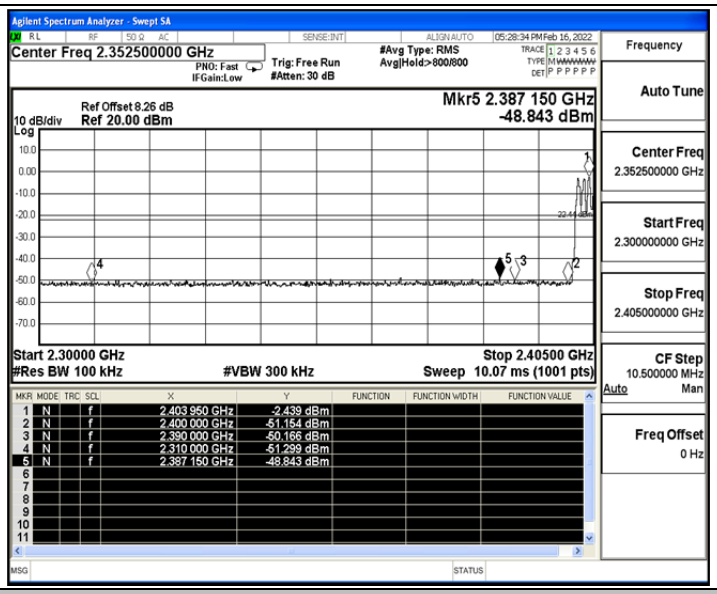
DH5_Ant1_Low_2402



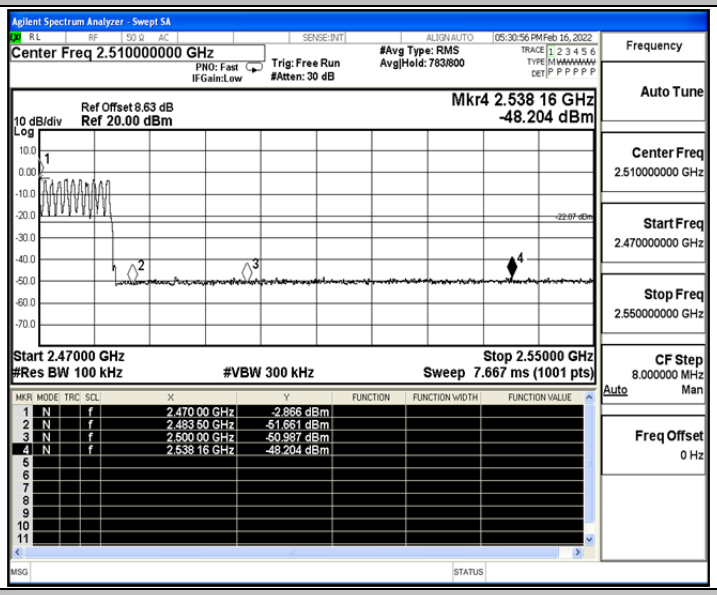
DH5_Ant1_High_2480



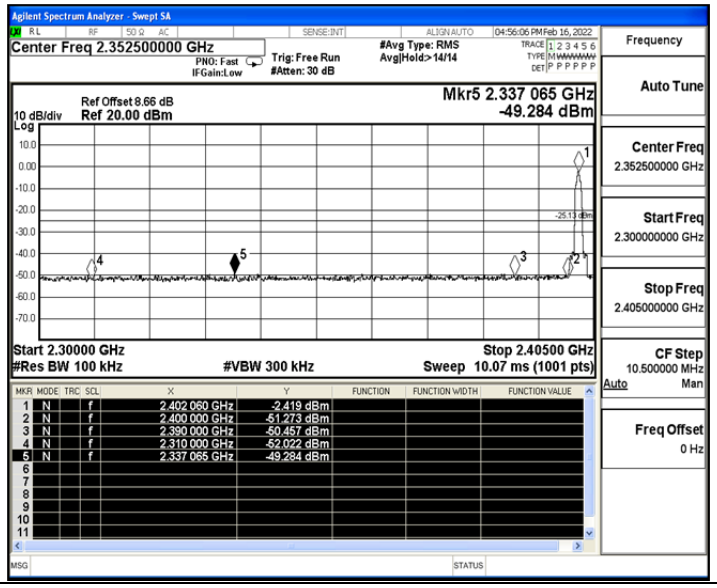
DH5_Ant1_Low_Hop_2402



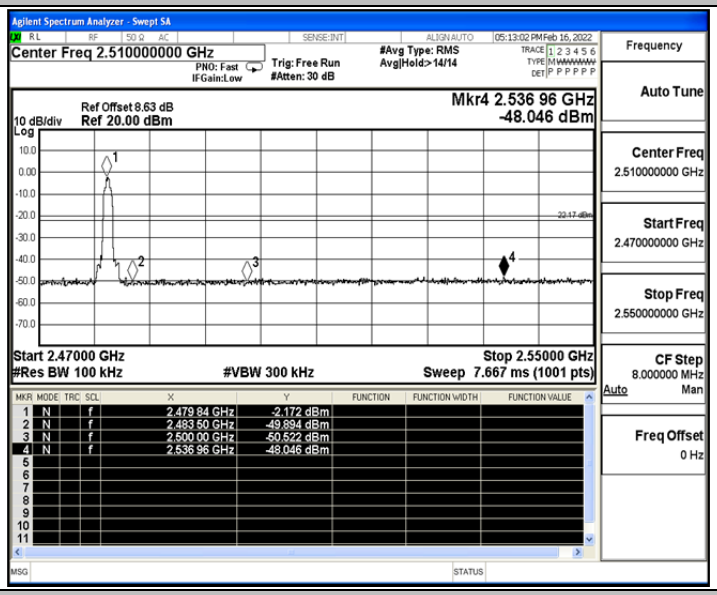
DH5_Ant1_High_Hop_2480



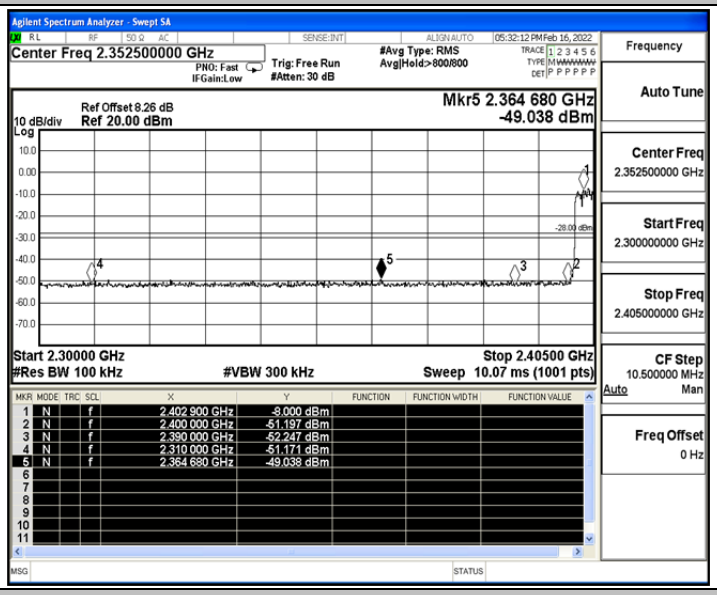
2DH5_Ant1_Low_2402



2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



2DH5_Ant1_High_Hop_2480