Case No. : GTS20220517009-1	
Ambient Condition: 22 ℃, 45 %RH,	
Test Date: 2022/6/22	**Test Engineer:** Jenny Zeng

Appendix A.1: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.882	2401.577	2402.459	---	---
		2441	0.858	2440.604	2441.462	---	---
		2480	0.879	2479.577	2480.456	---	---
2DH1	Ant1	2402	1.293	2401.367	2402.660	---	---
		2441	1.275	2440.361	2441.636	---	---
		2480	1.257	2479.394	2480.651	---	---

Test Graphs

DH1_Ant1_2402

DH1_Ant1_2441

DH1_Ant1_2480

2DH1_Ant1_2402

2DH1_Ant1_2441

2DH1_Ant1_2480

Appendix A.2: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.82549	2401.609	2402.435	---	---
		2441	0.82184	2440.608	2441.430	---	---
		2480	0.82475	2479.610	2480.435	---	---
2DH1	Ant1	2402	1.1741	2401.432	2402.606	---	---
		2441	1.1683	2440.434	2441.603	---	---
		2480	1.1699	2479.434	2480.604	---	---

Test Graphs

DH1_Ant1_2402

DH1_Ant1_2441

DH1_Ant1_2480

2DH1_Ant1_2402

2DH1_Ant1_2441

2DH1_Ant1_2480

Appendix A.3: Carrier frequency separation

Test Result

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Hop_2402	1.162	≥0.882	PASS
		Hop_2441	1.002	≥0.882	PASS
		Hop_2480	1.006	≥0.882	PASS
2DH1	Ant1	Hop_2402	1.010	≥0.862	PASS
		Hop_2441	0.976	≥0.862	PASS
		Hop_2480	0.984	≥0.862	PASS

Test Graphs

DH1_Ant1_Hop_2402

DH1_Ant1_Hop_2441

DH1_Ant1_Hop_2480

2DH1_Ant1_Hop_2402

2DH1_Ant1_Hop_2441

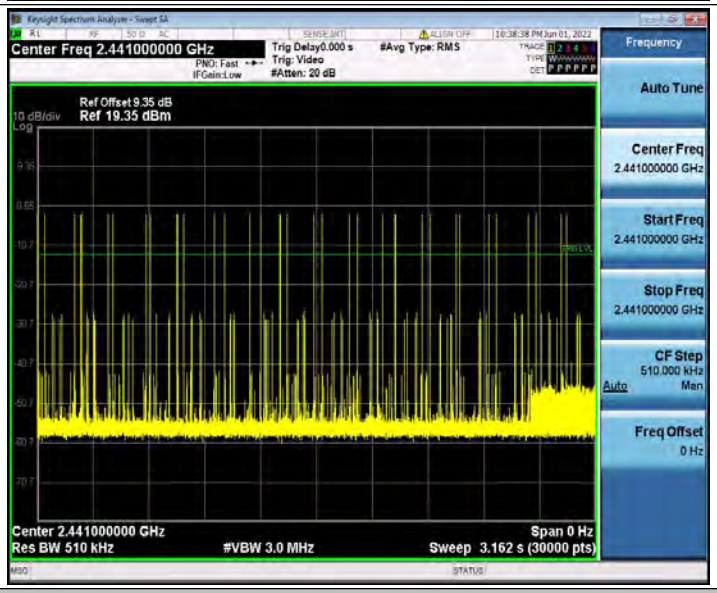
2DH1_Ant1_Hop_2480

Appendix A.4: Time of occupancy

Test Result

TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.36	320	0.117	≤0.4	PASS
DH3	Ant1	Hop	1.63	170	0.276	≤0.4	PASS
DH5	Ant1	Hop	2.87	100	0.287	≤0.4	PASS
2DH1	Ant1	Hop	0.37	330	0.124	≤0.4	PASS
2DH3	Ant1	Hop	1.63	140	0.228	≤0.4	PASS
2DH5	Ant1	Hop	2.88	50	0.144	≤0.4	PASS

Test Graphs

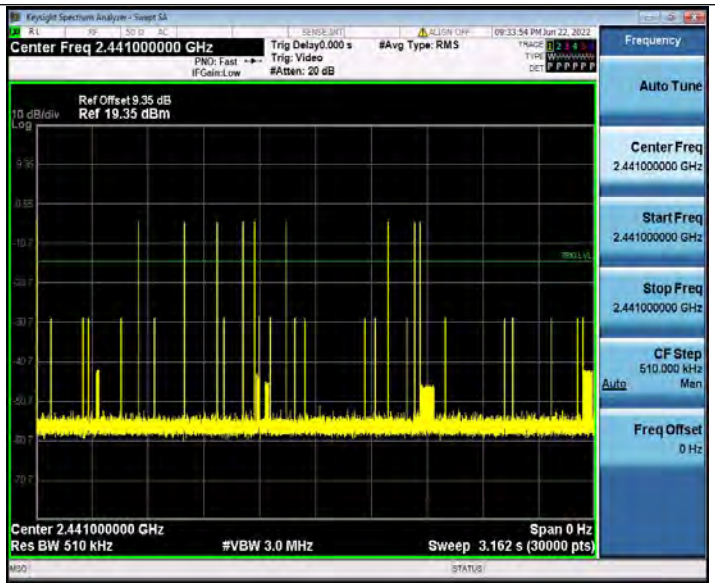
DH1_Ant1_Hop

DH3_Ant1_Hop

Center Freq 2.441000000 GHz
Trig Delay-200.0 µs
#Avg Type: RMS
Trig: Video
#Atten: 20 dB
Ref Offset 9.35 dB
10 dB/div
Ref 19.35 dBm
ΔMkr2 1.626 ms
9.73 dB
Center 2.441000000 GHz
Res BW 1.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 10.13 ms (2000 pts)
Frequency
Auto Tune
Center Freq
2.441000000 GHz
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
CF Step
1.000000 MHz
Freq Offset
0 Hz

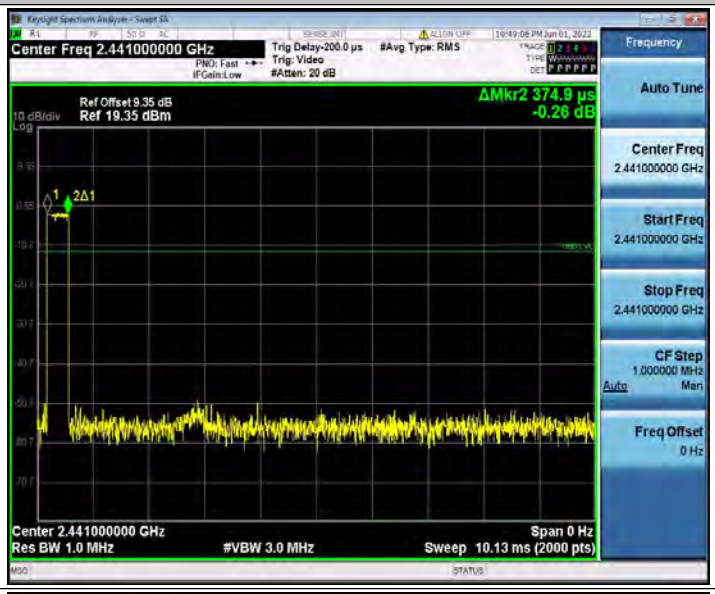
Center Freq 2.441000000 GHz
Trig Delay0.000 s
#Avg Type: RMS
Trig: Video
#Atten: 20 dB
Ref Offset 9.35 dB
10 dB/div
Ref 19.35 dBm
Center 2.441000000 GHz
Res BW 510 kHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 3.162 s (30000 pts)
Frequency
Auto Tune
Center Freq
2.441000000 GHz
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
CF Step
510.000 kHz
Freq Offset
0 Hz

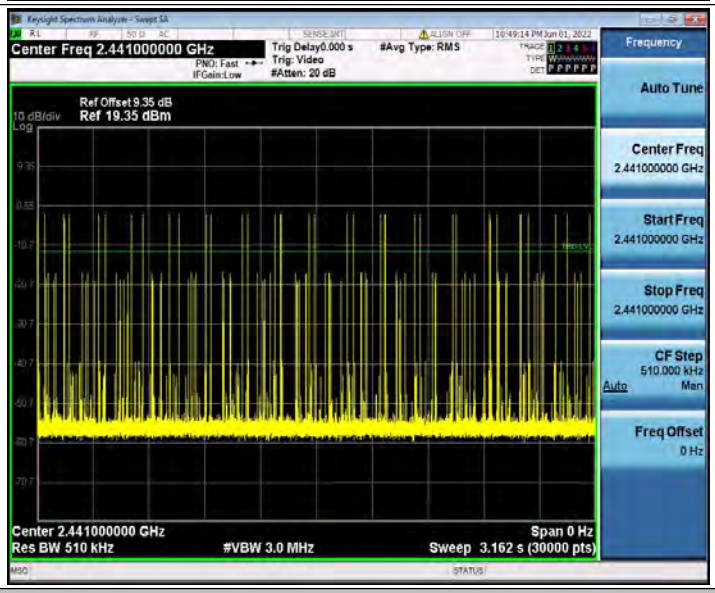
DH5_Ant1_Hop

Center Freq 2.441000000 GHz
Trig Delay-200.0 µs
#Avg Type: RMS
Trig: Video
#Atten: 20 dB
Ref Offset 9.35 dB
10 dB/div
Ref 19.35 dBm
ΔMkr2 2.873 ms
16.52 dB
Center 2.441000000 GHz
Res BW 1.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 10.13 ms (2000 pts)
Frequency
Auto Tune
Center Freq
2.441000000 GHz
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
CF Step
1.000000 MHz
Freq Offset
0 Hz

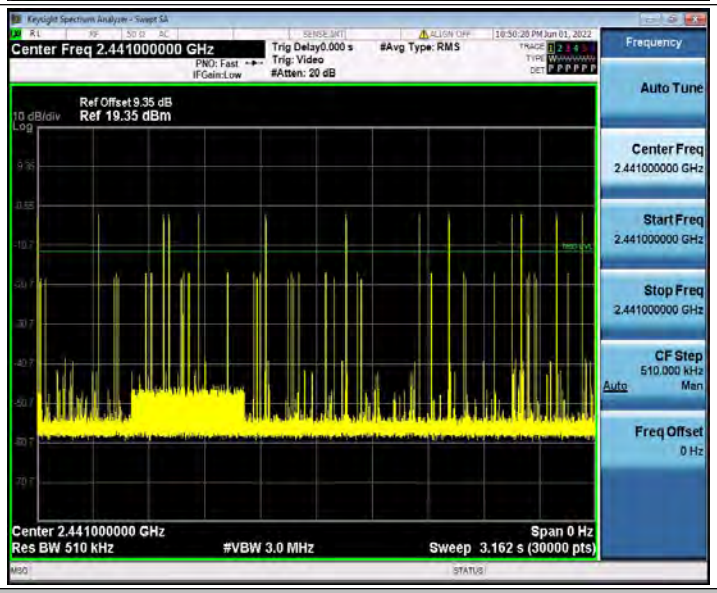


2DH1_Ant1_Hop

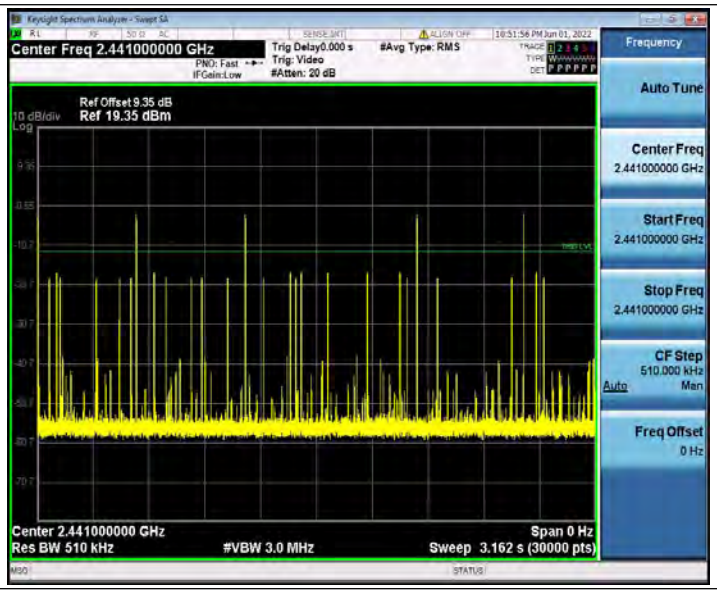




2DH3_Ant1_Hop



2DH5_Ant1_Hop


Keysight Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
PNO: Fast
IFGain:Low
Trig Delay0.000 s
Trig: Video
#Atten: 20 dB
#Avg Type: RMS
Frequency
Auto Tune
Center Freq
2.441000000 GHz
Start Freq
2.441000000 GHz
Stop Freq
2.441000000 GHz
CF Step
510.000 kHz
Auto
Man
Freq Offset
0 Hz
Ref Offset 9.35 dB
10 dB/div
Ref 19.35 dBm
Log
Center 2.441000000 GHz
Res BW 510 kHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 3.162 s (30000 pts)

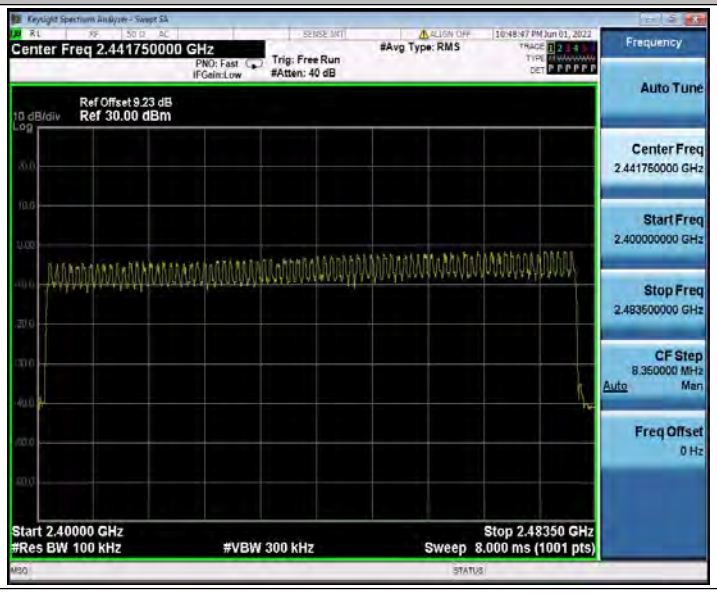
Appendix A.5: Number of hopping channels

Test Result

TestMode	Antenna	Frequency[MHz]	Result[Num]	Limit[Num]	Verdict
DH1	Ant1	Hop	79	≥15	PASS
2DH1	Ant1	Hop	79	≥15	PASS

Test Graphs

DH1_Ant1_Hop

2DH1_Ant1_Hop


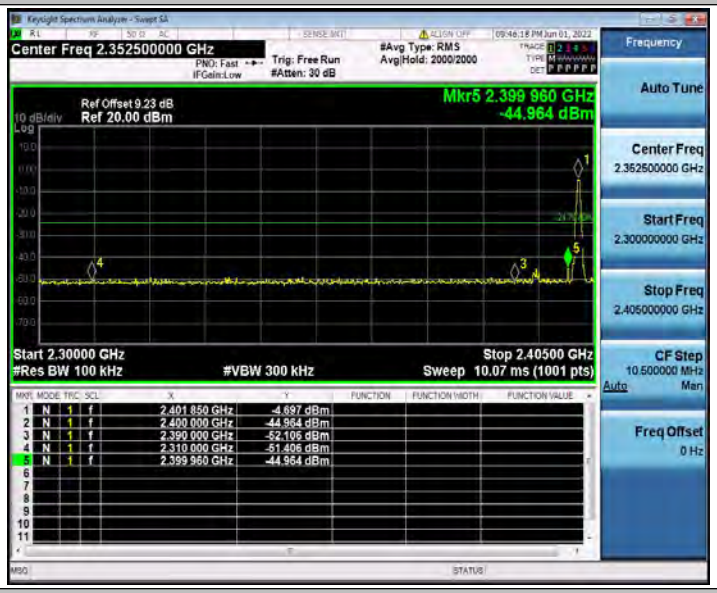
Appendix A.6: Band edge measurements

Test Result

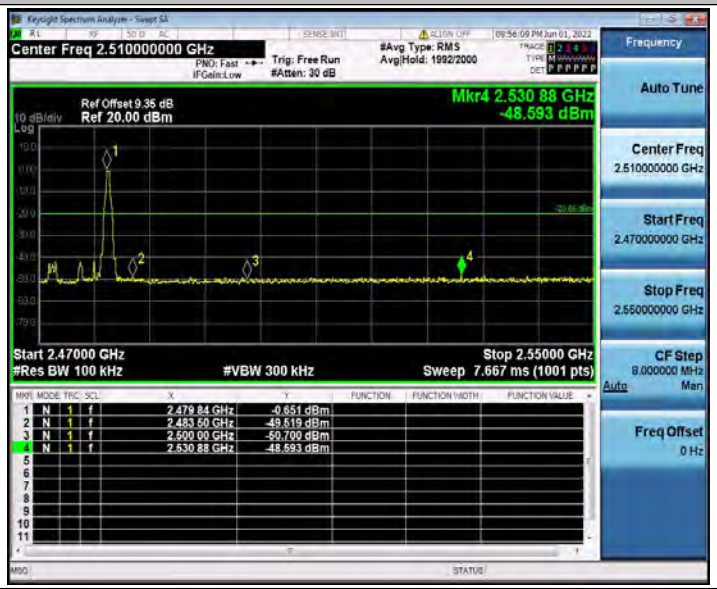
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	-4.70	-44.96	≤-24.7	PASS
		High	2480	-0.65	-48.59	≤-20.65	PASS
		Low	Hop_2402	-4.85	-49.1	≤-24.85	PASS
		High	Hop_2480	-1.43	-48.7	≤-21.43	PASS
2DH1	Ant1	Low	2402	-4.83	-45.11	≤-24.83	PASS
		High	2480	-0.52	-48.08	≤-20.52	PASS
		Low	Hop_2402	-5.64	-49.34	≤-25.64	PASS
		High	Hop_2480	-1.49	-48.4	≤-21.49	PASS

Test Graphs

DH1_Ant1_Low_2402

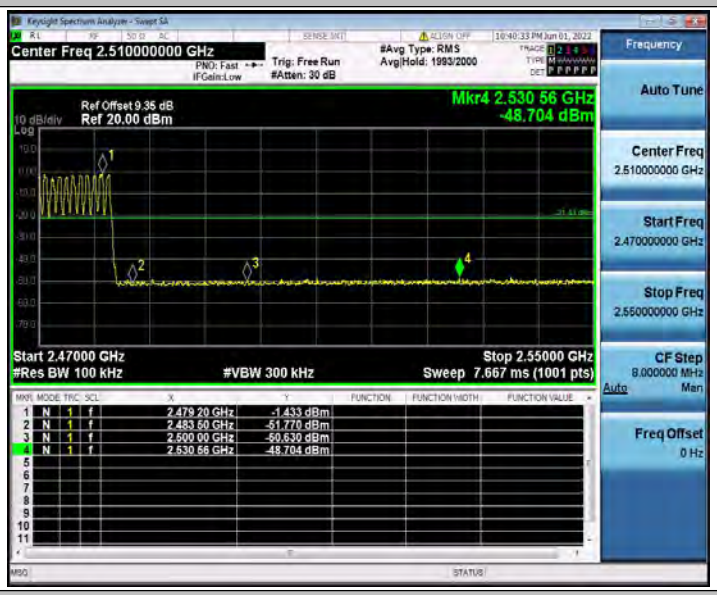


DH1_Ant1_High_2480

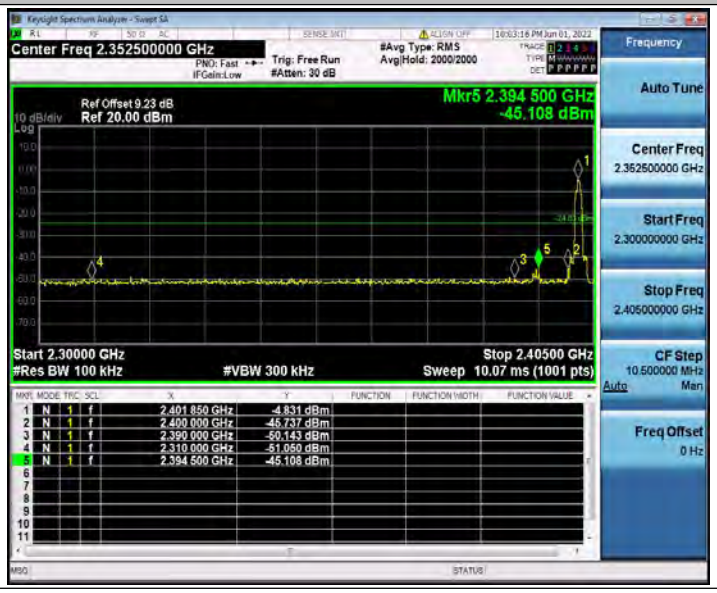


DH1_Ant1_Low_Hop_2402

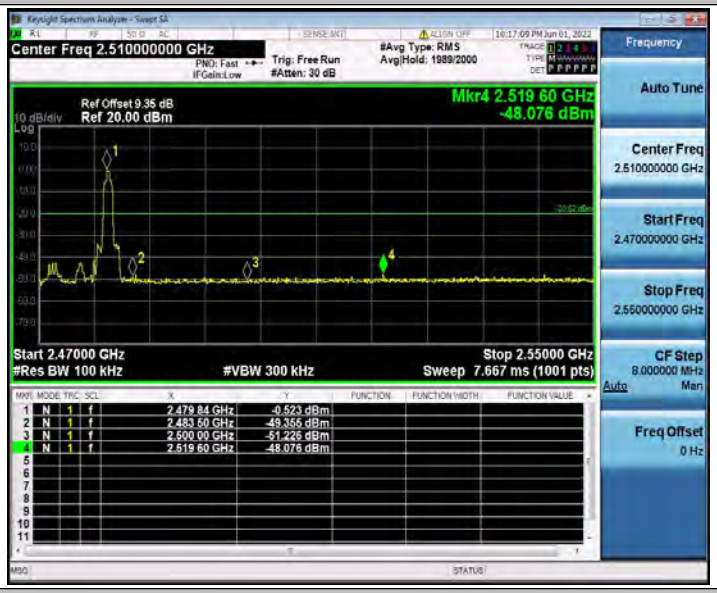
DH1_Ant1_High_Hop_2480



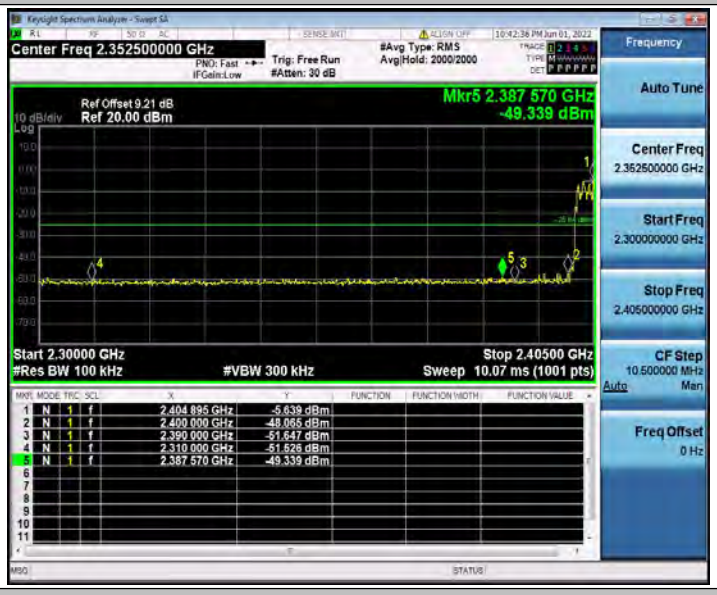
2DH1_Ant1_Low_2402



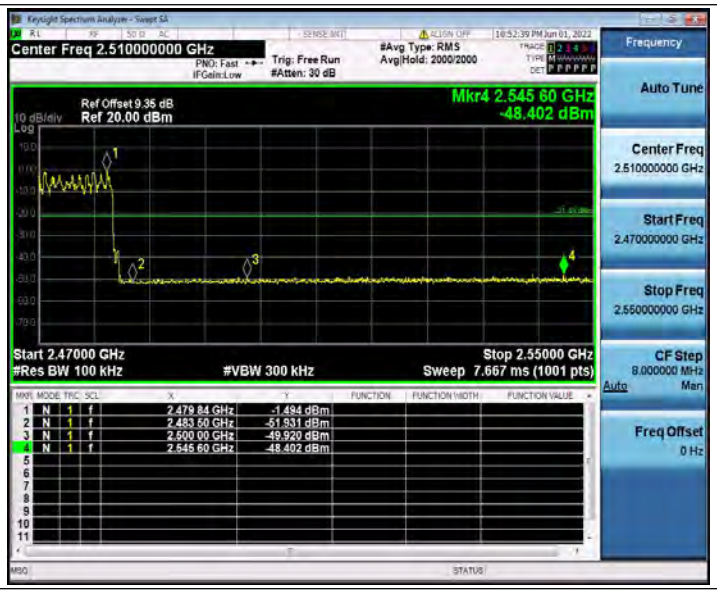
2DH1_Ant1_High_2480



2DH1_Ant1_Low_Hop_2402



2DH1_Ant1_High_Hop_2480


Keysight Spectrum Analyzer - Swept SA
Center Freq 2.510000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 2000/2000
10:52:39 PM Jun 01, 2022
Ref Offset 9.35 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr4 2.545 60 GHz
-48.402 dBm
Start 2.47000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.55000 GHz
Sweep 7.667 ms (1001 pts)
1 N 1 f 2.479 84 GHz -1.494 dBm
2 N 1 f 2.483 50 GHz -51.931 dBm
3 N 1 f 2.500 00 GHz -49.920 dBm
4 N 1 f 2.545 60 GHz -48.402 dBm
Frequency
Auto Tune
Center Freq
2.510000000 GHz
Start Freq
2.470000000 GHz
Stop Freq
2.550000000 GHz
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

Appendix A.7: Conducted Spurious Emission

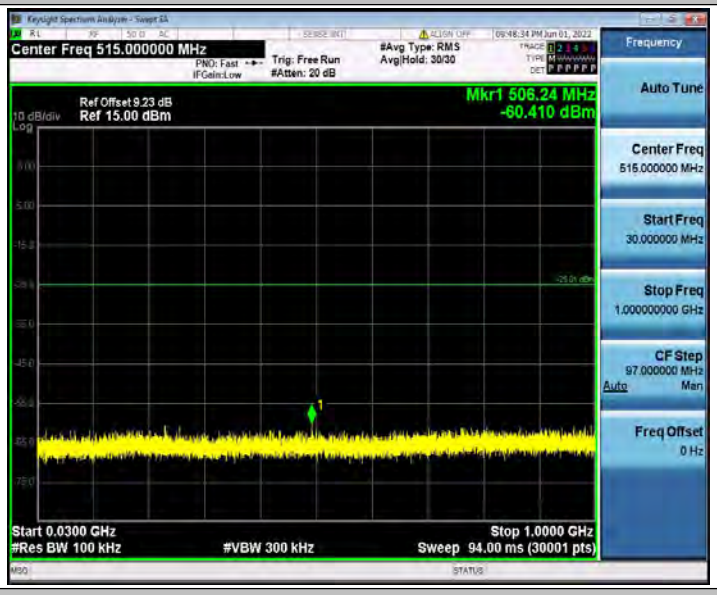
Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	-5.01	-5.01	---	PASS
			30~1000	-5.01	-60.41	≤-25.01	PASS
			1000~26500	-5.01	-47.83	≤-25.01	PASS
		2441	Reference	-3.09	-3.09	---	PASS
			30~1000	-3.09	-60.55	≤-23.09	PASS
			1000~26500	-3.09	-40.46	≤-23.09	PASS
		2480	Reference	-1.26	-1.26	---	PASS
			30~1000	-1.26	-59.76	≤-21.26	PASS
			1000~26500	-1.26	-44.78	≤-21.26	PASS
2DH1	Ant1	2402	Reference	-5.37	-5.37	---	PASS
			30~1000	-5.37	-60.22	≤-25.37	PASS
			1000~26500	-5.37	-47.74	≤-25.37	PASS
		2441	Reference	-2.49	-2.49	---	PASS
			30~1000	-2.49	-60.36	≤-22.49	PASS
			1000~26500	-2.49	-47.46	≤-22.49	PASS
		2480	Reference	-0.67	-0.67	---	PASS
			30~1000	-0.67	-60.3	≤-20.67	PASS
			1000~26500	-0.67	-47.38	≤-20.67	PASS

Test Graphs

DH1_Ant1_2402_0~Reference

DH1_Ant1_2402_30~1000



DH1_Ant1_2402_1000~26500

DH1_Ant1_2441_0~Reference

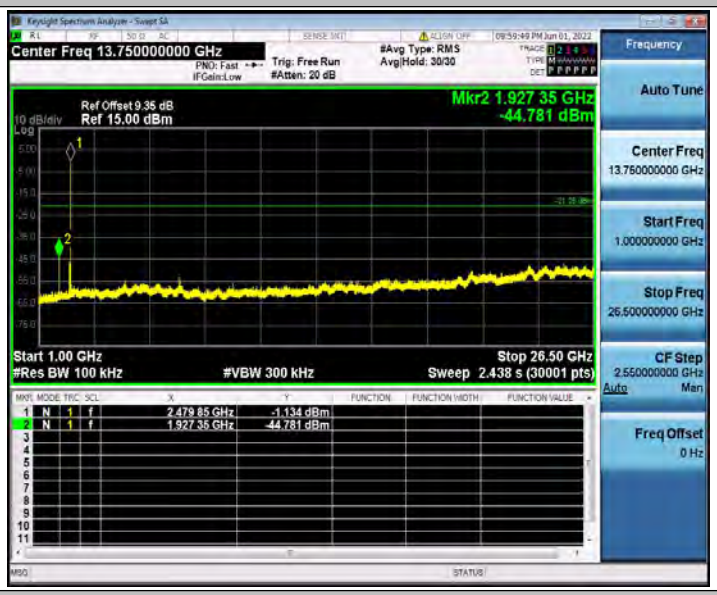
DH1_Ant1_2441_30~1000

DH1_Ant1_2441_1000~26500

DH1_Ant1_2480_0~Reference

DH1_Ant1_2480_30~1000

DH1_Ant1_2480_1000~26500



2DH1_Ant1_2402_0~Reference

2DH1_Ant1_2402_30~1000

2DH1_Ant1_2402_1000~26500

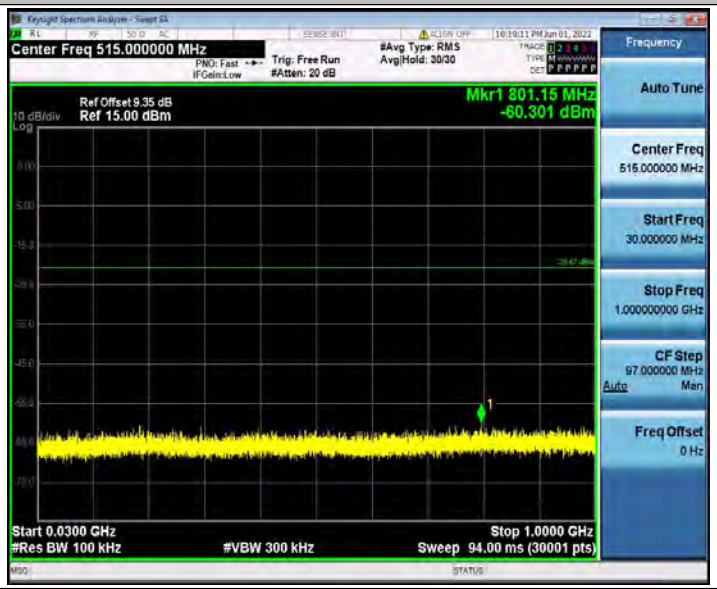
2DH1_Ant1_2441_0~Reference

2DH1_Ant1_2441_30~1000

2DH1_Ant1_2441_1000~26500

2DH1_Ant1_2480_0~Reference

2DH1_Ant1_2480_30~1000



2DH1_Ant1_2480_1000~26500

Center Freq 13.750000000 GHz
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 30/30
Ref Offset 9.35 dB
Ref 15.00 dBm
Mkr2 24.260 25 GHz
-47.378 dBm
Start 1.00 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 26.50 GHz
Sweep 2.438 s (30001 pts)
Frequency
Auto Tune
Center Freq
13.750000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
26.500000000 GHz
CF Step
2.550000000 GHz
Auto
Man
Freq Offset
0 Hz