



Appendix A

RF Test Data for BT V5.0 (DSS) (Conducted Measurement)

Product Name: True Wireless Can Speaker

Test Model: 73026-CO

Environmental Conditions

Temperature:	21.1℃
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling. Zhu
Supervised by:	Libin



A.1 20dB Emission Bandwidth

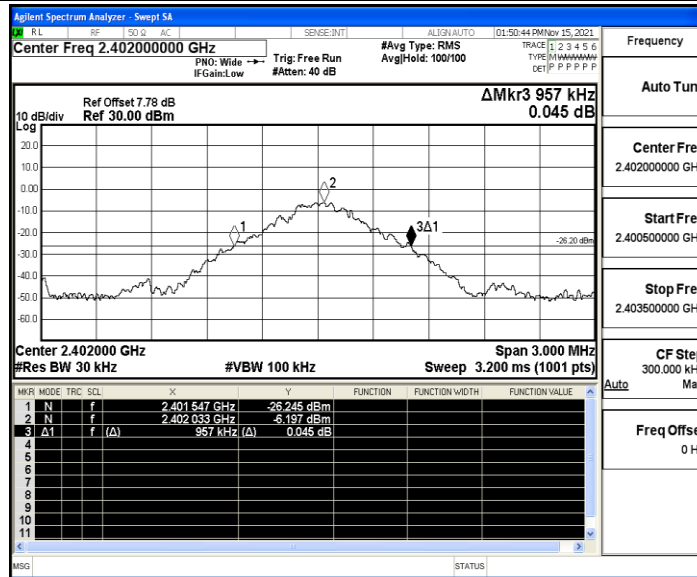
Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.957	2401.547	2402.504	---	PASS
		2441	0.954	2440.547	2441.501	---	PASS
		2480	0.966	2479.544	2480.510	---	PASS
2DH5	Ant1	2402	1.311	2401.358	2402.669	---	PASS
		2441	1.284	2440.382	2441.666	---	PASS
		2480	1.284	2479.382	2480.666	---	PASS

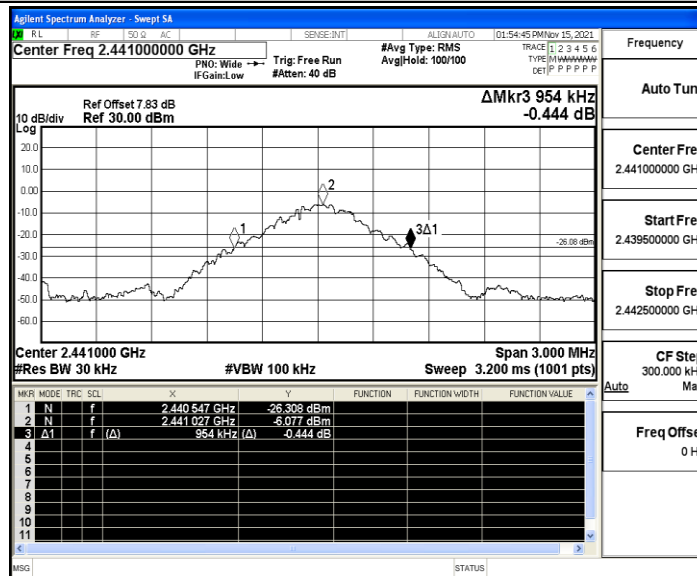


Test Graphs

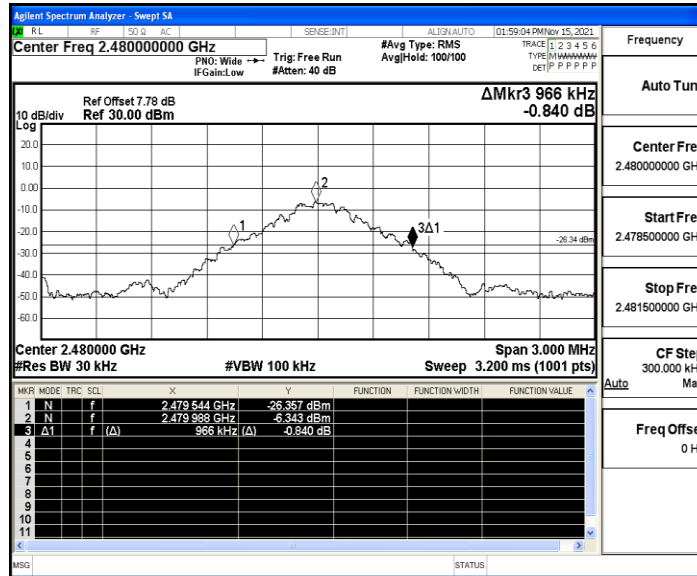
DH5_Ant1_2402



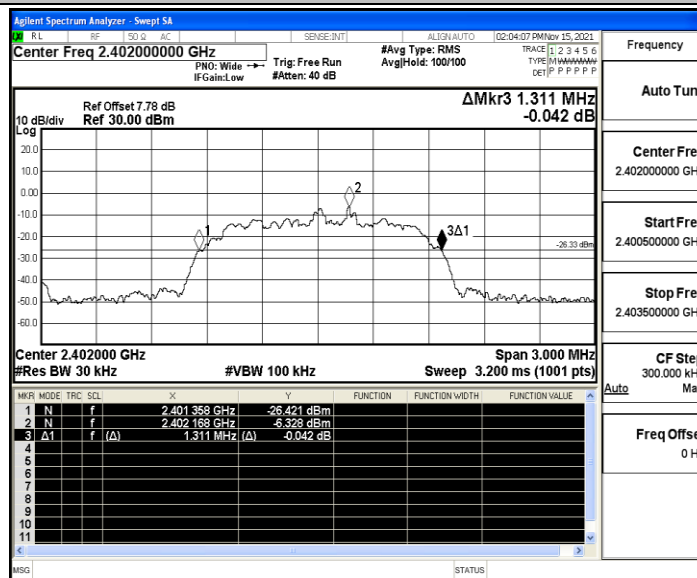
DH5_Ant1_2441



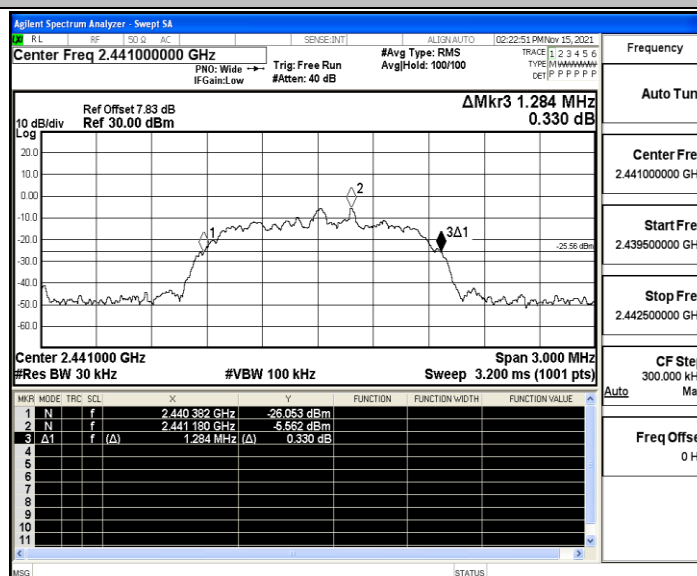
DH5_Ant1_2480



2DH5_Ant1_2402

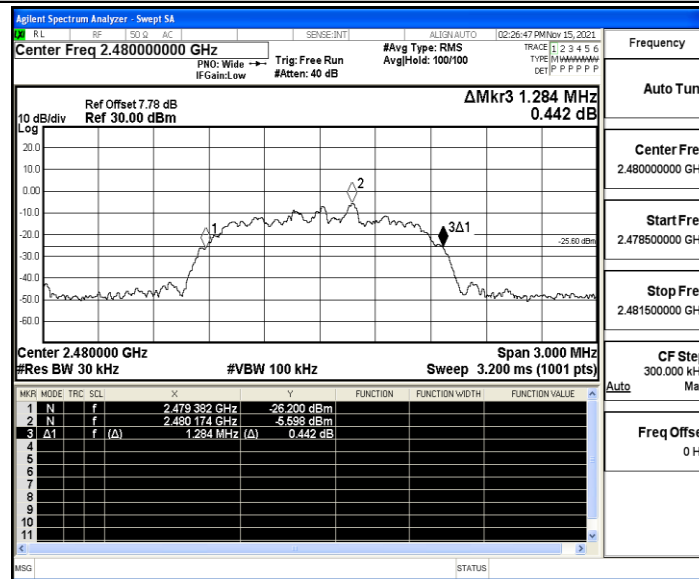


2DH5_Ant1_2441





2DH5_Ant1_2480





A.2 Maximum conducted output power

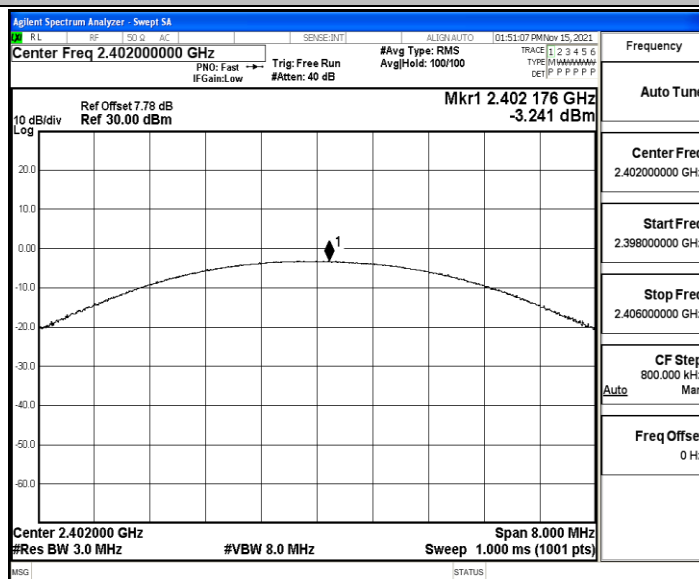
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	-3.24	≤20.97	PASS
		2441	-3.15	≤20.97	PASS
		2480	-3.24	≤20.97	PASS
2DH5	Ant1	2402	-2.39	≤20.97	PASS
		2441	-2.02	≤20.97	PASS
		2480	-2.3	≤20.97	PASS

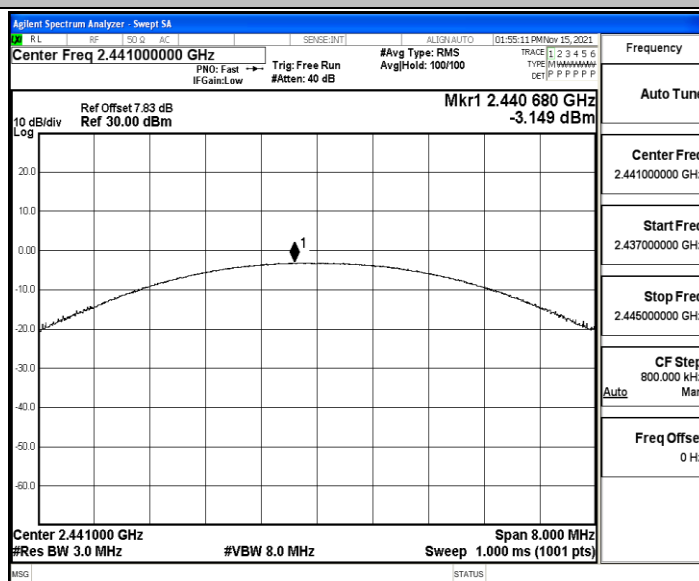


Test Graphs

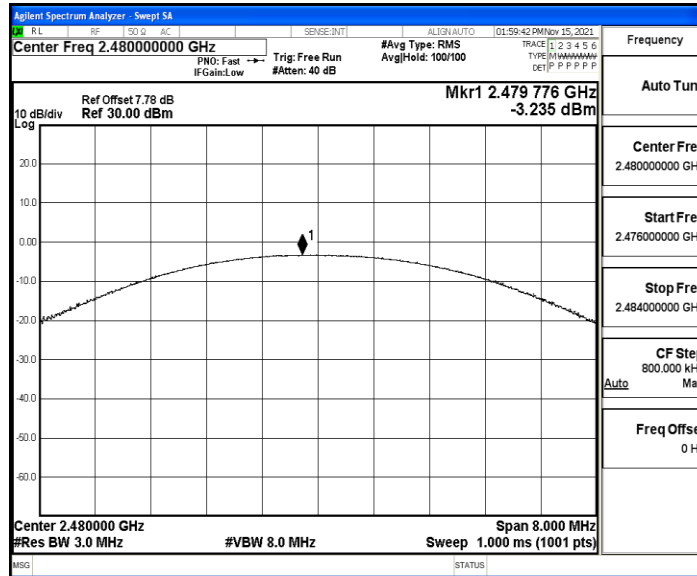
DH5_Ant1_2402



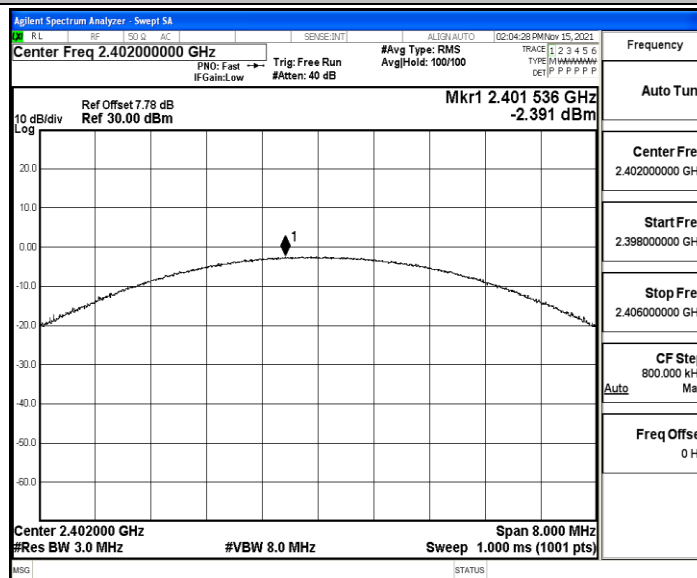
DH5_Ant1_2441



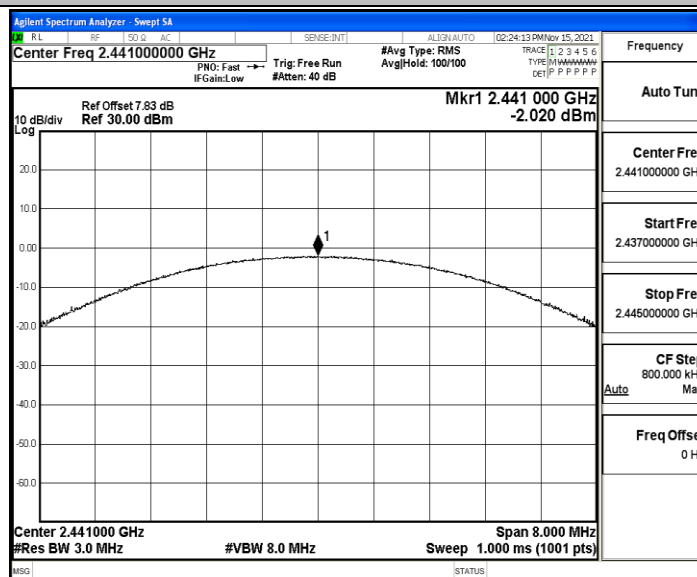
DH5_Ant1_2480



2DH5_Ant1_2402

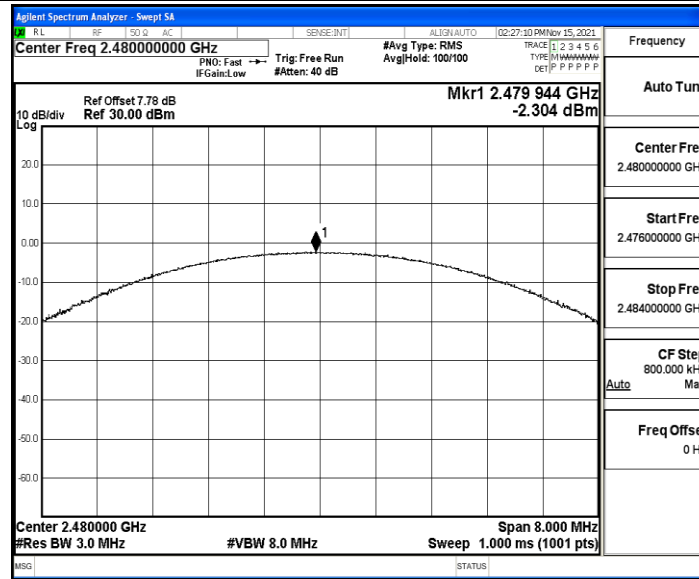


2DH5_Ant1_2441





2DH5_Ant1_2480



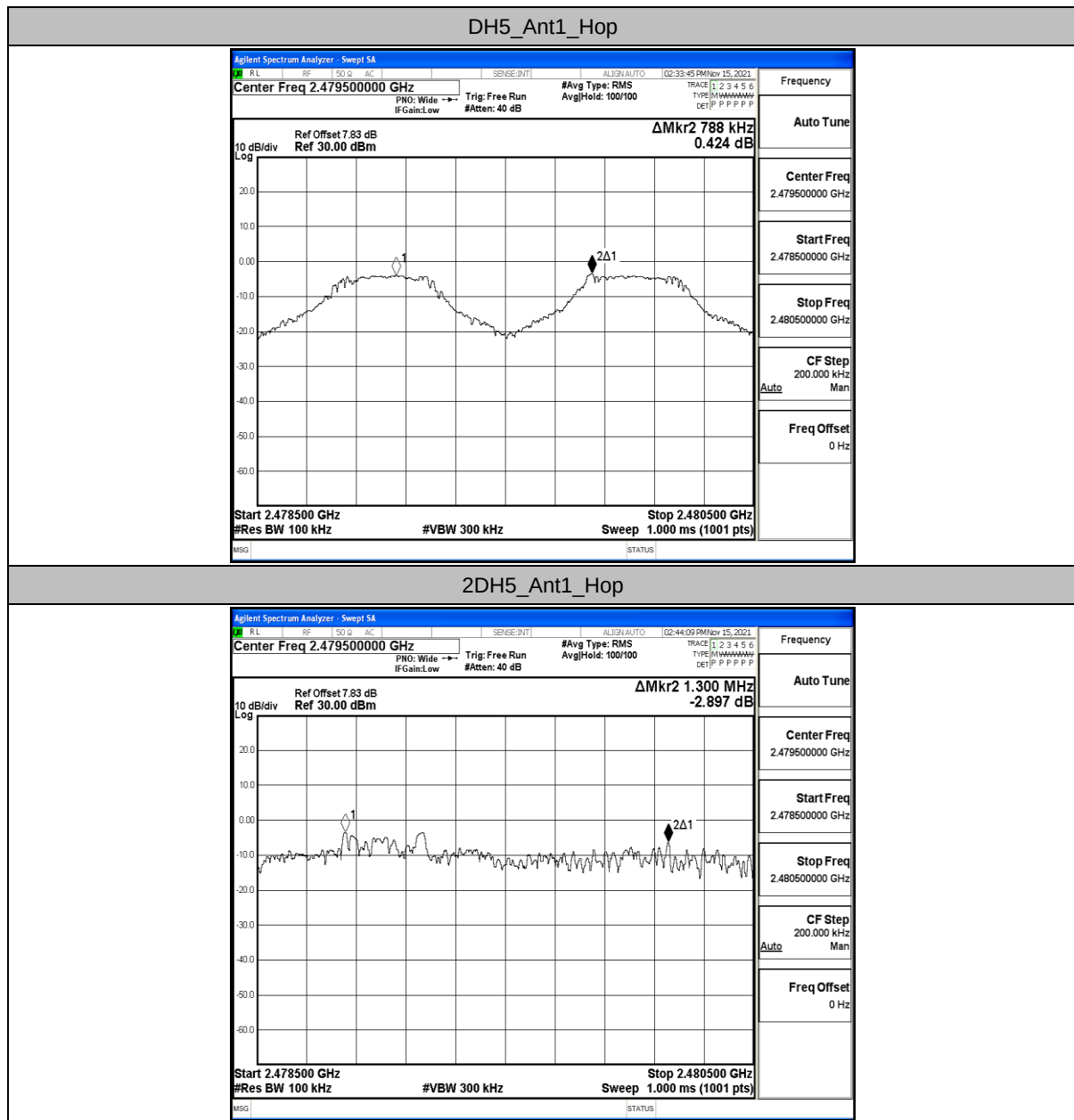


A.3 Carrier frequency separation

Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.788	≥0.644	PASS
2DH5	Ant1	Hop	1.3	≥0.874	PASS

Test Graphs



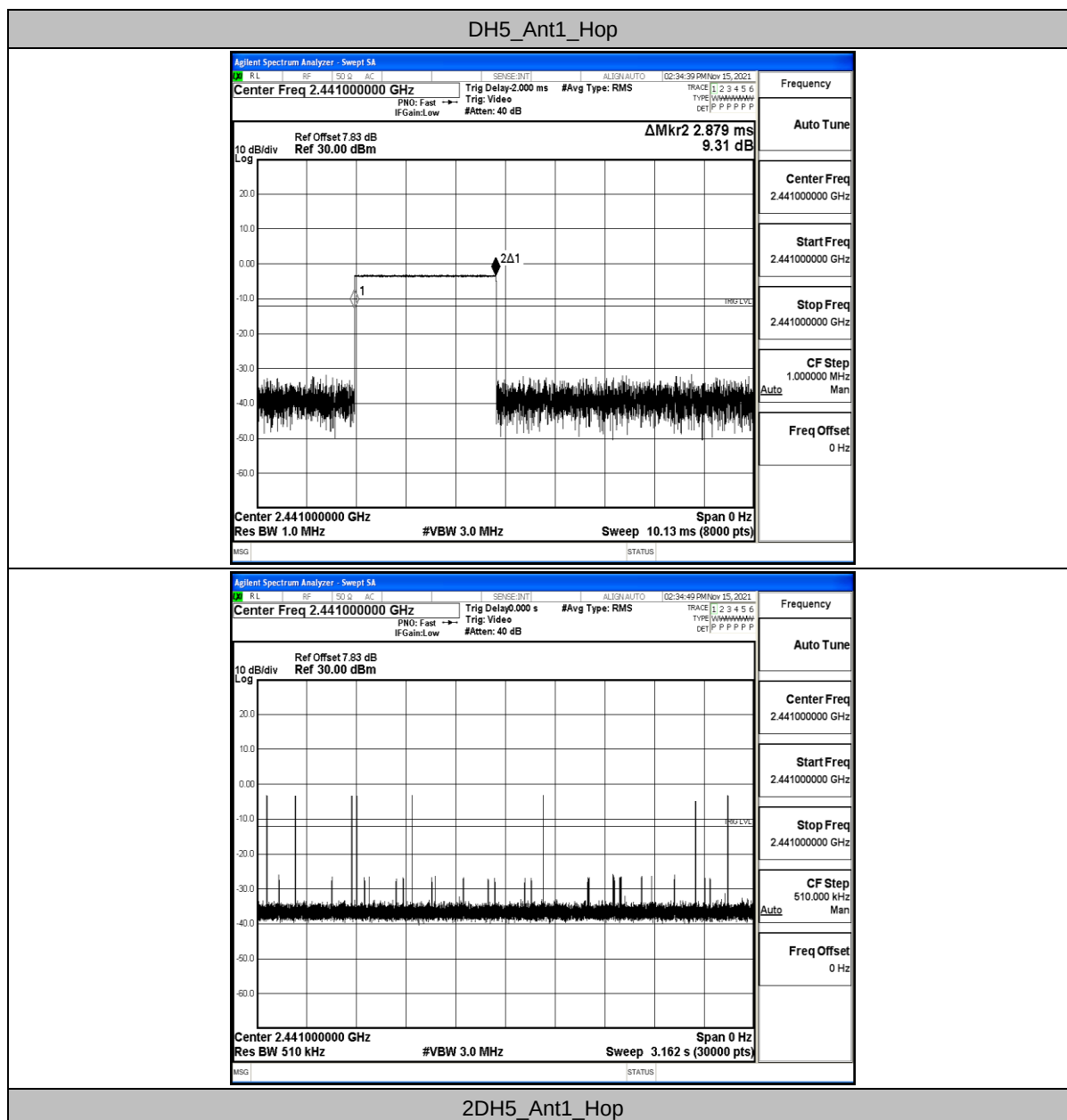


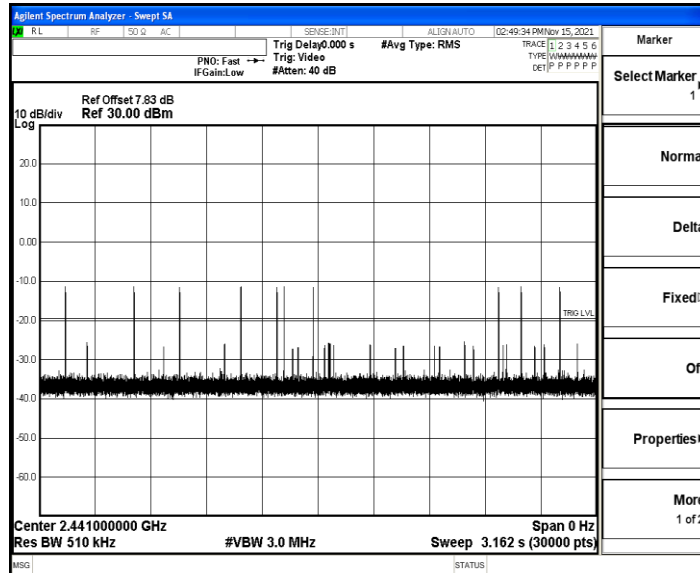
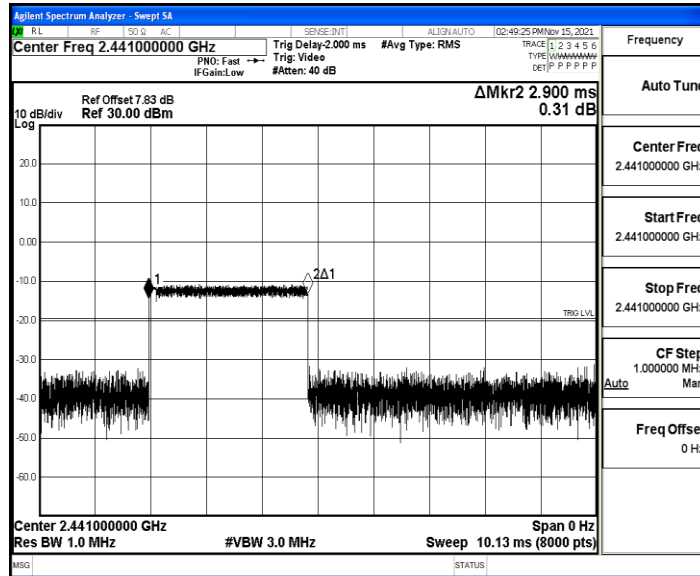
A.4 Time of occupancy

Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.88	90	0.259	≤0.4	PASS
2DH5	Ant1	Hop	2.90	110	0.319	≤0.4	PASS

Test Graphs





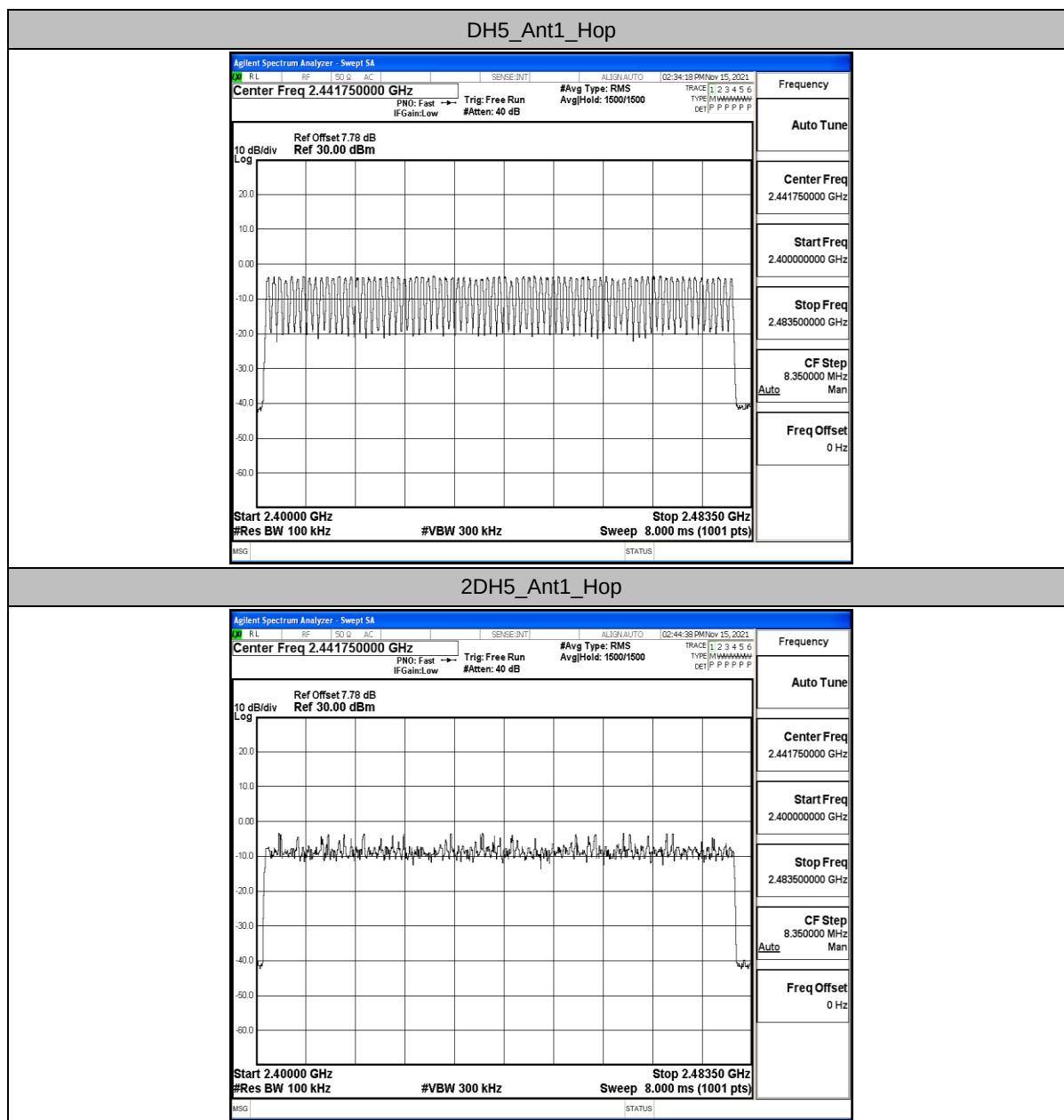


A.5 Number of hopping channels

Test Result

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

Test Graphs



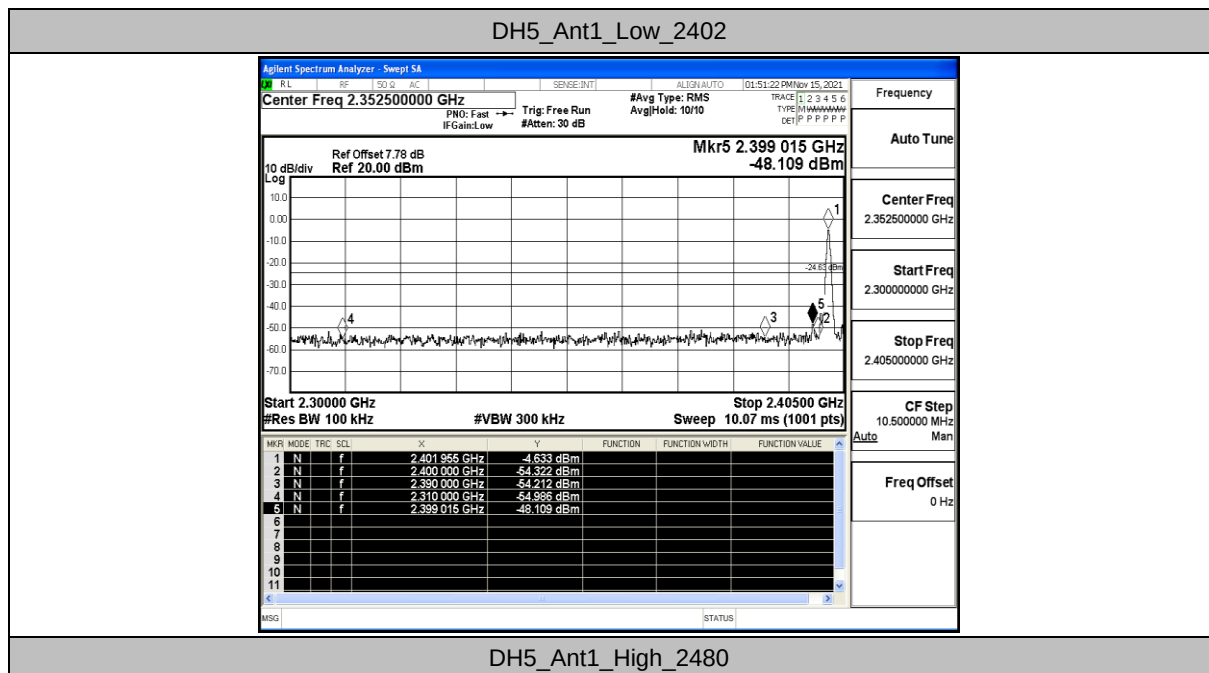


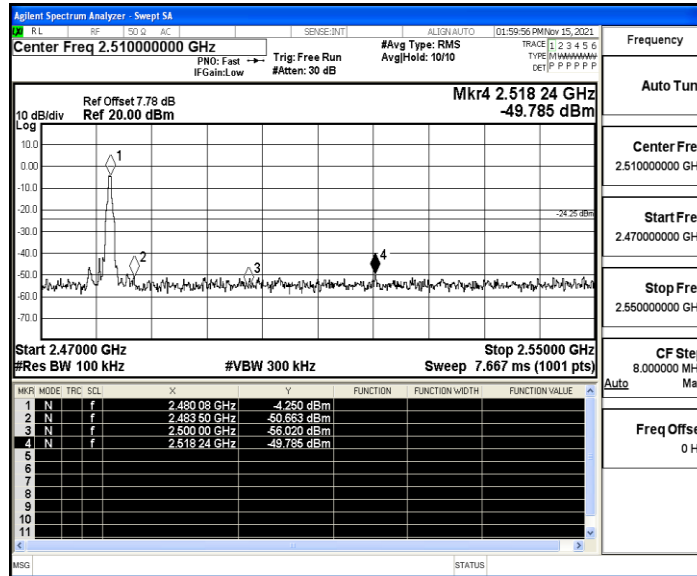
A.6 Band edge measurements

Test Result

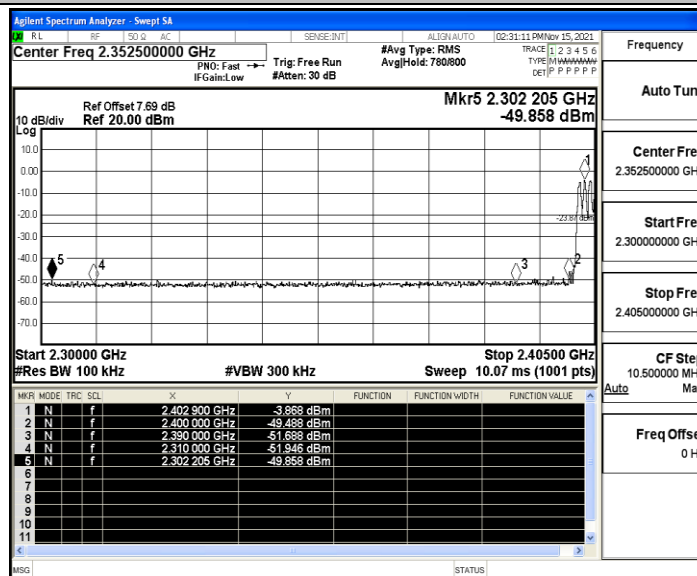
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-4.63	-48.11	≤ -24.63	PASS
		High	2480	-4.25	-49.79	≤ -24.25	PASS
		Low	Hop_2402	-3.87	-49.86	≤ -23.87	PASS
		High	Hop_2480	-3.35	-48.76	≤ -23.35	PASS
2DH5	Ant1	Low	2402	-8.28	-51.18	≤ -28.28	PASS
		High	2480	-8.39	-49.64	≤ -28.39	PASS
		Low	Hop_2402	-7.38	-49.61	≤ -27.38	PASS
		High	Hop_2480	-4.08	-48.09	≤ -24.08	PASS

Test Graphs

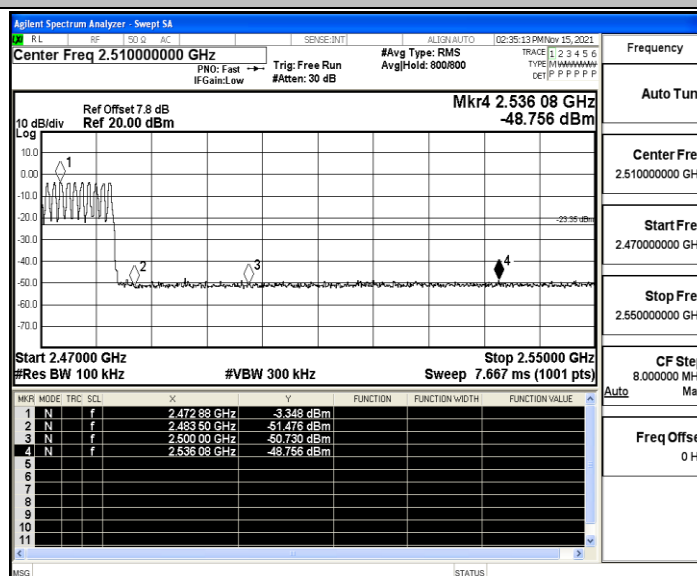




DH5_Ant1_Low_Hop_2402

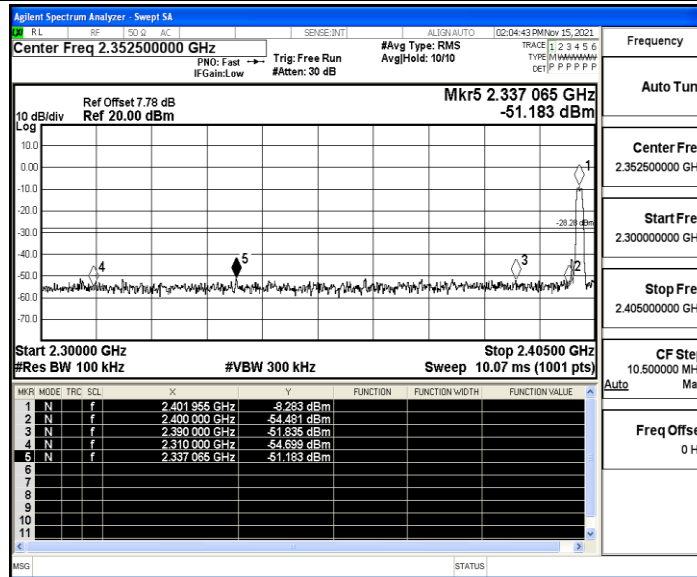


DH5_Ant1_High_Hop_2480

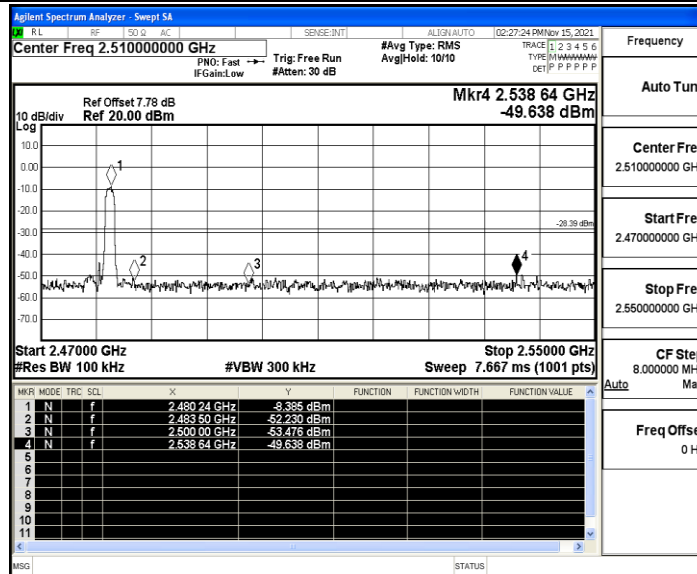




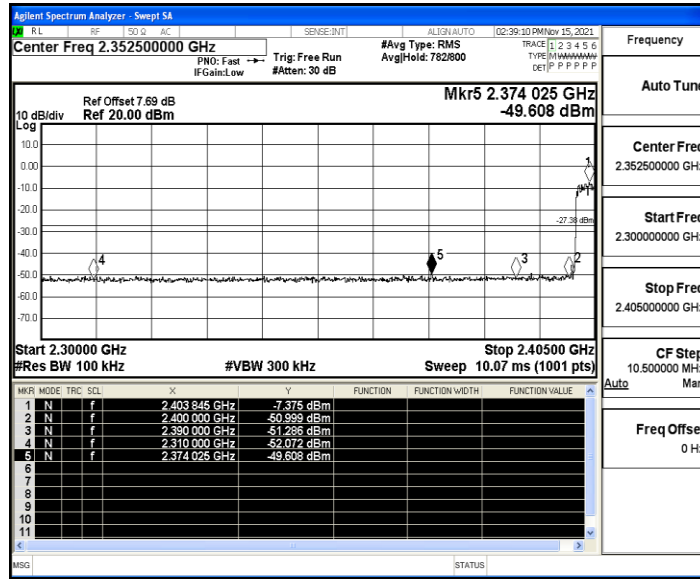
2DH5_Ant1_Low_2402



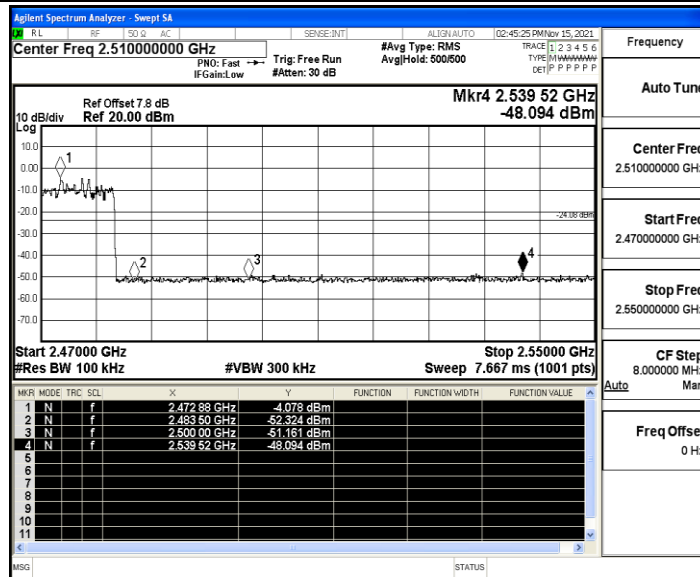
2DH5_Ant1_High_2480



2DH5_Ant1_Low_Hop_2402



2DH5_Ant1_High_Hop_2480





A.7 Conducted Spurious Emission

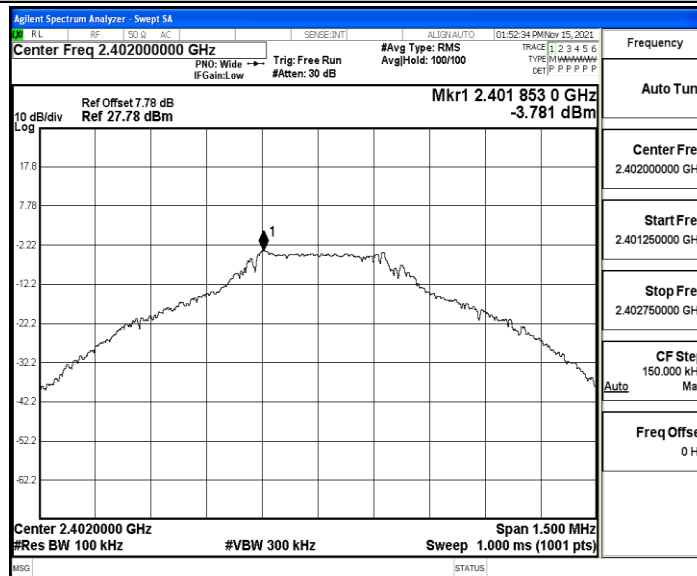
Test Result

TestMode	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	2402	Reference	-3.78	-3.78	---	PASS
		30~1000	-3.78	-56.41	≤ -23.78	PASS
		1000~26500	-3.78	-47.55	≤ -23.78	PASS
	2441	Reference	-4.01	-4.01	---	PASS
		30~1000	-4.01	-55.89	≤ -24.01	PASS
		1000~26500	-4.01	-44	≤ -24.01	PASS
	2480	Reference	-3.85	-3.85	---	PASS
		30~1000	-3.85	-55.19	≤ -23.85	PASS
		1000~26500	-3.85	-41.56	≤ -23.85	PASS
2DH5	2402	Reference	-3.90	-3.90	---	PASS
		30~1000	-3.90	-55.3	≤ -23.9	PASS
		1000~26500	-3.90	-34.57	≤ -23.9	PASS
	2441	Reference	-6.64	-6.64	---	PASS
		30~1000	-6.64	-55.95	≤ -26.64	PASS
		1000~26500	-6.64	-47.02	≤ -26.64	PASS
	2480	Reference	-3.61	-3.61	---	PASS
		30~1000	-3.61	-54.89	≤ -23.61	PASS
		1000~26500	-3.61	-44.97	≤ -23.61	PASS

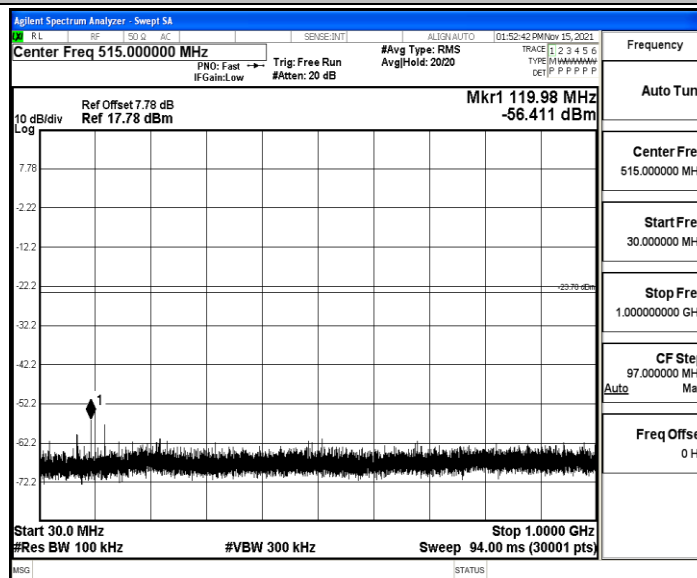


Test Graphs

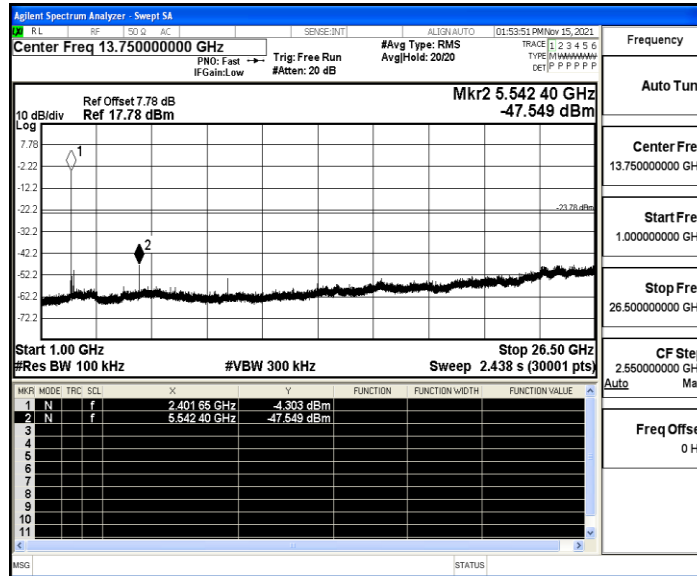
DH5_Ant1_2402_0~Reference



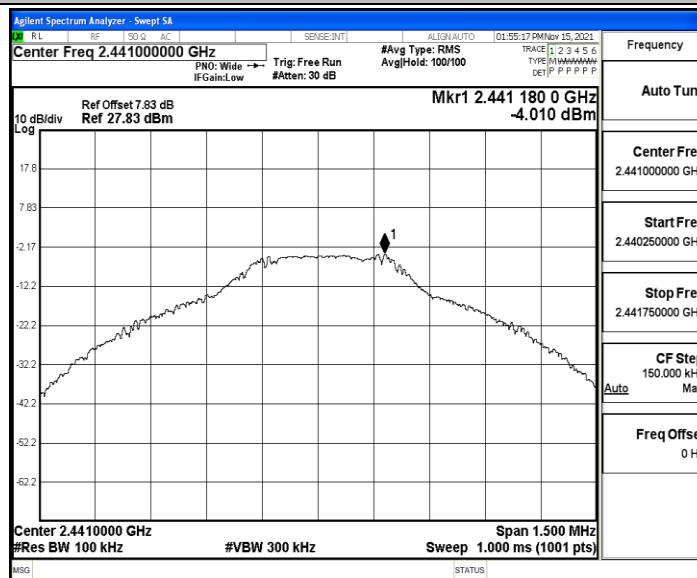
DH5_Ant1_2402_30~1000



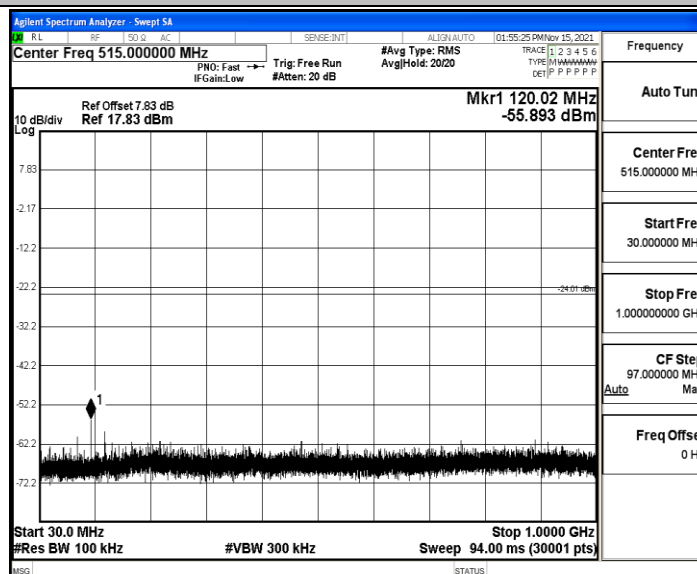
DH5_Ant1_2402_1000~26500



DH5_Ant1_2441_0~Reference

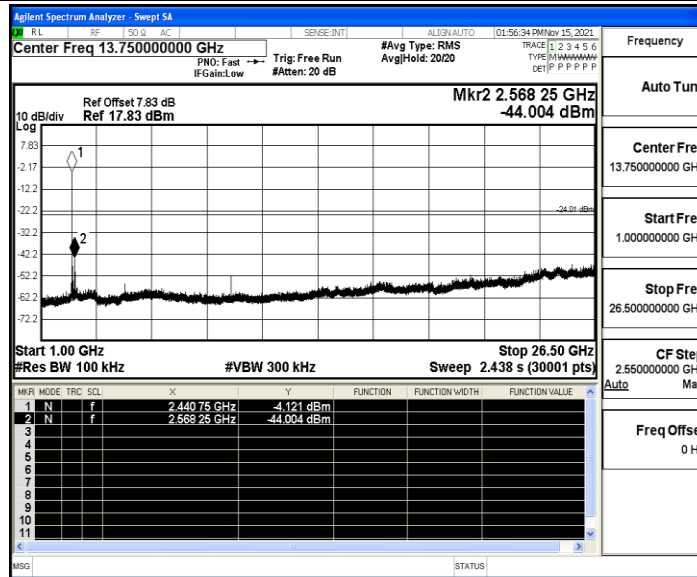


DH5_Ant1_2441_30~1000

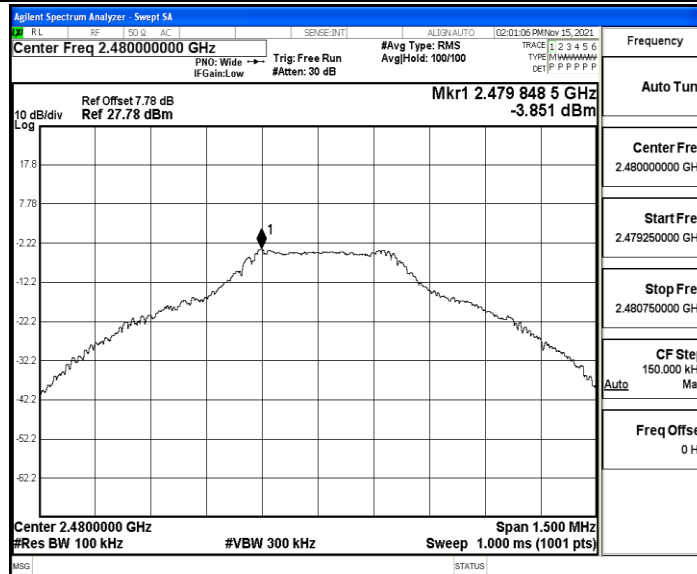




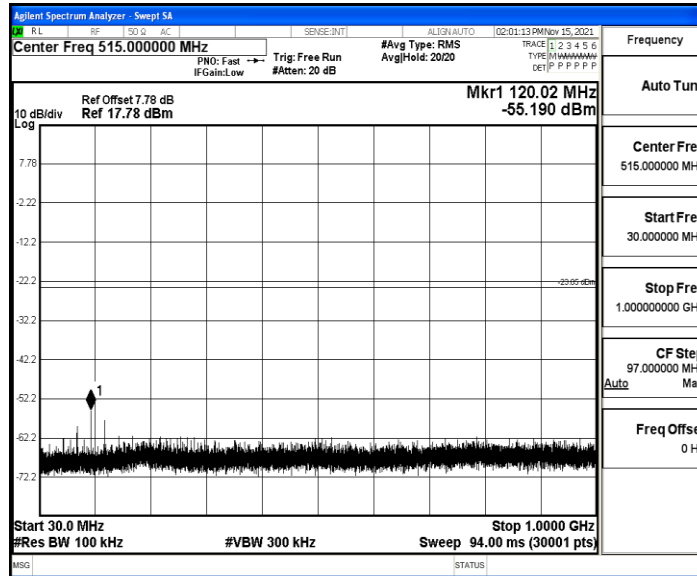
DH5_Ant1_2441_1000~26500



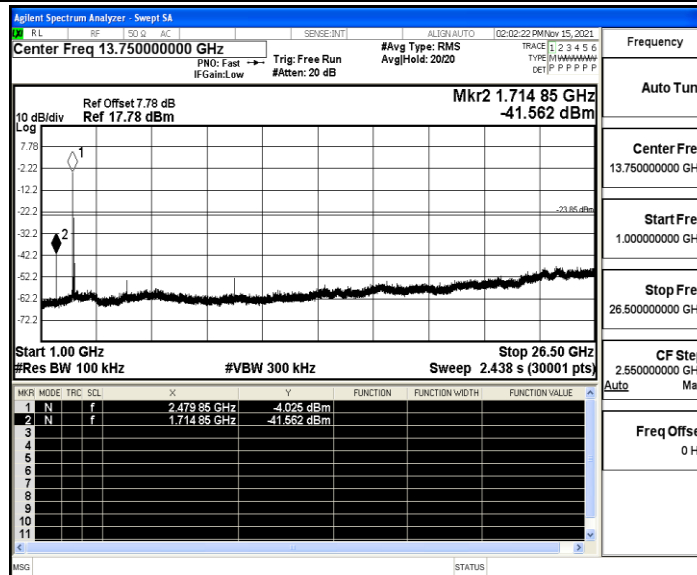
DH5_Ant1_2480_0~Reference



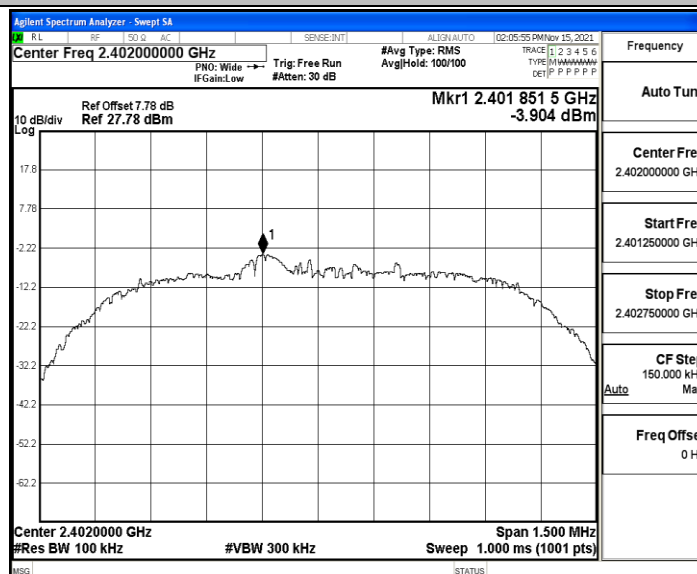
DH5_Ant1_2480_30~1000



DH5_Ant1_2480_1000~26500

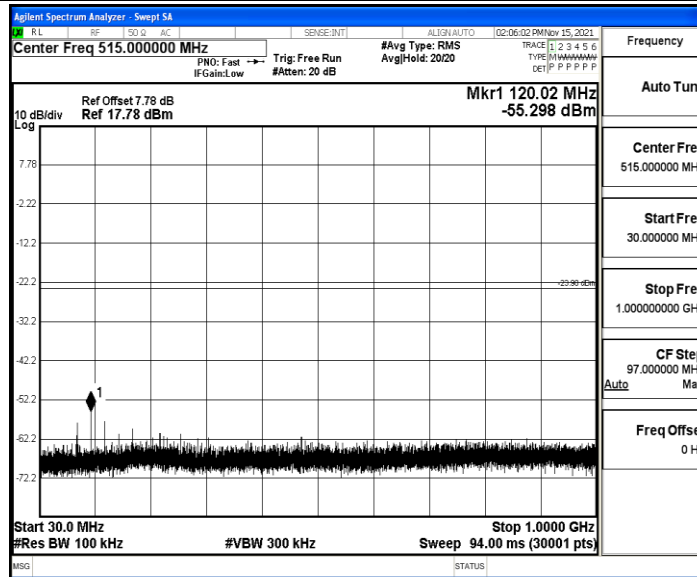


2DH5_Ant1_2402_0~Reference

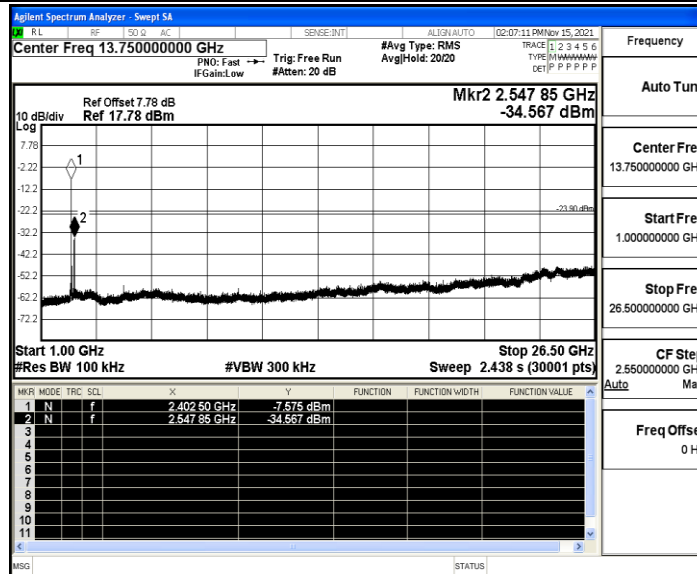




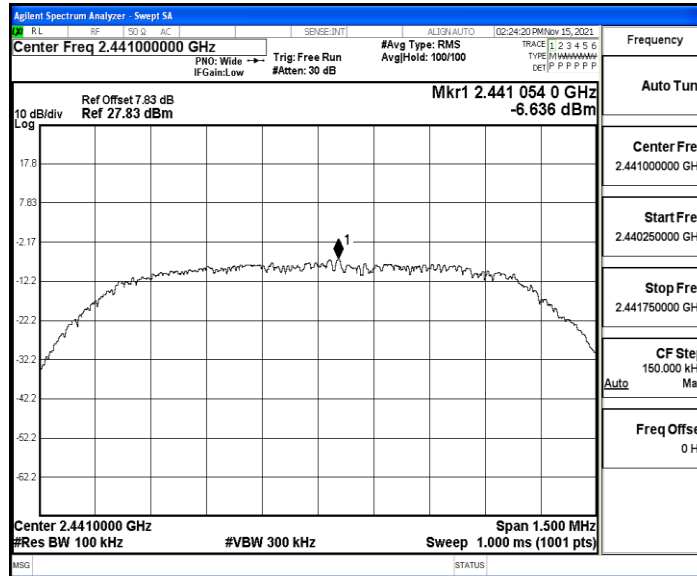
2DH5_Ant1_2402_30~1000



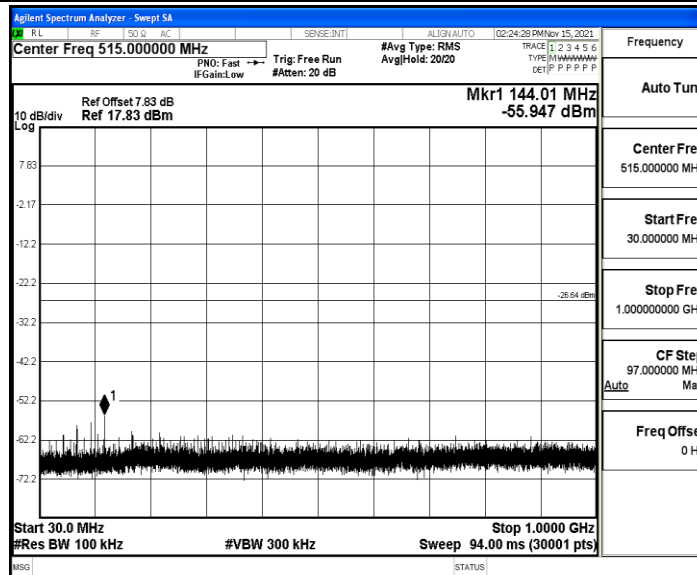
2DH5_Ant1_2402_1000~26500



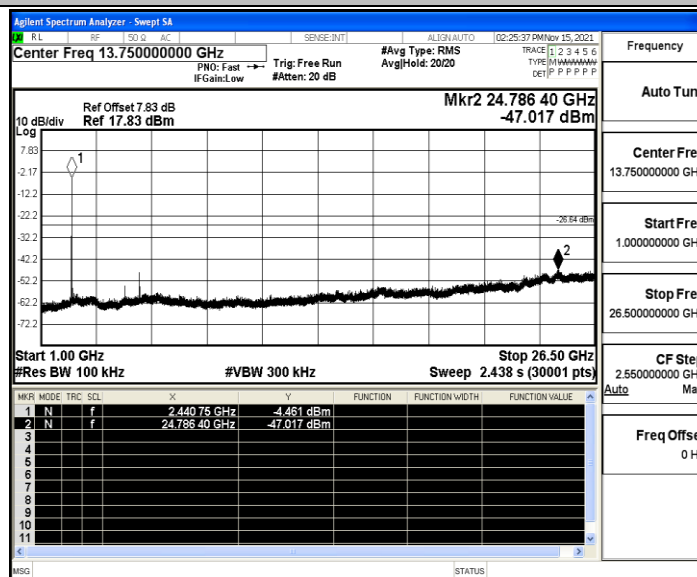
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000

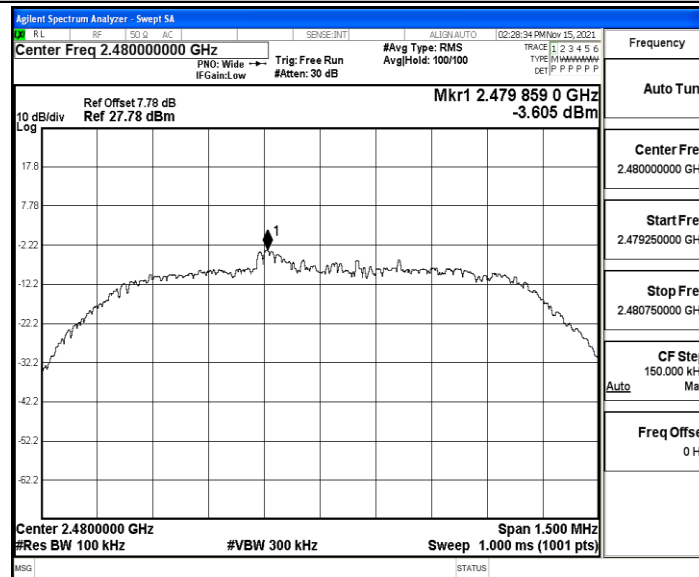


2DH5_Ant1_2441_1000~26500

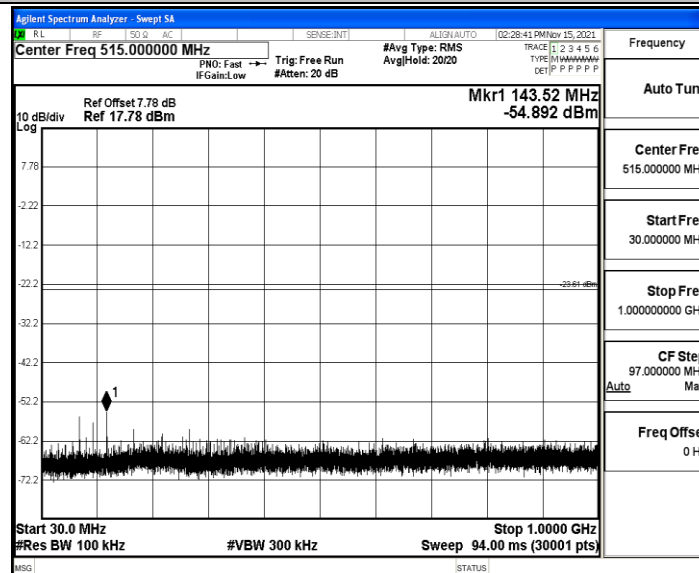




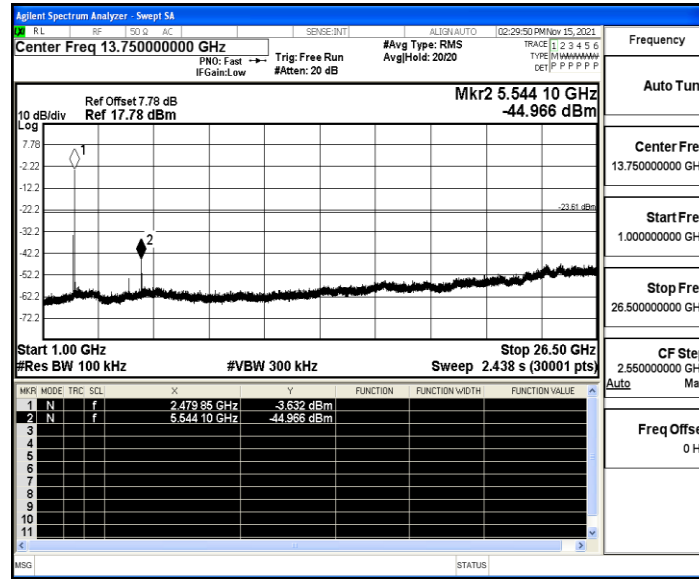
2DH5_Ant1_2480_0~Reference



2DH5_Ant1_2480_30~1000



2DH5_Ant1_2480_1000~26500





A.8 Emissions in Restricted Bands

Test Result

TestMode	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	2402	AV	2310.000	-49.29	≤-41.20	45.91	≤54	PASS
		AV	2378.015	-47.27	≤-41.20	47.93	≤54	PASS
		AV	2390.000	-48.42	≤-41.20	46.78	≤54	PASS
		Peak	2310.000	-40.91	≤-21.20	54.29	≤74	PASS
		Peak	2374.970	-38.63	≤-21.20	56.57	≤74	PASS
		Peak	2390.000	-42.37	≤-21.20	52.83	≤74	PASS
	2480	AV	2483.500	-45.73	≤-41.20	49.47	≤54	PASS
		AV	2483.520	-45.73	≤-41.20	49.47	≤54	PASS
		AV	2500.000	-47.67	≤-41.20	47.53	≤54	PASS
		Peak	2483.500	-39.8	≤-21.20	55.40	≤74	PASS
		Peak	2494.320	-38.52	≤-21.20	56.68	≤74	PASS
		Peak	2500.000	-41.33	≤-21.20	53.87	≤74	PASS
	Hop_24 02	Peak	2310.000	-40.53	≤-21.20	54.67	≤74	PASS
		Peak	2388.200	-37.66	≤-21.20	57.54	≤74	PASS
		Peak	2390.000	-40.45	≤-21.20	54.75	≤74	PASS
	Hop_24 80	Peak	2483.500	-40.31	≤-21.20	54.89	≤74	PASS
		Peak	2496.080	-37.16	≤-21.20	58.04	≤74	PASS
		Peak	2500.000	-39.32	≤-21.20	55.88	≤74	PASS
2DH5	2402	AV	2310.000	-49.13	≤-41.20	46.07	≤54	PASS
		AV	2377.910	-47.2	≤-41.20	48.00	≤54	PASS
		AV	2390.000	-48.27	≤-41.20	46.93	≤54	PASS
		Peak	2310.000	-42.82	≤-21.20	52.38	≤74	PASS
		Peak	2330.555	-37.97	≤-21.20	57.23	≤74	PASS
		Peak	2390.000	-40.58	≤-21.20	54.62	≤74	PASS
	2480	AV	2483.500	-46.48	≤-41.20	48.72	≤54	PASS
		AV	2483.520	-46.48	≤-41.20	48.72	≤54	PASS
		AV	2500.000	-47.46	≤-41.20	47.74	≤54	PASS
		Peak	2483.500	-41.33	≤-21.20	53.87	≤74	PASS
		Peak	2484.080	-37.92	≤-21.20	57.28	≤74	PASS
		Peak	2500.000	-41.64	≤-21.20	53.56	≤74	PASS
	Hop_24 02	Peak	2310.000	-41.29	≤-21.20	53.91	≤74	PASS
		Peak	2332.655	-38.19	≤-21.20	57.01	≤74	PASS
		Peak	2390.000	-40.68	≤-21.20	54.52	≤74	PASS
	Hop_24	Peak	2483.500	-39.99	≤-21.20	55.21	≤74	PASS



	80	Peak	2490.800	-38.35	≤-21.20	56.85	≤74	PASS
		Peak	2500.000	-40.07	≤-21.20	55.13	≤74	PASS

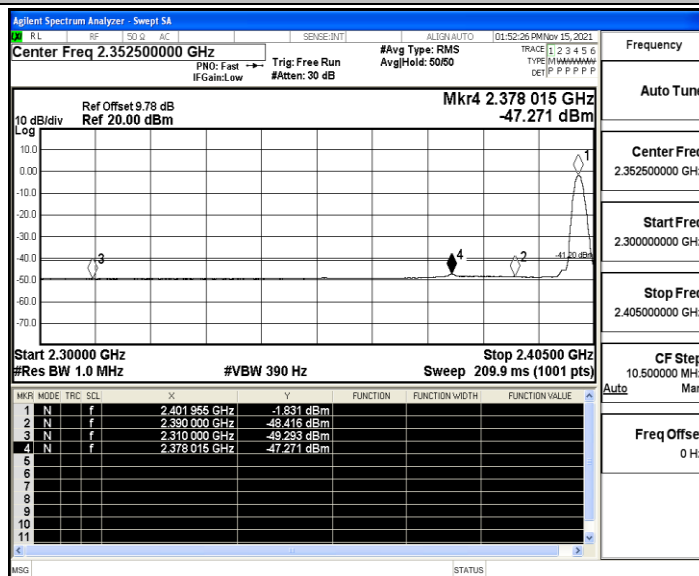
Note:

1. The Antenna Gain is compensated in the graph.
2. 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.

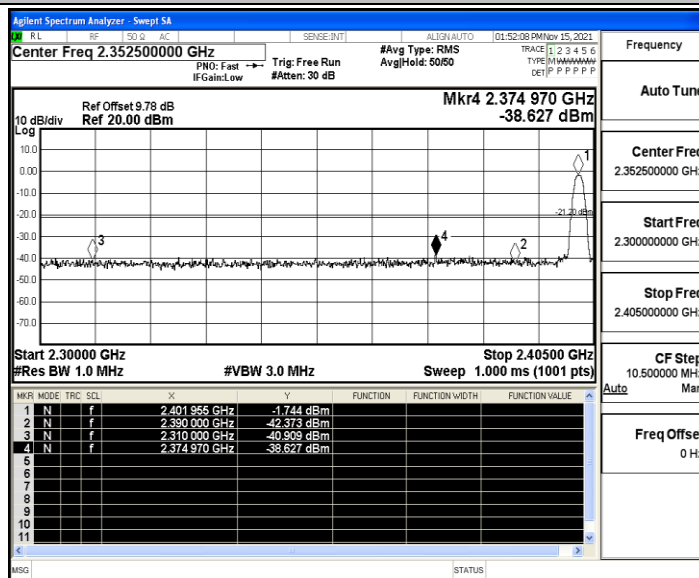


Test Graphs

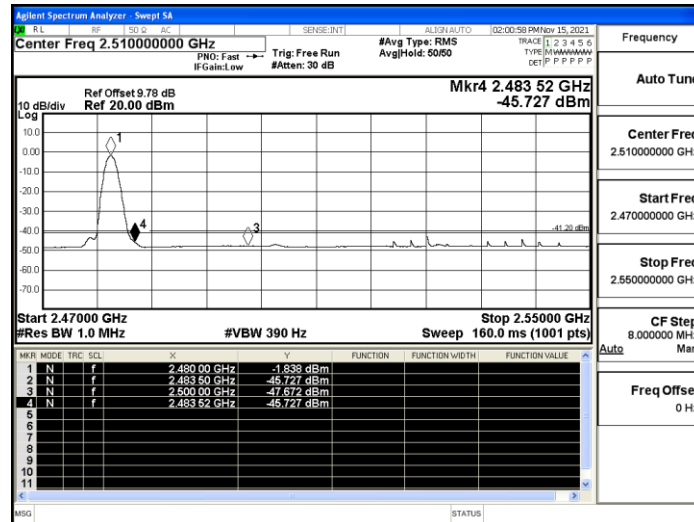
DH5_Ant1_Low_2402_AV



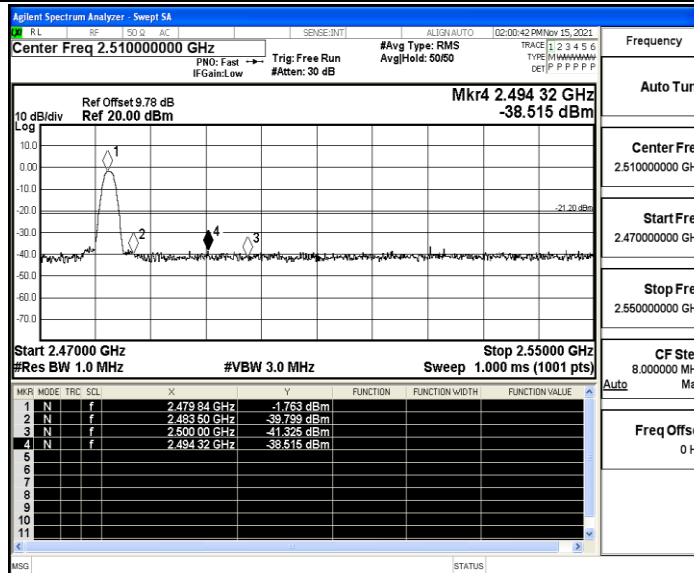
DH5_Ant1_Low_2402_Peak



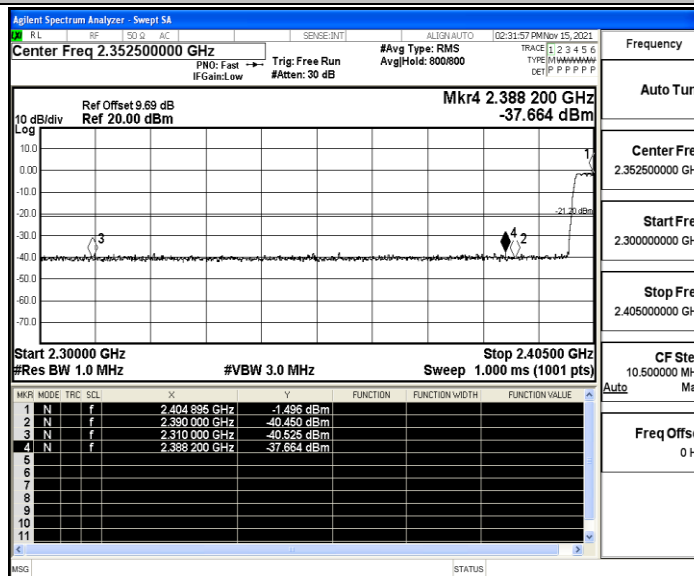
DH5_Ant1_High_2480_AV



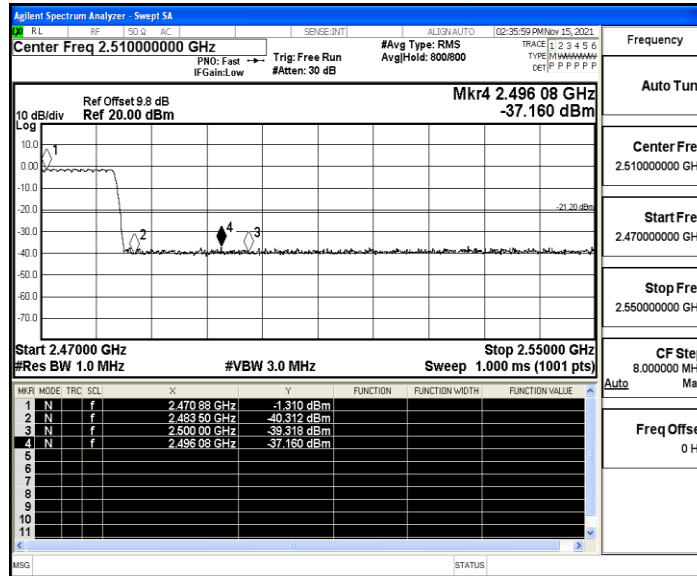
DH5_Ant1_High_2480_Peak



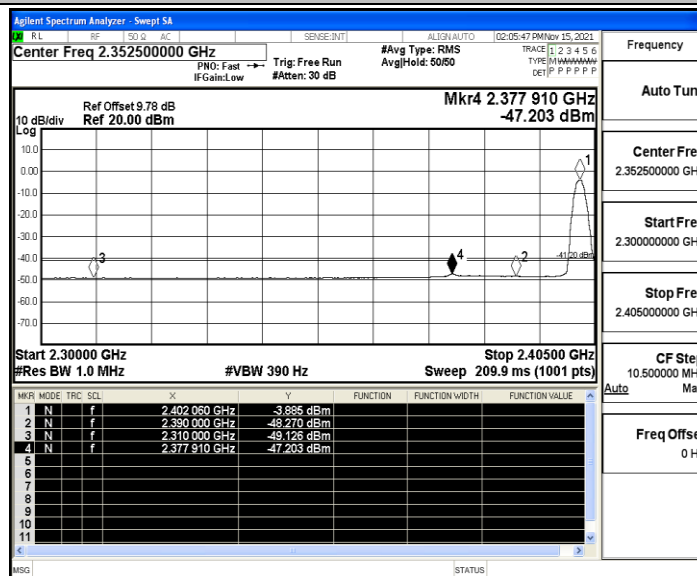
DH5_Ant1_Low_Hop_2402_Peak



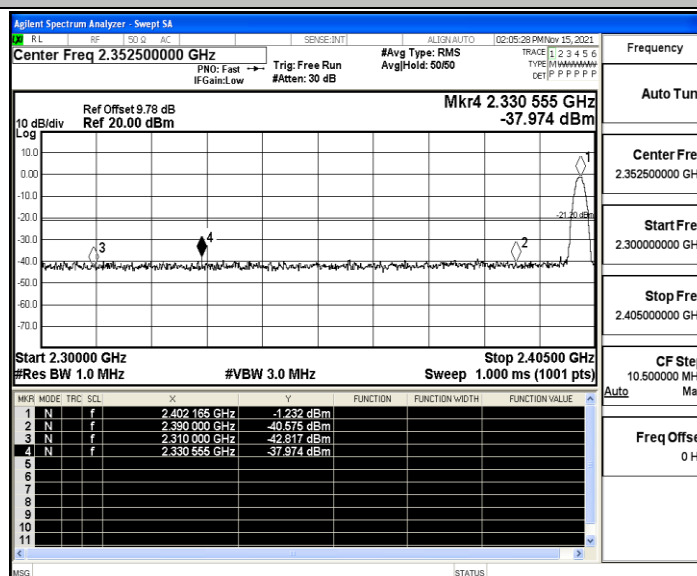
DH5_Ant1_High_Hop_2480_Peak

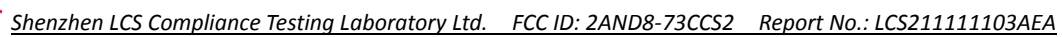


2DH5_Ant1_Low_2402_AV



2DH5_Ant1_Low_2402_Peak



[illegible]

Agilent Spectrum Analyzer - Sweep SA

RL: [] RS: [] FID: [] XC: [] SENSE: [INT] ALIGN: [AUTO] [02:28:10 PM] Nov 15, 2021

Center Freq 2.510000000 GHz #Avg Type: RMS Avg/Hold: 50/50 TRAC: [1] 2 3 4 5 6
PNO: Fast Trig: Free Run IF Gain: Low #Atten: 30 dB TYPE: [HMM] MMMW DET: [P P P P P]

Mkr4 2.484 08 GHz -37.924 dBm

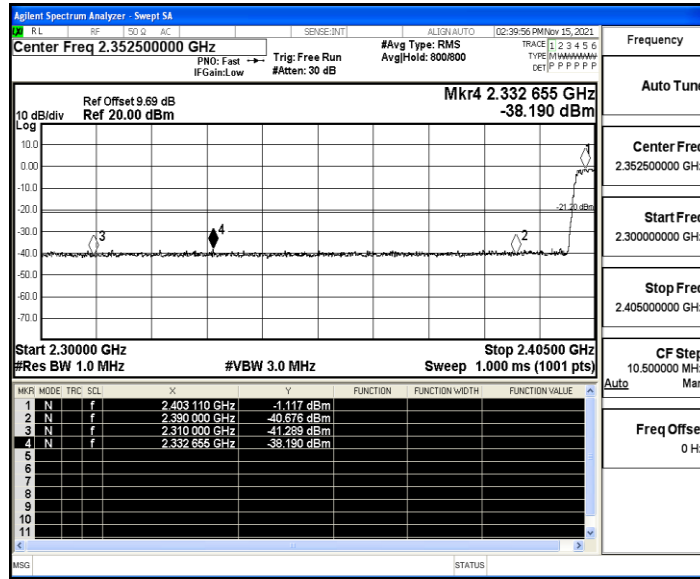
Ref Offset 9.78 dB Ref 20.00 dBm

MKR MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f	2.480 16 GHz	-1.012 dBm			
2	N	f	2.483 50 GHz	-41.326 dBm			
3	N	f	2.500 00 GHz	-41.636 dBm			
4	N	f	2.484 08 GHz	-37.924 dBm			

Start 2.47000 GHz Stop 2.55000 GHz
#Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts)

Frequency
Auto Tune
Center Freq 2.510000000 GHz
Start Freq 2.470000000 GHz
Stop Freq 2.550000000 GHz
CF Step 8.000000 MHz
Freq Offset 0 Hz

2DH5_Ant1_Low_Hop_2402_Peak



2DH5_Ant1_High_Hop_2480_Peak

