



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Soundbar with Bluetooth 5.0

Test Model: QY-B202

Environmental Conditions

Temperature:	23.4° C
Relative Humidity:	51.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling. Zhu
Supervised by:	Libu



A.1 20dB Emission Bandwidth

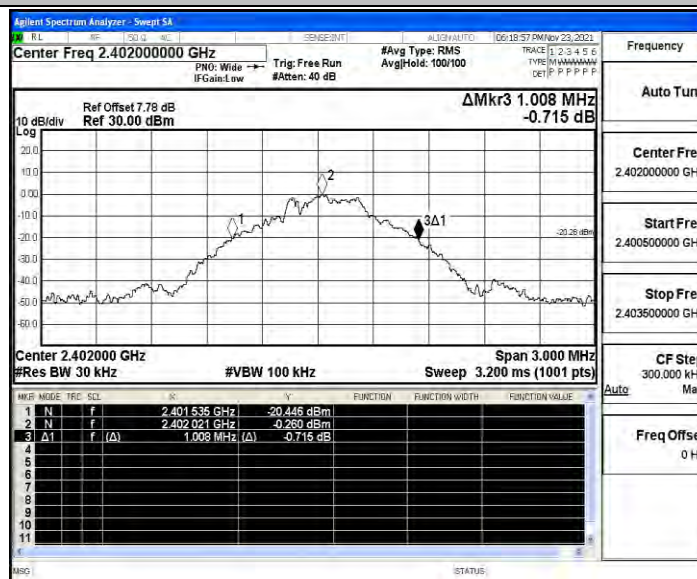
Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	1.008	2401.535	2402.543	---	PASS
		2441	0.951	2440.538	2441.489	---	PASS
		2480	1.059	2479.505	2480.564	---	PASS
2DH5	Ant1	2402	1.329	2401.382	2402.711	---	PASS
		2441	1.320	2440.385	2441.705	---	PASS
		2480	1.308	2479.397	2480.705	---	PASS
3DH5	Ant1	2402	1.308	2401.379	2402.687	---	PASS
		2441	1.317	2440.376	2441.693	---	PASS
		2480	1.284	2479.397	2480.681	---	PASS

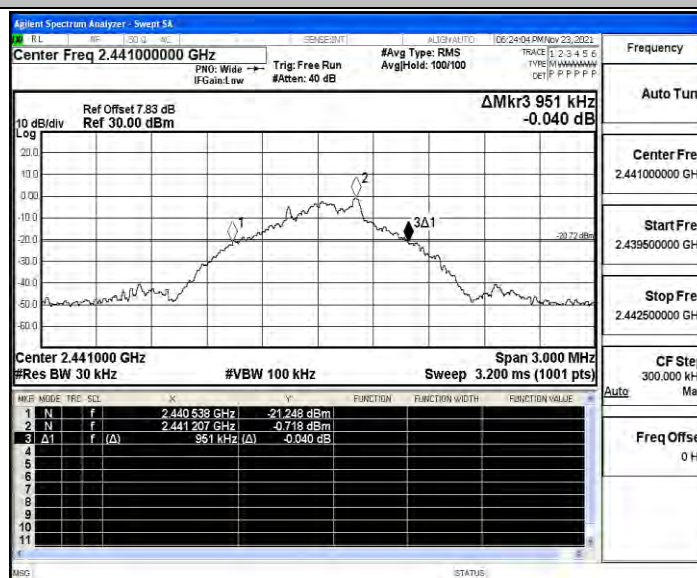


Test Graphs

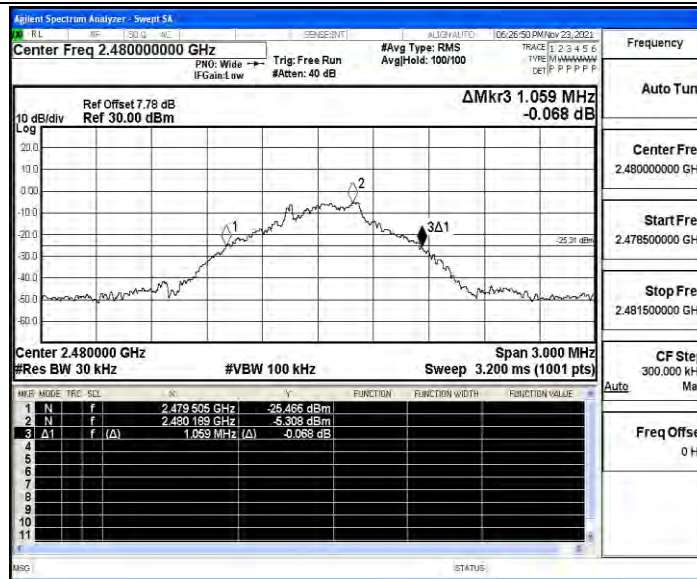
DH5_Ant1_2402



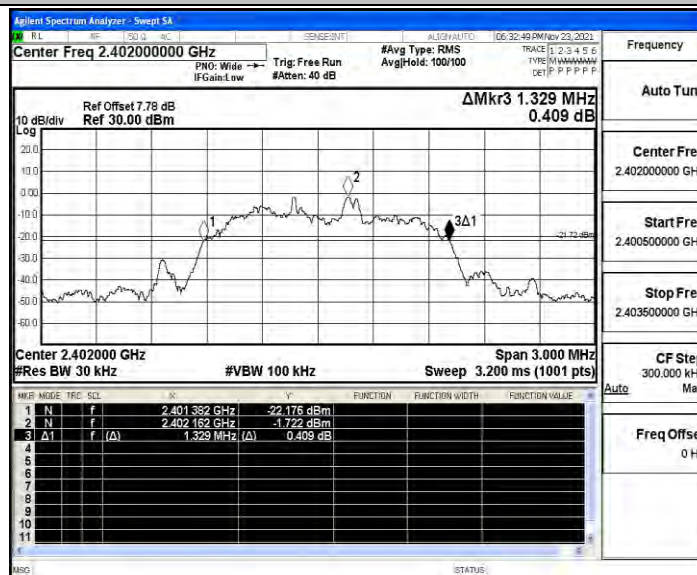
DH5_Ant1_2441



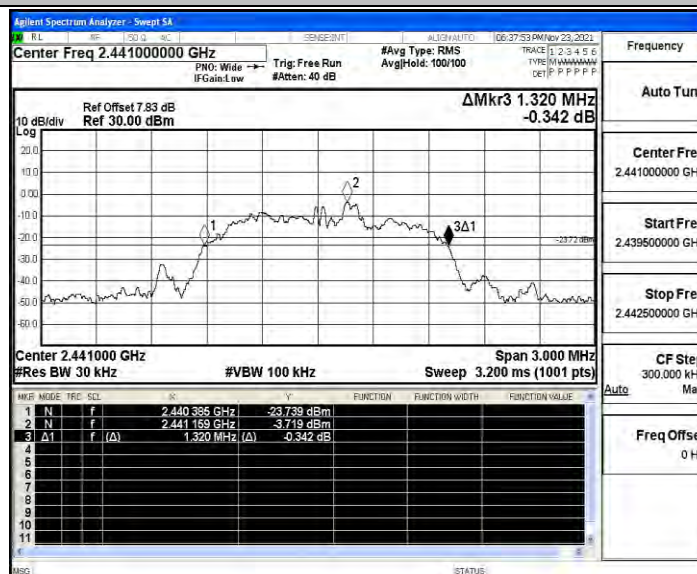
DH5_Ant1_2480



2DH5_Ant1_2402

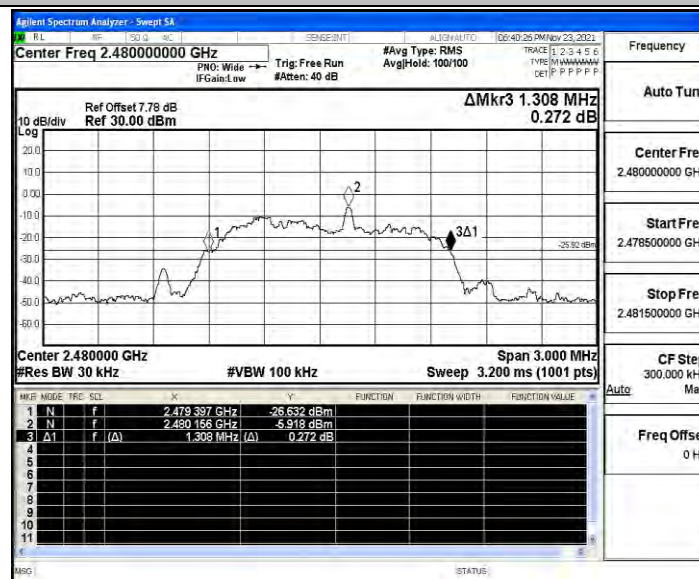


2DH5_Ant1_2441

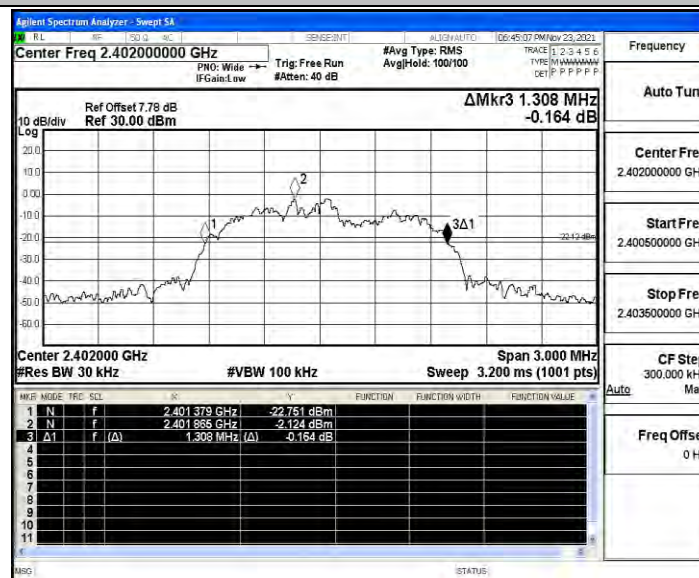




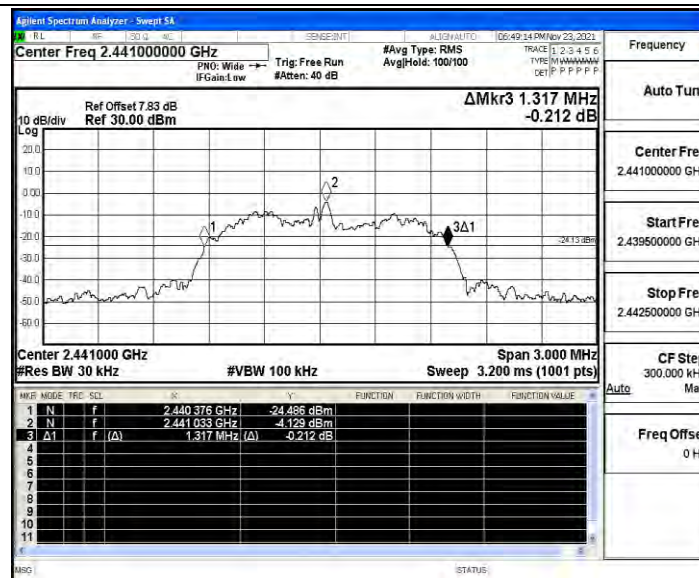
2DH5_Ant1_2480



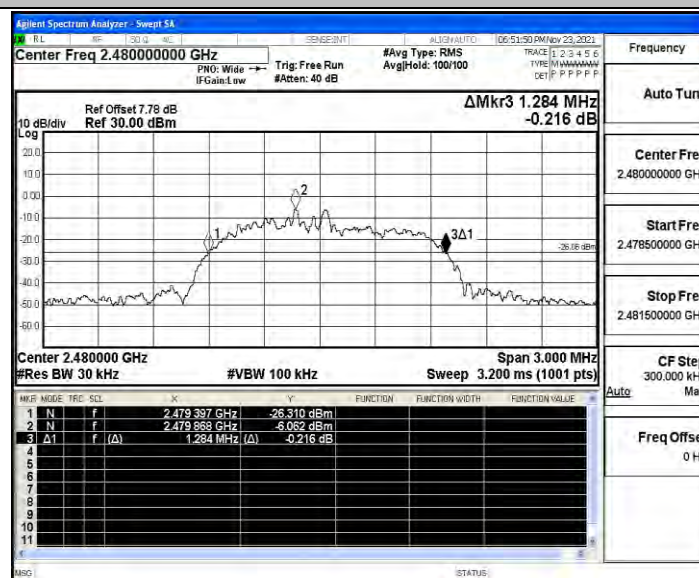
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



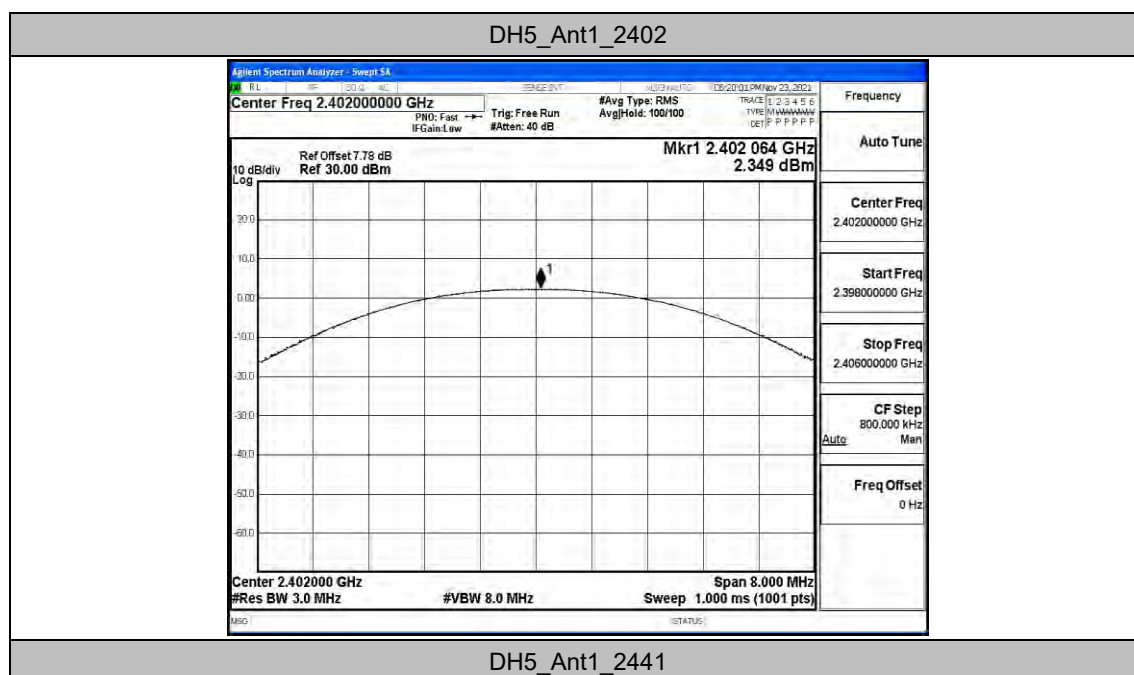


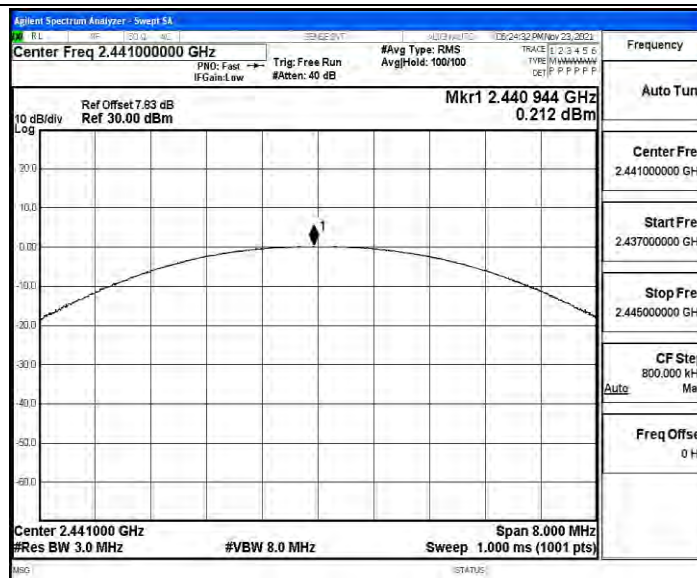
A.2 Maximum conducted output power

Test Result

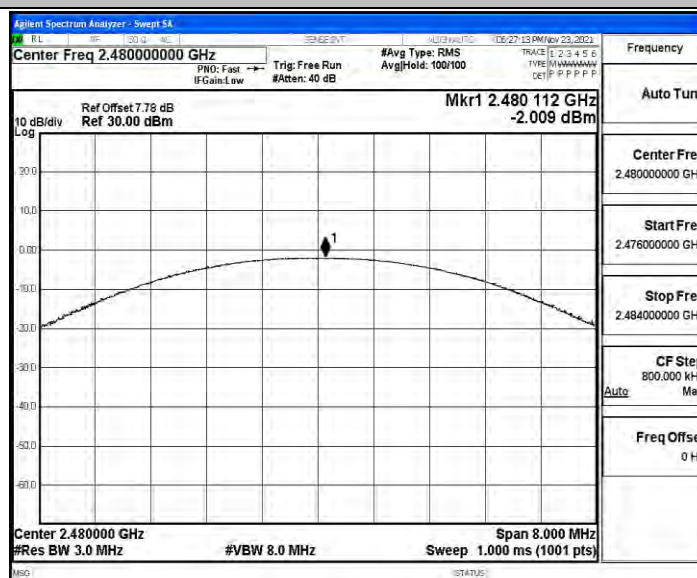
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	2.35	≤20.97	PASS
		2441	0.21	≤20.97	PASS
		2480	-2.01	≤20.97	PASS
2DH5	Ant1	2402	1.98	≤20.97	PASS
		2441	0.09	≤20.97	PASS
		2480	-2.08	≤20.97	PASS
3DH5	Ant1	2402	2.02	≤20.97	PASS
		2441	0.08	≤20.97	PASS
		2480	-2.08	≤20.97	PASS

Test Graphs

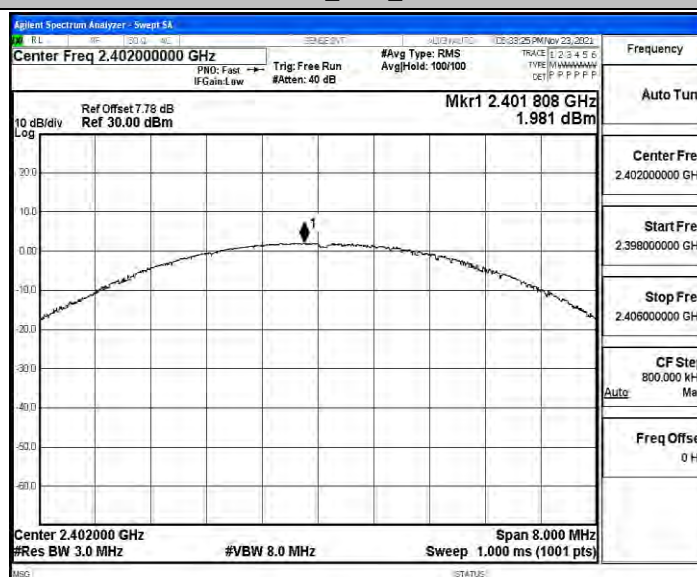




DH5_Ant1_2480

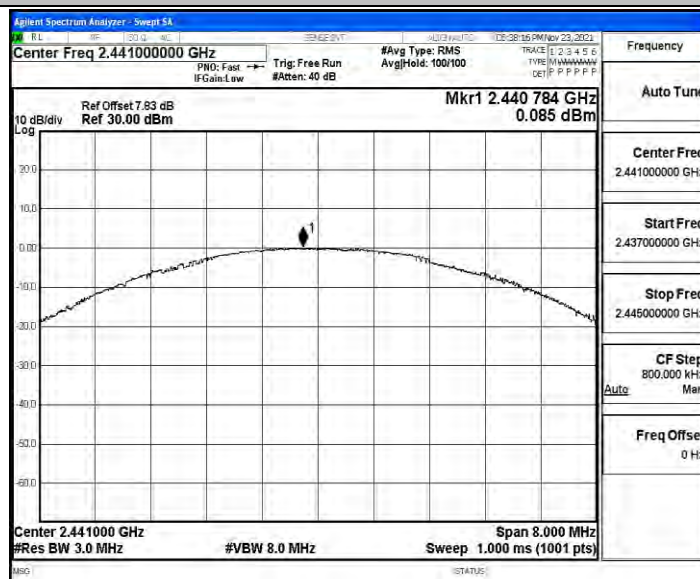


2DH5_Ant1_2402

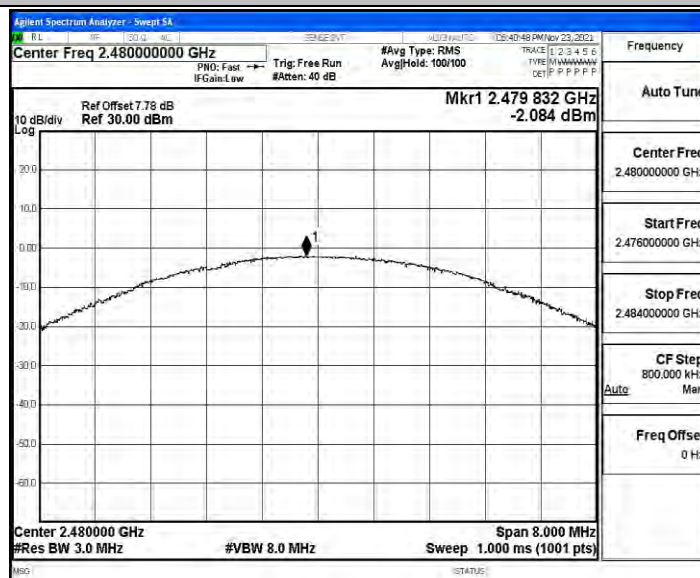




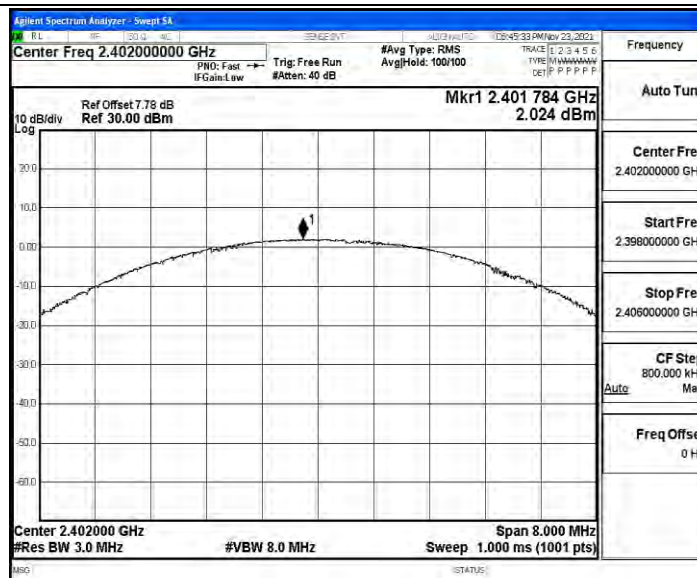
2DH5_Ant1_2441



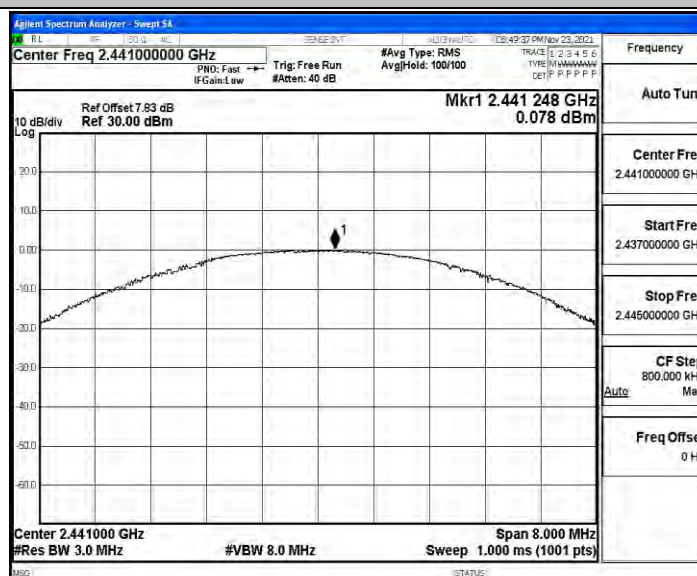
2DH5_Ant1_2480



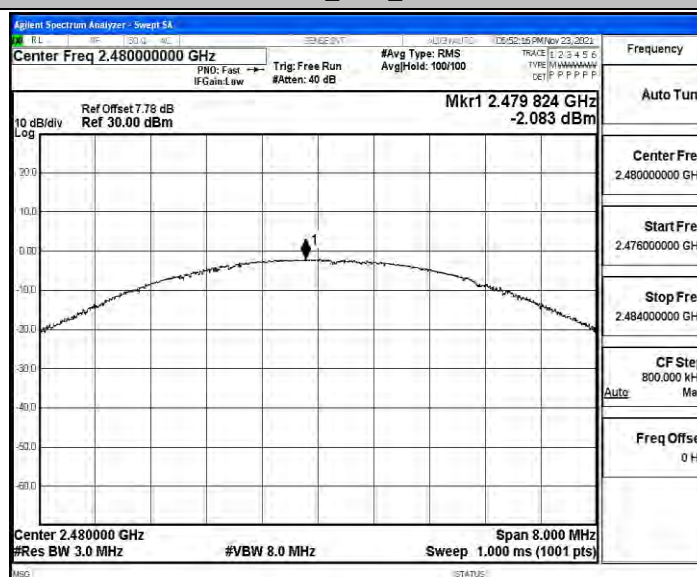
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



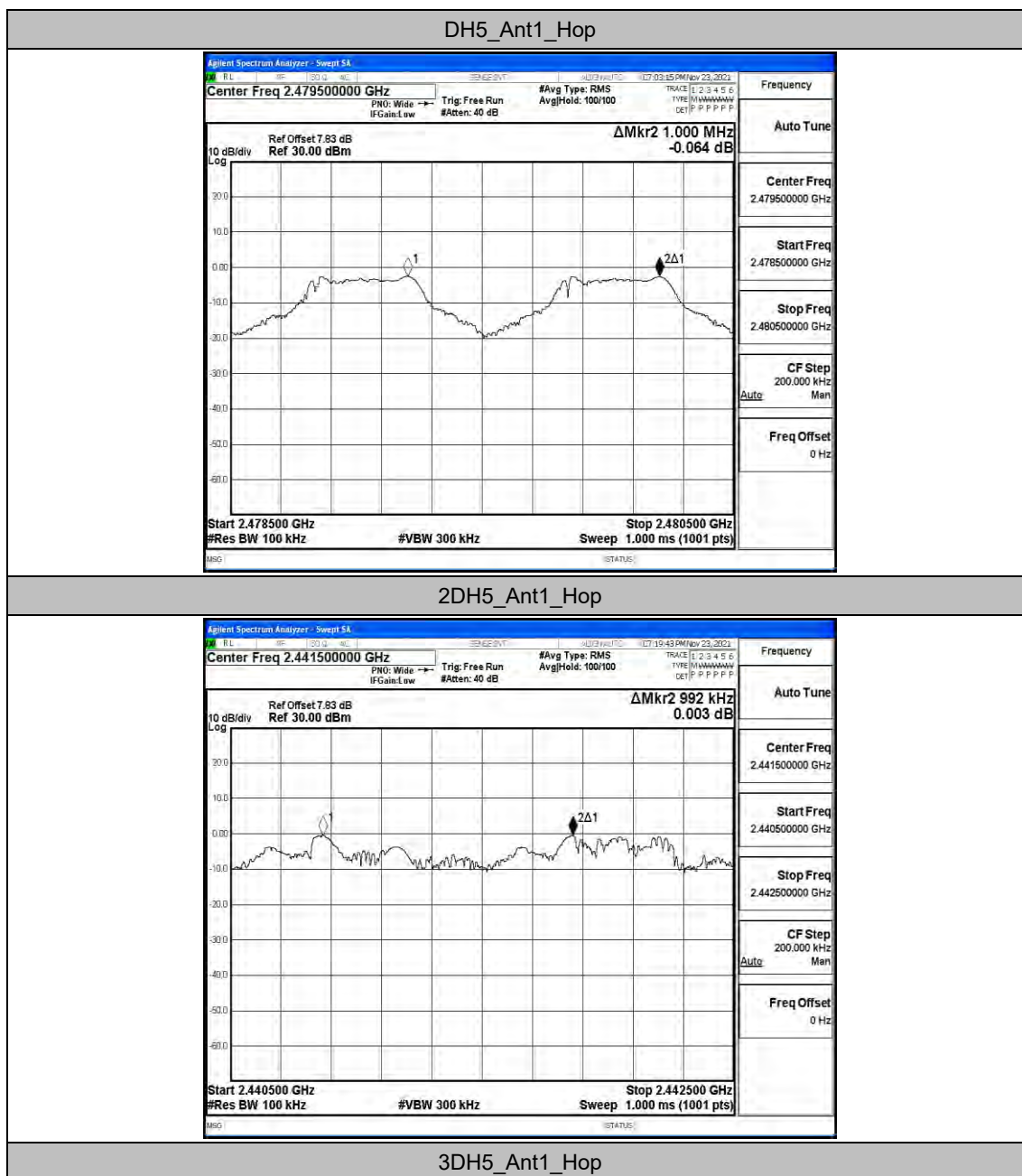


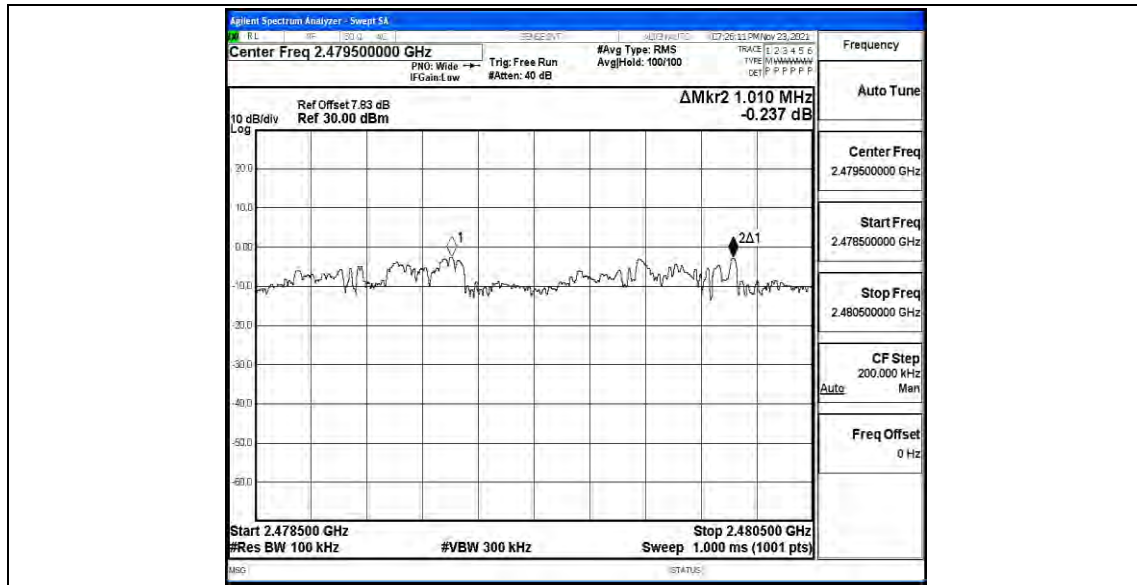
A.3 Carrier frequency separation

Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1	≥ 0.706	PASS
2DH5	Ant1	Hop	0.992	≥ 0.886	PASS
3DH5	Ant1	Hop	1.01	≥ 0.878	PASS

Test Graphs





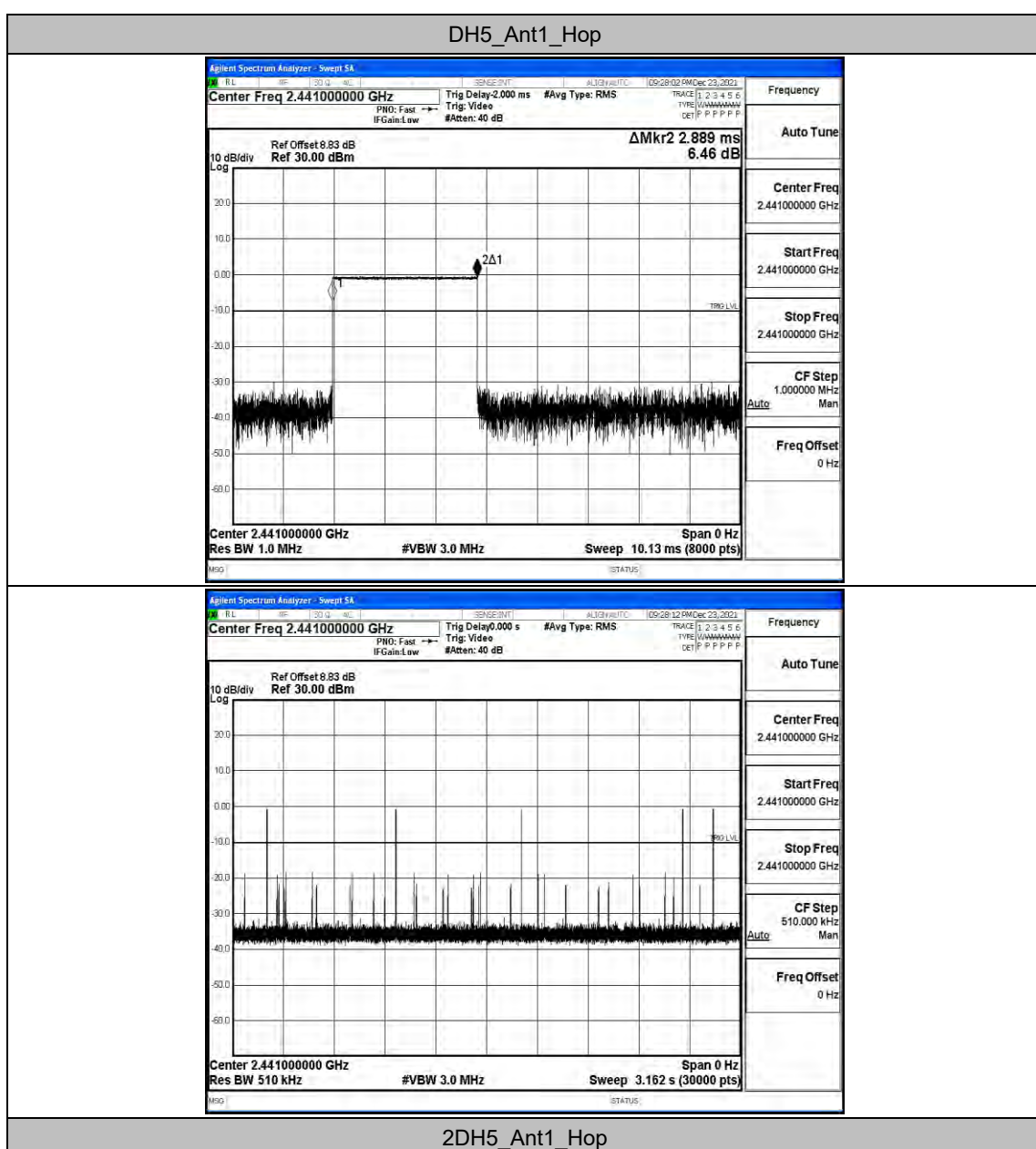


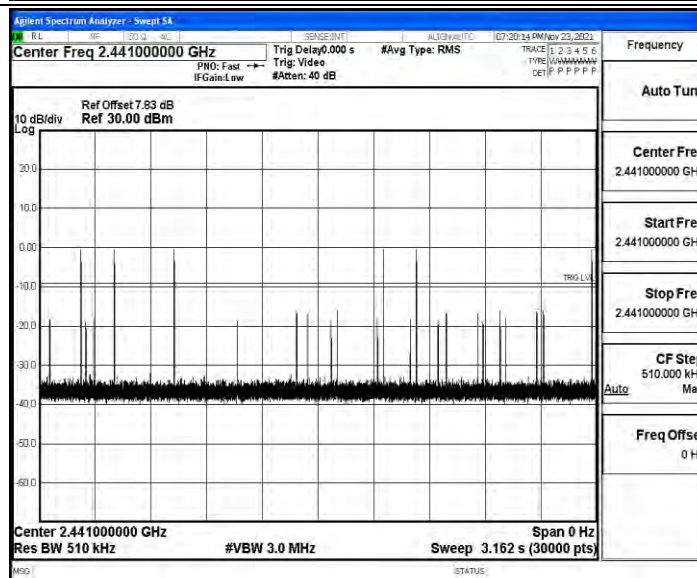
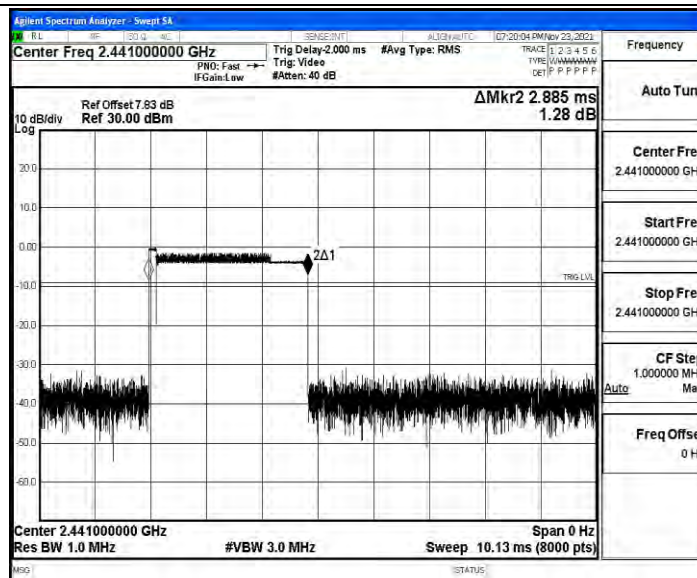
A.4 Time of occupancy

Test Result

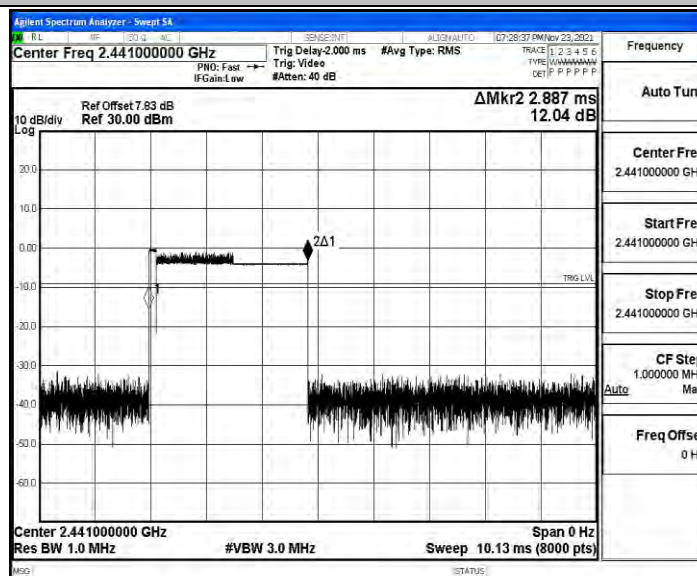
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.89	50	0.145	≤0.4	PASS
2DH5	Ant1	Hop	2.89	70	0.202	≤0.4	PASS
3DH5	Ant1	Hop	2.89	90	0.26	≤0.4	PASS

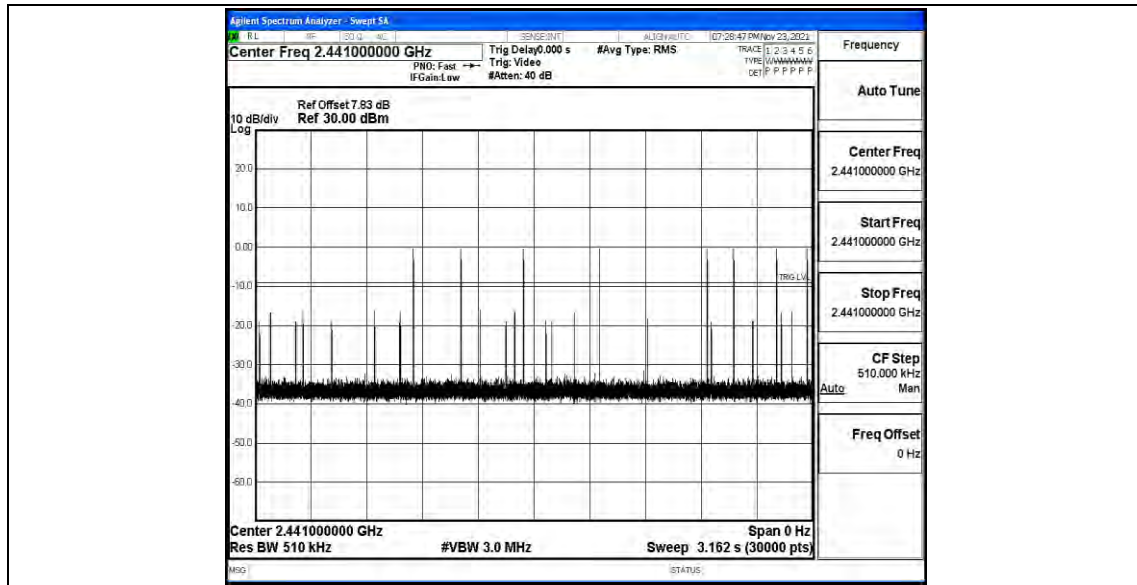
Test Graphs





3DH5_Ant1_Hop





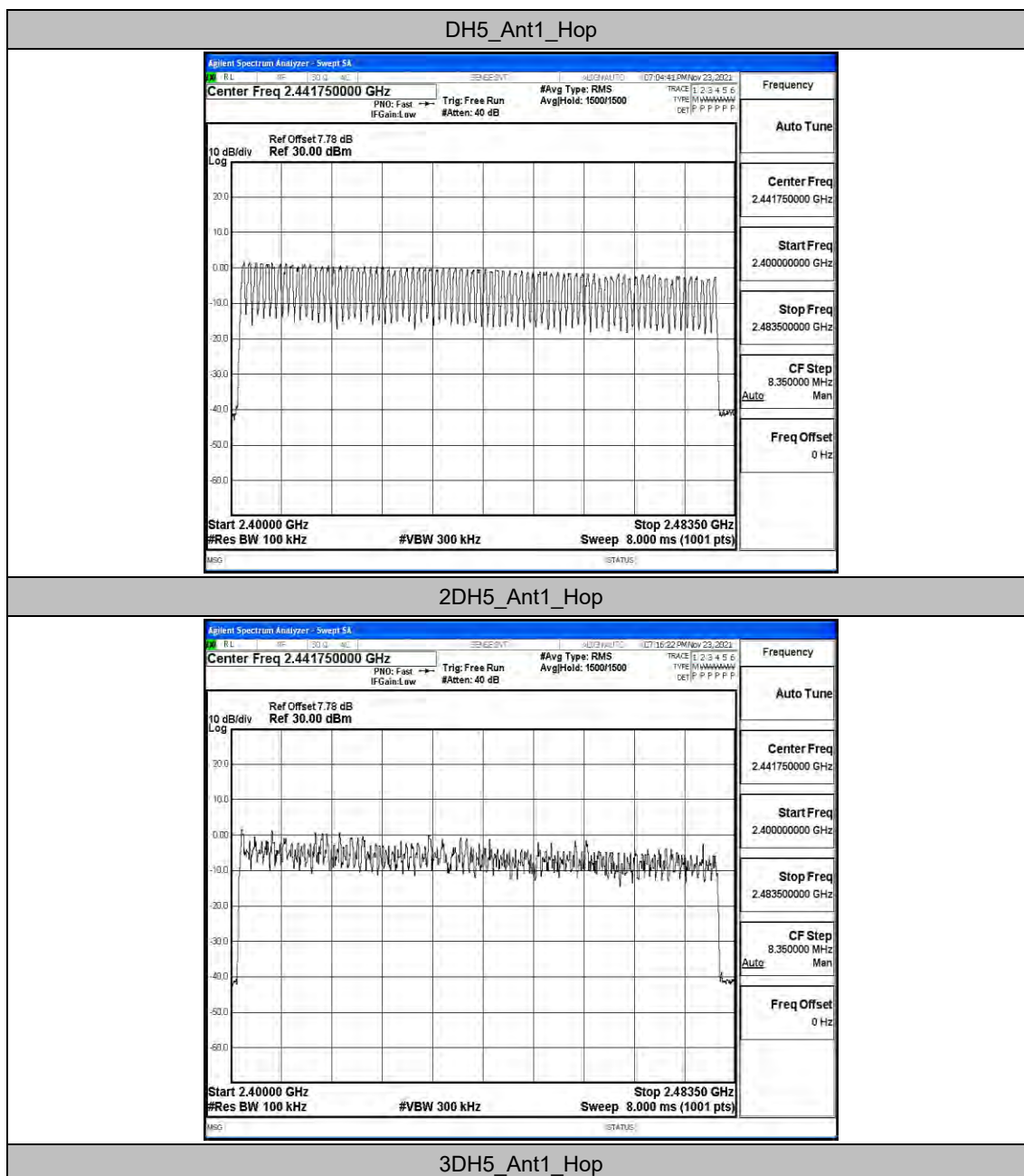


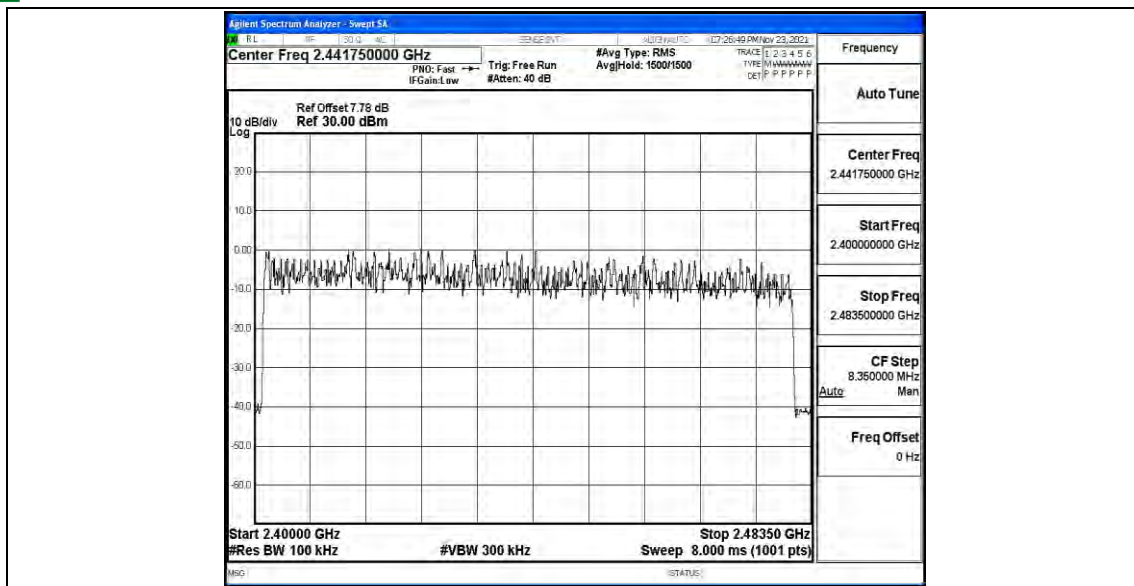
A.5 Number of hopping channels

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







A.6 Band edge measurements

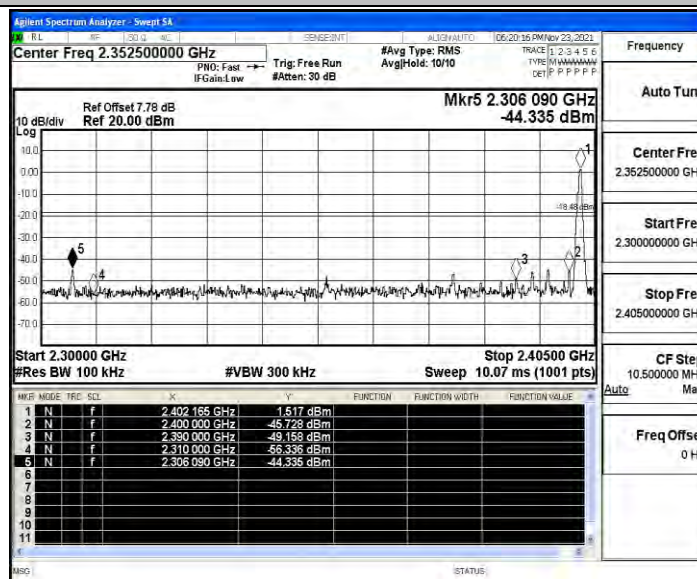
Test Result

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	1.52	-44.34	≤-18.48	PASS
		High	2480	-2.56	-48.42	≤-22.56	PASS
		Low	Hop_2402	1.46	-45.48	≤-18.54	PASS
		High	Hop_2480	-2.10	-45.2	≤-22.1	PASS
2DH5	Ant1	Low	2402	-1.77	-46.78	≤-21.77	PASS
		High	2480	-7.55	-50.45	≤-27.55	PASS
		Low	Hop_2402	-3.15	-46.33	≤-23.15	PASS
		High	Hop_2480	-2.30	-47.66	≤-22.3	PASS
3DH5	Ant1	Low	2402	-2.19	-46.38	≤-22.19	PASS
		High	2480	-2.64	-49.31	≤-22.64	PASS
		Low	Hop_2402	1.38	-46.08	≤-18.62	PASS
		High	Hop_2480	-5.74	-44.78	≤-25.74	PASS

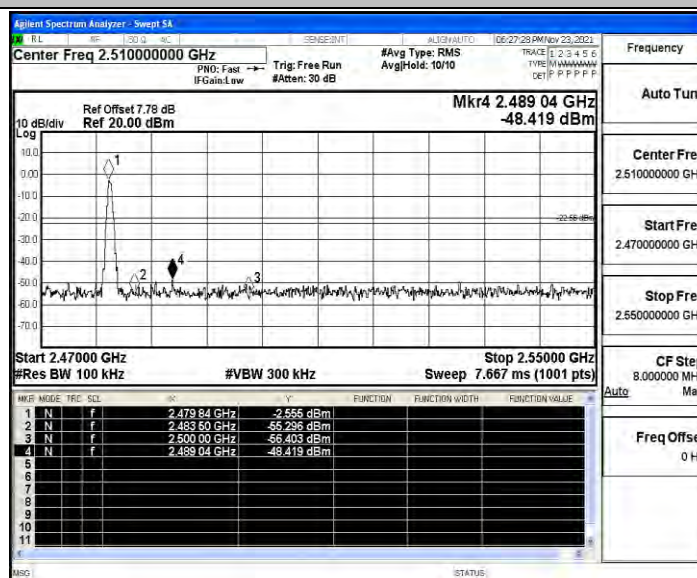


Test Graphs

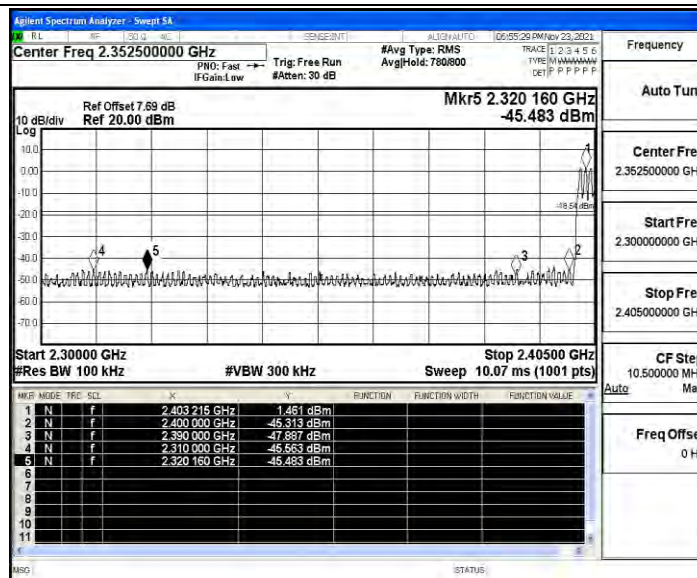
DH5_Ant1_Low_2402



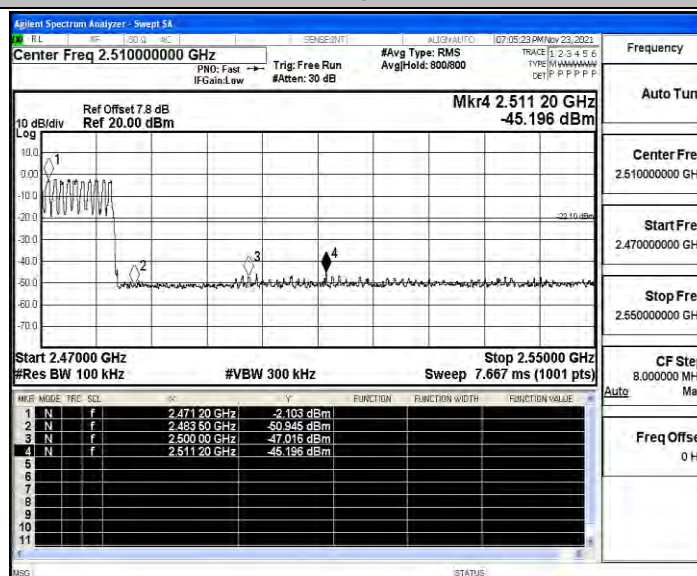
DH5_Ant1_High_2480



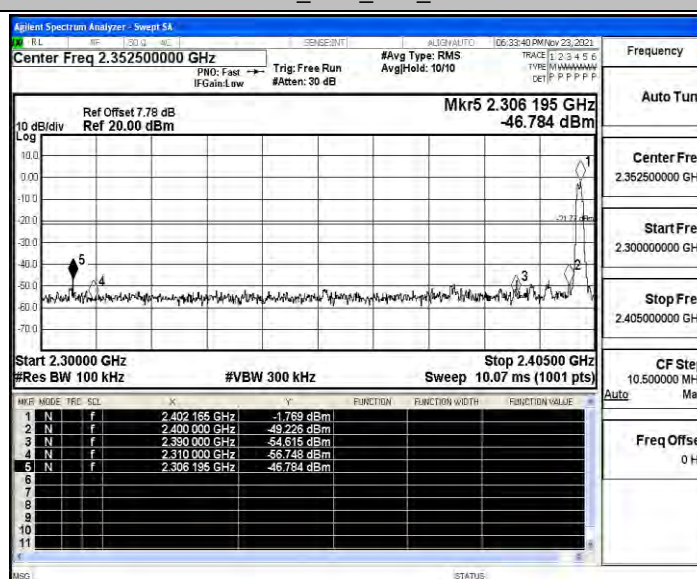
DH5_Ant1_Low_Hop_2402



DH5_Ant1_High_Hop_2480

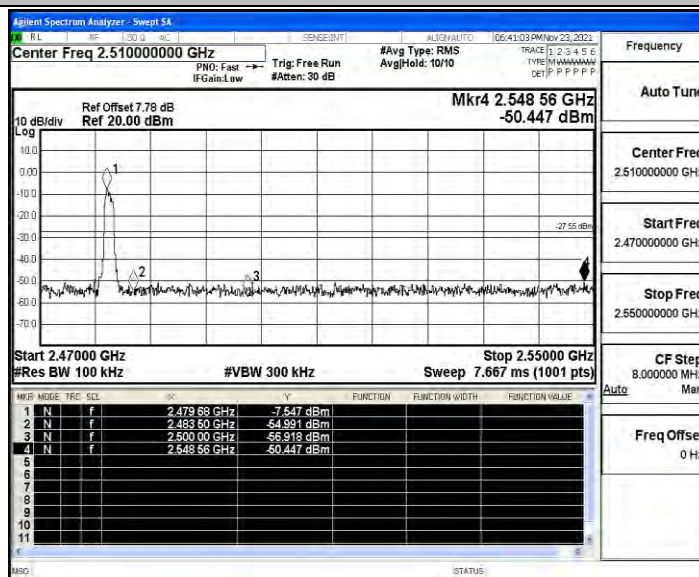


2DH5_Ant1_Low_2402

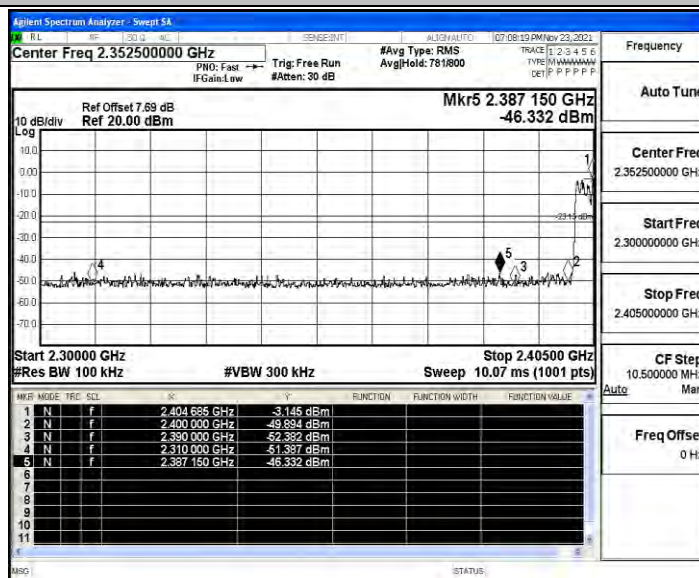




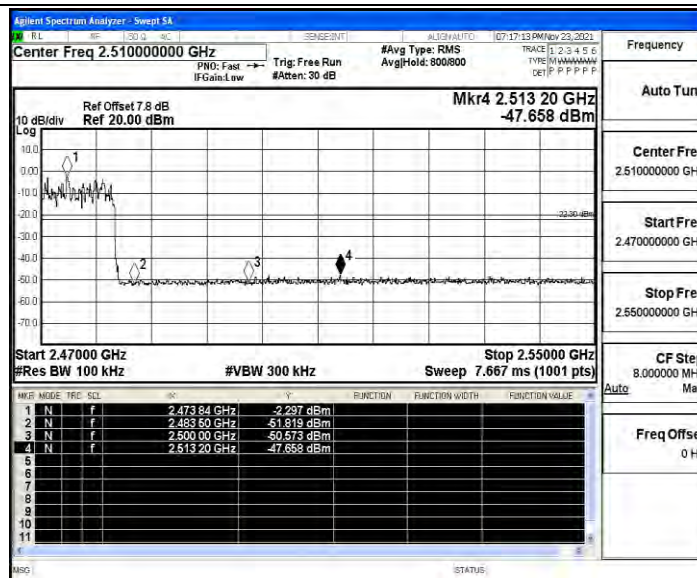
2DH5_Ant1_High_2480



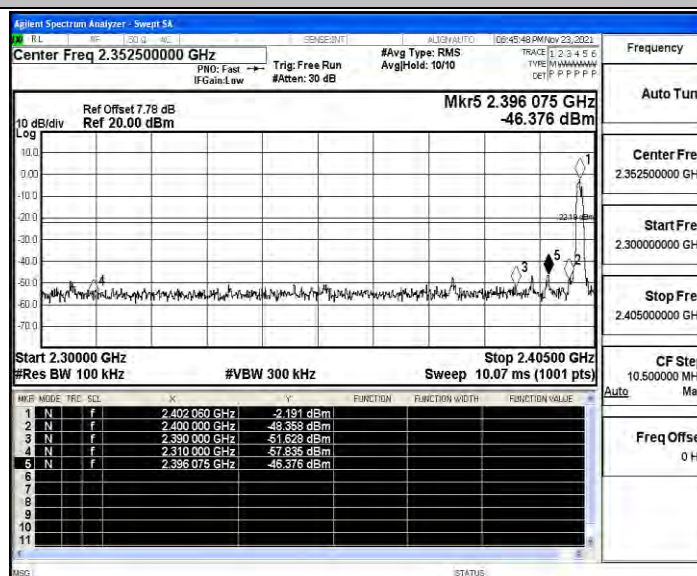
2DH5_Ant1_Low_Hop_2402



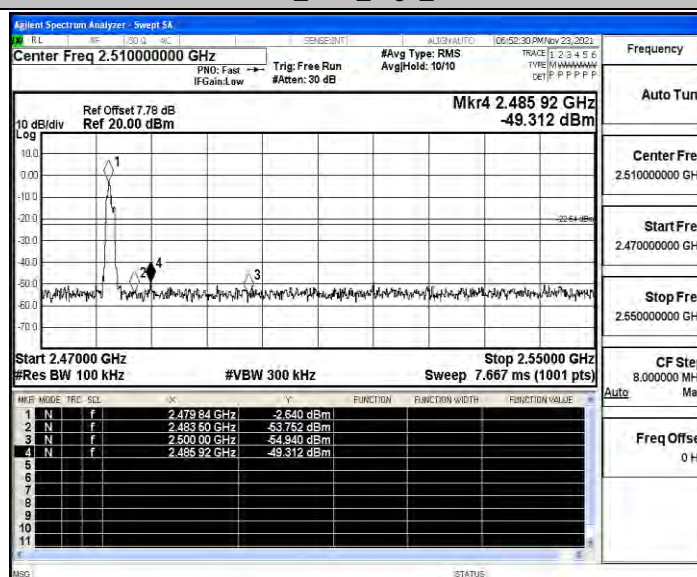
2DH5_Ant1_High_Hop_2480



3DH5_Ant1_Low_2402

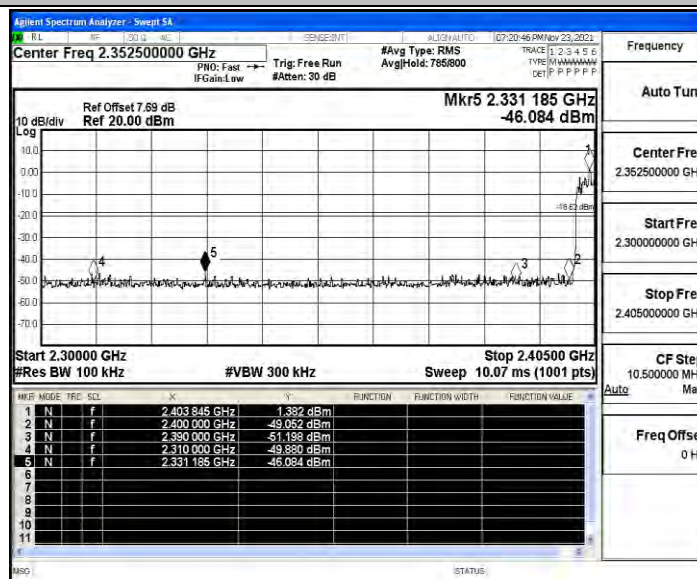


3DH5_Ant1_High_2480

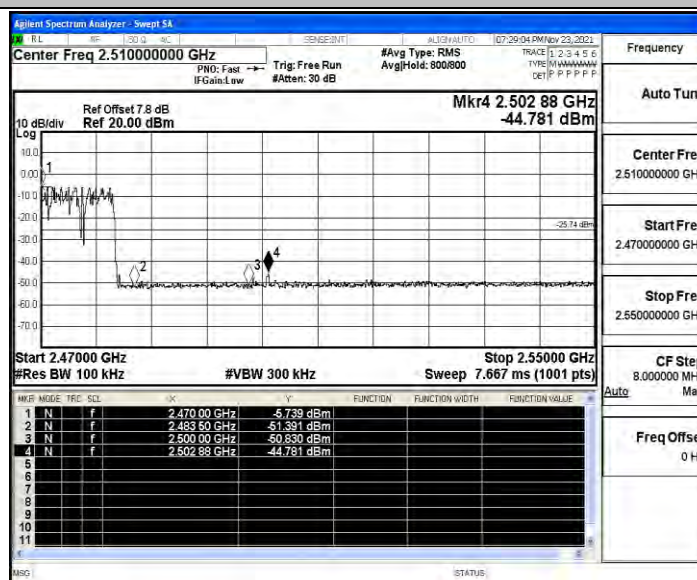




3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480





A.7 Conducted Spurious Emission

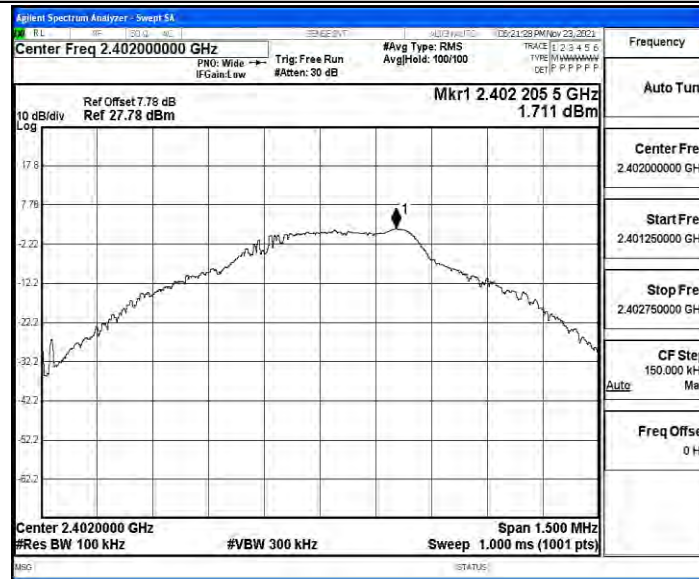
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	1.71	1.71	---	PASS
			30~1000	1.71	-51.12	≤-18.29	PASS
			1000~26500	1.71	-31.99	≤-18.29	PASS
		2441	Reference	-0.42	-0.42	---	PASS
			30~1000	-0.42	-52.81	≤-20.42	PASS
			1000~26500	-0.42	-35.72	≤-20.42	PASS
		2480	Reference	-2.59	-2.59	---	PASS
			30~1000	-2.59	-54.27	≤-22.59	PASS
			1000~26500	-2.59	-41.15	≤-22.59	PASS
2DH5	Ant1	2402	Reference	1.57	1.57	---	PASS
			30~1000	1.57	-53.26	≤-18.43	PASS
			1000~26500	1.57	-36.91	≤-18.43	PASS
		2441	Reference	-0.48	-0.48	---	PASS
			30~1000	-0.48	-56.01	≤-20.48	PASS
			1000~26500	-0.48	-39.85	≤-20.48	PASS
		2480	Reference	-2.61	-2.61	---	PASS
			30~1000	-2.61	-55.59	≤-22.61	PASS
			1000~26500	-2.61	-46.25	≤-22.61	PASS
3DH5	Ant1	2402	Reference	1.58	1.58	---	PASS
			30~1000	1.58	-54.94	≤-18.42	PASS
			1000~26500	1.58	-37.36	≤-18.42	PASS
		2441	Reference	-4.17	-4.17	---	PASS
			30~1000	-4.17	-53.89	≤-24.17	PASS
			1000~26500	-4.17	-35.58	≤-24.17	PASS
		2480	Reference	-2.61	-2.61	---	PASS
			30~1000	-2.61	-55.75	≤-22.61	PASS
			1000~26500	-2.61	-45.89	≤-22.61	PASS

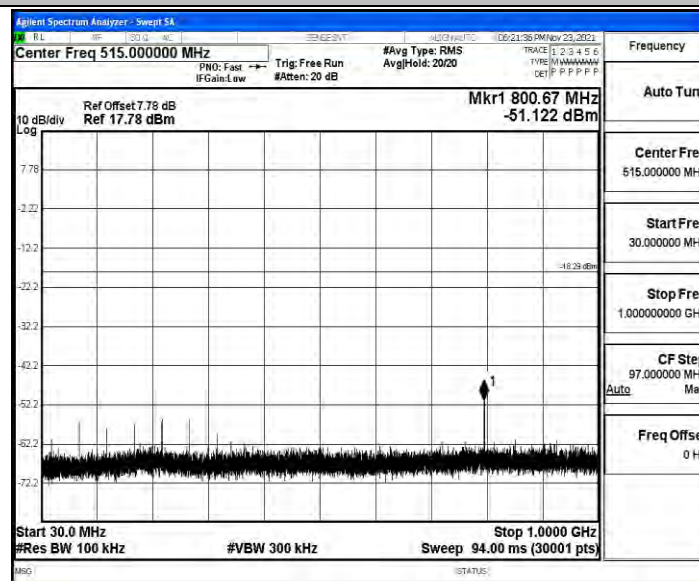


Test Graphs

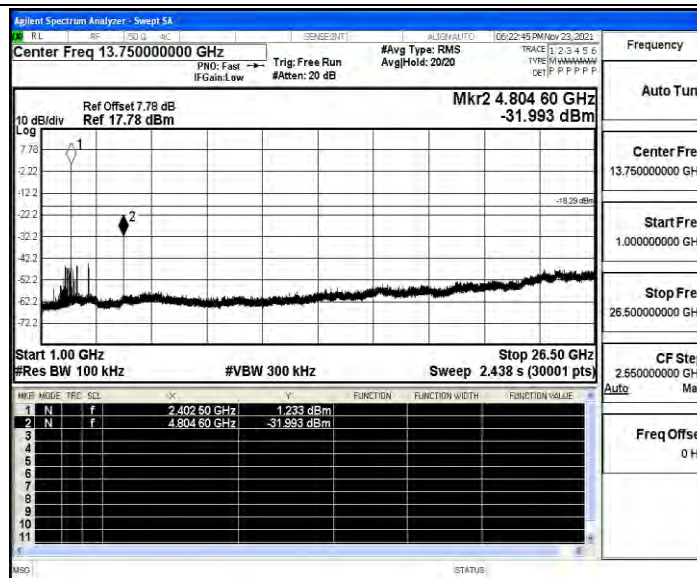
DH5_Ant1_2402_0~Reference



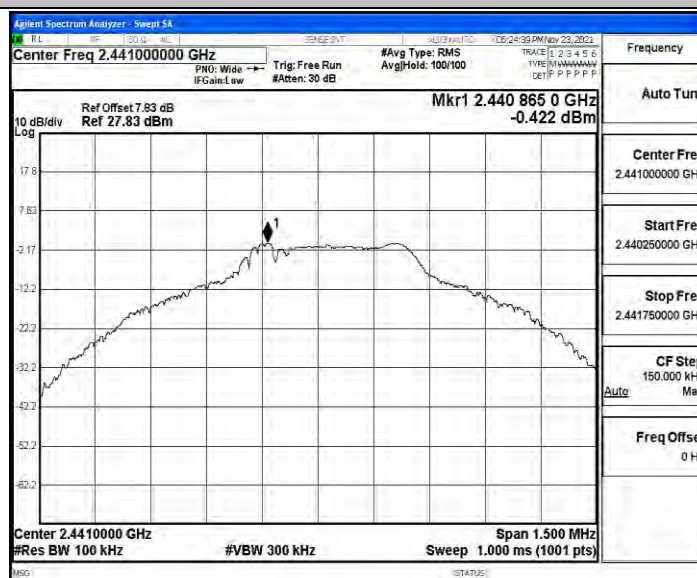
DH5_Ant1_2402_30~1000



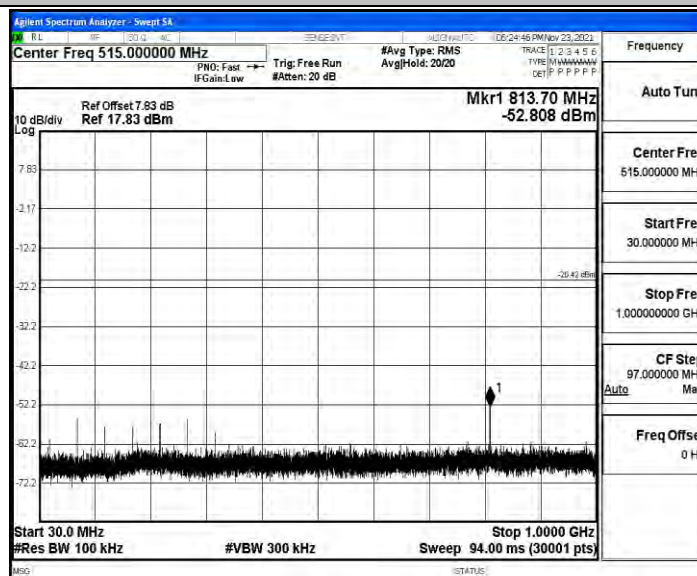
DH5_Ant1_2402_1000~26500



DH5_Ant1_2441_0~Reference

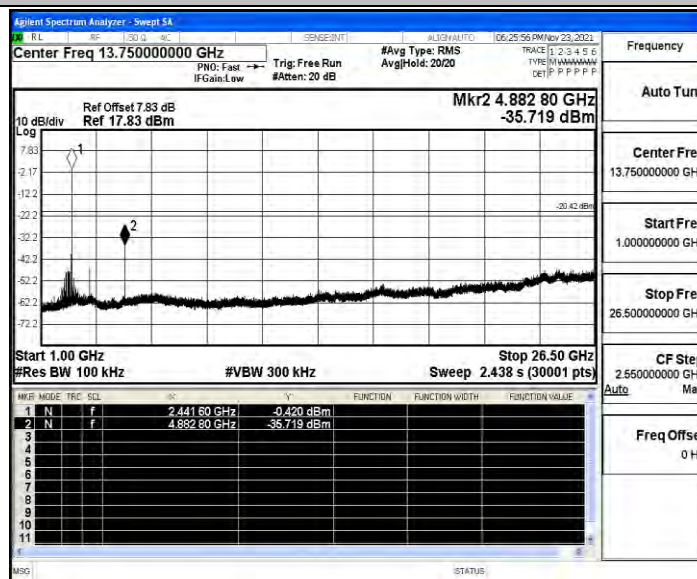


DH5_Ant1_2441_30~1000

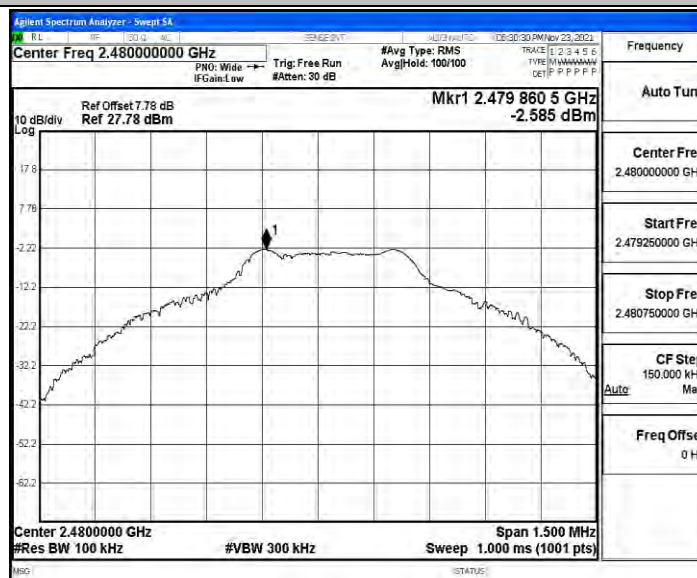




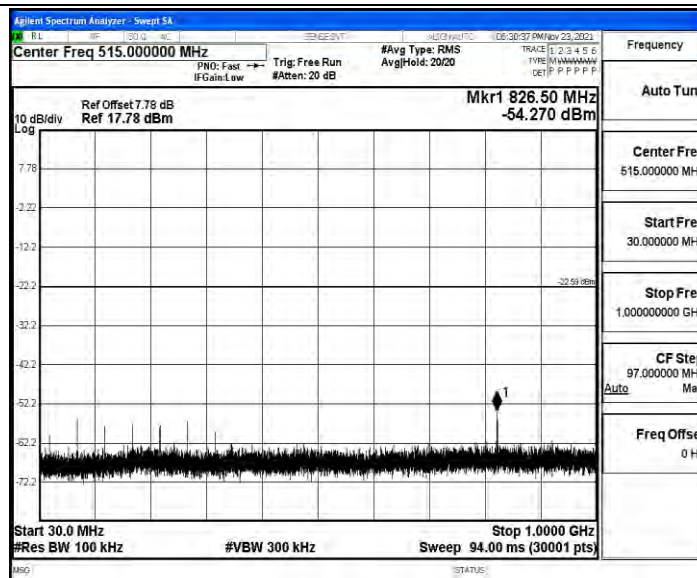
DH5_Ant1_2441_1000~26500



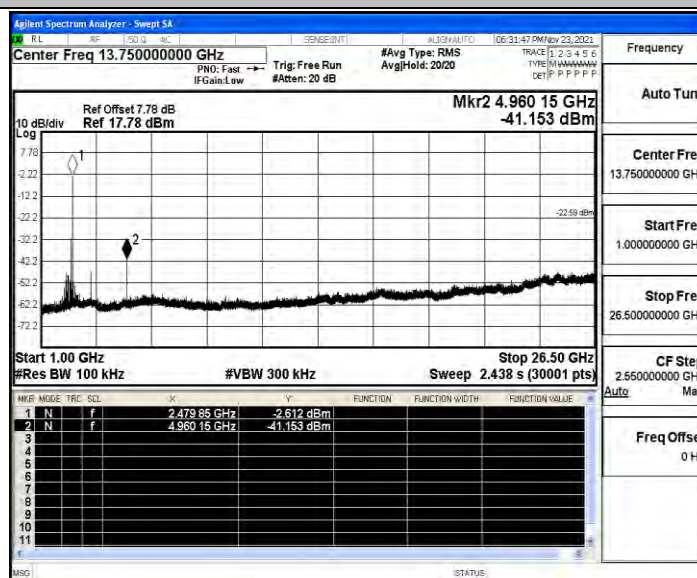
DH5_Ant1_2480_0~Reference



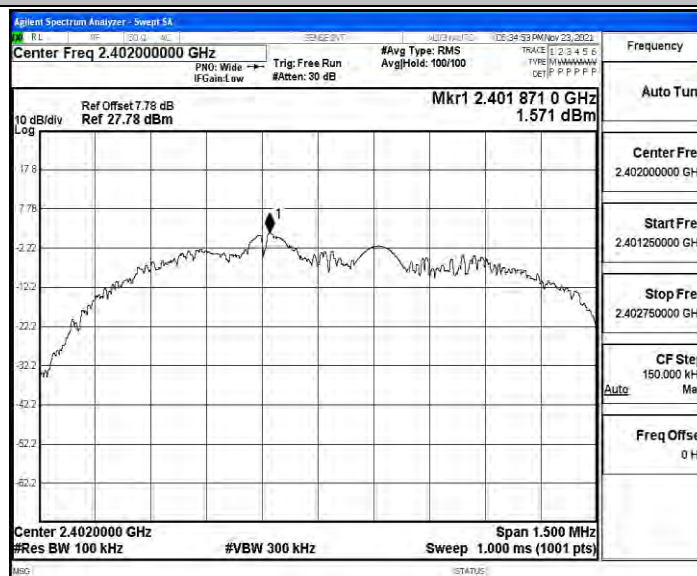
DH5_Ant1_2480_30~1000



DH5_Ant1_2480_1000~26500

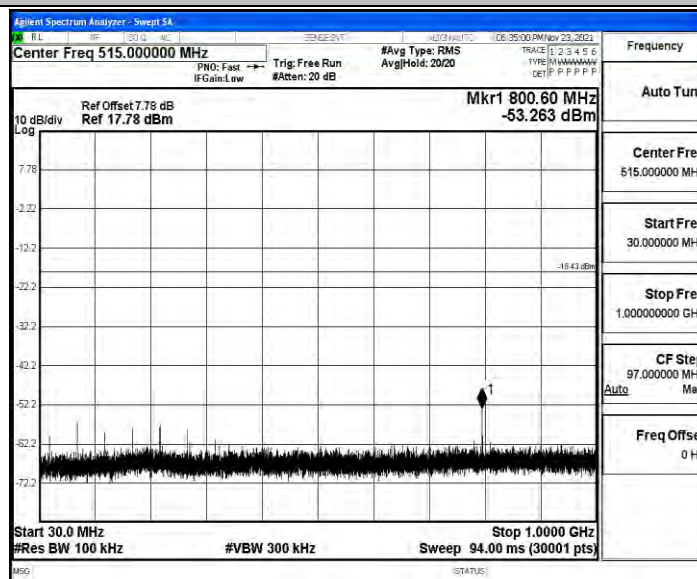


2DH5_Ant1_2402_0~Reference

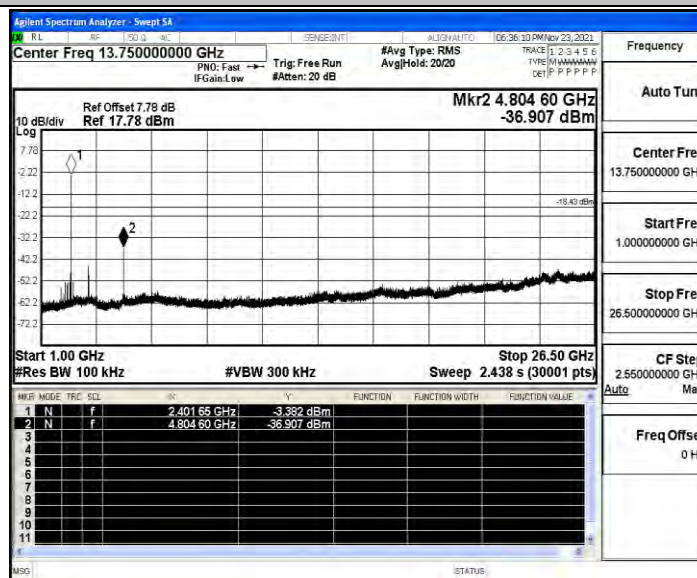




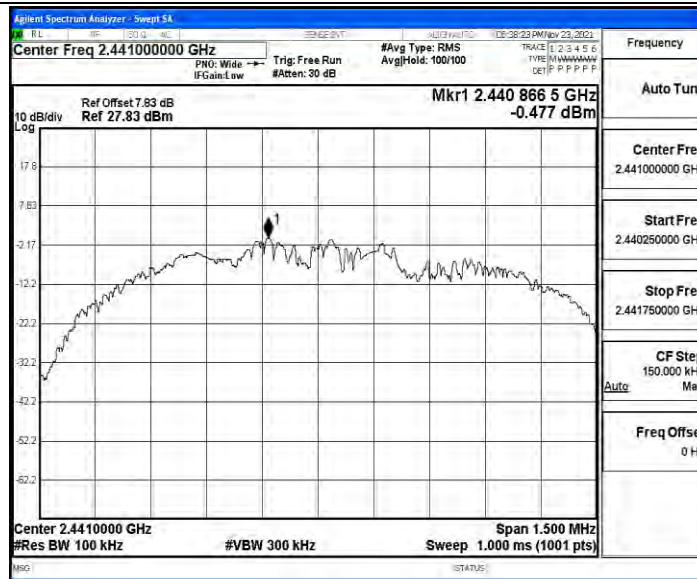
2DH5_Ant1_2402_30~1000



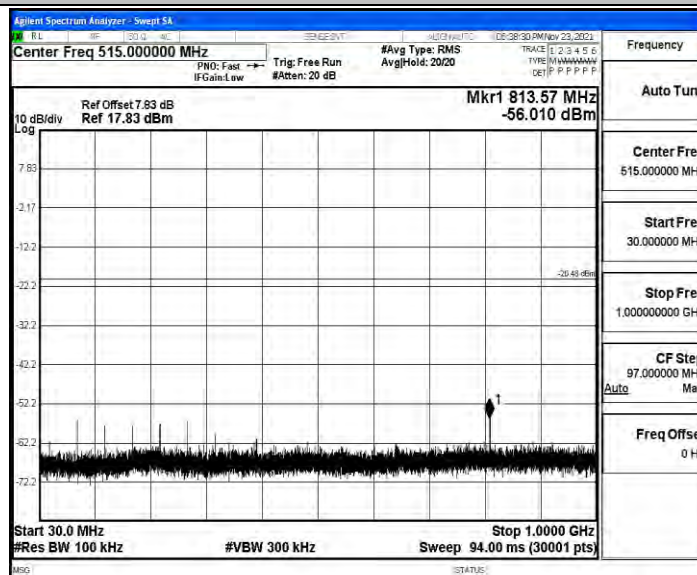
2DH5_Ant1_2402_1000~26500



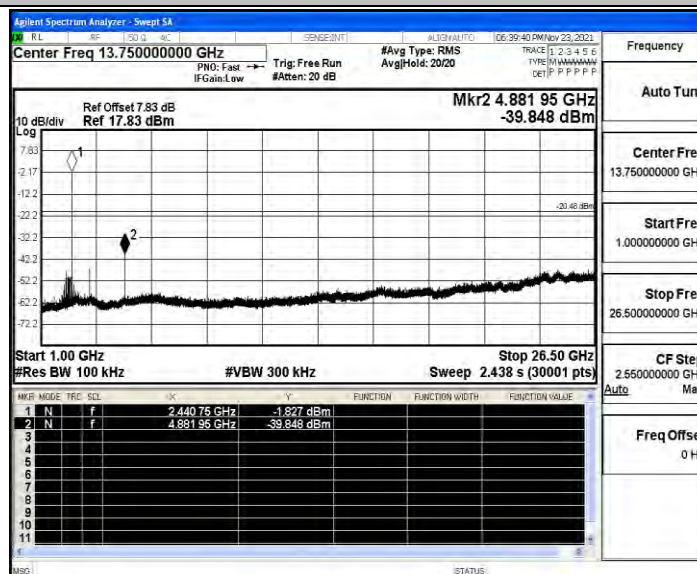
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000

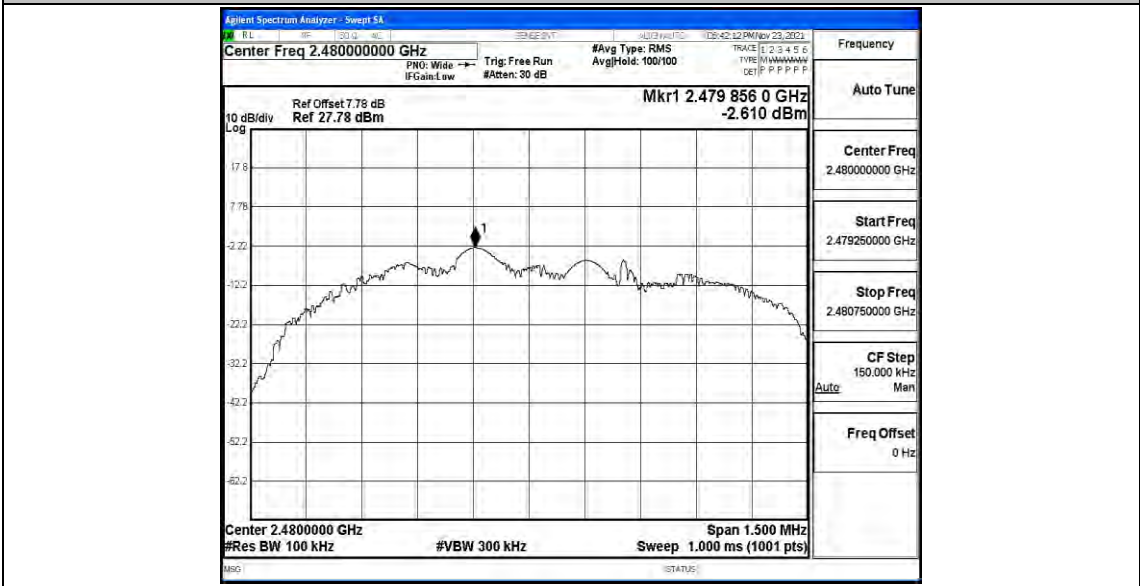


2DH5_Ant1_2441_1000~26500

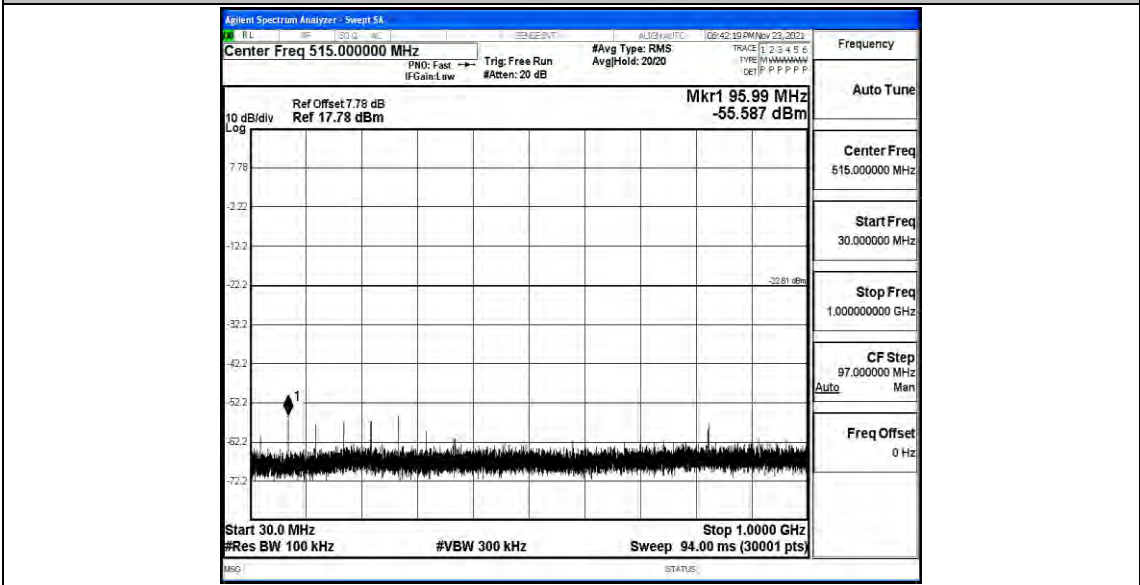




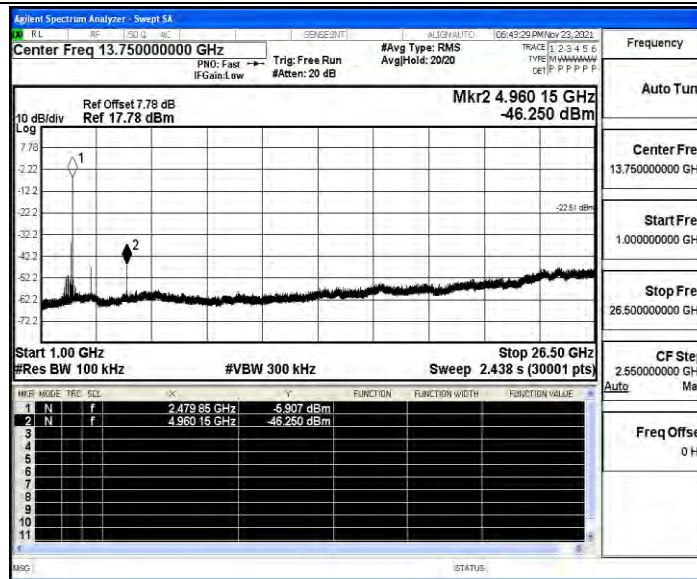
2DH5_Ant1_2480_0~Reference



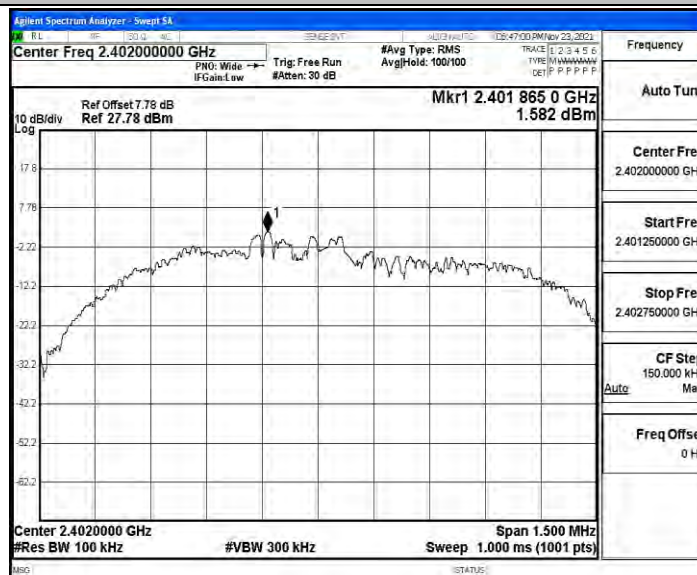
2DH5_Ant1_2480_30~1000



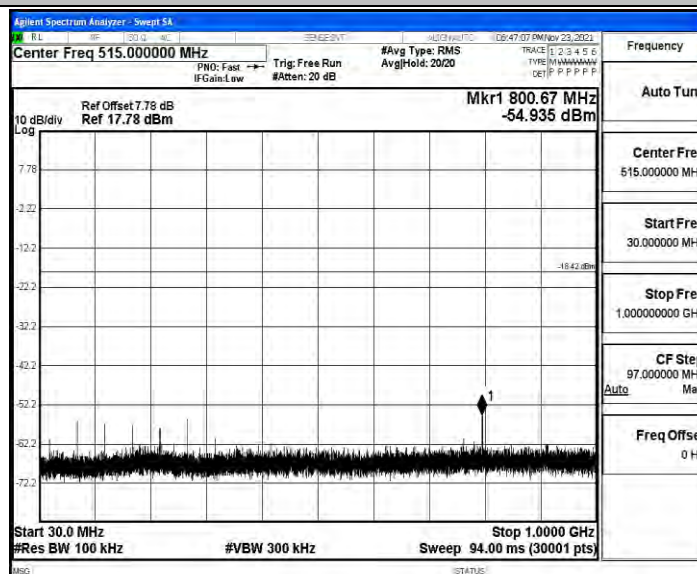
2DH5_Ant1_2480_1000~26500



3DH5_Ant1_2402_0~Reference

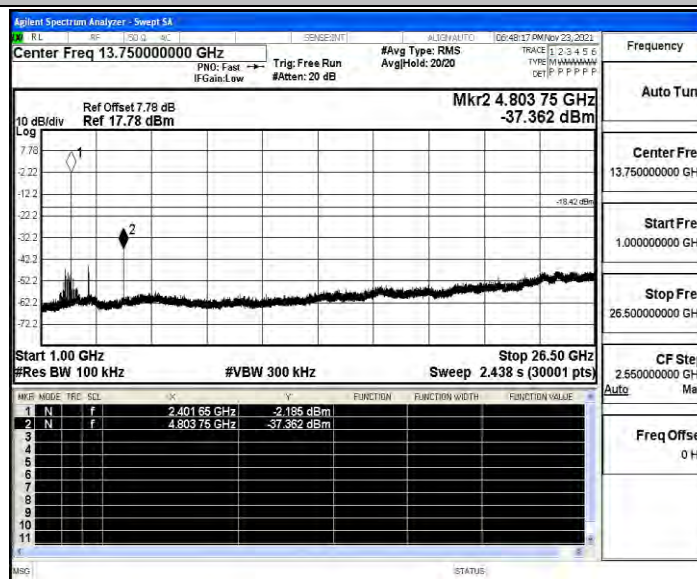


3DH5_Ant1_2402_30~1000

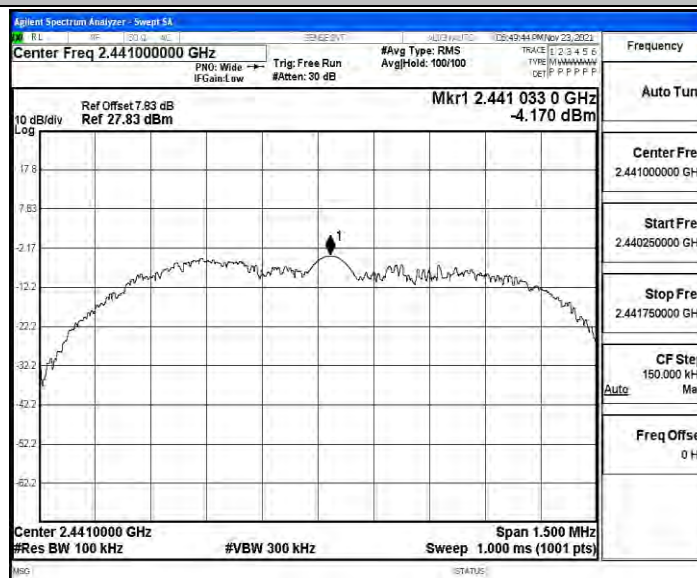




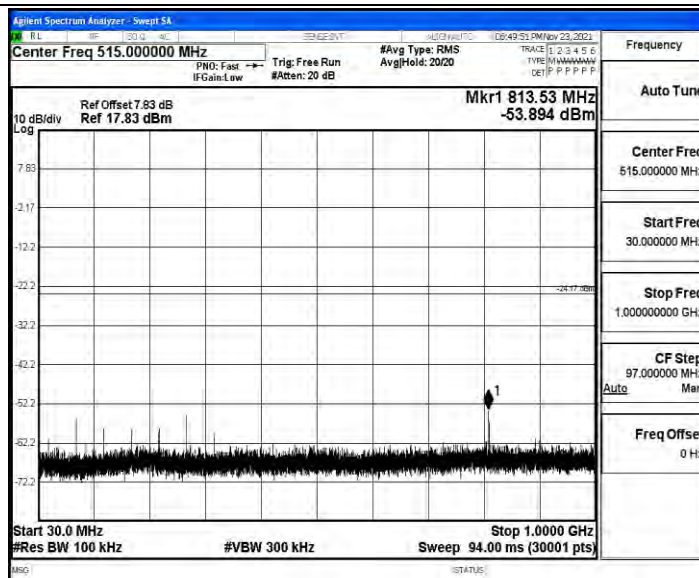
3DH5_Ant1_2402_1000~26500



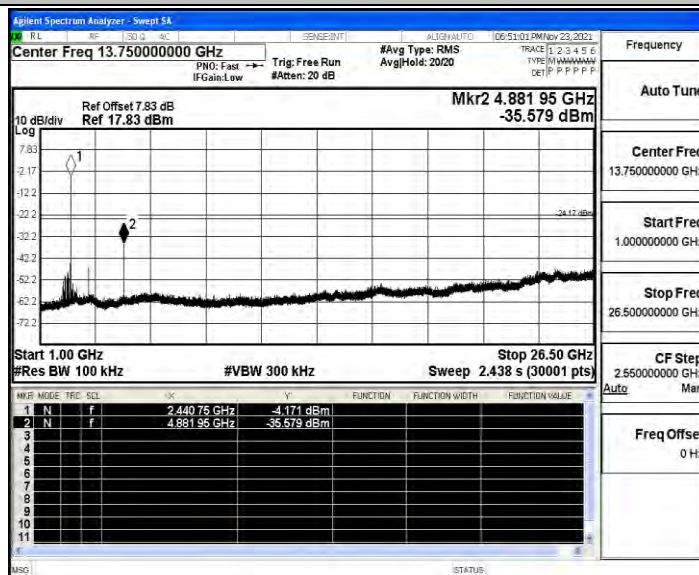
3DH5_Ant1_2441_0~Reference



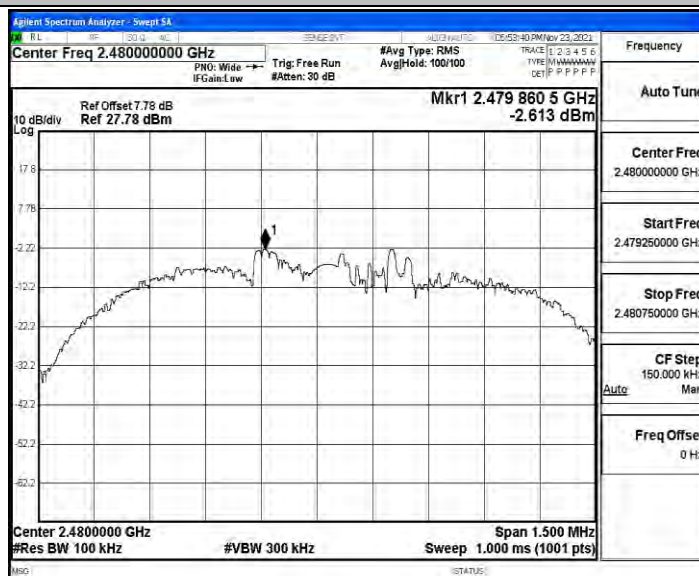
3DH5_Ant1_2441_30~1000



3DH5_Ant1_2441_1000~26500

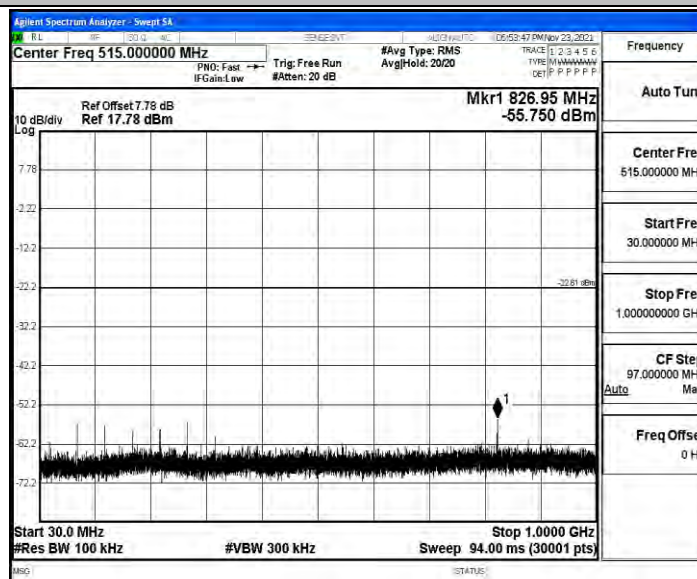


3DH5_Ant1_2480_0~Reference

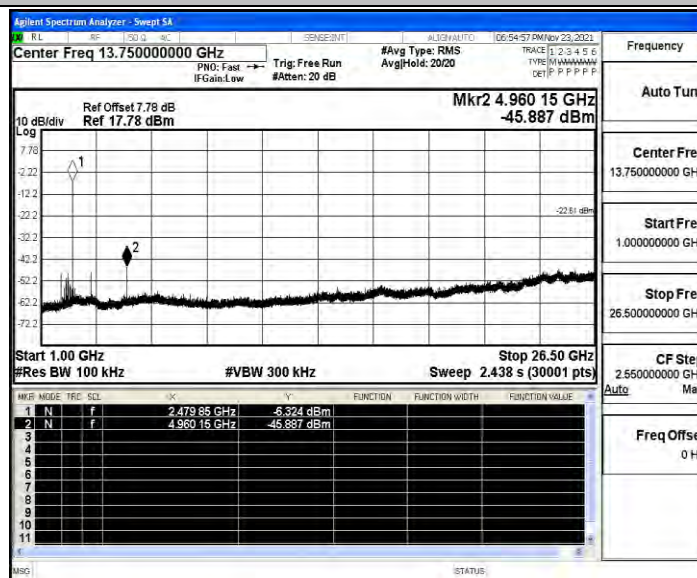




3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500





A.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-49.05	≤-41.20	46.15	≤54	PASS
				AV	2378.120	-43.34	≤-41.20	51.86	≤54	PASS
				AV	2390.000	-45.9	≤-41.20	49.30	≤54	PASS
				Peak	2310.000	-42.07	≤-21.20	53.13	≤74	PASS
				Peak	2378.435	-38.09	≤-21.20	57.11	≤74	PASS
				Peak	2390.000	-40.06	≤-21.20	55.14	≤74	PASS
		High	2480	AV	2483.500	-48.06	≤-41.20	47.14	≤54	PASS
				AV	2486.160	-46.49	≤-41.20	48.71	≤54	PASS
				AV	2500.000	-48.07	≤-41.20	47.13	≤54	PASS
				Peak	2483.500	-42.28	≤-21.20	52.92	≤74	PASS
				Peak	2492.080	-38.88	≤-21.20	56.32	≤74	PASS
				Peak	2500.000	-40	≤-21.20	55.20	≤74	PASS
		Low	Hop_24 02	Peak	2310.000	-39.04	≤-21.20	56.16	≤74	PASS
				Peak	2382.215	-37.48	≤-21.20	57.72	≤74	PASS
				Peak	2390.000	-38.72	≤-21.20	56.48	≤74	PASS
		High	Hop_24 80	Peak	2483.500	-40.59	≤-21.20	54.61	≤74	PASS
				Peak	2491.680	-37.58	≤-21.20	57.62	≤74	PASS
				Peak	2500.000	-39.9	≤-21.20	55.30	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-49.02	≤-41.20	46.18	≤54	PASS
				AV	2378.015	-44.66	≤-41.20	50.54	≤54	PASS
				AV	2390.000	-47.23	≤-41.20	47.97	≤54	PASS
				Peak	2310.000	-44.55	≤-21.20	50.65	≤74	PASS
				Peak	2378.120	-37.92	≤-21.20	57.28	≤74	PASS
				Peak	2390.000	-39.57	≤-21.20	55.63	≤74	PASS
		High	2480	AV	2483.500	-48.05	≤-41.20	47.15	≤54	PASS
				AV	2486.160	-47.4	≤-41.20	47.80	≤54	PASS
				AV	2500.000	-48.07	≤-41.20	47.13	≤54	PASS
				Peak	2483.500	-39.97	≤-21.20	55.23	≤74	PASS
				Peak	2497.200	-39.03	≤-21.20	56.17	≤74	PASS
				Peak	2500.000	-41.82	≤-21.20	53.38	≤74	PASS
		Low	Hop_24 02	Peak	2310.000	-38.9	≤-21.20	56.30	≤74	PASS
				Peak	2386.940	-37.63	≤-21.20	57.57	≤74	PASS
				Peak	2390.000	-39.46	≤-21.20	55.74	≤74	PASS
		High	Hop_24 80	Peak	2483.500	-40.52	≤-21.20	54.68	≤74	PASS
				Peak	2499.920	-37.73	≤-21.20	57.47	≤74	PASS
				Peak	2500.000	-38.27	≤-21.20	56.93	≤74	PASS
3DH5	Ant1	Low	2402	AV	2310.000	-48.9	≤-41.20	46.30	≤54	PASS



				AV	2378.015	-45.1	≤ -41.20	50.10	≤ 54	PASS
				AV	2390.000	-47.25	≤ -41.20	47.95	≤ 54	PASS
				Peak	2310.000	-41.27	≤ -21.20	53.93	≤ 74	PASS
				Peak	2377.910	-36.55	≤ -21.20	58.65	≤ 74	PASS
				Peak	2390.000	-39.93	≤ -21.20	55.27	≤ 74	PASS
		High	2480	AV	2483.500	-48.15	≤ -41.20	47.05	≤ 54	PASS
				AV	2485.760	-47.35	≤ -41.20	47.85	≤ 54	PASS
				AV	2500.000	-48.09	≤ -41.20	47.11	≤ 54	PASS
				Peak	2483.500	-42.39	≤ -21.20	52.81	≤ 74	PASS
				Peak	2484.640	-38.8	≤ -21.20	56.40	≤ 74	PASS
				Peak	2500.000	-41.88	≤ -21.20	53.32	≤ 74	PASS
		Low	Hop_24 02	Peak	2310.000	-41.01	≤ -21.20	54.19	≤ 74	PASS
				Peak	2378.645	-36.71	≤ -21.20	58.49	≤ 74	PASS
				Peak	2390.000	-39.76	≤ -21.20	55.44	≤ 74	PASS
		High	Hop_24 80	Peak	2483.500	-39.44	≤ -21.20	55.76	≤ 74	PASS
				Peak	2490.960	-36.86	≤ -21.20	58.34	≤ 74	PASS
				Peak	2500.000	-39.94	≤ -21.20	55.26	≤ 74	PASS

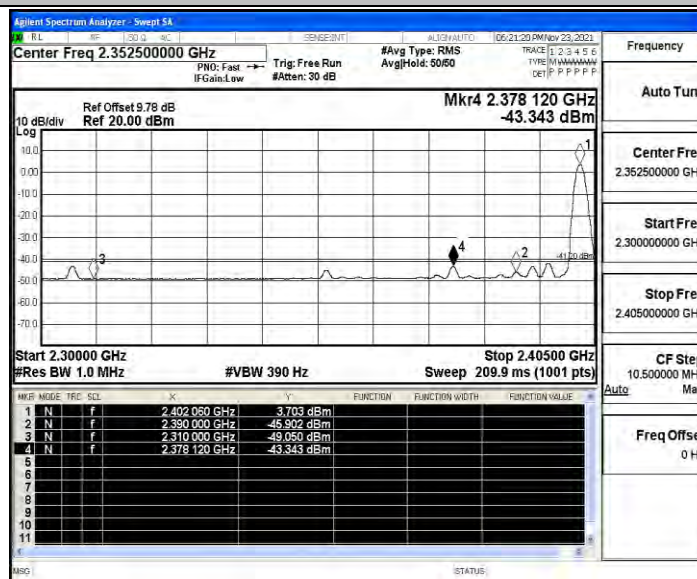
Note:

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.

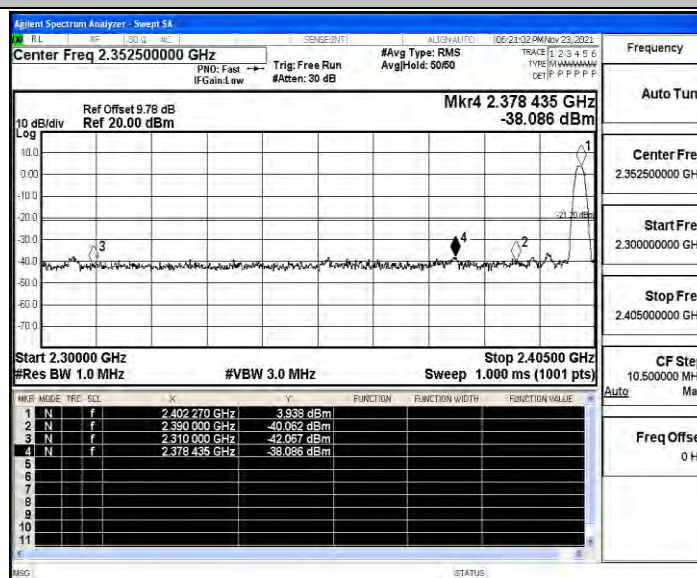


Test Graphs

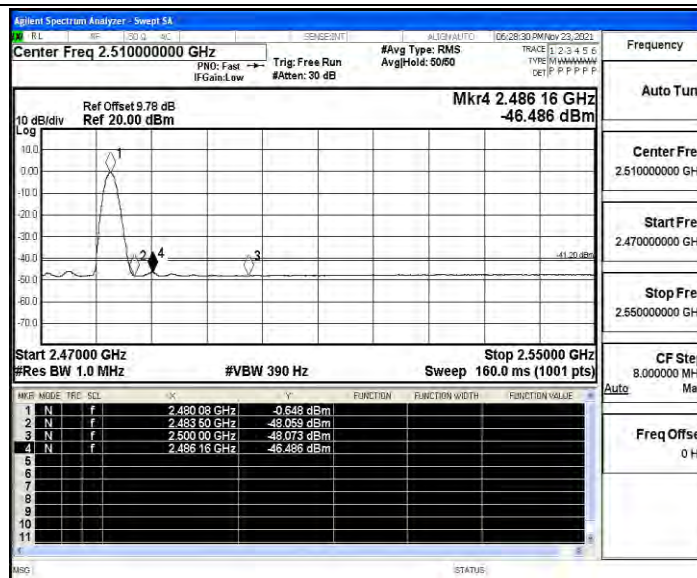
DH5_Ant1_Low_2402_AV



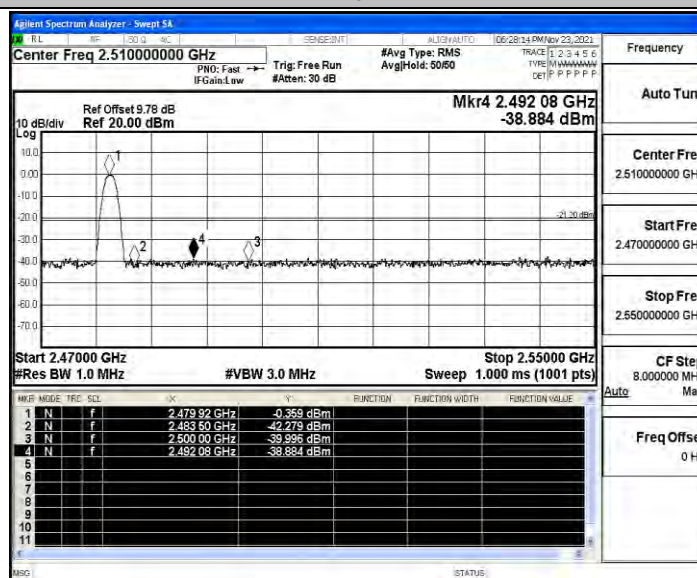
DH5_Ant1_Low_2402_Peak



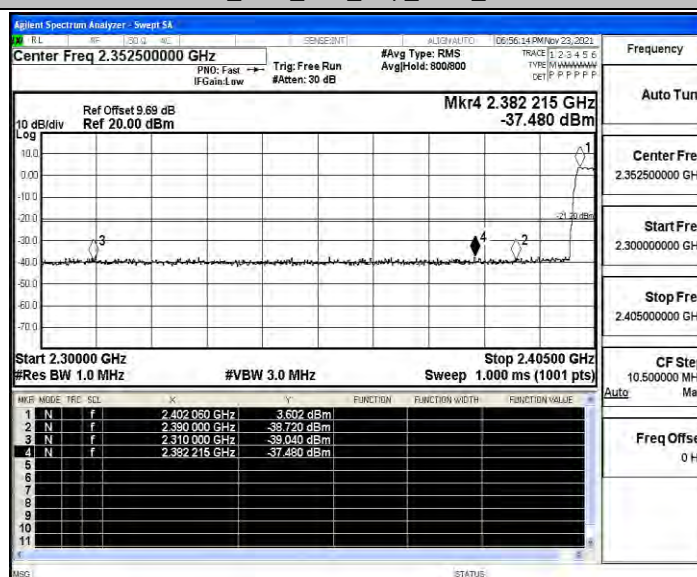
DH5_Ant1_High_2480_AV



DH5_Ant1_High_2480_Peak

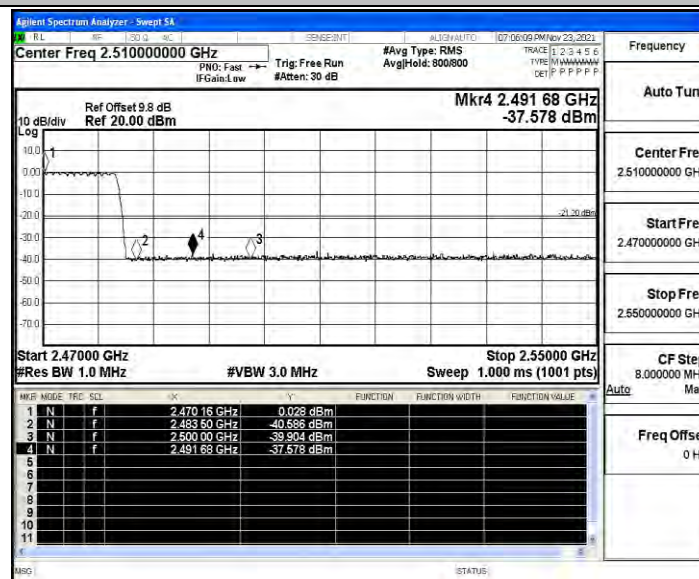


DH5_Ant1_Low_Hop_2402_Peak

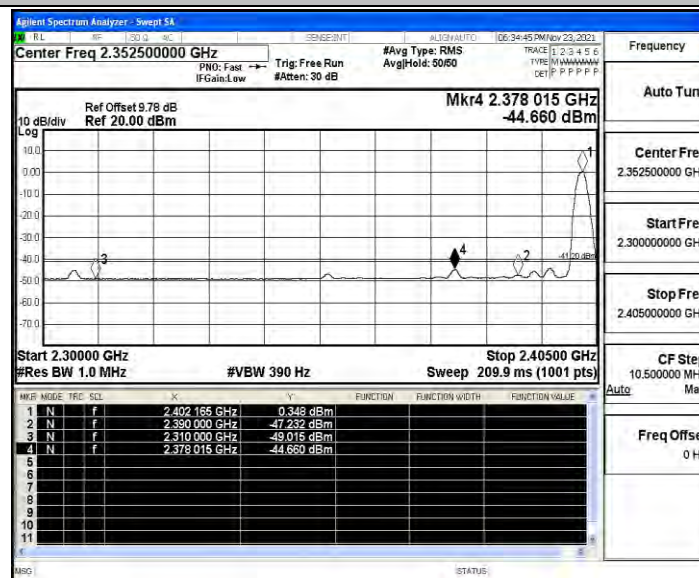




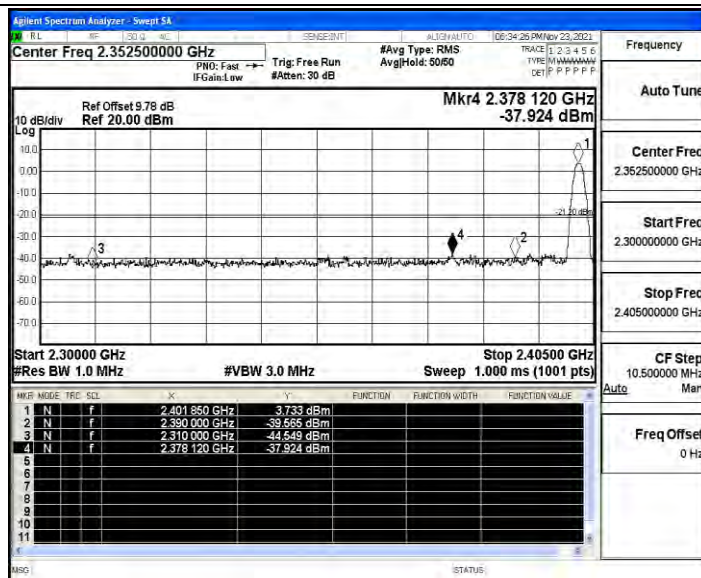
DH5_Ant1_High_Hop_2480_Peak



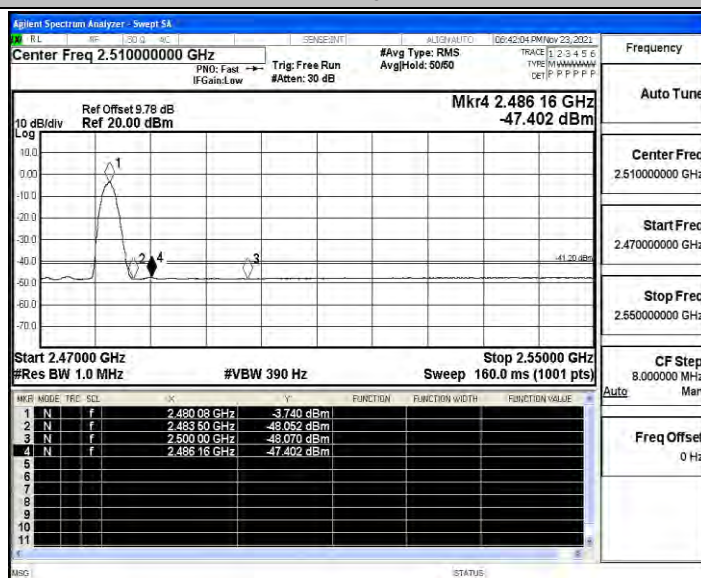
2DH5_Ant1_Low_2402_AV



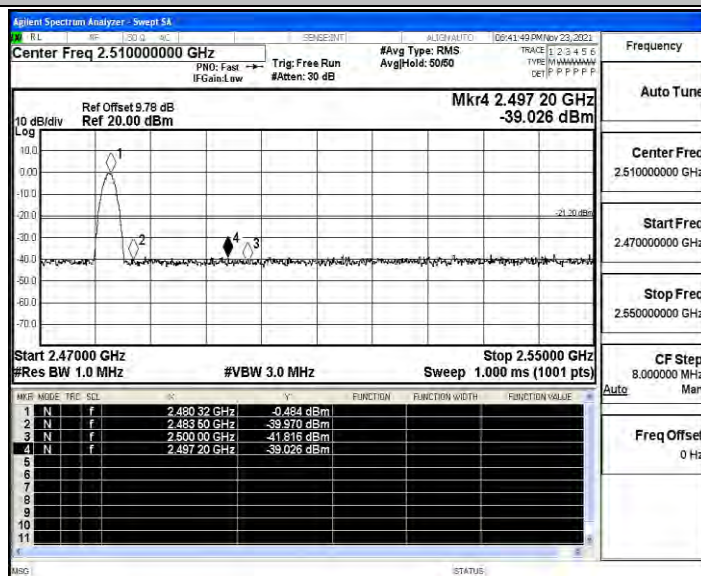
2DH5_Ant1_Low_2402_Peak



2DH5_Ant1_High_2480_AV

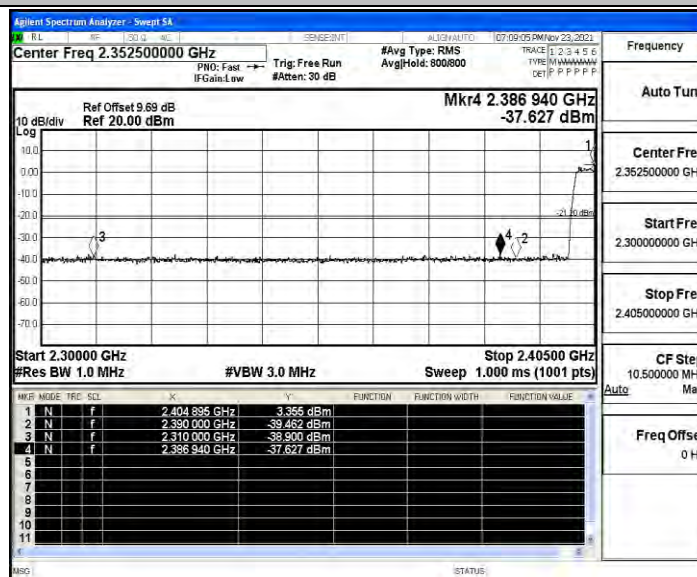


2DH5_Ant1_High_2480_Peak

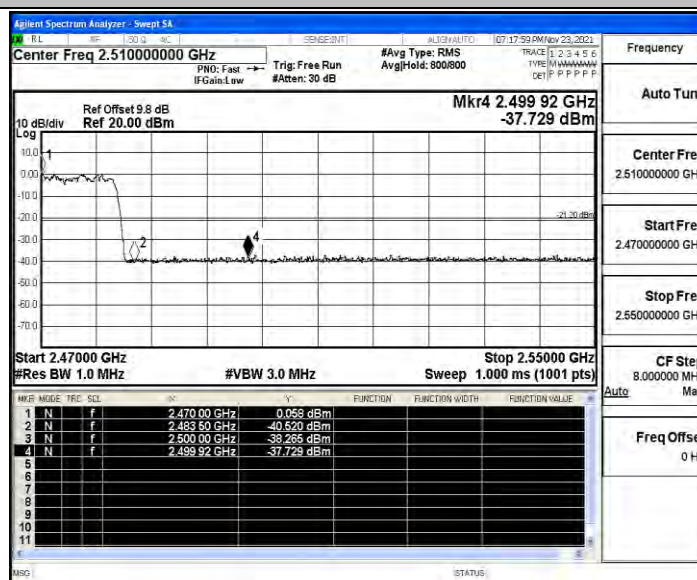




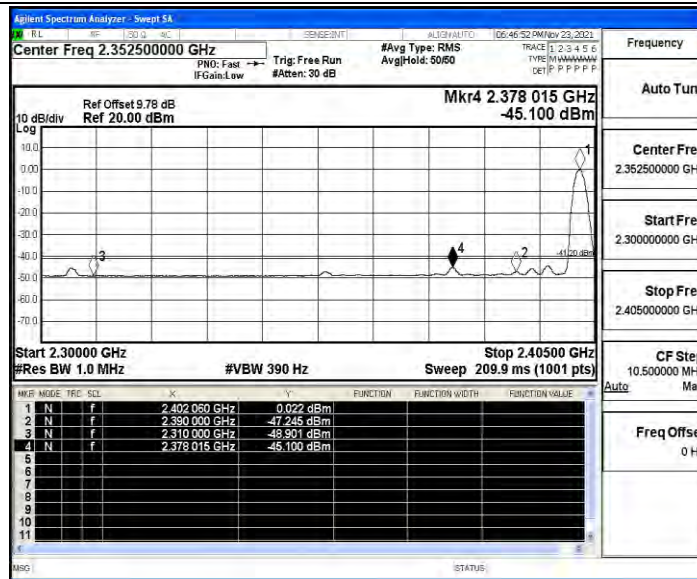
2DH5_Ant1_Low_Hop_2402_Peak



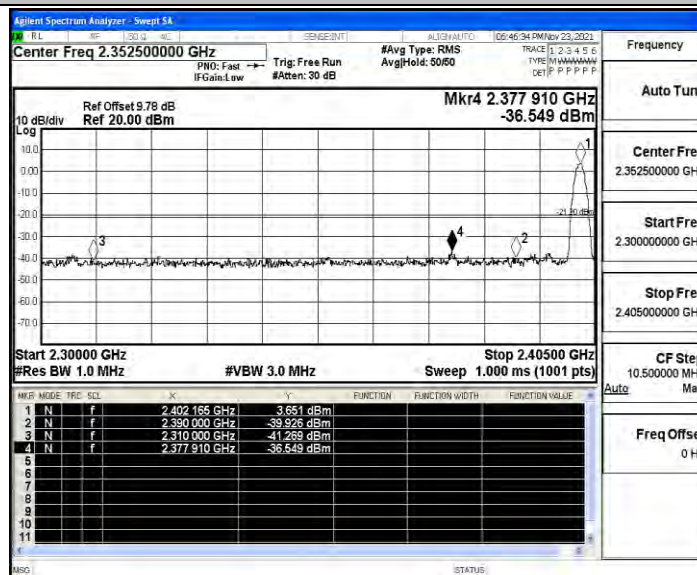
2DH5_Ant1_High_Hop_2480_Peak



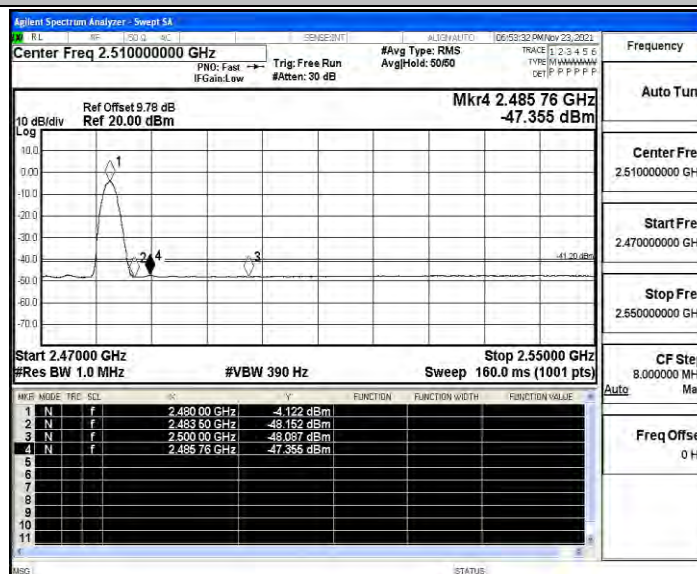
3DH5_Ant1_Low_2402_AV



3DH5_Ant1_Low_2402_Peak

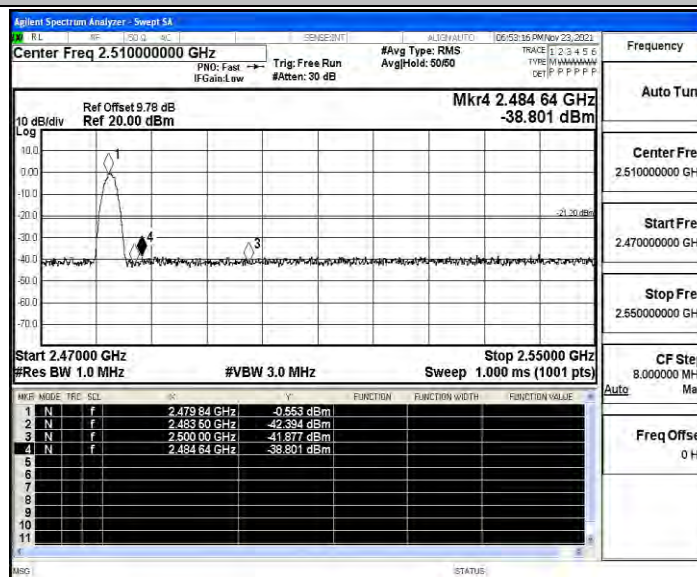


3DH5_Ant1_High_2480_AV

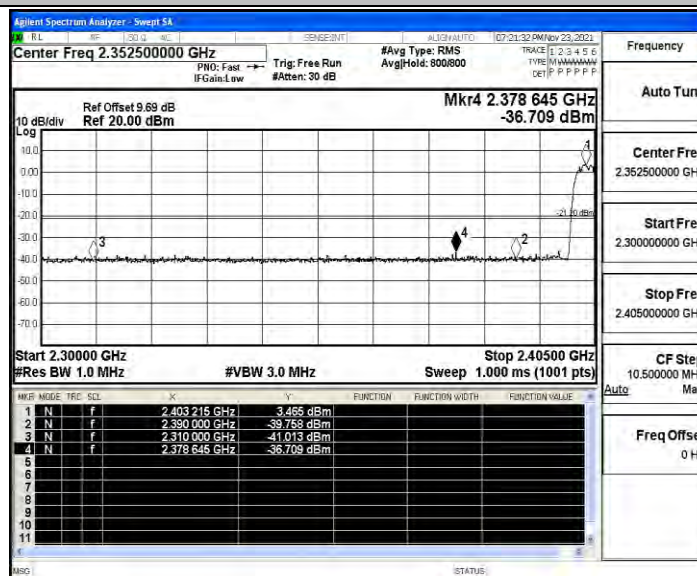




3DH5_Ant1_High_2480_Peak



3DH5_Ant1_Low_Hop_2402_Peak



3DH5_Ant1_High_Hop_2480_Peak

