



Appendix A

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

Product Name: wireless headset

Test Model: S40

Environmental Conditions

Temperature:	23.7 °C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling Zhu
Supervised by:	Li Huan



A.1 20dB Emission Bandwidth

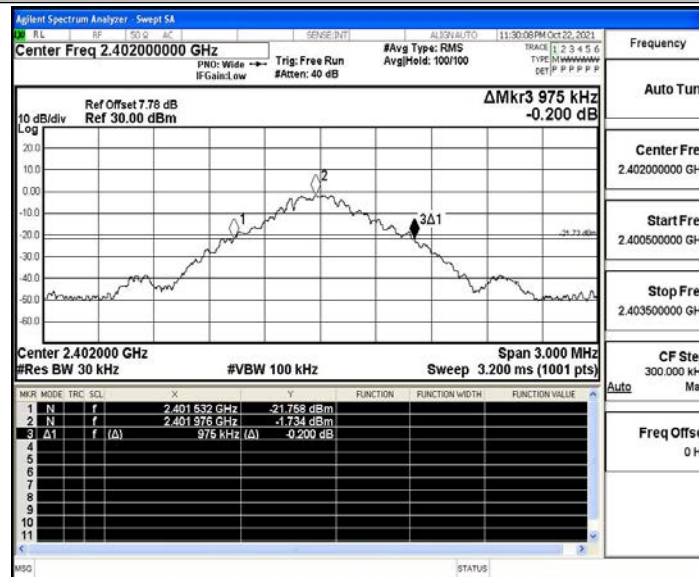
Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.975	2401.532	2402.507	---	PASS
		2441	0.975	2440.529	2441.504	---	PASS
		2480	1.032	2479.463	2480.495	---	PASS
2DH5	Ant1	2402	1.293	2401.364	2402.657	---	PASS
		2441	1.317	2440.343	2441.660	---	PASS
		2480	1.320	2479.340	2480.660	---	PASS
3DH5	Ant1	2402	1.317	2401.343	2402.660	---	PASS
		2441	1.344	2440.331	2441.675	---	PASS
		2480	1.299	2479.358	2480.657	---	PASS

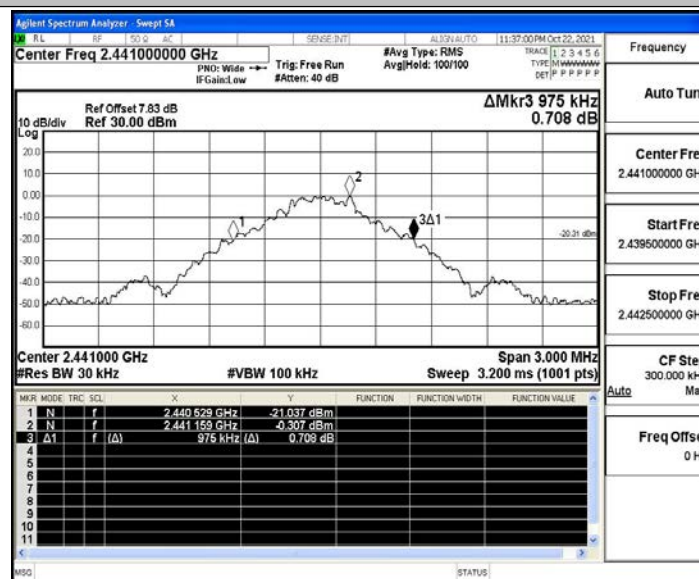


Test Graphs

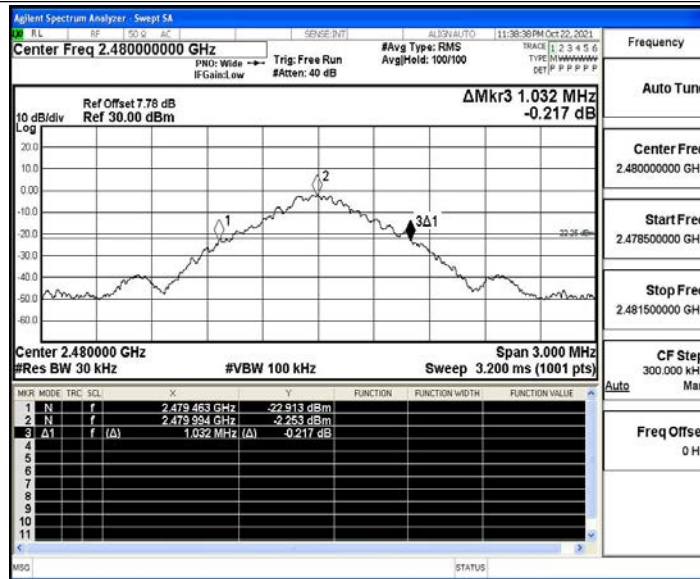
DH5_Ant1_2402



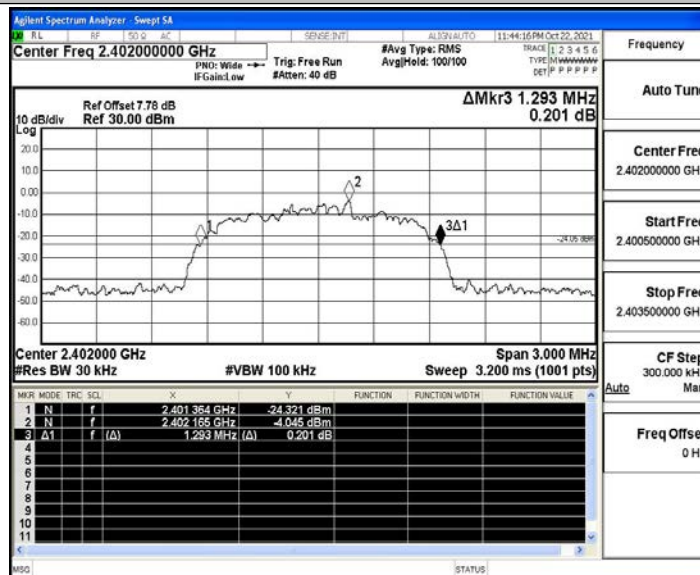
DH5_Ant1_2441



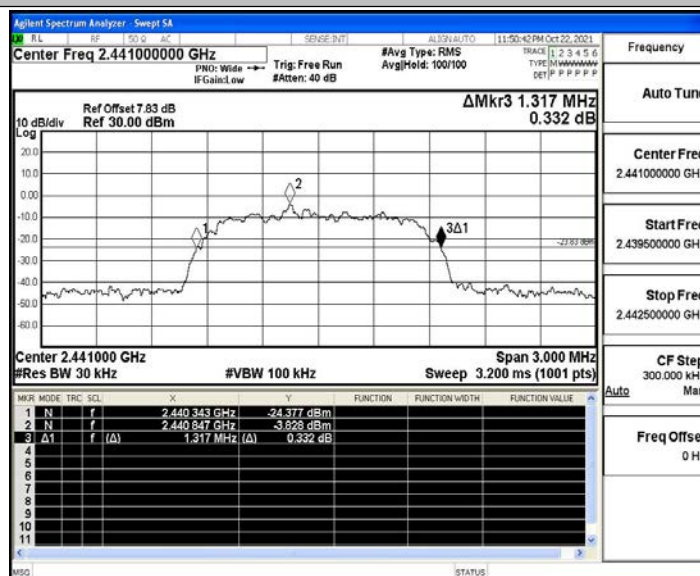
DH5_Ant1_2480



2DH5_Ant1_2402

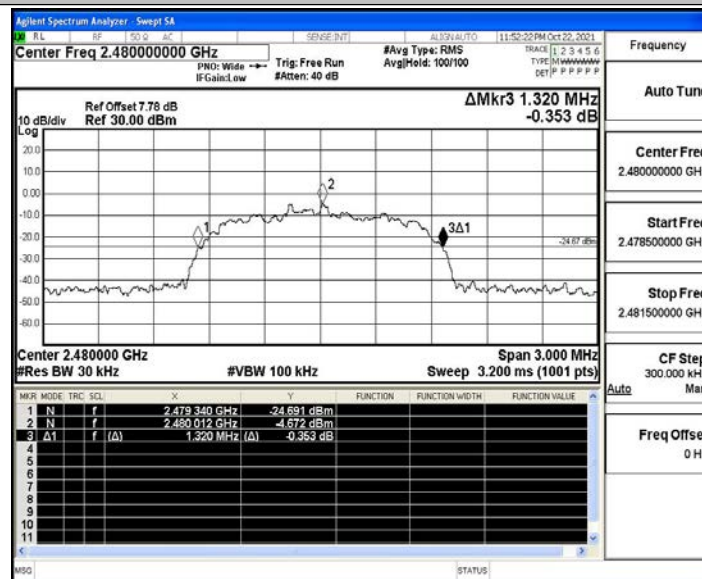


2DH5_Ant1_2441

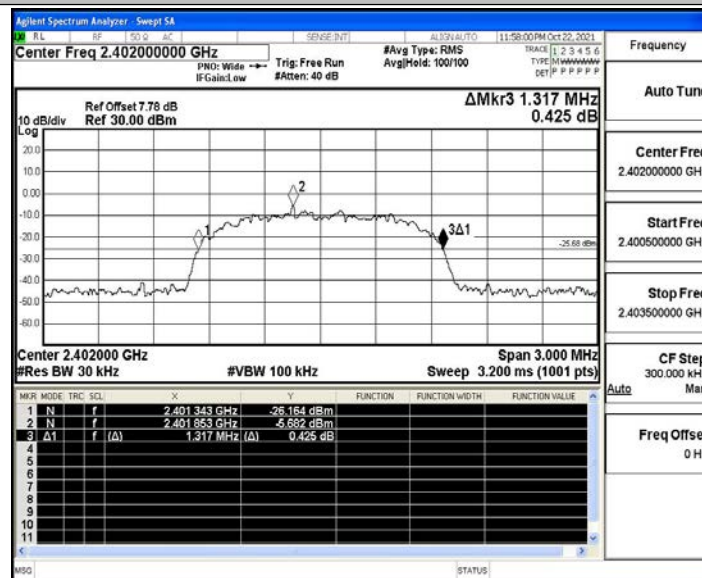




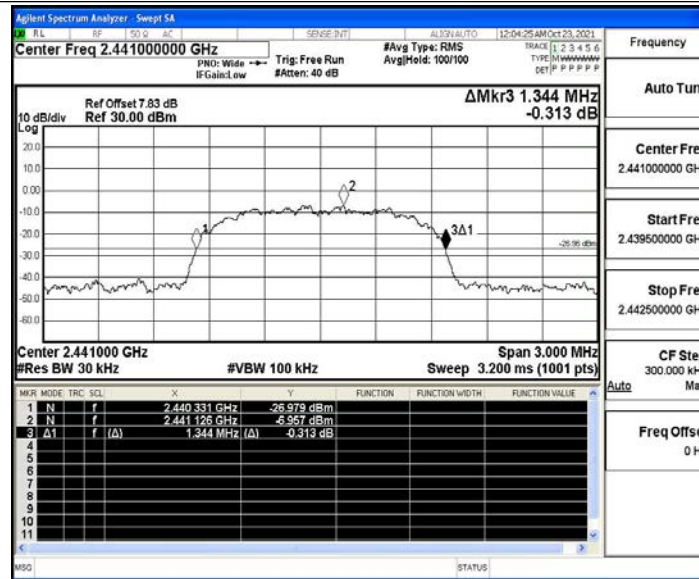
2DH5_Ant1_2480



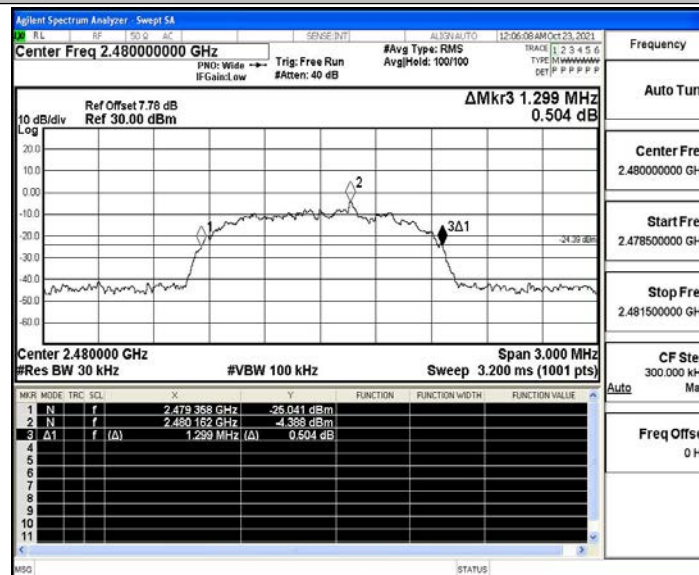
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480





A.2 Maximum peak conducted output power

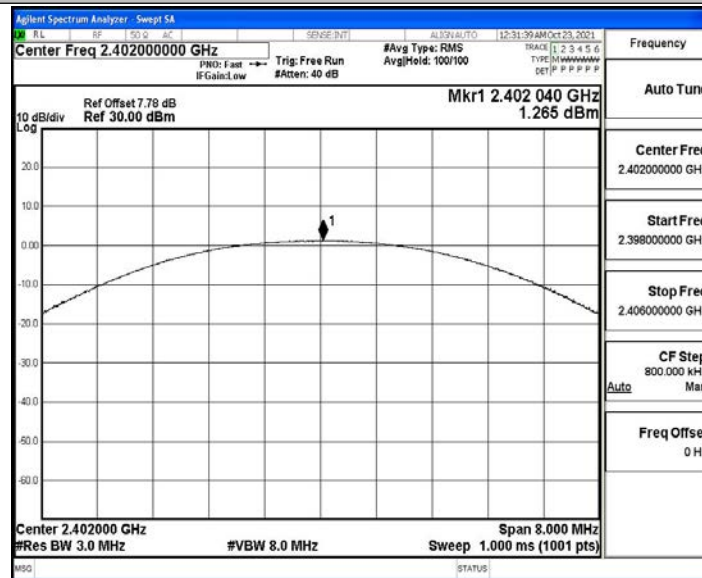
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	1.27	≤ 20.97	PASS
		2441	2.44	≤ 20.97	PASS
		2480	0.97	≤ 20.97	PASS
2DH5	Ant1	2402	0.27	≤ 20.97	PASS
		2441	1.39	≤ 20.97	PASS
		2480	0.07	≤ 20.97	PASS
3DH5	Ant1	2402	0.43	≤ 20.97	PASS
		2441	1.65	≤ 20.97	PASS
		2480	0.23	≤ 20.97	PASS

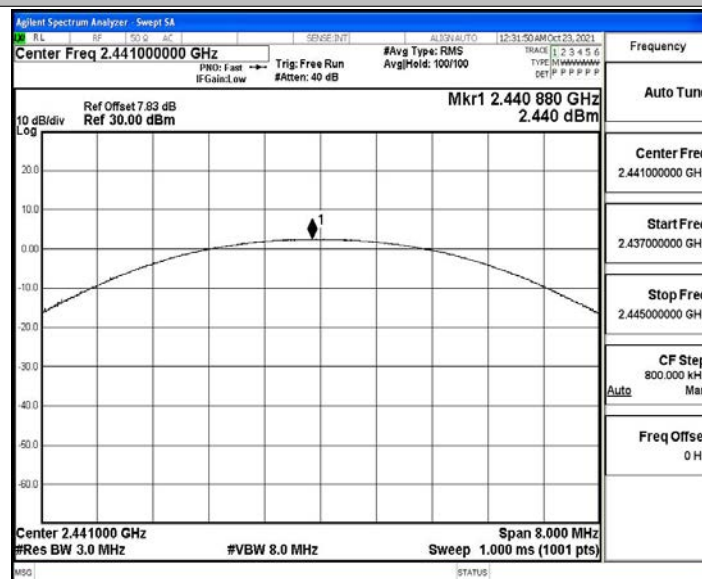


Test Graphs

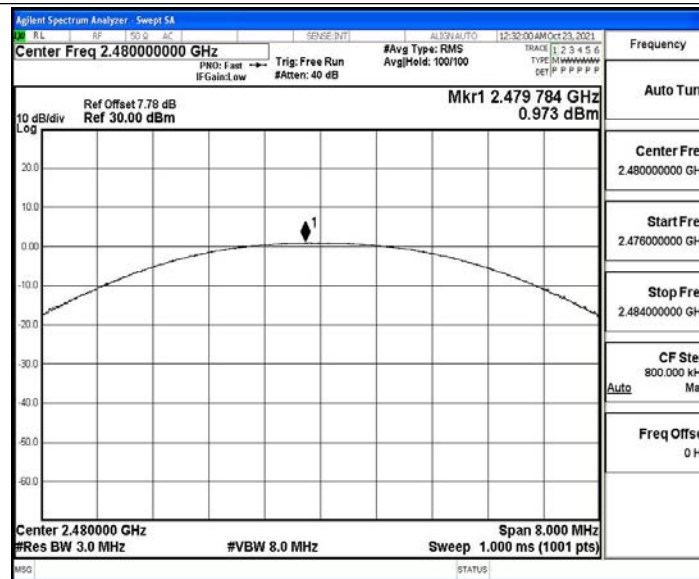
DH5_Ant1_2402



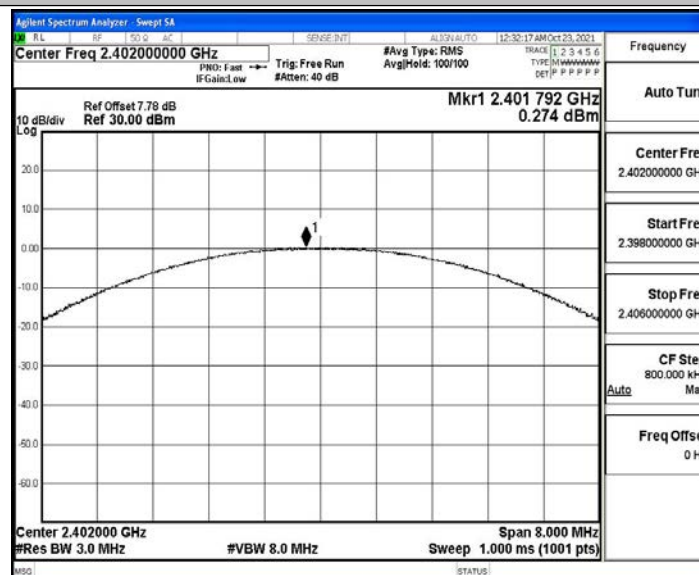
DH5_Ant1_2441



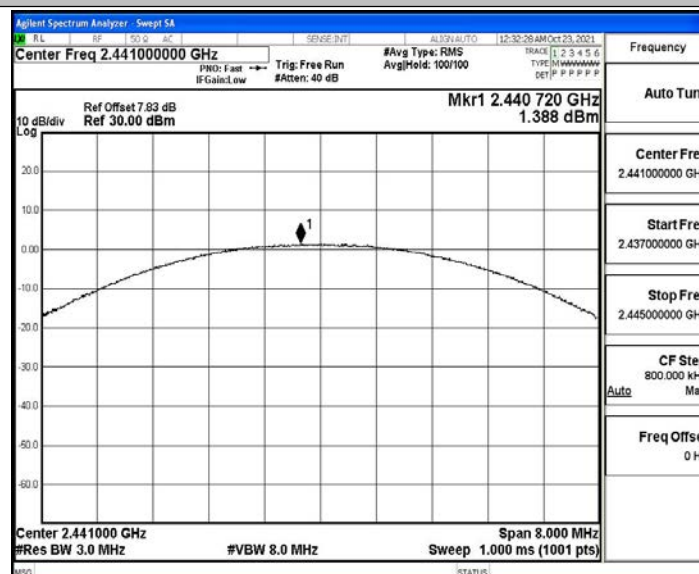
DH5_Ant1_2480



2DH5_Ant1_2402

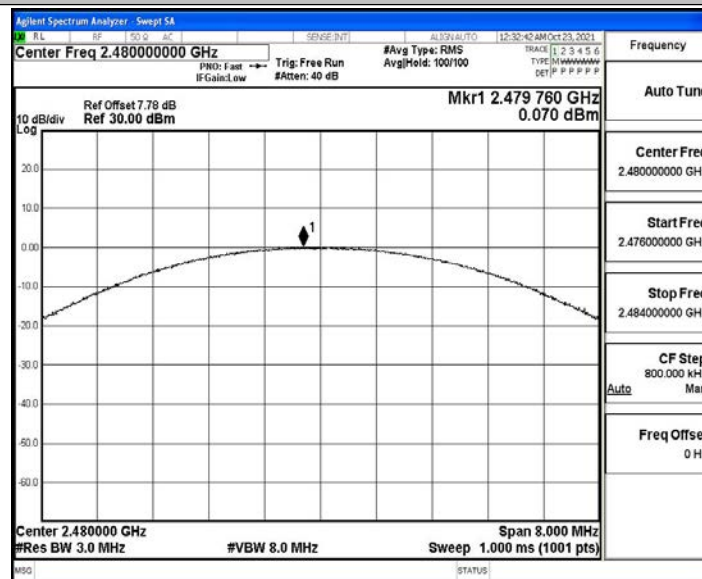


2DH5_Ant1_2441

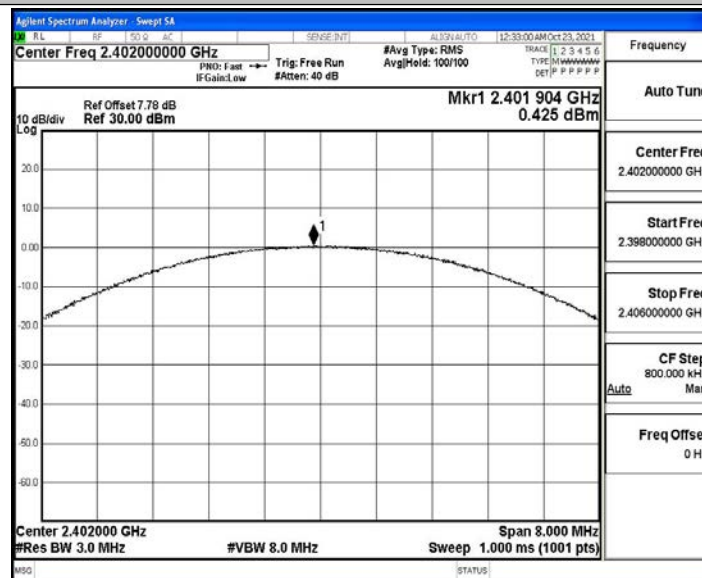




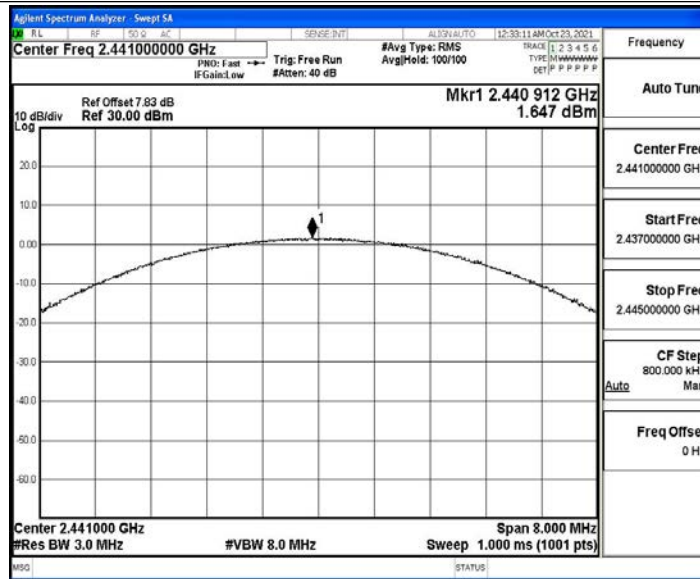
2DH5_Ant1_2480



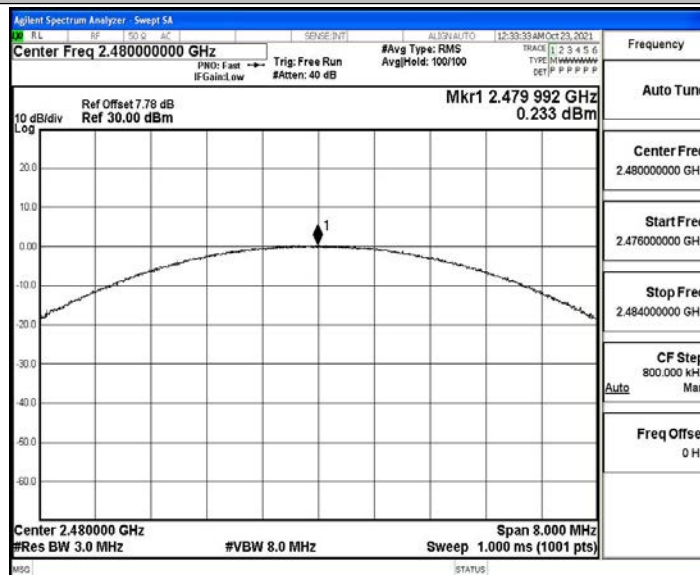
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480





A.3 Carrier frequency separation

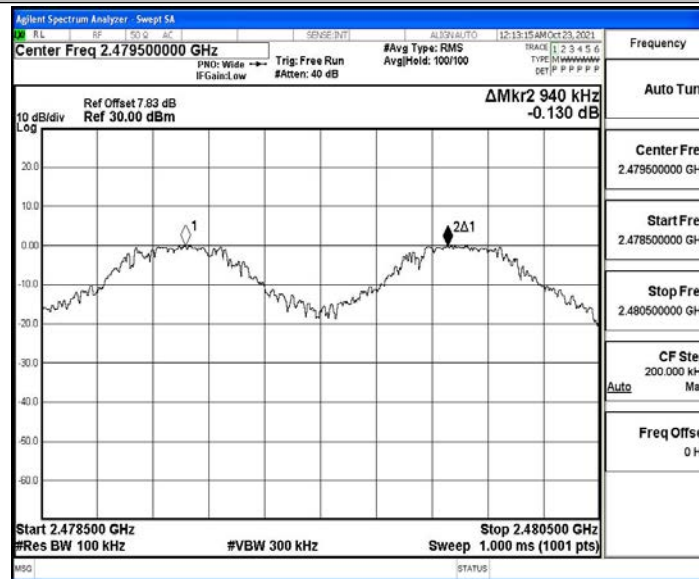
Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.94	≥ 0.688	PASS
2DH5	Ant1	Hop	0.938	≥ 0.880	PASS
3DH5	Ant1	Hop	1.078	≥ 0.896	PASS

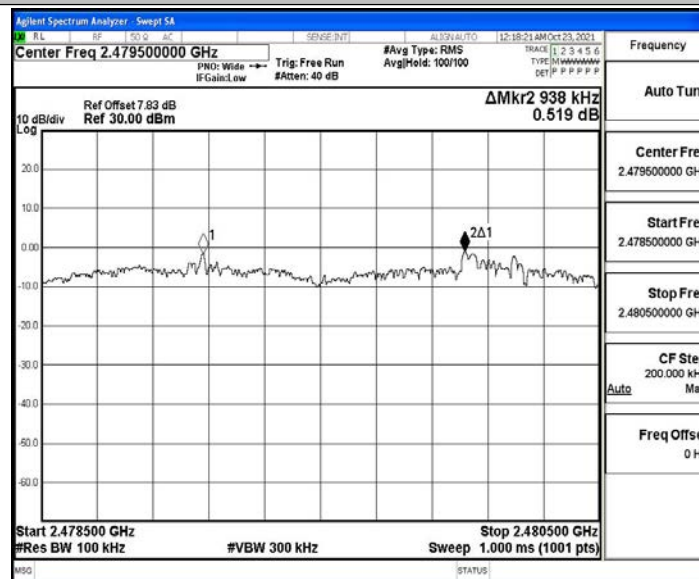


Test Graphs

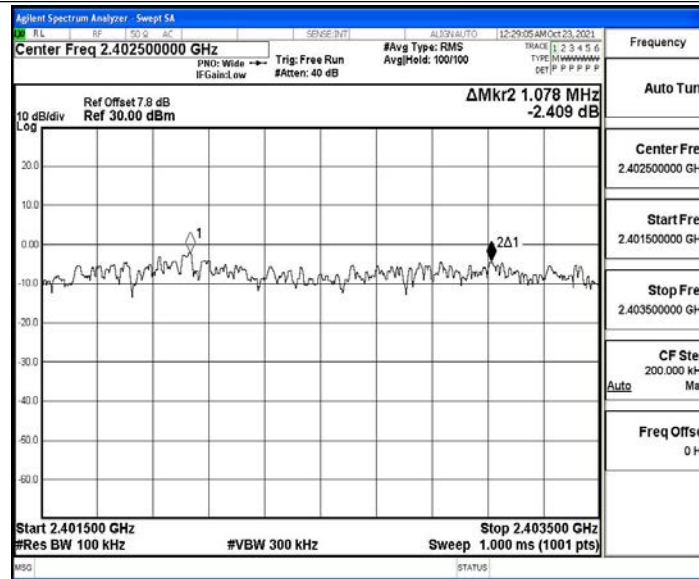
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop

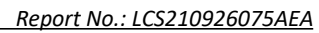




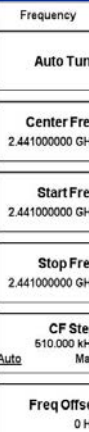
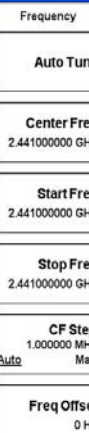
A.4 Time of occupancy

Test Result

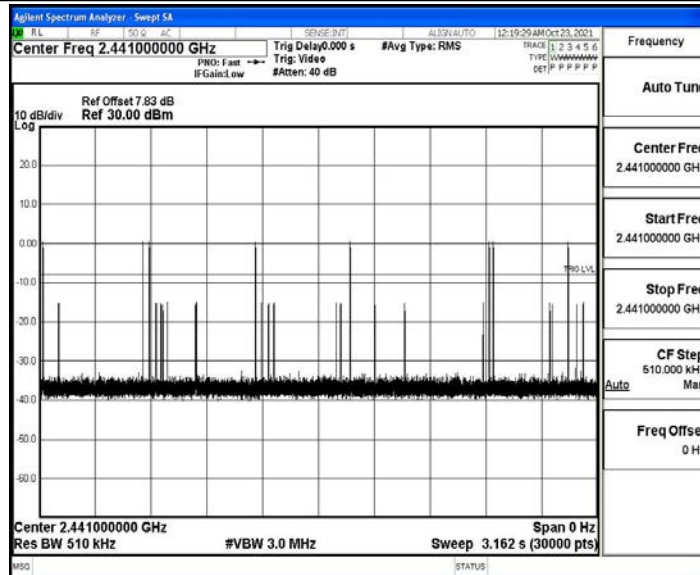
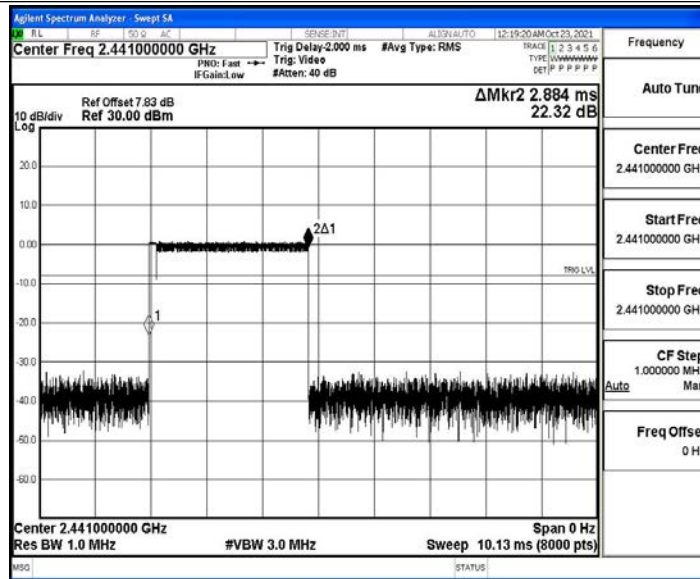
TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.88	100	0.288	≤0.4	PASS
2DH5	Ant1	Hop	2.88	90	0.26	≤0.4	PASS
3DH5	Ant1	Hop	2.89	130	0.375	≤0.4	PASS



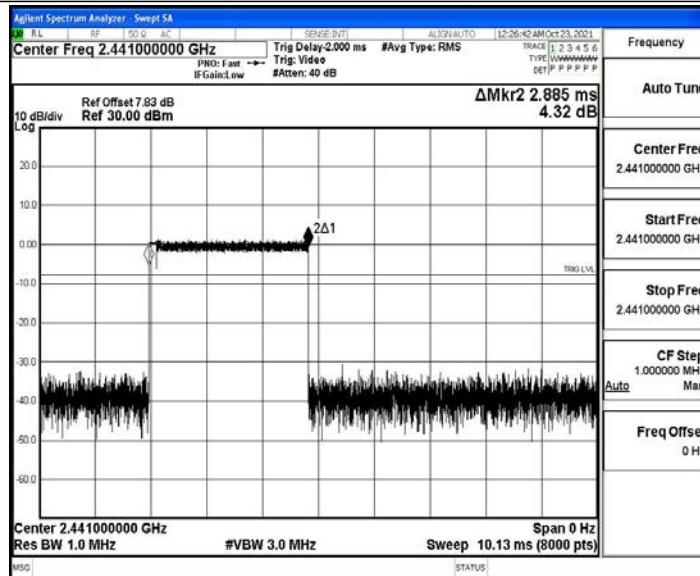
DH5_Ant1_Hop

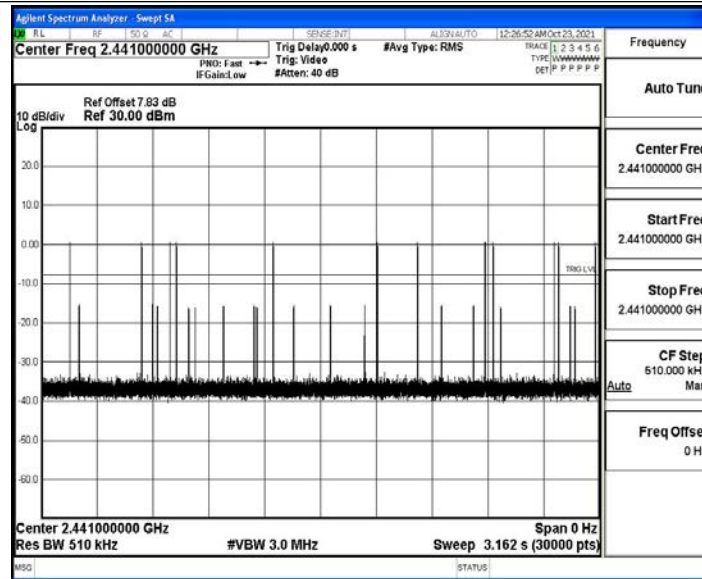


2DH5_Ant1_Hop



3DH5_Ant1_Hop







A.5 Number of hopping channels

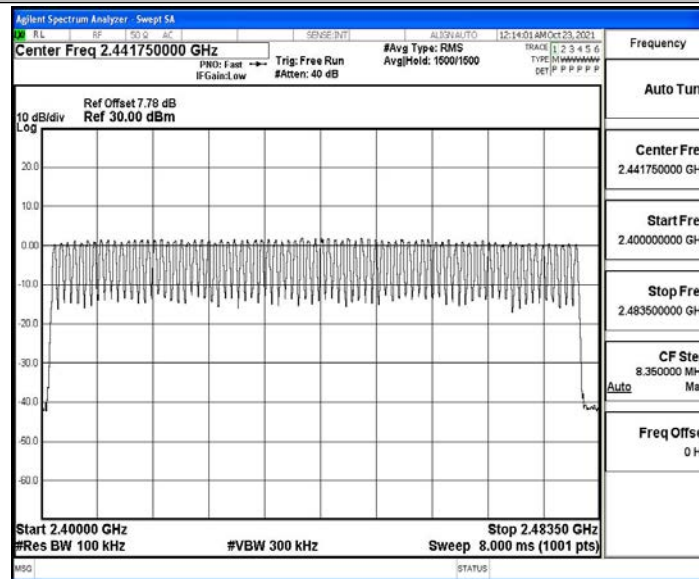
Test Result

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

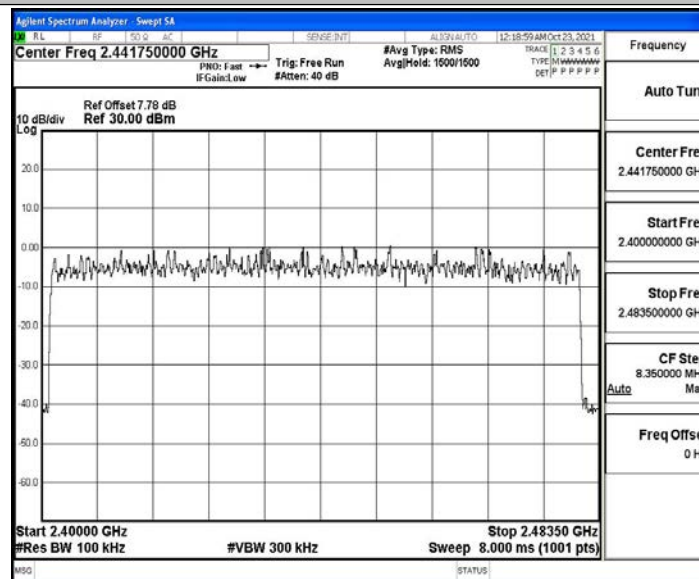


Test Graphs

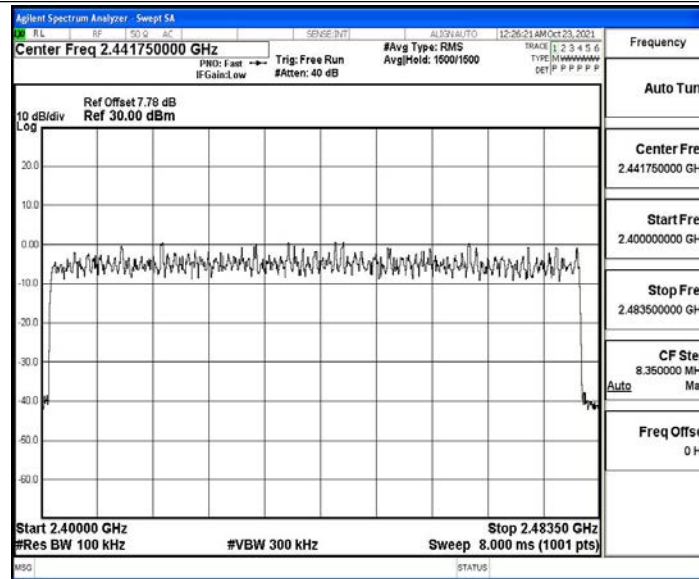
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop





A.6 Band edge measurements

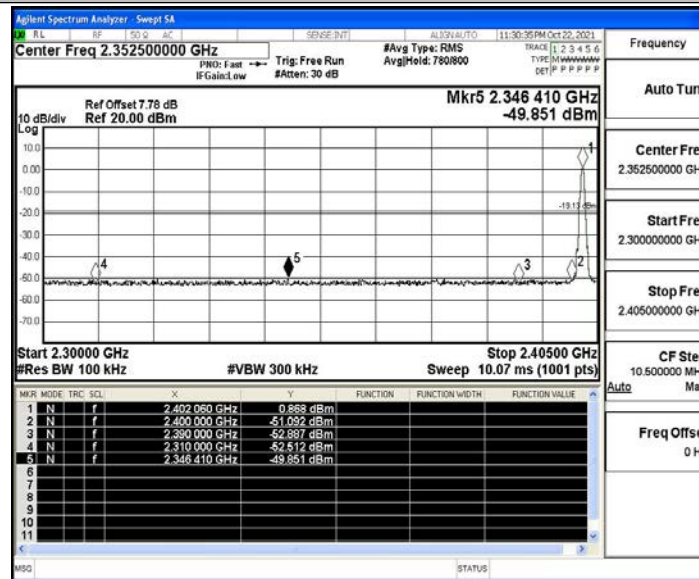
Test Result

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	0.87	-49.85	≤ -19.13	PASS
		High	2480	0.67	-48.9	≤ -19.33	PASS
		Low	Hop_2402	1.06	-49.9	≤ -18.94	PASS
		High	Hop_2480	0.72	-48.84	≤ -19.28	PASS
2DH5	Ant1	Low	2402	-1.38	-49.69	≤ -21.38	PASS
		High	2480	-0.76	-49.13	≤ -20.76	PASS
		Low	Hop_2402	-2.51	-49.75	≤ -22.51	PASS
		High	Hop_2480	-2.99	-48.12	≤ -22.99	PASS
3DH5	Ant1	Low	2402	-0.66	-49.34	≤ -20.66	PASS
		High	2480	-0.87	-48.89	≤ -20.87	PASS
		Low	Hop_2402	-4.50	-49.87	≤ -24.5	PASS
		High	Hop_2480	-2.73	-48.68	≤ -22.73	PASS

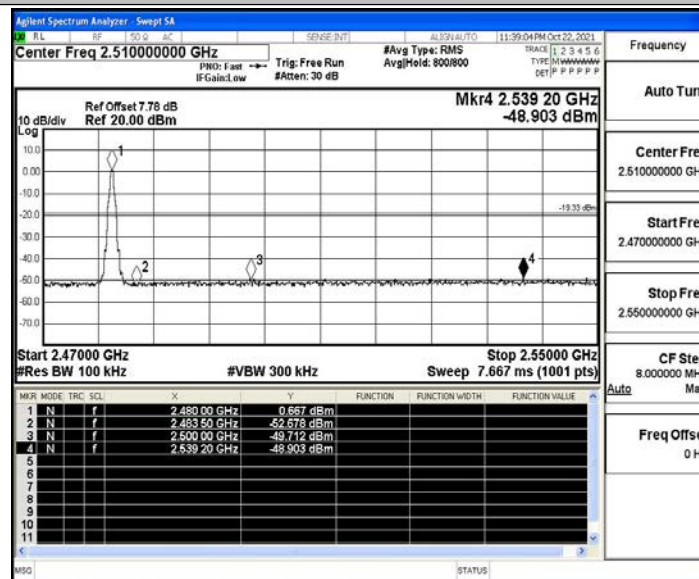


Test Graphs

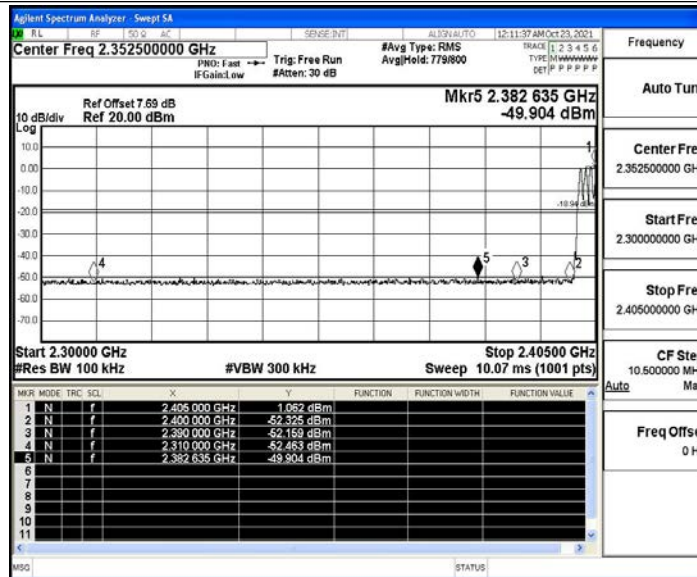
DH5_Ant1_Low_2402



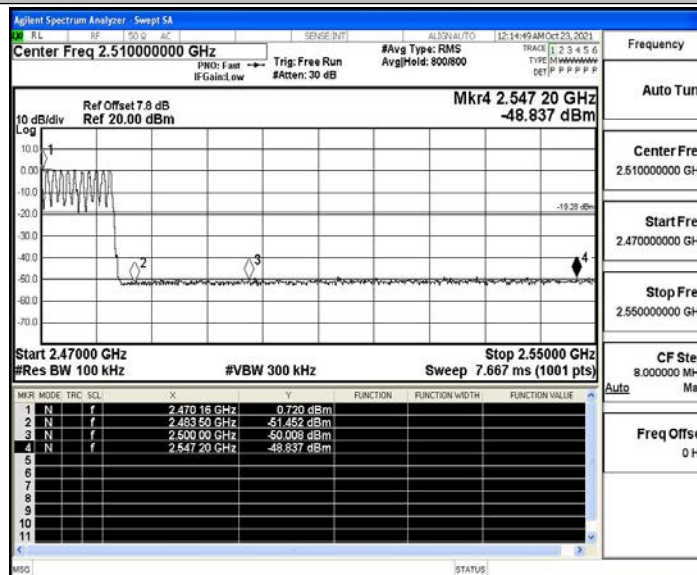
DH5_Ant1_High_2480



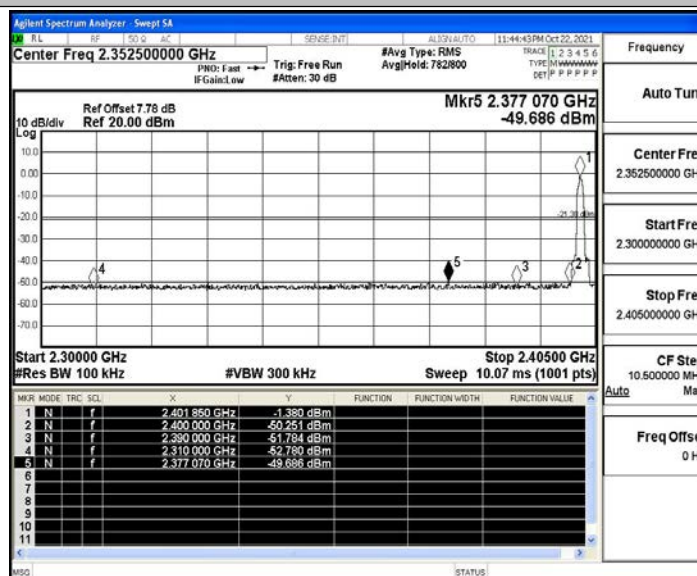
DH5_Ant1_Low_Hop_2402



DH5_Ant1_High_Hop_2480

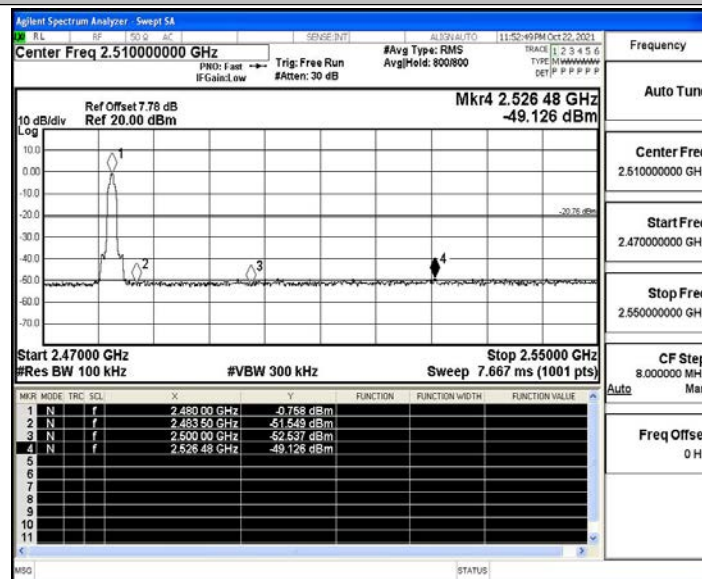


2DH5_Ant1_Low_2402

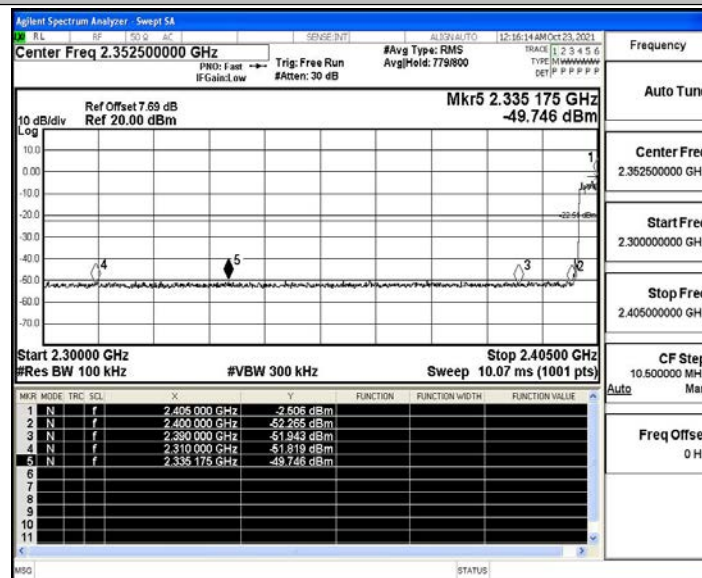




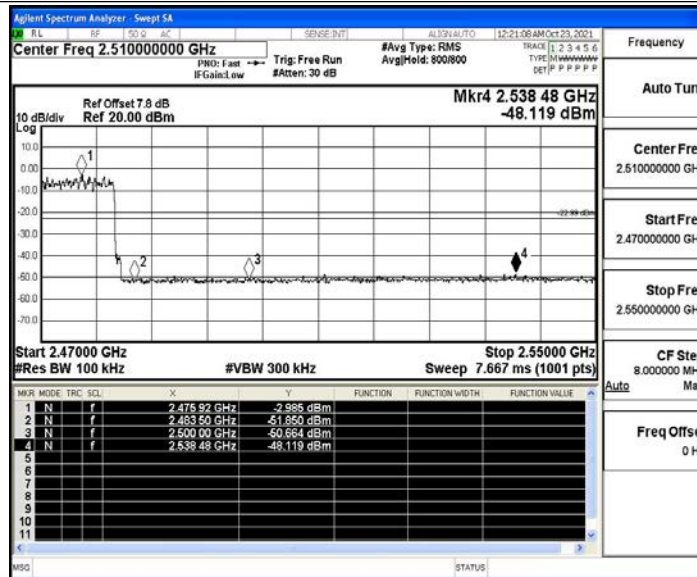
2DH5_Ant1_High_2480



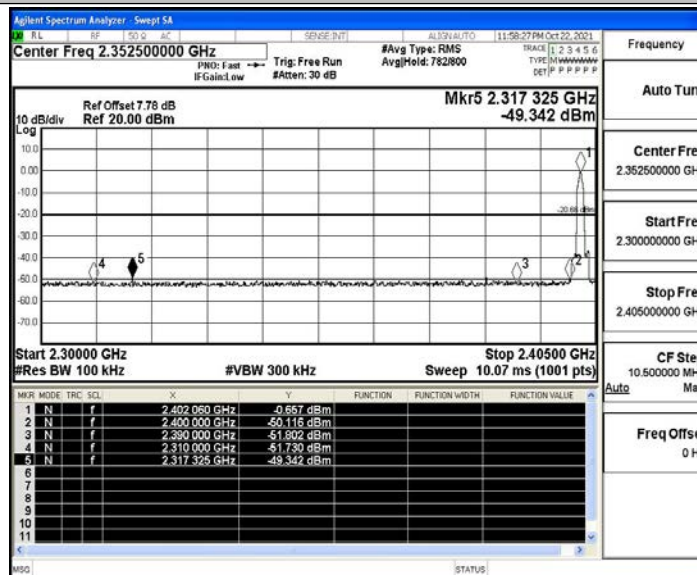
2DH5_Ant1_Low_Hop_2402



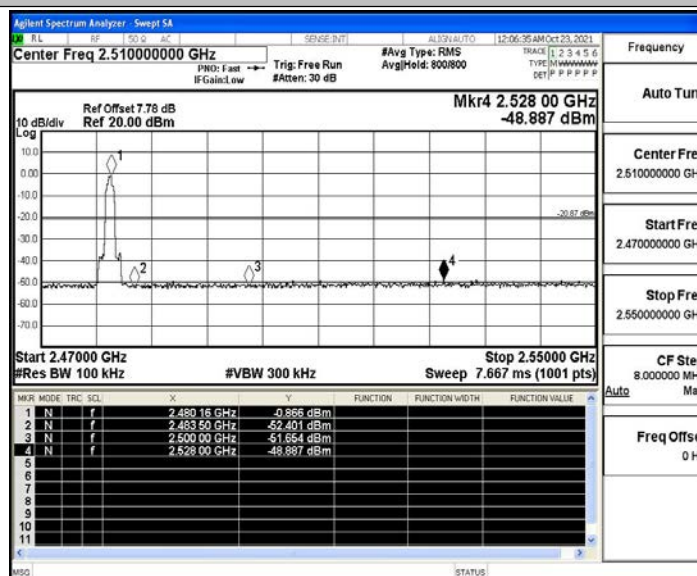
2DH5_Ant1_High_Hop_2480



3DH5_Ant1_Low_2402

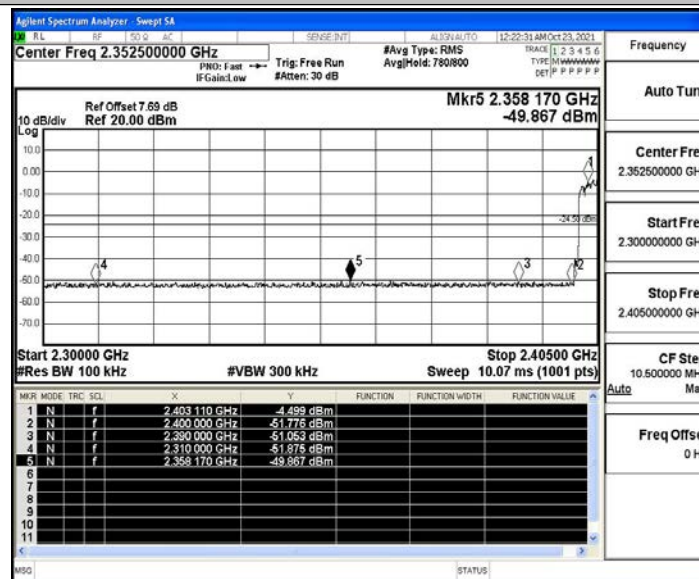


3DH5_Ant1_High_2480

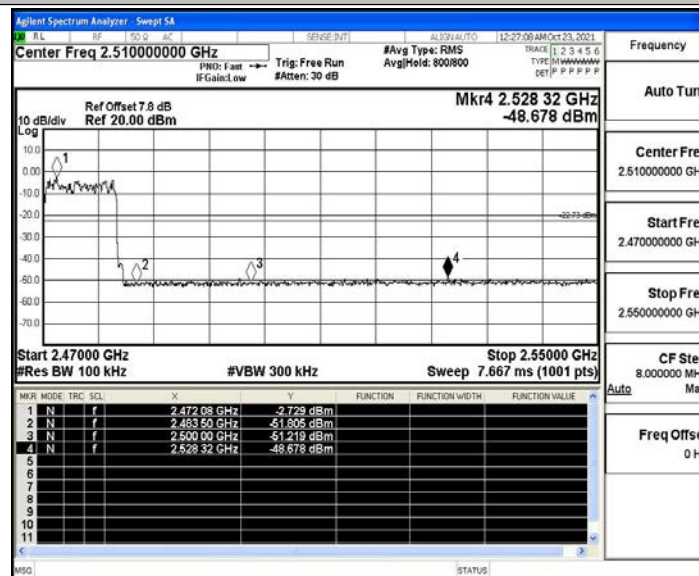




3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480





A.7 Conducted Spurious Emission

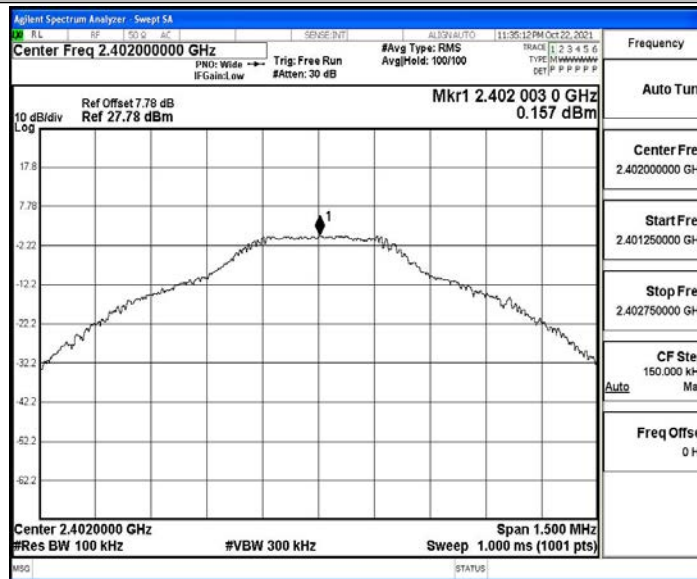
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	0.16	0.16	---	PASS
			30~1000	0.16	-62.1	≤-19.84	PASS
			1000~26500	0.16	-47.96	≤-19.84	PASS
		2441	Reference	1.87	1.87	---	PASS
			30~1000	1.87	-62.59	≤-18.13	PASS
			1000~26500	1.87	-47.59	≤-18.13	PASS
		2480	Reference	0.14	0.14	---	PASS
			30~1000	0.14	-60.35	≤-19.87	PASS
			1000~26500	0.14	-47.87	≤-19.87	PASS
2DH5	Ant1	2402	Reference	-2.28	-2.28	---	PASS
			30~1000	-2.28	-62.01	≤-22.28	PASS
			1000~26500	-2.28	-46.66	≤-22.28	PASS
		2441	Reference	0.41	0.41	---	PASS
			30~1000	0.41	-61.47	≤-19.59	PASS
			1000~26500	0.41	-47.23	≤-19.59	PASS
		2480	Reference	-2.75	-2.75	---	PASS
			30~1000	-2.75	-61.47	≤-22.75	PASS
			1000~26500	-2.75	-47.56	≤-22.75	PASS
3DH5	Ant1	2402	Reference	-1.43	-1.43	---	PASS
			30~1000	-1.43	-61.81	≤-21.43	PASS
			1000~26500	-1.43	-46.42	≤-21.43	PASS
		2441	Reference	0.45	0.45	---	PASS
			30~1000	0.45	-61.33	≤-19.55	PASS
			1000~26500	0.45	-46.69	≤-19.55	PASS
		2480	Reference	-0.94	-0.94	---	PASS
			30~1000	-0.94	-62.11	≤-20.94	PASS
			1000~26500	-0.94	-47.46	≤-20.94	PASS

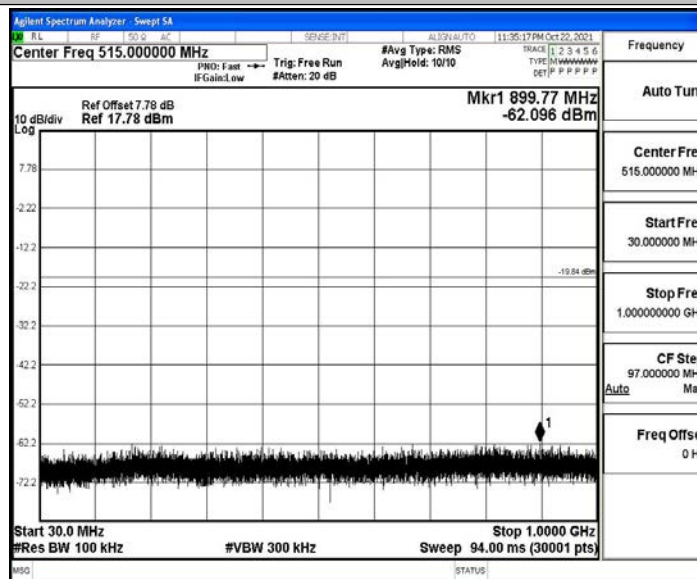


Test Graphs

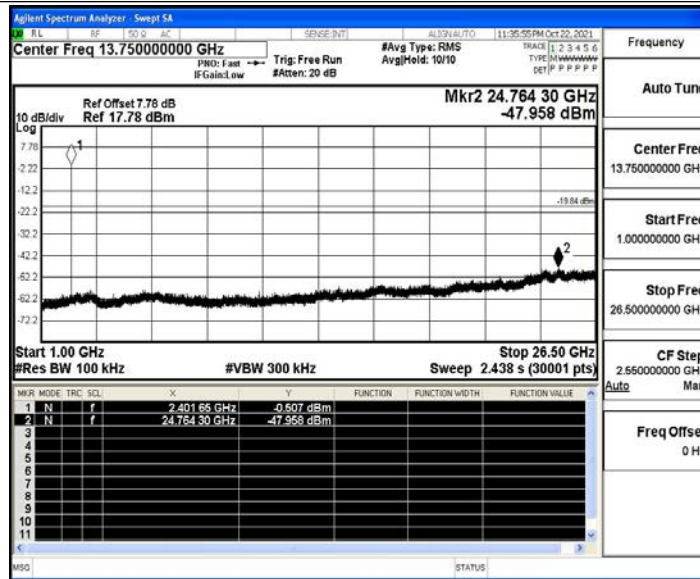
DH5_Ant1_2402_0~Reference



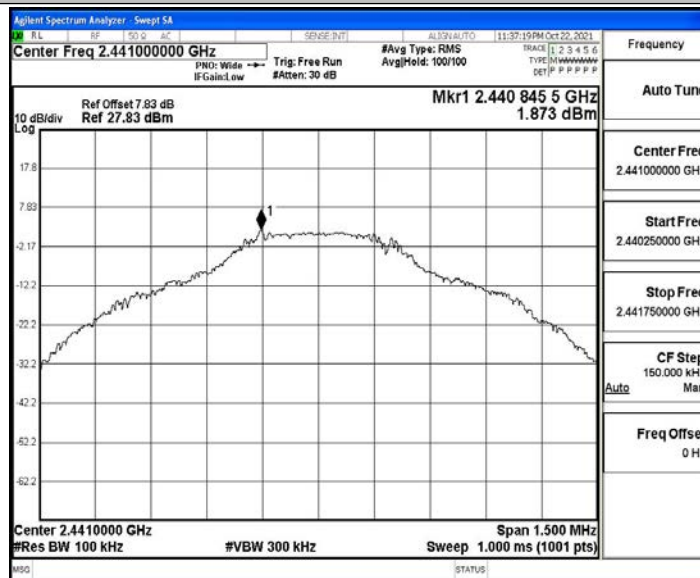
DH5_Ant1_2402_30~1000



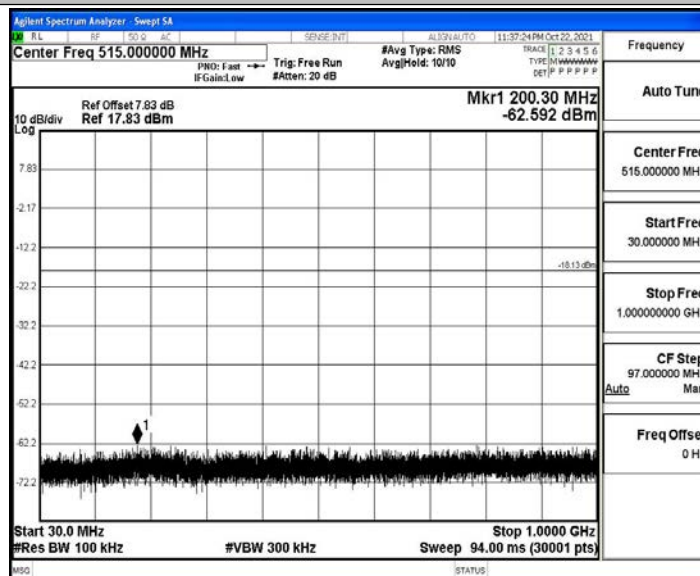
DH5_Ant1_2402_1000~26500



DH5_Ant1_2441_0~Reference

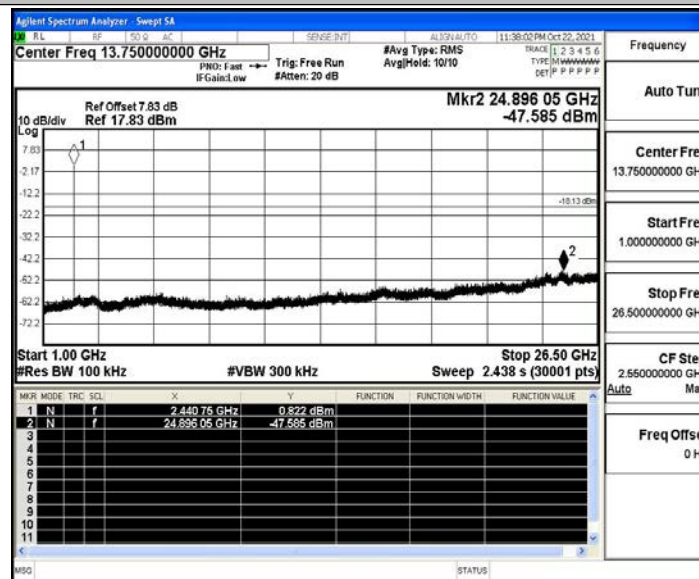


DH5_Ant1_2441_30~1000

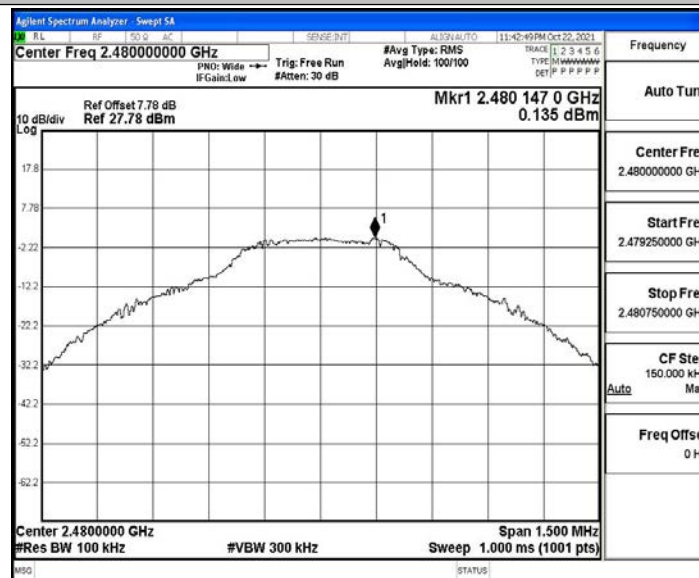




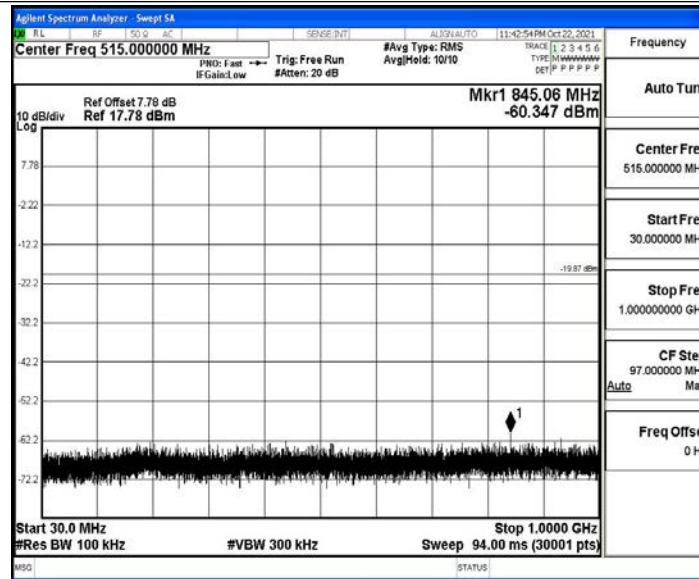
DH5_Ant1_2441_1000~26500



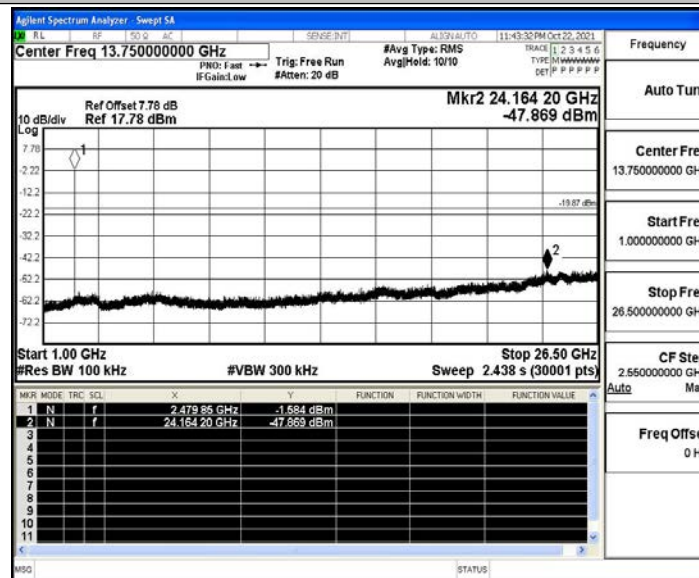
DH5_Ant1_2480_0~Reference



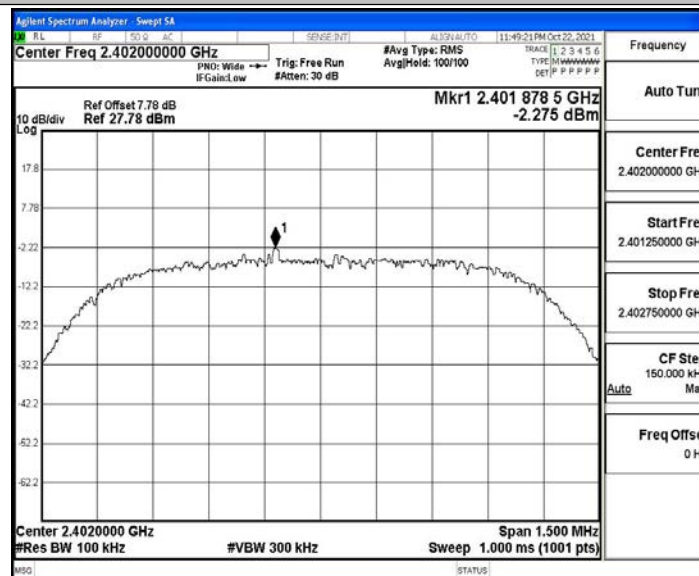
DH5_Ant1_2480_30~1000



DH5_Ant1_2480_1000~26500

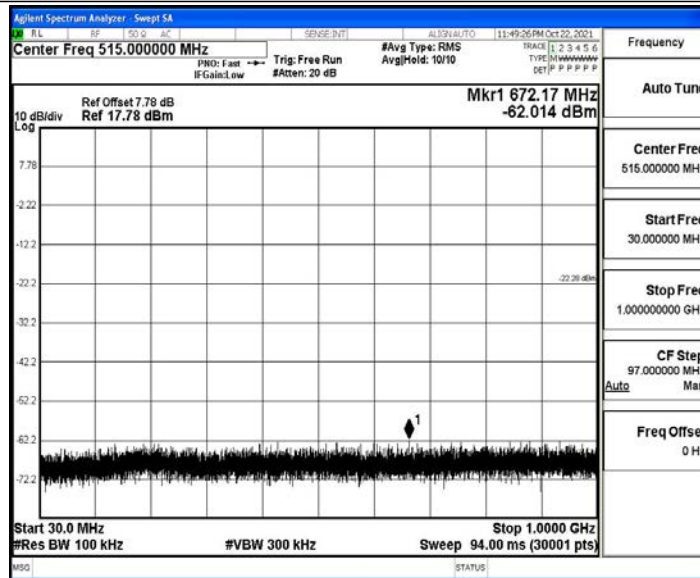


2DH5_Ant1_2402_0~Reference

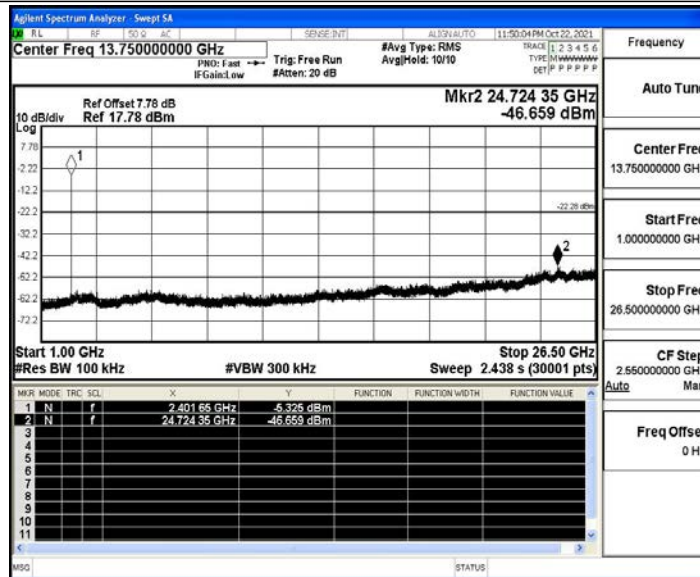




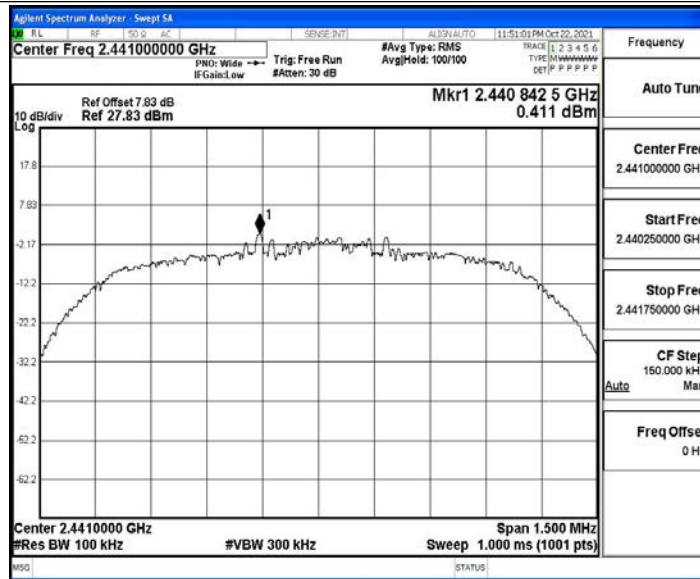
2DH5_Ant1_2402_30~1000



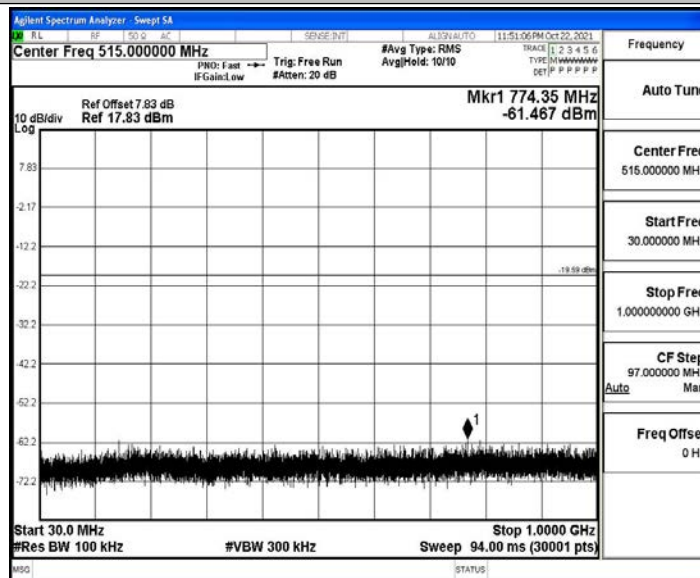
2DH5_Ant1_2402_1000~26500



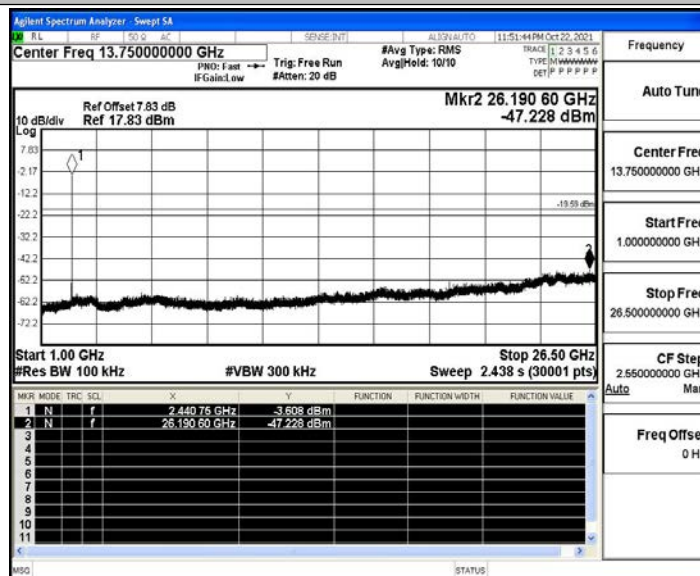
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000

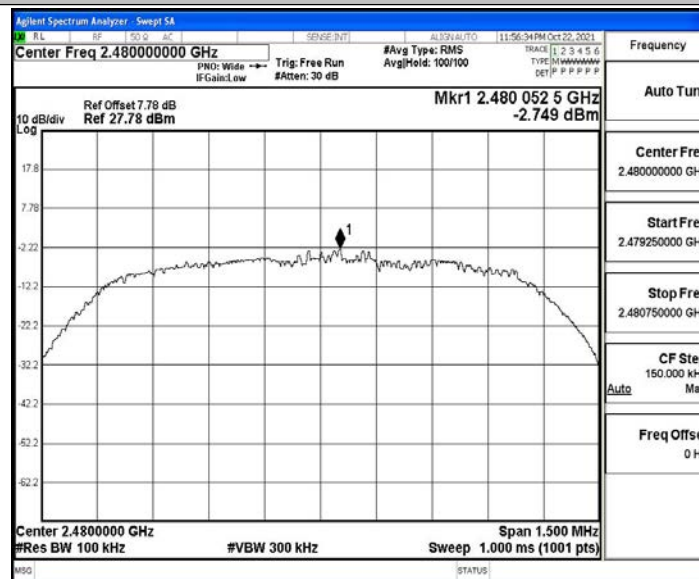


2DH5_Ant1_2441_1000~26500

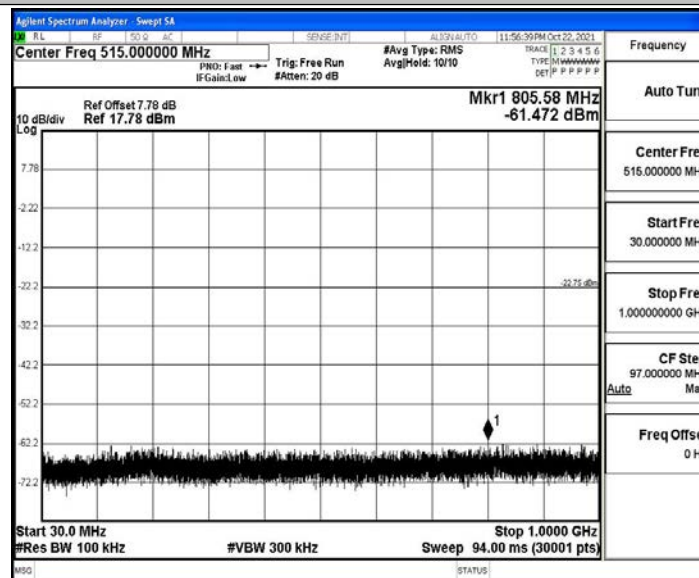




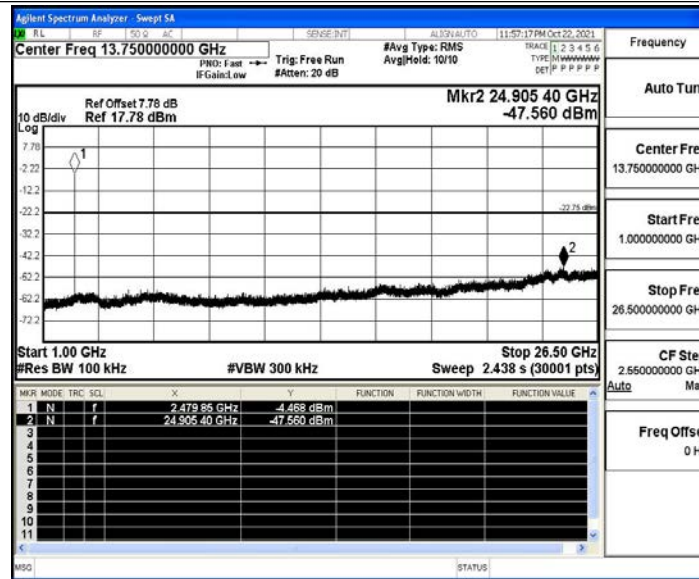
2DH5_Ant1_2480_0~Reference



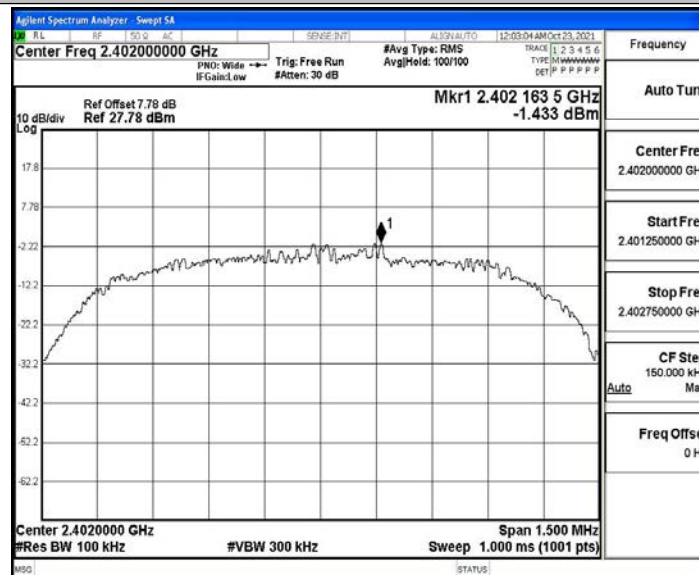
2DH5_Ant1_2480_30~1000



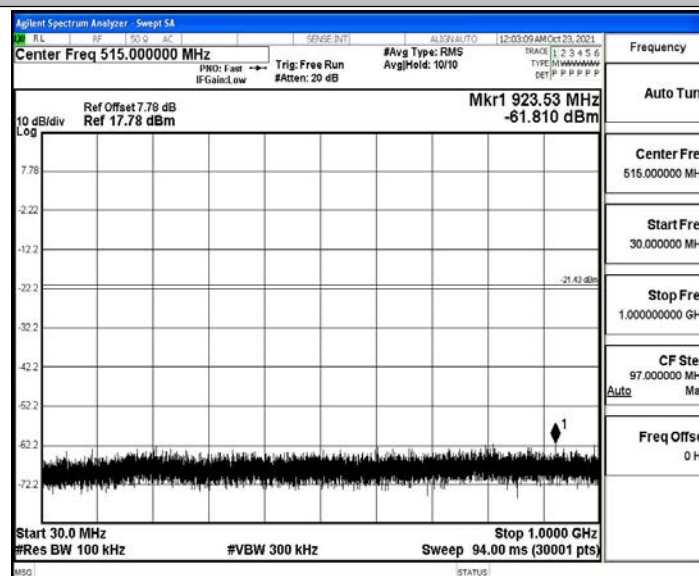
2DH5_Ant1_2480_1000~26500



3DH5_Ant1_2402_0~Reference

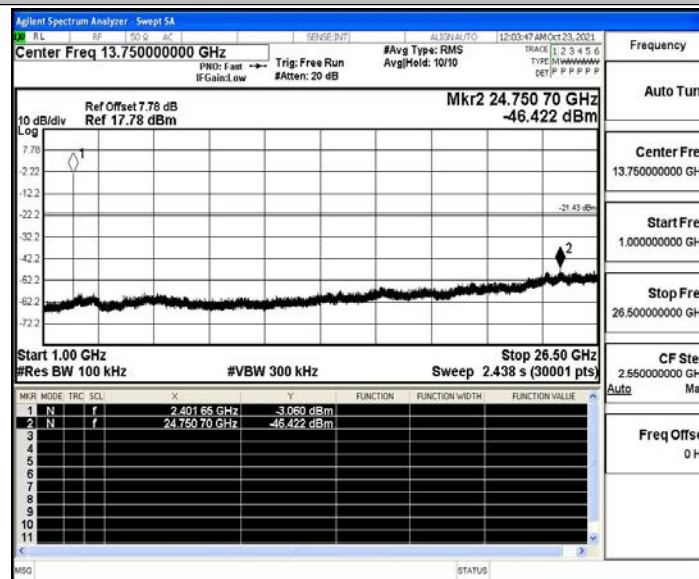


3DH5_Ant1_2402_30~1000

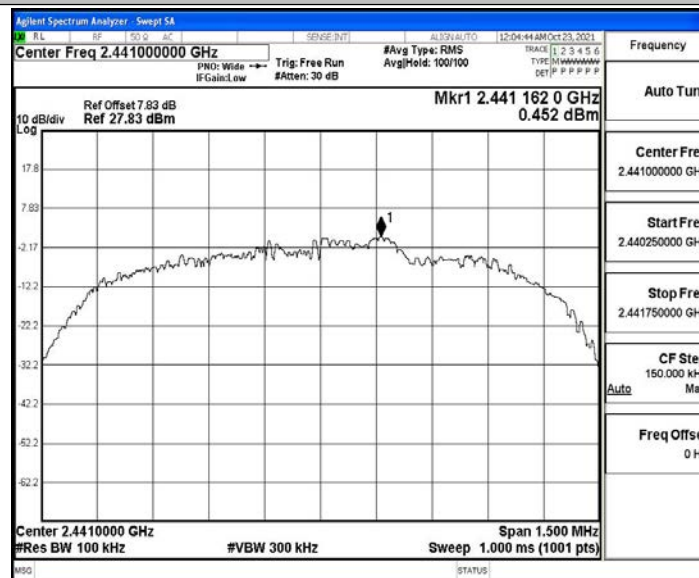




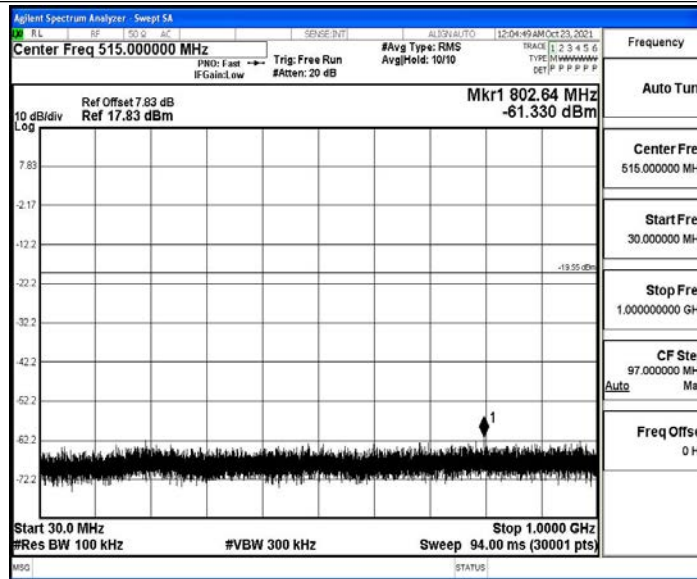
3DH5_Ant1_2402_1000~26500



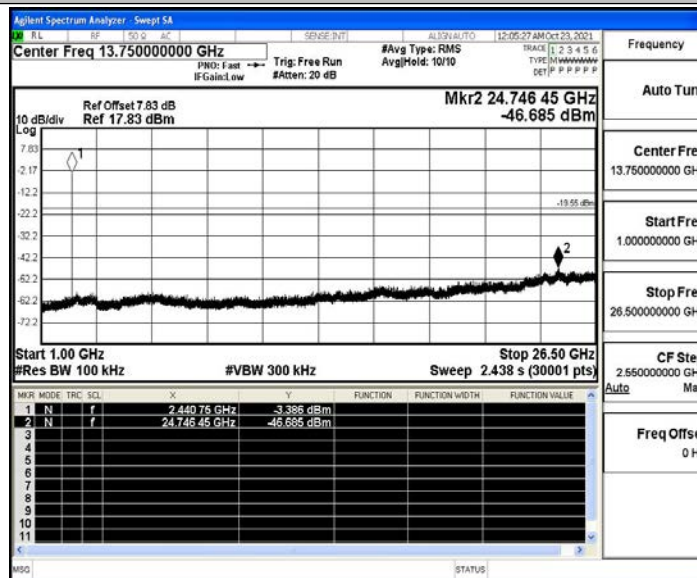
3DH5_Ant1_2441_0~Reference



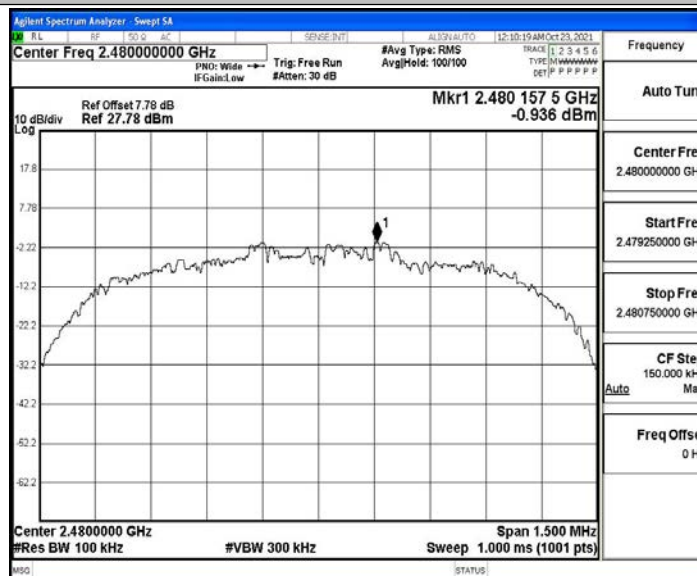
3DH5_Ant1_2441_30~1000



3DH5_Ant1_2441_1000~26500

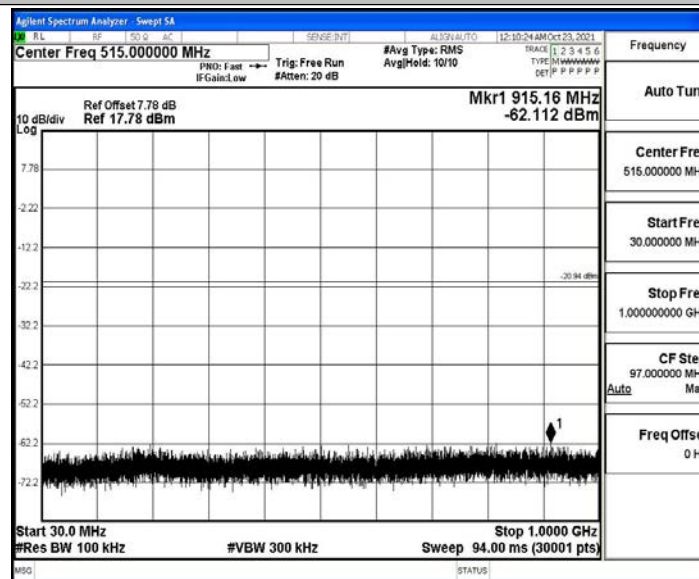


3DH5_Ant1_2480_0~Reference

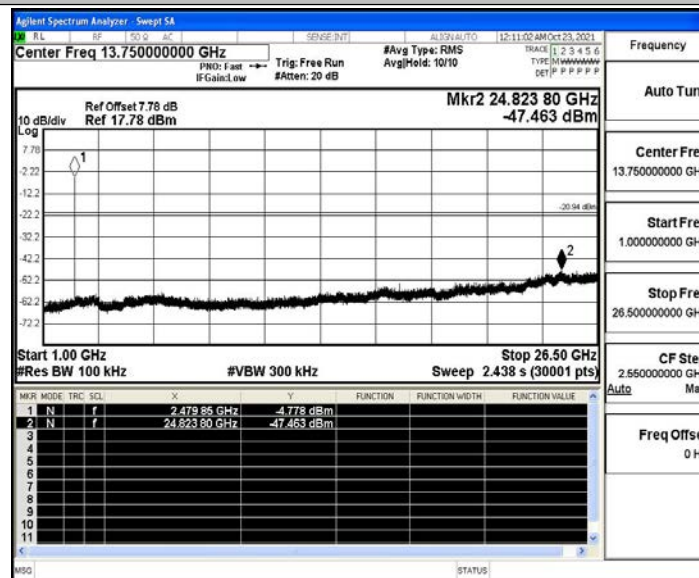




3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500





A.8 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	-49.11	≤-41.20	46.09	≤54	PASS
				AV	2389.040	-48.7	≤-41.20	46.50	≤54	PASS
				AV	2390.000	-48.74	≤-41.20	46.46	≤54	PASS
				Peak	2310.000	-39.31	≤-21.20	55.89	≤74	PASS
				Peak	2375.810	-38.58	≤-21.20	56.62	≤74	PASS
				Peak	2390.000	-40.57	≤-21.20	54.63	≤74	PASS
		High	2480	AV	2483.500	-48.06	≤-41.20	47.14	≤54	PASS
				AV	2483.520	-48.06	≤-41.20	47.14	≤54	PASS
				AV	2500.000	-48.23	≤-41.20	46.97	≤54	PASS
				Peak	2483.500	-40.03	≤-21.20	55.17	≤74	PASS
				Peak	2495.600	-37.48	≤-21.20	57.72	≤74	PASS
				Peak	2500.000	-39.93	≤-21.20	55.27	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-40.24	≤-21.20	54.96	≤74	PASS
				Peak	2350.925	-38.51	≤-21.20	56.69	≤74	PASS
				Peak	2390.000	-41.44	≤-21.20	53.76	≤74	PASS
		High	Hop_2480	Peak	2483.500	-39.54	≤-21.20	55.66	≤74	PASS
				Peak	2489.360	-37.91	≤-21.20	57.29	≤74	PASS
				Peak	2500.000	-39.76	≤-21.20	55.44	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-49.19	≤-41.20	46.01	≤54	PASS
				AV	2383.895	-48.68	≤-41.20	46.52	≤54	PASS
				AV	2390.000	-48.76	≤-41.20	46.44	≤54	PASS
				Peak	2310.000	-41.39	≤-21.20	53.81	≤74	PASS
				Peak	2320.790	-37.83	≤-21.20	57.37	≤74	PASS
				Peak	2390.000	-40.11	≤-21.20	55.09	≤74	PASS
		High	2480	AV	2483.500	-48	≤-41.20	47.20	≤54	PASS
				AV	2483.520	-48	≤-41.20	47.20	≤54	PASS
				AV	2500.000	-48.23	≤-41.20	46.97	≤54	PASS
				Peak	2483.500	-41.03	≤-21.20	54.17	≤74	PASS
				Peak	2498.640	-38.1	≤-21.20	57.10	≤74	PASS
				Peak	2500.000	-39.94	≤-21.20	55.26	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-41.7	≤-21.20	53.50	≤74	PASS
				Peak	2365.520	-38.48	≤-21.20	56.72	≤74	PASS
				Peak	2390.000	-40.84	≤-21.20	54.36	≤74	PASS
		High	Hop_2480	Peak	2483.500	-40.24	≤-21.20	54.96	≤74	PASS
				Peak	2497.760	-36.67	≤-21.20	58.53	≤74	PASS
				Peak	2500.000	-39.28	≤-21.20	55.92	≤74	PASS
3DH5	Ant1	Low	2402	AV	2310.000	-49.12	≤-41.20	46.08	≤54	PASS



				AV	2389.460	-48.57	≤-41.20	46.63	≤54	PASS
				AV	2390.000	-48.69	≤-41.20	46.51	≤54	PASS
				Peak	2310.000	-41.72	≤-21.20	53.48	≤74	PASS
				Peak	2339.585	-38.08	≤-21.20	57.12	≤74	PASS
				Peak	2390.000	-39.78	≤-21.20	55.42	≤74	PASS
		High	2480	AV	2483.500	-48	≤-41.20	47.20	≤54	PASS
				AV	2483.520	-47.99	≤-41.20	47.21	≤54	PASS
				AV	2500.000	-48.13	≤-41.20	47.07	≤54	PASS
				Peak	2483.500	-39.15	≤-21.20	56.05	≤74	PASS
				Peak	2495.360	-36.71	≤-21.20	58.49	≤74	PASS
				Peak	2500.000	-38.75	≤-21.20	56.45	≤74	PASS
		Low	Hop_24 02	Peak	2310.000	-40.83	≤-21.20	54.37	≤74	PASS
				Peak	2383.370	-38.6	≤-21.20	56.60	≤74	PASS
				Peak	2390.000	-41.32	≤-21.20	53.88	≤74	PASS
		High	Hop_24 80	Peak	2483.500	-40.7	≤-21.20	54.50	≤74	PASS
				Peak	2496.080	-38.07	≤-21.20	57.13	≤74	PASS
				Peak	2500.000	-39.74	≤-21.20	55.46	≤74	PASS

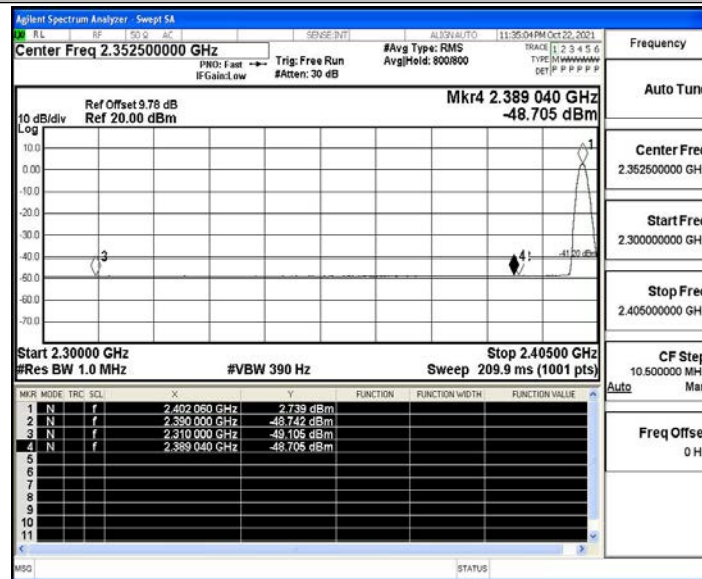
Note:

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.

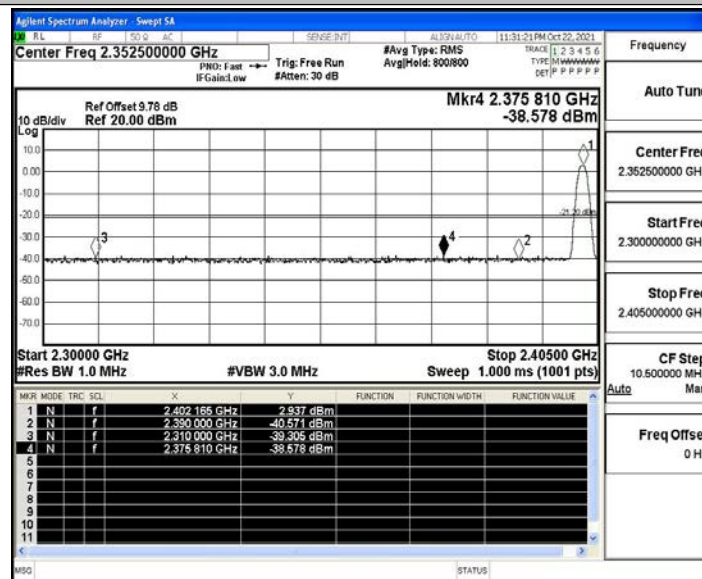


Test Graphs

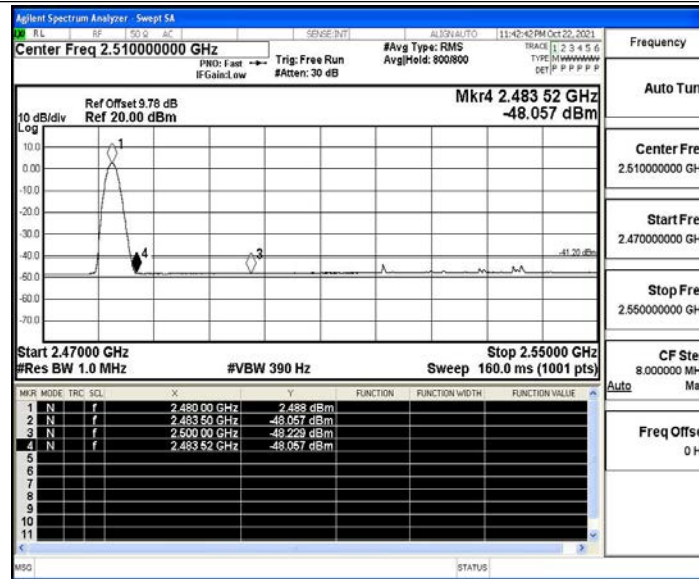
DH5_Ant1_Low_2402_AV



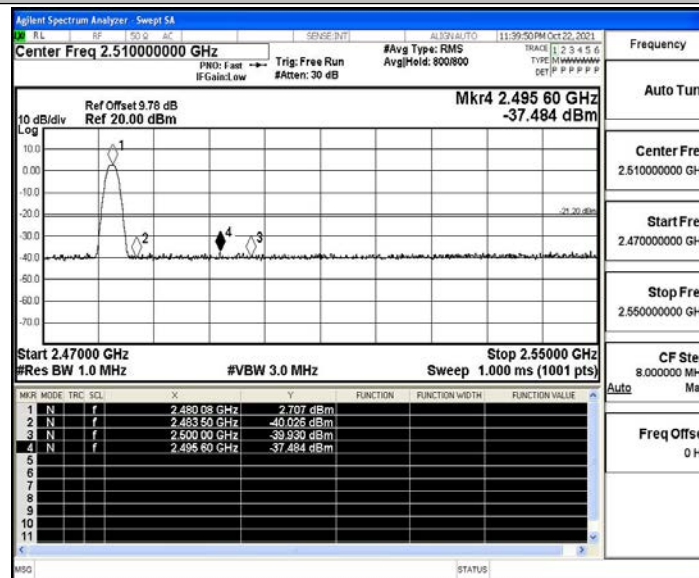
DH5_Ant1_Low_2402_Peak



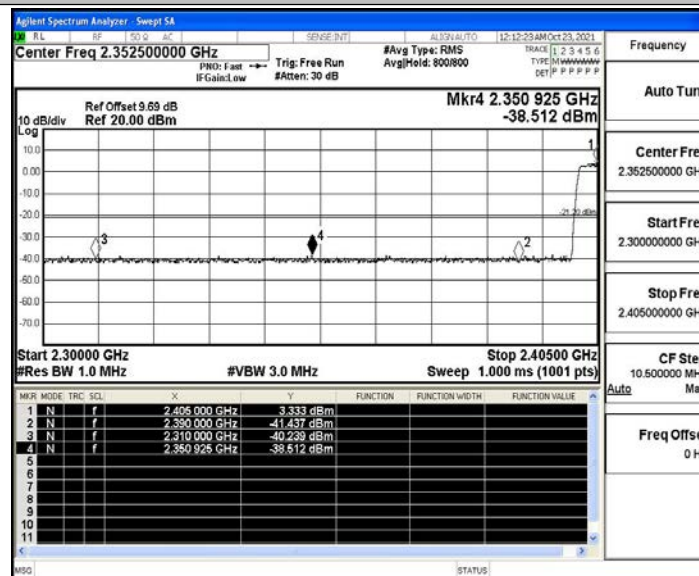
DH5_Ant1_High_2480_AV



DH5_Ant1_High_2480_Peak

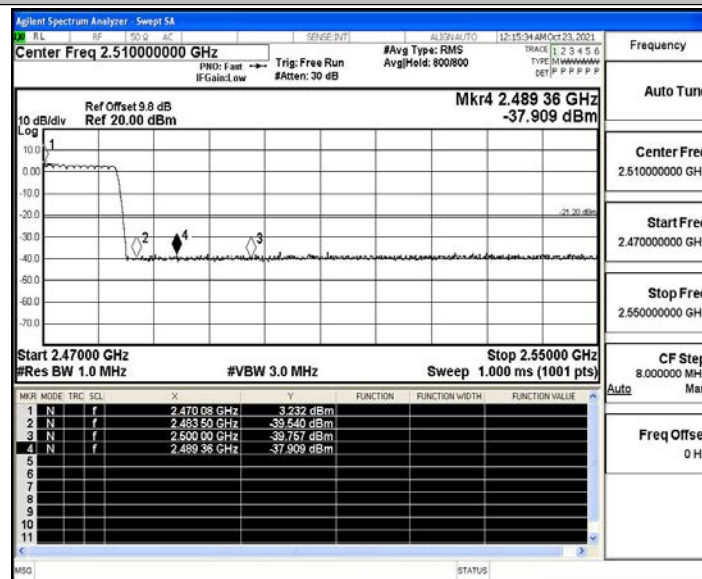


DH5_Ant1_Low_Hop_2402_Peak

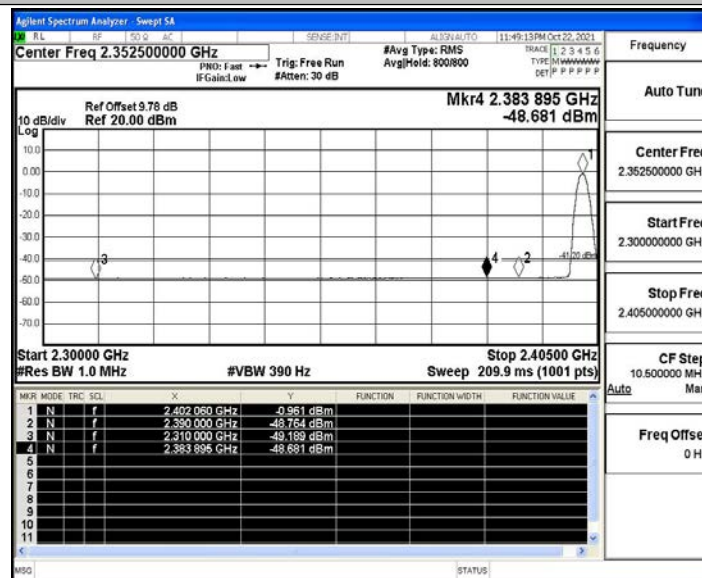




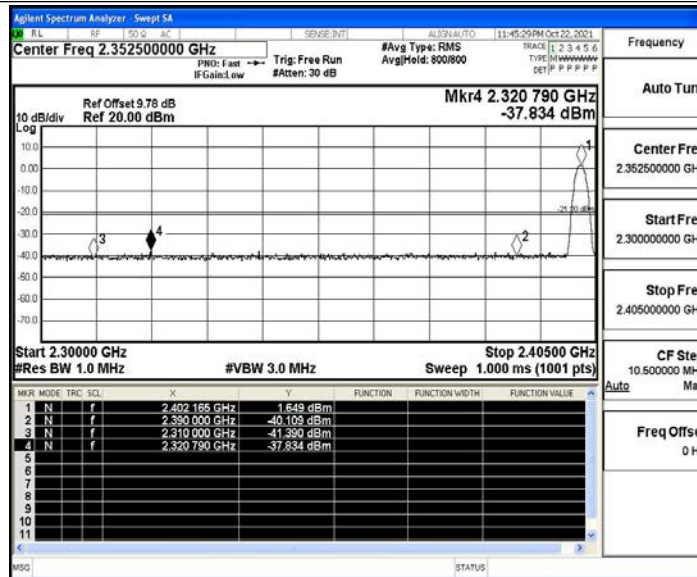
DH5_Ant1_High_Hop_2480_Peak



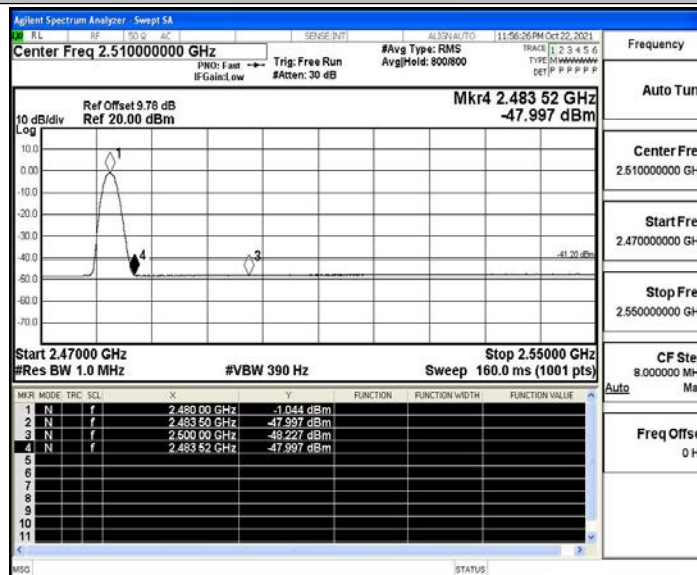
2DH5_Ant1_Low_2402_AV



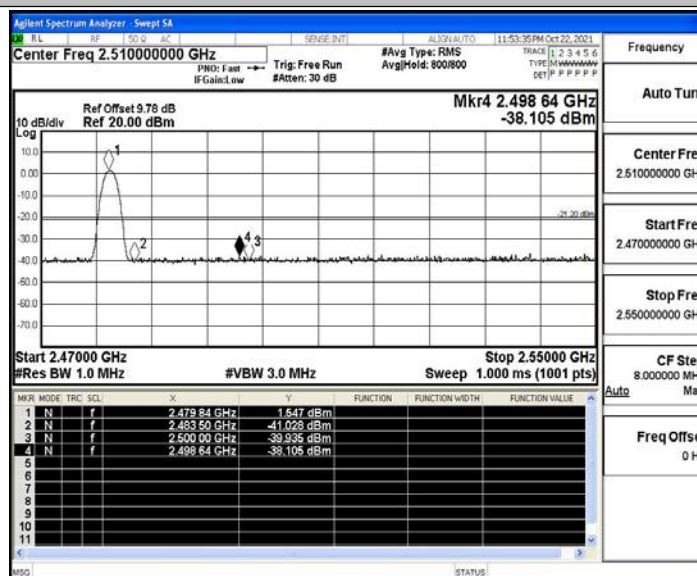
2DH5_Ant1_Low_2402_Peak



2DH5_Ant1_High_2480_AV

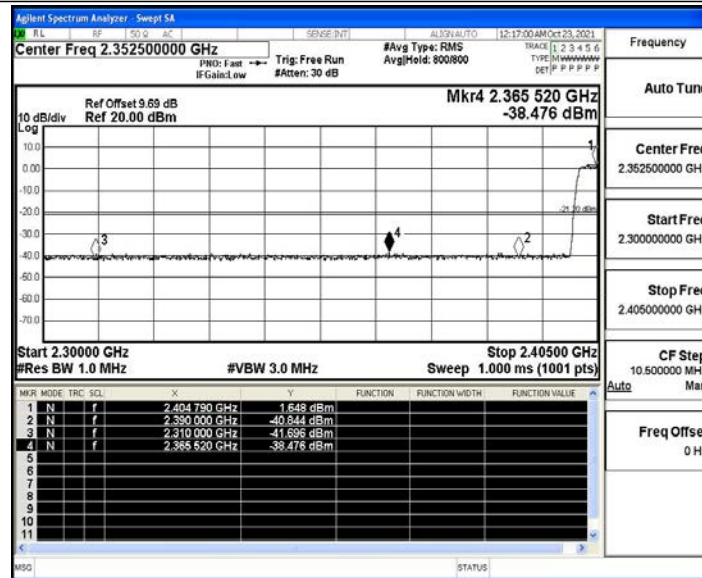


2DH5_Ant1_High_2480_Peak

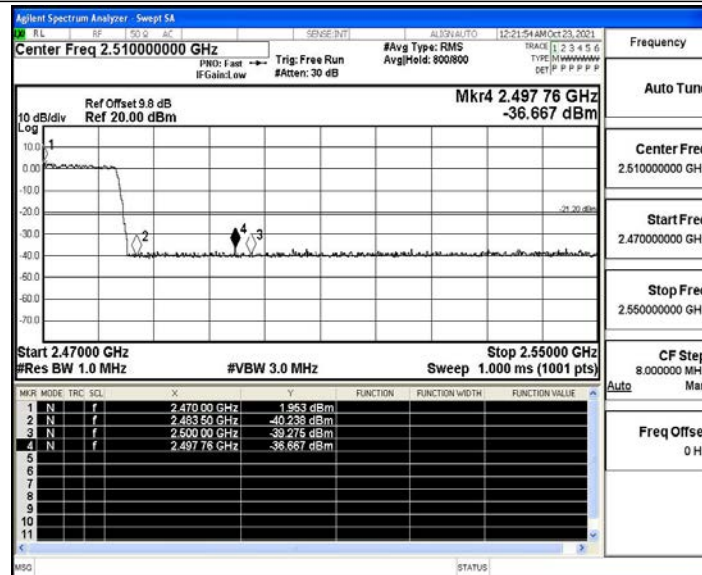




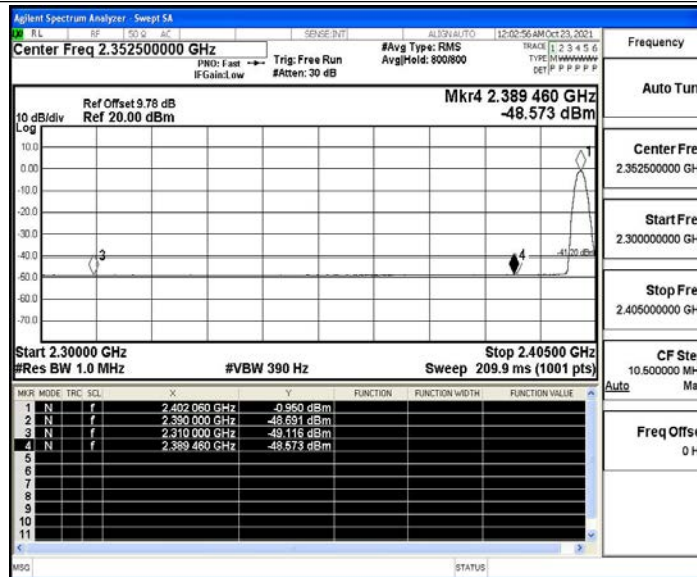
2DH5_Ant1_Low_Hop_2402_Peak



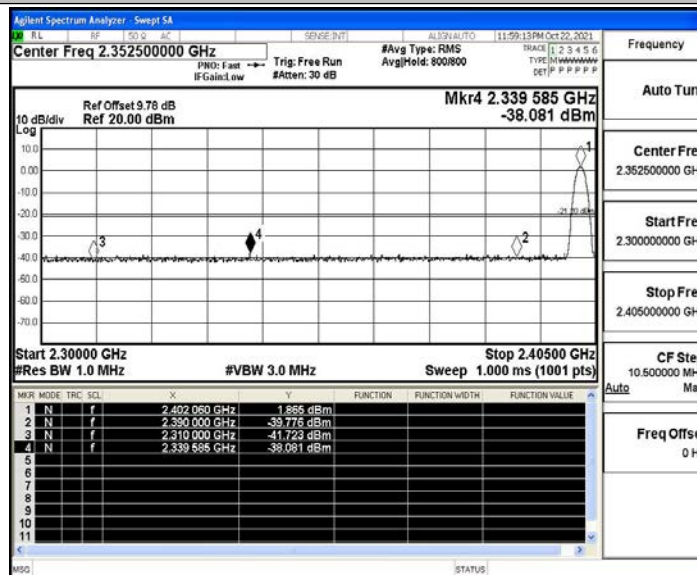
2DH5_Ant1_High_Hop_2480_Peak



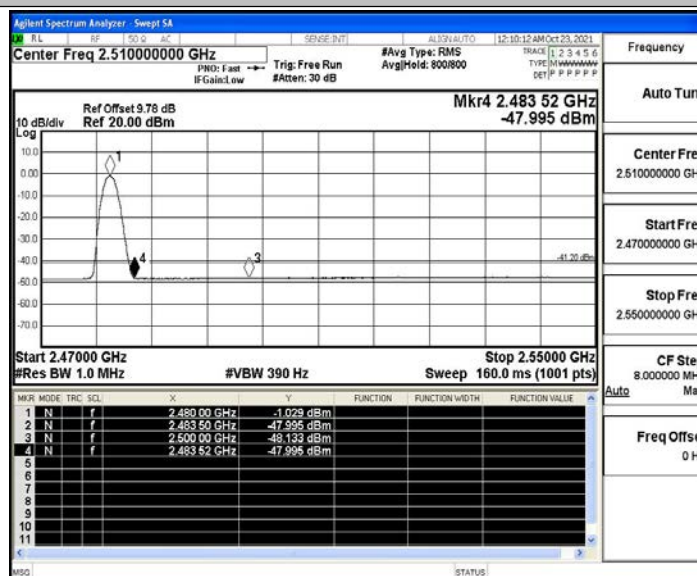
3DH5_Ant1_Low_2402_AV



3DH5_Ant1_Low_2402_Peak

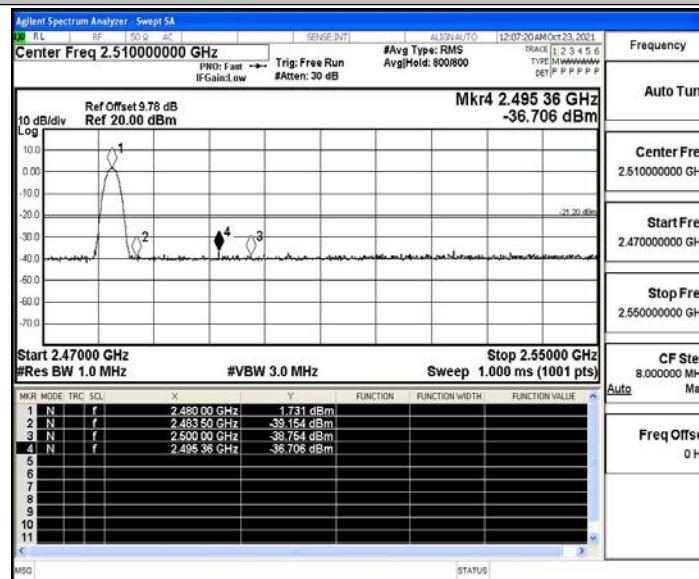


3DH5_Ant1_High_2480_AV

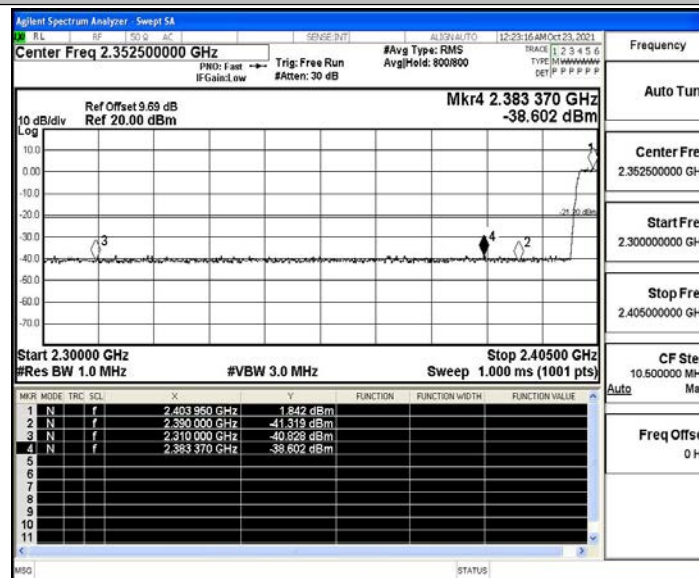




3DH5_Ant1_High_2480_Peak



3DH5_Ant1_Low_Hop_2402_Peak



3DH5_Ant1_High_Hop_2480_Peak

