



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: 4K Android TV™ Dongle

Test Model: i-217D1

Environmental Conditions

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



A.1 20dB Emission Bandwidth

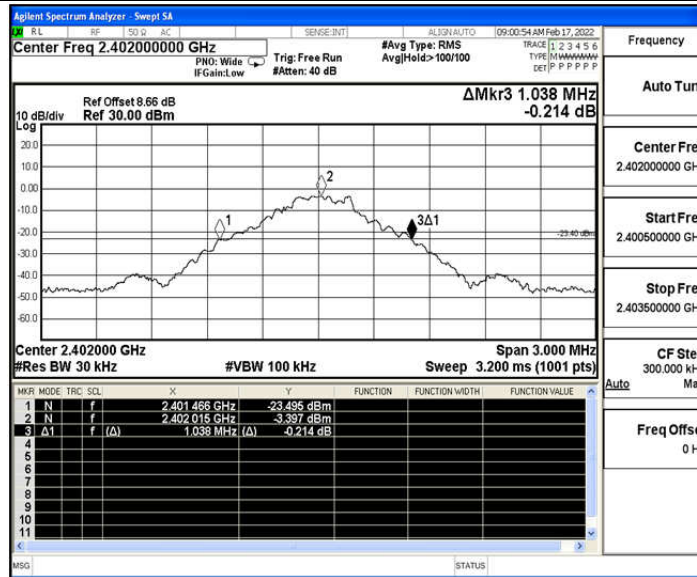
Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	1.038	2401.466	2402.504	---	---
		2441	1.044	2440.457	2441.501	---	---
		2480	1.044	2479.457	2480.501	---	---
2DH5	Ant1	2402	1.296	2401.355	2402.651	---	---
		2441	1.290	2440.358	2441.648	---	---
		2480	1.296	2479.355	2480.651	---	---
3DH5	Ant1	2402	1.290	2401.346	2402.636	---	---
		2441	1.290	2440.346	2441.636	---	---
		2480	1.305	2479.340	2480.645	---	---

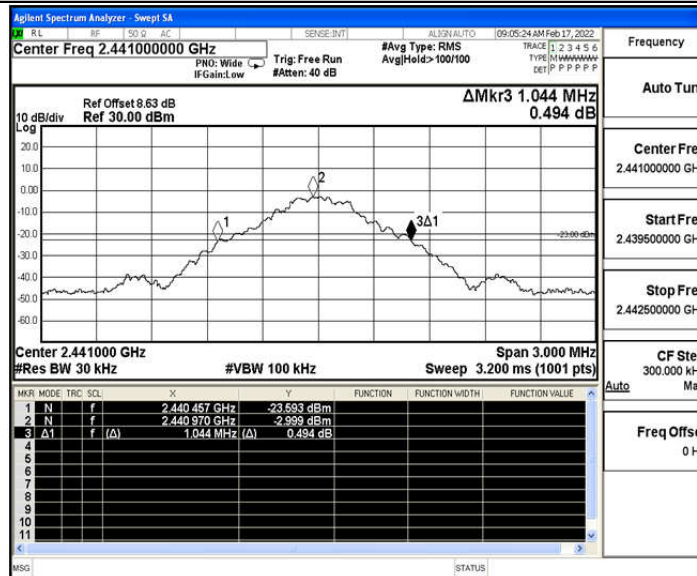


Test Graphs

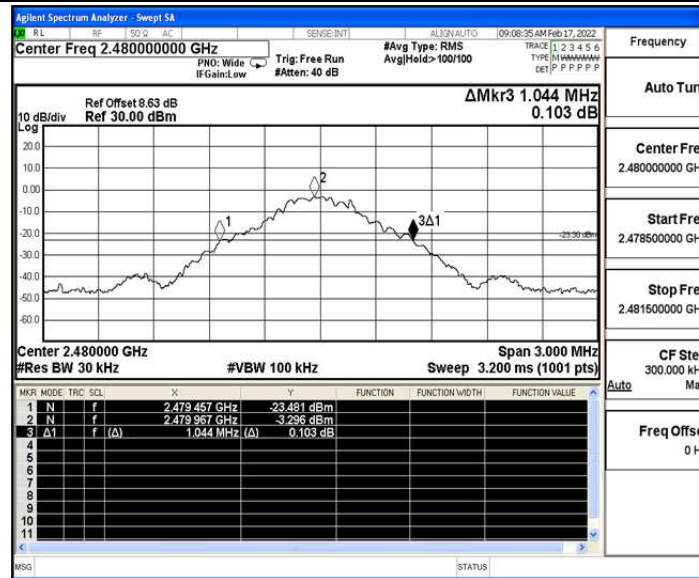
DH5_Ant1_2402



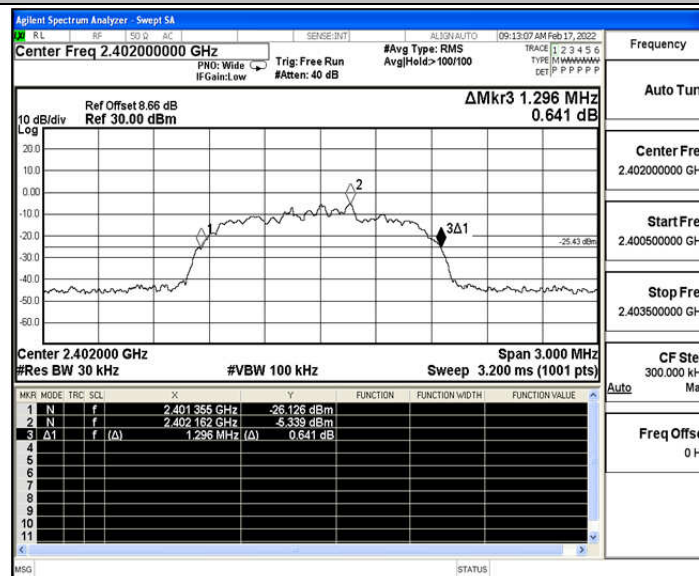
DH5_Ant1_2441



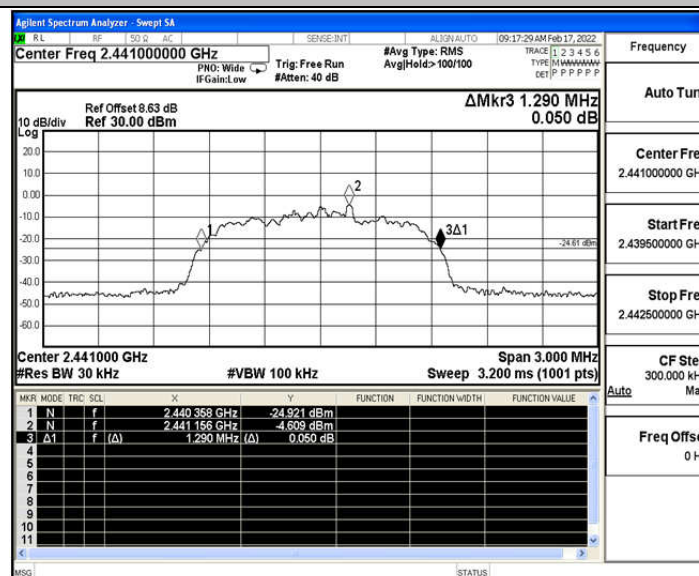
DH5_Ant1_2480



2DH5_Ant1_2402

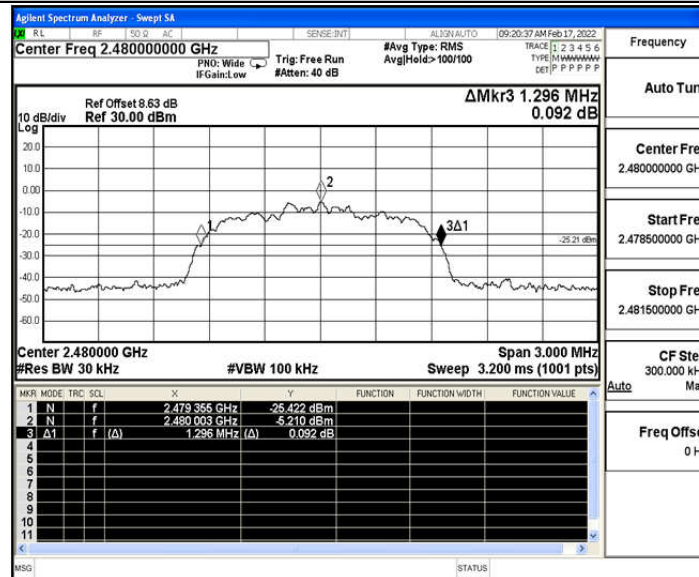


2DH5_Ant1_2441

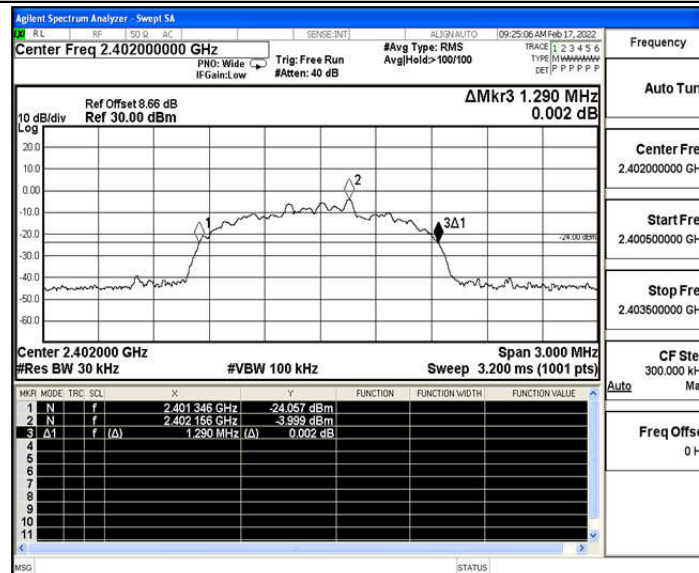




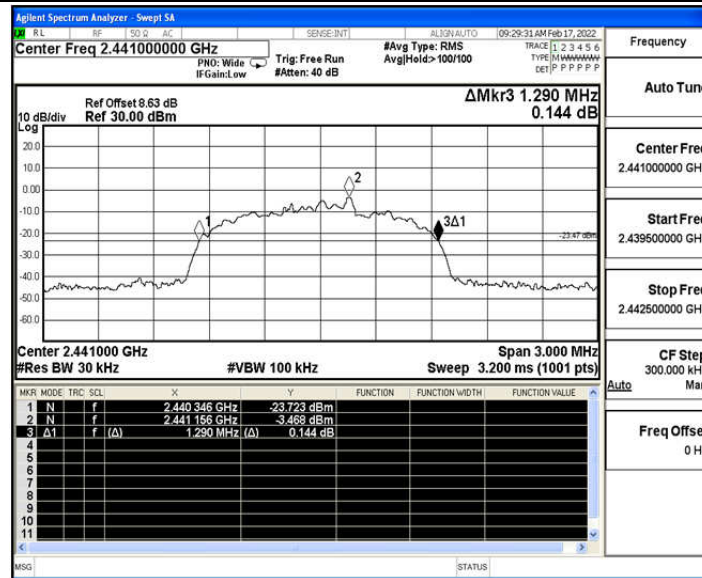
2DH5_Ant1_2480



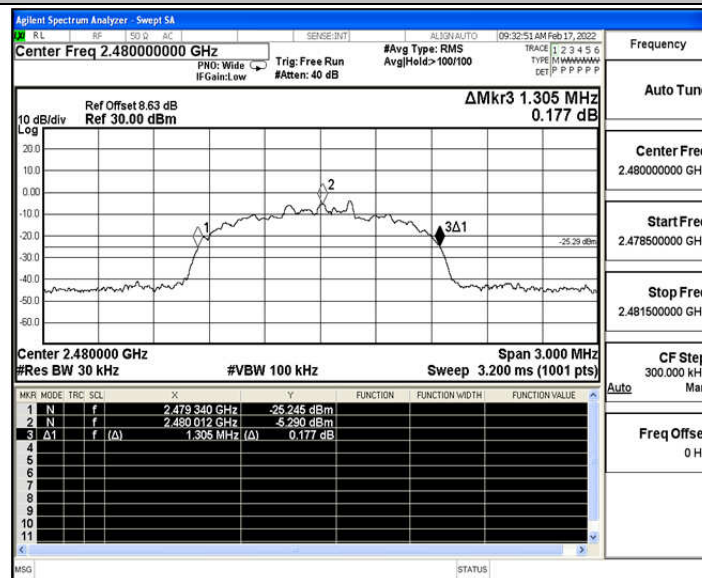
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480





A.2 Maximum peak conducted output power

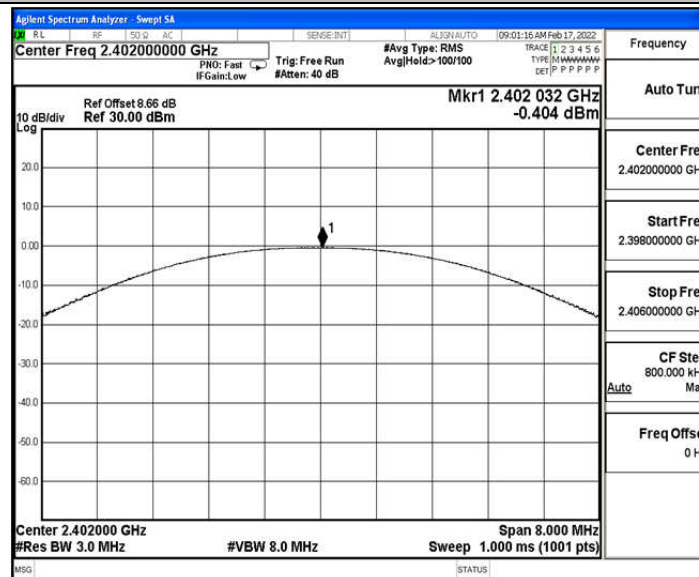
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	-0.4	≤ 20.97	PASS
		2441	0.08	≤ 20.97	PASS
		2480	-0.15	≤ 20.97	PASS
2DH5	Ant1	2402	-0.78	≤ 20.97	PASS
		2441	-0.23	≤ 20.97	PASS
		2480	-0.63	≤ 20.97	PASS
3DH5	Ant1	2402	-0.41	≤ 20.97	PASS
		2441	0.16	≤ 20.97	PASS
		2480	-0.05	≤ 20.97	PASS

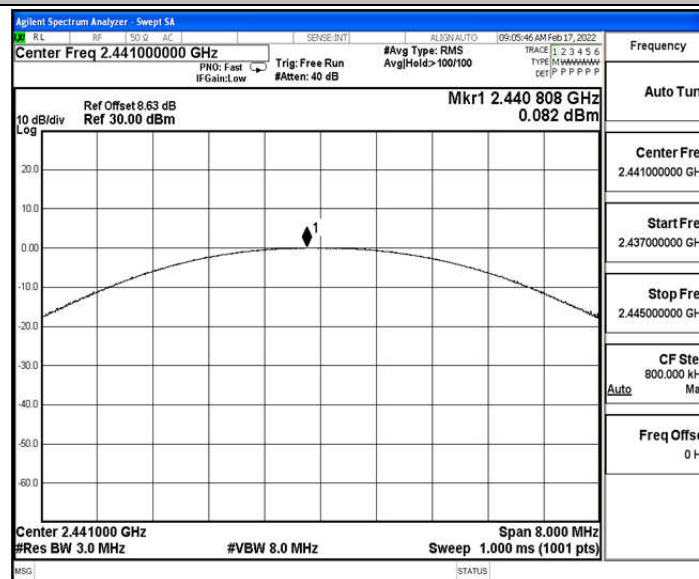


Test Graphs

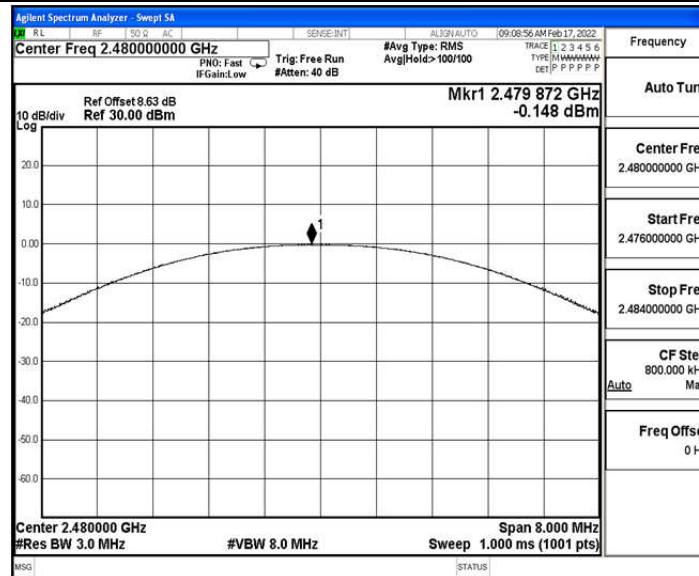
DH5_Ant1_2402



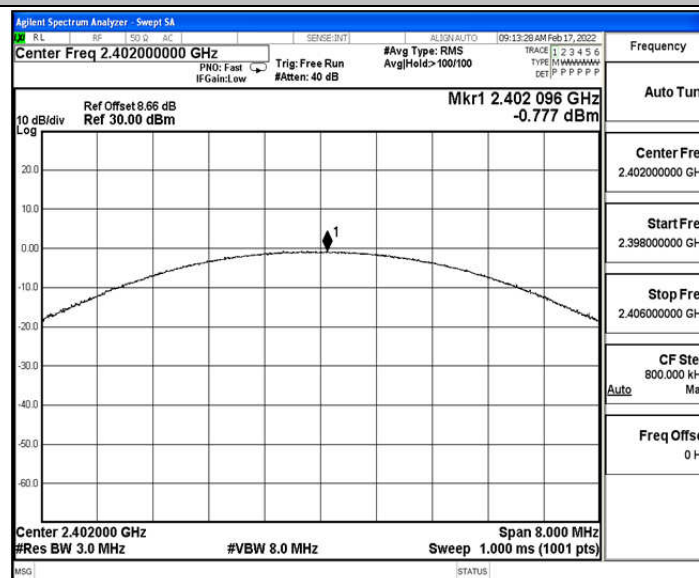
DH5_Ant1_2441



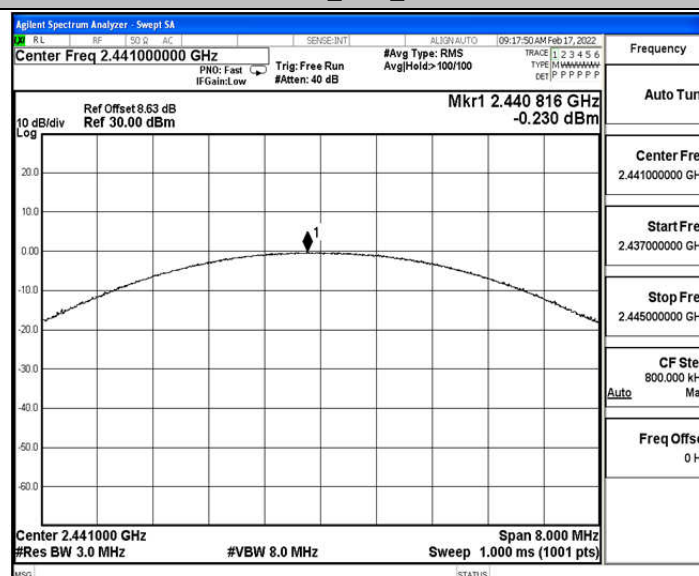
DH5_Ant1_2480



2DH5_Ant1_2402

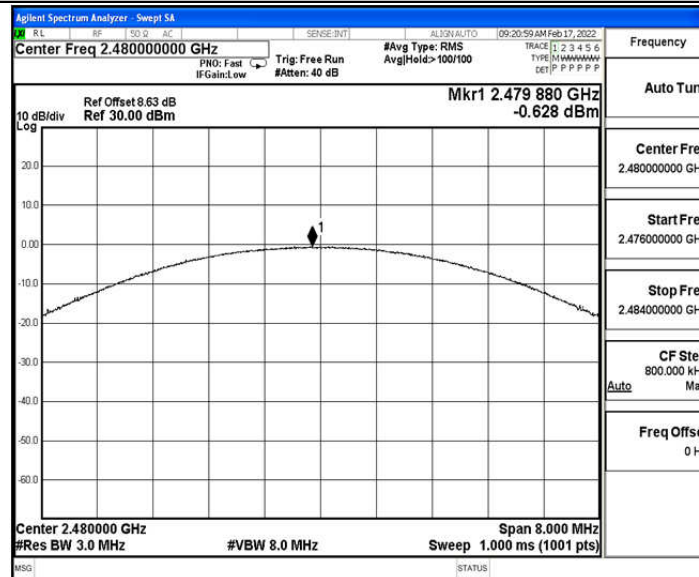


2DH5_Ant1_2441

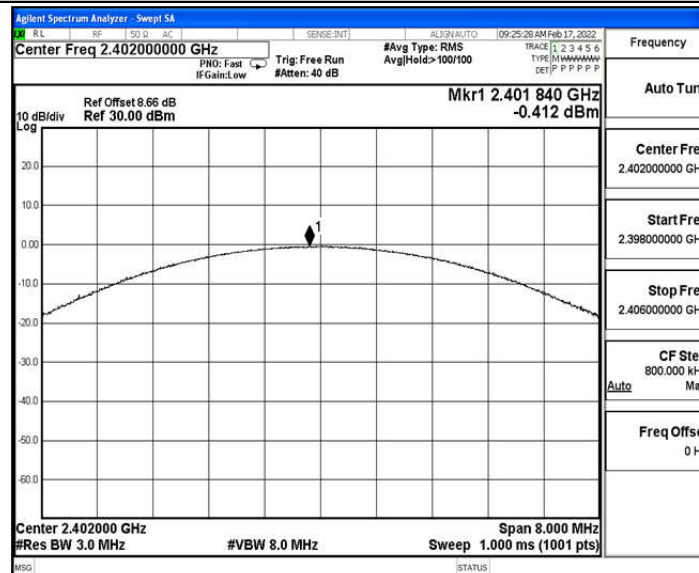




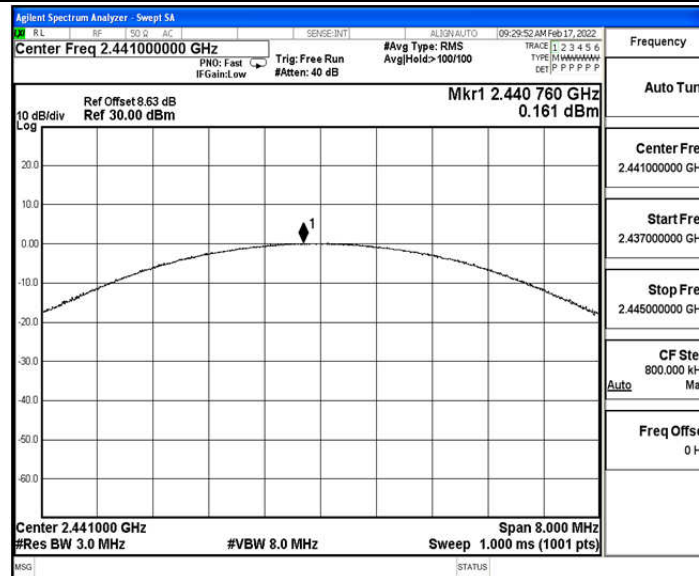
2DH5_Ant1_2480



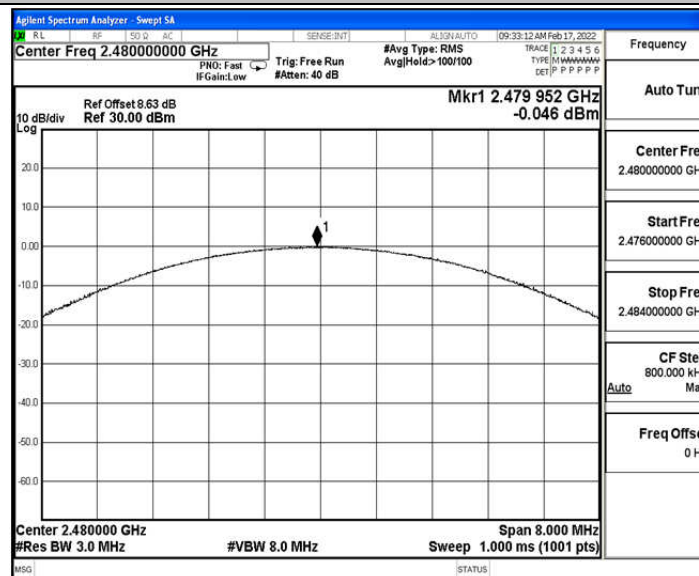
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480





A.3 Carrier frequency separation

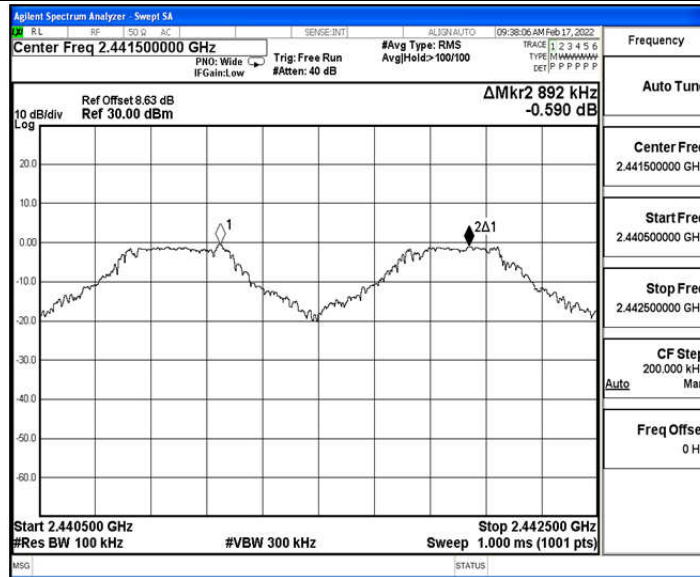
Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.892	≥ 0.696	PASS
2DH5	Ant1	Hop	1.018	≥ 0.864	PASS
3DH5	Ant1	Hop	1.092	≥ 0.870	PASS

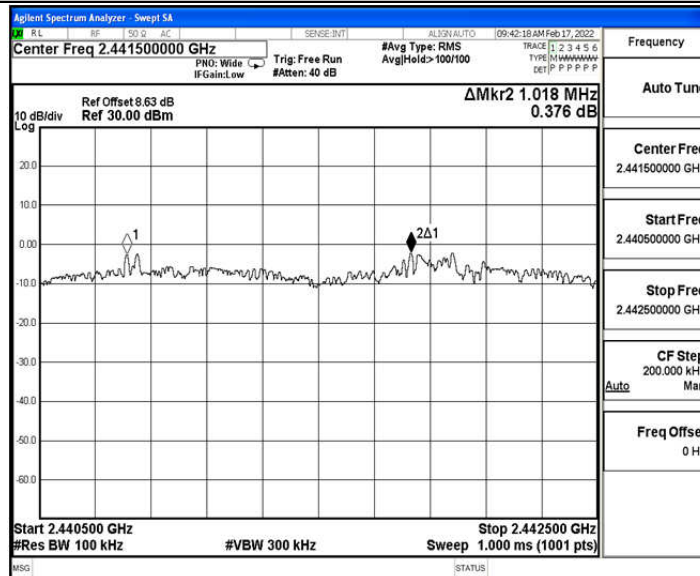


Test Graphs

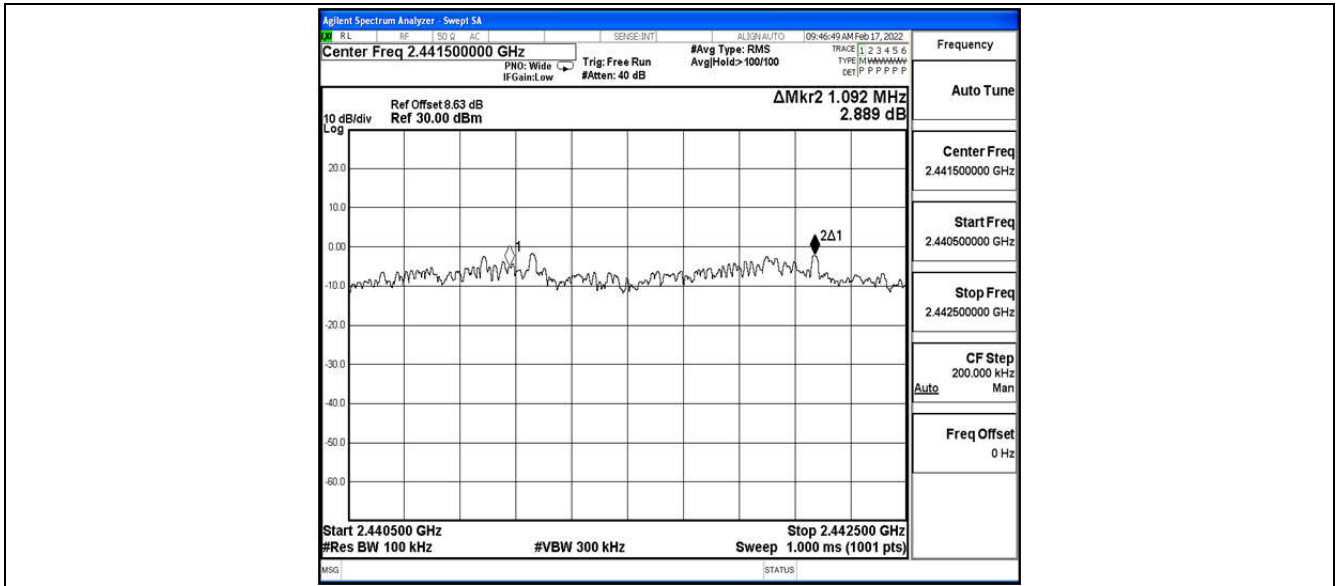
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop





A.4 Time of occupancy

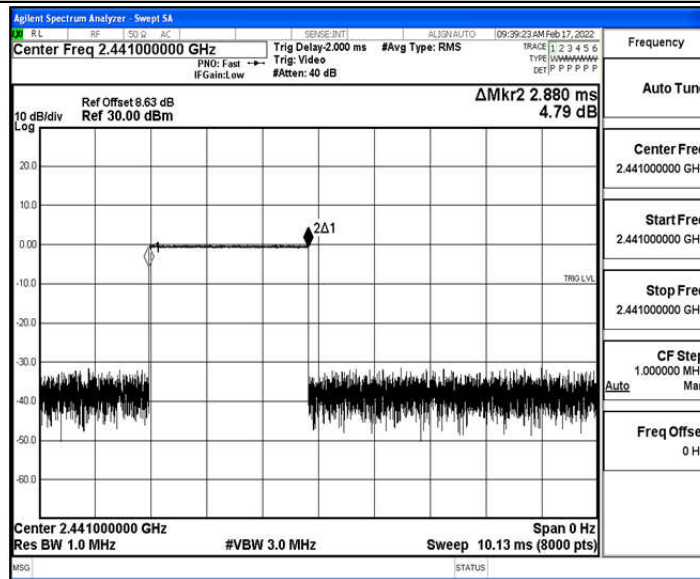
Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.88	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

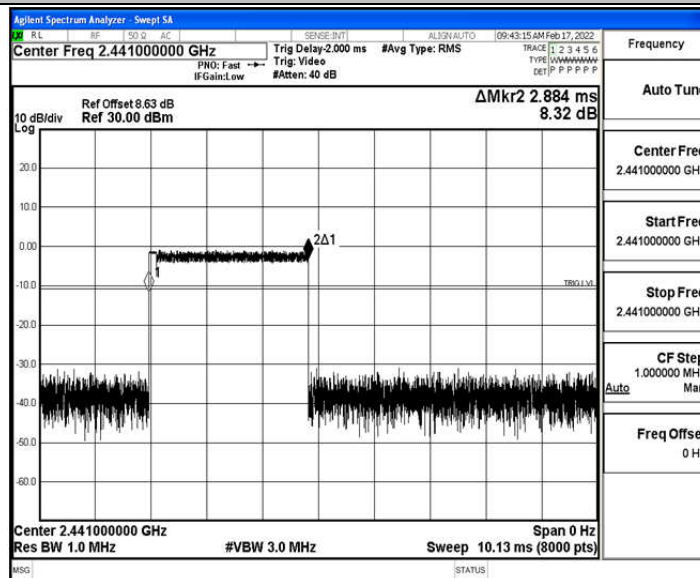


Test Graphs

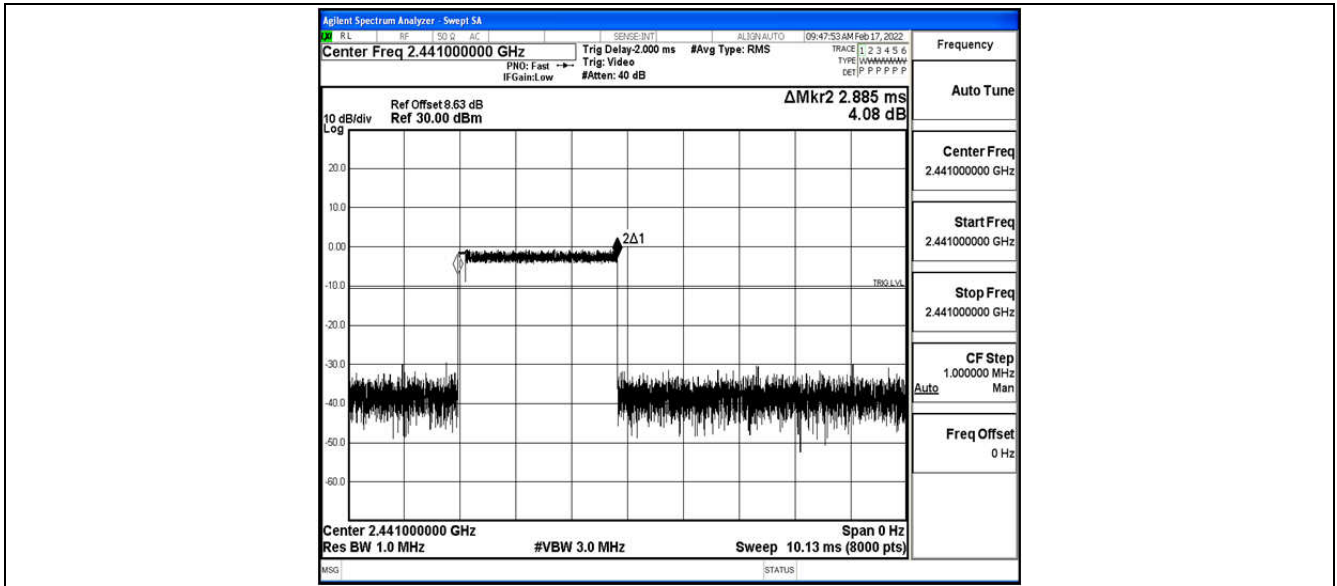
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop





A.5 Number of hopping channels

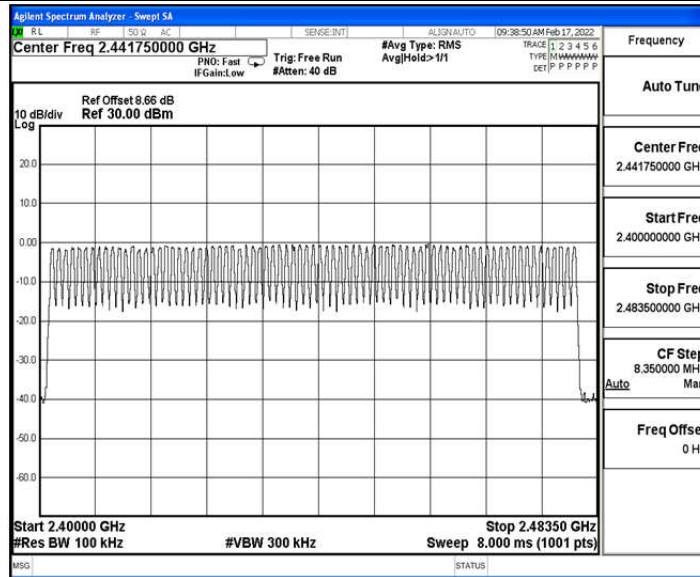
Test Result

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

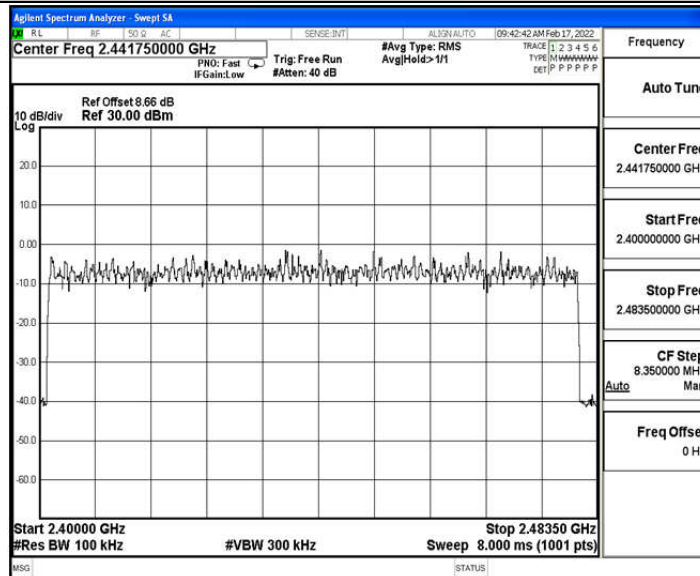


Test Graphs

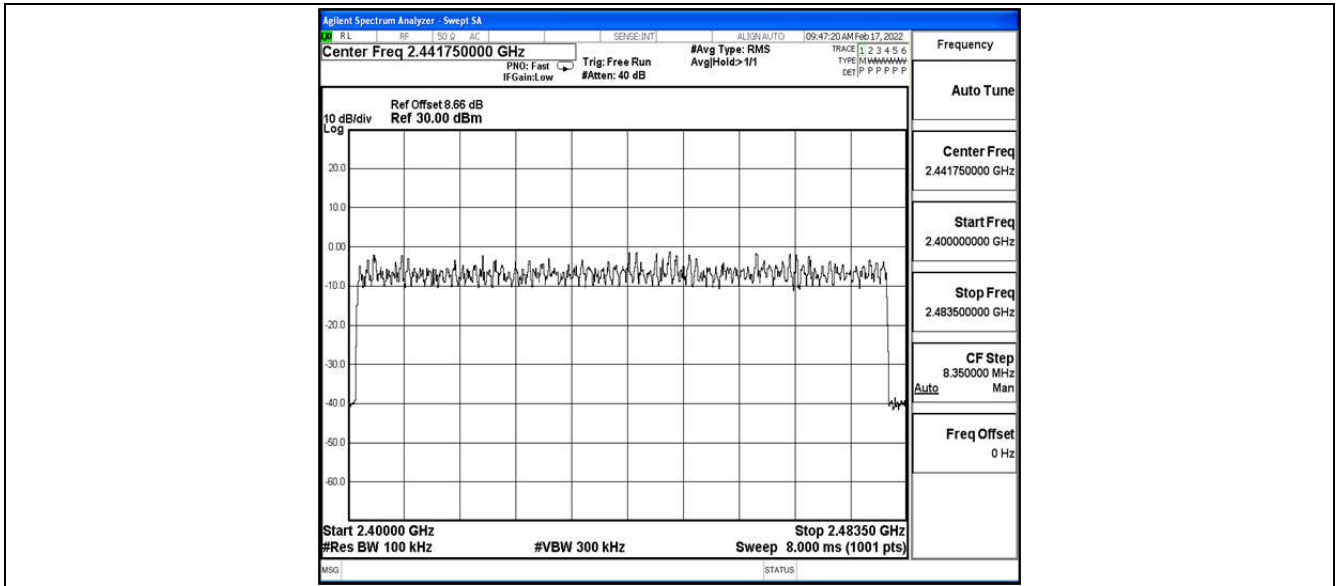
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop





A.6 Band edge measurements

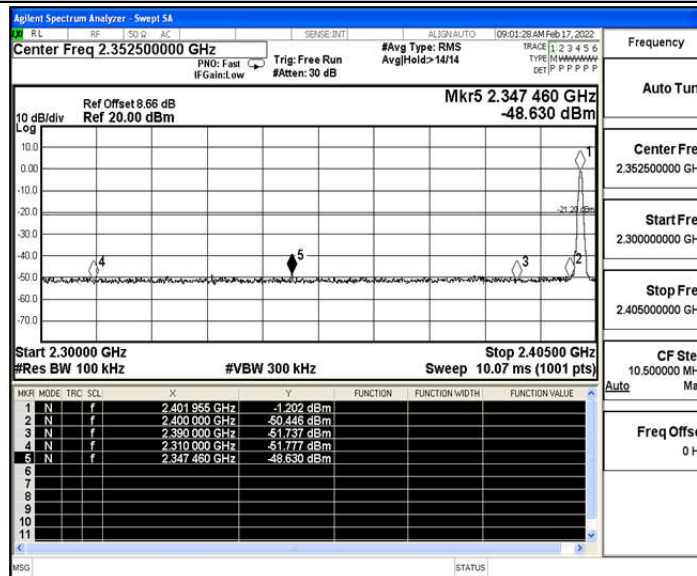
Test Result

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-1.20	-48.63	≤ -21.2	PASS
		High	2480	-0.74	-48.05	≤ -20.74	PASS
		Low	Hop_2402	-1.69	-48.51	≤ -21.69	PASS
		High	Hop_2480	-0.93	-48.21	≤ -20.93	PASS
2DH5	Ant1	Low	2402	-3.73	-48.88	≤ -23.73	PASS
		High	2480	-1.59	-47.56	≤ -21.59	PASS
		Low	Hop_2402	-6.45	-49.23	≤ -26.45	PASS
		High	Hop_2480	-2.42	-48.15	≤ -22.42	PASS
3DH5	Ant1	Low	2402	-1.74	-48.71	≤ -21.74	PASS
		High	2480	-1.53	-48	≤ -21.53	PASS
		Low	Hop_2402	-5.99	-48.78	≤ -25.99	PASS
		High	Hop_2480	-2.12	-47.74	≤ -22.12	PASS

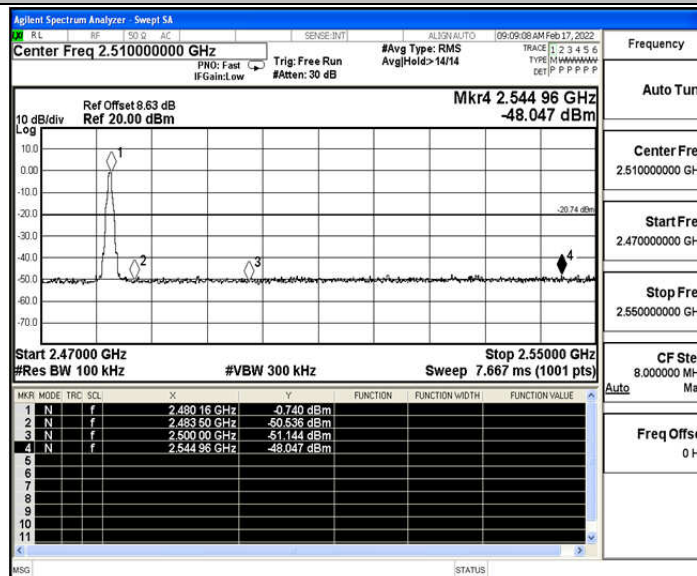


Test Graphs

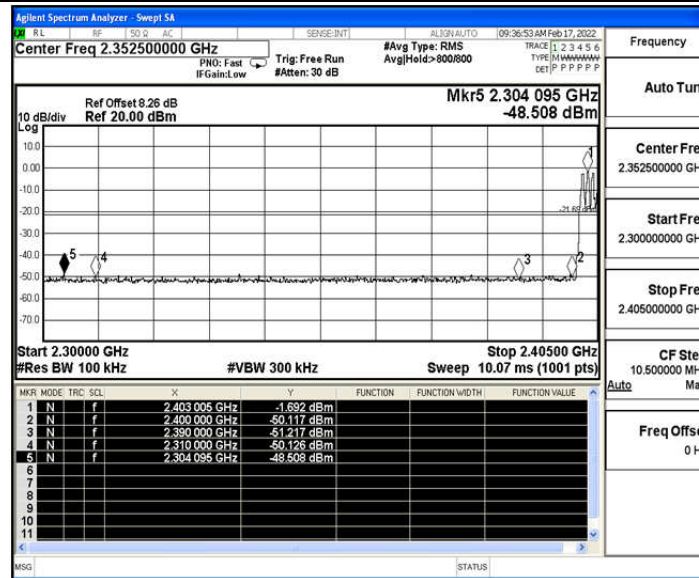
DH5_Ant1_Low_2402



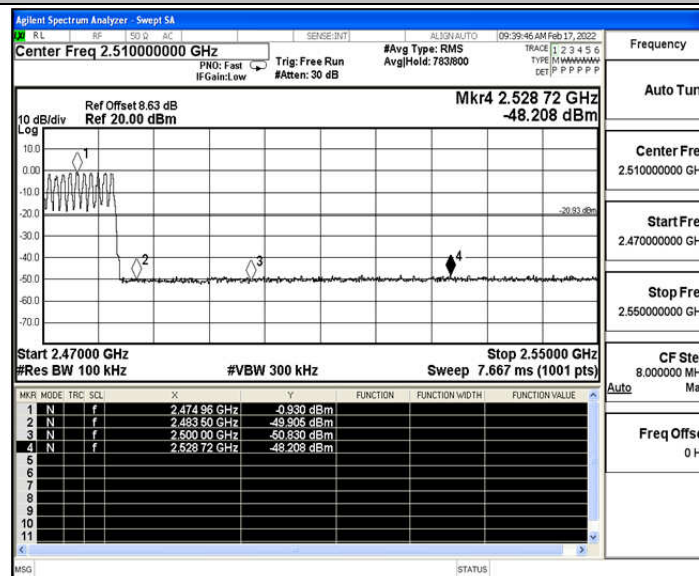
DH5_Ant1_High_2480



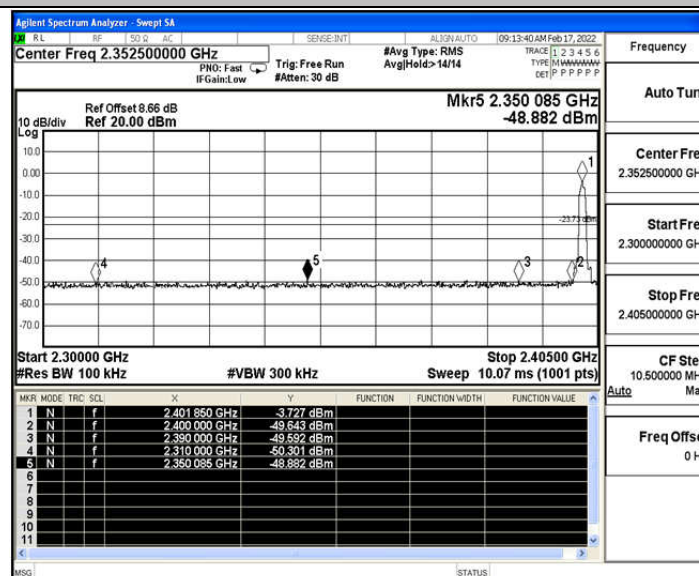
DH5_Ant1_Low_Hop_2402



DH5_Ant1_High_Hop_2480

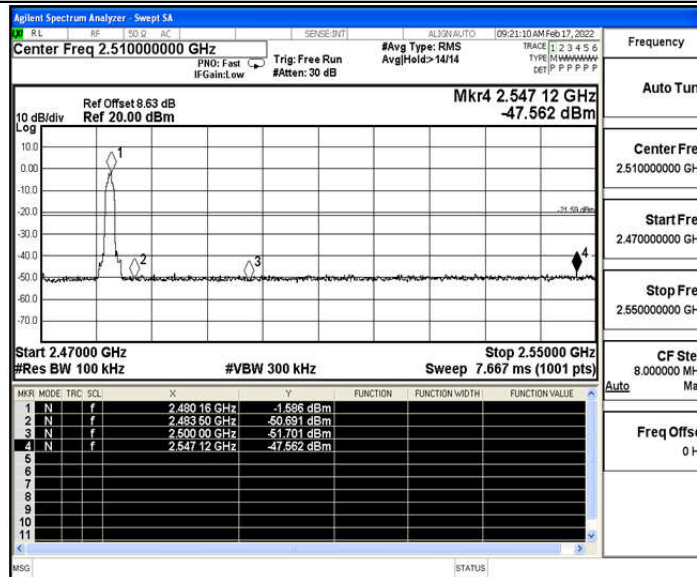


2DH5_Ant1_Low_2402

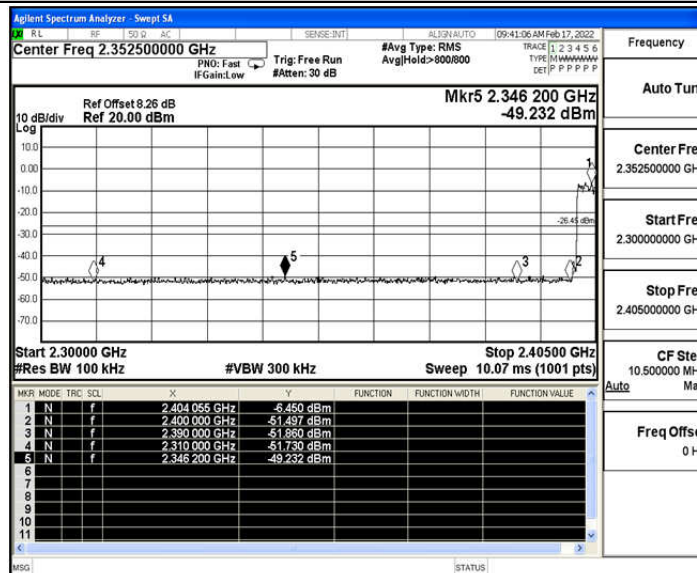




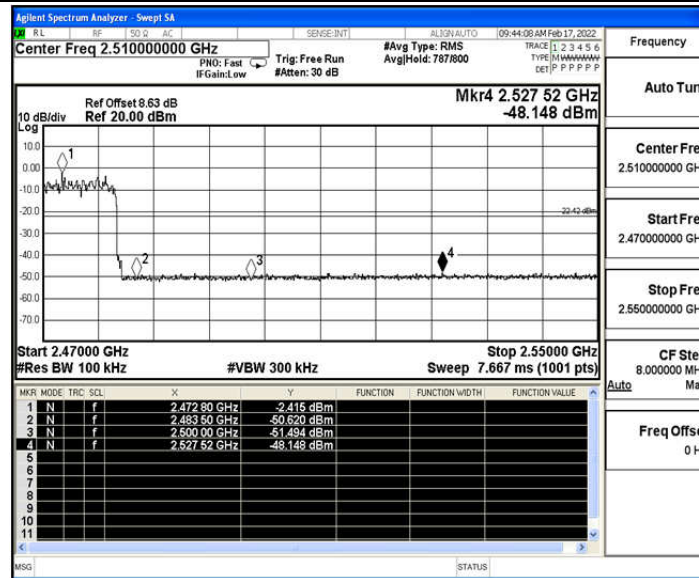
2DH5_Ant1_High_2480



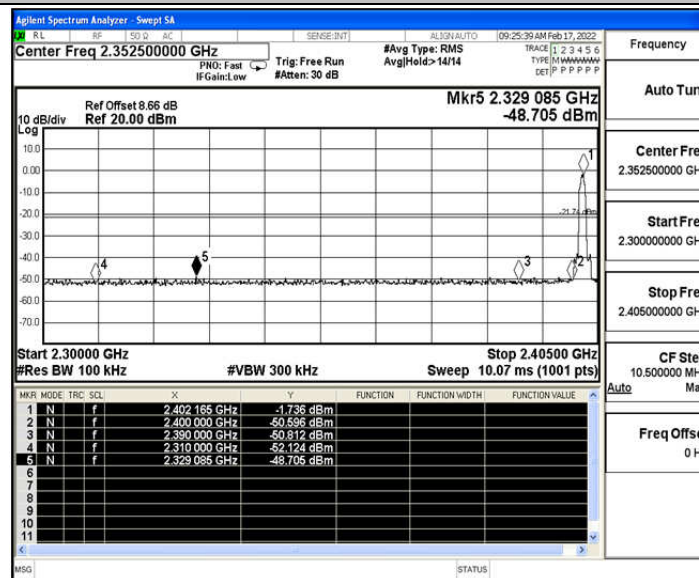
2DH5_Ant1_Low_Hop_2402



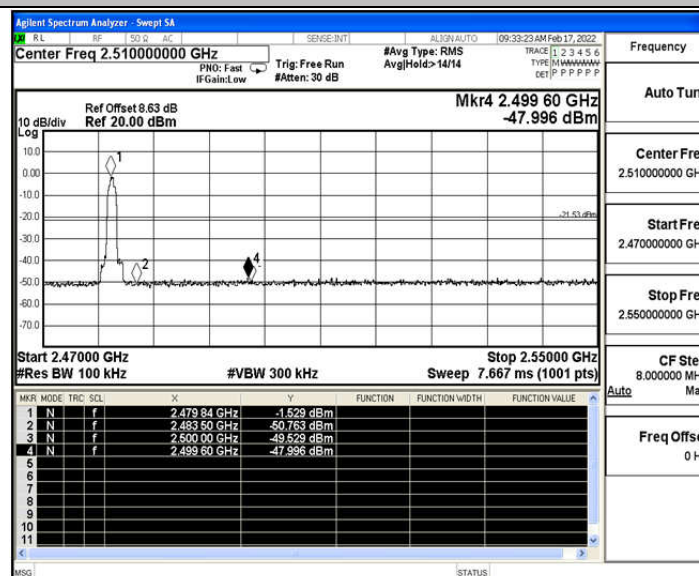
2DH5_Ant1_High_Hop_2480



3DH5_Ant1_Low_2402

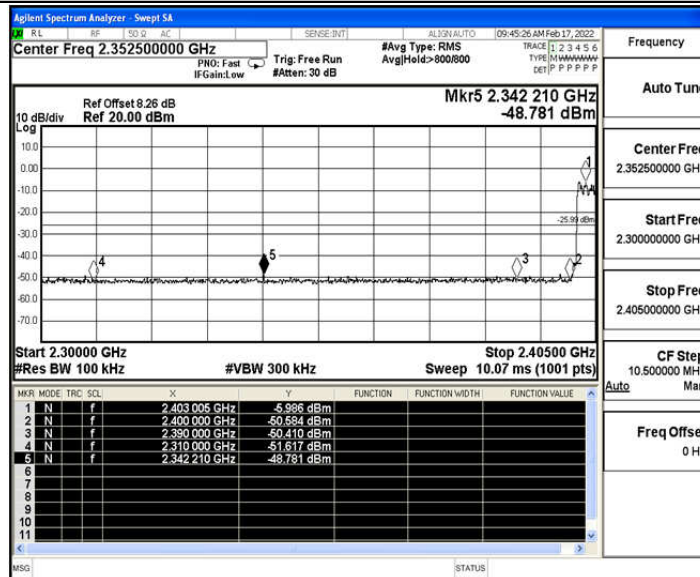


3DH5_Ant1_High_2480

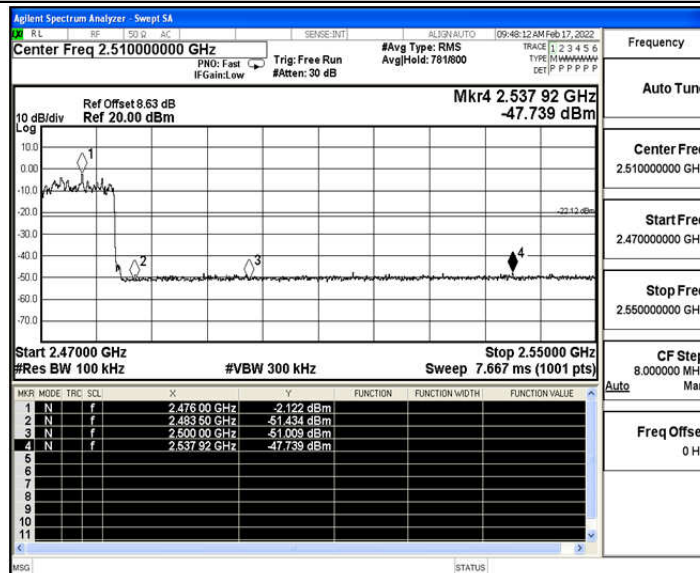




3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480





A.7 Conducted Spurious Emission

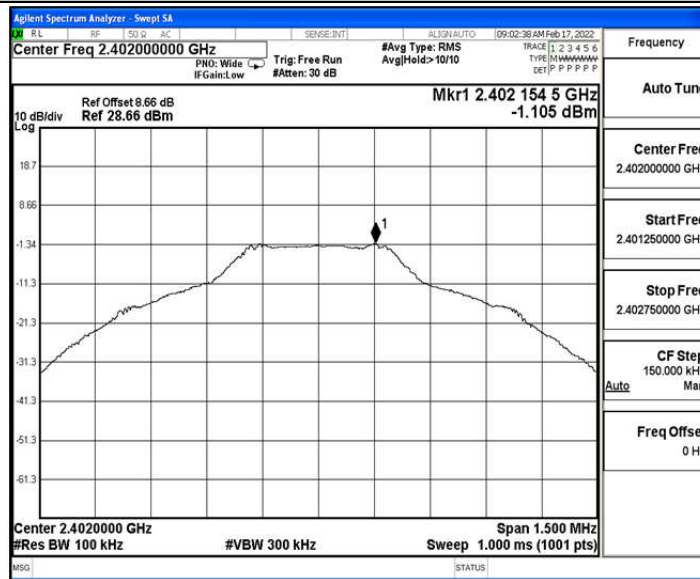
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-1.11	-1.11	---	PASS
			30~1000	-1.11	-60.75	≤ -21.11	PASS
			1000~26500	-1.11	-46.18	≤ -21.11	PASS
		2441	Reference	-0.63	-0.63	---	PASS
			30~1000	-0.63	-60.78	≤ -20.63	PASS
			1000~26500	-0.63	-46.1	≤ -20.63	PASS
		2480	Reference	-0.96	-0.96	---	PASS
			30~1000	-0.96	-60.07	≤ -20.96	PASS
			1000~26500	-0.96	-45.69	≤ -20.96	PASS
2DH5	Ant1	2402	Reference	-2.18	-2.18	---	PASS
			30~1000	-2.18	-60.64	≤ -22.18	PASS
			1000~26500	-2.18	-46.26	≤ -22.18	PASS
		2441	Reference	-1.81	-1.81	---	PASS
			30~1000	-1.81	-60.88	≤ -21.81	PASS
			1000~26500	-1.81	-46.09	≤ -21.81	PASS
		2480	Reference	-2.14	-2.14	---	PASS
			30~1000	-2.14	-60.58	≤ -22.14	PASS
			1000~26500	-2.14	-44.97	≤ -22.14	PASS
3DH5	Ant1	2402	Reference	-1.83	-1.83	---	PASS
			30~1000	-1.83	-60.57	≤ -21.83	PASS
			1000~26500	-1.83	-46.16	≤ -21.83	PASS
		2441	Reference	-1.41	-1.41	---	PASS
			30~1000	-1.41	-60.24	≤ -21.41	PASS
			1000~26500	-1.41	-45.69	≤ -21.41	PASS
		2480	Reference	-1.68	-1.68	---	PASS
			30~1000	-1.68	-60.32	≤ -21.68	PASS
			1000~26500	-1.68	-46.68	≤ -21.68	PASS

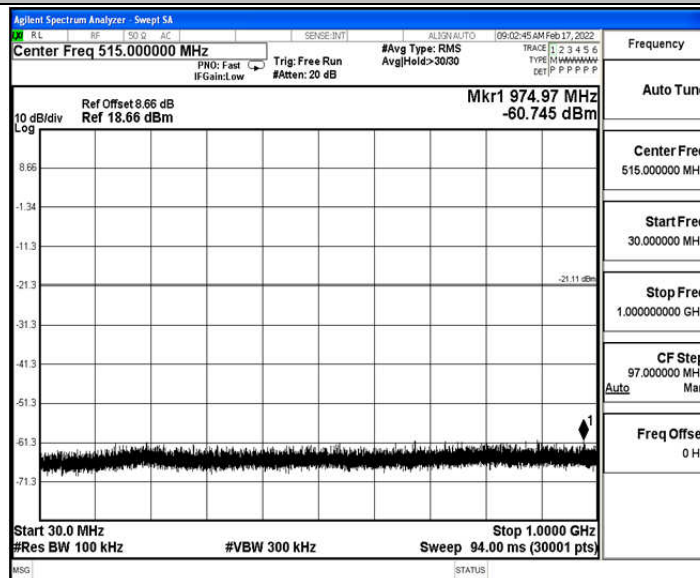


Test Graphs

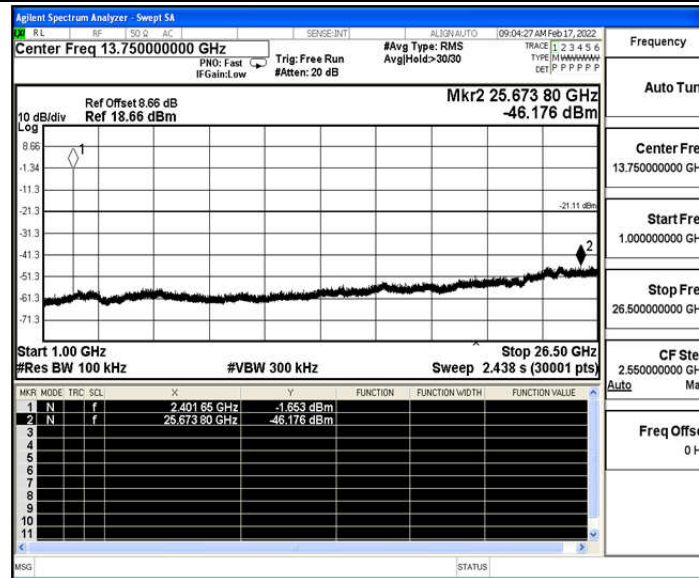
DH5_Ant1_2402_0~Reference



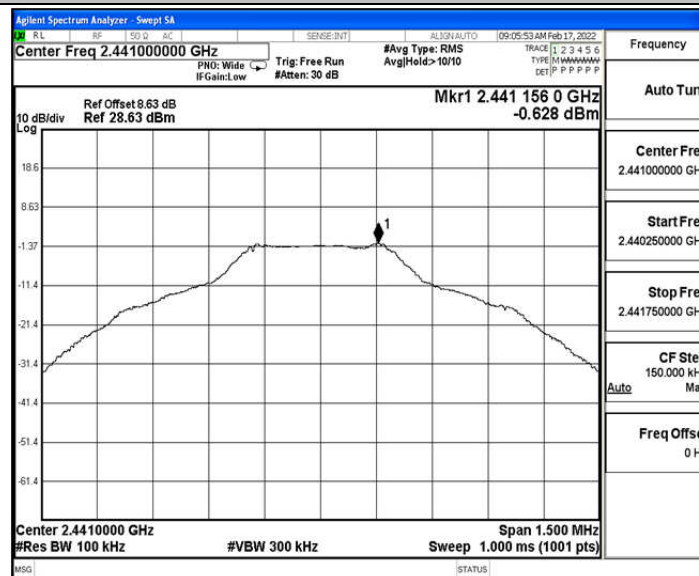
DH5_Ant1_2402_30~1000



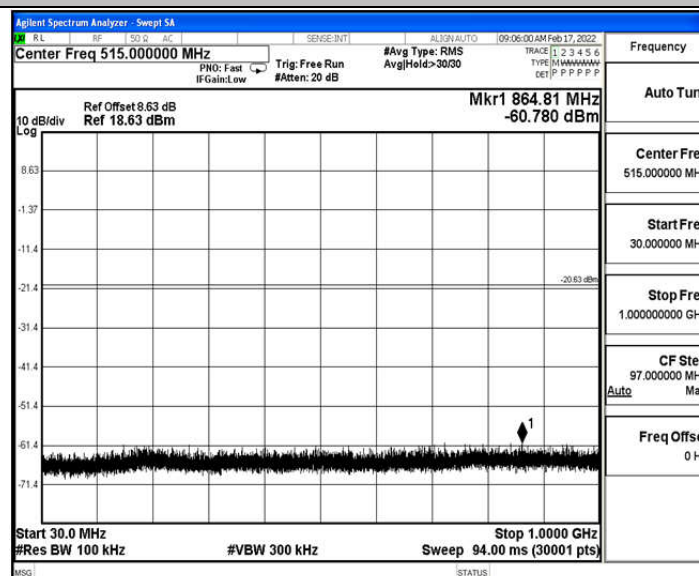
DH5_Ant1_2402_1000~26500



DH5_Ant1_2441_0~Reference

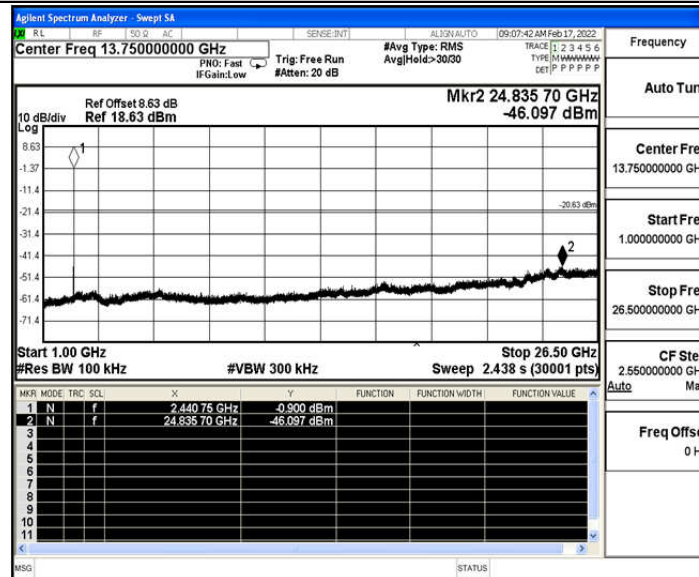


DH5_Ant1_2441_30~1000

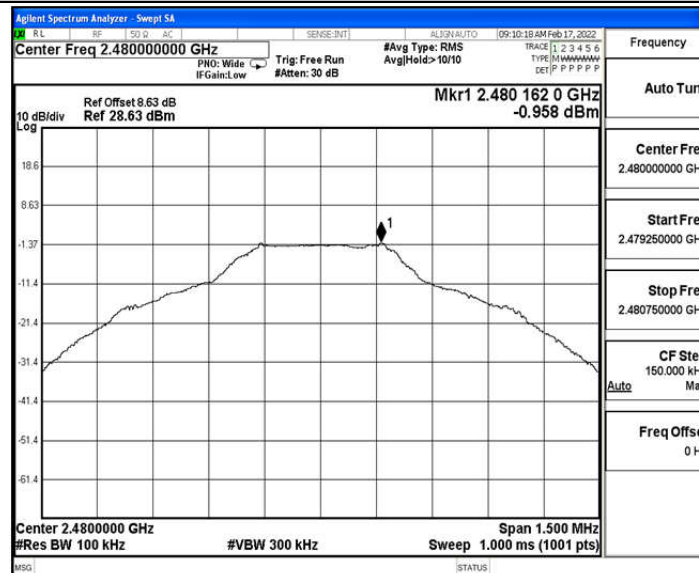




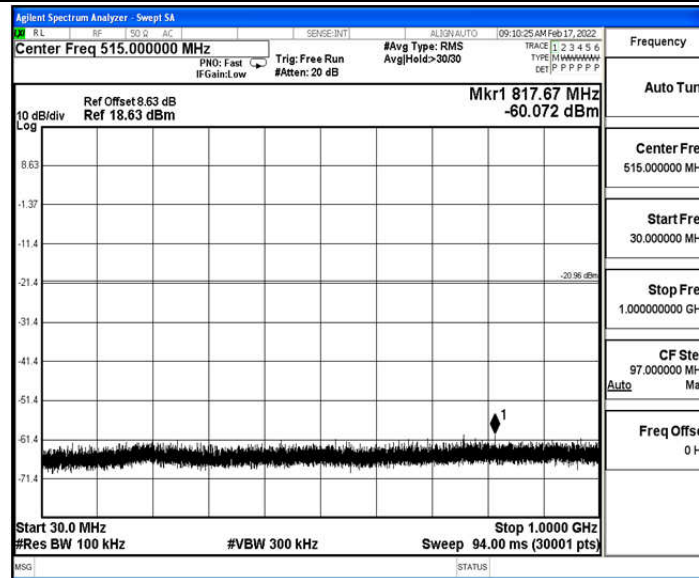
DH5_Ant1_2441_1000~26500



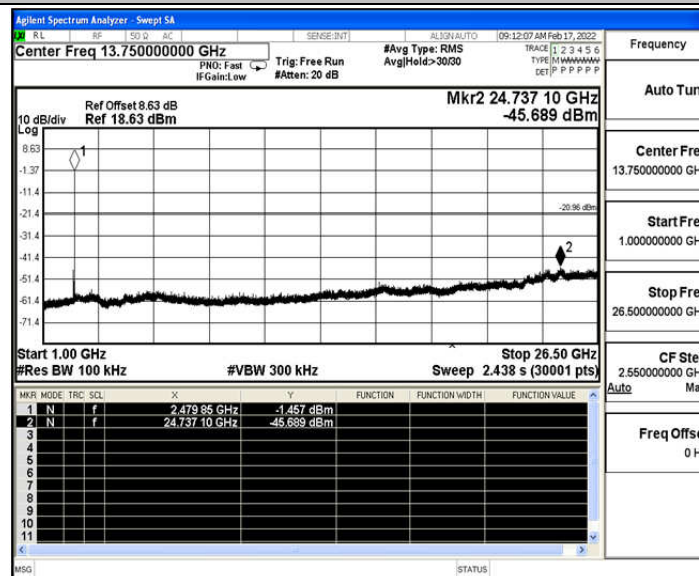
DH5_Ant1_2480_0~Reference



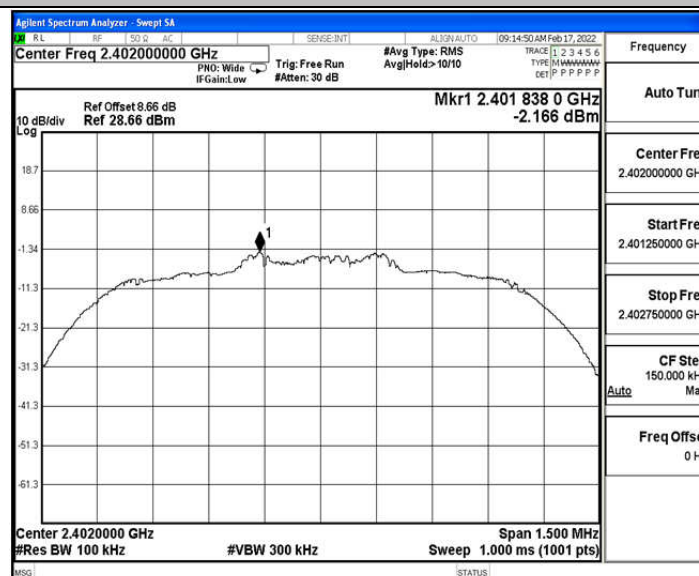
DH5_Ant1_2480_30~1000



DH5_Ant1_2480_1000~26500

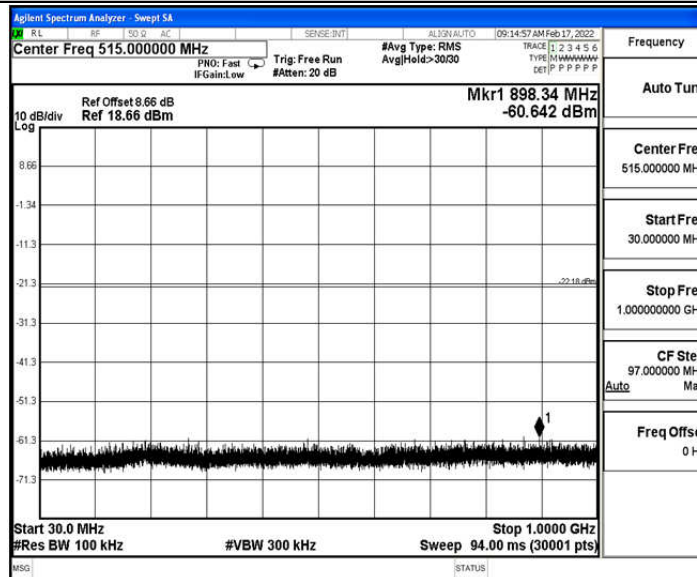


2DH5_Ant1_2402_0~Reference

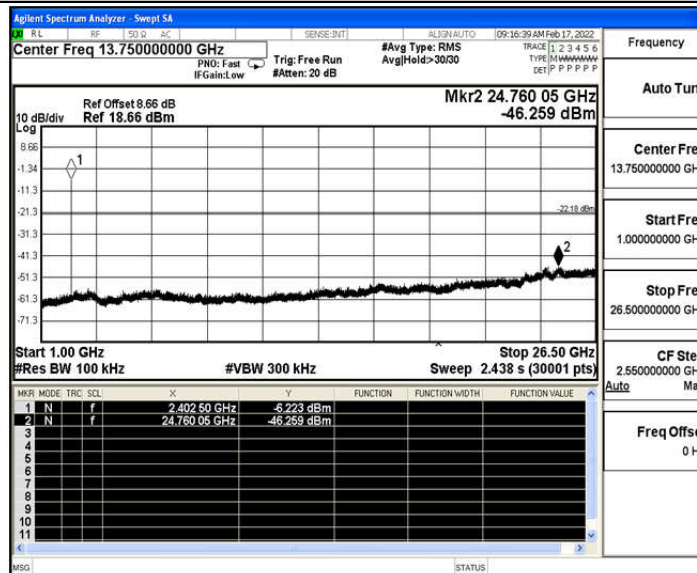




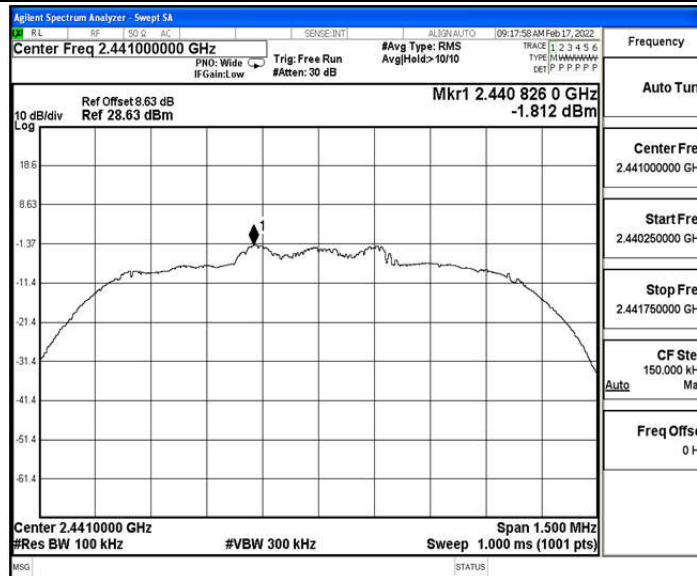
2DH5_Ant1_2402_30~1000



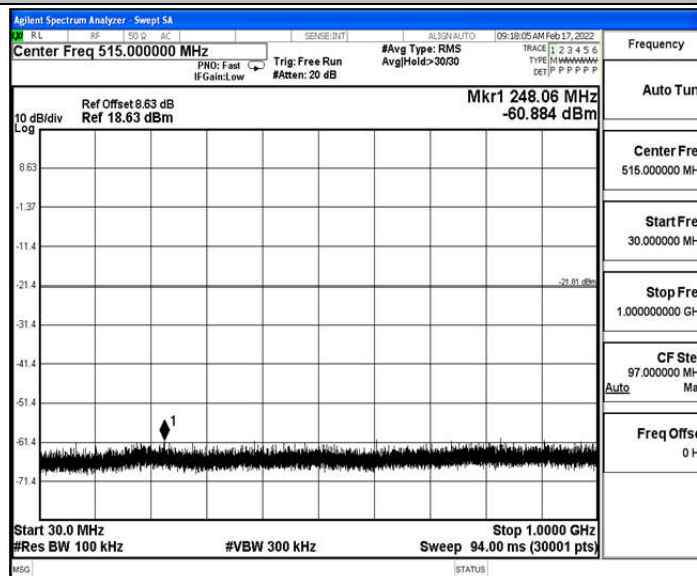
2DH5_Ant1_2402_1000~26500



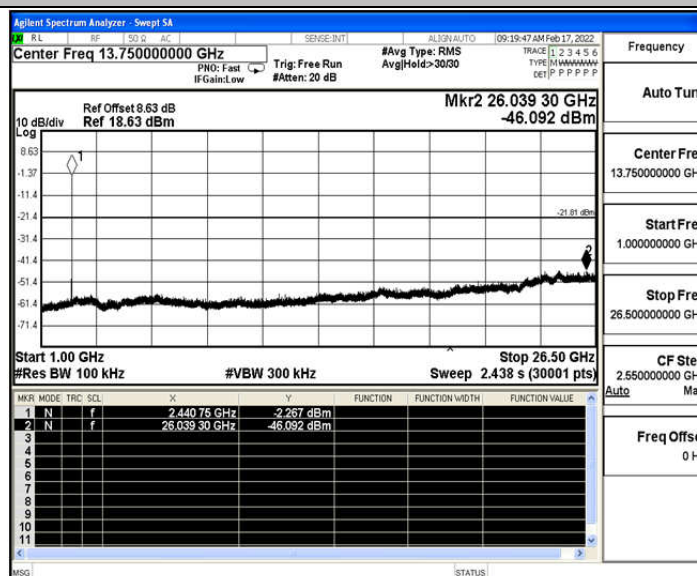
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000

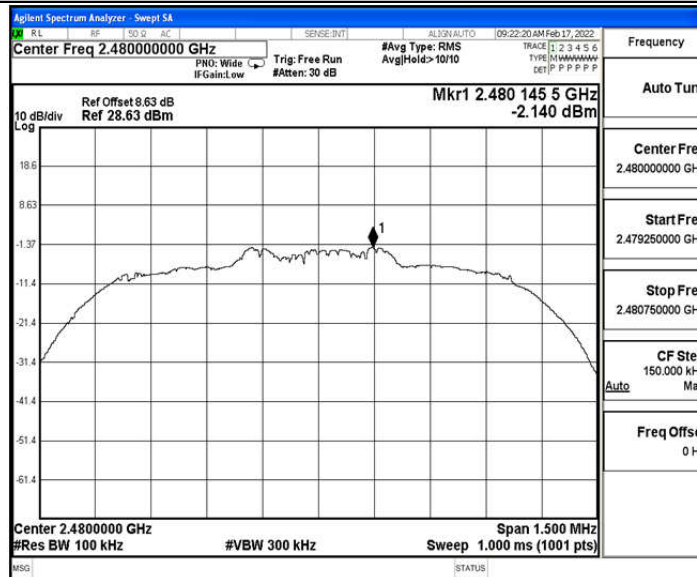


2DH5_Ant1_2441_1000~26500

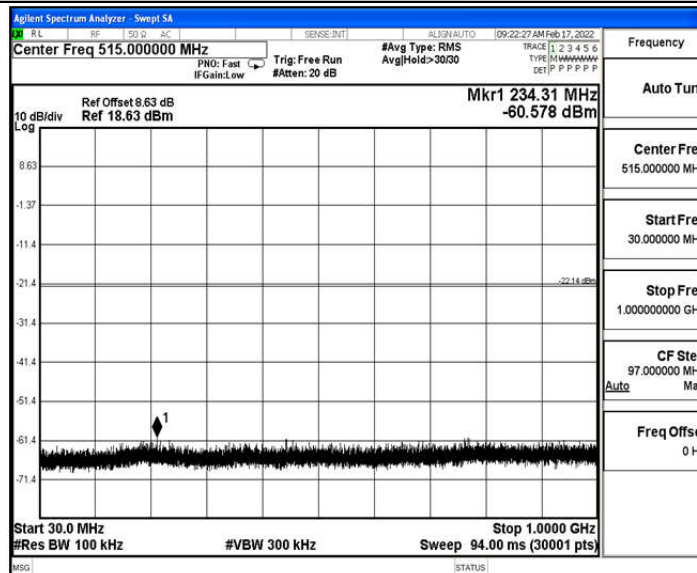




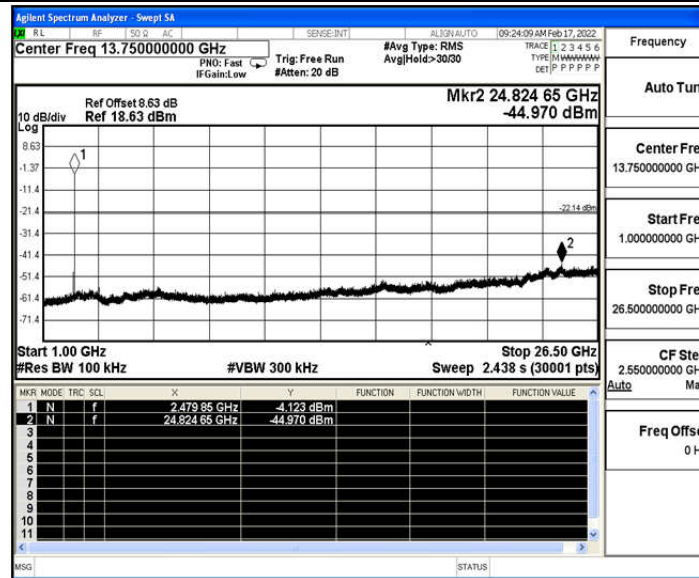
2DH5_Ant1_2480_0~Reference



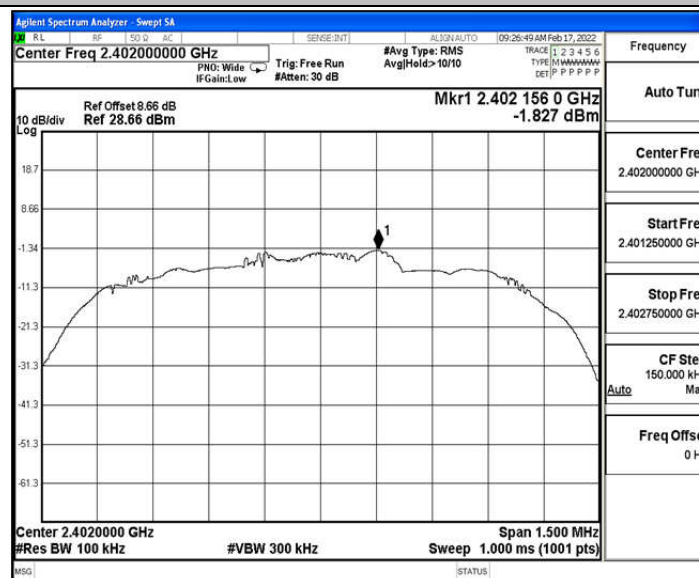
2DH5_Ant1_2480_30~1000



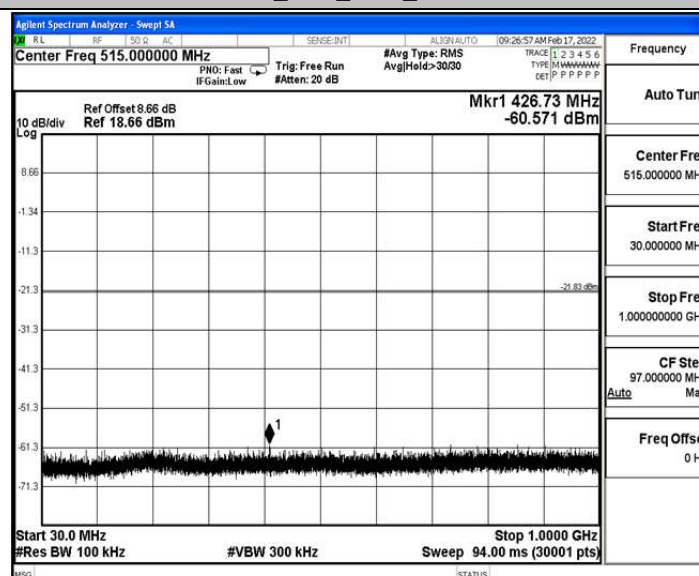
2DH5_Ant1_2480_1000~26500



3DH5_Ant1_2402_0~Reference

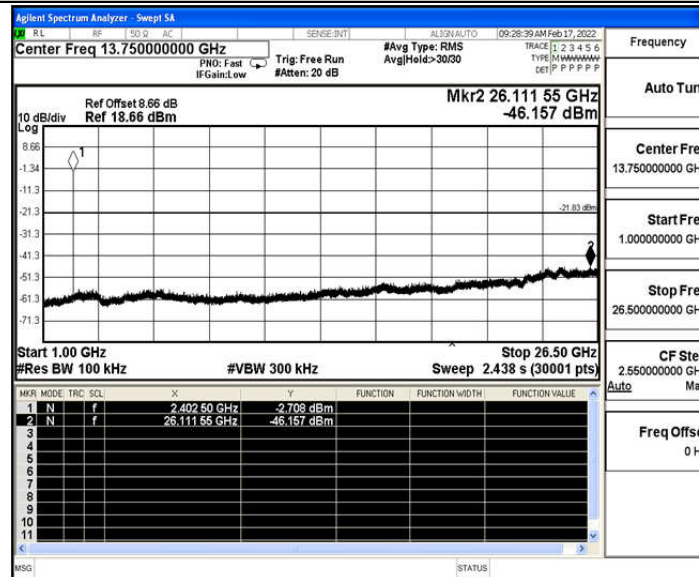


3DH5_Ant1_2402_30~1000

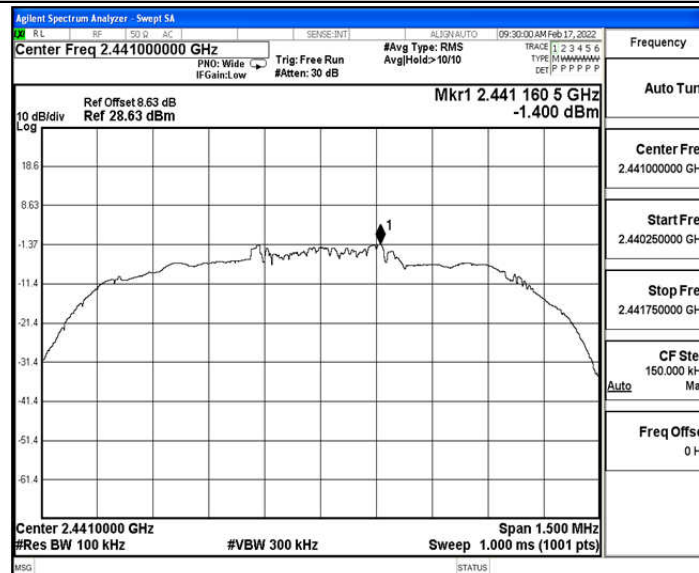




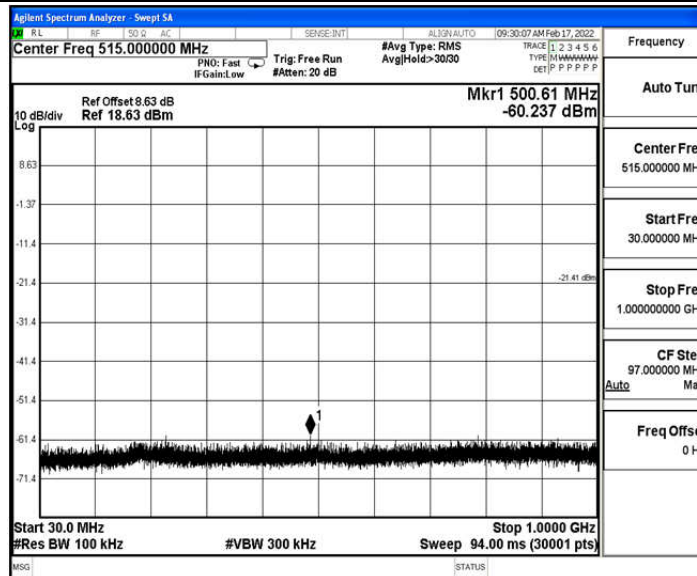
3DH5_Ant1_2402_1000~26500



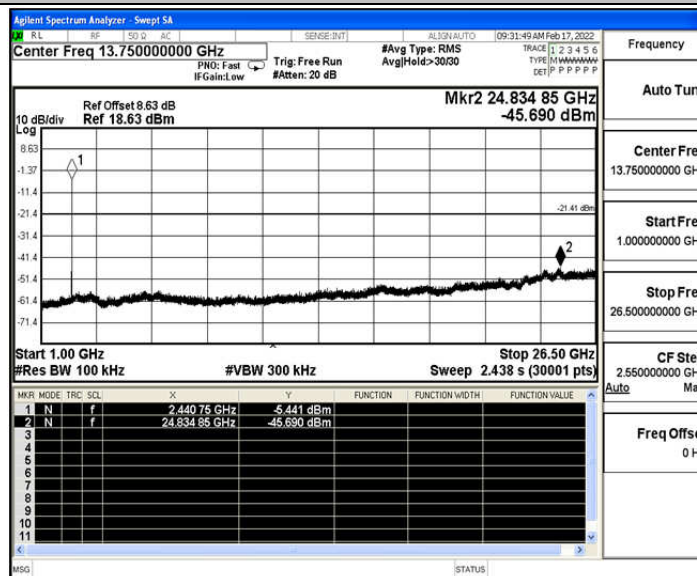
3DH5_Ant1_2441_0~Reference



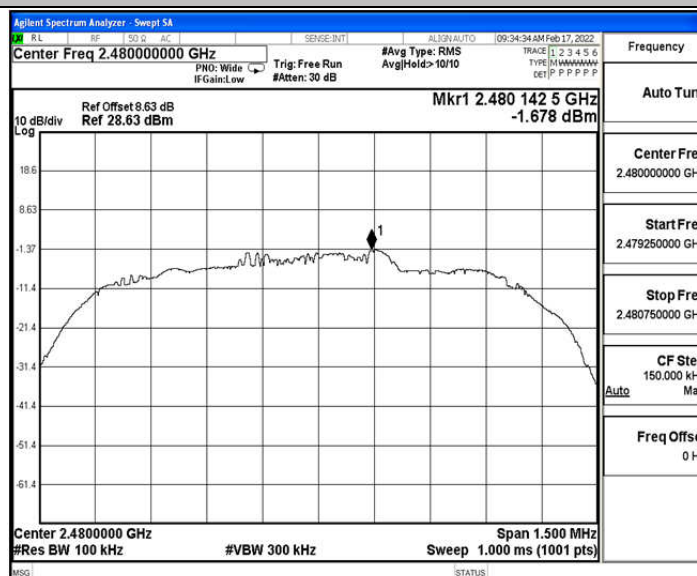
3DH5_Ant1_2441_30~1000



3DH5_Ant1_2441_1000~26500

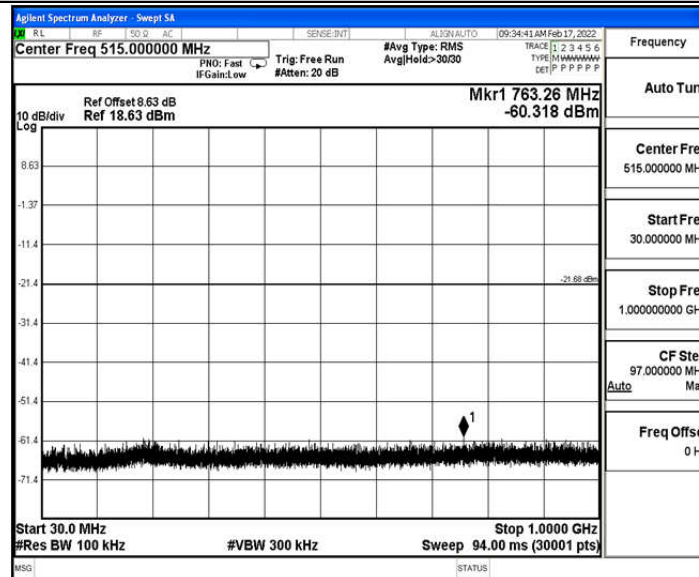


3DH5_Ant1_2480_0~Reference

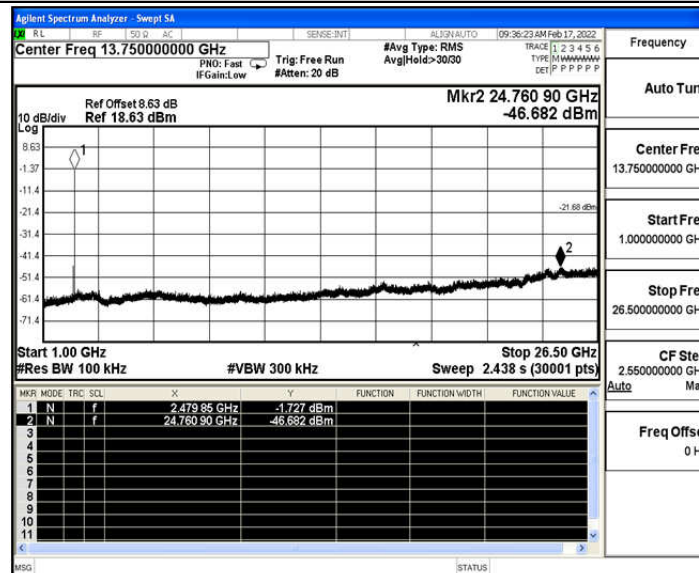




3DH5_Ant1_2480_30~1000



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	-48.34	≤-41.20	46.86	≤54	PASS
				AV	2382.530	-47.82	≤-41.20	47.38	≤54	PASS
				AV	2390.000	-48.03	≤-41.20	47.17	≤54	PASS
				Peak	2310.000	-38.21	≤-21.20	56.99	≤74	PASS
				Peak	2389.460	-36.27	≤-21.20	58.93	≤74	PASS
				Peak	2390.000	-38.5	≤-21.20	56.70	≤74	PASS
		High	2480	AV	2483.500	-47.47	≤-41.20	47.73	≤54	PASS
				AV	2490.720	-47.26	≤-41.20	47.94	≤54	PASS
				AV	2500.000	-47.39	≤-41.20	47.81	≤54	PASS
				Peak	2483.500	-38.69	≤-21.20	56.51	≤74	PASS
				Peak	2495.200	-35.26	≤-21.20	59.94	≤74	PASS
				Peak	2500.000	-37.86	≤-21.20	57.34	≤74	PASS
		Low	Hop_24 02	Peak	2310.000	-39.53	≤-21.20	55.67	≤74	PASS
				Peak	2347.775	-36.99	≤-21.20	58.21	≤74	PASS
				Peak	2390.000	-38.97	≤-21.20	56.23	≤74	PASS
		High	Hop_24 80	Peak	2483.500	-38.06	≤-21.20	57.14	≤74	PASS
				Peak	2485.120	-36.35	≤-21.20	58.85	≤74	PASS
				Peak	2500.000	-37.76	≤-21.20	57.44	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-48.35	≤-41.20	46.85	≤54	PASS
				AV	2386.415	-47.77	≤-41.20	47.43	≤54	PASS
				AV	2390.000	-47.99	≤-41.20	47.21	≤54	PASS
				Peak	2310.000	-38.58	≤-21.20	56.62	≤74	PASS
				Peak	2361.950	-36.88	≤-21.20	58.32	≤74	PASS
				Peak	2390.000	-38.7	≤-21.20	56.50	≤74	PASS
		High	2480	AV	2483.500	-47.33	≤-41.20	47.87	≤54	PASS
				AV	2493.680	-47.23	≤-41.20	47.97	≤54	PASS
				AV	2500.000	-47.41	≤-41.20	47.79	≤54	PASS
				Peak	2483.500	-38.38	≤-21.20	56.82	≤74	PASS
				Peak	2493.440	-36.16	≤-21.20	59.04	≤74	PASS
				Peak	2500.000	-37.86	≤-21.20	57.34	≤74	PASS
		Low	Hop_24 02	Peak	2310.000	-39.49	≤-21.20	55.71	≤74	PASS
				Peak	2368.355	-36.97	≤-21.20	58.23	≤74	PASS
				Peak	2390.000	-37.49	≤-21.20	57.71	≤74	PASS
		High	Hop_24 80	Peak	2483.500	-38.42	≤-21.20	56.78	≤74	PASS
				Peak	2491.680	-36.16	≤-21.20	59.04	≤74	PASS
				Peak	2500.000	-37.85	≤-21.20	57.35	≤74	PASS



3DH5	Ant1	Low	2402	AV	2310.000	-48.28	≤-41.20	46.92	≤54	PASS
				AV	2386.415	-47.77	≤-41.20	47.43	≤54	PASS
				AV	2390.000	-47.98	≤-41.20	47.22	≤54	PASS
				Peak	2310.000	-38.24	≤-21.20	56.96	≤74	PASS
				Peak	2348.300	-36.61	≤-21.20	58.59	≤74	PASS
				Peak	2390.000	-38.5	≤-21.20	56.70	≤74	PASS
		High	2480	AV	2483.500	-47.25	≤-41.20	47.95	≤54	PASS
				AV	2498.560	-47.09	≤-41.20	48.11	≤54	PASS
				AV	2500.000	-47.33	≤-41.20	47.87	≤54	PASS
				Peak	2483.500	-38.52	≤-21.20	56.68	≤74	PASS
				Peak	2489.120	-36.4	≤-21.20	58.80	≤74	PASS
				Peak	2500.000	-37.27	≤-21.20	57.93	≤74	PASS
		Low	Hop_24 02	Peak	2310.000	-38.7	≤-21.20	56.50	≤74	PASS
				Peak	2367.410	-37.45	≤-21.20	57.75	≤74	PASS
				Peak	2390.000	-38.43	≤-21.20	56.77	≤74	PASS
		High	Hop_24 80	Peak	2483.500	-38.2	≤-21.20	57.00	≤74	PASS
				Peak	2499.600	-36.21	≤-21.20	58.99	≤74	PASS
				Peak	2500.000	-37.72	≤-21.20	57.48	≤74	PASS

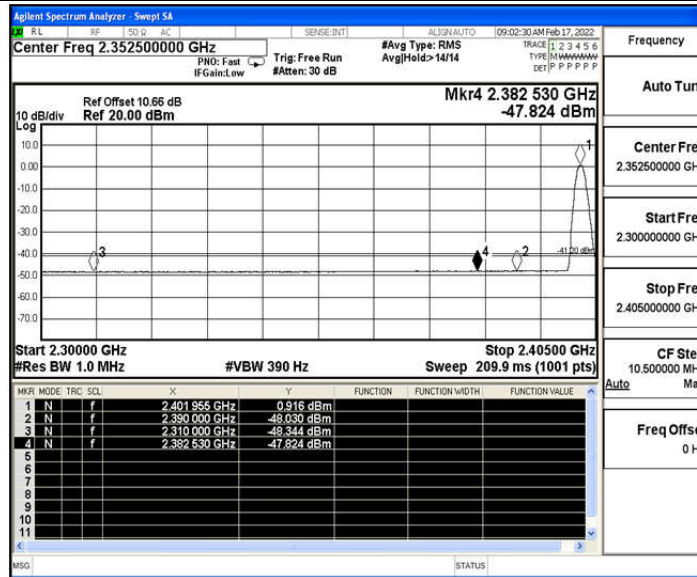
Note:

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.

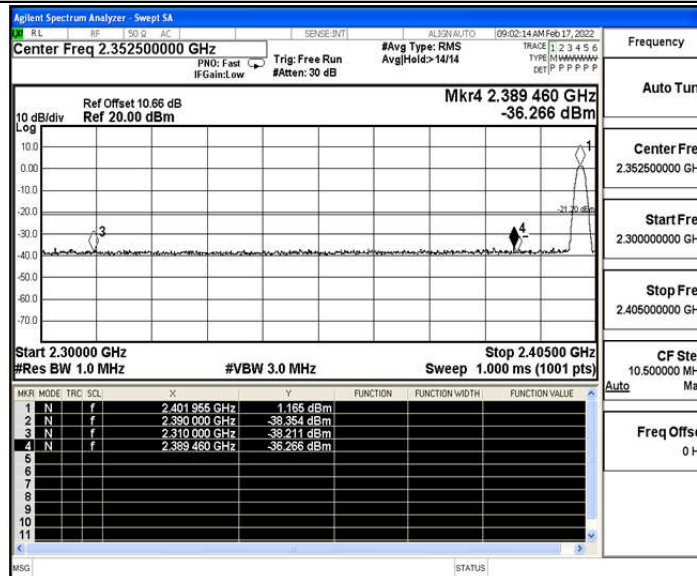


Test Graphs

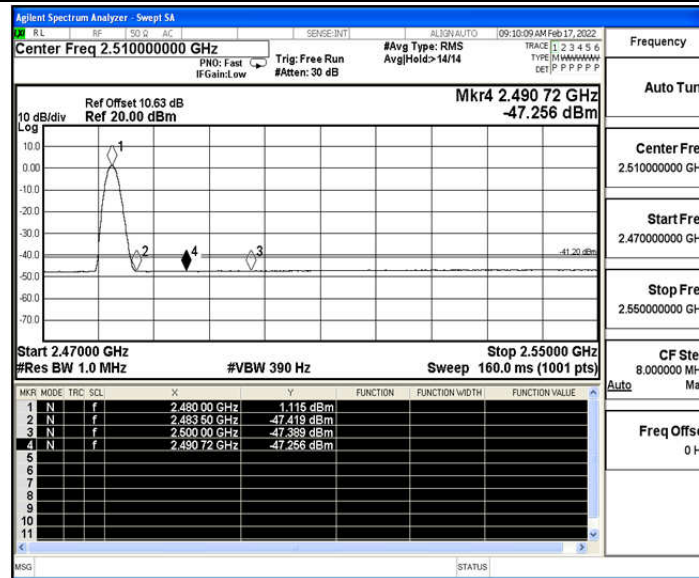
DH5_Ant1_Low_2402_AV



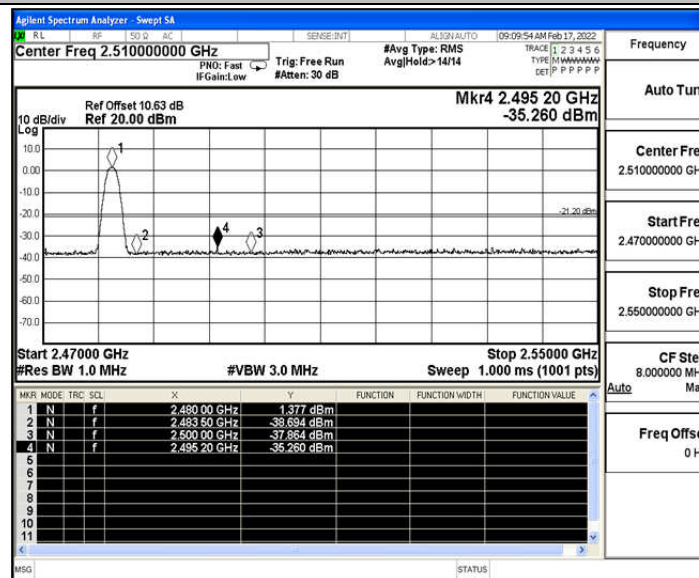
DH5_Ant1_Low_2402_Peak



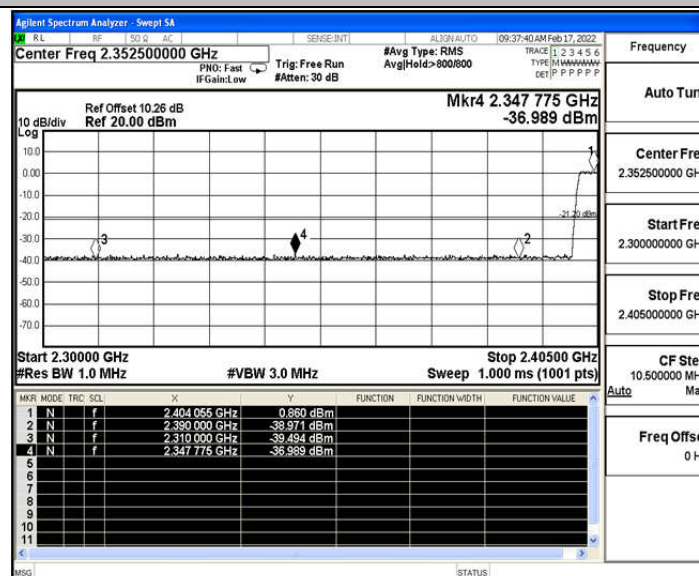
DH5_Ant1_High_2480_AV



DH5_Ant1_High_2480_Peak

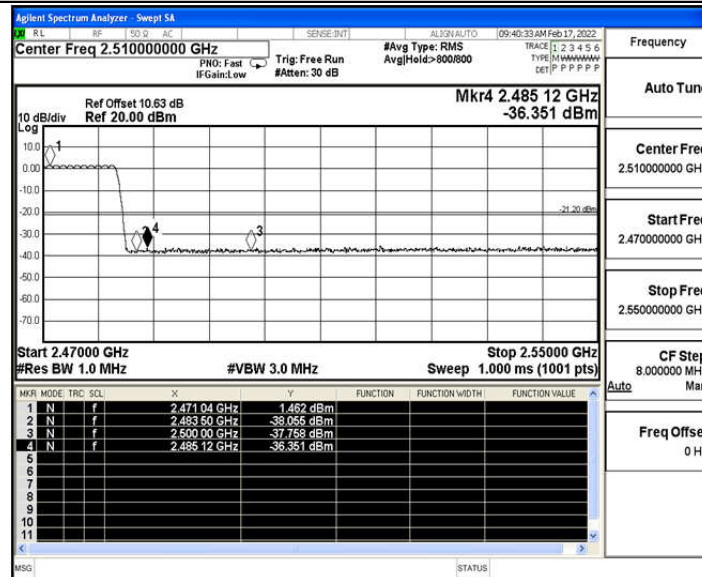


DH5_Ant1_Low_Hop_2402_Peak

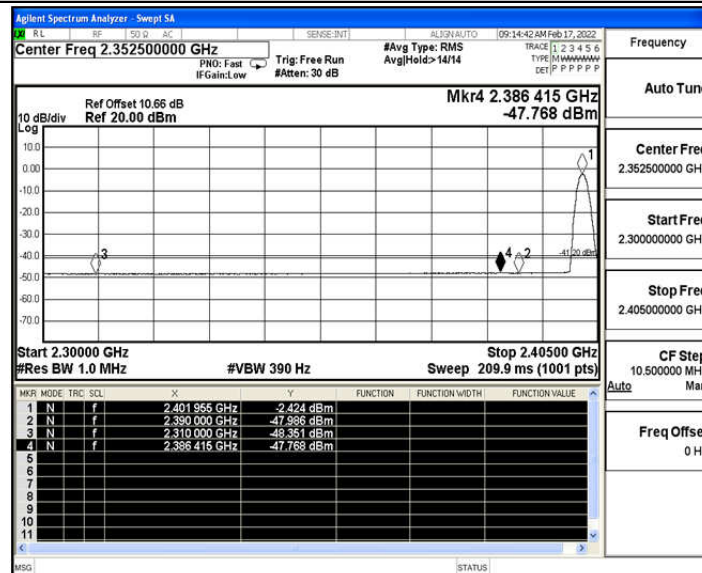




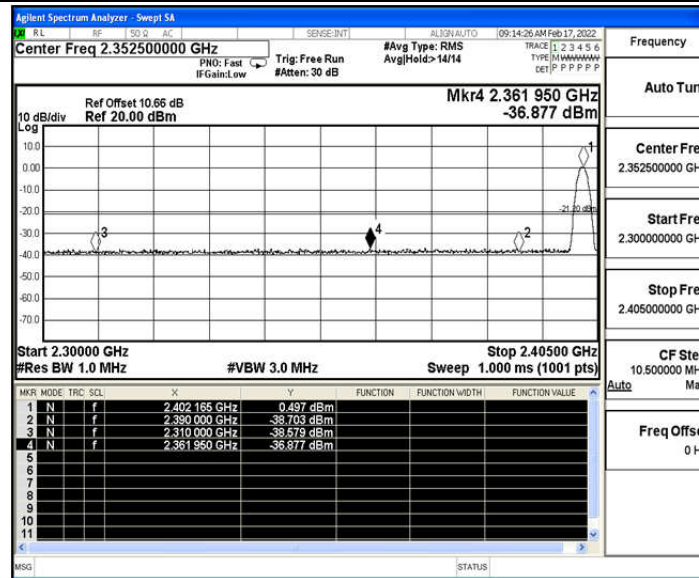
DH5_Ant1_High_Hop_2480_Peak



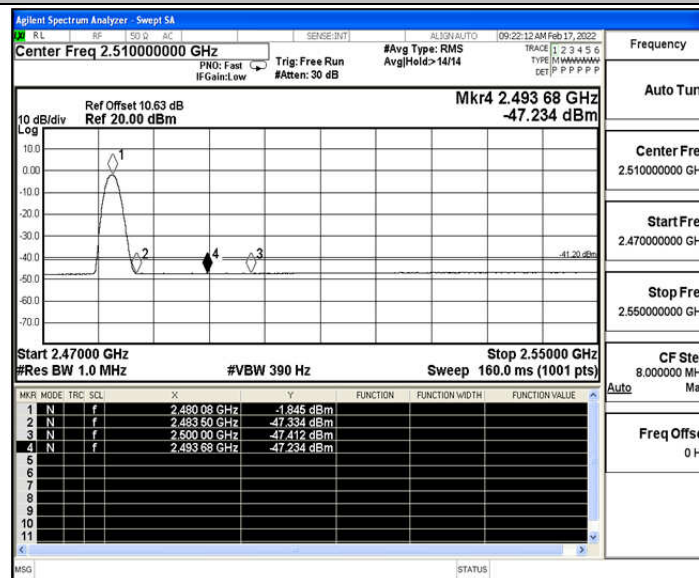
2DH5_Ant1_Low_2402_AV



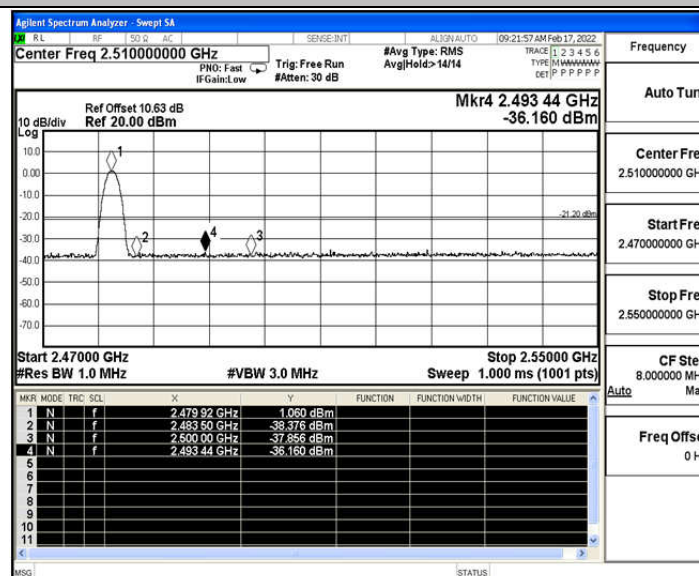
2DH5_Ant1_Low_2402_Peak



2DH5_Ant1_High_2480_AV

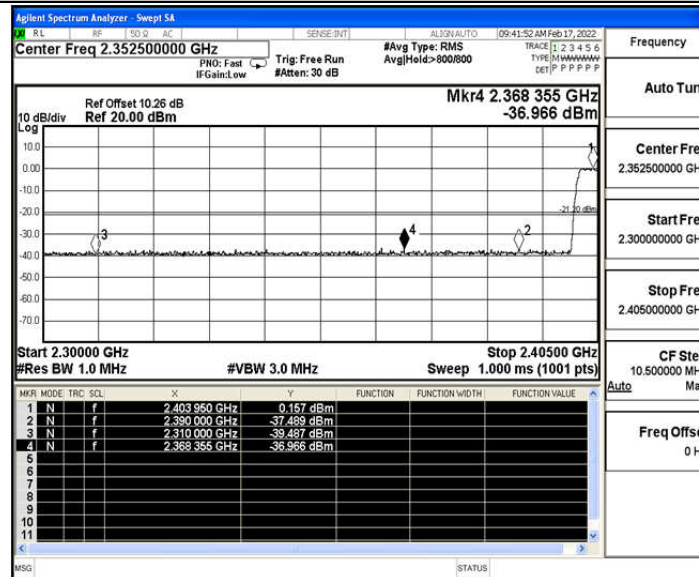


2DH5_Ant1_High_2480_Peak

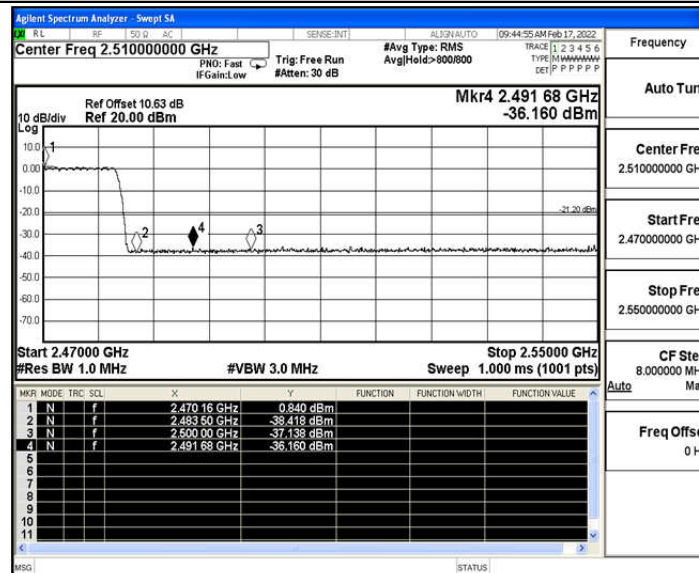




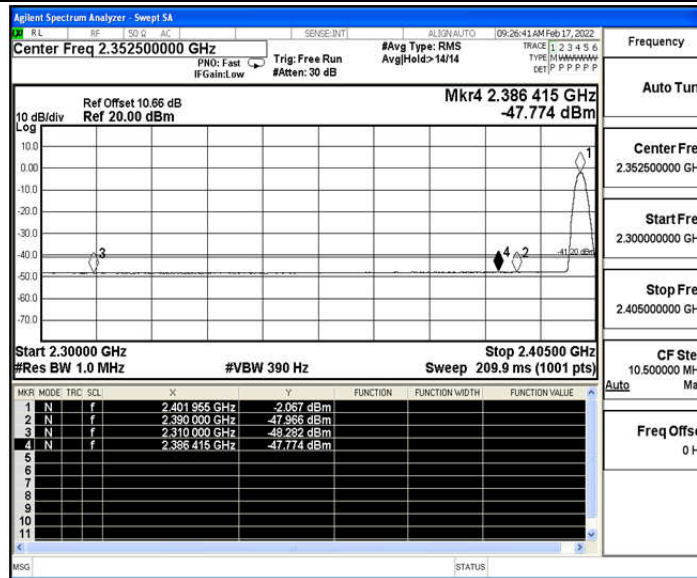
2DH5_Ant1_Low_Hop_2402_Peak



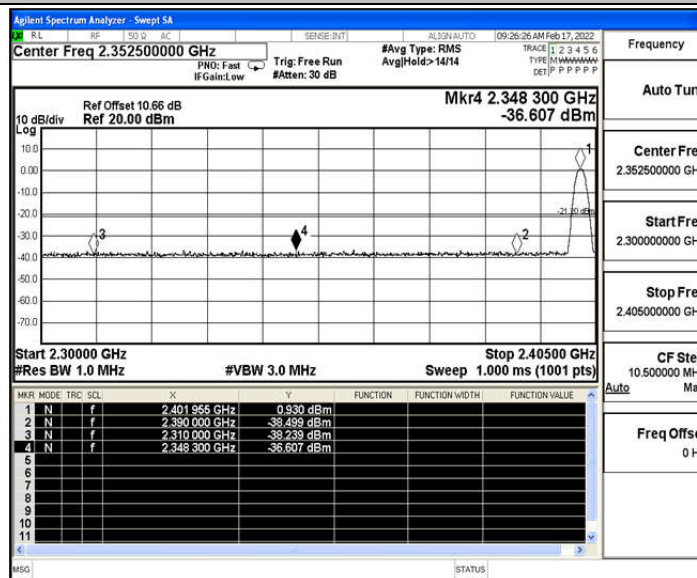
2DH5_Ant1_High_Hop_2480_Peak



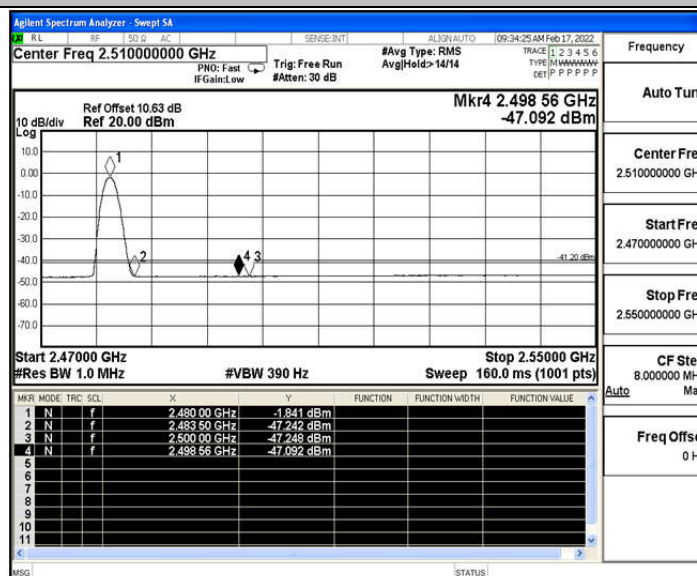
3DH5_Ant1_Low_2402_AV



3DH5_Ant1_Low_2402_Peak

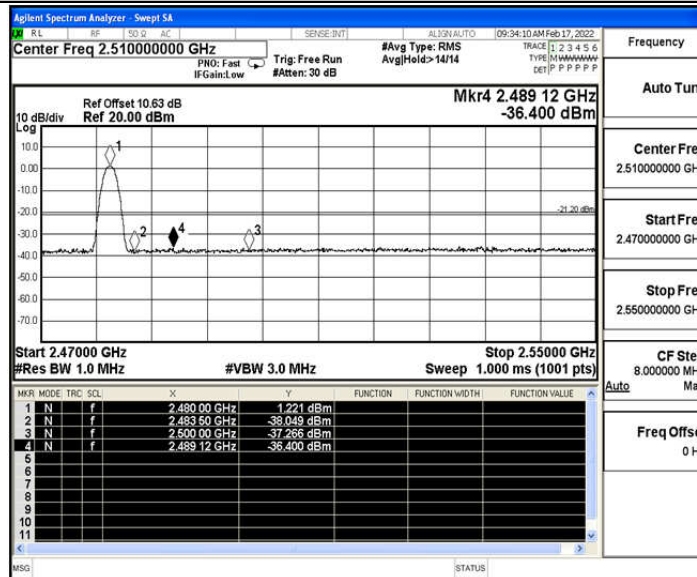


3DH5_Ant1_High_2480_AV

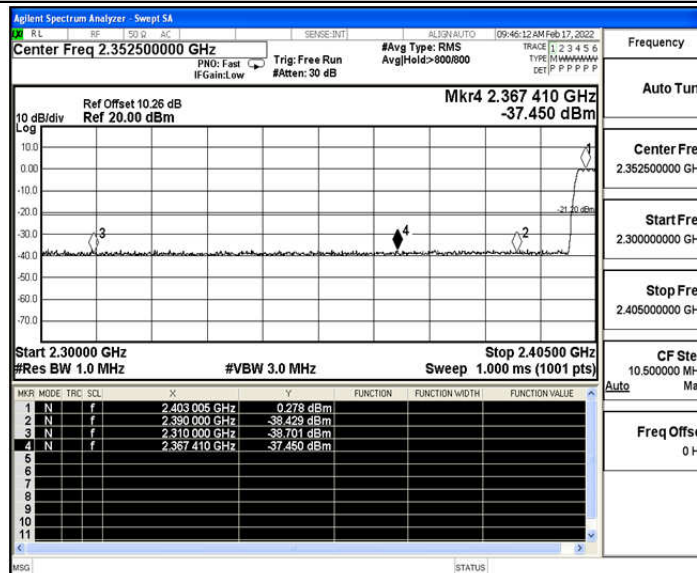




3DH5_Ant1_High_2480_Peak



3DH5_Ant1_Low_Hop_2402_Peak



3DH5_Ant1_High_Hop_2480_Peak

