



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Speaker

Test Model: RM-K666PIUS

Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	<i>Nick Peng</i> Nick Peng
Supervised by:	<i>Ling Zhu</i> Ling Zhu





A.1 20dB Emission Bandwidth

Test Result

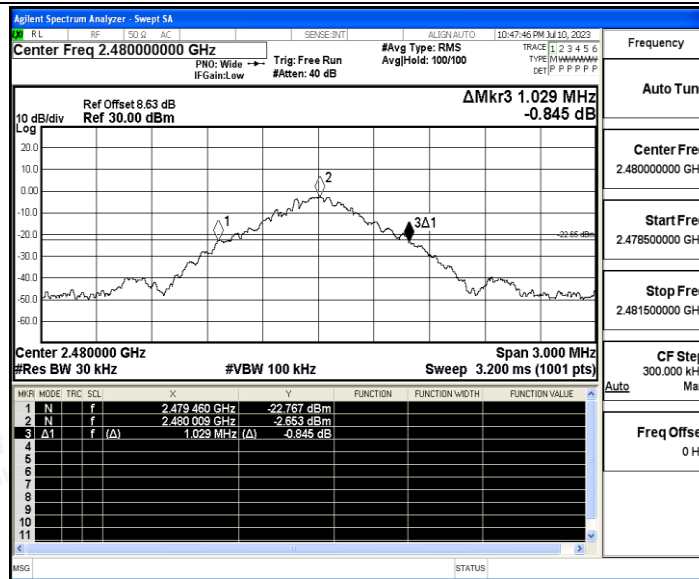
TestMode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	1.029	2401.469	2402.498	---	---
		2441	1.035	2440.466	2441.501	---	---
		2480	1.029	2479.460	2480.489	---	---
2DH5	Ant1	2402	1.290	2401.361	2402.651	---	---
		2441	1.341	2440.322	2441.663	---	---
		2480	1.290	2479.358	2480.648	---	---
3DH5	Ant1	2402	1.338	2401.328	2402.666	---	---
		2441	1.302	2440.343	2441.645	---	---
		2480	1.302	2479.343	2480.645	---	---



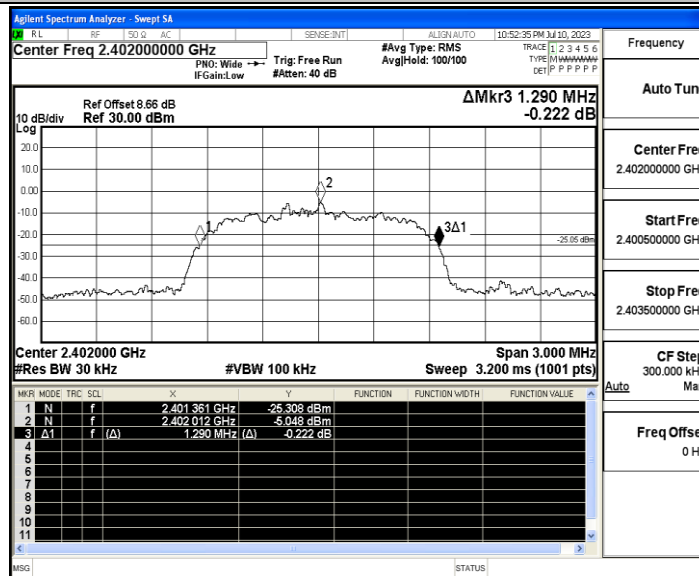


Test Graphs



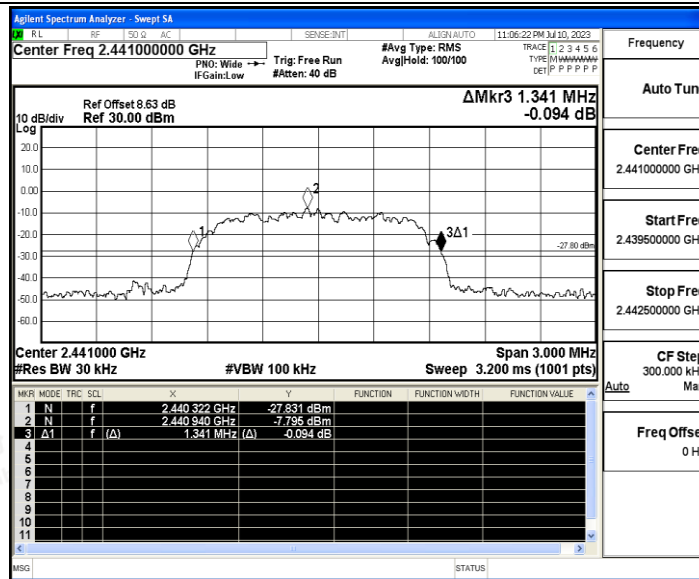


2DH5_Ant1_2402

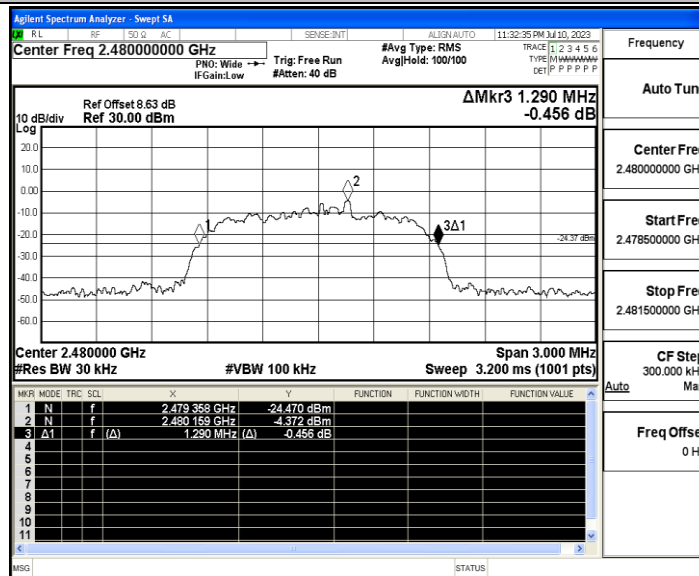


2DH5_Ant1_2441



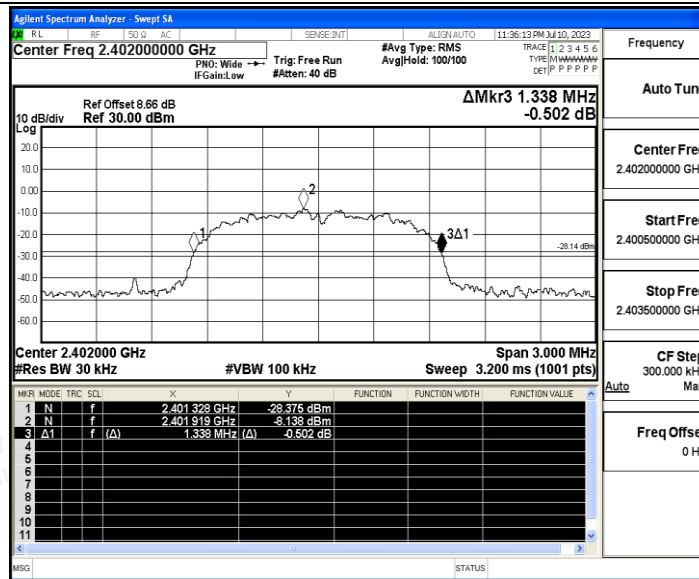


2DH5_Ant1_2480

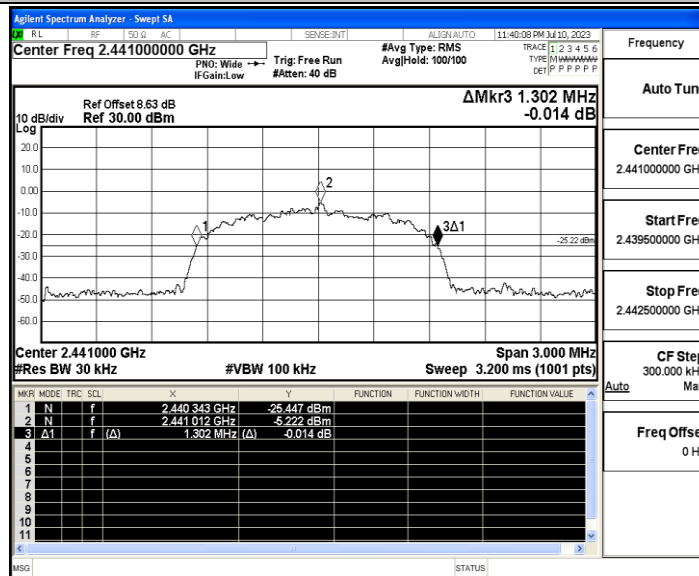


3DH5_Ant1_2402



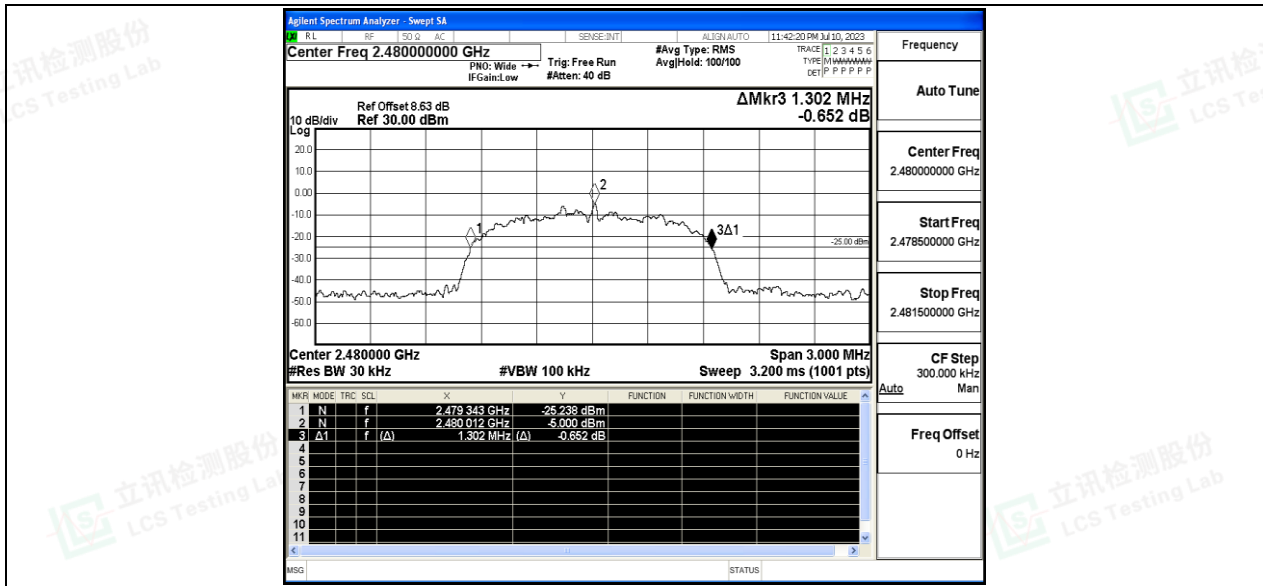


3DH5_Ant1_2441



3DH5_Ant1_2480







A.2 Maximum conducted output power

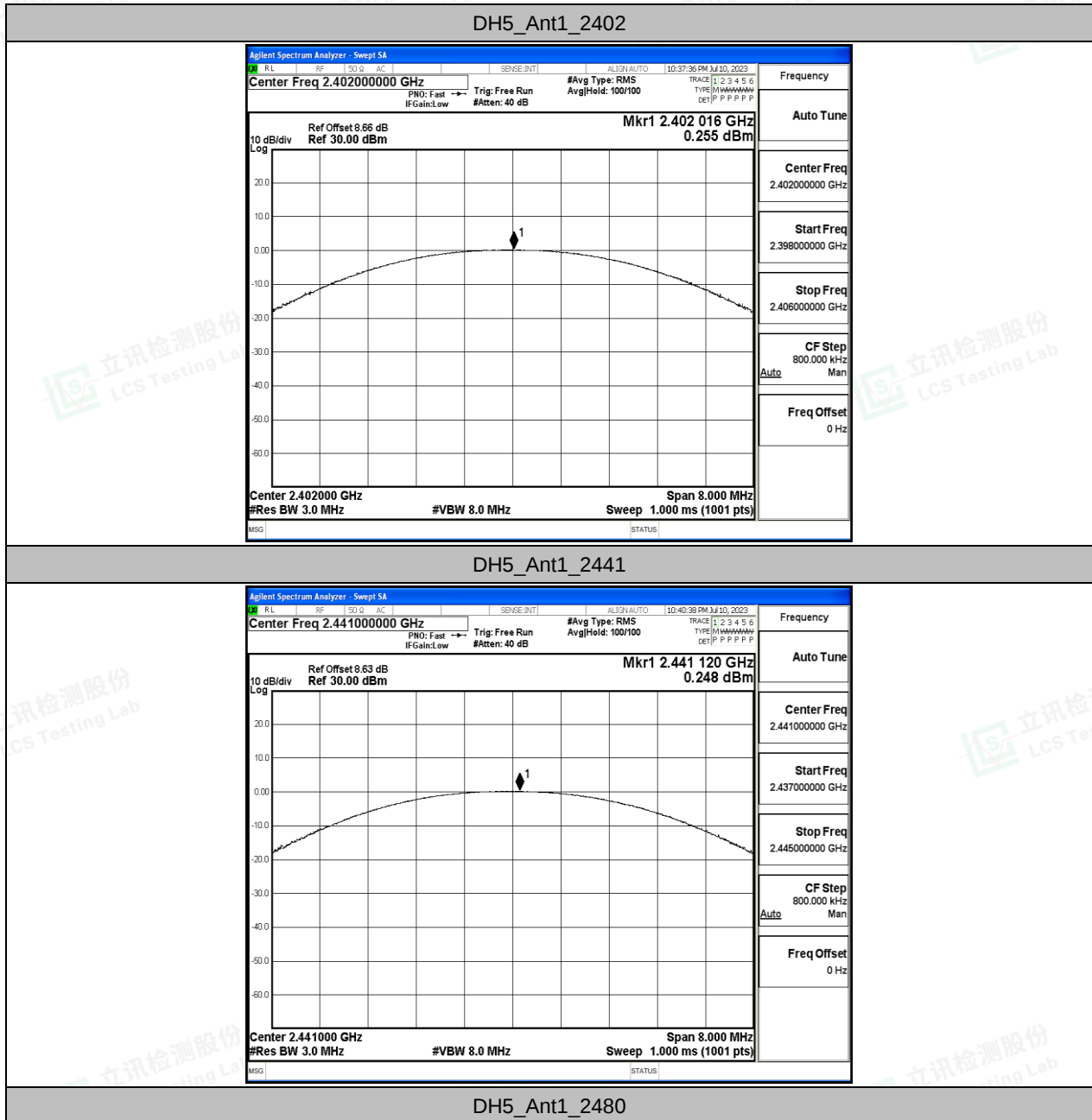
Test Result Peak

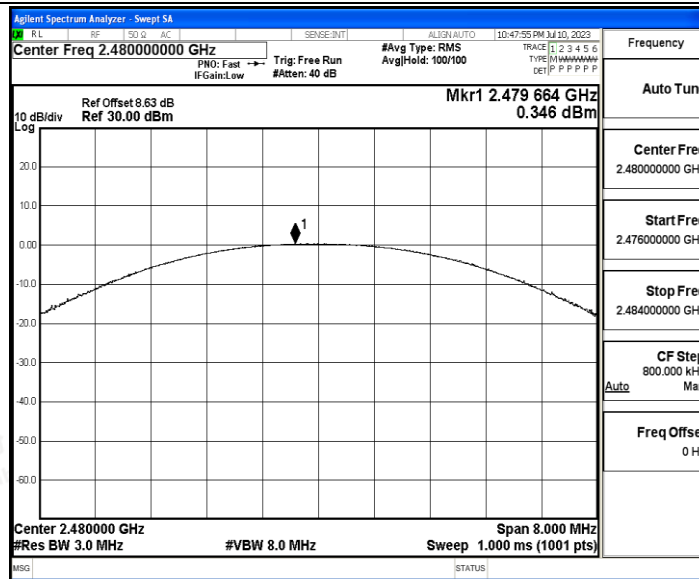
Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.26	≤20.97	PASS
		2441	0.25	≤20.97	PASS
		2480	0.35	≤20.97	PASS
2DH5	Ant1	2402	-0.16	≤20.97	PASS
		2441	-0.14	≤20.97	PASS
		2480	0.13	≤20.97	PASS
3DH5	Ant1	2402	-0.13	≤20.97	PASS
		2441	-0.07	≤20.97	PASS
		2480	0.15	≤20.97	PASS



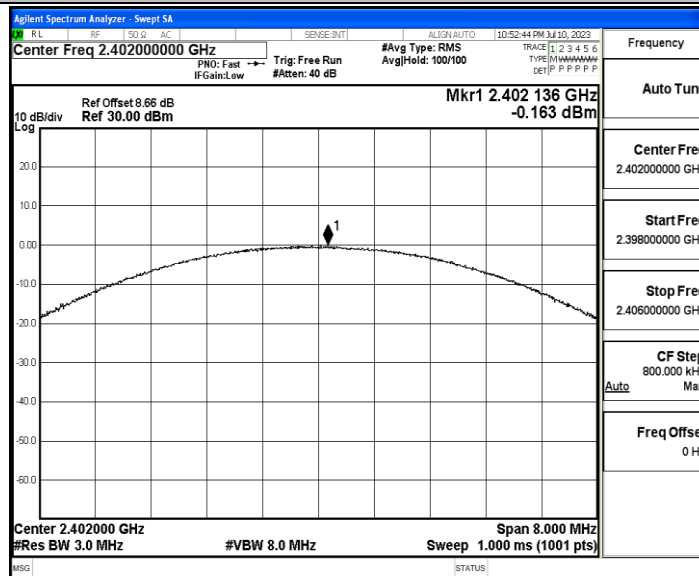


Test Graphs



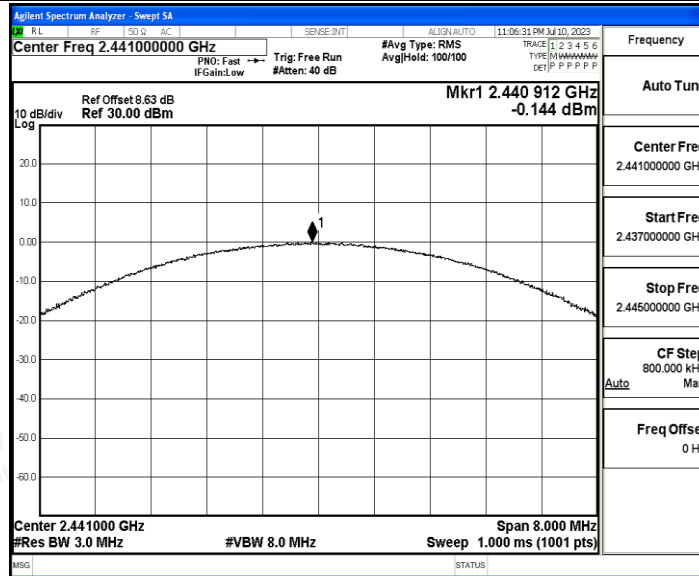


2DH5_Ant1_2402

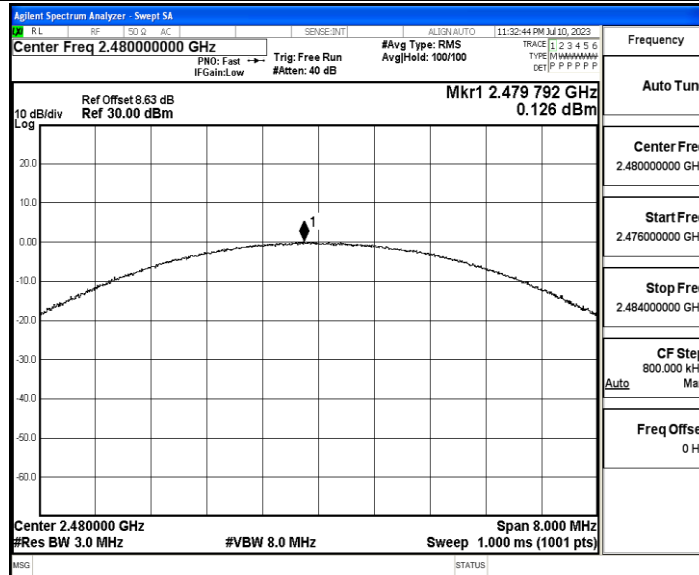


2DH5_Ant1_2441



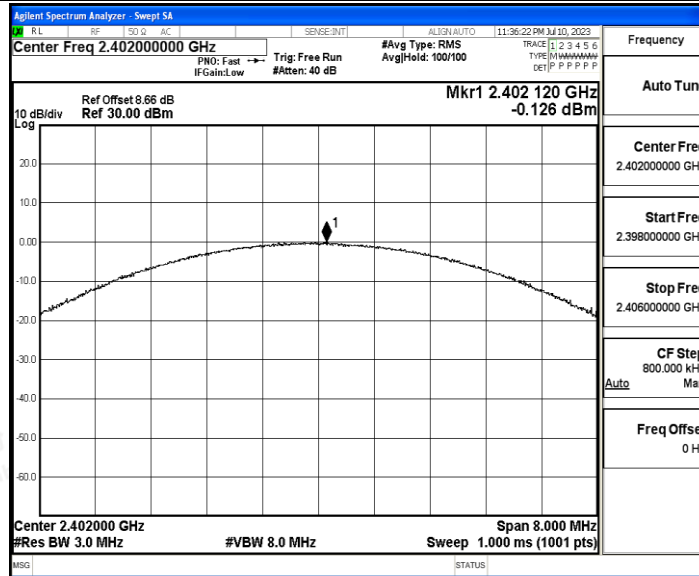


2DH5_Ant1_2480

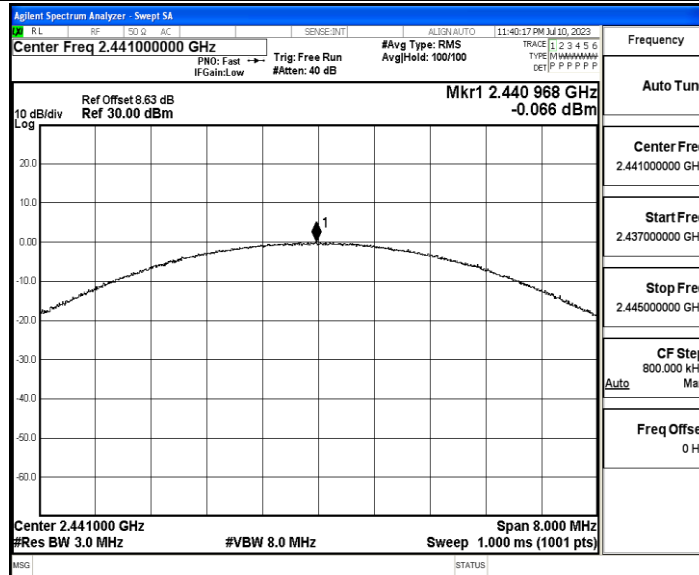


3DH5_Ant1_2402



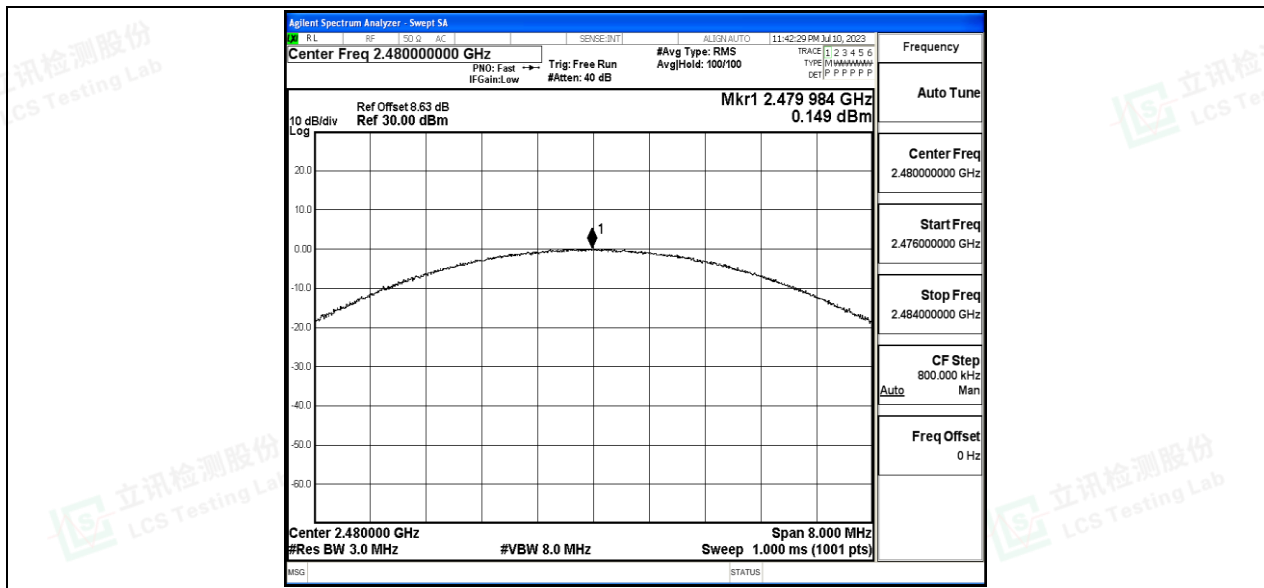


3DH5_Ant1_2441



3DH5_Ant1_2480







A.3 Carrier frequency separation

Test Result

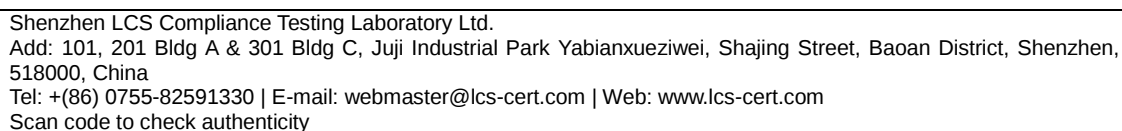
TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.018	≥ 0.690	PASS
2DH5	Ant1	Hop	0.982	≥ 0.894	PASS
3DH5	Ant1	Hop	1.078	≥ 0.892	PASS





Test Graphs







A.4 Time of occupancy

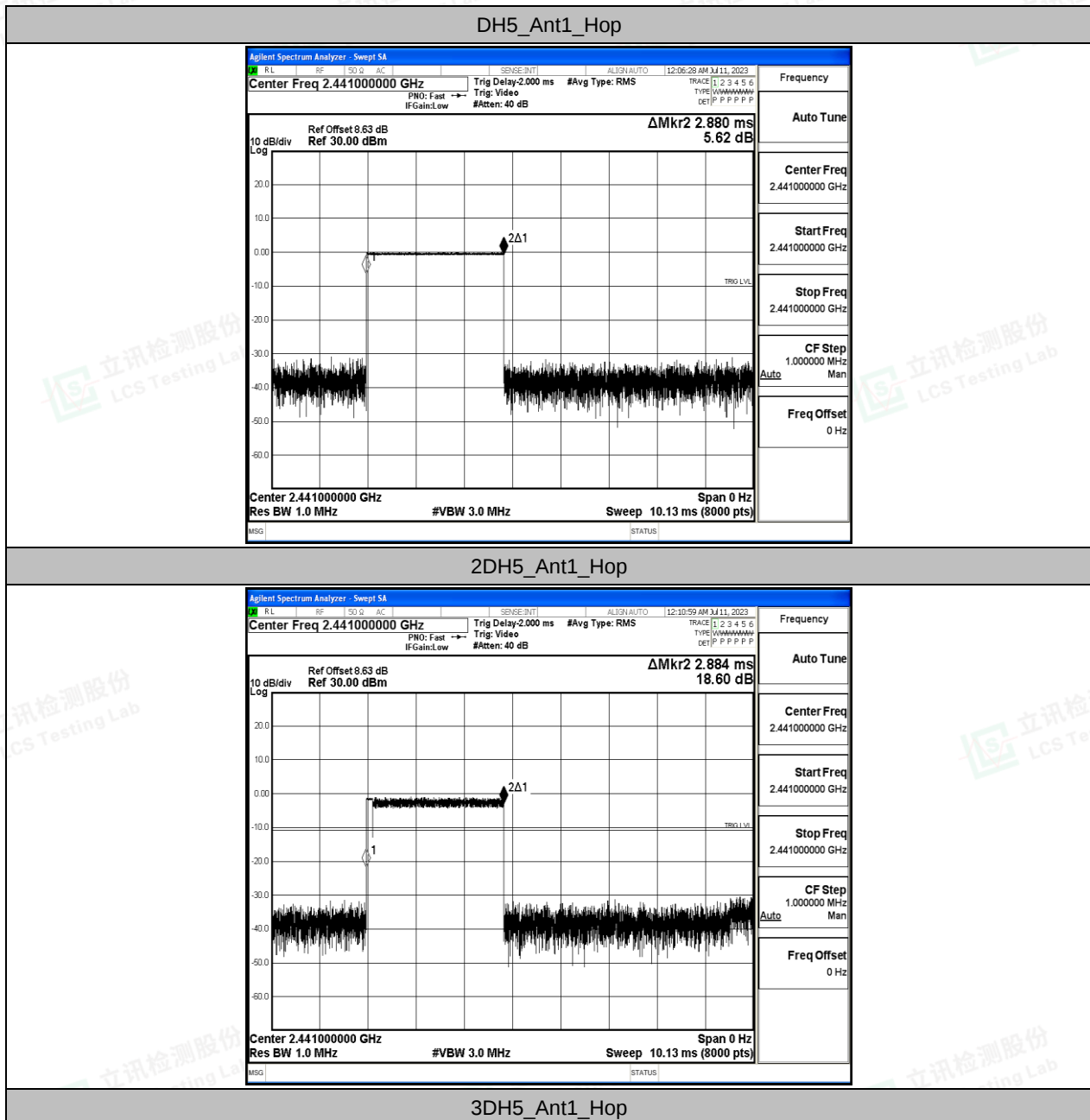
Test Result

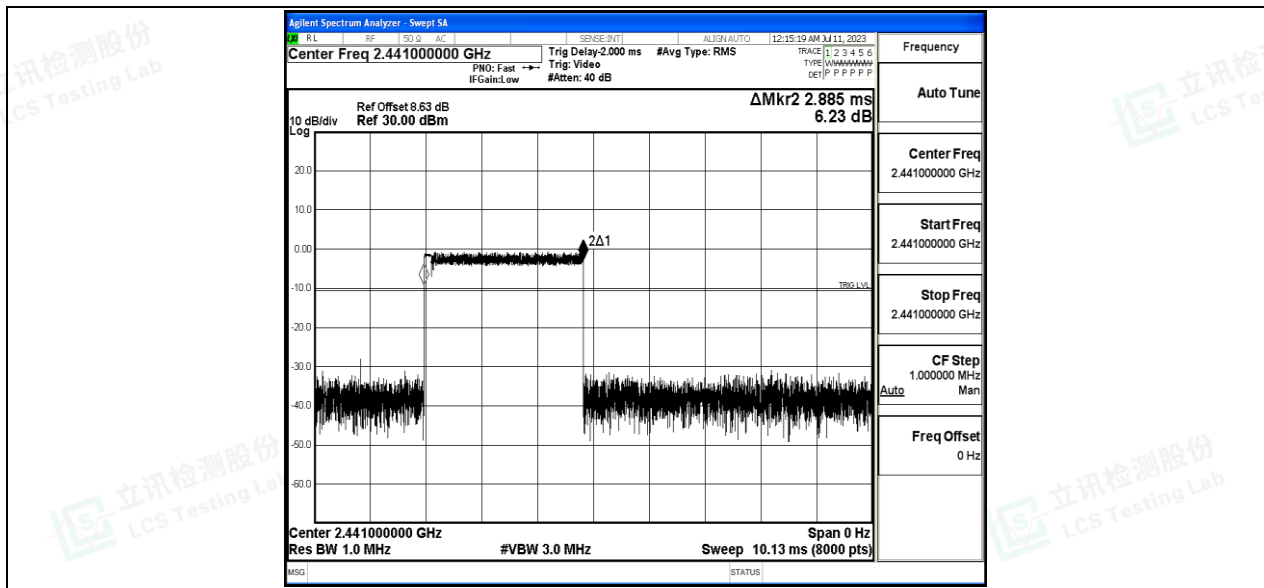
TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.880	106.67	0.307	≤0.4	PASS
2DH5	Ant1	Hop	2.884	106.67	0.308	≤0.4	PASS
3DH5	Ant1	Hop	2.885	106.67	0.308	≤0.4	PASS





Test Graphs







A.5 Number of hopping channels

Test Result

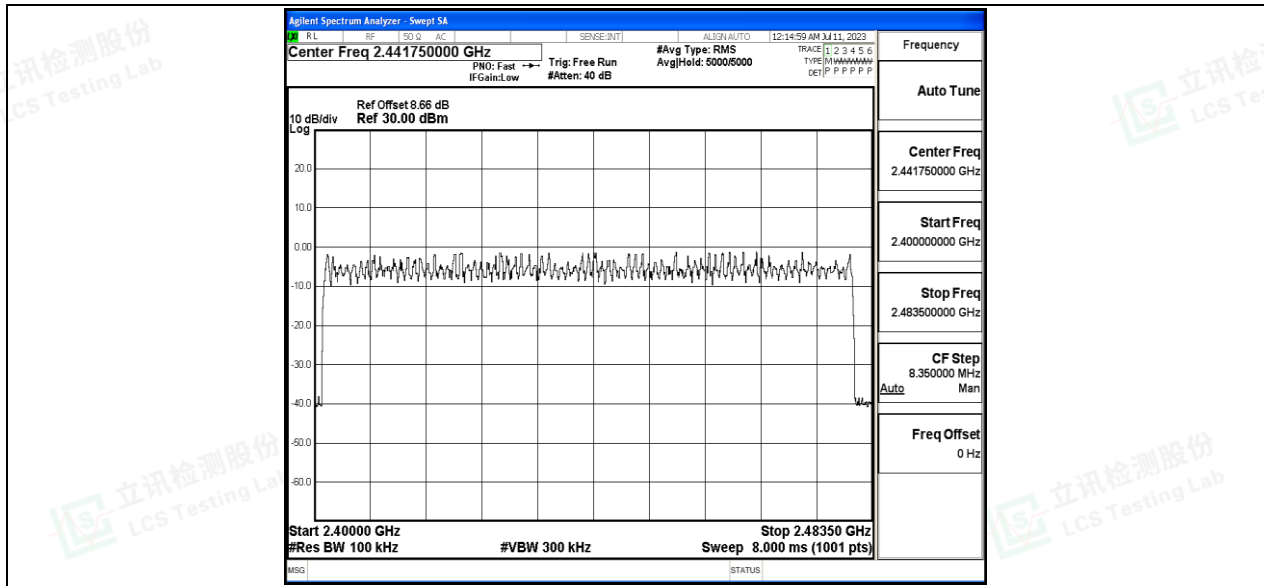
TestMode	Antenna	Frequency[MHz]	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS





Test Graphs







A.6 Band edge measurements

Test Result

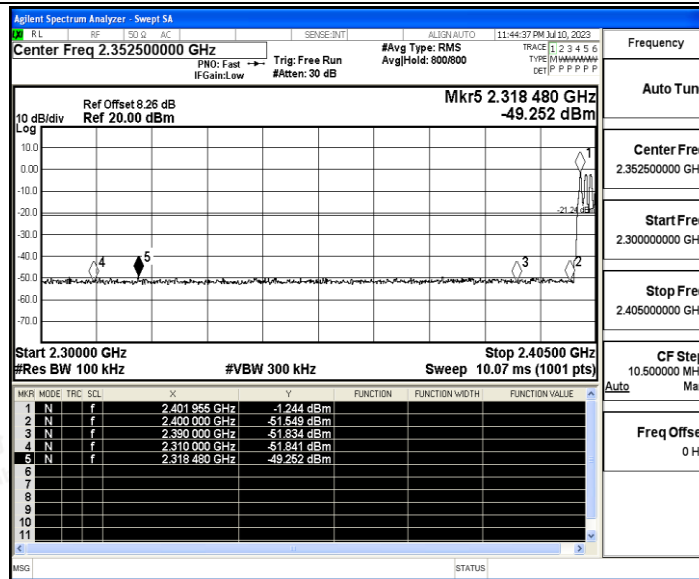
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.95	-50.43	≤-20.95	PASS
		High	2480	-1.05	-48.5	≤-21.05	PASS
		Low	Hop_2402	-1.24	-49.25	≤-21.24	PASS
		High	Hop_2480	-0.31	-48.2	≤-20.31	PASS
2DH5	Ant1	Low	2402	-4.42	-50.04	≤-24.42	PASS
		High	2480	-1.49	-50.01	≤-21.49	PASS
		Low	Hop_2402	-5.42	-49.69	≤-25.42	PASS
		High	Hop_2480	-2.32	-47.8	≤-22.32	PASS
3DH5	Ant1	Low	2402	-6.00	-50.47	≤-26	PASS
		High	2480	-3.39	-49.36	≤-23.39	PASS
		Low	Hop_2402	-4.97	-48.9	≤-24.97	PASS
		High	Hop_2480	-3.82	-47.81	≤-23.82	PASS



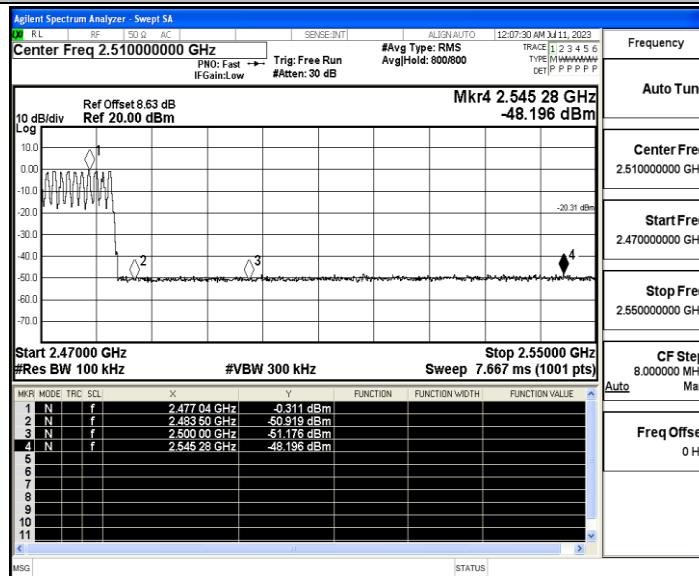


Test Graphs



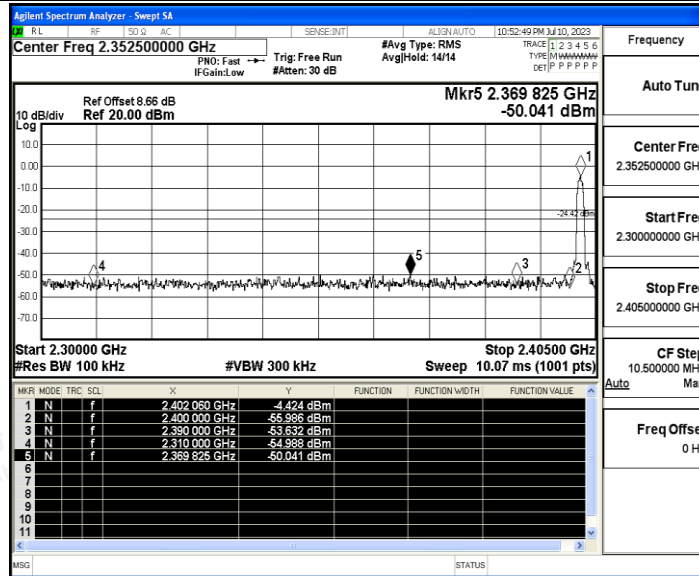


DH5_Ant1_High_Hop_2480

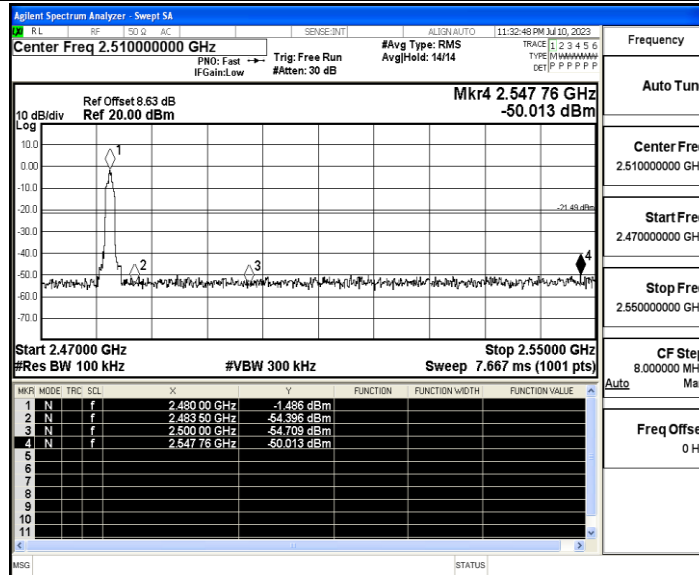


2DH5_Ant1_Low_2402



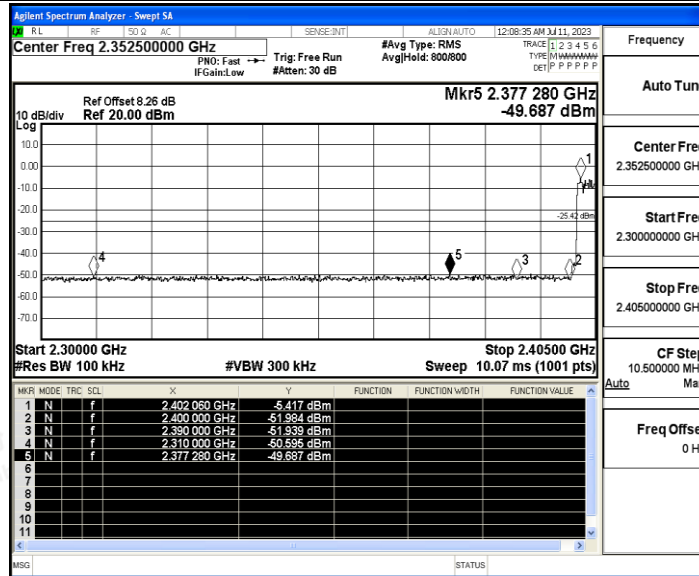


2DH5_Ant1_High_2480

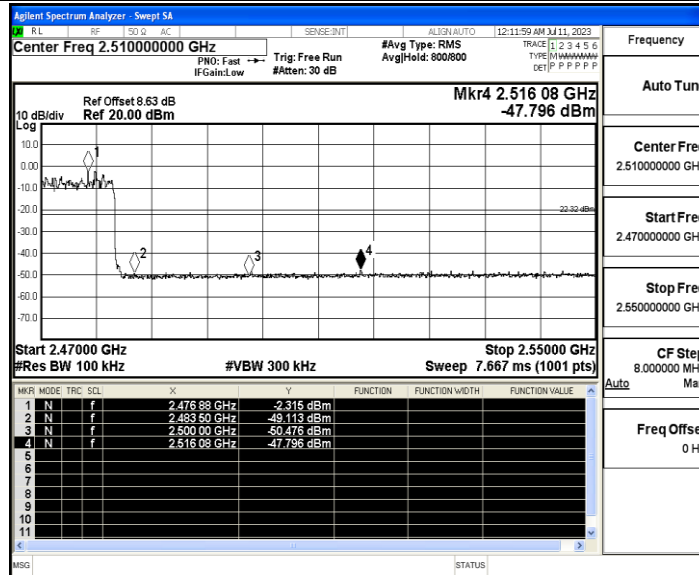


2DH5_Ant1_Low_Hop_2402



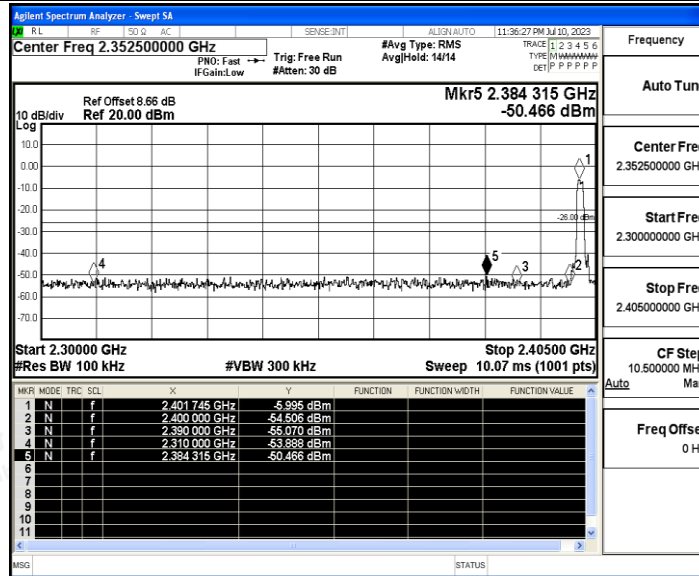


2DH5_Ant1_High_Hop_2480

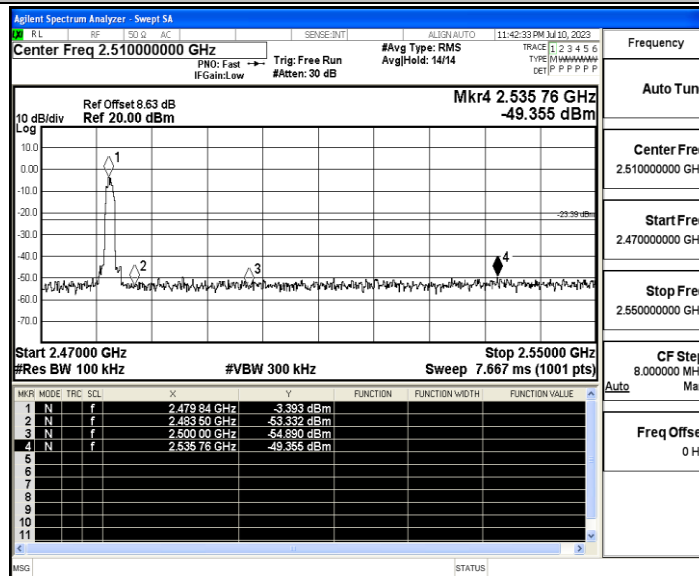


3DH5_Ant1_Low_2402



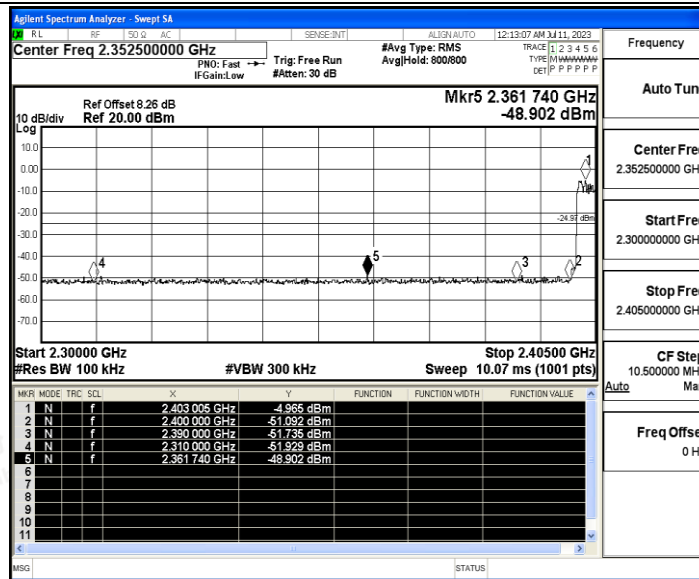


3DH5_Ant1_High_2480

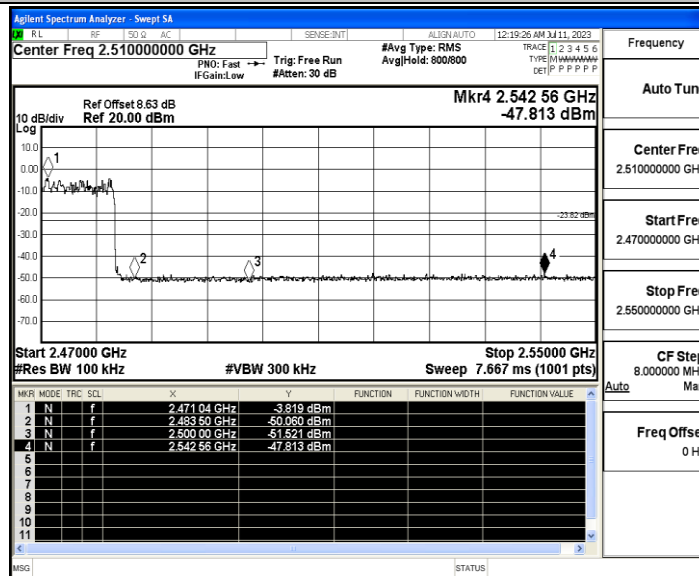


3DH5_Ant1_Low_Hop_2402





3DH5_Ant1_High_Hop_2480





A.7 Conducted Spurious Emission

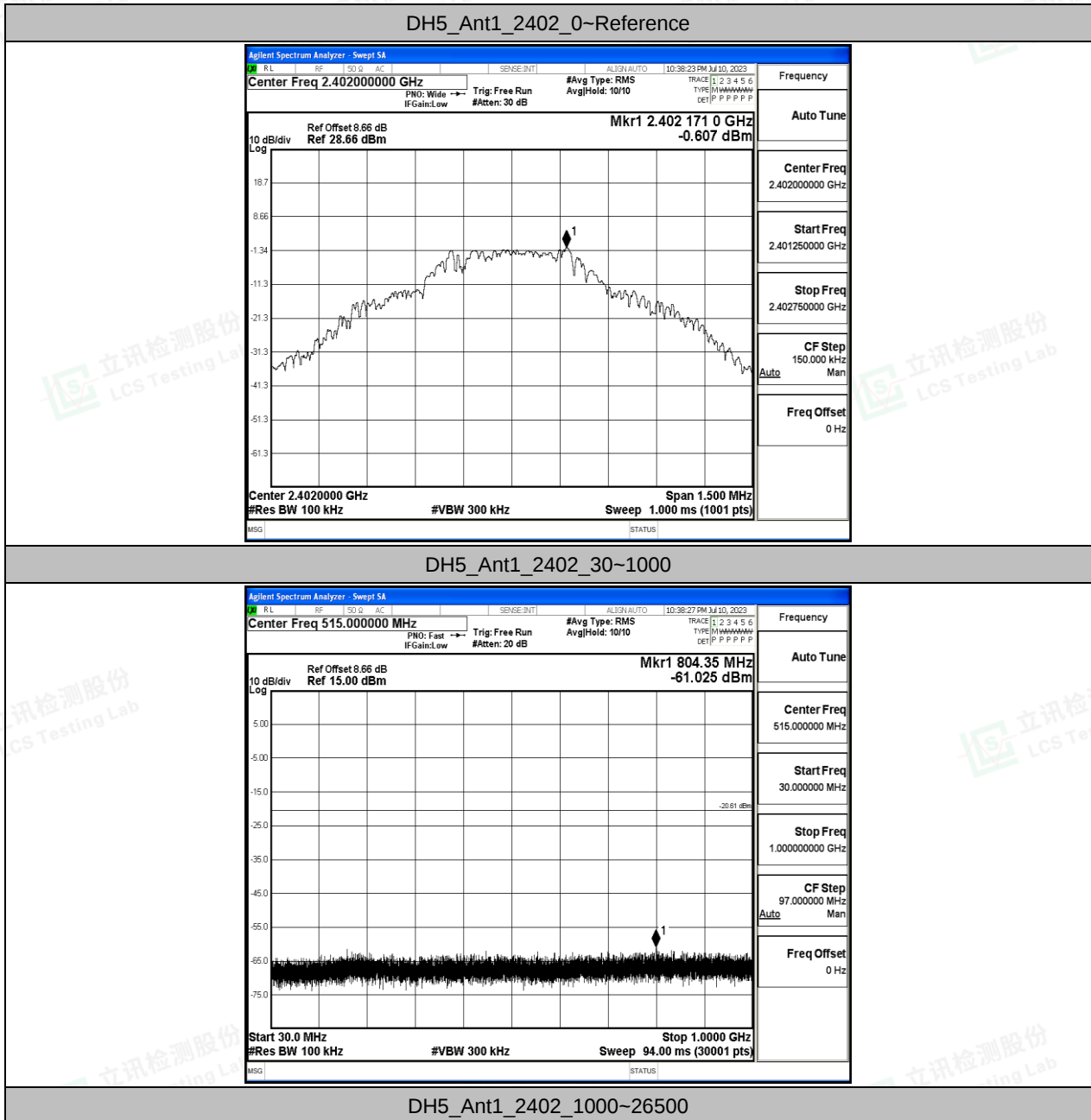
Test Result

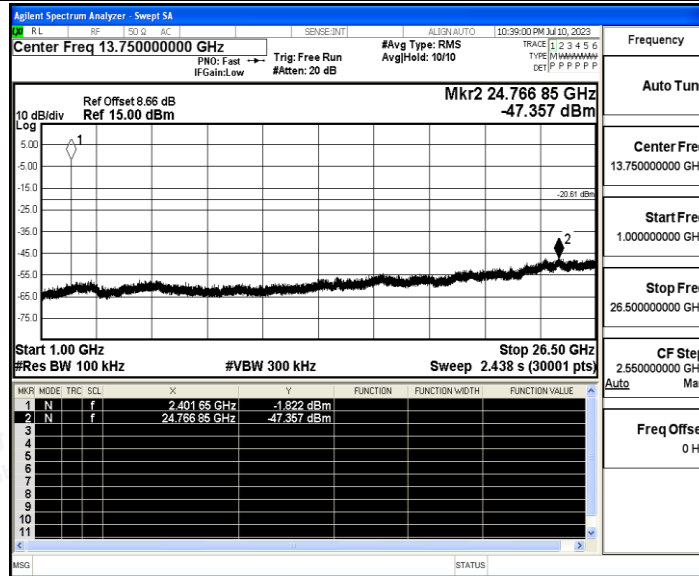
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-0.61	-0.61	---	PASS
			30~1000	-0.61	-61.03	≤ -20.61	PASS
			1000~26500	-0.61	-47.36	≤ -20.61	PASS
		2441	Reference	-1.28	-1.28	---	PASS
			30~1000	-1.28	-60.2	≤ -21.28	PASS
			1000~26500	-1.28	-46.54	≤ -21.28	PASS
		2480	Reference	-0.78	-0.78	---	PASS
			30~1000	-0.78	-60.97	≤ -20.78	PASS
			1000~26500	-0.78	-46.65	≤ -20.78	PASS
2DH5	Ant1	2402	Reference	-5.55	-5.55	---	PASS
			30~1000	-5.55	-60.79	≤ -25.55	PASS
			1000~26500	-5.55	-46.82	≤ -25.55	PASS
		2441	Reference	-5.42	-5.42	---	PASS
			30~1000	-5.42	-61.17	≤ -25.42	PASS
			1000~26500	-5.42	-46.24	≤ -25.42	PASS
		2480	Reference	-3.78	-3.78	---	PASS
			30~1000	-3.78	-60.88	≤ -23.78	PASS
			1000~26500	-3.78	-47.22	≤ -23.78	PASS
3DH5	Ant1	2402	Reference	-5.37	-5.37	---	PASS
			30~1000	-5.37	-60.96	≤ -25.37	PASS
			1000~26500	-5.37	-47.11	≤ -25.37	PASS
		2441	Reference	-5.12	-5.12	---	PASS
			30~1000	-5.12	-61.24	≤ -25.12	PASS
			1000~26500	-5.12	-46.54	≤ -25.12	PASS
		2480	Reference	-3.77	-3.77	---	PASS
			30~1000	-3.77	-60.35	≤ -23.77	PASS
			1000~26500	-3.77	-46	≤ -23.77	PASS



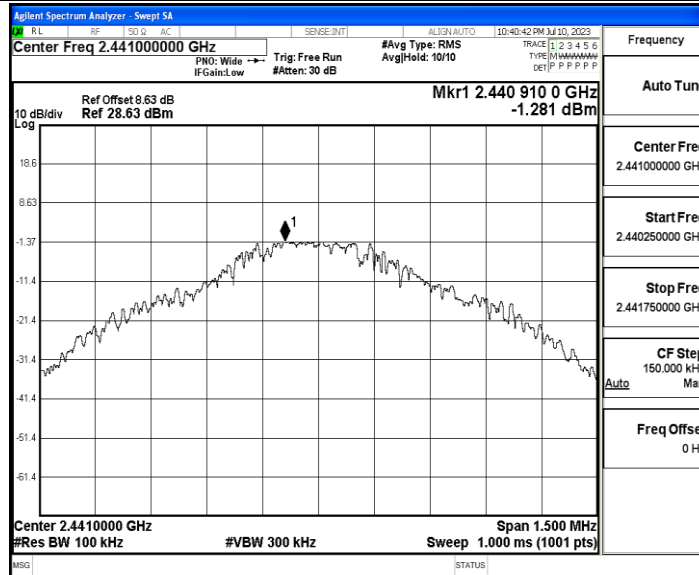


Test Graphs



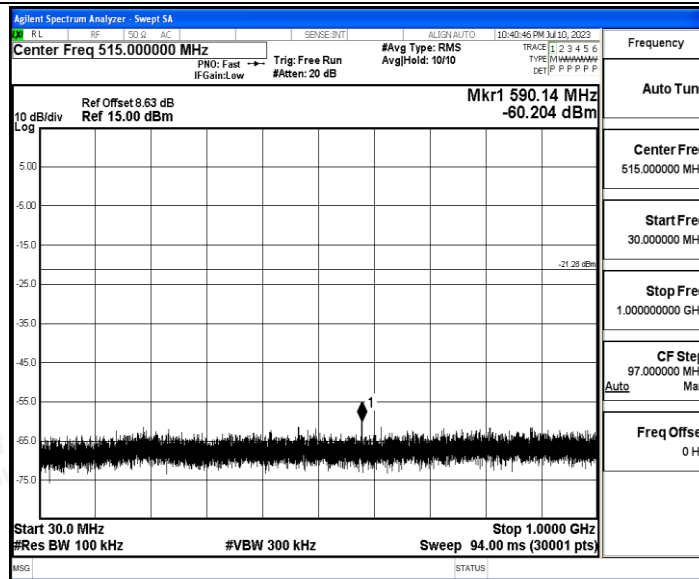


DH5_Ant1_2441_0~Reference

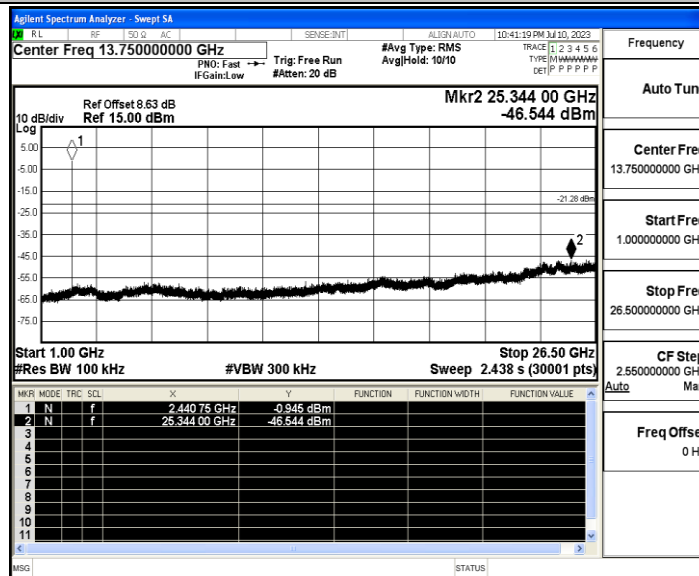


DH5_Ant1_2441_30~1000



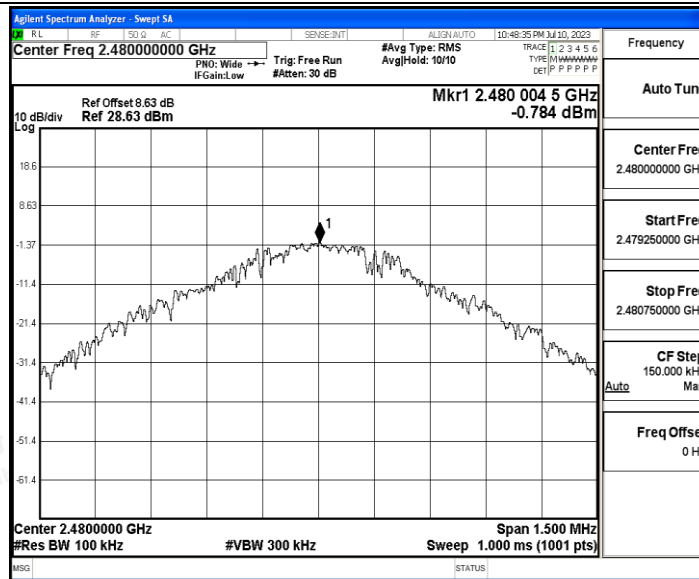


DH5_Ant1_2441_1000~26500

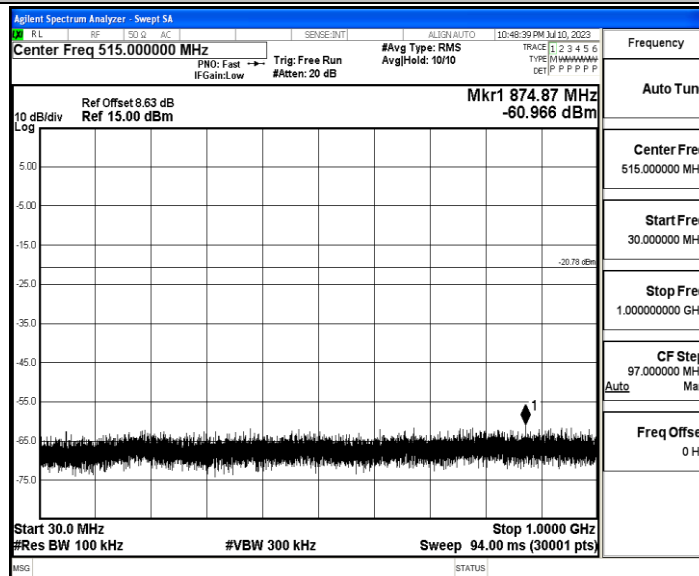


DH5_Ant1_2480_0~Reference



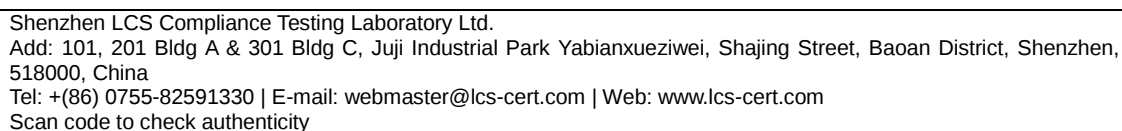
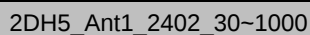
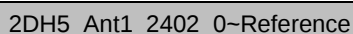


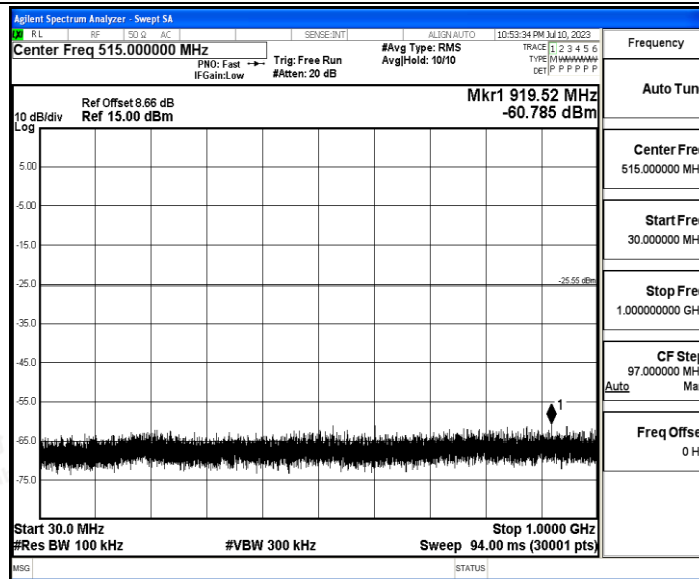
DH5_Ant1_2480_30~1000



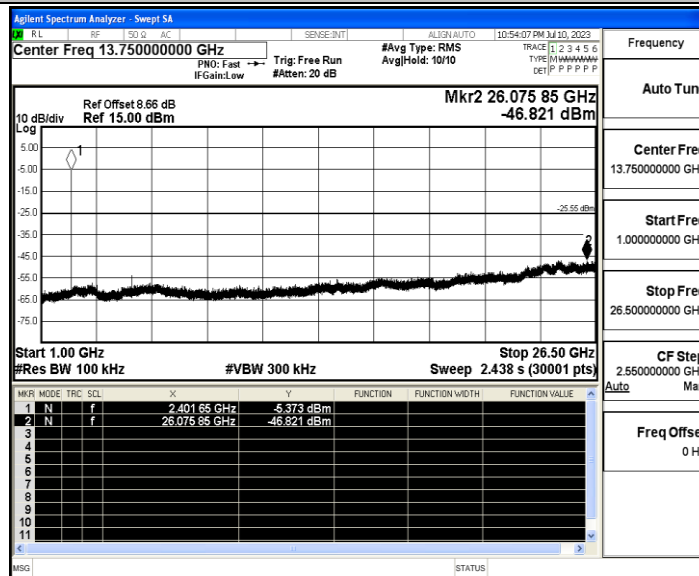
DH5_Ant1_2480_1000~26500





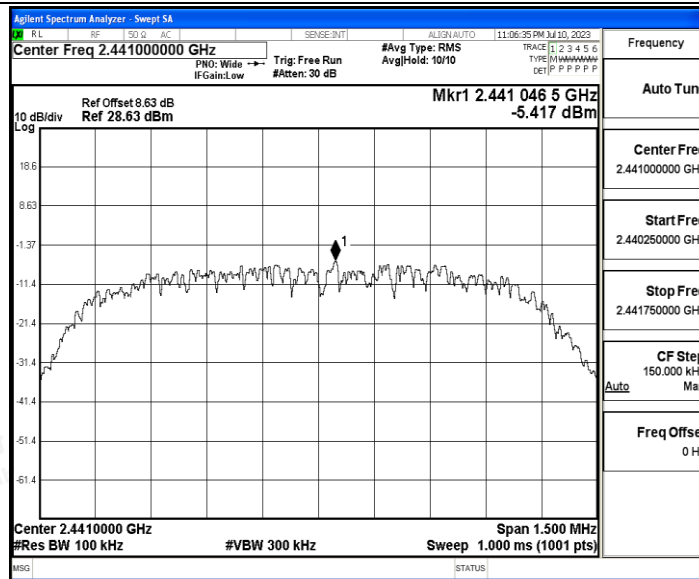


2DH5_Ant1_2402_1000~26500

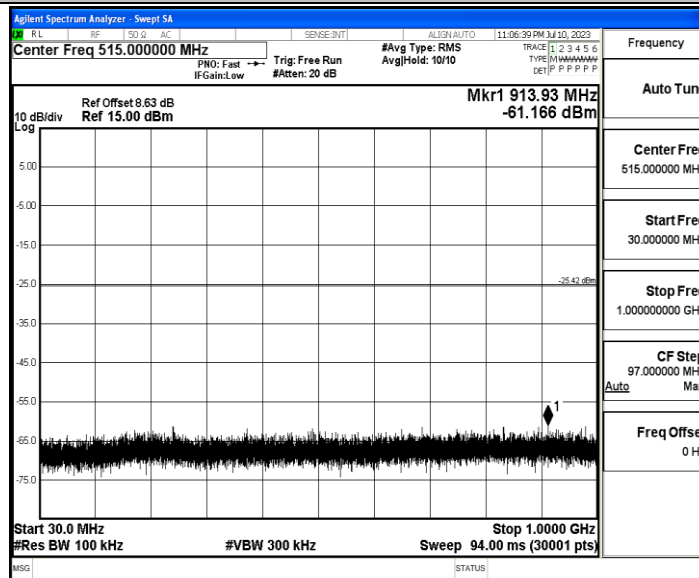


2DH5_Ant1_2441_0~Reference



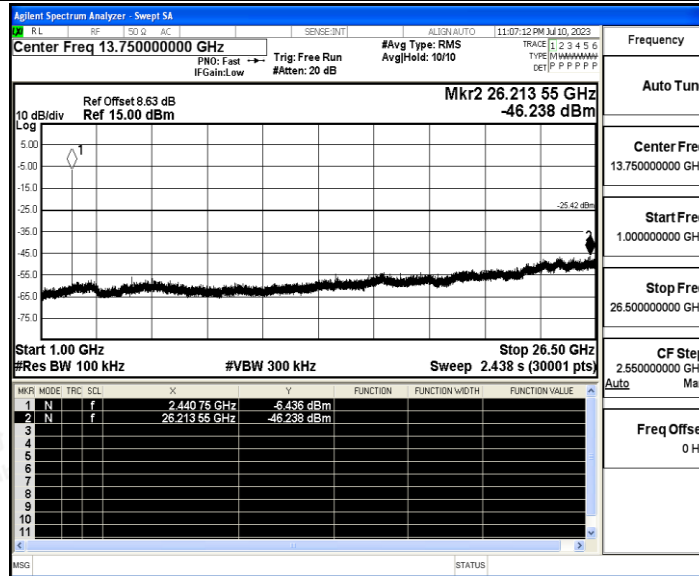


2DH5_Ant1_2441_30~1000

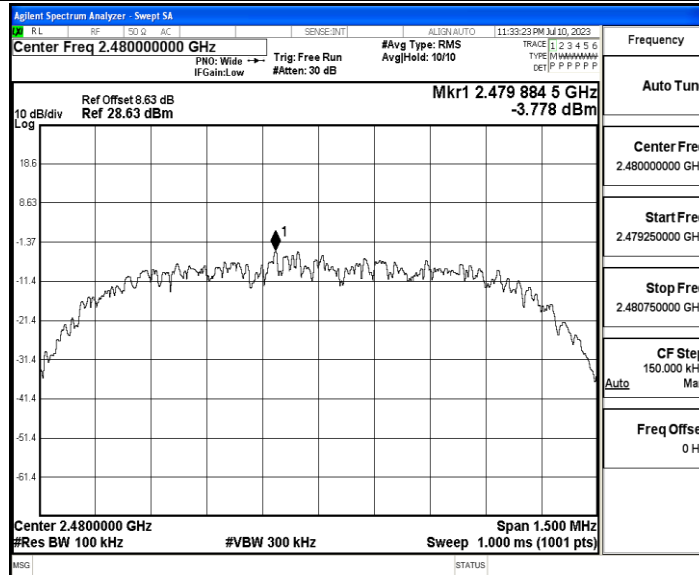


2DH5_Ant1_2441_1000~26500



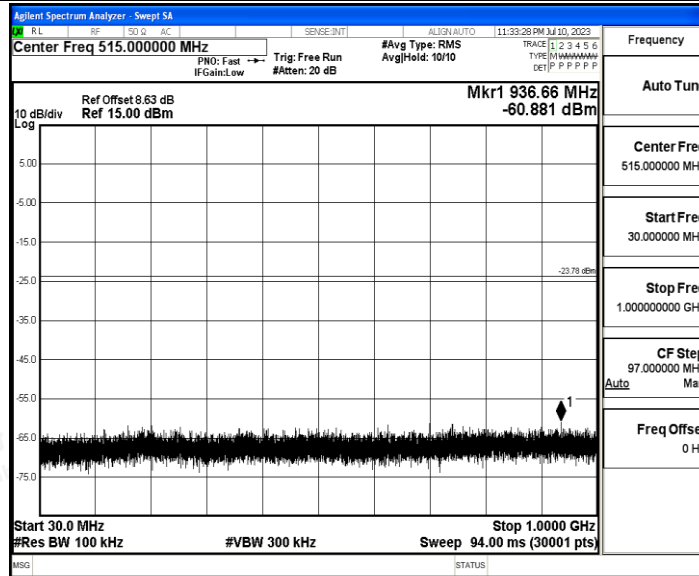


2DH5_Ant1_2480_0~Reference

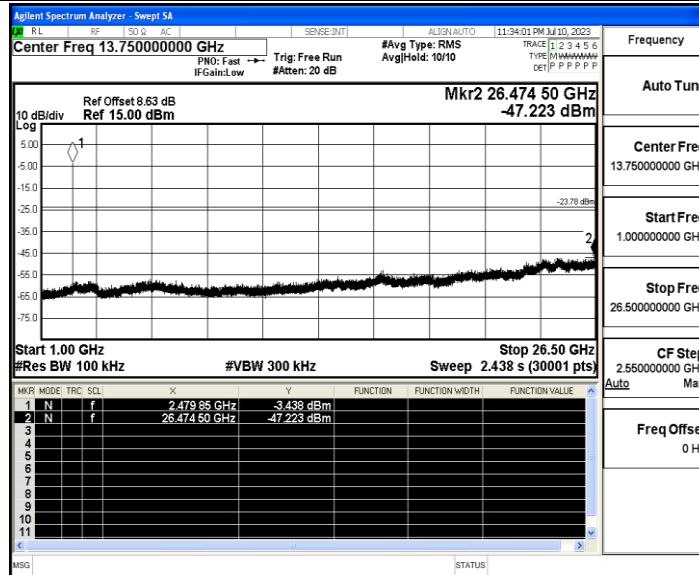


2DH5_Ant1_2480_30~1000



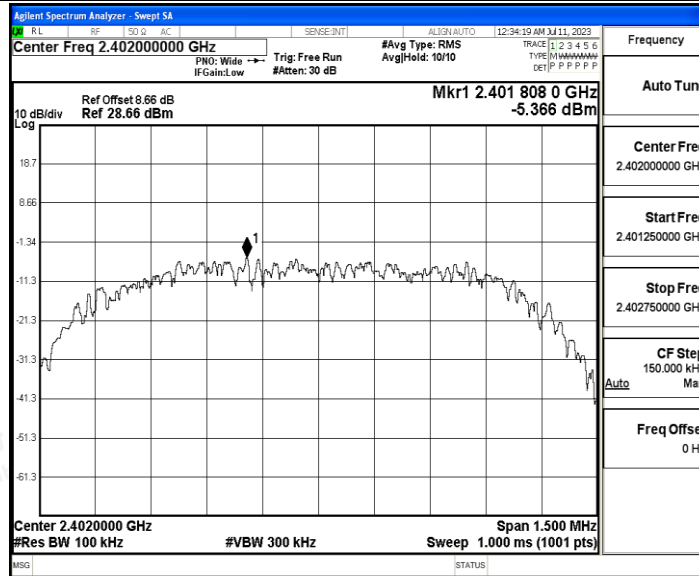


2DH5_Ant1_2480_1000~26500

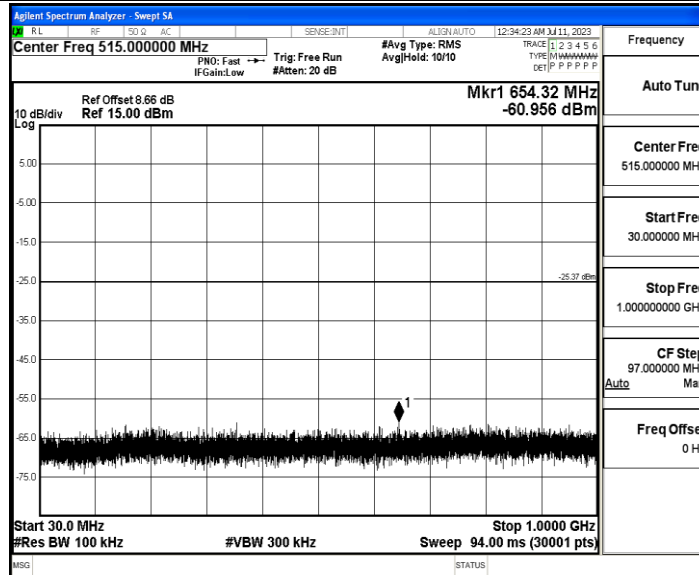


3DH5_Ant1_2402_0~Reference



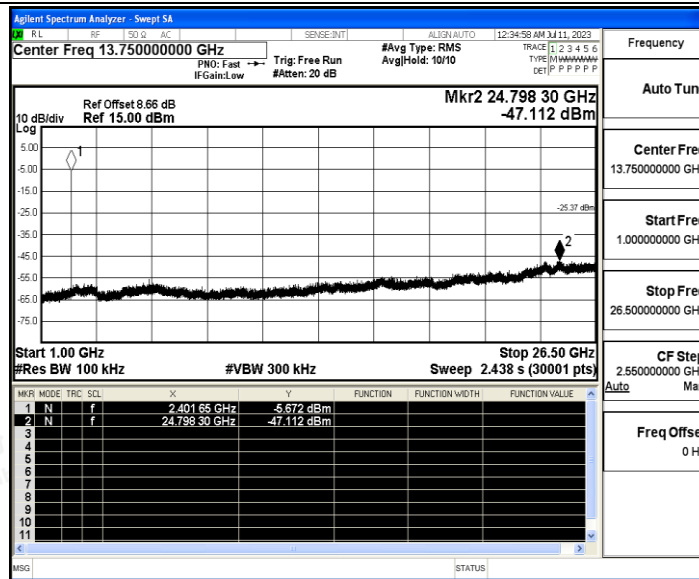


3DH5_Ant1_2402_30~1000

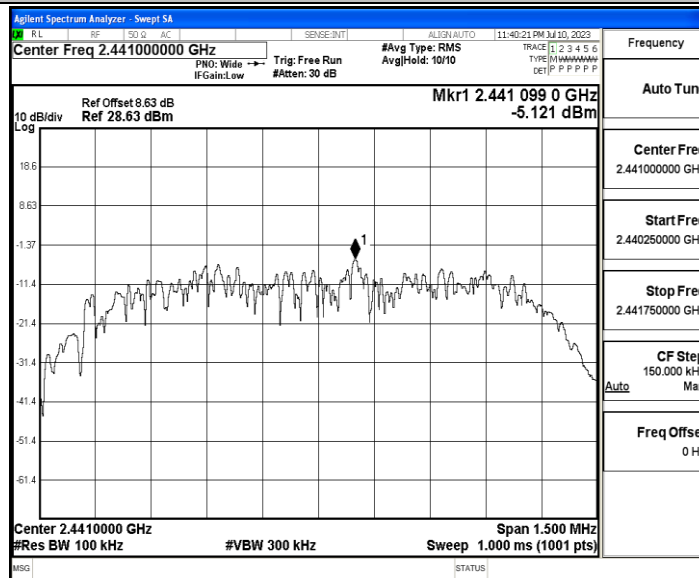


3DH5_Ant1_2402_1000~26500



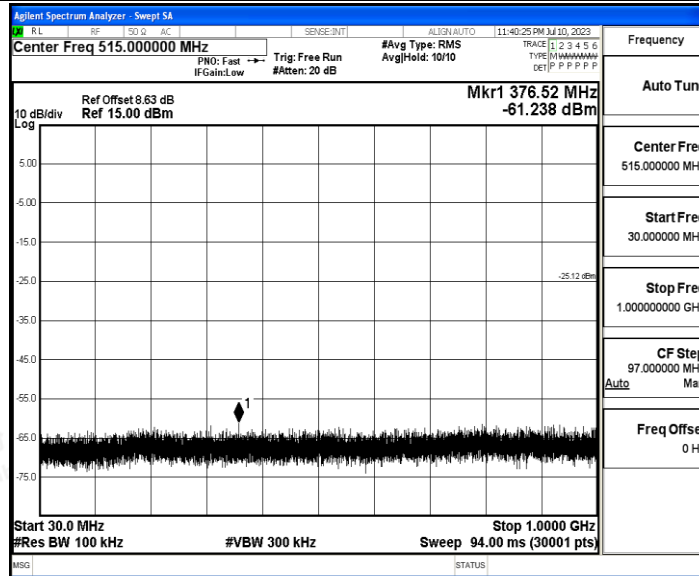


3DH5_Ant1_2441_0~Reference

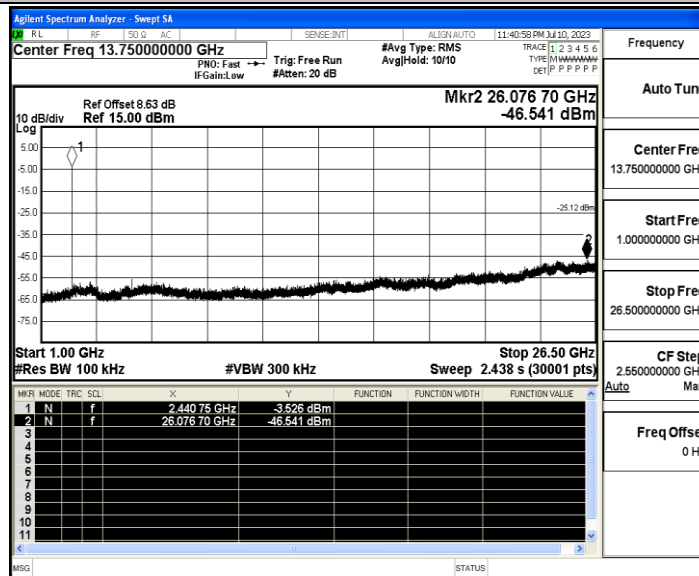


3DH5_Ant1_2441_30~1000



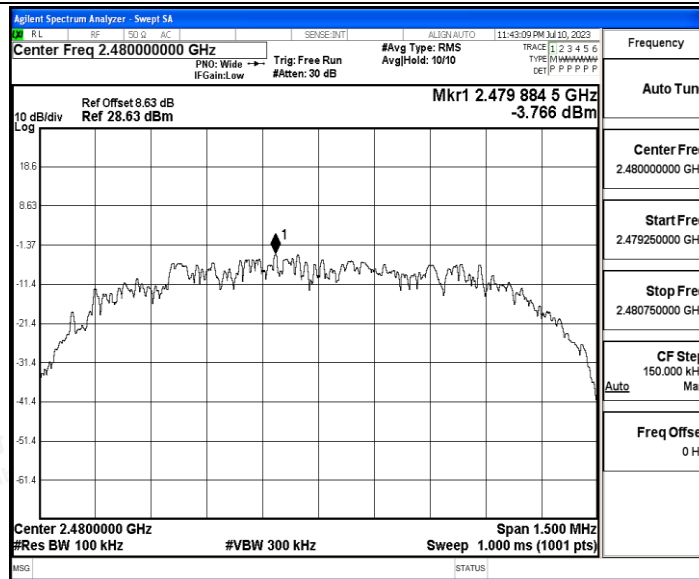


3DH5_Ant1_2441_1000~26500

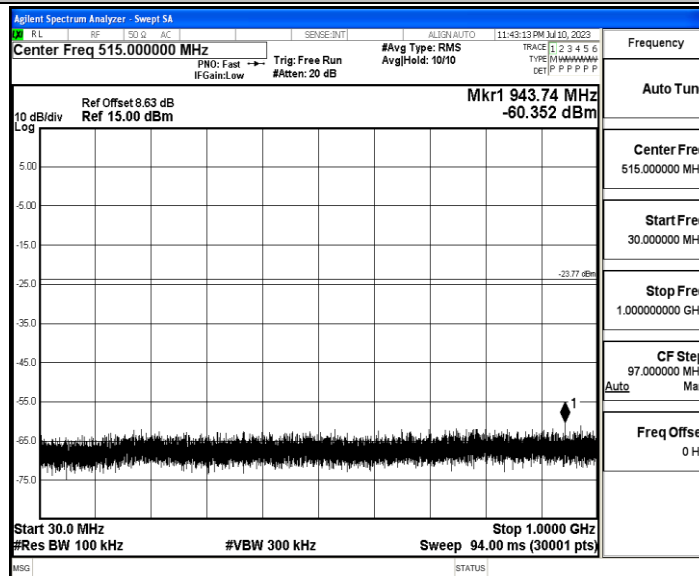


3DH5_Ant1_2480_0~Reference



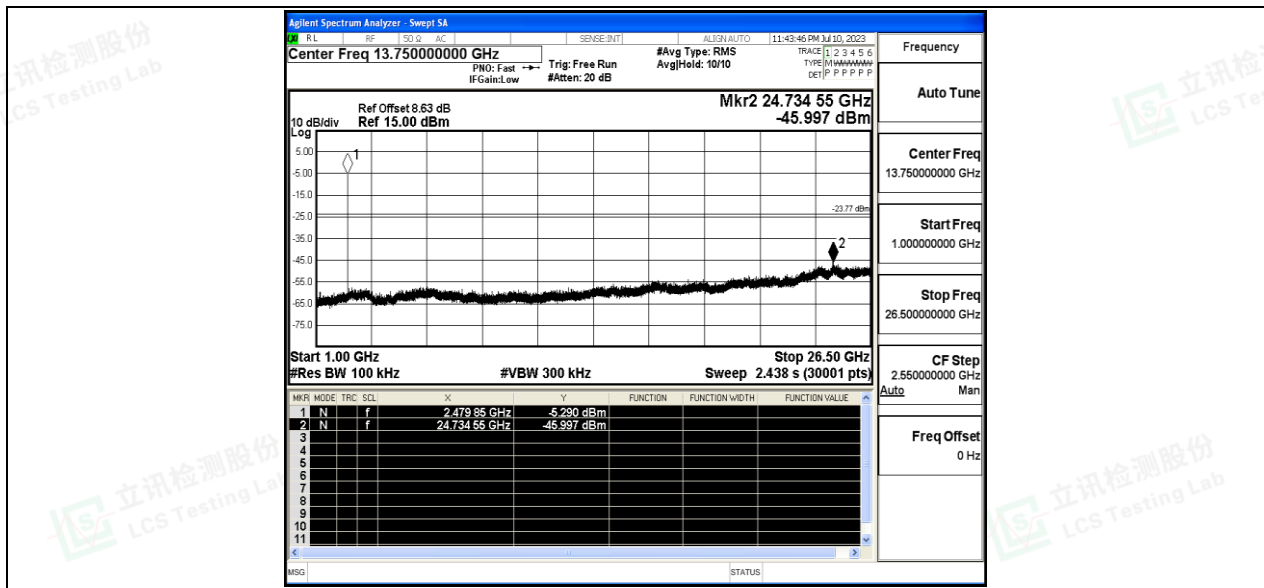


3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500







A.8 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Frequenc y[MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-48.21	≤-41.20	46.99	≤54	PASS
				AV	2386.835	-47.74	≤-41.20	47.46	≤54	PASS
				AV	2390.000	-47.96	≤-41.20	47.24	≤54	PASS
				Peak	2310.000	-41.83	≤-21.20	53.37	≤74	PASS
				Peak	2386.100	-38.72	≤-21.20	56.48	≤74	PASS
				Peak	2390.000	-42.15	≤-21.20	53.05	≤74	PASS
		High	2480	AV	2483.500	-47.38	≤-41.20	47.82	≤54	PASS
				AV	2498.800	-47.2	≤-41.20	48.00	≤54	PASS
				AV	2500.000	-47.4	≤-41.20	47.80	≤54	PASS
				Peak	2483.500	-43.7	≤-21.20	51.50	≤74	PASS
				Peak	2491.440	-38.66	≤-21.20	56.54	≤74	PASS
				Peak	2500.000	-41.99	≤-21.20	53.21	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-40.48	≤-21.20	54.72	≤74	PASS
				Peak	2382.635	-37.39	≤-21.20	57.81	≤74	PASS
				Peak	2390.000	-39.38	≤-21.20	55.82	≤74	PASS
		High	Hop_2480	Peak	2483.500	-39.41	≤-21.20	55.79	≤74	PASS
				Peak	2495.040	-37.3	≤-21.20	57.90	≤74	PASS
				Peak	2500.000	-38.36	≤-21.20	56.84	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-48.29	≤-41.20	46.91	≤54	PASS
				AV	2387.045	-47.74	≤-41.20	47.46	≤54	PASS
				AV	2390.000	-47.92	≤-41.20	47.28	≤54	PASS
				Peak	2310.000	-43.81	≤-21.20	51.39	≤74	PASS
				Peak	2352.605	-38.55	≤-21.20	56.65	≤74	PASS
				Peak	2390.000	-42.46	≤-21.20	52.74	≤74	PASS
		High	2480	AV	2483.500	-47.36	≤-41.20	47.84	≤54	PASS
				AV	2499.200	-47.23	≤-41.20	47.97	≤54	PASS
				AV	2500.000	-47.4	≤-41.20	47.80	≤54	PASS
				Peak	2483.500	-42.86	≤-21.20	52.34	≤74	PASS
				Peak	2494.720	-38.46	≤-21.20	56.74	≤74	PASS
				Peak	2500.000	-40.75	≤-21.20	54.45	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-40.53	≤-21.20	54.67	≤74	PASS
				Peak	2380.745	-37.91	≤-21.20	57.29	≤74	PASS
				Peak	2390.000	-40.39	≤-21.20	54.81	≤74	PASS
		High	Hop_2480	Peak	2483.500	-39.33	≤-21.20	55.87	≤74	PASS
				Peak	2495.120	-36.7	≤-21.20	58.50	≤74	PASS
				Peak	2500.000	-37.47	≤-21.20	57.73	≤74	PASS



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Scan code to check authenticity



3DH5	Ant1	Low	2402	AV	2310.000	-48.24	≤-41.20	46.96	≤54	PASS
				AV	2379.170	-47.79	≤-41.20	47.41	≤54	PASS
				AV	2390.000	-47.88	≤-41.20	47.32	≤54	PASS
				Peak	2310.000	-44.03	≤-21.20	51.17	≤74	PASS
				Peak	2373.185	-38.75	≤-21.20	56.45	≤74	PASS
				Peak	2390.000	-41.77	≤-21.20	53.43	≤74	PASS
		High	2480	AV	2483.500	-47.32	≤-41.20	47.88	≤54	PASS
				AV	2497.040	-47.21	≤-41.20	47.99	≤54	PASS
				AV	2500.000	-47.35	≤-41.20	47.85	≤54	PASS
				Peak	2483.500	-42.68	≤-21.20	52.52	≤74	PASS
				Peak	2487.760	-39.13	≤-21.20	56.07	≤74	PASS
				Peak	2500.000	-41.9	≤-21.20	53.30	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-40.35	≤-21.20	54.85	≤74	PASS
				Peak	2366.675	-37.38	≤-21.20	57.82	≤74	PASS
				Peak	2390.000	-40.19	≤-21.20	55.01	≤74	PASS
		High	Hop_2480	Peak	2483.500	-40.33	≤-21.20	54.87	≤74	PASS
				Peak	2496.640	-36.52	≤-21.20	58.68	≤74	PASS
				Peak	2500.000	-39.09	≤-21.20	56.11	≤74	PASS

Note:

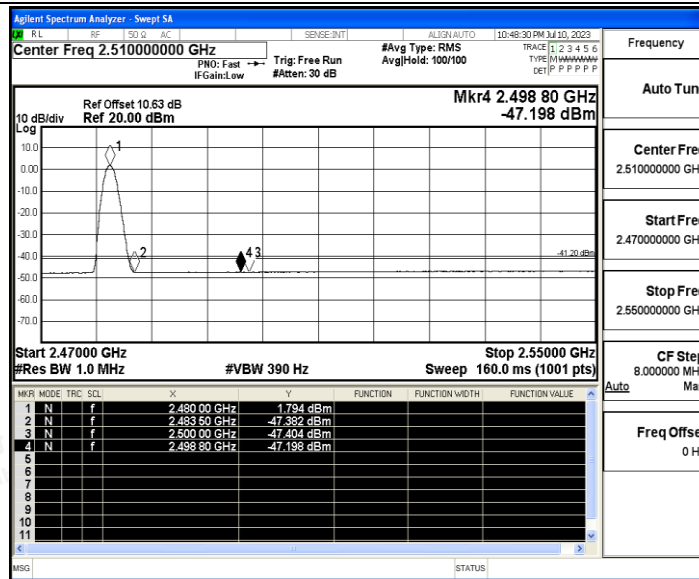
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



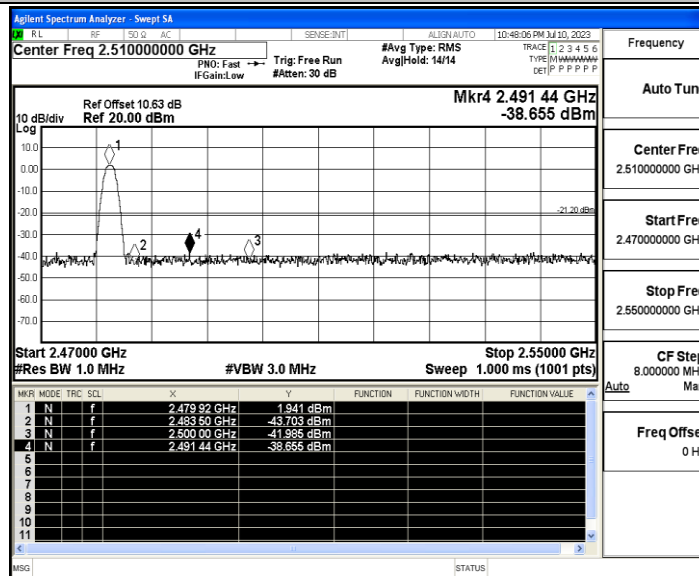


Test Graphs



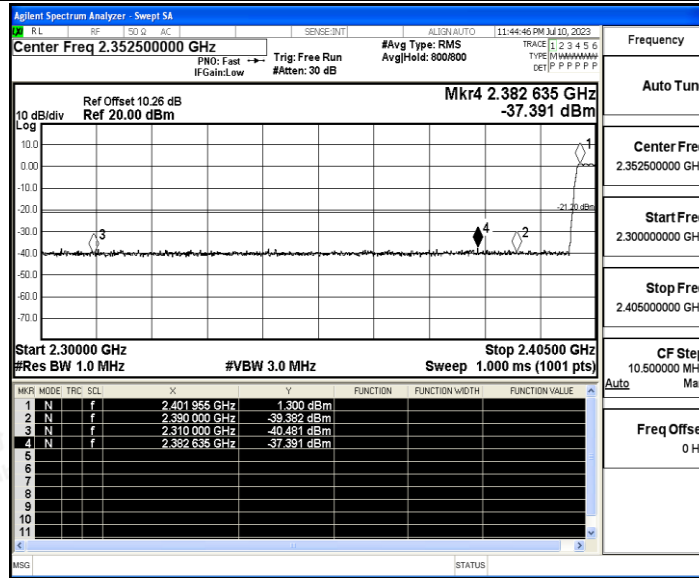


DH5_Ant1_High_2480_Peak

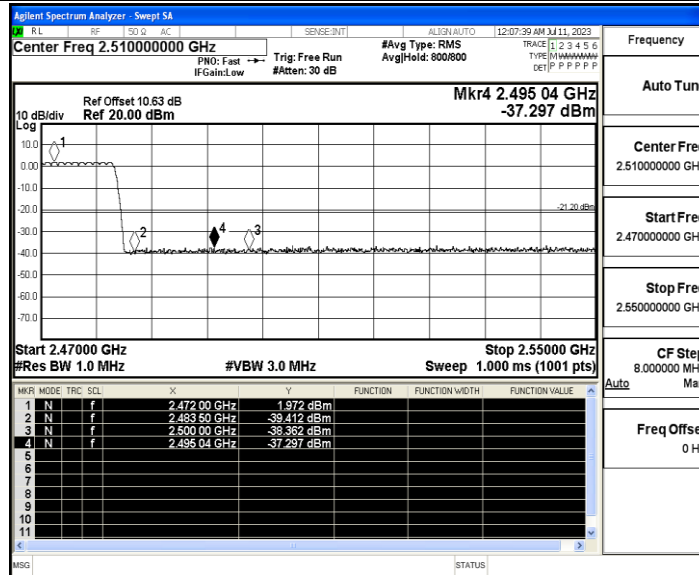


DH5_Ant1_Low_Hop_2402_Peak



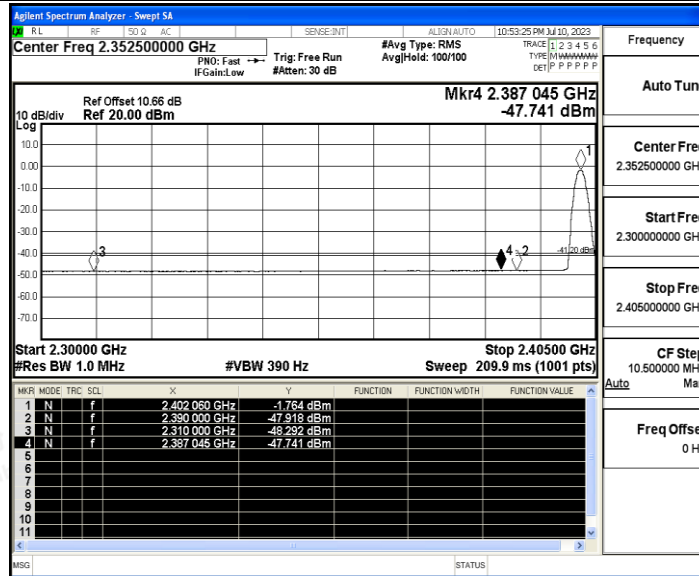


DH5_Ant1_High_Hop_2480_Peak

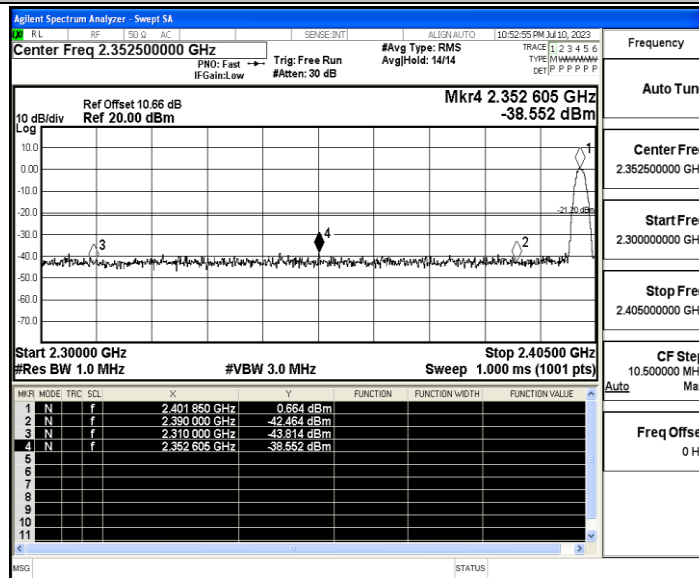


2DH5_Ant1_Low_2402_AV



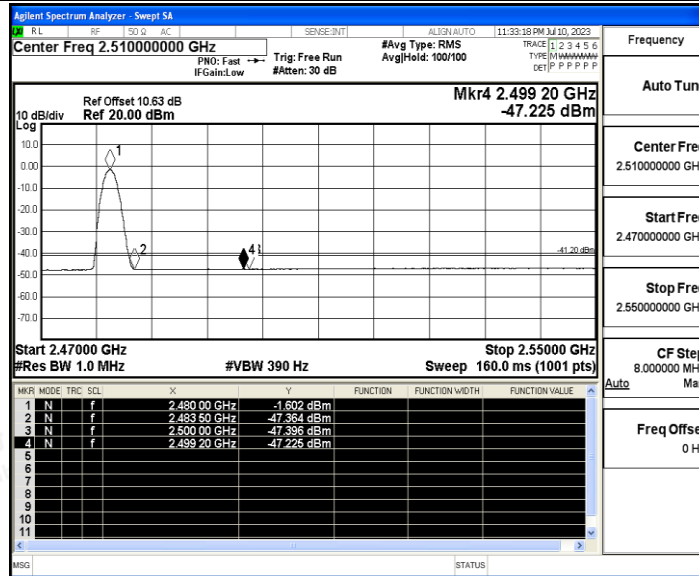


2DH5_Ant1_Low_2402_Peak

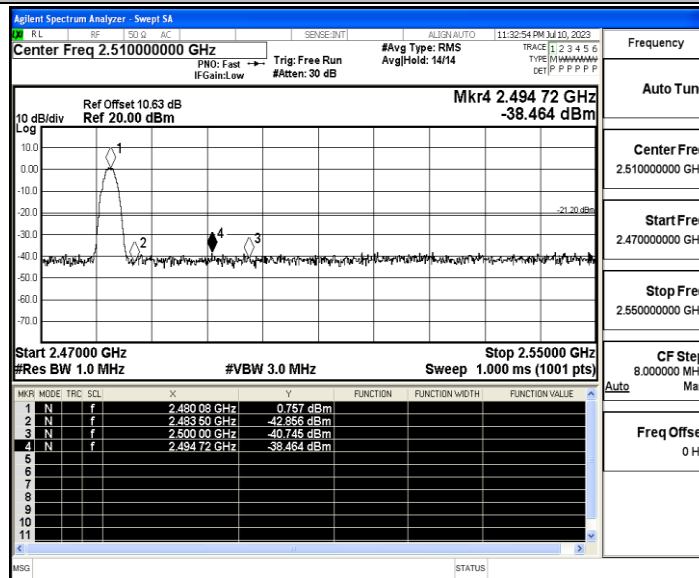


2DH5_Ant1_High_2480_AV



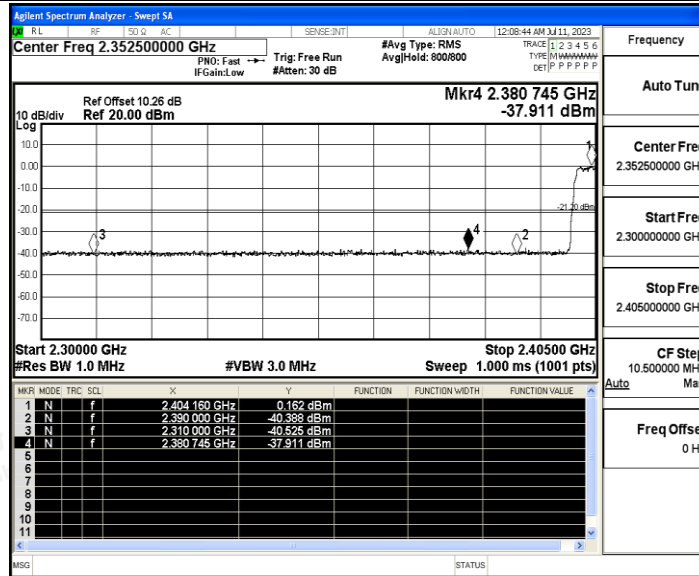


2DH5_Ant1_High_2480_Peak

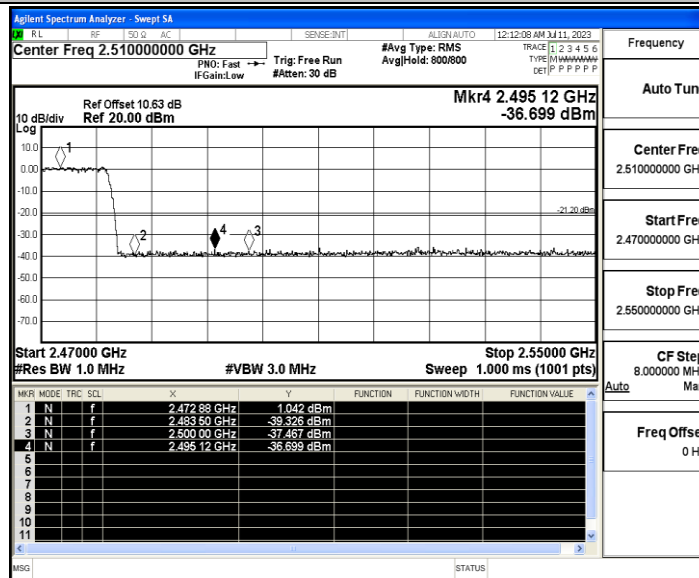


2DH5_Ant1_Low_Hop_2402_Peak



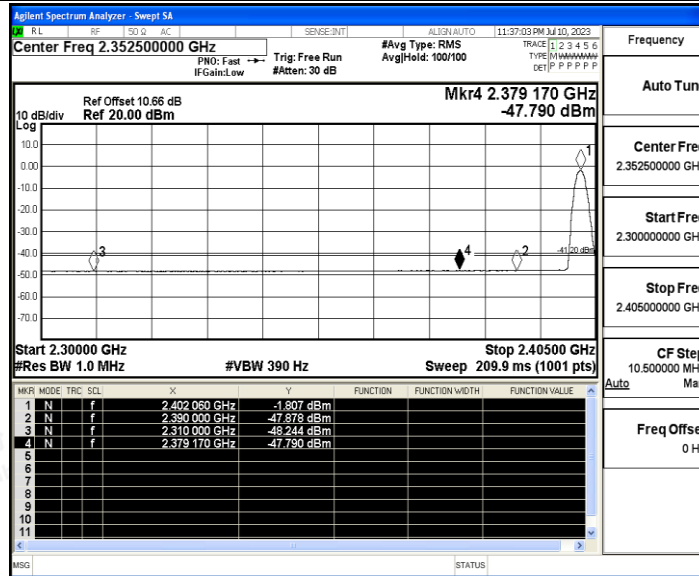


2DH5_Ant1_High_Hop_2480_Peak

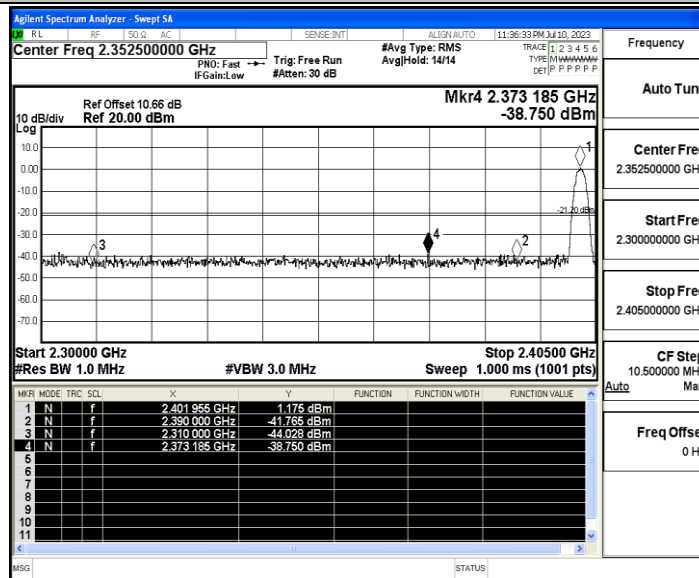


3DH5_Ant1_Low_2402_AV



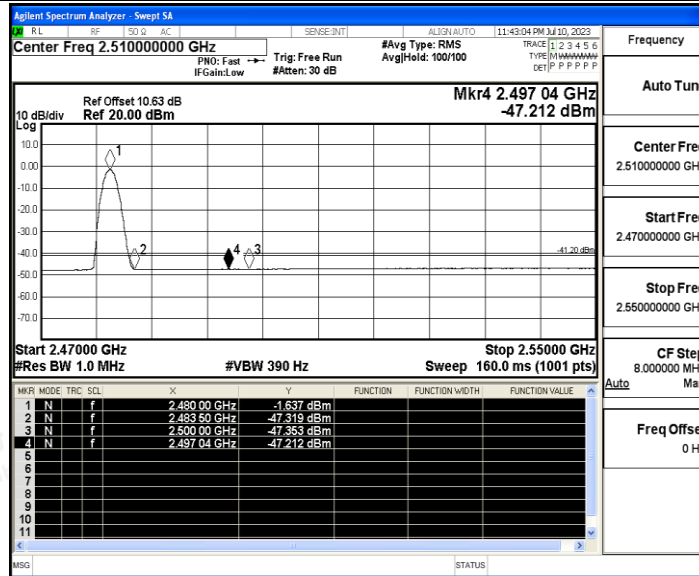


3DH5_Ant1_Low_2402_Peak

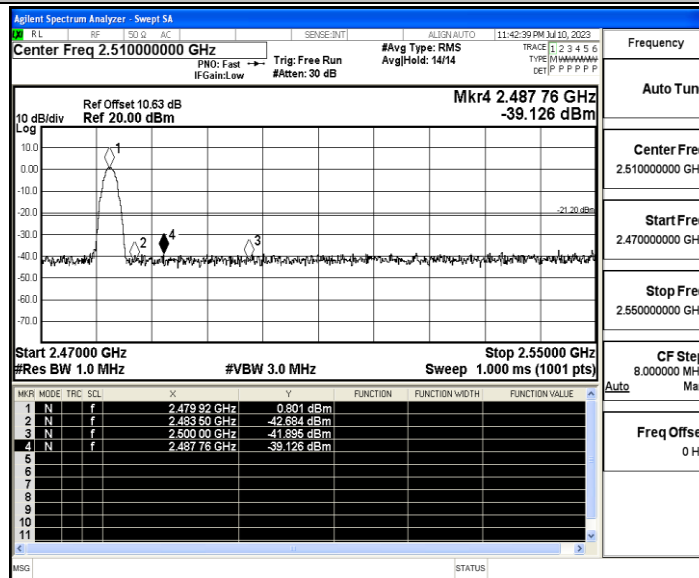


3DH5_Ant1_High_2480_AV



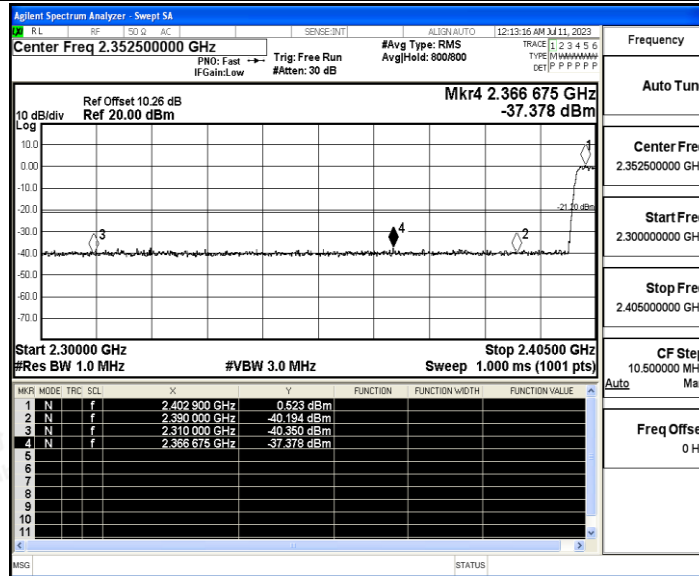


3DH5_Ant1_High_2480_Peak



3DH5_Ant1_Low_Hop_2402_Peak





3DH5_Ant1_High_Hop_2480_Peak

