



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Bluetooth Speaker

Test Model: VIBE GO

Environmental Conditions

Temperature:	23.8°C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Summer Wu
Supervised by:	Nick Peng





A.1 20dB Emission Bandwidth

Test Result

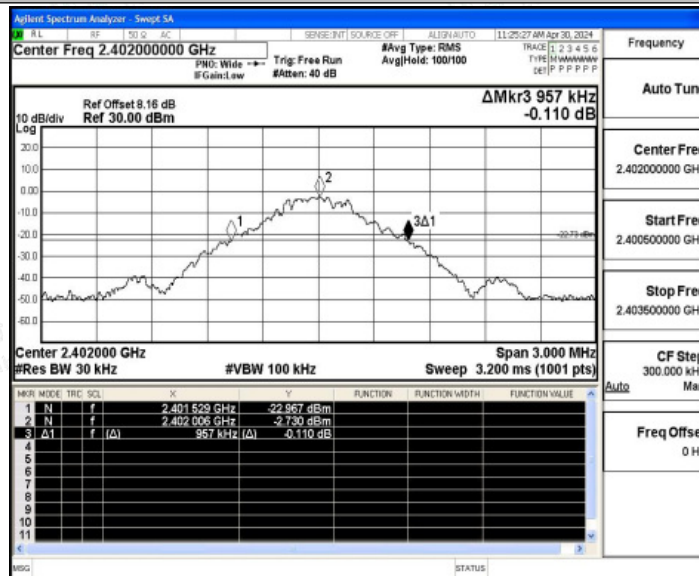
TestMode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.957	2401.529	2402.486	---	---
		2441	1.029	2440.463	2441.492	---	---
		2480	1.026	2479.457	2480.483	---	---
2DH5	Ant1	2402	1.314	2401.337	2402.651	---	---
		2441	1.278	2440.373	2441.651	---	---
		2480	1.287	2479.358	2480.645	---	---



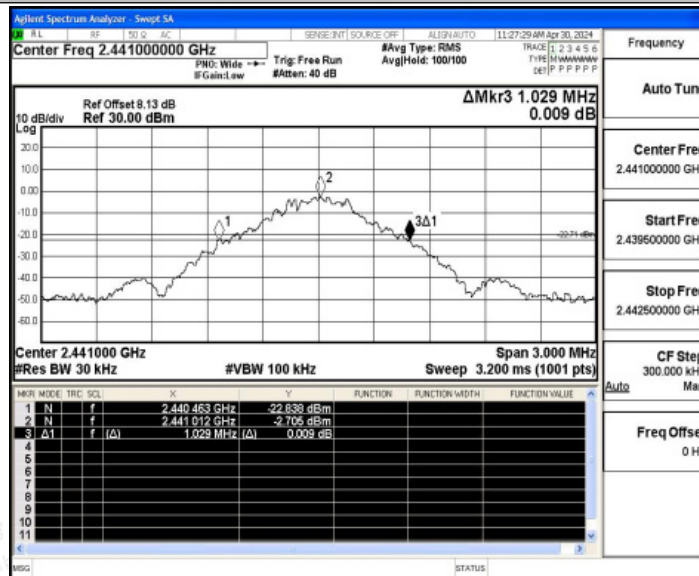


Test Graphs

DH5_Ant1_2402

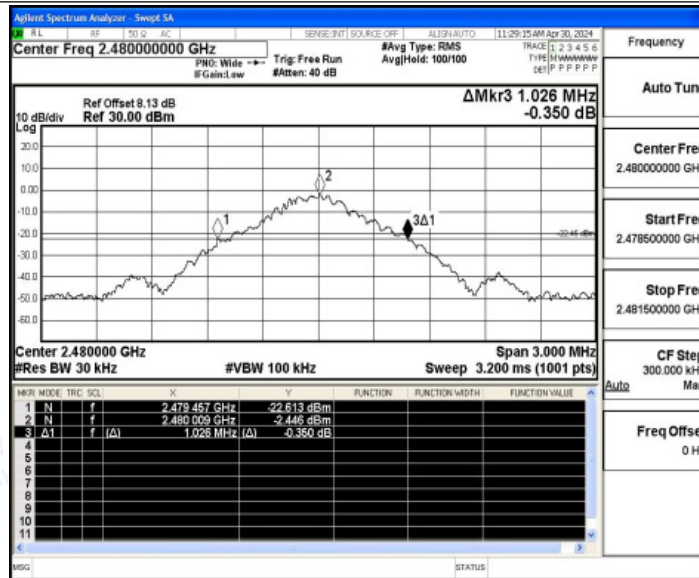


DH5_Ant1_2441

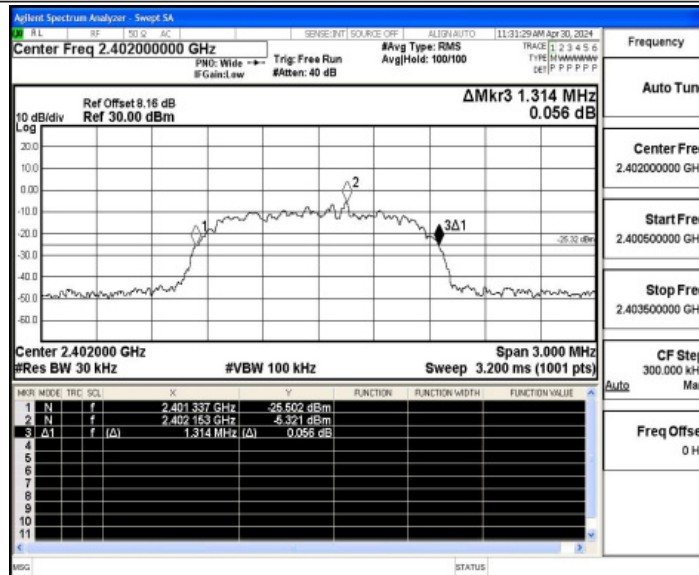


DH5_Ant1_2480



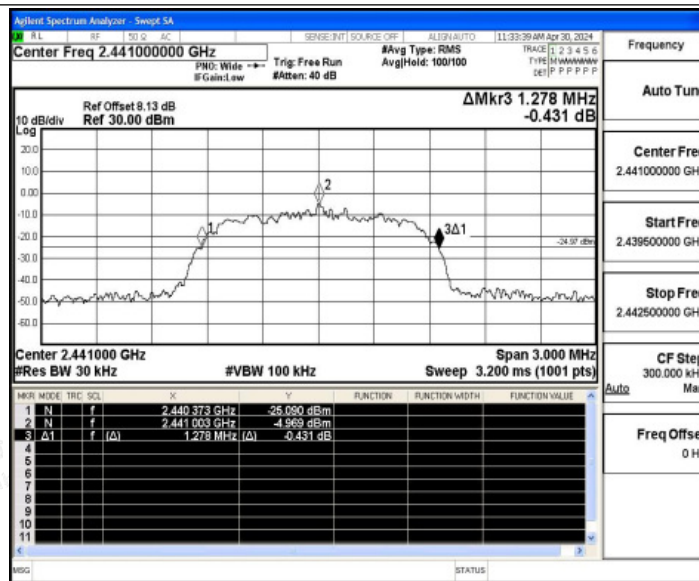


2DH5_Ant1_2402

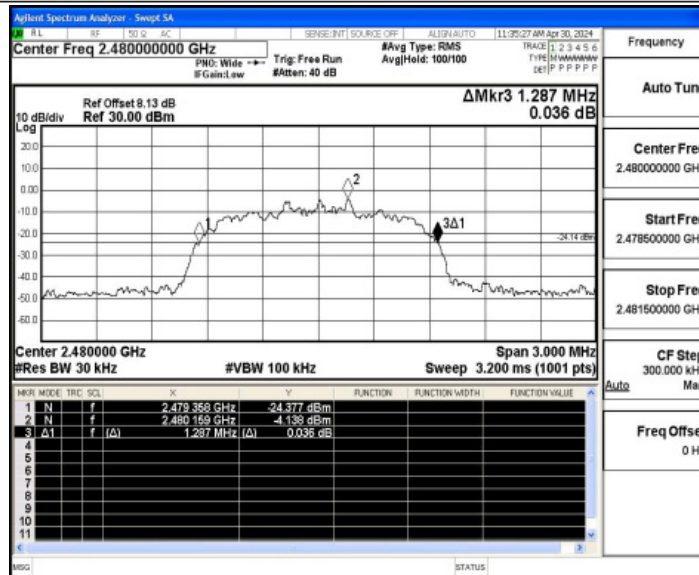


2DH5_Ant1_2441





2DH5_Ant1_2480



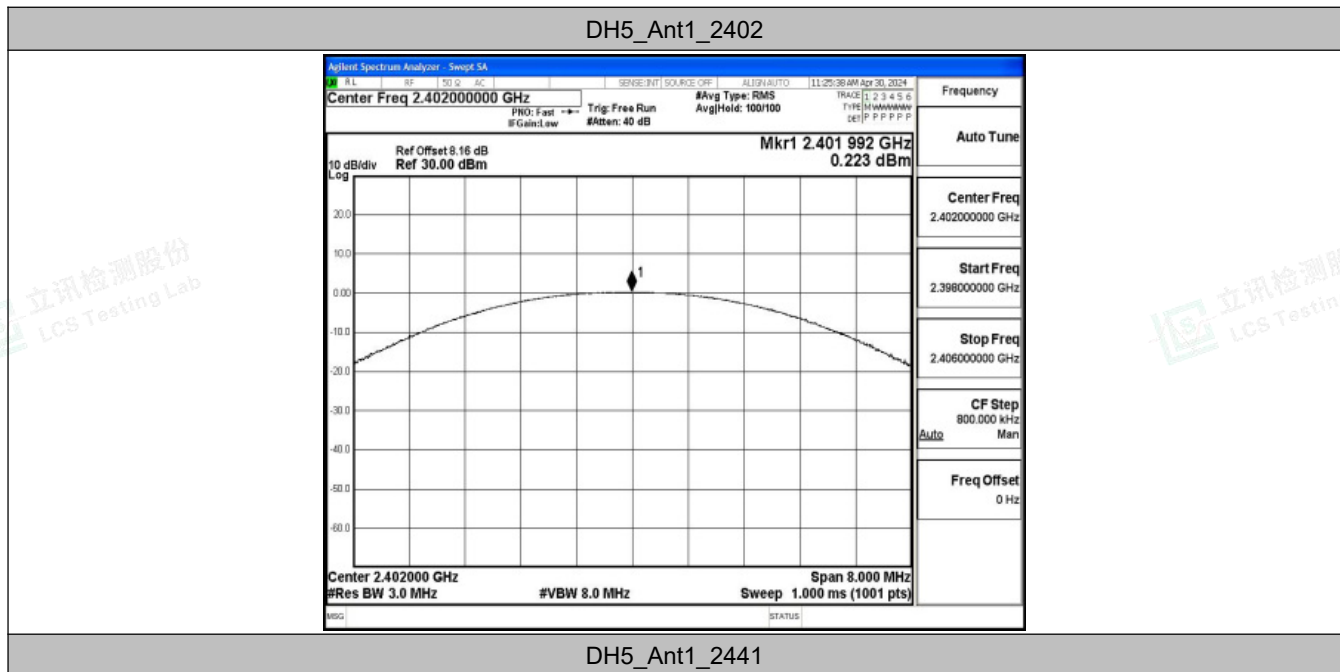


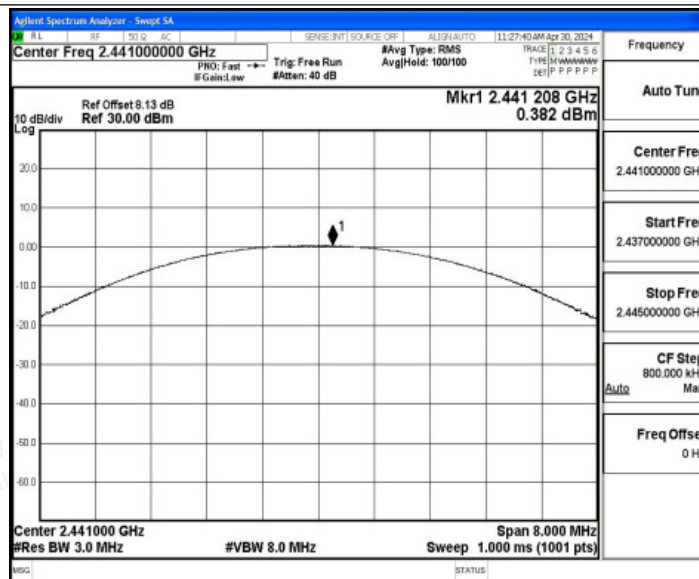
A.2 Maximum conducted output power

Test Result Peak

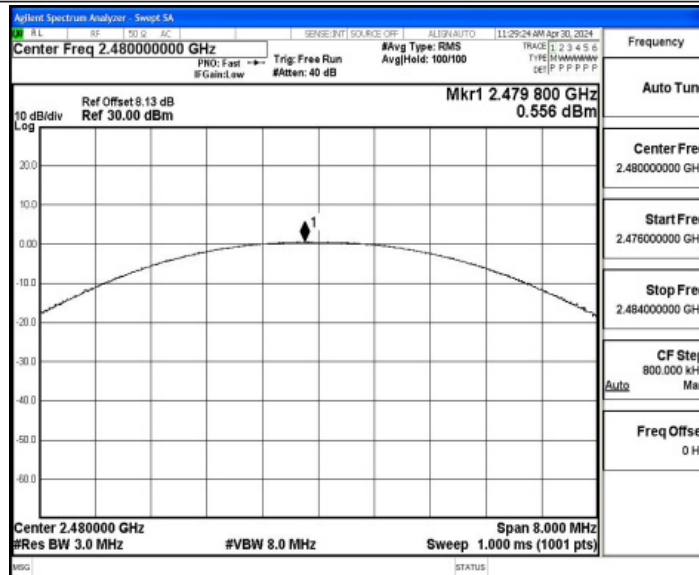
Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH5	Ant1	2402	0.22	≤20.97	PASS
		2441	0.38	≤20.97	PASS
		2480	0.56	≤20.97	PASS
2DH5	Ant1	2402	0.10	≤20.97	PASS
		2441	0.10	≤20.97	PASS
		2480	0.22	≤20.97	PASS

Test Graphs



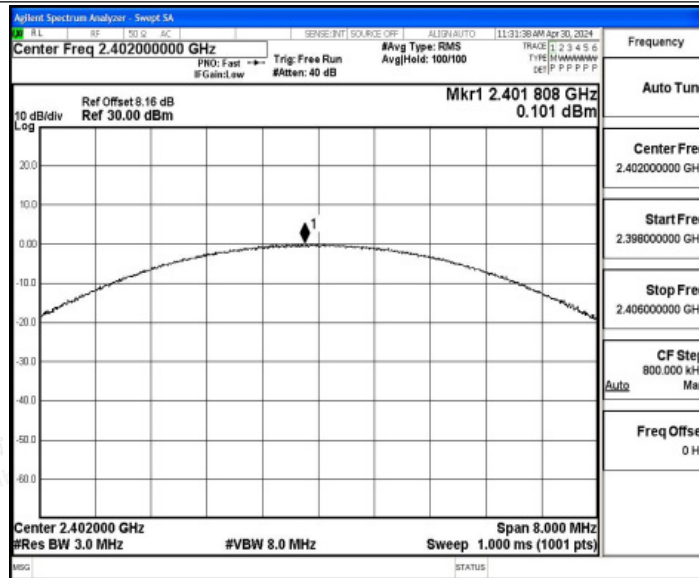


DH5_Ant1_2480

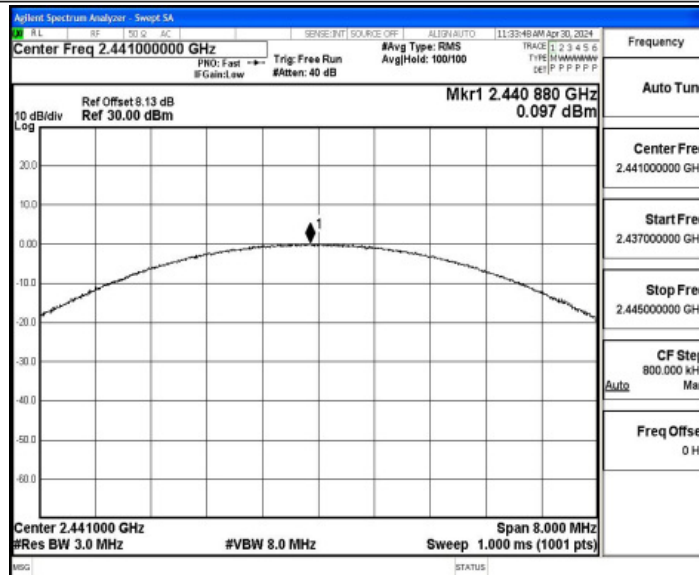


2DH5_Ant1_2402



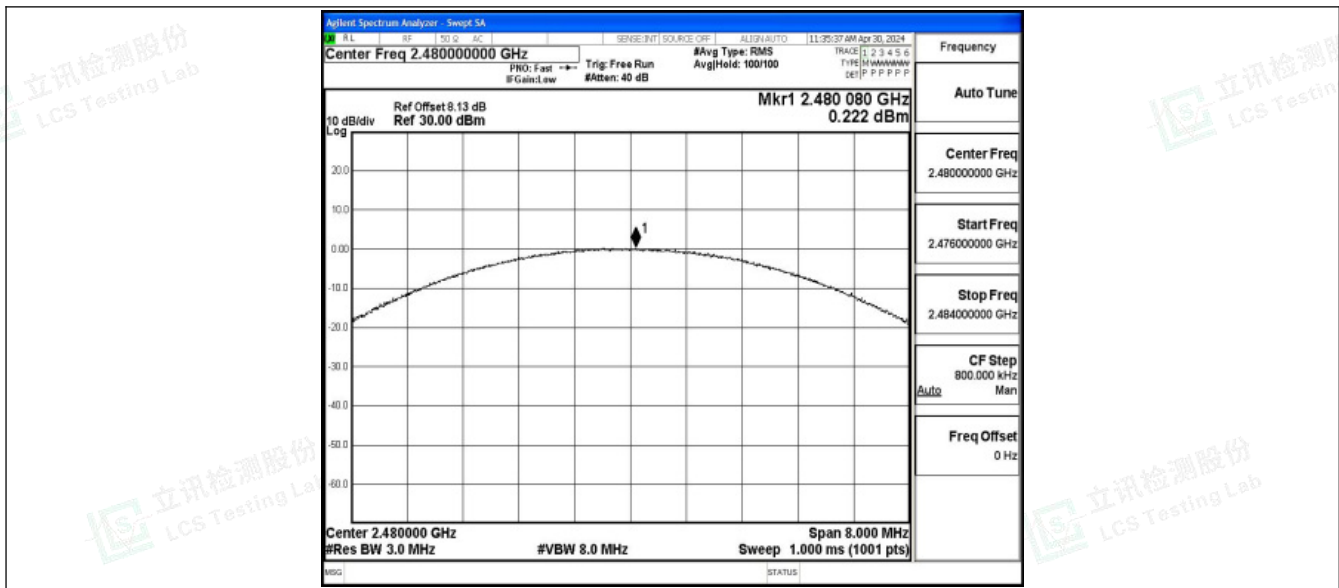


2DH5_Ant1_2441



2DH5_Ant1_2480







A.3 Carrier frequency separation

Test Result

TestMode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.156	≥ 1.029	PASS
2DH5	Ant1	Hop	0.918	≥ 0.876	PASS





Test Graphs





A.4 Time of occupancy

Test Result

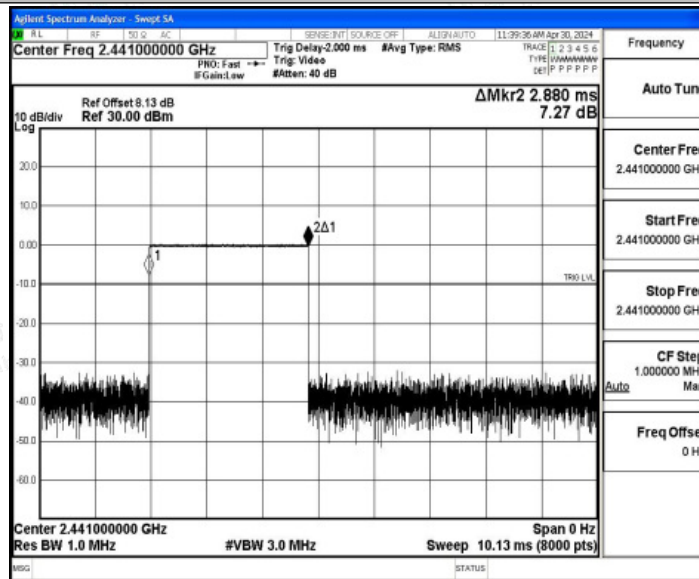
TestMode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.880	106.67	0.307	≤0.4	PASS
2DH5	Ant1	Hop	2.884	106.67	0.308	≤0.4	PASS



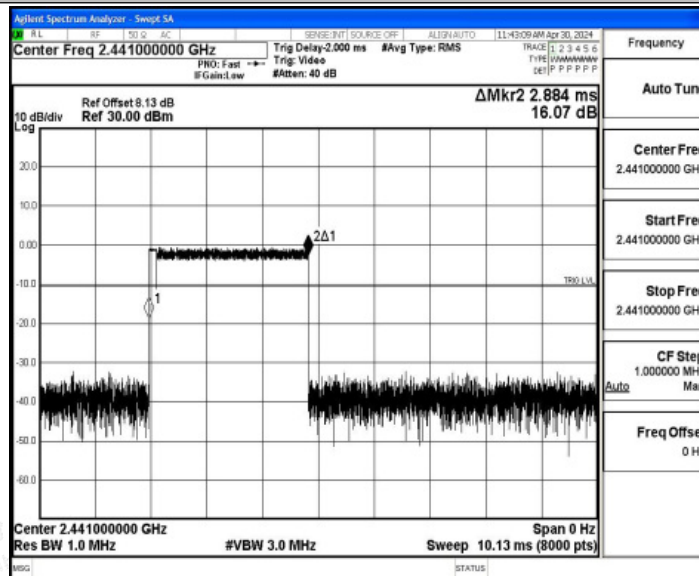


Test Graphs

DH5_Ant1_Hop



2DH5_Ant1_Hop





A.5 Number of hopping channels

Test Result

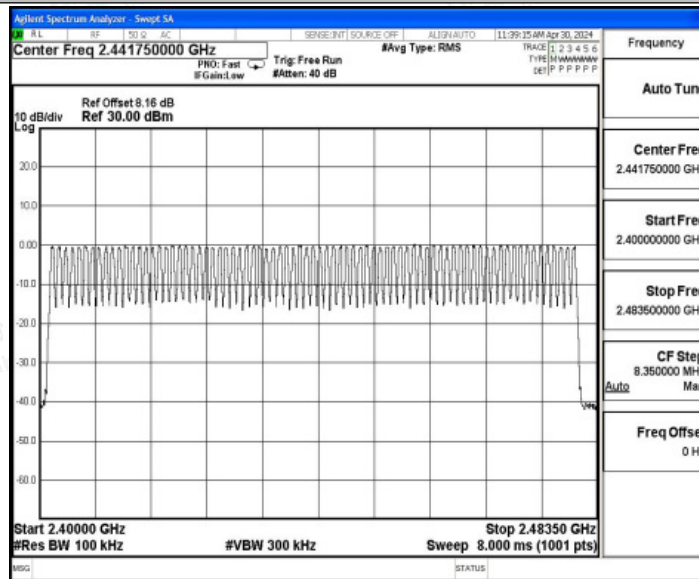
TestMode	Antenna	Frequency[MHz]	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS



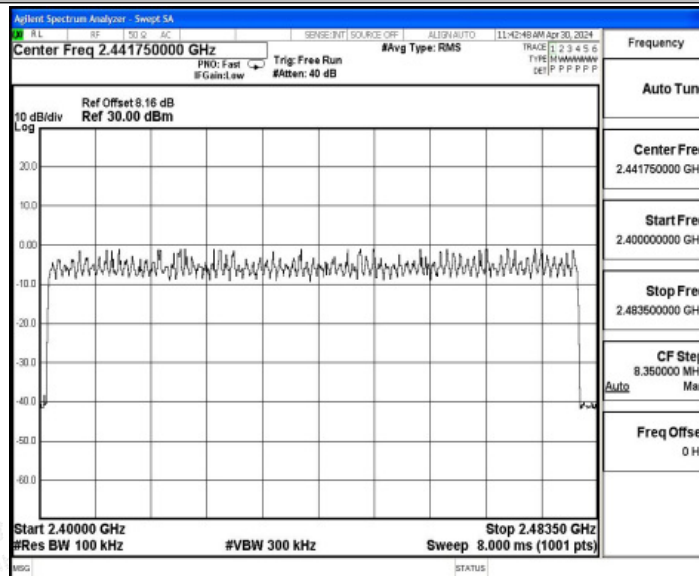


Test Graphs

DH5_Ant1_Hop



2DH5_Ant1_Hop





A.6 Band edge measurements

Test Result

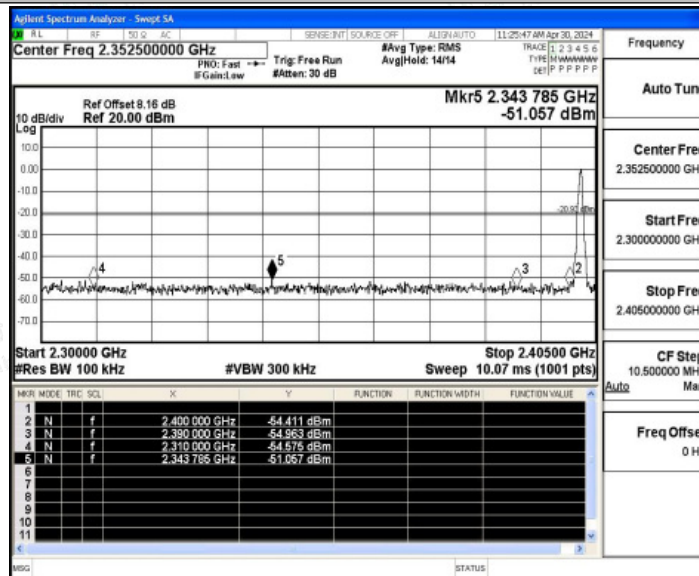
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-0.93	-51.06	≤ -20.93	PASS
		High	2480	-0.01	-51.07	≤ -20.01	PASS
		Low	Hop_2402	-1.12	-49.28	≤ -21.12	PASS
		High	Hop_2480	-0.16	-48.68	≤ -20.16	PASS
2DH5	Ant1	Low	2402	-1.70	-50.81	≤ -21.7	PASS
		High	2480	-1.03	-49.84	≤ -21.03	PASS
		Low	Hop_2402	-1.90	-49.91	≤ -21.9	PASS
		High	Hop_2480	-1.05	-49.28	≤ -21.05	PASS



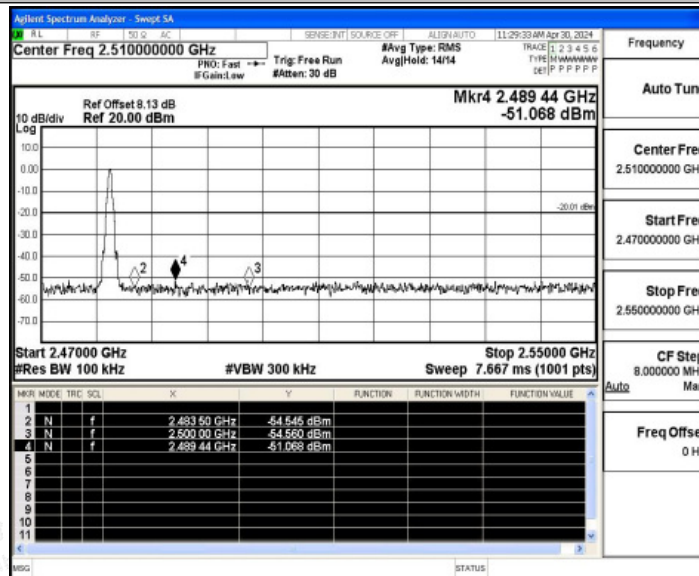


Test Graphs

DH5_Ant1_Low_2402

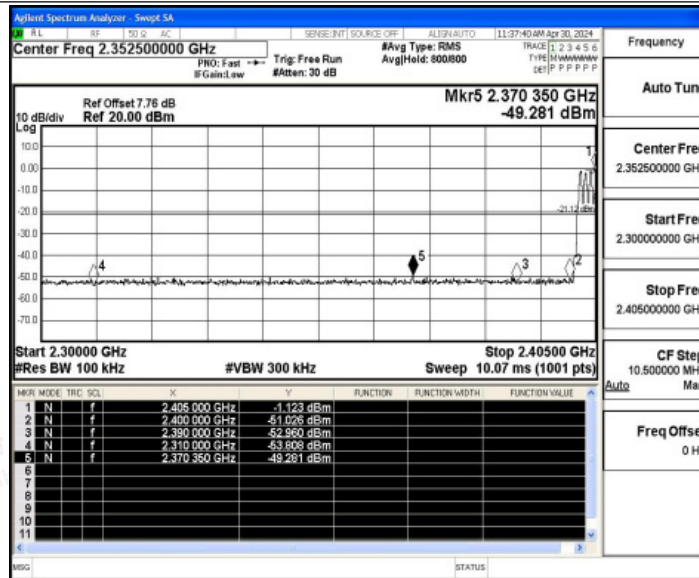


DH5_Ant1_High_2480

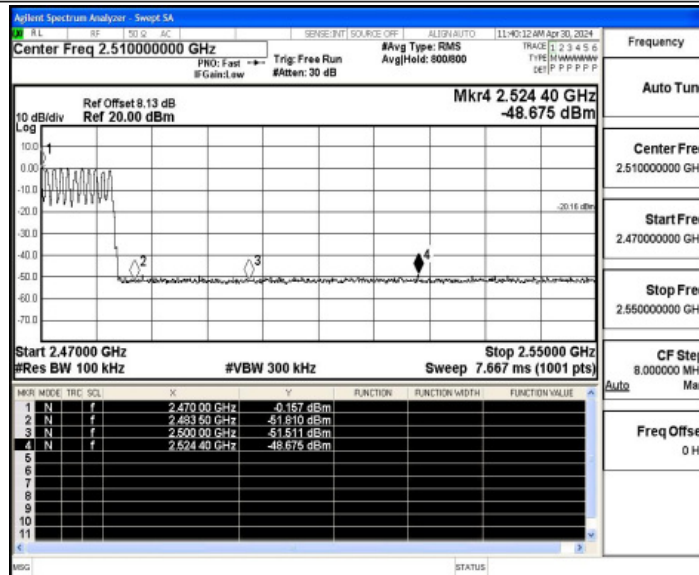


DH5_Ant1_Low_Hop_2402



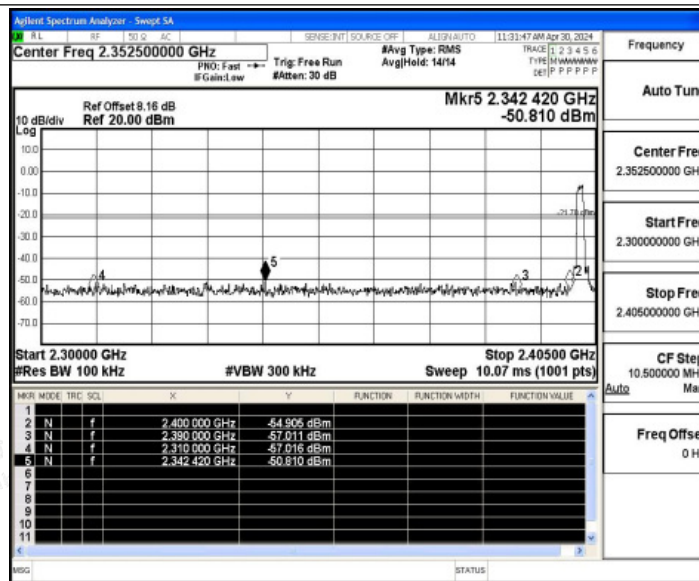


DH5_Ant1_High_Hop_2480

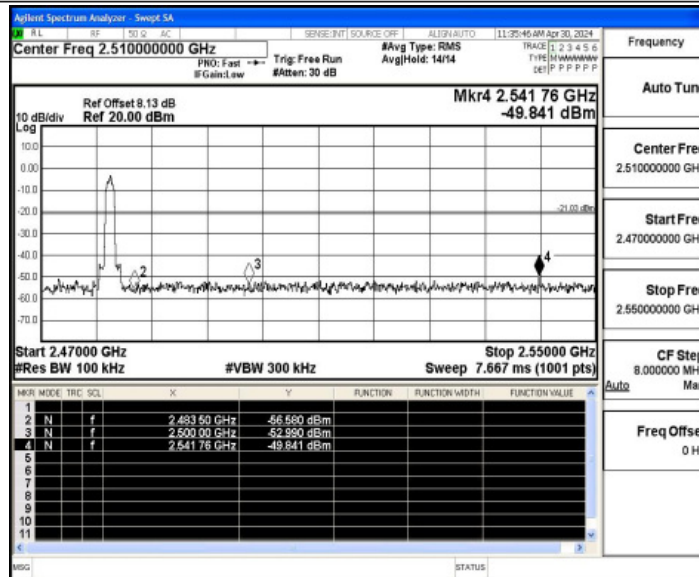


2DH5_Ant1_Low_2402



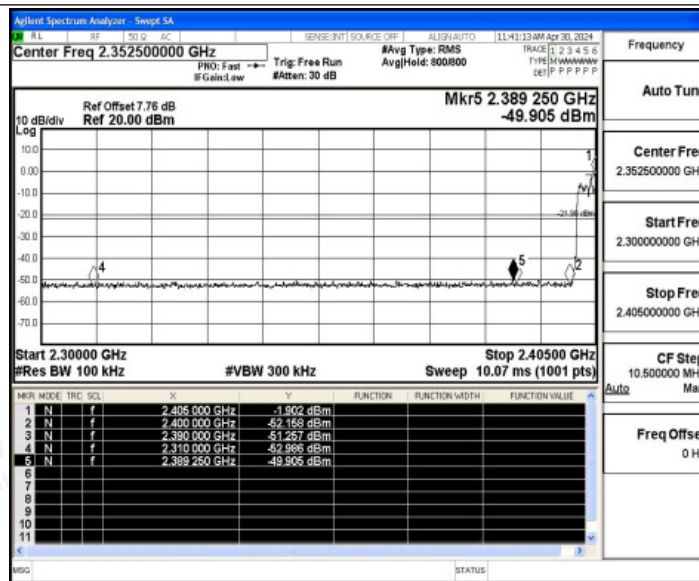


2DH5_Ant1_High_2480

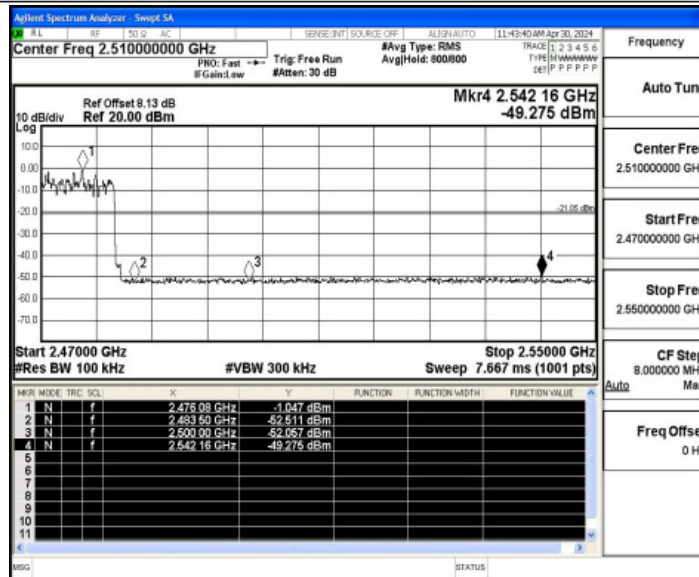


2DH5_Ant1_Low_Hop_2402





2DH5_Ant1_High_Hop_2480





A.7 Conducted Spurious Emission

Test Result

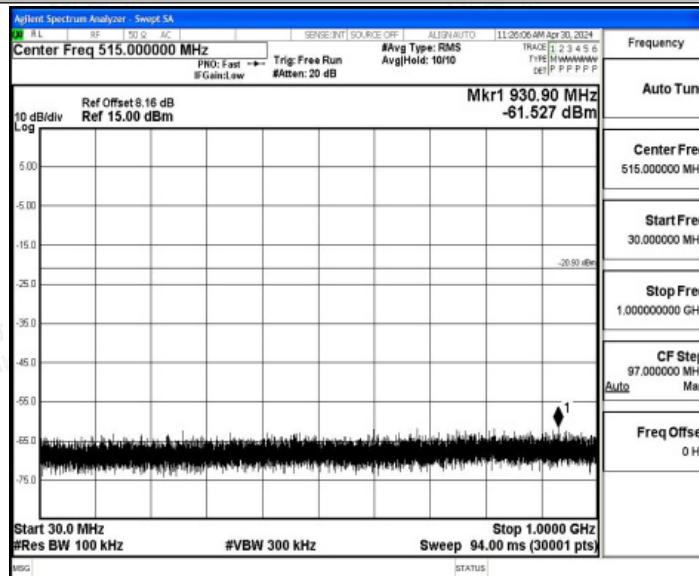
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	30~1000	-0.93	-61.53	≤-20.93	PASS
			1000~26500	-0.93	-48.09	≤-20.93	PASS
		2441	30~1000	-0.16	-61.52	≤-20.16	PASS
			1000~26500	-0.16	-48.95	≤-20.16	PASS
		2480	30~1000	-0.01	-60.66	≤-20.01	PASS
			1000~26500	-0.01	-49.25	≤-20.01	PASS
2DH5	Ant1	2402	30~1000	-1.70	-62.15	≤-21.7	PASS
			1000~26500	-1.70	-49.24	≤-21.7	PASS
		2441	30~1000	-1.35	-62	≤-21.35	PASS
			1000~26500	-1.35	-49.61	≤-21.35	PASS
		2480	30~1000	-1.03	-61.87	≤-21.03	PASS
			1000~26500	-1.03	-48.96	≤-21.03	PASS



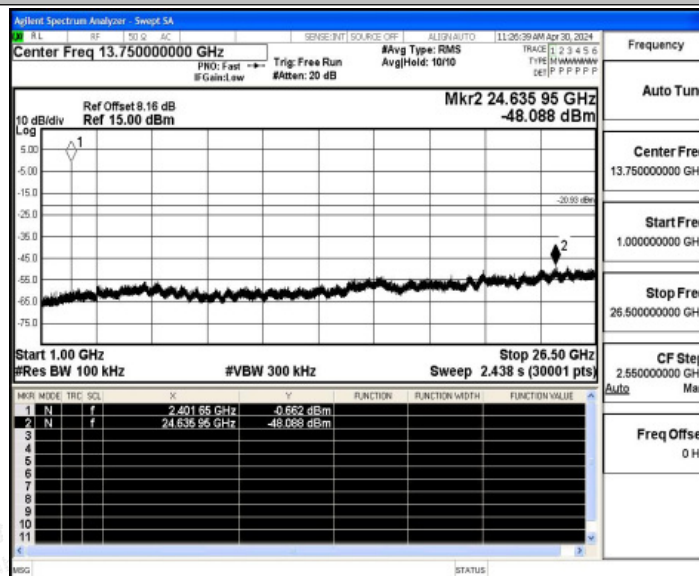


Test Graphs

DH5_Ant1_2402_30~1000

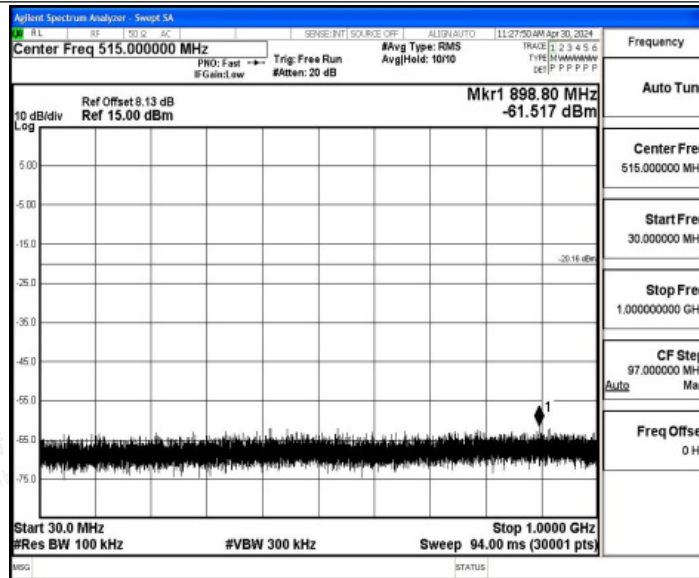


DH5_Ant1_2402_1000~26500

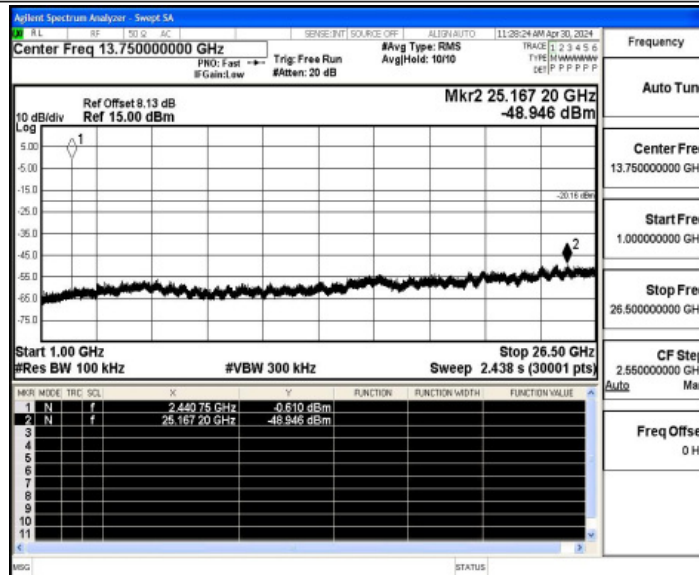


DH5_Ant1_2441_30~1000



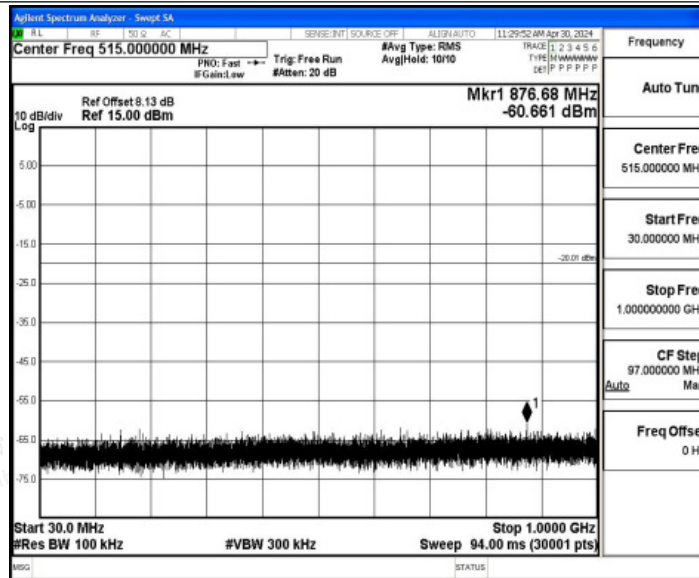


DH5_Ant1_2441_1000~26500

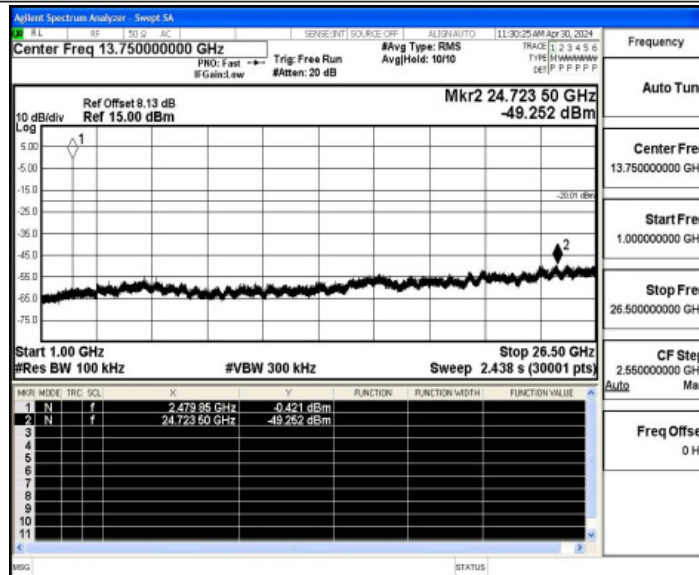


DH5_Ant1_2480_30~1000



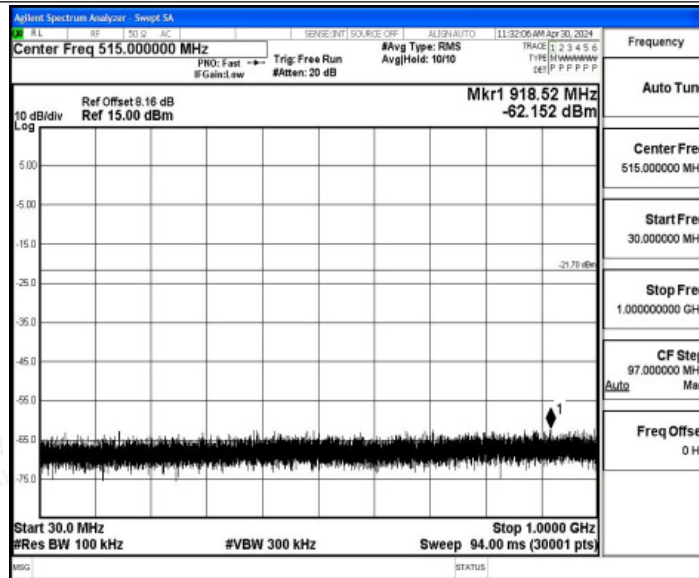


DH5_Ant1_2480_1000~26500

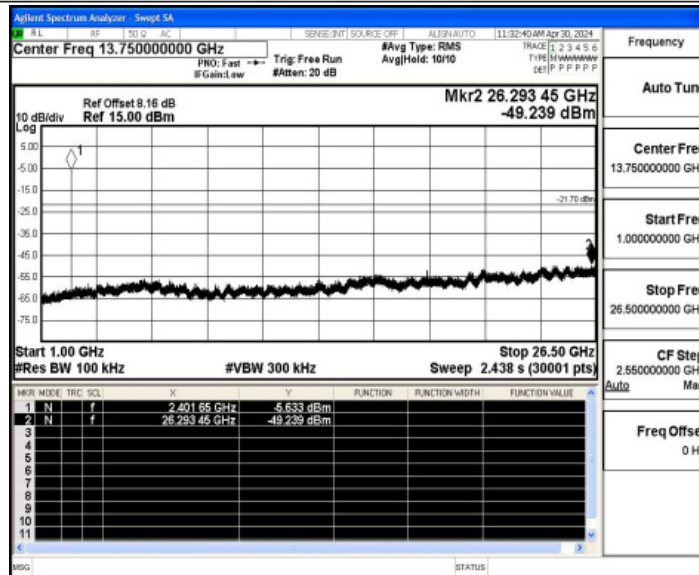


2DH5_Ant1_2402_30~1000



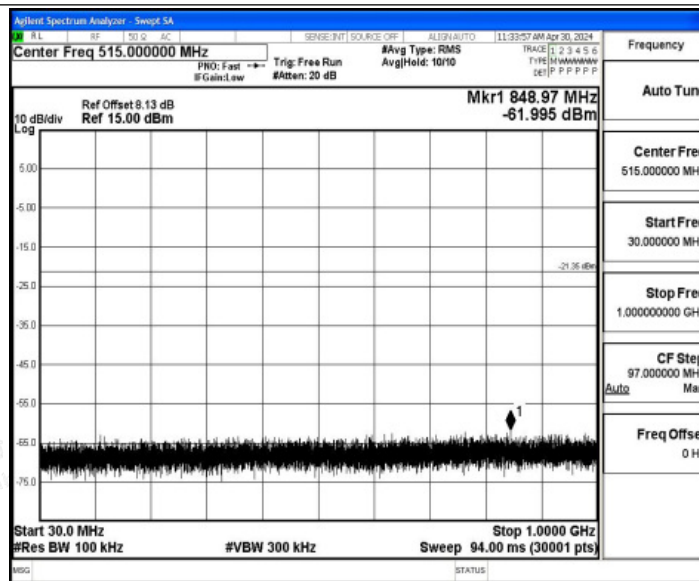


2DH5_Ant1_2402_1000~26500

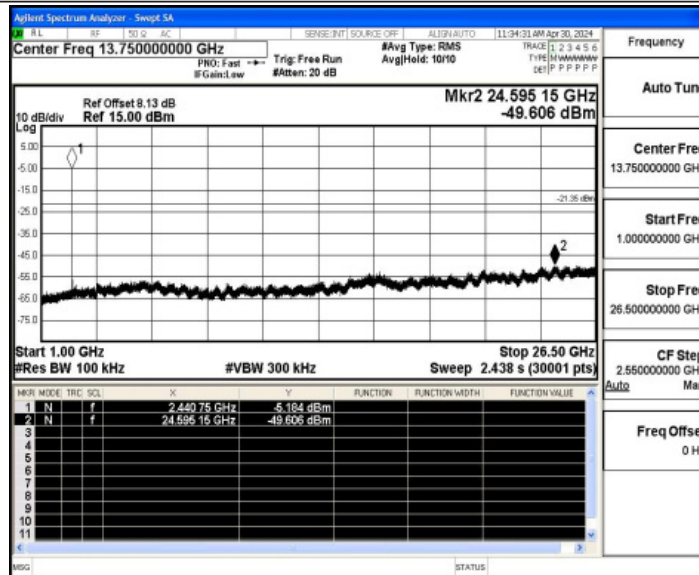


2DH5_Ant1_2441_30~1000



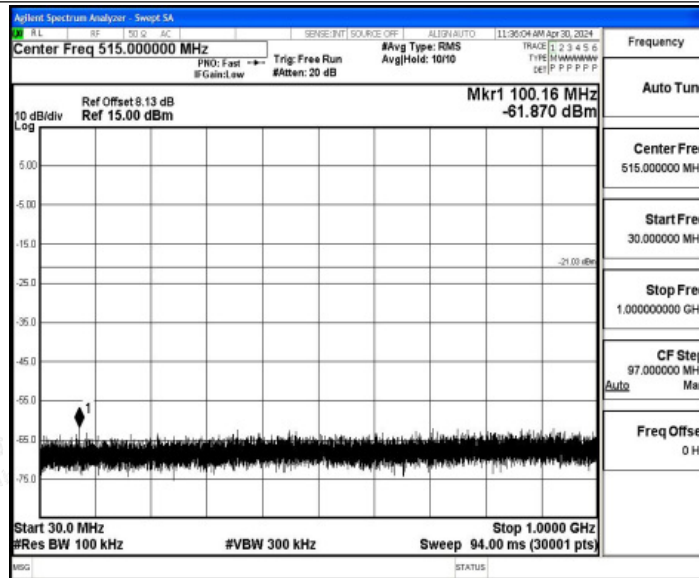


2DH5_Ant1_2441_1000~26500

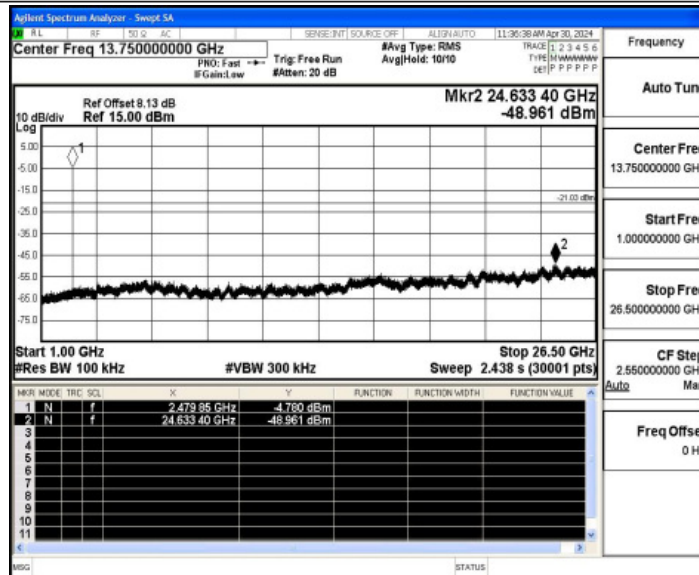


2DH5_Ant1_2480_30~1000





2DH5_Ant1_2480_1000~26500





Reference Level

Test Result

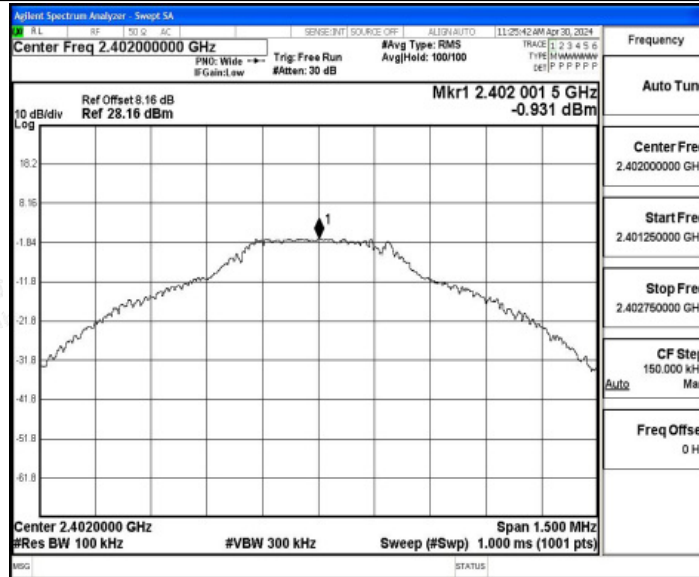
TestMode	Antenna	ChName	Frequency[MHz]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	2402.00	-0.93	---	PASS
		2441	2441.15	-0.16	---	PASS
		2480	2480.15	-0.01	---	PASS
2DH5	Ant1	2402	2401.85	-1.70	---	PASS
		2441	2441.15	-1.35	---	PASS
		2480	2479.84	-1.03	---	PASS



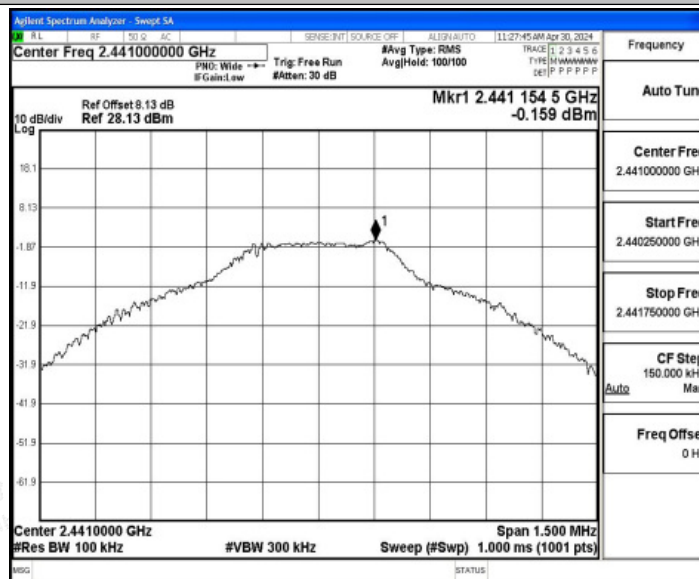


Test Graphs

DH5_Ant1_2402

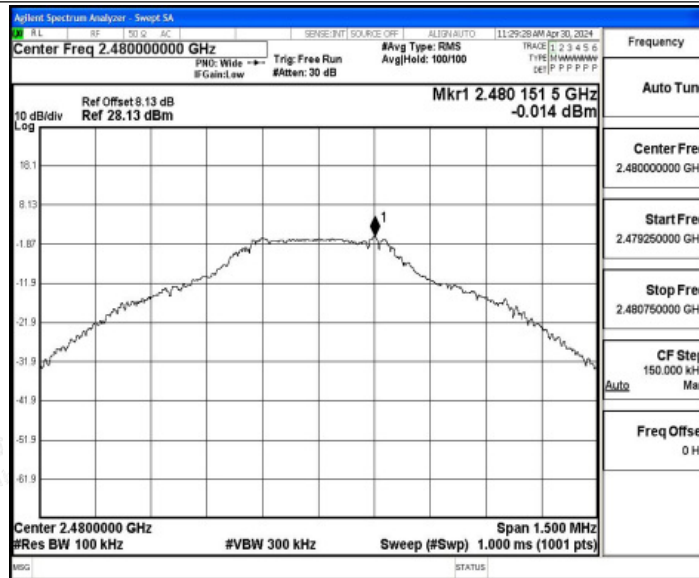


DH5_Ant1_2441

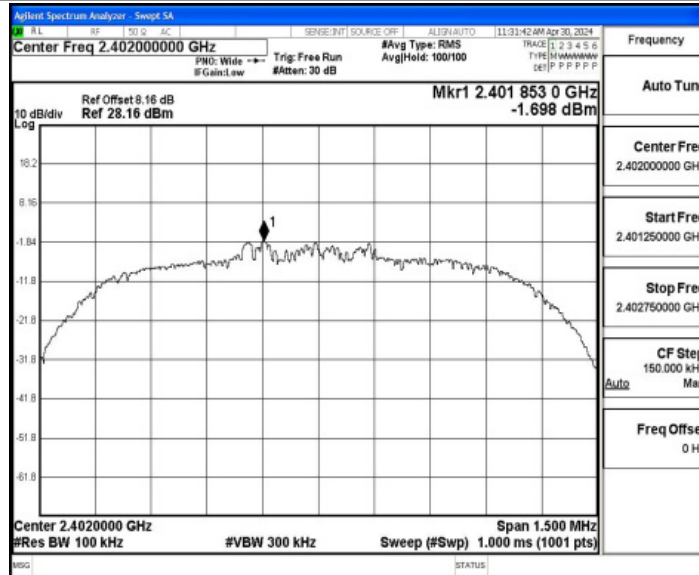


DH5_Ant1_2480



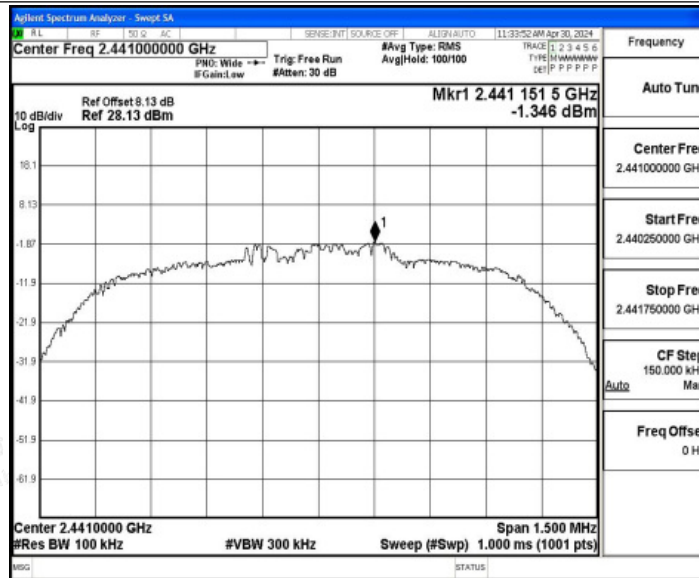


2DH5_Ant1_2402

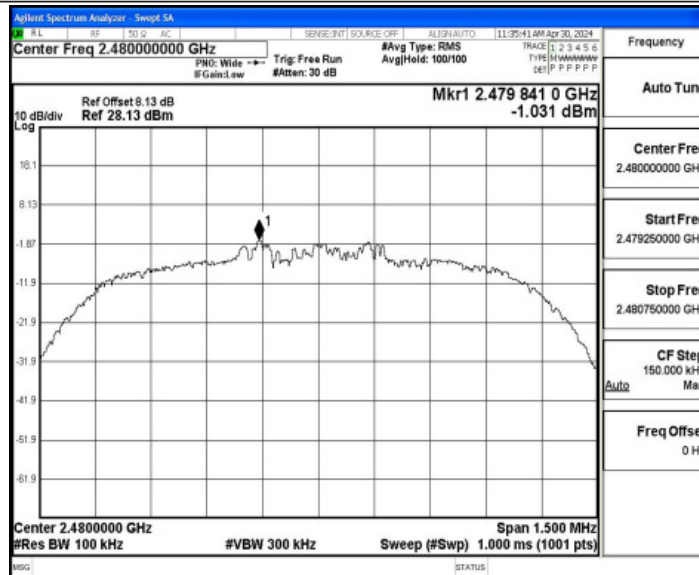


2DH5_Ant1_2441





2DH5_Ant1_2480





A.8 Duty Cycle

Test Result

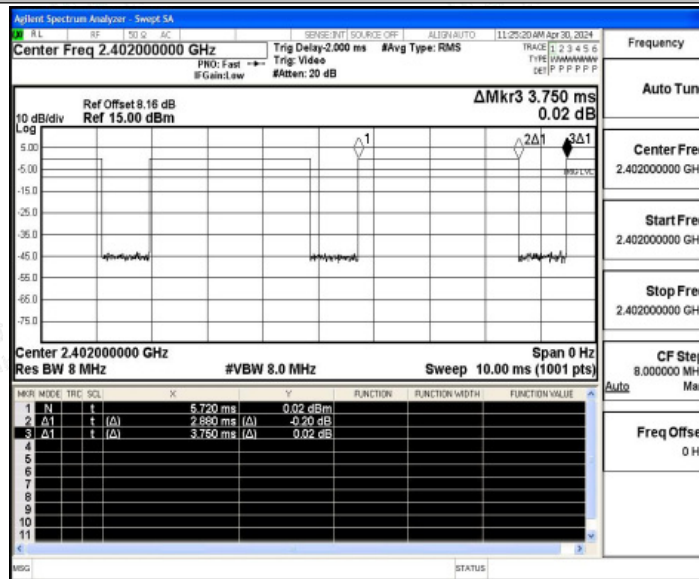
TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]	1/T Factor[kHz]
DH5	Ant1	2402	2.88	3.75	76.80	1.15	0.35
		2441	2.88	3.75	76.80	1.15	0.35
		2480	2.89	3.75	77.07	1.13	0.35
2DH5	Ant1	2402	2.88	3.75	76.80	1.15	0.35
		2441	2.88	3.75	76.80	1.15	0.35
		2480	2.89	3.75	77.07	1.13	0.35



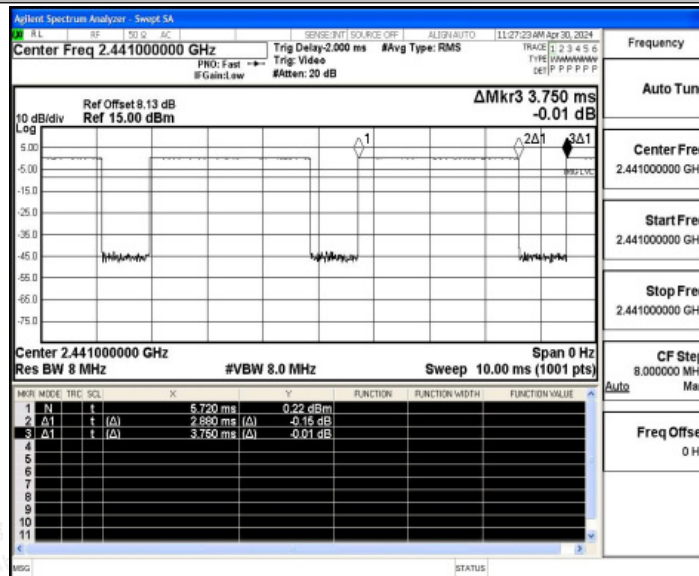


Test Graphs

DH5_Ant1_2402

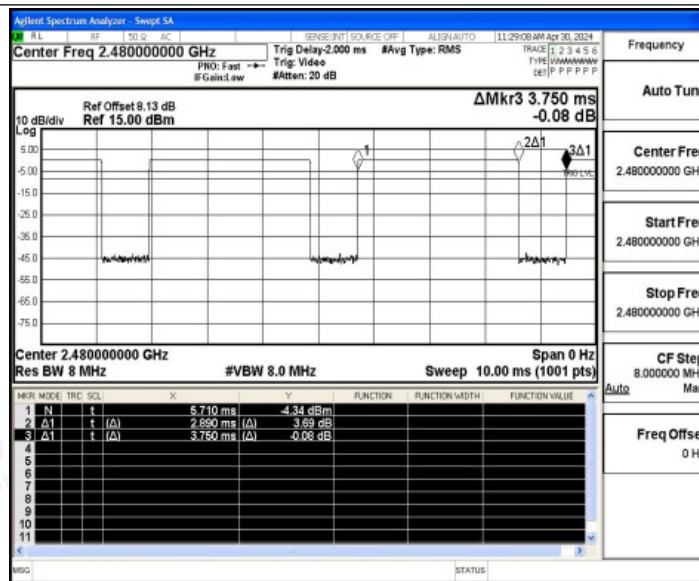


DH5_Ant1_2441

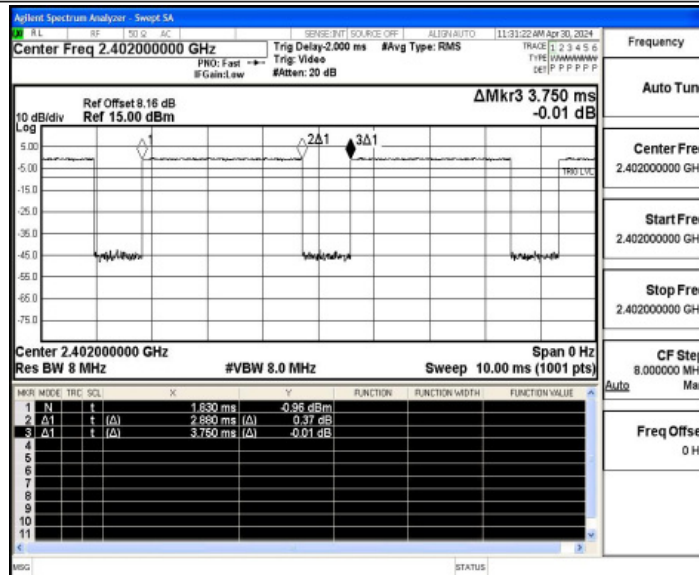


DH5_Ant1_2480



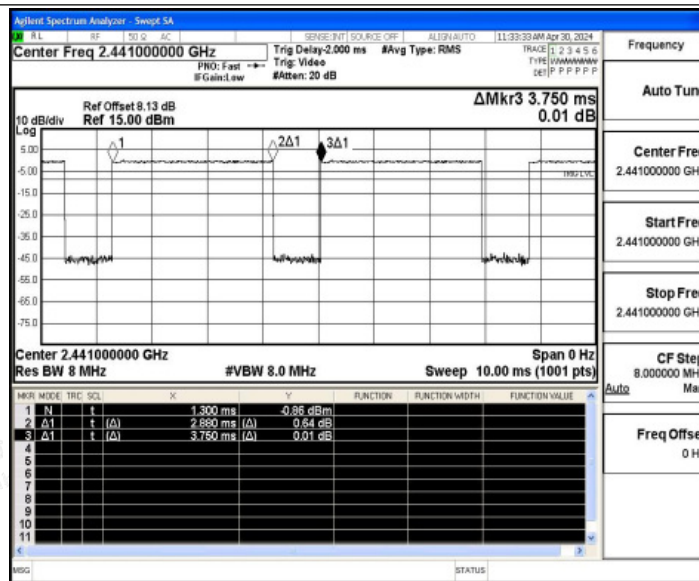


2DH5_Ant1_2402

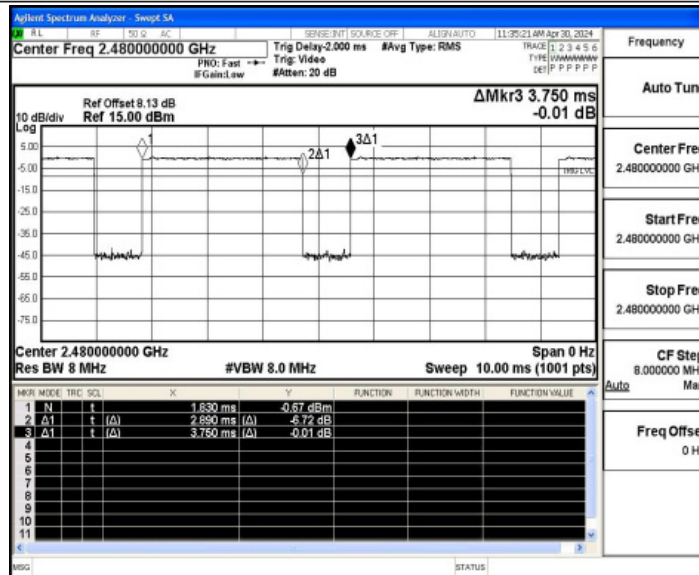


2DH5_Ant1_2441





2DH5_Ant1_2480





A.9 Emissions in Restricted Bands

Test Result

TestMode	Antenna	Channel Name	Frequency [MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-48.87	≤-41.20	46.33	≤54	PASS
				AV	2383.580	-47.55	≤-41.20	47.65	≤54	PASS
				AV	2390.000	-48.44	≤-41.20	46.76	≤54	PASS
				Peak	2310.000	-41.8	≤-21.20	53.40	≤74	PASS
				Peak	2367.200	-38.88	≤-21.20	56.32	≤74	PASS
				Peak	2390.000	-40.32	≤-21.20	54.88	≤74	PASS
		High	2480	AV	2483.500	-48.43	≤-41.20	46.77	≤54	PASS
				AV	2490.160	-47.7	≤-41.20	47.50	≤54	PASS
				AV	2500.000	-48.93	≤-41.20	46.27	≤54	PASS
				Peak	2483.500	-40.68	≤-21.20	54.52	≤74	PASS
				Peak	2496.800	-39.02	≤-21.20	56.18	≤74	PASS
				Peak	2500.000	-41.69	≤-21.20	53.51	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-42.75	≤-21.20	52.45	≤74	PASS
				Peak	2380.850	-38.9	≤-21.20	56.30	≤74	PASS
				Peak	2390.000	-41.56	≤-21.20	53.64	≤74	PASS
		High	Hop_2480	Peak	2483.500	-39.85	≤-21.20	55.35	≤74	PASS
				Peak	2493.040	-39.12	≤-21.20	56.08	≤74	PASS
				Peak	2500.000	-42.5	≤-21.20	52.70	≤74	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-48.71	≤-41.20	46.49	≤54	PASS
				AV	2379.485	-47.83	≤-41.20	47.37	≤54	PASS
				AV	2390.000	-48.92	≤-41.20	46.28	≤54	PASS
				Peak	2310.000	-41.42	≤-21.20	53.78	≤74	PASS
				Peak	2379.275	-38.16	≤-21.20	57.04	≤74	PASS
				Peak	2390.000	-42.03	≤-21.20	53.17	≤74	PASS
		High	2480	AV	2483.500	-48.77	≤-41.20	46.43	≤54	PASS
				AV	2486.000	-47.62	≤-41.20	47.58	≤54	PASS
				AV	2500.000	-48.82	≤-41.20	46.38	≤54	PASS
				Peak	2483.500	-41.24	≤-21.20	53.96	≤74	PASS
				Peak	2487.520	-38.19	≤-21.20	57.01	≤74	PASS
				Peak	2500.000	-41.95	≤-21.20	53.25	≤74	PASS
		Low	Hop_2402	Peak	2310.000	-42.55	≤-21.20	52.65	≤74	PASS
				Peak	2311.340	-39.02	≤-21.20	56.18	≤74	PASS
				Peak	2390.000	-40.85	≤-21.20	54.35	≤74	PASS
		High	Hop_2480	Peak	2483.500	-41.25	≤-21.20	53.95	≤74	PASS
				Peak	2485.280	-39.36	≤-21.20	55.84	≤74	PASS
				Peak	2500.000	-41.62	≤-21.20	53.58	≤74	PASS





Note:

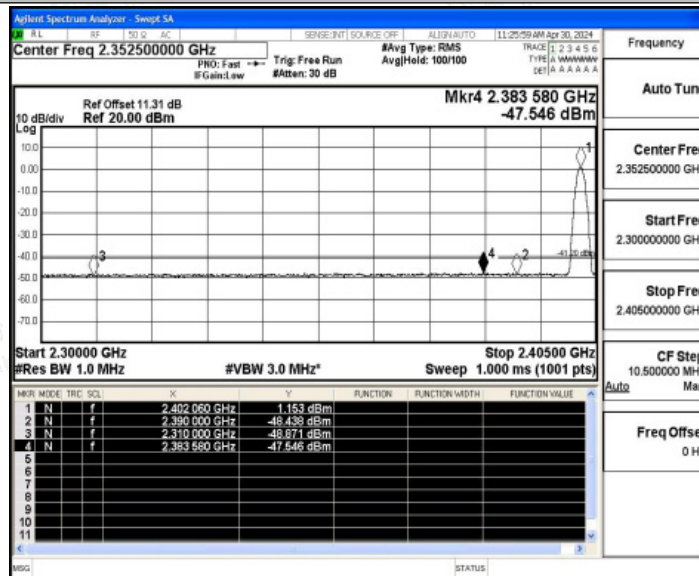
1. The Antenna Gain is compensated in the graph. The Correction Factor is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



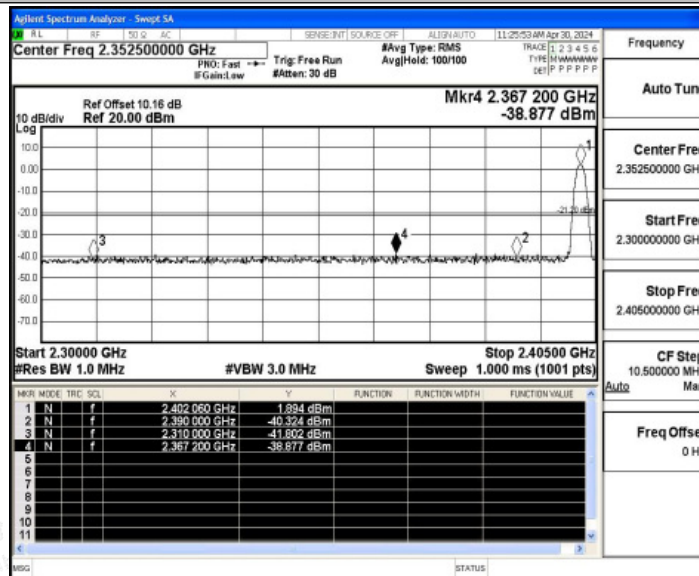


Test Graphs

DH5_Ant1_Low_2402_AV

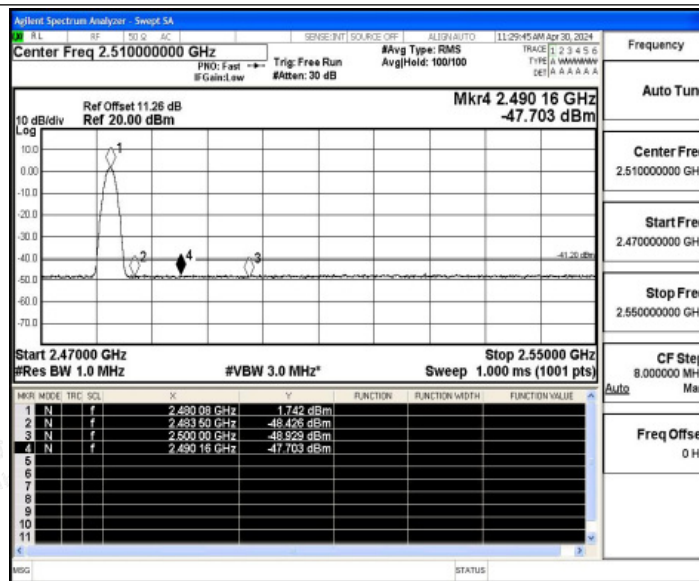


DH5_Ant1_Low_2402_Peak

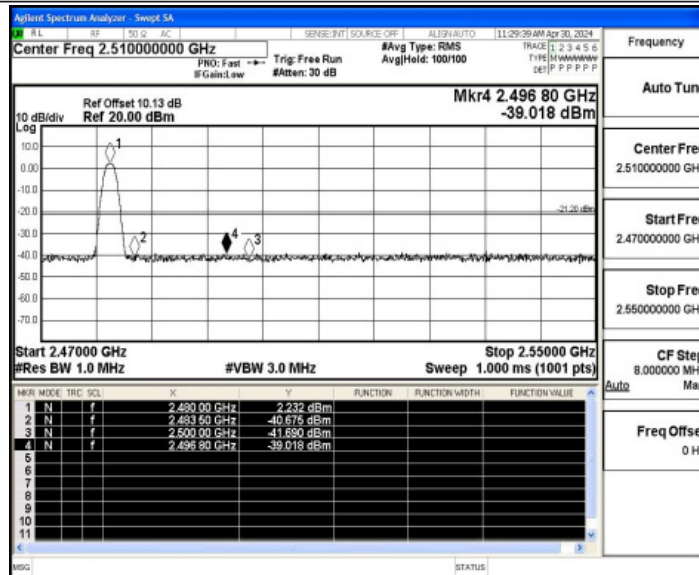


DH5_Ant1_High_2480_AV



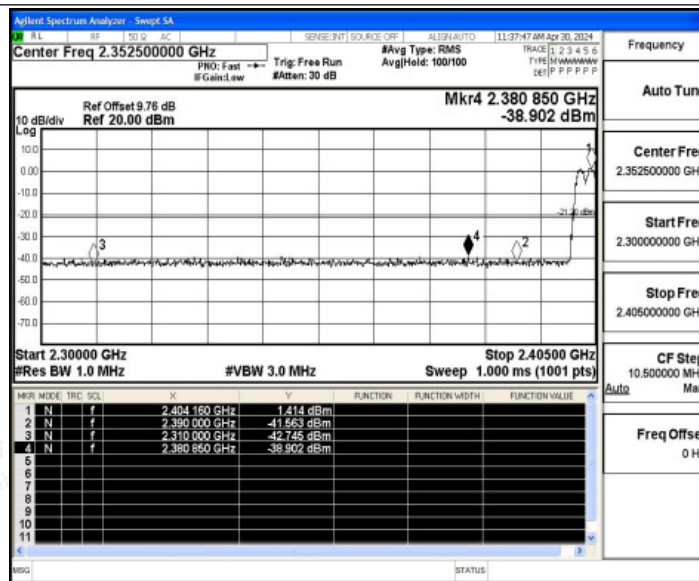


DH5_Ant1_High_2480_Peak

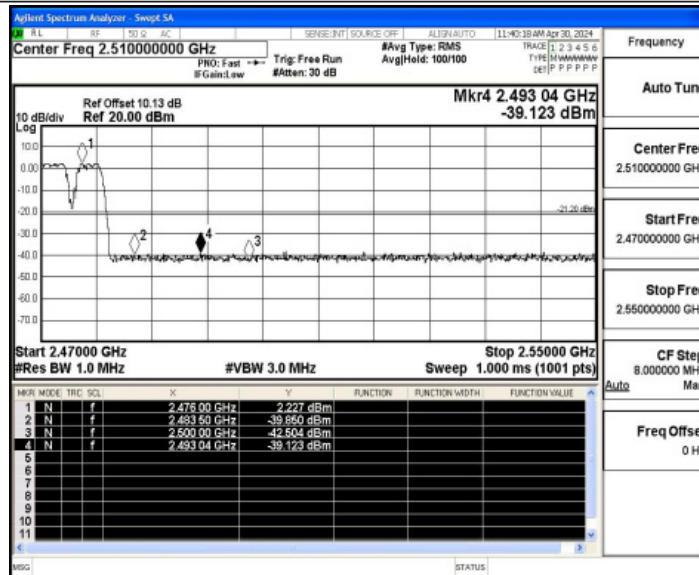


DH5_Ant1_Low_Hop_2402_Peak



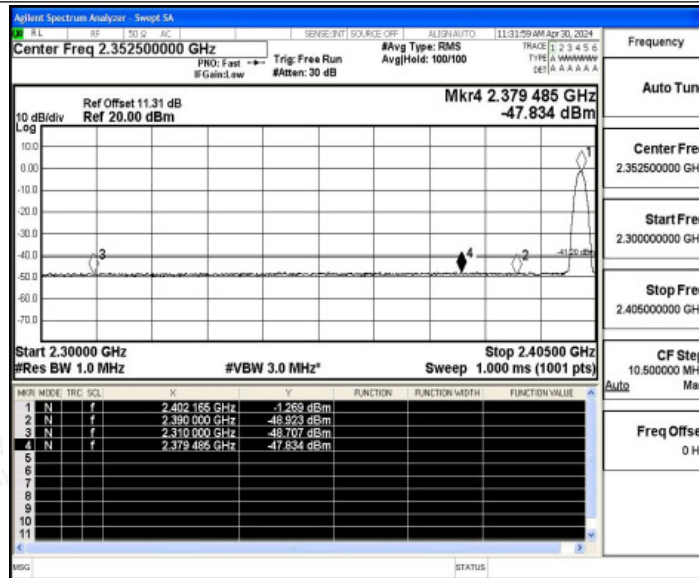


DH5_Ant1_High_Hop_2480_Peak

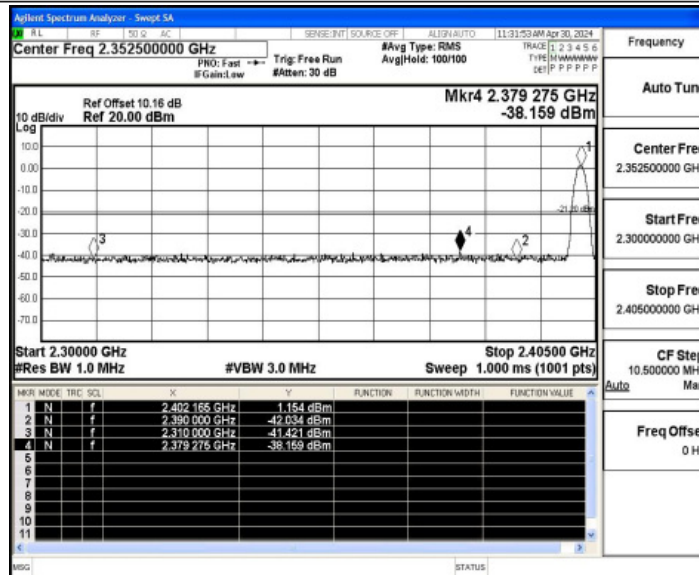


2DH5_Ant1_Low_2402_AV



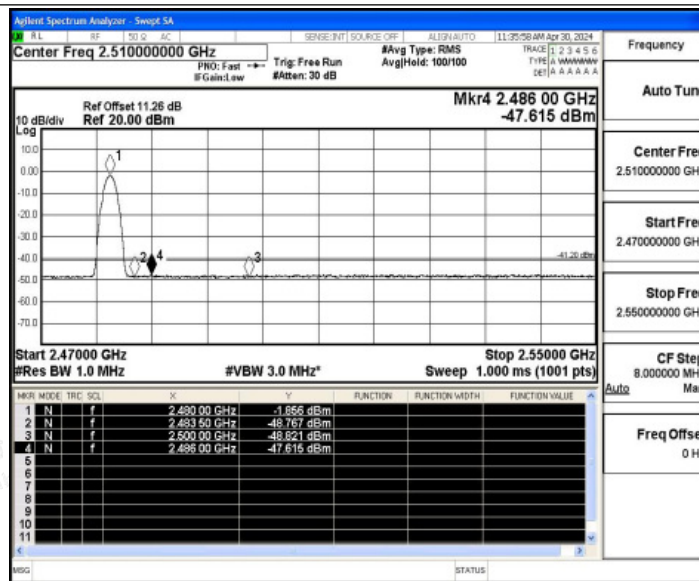


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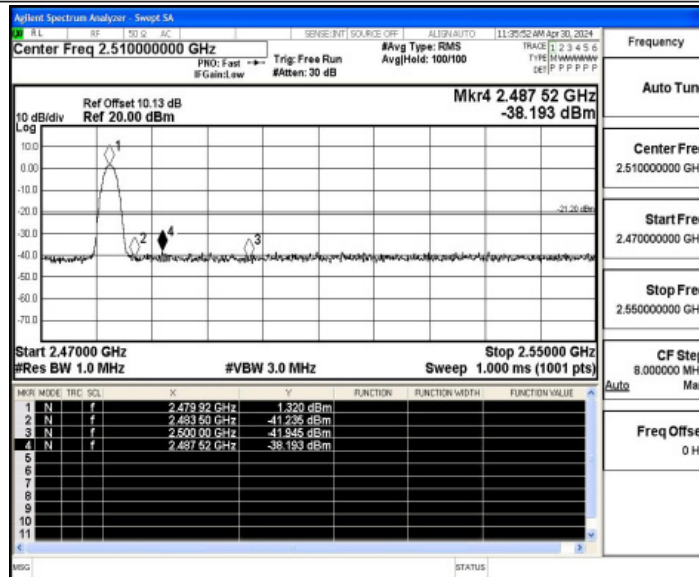


2DH5_Ant1_High_2480_AV



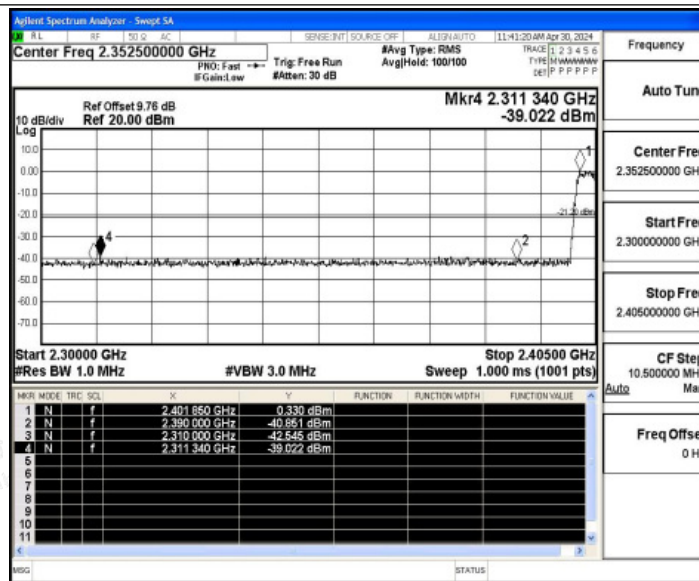


2DH5_Ant1_High_2480_Peak



2DH5_Ant1_Low_Hop_2402_Peak





2DH5_Ant1_High_Hop_2480_Peak

