



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: MEGAPHONE

Test Model: ER-66BTUC

Environmental Conditions

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



A.1: 20dB Emission Bandwidth

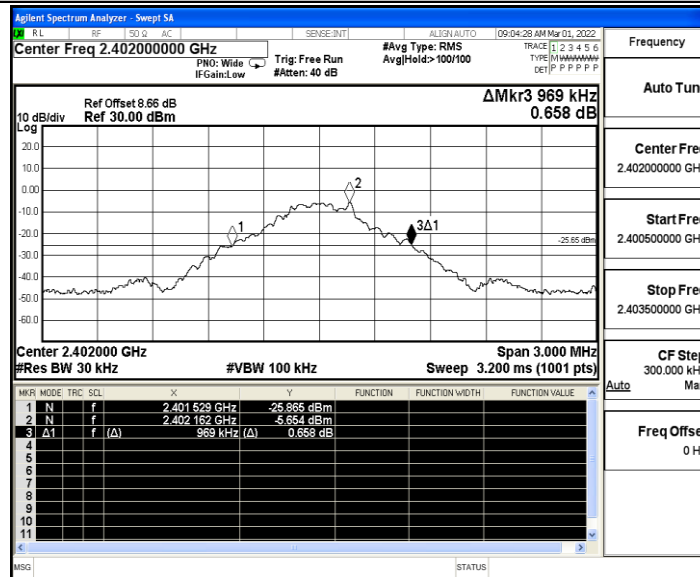
Test Result

TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.969	2401.529	2402.498	---	---
		2441	1.035	2440.466	2441.501	---	---
		2480	1.041	2479.466	2480.507	---	---
2DH5	Ant1	2402	1.320	2401.343	2402.663	---	---
		2441	1.290	2440.364	2441.654	---	---
		2480	1.293	2479.361	2480.654	---	---
3DH5	Ant1	2402	1.314	2401.346	2402.660	---	---
		2441	1.302	2440.346	2441.648	---	---
		2480	1.296	2479.352	2480.648	---	---

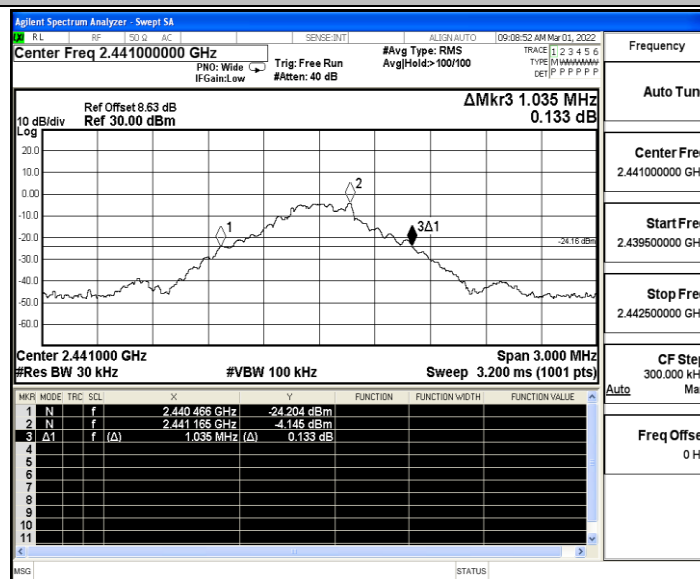


Test Graphs

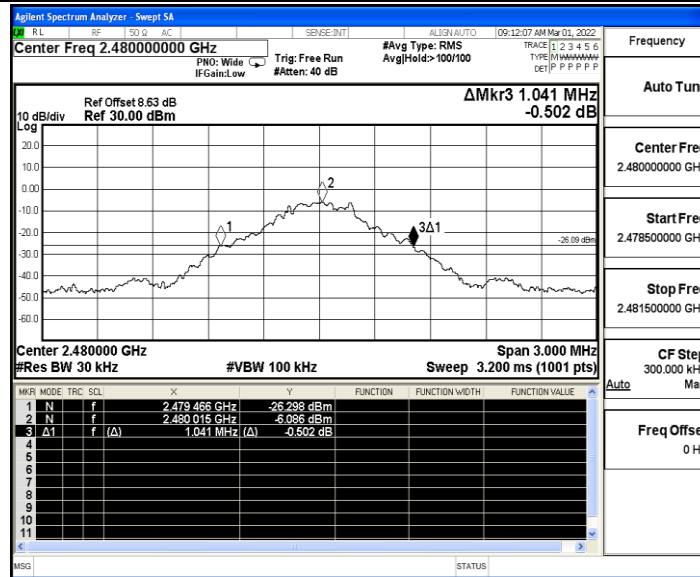
DH5_Ant1_2402



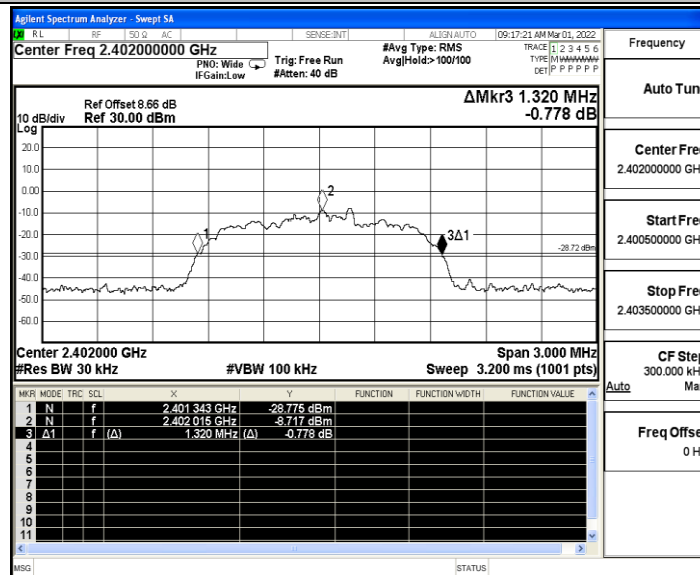
DH5_Ant1_2441



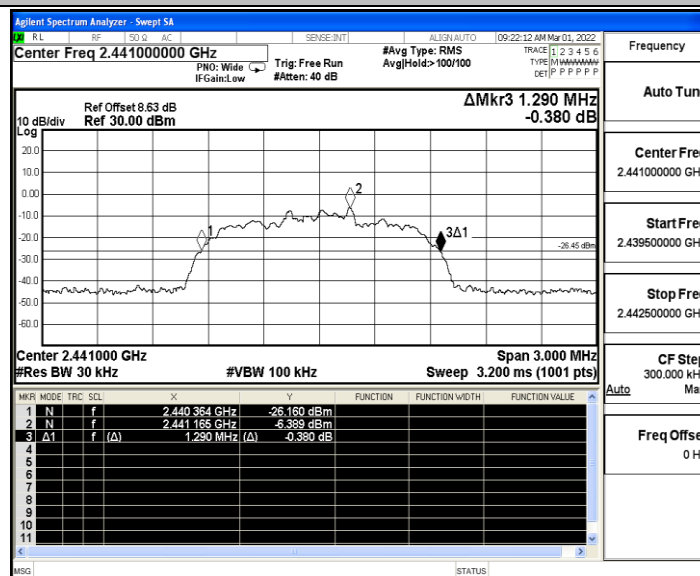
DH5_Ant1_2480



2DH5_Ant1_2402

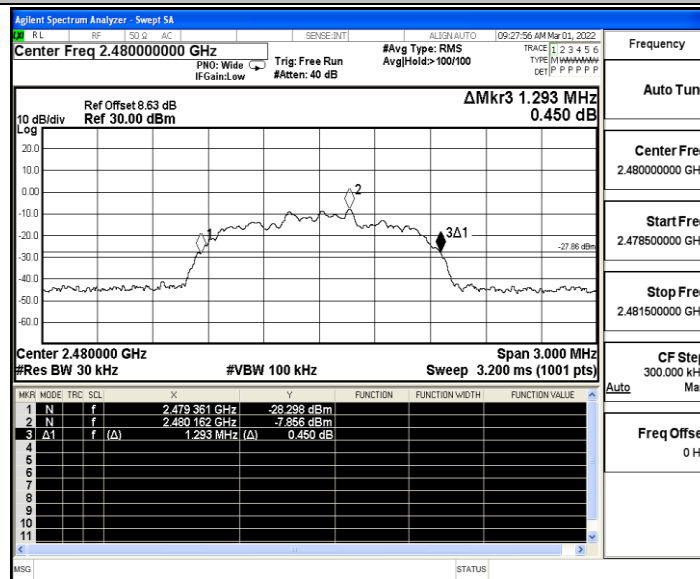


2DH5_Ant1_2441

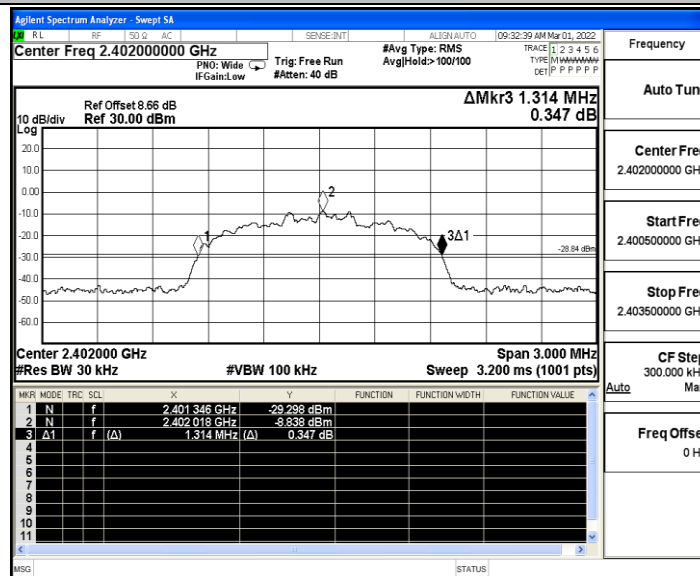




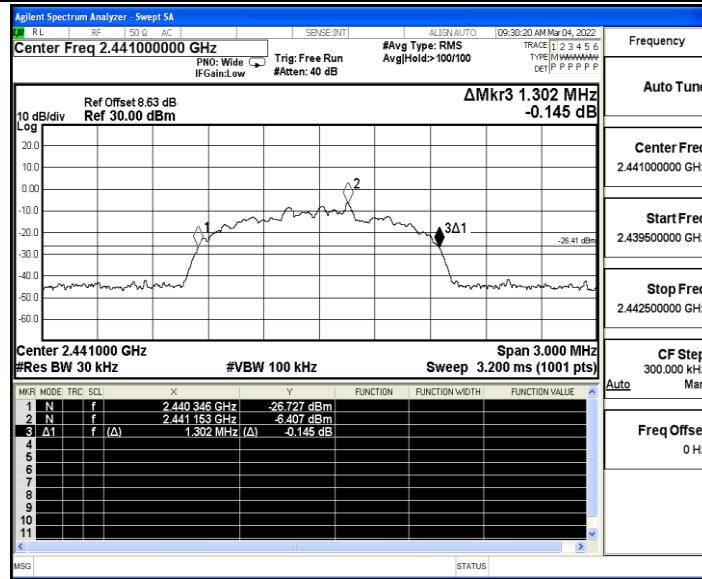
2DH5_Ant1_2480



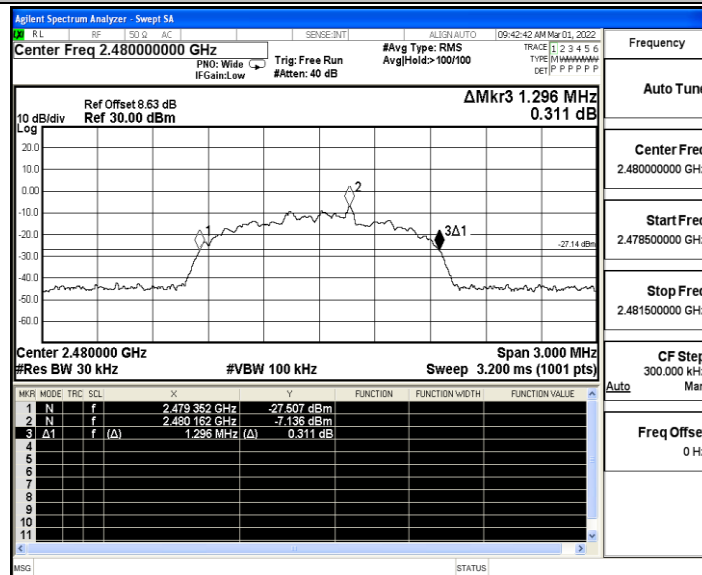
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480





A.2: Maximum conducted output power

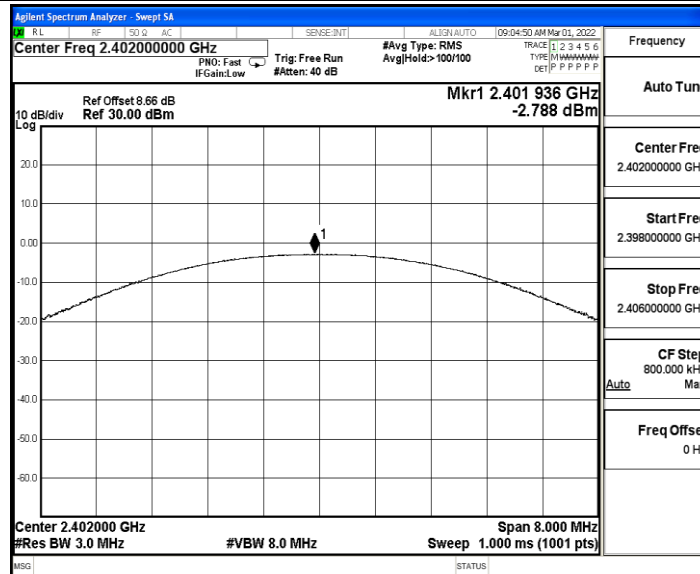
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	-2.79	≤20.97	PASS
		2441	-1.28	≤20.97	PASS
		2480	-2.93	≤20.97	PASS
2DH5	Ant1	2402	-3.68	≤20.97	PASS
		2441	-2.36	≤20.97	PASS
		2480	-3.79	≤20.97	PASS
3DH5	Ant1	2402	-3.54	≤20.97	PASS
		2441	-2.59	≤20.97	PASS
		2480	-3.66	≤20.97	PASS

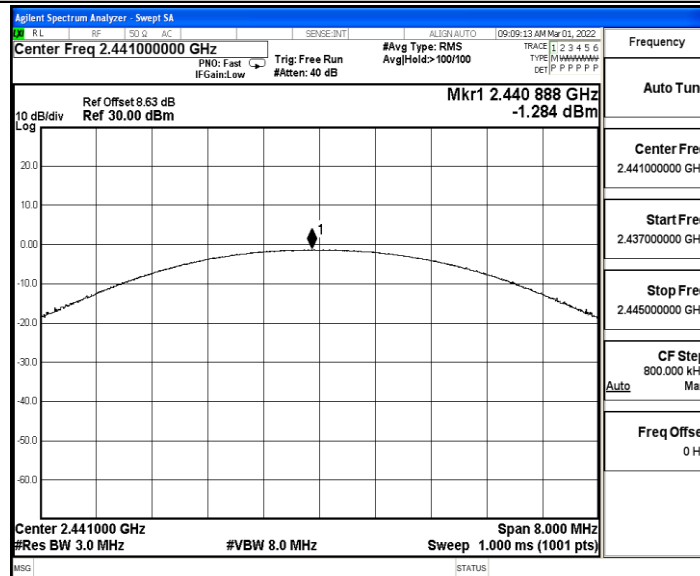


Test Graphs

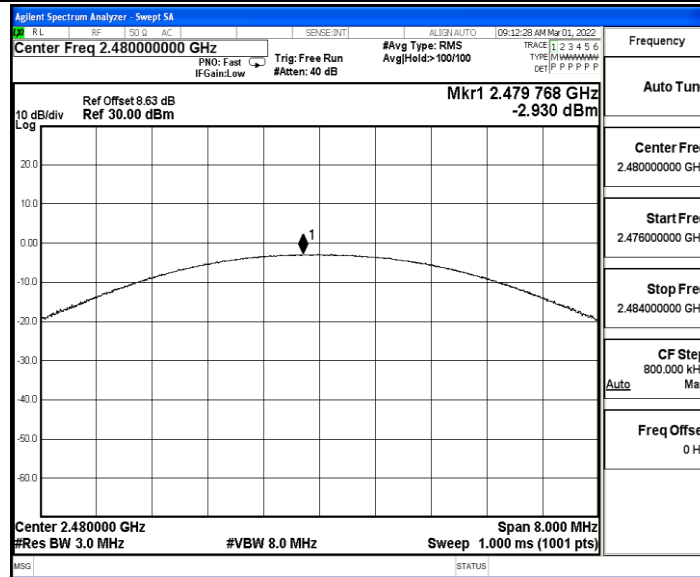
DH5_Ant1_2402



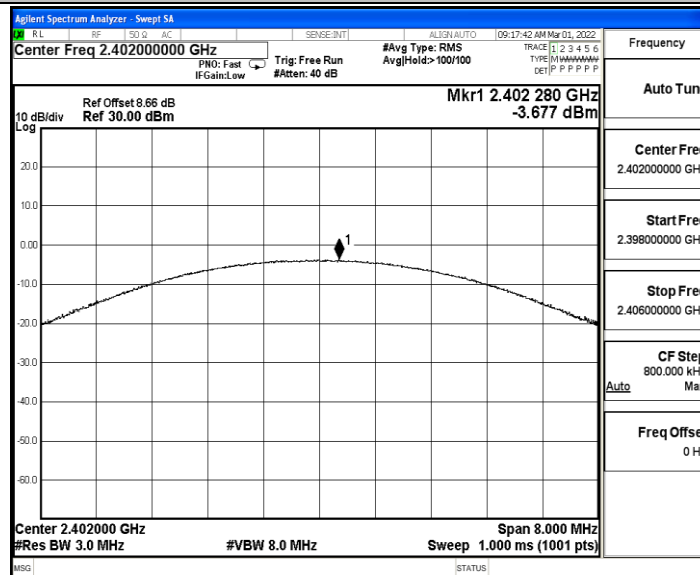
DH5_Ant1_2441



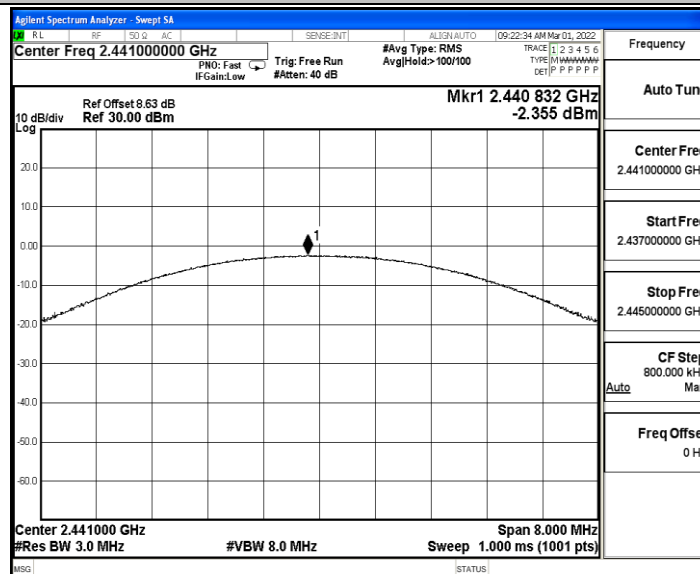
DH5_Ant1_2480



2DH5_Ant1_2402

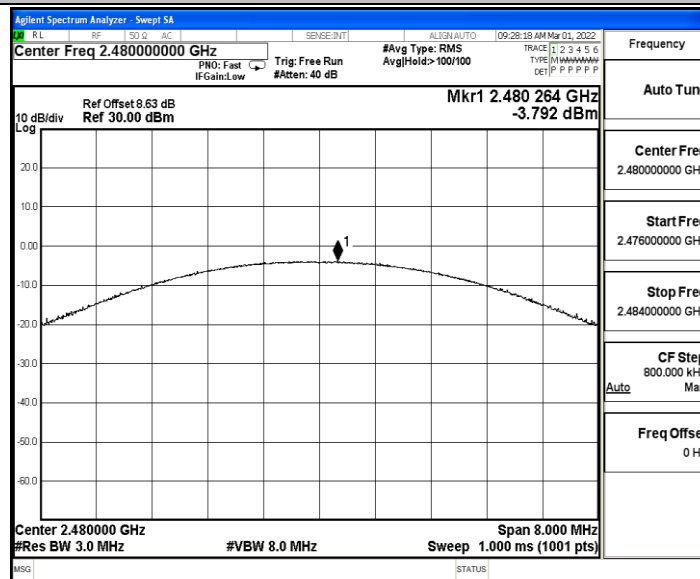


2DH5_Ant1_2441

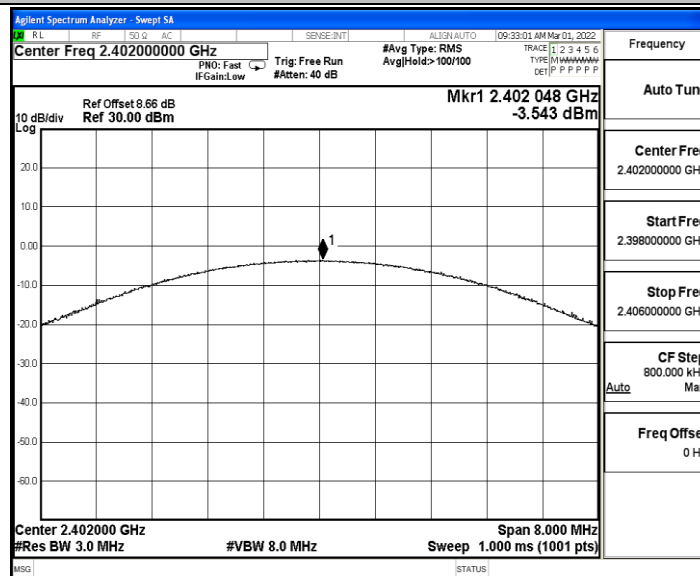




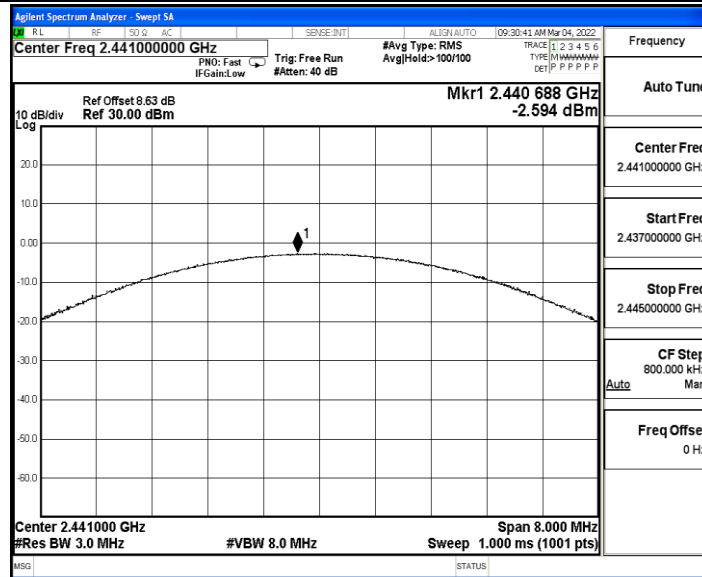
2DH5_Ant1_2480



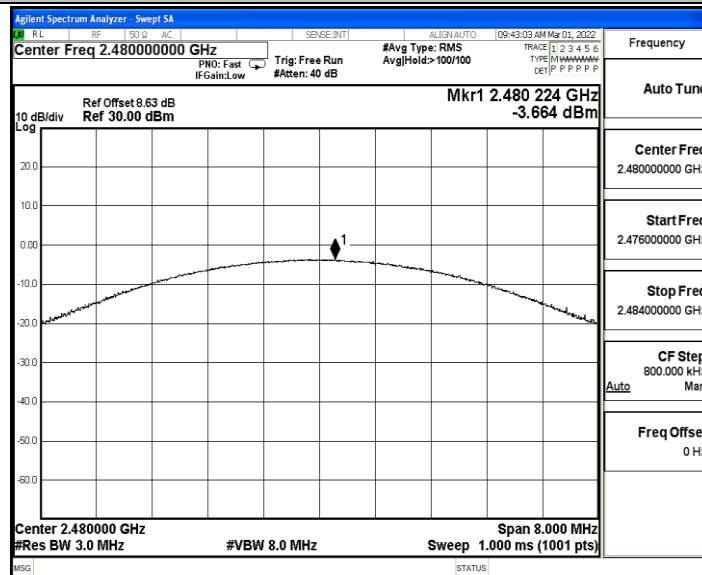
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480





A.3: Carrier frequency separation

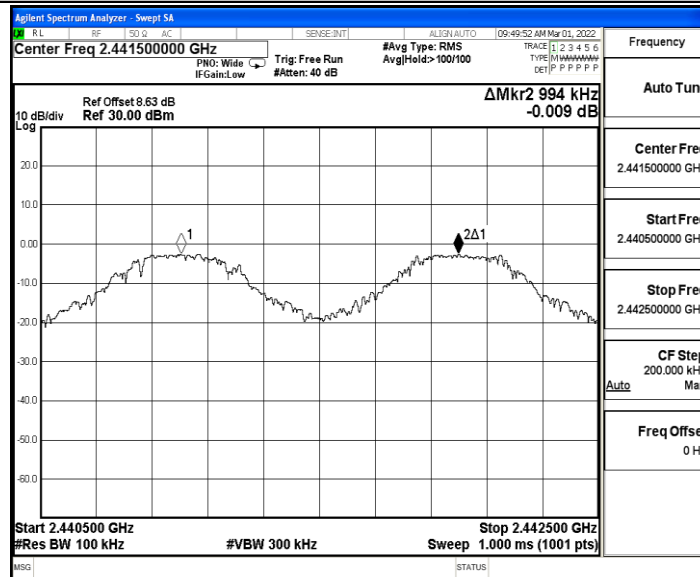
Test Result

TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.994	≥ 0.694	PASS
2DH5	Ant1	Hop	1.214	≥ 0.880	PASS
3DH5	Ant1	Hop	1.004	≥ 0.876	PASS

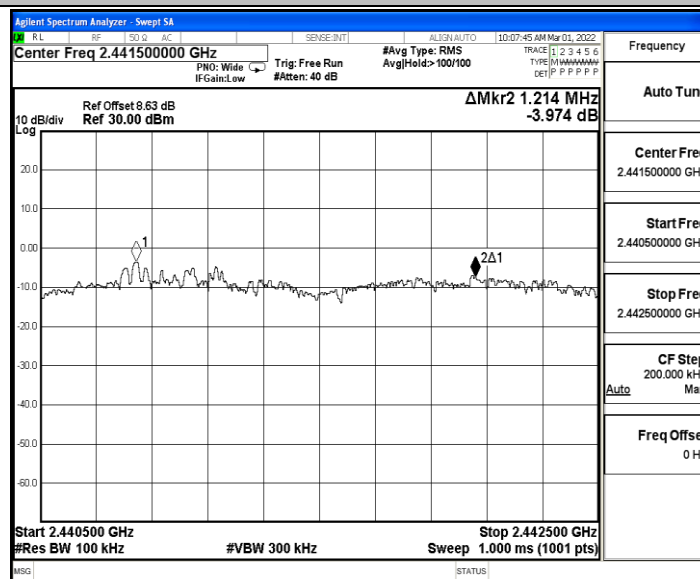


Test Graphs

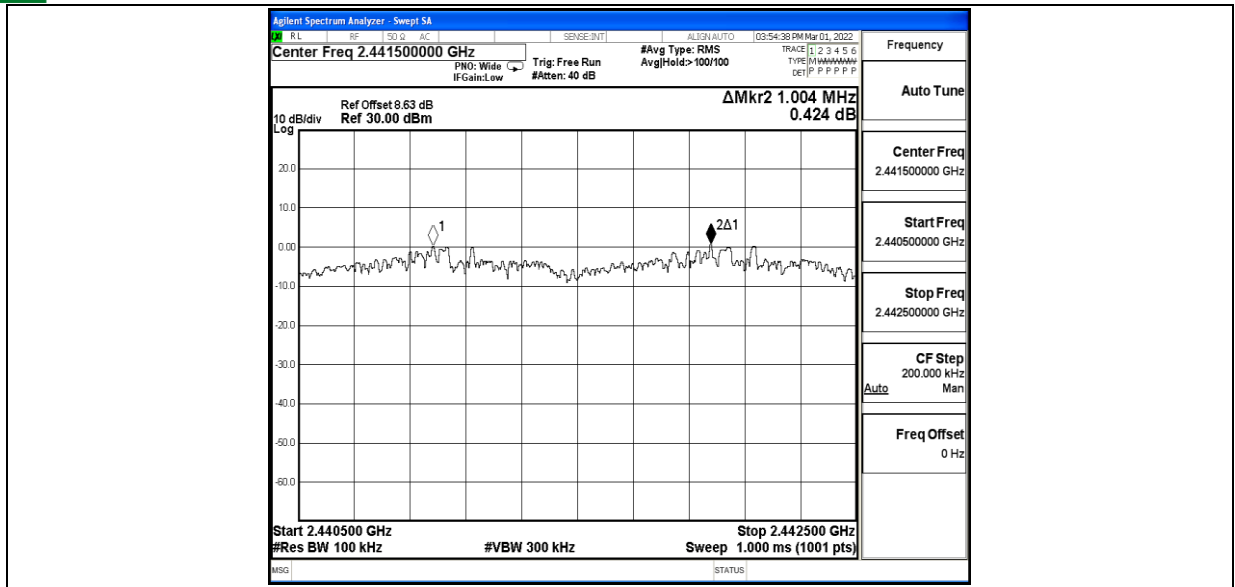
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop





A.4: Time of occupancy

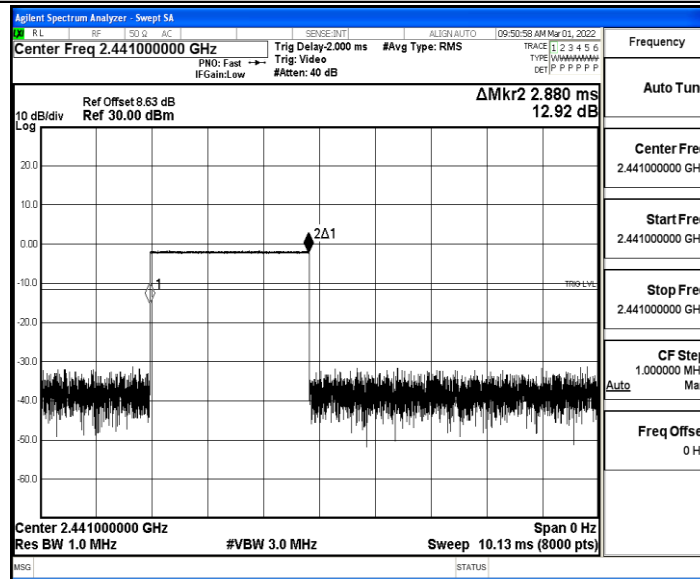
Test Result

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

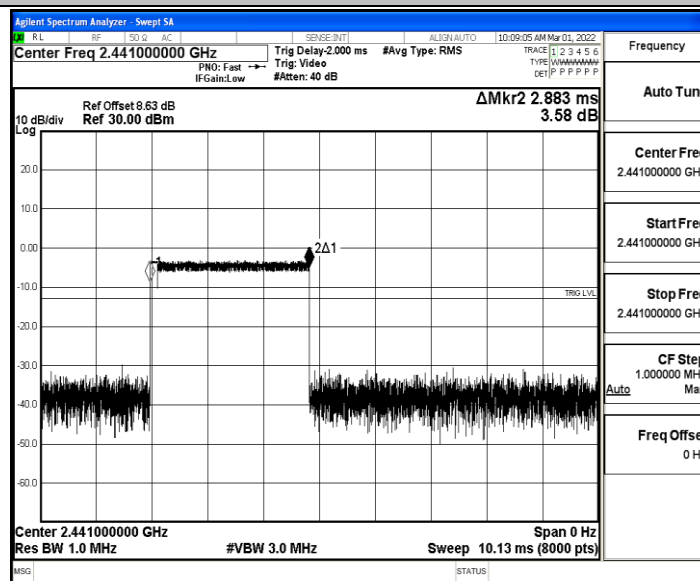


Test Graphs

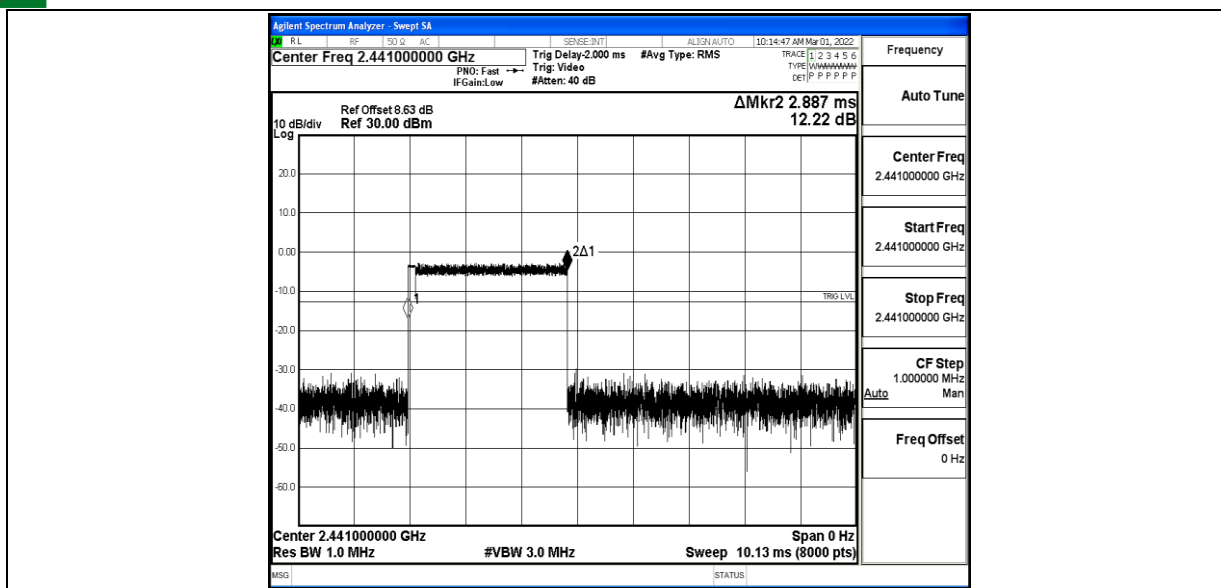
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop



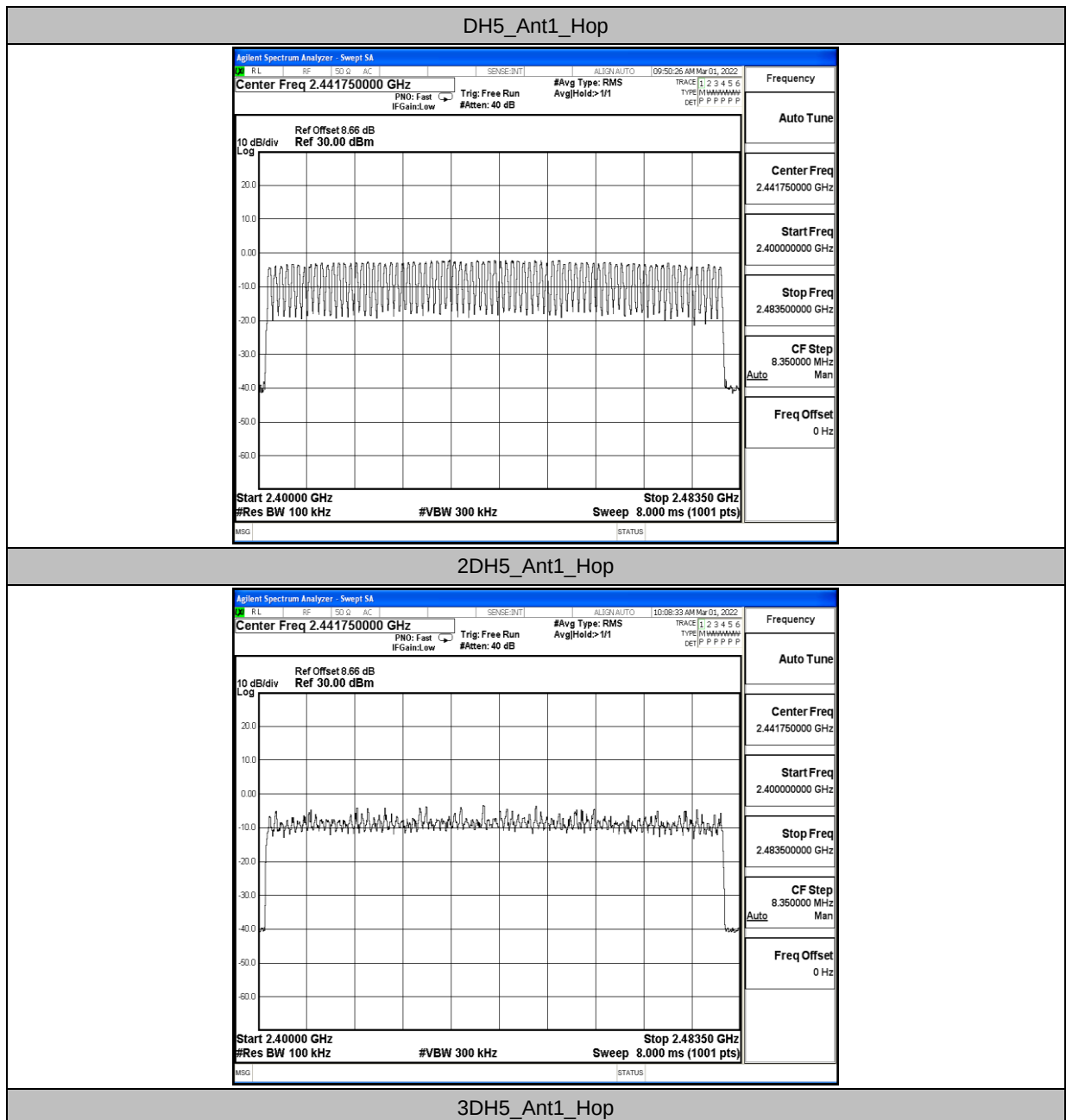


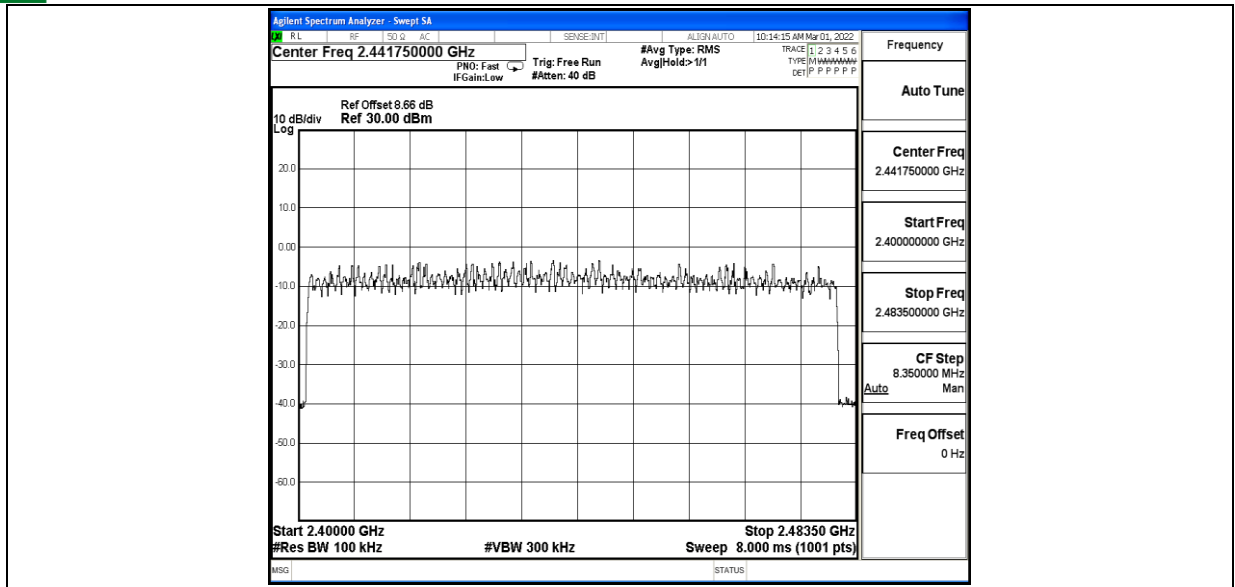
A.5: Number of hopping channels

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







A.6: Band edge measurements

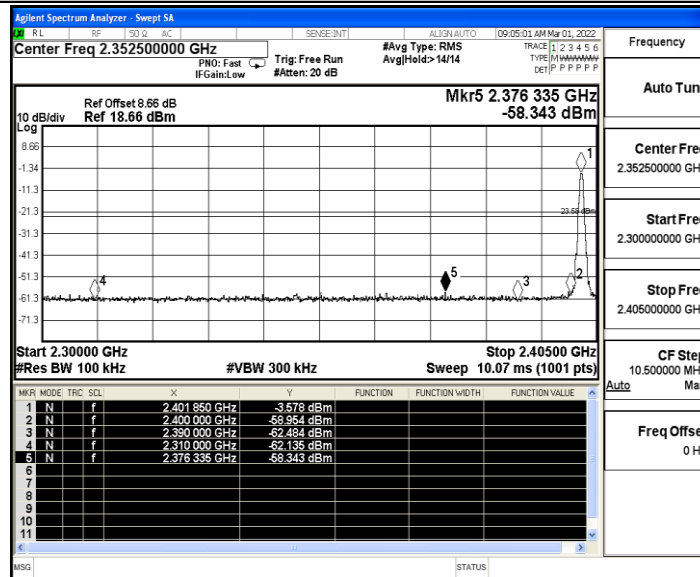
Test Result

TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-3.58	-58.34	≤ -23.58	PASS
		High	2480	-3.59	-57.4	≤ -23.59	PASS
		Low	Hop_2402	-3.99	-59.01	≤ -23.99	PASS
		High	Hop_2480	-3.92	-57.51	≤ -23.92	PASS
2DH5	Ant1	Low	2402	-5.40	-58.87	≤ -25.4	PASS
		High	2480	-5.82	-58.01	≤ -25.82	PASS
		Low	Hop_2402	-4.40	-59.4	≤ -24.4	PASS
		High	Hop_2480	-5.79	-57.93	≤ -25.79	PASS
3DH5	Ant1	Low	2402	-8.13	-59.04	≤ -28.13	PASS
		High	2480	-5.12	-57.81	≤ -25.12	PASS
		Low	Hop_2402	-8.72	-59.28	≤ -28.72	PASS
		High	Hop_2480	-5.84	-58.07	≤ -25.84	PASS

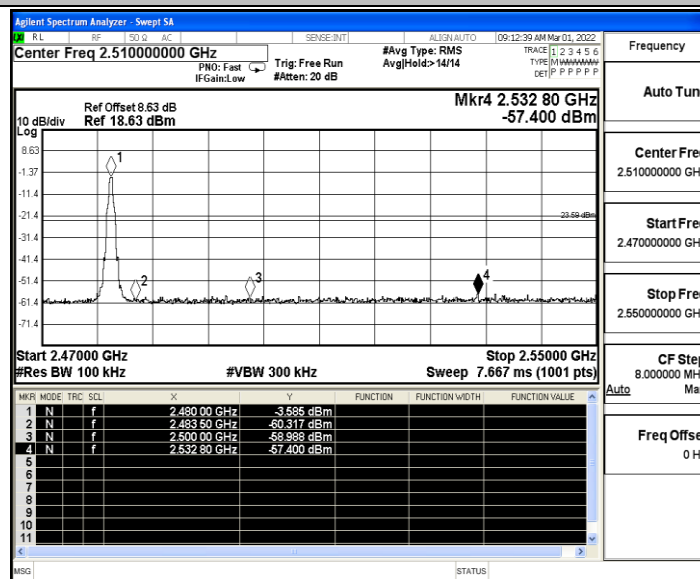


Test Graphs

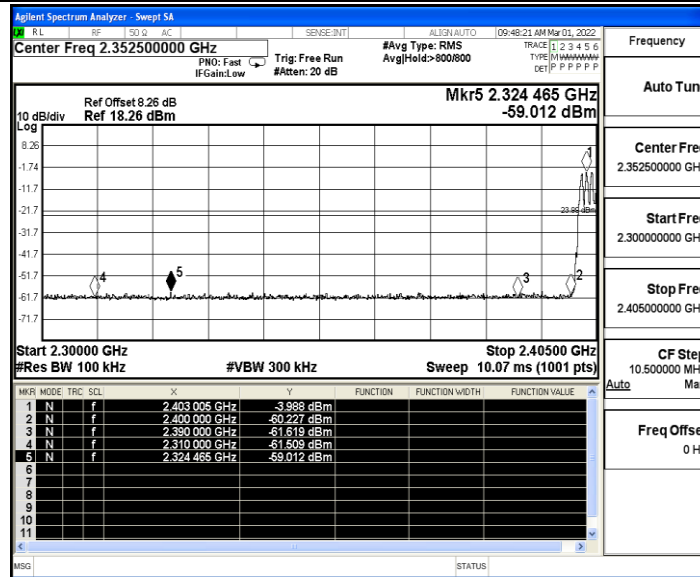
DH5_Ant1_Low_2402



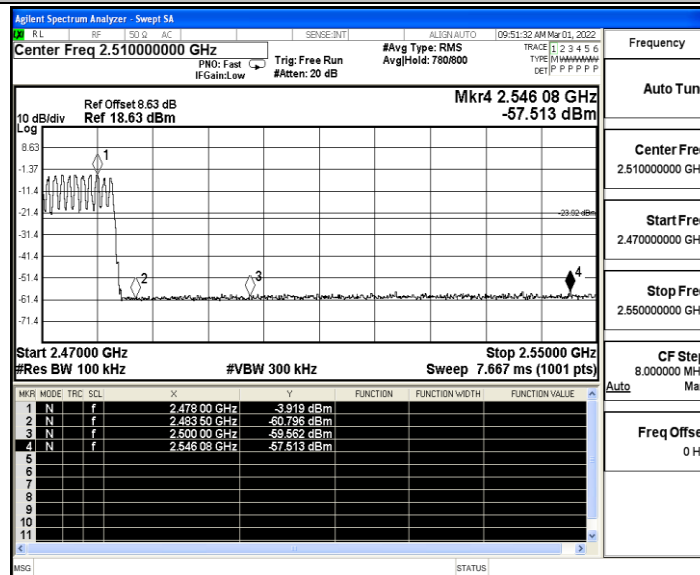
DH5_Ant1_High_2480



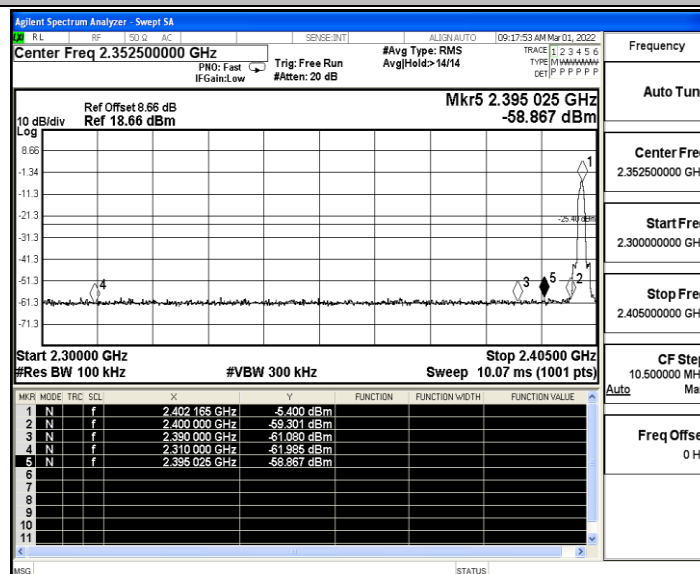
DH5_Ant1_Low_Hop_2402



DH5_Ant1_High_Hop_2480

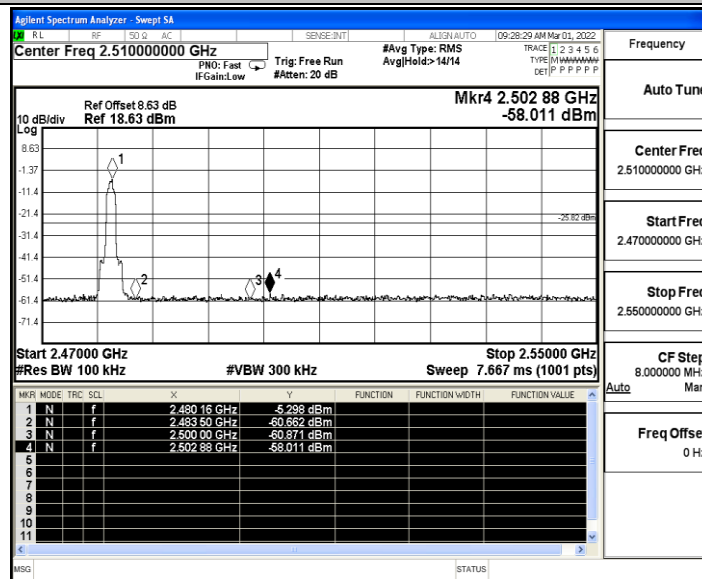


2DH5_Ant1_Low_2402

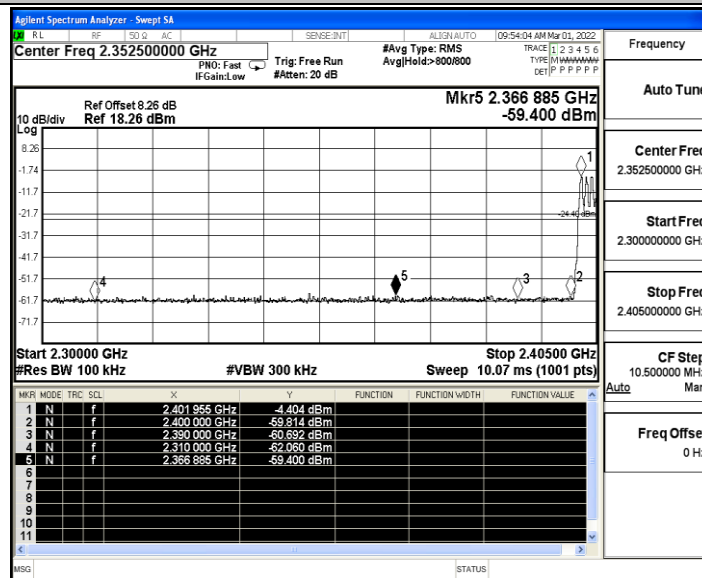




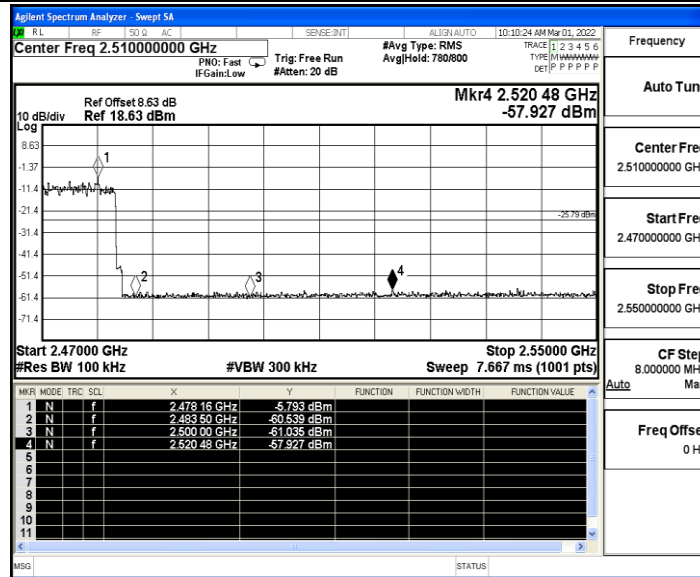
2DH5_Ant1_High_2480



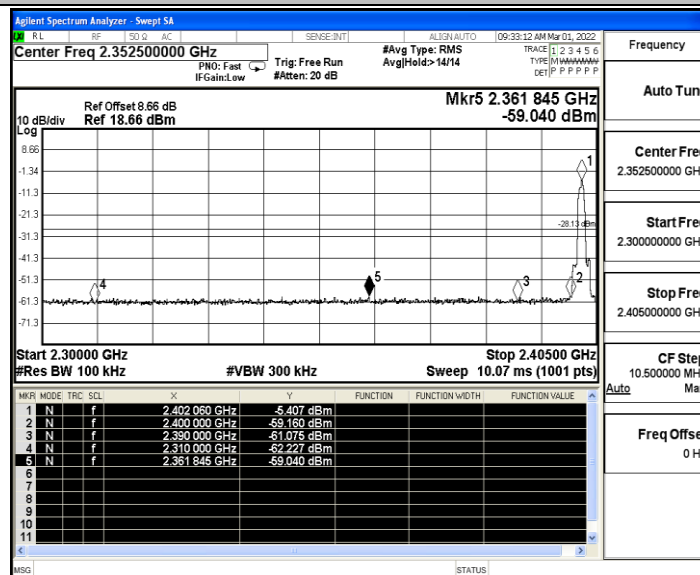
2DH5_Ant1_Low_Hop_2402



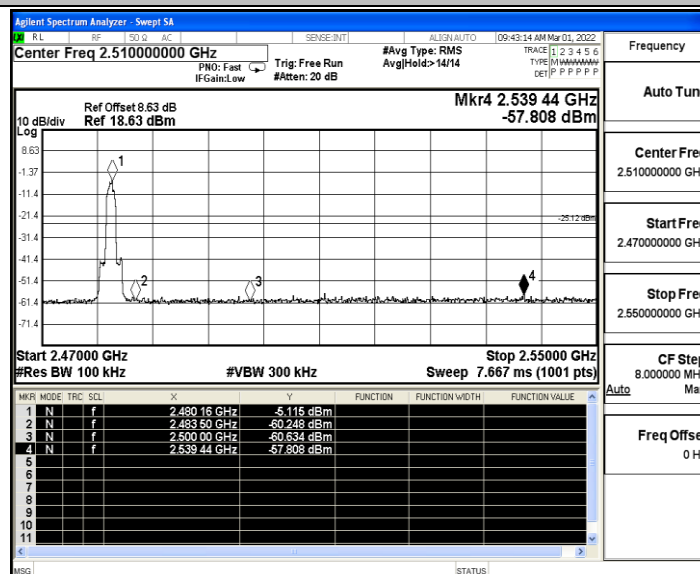
2DH5_Ant1_High_Hop_2480



3DH5_Ant1_Low_2402

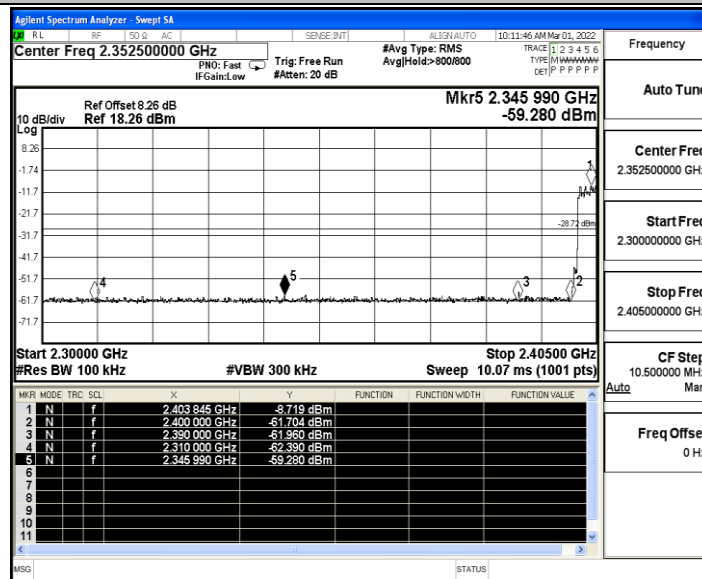


3DH5_Ant1_High_2480

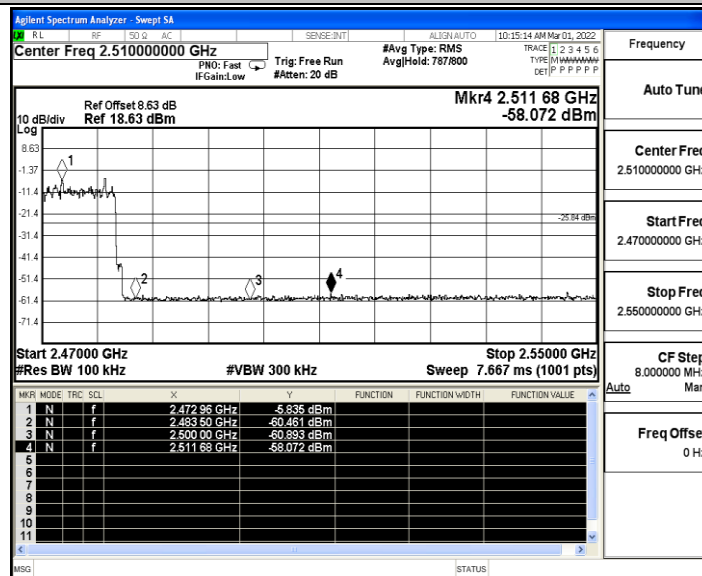




3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480





A.7: Conducted Spurious Emission

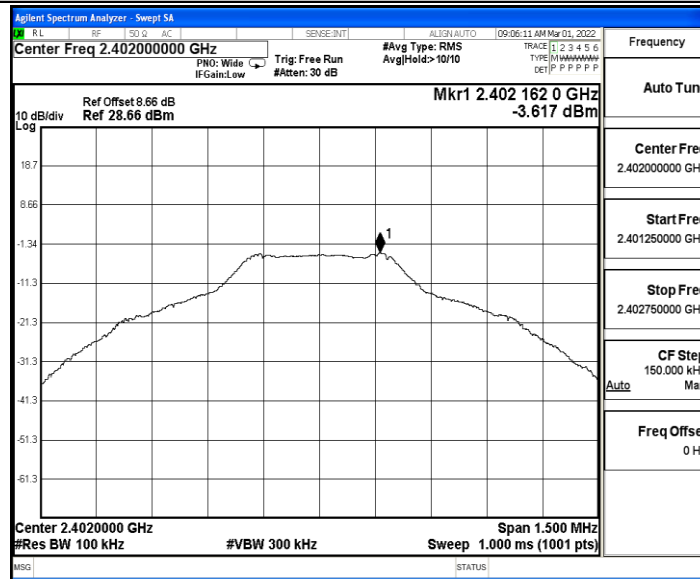
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-3.62	-3.62	---	PASS
			30~1000	-3.62	-60.39	≤ -23.62	PASS
			1000~26500	-3.62	-46.34	≤ -23.62	PASS
		2441	Reference	-2.21	-2.21	---	PASS
			30~1000	-2.21	-60.97	≤ -22.21	PASS
			1000~26500	-2.21	-46.62	≤ -22.21	PASS
		2480	Reference	-3.71	-3.71	---	PASS
			30~1000	-3.71	-59.68	≤ -23.71	PASS
			1000~26500	-3.71	-46.4	≤ -23.71	PASS
2DH5	Ant1	2402	Reference	-5.26	-5.26	---	PASS
			30~1000	-5.26	-60.54	≤ -25.26	PASS
			1000~26500	-5.26	-45.42	≤ -25.26	PASS
		2441	Reference	-3.70	-3.70	---	PASS
			30~1000	-3.70	-60.51	≤ -23.7	PASS
			1000~26500	-3.70	-45.75	≤ -23.7	PASS
		2480	Reference	-5.45	-5.45	---	PASS
			30~1000	-5.45	-60.55	≤ -25.45	PASS
			1000~26500	-5.45	-46.21	≤ -25.45	PASS
3DH5	Ant1	2402	Reference	-5.06	-5.06	---	PASS
			30~1000	-5.06	-44.75	≤ -25.06	PASS
			1000~26500	-5.06	-46.61	≤ -25.06	PASS
		2441	Reference	-4.14	-4.14	---	PASS
			30~1000	-4.14	-59.7	≤ -24.14	PASS
			1000~26500	-4.14	-46.24	≤ -24.14	PASS
		2480	Reference	-5.11	-5.11	---	PASS
			30~1000	-5.11	-61.47	≤ -25.11	PASS
			1000~26500	-5.11	-46.12	≤ -25.11	PASS

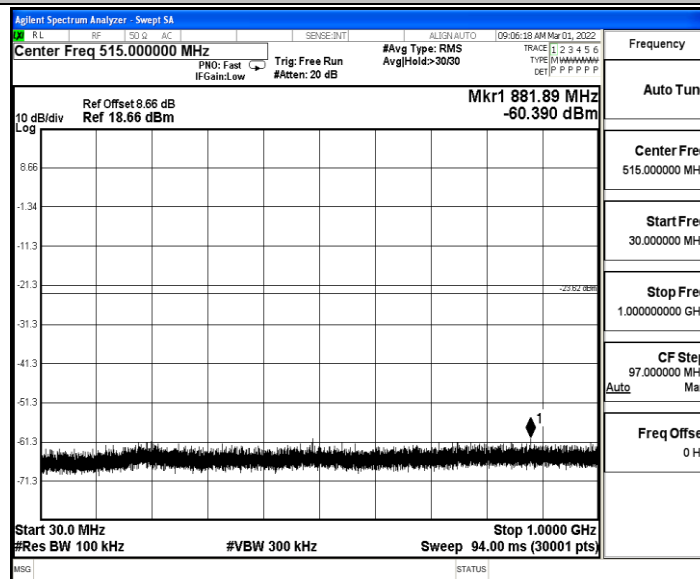


Test Graphs

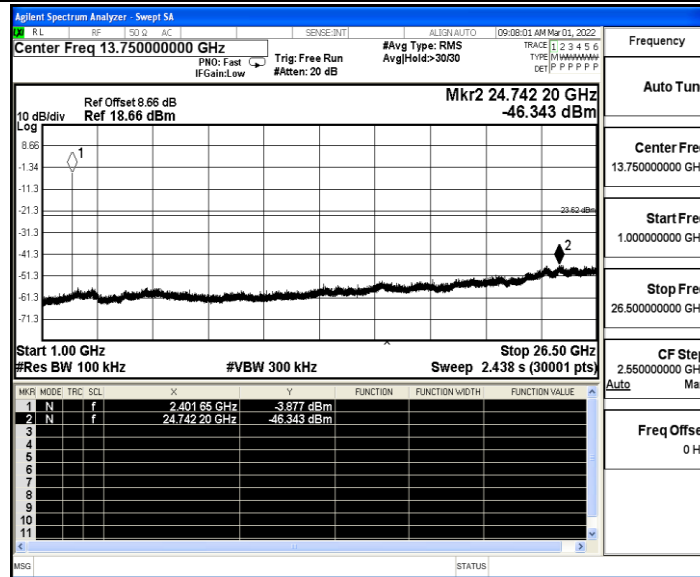
DH5_Ant1_2402_0~Reference



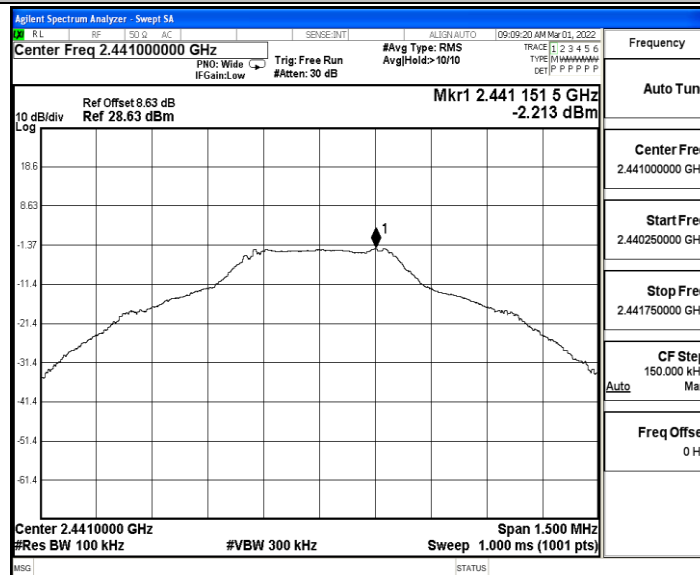
DH5_Ant1_2402_30~1000



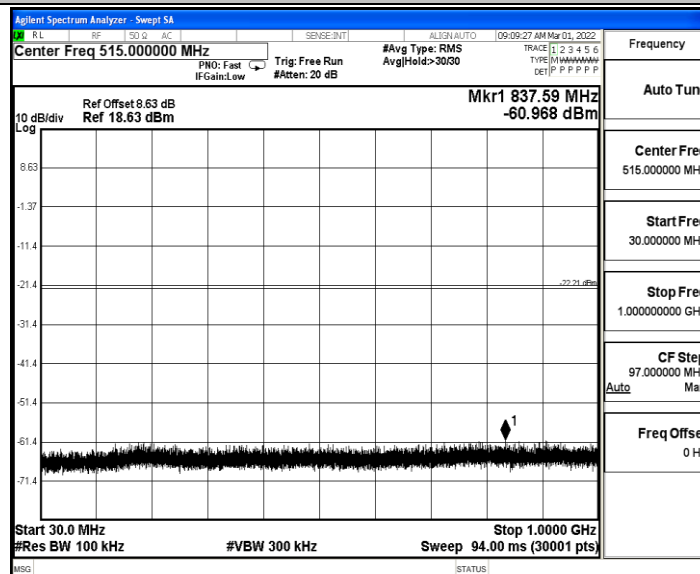
DH5_Ant1_2402_1000~26500



DH5_Ant1_2441_0~Reference

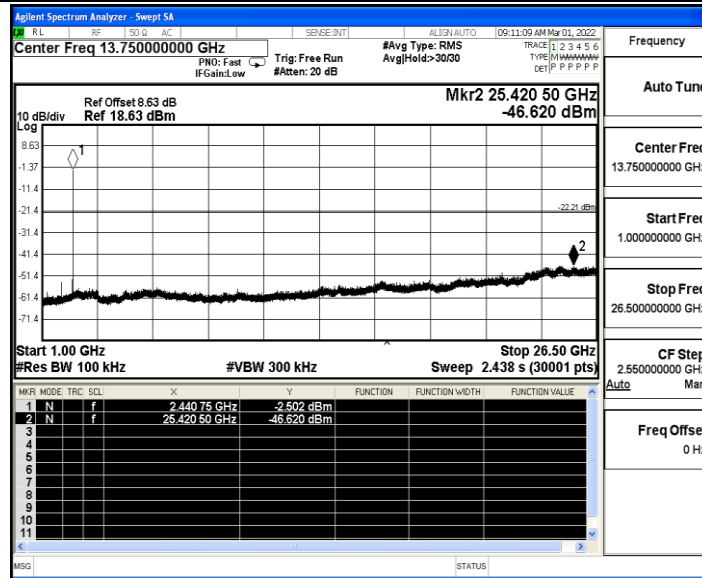


DH5_Ant1_2441_30~1000

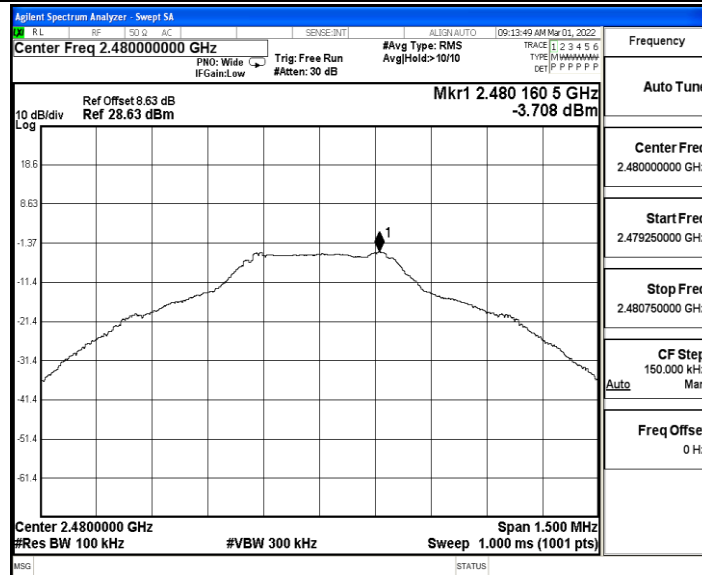




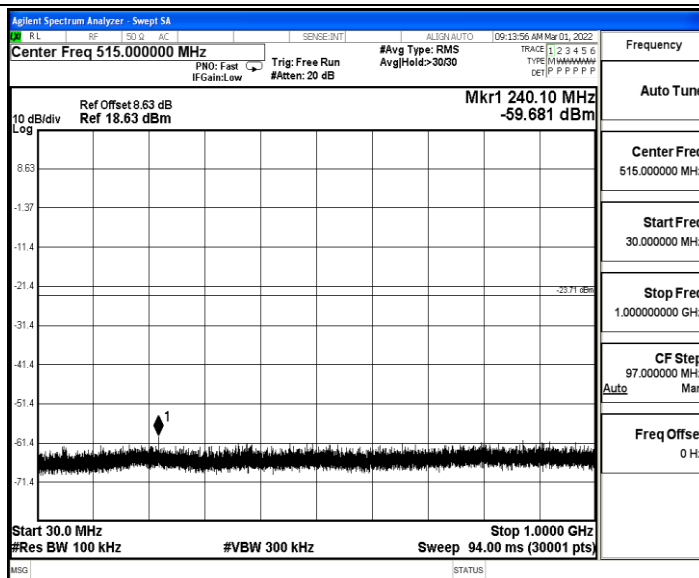
DH5_Ant1_2441_1000~26500



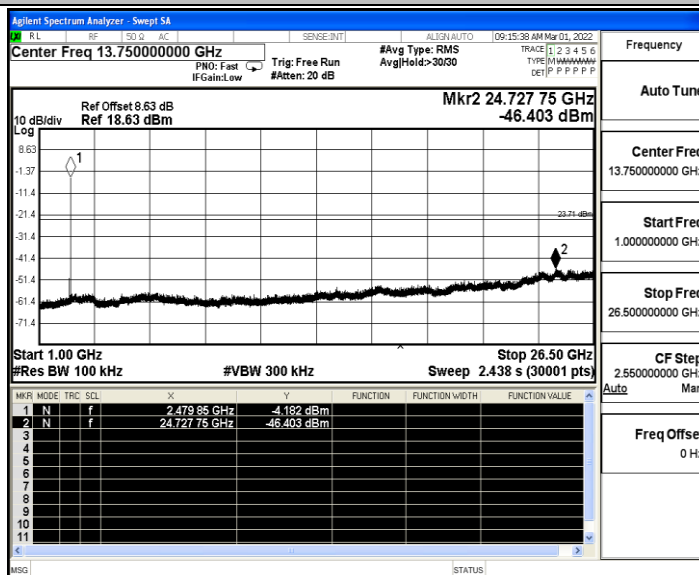
DH5_Ant1_2480_0~Reference



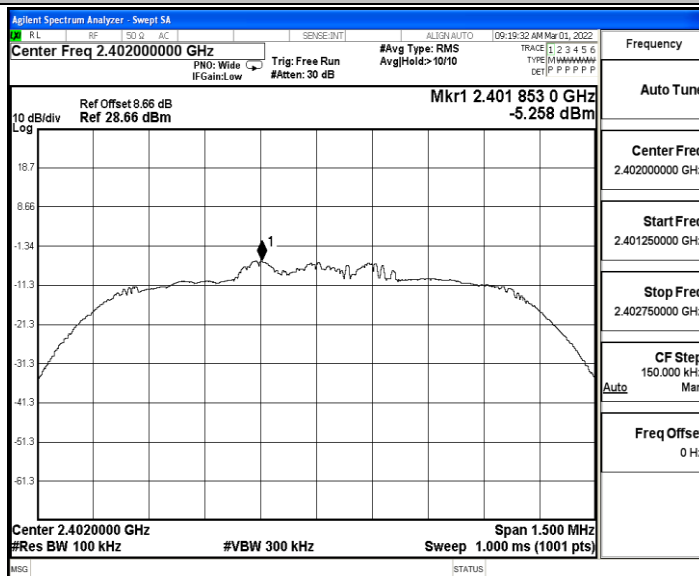
DH5_Ant1_2480_30~1000



DH5_Ant1_2480_1000~26500

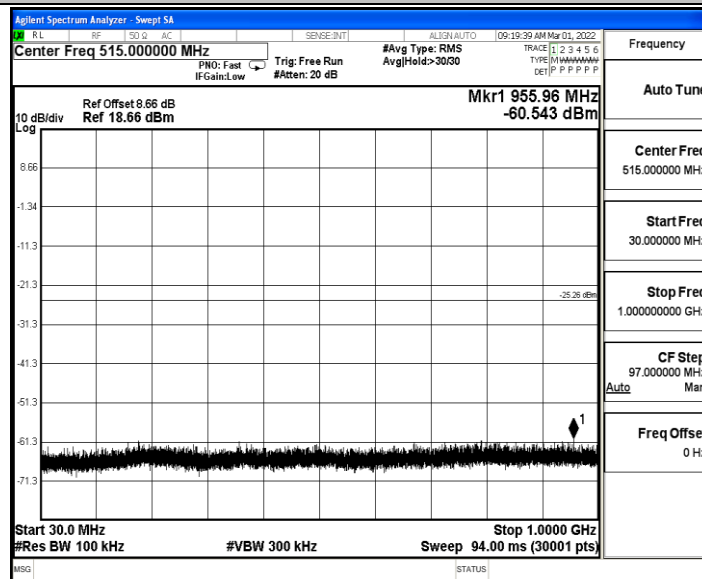


2DH5_Ant1_2402_0~Reference

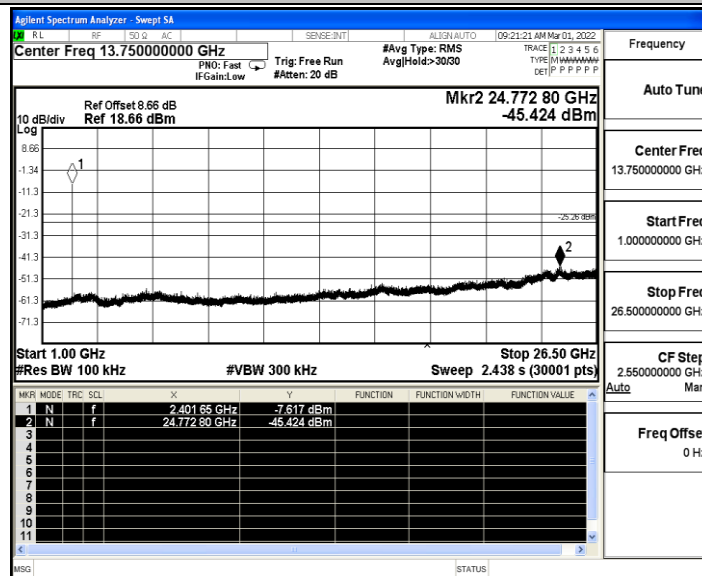




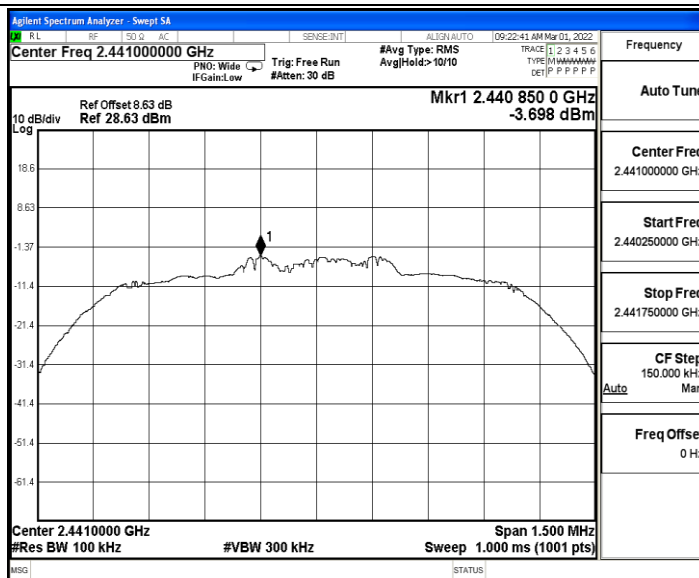
2DH5_Ant1_2402_30~1000



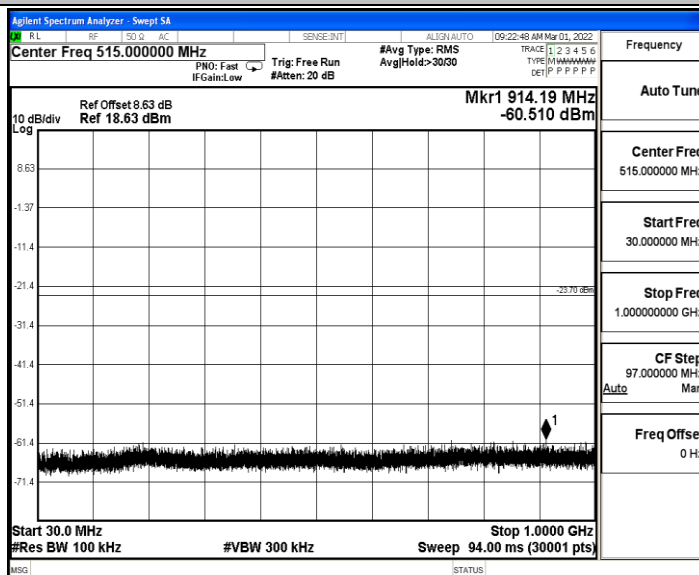
2DH5_Ant1_2402_1000~26500



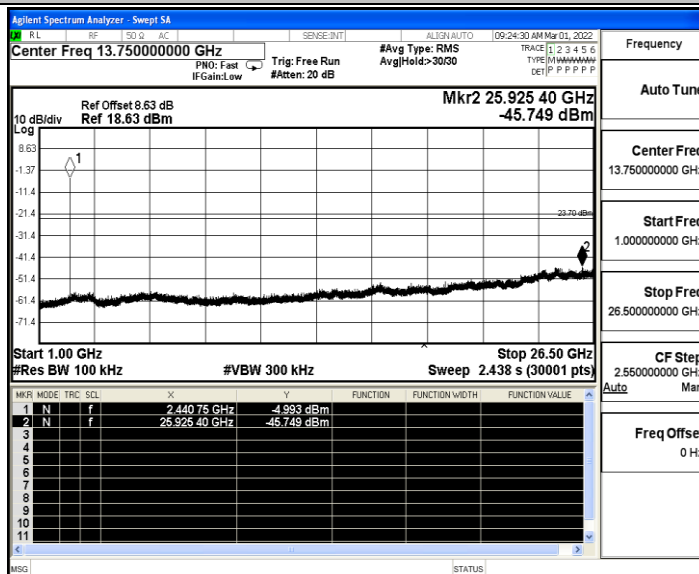
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000

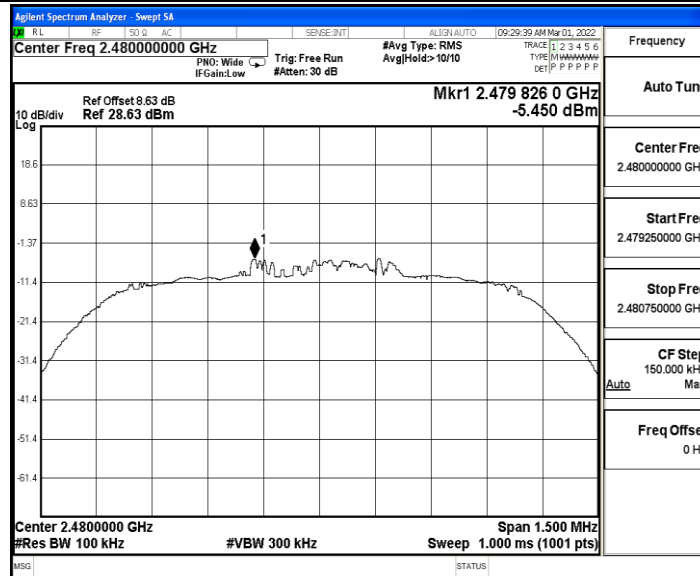


2DH5_Ant1_2441_1000~26500

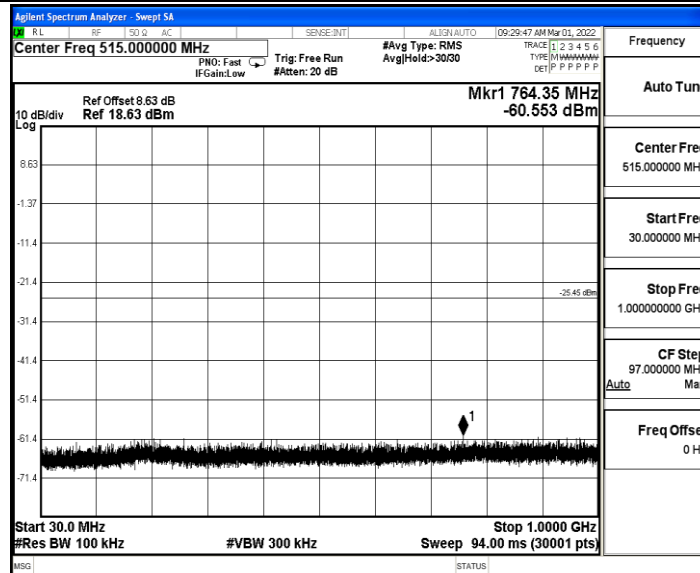




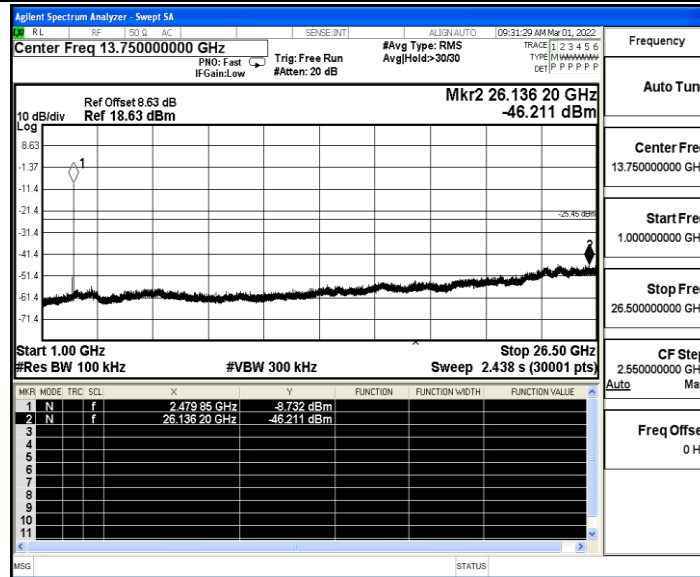
2DH5_Ant1_2480_0~Reference



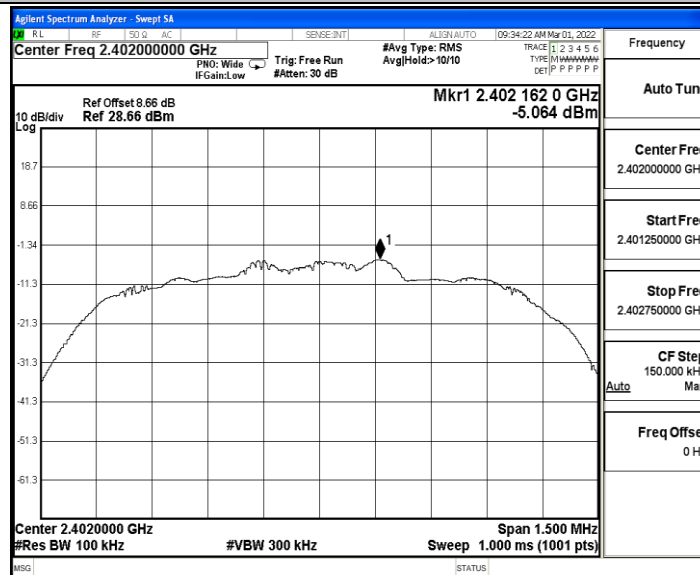
2DH5_Ant1_2480_30~1000



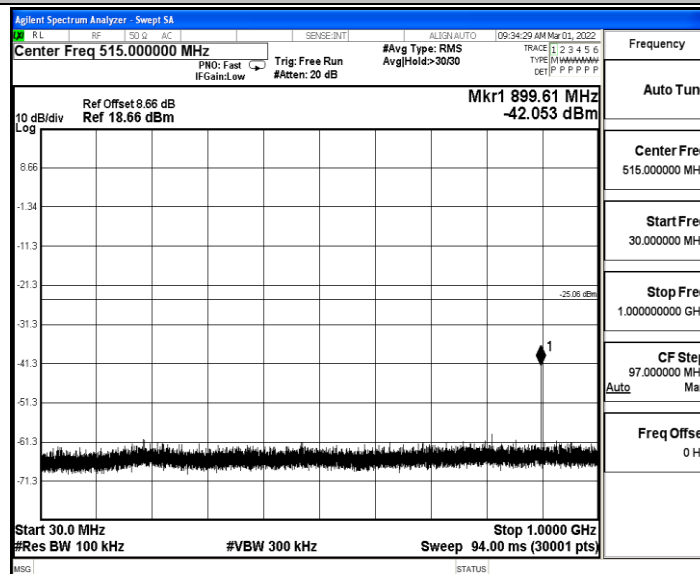
2DH5_Ant1_2480_1000~26500



3DH5_Ant1_2402_0~Reference

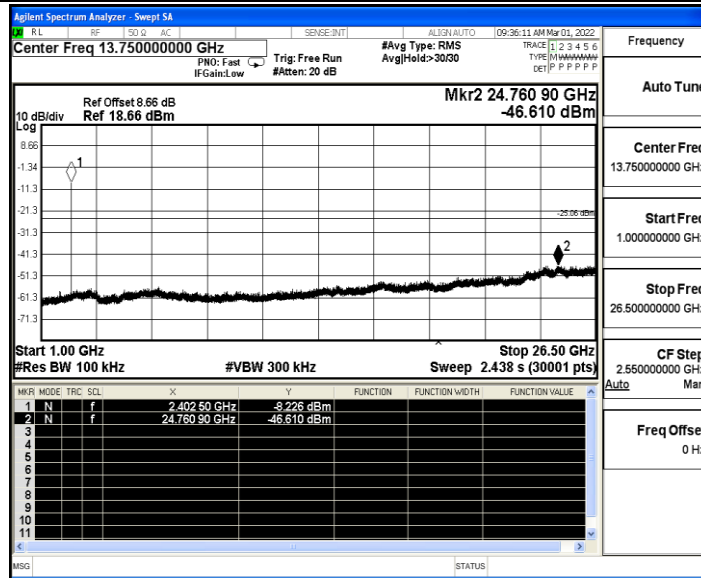


3DH5_Ant1_2402_30~1000

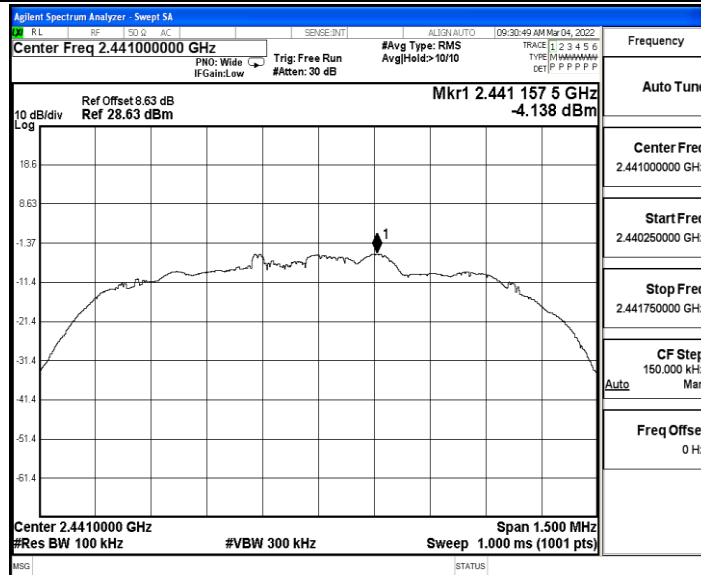




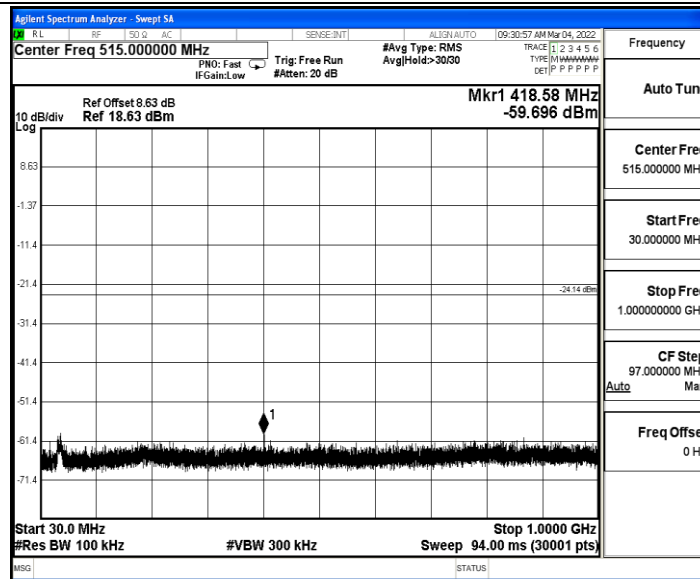
3DH5_Ant1_2402_1000~26500



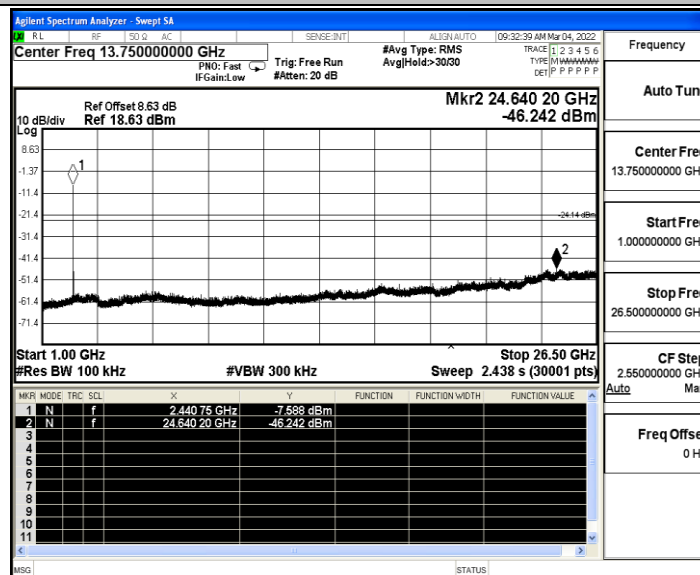
3DH5_Ant1_2441_0~Reference



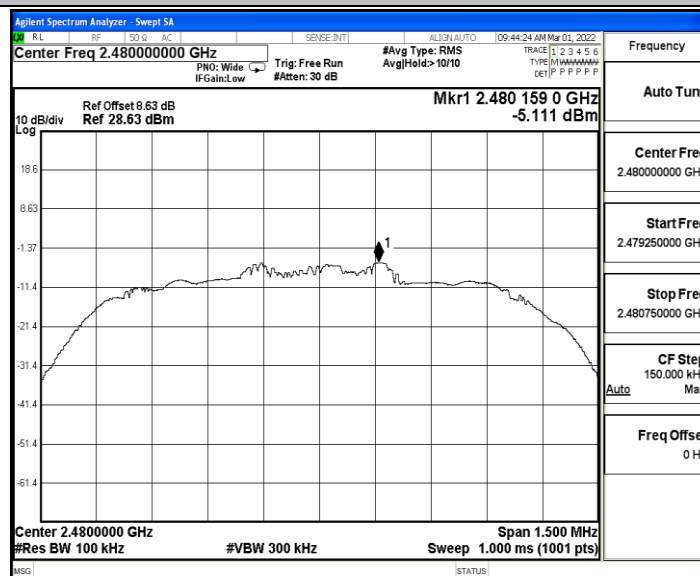
3DH5_Ant1_2441_30~1000



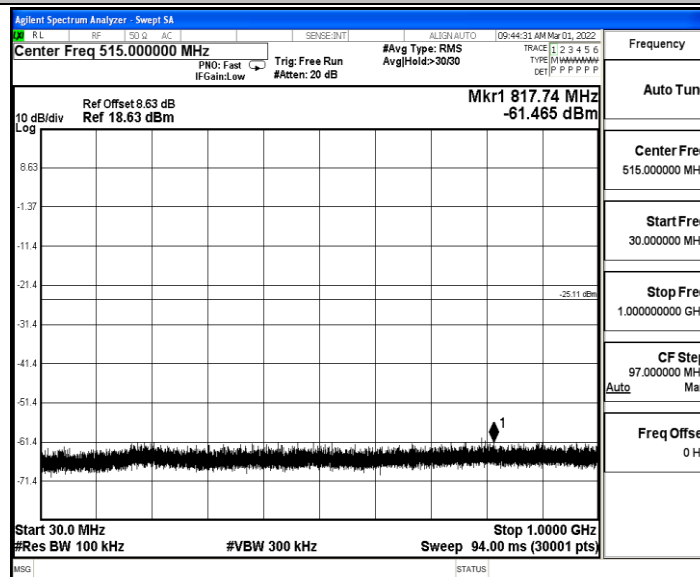
3DH5_Ant1_2441_1000~26500



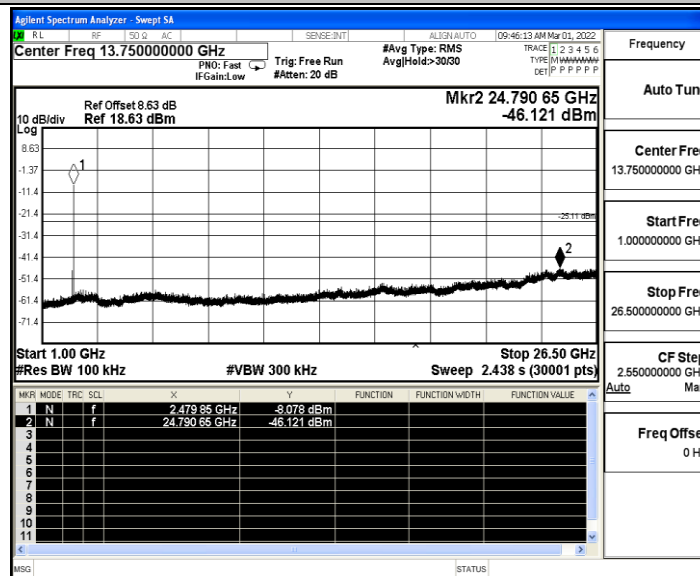
3DH5_Ant1_2480_0~Reference



3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500





A.8: Emissions in Restricted Bands

Test Result

TestMode	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
DH5	2402	AV	2310.000	-58.23	≤-41.20	36.97	≤54	PASS
		AV	2388.830	-57.52	≤-41.20	37.68	≤54	PASS
		AV	2390.000	-57.79	≤-41.20	37.41	≤54	PASS
		Peak	2310.000	-49.61	≤-21.20	45.59	≤74	PASS
		Peak	2387.360	-45.86	≤-21.20	49.34	≤74	PASS
		Peak	2390.000	-48.02	≤-21.20	47.18	≤74	PASS
	2480	AV	2483.500	-56.4	≤-41.20	38.80	≤54	PASS
		AV	2483.520	-56.4	≤-41.20	38.80	≤54	PASS
		AV	2500.000	-57.24	≤-41.20	37.96	≤54	PASS
		Peak	2483.500	-48.23	≤-21.20	46.97	≤74	PASS
		Peak	2492.640	-46.21	≤-21.20	48.99	≤74	PASS
		Peak	2500.000	-47.84	≤-21.20	47.36	≤74	PASS
	Hop_240 2	Peak	2310.000	-49.14	≤-21.20	46.06	≤74	PASS
		Peak	2368.985	-46.77	≤-21.20	48.43	≤74	PASS
		Peak	2390.000	-48.43	≤-21.20	46.77	≤74	PASS
	Hop_248 0	Peak	2483.500	-48.33	≤-21.20	46.87	≤74	PASS
		Peak	2492.320	-46.54	≤-21.20	48.66	≤74	PASS
		Peak	2500.000	-46.91	≤-21.20	48.29	≤74	PASS
2DH5	2402	AV	2310.000	-58.24	≤-41.20	36.96	≤54	PASS
		AV	2388.095	-57.65	≤-41.20	37.55	≤54	PASS
		AV	2390.000	-57.79	≤-41.20	37.41	≤54	PASS
		Peak	2310.000	-47.16	≤-21.20	48.04	≤74	PASS
		Peak	2382.635	-45.83	≤-21.20	49.37	≤74	PASS
		Peak	2390.000	-48.48	≤-21.20	46.72	≤74	PASS
	2480	AV	2483.500	-56.37	≤-41.20	38.83	≤54	PASS
		AV	2483.520	-56.37	≤-41.20	38.83	≤54	PASS
		AV	2500.000	-57.23	≤-41.20	37.97	≤54	PASS
		Peak	2483.500	-47.48	≤-21.20	47.72	≤74	PASS
		Peak	2492.880	-46.09	≤-21.20	49.11	≤74	PASS
		Peak	2500.000	-47.91	≤-21.20	47.29	≤74	PASS
	Hop_240 2	Peak	2310.000	-48.2	≤-21.20	47.00	≤74	PASS
		Peak	2331.500	-46.98	≤-21.20	48.22	≤74	PASS
		Peak	2390.000	-49.27	≤-21.20	45.93	≤74	PASS
	Hop_248 0	Peak	2483.500	-48.22	≤-21.20	46.98	≤74	PASS
		Peak	2485.760	-45.89	≤-21.20	49.31	≤74	PASS
		Peak	2500.000	-48.08	≤-21.20	47.12	≤74	PASS
3DH5	2402	AV	2310.000	-58.19	≤-41.20	37.01	≤54	PASS



		AV	2389.250	-57.67	≤ -41.20	37.53	≤ 54	PASS
		AV	2390.000	-57.68	≤ -41.20	37.52	≤ 54	PASS
		Peak	2310.000	-48	≤ -21.20	47.20	≤ 74	PASS
		Peak	2374.340	-46.4	≤ -21.20	48.80	≤ 74	PASS
		Peak	2390.000	-48.33	≤ -21.20	46.87	≤ 74	PASS
	2480	AV	2483.500	-56.16	≤ -41.20	39.04	≤ 54	PASS
		AV	2483.520	-56.16	≤ -41.20	39.04	≤ 54	PASS
		AV	2500.000	-57.26	≤ -41.20	37.94	≤ 54	PASS
		Peak	2483.500	-46.5	≤ -21.20	48.70	≤ 74	PASS
		Peak	2488.240	-45.89	≤ -21.20	49.31	≤ 74	PASS
		Peak	2500.000	-47.75	≤ -21.20	47.45	≤ 74	PASS
	Hop_240 2	Peak	2310.000	-48.94	≤ -21.20	46.26	≤ 74	PASS
		Peak	2332.025	-46.84	≤ -21.20	48.36	≤ 74	PASS
		Peak	2390.000	-49.06	≤ -21.20	46.14	≤ 74	PASS
	Hop_248 0	Peak	2483.500	-47.3	≤ -21.20	47.90	≤ 74	PASS
		Peak	2497.360	-45.82	≤ -21.20	49.38	≤ 74	PASS
		Peak	2500.000	-46.92	≤ -21.20	48.28	≤ 74	PASS

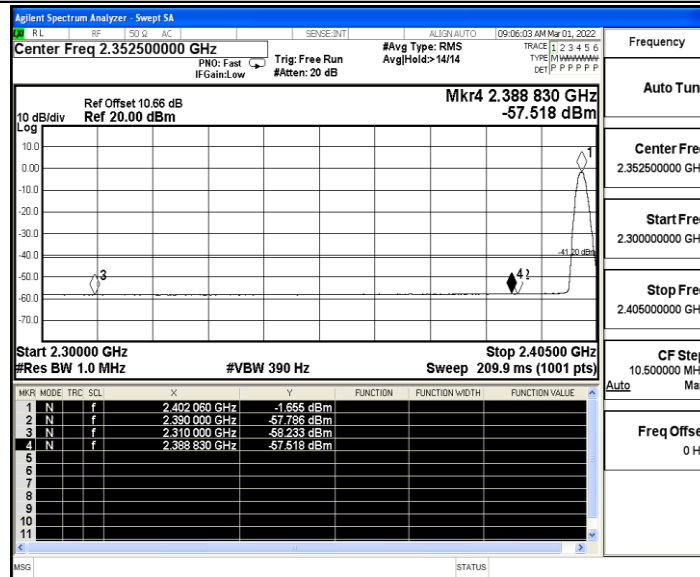
Note:

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.

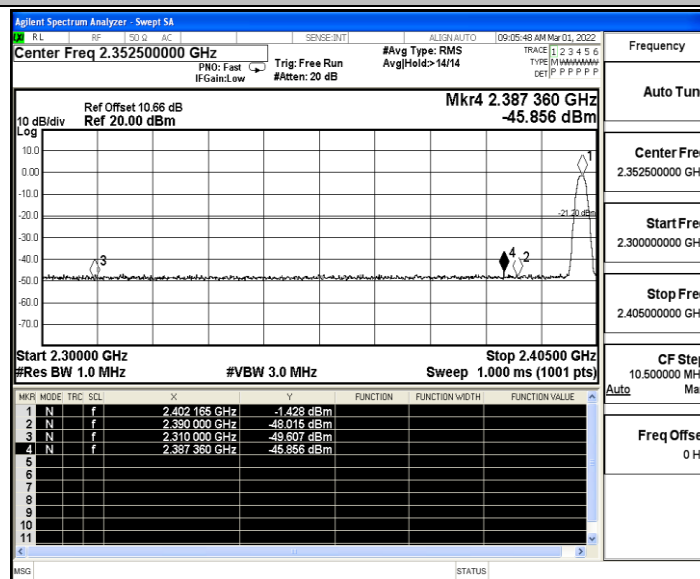


Test Graphs

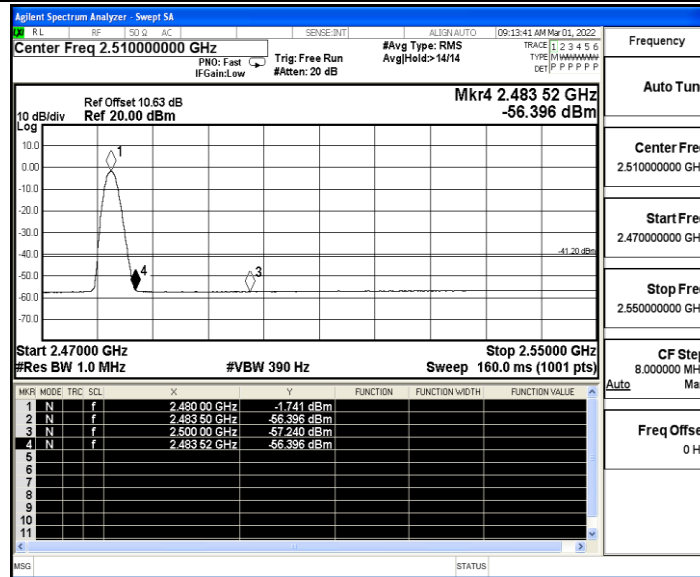
DH5_Ant1_Low_2402_AV



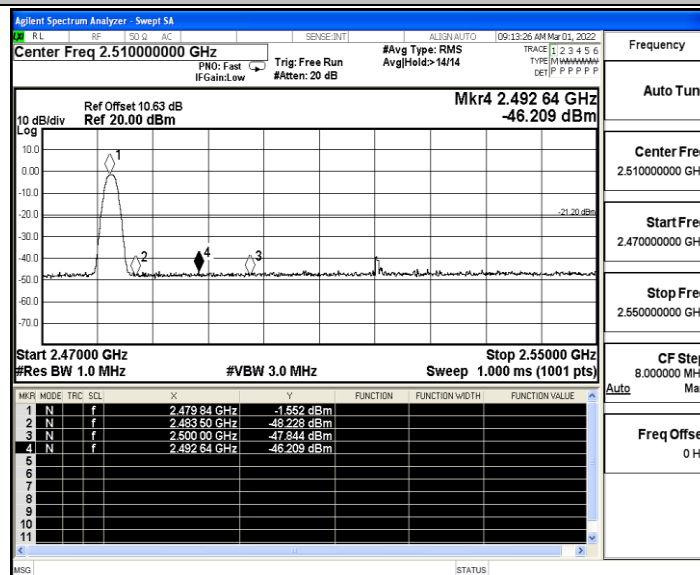
DH5_Ant1_Low_2402_Peak



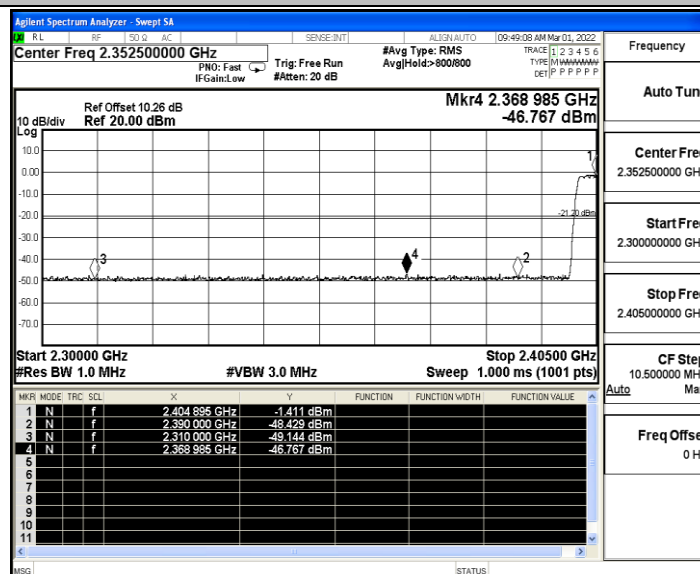
DH5_Ant1_High_2480_AV



DH5_Ant1_High_2480_Peak

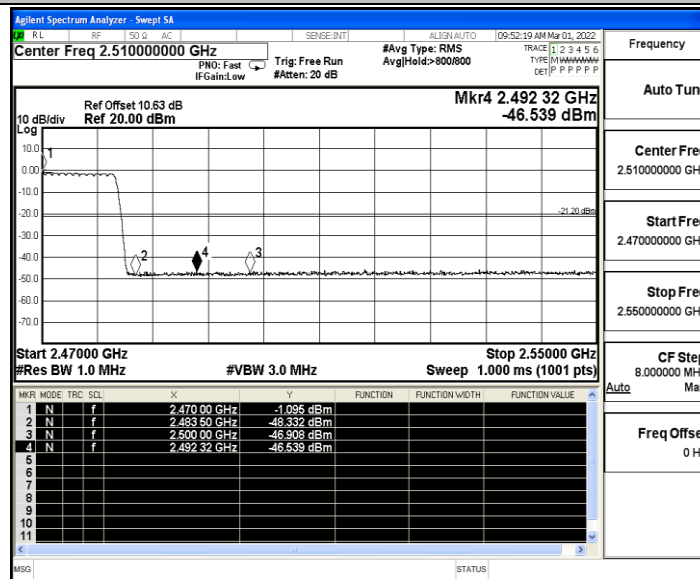


DH5_Ant1_Low_Hop_2402_Peak

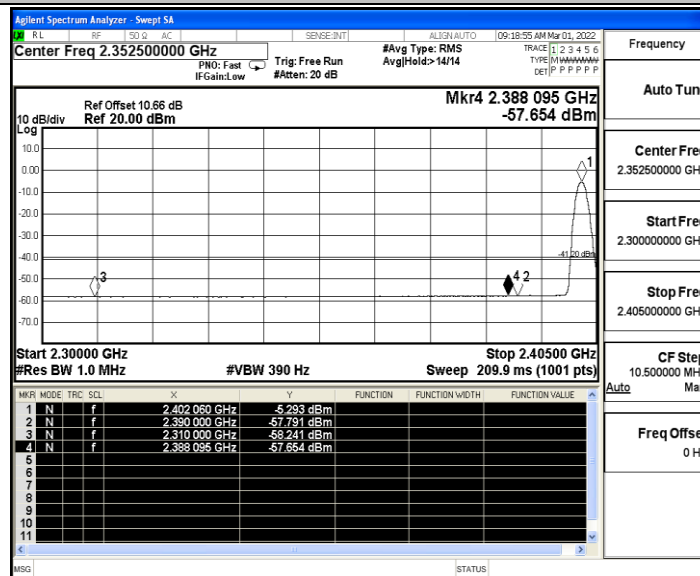




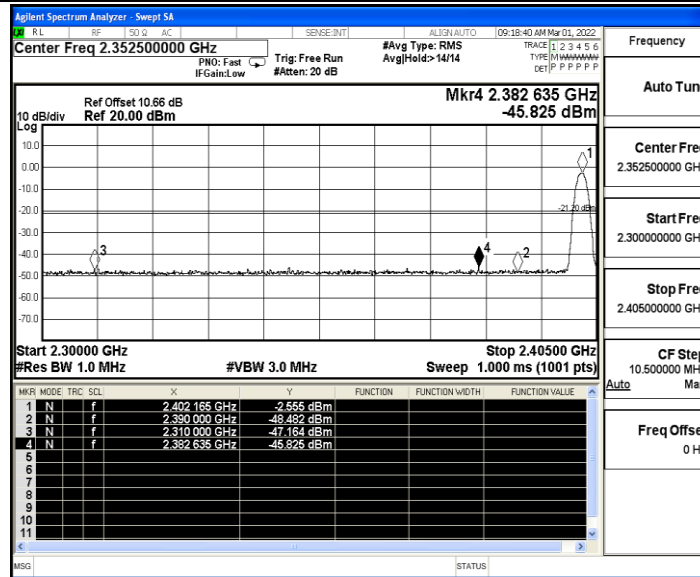
DH5_Ant1_High_Hop_2480_Peak



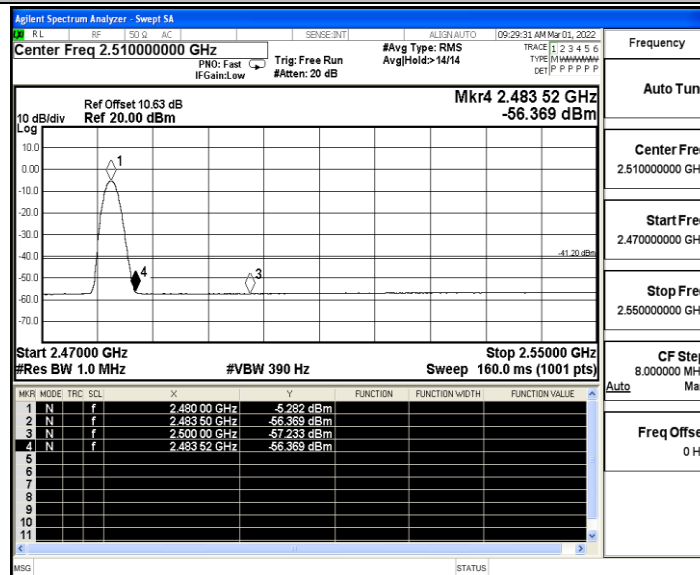
2DH5_Ant1_Low_2402_AV



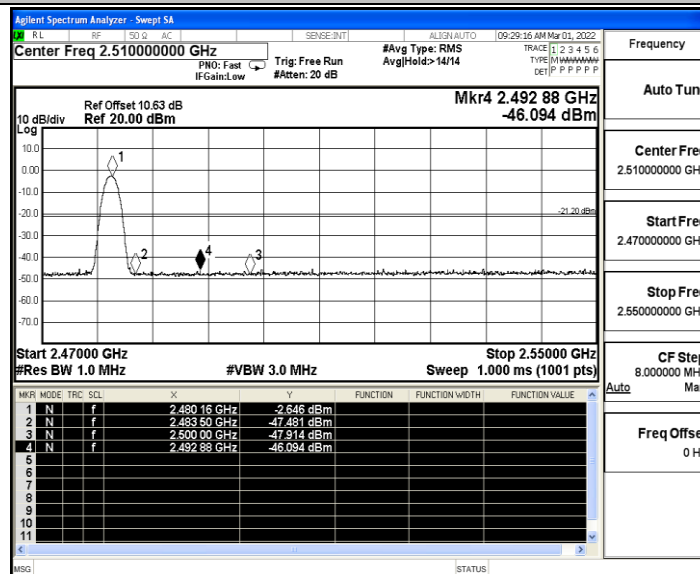
2DH5_Ant1_Low_2402_Peak



2DH5_Ant1_High_2480_AV

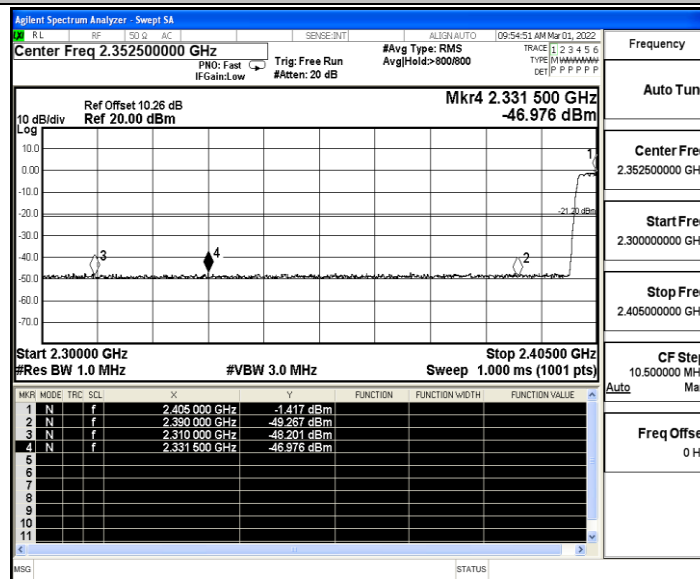


2DH5_Ant1_High_2480_Peak

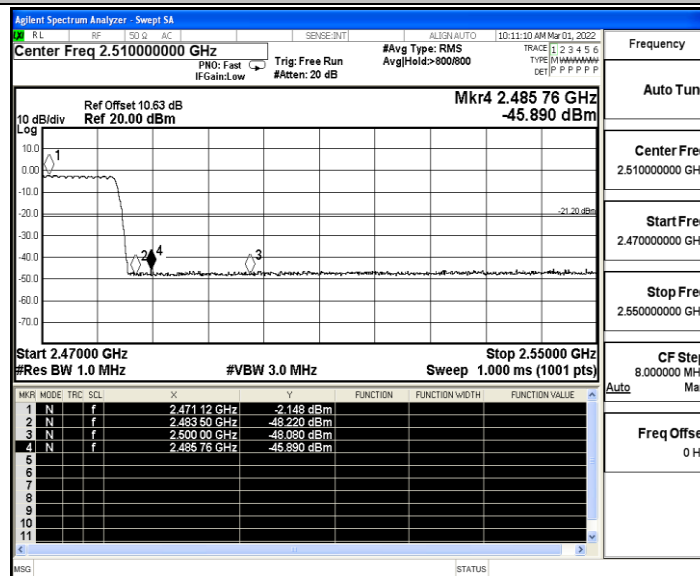




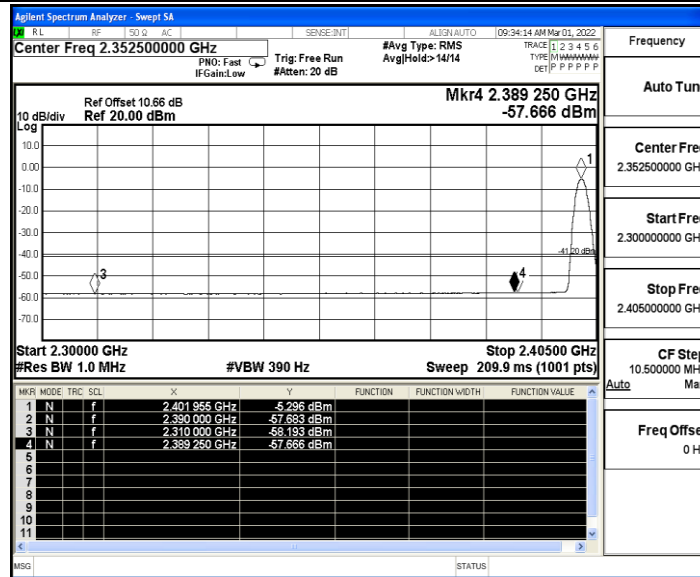
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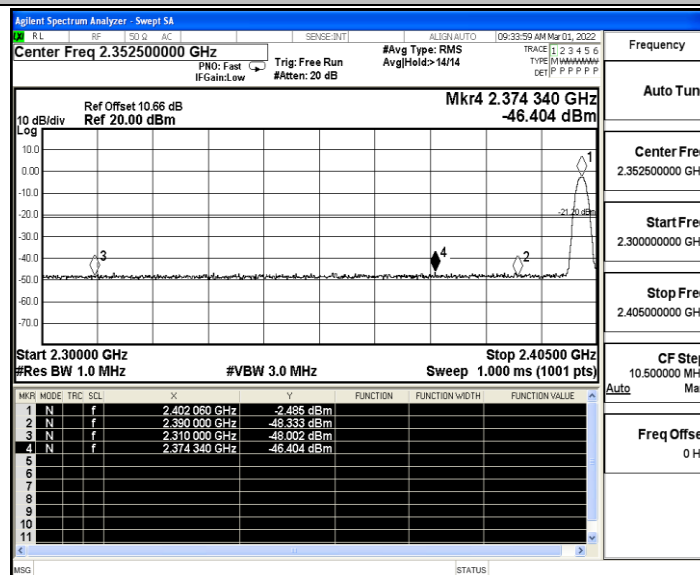
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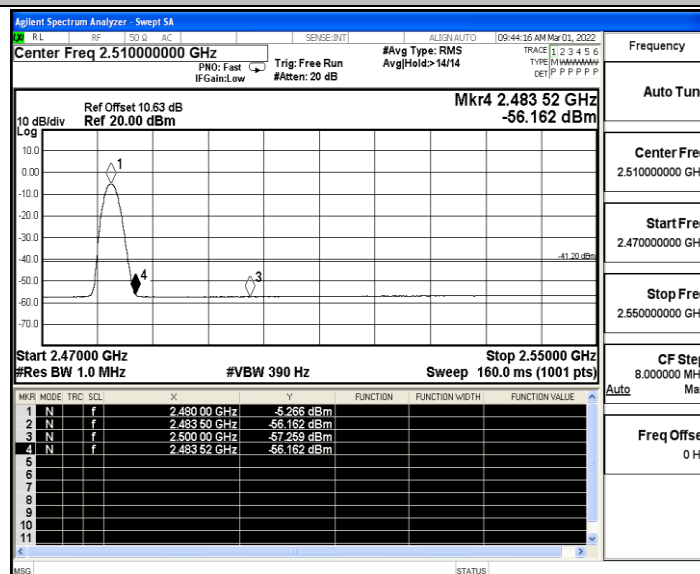
3DH5_Ant1_Low_2402_AV



3DH5_Ant1_Low_2402_Peak

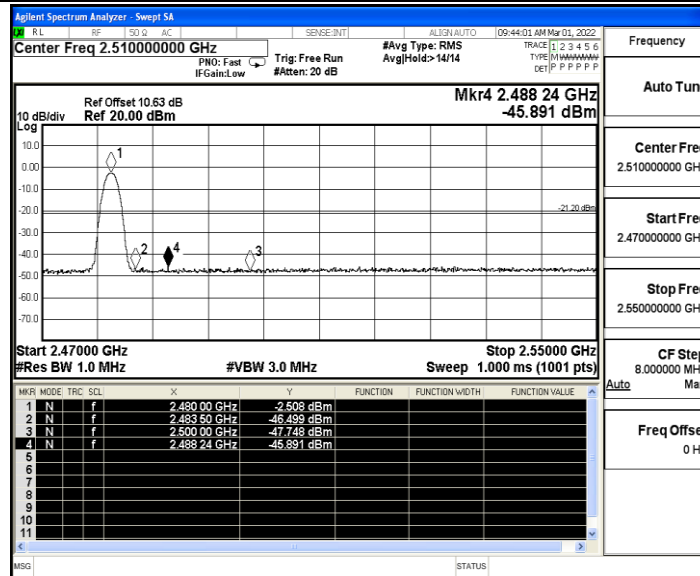


3DH5_Ant1_High_2480_AV

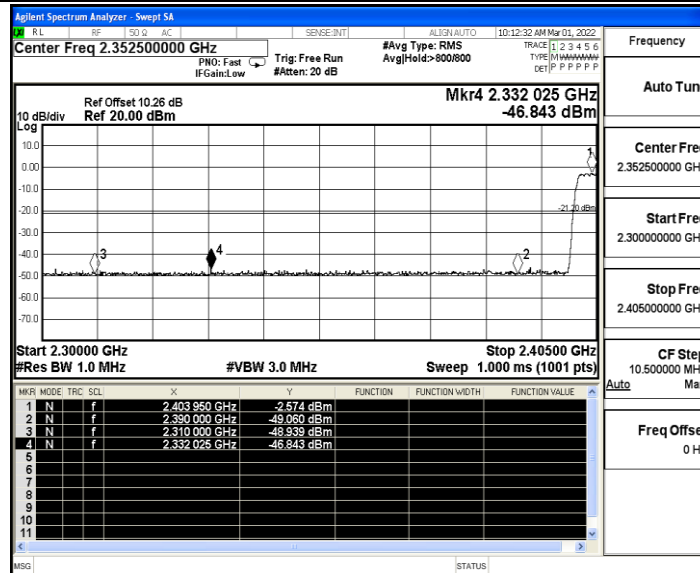




3DH5_Ant1_High_2480_Peak



3DH5_Ant1_Low_Hop_2402_Peak



3DH5_Ant1_High_Hop_2480_Peak

