RF Test Data for BT(BDR/EDR) (Conducted Measurement)

Product Name: NucBox3

Trade Mark: GMKtec,GMKTEC

Test Model: KB3

FCC ID: 2AXUD-KB3

Environmental Conditions

Temperature:	25.5°C
Relative Humidity:	55%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

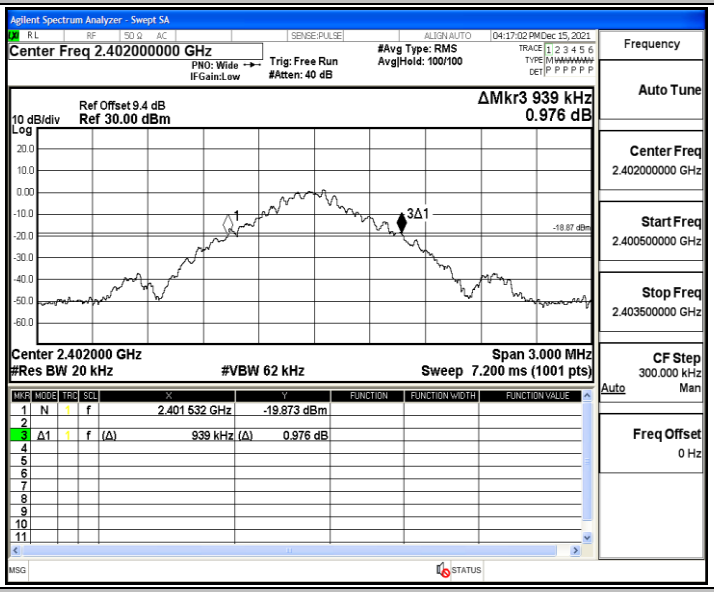
Appendix A: 20dB Emission Bandwidth

Test Result

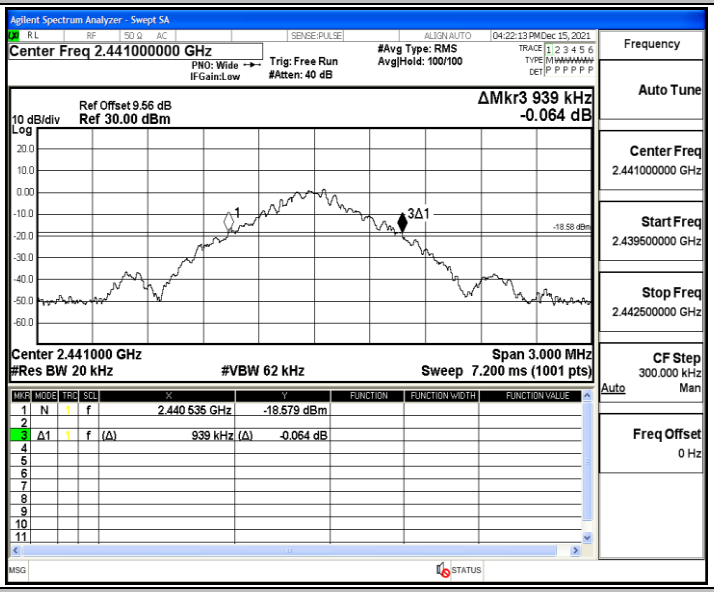
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.939	2401.532	2402.471	---	PASS
		2441	0.939	2440.535	2441.474	---	PASS
		2480	0.951	2479.529	2480.480	---	PASS
2DH5	Ant1	2402	1.491	2401.256	2402.747	---	PASS
		2441	1.515	2440.238	2441.753	---	PASS
		2480	1.521	2479.232	2480.753	---	PASS
3DH5	Ant1	2402	1.485	2401.265	2402.750	---	PASS
		2441	1.494	2440.268	2441.762	---	PASS
		2480	1.491	2479.265	2480.756	---	PASS

Test Graphs

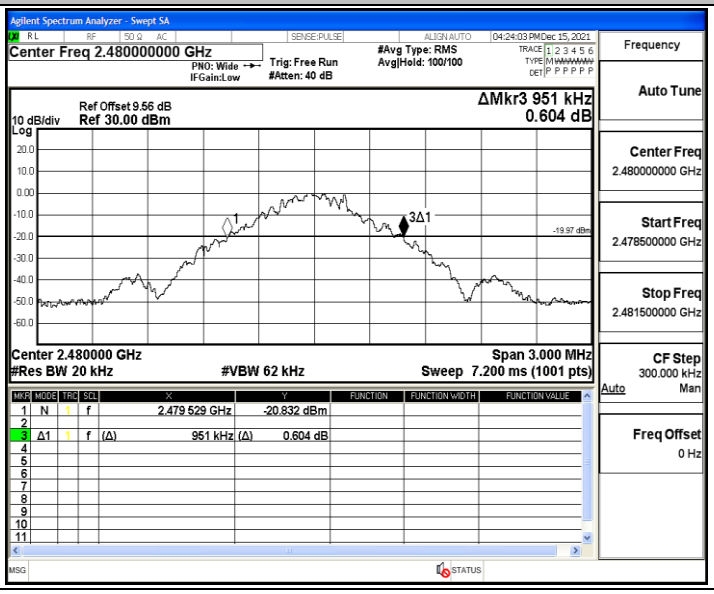
DH5_Ant1_2402



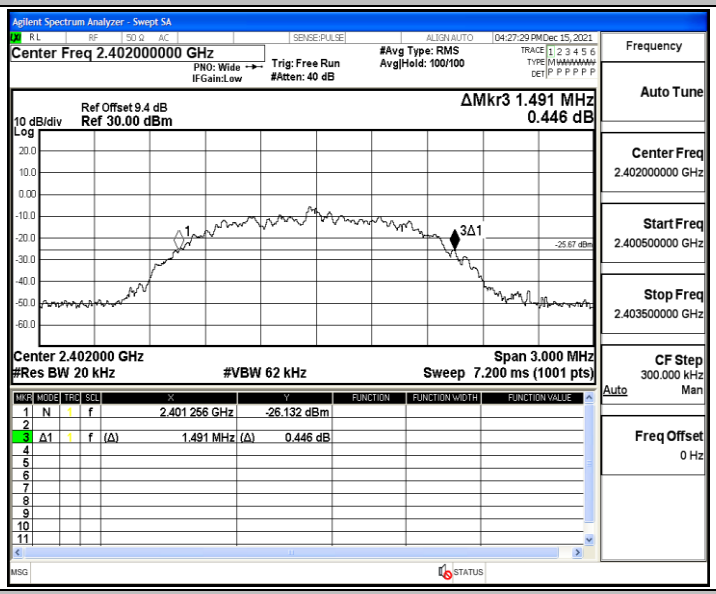
DH5_Ant1_2441



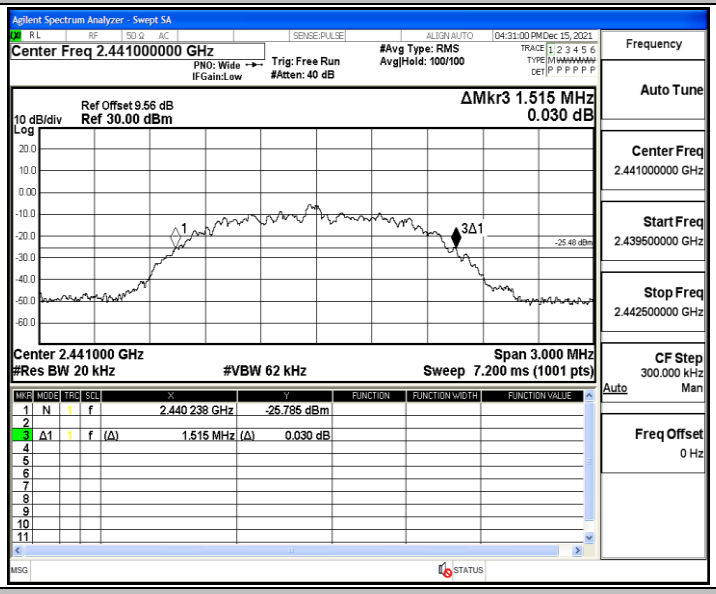
DH5_Ant1_2480



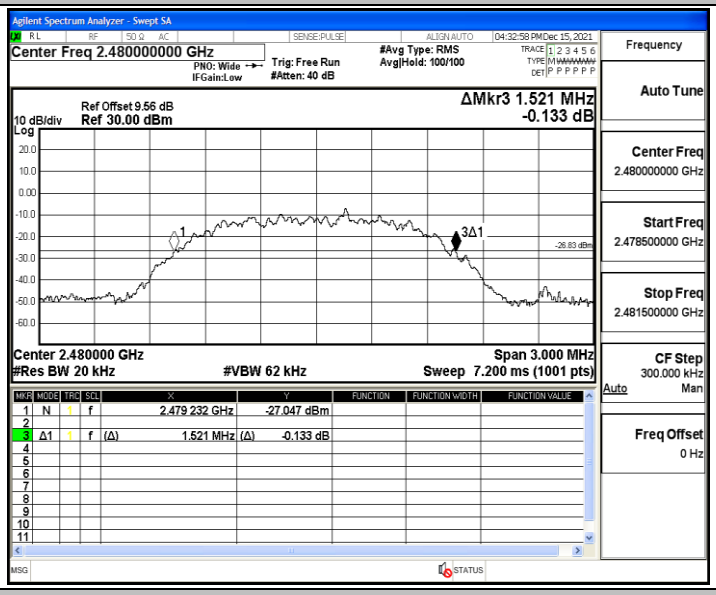
2DH5_Ant1_2402



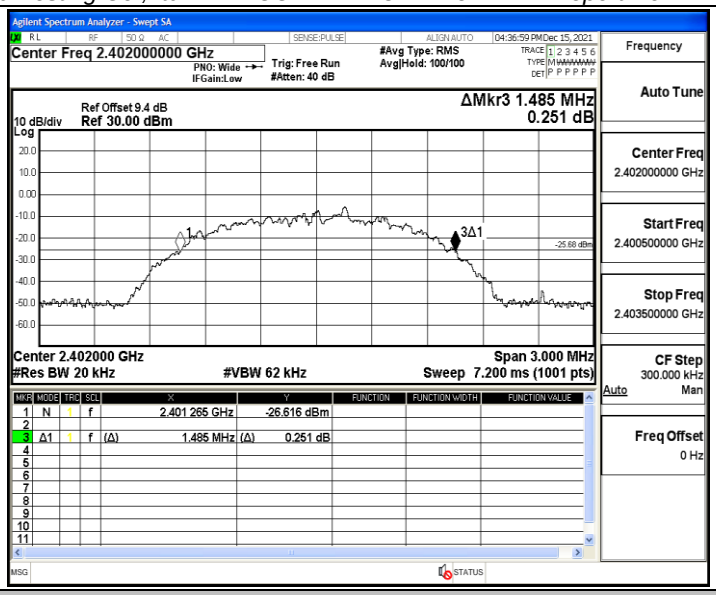
2DH5_Ant1_2441



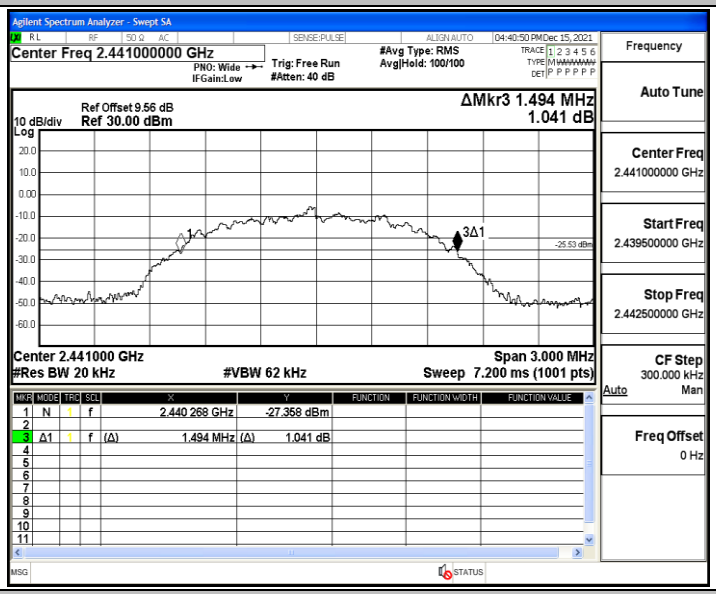
2DH5_Ant1_2480



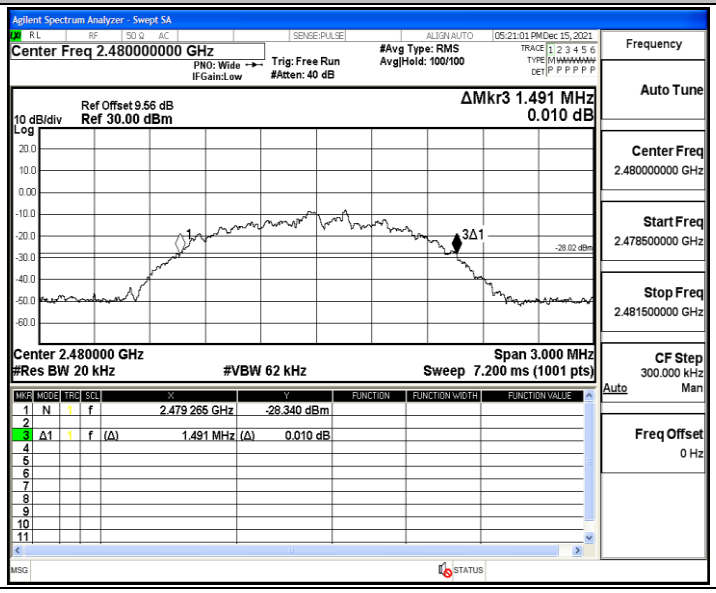
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



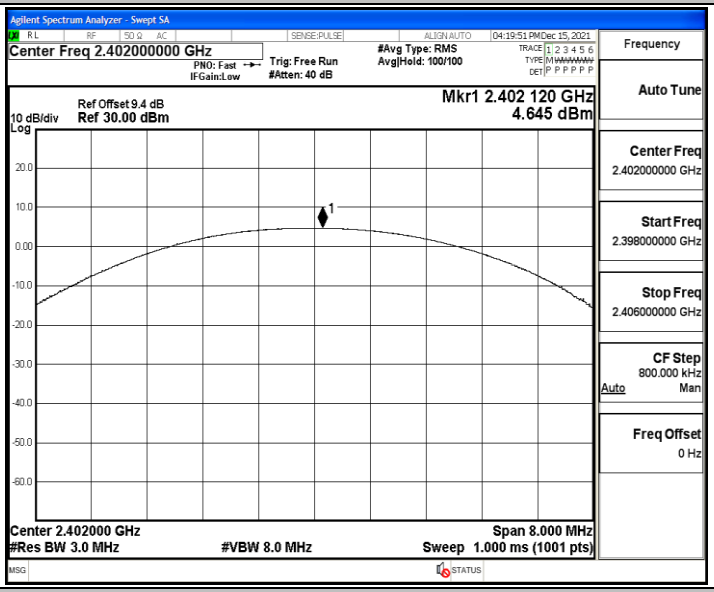
Appendix B: Maximum conducted output power

Test Result

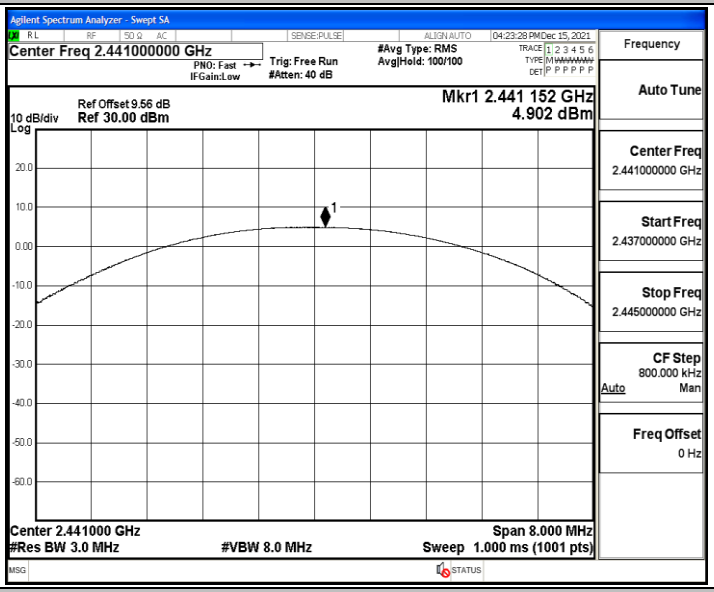
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	4.65	≤30.00	PASS
		2441	4.9	≤30.00	PASS
		2480	4.13	≤30.00	PASS
2DH5	Ant1	2402	1.02	≤20.97	PASS
		2441	1.47	≤20.97	PASS
		2480	0.58	≤20.97	PASS
3DH5	Ant1	2402	1.23	≤20.97	PASS
		2441	1.6	≤20.97	PASS
		2480	0.89	≤20.97	PASS

Test Graphs

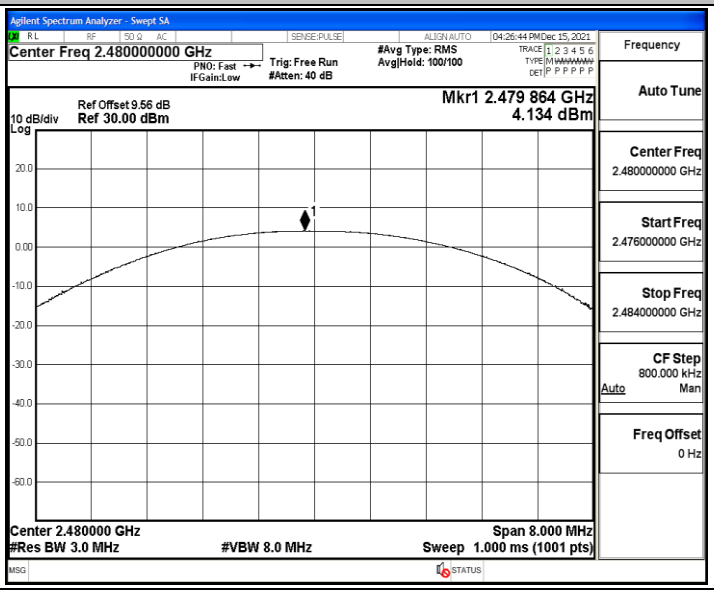
DH5_Ant1_2402



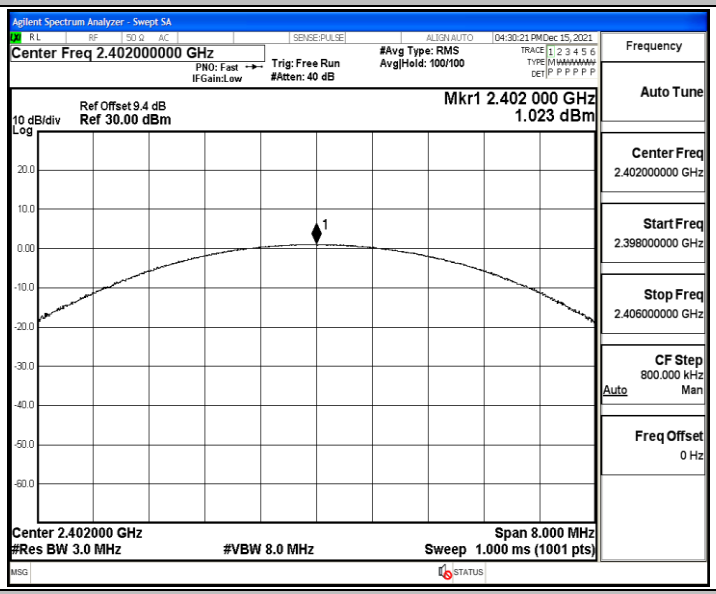
DH5_Ant1_2441



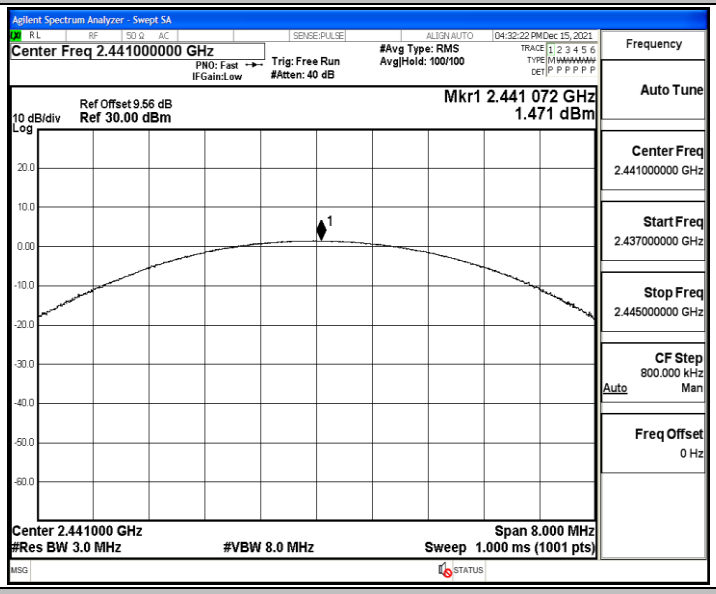
DH5_Ant1_2480



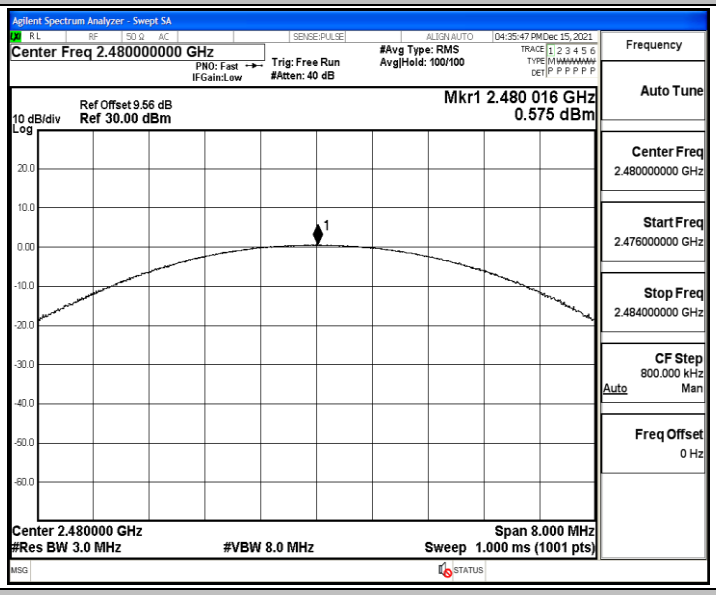
2DH5_Ant1_2402



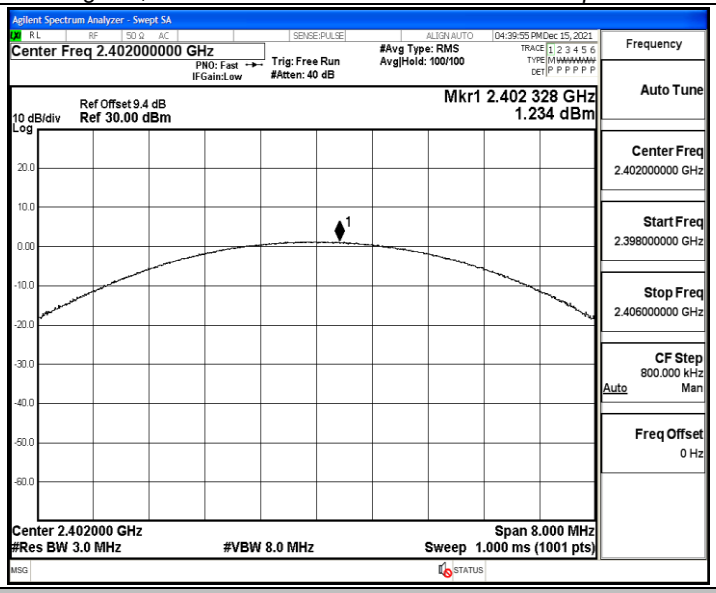
2DH5_Ant1_2441



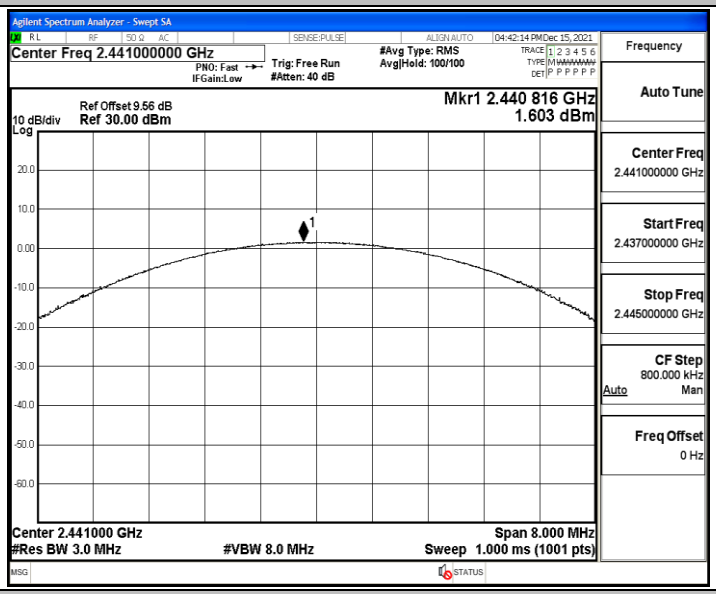
2DH5_Ant1_2480



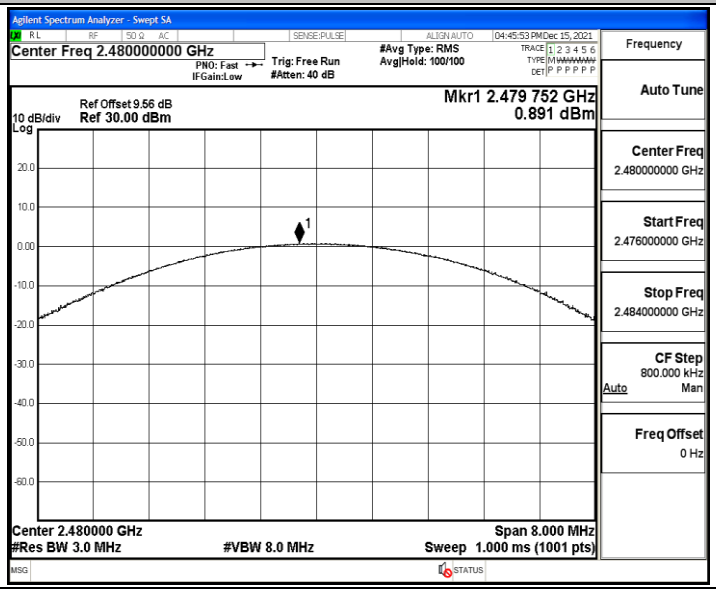
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



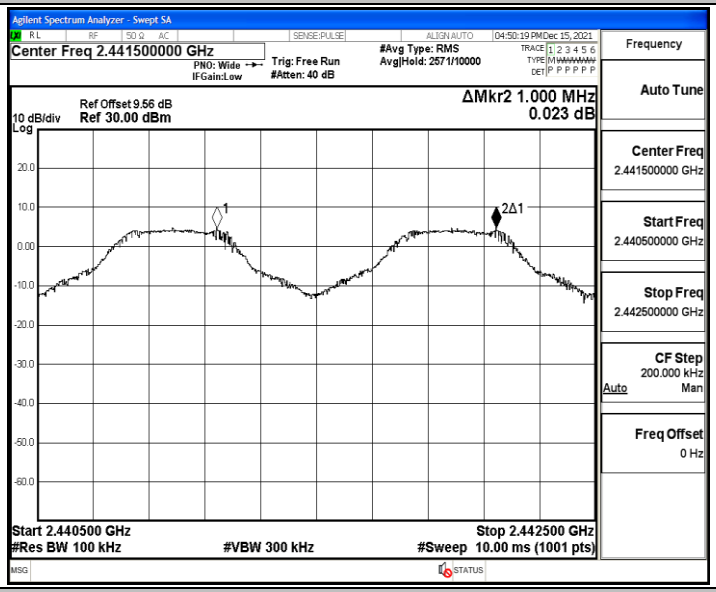
Appendix C: Carrier frequency separation

Test Result

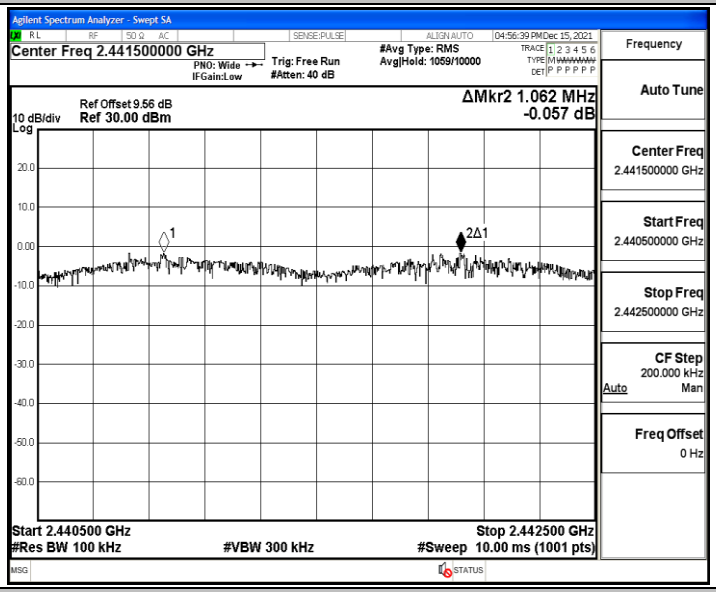
TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.000	≥0.951	PASS
2DH5	Ant1	Hop	1.062	≥1.014	PASS
3DH5	Ant1	Hop	1.004	≥0.996	PASS

Test Graphs

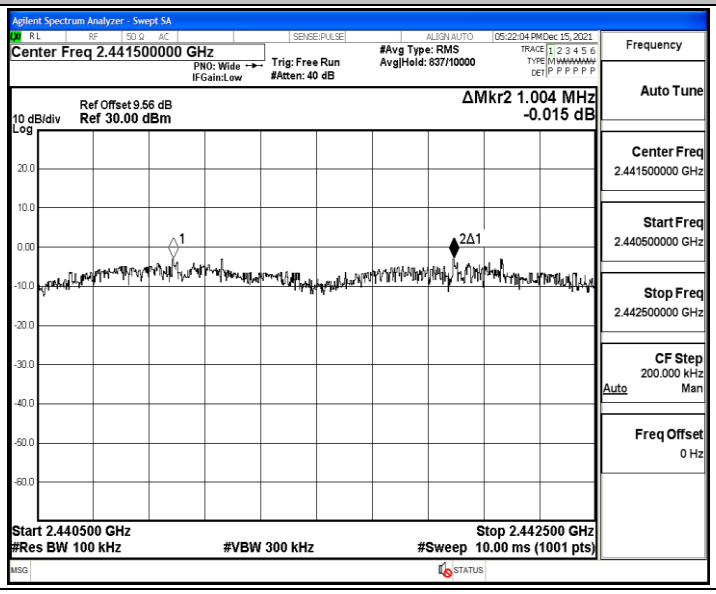
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop



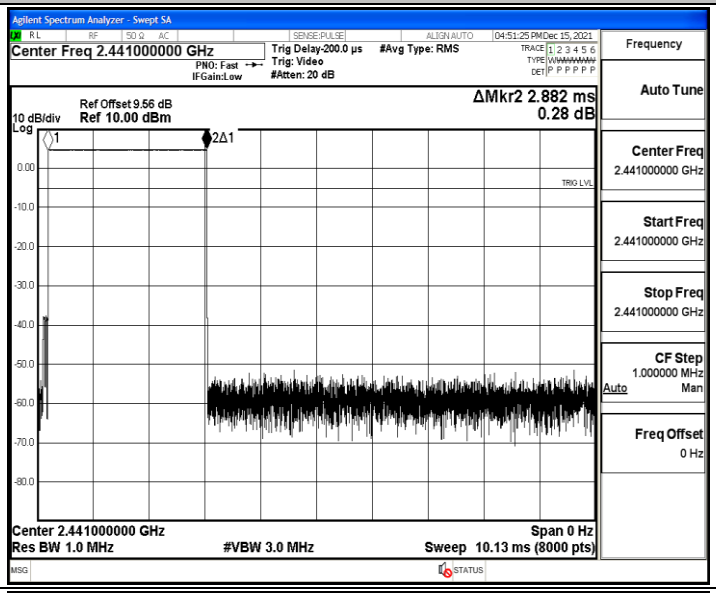
Appendix D: Time of occupancy

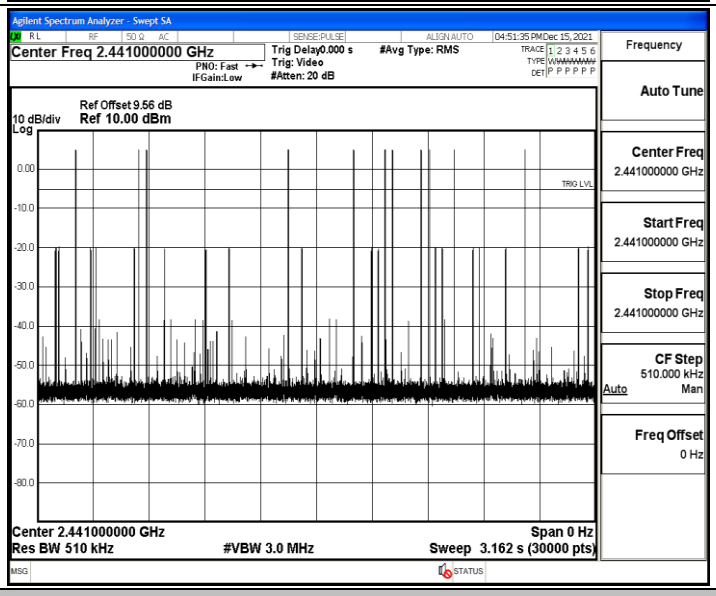
Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.88	120	0.346	≤0.4	PASS
2DH5	Ant1	Hop	2.89	100	0.289	≤0.4	PASS
3DH5	Ant1	Hop	2.89	110	0.318	≤0.4	PASS

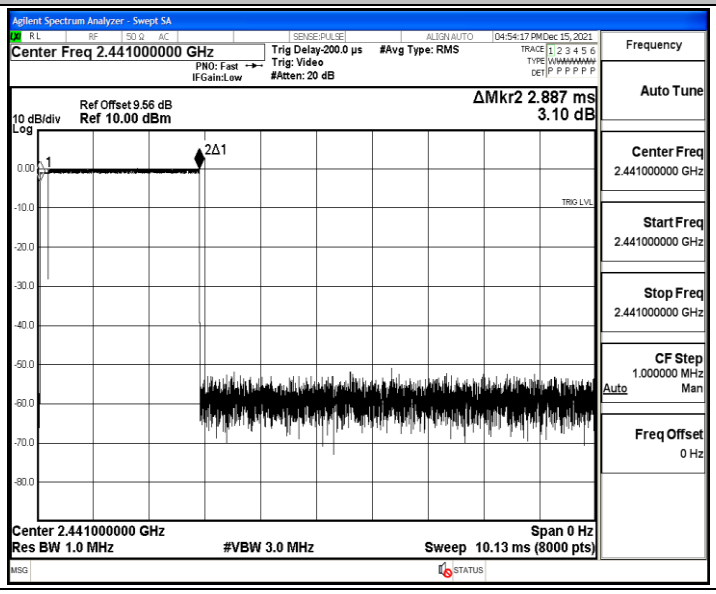
Test Graphs

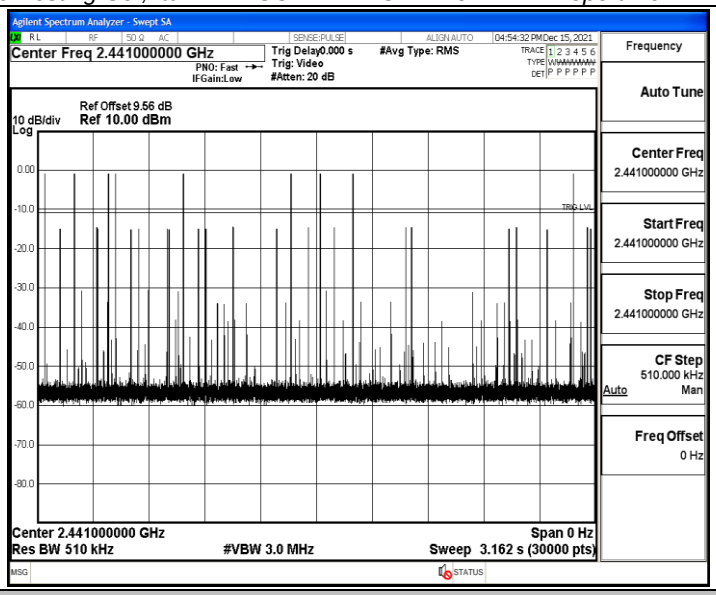
DH5_Ant1_Hop



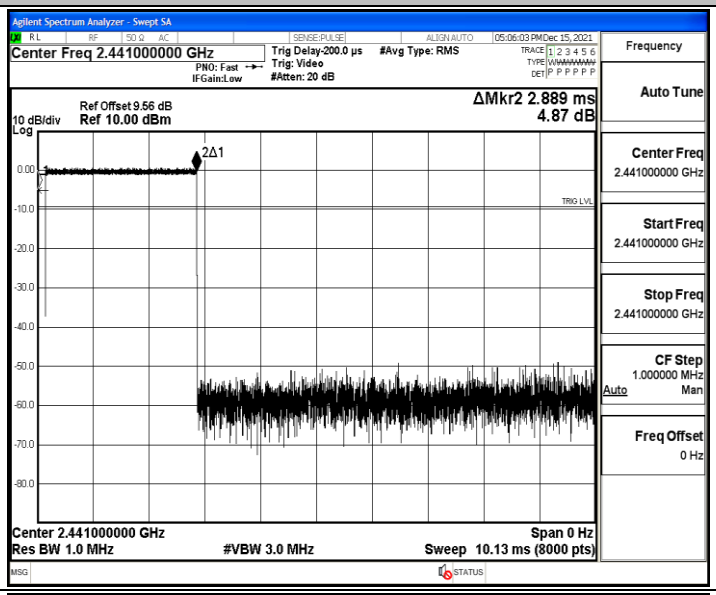


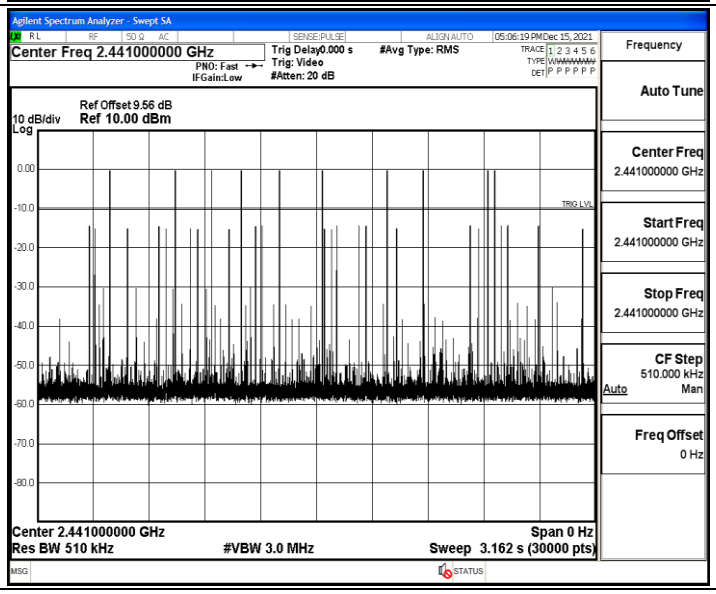
2DH5_Ant1_Hop





3DH5_Ant1_Hop





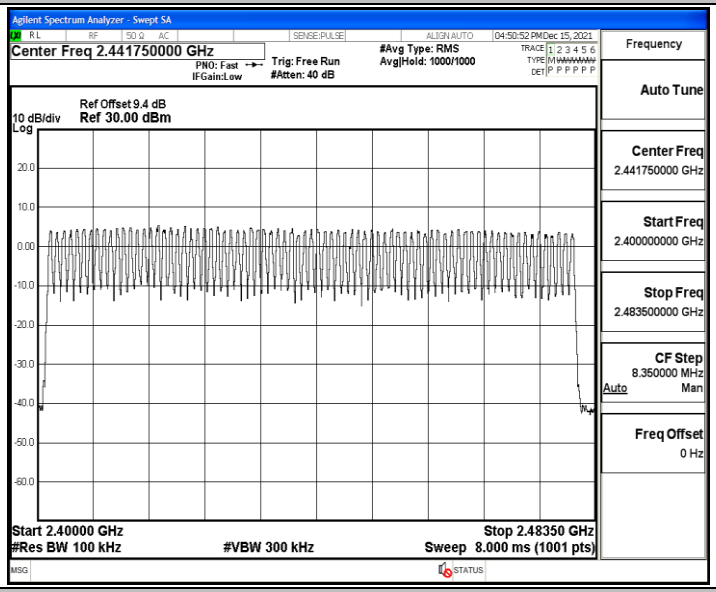
Appendix E: Number of hopping channels

Test Result

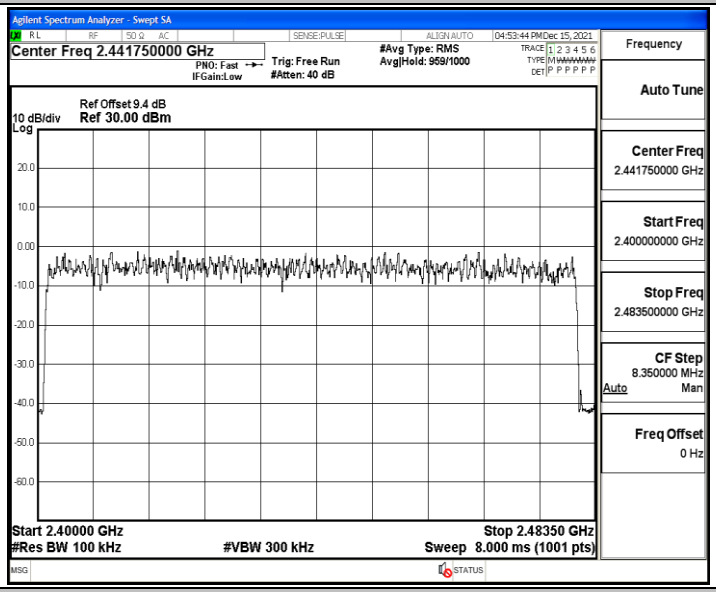
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

Test Graphs

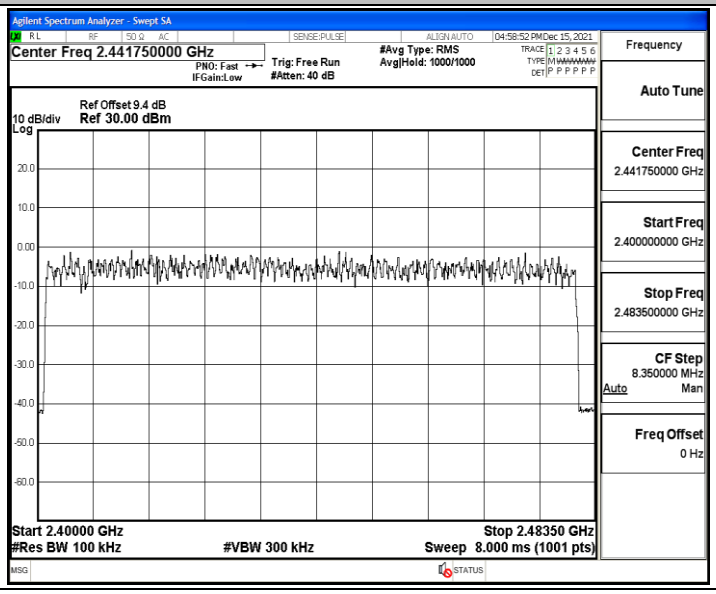
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop



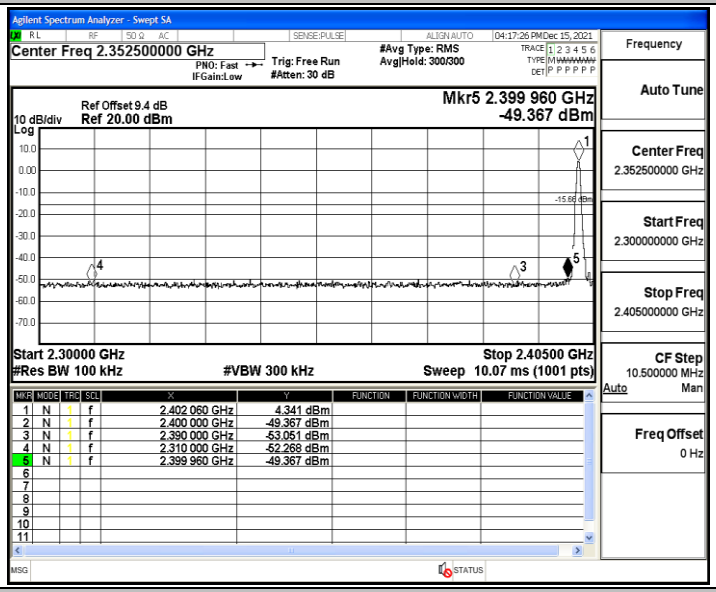
Appendix F: Band edge measurements

Test Result

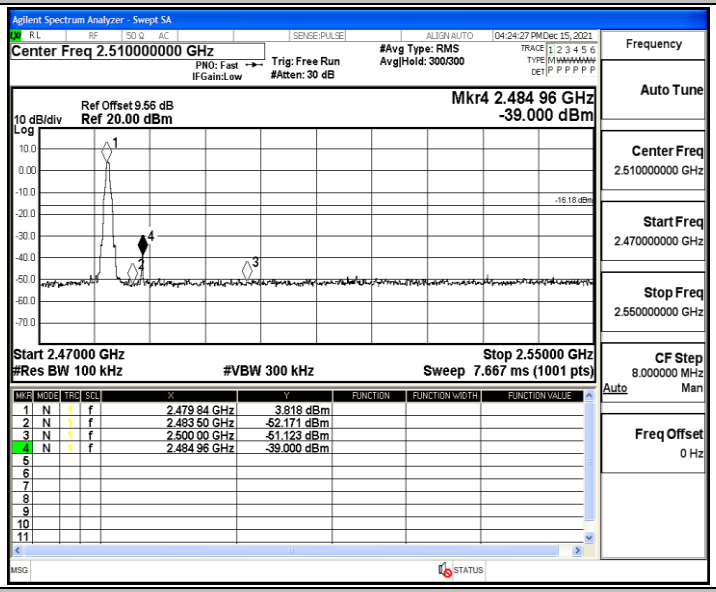
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	4.34	-49.37	≤-15.66	PASS
		High	2480	3.82	-39	≤-16.18	PASS
		Low	Hop_2402	4.26	-50.1	≤-15.74	PASS
		High	Hop_2480	3.85	-48.15	≤-16.15	PASS
2DH5	Ant1	Low	2402	-1.66	-47.24	≤-21.66	PASS
		High	2480	-2.45	-39.5	≤-22.45	PASS
		Low	Hop_2402	-2.39	-50.08	≤-22.39	PASS
		High	Hop_2480	-2.34	-49.07	≤-22.34	PASS
3DH5	Ant1	Low	2402	-1.46	-48.08	≤-21.46	PASS
		High	2480	-1.99	-38.83	≤-21.99	PASS
		Low	Hop_2402	-3.43	-49.91	≤-23.43	PASS
		High	Hop_2480	-2.46	-49.01	≤-22.46	PASS

Test Graphs

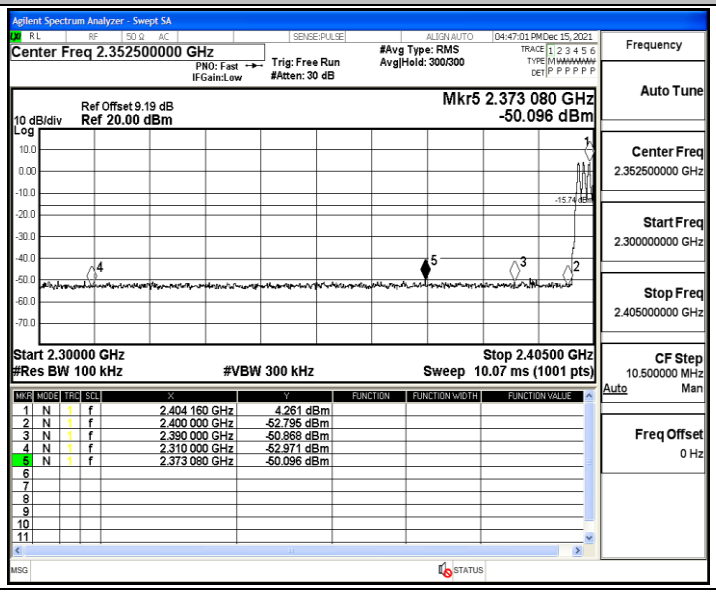
DH5_Ant1_Low_2402



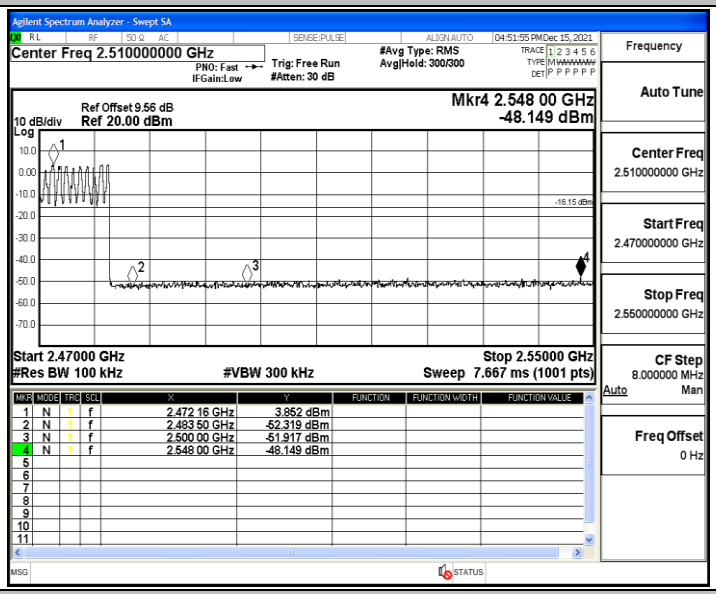
DH5_Ant1_High_2480



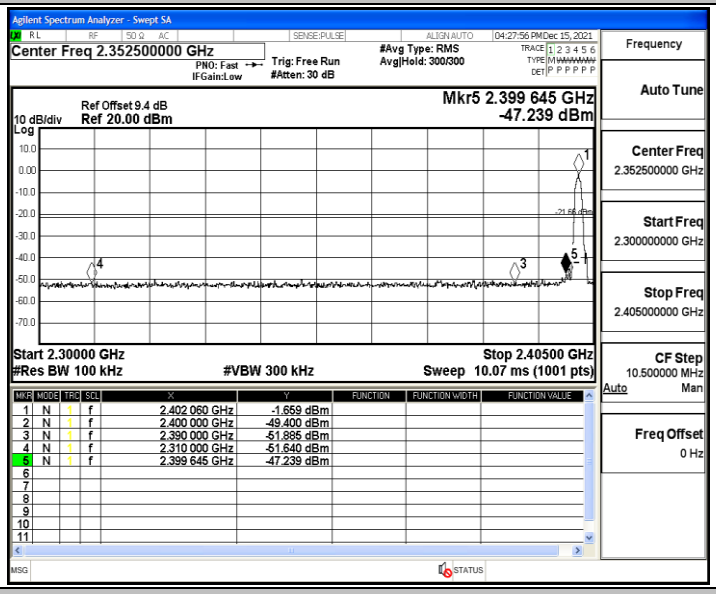
DH5_Ant1_Low_Hop_2402



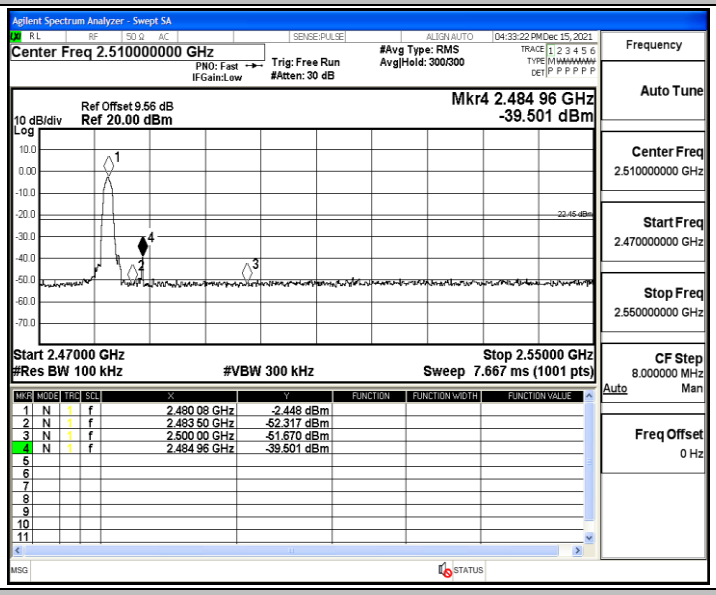
DH5_Ant1_High_Hop_2480



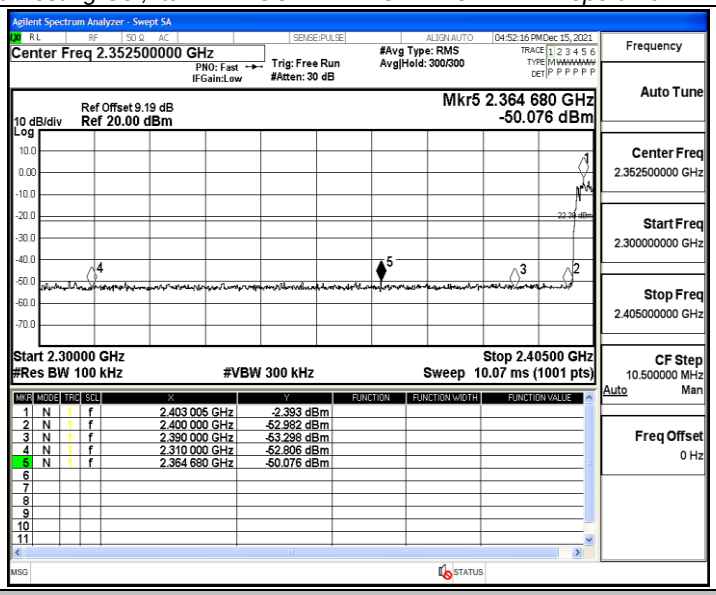
2DH5_Ant1_Low_2402



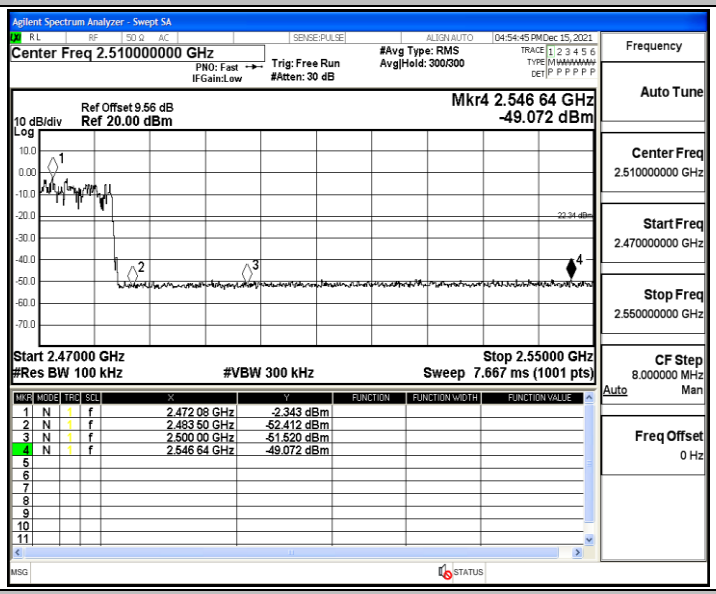
2DH5_Ant1_High_2480



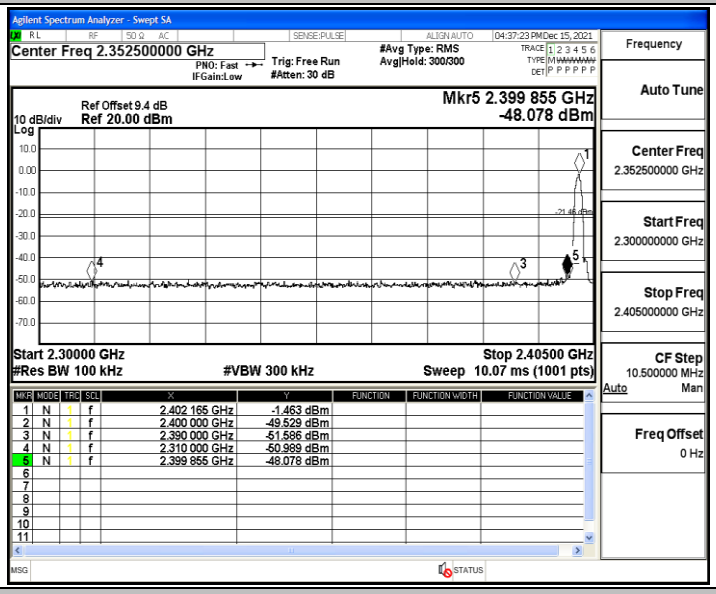
2DH5_Ant1_Low_Hop_2402



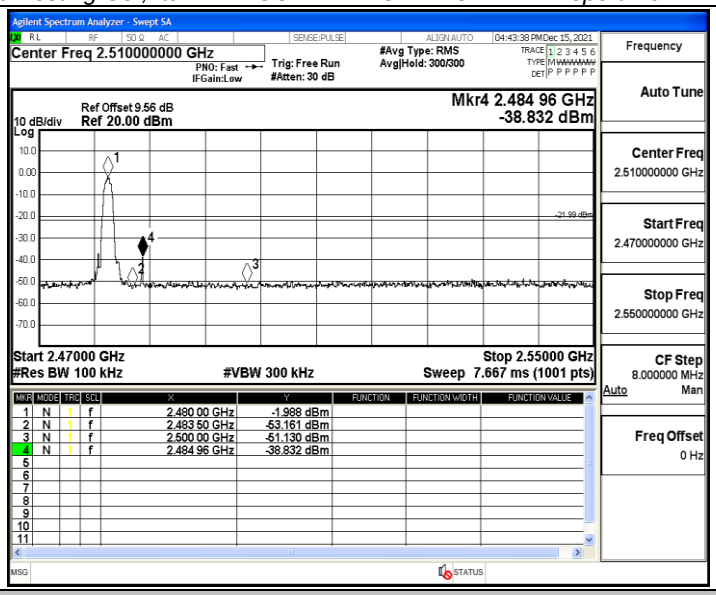
2DH5_Ant1_High_Hop_2480



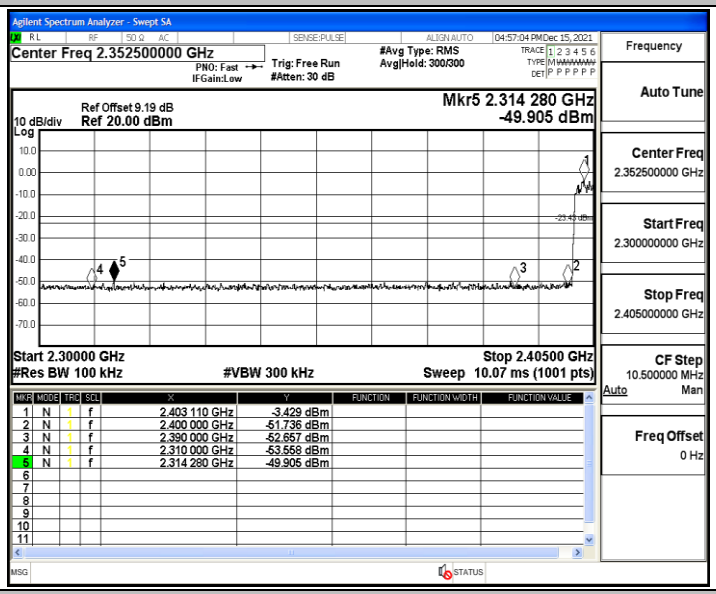
3DH5_Ant1_Low_2402



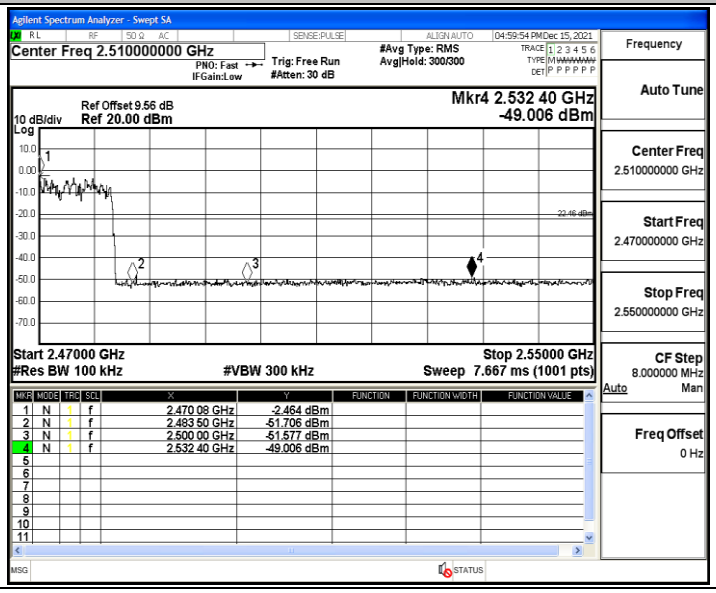
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480



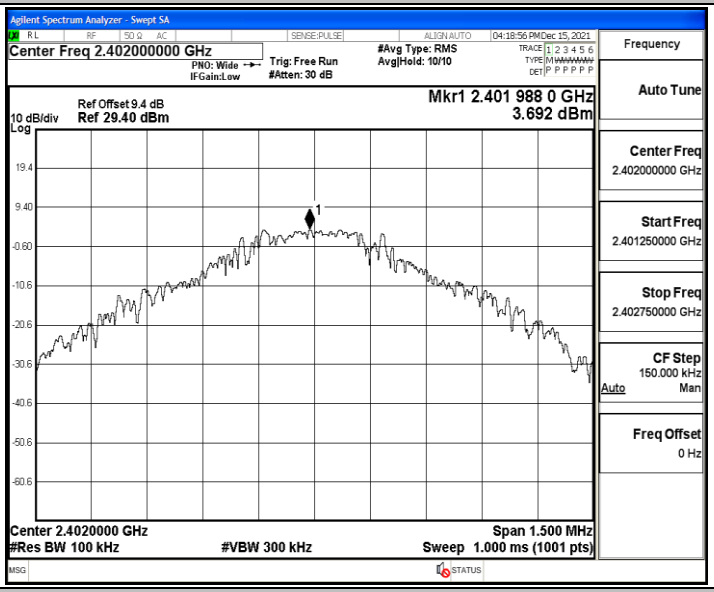
Appendix G: Conducted Spurious Emission

Test Result

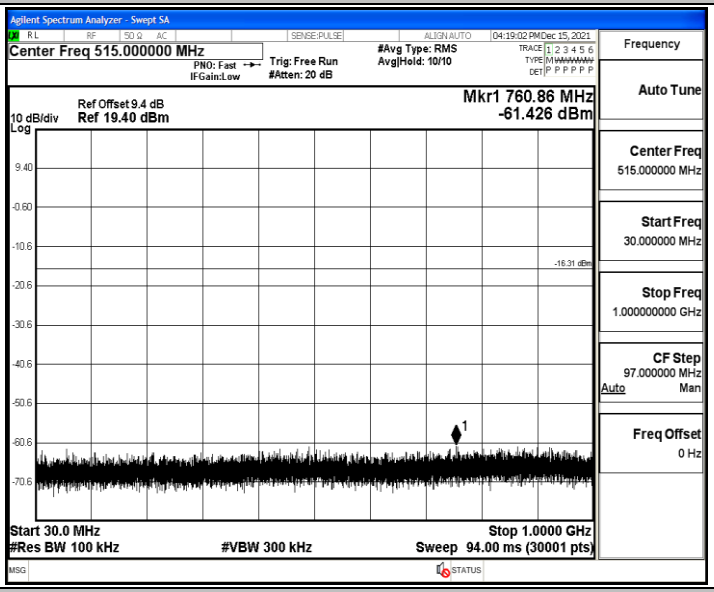
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	3.69	3.69	---	PASS
			30~1000	3.69	-61.43	≤-16.31	PASS
			1000~26500	3.69	-51.52	≤-16.31	PASS
		2441	Reference	4.08	4.08	---	PASS
			30~1000	4.08	-60.8	≤-15.92	PASS
			1000~26500	4.08	-51.62	≤-15.92	PASS
		2480	Reference	3.87	3.87	---	PASS
			30~1000	3.87	-61.23	≤-16.13	PASS
			1000~26500	3.87	-51.53	≤-16.13	PASS
2DH5	Ant1	2402	Reference	-1.89	-1.89	---	PASS
			30~1000	-1.89	-60.96	≤-21.89	PASS
			1000~26500	-1.89	-52.37	≤-21.89	PASS
		2441	Reference	-2.90	-2.90	---	PASS
			30~1000	-2.90	-59.86	≤-22.9	PASS
			1000~26500	-2.90	-52.13	≤-22.9	PASS
		2480	Reference	-2.10	-2.10	---	PASS
			30~1000	-2.10	-60.84	≤-22.1	PASS
			1000~26500	-2.10	-52.49	≤-22.1	PASS
3DH5	Ant1	2402	Reference	-3.54	-3.54	---	PASS
			30~1000	-3.54	-60.42	≤-23.54	PASS
			1000~26500	-3.54	-52.4	≤-23.54	PASS
		2441	Reference	-1.31	-1.31	---	PASS
			30~1000	-1.31	-60.55	≤-21.31	PASS
			1000~26500	-1.31	-52.46	≤-21.31	PASS
		2480	Reference	-3.85	-3.85	---	PASS
			30~1000	-3.85	-61.32	≤-23.85	PASS
			1000~26500	-3.85	-51.91	≤-23.85	PASS

Test Graphs

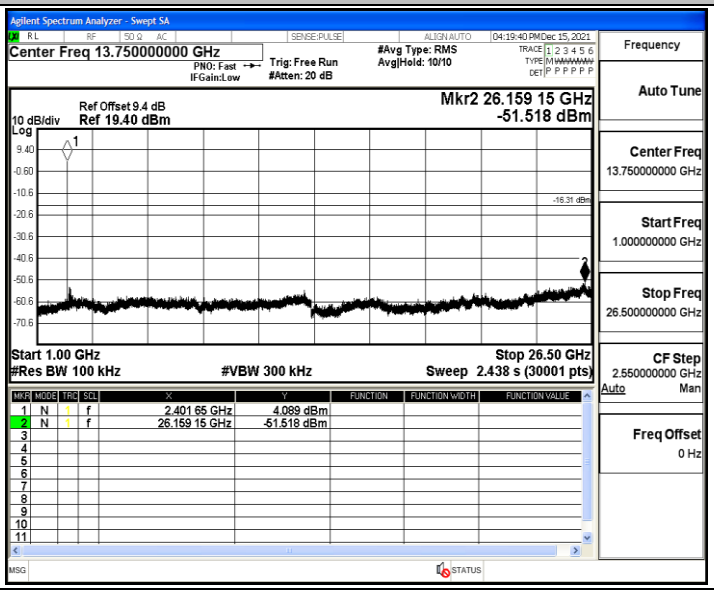
DH5_Ant1_2402_0~Reference



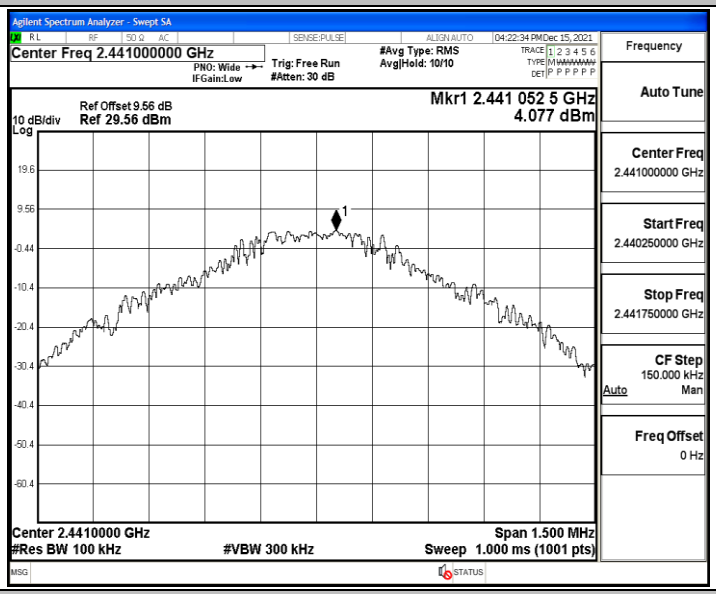
DH5_Ant1_2402_30~1000



DH5_Ant1_2402_1000~26500



DH5_Ant1_2441_0~Reference



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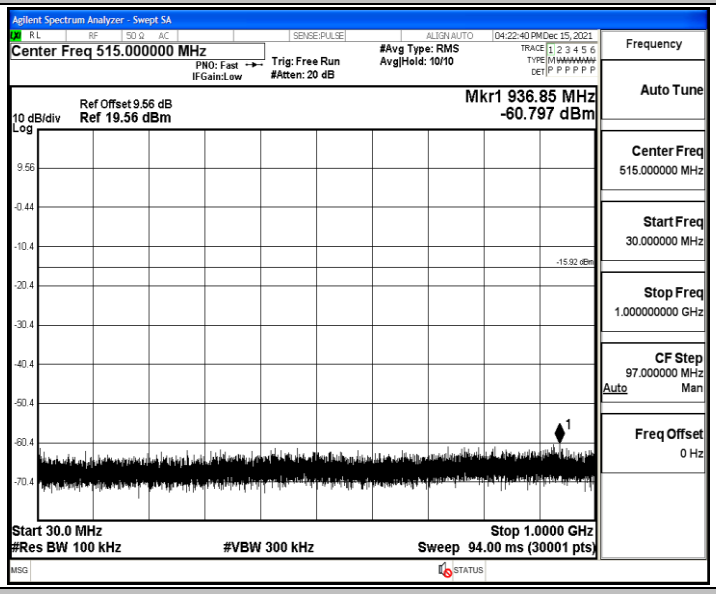

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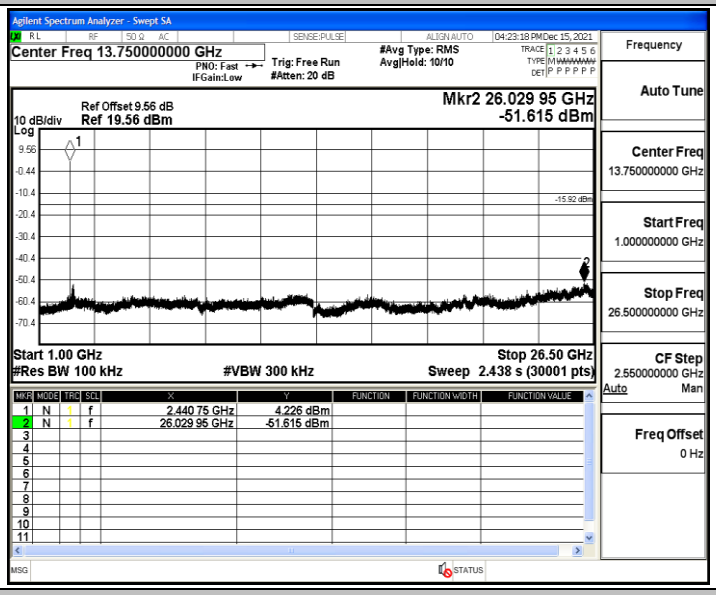

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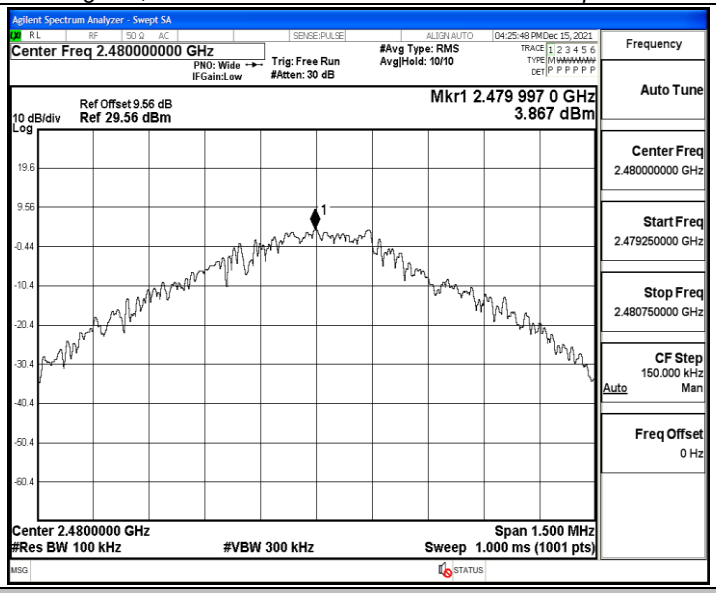

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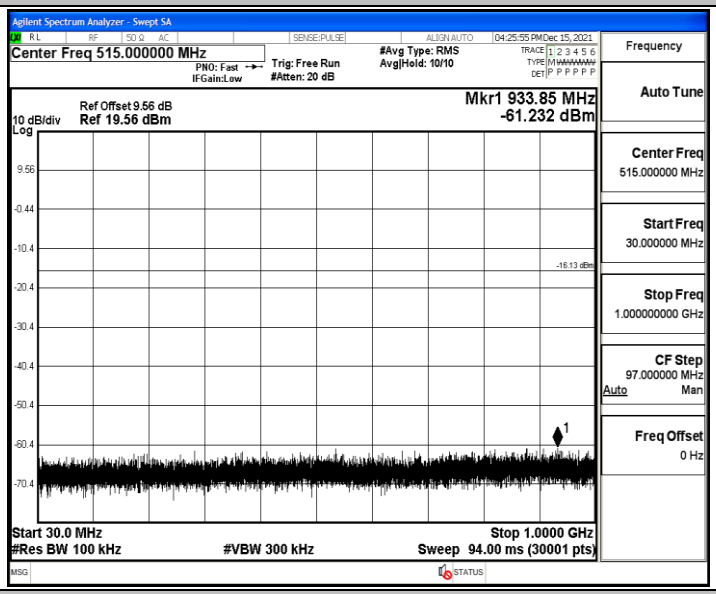

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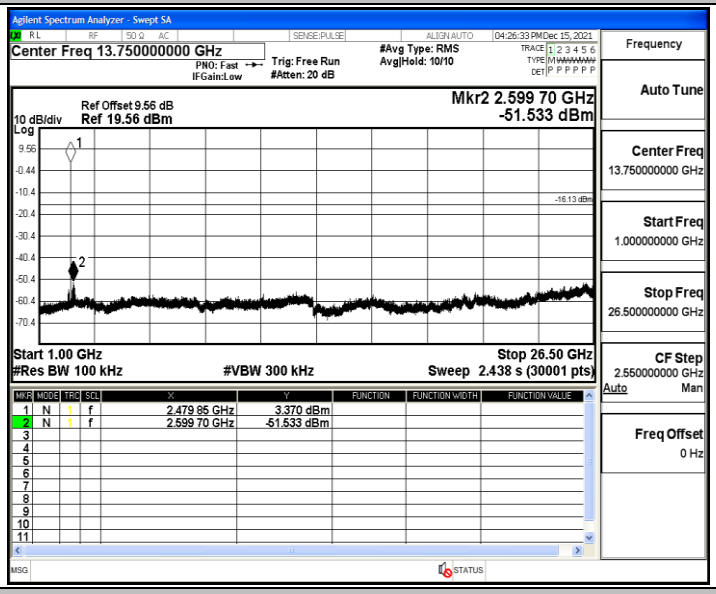

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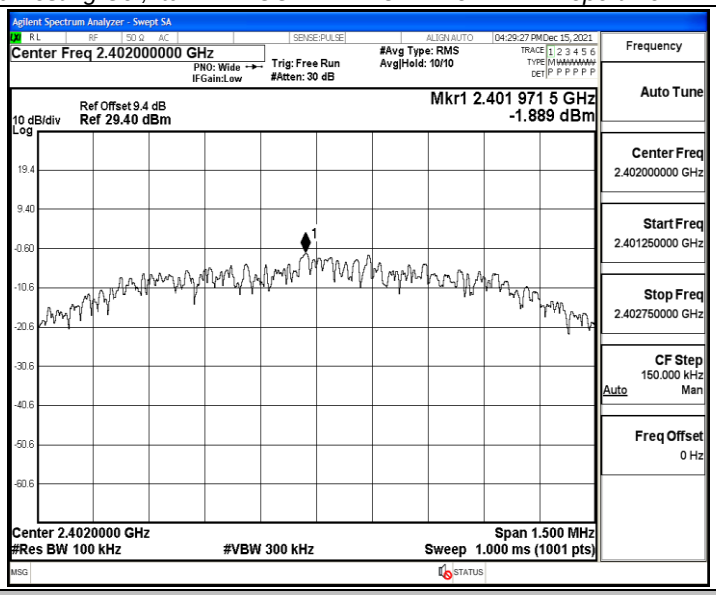

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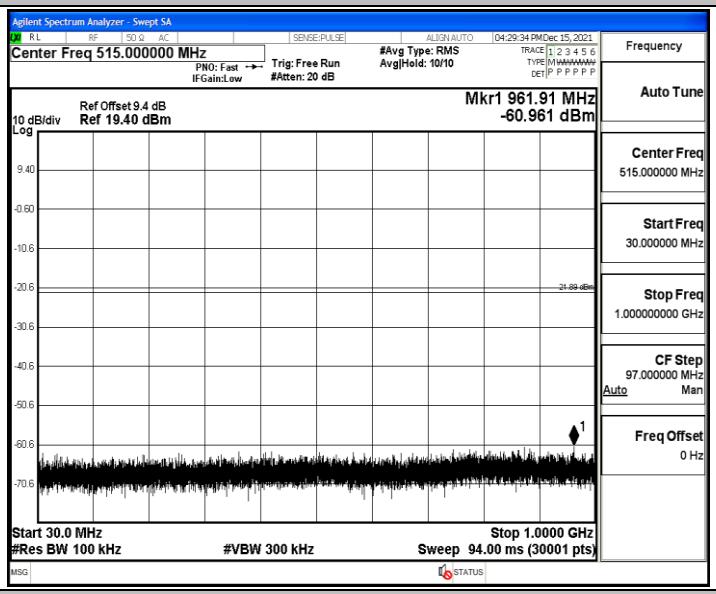

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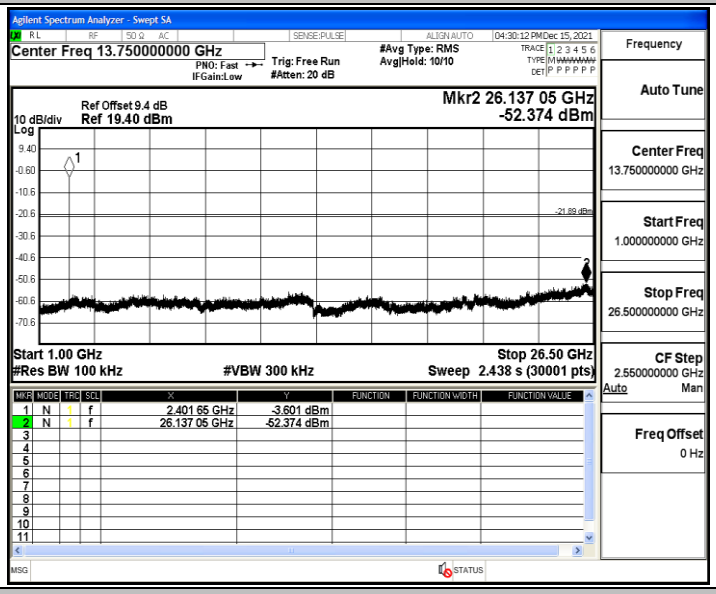

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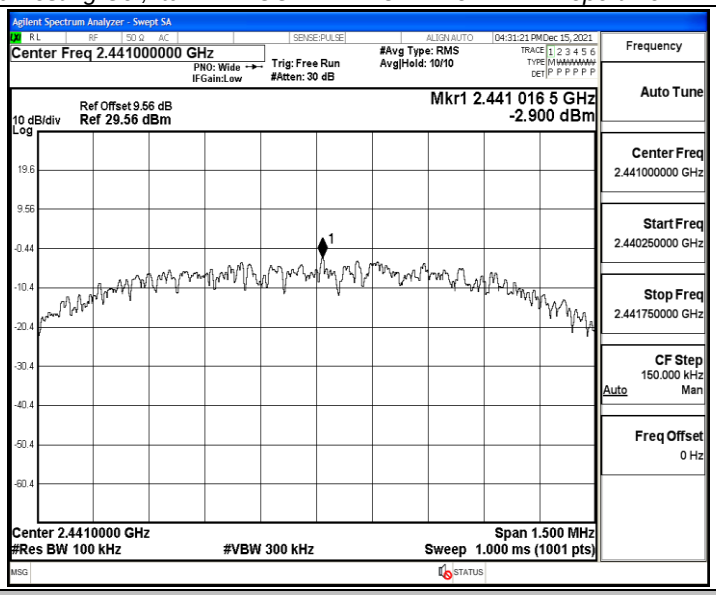

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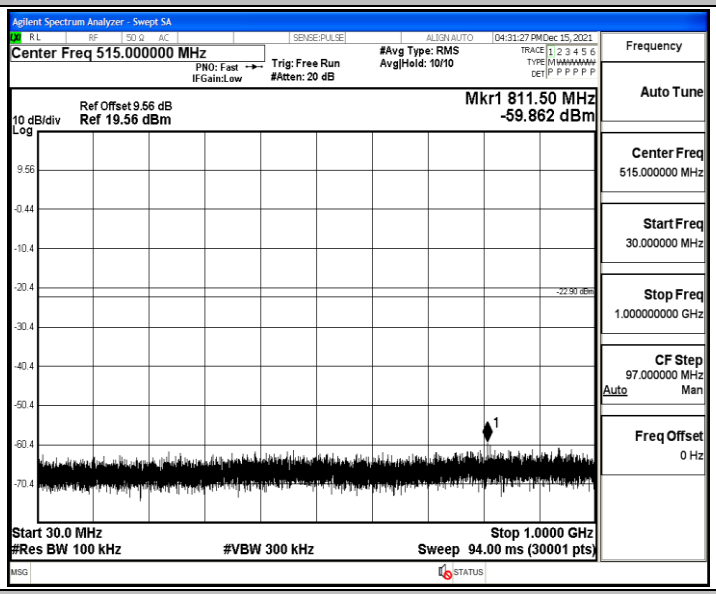

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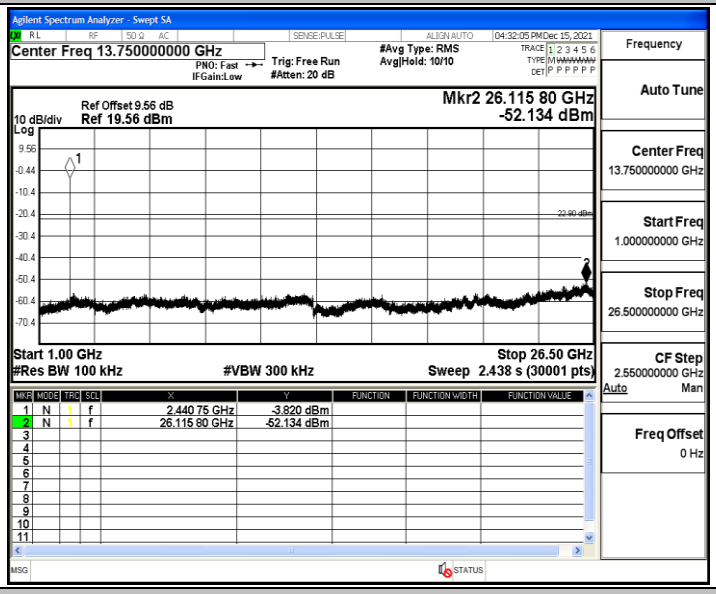

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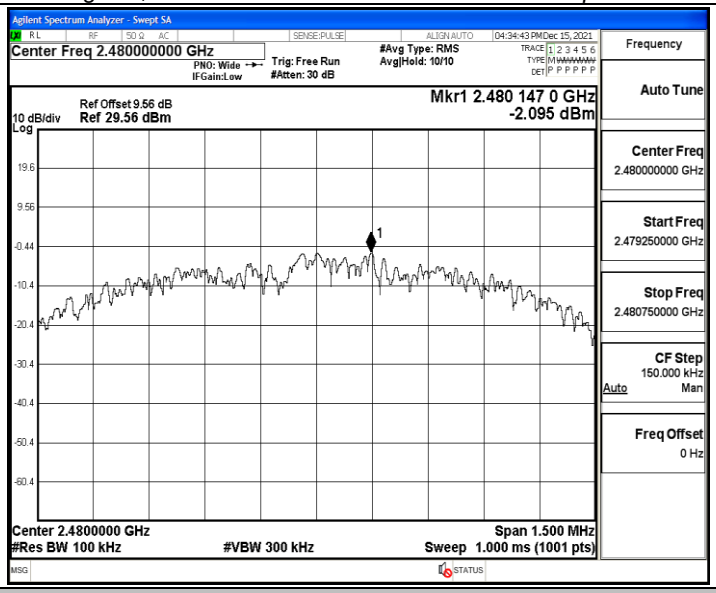

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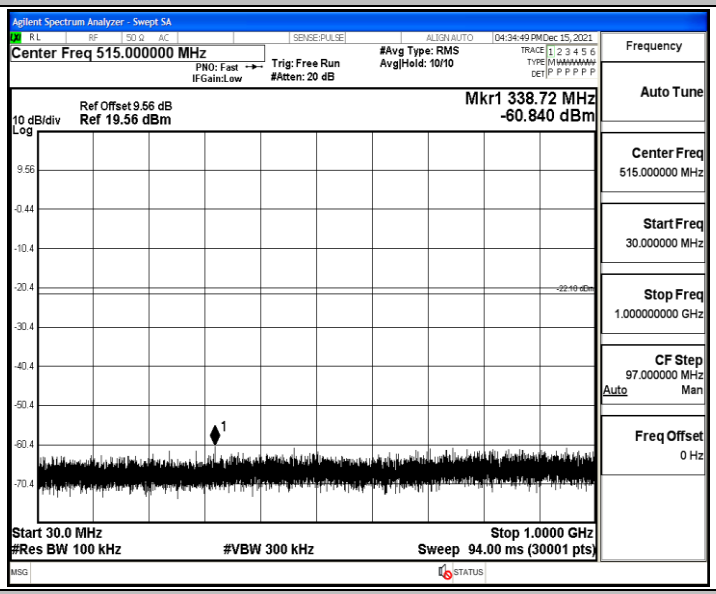

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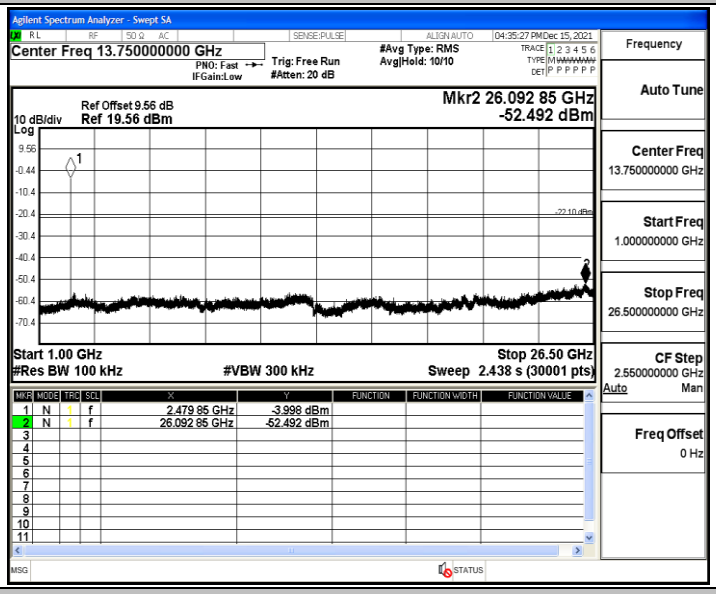
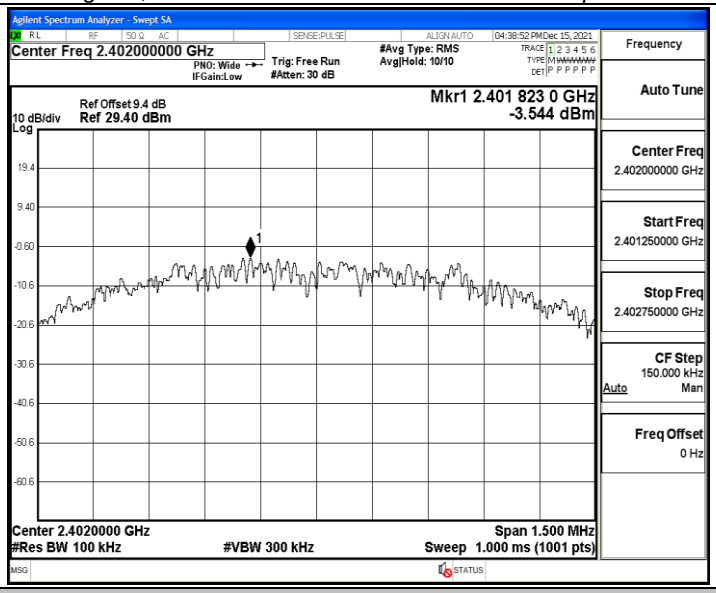


3DH5_Ant1_2402_0~Reference



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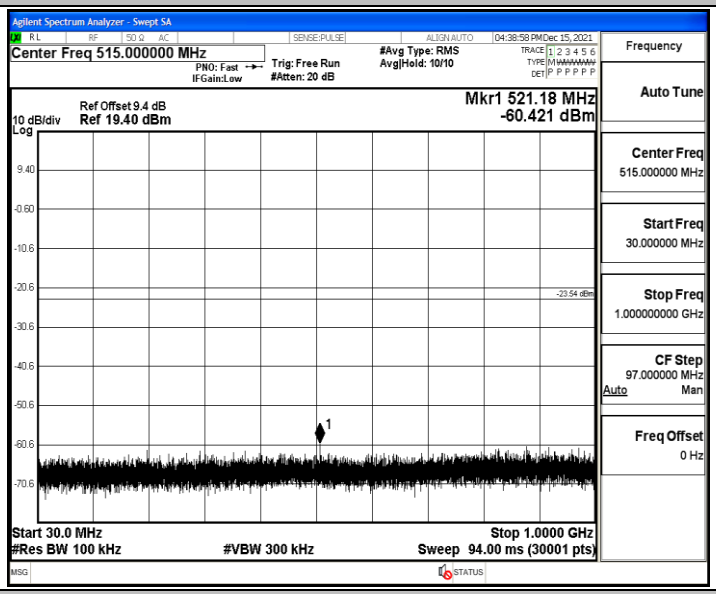

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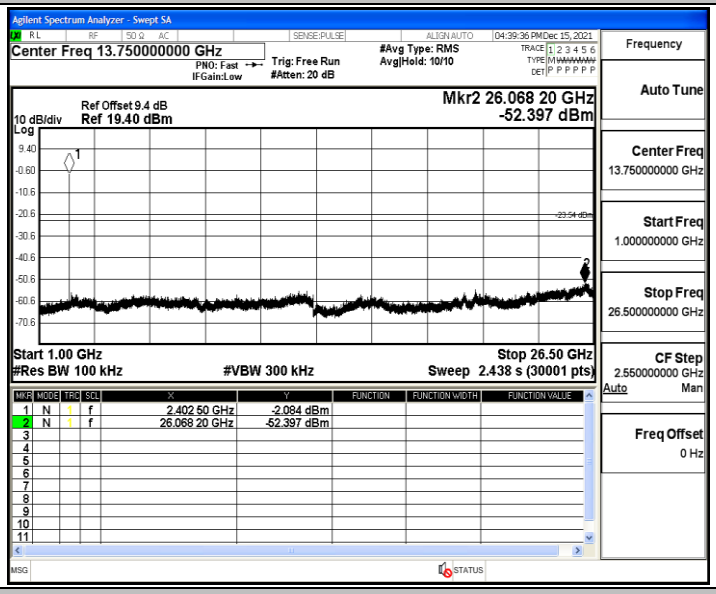

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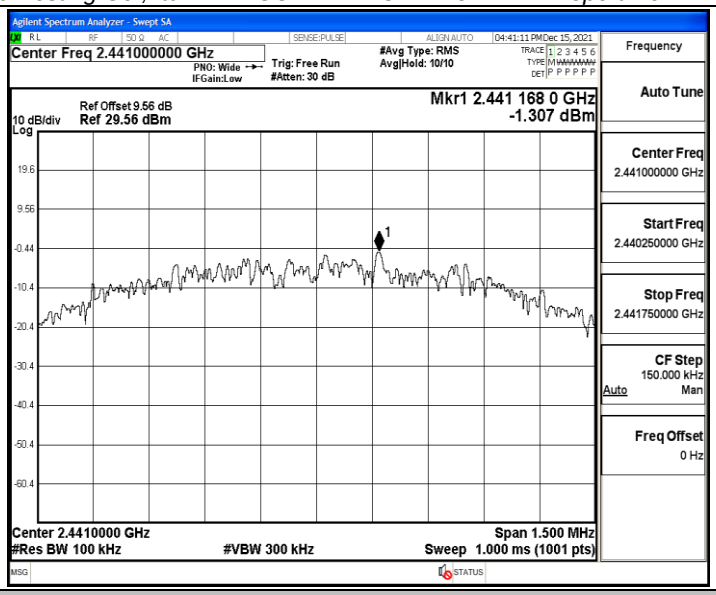

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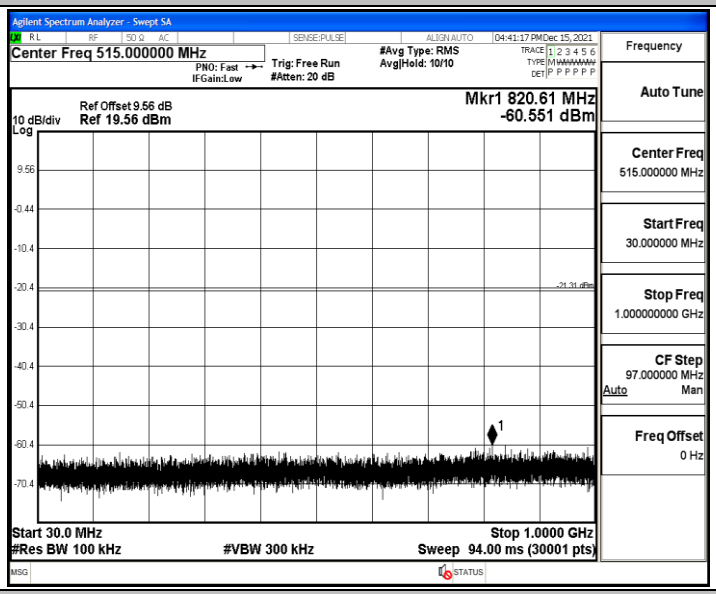
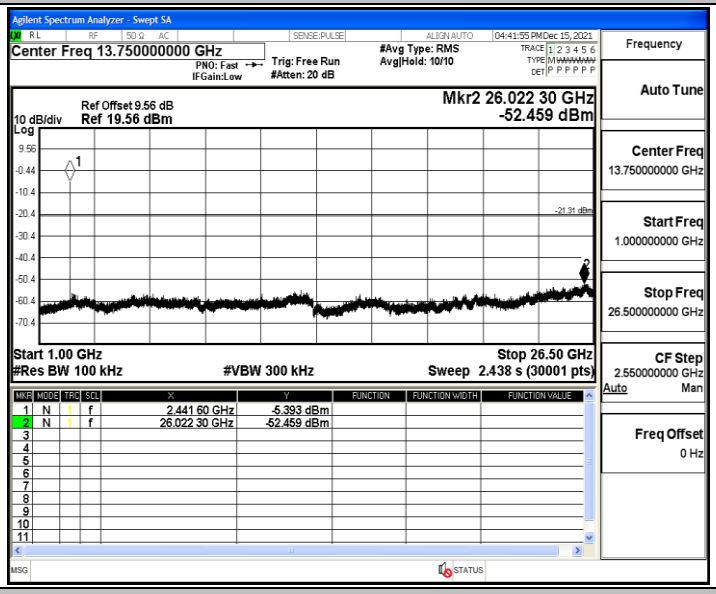
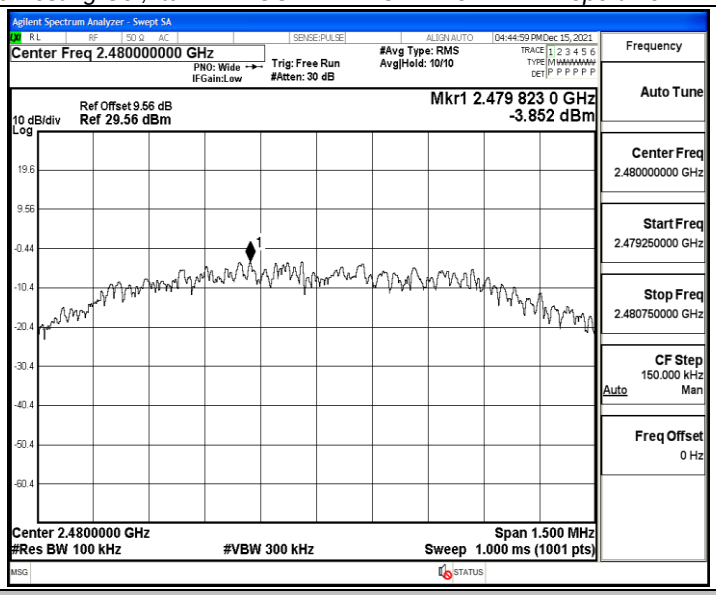


3DH5_Ant1_2441_1000~26500



3DH5_Ant1_2480_0~Reference



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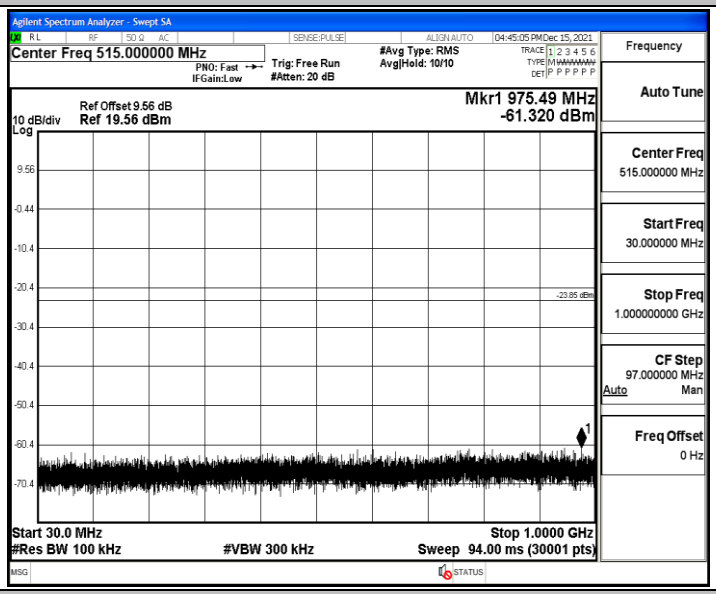

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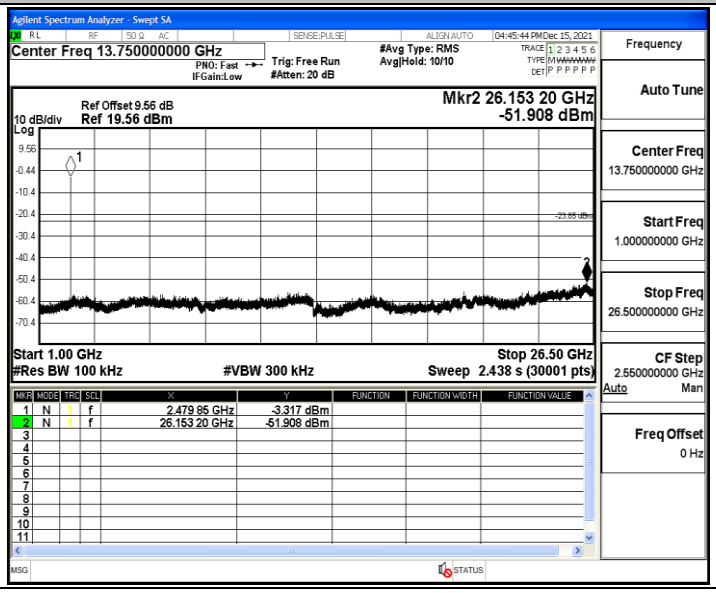


Appendix H: Emissions in Restricted Bands

Test Result

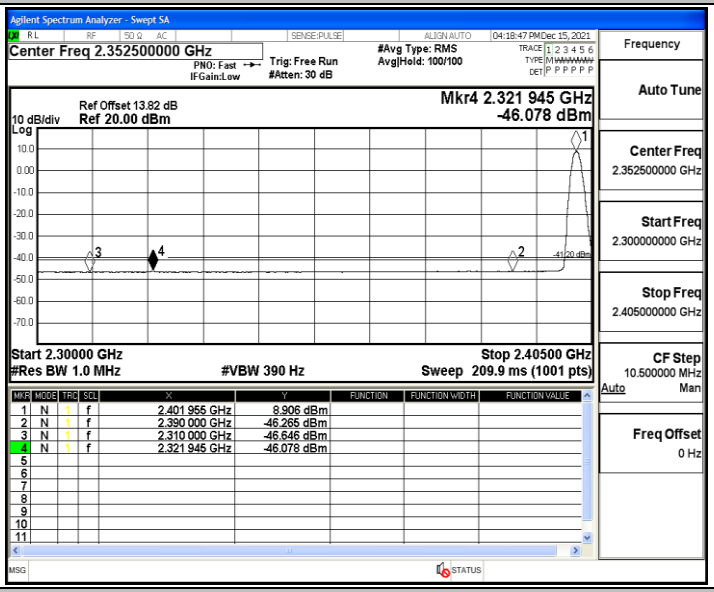
TestMode	Antenna	ChName	Channel	Detector	Freq(MHz)	Result(dBm)	Limit(dBm)	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-46.65	≤-41.20	PASS
				AV	2321.945	-46.08	≤-41.20	PASS
				AV	2390.000	-46.27	≤-41.20	PASS
				Peak	2310.000	-38.22	≤-21.20	PASS
				Peak	2365.940	-37.11	≤-21.20	PASS
				Peak	2390.000	-39.42	≤-21.20	PASS
		High	2480	AV	2483.500	-45.09	≤-41.20	PASS
				AV	2484.880	-43.65	≤-41.20	PASS
				AV	2500.000	-45.48	≤-41.20	PASS
				Peak	2483.500	-38.97	≤-21.20	PASS
				Peak	2484.640	-33.97	≤-21.20	PASS
				Peak	2500.000	-37.74	≤-21.20	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-46.61	≤-41.20	PASS
				AV	2377.070	-46.2	≤-41.20	PASS
				AV	2390.000	-46.25	≤-41.20	PASS
				Peak	2310.000	-38.74	≤-21.20	PASS
				Peak	2324.885	-36.54	≤-21.20	PASS
				Peak	2390.000	-39.97	≤-21.20	PASS
		High	2480	AV	2483.500	-45.18	≤-41.20	PASS
				AV	2484.880	-43.59	≤-41.20	PASS
				AV	2500.000	-45.68	≤-41.20	PASS
				Peak	2483.500	-37.75	≤-21.20	PASS
				Peak	2484.960	-30.87	≤-21.20	PASS
				Peak	2500.000	-37.78	≤-21.20	PASS
3DH5	Ant1	Low	2402	AV	2310.000	-46.54	≤-41.20	PASS
				AV	2389.775	-46.05	≤-41.20	PASS
				AV	2390.000	-46.26	≤-41.20	PASS
				Peak	2310.000	-39.2	≤-21.20	PASS
				Peak	2376.965	-35.51	≤-21.20	PASS
				Peak	2390.000	-38.59	≤-21.20	PASS
		High	2480	AV	2483.500	-44.95	≤-41.20	PASS
				AV	2485.040	-43.81	≤-41.20	PASS
				AV	2500.000	-45.58	≤-41.20	PASS
				Peak	2483.500	-38.59	≤-21.20	PASS
				Peak	2484.480	-34.01	≤-21.20	PASS
				Peak	2500.000	-38.9	≤-21.20	PASS

Note：

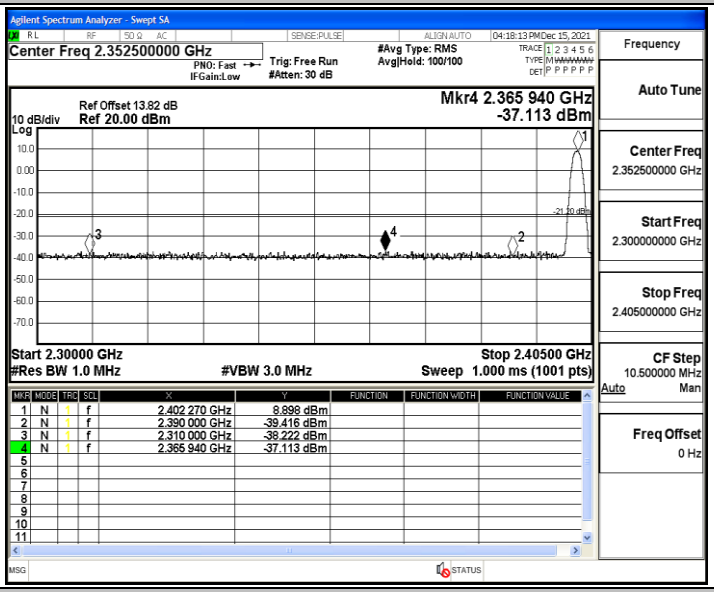
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

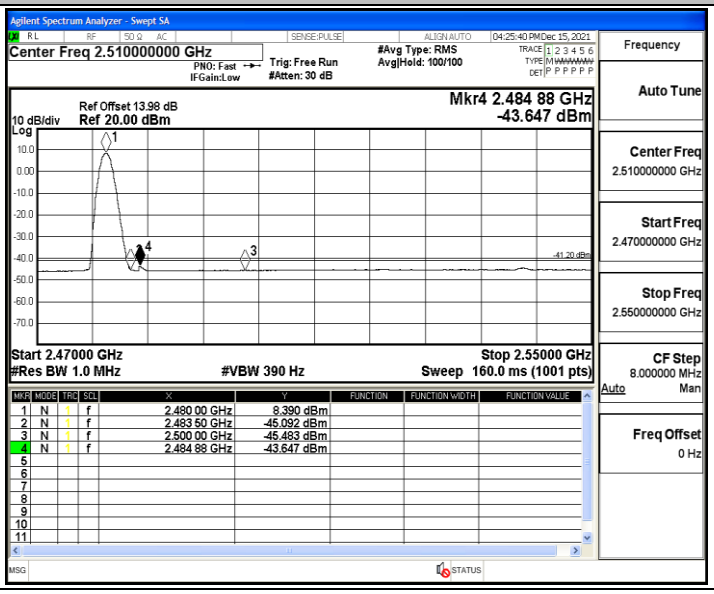
DH5_Ant1_Low_2402_AV



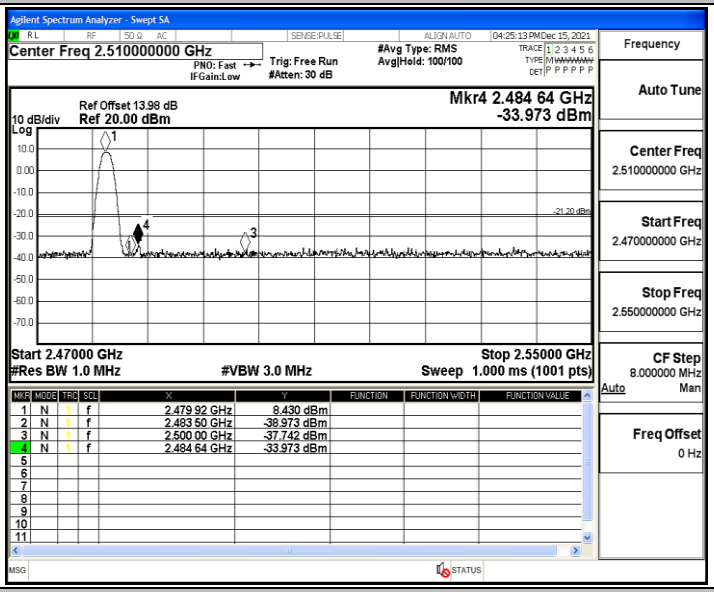
DH5_Ant1_Low_2402_Peak



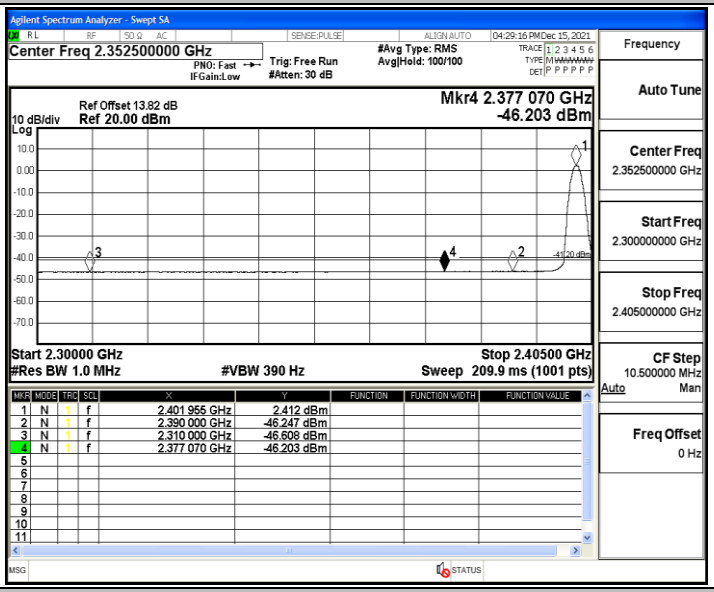
DH5_Ant1_High_2480_AV



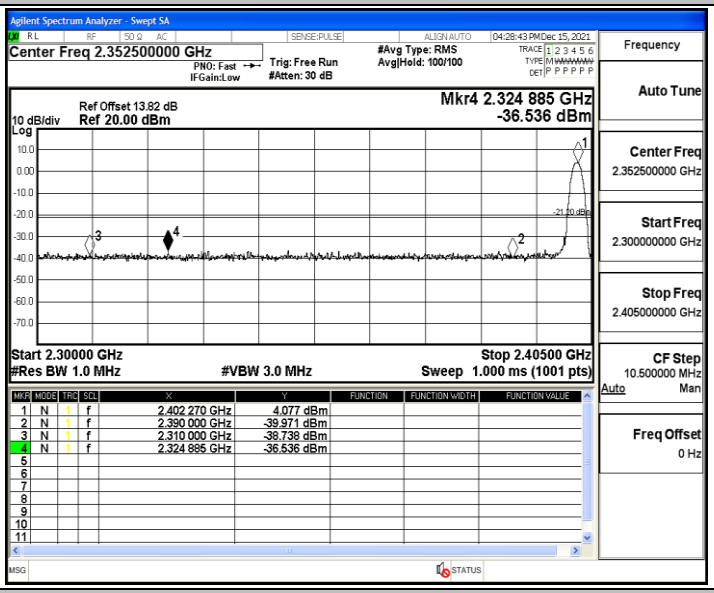
DH5_Ant1_High_2480_Peak



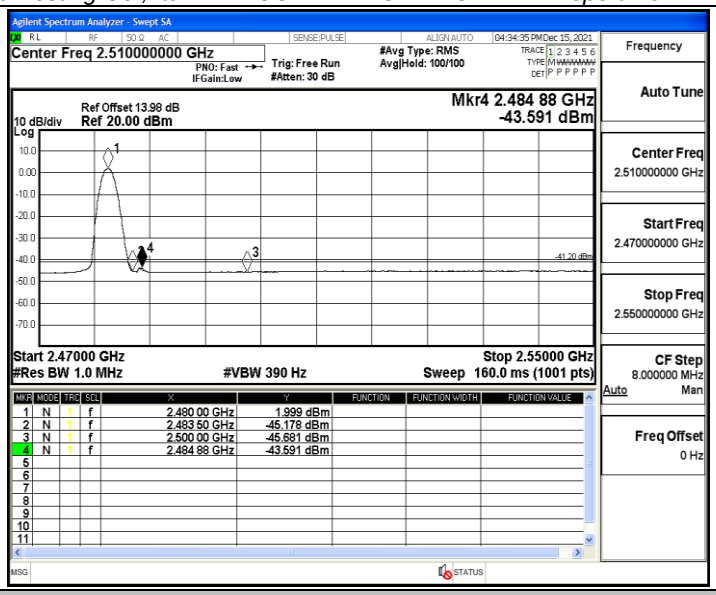
2DH5_Ant1_Low_2402_AV



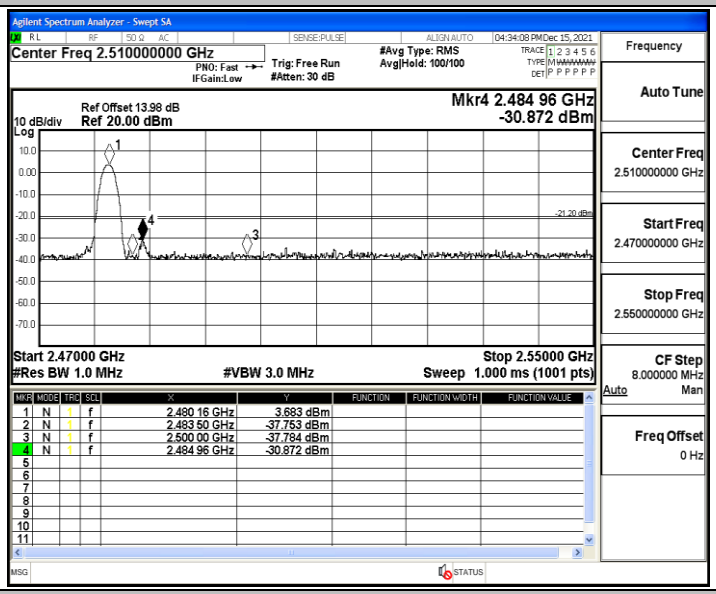
2DH5_Ant1_Low_2402_Peak



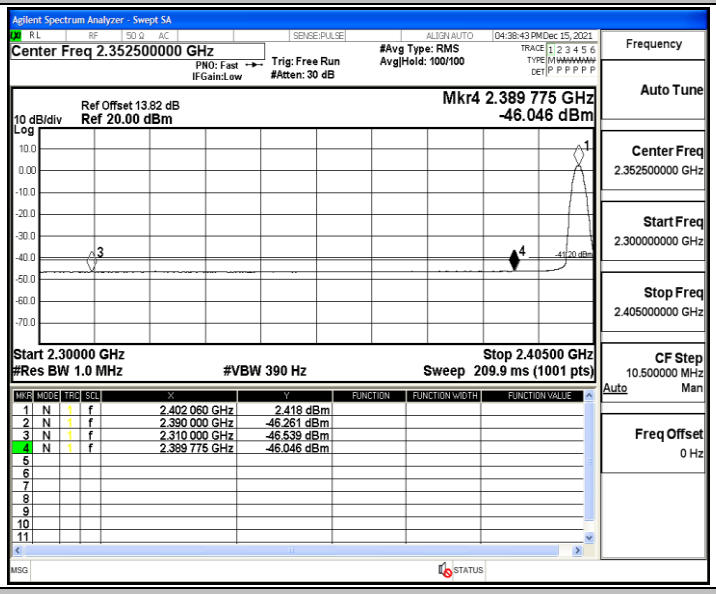
2DH5_Ant1_High_2480_AV



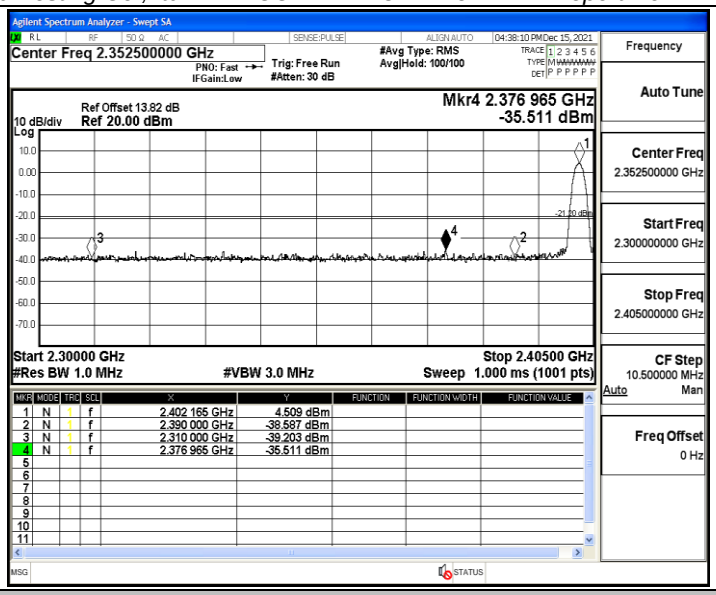
2DH5_Ant1_High_2480_Peak



3DH5_Ant1_Low_2402_AV



3DH5_Ant1_Low_2402_Peak



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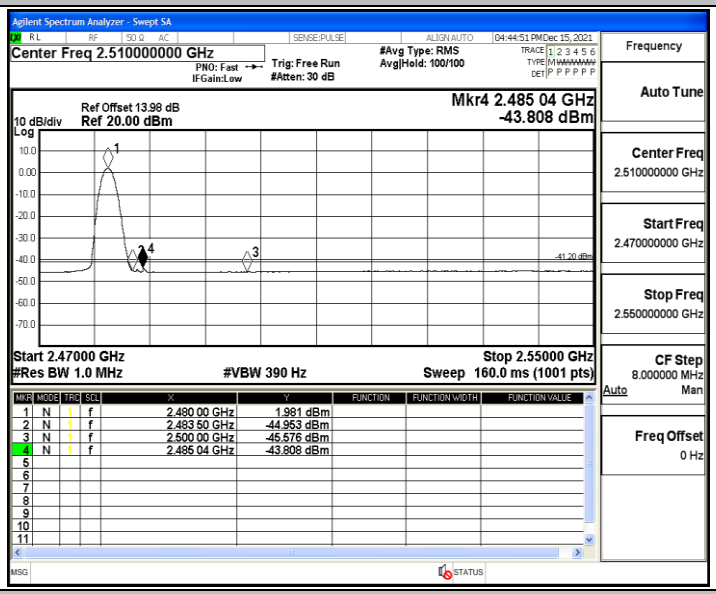

3DH5_Ant1_High_2480_Peak