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

Product Name: Pro[1] X

Trade Mark: F

Test Model: QX1051

FCC ID: 2AUCLQX1050

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

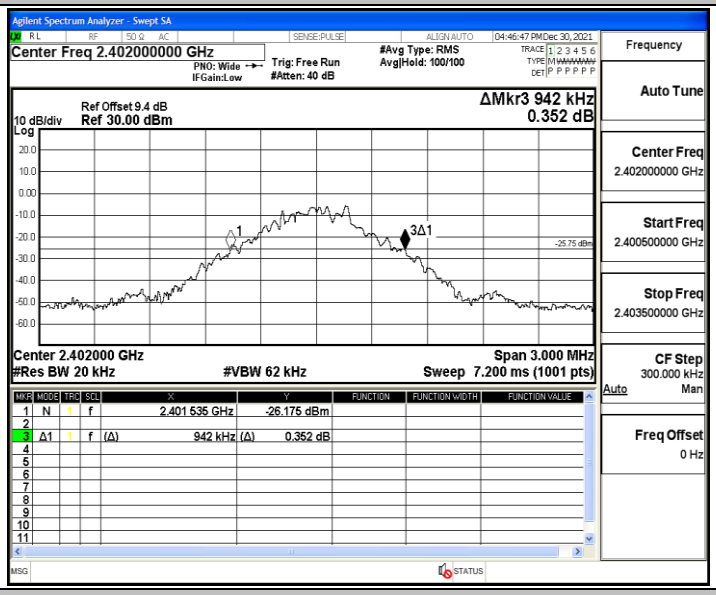
Appendix A: 20dB Emission Bandwidth

Test Result

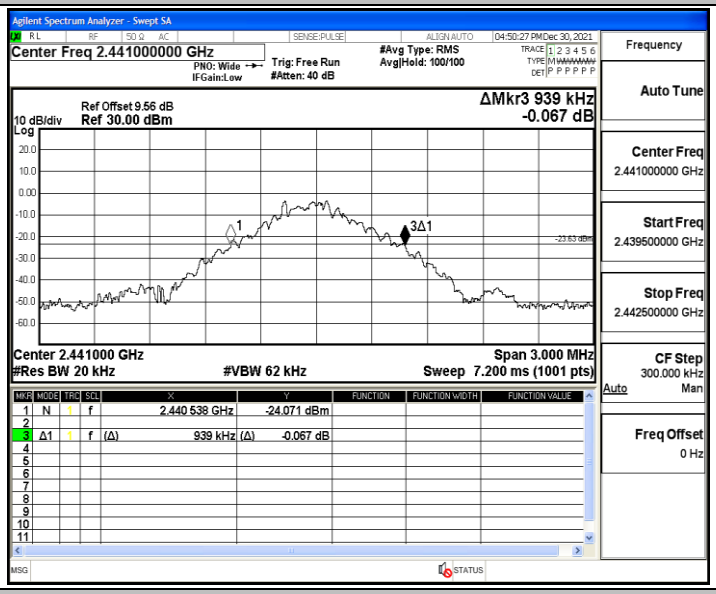
TestMode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.942	2401.535	2402.477	---	PASS
		2441	0.939	2440.538	2441.477	---	PASS
		2480	0.945	2479.538	2480.483	---	PASS
2DH5	Ant1	2402	1.314	2401.337	2402.651	---	PASS
		2441	1.320	2440.334	2441.654	---	PASS
		2480	1.329	2479.331	2480.660	---	PASS
3DH5	Ant1	2402	1.335	2401.325	2402.660	---	PASS
		2441	1.287	2440.346	2441.633	---	PASS
		2480	1.338	2479.325	2480.663	---	PASS

Test Graphs

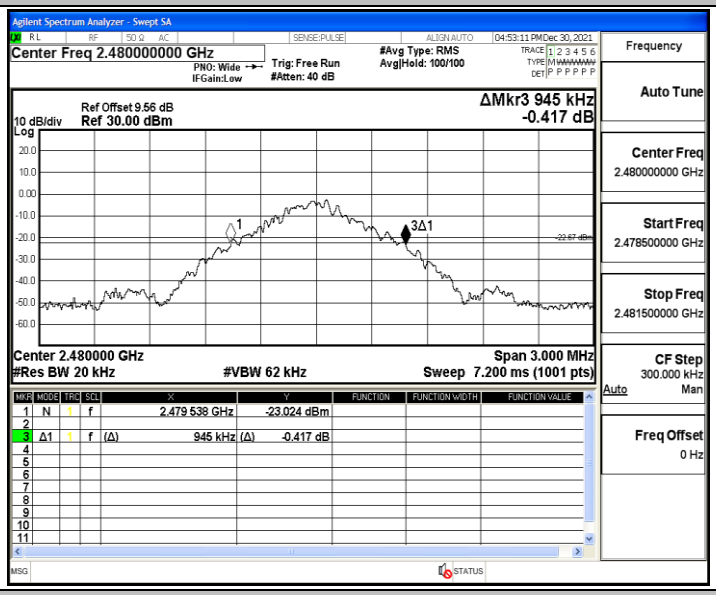
DH5_Ant1_2402



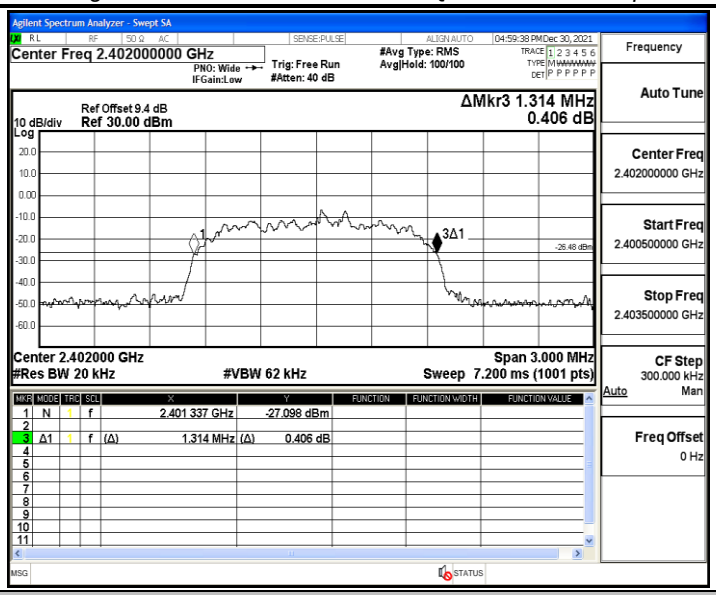
DH5_Ant1_2441



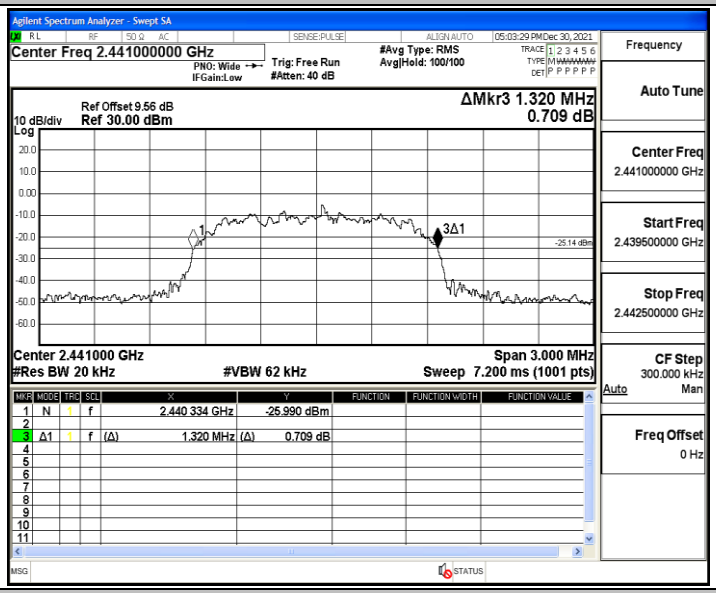
DH5_Ant1_2480



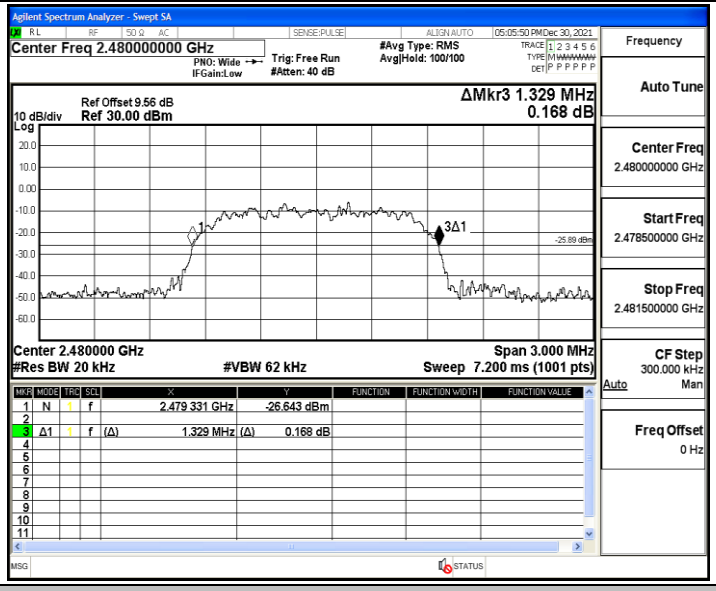
2DH5_Ant1_2402



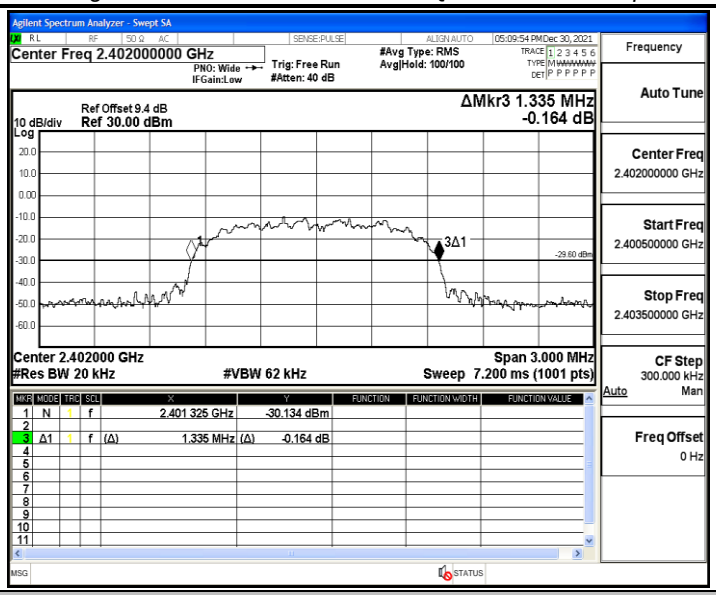
2DH5_Ant1_2441



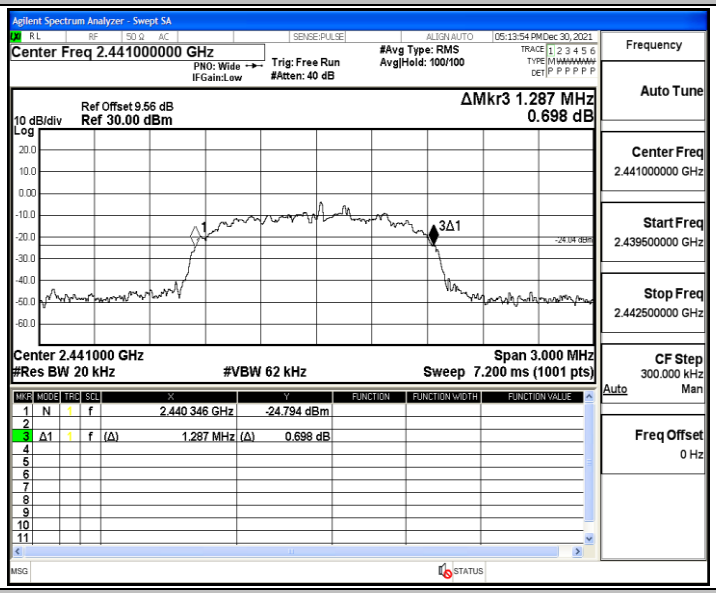
2DH5_Ant1_2480



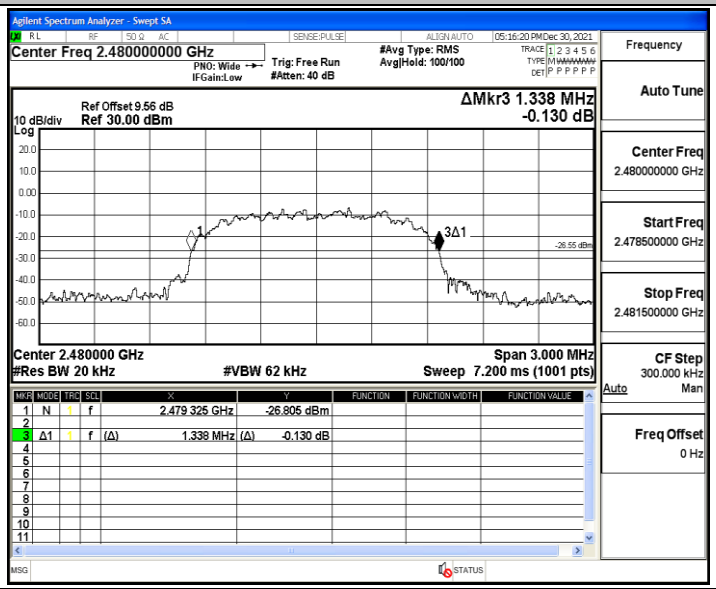
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



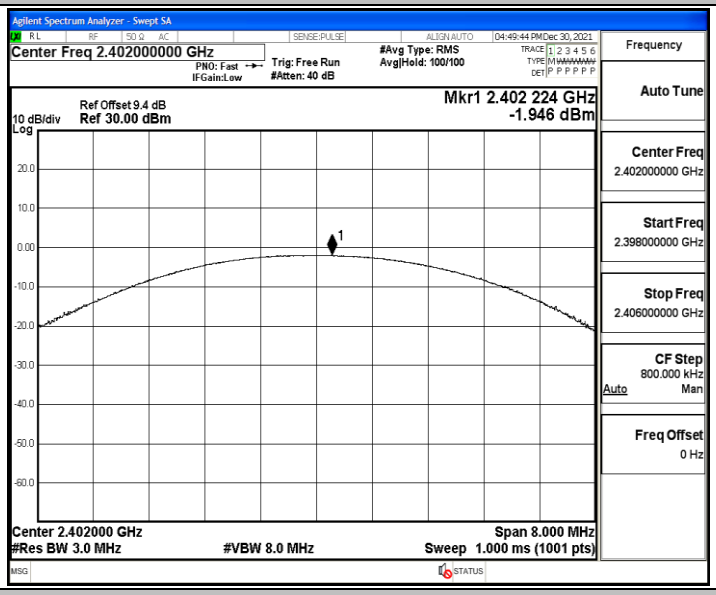
Appendix B: Maximum conducted output power

Test Result

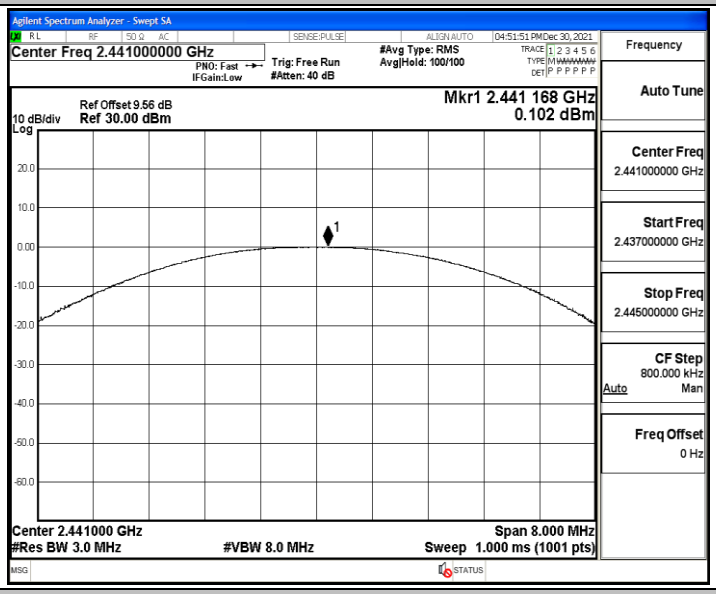
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	-1.95	≤30.00	PASS
		2441	0.1	≤30.00	PASS
		2480	1.08	≤30.00	PASS
2DH5	Ant1	2402	-0.14	≤20.97	PASS
		2441	1.98	≤20.97	PASS
		2480	3.02	≤20.97	PASS
3DH5	Ant1	2402	0.12	≤20.97	PASS
		2441	2.23	≤20.97	PASS
		2480	3.43	≤20.97	PASS

Test Graphs

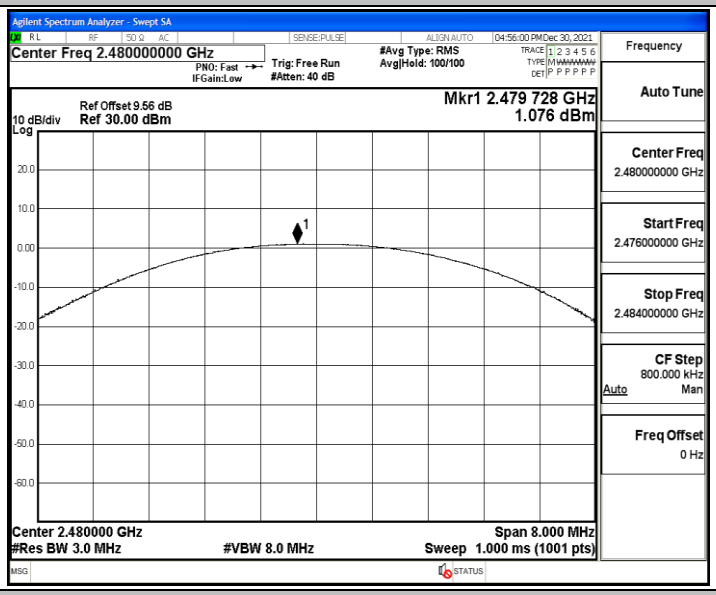
DH5_Ant1_2402



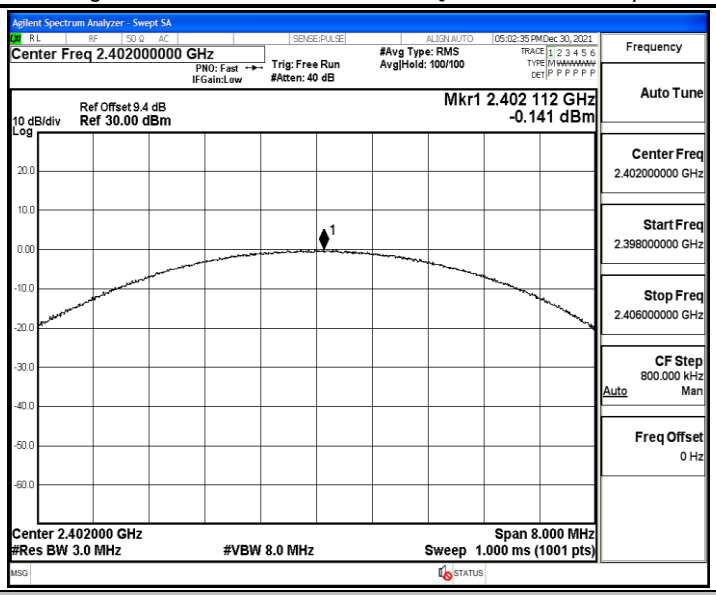
DH5_Ant1_2441



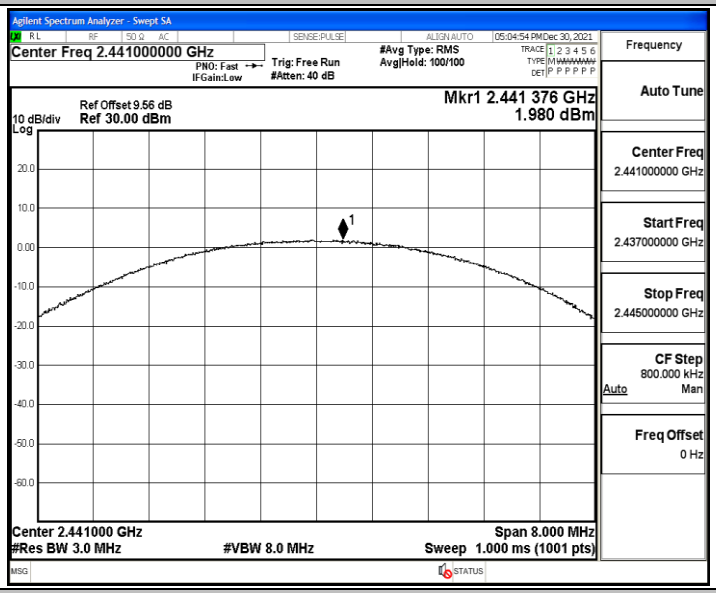
DH5_Ant1_2480



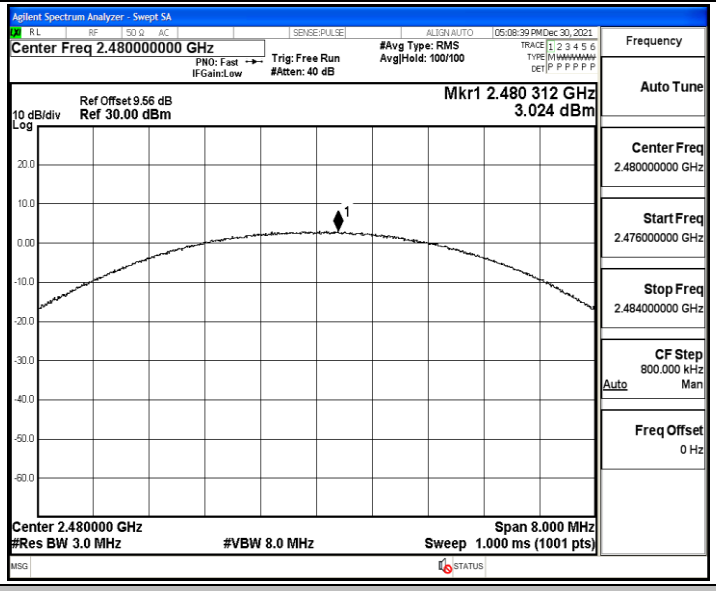
2DH5_Ant1_2402



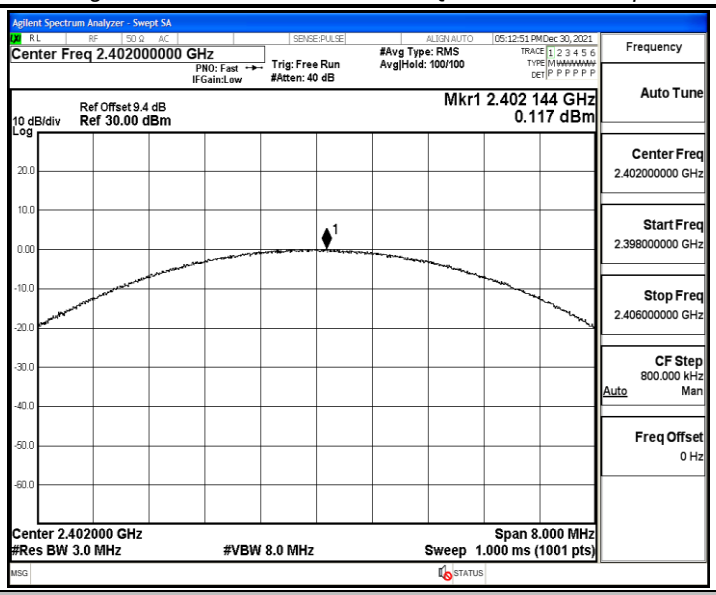
2DH5_Ant1_2441



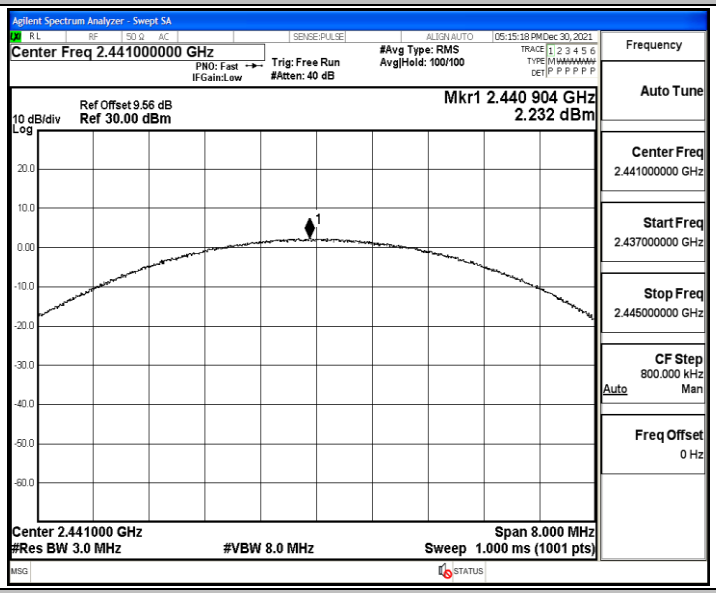
2DH5_Ant1_2480



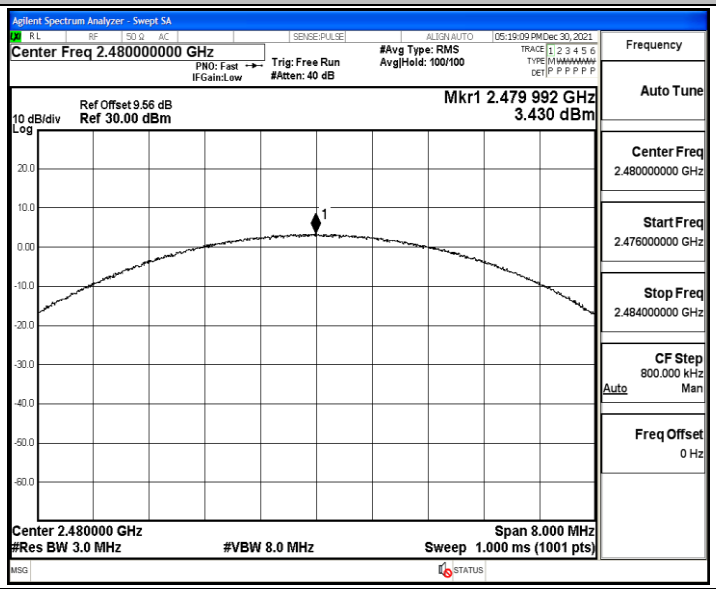
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



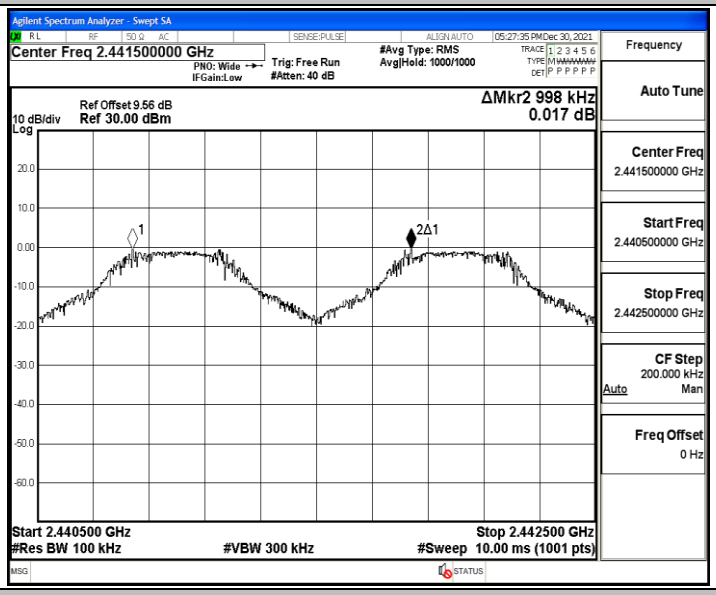
Appendix C: Carrier frequency separation

Test Result

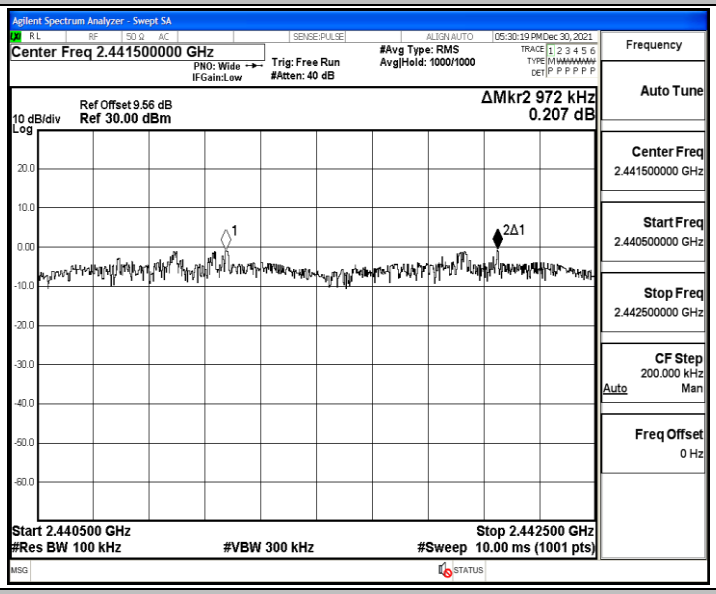
TestMode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	0.998	≥0.945	PASS
2DH5	Ant1	Hop	0.972	≥0.886	PASS
3DH5	Ant1	Hop	1.008	≥0.892	PASS

Test Graphs

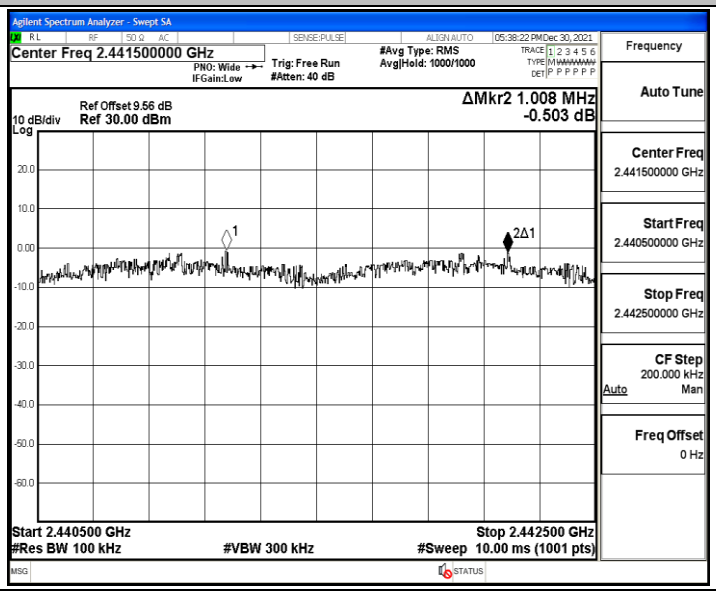
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop



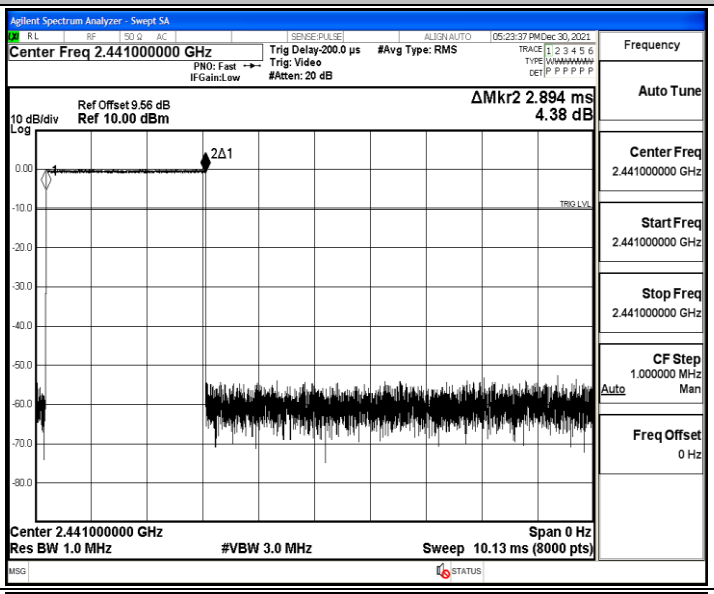
Appendix D: Time of occupancy

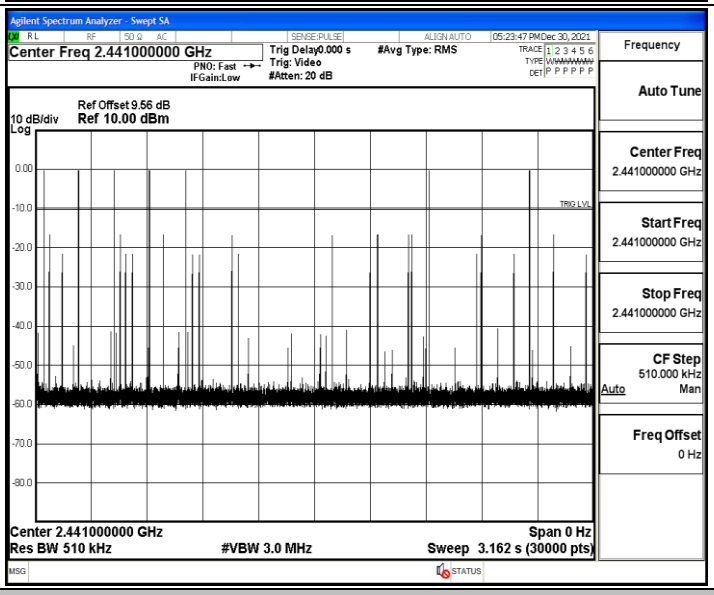
Test Result

TestMode	Antenna	Channel	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.89	80	0.232	≤0.4	PASS
2DH5	Ant1	Hop	2.88	120	0.346	≤0.4	PASS
3DH5	Ant1	Hop	2.88	90	0.259	≤0.4	PASS

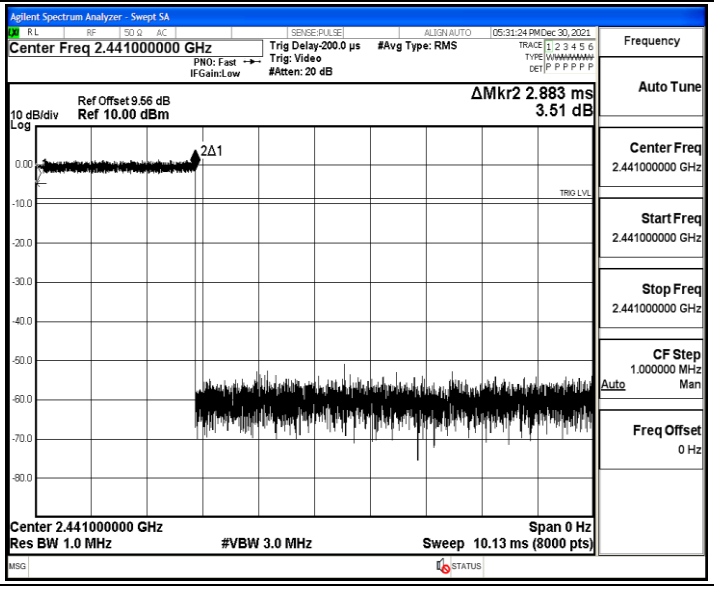
Test Graphs

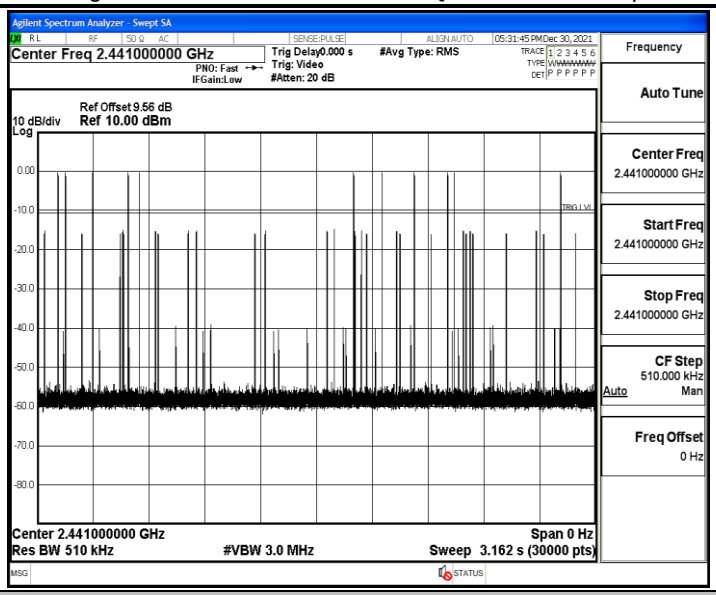
DH5_Ant1_Hop



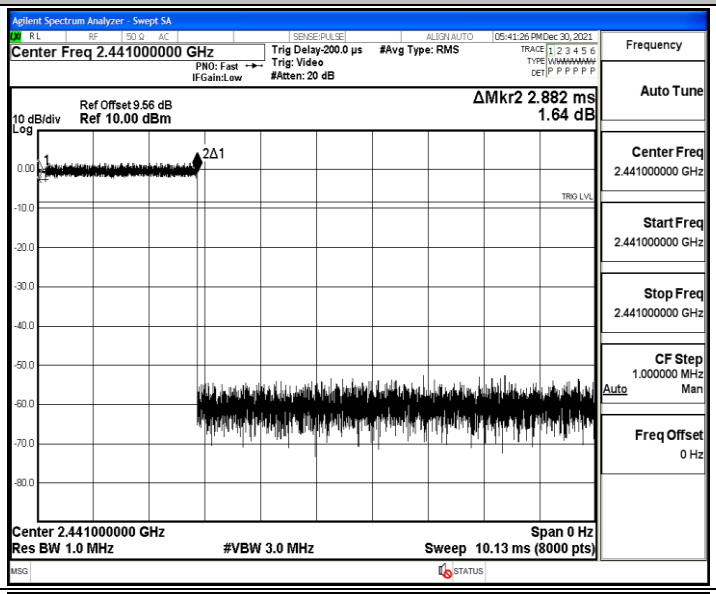


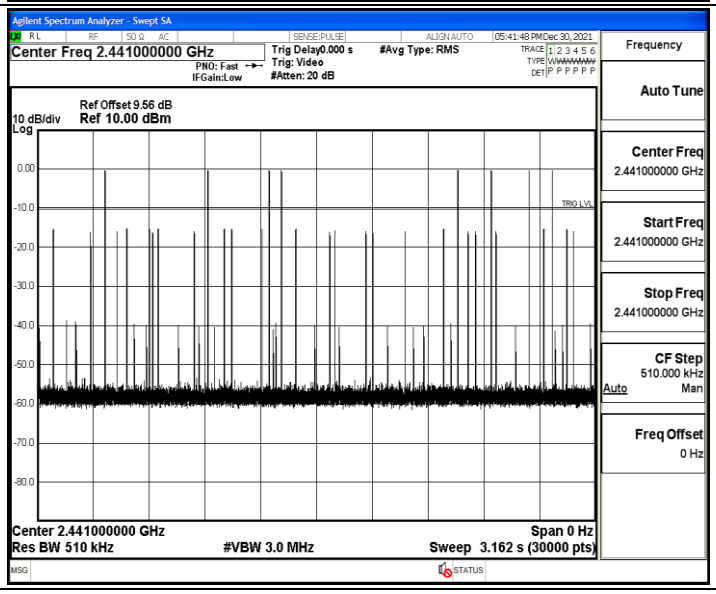
2DH5_Ant1_Hop





3DH5_Ant1_Hop





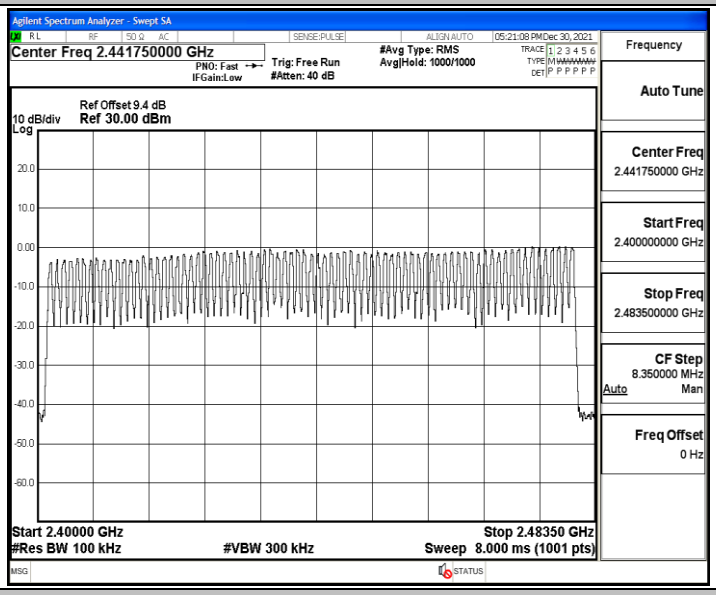
Appendix E: Number of hopping channels

Test Result

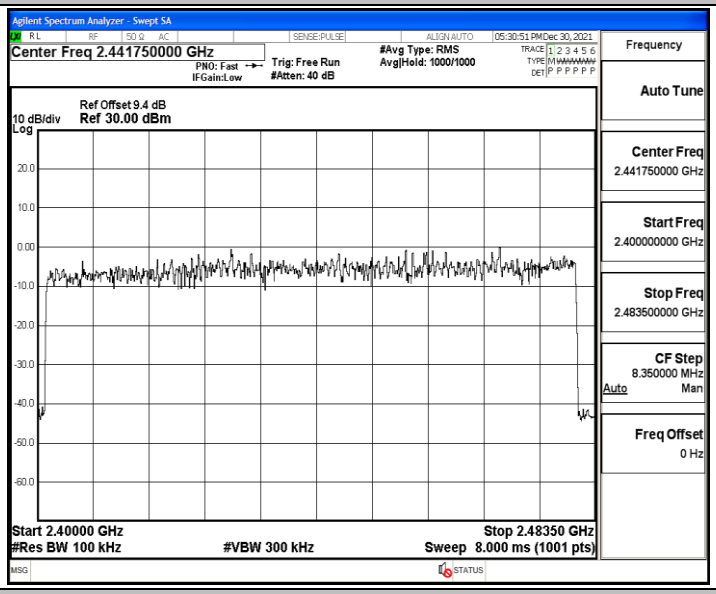
TestMode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

Test Graphs

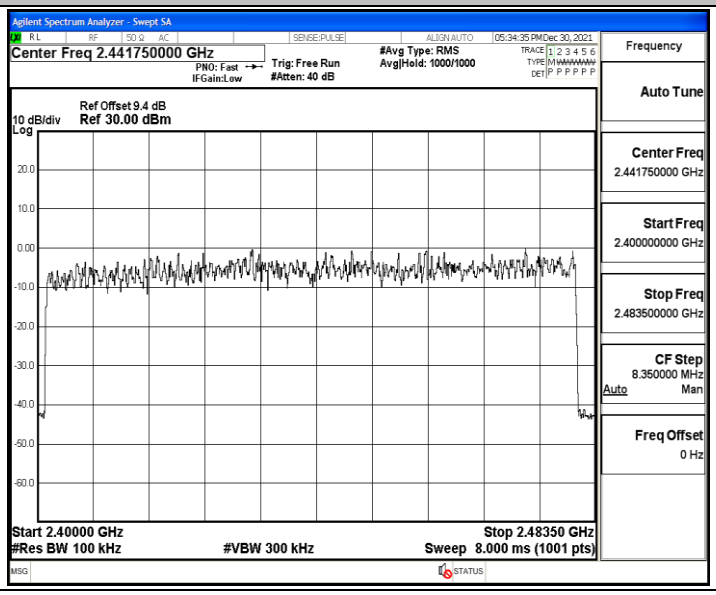
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop



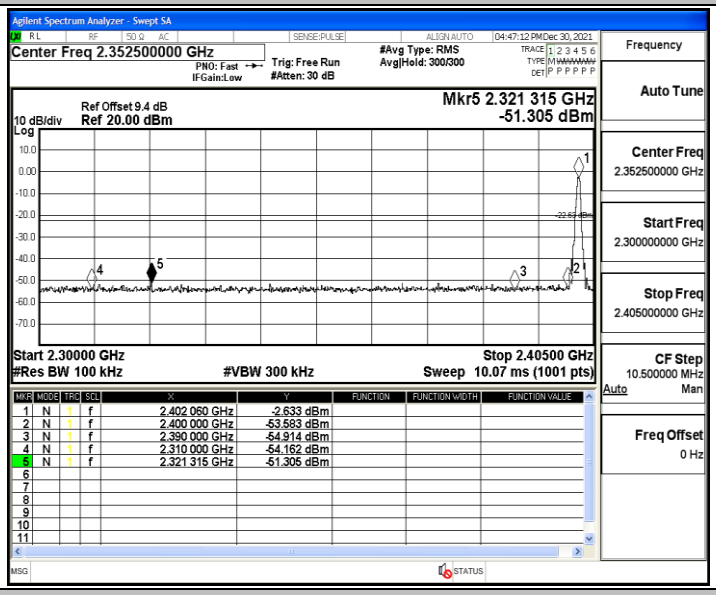
Appendix F: Band edge measurements

Test Result

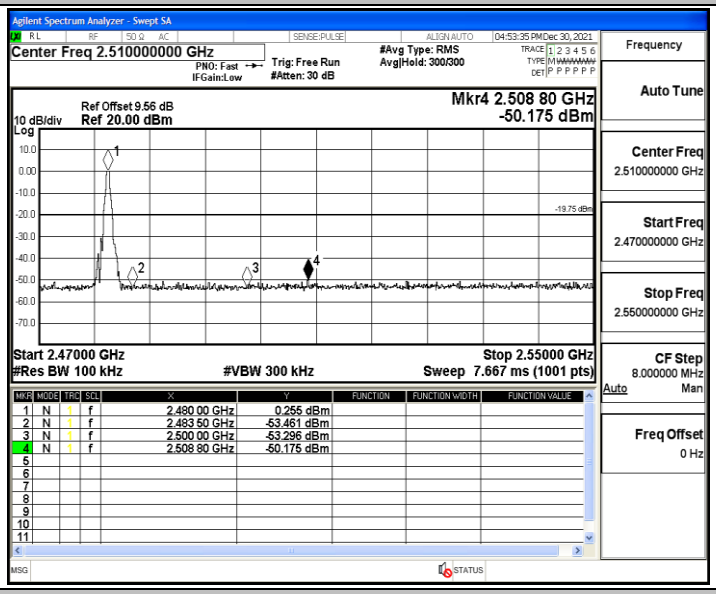
TestMode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	Low	2402	-2.63	-51.31	≤-22.63	PASS
		High	2480	0.26	-50.18	≤-19.75	PASS
		Low	Hop_2402	-3.36	-51.53	≤-23.36	PASS
		High	Hop_2480	0.00	-49.74	≤-20	PASS
2DH5	Ant1	Low	2402	-2.94	-51	≤-22.94	PASS
		High	2480	0.57	-50.03	≤-19.43	PASS
		Low	Hop_2402	-6.24	-51.32	≤-26.24	PASS
		High	Hop_2480	-0.30	-50.41	≤-20.3	PASS
3DH5	Ant1	Low	2402	-3.16	-51.09	≤-23.16	PASS
		High	2480	0.58	-50.35	≤-19.42	PASS
		Low	Hop_2402	-2.94	-51.3	≤-22.94	PASS
		High	Hop_2480	-2.33	-50.56	≤-22.33	PASS

Test Graphs

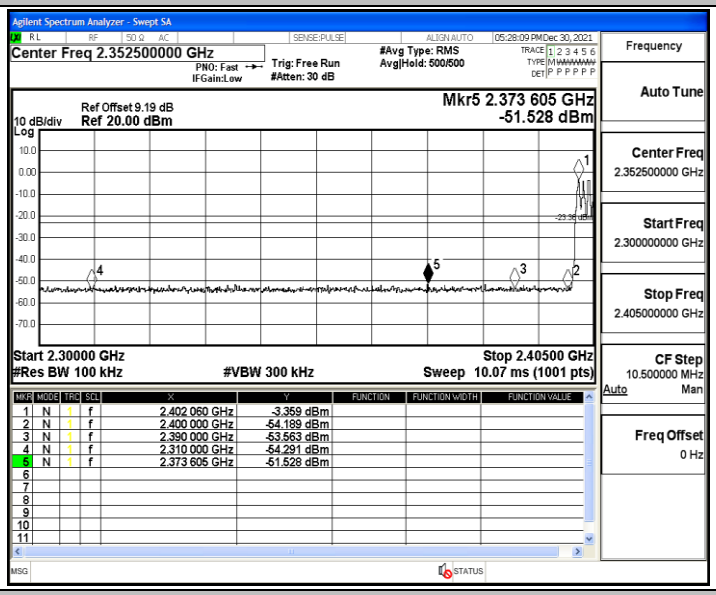
DH5_Ant1_Low_2402



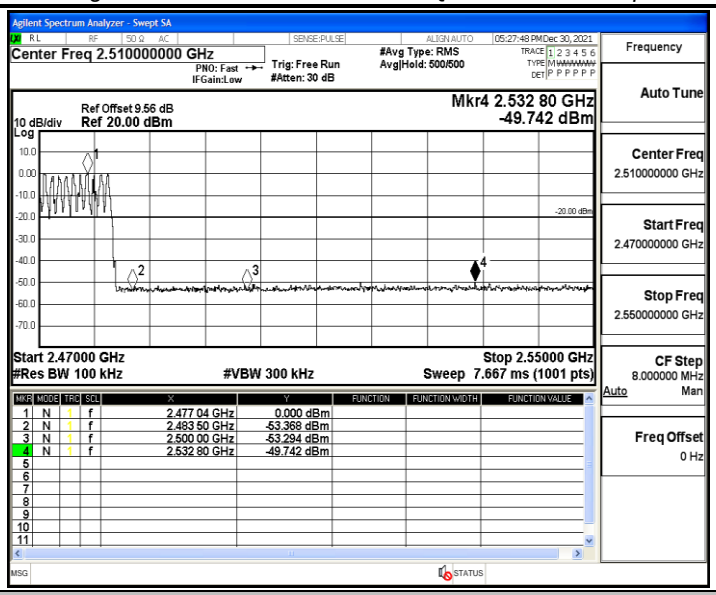
DH5_Ant1_High_2480



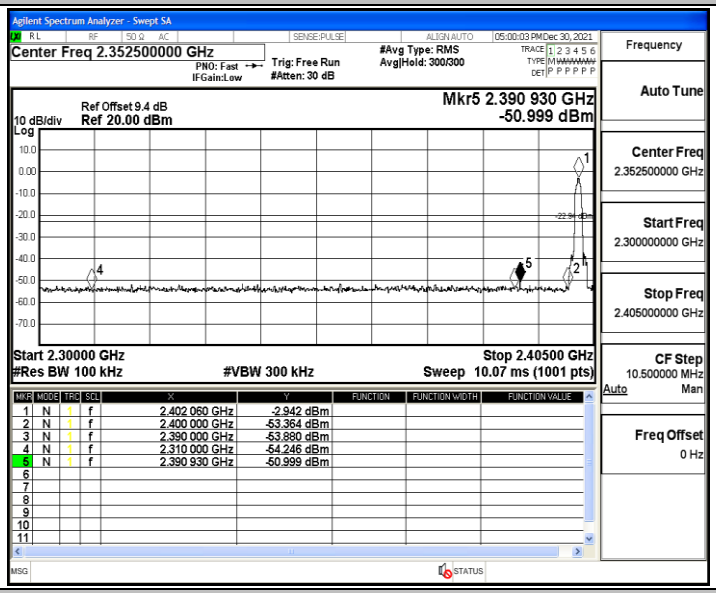
DH5_Ant1_Low_Hop_2402



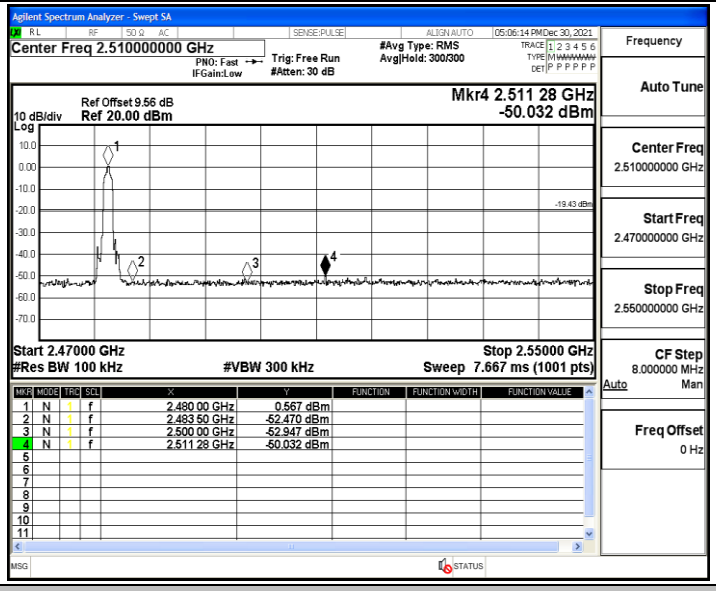
DH5_Ant1_High_Hop_2480



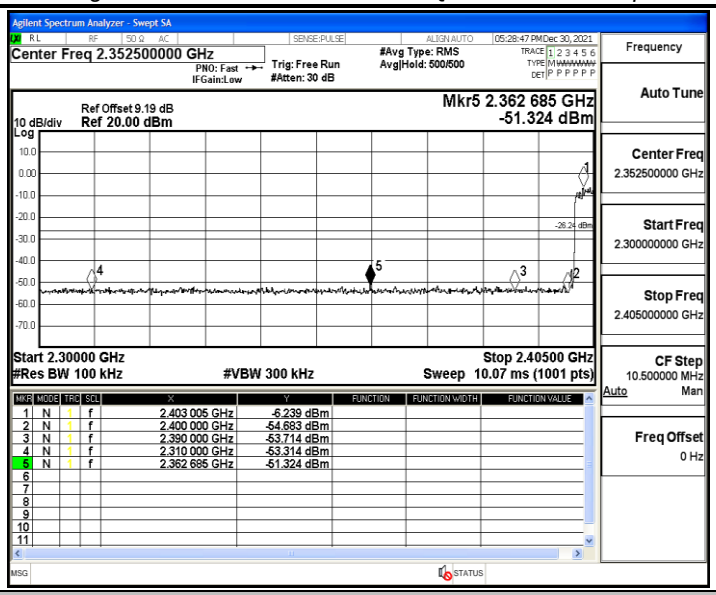
2DH5_Ant1_Low_2402



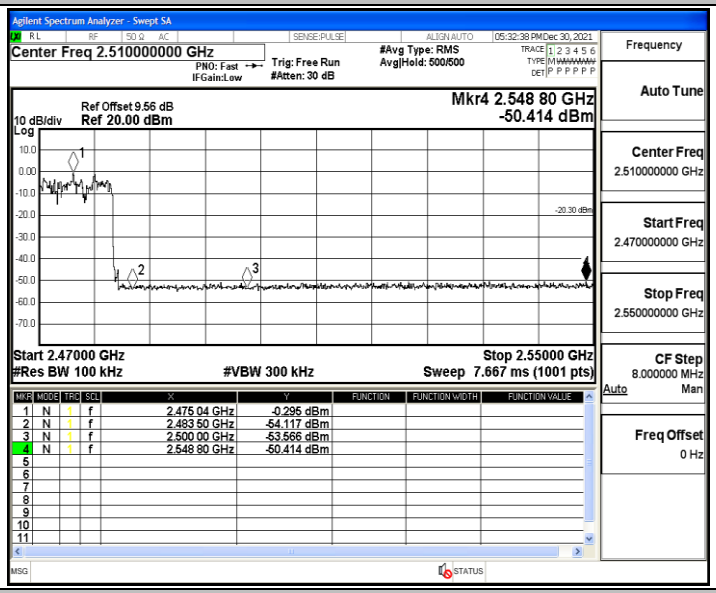
2DH5_Ant1_High_2480



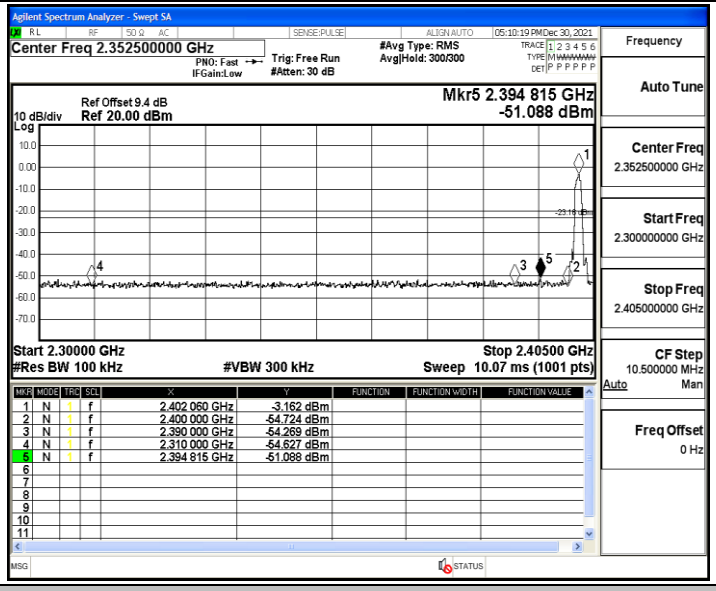
2DH5_Ant1_Low_Hop_2402



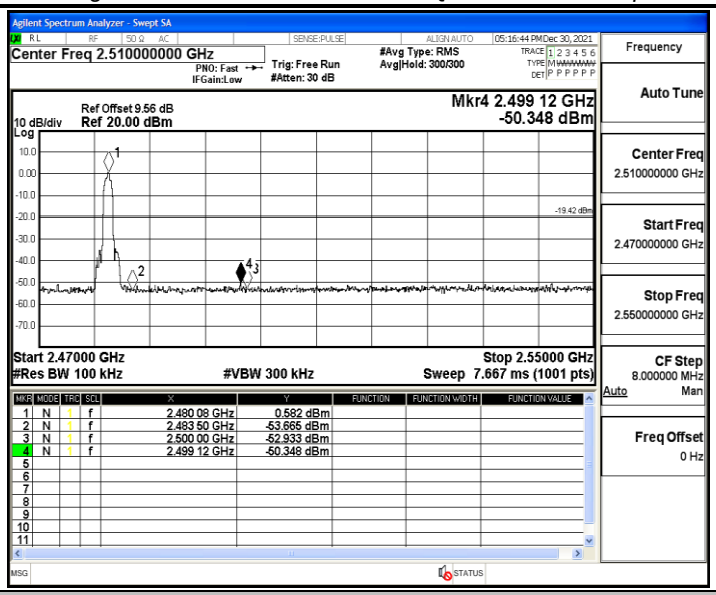
2DH5_Ant1_High_Hop_2480



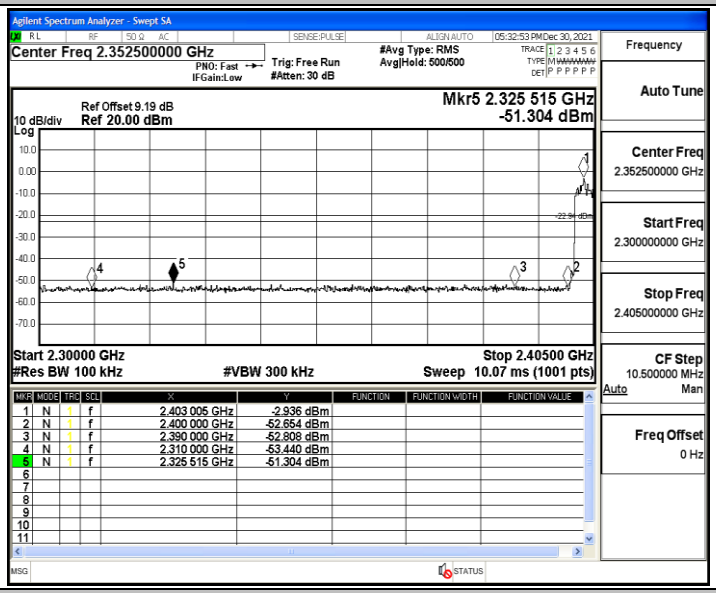
3DH5_Ant1_Low_2402



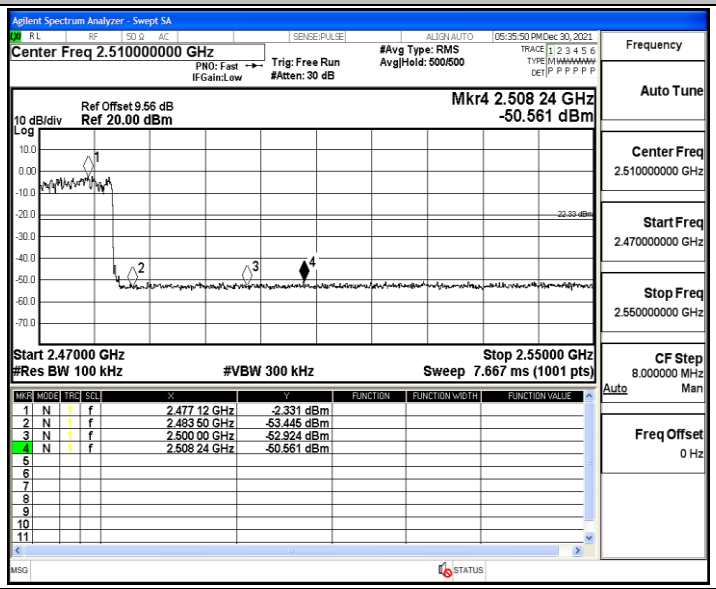
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



3DH5_Ant1_High_Hop_2480



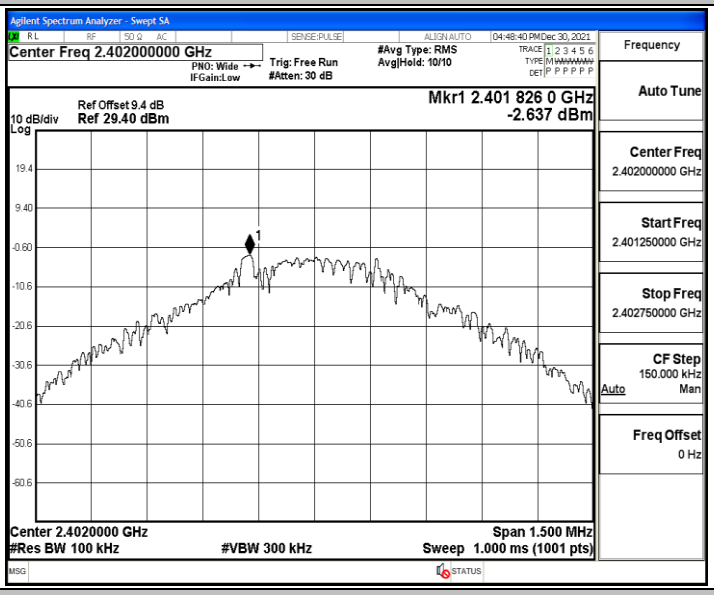
Appendix G: Conducted Spurious Emission

Test Result

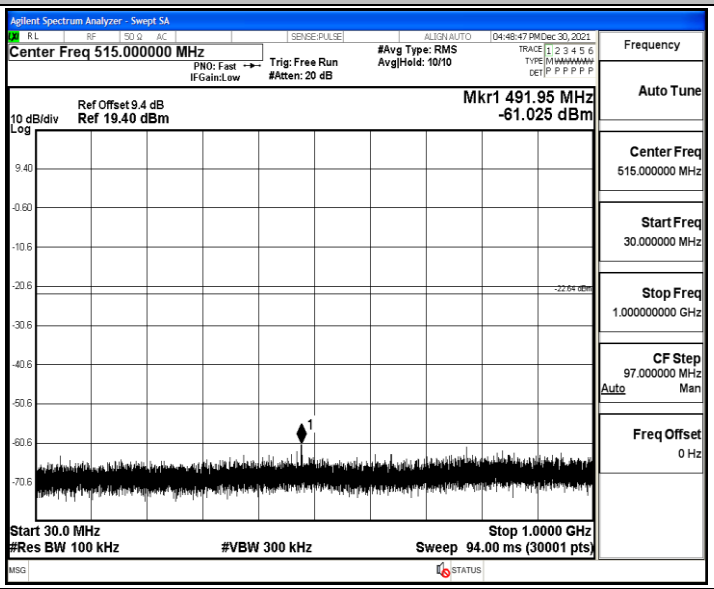
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	-2.64	-2.64	---	PASS
			30~1000	-2.64	-61.03	≤-22.64	PASS
			1000~26500	-2.64	-53.68	≤-22.64	PASS
		2441	Reference	-0.74	-0.74	---	PASS
			30~1000	-0.74	-62.37	≤-20.74	PASS
			1000~26500	-0.74	-53.6	≤-20.74	PASS
		2480	Reference	-0.05	-0.05	---	PASS
			30~1000	-0.05	-62.26	≤-20.05	PASS
			1000~26500	-0.05	-52.36	≤-20.05	PASS
2DH5	Ant1	2402	Reference	-3.50	-3.50	---	PASS
			30~1000	-3.50	-62.54	≤-23.5	PASS
			1000~26500	-3.50	-53.85	≤-23.5	PASS
		2441	Reference	-2.70	-2.70	---	PASS
			30~1000	-2.70	-62.18	≤-22.7	PASS
			1000~26500	-2.70	-53.81	≤-22.7	PASS
		2480	Reference	-0.46	-0.46	---	PASS
			30~1000	-0.46	-62.63	≤-20.46	PASS
			1000~26500	-0.46	-53.24	≤-20.46	PASS
3DH5	Ant1	2402	Reference	-3.34	-3.34	---	PASS
			30~1000	-3.34	-62.21	≤-23.34	PASS
			1000~26500	-3.34	-53.94	≤-23.34	PASS
		2441	Reference	-3.23	-3.23	---	PASS
			30~1000	-3.23	-62.71	≤-23.23	PASS
			1000~26500	-3.23	-53.38	≤-23.23	PASS
		2480	Reference	-1.97	-1.97	---	PASS
			30~1000	-1.97	-62.44	≤-21.97	PASS
			1000~26500	-1.97	-53.15	≤-21.97	PASS

Test Graphs

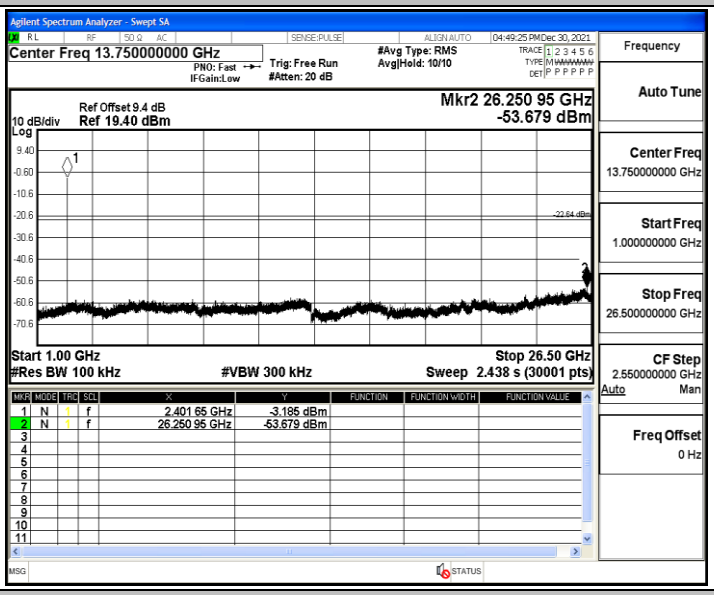
DH5_Ant1_2402_0~Reference



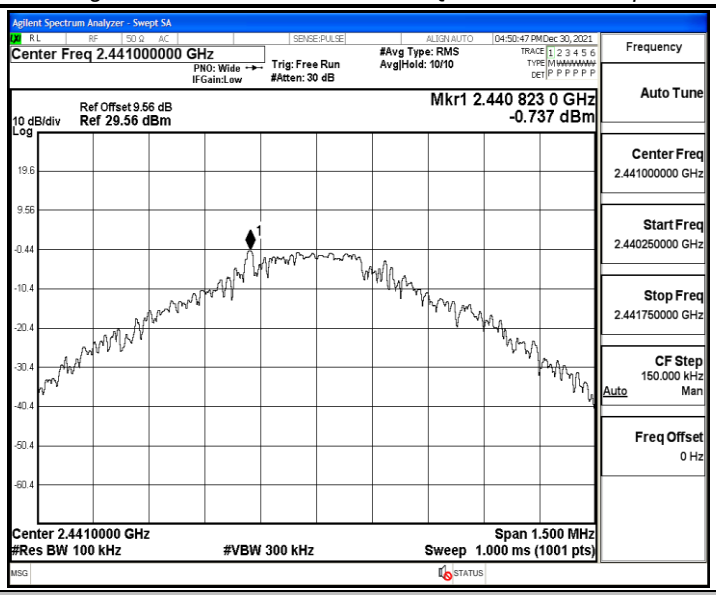
DH5_Ant1_2402_30~1000



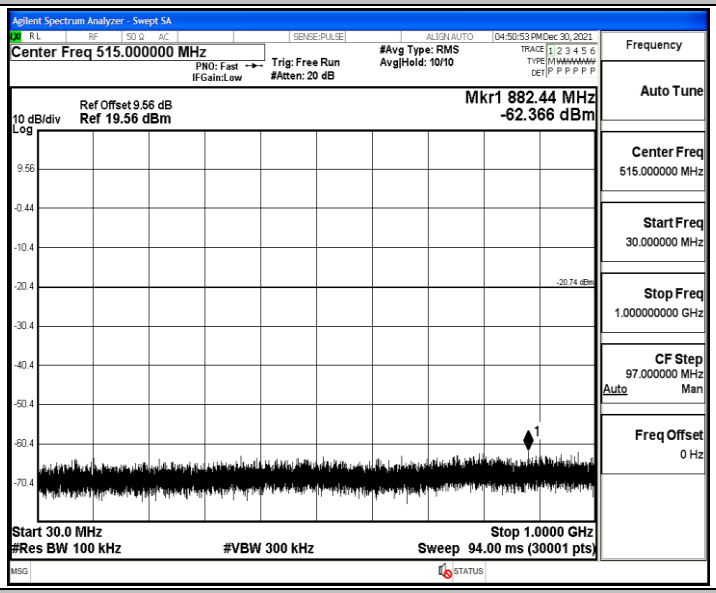
DH5_Ant1_2402_1000~26500



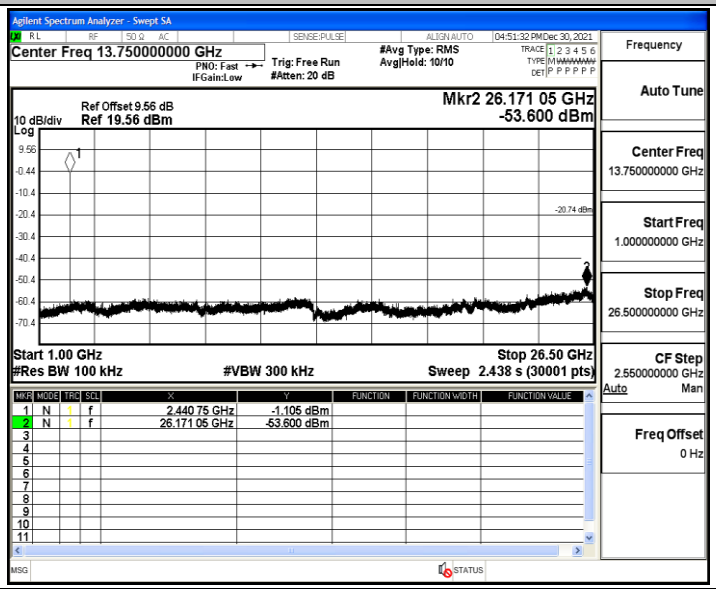
DH5_Ant1_2441_0~Reference



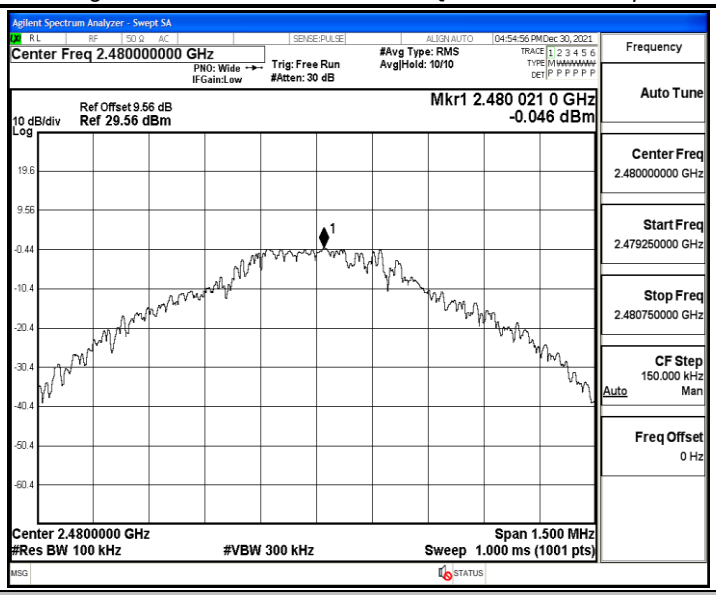
DH5_Ant1_2441_30~1000



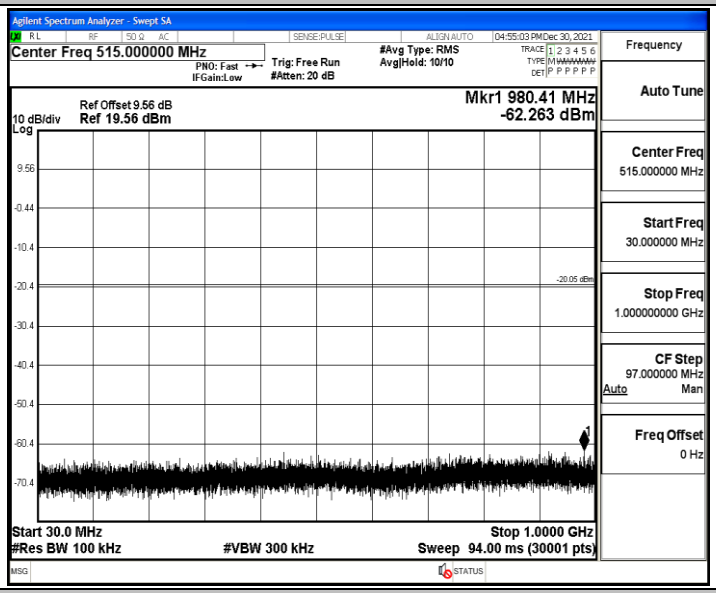
DH5_Ant1_2441_1000~26500



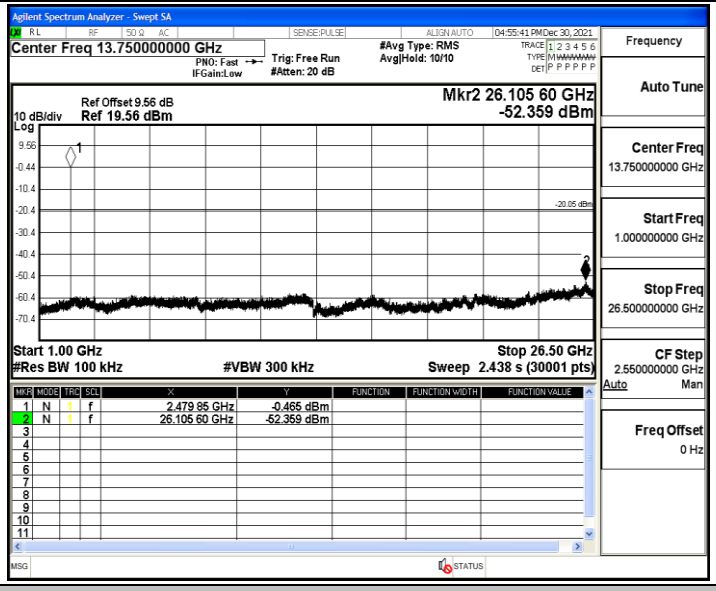
DH5_Ant1_2480_0~Reference



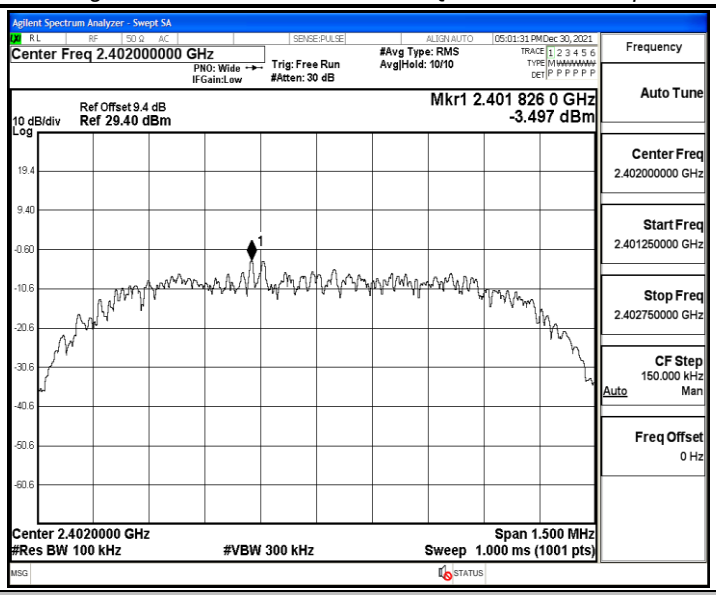
DH5_Ant1_2480_30~1000



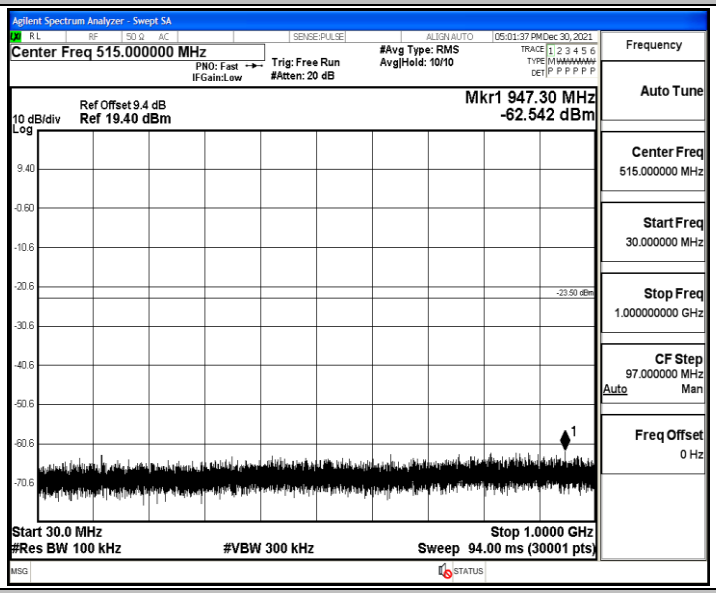
DH5_Ant1_2480_1000~26500



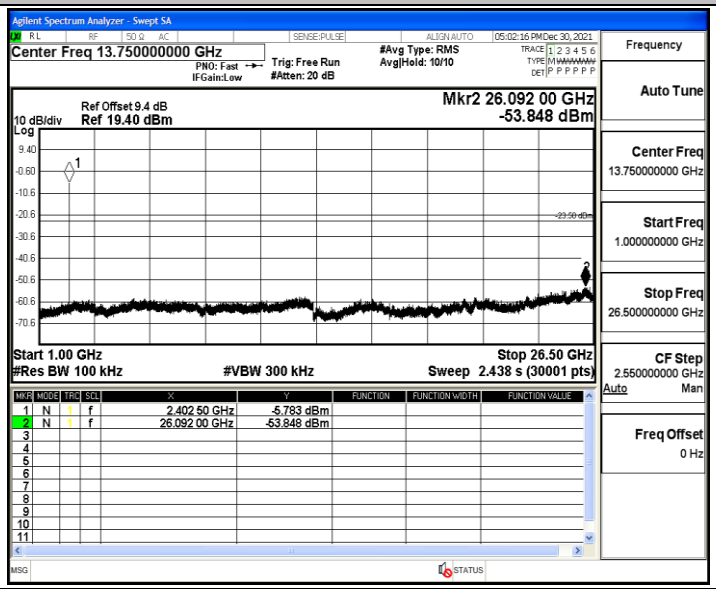
2DH5_Ant1_2402_0~Reference



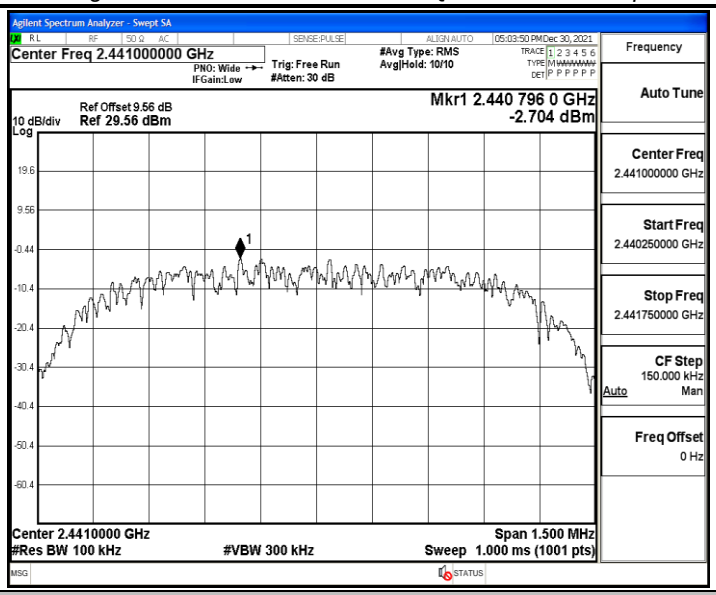
2DH5_Ant1_2402_30~1000



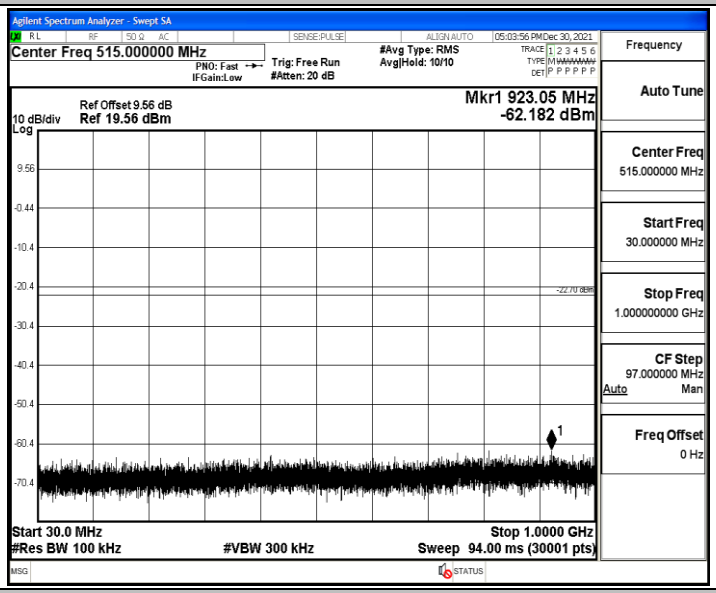
2DH5_Ant1_2402_1000~26500



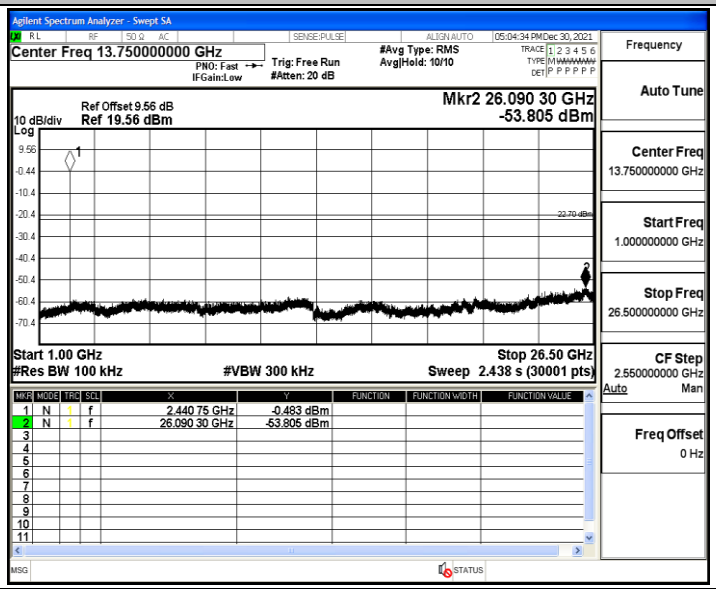
2DH5_Ant1_2441_0~Reference



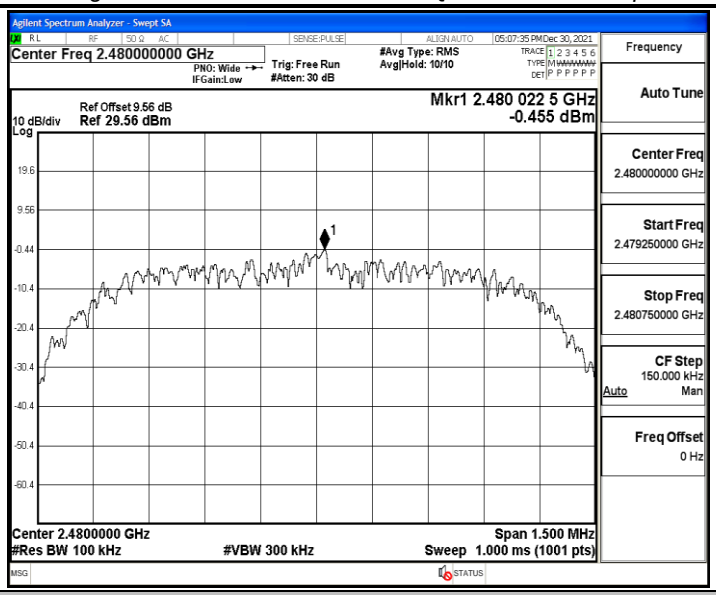
2DH5_Ant1_2441_30~1000



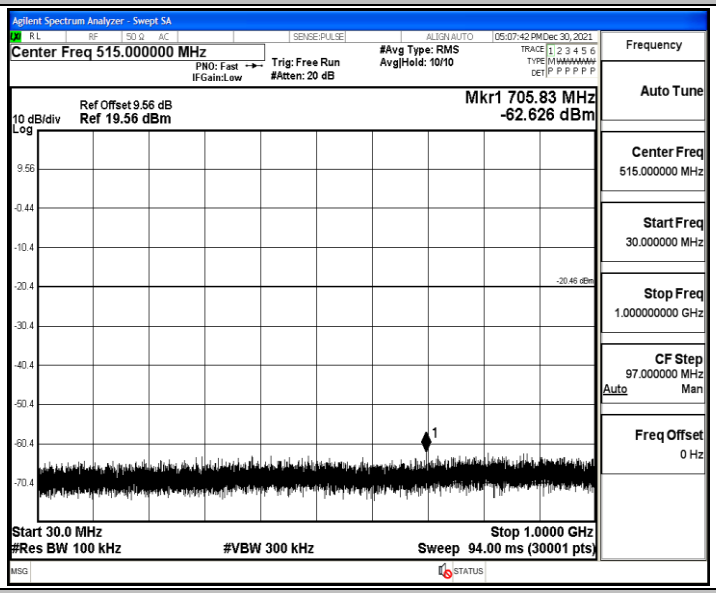
2DH5_Ant1_2441_1000~26500



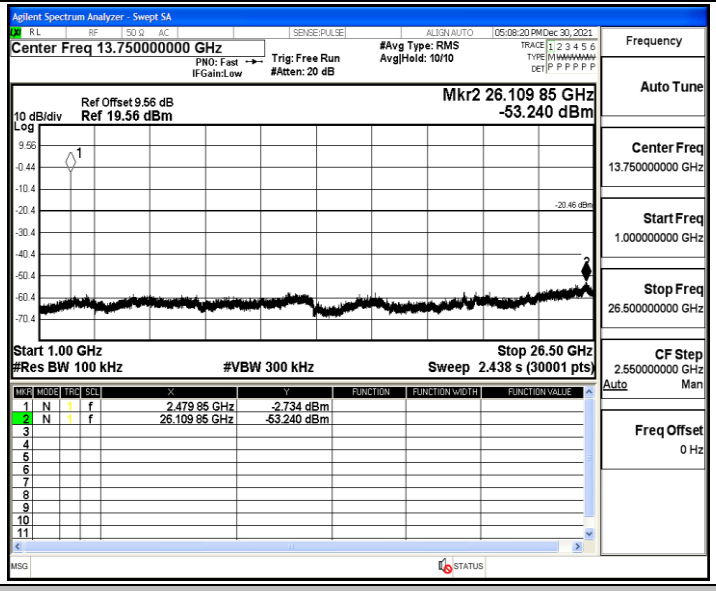
2DH5_Ant1_2480_0~Reference



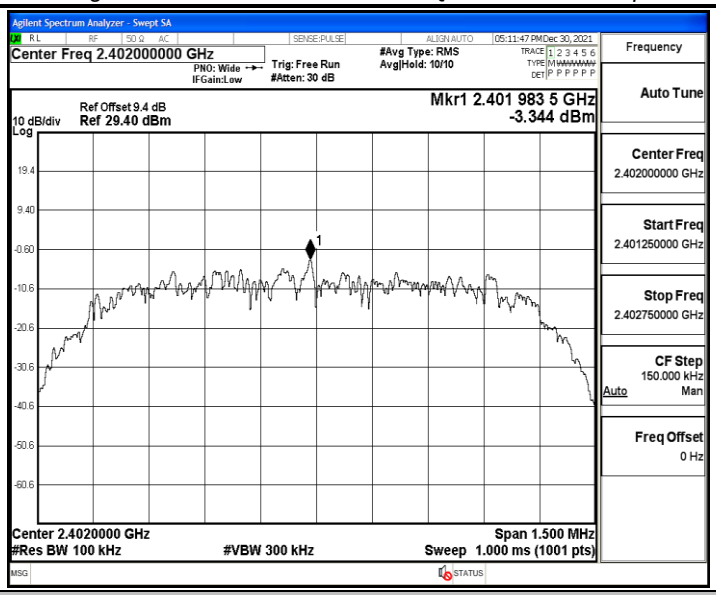
2DH5_Ant1_2480_30~1000



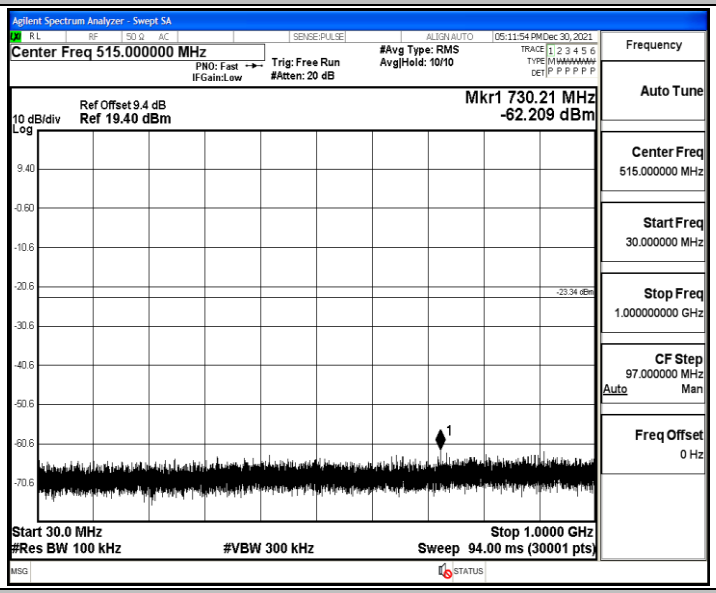
2DH5_Ant1_2480_1000~26500



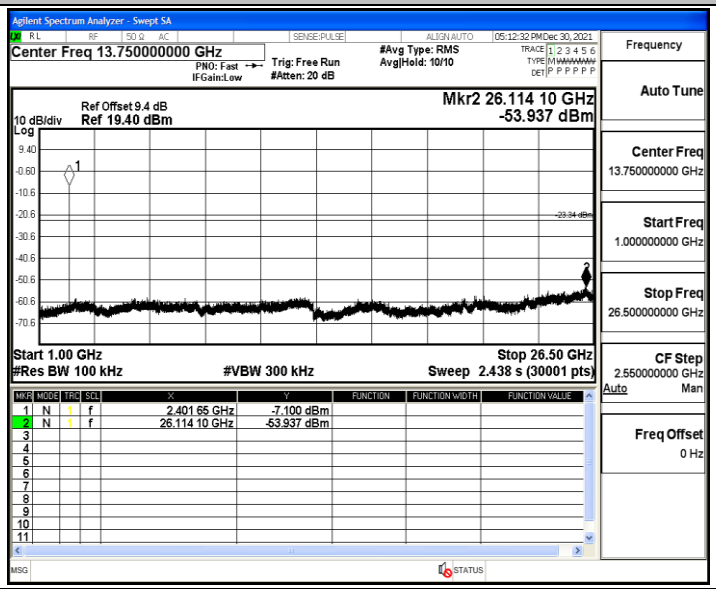
3DH5_Ant1_2402_0~Reference



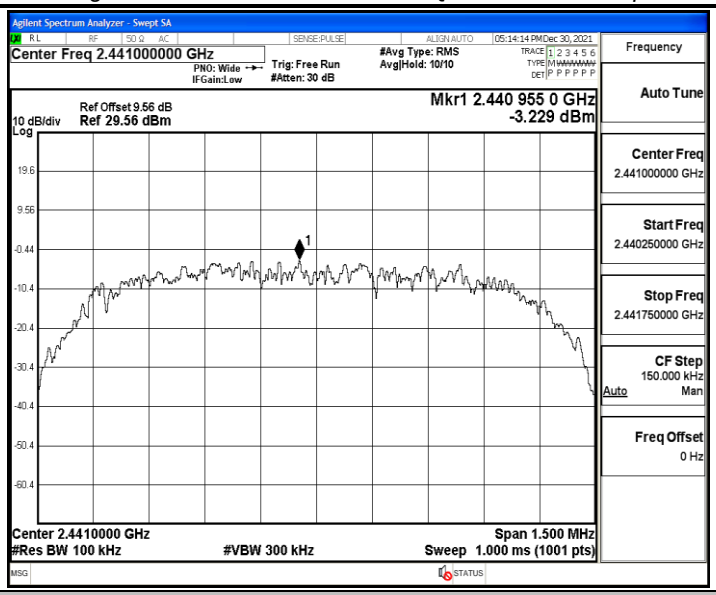
3DH5_Ant1_2402_30~1000



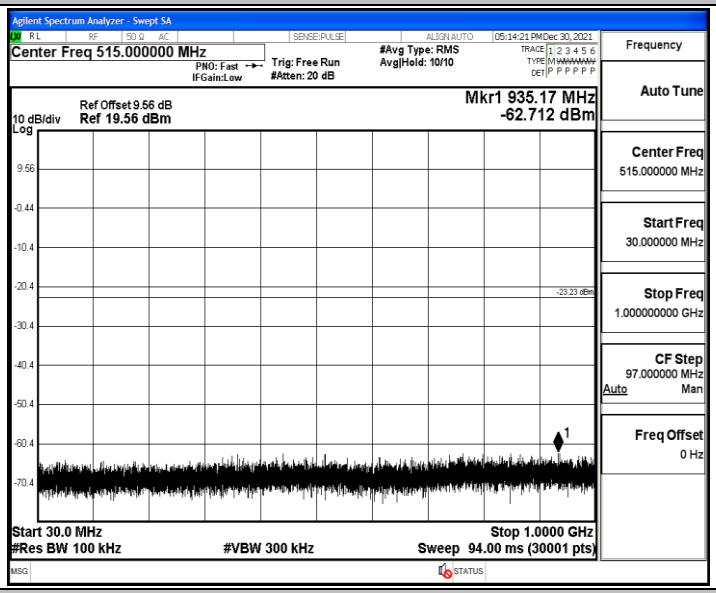
3DH5_Ant1_2402_1000~26500



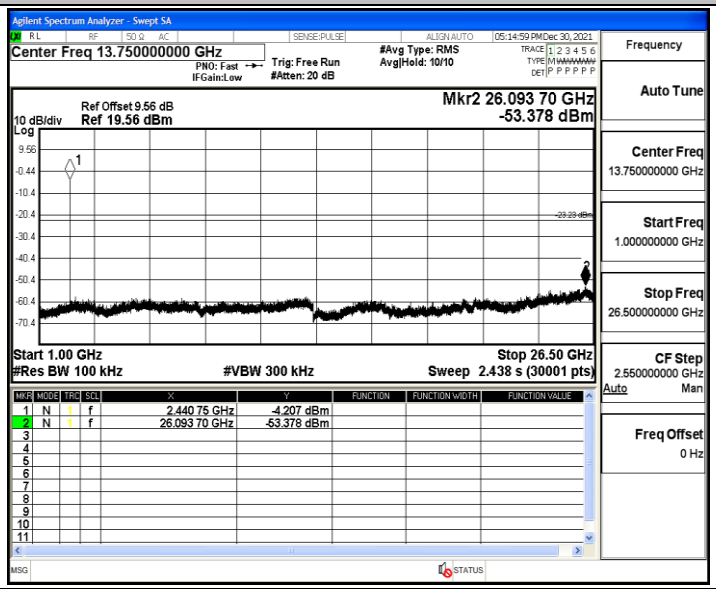
3DH5_Ant1_2441_0~Reference



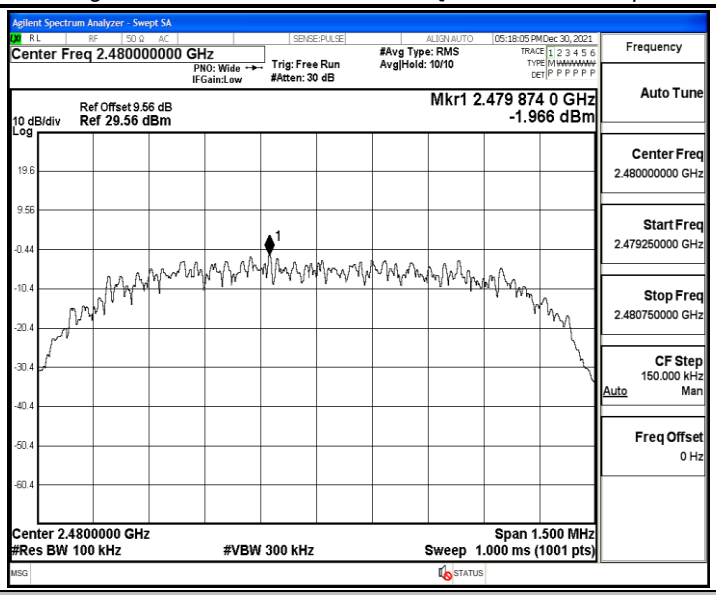
3DH5_Ant1_2441_30~1000



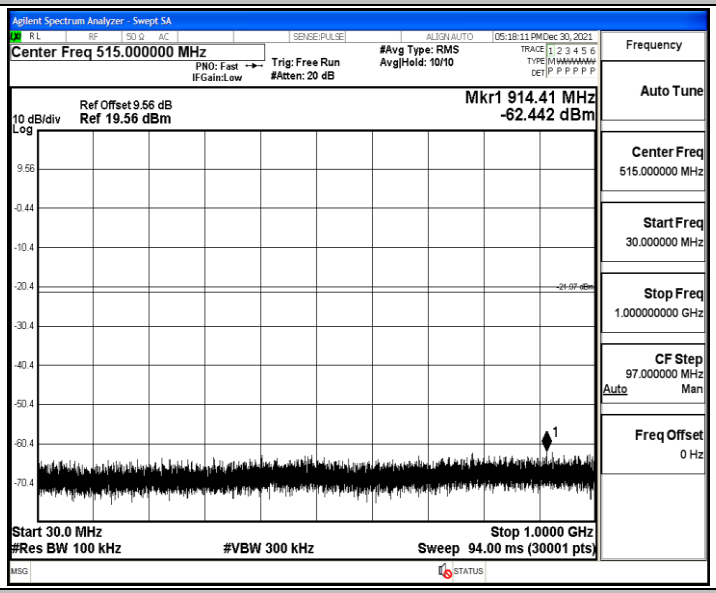
3DH5_Ant1_2441_1000~26500



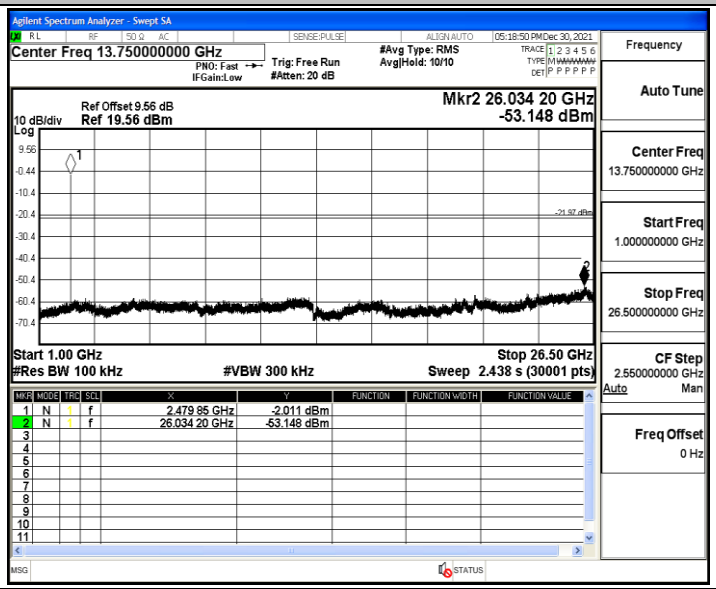
3DH5_Ant1_2480_0~Reference



3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500



Appendix H: Emissions in Restricted Bands

Test Result

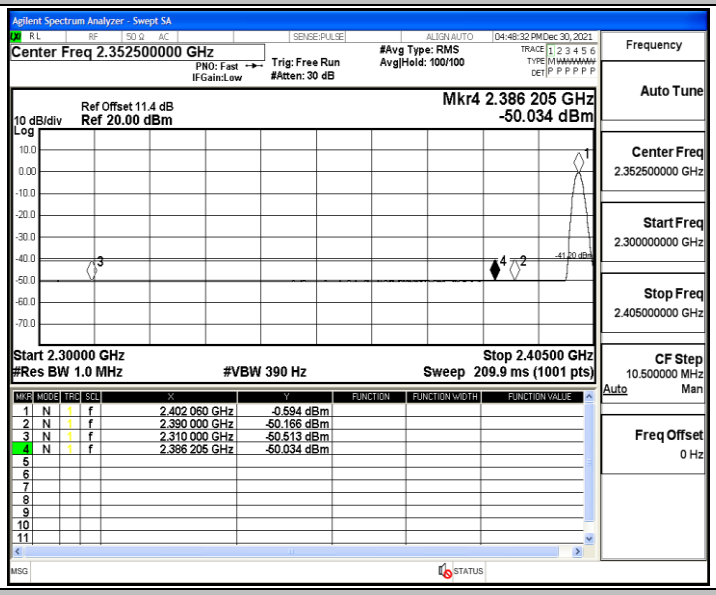
TestMode	Antenna	ChName	Channel	Detector	Freq(MHz)	Result(dBm)	Limit(dBm)	Verdict
DH5	Ant1	Low	2402	AV	2310.000	-50.51	≤-41.20	PASS
				AV	2386.205	-50.03	≤-41.20	PASS
				AV	2390.000	-50.17	≤-41.20	PASS
				Peak	2310.000	-43.66	≤-21.20	PASS
				Peak	2388.410	-38.93	≤-21.20	PASS
				Peak	2390.000	-42.51	≤-21.20	PASS
		High	2480	AV	2483.500	-49.19	≤-41.20	PASS
				AV	2483.520	-49.19	≤-41.20	PASS
				AV	2500.000	-49.63	≤-41.20	PASS
				Peak	2483.500	-42.36	≤-21.20	PASS
				Peak	2497.200	-39.6	≤-21.20	PASS
				Peak	2500.000	-43.24	≤-21.20	PASS
2DH5	Ant1	Low	2402	AV	2310.000	-50.57	≤-41.20	PASS
				AV	2372.030	-50.15	≤-41.20	PASS
				AV	2390.000	-50.23	≤-41.20	PASS
				Peak	2310.000	-43.55	≤-21.20	PASS
				Peak	2353.340	-40.3	≤-21.20	PASS
				Peak	2390.000	-43.67	≤-21.20	PASS
		High	2480	AV	2483.500	-48.89	≤-41.20	PASS
				AV	2483.520	-48.89	≤-41.20	PASS
				AV	2500.000	-49.52	≤-41.20	PASS
				Peak	2483.500	-41.59	≤-21.20	PASS
				Peak	2498.400	-39.8	≤-21.20	PASS
				Peak	2500.000	-42.78	≤-21.20	PASS
3DH5	Ant1	Low	2402	AV	2310.000	-50.58	≤-41.20	PASS
				AV	2388.620	-50.14	≤-41.20	PASS
				AV	2390.000	-50.27	≤-41.20	PASS
				Peak	2310.000	-43.57	≤-21.20	PASS
				Peak	2317.220	-40.29	≤-21.20	PASS
				Peak	2390.000	-41.65	≤-21.20	PASS
		High	2480	AV	2483.500	-49.04	≤-41.20	PASS
				AV	2483.520	-49.04	≤-41.20	PASS
				AV	2500.000	-49.46	≤-41.20	PASS
				Peak	2483.500	-41.73	≤-21.20	PASS
				Peak	2492.560	-39.83	≤-21.20	PASS
				Peak	2500.000	-42.61	≤-21.20	PASS

Note：

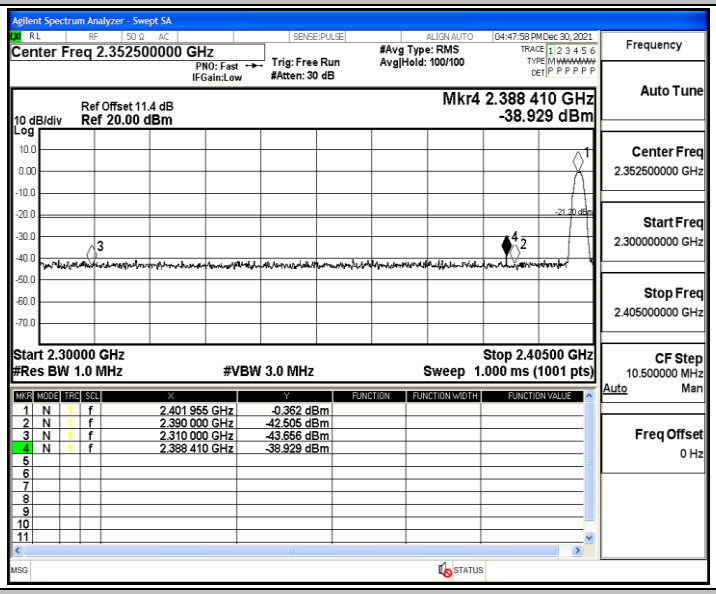
1. The Antenna Gain is compensated in the graph with 2dBi and Antenna Gain which is Higher.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

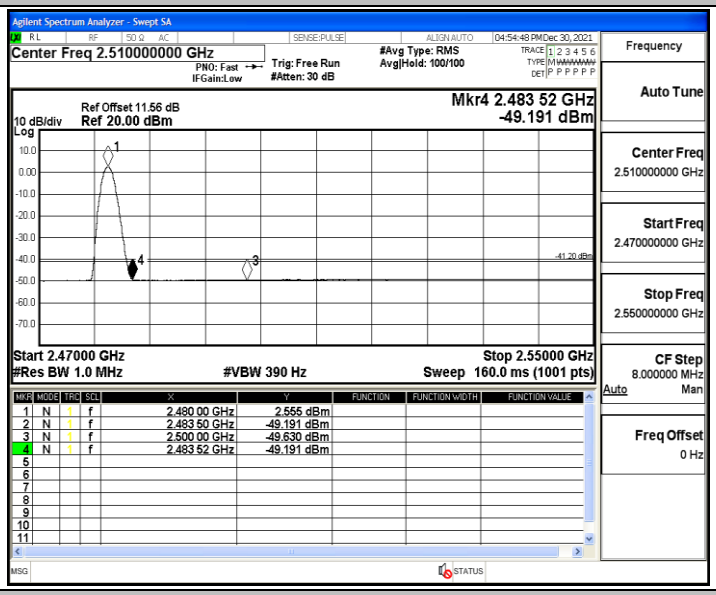
DH5_Ant1_Low_2402_AV



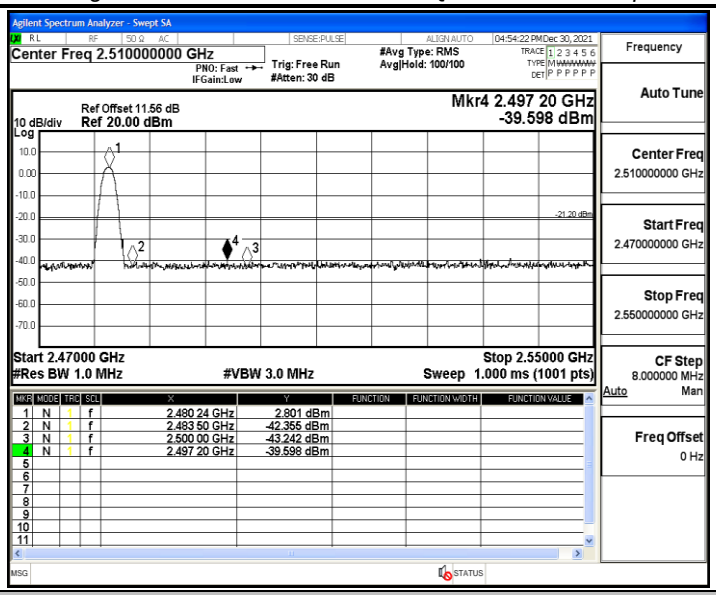
DH5_Ant1_Low_2402_Peak



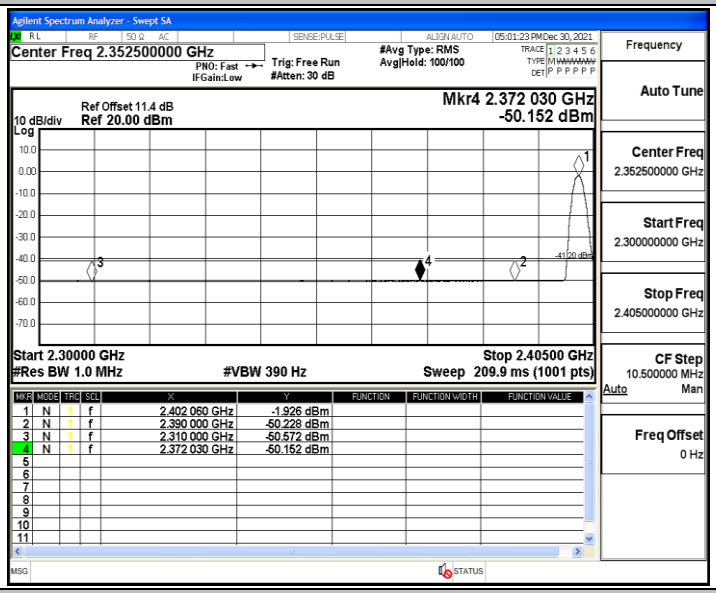
DH5_Ant1_High_2480_AV



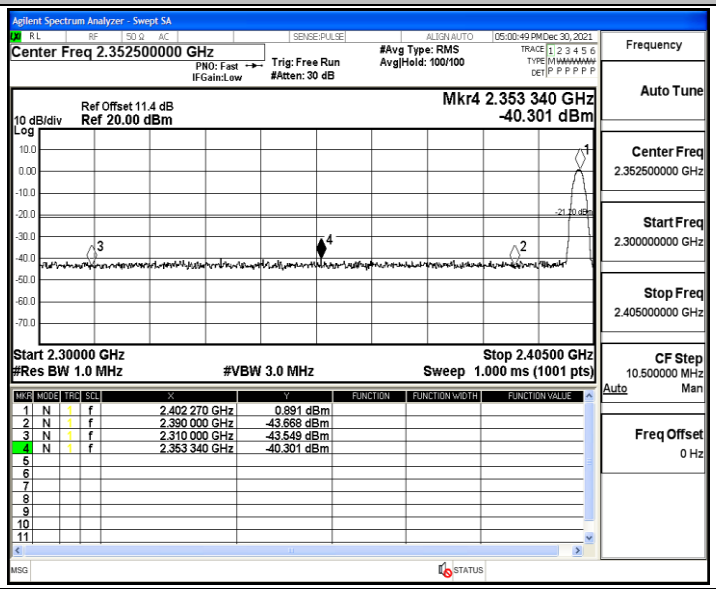
DH5_Ant1_High_2480_Peak



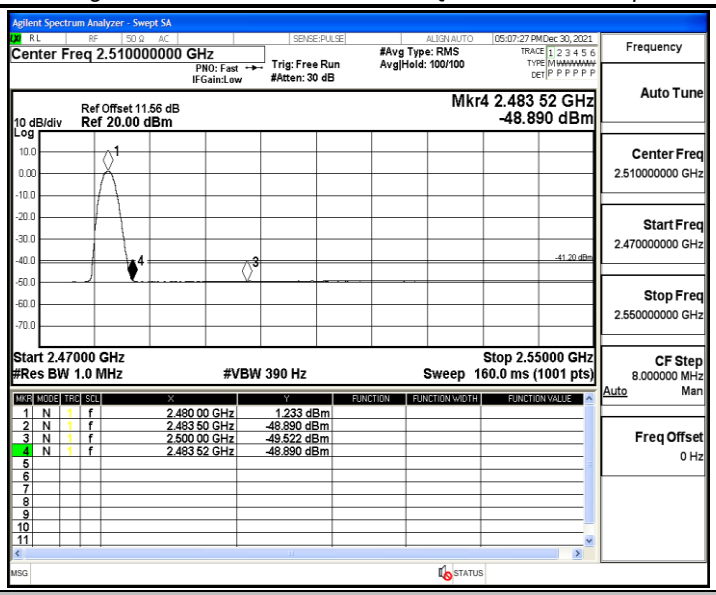
2DH5_Ant1_Low_2402_AV



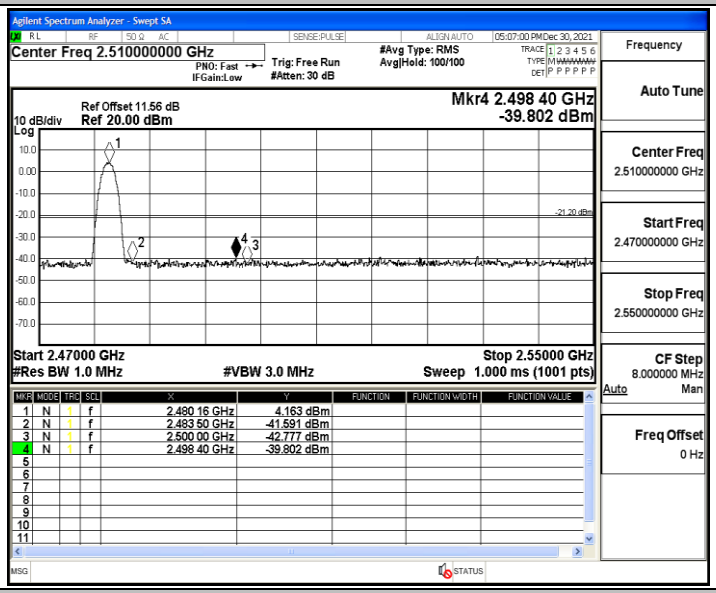
2DH5_Ant1_Low_2402_Peak



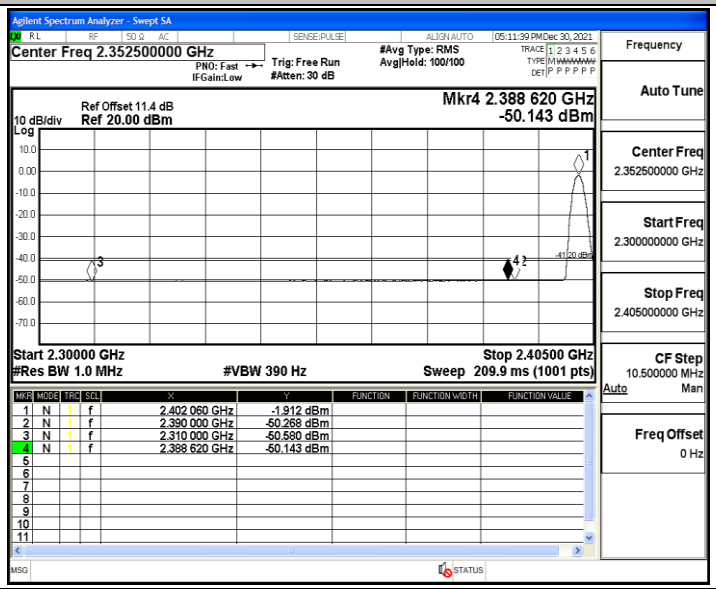
2DH5_Ant1_High_2480_AV



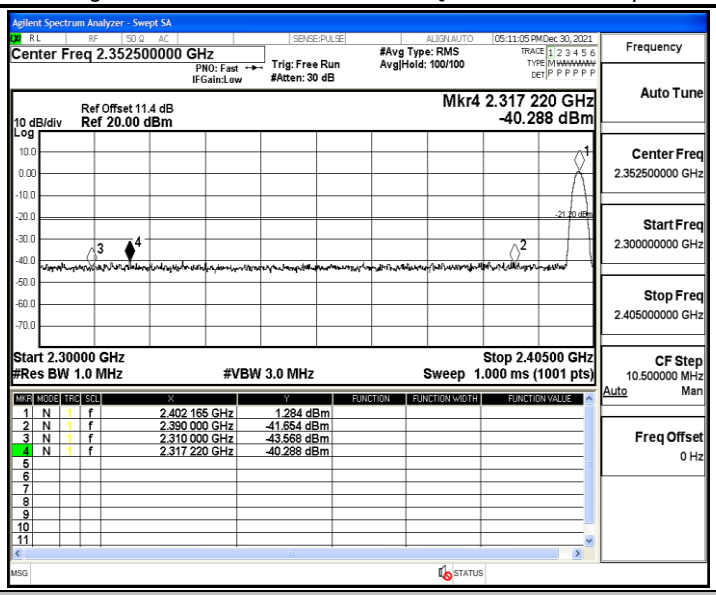
2DH5_Ant1_High_2480_Peak



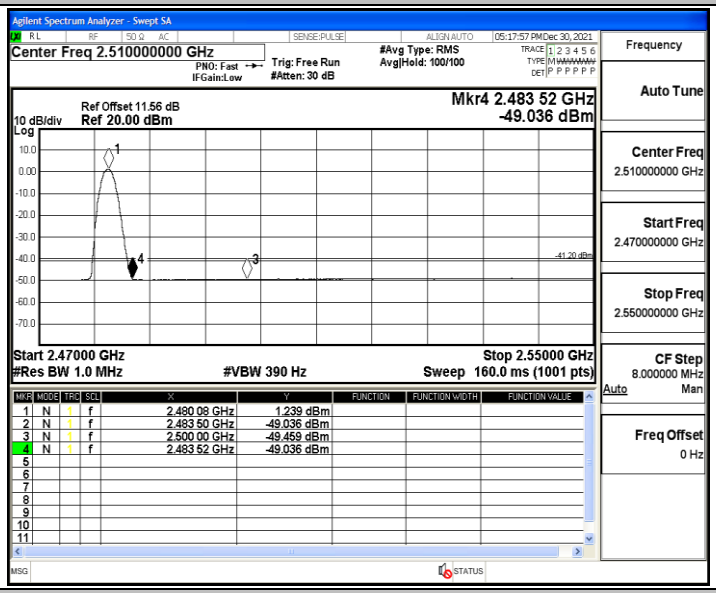
3DH5_Ant1_Low_2402_AV



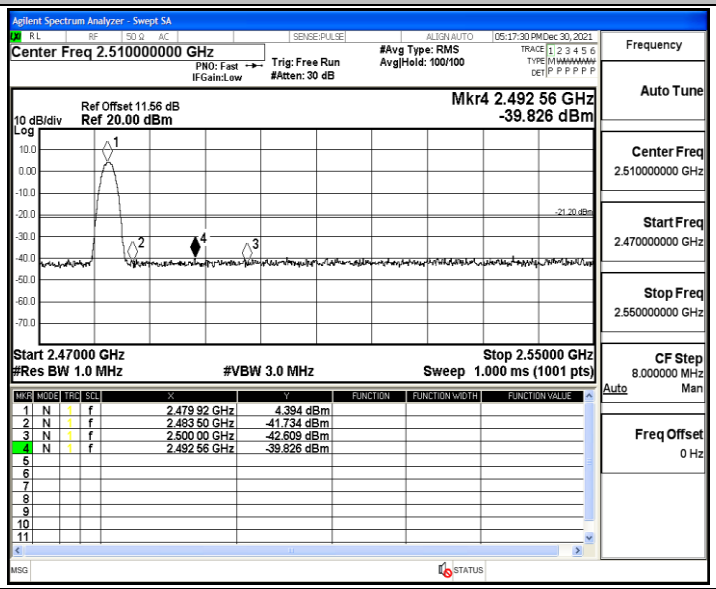
3DH5_Ant1_Low_2402_Peak



3DH5_Ant1_High_2480_AV



3DH5_Ant1_High_2480_Peak



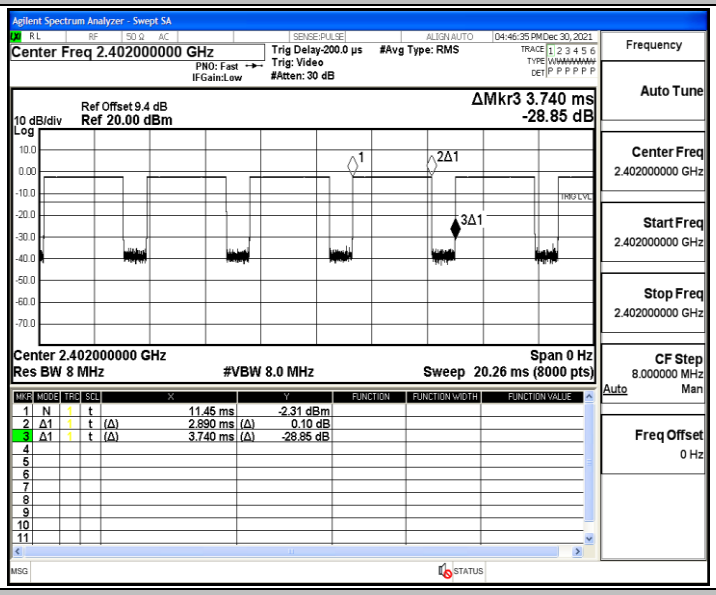
Appendix I: Duty Cycle

Test Result

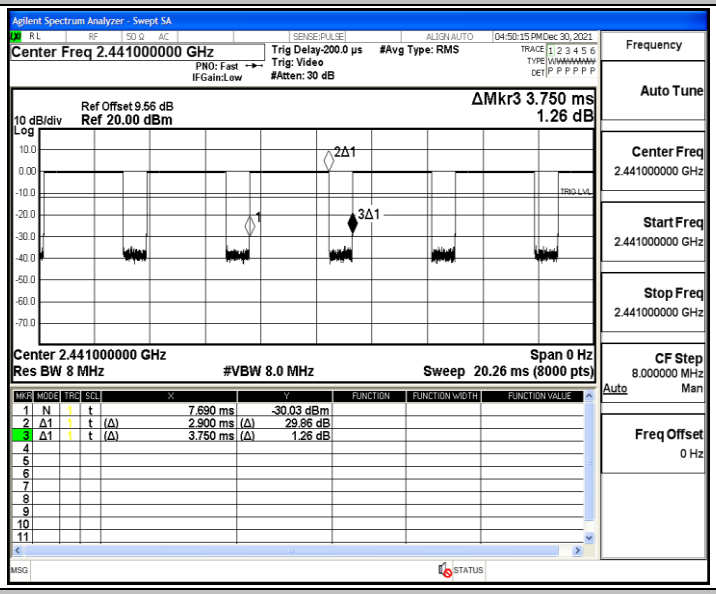
TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T
DH5	Ant1	2402	2.89	3.74	77.27	0.35
		2441	2.90	3.75	77.33	0.34
		2480	2.90	3.75	77.33	0.34
2DH5	Ant1	2402	2.88	3.75	76.80	0.35
		2441	2.89	3.75	77.07	0.35
		2480	2.89	3.75	77.07	0.35
3DH5	Ant1	2402	2.89	3.75	77.07	0.35
		2441	2.88	3.75	76.80	0.35
		2480	2.88	3.75	76.80	0.35

Test Graphs

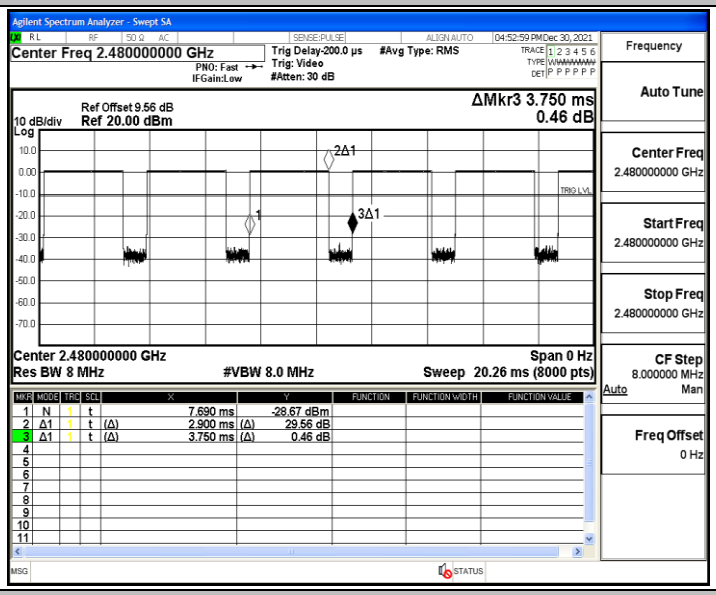
DH5_Ant1_2402



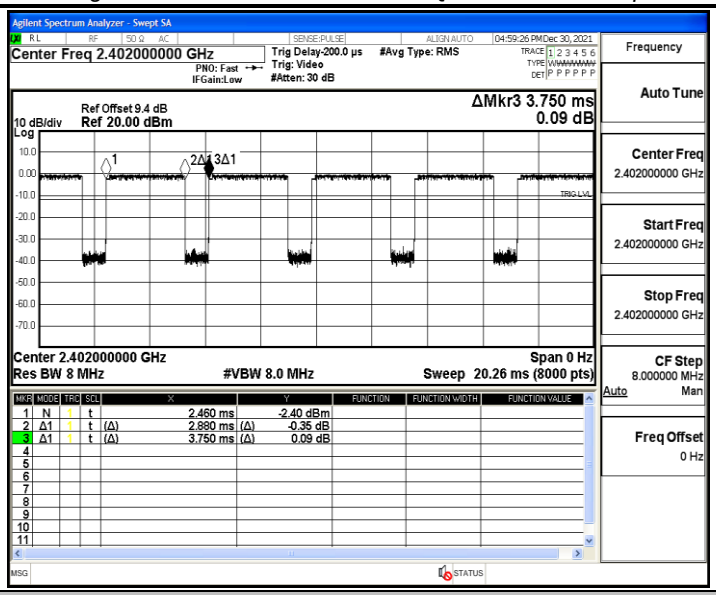
DH5_Ant1_2441



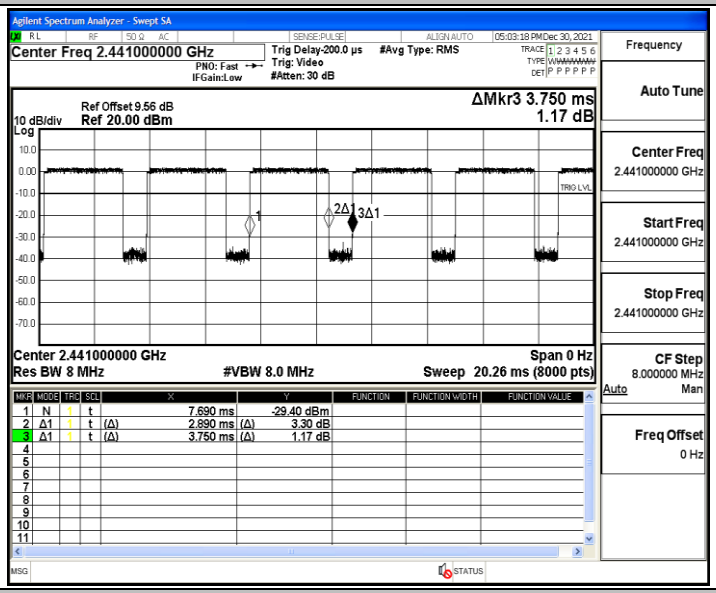
DH5_Ant1_2480



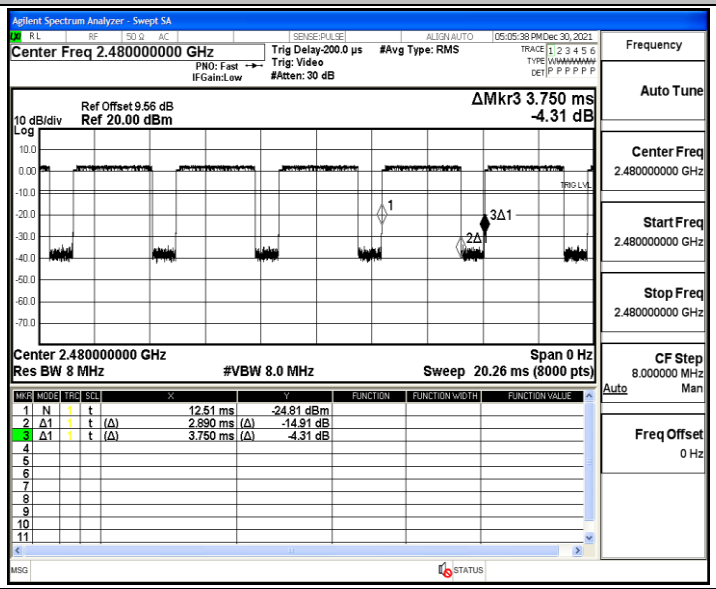
2DH5_Ant1_2402



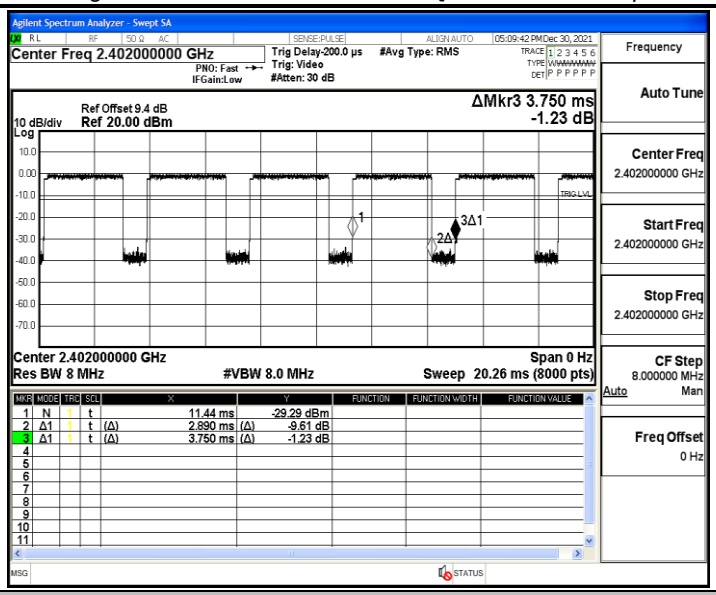
2DH5_Ant1_2441



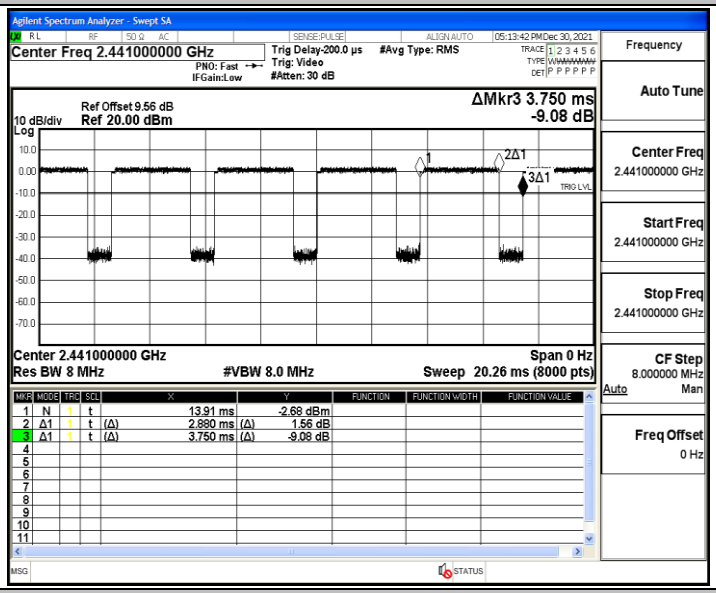
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480