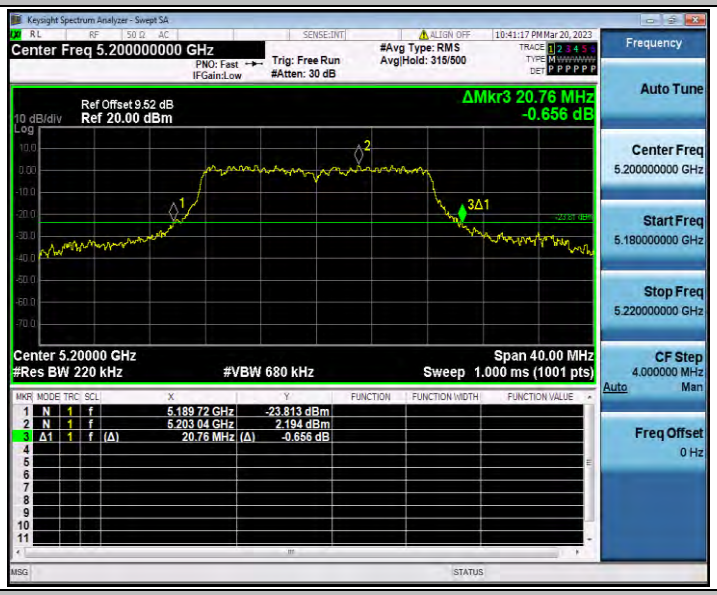
Case No. : GTS20230203009-1-13	
Ambient Condition: 23 ℃, 49 %RH, Atmos100.1Kpa,	
Test Date: 2023.3.20	**Test Engineer:** Jenny zeng

Appendix D.1: Emission Bandwidth

Test Result

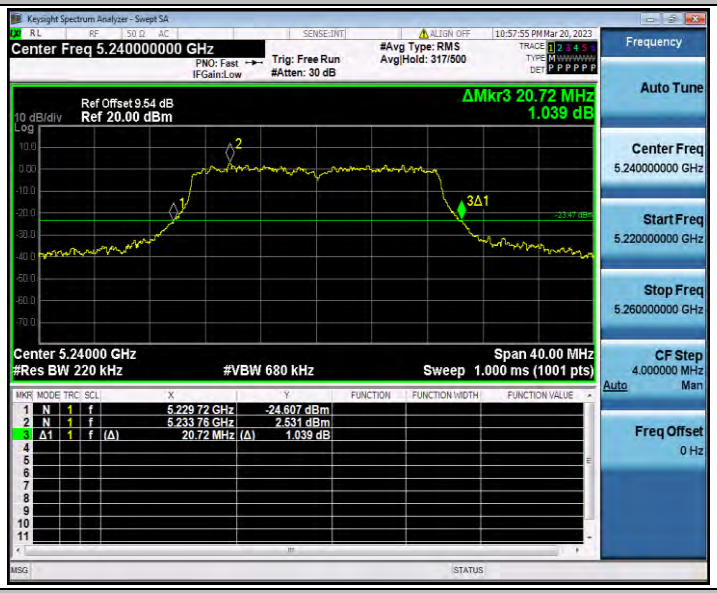
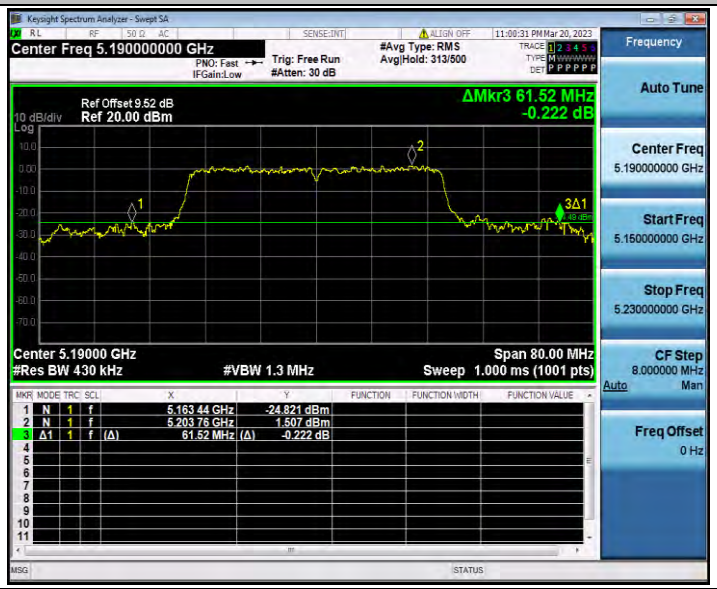
TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	20.240	5170.120	5190.360	---	---
		5200	20.760	5189.720	5210.480	---	---
		5240	20.280	5229.800	5250.080	---	---
11N20SISO	Ant1	5180	21.080	5169.680	5190.760	---	---
		5200	21.640	5189.280	5210.920	---	---
		5240	20.720	5229.720	5250.440	---	---
11N40SISO	Ant1	5190	61.520	5163.440	5224.960	---	---
		5230	44.000	5209.440	5253.440	---	---
11AC20SISO	Ant1	5180	26.280	5167.960	5194.240	---	---
		5200	21.080	5189.480	5210.560	---	---
		5240	21.200	5229.360	5250.560	---	---
11AC40SISO	Ant1	5190	60.720	5164.320	5225.040	---	---
		5230	45.360	5208.560	5253.920	---	---
11AC80SISO	Ant1	5210	91.360	5160.880	5252.240	---	---

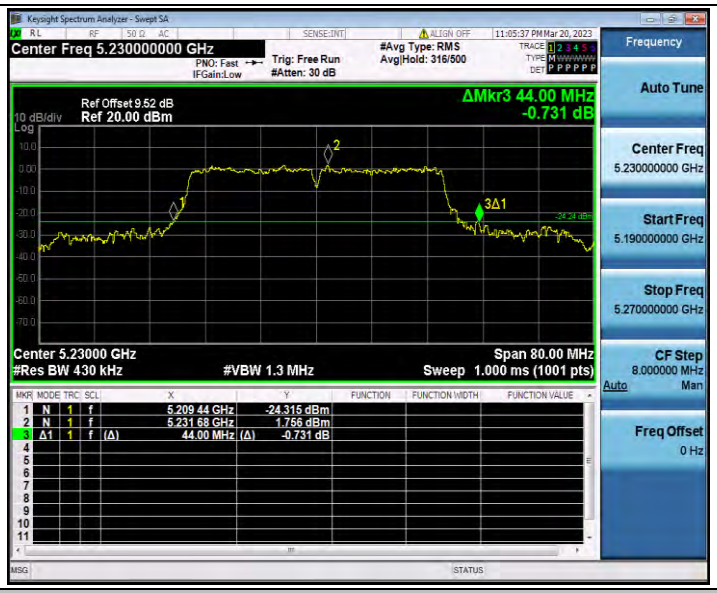
Test Graphs

11A_Ant1_5180
11A_Ant1_5200

11A_Ant1_5240

11N20SISO_Ant1_5180

11N20SISO_Ant1_5200

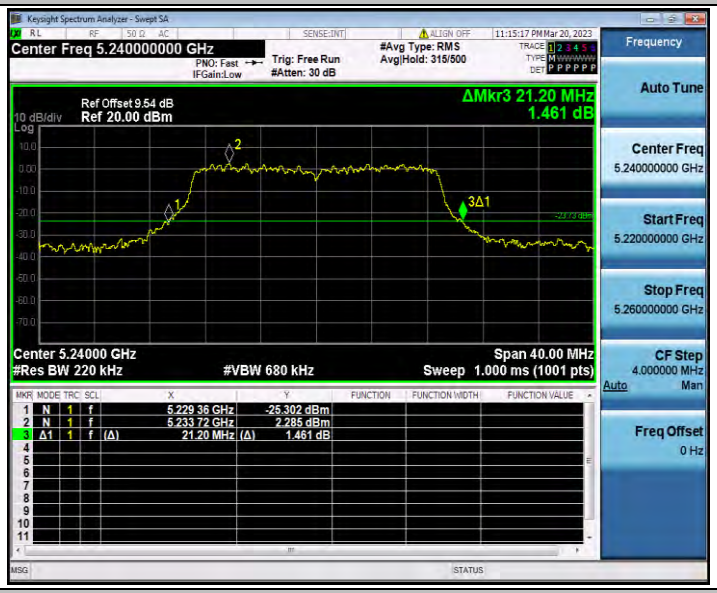
11N20SISO_Ant1_5240

11N40SISO_Ant1_5190

11N40SISO_Ant1_5230



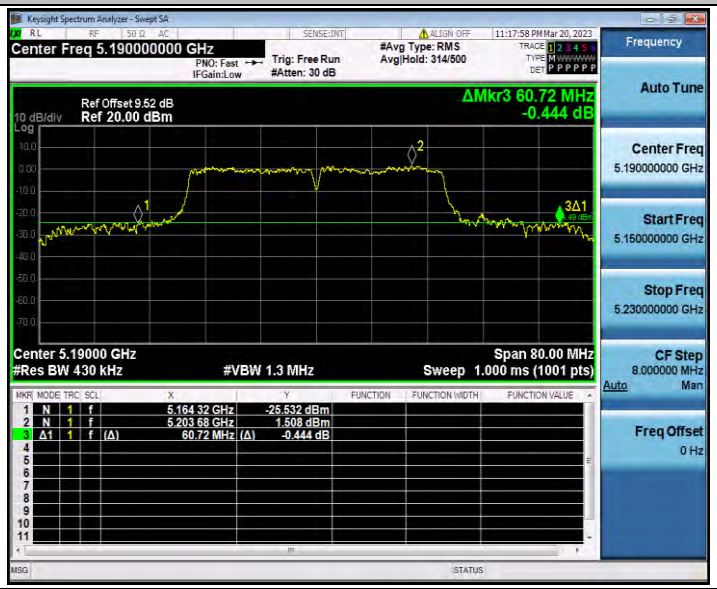
11AC20SISO_Ant1_5180

11AC20SISO_Ant1_5200

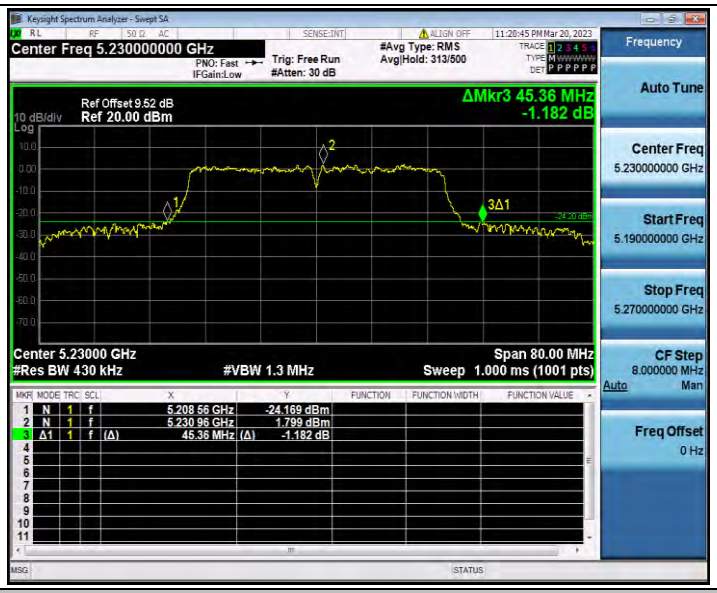
11AC20SISO_Ant1_5240



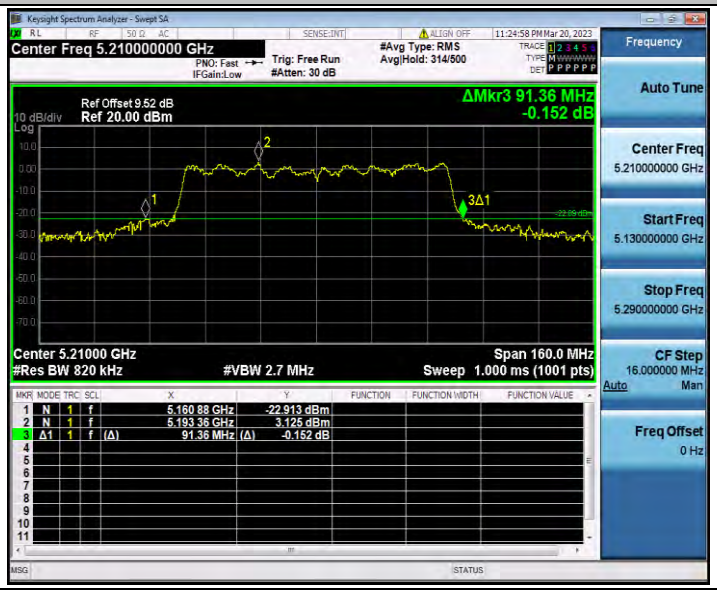
11AC40SISO_Ant1_5190



11AC40SISO_Ant1_5230



11AC80SISO_Ant1_5210



Appendix D.2: Occupied channel bandwidth

Test Result

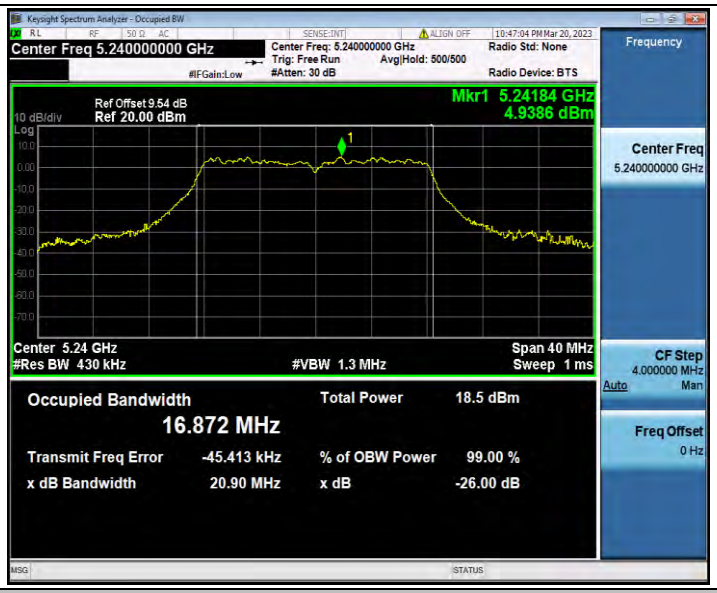
TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	16.910	5171.592	5188.502	---	---
		5200	16.874	5191.643	5208.517	---	---
		5240	16.872	5231.519	5248.391	---	---
11N20SISO	Ant1	5180	18.018	5171.040	5189.058	---	---
		5200	18.107	5190.964	5209.071	---	---
		5240	18.004	5230.971	5248.975	---	---
11N40SISO	Ant1	5190	36.791	5171.624	5208.415	---	---
		5230	36.781	5211.667	5248.448	---	---
11AC20SISO	Ant1	5180	18.464	5170.719	5189.183	---	---
		5200	18.009	5190.945	5208.954	---	---
		5240	17.964	5230.968	5248.932	---	---
11AC40SISO	Ant1	5190	36.973	5171.587	5208.560	---	---
		5230	36.934	5211.617	5248.551	---	---
11AC80SISO	Ant1	5210	76.948	5171.684	5248.632	---	---

Test Graphs

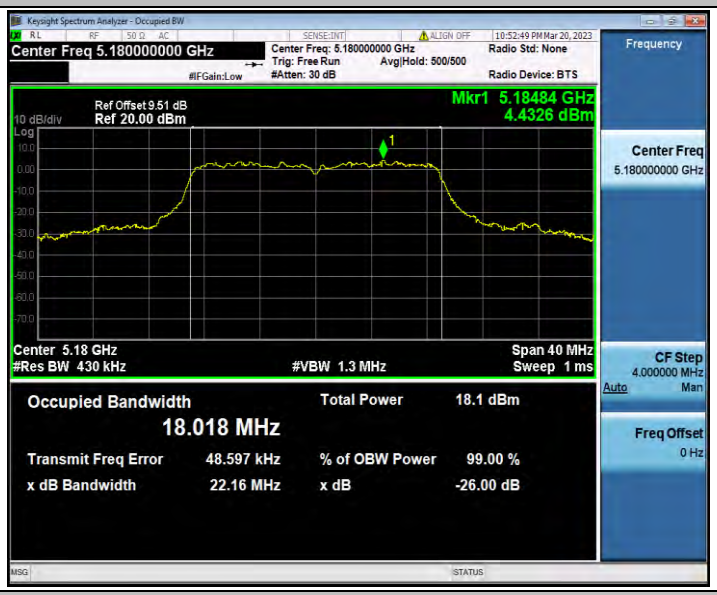
11A_Ant1_5180

11A_Ant1_5200

11A_Ant1_5240



11N20SISO_Ant1_5180

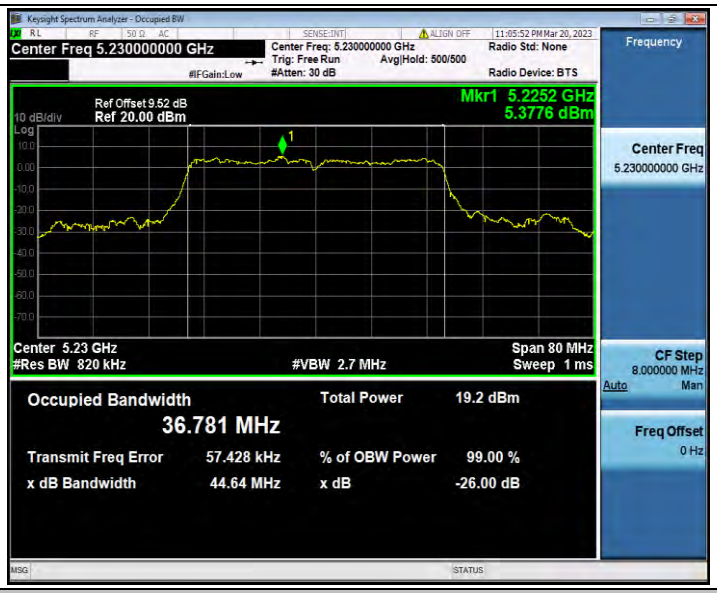


11N20SISO_Ant1_5200

11N20SISO_Ant1_5240

11N40SISO_Ant1_5190

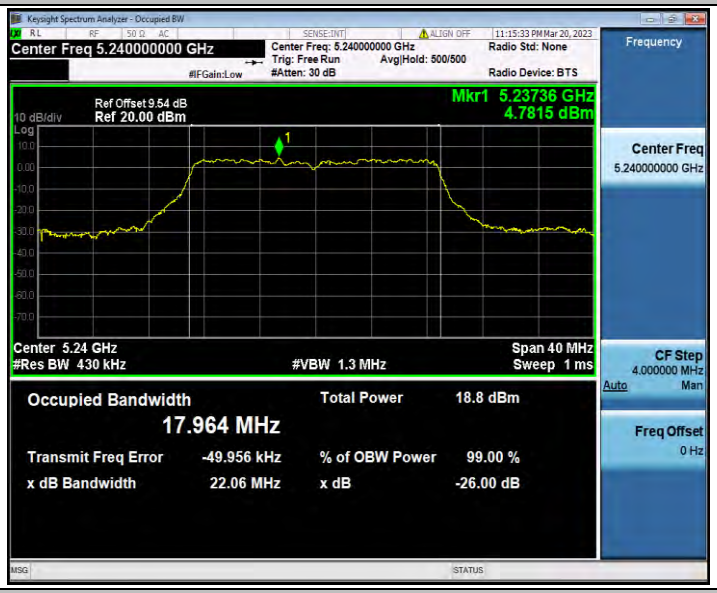
11N40SISO_Ant1_5230



11AC20SISO_Ant1_5180

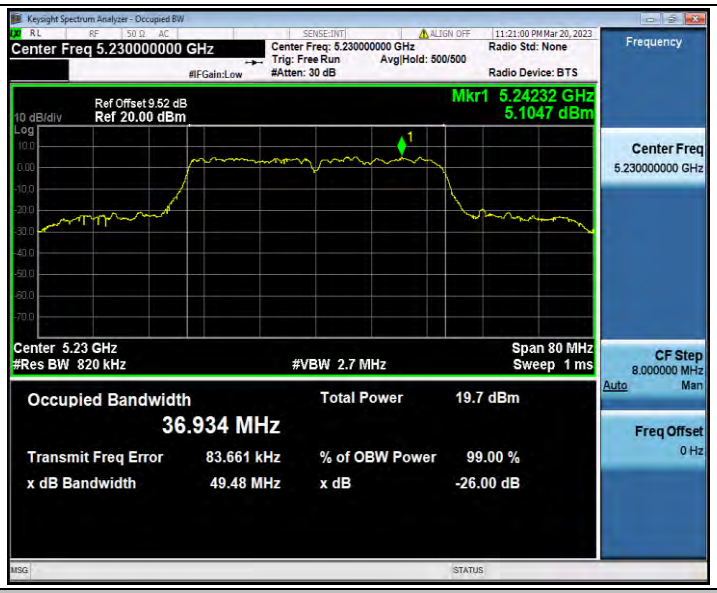
11AC20SISO_Ant1_5200

11AC20SISO_Ant1_5240



11AC40SISO_Ant1_5190

11AC40SISO_Ant1_5230



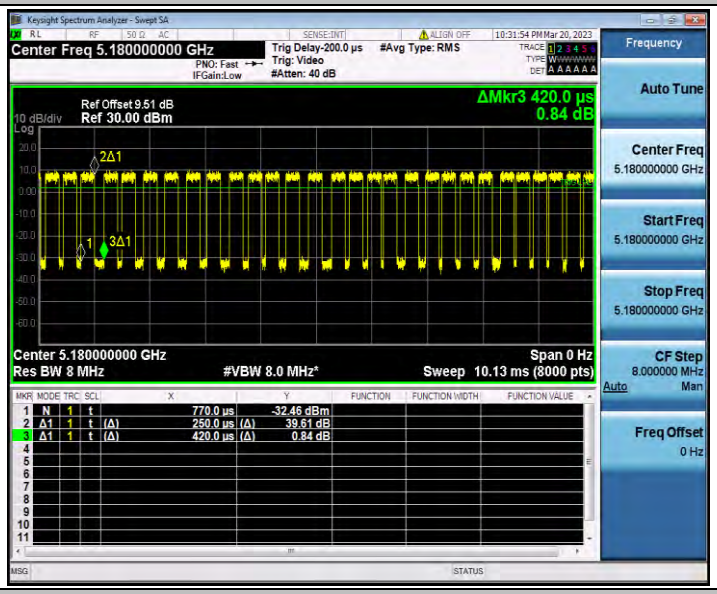
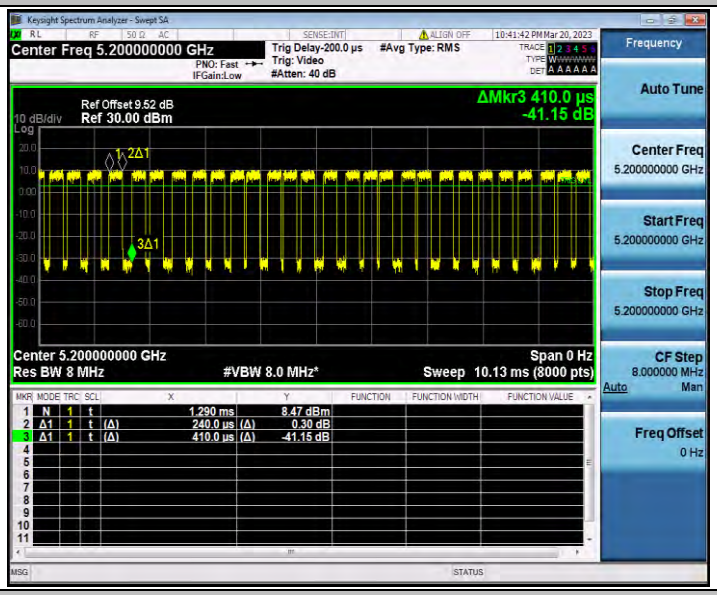
11AC80SISO_Ant1_5210

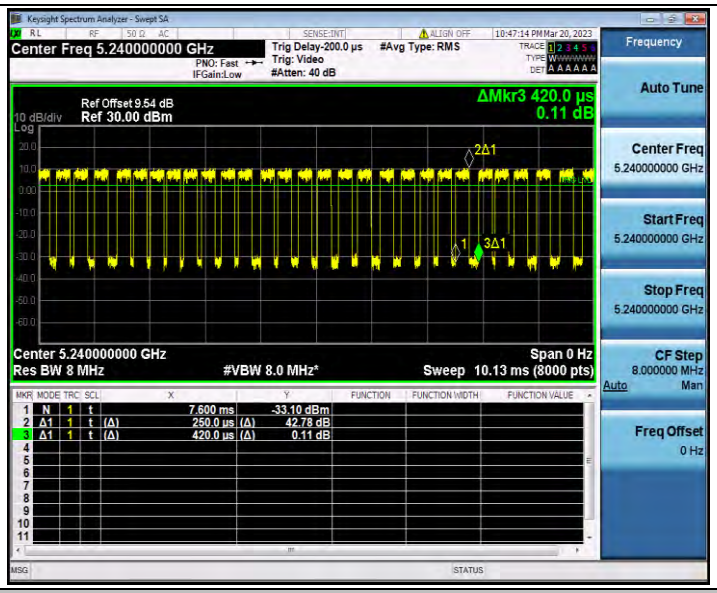
Appendix D.3: Duty Cycle

Test Result

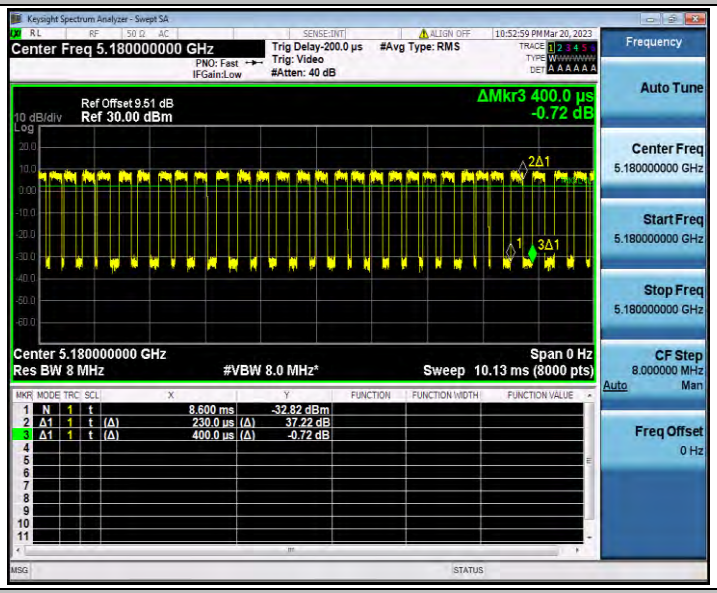
TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11A	Ant1	5180	0.25	0.42	59.52
		5200	0.24	0.41	58.54
		5240	0.25	0.42	59.52
11N20SISO	Ant1	5180	0.23	0.40	57.50
		5200	0.23	0.39	58.97
		5240	0.23	0.39	58.97
11N40SISO	Ant1	5190	0.13	0.30	43.33
		5230	0.13	0.30	43.33
11AC20SISO	Ant1	5180	0.20	0.37	54.05
		5200	0.20	0.37	54.05
		5240	0.20	0.37	54.05
11AC40SISO	Ant1	5190	0.11	0.28	39.29
		5230	0.11	0.28	39.29
11AC80SISO	Ant1	5210	0.07	0.24	29.17

Test Graphs

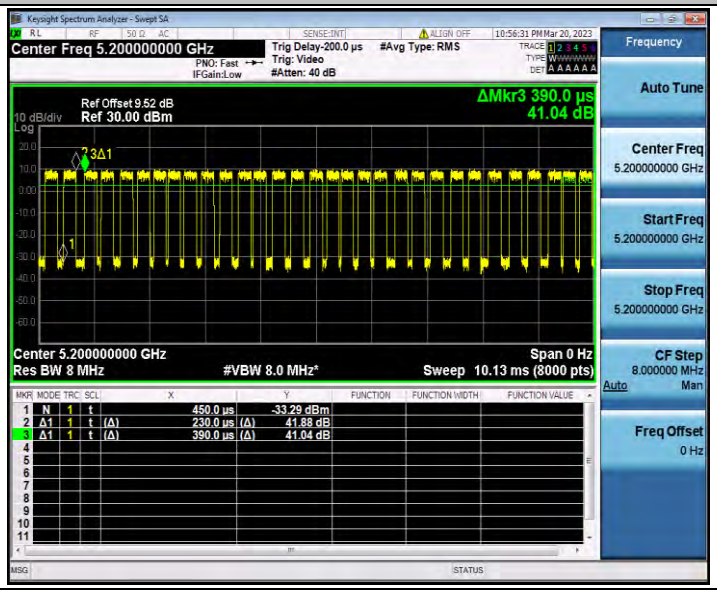
11A_Ant1_5180

11A_Ant1_5200

11A_Ant1_5240

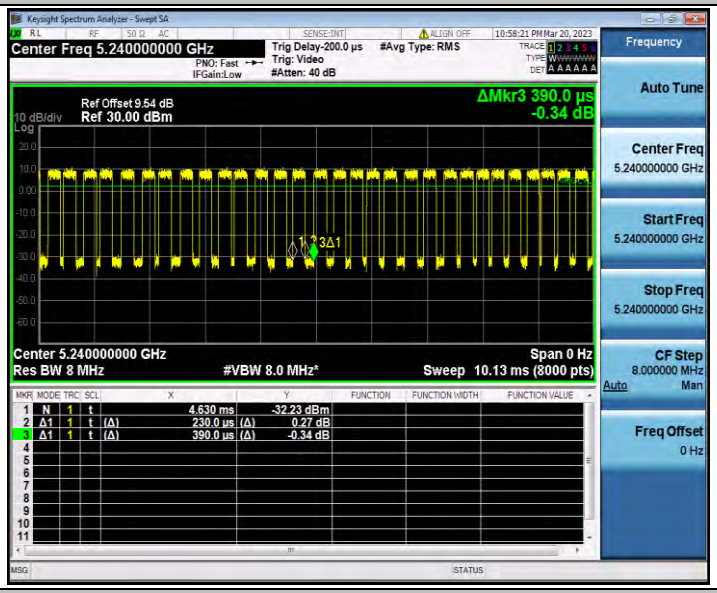
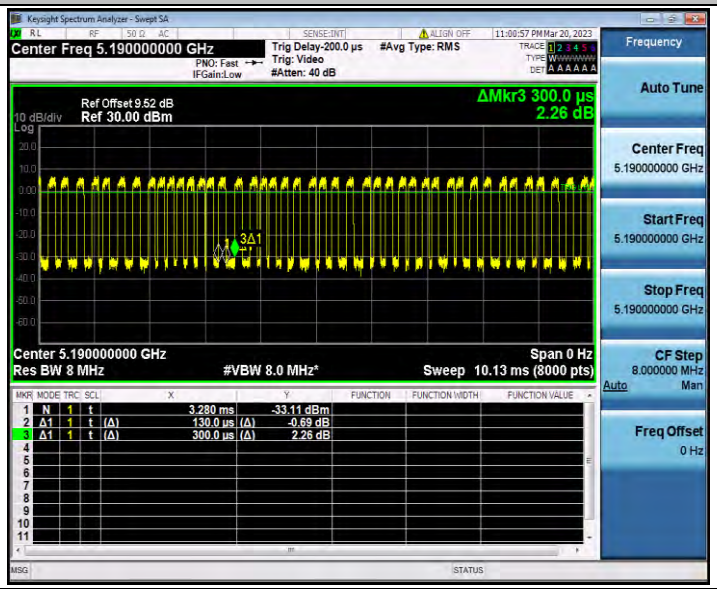


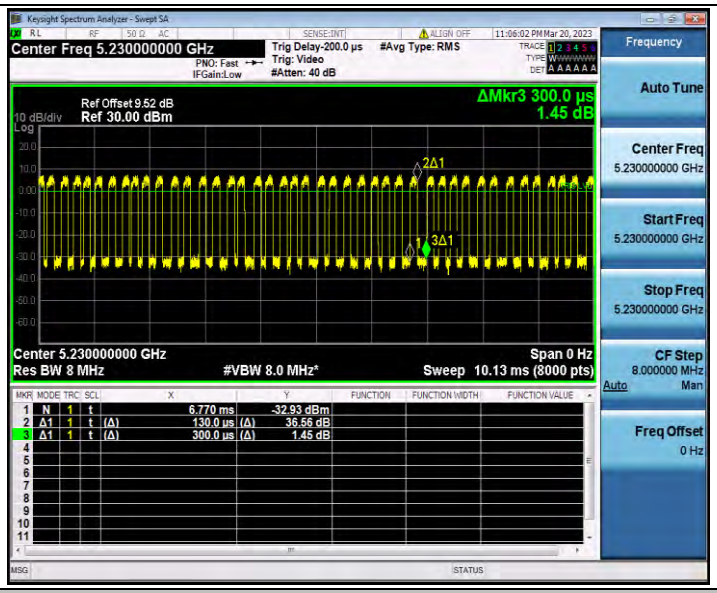
11N20SISO_Ant1_5180



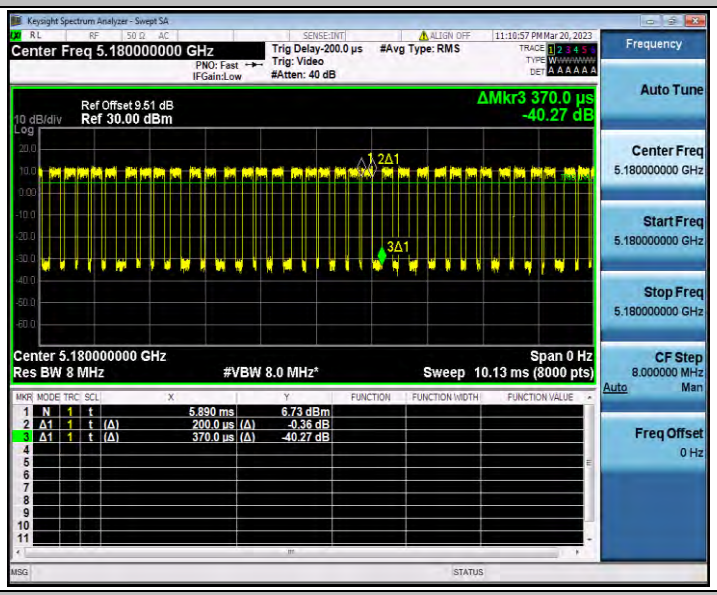
11N20SISO_Ant1_5200



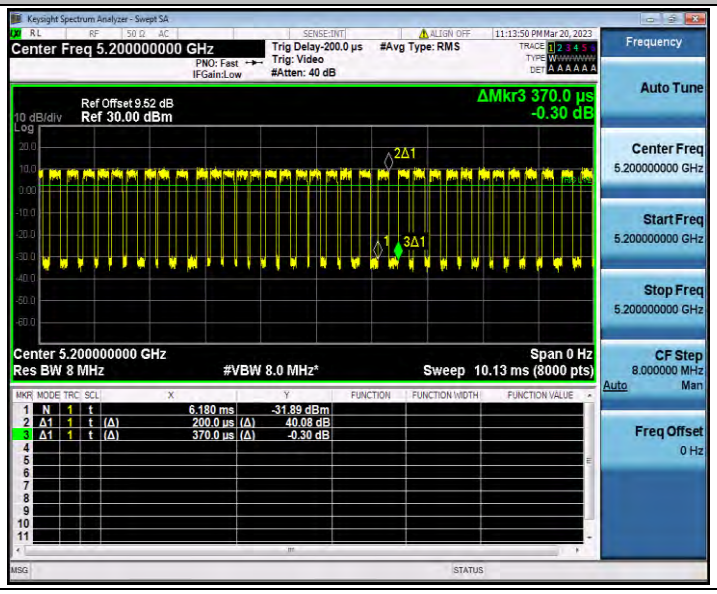
11N20SISO_Ant1_5240

11N40SISO_Ant1_5190

11N40SISO_Ant1_5230

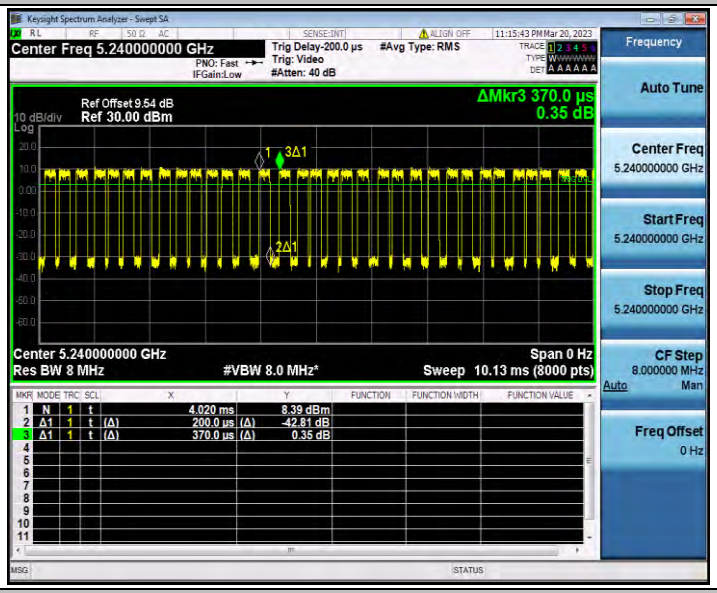


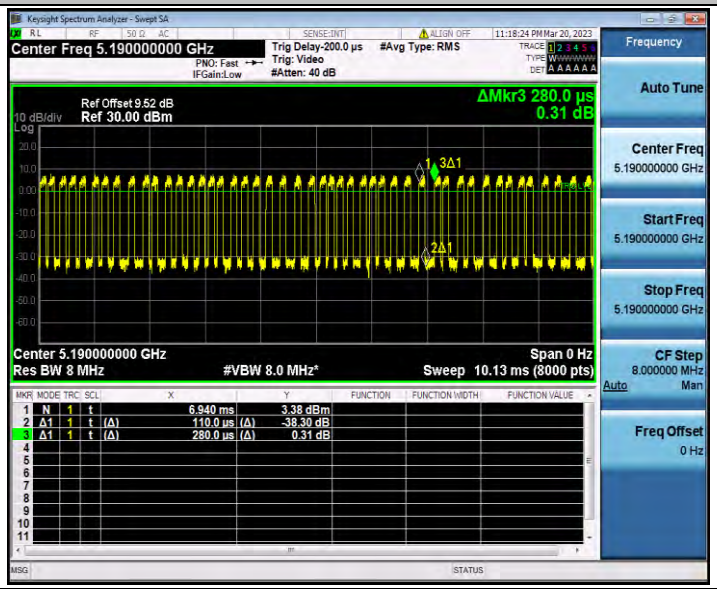
11AC20SISO_Ant1_5180



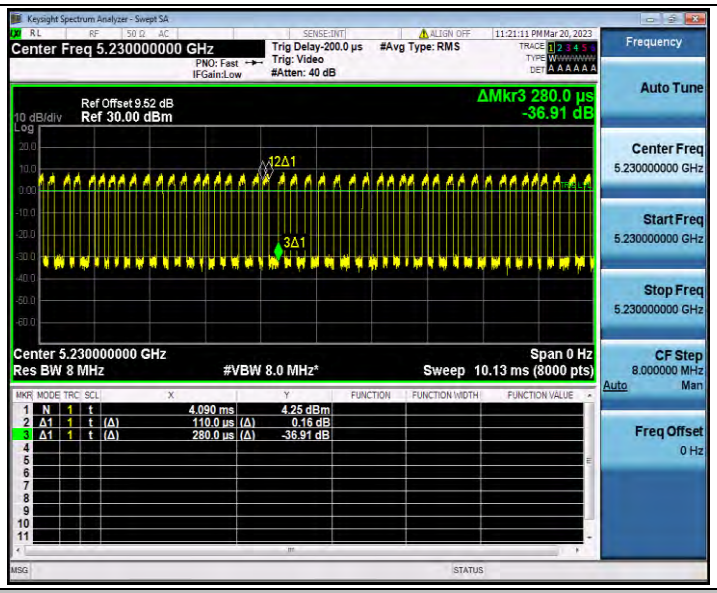
11AC20SISO_Ant1_5200



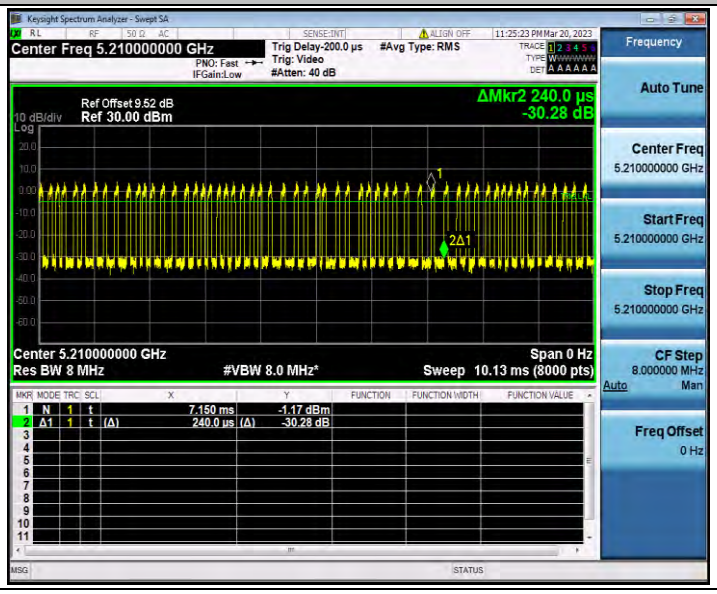
11AC20SISO_Ant1_5240


11AC40SISO_Ant1_5190


11AC40SISO_Ant1_5230



11AC80SISO_Ant1_5210



Appendix D.4: Maximum conducted output power

Test Result Channel Power

Test Mode	Antenna	Frequency[MHz]	Channel Powert [dBm]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	9.69	59.52	2.25	11.94	≤23.98	PASS
		5200	10.45	58.54	2.33	12.78	≤23.98	PASS
		5240	10.26	59.52	2.25	12.51	≤23.98	PASS
11N20SISO	Ant1	5180	9.84	57.50	2.40	12.24	≤23.98	PASS
		5200	10.21	58.97	2.29	12.50	≤23.98	PASS
		5240	10.31	58.97	2.29	12.60	≤23.98	PASS
11N40SISO	Ant1	5190	9.04	43.33	3.63	12.67	≤23.98	PASS
		5230	9.44	43.33	3.63	13.07	≤23.98	PASS
11AC20SISO	Ant1	5180	12.28	54.05	2.67	14.95	≤23.98	PASS
		5200	10.46	54.05	2.67	13.13	≤23.98	PASS
		5240	10.42	54.05	2.67	13.09	≤23.98	PASS
11AC40SISO	Ant1	5190	9.20	39.29	4.06	13.26	≤23.98	PASS
		5230	9.54	39.29	4.06	13.60	≤23.98	PASS
11AC80SISO	Ant1	5210	8.47	29.17	5.35	13.82	≤23.98	PASS

Note：The Duty Cycle Factor is compensated in the graph.

Appendix D.5: Maximum power spectral density

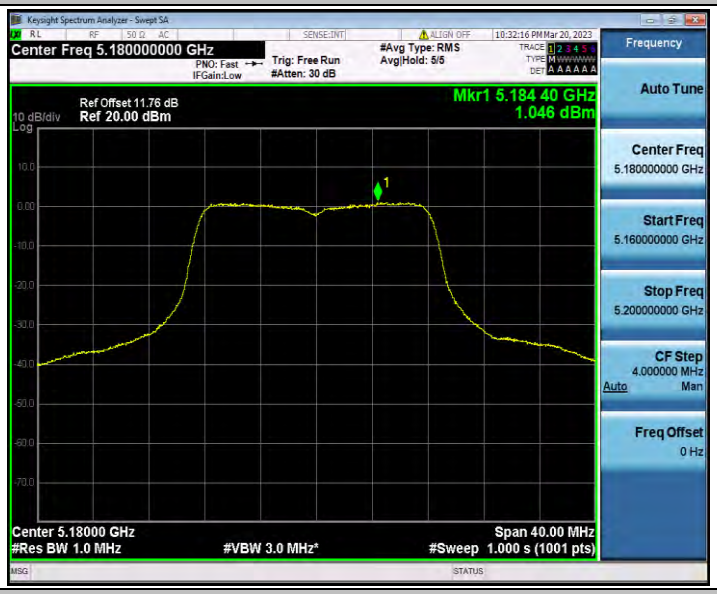
Test Result

TestMode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	1.05	≤11.00	PASS
		5200	1.99	≤11.00	PASS
		5240	1.77	≤11.00	PASS
11N20SISO	Ant1	5180	1.27	≤11.00	PASS
		5200	1.46	≤11.00	PASS
		5240	1.58	≤11.00	PASS
11N40SISO	Ant1	5190	-0.47	≤11.00	PASS
		5230	-0.52	≤11.00	PASS
11AC20SISO	Ant1	5180	4.24	≤11.00	PASS
		5200	1.75	≤11.00	PASS
		5240	2.28	≤11.00	PASS
11AC40SISO	Ant1	5190	-0.14	≤11.00	PASS
		5230	0.11	≤11.00	PASS
11AC80SISO	Ant1	5210	-0.89	≤11.00	PASS

Note：1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

Test Graphs

11A_Ant1_5180



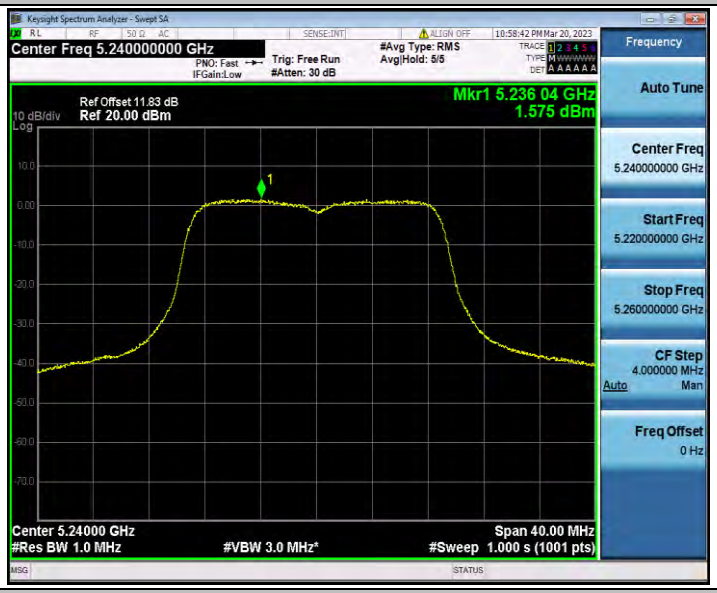
11A_Ant1_5200

11A_Ant1_5240

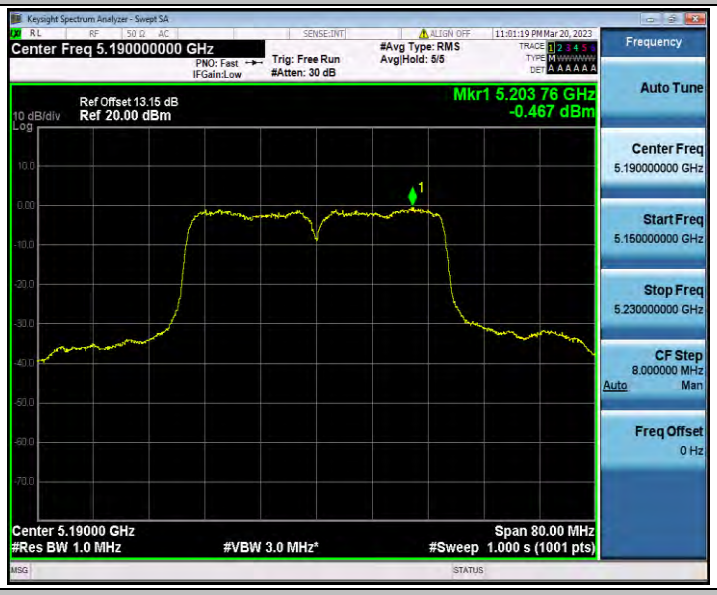
11N20SISO_Ant1_5180

11N20SISO_Ant1_5200

11N20SISO_Ant1_5240



11N40SISO_Ant1_5190



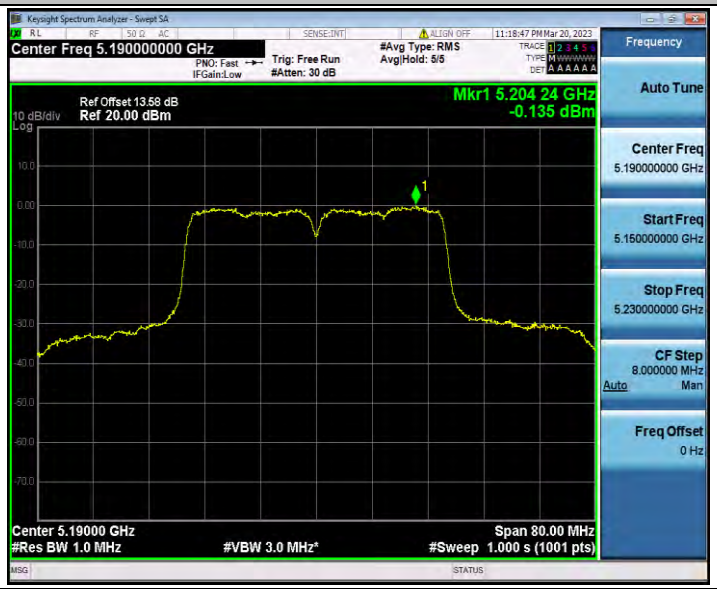
11N40SISO_Ant1_5230

11AC20SISO_Ant1_5180

11AC20SISO_Ant1_5200

11AC20SISO_Ant1_5240

11AC40SISO_Ant1_5190



11AC40SISO_Ant1_5230

11AC80SISO_Ant1_5210

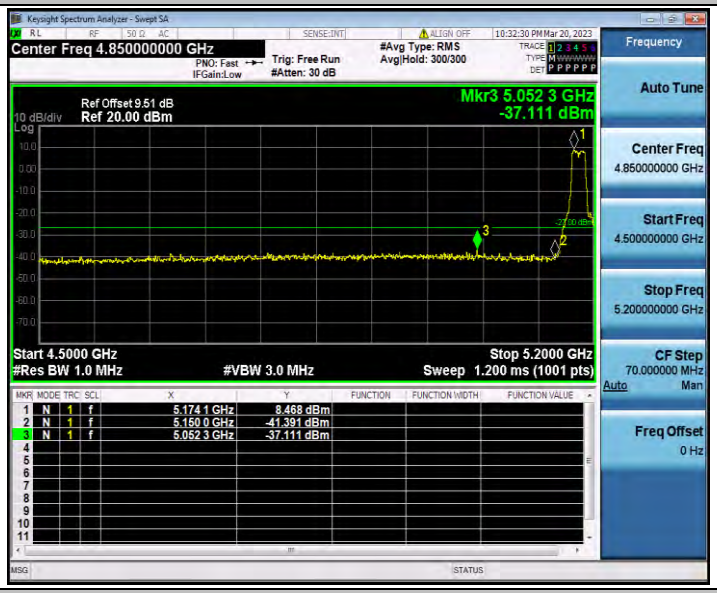
Appendix D.6: Band edge measurements

Test Result B1

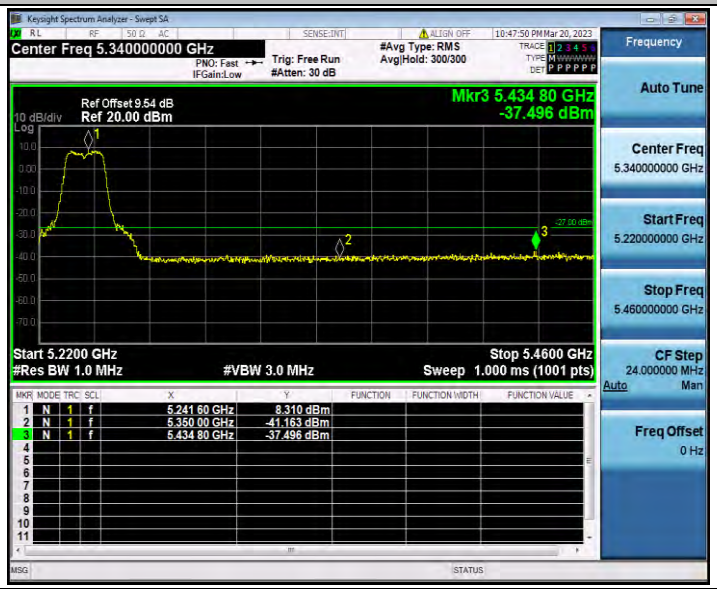
TestMode	Antenna	ChName	Frequency[MHz]	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	Low	5180	-37.11	≤-27	PASS
		High	5240	-37.5	≤-27	PASS
11N20SISO	Ant1	Low	5180	-37.66	≤-27	PASS
		High	5240	-37.6	≤-27	PASS
11N40SISO	Ant1	Low	5190	-27.9	≤-27	PASS
		High	5230	-37.68	≤-27	PASS
11AC20SISO	Ant1	Low	5180	-31.56	≤-27	PASS
		High	5240	-38.06	≤-27	PASS
11AC40SISO	Ant1	Low	5190	-28.16	≤-27	PASS
		High	5230	-37.92	≤-27	PASS
11AC80SISO	Ant1	Low	5210	-28.92	≤-27	PASS
		High	5210	-37.62	≤-27	PASS

Test Graphs B1

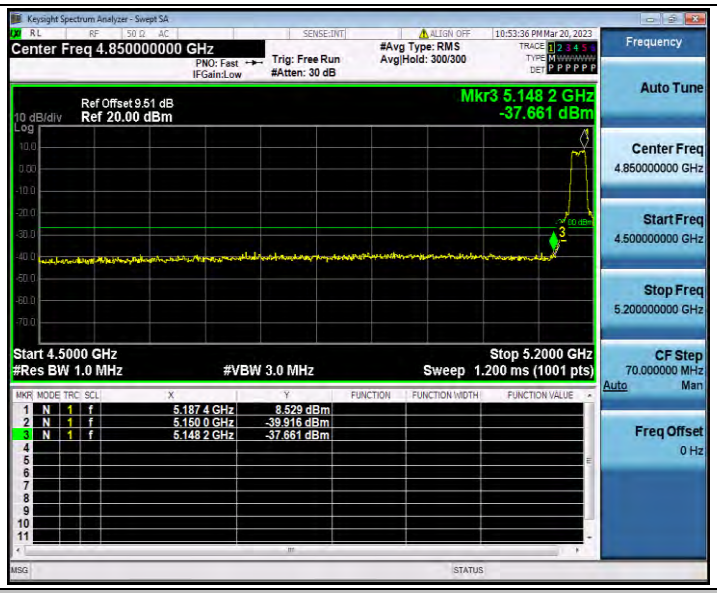
11A_Ant1_Low_5180



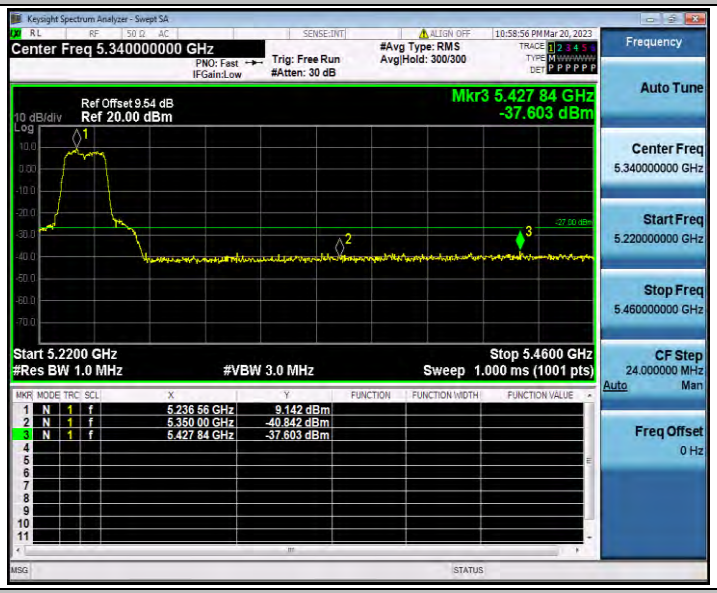
11A_Ant1_High_5240



11N20SISO_Ant1_Low_5180



11N20SISO_Ant1_High_5240



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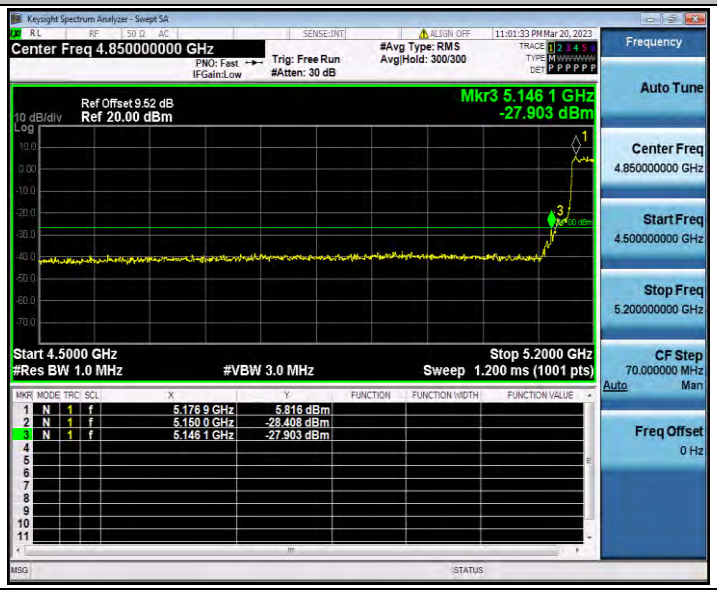
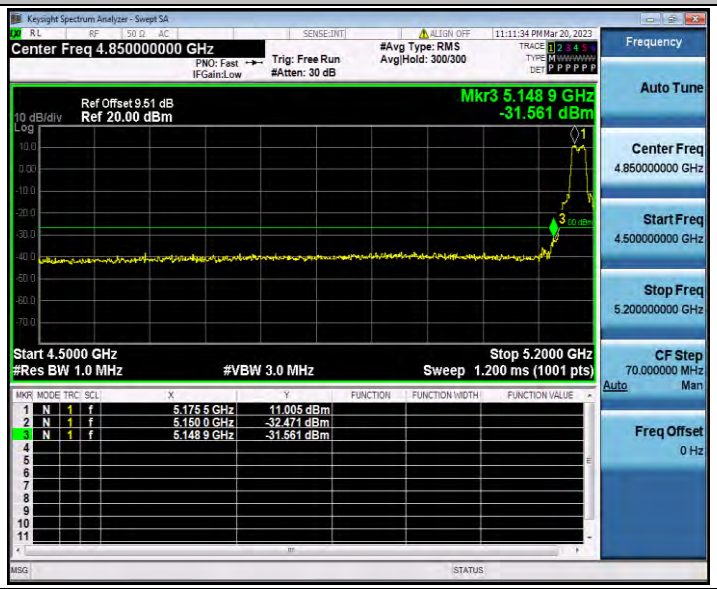


11N40SISO_Ant1_High_5230

11AC20SISO_Ant1_Low_5180


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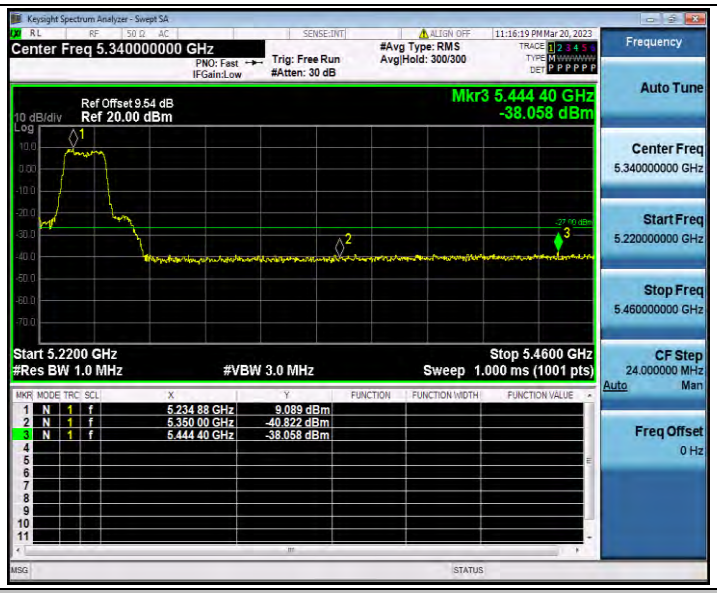

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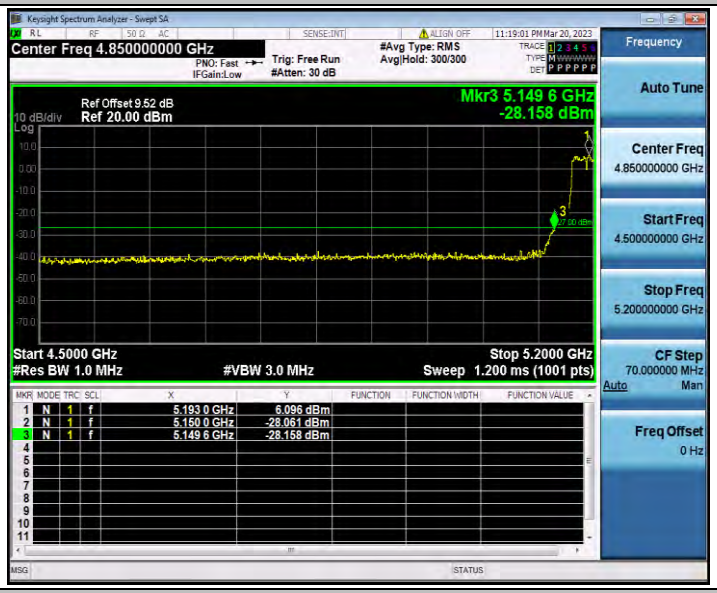

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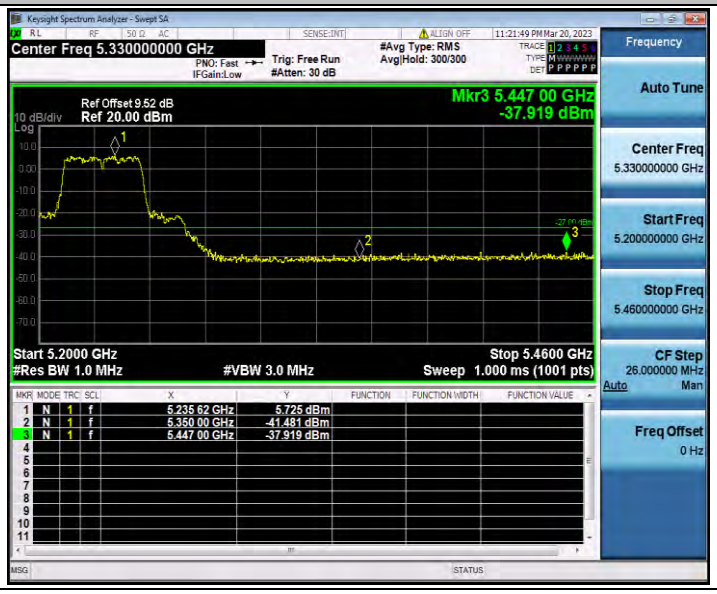
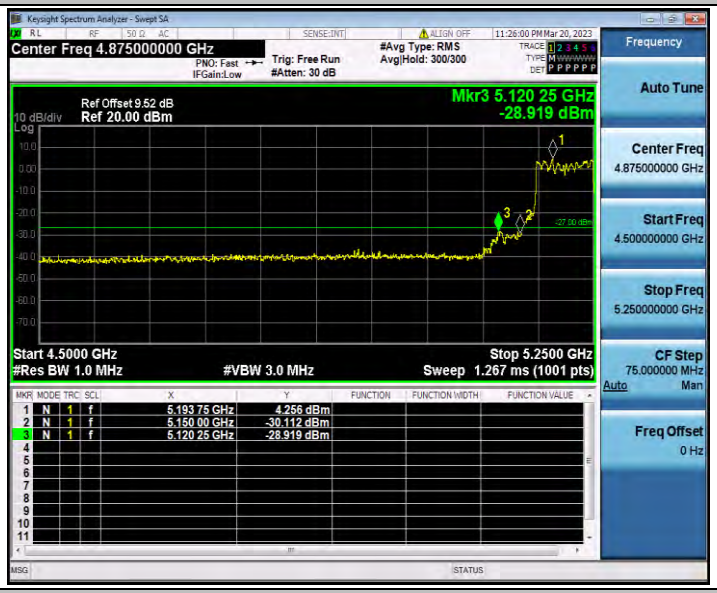


11AC80SISO_Ant1_Low_5210


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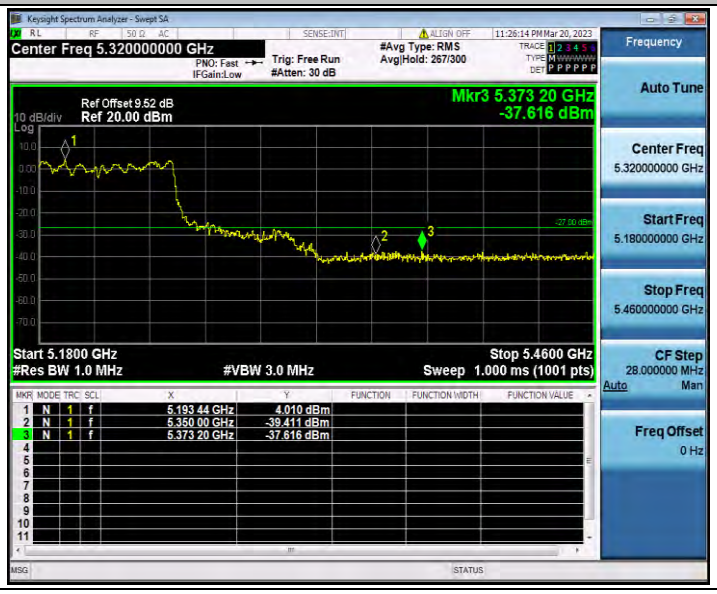


Appendix D.7: Conducted Spurious Emission

Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	Max. Fre [MHz]	Max. Level [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	30~5140	3145.74	-46.59	≤-27	PASS
			5360~40000	24173.82	-36.97	≤-27	PASS
		5200	30~5140	2680.39	-45.94	≤-27	PASS
			5360~40000	24253.88	-37.42	≤-27	PASS
		5240	30~5140	4935.6	-46.61	≤-27	PASS
			5360~40000	25187.29	-37.2	≤-27	PASS
11N20SISO	Ant1	5180	30~5140	5136.42	-46.72	≤-27	PASS
			5360~40000	24740.78	-38.2	≤-27	PASS
		5200	30~5140	2448.05	-31.06	≤-27	PASS
			5360~40000	25147.62	-37.8	≤-27	PASS
		5240	30~5140	2411.09	-30.09	≤-27	PASS
			5360~40000	24289.95	-37.61	≤-27	PASS
11N40SISO	Ant1	5190	30~5140	5140	-35.25	≤-27	PASS
			5360~40000	25709.53	-38.35	≤-27	PASS
		5230	30~5140	4871.04	-47.03	≤-27	PASS
			5360~40000	25787.44	-38.17	≤-27	PASS
11AC20SISO	Ant1	5180	30~5140	5134.89	-38.16	≤-27	PASS
			5360~40000	23533.99	-38.08	≤-27	PASS
		5200	30~5140	4911.24	-44.83	≤-27	PASS
			5360~40000	24301.49	-37.82	≤-27	PASS
		5240	30~5140	4817.05	-46.29	≤-27	PASS
			5360~40000	24755.21	-38.18	≤-27	PASS
11AC40SISO	Ant1	5190	30~5140	5137.1	-39.01	≤-27	PASS
			5360~40000	24267.59	-37.96	≤-27	PASS
		5230	30~5140	2765.04	-47.34	≤-27	PASS
			5360~40000	23535.44	-38.19	≤-27	PASS
11AC80SISO	Ant1	5210	30~5140	5132.68	-30.59	≤-27	PASS
			5360~40000	25567.43	-37.91	≤-27	PASS

Test Graphs

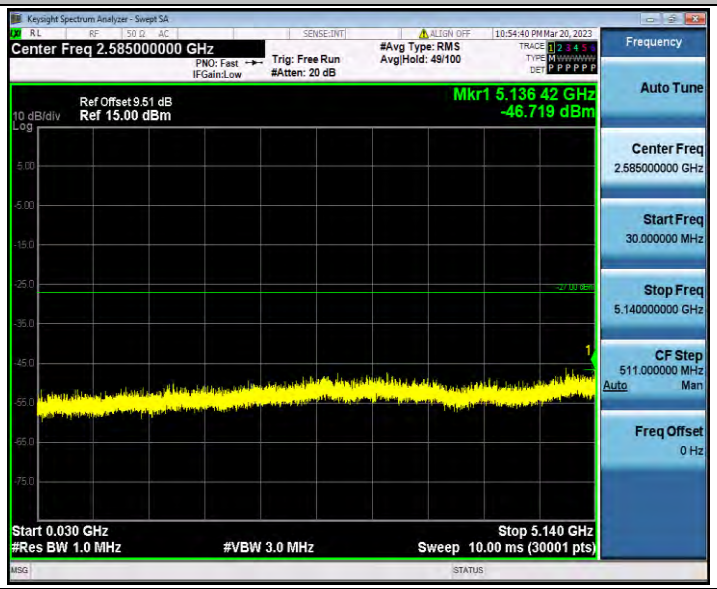
11A_Ant1_5180_30~5140

11A_Ant1_5180_5360~40000

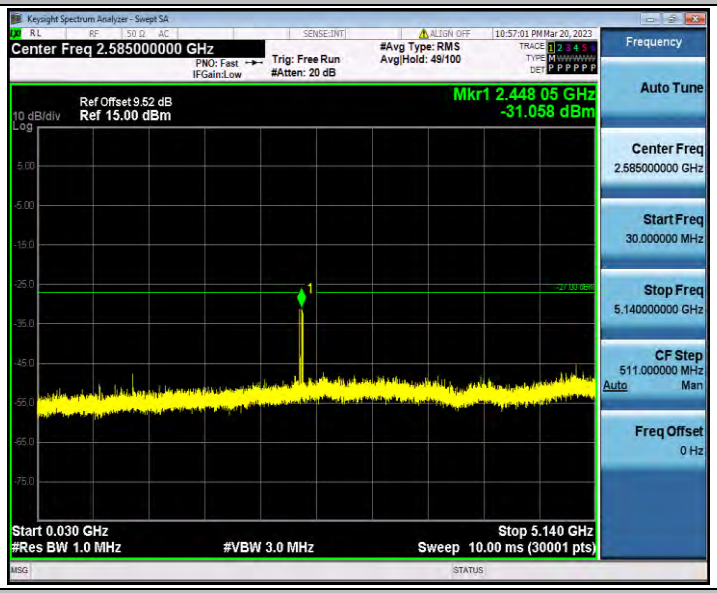
11A_Ant1_5200_30~5140

11A_Ant1_5200_5360~40000

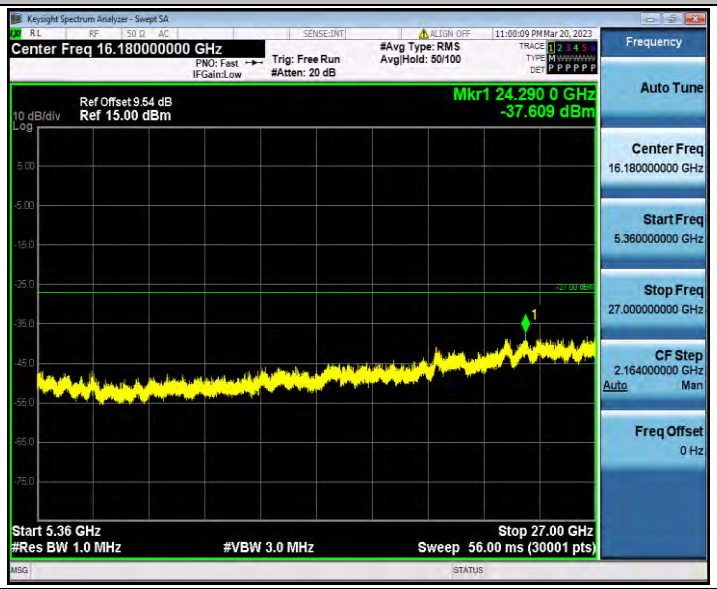
11A_Ant1_5240_30~5140

11A_Ant1_5240_5360~40000
11N20SISO_Ant1_5180_30~5140

11N20SISO_Ant1_5180_5360~40000

11N20SISO_Ant1_5200_30~5140



11N20SISO_Ant1_5200_5360~40000

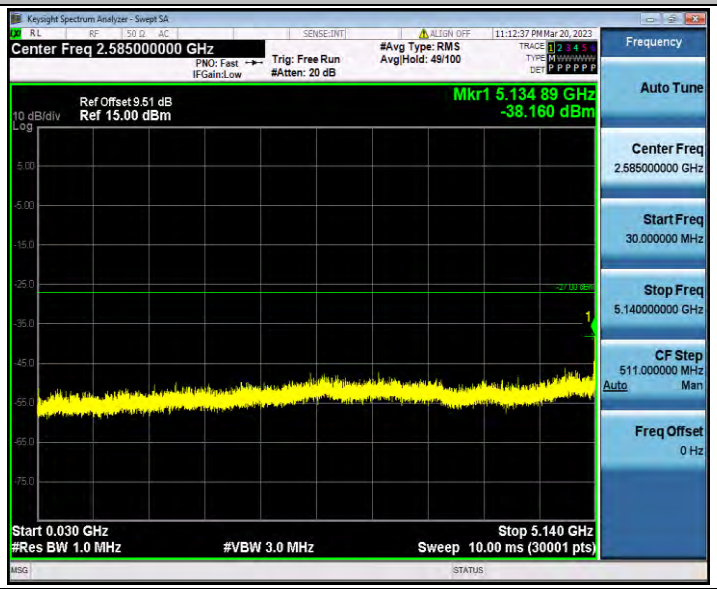
11N20SISO_Ant1_5240_30~5140
11N20SISO_Ant1_5240_5360~40000

11N40SISO_Ant1_5190_30~5140

11N40SISO_Ant1_5190_5360~40000

11N40SISO_Ant1_5230_30~5140

11N40SISO_Ant1_5230_5360~40000

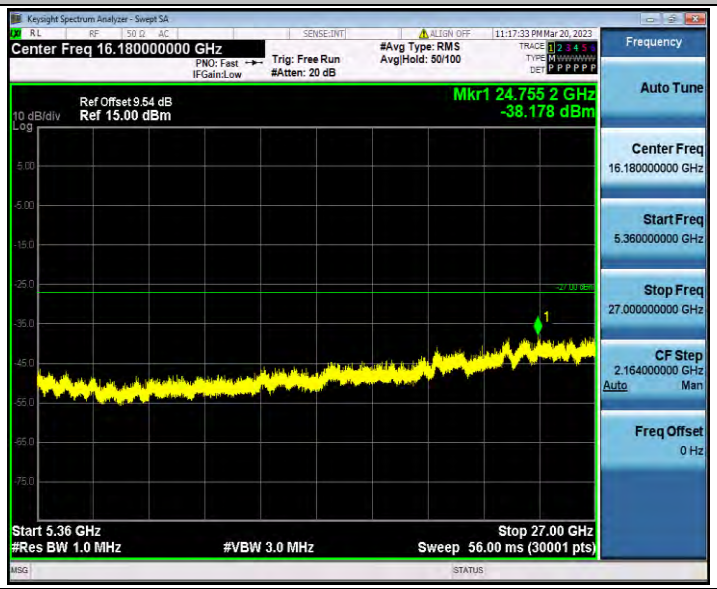
11AC20SISO_Ant1_5180_30~5140

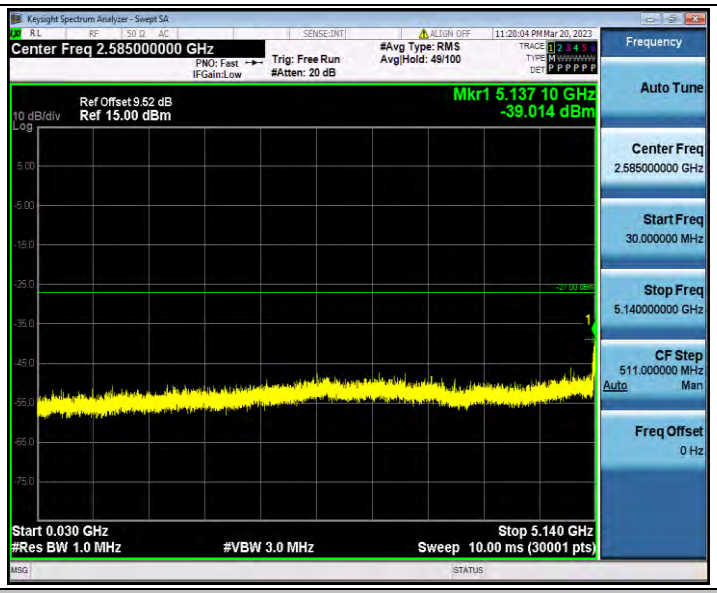


11AC20SISO_Ant1_5180_5360~40000

11AC20SISO_Ant1_5200_30~5140

11AC20SISO_Ant1_5200_5360~40000

11AC20SISO_Ant1_5240_30~5140
11AC20SISO_Ant1_5240_5360~40000

11AC40SISO_Ant1_5190_30~5140

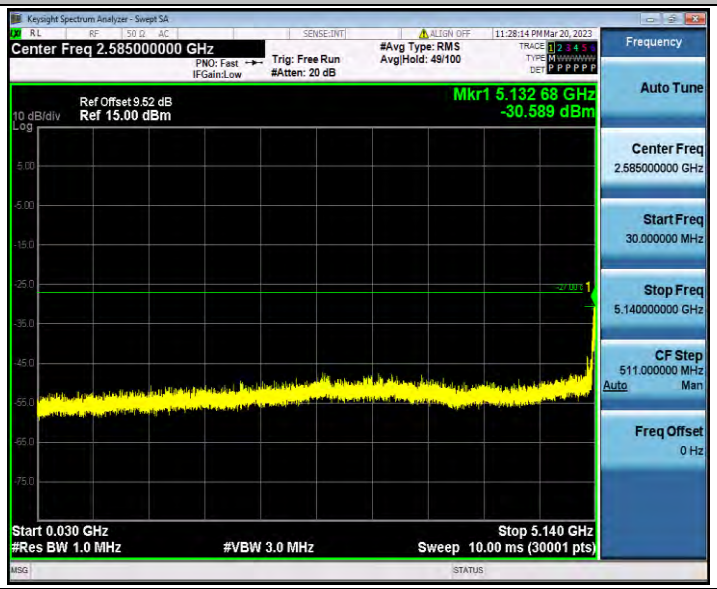


11AC40SISO_Ant1_5190_5360~40000

11AC40SISO_Ant1_5230_30~5140

11AC40SISO_Ant1_5230_5360~40000

11AC80SISO_Ant1_5210_30~5140



11AC80SISO_Ant1_5210_5360~40000

Keysight Spectrum Analyzer - Swept SA
Center Freq 16.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold: 50/100
11:28:24 PM Mar 20, 2023
Ref Offset 9.52 dB
10 dB/div
Ref 15.00 dBm
Log
Mkr1 25.567 4 GHz
-37.907 dBm
Start 5.36 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 27.00 GHz
Sweep 56.00 ms (30001 pts)
Frequency
Auto Tune
Center Freq
16.180000000 GHz
Start Freq
5.360000000 GHz
Stop Freq
27.000000000 GHz
CF Step
2.164000000 GHz
Auto
Man
Freq Offset
0 Hz