Case No. : GTS20230105011-1-26	
Ambient Condition: 24 ℃, 50 %RH, Atmos100.1Kpa,	
Test Date: 2023.3.6	**Test Engineer:** Jenny zeng

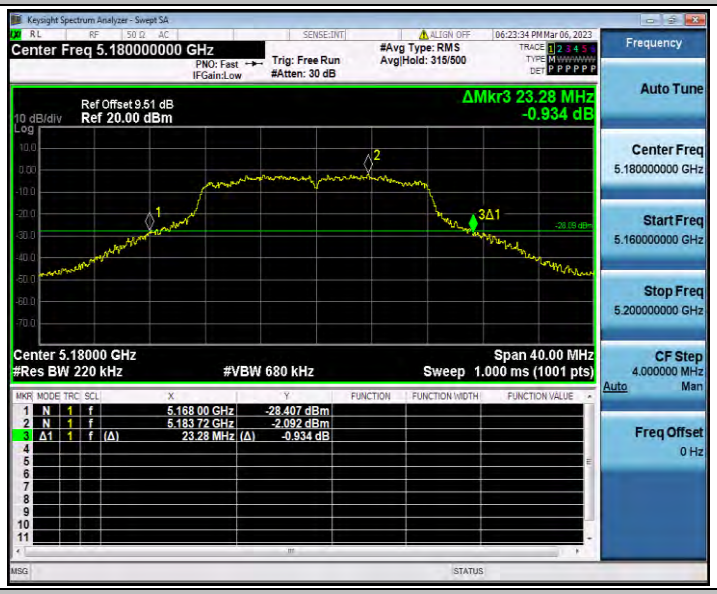
Appendix D.1: Emission Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant2	5180	23.280	5168.000	5191.280	---	---
		5200	21.720	5189.240	5210.960	---	---
		5240	22.480	5228.560	5251.040	---	---
11N20SISO	Ant2	5180	24.120	5168.240	5192.360	---	---
		5200	23.360	5188.240	5211.600	---	---
		5240	23.920	5228.280	5252.200	---	---
11N40SISO	Ant2	5190	43.040	5168.640	5211.680	---	---
		5230	41.520	5209.120	5250.640	---	---
11AC20SISO	Ant2	5180	22.840	5168.440	5191.280	---	---
		5200	22.720	5188.480	5211.200	---	---
		5240	23.400	5228.480	5251.880	---	---
11AC40SISO	Ant2	5190	43.600	5167.840	5211.440	---	---
		5230	43.280	5208.160	5251.440	---	---
11AC80SISO	Ant2	5210	83.200	5167.760	5250.960	---	---

Test Graphs

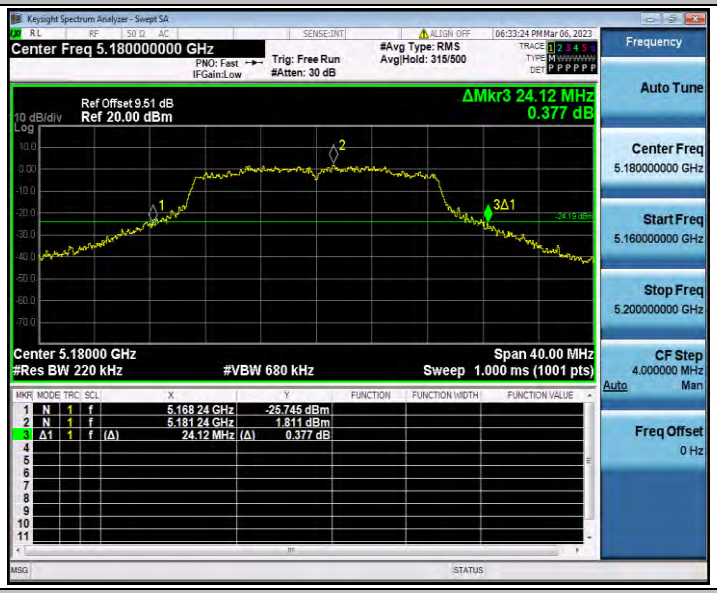
11A_Ant2_5180



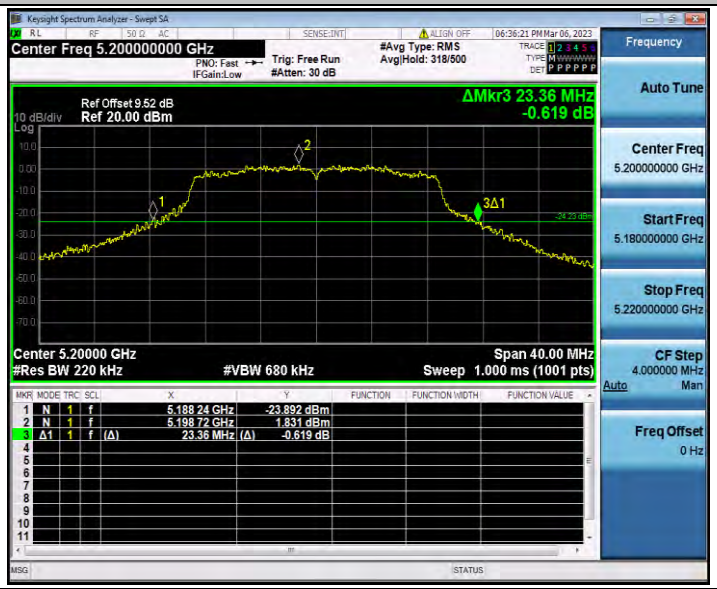
11A_Ant2_5200

11A_Ant2_5240

11N20SISO_Ant2_5180

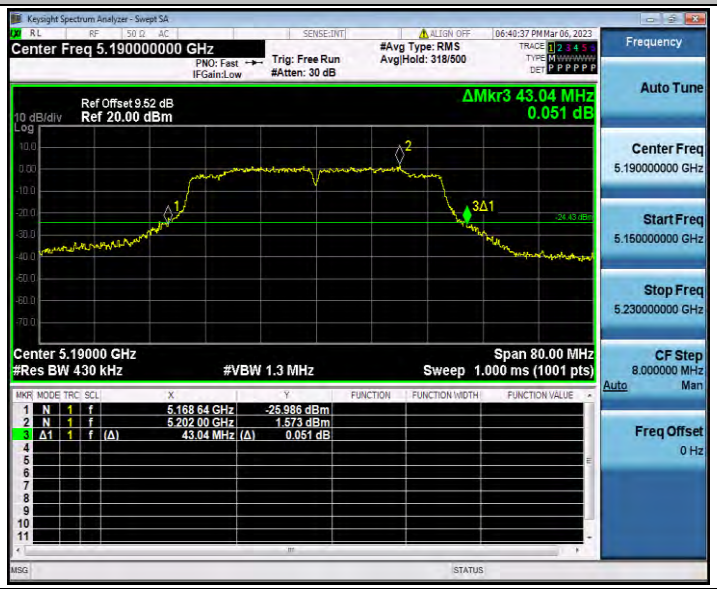


11N20SISO_Ant2_5200



11N20SISO_Ant2_5240

11N40SISO_Ant2_5190

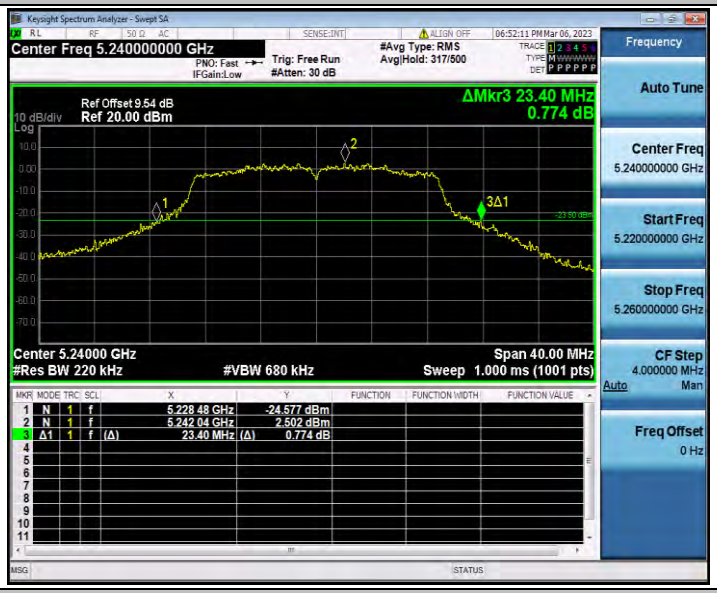


11N40SISO_Ant2_5230

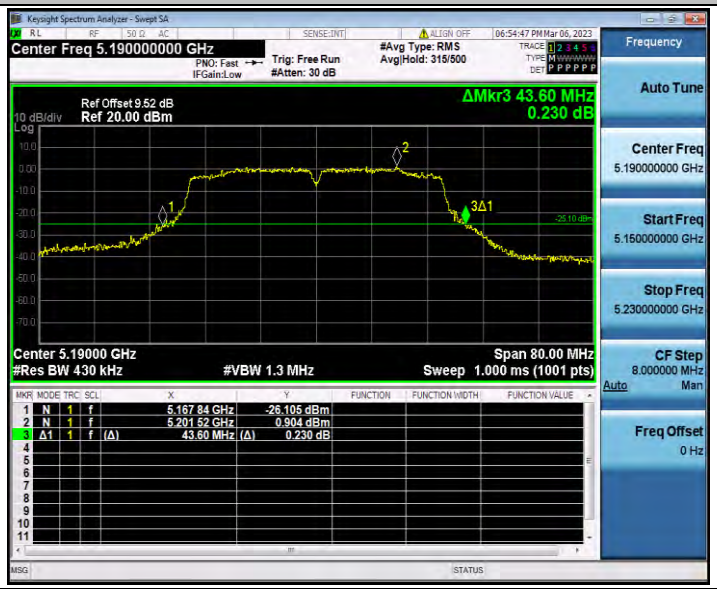
11AC20SISO_Ant2_5180

11AC20SISO_Ant2_5200

11AC20SISO_Ant2_5240

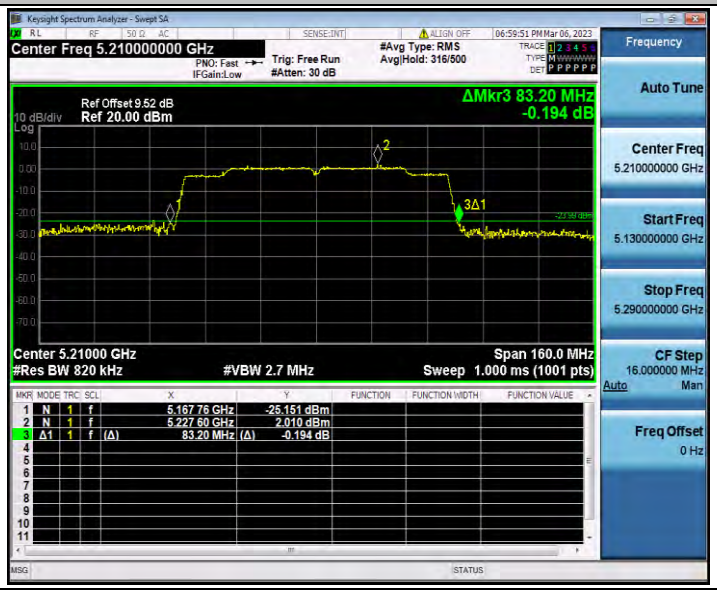


11AC40SISO_Ant2_5190



11AC40SISO_Ant2_5230

11AC80SISO_Ant2_5210



Appendix D.2: Occupied channel bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant2	5180	16.960	5171.493	5188.453	---	---
		5200	16.951	5191.478	5208.429	---	---
		5240	16.936	5231.505	5248.441	---	---
11N20SISO	Ant2	5180	18.100	5170.928	5189.028	---	---
		5200	18.060	5190.934	5208.994	---	---
		5240	18.045	5230.959	5249.004	---	---
11N40SISO	Ant2	5190	36.249	5171.846	5208.095	---	---
		5230	36.308	5211.806	5248.114	---	---
11AC20SISO	Ant2	5180	18.050	5170.944	5188.994	---	---
		5200	18.031	5190.939	5208.970	---	---
		5240	18.048	5230.953	5249.001	---	---
11AC40SISO	Ant2	5190	36.317	5171.845	5208.162	---	---
		5230	36.267	5211.832	5248.099	---	---
11AC80SISO	Ant2	5210	75.531	5172.280	5247.811	---	---

Test Graphs

11A_Ant2_5180

11A_Ant2_5200

11A_Ant2_5240

11N20SISO_Ant2_5180

11N20SISO_Ant2_5200

11N20SISO_Ant2_5240

11N40SISO_Ant2_5190

11N40SISO_Ant2_5230

11AC20SISO_Ant2_5180

11AC20SISO_Ant2_5200

11AC20SISO_Ant2_5240

11AC40SISO_Ant2_5190

11AC40SISO_Ant2_5230

11AC80SISO_Ant2_5210

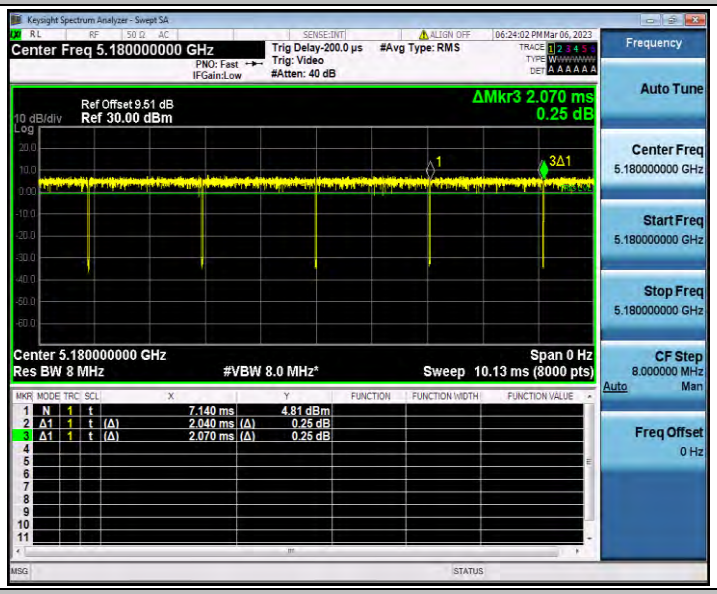
Appendix D.3: Duty Cycle

Test Result

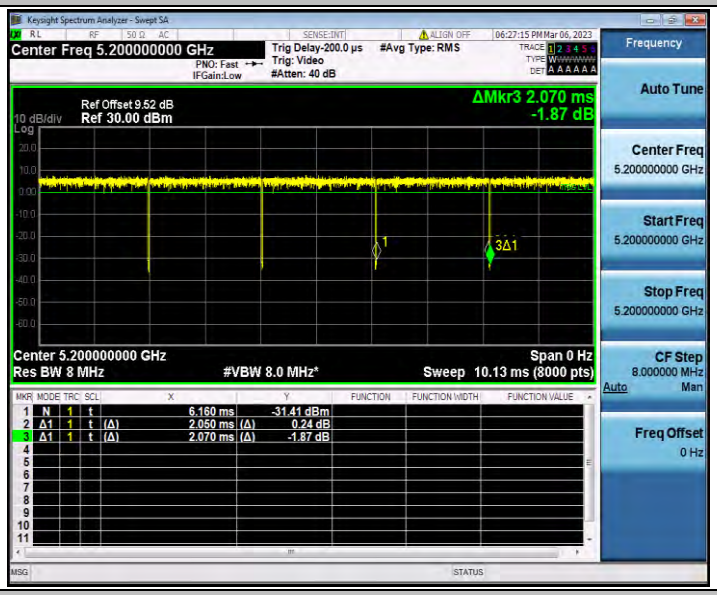
TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11A	Ant2	5180	2.04	2.07	98.55
		5200	2.05	2.07	99.03
		5240	2.05	2.07	99.03
11N20SISO	Ant2	5180	1.91	1.93	98.96
		5200	1.91	1.93	98.96
		5240	1.90	1.93	98.45
11N40SISO	Ant2	5190	0.94	0.96	97.92
		5230	0.94	0.96	97.92
11AC20SISO	Ant2	5180	1.91	1.94	98.45
		5200	1.91	1.94	98.45
		5240	1.92	1.94	98.97
11AC40SISO	Ant2	5190	0.94	1.11	84.68
		5230	0.95	1.12	84.82
11AC80SISO	Ant2	5210	0.46	0.54	85.19

Test Graphs

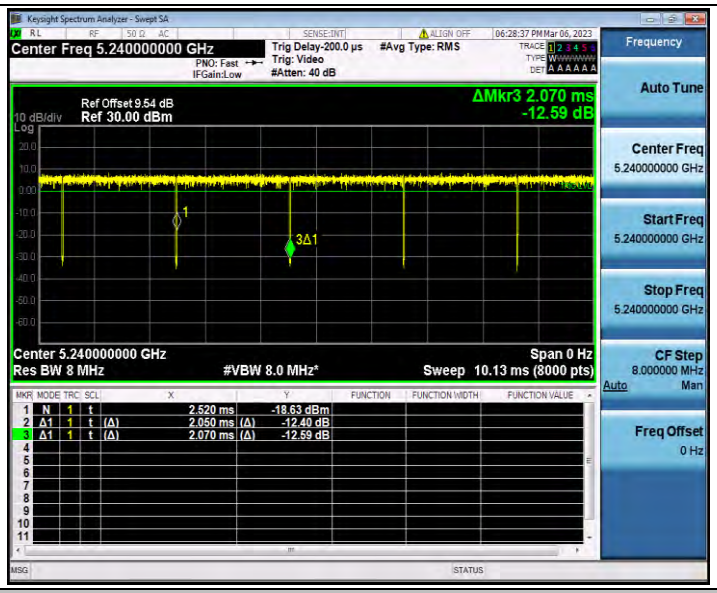
11A_Ant2_5180



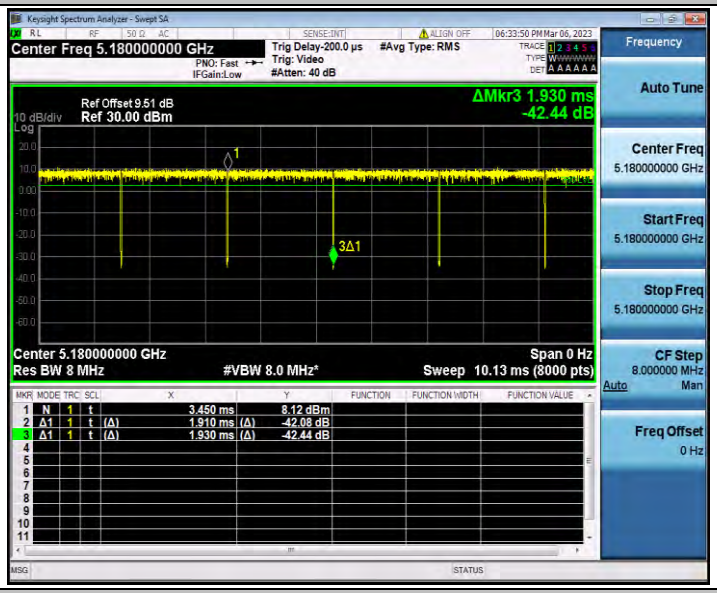
11A_Ant2_5200



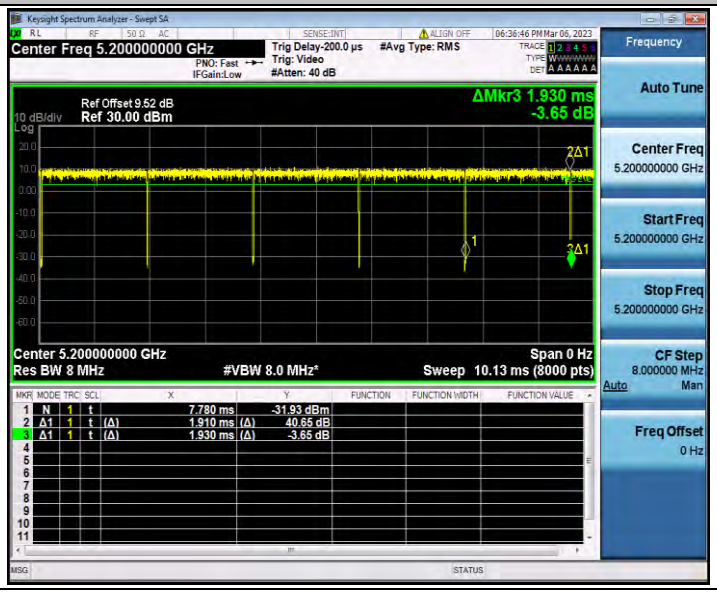
11A_Ant2_5240



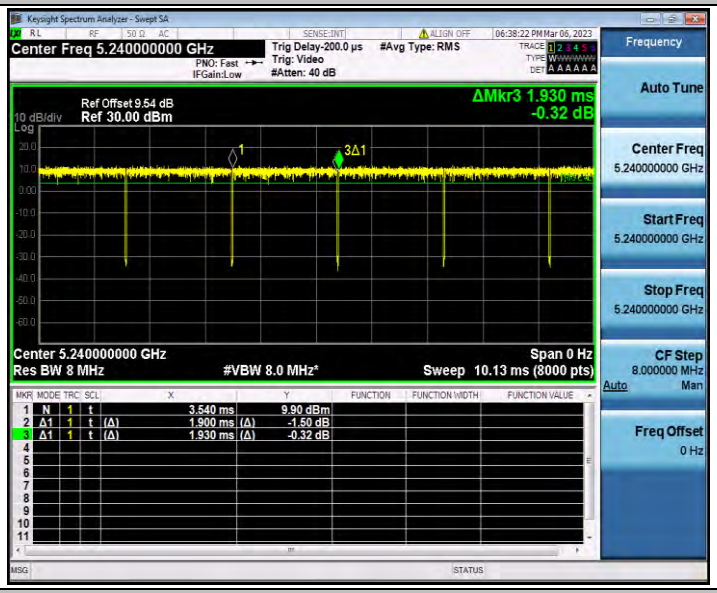
11N20SISO_Ant2_5180



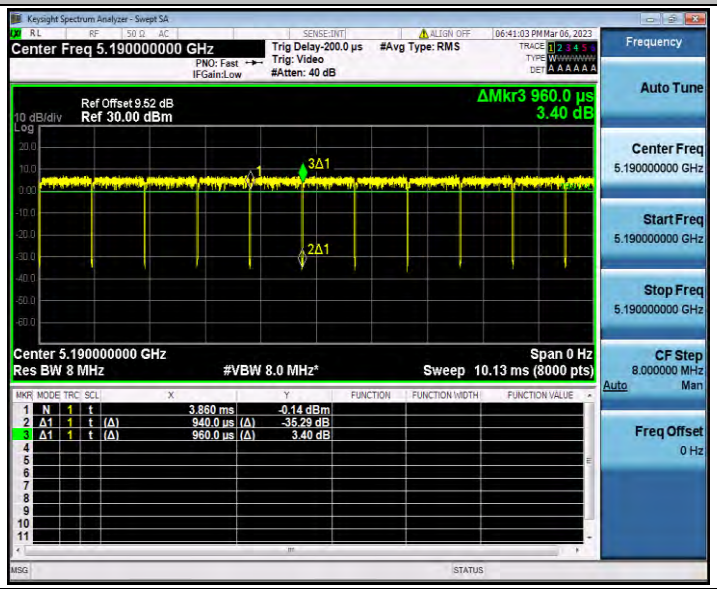
11N20SISO_Ant2_5200



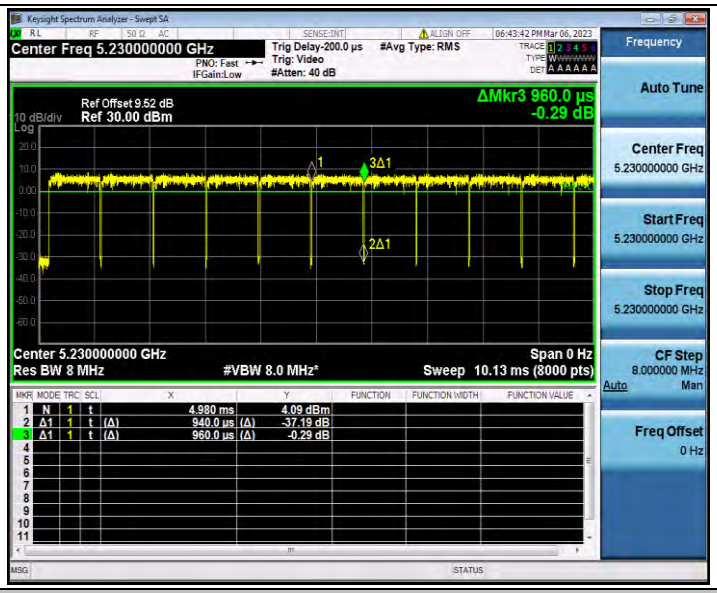
11N20SISO_Ant2_5240



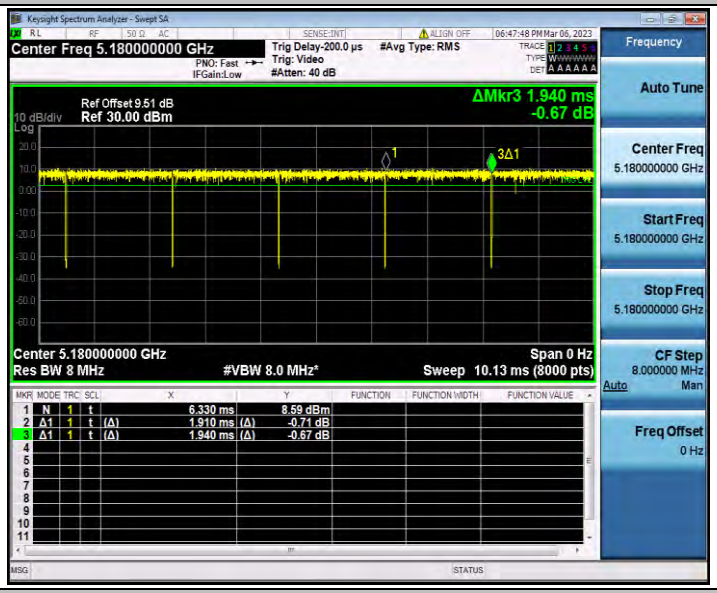
11N40SISO_Ant2_5190



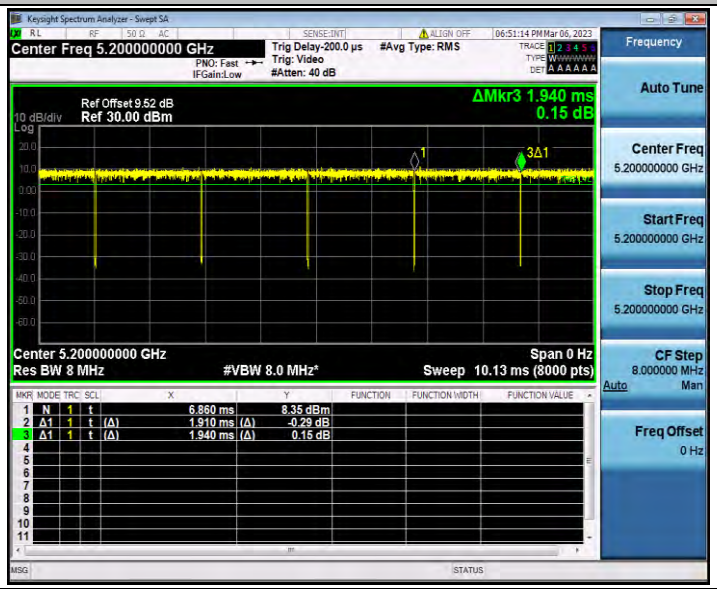
11N40SISO_Ant2_5230



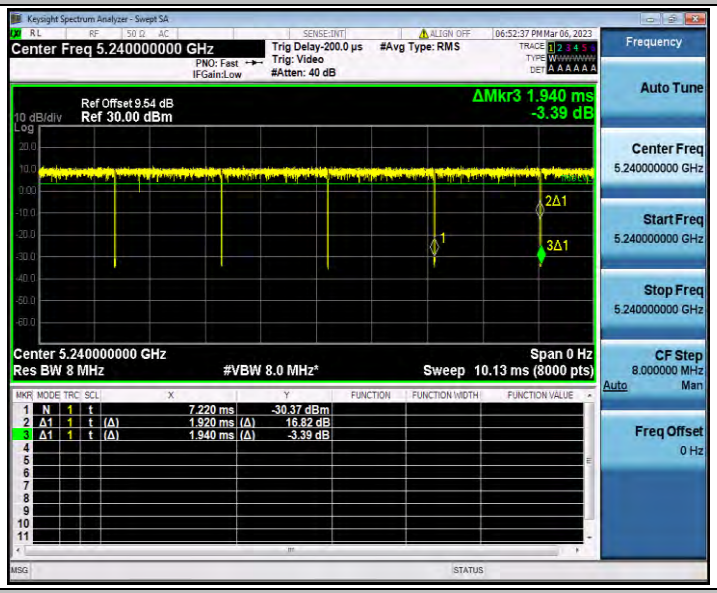
11AC20SISO_Ant2_5180



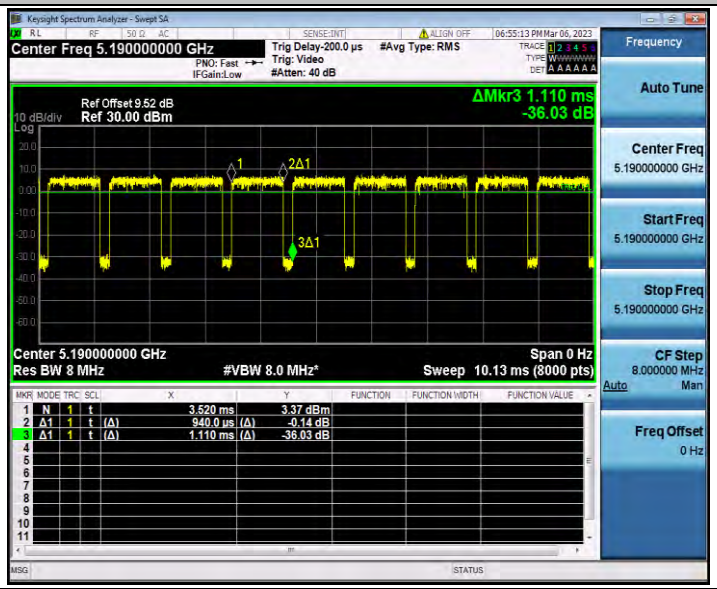
11AC20SISO_Ant2_5200



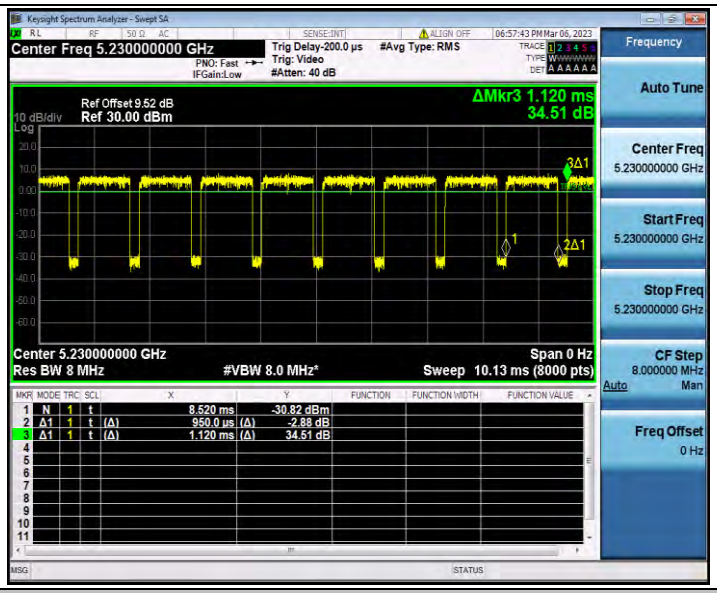
11AC20SISO_Ant2_5240



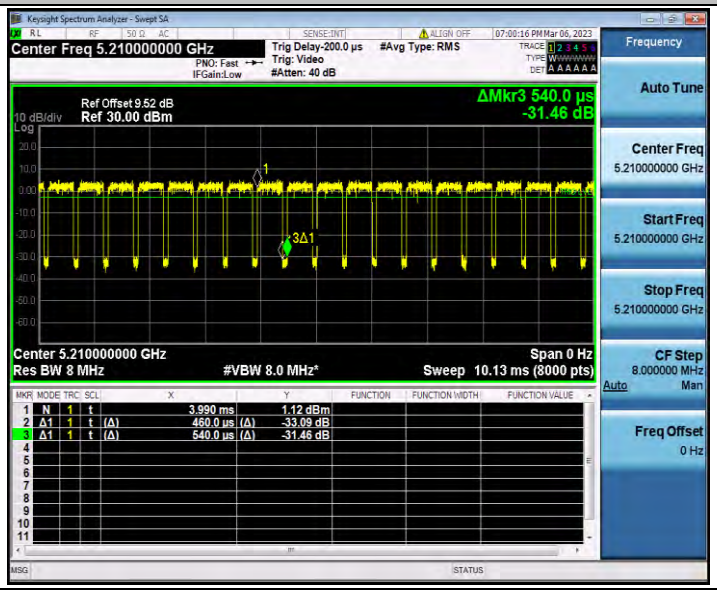
11AC40SISO_Ant2_5190



11AC40SISO_Ant2_5230



11AC80SISO_Ant2_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	Ant2	5180	11.59	98.55	0.06	11.65	≤23.98	PASS
		5200	11.81	99.03	0.04	11.85	≤23.98	PASS
		5240	10.96	99.03	0.04	11.00	≤23.98	PASS
11N20SISO	Ant2	5180	10.89	98.96	0.05	10.94	≤23.98	PASS
		5200	11.20	98.96	0.05	11.25	≤23.98	PASS
		5240	11.84	98.45	0.07	11.91	≤23.98	PASS
11N40SISO	Ant2	5190	11.12	97.92	0.09	11.21	≤23.98	PASS
		5230	11.37	97.92	0.09	11.46	≤23.98	PASS
11AC20SISO	Ant2	5180	10.73	98.45	0.07	10.80	≤23.98	PASS
		5200	10.99	98.45	0.07	11.06	≤23.98	PASS
		5240	11.50	98.97	0.04	11.54	≤23.98	PASS
11AC40SISO	Ant2	5190	10.42	84.68	0.72	11.14	≤23.98	PASS
		5230	10.80	84.82	0.72	11.52	≤23.98	PASS
11AC80SISO	Ant2	5210	10.99	85.19	0.70	11.69	≤23.98	PASS

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

Appendix D.5: Maximum power spectral density

Test Result

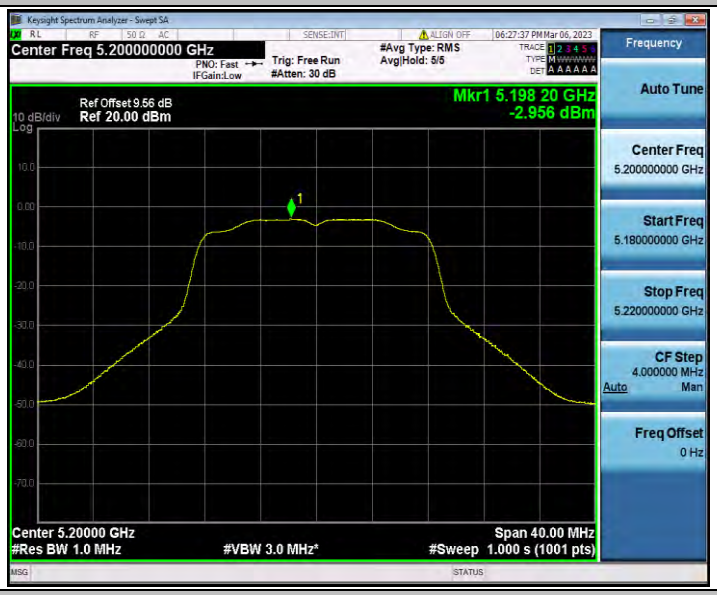
TestMode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant2	5180	-3.42	≤11.00	PASS
		5200	-2.96	≤11.00	PASS
		5240	-2.61	≤11.00	PASS
11N20SISO	Ant2	5180	-0.27	≤11.00	PASS
		5200	-0.06	≤11.00	PASS
		5240	0.93	≤11.00	PASS
11N40SISO	Ant2	5190	-3.23	≤11.00	PASS
		5230	-2.88	≤11.00	PASS
11AC20SISO	Ant2	5180	-0.43	≤11.00	PASS
		5200	-0.3	≤11.00	PASS
		5240	0.39	≤11.00	PASS
11AC40SISO	Ant2	5190	-2.77	≤11.00	PASS
		5230	-2.51	≤11.00	PASS
11AC80SISO	Ant2	5210	-5.18	≤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.

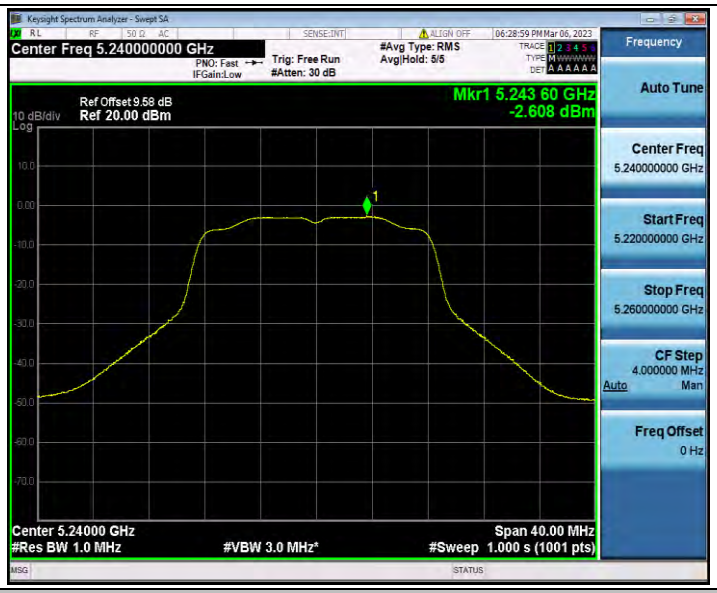
Test Graphs

11A_Ant2_5180

11A_Ant2_5200



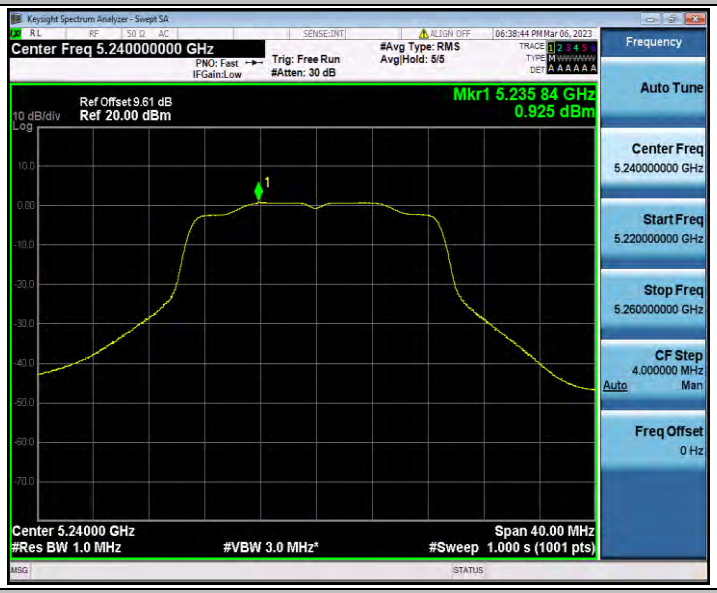
11A_Ant2_5240



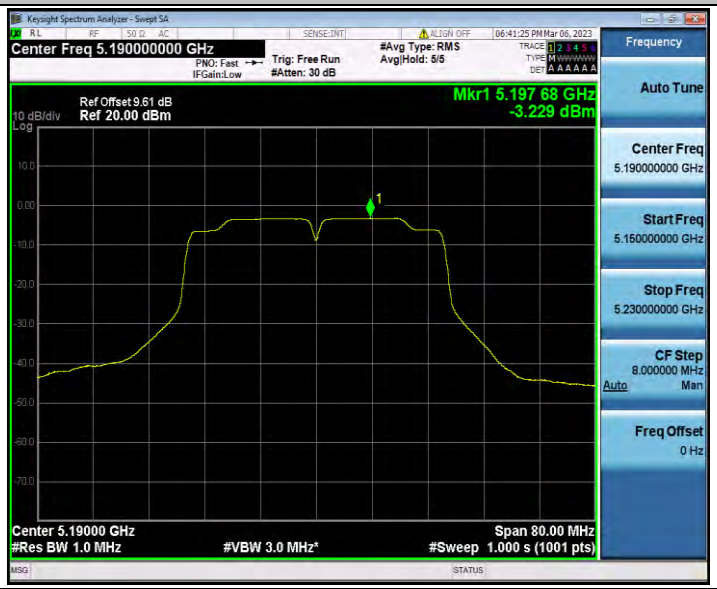
11N20SISO_Ant2_5180

11N20SISO_Ant2_5200

11N20SISO_Ant2_5240

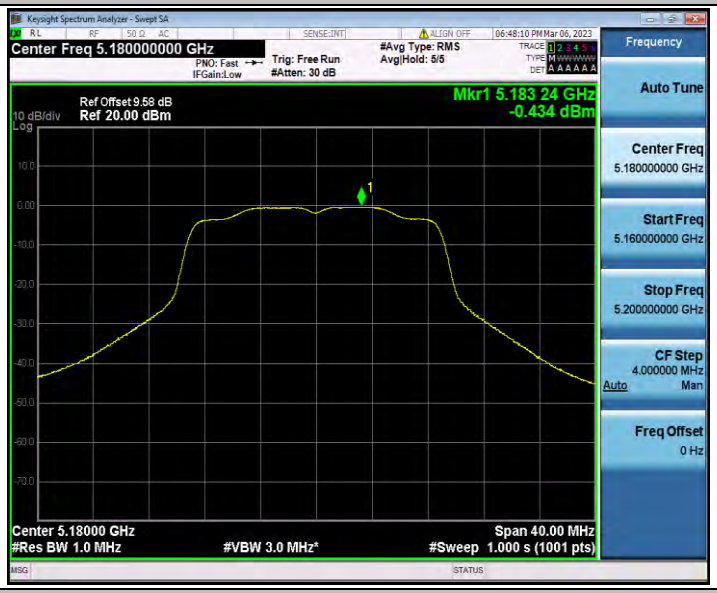


11N40SISO_Ant2_5190



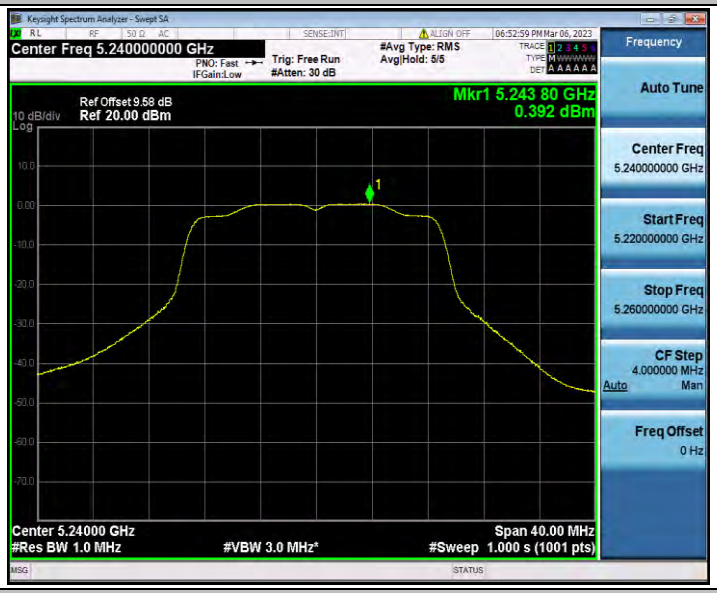
11N40SISO_Ant2_5230

11AC20SISO_Ant2_5180

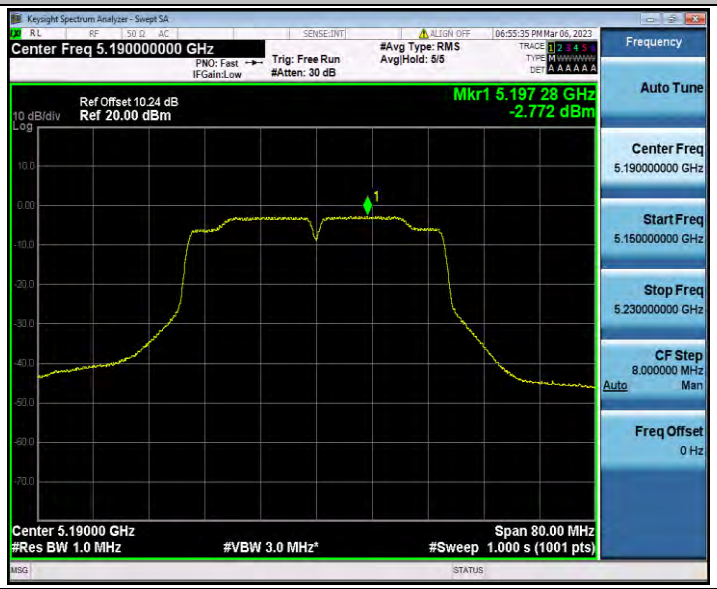


11AC20SISO_Ant2_5200

11AC20SISO_Ant2_5240



11AC40SISO_Ant2_5190



11AC40SISO_Ant2_5230

11AC80SISO_Ant2_5210

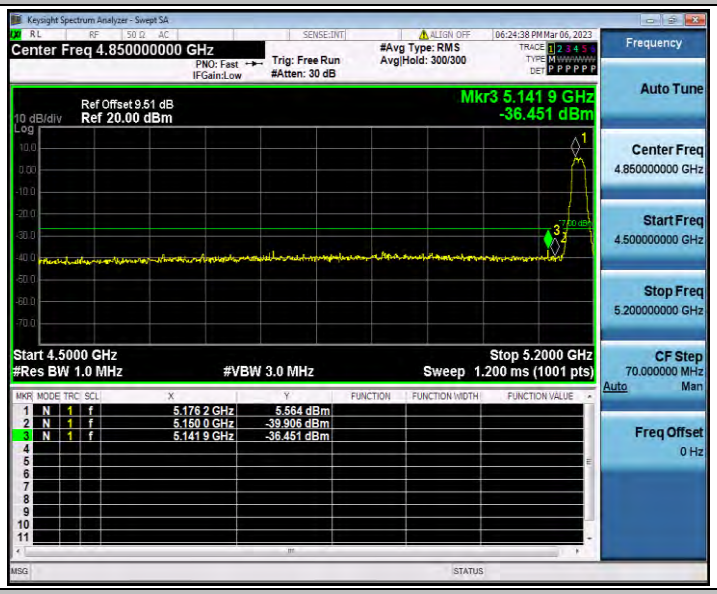
Appendix D.6: Band edge measurements

Test Result B1

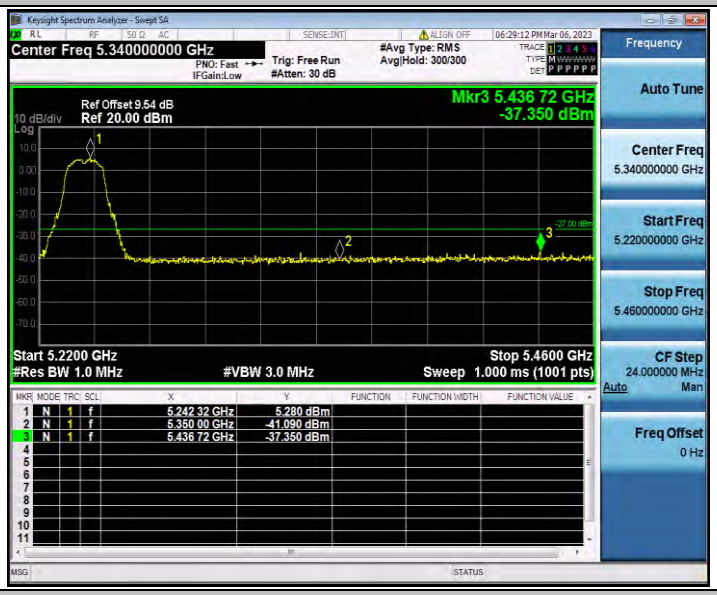
TestMode	Antenna	ChName	Frequency[MHz]	Result[dBm]	Limit[dBm]	Verdict
11A	Ant2	Low	5180	-36.45	≤-27	PASS
		High	5240	-37.35	≤-27	PASS
11N20SISO	Ant2	Low	5180	-37.13	≤-27	PASS
		High	5240	-37.92	≤-27	PASS
11N40SISO	Ant2	Low	5190	-32.62	≤-27	PASS
		High	5230	-36.56	≤-27	PASS
11AC20SISO	Ant2	Low	5180	-37.78	≤-27	PASS
		High	5240	-37	≤-27	PASS
11AC40SISO	Ant2	Low	5190	-32	≤-27	PASS
		High	5230	-38.24	≤-27	PASS
11AC80SISO	Ant2	Low	5210	-35.13	≤-27	PASS
		High	5210	-38.21	≤-27	PASS

Test Graphs B1

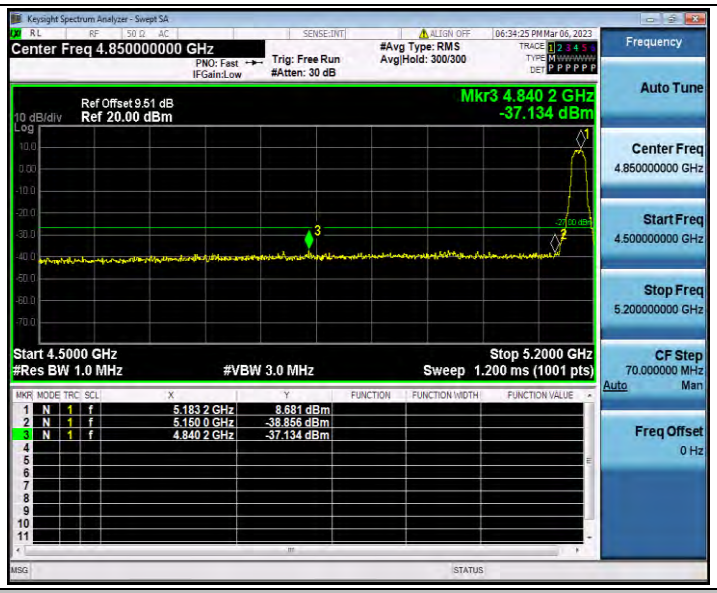
11A_Ant2_Low_5180



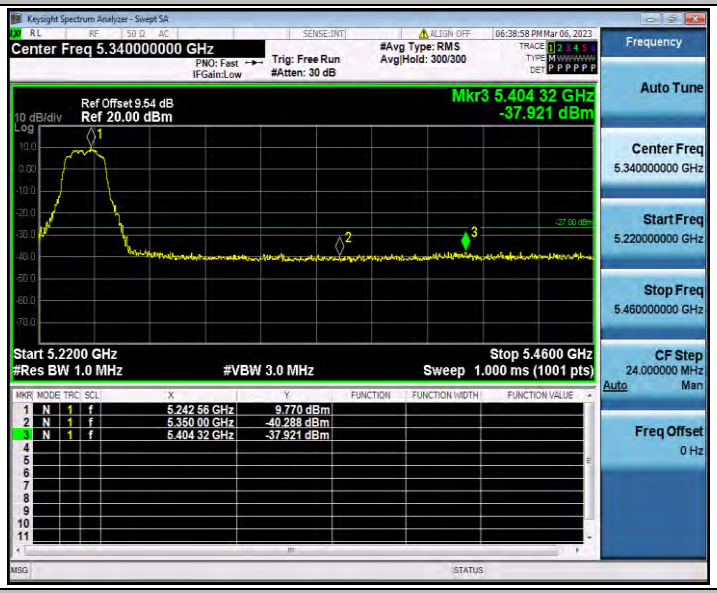
11A_Ant2_High_5240



11N20SISO_Ant2_Low_5180

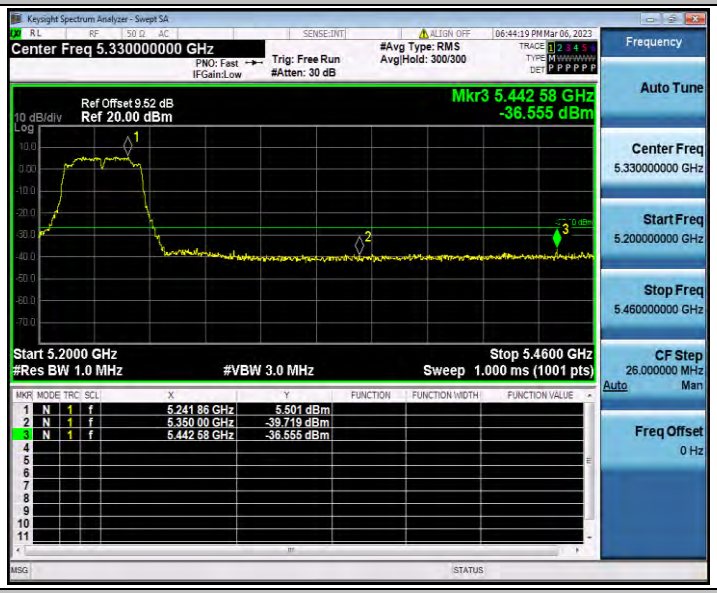


11N20SISO_Ant2_High_5240

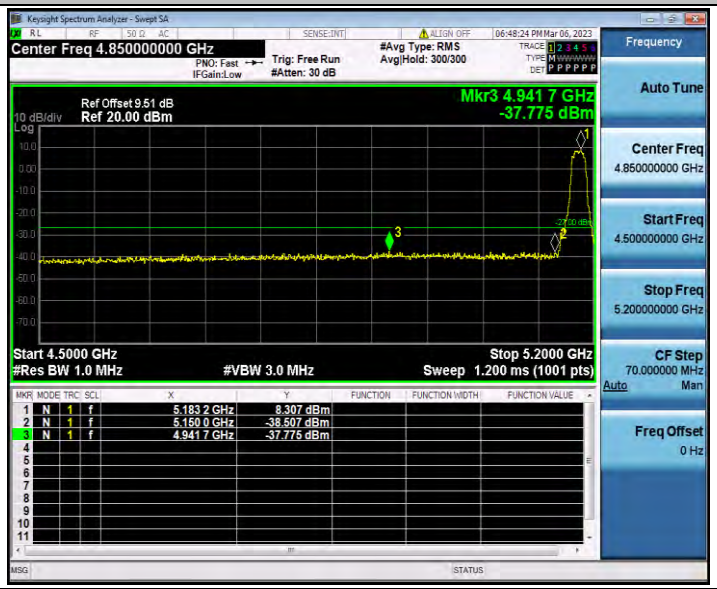


11N40SISO_Ant2_Low_5190

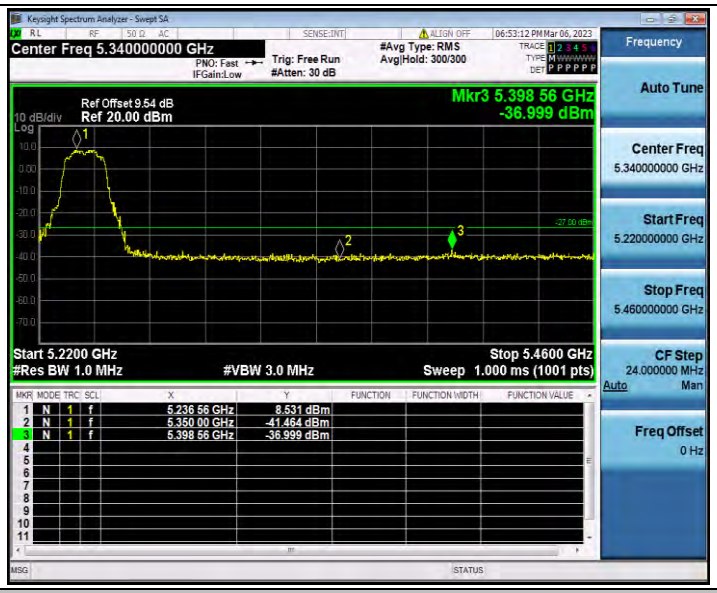
11N40SISO_Ant2_High_5230



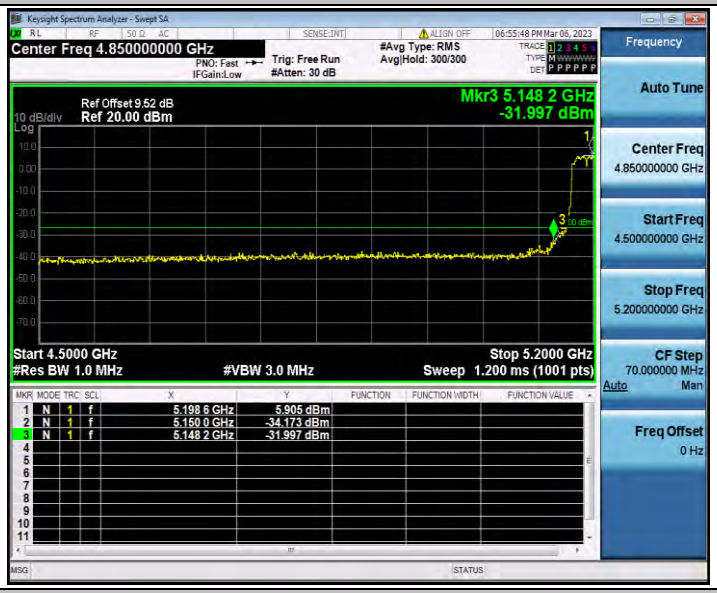
11AC20SISO_Ant2_Low_5180



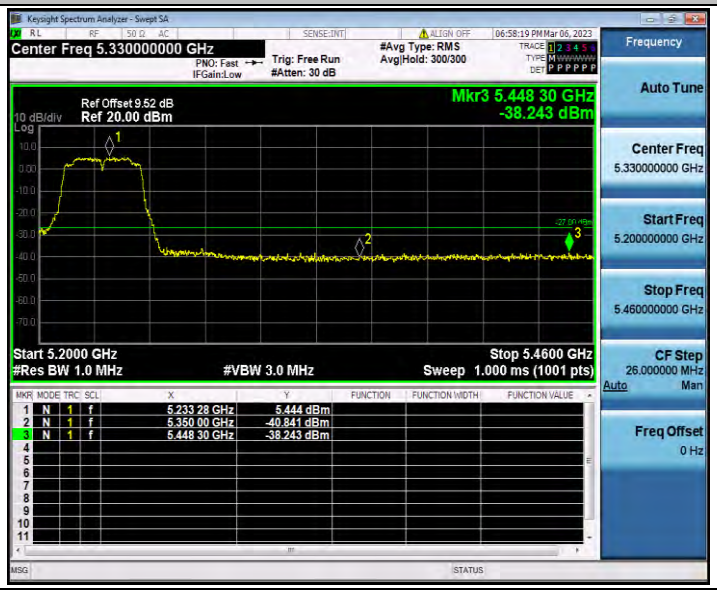
11AC20SISO_Ant2_High_5240

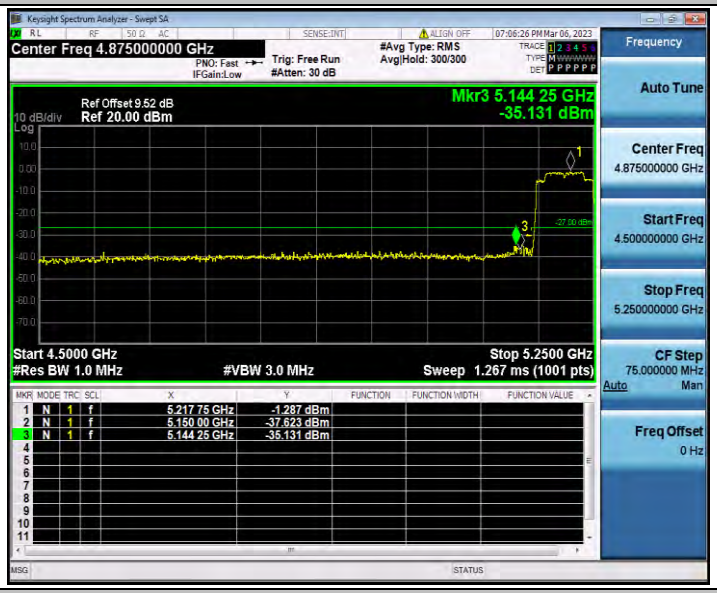


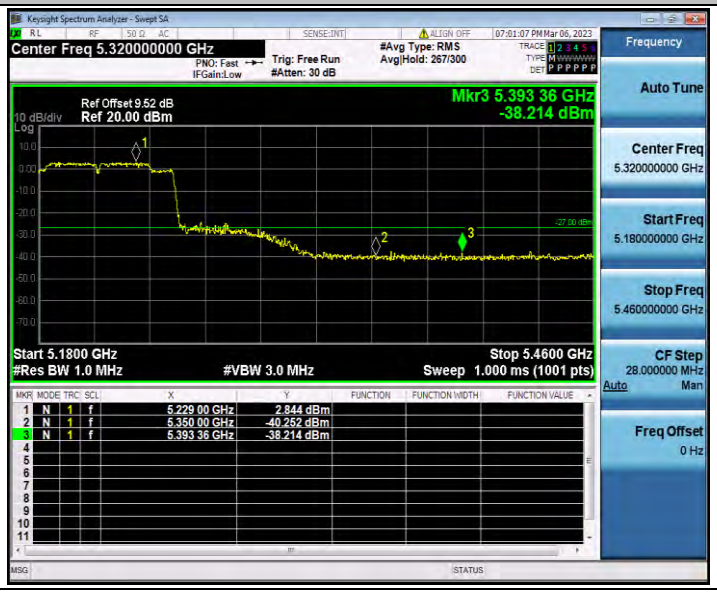
11AC40SISO_Ant2_Low_5190



11AC40SISO_Ant2_High_5230



11AC80SISO_Ant2_Low_5210


11AC80SISO_Ant2_High_5210


Appendix D.7: Conducted Spurious Emission

Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	Max. Fre [MHz]	Max. Level [dBm]	Limit [dBm]	Verdict
11A	Ant2	5180	30~5140	5119.22	-45.4	≤-27	PASS
			5360~40000	26981.97	-38.3	≤-27	PASS
		5200	30~5140	4887.57	-46.22	≤-27	PASS
			5360~40000	26550.61	-37.99	≤-27	PASS
		5240	30~5140	4935.43	-45.95	≤-27	PASS
			5360~40000	24837.44	-38.04	≤-27	PASS
11N20SISO	Ant2	5180	30~5140	5139.83	-44.69	≤-27	PASS
			5360~40000	25303.42	-37.87	≤-27	PASS
		5200	30~5140	5135.4	-45.29	≤-27	PASS
			5360~40000	26768.45	-37.41	≤-27	PASS
		5240	30~5140	5079.87	-42.8	≤-27	PASS
			5360~40000	26099.78	-37.89	≤-27	PASS
11N40SISO	Ant2	5190	30~5140	5135.57	-38.2	≤-27	PASS
			5360~40000	26714.35	-37.34	≤-27	PASS
		5230	30~5140	5121.77	-45.46	≤-27	PASS
			5360~40000	25543.63	-37.74	≤-27	PASS
11AC20SISO	Ant2	5180	30~5140	5110.7	-44.53	≤-27	PASS
			5360~40000	24242.34	-37.85	≤-27	PASS
		5200	30~5140	5137.1	-46.32	≤-27	PASS
			5360~40000	24895.87	-38.26	≤-27	PASS
		5240	30~5140	5078.85	-43.51	≤-27	PASS
			5360~40000	24214.93	-38.56	≤-27	PASS
11AC40SISO	Ant2	5190	30~5140	5118.88	-37.64	≤-27	PASS
			5360~40000	26074.53	-38.24	≤-27	PASS
		5230	30~5140	5075.78	-46.06	≤-27	PASS
			5360~40000	25641.73	-37.76	≤-27	PASS
11AC80SISO	Ant2	5210	30~5140	5075.78	-46.06	≤-27	PASS
			5360~40000	26021.87	-37.8	≤-27	PASS

Test Graphs

11A_Ant2_5180_30~5140

11A_Ant2_5180_5360~40000

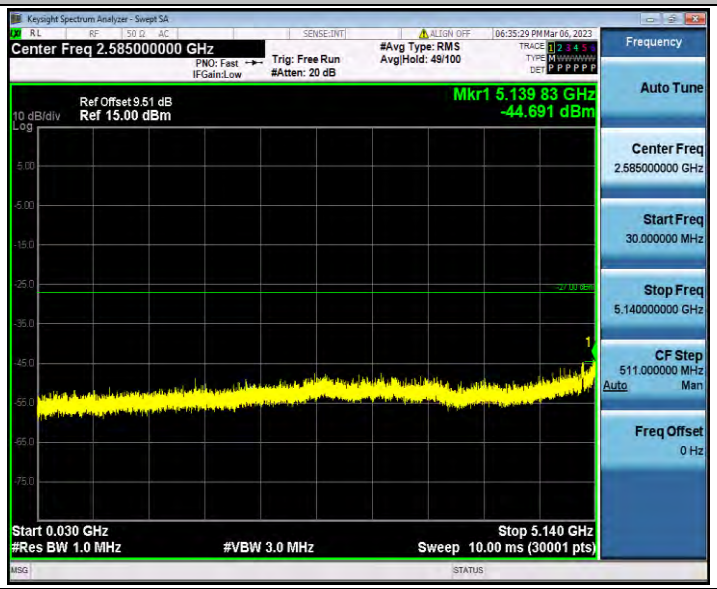
11A_Ant2_5200_30~5140

11A_Ant2_5200_5360~40000

11A_Ant2_5240_30~5140

11A_Ant2_5240_5360~40000

11N20SISO_Ant2_5180_30~5140



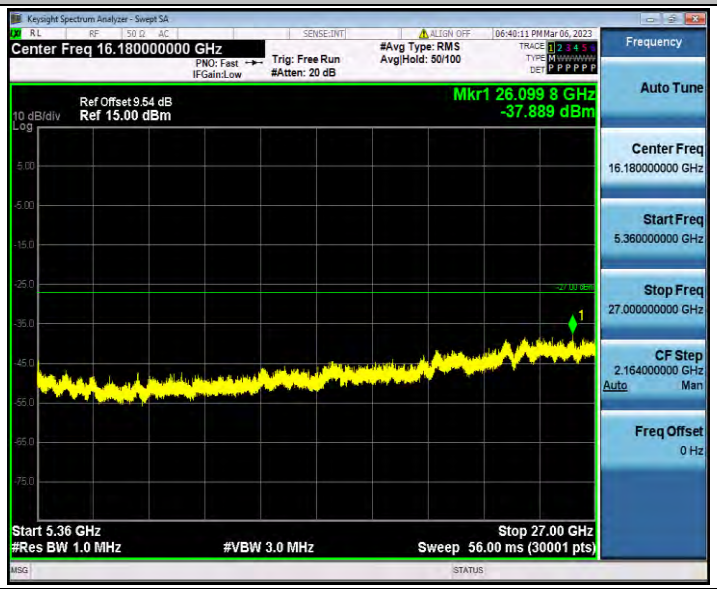
11N20SISO_Ant2_5180_5360~40000

11N20SISO_Ant2_5200_30~5140

11N20SISO_Ant2_5200_5360~40000

11N20SISO_Ant2_5240_30~5140

11N20SISO_Ant2_5240_5360~40000



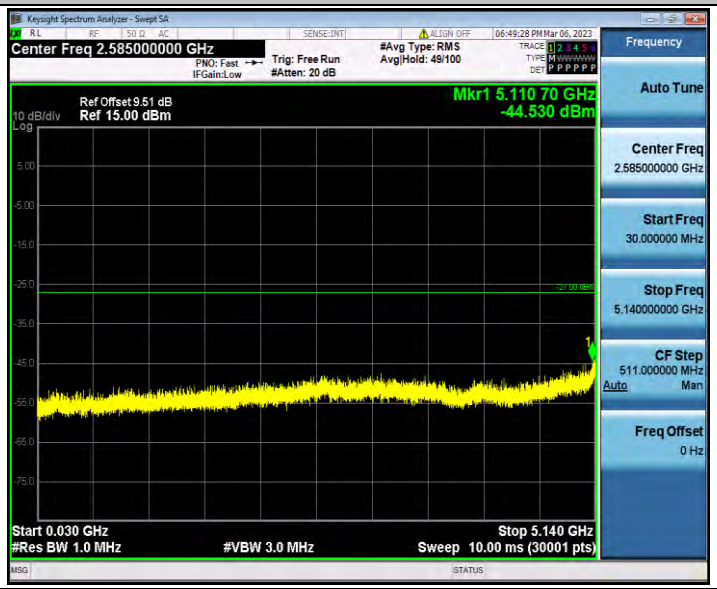
11N40SISO_Ant2_5190_30~5140

11N40SISO_Ant2_5190_5360~40000

11N40SISO_Ant2_5230_30~5140

11N40SISO_Ant2_5230_5360~40000

11AC20SISO_Ant2_5180_30~5140



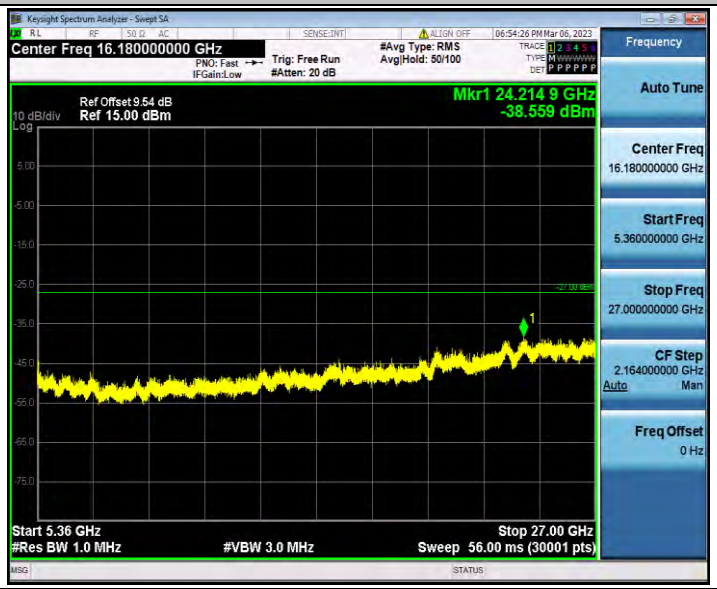
11AC20SISO_Ant2_5180_5360~40000

11AC20SISO_Ant2_5200_30~5140

11AC20SISO_Ant2_5200_5360~40000

11AC20SISO_Ant2_5240_30~5140

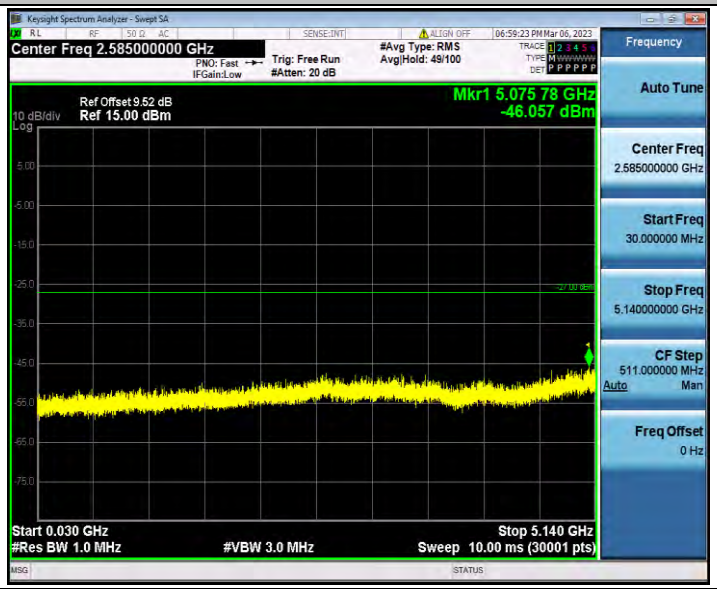
11AC20SISO_Ant2_5240_5360~40000



11AC40SISO_Ant2_5190_30~5140

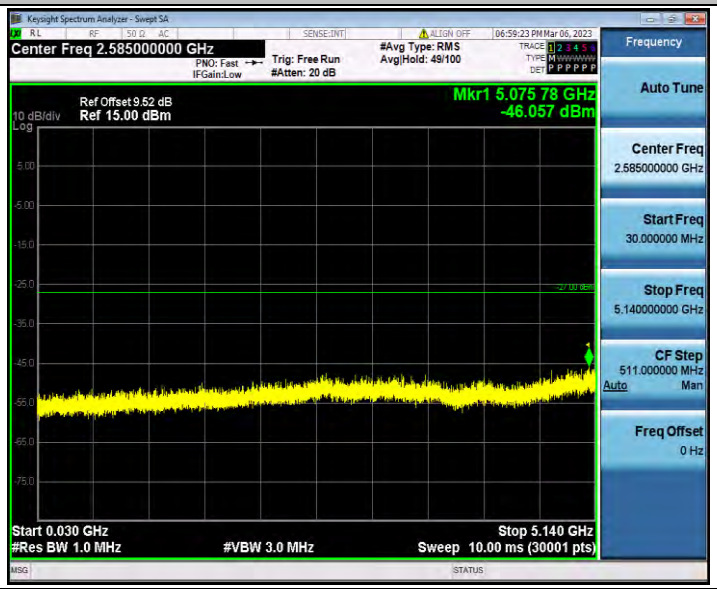
11AC40SISO_Ant2_5190_5360~40000

11AC40SISO_Ant2_5230_30~5140



11AC40SISO_Ant2_5230_5360~40000

11AC80SISO_Ant2_5210_30~5140



11AC80SISO_Ant2_5210_5360~40000

Keysight Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
ALIGN OFF
07:03:16 PM Mar 06, 2023
Center Freq 16.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold: 51/100
TRACE 1 2 3 4 5 6
TYPE M
DET P P P P P
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
Mkr1 26.021 9 GHz
-37.801 dBm
Ref Offset 9.52 dB
10 dB/div
Ref 15.00 dBm
Log
5.00
-5.00
-15.0
-25.0
-35.0
-45.0
-55.0
-65.0
-75.0
-27.00 dBm
1
Start 5.36 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 27.00 GHz
Sweep 56.00 ms (30001 pts)
MSG
STATUS