Case No. : GTS20230105011-1-26	
Ambient Condition: 25 ℃, 45 %RH, Atmos100.1Kpa,	
Test Date: 2023.3.4	**Test Engineer:** Jenny zeng

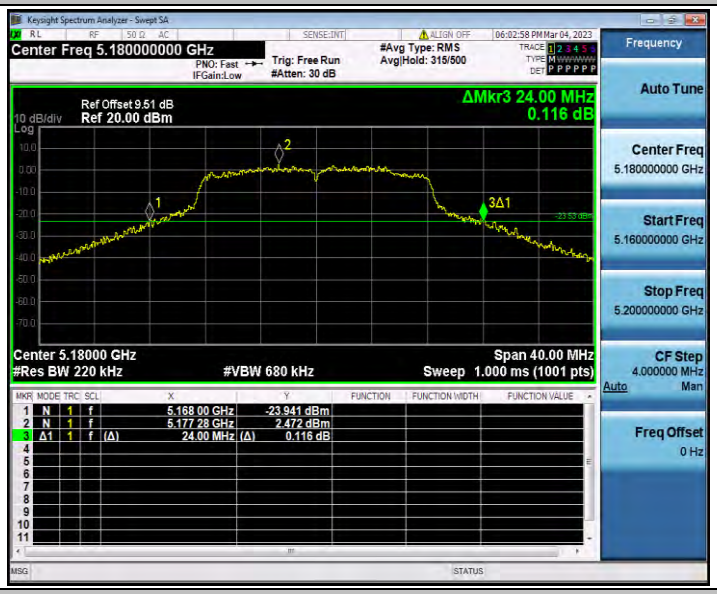
Appendix D.1: Emission Bandwidth

Test Result

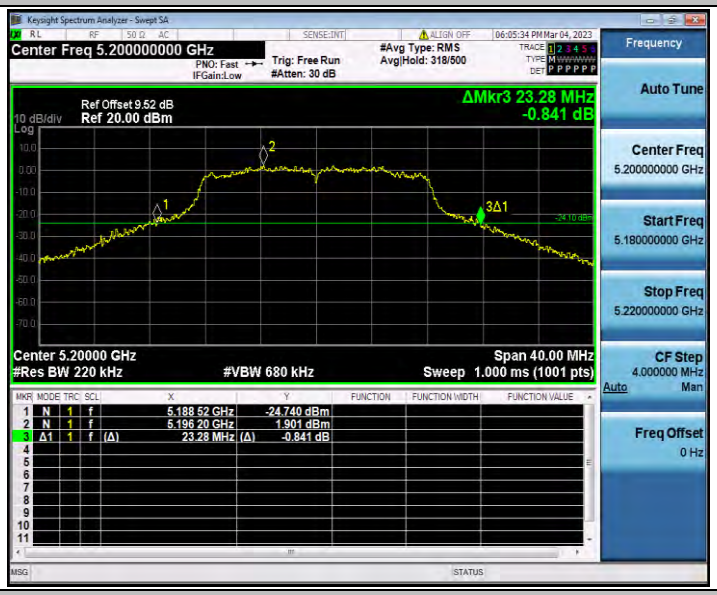
TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	24.000	5168.000	5192.000	---	---
		5200	23.280	5188.520	5211.800	---	---
		5240	22.800	5227.920	5250.720	---	---
11N20SISO	Ant1	5180	24.640	5167.880	5192.520	---	---
		5200	23.640	5187.920	5211.560	---	---
		5240	23.800	5227.920	5251.720	---	---
11N40SISO	Ant1	5190	44.080	5167.520	5211.600	---	---
		5230	43.280	5207.280	5250.560	---	---
11AC20SISO	Ant1	5180	24.320	5168.160	5192.480	---	---
		5200	23.200	5188.400	5211.600	---	---
		5240	23.480	5227.840	5251.320	---	---
11AC40SISO	Ant1	5190	45.200	5167.920	5213.120	---	---
		5230	43.600	5207.920	5251.520	---	---
11AC80SISO	Ant1	5210	87.360	5163.120	5250.480	---	---

Test Graphs

11A_Ant1_5180

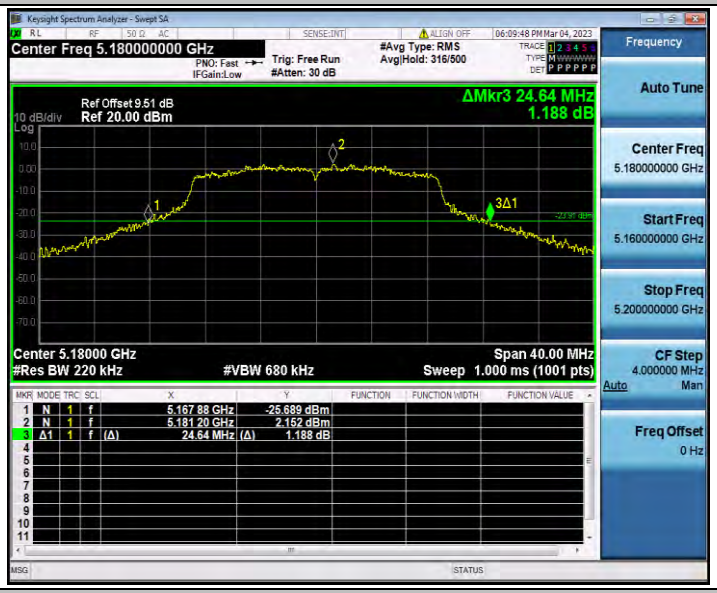


11A_Ant1_5200

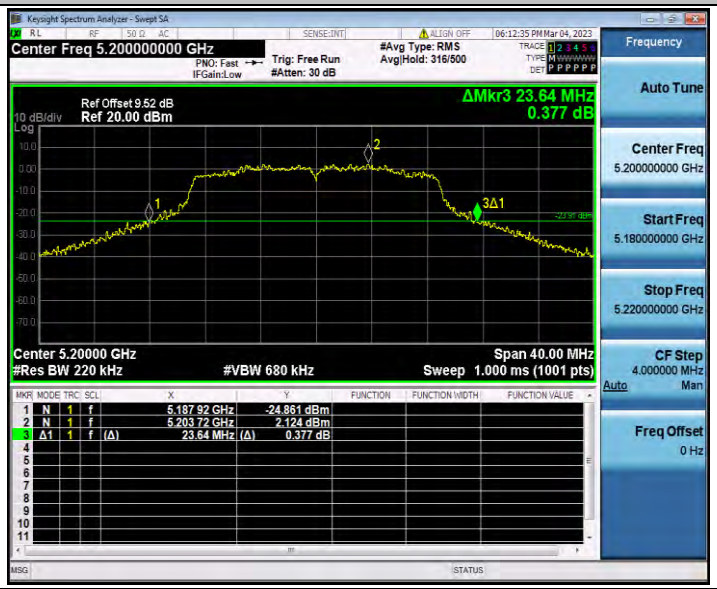


11A_Ant1_5240

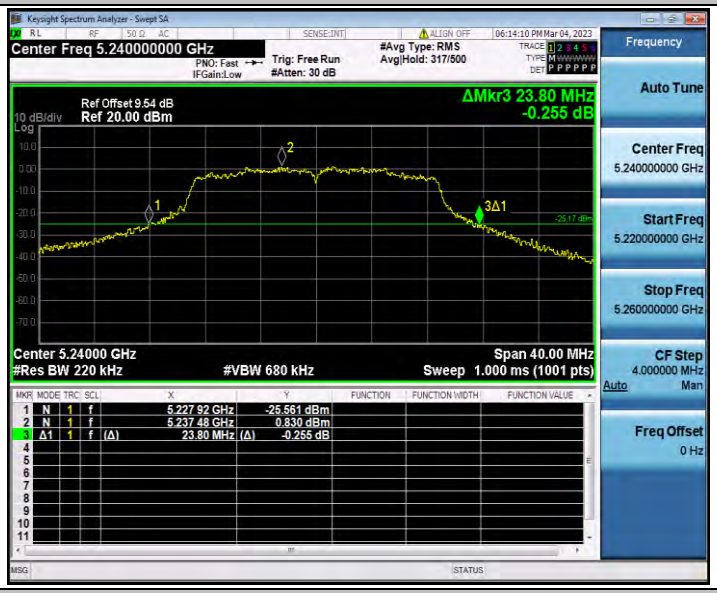
11N20SISO_Ant1_5180



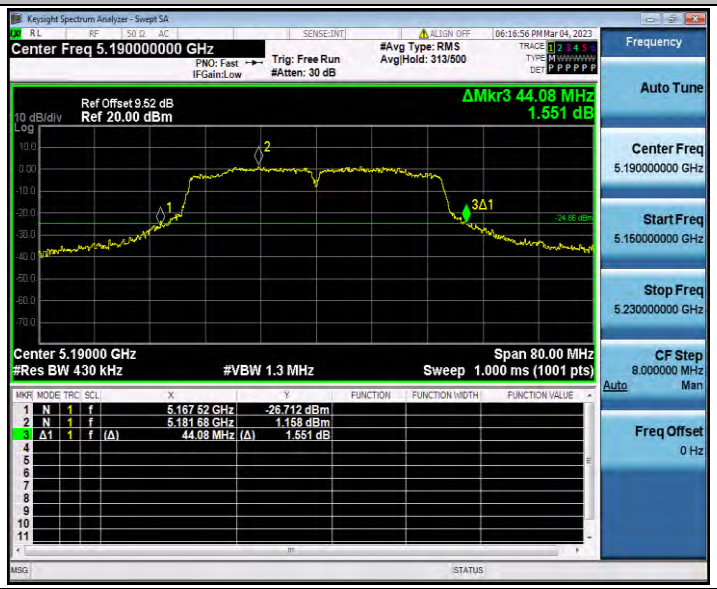
11N20SISO_Ant1_5200



11N20SISO_Ant1_5240



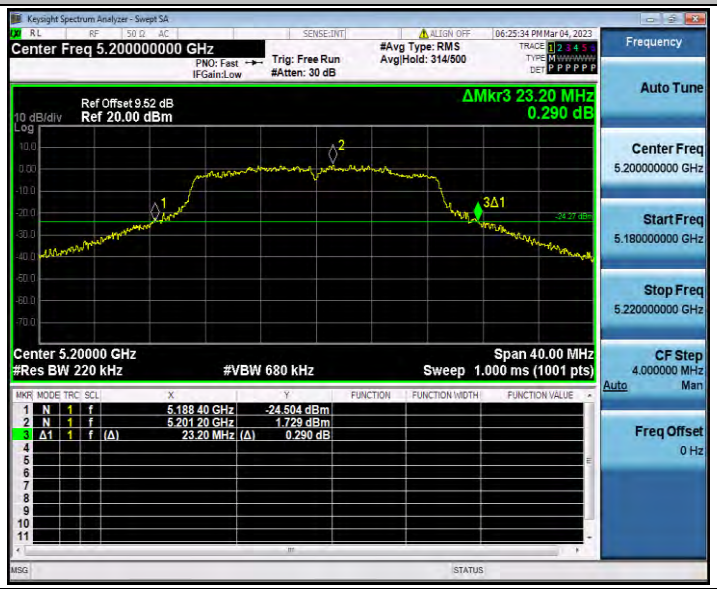
11N40SISO_Ant1_5190



11N40SISO_Ant1_5230

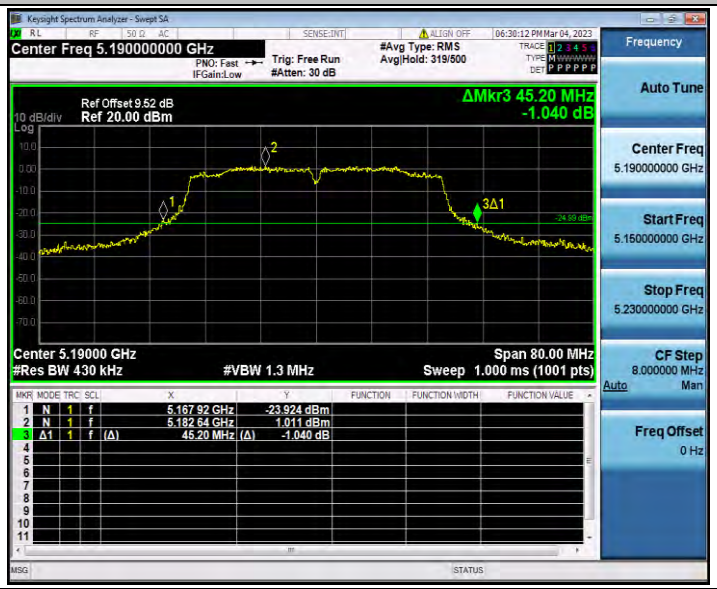
11AC20SISO_Ant1_5180

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	17.077	5171.403	5188.480	---	---
		5200	17.042	5191.458	5208.500	---	---
		5240	16.932	5231.472	5248.404	---	---
11N20SISO	Ant1	5180	18.249	5170.874	5189.123	---	---
		5200	18.136	5190.886	5209.022	---	---
		5240	18.107	5230.878	5248.985	---	---
11N40SISO	Ant1	5190	36.312	5171.804	5208.116	---	---
		5230	36.341	5211.744	5248.085	---	---
11AC20SISO	Ant1	5180	18.208	5170.872	5189.080	---	---
		5200	18.082	5190.924	5209.006	---	---
		5240	18.130	5230.863	5248.993	---	---
11AC40SISO	Ant1	5190	36.340	5171.848	5208.188	---	---
		5230	36.281	5211.757	5248.038	---	---
11AC80SISO	Ant1	5210	75.355	5172.252	5247.607	---	---

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

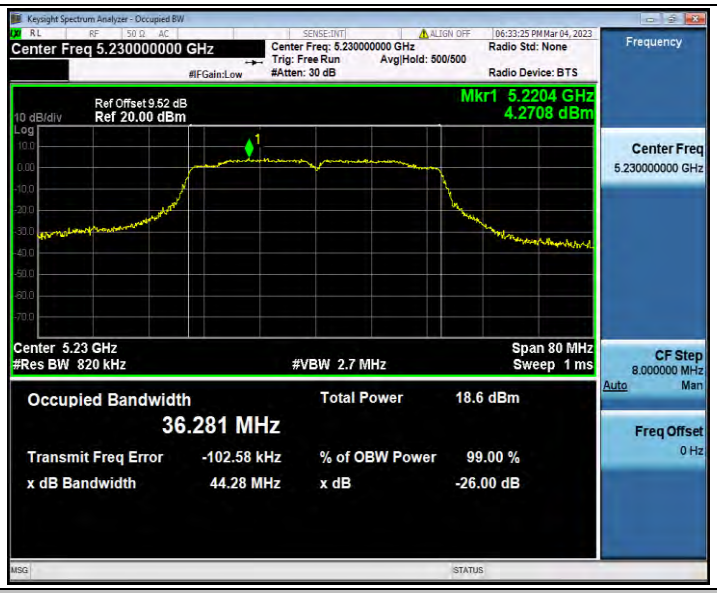
11AC20SISO_Ant1_5180

11AC20SISO_Ant1_5200

11AC20SISO_Ant1_5240

11AC40SISO_Ant1_5190

11AC40SISO_Ant1_5230



11AC80SISO_Ant1_5210

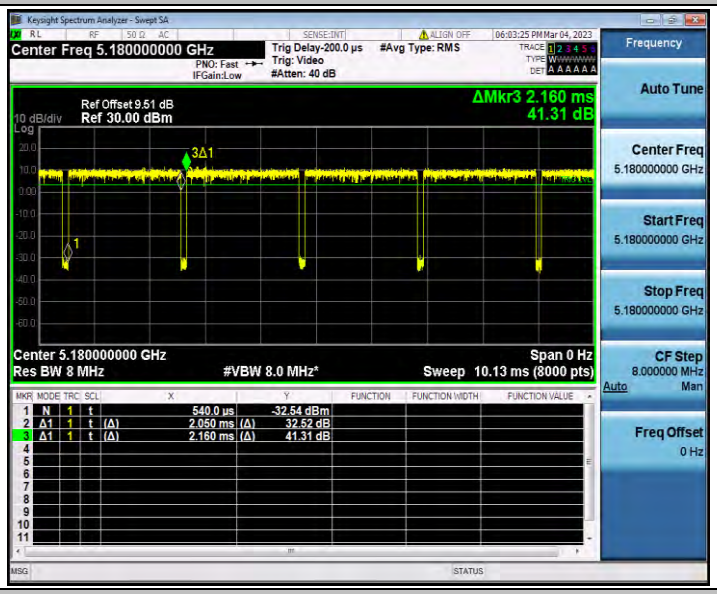
Appendix D.3: Duty Cycle

Test Result

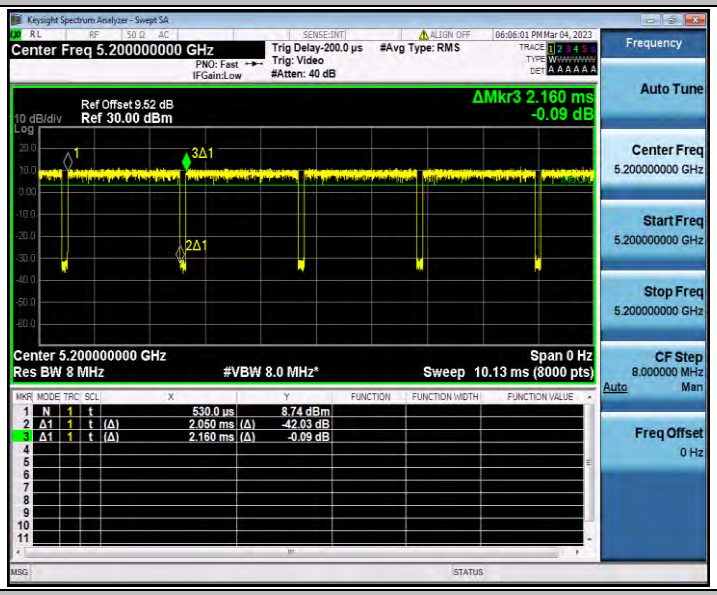
TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11A	Ant1	5180	2.05	2.16	94.91
		5200	2.05	2.16	94.91
		5240	2.05	2.16	94.91
11N20SISO	Ant1	5180	1.90	1.93	98.45
		5200	1.91	1.93	98.96
		5240	1.91	1.93	98.96
11N40SISO	Ant1	5190	0.93	0.96	96.88
		5230	0.93	0.96	96.88
11AC20SISO	Ant1	5180	1.91	1.94	98.45
		5200	1.92	1.94	98.97
		5240	1.92	1.94	98.97
11AC40SISO	Ant1	5190	0.94	0.97	96.91
		5230	0.95	0.97	97.94
11AC80SISO	Ant1	5210	0.46	0.48	95.83

Test Graphs

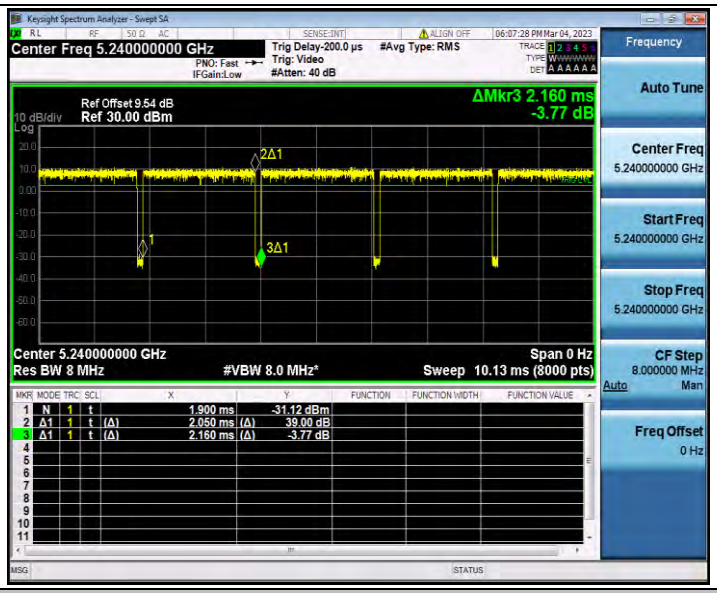
11A_Ant1_5180



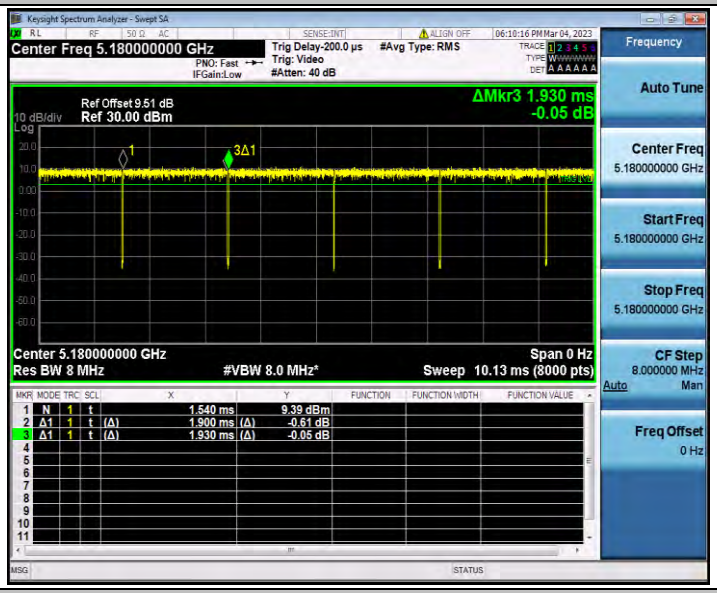
11A_Ant1_5200



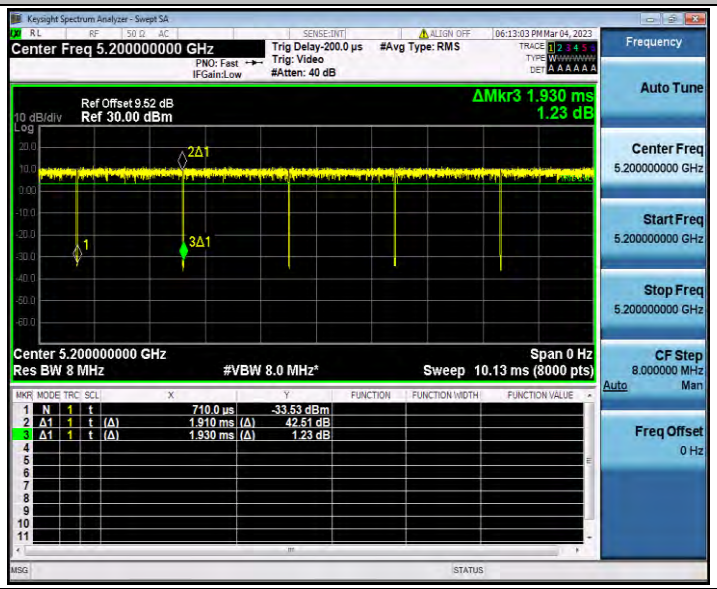
11A_Ant1_5240



11N20SISO_Ant1_5180



11N20SISO_Ant1_5200



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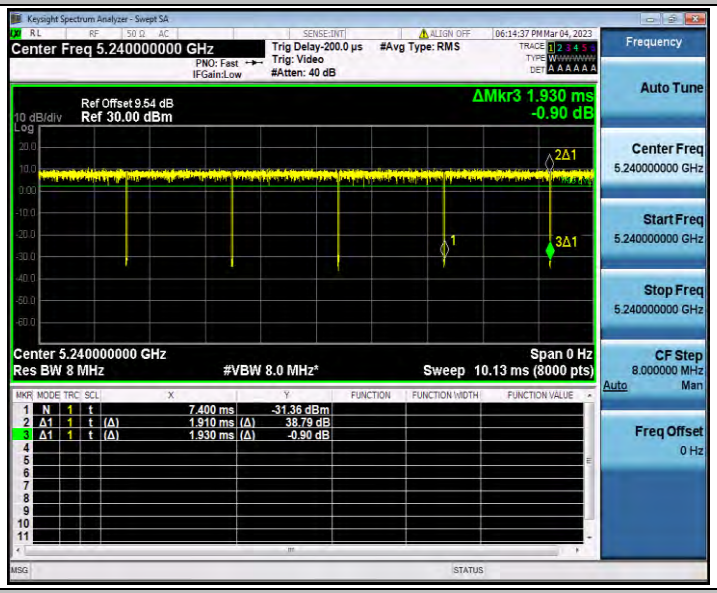
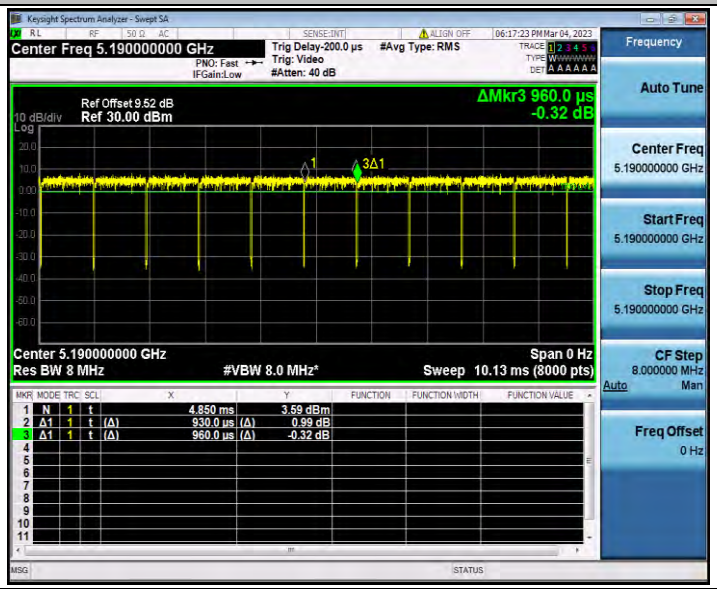
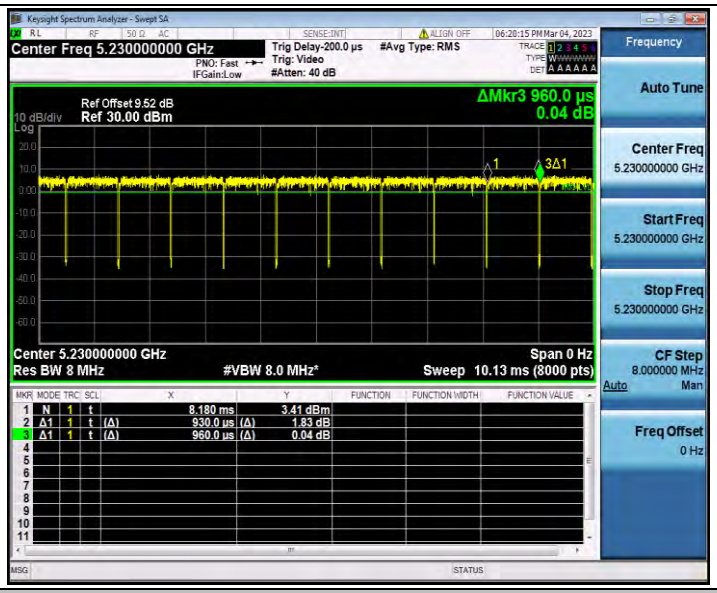


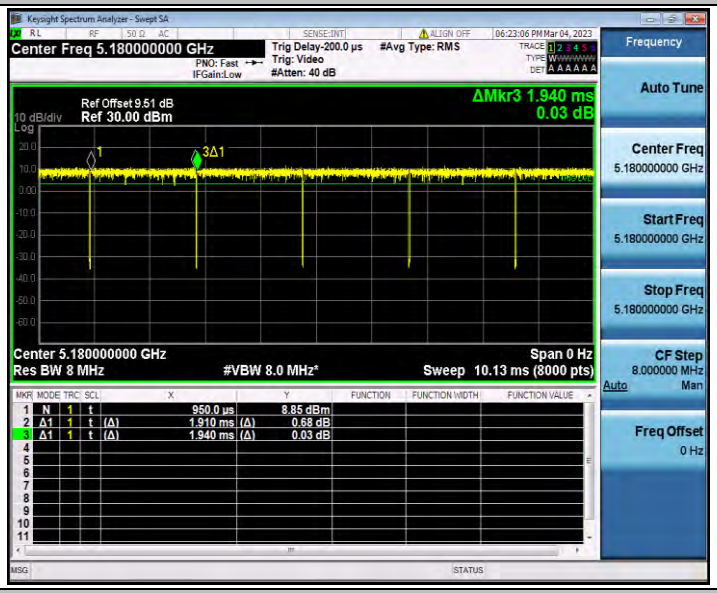
11N40SISO_Ant1_5190



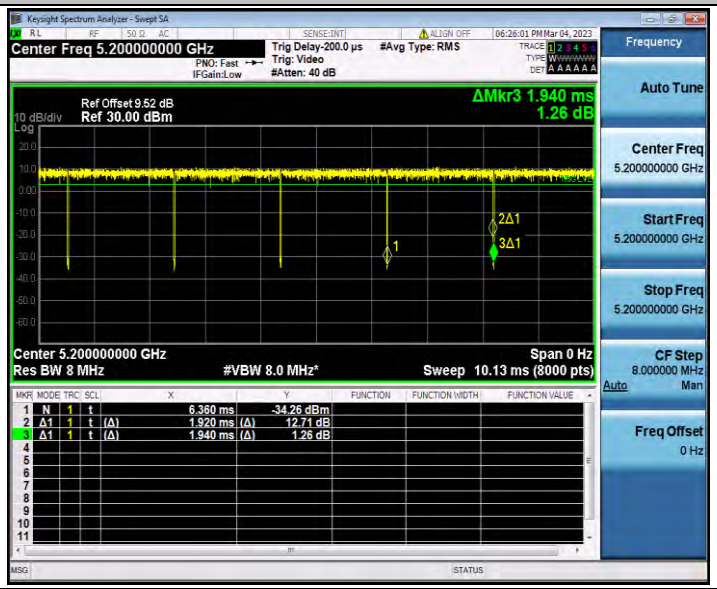
11N40SISO_Ant1_5230



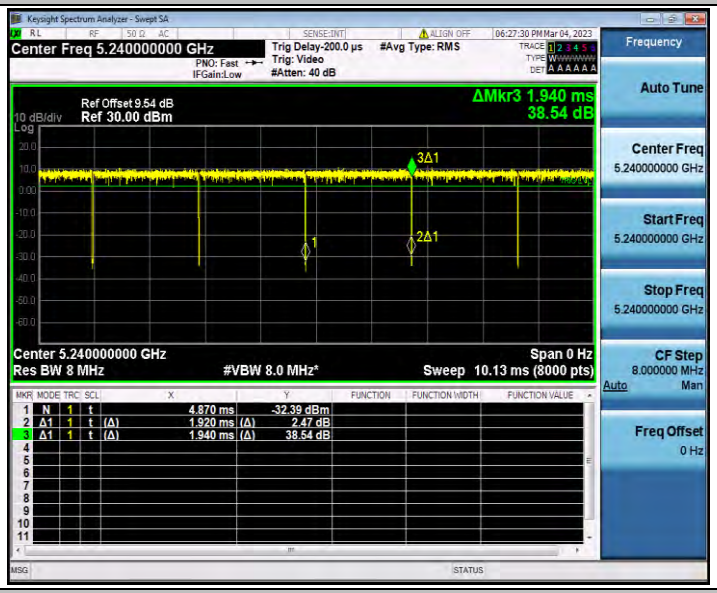
11AC20SISO_Ant1_5180



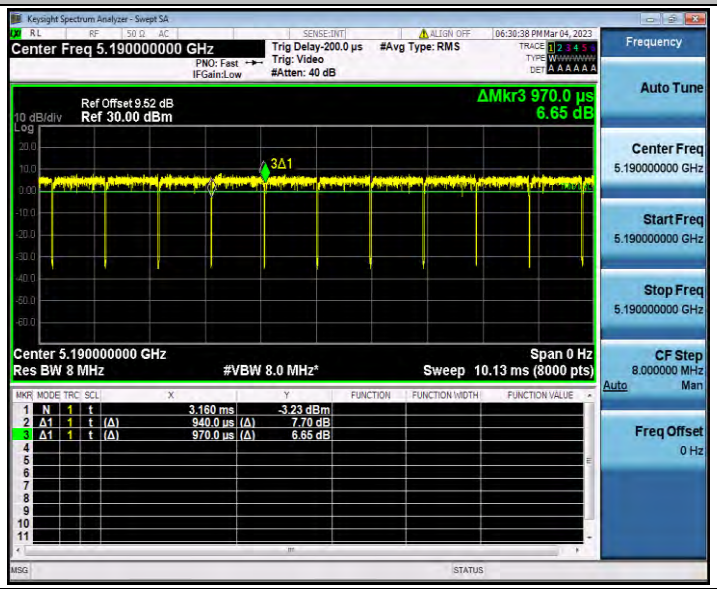
11AC20SISO_Ant1_5200



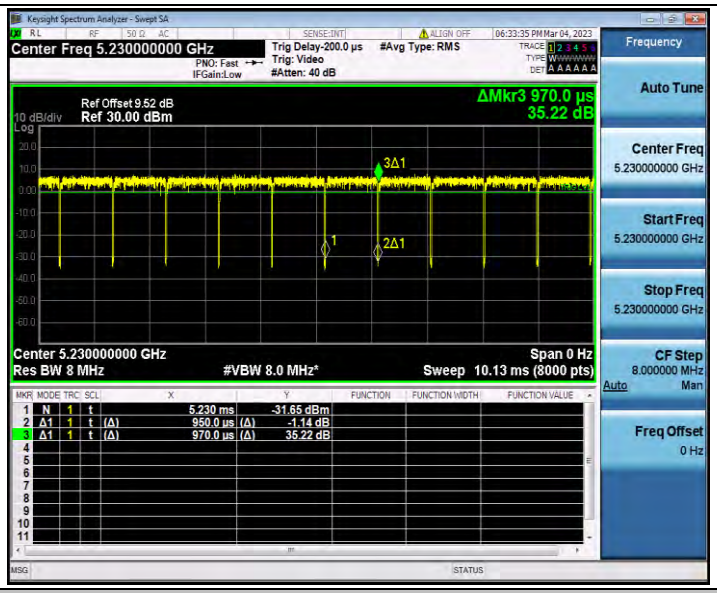
11AC20SISO_Ant1_5240



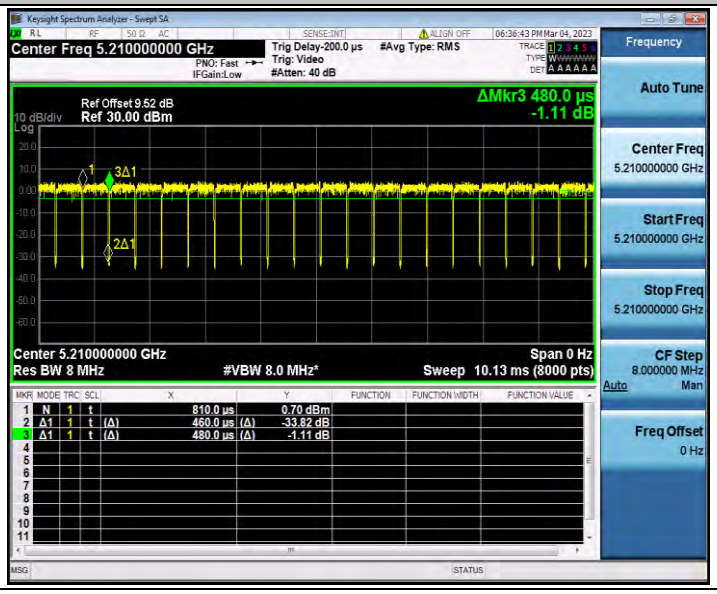
11AC40SISO_Ant1_5190



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	11.06	94.91	0.23	11.29	≤23.98	PASS
		5200	11.03	94.91	0.23	11.26	≤23.98	PASS
		5240	11.07	94.91	0.23	11.30	≤23.98	PASS
11N20SISO	Ant1	5180	11.37	98.45	0.07	11.44	≤23.98	PASS
		5200	11.43	98.96	0.05	11.48	≤23.98	PASS
		5240	10.47	98.96	0.05	10.52	≤23.98	PASS
11N40SISO	Ant1	5190	11.16	96.88	0.14	11.30	≤23.98	PASS
		5230	10.93	96.88	0.14	11.07	≤23.98	PASS
11AC20SISO	Ant1	5180	11.49	98.45	0.07	11.56	≤23.98	PASS
		5200	11.06	98.97	0.04	11.10	≤23.98	PASS
		5240	10.53	98.97	0.04	10.57	≤23.98	PASS
11AC40SISO	Ant1	5190	11.21	96.91	0.14	11.35	≤23.98	PASS
		5230	10.94	97.94	0.09	11.03	≤23.98	PASS
11AC80SISO	Ant1	5210	11.04	95.83	0.18	11.22	≤23.98	PASS

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

Appendix D.5: Maximum power spectral density

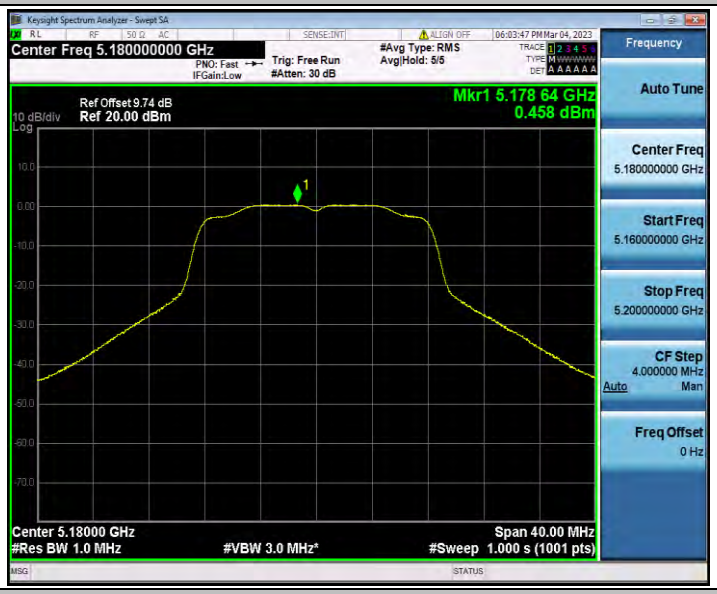
Test Result

TestMode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	0.46	≤11.00	PASS
		5200	0.43	≤11.00	PASS
		5240	0.42	≤11.00	PASS
11N20SISO	Ant1	5180	0.14	≤11.00	PASS
		5200	0.25	≤11.00	PASS
		5240	-0.59	≤11.00	PASS
11N40SISO	Ant1	5190	-3.14	≤11.00	PASS
		5230	-3.18	≤11.00	PASS
11AC20SISO	Ant1	5180	0.23	≤11.00	PASS
		5200	-0.07	≤11.00	PASS
		5240	-0.52	≤11.00	PASS
11AC40SISO	Ant1	5190	-3.09	≤11.00	PASS
		5230	-3.14	≤11.00	PASS
11AC80SISO	Ant1	5210	-5.99	≤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.

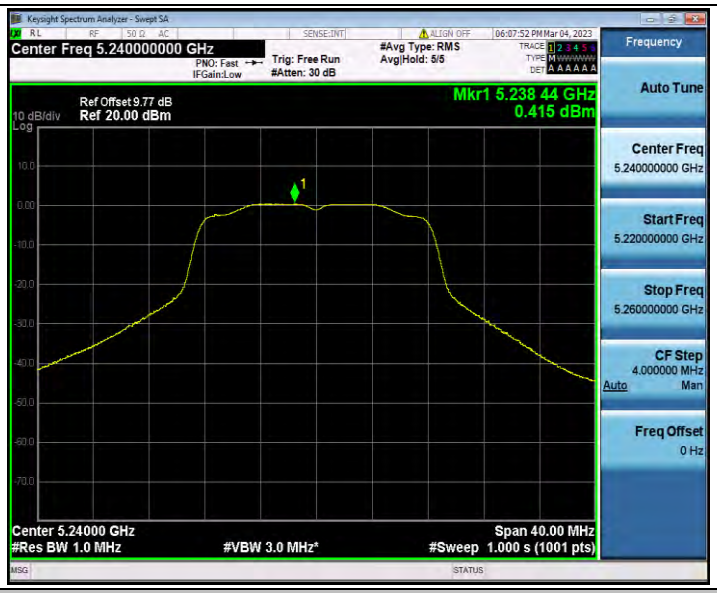
Test Graphs

11A_Ant1_5180



11A_Ant1_5200

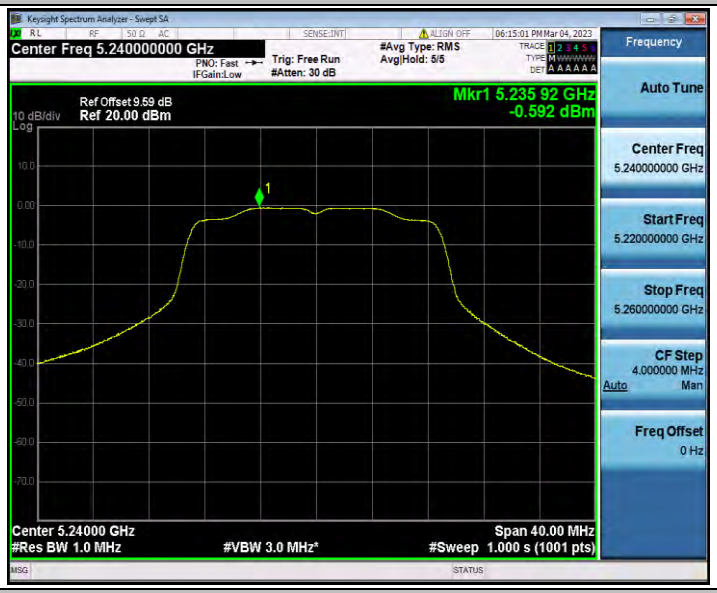
11A_Ant1_5240



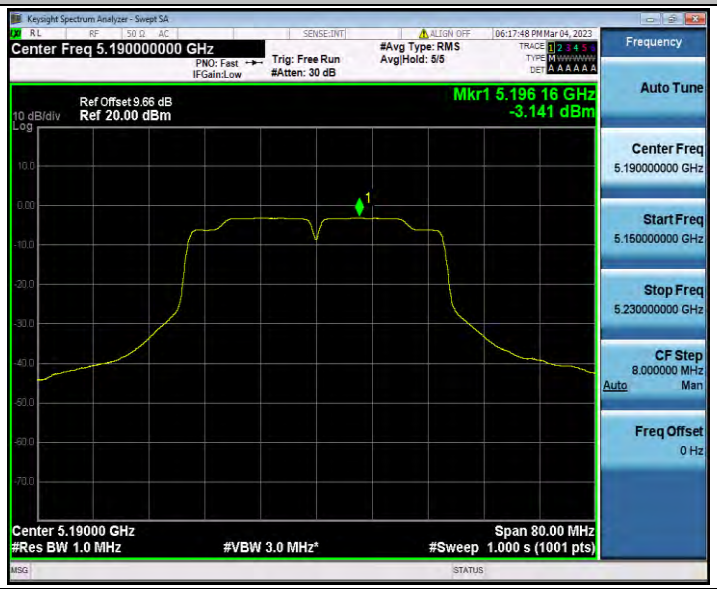
11N20SISO_Ant1_5180

11N20SISO_Ant1_5200

11N20SISO_Ant1_5240



11N40SISO_Ant1_5190



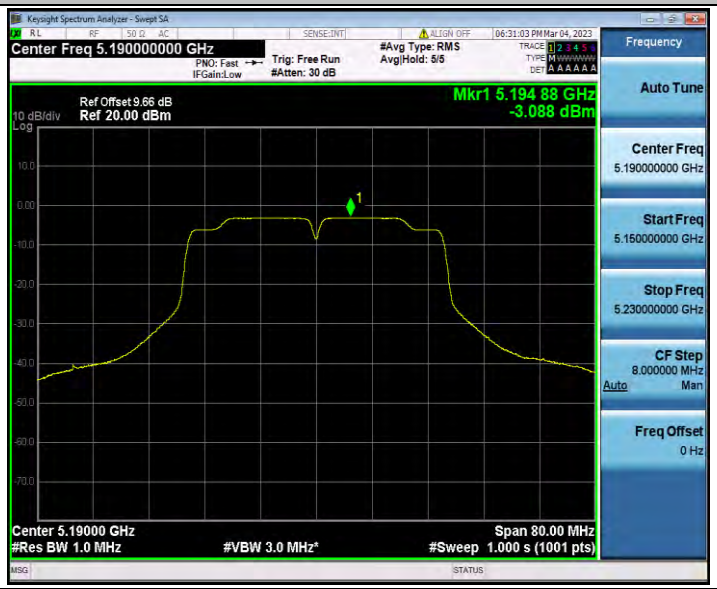
11N40SISO_Ant1_5230

11AC20SISO_Ant1_5180

11AC20SISO_Ant1_5200

11AC20SISO_Ant1_5240

11AC40SISO_Ant1_5190



11AC40SISO_Ant1_5230

11AC80SISO_Ant1_5210

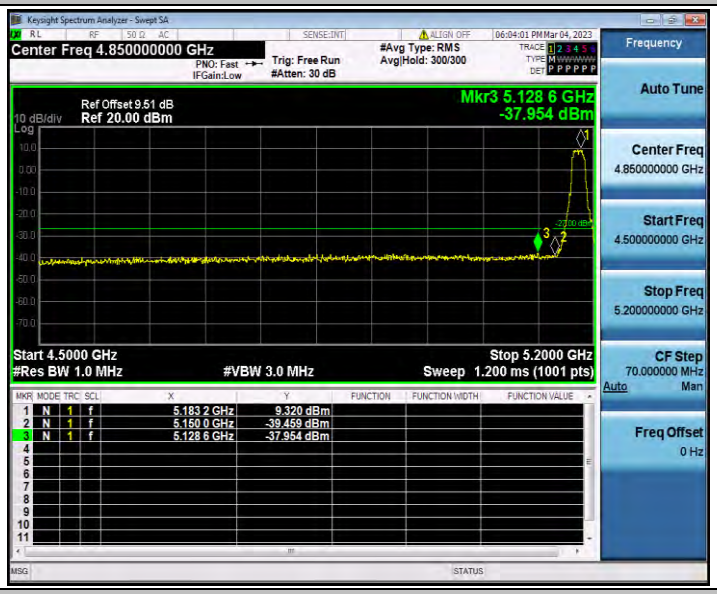
Appendix D.6: Band edge measurements

Test Result B1

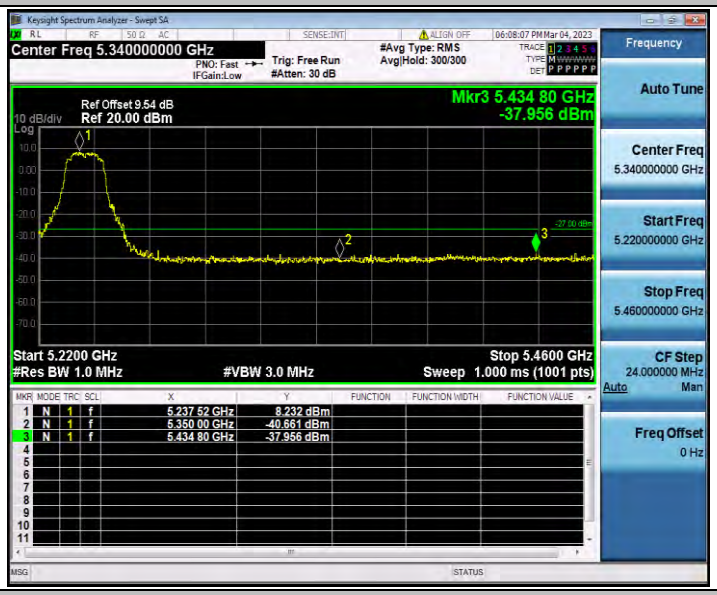
TestMode	Antenna	ChName	Frequency[MHz]	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	Low	5180	-37.95	≤-27	PASS
		High	5240	-37.96	≤-27	PASS
11N20SISO	Ant1	Low	5180	-37.39	≤-27	PASS
		High	5240	-37.41	≤-27	PASS
11N40SISO	Ant1	Low	5190	-32.51	≤-27	PASS
		High	5230	-37.89	≤-27	PASS
11AC20SISO	Ant1	Low	5180	-37.12	≤-27	PASS
		High	5240	-37.84	≤-27	PASS
11AC40SISO	Ant1	Low	5190	-34.4	≤-27	PASS
		High	5230	-37.47	≤-27	PASS
11AC80SISO	Ant1	Low	5210	-27.57	≤-27	PASS
		High	5210	-37.58	≤-27	PASS

Test Graphs B1

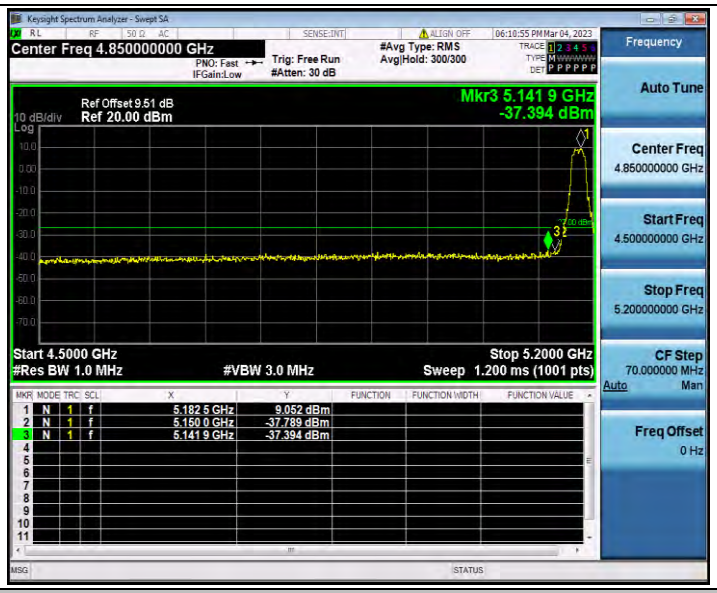
11A_Ant1_Low_5180



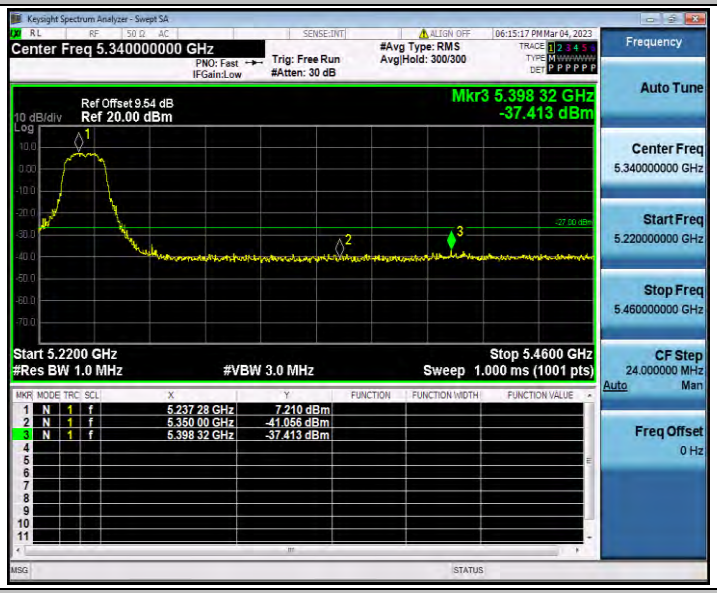
11A_Ant1_High_5240



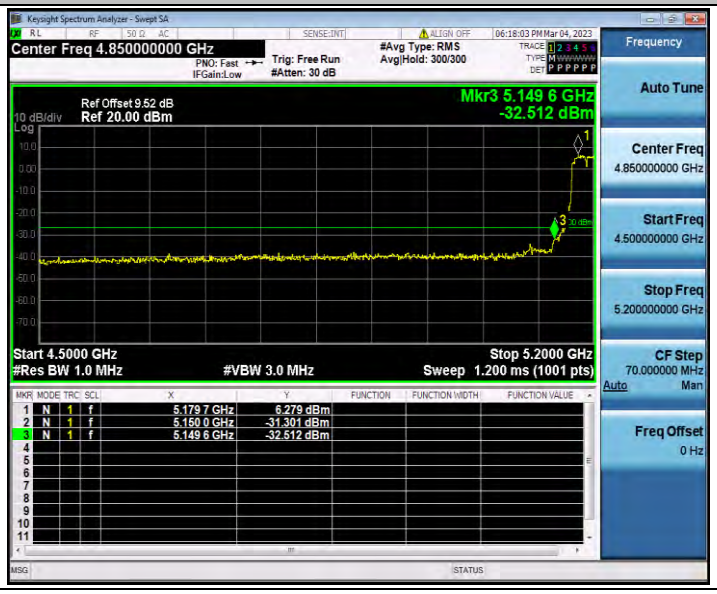
11N20SISO_Ant1_Low_5180



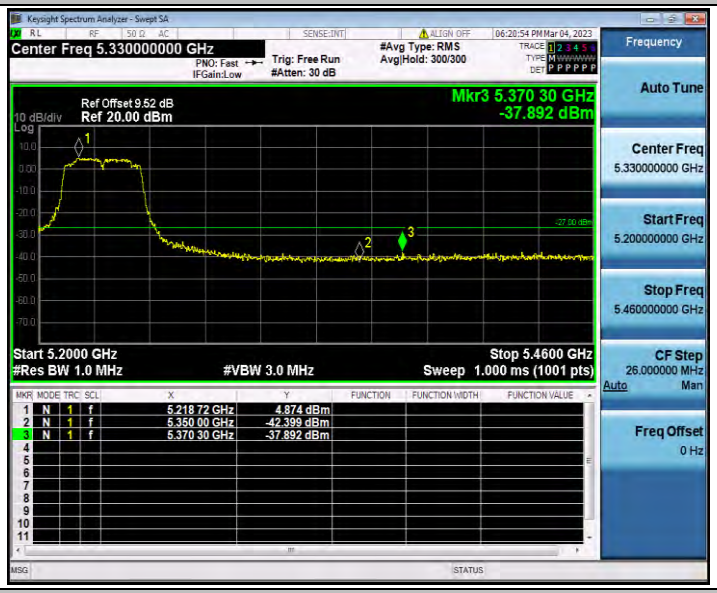
11N20SISO_Ant1_High_5240



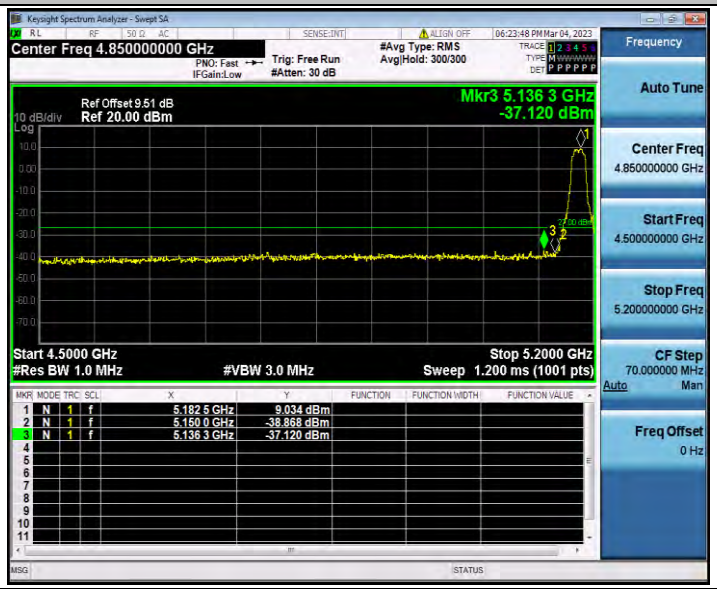
11N40SISO_Ant1_Low_5190



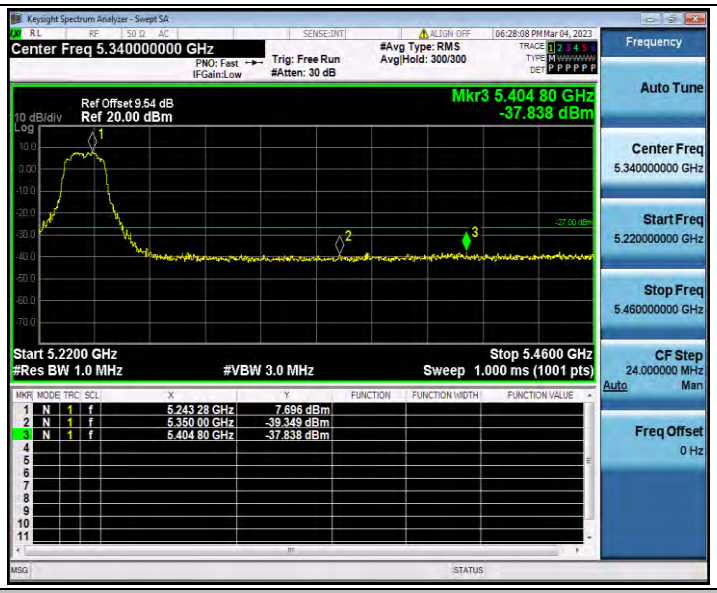
11N40SISO_Ant1_High_5230



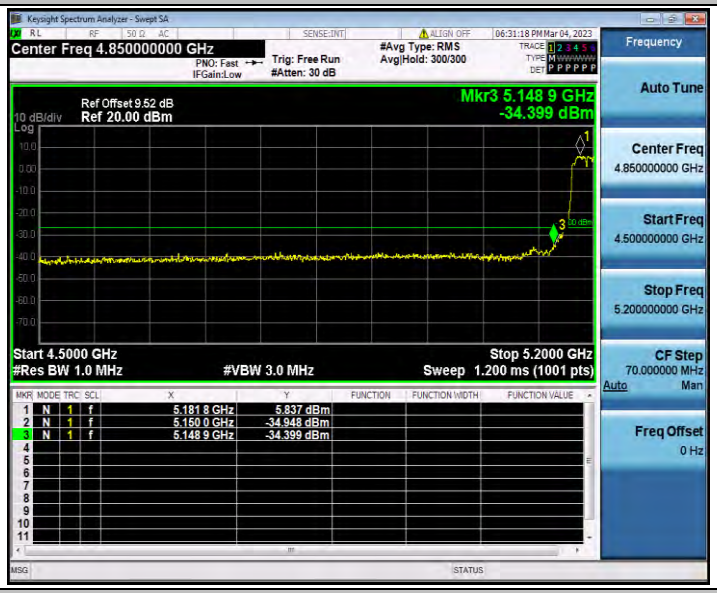
11AC20SISO_Ant1_Low_5180



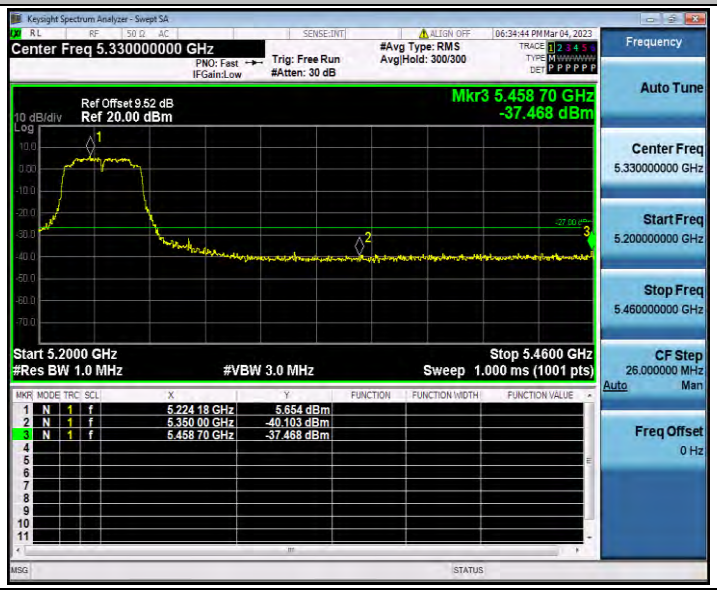
11AC20SISO_Ant1_High_5240



11AC40SISO_Ant1_Low_5190

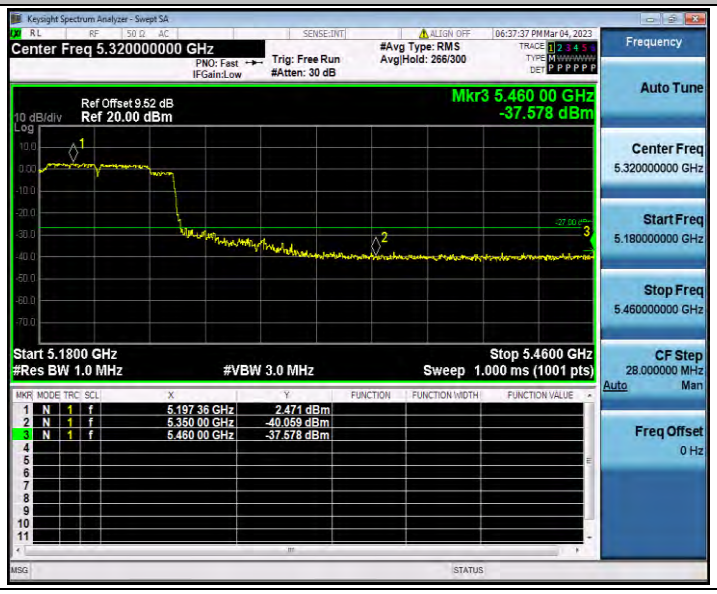


11AC40SISO_Ant1_High_5230



11AC80SISO_Ant1_Low_5210

11AC80SISO_Ant1_High_5210



Appendix D.7: Conducted Spurious Emission

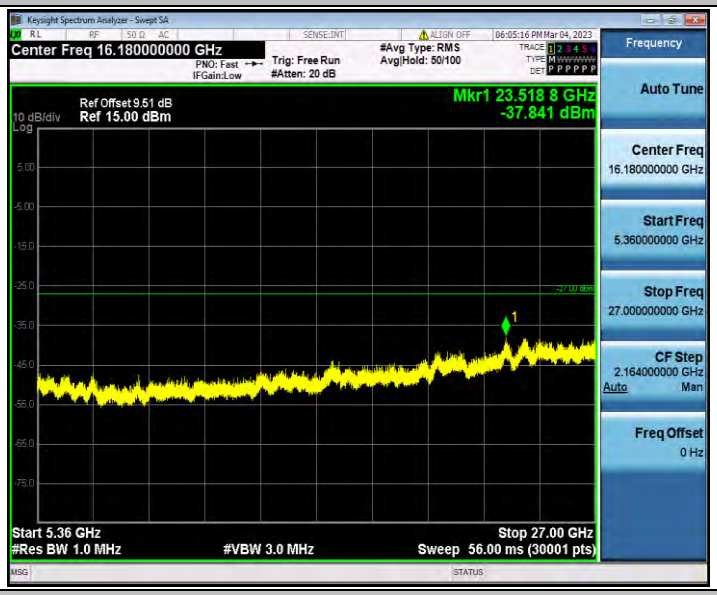
Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	Max. Fre [MHz]	Max. Level [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	30~5140	5138.47	-44.24	≤-27	PASS
			5360~40000	23518.85	-37.84	≤-27	PASS
		5200	30~5140	5136.08	-45	≤-27	PASS
			5360~40000	26007.45	-38.2	≤-27	PASS
		5240	30~5140	5080.21	-46.13	≤-27	PASS
			5360~40000	24272.64	-38.06	≤-27	PASS
11N20SISO	Ant1	5180	30~5140	5134.04	-43.65	≤-27	PASS
			5360~40000	23591.7	-37.45	≤-27	PASS
		5200	30~5140	5139.49	-45.21	≤-27	PASS
			5360~40000	23530.39	-38.25	≤-27	PASS
		5240	30~5140	5075.44	-47.1	≤-27	PASS
			5360~40000	24779.01	-38.56	≤-27	PASS
11N40SISO	Ant1	5190	30~5140	5139.49	-39.43	≤-27	PASS
			5360~40000	24212.05	-37.97	≤-27	PASS
		5230	30~5140	5131.99	-45.54	≤-27	PASS
			5360~40000	24745.83	-37.83	≤-27	PASS
11AC20SISO	Ant1	5180	30~5140	5127.91	-43.03	≤-27	PASS
			5360~40000	25553.01	-38.29	≤-27	PASS
		5200	30~5140	5131.99	-45.33	≤-27	PASS
			5360~40000	24760.98	-38.34	≤-27	PASS
		5240	30~5140	5075.1	-45.89	≤-27	PASS
			5360~40000	25695.11	-38.37	≤-27	PASS
11AC40SISO	Ant1	5190	30~5140	5123.31	-40.66	≤-27	PASS
			5360~40000	24848.26	-38.48	≤-27	PASS
		5230	30~5140	5139.66	-45.28	≤-27	PASS
			5360~40000	26542.67	-38.63	≤-27	PASS
11AC80SISO	Ant1	5210	30~5140	5130.46	-28.11	≤-27	PASS
			5360~40000	24823.02	-36.94	≤-27	PASS

Test Graphs

11A_Ant1_5180_30~5140

11A_Ant1_5180_5360~40000



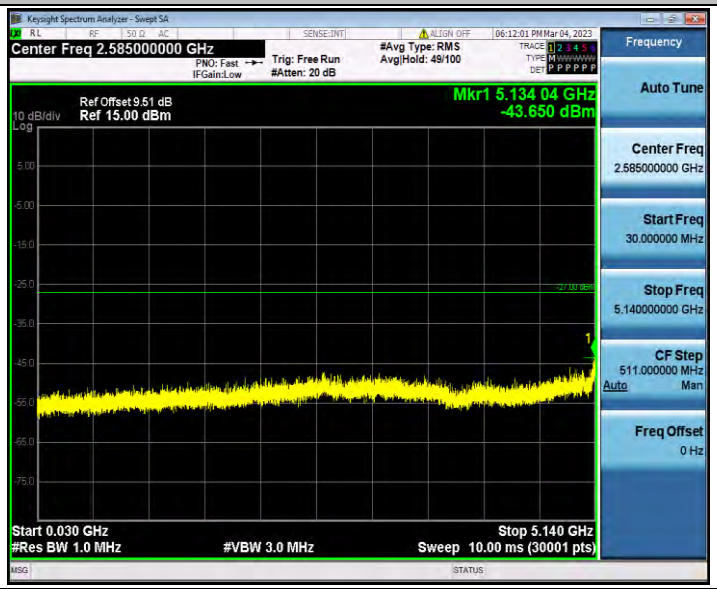
11A_Ant1_5200_30~5140

11A_Ant1_5200_5360~40000

11A_Ant1_5240_30~5140

11A_Ant1_5240_5360~40000

11N20SISO_Ant1_5180_30~5140



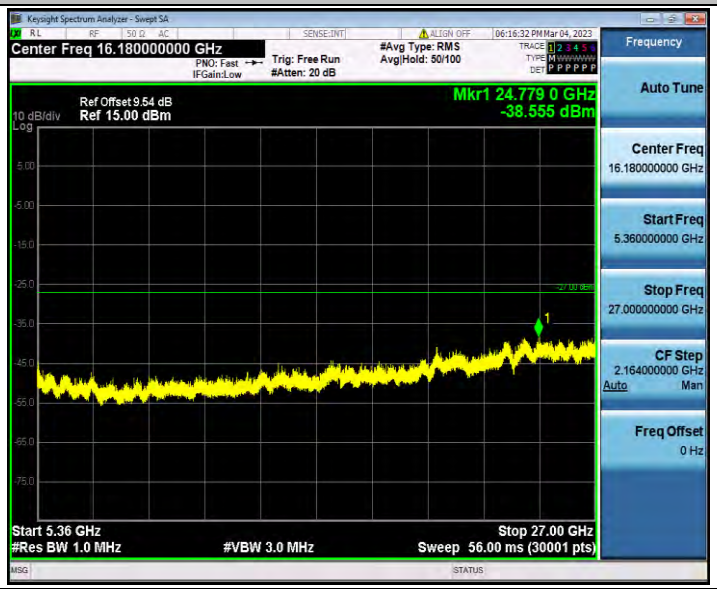
11N20SISO_Ant1_5180_5360~40000

11N20SISO_Ant1_5200_30~5140

11N20SISO_Ant1_5200_5360~40000

11N20SISO_Ant1_5240_30~5140

11N20SISO_Ant1_5240_5360~40000



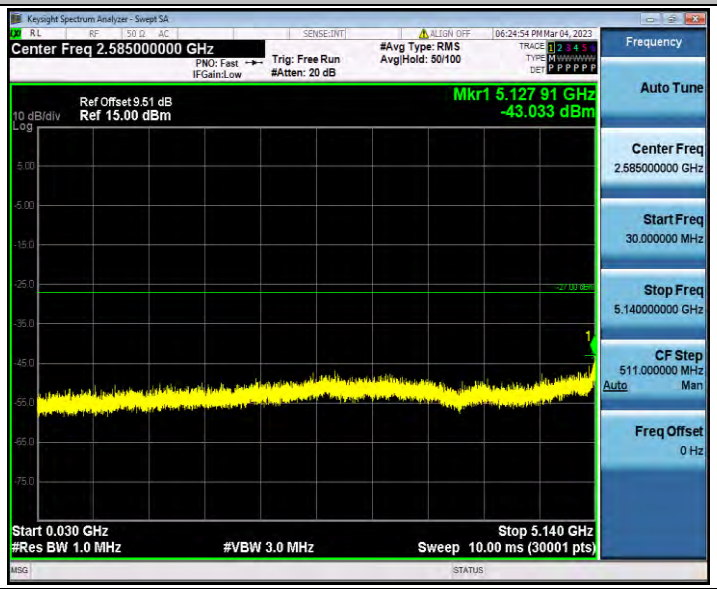
11N40SISO_Ant1_5190_30~5140

11N40SISO_Ant1_5190_5360~40000

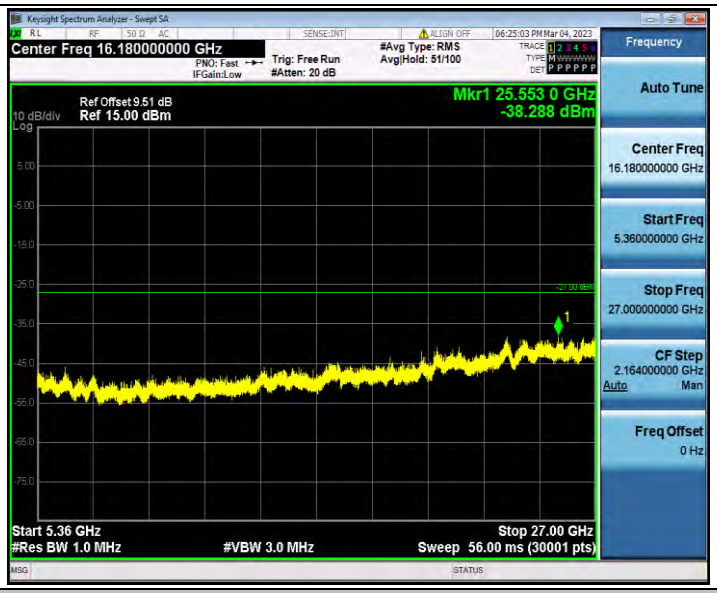
11N40SISO_Ant1_5230_30~5140

11N40SISO_Ant1_5230_5360~40000

11AC20SISO_Ant1_5180_30~5140



11AC20SISO_Ant1_5180_5360~40000

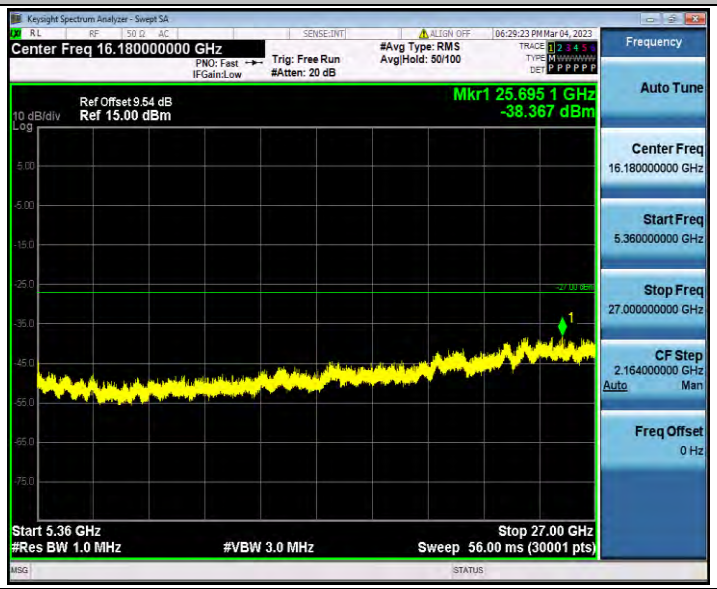


11AC20SISO_Ant1_5200_30~5140

11AC20SISO_Ant1_5200_5360~40000

11AC20SISO_Ant1_5240_30~5140

11AC20SISO_Ant1_5240_5360~40000



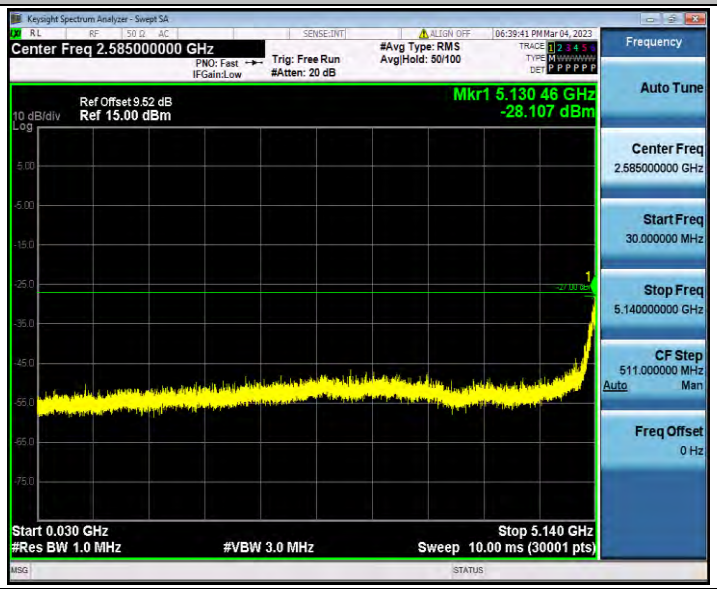
11AC40SISO_Ant1_5190_30~5140

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
RL
RF
50 Ω AC
SENSE:INT
ALIGN OFF
06:39:51 PM Mar 04, 2023
Center Freq 16.180000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
Avg|Hold: 50/100
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
Ref Offset 9.52 dB
10 dB/div
Ref 15.00 dBm
Log
Mkr1 24.823 0 GHz
-36.941 dBm
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