Case No. : GTS20221215006-1-4	
Ambient Condition: 25 ℃, 45 %RH, Atmos100.1Kpa,	
Test Date: 2022.12.28	**Test Engineer:** Jenny zeng

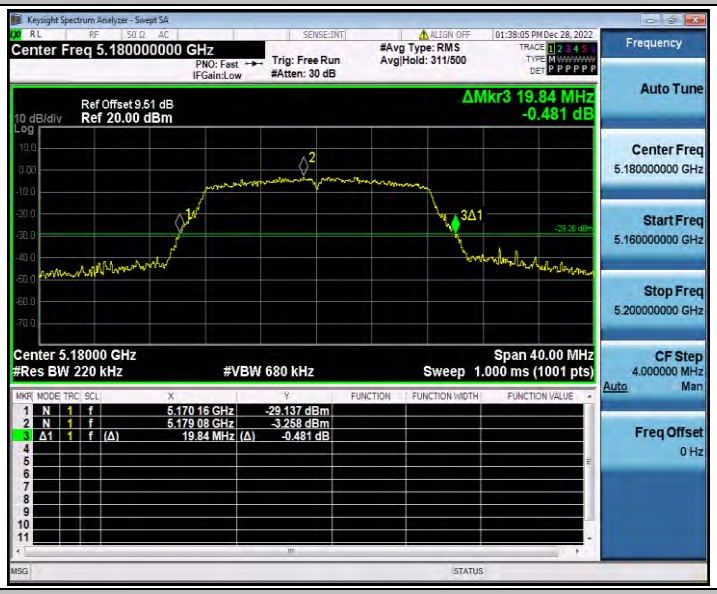
Appendix D.1: Emission Bandwidth

Test Result

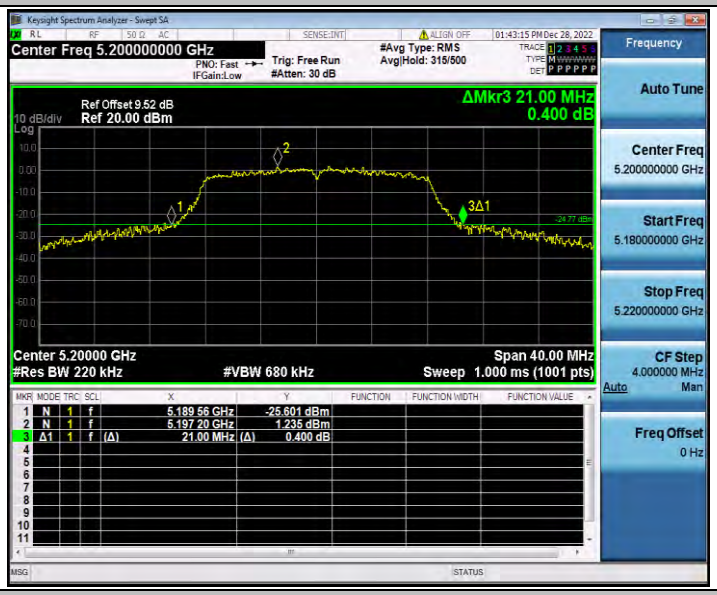
TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	19.840	5170.160	5190.000	---	---
		5200	21.000	5189.560	5210.560	---	---
		5240	23.840	5226.880	5250.720	---	---
11N20SISO	Ant1	5180	21.040	5169.600	5190.640	---	---
		5200	22.840	5188.160	5211.000	---	---
		5240	21.040	5229.600	5250.640	---	---
11N40SISO	Ant1	5190	41.680	5169.520	5211.200	---	---
		5230	43.600	5209.920	5253.520	---	---
11AC20SISO	Ant1	5180	21.520	5168.720	5190.240	---	---
		5200	25.760	5187.200	5212.960	---	---
		5240	23.560	5227.000	5250.560	---	---
11AC40SISO	Ant1	5190	42.400	5168.320	5210.720	---	---
		5230	44.480	5210.000	5254.480	---	---
11AC80SISO	Ant1	5210	137.120	5149.840	5286.960	---	---

Test Graphs

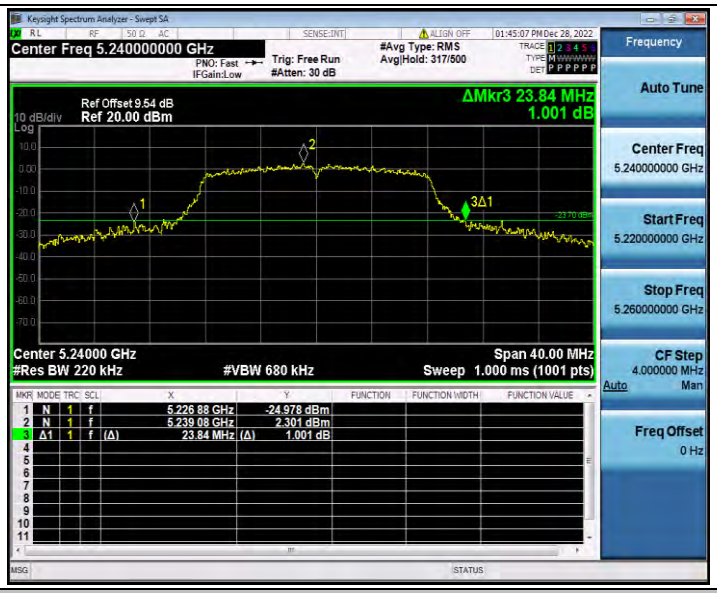
11A_Ant1_5180



11A_Ant1_5200



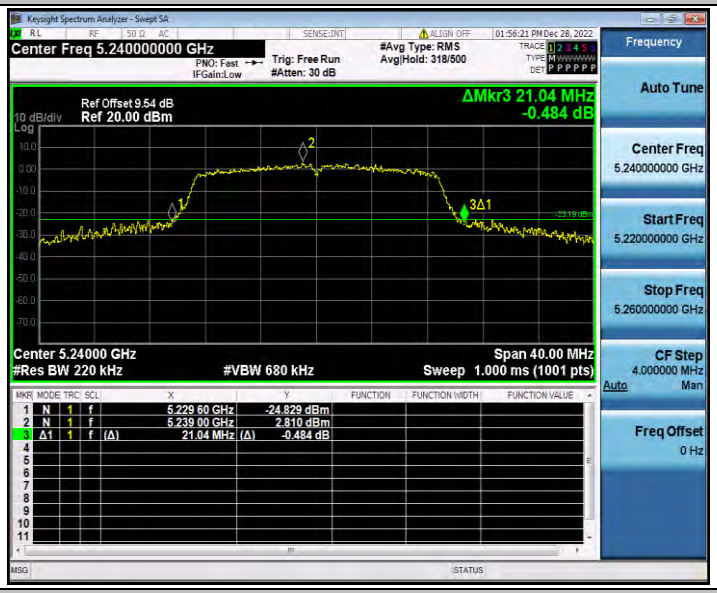
11A_Ant1_5240



11N20SISO_Ant1_5180

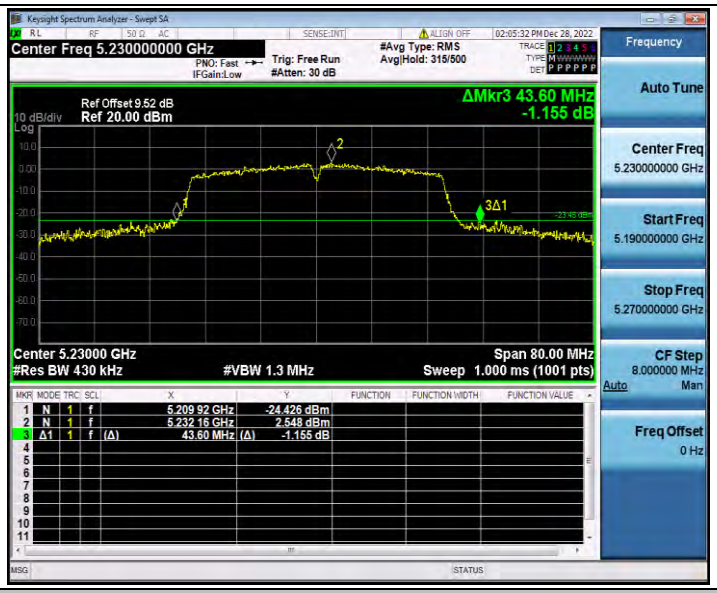
11N20SISO_Ant1_5200

11N20SISO_Ant1_5240



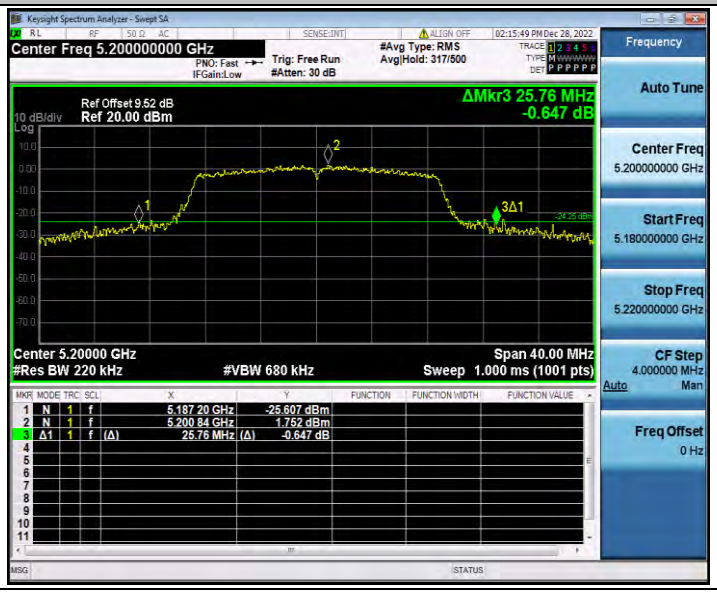
11N40SISO_Ant1_5190

11N40SISO_Ant1_5230



11AC20SISO_Ant1_5180

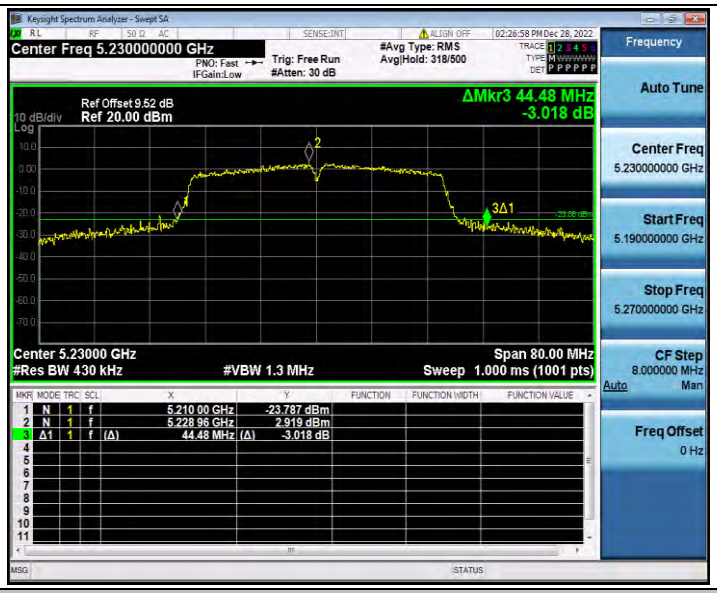
11AC20SISO_Ant1_5200



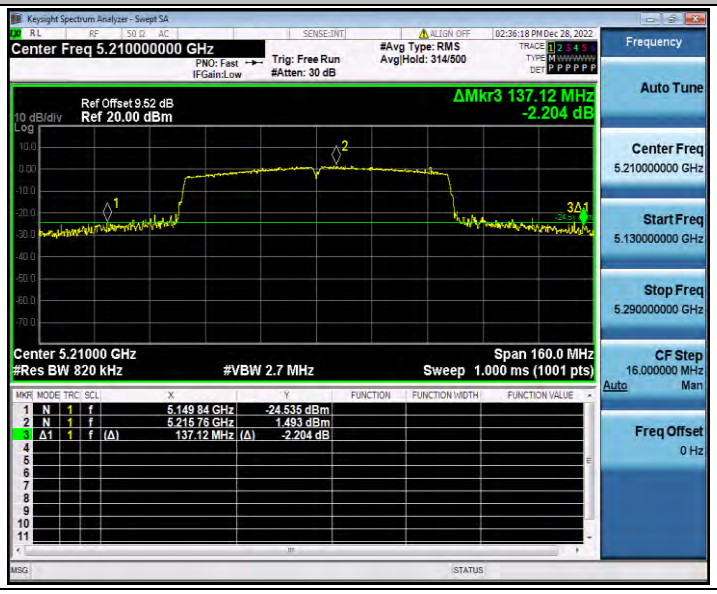
11AC20SISO_Ant1_5240

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	16.899	5171.628	5188.527	---	---
		5200	17.186	5191.485	5208.671	---	---
		5240	17.184	5231.451	5248.635	---	---
11N20SISO	Ant1	5180	18.084	5171.032	5189.116	---	---
		5200	18.097	5191.005	5209.102	---	---
		5240	18.027	5231.050	5249.077	---	---
11N40SISO	Ant1	5190	36.560	5171.841	5208.401	---	---
		5230	36.474	5211.872	5248.346	---	---
11AC20SISO	Ant1	5180	18.069	5171.045	5189.114	---	---
		5200	18.078	5191.029	5209.107	---	---
		5240	18.061	5231.040	5249.101	---	---
11AC40SISO	Ant1	5190	36.704	5171.705	5208.409	---	---
		5230	36.597	5211.815	5248.412	---	---
11AC80SISO	Ant1	5210	75.697	5172.369	5248.066	---	---

Test Graphs

11A_Ant1_5180

11A_Ant1_5200

11A_Ant1_5240

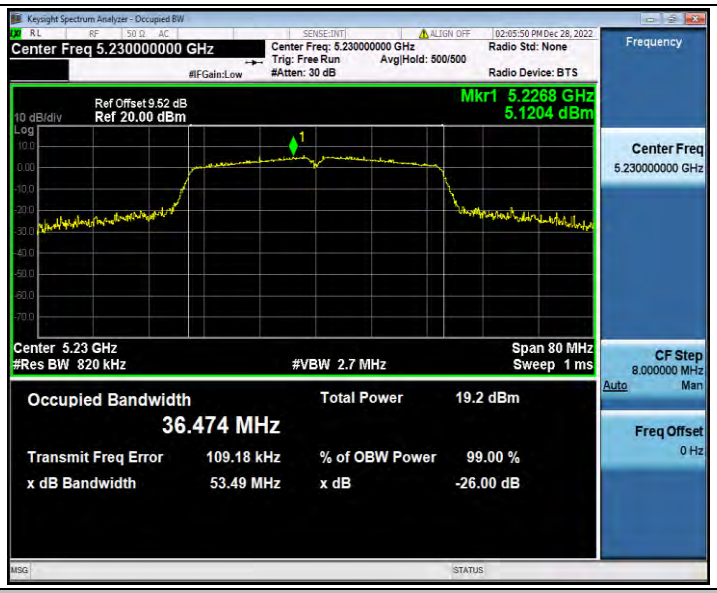
11N20SISO_Ant1_5180

11N20SISO_Ant1_5200

11N20SISO_Ant1_5240

11N40SISO_Ant1_5190

11N40SISO_Ant1_5230



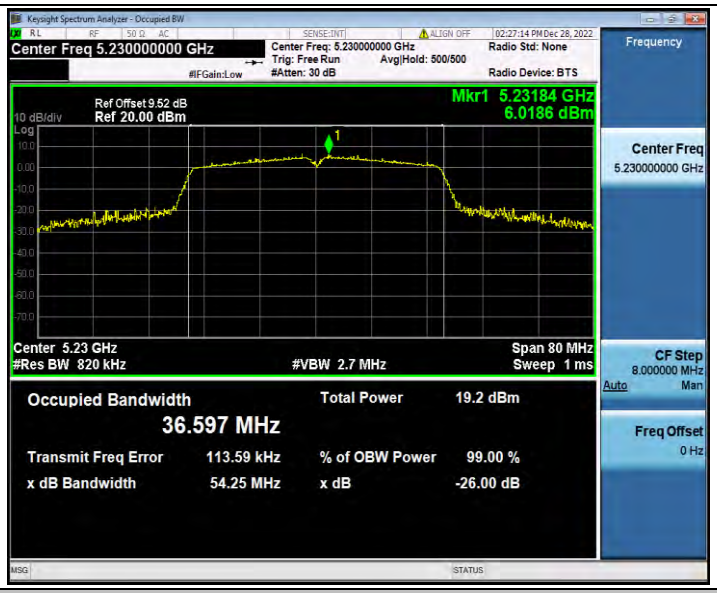
11AC20SISO_Ant1_5180

11AC20SISO_Ant1_5200

11AC20SISO_Ant1_5240

11AC40SISO_Ant1_5190

11AC40SISO_Ant1_5230



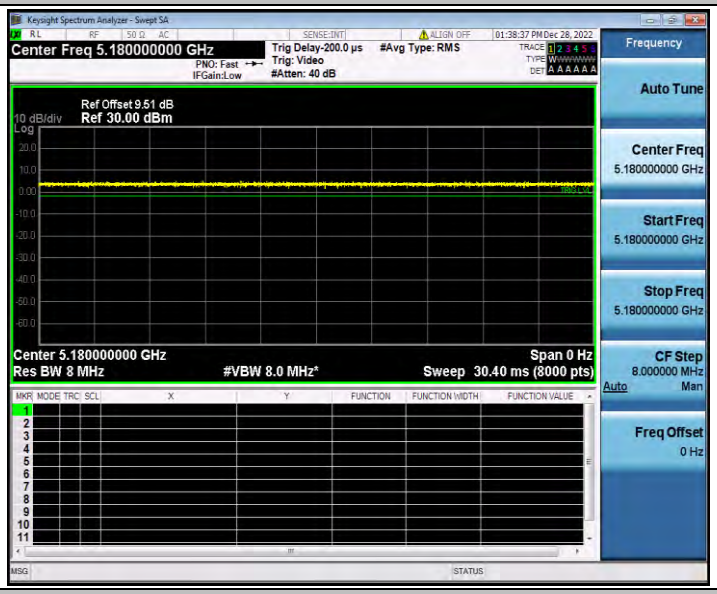
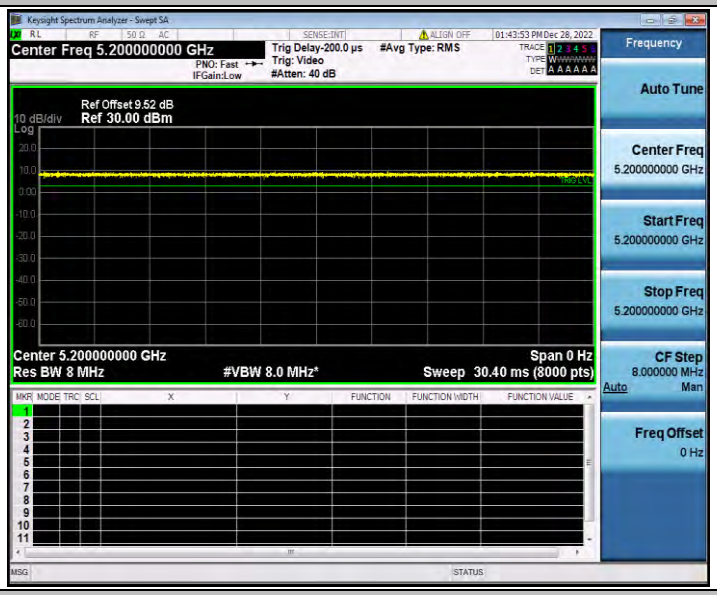
11AC80SISO_Ant1_5210

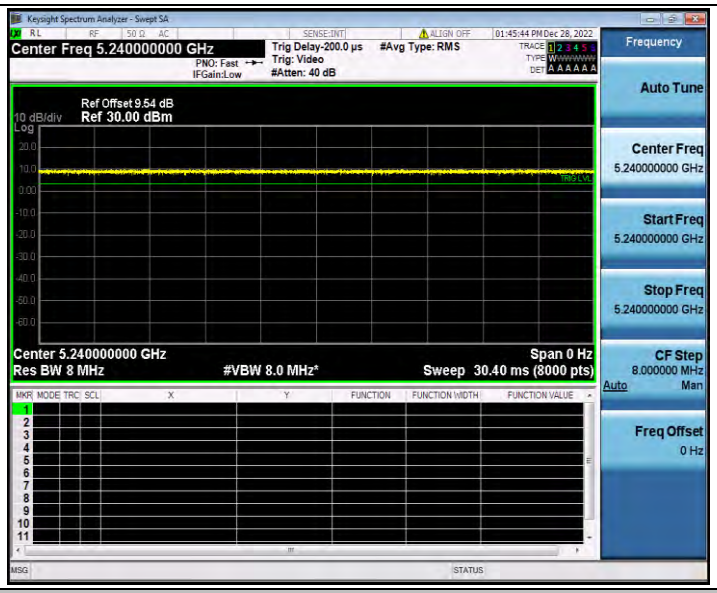
Appendix D.3: Duty Cycle

Test Result

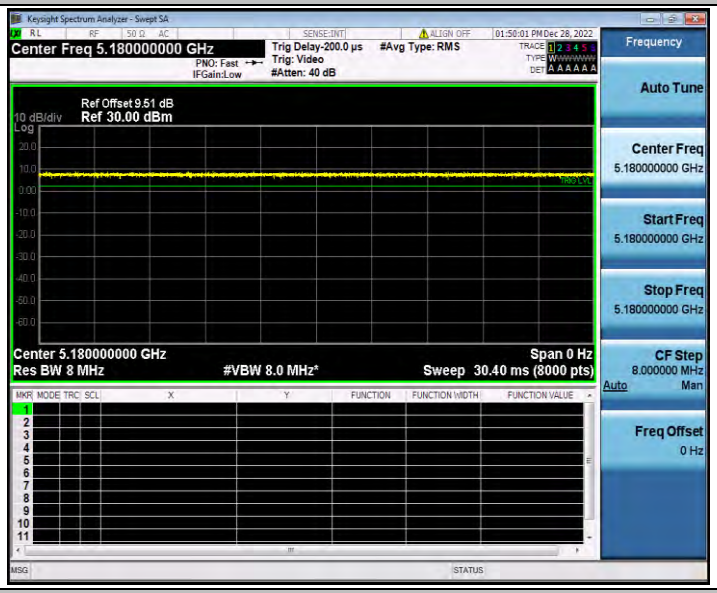
TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11A	Ant1	5180	30.00	30.00	100.00
		5200	30.00	30.00	100.00
		5240	30.00	30.00	100.00
11N20SISO	Ant1	5180	30.00	30.00	100.00
		5200	30.00	30.00	100.00
		5240	30.00	30.00	100.00
11N40SISO	Ant1	5190	30.00	30.00	100.00
		5230	30.00	30.00	100.00
11AC20SISO	Ant1	5180	30.00	30.00	100.00
		5200	30.00	30.00	100.00
		5240	30.00	30.00	100.00
11AC40SISO	Ant1	5190	30.00	30.00	100.00
		5230	30.00	30.00	100.00
11AC80SISO	Ant1	5210	30.00	30.00	100.00

Test Graphs

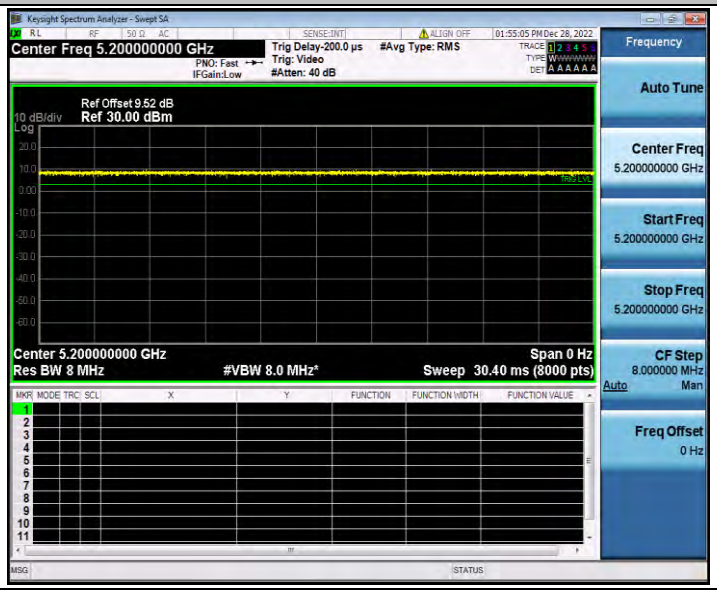
11A_Ant1_5180

11A_Ant1_5200

11A_Ant1_5240

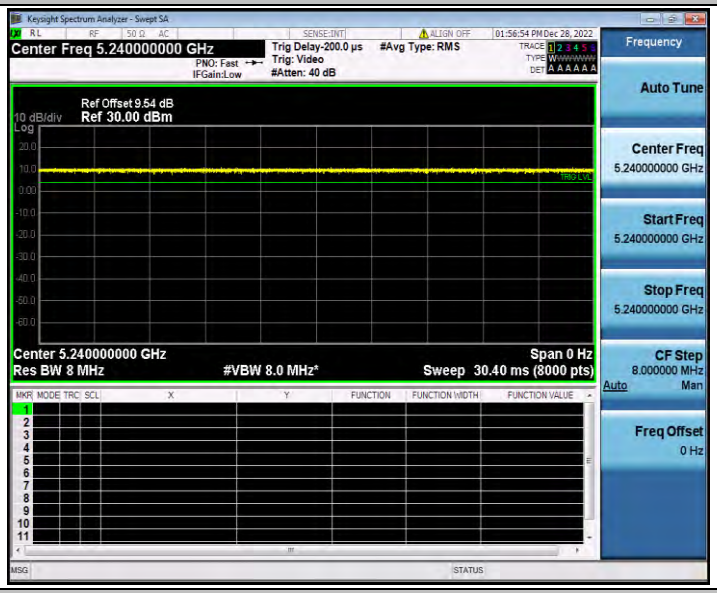
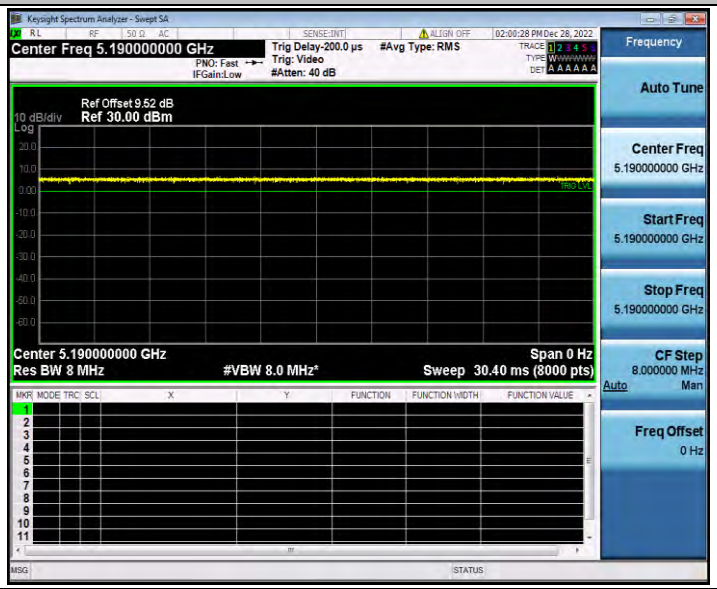


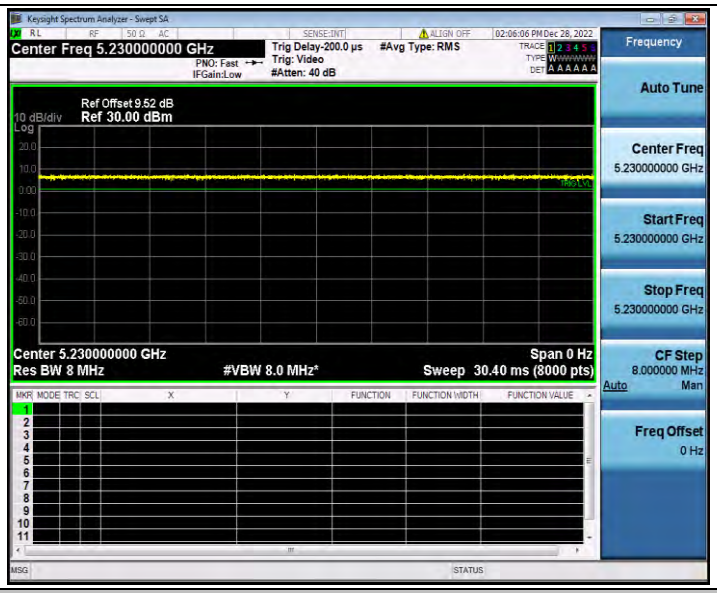
11N20SISO_Ant1_5180



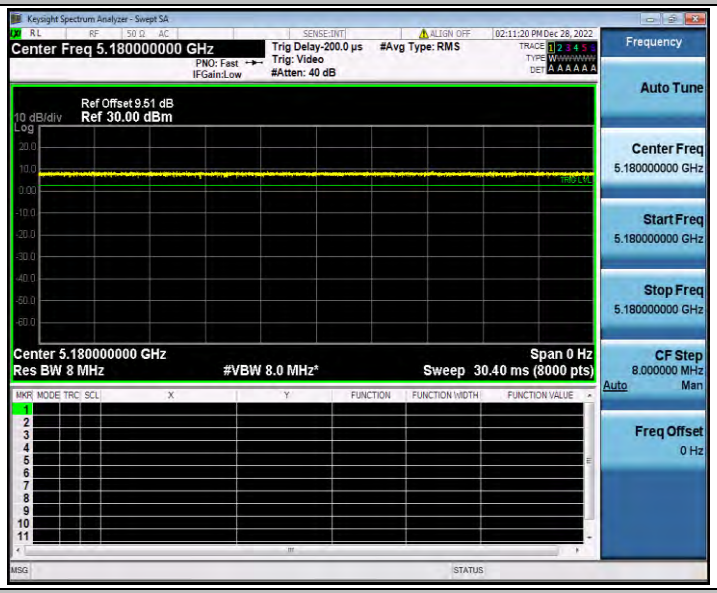
11N20SISO_Ant1_5200



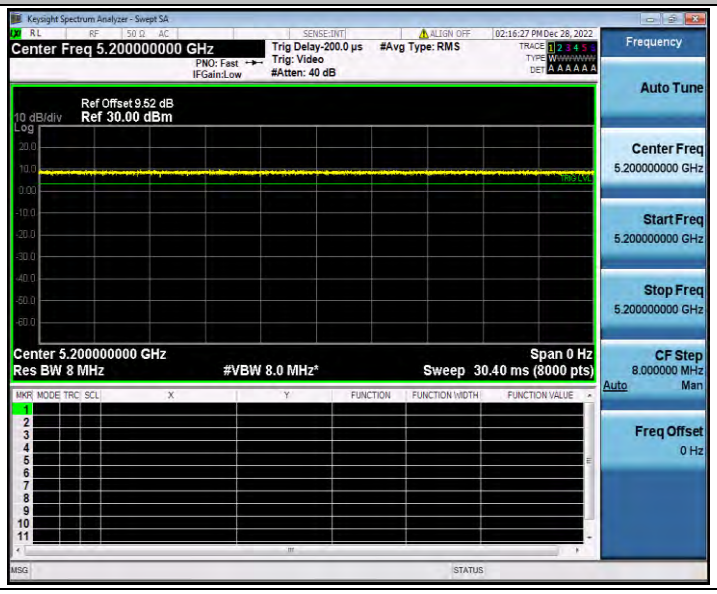
11N20SISO_Ant1_5240

11N40SISO_Ant1_5190

11N40SISO_Ant1_5230

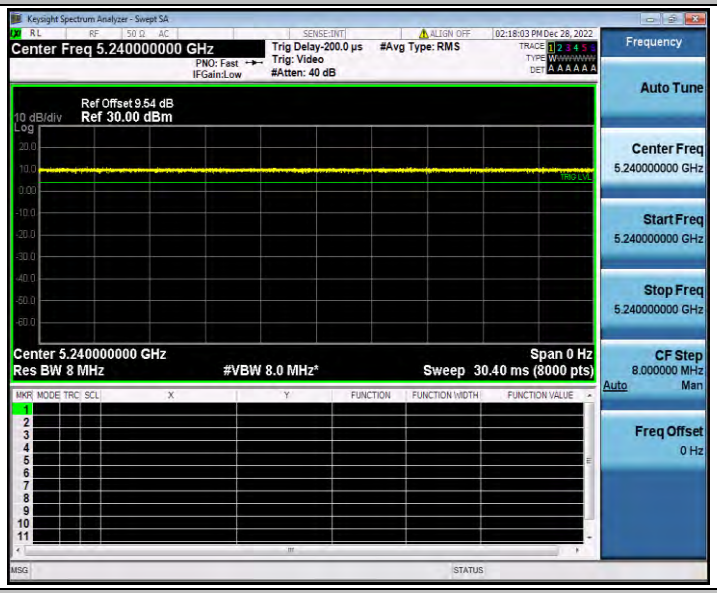
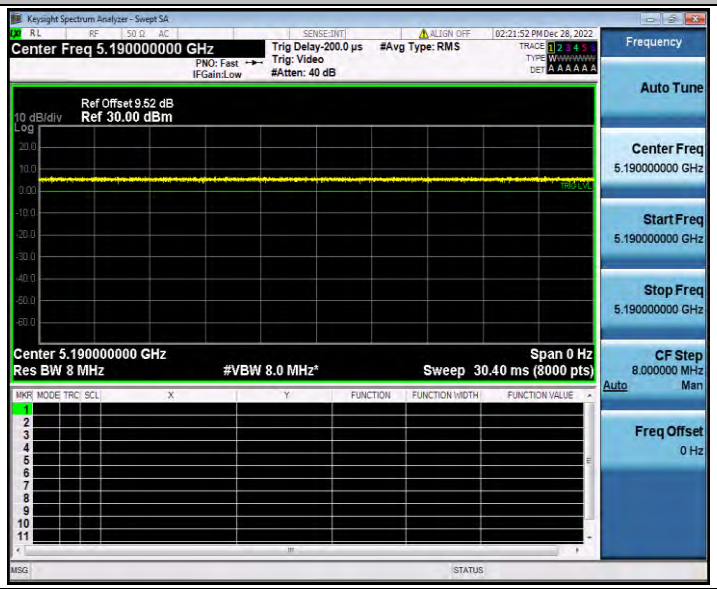


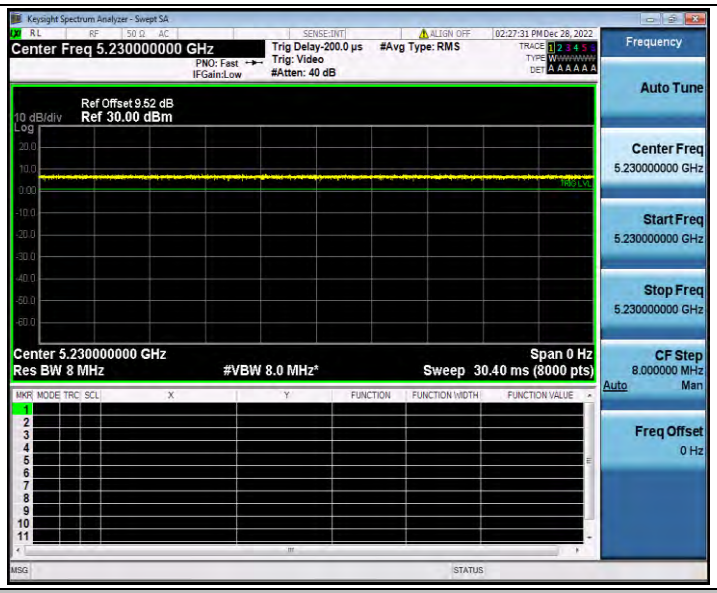
11AC20SISO_Ant1_5180



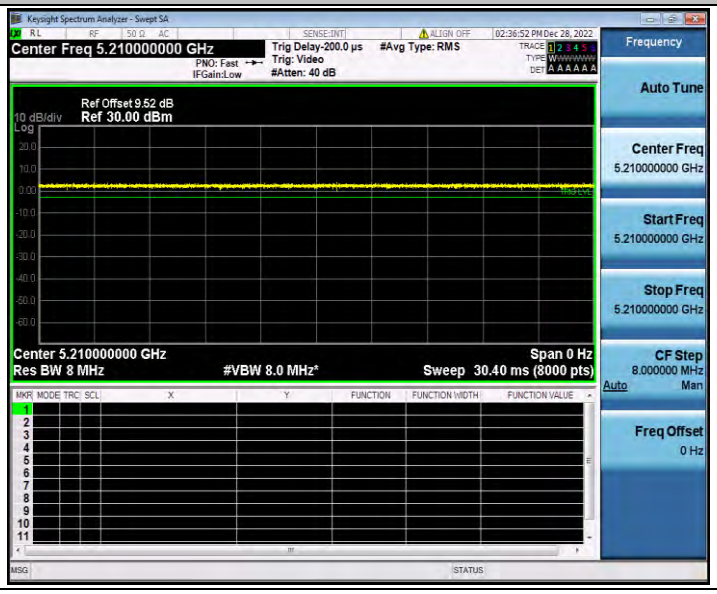
11AC20SISO_Ant1_5200



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	7.16	100.00	0.00	7.16	≤23.98	PASS
		5200	7.66	100.00	0.00	7.66	≤23.98	PASS
		5240	7.35	100.00	0.00	7.35	≤23.98	PASS
11N20SISO	Ant1	5180	7.25	100.00	0.00	7.25	≤23.98	PASS
		5200	7.05	100.00	0.00	7.05	≤23.98	PASS
		5240	7.04	100.00	0.00	7.04	≤23.98	PASS
11N40SISO	Ant1	5190	7.87	100.00	0.00	7.87	≤23.98	PASS
		5230	7.77	100.00	0.00	7.77	≤23.98	PASS
11AC20SISO	Ant1	5180	7.55	100.00	0.00	7.55	≤23.98	PASS
		5200	7.22	100.00	0.00	7.22	≤23.98	PASS
		5240	7.13	100.00	0.00	7.13	≤23.98	PASS
11AC40SISO	Ant1	5190	7.89	100.00	0.00	7.89	≤23.98	PASS
		5230	7.85	100.00	0.00	7.85	≤23.98	PASS
11AC80SISO	Ant1	5210	7.24	100.00	0.00	7.24	≤23.98	PASS

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

Appendix D.5: Maximum power spectral density

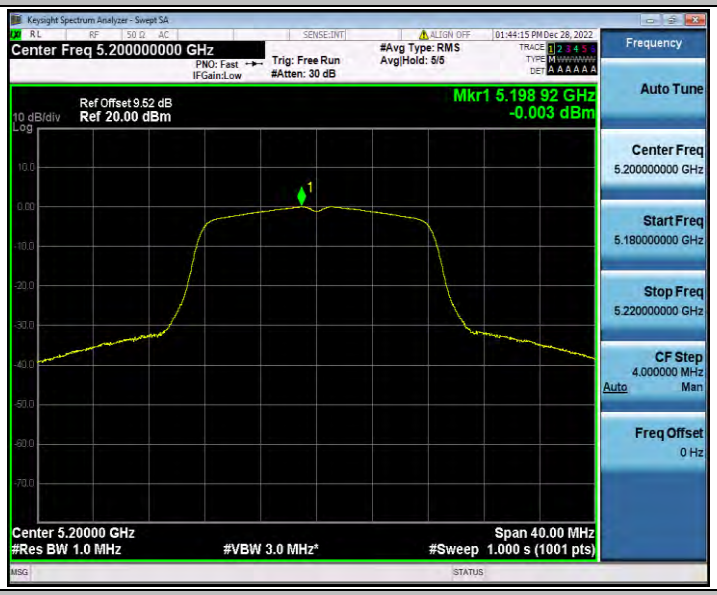
Test Result

TestMode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	-4.48	≤11.00	PASS
		5200	0	≤11.00	PASS
		5240	0.81	≤11.00	PASS
11N20SISO	Ant1	5180	-0.57	≤11.00	PASS
		5200	0.23	≤11.00	PASS
		5240	1.35	≤11.00	PASS
11N40SISO	Ant1	5190	-2.62	≤11.00	PASS
		5230	-1.52	≤11.00	PASS
11AC20SISO	Ant1	5180	-0.25	≤11.00	PASS
		5200	0.39	≤11.00	PASS
		5240	1.41	≤11.00	PASS
11AC40SISO	Ant1	5190	-2.58	≤11.00	PASS
		5230	-1.48	≤11.00	PASS
11AC80SISO	Ant1	5210	-5.59	≤11.00	PASS

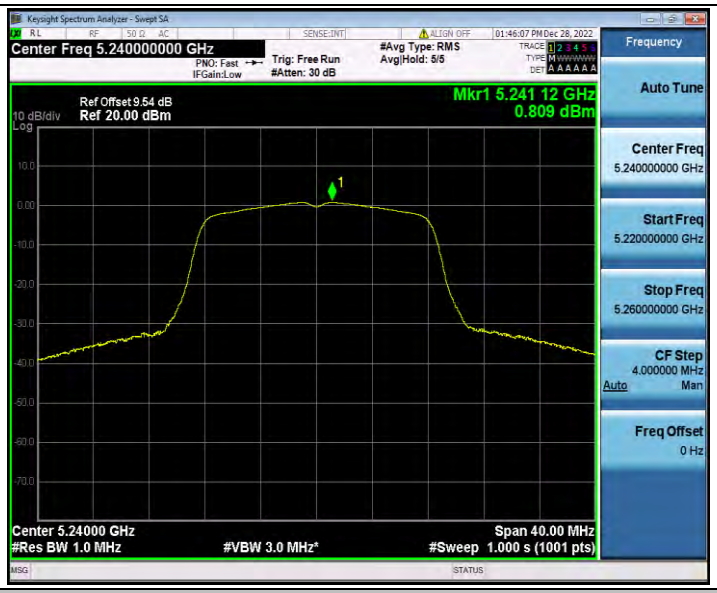
Note：1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

Test Graphs

11A_Ant1_5180

11A_Ant1_5200


11A_Ant1_5240



11N20SISO_Ant1_5180

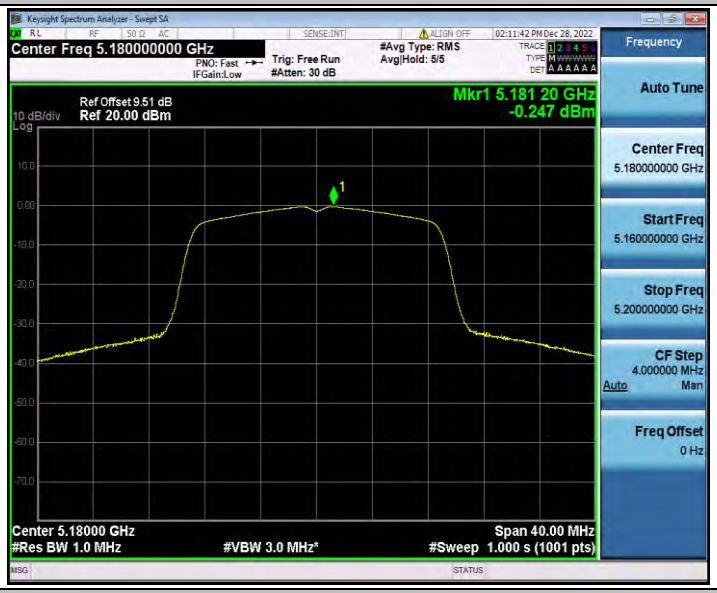
11N20SISO_Ant1_5200

11N20SISO_Ant1_5240

11N40SISO_Ant1_5190

11N40SISO_Ant1_5230

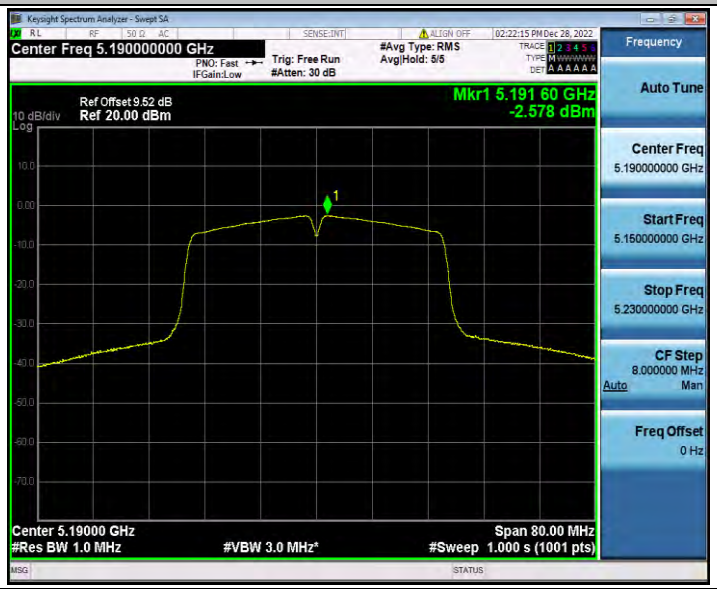
11AC20SISO_Ant1_5180



11AC20SISO_Ant1_5200

11AC20SISO_Ant1_5240

11AC40SISO_Ant1_5190



11AC40SISO_Ant1_5230

11AC80SISO_Ant1_5210

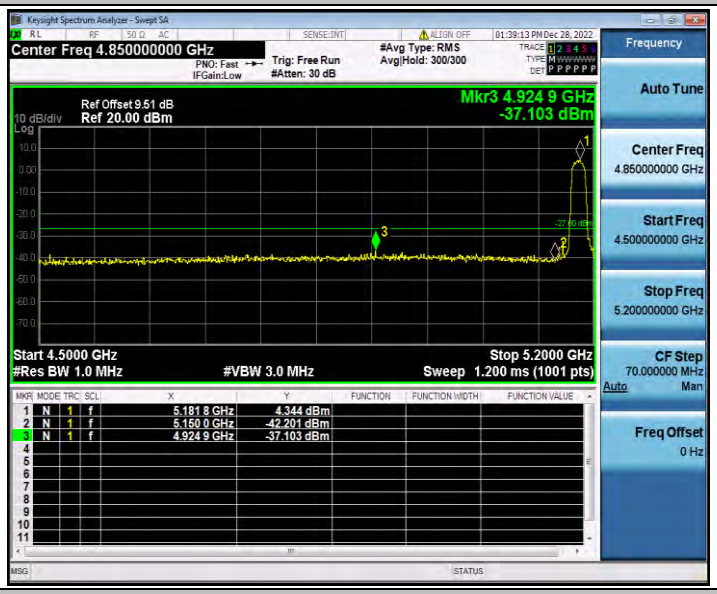
Appendix D.6: Band edge measurements

Test Result B1

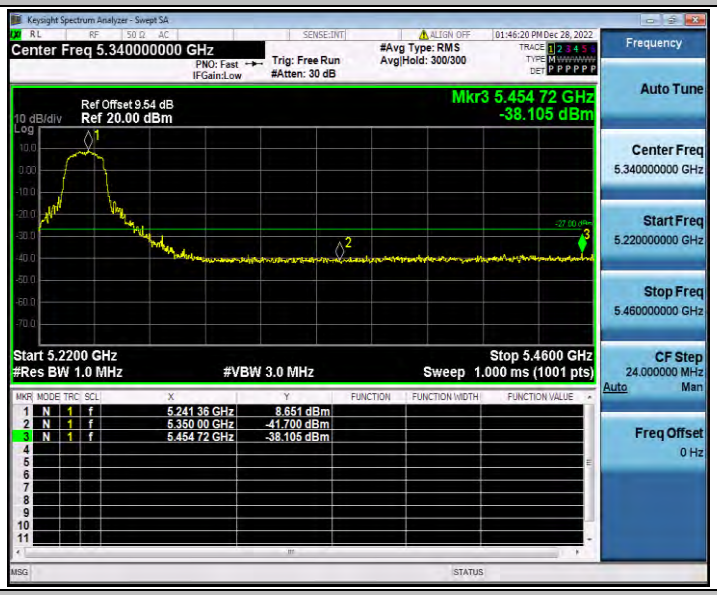
TestMode	Antenna	ChName	Frequency[MHz]	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	Low	5180	-37.1	≤-27	PASS
		High	5240	-38.11	≤-27	PASS
11N20SISO	Ant1	Low	5180	-34.62	≤-27	PASS
		High	5240	-38.19	≤-27	PASS
11N40SISO	Ant1	Low	5190	-37.73	≤-27	PASS
		High	5230	-37.5	≤-27	PASS
11AC20SISO	Ant1	Low	5180	-33.73	≤-27	PASS
		High	5240	-38.31	≤-27	PASS
11AC40SISO	Ant1	Low	5190	-29.36	≤-27	PASS
		High	5230	-37.53	≤-27	PASS
11AC80SISO	Ant1	Low	5210	-29.55	≤-27	PASS
		High	5210	-36.99	≤-27	PASS

Test Graphs B1

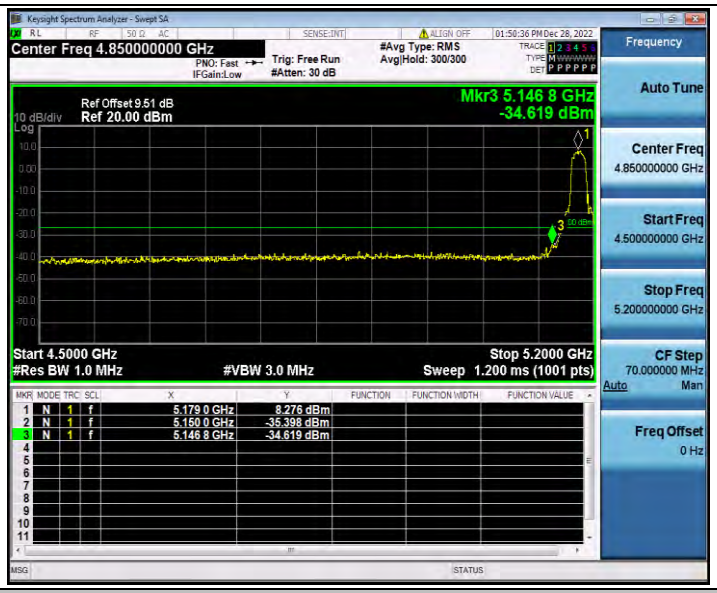
11A_Ant1_Low_5180



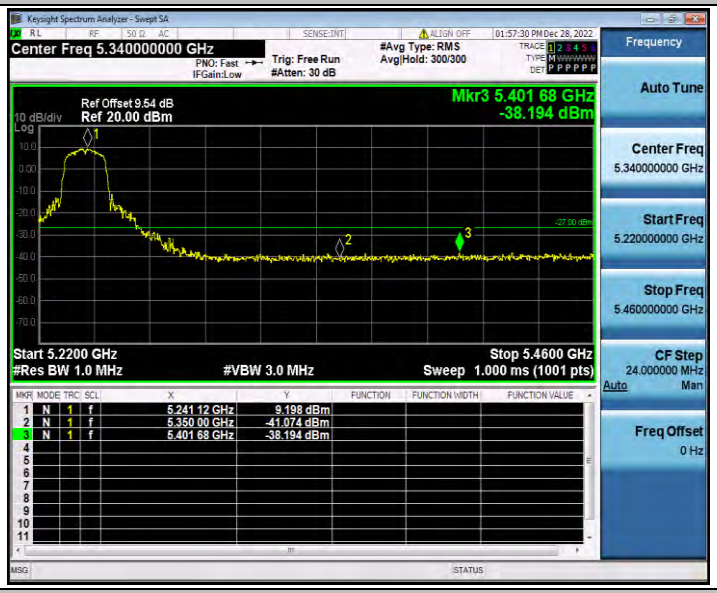
11A_Ant1_High_5240



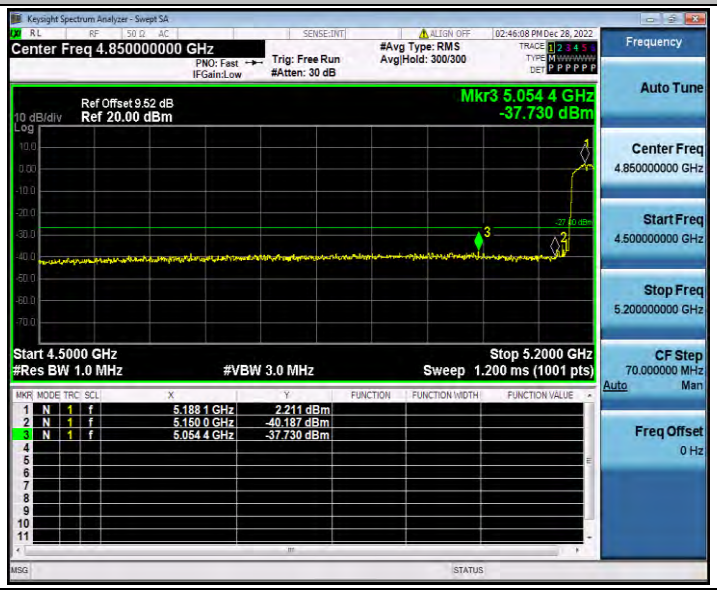
11N20SISO_Ant1_Low_5180



11N20SISO_Ant1_High_5240

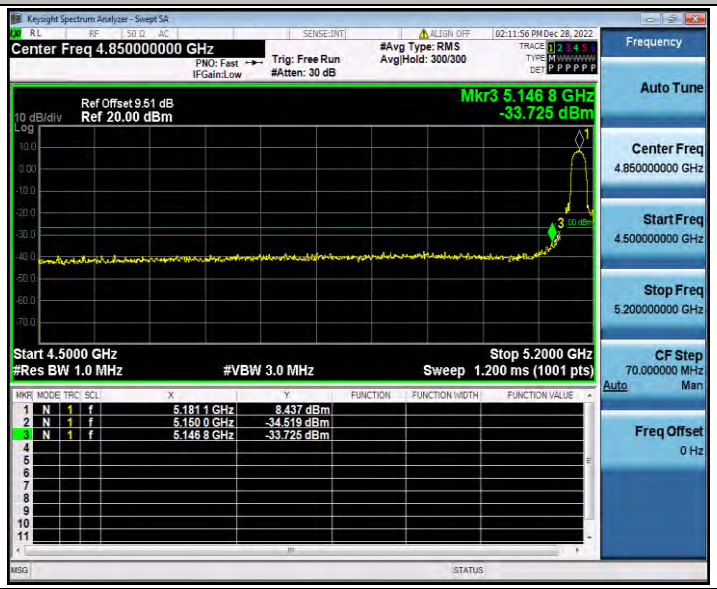


11N40SISO_Ant1_Low_5190

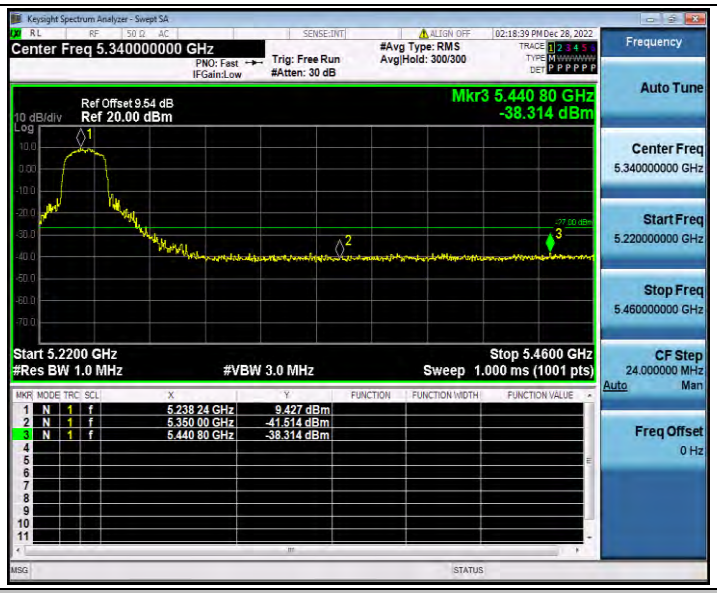


11N40SISO_Ant1_High_5230

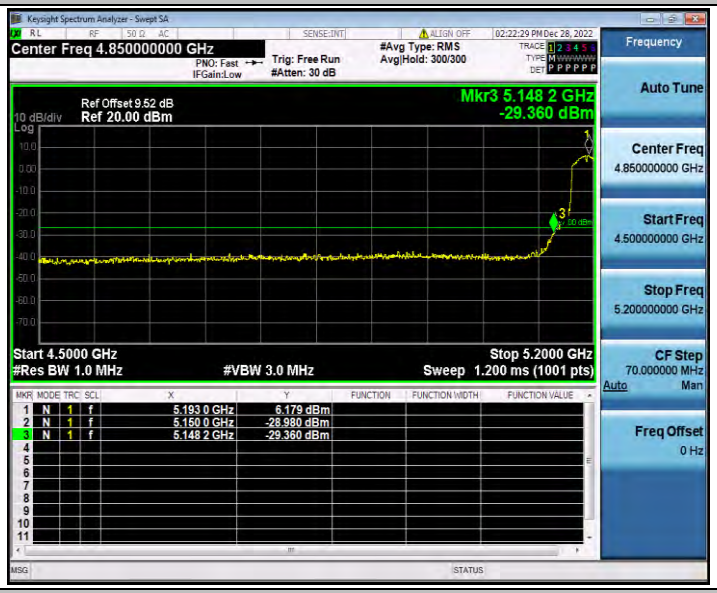
11AC20SISO_Ant1_Low_5180



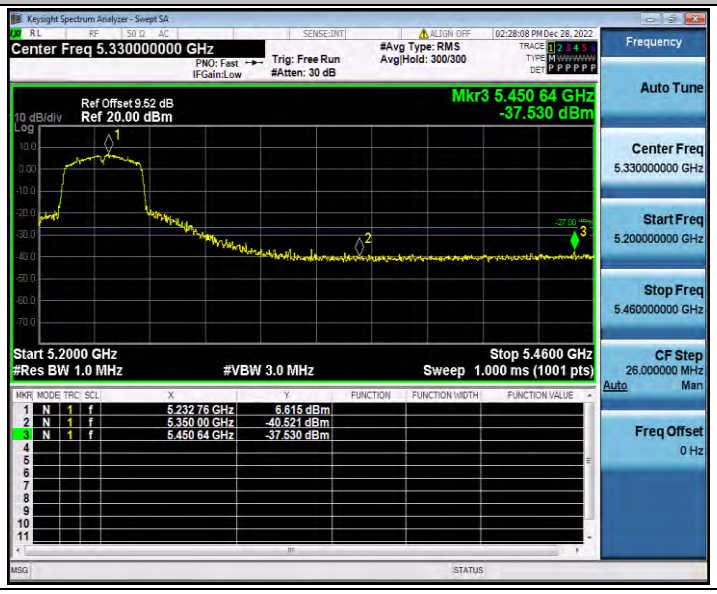
11AC20SISO_Ant1_High_5240



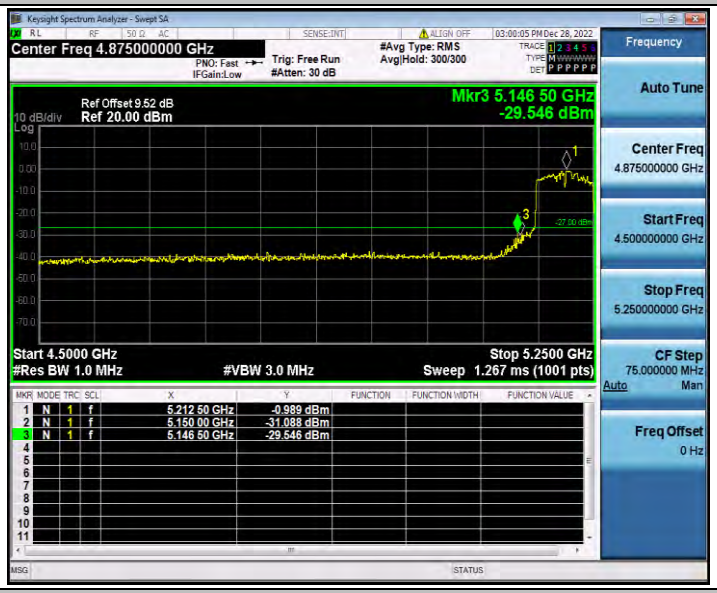
11AC40SISO_Ant1_Low_5190



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	2470.71	-45.43	≤-27	PASS
			5360~40000	24784.79	-37.84	≤-27	PASS
		5200	30~5140	37.67	-46.69	≤-27	PASS
			5360~40000	24248.11	-38.67	≤-27	PASS
		5240	30~5140	94.05	-46.43	≤-27	PASS
			5360~40000	26902.62	-37.33	≤-27	PASS
11N20SISO	Ant1	5180	30~5140	5136.59	-43.98	≤-27	PASS
			5360~40000	26868	-37.16	≤-27	PASS
		5200	30~5140	5114.45	-46.55	≤-27	PASS
			5360~40000	26559.99	-38.1	≤-27	PASS
		5240	30~5140	4881.6	-47.58	≤-27	PASS
			5360~40000	24316.64	-37.5	≤-27	PASS
11N40SISO	Ant1	5190	30~5140	5140	-37.67	≤-27	PASS
			5360~40000	26487.13	-38.22	≤-27	PASS
		5230	30~5140	4939.52	-46.87	≤-27	PASS
			5360~40000	24882.17	-38.44	≤-27	PASS
11AC20SISO	Ant1	5180	30~5140	5139.83	-40.8	≤-27	PASS
			5360~40000	24323.85	-37.57	≤-27	PASS
		5200	30~5140	4953.49	-46.88	≤-27	PASS
			5360~40000	23547.7	-38.35	≤-27	PASS
		5240	30~5140	4959.45	-47.21	≤-27	PASS
			5360~40000	23511.63	-38.1	≤-27	PASS
11AC40SISO	Ant1	5190	30~5140	5139.49	-38.72	≤-27	PASS
			5360~40000	26700.65	-37.88	≤-27	PASS
		5230	30~5140	5033.2	-47.17	≤-27	PASS
			5360~40000	25558.05	-37.73	≤-27	PASS
11AC80SISO	Ant1	5210	30~5140	5136.25	-27.04	≤-27	PASS
			5360~40000	25084.86	-37.31	≤-27	PASS

Test Graphs

11A_Ant1_5180_30~5140

11A_Ant1_5180_5360~40000

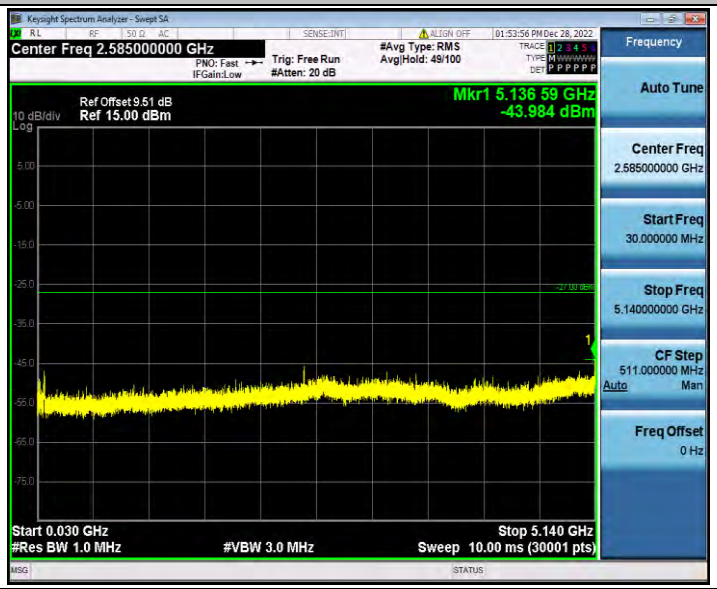
11A_Ant1_5200_30~5140

11A_Ant1_5200_5360~40000

11A_Ant1_5240_30~5140

11A_Ant1_5240_5360~40000

11N20SISO_Ant1_5180_30~5140



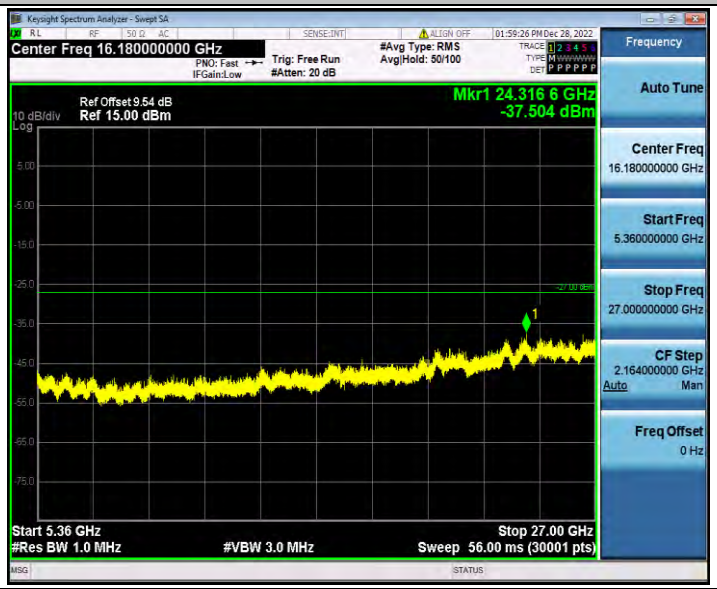
11N20SISO_Ant1_5180_5360~40000

11N20SISO_Ant1_5200_30~5140

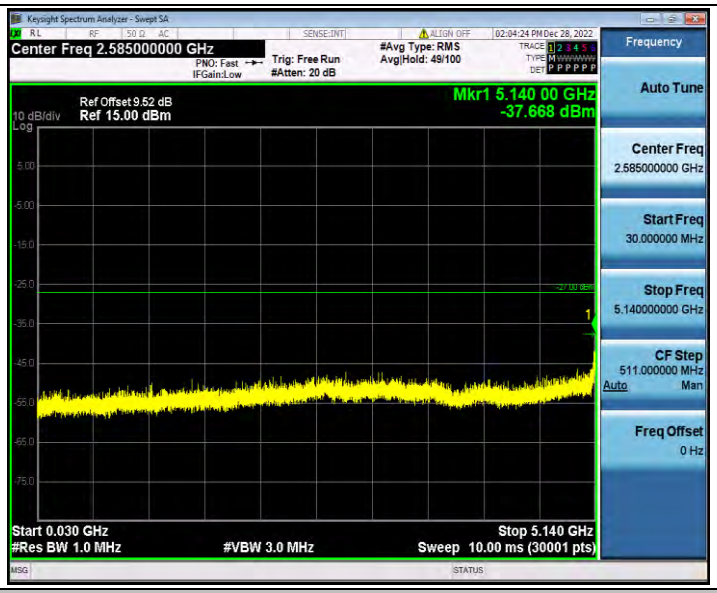
11N20SISO_Ant1_5200_5360~40000

11N20SISO_Ant1_5240_30~5140

11N20SISO_Ant1_5240_5360~40000



11N40SISO_Ant1_5190_30~5140

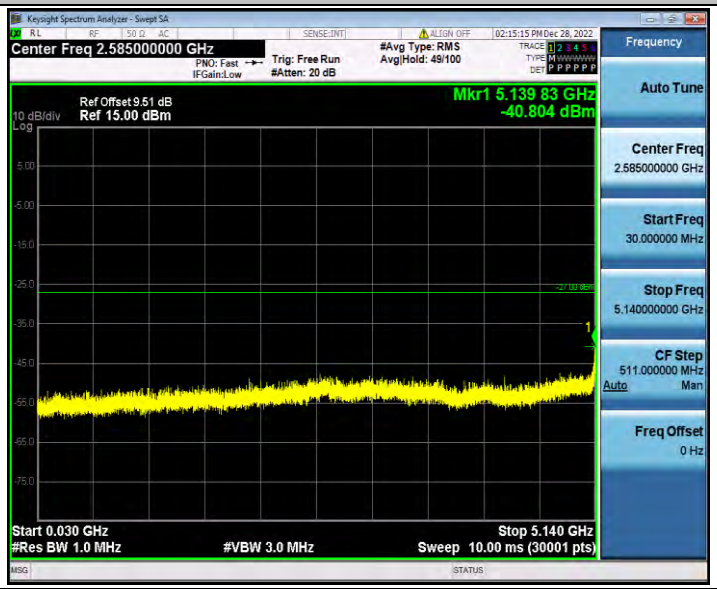


11N40SISO_Ant1_5190_5360~40000

11N40SISO_Ant1_5230_30~5140

11N40SISO_Ant1_5230_5360~40000

11AC20SISO_Ant1_5180_30~5140



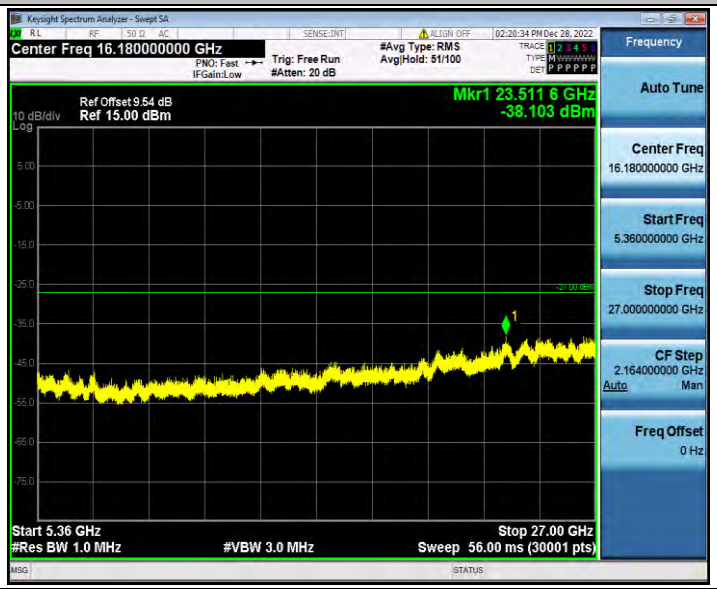
11AC20SISO_Ant1_5180_5360~40000

11AC20SISO_Ant1_5200_30~5140

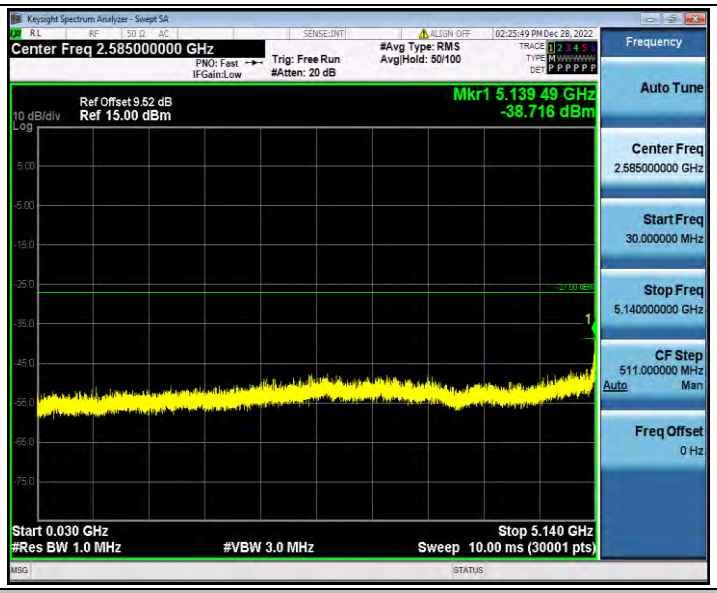
11AC20SISO_Ant1_5200_5360~40000

11AC20SISO_Ant1_5240_30~5140

11AC20SISO_Ant1_5240_5360~40000



11AC40SISO_Ant1_5190_30~5140

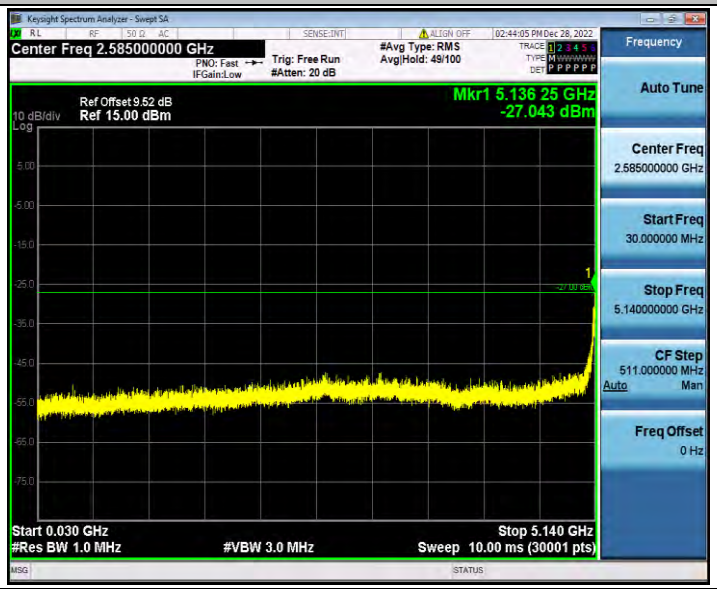


11AC40SISO_Ant1_5190_5360~40000

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
02:44:15 PM Dec 28, 2022
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 25.084 9 GHz
-37.307 dBm
5.00
-5.00
-15.0
-25.0
-27.00 dBm
-35.0
-45.0
-55.0
-65.0
-75.0
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