

FCC Appendix RF Test Data for 5GWiFi

FCC ID : 2A7AQ-BD13

Company : Newsmay Technology Co.,limited

EUT : MINI PC

Model Number : BD13

Report No. : CTA26050900902

Reviewed By : Eric Wang

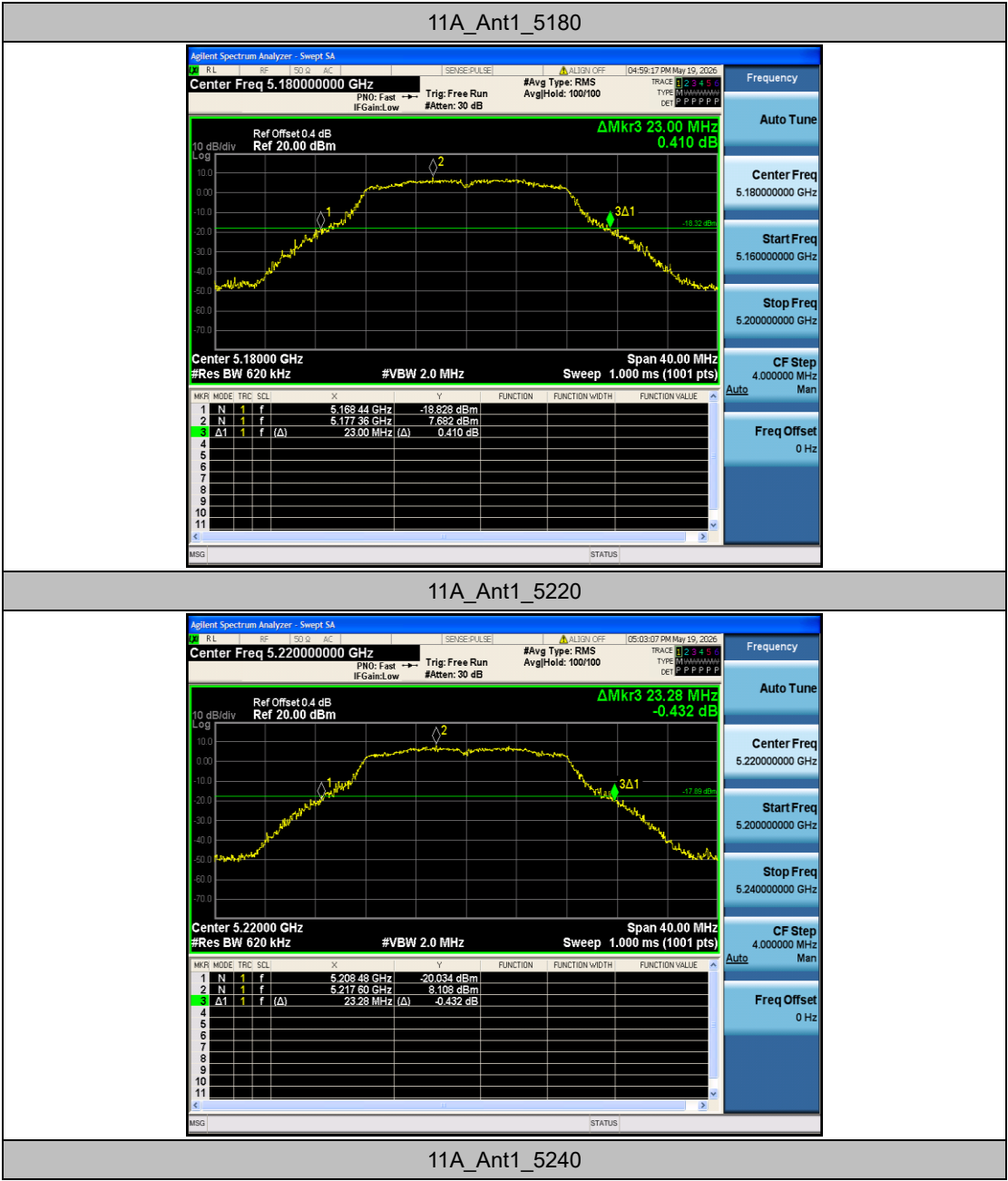
FCC Appendix RF Test Data for 5GWiFi Antenna 1

Appendix A1: Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	23.000	5168.440	5191.440	---	---
		5220	23.280	5208.480	5231.760	---	---
		5240	23.240	5228.440	5251.680	---	---
11N20SISO	Ant1	5180	23.280	5168.200	5191.480	---	---
		5220	24.920	5207.640	5232.560	---	---
		5240	23.920	5228.080	5252.000	---	---
11N40SISO	Ant1	5190	43.120	5168.960	5212.080	---	---
		5230	43.440	5208.800	5252.240	---	---
11AC20SISO	Ant1	5180	22.600	5168.880	5191.480	---	---
		5220	22.600	5208.840	5231.440	---	---
		5240	23.360	5228.200	5251.560	---	---
11AC40SISO	Ant1	5190	42.720	5168.800	5211.520	---	---
		5230	43.120	5208.640	5251.760	---	---
11AC80SISO	Ant1	5210	87.520	5166.160	5253.680	---	---

Test Graphs



11A_Ant1_5220

Agilent Spectrum Analyzer - Swept SA

Center Freq 5.220000000 GHz

Ref Offset 0.4 dB
Ref 20.00 dBm

Trig: Free Run
#Att: 30 dB

#Avg Type: RMS
Avg/Hold: 100/100

AL301 OFF

05:03:07 PM May 19, 2026

Frequency

Auto Tune

Center Freq
5.220000000 GHz

Start Freq
5.200000000 GHz

Stop Freq
5.240000000 GHz

CF Step
4.000000 MHz
Man

Freq Offset
0 Hz

10 dB/div
Log

Ref Offset 0.4 dB
Ref 20.00 dBm

Δ Mkr3 23.28 MHz
-0.432 dB

Center 5.22000 GHz
#Res BW 620 kHz
#VBW 2.0 MHz
Span 40.00 MHz
Sweep 1.000 ms (1001 pts)

MR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	5.20848 GHz	-20.034 dBm			
2	N	1	f	5.21760 GHz	8.108 dBm			
3	Δ 1	1	f (Δ)	23.28 MHz (Δ)	-0.432 dB			

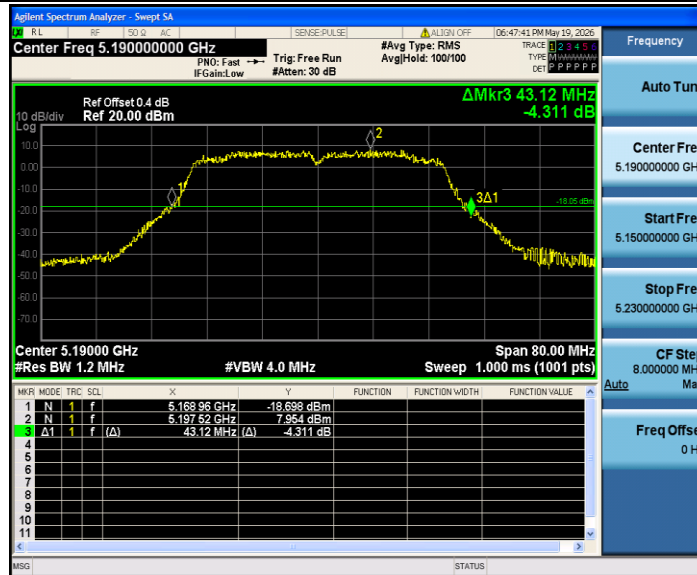
11A_Ant1_5240



11N20SISO_Ant1_5240



11N40SISO_Ant1_5190



11N40SISO_Ant1_5230



11AC20SISO_Ant1_5180



11AC20SISO_Ant1_5220



11AC20SISO_Ant1_5240



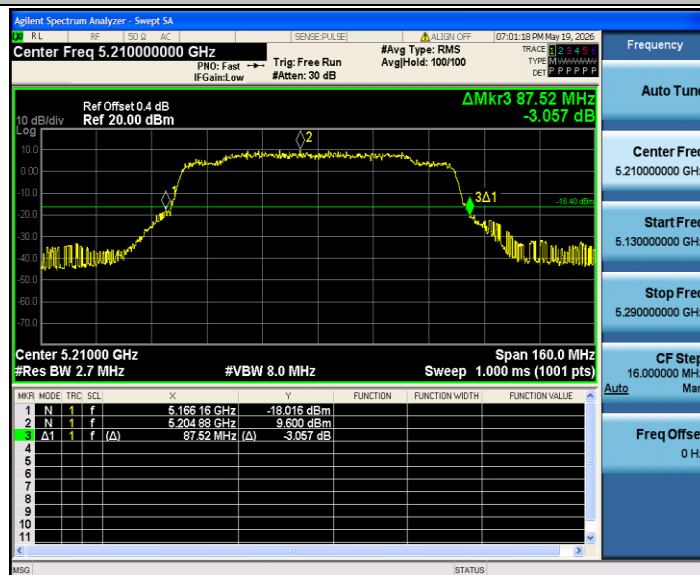
11AC40SISO_Ant1_5190



11AC40SISO_Ant1_5230



11AC80SISO_Ant1_5210



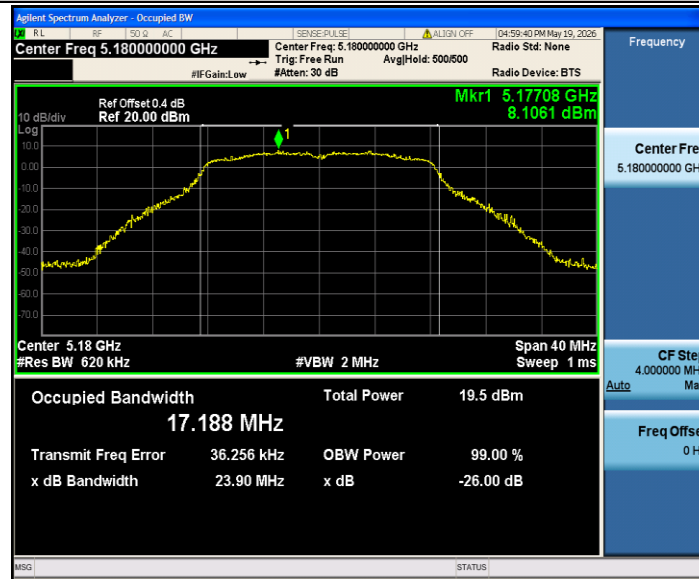
Appendix A2: Occupied channel bandwidth

Test Result

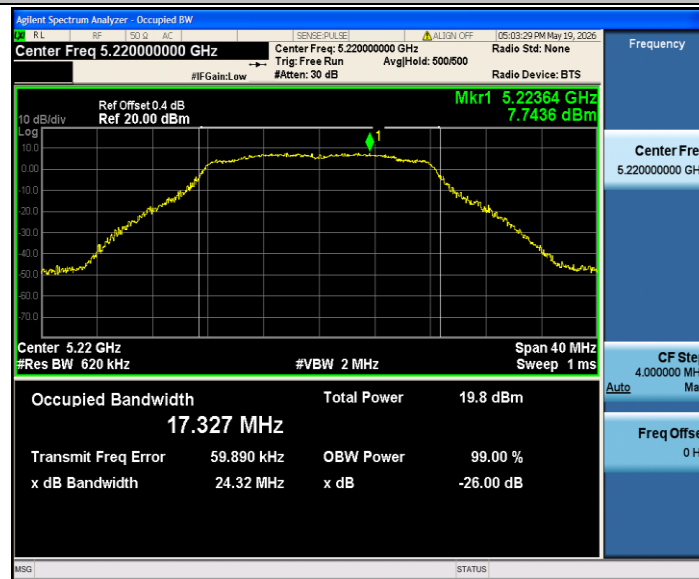
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	17.188	5171.4423	5188.6303	---	---
		5220	17.327	5211.3964	5228.7234	---	---
		5240	17.244	5231.3788	5248.6228	---	---
11N20SISO	Ant1	5180	18.239	5170.9105	5189.1495	---	---
		5220	18.300	5210.8852	5229.1852	---	---
		5240	18.269	5230.8842	5249.1532	---	---
11N40SISO	Ant1	5190	36.322	5171.9114	5208.2334	---	---
		5230	36.253	5211.9848	5248.2378	---	---
11AC20SISO	Ant1	5180	19.095	5170.4743	5189.5693	---	---
		5220	19.078	5210.5061	5229.5841	---	---
		5240	19.129	5230.4777	5249.6067	---	---
11AC40SISO	Ant1	5190	37.871	5171.0982	5208.9692	---	---
		5230	37.746	5211.2434	5248.9894	---	---
11AC80SISO	Ant1	5210	77.082	5171.5350	5248.6170	---	---

Test Graphs

11A_Ant1_5180



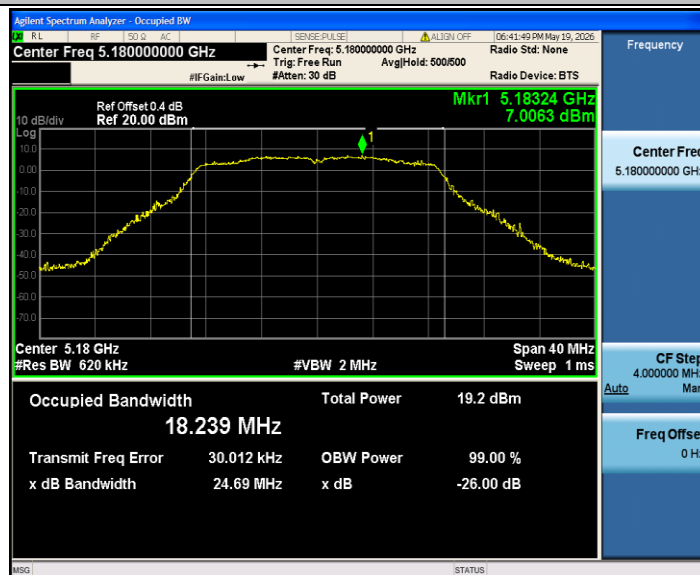
11A_Ant1_5220



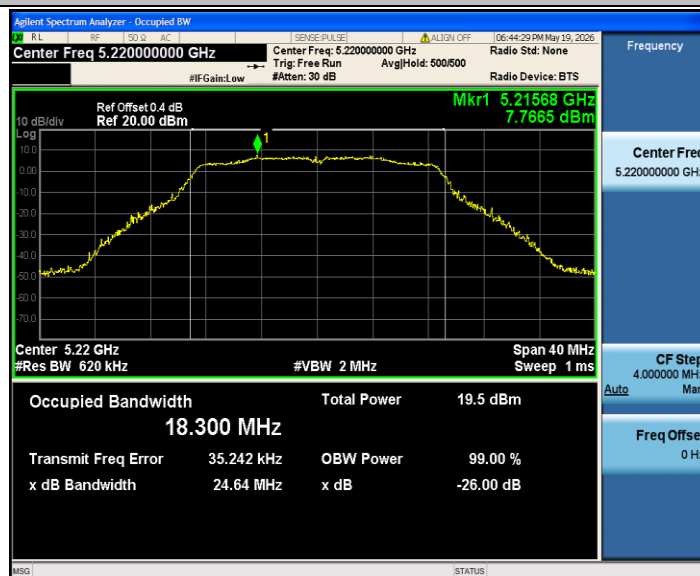
11A_Ant1_5240



11N20SISO_Ant1_5180



11N20SISO_Ant1_5220



11N20SISO_Ant1_5240



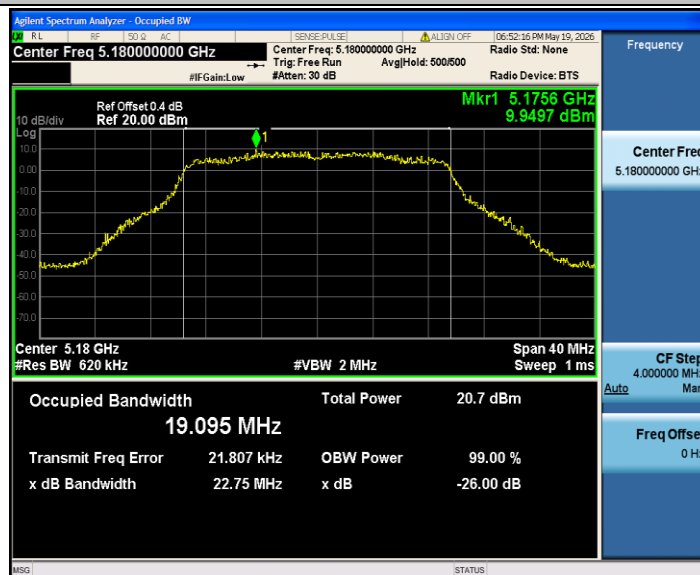
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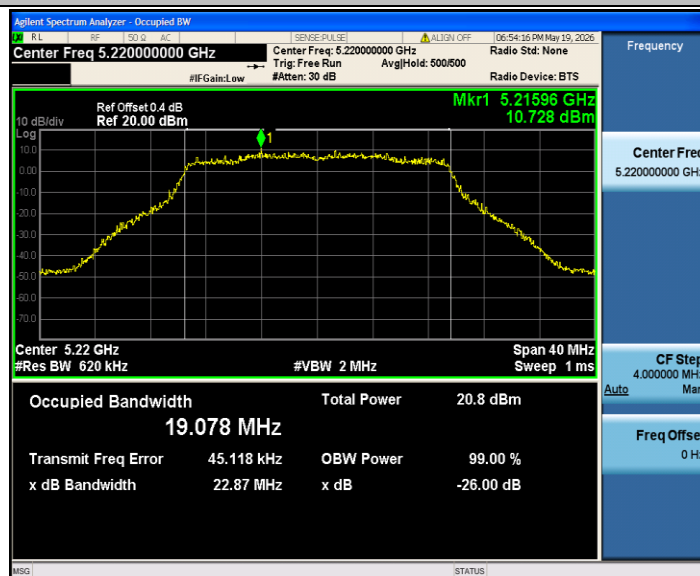
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11AC20SISO_Ant1_5180



11AC20SISO_Ant1_5220



11AC20SISO_Ant1_5240



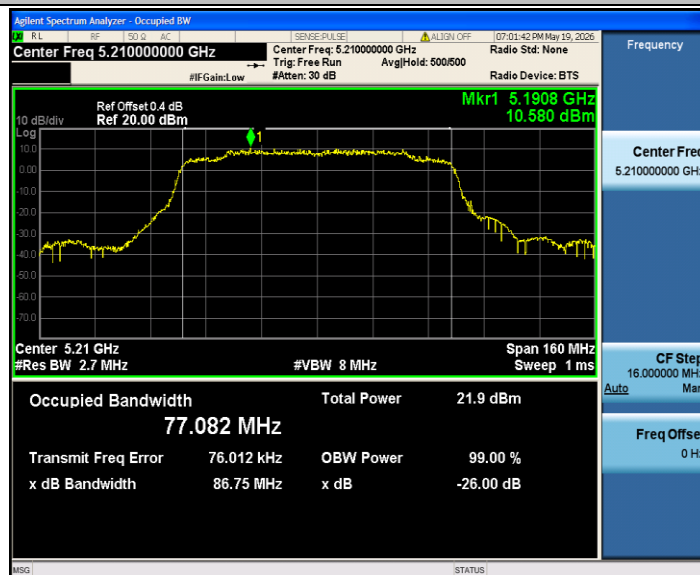
11AC40SISO_Ant1_5190



11AC40SISO_Ant1_5230



11AC80SISO_Ant1_5210

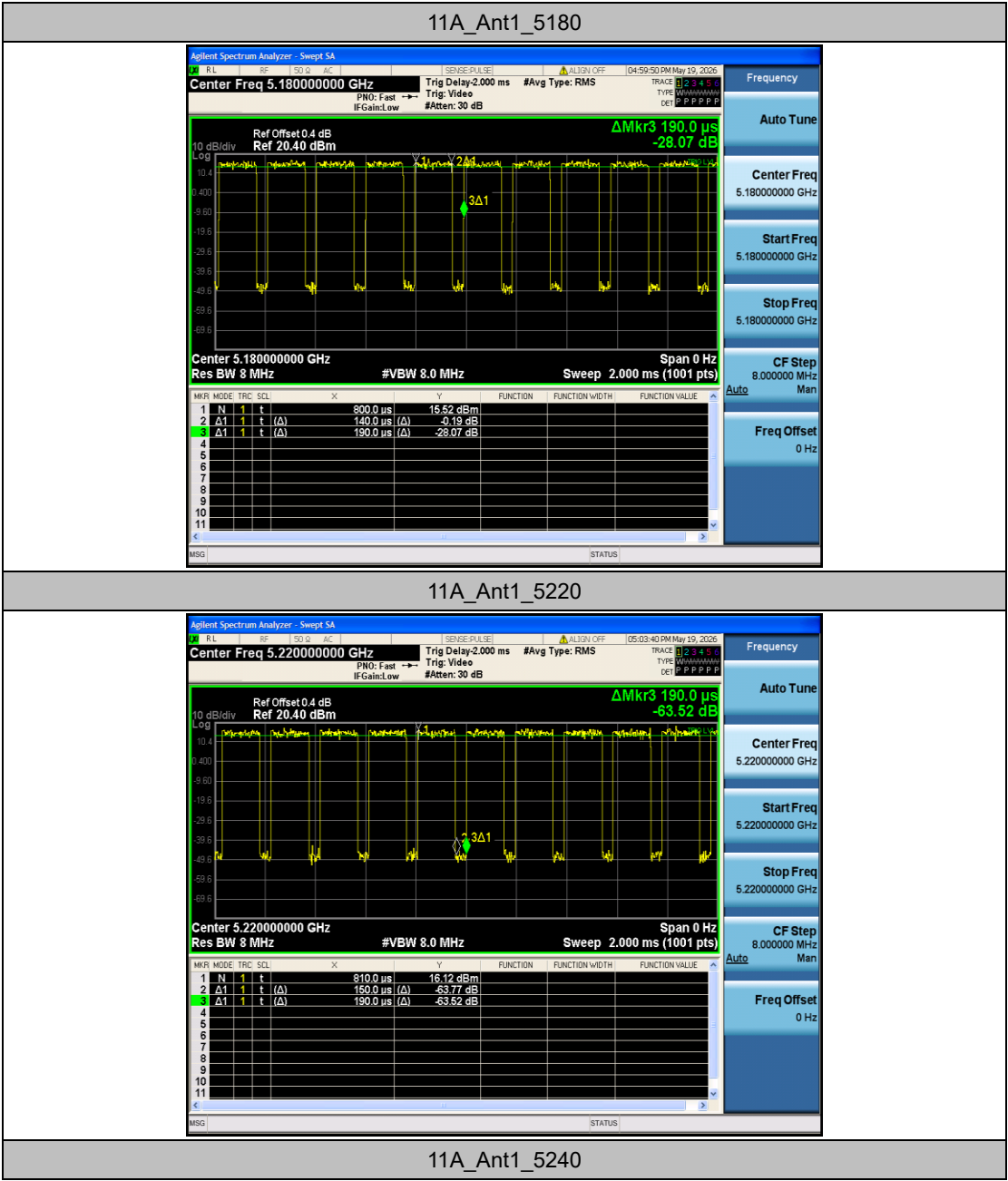


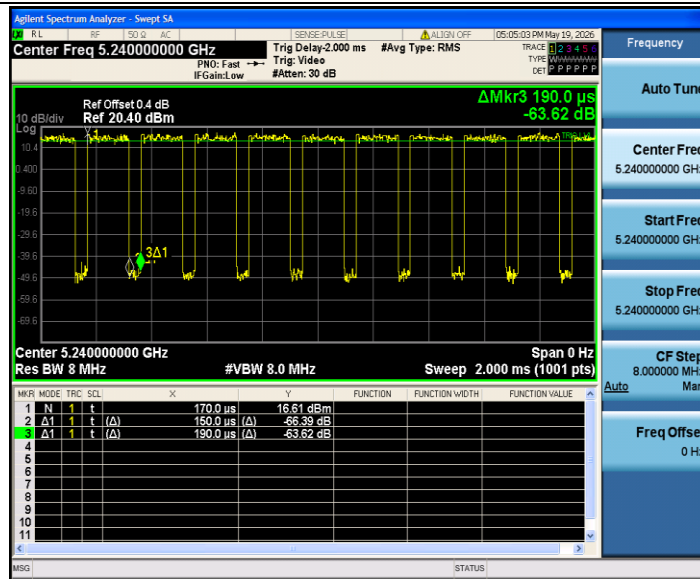
Appendix B: Duty Cycle

Test Result

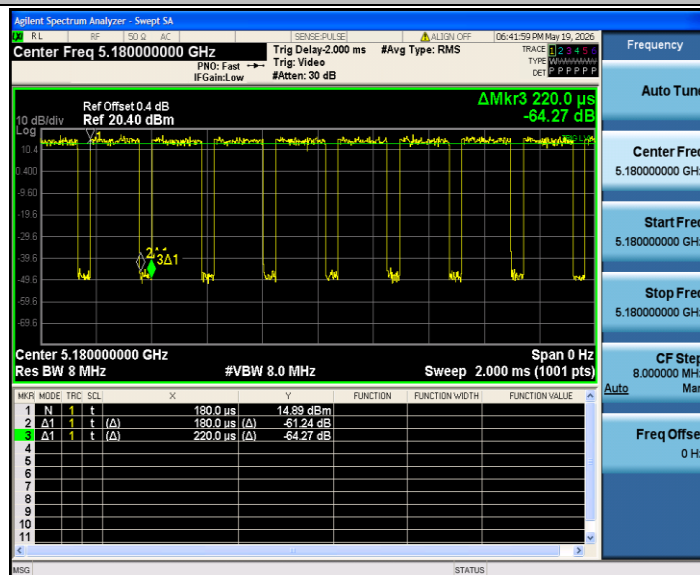
TestMode	Antenna	Freq(MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	DC Factor [dB]	Limit	Verdict
11A	Ant1	5180	0.14	0.19	73.68	1.33	---	---
		5220	0.15	0.19	78.95	1.03	---	---
		5240	0.15	0.19	78.95	1.03	---	---
11N20SISO	Ant1	5180	0.18	0.22	81.82	0.87	---	---
		5220	0.18	0.23	78.26	1.06	---	---
		5240	0.17	0.22	77.27	1.12	---	---
11N40SISO	Ant1	5190	0.18	0.23	78.26	1.06	---	---
		5230	0.18	0.23	78.26	1.06	---	---
11AC20SISO	Ant1	5180	0.25	0.30	83.33	0.79	---	---
		5220	0.26	0.30	86.67	0.62	---	---
		5240	0.26	0.31	83.87	0.76	---	---
11AC40SISO	Ant1	5190	0.18	0.22	81.82	0.87	---	---
		5230	0.18	0.23	78.26	1.06	---	---
11AC80SISO	Ant1	5210	0.16	0.21	76.19	1.18	---	---

Test Graphs

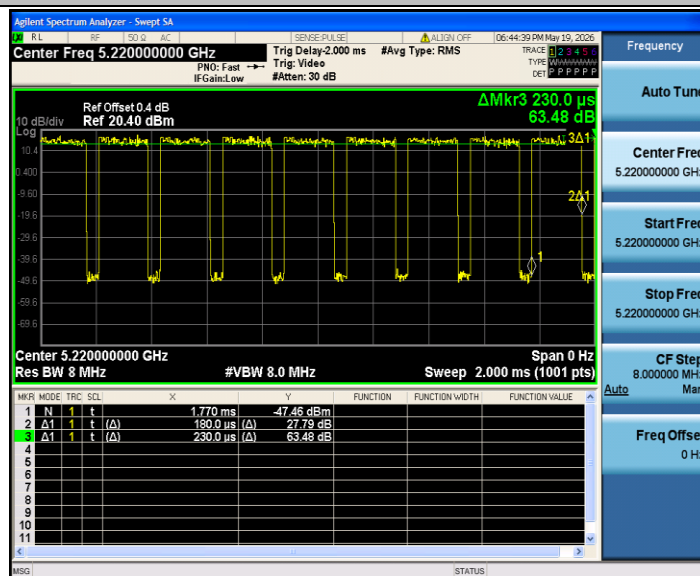




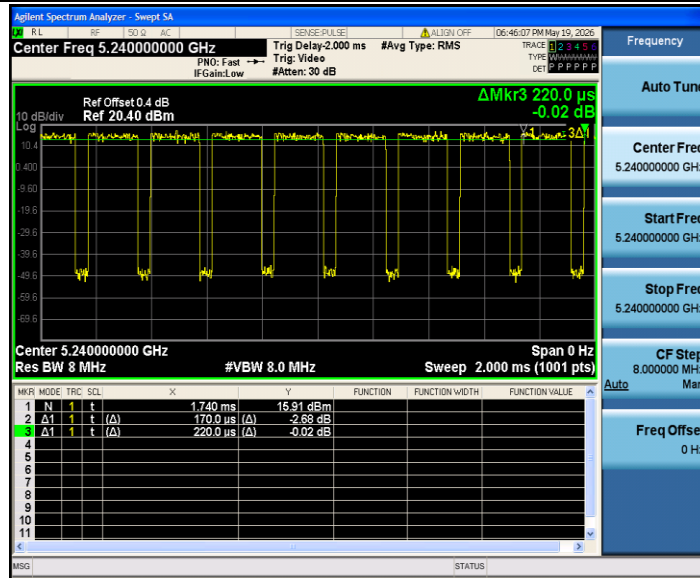
11N20SISO_Ant1_5180



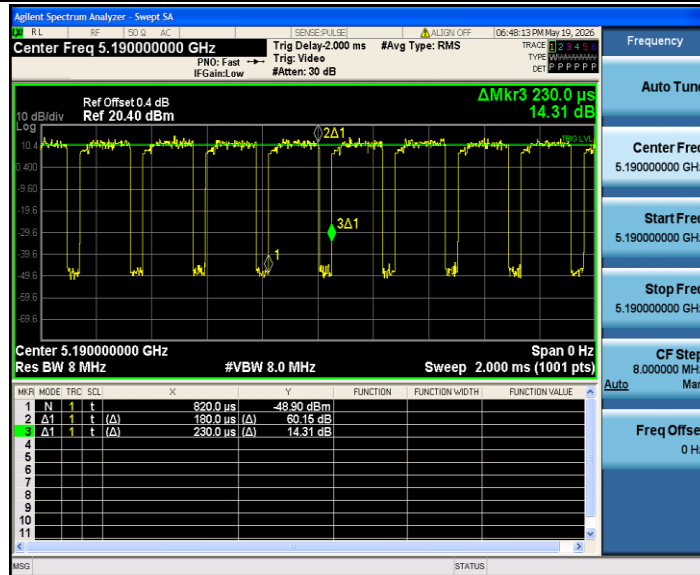
11N20SISO_Ant1_5220



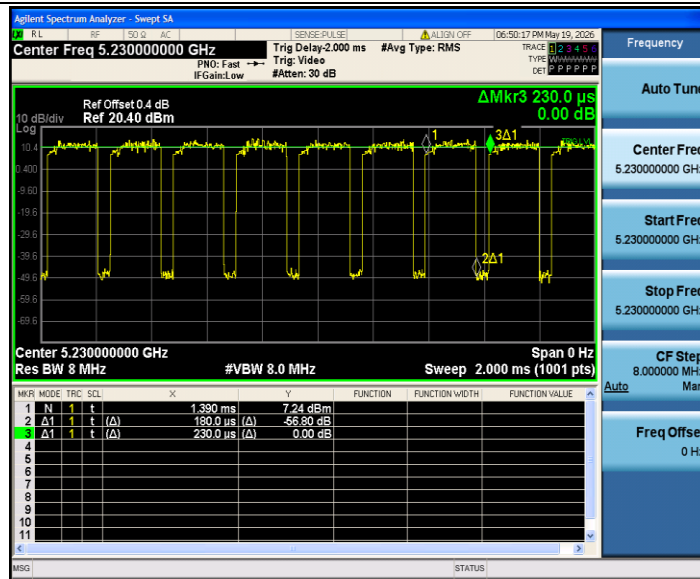
11N20SISO_Ant1_5240



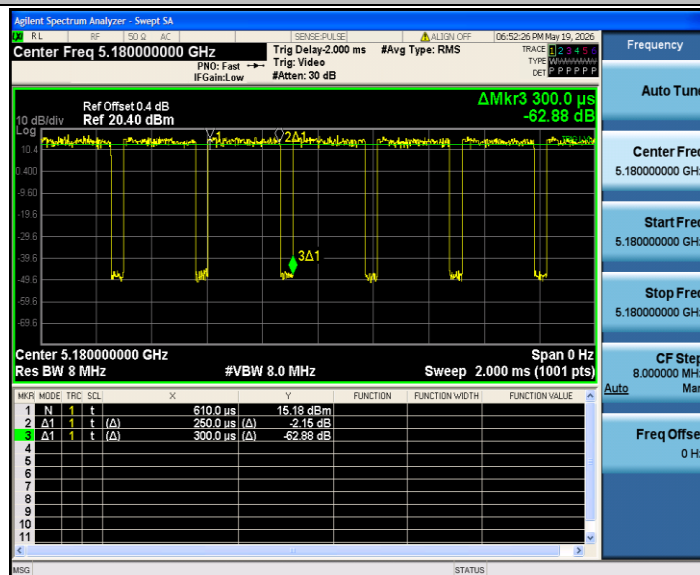
11N40SISO_Ant1_5190



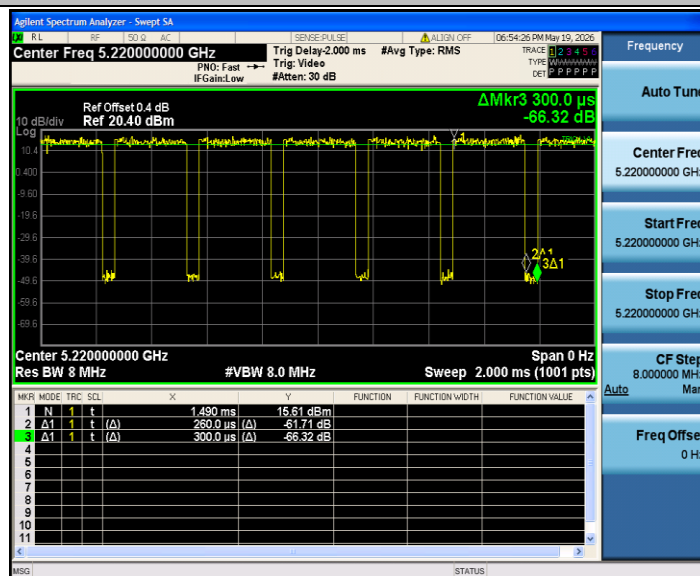
11N40SISO_Ant1_5230



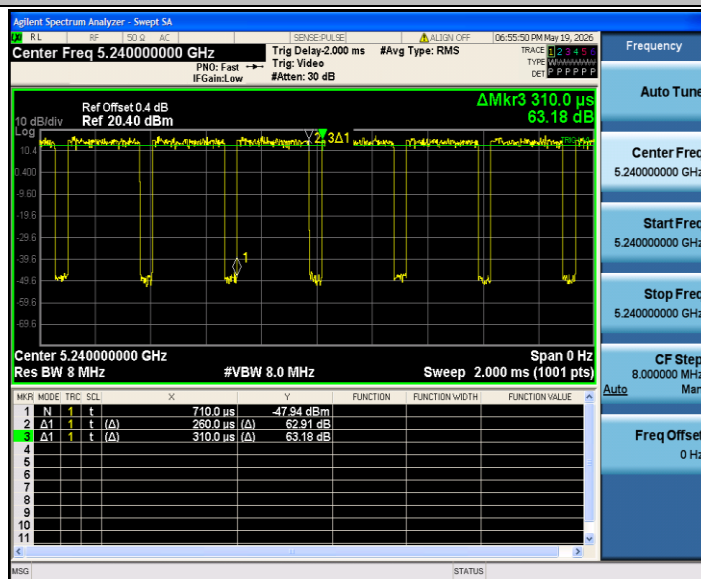
11AC20SISO_Ant1_5180



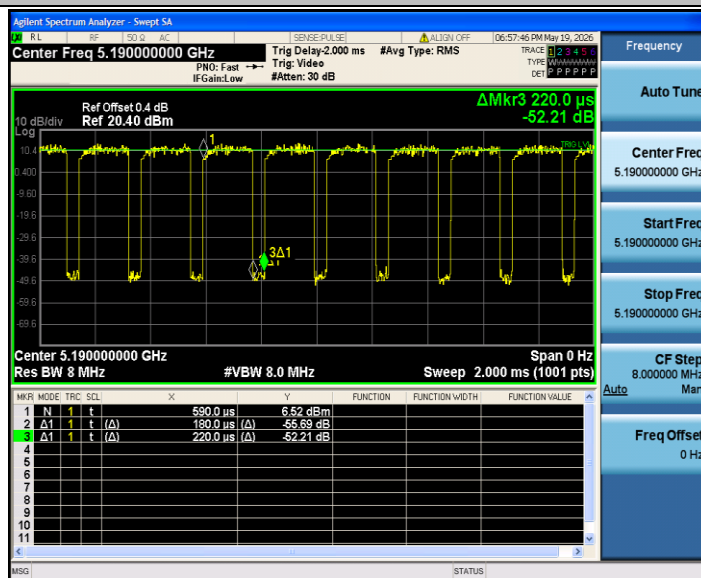
11AC20SISO_Ant1_5220



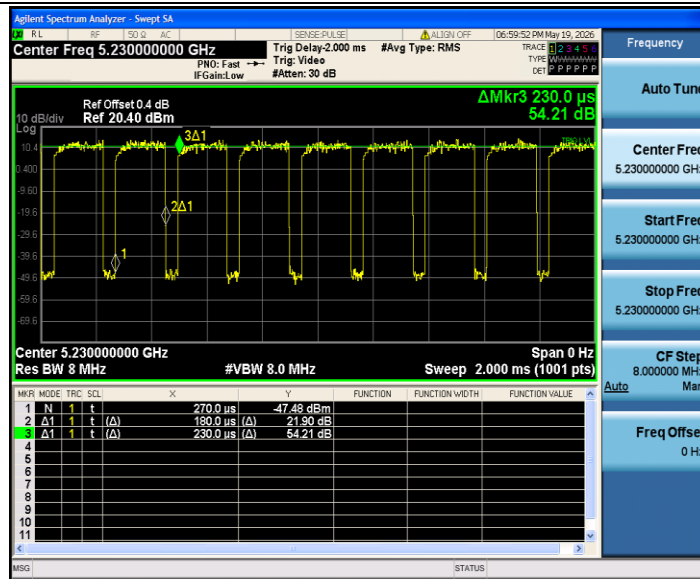
11AC20SISO_Ant1_5240



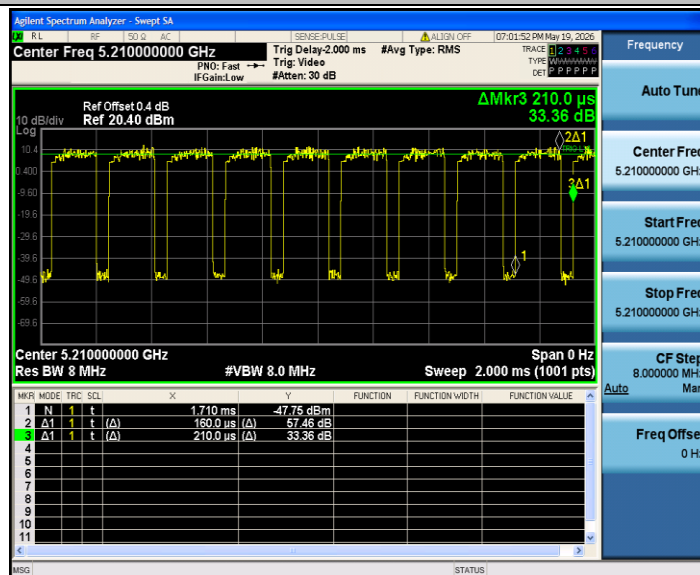
11AC40SISO_Ant1_5190



11AC40SISO_Ant1_5230



11AC80ISO_Ant1_5210



Appendix C: Maximum conducted output power

Test Result

Test Mode	Antenna	Freq(MHz)	Channel Power [dBm]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	11.55	73.68	1.33	12.88	≤23.98	PASS
		5220	11.81	78.95	1.03	12.84	≤23.98	PASS
		5240	11.68	78.95	1.03	12.71	≤23.98	PASS
11N20SI SO	Ant1	5180	11.45	81.82	0.87	12.32	≤23.98	PASS
		5220	11.75	78.26	1.06	12.81	≤23.98	PASS
		5240	11.55	77.27	1.12	12.67	≤23.98	PASS
11N40SI SO	Ant1	5190	11.65	78.26	1.06	12.71	≤23.98	PASS
		5230	11.85	78.26	1.06	12.91	≤23.98	PASS
11AC20S ISO	Ant1	5180	11.69	83.33	0.79	12.48	≤23.98	PASS
		5220	11.86	86.67	0.62	12.48	≤23.98	PASS
		5240	11.68	83.87	0.76	12.44	≤23.98	PASS
11AC40S ISO	Ant1	5190	11.24	81.82	0.87	12.11	≤23.98	PASS
		5230	11.46	78.26	1.06	12.52	≤23.98	PASS
11AC80S ISO	Ant1	5210	11.64	76.19	1.18	12.82	≤23.98	PASS

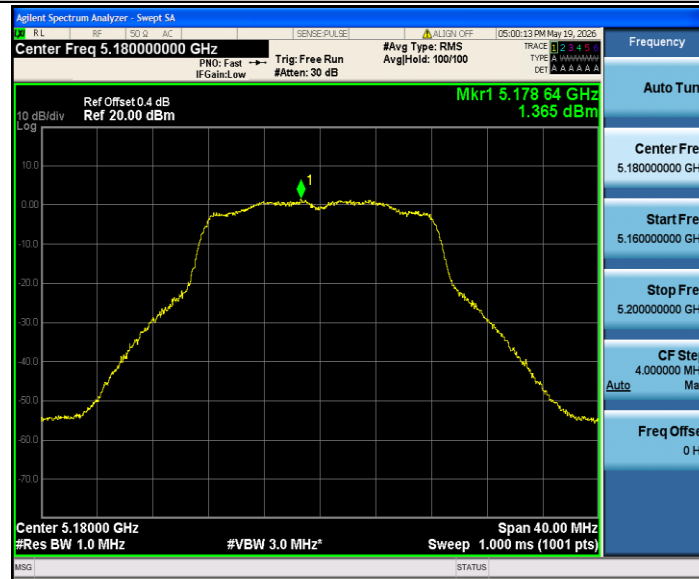
Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	RawData [dBm/MHz]	DC Factor [dBm]	Result [dBm/MHz]	Limit [dBm/MHz]	Verdict
11A	Ant1	5180	1.37	1.33	2.70	≤11.00	PASS
		5220	1.51	1.03	2.54	≤11.00	PASS
		5240	1.36	1.03	2.39	≤11.00	PASS
11N20SISO	Ant1	5180	1.26	0.87	2.13	≤11.00	PASS
		5220	1.59	1.06	2.65	≤11.00	PASS
		5240	1.25	1.12	2.37	≤11.00	PASS
11N40SISO	Ant1	5190	-2.14	1.06	-1.08	≤11.00	PASS
		5230	-1.59	1.06	-0.53	≤11.00	PASS
11AC20SISO	Ant1	5180	1.43	0.79	2.22	≤11.00	PASS
		5220	1.33	0.62	1.95	≤11.00	PASS
		5240	1.33	0.76	2.09	≤11.00	PASS
11AC40SISO	Ant1	5190	-2.53	0.87	-1.66	≤11.00	PASS
		5230	-2.15	1.06	-1.09	≤11.00	PASS
11AC80SISO	Ant1	5210	-5.07	1.18	-3.89	≤11.00	PASS

Test Graphs

11A_Ant1_5180



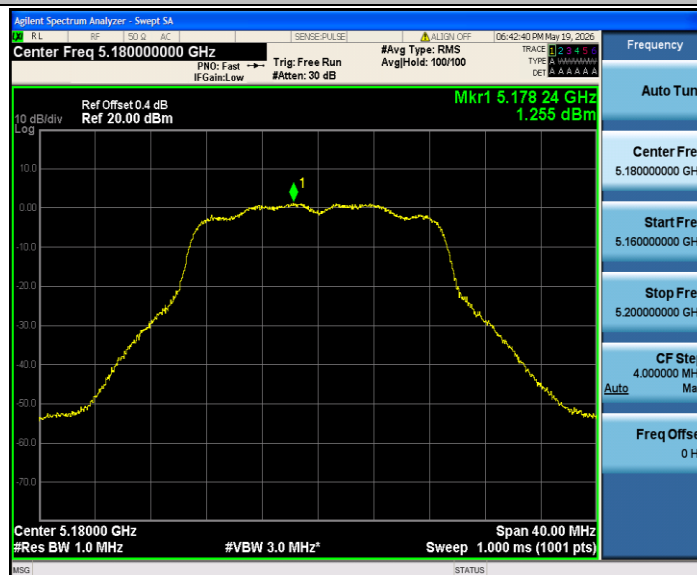
11A_Ant1_5220



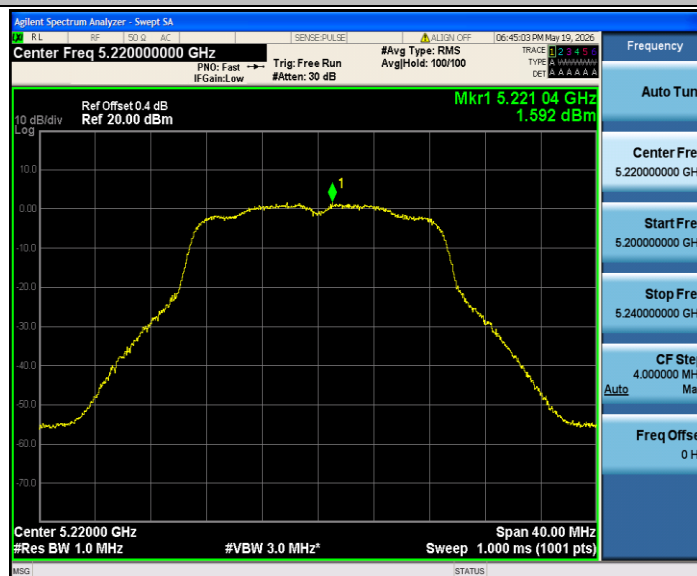
11A_Ant1_5240



11N20SISO_Ant1_5180



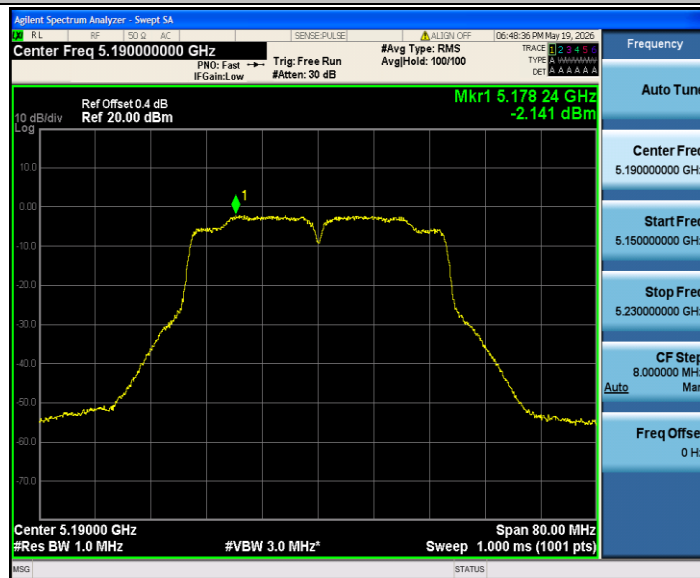
11N20SISO_Ant1_5220



11N20SISO_Ant1_5240



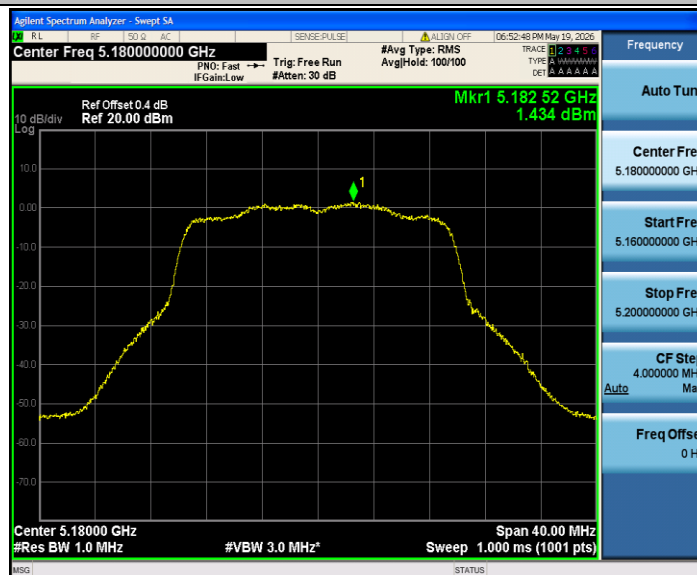
11N40SISO_Ant1_5190



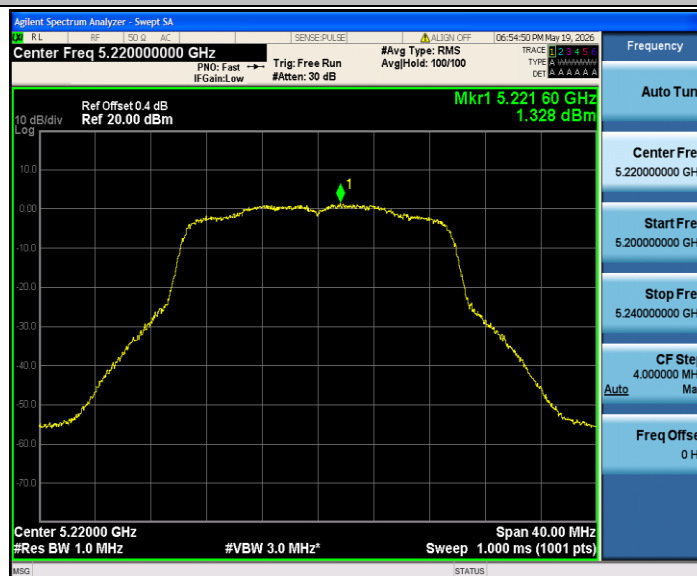
11N40SISO_Ant1_5230



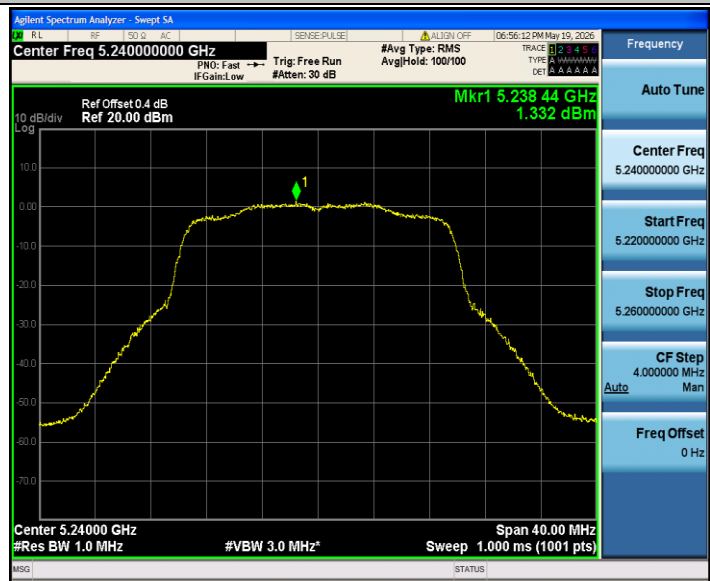
11AC20SISO_Ant1_5180



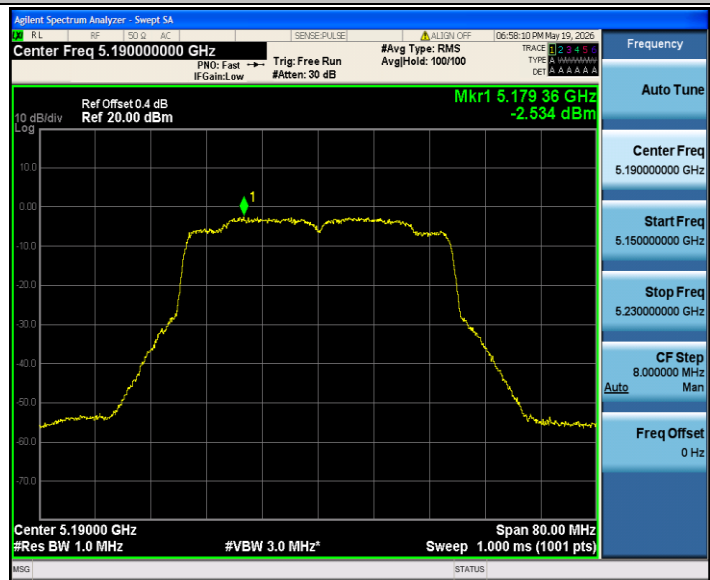
11AC20SISO_Ant1_5220



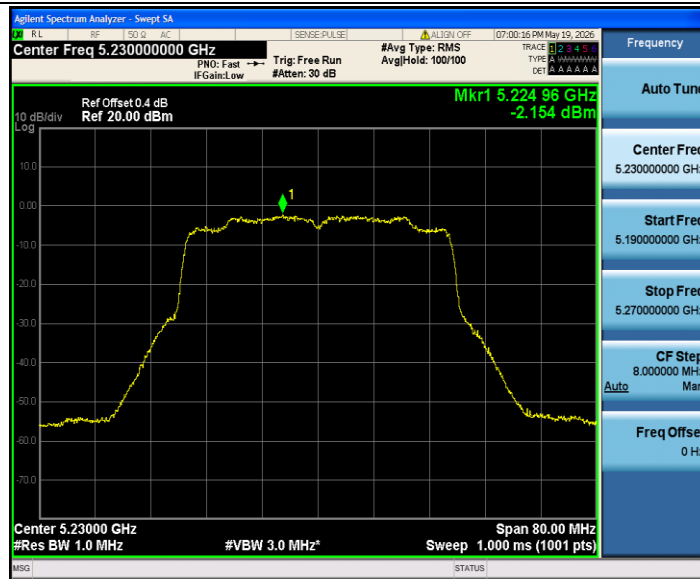
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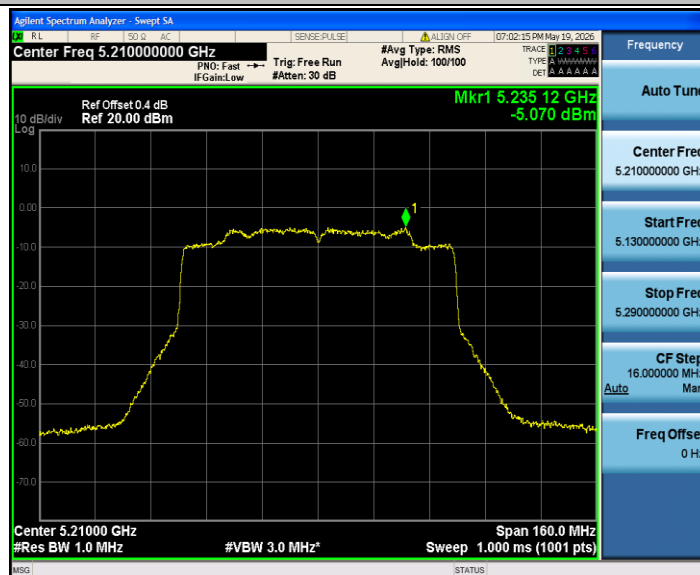
11AC40SISO_Ant1_5190



11AC40SISO_Ant1_5230



11AC80SISO_Ant1_5210

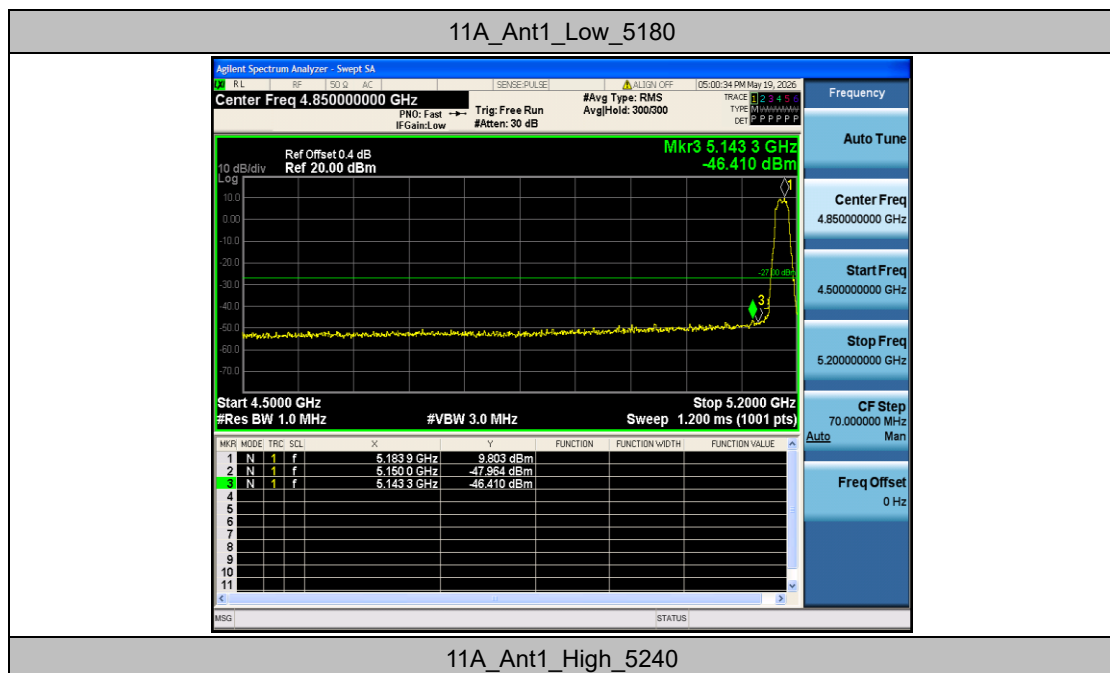


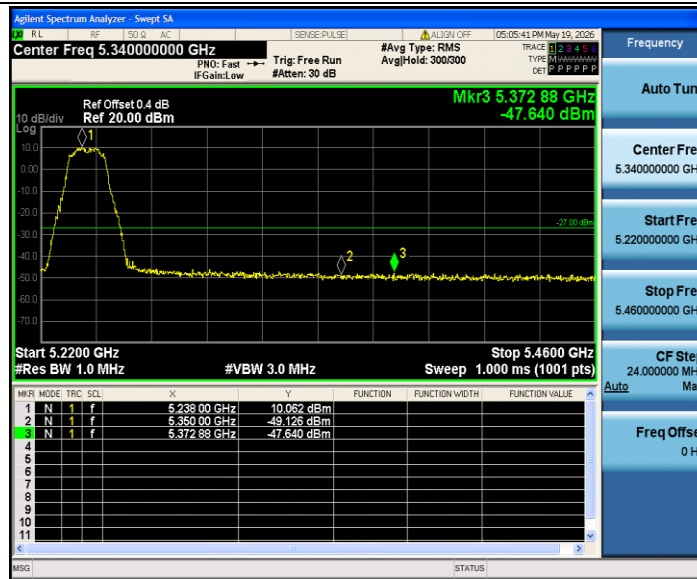
Appendix E: Band edge measurements

Test Result B1

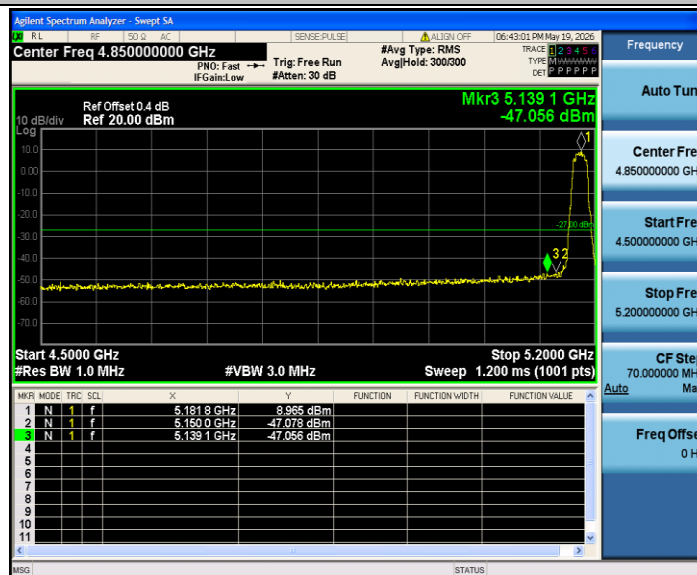
TestMode	Antenna	ChName	Freq(MHz)	Result[dBm]	Limit[dBm]	Verdict
11A	Ant1	Low	5180	-46.41	≤ -27	PASS
		High	5240	-47.64	≤ -27	PASS
11N20SISO	Ant1	Low	5180	-47.06	≤ -27	PASS
		High	5240	-46.63	≤ -27	PASS
11N40SISO	Ant1	Low	5190	-44.64	≤ -27	PASS
		High	5230	-46.92	≤ -27	PASS
11AC20SISO	Ant1	Low	5180	-46.32	≤ -27	PASS
		High	5240	-47.28	≤ -27	PASS
11AC40SISO	Ant1	Low	5190	-45.94	≤ -27	PASS
		High	5230	-47.34	≤ -27	PASS
11AC80SISO	Ant1	Low	5210	-41.62	≤ -27	PASS
		High	5210	-46.32	≤ -27	PASS

Test Graphs B1

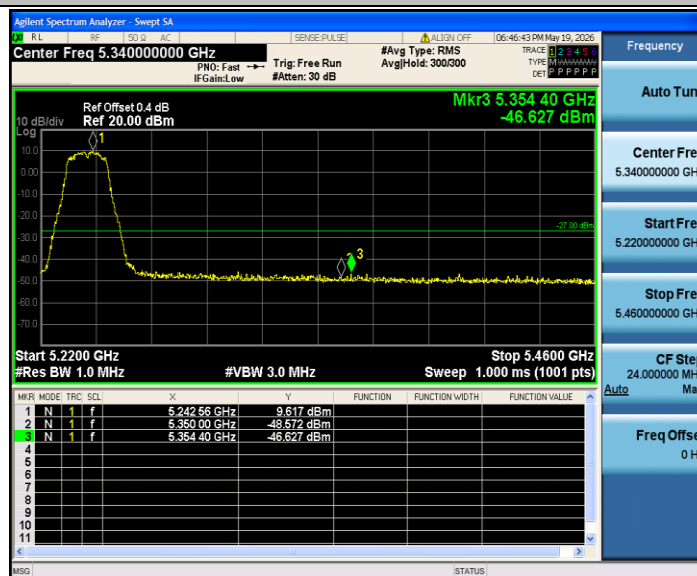




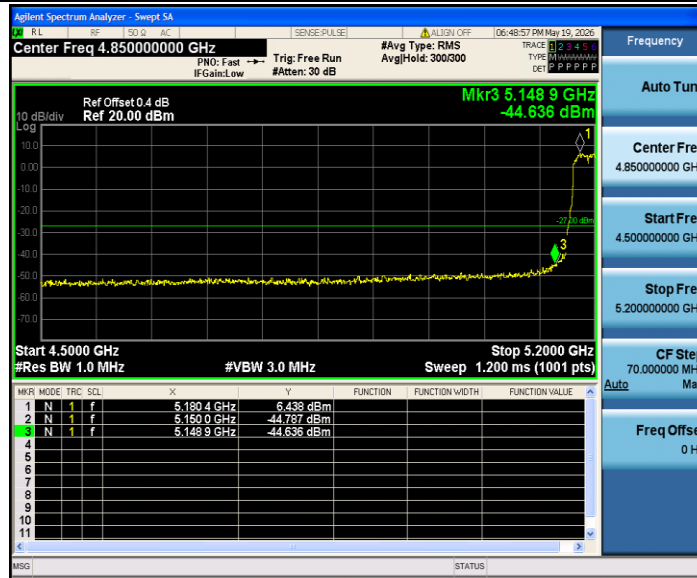
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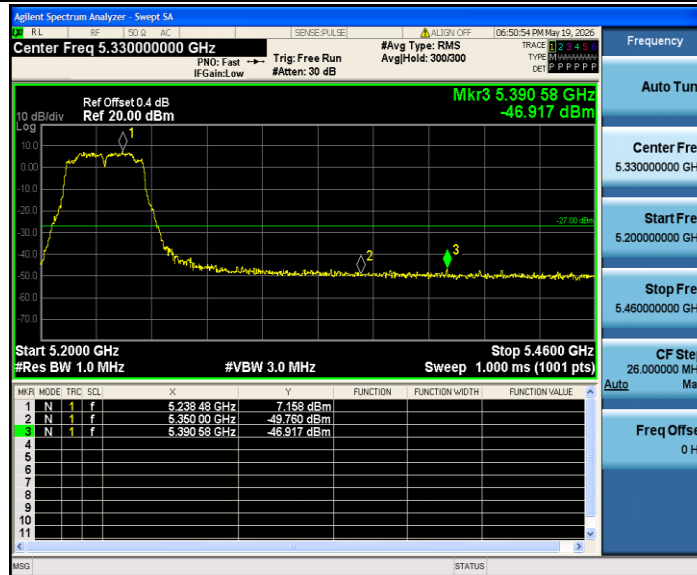
11N20SISO_Ant1_High_5240



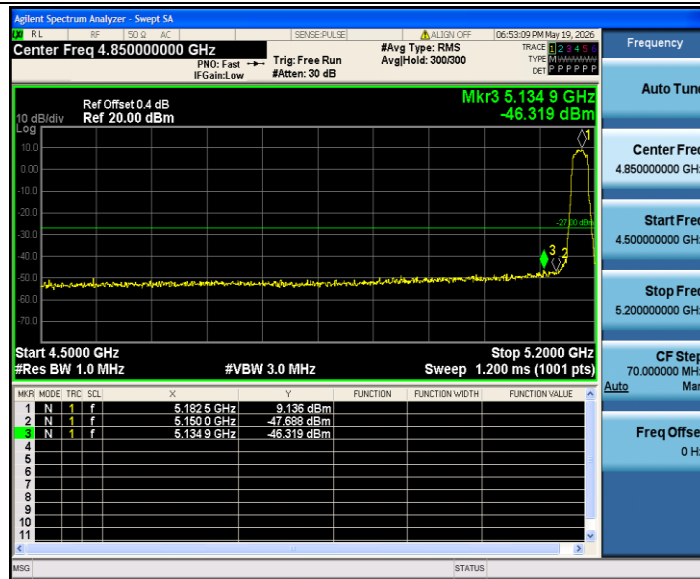
11N40SISO_Ant1_Low_5190



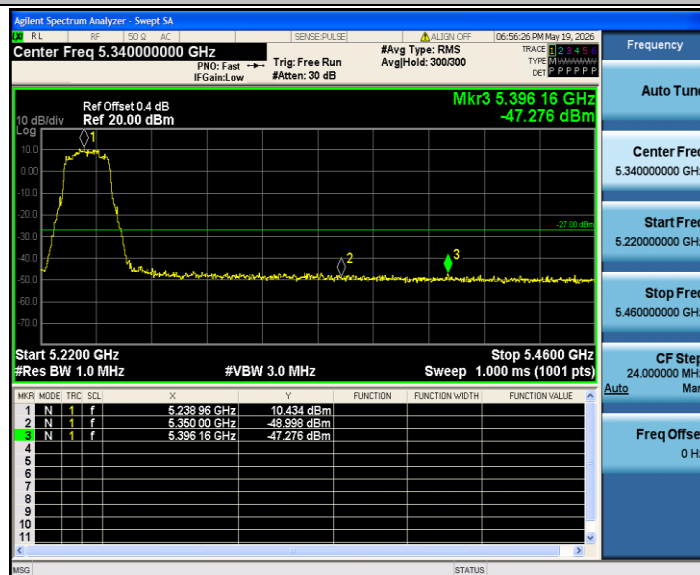
11N40SISO_Ant1_High_5230



11AC20SISO_Ant1_Low_5180



11AC20SISO_Ant1_High_5240



11AC40SISO_Ant1_Low_5190

