Appendix Test Data

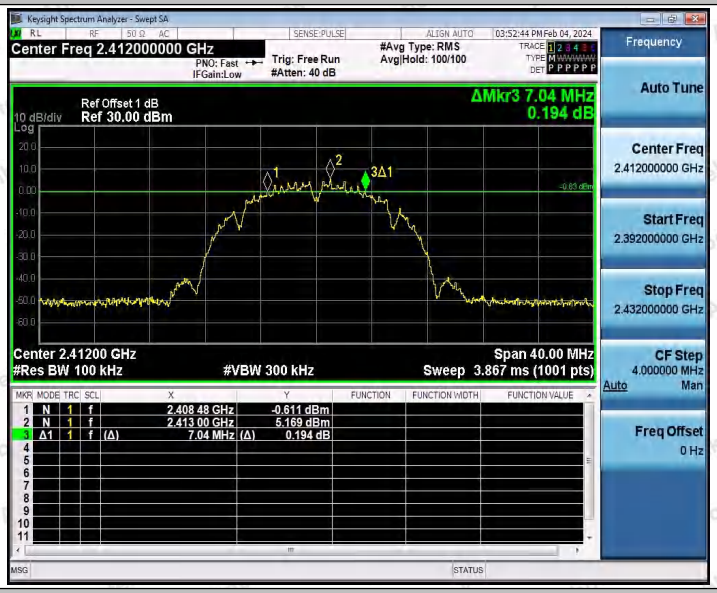
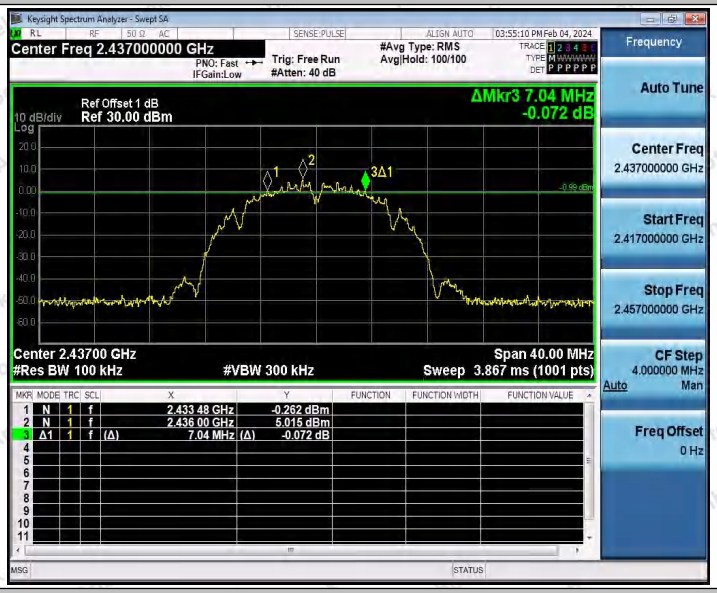
Report No.:	18220WC40009902	Test Sample No.:	1-2-2
Start Test Date:	2024.2.4	Finish Test Date:	2024.2.5
Test Engineer:	Joker Wang	Auditor:	Justin Feng
Temperature:	24.8℃	Relative Humidity:	42%
Pressure:	101kPa		

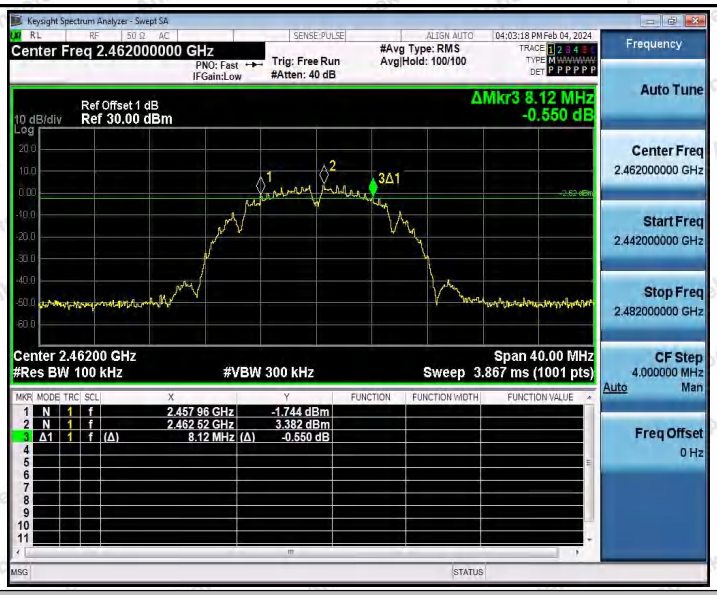
Appendix A: DTS Bandwidth

Test Result

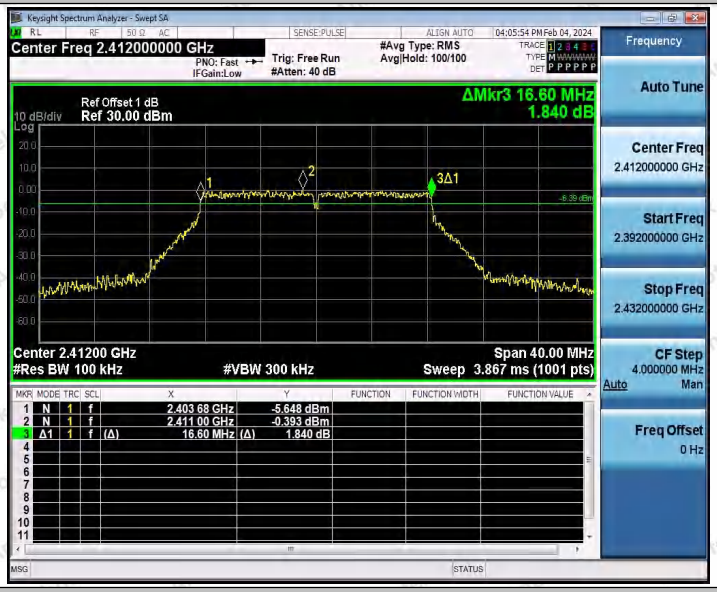
TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	7.040	2408.480	2415.520	0.5	PASS
		2437	7.040	2433.480	2440.520	0.5	PASS
		2462	8.120	2457.960	2466.080	0.5	PASS
11G	Ant1	2412	16.600	2403.680	2420.280	0.5	PASS
		2437	16.400	2428.800	2445.200	0.5	PASS
		2462	16.400	2453.760	2470.160	0.5	PASS
11N20SISO	Ant1	2412	17.720	2403.160	2420.880	0.5	PASS
		2437	17.680	2428.120	2445.800	0.5	PASS
		2462	17.640	2453.160	2470.800	0.5	PASS
11N40SISO	Ant1	2422	36.160	2403.840	2440.000	0.5	PASS
		2437	36.400	2418.760	2455.160	0.5	PASS
		2452	36.320	2433.840	2470.160	0.5	PASS
11AX20SISO	Ant1	2412	19.000	2402.480	2421.480	0.5	PASS
		2437	19.080	2427.400	2446.480	0.5	PASS
		2462	19.000	2452.480	2471.480	0.5	PASS
11AX40SISO	Ant1	2422	37.920	2402.960	2440.880	0.5	PASS
		2437	38.000	2417.960	2455.960	0.5	PASS
		2452	38.000	2432.960	2470.960	0.5	PASS

Test Graphs

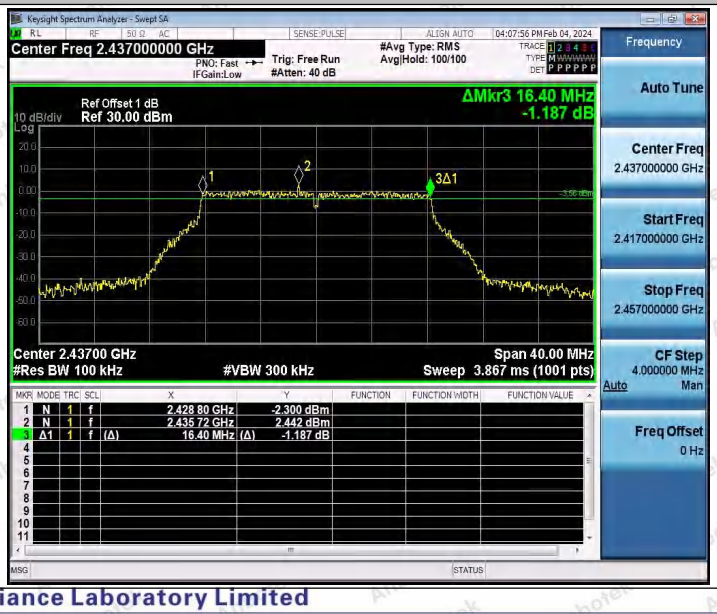
11B_Ant1_2412

11B_Ant1_2437

11B_Ant1_2462



11G_Ant1_2412



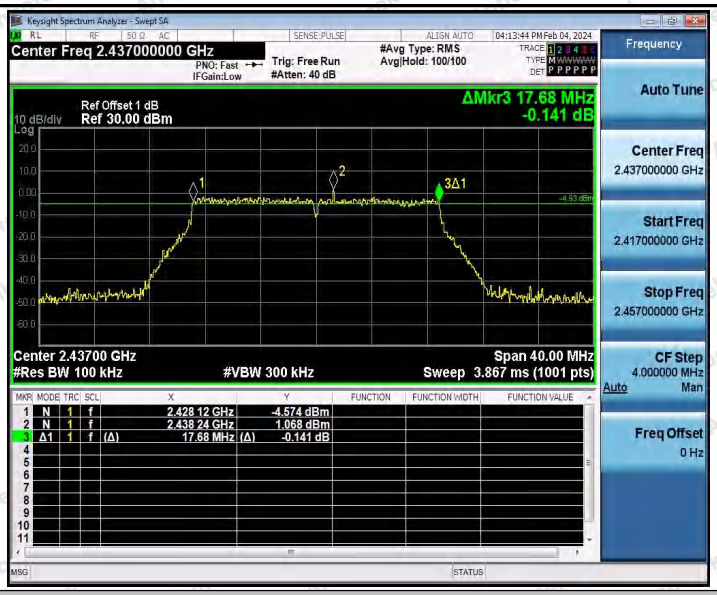
11G_Ant1_2437



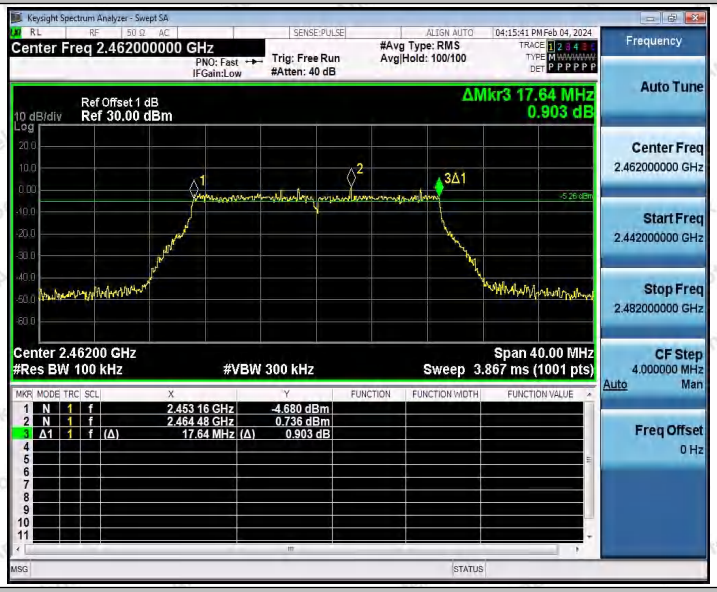
11G_Ant1_2462

11N20SISO_Ant1_2412

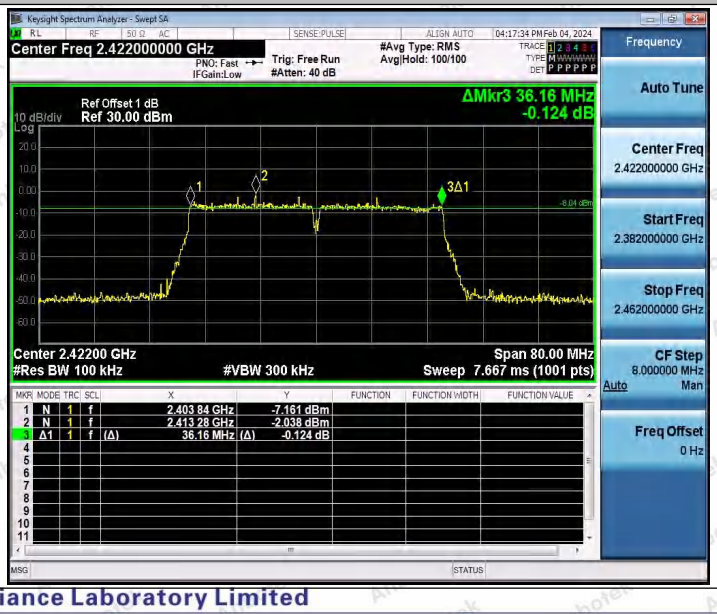
11N20SISO_Ant1_2437



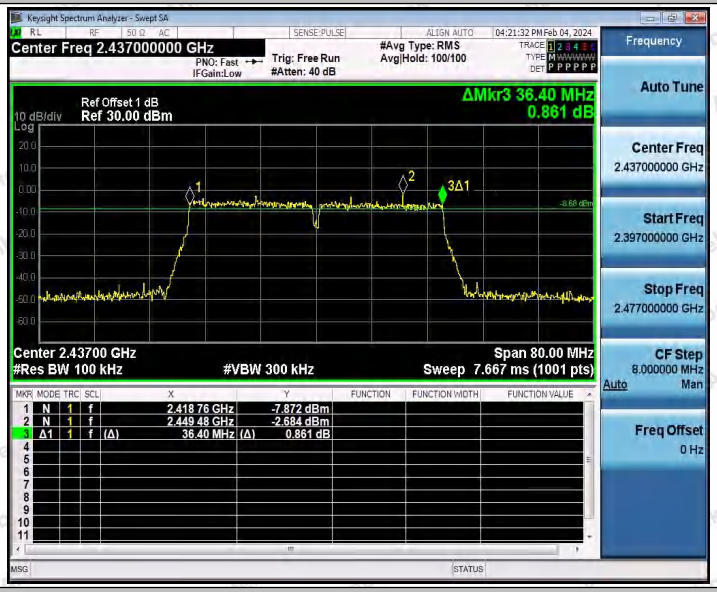
11N20SISO_Ant1_2462



11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



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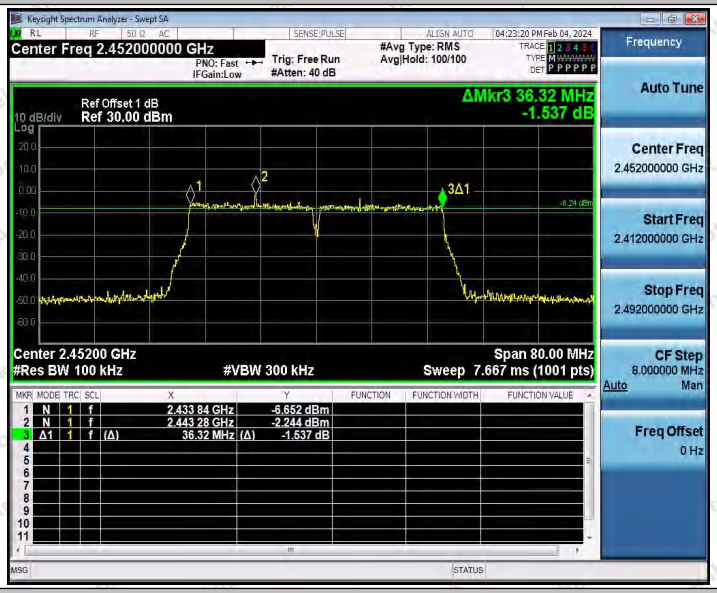
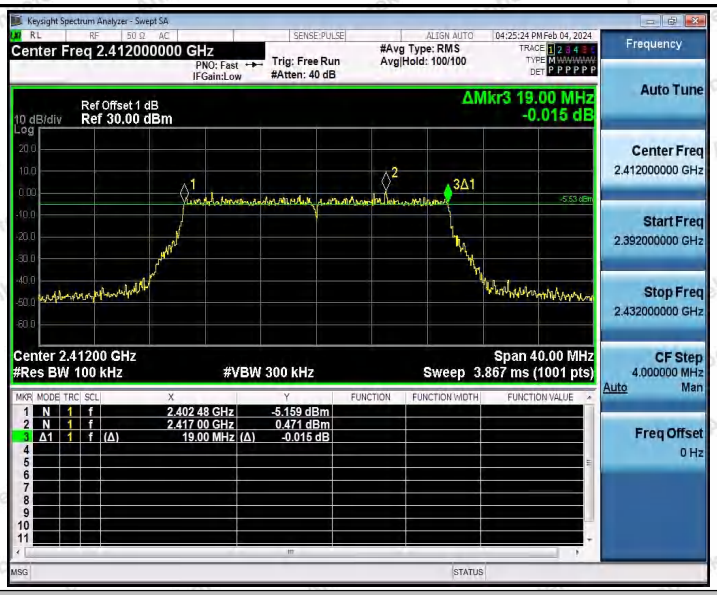
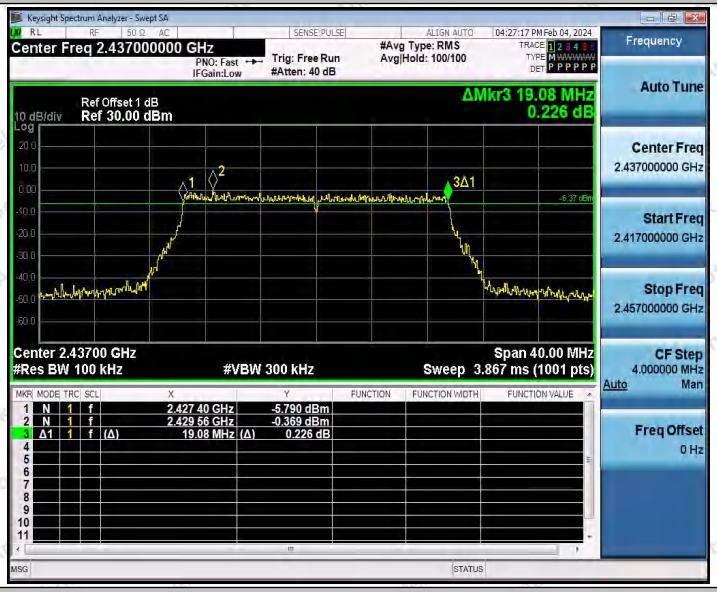


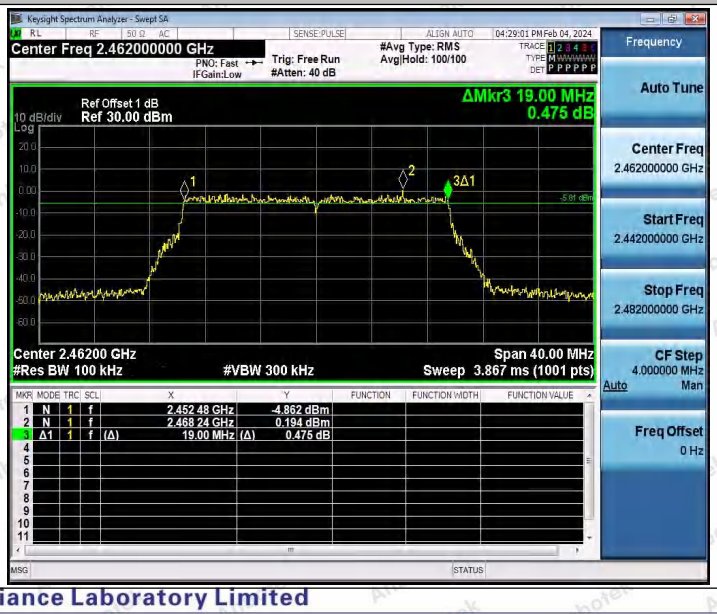
11AX20SISO_Ant1_2412



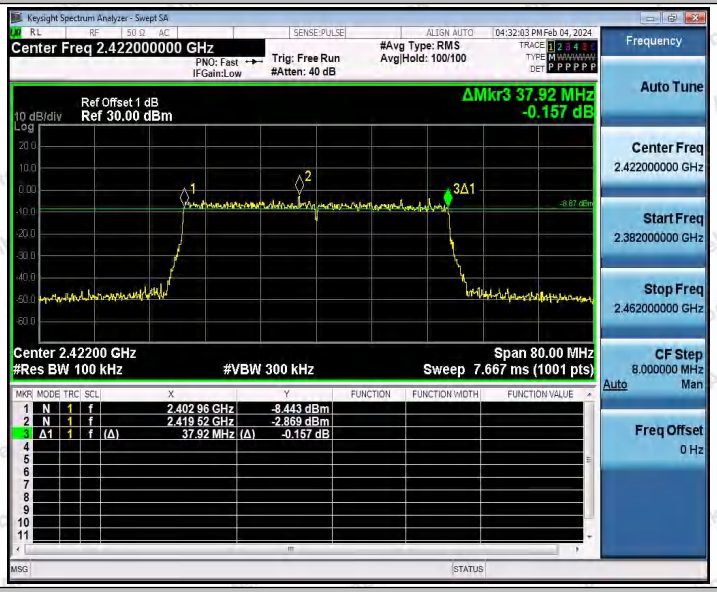
11AX20SISO_Ant1_2437



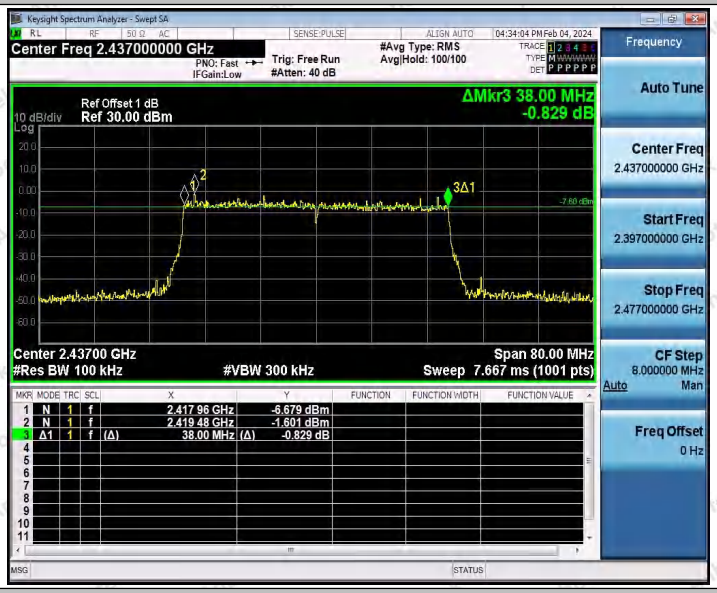
11AX20SISO_Ant1_2462



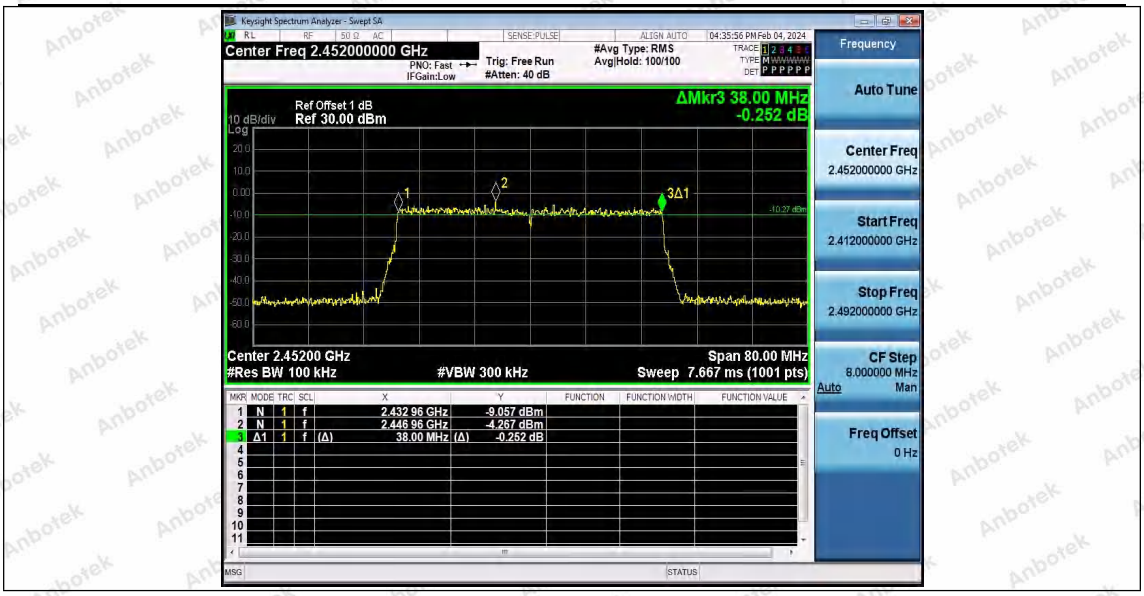
11AX40SISO_Ant1_2422



11AX40SISO_Ant1_2437



11AX40SISO_Ant1_2452

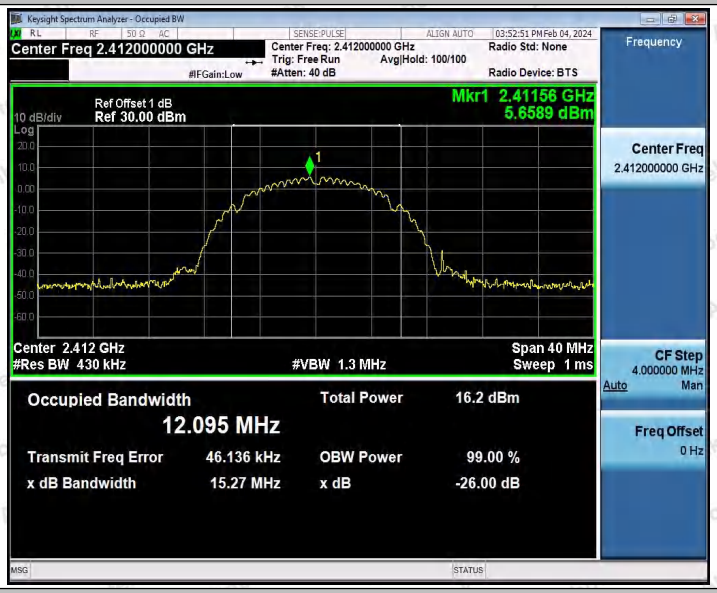
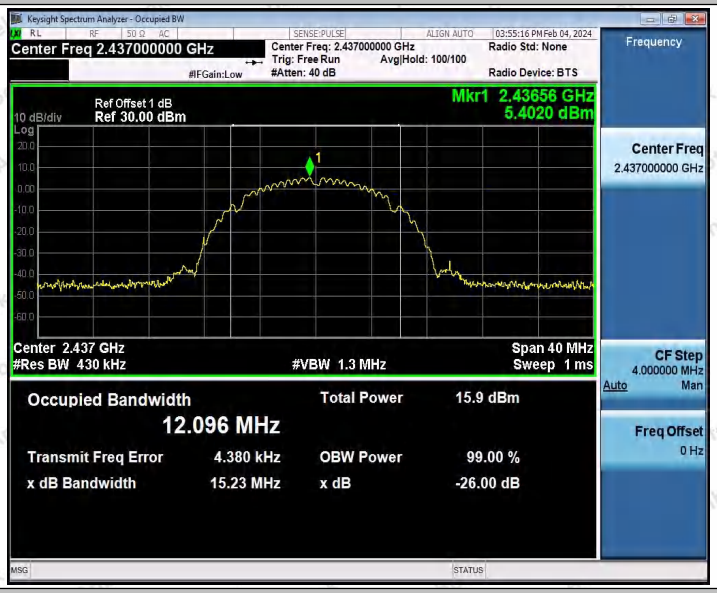

Keysight Spectrum Analyzer - Swept SA
Center Freq 2.452000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
#Avg Type: RMS
Avg|Hold: 100/100
04:35:56 PM Feb 04, 2024
Ref Offset 1 dB
10 dB/div
Ref 30.00 dBm
ΔMkr3 38.00 MHz
-0.252 dB
Center 2.45200 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 80.00 MHz
Sweep 7.667 ms (1001 pts)
1 N 1 f 2.432 96 GHz -9.057 dBm
2 N 1 f 2.446 96 GHz -4.267 dBm
3 Δ1 1 f (Δ) 38.00 MHz (Δ) -0.252 dB
Frequency
Auto Tune
Center Freq
2.452000000 GHz
Start Freq
2.412000000 GHz
Stop Freq
2.492000000 GHz
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

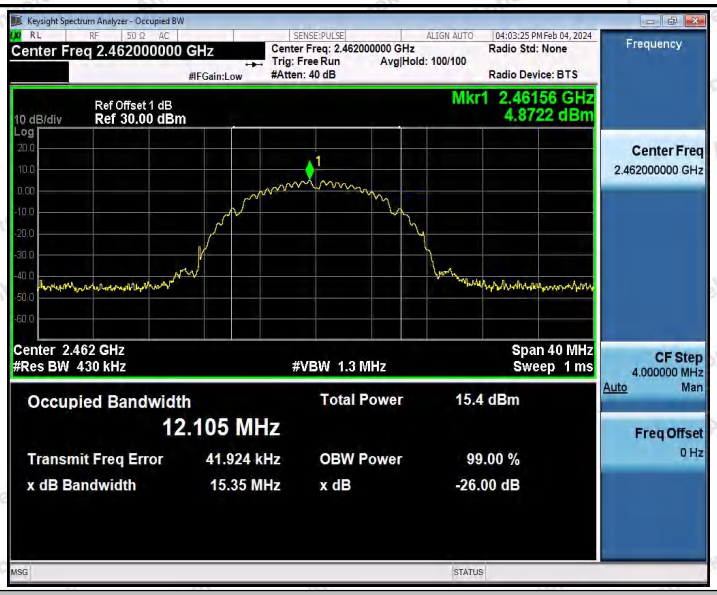
Appendix B: Occupied Channel Bandwidth

Test Result

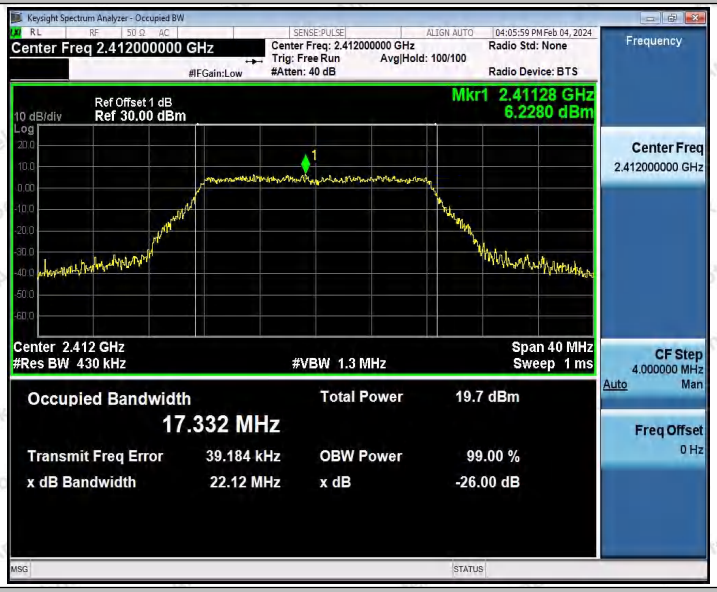
TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	12.095	2405.9986	2418.0936	---	---
		2437	12.096	2430.9564	2443.0524	---	---
		2462	12.105	2455.9894	2468.0944	---	---
11G	Ant1	2412	17.332	2403.3732	2420.7052	---	---
		2437	17.431	2428.2480	2445.6790	---	---
		2462	17.465	2453.2214	2470.6864	---	---
11N20SISO	Ant1	2412	18.338	2402.8496	2421.1876	---	---
		2437	18.351	2427.7883	2446.1393	---	---
		2462	18.419	2452.7880	2471.2070	---	---
11N40SISO	Ant1	2422	36.551	2403.7321	2440.2831	---	---
		2437	36.522	2418.7427	2455.2647	---	---
		2452	36.722	2433.6081	2470.3301	---	---
11AX20SISO	Ant1	2412	19.293	2402.3656	2421.6586	---	---
		2437	19.241	2427.3648	2446.6058	---	---
		2462	19.263	2452.3924	2471.6554	---	---
11AX40SISO	Ant1	2422	37.956	2403.0202	2440.9762	---	---
		2437	37.891	2418.0665	2455.9575	---	---
		2452	38.000	2433.0090	2471.0090	---	---

Test Graphs

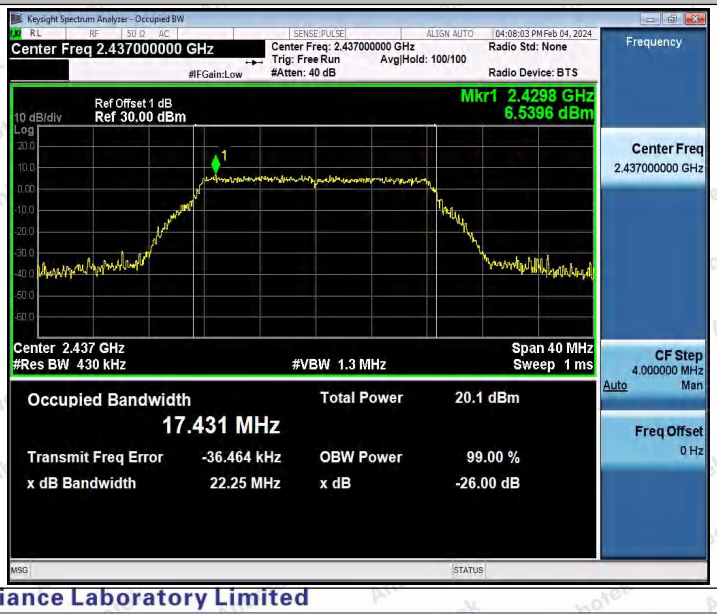
11B_Ant1_2412

11B_Ant1_2437

11B_Ant1_2462



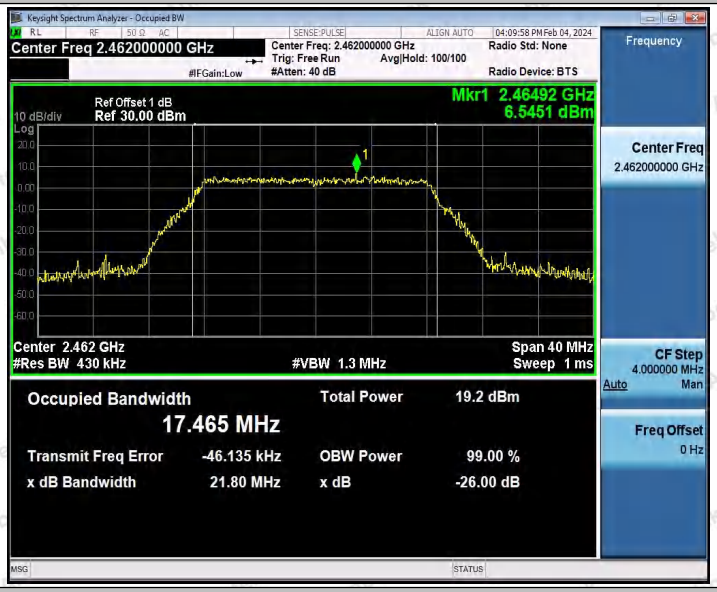
11G_Ant1_2412



11G_Ant1_2437



11G_Ant1_2462

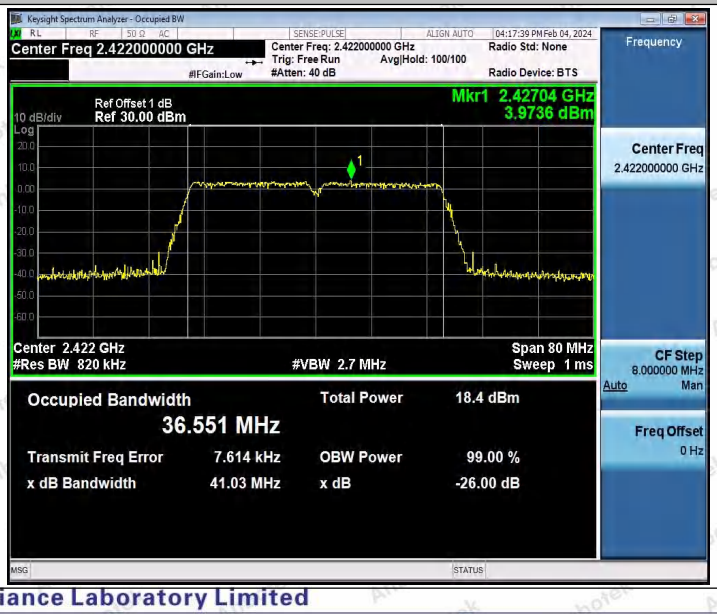


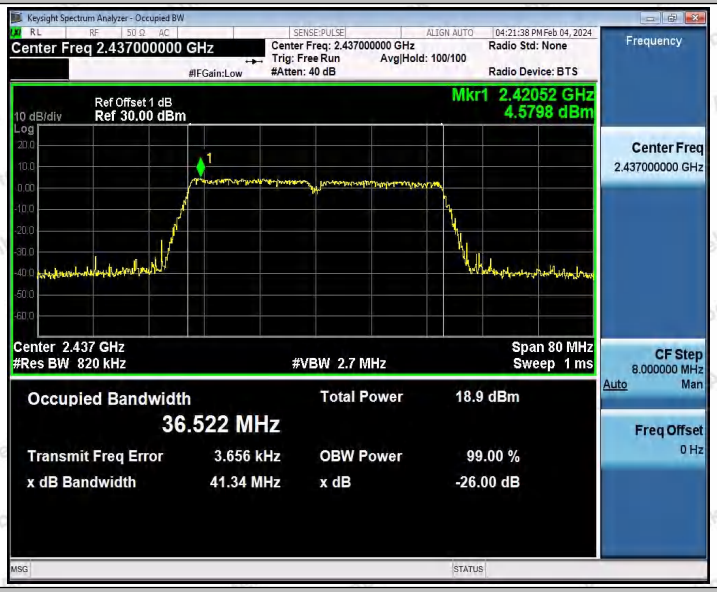
11N20SISO_Ant1_2412

11N20SISO_Ant1_2437

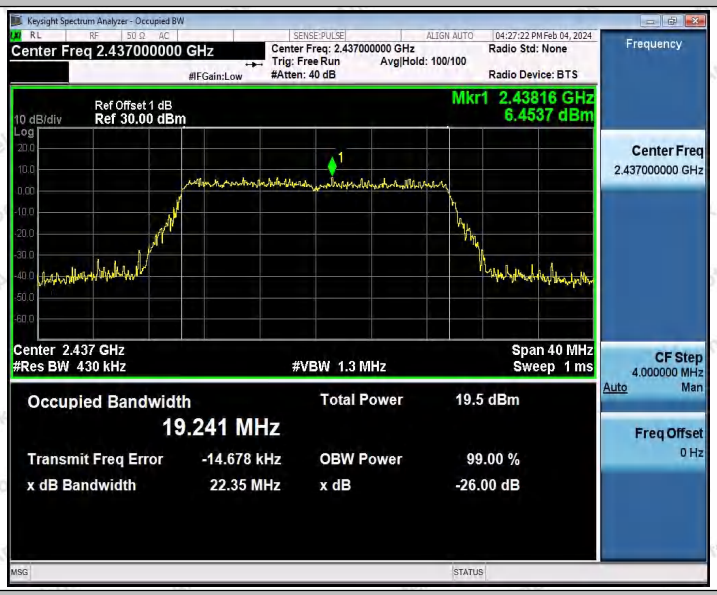
11N20SISO_Ant1_2462

11N40SISO_Ant1_2422

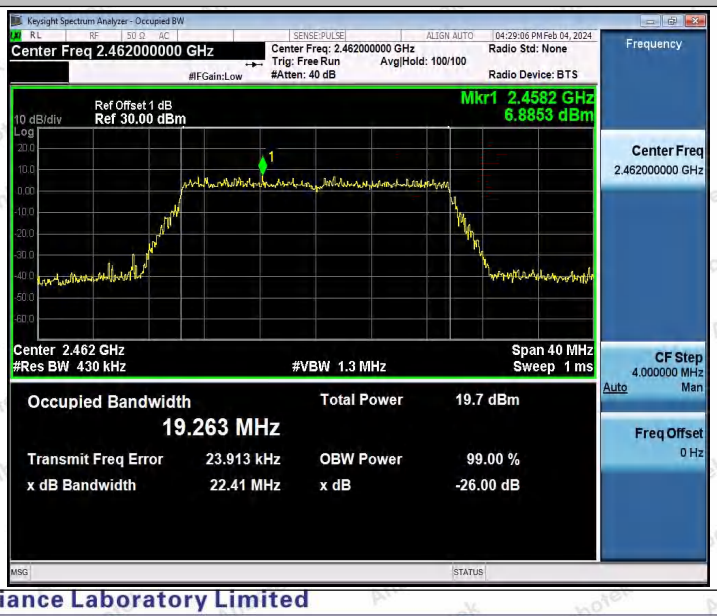


11N40SISO_Ant1_2437

11N40SISO_Ant1_2452
11AX20SISO_Ant1_2412

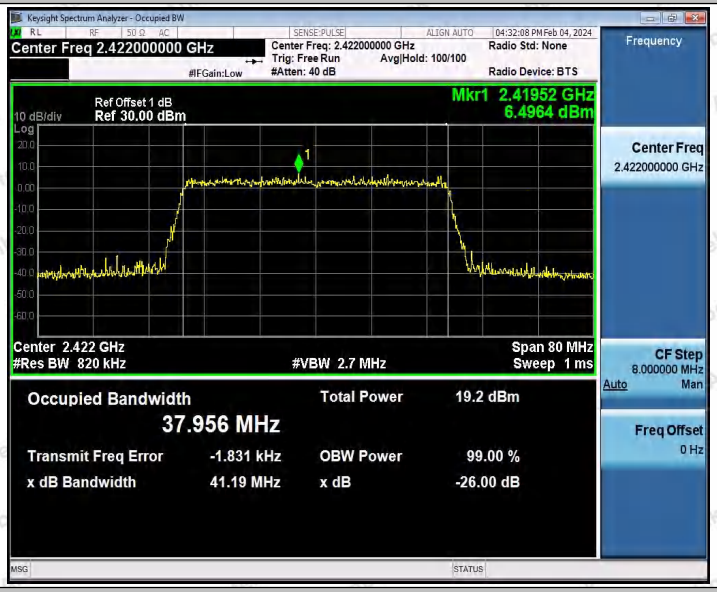
11AX20SISO_Ant1_2437



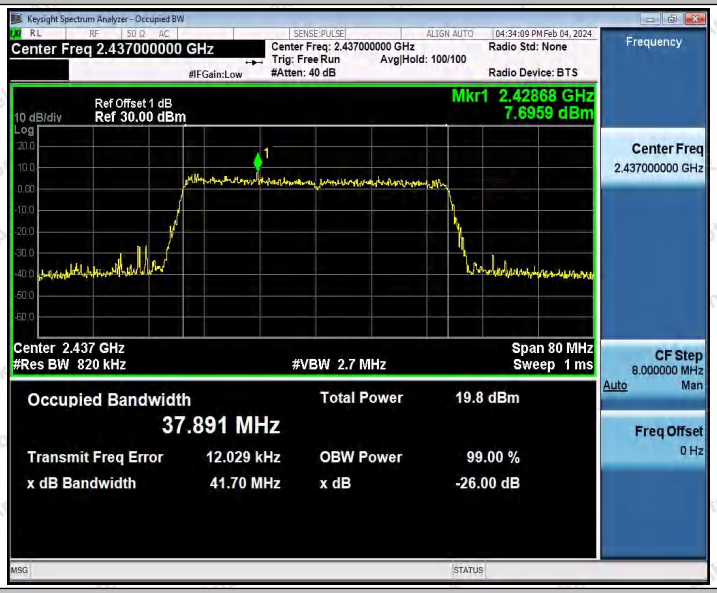
11AX20SISO_Ant1_2462



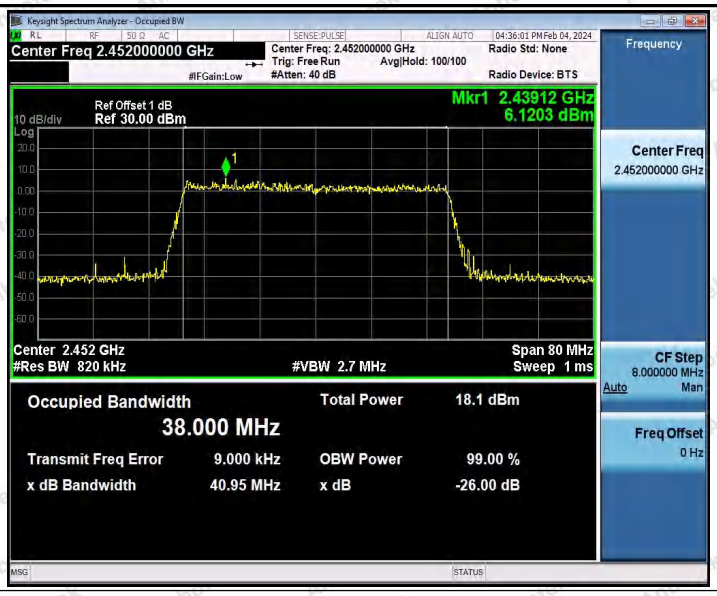
11AX40SISO_Ant1_2422



11AX40SISO_Ant1_2437



11AX40SISO_Ant1_2452


Keysight Spectrum Analyzer - Occupied BW
Center Freq 2.452000000 GHz
Center Freq: 2.452000000 GHz
Trig: Free Run
Avg|Hold: 100/100
#Atten: 40 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
Frequency
Ref Offset 1 dB
10 dB/div
Ref 30.00 dBm
Mkr1 2.43912 GHz
6.1203 dBm
Center 2.452 GHz
#Res BW 820 kHz
#VBW 2.7 MHz
Span 80 MHz
Sweep 1 ms
Occupied Bandwidth
38.000 MHz
Total Power 18.1 dBm
Transmit Freq Error 9.000 kHz
OBW Power 99.00 %
x dB Bandwidth 40.95 MHz
x dB -26.00 dB
Center Freq
2.452000000 GHz
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

Appendix C: Maximum conducted output power

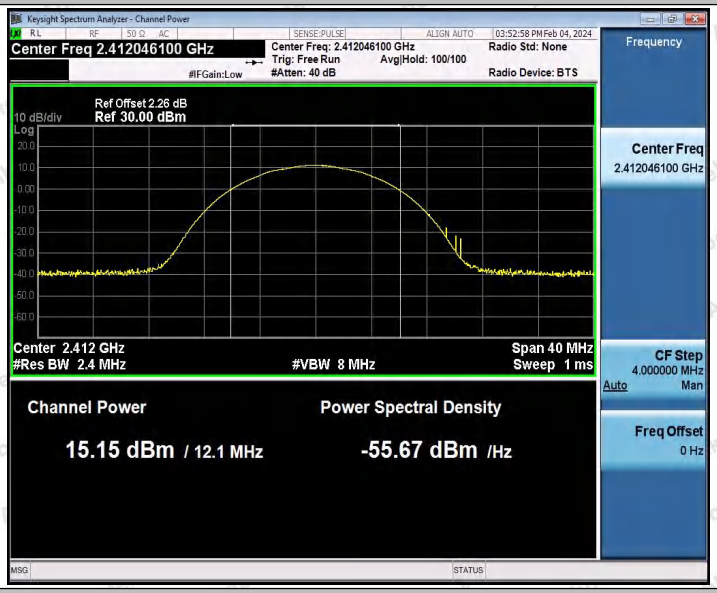
Test Result

TestMode	Antenna	Frequency[MHz]	Average Output Power[dBm]	Conducted Limit[dBm]
11B	Ant1	2412	15.15	≤30.00
		2437	15.16	≤30.00
		2462	14.54	≤30.00
11G	Ant1	2412	17.60	≤30.00
		2437	18.00	≤30.00
		2462	17.07	≤30.00
11N20SISO	Ant1	2412	15.80	≤30.00
		2437	16.05	≤30.00
		2462	16.21	≤30.00
11N40SISO	Ant1	2422	15.27	≤30.00
		2437	15.93	≤30.00
		2452	15.44	≤30.00
11AX20SISO	Ant1	2412	16.67	≤30.00
		2437	16.93	≤30.00
		2462	17.06	≤30.00
11AX40SISO	Ant1	2422	15.91	≤30.00
		2437	**18.91**	≤30.00
		2452	14.85	≤30.00

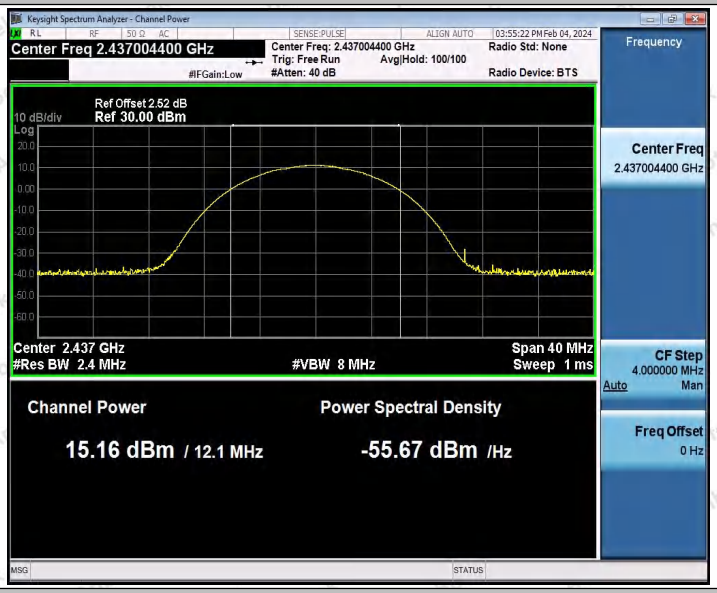
Note：The Duty Cycle Factor(10*log(1/D)) and cable loss are compensated in the graph.

Test Graphs

11B_Ant1_2412

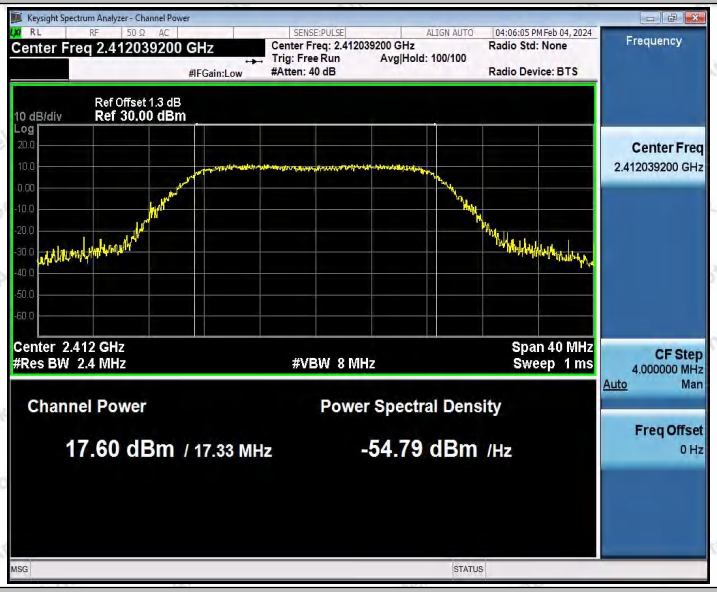


11B_Ant1_2437

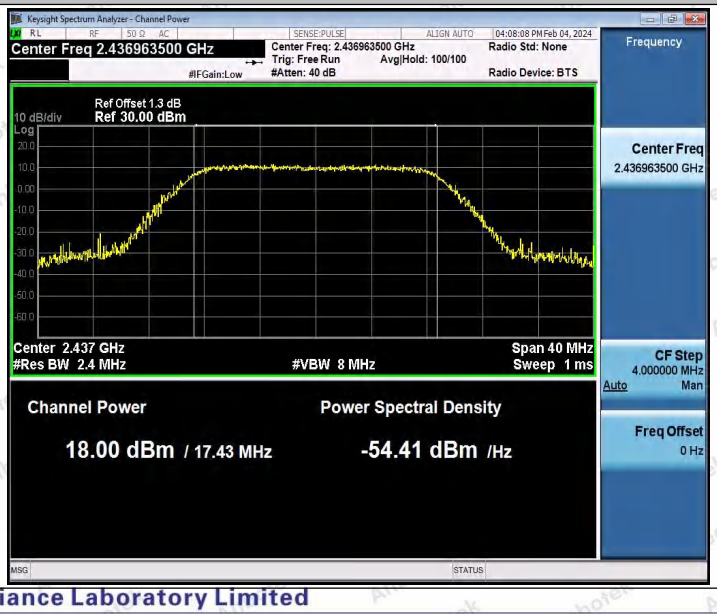


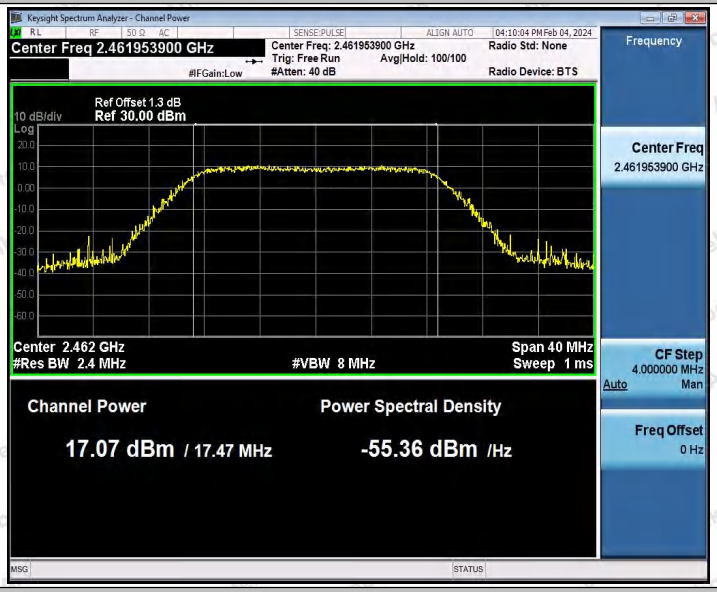
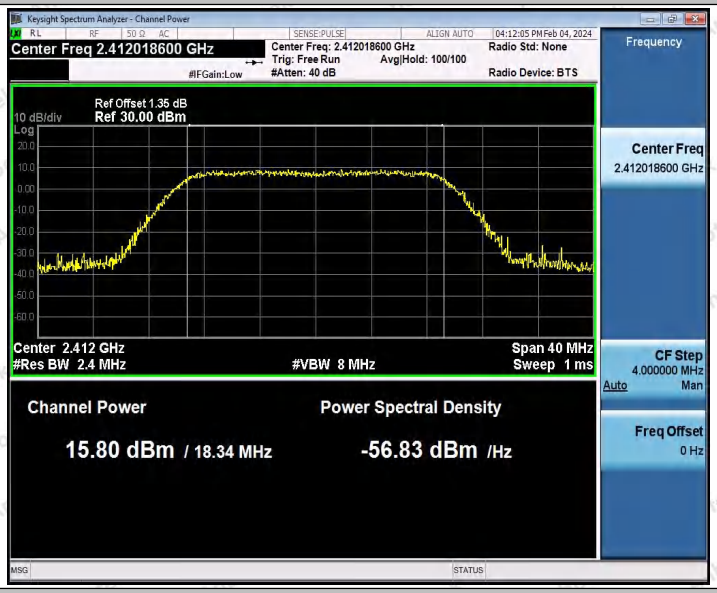
11B_Ant1_2462

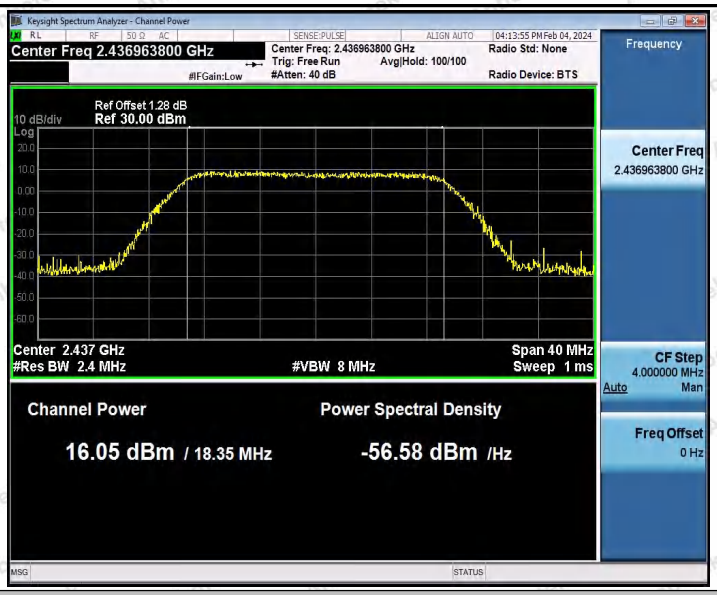
11G_Ant1_2412



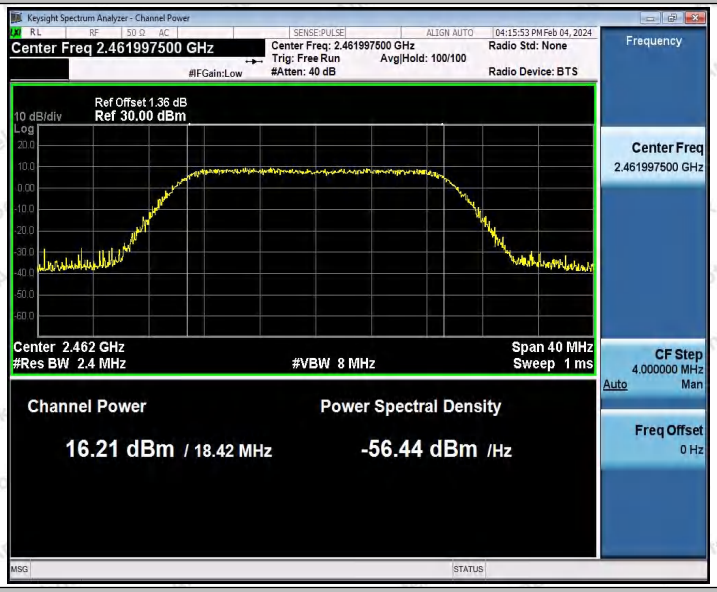
11G_Ant1_2437



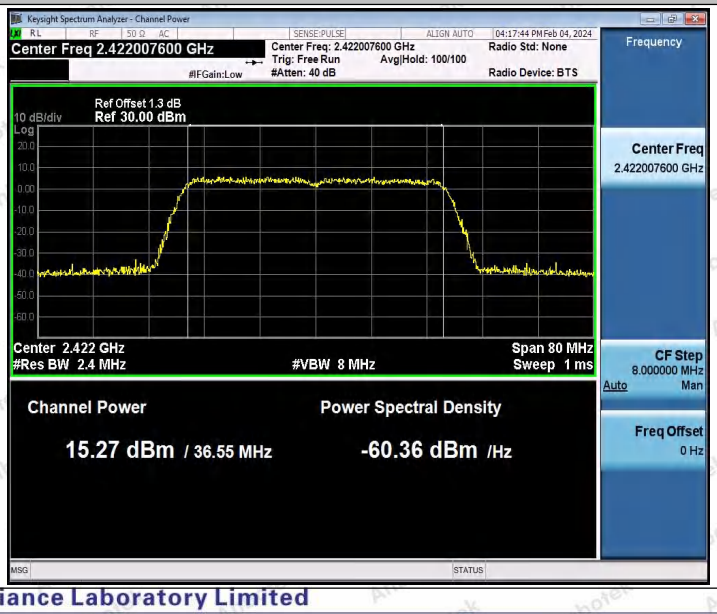
11G_Ant1_2462

11N20SISO_Ant1_2412

11N20SISO_Ant1_2437



11N20SISO_Ant1_2462

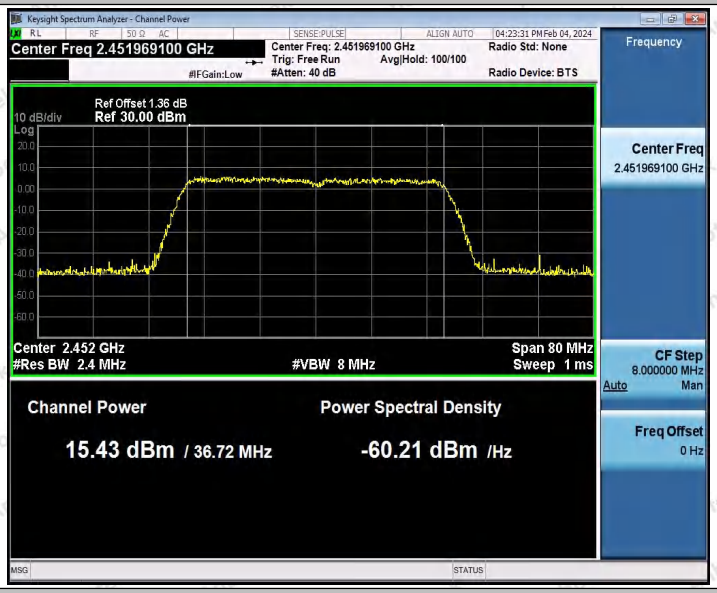


11N40SISO_Ant1_2422

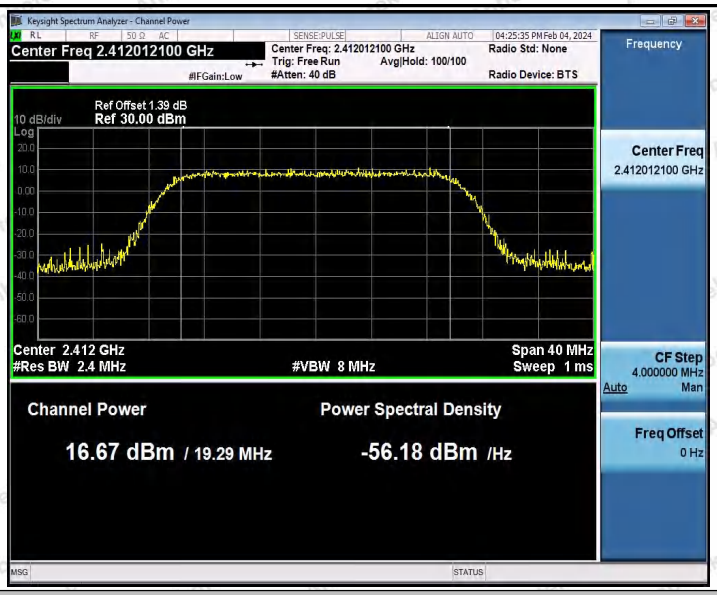


11N40SISO_Ant1_2437

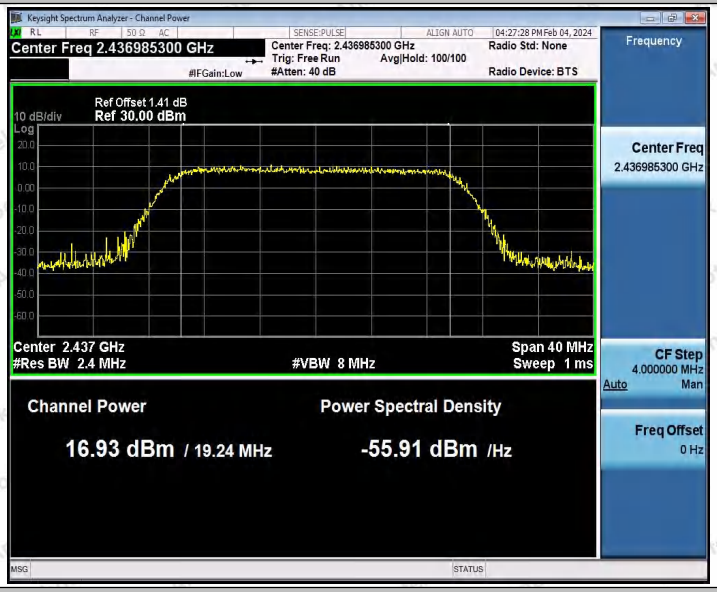
11N40SISO_Ant1_2452



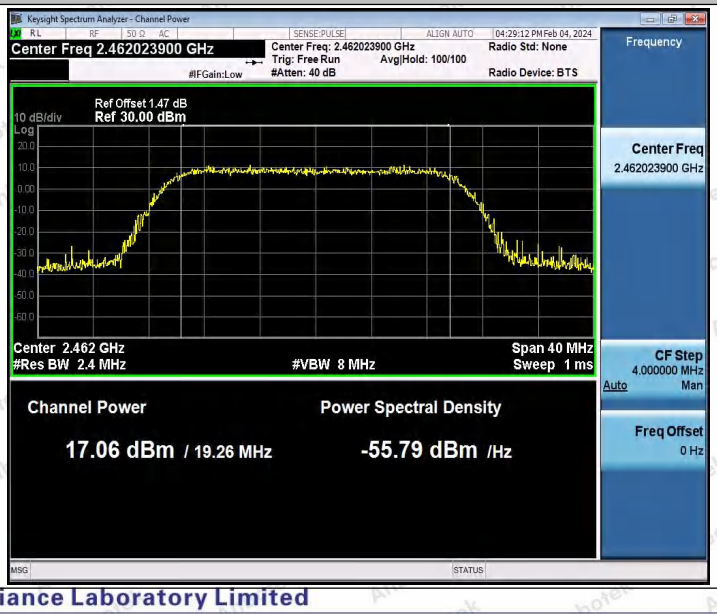
11AX20SISO_Ant1_2412



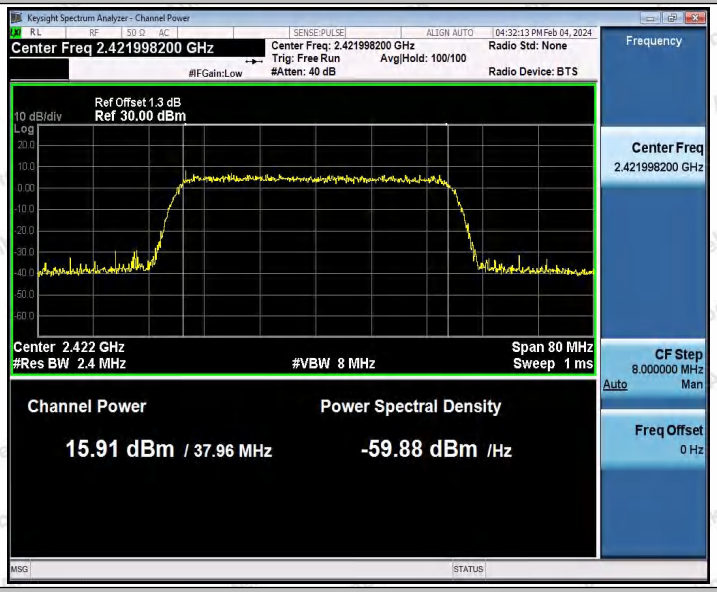
11AX20SISO_Ant1_2437



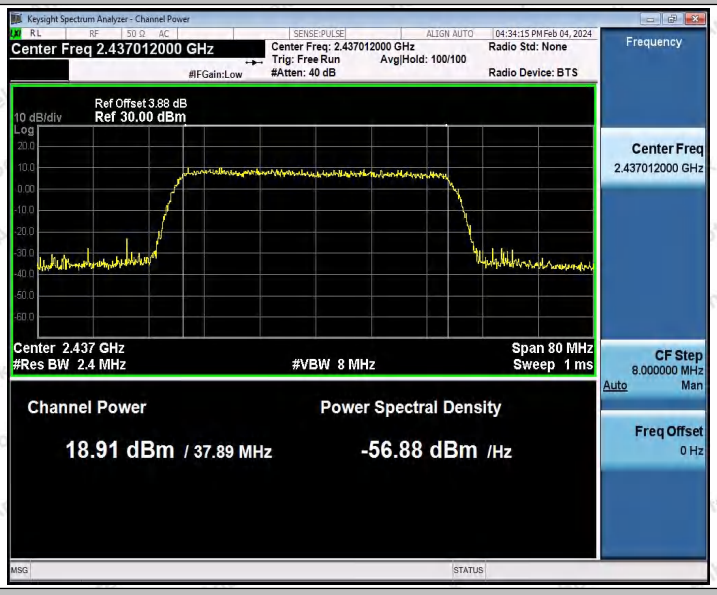
11AX20SISO_Ant1_2462



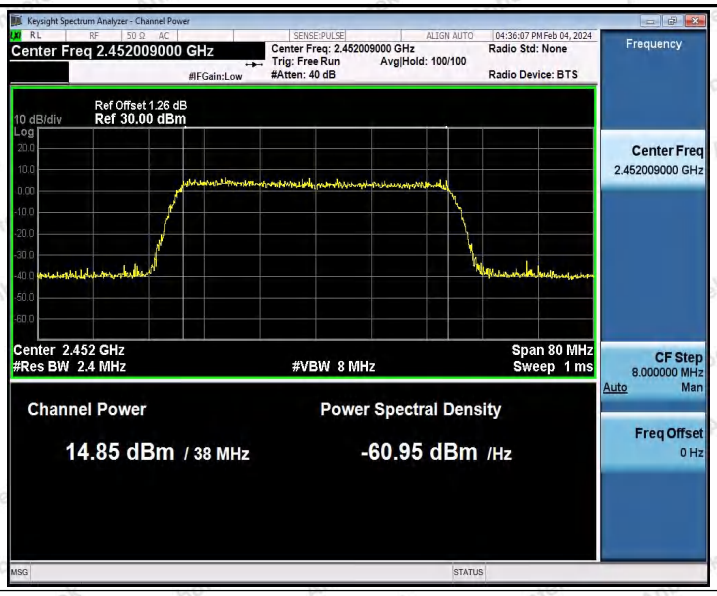
11AX40SISO_Ant1_2422



11AX40SISO_Ant1_2437



11AX40SISO_Ant1_2452


Keysight Spectrum Analyzer - Channel Power
Center Freq 2.452009000 GHz
Center Freq: 2.452009000 GHz
Trig: Free Run
Avg|Hold: 100/100
#Atten: 40 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
04:36:07 PM Feb 04, 2024
Frequency
Ref Offset 1.26 dB
10 dB/div
Ref 30.00 dBm
Log
Center 2.452 GHz
#Res BW 2.4 MHz
#VBW 8 MHz
Span 80 MHz
Sweep 1 ms
Channel Power
14.85 dBm / 38 MHz
Power Spectral Density
-60.95 dBm /Hz
Center Freq
2.452009000 GHz
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

Appendix D: Maximum power spectral density

Test Result

TestMode	Antenna	Frequency [MHz]	Result [dBm/30kHz]	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-7.38	-17.38	≤8.00	PASS
		2437	-8.09	-18.09	≤8.00	PASS
		2462	-8.41	-18.41	≤8.00	PASS
11G	Ant1	2412	-12.13	-22.13	≤8.00	PASS
		2437	-11.65	-21.65	≤8.00	PASS
		2462	-12.02	-22.02	≤8.00	PASS
11N20SISO	Ant1	2412	-13.74	-23.74	≤8.00	PASS
		2437	-13.93	-23.93	≤8.00	PASS
		2462	-13.52	-23.52	≤8.00	PASS
11N40SISO	Ant1	2422	-18.00	-28.00	≤8.00	PASS
		2437	-16.83	-26.83	≤8.00	PASS
		2452	-17.76	-27.76	≤8.00	PASS
11AX20SISO	Ant1	2412	-15.69	-25.69	≤8.00	PASS
		2437	-15.42	-25.42	≤8.00	PASS
		2462	-14.72	-24.72	≤8.00	PASS
11AX40SISO	Ant1	2422	-19.70	-29.70	≤8.00	PASS
		2437	-15.98	-25.98	≤8.00	PASS
		2452	-20.26	-30.26	≤8.00	PASS

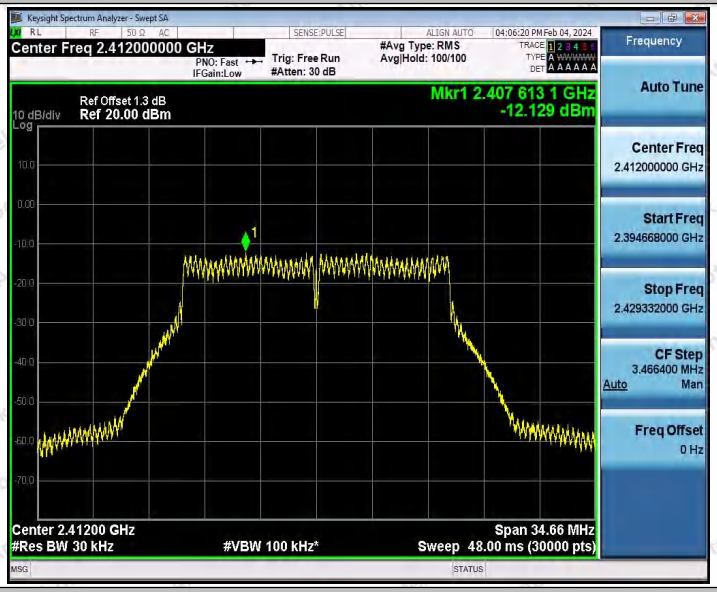
Note：

1. The Duty Cycle Factor(10*log(1/D)) and cable loss are compensated in the graph.
2. PSD(dBm/3kHz)= PSD(dBm/30kHz)- (10*log(30/3))

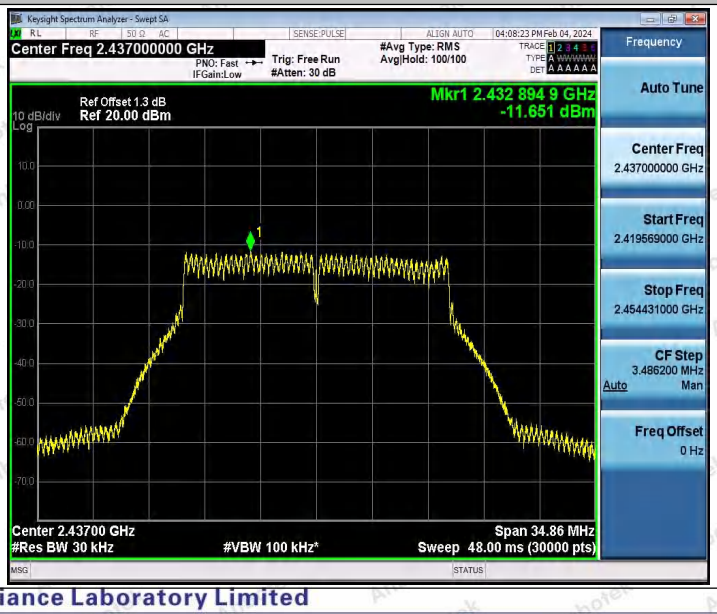
Test Graphs

11B_Ant1_2412
11B_Ant1_2437
11B_Ant1_2462

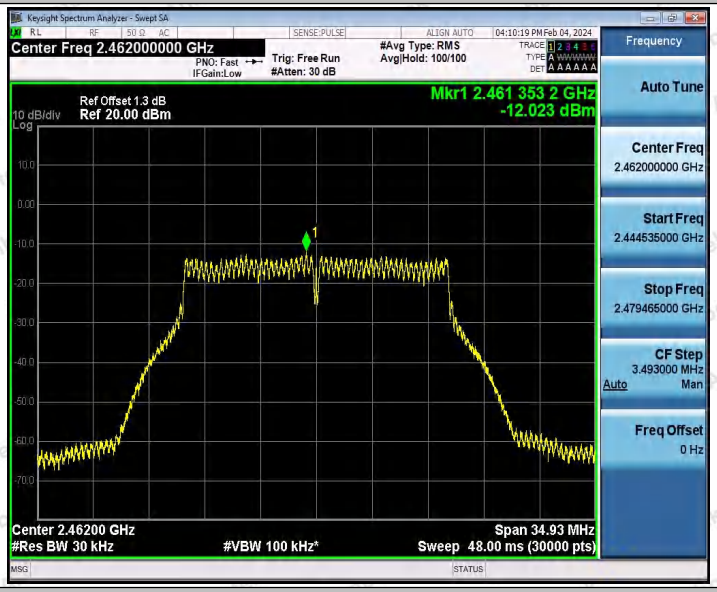
11G_Ant1_2412



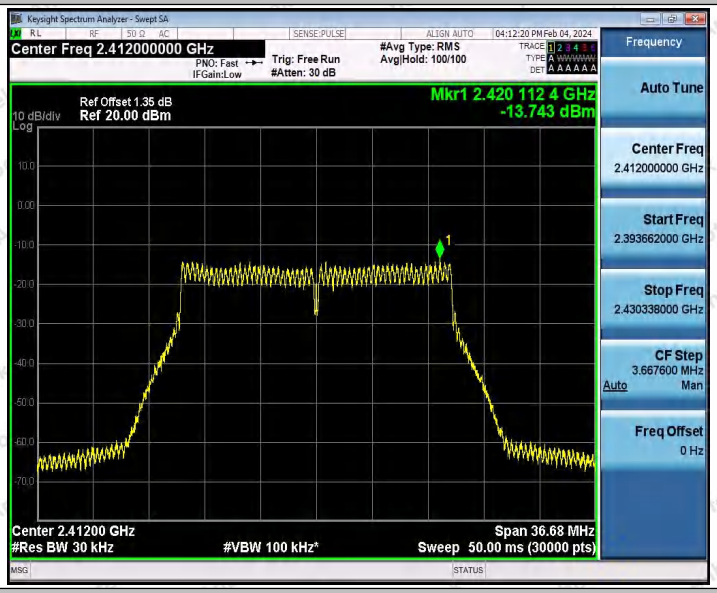
11G_Ant1_2437



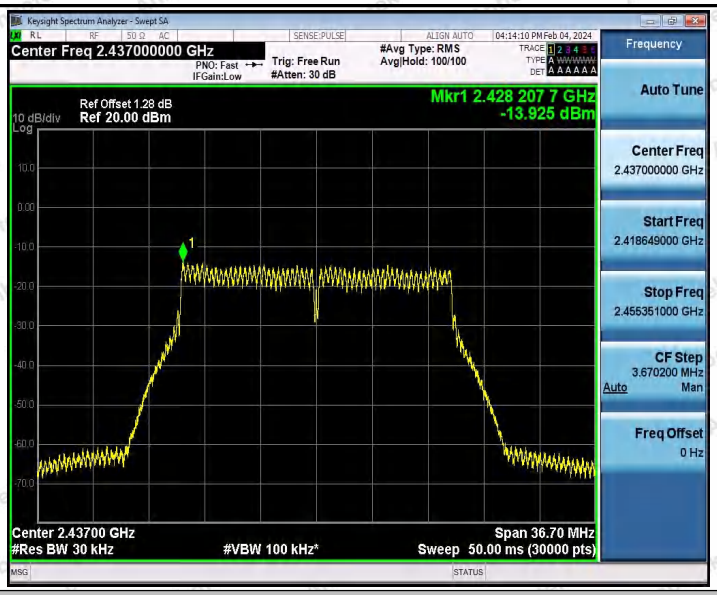
11G_Ant1_2462



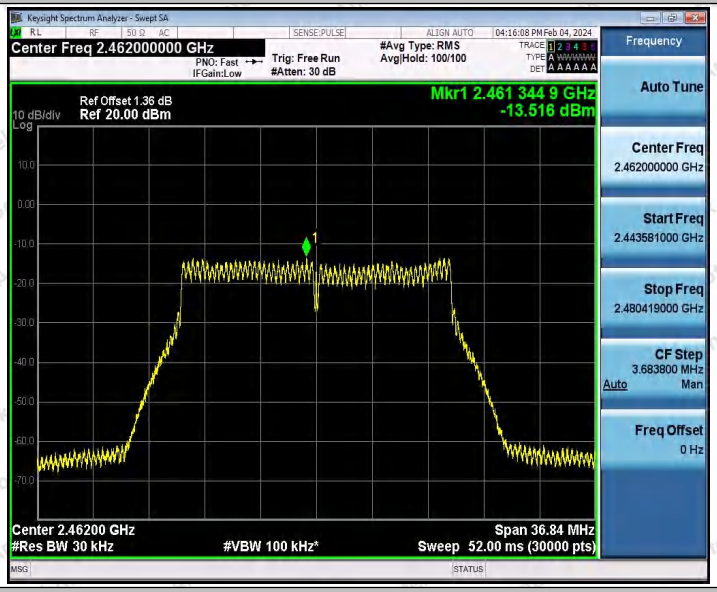
11N20SISO_Ant1_2412



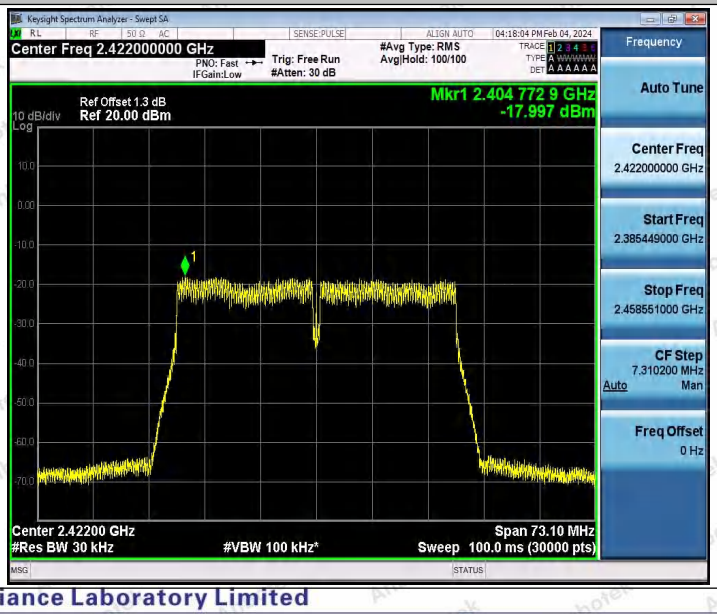
11N20SISO_Ant1_2437

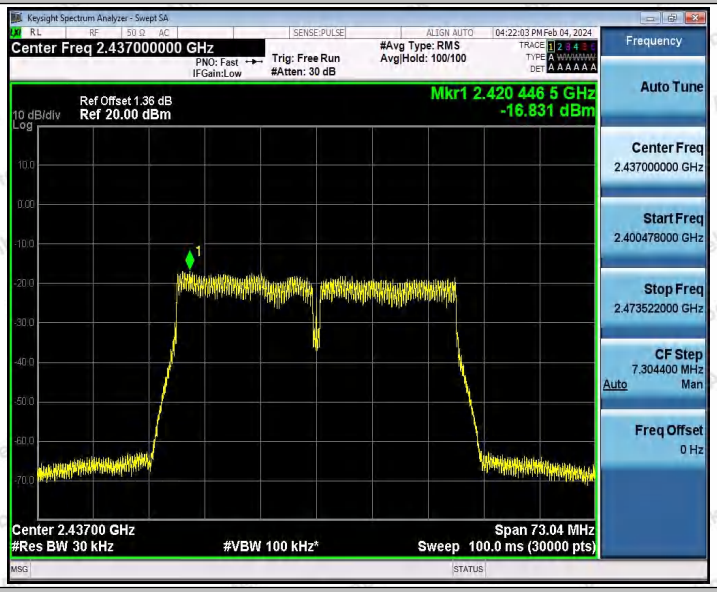
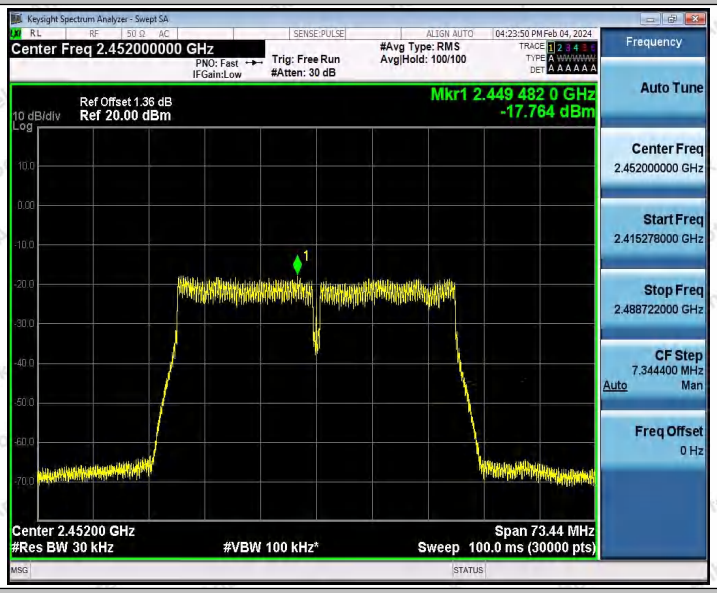


11N20SISO_Ant1_2462

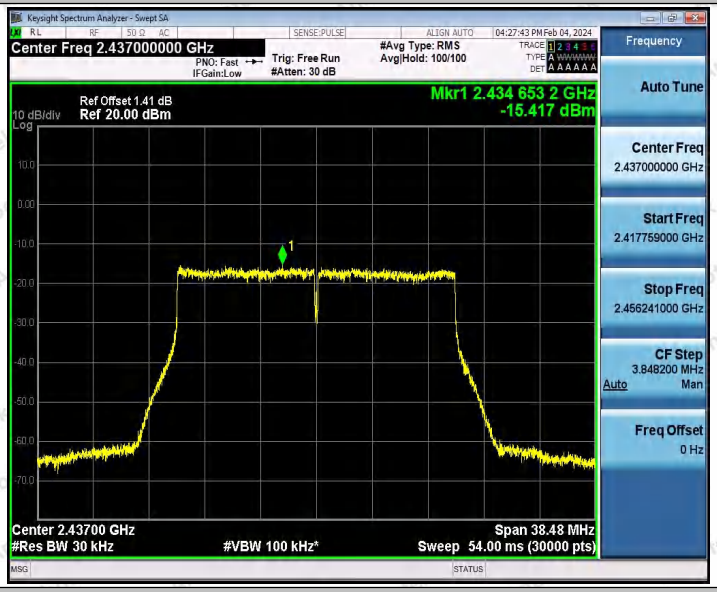


11N40SISO_Ant1_2422

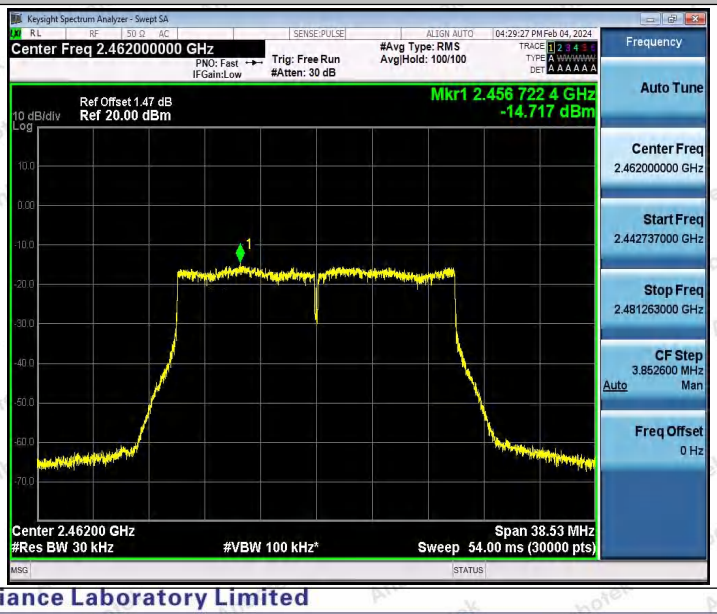


11N40SISO_Ant1_2437

11N40SISO_Ant1_2452

11AX20SISO_Ant1_2412

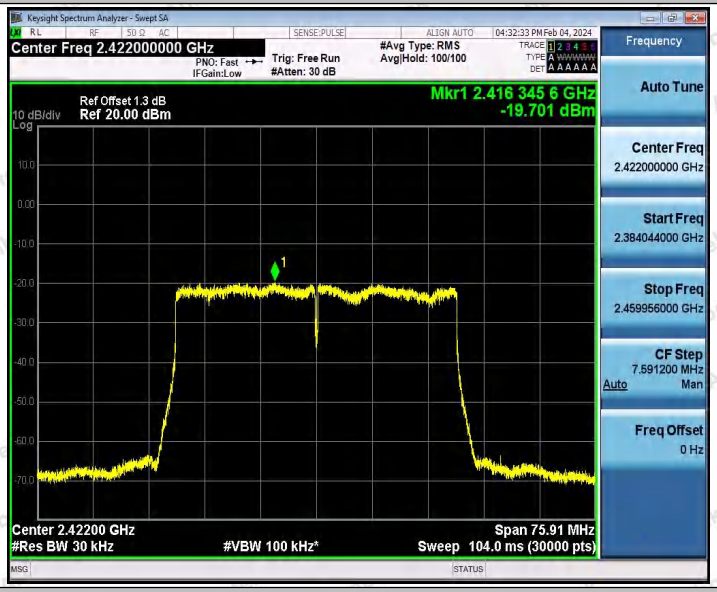
11AX20SISO_Ant1_2437



11AX20SISO_Ant1_2462



11AX40SISO_Ant1_2422



11AX40SISO_Ant1_2437

11AX40SISO_Ant1_2452

Keysight Spectrum Analyzer - Swept SA
Center Freq 2.452000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 100/100
04:36:27 PM Feb 04, 2024
Ref Offset 1.26 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 2.434 247 1 GHz
-20.255 dBm
Center 2.45200 GHz
#Res BW 30 kHz
#VBW 100 kHz*
Span 76.00 MHz
Sweep 104.0 ms (30000 pts)
Frequency
Auto Tune
Center Freq
2.452000000 GHz
Start Freq
2.414000000 GHz
Stop Freq
2.490000000 GHz
CF Step
7.600000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

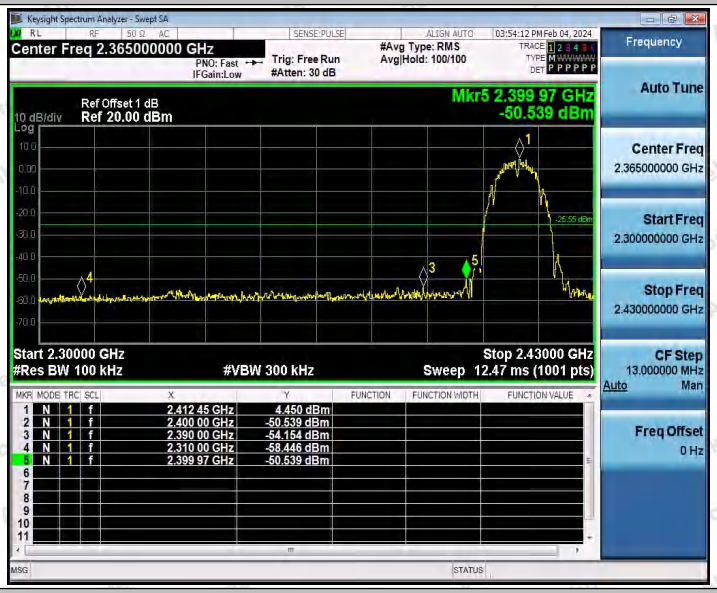
Appendix E: Band edge measurements

Test Result

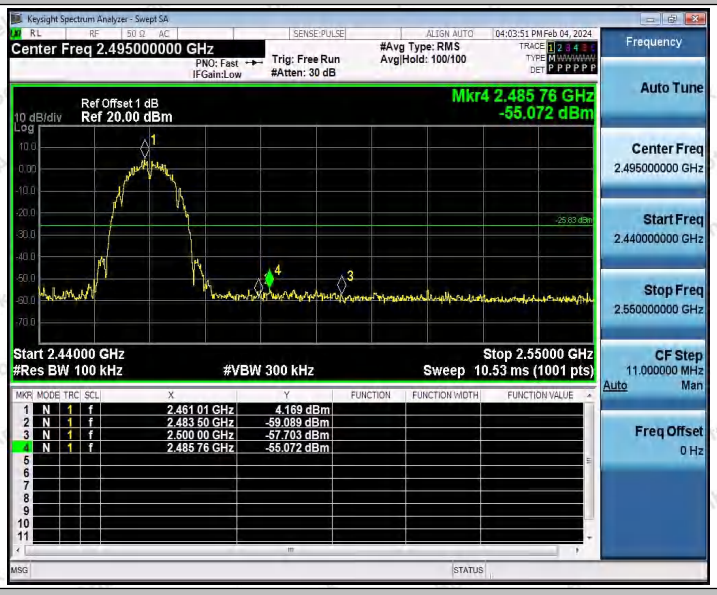
TestMode	Antenna	ChName	Frequency [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	4.45	-50.54	≤-25.55	PASS
		High	2462	4.17	-55.07	≤-25.83	PASS
11G	Ant1	Low	2412	2.54	-36.24	≤-27.46	PASS
		High	2462	-0.15	-49.37	≤-30.15	PASS
11N20SISO	Ant1	Low	2412	-0.29	-38.21	≤-30.29	PASS
		High	2462	-2.24	-47.99	≤-32.24	PASS
11N40SISO	Ant1	Low	2422	-3.38	-47.85	≤-33.38	PASS
		High	2452	-2.77	-48.92	≤-32.77	PASS
11AX20SISO	Ant1	Low	2412	-1.15	-38.77	≤-31.15	PASS
		High	2462	-1.21	-47.39	≤-31.21	PASS
11AX40SISO	Ant1	Low	2422	-4.48	-42.34	≤-34.48	PASS
		High	2452	-4.62	-51.06	≤-34.62	PASS

Test Graphs

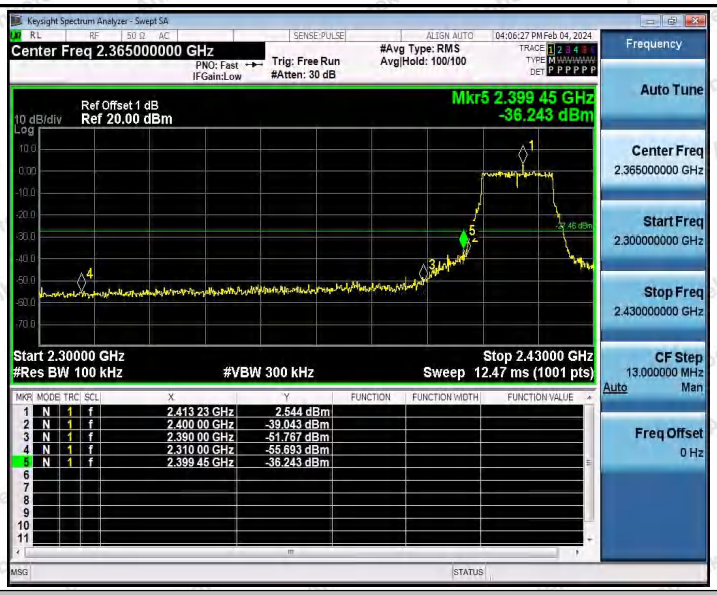
11B_Ant1_Low_2412



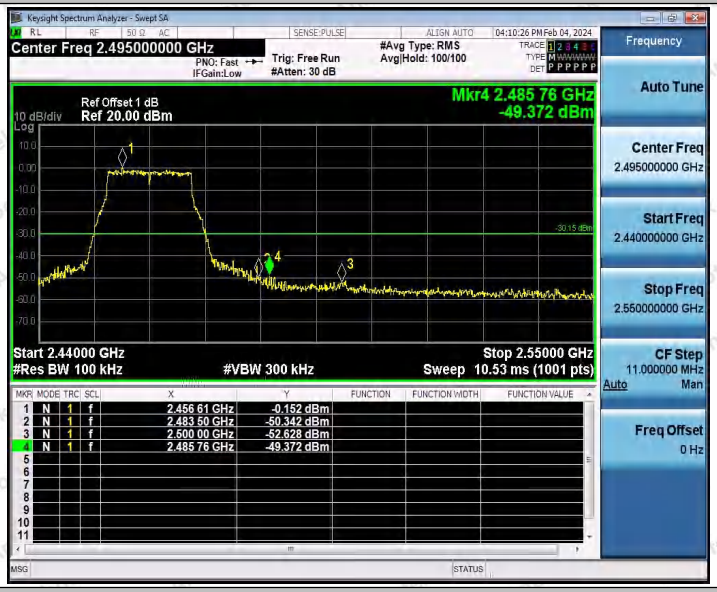
11B_Ant1_High_2462



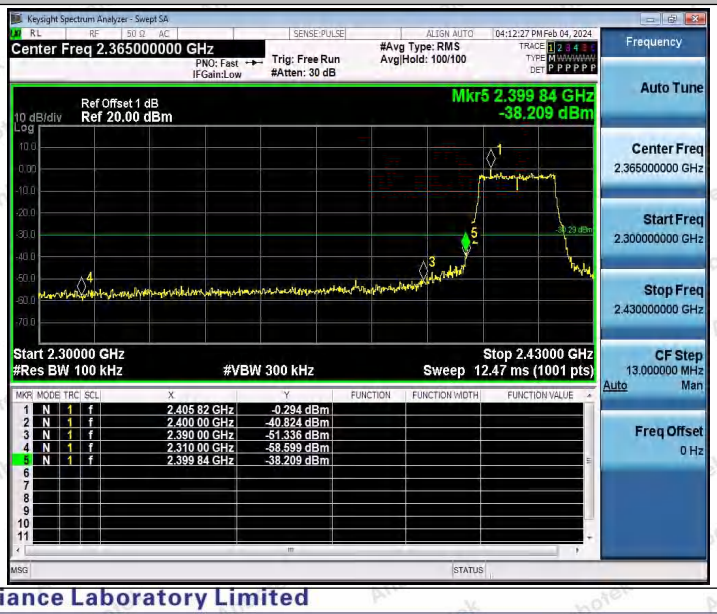
11G_Ant1_Low_2412



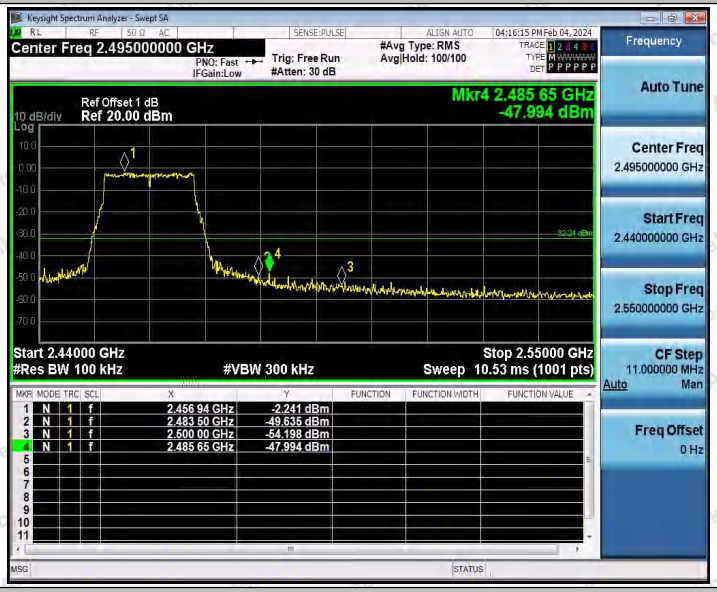
11G_Ant1_High_2462



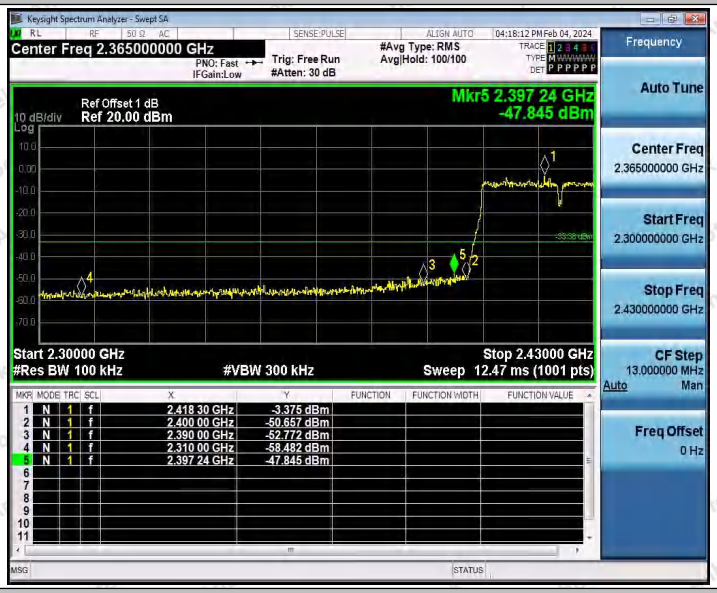
11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452