

Test Graphs





11G_Ant1_High_2462



11N20SISO_Ant1_Low_2412



11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



11N40SISO_Ant1_High_2452

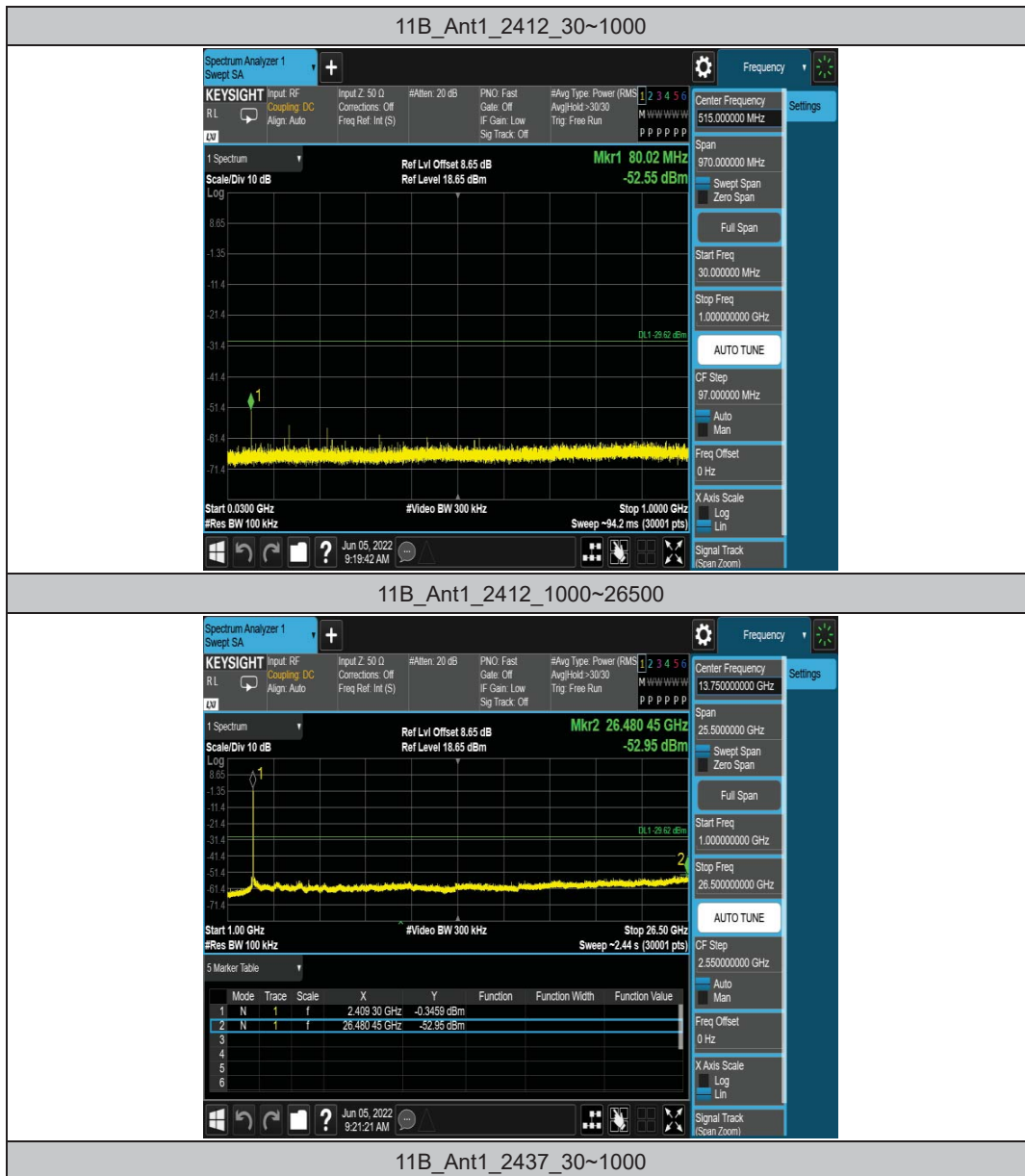


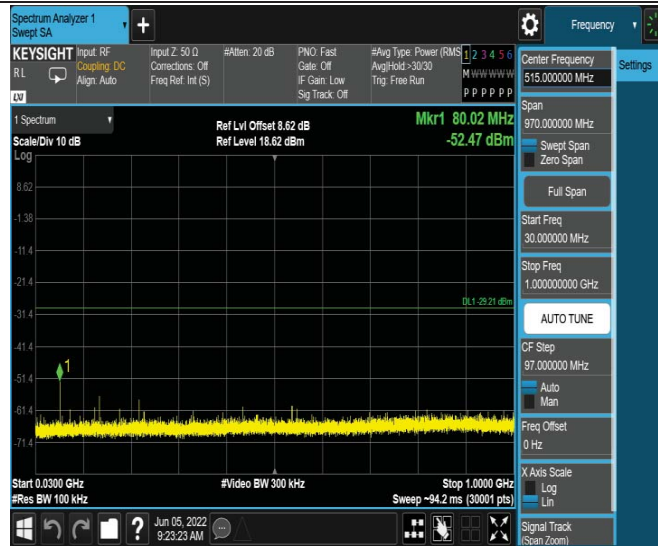
Appendix F: Conducted Spurious Emission

Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	30~1000	0.38	-52.55	≤-29.62	PASS
			1000~26500	0.38	-52.95	≤-29.62	PASS
		2437	30~1000	0.79	-52.47	≤-29.21	PASS
			1000~26500	0.79	-52.86	≤-29.21	PASS
		2462	30~1000	8.05	-56.13	≤-21.95	PASS
			1000~26500	8.05	-50.86	≤-21.95	PASS
11G	Ant1	2412	30~1000	0.52	-53.09	≤-29.48	PASS
			1000~26500	0.52	-53.55	≤-29.48	PASS
		2437	30~1000	0.54	-52.75	≤-29.46	PASS
			1000~26500	0.54	-52.68	≤-29.46	PASS
		2462	30~1000	1.61	-31.97	≤-28.39	PASS
			1000~26500	1.61	-52.93	≤-28.39	PASS
11N20SISO	Ant1	2412	30~1000	0.87	-47.23	≤-29.13	PASS
			1000~26500	0.87	-52.9	≤-29.13	PASS
		2437	30~1000	1.59	-48.41	≤-28.41	PASS
			1000~26500	1.59	-50.99	≤-28.41	PASS
		2462	30~1000	1.23	-35.95	≤-28.77	PASS
			1000~26500	1.23	-52.99	≤-28.77	PASS
11N40SISO	Ant1	2422	30~1000	-1.27	-46.5	≤-31.27	PASS
			1000~26500	-1.27	-53.61	≤-31.27	PASS
		2437	30~1000	-1.24	-47.82	≤-31.24	PASS
			1000~26500	-1.24	-51.83	≤-31.24	PASS
		2452	30~1000	-1.33	-47.6	≤-31.33	PASS
			1000~26500	-1.33	-53.1	≤-31.33	PASS

Test Graphs

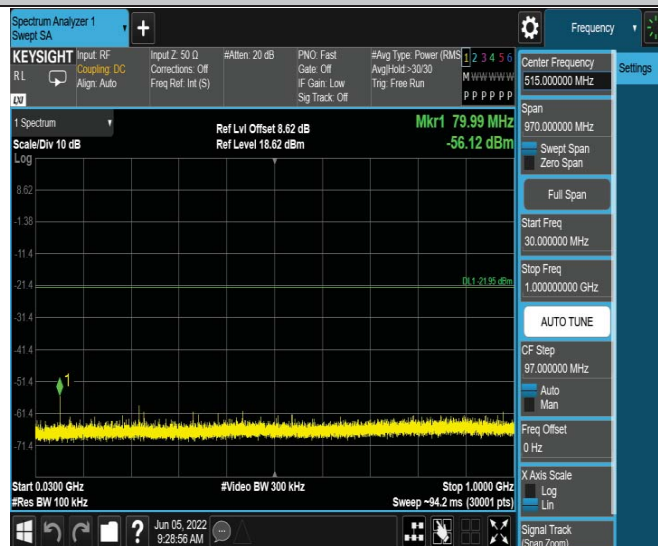




11B_Ant1_2437_1000~26500



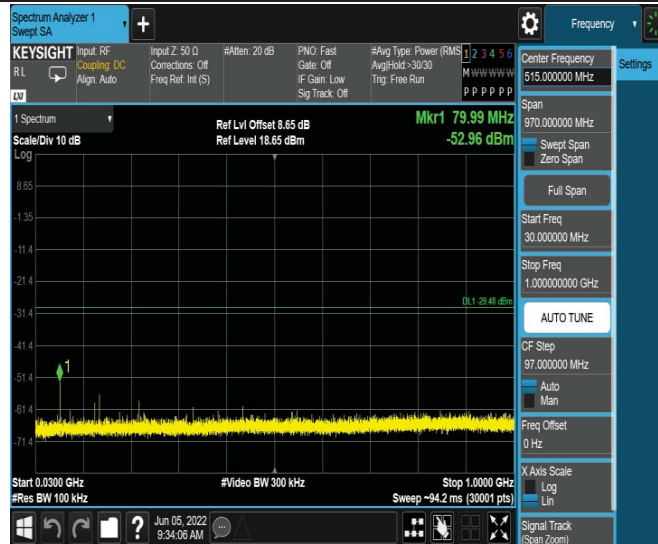
11B_Ant1_2462_30~1000



11B_Ant1_2462_1000~26500



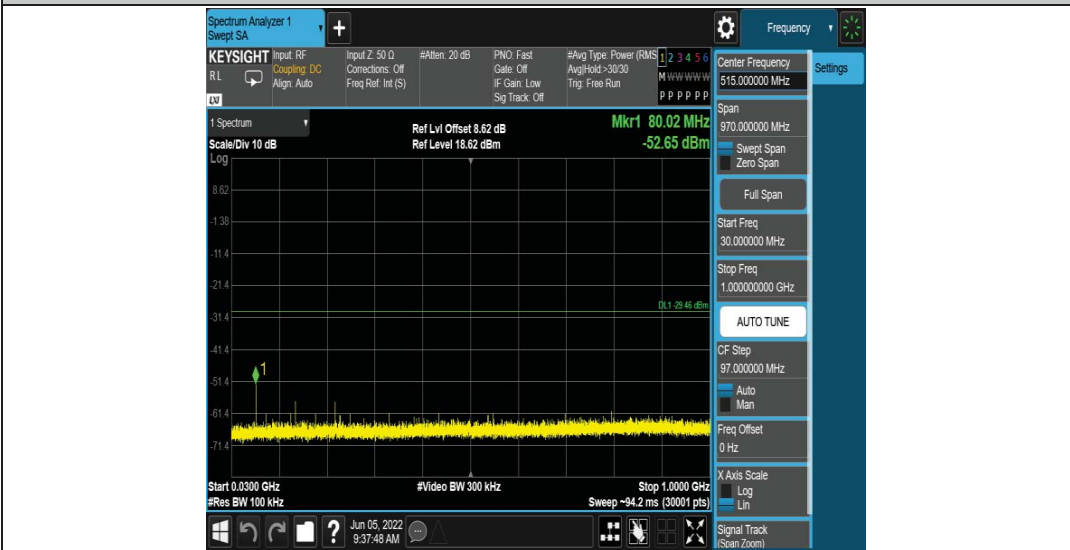
11G_Ant1_2412_30~1000



11G_Ant1_2412_1000~26500



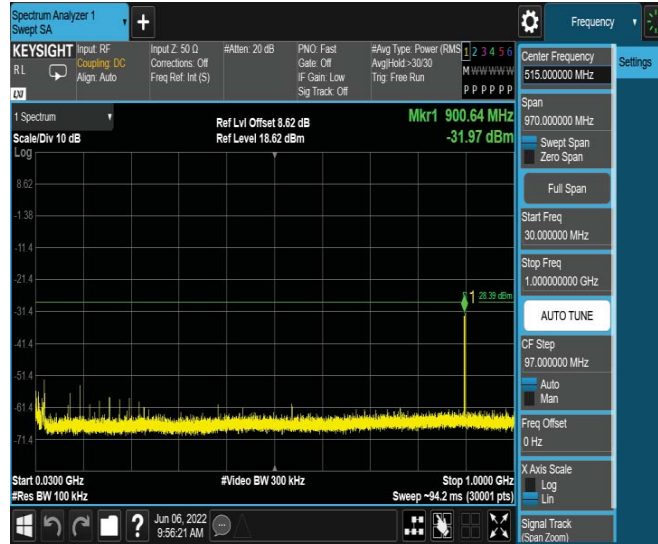
11G_Ant1_2437_30~1000



11G_Ant1_2437_1000~26500



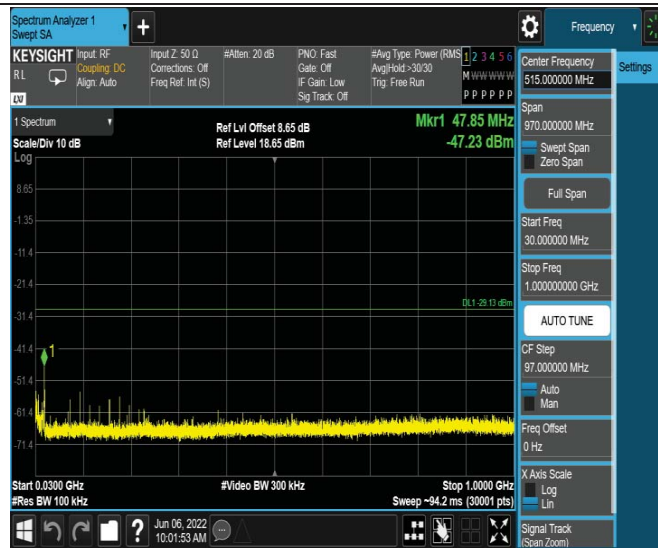
11G_Ant1_2462_30~1000



11G_Ant1_2462_1000~26500



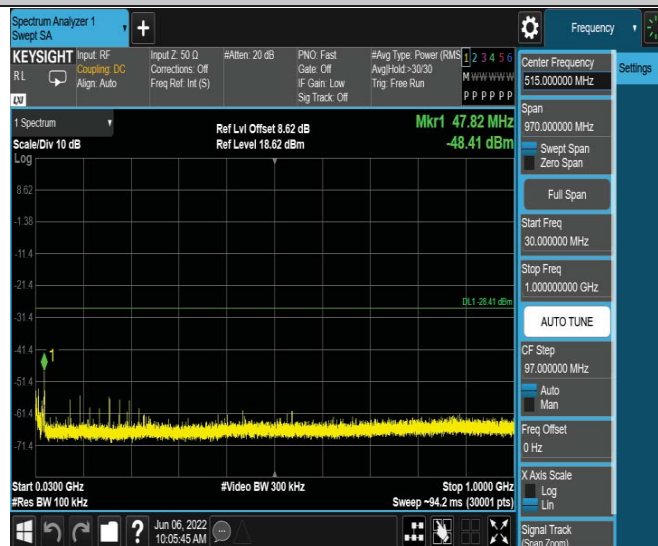
11N20SISO_Ant1_2412_30~1000



11N20SISO_Ant1_2412_1000~26500



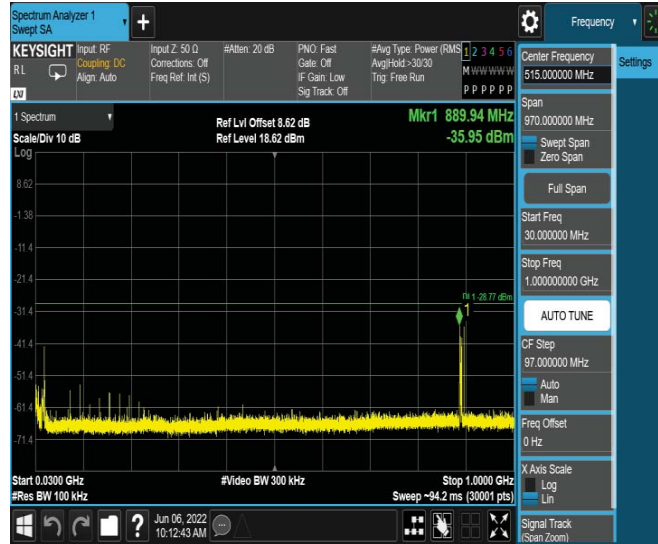
11N20SISO_Ant1_2437_30~1000



11N20SISO_Ant1_2437_1000~26500



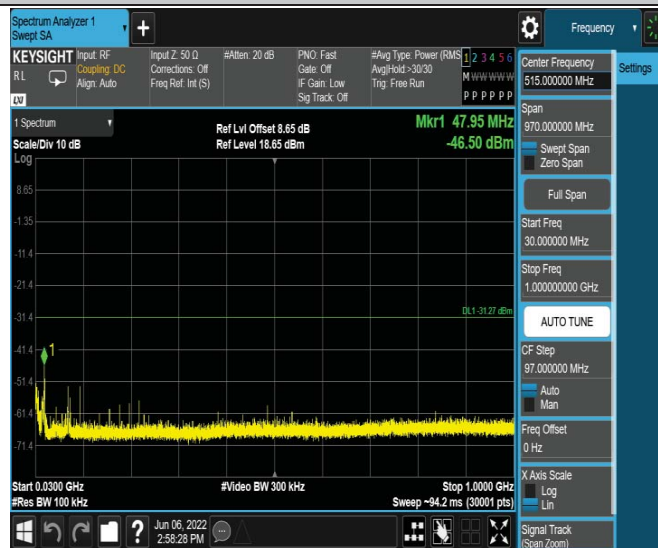
11N20SISO_Ant1_2462_30~1000



11N20SISO_Ant1_2462_1000~26500



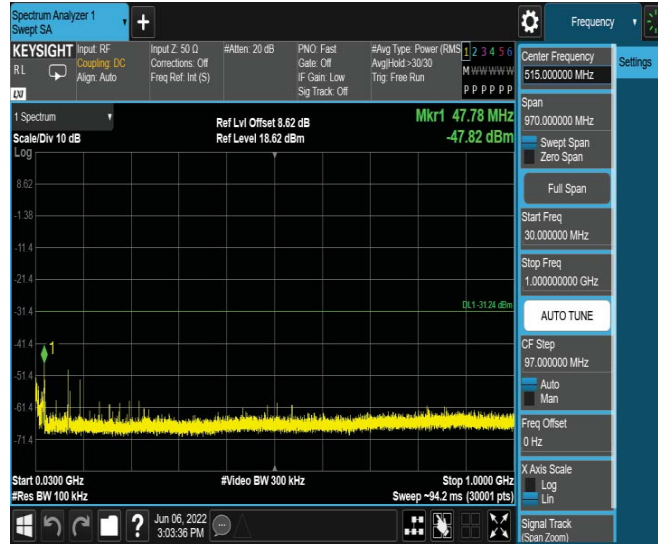
11N40SISO_Ant1_2422_30~1000



11N40SISO_Ant1_2422_1000~26500



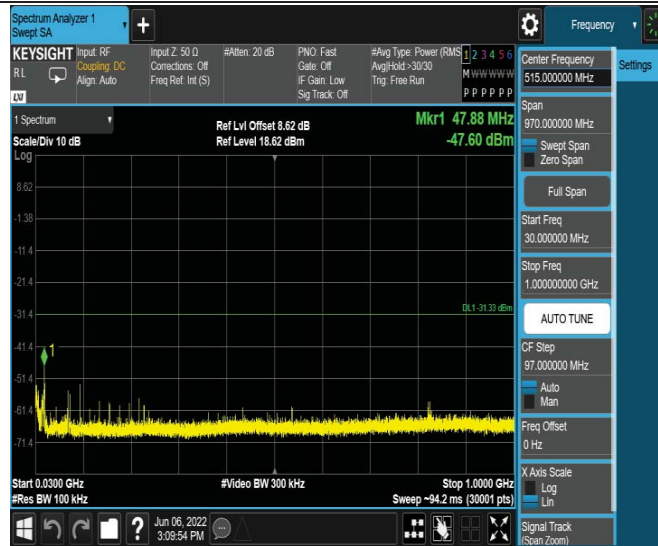
11N40SISO_Ant1_2437_30~1000



11N40SISO_Ant1_2437_1000~26500



11N40SISO_Ant1_2452_30~1000



11N40SISO_Ant1_2452_1000~26500



Appendix G: Duty Cycle

Test Result

TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11B	Ant1	2412	1.92	2.04	94.12
		2437	1.92	2.07	92.75
		2462	12.42	12.58	98.73
11G	Ant1	2412	2.06	2.10	98.10
		2437	2.06	2.13	96.71
		2462	2.06	2.18	94.50
11N20SISO	Ant1	2412	1.92	2.07	92.75
		2437	1.92	1.97	97.46
		2462	1.92	2.09	91.87
11N40SISO	Ant1	2422	0.94	1.03	91.26
		2437	0.94	1.11	84.68
		2452	0.94	1.10	85.45

11B_Ant1_2412

Spectrum Analyzer 1
Sweep SA

KEYSIGHT Input RF: Coupling DC, Align Auto
Input Z: 50 Ω, Corrections: Off, Freq Ref: Int (S)
#Atten: 30 dB, PNO: Fast Gate Off, IF Gain: Low, Sig Track: Off
#Avg Type: Power (RMS), Trg Video, Trg Delay: 200.0 μs, WWW: WWW, P P P P P

1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 8.65 dB
Ref Level 20.00 dBm
ΔMkr3 2.040 ms
-0.09 dB

Center 2.412000000 GHz
#Video BW 1.0 MHz
Span 0 Hz
Res BW 1.0 MHz
Sweep 5.00 ms (1001 pts)

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	t	1.840 ms	-11.09 dBm		
2	Δ1	1	t	1.920 ms (Δ)	13.26 dB		
3	Δ1	1	t	2.040 ms (Δ)	-0.08956 dB		
4	F	1	t	4.455 ms	6.673 dBm		
5							
6							

Center Frequency 2.412000000 GHz
Span 0.000000000 Hz
Sweep Span Zero Span
Full Span
Start Freq 2.412000000 GHz
Stop Freq 2.412000000 GHz
AUTO TUNE
CF Step 1.0000000 MHz
Auto Man
Freq Offset 0 Hz
X Axis Scale Log Lin
Signal Track (Open Zoom)

11B_Ant1_2437

Spectrum Analyzer 1
Sweep SA

KEYSIGHT Input RF: Coupling DC, Align Auto
Input Z: 50 Ω, Corrections: Off, Freq Ref: Int (S)
#Atten: 30 dB, PNO: Fast Gate Off, IF Gain: Low, Sig Track: Off
#Avg Type: Power (RMS), Trg Video, Trg Delay: 200.0 μs, WWW: WWW, P P P P P

1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 8.62 dB
Ref Level 20.00 dBm
ΔMkr3 2.070 ms
-0.31 dB

Center 2.437000000 GHz
#Video BW 1.0 MHz
Span 0 Hz
Res BW 1.0 MHz
Sweep 5.00 ms (1001 pts)

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	t	1.710 ms	-10.70 dBm		
2	Δ1	1	t	1.920 ms (Δ)	9.947 dB		
3	Δ1	1	t	2.070 ms (Δ)	-0.3136 dB		
4							
5							
6							

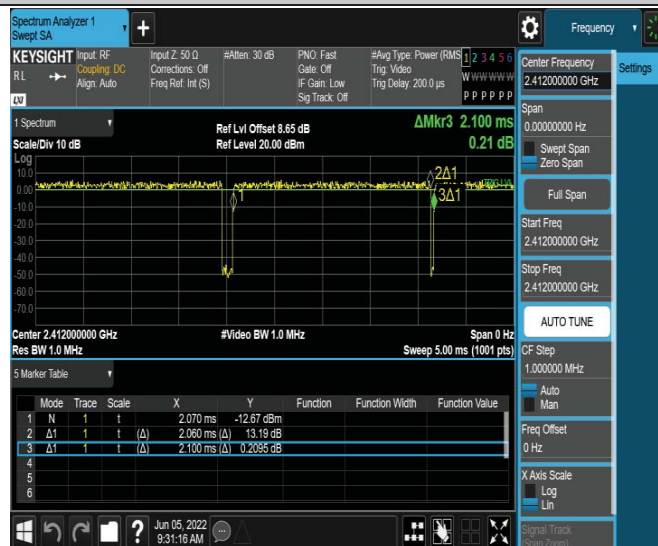
Center Frequency 2.437000000 GHz
Span 0.000000000 Hz
Sweep Span Zero Span
Full Span
Start Freq 2.437000000 GHz
Stop Freq 2.437000000 GHz
AUTO TUNE
CF Step 1.0000000 MHz
Auto Man
Freq Offset 0 Hz
X Axis Scale Log Lin
Signal Track (Open Zoom)

11B_Ant1_2462

11B_Ant1_2462



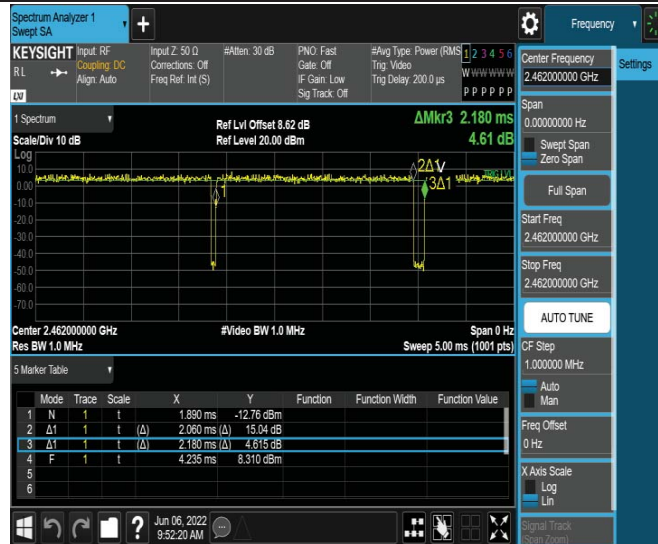
11G_Ant1_2412



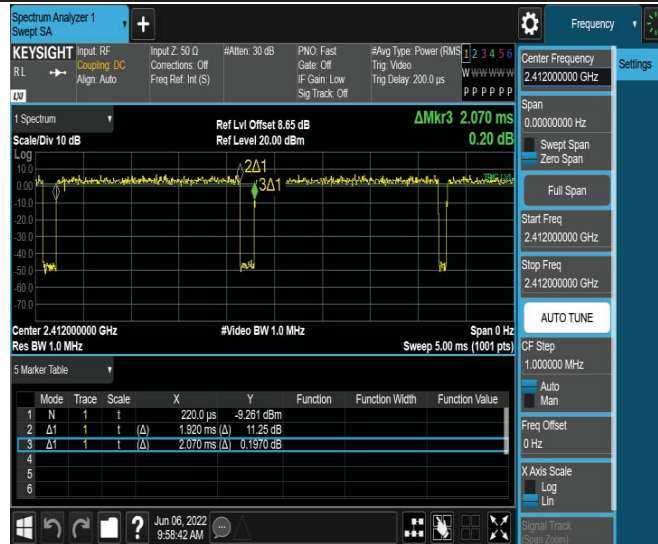
11G_Ant1_2437



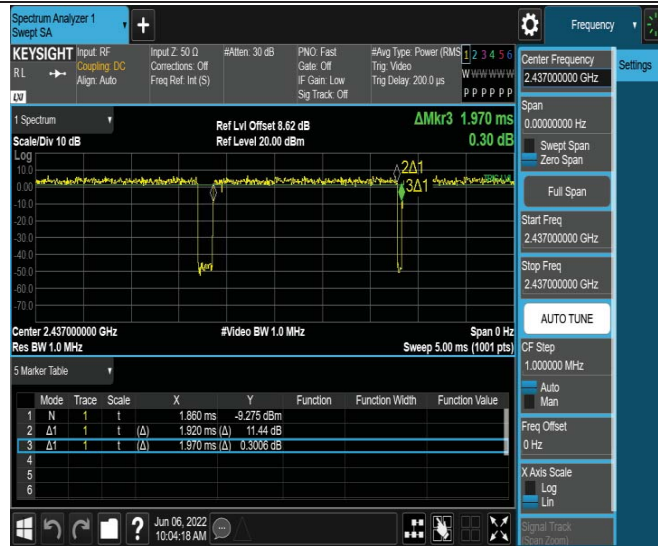
11G_Ant1_2462



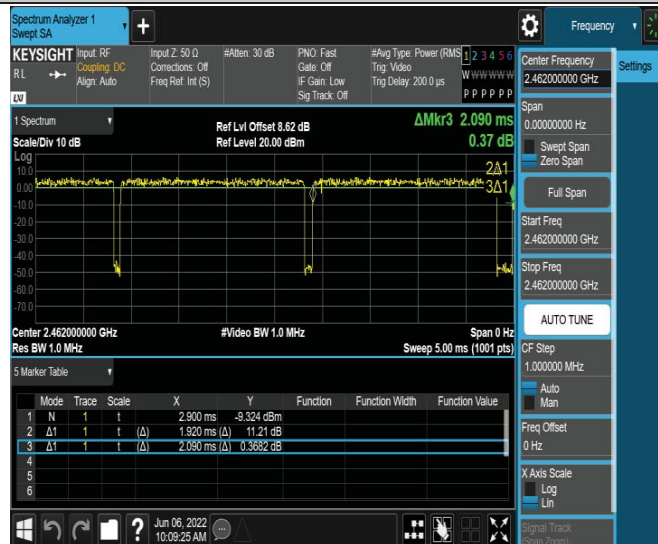
11N20SISO_Ant1_2412



11N20SISO_Ant1_2437



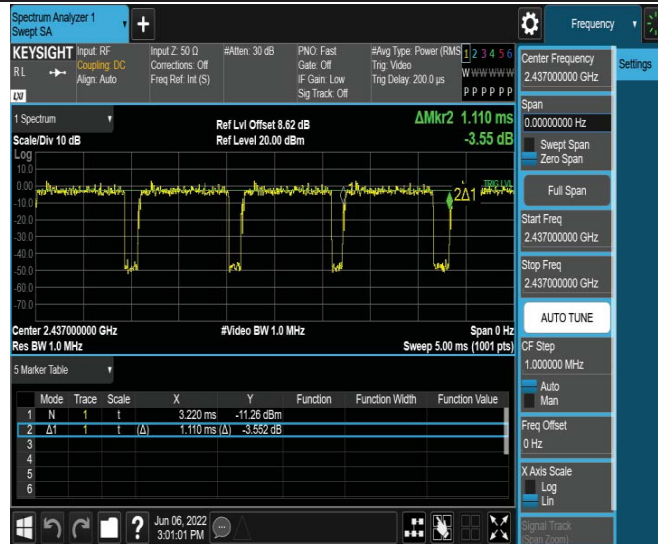
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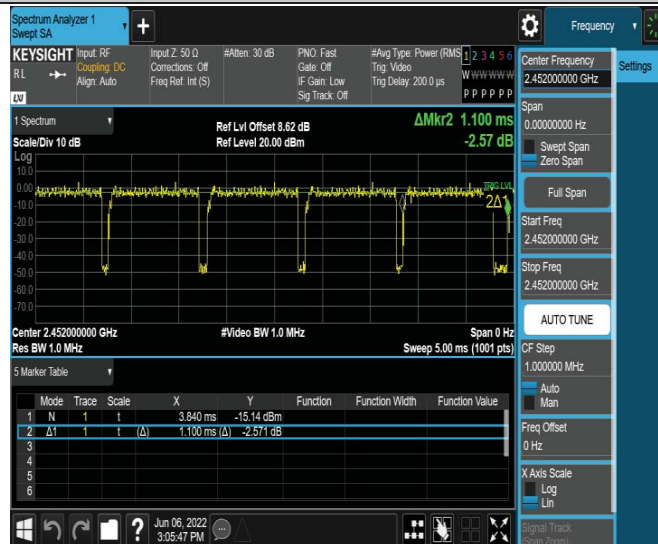
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452

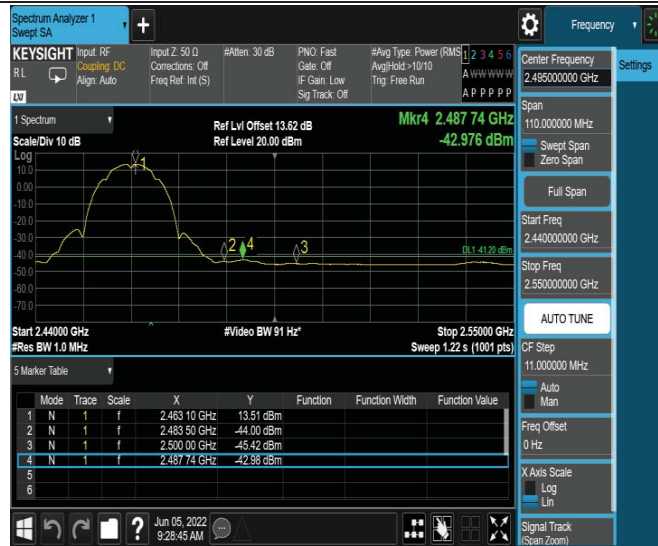


Appendix H: Emissions in Restricted Bands

1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs





11B_Ant1_High_2462_Peak



11G_Ant1_Low_2412_AV



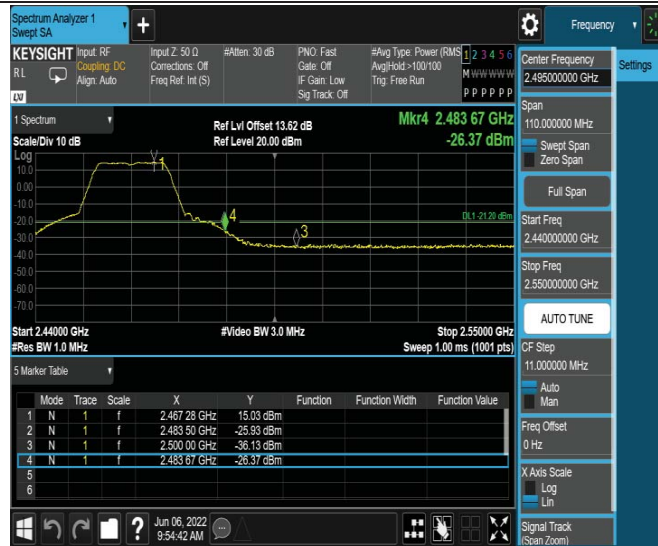
11G_Ant1_Low_2412_Peak



11G_Ant1_High_2462_AV



11G_Ant1_High_2462_Peak



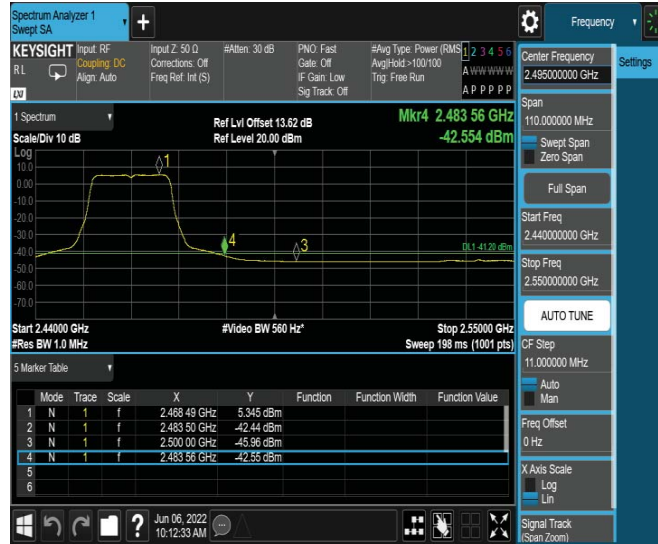
11N20SISO_Ant1_Low_2412_AV



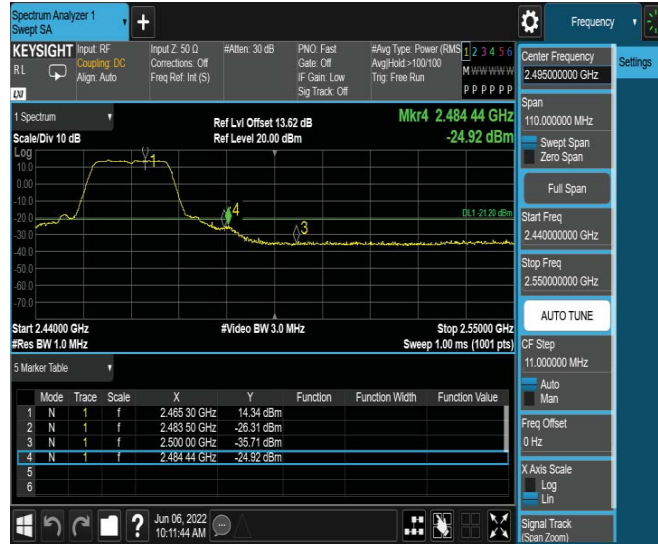
11N20SISO_Ant1_Low_2412_Peak



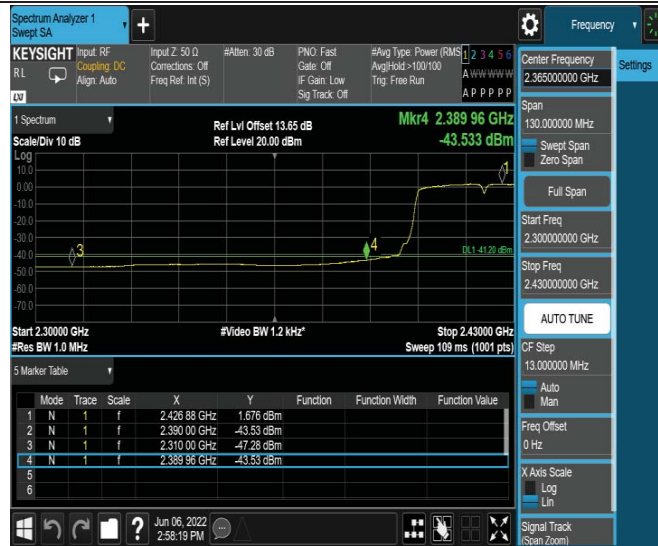
11N20SISO_Ant1_High_2462_AV



11N20SISO_Ant1_High_2462_Peak



11N40SISO_Ant1_Low_2422_AV



11N40SISO_Ant1_Low_2422_Peak



11N40SISO_Ant1_High_2452_AV



11N40SISO_Ant1_High_2452_Peak



Radiated emission measurements

Mode:	11B-2412
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PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBμV/m]	Factor [dB/m]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	Polarity	Verdict
1	2310.0000	61.73	-19.79	41.94	74.00	32.06	Horizontal	PASS
2	2330.1802	62.02	-19.76	42.26	74.00	31.74	Horizontal	PASS
3	2344.1141	62.09	-19.73	42.36	74.00	31.64	Horizontal	PASS
4	2361.1712	62.49	-19.12	43.37	74.00	30.63	Horizontal	PASS
5	2386.2362	63.01	-17.78	45.23	74.00	28.77	Horizontal	PASS
6	2390.0000	61.68	-17.57	44.11	74.00	29.89	Horizontal	PASS

PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBμV/m]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Verdict
1	2310.000	63.06	43.27	-19.79	74.00	30.73	Vertical	PASS
2	2327.377	64.87	45.11	-19.76	74.00	28.89	Vertical	PASS
3	2339.709	65.10	45.36	-19.74	74.00	28.64	Vertical	PASS
4	2359.009	65.23	45.99	-19.24	74.00	28.01	Vertical	PASS
5	2368.538	67.42	48.69	-18.73	74.00	25.31	Vertical	PASS
6	2390.000	65.02	47.45	-17.57	74.00	26.55	Vertical	PASS

Mode:	11B-2462
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PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBμV/m]	Factor [dB/m]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	Polarity	Verdict
1	2483.5000	60.8	-18.02	42.78	74.00	31.22	Horizontal	PASS
2	2487.4373	63.11	-18.68	44.43	74.00	29.57	Horizontal	PASS
3	2489.8729	63.58	-18.96	44.62	74.00	29.38	Horizontal	PASS
4	2496.0479	63.34	-18.91	44.43	74.00	29.57	Horizontal	PASS
5	2499.2277	63.15	-18.86	44.29	74.00	29.71	Horizontal	PASS
6	2500.0000	61.09	-18.85	42.24	74.00	31.76	Horizontal	PASS

PK Final Data List								
NO.	Freq. [MHz]	PK Reading [dBμV/m]	Factor [dB/m]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	Polarity	Verdict
1	2483.5000	61.25	-18.02	43.23	74.00	30.77	Vertical	PASS
2	2487.5363	64.25	-18.69	45.56	74.00	28.44	Vertical	PASS
3	2489.7690	63.68	-18.95	44.73	74.00	29.27	Vertical	PASS
4	2494.0066	63.89	-18.93	44.96	74.00	29.04	Vertical	PASS
5	2497.0446	62.86	-18.89	43.97	74.00	30.03	Vertical	PASS
6	2500.0000	60.86	-18.85	42.01	74.00	31.99	Vertical	PASS