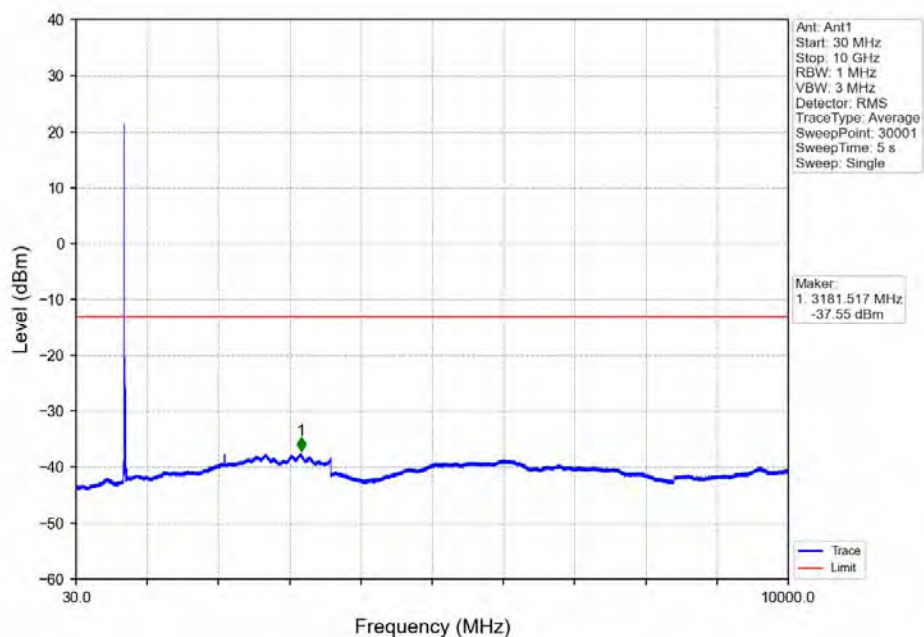
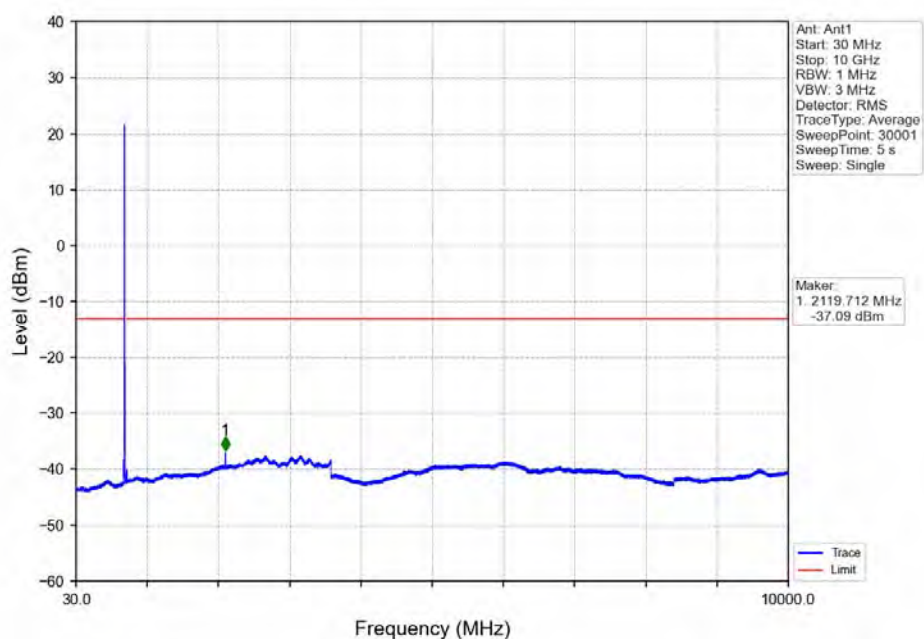
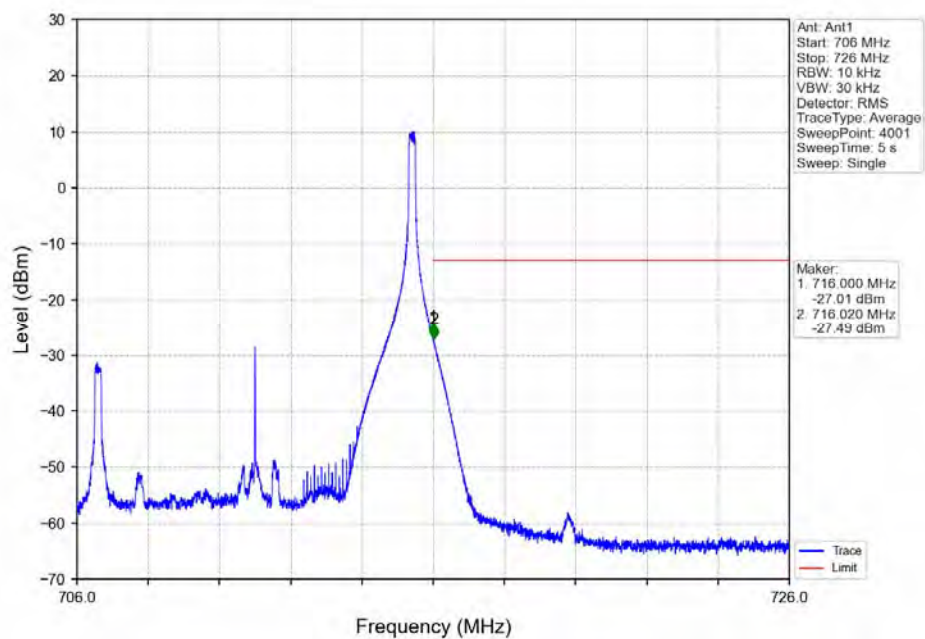




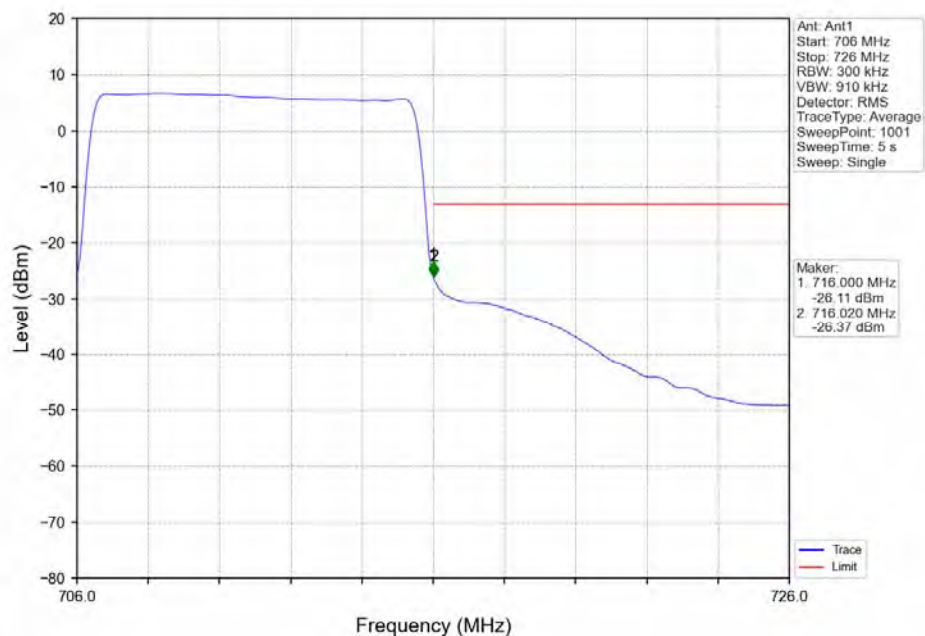
Band12_10MHz_16QAM_HCH_711MHz_RB_1_0_NTNV



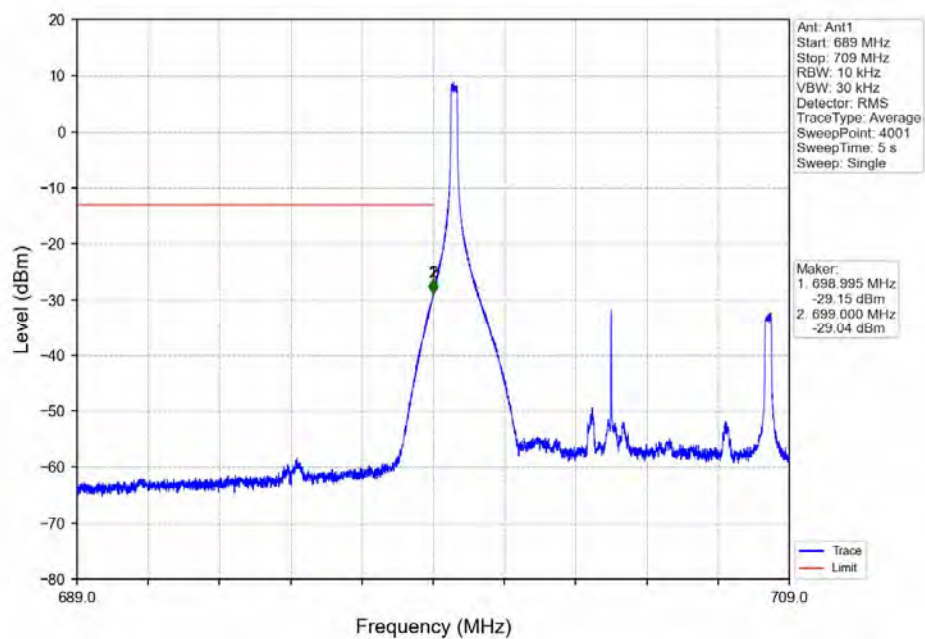
Band12_10MHz_16QAM_HCH_711MHz_RB_1_49_NTNV



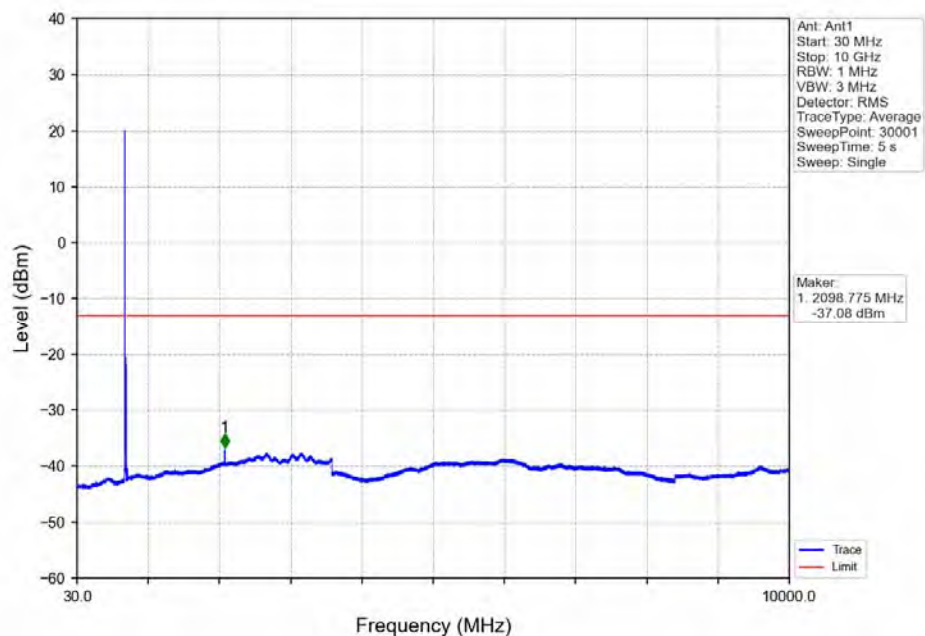
Band12_10MHz_16QAM_HCH_711MHz_RB_50_0_NTNV



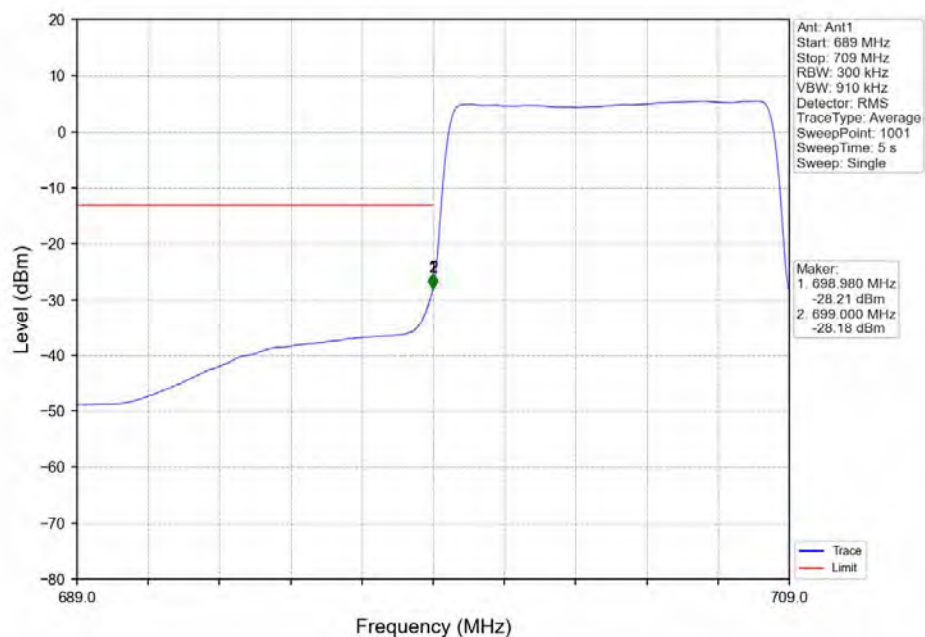
Band12_10MHz_64QAM_LCH_704MHz_RB_1_0_NTNV



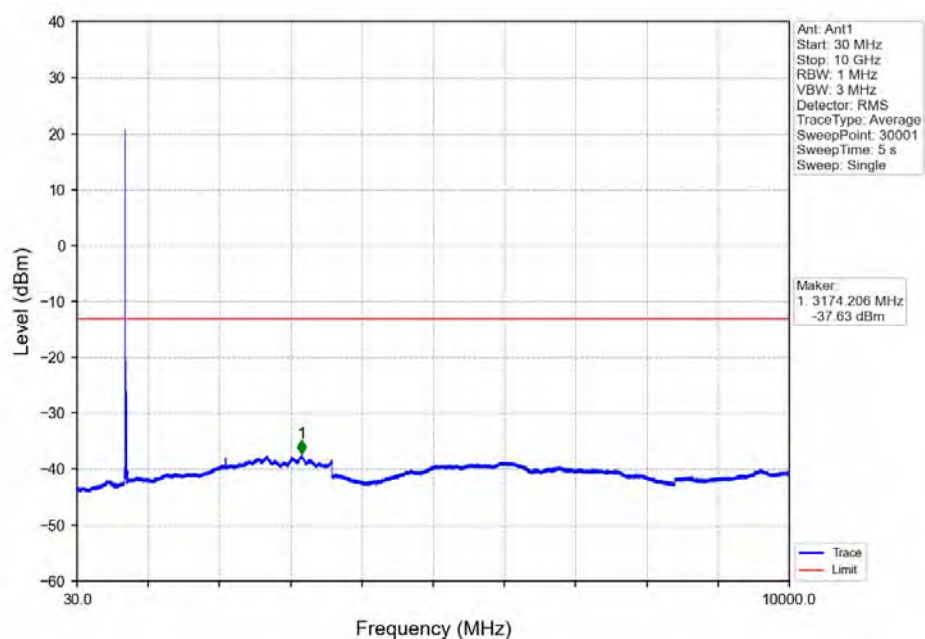
Band12_10MHz_64QAM_LCH_704MHz_RB_1_0_NTNV



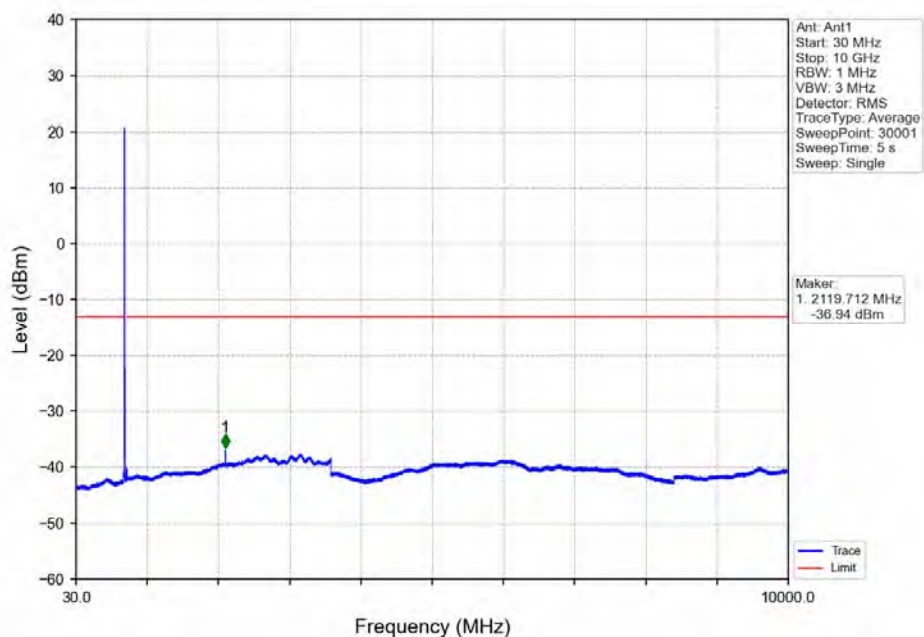
Band12_10MHz_64QAM_LCH_704MHz_RB_50_0_NTNV



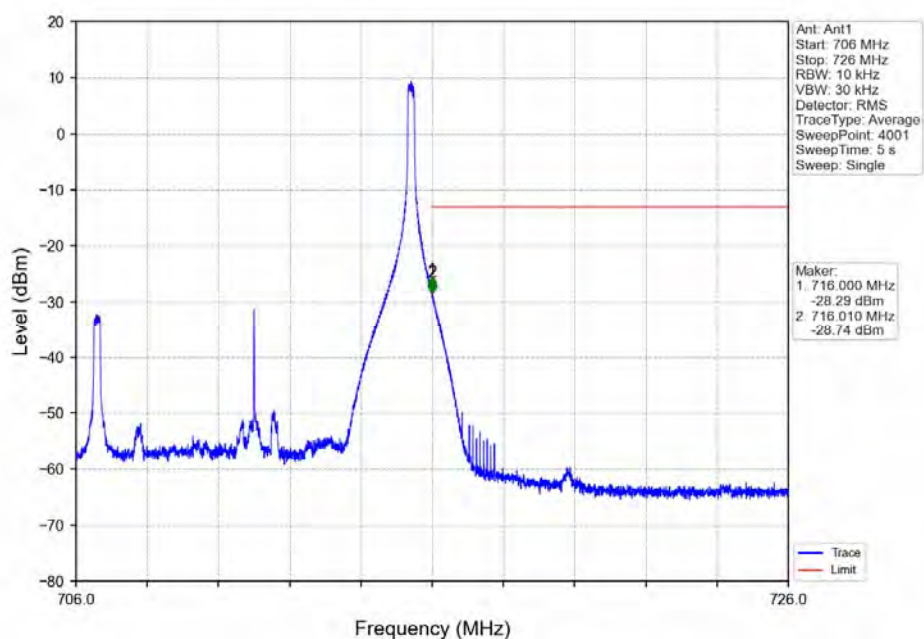
Band12_10MHz_64QAM_MCH_707.5MHz_RB_1_0_NTNV



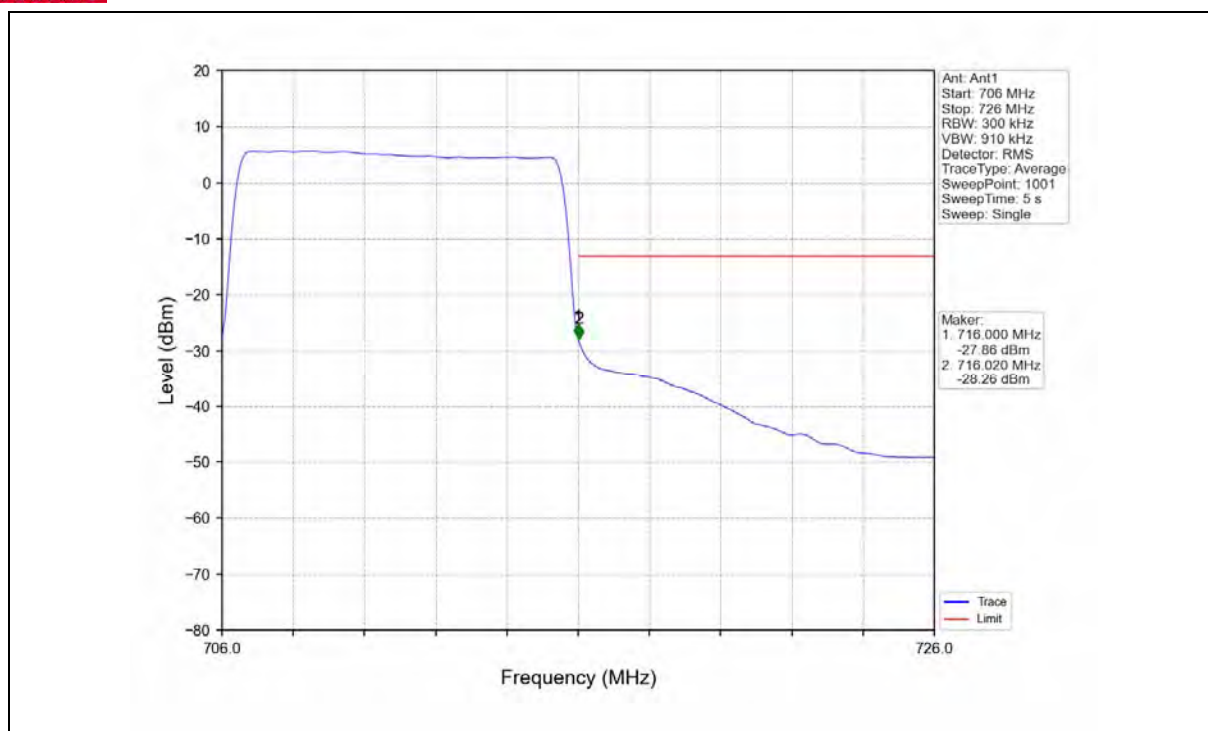
Band12_10MHz_64QAM_HCH_711MHz_RB_1_0_NTNV



Band12_10MHz_64QAM_HCH_711MHz_RB_1_49_NTNV



Band12_10MHz_64QAM_HCH_711MHz_RB_50_0_NTNV



APPENDIX C : LTE Band30

Frequency Stability

B30_5MHz

Test Result

Band: 30 / Bandwidth: 5MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	2307.5	25	0	20	3.27	-7.71	-0.00	-2.5 to 2.5	Pass
					3.85	-16.77	-0.01	-2.5 to 2.5	Pass
					4.43	-2.38	-0.00	-2.5 to 2.5	Pass
				-10	3.85	4.59	0.00	-2.5 to 2.5	Pass
				0	3.85	5.36	0.00	-2.5 to 2.5	Pass
				10	3.85	0.47	0.00	-2.5 to 2.5	Pass
				30	3.85	-4.12	-0.00	-2.5 to 2.5	Pass
				40	3.85	-4.81	-0.00	-2.5 to 2.5	Pass
				50	3.85	-11.10	-0.00	-2.5 to 2.5	Pass
	2310	25	0	20	3.27	-6.11	-0.00	-2.5 to 2.5	Pass
					3.85	-28.14	-0.01	-2.5 to 2.5	Pass
					4.43	-13.96	-0.01	-2.5 to 2.5	Pass
				-10	3.85	-5.55	-0.00	-2.5 to 2.5	Pass
				0	3.85	-3.25	-0.00	-2.5 to 2.5	Pass
				10	3.85	-5.09	-0.00	-2.5 to 2.5	Pass
				30	3.85	-5.26	-0.00	-2.5 to 2.5	Pass
				40	3.85	-7.20	-0.00	-2.5 to 2.5	Pass
				50	3.85	-8.80	-0.00	-2.5 to 2.5	Pass
	2312.5	25	0	20	3.27	-4.05	-0.00	-2.5 to 2.5	Pass
					3.85	-23.12	-0.01	-2.5 to 2.5	Pass
					4.43	-8.55	-0.00	-2.5 to 2.5	Pass
				-10	3.85	-4.41	-0.00	-2.5 to 2.5	Pass
				0	3.85	-4.59	-0.00	-2.5 to 2.5	Pass
				10	3.85	-2.82	-0.00	-2.5 to 2.5	Pass
				30	3.85	-5.85	-0.00	-2.5 to 2.5	Pass
				40	3.85	9.23	0.00	-2.5 to 2.5	Pass
				50	3.85	2.33	0.00	-2.5 to 2.5	Pass
16QAM	2307.5	25	0	20	3.27	-6.79	-0.00	-2.5 to 2.5	Pass
					3.85	-4.43	-0.00	-2.5 to 2.5	Pass
					4.43	-6.07	-0.00	-2.5 to 2.5	Pass
				-10	3.85	-11.46	-0.01	-2.5 to 2.5	Pass
				0	3.85	-18.15	-0.01	-2.5 to 2.5	Pass
				10	3.85	-7.17	-0.00	-2.5 to 2.5	Pass
				30	3.85	-12.52	-0.01	-2.5 to 2.5	Pass
				40	3.85	-12.02	-0.01	-2.5 to 2.5	Pass
				50	3.85	-6.45	-0.00	-2.5 to 2.5	Pass
	2310	25	0	20	3.27	-2.88	-0.00	-2.5 to 2.5	Pass
					3.85	2.82	0.00	-2.5 to 2.5	Pass

64QAM	2312.5	25	0		4.43	-1.19	-0.00	-2.5 to 2.5	Pass
				-10	3.85	-9.05	-0.00	-2.5 to 2.5	Pass
				0	3.85	-9.01	-0.00	-2.5 to 2.5	Pass
				10	3.85	-14.68	-0.01	-2.5 to 2.5	Pass
				30	3.85	-4.33	-0.00	-2.5 to 2.5	Pass
				40	3.85	-12.49	-0.01	-2.5 to 2.5	Pass
				50	3.85	-3.82	-0.00	-2.5 to 2.5	Pass
				20	3.27	-1.57	-0.00	-2.5 to 2.5	Pass
					3.85	1.75	0.00	-2.5 to 2.5	Pass
					4.43	-0.63	-0.00	-2.5 to 2.5	Pass
				-10	3.85	-7.25	-0.00	-2.5 to 2.5	Pass
				0	3.85	-5.18	-0.00	-2.5 to 2.5	Pass
				10	3.85	-1.12	-0.00	-2.5 to 2.5	Pass
	2307.5	25	0	30	3.85	-8.77	-0.00	-2.5 to 2.5	Pass
				40	3.85	-13.12	-0.01	-2.5 to 2.5	Pass
				50	3.85	-12.40	-0.01	-2.5 to 2.5	Pass
				20	3.27	-1.89	-0.00	-2.5 to 2.5	Pass
					3.85	-5.38	-0.00	-2.5 to 2.5	Pass
					4.43	0.84	0.00	-2.5 to 2.5	Pass
				-10	3.85	4.89	0.00	-2.5 to 2.5	Pass
				0	3.85	-5.79	-0.00	-2.5 to 2.5	Pass
				10	3.85	-12.39	-0.01	-2.5 to 2.5	Pass
				30	3.85	-8.91	-0.00	-2.5 to 2.5	Pass
				40	3.85	-3.82	-0.00	-2.5 to 2.5	Pass
				50	3.85	-4.42	-0.00	-2.5 to 2.5	Pass
	2310	25	0	20	3.27	-2.79	-0.00	-2.5 to 2.5	Pass
					3.85	1.26	0.00	-2.5 to 2.5	Pass
					4.43	-1.72	-0.00	-2.5 to 2.5	Pass
				-10	3.85	-2.30	-0.00	-2.5 to 2.5	Pass
				0	3.85	-4.09	-0.00	-2.5 to 2.5	Pass
				10	3.85	0.21	0.00	-2.5 to 2.5	Pass
				30	3.85	-0.71	-0.00	-2.5 to 2.5	Pass
				40	3.85	-7.28	-0.00	-2.5 to 2.5	Pass
				50	3.85	-3.90	-0.00	-2.5 to 2.5	Pass
	2312.5	25	0	20	3.27	-5.58	-0.00	-2.5 to 2.5	Pass
					3.85	6.15	0.00	-2.5 to 2.5	Pass
					4.43	-1.62	-0.00	-2.5 to 2.5	Pass
				-10	3.85	-6.37	-0.00	-2.5 to 2.5	Pass
				0	3.85	-5.41	-0.00	-2.5 to 2.5	Pass
				10	3.85	-6.11	-0.00	-2.5 to 2.5	Pass
				30	3.85	-2.00	-0.00	-2.5 to 2.5	Pass
				40	3.85	-5.26	-0.00	-2.5 to 2.5	Pass
				50	3.85	-3.76	-0.00	-2.5 to 2.5	Pass

B30_10MHz

Test Result

Band: 30 / Bandwidth: 10MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	2310	50	0	20	3.27	-15.16	-0.01	-2.5 to 2.5	Pass

						3.85	-11.00	-0.00	-2.5 to 2.5	Pass
						4.43	-2.63	-0.00	-2.5 to 2.5	Pass
					-10	3.85	-9.86	-0.00	-2.5 to 2.5	Pass
					0	3.85	-12.00	-0.01	-2.5 to 2.5	Pass
					10	3.85	-11.20	-0.00	-2.5 to 2.5	Pass
					30	3.85	-8.01	-0.00	-2.5 to 2.5	Pass
					40	3.85	-10.40	-0.00	-2.5 to 2.5	Pass
					50	3.85	-1.22	-0.00	-2.5 to 2.5	Pass
16QAM	2310	50	0	20		3.27	-4.05	-0.00	-2.5 to 2.5	Pass
						3.85	-4.19	-0.00	-2.5 to 2.5	Pass
						4.43	-5.11	-0.00	-2.5 to 2.5	Pass
				-10	3.85	-12.46	-0.01	-2.5 to 2.5	Pass	
				0	3.85	4.71	0.00	-2.5 to 2.5	Pass	
				10	3.85	-5.65	-0.00	-2.5 to 2.5	Pass	
				30	3.85	-3.69	-0.00	-2.5 to 2.5	Pass	
				40	3.85	-1.52	-0.00	-2.5 to 2.5	Pass	
50	3.85	-2.25	-0.00	-2.5 to 2.5	Pass					
64QAM	2310	50	0	20		3.27	6.27	0.00	-2.5 to 2.5	Pass
						3.85	-9.61	-0.00	-2.5 to 2.5	Pass
						4.43	-2.82	-0.00	-2.5 to 2.5	Pass
				-10	3.85	-6.78	-0.00	-2.5 to 2.5	Pass	
				0	3.85	-9.71	-0.00	-2.5 to 2.5	Pass	
				10	3.85	-14.23	-0.01	-2.5 to 2.5	Pass	
				30	3.85	-6.81	-0.00	-2.5 to 2.5	Pass	
				40	3.85	-8.57	-0.00	-2.5 to 2.5	Pass	
50	3.85	-14.35	-0.01	-2.5 to 2.5	Pass					

99% & 26dB Bandwidth

99%_OBW

Test Result

Band: 30 / NTN						
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)	Verdict
			Size	Offset	Result	
5	QPSK	2307.5	25	0	4.553	Pass
		2310	25	0	4.546	Pass
		2312.5	25	0	4.546	Pass
	16QAM	2307.5	25	0	4.527	Pass
		2310	25	0	4.564	Pass
		2312.5	25	0	4.563	Pass
	64QAM	2307.5	25	0	4.539	Pass
		2310	25	0	4.550	Pass
		2312.5	25	0	4.543	Pass
10	QPSK	/	/	/	/	Pass
		2310	50	0	9.075	Pass
		/	/	/	/	Pass
	16QAM	/	/	/	/	Pass
		2310	50	0	9.062	Pass
		/	/	/	/	Pass
	64QAM	/	/	/	/	Pass
		2310	50	0	9.050	Pass
		/	/	/	/	Pass

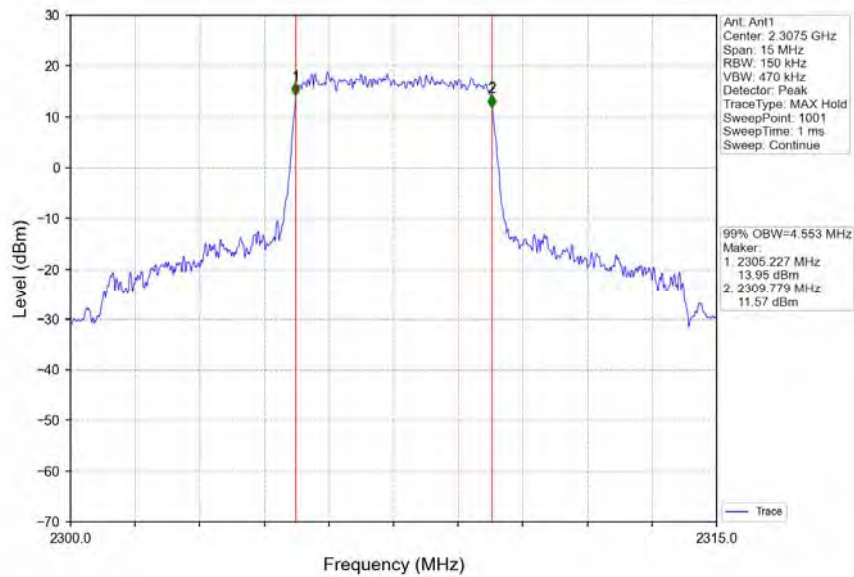


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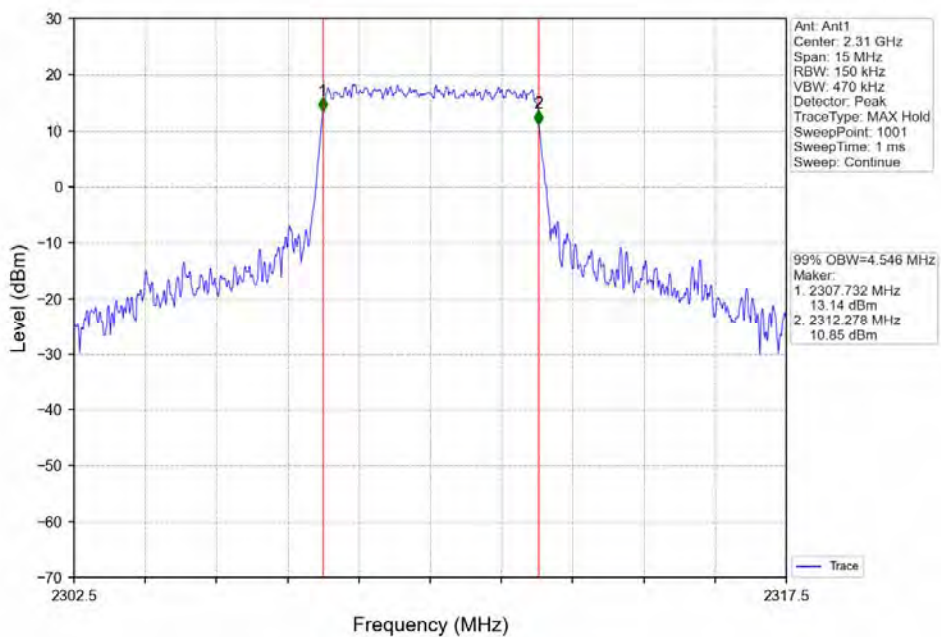
Test Report No.: W7L-220503W001RF06

Test Graph

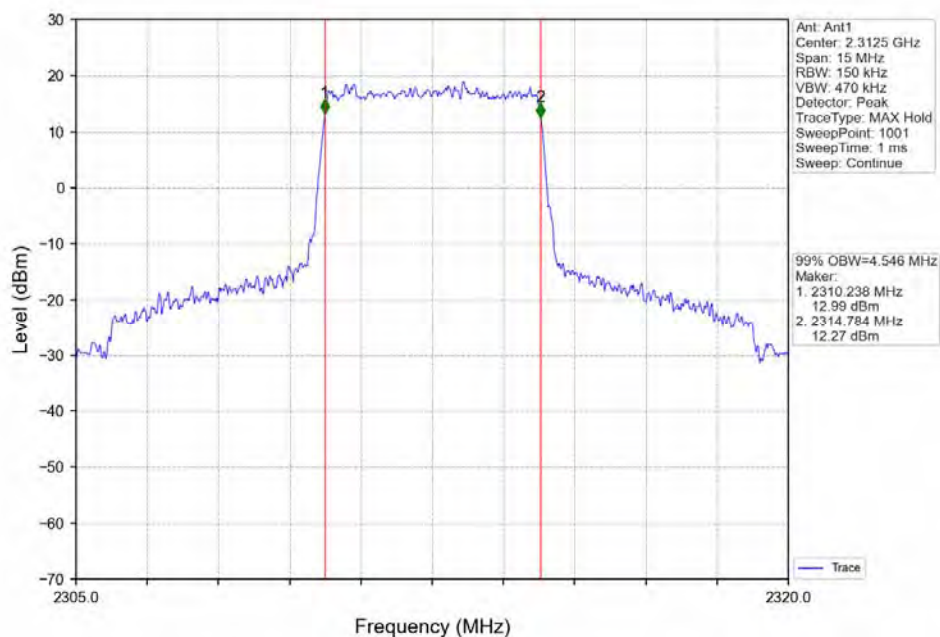
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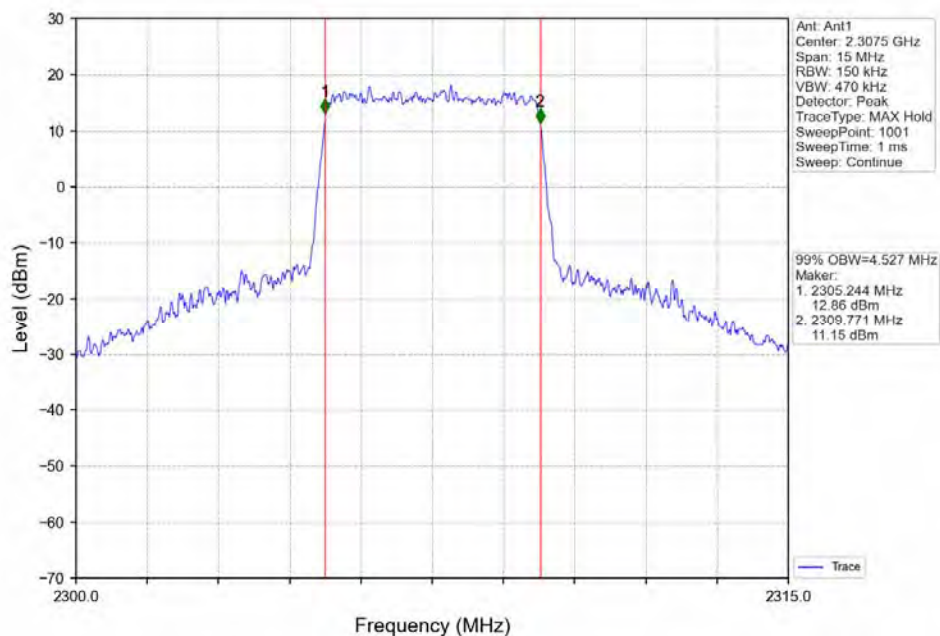
Band30_5MHz_QPSK_MCH_2310MHz_RB_25_0_NTNV



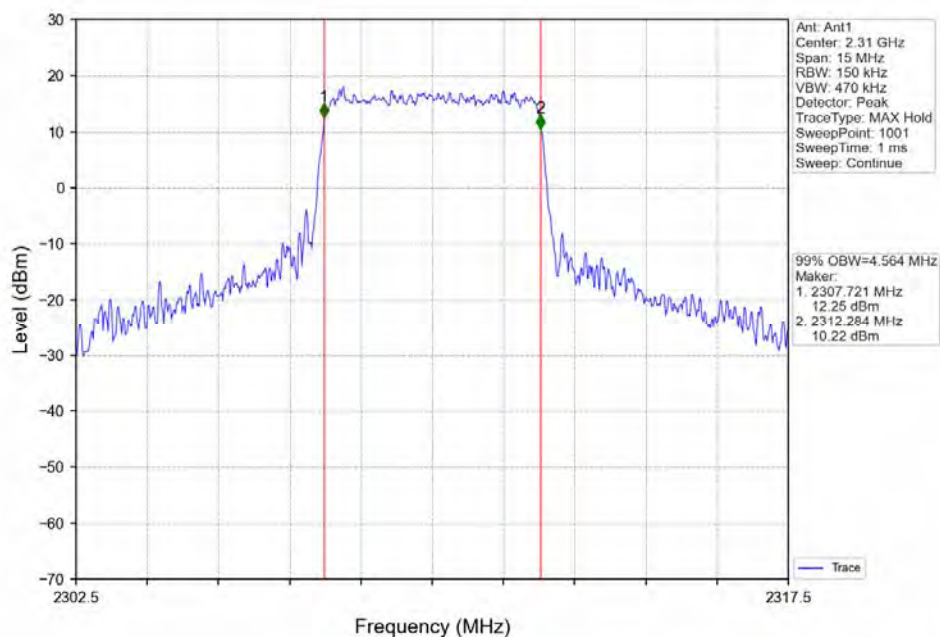
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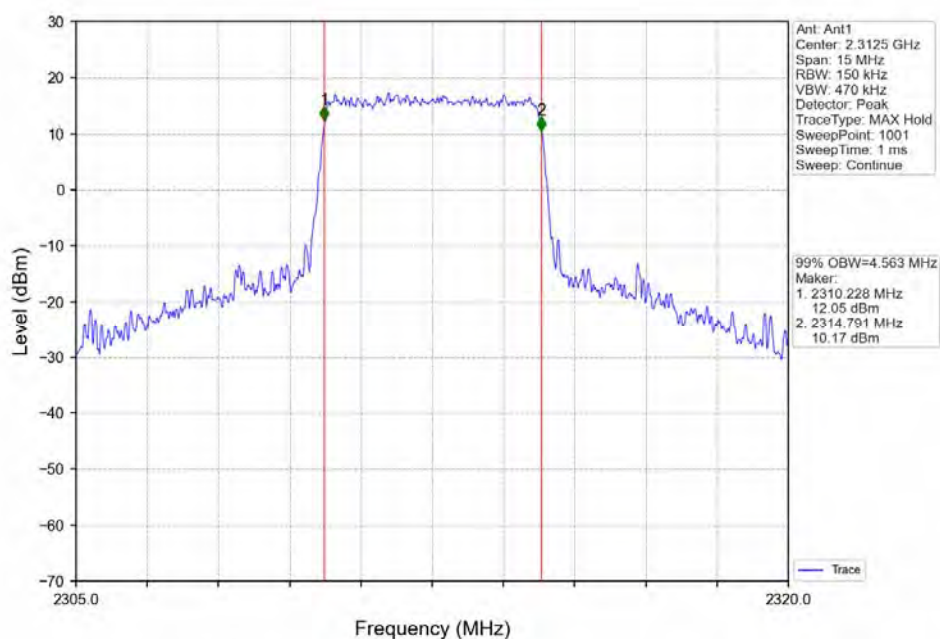
Band30_5MHz_16QAM_LCH_2307.5MHz_RB_25_0_NTNV



Band30_5MHz_16QAM_MCH_2310MHz_RB_25_0_NTNV



Band30_5MHz_16QAM_HCH_2312.5MHz_RB_25_0_NTNV

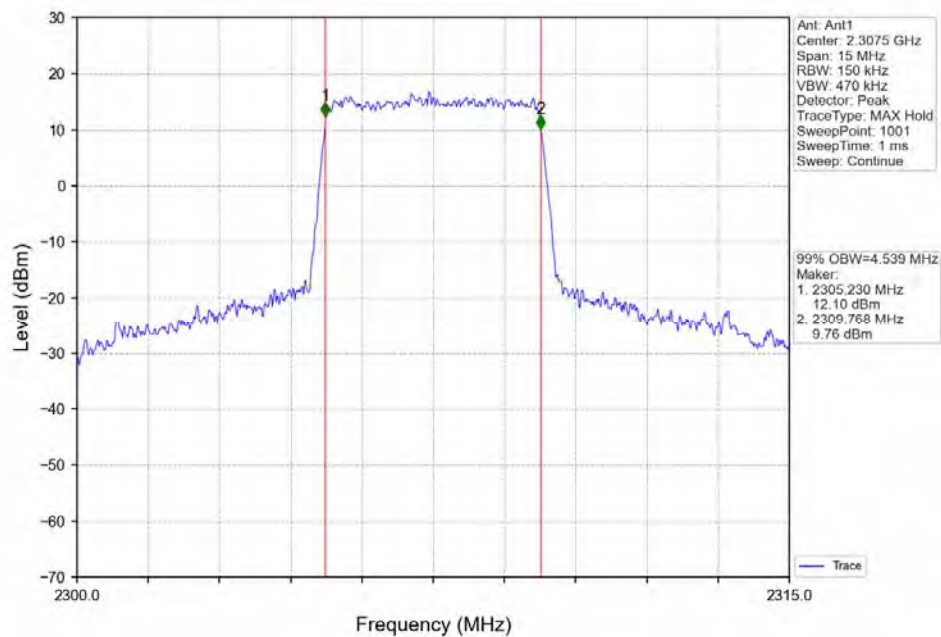


Band30_5MHz_64QAM_LCH_2307.5MHz_RB_25_0_NTNV

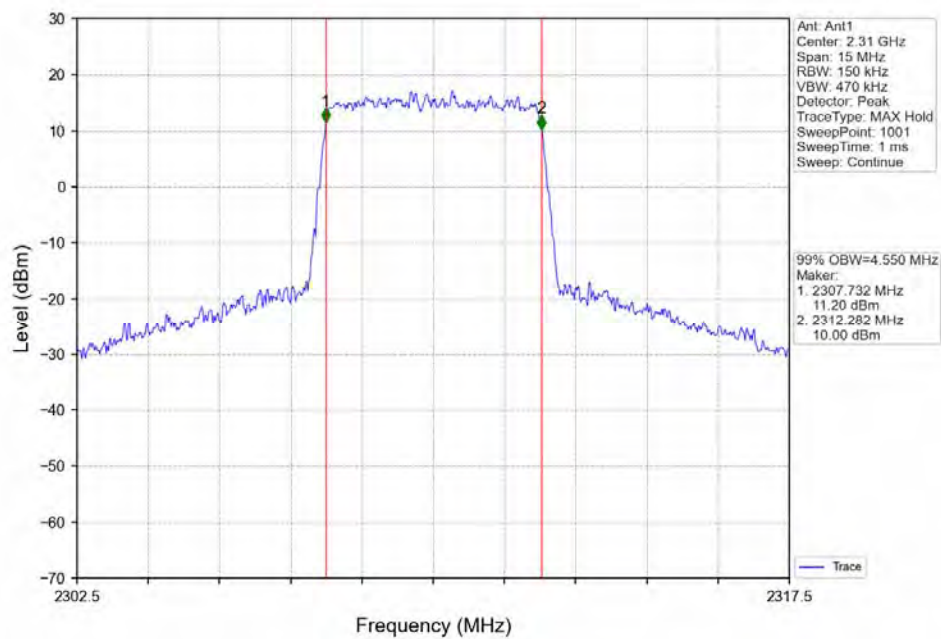


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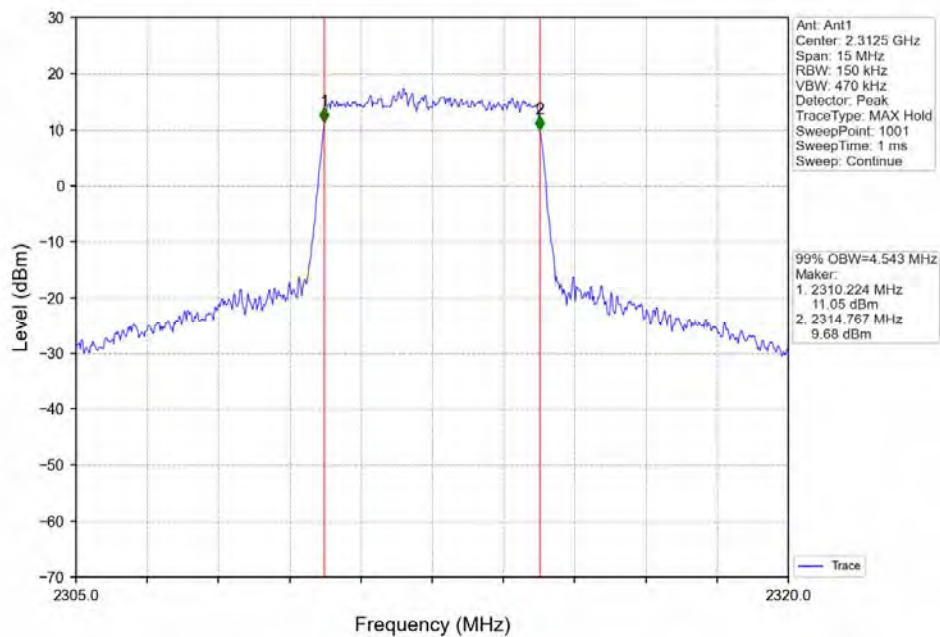
Test Report No.: W7L-220503W001RF06



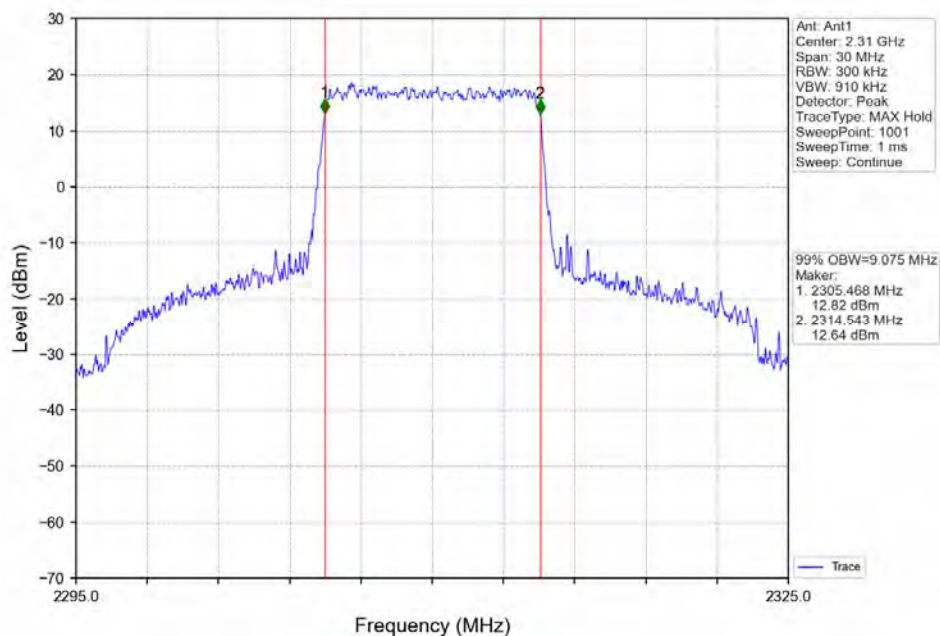
Band30_5MHz_64QAM_MCH_2310MHz_RB_25_0_NTNV



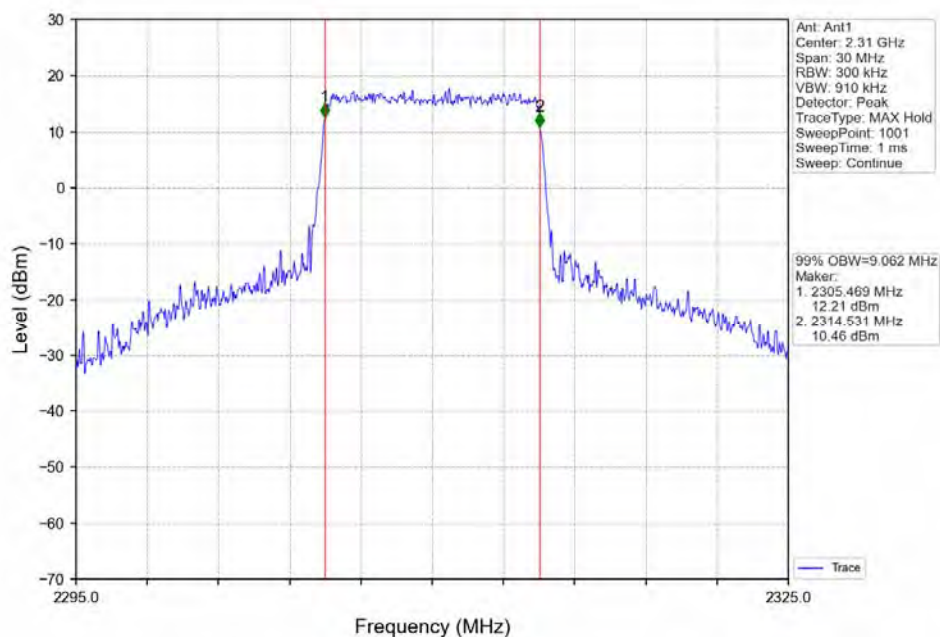
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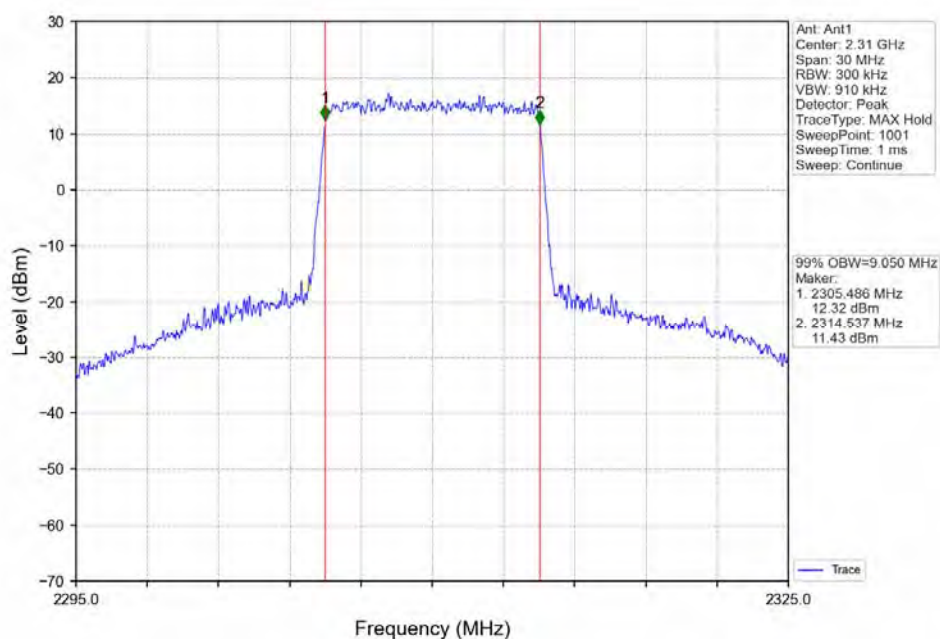
Band30_10MHz_QPSK_MCH_2310MHz_RB_50_0_NTNV



Band30_10MHz_16QAM_MCH_2310MHz_RB_50_0_NTNV



Band30_10MHz_64QAM_MCH_2310MHz_RB_50_0_NTNV





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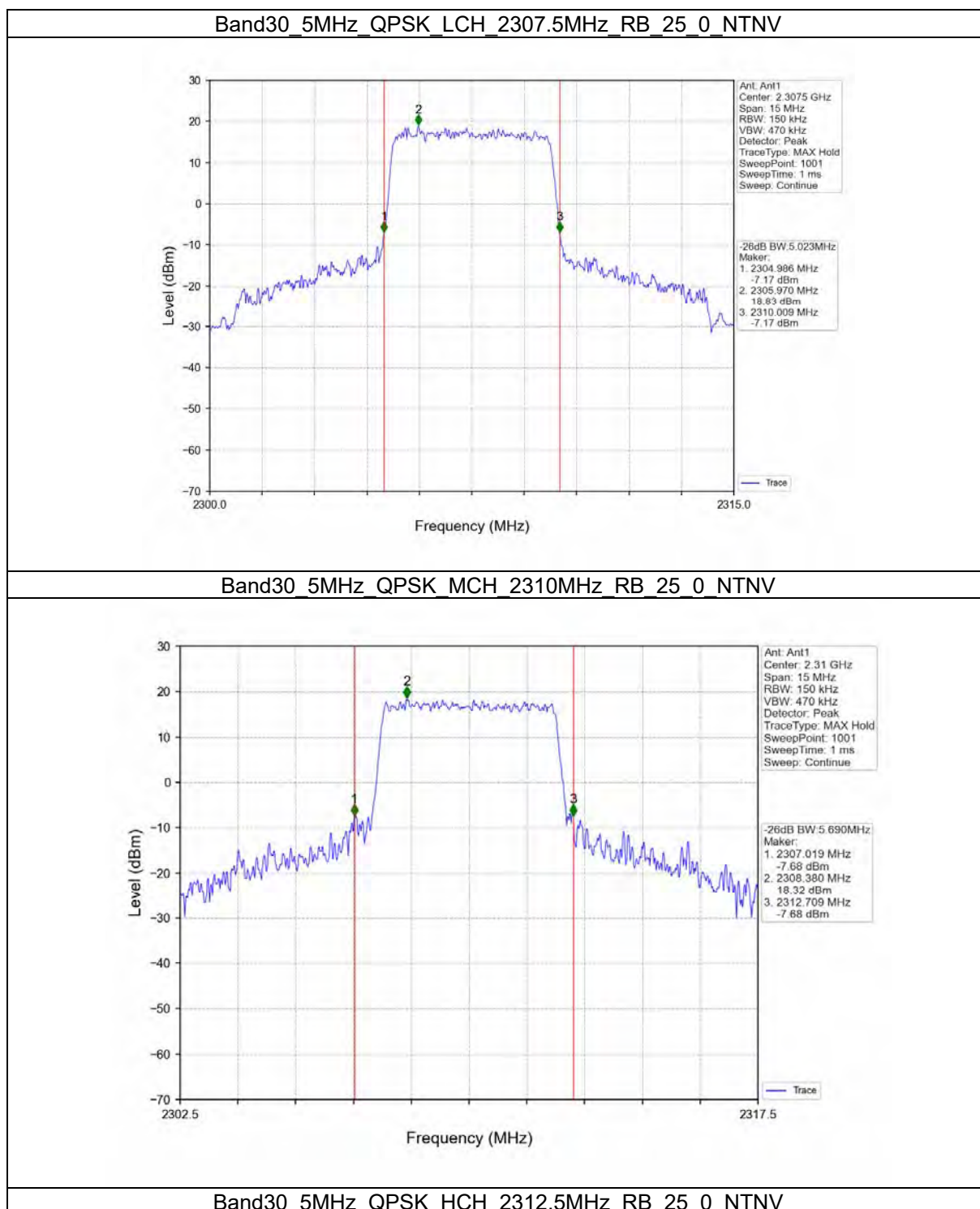
Test Report No.: W7L-220503W001RF06

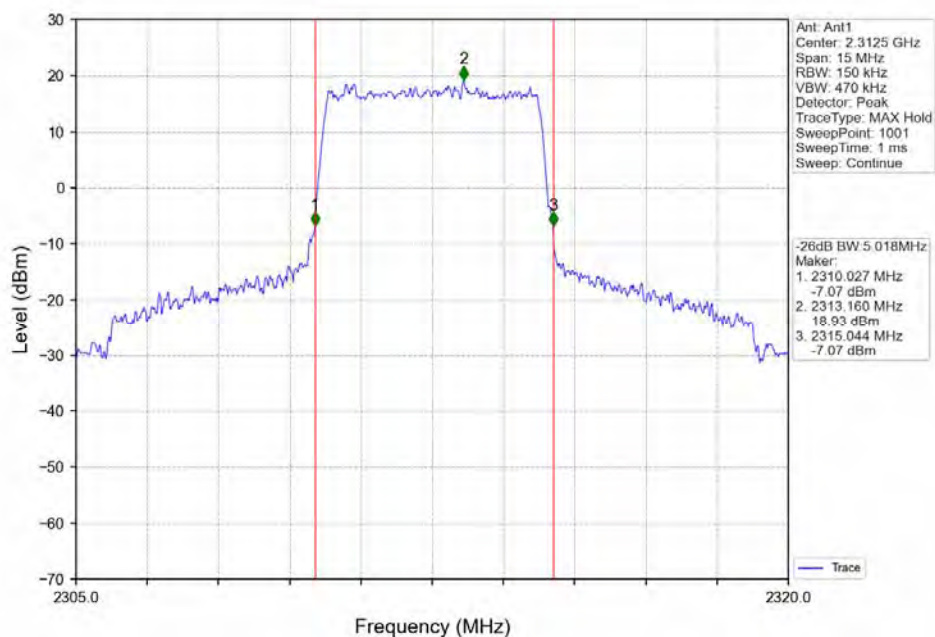
26DB_BW

Test Result

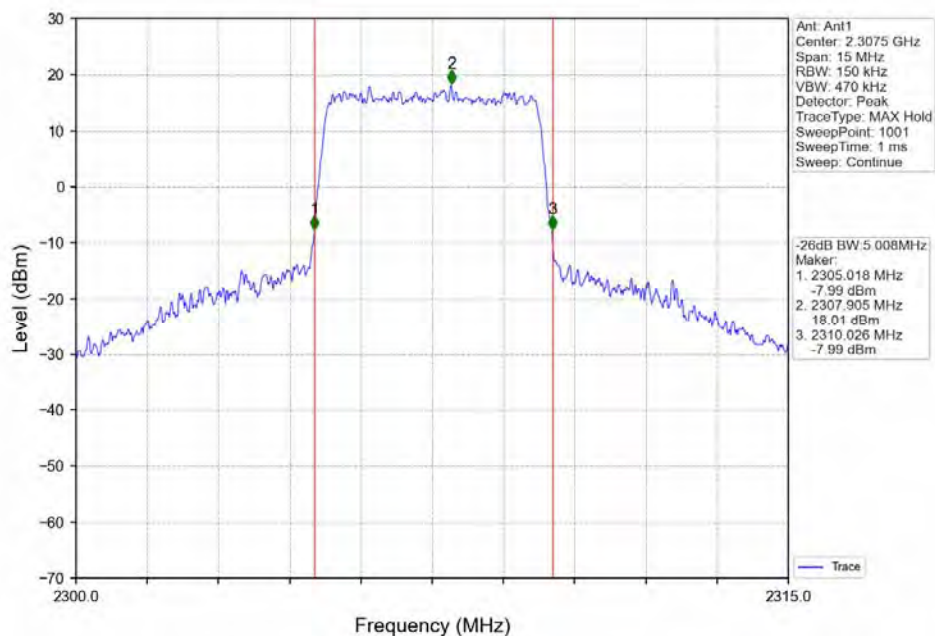
Band: 30 / NTNV						
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)	Verdict
			Size	Offset	Result	
5	QPSK	2307.5	25	0	5.023	Pass
		2310	25	0	5.690	Pass
		2312.5	25	0	5.018	Pass
	16QAM	2307.5	25	0	5.008	Pass
		2310	25	0	5.211	Pass
		2312.5	25	0	5.067	Pass
	64QAM	2307.5	25	0	5.013	Pass
		2310	25	0	5.042	Pass
		2312.5	25	0	4.991	Pass
10	QPSK	/	/	/	/	Pass
		2310	50	0	10.023	Pass
		/	/	/	/	Pass
	16QAM	/	/	/	/	Pass
		2310	50	0	10.251	Pass
		/	/	/	/	Pass
	64QAM	/	/	/	/	Pass
		2310	50	0	9.851	Pass
		/	/	/	/	Pass

Test Graph

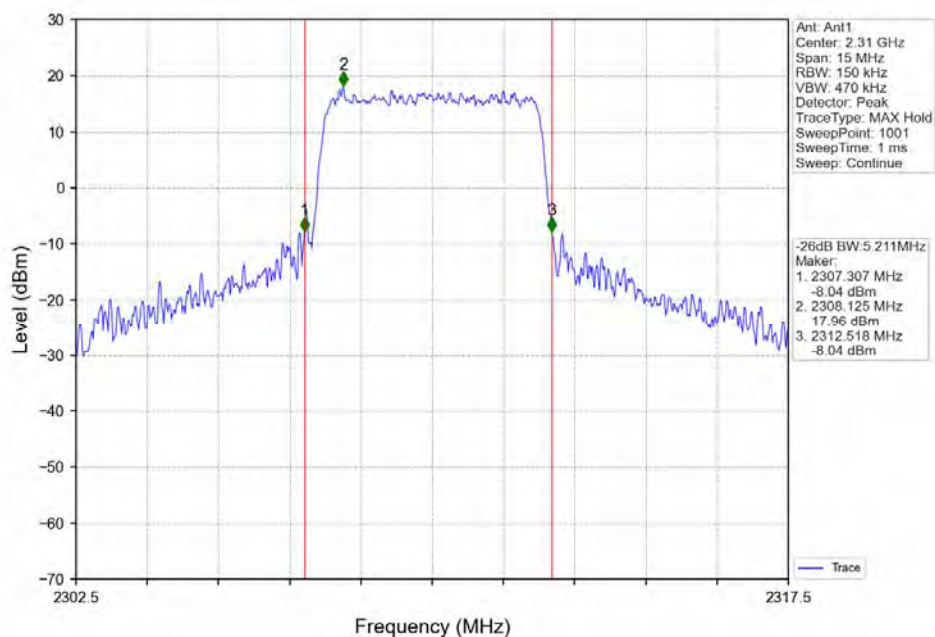




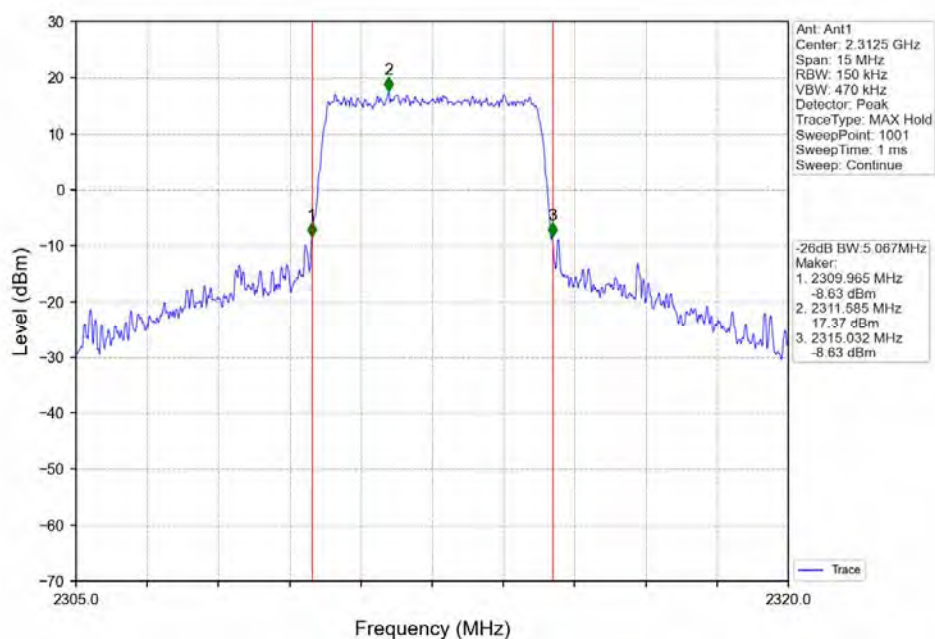
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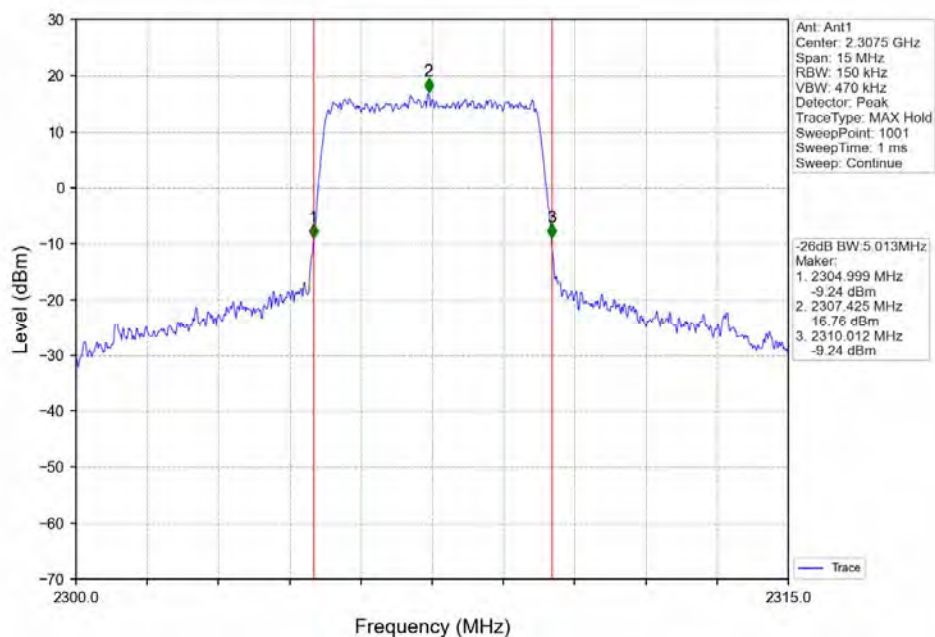
Band30_5MHz_16QAM_MCH_2310MHz_RB_25_0_NTNV



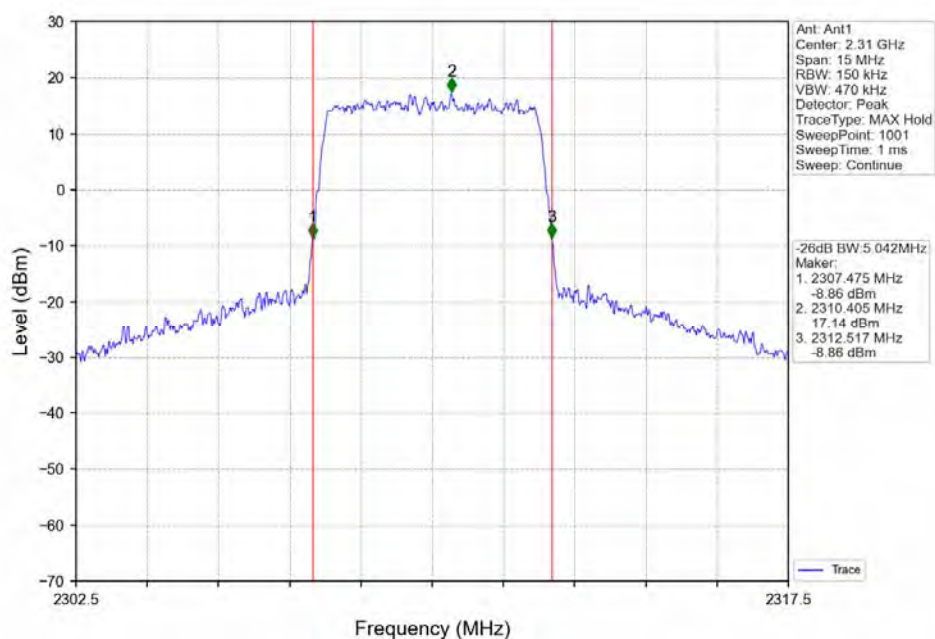
Band30_5MHz_16QAM_HCH_2312.5MHz_RB_25_0_NTNV



Band30_5MHz_64QAM_LCH_2307.5MHz_RB_25_0_NTNV



Band30_5MHz_64QAM_MCH_2310MHz_RB_25_0_NTNV

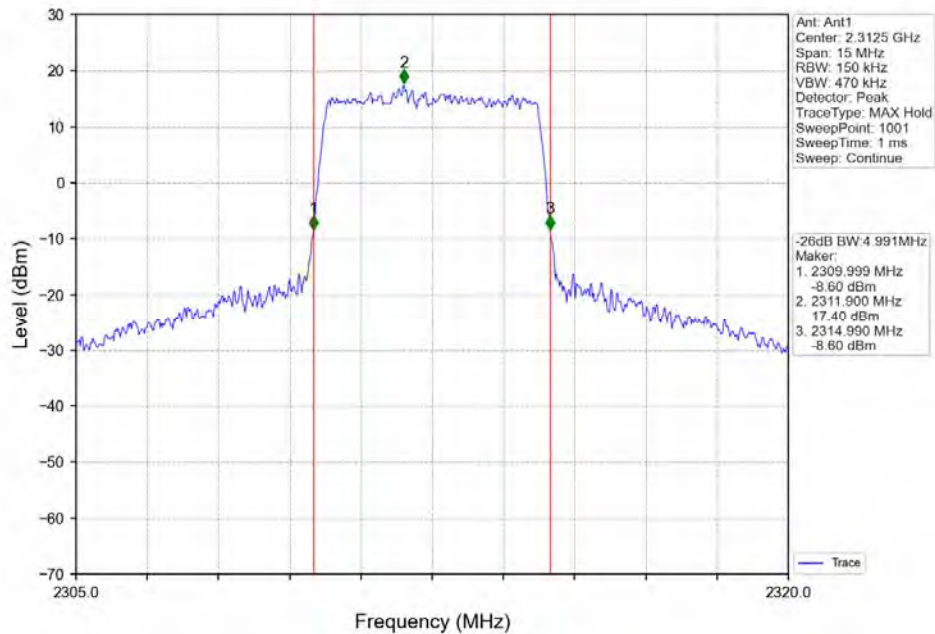


Band30_5MHz_64QAM_HCH_2312.5MHz_RB_25_0_NTNV

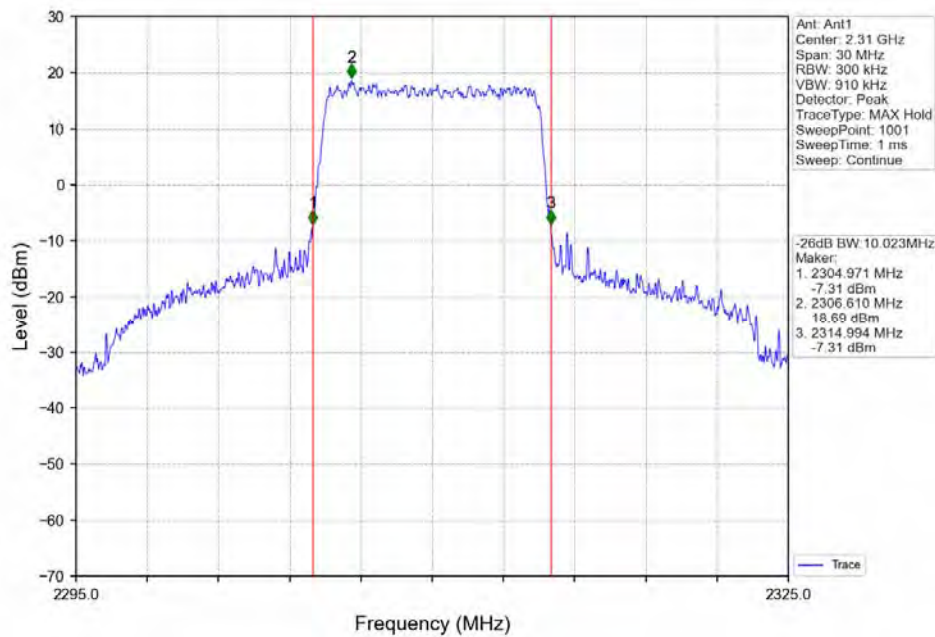


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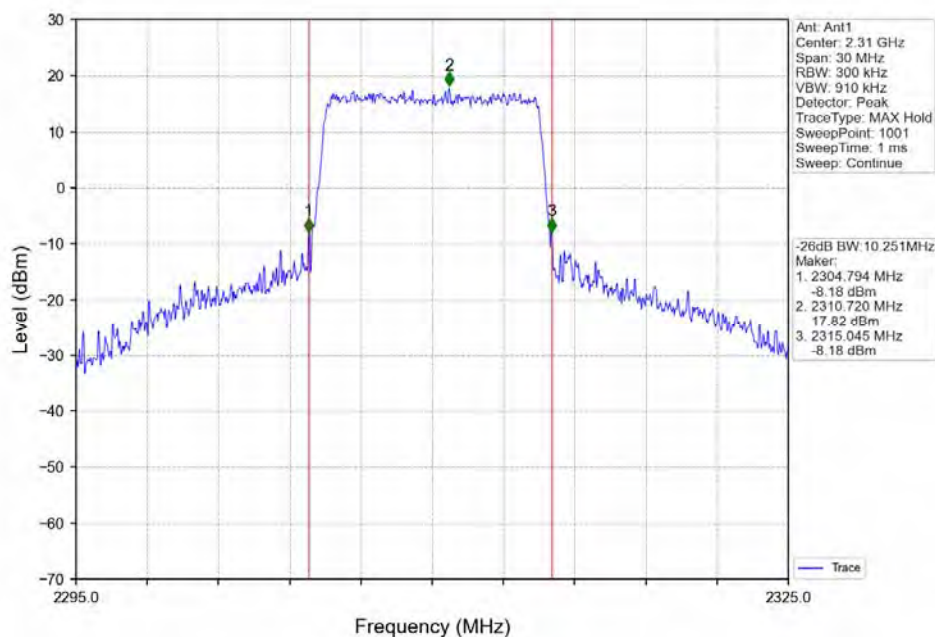
Test Report No.: W7L-220503W001RF06



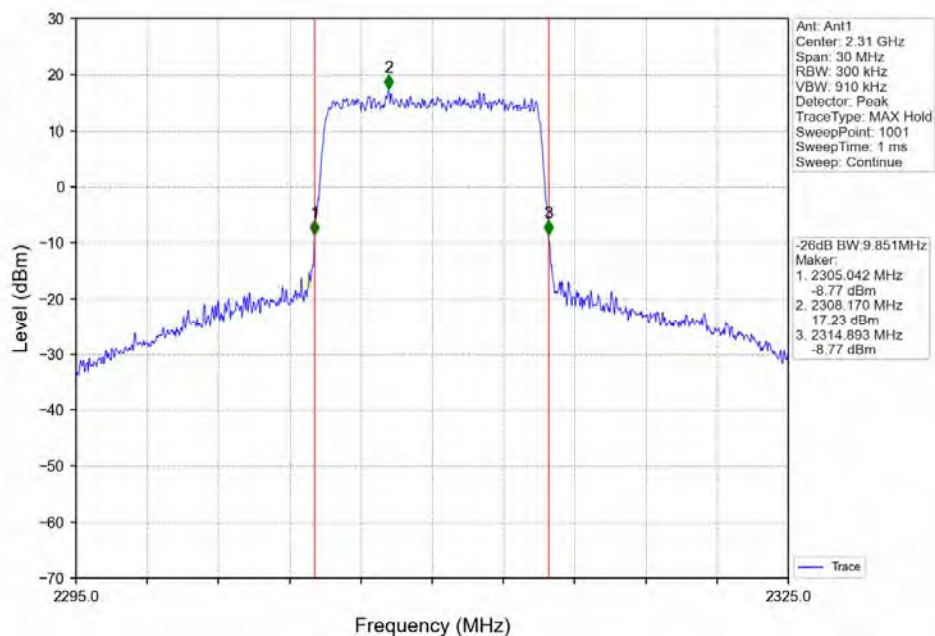
Band30_10MHz_QPSK_MCH_2310MHz_RB_50_0_NTNV



Band30_10MHz_16QAM_MCH_2310MHz_RB_50_0_NTNV



Band30_10MHz_64QAM_MCH_2310MHz_RB_50_0_NTNV





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Test Report No.: W7L-220503W001RF06

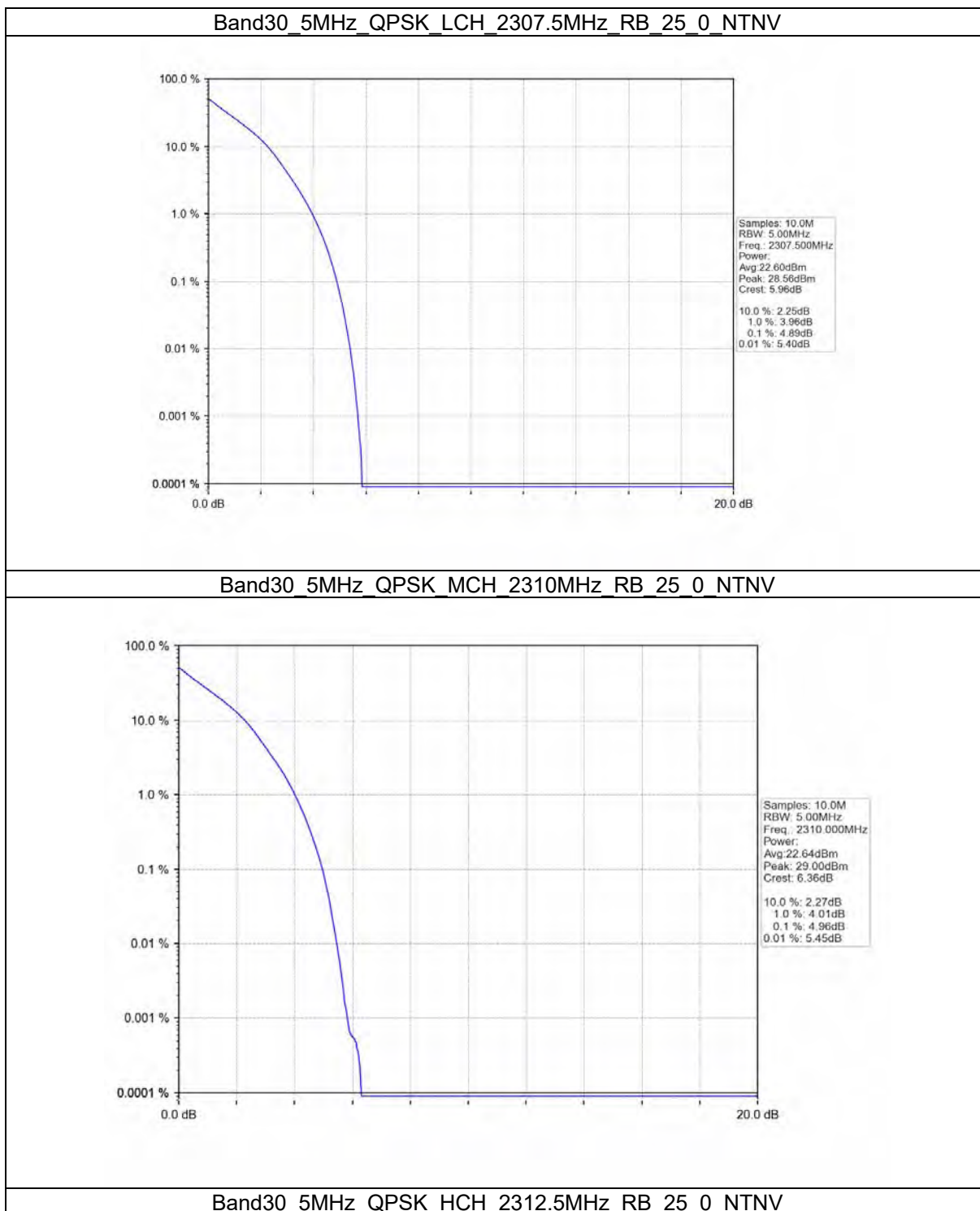
Peak-Average Ratio

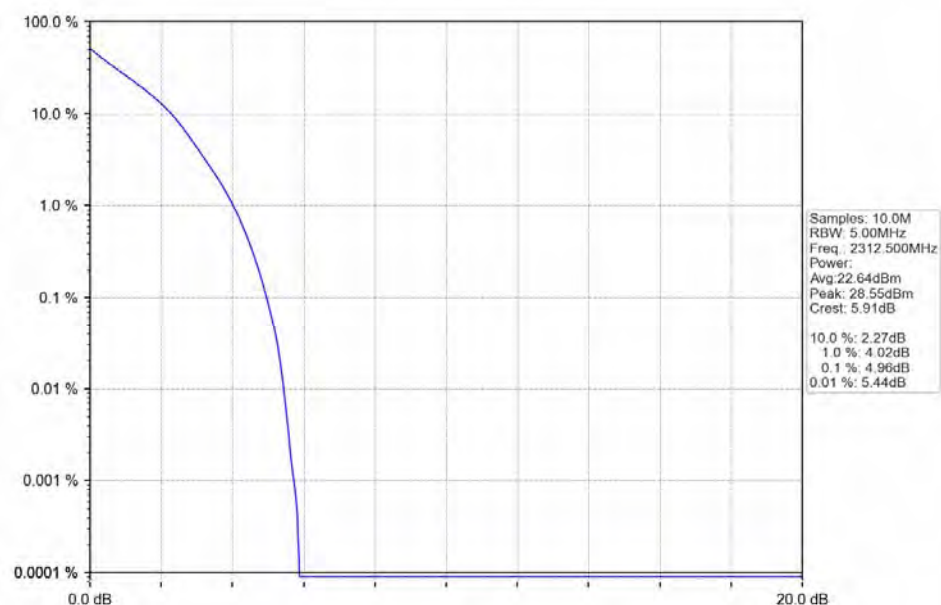
B30_5MHz

Test Result

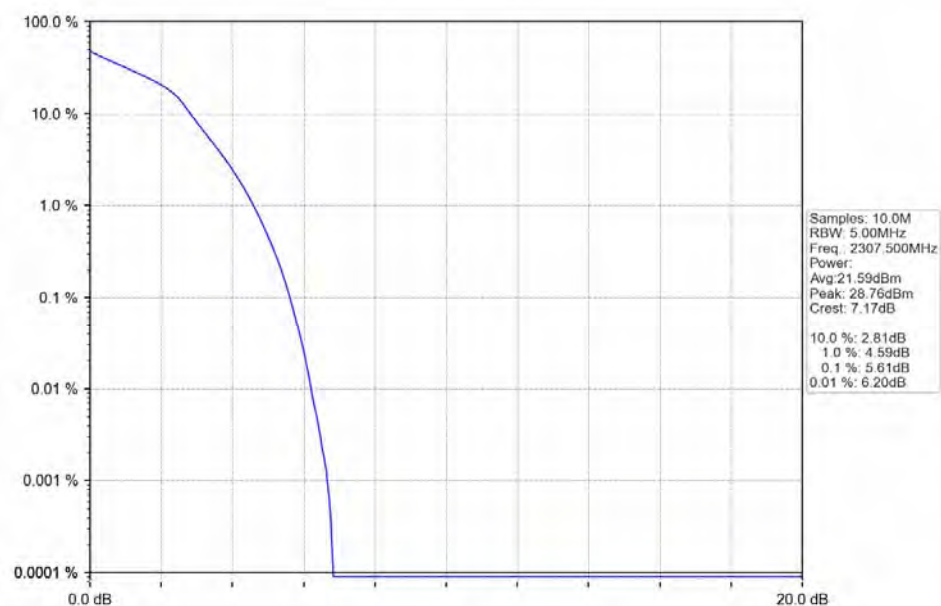
Band: 30 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	2307.5	25	0	4.89	<=13	Pass
	2310	25	0	4.96	<=13	Pass
	2312.5	25	0	4.96	<=13	Pass
16QAM	2307.5	25	0	5.61	<=13	Pass
	2310	25	0	5.68	<=13	Pass
	2312.5	25	0	5.71	<=13	Pass
64QAM	2307.5	25	0	6.02	<=13	Pass
	2310	25	0	6.04	<=13	Pass
	2312.5	25	0	6.07	<=13	Pass

Test Graph

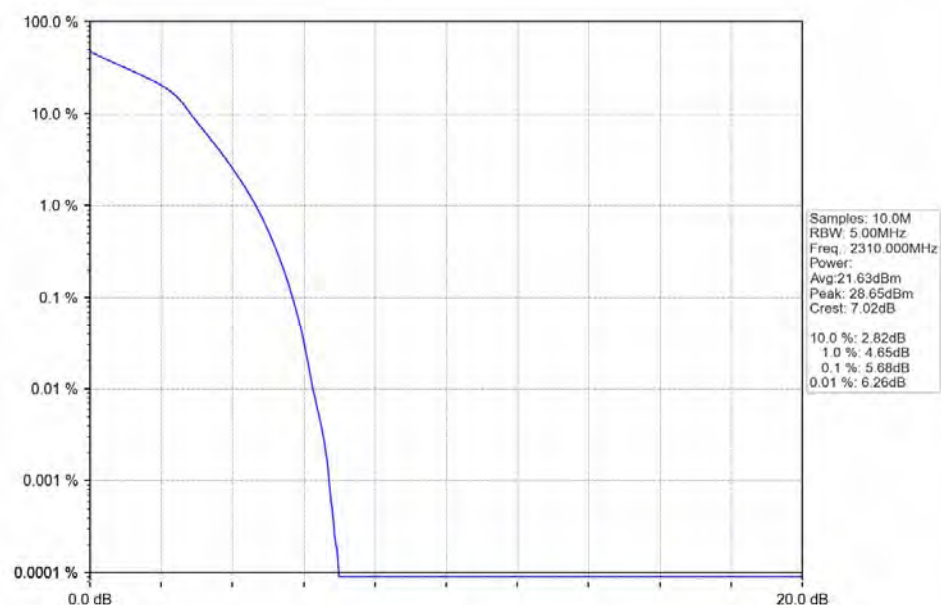




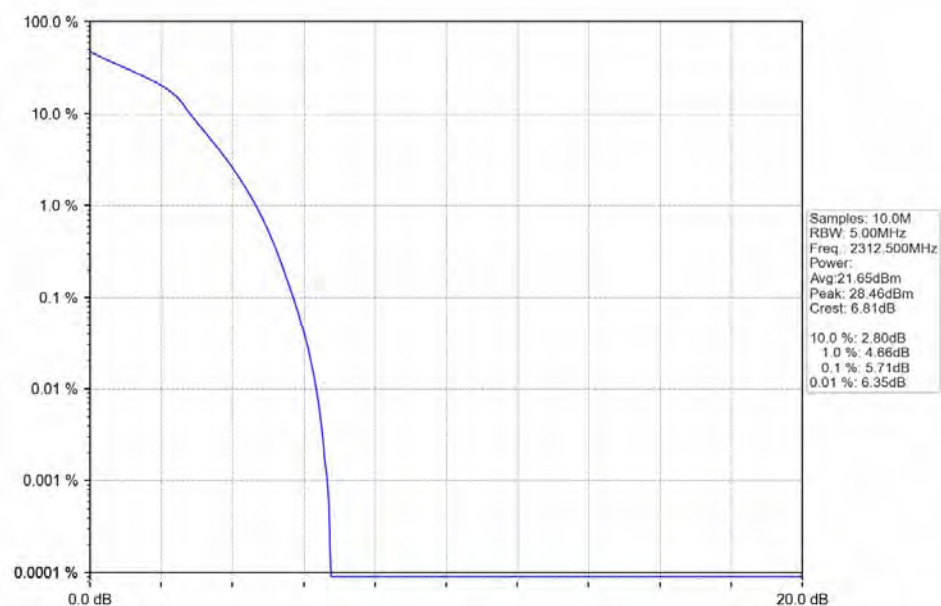
Band30_5MHz_16QAM_LCH_2307.5MHz_RB_25_0_NTNV



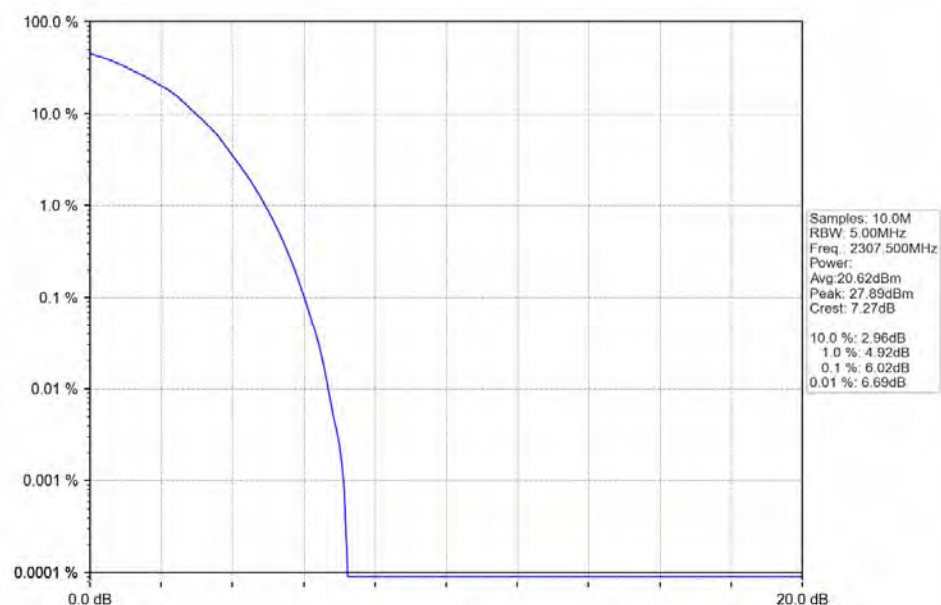
Band30_5MHz_16QAM_MCH_2310MHz_RB_25_0_NTNV



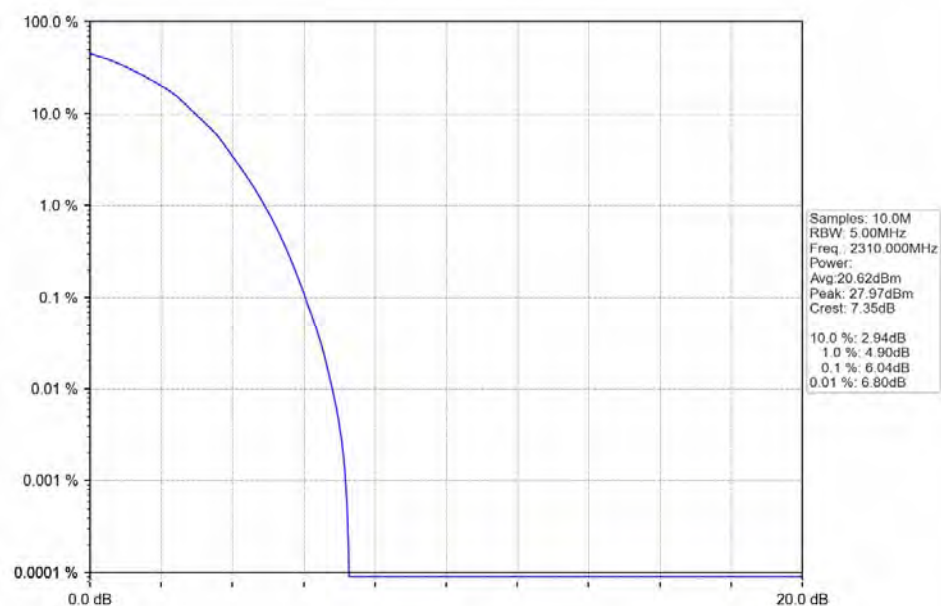
Band30_5MHz_16QAM_HCH_2312.5MHz_RB_25_0_NTNV



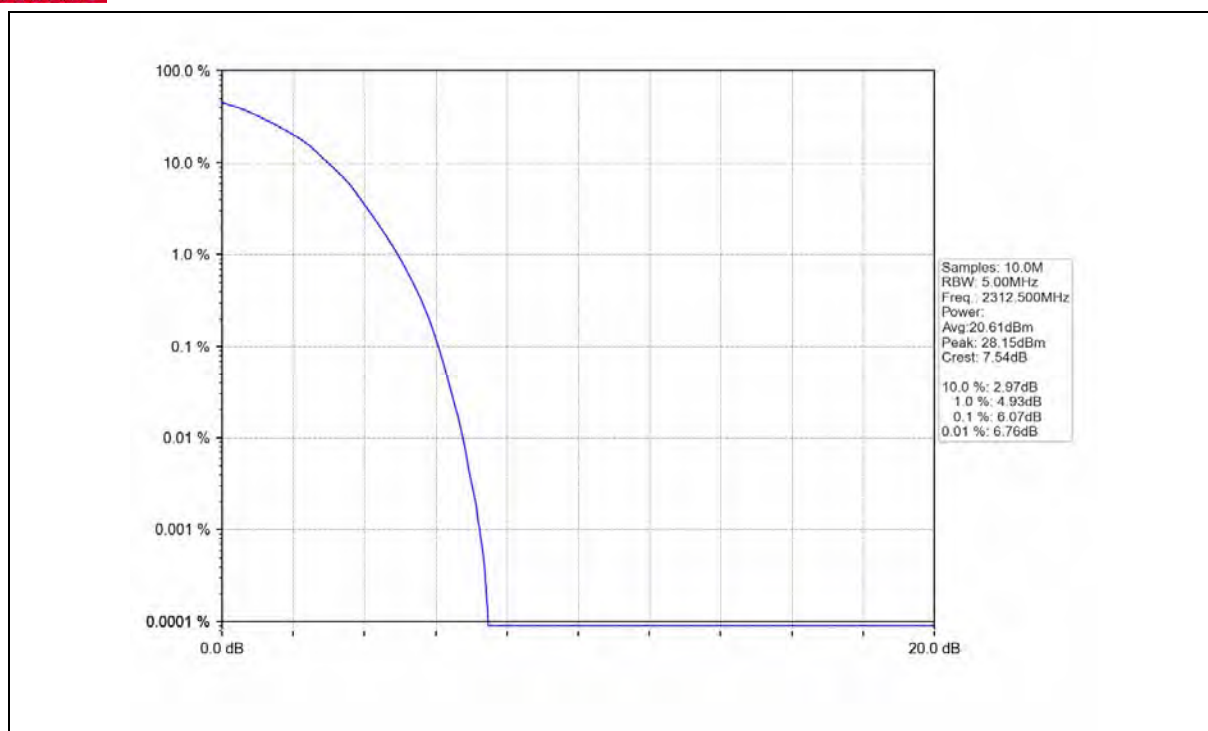
Band30_5MHz_64QAM_LCH_2307.5MHz_RB_25_0_NTNV



Band30_5MHz_64QAM_MCH_2310MHz_RB_25_0_NTNV



Band30_5MHz_64QAM_HCH_2312.5MHz_RB_25_0_NTNV





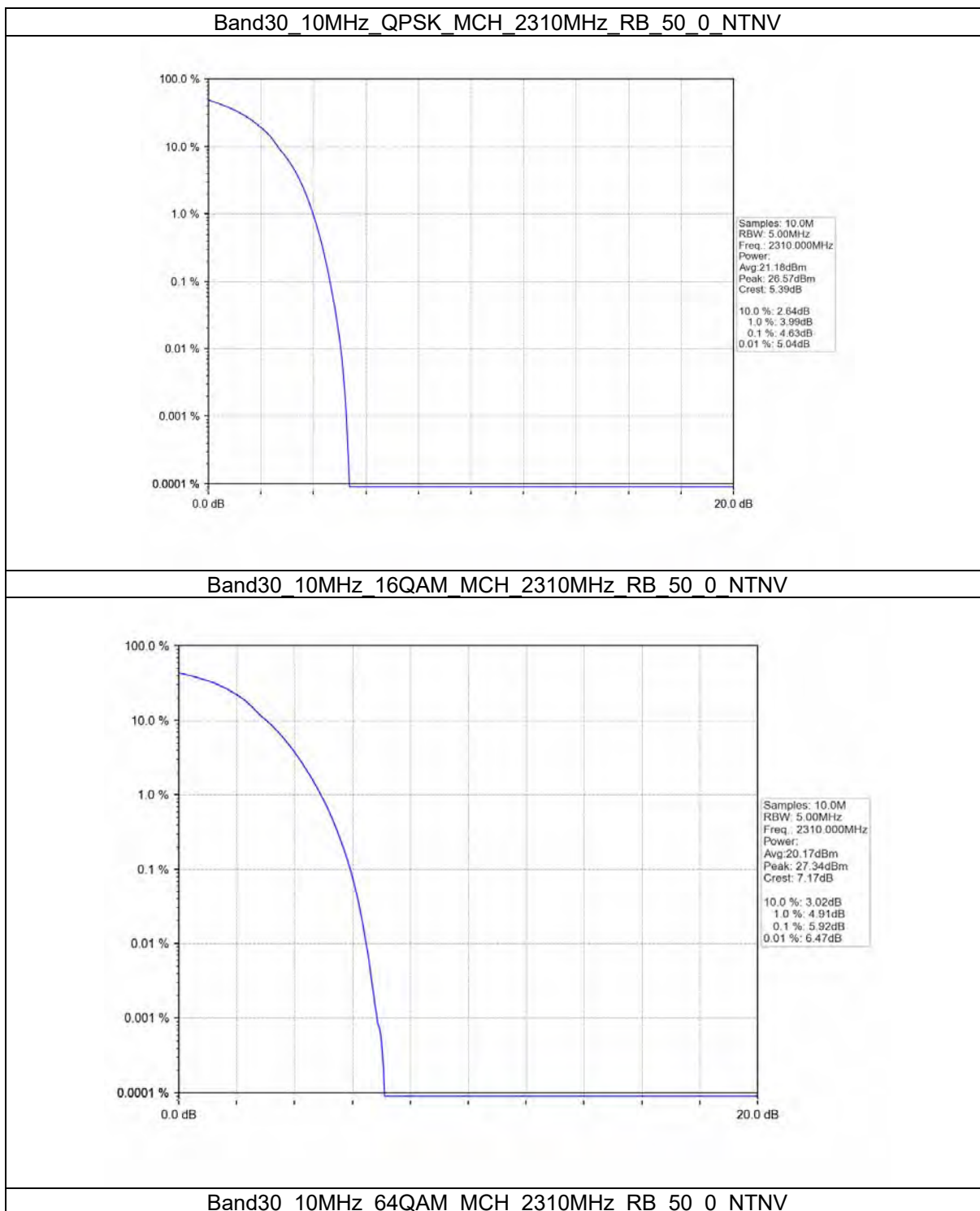
Test Report No.: W7L-220503W001RF06

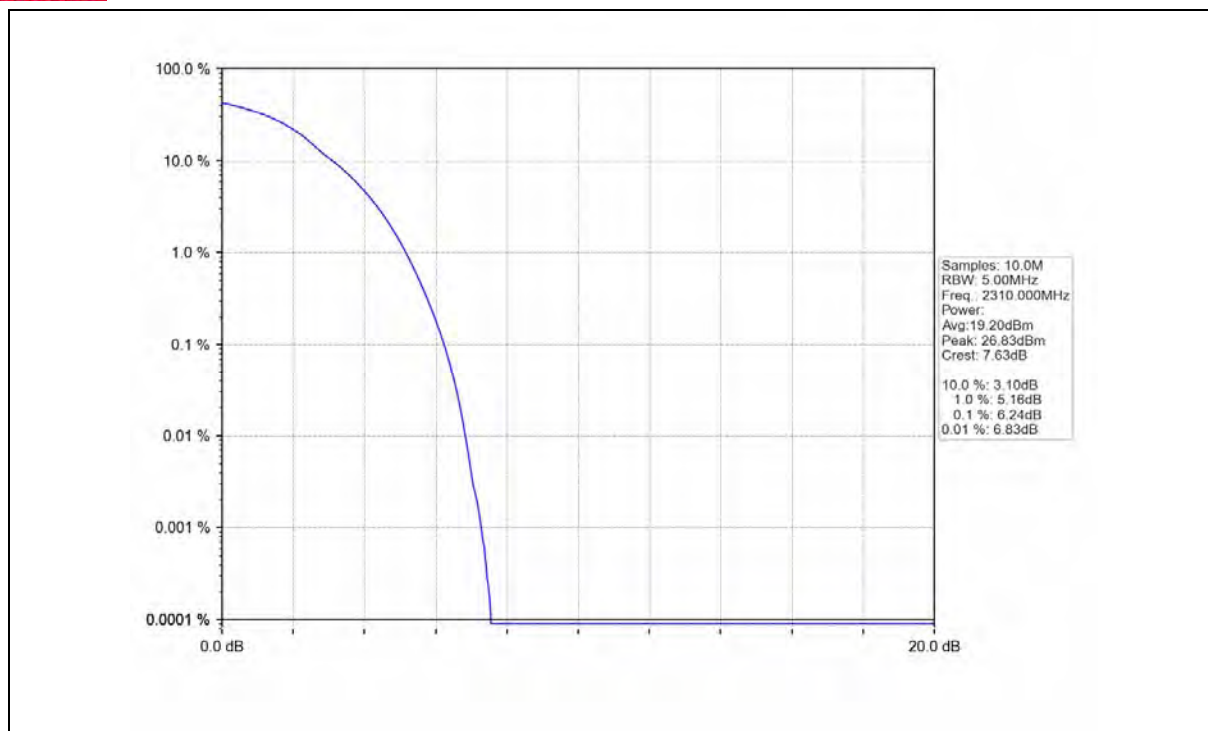
B30_10MHz

Test Result

Band: 30 / Bandwidth: 10MHz / NTN						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	2310	/	/	/	<=13	Pass
	2310	50	0	4.63	<=13	Pass
	2310	/	/	/	<=13	Pass
16QAM	2310	/	/	/	<=13	Pass
	2310	50	0	5.92	<=13	Pass
	2310	/	/	/	<=13	Pass
64QAM	2310	/	/	/	<=13	Pass
	2310	50	0	6.24	<=13	Pass
	2310	/	/	/	<=13	Pass

Test Graph







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Spurious Emission

B30_5MHz

Test Result

Band: 30 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	2307.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	2310	1	0	Refer To Test Graph		Pass
	2312.5	1	0	Refer To Test Graph		Pass
			24	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
16QAM	2307.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	2310	1	0	Refer To Test Graph		Pass
	2312.5	1	0	Refer To Test Graph		Pass
			24	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
64QAM	2307.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	2310	1	0	Refer To Test Graph		Pass
	2312.5	1	0	Refer To Test Graph		Pass
			24	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass

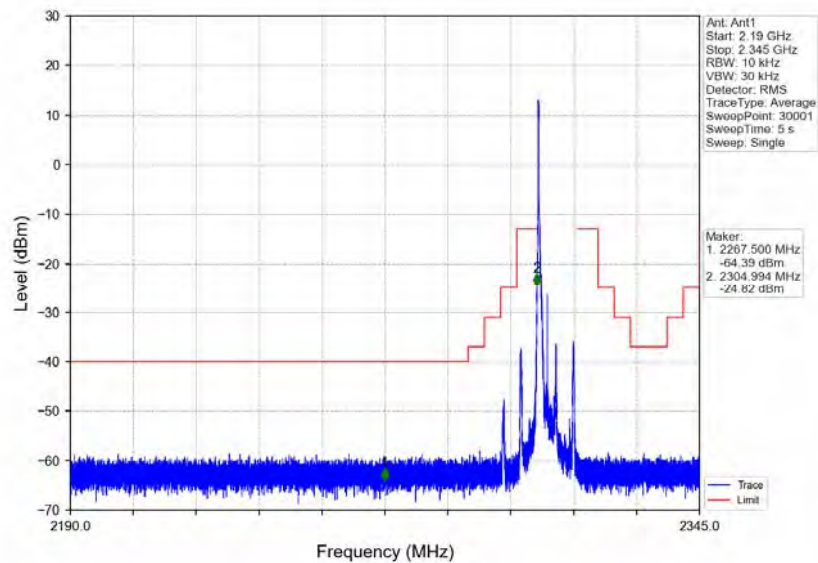


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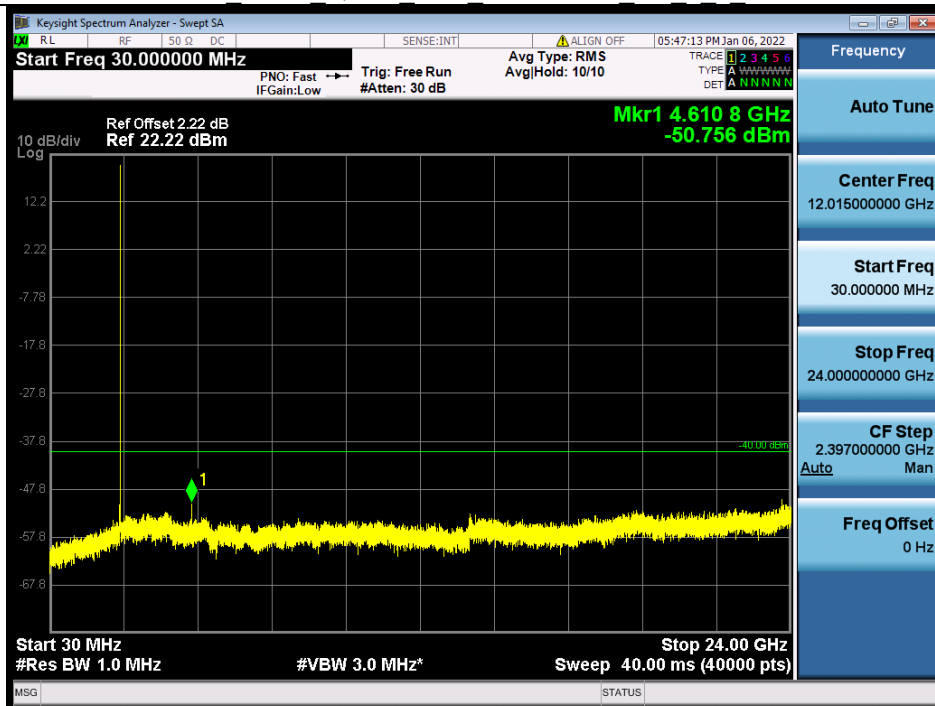
Test Report No.: W7L-220503W001RF06

Test Graph

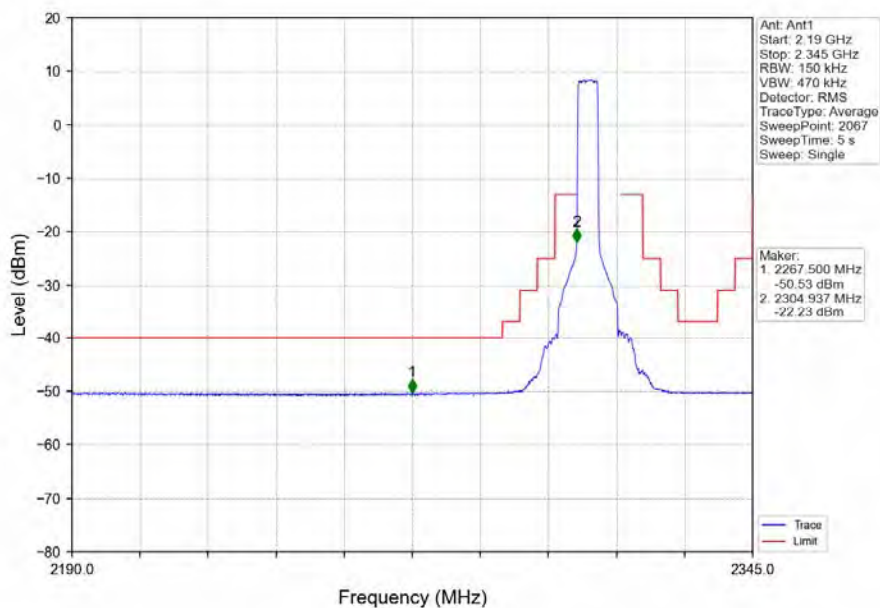
Band30_5MHz_QPSK_LCH_2307.5MHz_RB_1_0_NTNV



Band30_5MHz_QPSK_LCH_2307.5MHz_RB_1_0_NTNV



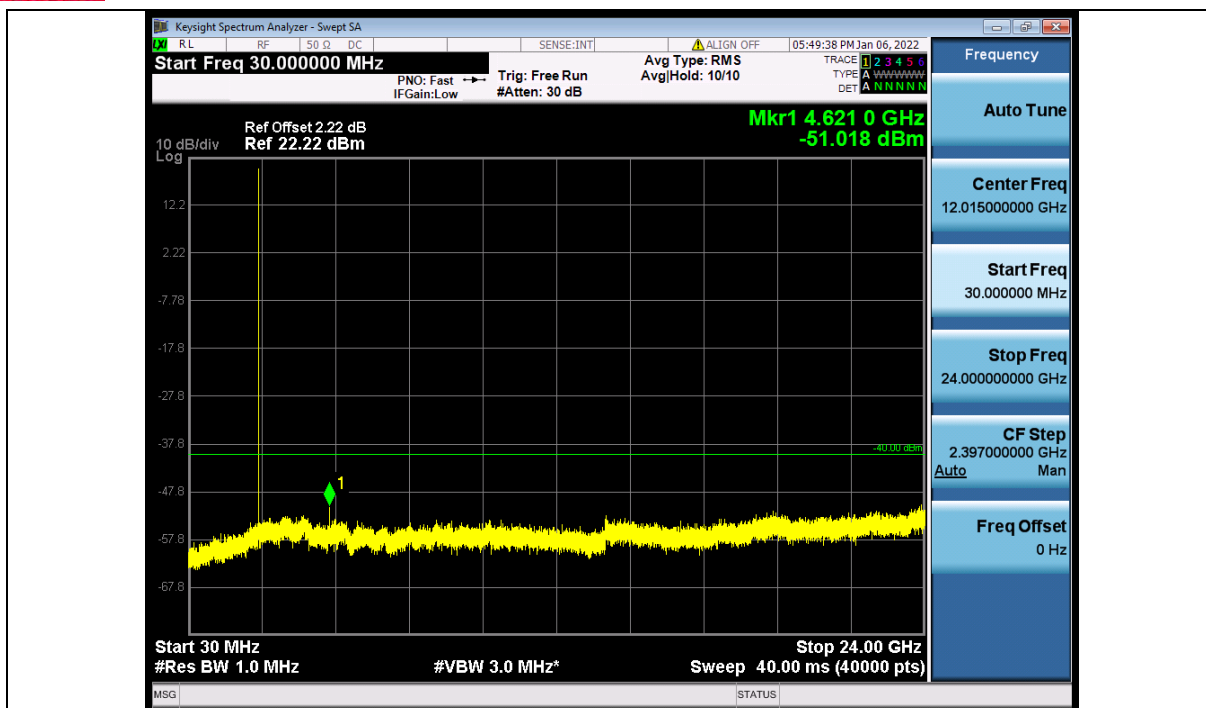
Band30_5MHz_QPSK_LCH_2307.5MHz_RB_25_0_NTNV



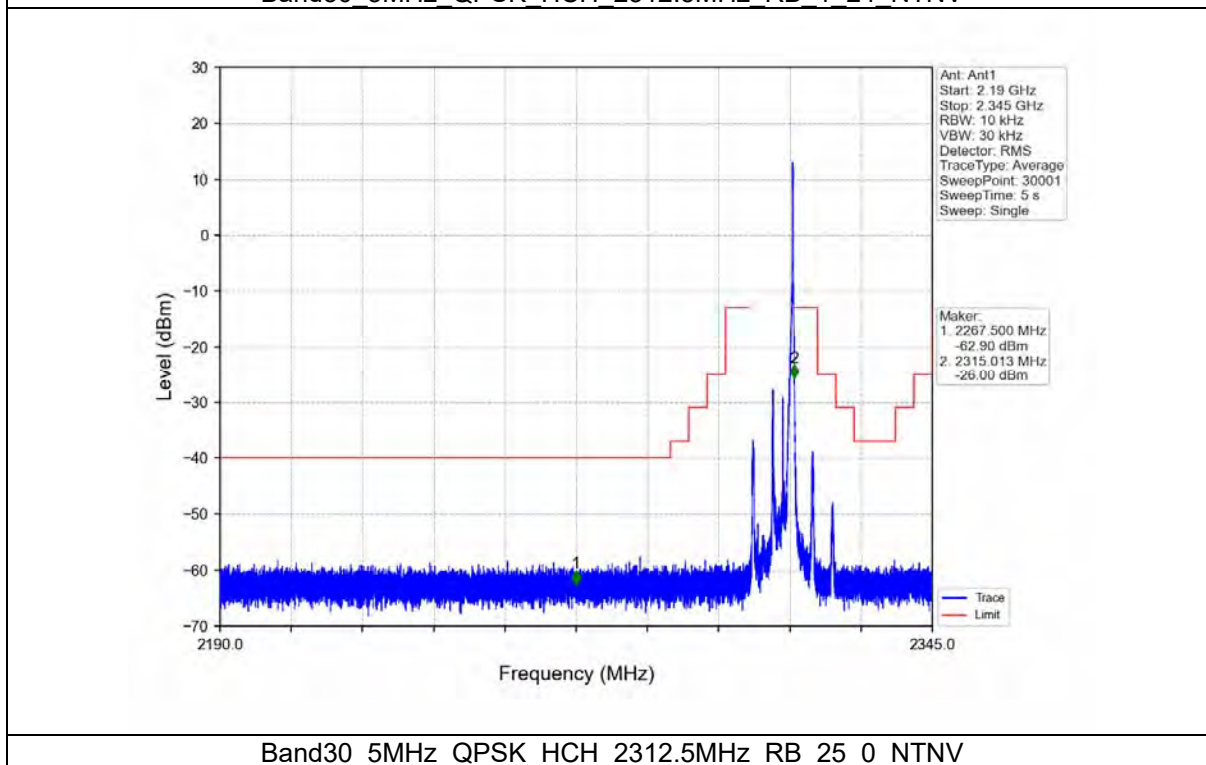
Band30 5MHz QPSK MCH 2310MHz RB 1 0 NTNV



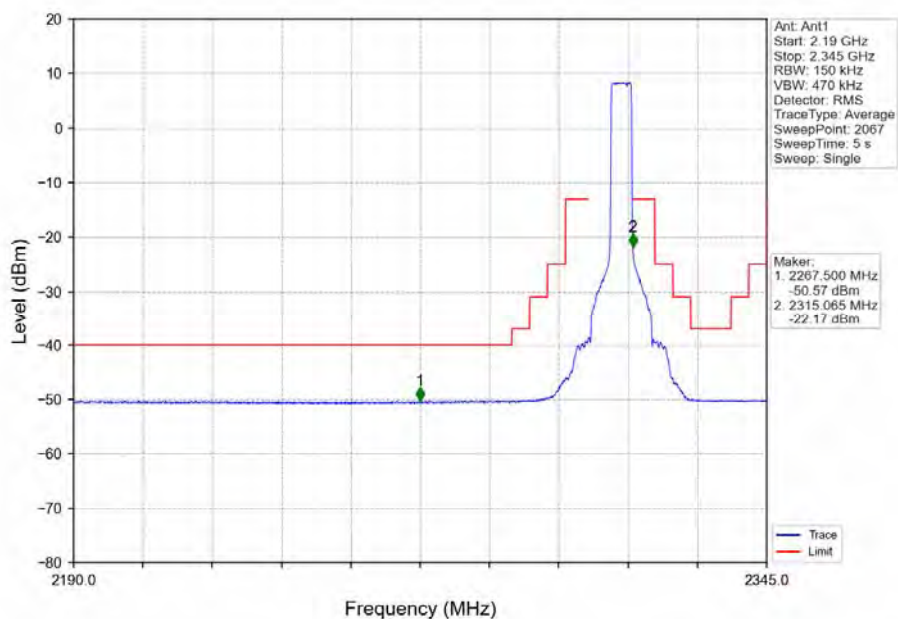
Band30 5MHz QPSK HCH 2312.5MHz RB 1 0 NTNV



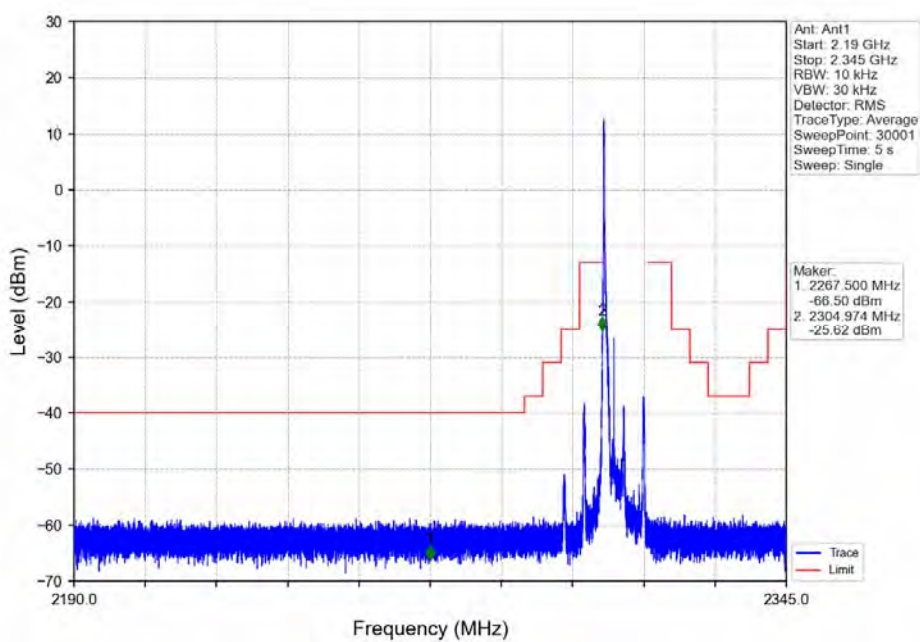
Band30_5MHz QPSK HCH 2312.5MHz RB 1 24 NTN



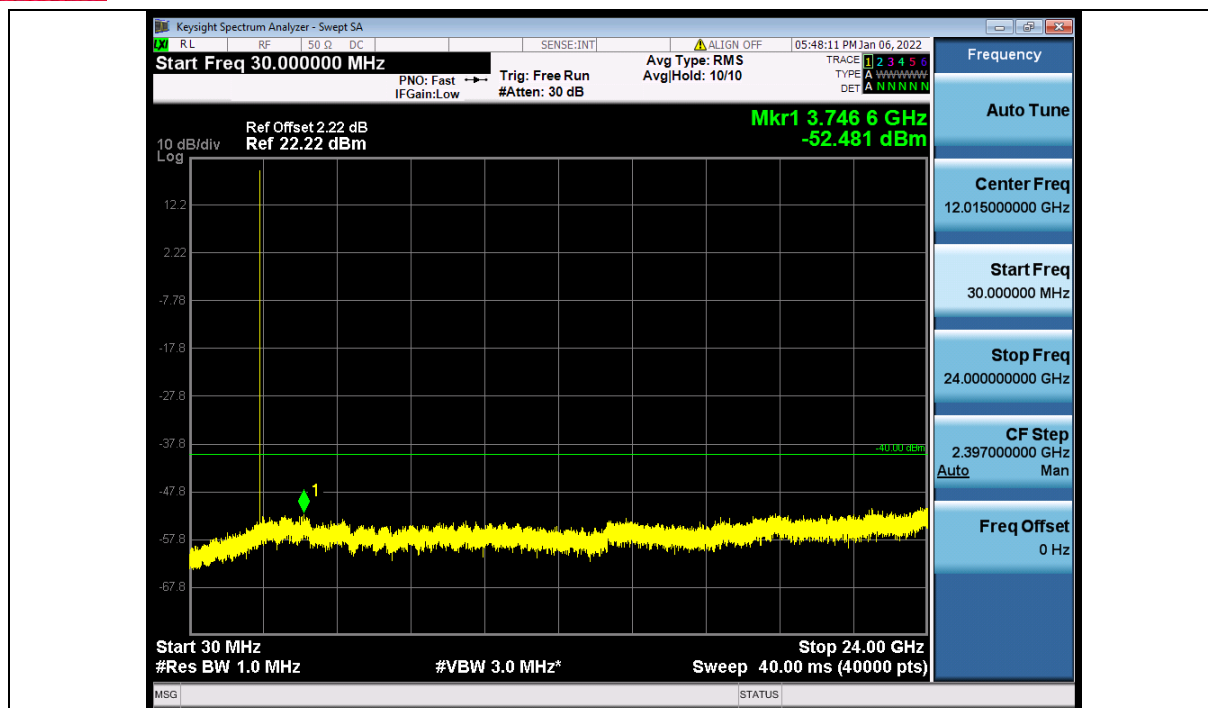
Band30_5MHz QPSK HCH 2312.5MHz RB 25 0 NTN



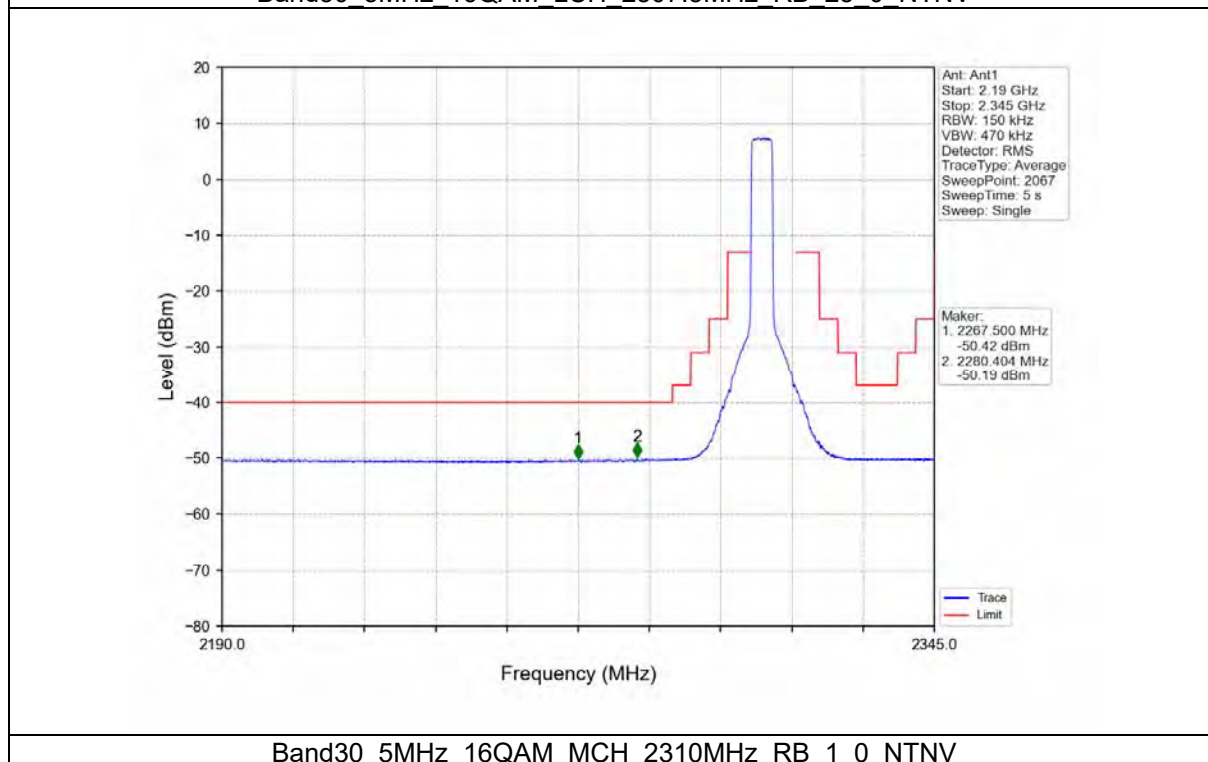
Band30_5MHz_16QAM_LCH_2307.5MHz_RB_1_0_NTNV



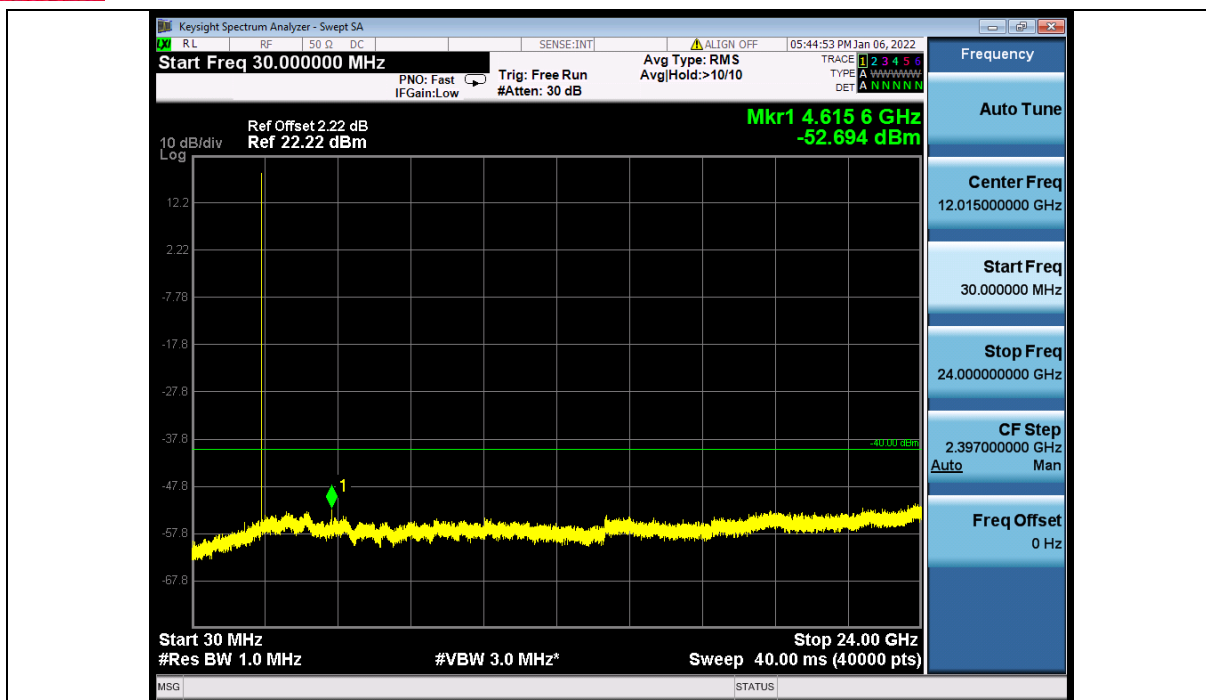
Band30_5MHz_16QAM_LCH_2307.5MHz_RB_1_0_NTNV



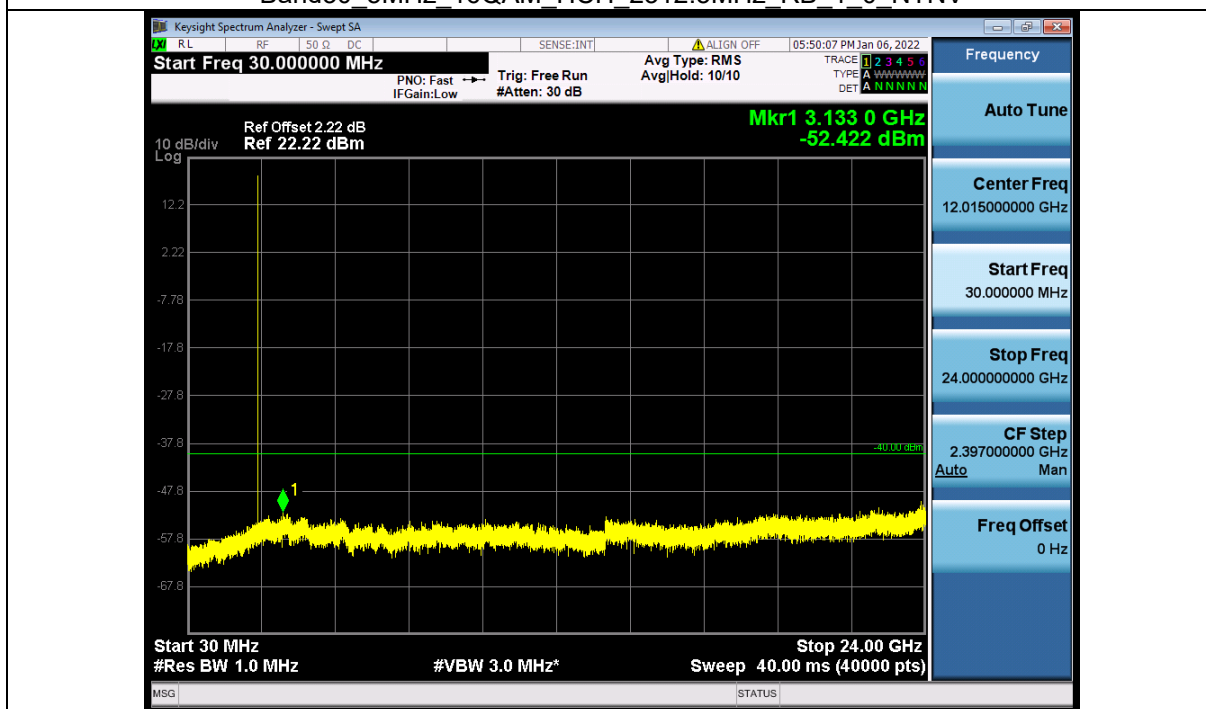
Band30_5MHz_16QAM_LCH_2307.5MHz_RB_25_0_NTNV



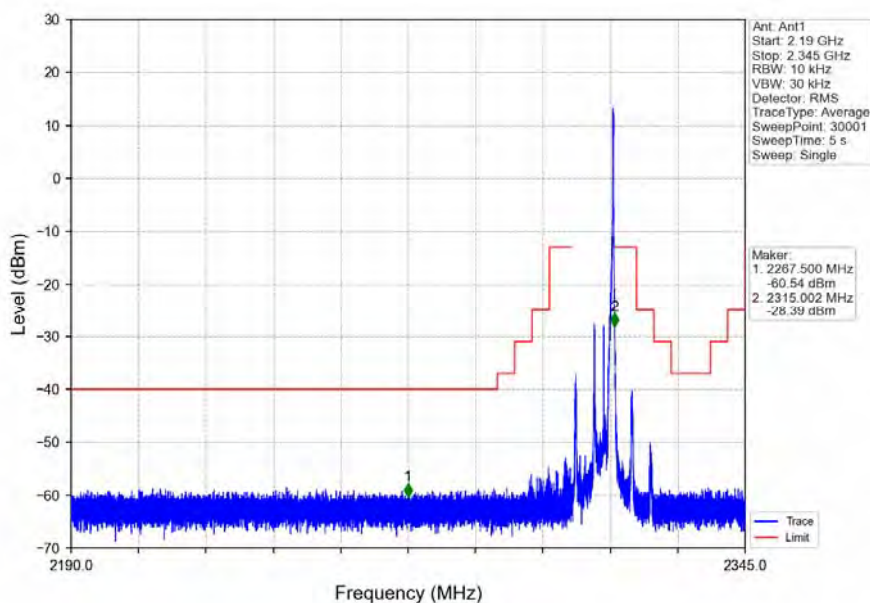
Band30_5MHz_16QAM_MCH_2310MHz_RB_1_0_NTNV



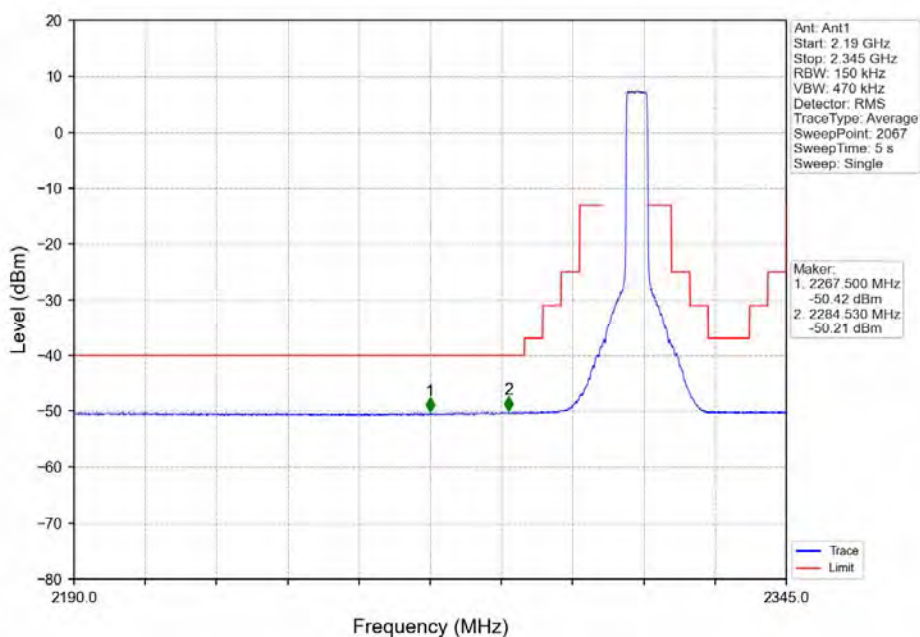
Band30 5MHz 16QAM HCH 2312.5MHz RB 1 0 NTNv



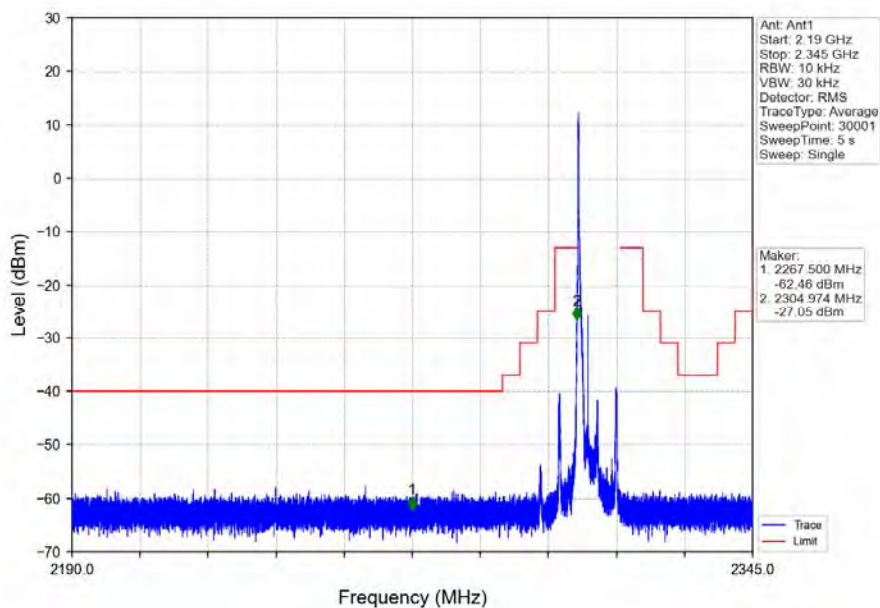
Band30_5MHz_16QAM_HCH_2312.5MHz_RB_1_24_NTNV



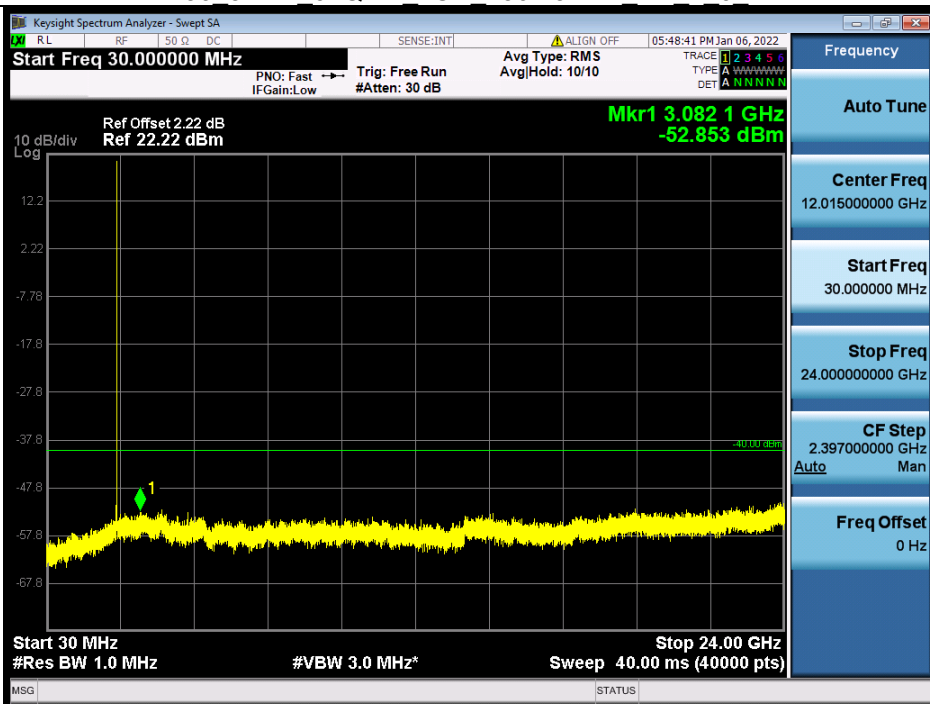
Band30_5MHz_16QAM_HCH_2312.5MHz_RB_25_0_NTNV



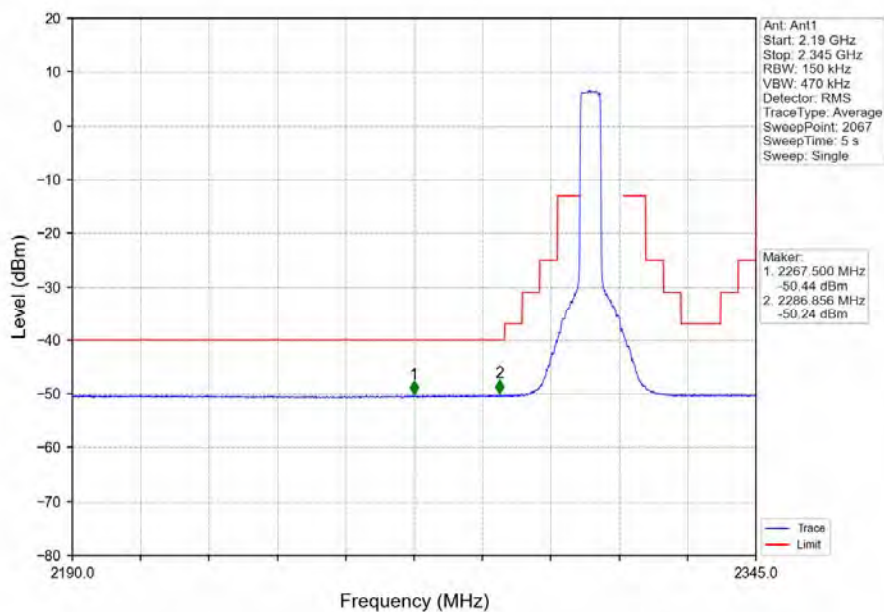
Band30_5MHz_64QAM_LCH_2307.5MHz_RB_1_0_NTNV



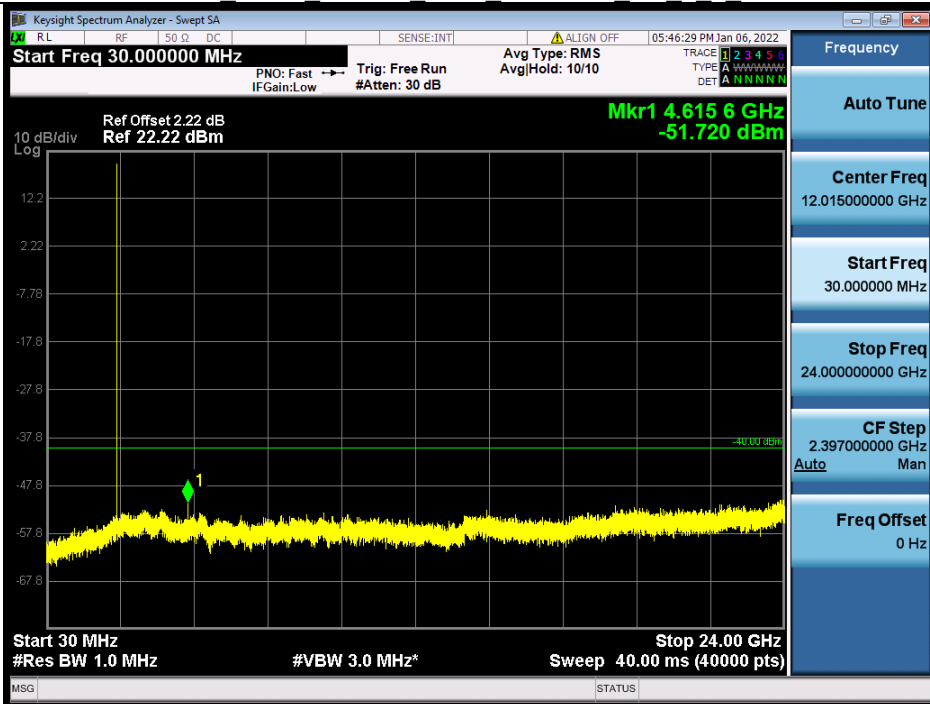
Band30 5MHz 64QAM LCH 2307.5MHz RB 1 0 NTNV

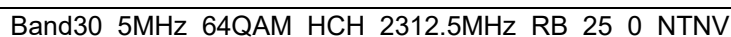


Band30_5MHz_64QAM_LCH_2307.5MHz_RB_25_0_NTNV



Band30_5MHz_64QAM_MCH_2310MHz_RB_1_0_NTNV

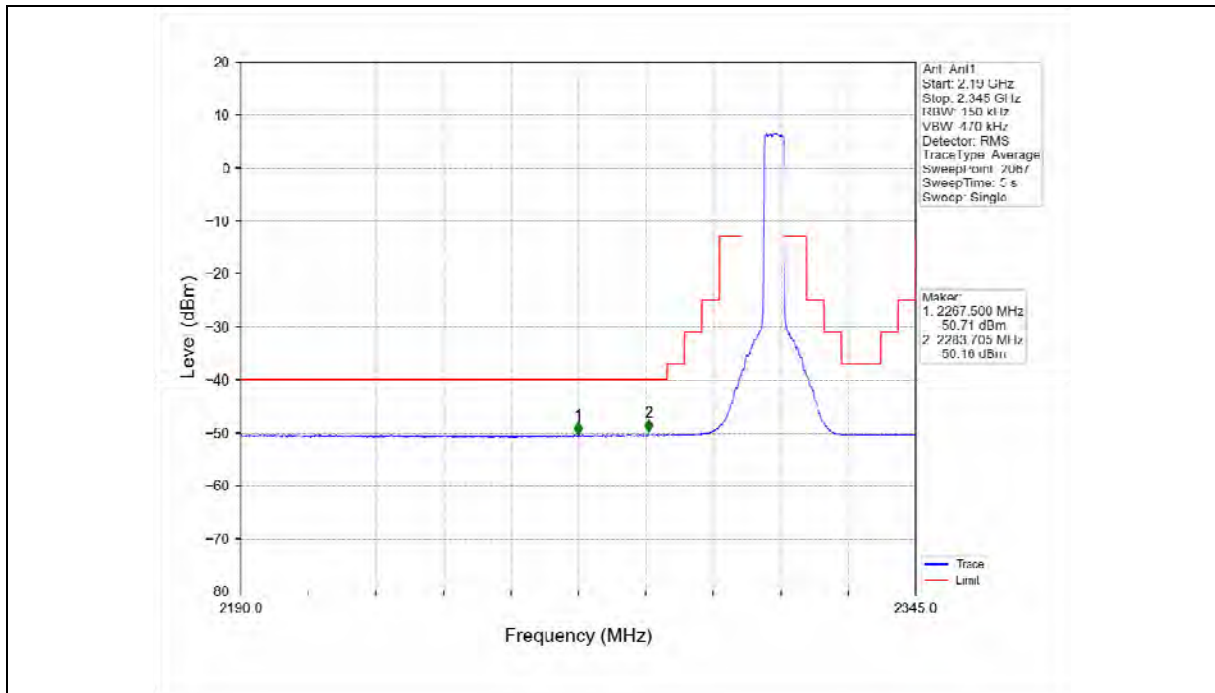






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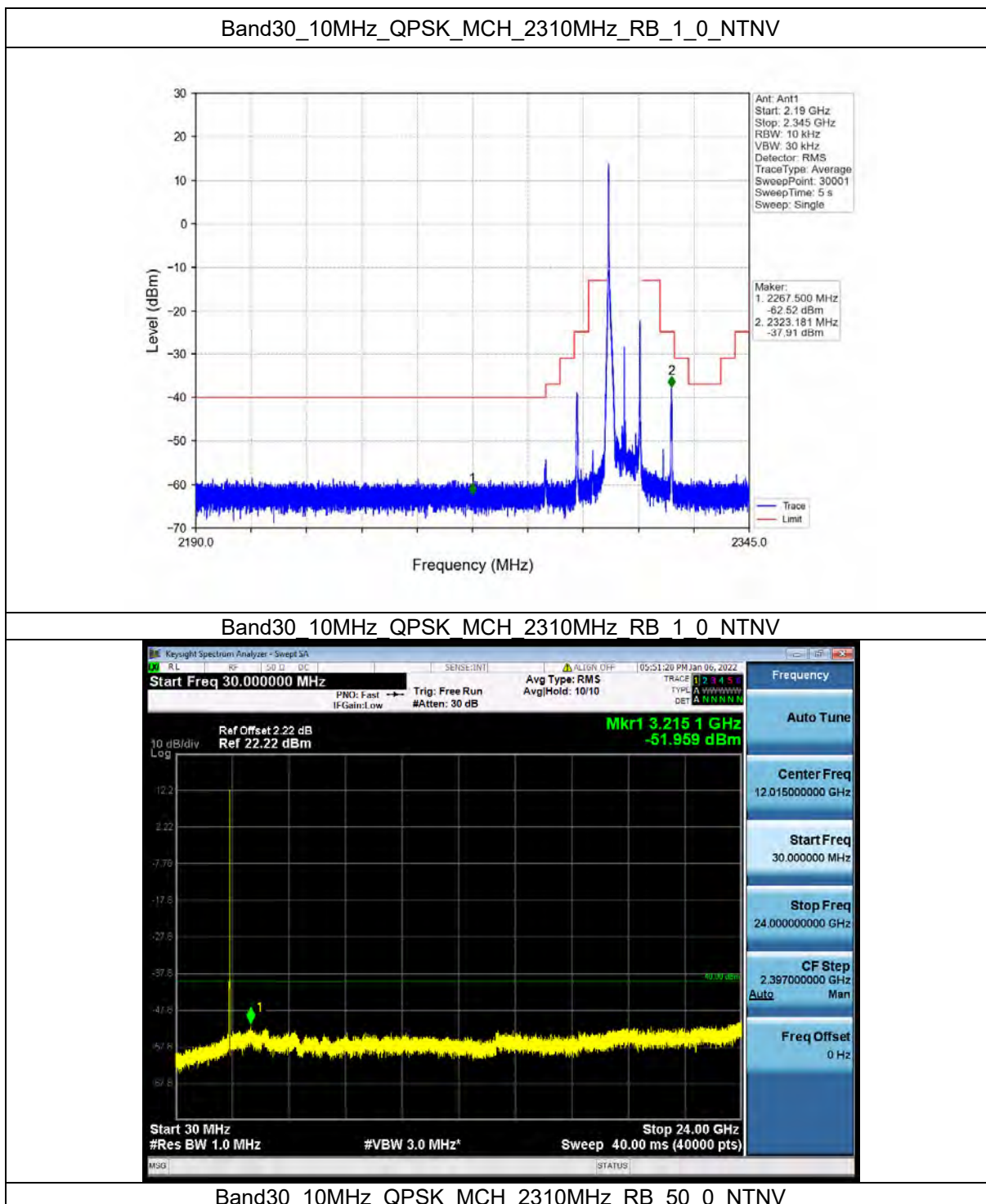
Test Report No.: W7L-220503W001RF06

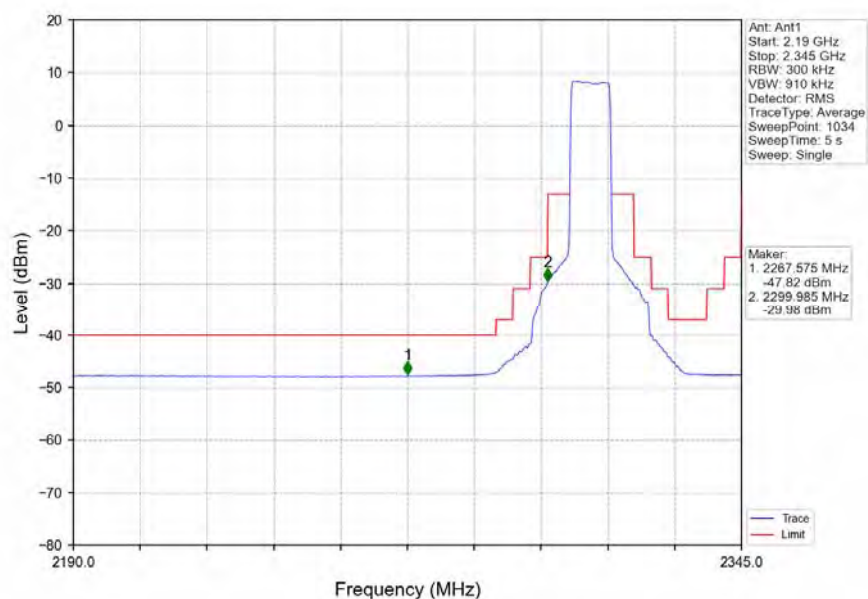
B30_10MHz

Test Result

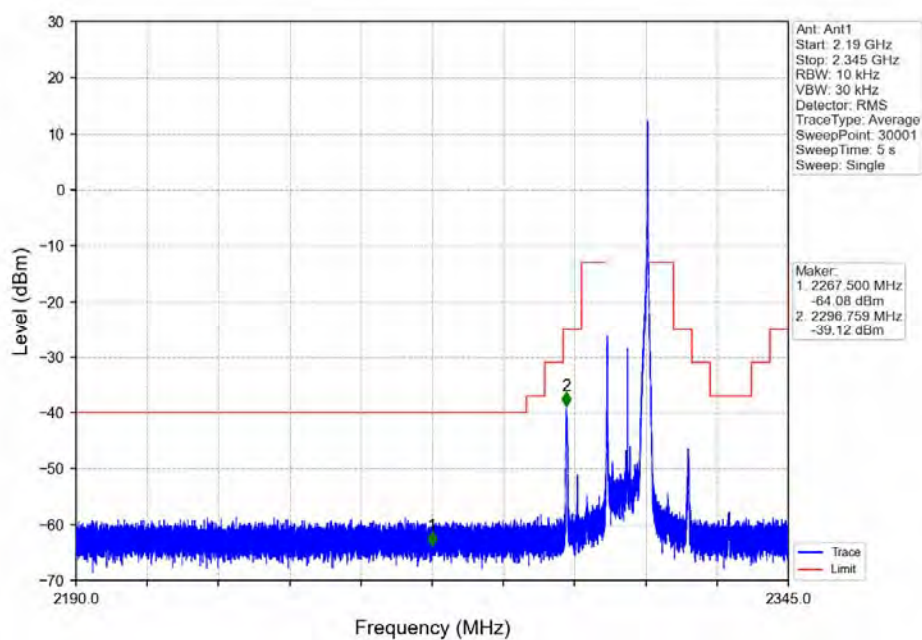
Band: 30 / Bandwidth: 10MHz / NTN						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	2310	1	0	Refer To Test Graph		Pass
			49	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
16QAM	2310	1	0	Refer To Test Graph		Pass
			49	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
64QAM	2310	1	0	Refer To Test Graph		Pass
			49	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass

Test Graph

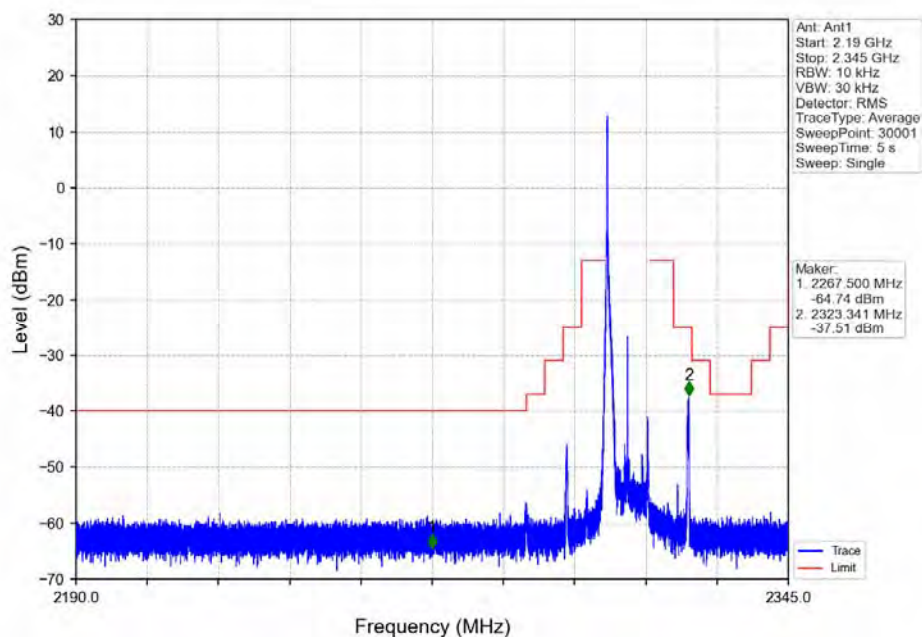




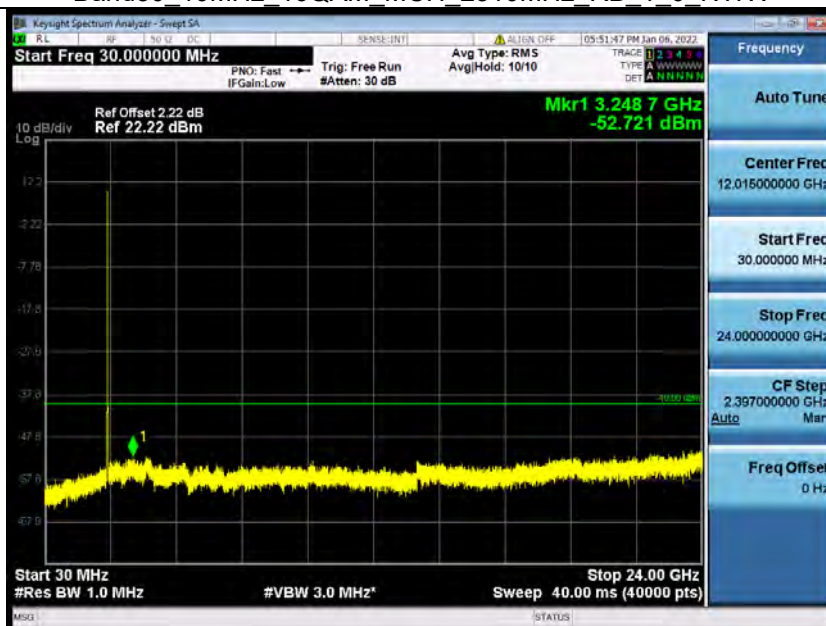
Band30_10MHz_QPSK_MCH_2310MHz_RB_1_49_NTNV



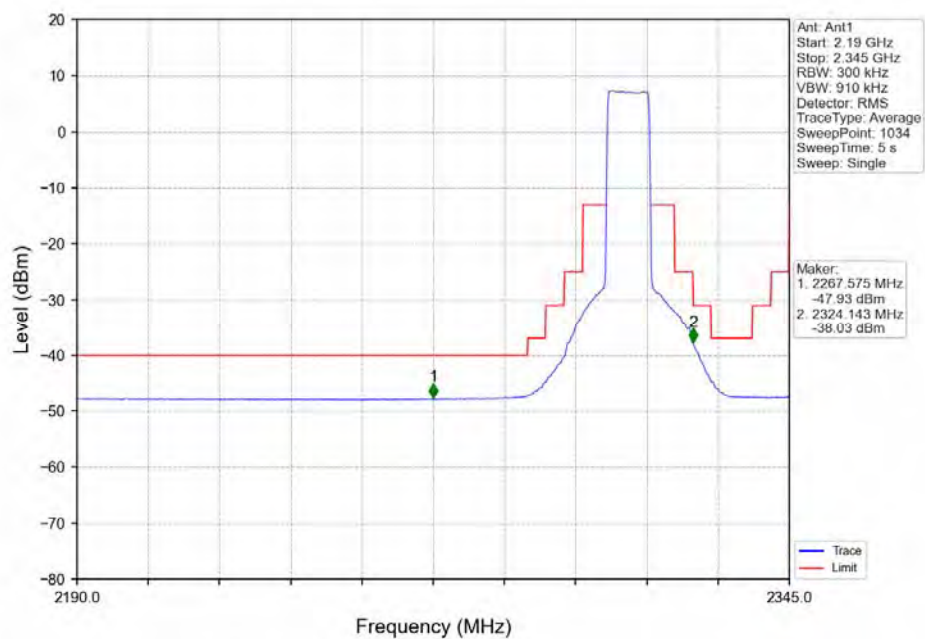
Band30_10MHz_16QAM_MCH_2310MHz_RB_1_0_NTNV



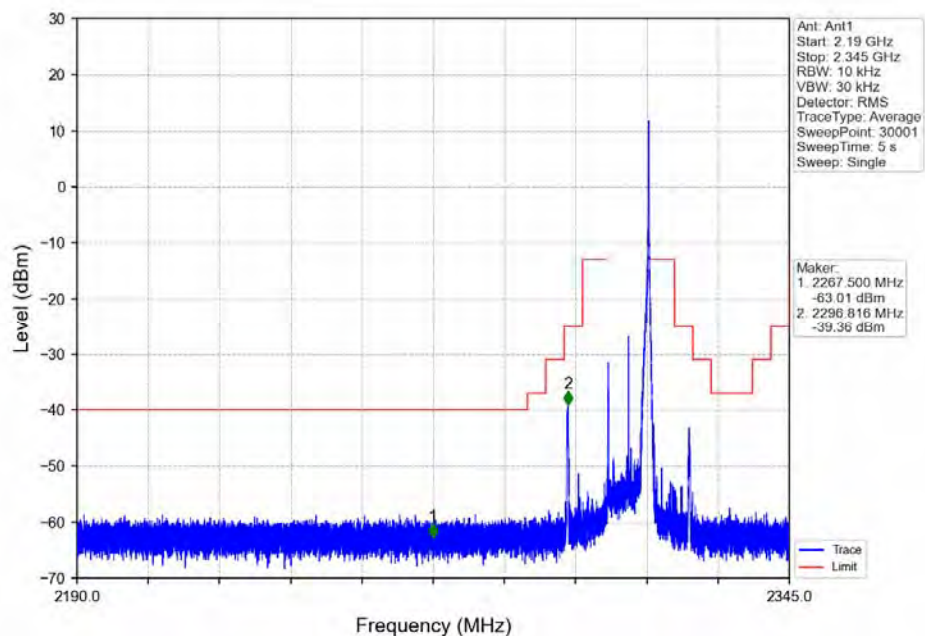
Band30_10MHz_16QAM_MCH_2310MHz_RB_1_0_NTNV



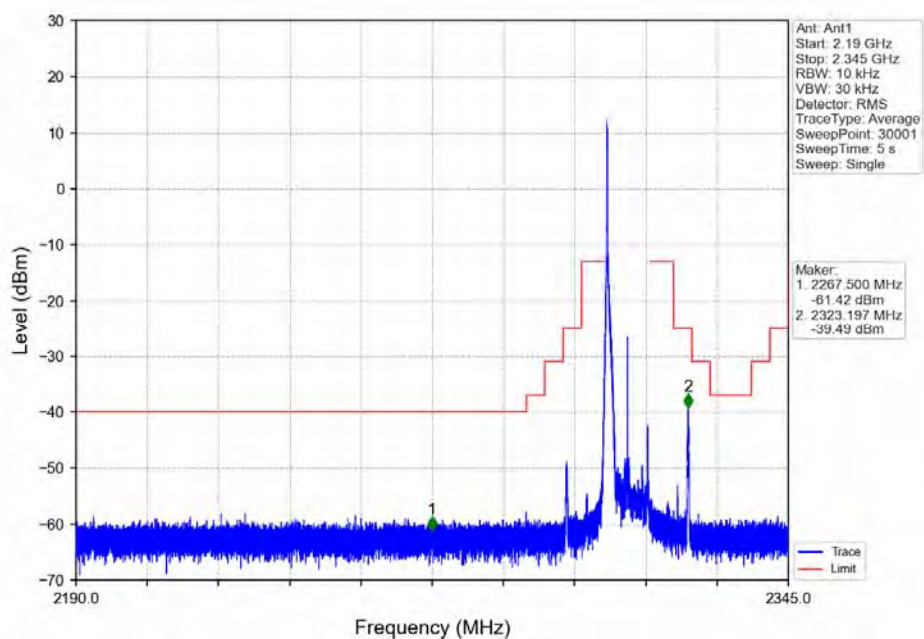
Band30_10MHz_16QAM_MCH_2310MHz_RB_50_0_NTNV



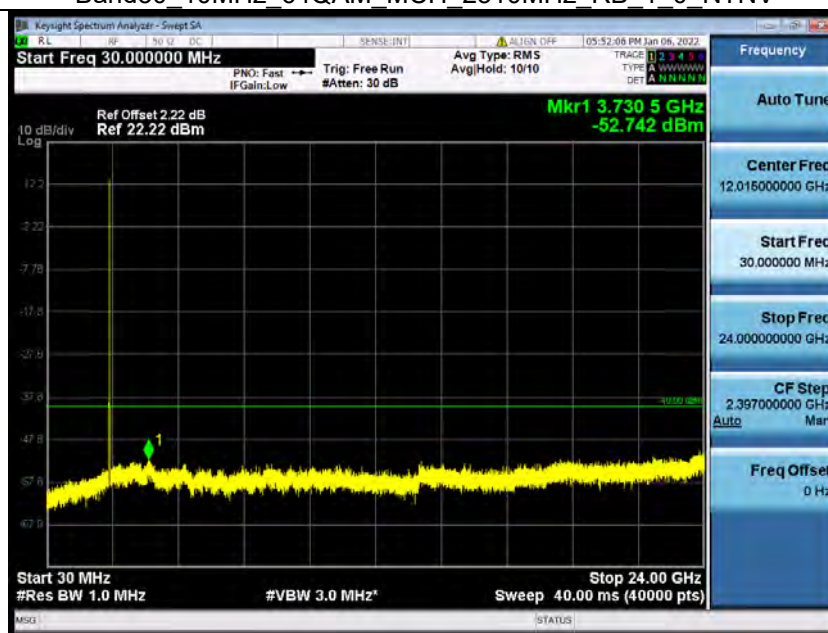
Band30_10MHz_16QAM_MCH_2310MHz_RB_1_49_NTNV



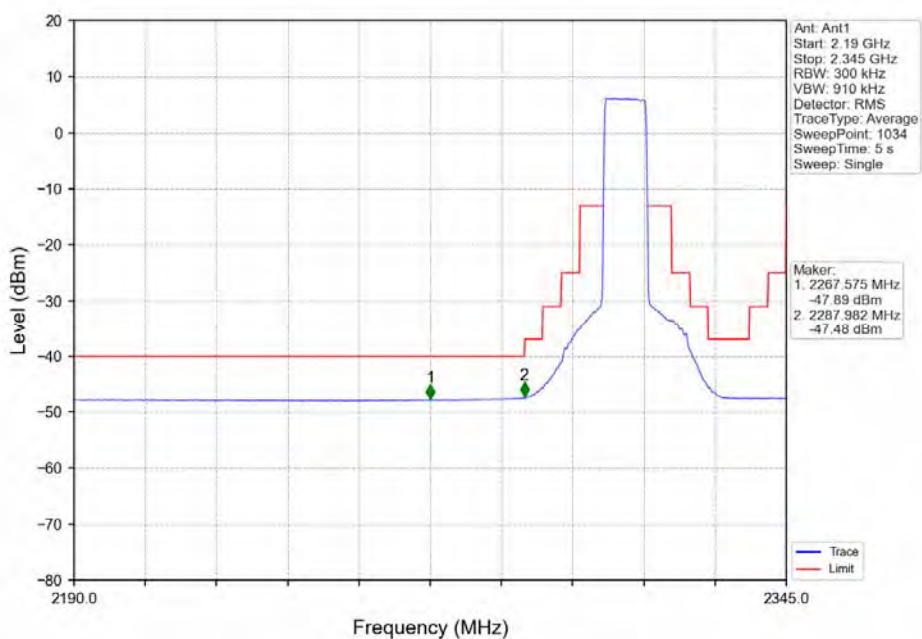
Band30_10MHz_64QAM_MCH_2310MHz_RB_1_0_NTNV



Band30_10MHz_64QAM_MCH_2310MHz_RB_1_0_NTNV



Band30_10MHz_64QAM_MCH_2310MHz_RB_50_0_NTNV



Band30_10MHz_64QAM_MCH_2310MHz_RB_1_49_NTNV

