

4. Peak-Average Ratio

4.1 Test Result

4.1.1 B4_1.4MHz

Band: 4 / Bandwidth: 1.4MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	1710.7	6	0	6.15	<=13	Pass
	1732.5	6	0	6.30	<=13	Pass
	1754.3	6	0	5.97	<=13	Pass
16QAM	1710.7	6	0	6.93	<=13	Pass
	1732.5	6	0	6.92	<=13	Pass
	1754.3	6	0	6.67	<=13	Pass

4.1.2 B4_3MHz

Band: 4 / Bandwidth: 3MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	1711.5	15	0	6.09	<=13	Pass
	1732.5	15	0	6.15	<=13	Pass
	1753.5	15	0	6.00	<=13	Pass
16QAM	1711.5	15	0	6.82	<=13	Pass
	1732.5	15	0	6.93	<=13	Pass
	1753.5	15	0	6.76	<=13	Pass

4.1.3 B4_5MHz

Band: 4 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	1712.5	25	0	5.92	<=13	Pass
	1732.5	25	0	6.07	<=13	Pass
	1752.5	25	0	5.92	<=13	Pass
16QAM	1712.5	25	0	6.55	<=13	Pass
	1732.5	25	0	6.69	<=13	Pass
	1752.5	25	0	6.62	<=13	Pass

4.1.4 B4_10MHz

Band: 4 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	1715	50	0	5.69	<=13	Pass
	1732.5	50	0	5.86	<=13	Pass
	1750	50	0	5.84	<=13	Pass
16QAM	1715	27	0	6.60	<=13	Pass
	1732.5	27	0	6.64	<=13	Pass
	1750	27	23	6.72	<=13	Pass

4.1.5 B4_15MHz

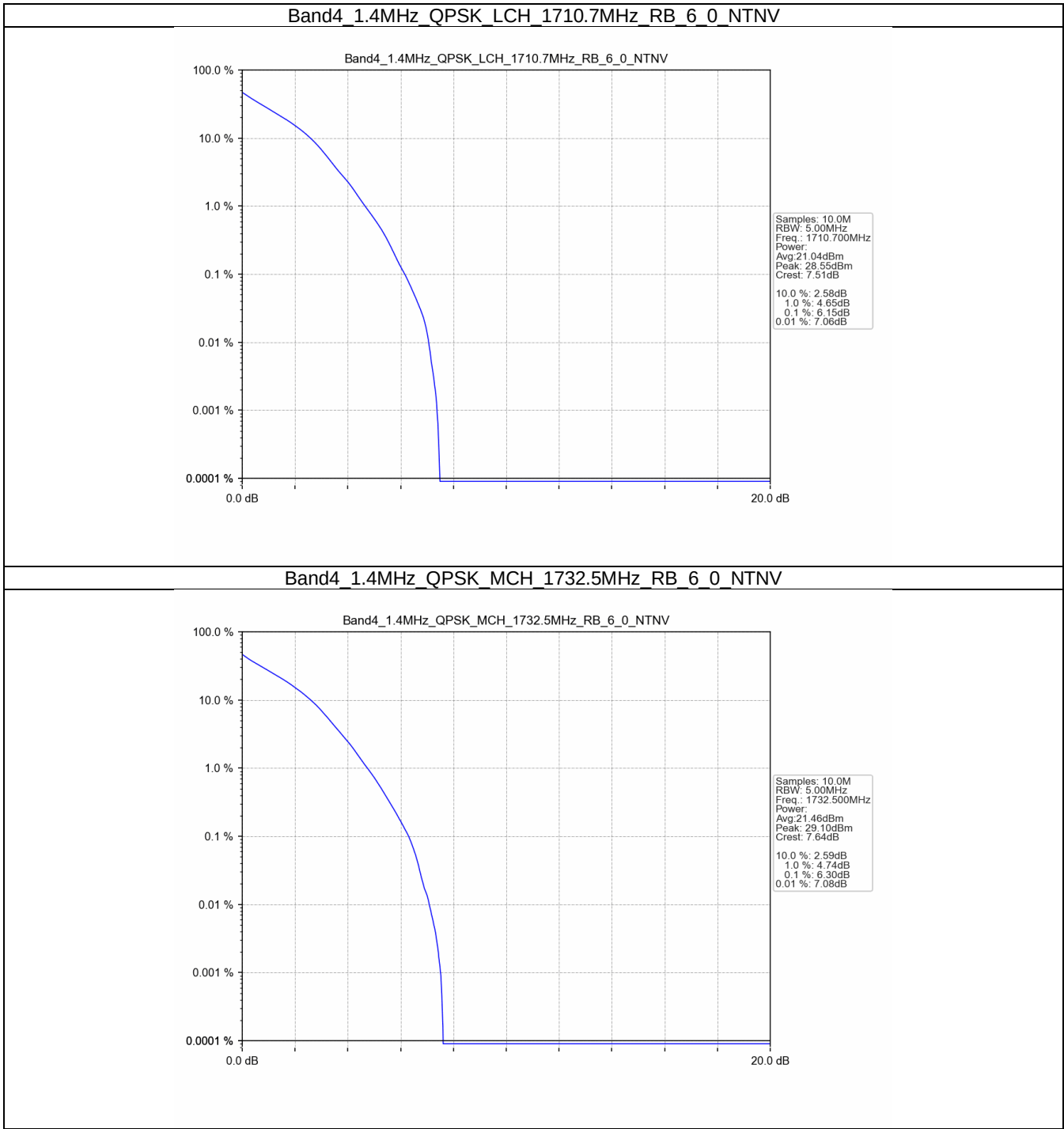
Band: 4 / Bandwidth: 15MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	1717.5	75	0	6.09	<=13	Pass
	1732.5	75	0	6.43	<=13	Pass
	1747.5	75	0	6.42	<=13	Pass
16QAM	1717.5	27	0	6.60	<=13	Pass
	1732.5	27	0	6.80	<=13	Pass
	1747.5	27	48	6.79	<=13	Pass

4.1.6 B4_20MHz

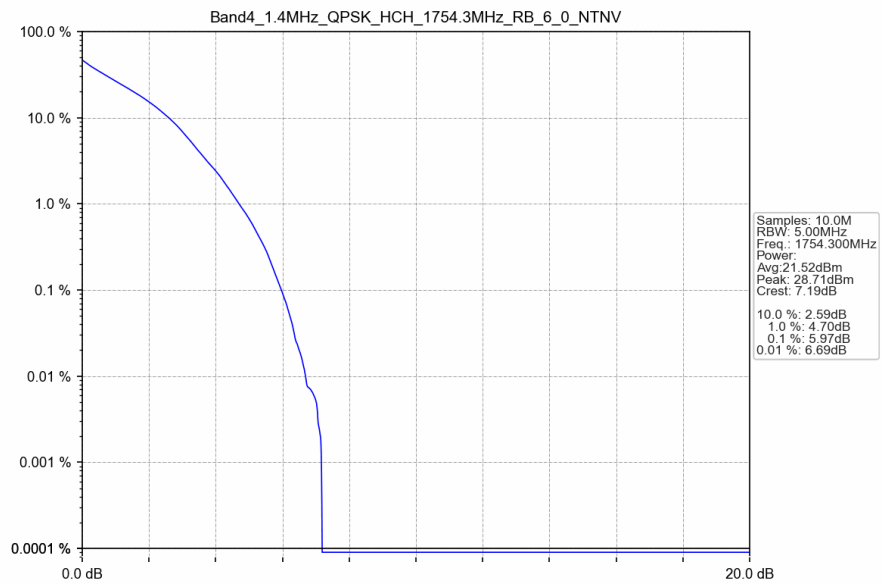
Band: 4 / Bandwidth: 20MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	1720	100	0	5.71	<=13	Pass
	1732.5	100	0	6.04	<=13	Pass
	1745	100	0	6.06	<=13	Pass
16QAM	1720	27	0	6.68	<=13	Pass
	1732.5	27	0	6.73	<=13	Pass
	1745	27	73	6.84	<=13	Pass

4.2 Test Graph

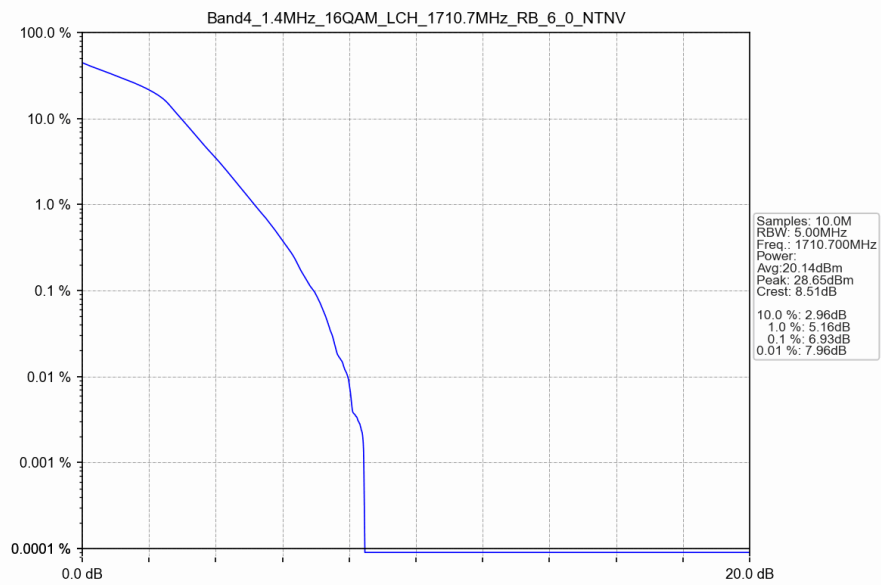
4.2.1 B4_1.4MHz



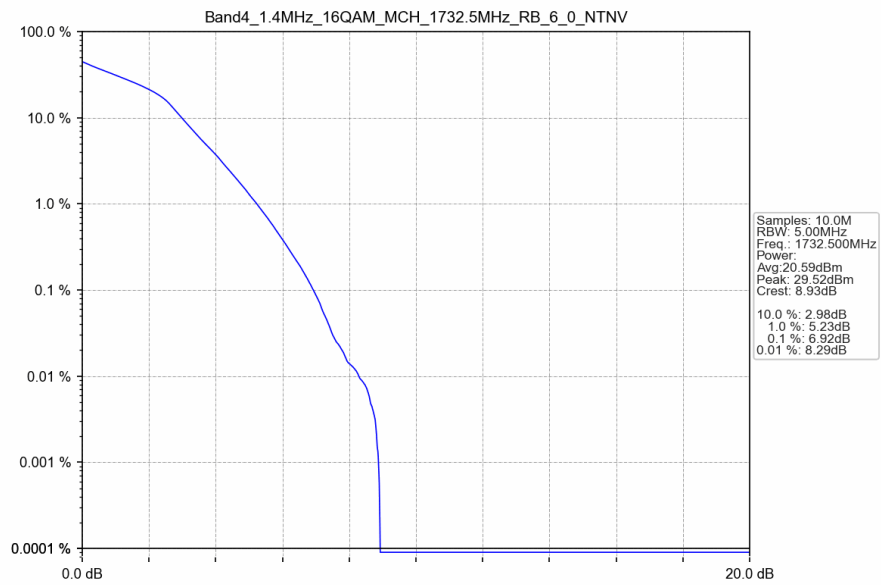
Band4 1.4MHz QPSK HCH 1754.3MHz RB 6 0 NTV



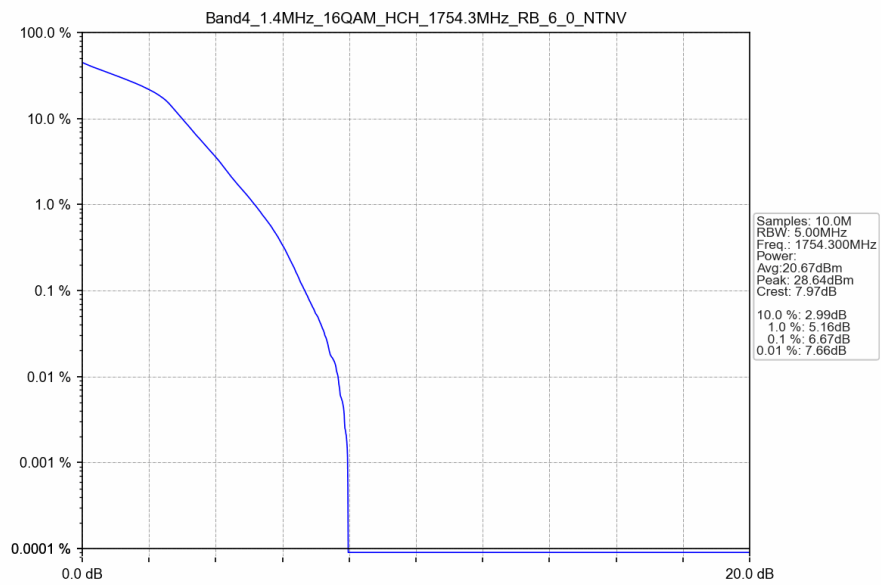
Band4 1.4MHz 16QAM LCH 1710.7MHz RB 6 0 NTV



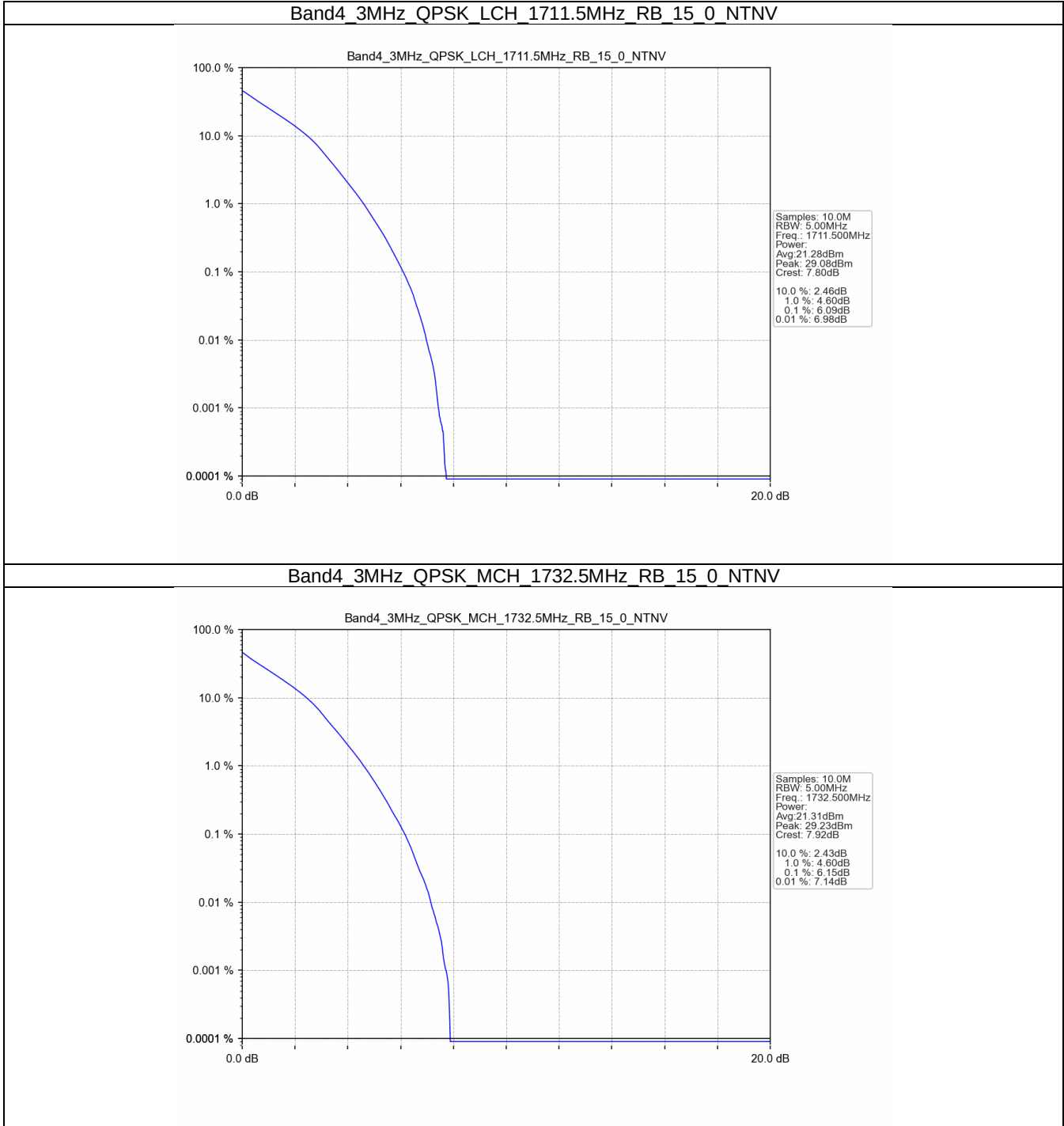
Band4 1.4MHz 16QAM MCH 1732.5MHz RB 6 0 NTN



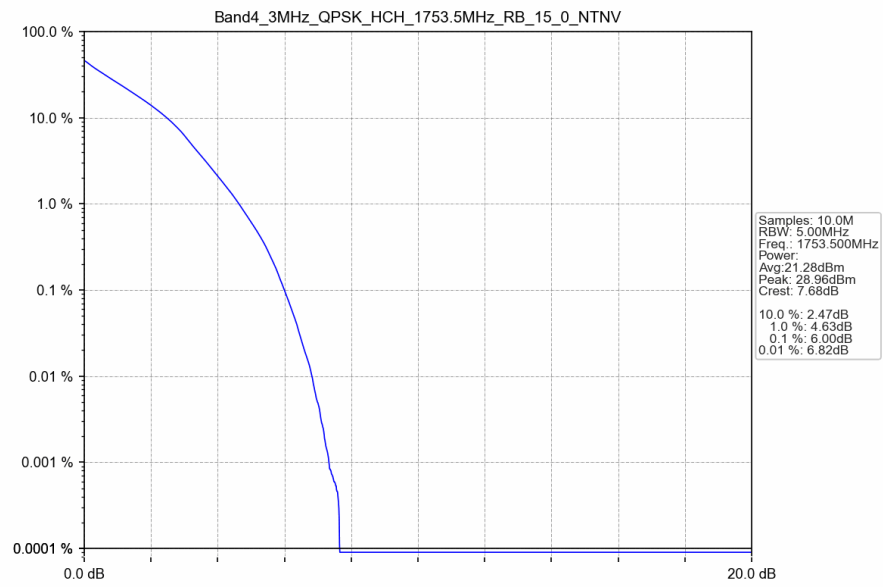
Band4 1.4MHz 16QAM HCH 1754.3MHz RB 6 0 NTN



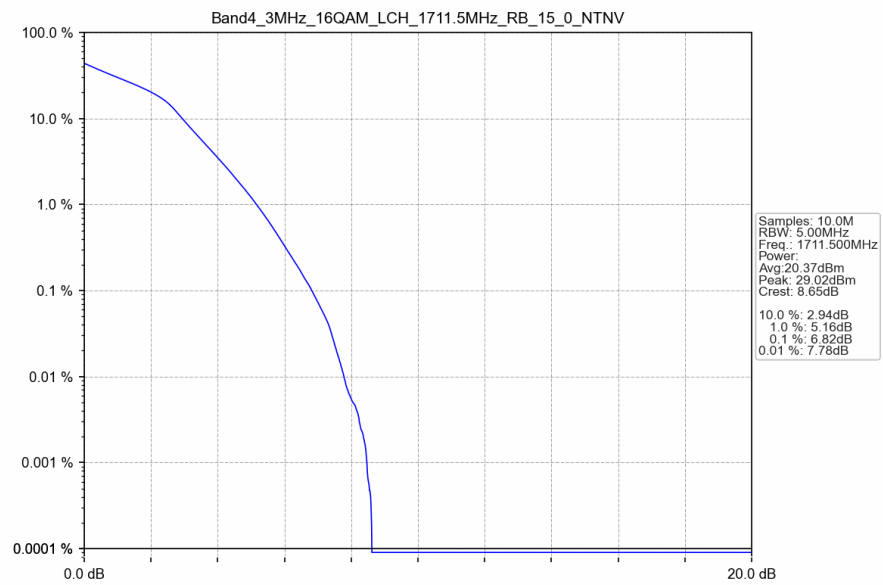
4.2.2 B4_3MHz



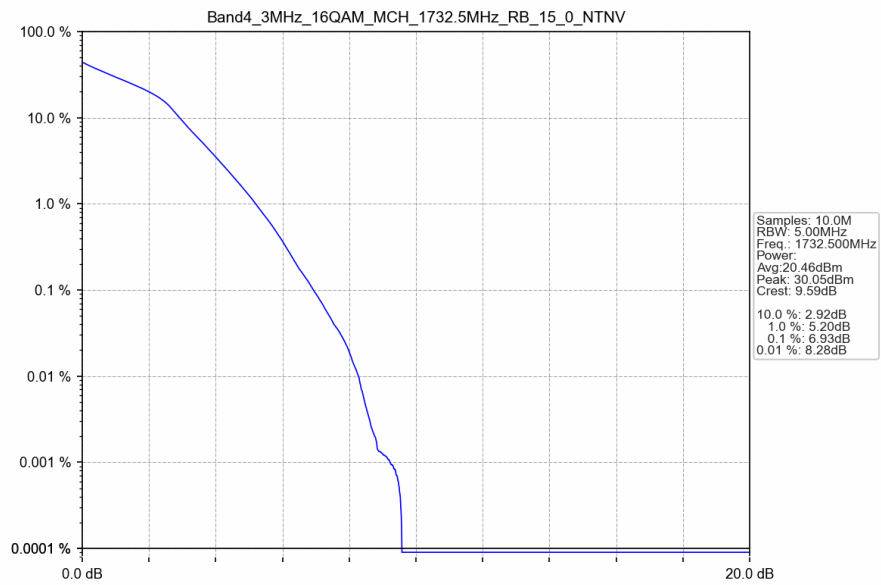
Band4 3MHz QPSK HCH 1753.5MHz RB 15 0 NTV



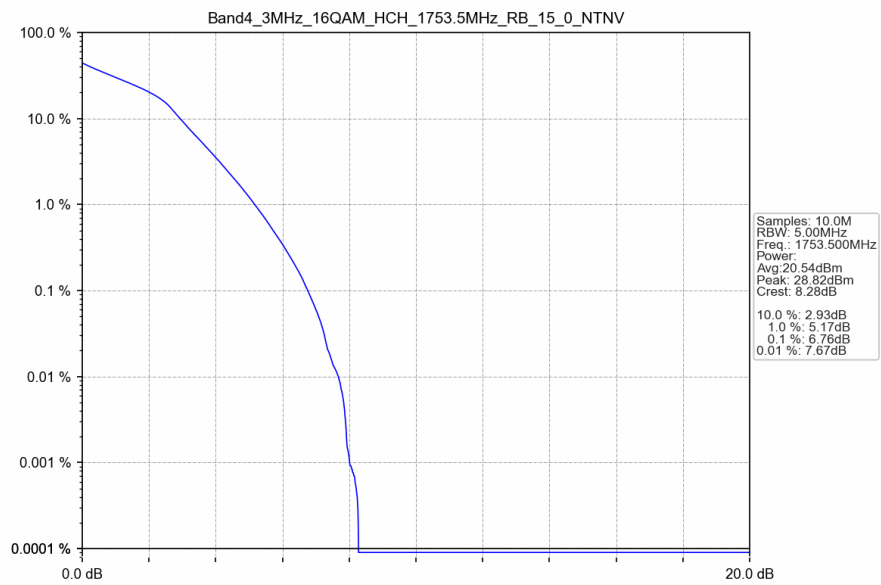
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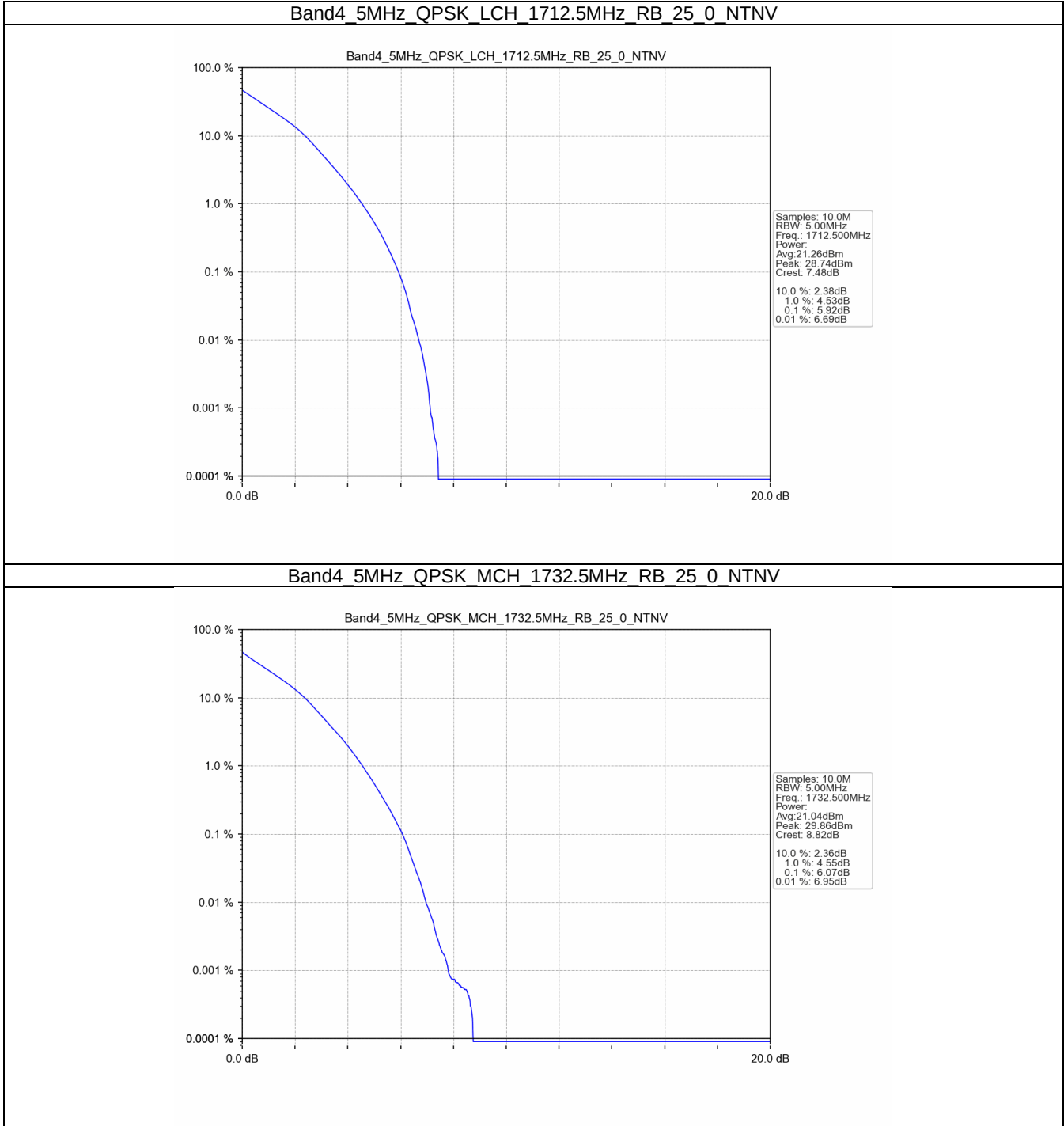
Band4 3MHz 16QAM MCH 1732.5MHz RB 15 0 NTNV



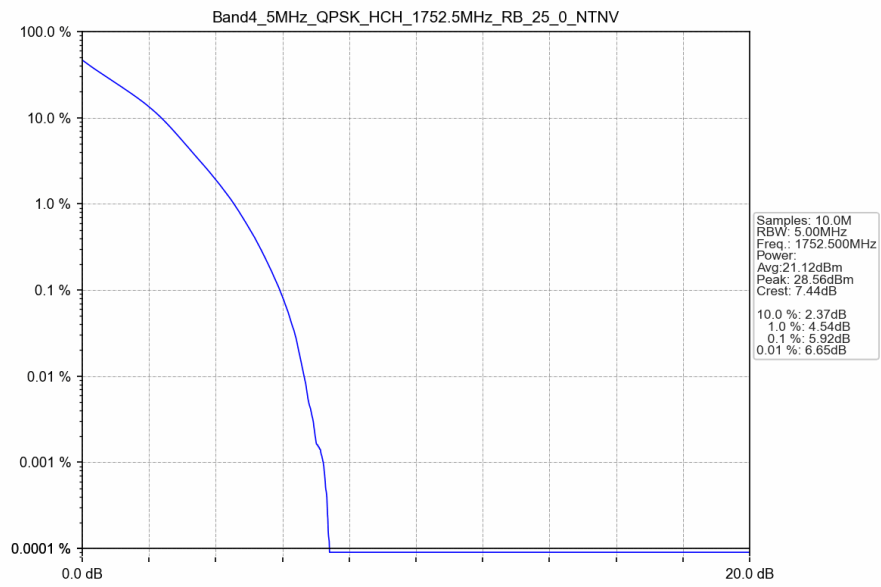
Band4 3MHz 16QAM HCH 1753.5MHz RB 15 0 NTNV



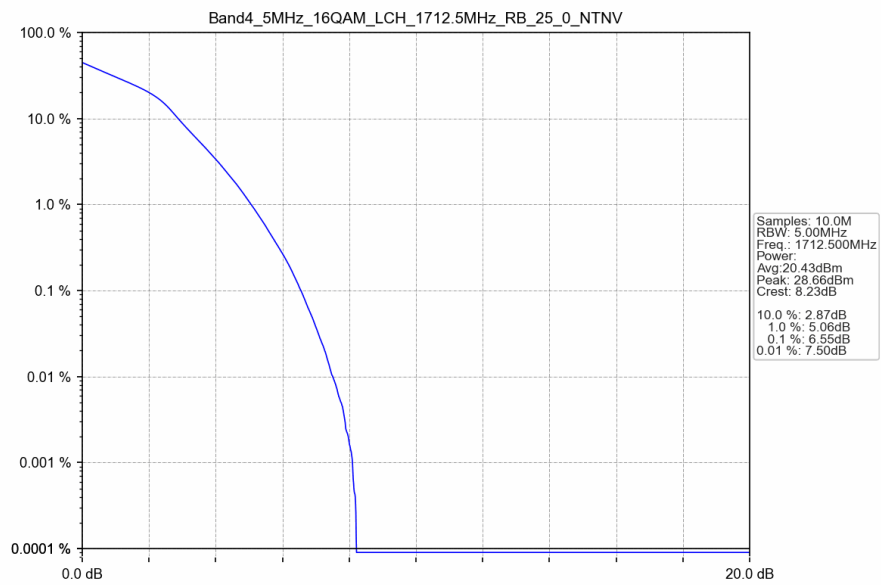
4.2.3 B4_5MHz



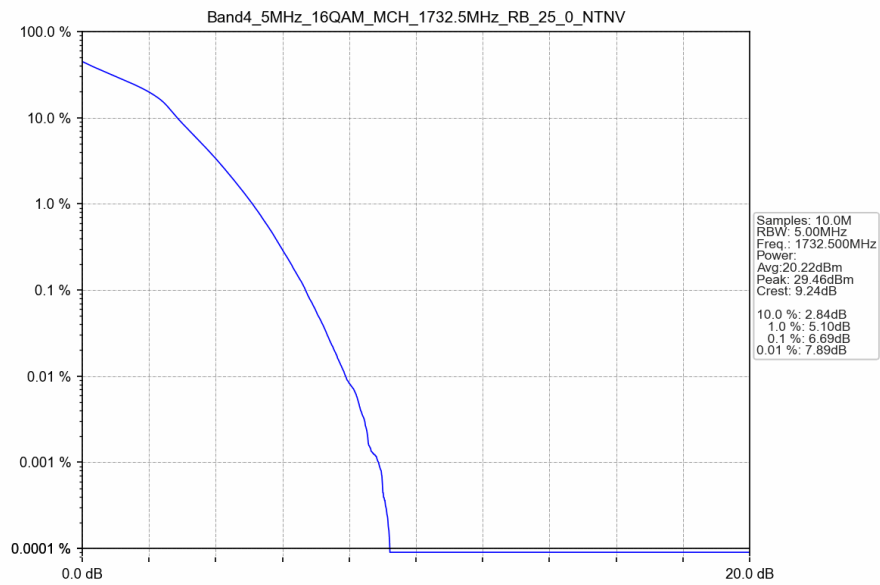
Band4 5MHz QPSK HCH 1752.5MHz RB 25 0 NTNV



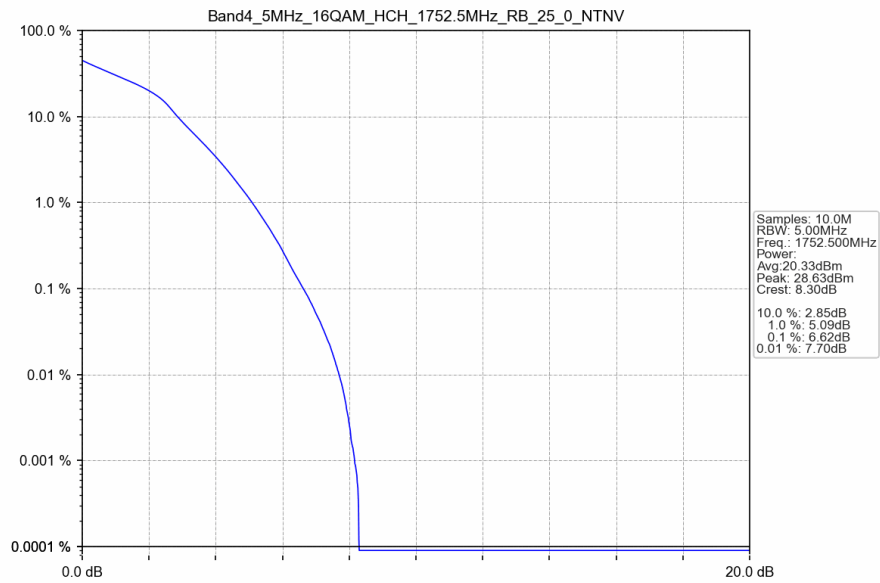
Band4 5MHz 16QAM LCH 1712.5MHz RB 25 0 NTNV



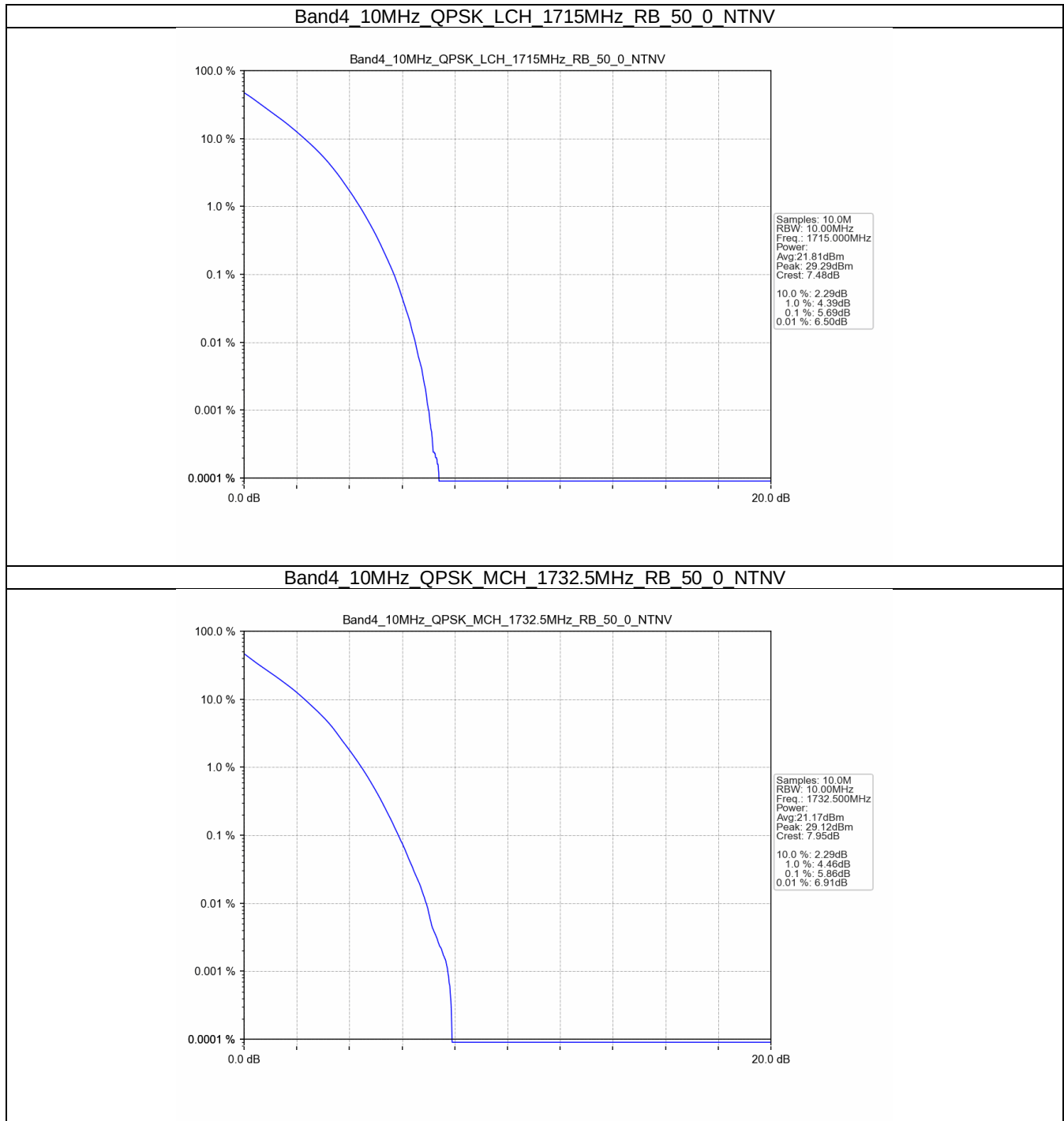
Band4 5MHz 16QAM MCH 1732.5MHz RB 25 0 NTNV



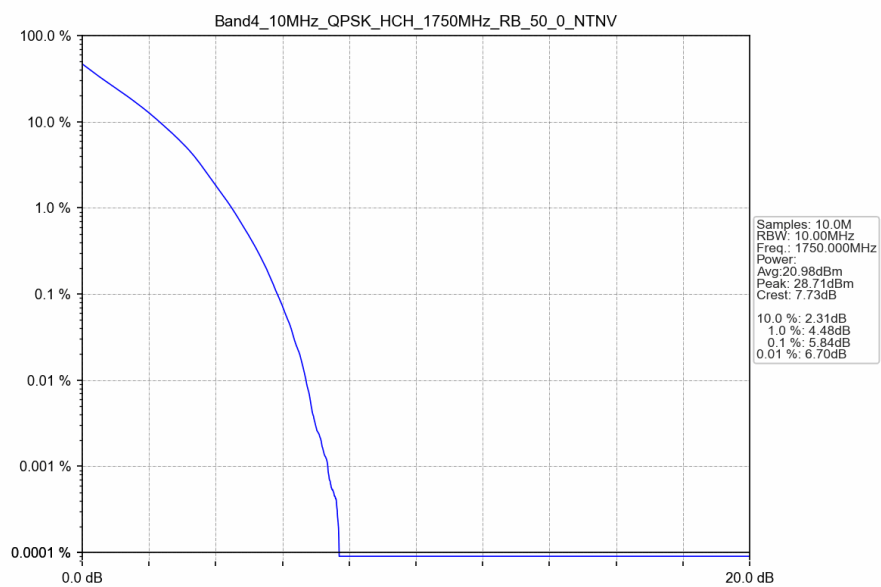
Band4 5MHz 16QAM HCH 1752.5MHz RB 25 0 NTNV



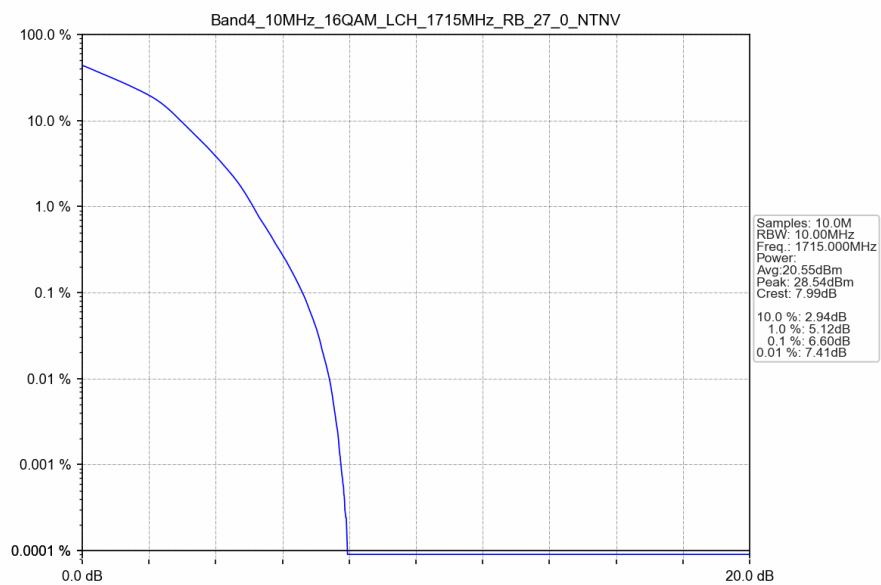
4.2.4 B4_10MHz



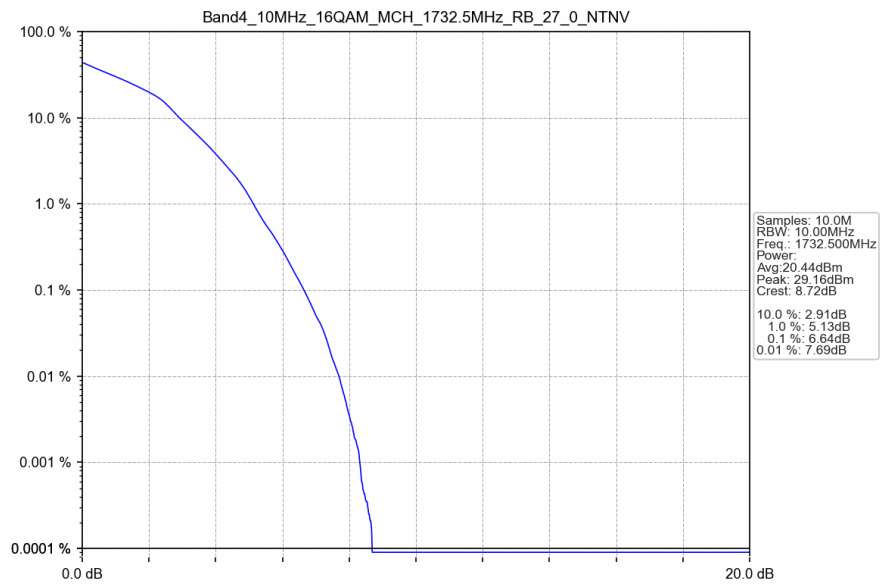
Band4 10MHz QPSK HCH 1750MHz RB 50 0 NTV



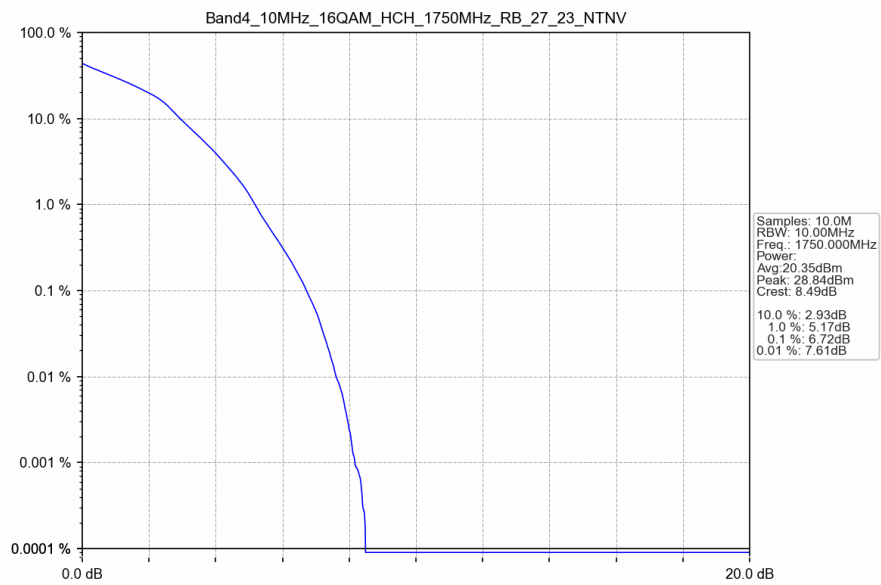
Band4 10MHz 16QAM LCH 1715MHz RB 27 0 NTV



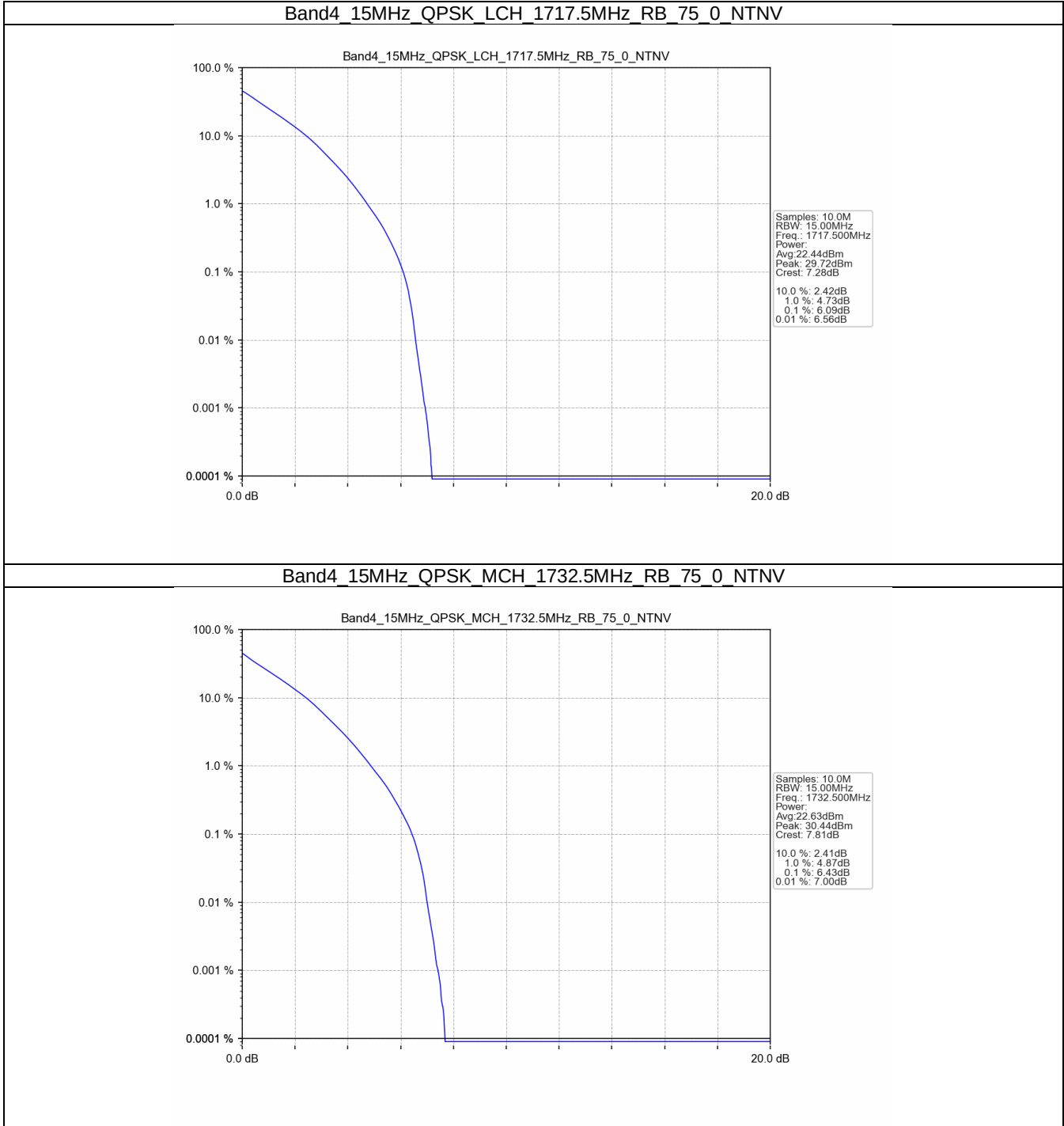
Band4 10MHz 16QAM MCH 1732.5MHz RB 27 0 NTNV



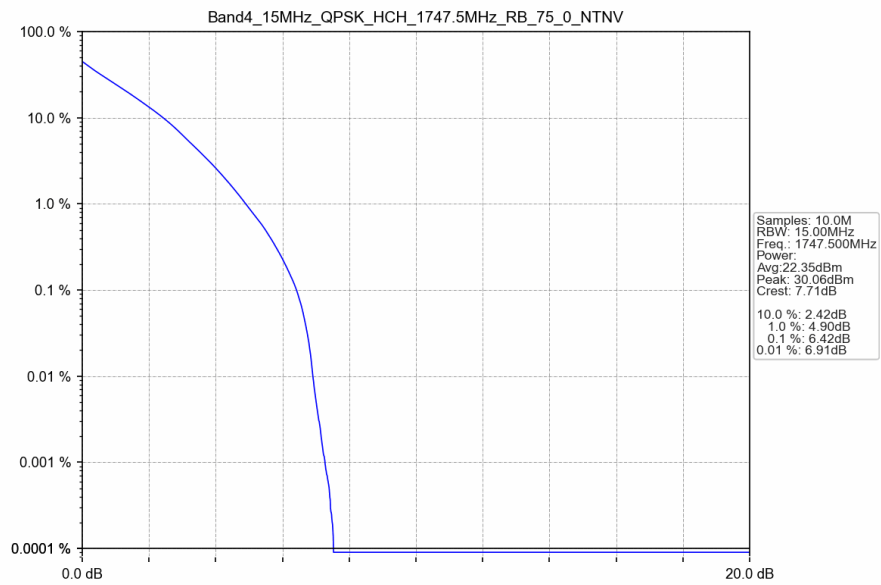
Band4 10MHz 16QAM HCH 1750MHz RB 27 23 NTNV



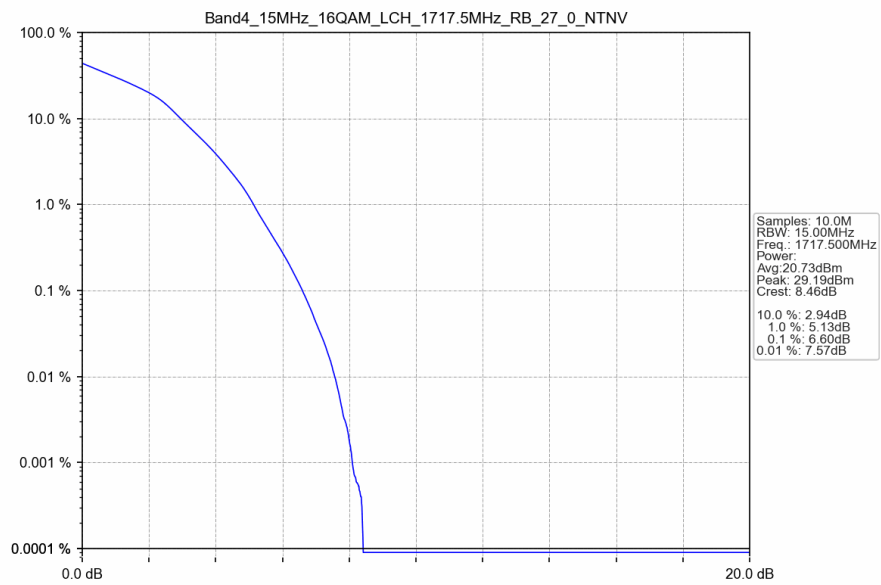
4.2.5 B4_15MHz



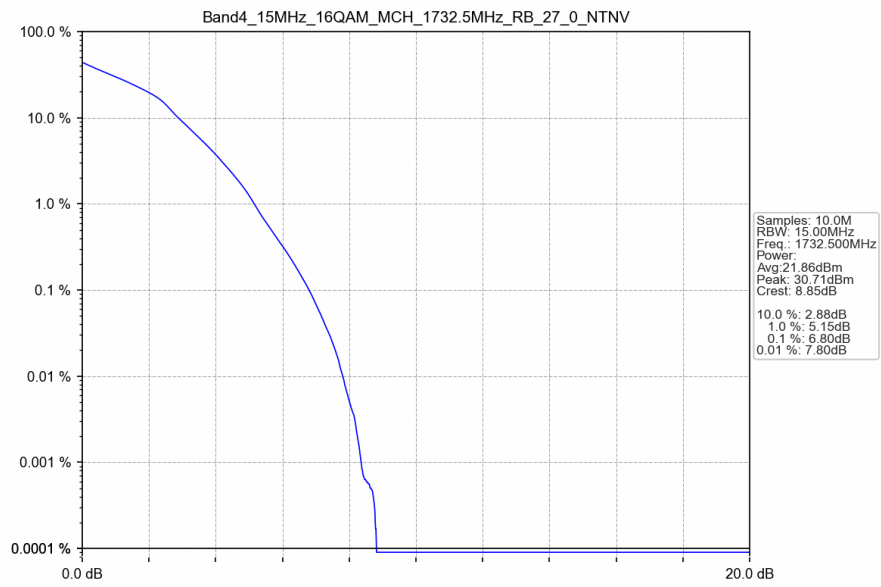
Band4 15MHz QPSK HCH 1747.5MHz RB 75 0 NTNV



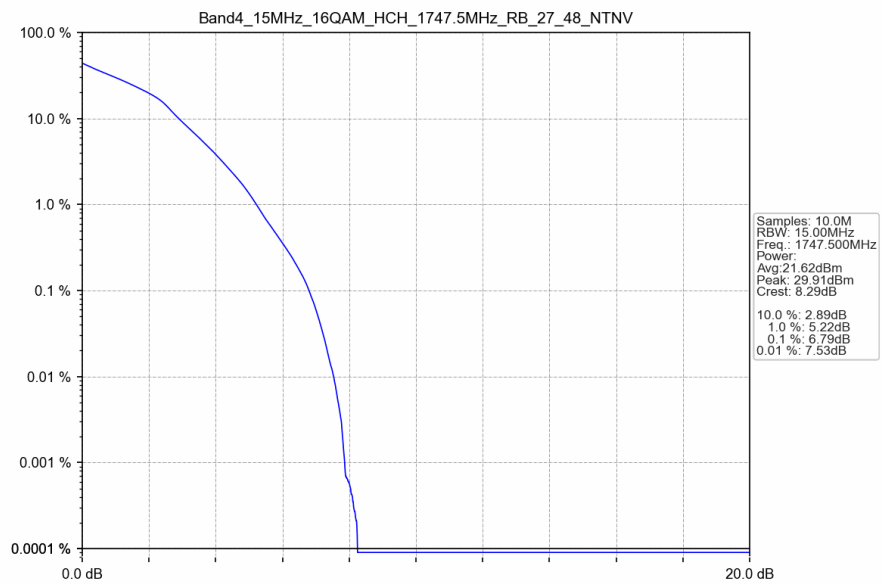
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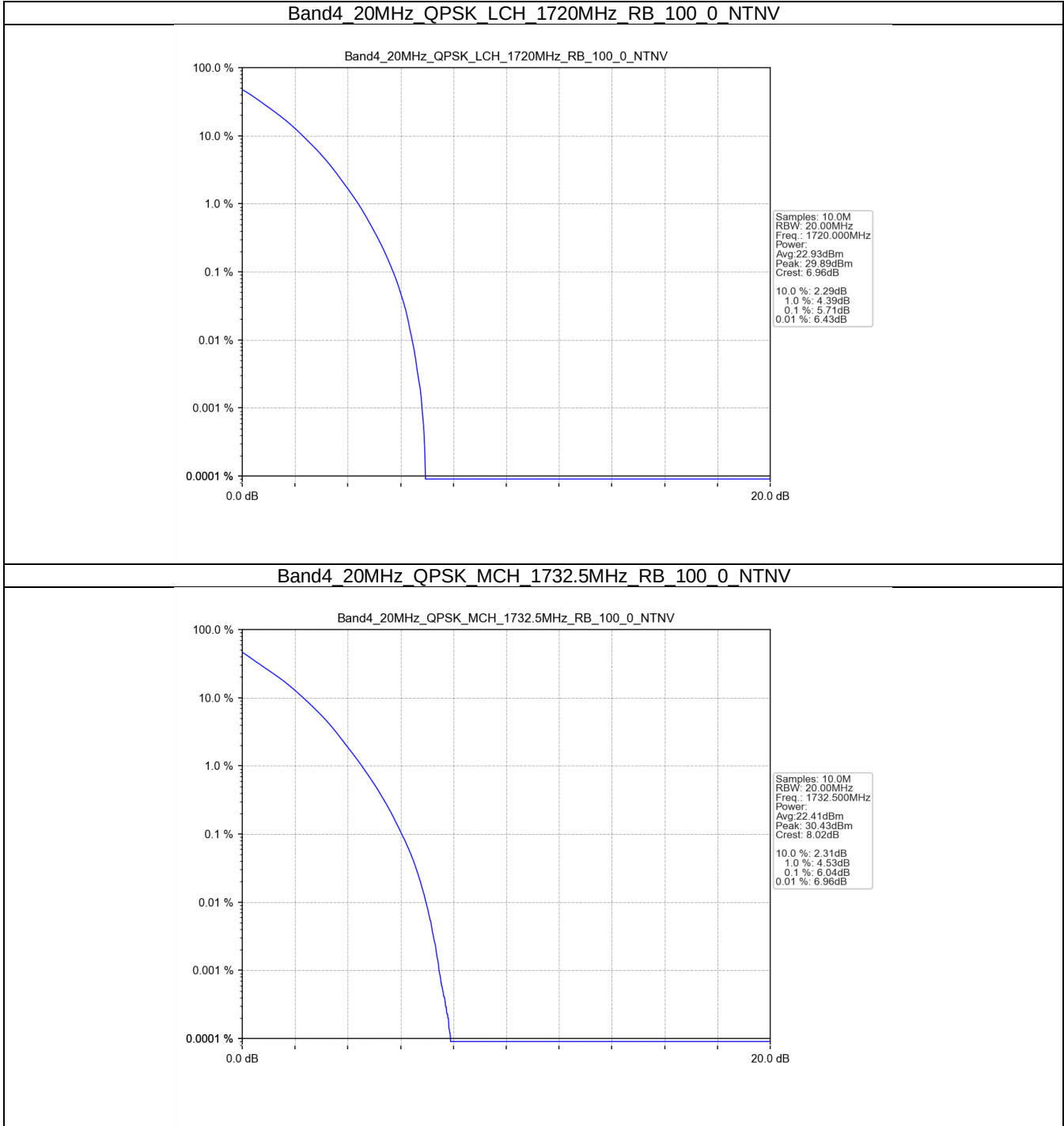
Band4 15MHz 16QAM MCH 1732.5MHz RB 27 0 NTNV



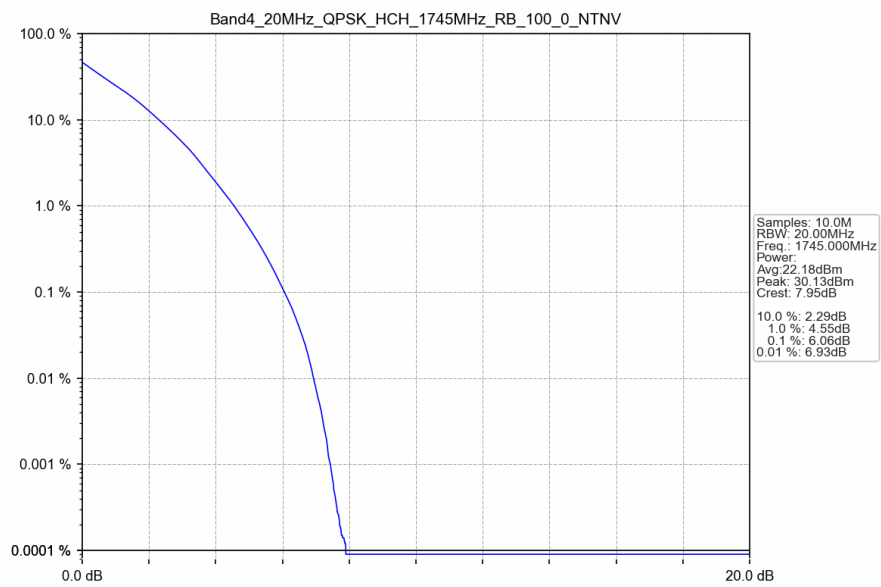
Band4 15MHz 16QAM HCH 1747.5MHz RB 27 48 NTNV



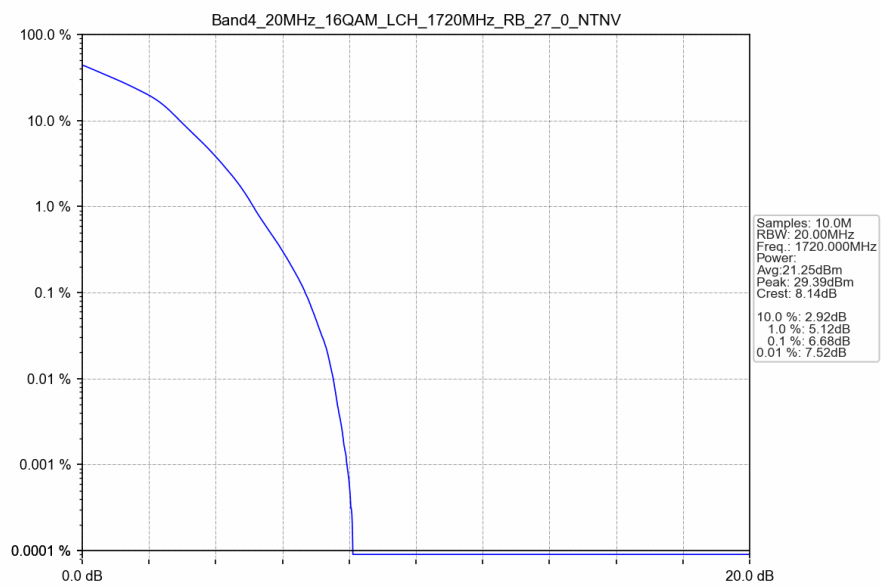
4.2.6 B4_20MHz



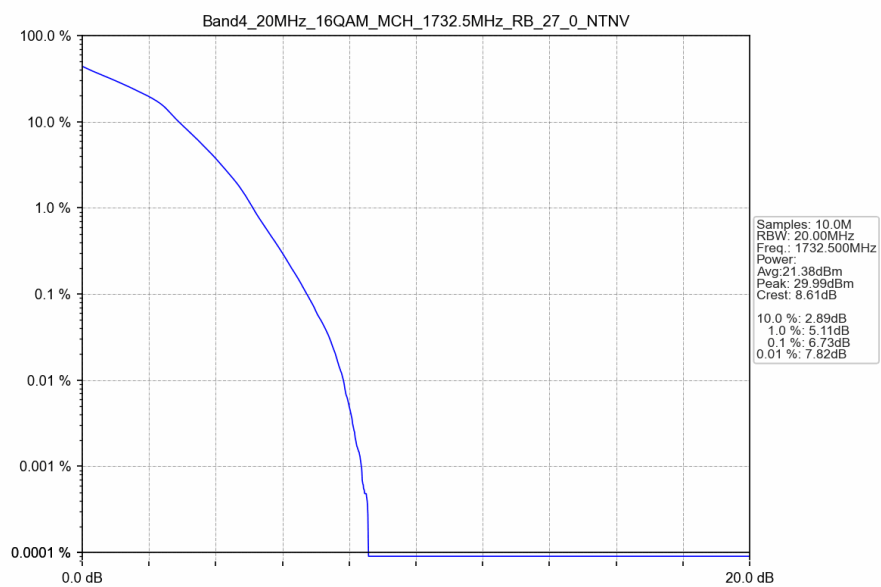
Band4 20MHz QPSK HCH 1745MHz RB 100 0 NTV



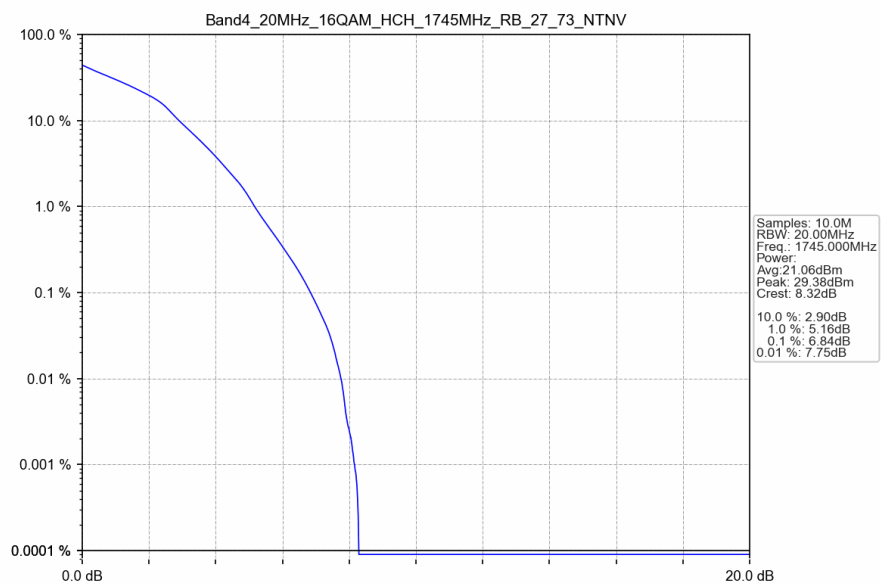
Band4 20MHz 16QAM LCH 1720MHz RB 27 0 NTV



Band4 20MHz 16QAM MCH 1732.5MHz RB 27 0 NTNV



Band4 20MHz 16QAM HCH 1745MHz RB 27 73 NTNV



5. Spurious Emission

5.1 Test Result

5.1.1 B4_1.4MHz

Band: 4 / Bandwidth: 1.4MHz / NTVN						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	1710.7	1	0	Refer To Test Graph		Pass
		6	0	Refer To Test Graph		Pass
	1732.5	1	0	Refer To Test Graph		Pass
	1754.3	1	0	Refer To Test Graph		Pass
			5	Refer To Test Graph		Pass
		6	0	Refer To Test Graph		Pass
16QAM	1710.7	1	0	Refer To Test Graph		Pass
		6	0	Refer To Test Graph		Pass
	1732.5	1	0	Refer To Test Graph		Pass
	1754.3	1	0	Refer To Test Graph		Pass
			5	Refer To Test Graph		Pass
		6	0	Refer To Test Graph		Pass

5.1.2 B4_3MHz

Band: 4 / Bandwidth: 3MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	1711.5	1	0	Refer To Test Graph		Pass
		15	0	Refer To Test Graph		Pass
	1732.5	1	0	Refer To Test Graph		Pass
	1753.5	1	0	Refer To Test Graph		Pass
			14	Refer To Test Graph		Pass
		15	0	Refer To Test Graph		Pass
16QAM	1711.5	1	0	Refer To Test Graph		Pass
		15	0	Refer To Test Graph		Pass
	1732.5	1	0	Refer To Test Graph		Pass
	1753.5	1	0	Refer To Test Graph		Pass
			14	Refer To Test Graph		Pass
		15	0	Refer To Test Graph		Pass

5.1.3 B4_5MHz

Band: 4 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	1712.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	1732.5	1	0	Refer To Test Graph		Pass
	1752.5	1	0	Refer To Test Graph		Pass
			24	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
16QAM	1712.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	1732.5	1	0	Refer To Test Graph		Pass
	1752.5	1	0	Refer To Test Graph		Pass
			24	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass

5.1.4 B4_10MHz

Band: 4 / Bandwidth: 10MHz / NTVN						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	1715	1	0	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
	1732.5	1	0	Refer To Test Graph		Pass
	1750	1	0	Refer To Test Graph		Pass
			49	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
16QAM	1715	1	0	Refer To Test Graph		Pass
	1732.5	1	0	Refer To Test Graph		Pass
	1750	1	0	Refer To Test Graph		Pass
			49	Refer To Test Graph		Pass

5.1.5 B4_15MHz

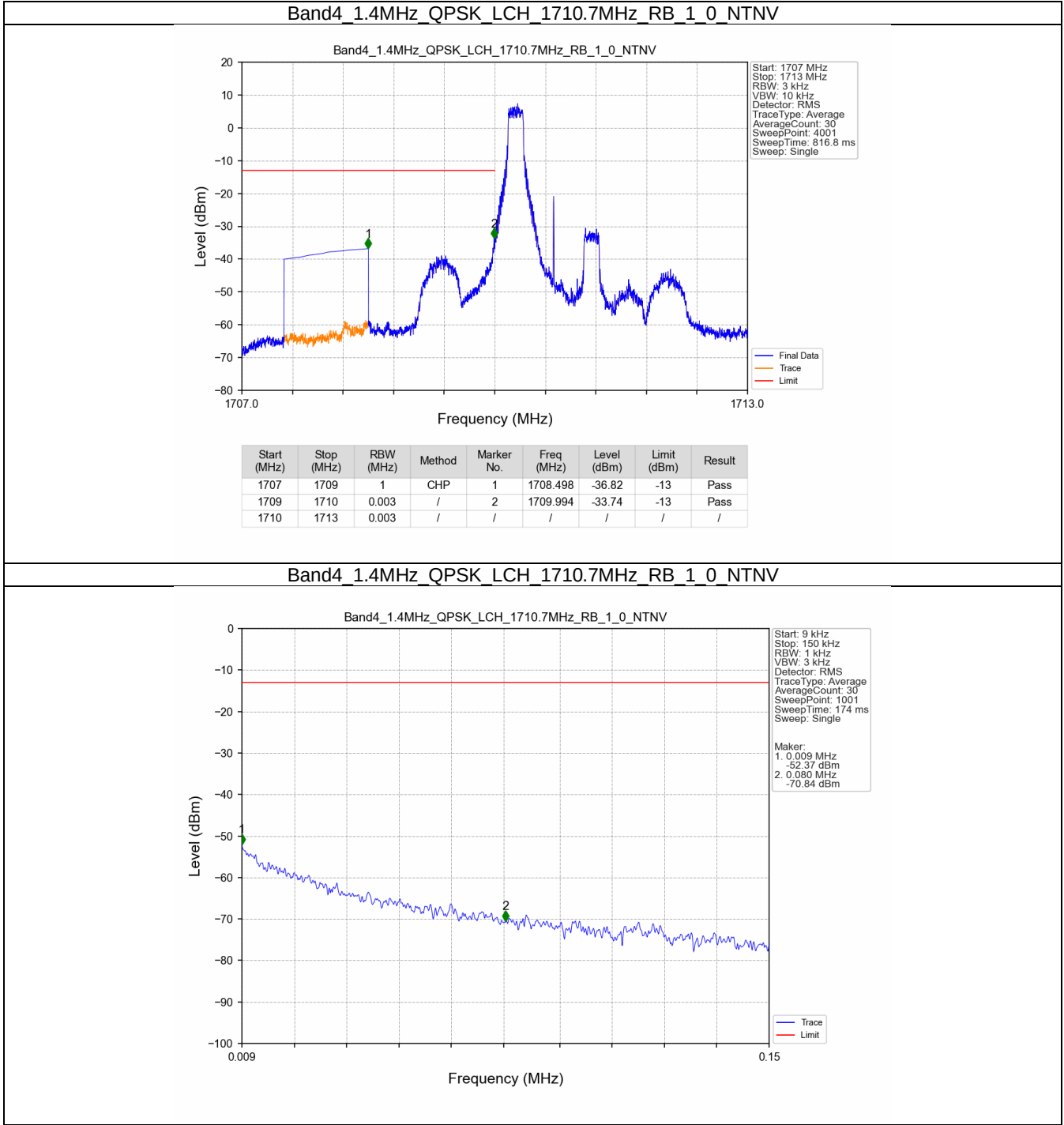
Band: 4 / Bandwidth: 15MHz / NTVN						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	1717.5	1	0	Refer To Test Graph		Pass
		75	0	Refer To Test Graph		Pass
	1732.5	1	0	Refer To Test Graph		Pass
	1747.5	1	0	Refer To Test Graph		Pass
			74	Refer To Test Graph		Pass
		75	0	Refer To Test Graph		Pass
16QAM	1717.5	1	0	Refer To Test Graph		Pass
	1732.5	1	0	Refer To Test Graph		Pass
	1747.5	1	0	Refer To Test Graph		Pass
			74	Refer To Test Graph		Pass

5.1.6 B4_20MHz

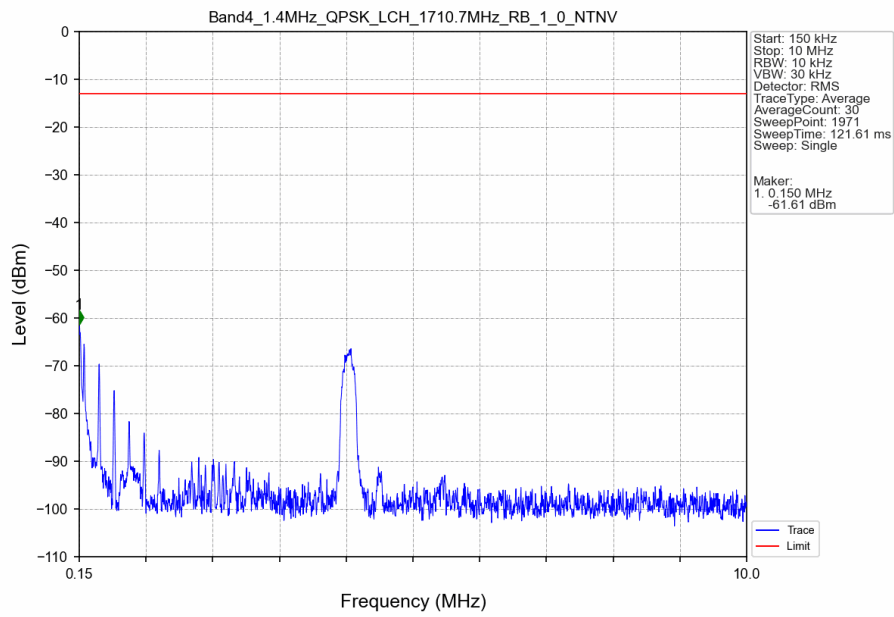
Band: 4 / Bandwidth: 20MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	1720	1	0	Refer To Test Graph		Pass
		100	0	Refer To Test Graph		Pass
	1732.5	1	0	Refer To Test Graph		Pass
	1745	1	0	Refer To Test Graph		Pass
			99	Refer To Test Graph		Pass
		100	0	Refer To Test Graph		Pass
16QAM	1720	1	0	Refer To Test Graph		Pass
	1732.5	1	0	Refer To Test Graph		Pass
	1745	1	0	Refer To Test Graph		Pass
			99	Refer To Test Graph		Pass

5.2 Test Graph

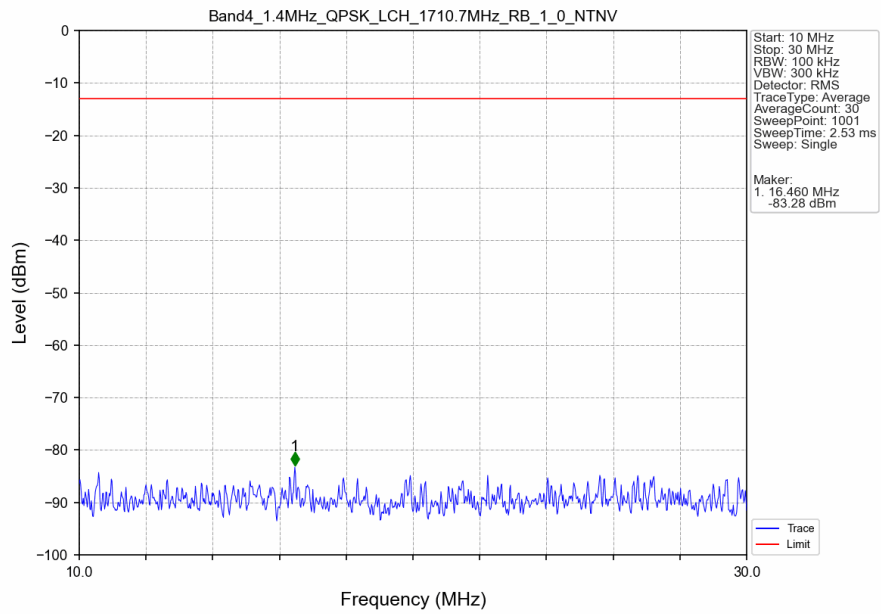
5.2.1 B4_1.4MHz



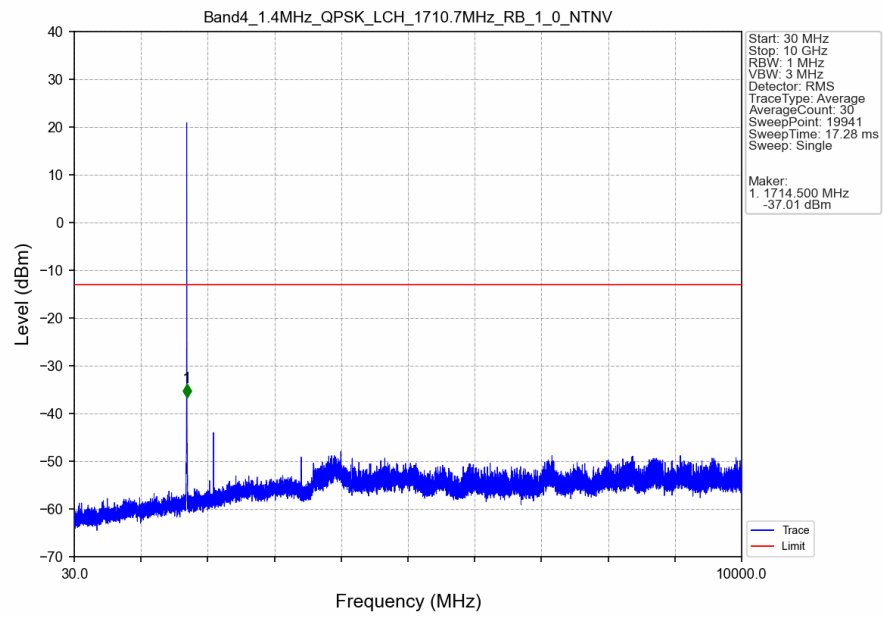
Band4 1.4MHz QPSK LCH 1710.7MHz RB 1 0 NTNV



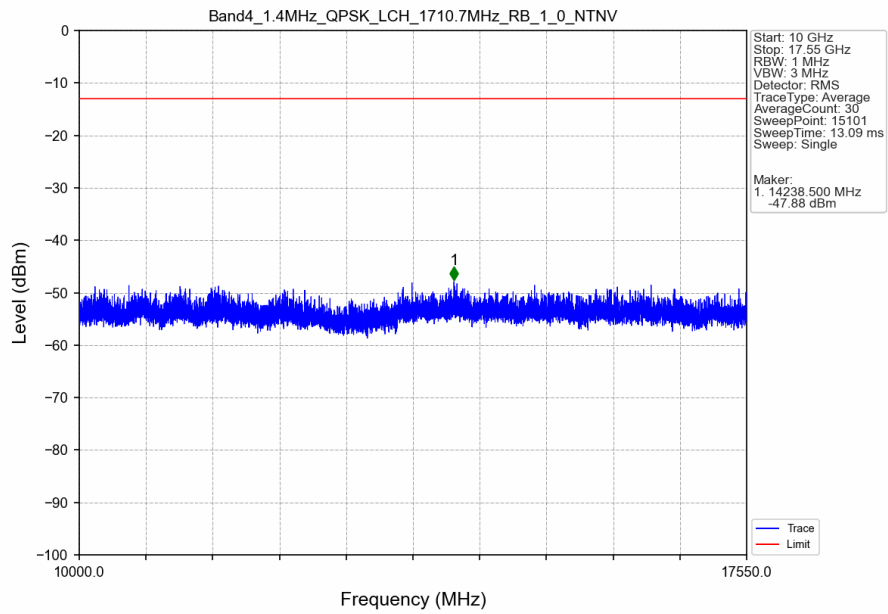
Band4 1.4MHz QPSK LCH 1710.7MHz RB 1 0 NTNV



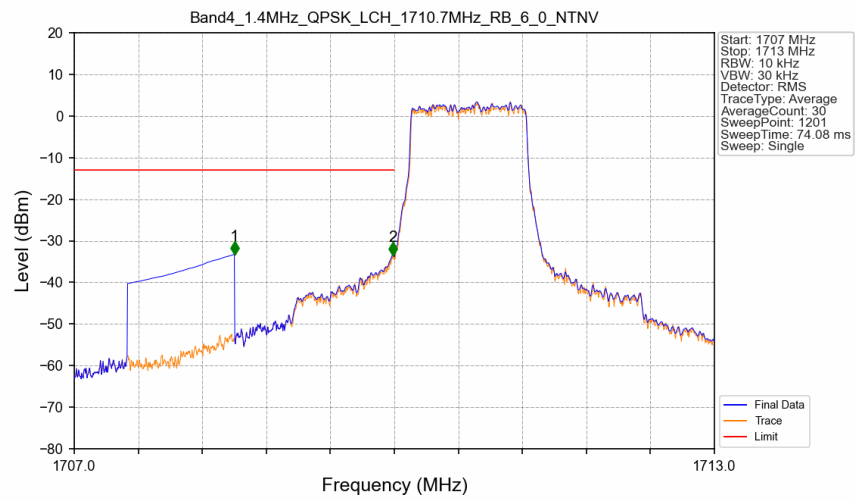
Band4 1.4MHz QPSK LCH 1710.7MHz RB 1 0 NTV



Band4 1.4MHz QPSK LCH 1710.7MHz RB 1 0 NTV

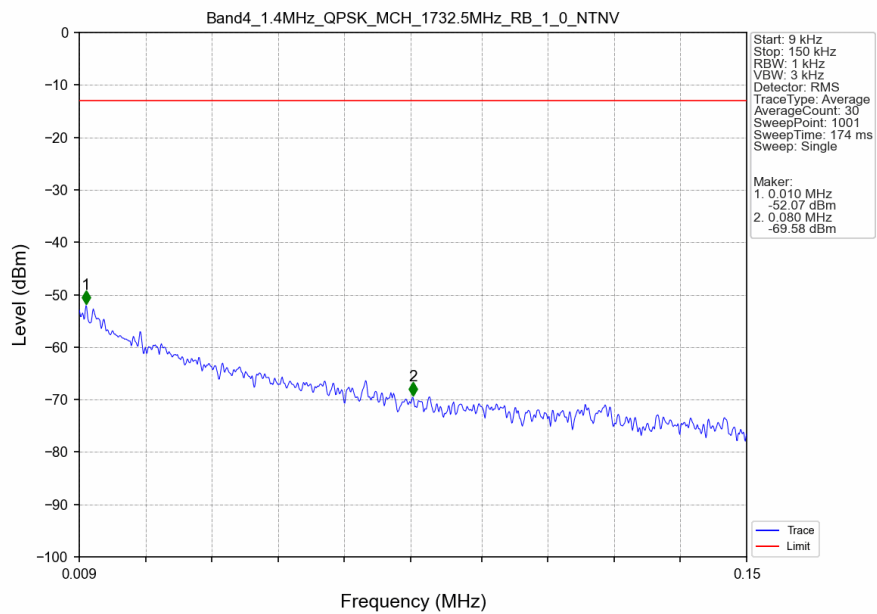


Band4 1.4MHz QPSK LCH 1710.7MHz RB 6 0 NTV

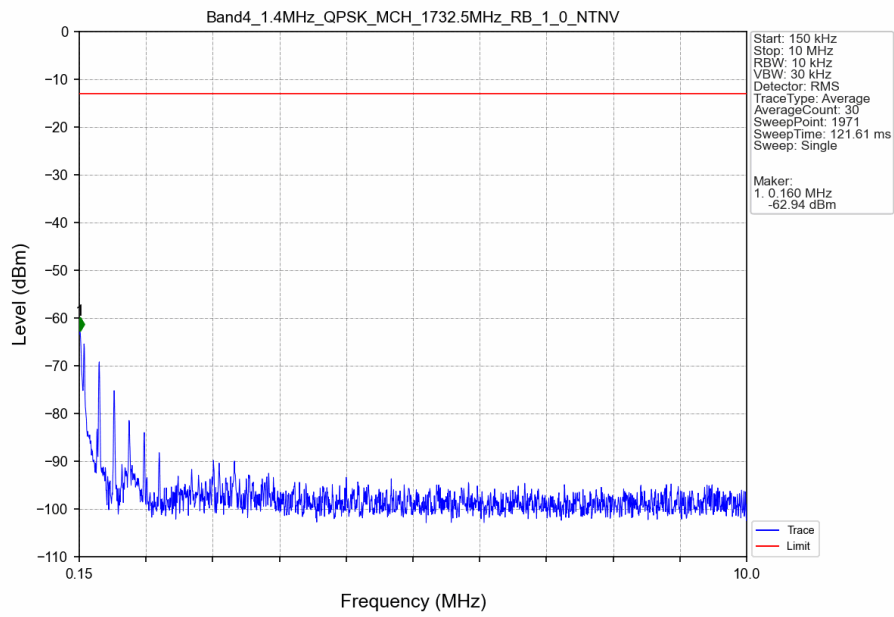


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1707	1709	1	CHP	1	1708.500	-33.28	-13	Pass
1709	1710	0.013	CHP	2	1709.985	-33.49	-13	Pass
1710	1713	0.013	CHP	/	/	/	/	/

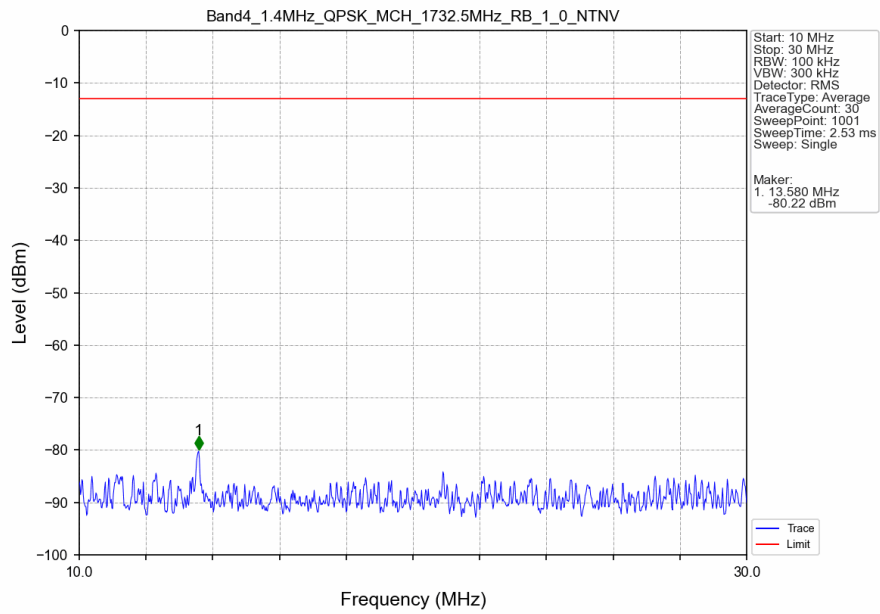
Band4 1.4MHz QPSK MCH 1732.5MHz RB 1 0 NTV



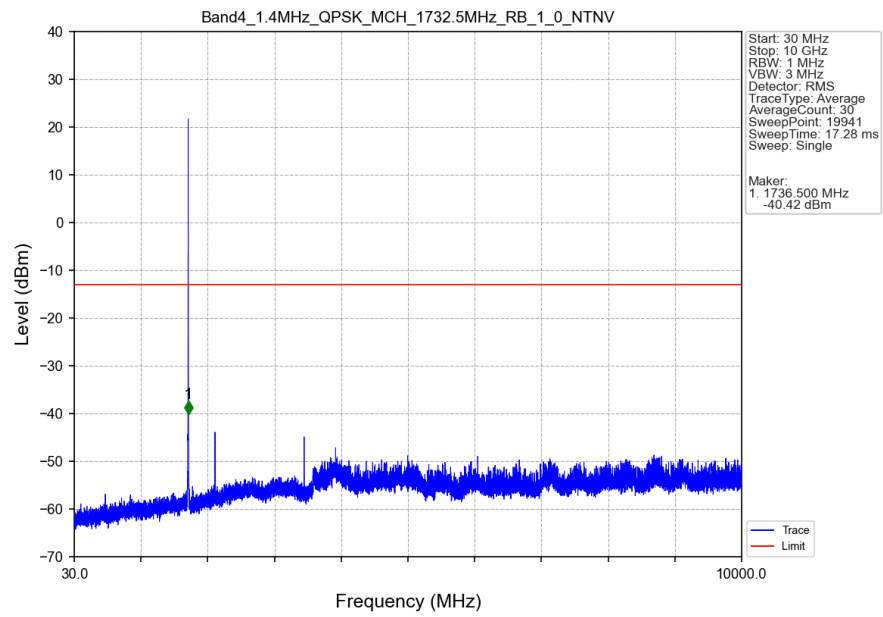
Band4 1.4MHz QPSK MCH 1732.5MHz RB 1 0 NTNV



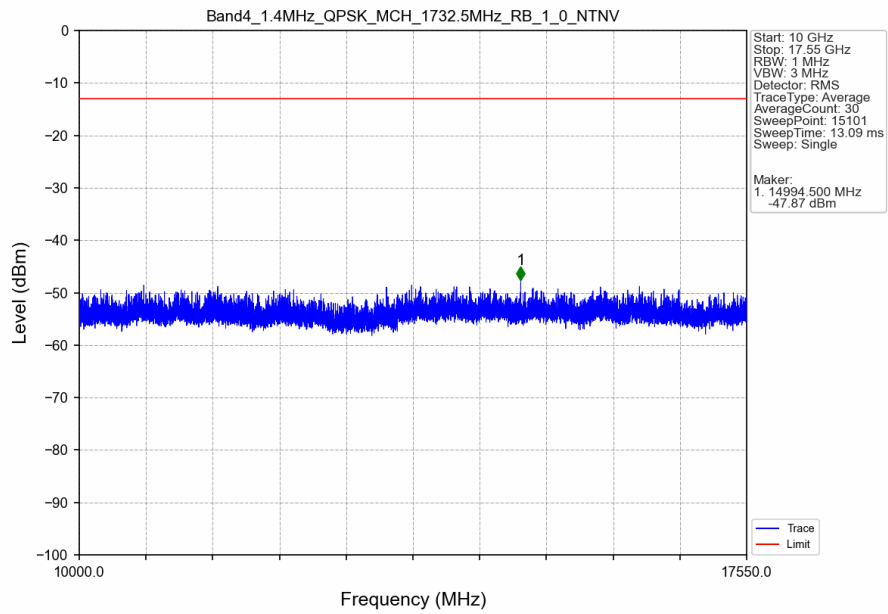
Band4 1.4MHz QPSK MCH 1732.5MHz RB 1 0 NTNV



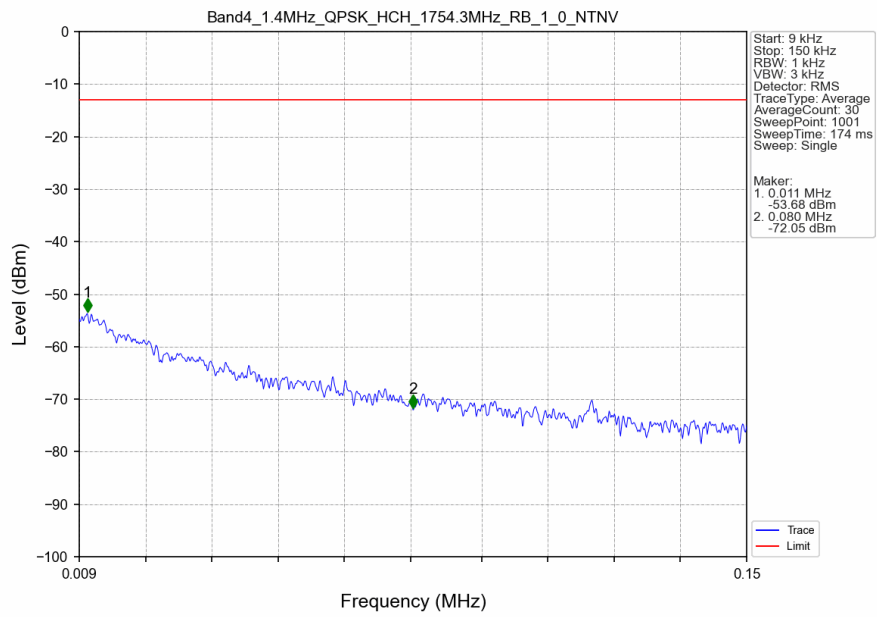
Band4 1.4MHz QPSK MCH 1732.5MHz RB 1 0 NTV



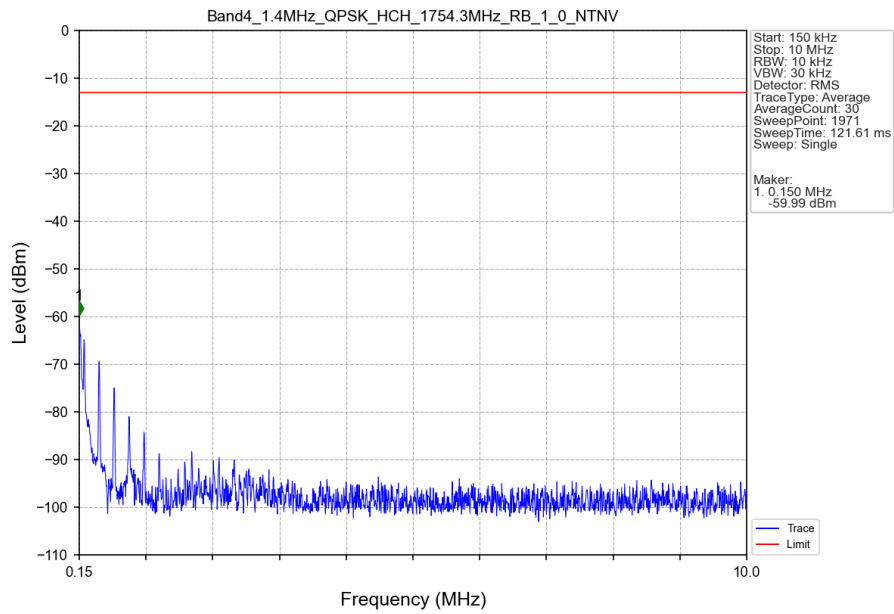
Band4 1.4MHz QPSK MCH 1732.5MHz RB 1 0 NTV



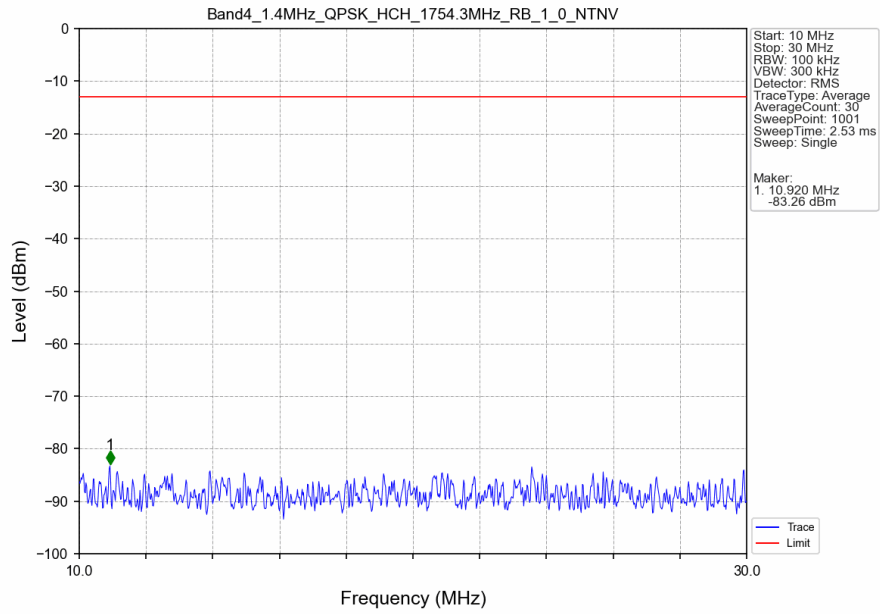
Band4 1.4MHz QPSK HCH 1754.3MHz RB 1 0 NTNV



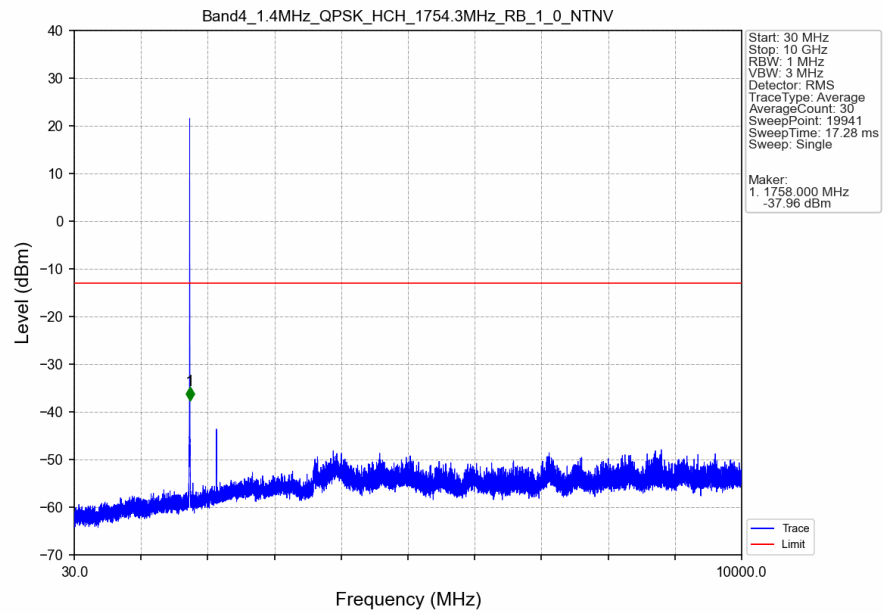
Band4 1.4MHz QPSK HCH 1754.3MHz RB 1 0 NTNV



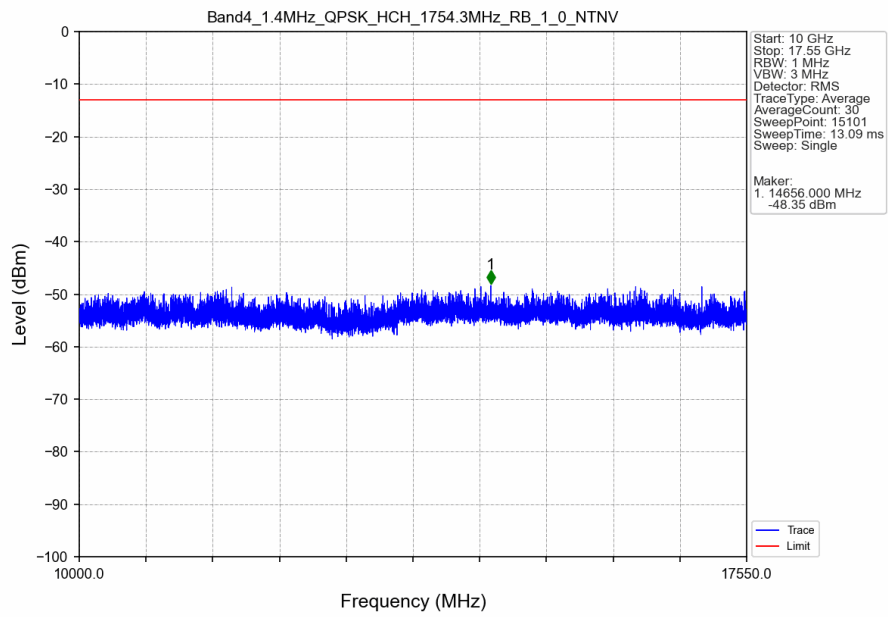
Band4 1.4MHz QPSK HCH 1754.3MHz RB 1 0 NTV



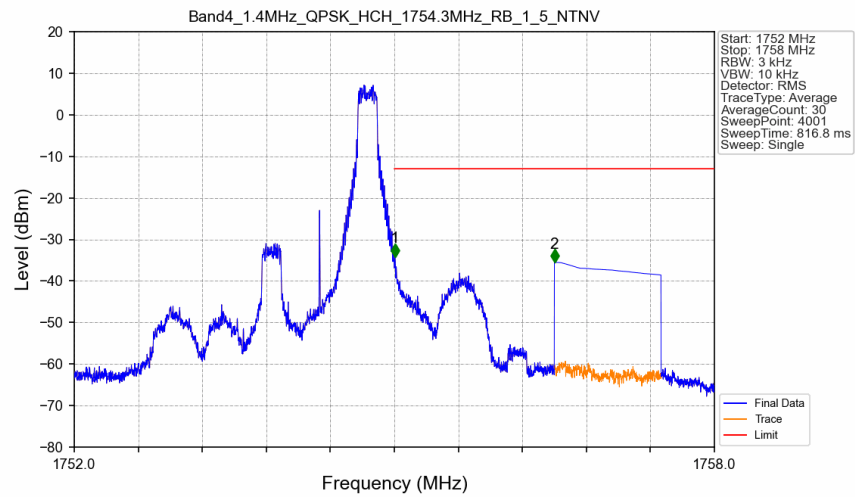
Band4 1.4MHz QPSK HCH 1754.3MHz RB 1 0 NTV



Band4 1.4MHz QPSK HCH 1754.3MHz RB 1 0 NTV

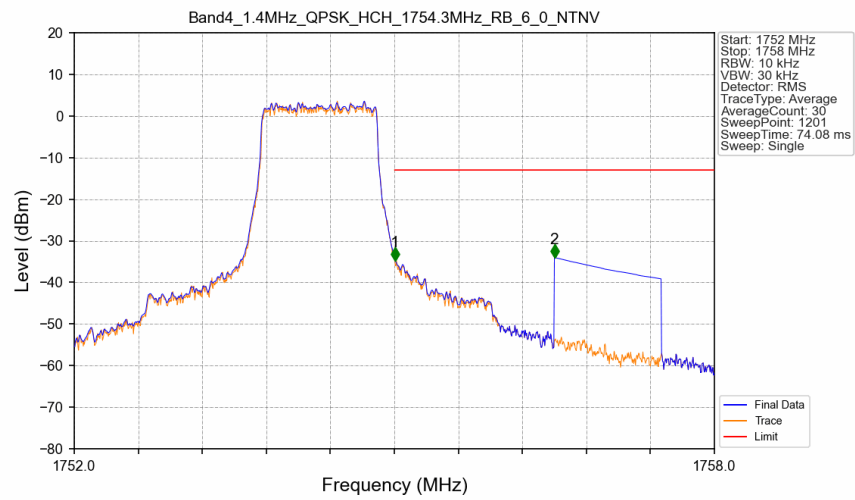


Band4 1.4MHz QPSK HCH 1754.3MHz RB 1 5 NTV



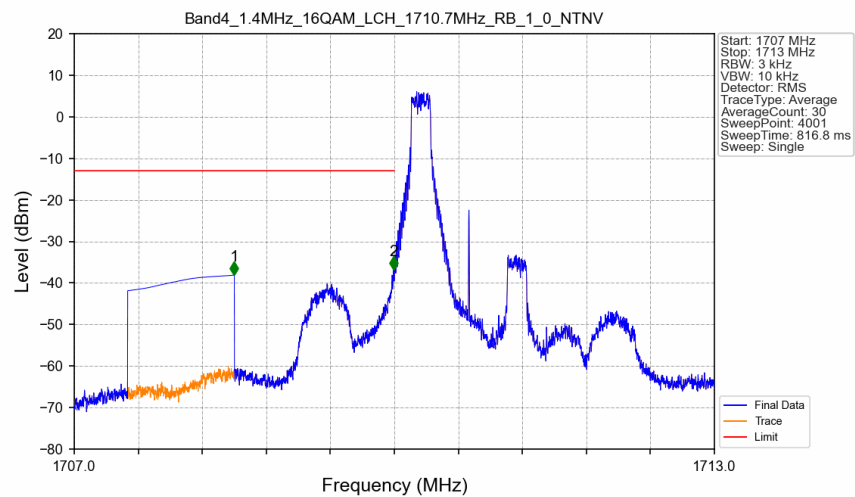
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1752	1755	0.003	/	/	/	/	/	/
1755	1756	0.003	/	1	1755.006	-34.14	-13	Pass
1756	1758	1	CHP	2	1756.500	-35.51	-13	Pass

Band4 1.4MHz QPSK HCH 1754.3MHz RB 6 0 NTV



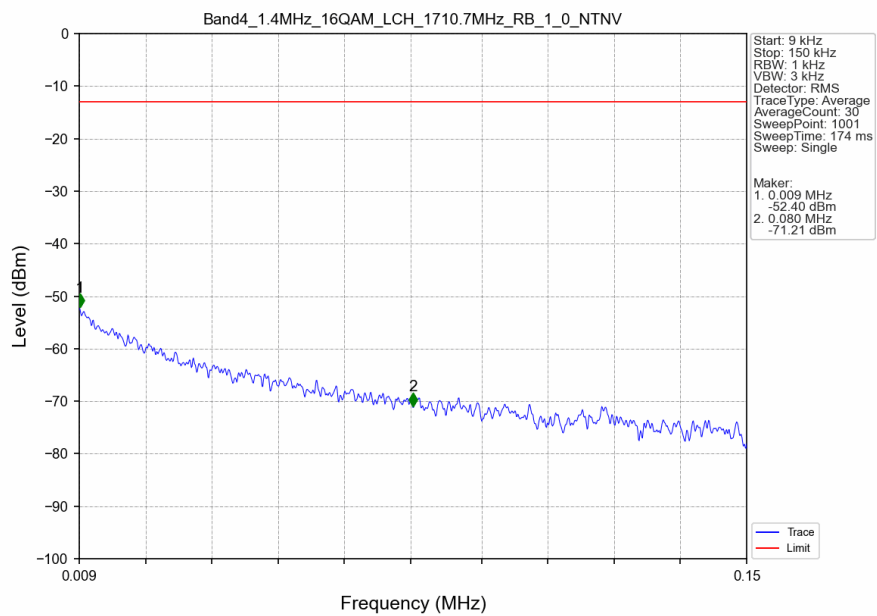
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1752	1755	0.013	CHP	/	/	/	/	/
1755	1756	0.013	CHP	1	1755.005	-34.71	-13	Pass
1756	1758	1	CHP	2	1756.500	-33.99	-13	Pass

Band4 1.4MHz 16QAM LCH 1710.7MHz RB 1 0 NTV

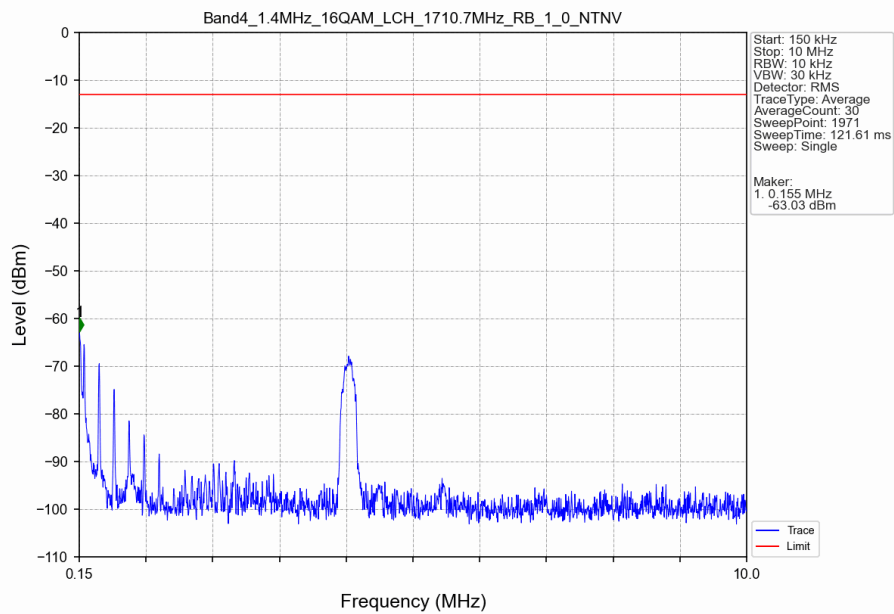


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1707	1709	1	CHP	1	1708.497	-38.12	-13	Pass
1709	1710	0.003	/	2	1709.994	-36.72	-13	Pass
1710	1713	0.003	/	/	/	/	/	/

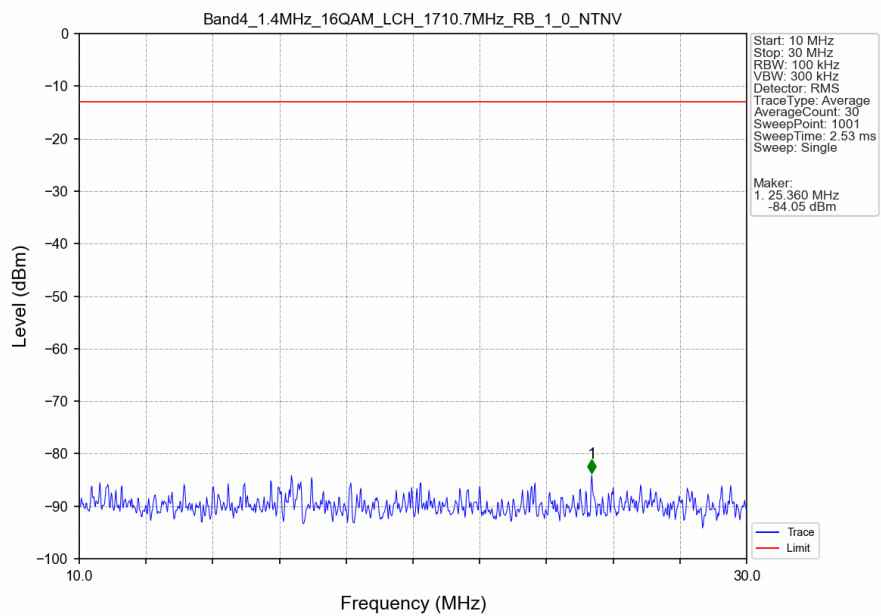
Band4 1.4MHz 16QAM LCH 1710.7MHz RB 1 0 NTNV



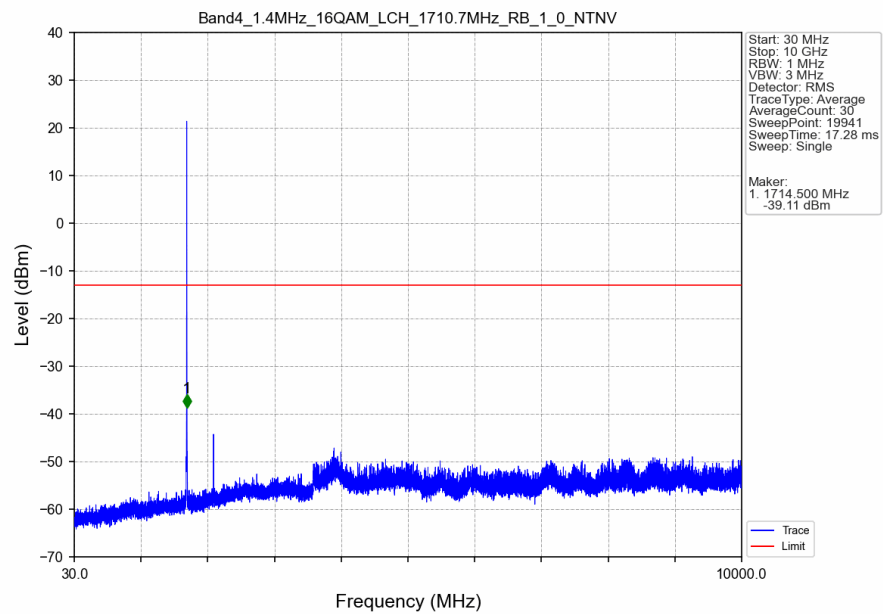
Band4 1.4MHz 16QAM LCH 1710.7MHz RB 1 0 NTNV



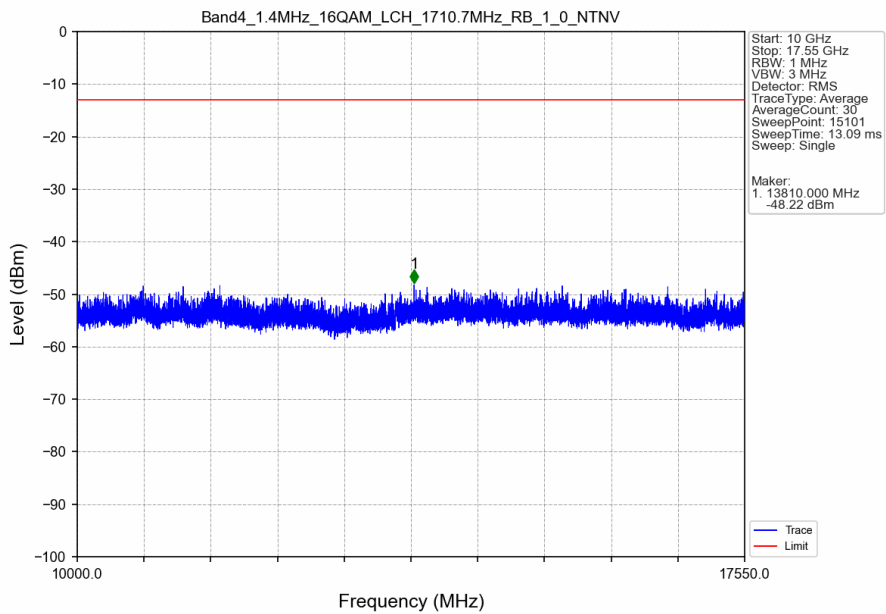
Band4 1.4MHz 16QAM LCH 1710.7MHz RB 1 0 NTNV



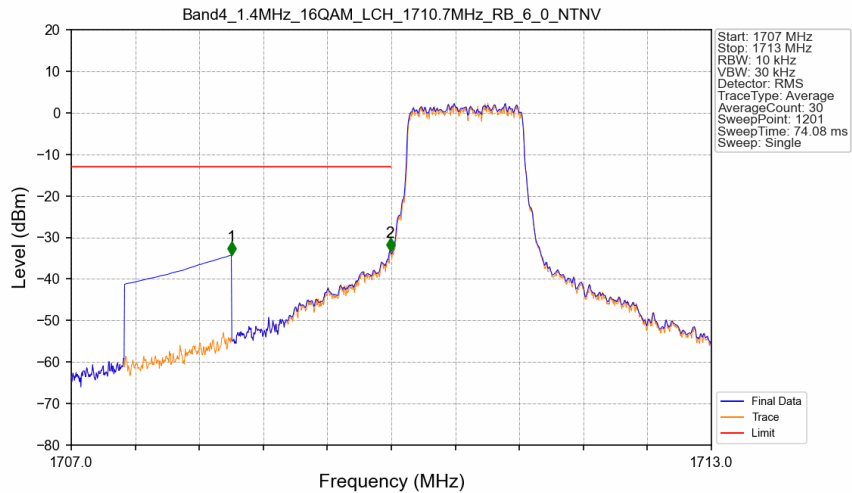
Band4 1.4MHz 16QAM LCH 1710.7MHz RB 1 0 NTNV



Band4 1.4MHz 16QAM LCH 1710.7MHz RB 1 0 NTNV

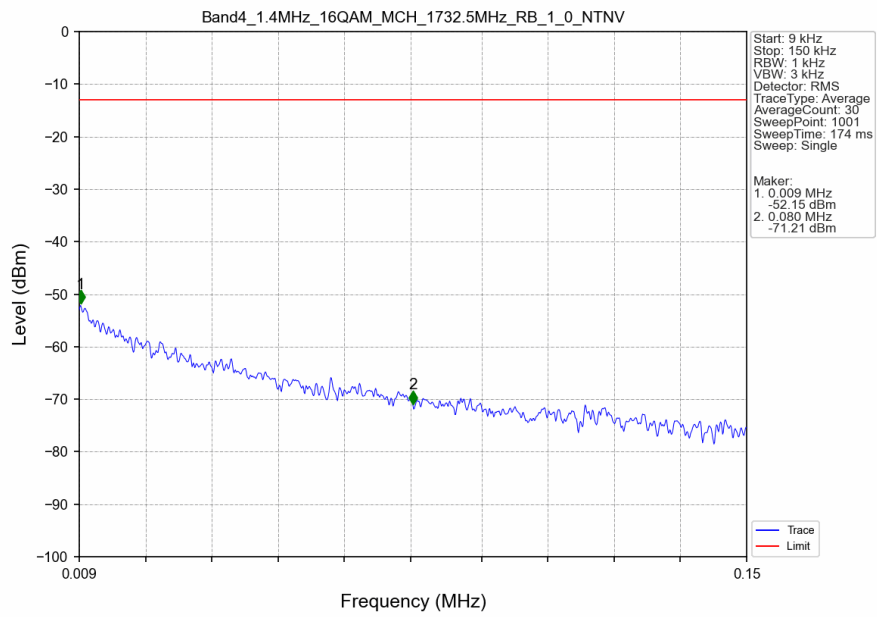


Band4 1.4MHz 16QAM LCH 1710.7MHz RB 6 0 NTNV

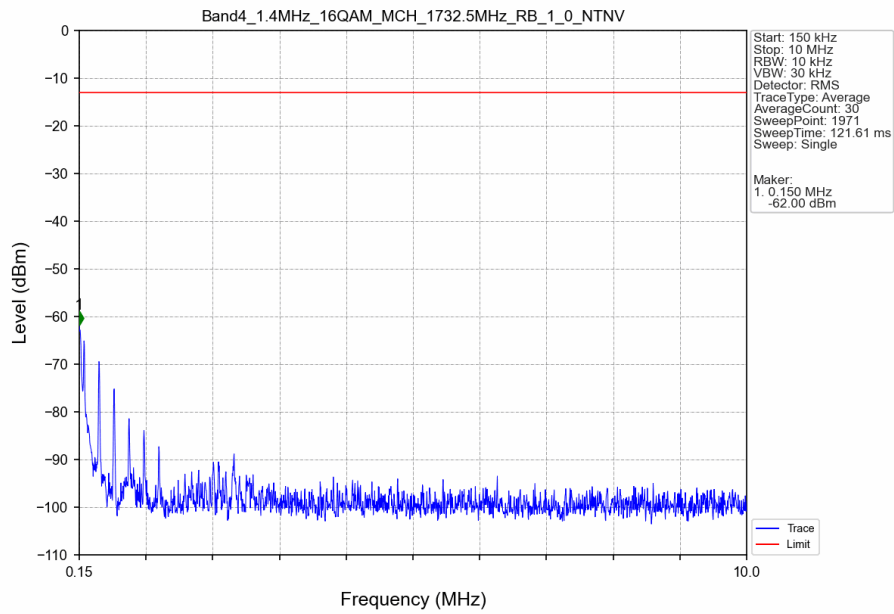


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1707	1709	1	CHP	1	1708.500	-34.25	-13	Pass
1709	1710	0.013	CHP	2	1709.990	-33.23	-13	Pass
1710	1713	0.013	CHP	/	/	/	/	/

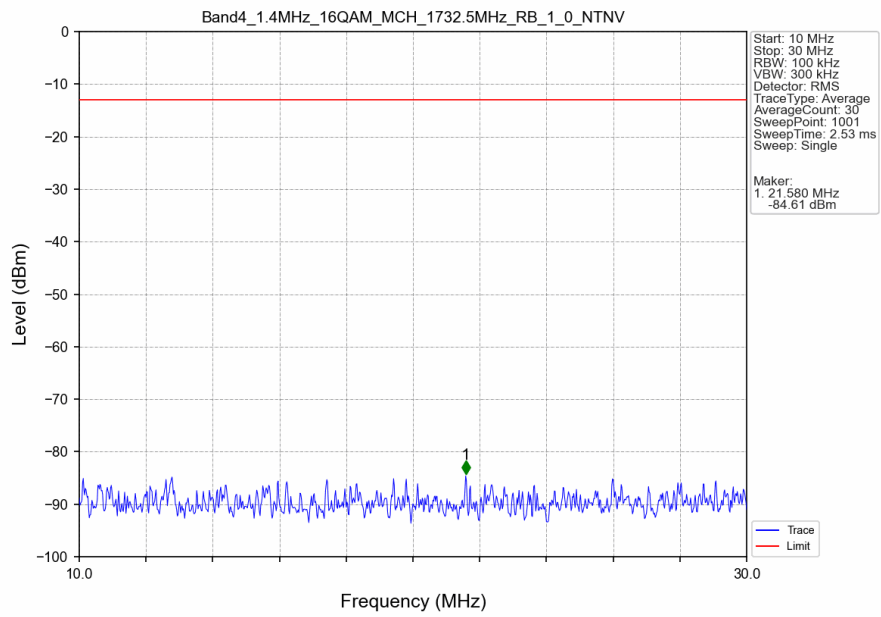
Band4 1.4MHz 16QAM MCH 1732.5MHz RB 1 0 NTN



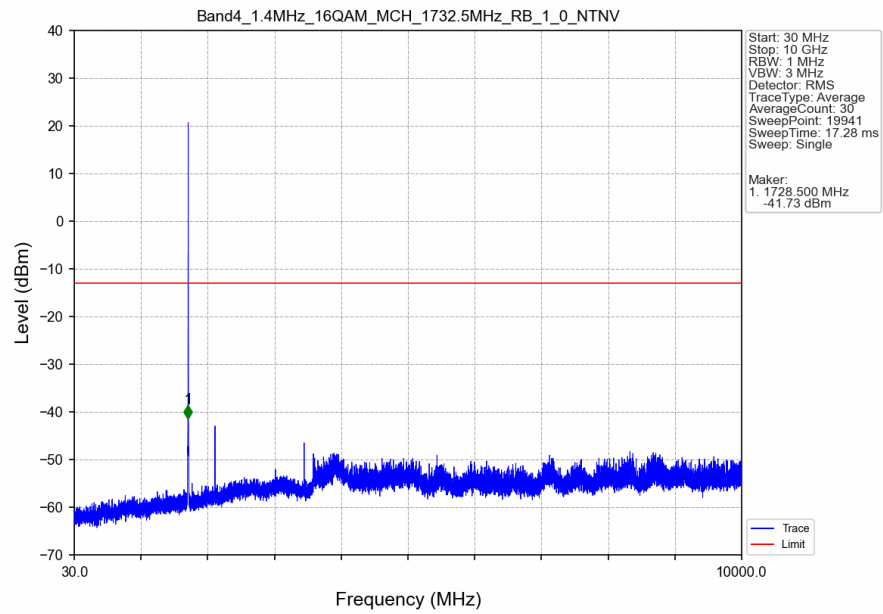
Band4 1.4MHz 16QAM MCH 1732.5MHz RB 1 0 NTN



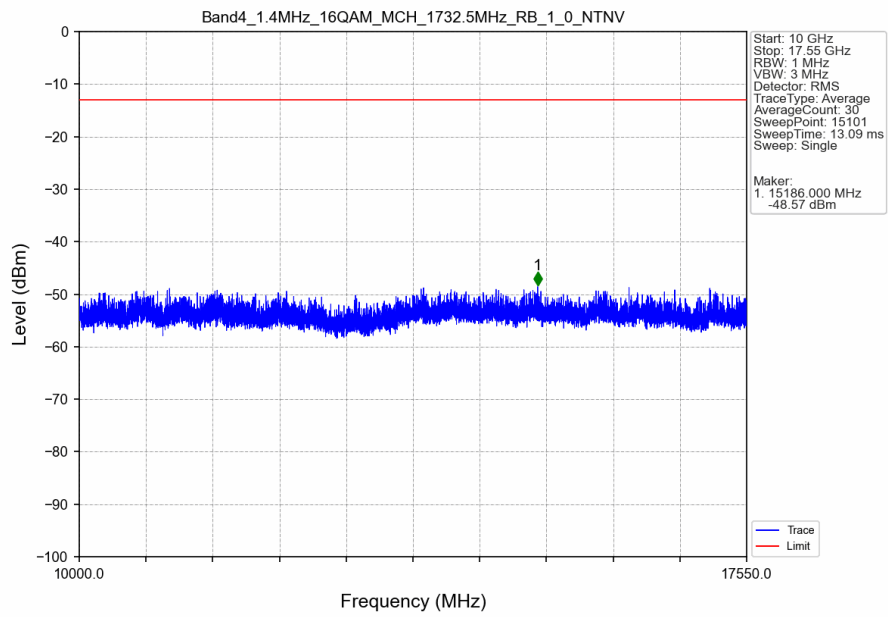
Band4 1.4MHz 16QAM MCH 1732.5MHz RB 1 0 NTNV



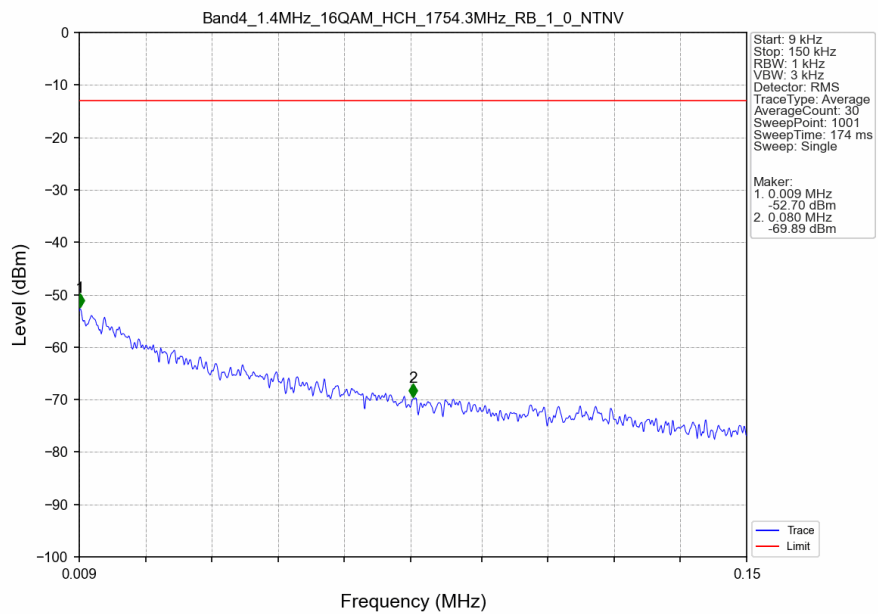
Band4 1.4MHz 16QAM MCH 1732.5MHz RB 1 0 NTNV



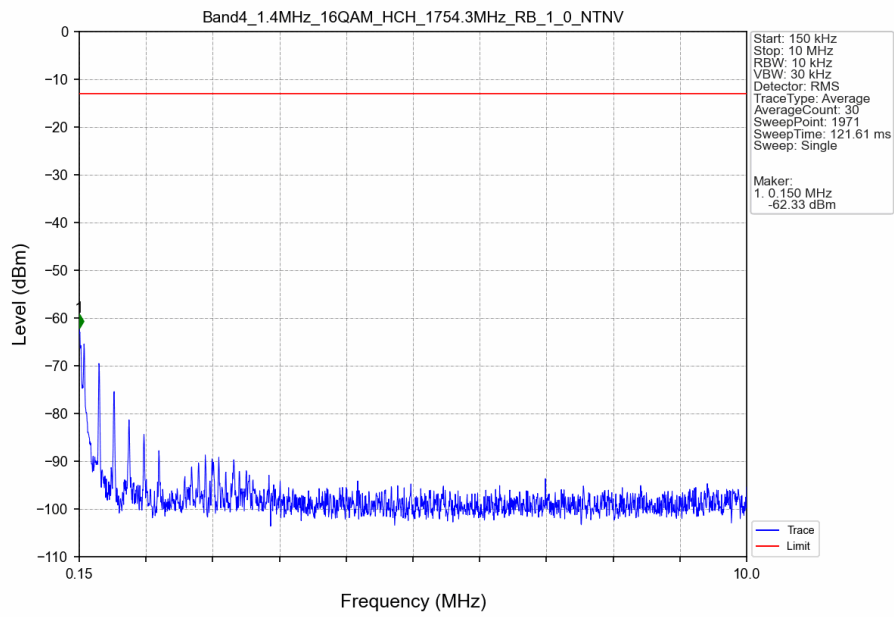
Band4 1.4MHz 16QAM MCH 1732.5MHz RB 1 0 NTN



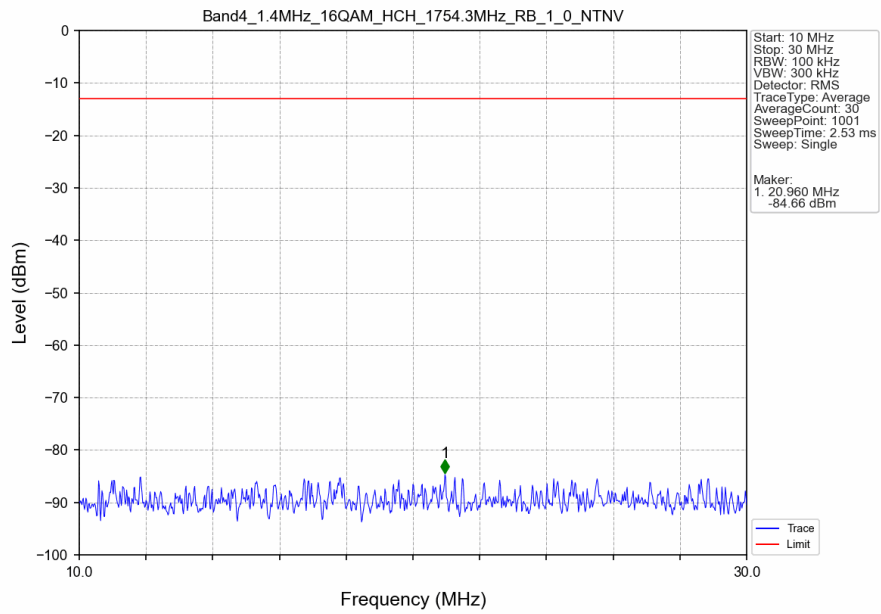
Band4 1.4MHz 16QAM HCH 1754.3MHz RB 1 0 NTN



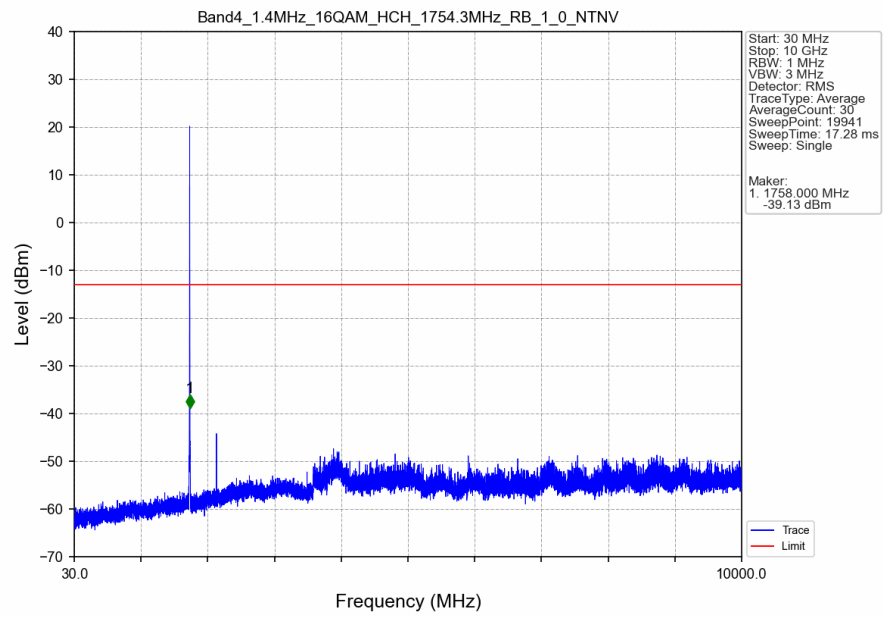
Band4_1.4MHz_16QAM_HCH_1754.3MHz_RB_1_0_NTNV



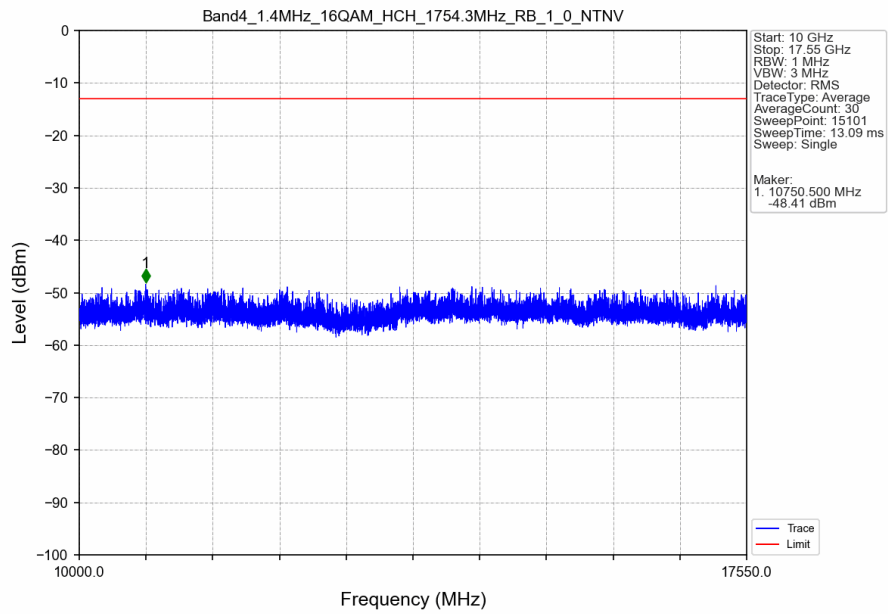
Band4_1.4MHz_16QAM_HCH_1754.3MHz_RB_1_0_NTNV



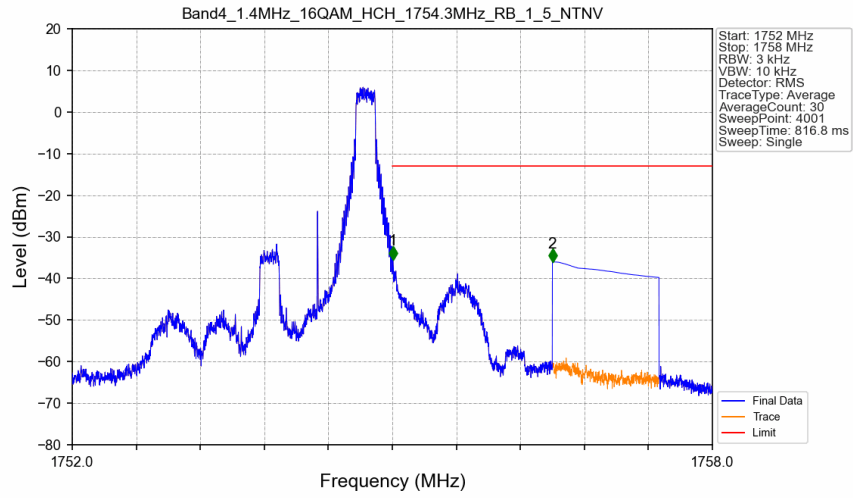
Band4 1.4MHz 16QAM HCH 1754.3MHz RB 1 0 NTNV



Band4 1.4MHz 16QAM HCH 1754.3MHz RB 1 0 NTNV

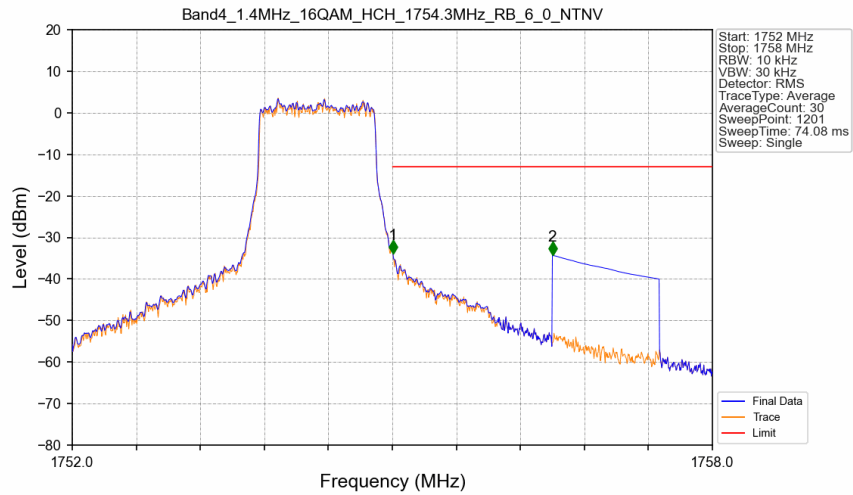


Band4 1.4MHz 16QAM HCH 1754.3MHz RB 1 5 NTN



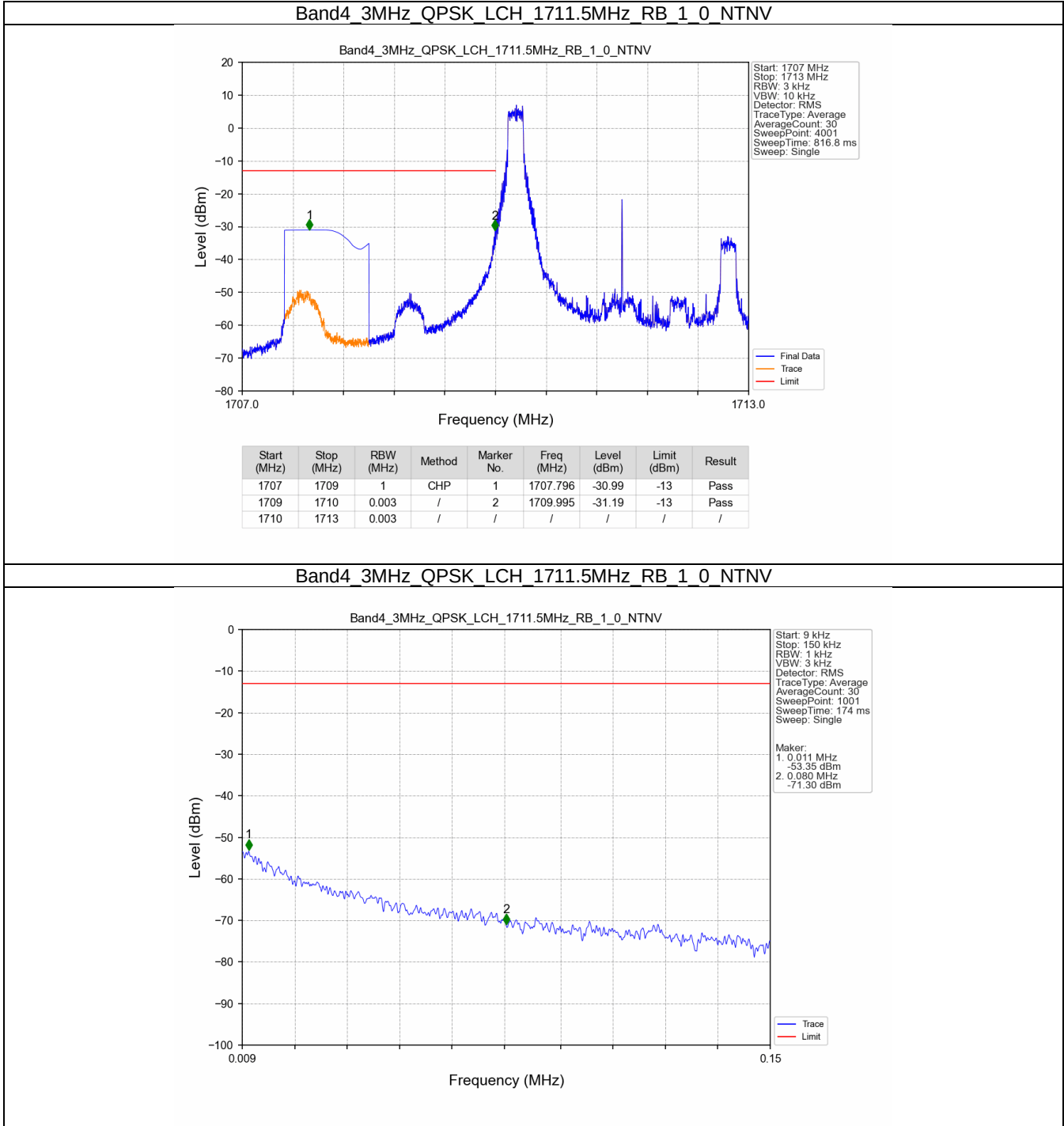
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1752	1755	0.003	/	/	/	/	/	/
1755	1756	0.003	/	1	1755.006	-35.41	-13	Pass
1756	1758	1	CHP	2	1756.500	-36.02	-13	Pass

Band4 1.4MHz 16QAM HCH 1754.3MHz RB 6 0 NTN

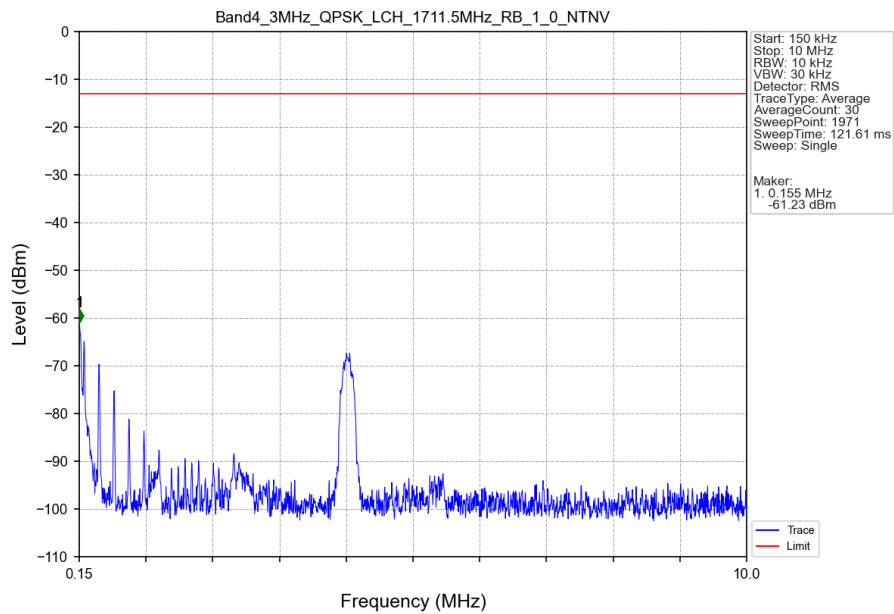


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1752	1755	0.013	CHP	/	/	/	/	/
1755	1756	0.013	CHP	1	1755.005	-33.85	-13	Pass
1756	1758	1	CHP	2	1756.500	-34.27	-13	Pass

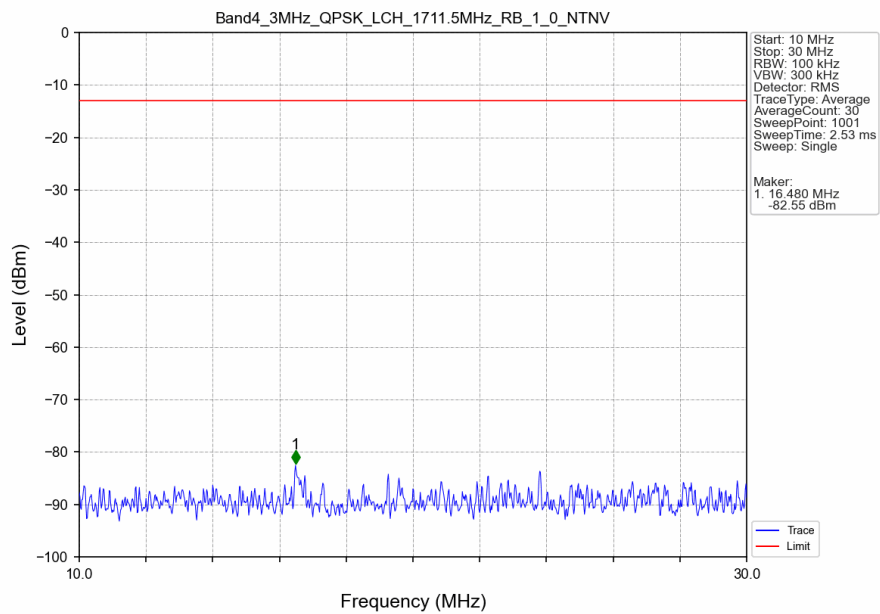
5.2.2 B4_3MHz



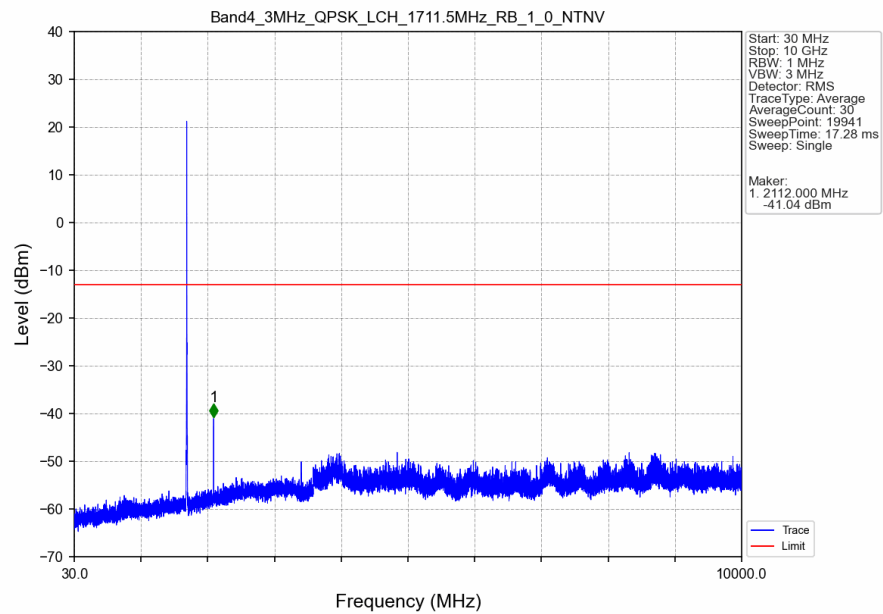
Band4 3MHz QPSK LCH 1711.5MHz RB 1 0 NTN



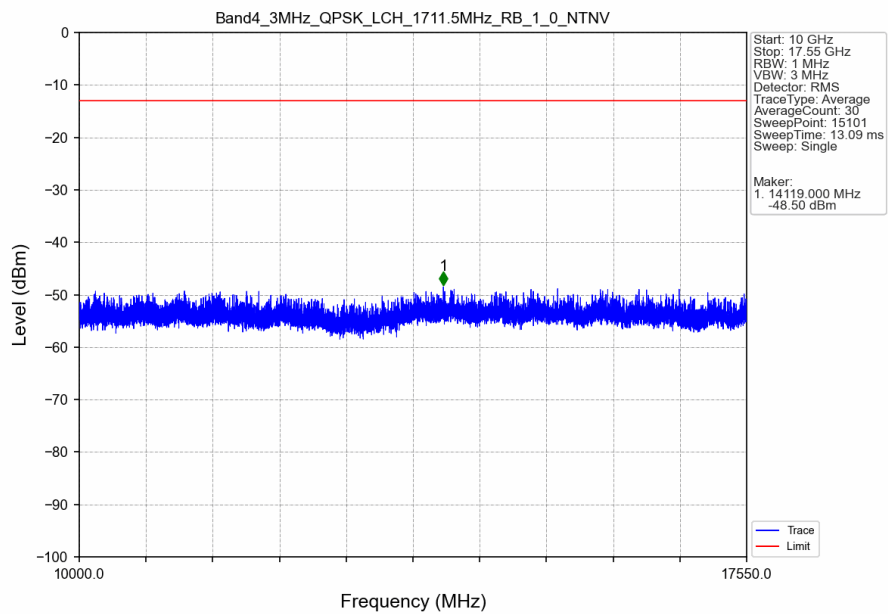
Band4 3MHz QPSK LCH 1711.5MHz RB 1 0 NTN



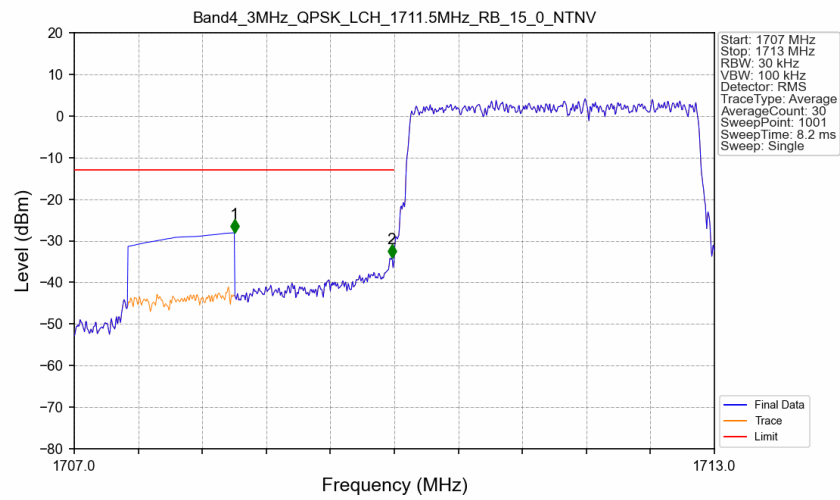
Band4 3MHz QPSK LCH 1711.5MHz RB 1 0 NTN



Band4 3MHz QPSK LCH 1711.5MHz RB 1 0 NTN

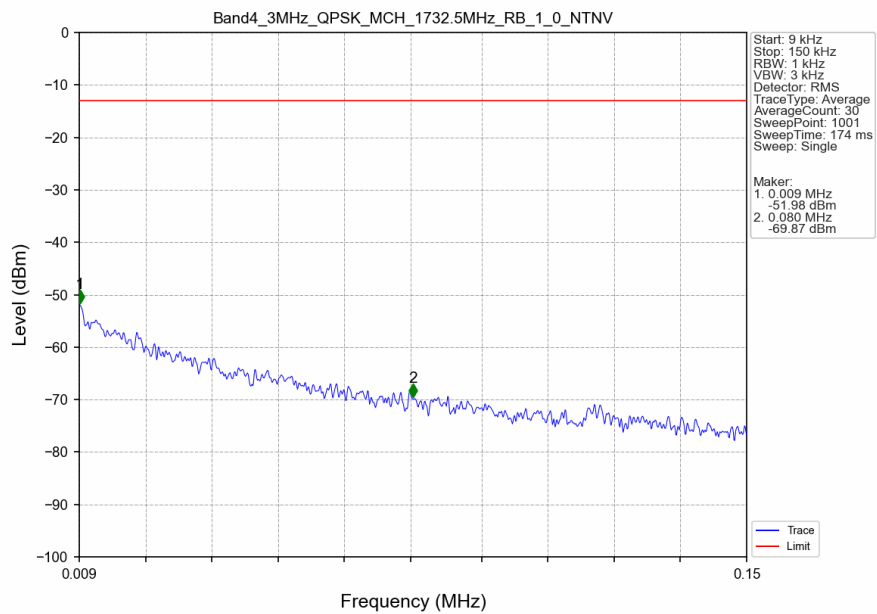


Band4 3MHz QPSK LCH 1711.5MHz RB 15 0 NTNV

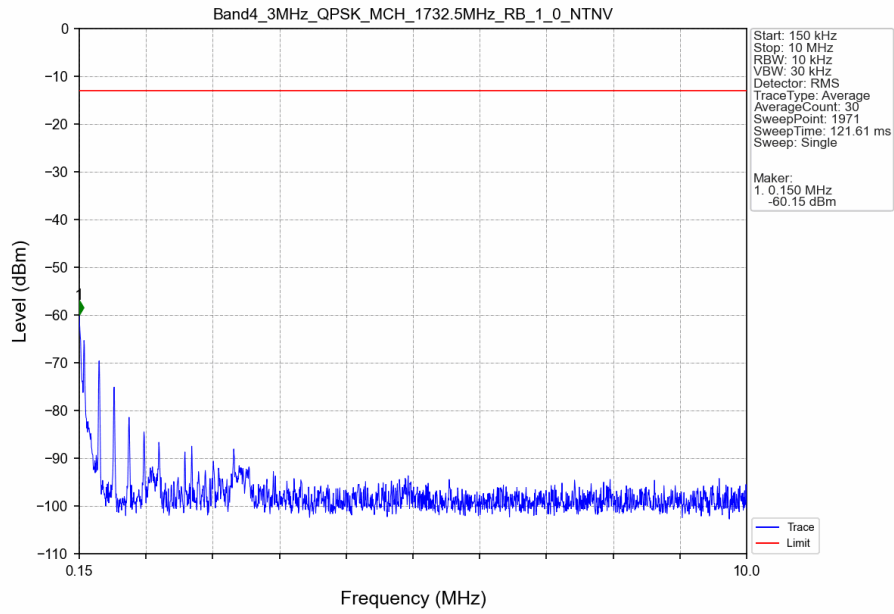


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1707	1709	1	CHP	1	1708.500	-28.08	-13	Pass
1709	1710	0.03	/	2	1709.976	-34.13	-13	Pass
1710	1713	0.03	/	/	/	/	/	/

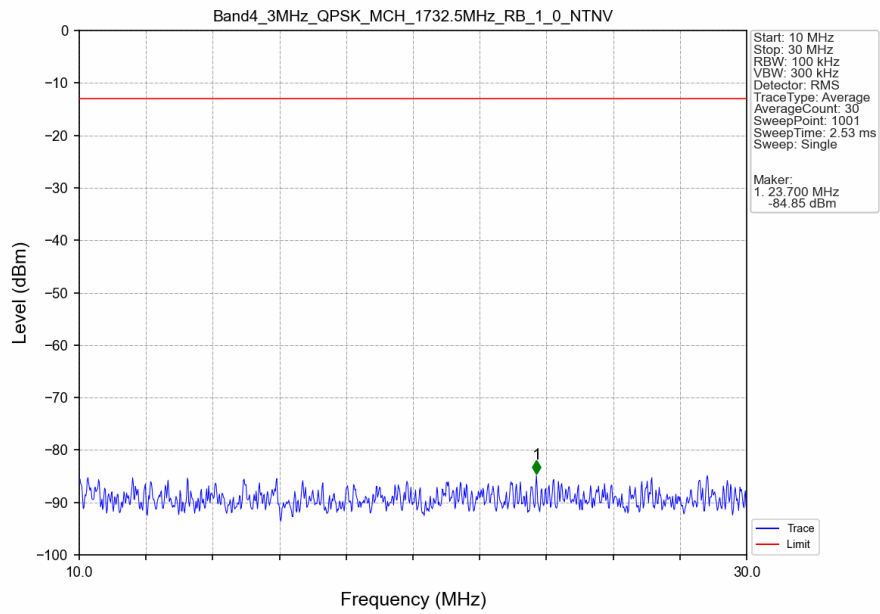
Band4 3MHz QPSK MCH 1732.5MHz RB 1 0 NTNV



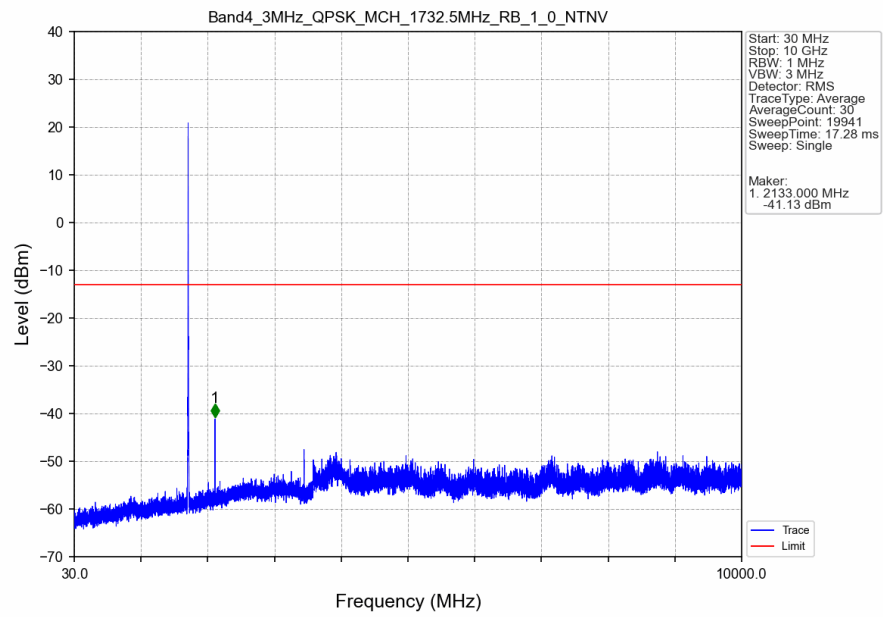
Band4 3MHz QPSK MCH 1732.5MHz RB 1 0 NTN



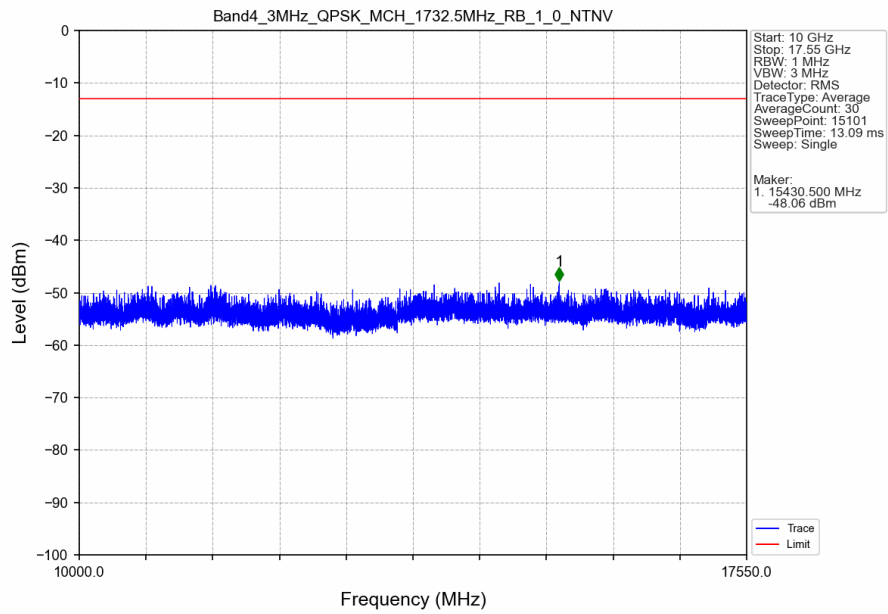
Band4 3MHz QPSK MCH 1732.5MHz RB 1 0 NTN



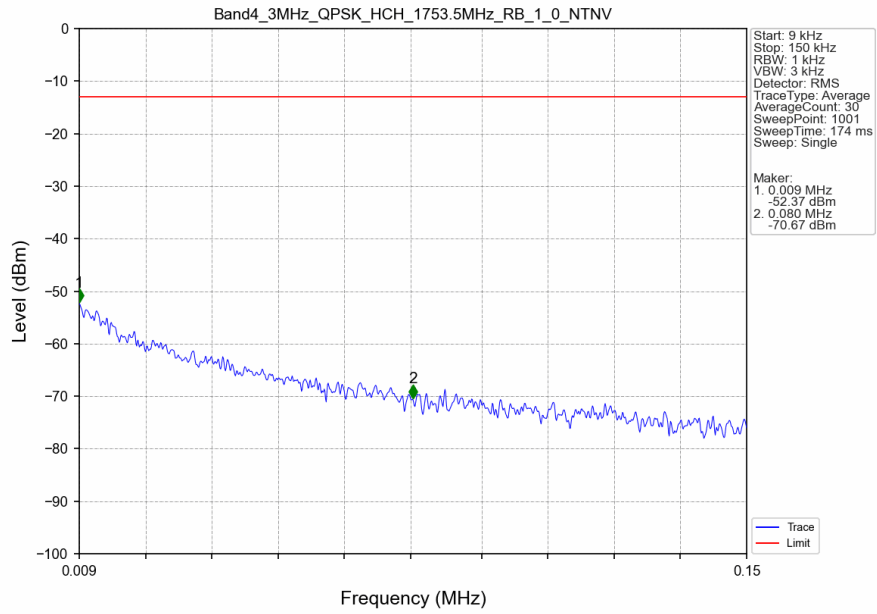
Band4 3MHz QPSK MCH 1732.5MHz RB 1 0 NTNV



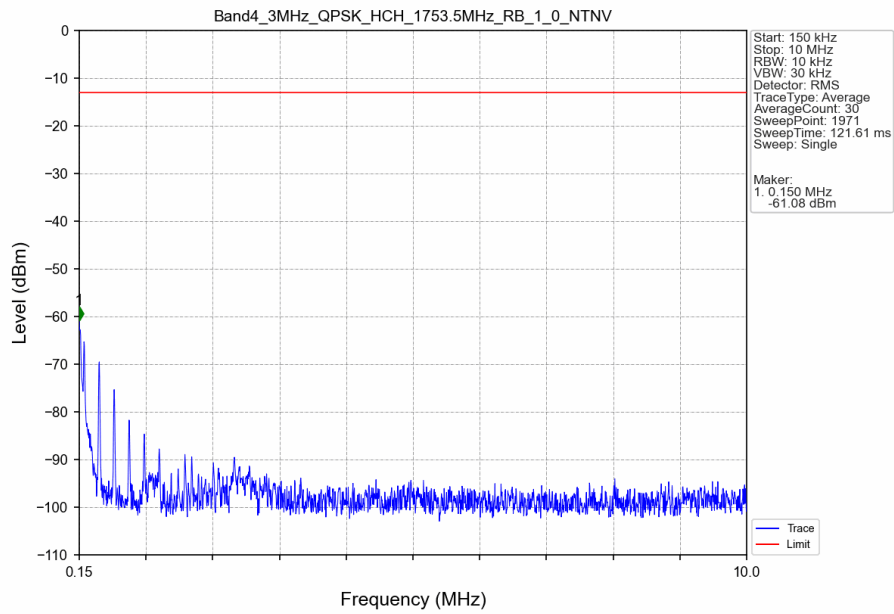
Band4 3MHz QPSK MCH 1732.5MHz RB 1 0 NTNV



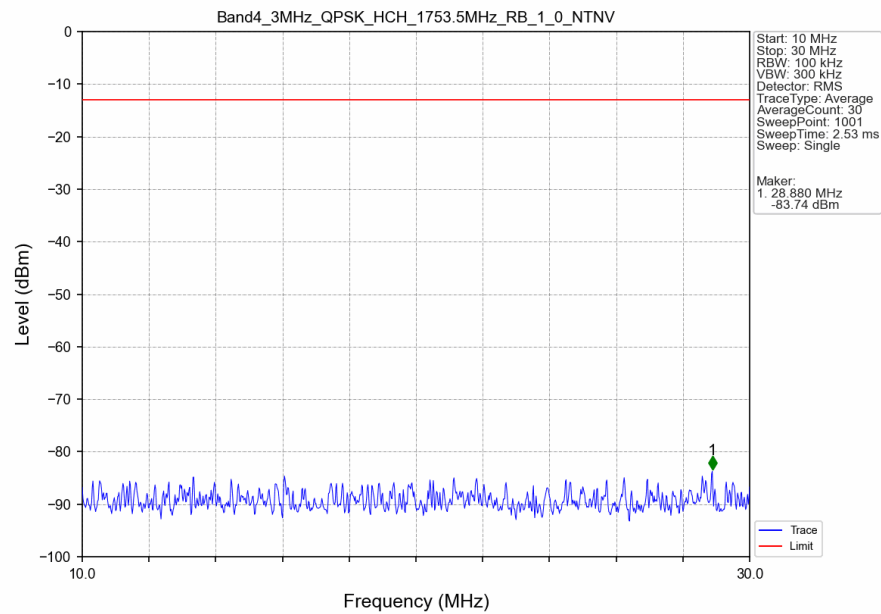
Band4 3MHz QPSK HCH 1753.5MHz RB 1 0 NTN



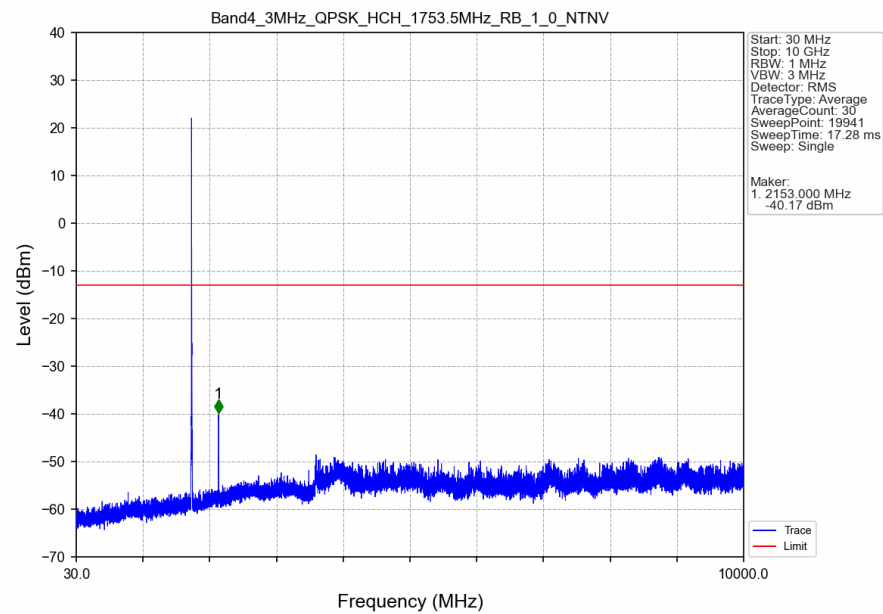
Band4 3MHz QPSK HCH 1753.5MHz RB 1 0 NTN



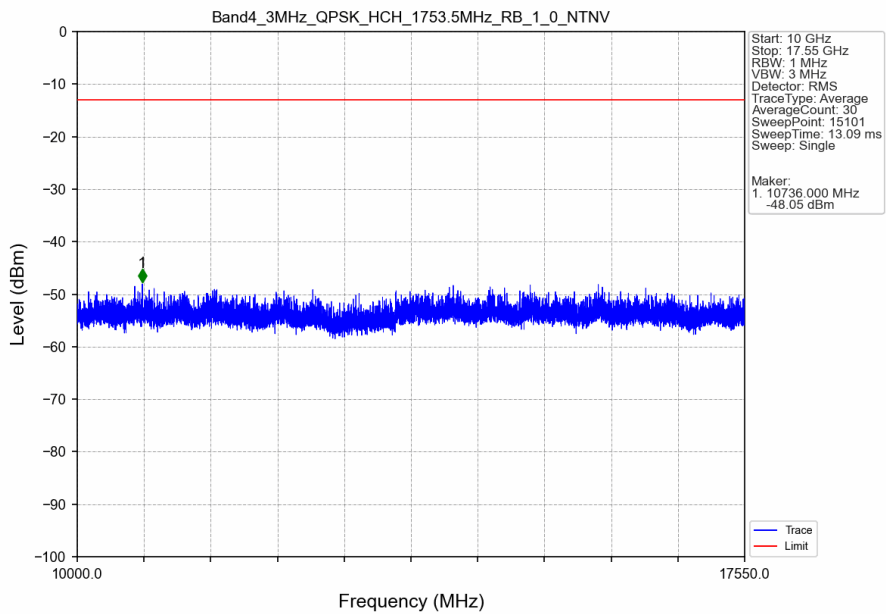
Band4 3MHz QPSK HCH 1753.5MHz RB 1 0 NTN



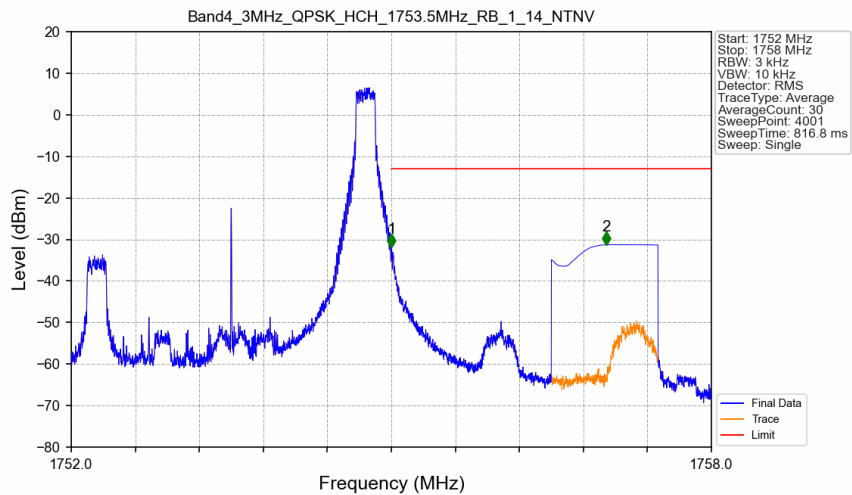
Band4 3MHz QPSK HCH 1753.5MHz RB 1 0 NTN



Band4 3MHz QPSK HCH 1753.5MHz RB 1 0 NTN

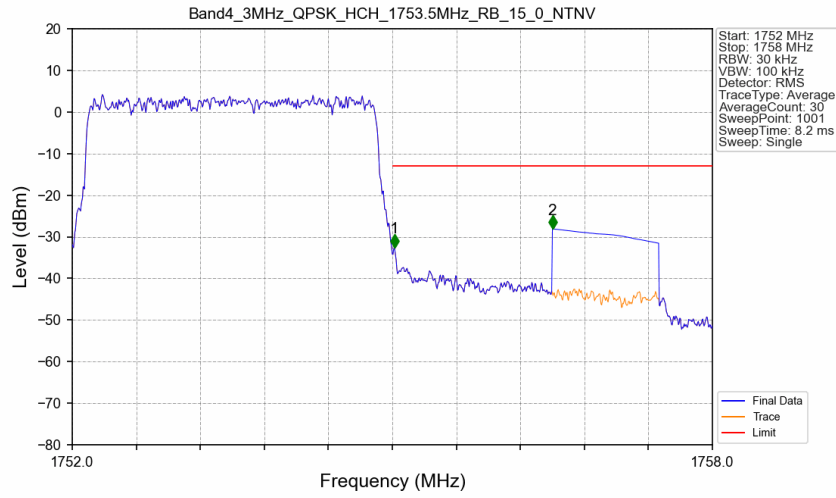


Band4 3MHz QPSK HCH 1753.5MHz RB 1 14 NTN



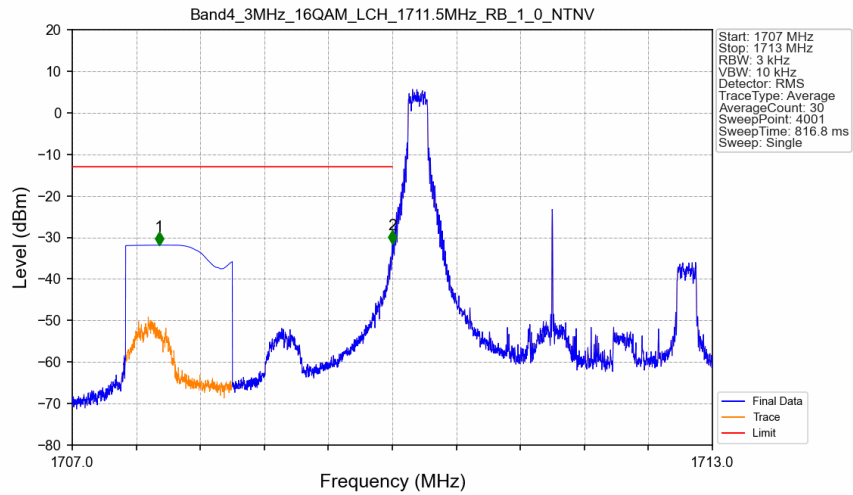
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1752	1755	0.003	/	/	/	/	/	/
1755	1756	0.003	/	1	1755.003	-31.77	-13	Pass
1756	1758	1	CHP	2	1757.017	-31.28	-13	Pass

Band4 3MHz QPSK HCH 1753.5MHz RB 15 0 NTV



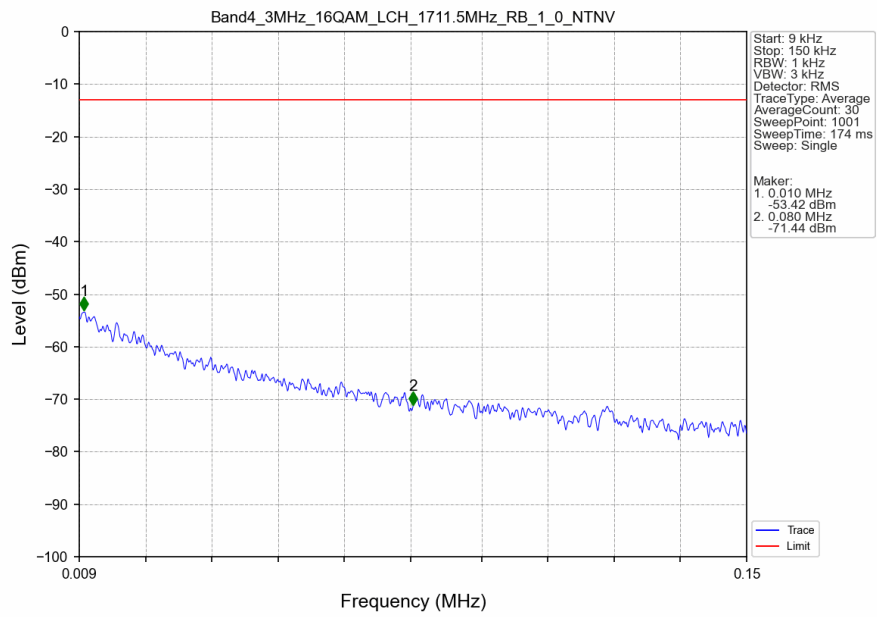
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1752	1755	0.03	/	/	/	/	/	/
1755	1756	0.03	/	1	1755.018	-32.49	-13	Pass
1756	1758	1	CHP	2	1756.500	-28.11	-13	Pass

Band4 3MHz 16QAM LCH 1711.5MHz RB 1 0 NTV

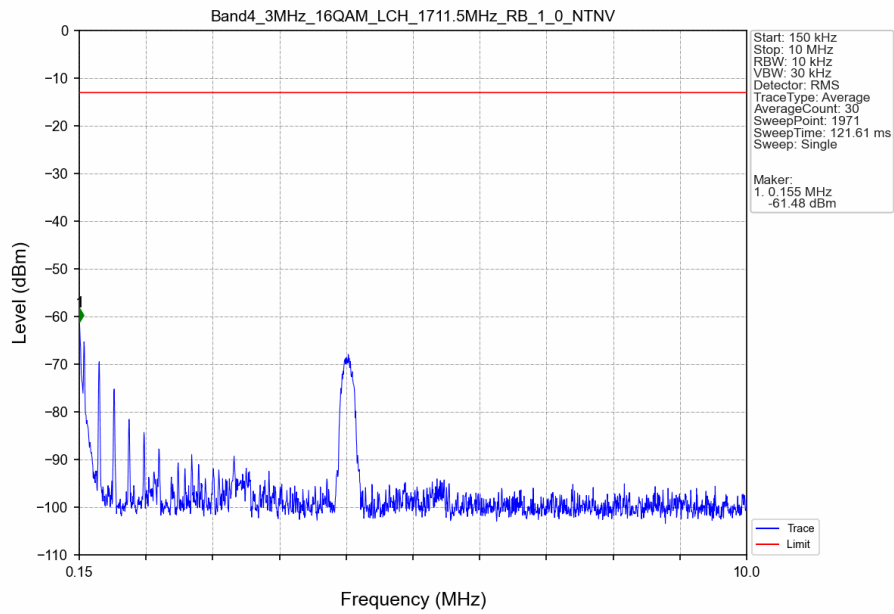


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1707	1709	1	CHP	1	1707.814	-31.86	-13	Pass
1709	1710	0.003	/	2	1709.998	-31.57	-13	Pass
1710	1713	0.003	/	/	/	/	/	/

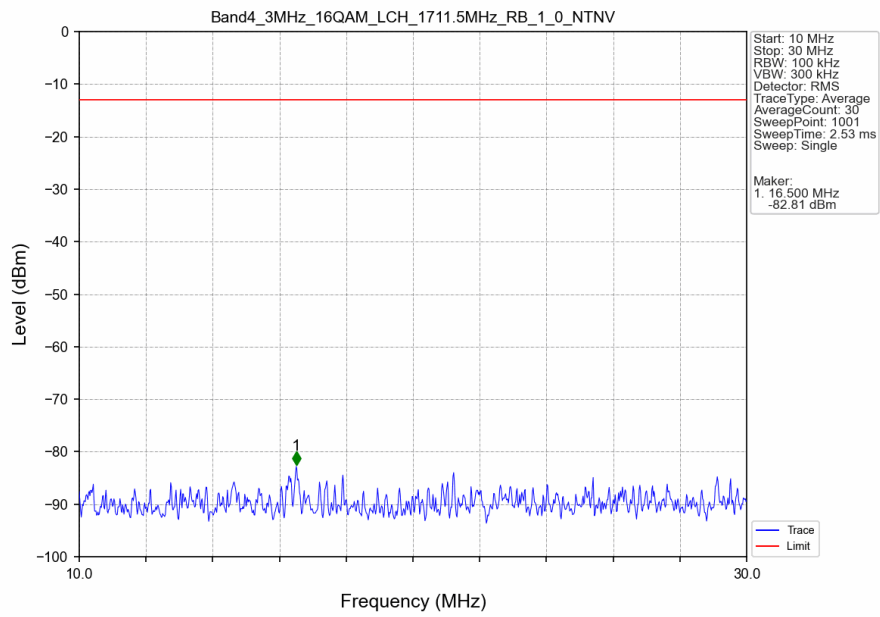
Band4_3MHz_16QAM_LCH_1711.5MHz_RB_1_0_NTNV



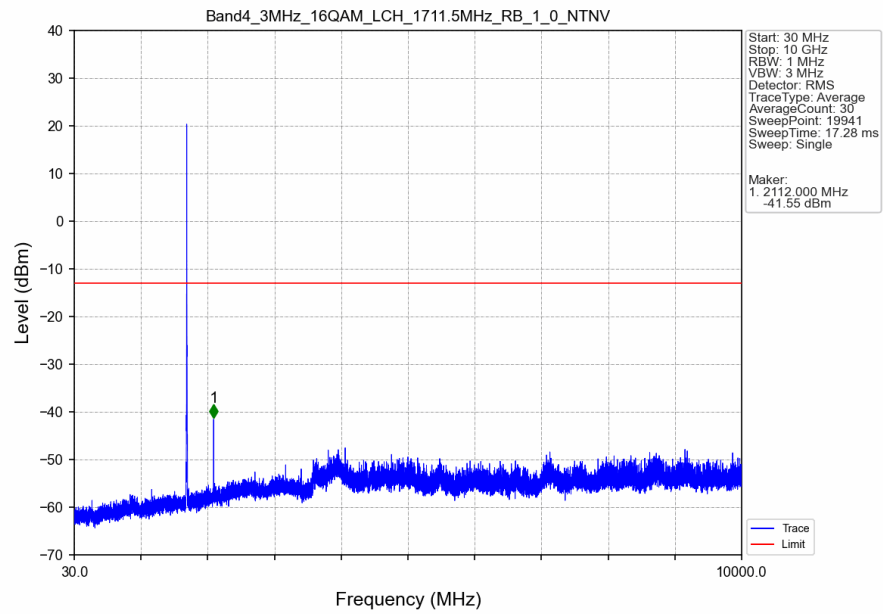
Band4_3MHz_16QAM_LCH_1711.5MHz_RB_1_0_NTNV



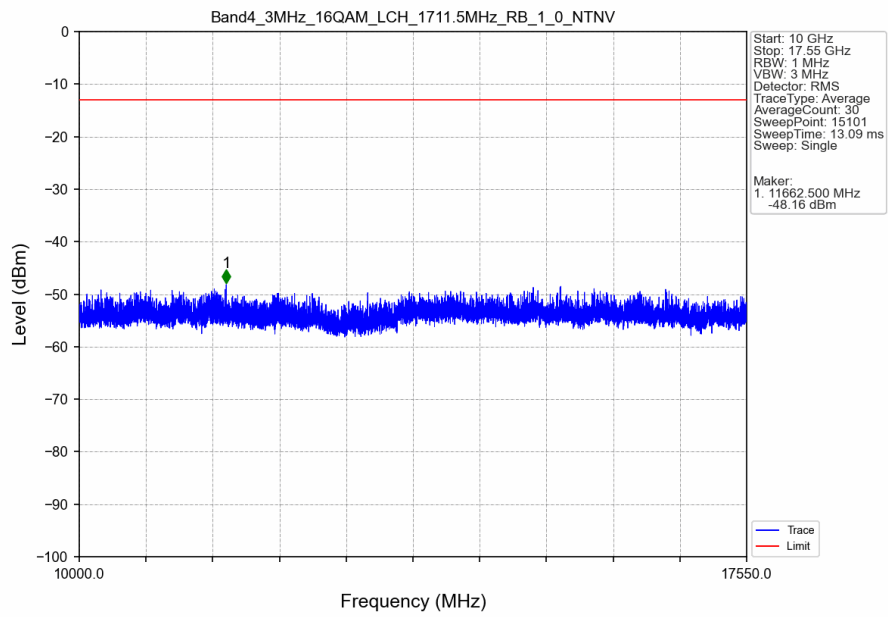
Band4 3MHz 16QAM LCH 1711.5MHz RB 1 0 NTV



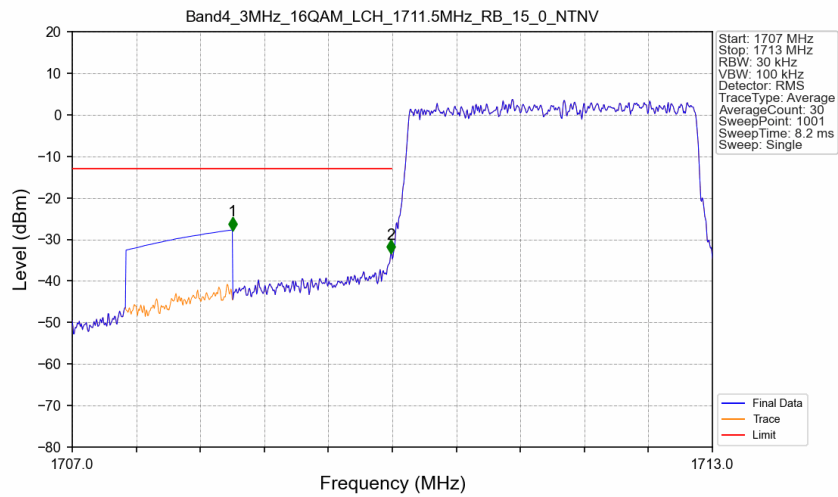
Band4 3MHz 16QAM LCH 1711.5MHz RB 1 0 NTV



Band4 3MHz 16QAM LCH 1711.5MHz RB 1 0 NTV

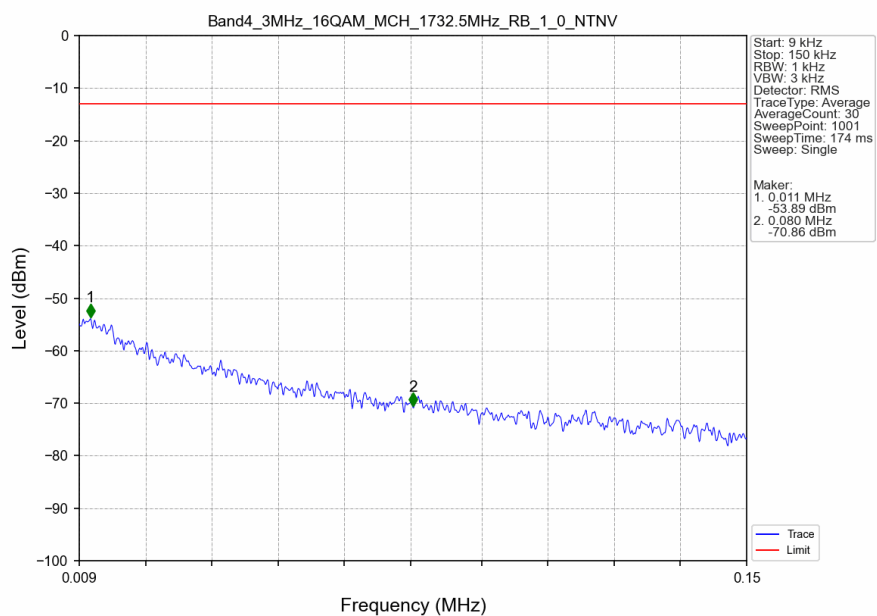


Band4 3MHz 16QAM LCH 1711.5MHz RB 15 0 NTV

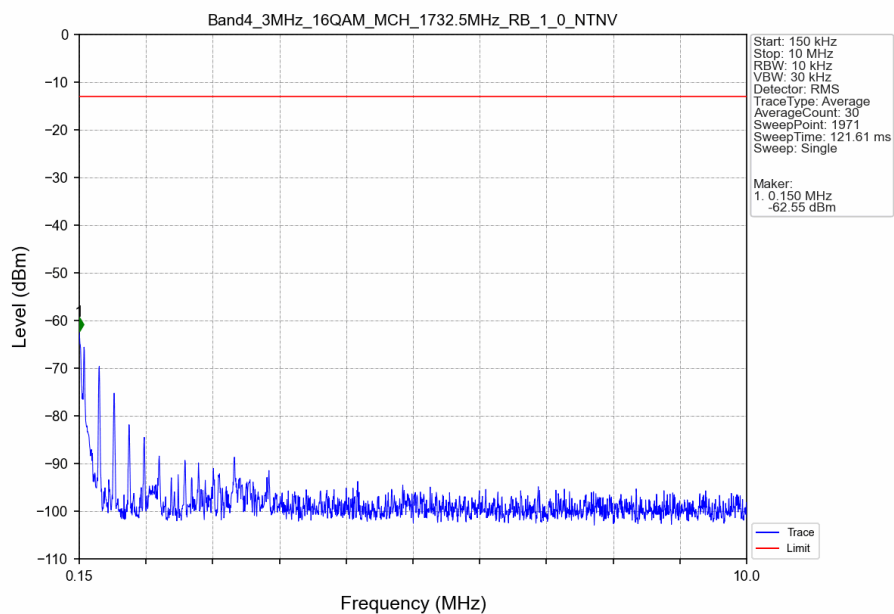


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1707	1709	1	CHP	1	1708.500	-27.76	-13	Pass
1709	1710	0.03	/	2	1709.988	-33.29	-13	Pass
1710	1713	0.03	/	/	/	/	/	/

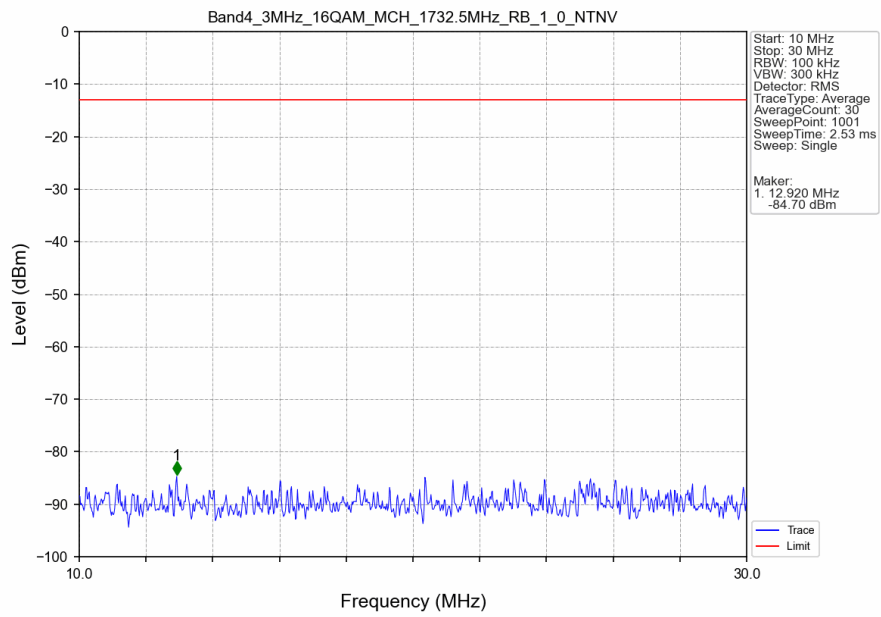
Band4_3MHz_16QAM_MCH_1732.5MHz_RB_1_0_NTNV



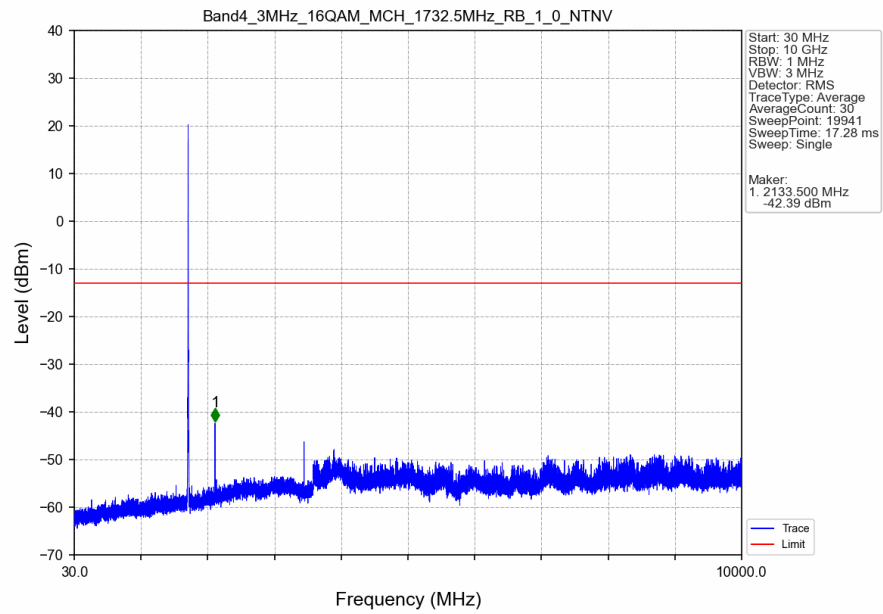
Band4_3MHz_16QAM_MCH_1732.5MHz_RB_1_0_NTNV



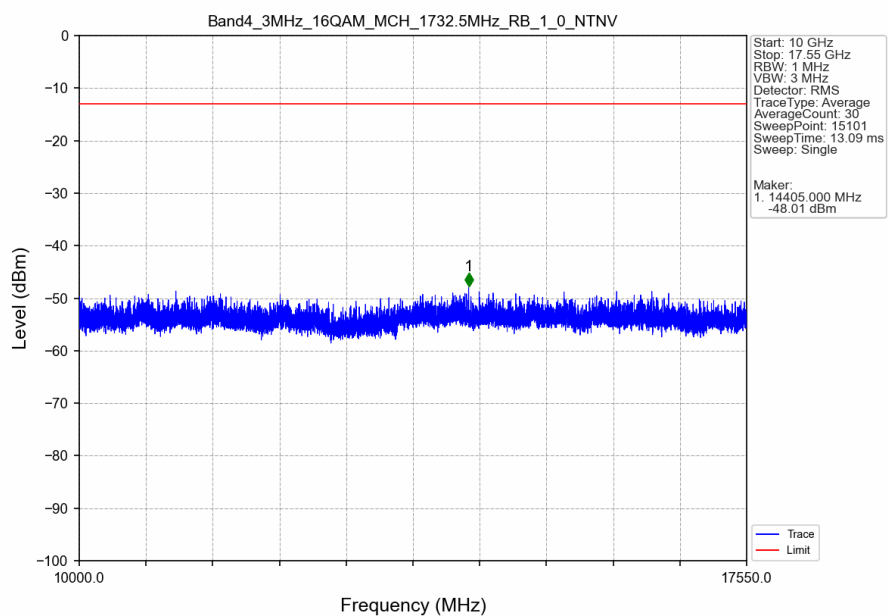
Band4_3MHz_16QAM_MCH_1732.5MHz_RB_1_0_NTNV



Band4_3MHz_16QAM_MCH_1732.5MHz_RB_1_0_NTNV



Band4_3MHz_16QAM_MCH_1732.5MHz_RB_1_0_NTNV



Band4_3MHz_16QAM_HCH_1753.5MHz_RB_1_0_NTNV

