

RF Test Report

For

Project No.:	RF251027002-01-003
Client:	Autel Robotics Co., Ltd.
Manufacturer:	Autel Robotics Co., Ltd.
Product Description:	OmniLink
Model No.:	Nest RF-6
Test Engineer:	Jason Huang
Test Date:	2025-10-28

Test Summary

Item	Result
Duty Cycle	Pass
Bandwidth	Pass
Maximum Conducted Output Power	Pass
Maximum Power Spectral Density	Pass
Frequency Stability	Pass

1. Duty Cycle

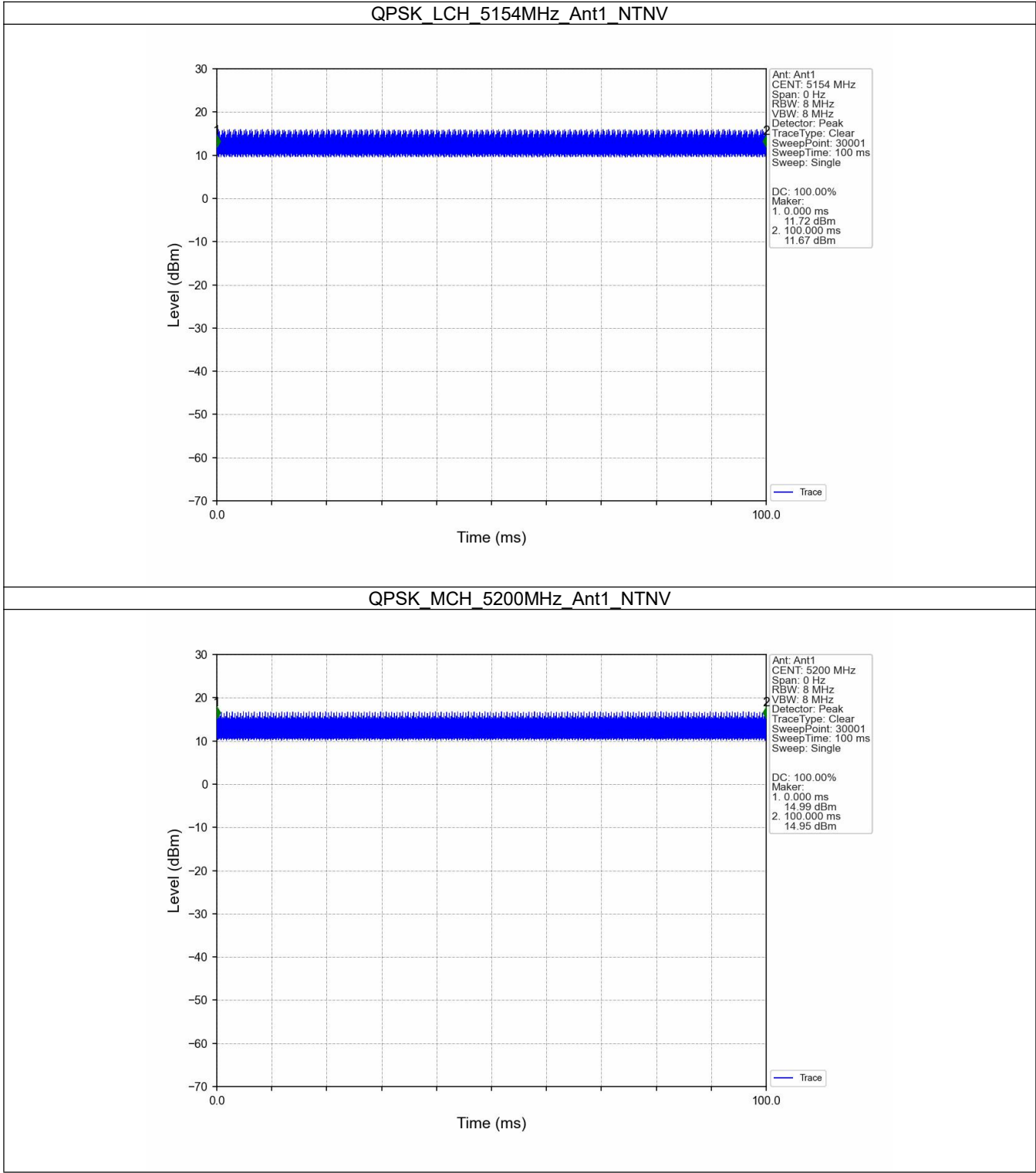
1.1 Test Result

1.1.1 Ant1

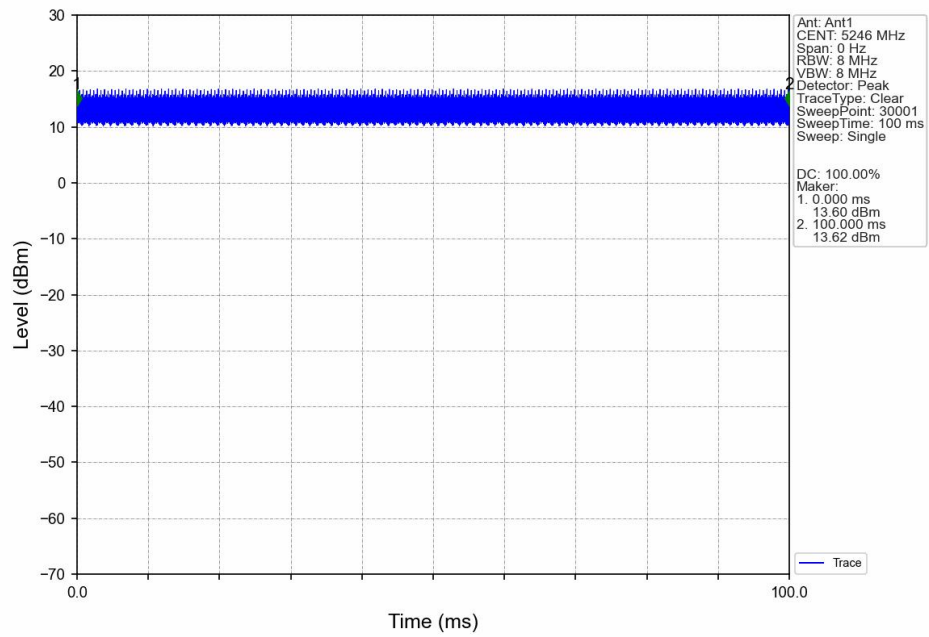
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
QPSK	MIMO	5154	100.000	100.000	100.00	0.00	0.00
		5200	100.000	100.000	100.00	0.00	0.00
		5246	100.000	100.000	100.00	0.00	0.00
16QAM	MIMO	5154	100.000	100.000	100.00	0.00	0.00
		5200	100.000	100.000	100.00	0.00	0.00
		5246	100.000	100.000	100.00	0.00	0.00

1.2 Test Graph

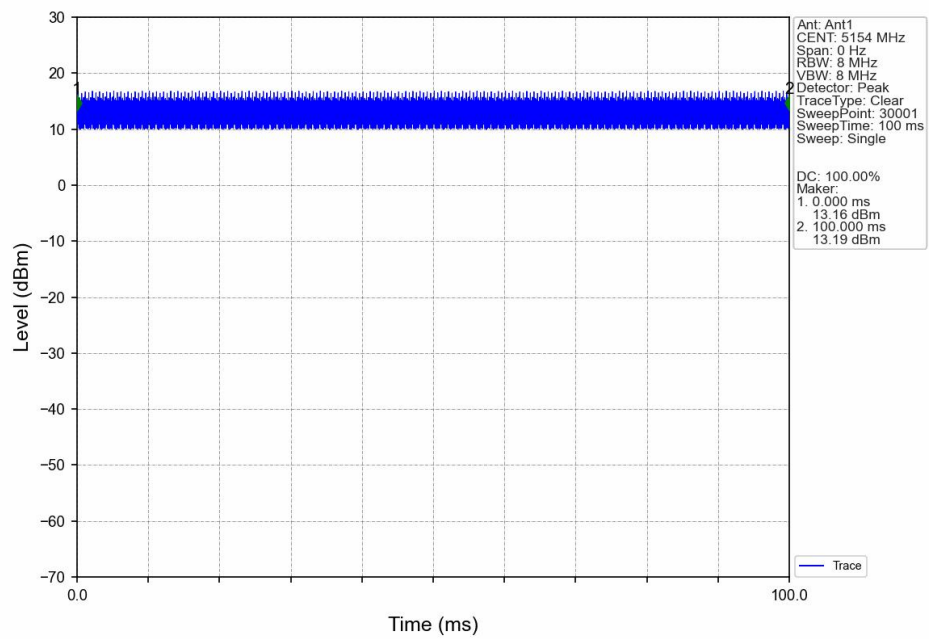
1.2.1 Ant1



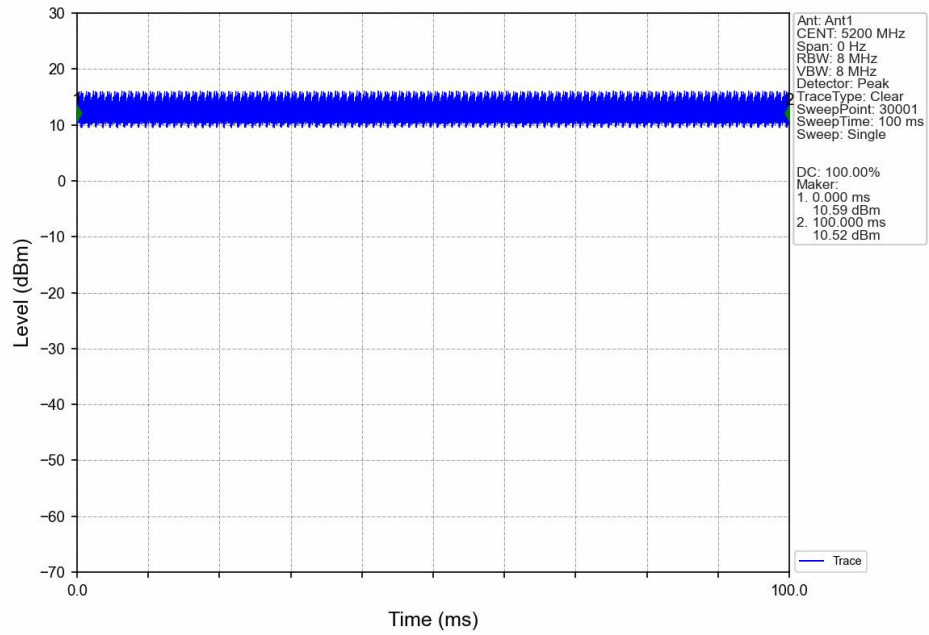
QPSK_HCH_5246MHz_Ant1_NTNV



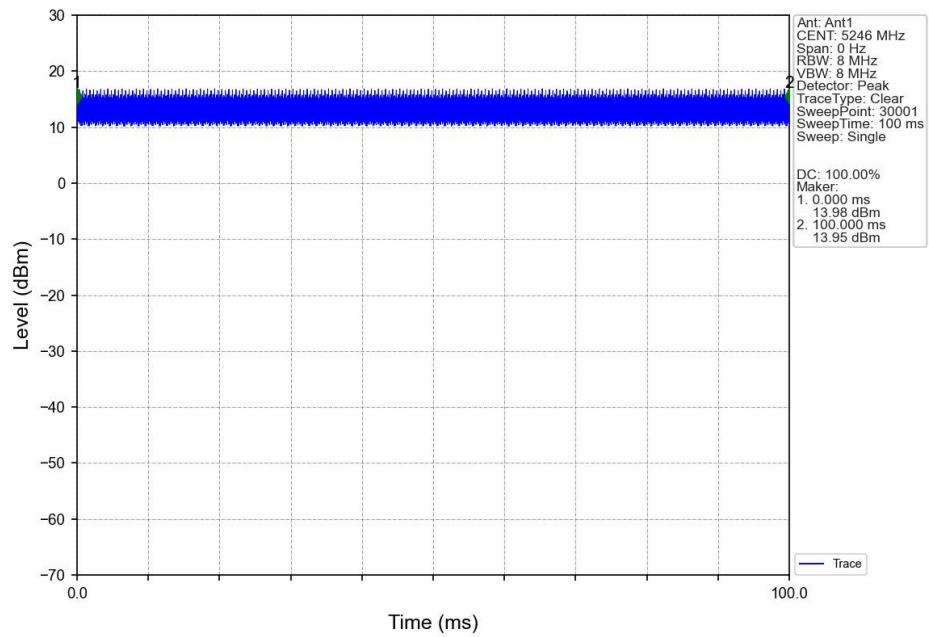
16QAM_LCH_5154MHz_Ant1_NTNV



16QAM_MCH_5200MHz_Ant1_NTNV



16QAM_HCH_5246MHz_Ant1_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

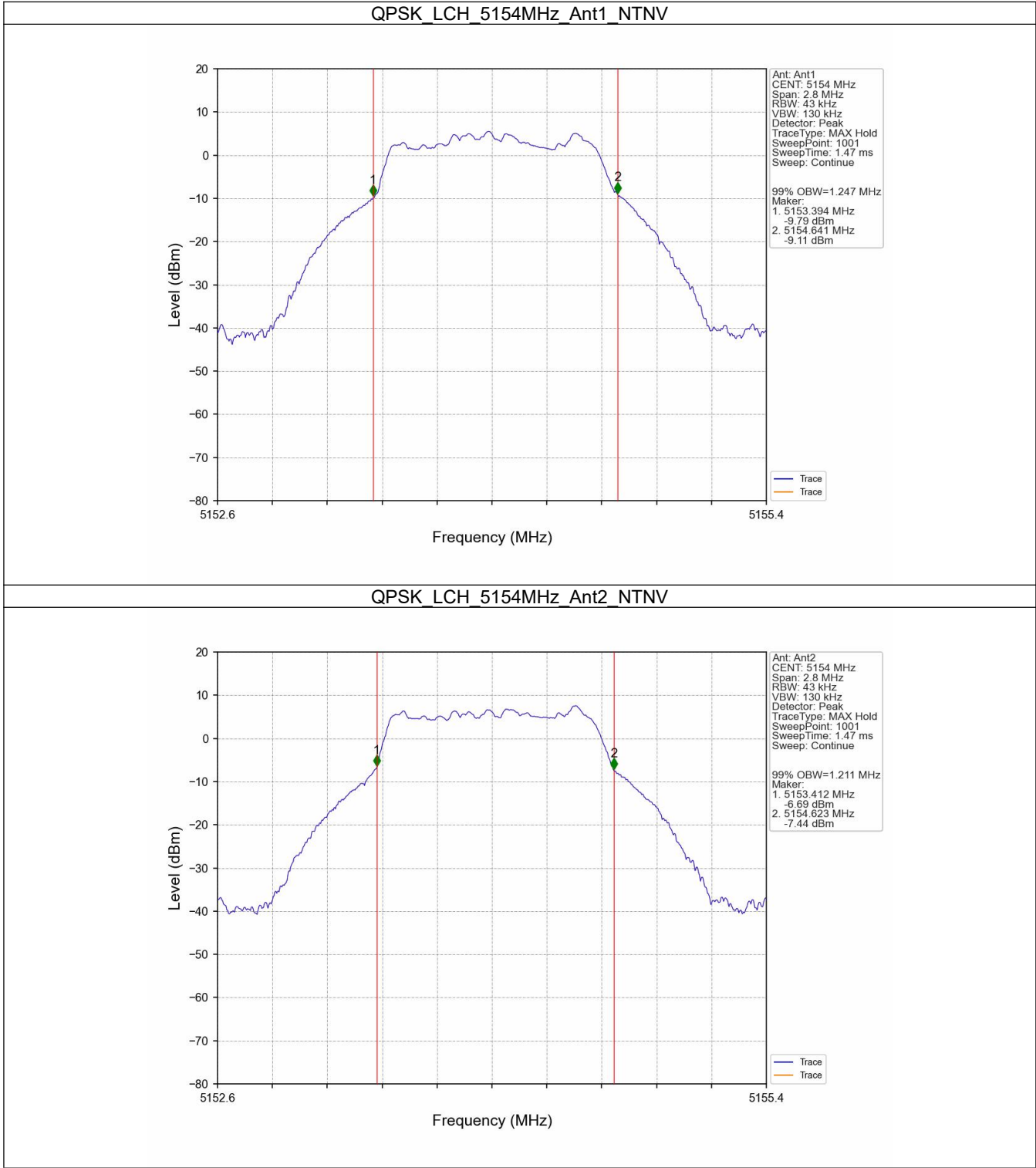
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
QPSK	MIMO	5154	1	1.247	/	Pass
			2	1.211	/	Pass
		5200	1	1.182	/	Pass
			2	1.192	/	Pass
		5246	1	1.189	/	Pass
			2	1.187	/	Pass
16QAM	MIMO	5154	1	1.179	/	Pass
			2	1.197	/	Pass
		5200	1	1.241	/	Pass
			2	1.221	/	Pass
		5246	1	1.189	/	Pass
			2	1.184	/	Pass

2.1.2 26dB BW

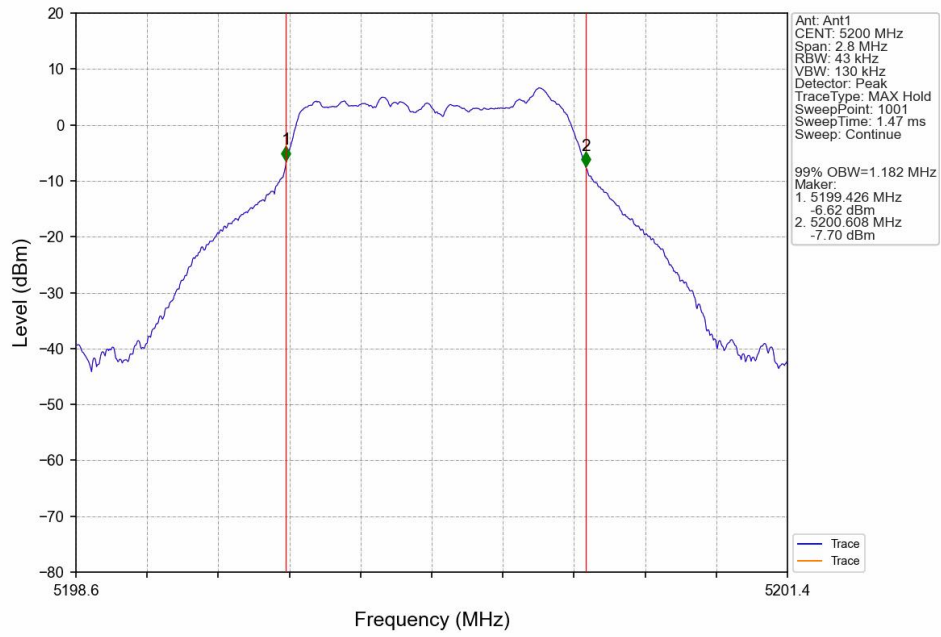
Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)		Verdict
				Result	Limit	
QPSK	MIMO	5154	1	1.561	/	Pass
			2	1.524	/	Pass
		5200	1	1.444	/	Pass
			2	1.490	/	Pass
		5246	1	1.458	/	Pass
			2	1.475	/	Pass
16QAM	MIMO	5154	1	1.443	/	Pass
			2	1.492	/	Pass
		5200	1	1.578	/	Pass
			2	1.569	/	Pass
		5246	1	1.460	/	Pass
			2	1.470	/	Pass

2.2 Test Graph

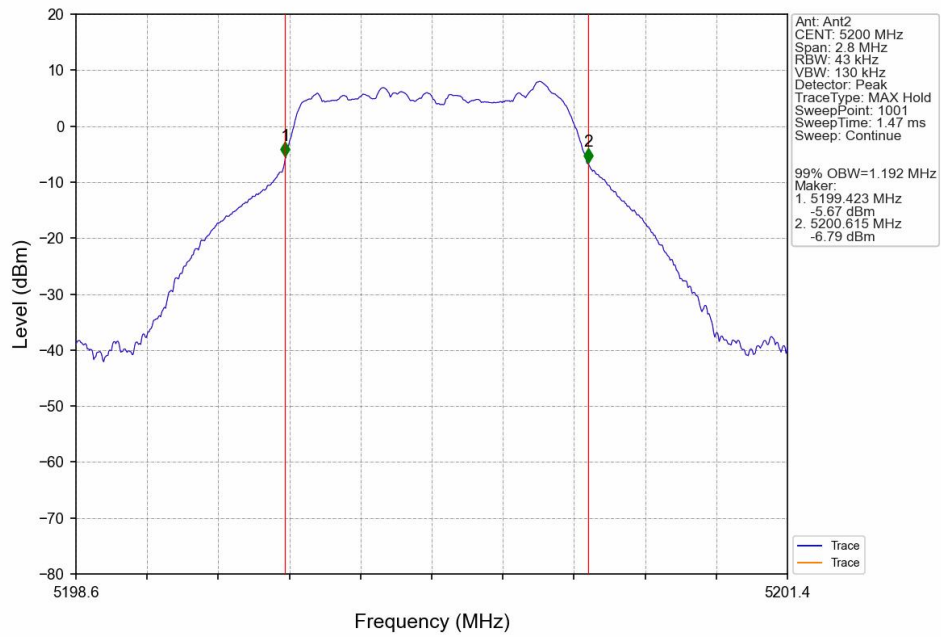
2.2.1 OBW



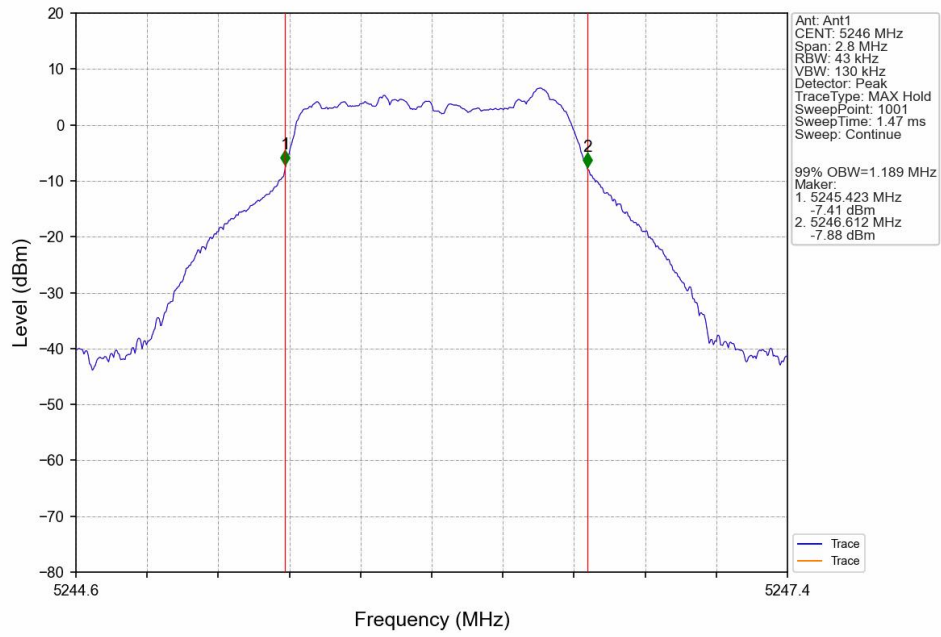
QPSK_MCH_5200MHz_Ant1_NTNV



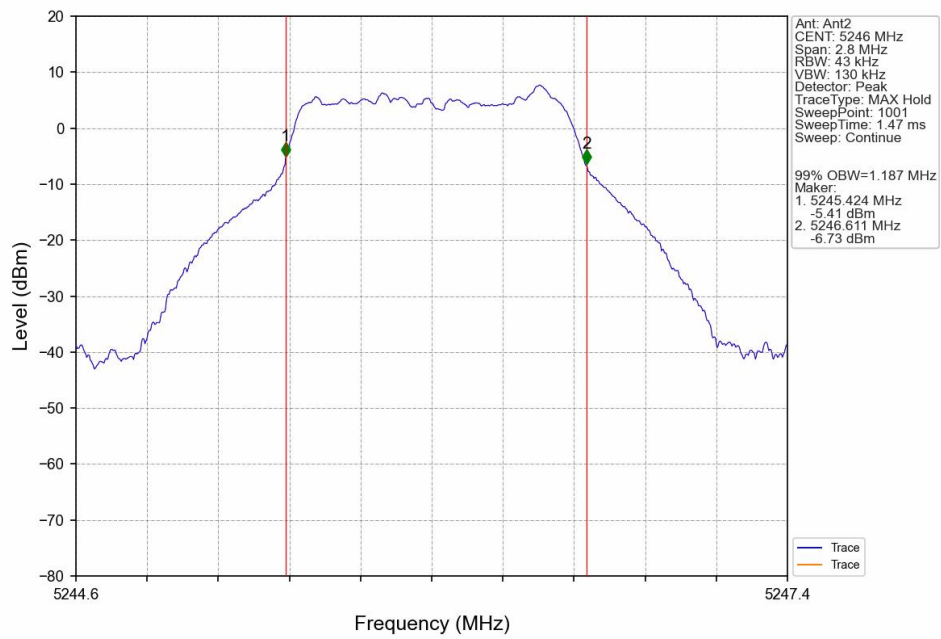
QPSK_MCH_5200MHz_Ant2_NTNV



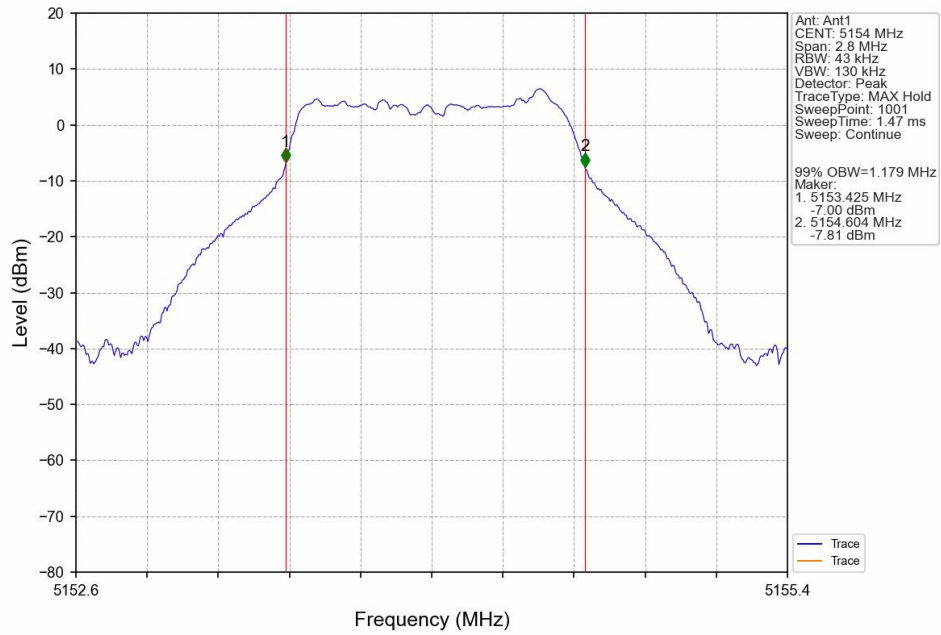
QPSK_HCH_5246MHz_Ant1_NTNV



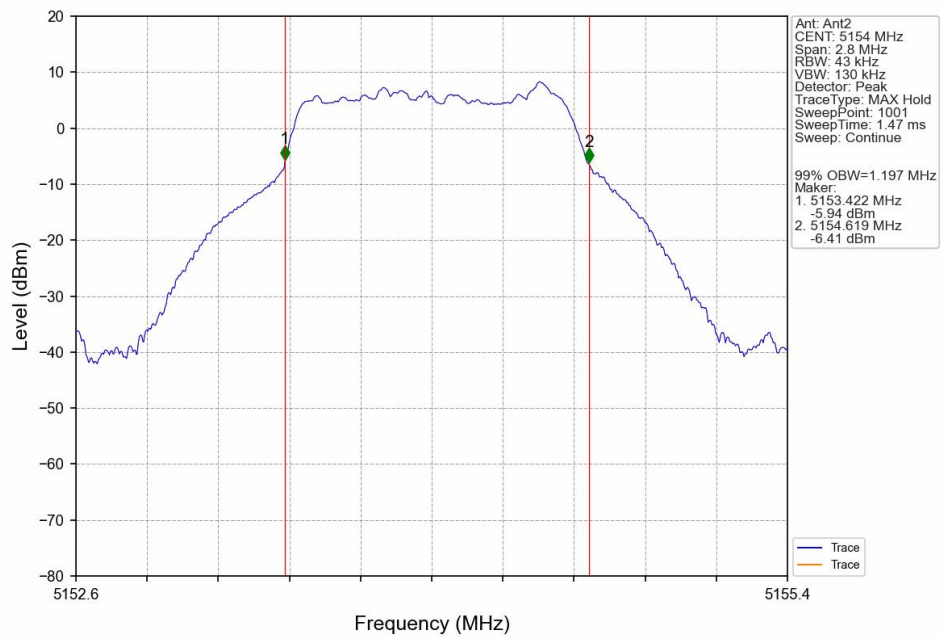
QPSK_HCH_5246MHz_Ant2_NTNV



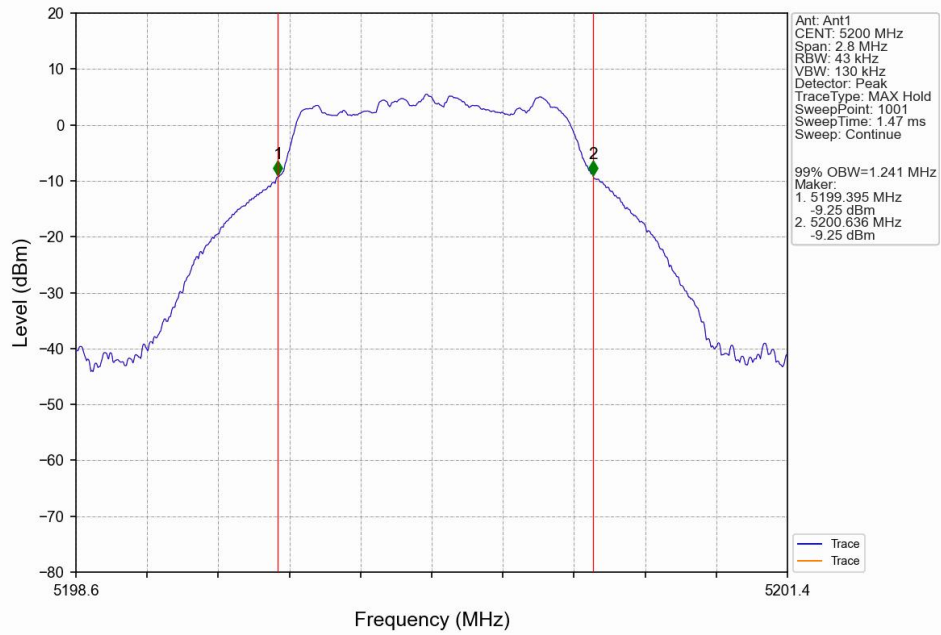
16QAM_LCH_5154MHz_Ant1_NTNV



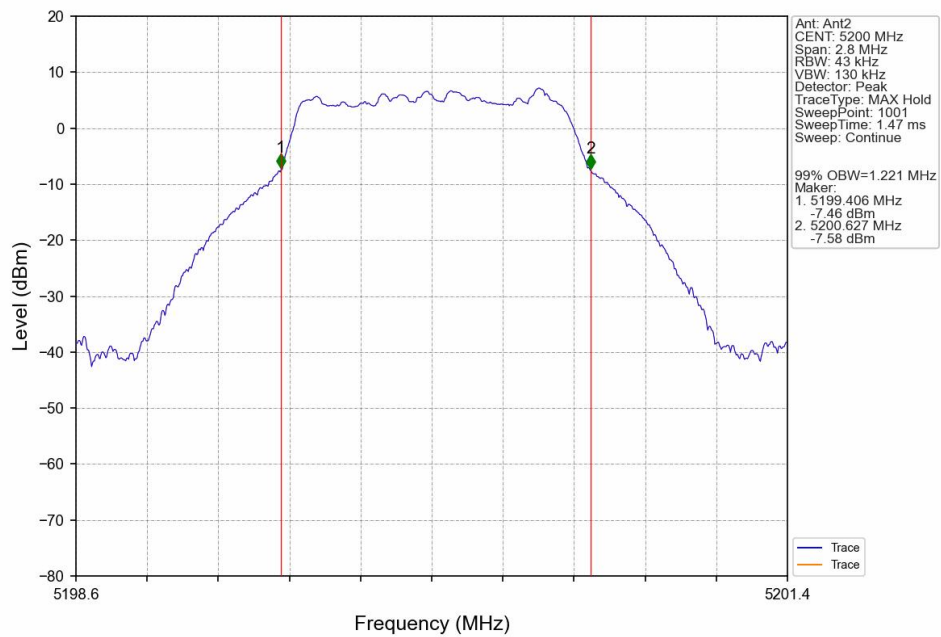
16QAM_LCH_5154MHz_Ant2_NTNV



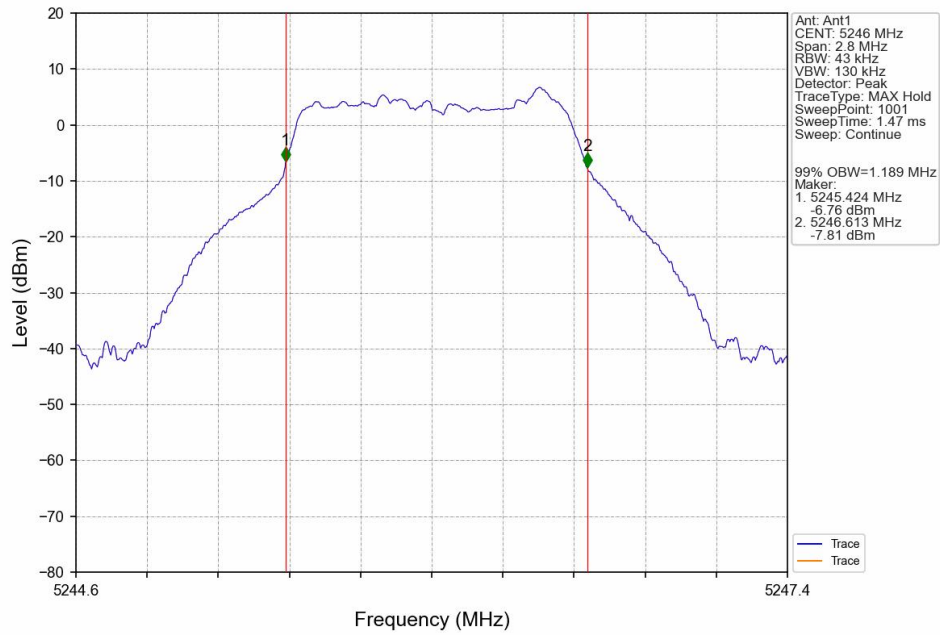
16QAM_MCH_5200MHz_Ant1_NTNV



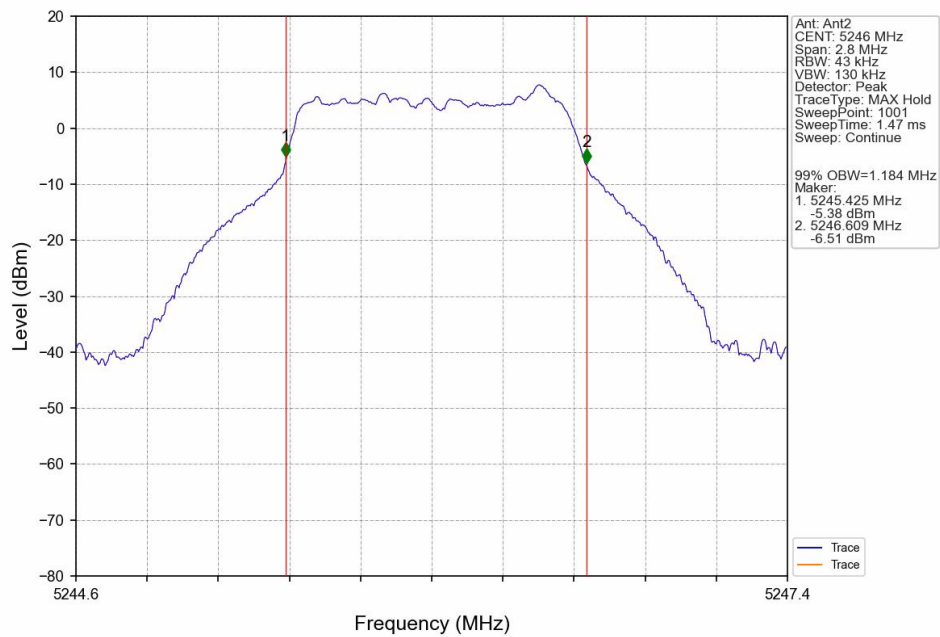
16QAM_MCH_5200MHz_Ant2_NTNV



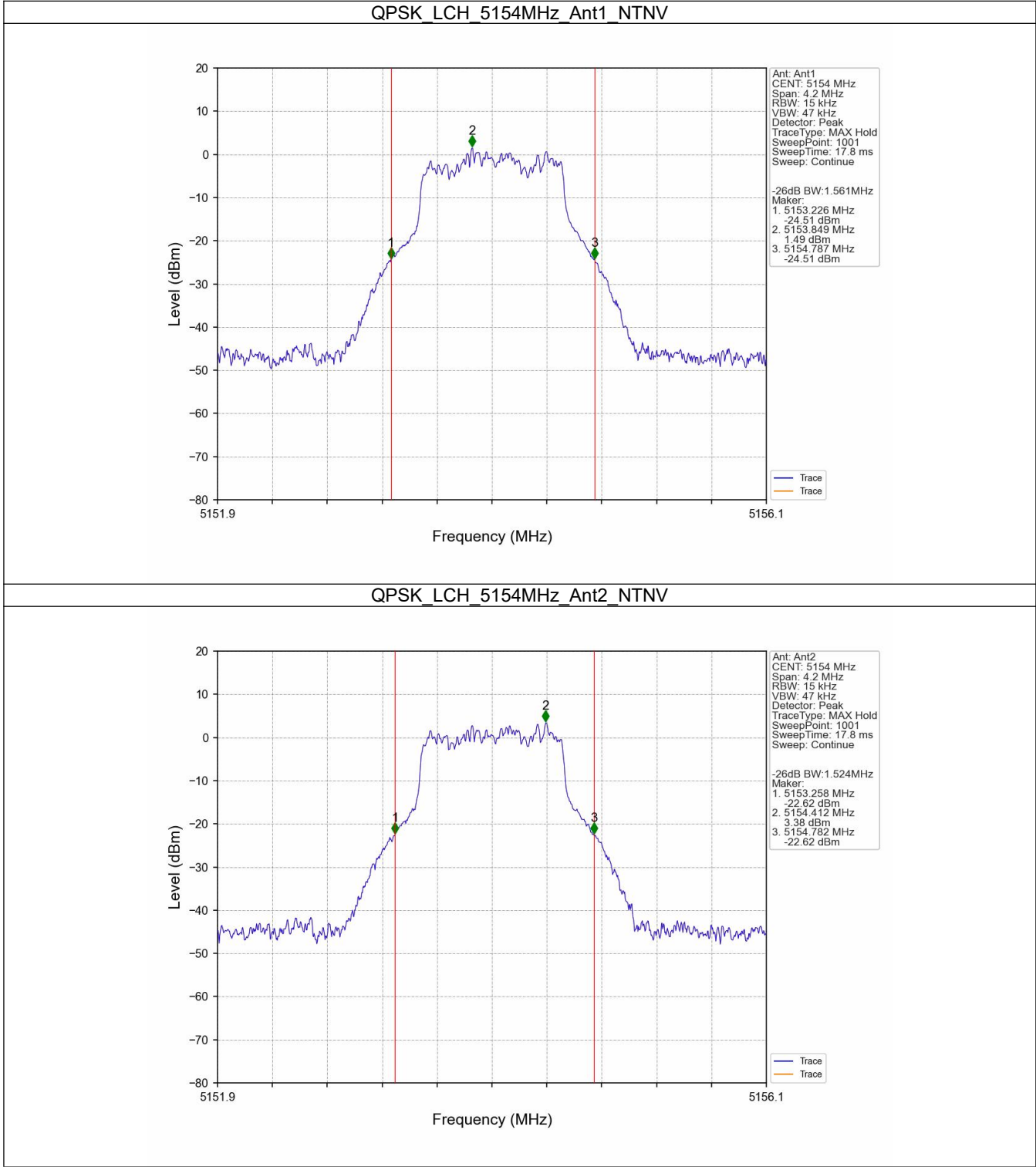
16QAM_HCH_5246MHz_Ant1_NTNV



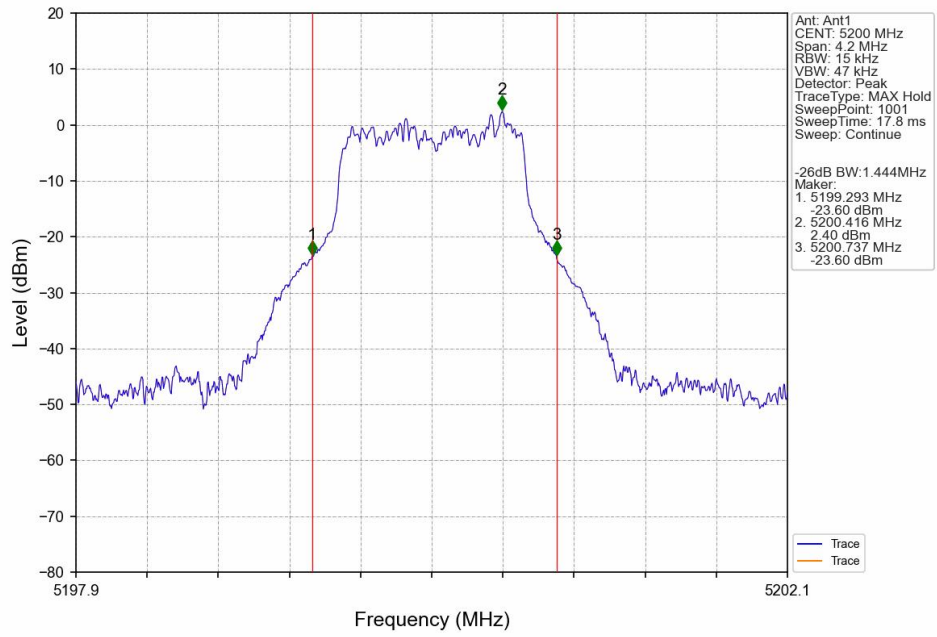
16QAM_HCH_5246MHz_Ant2_NTNV



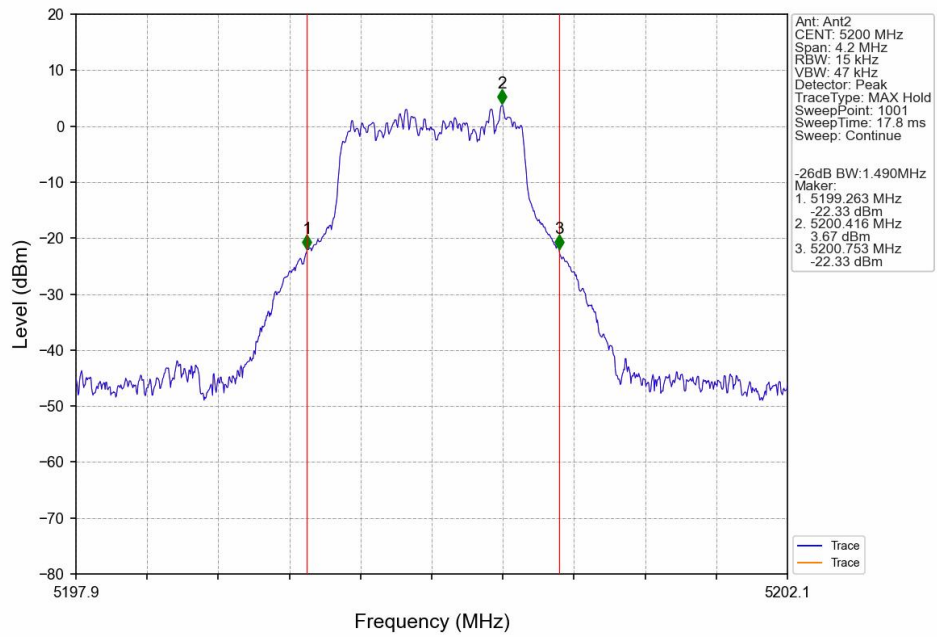
2.2.2 26dB BW



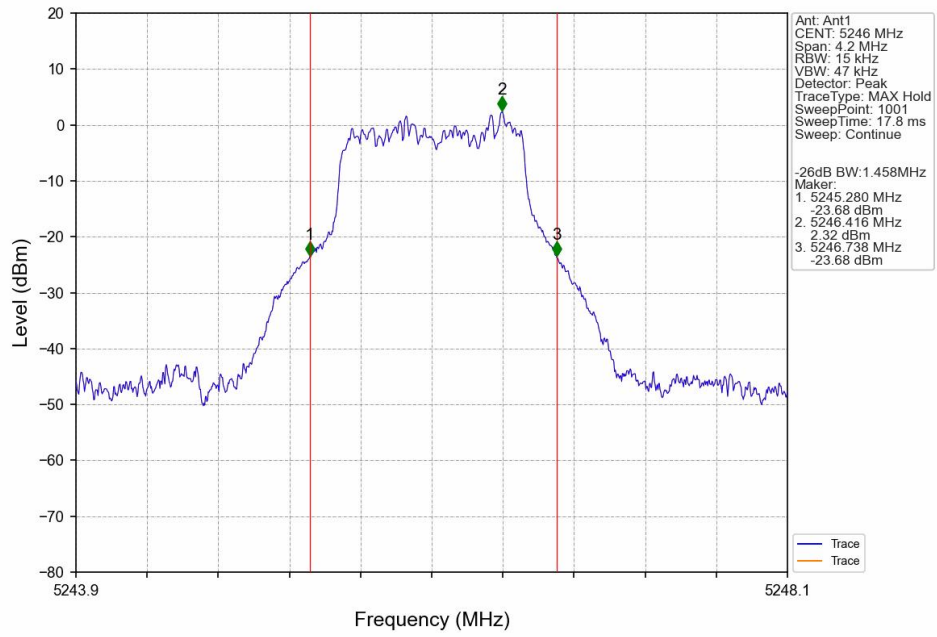
QPSK_MCH_5200MHz_Ant1_NTNV



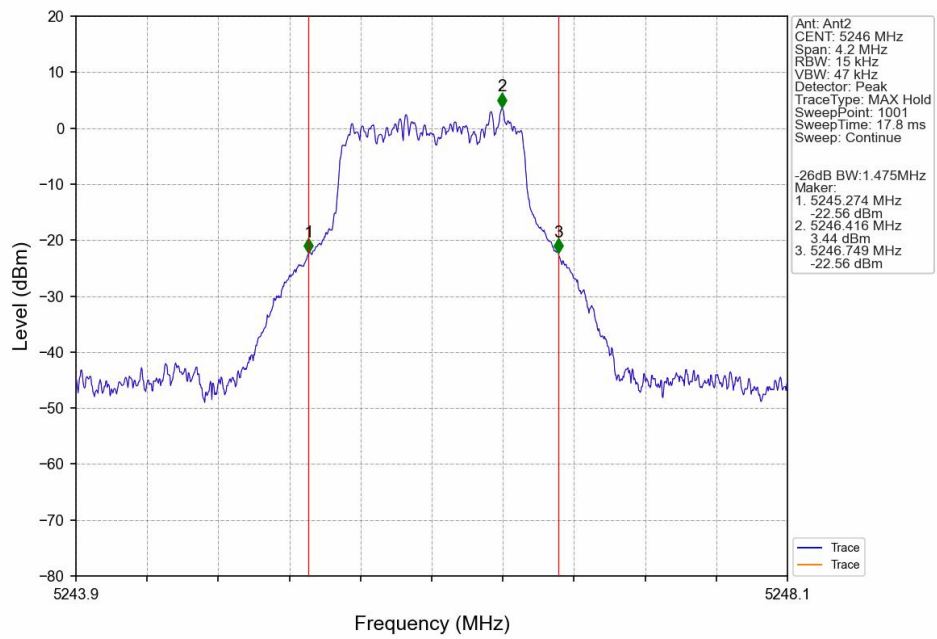
QPSK_MCH_5200MHz_Ant2_NTNV



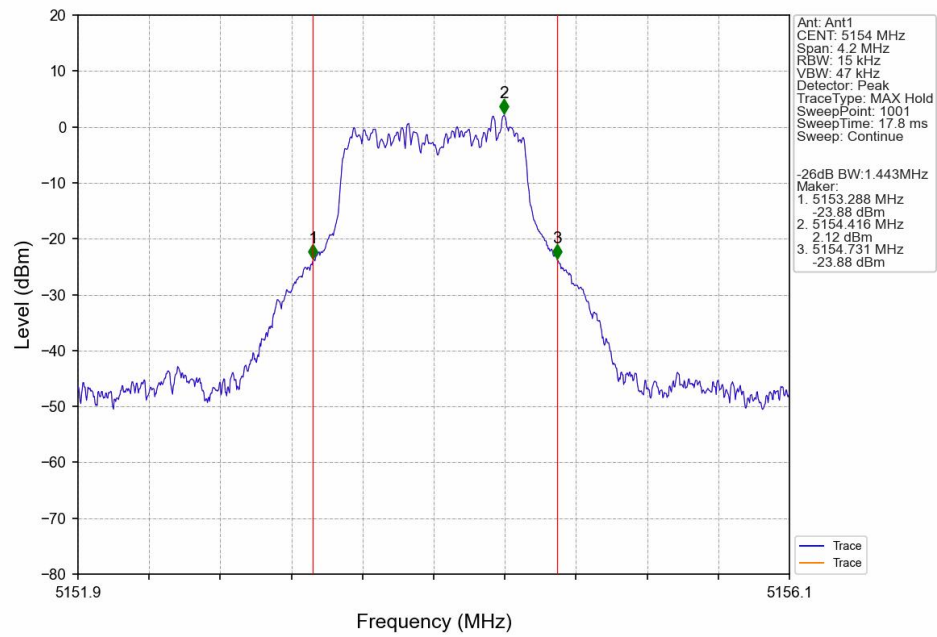
QPSK_HCH_5246MHz_Ant1_NTNV



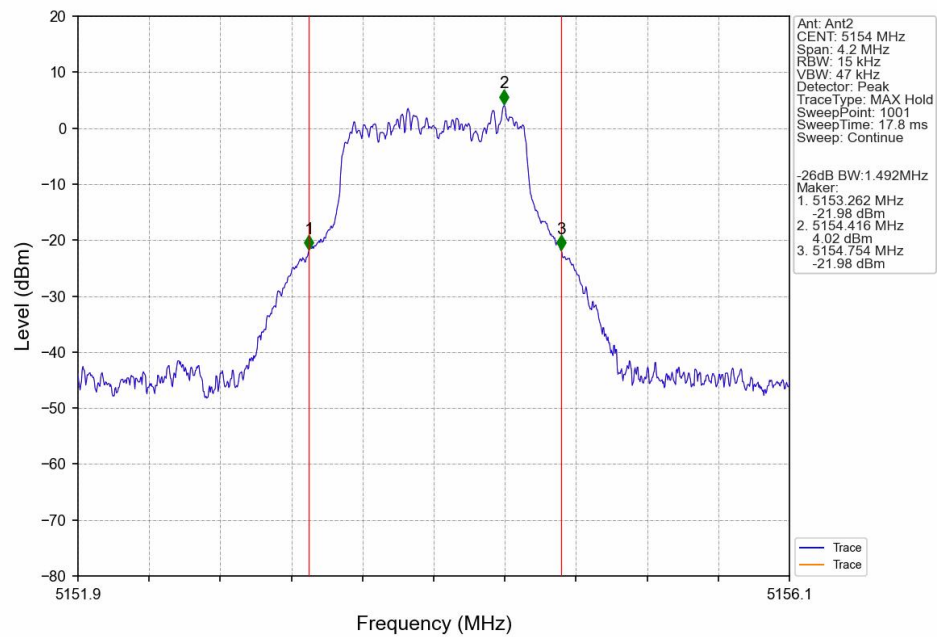
QPSK_HCH_5246MHz_Ant2_NTNV



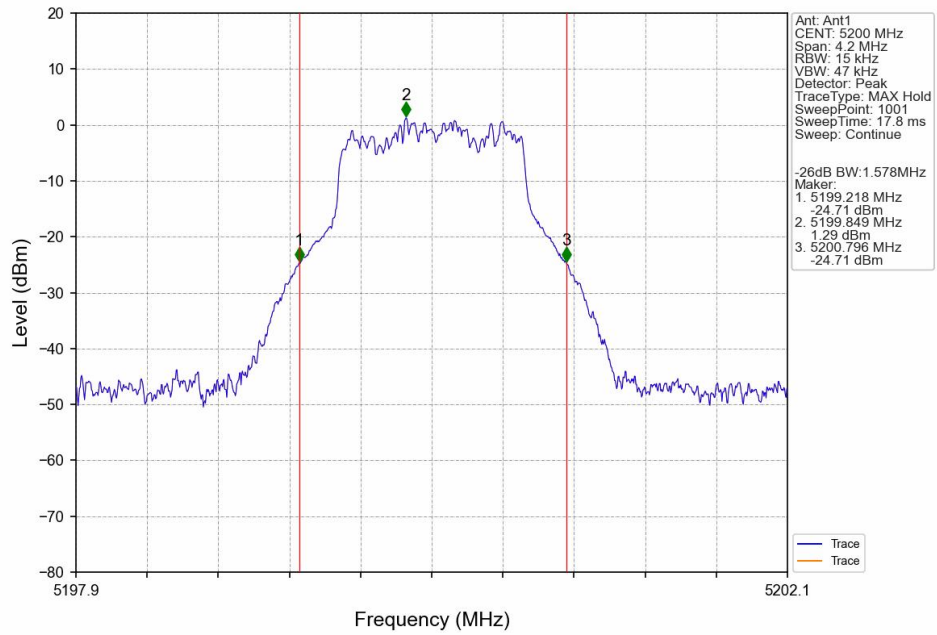
16QAM_LCH_5154MHz_Ant1_NTNV



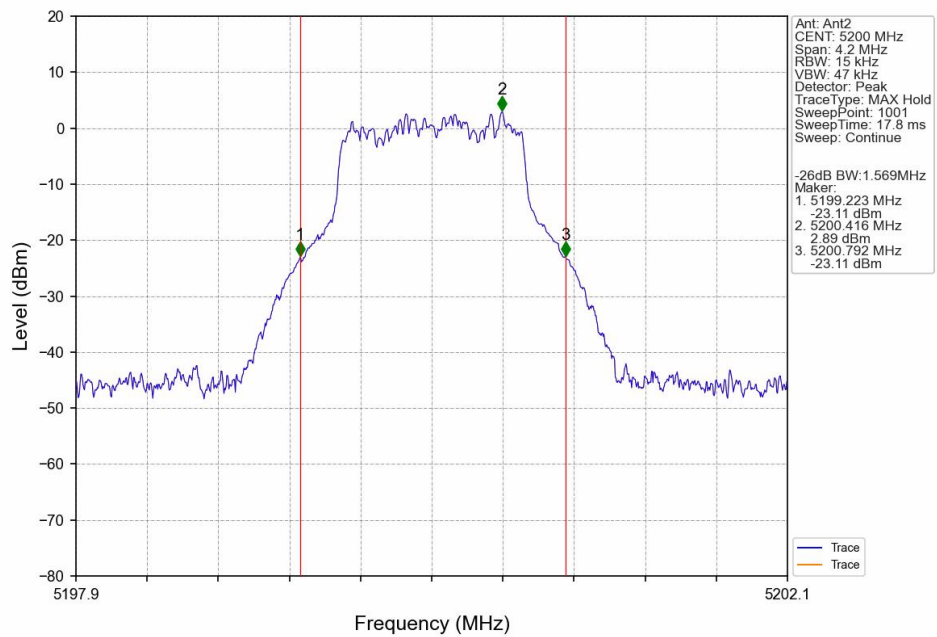
16QAM_LCH_5154MHz_Ant2_NTNV



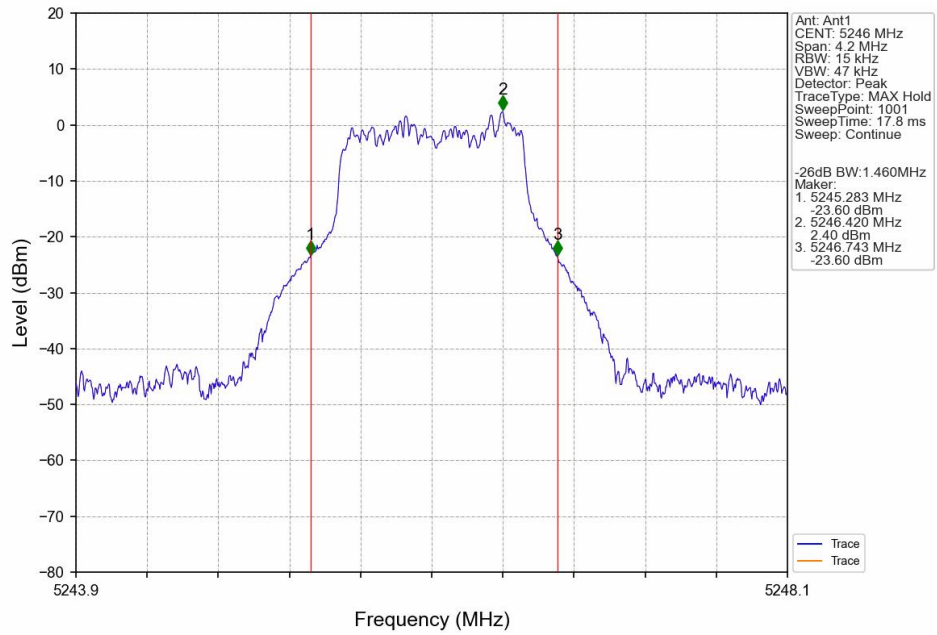
16QAM_MCH_5200MHz_Ant1_NTNV



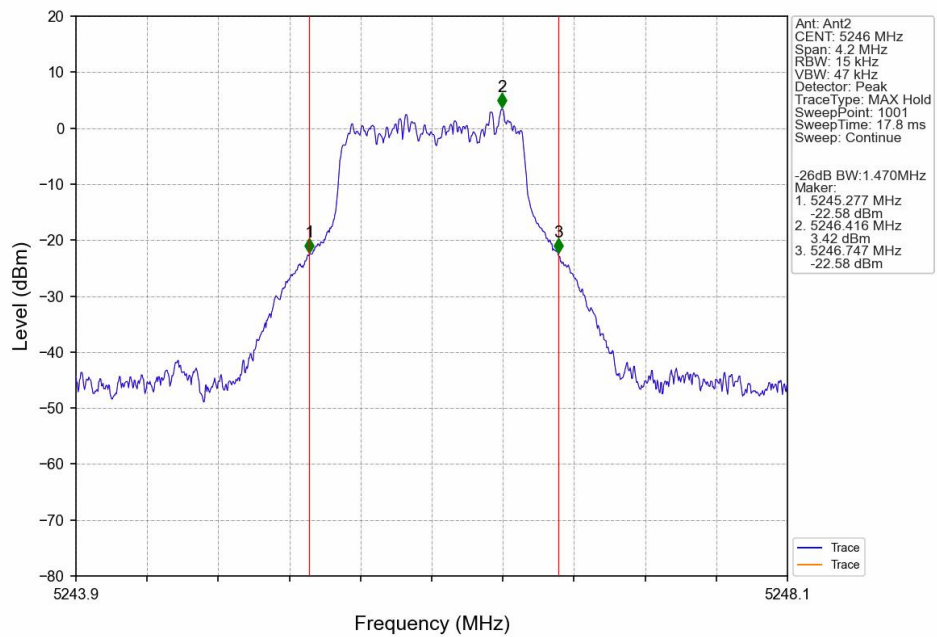
16QAM_MCH_5200MHz_Ant2_NTNV



16QAM_HCH_5246MHz_Ant1_NTNV



16QAM_HCH_5246MHz_Ant2_NTNV



3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)				Verdict
			ANT1	ANT2	MIMO	Limit	
QPSK	MIMO	5154	4.45	7.14	9.01	<=23.47	Pass
		5200	4.10	6.50	8.47	<=23.47	Pass
		5246	4.04	5.85	8.05	<=23.47	Pass
16QAM	MIMO	5154	4.06	6.87	8.70	<=23.47	Pass
		5200	4.12	6.47	8.46	<=23.47	Pass
		5246	3.90	5.74	7.93	<=23.47	Pass
Note1: Antenna Gain: Ant1: 3.50dBi; Ant2: 3.50dBi; Note2: Directional Gain: Band1: 6.51dBi							

4. Maximum Power Spectral Density

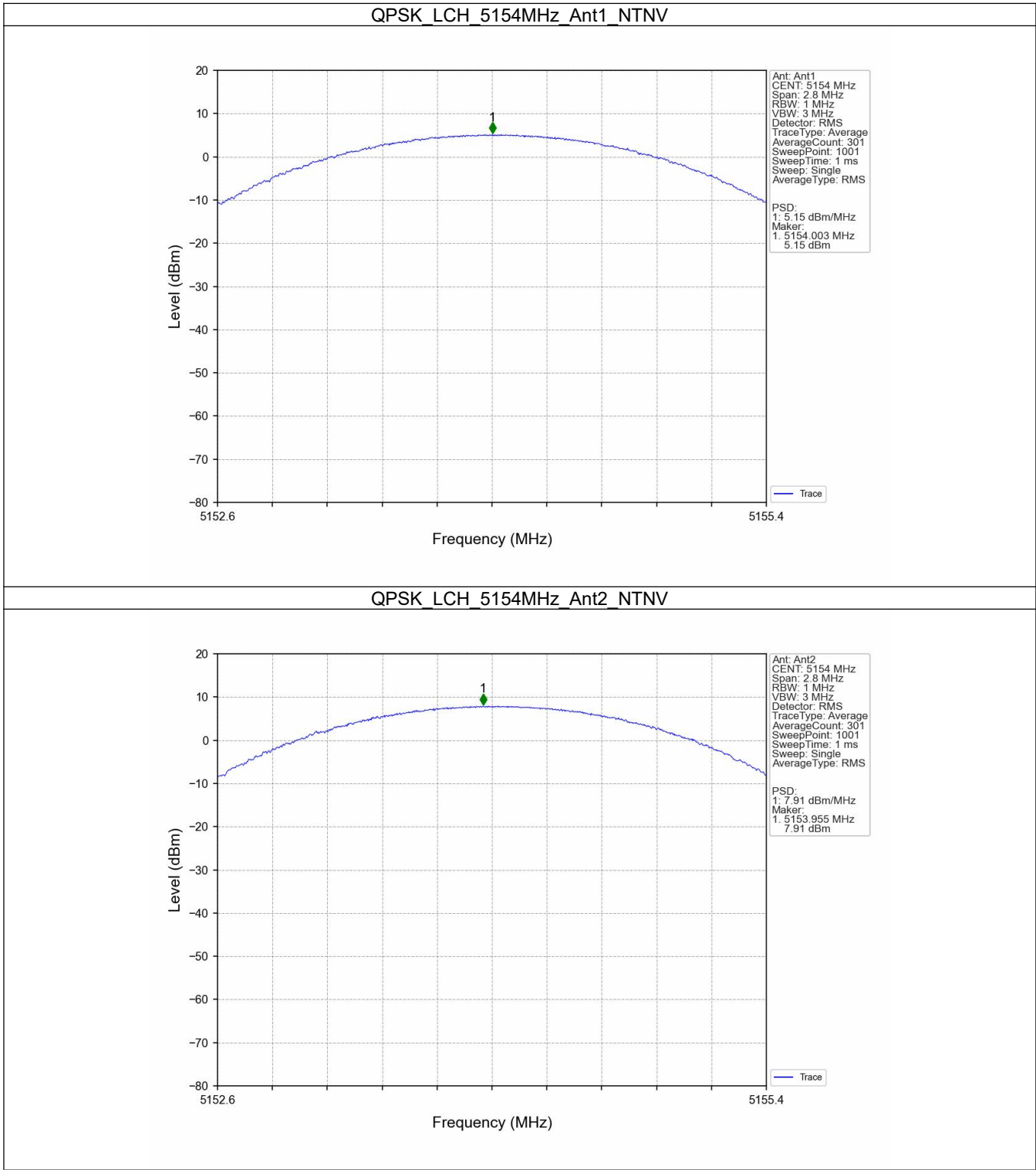
4.1 Test Result

4.1.1 PSD

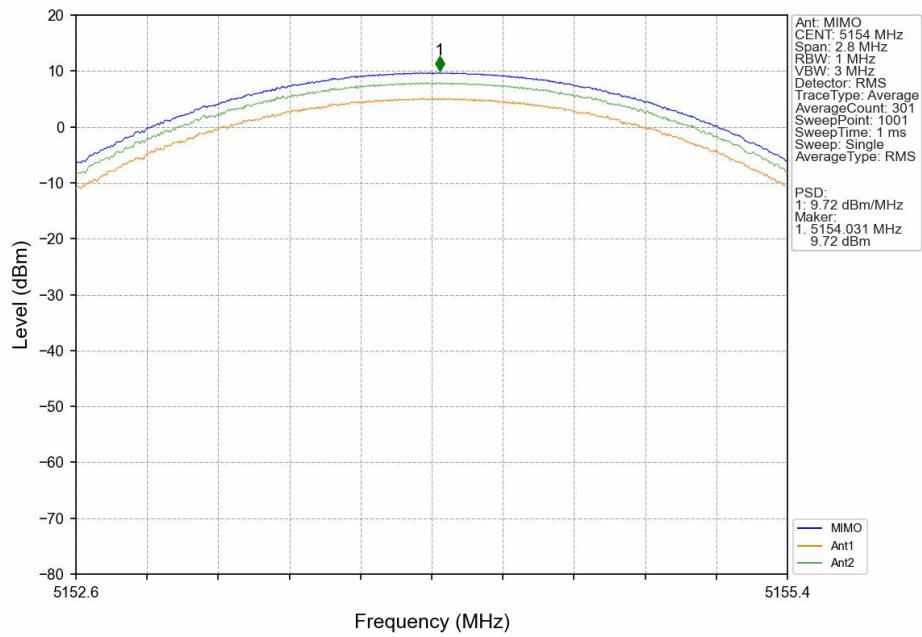
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/MHz)				Verdict
			ANT1	ANT2	MIMO	Limit	
QPSK	MIMO	5154	5.15	7.91	9.72	<=10.49	Pass
		5200	5.04	7.40	9.36	<=10.49	Pass
		5246	4.91	6.74	8.86	<=10.49	Pass
16QAM	MIMO	5154	4.96	7.77	9.55	<=10.49	Pass
		5200	4.91	7.32	9.21	<=10.49	Pass
		5246	4.83	6.58	8.70	<=10.49	Pass
Note1: Antenna Gain: Ant1: 3.50dBi; Ant2: 3.50dBi; Note2: Directional Gain: Band1: 6.51dBi							

4.2 Test Graph

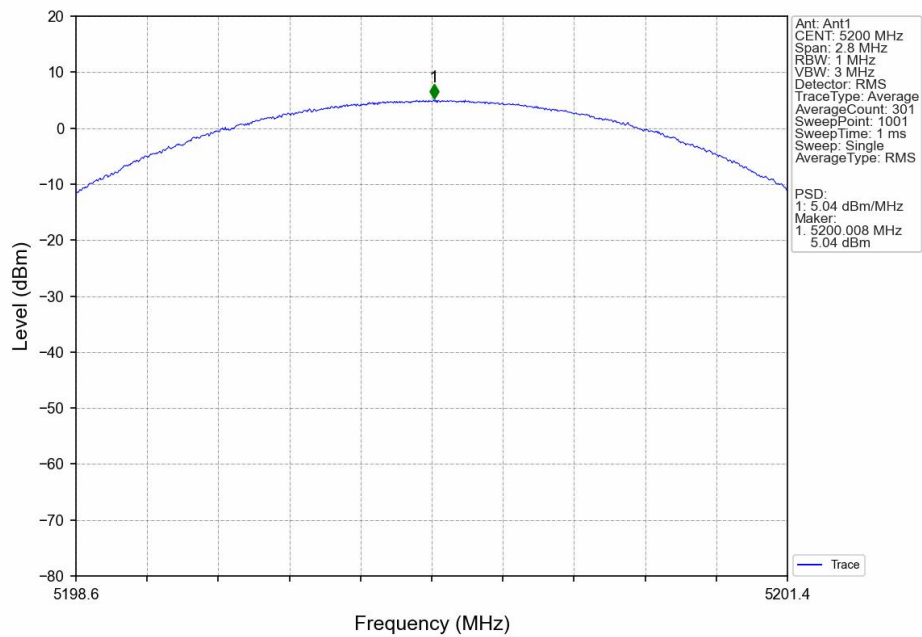
4.2.1 PSD



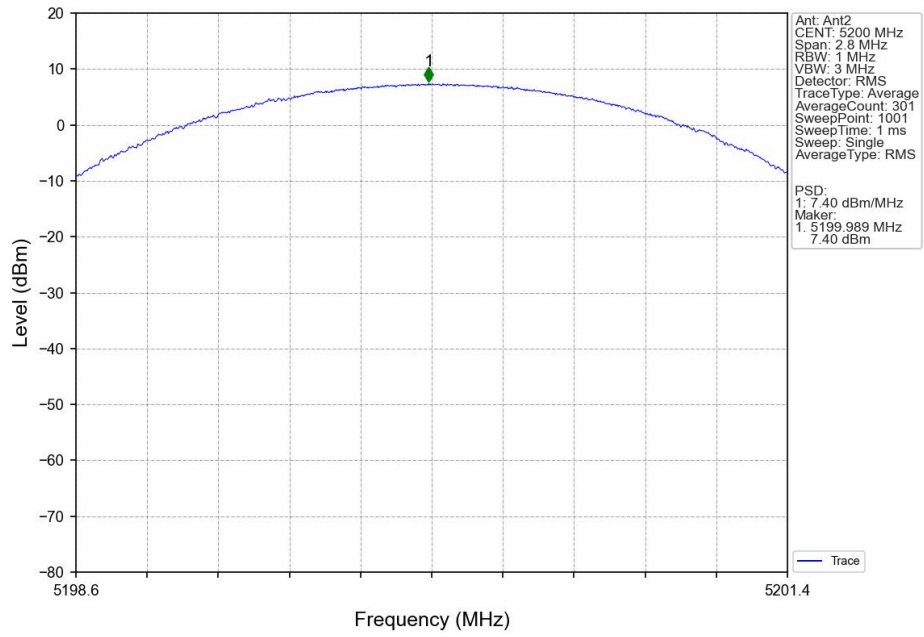
QPSK_LCH_5154MHz_MIMO_NTNV



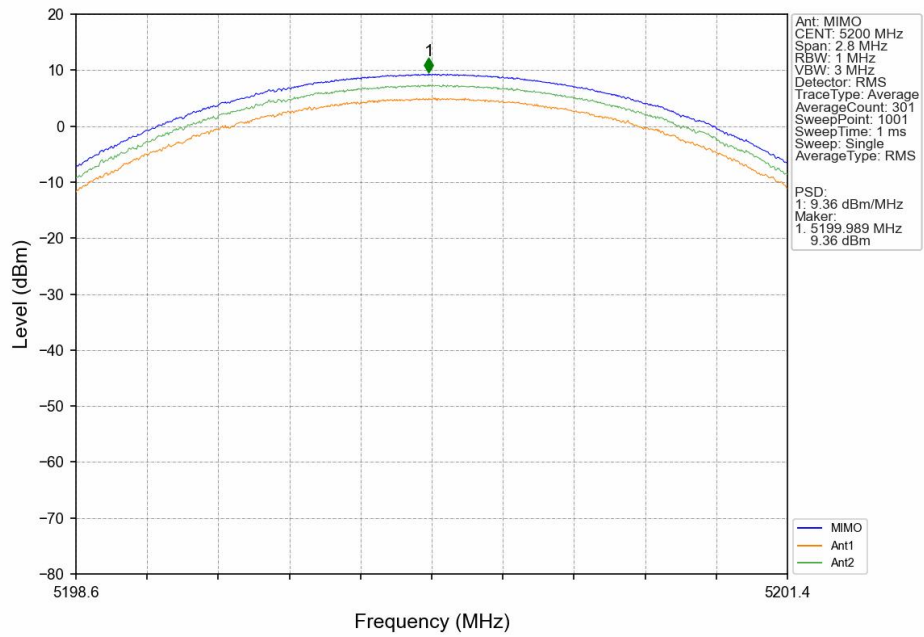
QPSK_MCH_5200MHz_Ant1_NTNV



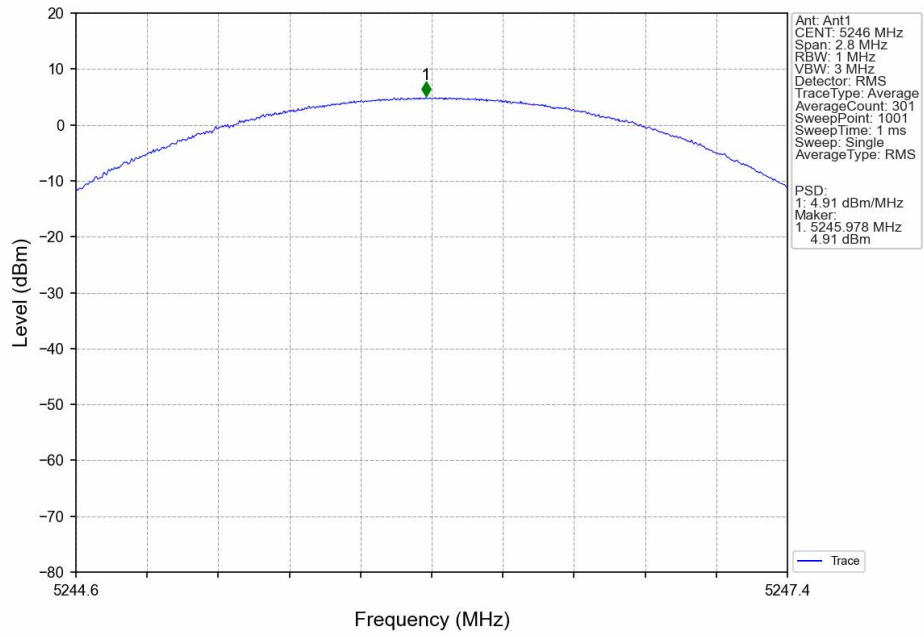
QPSK_MCH_5200MHz_Ant2_NTNV



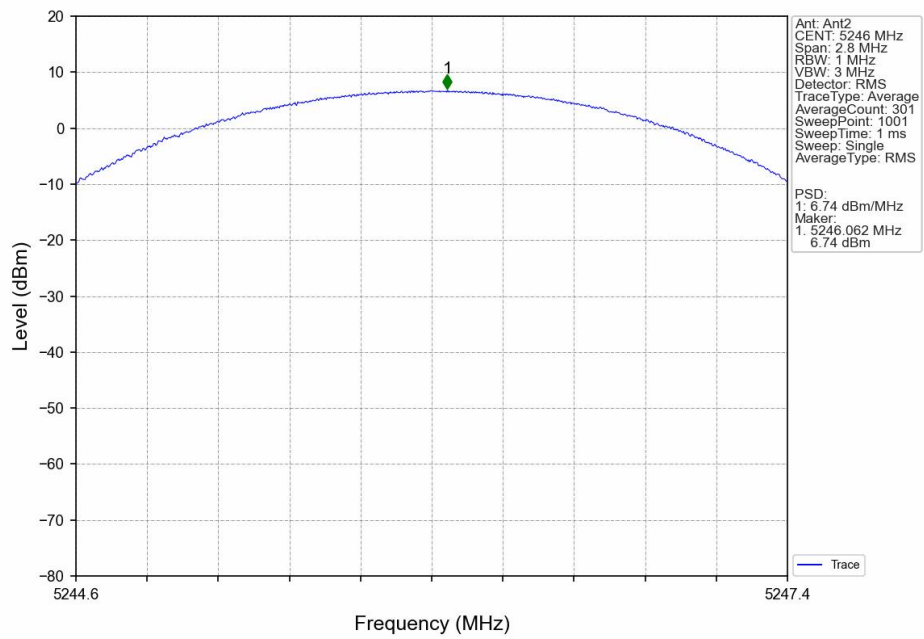
QPSK_MCH_5200MHz_MIMO_NTNV



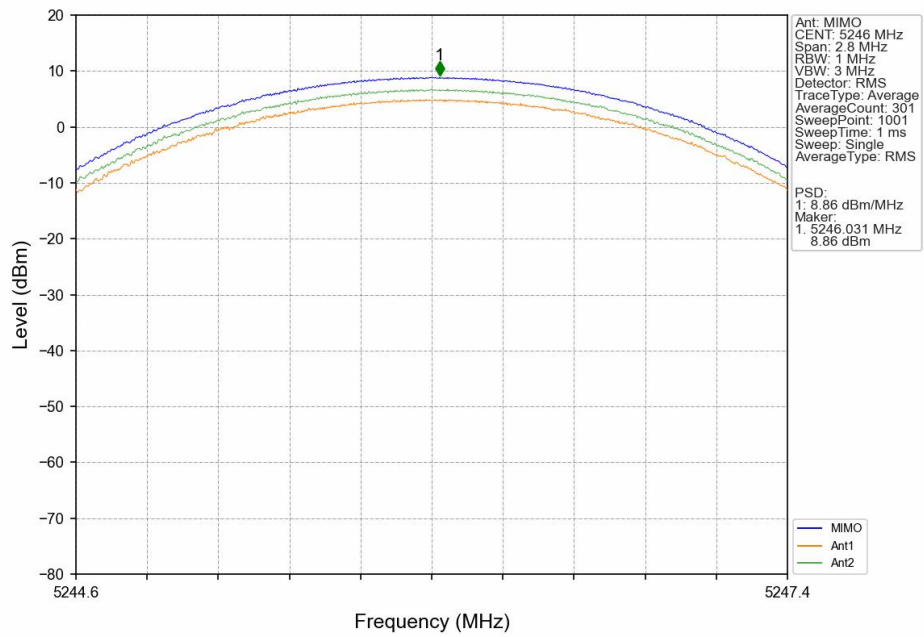
QPSK_HCH_5246MHz_Ant1_NTNV



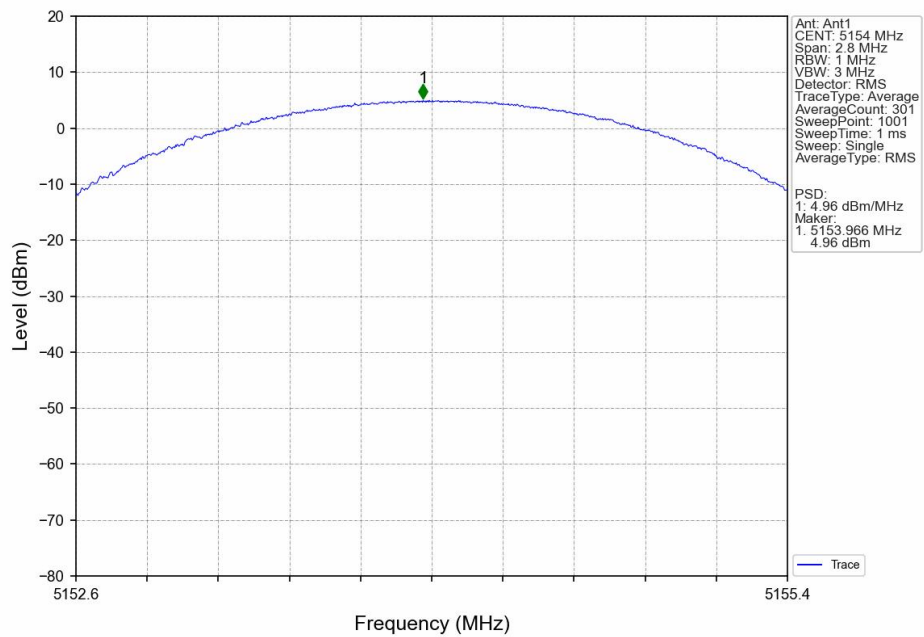
QPSK_HCH_5246MHz_Ant2_NTNV



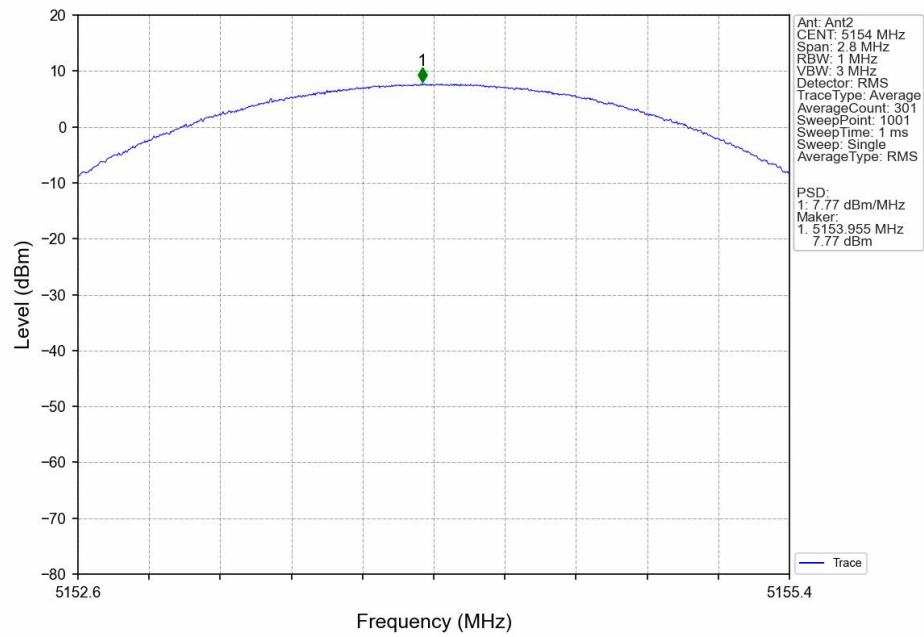
QPSK_HCH_5246MHz_MIMO_NTNV



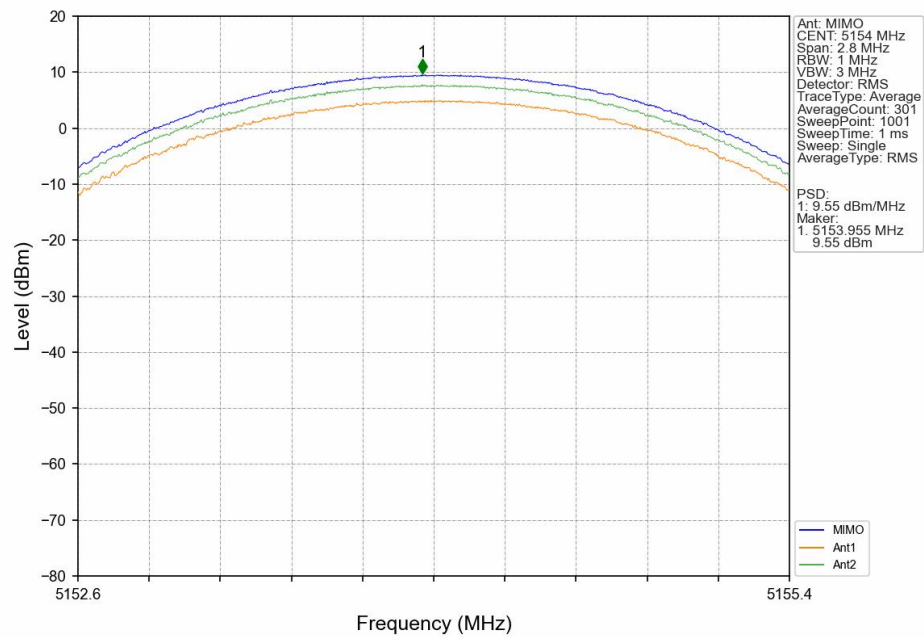
16QAM_LCH_5154MHz_Ant1_NTNV



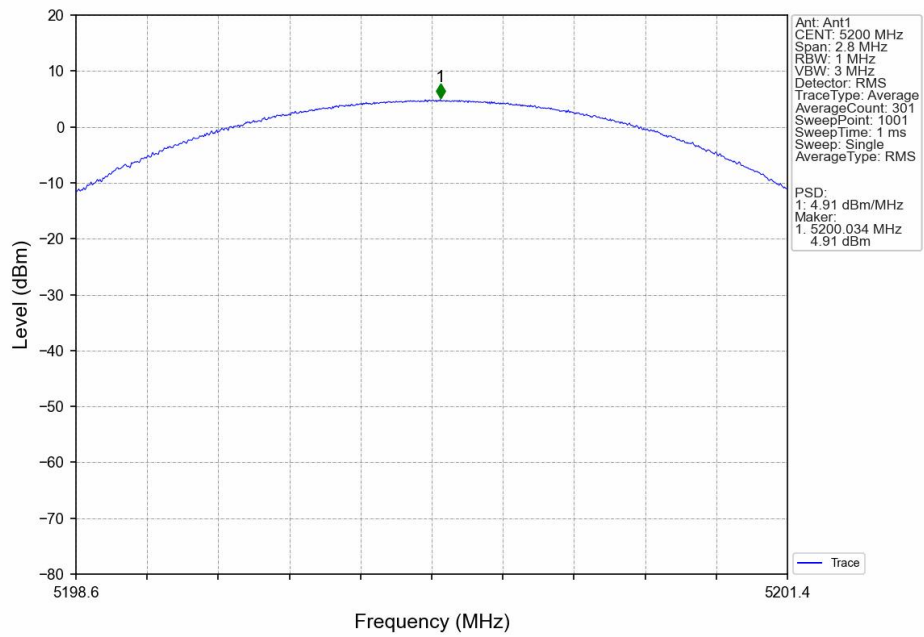
16QAM_LCH_5154MHz_Ant2_NTNV



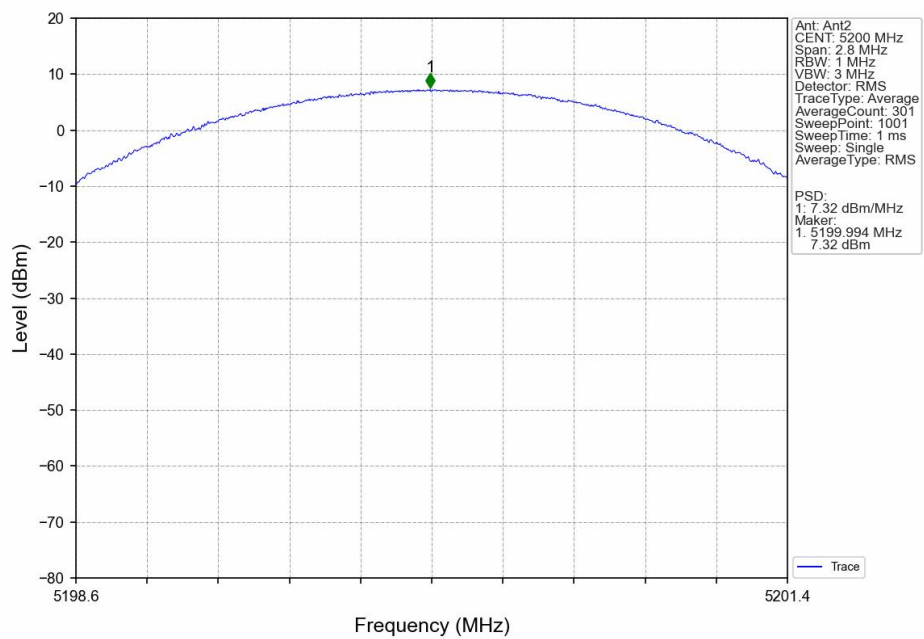
16QAM_LCH_5154MHz_MIMO_NTNV



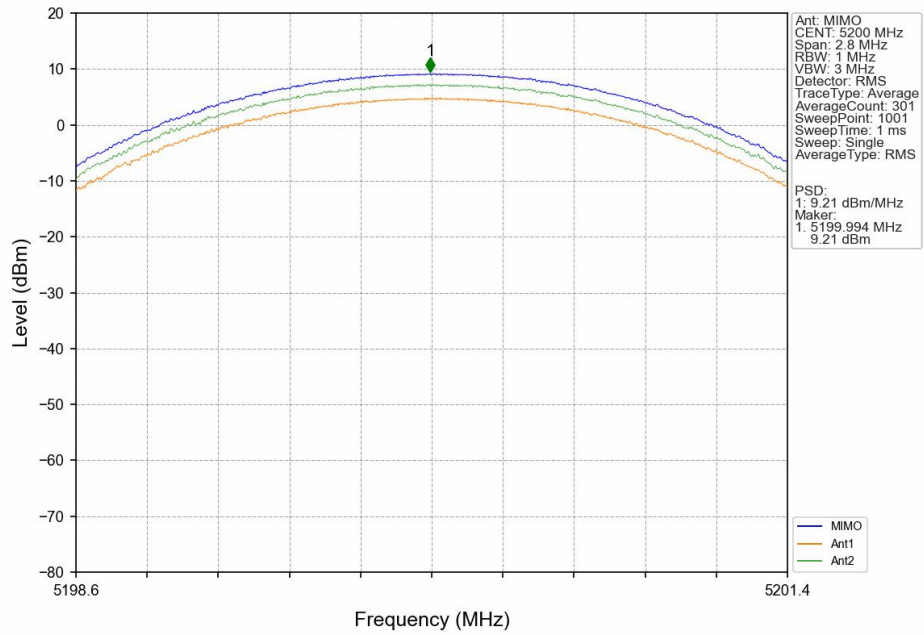
16QAM_MCH_5200MHz_Ant1_NTNV



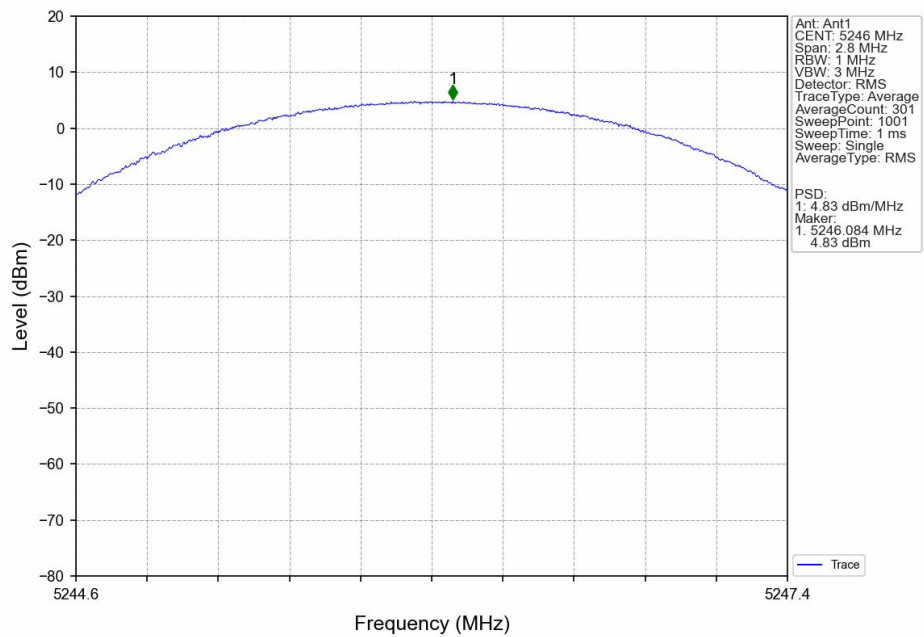
16QAM_MCH_5200MHz_Ant2_NTNV



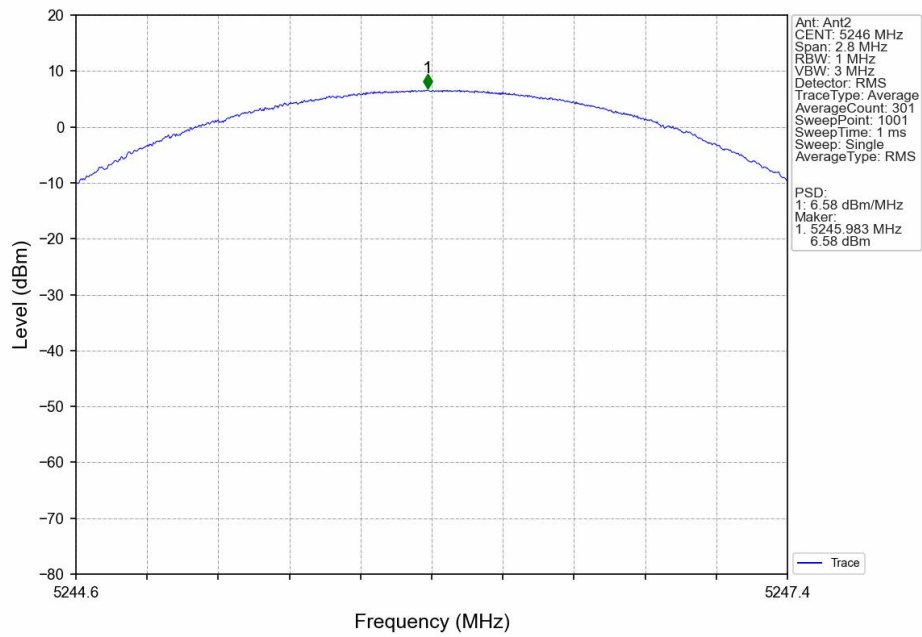
16QAM_MCH_5200MHz_MIMO_NTNV



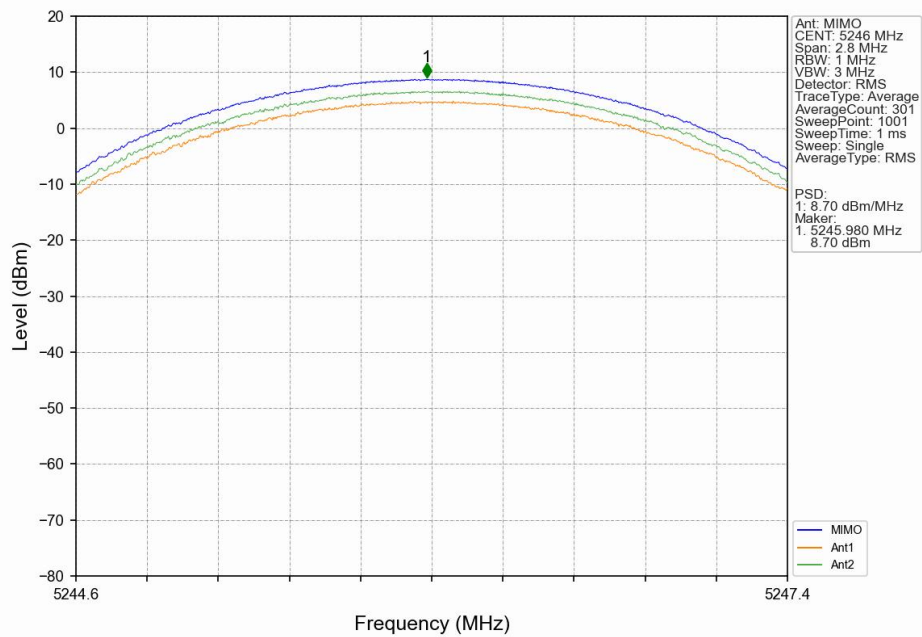
16QAM_HCH_5246MHz_Ant1_NTNV



16QAM_HCH_5246MHz_Ant2_NTNV



16QAM_HCH_5246MHz_MIMO_NTNV



5. Frequency Stability

5.1 Test Result

5.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	Temperature (°C)	Voltage (VAC)	Measured Frequency (MHz)	Limit (MHz)	Verdict
QPSK	MIMO	5154	20	102	5154.015	5150 to 5250	Pass
				120	5154.015	5150 to 5250	Pass
				138	5154.014	5150 to 5250	Pass
			-30	120	5154.014	5150 to 5250	Pass
			-20	120	5154.015	5150 to 5250	Pass
			-10	120	5154.014	5150 to 5250	Pass
			0	120	5154.014	5150 to 5250	Pass
			10	120	5154.010	5150 to 5250	Pass
			30	120	5154.014	5150 to 5250	Pass
			40	120	5154.018	5150 to 5250	Pass
			50	120	5154.017	5150 to 5250	Pass
		5200	20	102	5200.017	5150 to 5250	Pass
				120	5200.014	5150 to 5250	Pass
				138	5200.017	5150 to 5250	Pass
			-30	120	5200.017	5150 to 5250	Pass
			-20	120	5200.014	5150 to 5250	Pass
			-10	120	5200.015	5150 to 5250	Pass
			0	120	5200.010	5150 to 5250	Pass
			10	120	5200.015	5150 to 5250	Pass
			30	120	5200.008	5150 to 5250	Pass
			40	120	5200.017	5150 to 5250	Pass
			50	120	5200.015	5150 to 5250	Pass
		5246	20	102	5246.013	5150 to 5250	Pass
				120	5246.018	5150 to 5250	Pass
				138	5246.014	5150 to 5250	Pass
			-30	120	5246.015	5150 to 5250	Pass
			-20	120	5246.015	5150 to 5250	Pass
			-10	120	5246.014	5150 to 5250	Pass
			0	120	5246.017	5150 to 5250	Pass
			10	120	5246.014	5150 to 5250	Pass
			30	120	5246.011	5150 to 5250	Pass
			40	120	5246.014	5150 to 5250	Pass
			50	120	5246.018	5150 to 5250	Pass
16QAM	MIMO	5154	20	102	5154.018	5150 to 5250	Pass
				120	5154.014	5150 to 5250	Pass
				138	5154.014	5150 to 5250	Pass
			-30	120	5154.017	5150 to 5250	Pass
			-20	120	5154.010	5150 to 5250	Pass
			-10	120	5154.010	5150 to 5250	Pass
			0	120	5154.017	5150 to 5250	Pass
			10	120	5154.015	5150 to 5250	Pass
			30	120	5154.010	5150 to 5250	Pass
			40	120	5154.008	5150 to 5250	Pass
			50	120	5154.013	5150 to 5250	Pass
		5200	20	102	5200.015	5150 to 5250	Pass
				120	5200.010	5150 to 5250	Pass

				138	5200.015	5150 to 5250	Pass
			-30	120	5200.011	5150 to 5250	Pass
			-20	120	5200.014	5150 to 5250	Pass
			-10	120	5200.010	5150 to 5250	Pass
			0	120	5200.011	5150 to 5250	Pass
			10	120	5200.010	5150 to 5250	Pass
			30	120	5200.014	5150 to 5250	Pass
			40	120	5200.011	5150 to 5250	Pass
			50	120	5200.013	5150 to 5250	Pass
		5246	20	102	5246.015	5150 to 5250	Pass
				120	5246.013	5150 to 5250	Pass
				138	5246.015	5150 to 5250	Pass
			-30	120	5246.014	5150 to 5250	Pass
			-20	120	5246.015	5150 to 5250	Pass
			-10	120	5246.017	5150 to 5250	Pass
			0	120	5246.017	5150 to 5250	Pass
			10	120	5246.015	5150 to 5250	Pass
			30	120	5246.013	5150 to 5250	Pass
			40	120	5246.014	5150 to 5250	Pass
			50	120	5246.013	5150 to 5250	Pass

6. Form731

6.1 Test Result

6.1.1 Form731

Lower Freq (MHz)	High Freq (MHz)	MAX Power (W)	MAX Power (dBm)
5154	5246	0.0080	9.01