

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

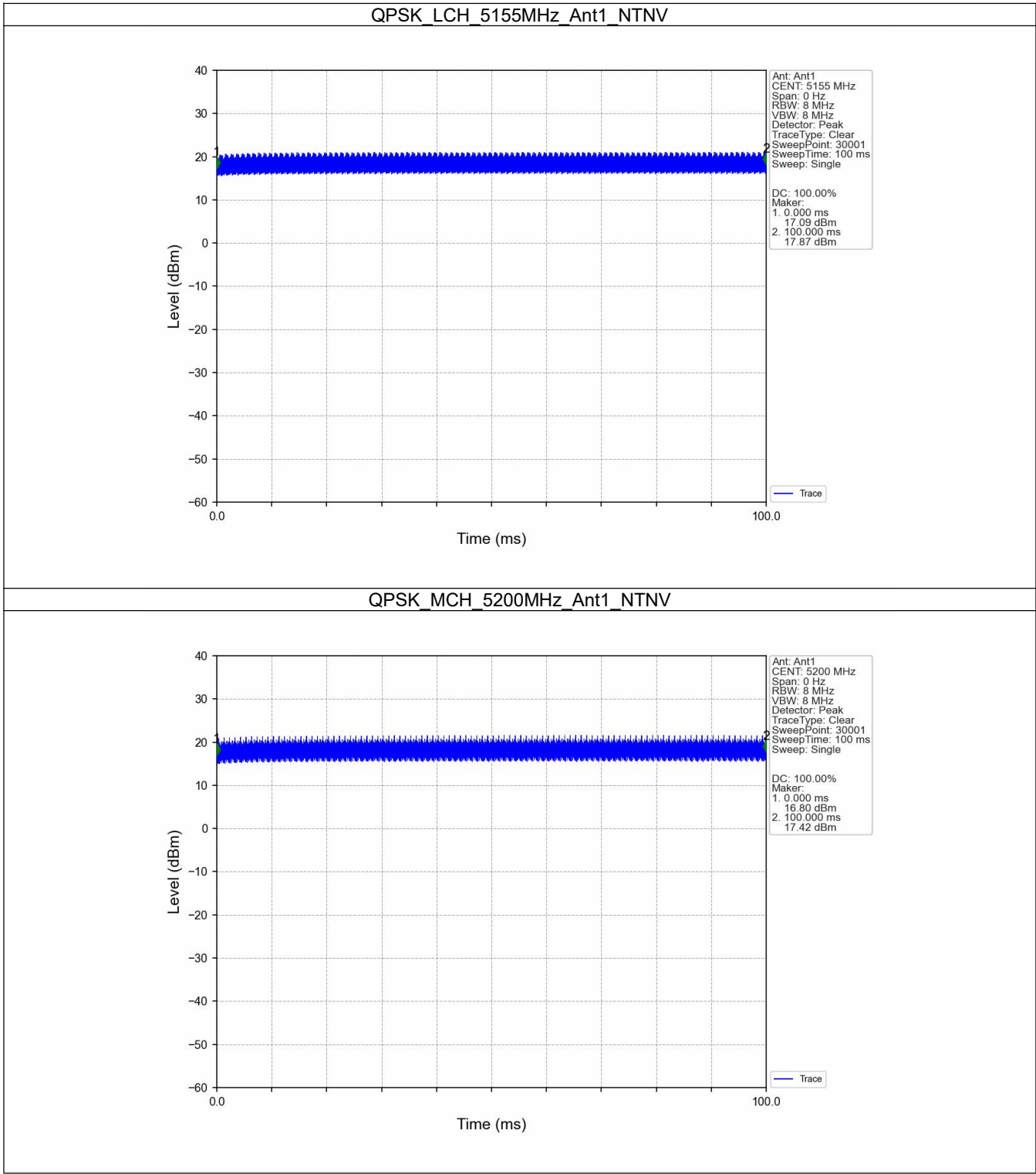
1.1 Test Result

1.1.1 Ant1

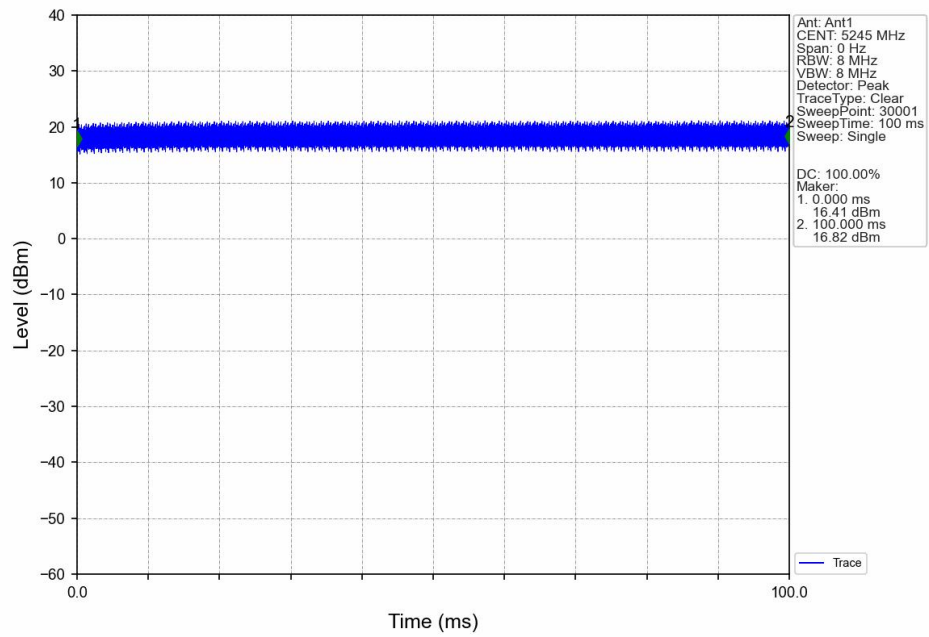
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
QPSK	MIMO	5155	100.000	100.000	100.00	0.00	0.00
		5200	100.000	100.000	100.00	0.00	0.00
		5245	100.000	100.000	100.00	0.00	0.00
16QAM	MIMO	5155	100.000	100.000	100.00	0.00	0.00
		5200	100.000	100.000	100.00	0.00	0.00
		5245	100.000	100.000	100.00	0.00	0.00

1.2 Test Graph

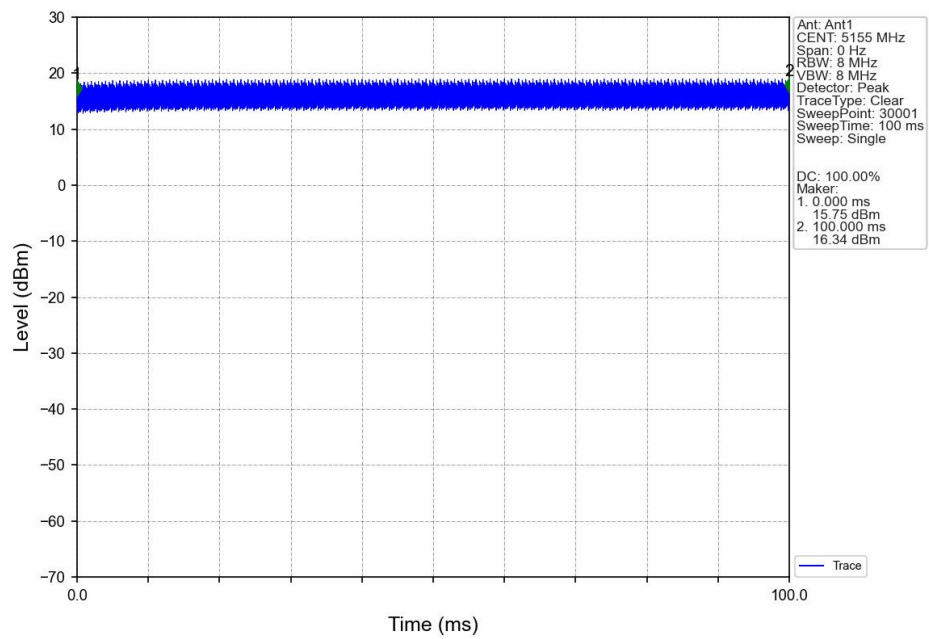
1.2.1 Ant1



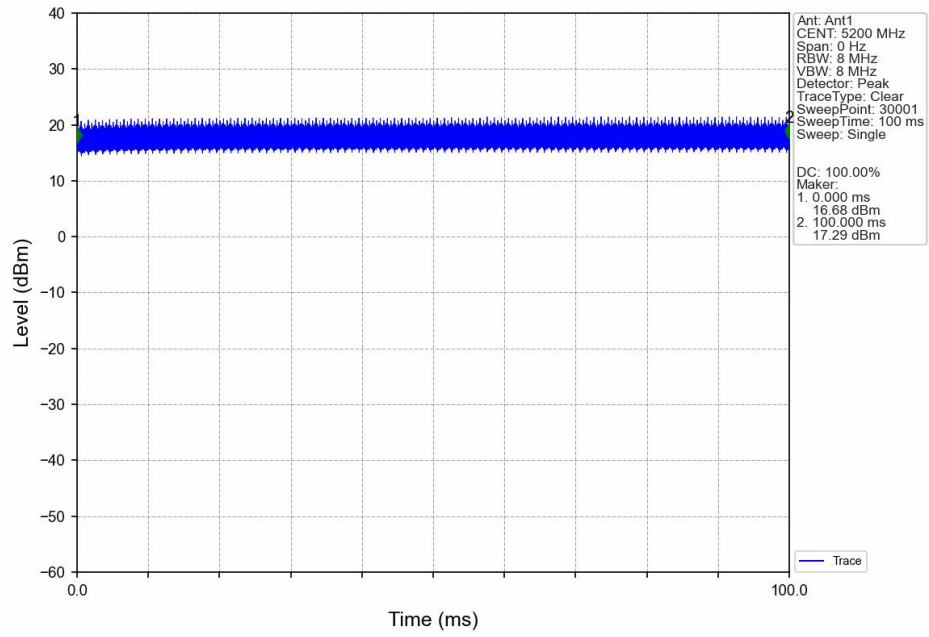
QPSK_HCH_5245MHz_Ant1_NTNV



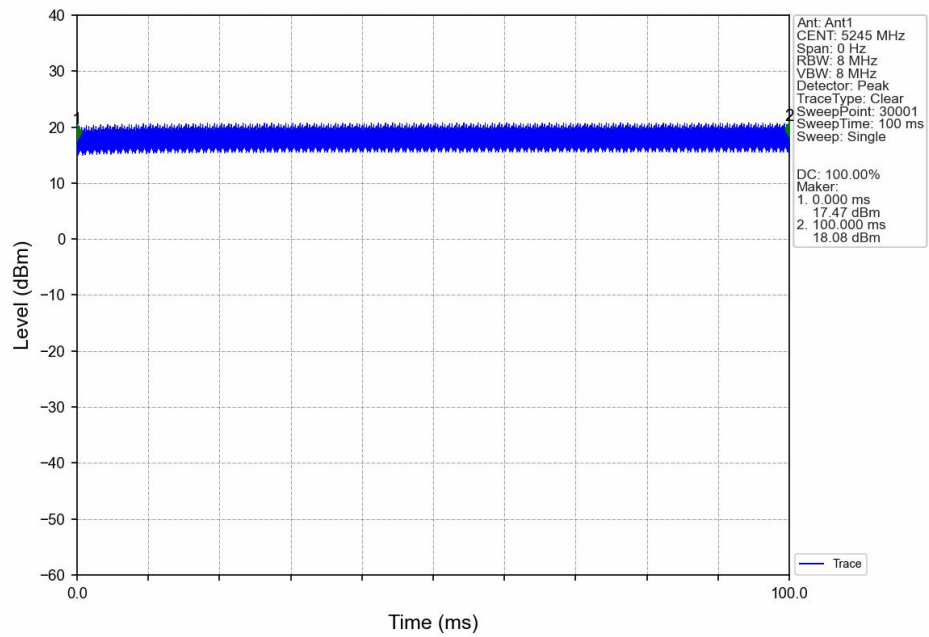
16QAM_LCH_5155MHz_Ant1_NTNV



16QAM_MCH_5200MHz_Ant1_NTNV



16QAM_HCH_5245MHz_Ant1_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

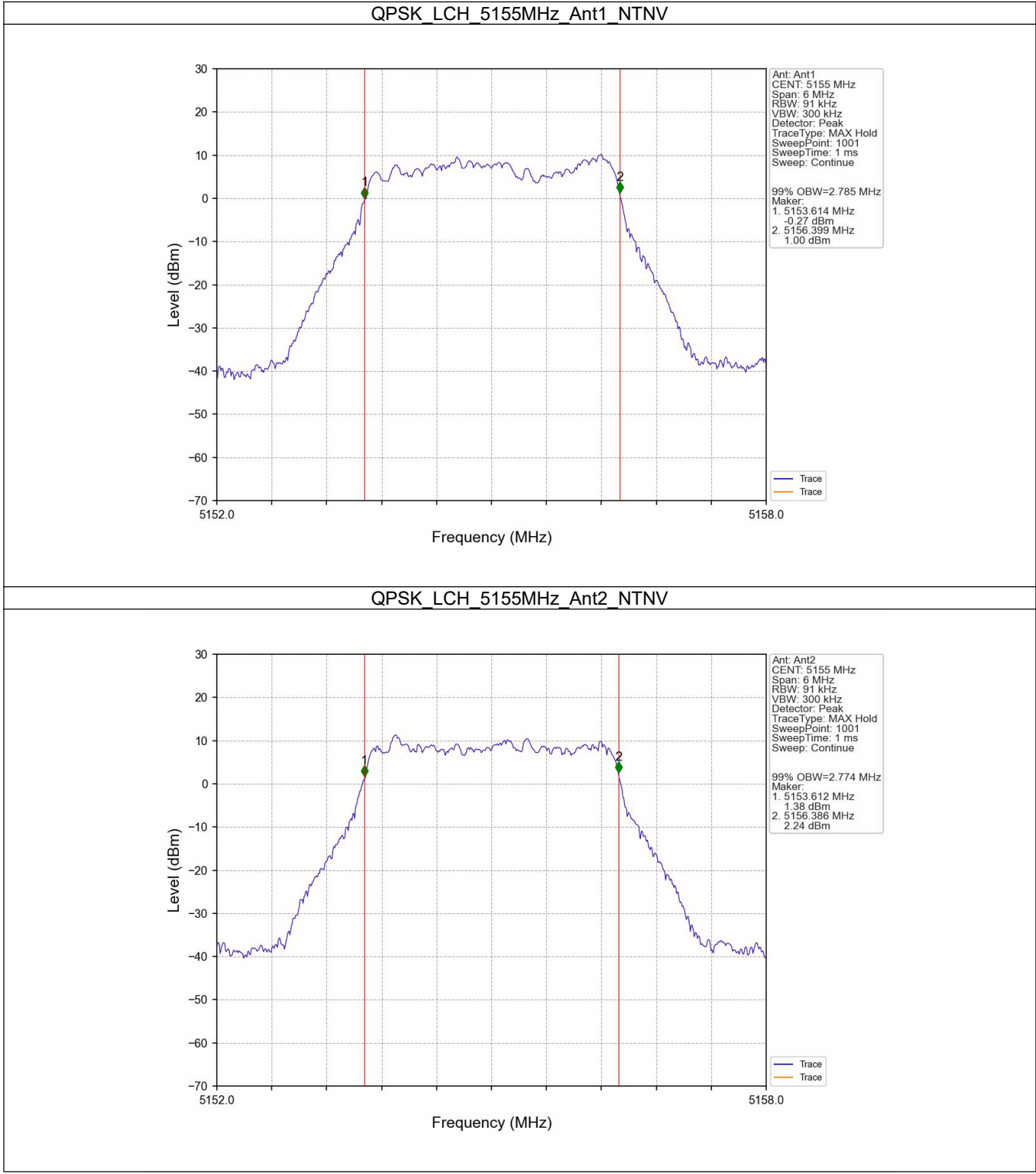
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
QPSK	MIMO	5155	1	2.785	/	Pass
			2	2.774	/	Pass
		5200	1	2.778	/	Pass
			2	2.778	/	Pass
		5245	1	2.742	/	Pass
			2	2.750	/	Pass
16QAM	MIMO	5155	1	2.749	/	Pass
			2	2.763	/	Pass
		5200	1	2.776	/	Pass
			2	2.780	/	Pass
		5245	1	2.737	/	Pass
			2	2.747	/	Pass

2.1.2 26dB BW

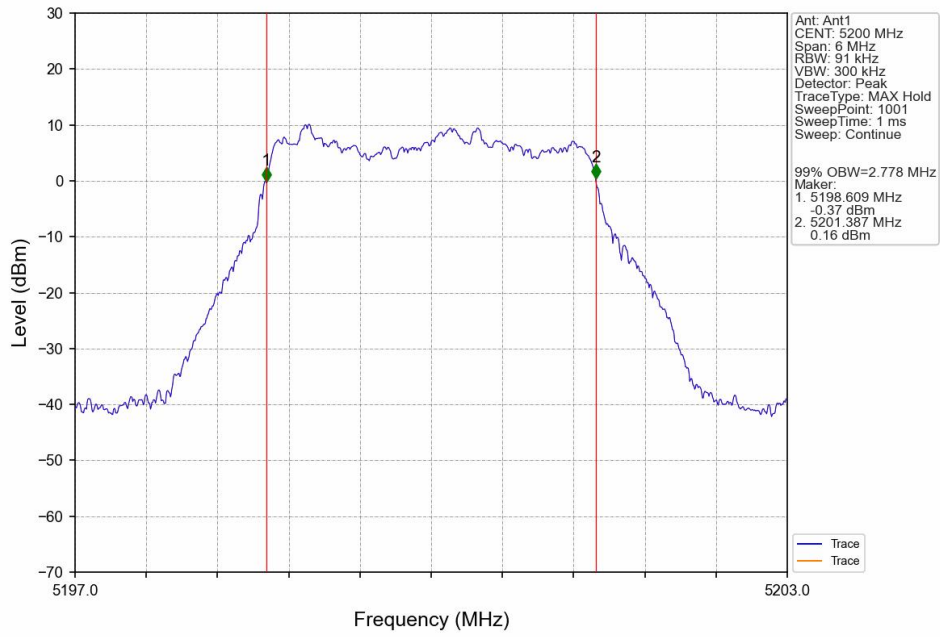
Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)		Verdict
				Result	Limit	
QPSK	MIMO	5155	1	3.205	/	Pass
			2	3.168	/	Pass
		5200	1	3.183	/	Pass
			2	3.190	/	Pass
		5245	1	3.027	/	Pass
			2	3.113	/	Pass
16QAM	MIMO	5155	1	3.108	/	Pass
			2	3.177	/	Pass
		5200	1	3.173	/	Pass
			2	3.189	/	Pass
		5245	1	3.021	/	Pass
			2	3.109	/	Pass

2.2 Test Graph

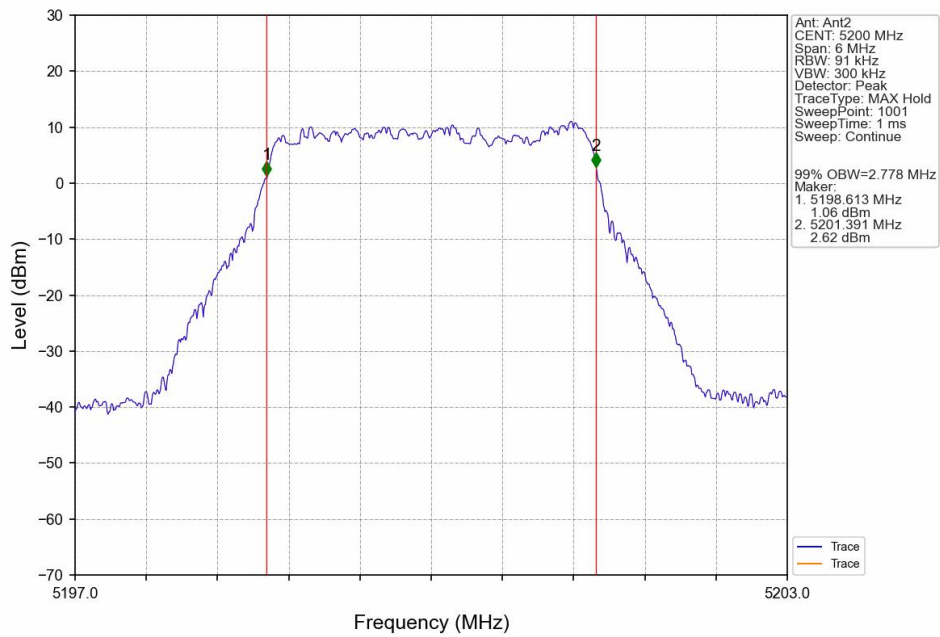
2.2.1 OBW



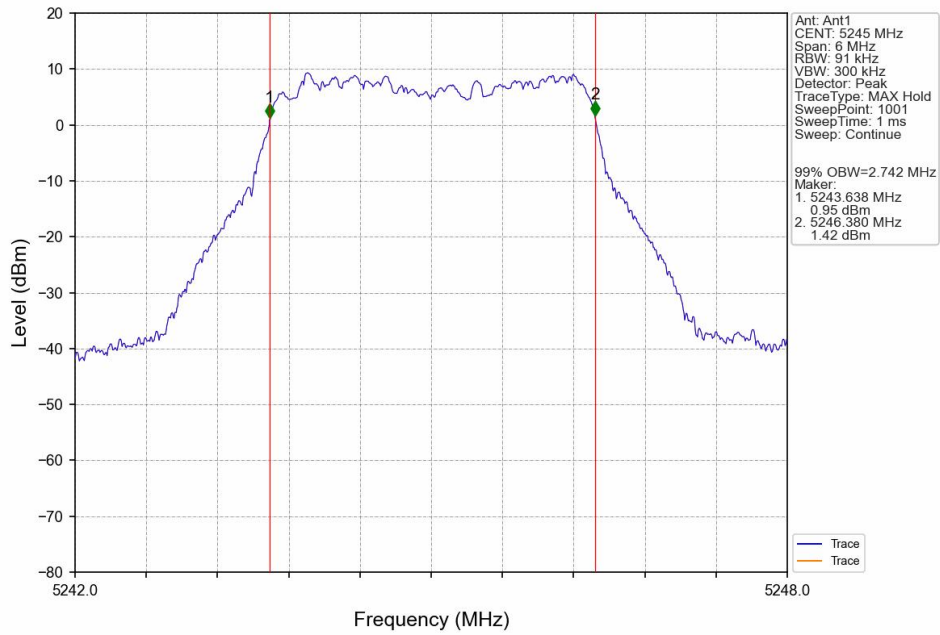
QPSK_MCH_5200MHz_Ant1_NTNV



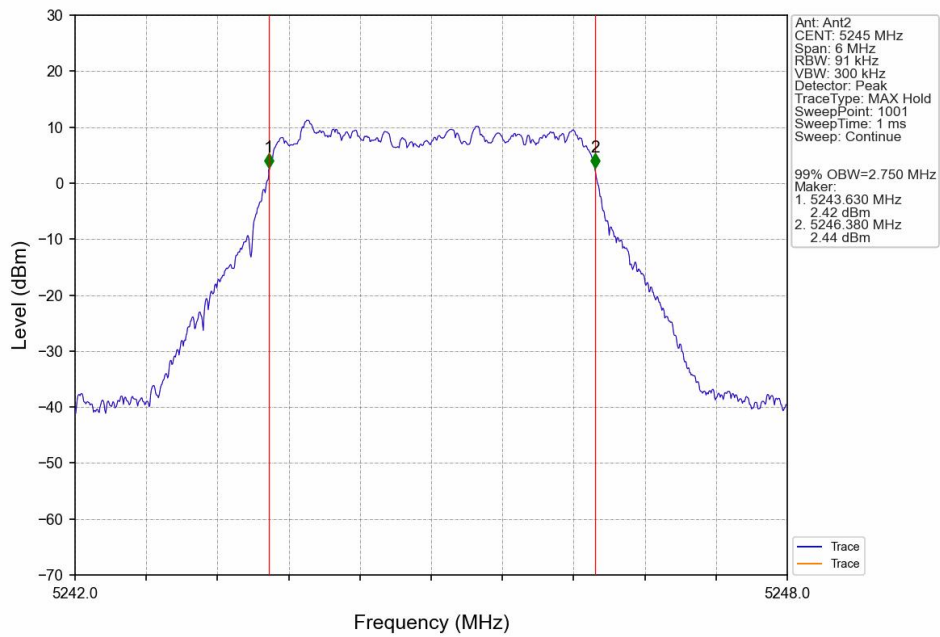
QPSK_MCH_5200MHz_Ant2_NTNV



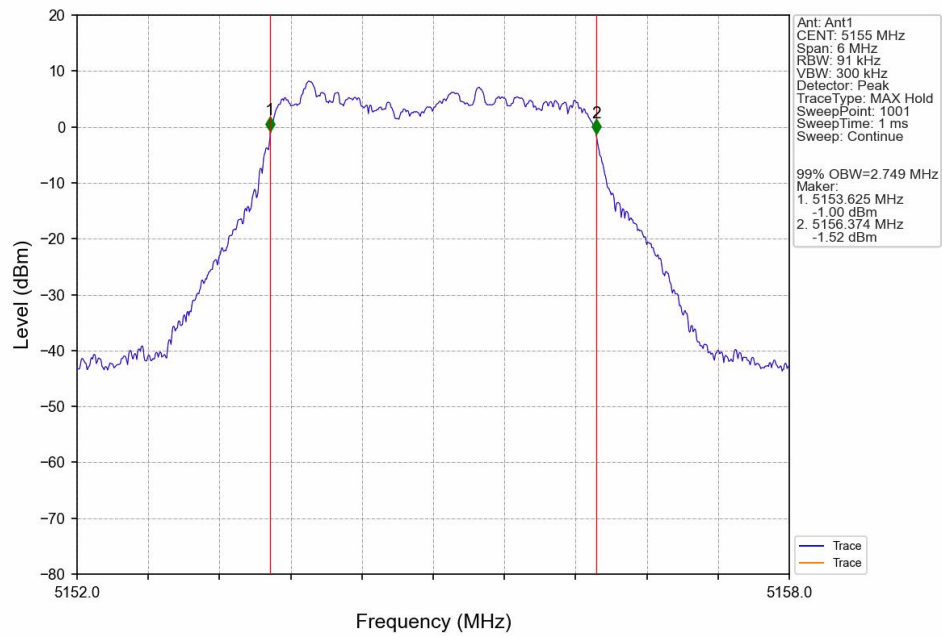
QPSK_HCH_5245MHz_Ant1_NTNV



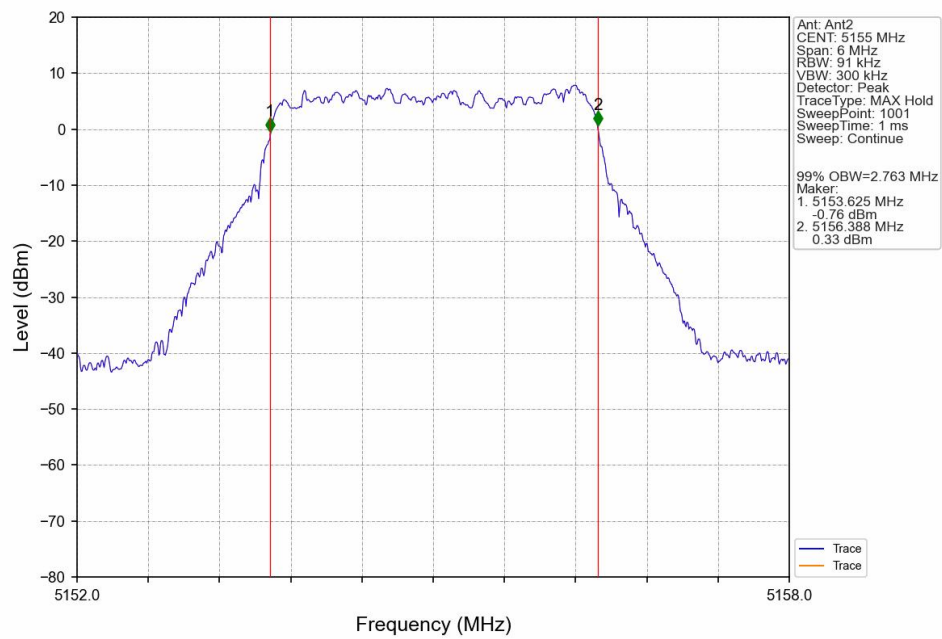
QPSK_HCH_5245MHz_Ant2_NTNV



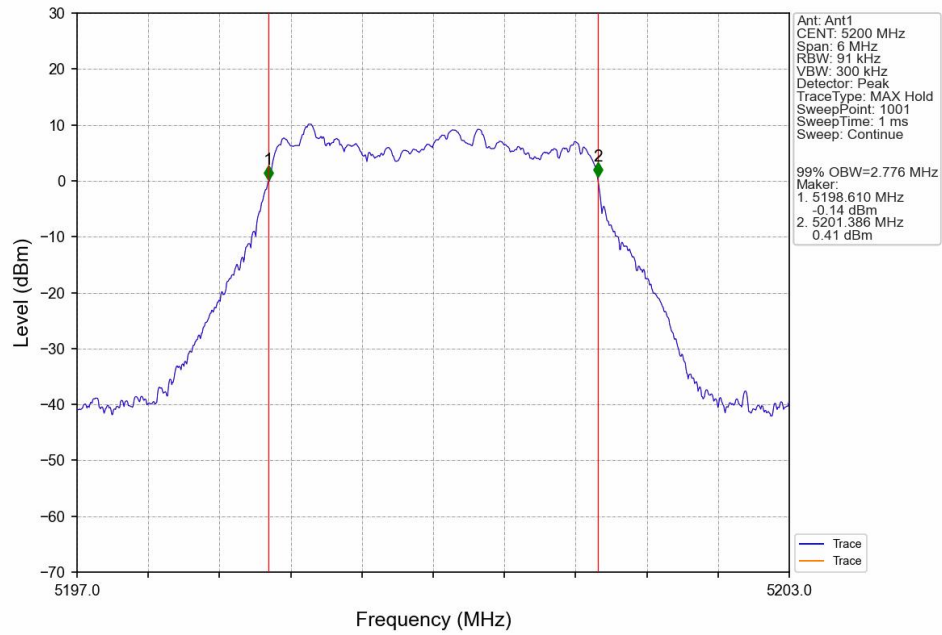
16QAM_LCH_5155MHz_Ant1_NTNV



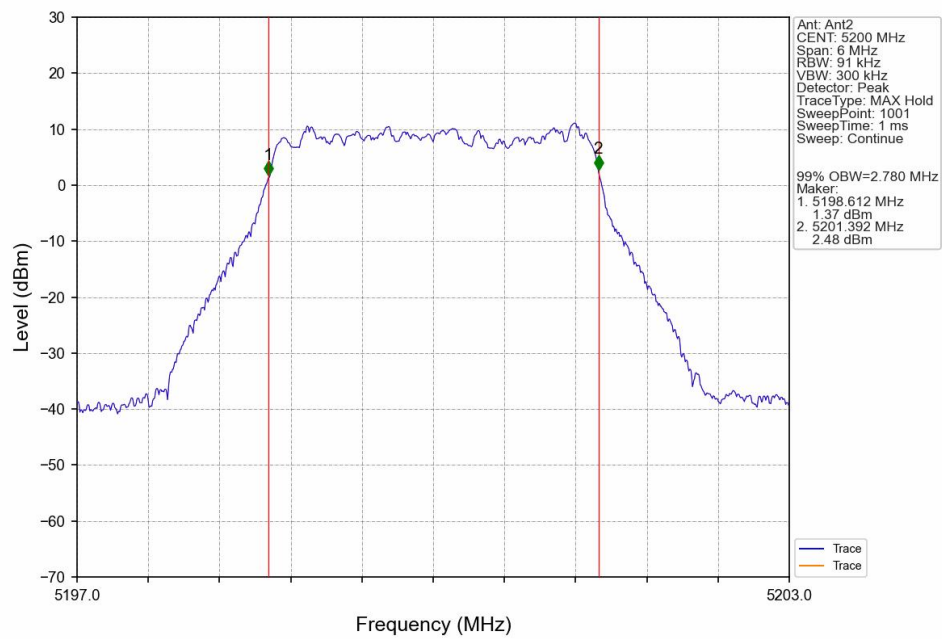
16QAM_LCH_5155MHz_Ant2_NTNV



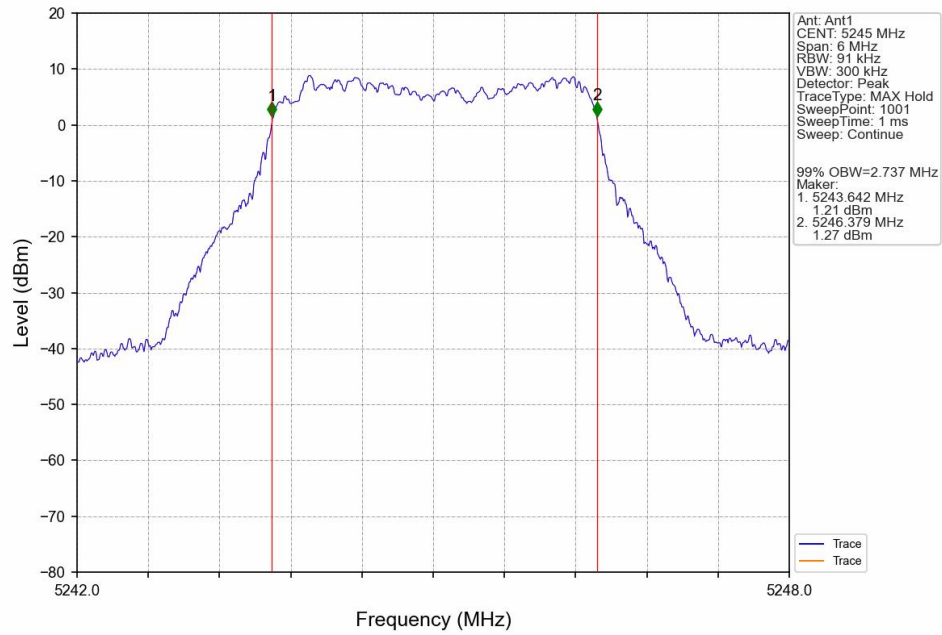
16QAM_MCH_5200MHz_Ant1_NTNV



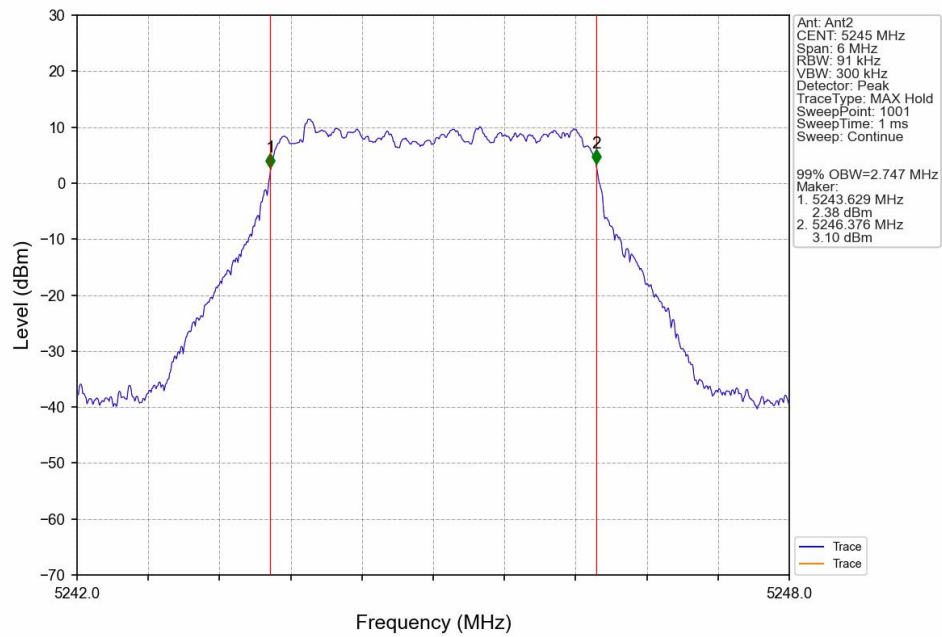
16QAM_MCH_5200MHz_Ant2_NTNV



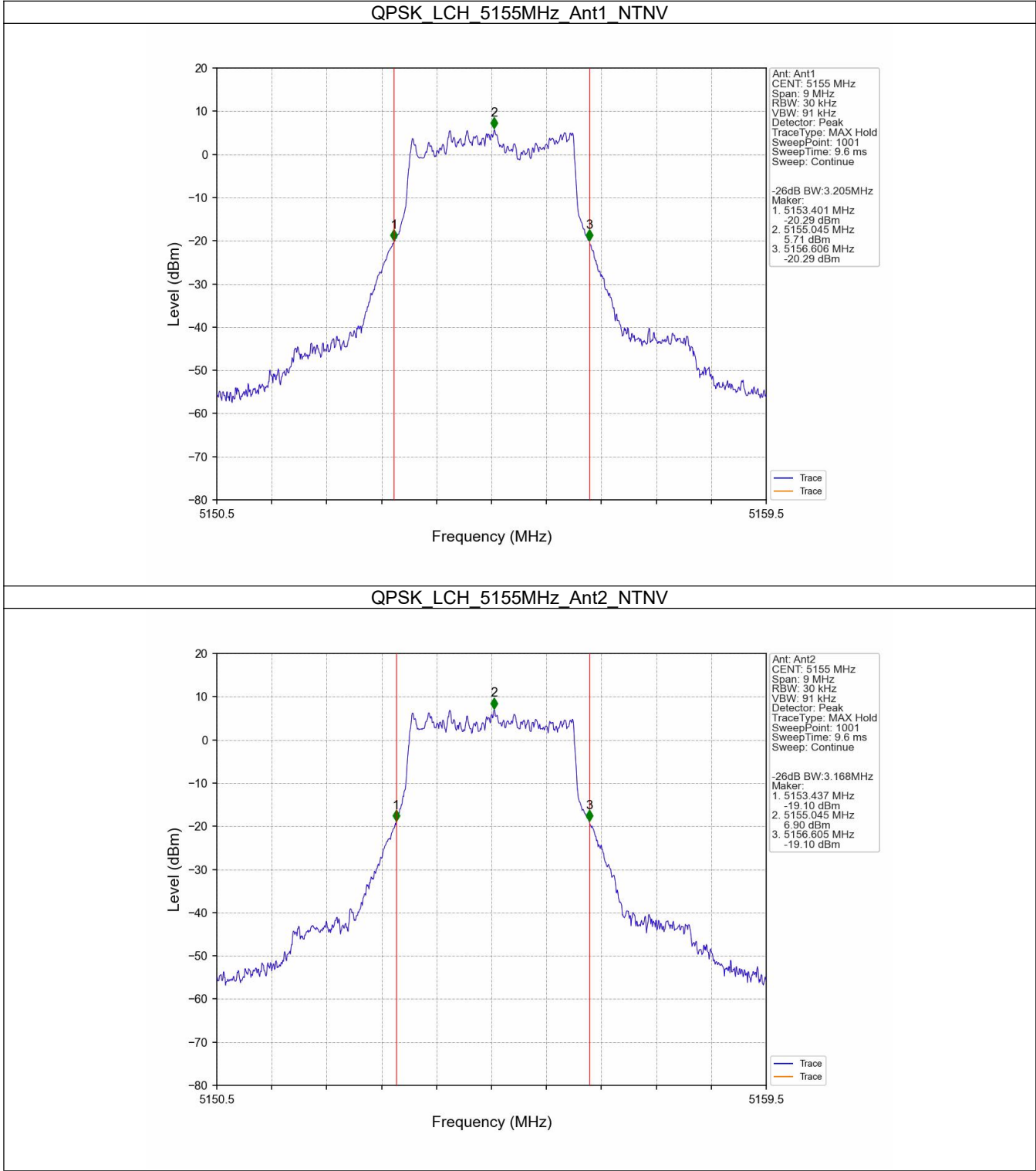
16QAM_HCH_5245MHz_Ant1_NTNV



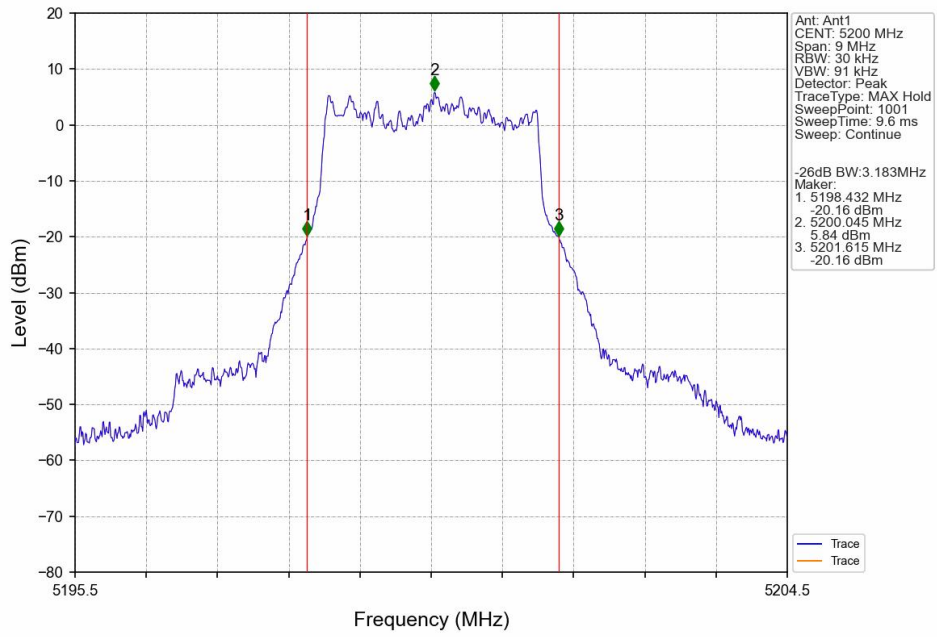
16QAM_HCH_5245MHz_Ant2_NTNV



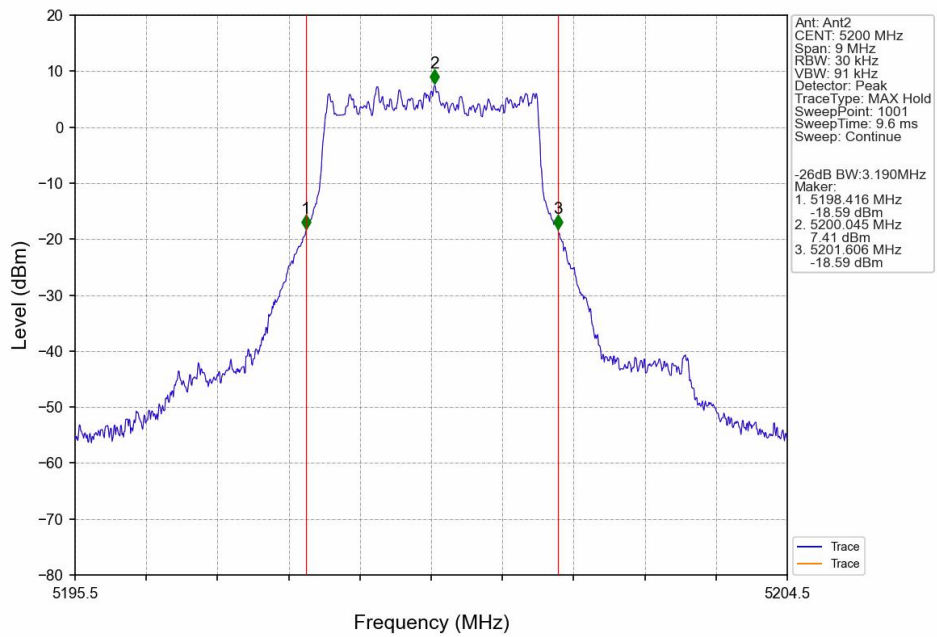
2.2.2 26dB BW



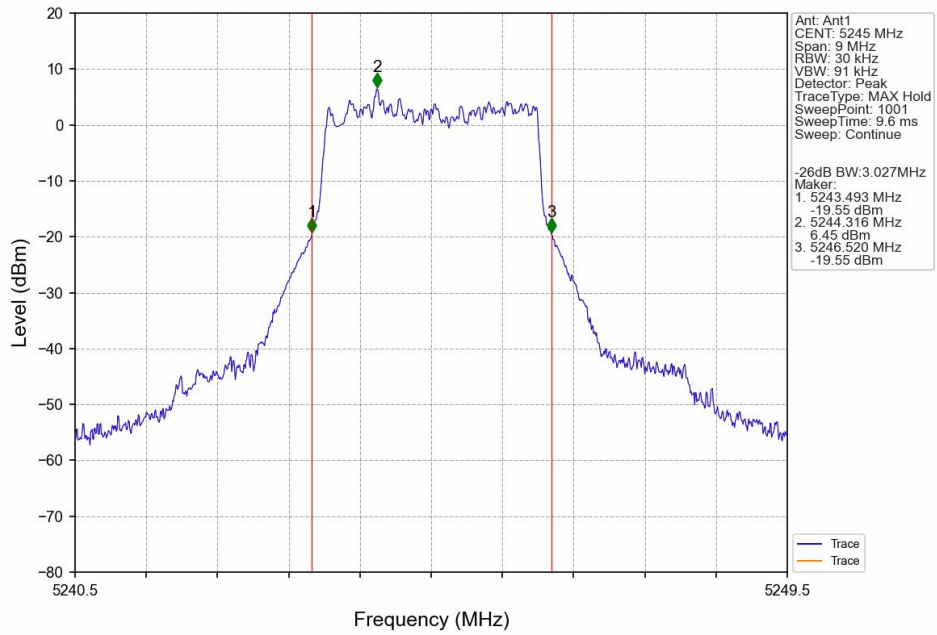
QPSK_MCH_5200MHz_Ant1_NTNV



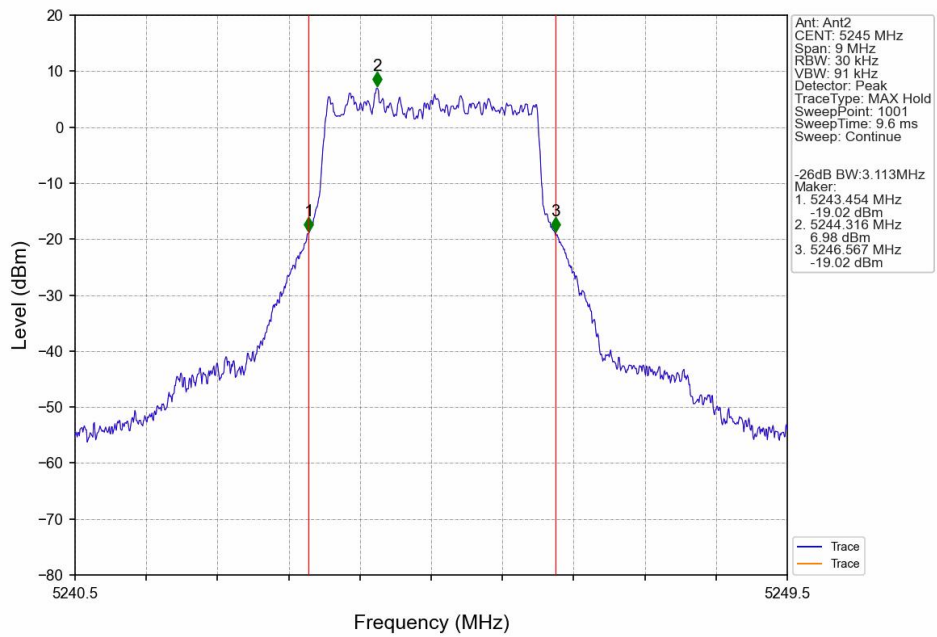
QPSK_MCH_5200MHz_Ant2_NTNV



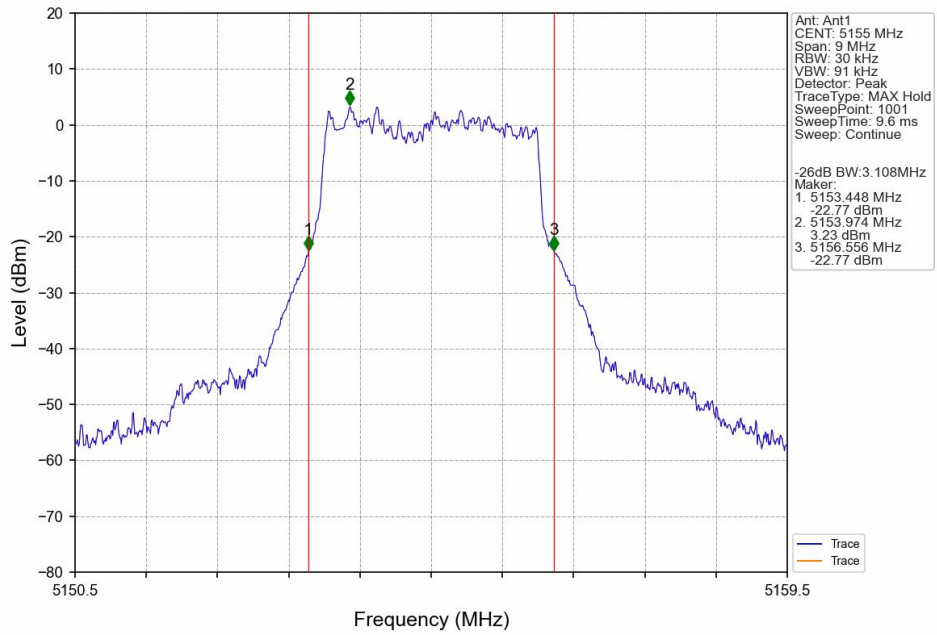
QPSK_HCH_5245MHz_Ant1_NTNV



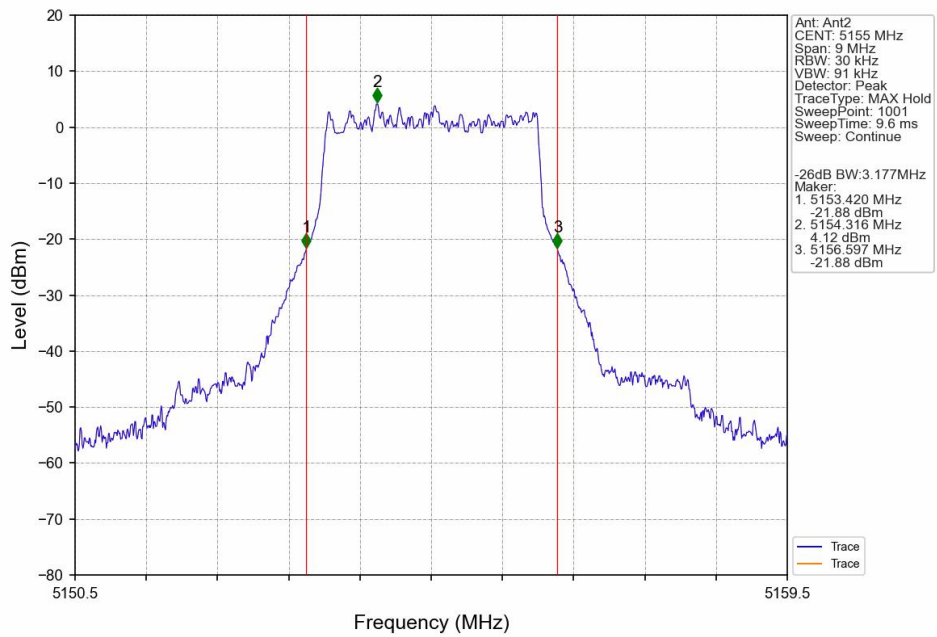
QPSK_HCH_5245MHz_Ant2_NTNV



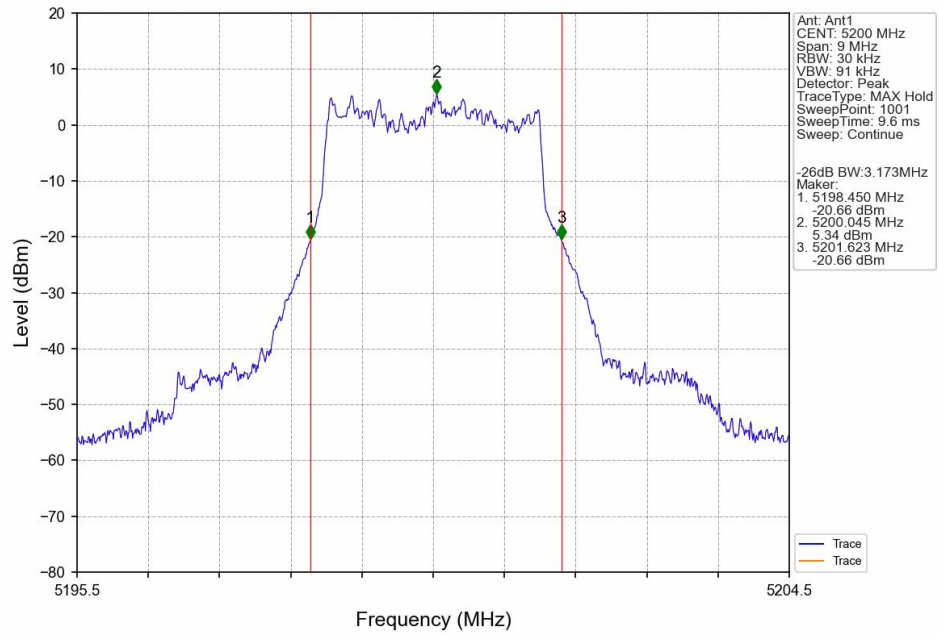
16QAM_LCH_5155MHz_Ant1_NTNV



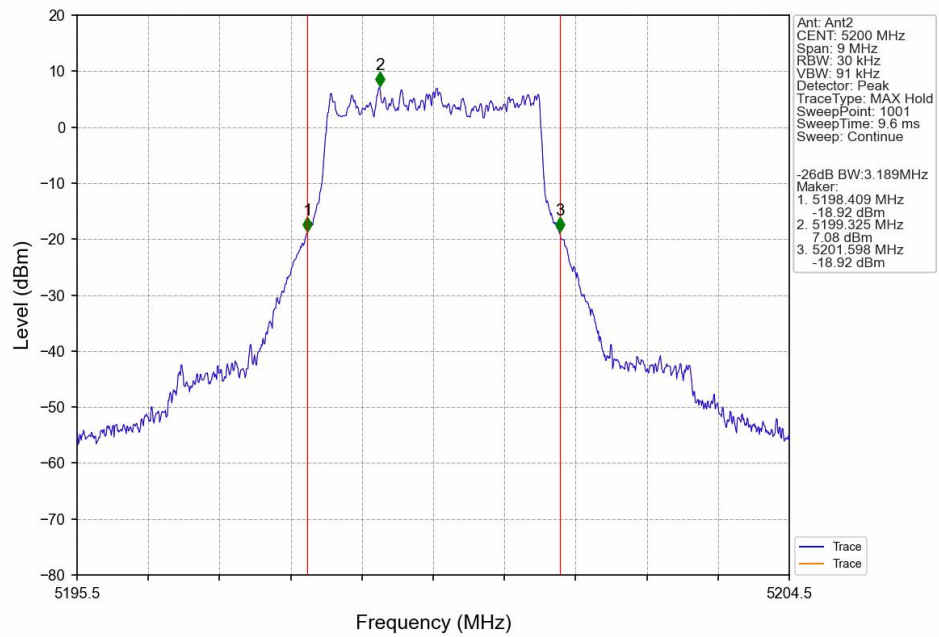
16QAM_LCH_5155MHz_Ant2_NTNV



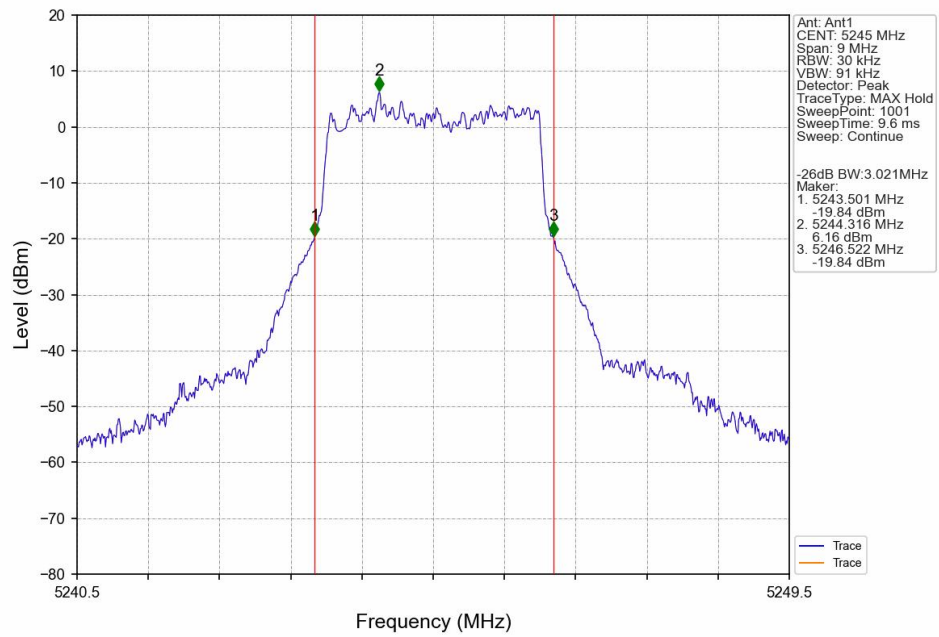
16QAM_MCH_5200MHz_Ant1_NTNV



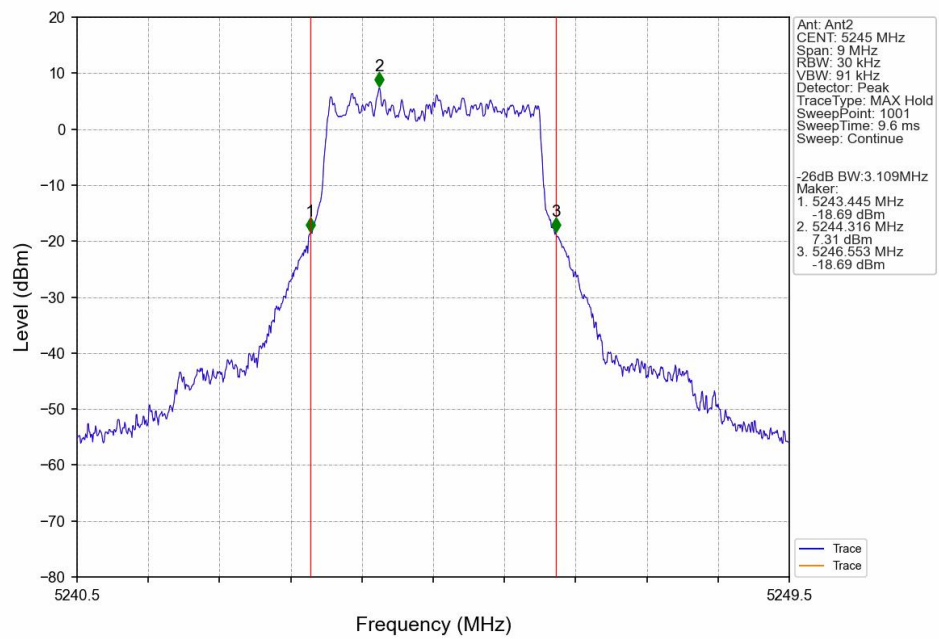
16QAM_MCH_5200MHz_Ant2_NTNV



16QAM_HCH_5245MHz_Ant1_NTNV



16QAM_HCH_5245MHz_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	5155	9.47	9.74	12.62	<=23.37	Pass
		5200	9.21	9.84	12.55	<=23.37	Pass
		5245	8.76	9.44	12.12	<=23.37	Pass
16QAM	MIMO	5155	9.33	9.67	12.51	<=23.37	Pass
		5200	9.20	9.80	12.52	<=23.37	Pass
		5245	8.87	9.54	12.23	<=23.37	Pass
Note1: Antenna Gain: Ant1: 3.60dBi; Ant2: 3.60dBi; Note2: Directional Gain: Band1: 6.61dBi							

4. Maximum Power Spectral Density

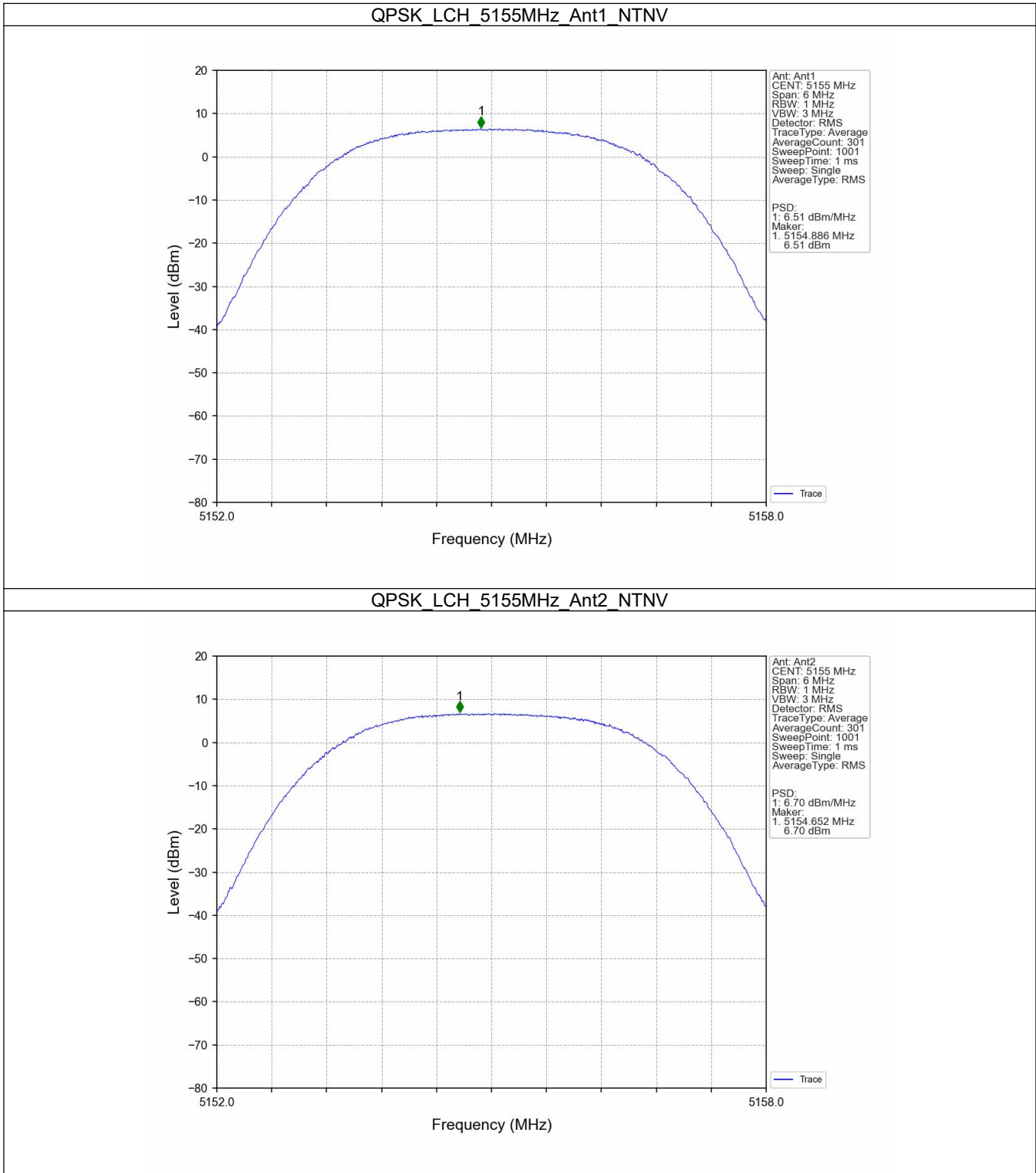
4.1 Test Result

4.1.1 PSD

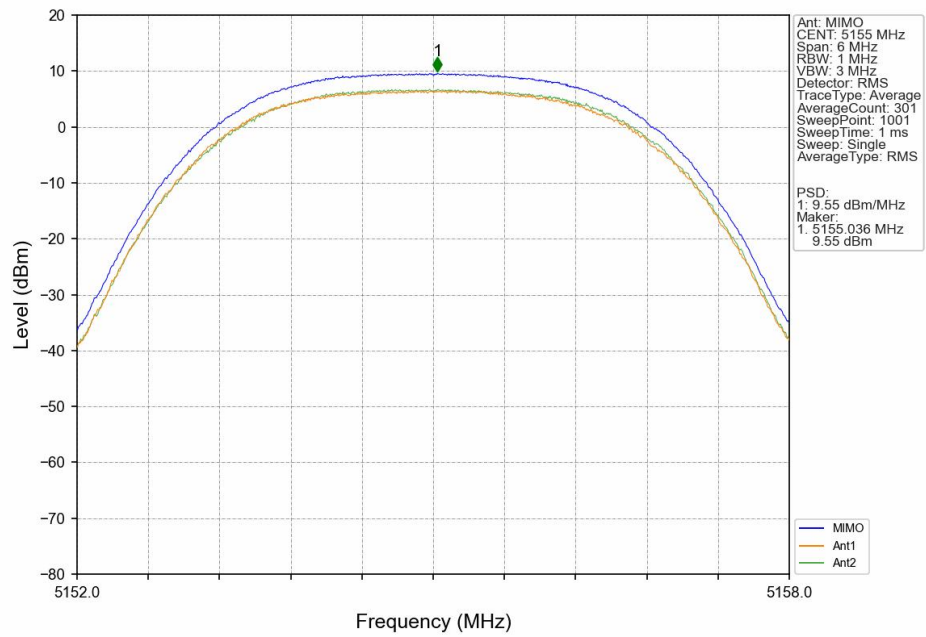
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/MHz)				Verdict
			ANT1	ANT2	MIMO	Limit	
QPSK	MIMO	5155	6.51	6.70	9.55	<=10.39	Pass
		5200	6.15	6.75	9.37	<=10.39	Pass
		5245	5.86	6.54	9.17	<=10.39	Pass
16QAM	MIMO	5155	6.54	6.79	9.56	<=10.39	Pass
		5200	6.10	6.74	9.29	<=10.39	Pass
		5245	5.75	6.53	9.09	<=10.39	Pass
Note1: Antenna Gain: Ant1: 3.60dBi; Ant2: 3.60dBi; Note2: Directional Gain: Band1: 6.61dBi							

4.2 Test Graph

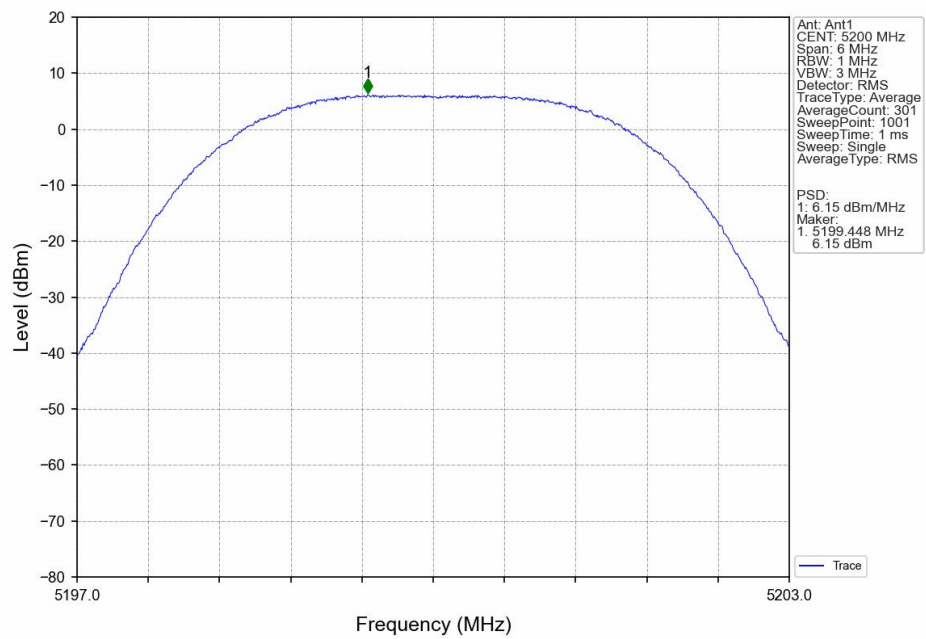
4.2.1 PSD



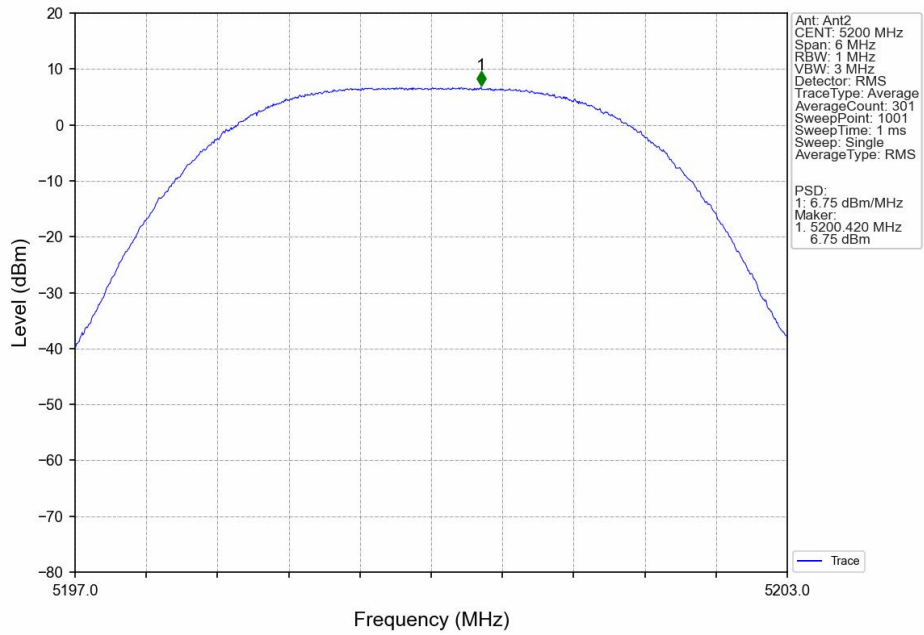
QPSK_LCH_5155MHz_MIMO_NTNV



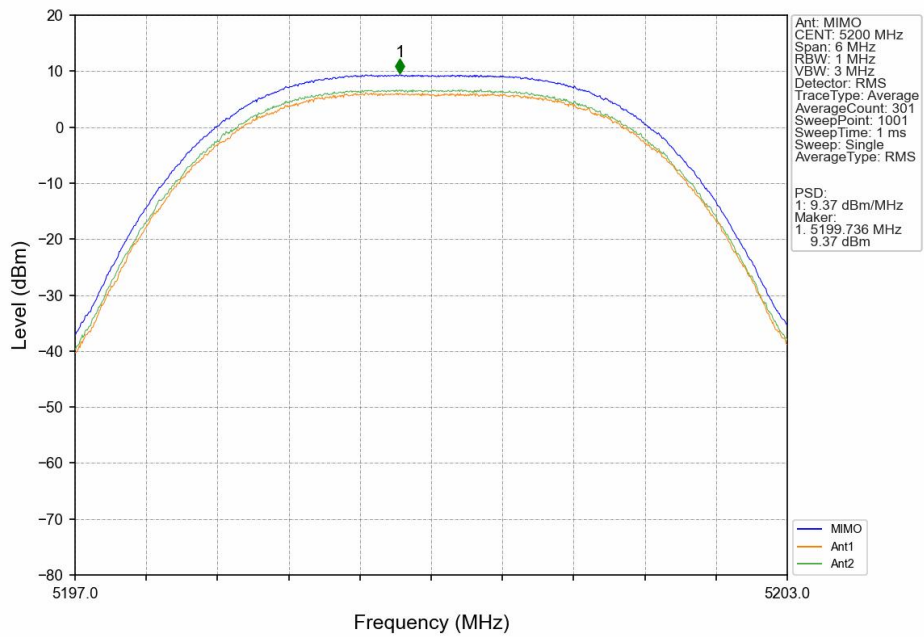
QPSK_MCH_5200MHz_Ant1_NTNV



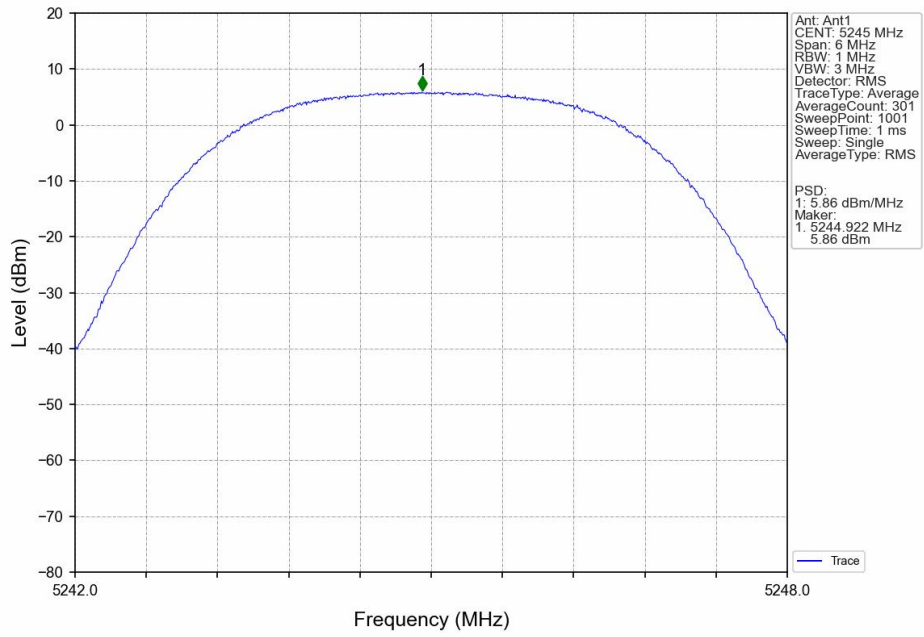
QPSK_MCH_5200MHz_Ant2_NTNV



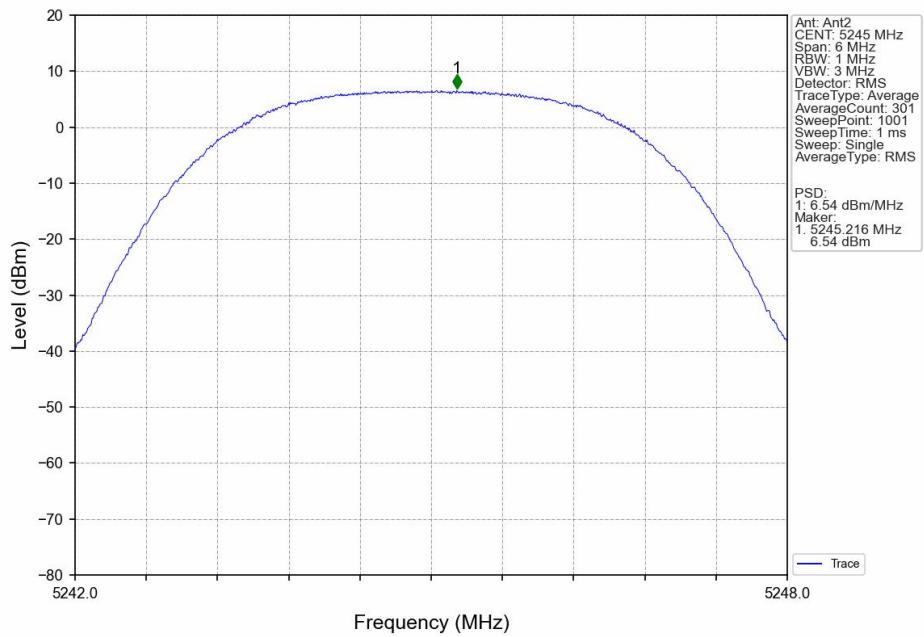
QPSK_MCH_5200MHz_MIMO_NTNV



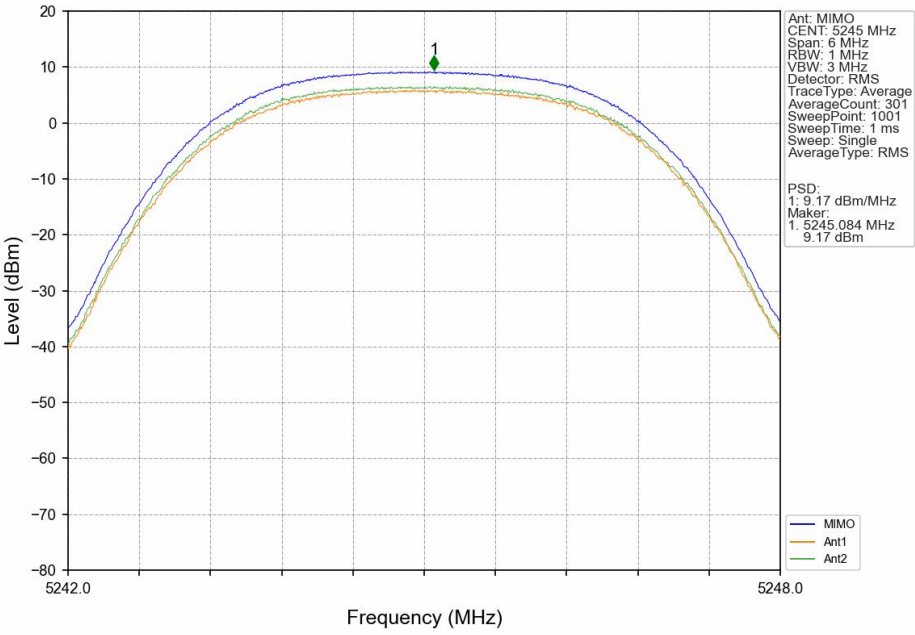
QPSK_HCH_5245MHz_Ant1_NTNV



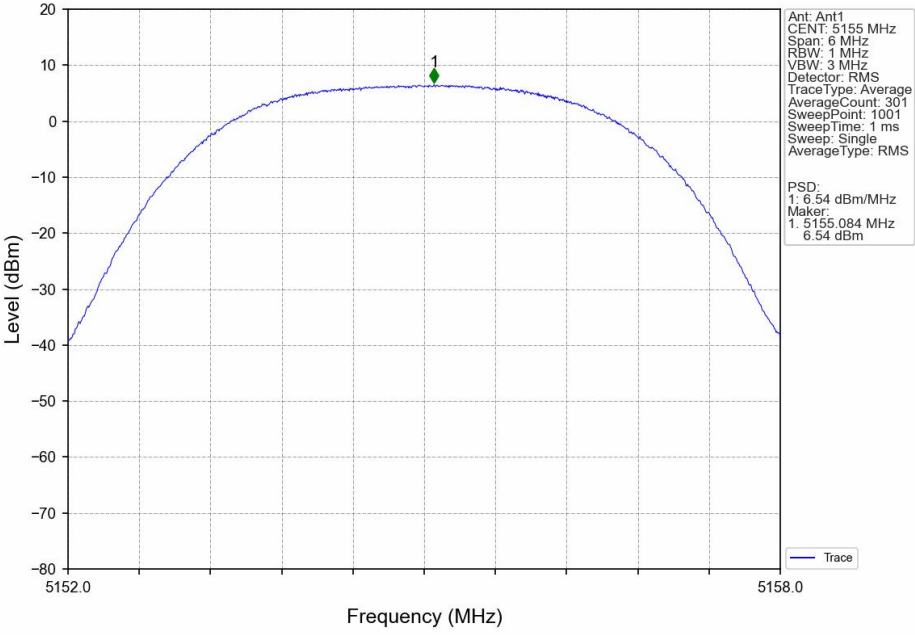
QPSK_HCH_5245MHz_Ant2_NTNV



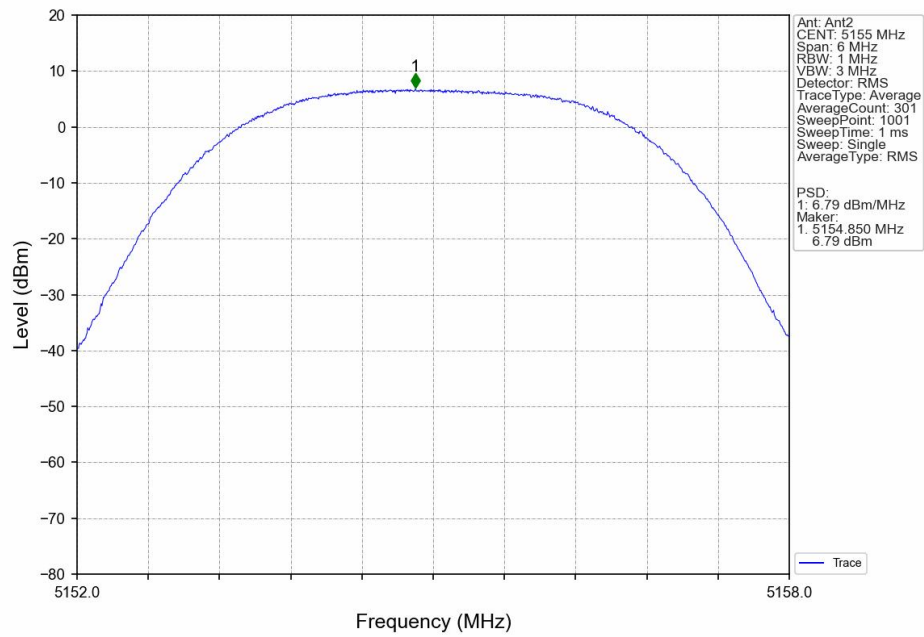
QPSK_HCH_5245MHz_MIMO_NTNV



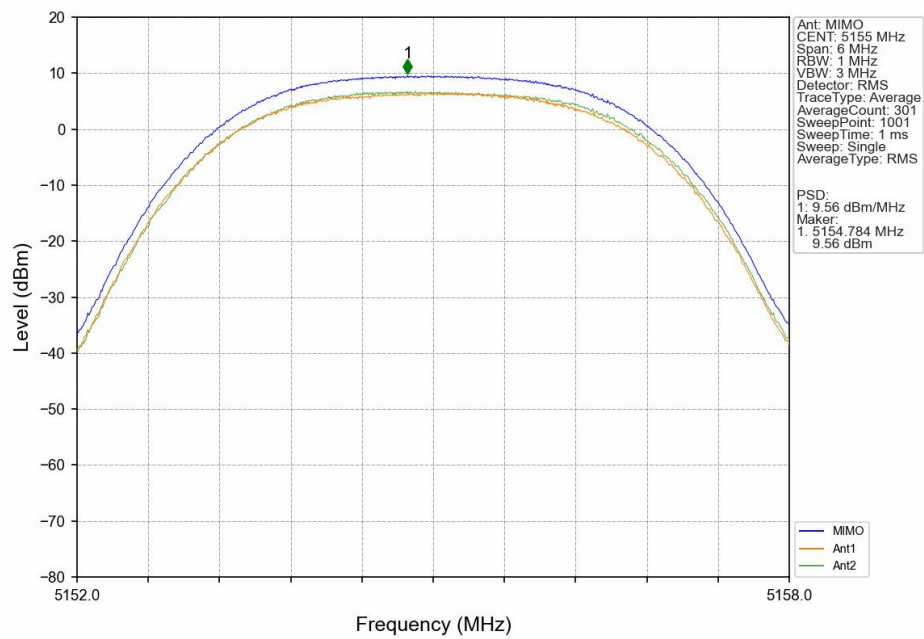
16QAM_LCH_5155MHz_Ant1_NTNV



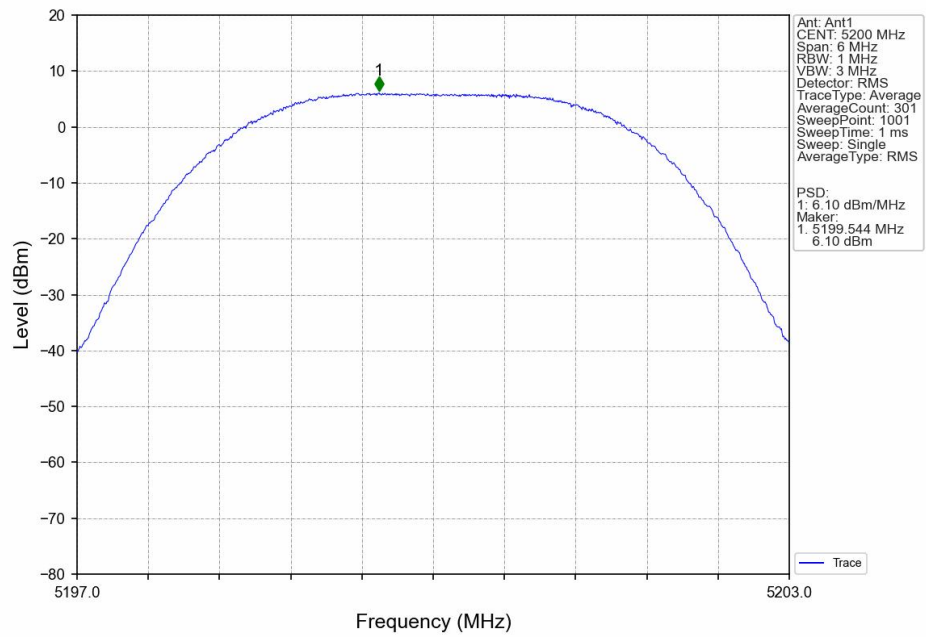
16QAM_LCH_5155MHz_Ant2_NTNV



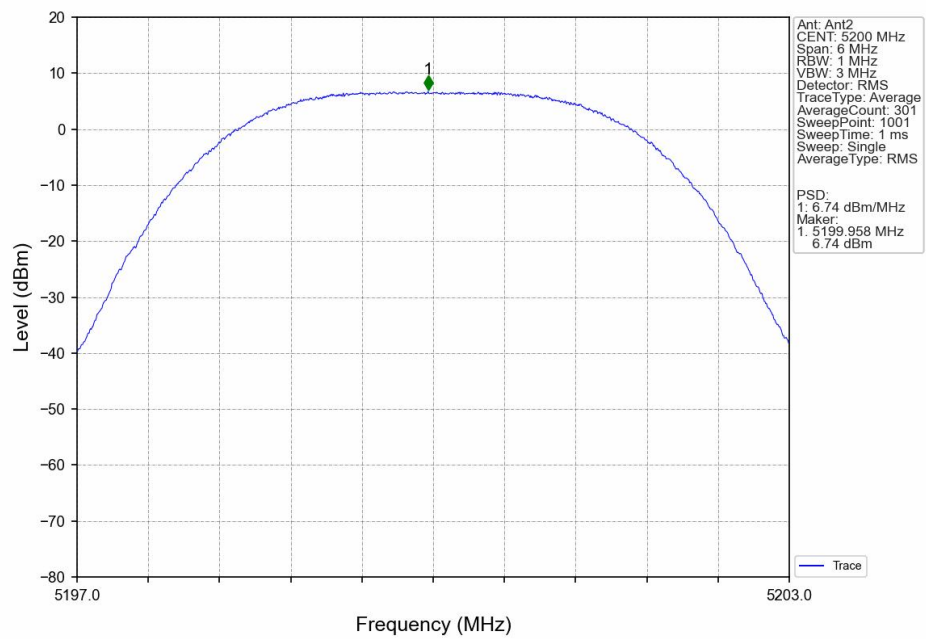
16QAM_LCH_5155MHz_MIMO_NTNV



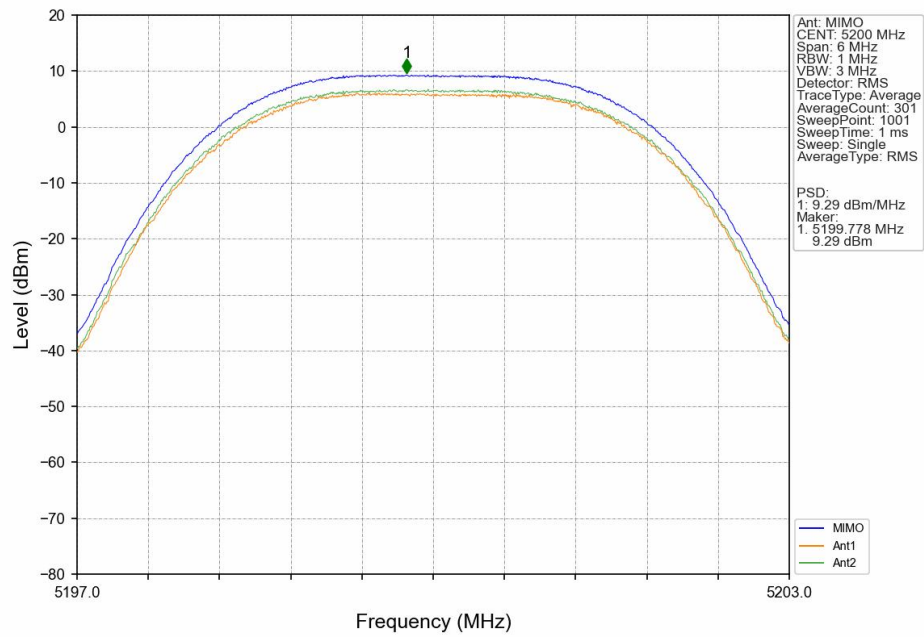
16QAM_MCH_5200MHz_Ant1_NTNV



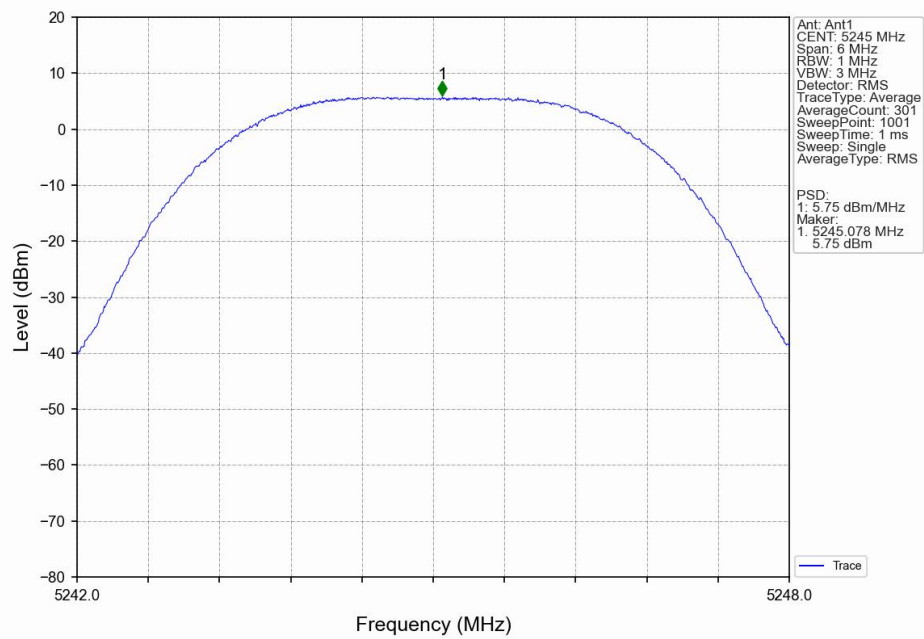
16QAM_MCH_5200MHz_Ant2_NTNV



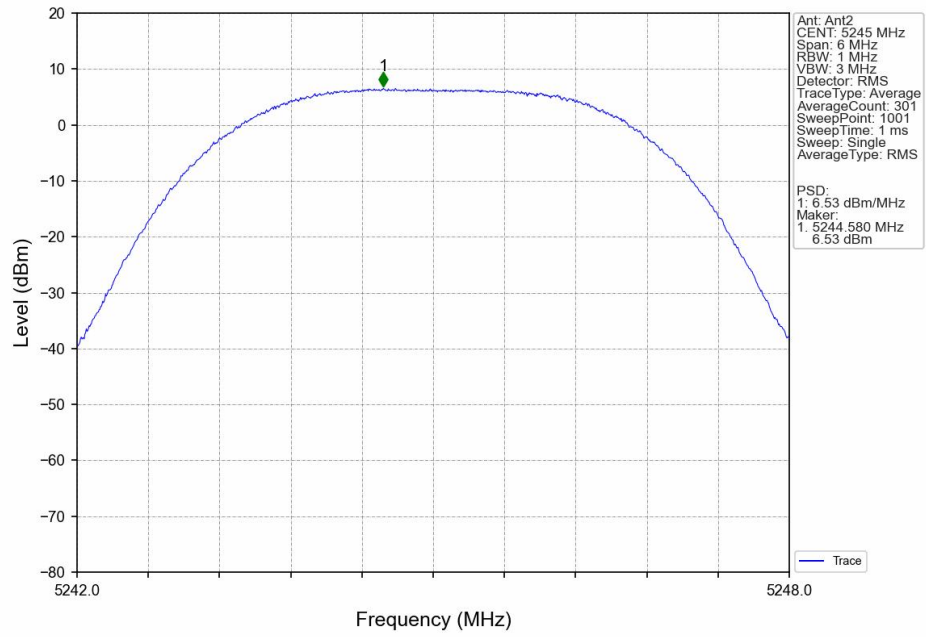
16QAM_MCH_5200MHz_MIMO_NTNV



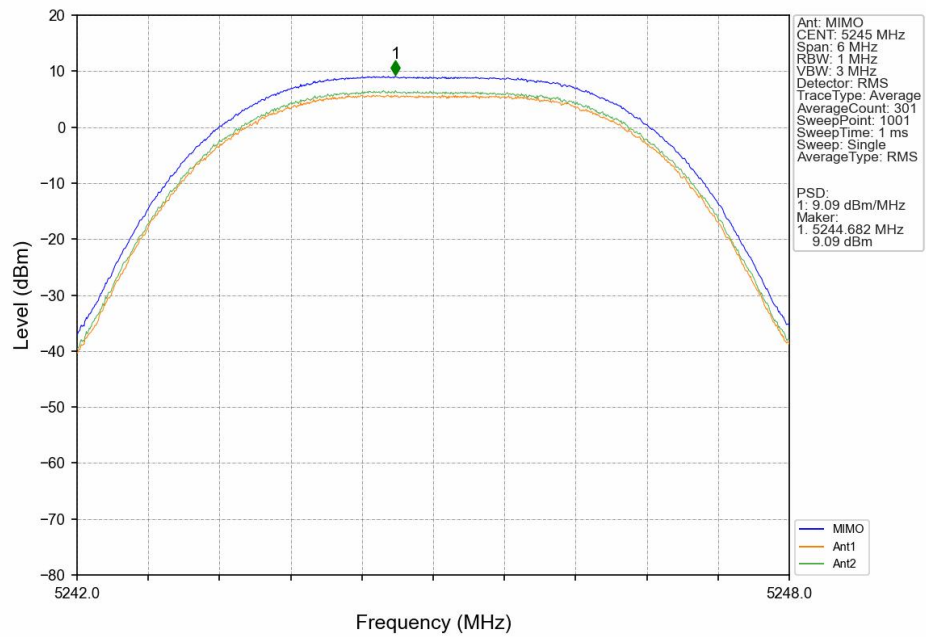
16QAM_HCH_5245MHz_Ant1_NTNV



16QAM_HCH_5245MHz_Ant2_NTNV



16QAM_HCH_5245MHz_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	5155	20	102	5155.042	5150 to 5250	Pass
				120	5155.045	5150 to 5250	Pass
				138	5155.054	5150 to 5250	Pass
			-30	120	5155.036	5150 to 5250	Pass
			-20	120	5155.051	5150 to 5250	Pass
			-10	120	5155.036	5150 to 5250	Pass
			0	120	5155.036	5150 to 5250	Pass
			10	120	5155.048	5150 to 5250	Pass
			30	120	5155.051	5150 to 5250	Pass
			40	120	5155.051	5150 to 5250	Pass
			50	120	5155.054	5150 to 5250	Pass
		5200	20	102	5200.003	5150 to 5250	Pass
				120	5200.018	5150 to 5250	Pass
				138	5200.015	5150 to 5250	Pass
			-30	120	5200.018	5150 to 5250	Pass
			-20	120	5200.006	5150 to 5250	Pass
			-10	120	5200.018	5150 to 5250	Pass
			0	120	5200.015	5150 to 5250	Pass
			10	120	5200.006	5150 to 5250	Pass
			30	120	5200.006	5150 to 5250	Pass
			40	120	5200.015	5150 to 5250	Pass
			50	120	5200.015	5150 to 5250	Pass
		5245	20	102	5245.021	5150 to 5250	Pass
				120	5245.042	5150 to 5250	Pass
				138	5245.042	5150 to 5250	Pass
			-30	120	5245.039	5150 to 5250	Pass
			-20	120	5245.021	5150 to 5250	Pass
			-10	120	5245.036	5150 to 5250	Pass
			0	120	5245.042	5150 to 5250	Pass
			10	120	5245.036	5150 to 5250	Pass
			30	120	5245.036	5150 to 5250	Pass
			40	120	5245.042	5150 to 5250	Pass
			50	120	5245.036	5150 to 5250	Pass
16QAM	MIMO	5155	20	102	5155.009	5150 to 5250	Pass
				120	5154.997	5150 to 5250	Pass
				138	5155.006	5150 to 5250	Pass
			-30	120	5155.015	5150 to 5250	Pass
			-20	120	5155.006	5150 to 5250	Pass
			-10	120	5155.003	5150 to 5250	Pass
			0	120	5155.009	5150 to 5250	Pass
			10	120	5155.015	5150 to 5250	Pass
			30	120	5155.000	5150 to 5250	Pass
			40	120	5155.000	5150 to 5250	Pass
			50	120	5155.006	5150 to 5250	Pass
		5200	20	102	5200.018	5150 to 5250	Pass
				120	5200.024	5150 to 5250	Pass

				138	5200.018	5150 to 5250	Pass
			-30	120	5200.027	5150 to 5250	Pass
			-20	120	5200.021	5150 to 5250	Pass
			-10	120	5200.003	5150 to 5250	Pass
			0	120	5200.018	5150 to 5250	Pass
			10	120	5200.021	5150 to 5250	Pass
			30	120	5200.021	5150 to 5250	Pass
			40	120	5200.021	5150 to 5250	Pass
			50	120	5200.024	5150 to 5250	Pass
		5245	20	102	5245.039	5150 to 5250	Pass
				120	5245.030	5150 to 5250	Pass
				138	5245.027	5150 to 5250	Pass
			-30	120	5245.021	5150 to 5250	Pass
			-20	120	5245.042	5150 to 5250	Pass
			-10	120	5245.042	5150 to 5250	Pass
			0	120	5245.045	5150 to 5250	Pass
			10	120	5245.039	5150 to 5250	Pass
			30	120	5245.042	5150 to 5250	Pass
			40	120	5245.030	5150 to 5250	Pass
			50	120	5245.030	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)
5155	5245	0.0183	12.62