RF Test Data

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

1. Duty Cycle

1.1 Test Result

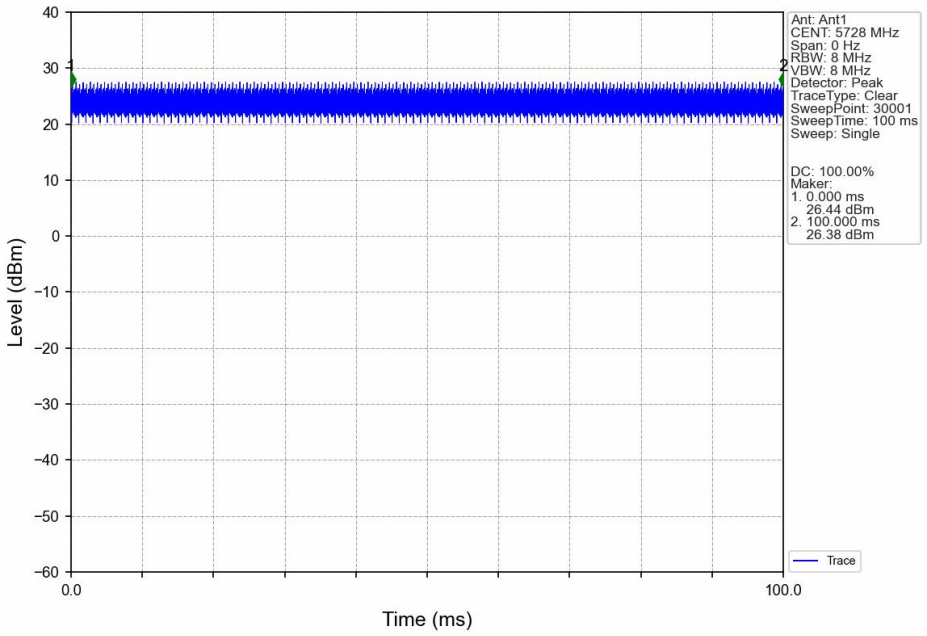
1.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
QPSK	MIMO	5728	100.000	100.000	100.00	0.00	0.00
		5788	100.000	100.000	100.00	0.00	0.00
		5847	100.000	100.000	100.00	0.00	0.00
16QAM	MIMO	5728	100.000	100.000	100.00	0.00	0.00
		5788	100.000	100.000	100.00	0.00	0.00
		5847	100.000	100.000	100.00	0.00	0.00

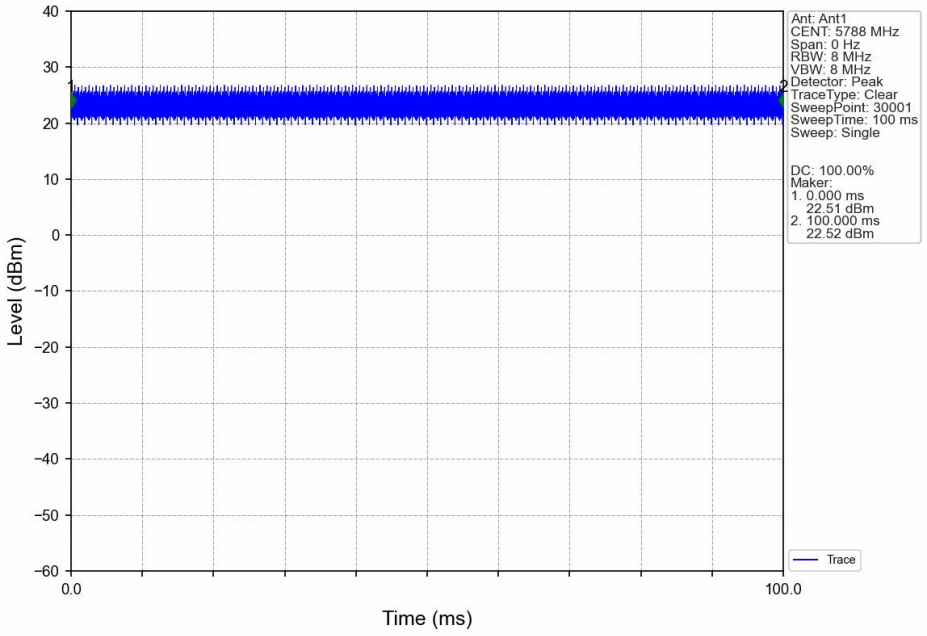
1.2 Test Graph

1.2.1 Ant1

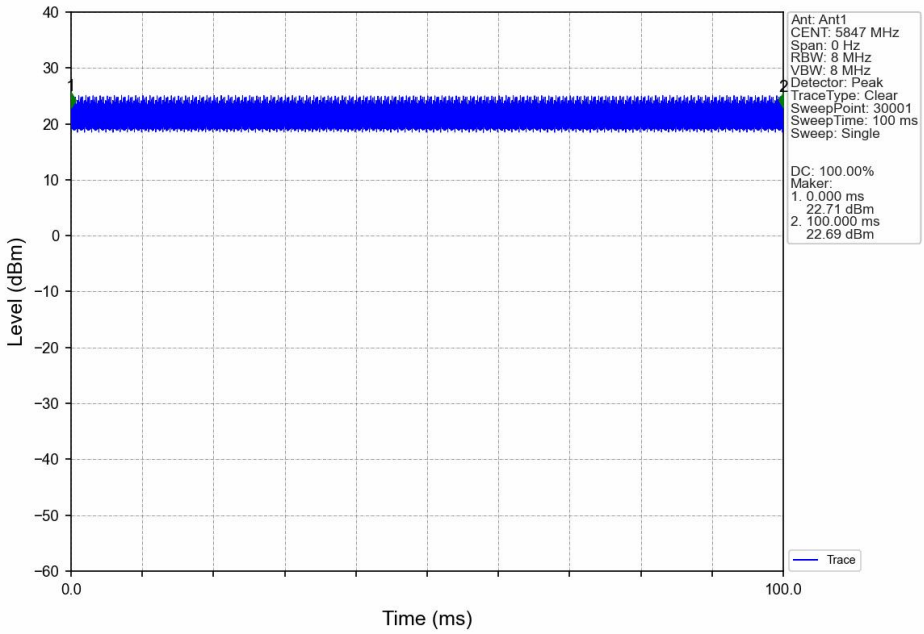
QPSK_LCH_5728MHz_Ant1_NTNV



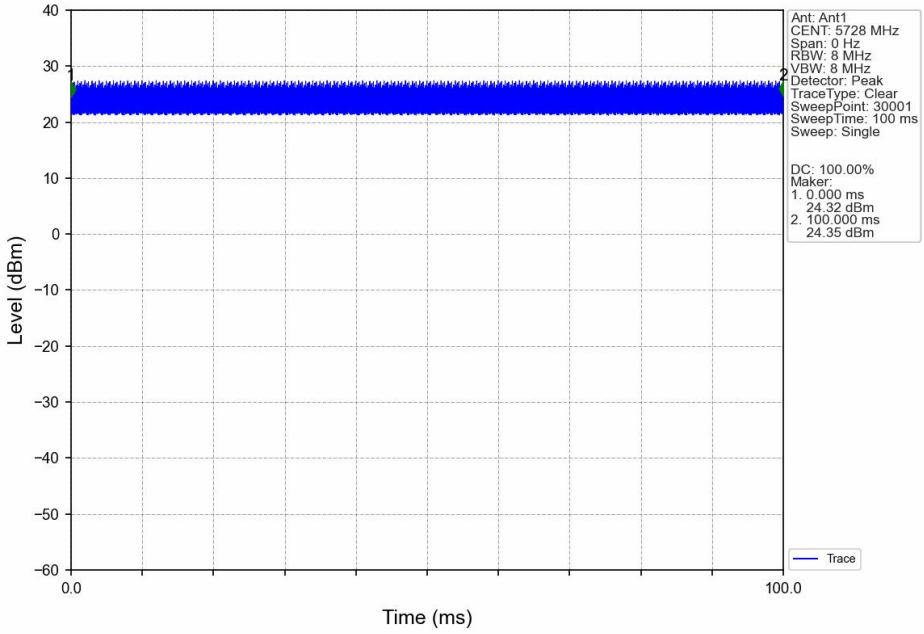
QPSK_MCH_5788MHz_Ant1_NTNV



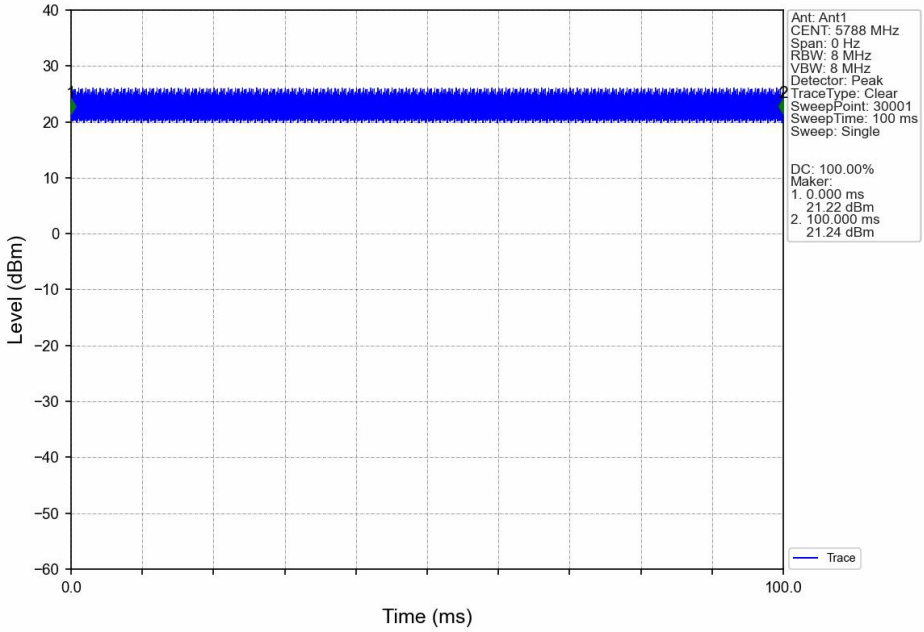
QPSK_HCH_5847MHz_Ant1_NTNV



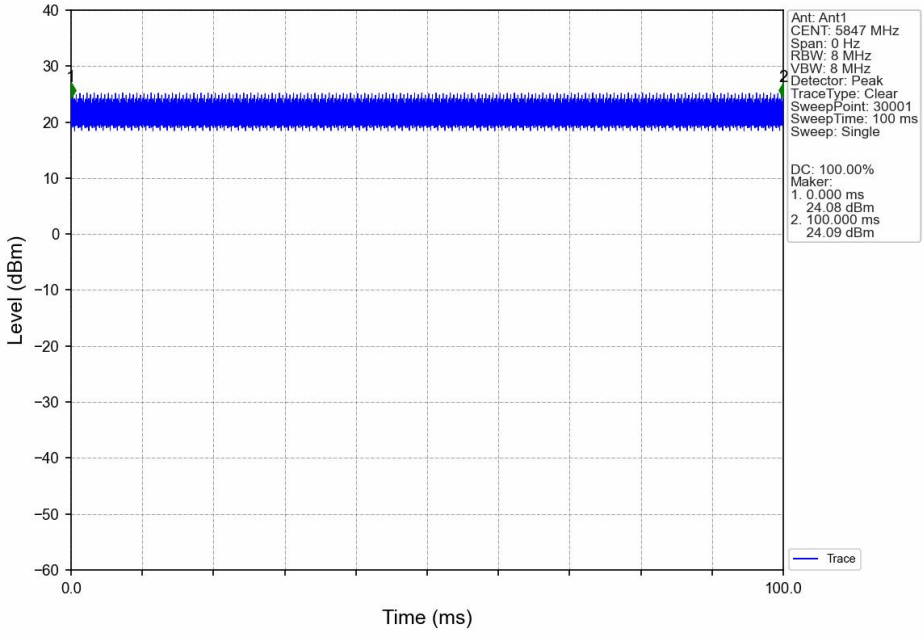
16QAM_LCH_5728MHz_Ant1_NTNV



16QAM_MCH_5788MHz_Ant1_NTNV



16QAM_HCH_5847MHz_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	5728	1	1.229	/	Pass
		5788	1	1.207	/	Pass
		5847	1	1.230	/	Pass
16QAM	MIMO	5728	1	1.199	/	Pass
		5788	1	1.221	/	Pass
		5847	1	1.198	/	Pass

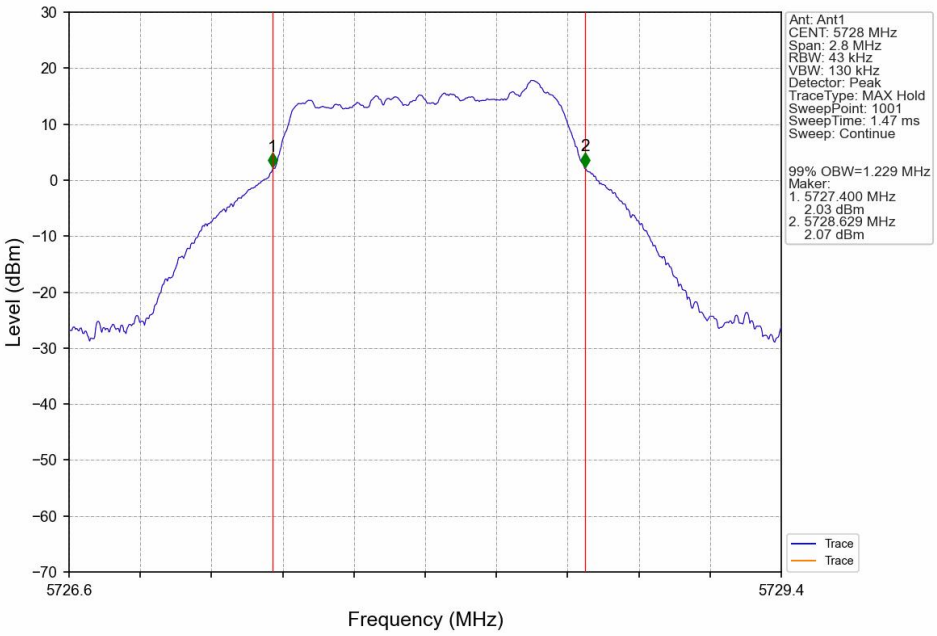
2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
QPSK	MIMO	5728	1	1.128	>=0.5	Pass
		5788	1	1.130	>=0.5	Pass
		5847	1	1.141	>=0.5	Pass
16QAM	MIMO	5728	1	1.130	>=0.5	Pass
		5788	1	1.133	>=0.5	Pass
		5847	1	1.132	>=0.5	Pass

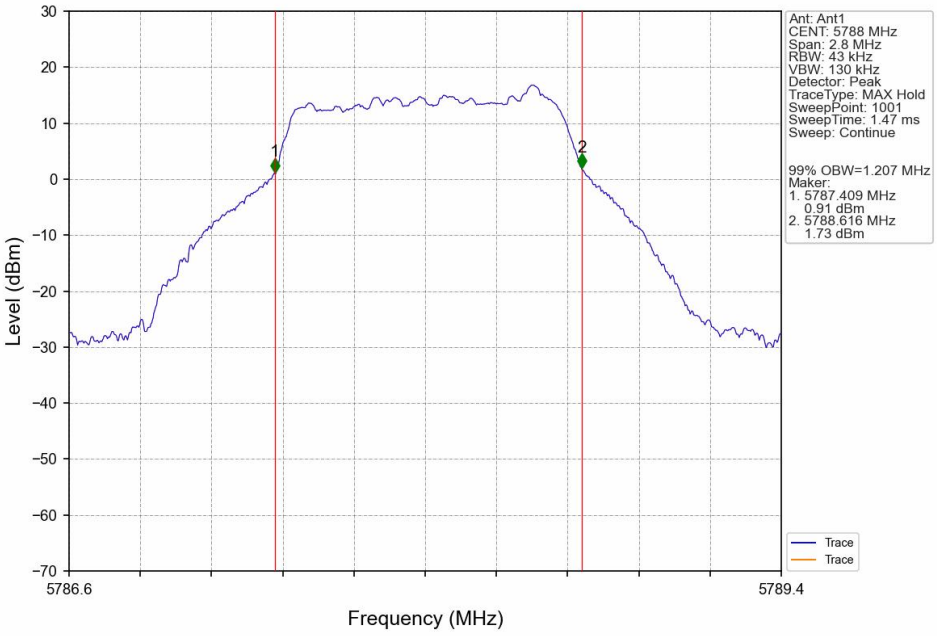
2.2 Test Graph

2.2.1 OBW

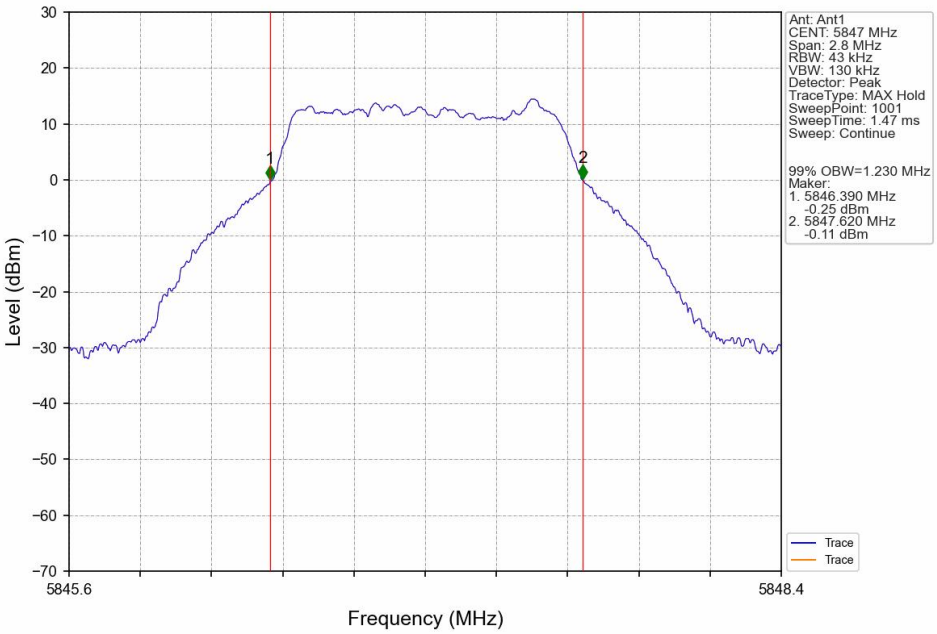
QPSK_LCH_5728MHz_Ant1_NTNV



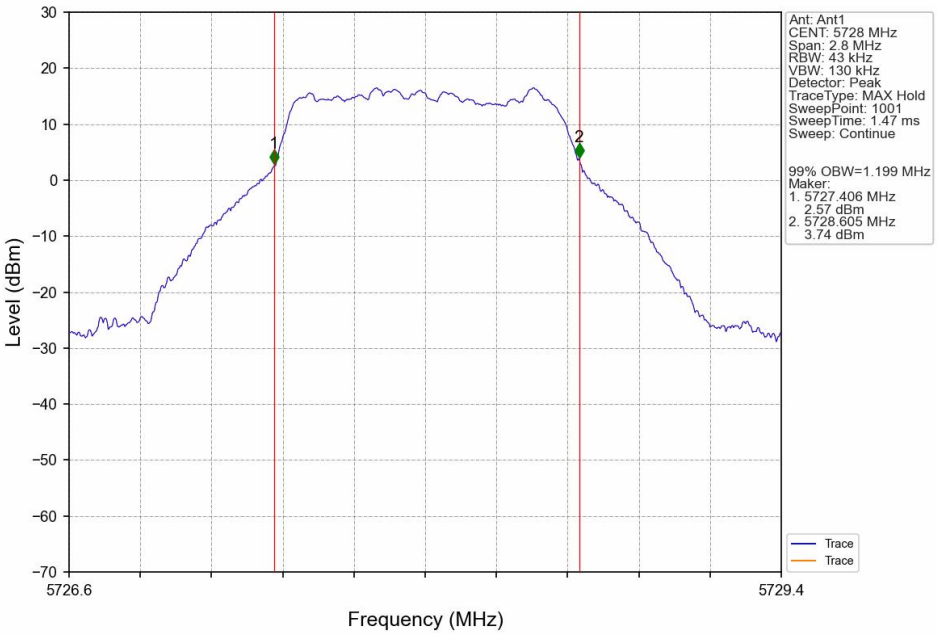
QPSK_MCH_5788MHz_Ant1_NTNV



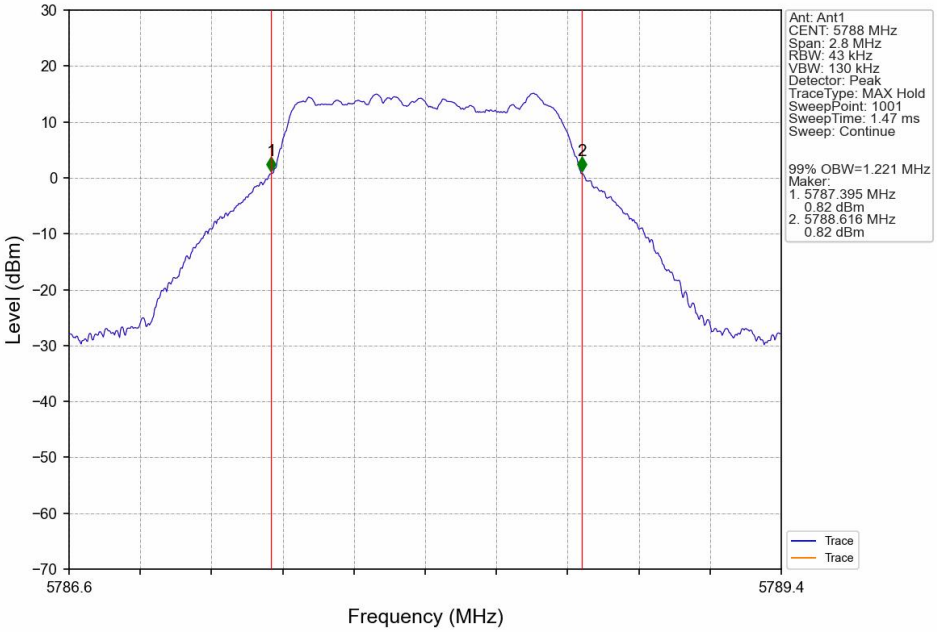
QPSK_HCH_5847MHz_Ant1_NTNV



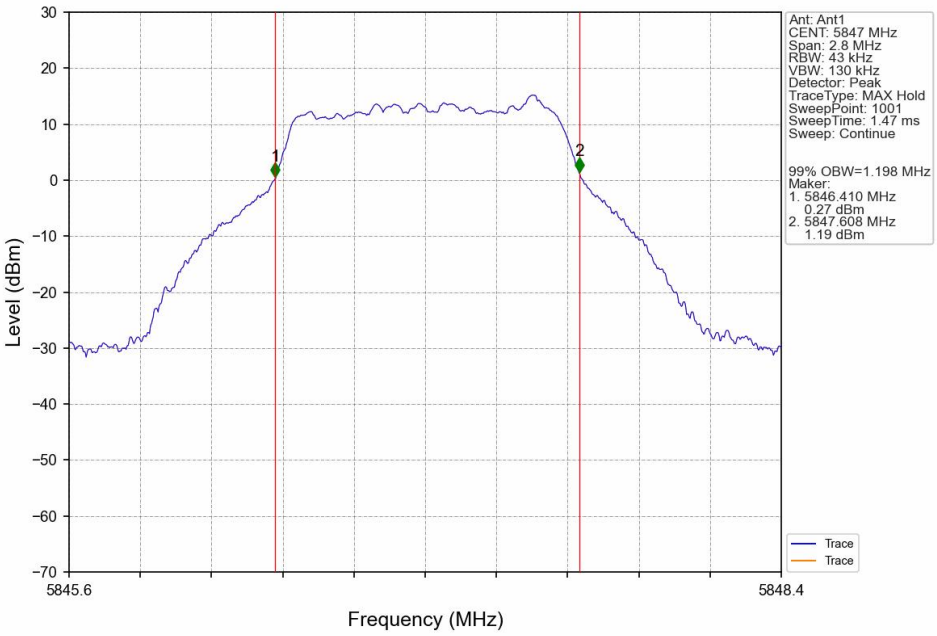
16QAM_LCH_5728MHz_Ant1_NTNV



16QAM_MCH_5788MHz_Ant1_NTNV

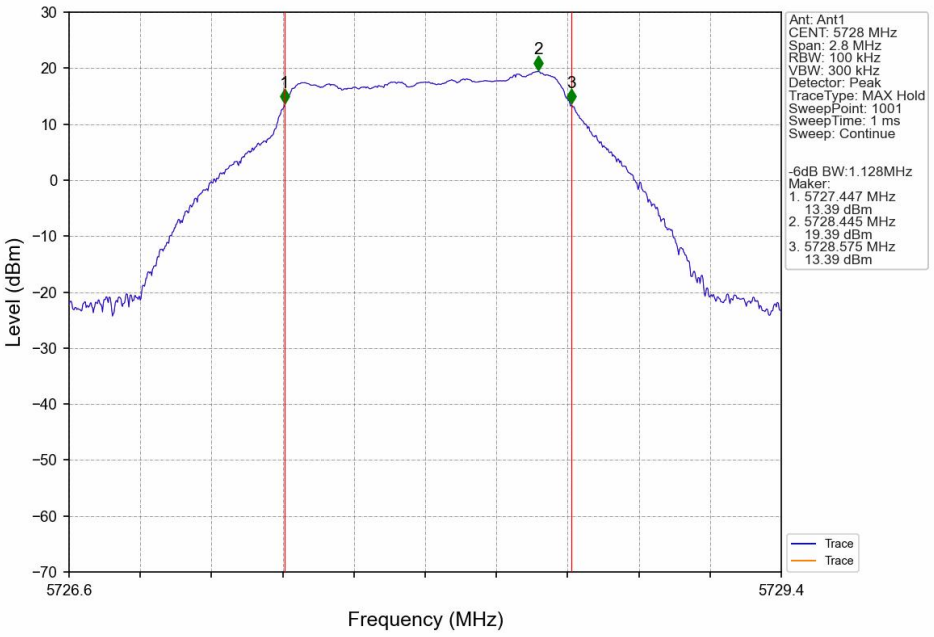


16QAM_HCH_5847MHz_Ant1_NTNV

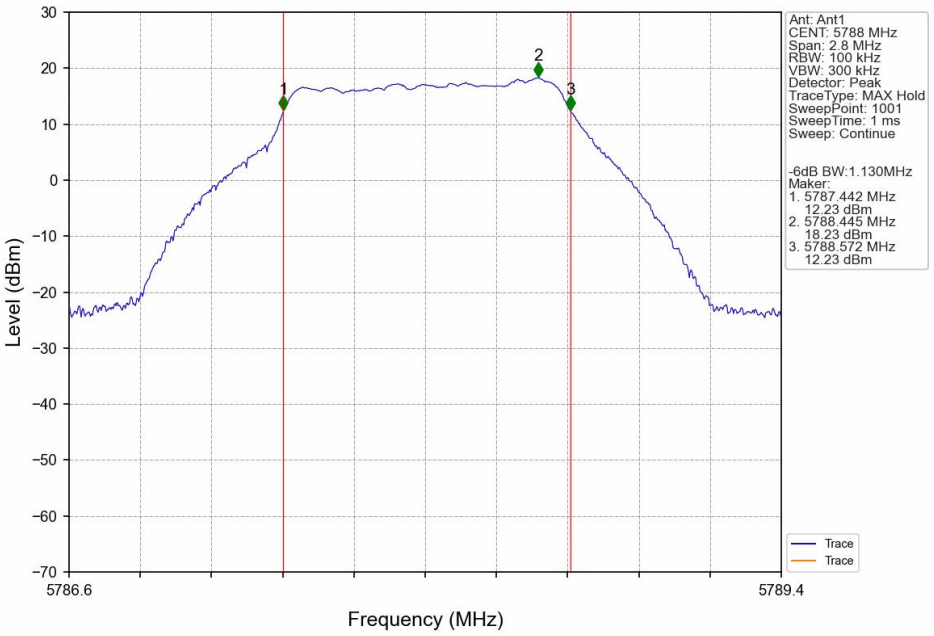


2.2.2 6dB BW

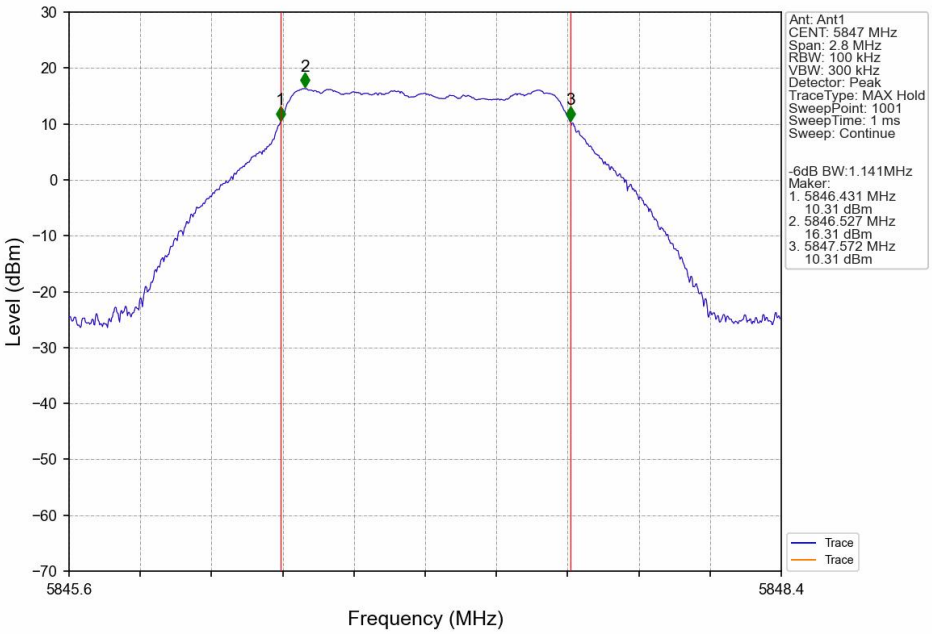
QPSK_LCH_5728MHz_Ant1_NTNV



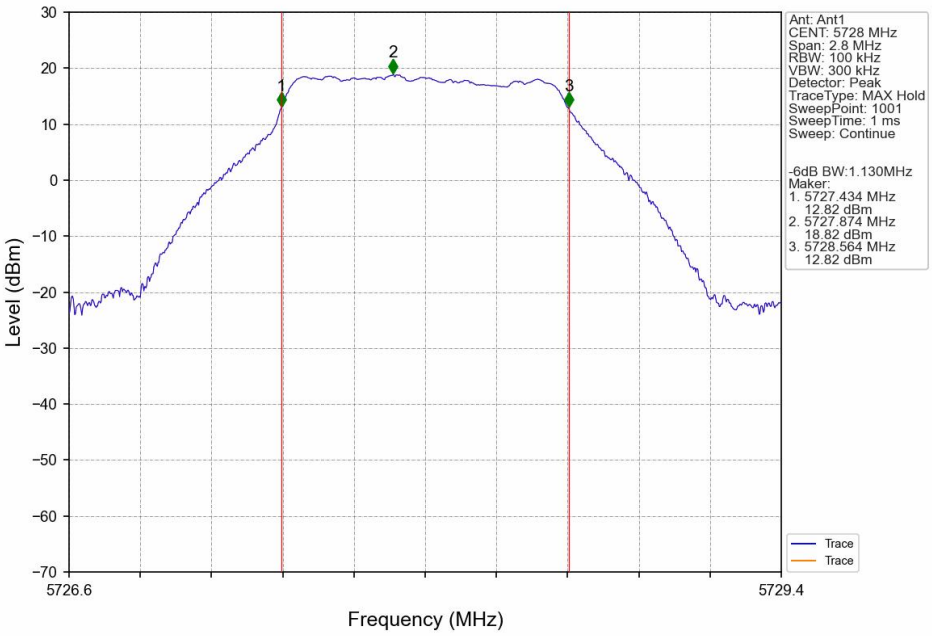
QPSK_MCH_5788MHz_Ant1_NTNV



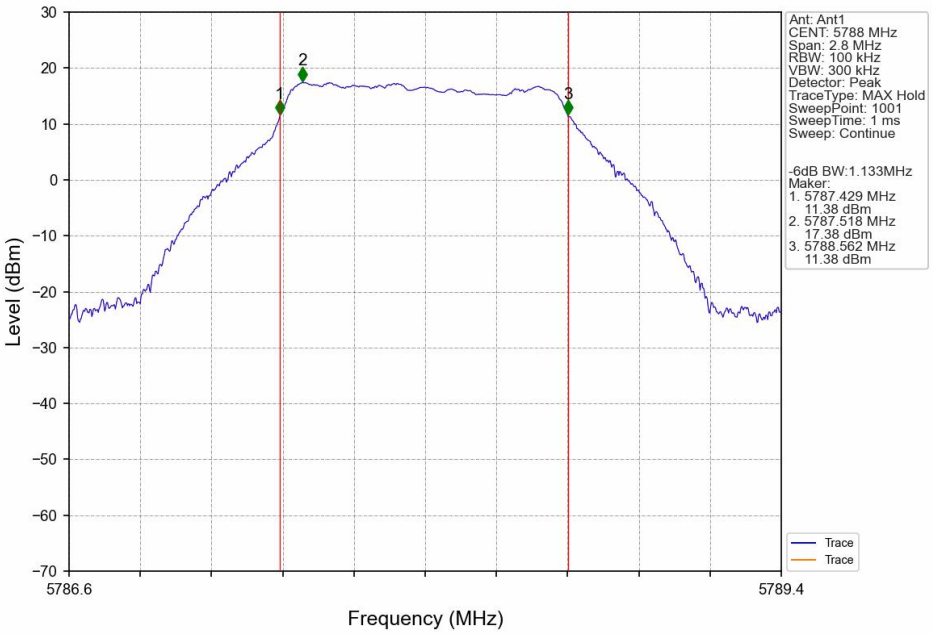
QPSK_HCH_5847MHz_Ant1_NTNV



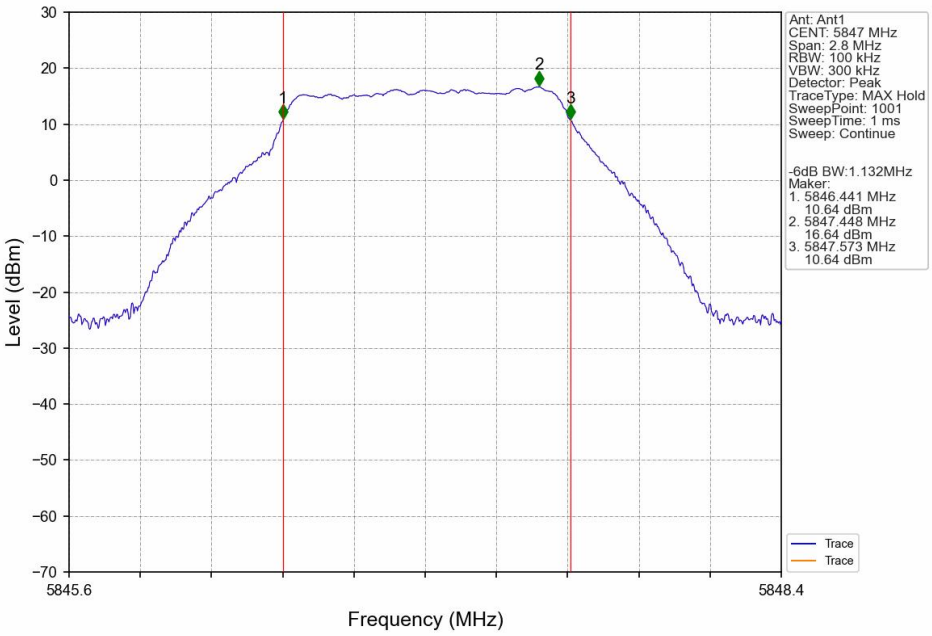
16QAM_LCH_5728MHz_Ant1_NTNV



16QAM_MCH_5788MHz_Ant1_NTNV



16QAM_HCH_5847MHz_Ant1_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	5728	15.79	10.98	17.03	<=28.09	Pass
		5788	14.47	10.17	15.84	<=28.09	Pass
		5847	14.46	9.78	15.73	<=28.09	Pass
16QAM	MIMO	5728	15.55	10.68	16.77	<=28.09	Pass
		5788	14.50	10.01	15.82	<=28.09	Pass
		5847	14.31	9.65	15.59	<=28.09	Pass
Note1: Antenna Gain: Ant1: 4.90dBi; Ant2: 4.90dBi; Note2: Directional Gain: Band3: 7.91dBi							

4. Maximum Power Spectral Density

4.1 Test Result

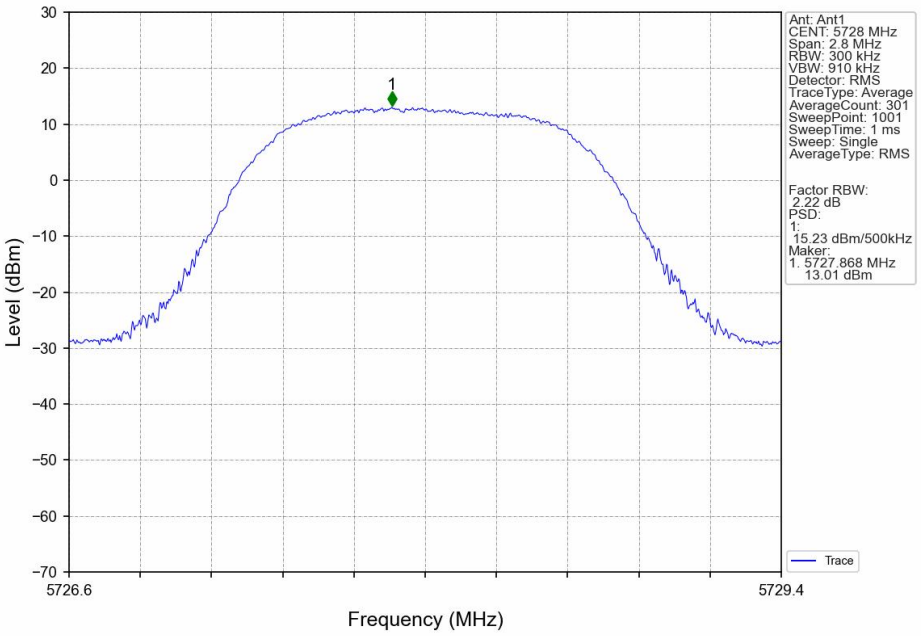
4.1.1 PSD-Band3

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/500kHz)				Verdict
			ANT1	ANT2	MIMO	Limit	
QPSK	MIMO	5728	15.23	10.18	16.26	<=28.09	Pass
		5788	13.86	9.54	14.94	<=28.09	Pass
		5847	13.45	8.92	14.58	<=28.09	Pass
16QAM	MIMO	5728	14.77	9.89	15.91	<=28.09	Pass
		5788	13.57	9.18	14.89	<=28.09	Pass
		5847	13.46	9.03	14.66	<=28.09	Pass
Note1: Antenna Gain: Ant1: 4.90dBi; Ant2: 4.90dBi; Note2: Directional Gain: Band3: 7.91dBi							

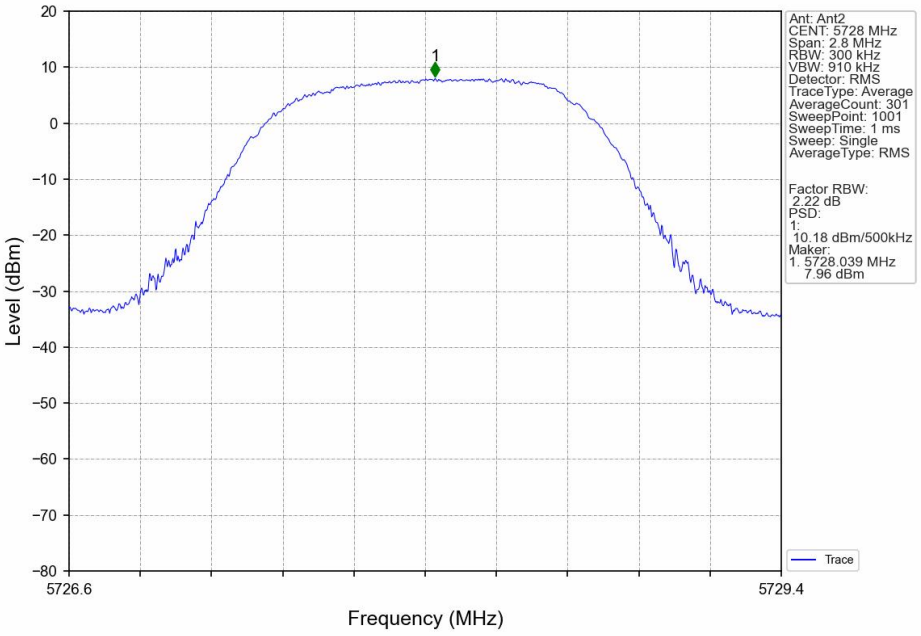
4.2 Test Graph

4.2.1 PSD-Band3

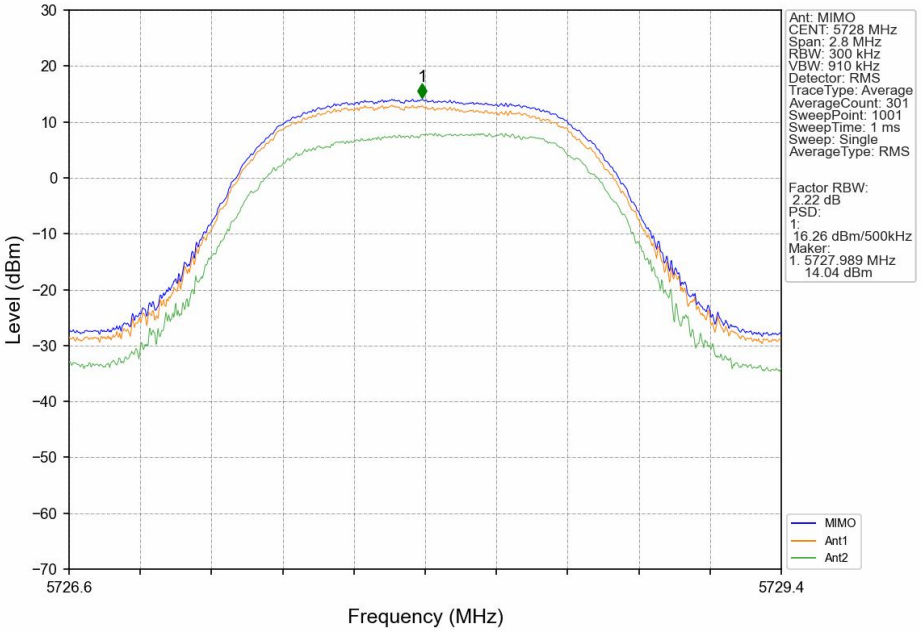
QPSK_LCH_5728MHz_Ant1_NTNV



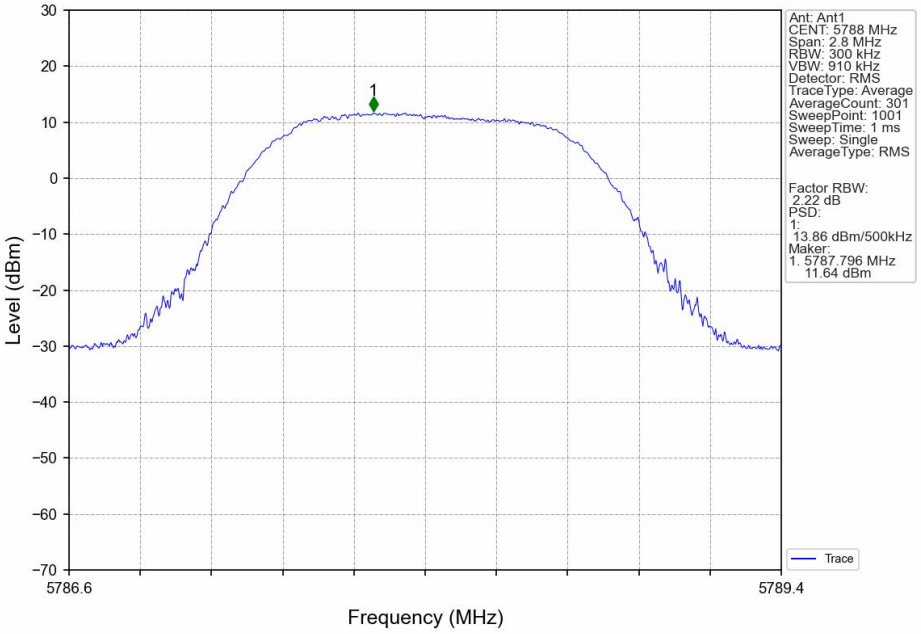
QPSK_LCH_5728MHz_Ant2_NTNV



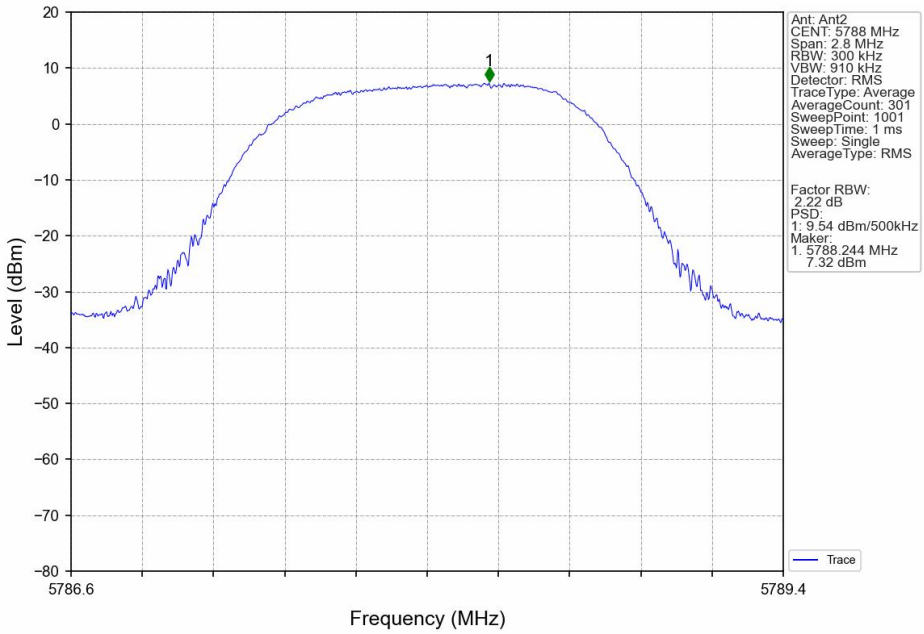
QPSK_LCH_5728MHz_MIMO_NTNV



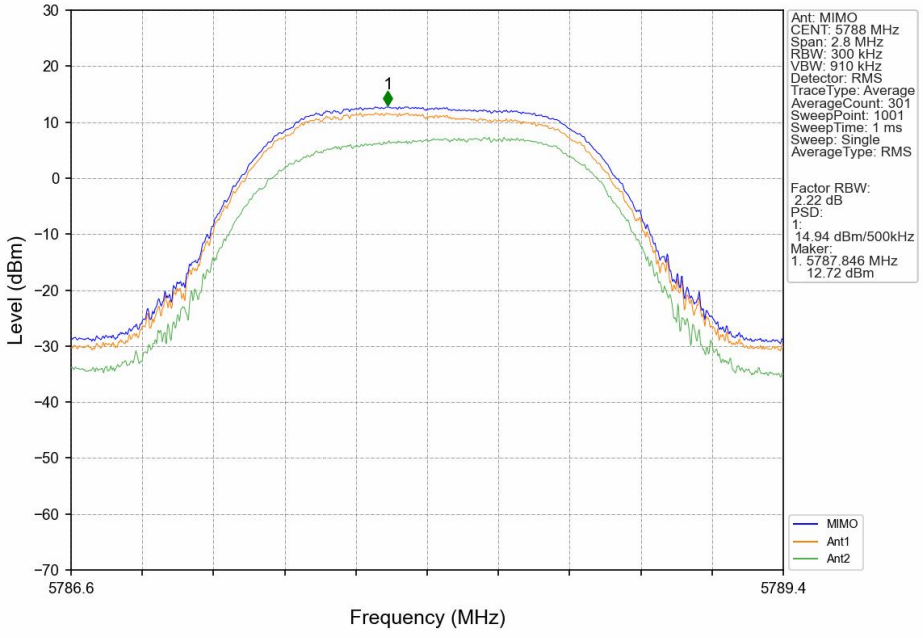
QPSK_MCH_5788MHz_Ant1_NTNV



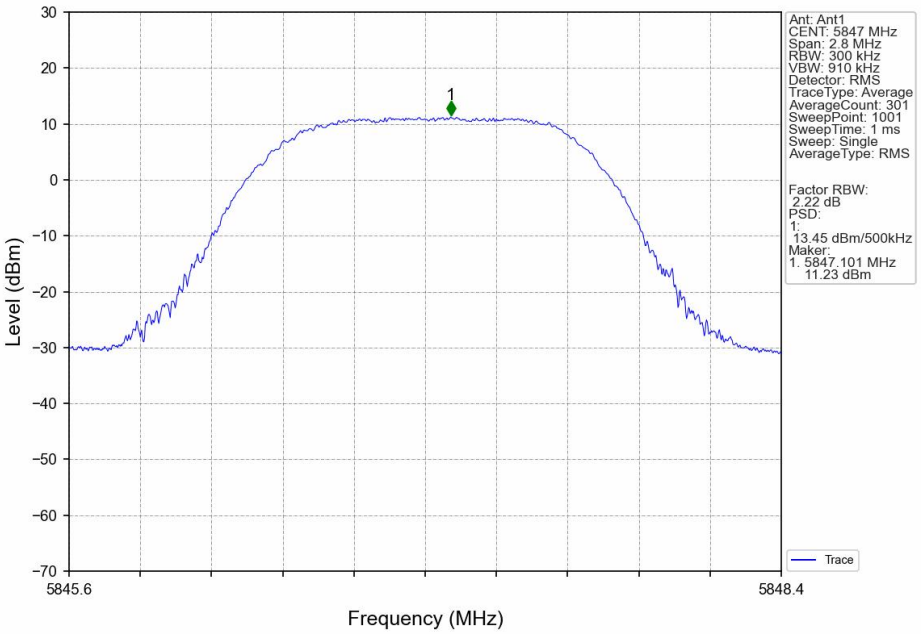
QPSK_MCH_5788MHz_Ant2_NTNV



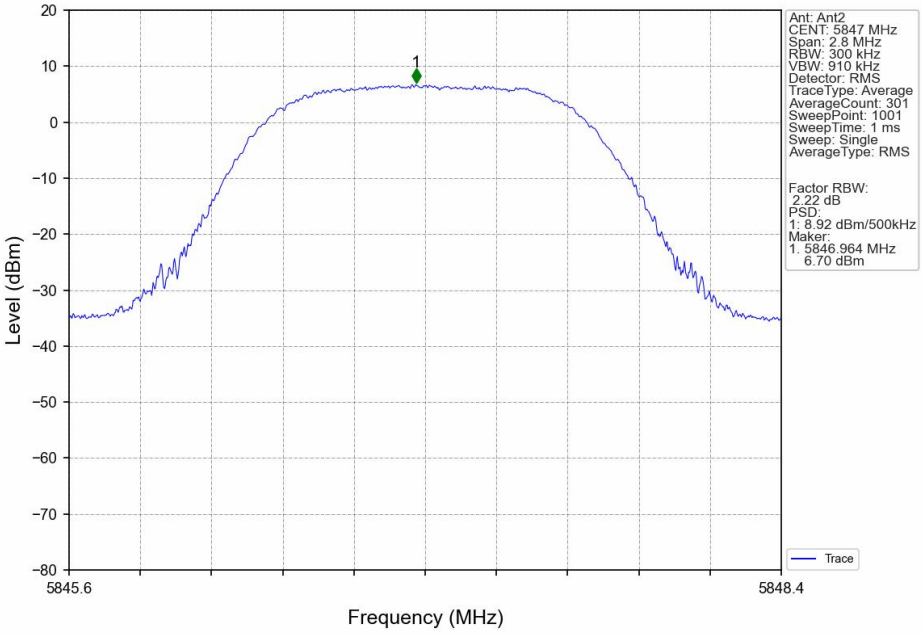
QPSK_MCH_5788MHz_MIMO_NTNV



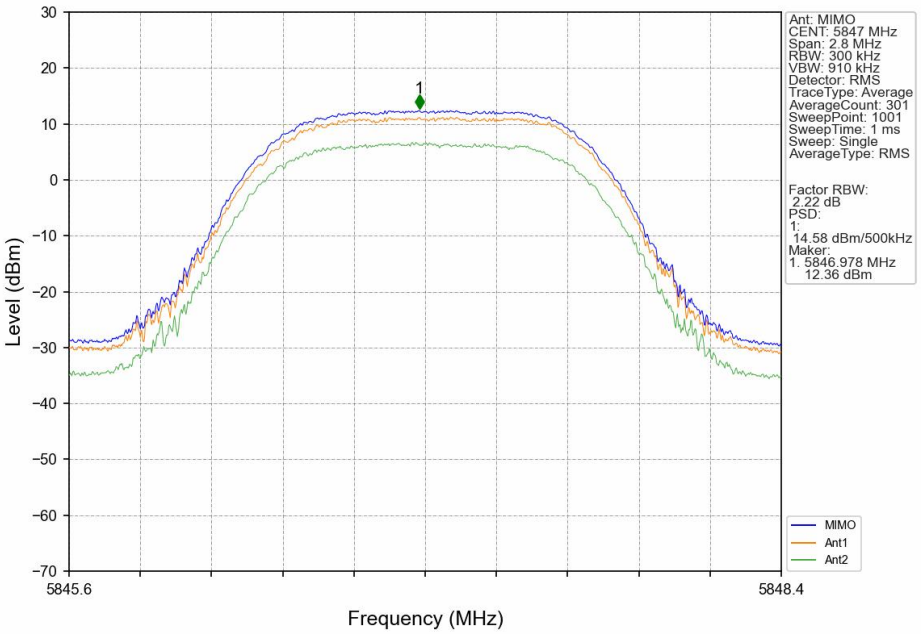
QPSK_HCH_5847MHz_Ant1_NTNV



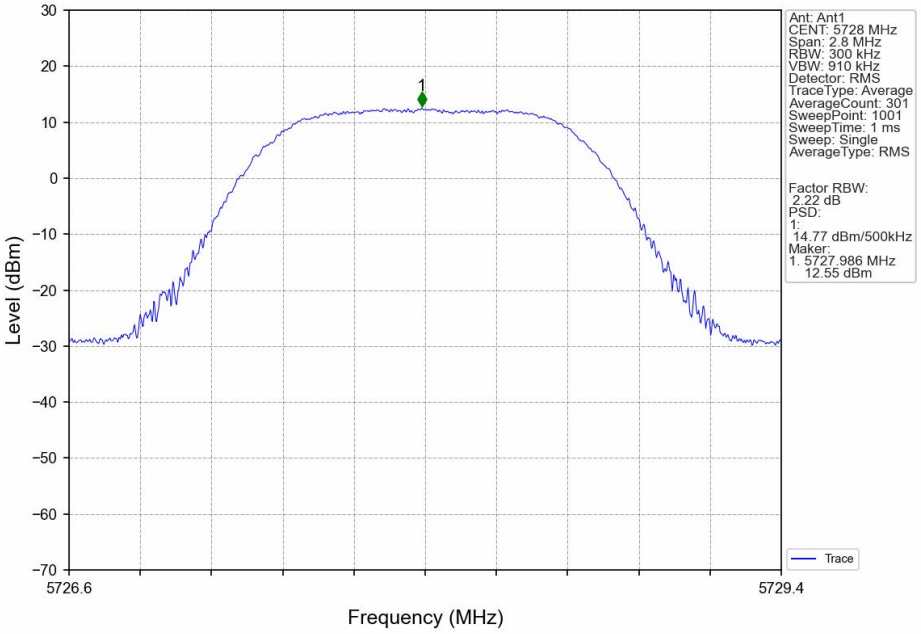
QPSK_HCH_5847MHz_Ant2_NTNV



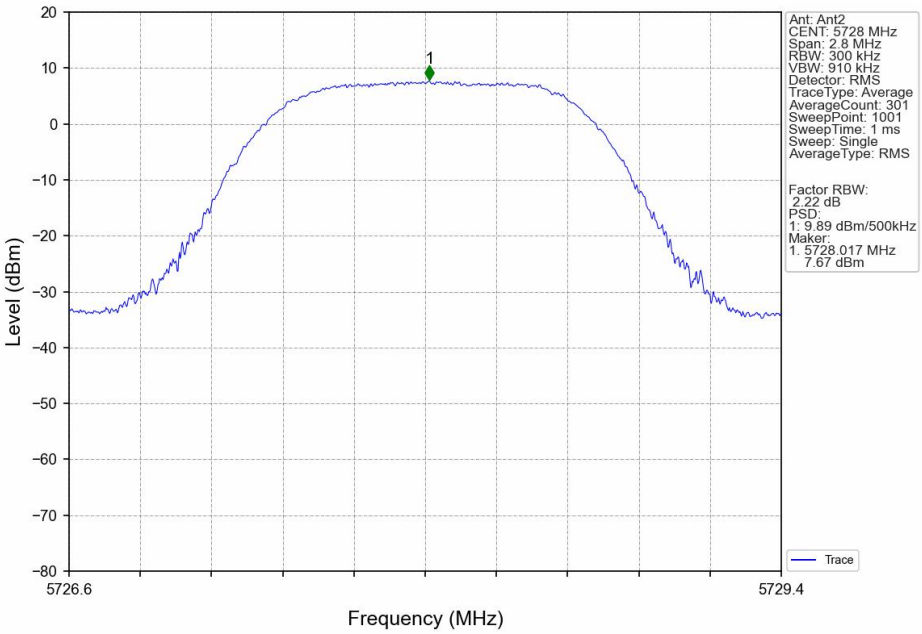
QPSK_HCH_5847MHz_MIMO_NTNV



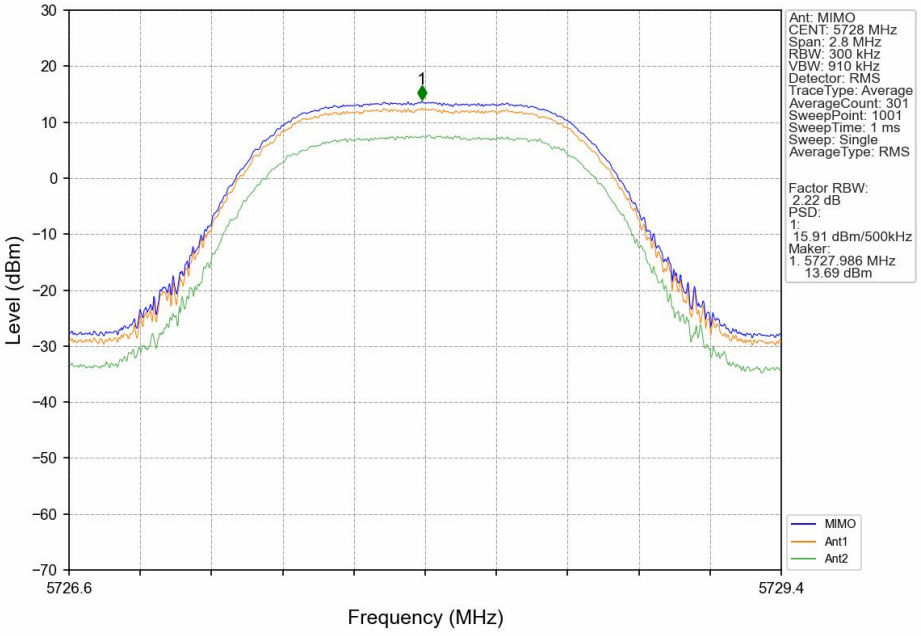
16QAM_LCH_5728MHz_Ant1_NTNV



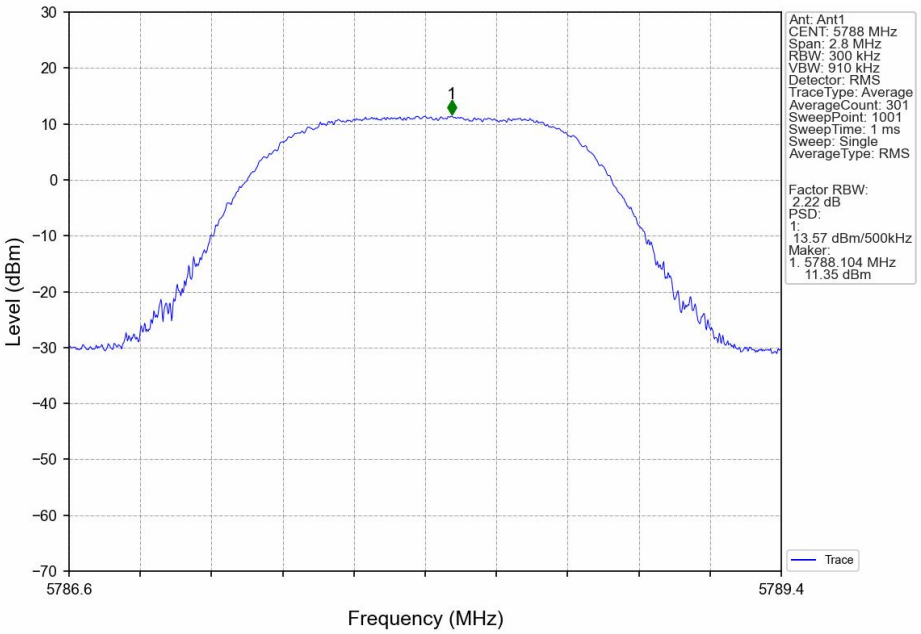
16QAM_LCH_5728MHz_Ant2_NTNV



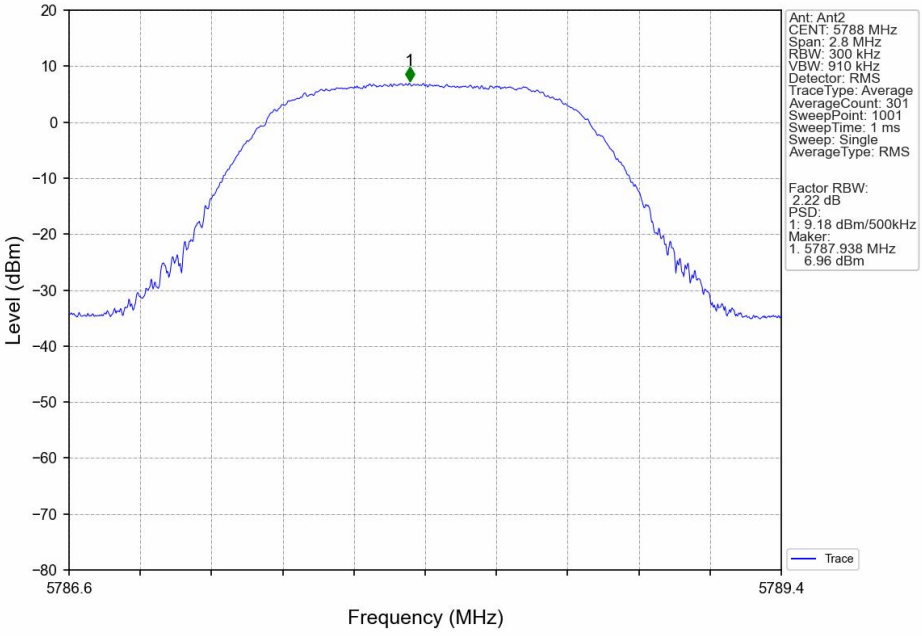
16QAM_LCH_5728MHz_MIMO_NTNV



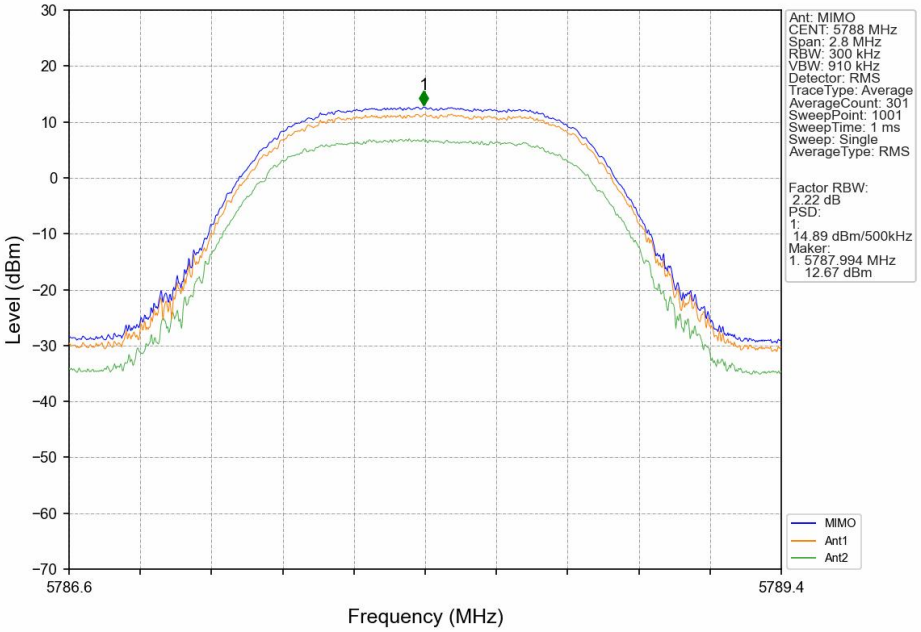
16QAM_MCH_5788MHz_Ant1_NTNV



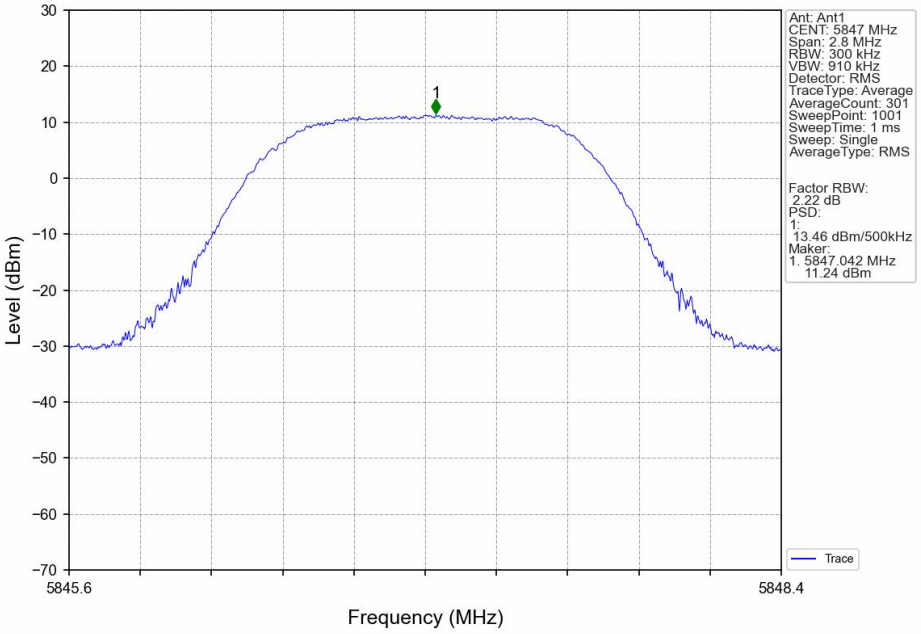
16QAM_MCH_5788MHz_Ant2_NTNV



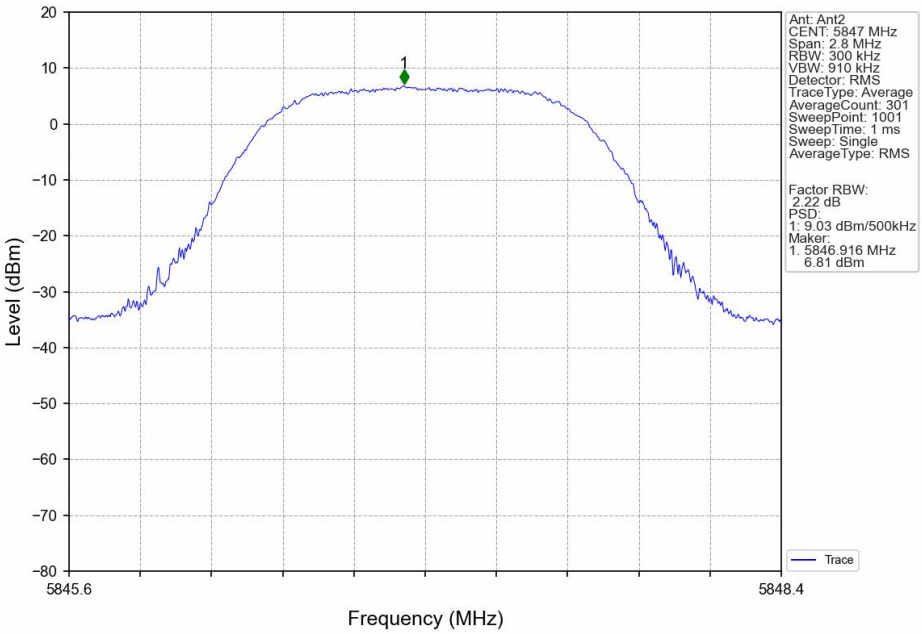
16QAM_MCH_5788MHz_MIMO_NTNV



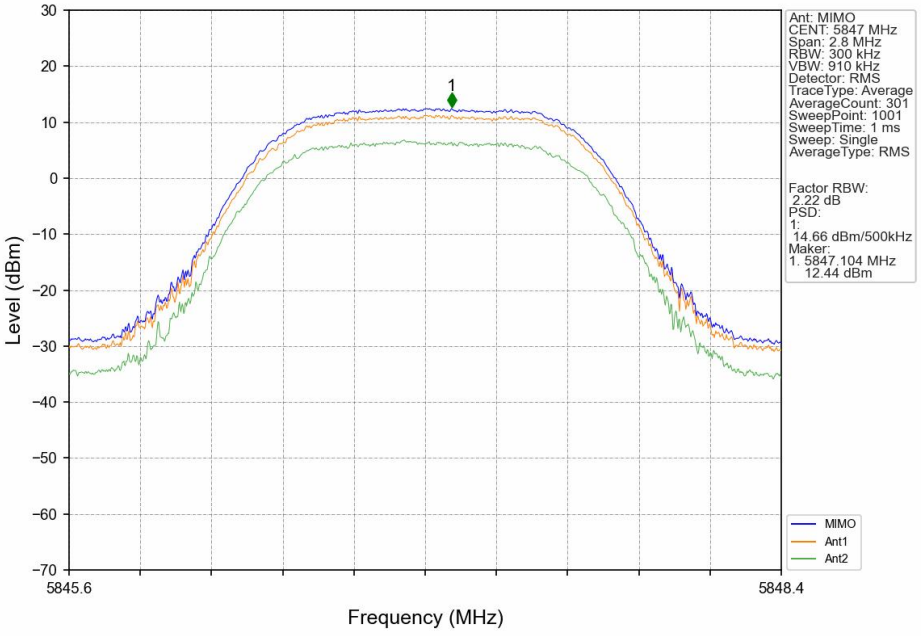
16QAM_HCH_5847MHz_Ant1_NTNV



16QAM_HCH_5847MHz_Ant2_NTNV



16QAM_HCH_5847MHz_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	5728	20	102	5728.010	5725 to 5850	Pass
				120	5728.011	5725 to 5850	Pass
				138	5728.007	5725 to 5850	Pass
			-30	120	5728.013	5725 to 5850	Pass
			-20	120	5728.011	5725 to 5850	Pass
			-10	120	5728.015	5725 to 5850	Pass
			0	120	5728.015	5725 to 5850	Pass
			10	120	5728.008	5725 to 5850	Pass
			30	120	5728.013	5725 to 5850	Pass
			40	120	5728.014	5725 to 5850	Pass
			50	120	5728.011	5725 to 5850	Pass
		5788	20	102	5788.006	5725 to 5850	Pass
				120	5788.013	5725 to 5850	Pass
				138	5788.010	5725 to 5850	Pass
			-30	120	5788.007	5725 to 5850	Pass
			-20	120	5788.004	5725 to 5850	Pass
			-10	120	5788.003	5725 to 5850	Pass
			0	120	5788.006	5725 to 5850	Pass
			10	120	5788.006	5725 to 5850	Pass
			30	120	5788.008	5725 to 5850	Pass
			40	120	5788.000	5725 to 5850	Pass
			50	120	5788.004	5725 to 5850	Pass
		5847	20	102	5847.000	5725 to 5850	Pass
				120	5846.993	5725 to 5850	Pass
				138	5846.999	5725 to 5850	Pass
			-30	120	5846.996	5725 to 5850	Pass
			-20	120	5846.997	5725 to 5850	Pass
			-10	120	5847.000	5725 to 5850	Pass
			0	120	5846.996	5725 to 5850	Pass
			10	120	5846.996	5725 to 5850	Pass
			30	120	5846.997	5725 to 5850	Pass
			40	120	5847.000	5725 to 5850	Pass
			50	120	5846.999	5725 to 5850	Pass
16QAM	MIMO	5728	20	102	5728.000	5725 to 5850	Pass
				120	5727.999	5725 to 5850	Pass
				138	5727.999	5725 to 5850	Pass
			-30	120	5727.999	5725 to 5850	Pass
			-20	120	5728.001	5725 to 5850	Pass
			-10	120	5727.999	5725 to 5850	Pass
			0	120	5727.997	5725 to 5850	Pass
			10	120	5727.997	5725 to 5850	Pass
			30	120	5727.999	5725 to 5850	Pass
			40	120	5727.999	5725 to 5850	Pass
			50	120	5728.001	5725 to 5850	Pass
		5788	20	102	5787.990	5725 to 5850	Pass
				120	5787.996	5725 to 5850	Pass

				138	5788.000	5725 to 5850	Pass
			-30	120	5787.999	5725 to 5850	Pass
			-20	120	5788.004	5725 to 5850	Pass
			-10	120	5788.003	5725 to 5850	Pass
			0	120	5788.000	5725 to 5850	Pass
			10	120	5787.996	5725 to 5850	Pass
			30	120	5787.999	5725 to 5850	Pass
			40	120	5787.992	5725 to 5850	Pass
			50	120	5787.993	5725 to 5850	Pass
		5847	20	102	5847.004	5725 to 5850	Pass
				120	5846.999	5725 to 5850	Pass
				138	5847.004	5725 to 5850	Pass
			-30	120	5847.004	5725 to 5850	Pass
			-20	120	5847.003	5725 to 5850	Pass
			-10	120	5847.001	5725 to 5850	Pass
			0	120	5847.006	5725 to 5850	Pass
			10	120	5847.003	5725 to 5850	Pass
			30	120	5847.000	5725 to 5850	Pass
			40	120	5846.999	5725 to 5850	Pass
			50	120	5847.008	5725 to 5850	Pass