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Annex for BT

Test Report No.:CTL2406131031-WF01

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1. Bandwidth

1.1 Test Result

1.1.1 OBW

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	99% Occupied Bandwidth (MHz)		Verdict
					Result	Limit	
GFSK	SISO	2402	DH5	1	0.885	/	Pass
		2441	DH5	1	0.883	/	Pass
		2480	DH5	1	0.888	/	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.195	/	Pass
		2441	2DH5	1	1.202	/	Pass
		2480	2DH5	1	1.187	/	Pass
8DPSK	SISO	2402	3DH5	1	1.197	/	Pass
		2441	3DH5	1	1.196	/	Pass
		2480	3DH5	1	1.196	/	Pass

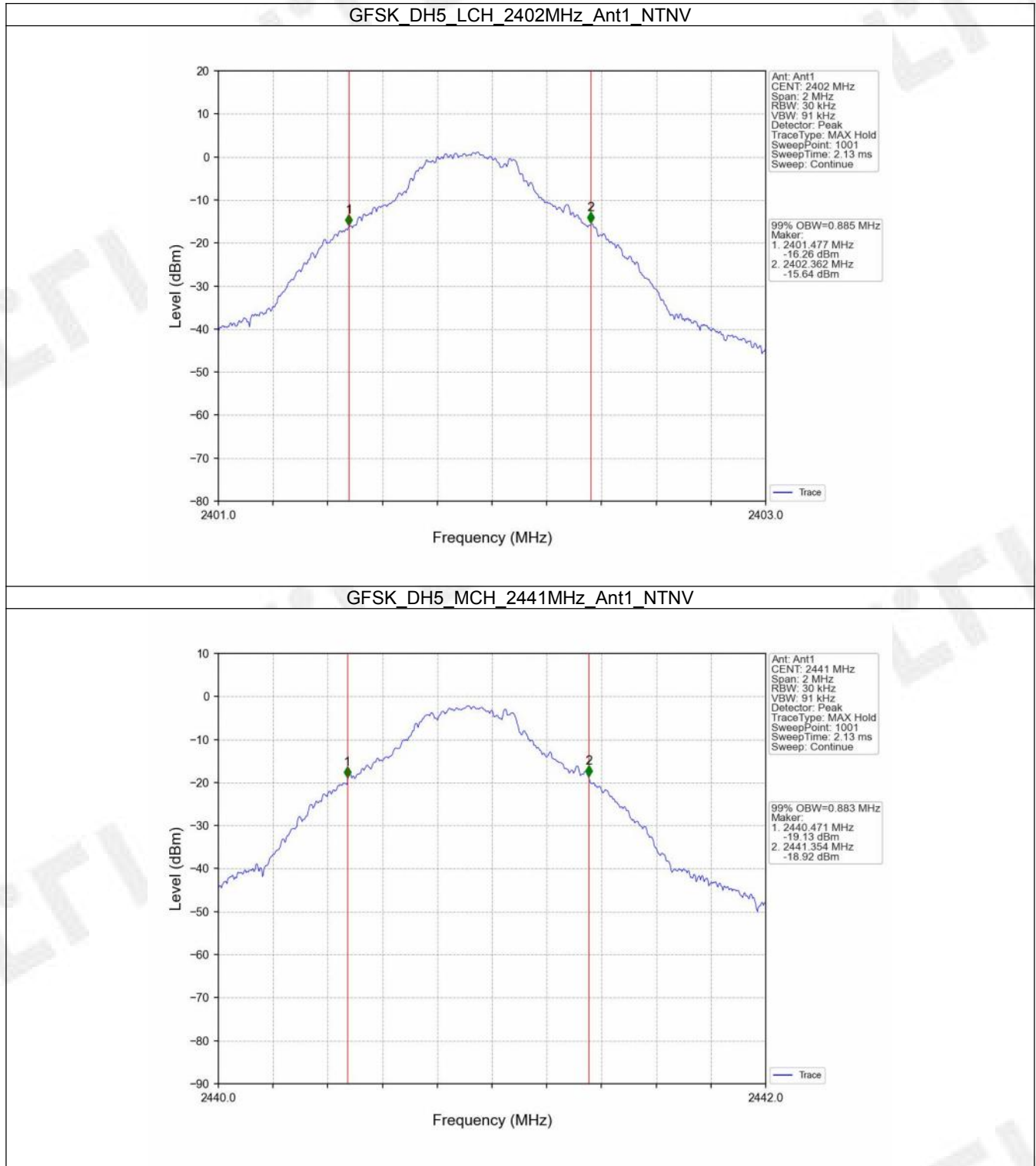
1.1.2 20dB BW

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	20dB Bandwidth (MHz)		Verdict
					Result	Limit	
GFSK	SISO	2402	DH5	1	1.012	/	Pass
		2441	DH5	1	1.026	/	Pass
		2480	DH5	1	1.011	/	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.335	/	Pass
		2441	2DH5	1	1.325	/	Pass
		2480	2DH5	1	1.325	/	Pass
8DPSK	SISO	2402	3DH5	1	1.326	/	Pass
		2441	3DH5	1	1.344	/	Pass
		2480	3DH5	1	1.325	/	Pass

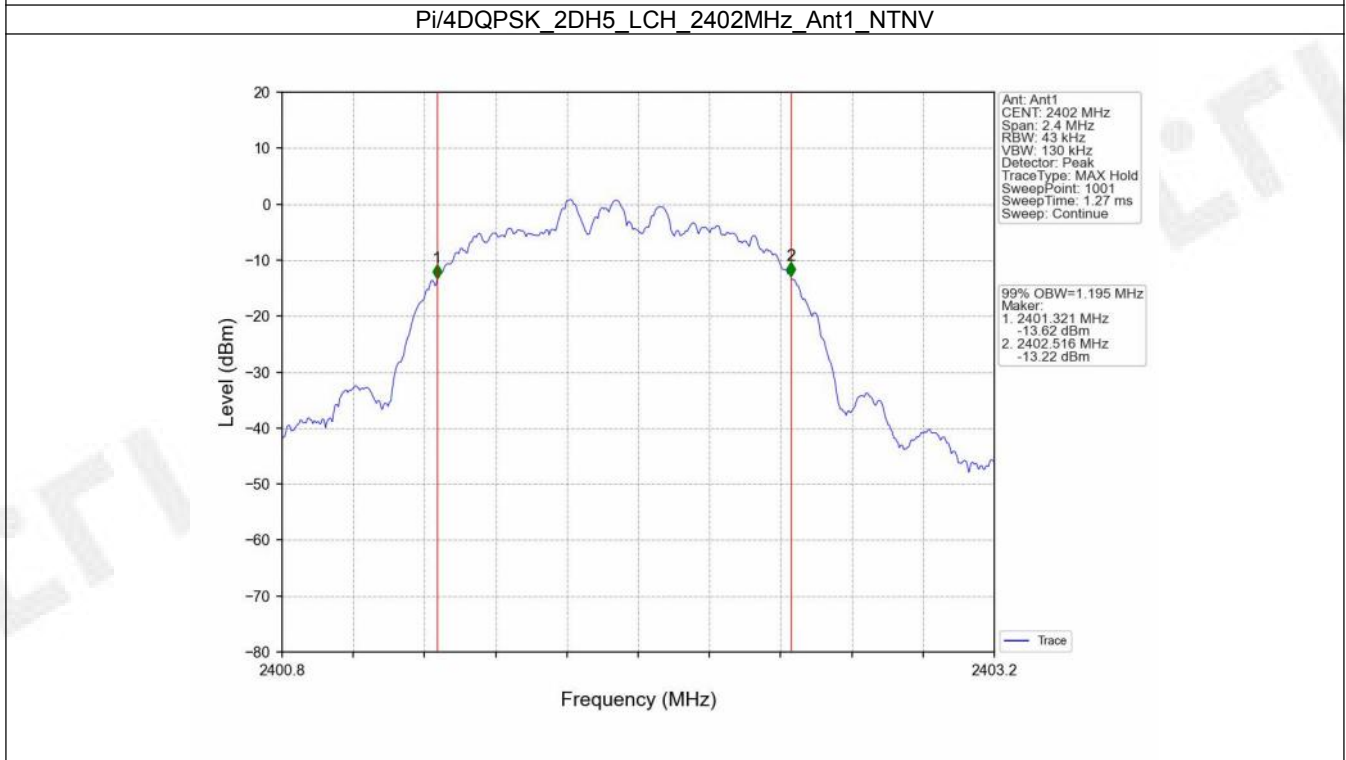
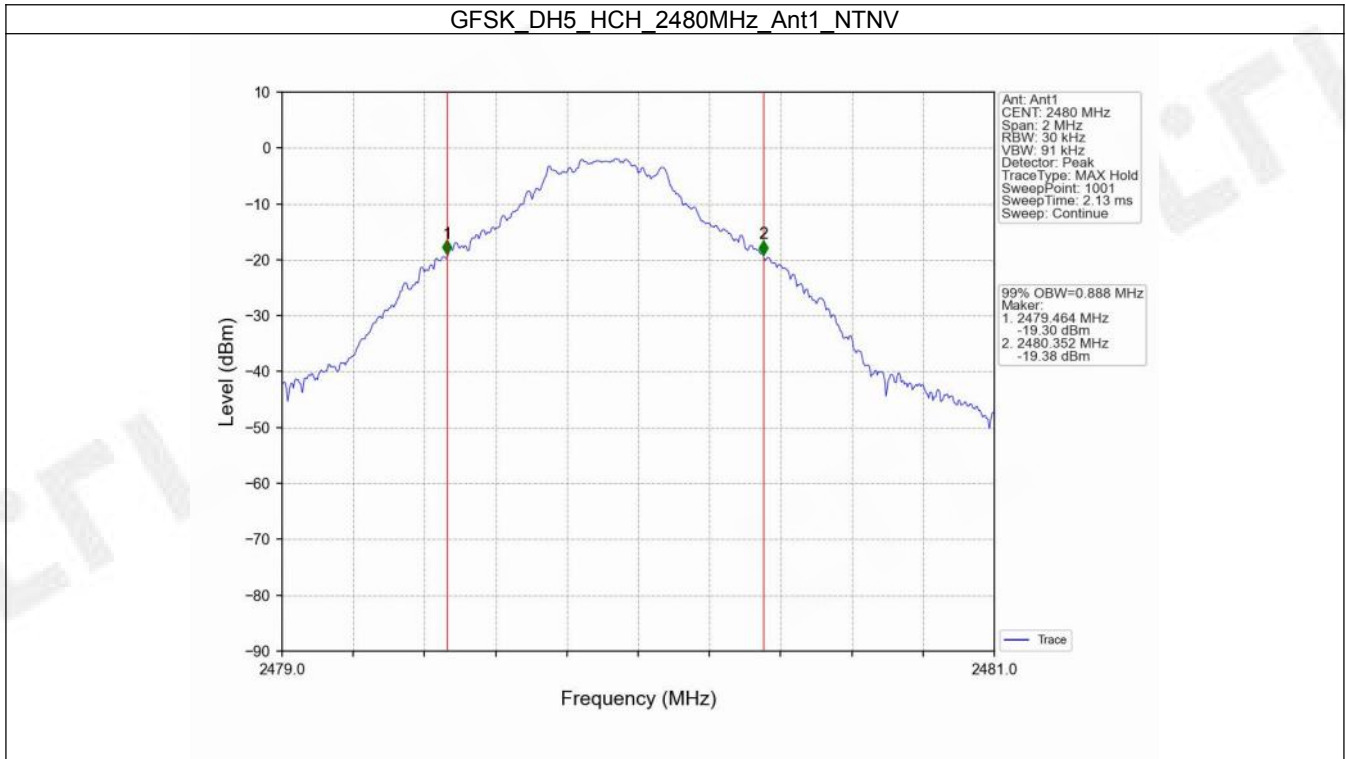
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1.2 Test Graph

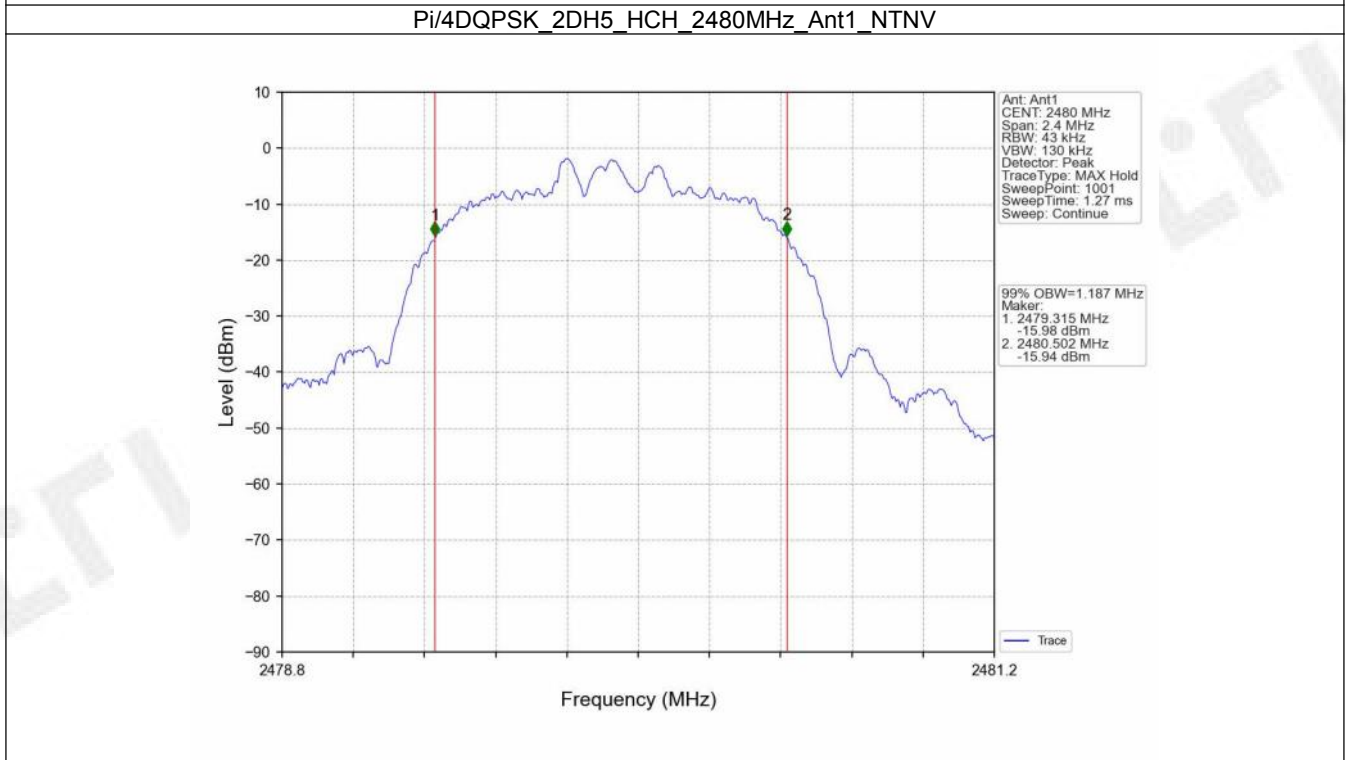
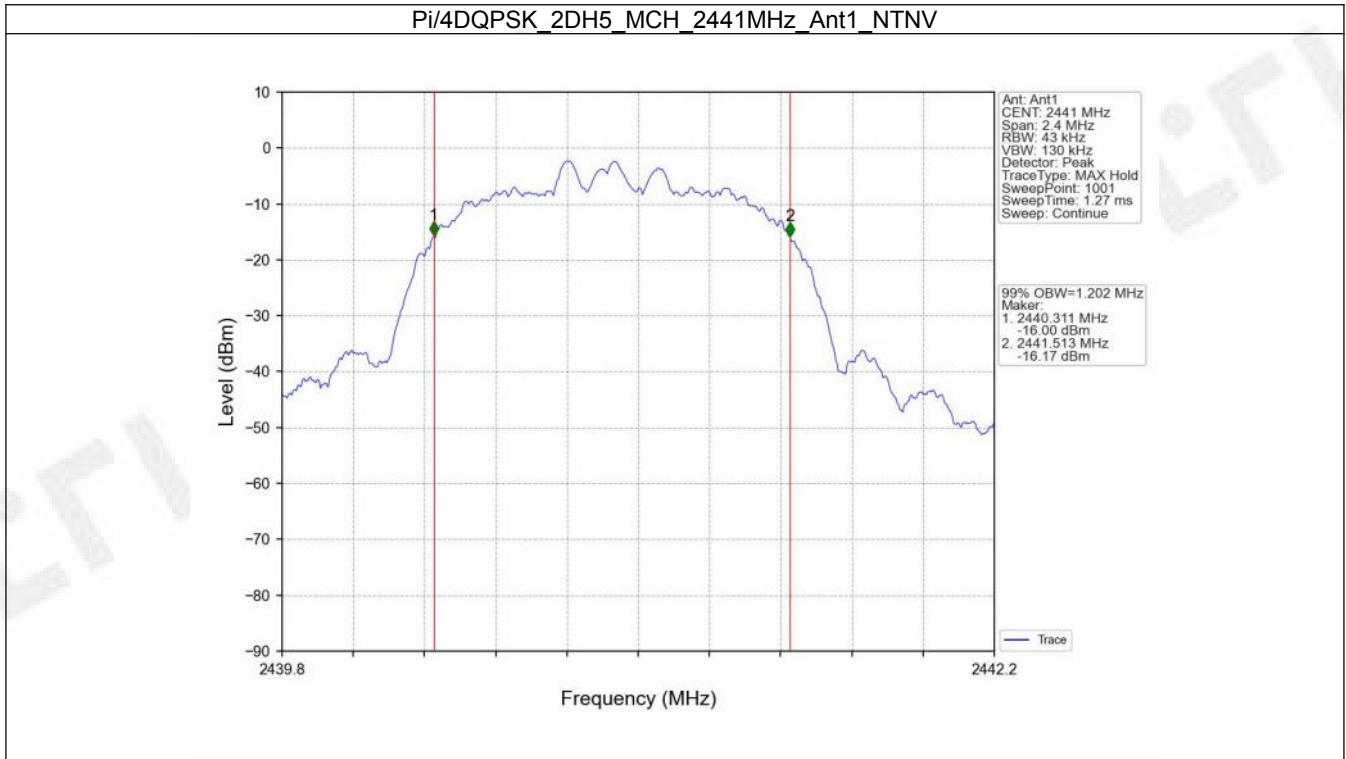
1.2.1 OBW



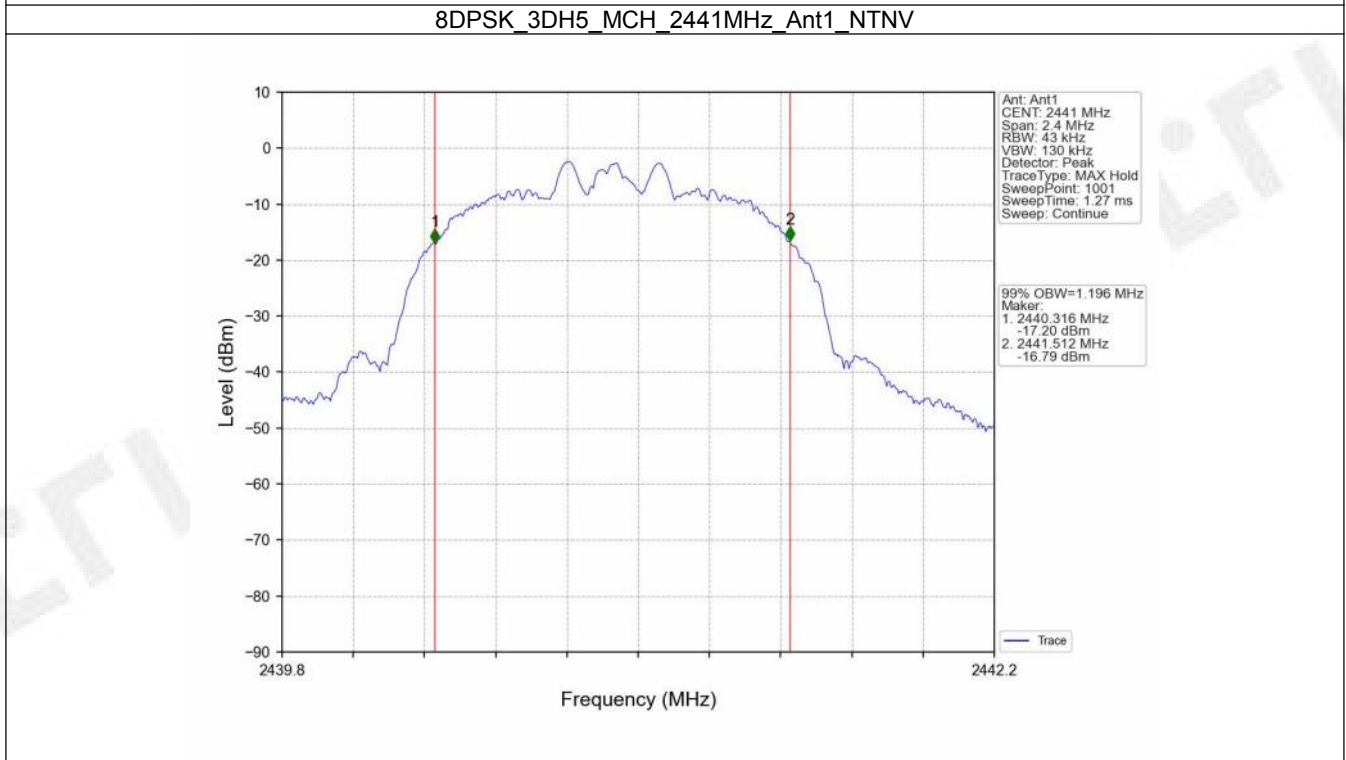
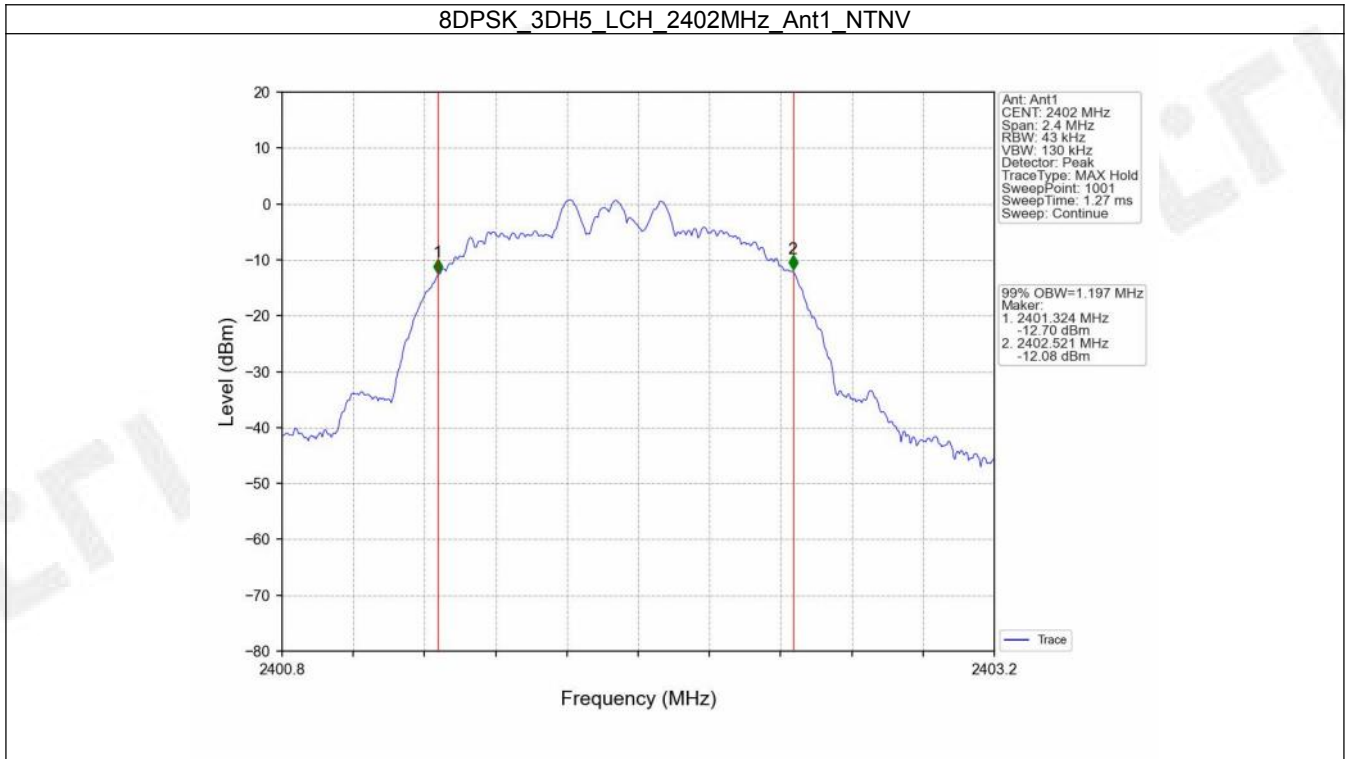
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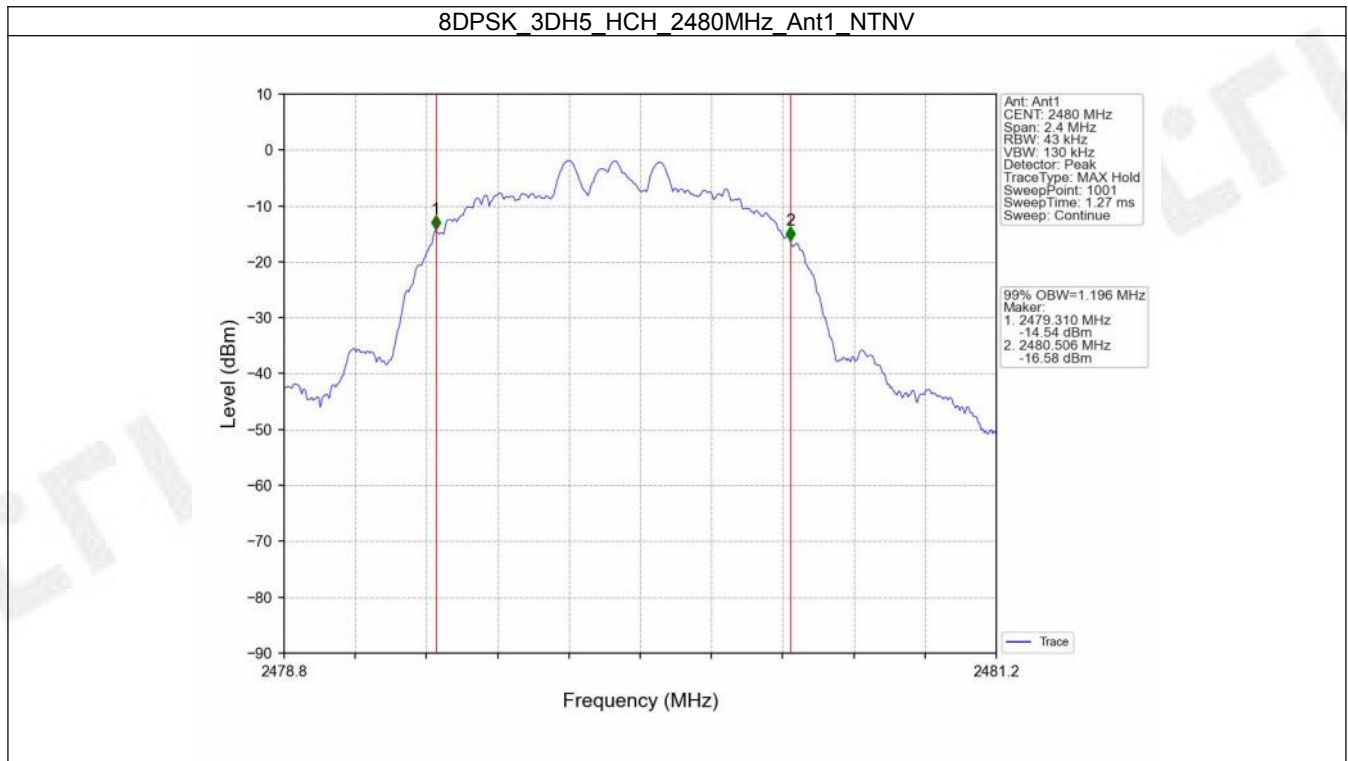
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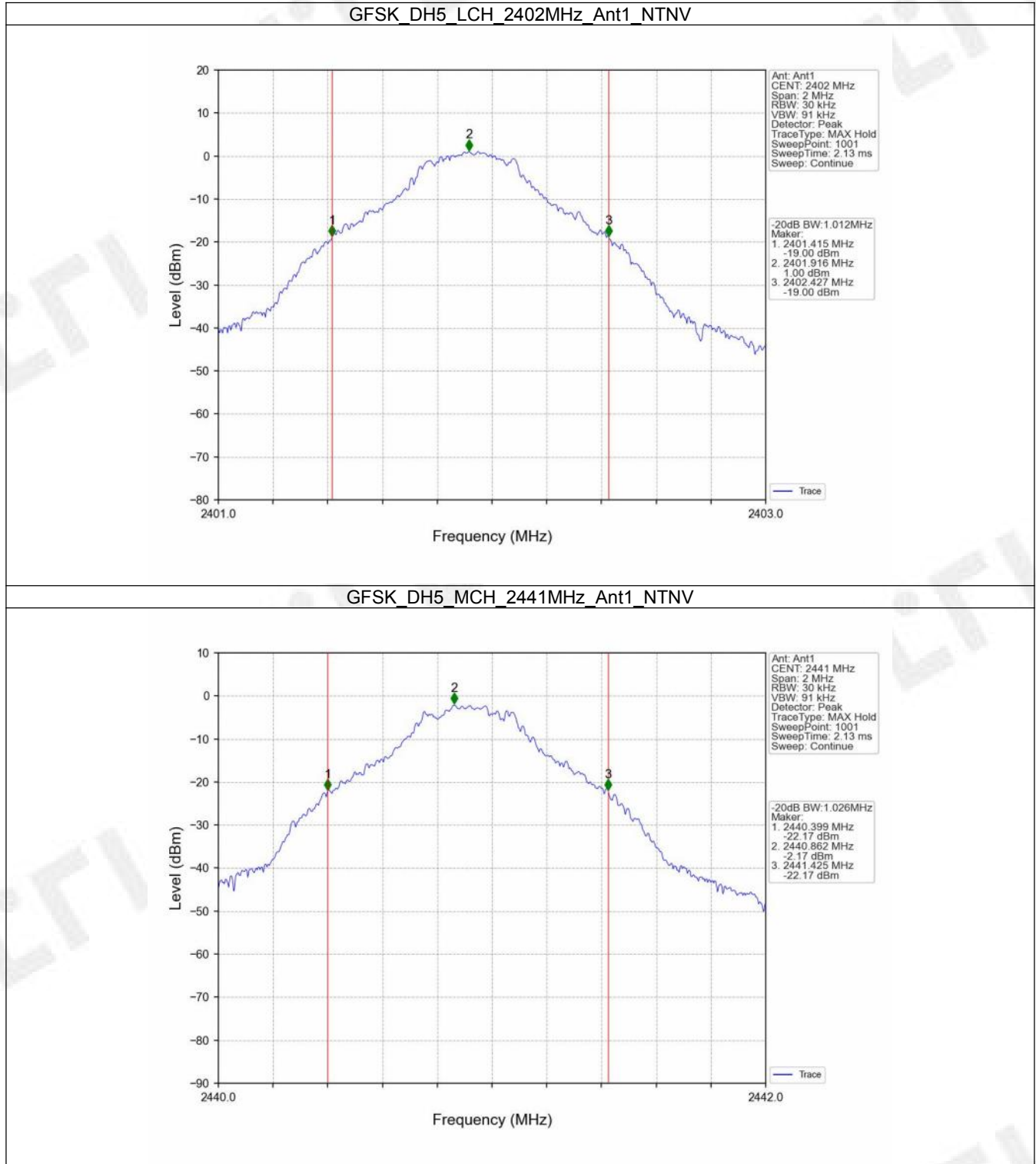


FCCID: 2AHPZ-CHS65

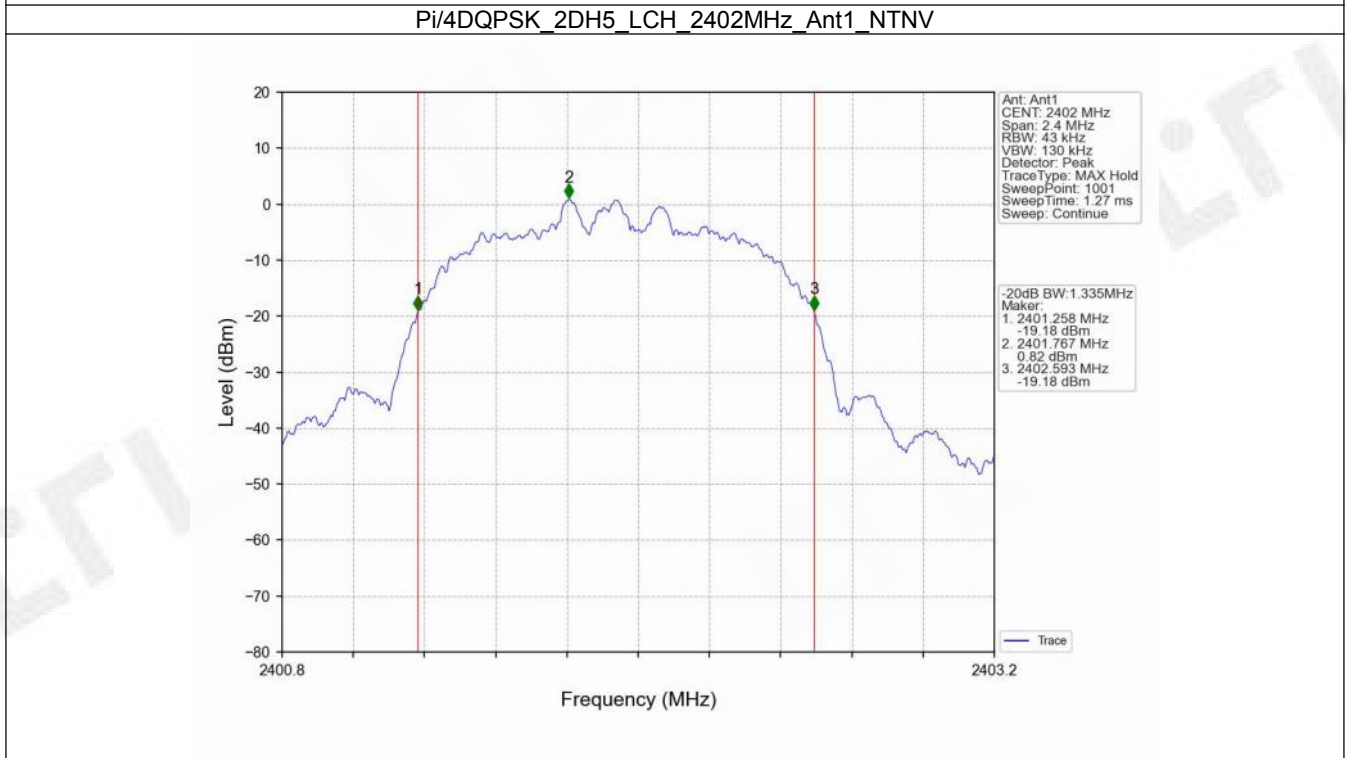
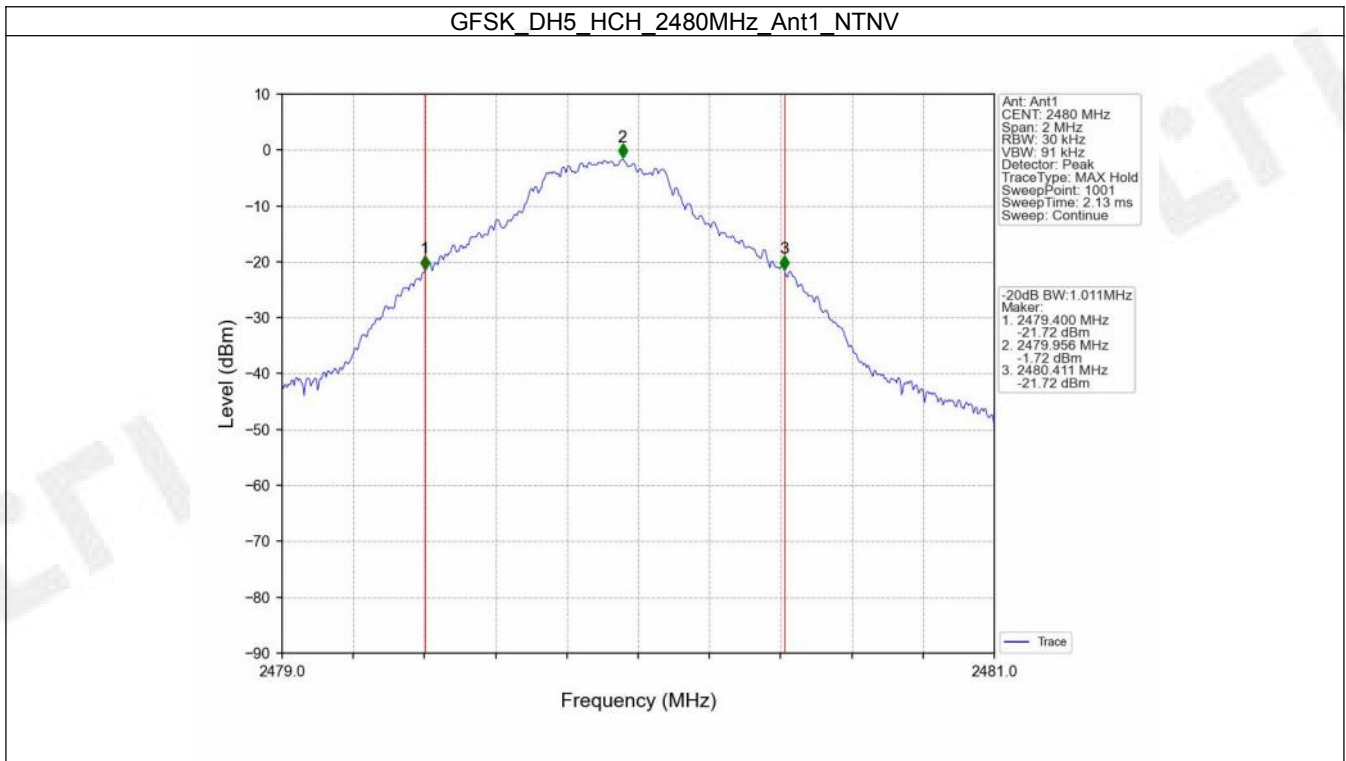


FCCID: 2AHPZ-CHS65

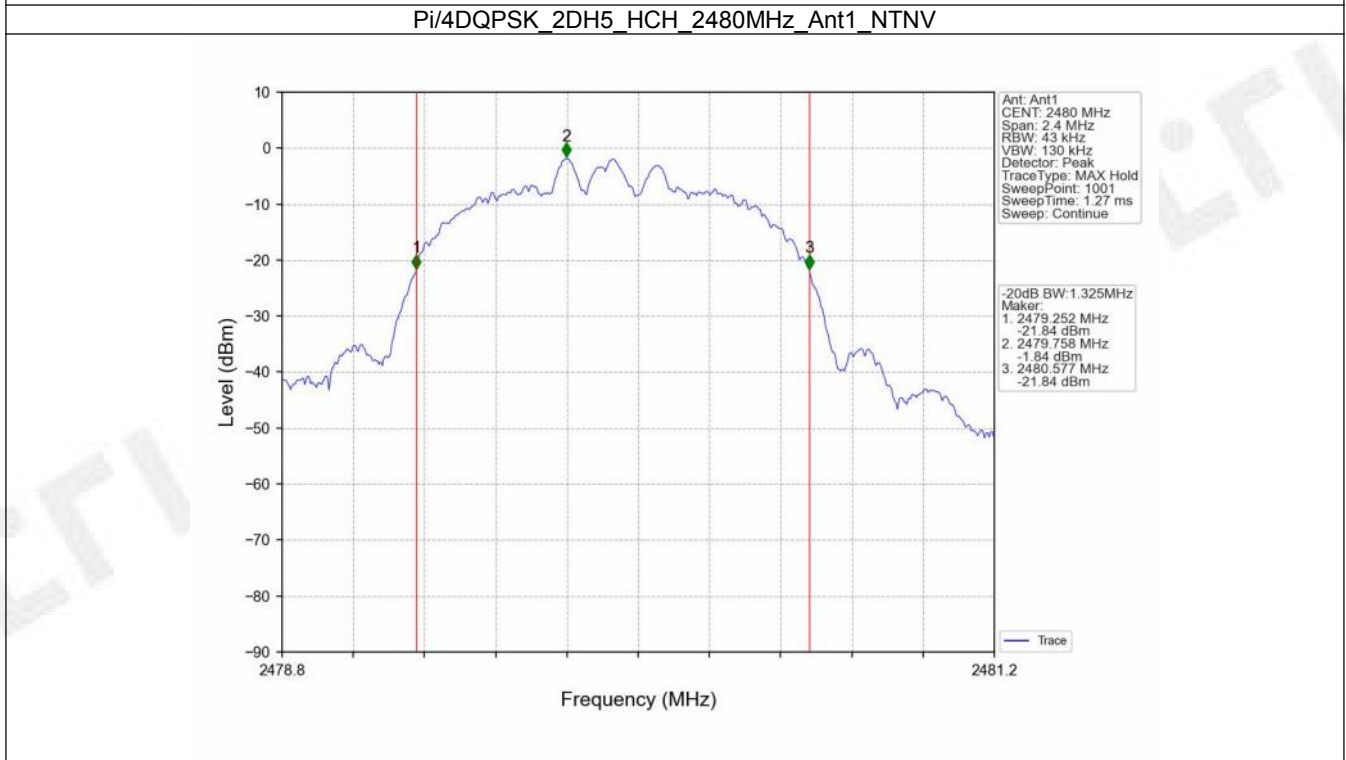
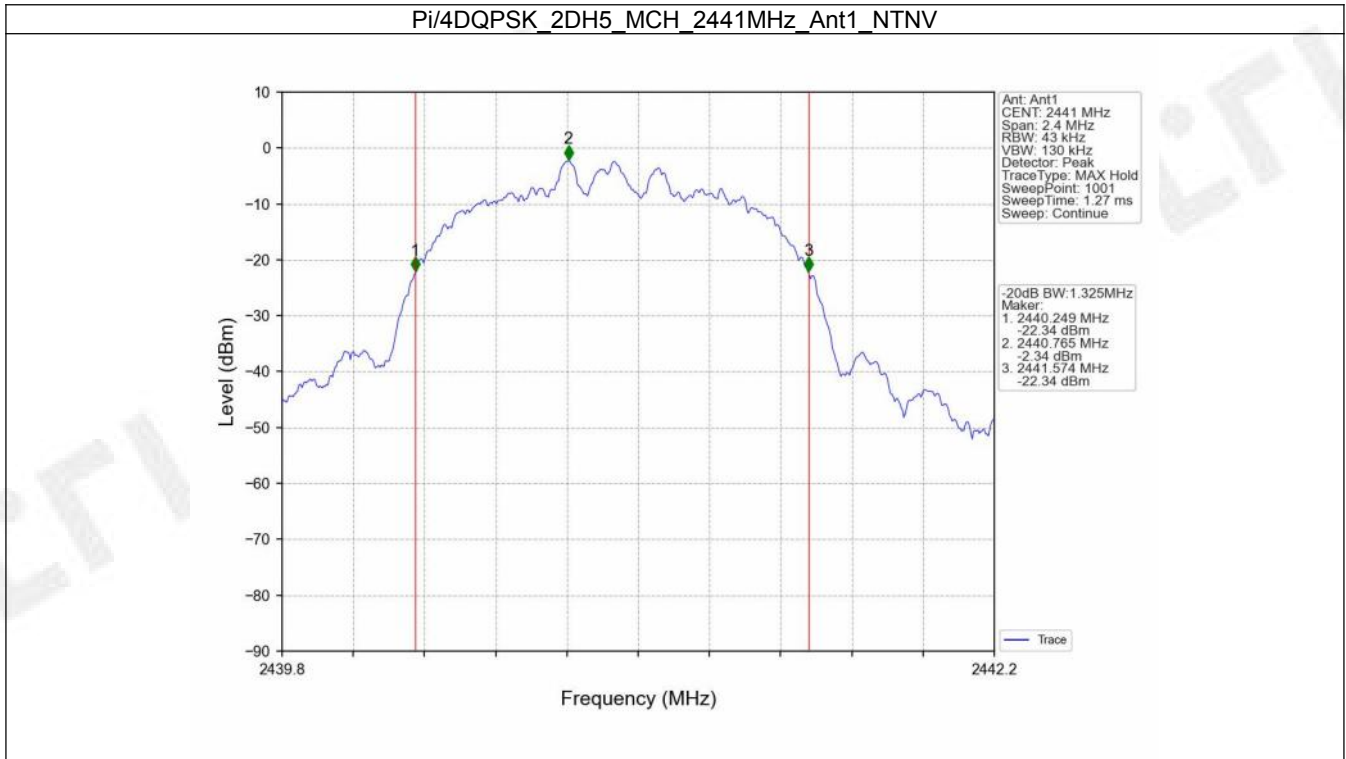
1.2.2 20dB BW



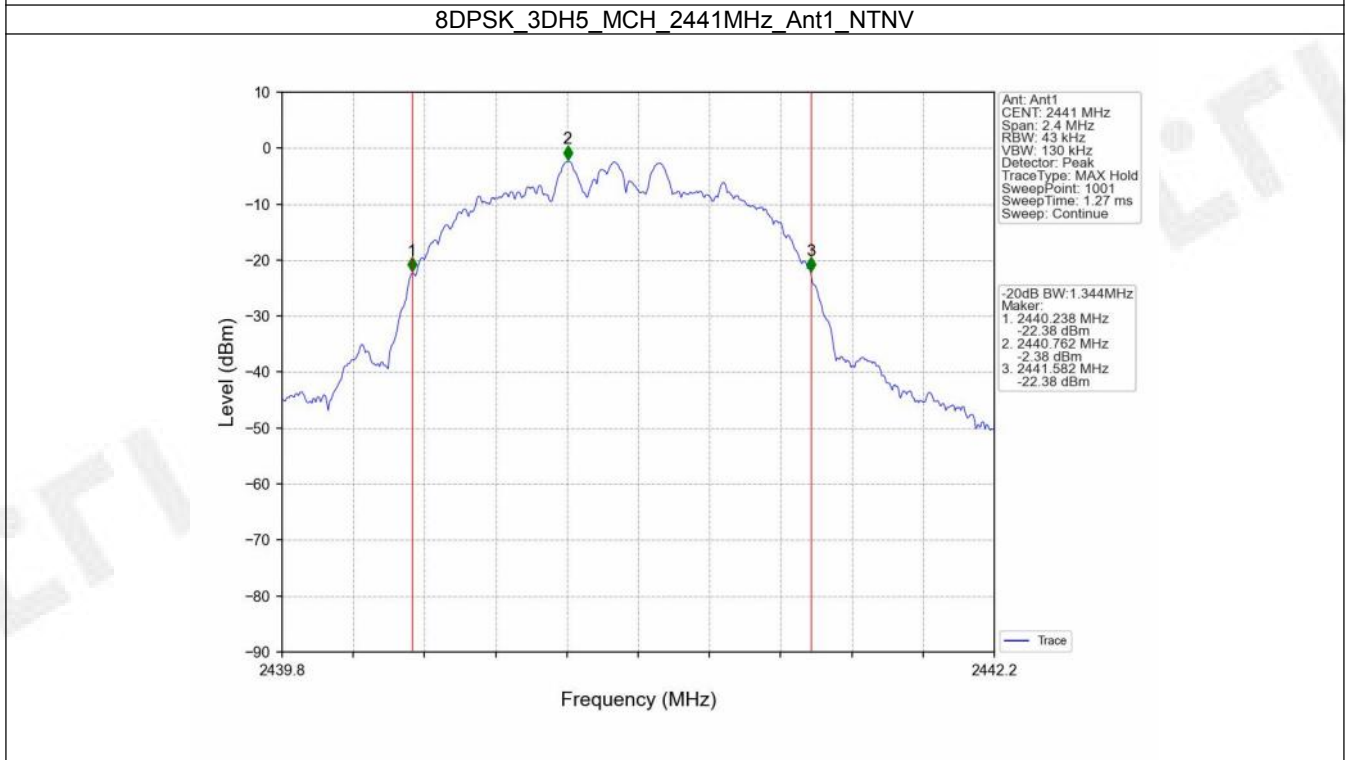
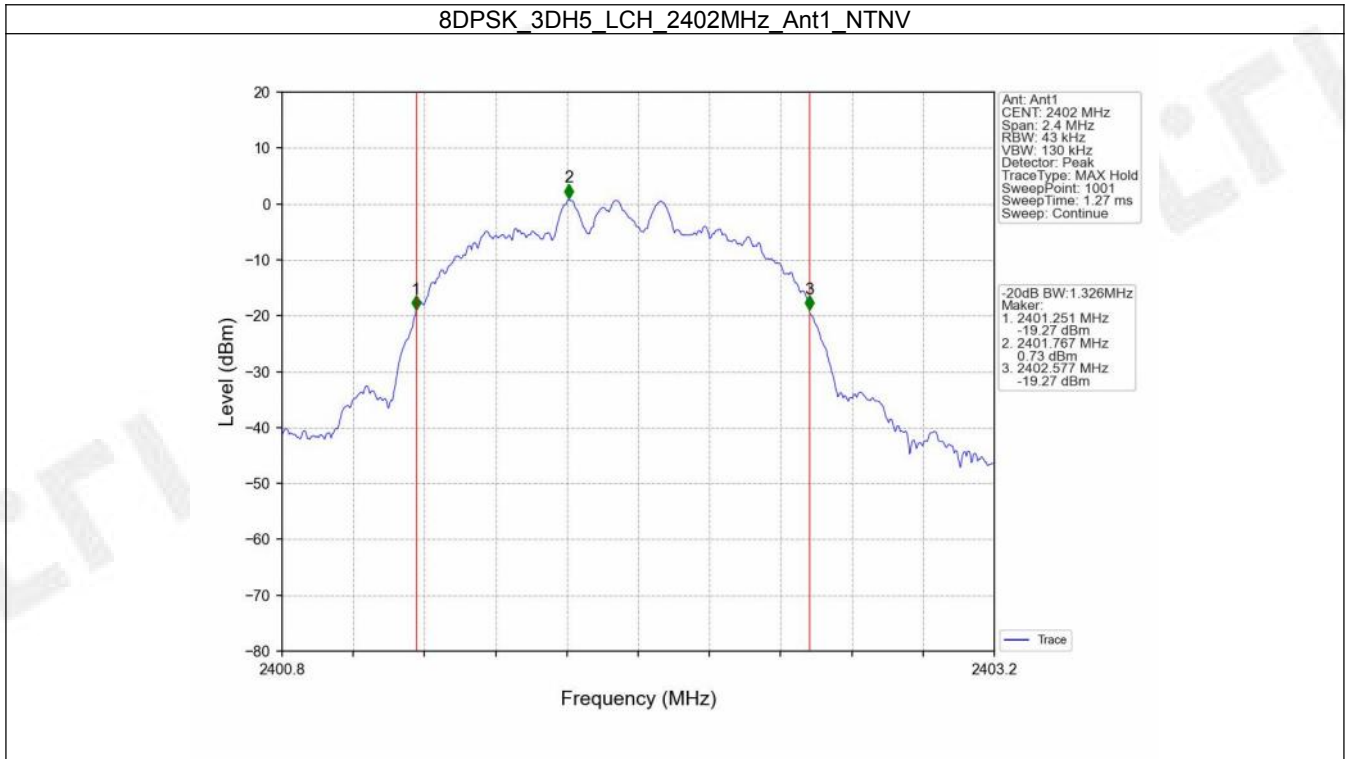
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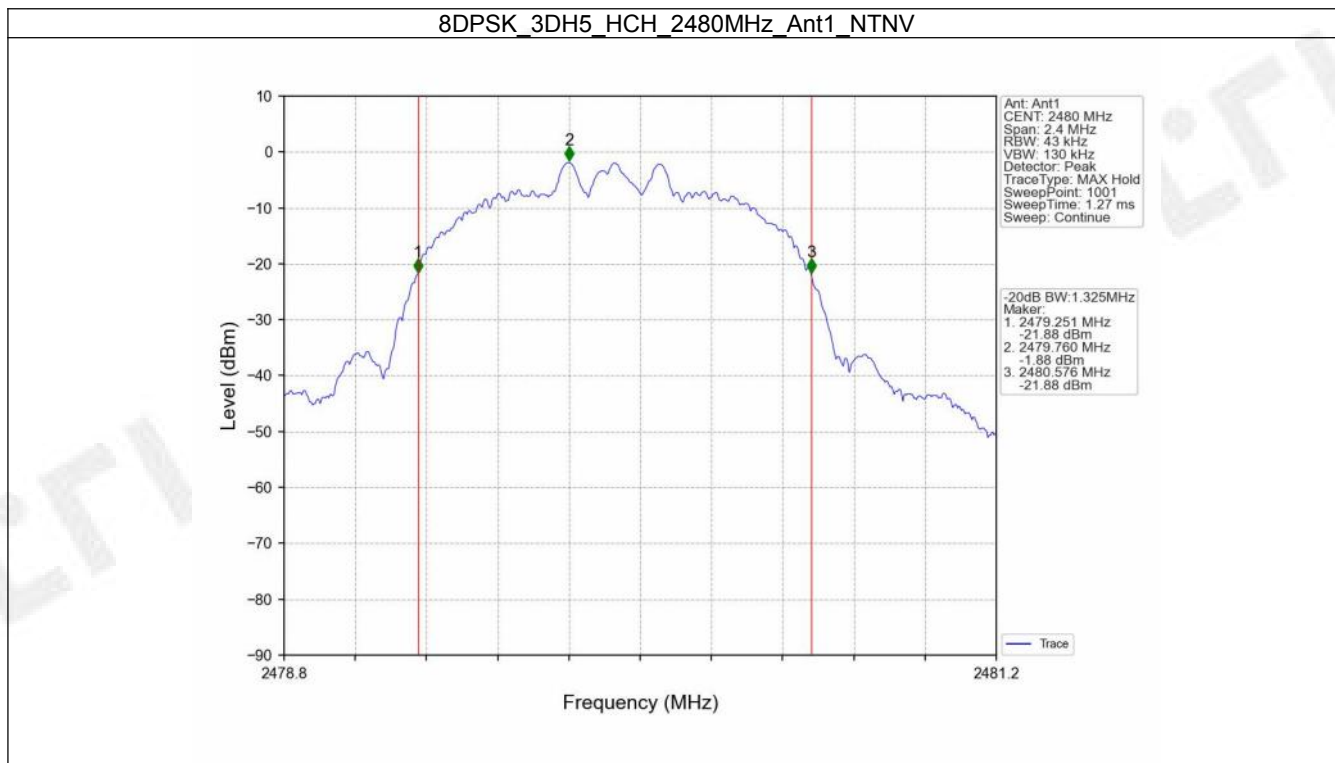
FCCID: 2AHPZ-CHS65



FCCID: 2AHPZ-CHS65



FCCID: 2AHPZ-CHS65



FCCID: 2AHPZ-CHS65

2. Maximum Conducted Output Power

2.1 Test Result

2.1.1 Power

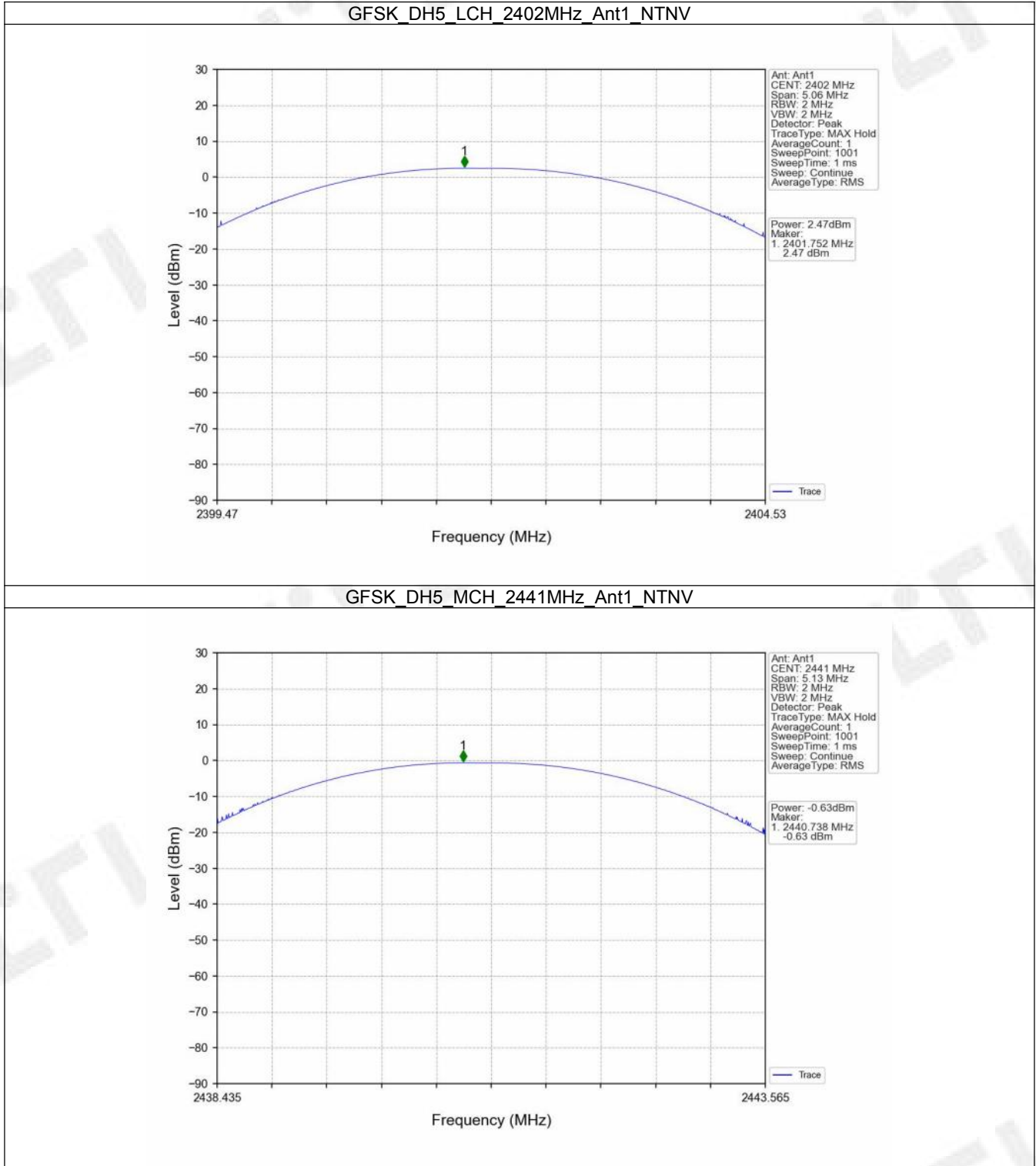
Mode	TX Type	Frequency (MHz)	Packet Type	Maximum Peak Conducted Output Power (dBm)		Verdict
				ANT1	Limit	
GFSK	SISO	2402	DH5	2.47	<=20.97	Pass
		2441	DH5	-0.63	<=20.97	Pass
		2480	DH5	-0.36	<=20.97	Pass
Pi/4DQPSK	SISO	2402	2DH5	2.35	<=20.97	Pass
		2441	2DH5	-0.79	<=20.97	Pass
		2480	2DH5	-0.37	<=20.97	Pass
8DPSK	SISO	2402	3DH5	2.61	<=20.97	Pass
		2441	3DH5	-0.54	<=20.97	Pass
		2480	3DH5	-0.06	<=20.97	Pass

Note1: Antenna Gain: Ant1: 1.70dBi;

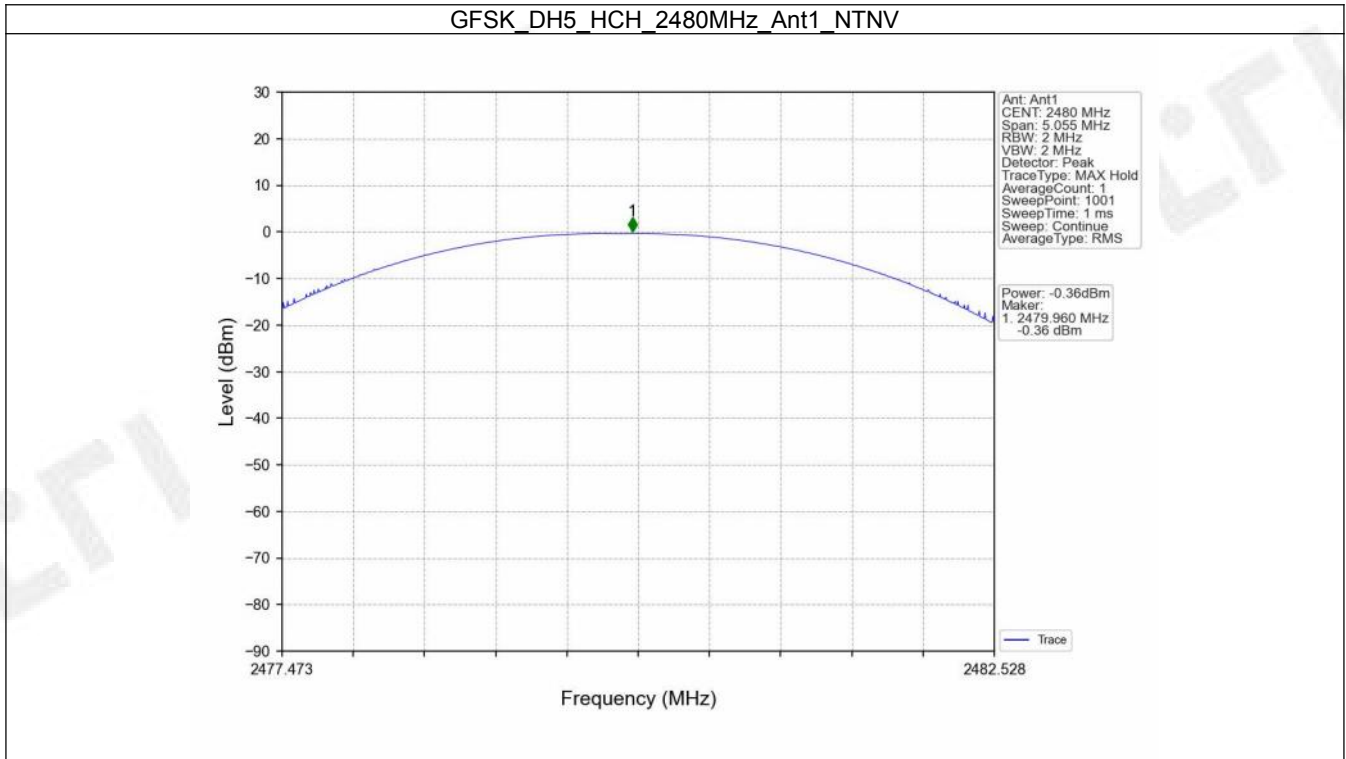
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2.2 Test Graph

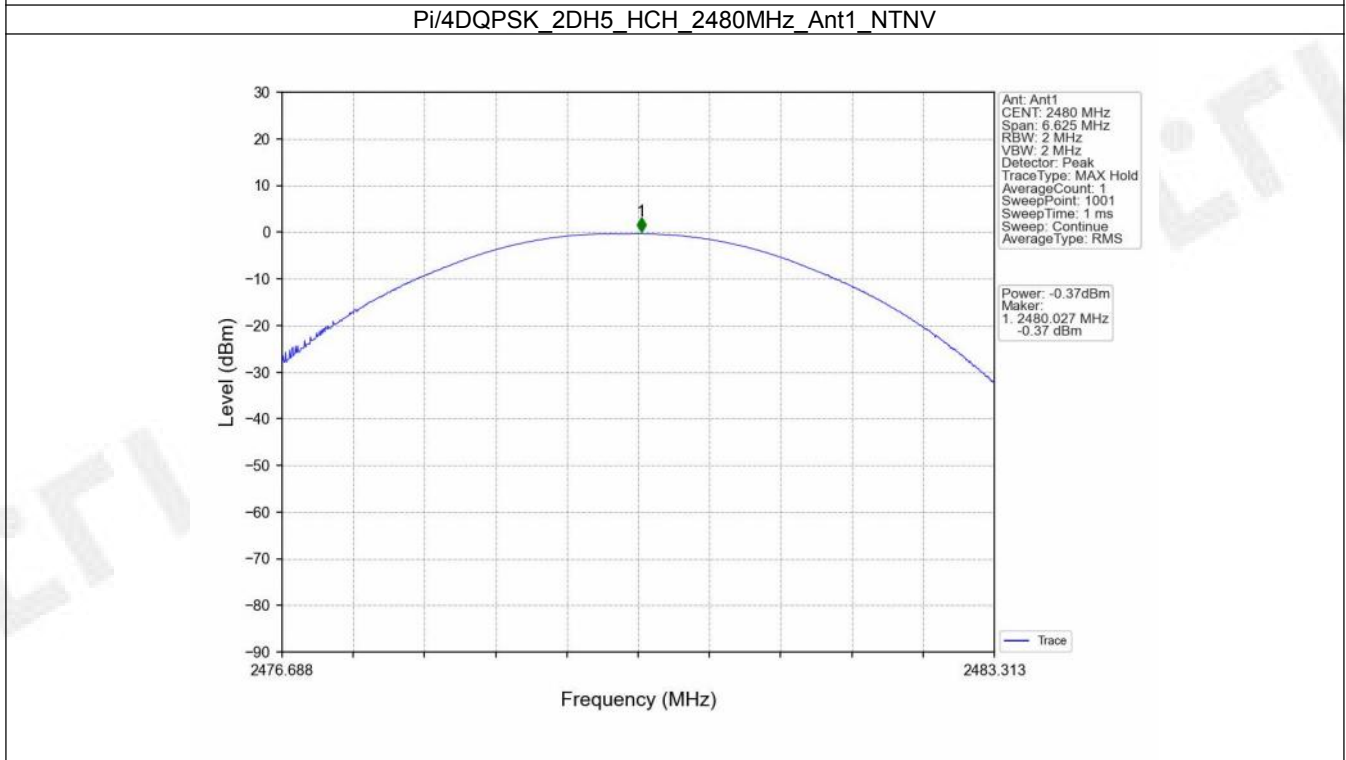
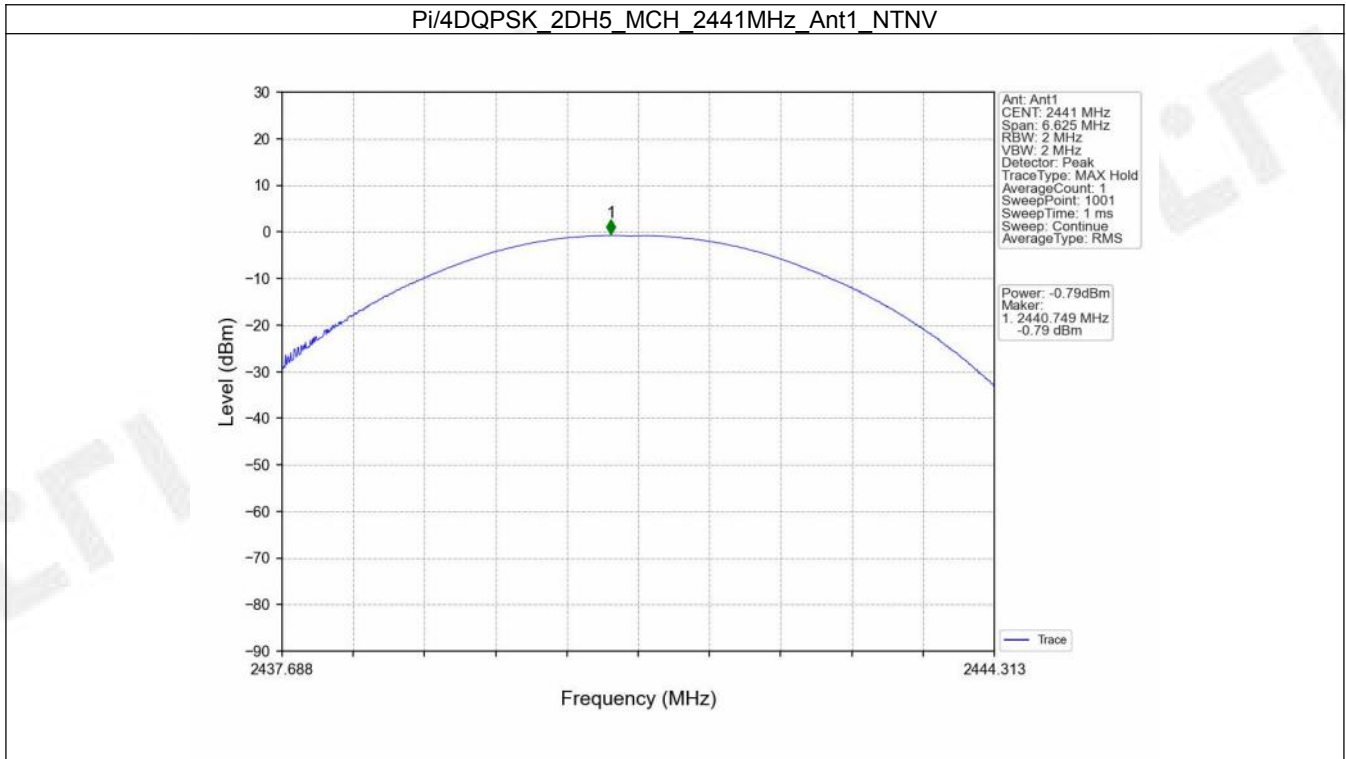
2.2.1 Power



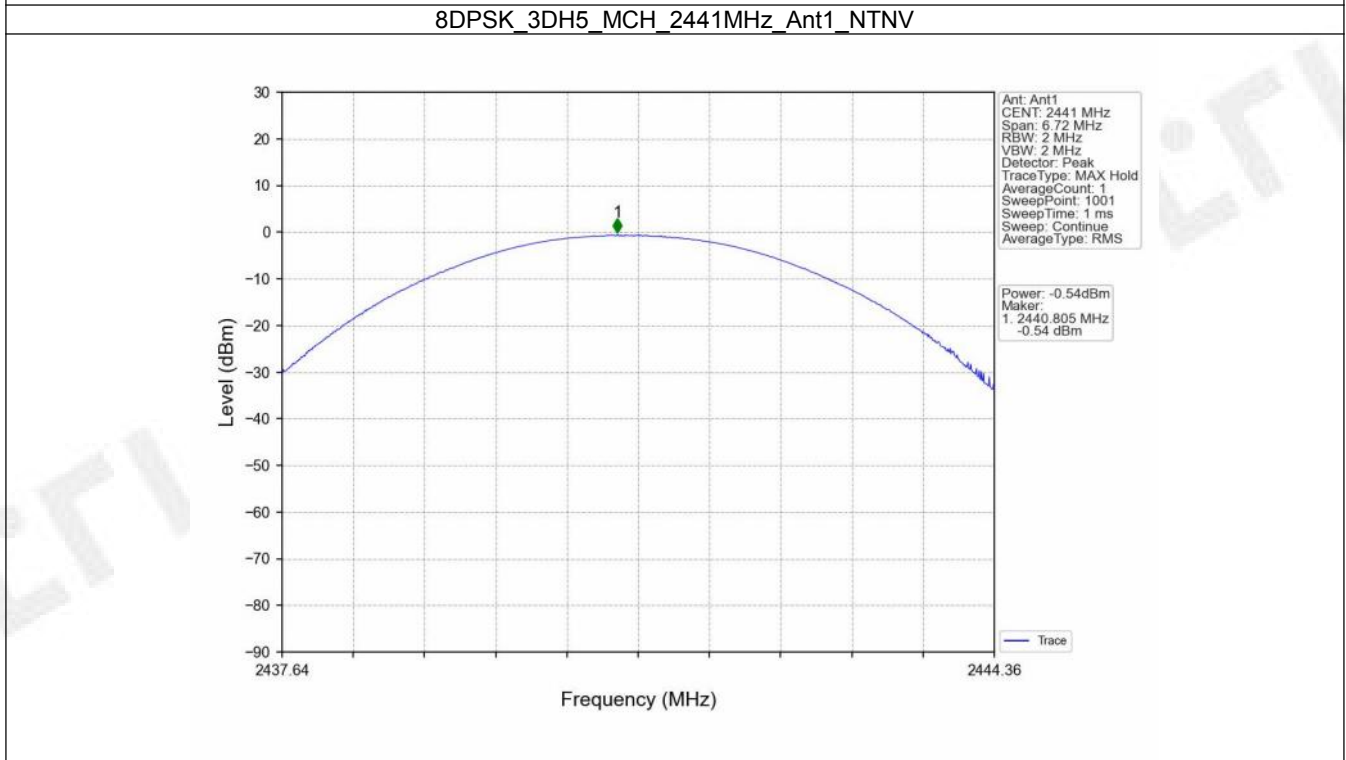
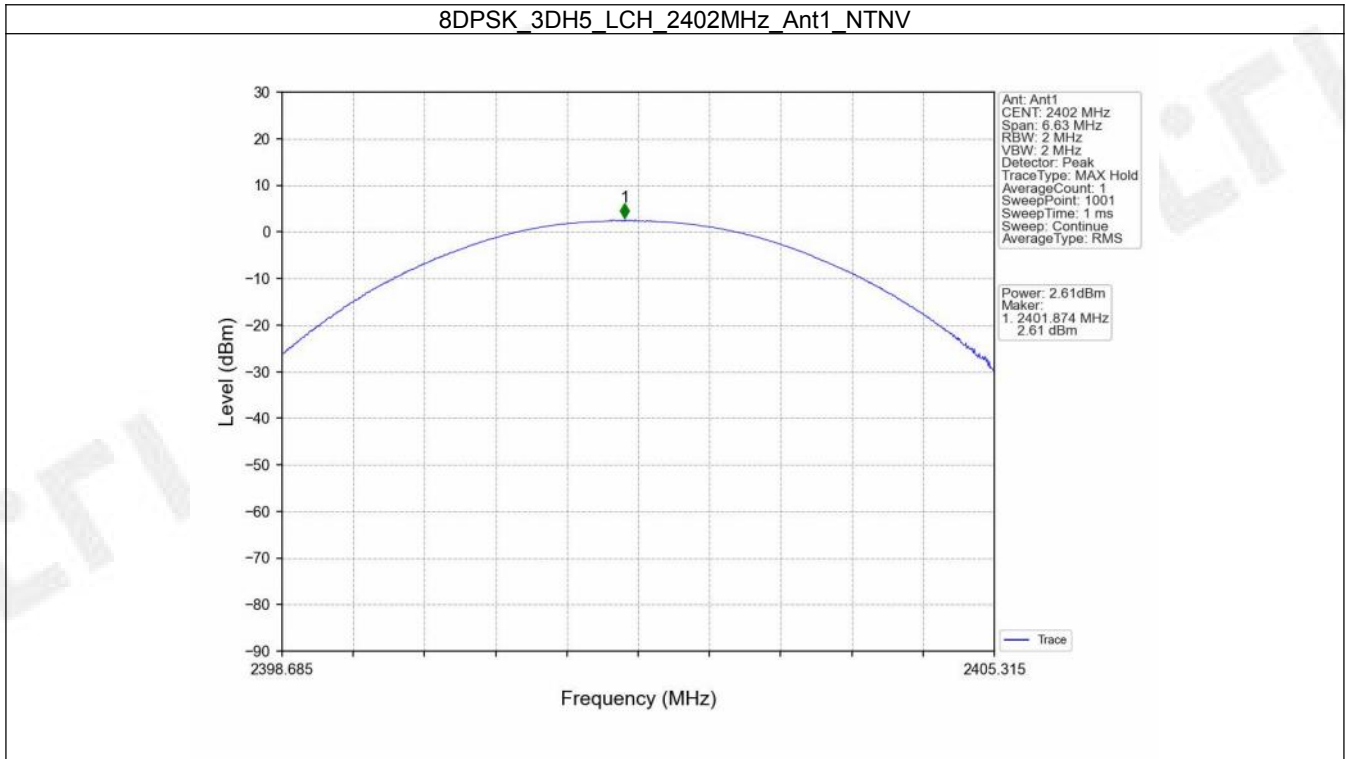
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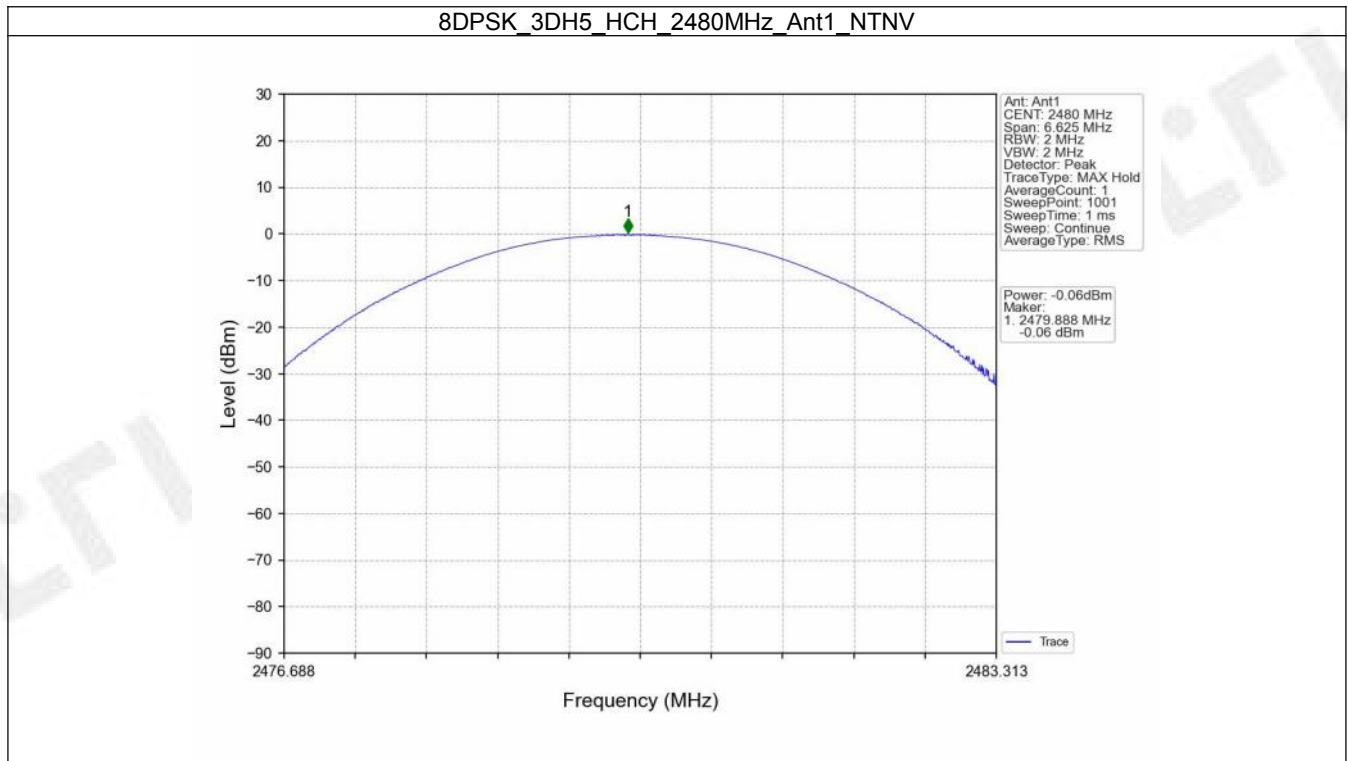
FCCID: 2AHPZ-CHS65



FCCID: 2AHPZ-CHS65



FCCID: 2AHPZ-CHS65



FCCID: 2AHPZ-CHS65

3. Carrier Frequency Separation

3.1 Test Result

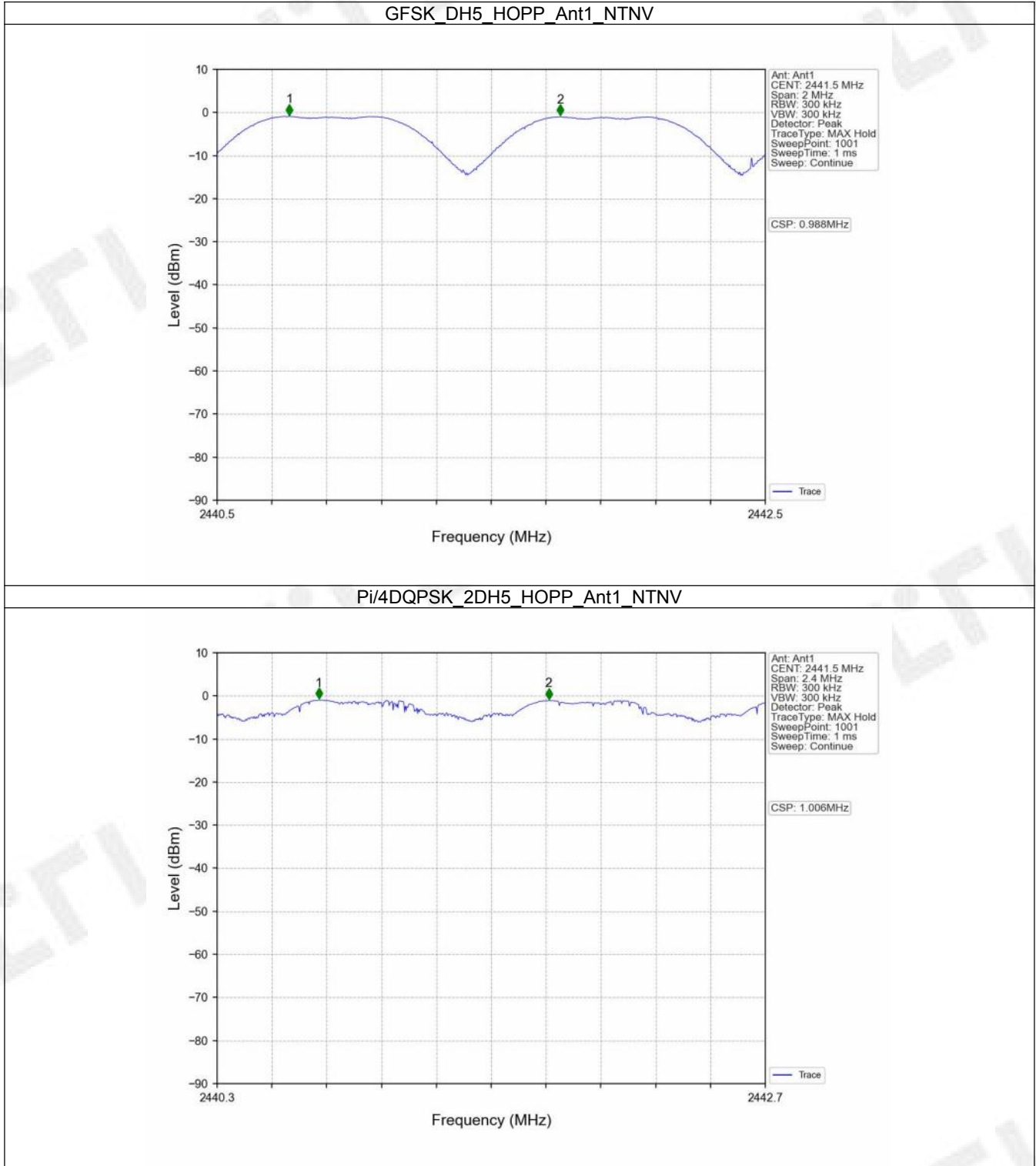
3.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	Packet Type	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limit (MHz)	Verdict
GFSK	SISO	HOPP	DH5	0.988	1.026	≥ 0.684	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	1.006	1.335	≥ 0.89	Pass
8DPSK	SISO	HOPP	3DH5	1.006	1.344	≥ 0.896	Pass

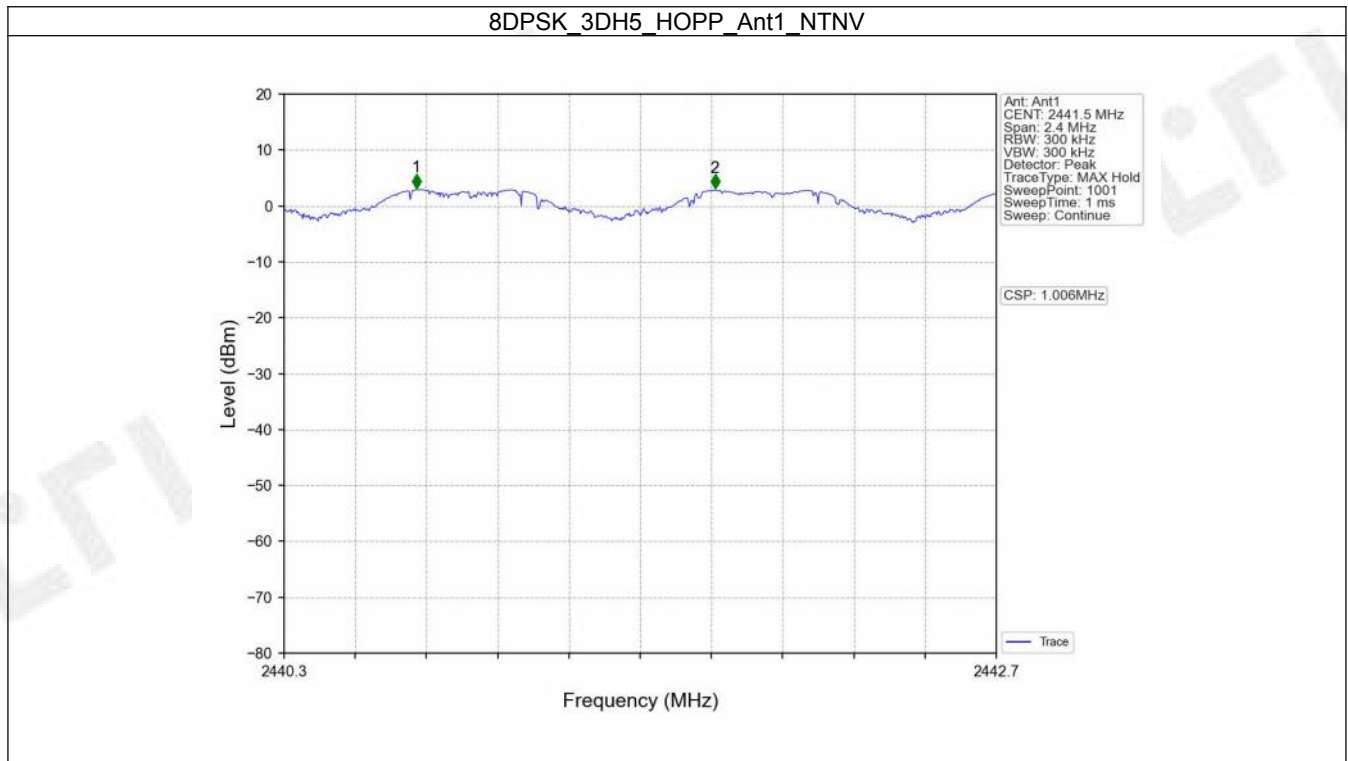
FCCID: 2AHPZ-CHS65

3.2 Test Graph

3.2.1 Ant1



FCCID: 2AHPZ-CHS65



FCCID: 2AHPZ-CHS65

4. Number of Hopping Frequencies

4.1 Test Result

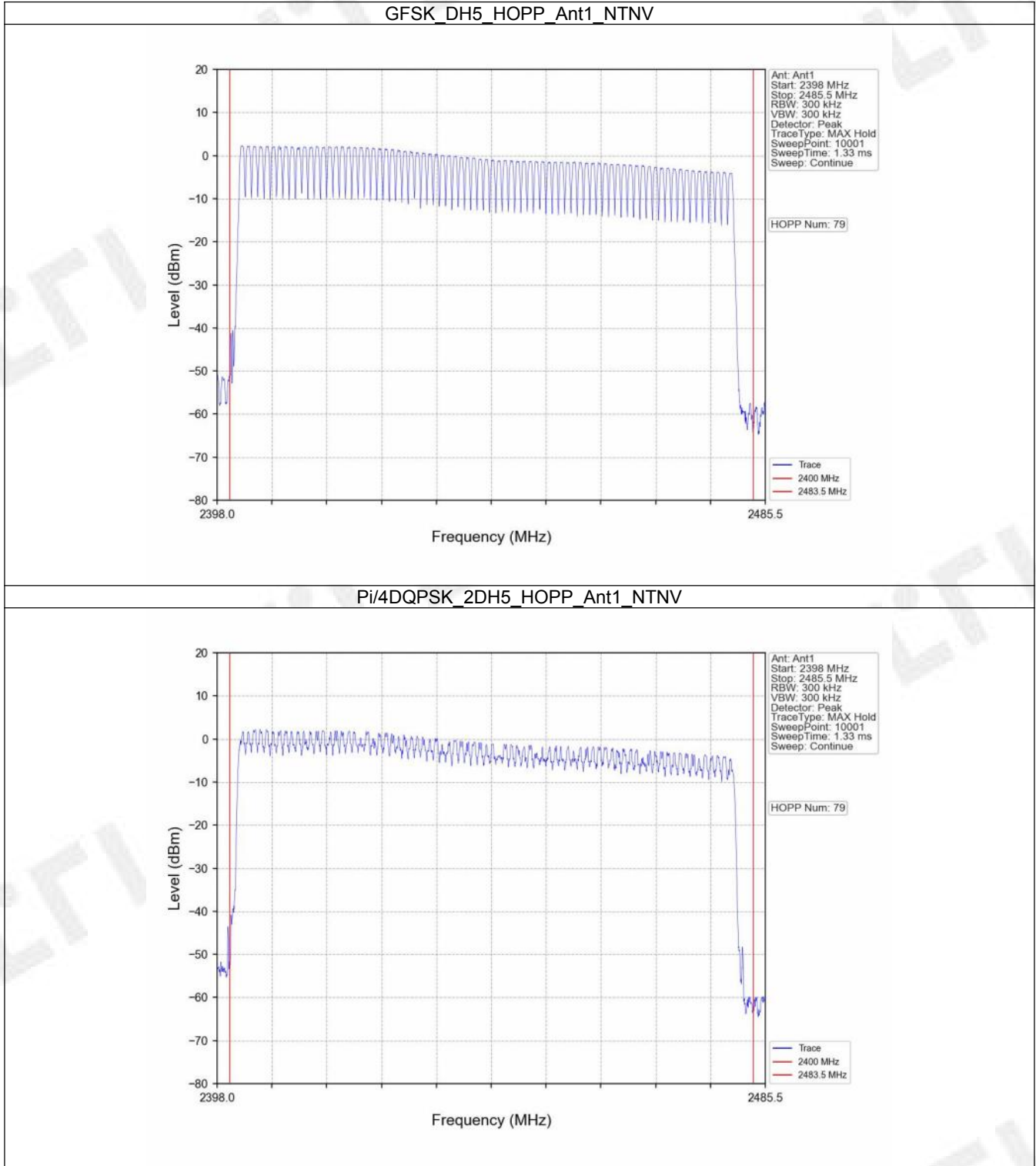
4.1.1 HoppNum

Mode	TX Type	Frequency (MHz)	Packet Type	Num of Hopping Frequencies		Verdict
				ANT1	Limit	
GFSK	SISO	HOPP	DH5	79	>=15	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	79	>=15	Pass
8DPSK	SISO	HOPP	3DH5	79	>=15	Pass

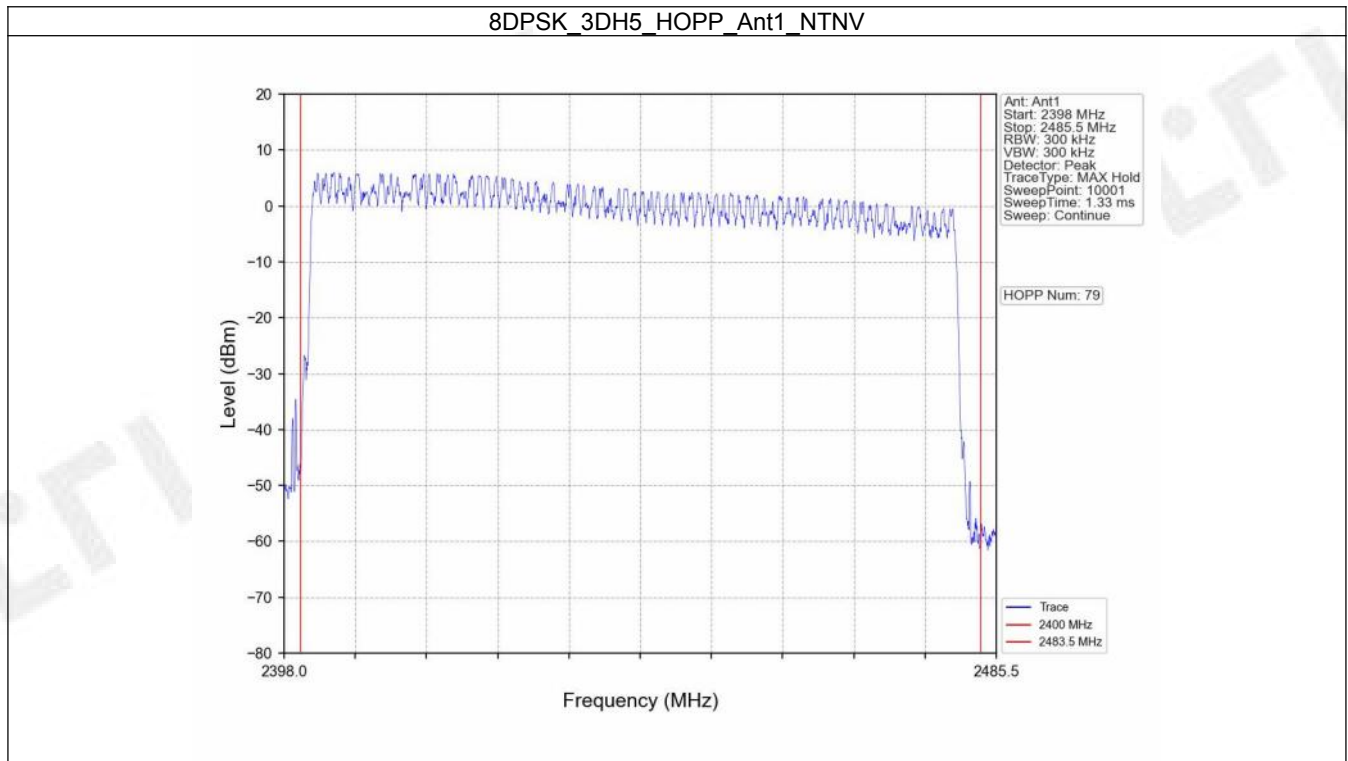
FCCID: 2AHPZ-CHS65

4.2 Test Graph

4.2.1 HoppNum



FCCID: 2AHPZ-CHS65



FCCID: 2AHPZ-CHS65

5. Time of Occupancy (Dwell Time)

5.1 Test Result

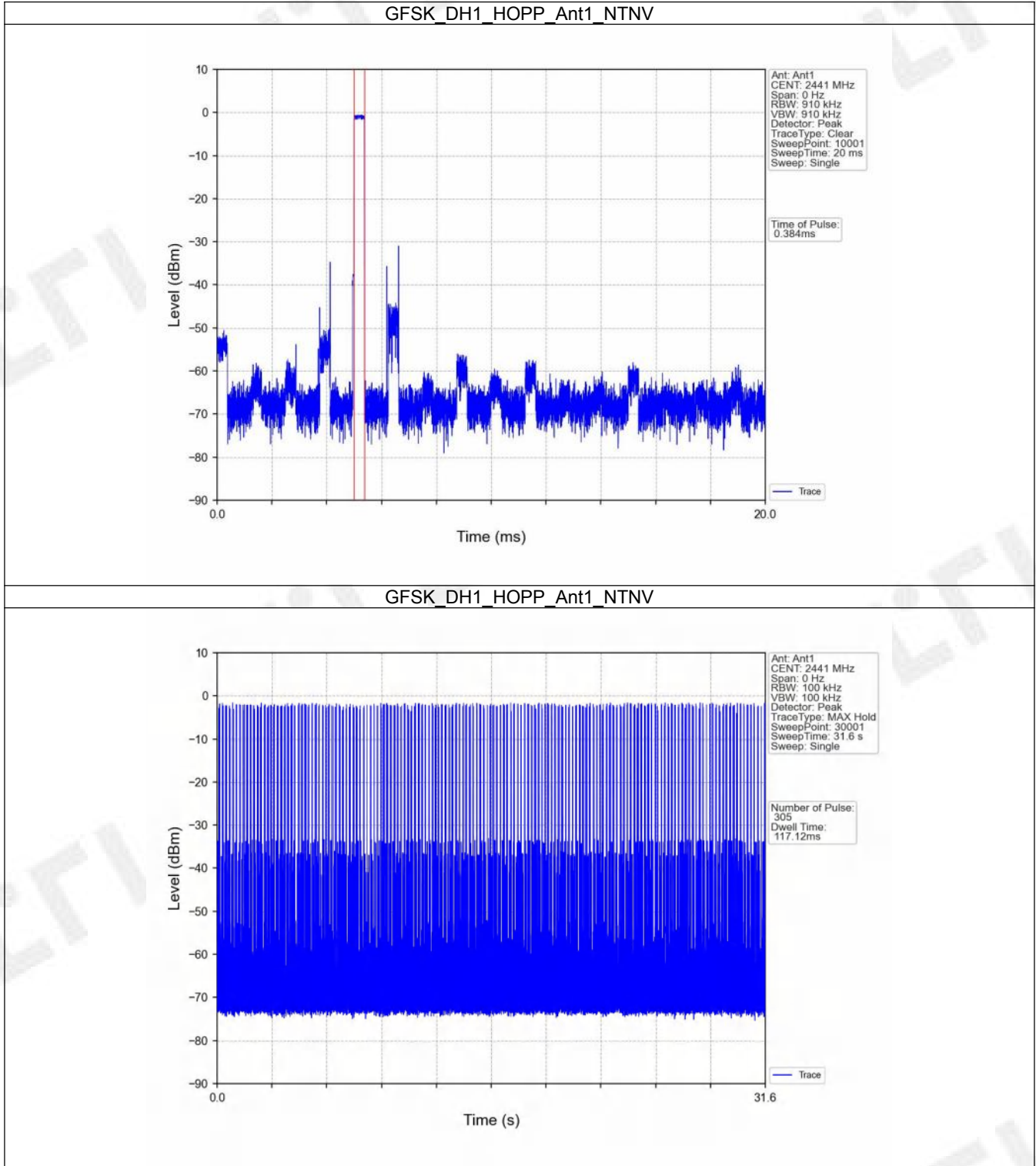
5.1.1 Ant1

Ant1									
Mode	TX Type	Frequency (MHz)	Packet Type	Duration of Single Pulse (ms)	Observation Period (s)	Num of Pulse in Observation Period	Dwell Time (ms)	Limit (ms)	Verdict
GFSK	SISO	HOPP	DH1	0.384	31.600	305	117.120	<=400	Pass
			DH3	1.698	31.600	173	293.754	<=400	Pass
			DH5	2.946	31.600	102	300.492	<=400	Pass
Pi/4DQPSK	SISO	HOPP	2DH1	2.952	31.600	100	295.200	<=400	Pass
			2DH3	1.642	31.600	173	284.066	<=400	Pass
			2DH5	2.952	31.600	106	312.912	<=400	Pass
8DPSK	SISO	HOPP	3DH1	0.452	31.600	313	141.476	<=400	Pass
			3DH3	1.702	31.600	171	291.042	<=400	Pass
			3DH5	2.890	31.600	103	297.670	<=400	Pass

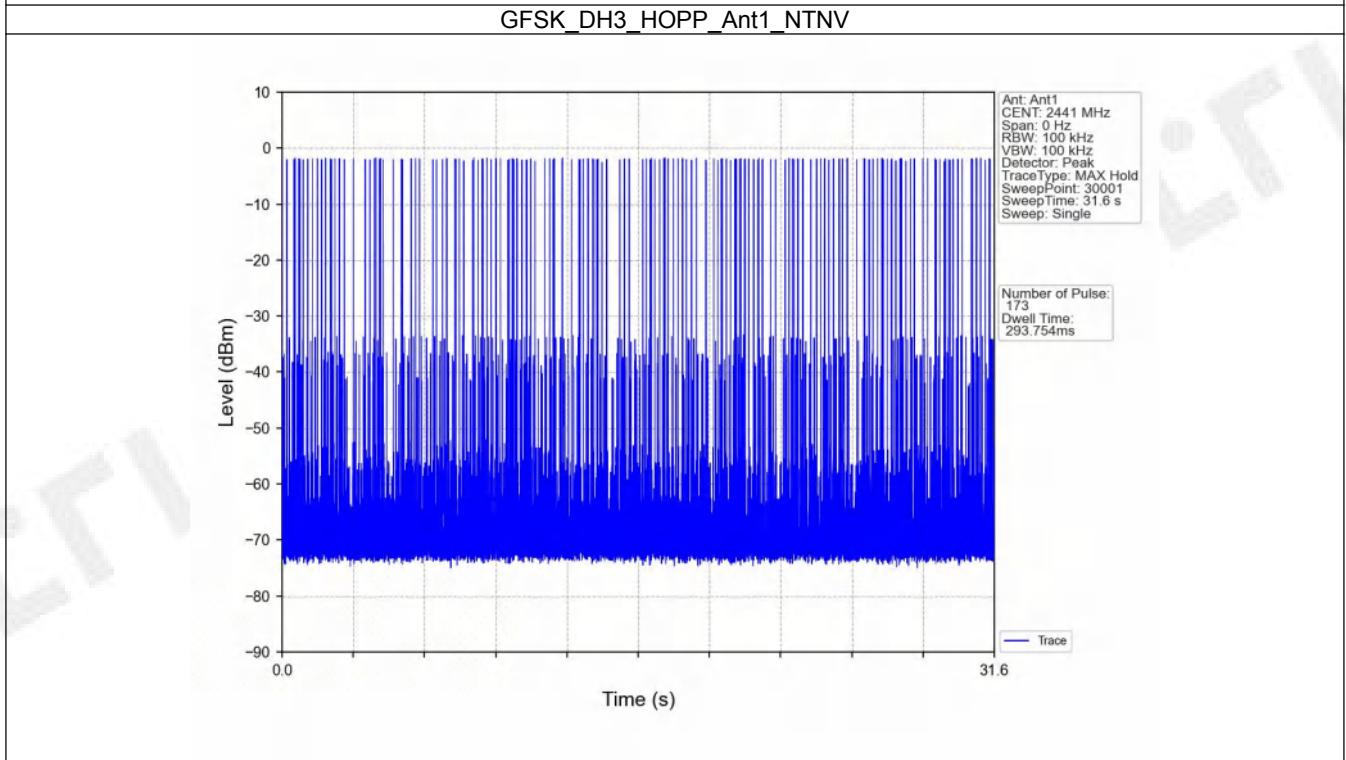
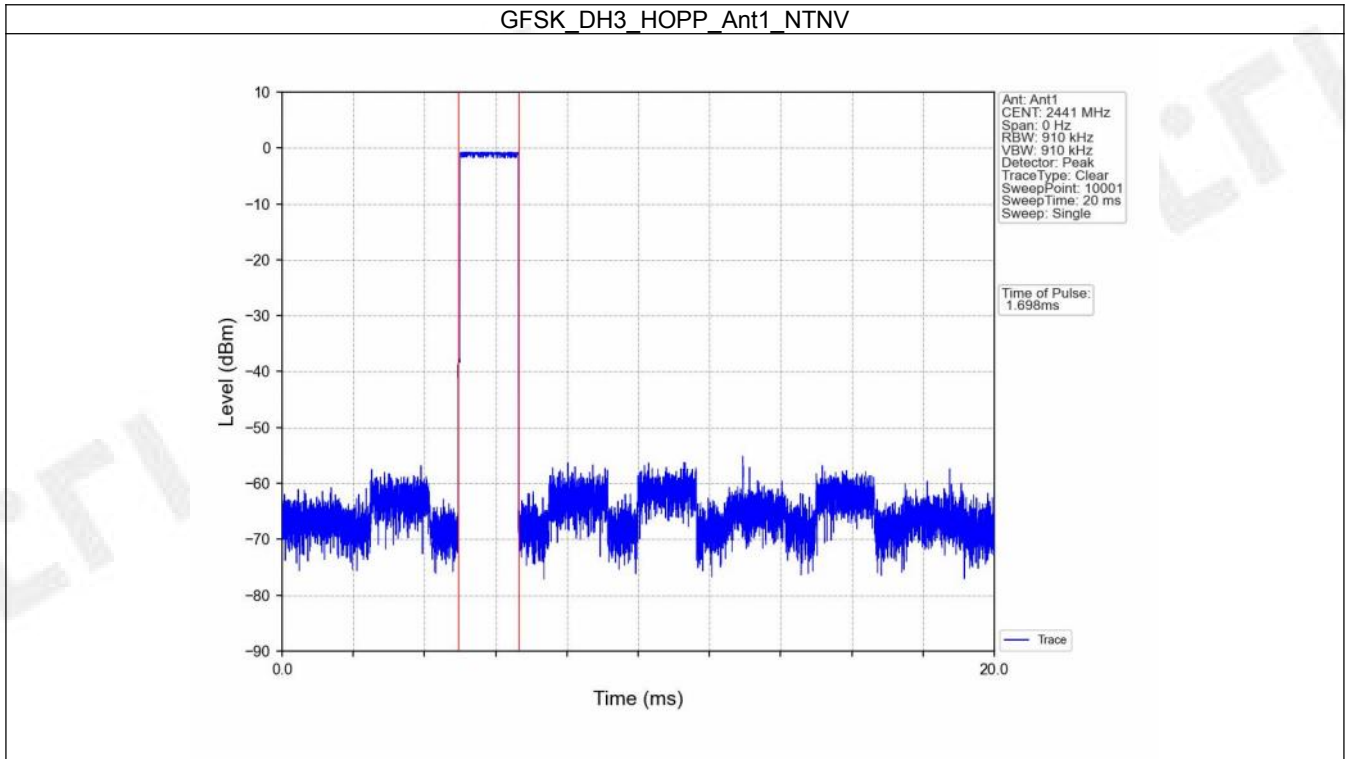
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5.2 Test Graph

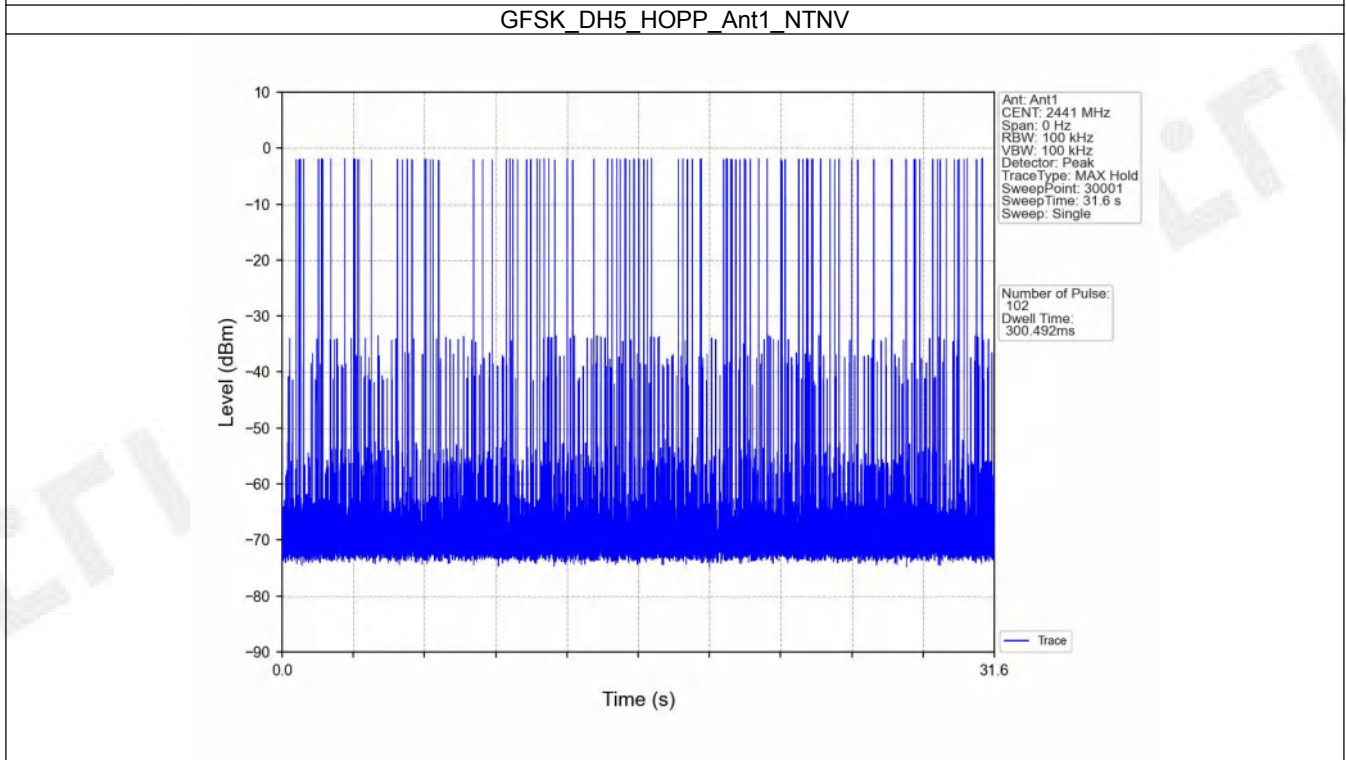
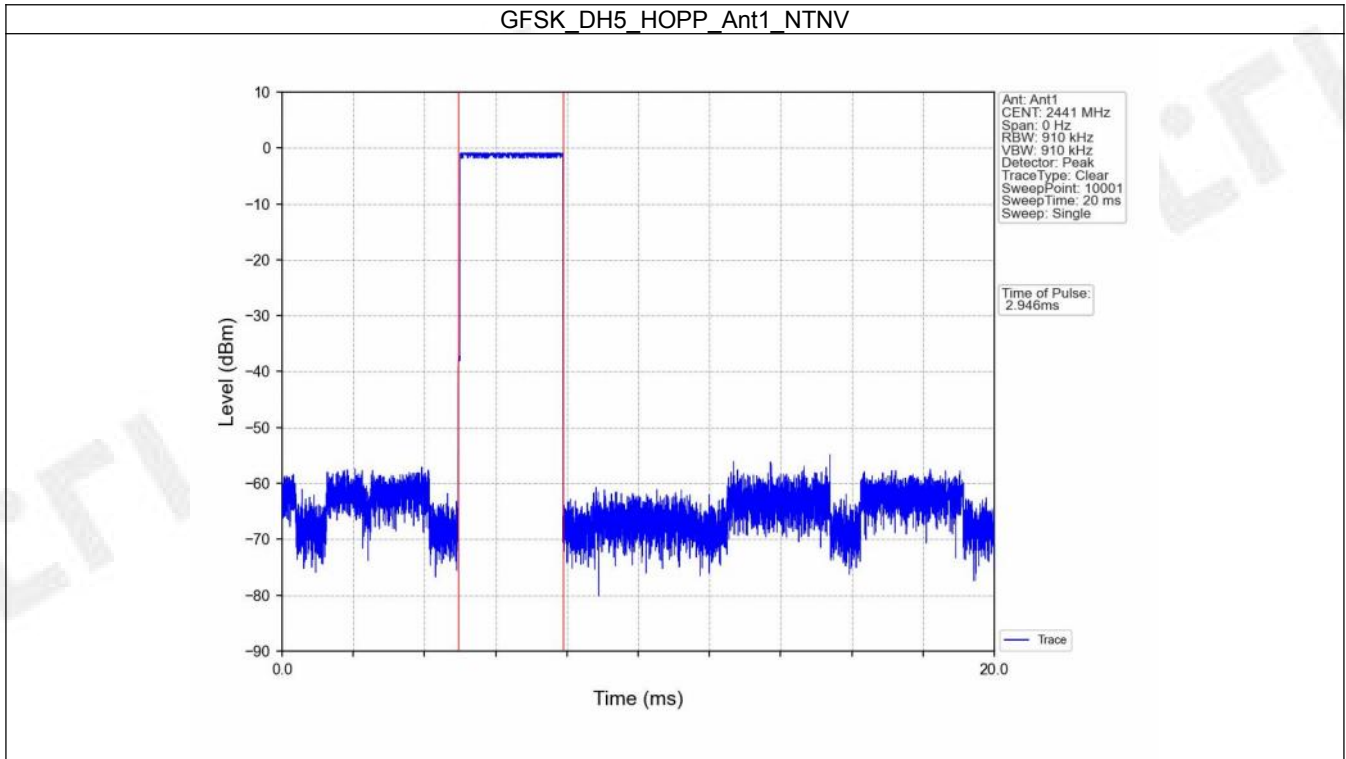
5.2.1 Ant1



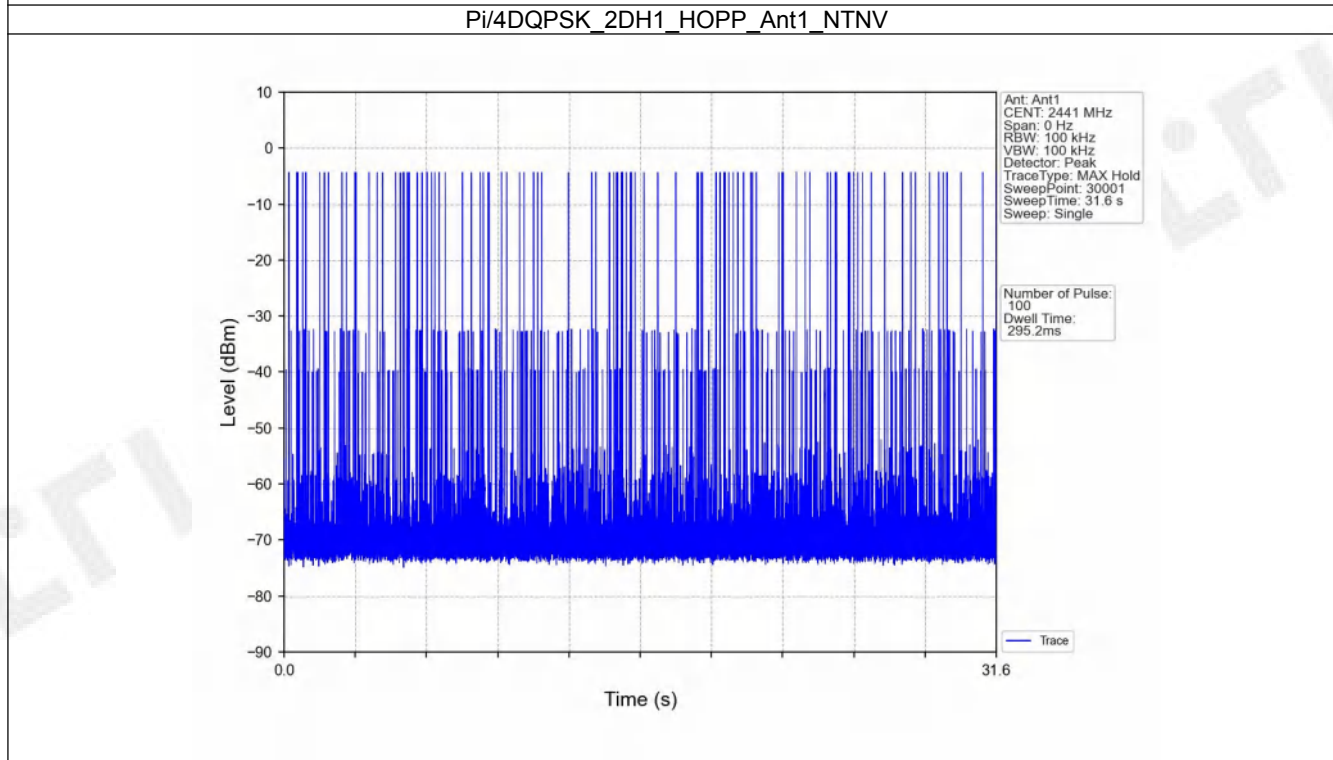
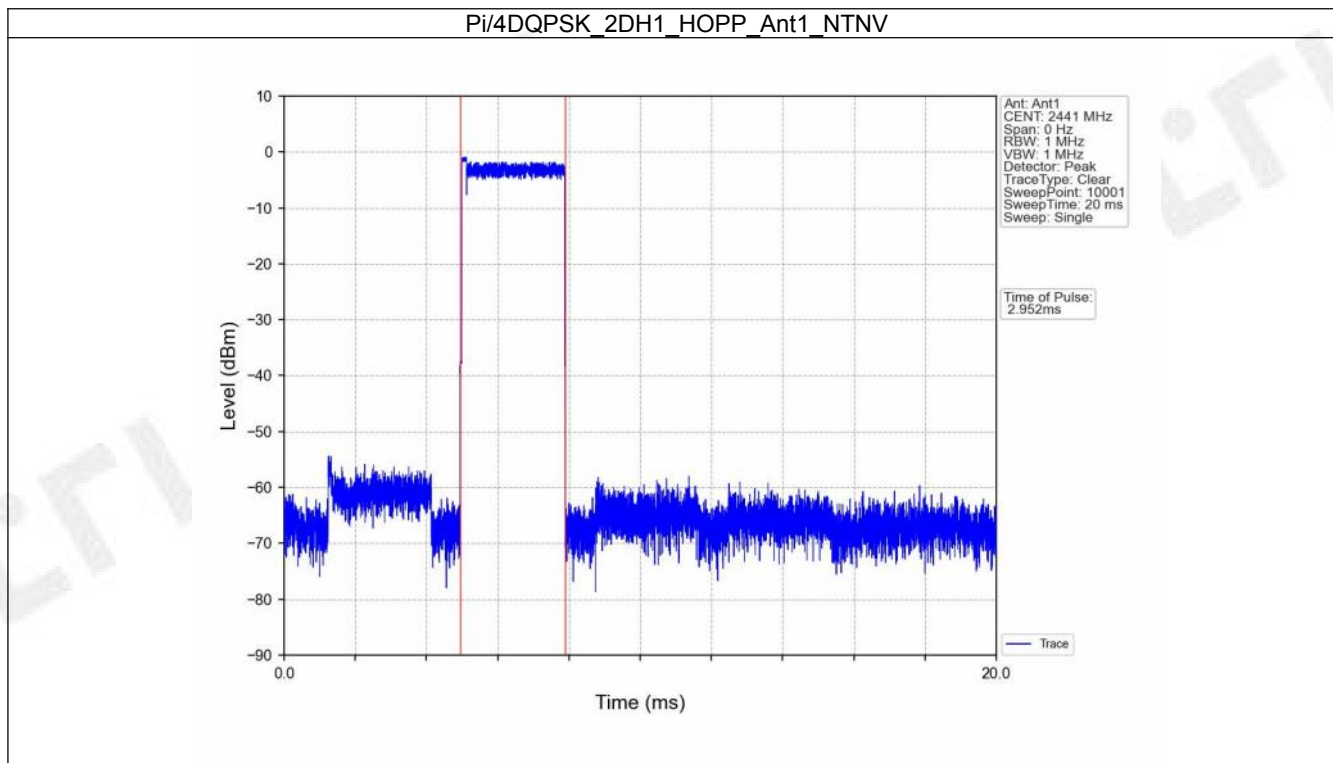
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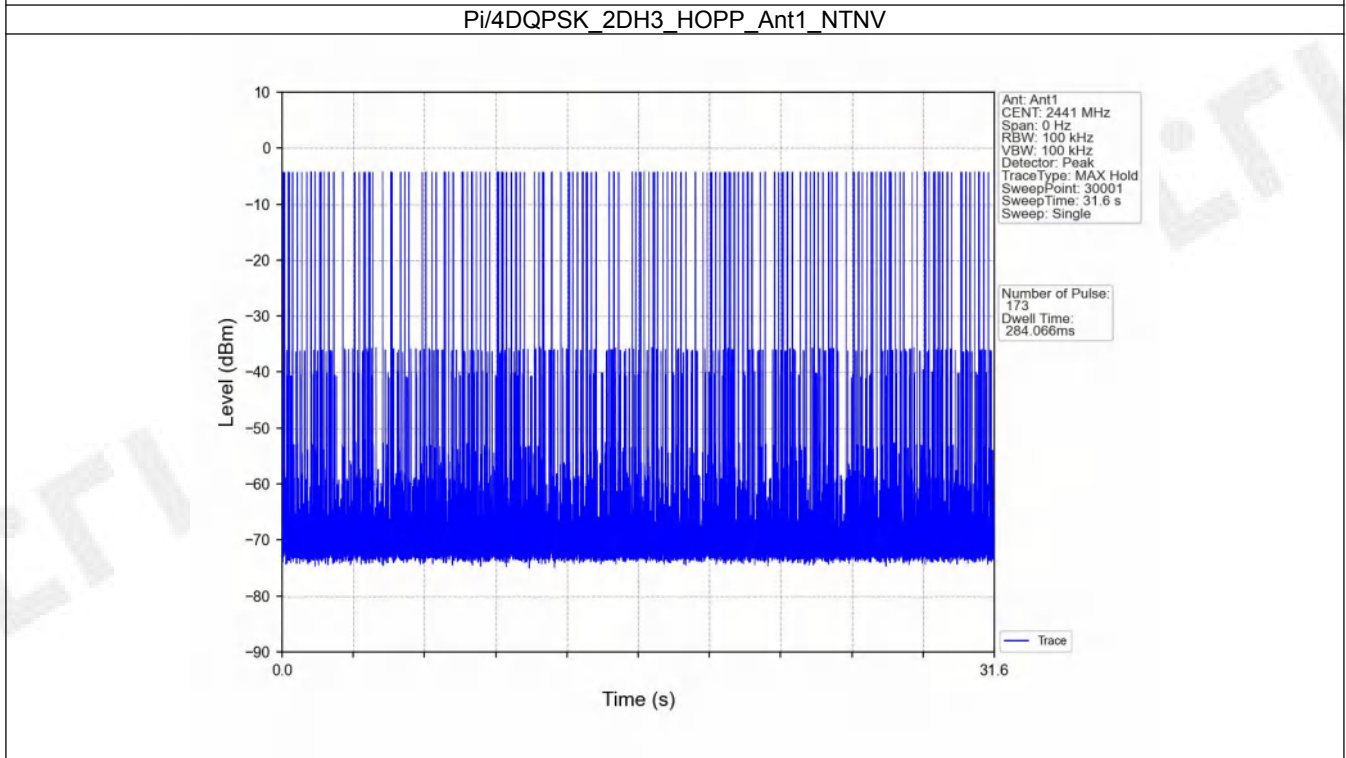
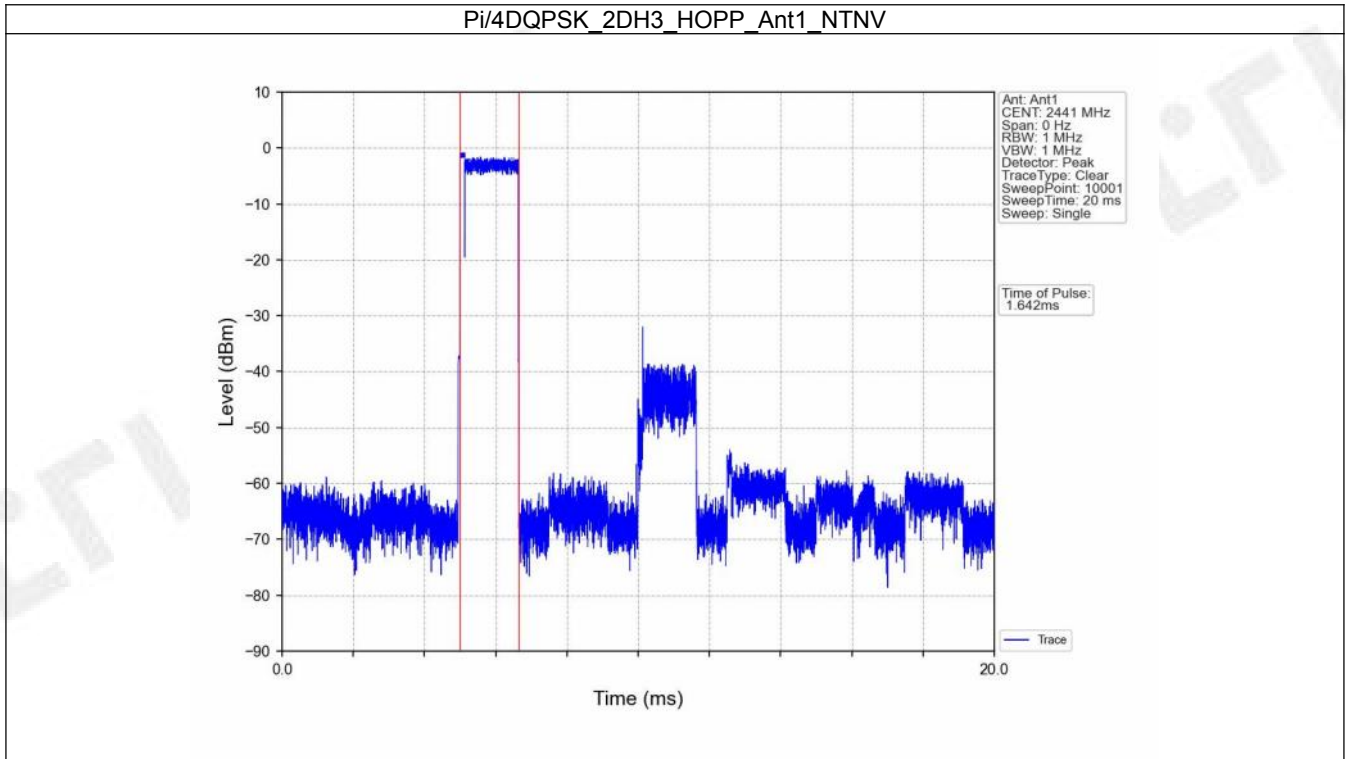
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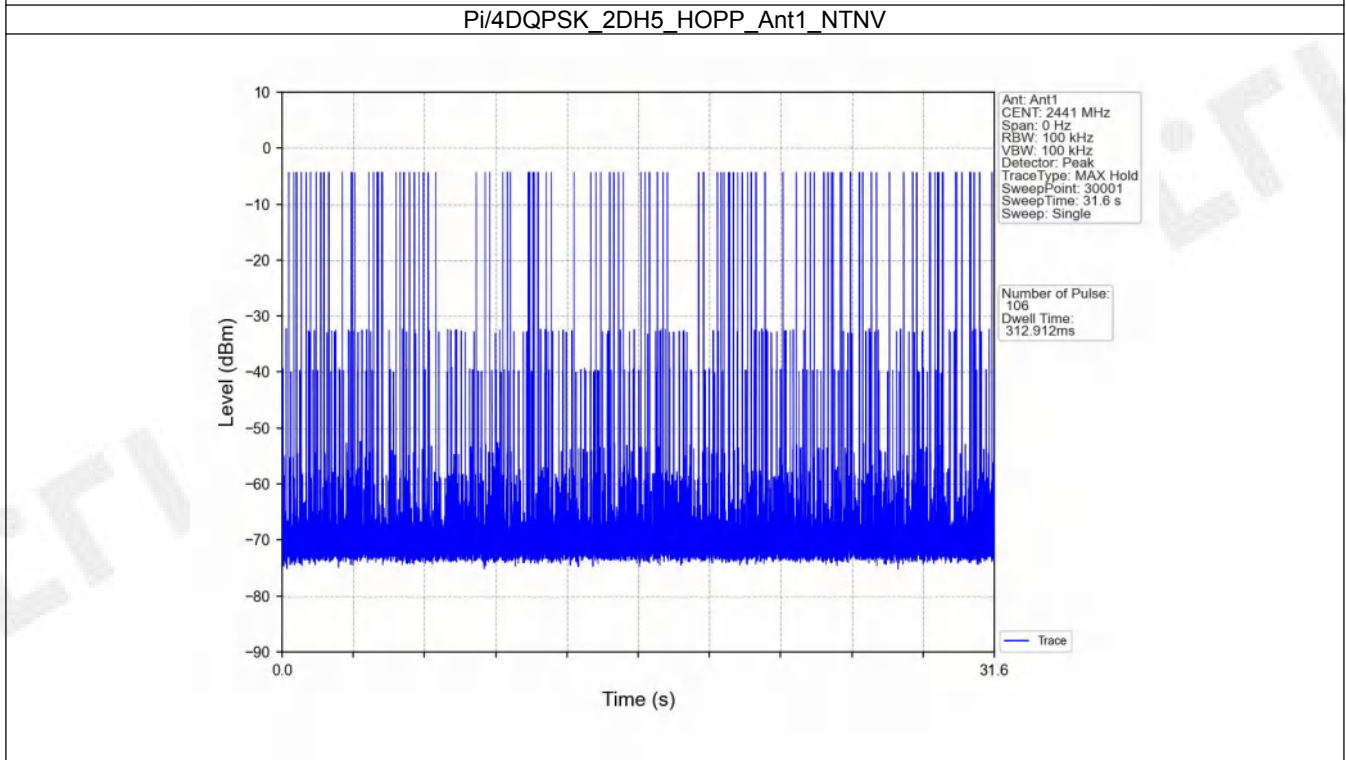
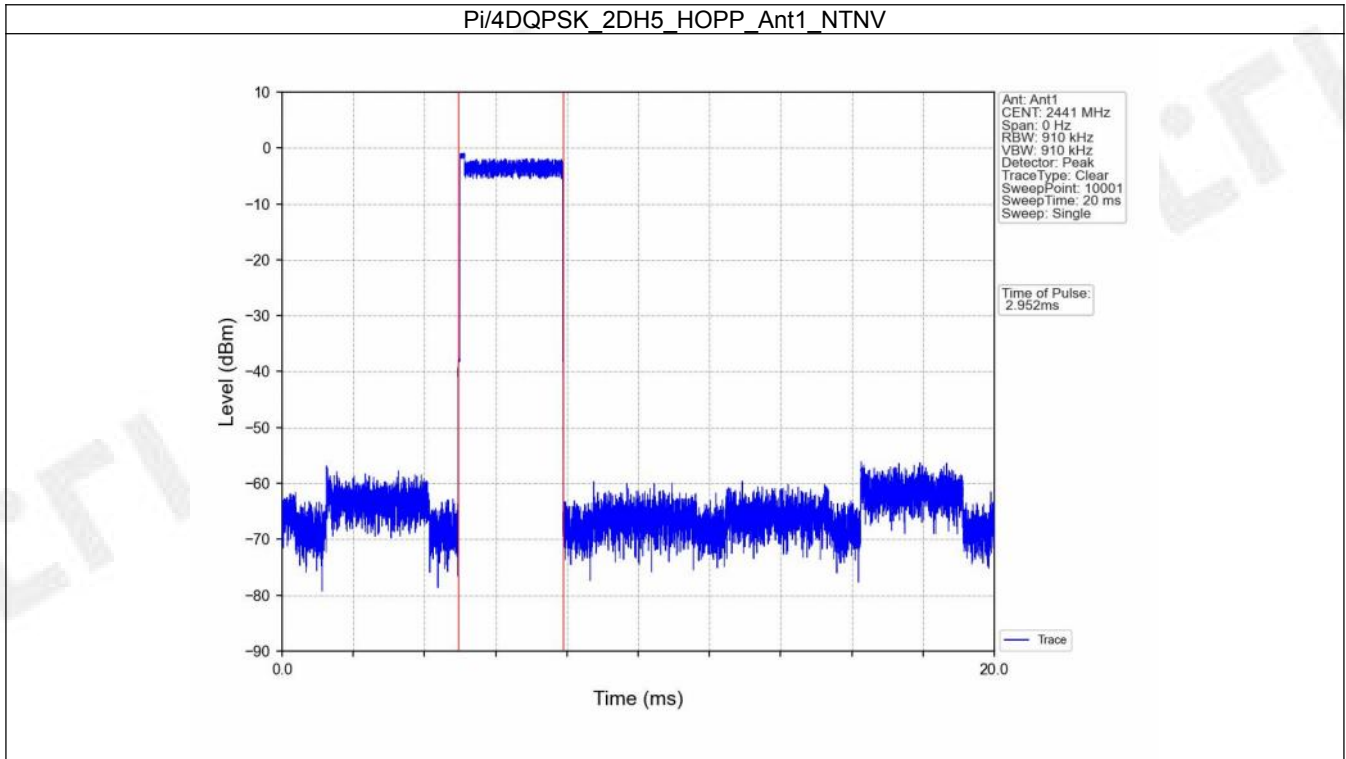
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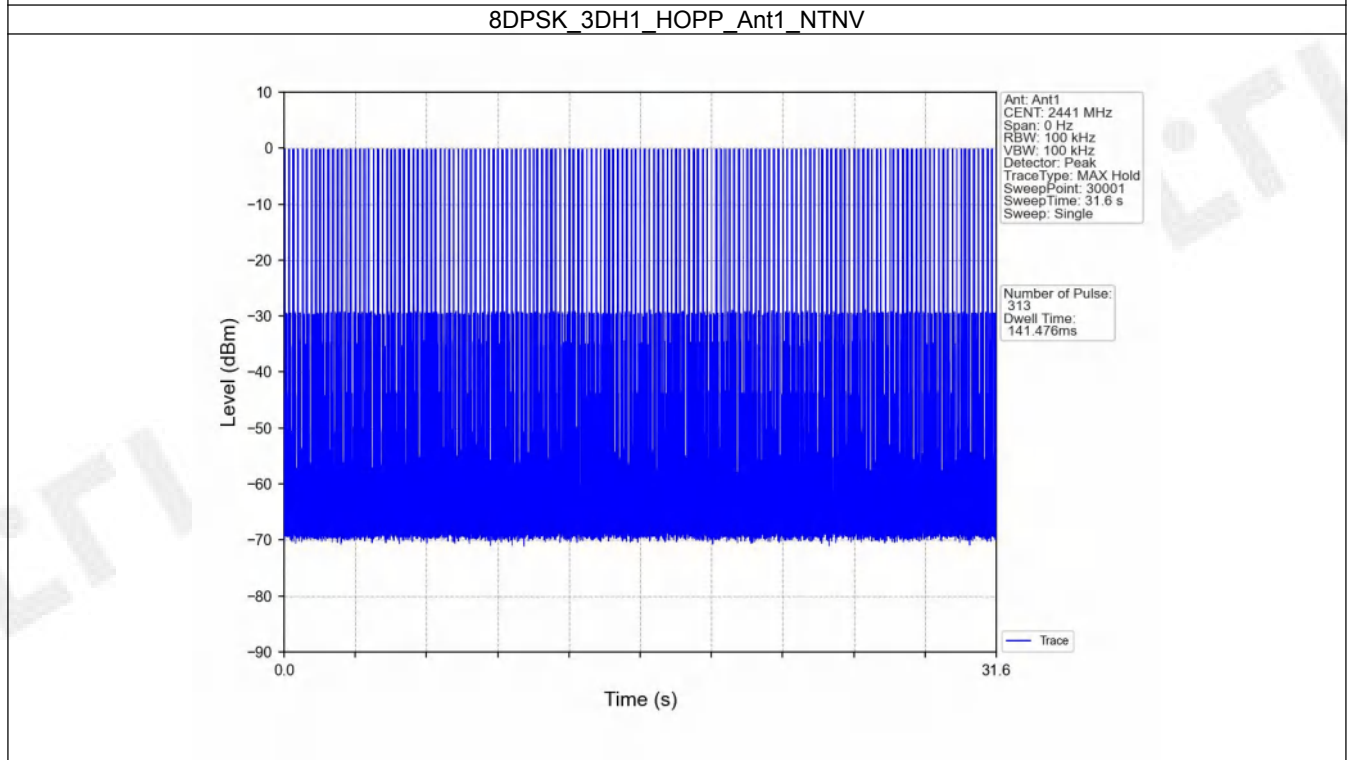
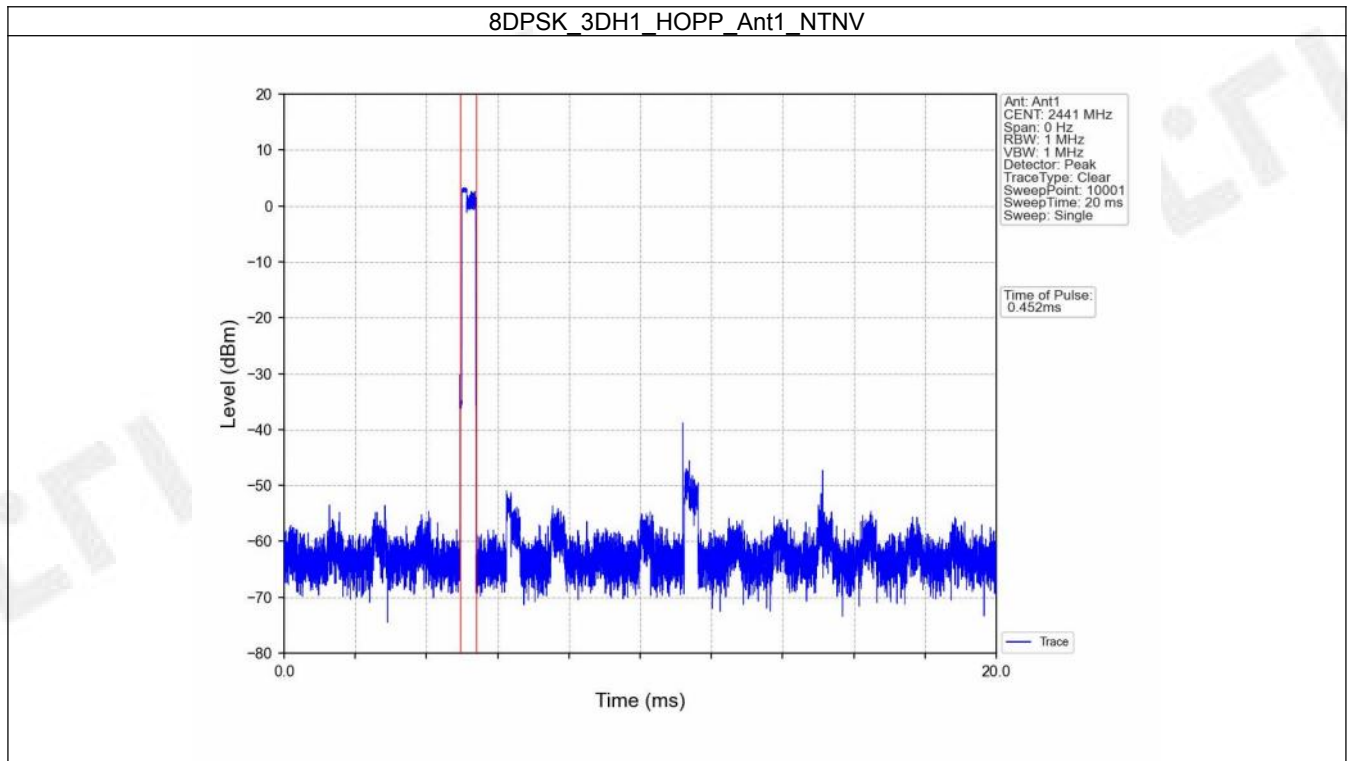
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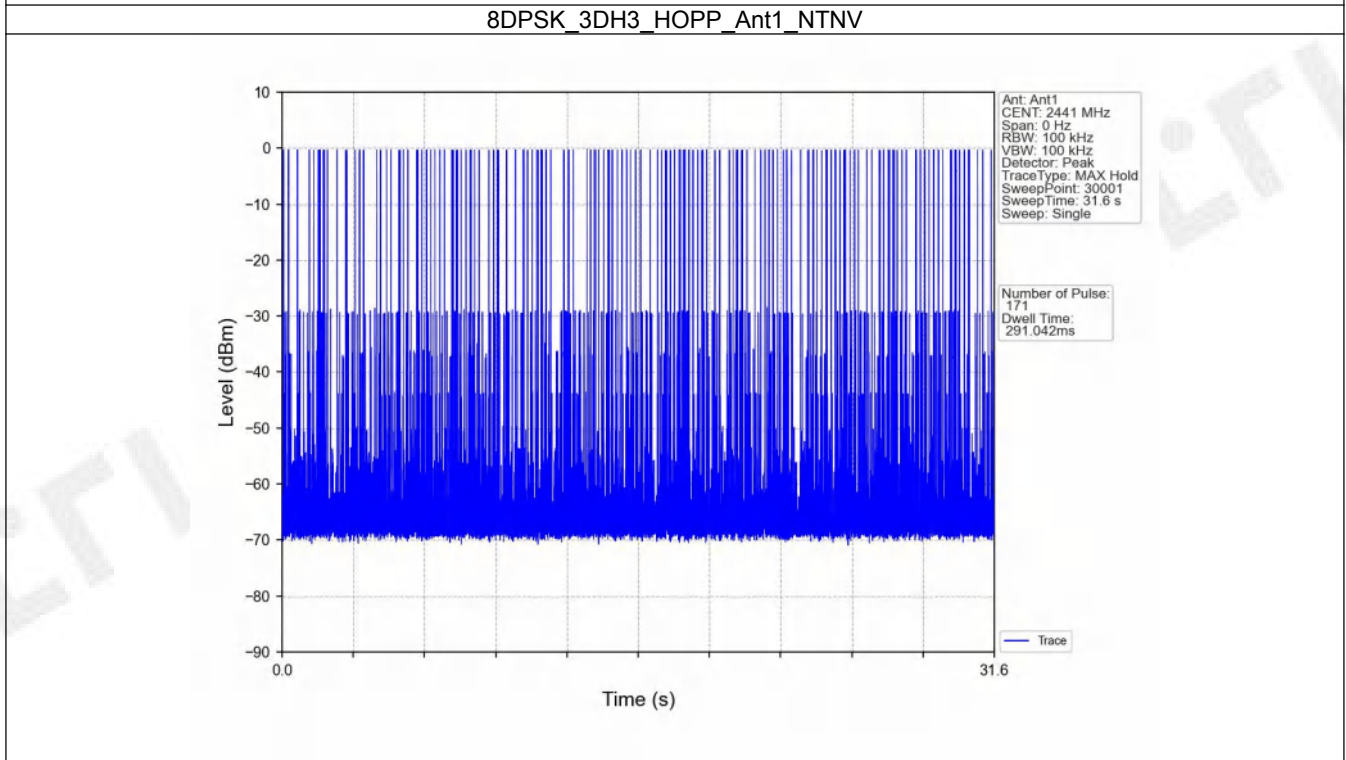
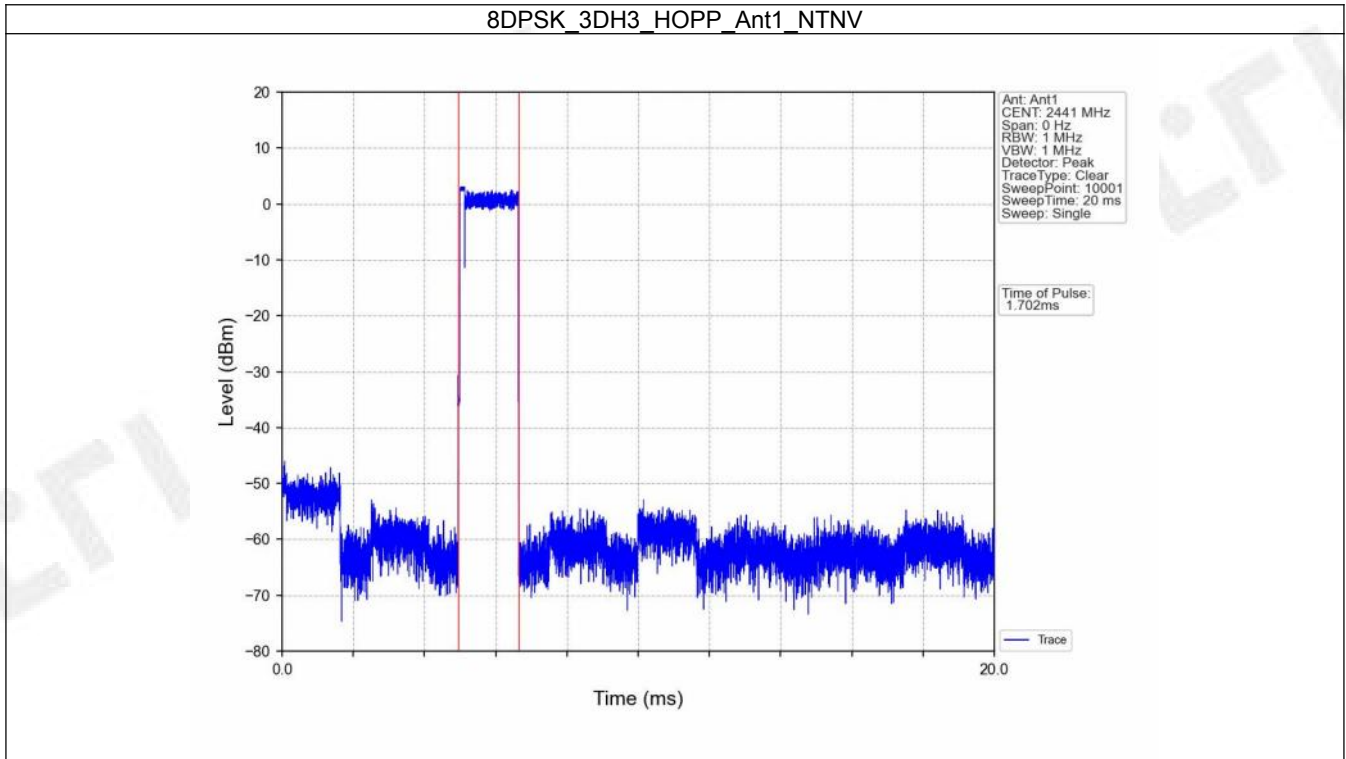
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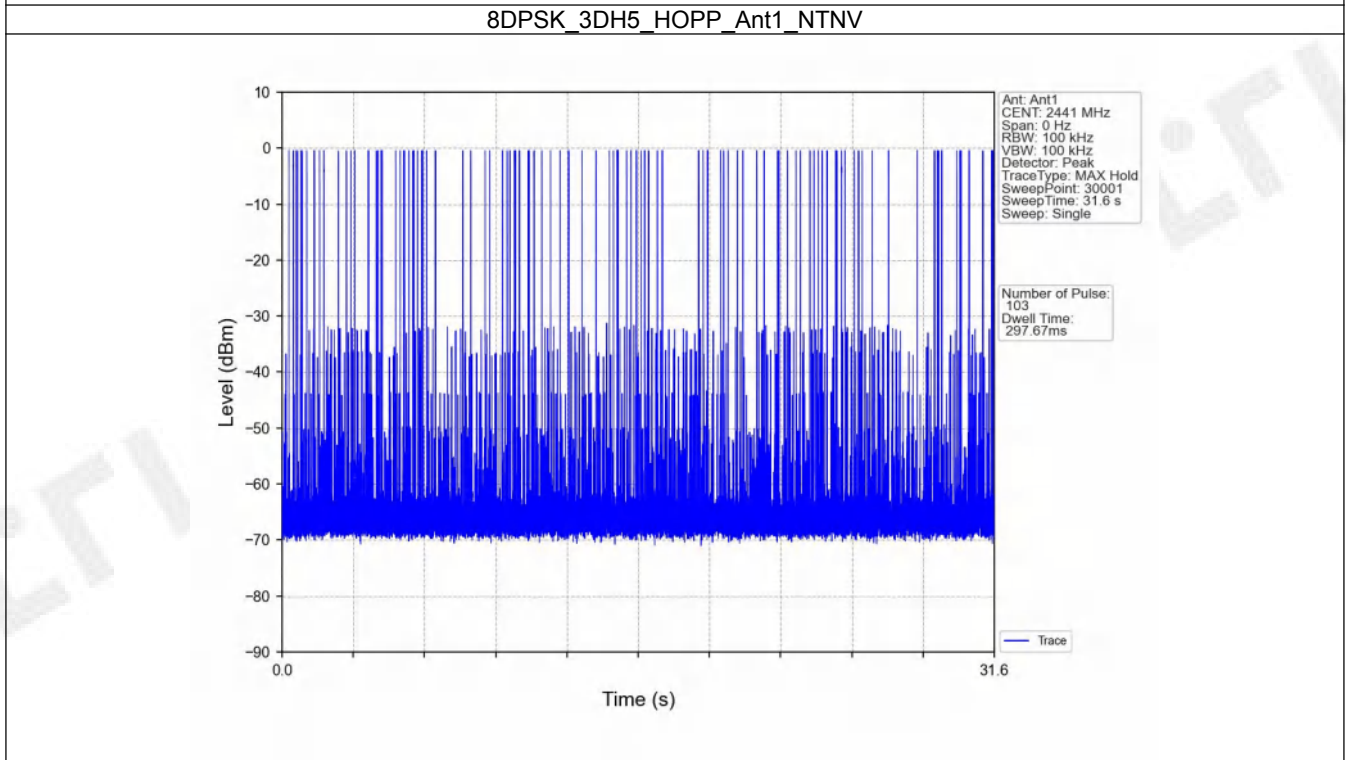
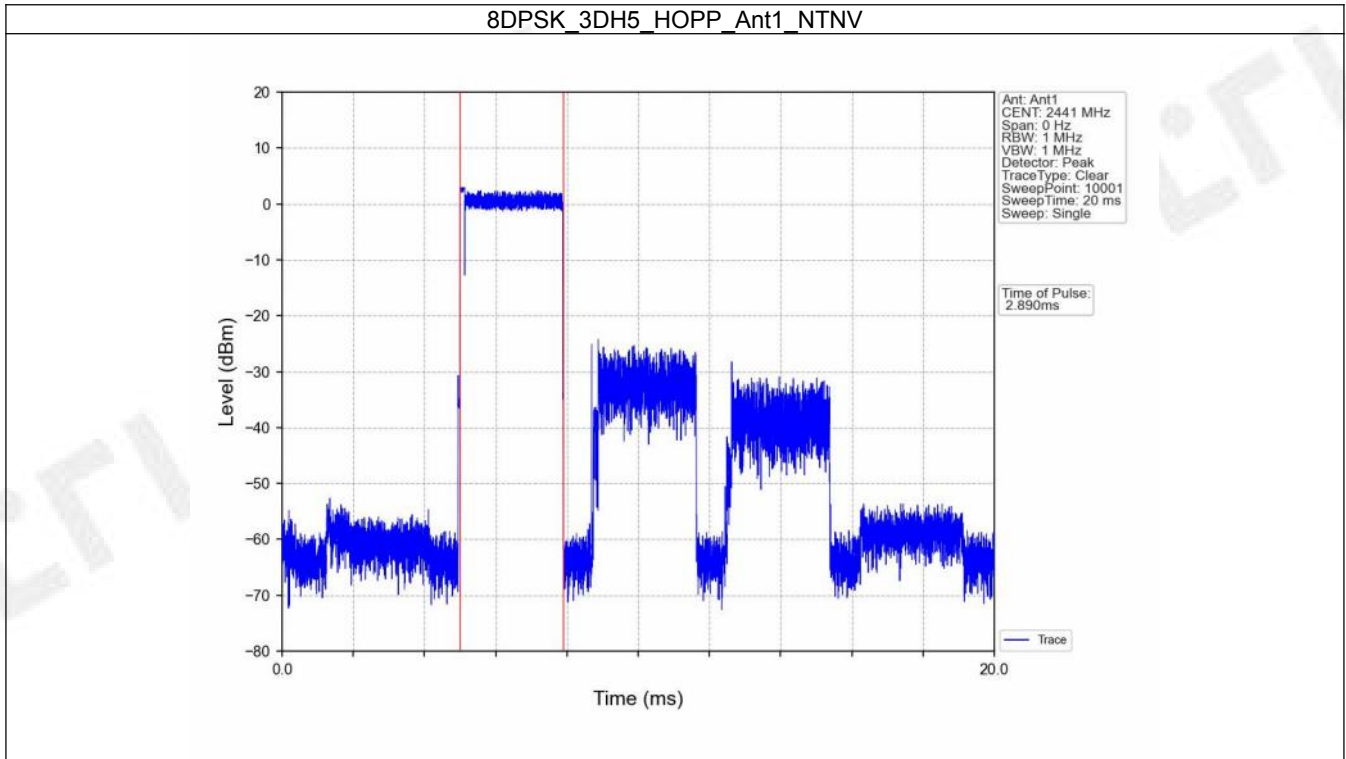
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FCCID: 2AHPZ-CHS65



FCCID: 2AHPZ-CHS65

6. Unwanted Emissions In Non-restricted Frequency Bands

6.1 Test Result

6.1.1 Ref

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)
GFSK	SISO	2402	DH5	1	2.20
		2441	DH5	1	-0.93
		2480	DH5	1	-0.61
Pi/4DQPSK	SISO	2402	2DH5	1	2.07
		2441	2DH5	1	-1.04
		2480	2DH5	1	-4.27
8DPSK	SISO	2402	3DH5	1	1.99
		2441	3DH5	1	-1.08
		2480	3DH5	1	-0.62

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

6.1.2 CSE

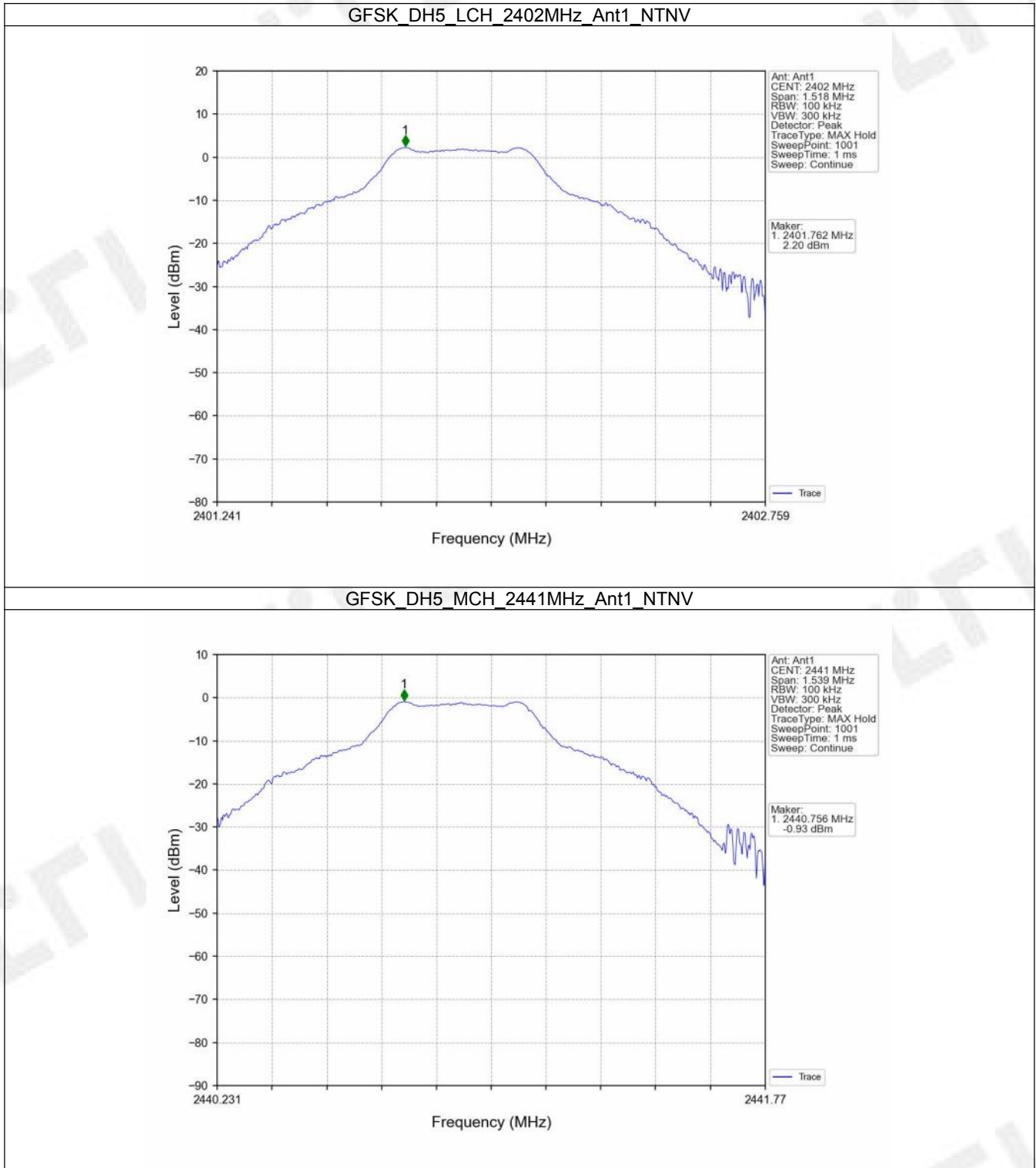
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
GFSK	SISO	2402	DH5	1	2.20	-17.80	Pass
		2441	DH5	1	2.20	-17.80	Pass
		2480	DH5	1	2.20	-17.80	Pass
		HOPP	DH5	1	2.20	-17.80	Pass
					2.20	-17.80	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	2.07	-17.93	Pass
		2441	2DH5	1	2.07	-17.93	Pass
		2480	2DH5	1	2.07	-17.93	Pass
		HOPP	2DH5	1	2.07	-17.93	Pass
					2.07	-17.93	Pass
8DPSK	SISO	2402	3DH5	1	1.99	-18.01	Pass
		2441	3DH5	1	1.99	-18.01	Pass
		2480	3DH5	1	1.99	-18.01	Pass
		HOPP	3DH5	1	1.99	-18.01	Pass
					1.99	-18.01	Pass

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

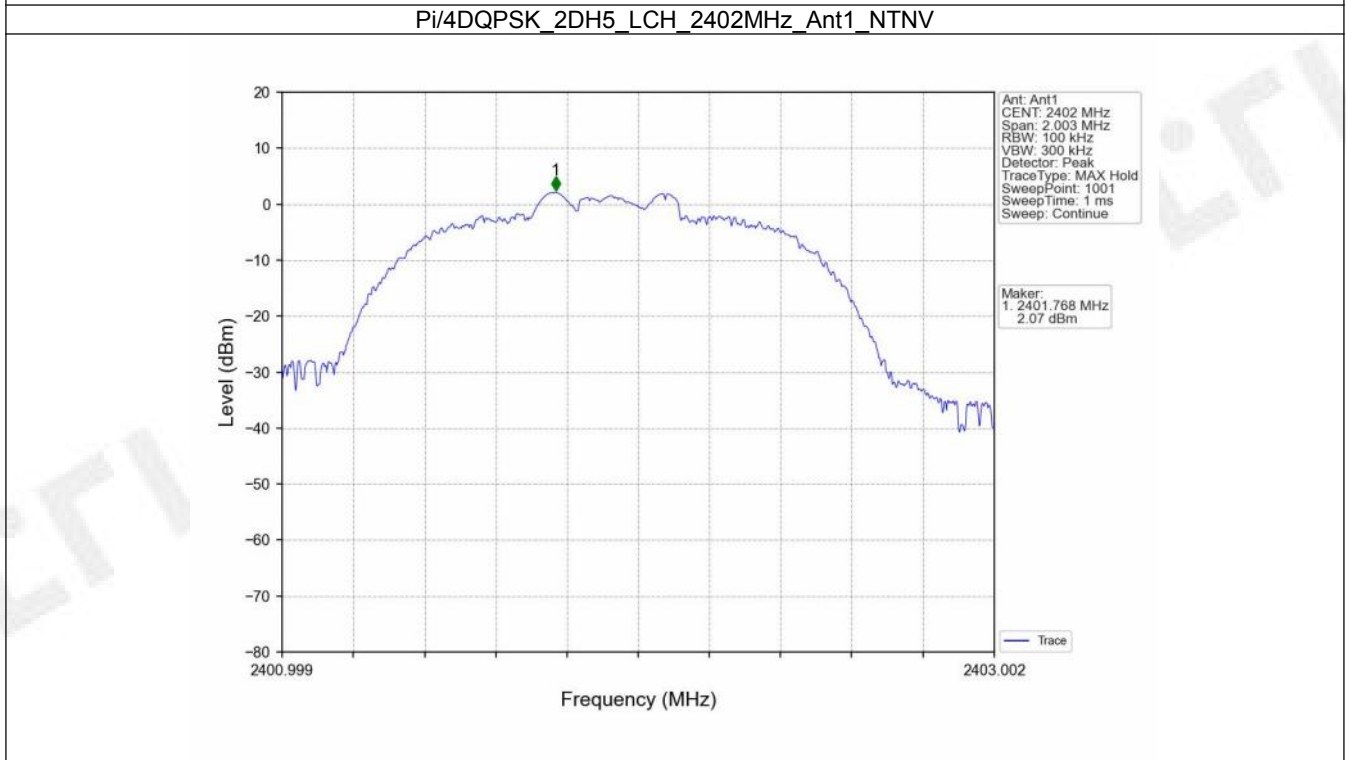
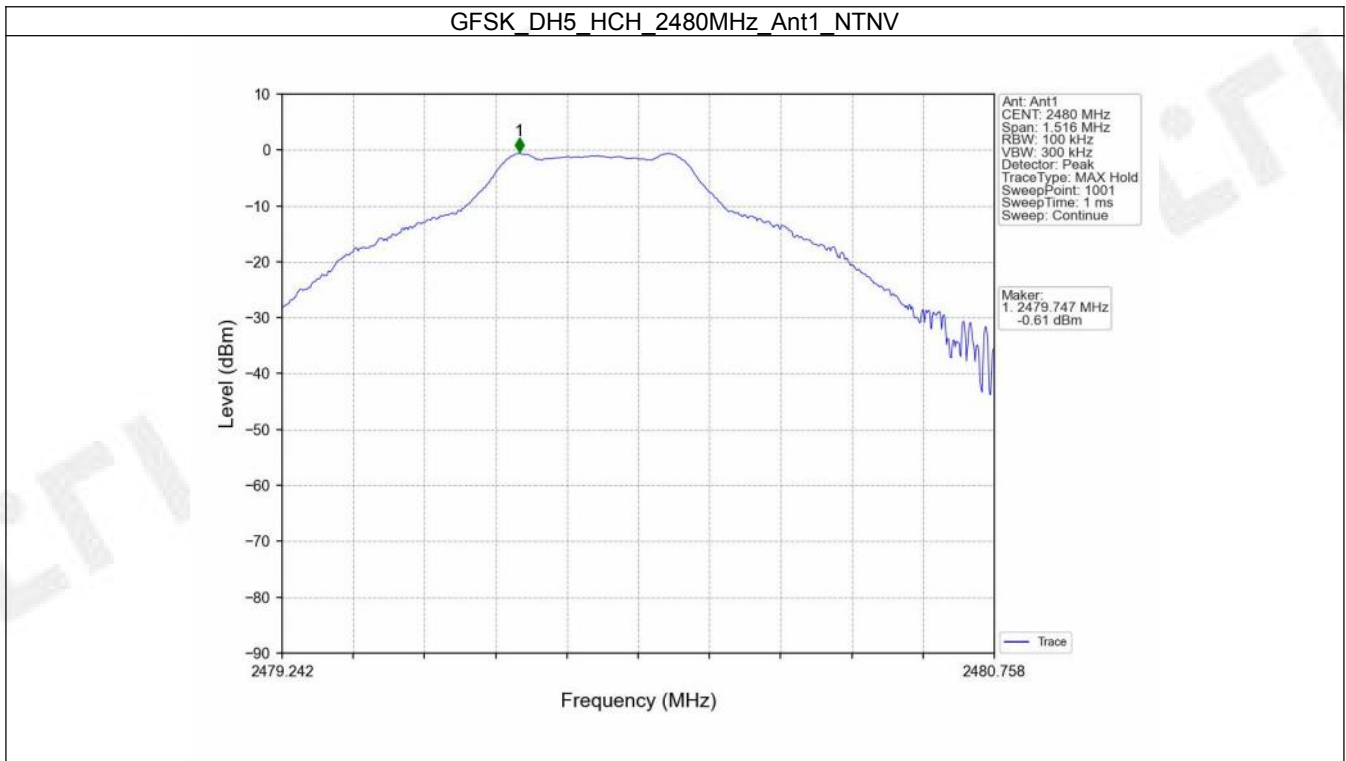
FCCID: 2AHPZ-CHS65

6.2 Test Graph

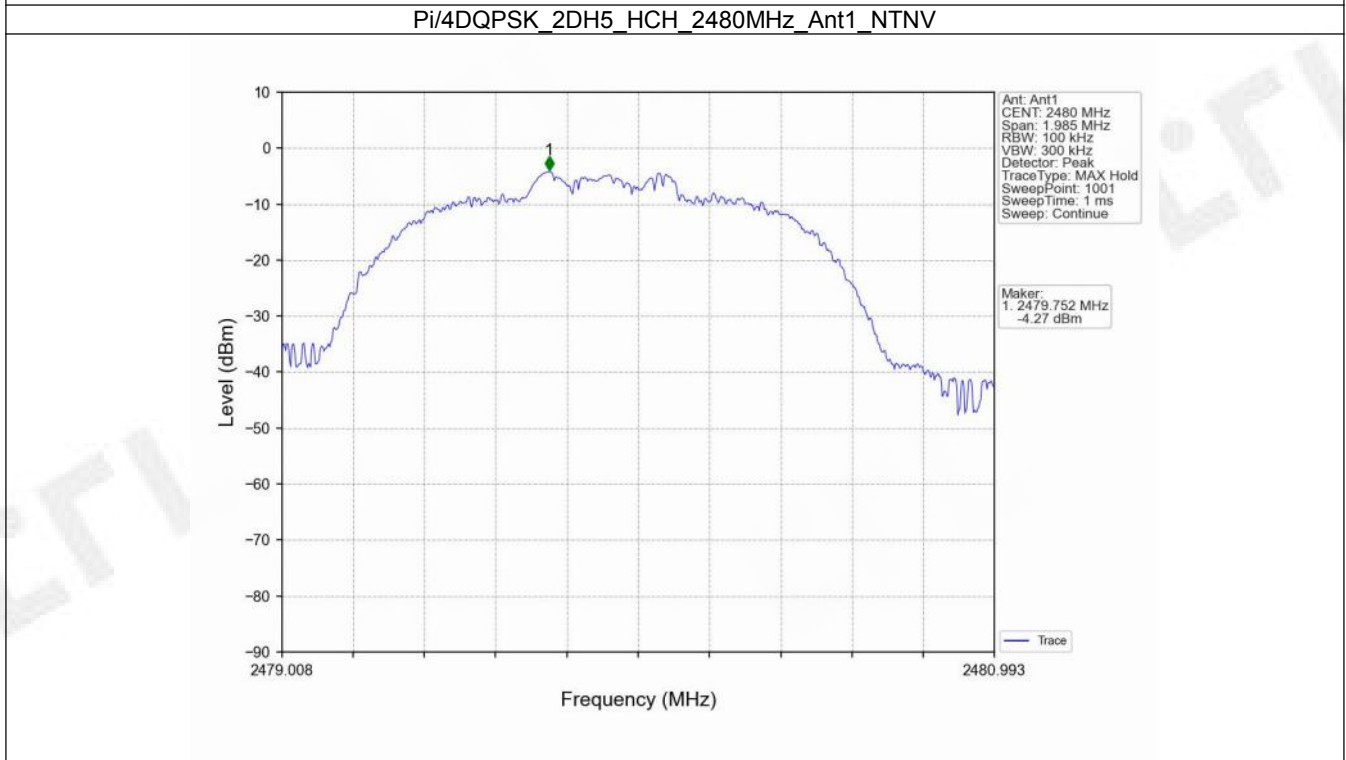
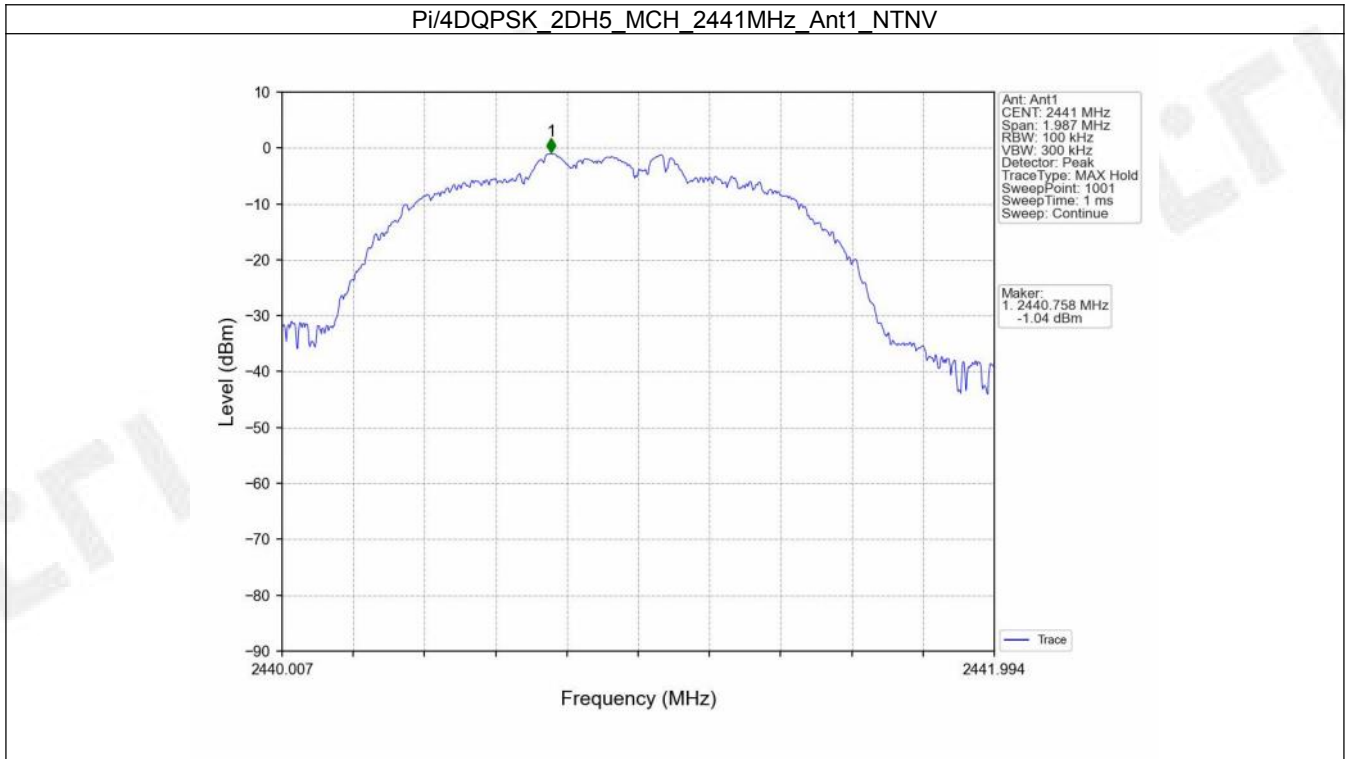
6.2.1 Ref



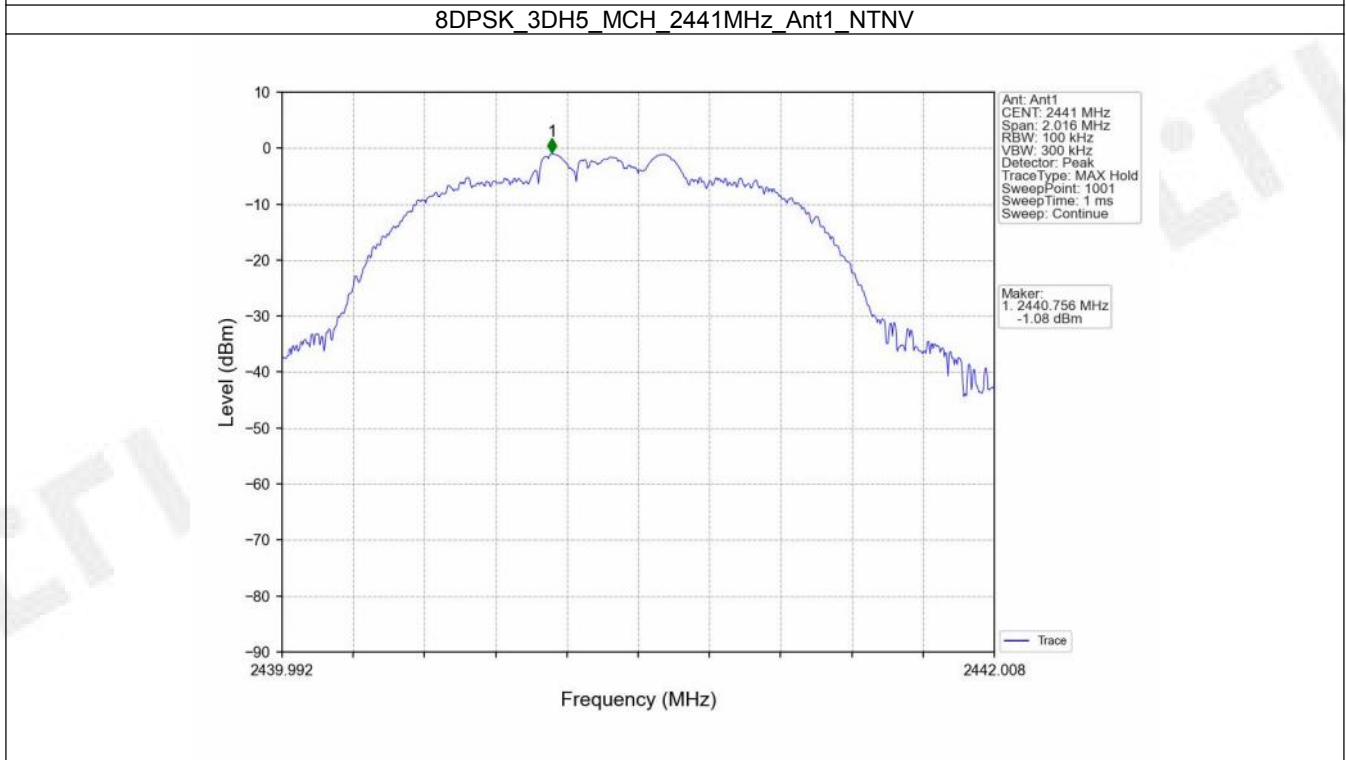
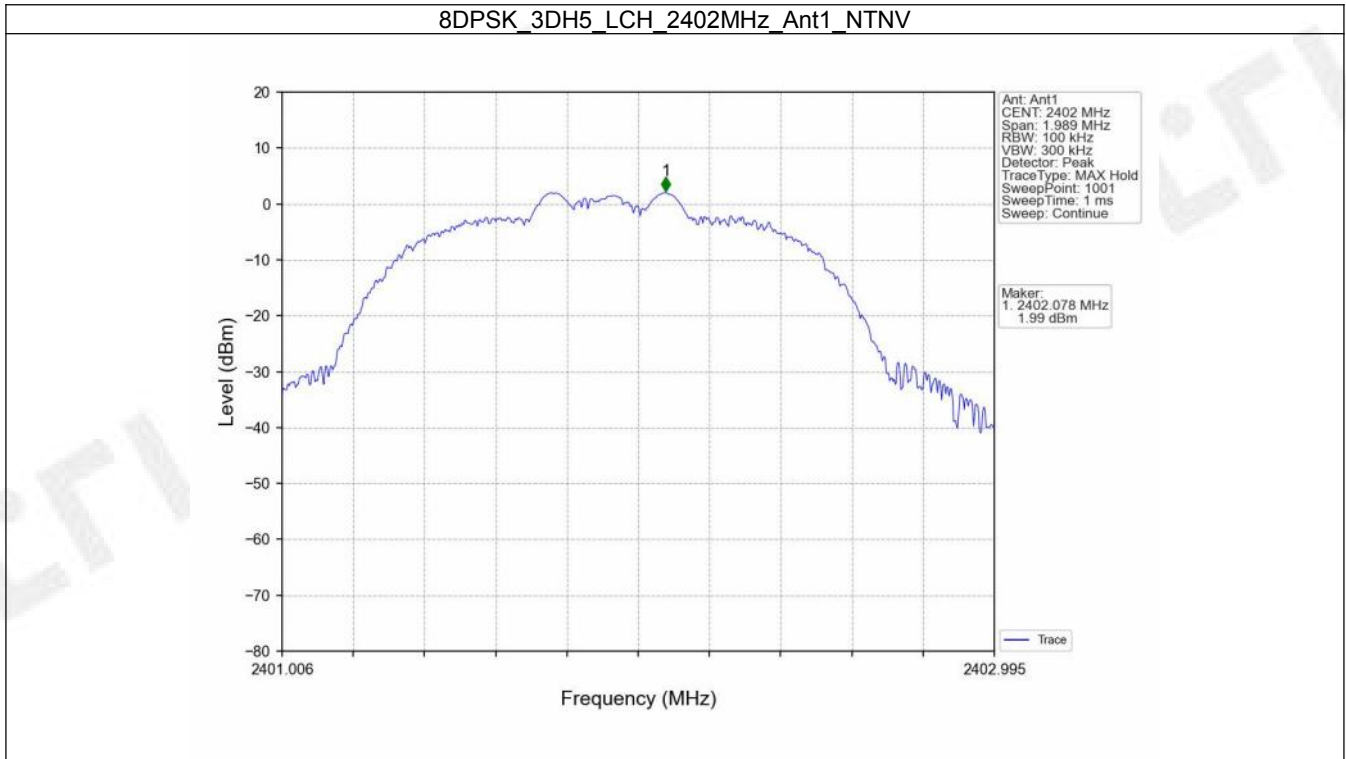
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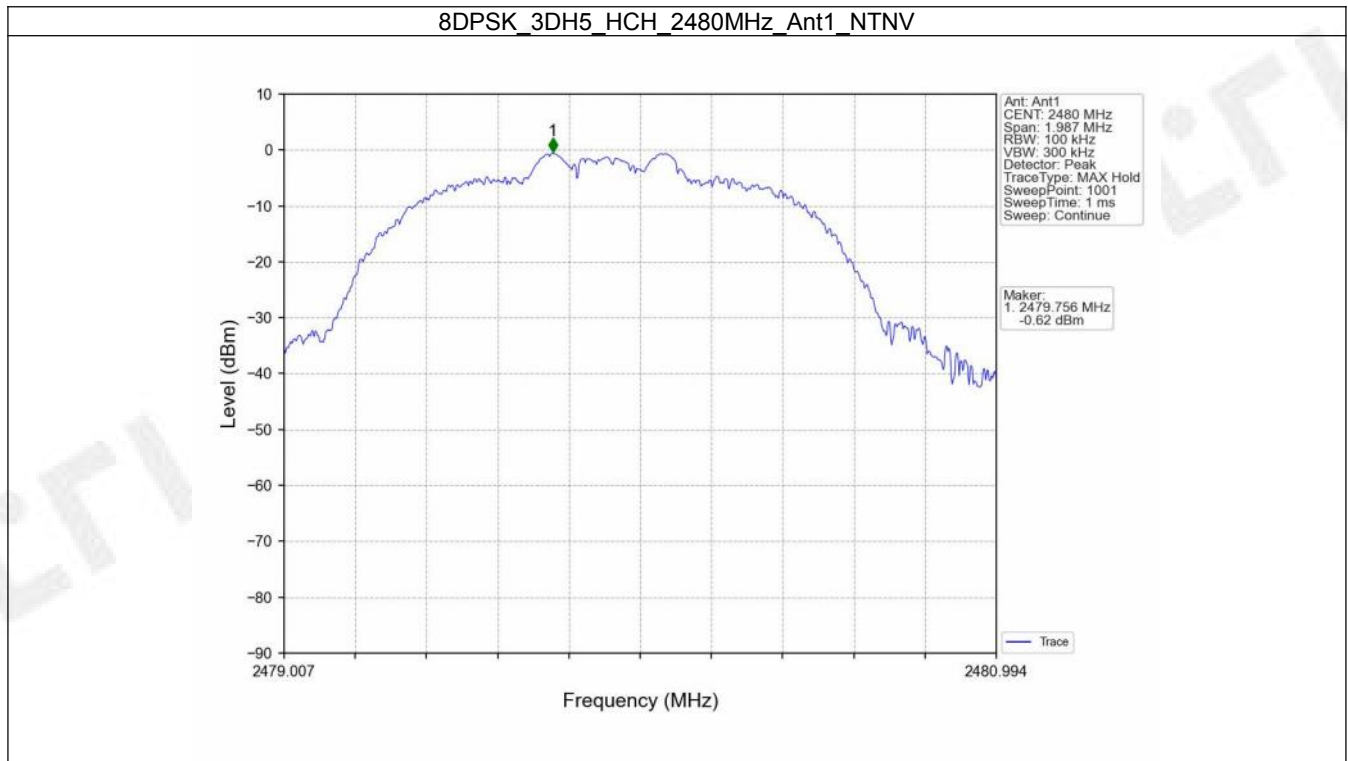
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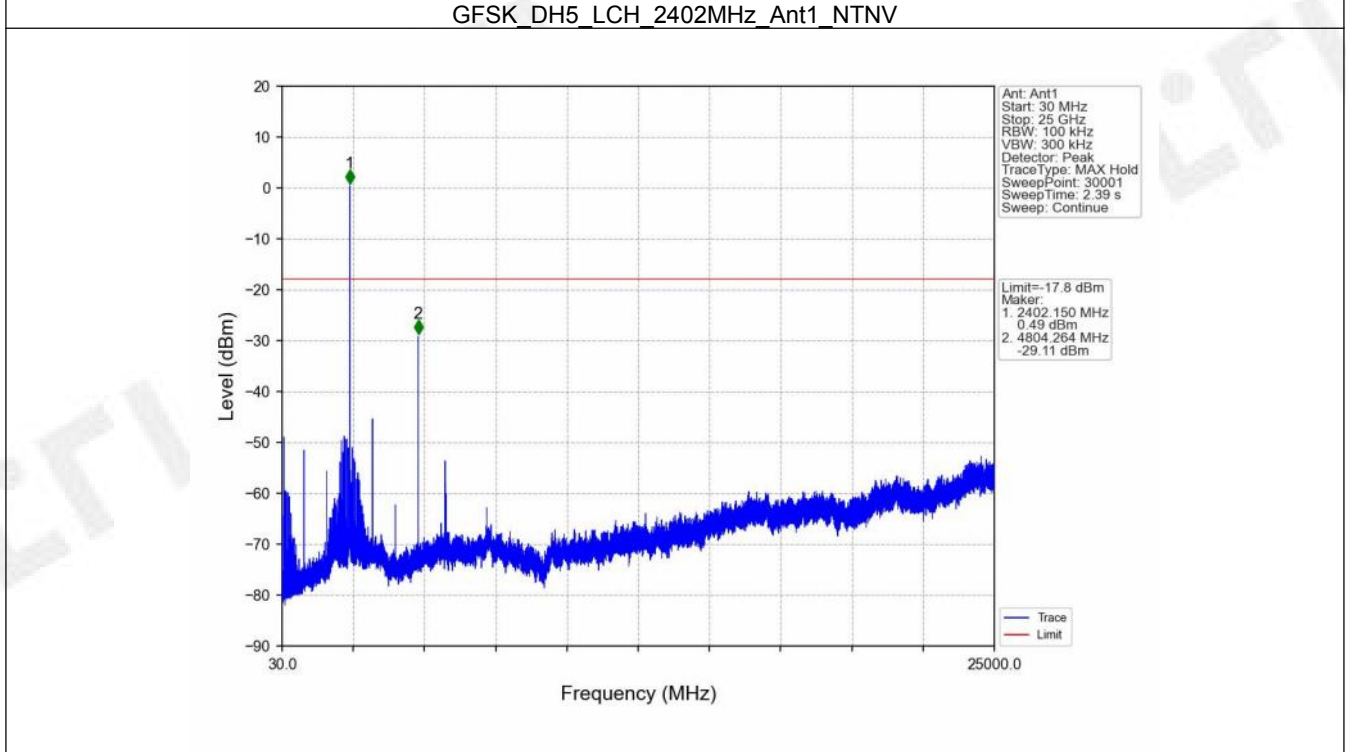
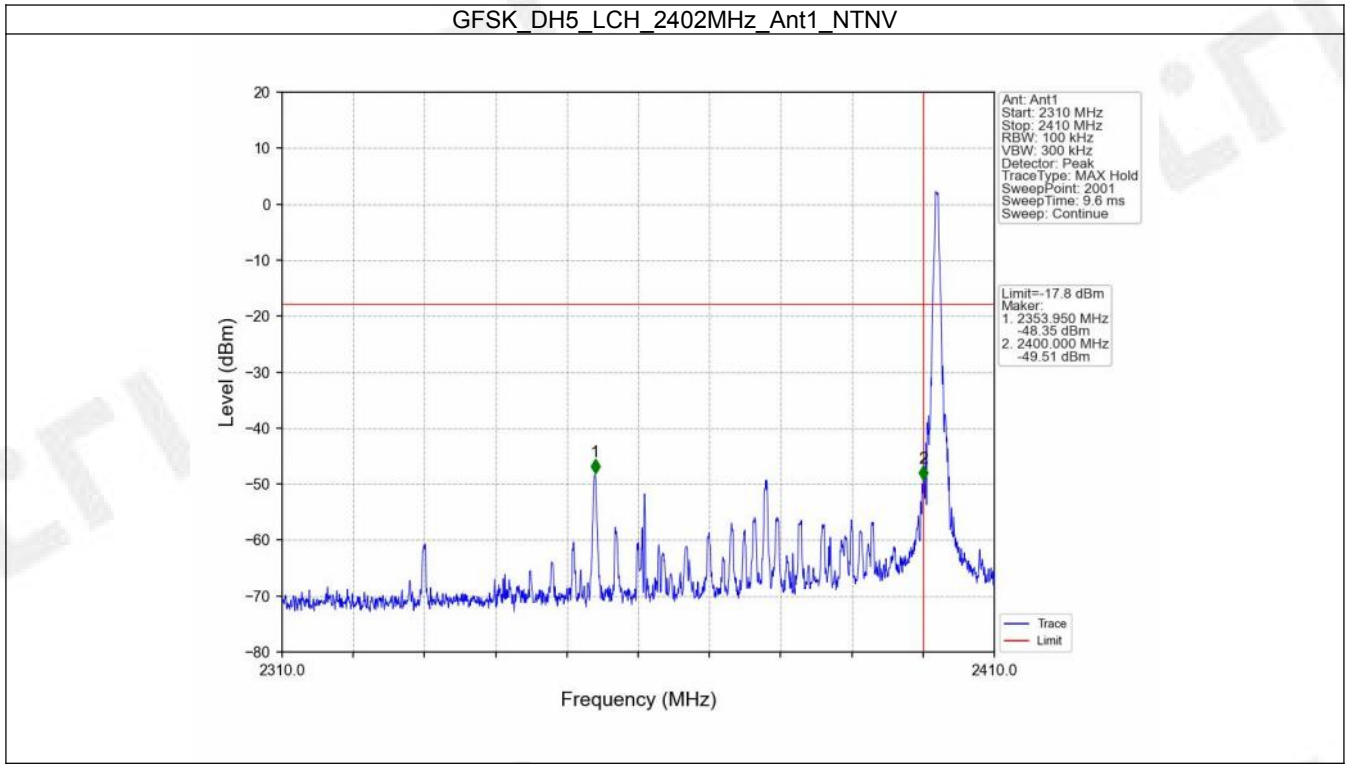


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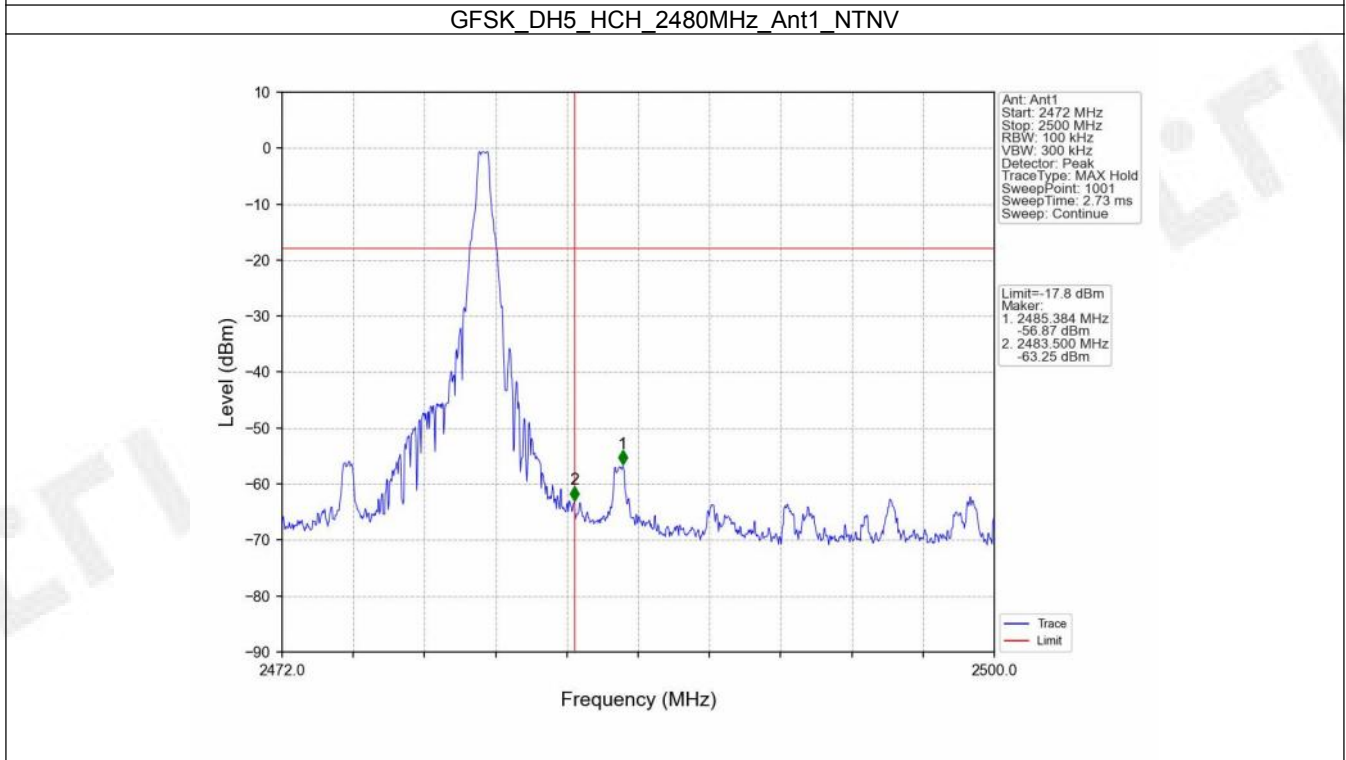
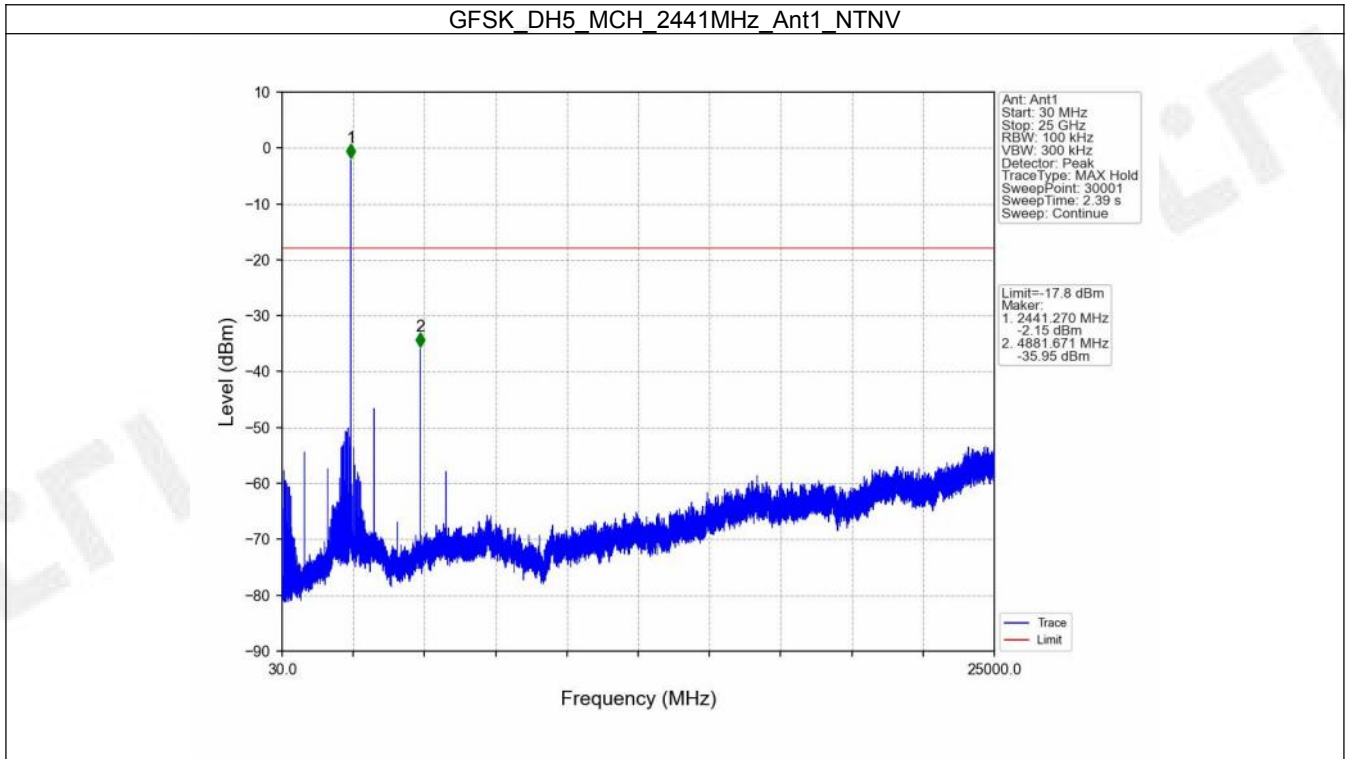


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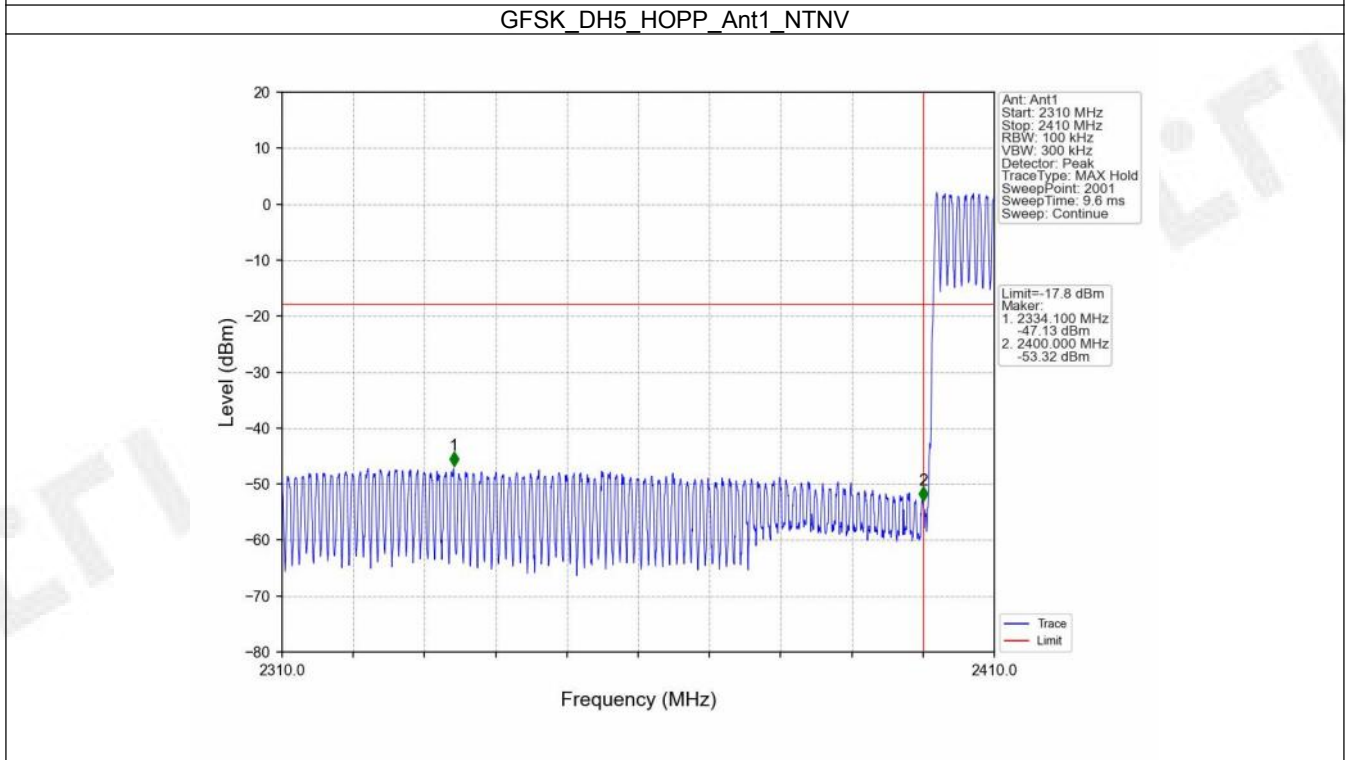
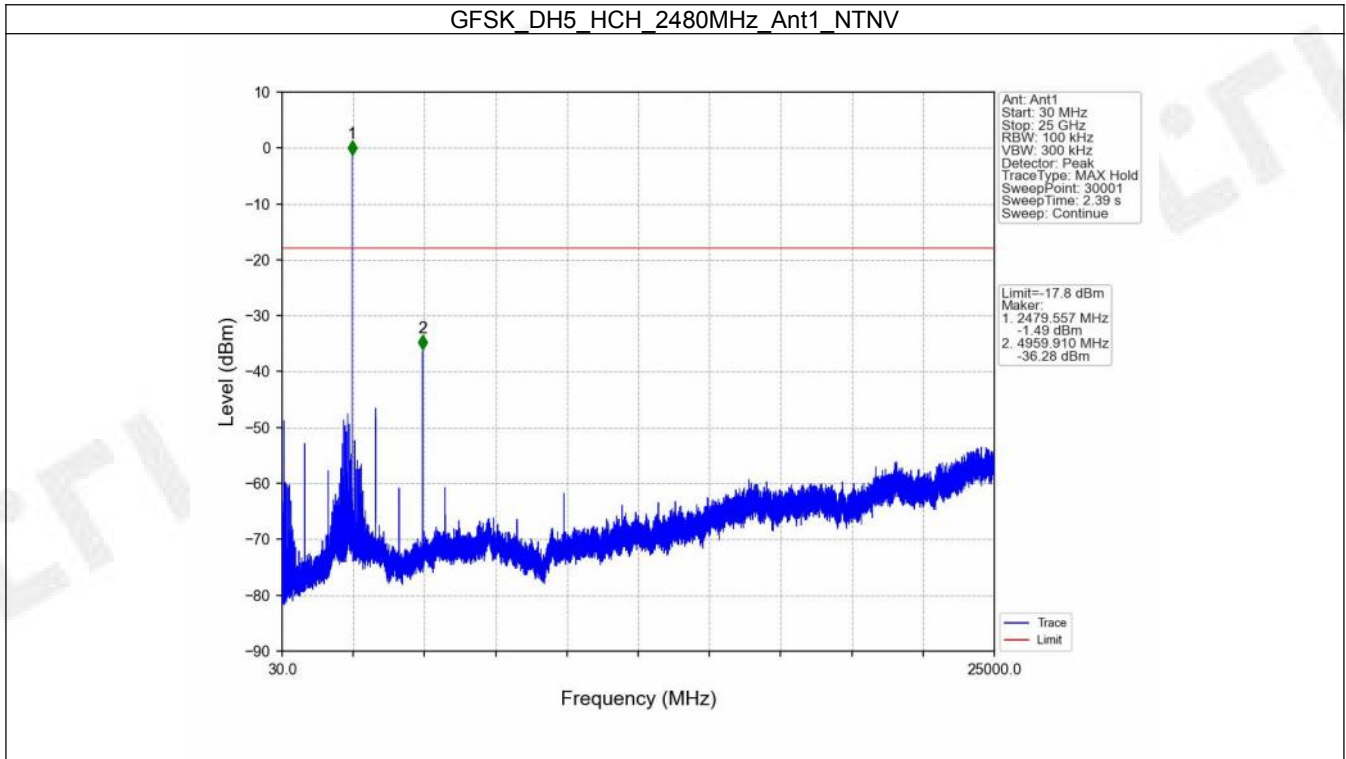
6.2.2 CSE



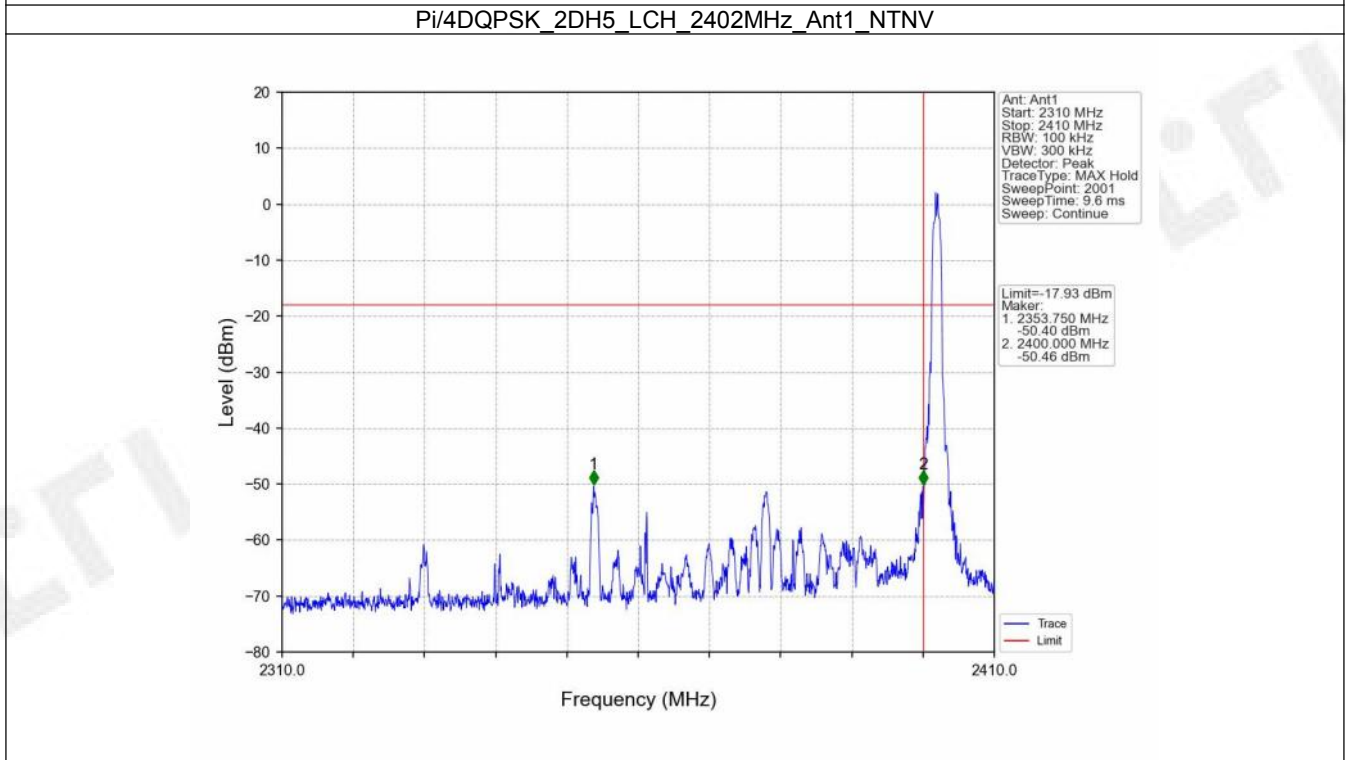
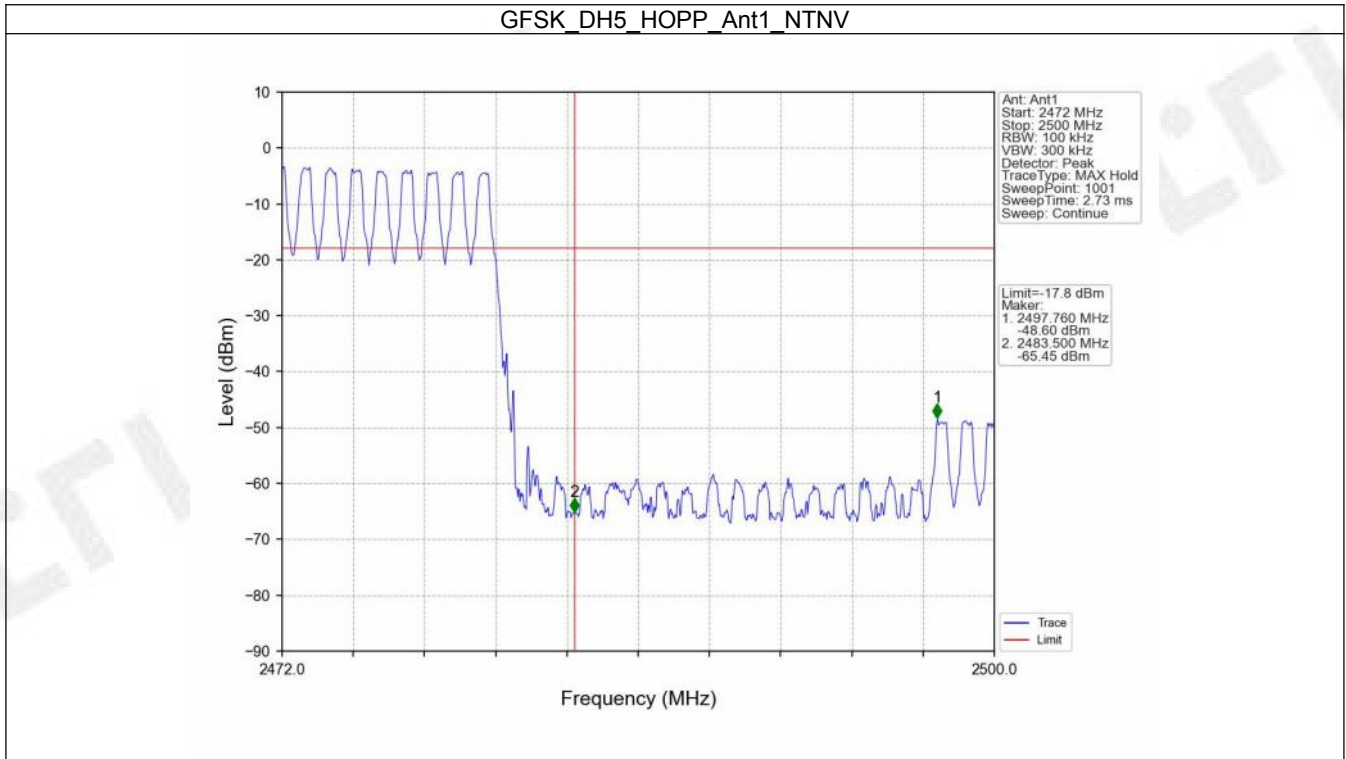
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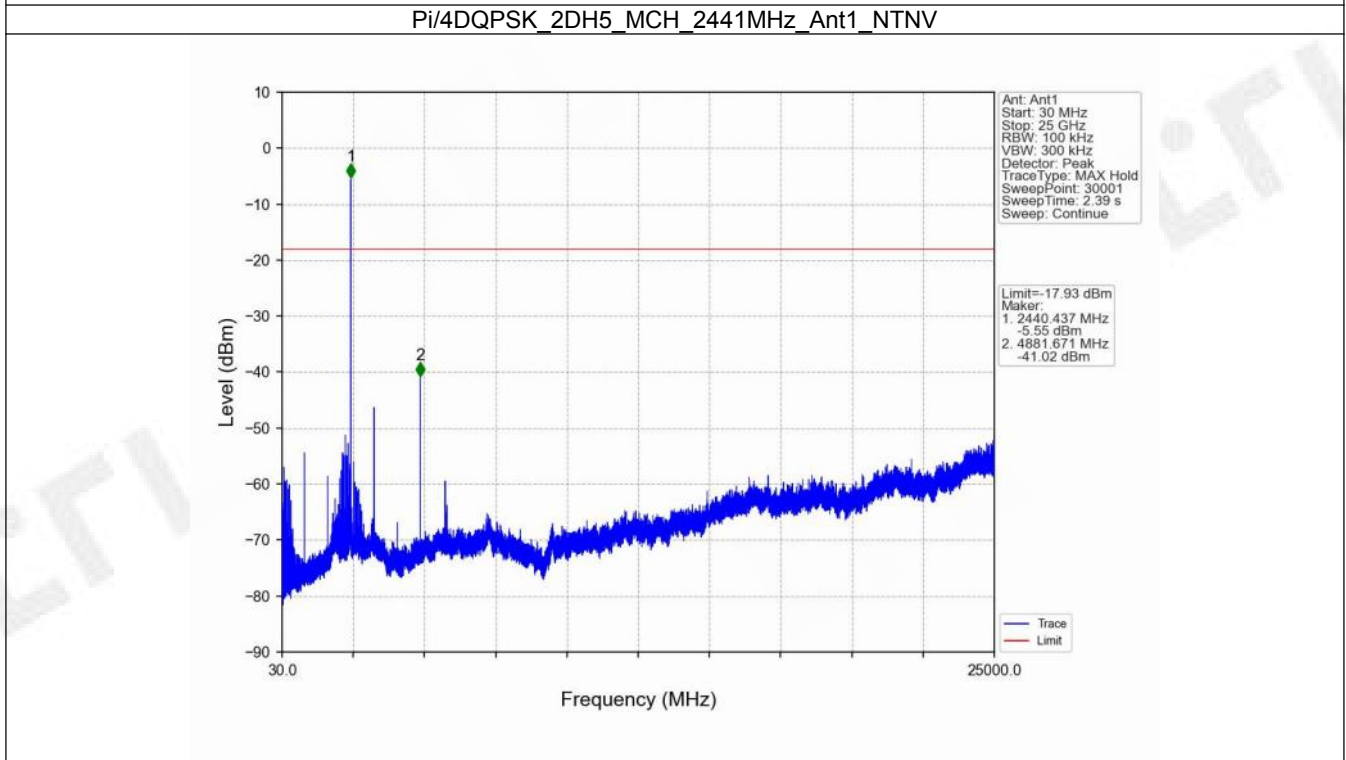
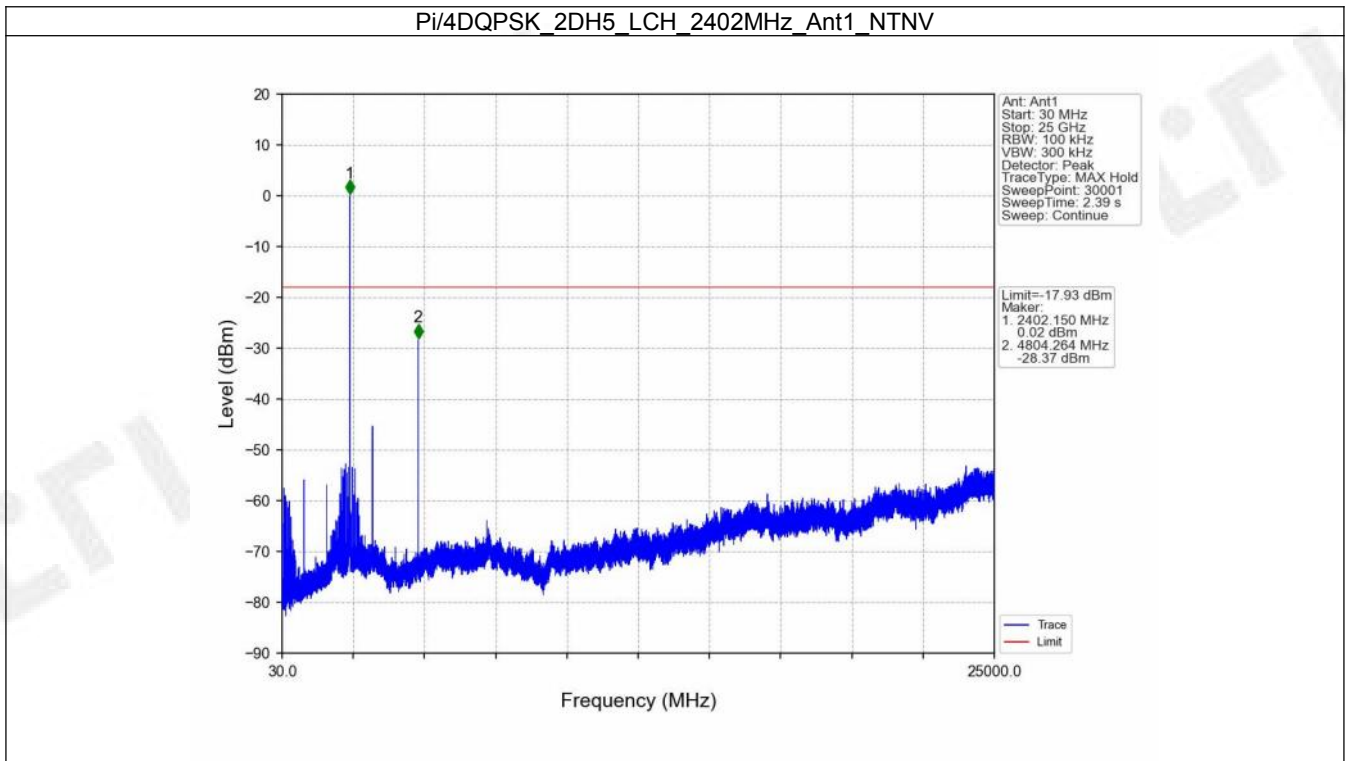
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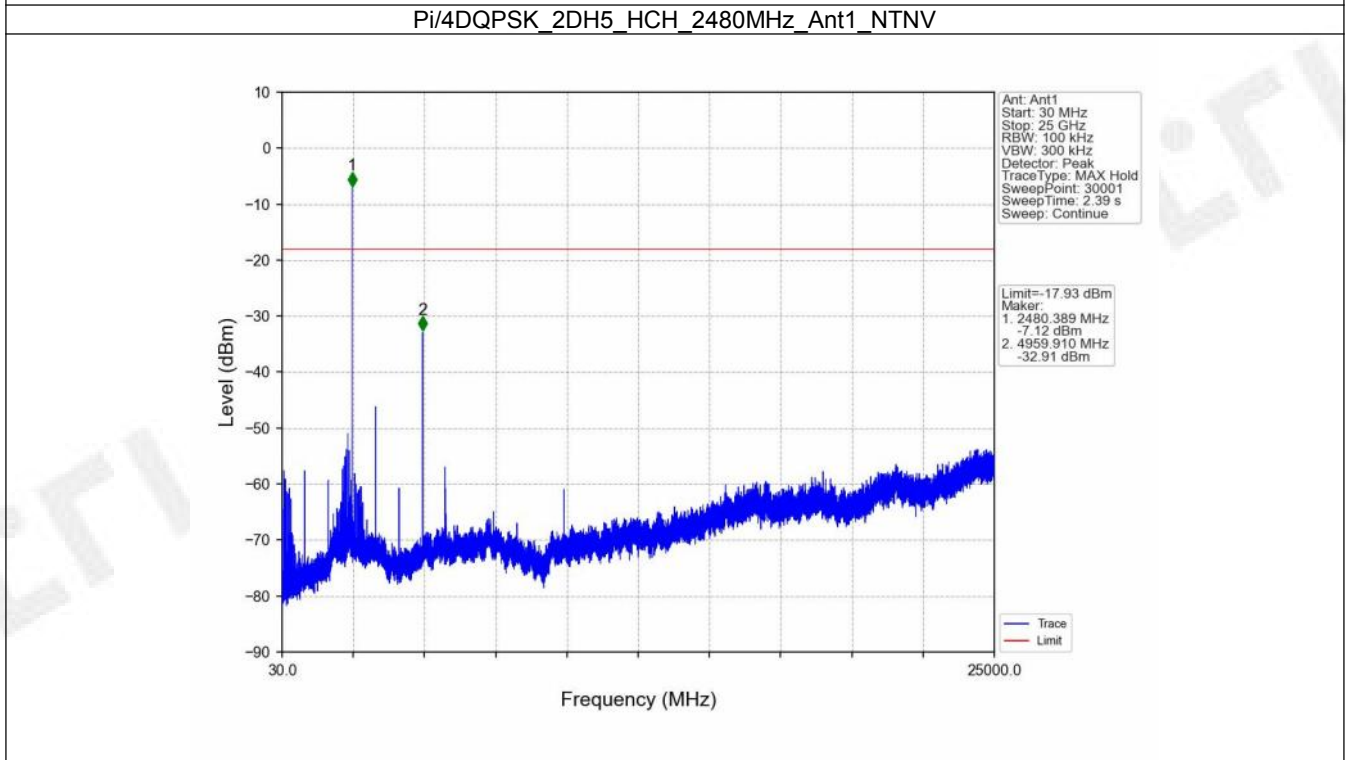
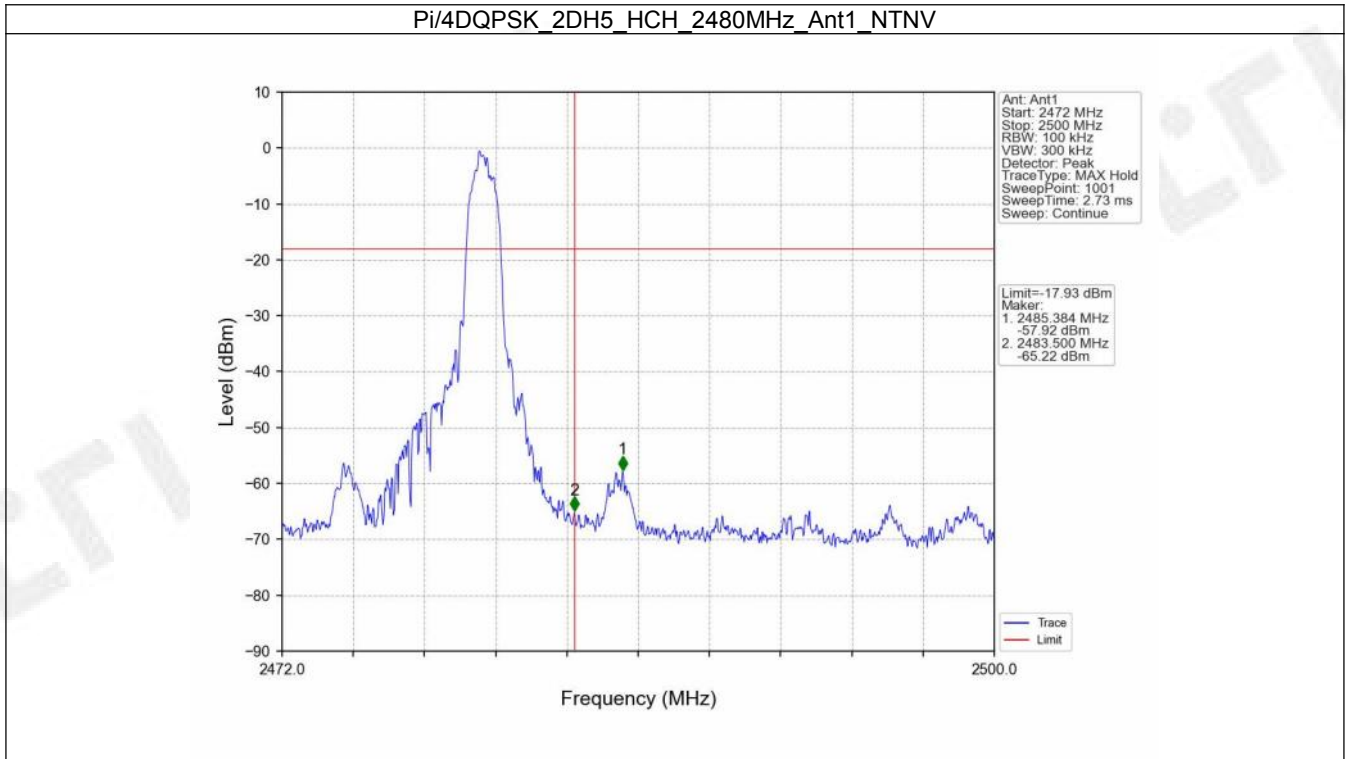
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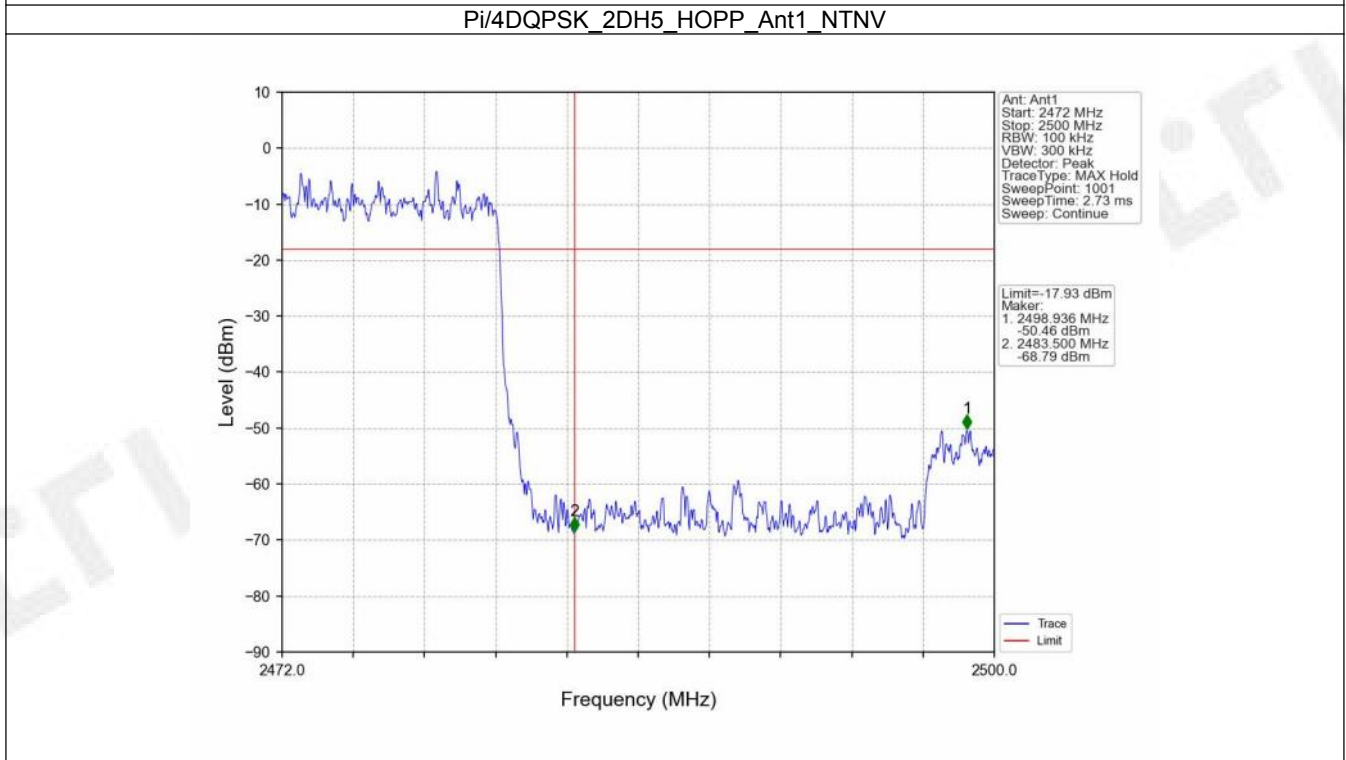
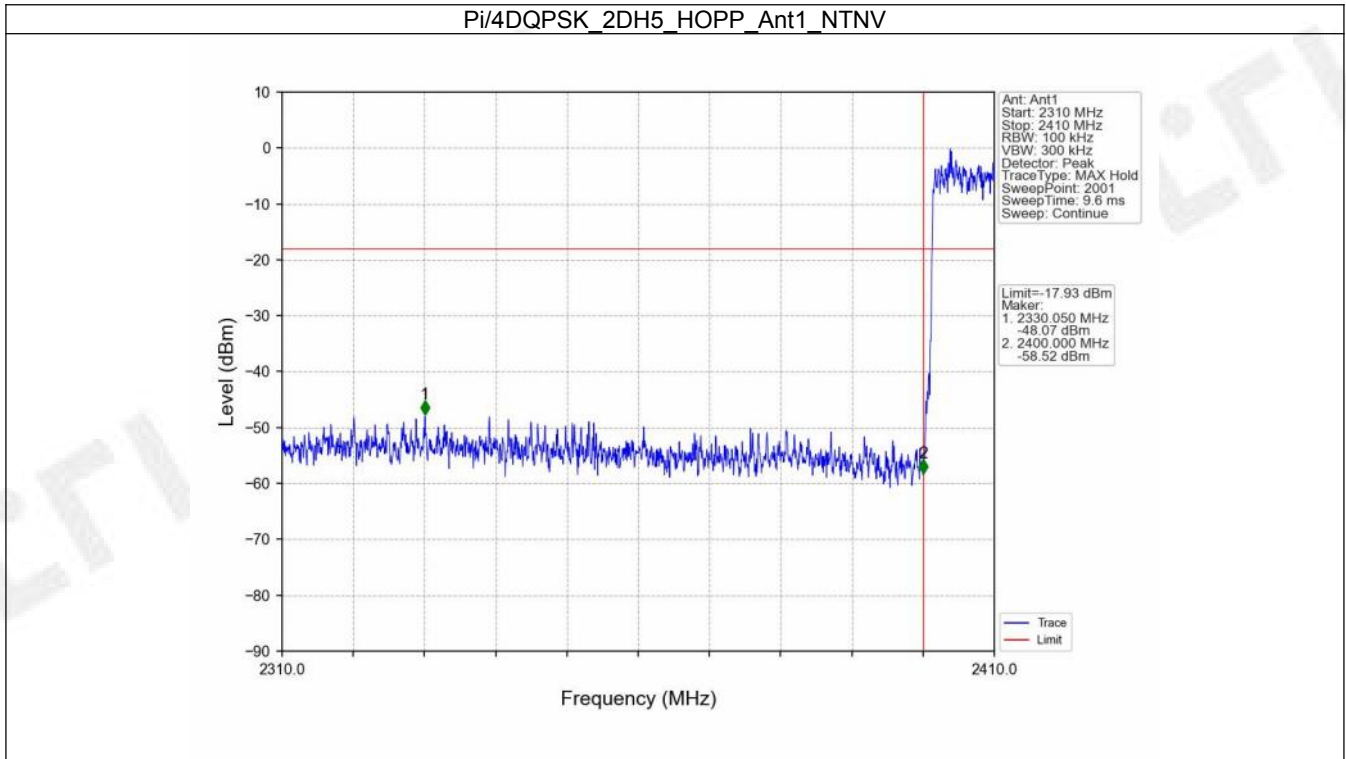
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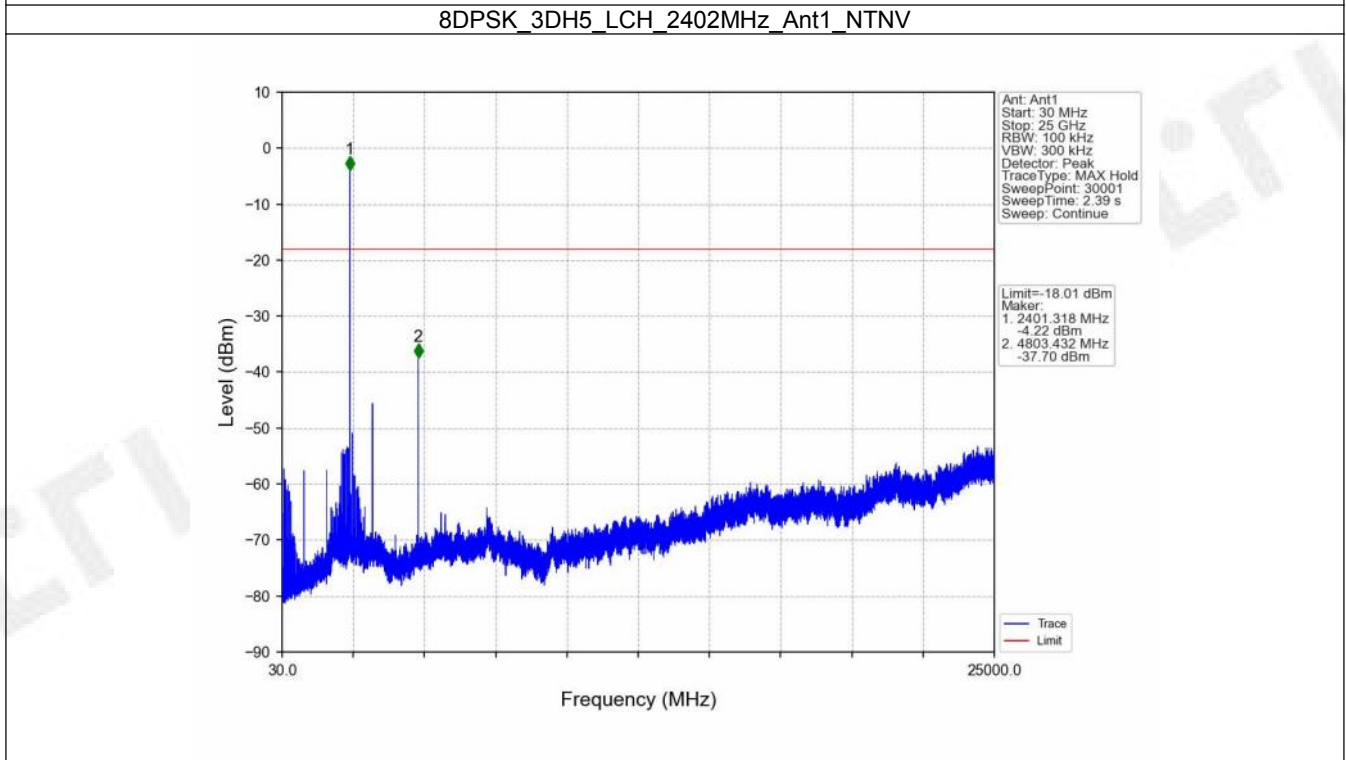
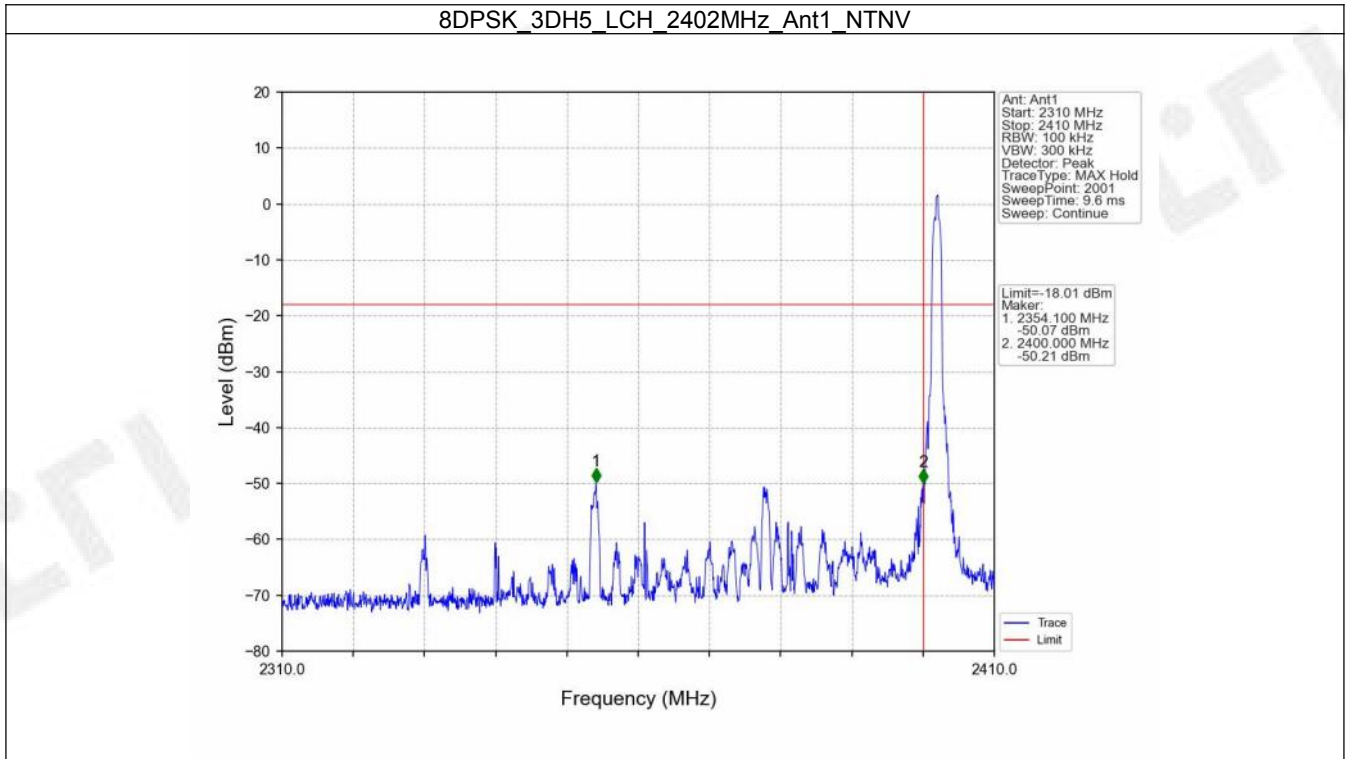
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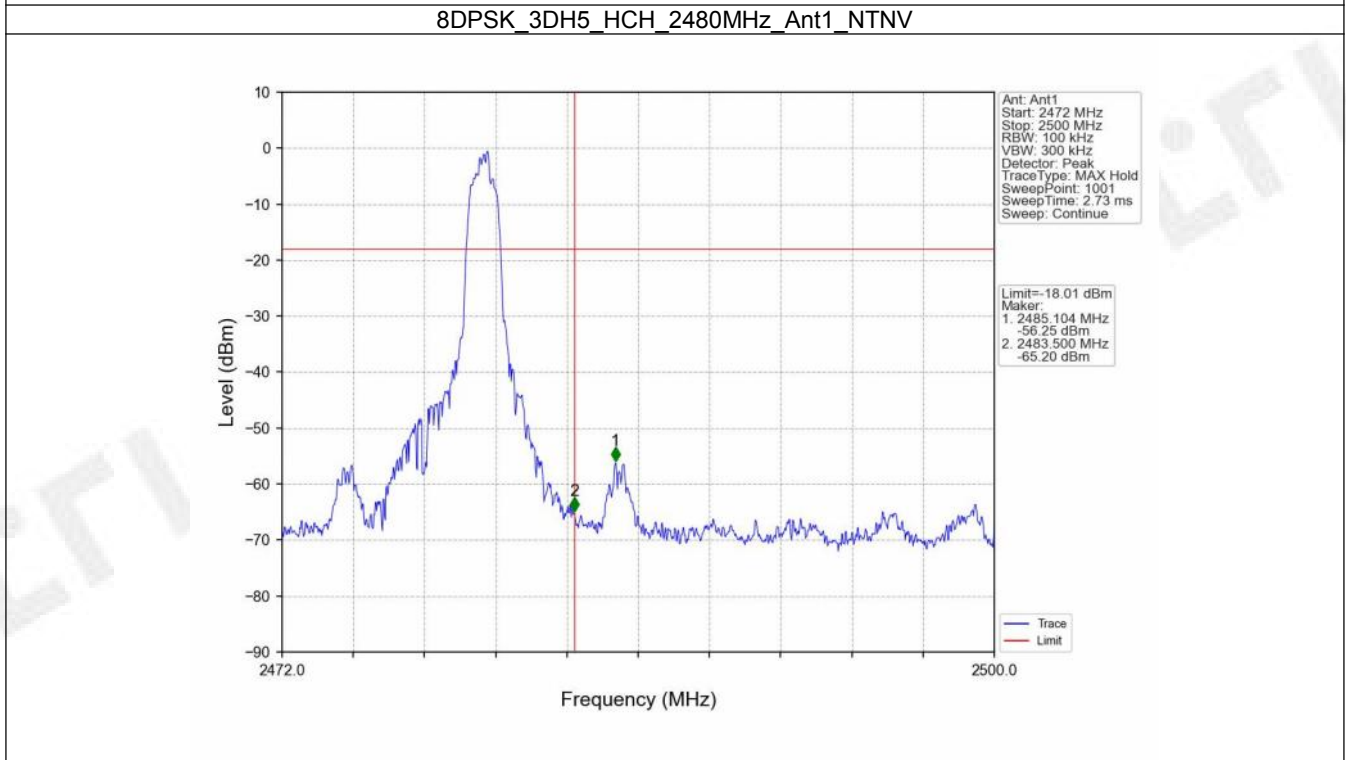
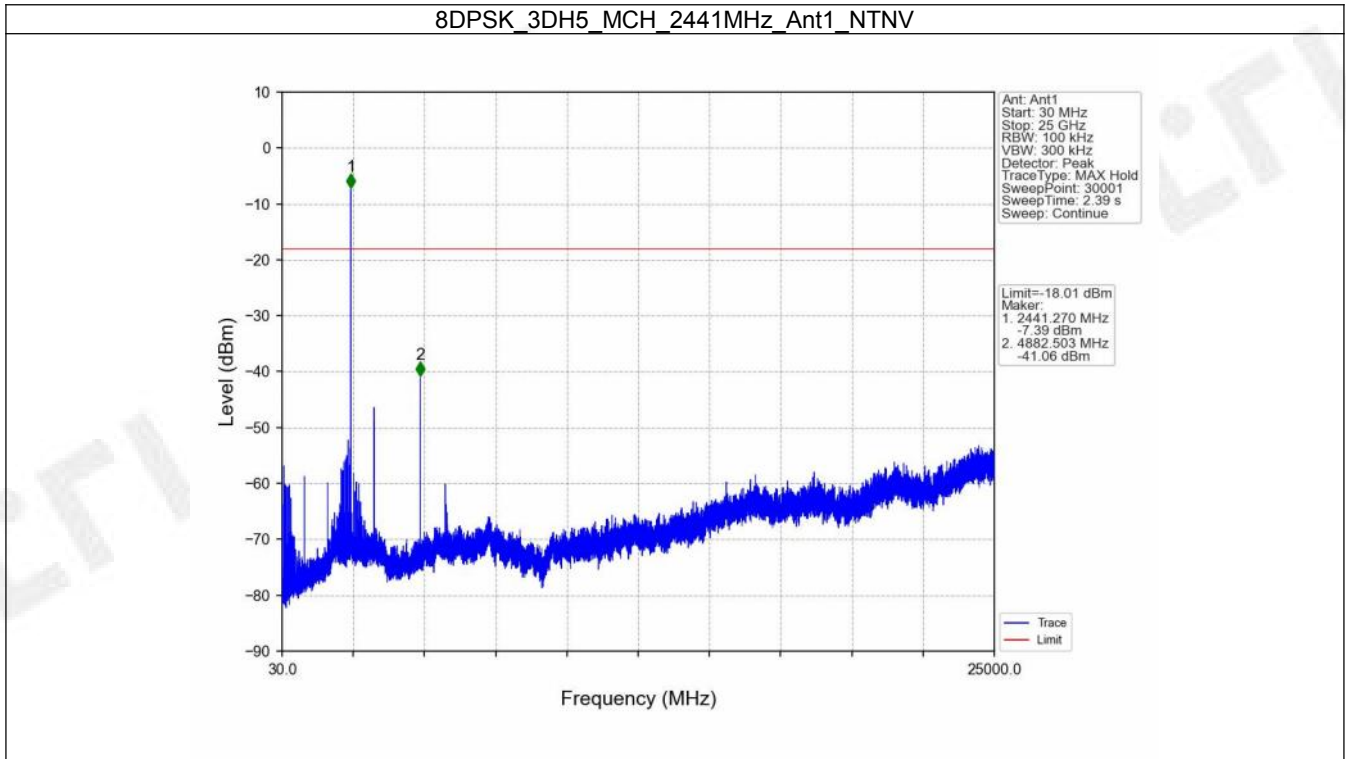
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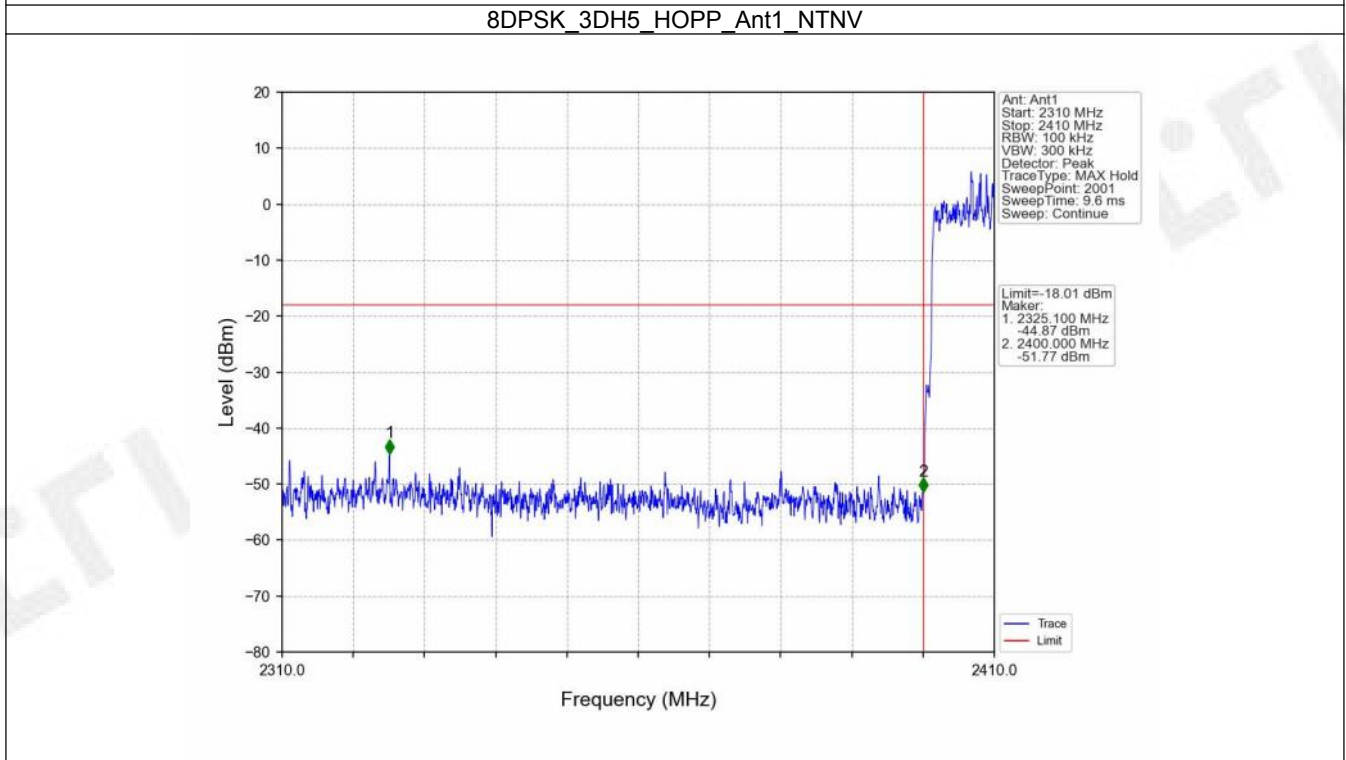
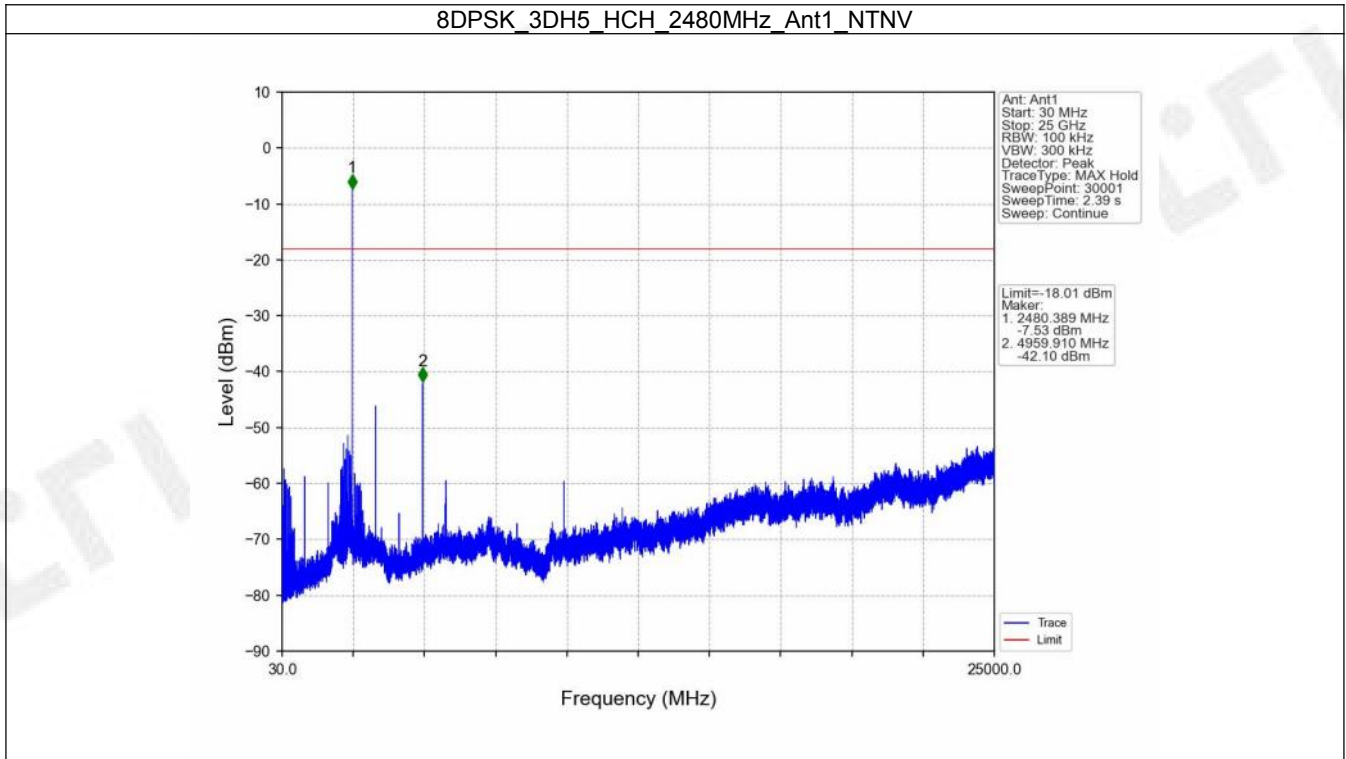
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