

Appendix - LORA

1. Bandwidth

1.1 Test Result

1.1.1 OBW

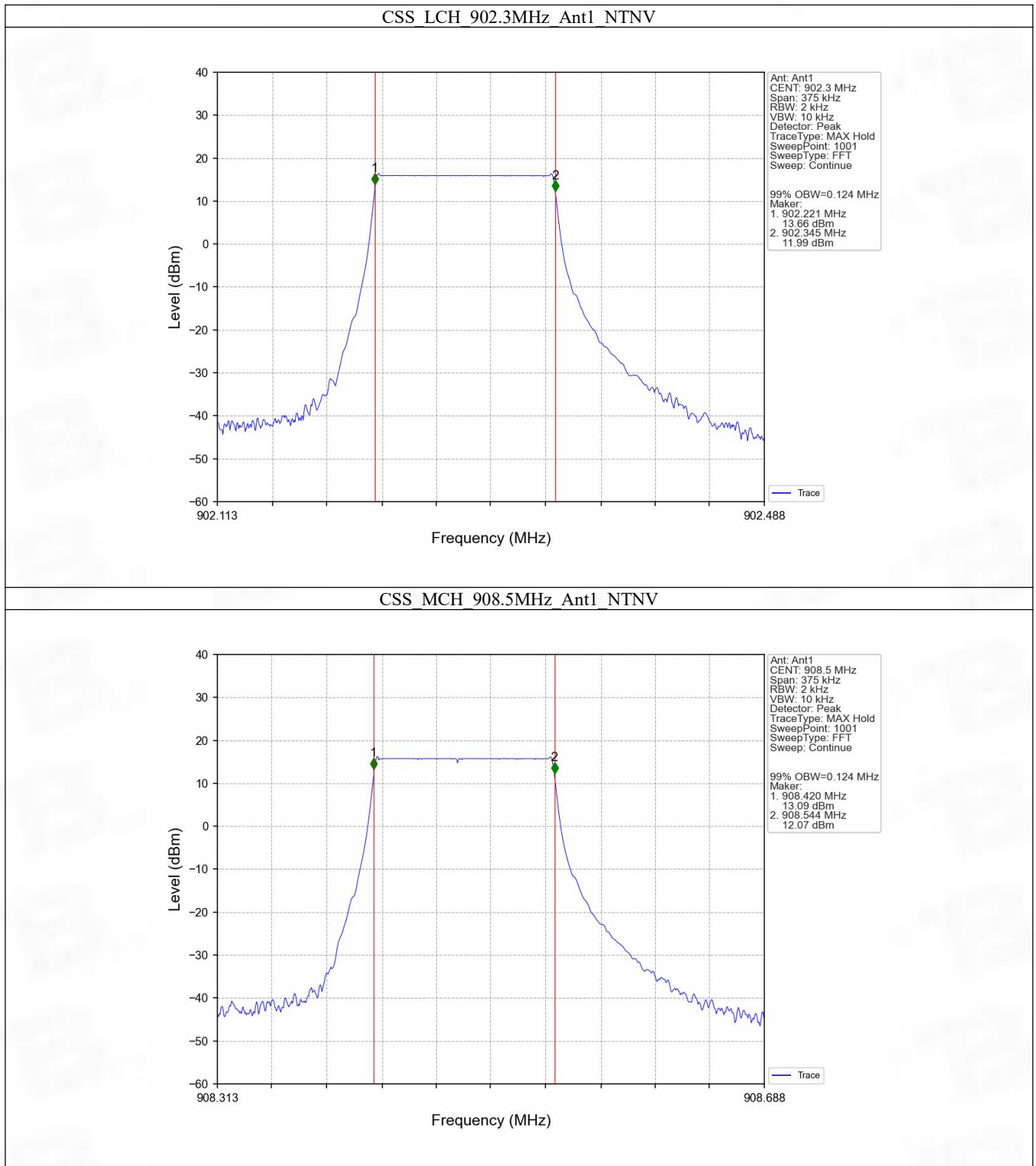
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
CSS	SISO	902.3	1	0.124	/	Pass
		908.5	1	0.124	/	Pass
		914.9	1	0.124	/	Pass

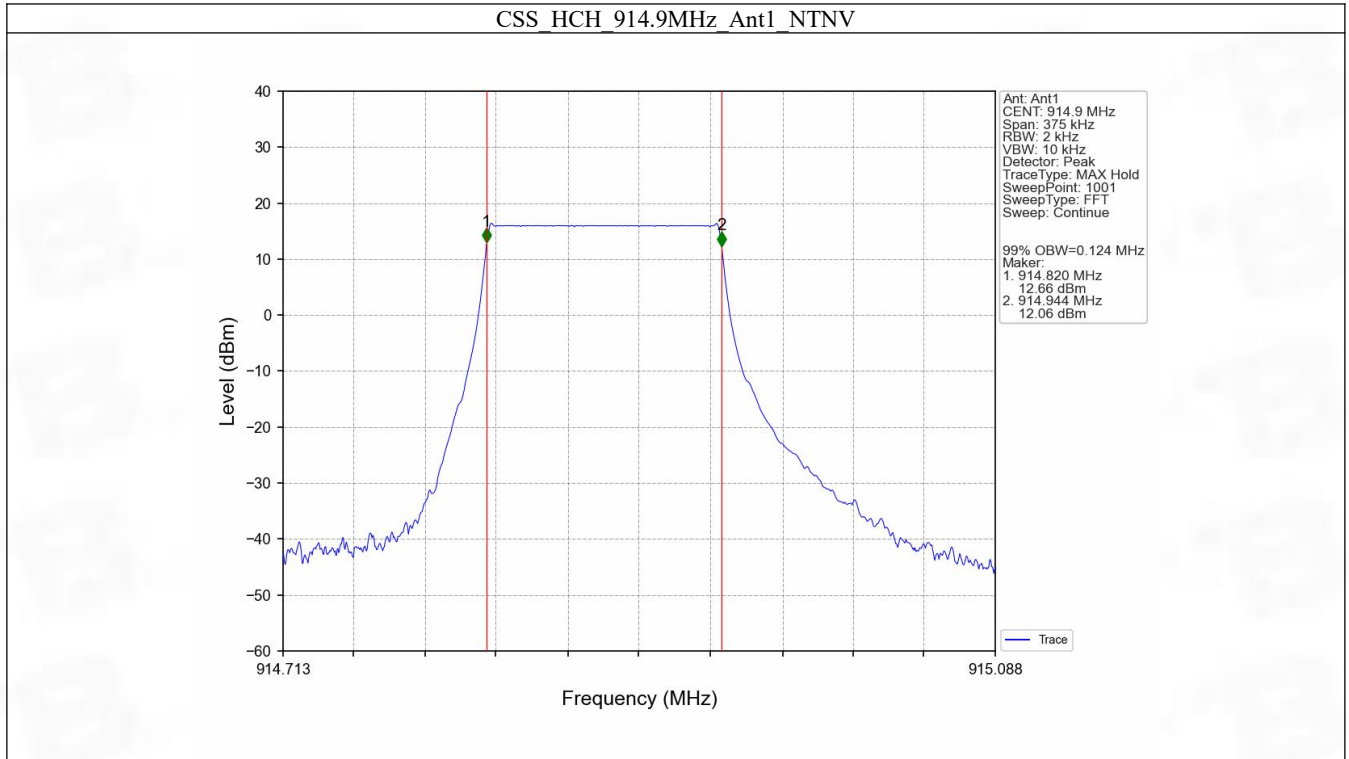
1.1.2 20dB BW

Mode	TX Type	Frequency (MHz)	ANT	20dB Bandwidth (MHz)		Verdict
				Result	Limit	
CSS	SISO	902.3	1	0.136	0.25	Pass
		908.5	1	0.136	0.25	Pass
		914.9	1	0.136	0.25	Pass

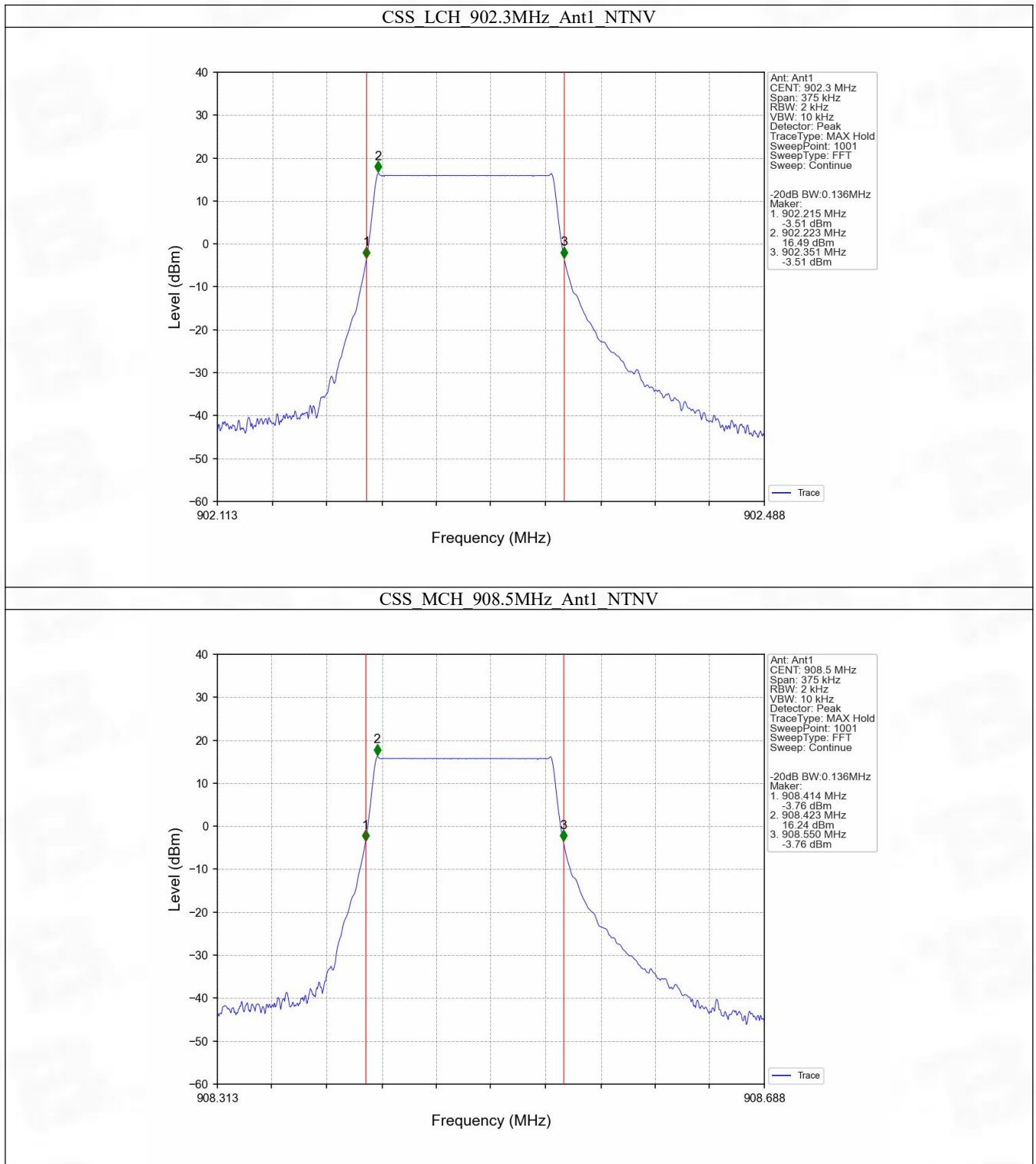
1.2 Test Graph

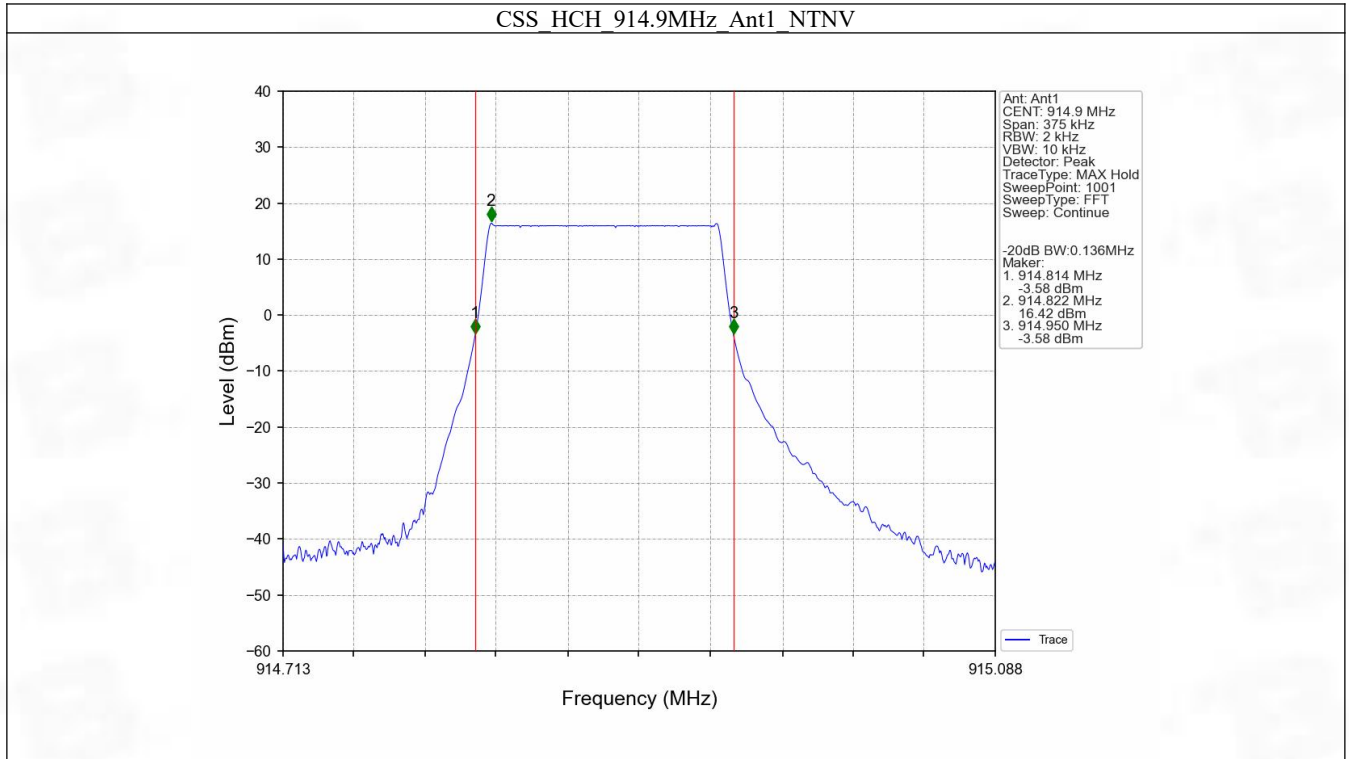
1.2.1 OBW





1.2.2 20dB BW





2. Maximum Conducted Output Power

2.1 Test Result

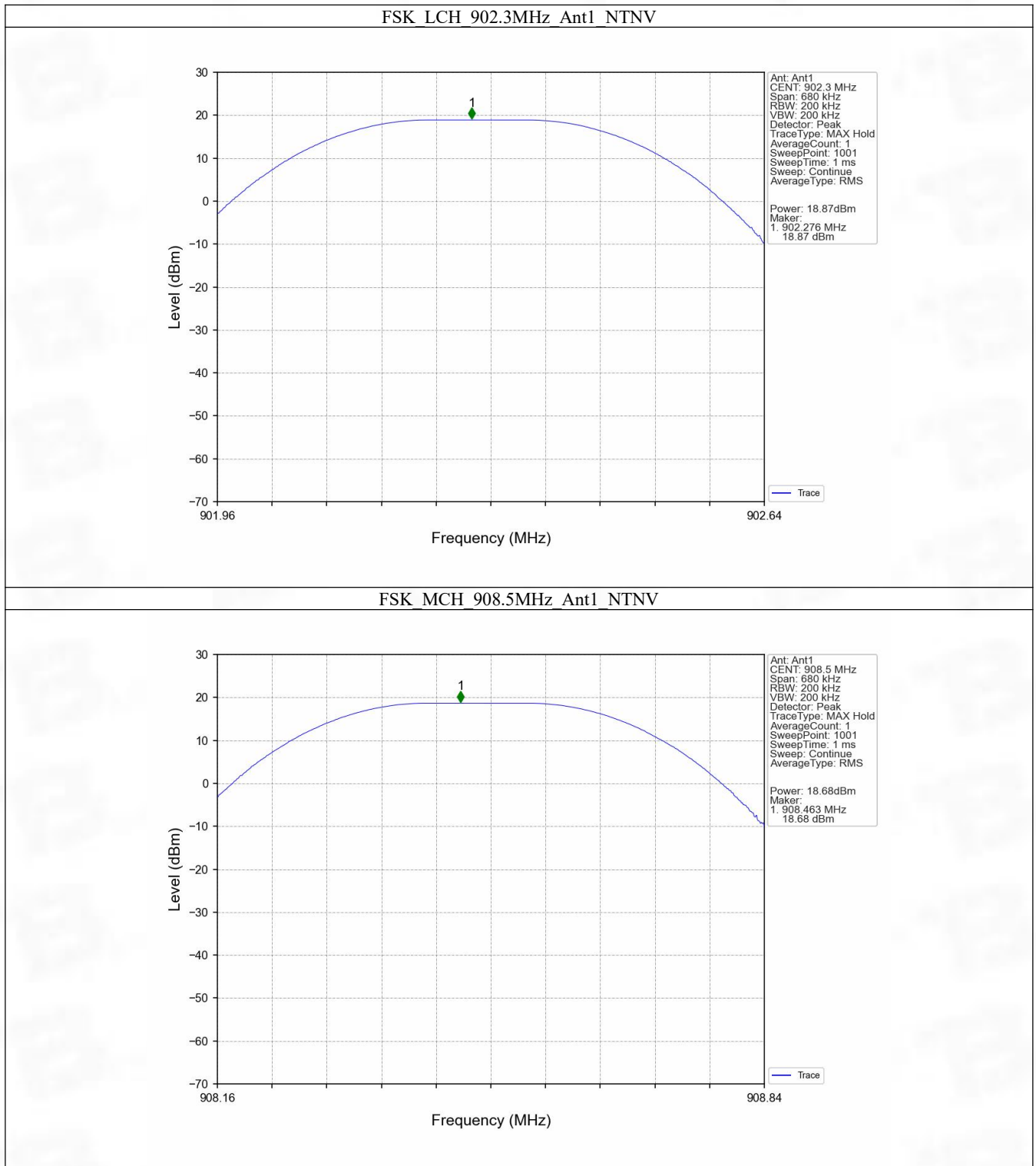
2.1.1 Power

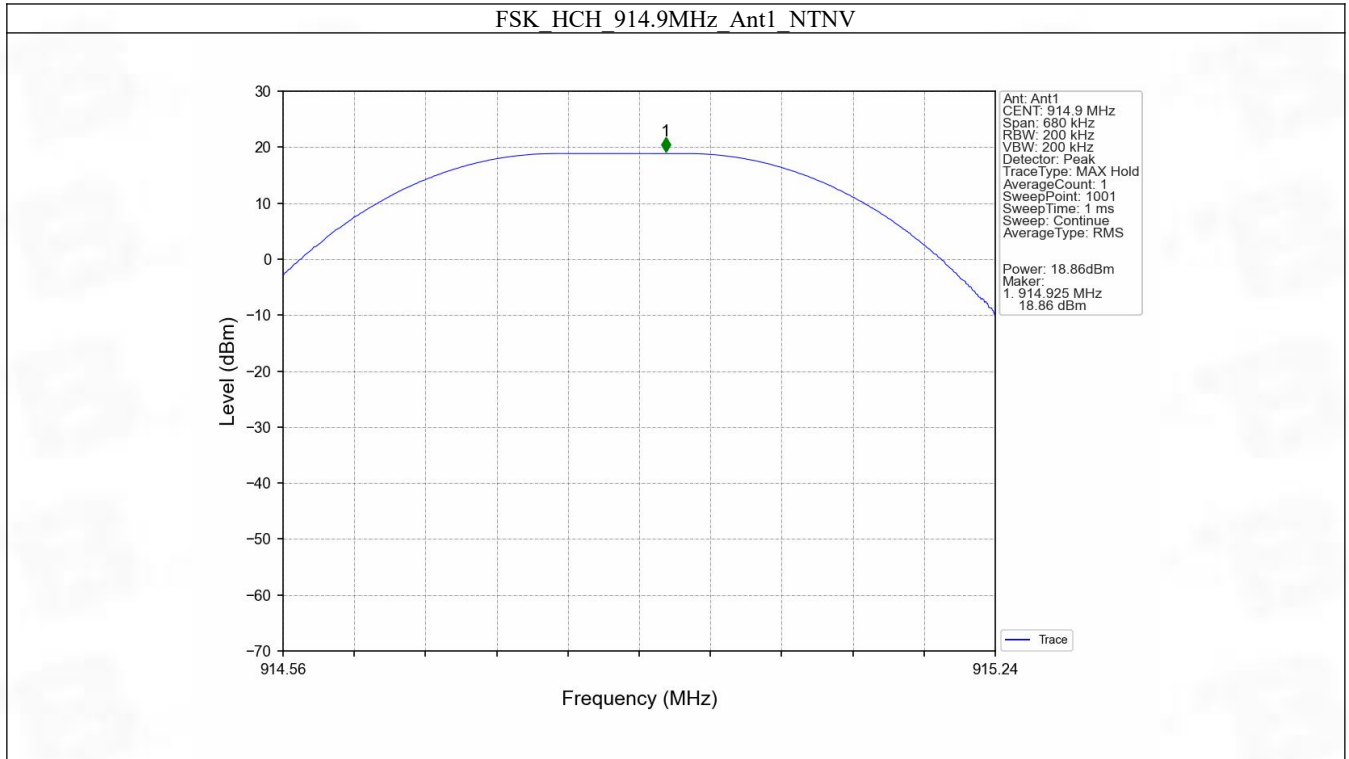
Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
CSS	SISO	902.3	18.87	≤ 30	Pass
		908.5	18.68	≤ 30	Pass
		914.9	18.86	≤ 30	Pass

Note1: Antenna Gain: Ant1: 1.70dBi;

2.2 Test Graph

2.2.1 Power





3. Carrier Frequency Separation

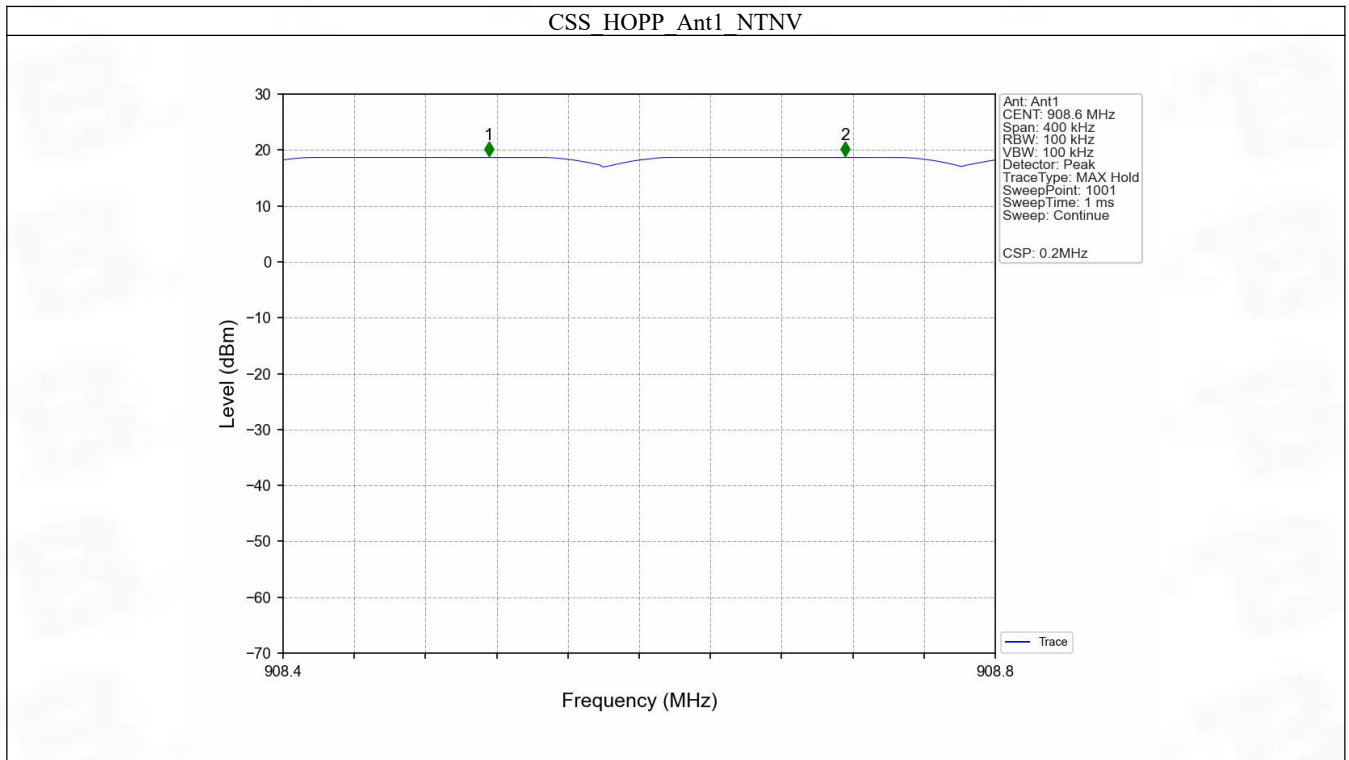
3.1 Test Result

3.1.1 Ant1

Ant1						
Mode	TX Type	Frequency (MHz)	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limit (MHz)	Verdict
CSS	SISO	HOPP	0.200	0.136	≥ 0.136	Pass

3.2 Test Graph

3.2.1 Ant1



4. Number of Hopping Frequencies

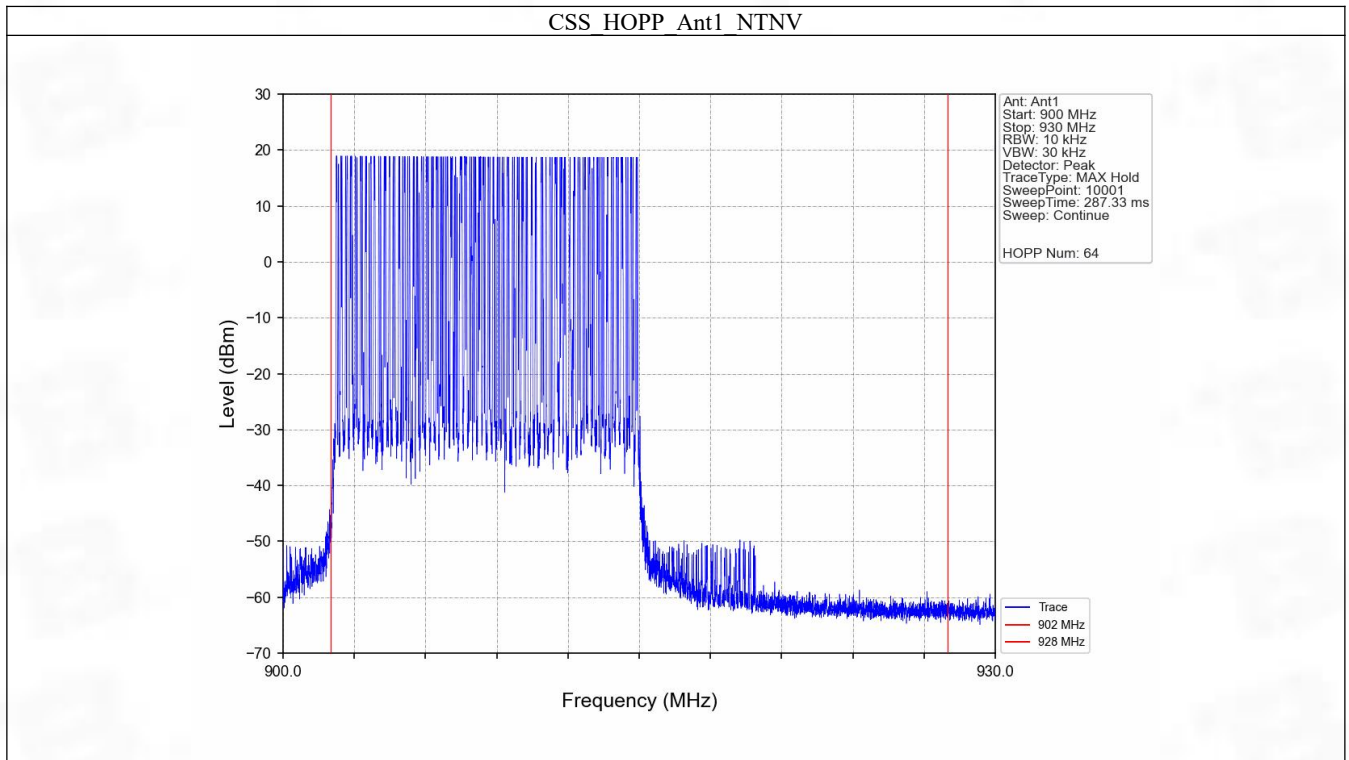
4.1 Test Result

4.1.1 HoppNum

Mode	TX Type	Frequency (MHz)	Num of Hopping Frequencies		Verdict
			ANT1	Limit	
CSS	SISO	HOPP	64	≥ 50	Pass

4.2 Test Graph

4.2.1 HoppNum



5. Time of Occupancy (Dwell Time)

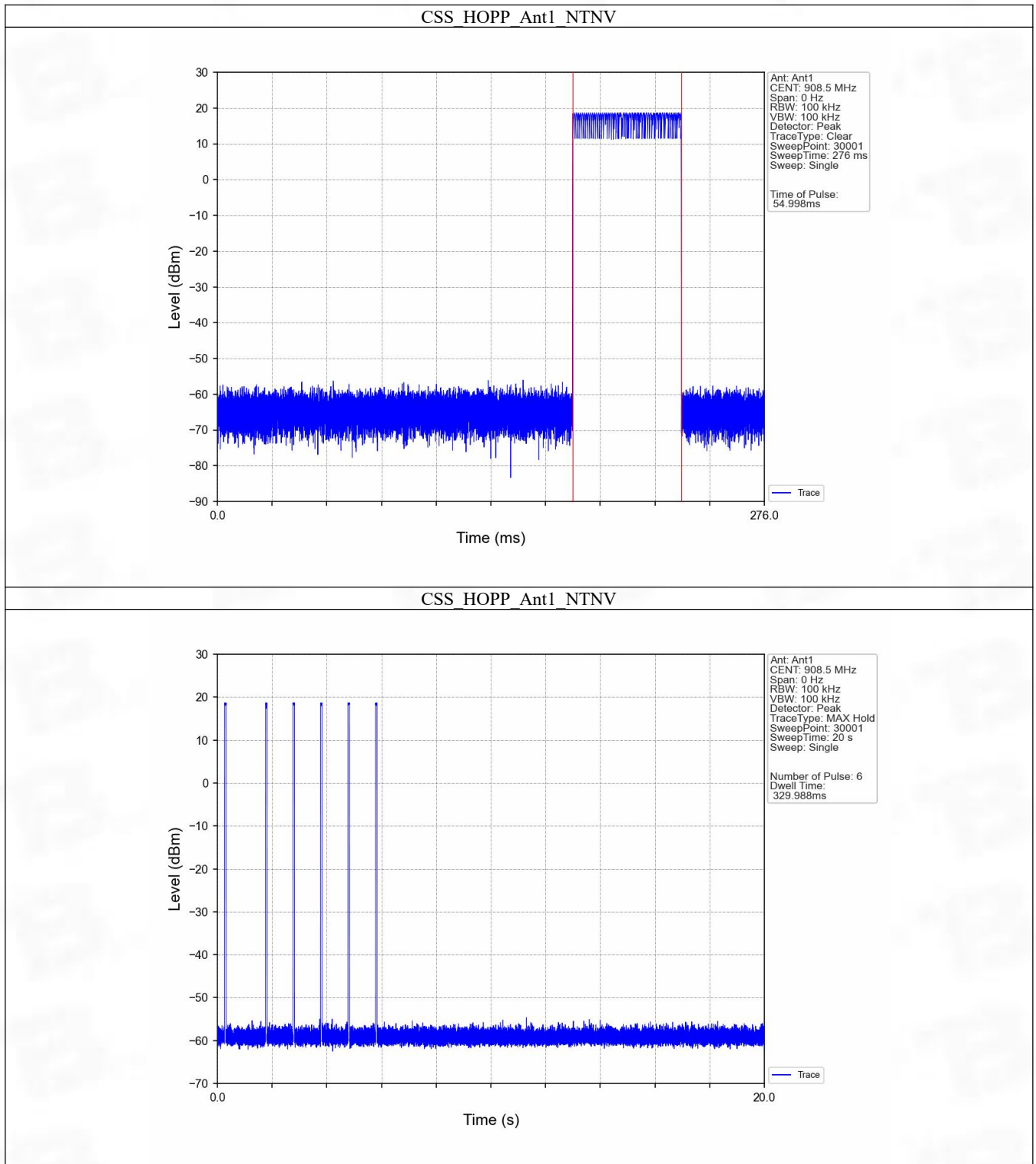
5.1 Test Result

5.1.1 Ant1

Ant1								
Mode	TX Type	Frequency (MHz)	Duration of Single Pulse (ms)	Observation Period (s)	Num of Pulse in Observation Period	Dwell Time (ms)	Limit (ms)	Verdict
CSS	SISO	HOPP	54.998	20.000	6	329.988	<=400	Pass

5.2 Test Graph

5.2.1 Ant1



6. Unwanted Emissions In Non-restricted Frequency Bands

6.1 Test Result

6.1.1 Ref

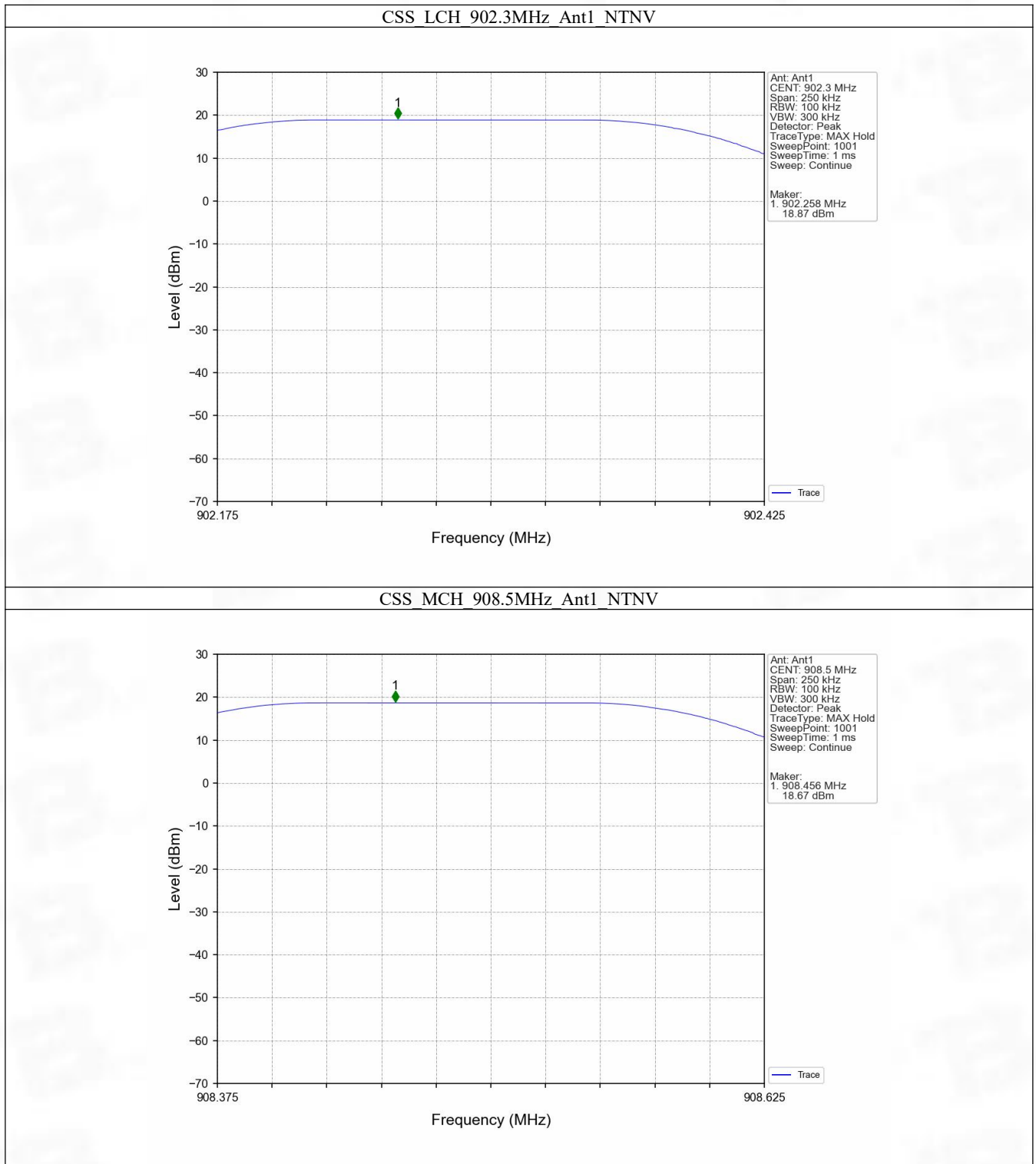
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
CSS	SISO	902.3	1	18.87
		908.5	1	18.67
		914.9	1	18.76
		HOPP	1	18.95
				18.95

6.1.2 CSE

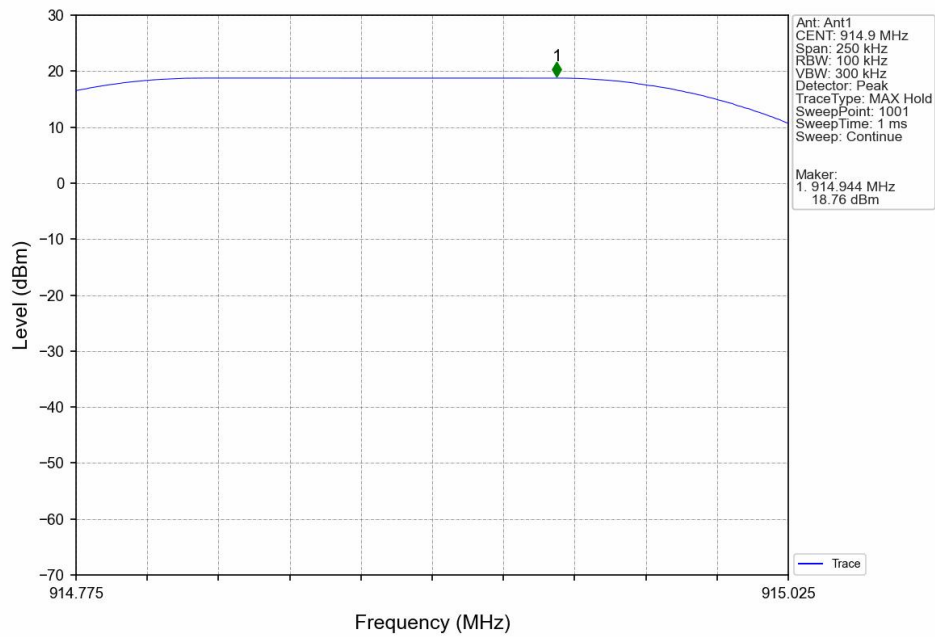
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
CSS	SISO	902.3	1	18.87	-1.13	Pass
		908.5	1	18.67	-1.33	Pass
		914.9	1	18.76	-1.24	Pass
		HOPP	1	18.95	-1.05	Pass
				18.95	-1.05	Pass
				18.95	-1.05	Pass

6.2 Test Graph

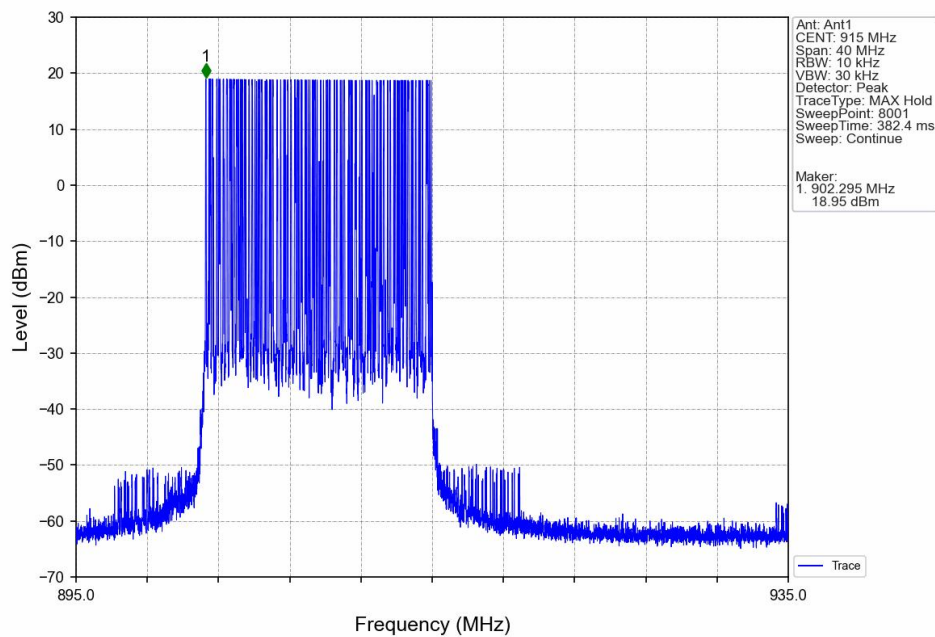
6.2.1 Ref

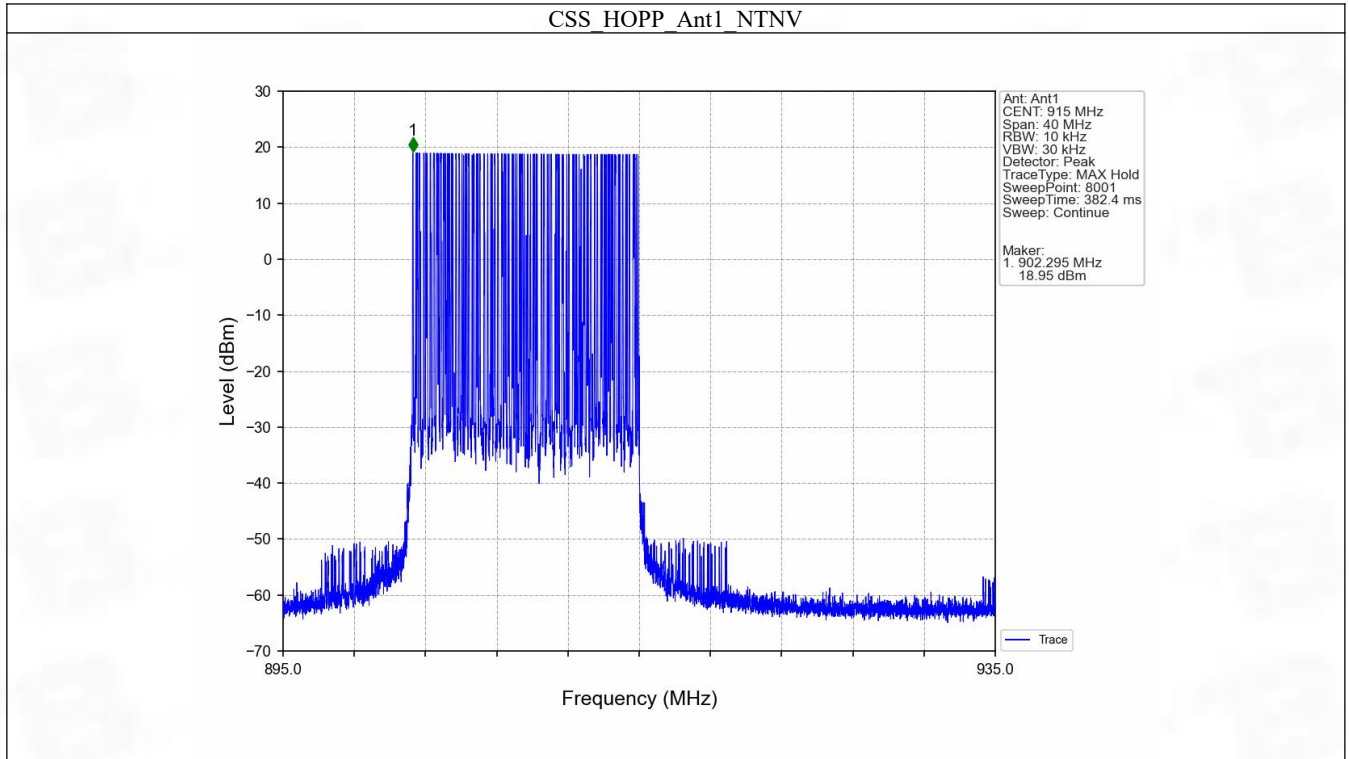


CSS_HCH_914.9MHz_Ant1_NTNV

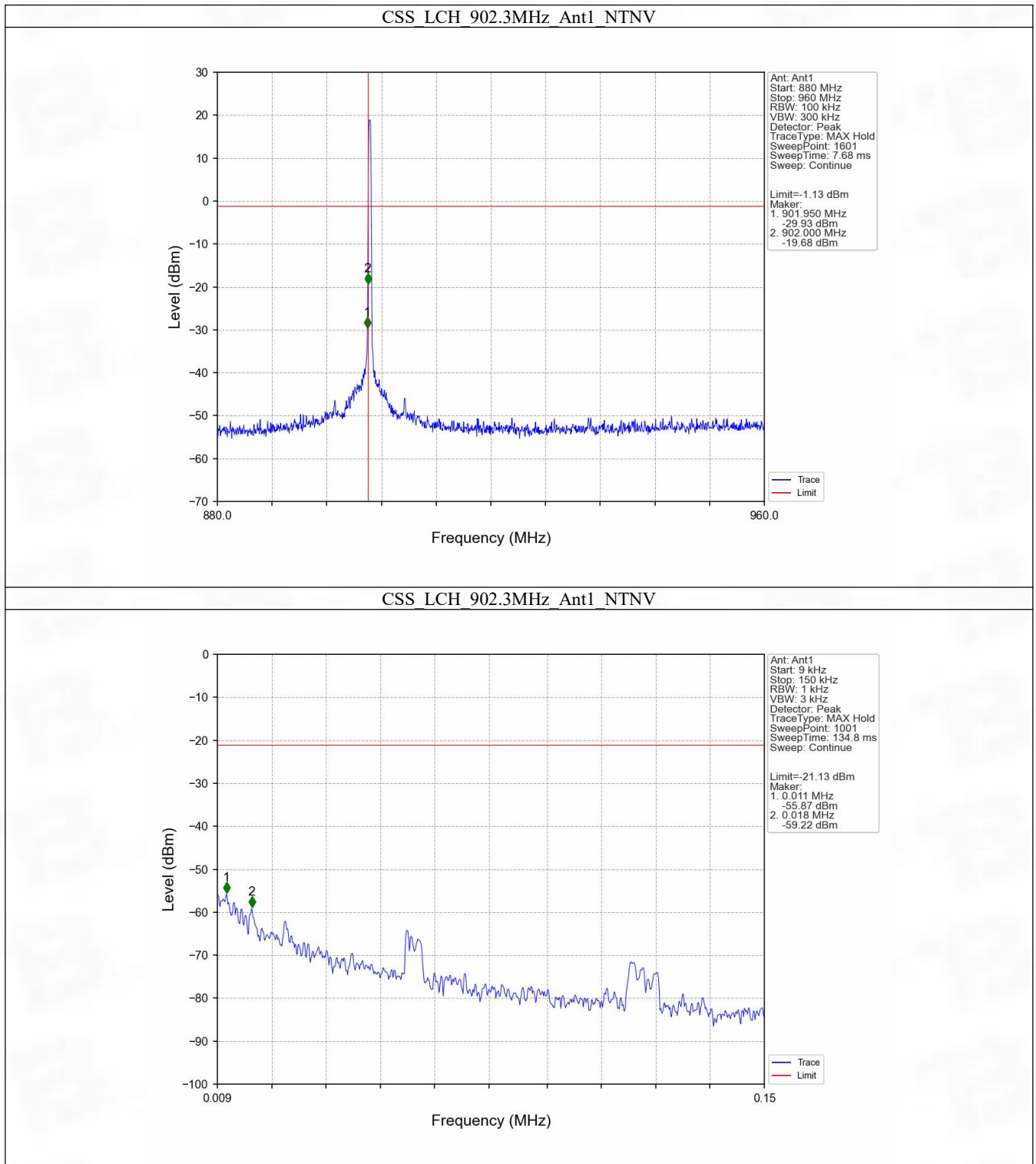


CSS_HOPP_Ant1_NTNV

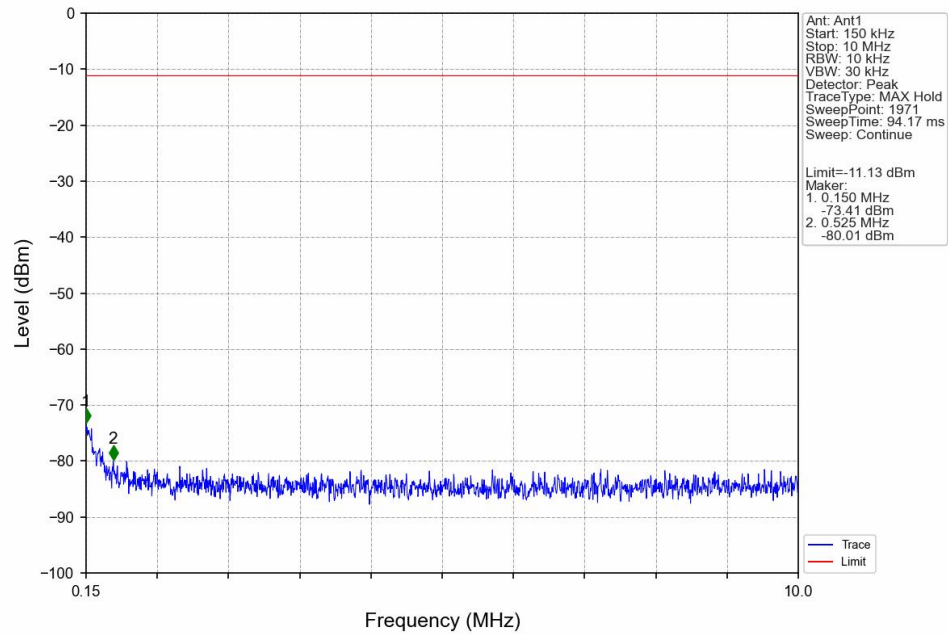




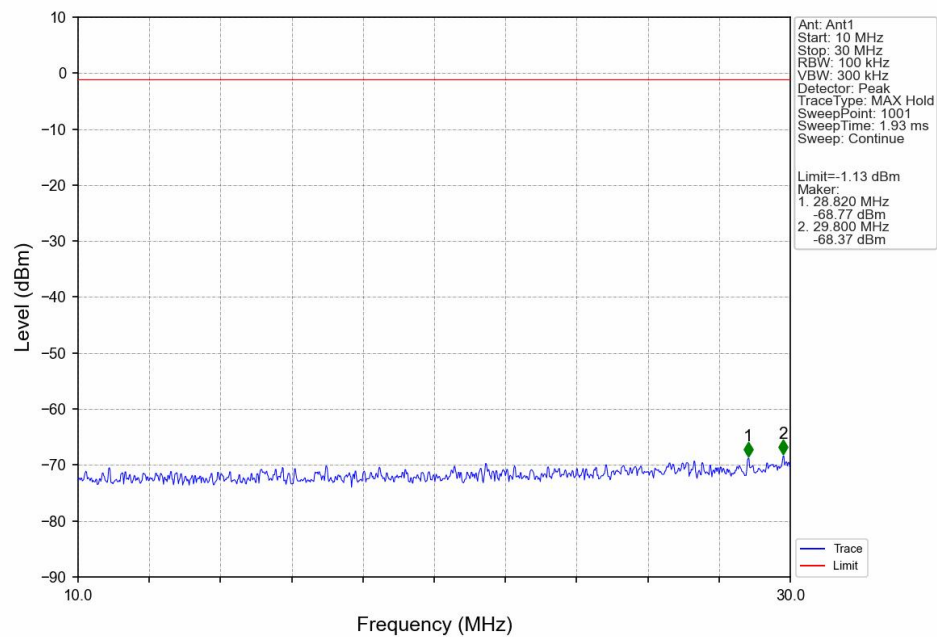
6.2.2 CSE



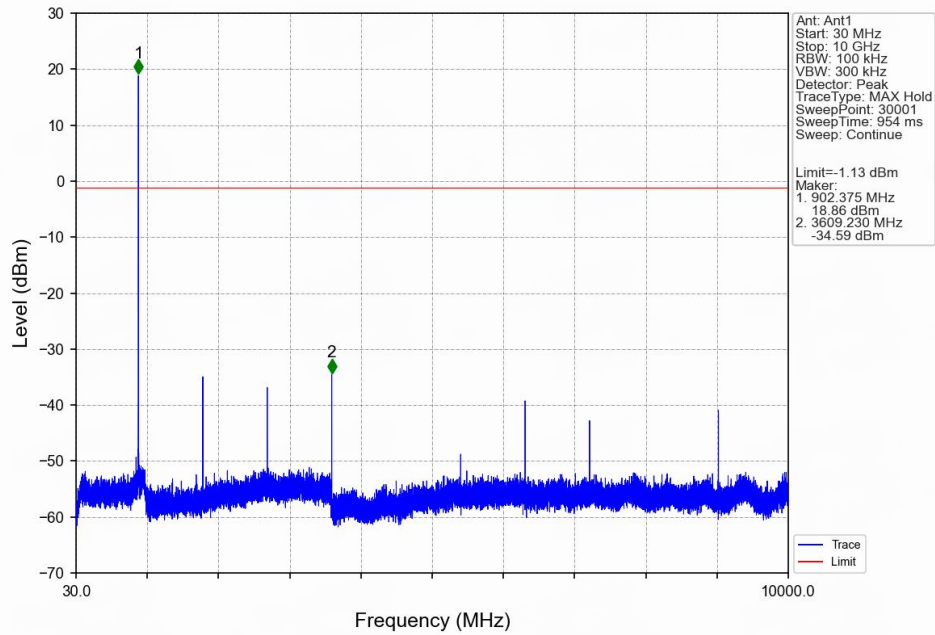
CSS_LCH_902.3MHz_Ant1_NTNV



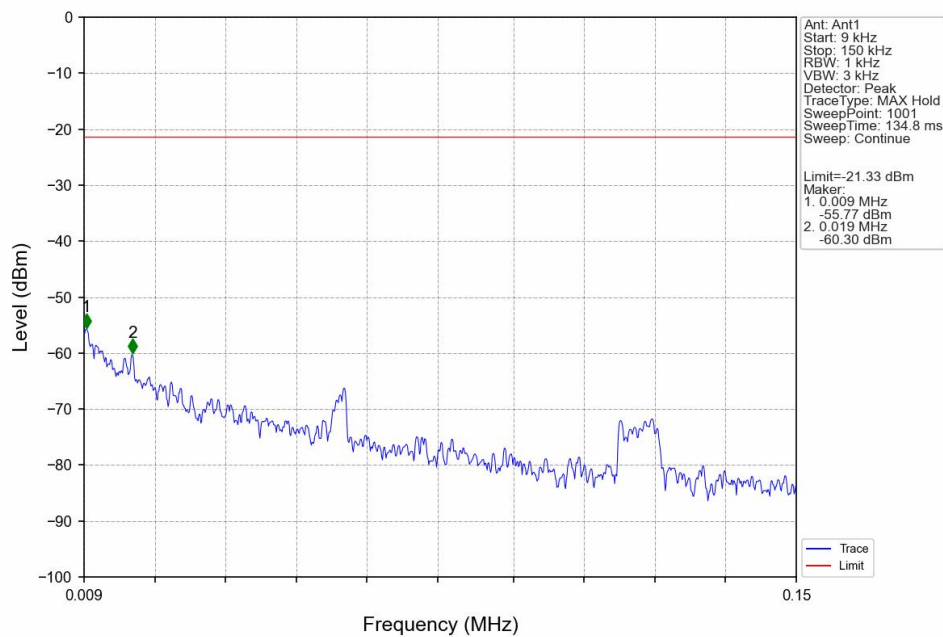
CSS_LCH_902.3MHz_Ant1_NTNV



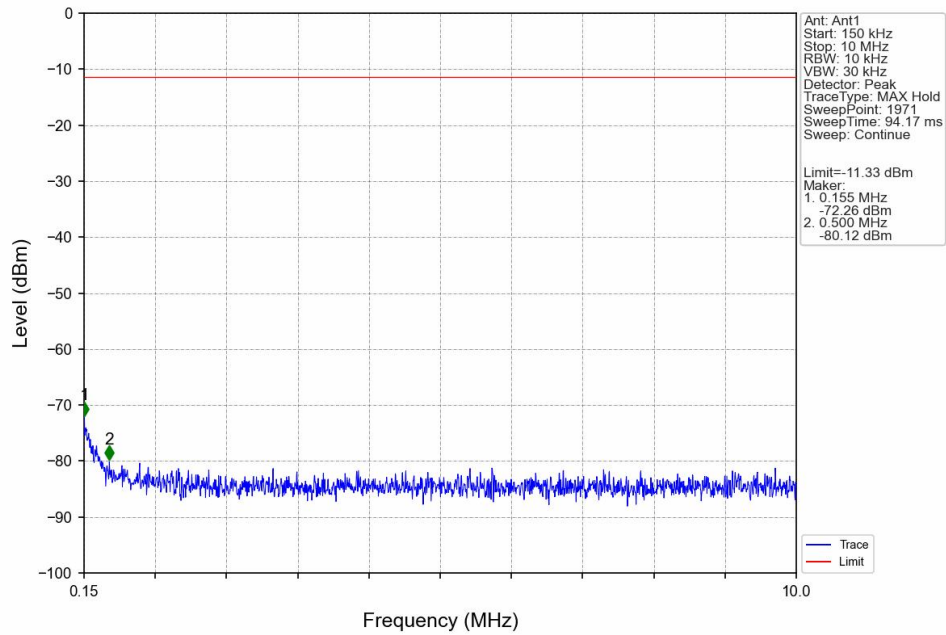
CSS_LCH_902.3MHz_Ant1_NTNV



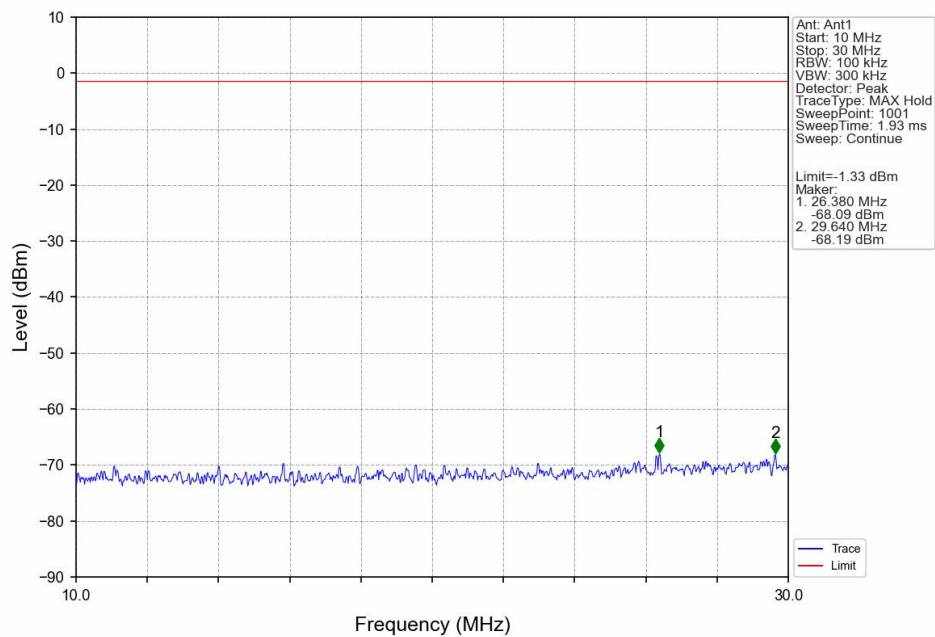
CSS_MCH_908.5MHz_Ant1_NTNV



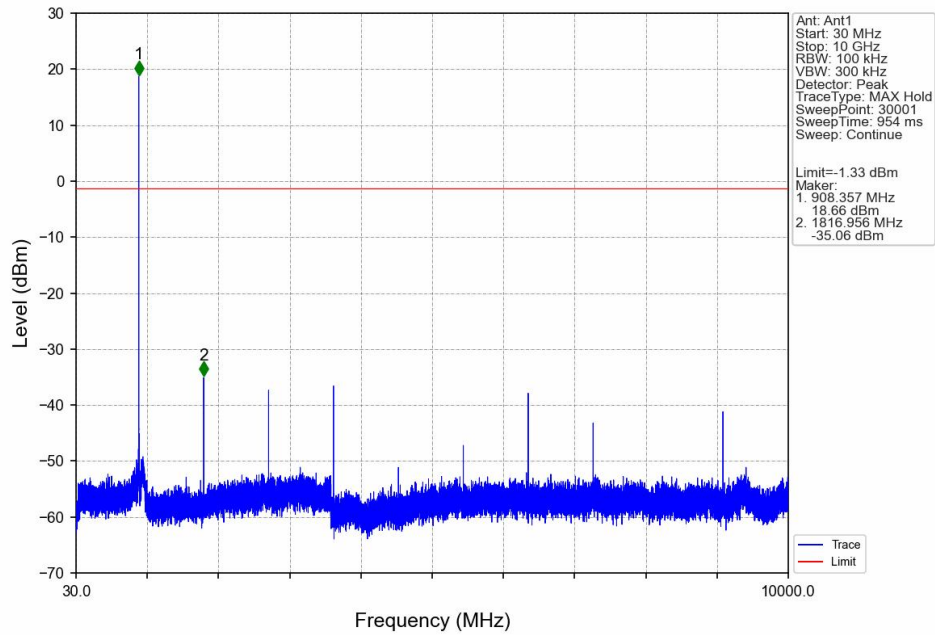
CSS_MCH_908.5MHz_Ant1_NTNV



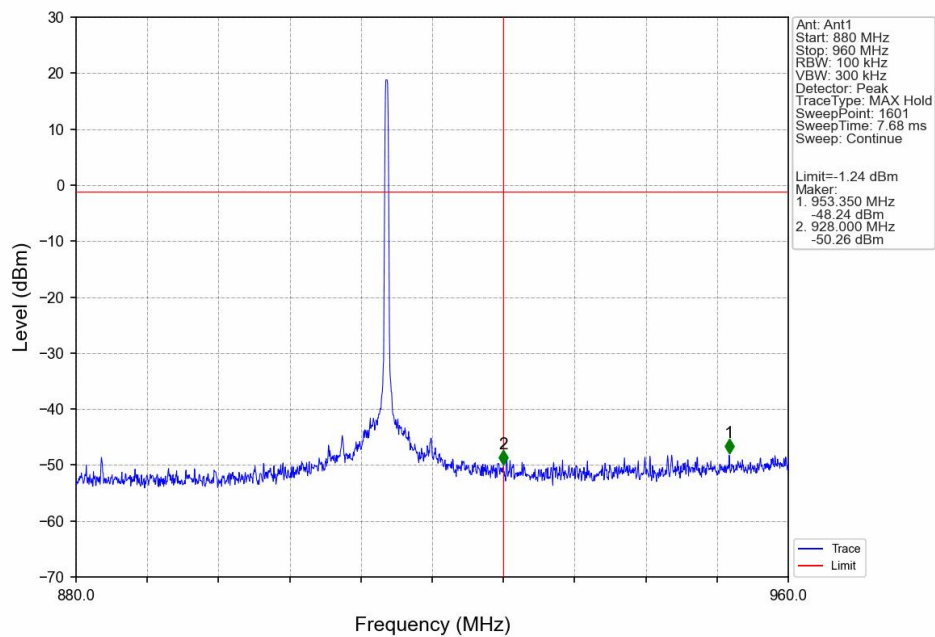
CSS_MCH_908.5MHz_Ant1_NTNV



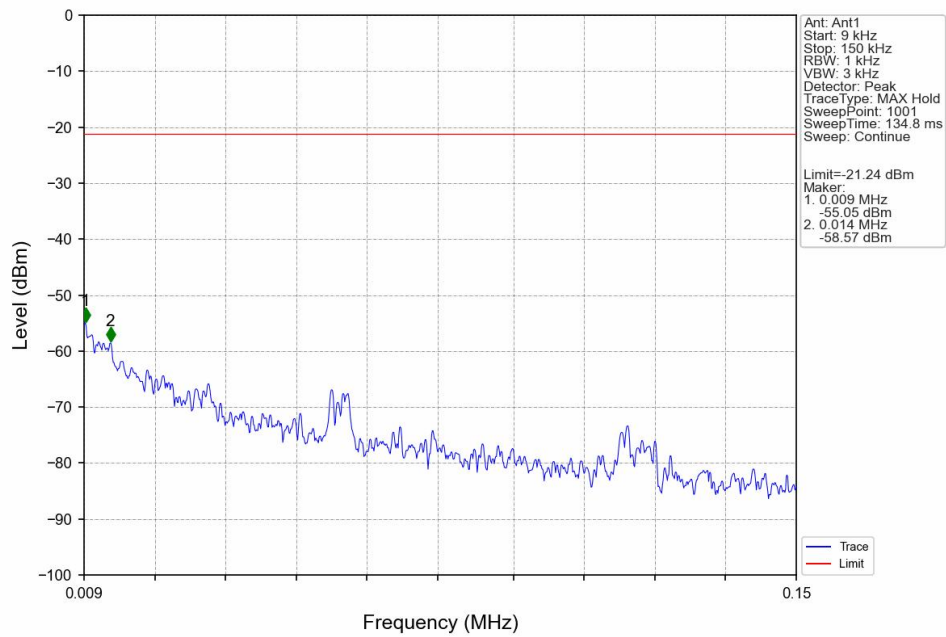
CSS_MCH_908.5MHz_Ant1_NTNV



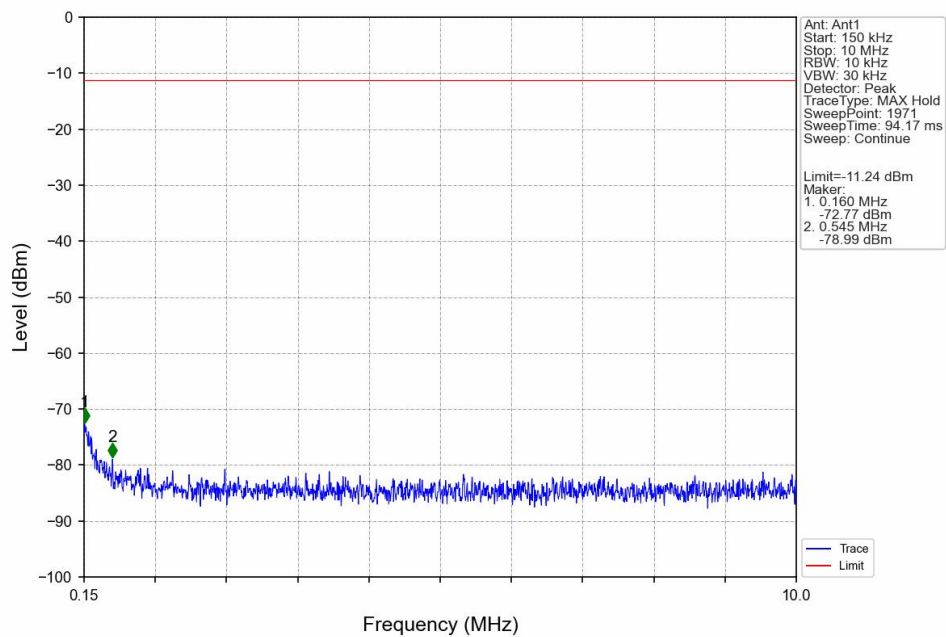
CSS_HCH_914.9MHz_Ant1_NTNV



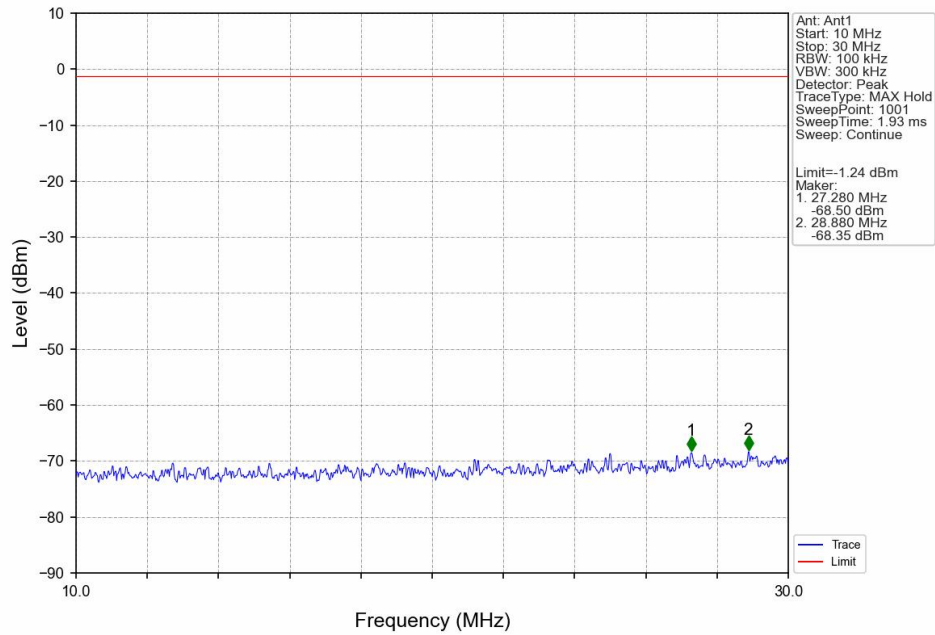
CSS_HCH_914.9MHz_Ant1_NTNV



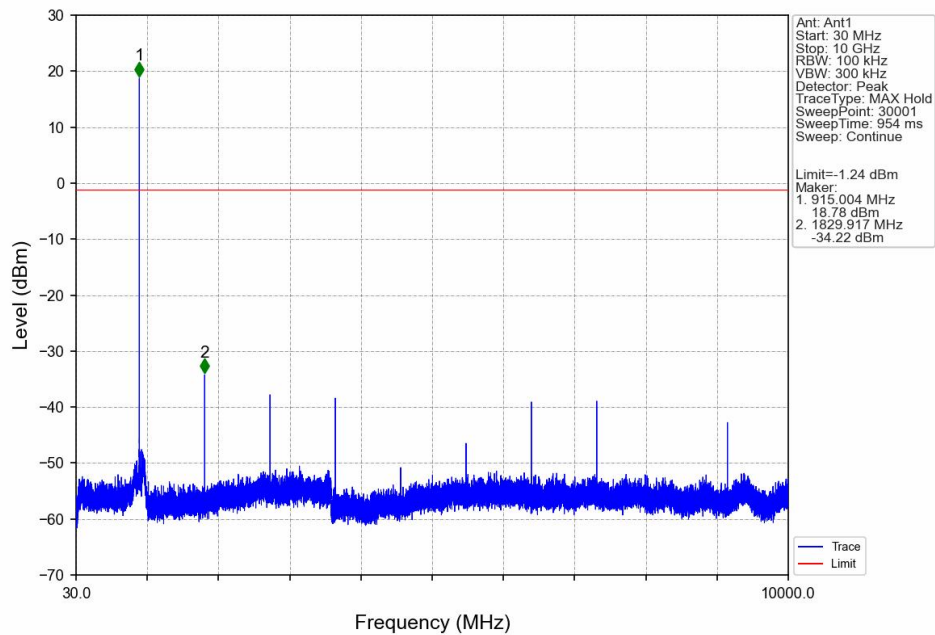
CSS_HCH_914.9MHz_Ant1_NTNV



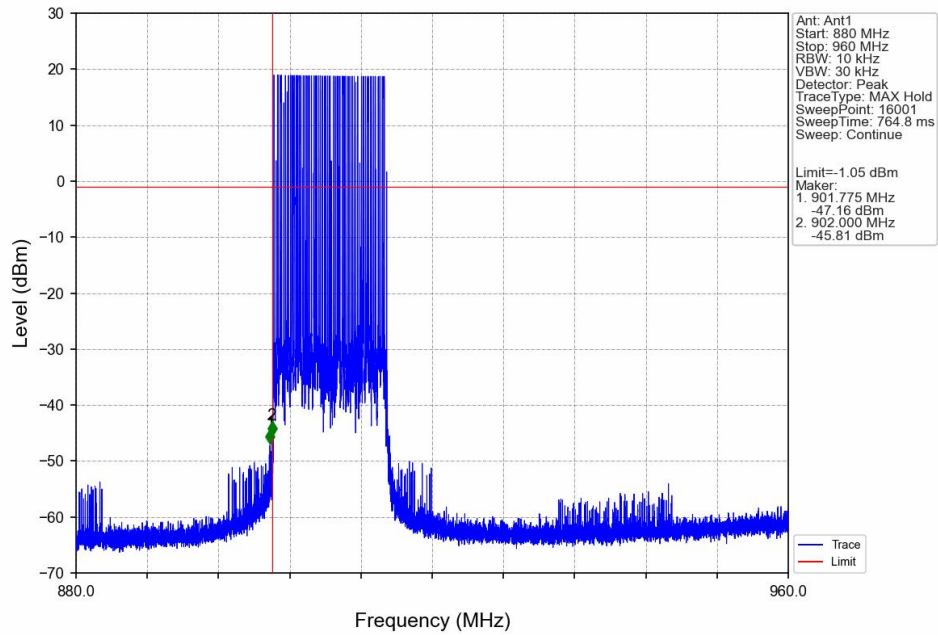
CSS_HCH_914.9MHz_Ant1_NTNV



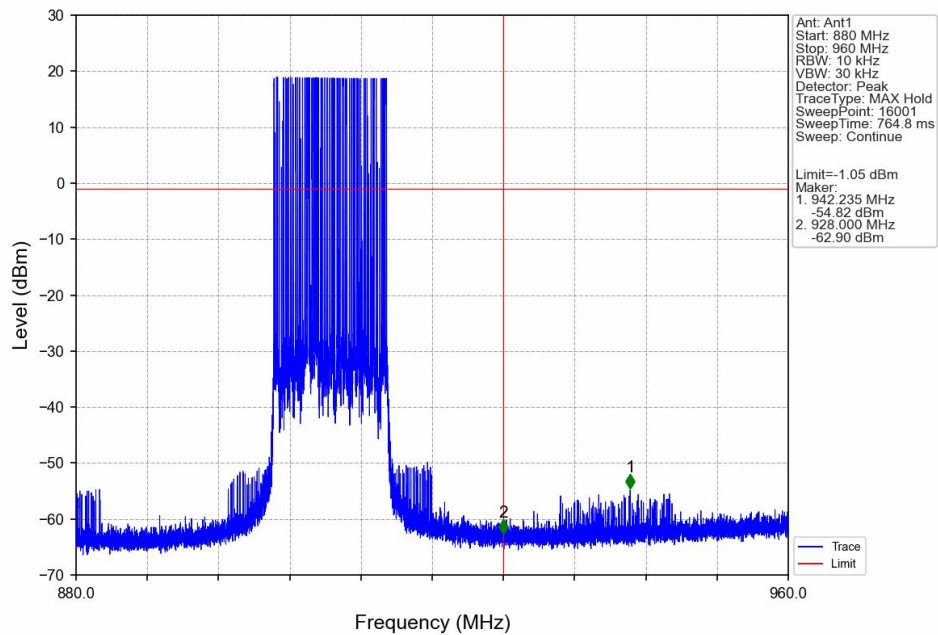
CSS_HCH_914.9MHz_Ant1_NTNV



CSS_HOPP_Ant1_NTNV



CSS_HOPP_Ant1_NTNV



7. Form731

7.1 Test Result

7.1.1 Form731

Lower Freq (MHz)	High Freq (MHz)	MAX Power (W)	MAX Power (dBm)
902.3	914.9	0.0771	18.87