

Appendix RF Test Data for ZIGBEE

Company: : Shenzhen Yingshi Weide Technology Co., Ltd.
EUT : Zigbee dongle
FCC ID : 2BQJA-ZBM-MG21
Model Number : ZBM-MG21
Report No. : HTT202510894F01
Reviewed By : Heber He

1. Duty Cycle

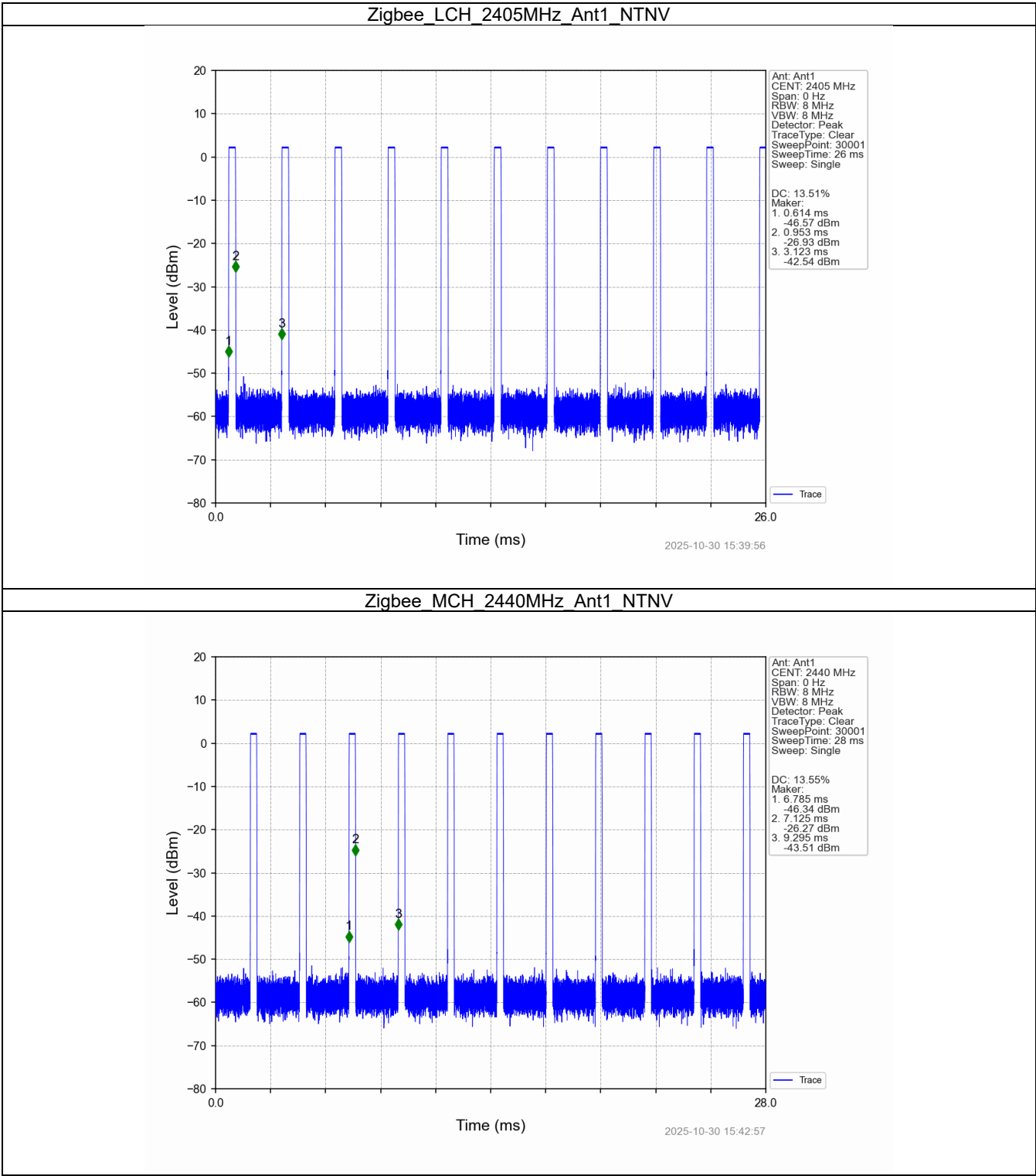
1.1 Test Result

1.1.1 Ant1

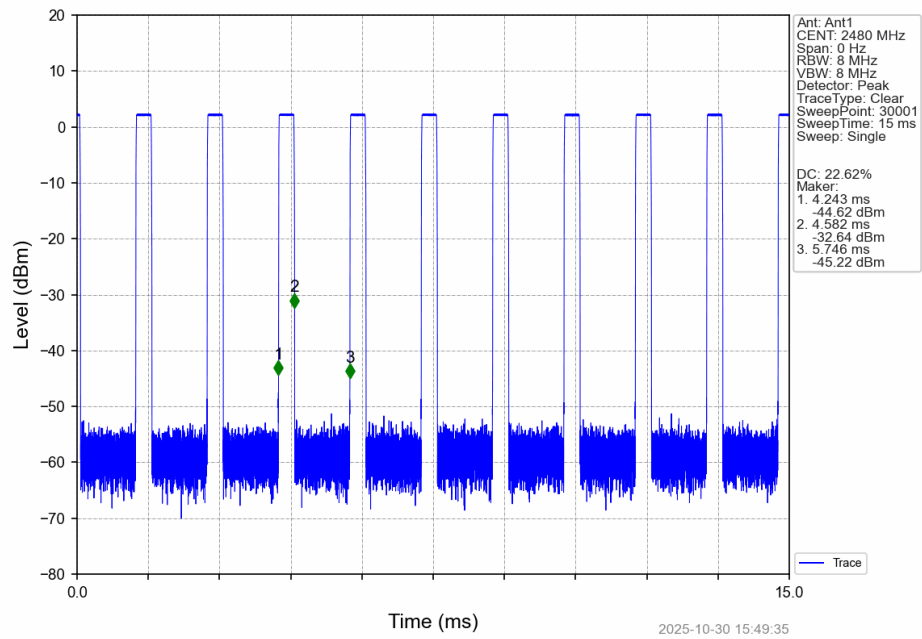
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
Zigbee	SISO	2405	0.339	2.509	13.51	8.69	0.00
		2440	0.340	2.510	13.55	8.68	0.01
		2480	0.340	1.503	22.62	6.45	0.03

1.2 Test Graph

1.2.1 Ant1



Zigbee_HCH_2480MHz_Ant1_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

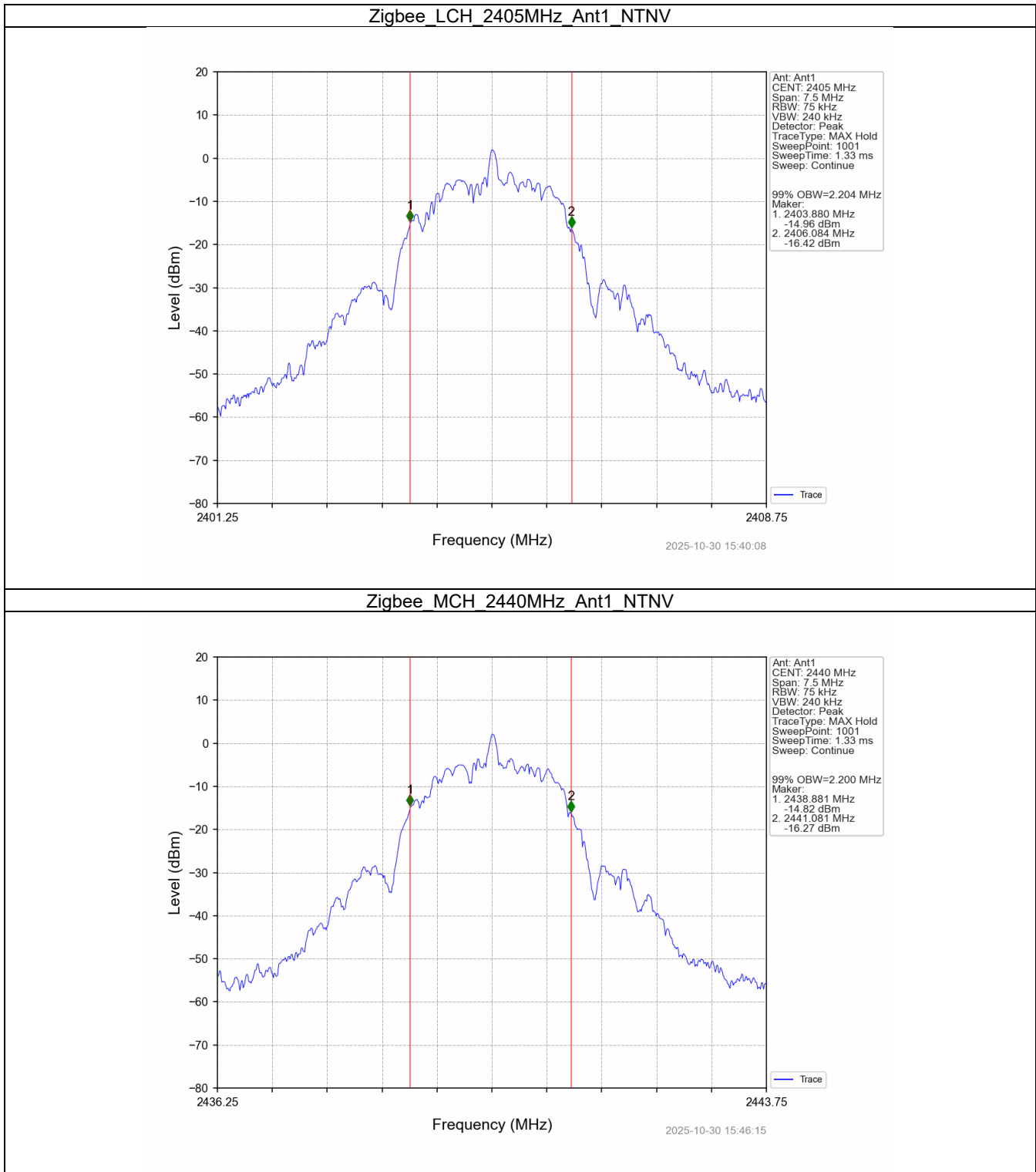
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
Zigbee	SISO	2405	1	2.204	/	Pass
		2440	1	2.200	/	Pass
		2480	1	2.201	/	Pass

2.1.2 6dB BW

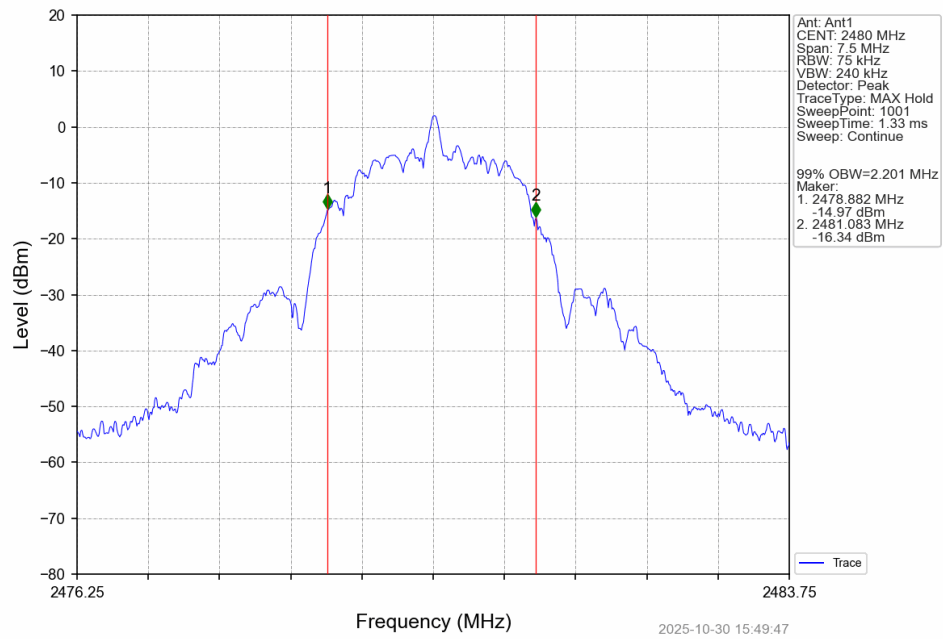
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
Zigbee	SISO	2405	1	0.534	≥ 0.5	Pass
		2440	1	0.535	≥ 0.5	Pass
		2480	1	0.767	≥ 0.5	Pass

2.2 Test Graph

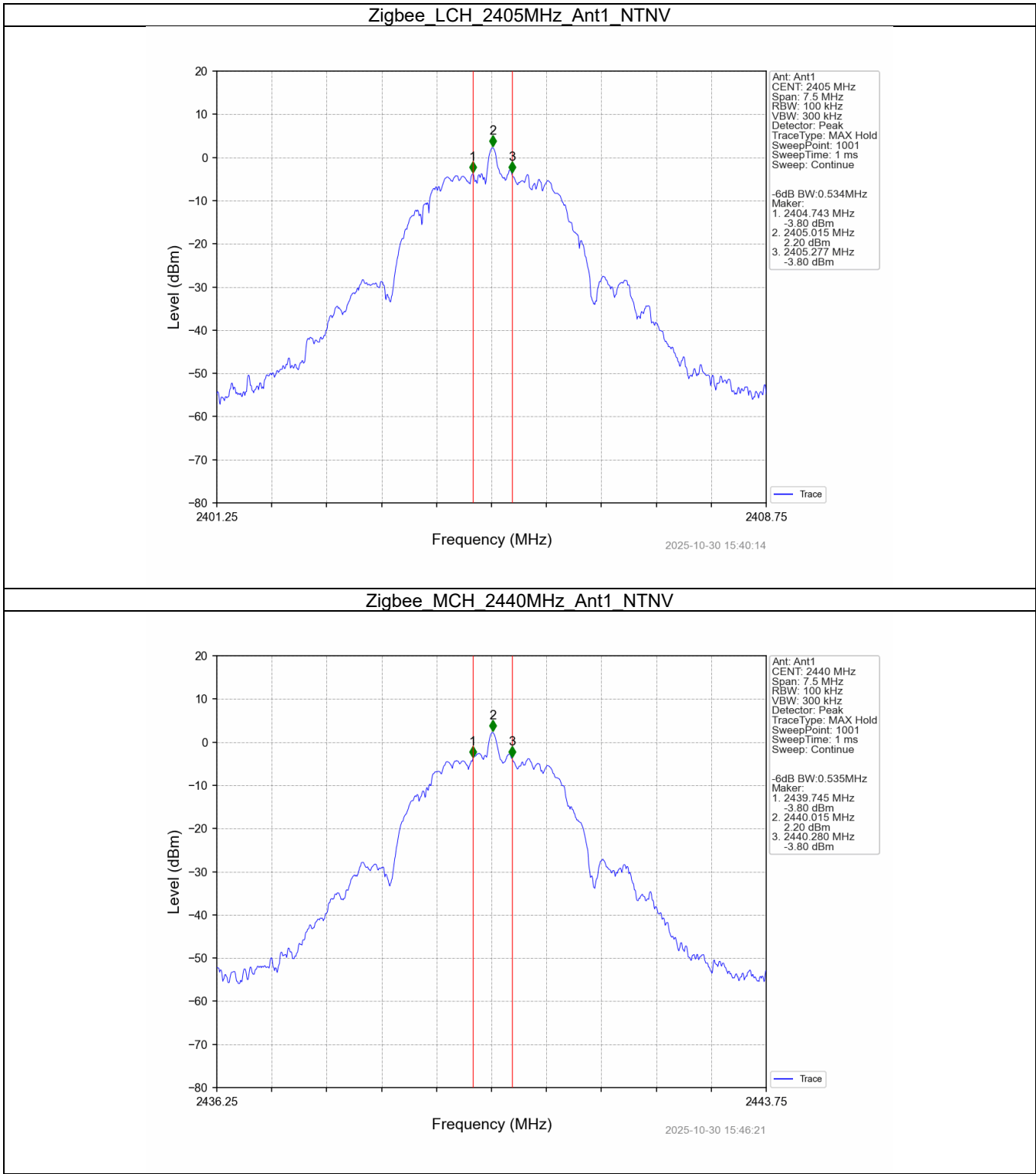
2.2.1 OBW



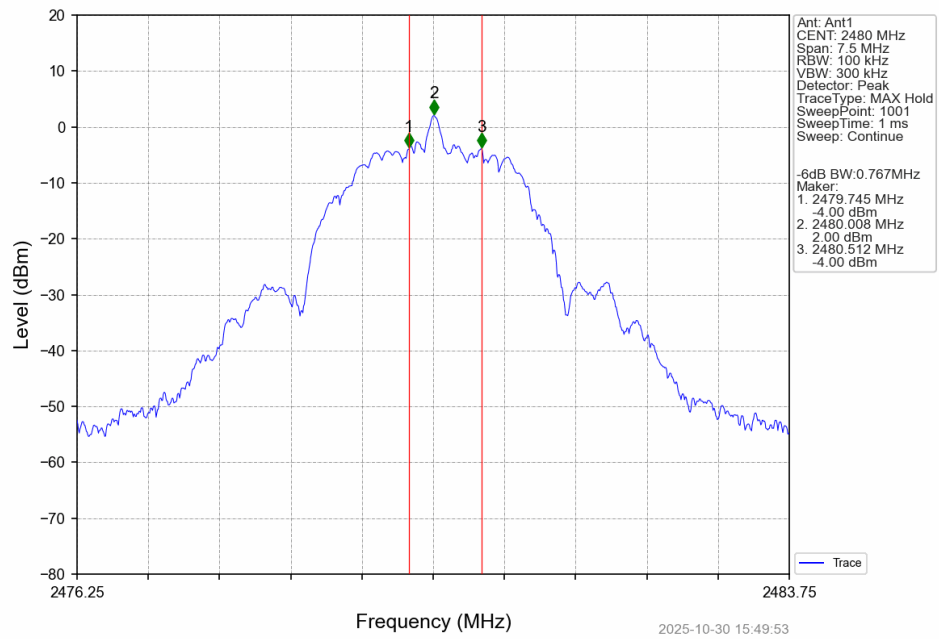
Zigbee_HCH_2480MHz_Ant1_NTNV



2.2.2 6dB BW



Zigbee_HCH_2480MHz_Ant1_NTNV



3. Maximum Conducted Output Power

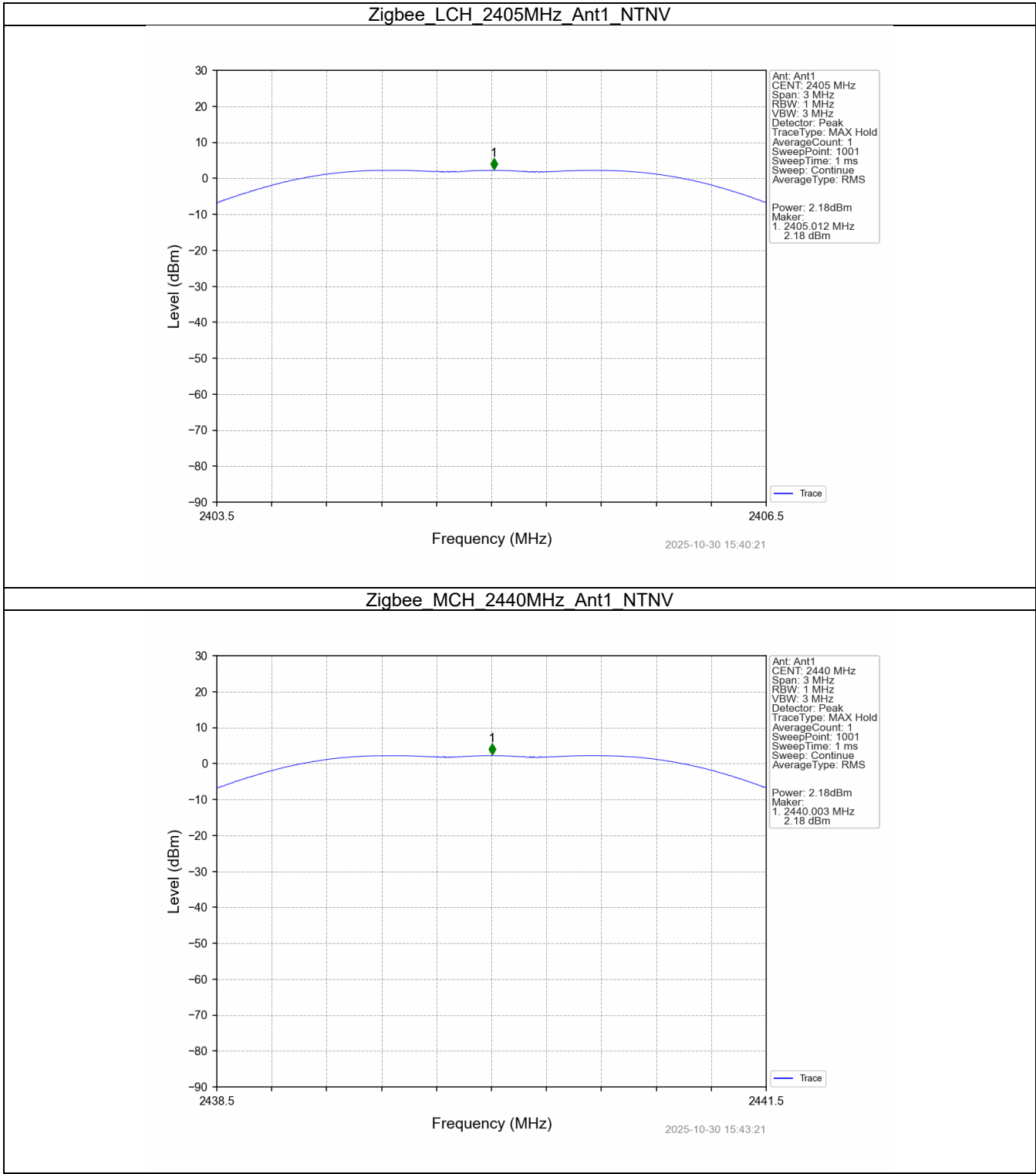
3.1 Test Result

3.1.1 Power

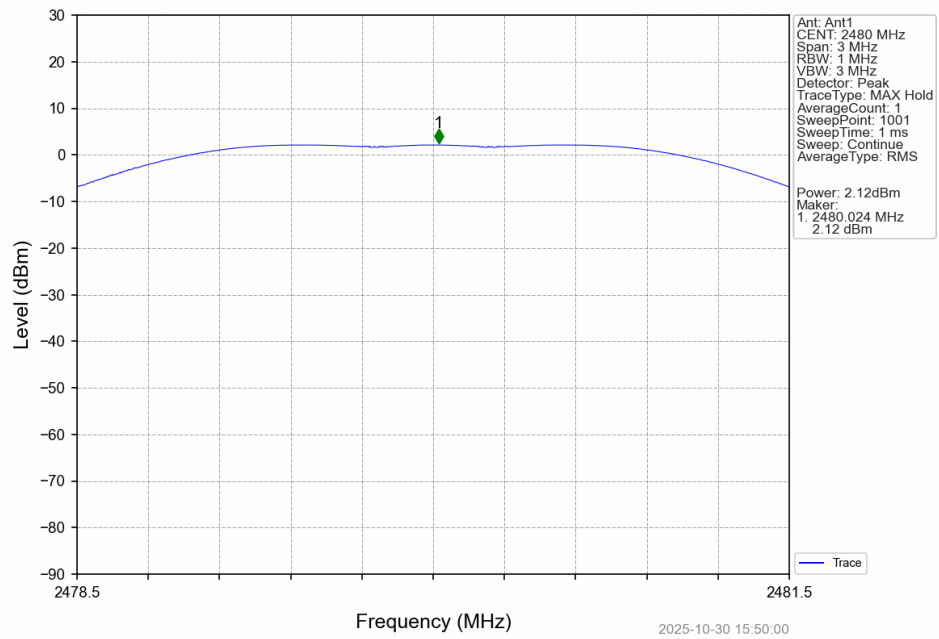
Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
Zigbee	SISO	2405	2.18	<=30	Pass
		2440	2.18	<=30	Pass
		2480	2.12	<=30	Pass

3.2 Test Graph

3.2.1 Power



Zigbee_HCH_2480MHz_Ant1_NTNV



4. Maximum Power Spectral Density

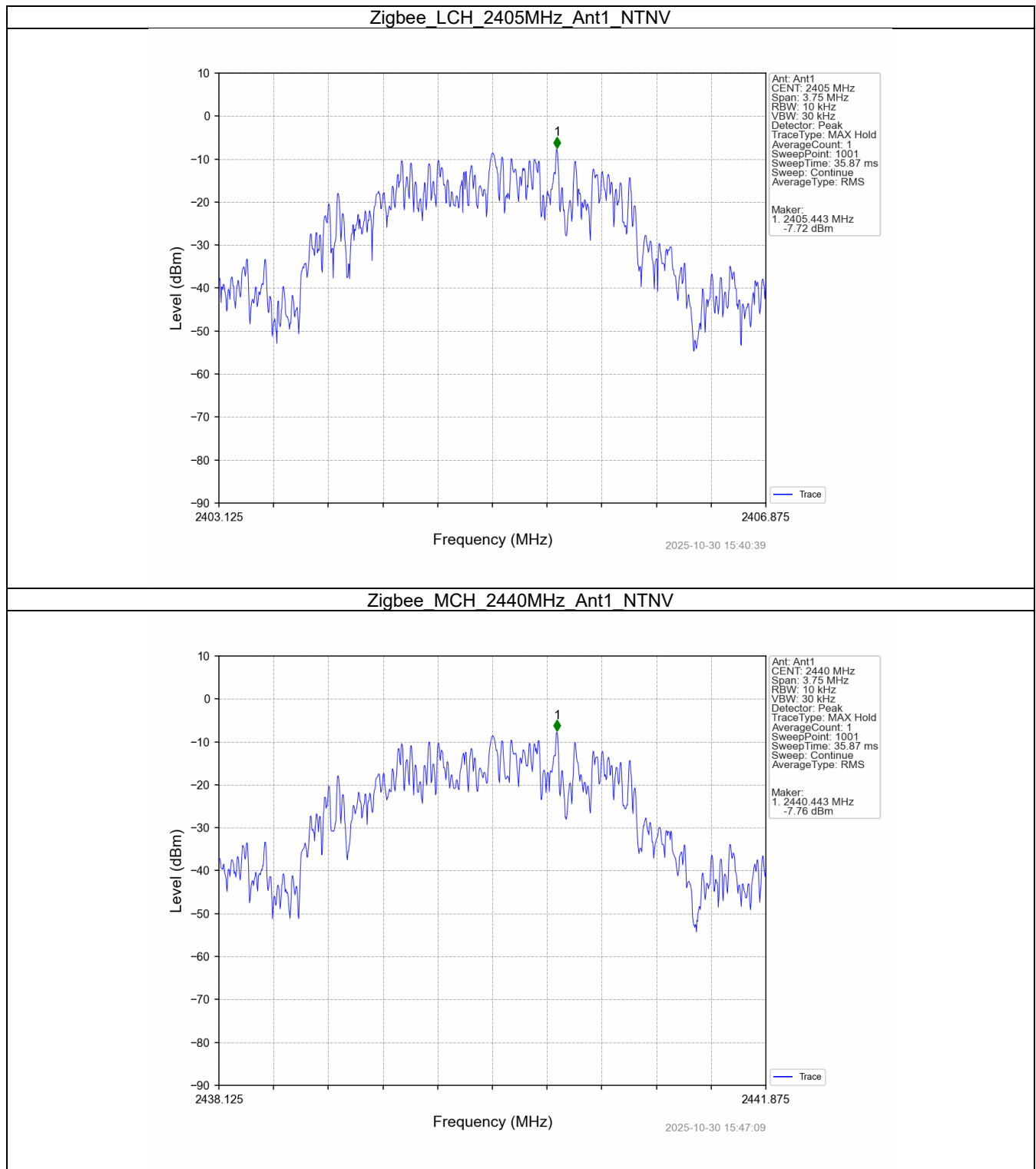
4.1 Test Result

4.1.1 PSD

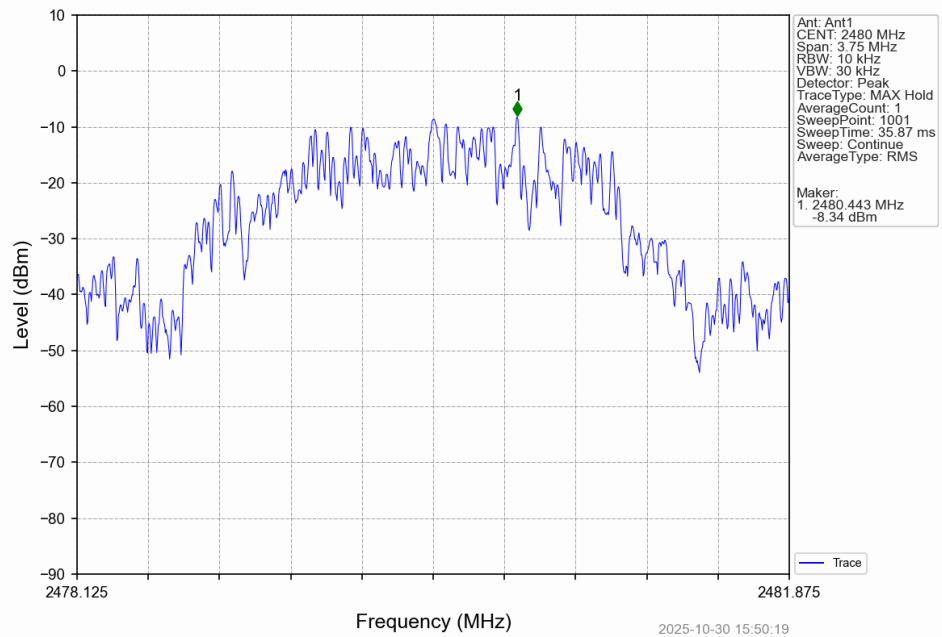
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm)		Verdict
			ANT1	Limit	
Zigbee	SISO	2405	-7.72	<=8	Pass
		2440	-7.76	<=8	Pass
		2480	-8.34	<=8	Pass

4.2 Test Graph

4.2.1 PSD



Zigbee_HCH_2480MHz_Ant1_NTNV



5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

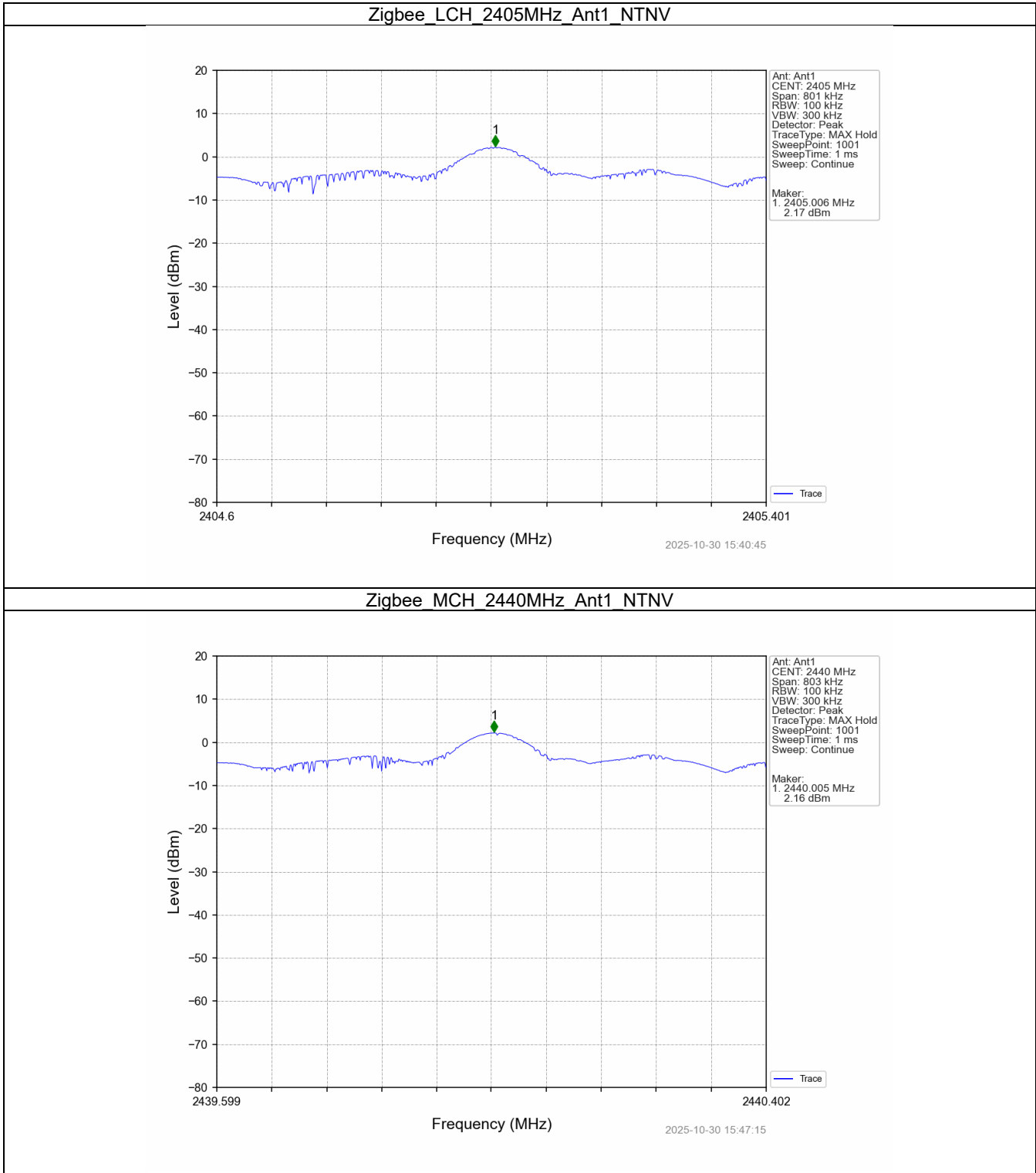
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
Zigbee	SISO	2405	1	2.17
		2440	1	2.16
		2480	1	2.09
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.				

5.1.2 CSE

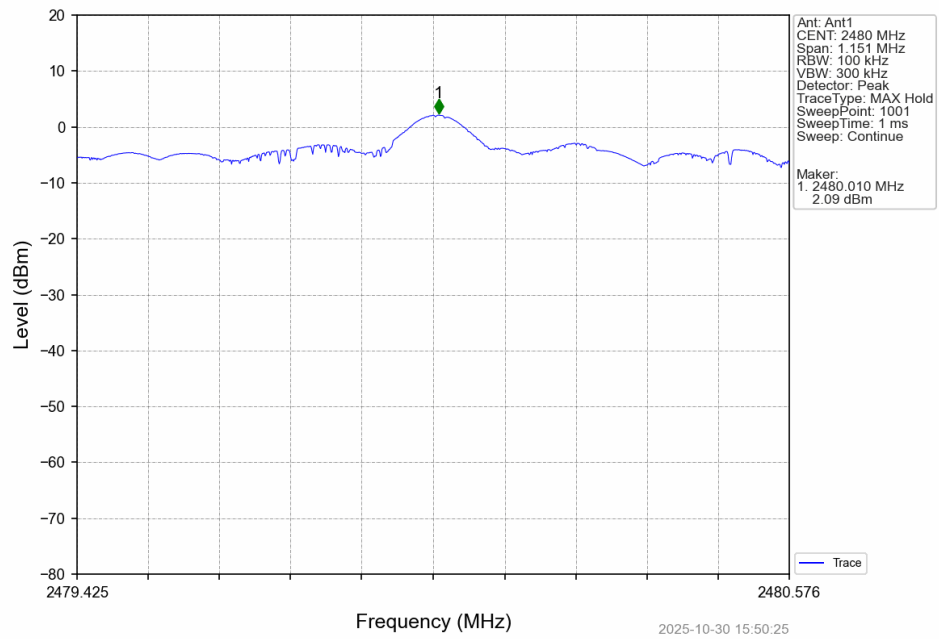
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
Zigbee	SISO	2405	1	2.17	-17.83	Pass
		2440	1	2.16	-17.84	Pass
		2480	1	2.09	-17.91	Pass
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.						

5.2 Test Graph

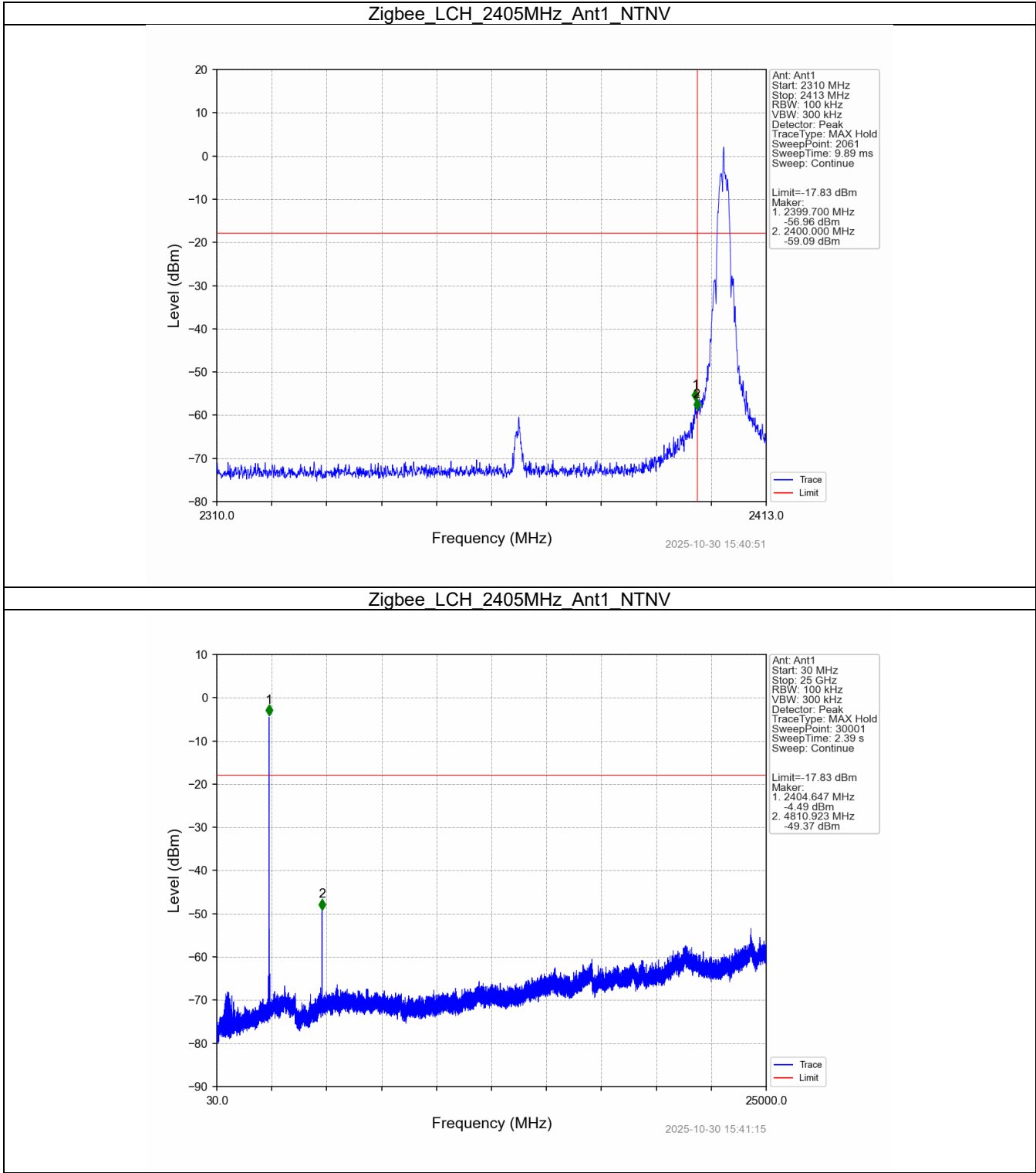
5.2.1 Ref



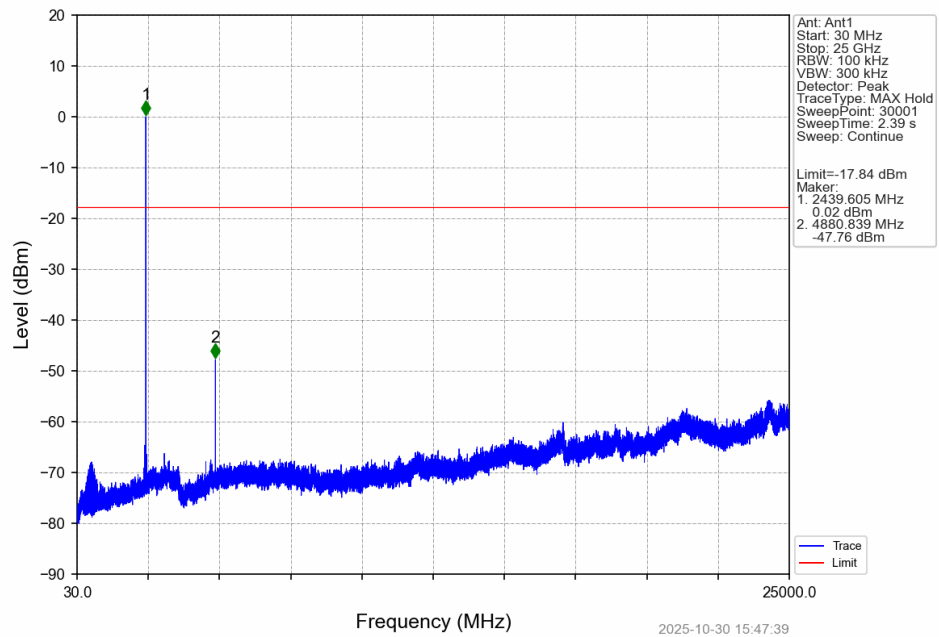
Zigbee_HCH_2480MHz_Ant1_NTNV



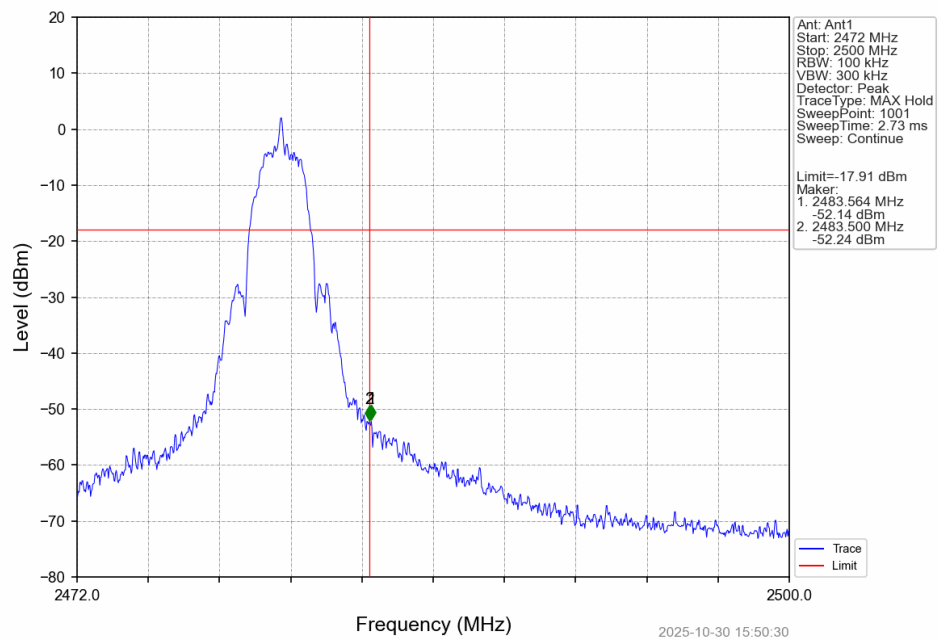
5.2.2 CSE



Zigbee_MCH_2440MHz_Ant1_NTNV



Zigbee_HCH_2480MHz_Ant1_NTNV



Zigbee_HCH_2480MHz_Ant1_NTNV

