ANNEX D TEST DATA

For

Project No.:	8236EU010917W
Client:	Asteria Technology Pte. Ltd.
Product Description:	Gravio Light Gen 2.0
Model No.:	GL9218
FCC ID:	2AT7Z-GL9218
Technology:	Zigbee
Test Engineer:	Mikey zhu
Test Date:	2024-12-24

Test Summary

Item	Result
Duty Cycle	Pass
Bandwidth	Pass
Maximum Conducted Output Power	Pass
Maximum Power Spectral Density	Pass
Unwanted Emissions In Non-restricted Frequency Bands	Pass

1. Duty Cycle

1.1 Test Result

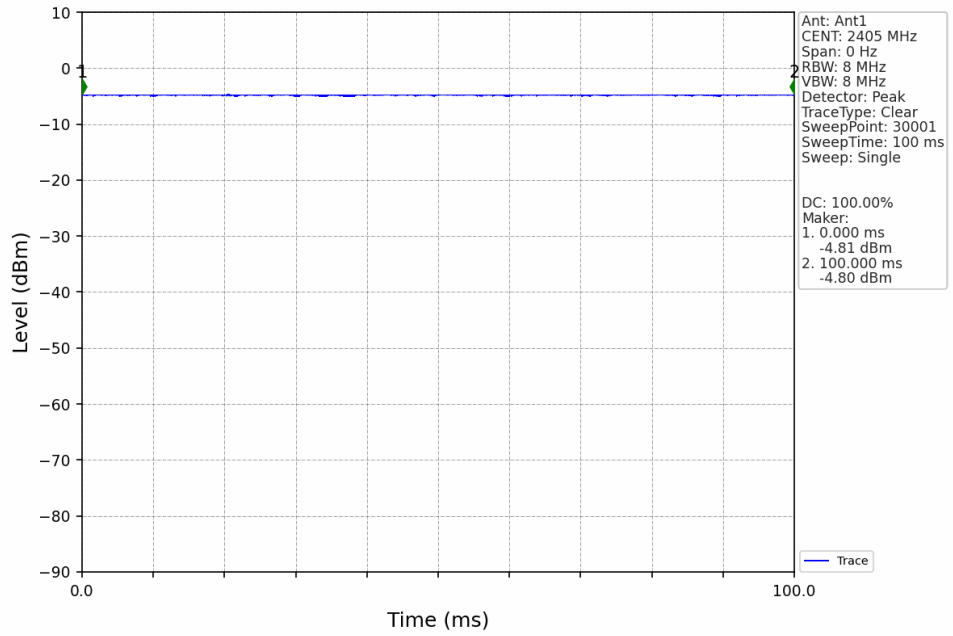
1.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
Zigbee	SISO	2405	100.000	100.000	100.00	0.00	0.00
		2440	100.000	100.000	100.00	0.00	0.00
		2480	100.000	100.000	100.00	0.00	0.00

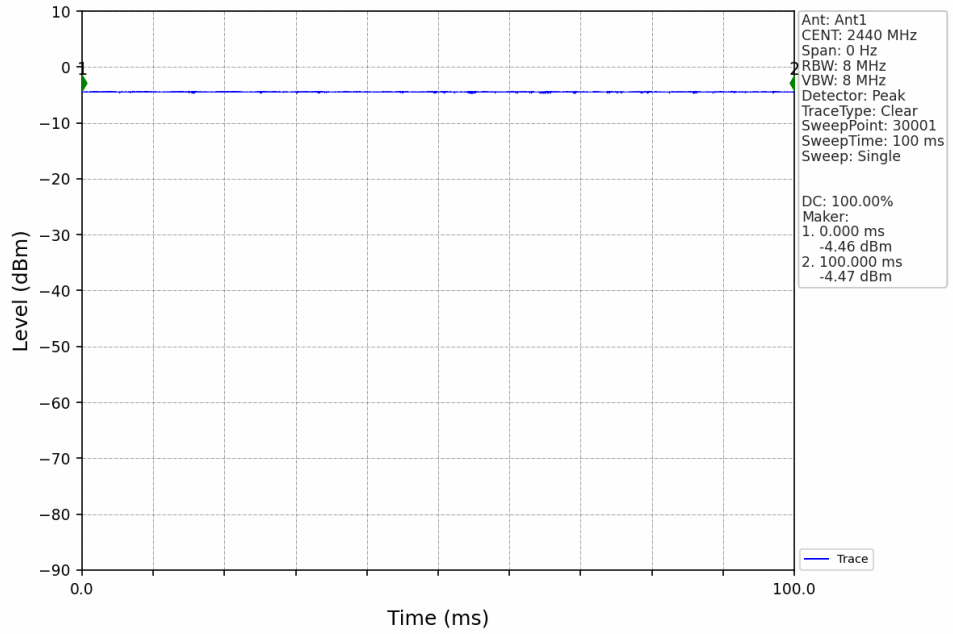
1.2 Test Graph

1.2.1 Ant1

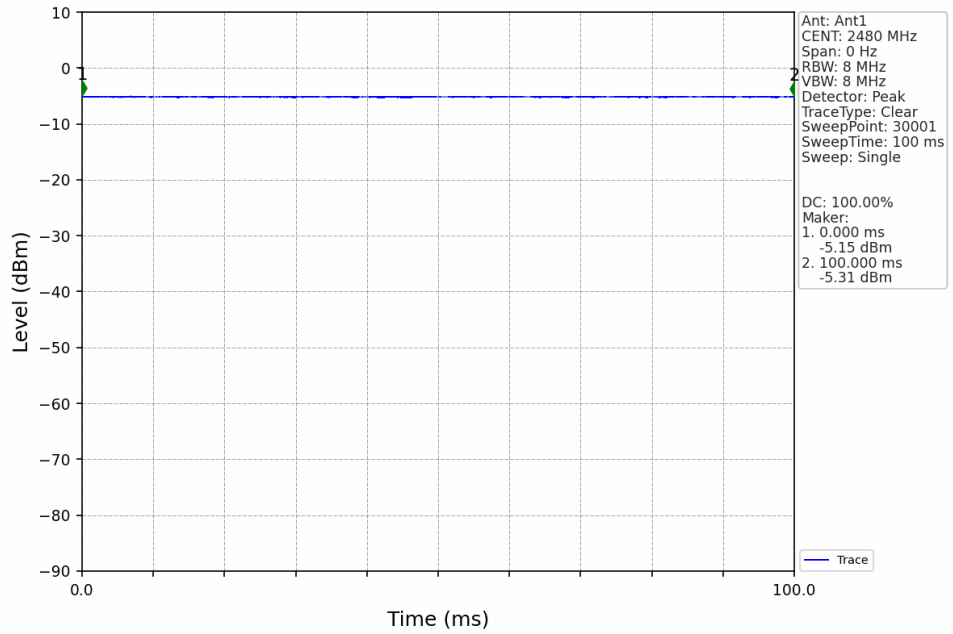
Zigbee_LCH_2405MHz_Ant1_NTNV



Zigbee_MCH_2440MHz_Ant1_NTNV



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	2.278	/	Pass
		2440	1	2.305	/	Pass
		2480	1	2.281	/	Pass

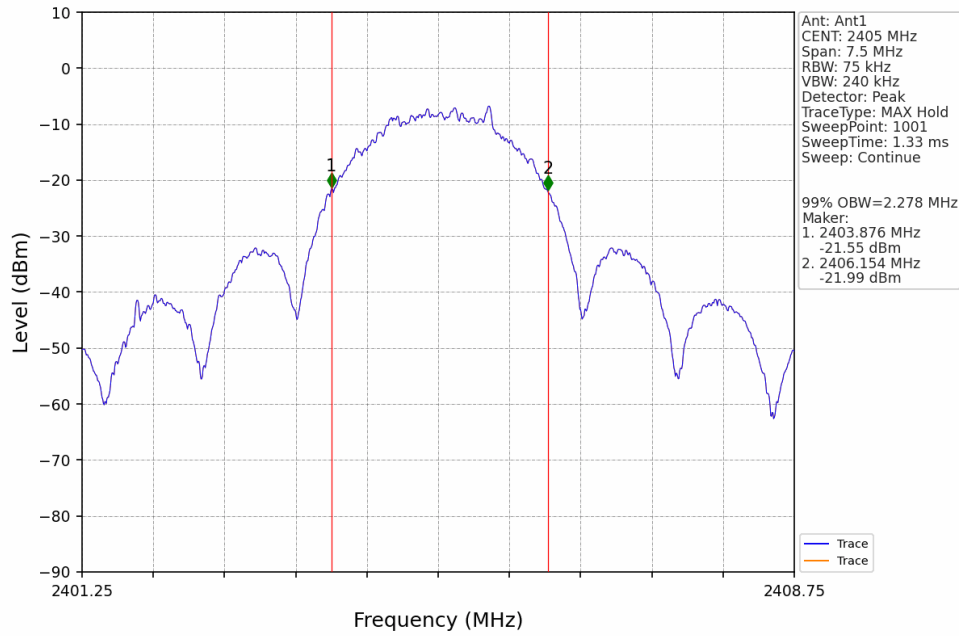
2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
Zigbee	SISO	2405	1	1.436	>=0.5	Pass
		2440	1	1.468	>=0.5	Pass
		2480	1	1.480	>=0.5	Pass

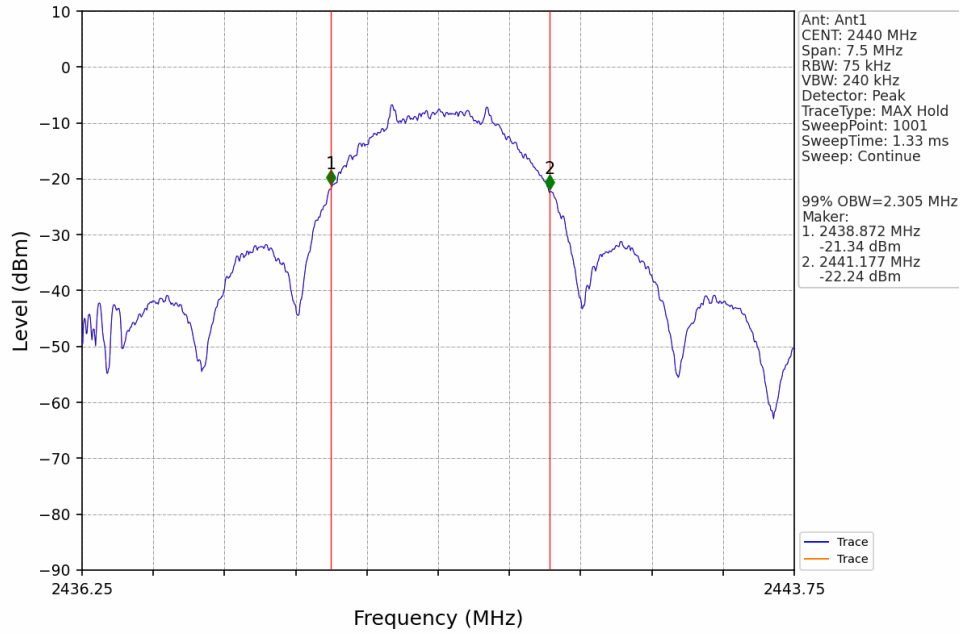
2.2 Test Graph

2.2.1 OBW

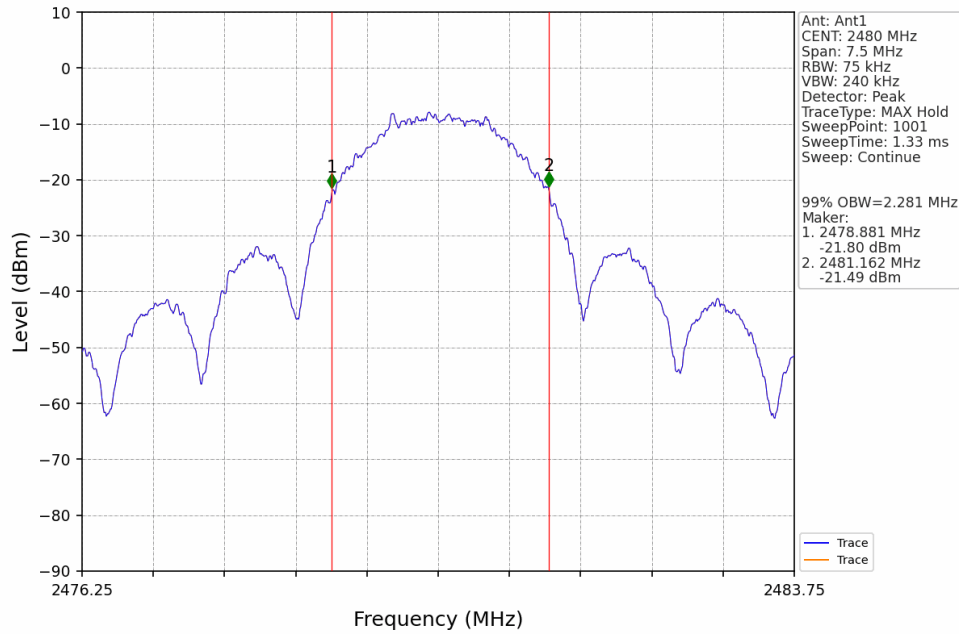
Zigbee_LCH_2405MHz_Ant1_NTNV



Zigbee_MCH_2440MHz_Ant1_NTNV

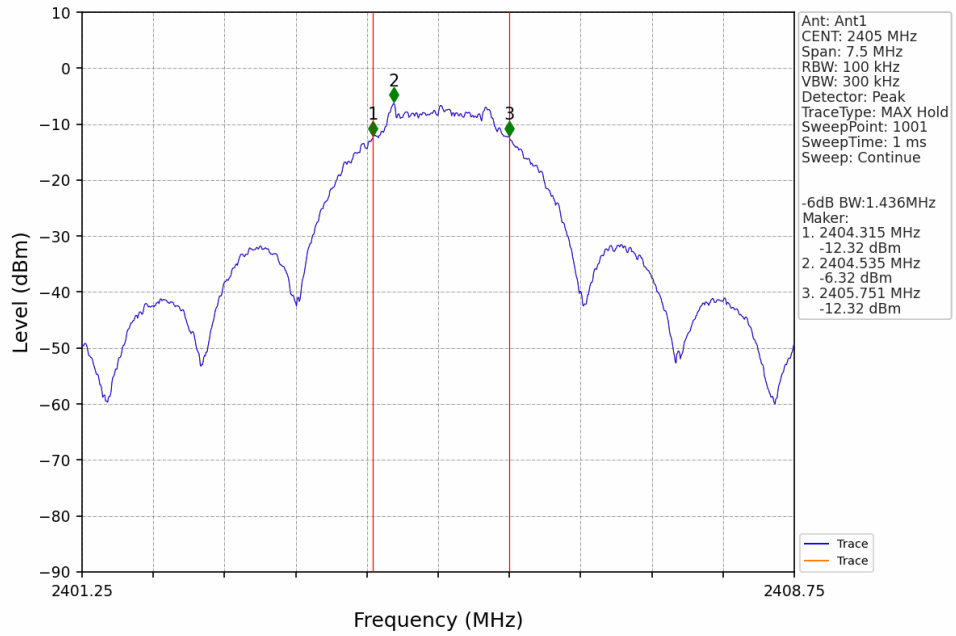


Zigbee_HCH_2480MHz_Ant1_NTNV

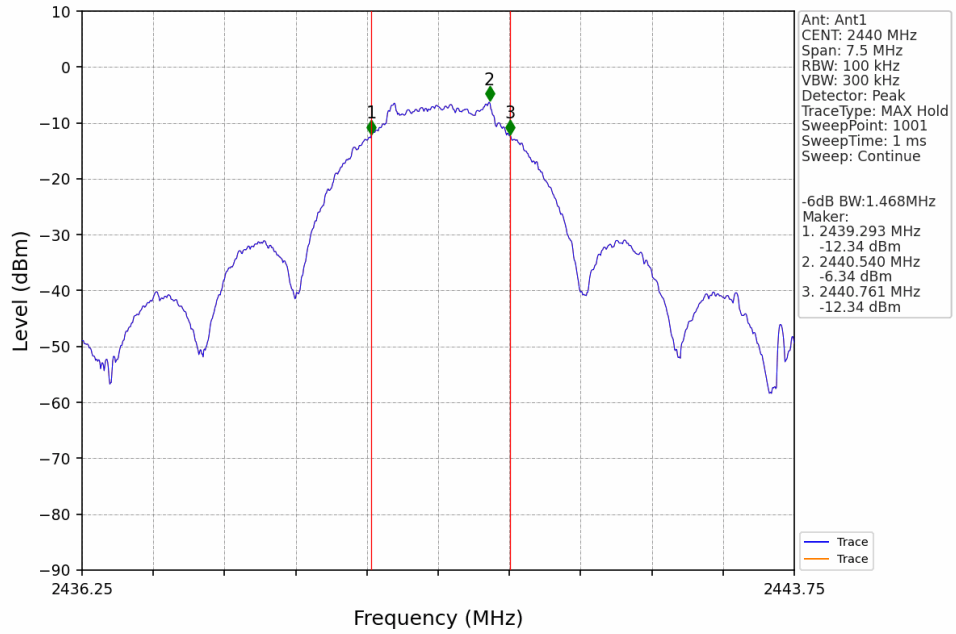


2.2.2 6dB BW

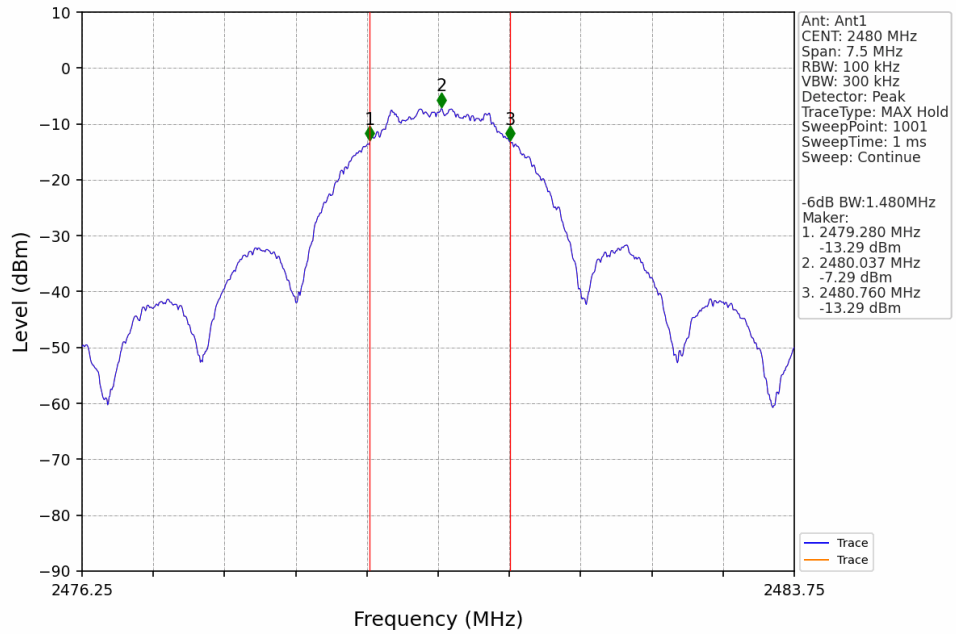
Zigbee_LCH_2405MHz_Ant1_NTNV



Zigbee_MCH_2440MHz_Ant1_NTNV



Zigbee_HCH_2480MHz_Ant1_NTNV



3. Maximum Conducted Output Power

3.1 Test Result

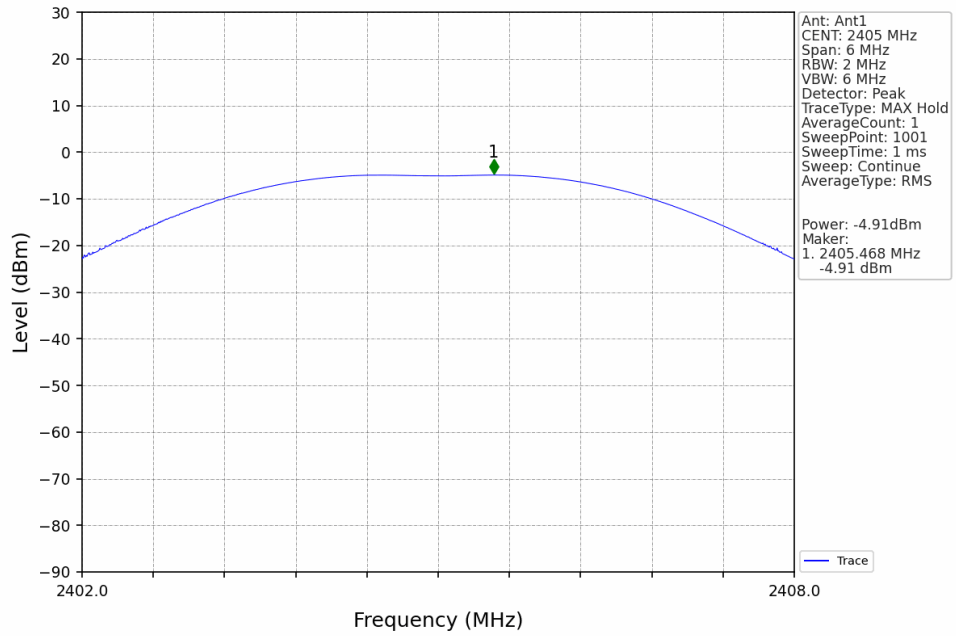
3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
Zigbee	SISO	2405	-4.91	<=30	Pass
		2440	-4.57	<=30	Pass
		2480	-5.21	<=30	Pass

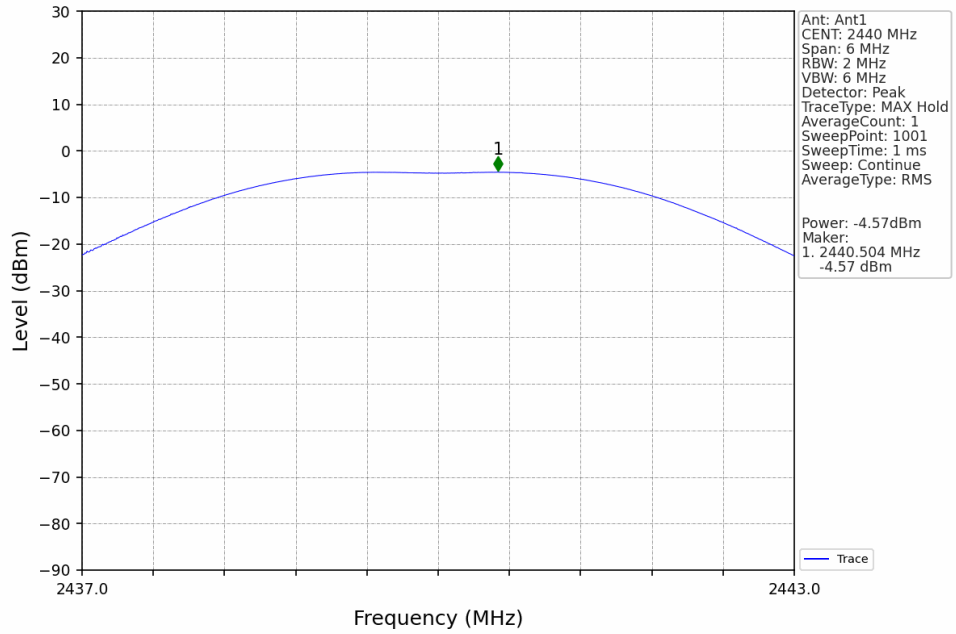
3.2 Test Graph

3.2.1 Power

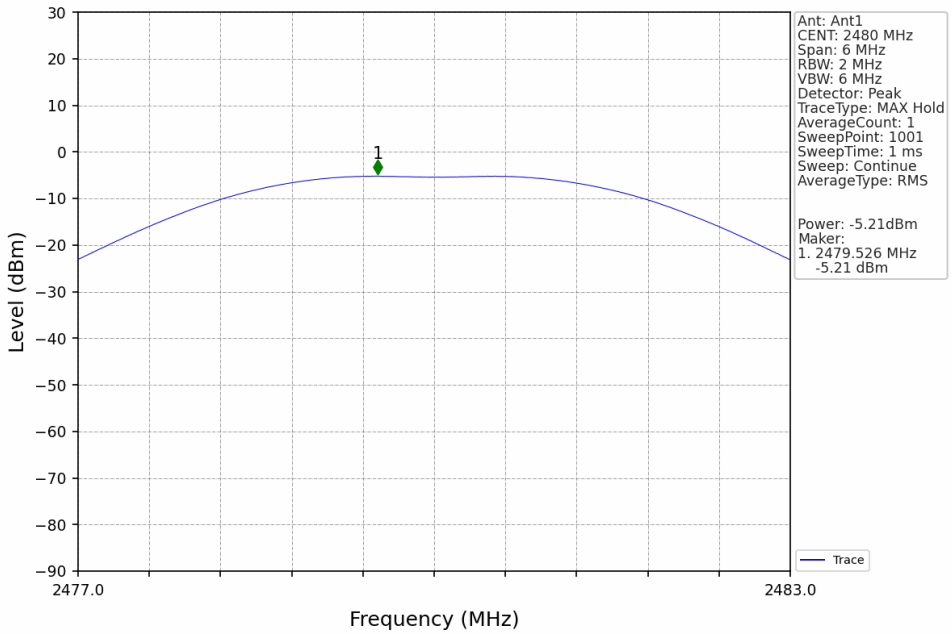
Zigbee_LCH_2405MHz_Ant1_NTNV



Zigbee_MCH_2440MHz_Ant1_NTNV



Zigbee_HCH_2480MHz_Ant1_NTNV



4. Maximum Power Spectral Density

4.1 Test Result

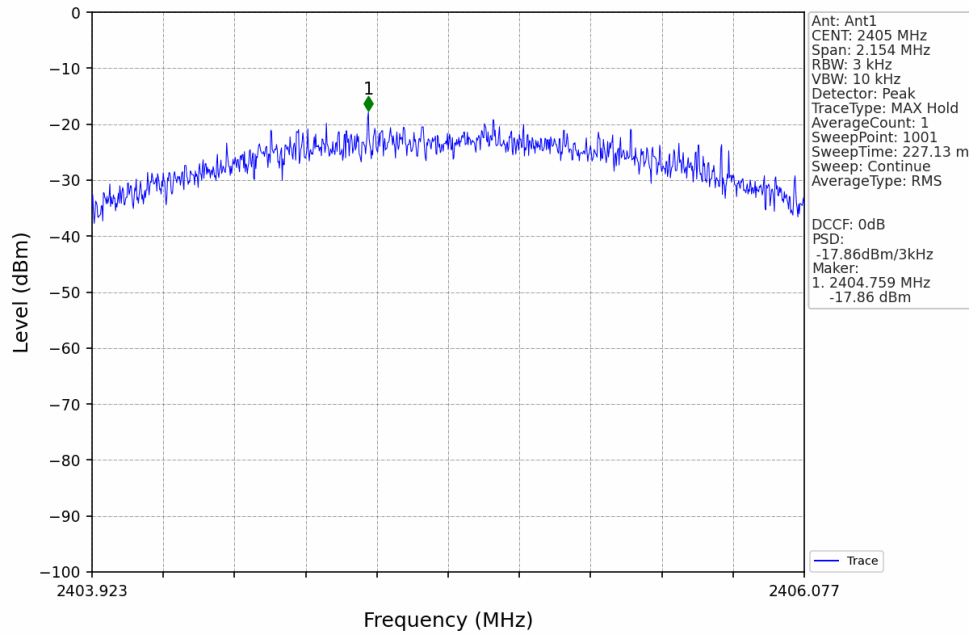
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
Zigbee	SISO	2405	-17.86	<=8	Pass
		2440	-18.48	<=8	Pass
		2480	-19.26	<=8	Pass

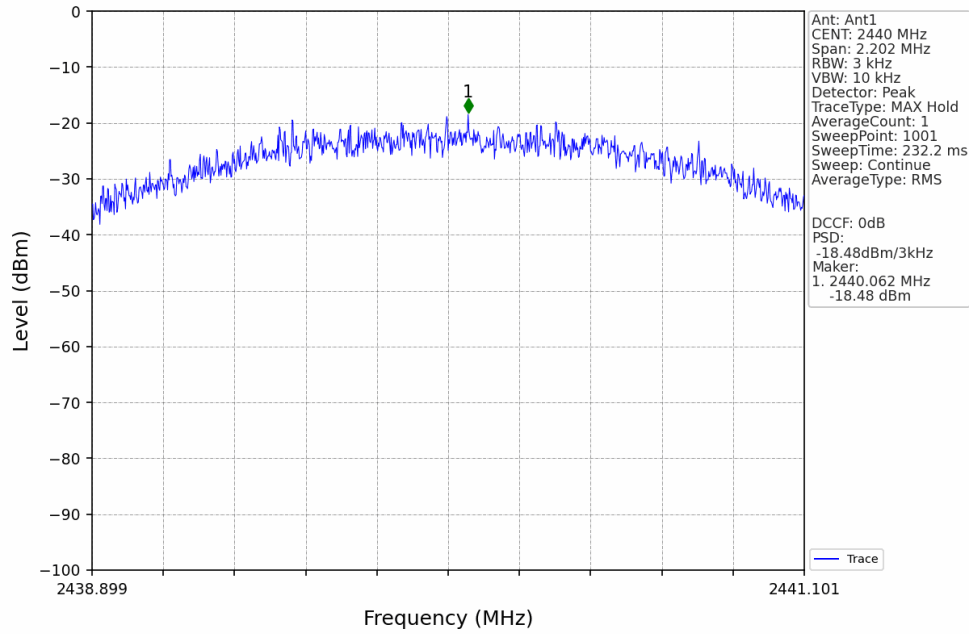
4.2 Test Graph

4.2.1 PSD

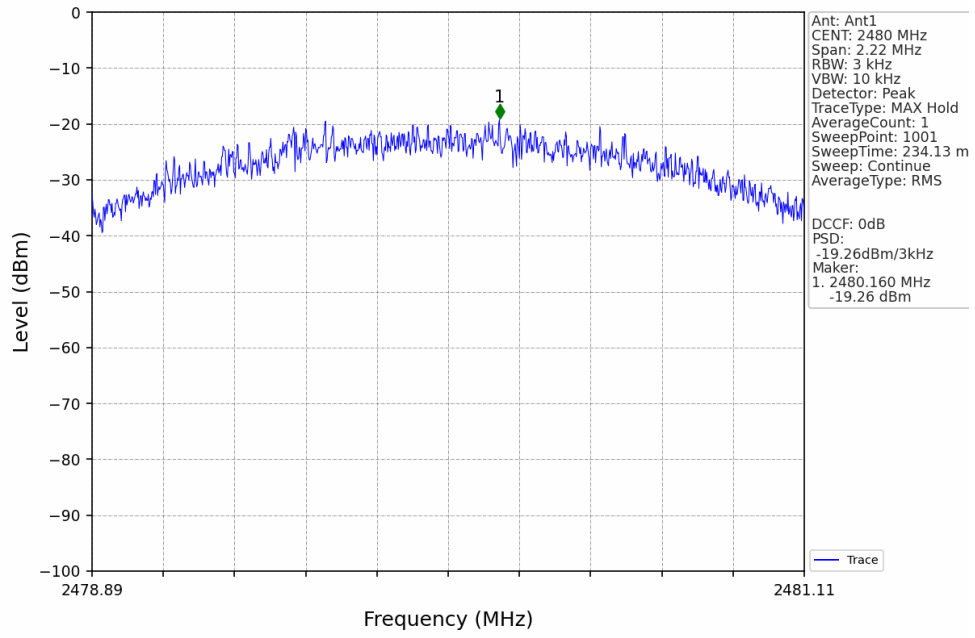
Zigbee_LCH_2405MHz_Ant1_NTNV



Zigbee_MCH_2440MHz_Ant1_NTNV



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	-6.87
		2440	1	-5.70
		2480	1	-6.94
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.				

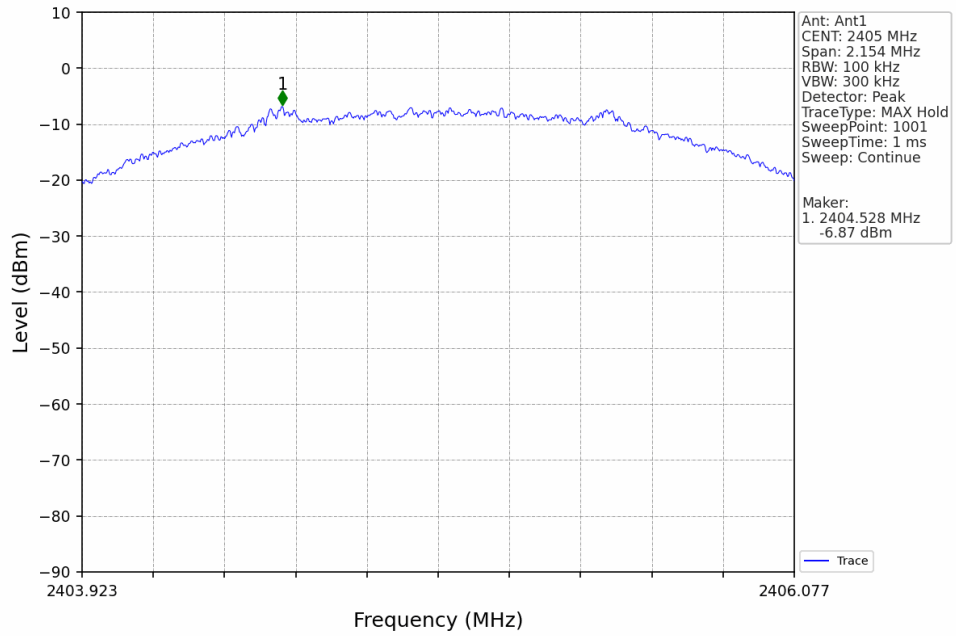
5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
Zigbee	SISO	2405	1	-6.87	-26.87	Pass
		2440	1	-5.70	-25.70	Pass
		2480	1	-6.94	-26.94	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.						

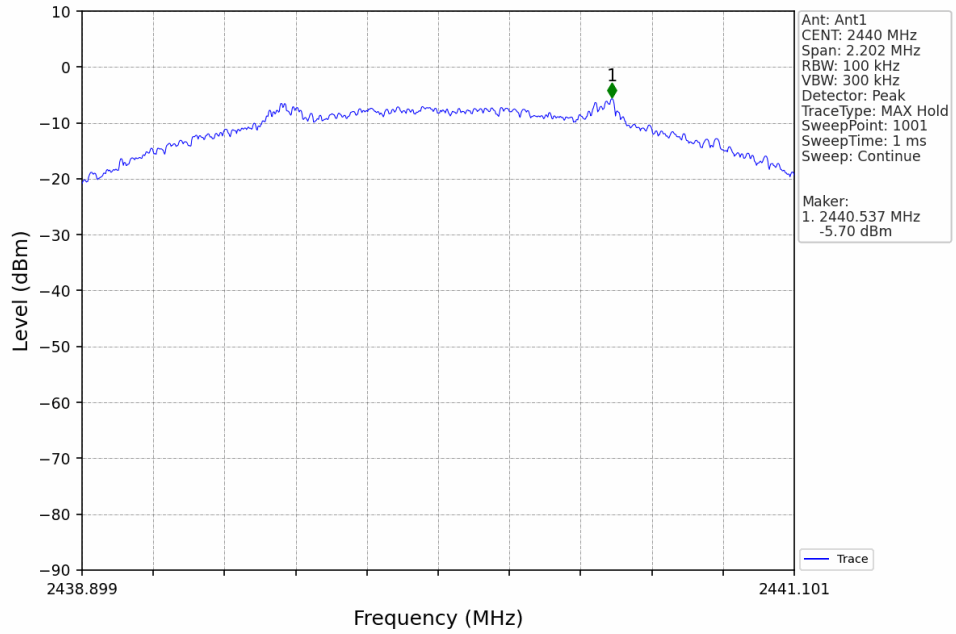
5.2 Test Graph

5.2.1 Ref

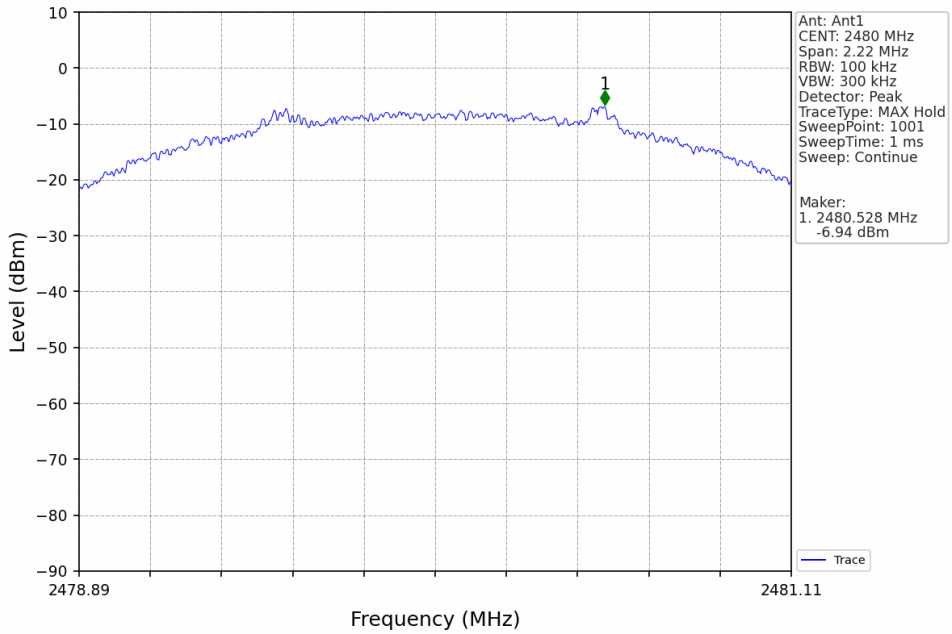
Zigbee_LCH_2405MHz_Ant1_NTNV



Zigbee_MCH_2440MHz_Ant1_NTNV

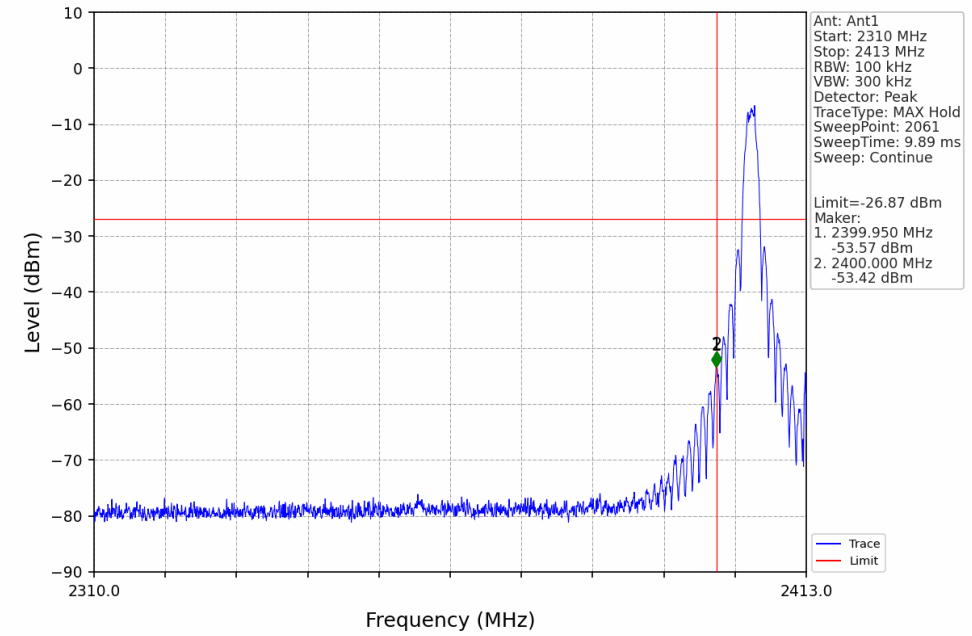


Zigbee_HCH_2480MHz_Ant1_NTNV

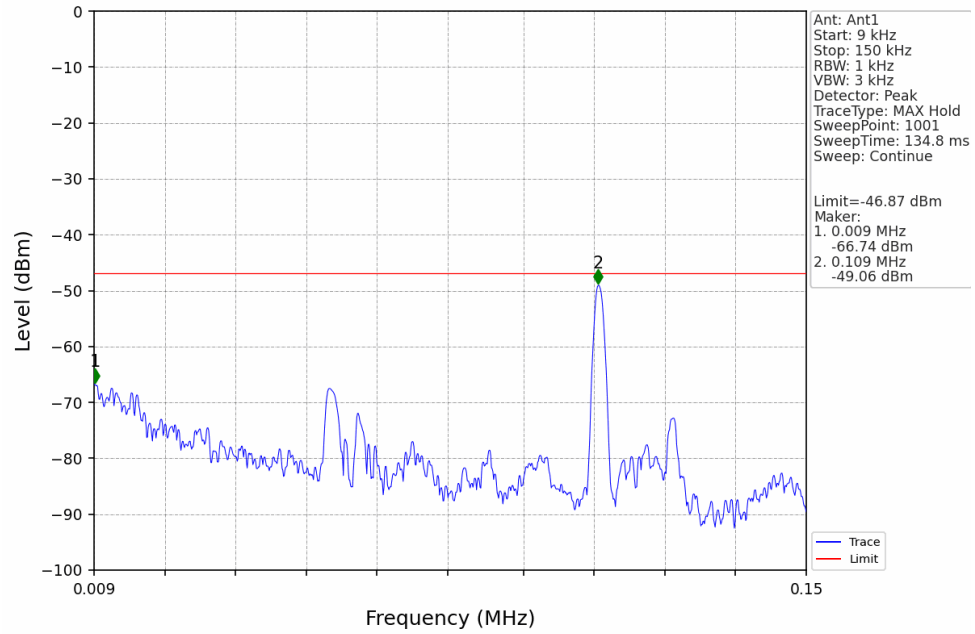


5.2.2 CSE

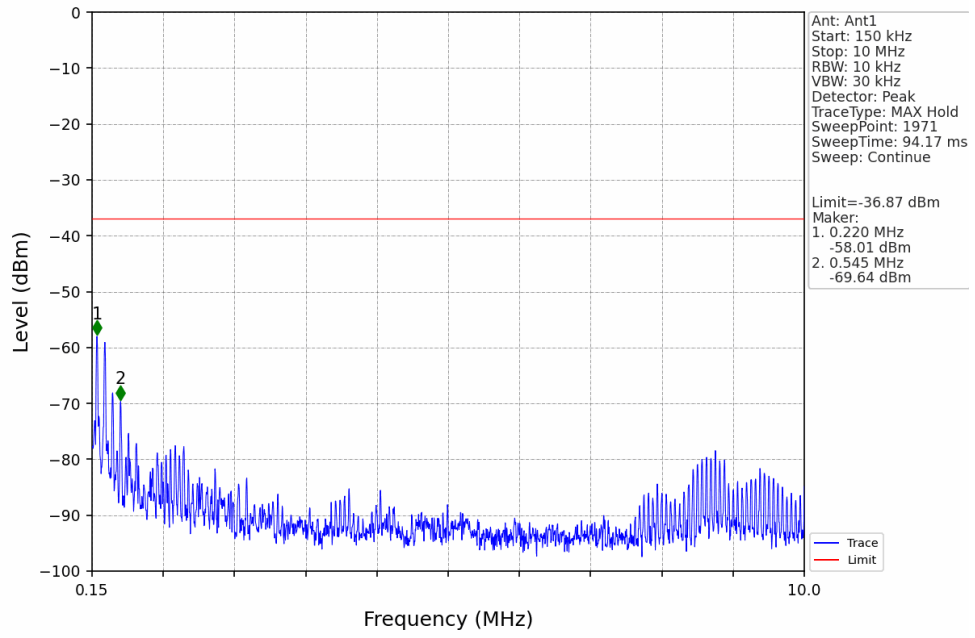
Zigbee_LCH_2405MHz_Ant1_NTNV



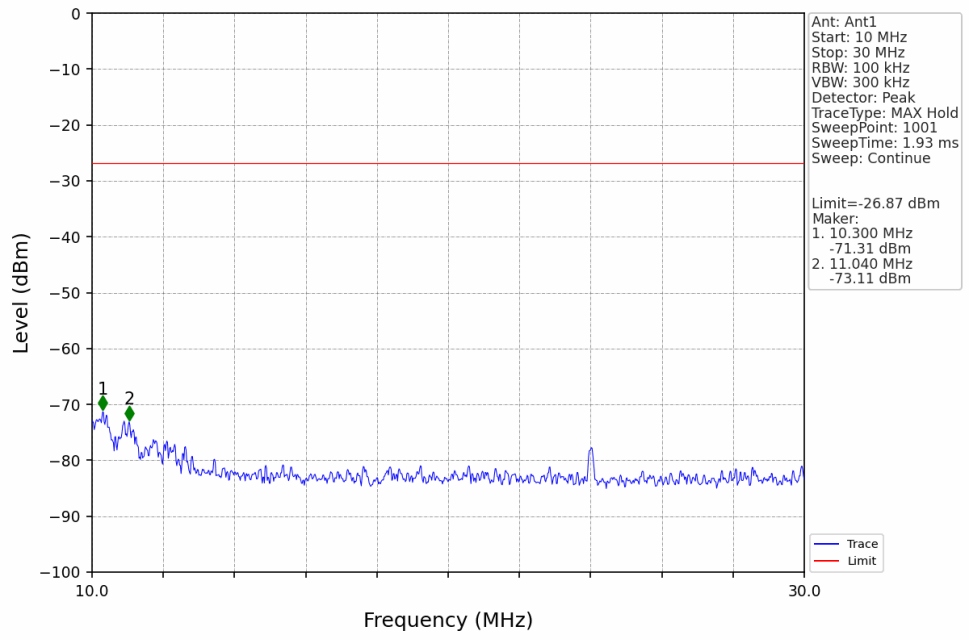
Zigbee_LCH_2405MHz_Ant1_NTNV



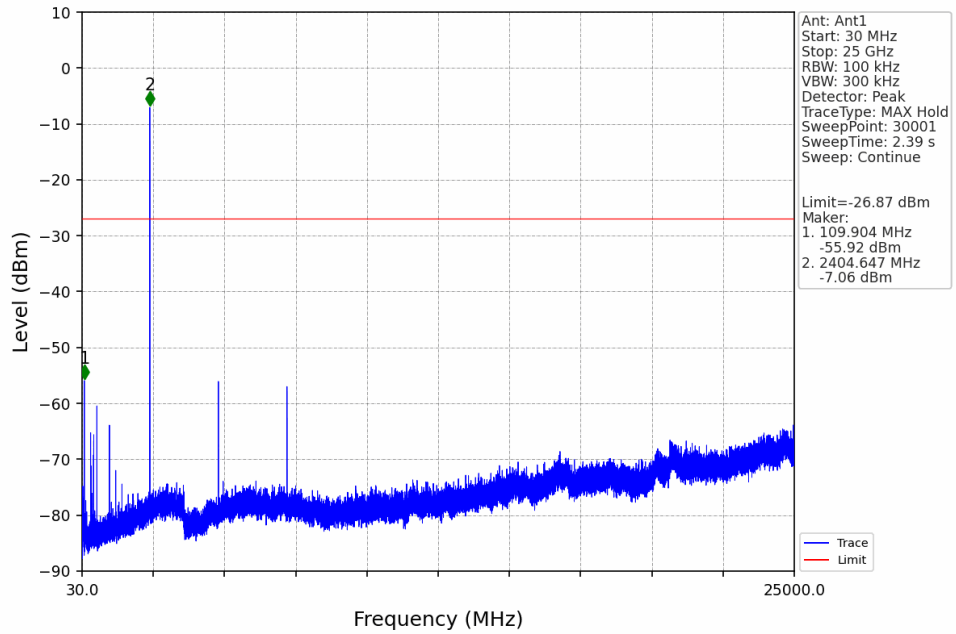
Zigbee_LCH_2405MHz_Ant1_NTNV



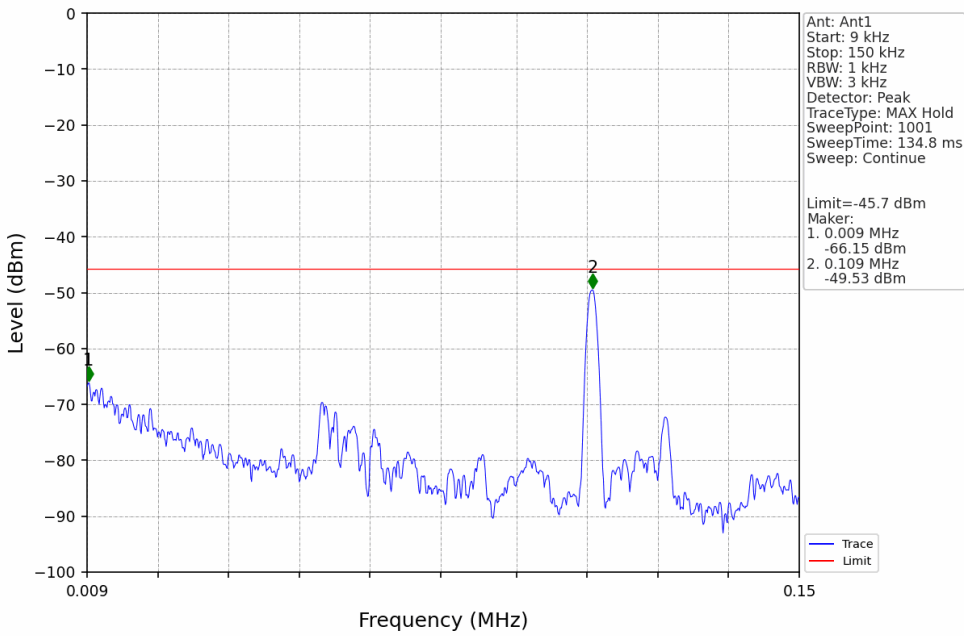
Zigbee_LCH_2405MHz_Ant1_NTNV



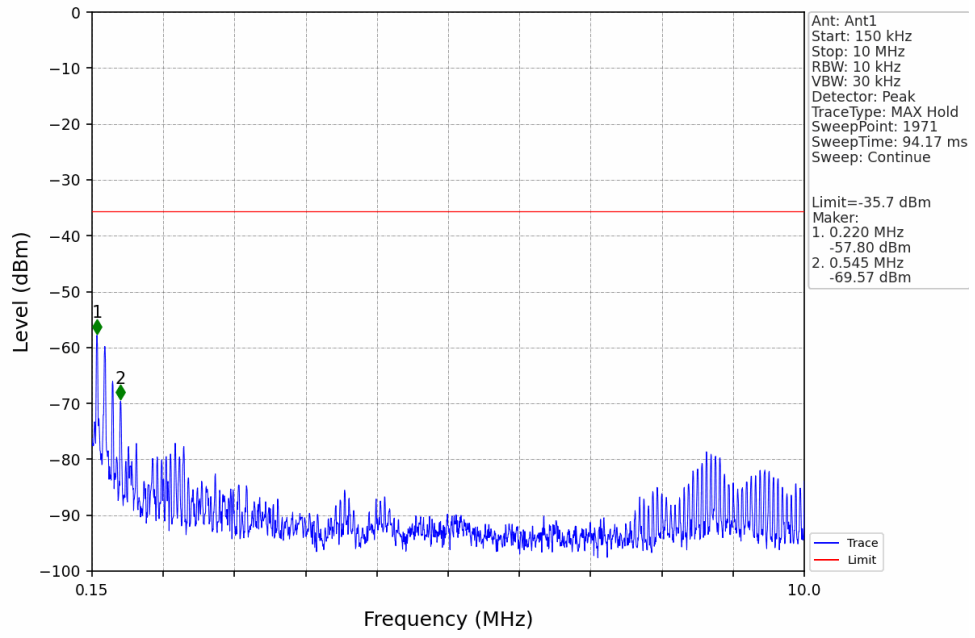
Zigbee_LCH_2405MHz_Ant1_NTNV



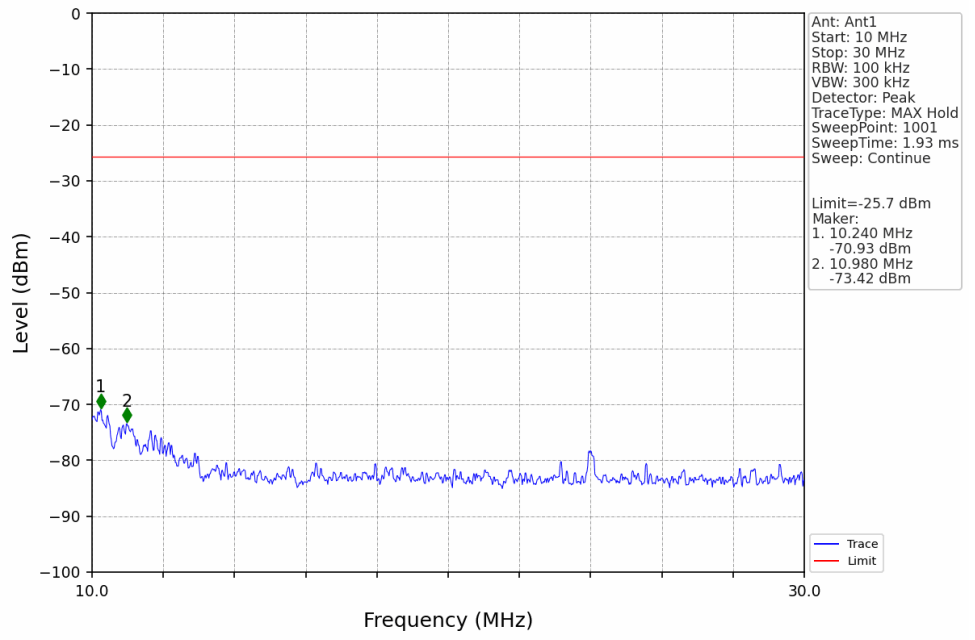
Zigbee_MCH_2440MHz_Ant1_NTNV



Zigbee_MCH_2440MHz_Ant1_NTNV



Zigbee_MCH_2440MHz_Ant1_NTNV



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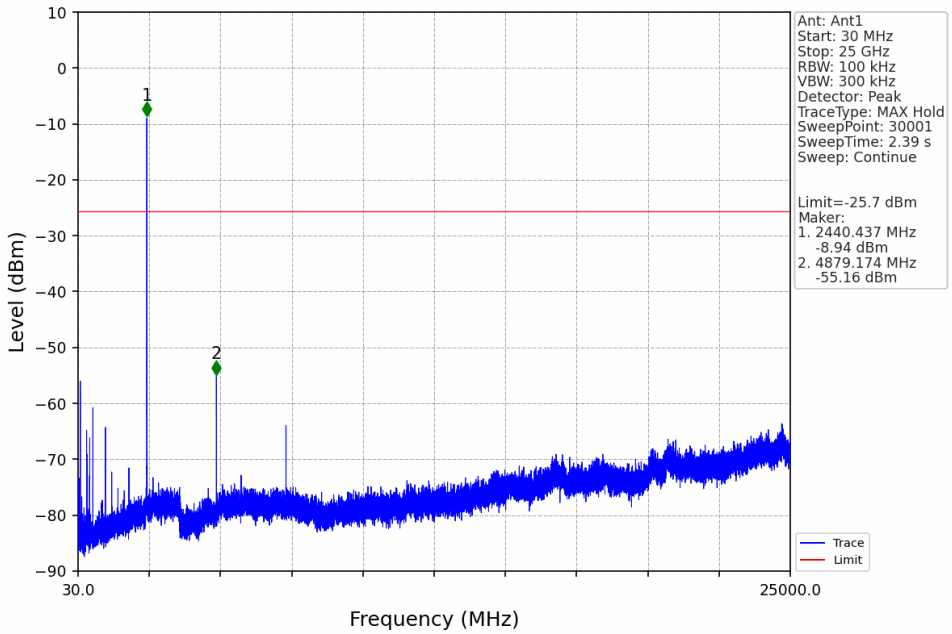
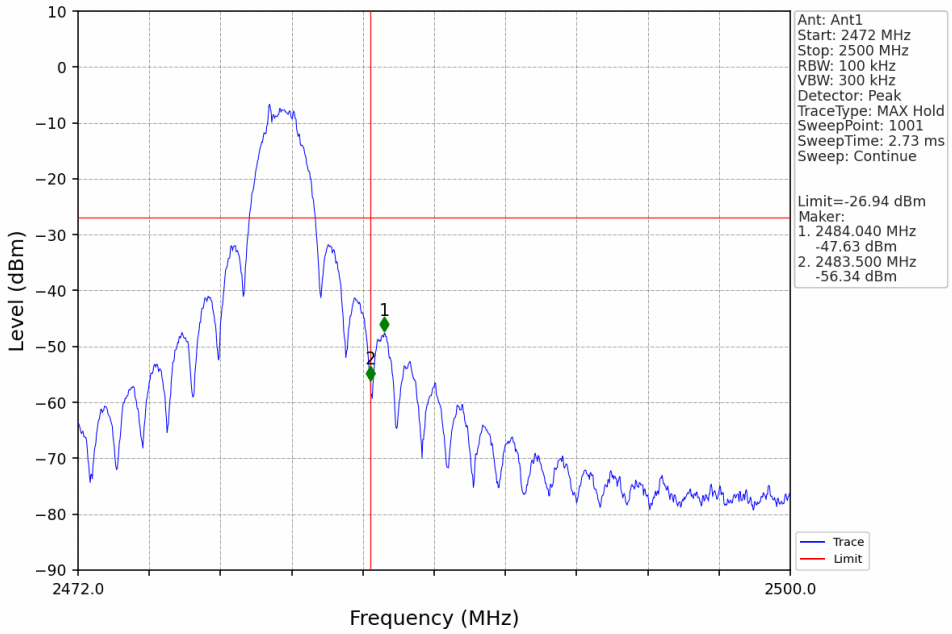
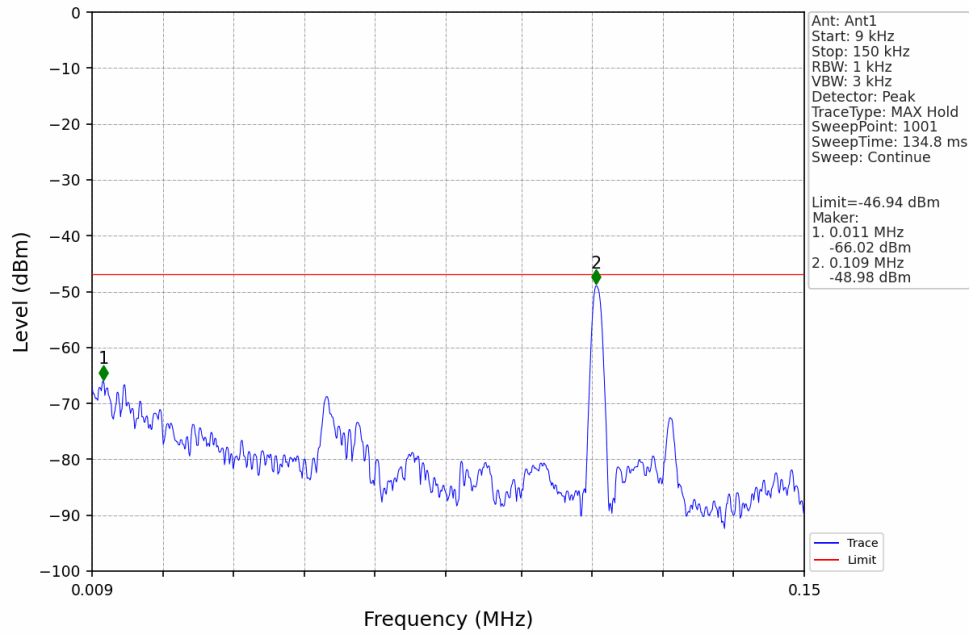


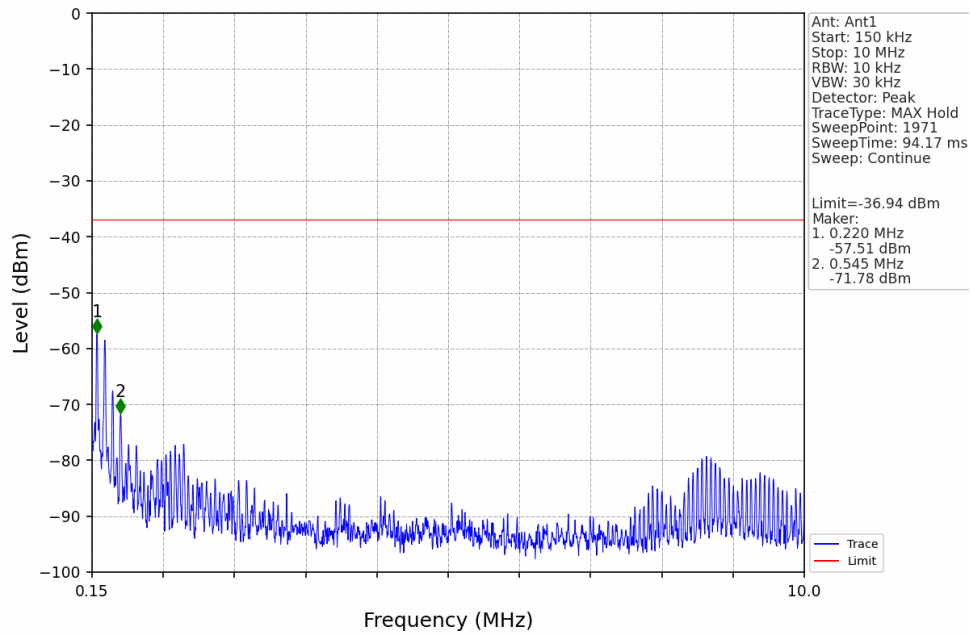
Zigbee_HCH_2480MHz_Ant1_NTNV



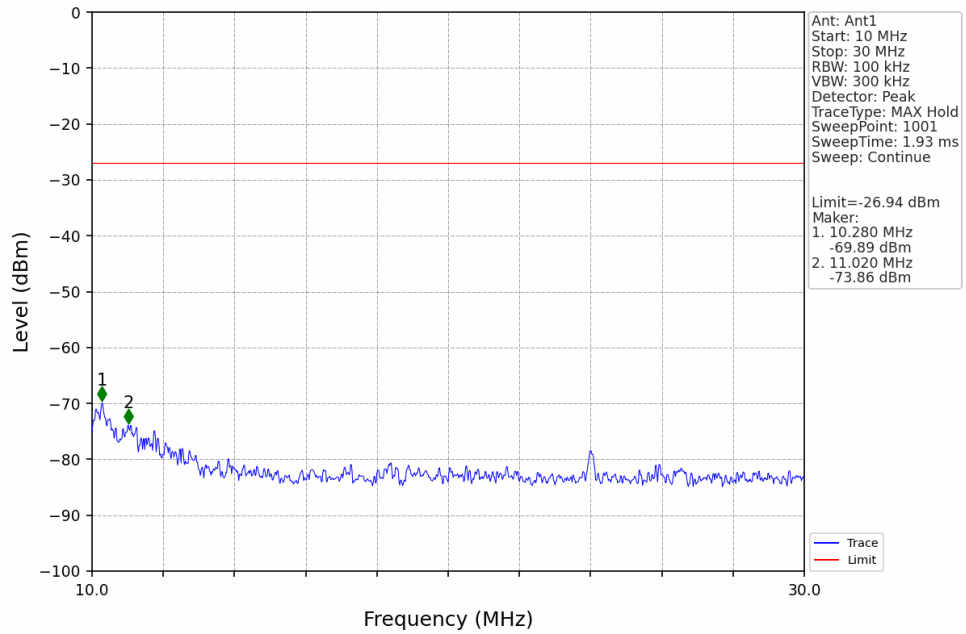
Zigbee_HCH_2480MHz_Ant1_NTNV



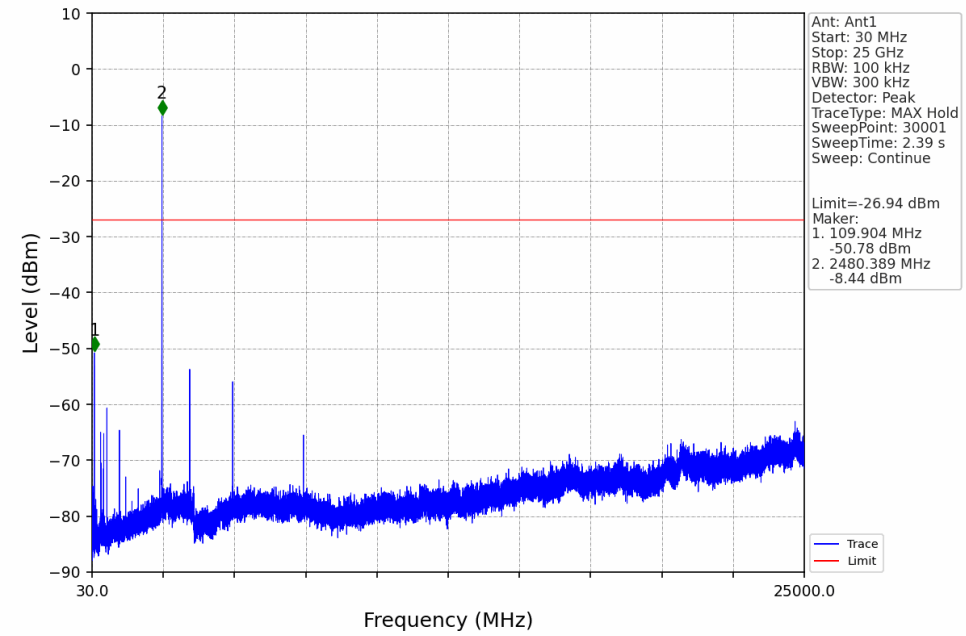
Zigbee_HCH_2480MHz_Ant1_NTNV



Zigbee_HCH_2480MHz_Ant1_NTNV



Zigbee_HCH_2480MHz_Ant1_NTNV



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