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TESTING
CNAS L3110

TEST REPORT

Reference No.	:	WTD25D10281058W002
Manufacturer*	:	Shenzhen Cudy Technology Co., Ltd.
Address	:	7/F, Lepu Tower (West), 66 Xingke Rd, Nanshan, Shenzhen, China
Factory	:	Shenzhen Cudy Technology Co., Ltd.
Address	:	7/F, Lepu Tower (West), 66 Xingke Rd, Nanshan, Shenzhen, China
Product	:	AX900 Dual-Band Wi-Fi 6 USB Adapter
Model(s)	:	WU900
Brand Name	:	Cudy
Standards	:	ETSI EN 300 328 V2.2.2 (2019-07)
Date of Receipt Sample	:	2025-10-31
Date of Test	:	2025-11-07 to 2025-11-25
Date of Issue	:	2025-12-02
Test Result	:	**Pass**

Remarks:
1. The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.
2. "*" **manufacturer** means any natural or legal person who manufactures radio equipment or has radio equipment designed or manufactured, and markets that equipment under his name or trade mark.

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3 Revision History

Test Report No.	Date of Receipt Sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTD25D10281058W002	2025-10-31	2025-11-07 to 2025-11-25	2025-12-02	Original	-	Valid

4 General Information

4.1 General Description of E.U.T.

Product:	AX900 Dual-Band Wi-Fi 6 USB Adapter
Model(s):	WU900
Model Description:	N/A
Wi-Fi Specification:	2.4G-802.11b/g/n(HT20)/ax(HE20)/n(HT40)/ax(HE40)
Hardware Version:	V1.0
Software Version:	1.0.0

4.2 Details of E.U.T.

Operation Frequency:	802.11b/g/n(HT20)/ax(HE20): 2412-2472MHz 802.11 n(HT40)/ax(HE40): 2422-2462MHz
Max. RF output power:	15.38dBm EIRP.
Type of Modulation:	DSSS, OFDM
Antenna installation:	Metal Antenna
Antenna Gain:	-1.27dBi

Note:
#: The antenna gain is provided by the applicant, and the applicant should be responsible for its authenticity, WALTEK lab has not verified the authenticity of its information.

Ratings:	DC 5V from USB plug

4.3 Channel List

Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	2412	2	2417	3	2422	4	2427
5	2432	6	2437	7	2442	8	2447
9	2452	10	2457	11	2462	12	2467
13	2472						

4.4 Additional Information

In accordance with ETSI EN 300 328, clause 5.4.1, the following information is provided by the manufacturer.

a) The type of wideband data transmission equipment:

☐ FHSS
☒ non-FHSS

b) In case of FHSS modulation:

- In case of non-Adaptive Frequency Hopping equipment:
  The number of Hopping Frequencies: 19
- In case of Adaptive Frequency Hopping Equipment:
  The maximum number of Hopping Frequencies:
  The minimum number of Hopping Frequencies:
  The (average) Dwell Time:

c) Adaptive / non-adaptive equipment:

☐ non-adaptive Equipment
☒ adaptive Equipment without the possibility to switch to a non-adaptive mode
☐ adaptive Equipment which can also operate in a non-adaptive mode

d) In case of adaptive equipment:

The Channel Occupancy Time implemented by the equipment
☐The equipment has implemented an LBT mechanism

- In case of non-FHSS equipment:
  ☐ The equipment is Frame Based equipment
  ☐ The equipment is Load Based equipment
  ☐ The equipment can switch dynamically between Frame Based and Load Based equipment
  The CCA time implemented by the equipment: ..... µs

☒ The equipment has implemented a DAA mechanism
☐ The equipment can operate in more than one adaptive mode

e) In case of non-adaptive Equipment:

The maximum RF Output Power (e.i.r.p.):
The maximum (corresponding) Duty Cycle: …….
Equipment with dynamic behaviour, that behaviour is described here. (e.g. the different combinations of duty cycle and corresponding power levels to be declared): N/A

f) The worst case operational mode for each of the following tests:

- RF Output Power
  802.11b
- Power Spectral Density
  802.11b
- Duty cycle, Tx-Sequence, Tx-gap
  N/A
- Accumulated Transmit time, Frequency Occupation & Hopping Sequence (only for FHSS equipment)
  N/A
- Hopping Frequency Separation (only for FHSS equipment)
  N/A
- Medium Utilisation
  N/A
- Adaptivity & Receiver Blocking
  802.11b

- Nominal Channel Bandwidth
  802.11ax40
- Transmitter unwanted emissions in the OOB domain
  802.11b
- Transmitter unwanted emissions in the spurious domain
  802.11b
- Receiver spurious emissions
  802.11b

g) The different transmit operating modes (tick all that apply):

☒ Operating mode 1: Single Antenna Equipment
- ☒ Equipment with only one antenna
- ☐ Equipment with two diversity antennas but only one antenna active at any moment in time
- ☐ Smart Antenna Systems with two or more antennas, but operating in a (legacy) mode where only one antenna is used. (e.g. IEEE 802.11™ [i.3] legacy mode in smart antenna systems)

☐ Operating mode 2: Smart Antenna Systems - Multiple Antennas without beam forming
- ☐ Single spatial stream / Standard throughput / (e.g. IEEE 802.11™ legacy mode)
- ☐ High Throughput (> 1 spatial stream) using Occupied Channel Bandwidth 1
- ☐ High Throughput (> 1 spatial stream) using Occupied Channel Bandwidth 2

NOTE 1: Add more lines if more channel bandwidths are supported.

☐ Operating mode 3: Smart Antenna Systems - Multiple Antennas with beam forming
- ☐ Single spatial stream / Standard throughput (e.g. IEEE 802.11™ legacy mode)
- ☐ High Throughput (> 1 spatial stream) using Occupied Channel Bandwidth 1
- ☐ High Throughput (> 1 spatial stream) using Occupied Channel Bandwidth 2

NOTE 2: Add more lines if more channel bandwidths are supported.

h) In case of Smart Antenna Systems:
- The number of Receive chains: N/A
- The number of Transmit chains: N/A
  - ☐ symmetrical power distribution
  - ☐ asymmetrical power distribution

In case of beam forming, the maximum beam forming gain: N/A
NOTE: The additional beam forming gain does not include the basic gain of a single antenna.

i) Operating Frequency Range(s) of the equipment:
- Operating Frequency Range 1: 2400 MHz to 2483.5 MHz
- Operating Frequency Range 2: ..... MHz to ..... MHz

NOTE: Add more lines if more Frequency Ranges are supported.

j) Nominal Channel Bandwidth(s):
- Nominal Channel Bandwidth 1: 37.827MHz
- Nominal Channel Bandwidth 2: ..... MHz

NOTE: Add more lines if more channel bandwidths are supported.

k) Type of Equipment (stand-alone, combined, plug-in radio device, etc.):

☒ Stand-alone
☐ Combined Equipment
☐ Plug-in radio device
☐ Other .....

l) The normal and the extreme operating conditions that apply to the equipment:

Normal operating conditions (if applicable):
Operating temperature range: +23°C
Other (please specify if applicable): ……

Extreme operating conditions:
Operating temperature range: Minimum: 0°C Maximum +40°C

Other (please specify if applicable): …… Minimum: …… Maximum ……
Details provided are for the:
☒ Stand-alone
☐ Combined Equipment
☐ Test jig

m) The intended combination(s) of the radio equipment power settings and one or more antenna assemblies and their corresponding e.i.r.p levels:

- Antenna Type

☒ Integral Antenna (information to be provided in case of conducted measurements)
Antenna Gain: -1.27dBi
If applicable, additional beamforming gain (excluding basic antenna gain): ..... dB
☒ Temporary RF connector provided
☐ No temporary RF connector provided
☐ Dedicated Antennas (equipment with antenna connector)
☐ Single power level with corresponding antenna(s)
☐ Multiple power settings and corresponding antenna(s)
Number of different Power Levels: .....
Power Level 1: ..... dBm
Power Level 2: ..... dBm

NOTE 1: Add more lines in case the equipment has more power levels.

NOTE 2: These power levels are conducted power levels (at antenna connector).

- For each of the Power Levels, provide the intended antenna assemblies, their corresponding gains (G) and the resulting e.i.r.p. levels also taking into account the beamforming gain (Y) if applicable

Power Level 1: ..... dBm
Number of antenna assemblies provided for this power level: .....

Assembly #	Gain (dBi)	e.i.r.p. (dBm)	Part number or model name
1			
2			
3			
4			

NOTE 3: Add more rows in case more antenna assemblies are supported for this power level.

Power Level 2: ..... dBm
Number of antenna assemblies provided for this power level: .....

Assembly #	Gain (dBi)	e.i.r.p. (dBm)	Part number or model name
1			
2			
3			
4			

NOTE 4 Add more rows in case more antenna assemblies are supported for this power level.

Power Level 3 ..... dBm
Number of antenna assemblies provided for this power level: .....

Assembly #	Gain (dBi)	e.i.r.p. (dBm)	Part number or model name
1			
2			
3			
4			

NOTE 5Add more rows in case more antenna assemblies are supported for this power level.

n) The nominal voltages of the stand-alone radio equipment or the nominal voltages of the combined (host) equipment or test jig in case of plug-in devices:

Details provided are for the: ☒ stand-alone equipment
☐ combined (or host) equipment
☐ test jig

Supply Voltage: ☐ AC mains State AC voltage: V
☒ DC State DC voltage 5V
In case of DC, indicate the type of power source
☐ Internal Power Supply
☐ External Power Supply or AC/DC adapter VDC
☐ Battery 3.7V
☐ Other: .....

o) Describe the test modes available which can facilitate testing:
The EUT can be into the Engineer mode for testing.

p) The equipment type (e.g. Bluetooth®, IEEE 802.11™, IEEE 802.15.4™, proprietary, etc.):

proprietary

q) If applicable, the statistical analysis referred to in clause 5.3.1 q)
(to be provided as separate attachment)

r) If applicable, the statistical analysis referred to in clause 5.3.1 r)
(to be provided as separate attachment)

s) Geo-location capability supported by the equipment:
☐ Yes
☐ The geographical location determined by the equipment as defined in clause 4.3.1.13.2 or clause 4.3.2.12.2 is not accessible to the user.
☒ No

5 Test Summary

RF PART		
Test Items	**Test Requirement**	**Result**
RF output power	ETSI EN 300 328	PASS
Duty Cycle, Tx-sequence, Tx-gap	ETSI EN 300 328	N/A
Accumulated Transmit Time, Frequency Occupation and Hopping Sequence	ETSI EN 300 328	N/A
Hopping Frequency Separation	ETSI EN 300 328	N/A
Medium Utilisation (MU) factor	ETSI EN 300 328	N/A
Adaptivity (Adaptive Frequency Hopping)	ETSI EN 300 328	PASS
Receiver Blocking	ETSI EN 300 328	PASS
Occupied Channel Bandwidth	ETSI EN 300 328	PASS
Maximum spectral power density	ETSI EN 300 328	PASS
Transmitter unwanted emissions in the out-of-band domain	ETSI EN 300 328	PASS
Transmitter unwanted emissions in the spurious domain	ETSI EN 300 328	PASS
Receiver spurious emissions	ETSI EN 300 328	PASS
Geo-location capability	ETSI EN 300 328	N/A
Remark: N/A: Not Applicable RF: In this whole report RF means Radio Frequency.		

6 Equipment Used during Test

6.1 Equipments List

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1.	Spectrum Analyzer	Agilent	N9020A	MY49100060	2025-07-04	2026-07-03
2.	Spectrum Analyzer (9k-6GHz)	R&S	FSL6	100959	2025-07-04	2026-07-03
3.	Humidity Chamber	GF	GTH-225-40-1P	IAA061213	2025-07-04	2026-07-03
4.	EXA Signal Analyzer	Malaysia Keysight	N9010A	MY50520207	2025-04-19	2026-04-18
5.	ESG VECTOR SIGNAL GENERATOR	Malaysia Keysight	E4438C	MY45092536	2025-04-19	2026-04-18
6.	EXG Analog Signal Generator	Malaysia Keysight	N5171B	MY53050845	2025-07-04	2026-07-03
7.	USB Wideband Power Sensor	MAIWEI technology	MW100-PSB	SG54400003	2025-04-19	2026-04-18
8.	Trilog Broadband Antenna	SCHWARZBECK	VULB9163	336	2025-07-20	2026-07-19
9.	Coaxial Cable (below 1GHz)	Top	TYPE16(13M)	-	2025-04-19	2026-04-18
10.	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1314	2025-08-09	2026-08-08
11.	Broadband Preamplifier	COMPLIANCE DIRECTION	PAP-1G18	2004	2025-07-04	2026-07-03
12.	Coaxial Cable (above 1GHz)	ZT26-NJ-NJ-8M/FA	1GHz-18GHz	NA	2025-04-19	2026-04-18
13	Universal Radio Communication Tester	R&S	CMW500	127818	2025-04-19	2026-04-18

ETSI Test software

Software name	ETSI family
Software version	V2.2.2

6.2 Measurement Uncertainty

Parameter	Uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±0.42dB
Power Spectral Density, conducted	±0.7dB
Unwanted Emissions, conducted	±2.76dB
Time	±5%
Duty Cycle	±5%
Temperature	±1°C
Humidity	±2%
DC and low frequency voltages	±0.1%
Conduction disturbance(150kHz~30MHz)	±3.64dB
Radiated Emission(30MHz~1GHz)	±4.53dB
Radiated Emission(1GHz~6GHz)	±5.03dB

6.3 Test Equipment Calibration

All the test equipments used are valid and calibrated by CEPREI Certification Body that address is No.110 Dongguan Zhuang RD. Guangzhou, P.R.China.

7 RF Requirements

1. Normal Test Conditions:

Ambient Condition: 5VDC, 23 °C, 55 %RH

2. Extreme Test Conditions:

Extreme Temperature: 0°C to +40°C;

For tests at extreme temperatures, measurements shall be made over the extremes of the operating temperature range as declared by the manufacturer.

Test Conditions	Normal	LT	HT
Temperature (℃)	23	0	40

3. Test Mode

All test mode(s) and condition(s) mentioned were considered and evaluated respectively by performing full tests, the worst data were recorded and reported.

Test mode	Low channel	Middle channel	High channel
Transmitting(802.11b/g/n/ax20)	2412MHz	2442MHz	2472MHz
Transmitting(802.11n40/ax40)	2422MHz	2442MHz	2462MHz
Receiving(802.11b/g/n/ax20)	2412MHz	2442MHz	2472MHz
Receiving(802.11 n40/ax40)	2422MHz	2442MHz	2462MHz

7.1 RF Output power

7.1.1 Definition

The RF output power is defined as the mean equivalent isotropically radiated power (e.i.r.p.) of the equipment during a transmission burst.

7.1.2 Limit

The maximum RF output power for adaptive Frequency Hopping equipment shall be equal to or less than 20dBm.
The maximum RF output power for non-adaptive equipment shall be declared by the supplier and shall not exceed 20 dBm. See clause 5.4.1 m). For non-adaptive equipment using wide band modulations other than FHSS, the maximum RF output power shall be equal to or less than the value declared by the manufacturer.
This limit shall apply for any combination of power level and intended antenna assembly.

7.1.3 EUT Operation Condition

The EUT was programmed to be in continuously transmitting mode.

7.1.4 Test Procedure

Step 1:

• Use a fast power sensor suitable for 2.4 GHz and capable of minimum 1 MS/s.

• Use the following settings:

- Sample speed 1 MS/s or faster.

- The samples shall represent the RMS power of the signal.

- Measurement duration: For non-adaptive equipment: equal to the observation period defined in clause 4.3.1.3.2 or clause 4.3.2.4.2. For adaptive equipment, the measurement duration shall be long enough to ensure a minimum number of bursts (at least 10) are captured.

NOTE 1: For adaptive equipment, to increase the measurement accuracy, a higher number of bursts may be used.

Step 2:

• For conducted measurements on devices with one transmit chain:

- Connect the power sensor to the transmit port, sample the transmit signal and store the raw data. Use these stored samples in all following steps.

• For conducted measurements on devices with multiple transmit chains:

- Connect one power sensor to each transmit port for a synchronous measurement on all transmit ports.

- Trigger the power sensors so that they start sampling at the same time. Make sure the time difference between the samples of all sensors is less than 500 ns.

- For each individual sampling point (time domain), sum the coincident power samples of all ports and store them. Use these summed samples in all following steps.

Step 3:

• Find the start and stop times of each burst in the stored measurement samples.

The start and stop times are defined as the points where the power is at least 30 dB below the highest value of the stored samples in step 2.

NOTE 2: In case of insufficient dynamic range, the value of 30 dB may need to be reduced appropriately.

Step 4:

• Between the start and stop times of each individual burst calculate the RMS power over the burst using the formula below. Save these Pburst values, as well as the start and stop times for each burst.

$$P_{burst} = \frac{1}{k}\sum_{n=1}^{k} P_{sample}(n)$$

with 'k' being the total number of samples and 'n' the actual sample number

Step 5:

• The highest of all Pburst values (value "A" in dBm) will be used for maximum e.i.r.p. calculations.

Step 6:

• Add the (stated) antenna assembly gain "G" in dBi of the individual antenna.

• If applicable, add the additional beamforming gain "Y" in dB.

• If more than one antenna assembly is intended for this power setting, the maximum overall antenna gain (G or G + Y) shall be used.

• The RF Output Power (P) shall be calculated using the formula below:

P = A + G + Y

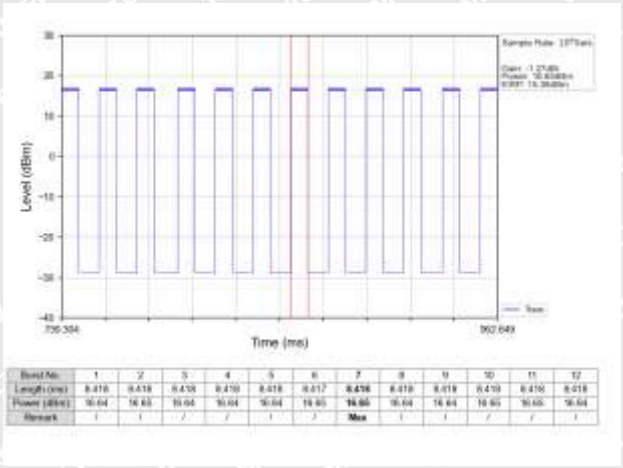
• This value, which shall comply with the limit given in clause 4.3.1.2.3 or clause 4.3.2.2.3, shall be recorded in the test report.

7.1.5Measurement Record

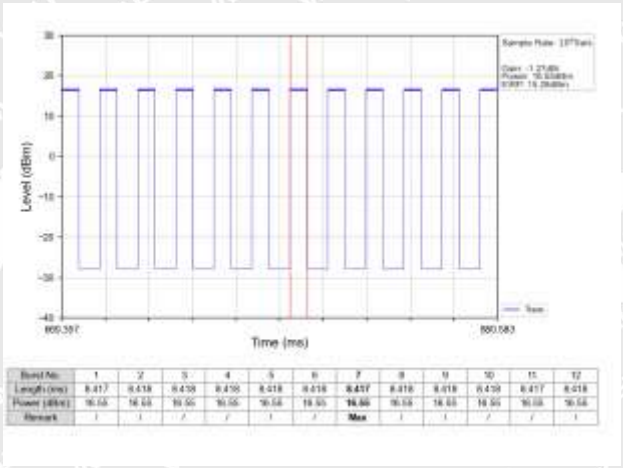
Modulation	Test conditions		EIRP (dBm)		
			Low CH	Middle CH	High CH
802.11b	Normal		15.38	15.28	14.66
	Extreme	LT	15.35	15.28	14.57
		HT	15.21	15.23	14.61
	Max. radiated Power			**15.38**	
802.11g	Normal		14.49	15.09	14.35
	Extreme	LT	14.48	15.15	14.36
		HT	14.49	15.14	14.41
	Max. radiated Power			15.09	
802.11n HT20	Normal		14.38	14.92	14.31
	Extreme	LT	14.37	14.94	14.30
		HT	14.37	14.91	14.26
	Max. radiated Power			14.92	
802.11n HT40	Normal		14.12	14.80	14.45
	Extreme	LT	14.16	14.83	14.43
		HT	14.18	14.82	14.41
	Max. radiated Power			14.80	
802.11ax HE20	Normal		14.27	14.80	14.15
	Extreme	LT	14.28	14.81	14.20
		HT	14.28	14.81	14.17
	Max. radiated Power			14.80	
802.11ax HE40	Normal		14.08	14.75	14.36
	Extreme	LT	14.10	14.80	14.35
		HT	14.10	14.77	14.37
	Max. radiated Power			14.75	
Limit			≤100mW (20dBm)		
Remark: P = A + G + Y, G=-1.27dBi, Y=0dB					

Test Plots

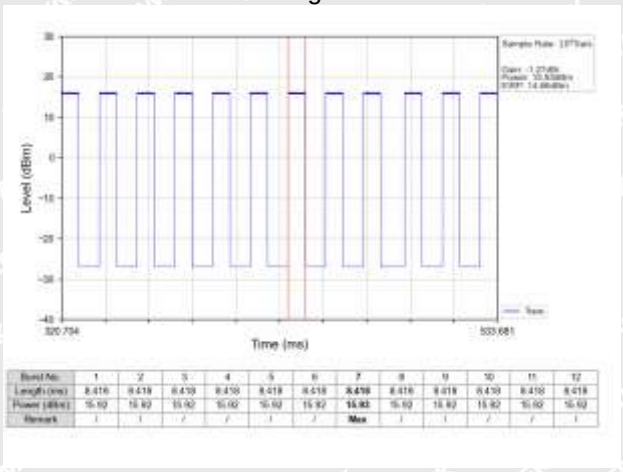
802.11b Low Channel



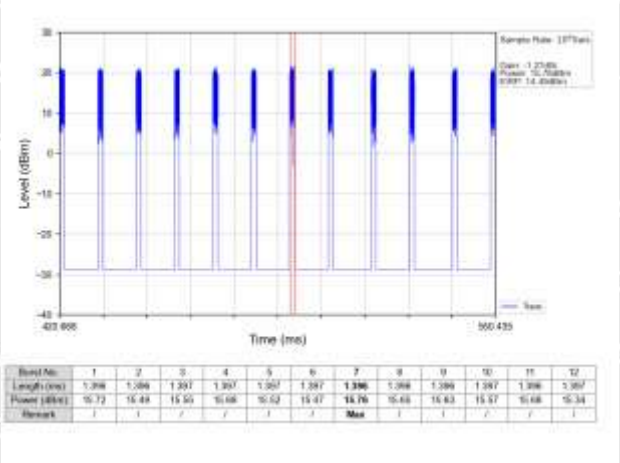
802.11b Middle Channel



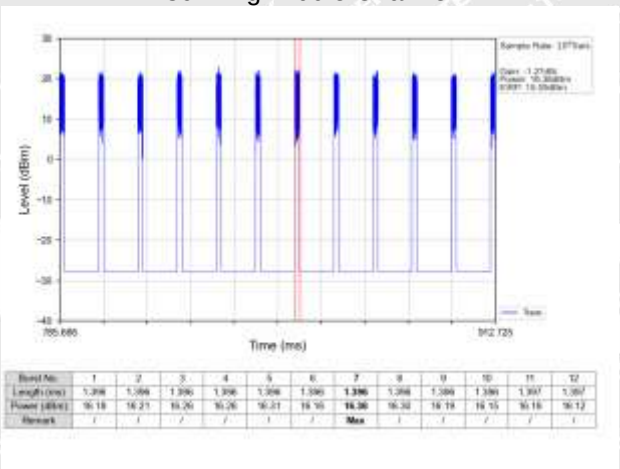
802.11b High Channel



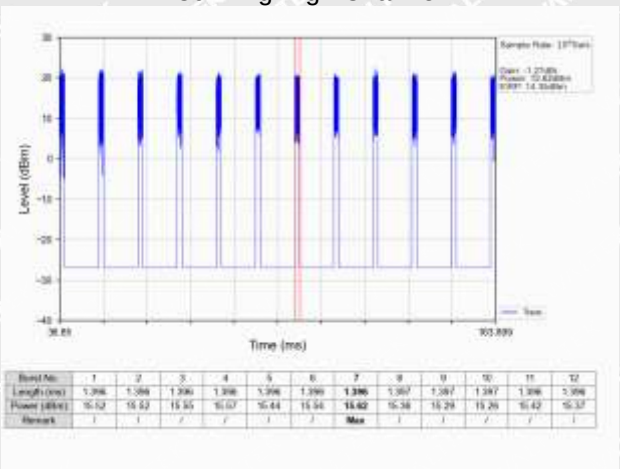
802.11g Low Channel



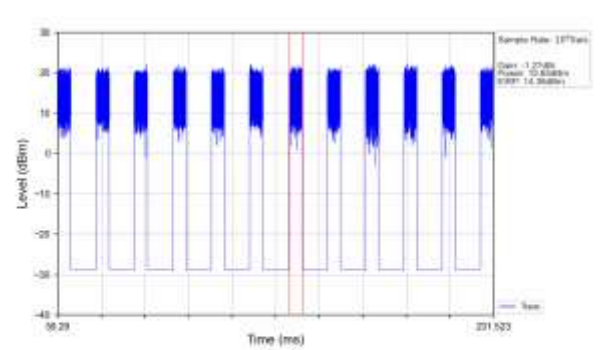
802.11g Middle Channel



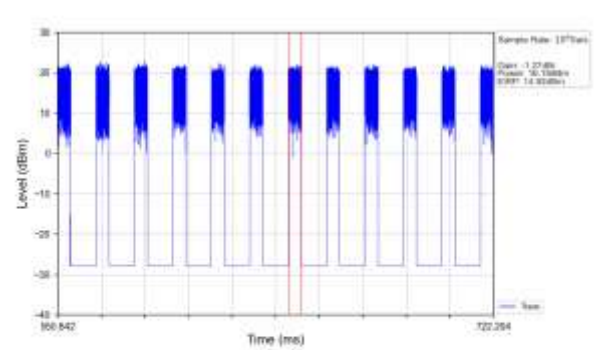
802.11g High Channel



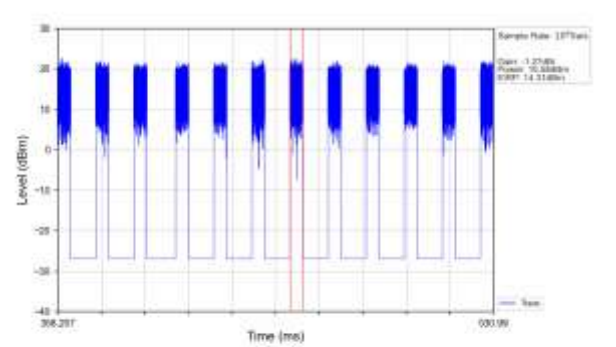
802.11n20 Low Channel



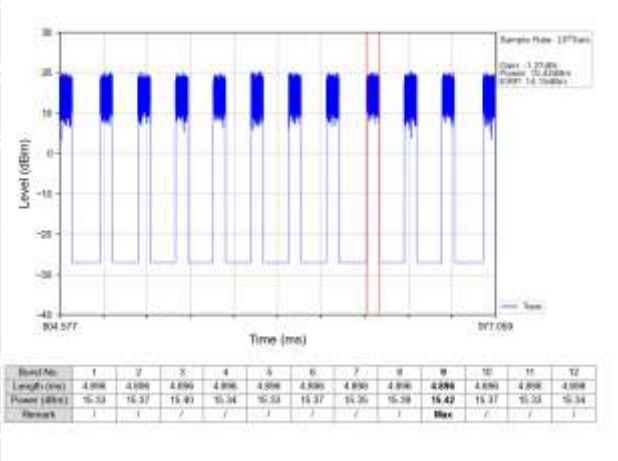
802.11n20 Middle Channel



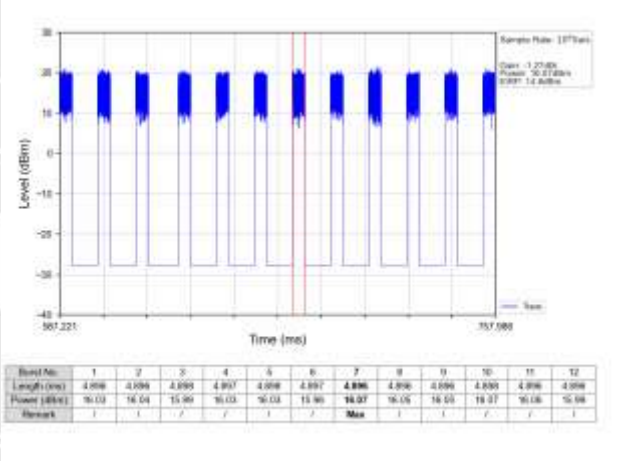
802.11n20 High Channel



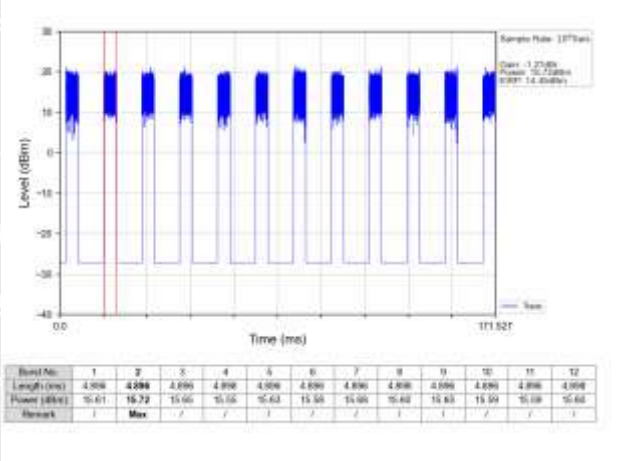
802.11n40 Low Channel



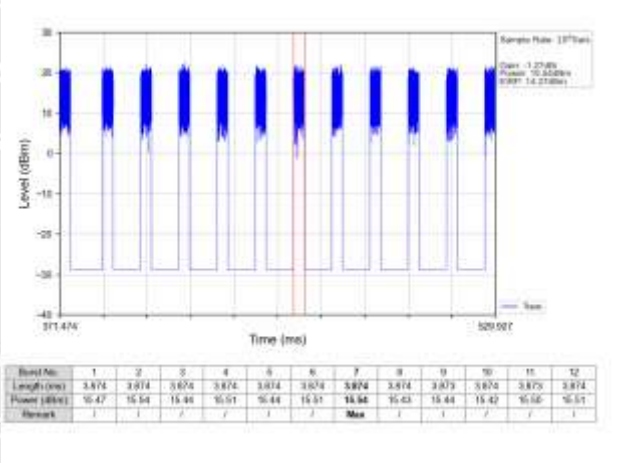
802.11n40 Middle Channel



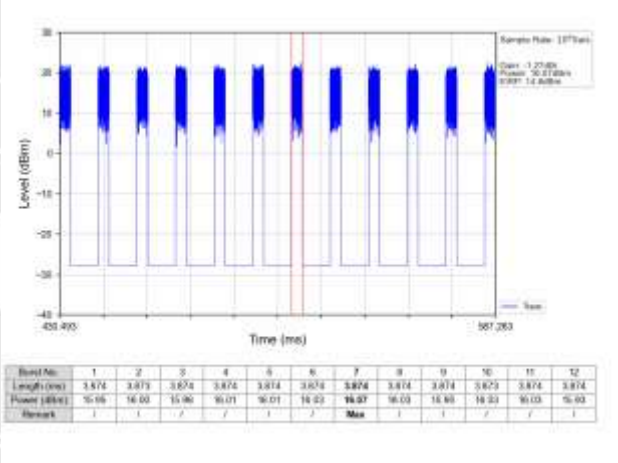
802.11n40 High Channel



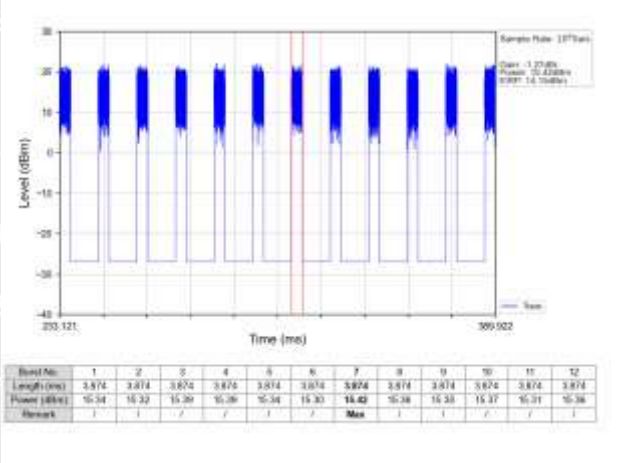
802.11ax20 Low Channel



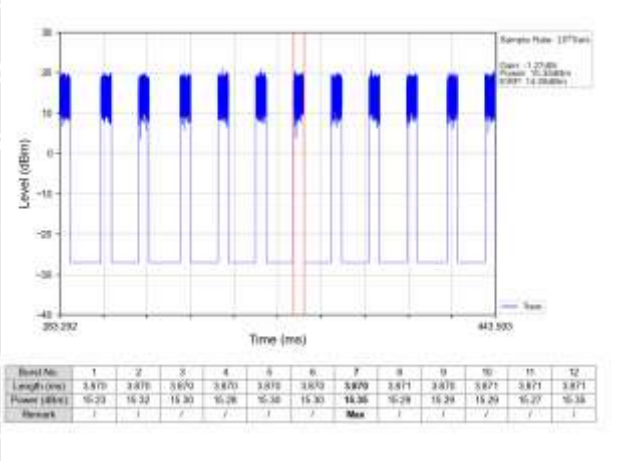
802.11ax20 Middle Channel



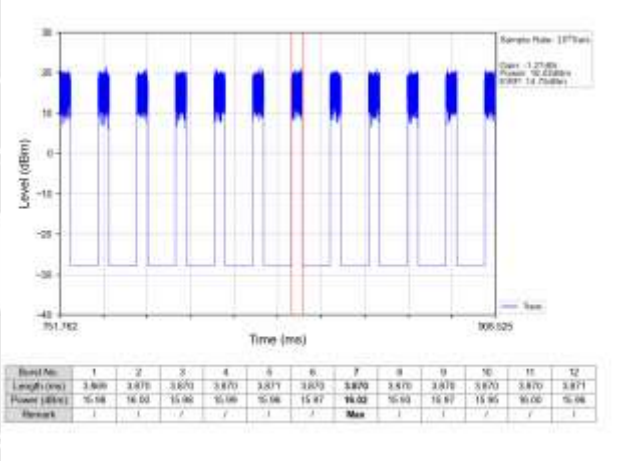
802.11ax20 High Channel



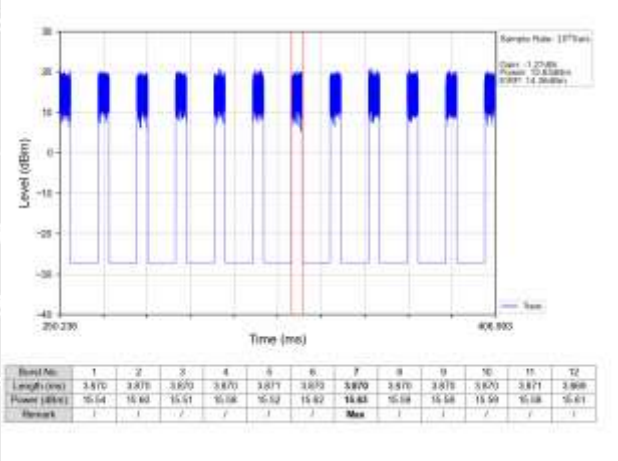
802.11ax40 Low Channel



802.11ax40 Middle Channel



802.11ax40 High Channel



7.2 Power Spectral Density

7.2.1Definition

The Power Spectral Density is the mean equivalent isotropically radiated power (e.i.r.p.) spectral density in a 1 MHz bandwidth during a transmission burst.

7.2.2Limit

For equipment using wide band modulations other than FHSS, the maximum Power Spectral Density is limited to 10 dBm per MHz.

7.2.3EUT Operation Condition

The EUT was programmed to be in continuously transmitting mode.

7.2.4 Test Procedure

Step 1:

Connect the UUT to the spectrum analyser and use the following settings:

• Start Frequency: 2 400 MHz

• Stop Frequency: 2 483,5 MHz

• Resolution BW: 10 kHz

• Video BW: 30 kHz

• Sweep Points: > 8 350

NOTE: For spectrum analysers not supporting this number of sweep points, the frequency band may be segmented.

• Detector: RMS

• Trace Mode: Max Hold

• Sweep time: For non-continuous transmissions: 2 × Channel Occupancy Time × number of sweep points

For continuous transmissions: 10 s; the sweep time may be increased further until a value where the sweep time has no further impact anymore on the RMS value of the signal.

For non-continuous signals, wait for the trace to stabilize.

Save the data (trace data) set to a file.

Step 2:

For conducted measurements on smart antenna systems using either operating mode 2 or operating mode 3 (see clause 5.3.2.2), repeat the measurement for each of the transmit ports. For each sampling point (frequency domain), add up the coincident power values (in mW) for the different transmit chains and use this as the new data set.

Step 3:

Add up the values for power for all the samples in the file using the formula below.

$$P_{Sum} = \sum_{n=1}^{k} P_{sample}(n)$$

with 'k' being the total number of samples and 'n' the actual sample number

Step 4:

Normalize the individual values for power (in dBm) so that the sum is equal to the RF Output Power (e.i.r.p.) measured in clause 5.4.2 and save the corrected data. The following formulas can be used:

$$C_{Corr} = P_{Sum} - P_{e.i.r.p.}$$

$$P_{Samplecorr}(n) = P_{Sample}(n) - C_{Corr}$$

with 'n' being the actual sample number

Step 5:

Starting from the first sample *PSamplecorr(n)* (lowest frequency), add up the power (in mW) of the following samples representing a 1 MHz segment and record the results for power and position (i.e. sample #1 to sample #100). This is the Power Spectral Density (e.i.r.p.) for the first 1 MHz segment which shall be recorded.

Step 6:

Shift the start point of the samples added up in step 5 by one sample and repeat the procedure in step 5 (i.e. sample #2 to sample #101).

Step 7:

Repeat step 6 until the end of the data set and record the Power Spectral Density values for each of the 1 MHz segments.

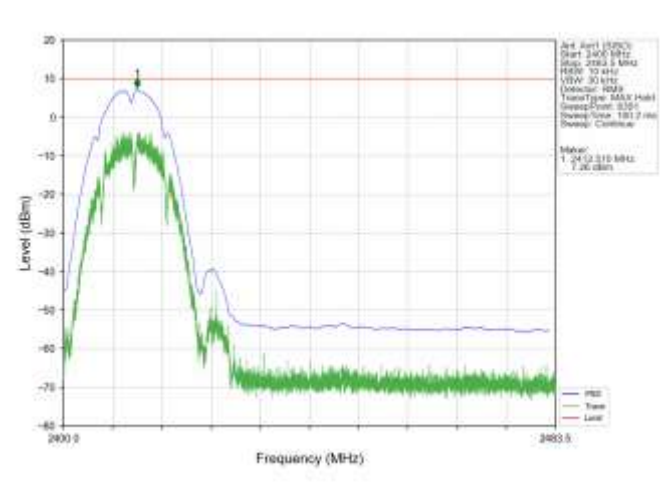
From all the recorded results, the highest value is the maximum Power Spectral Density for the UUT. This value, which shall comply with the limit given in clause 4.3.2.3.3, shall be recorded in the test report.

7.2.5Measurement Record

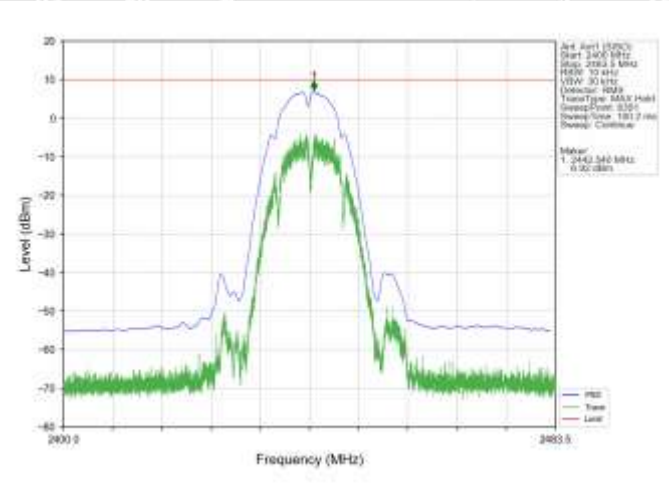
Modulation	Maximum e.i.r.p. Spectral Density (dBm/MHz)		
	Low Channel	Middle Channel	High Channel
802.11b	7.26	6.92	6.59
802.11g	4.18	4.76	4.04
802.11n20	3.33	3.68	3.97
802.11n40	0.65	0.84	0.38
802.11ax20	3.07	3.31	2.82
802.11ax40	-0.34	0.28	-0.03
Limit	≤10dBm/MHz		
Remark: PSD = D + G + Y, G=-1.27dBi, Y=0 dBm/MHz			

Test Plots

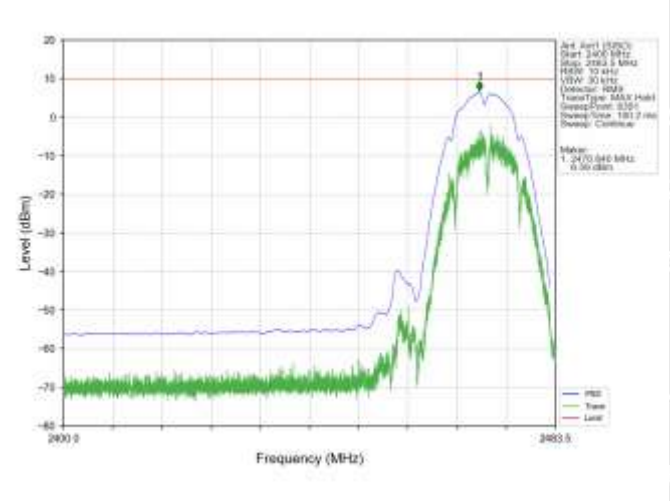
802.11b Low Channel



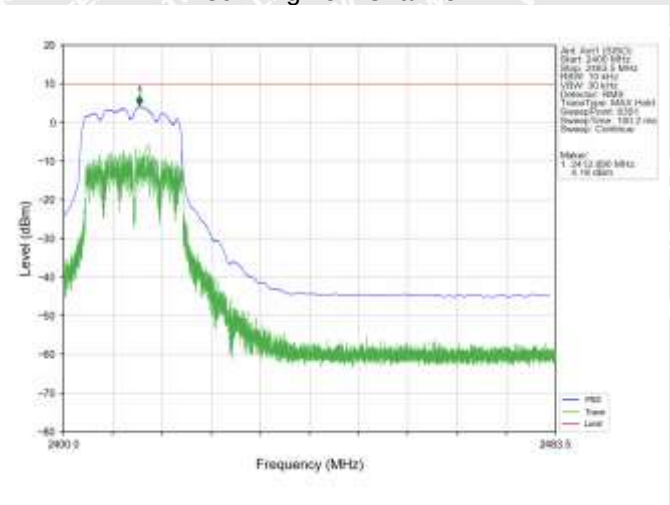
802.11b Middle Channel



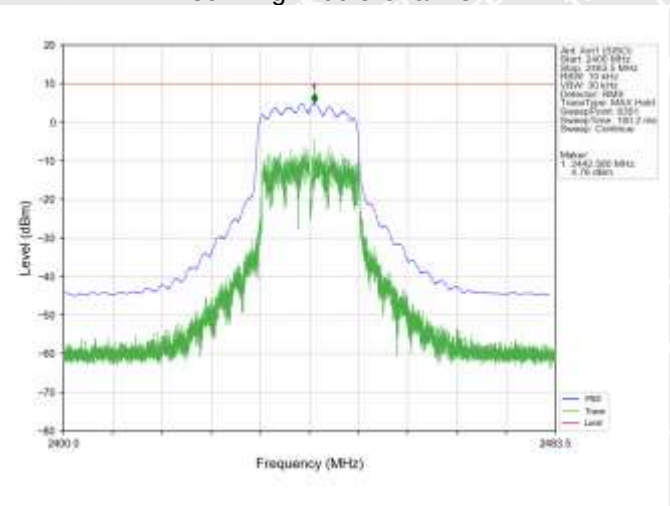
802.11b High Channel



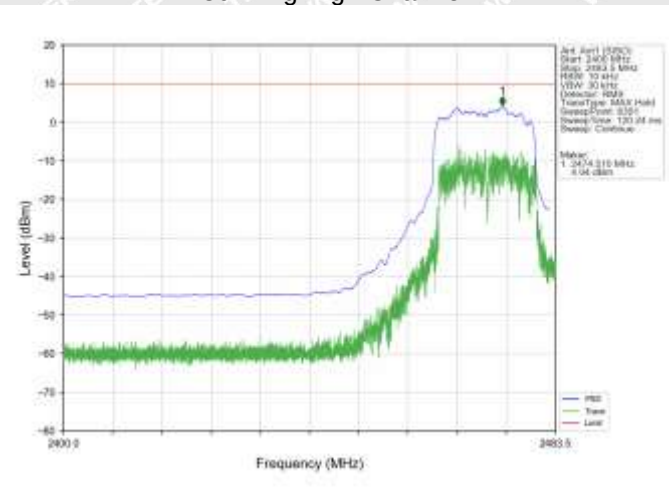
802.11g Low Channel



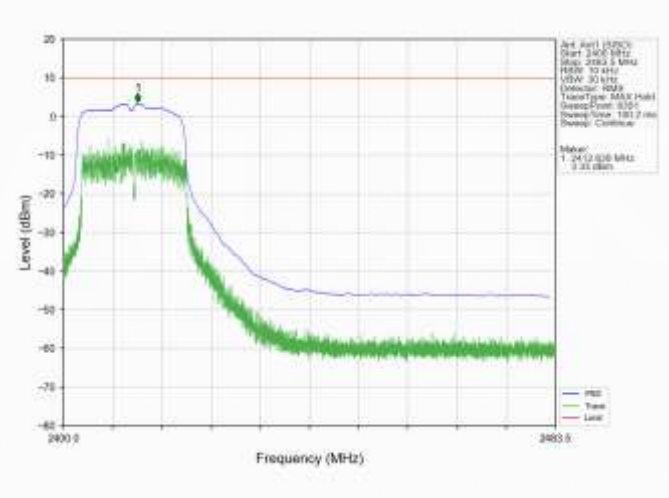
802.11g Middle Channel



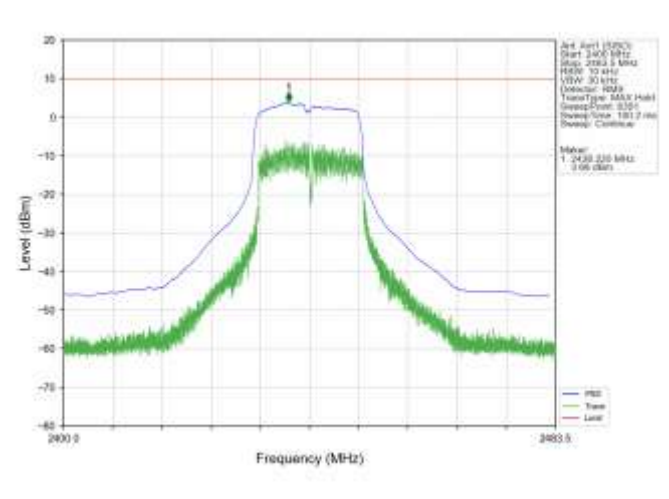
802.11g High Channel



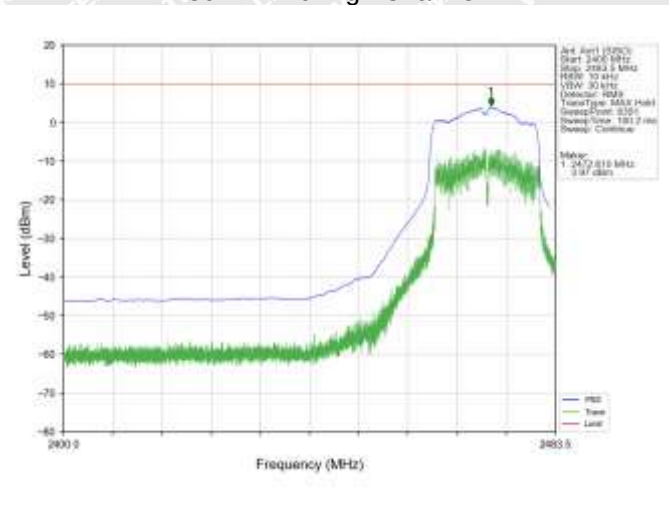
802.11n20 Low Channel



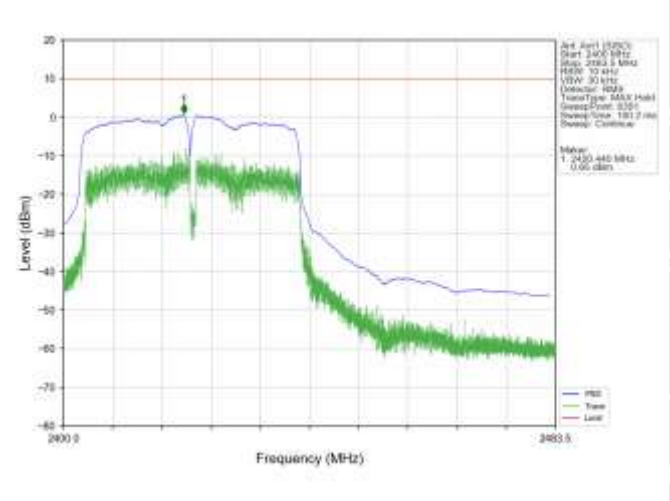
802.11n20 Middle Channel



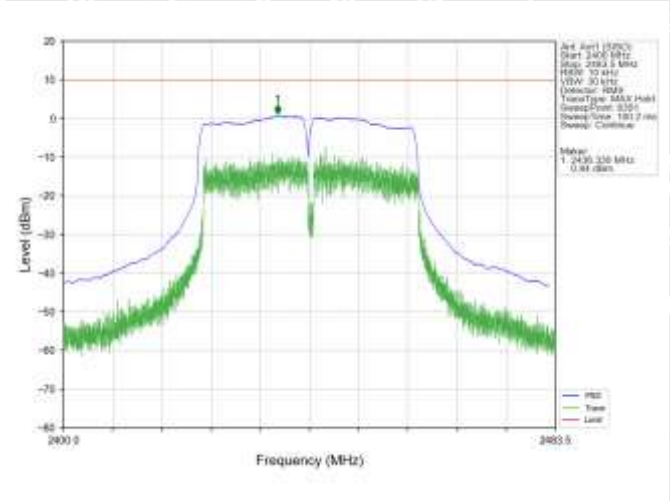
802.11n20 High Channel



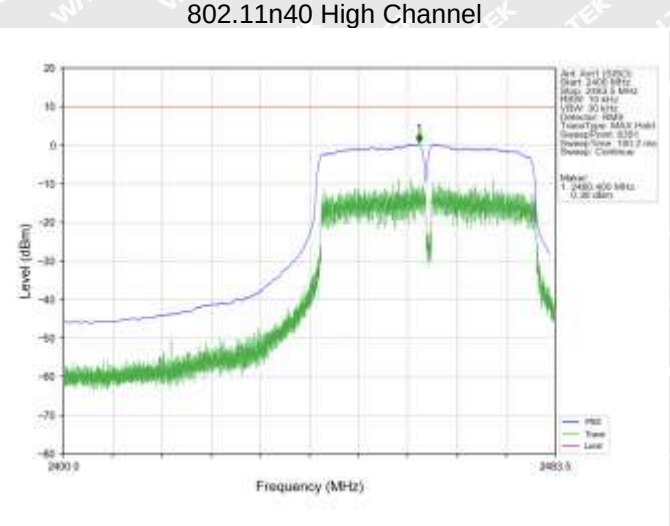
802.11n40 Low Channel



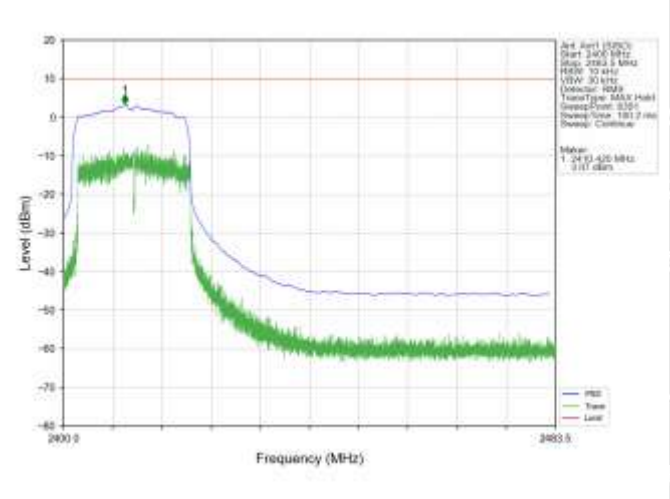
802.11n40 Middle Channel



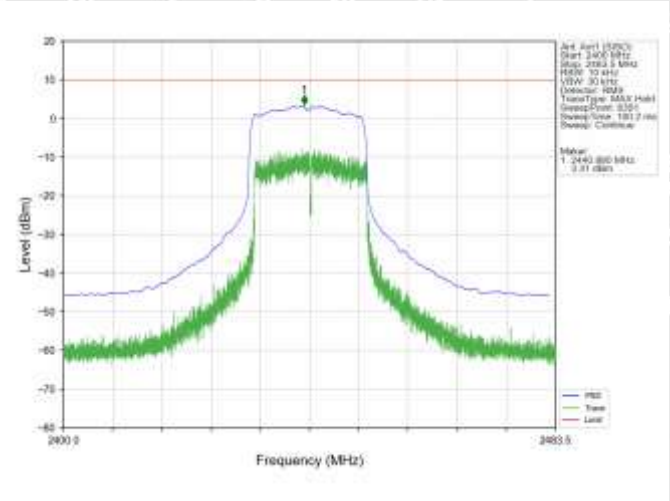
802.11n40 High Channel



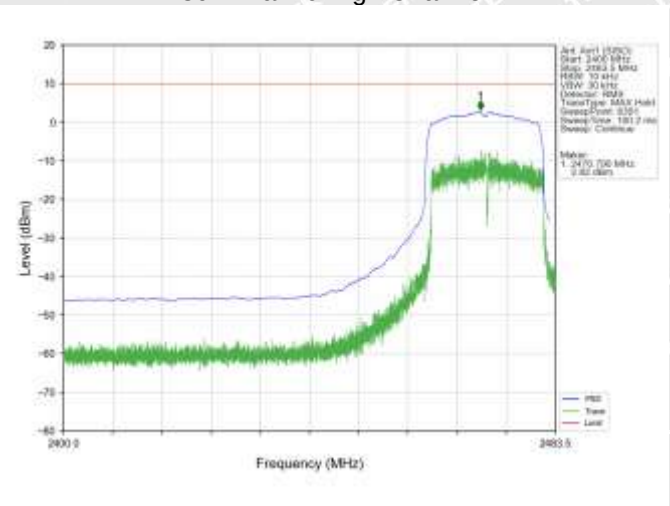
802.11ax20 Low Channel



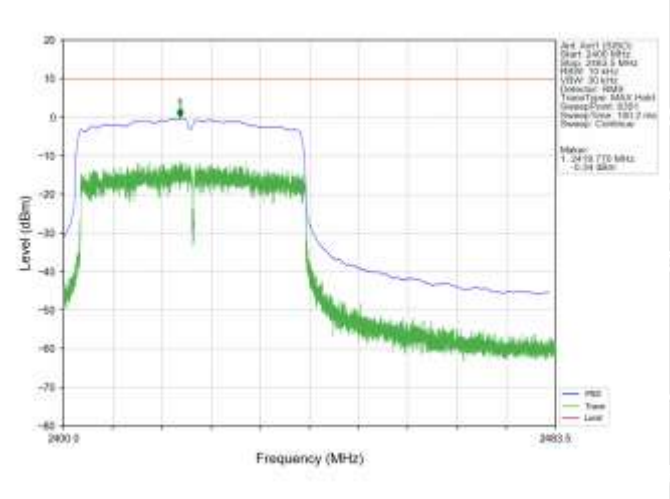
802.11ax20 Middle Channel



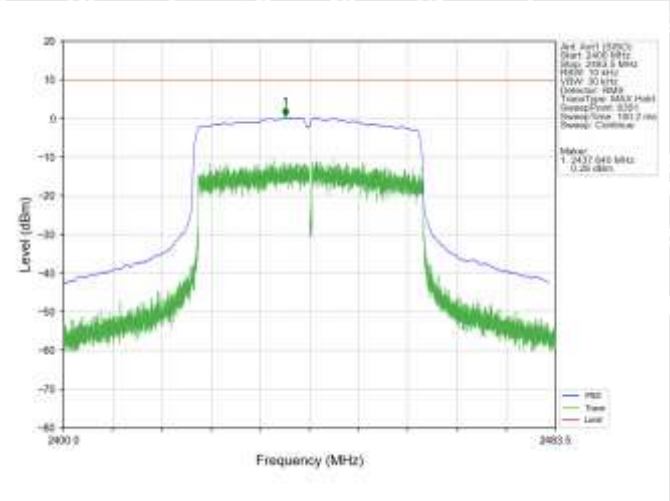
802.11ax20 High Channel



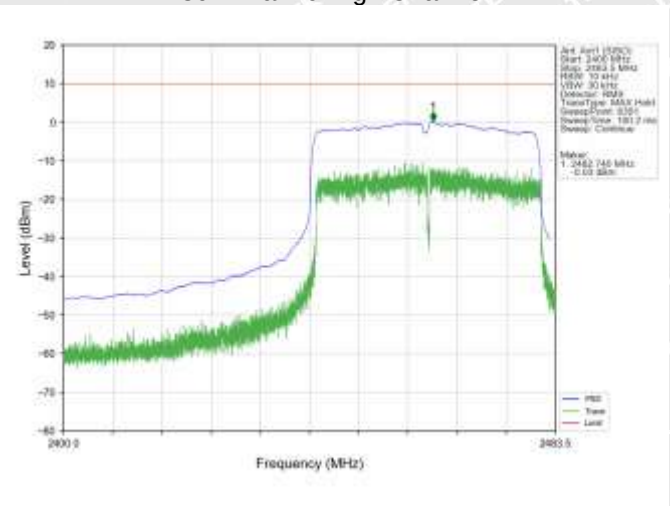
802.11ax40 Low Channel



802.11ax40 Middle Channel



802.11ax40 High Channel



7.3 Adaptivity (adaptive equipment using modulations other than FHSS)

7.3.1 Adaptivity Definition

Non-LBT based Detect and Avoid is a mechanism for equipment using wide band modulations other than FHSS and by which a given channel is made 'unavailable' because an interfering signal was reported after the transmission in that channel. This mechanism shall operate as intended in the presence of an unwanted signal on frequencies other than those of the operating band.

LBT based Detect and Avoid is a mechanism by which equipment using wide band modulations other than FHSS,avoids transmissions in a channel in the presence of an interfering signal in that channel. This mechanism shall operate as intended in the presence of an unwanted signal on frequencies other than those of the operating band.

Short Control Signalling Transmissions are transmissions used by adaptive equipment to send control signals(e.g. ACK/NACK signals, etc.) without sensing the operating channel for the presence of other signals.

Adaptive equipment may or may not have Short Control Signalling Transmissions.

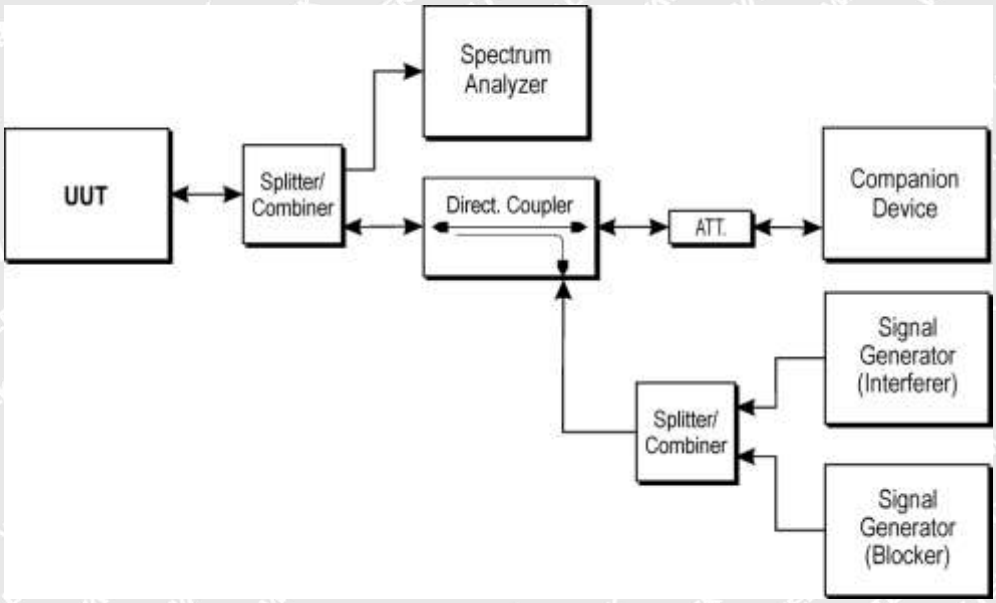
7.3.2 Adaptivity Limit

Refer to section 4.3.2.6.2.2 and 4.3.2.6.3.2 and 4.3.2.6.4.2 of ETSI EN 300 328 V2.2.2

7.3.3 EUT Operation Condition

The EUT was programmed to be in transmitting on mode.

7.3.4 Test Procedure



7.3.5Measurement Record

COT

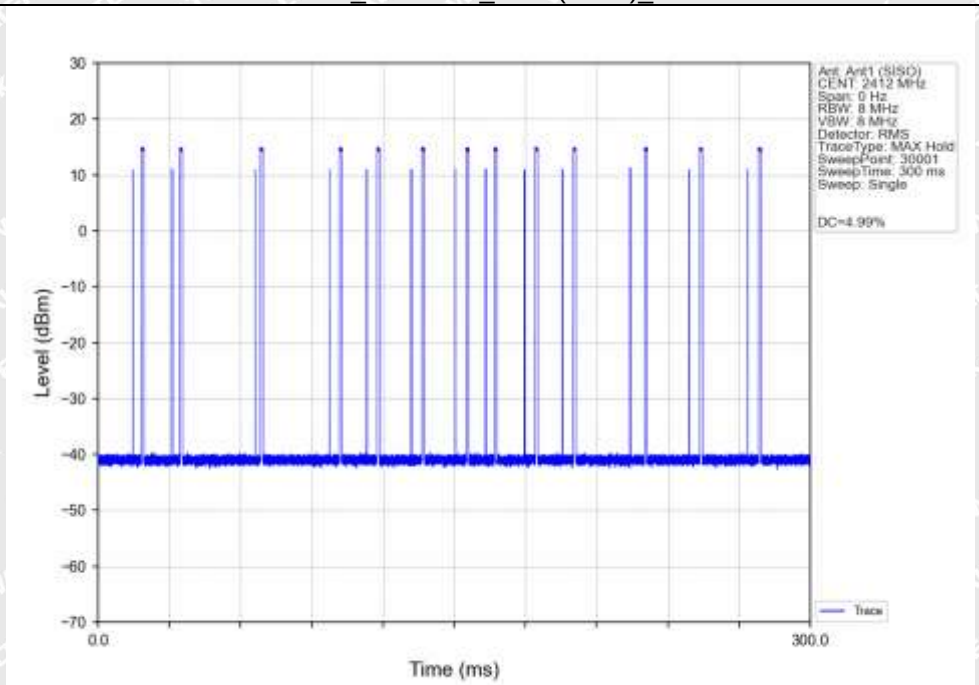
ENV	Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	Min Idle Time (ms)		Max COT (ms)		Verdict
							Result	Limit	Result	Limit	
NTNV	802.11b	SISO	2412	/	/	1	2.180	>=0.018	1.120	<=13	Pass
			2462	/	/	1	0.110	>=0.018	1.120	<=13	Pass
	802.11g	SISO	2412	/	/	1	0.080	>=0.018	1.120	<=13	Pass
			2462	/	/	1	0.080	>=0.018	1.120	<=13	Pass
	802.11n (HT20)	SISO	2412	/	/	1	0.130	>=0.018	1.120	<=13	Pass
			2462	/	/	1	0.140	>=0.018	1.120	<=13	Pass
	802.11n (HT40)	SISO	2422	/	/	1	0.120	>=0.018	1.120	<=13	Pass
			2462	/	/	1	0.080	>=0.018	1.120	<=13	Pass
	802.11ax (HEW20)	SISO	2412	SU	/	1	0.100	>=0.018	1.120	<=13	Pass
			2462	SU	/	1	0.110	>=0.018	1.120	<=13	Pass
	802.11ax (HEW40)	SISO	2422	SU	/	1	3.080	>=0.018	1.120	<=13	Pass
			2462	SU	/	1	1.290	>=0.018	1.120	<=13	Pass

Adaptivity

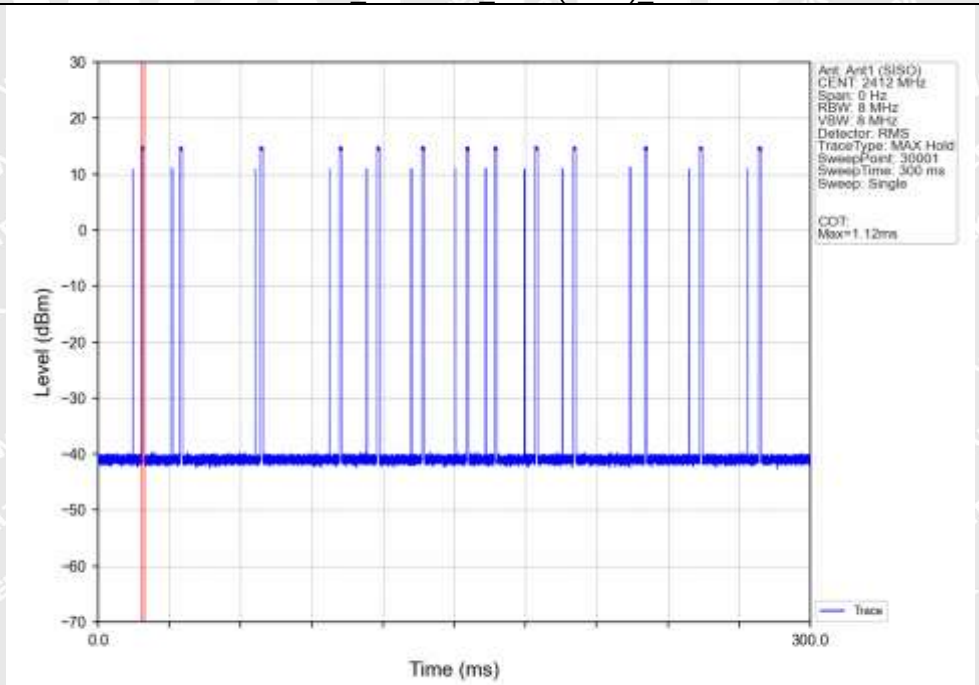
ENV	Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	Interference Signal			Max. Short Control Signal		Verdict
							Type	Add Time (s)	Level (dBm/MHz)	Duty Cycle (%)	Limit (%)	
NTNV	802.11b	SISO	2412	/	/	1	AWGN	1.147	-66.65	0.00	<=10	Pass
							AWGN+CW	61.147	-66.65	0.00	<=10	Pass
			2462	/	/	1	AWGN	1.147	-65.93	0.00	<=10	Pass
							AWGN+CW	61.147	-65.93	0.00	<=10	Pass
	802.11g	SISO	2412	/	/	1	AWGN	1.147	-65.76	0.00	<=10	Pass
							AWGN+CW	61.147	-65.76	0.00	<=10	Pass
			2462	/	/	1	AWGN	1.147	-65.62	0.00	<=10	Pass
							AWGN+CW	61.147	-65.62	0.00	<=10	Pass
	802.11n (HT20)	SISO	2412	/	/	1	AWGN	1.147	-65.65	0.00	<=10	Pass
							AWGN+CW	61.147	-65.65	0.00	<=10	Pass
			2462	/	/	1	AWGN	1.147	-65.58	0.00	<=10	Pass
							AWGN+CW	61.147	-65.58	0.00	<=10	Pass
	802.11n (HT40)	SISO	2422	/	/	1	AWGN	1.147	-65.42	0.00	<=10	Pass
							AWGN+CW	61.147	-65.42	0.00	<=10	Pass
			2462	/	/	1	AWGN	1.147	-65.72	0.00	<=10	Pass
							AWGN+CW	61.147	-65.72	0.00	<=10	Pass
	802.11ax (HEW20)	SISO	2412	SU	/	1	AWGN	1.147	-65.54	0.00	<=10	Pass
							AWGN+CW	61.147	-65.54	0.00	<=10	Pass
			2462	SU	/	1	AWGN	1.147	-65.42	0.00	<=10	Pass
							AWGN+CW	61.147	-65.42	0.00	<=10	Pass
	802.11ax (HEW40)	SISO	2422	SU	/	1	AWGN	1.147	-65.35	0.00	<=10	Pass
							AWGN+CW	61.147	-65.35	0.00	<=10	Pass
			2462	SU	/	1	AWGN	1.147	-65.63	0.00	<=10	Pass
							AWGN+CW	61.147	-65.63	0.00	<=10	Pass

Test Plots
COT

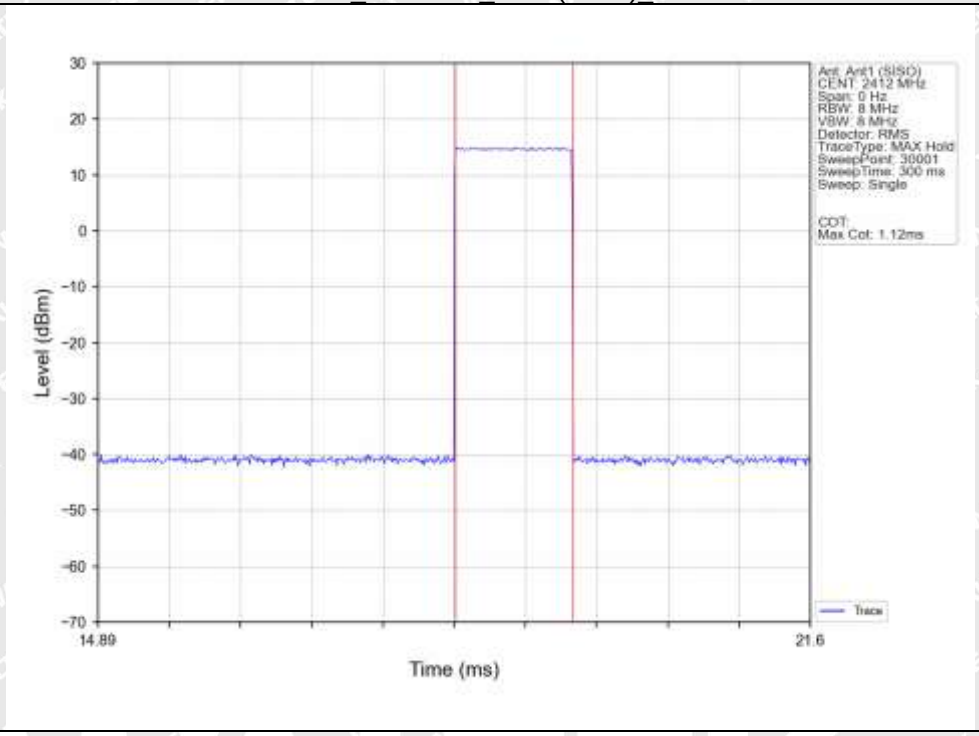
802.11b_2412MHz_Ant1 (SISO)_NTNV



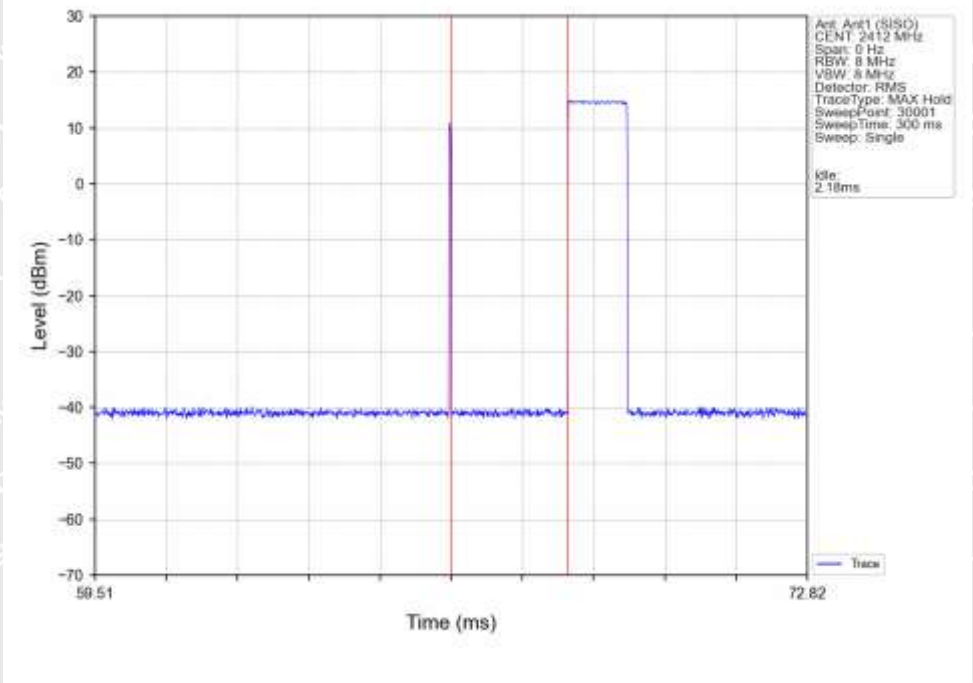
802.11b_2412MHz_Ant1 (SISO)_NTNV



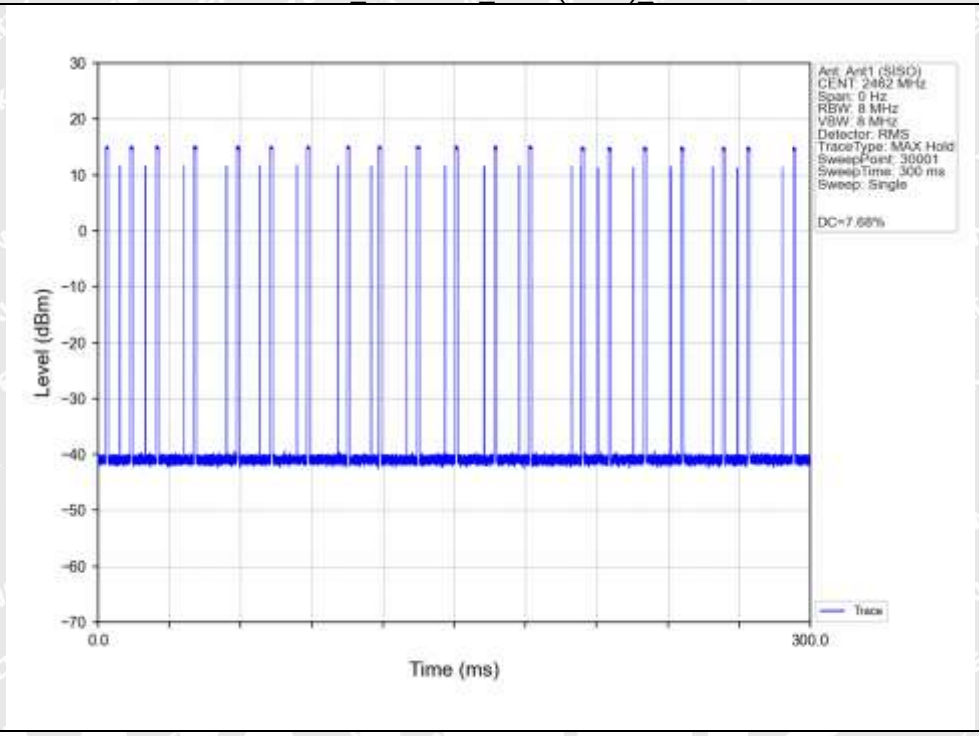
802.11b_2412MHz_Ant1 (SISO)_NTNV



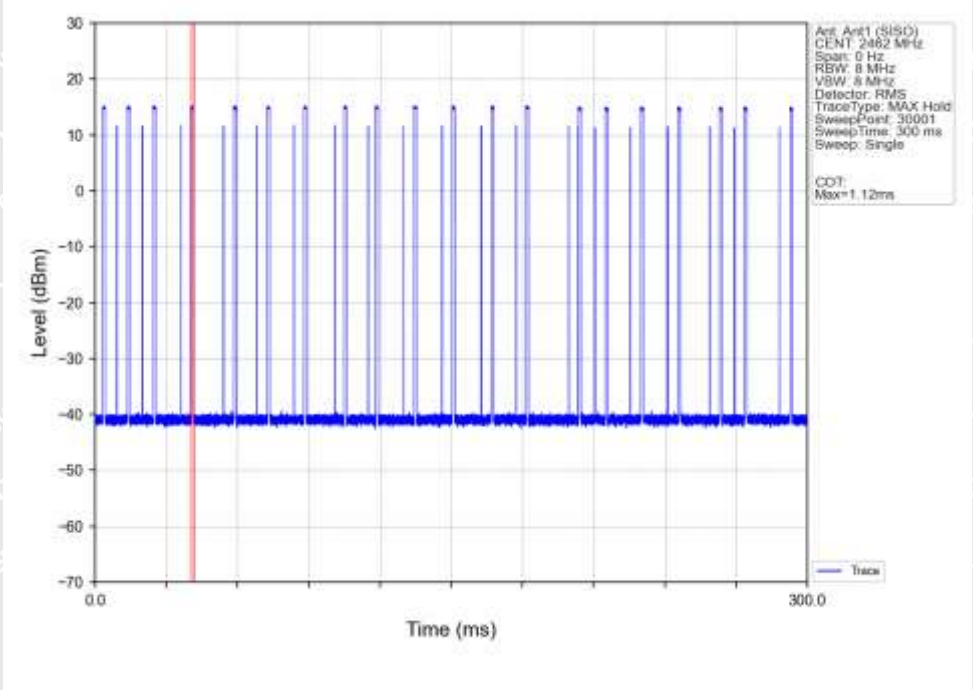
802.11b_2412MHz_Ant1 (SISO)_NTNV



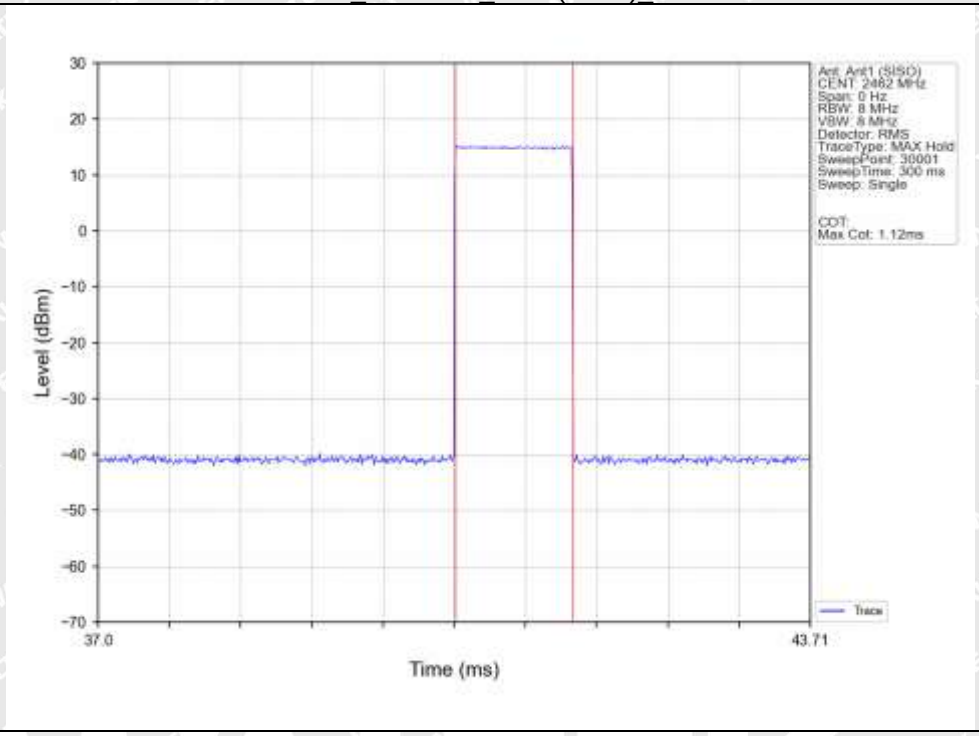
802.11b_2462MHz_Ant1 (SISO)_NTNV



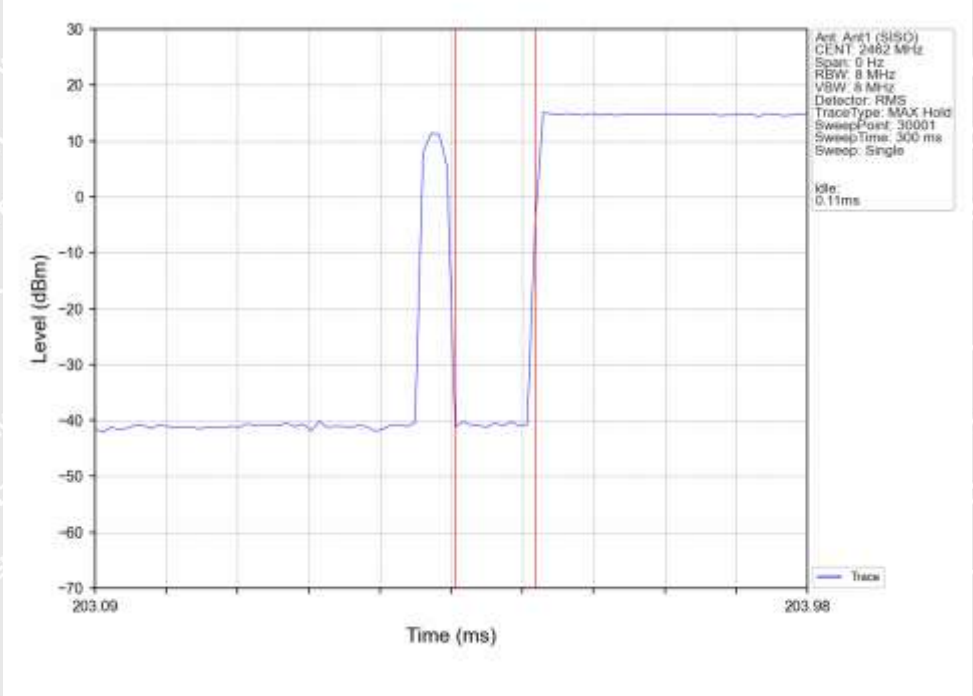
802.11b_2462MHz_Ant1 (SISO)_NTNV



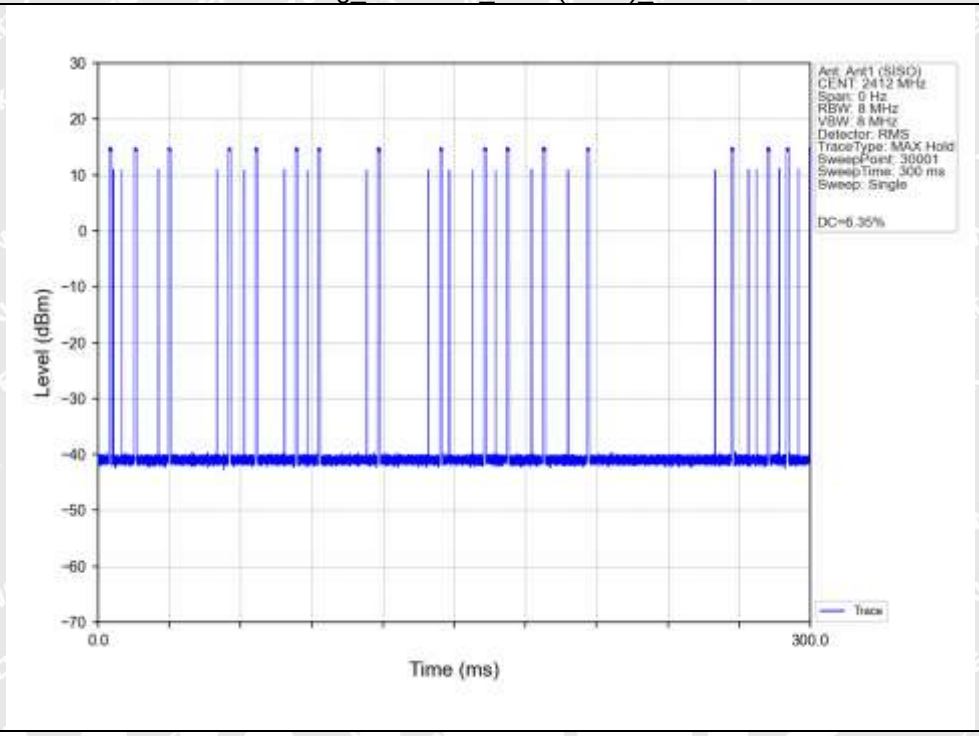
802.11b_2462MHz_Ant1 (SISO)_NTNV



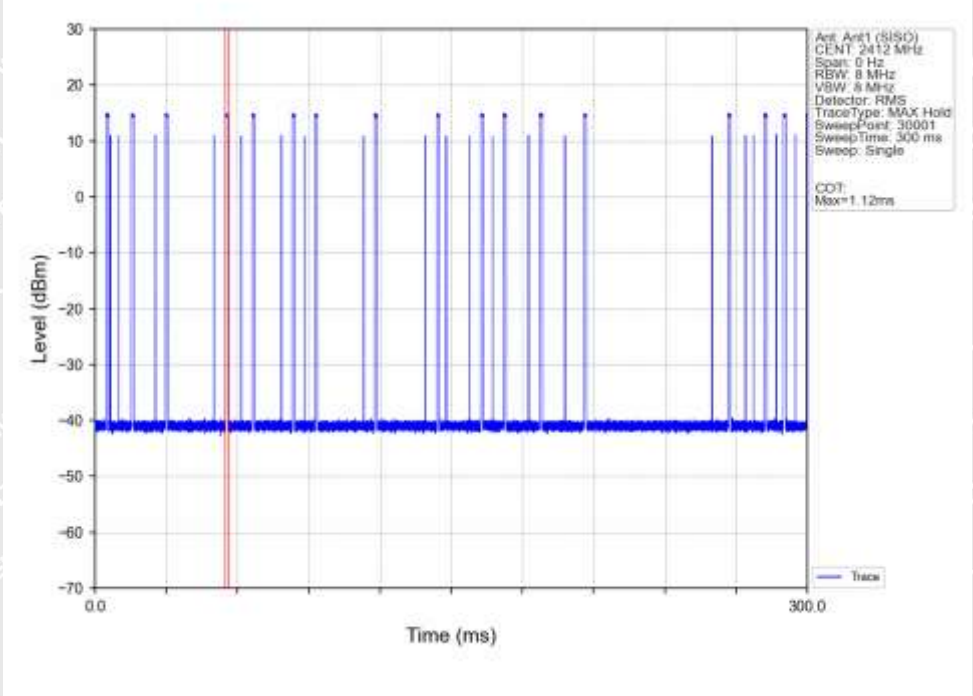
802.11b_2462MHz_Ant1 (SISO)_NTNV

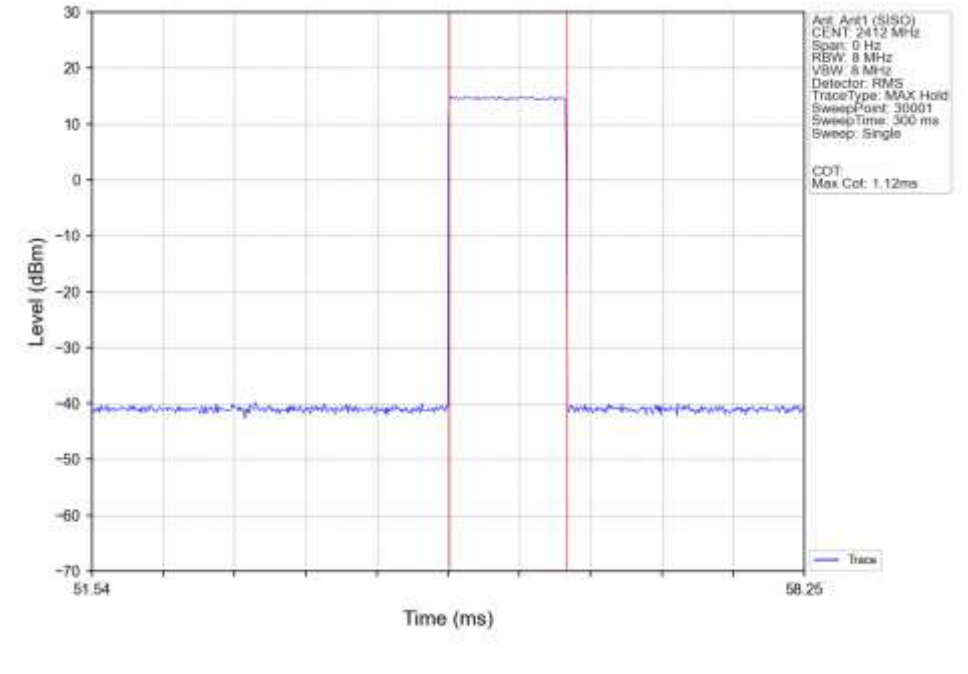


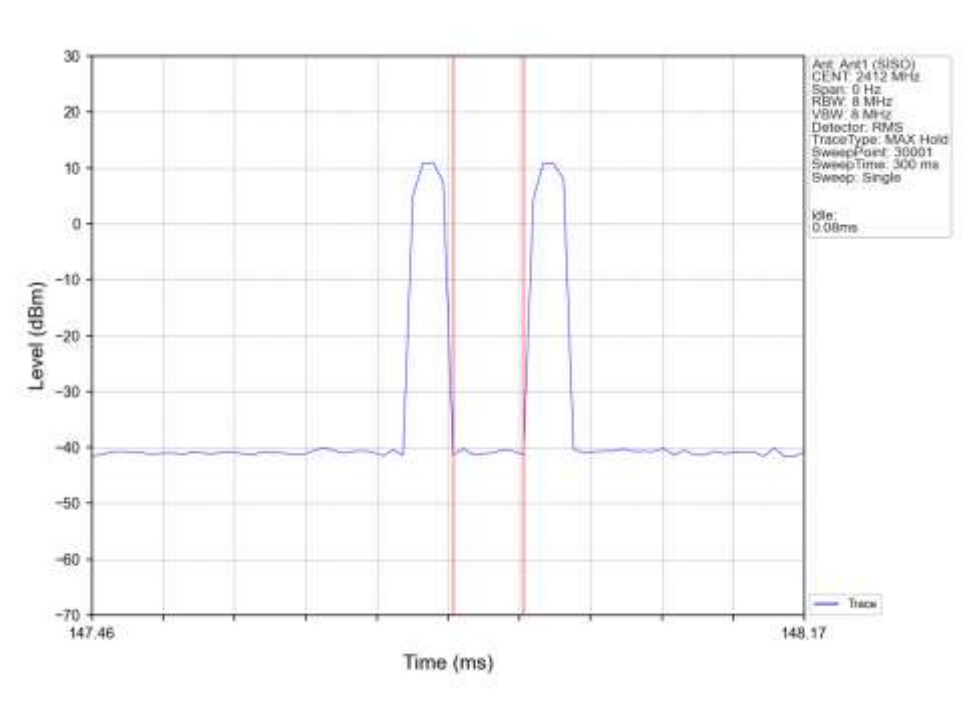
802.11g_2412MHz_Ant1 (SISO)_NTNV



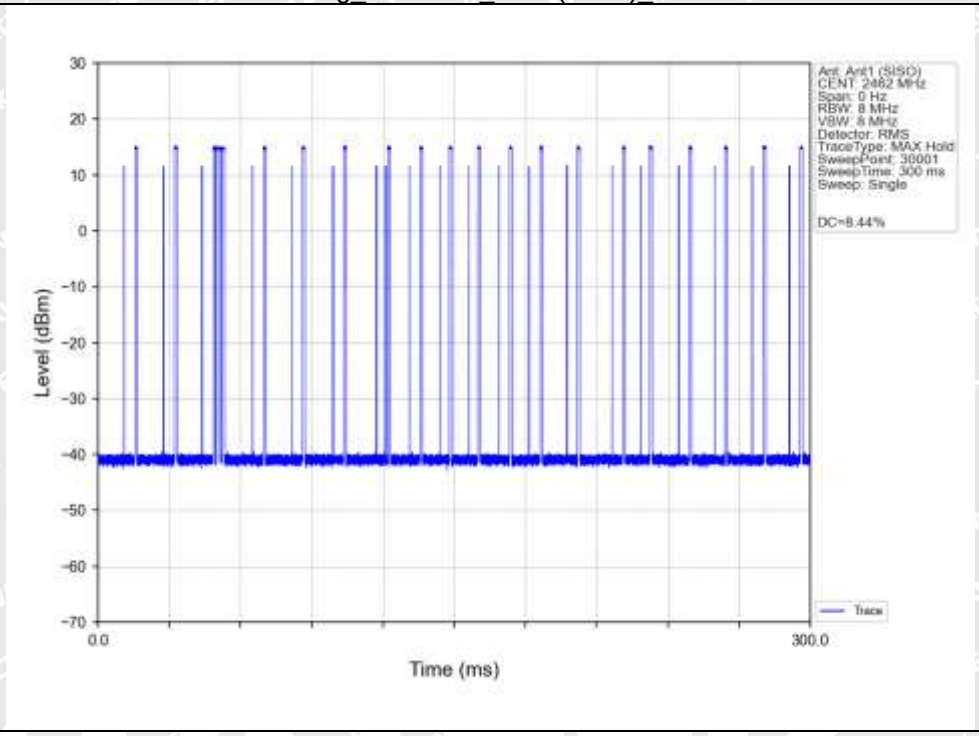
802.11g_2412MHz_Ant1 (SISO)_NTNV



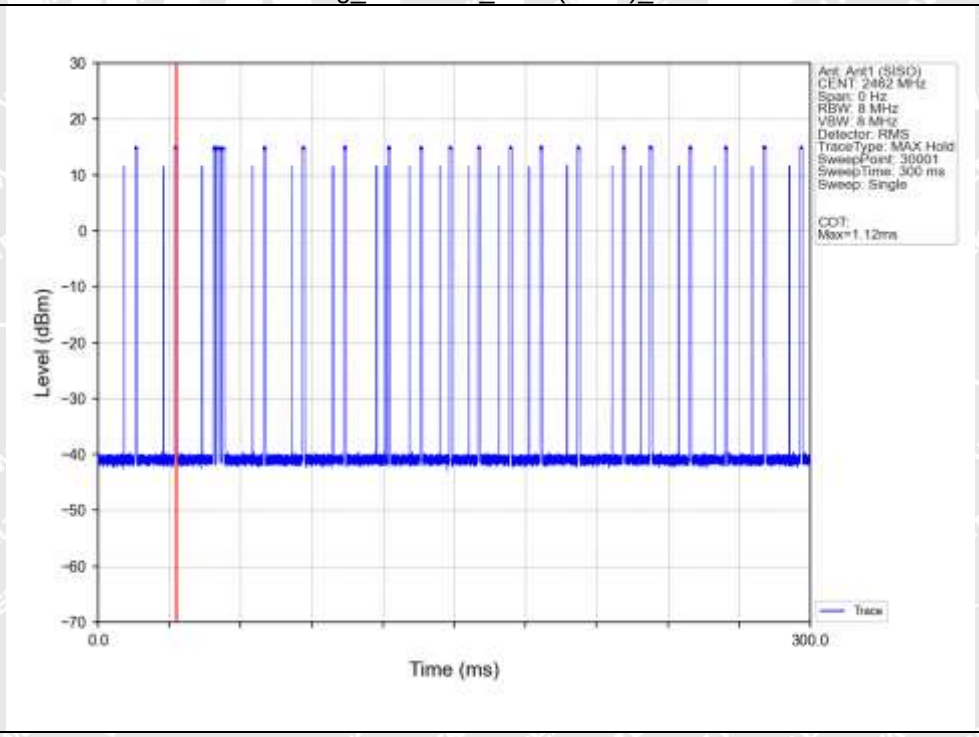
802.11g_2412MHz_Ant1 (SISO)_NTNV


802.11g_2412MHz_Ant1 (SISO)_NTNV


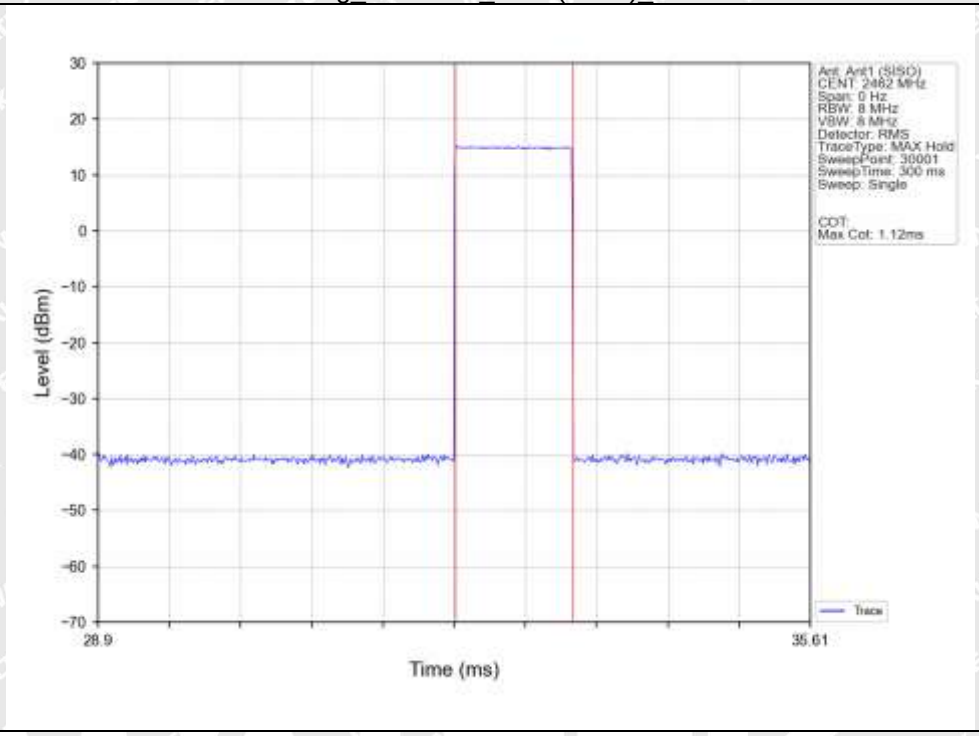
802.11g_2462MHz_Ant1 (SISO)_NTNV



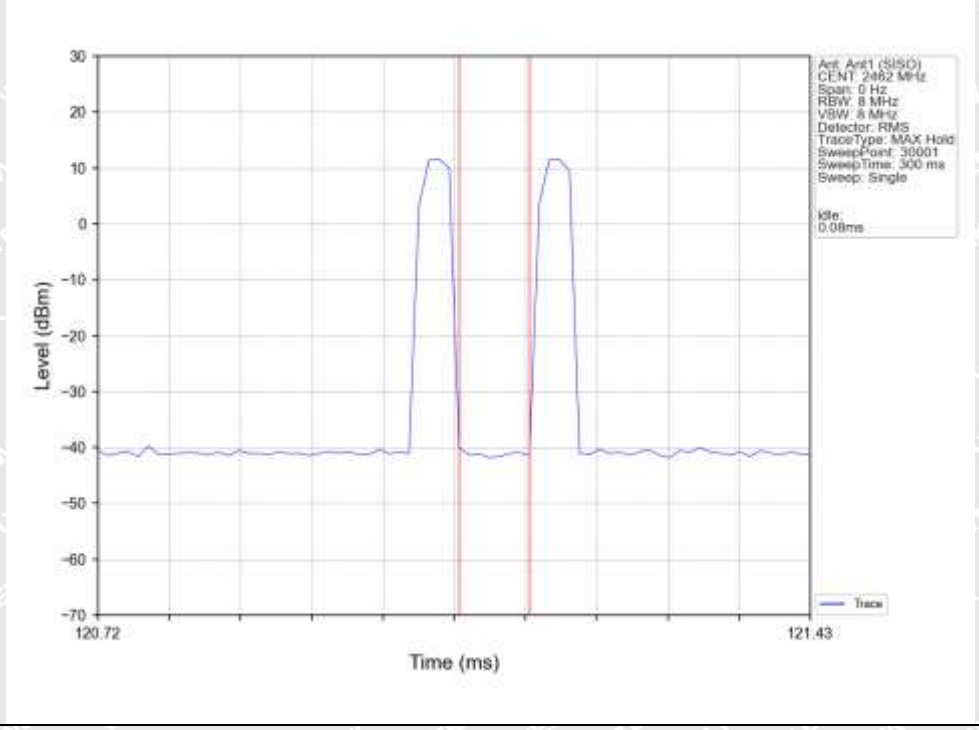
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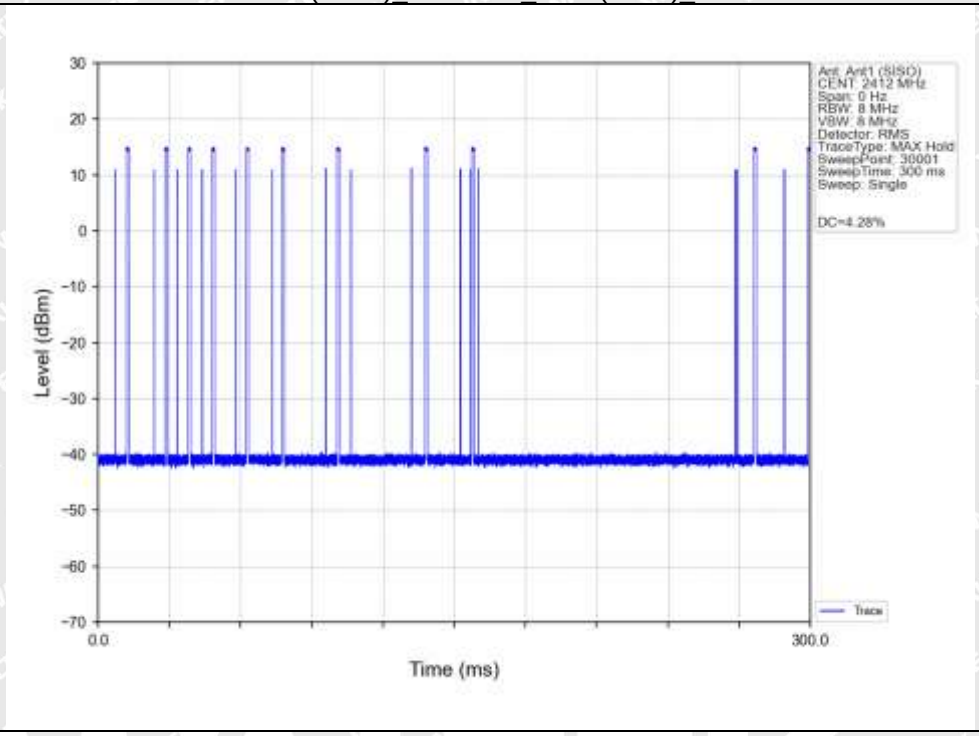
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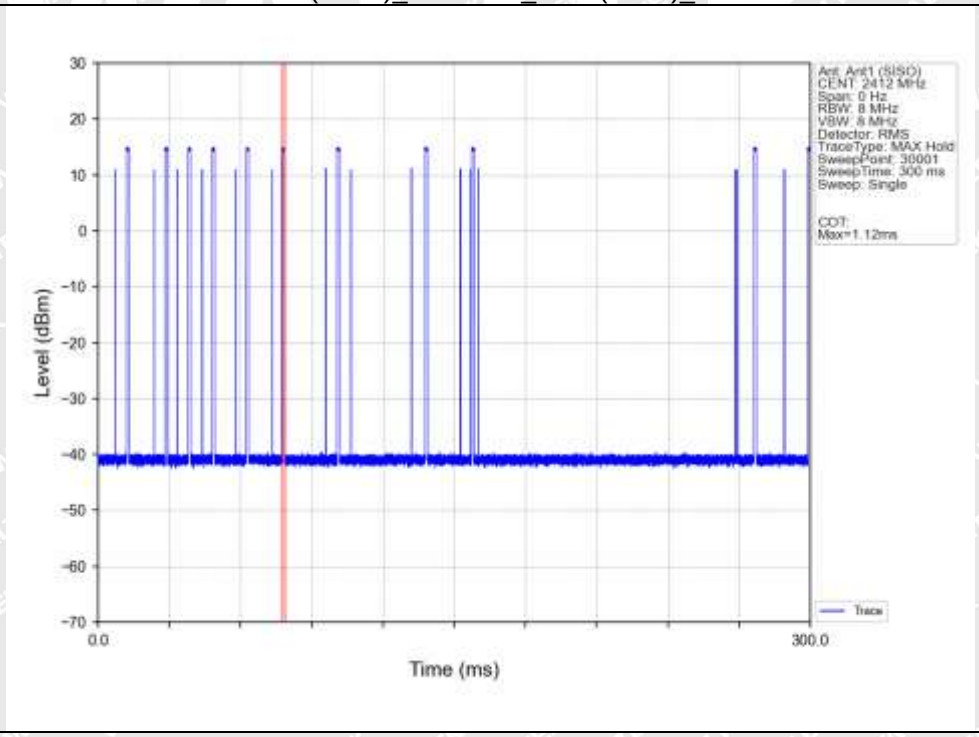
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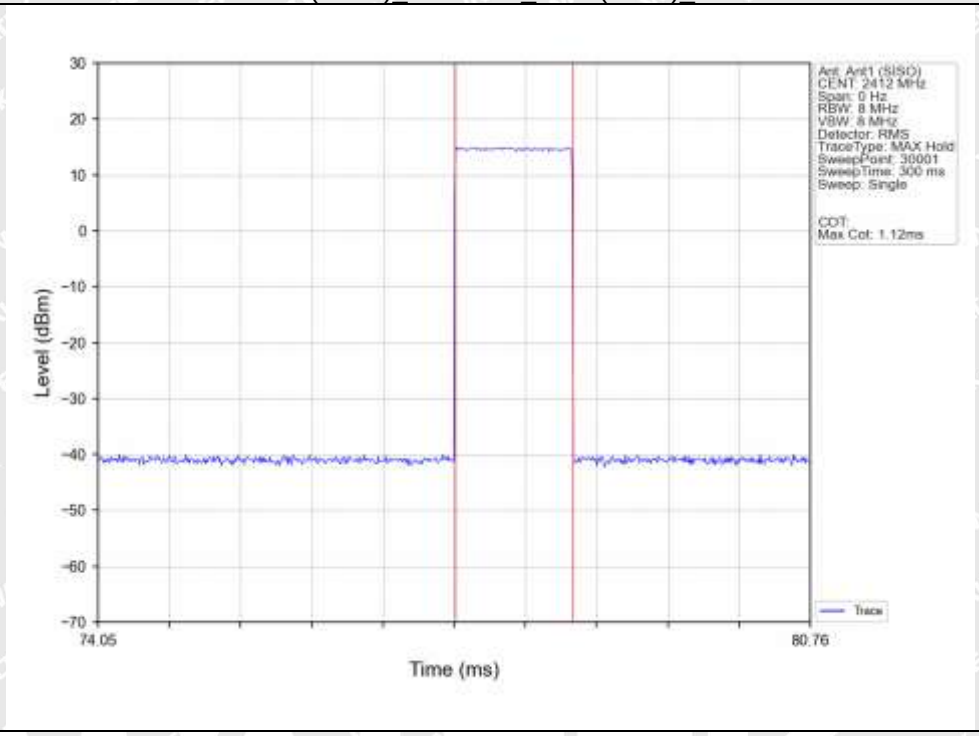
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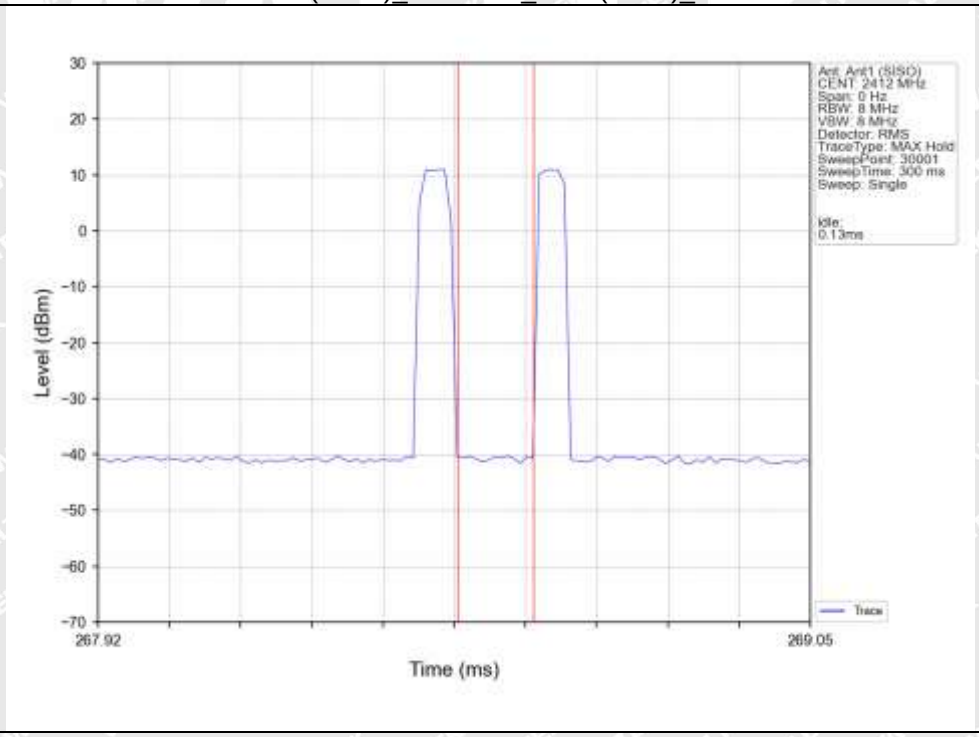
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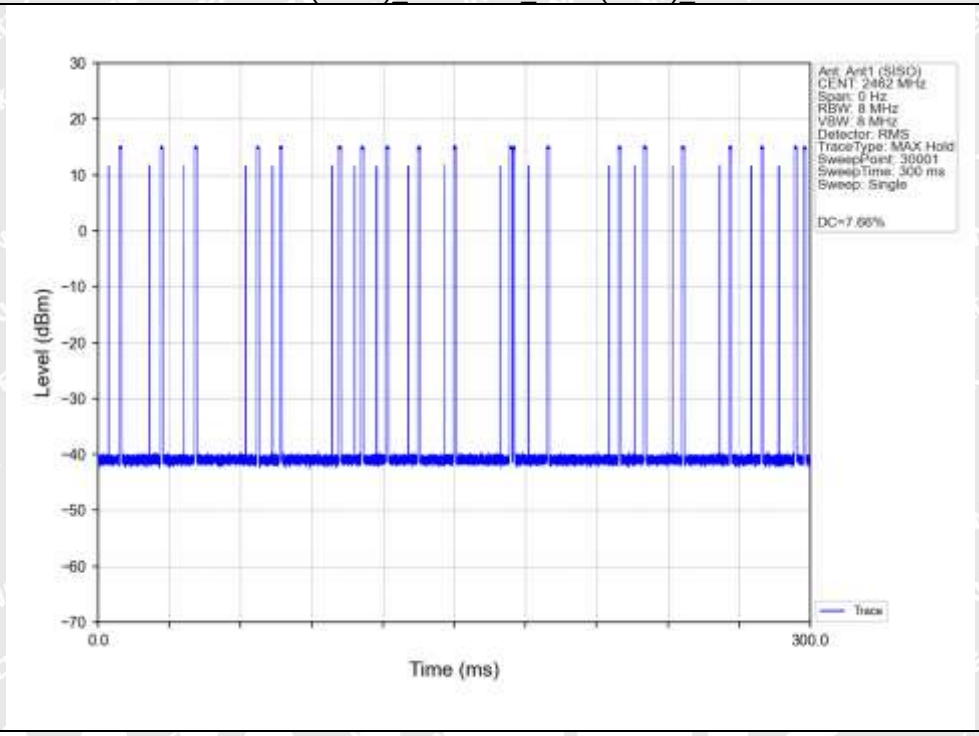
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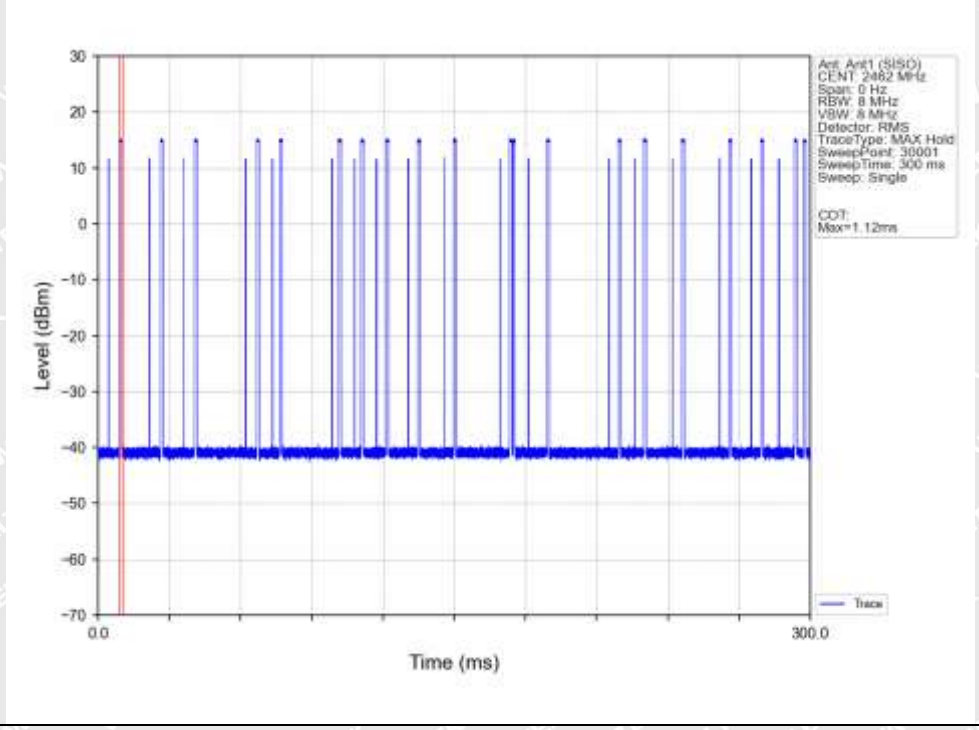
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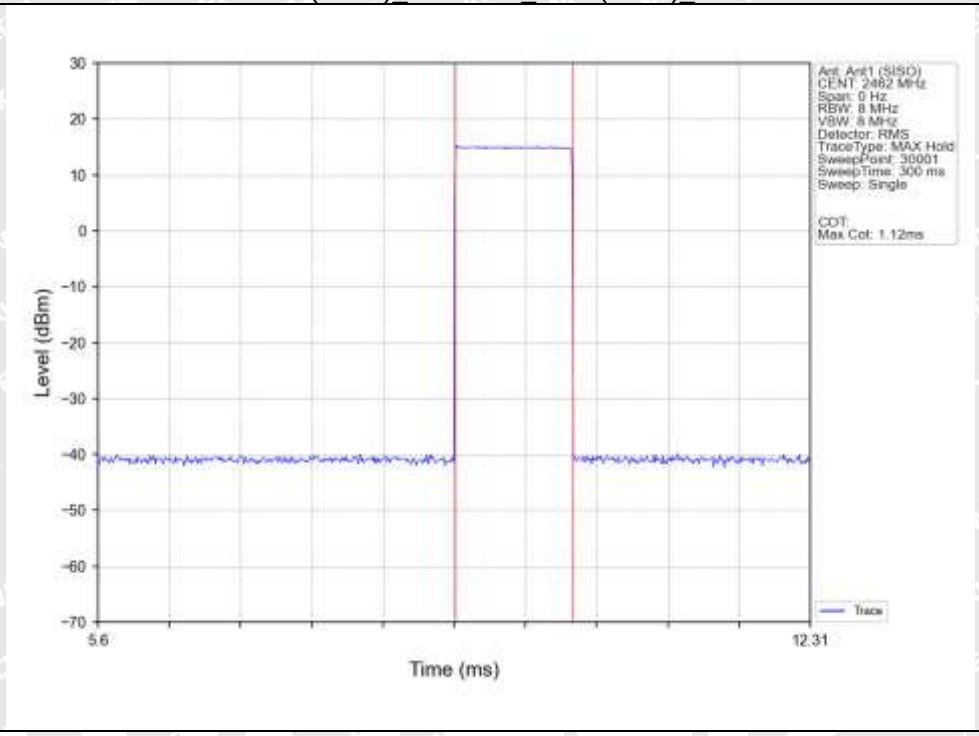
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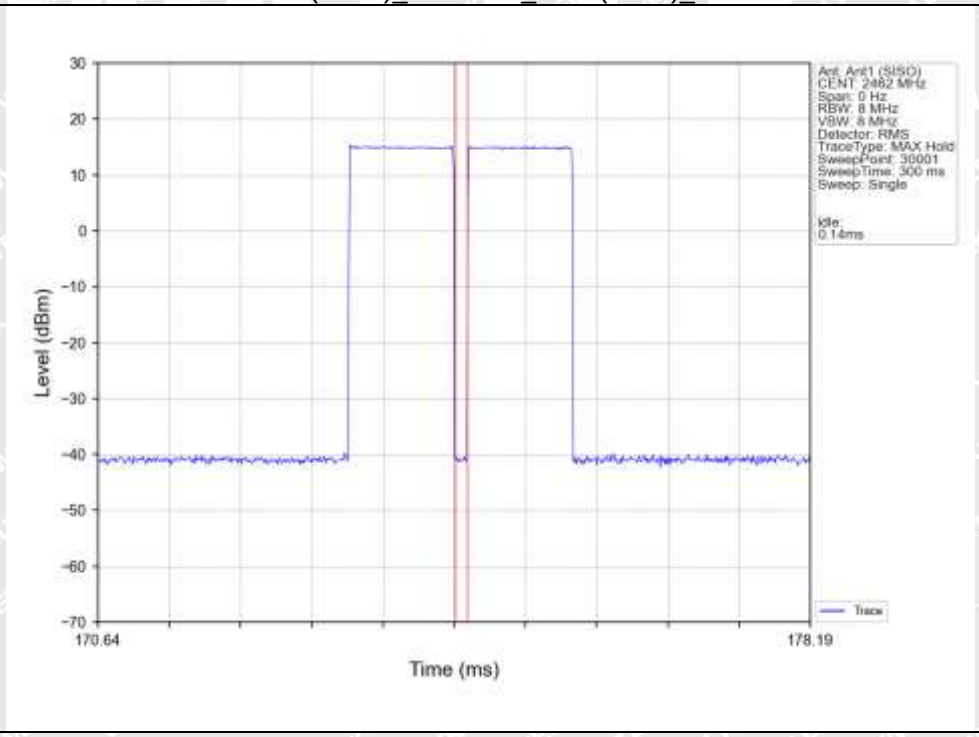
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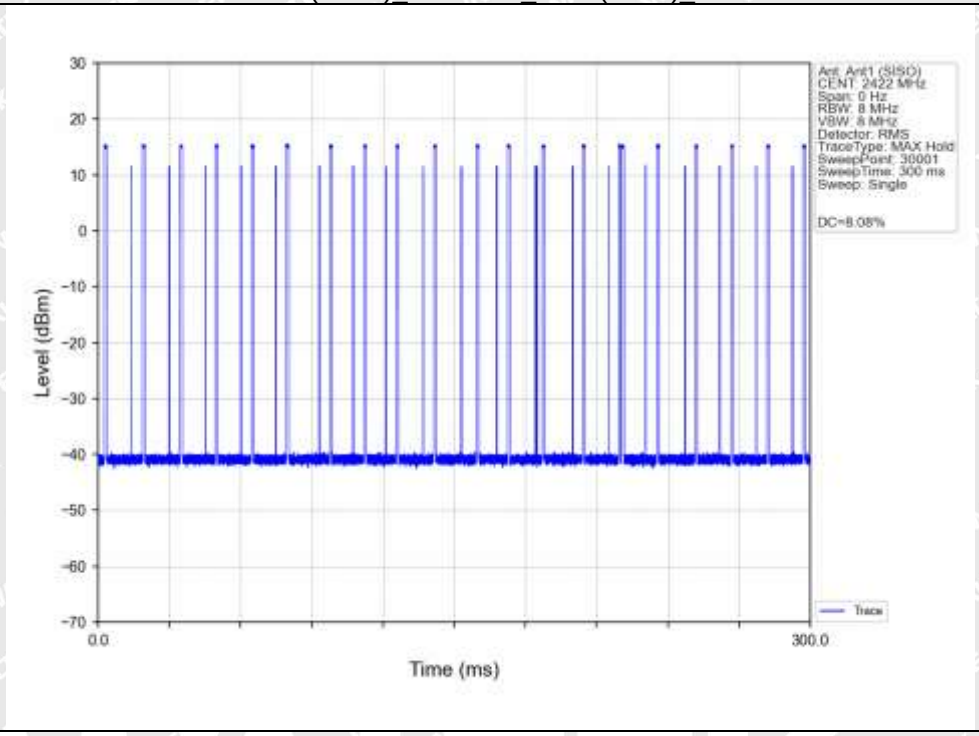
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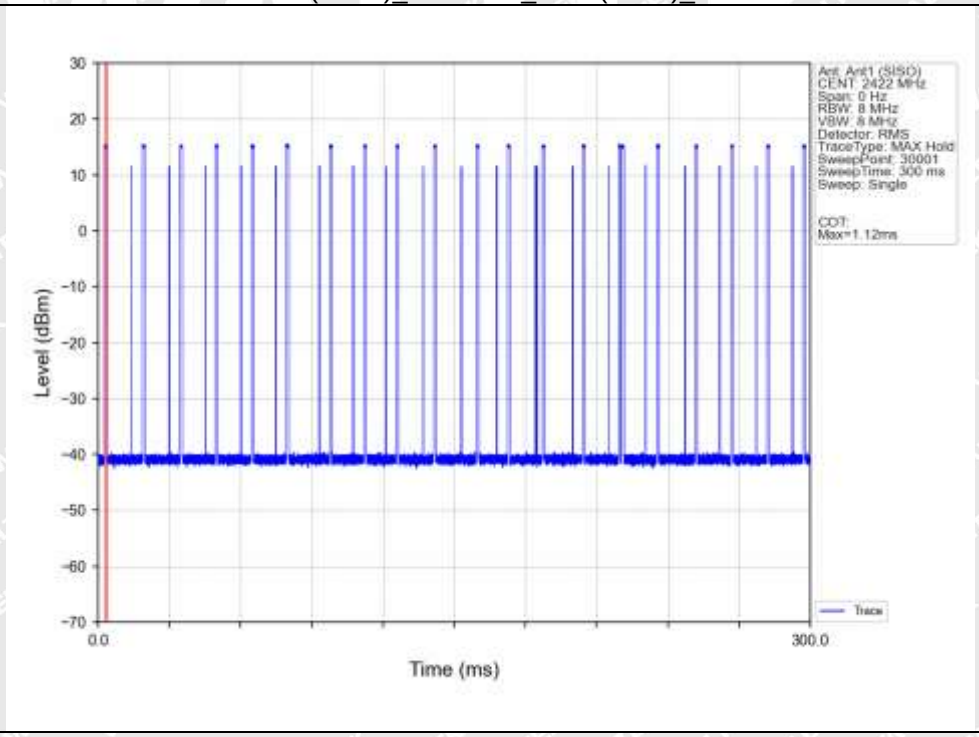
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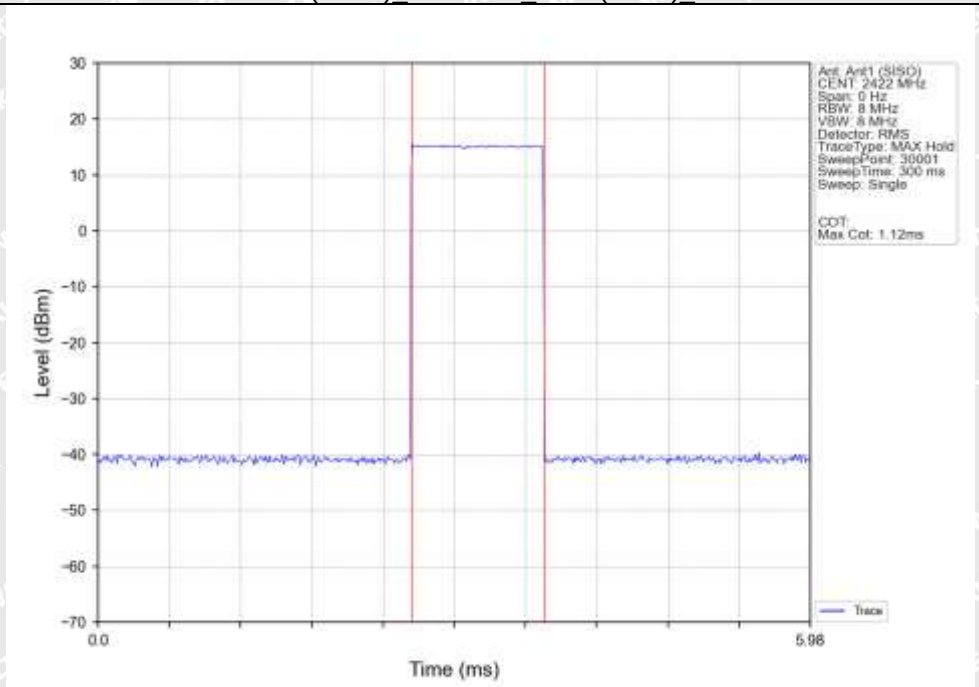
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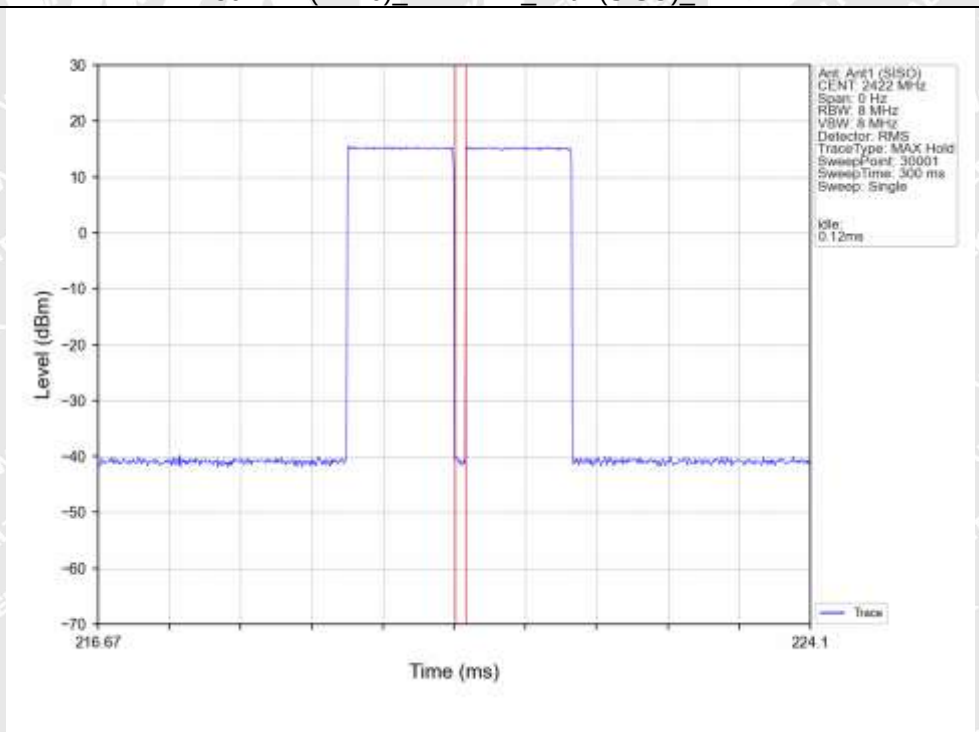
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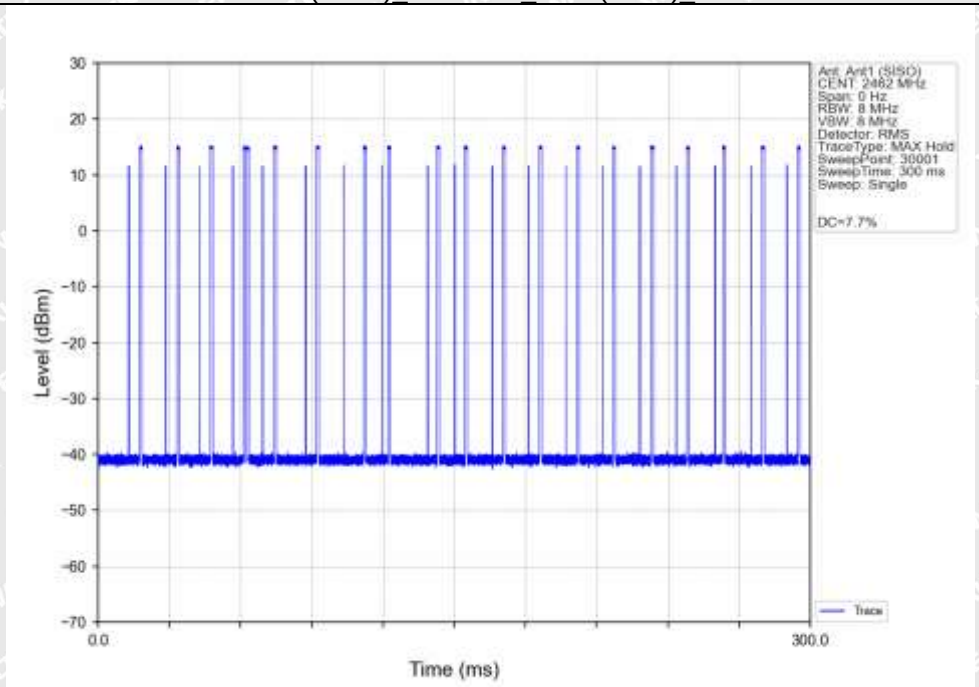
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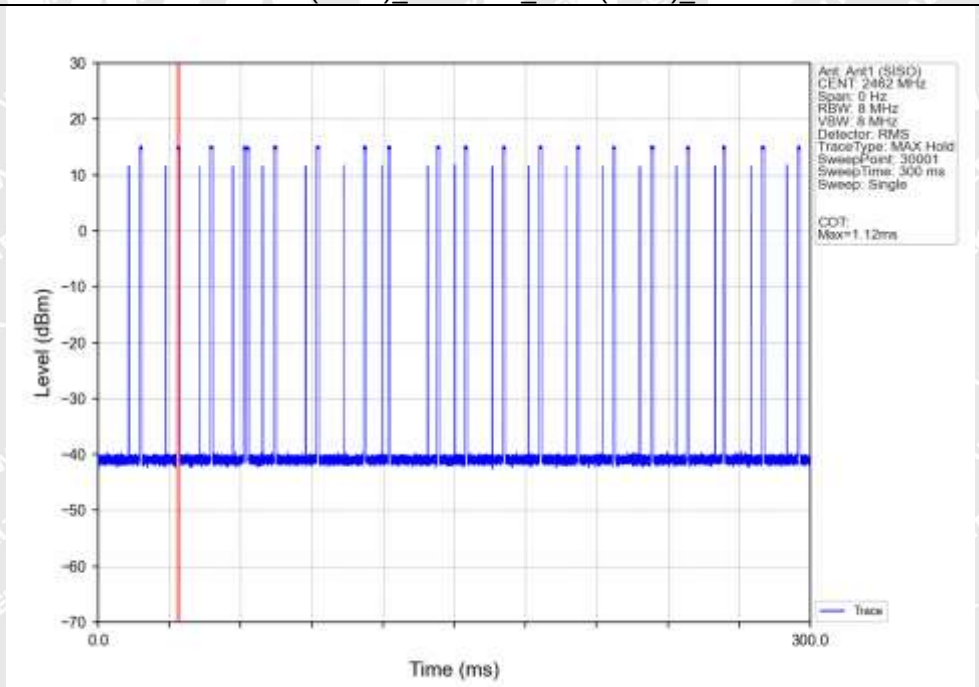
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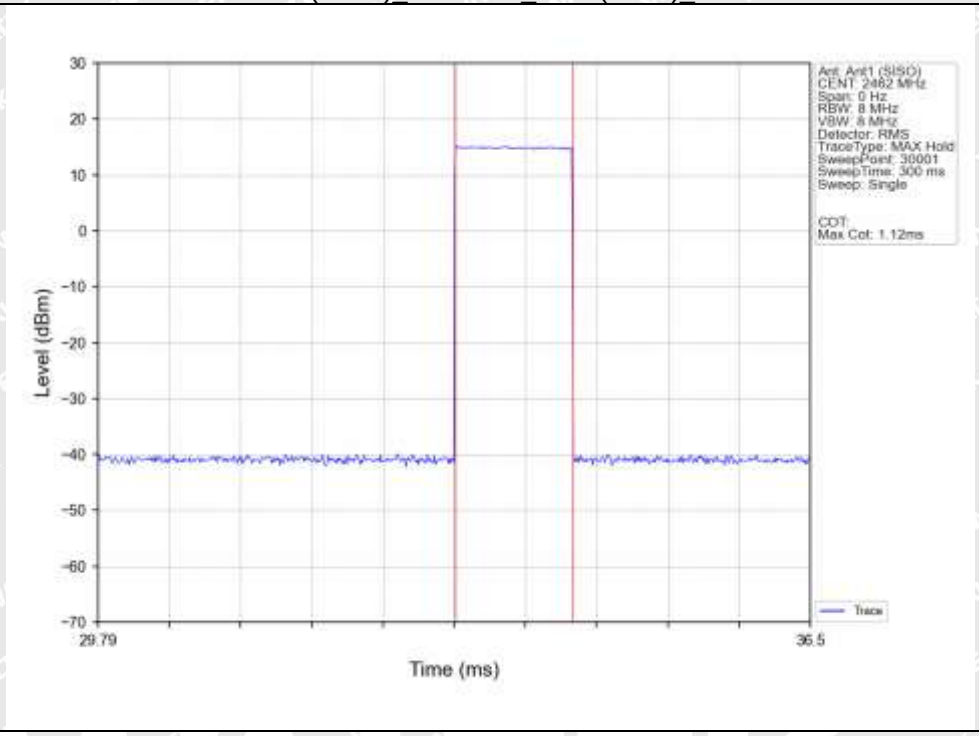
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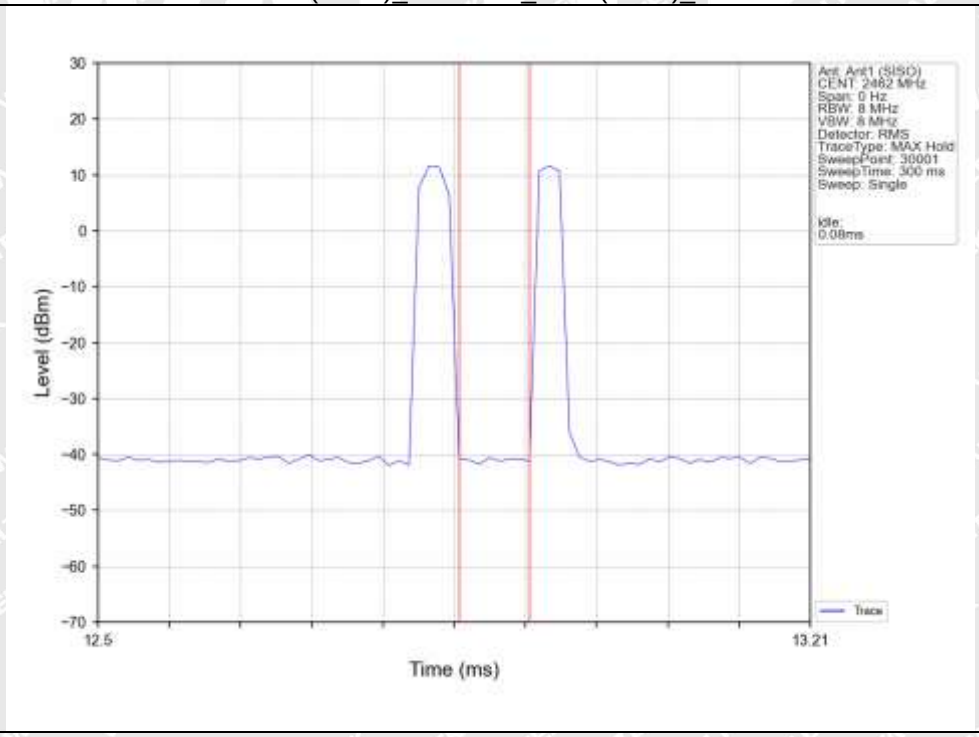
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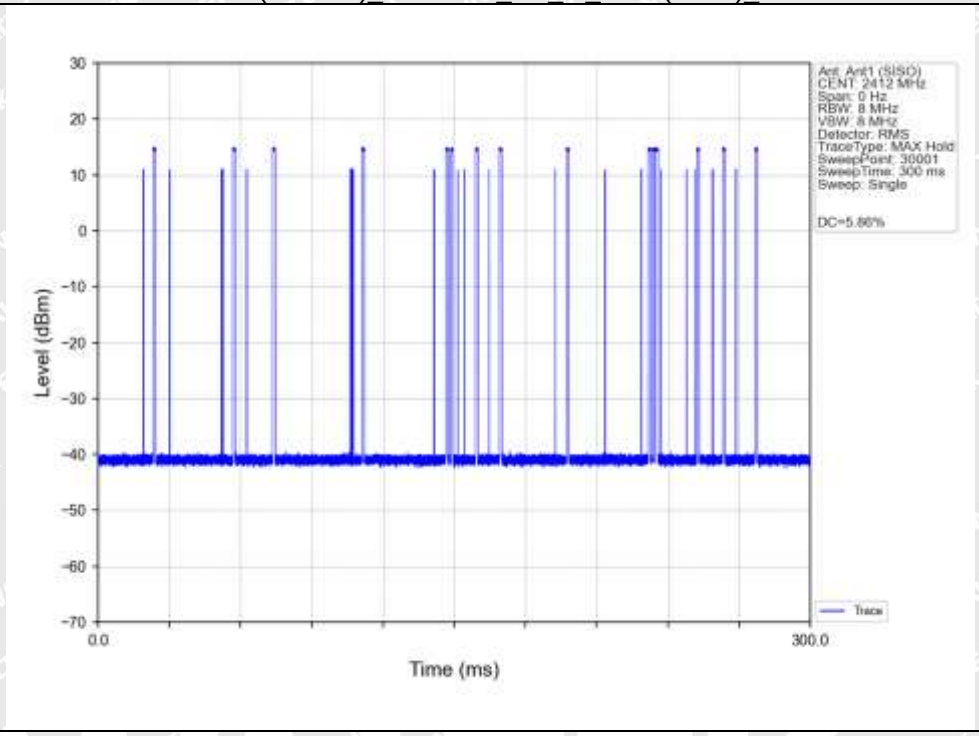
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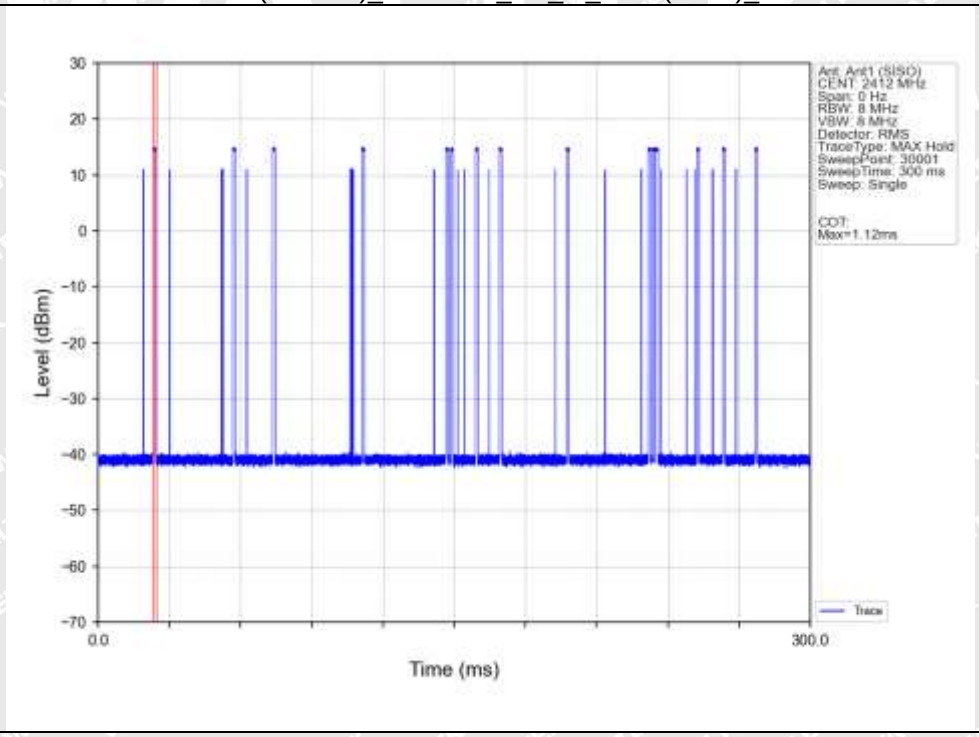
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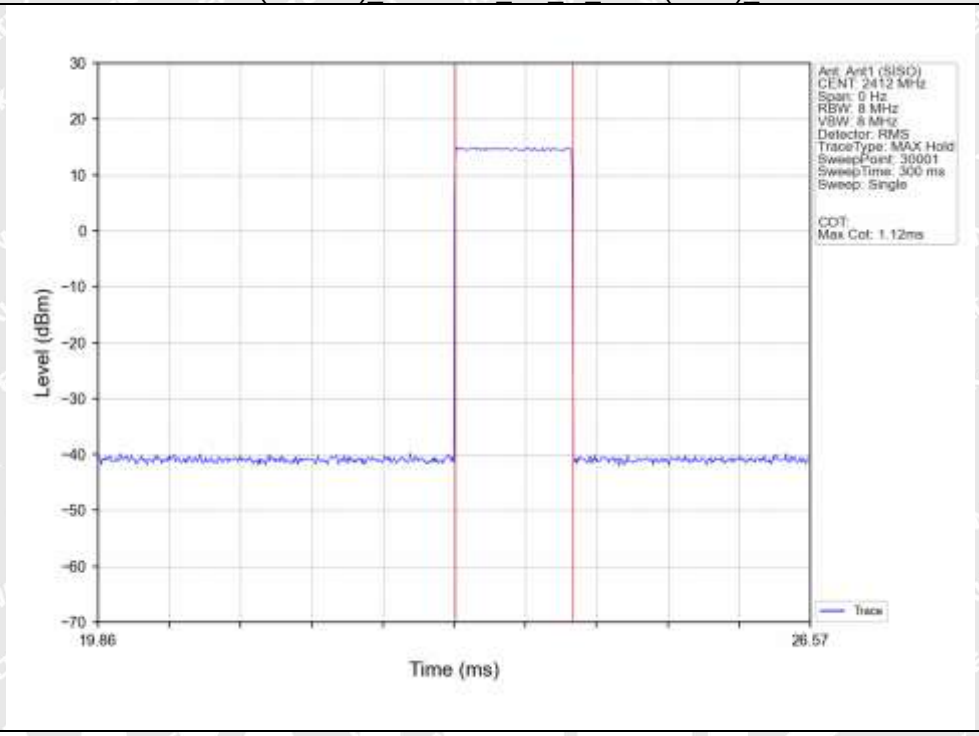
802.11ax(HEW20)_2412MHz_SU_ / _Ant1 (SISO)_NTNV



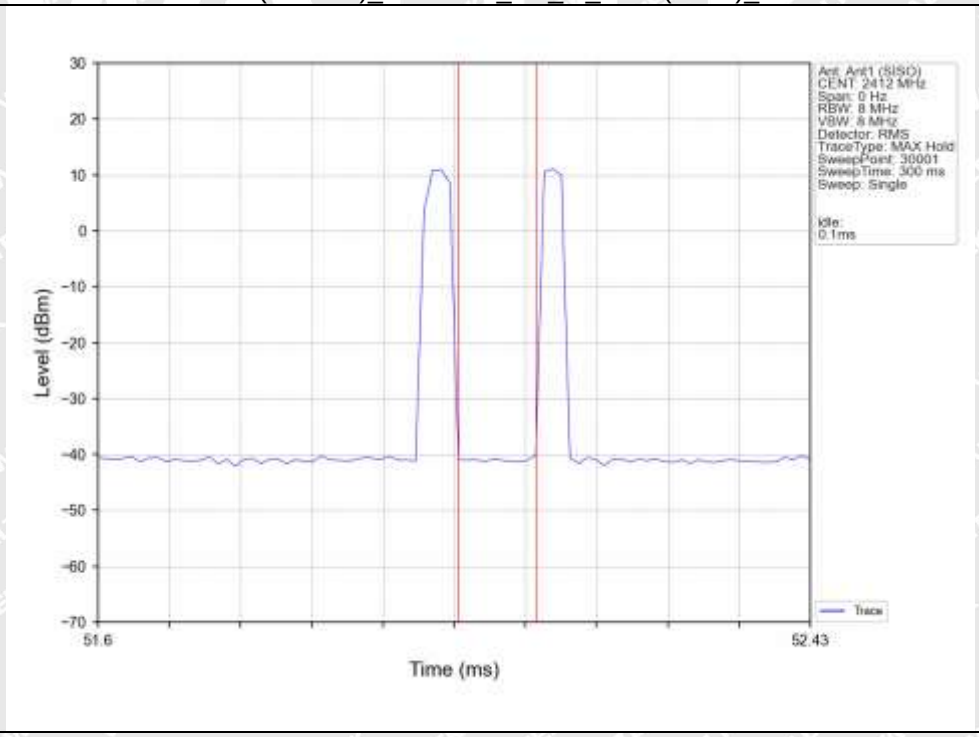
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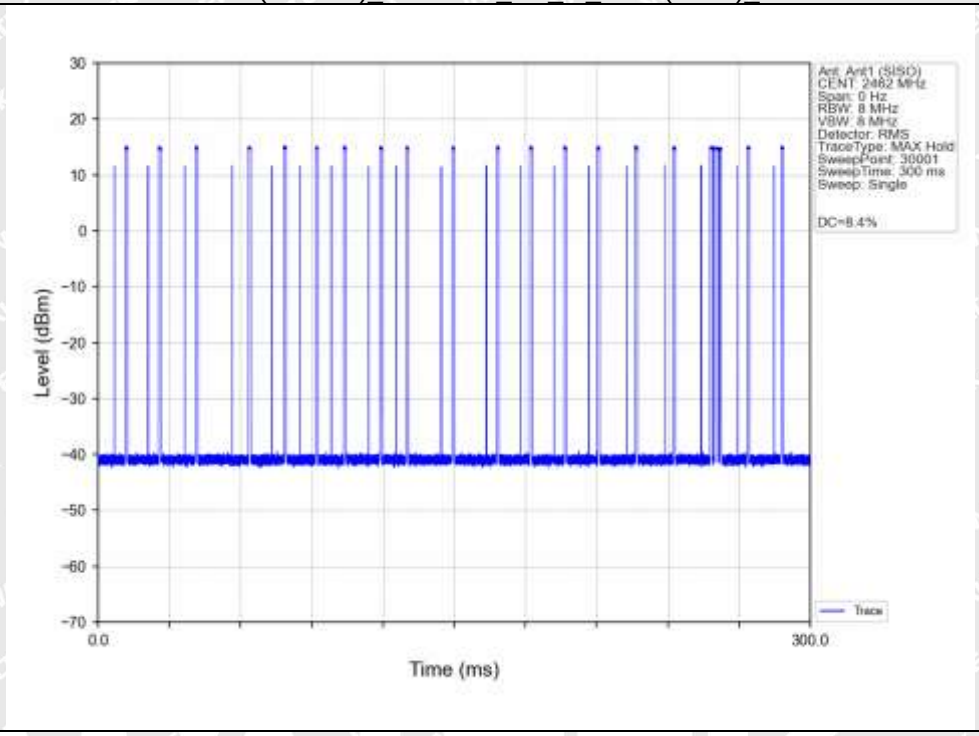
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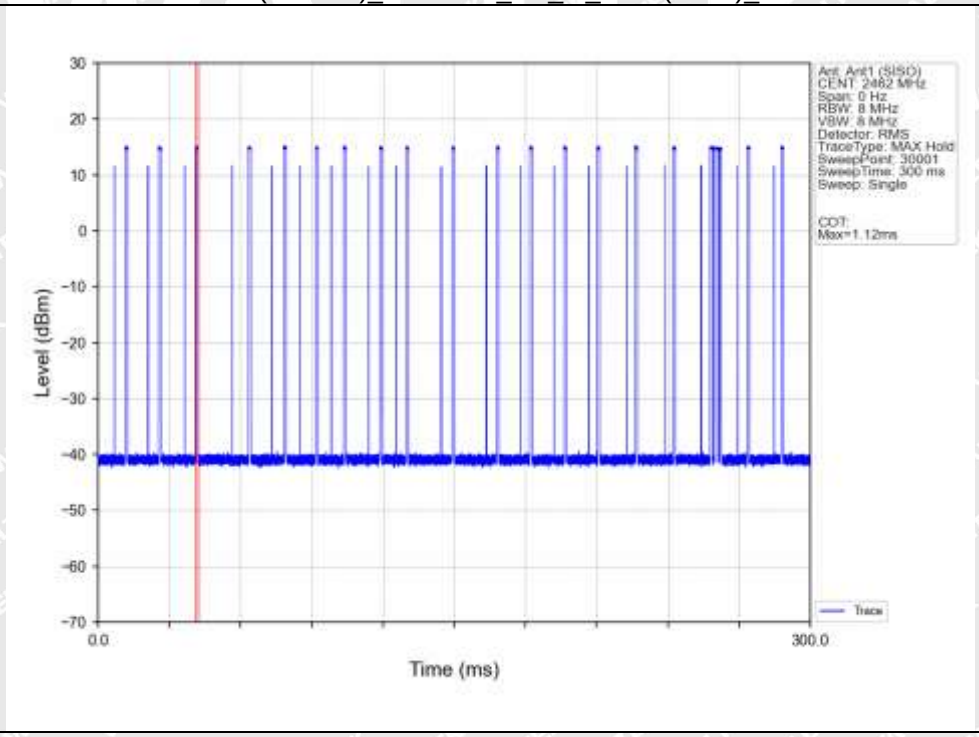
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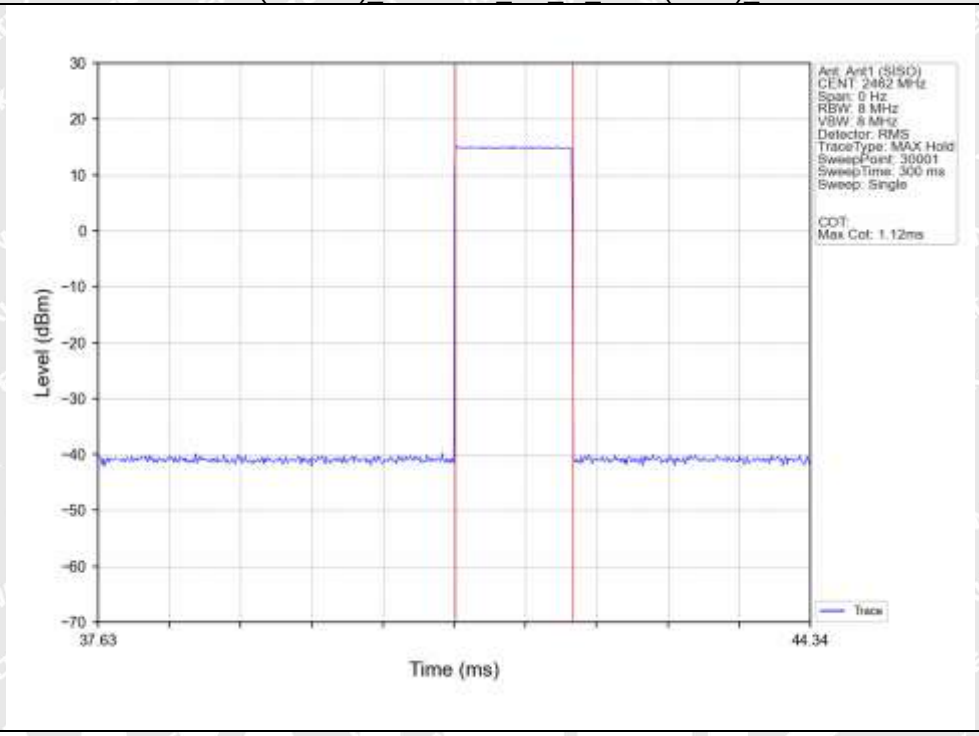
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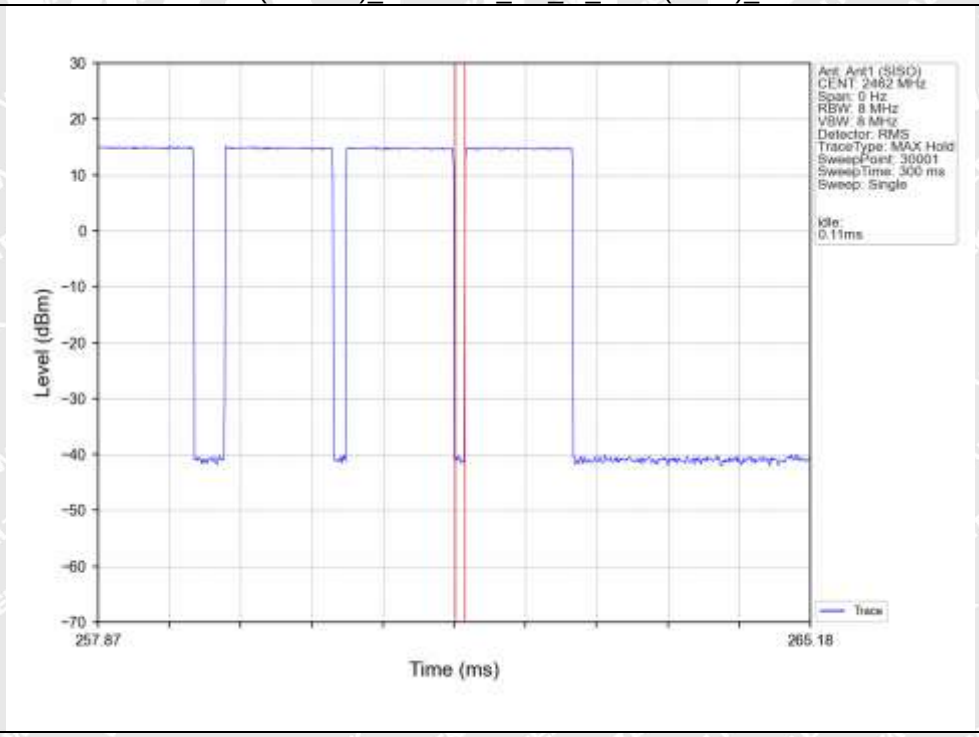
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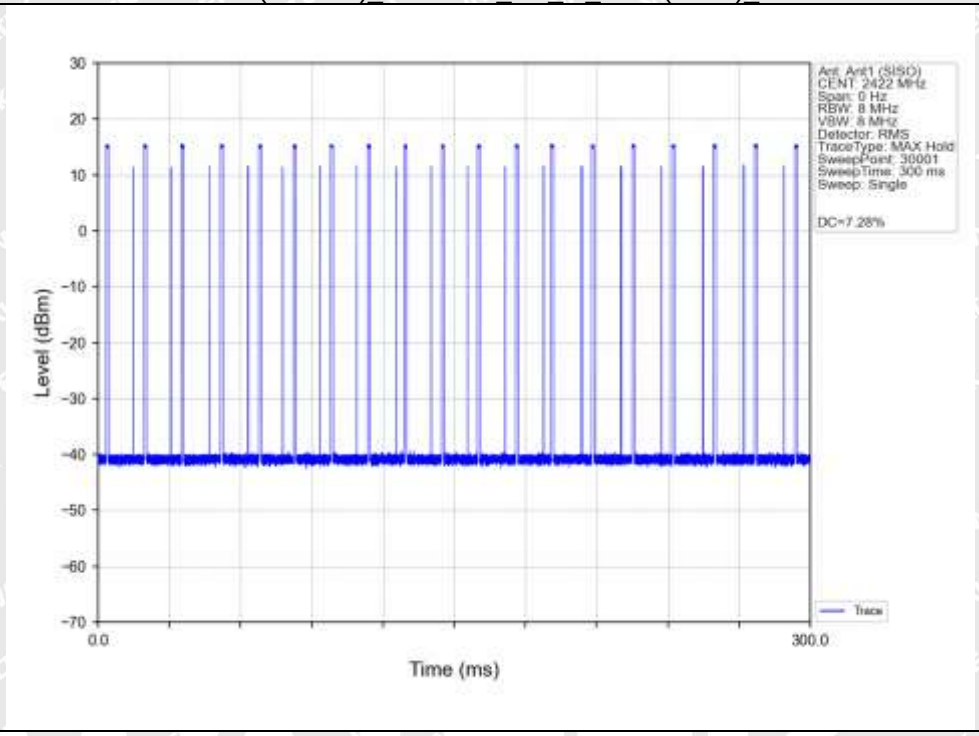
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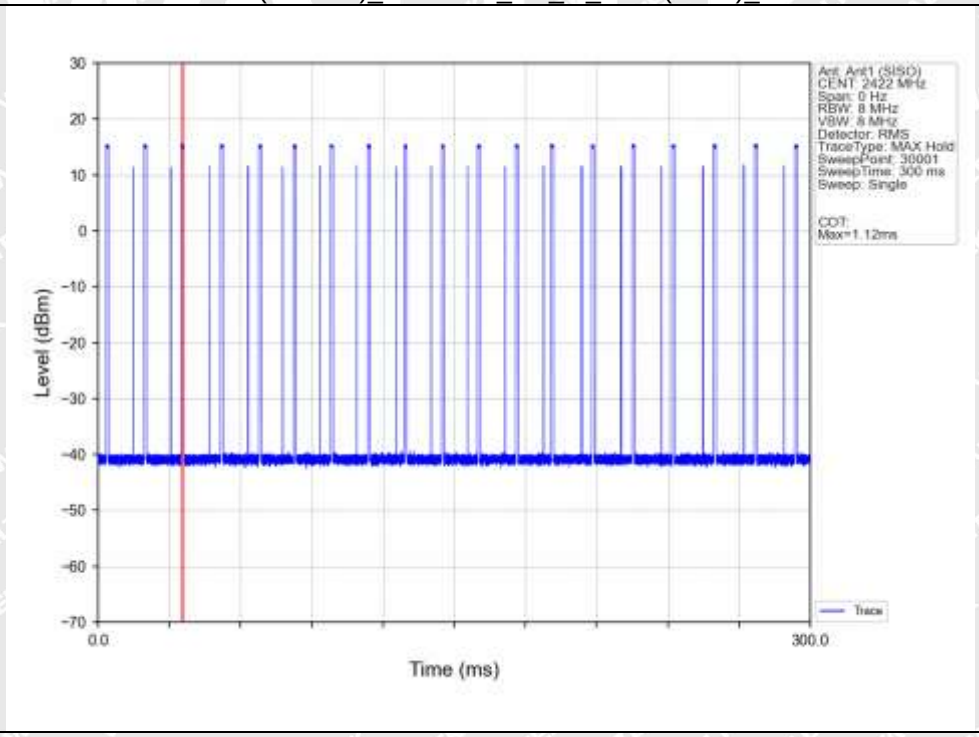
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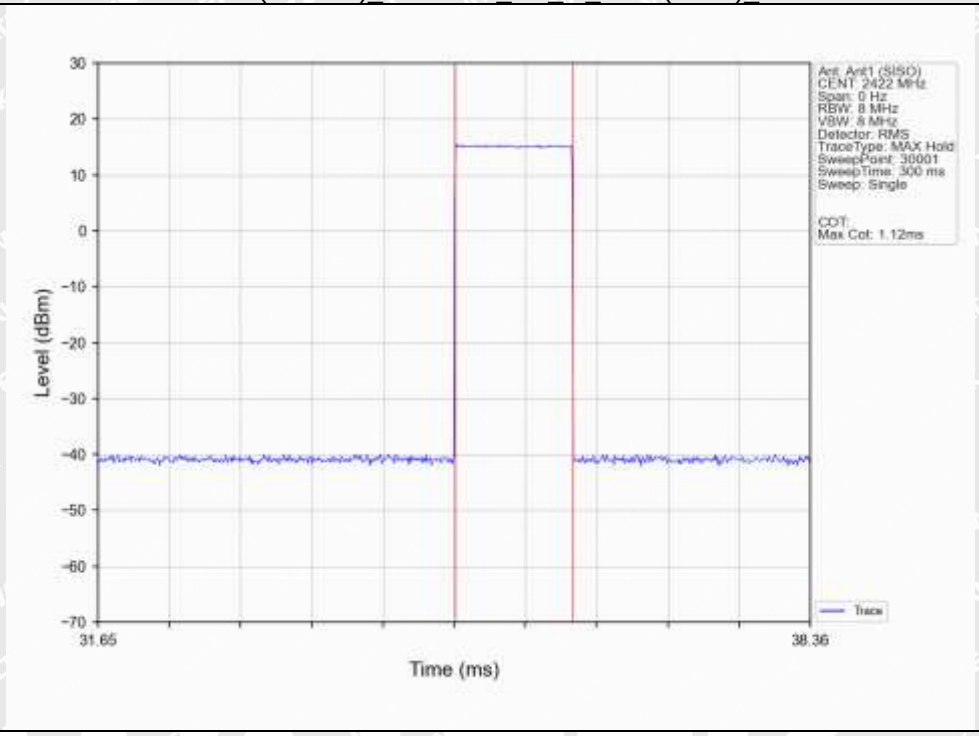
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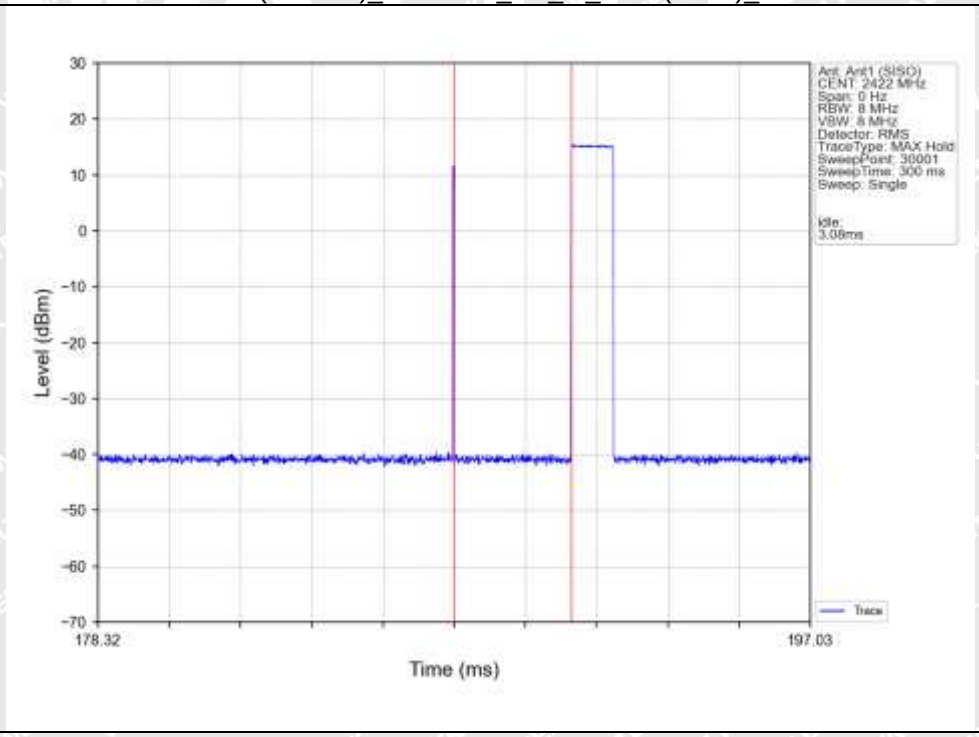
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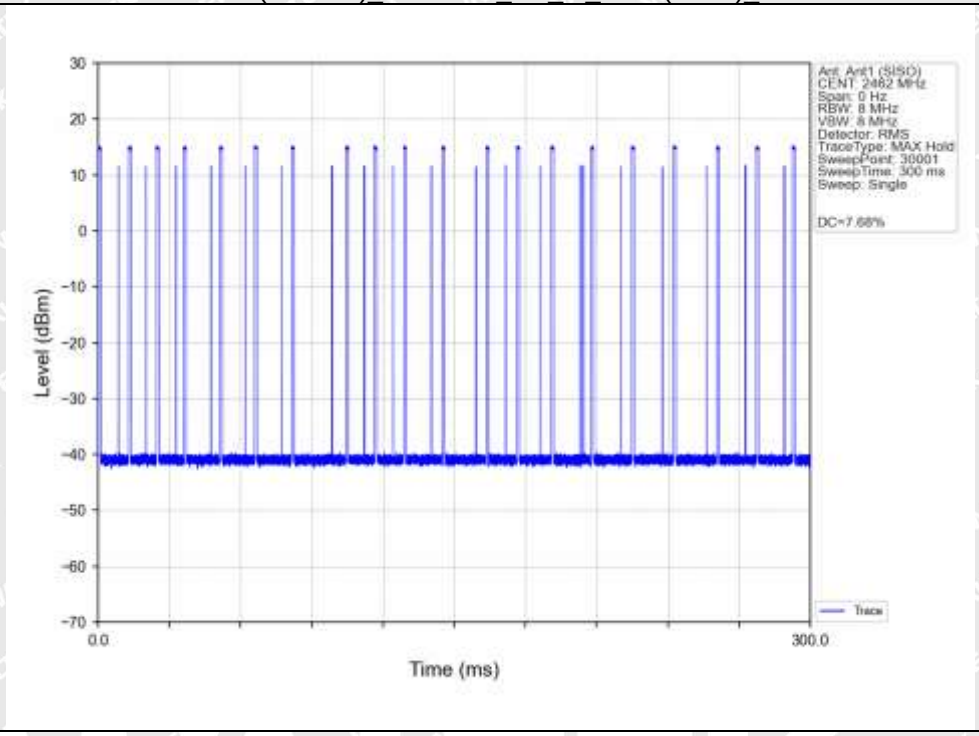
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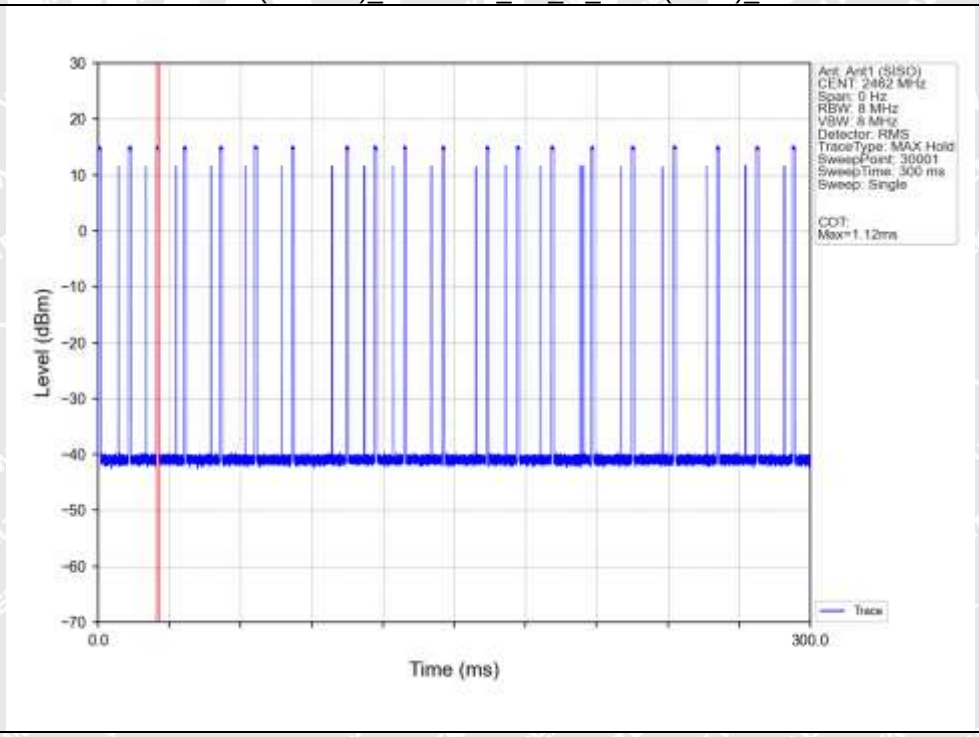
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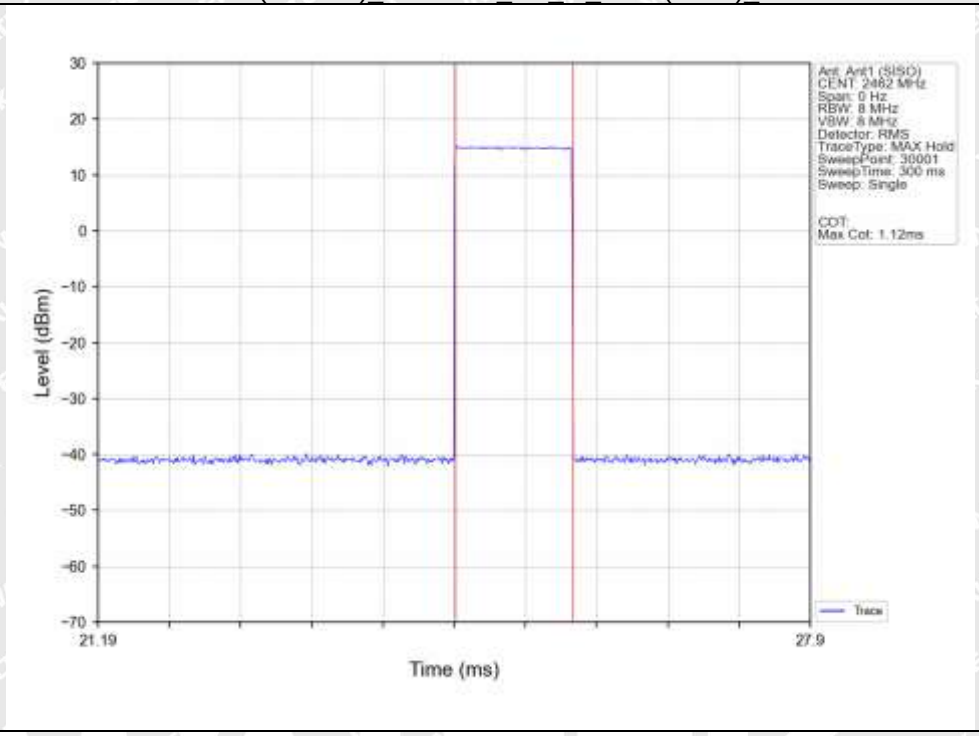
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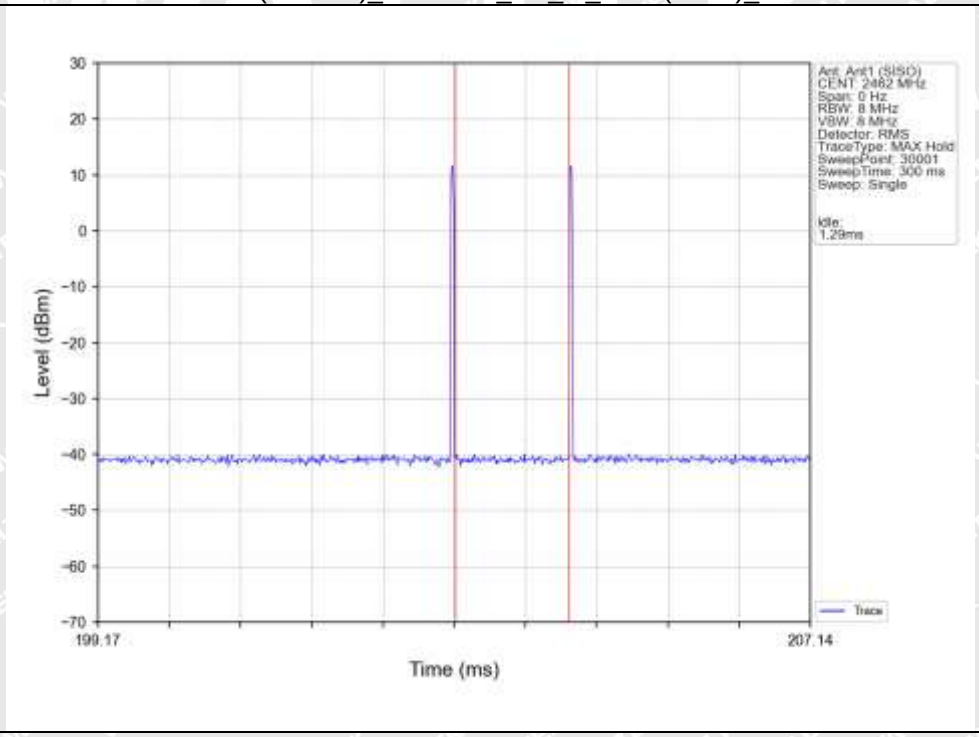
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802.11ax(HEW40)_2462MHz_SU_ / _Ant1 (SISO)_NTNV

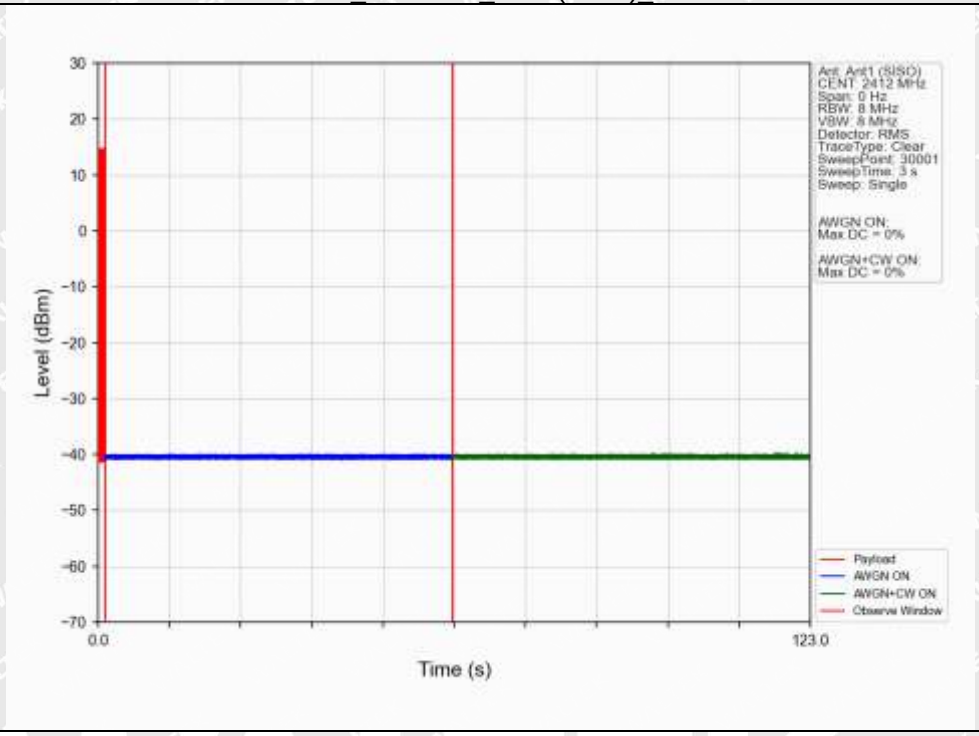


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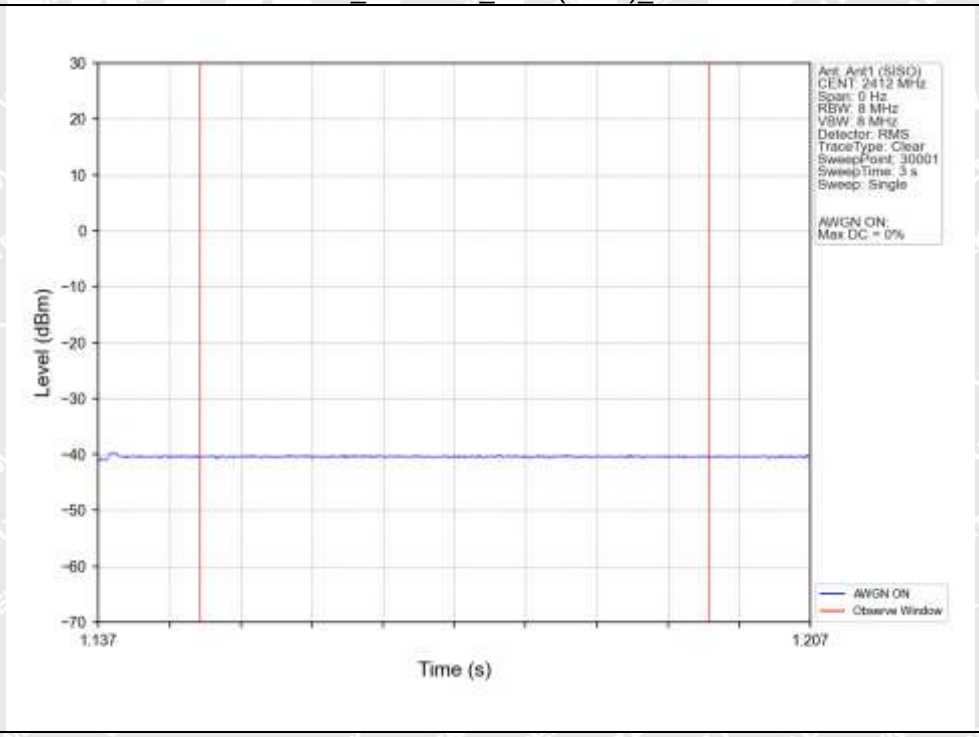


Adaptivity

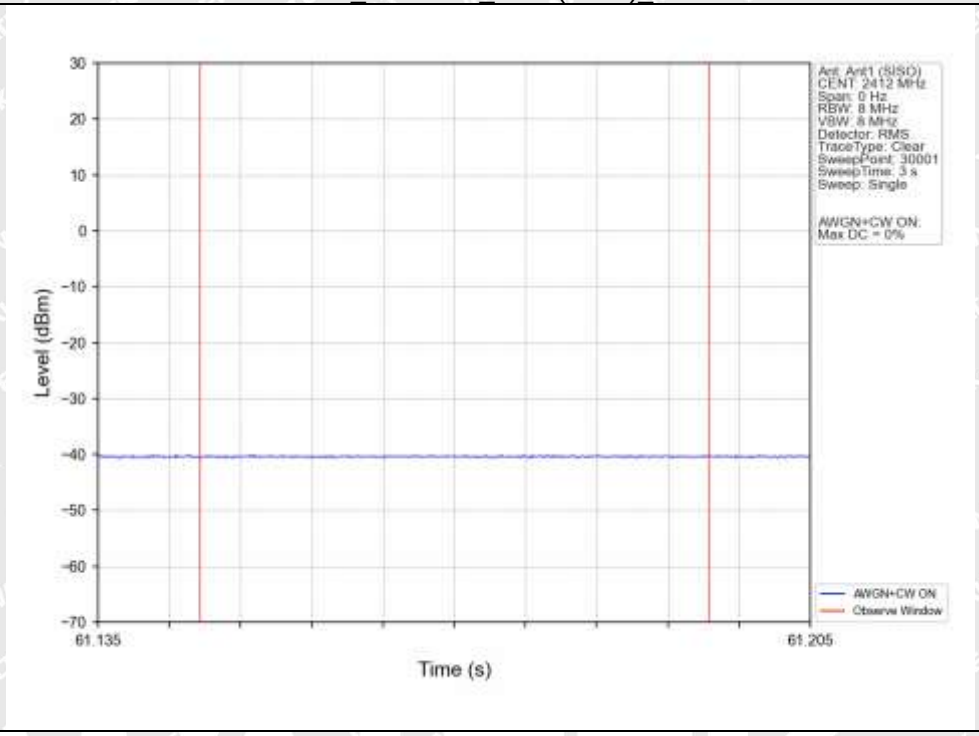
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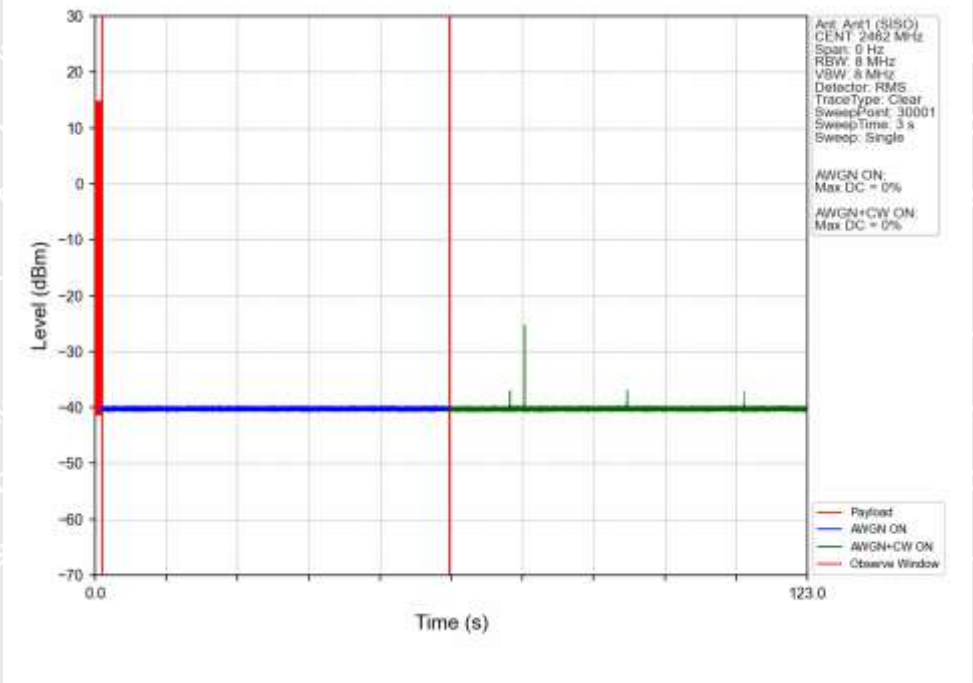
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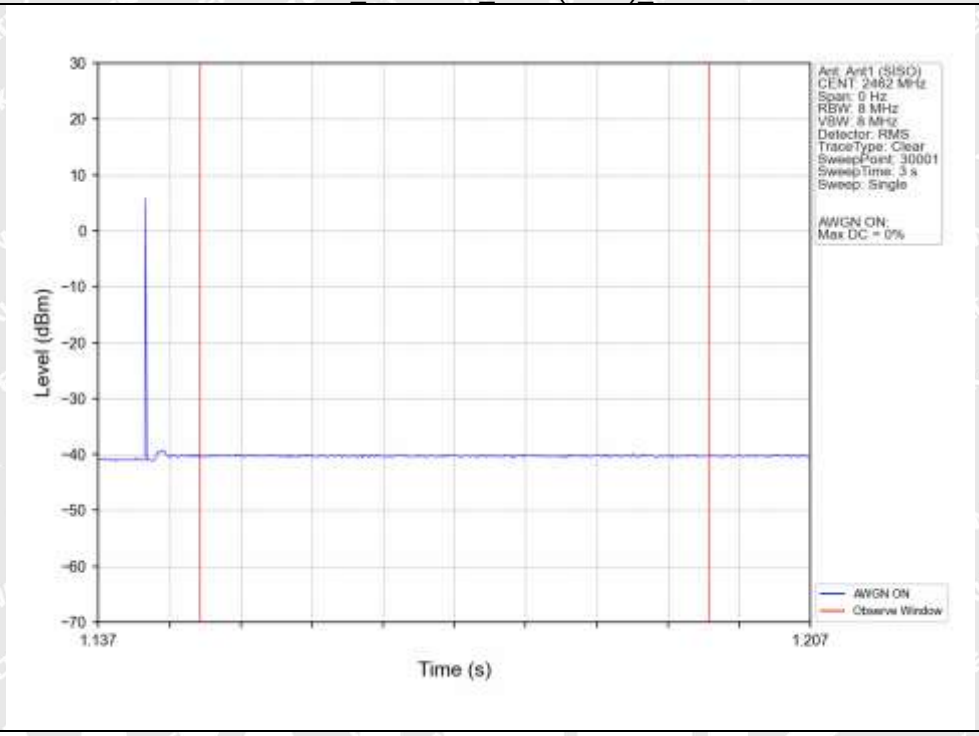
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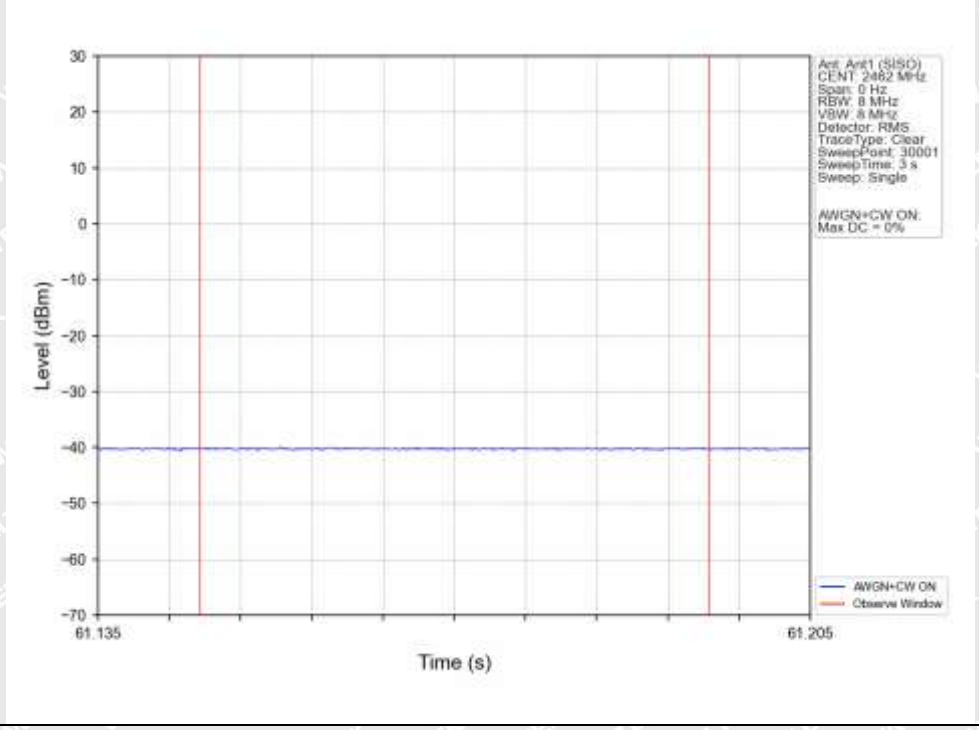
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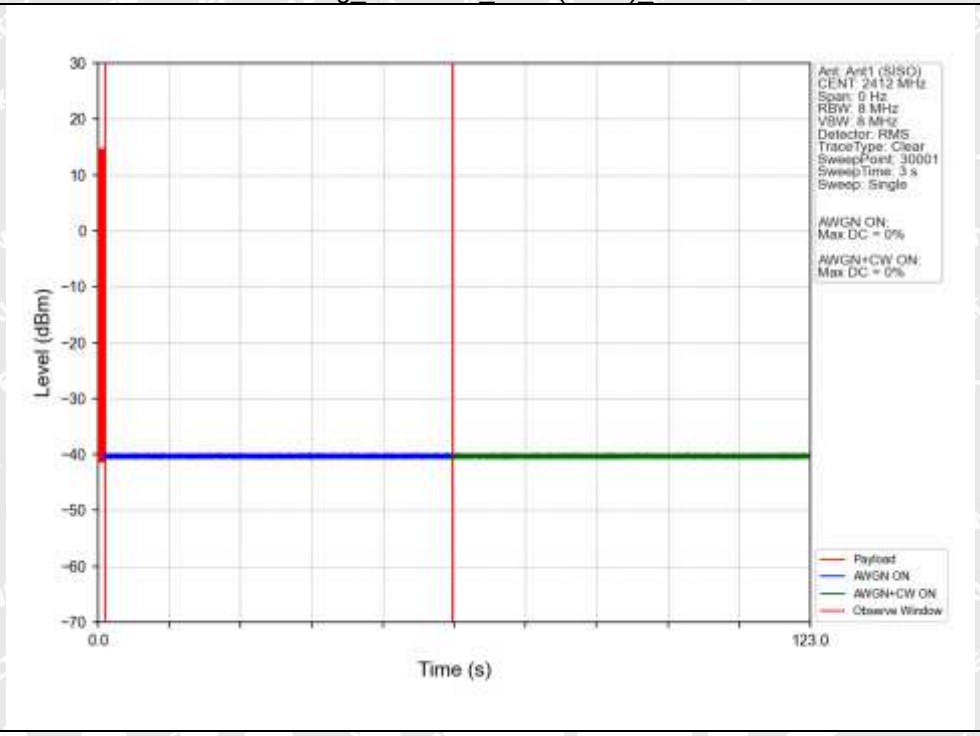
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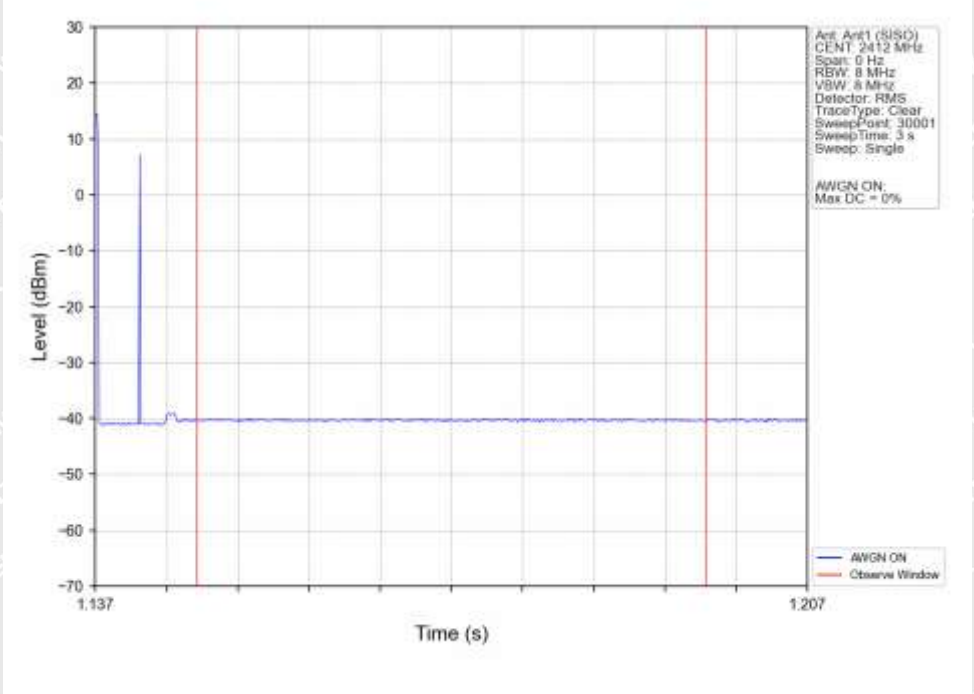
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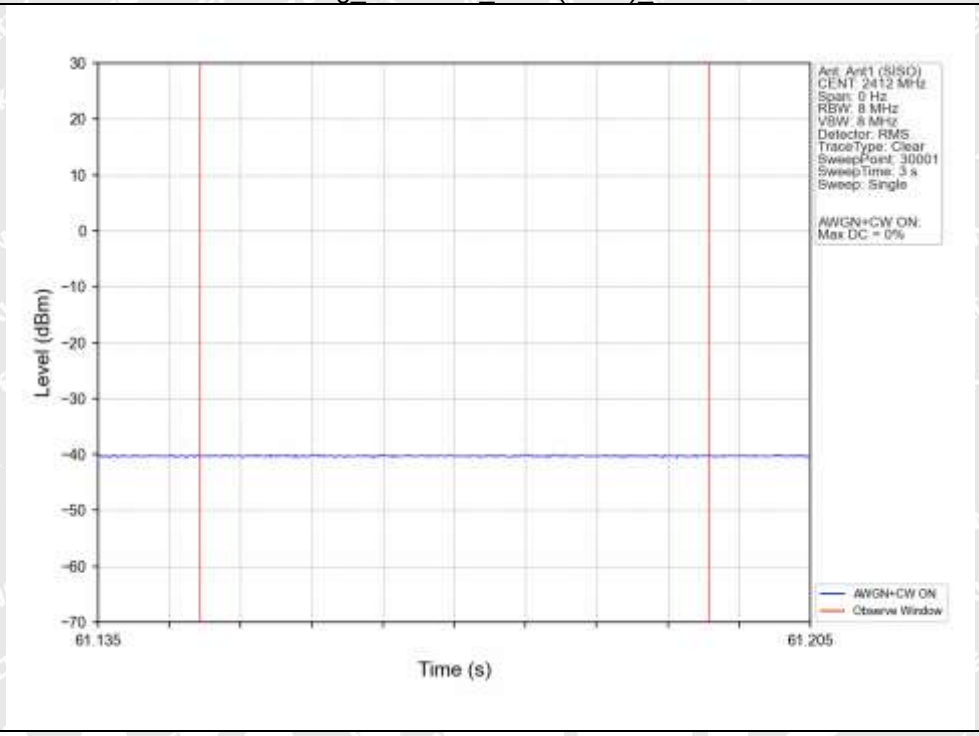
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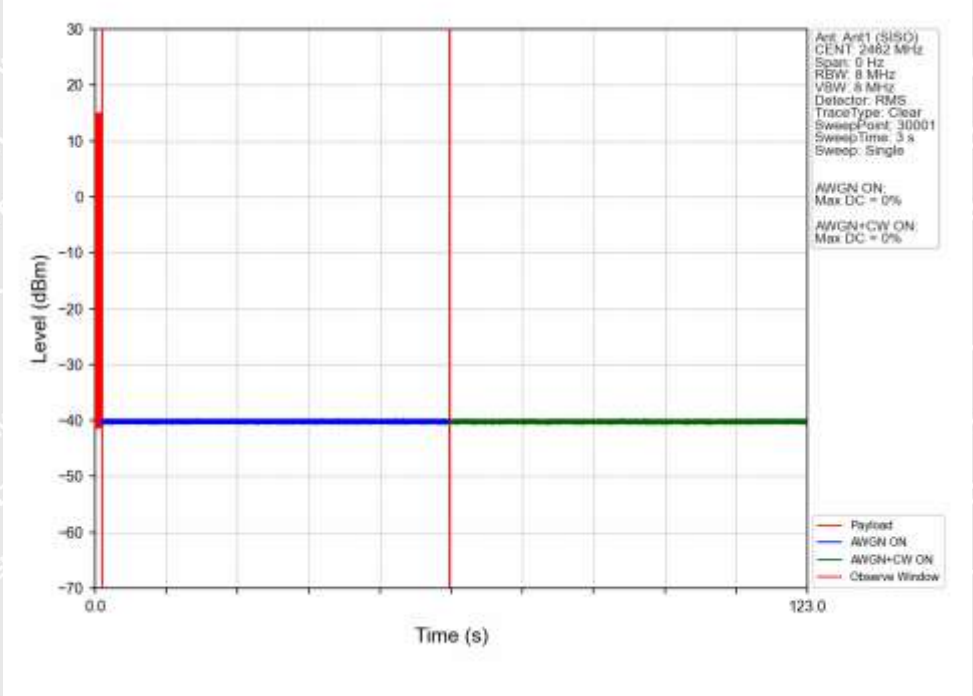
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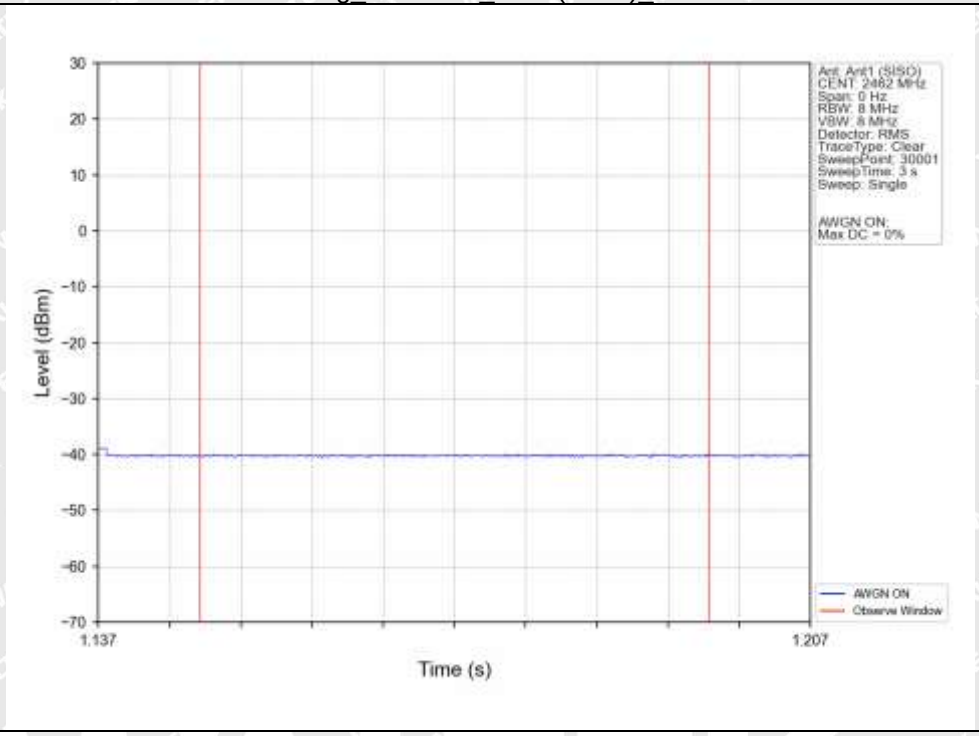
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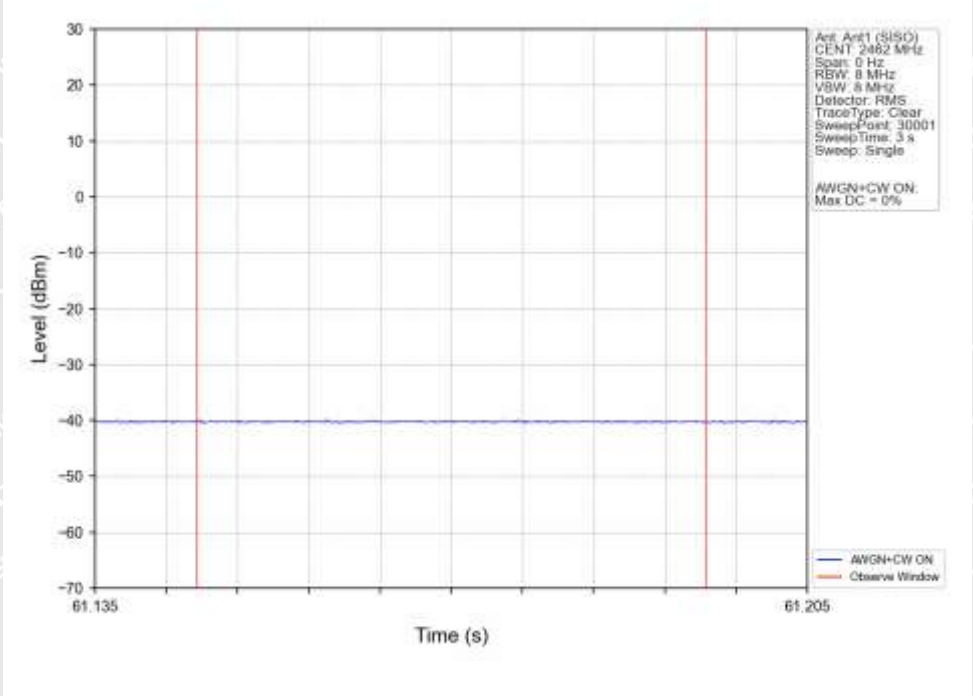
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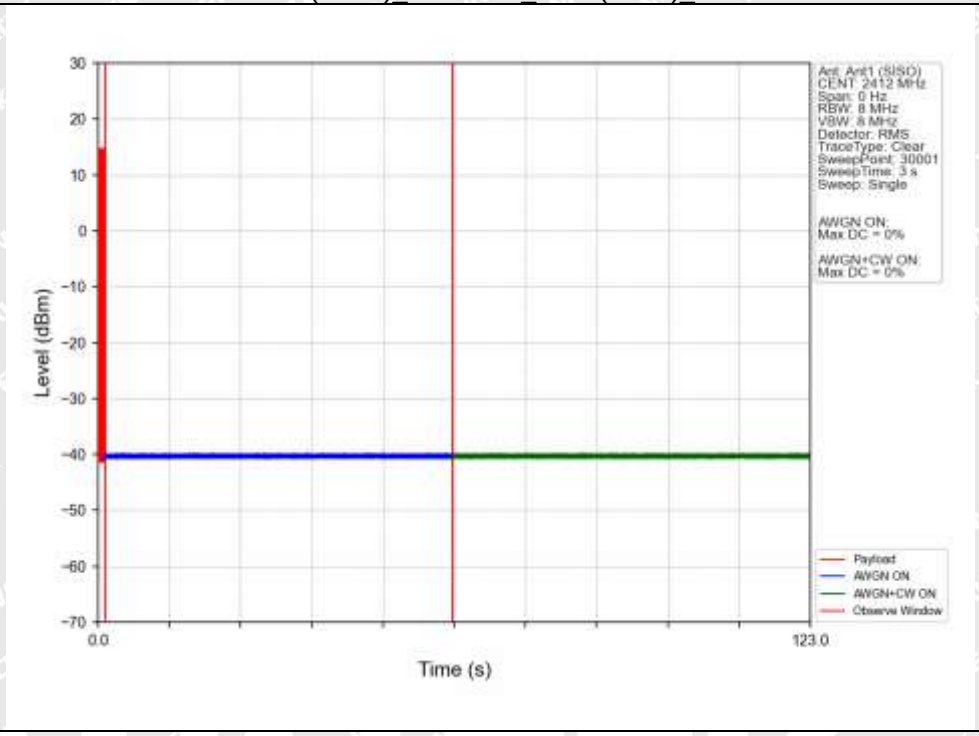
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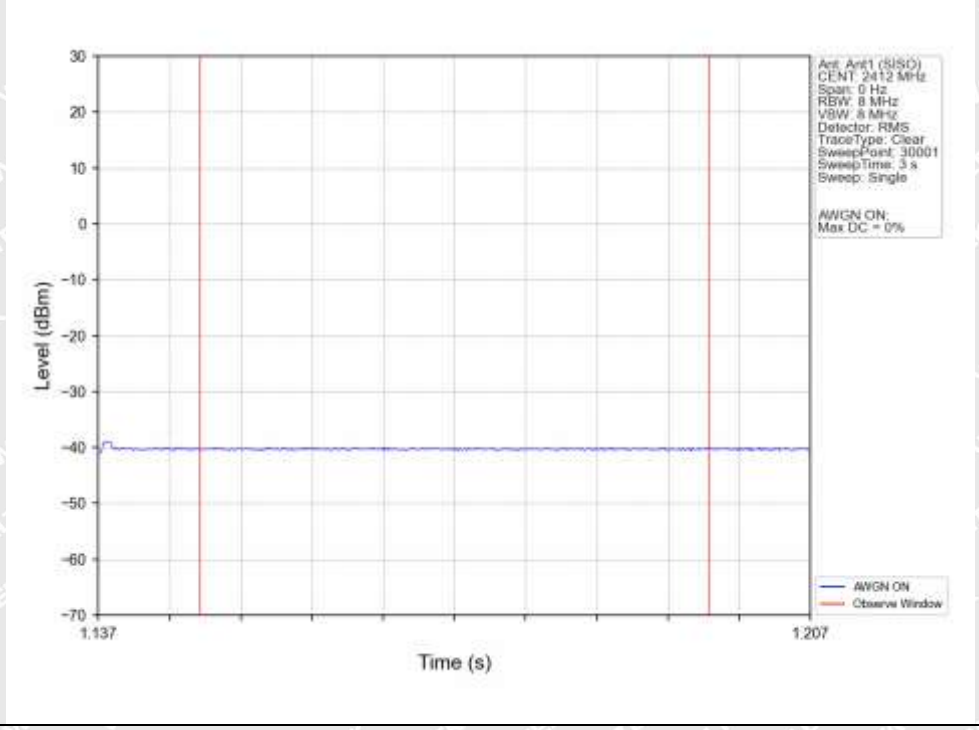
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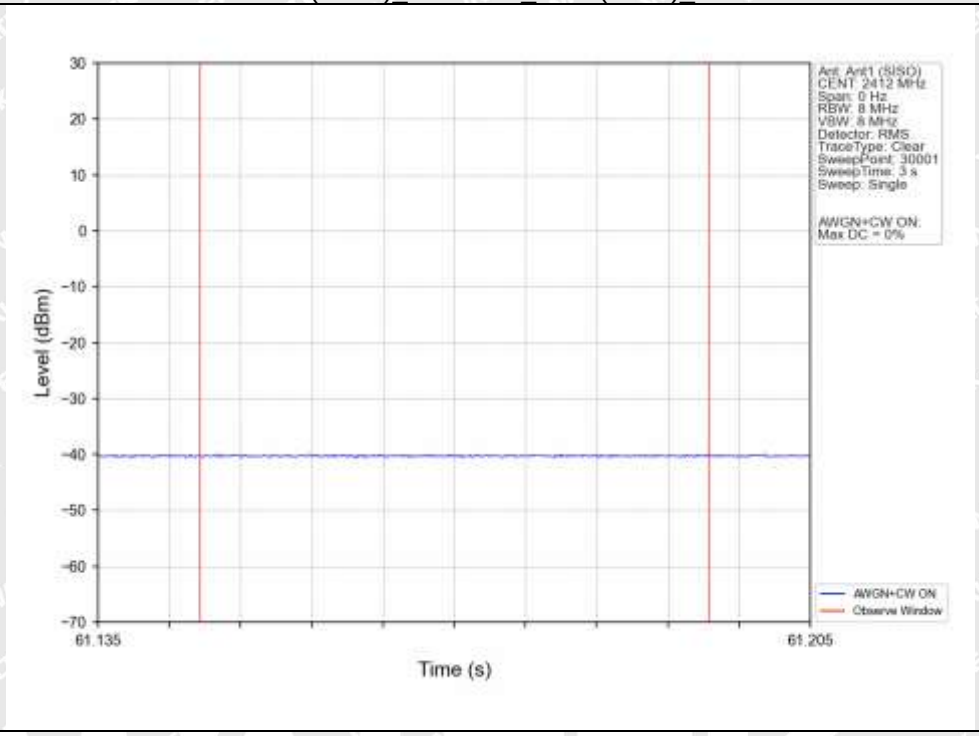
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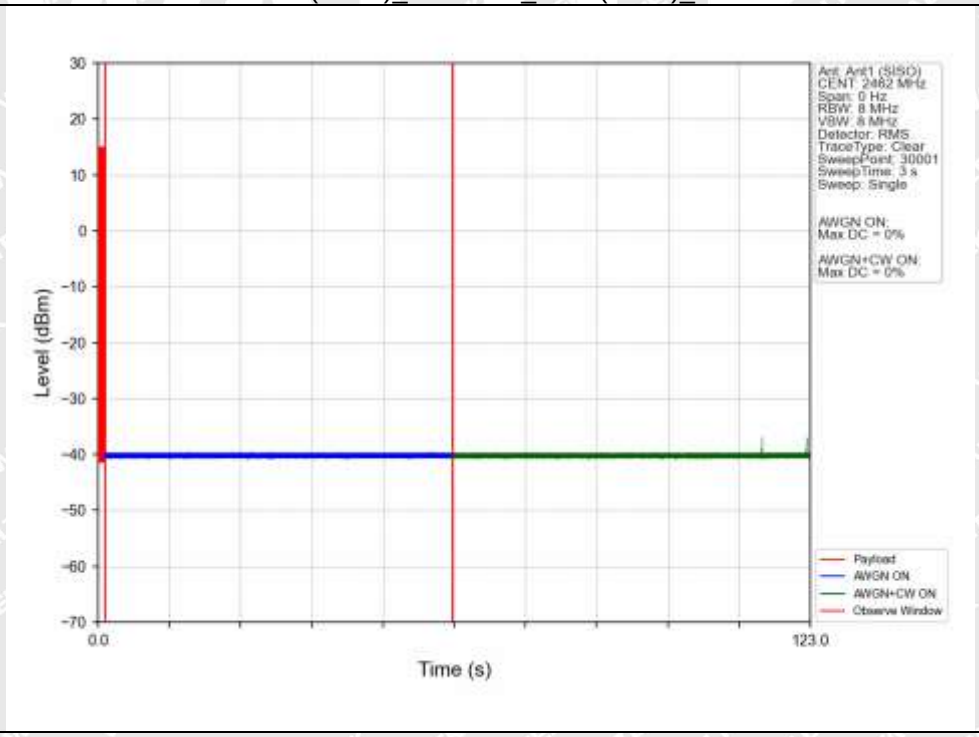
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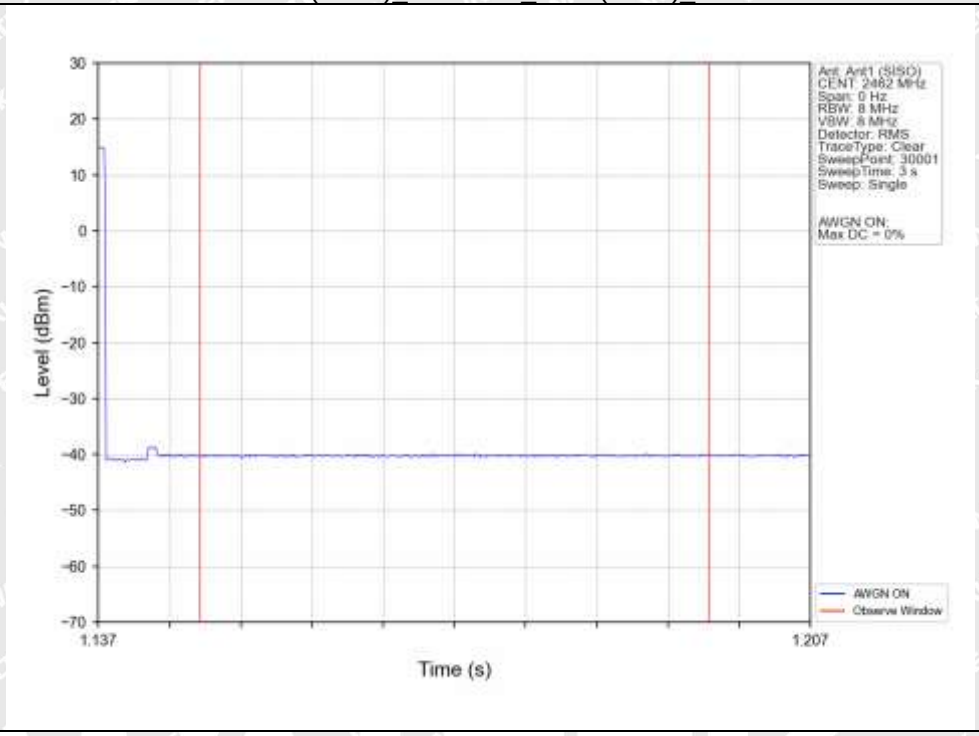
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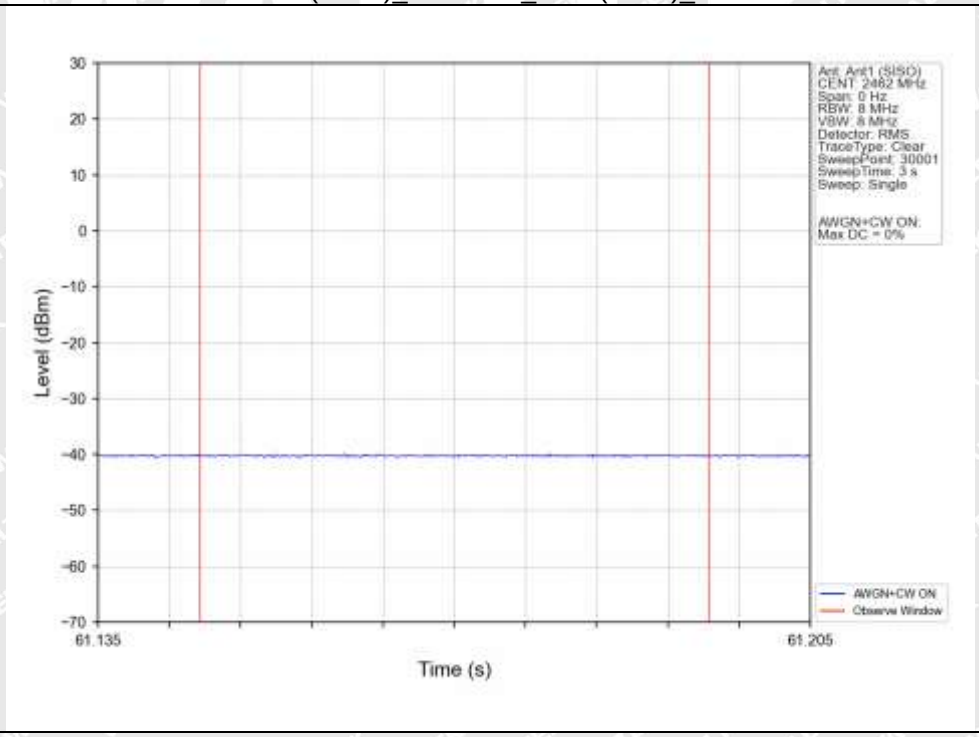
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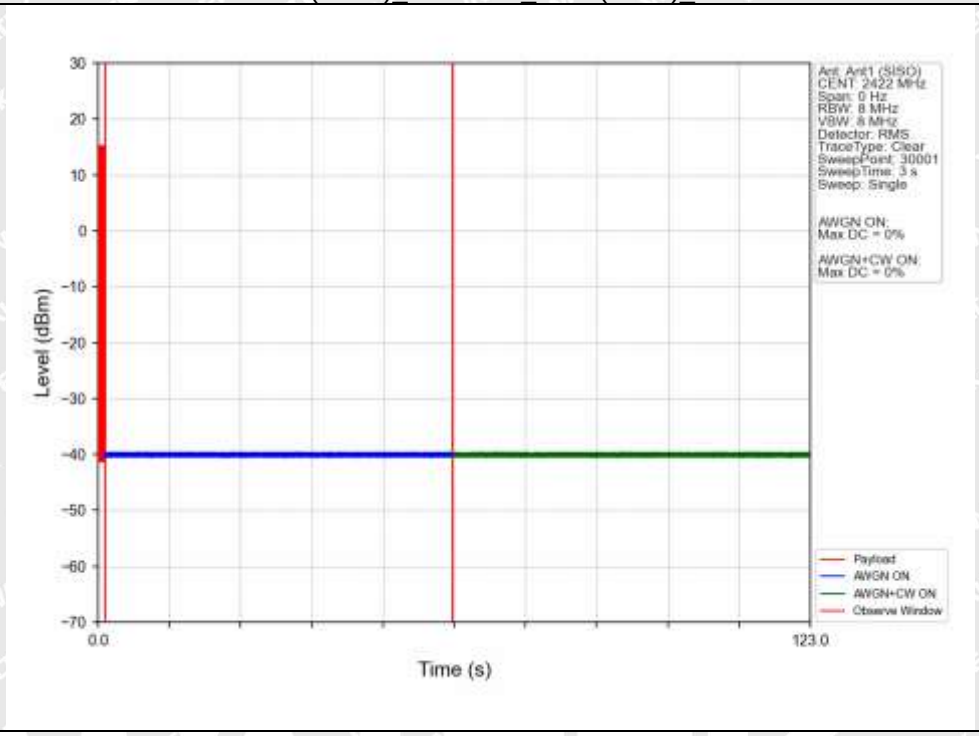
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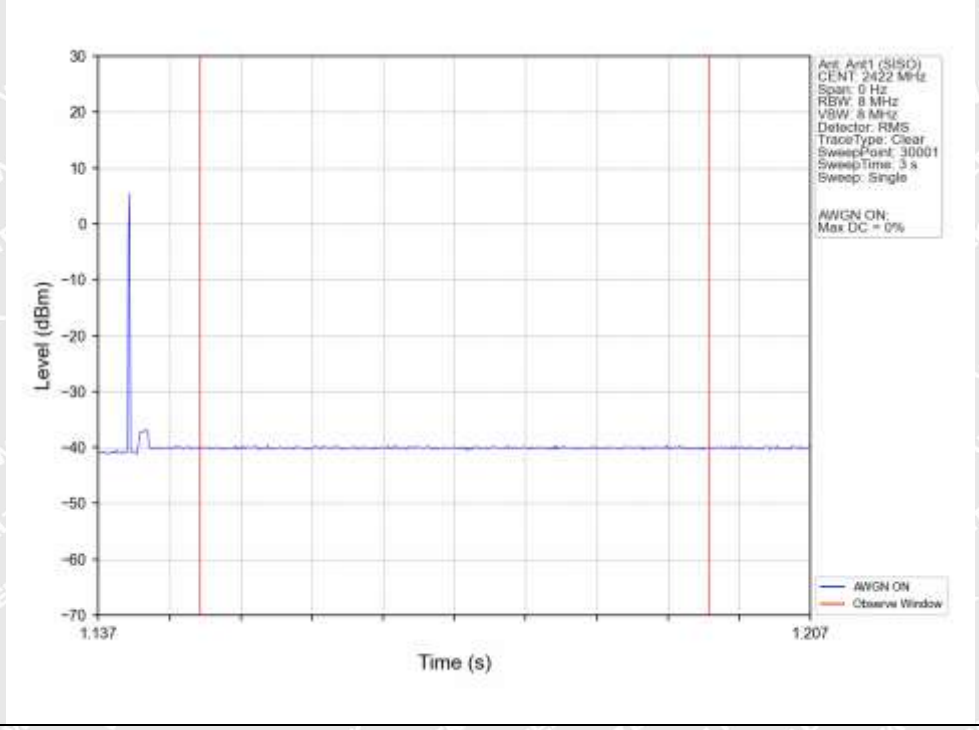
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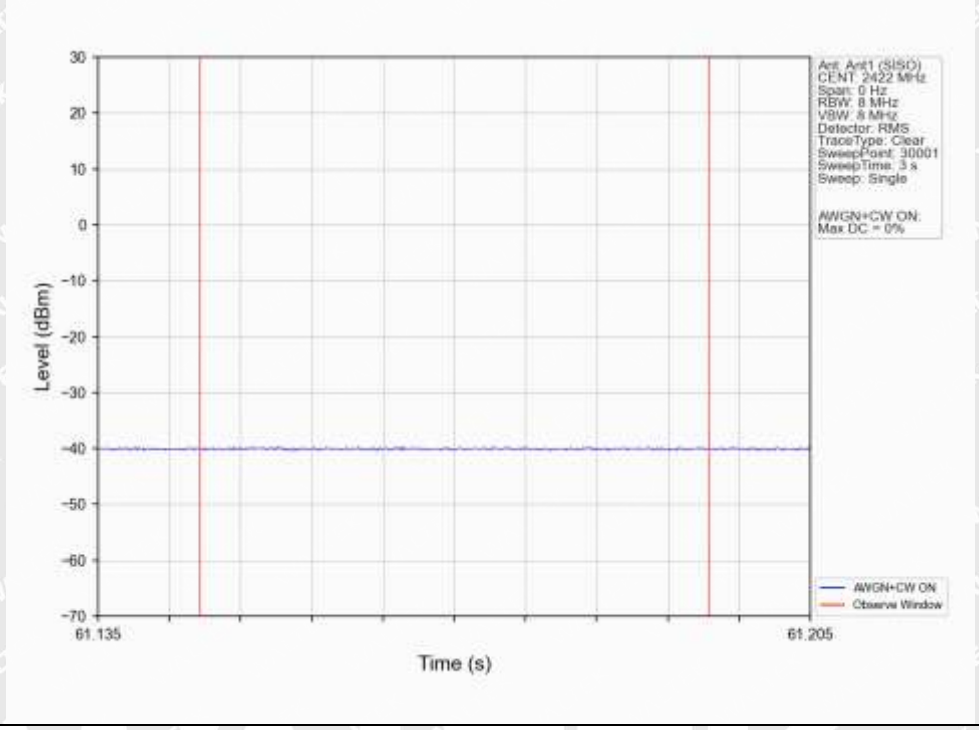
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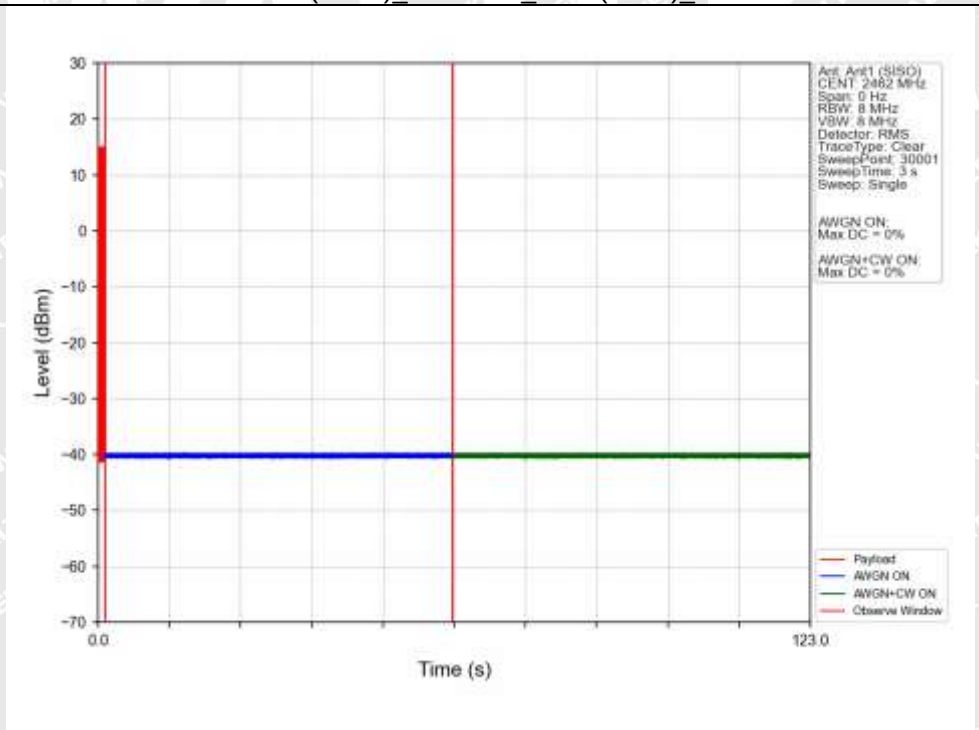
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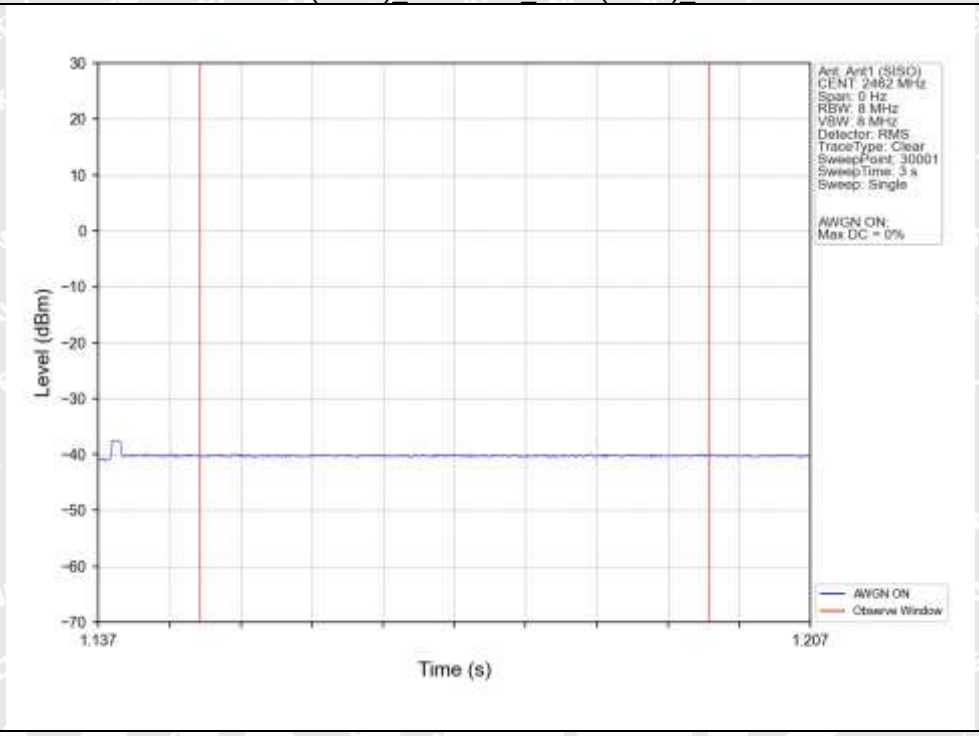
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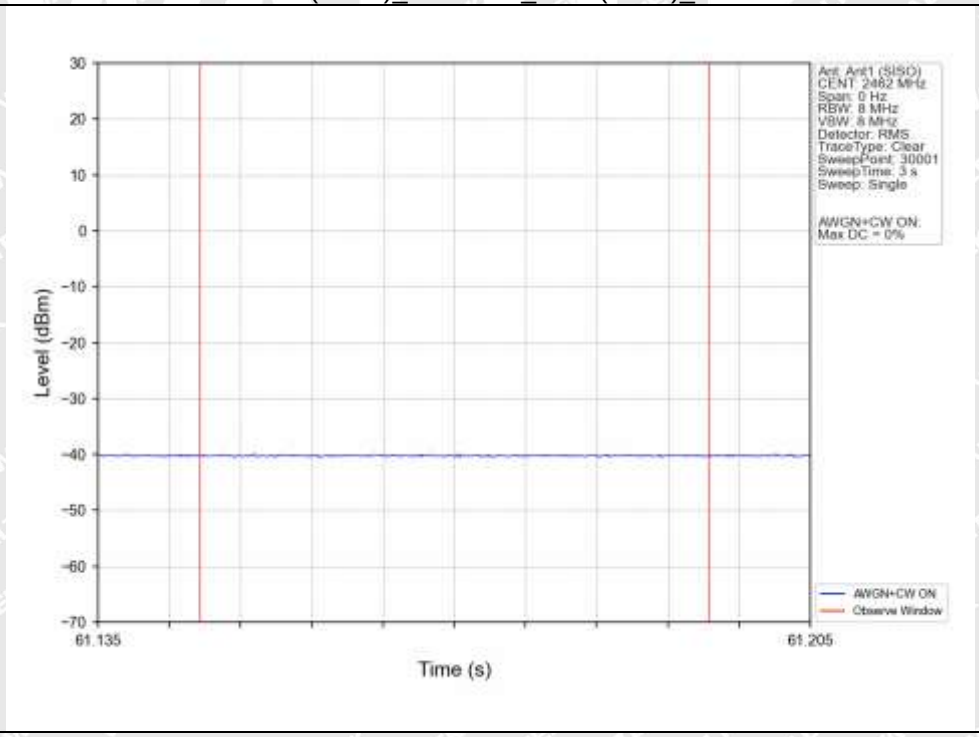
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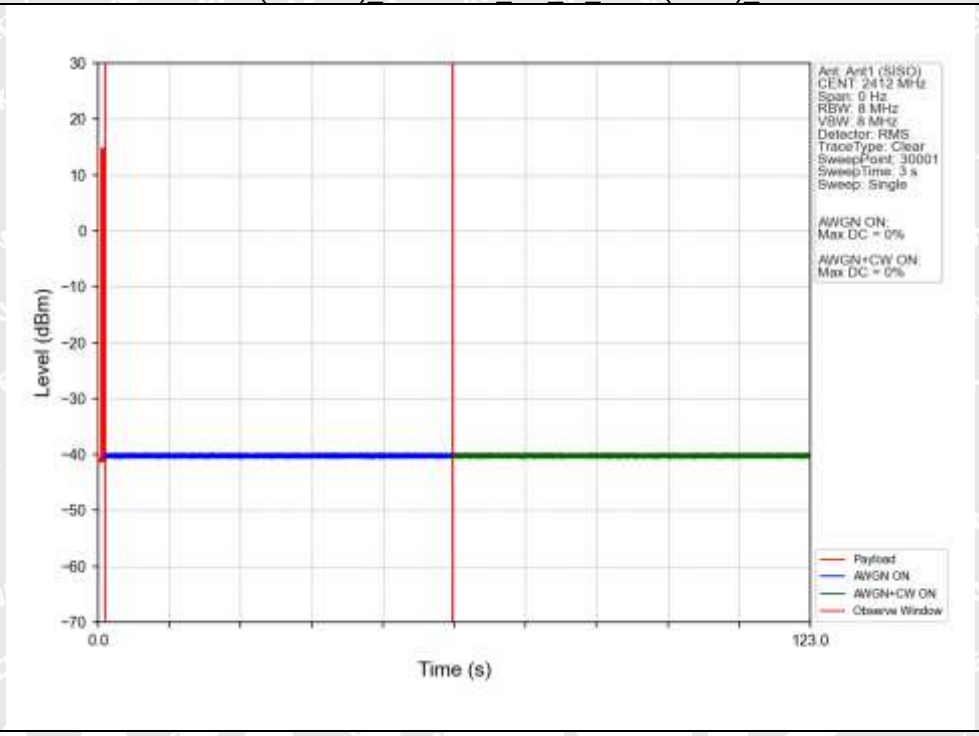
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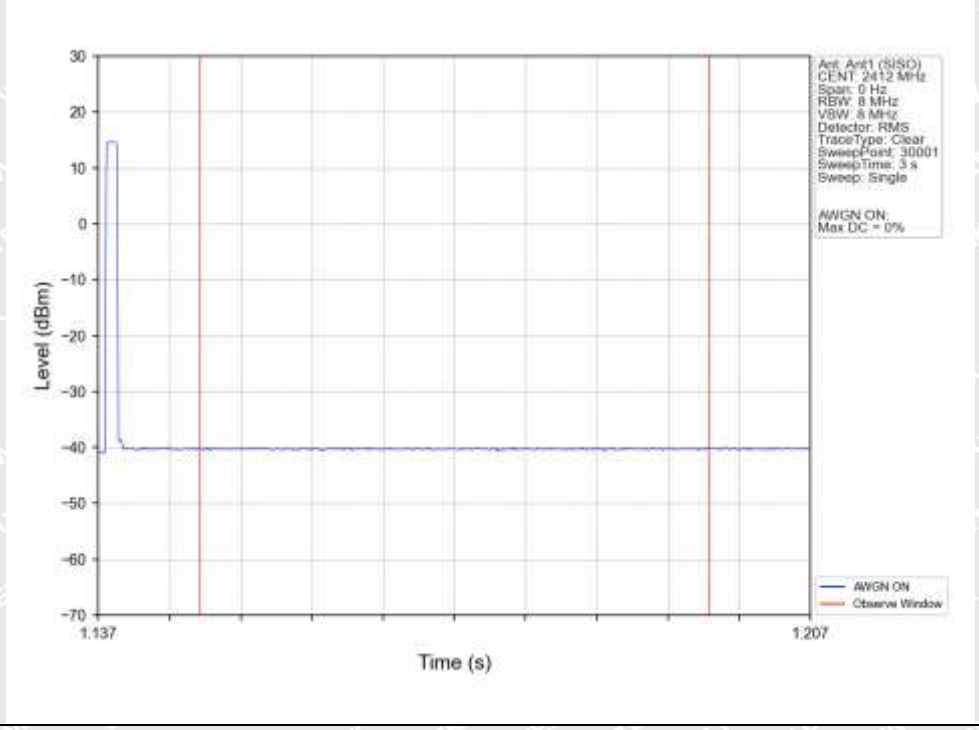
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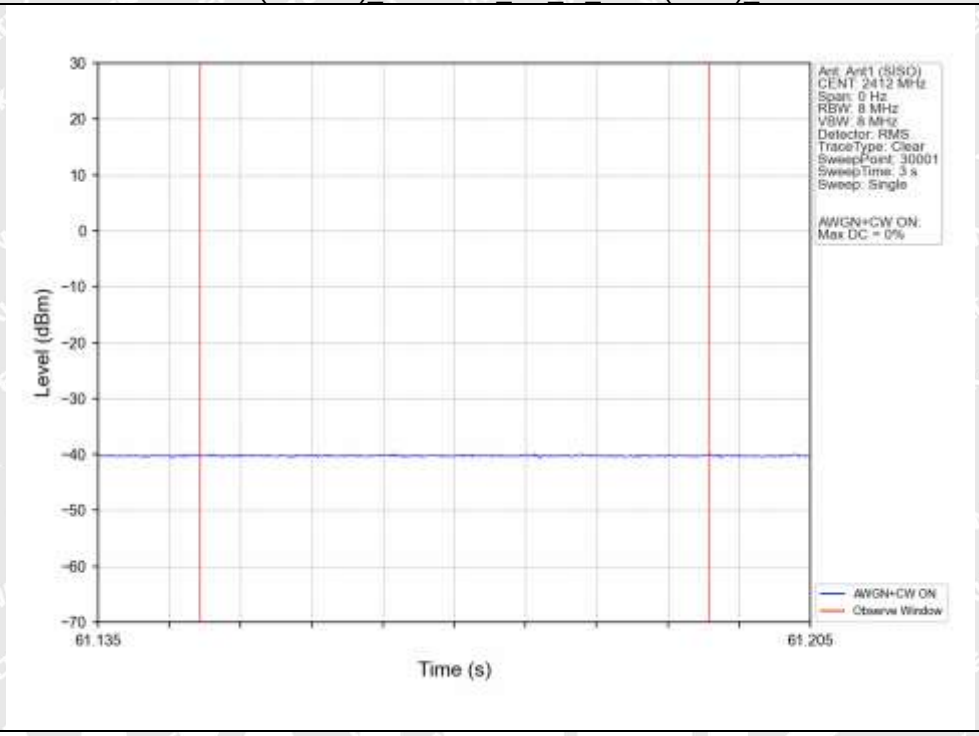
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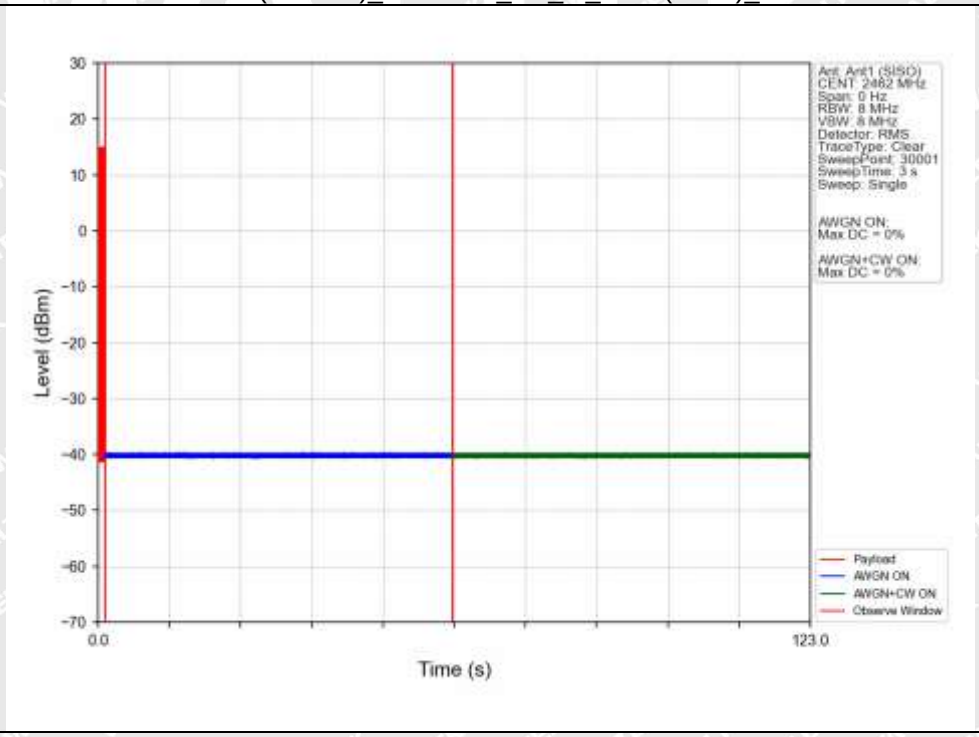
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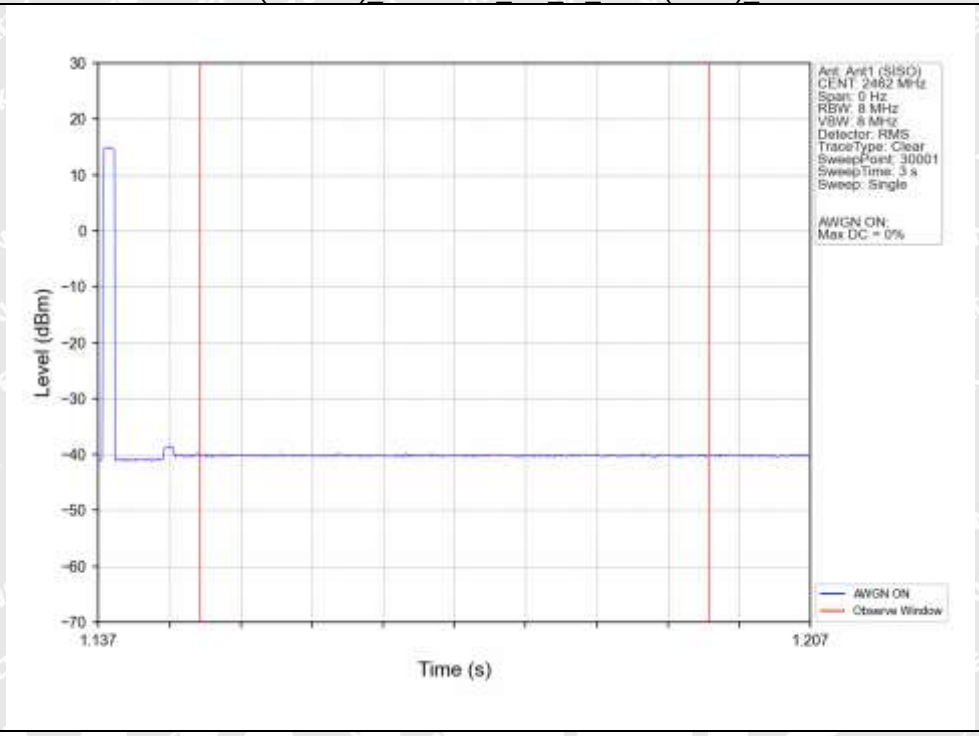
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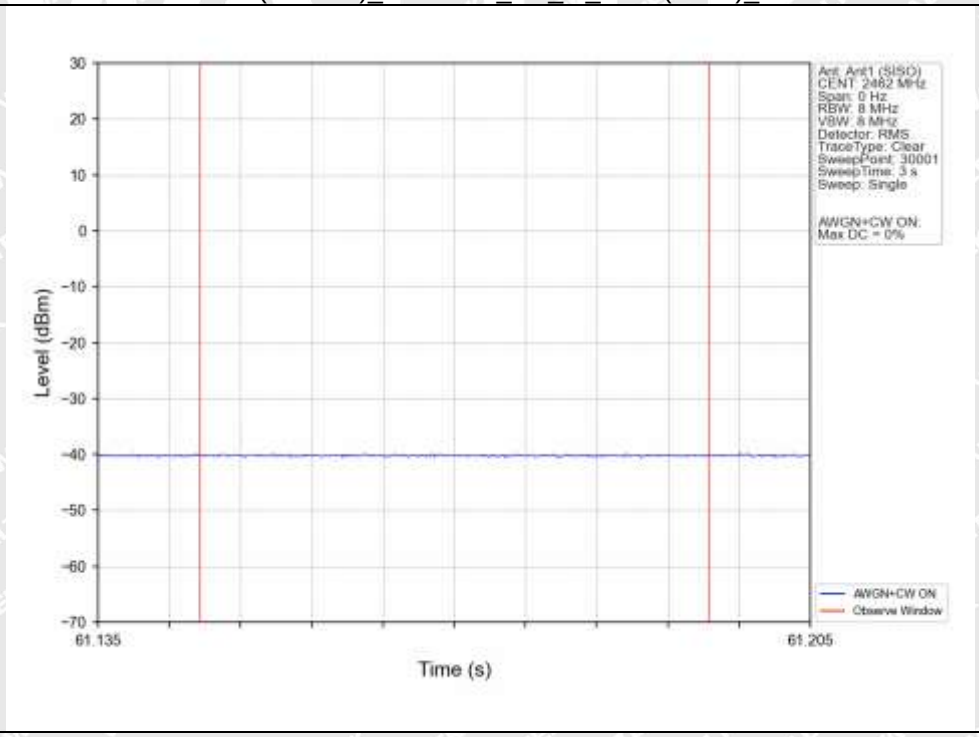
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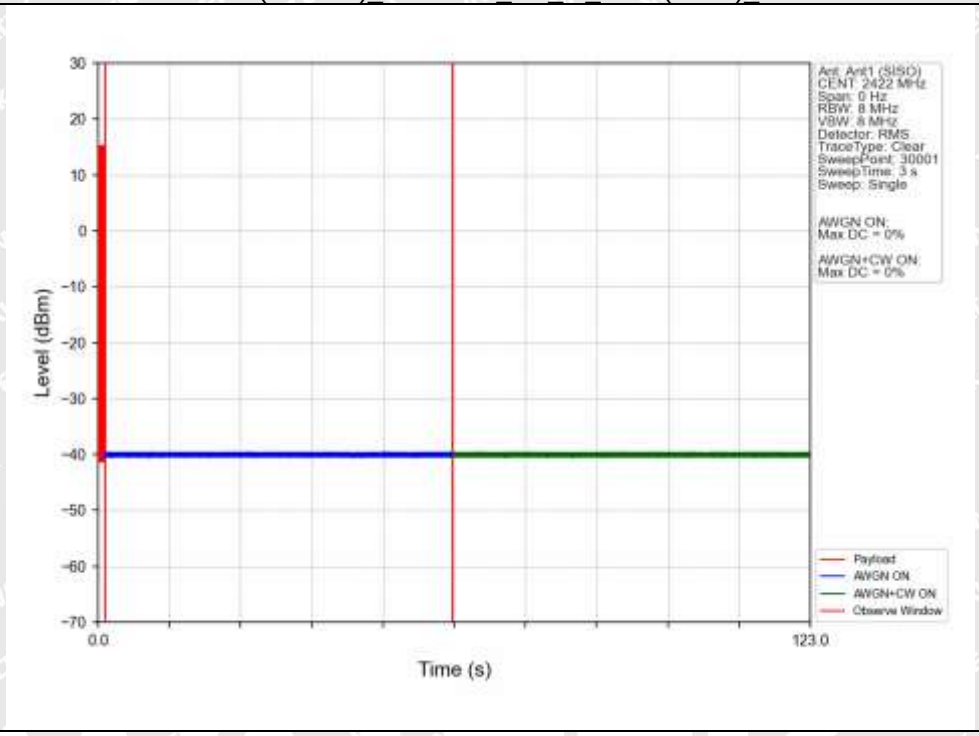
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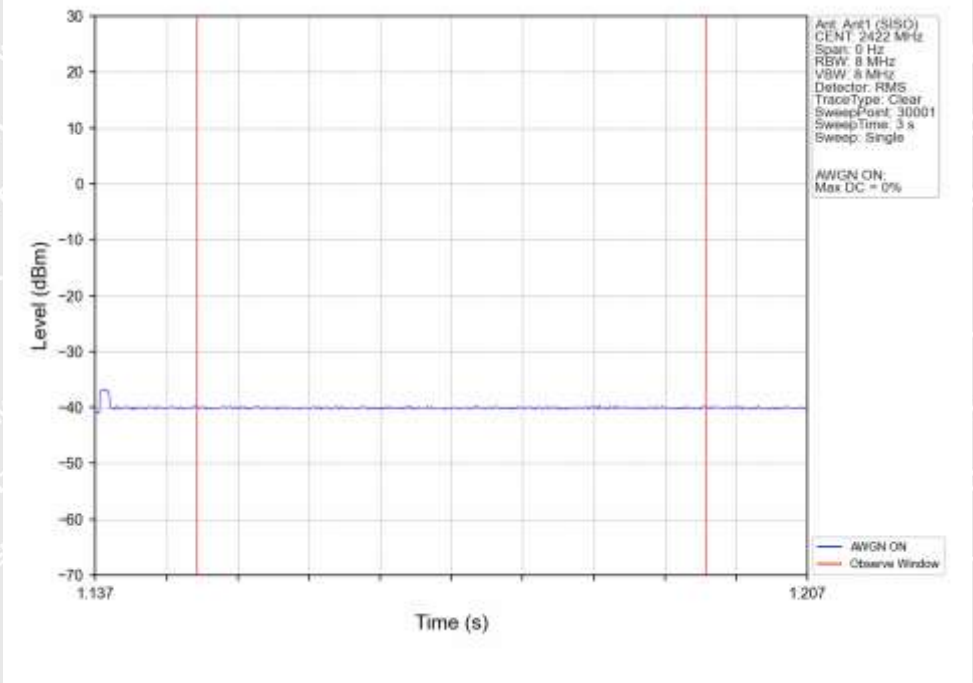
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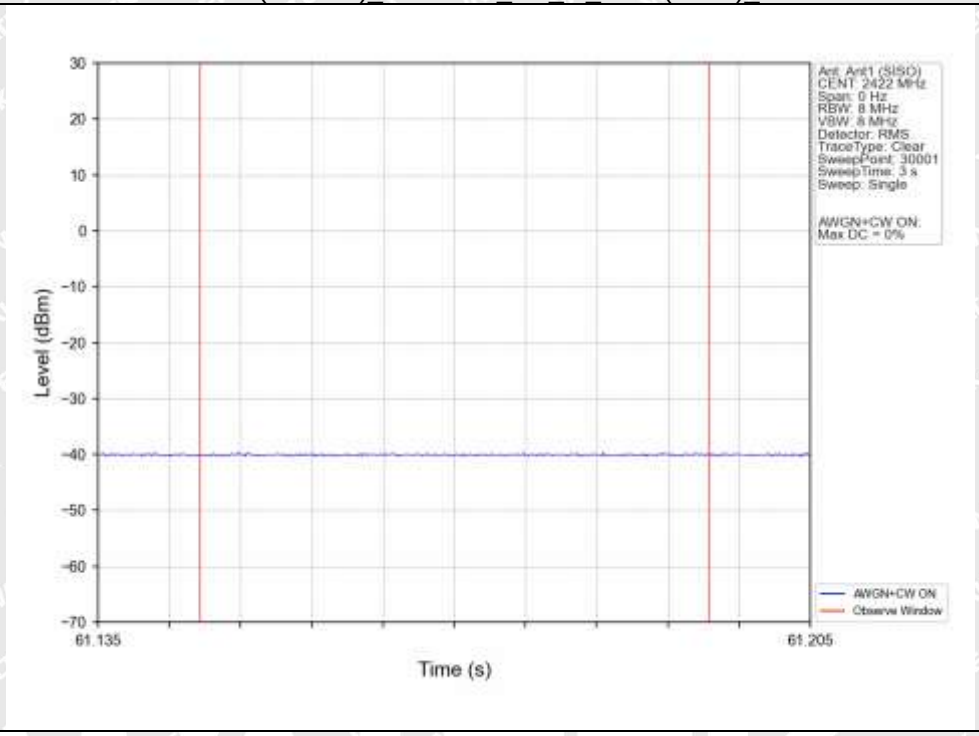
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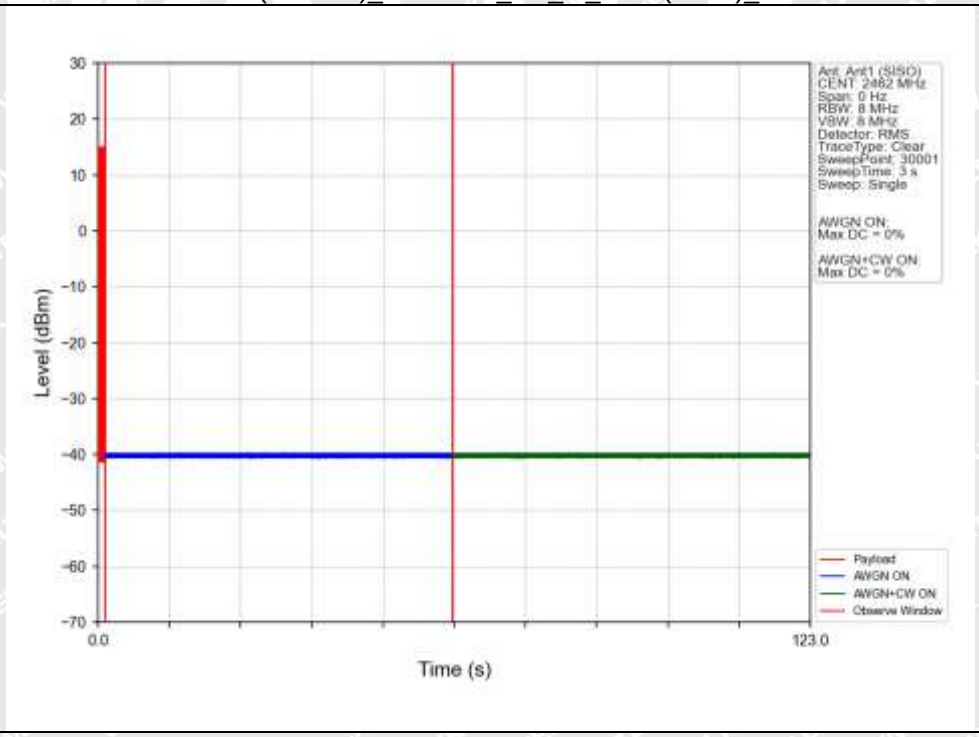
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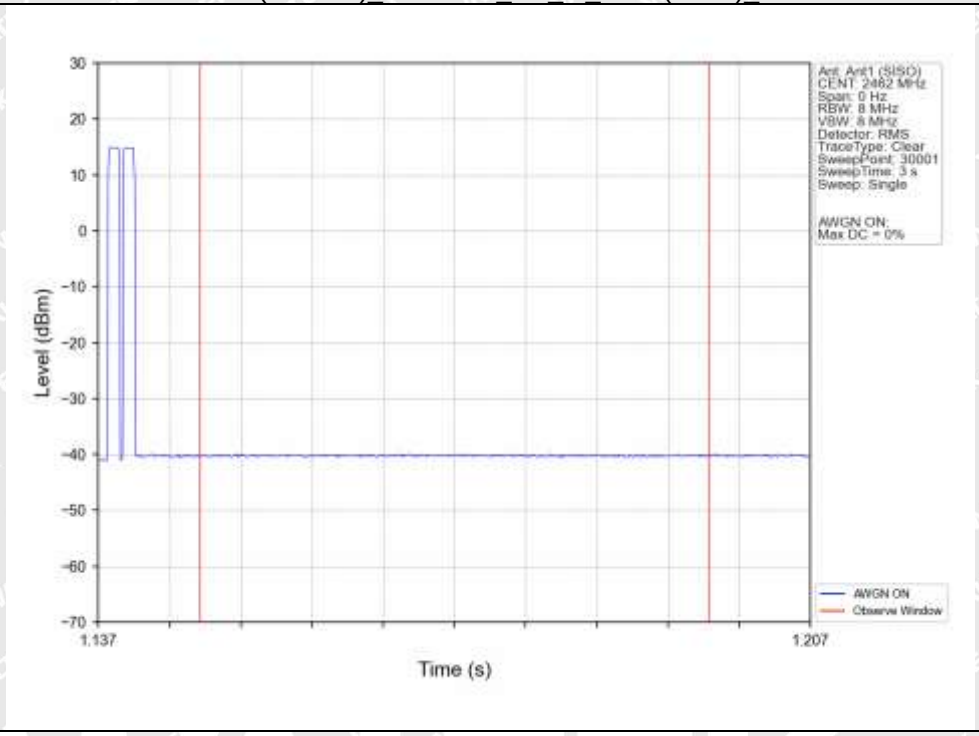
802.11ax(HEW40)_2422MHz_SU_ / _Ant1 (SISO)_NTNV



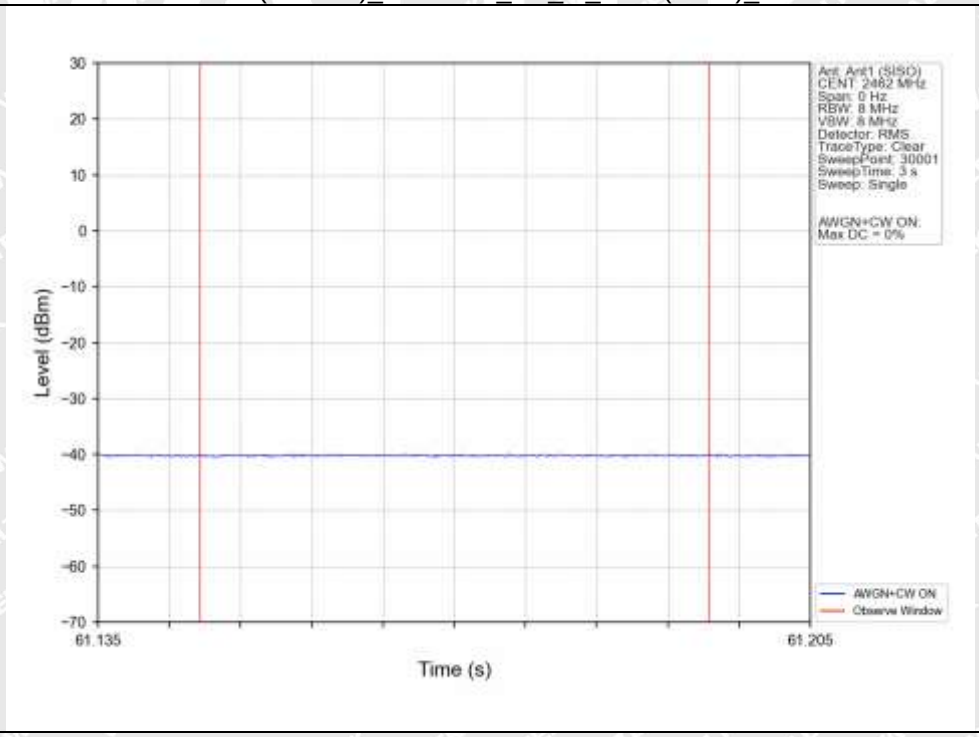
802.11ax(HEW40)_2462MHz_SU_ / _Ant1 (SISO)_NTNV



802.11ax(HEW40)_2462MHz_SU_ / _Ant1 (SISO)_NTNV



802.11ax(HEW40)_2462MHz_SU_ / _Ant1 (SISO)_NTNV



7.4 Receiver Blocking

7.4.1 Receiver Blocking Definition

Receiver blocking is a measure of the ability of the equipment to receive a wanted signal on its operating channel without exceeding a given degradation in the presence of an unwanted signal (blocking signal) at frequencies other than those of the operating band.

7.4.2 Receiver Blocking Limit

While maintaining the minimum performance criteria as defined in clause 4.3.2.11.3, the blocking levels at specified frequency offsets shall be equal to or greater than the limits defined for the applicable receiver category provided in table 14, table 15 or table 16.

Table 14: Receiver Blocking parameters for Receiver Category 1 equipment

Wanted signal mean power from companion device (dBm) (see notes 1 and 4)	Blocking signal frequency (MHz)	Blocking signal power (dBm) (see note 4)	Type of blocking signal
(-133 dBm + 10 × $\log_{10}$(OCBW)) or -68 dBm whichever is less (see note 2)	2 380 2 504	-34	CW
(-139 dBm + 10 × $\log_{10}$(OCBW)) or -74 dBm whichever is less (see note 3)	2 300 2 330 2 360 2 524 2 584 2 674		

NOTE 1: OCBW is in Hz.
NOTE 2: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to P_{min} + 26 dB where P_{min} is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal.
NOTE 3: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to P_{min} + 20 dB where P_{min} is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal.
NOTE 4: The level specified is the level at the UUT receiver input assuming a 0 dBi antenna assembly gain. In case of conducted measurements, this level has to be corrected for the (in-band) antenna assembly gain (G). In case of radiated measurements, this level is equivalent to a power flux density (PFD) in front of the UUT antenna with the UUT being configured/positioned as recorded in clause 5.4.3.2.2.

Table 15: Receiver Blocking parameters receiver Category 2 equipment

Wanted signal mean power from companion device (dBm) (see notes 1 and 3)	Blocking signal frequency (MHz)	Blocking signal power (dBm) (see note 3)	Type of blocking signal
(-139 dBm + 10 × $\log_{10}$(OCBW) + 10 dB) or (-74 dBm + 10 dB) whichever is less (see note 2)	2 380 2 504 2 300 2 584	-34	CW

NOTE 1: OCBW is in Hz.
NOTE 2: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to P_{min} + 26 dB where P_{min} is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal.
NOTE 3: The level specified is the level at the UUT receiver input assuming a 0 dBi antenna assembly gain. In case of conducted measurements, this level has to be corrected for the (in-band) antenna assembly gain (G). In case of radiated measurements, this level is equivalent to a power flux density (PFD) in front of the UUT antenna with the UUT being configured/positioned as recorded in clause 5.4.3.2.2.

Table 16: Receiver Blocking parameters receiver Category 3 equipment

Wanted signal mean power from companion device (dBm) (see notes 1 and 3)	Blocking signal frequency (MHz)	Blocking signal power (dBm) (see note 3)	Type of blocking signal
(-139 dBm + 10 × $\log_{10}$(OCBW) + 20 dB) or (-74 dBm + 20 dB) whichever is less (see note 2)	2 380 2 504 2 300 2 584	-34	CW

NOTE 1: OCBW is in Hz.
NOTE 2: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to P_{min} + 30 dB where P_{min} is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal.
NOTE 3: The level specified is the level at the UUT receiver input assuming a 0 dBi antenna assembly gain. In case of conducted measurements, this level has to be corrected for the (in-band) antenna assembly gain (G). In case of radiated measurements, this level is equivalent to a power flux density (PFD) in front of the UUT antenna with the UUT being configured/positioned as recorded in clause 5.4.3.2.2.

The conformance tests for this requirement are defined in clause 5.4.11.

7.4.3EUT Operation Condition

The EUT was programmed to be in transmitting on mode.

7.4.4Test Procedure

For systems using multiple receive chains only one chain (antenna port) need to be tested. All other receiver inputs shall be terminated.
Figure 6 shows the test set-up which can be used for performing the receiver blocking test.

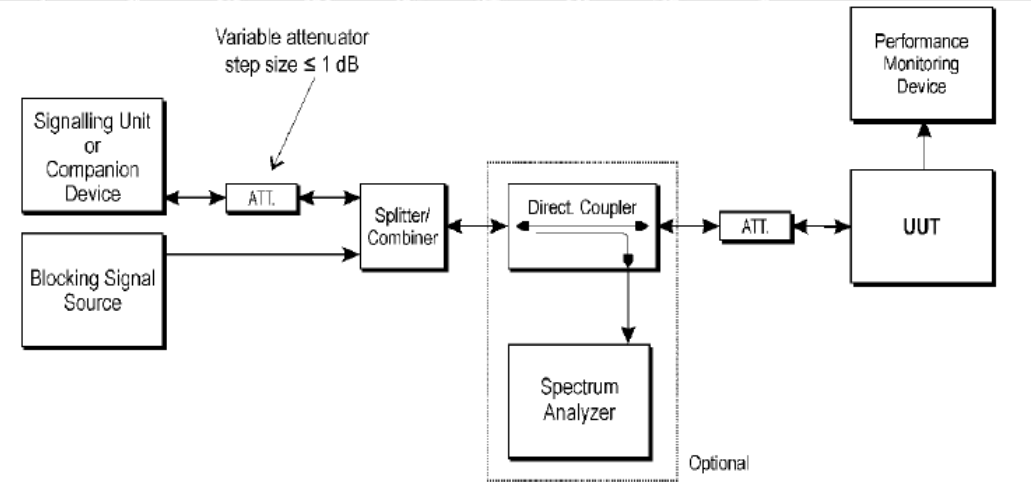


Figure 6: Test Set-up for receiver blocking

The procedure in step 1 to step 6 below shall be used to verify the receiver blocking requirement as described in clause 4.3.1.12 or clause 4.3.2.11.

Table 6, table 7 and table 8 in clause 4.3.1.12.4 contain the applicable blocking frequencies and blocking levels for each of the receiver categories for testing Receiver Blocking on frequency hopping equipment.

Table 14, table 15 and table 16 in clause 4.3.2.11.4 contain the applicable blocking frequencies and blocking levels for each of the receiver categories for testing Receiver Blocking on equipment using wide band modulations other than
FHSS.

Step 1:

• For non-frequency hopping equipment, the UUT shall be set to the lowest operating channel.

Step 2:

• The blocking signal generator is set to the first frequency as defined in the appropriate table corresponding to the receiver category and type of equipment.

Step 3:

• With the blocking signal generator switched off, a communication link is established between the UUT and the associated companion device using the test setup shown in figure 6. The attenuation of the variable attenuator shall be increased in 1 dB steps to a value at which the minimum performance criteria as specified in clause 4.3.1.12.3 or clause 4.3.2.11.3 is still met. The resulting level for the wanted signal at the input of the UUT is Pmin.

• This signal level (Pmin) is increased by the value provided in the table corresponding to the receiver category and type of equipment.

Step 4:

• The blocking signal at the UUT is set to the level provided in the table corresponding to the receiver category and type of equipment. It shall be verified and recorded in the test report that the performance criteria as specified in clause 4.3.1.12.3 or clause 4.3.2.11.3 is met.

Step 5:

• Repeat step 4 for each remaining combination of frequency and level for the blocking signal as provided in the table corresponding to the receiver category and type of equipment.

Step 6:

• For non-frequency hopping equipment, repeat step 2 to step 5 with the UUT operating at the highest operating channel.

7.4.5Measurement Record

Receiver Blocking parameters receiver category 1 equipment

ENV	Mode	TX Type	Frequency (MHz)	Wanted signal level (dBm)	Blocking Signal		PER (%)	Limit (%)	Verdict
					Frequency (MHz)	Power (dBm)			
NTNV	802.11b	SISO	2412	-55.27	2300[1]	-35.27[1]	1.8	<=10	Pass
					2380[1]	-35.27[1]	1.7	<=10	Pass
			2472	-55.27	2504[1]	-35.27[1]	1.6	<=10	Pass
					2584[1]	-35.27[1]	1.7	<=10	Pass
Note1: Wait for the EIRP and MU values to calculate the Receiver Category (Blocking Signal Frequency & Power).									

7.5 Occupied Channel Bandwidth

7.5.1Definition

The Occupied Channel Bandwidth is the bandwidth that contains 99 % of the power of the signal.

7.5.2Limit

The Occupied Channel Bandwidth shall fall completely within the band given in clause 1.
In addition, for non-adaptive equipment using wide band modulations other than FHSS and with e.i.r.p. greater than 10 dBm, the occupied channel bandwidth shall be less than 20MHz.

7.5.3 EUT Operation Condition

The EUT was programmed to be in continuously transmitting mode.

7.5.4Test Procedure

Step 1:

Connect the UUT to the spectrum analyser and use the following settings:

• Centre Frequency: The centre frequency of the channel under test

• Resolution BW: ~ 1 % of the span without going below 1 %

• Video BW: 3 × RBW

• Frequency Span: 2 × Nominal Channel Bandwidth

• Detector Mode: RMS

• Trace Mode: Max Hold

• Sweep time: 1 s

Step 2:

Wait for the trace to stabilize.

Find the peak value of the trace and place the analyser marker on this peak.

Step 3:

Use the 99 % bandwidth function of the spectrum analyser to measure the Occupied Channel Bandwidth of the UUT.

This value shall be recorded.

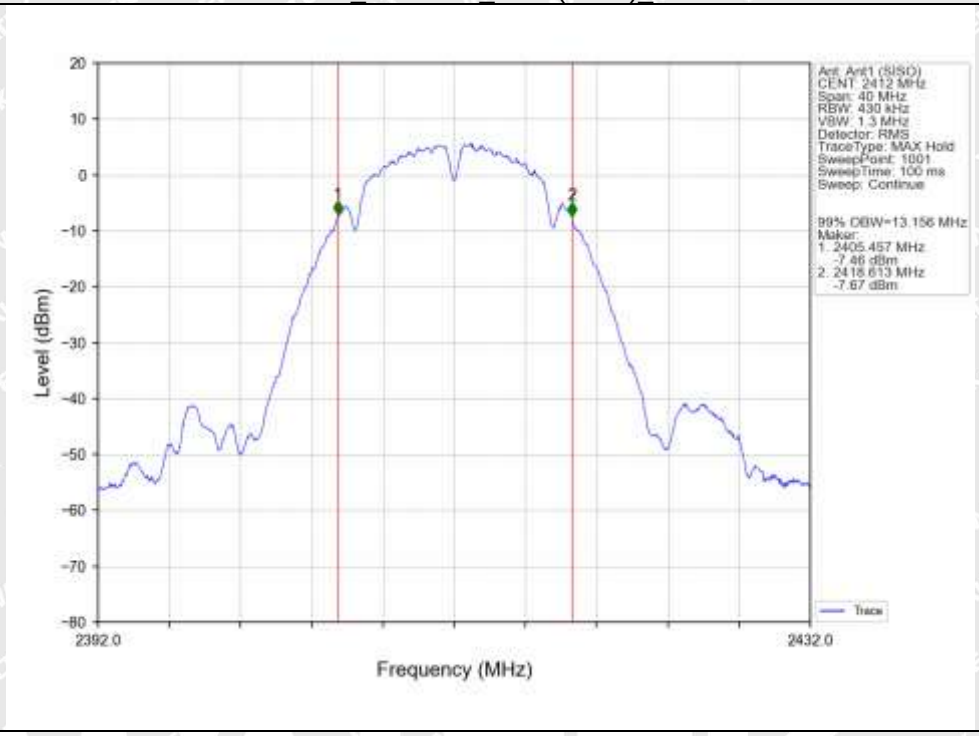
NOTE: Make sure that the power envelope is sufficiently above the noise floor of the analyser to avoid the noise signals left and right from the power envelope being taken into account by this measurement.

7.5.5Measurement Record

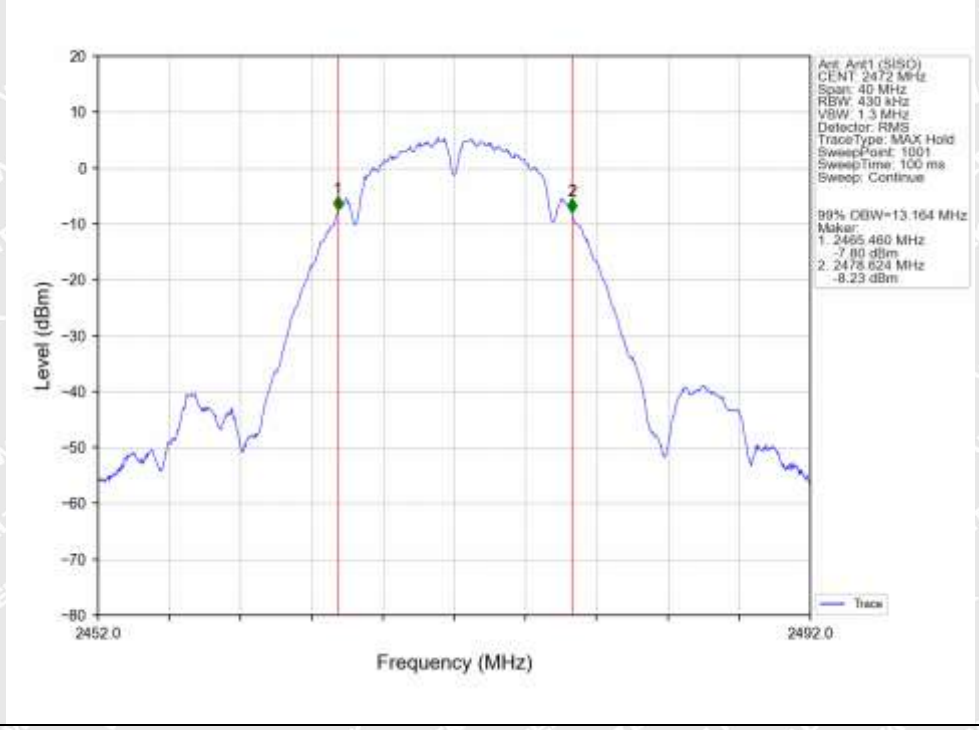
Modulation	Frequency (MHz)	Frequency Range (MHz)		Occupied Channel (MHz)
802.11b	Low	2405.457	/	13.156
	High	/	2478.624	13.164
802.11g	Low	2403.696	/	16.591
	High	/	2480.305	16.614
802.11n20	Low	2403.093	/	17.801
	High	/	2480.893	17.802
802.11n40	Low	2403.817	/	36.314
	High	/	2480.133	36.311
802.11ax20	Low	2402.500	/	18.989
	High	/	2481.491	18.988
802.11ax40	Low	2403.070	/	37.807
	High	/	2480.884	37.827

Test Plot

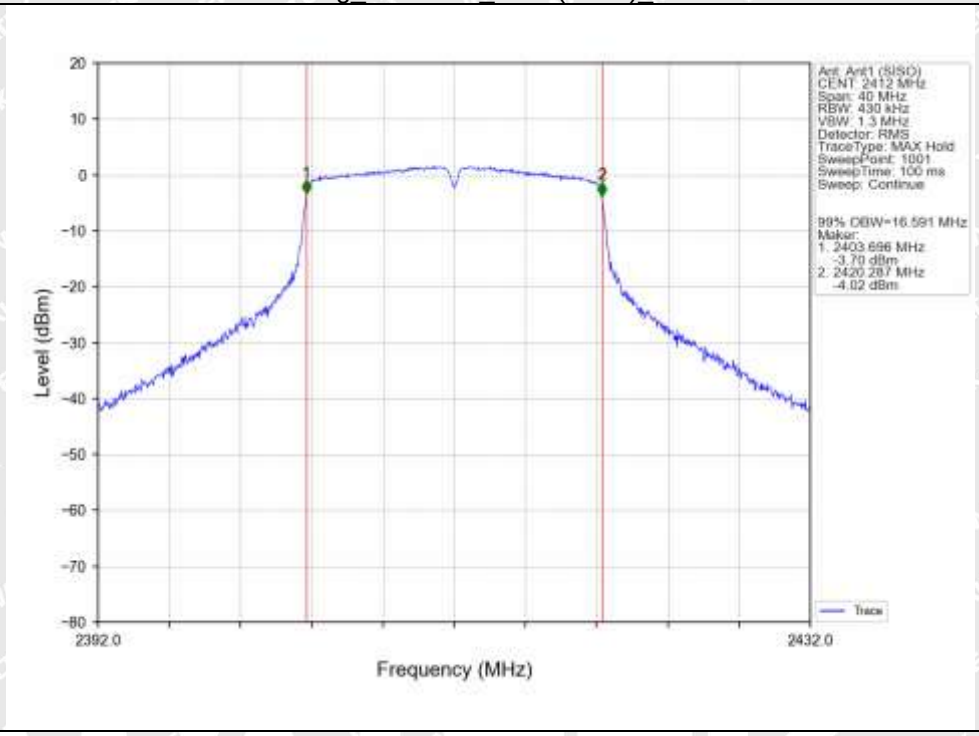
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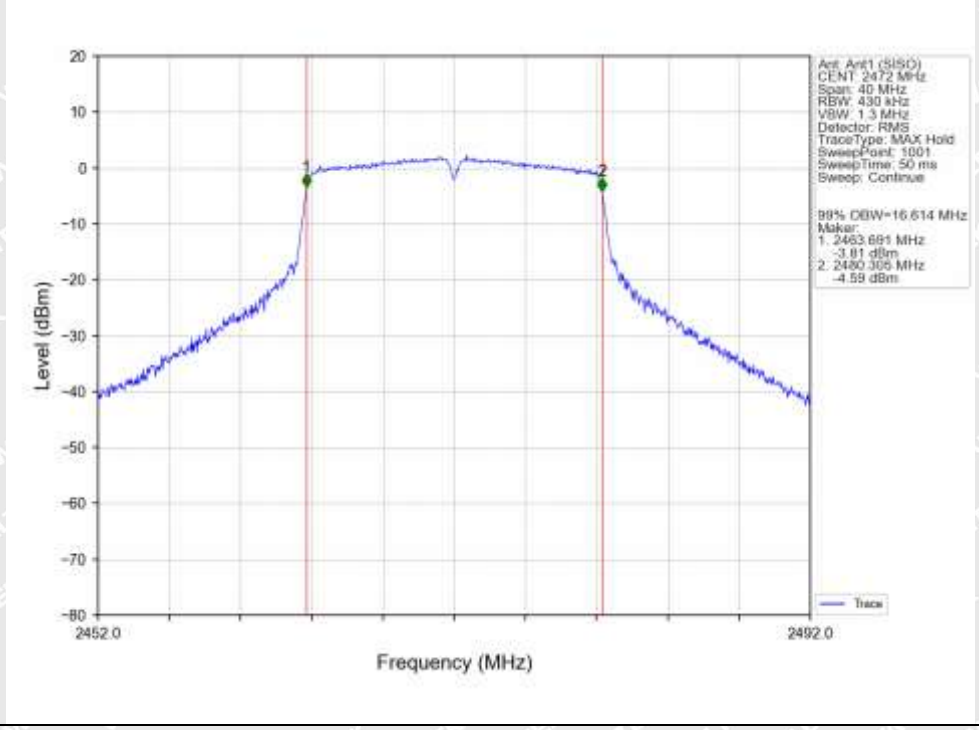
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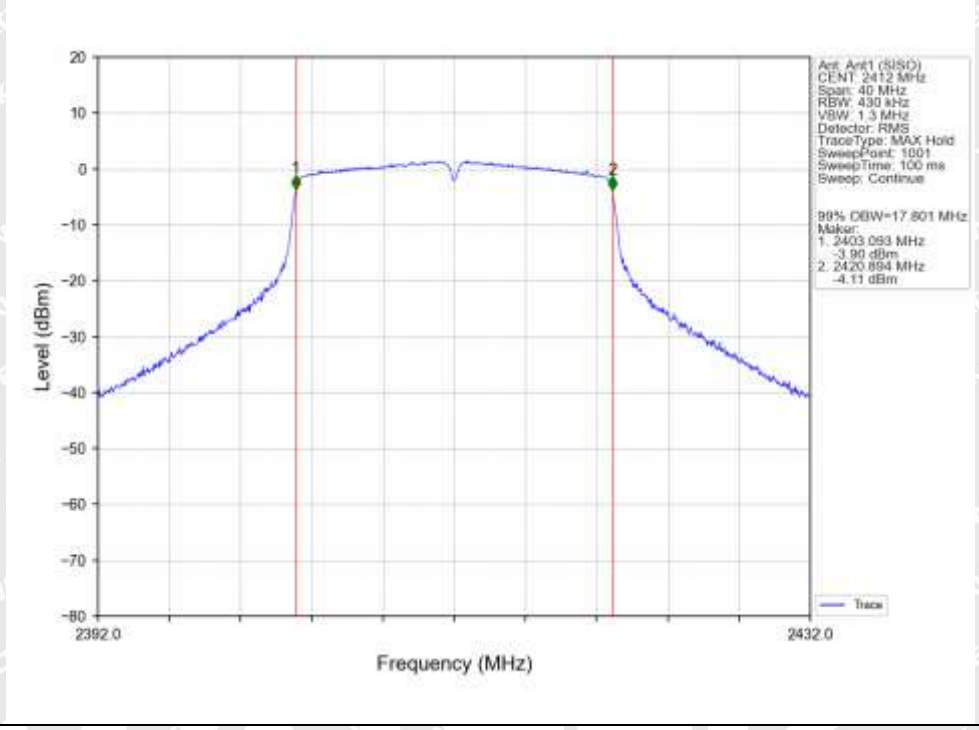
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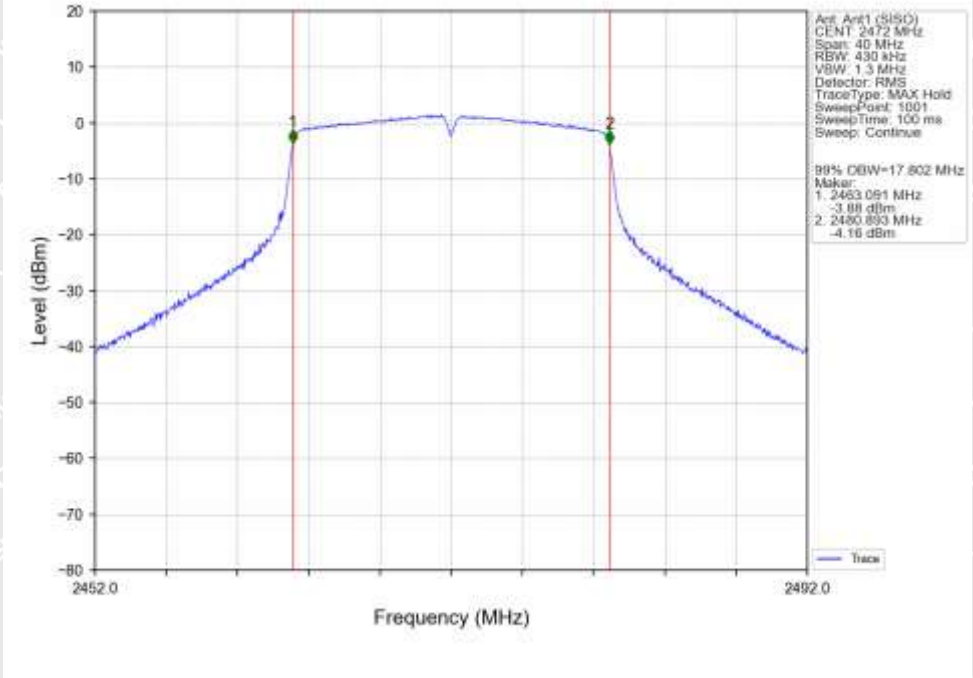
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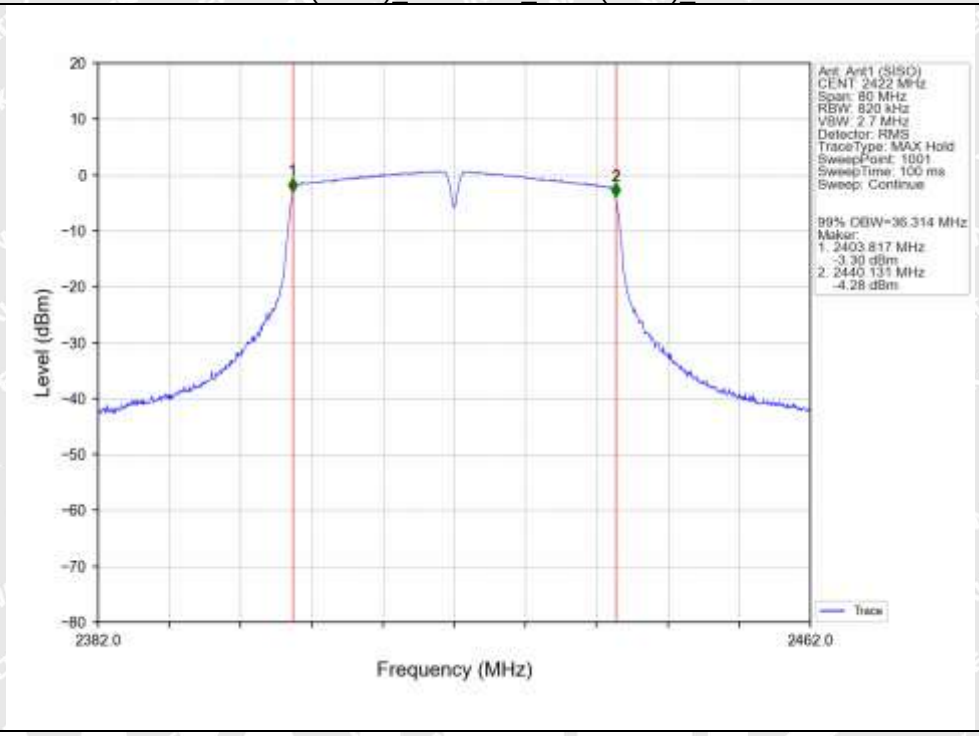
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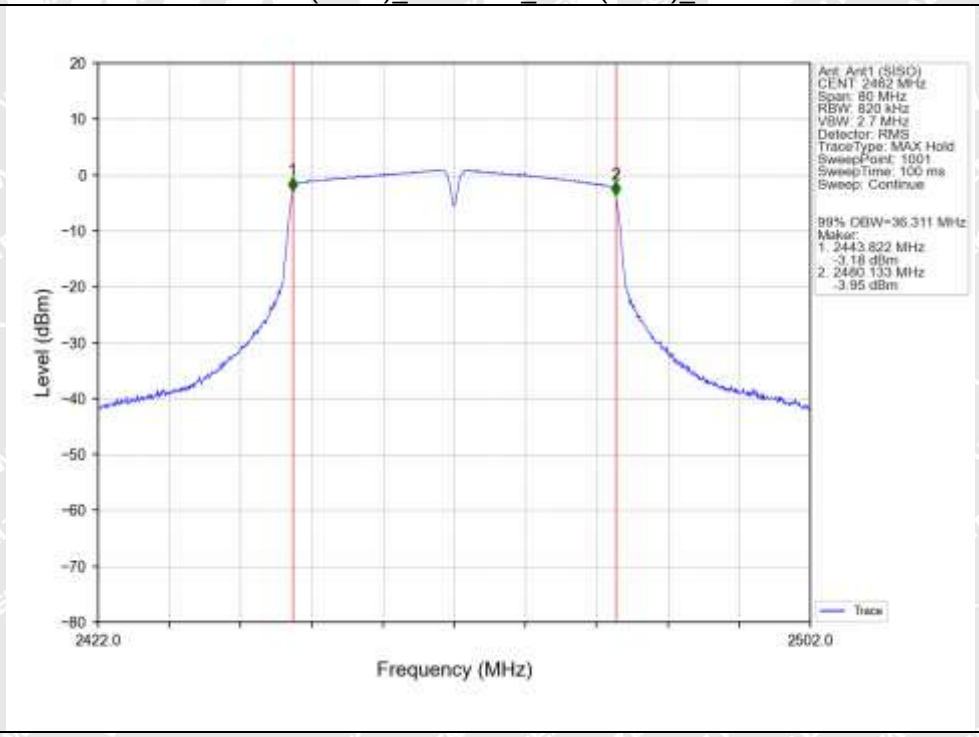
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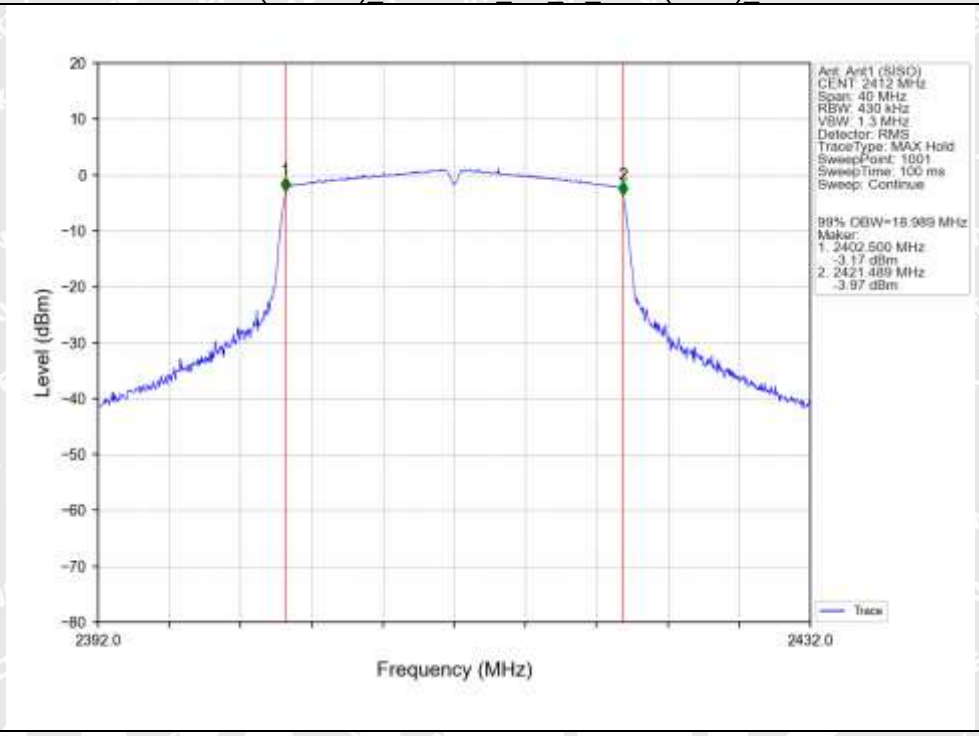
802.11n(HT40)_2422MHz_Ant1 (SISO)_NTNV



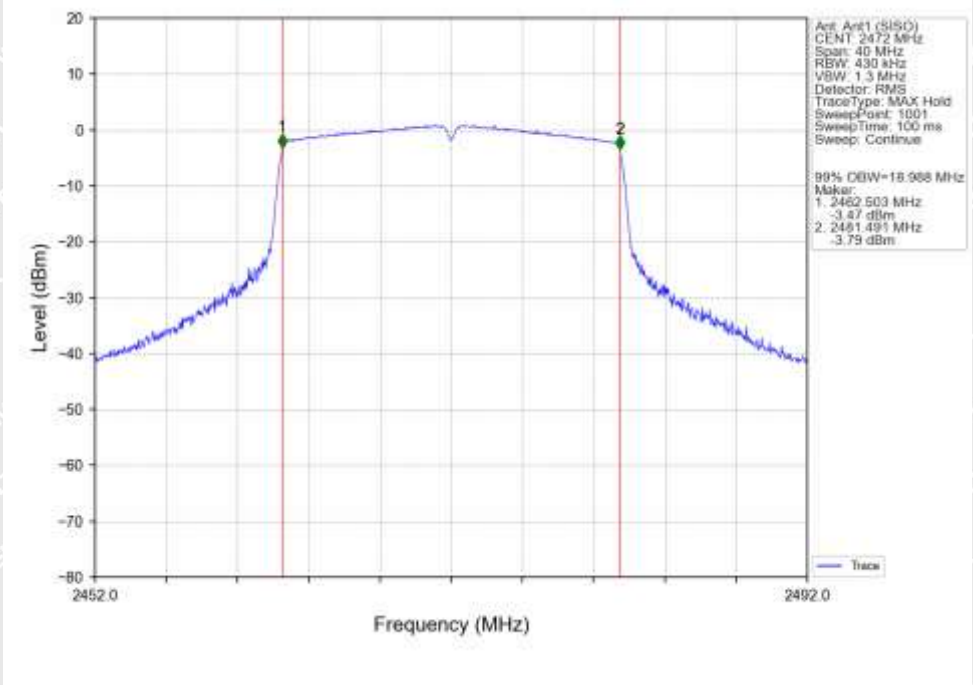
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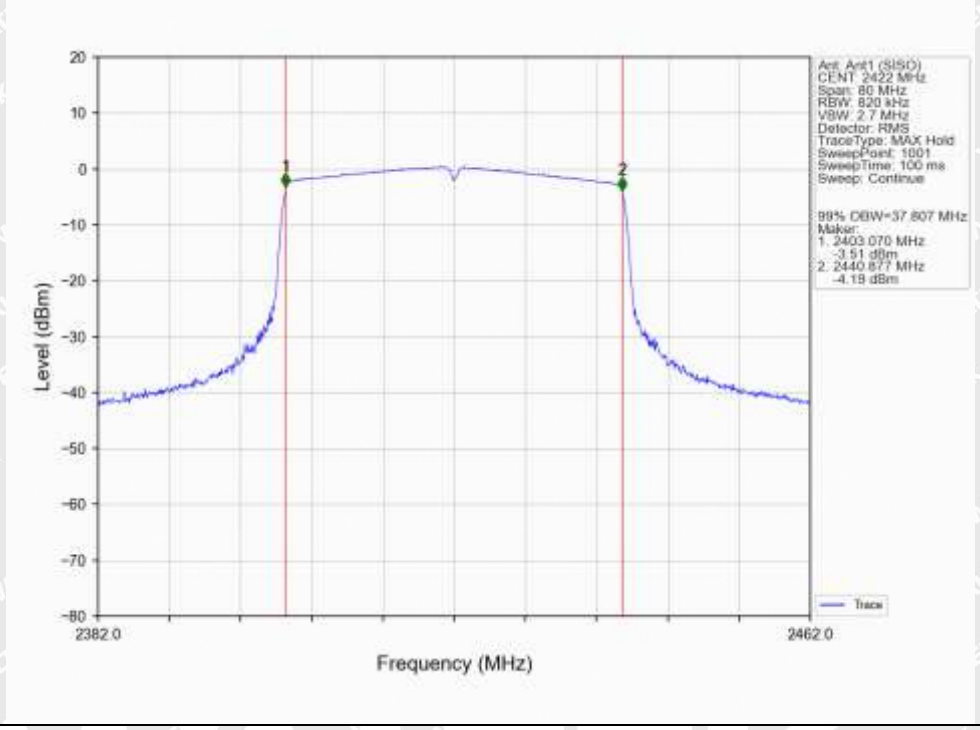
802.11ax(HEW20)_2412MHz_SU_ / _Ant1 (SISO)_NTNV



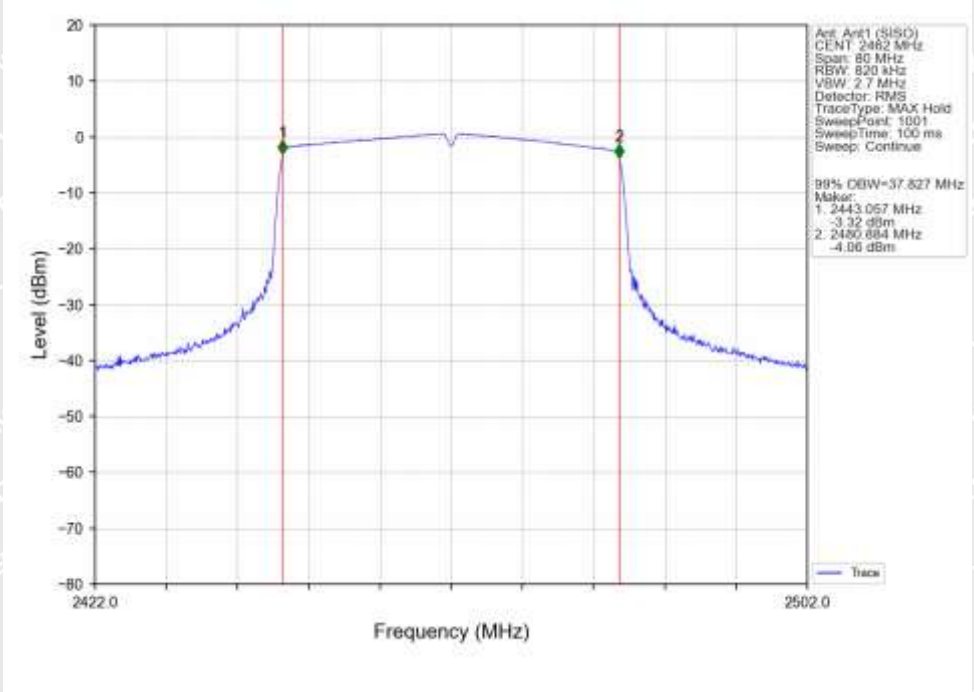
802.11ax(HEW20)_2472MHz_SU_ / _Ant1 (SISO)_NTNV



802.11ax(HEW40)_2422MHz_SU_ / _Ant1 (SISO)_NTNV



802.11ax(HEW40)_2462MHz_SU_ / _Ant1 (SISO)_NTNV



7.6 Transmitter unwanted emissions in the out-of-band domain

7.6.1Definition

Transmitter unwanted emissions in the out-of-band domain are emissions when the equipment is in Transmit mode, on frequencies immediately outside the necessary bandwidth which results from the modulation process, but excluding spurious.

7.6.2Limit

The transmitter unwanted emissions in the out-of-band domain but outside the allocated band, shall not exceed the values provided by the mask in figure 3.

NOTE: Within the 2 400 MHz to 2 483,5 MHz band, the Out-of-band emissions are fulfilled by compliance with the Occupied Channel Bandwidth requirement in clause 4.3.2.7.

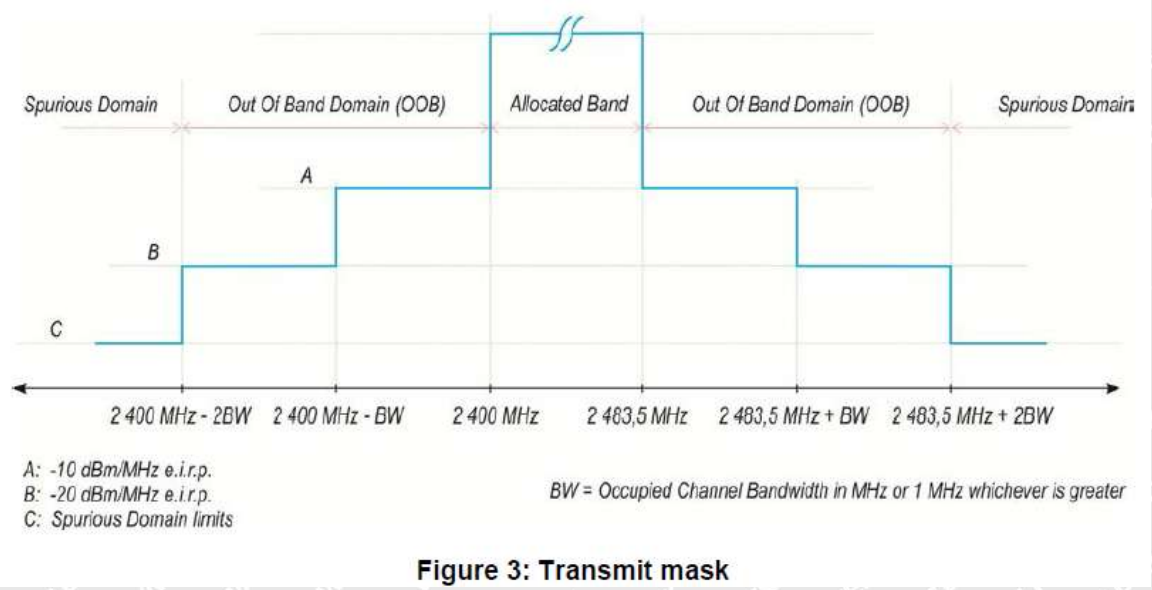


Figure 3: Transmit mask

7.6.3EUT Operation Condition

The EUT was programmed to be in continuously transmitting mode.

7.6.4Test Procedure

The applicable mask is defined by the measurement results from the tests performed under clause 5.3.8 (Occupied Channel Bandwidth).

The test procedure is further as described under clause 5.3.9.2.1.

The Out-of-band emissions within the different horizontal segments of the mask provided in figures 1 and 3 shall be measured using the steps below. This method assumes the spectrum analyser is equipped with the Time Domain Power option.

Step 1:

• Connect the UUT to the spectrum analyser and use the following settings:

- Centre Frequency: 2 484 MHz

- Span: 0 Hz

- Resolution BW: 1 MHz

- Filter mode: Channel filter
- Video BW: 3 MHz
- Detector Mode: RMS
- Trace Mode: Max Hold
- Sweep Mode: Continuous
- Sweep Points: Sweep Time [s] / (1 µs) or 5 000 whichever is greater
- Trigger Mode: Video trigger

NOTE 1: In case video triggering is not possible, an external trigger source may be used.

- Sweep Time: > 120 % of the duration of the longest burst detected during the measurement of the RF Output Power

Step 2 (segment 2 483,5 MHz to 2 483,5 MHz + BW):

• Adjust the trigger level to select the transmissions with the highest power level.

• For frequency hopping equipment operating in a normal hopping mode, the different hops will result in signal bursts with different power levels. In this case the burst with the highest power level shall be selected.

• Set a window (start and stop lines) to match with the start and end of the burst and in which the RMS power shall be measured using the Time Domain Power function.

• Select RMS power to be measured within the selected window and note the result which is the RMS power within this 1 MHz segment (2 483,5 MHz to 2 484,5 MHz). Compare this value with the applicable limit provided by the mask.

• Increase the centre frequency in steps of 1 MHz and repeat this measurement for every 1 MHz segment within the range 2 483,5 MHz to 2 483,5 MHz + BW. The centre frequency of the last 1 MHz segment shall be set to 2 483,5 MHz + BW - 0,5 MHz (which means this may partly overlap with the previous 1 MHz segment).

Step 3 (segment 2 483,5 MHz + BW to 2 483,5 MHz + 2BW):

• Change the centre frequency of the analyser to 2 484 MHz + BW and perform the measurement for the first 1 MHz segment within range 2 483,5 MHz + BW to 2 483,5 MHz + 2BW. Increase the centre frequency in 1 MHz steps and repeat the measurements to cover this whole range. The centre frequency of the last 1 MHz segment shall be set to 2 483,5 MHz + 2 BW - 0,5 MHz (which means this may partly overlap with the previous 1 MHz segment).

Step 4 (segment 2 400 MHz - BW to 2 400 MHz):

• Change the centre frequency of the analyser to 2 399,5 MHz and perform the measurement for the first 1 MHz segment within range 2 400 MHz - BW to 2 400 MHz Reduce the centre frequency in 1 MHz steps and repeat the measurements to cover this whole range. The centre frequency of the last 1 MHz segment shall be set to 2 400 MHz - BW + 0,5 MHz (which means this may partly overlap with the previous 1 MHz segment).

Step 5 (segment 2 400 MHz - 2BW to 2 400 MHz - BW):

• Change the centre frequency of the analyser to 2 399,5 MHz - BW and perform the measurement for the first 1 MHz segment within range 2 400 MHz - 2BW to 2 400 MHz - BW. Reduce the centre frequency in 1 MHz steps and repeat the measurements to cover this whole range. The centre frequency of the last 1 MHz segment shall be set to 2 400 MHz - 2BW + 0,5 MHz (which means this may partly overlap with the previous 1 MHz segment).

Step 6:

• In case of conducted measurements on equipment with a single transmit chain, the declared antenna assembly gain "G" in dBi shall be added to the results for each of the 1 MHz segments and compared with the limits

provided by the mask given in figure 1 or figure 3. If more than one antenna assembly is intended for this power setting, the antenna with the highest gain shall be considered.

• In case of conducted measurements on smart antenna systems (equipment with multiple transmit chains), the measurements need to be repeated for each of the active transmit chains. The

declared antenna assembly gain "G" in dBi for a single antenna shall be added to these results. If more than one antenna assembly is intended for this power setting, the antenna with the highest gain shall be considered. Comparison with the applicable limits shall be done using any of the options given below:

- Option 1: the results for each of the transmit chains for the corresponding 1 MHz segments shall be added. The additional beamforming gain "Y" in dB shall be added as well and the resulting values compared with the limits provided by the mask given in figure 1 or figure 3.

- Option 2: the limits provided by the mask given in figure 1 or figure 3 shall be reduced by

10 × log10(Ach) and the additional beamforming gain "Y" in dB. The results for each of the transmit chains shall be individually compared with these reduced limits.

NOTE 2: Ach refers to the number of active transmit chains.

It shall be recorded whether the equipment complies with the mask provided in figure 1 or figure 3.

7.6.5Measurement Record

Condition: Normal

802.11b Ant1 NTNV							
Mode	TX Type	Frequency (MHz)	ANT	Test Freq. (MHz)	Result (dBm/MHz)	Limit (dBm/MHz)	Verdict
802.11b	SISO	2412	1	2374.188	-56.81	<=-20	Pass
				2374.344	-56.72	<=-20	Pass
				2375.344	-56.60	<=-20	Pass
				2376.344	-56.61	<=-20	Pass
				2377.344	-56.72	<=-20	Pass
				2378.344	-56.64	<=-20	Pass
				2379.344	-56.94	<=-20	Pass
				2380.344	-56.83	<=-20	Pass
				2381.344	-56.87	<=-20	Pass
				2382.344	-56.86	<=-20	Pass
				2383.344	-56.66	<=-20	Pass
				2384.344	-56.83	<=-20	Pass
				2385.344	-56.60	<=-20	Pass
				2386.344	-56.40	<=-20	Pass
				2387.344	-56.57	<=-10	Pass
				2387.500	-56.51	<=-10	Pass
				2388.500	-56.38	<=-10	Pass
				2389.500	-55.92	<=-10	Pass
				2390.500	-55.31	<=-10	Pass
				2391.500	-55.66	<=-10	Pass
				2392.500	-55.97	<=-10	Pass
				2393.500	-54.34	<=-10	Pass
				2394.500	-53.57	<=-10	Pass
				2395.500	-52.13	<=-10	Pass
				2396.500	-46.74	<=-10	Pass
				2397.500	-43.19	<=-10	Pass
				2398.500	-46.69	<=-10	Pass
				2399.500	-47.20	<=-10	Pass
		2472	1	2484.000	-47.14	<=-10	Pass
				2485.000	-40.93	<=-10	Pass
				2486.000	-40.88	<=-10	Pass
				2487.000	-41.79	<=-10	Pass
				2488.000	-45.19	<=-10	Pass
				2489.000	-51.52	<=-10	Pass
				2490.000	-52.25	<=-10	Pass
				2491.000	-54.76	<=-10	Pass
				2492.000	-56.17	<=-10	Pass
				2493.000	-55.63	<=-10	Pass
				2494.000	-55.98	<=-10	Pass
				2495.000	-56.05	<=-10	Pass
				2496.000	-56.56	<=-10	Pass
				2496.164	-56.16	<=-10	Pass
				2497.164	-56.27	<=-20	Pass
				2498.164	-56.48	<=-20	Pass
				2499.164	-56.57	<=-20	Pass

				2500.164	-56.74	<=-20	Pass
				2501.164	-56.53	<=-20	Pass
				2502.164	-56.43	<=-20	Pass
				2503.164	-56.72	<=-20	Pass
				2504.164	-56.58	<=-20	Pass
				2505.164	-56.43	<=-20	Pass
				2506.164	-56.42	<=-20	Pass
				2507.164	-55.95	<=-20	Pass
				2508.164	-56.42	<=-20	Pass
				2509.164	-56.53	<=-20	Pass
				2509.328	-56.64	<=-20	Pass

802.11g Ant1 NTNV							
Mode	TX Type	Frequency (MHz)	ANT	Test Freq. (MHz)	Result (dBm/MHz)	Limit (dBm/MHz)	Verdict
802.11g	SISO	2412	1	2367.318	-47.89	<=-20	Pass
				2367.909	-47.94	<=-20	Pass
				2368.909	-47.88	<=-20	Pass
				2369.909	-47.91	<=-20	Pass
				2370.909	-47.88	<=-20	Pass
				2371.909	-47.88	<=-20	Pass
				2372.909	-47.89	<=-20	Pass
				2373.909	-47.88	<=-20	Pass
				2374.909	-47.86	<=-20	Pass
				2375.909	-47.87	<=-20	Pass
				2376.909	-47.86	<=-20	Pass
				2377.909	-47.84	<=-20	Pass
				2378.909	-47.83	<=-20	Pass
				2379.909	-47.78	<=-20	Pass
				2380.909	-47.78	<=-20	Pass
				2381.909	-47.74	<=-20	Pass
				2382.909	-47.71	<=-20	Pass
				2383.909	-47.69	<=-10	Pass
				2384.500	-47.65	<=-10	Pass
				2385.500	-47.62	<=-10	Pass
				2386.500	-47.43	<=-10	Pass
				2387.500	-47.26	<=-10	Pass
				2388.500	-47.07	<=-10	Pass
				2389.500	-46.69	<=-10	Pass
				2390.500	-46.36	<=-10	Pass
				2391.500	-45.94	<=-10	Pass
				2392.500	-45.03	<=-10	Pass
				2393.500	-44.02	<=-10	Pass
				2394.500	-42.83	<=-10	Pass
				2395.500	-42.15	<=-10	Pass
				2396.500	-40.68	<=-10	Pass
				2397.500	-38.24	<=-10	Pass
				2398.500	-37.35	<=-10	Pass
				2399.500	-35.70	<=-10	Pass
		2472	1	2484.000	-34.77	<=-10	Pass
				2485.000	-36.38	<=-10	Pass
				2486.000	-38.03	<=-10	Pass
				2487.000	-39.97	<=-10	Pass
				2488.000	-41.26	<=-10	Pass
				2489.000	-42.81	<=-10	Pass
				2490.000	-44.10	<=-10	Pass
				2491.000	-45.00	<=-10	Pass
				2492.000	-45.82	<=-10	Pass
				2493.000	-46.31	<=-10	Pass
				2494.000	-46.67	<=-10	Pass
				2495.000	-46.94	<=-10	Pass
				2496.000	-47.15	<=-10	Pass

				2497.000	-47.34	<=-10	Pass
				2498.000	-47.45	<=-10	Pass
				2499.000	-47.52	<=-10	Pass
				2499.614	-47.54	<=-10	Pass
				2500.614	-47.56	<=-20	Pass
				2501.614	-47.60	<=-20	Pass
				2502.614	-47.62	<=-20	Pass
				2503.614	-47.63	<=-20	Pass
				2504.614	-47.62	<=-20	Pass
				2505.614	-47.62	<=-20	Pass
				2506.614	-47.62	<=-20	Pass
				2507.614	-47.64	<=-20	Pass
				2508.614	-47.65	<=-20	Pass
				2509.614	-47.65	<=-20	Pass
				2510.614	-47.64	<=-20	Pass
				2511.614	-47.63	<=-20	Pass
				2512.614	-47.64	<=-20	Pass
				2513.614	-47.64	<=-20	Pass
				2514.614	-47.63	<=-20	Pass
				2515.614	-47.64	<=-20	Pass
				2516.228	-47.63	<=-20	Pass

802.11n(HT20) Ant1 NTNV							
Mode	TX Type	Frequency (MHz)	ANT	Test Freq. (MHz)	Result (dBm/MHz)	Limit (dBm/MHz)	Verdict
802.11n (HT20)	SISO	2412	1	2364.898	-47.83	<=-20	Pass
				2365.699	-47.82	<=-20	Pass
				2366.699	-47.80	<=-20	Pass
				2367.699	-47.81	<=-20	Pass
				2368.699	-47.80	<=-20	Pass
				2369.699	-47.78	<=-20	Pass
				2370.699	-47.82	<=-20	Pass
				2371.699	-47.75	<=-20	Pass
				2372.699	-47.70	<=-20	Pass
				2373.699	-47.69	<=-20	Pass
				2374.699	-47.69	<=-20	Pass
				2375.699	-47.62	<=-20	Pass
				2376.699	-47.58	<=-20	Pass
				2377.699	-47.59	<=-20	Pass
				2378.699	-47.57	<=-20	Pass
				2379.699	-47.57	<=-20	Pass
				2380.699	-47.51	<=-20	Pass
				2381.699	-47.43	<=-20	Pass
				2382.699	-47.35	<=-10	Pass
				2383.500	-47.15	<=-10	Pass
				2384.500	-47.09	<=-10	Pass
				2385.500	-47.02	<=-10	Pass
				2386.500	-46.82	<=-10	Pass
				2387.500	-46.38	<=-10	Pass
				2388.500	-45.34	<=-10	Pass
				2389.500	-44.41	<=-10	Pass
				2390.500	-44.09	<=-10	Pass
				2391.500	-43.51	<=-10	Pass
				2392.500	-42.29	<=-10	Pass
				2393.500	-40.33	<=-10	Pass
				2394.500	-38.62	<=-10	Pass
				2395.500	-36.76	<=-10	Pass
				2396.500	-35.27	<=-10	Pass
				2397.500	-34.36	<=-10	Pass
				2398.500	-31.28	<=-10	Pass
				2399.500	-29.69	<=-10	Pass
		2472	1	2484.000	-29.91	<=-10	Pass
				2485.000	-31.73	<=-10	Pass
				2486.000	-33.79	<=-10	Pass
				2487.000	-35.15	<=-10	Pass
				2488.000	-36.63	<=-10	Pass
				2489.000	-38.63	<=-10	Pass
				2490.000	-39.83	<=-10	Pass
				2491.000	-41.22	<=-10	Pass
				2492.000	-42.41	<=-10	Pass
				2493.000	-43.58	<=-10	Pass
				2494.000	-44.30	<=-10	Pass

				2495.000	-45.66	<=-10	Pass
				2496.000	-46.21	<=-10	Pass
				2497.000	-46.56	<=-10	Pass
				2498.000	-46.78	<=-10	Pass
				2499.000	-47.17	<=-10	Pass
				2500.000	-47.17	<=-10	Pass
				2500.802	-47.31	<=-10	Pass
				2501.802	-47.26	<=-20	Pass
				2502.802	-47.39	<=-20	Pass
				2503.802	-47.35	<=-20	Pass
				2504.802	-47.37	<=-20	Pass
				2505.802	-47.45	<=-20	Pass
				2506.802	-47.50	<=-20	Pass
				2507.802	-47.51	<=-20	Pass
				2508.802	-47.52	<=-20	Pass
				2509.802	-47.53	<=-20	Pass
				2510.802	-47.58	<=-20	Pass
				2511.802	-47.57	<=-20	Pass
				2512.802	-47.57	<=-20	Pass
				2513.802	-47.54	<=-20	Pass
				2514.802	-47.54	<=-20	Pass
				2515.802	-47.61	<=-20	Pass
				2516.802	-47.58	<=-20	Pass
				2517.802	-47.59	<=-20	Pass
				2518.604	-47.58	<=-20	Pass

802.11n(HT40) Ant1 NTNV							
Mode	TX Type	Frequency (MHz)	ANT	Test Freq. (MHz)	Result (dBm/MHz)	Limit (dBm/MHz)	Verdict
802.11n (HT40)	SISO	2422	1	2327.872	-57.57	<=-20	Pass
				2328.186	-57.44	<=-20	Pass
				2329.186	-57.39	<=-20	Pass
				2330.186	-57.31	<=-20	Pass
				2331.186	-57.38	<=-20	Pass
				2332.186	-57.05	<=-20	Pass
				2333.186	-57.29	<=-20	Pass
				2334.186	-57.25	<=-20	Pass
				2335.186	-57.02	<=-20	Pass
				2336.186	-57.06	<=-20	Pass
				2337.186	-57.07	<=-20	Pass
				2338.186	-57.17	<=-20	Pass
				2339.186	-57.13	<=-20	Pass
				2340.186	-57.16	<=-20	Pass
				2341.186	-57.09	<=-20	Pass
				2342.186	-57.04	<=-20	Pass
				2343.186	-57.08	<=-20	Pass
				2344.186	-56.81	<=-20	Pass
				2345.186	-57.01	<=-20	Pass
				2346.186	-56.70	<=-20	Pass
				2347.186	-56.83	<=-20	Pass
				2348.186	-56.80	<=-20	Pass
				2349.186	-56.51	<=-20	Pass
				2350.186	-56.60	<=-20	Pass
				2351.186	-56.62	<=-20	Pass
				2352.186	-56.62	<=-20	Pass
				2353.186	-56.54	<=-20	Pass
				2354.186	-56.23	<=-20	Pass
				2355.186	-56.23	<=-20	Pass
				2356.186	-56.35	<=-20	Pass
				2357.186	-56.31	<=-20	Pass
				2358.186	-56.26	<=-20	Pass
				2359.186	-55.98	<=-20	Pass
				2360.186	-55.96	<=-20	Pass
				2361.186	-55.78	<=-20	Pass
				2362.186	-56.00	<=-20	Pass
				2363.186	-55.94	<=-20	Pass
				2364.186	-55.57	<=-10	Pass
				2364.500	-55.42	<=-10	Pass
				2365.500	-55.64	<=-10	Pass
				2366.500	-55.55	<=-10	Pass
				2367.500	-55.38	<=-10	Pass
				2368.500	-54.66	<=-10	Pass
				2369.500	-54.70	<=-10	Pass
				2370.500	-54.73	<=-10	Pass
				2371.500	-54.45	<=-10	Pass
				2372.500	-54.20	<=-10	Pass

				2373.500	-53.65	<=-10	Pass
				2374.500	-53.40	<=-10	Pass
				2375.500	-52.08	<=-10	Pass
				2376.500	-51.56	<=-10	Pass
				2377.500	-51.04	<=-10	Pass
				2378.500	-51.42	<=-10	Pass
				2379.500	-50.56	<=-10	Pass
				2380.500	-49.79	<=-10	Pass
				2381.500	-49.78	<=-10	Pass
				2382.500	-48.10	<=-10	Pass
				2383.500	-48.69	<=-10	Pass
				2384.500	-48.01	<=-10	Pass
				2385.500	-47.02	<=-10	Pass
				2386.500	-47.13	<=-10	Pass
				2387.500	-46.70	<=-10	Pass
				2388.500	-46.12	<=-10	Pass
				2389.500	-45.72	<=-10	Pass
				2390.500	-44.63	<=-10	Pass
				2391.500	-44.36	<=-10	Pass
				2392.500	-42.78	<=-10	Pass
				2393.500	-41.96	<=-10	Pass
				2394.500	-42.17	<=-10	Pass
				2395.500	-41.22	<=-10	Pass
				2396.500	-39.96	<=-10	Pass
				2397.500	-38.24	<=-10	Pass
				2398.500	-36.16	<=-10	Pass
				2399.500	-34.84	<=-10	Pass
		2462	1	2484.000	-34.41	<=-10	Pass
				2485.000	-35.23	<=-10	Pass
				2486.000	-36.70	<=-10	Pass
				2487.000	-38.69	<=-10	Pass
				2488.000	-38.58	<=-10	Pass
				2489.000	-40.09	<=-10	Pass
				2490.000	-40.54	<=-10	Pass
				2491.000	-41.29	<=-10	Pass
				2492.000	-41.33	<=-10	Pass
				2493.000	-41.80	<=-10	Pass
				2494.000	-42.44	<=-10	Pass
				2495.000	-43.32	<=-10	Pass
				2496.000	-43.72	<=-10	Pass
				2497.000	-43.22	<=-10	Pass
				2498.000	-44.19	<=-10	Pass
				2499.000	-44.54	<=-10	Pass
				2500.000	-44.44	<=-10	Pass
				2501.000	-44.71	<=-10	Pass
				2502.000	-45.41	<=-10	Pass
				2503.000	-45.05	<=-10	Pass
				2504.000	-45.45	<=-10	Pass
				2505.000	-45.60	<=-10	Pass
				2506.000	-45.86	<=-10	Pass
				2507.000	-46.29	<=-10	Pass
				2508.000	-46.59	<=-10	Pass

				2509.000	-46.44	<=-10	Pass
				2510.000	-46.88	<=-10	Pass
				2511.000	-46.96	<=-10	Pass
				2512.000	-46.95	<=-10	Pass
				2513.000	-47.16	<=-10	Pass
				2514.000	-47.26	<=-10	Pass
				2515.000	-47.21	<=-10	Pass
				2516.000	-47.28	<=-10	Pass
				2517.000	-47.35	<=-10	Pass
				2518.000	-47.38	<=-10	Pass
				2519.000	-47.35	<=-10	Pass
				2519.311	-47.30	<=-10	Pass
				2520.311	-47.36	<=-20	Pass
				2521.311	-47.37	<=-20	Pass
				2522.311	-47.44	<=-20	Pass
				2523.311	-47.42	<=-20	Pass
				2524.311	-47.38	<=-20	Pass
				2525.311	-47.38	<=-20	Pass
				2526.311	-47.38	<=-20	Pass
				2527.311	-47.43	<=-20	Pass
				2528.311	-47.43	<=-20	Pass
				2529.311	-47.40	<=-20	Pass
				2530.311	-47.39	<=-20	Pass
				2531.311	-47.42	<=-20	Pass
				2532.311	-47.41	<=-20	Pass
				2533.311	-47.41	<=-20	Pass
				2534.311	-47.33	<=-20	Pass
				2535.311	-47.39	<=-20	Pass
				2536.311	-47.38	<=-20	Pass
				2537.311	-47.37	<=-20	Pass
				2538.311	-47.37	<=-20	Pass
				2539.311	-47.35	<=-20	Pass
				2540.311	-47.36	<=-20	Pass
				2541.311	-47.33	<=-20	Pass
				2542.311	-47.36	<=-20	Pass
				2543.311	-47.34	<=-20	Pass
				2544.311	-47.35	<=-20	Pass
				2545.311	-47.32	<=-20	Pass
				2546.311	-47.29	<=-20	Pass
				2547.311	-47.32	<=-20	Pass
				2548.311	-47.34	<=-20	Pass
				2549.311	-47.32	<=-20	Pass
				2550.311	-47.30	<=-20	Pass
				2551.311	-47.30	<=-20	Pass
				2552.311	-47.30	<=-20	Pass
				2553.311	-47.32	<=-20	Pass
				2554.311	-47.28	<=-20	Pass
				2555.311	-47.28	<=-20	Pass
				2555.622	-47.29	<=-20	Pass

802.11ax(HEW20) 2412MHz SU Ant1 NTNV									
Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	Test Freq. (MHz)	Result (dBm/MHz)	Limit (dBm/MHz)	Verdict
802.11ax (HEW20)	SISO	2412	SU	/	1	2362.522	-47.85	<=-20	Pass
						2363.511	-47.83	<=-20	Pass
						2364.511	-47.85	<=-20	Pass
						2365.511	-47.83	<=-20	Pass
						2366.511	-47.83	<=-20	Pass
						2367.511	-47.87	<=-20	Pass
						2368.511	-47.83	<=-20	Pass
						2369.511	-47.83	<=-20	Pass
						2370.511	-47.78	<=-20	Pass
						2371.511	-47.80	<=-20	Pass
						2372.511	-47.79	<=-20	Pass
						2373.511	-47.75	<=-20	Pass
						2374.511	-47.74	<=-20	Pass
						2375.511	-47.70	<=-20	Pass
						2376.511	-47.73	<=-20	Pass
						2377.511	-47.70	<=-20	Pass
						2378.511	-47.63	<=-20	Pass
						2379.511	-47.63	<=-20	Pass
						2380.511	-47.61	<=-20	Pass
						2381.511	-47.47	<=-10	Pass
						2382.500	-47.43	<=-10	Pass
						2383.500	-47.31	<=-10	Pass
						2384.500	-47.15	<=-10	Pass
						2385.500	-46.91	<=-10	Pass
						2386.500	-46.82	<=-10	Pass
						2387.500	-46.22	<=-10	Pass
						2388.500	-45.84	<=-10	Pass
						2389.500	-45.03	<=-10	Pass
						2390.500	-44.88	<=-10	Pass
						2391.500	-44.06	<=-10	Pass
						2392.500	-43.15	<=-10	Pass
						2393.500	-42.10	<=-10	Pass
						2394.500	-40.77	<=-10	Pass
						2395.500	-39.73	<=-10	Pass
						2396.500	-38.69	<=-10	Pass
						2397.500	-37.20	<=-10	Pass
						2398.500	-36.10	<=-10	Pass
						2399.500	-33.81	<=-10	Pass

802.11ax(HEW20) 2472MHz SU Ant1 NTNV									
Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	Test Freq. (MHz)	Result (dBm/MHz)	Limit (dBm/MHz)	Verdict
802.11ax (HEW20)	SISO	2472	SU	/	1	2484.000	-33.97	<=-10	Pass
						2485.000	-34.98	<=-10	Pass
						2486.000	-36.48	<=-10	Pass
						2487.000	-38.06	<=-10	Pass
						2488.000	-39.24	<=-10	Pass
						2489.000	-41.36	<=-10	Pass
						2490.000	-41.63	<=-10	Pass
						2491.000	-42.74	<=-10	Pass
						2492.000	-43.26	<=-10	Pass
						2493.000	-44.10	<=-10	Pass
						2494.000	-44.84	<=-10	Pass
						2495.000	-45.49	<=-10	Pass
						2496.000	-46.02	<=-10	Pass
						2497.000	-46.43	<=-10	Pass
						2498.000	-46.80	<=-10	Pass
						2499.000	-47.00	<=-10	Pass
						2500.000	-47.18	<=-10	Pass
						2501.000	-47.21	<=-10	Pass
						2501.988	-47.36	<=-10	Pass
						2502.988	-47.34	<=-20	Pass
						2503.988	-47.41	<=-20	Pass
						2504.988	-47.42	<=-20	Pass
						2505.988	-47.47	<=-20	Pass
						2506.988	-47.47	<=-20	Pass
						2507.988	-47.55	<=-20	Pass
						2508.988	-47.51	<=-20	Pass
						2509.988	-47.56	<=-20	Pass
						2510.988	-47.57	<=-20	Pass
						2511.988	-47.60	<=-20	Pass
						2512.988	-47.60	<=-20	Pass
						2513.988	-47.60	<=-20	Pass
						2514.988	-47.63	<=-20	Pass
						2515.988	-47.58	<=-20	Pass
						2516.988	-47.59	<=-20	Pass
						2517.988	-47.59	<=-20	Pass
						2518.988	-47.57	<=-20	Pass
						2519.988	-47.56	<=-20	Pass
						2520.976	-47.56	<=-20	Pass

802.11ax(HEW40) 2422MHz SU Ant1 NTNV									
Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	Test Freq. (MHz)	Result (dBm/MHz)	Limit (dBm/MHz)	Verdict
802.11ax (HEW40)	SISO	2422	SU	/	1	2324.886	-47.86	<=-20	Pass
						2325.693	-47.87	<=-20	Pass
						2326.693	-47.84	<=-20	Pass
						2327.693	-47.88	<=-20	Pass
						2328.693	-47.89	<=-20	Pass
						2329.693	-47.88	<=-20	Pass
						2330.693	-47.89	<=-20	Pass
						2331.693	-47.83	<=-20	Pass
						2332.693	-47.89	<=-20	Pass
						2333.693	-47.88	<=-20	Pass
						2334.693	-47.89	<=-20	Pass
						2335.693	-47.88	<=-20	Pass
						2336.693	-47.89	<=-20	Pass
						2337.693	-47.87	<=-20	Pass
						2338.693	-47.86	<=-20	Pass
						2339.693	-47.86	<=-20	Pass
						2340.693	-47.86	<=-20	Pass
						2341.693	-47.89	<=-20	Pass
						2342.693	-47.87	<=-20	Pass
						2343.693	-47.86	<=-20	Pass
						2344.693	-47.87	<=-20	Pass
						2345.693	-47.88	<=-20	Pass
						2346.693	-47.87	<=-20	Pass
						2347.693	-47.84	<=-20	Pass
						2348.693	-47.82	<=-20	Pass
						2349.693	-47.82	<=-20	Pass
						2350.693	-47.80	<=-20	Pass
						2351.693	-47.84	<=-20	Pass
						2352.693	-47.79	<=-20	Pass
						2353.693	-47.78	<=-20	Pass
						2354.693	-47.78	<=-20	Pass
						2355.693	-47.80	<=-20	Pass
						2356.693	-47.76	<=-20	Pass
						2357.693	-47.81	<=-20	Pass
						2358.693	-47.80	<=-20	Pass
						2359.693	-47.75	<=-20	Pass
						2360.693	-47.74	<=-20	Pass
						2361.693	-47.72	<=-20	Pass
						2362.693	-47.69	<=-10	Pass
						2363.500	-47.70	<=-10	Pass
						2364.500	-47.66	<=-10	Pass
						2365.500	-47.71	<=-10	Pass
						2366.500	-47.65	<=-10	Pass
						2367.500	-47.61	<=-10	Pass
						2368.500	-47.54	<=-10	Pass
						2369.500	-47.58	<=-10	Pass
						2370.500	-47.48	<=-10	Pass

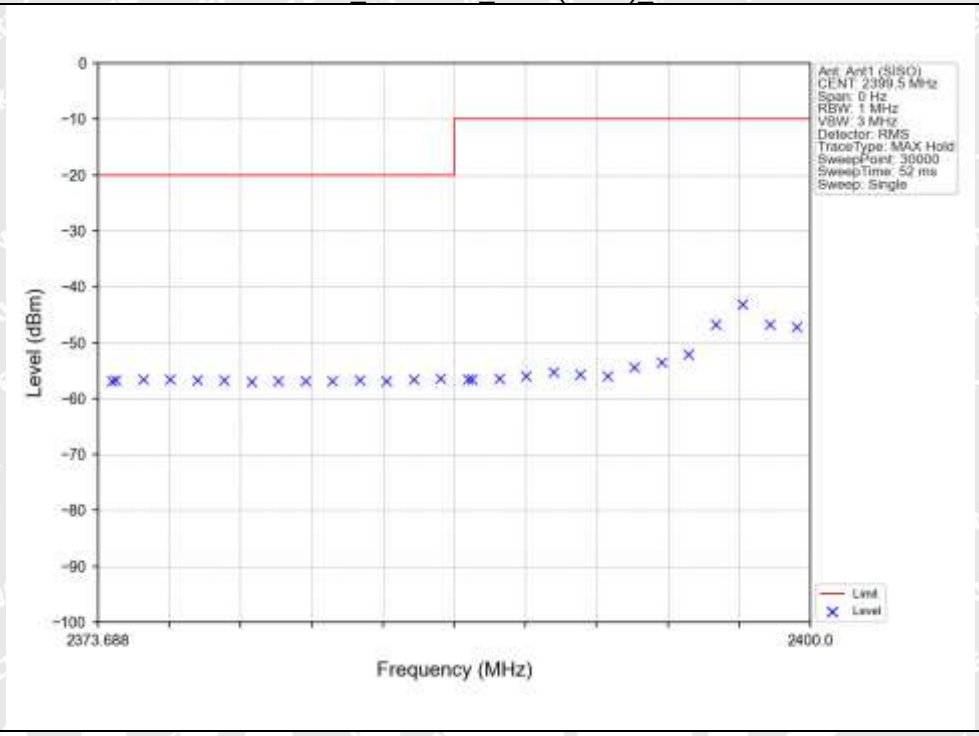
						2371.500	-47.43	<=-10	Pass
						2372.500	-47.30	<=-10	Pass
						2373.500	-47.21	<=-10	Pass
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						2375.500	-47.11	<=-10	Pass
						2376.500	-46.92	<=-10	Pass
						2377.500	-46.69	<=-10	Pass
						2378.500	-46.50	<=-10	Pass
						2379.500	-46.47	<=-10	Pass
						2380.500	-46.09	<=-10	Pass
						2381.500	-45.82	<=-10	Pass
						2382.500	-45.60	<=-10	Pass
						2383.500	-45.47	<=-10	Pass
						2384.500	-45.10	<=-10	Pass
						2385.500	-44.95	<=-10	Pass
						2386.500	-44.66	<=-10	Pass
						2387.500	-44.49	<=-10	Pass
						2388.500	-43.97	<=-10	Pass
						2389.500	-44.11	<=-10	Pass
						2390.500	-43.69	<=-10	Pass
						2391.500	-43.03	<=-10	Pass
						2392.500	-42.64	<=-10	Pass
						2393.500	-43.21	<=-10	Pass
						2394.500	-42.69	<=-10	Pass
						2395.500	-41.44	<=-10	Pass
						2396.500	-40.73	<=-10	Pass
						2397.500	-40.23	<=-10	Pass
						2398.500	-39.10	<=-10	Pass
						2399.500	-38.79	<=-10	Pass

802.11ax(HEW40) 2462MHz SU Ant1 NTNV									
Mode	TX Type	Frequency (MHz)	RU	RU Pos	ANT	Test Freq. (MHz)	Result (dBm/MHz)	Limit (dBm/MHz)	Verdict
802.11ax (HEW40)	SISO	2462	SU	/	1	2484.000	-36.97	<=-10	Pass
						2485.000	-38.17	<=-10	Pass
						2486.000	-40.09	<=-10	Pass
						2487.000	-40.50	<=-10	Pass
						2488.000	-40.46	<=-10	Pass
						2489.000	-41.04	<=-10	Pass
						2490.000	-41.90	<=-10	Pass
						2491.000	-41.91	<=-10	Pass
						2492.000	-42.77	<=-10	Pass
						2493.000	-42.59	<=-10	Pass
						2494.000	-43.20	<=-10	Pass
						2495.000	-43.25	<=-10	Pass
						2496.000	-43.54	<=-10	Pass
						2497.000	-43.85	<=-10	Pass
						2498.000	-44.01	<=-10	Pass
						2499.000	-44.82	<=-10	Pass
						2500.000	-45.15	<=-10	Pass
						2501.000	-45.18	<=-10	Pass
						2502.000	-45.13	<=-10	Pass
						2503.000	-45.34	<=-10	Pass
						2504.000	-45.55	<=-10	Pass
						2505.000	-46.15	<=-10	Pass
						2506.000	-45.96	<=-10	Pass
						2507.000	-46.41	<=-10	Pass
						2508.000	-46.33	<=-10	Pass
						2509.000	-46.51	<=-10	Pass
						2510.000	-46.81	<=-10	Pass
						2511.000	-46.75	<=-10	Pass
						2512.000	-47.04	<=-10	Pass
						2513.000	-46.97	<=-10	Pass
						2514.000	-47.18	<=-10	Pass
						2515.000	-47.18	<=-10	Pass
						2516.000	-47.21	<=-10	Pass
						2517.000	-47.25	<=-10	Pass
						2518.000	-47.33	<=-10	Pass
						2519.000	-47.30	<=-10	Pass
						2520.000	-47.35	<=-10	Pass
						2520.827	-47.32	<=-10	Pass
						2521.827	-47.45	<=-20	Pass
						2522.827	-47.35	<=-20	Pass
						2523.827	-47.37	<=-20	Pass
						2524.827	-47.39	<=-20	Pass
						2525.827	-47.40	<=-20	Pass
						2526.827	-47.39	<=-20	Pass
						2527.827	-47.42	<=-20	Pass
						2528.827	-47.39	<=-20	Pass
						2529.827	-47.44	<=-20	Pass

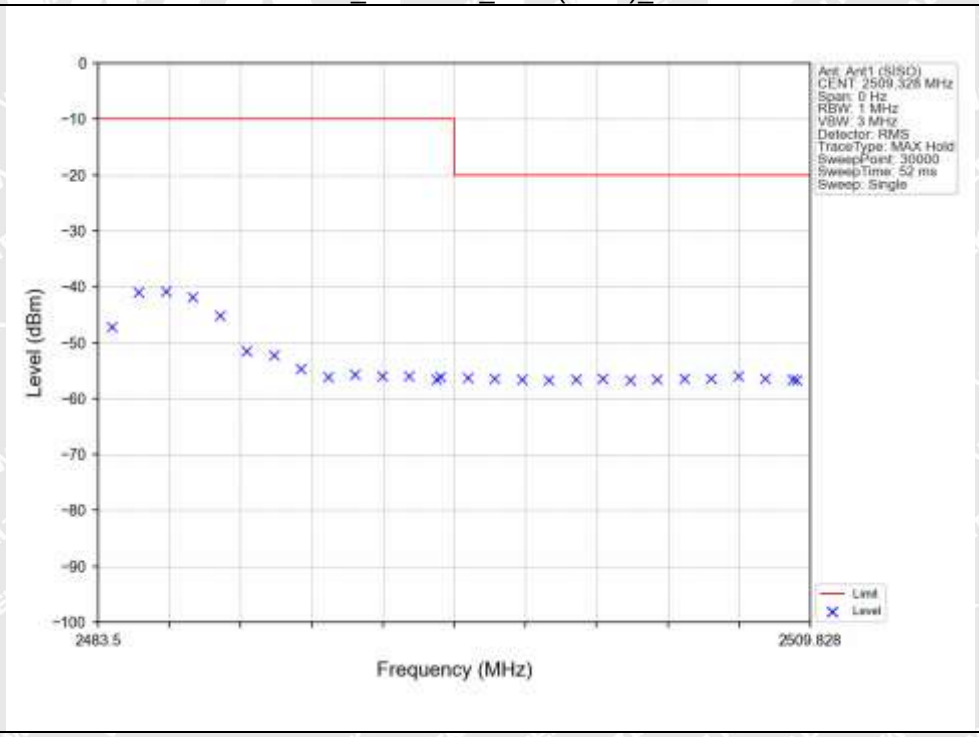
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						2531.827	-47.41	<=-20	Pass
						2532.827	-47.42	<=-20	Pass
						2533.827	-47.41	<=-20	Pass
						2534.827	-47.41	<=-20	Pass
						2535.827	-47.40	<=-20	Pass
						2536.827	-47.37	<=-20	Pass
						2537.827	-47.39	<=-20	Pass
						2538.827	-47.37	<=-20	Pass
						2539.827	-47.35	<=-20	Pass
						2540.827	-47.36	<=-20	Pass
						2541.827	-47.37	<=-20	Pass
						2542.827	-47.33	<=-20	Pass
						2543.827	-47.35	<=-20	Pass
						2544.827	-47.35	<=-20	Pass
						2545.827	-47.32	<=-20	Pass
						2546.827	-47.31	<=-20	Pass
						2547.827	-47.34	<=-20	Pass
						2548.827	-47.33	<=-20	Pass
						2549.827	-47.32	<=-20	Pass
						2550.827	-47.31	<=-20	Pass
						2551.827	-47.31	<=-20	Pass
						2552.827	-47.30	<=-20	Pass
						2553.827	-47.28	<=-20	Pass
						2554.827	-47.32	<=-20	Pass
						2555.827	-47.31	<=-20	Pass
						2556.827	-47.29	<=-20	Pass
						2557.827	-47.31	<=-20	Pass
						2558.654	-47.28	<=-20	Pass

Test Plots

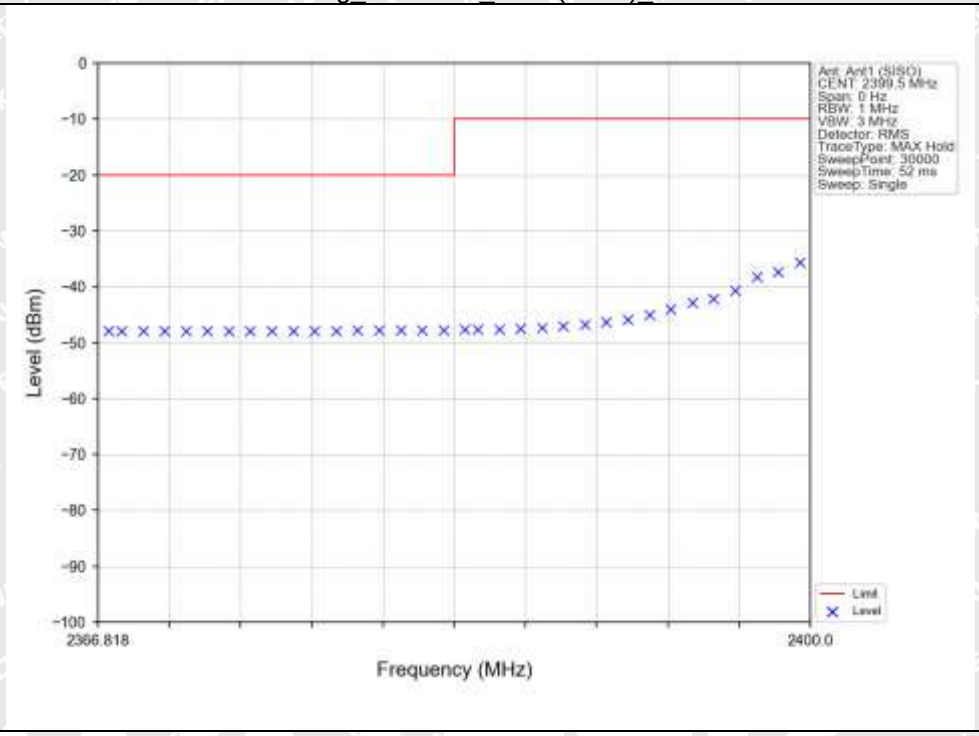
802.11b_2412MHz_Ant1 (SISO)_NTNV



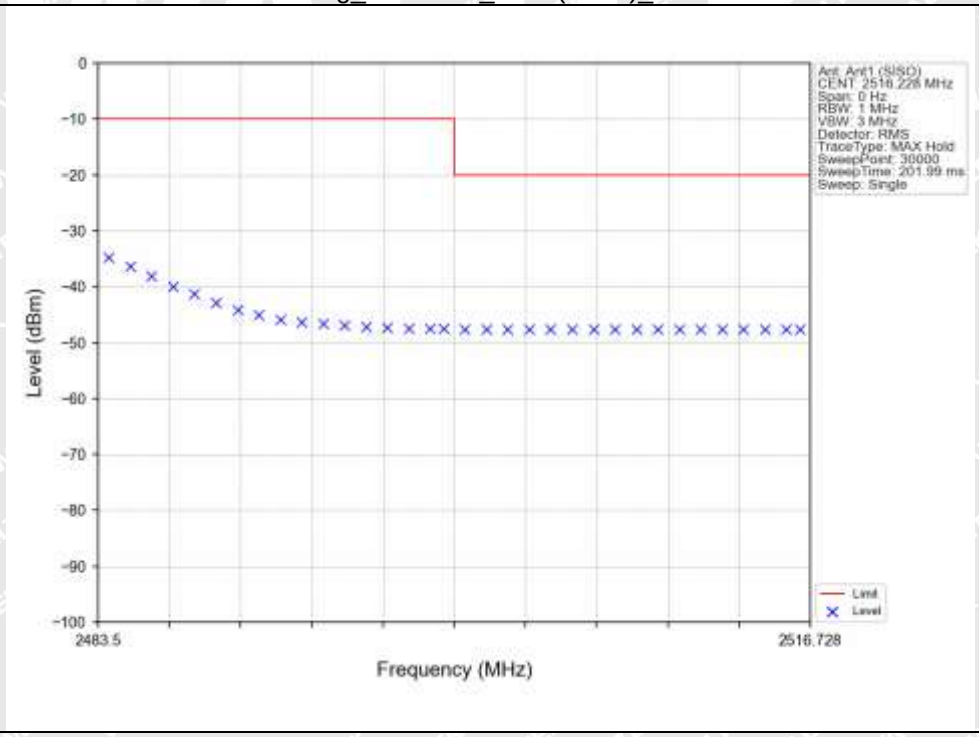
802.11b_2472MHz_Ant1 (SISO)_NTNV



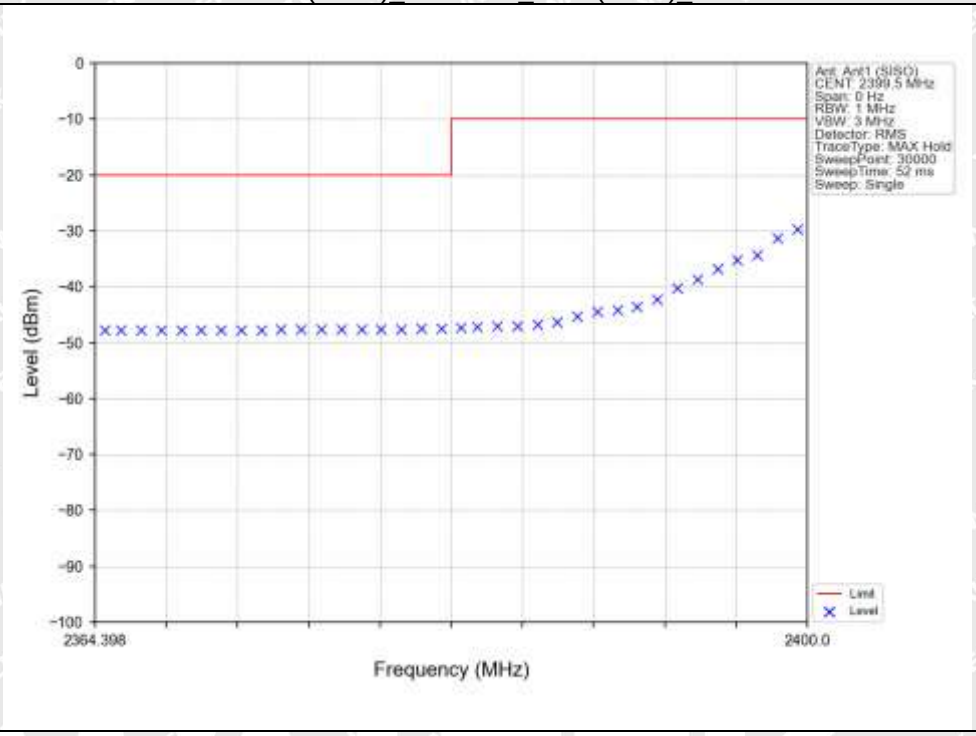
802.11g_2412MHz_Ant1 (SISO)_NTNV



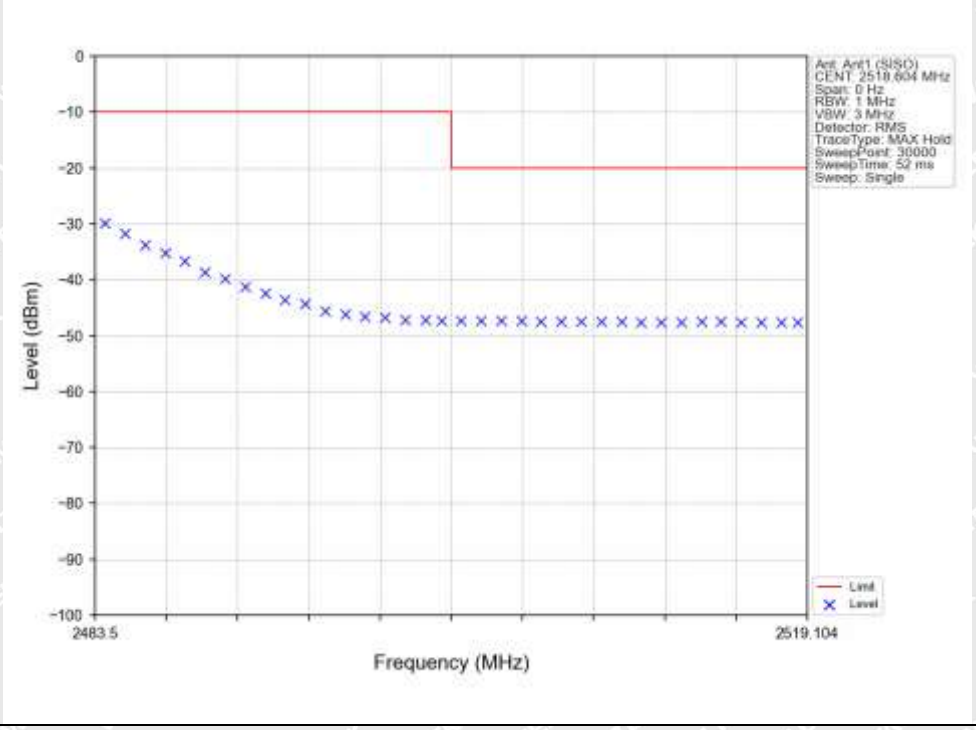
802.11g_2472MHz_Ant1 (SISO)_NTNV



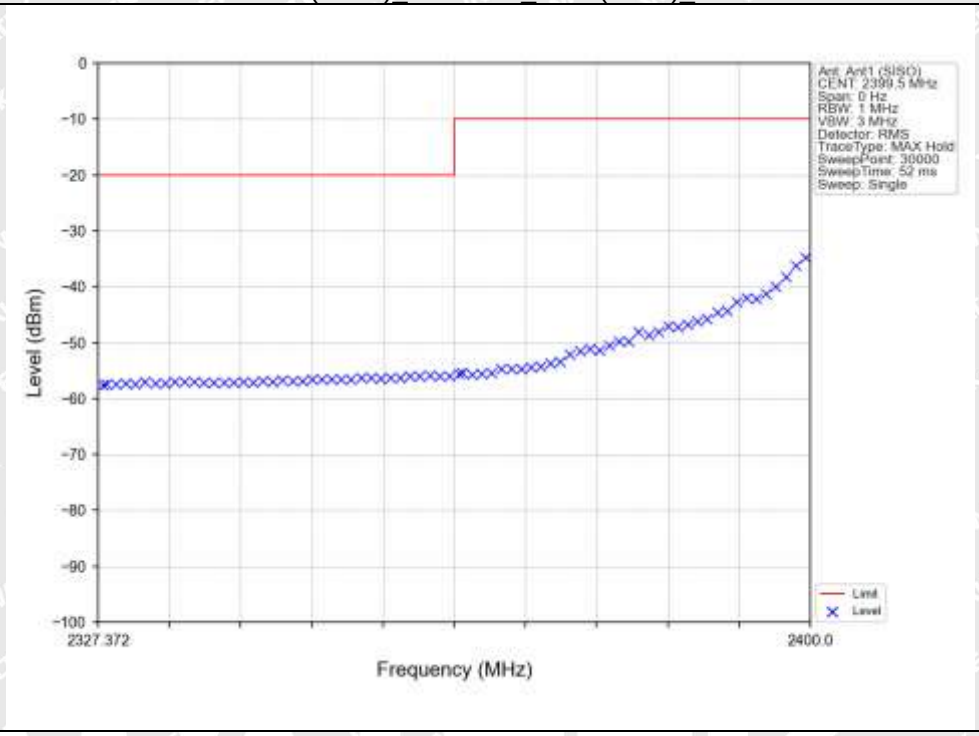
802.11n(HT20)_2412MHz_Ant1 (SISO)_NTNV



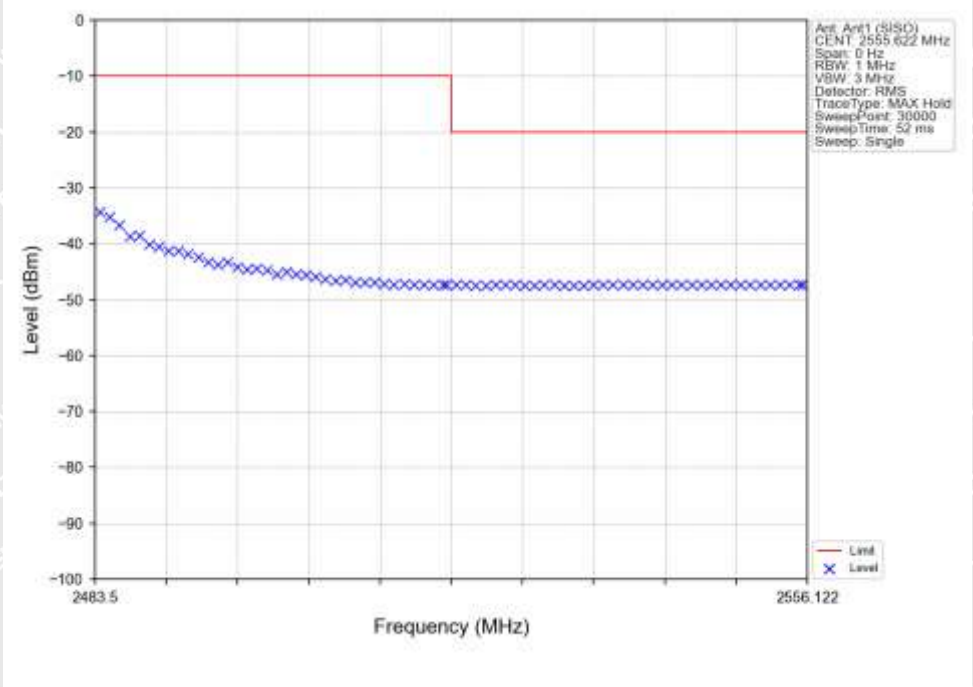
802.11n(HT20)_2472MHz_Ant1 (SISO)_NTNV



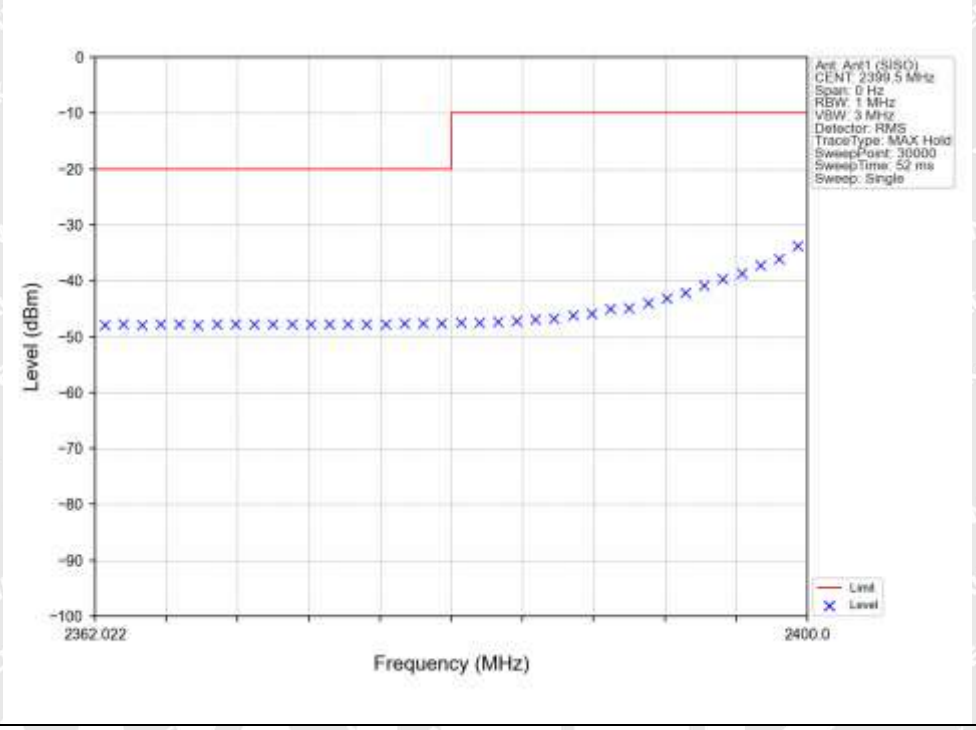
802.11n(HT40)_2422MHz_Ant1 (SISO)_NTNV



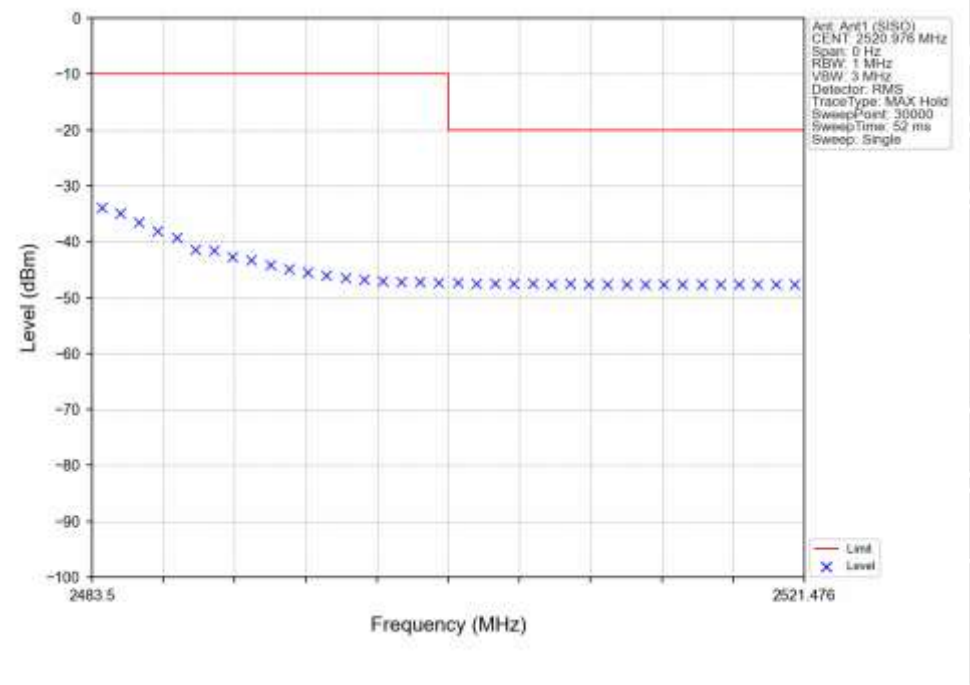
802.11n(HT40)_2462MHz_Ant1 (SISO)_NTNV



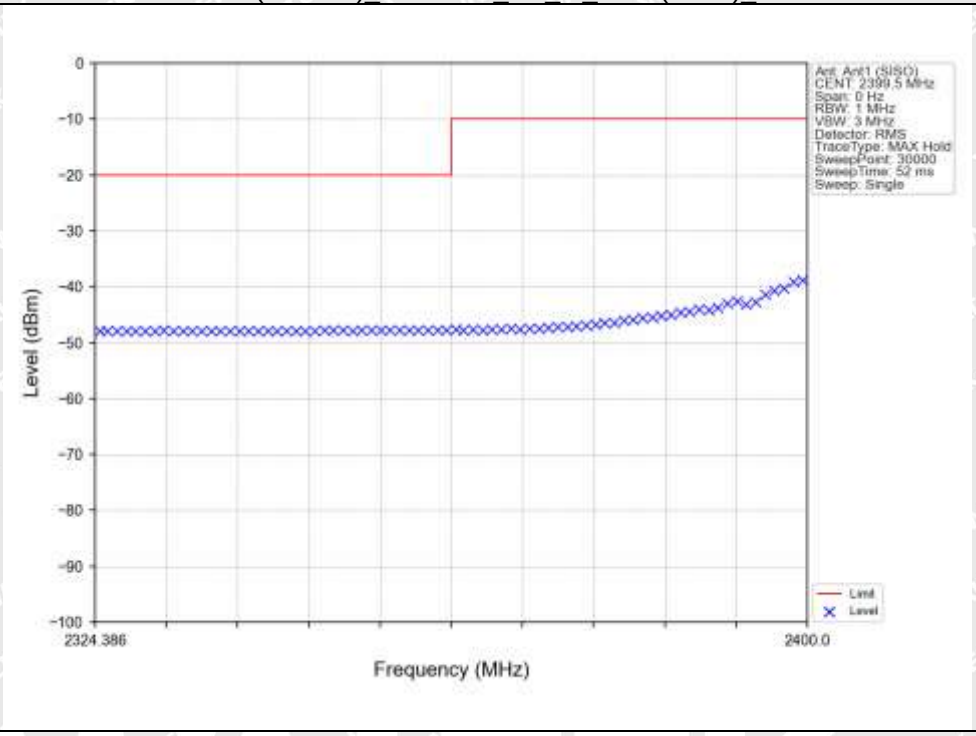
802.11ax(HEW20)_2412MHz_SU_ / _Ant1 (SISO)_NTNV



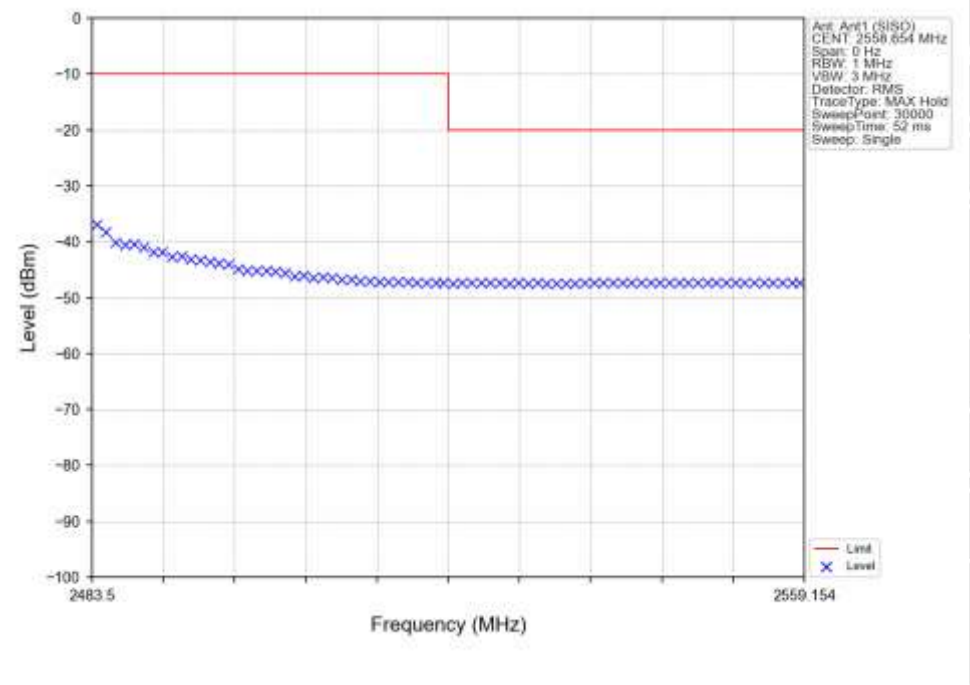
802.11ax(HEW20)_2472MHz_SU_ / _Ant1 (SISO)_NTNV



802.11ax(HEW40)_2422MHz_SU_ / _Ant1 (SISO)_NTNV



802.11ax(HEW40)_2462MHz_SU_ / _Ant1 (SISO)_NTNV



7.7 Transmitter unwanted emissions in the spurious domain

7.7.1Definition

Transmitter unwanted emissions in the spurious domain are emissions outside the allocated band and outside the out-of-band domain as indicated in figure 1 when the equipment is in Transmit mode.

7.7.2Limit

The transmitter unwanted emissions in the spurious domain shall not exceed the values given in table 12.

In case of equipment with antenna connectors, these limits apply to emissions at the antenna port (conducted). For emissions radiated by the cabinet or emissions radiated by integral antenna equipment (without antenna connectors), these limits are e.r.p. for emissions up to 1 GHz and as e.i.r.p. for emissions above 1 GHz.

Table 12: Transmitter limits for spurious emissions

Frequency range	Maximum power,e.r.p. (≤ 1 GHz) e.i.r.p. (> 1 GHz)	Bandwidth
30 MHz to 47 MHz	-36 dBm	100 kHz
47 MHz to 74 MHz	-54 dBm	100 kHz
74 MHz to 87.5 MHz	-36 dBm	100 kHz
87.5 MHz to 118 MHz	-54 dBm	100 kHz
118 MHz to 174 MHz	-36 dBm	100 kHz
174 MHz to 230 MHz	-54 dBm	100 kHz
230 MHz to 470 MHz	-36 dBm	100 kHz
470 MHz to 694 MHz	-54 dBm	100 kHz
694 MHz to 1 GHz	-36 dBm	100 kHz
1 GHz to 12.75 GHz	-30 dBm	1 MHz

7.7.3EUT Operation Condition

The EUT was programmed to be in continuously transmitting mode.

7.7.4Test Procedure

The test site as described in annex B and applicable measurement procedures as described in annex C shall be used.

The test procedure is further as described under clause 5.4.9.2.1

7.7.5Measurement Record

Frequency	Receiver Reading	Turn table Angle	RX Antenna		Substituted			Absolute Level	Result	
			Height	Polar	SG Level	Cable	Antenna Gain		Limit	Margin
(MHz)	(dBμV)	Degree	(m)	(H/V)	(dBm)	(dB)	(dB)	(dBm)	(dBm)	(dB)
802.11b low channel										
196.46	33.06	144	1.8	H	-64.29	0.16	0.00	-64.45	-54	-10.45
196.46	33.44	59	2.0	V	-65.06	0.16	0.00	-65.22	-54	-11.22
4824.00	50.66	322	1.7	H	-58.80	2.64	12.70	-48.74	-30	-18.74
4824.00	51.87	108	1.2	V	-56.32	2.64	12.70	-46.26	-30	-16.26
7236.00	46.67	291	1.1	H	-60.97	3.22	11.70	-52.49	-30	-22.49
7236.00	45.27	67	1.5	V	-62.25	3.22	11.70	-53.77	-30	-23.77
802.11b High channel										
196.46	32.51	19	1.3	H	-64.84	0.16	0.00	-65.00	-54	-11.00
196.46	34.08	39	1.4	V	-64.42	0.16	0.00	-64.58	-54	-10.58
4944.00	49.56	24	1.6	H	-59.47	2.40	11.60	-50.27	-30	-20.27
4944.00	52.02	151	1.6	V	-56.54	2.40	11.60	-47.34	-30	-17.34
7416.00	45.78	162	1.1	H	-60.76	3.28	11.90	-52.14	-30	-22.14
7416.00	45.52	73	1.3	V	-61.19	3.28	11.90	-52.57	-30	-22.57

Frequency	Receiver Reading	Turn table Angle	RX Antenna		Substituted			Absolute Level	Result	
			Height	Polar	SG Level	Cable	Antenna Gain		Limit	Margin
(MHz)	(dBμV)	Degree	(m)	(H/V)	(dBm)	(dB)	(dB)	(dBm)	(dBm)	(dB)
802.11g low channel										
196.46	33.42	61	1.8	H	-63.93	0.16	0.00	-64.09	-54	-10.09
196.46	34.27	153	2.0	V	-64.23	0.16	0.00	-64.39	-54	-10.39
4824.00	50.75	7	1.7	H	-58.71	2.64	12.70	-48.65	-30	-18.65
4824.00	52.45	24	1.5	V	-55.74	2.64	12.70	-45.68	-30	-15.68
7236.00	46.24	151	1.3	H	-61.40	3.22	11.70	-52.92	-30	-22.92
7236.00	45.86	6	1.0	V	-61.66	3.22	11.70	-53.18	-30	-23.18
802.11g High channel										
196.46	32.70	123	1.6	H	-64.65	0.16	0.00	-64.81	-54	-10.81
196.46	32.12	286	1.2	V	-66.38	0.16	0.00	-66.54	-54	-12.54
4944.00	49.37	282	1.4	H	-59.66	2.40	11.60	-50.46	-30	-20.46
4944.00	52.10	122	1.2	V	-56.46	2.40	11.60	-47.26	-30	-17.26
7416.00	46.27	24	1.9	H	-60.27	3.28	11.90	-51.65	-30	-21.65
7416.00	45.75	178	1.3	V	-60.96	3.28	11.90	-52.34	-30	-22.34

Frequency	Receiver Reading	Turn table Angle	RX Antenna		Substituted			Absolute Level	Result	
			Height	Polar	SG Level	Cable	Antenna Gain		Limit	Margin
(MHz)	(dBμV)	Degree	(m)	(H/V)	(dBm)	(dB)	(dB)	(dBm)	(dBm)	(dB)
802.11n20 low channel										
196.46	31.93	5	1.7	H	-65.42	0.16	0.00	-65.58	-54	-11.58
196.46	33.73	80	1.1	V	-64.77	0.16	0.00	-64.93	-54	-10.93
4824.00	49.44	307	1.7	H	-60.02	2.64	12.70	-49.96	-30	-19.96
4824.00	50.72	129	1.4	V	-57.47	2.64	12.70	-47.41	-30	-17.41
7236.00	47.53	41	1.9	H	-60.11	3.22	11.70	-51.63	-30	-21.63
7236.00	44.63	85	1.9	V	-62.89	3.22	11.70	-54.41	-30	-24.41
802.11n20 High channel										
196.46	34.50	154	1.3	H	-62.85	0.16	0.00	-63.01	-54	-9.01
196.46	33.83	309	1.1	V	-64.67	0.16	0.00	-64.83	-54	-10.83
4944.00	49.52	202	1.4	H	-59.51	2.40	11.60	-50.31	-30	-20.31
4944.00	52.65	50	1.3	V	-55.91	2.40	11.60	-46.71	-30	-16.71
7416.00	45.57	283	1.0	H	-60.97	3.28	11.90	-52.35	-30	-22.35
7416.00	45.10	190	1.2	V	-61.61	3.28	11.90	-52.99	-30	-22.99

Frequency	Receiver Reading	Turn table Angle	RX Antenna		Substituted			Absolute Level	Result	
			Height	Polar	SG Level	Cable	Antenna Gain		Limit	Margin
(MHz)	(dBμV)	Degree	(m)	(H/V)	(dBm)	(dB)	(dB)	(dBm)	(dBm)	(dB)
802.11n40 low channel										
196.46	36.54	46	1.5	H	-63.96	0.18	0.00	-64.14	-54	-10.14
196.46	34.08	311	1.8	V	-65.27	0.18	0.00	-65.45	-54	-11.45
4844.00	47.35	199	1.4	H	-62.11	2.64	12.70	-52.05	-30	-22.05
4844.00	51.03	273	1.5	V	-57.16	2.64	12.70	-47.10	-30	-17.10
7266.00	50.45	193	1.9	H	-57.19	3.22	11.70	-48.71	-30	-18.71
7266.00	48.54	238	1.2	V	-58.98	3.22	11.70	-50.50	-30	-20.50
802.11n40 High channel										
196.46	37.32	290	1.5	H	-63.18	0.18	0.00	-63.36	-54	-9.36
196.46	33.22	353	1.9	V	-66.13	0.18	0.00	-66.31	-54	-12.31
4924.00	46.61	174	2.0	H	-62.42	2.40	11.60	-53.22	-30	-23.22
4924.00	50.41	73	1.5	V	-58.15	2.40	11.60	-48.95	-30	-18.95
7386.00	50.73	305	1.4	H	-55.81	3.28	11.90	-47.19	-30	-17.19
7386.00	49.26	227	1.1	V	-57.45	3.28	11.90	-48.83	-30	-18.83

Frequency	Receiver Reading	Turn table Angle	RX Antenna		Substituted			Absolute Level	Result	
			Height	Polar	SG Level	Cable	Antenna Gain		Limit	Margin
(MHz)	(dBμV)	Degree	(m)	(H/V)	(dBm)	(dB)	(dB)	(dBm)	(dBm)	(dB)
802.11ax20 low channel										
196.46	33.15	188	1.6	H	-64.20	0.16	0.00	-64.36	-54	-10.36
196.46	33.06	357	1.5	V	-65.44	0.16	0.00	-65.60	-54	-11.60
4824.00	52.10	104	1.6	H	-57.36	2.64	12.70	-47.30	-30	-17.30
4824.00	52.30	195	1.3	V	-55.89	2.64	12.70	-45.83	-30	-15.83
7236.00	48.53	356	1.2	H	-59.11	3.22	11.70	-50.63	-30	-20.63
7236.00	44.66	316	1.3	V	-62.86	3.22	11.70	-54.38	-30	-24.38
802.11ax20 High channel										
196.46	30.99	91	1.0	H	-66.36	0.16	0.00	-66.52	-54	-12.52
196.46	34.81	181	1.1	V	-63.69	0.16	0.00	-63.85	-54	-9.85
4944.00	50.50	263	1.9	H	-58.53	2.40	11.60	-49.33	-30	-19.33
4944.00	51.76	23	2.0	V	-56.80	2.40	11.60	-47.60	-30	-17.60
7416.00	46.38	52	1.0	H	-60.16	3.28	11.90	-51.54	-30	-21.54
7416.00	43.65	295	1.7	V	-63.06	3.28	11.90	-54.44	-30	-24.44

Frequency	Receiver Reading	Turn table Angle	RX Antenna		Substituted			Absolute Level	Result	
			Height	Polar	SG Level	Cable	Antenna Gain		Limit	Margin
(MHz)	(dBμV)	Degree	(m)	(H/V)	(dBm)	(dB)	(dB)	(dBm)	(dBm)	(dB)
802.11ax40 low channel										
196.46	36.24	97	1.4	H	-64.26	0.18	0.00	-64.44	-54	-10.44
196.46	33.33	310	1.4	V	-66.02	0.18	0.00	-66.20	-54	-12.20
4844.00	47.33	220	1.7	H	-62.13	2.64	12.70	-52.07	-30	-22.07
4844.00	51.55	109	1.9	V	-56.64	2.64	12.70	-46.58	-30	-16.58
7266.00	50.10	112	1.6	H	-57.54	3.22	11.70	-49.06	-30	-19.06
7266.00	48.28	26	1.7	V	-59.24	3.22	11.70	-50.76	-30	-20.76
802.11ax40 High channel										
196.46	35.27	260	1.1	H	-65.23	0.18	0.00	-65.41	-54	-11.41
196.46	33.98	17	1.7	V	-65.37	0.18	0.00	-65.55	-54	-11.55
4924.00	48.00	254	1.3	H	-61.03	2.40	11.60	-51.83	-30	-21.83
4924.00	51.86	24	1.6	V	-56.70	2.40	11.60	-47.50	-30	-17.50
7386.00	49.35	145	2.0	H	-57.19	3.28	11.90	-48.57	-30	-18.57
7386.00	47.84	355	1.5	V	-58.87	3.28	11.90	-50.25	-30	-20.25

Remark: only the worst case ANT 1 mode is recorded.

7.8 Receiver spurious emissions

7.8.1Definition

Receiver spurious emissions are emissions at any frequency when the equipment is in receive mode.

7.8.2Limit

The spurious emissions of the receiver shall not exceed the values given in table 13.
In case of equipment with antenna connectors, these limits apply to emissions at the antenna port (conducted). For emissions radiated by the cabinet or for emissions radiated by integral antenna equipment (without antenna connectors),these limits are e.r.p. for emissions up to 1 GHz and e.i.r.p. for emissions above 1 GHz.

Table 13: Spurious emission limits for receivers

Frequency range	Maximum power e.r.p. (≤ 1 GHz) e.i.r.p. (> 1 GHz)	Measurement bandwidth
30 MHz to 1 GHz	-57 dBm	100 kHz
1 GHz to 12.75 GHz	-47 dBm	1 MHz

7.8.3EUT Operation Condition

The EUT was programmed to be in continuously receiving mode.

7.8.4Test Procedure

The test site as described in annex B and applicable measurement procedures as described in annex C shall be used.
The test procedure is further as described under clause 5.4.10.2.1.

7.8.5Measurement Record

Frequency	Receiver Reading	Turn table Angle	RX Antenna		Substituted			Absolute Level	Result	
			Height	Polar	SG Level	Cable	Antenna Gain		Limit	Margin
(MHz)	(dBμV)	Degree	(m)	(H/V)	(dBm)	(dB)	(dB)	(dBm)	(dBm)	(dB)
802.11b low channel										
166.18	36.40	303	1.2	H	-70.99	0.16	0.00	-71.15	-57	-14.15
166.18	36.99	108	1.6	V	-68.44	0.16	0.00	-68.60	-57	-11.60
1563.46	41.40	349	1.8	H	-68.06	2.15	7.50	-62.71	-47	-15.71
1563.46	42.68	67	1.2	V	-65.51	2.15	7.50	-60.16	-47	-13.16
802.11b High channel										
166.18	35.19	176	1.2	H	-72.20	0.16	0.00	-72.36	-57	-15.36
166.18	38.03	233	1.1	V	-67.40	0.16	0.00	-67.56	-57	-10.56
1563.46	40.13	303	1.6	H	-69.33	2.15	7.50	-63.98	-47	-16.98
1563.46	44.12	215	1.7	V	-64.07	2.15	7.50	-58.72	-47	-11.72

Remark: only the worst case ANT 1 802.11b mode is recorded.

8 Photographs of test setup and EUT.

Note: Please refer to appendix: Appendix-WU900-Photos

======End of Report======