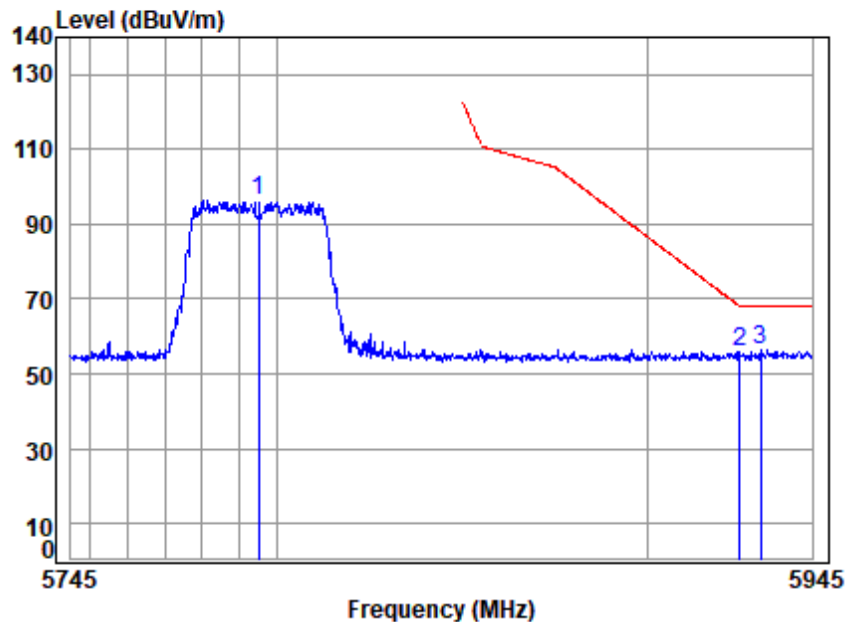


Test Mode: 07; Polarity: Vertical; Modulation:802.11ac; Bandwidth:40MHz; Channel:High

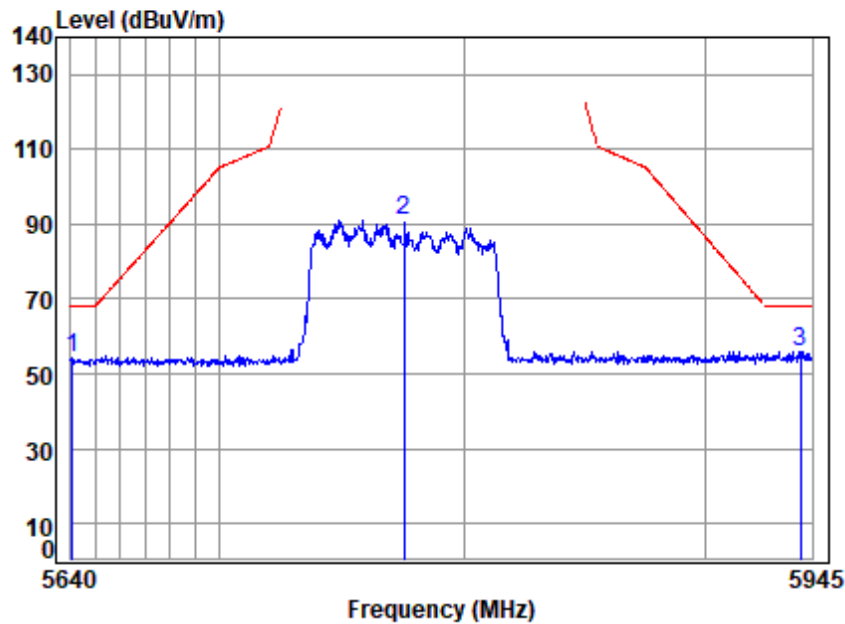


Site : chamber
Condition: 3m VERTICAL
Job No : 04078AU
Mode : 5795 Band edge
Note : 5G WIFI 11AC40

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	5795.00	8.03	34.29	34.99	89.02	96.35	-----	----- peak
2	5925.10	8.12	34.65	34.93	47.80	55.64	68.20	-12.56 Peak
3	5930.98	8.12	34.66	34.93	48.47	56.32	68.20	-11.88 Peak



Test Mode: 07; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:80MHz; Channel:middle

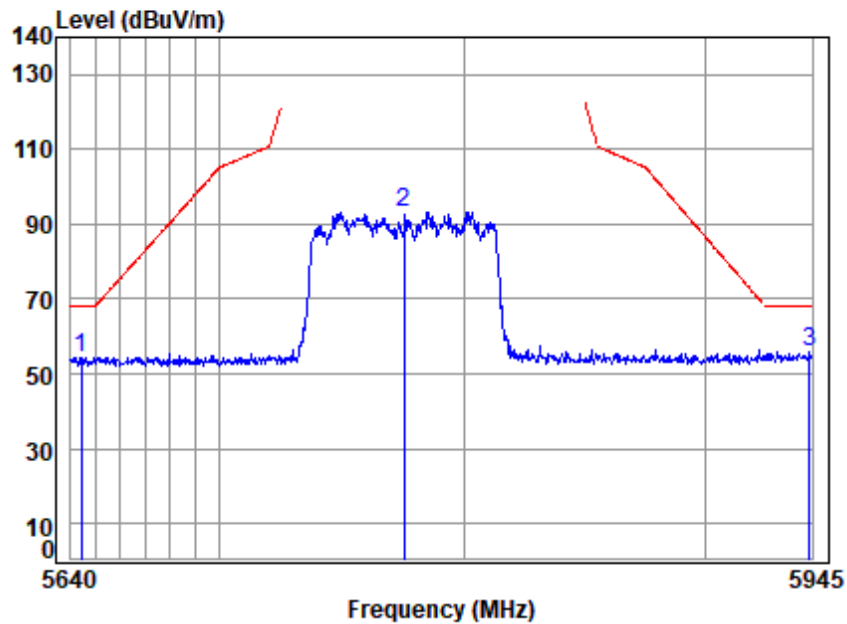


Site : chamber
Condition: 3m HORIZONTAL
Job No : 04078AU
Mode : 5775 Band edge
Note : 5G WIFI 11AC80

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	5640.59	7.92	34.46	35.07	47.11	54.42	68.20	-13.78 Peak
2	5775.00	8.01	34.25	35.00	83.95	91.21	-----	----- peak
3	5939.99	8.13	34.68	34.93	47.97	55.85	68.20	-12.35 Peak



Test Mode: 07; Polarity: Vertical; Modulation:802.11ac; Bandwidth:80MHz; Channel:middle



Site : chamber
Condition: 3m VERTICAL
Job No : 04078AU
Mode : 5775 Band edge
Note : 5G WIFI 11AC80

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	5644.16	7.92	34.43	35.06	47.17	54.46	68.20	-13.74 Peak
2	5775.00	8.01	34.25	35.00	86.12	93.38	-----	----- peak
3	5943.75	8.13	34.69	34.93	47.93	55.82	68.20	-12.38 Peak



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7.4 Duty Cycle

Test Requirement: ANSI C63.10 (2013) Section 12.2
 Test Method: ANSI C63.10 (2020) Section 12.2
 Test Engineer: Mingli Hu

7.4.1 E.U.T. Operation

Operating Environment:

Temperature: 20.4 °C Humidity: 57.4 % RH Atmospheric Pressure: 1020 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode (U-NII-1) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.
Final test	05	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac20/40/80, Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.
Final test	07	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.



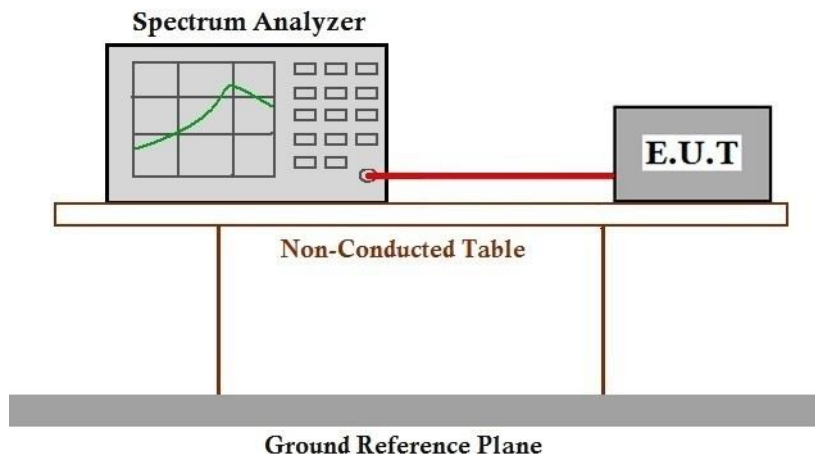
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7.4.3 Test Setup Diagram



7.4.4 Measurement Procedure and Data

Please Refer to Appendix for Details



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7.5 99% Bandwidth

Test Requirement ANSI C63.10 (2013) Section 12.4.2

Test Method: ANSI C63.10 (2020) Section 12.5.3

Test Engineer: Mingli Hu

7.5.1 E.U.T. Operation

Operating Environment:

Temperature: 20.4 °C

Humidity: 57.4 % RH

Atmospheric Pressure: 1020 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode (U-NII-1) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.
Final test	05	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac20/40/80, Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.
Final test	07	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.



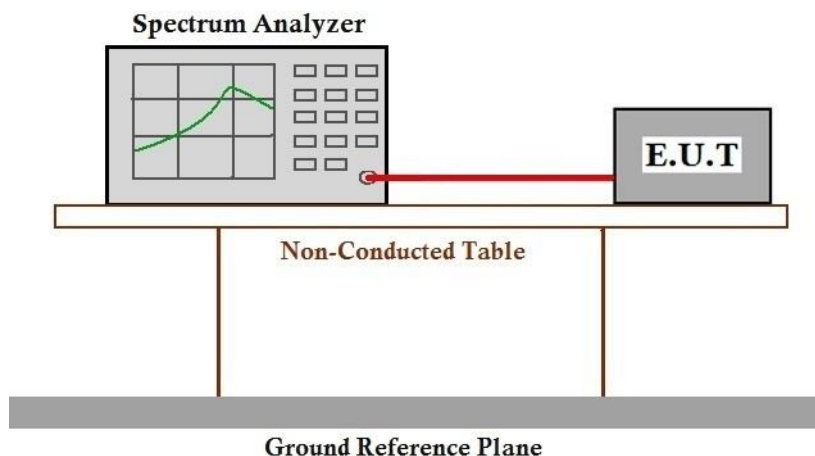
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7.5.3 Test Setup Diagram



7.5.4 Measurement Procedure and Data

Please Refer to Appendix for Details



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7.6 26dB Emission bandwidth

Test Requirement 47 CFR Part 15, Subpart E 15.407 (a)

Test Method: ANSI C63.10 (2020) Section 12.5.2

Test Engineer: Mingli Hu

7.6.1 E.U.T. Operation

Operating Environment:

Temperature: 20.4 °C

Humidity: 57.4 % RH

Atmospheric Pressure: 1020 mbar

7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode (U-NII-1) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.
Final test	05	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac20/40/80, Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.
Final test	07	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.



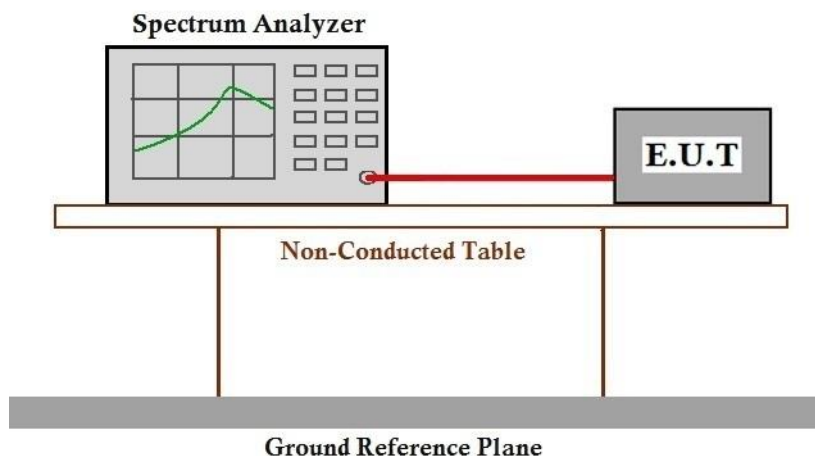
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7.6.3 Test Setup Diagram



7.6.4 Measurement Procedure and Data

Please Refer to Appendix for Details



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7.7 Minimum 6 dB bandwidth (5.725-5.85 GHz band)

Test Requirement 47 CFR Part 15, Subpart E 15.407 (e)

Test Method: ANSI C63.10 (2020) Section 12.5.1

Test Engineer: Mingli Hu

Limit:

Frequency band(MHz)	Limit
5725-5850	≥ 500 kHz

7.7.1 E.U.T. Operation

Operating Environment:

Temperature: 20.4 °C

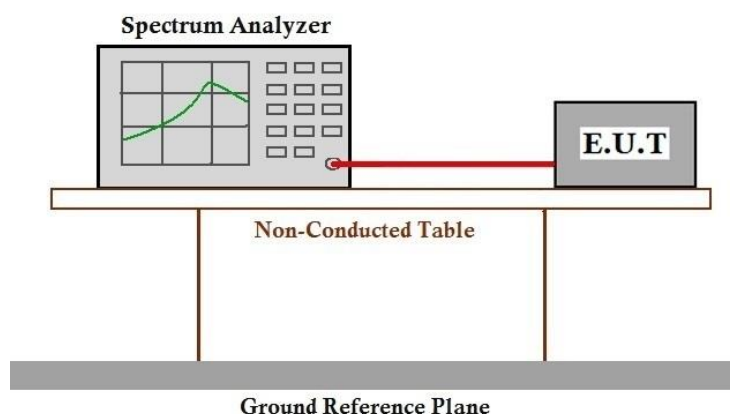
Humidity: 57.4 % RH

Atmospheric Pressure: 1020 mbar

7.7.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	07	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.

7.7.3 Test Setup Diagram



7.7.4 Measurement Procedure and Data

Please Refer to Appendix for Details



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7.8 Maximum Conducted output power

Test Requirement 47 CFR Part 15, Subpart E 15.407 (a)

Test Method: ANSI C63.10 (2020) Section 12.4

Test Engineer: Mingli Hu

Limit:

Frequency band(MHz)	Limit
5150-5250	≤1W(30dBm) for master device
	≤250mW(24dBm) for client device
5250-5350	≤250mW(24dBm) or 11dBm+10logB*
5470-5725	≤250mW(24dBm) or 11dBm+10logB*
5725-5850	≤1W(30dBm)
Remark:	* Where B is the 26dB emission bandwidth in MHz. The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.

7.8.1 E.U.T. Operation

Operating Environment:

Temperature: 20.4 °C

Humidity: 57.4 % RH

Atmospheric Pressure: 1020 mbar

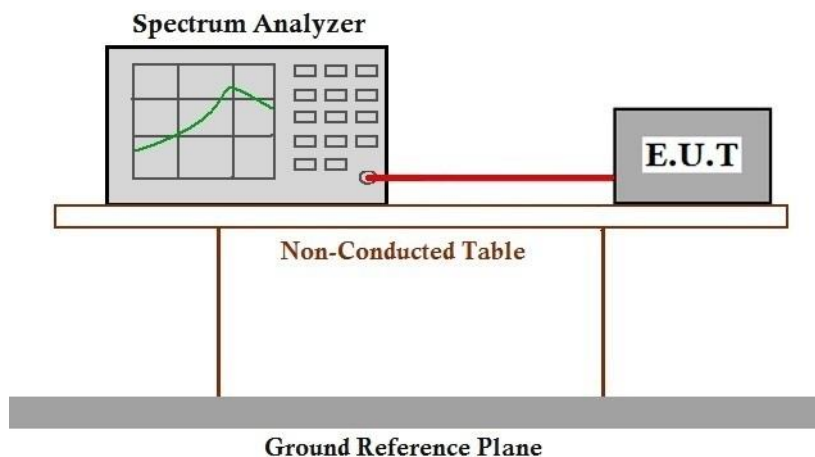
7.8.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.
Final test	05	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac20/40/80, Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.



Final test	07	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.
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7.8.3 Test Setup Diagram



7.8.4 Measurement Procedure and Data

Note: Since the verify power the same operating range bandwidth and smaller power can be covered by the higher power.

AV Output power Level = Reading level + Cable loss + DCCF

Please Refer to Appendix for Details



7.9 Peak Power spectrum density

Test Requirement 47 CFR Part 15, Subpart E 15.407 (a)

Test Method: ANSI C63.10 (2020) Section 12.6

Test Engineer: Mingli Hu

Limit:

Frequency band(MHz)	Limit
5150-5250	≤17dBm in 1MHz for master device
	≤11dBm in 1MHz for client device
5250-5350	≤11dBm in 1MHz for client device
5470-5725	≤11dBm in 1MHz for client device
5725-5850	≤30dBm in 500 kHz
Remark:	The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test.

7.9.1 E.U.T. Operation

Operating Environment:

Temperature: 20.4 °C

Humidity: 57.4 % RH

Atmospheric Pressure: 1020 mbar

7.9.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.
Final test	05	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac20/40/80, Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.
Final test	07	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.



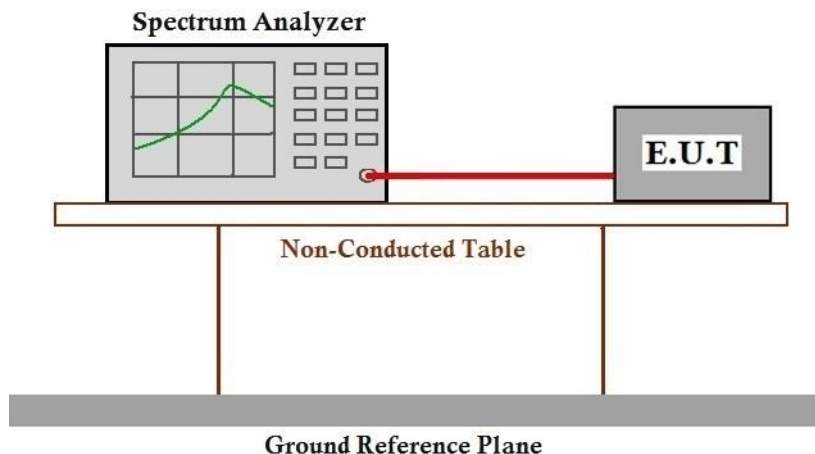
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7.9.3 Test Setup Diagram



7.9.4 Measurement Procedure and Data

RBW conversion factor from 300kHz to 500kHz (2.22dB) for UNII Band 3 has been considered.

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7.10 Frequency Stability

Test Requirement 47 CFR Part 15, Subpart E 15.407 (g)

Test Method: ANSI C63.10 (2020) Section 6.8

Test Engineer: Mingli Hu

7.10.1 E.U.T. Operation

Operating Environment:

Temperature: 20.4 °C

Humidity: 57.4 % RH

Atmospheric Pressure: 1020 mbar

7.10.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode (U-NII-1) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.
Final test	05	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac20/40/80, Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.
Final test	07	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n/ac 20/40/80, Only the data of worst case is recorded in the report.



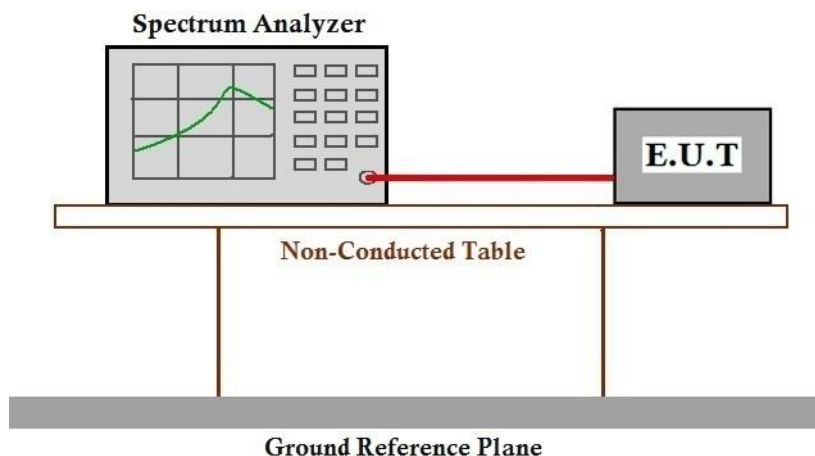
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7.10.3 Test Setup Diagram



7.10.4 Measurement Procedure and Data

Please Refer to Appendix for Details



7.11 Channel Move Time

Test Requirement KDB 905462 D02 Section 5.1
 Test Method: KDB 905462 D02 Section 7.8.3
 Test Engineer: Joke Huang

Limit:

Test item	Limit	Applicability	
		Master Device or client with Radar Detection	Client without Radar Detection
Non-occupancy period	Minimum 30 minutes	Yes	Not required
Channel Availability Check Time	60 seconds	Yes	Not required
Channel Move Time	10 seconds See Note 1.	Yes	Yes
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.	Yes	Yes
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.	Yes	Not required

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

7.11.1 E.U.T. Operation

Operating Environment:

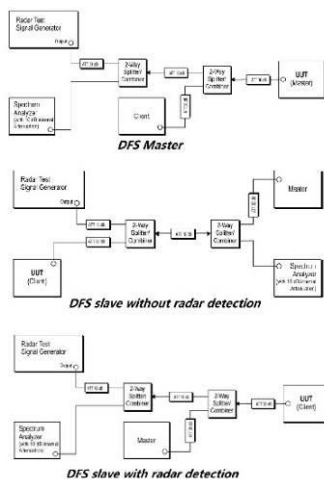
Temperature: 22.3 °C Humidity: 52.3 % RH Atmospheric Pressure: 1020 mbar



7.11.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	08	Normal operating_Keep the EUT communication with the companion device.

7.11.3 Test Setup Diagram



7.11.4 Measurement Procedure and Data

- 1) The radar pulse generator is setup to provide a pulse at frequency that the master and client are operating. A type 0 radar pulse with a 1us pulse width and a 1428us PRI is used for the testing.
- 2) The vector signal generator is adjusted to provide the radar burst (18 pulses) at the level of approximately -61dBm at the antenna port of the master device.
- 3) A trigger is provided from the pulse generator to the DFS monitoring system in order to capture the traffic and the occurrence of the radar pulse.
- 4) EUT will associate with the master at channel. The file "iperf.exe" specified by the FCC is streamed from the PC 2 through the master and the client device to the PC 1 and played in full motion video using Media Player Classic Ver. 6.4.8.6 in order to properly load the network for the entire period of the test.
- 5) When radar burst with a level equal to the DFS Detection Threshold +1dB is generated on the operating channel of the U-NII device. At time T0 the radar waveform generator sends a burst of pulse of the radar waveform at Detection Threshold +1dB.
- 6) Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). One 15 seconds plot is reported for the Short Pulse Radar Type 0. The plot for the Short Pulse Radar Types start at the end of the radar burst. The Channel Move Time will be calculated based on the zoom in 600ms plot of the Short Pulse Radar Type.
- 7) Measurement of the aggregate duration of the Channel Closed Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by: $Dwell (0.3ms) = S (12000ms) / B (4000)$; where Dwell is the dwell time per spectrum analyzer sampling bin, S is sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by: $C (ms) = N \times Dwell (0.3ms)$; where C is the Closing Time, N is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.
- 8) Measurement the EUT for more than 30 minutes following the channel move time to verify that no transmission or beacons occur on this channel.

Please Refer to Appendix for Details



7.12 Channel Closing Transmission Time

Test Requirement KDB 905462 D02 Section 5.1
 Test Method: KDB 905462 D02 Section 7.8.3
 Test Engineer: Joke Huang

Limit:

Test item	Limit	Applicability	
		Master Device or client with Radar Detection	Client without Radar Detection
Non-occupancy period	Minimum 30 minutes	Yes	Not required
Channel Availability Check Time	60 seconds	Yes	Not required
Channel Move Time	10 seconds See Note 1.	Yes	Yes
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.	Yes	Yes
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.	Yes	Not required

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

7.12.1 E.U.T. Operation

Operating Environment:

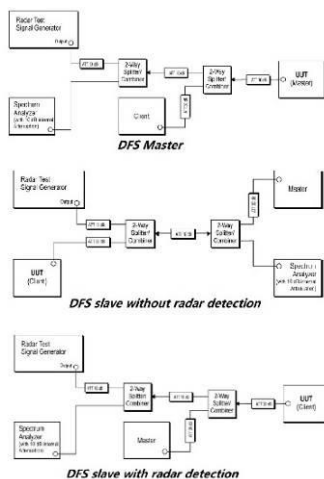
Temperature: 22.1 °C Humidity: 52.3 % RH Atmospheric Pressure: 1020 mbar



7.12.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	08	Normal operating_Keep the EUT communication with the companion device.

7.12.3 Test Setup Diagram



7.12.4 Measurement Procedure and Data

- 1) The radar pulse generator is setup to provide a pulse at frequency that the master and client are operating. A type 0 radar pulse with a 1us pulse width and a 1428us PRI is used for the testing.
- 2) The vector signal generator is adjusted to provide the radar burst (18 pulses) at the level of approximately -61dBm at the antenna port of the master device.
- 3) A trigger is provided from the pulse generator to the DFS monitoring system in order to capture the traffic and the occurrence of the radar pulse.
- 4) EUT will associate with the master at channel. The file "iperf.exe" specified by the FCC is streamed from the PC 2 through the master and the client device to the PC 1 and played in full motion video using Media Player Classic Ver. 6.4.8.6 in order to properly load the network for the entire period of the test.
- 5) When radar burst with a level equal to the DFS Detection Threshold +1dB is generated on the operating channel of the U-NII device. At time T0 the radar waveform generator sends a burst of pulse of the radar waveform at Detection Threshold +1dB.
- 6) Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). One 15 seconds plot is reported for the Short Pulse Radar Type 0. The plot for the Short Pulse Radar Types start at the end of the radar burst. The Channel Move Time will be calculated based on the zoom in 600ms plot of the Short Pulse Radar Type.
- 7) Measurement of the aggregate duration of the Channel Closed Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by: $Dwell (0.3ms) = S (12000ms) / B (4000)$; where Dwell is the dwell time per spectrum analyzer sampling bin, S is sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by: $C (ms) = N \times Dwell (0.3ms)$; where C is the Closing Time, N is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.
- 8) Measurement the EUT for more than 30 minutes following the channel move time to verify that no transmission or beacons occur on this channel.

Please Refer to Appendix for Details



8 Test Setup Photo

Refer to Appendix - Test Setup Photo for SZCR2509004078AU

9 EUT Constructional Details (EUT Photos)

Refer to Appendix_ external and internal photos for SZCR2509004078AU



10 Appendix

1. Duty Cycle

1.1 Test Result

1.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	2.070	2.236	92.58	0.34	5.94
		5200	2.066	2.238	92.31	0.35	5.11
		5240	2.071	2.237	92.58	0.33	5.98
		5260	2.065	2.236	92.35	0.35	5.11
		5300	2.066	2.236	92.40	0.34	5.49
		5320	2.065	2.219	93.06	0.31	3.12
		5500	2.071	2.219	93.33	0.30	4.80
		5580	2.071	2.236	92.62	0.33	5.91
		5700	2.066	2.228	92.73	0.33	4.72
		5745	2.070	2.173	95.26	0.21	3.26
		5785	2.071	2.287	90.56	0.43	7.62
		5825	2.071	2.228	92.95	0.32	5.17
802.11n (HT20)	SISO	5180	1.928	2.092	92.16	0.35	5.87
		5200	1.927	2.075	92.87	0.32	5.60
		5240	1.922	2.084	92.23	0.35	5.93
		5260	1.927	2.075	92.87	0.32	5.54
		5300	1.927	2.066	93.27	0.30	5.17
		5320	1.922	2.084	92.23	0.35	5.91
		5500	1.926	2.093	92.02	0.36	6.38
		5580	1.926	2.093	92.02	0.36	5.90
		5700	1.922	2.093	91.83	0.37	4.56
		5745	1.927	2.094	92.02	0.36	6.34
		5785	1.927	2.084	92.47	0.34	5.96
		5825	1.922	2.093	91.83	0.37	4.58
802.11n (HT40)	SISO	5190	0.951	1.117	85.14	0.70	11.71
		5230	0.946	1.108	85.38	0.69	10.08
		5270	0.946	1.117	84.69	0.72	8.23
		5310	0.946	1.118	84.62	0.73	10.74



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SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250900407805

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		5510	0.945	1.108	85.29	0.69	9.24
		5550	0.946	1.117	84.69	0.72	9.08
		5670	0.945	1.117	84.60	0.73	10.75
		5755	0.951	1.117	85.14	0.70	11.76
		5795	0.950	1.107	85.82	0.66	10.99
802.11ac (VHT20)	SISO	5180	1.938	2.105	92.07	0.36	6.35
		5200	1.934	2.106	91.83	0.37	5.42
		5240	1.934	2.078	93.07	0.31	3.33
		5260	1.933	2.104	91.87	0.37	5.86
		5300	1.934	2.096	92.27	0.35	5.44
		5320	1.938	2.104	92.11	0.36	6.28
		5500	1.933	2.051	94.25	0.26	3.86
		5580	1.938	2.096	92.46	0.34	5.52
		5700	1.934	2.078	93.07	0.31	4.22
		5745	1.938	2.105	92.07	0.36	6.36
		5785	1.933	2.078	93.02	0.31	4.66
		5825	1.938	2.105	92.07	0.36	6.30
802.11ac (VHT40)	SISO	5190	0.954	1.116	85.48	0.68	10.04
		5230	0.959	1.107	86.63	0.62	10.24
		5270	0.958	1.124	85.23	0.69	10.74
		5310	0.953	1.116	85.39	0.69	10.01
		5510	0.954	1.125	84.80	0.72	9.02
		5550	0.953	1.125	84.71	0.72	11.55
		5670	0.954	1.116	85.48	0.68	9.14
		5755	0.958	1.116	85.84	0.66	10.95
		5795	0.954	1.126	84.72	0.72	11.59
802.11ac (VHT80)	SISO	5210	0.462	0.624	74.04	1.31	18.69
		5290	0.462	0.633	72.99	1.37	19.79
		5530	0.461	0.633	72.83	1.38	16.54
		5610	0.462	0.597	77.39	1.11	15.35
		5775	0.462	0.633	72.99	1.37	18.14



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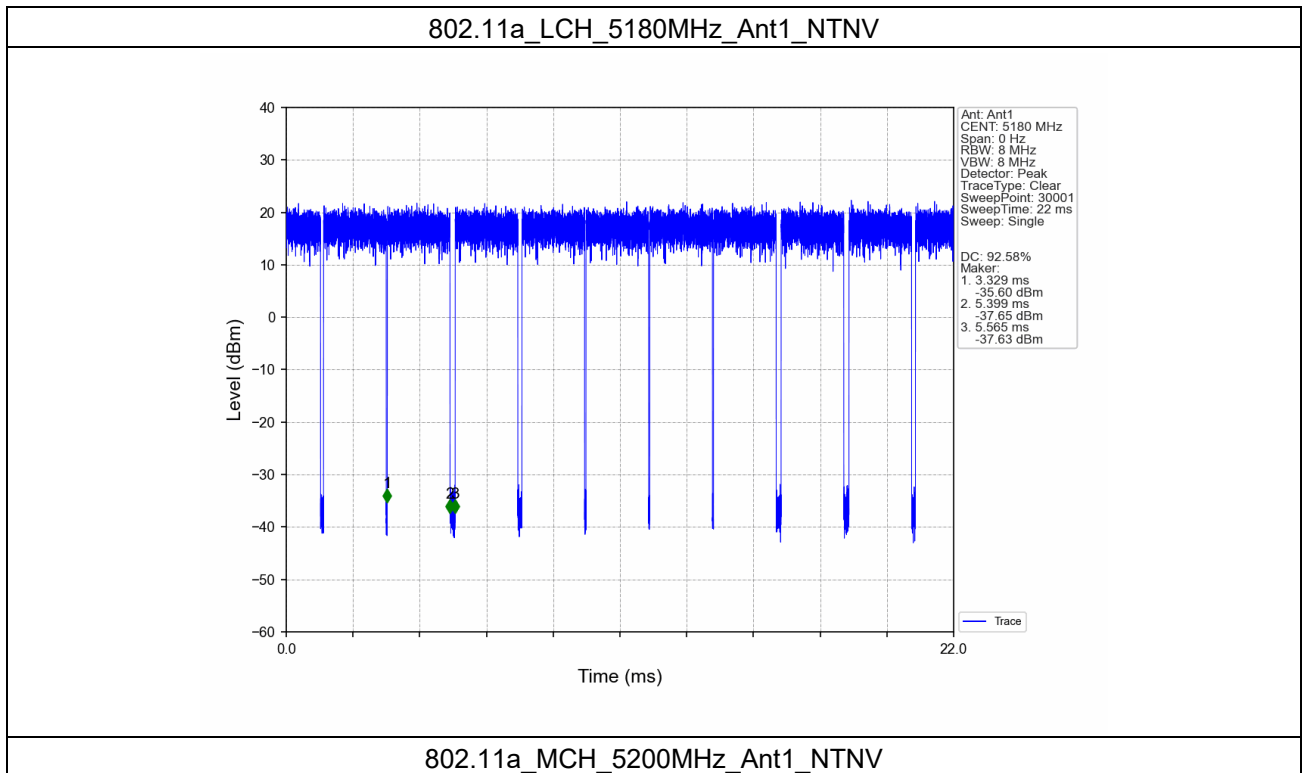
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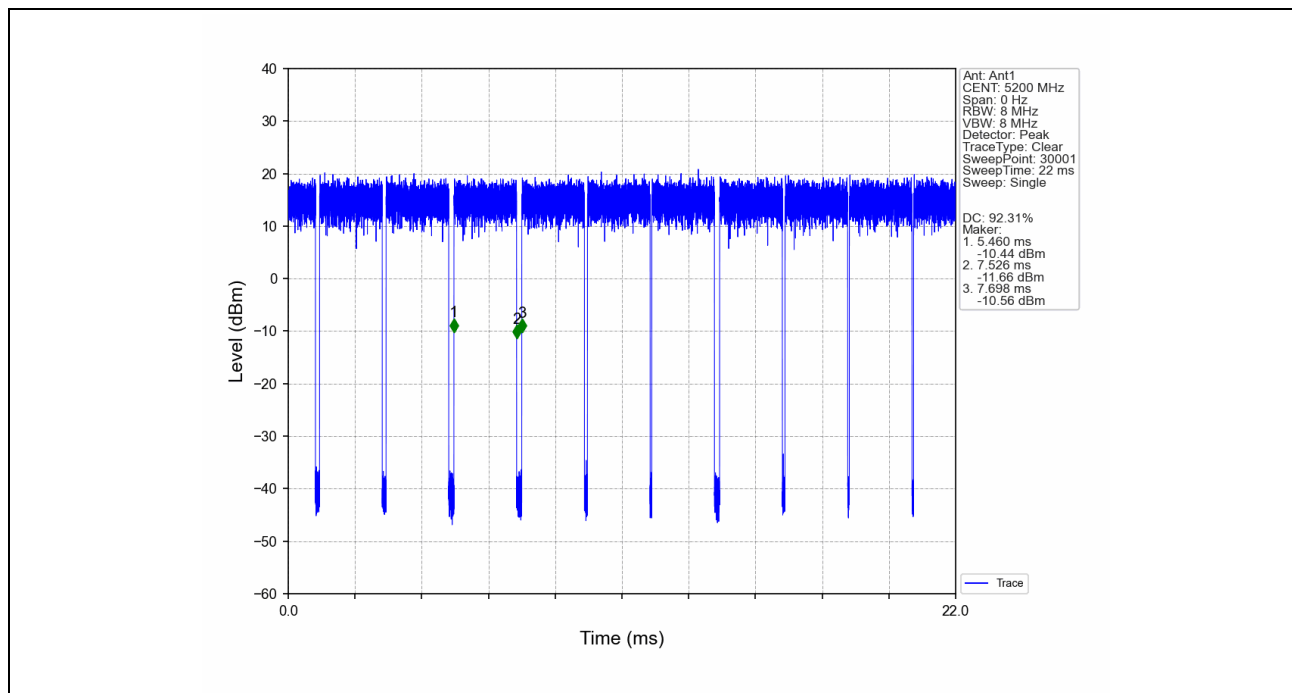
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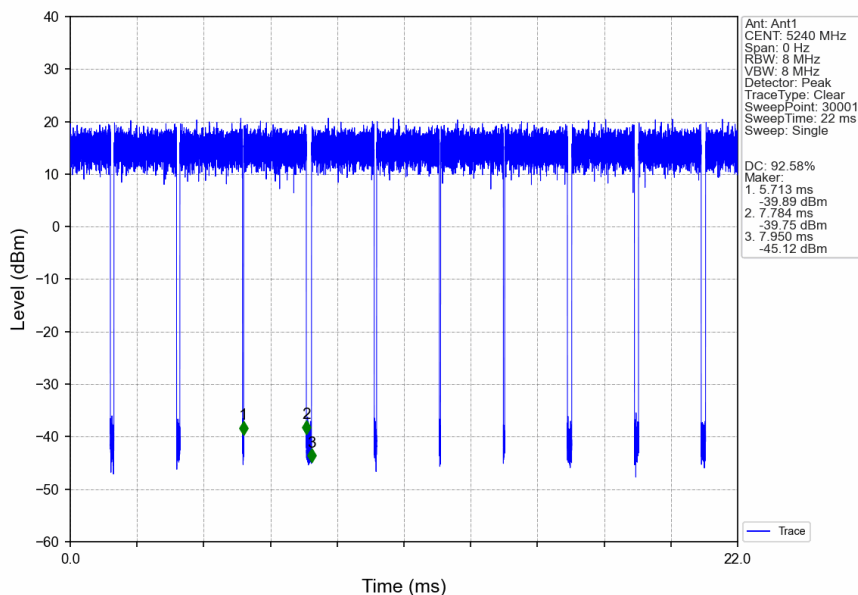
1.2 Test Graph

1.2.1 Ant1

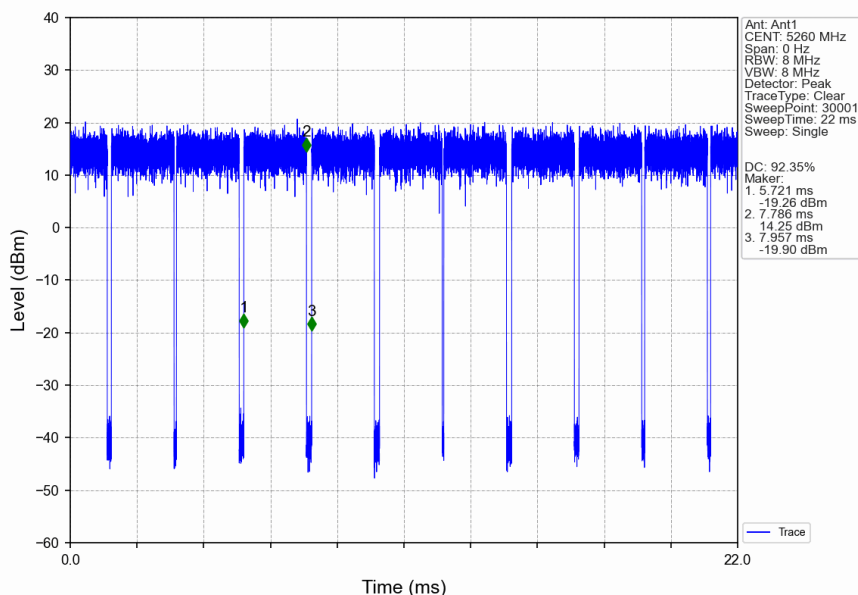




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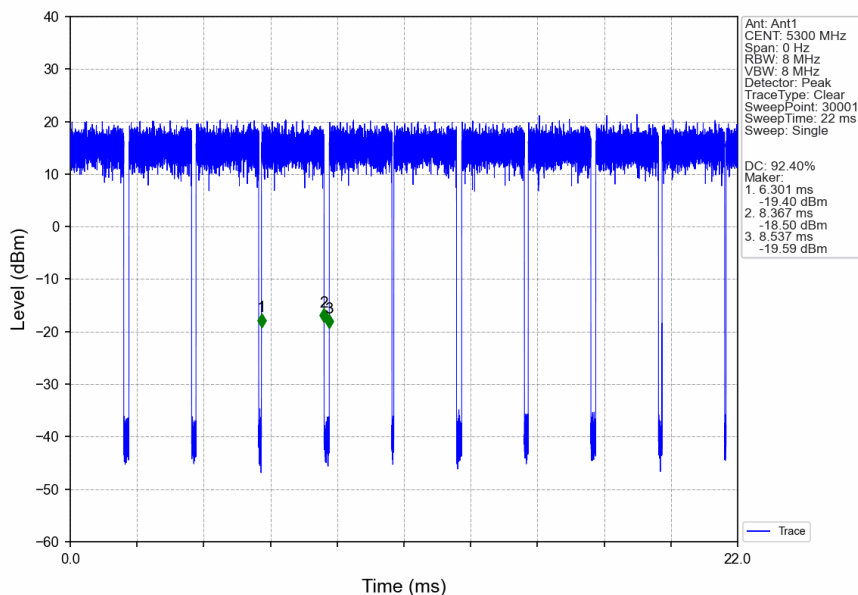
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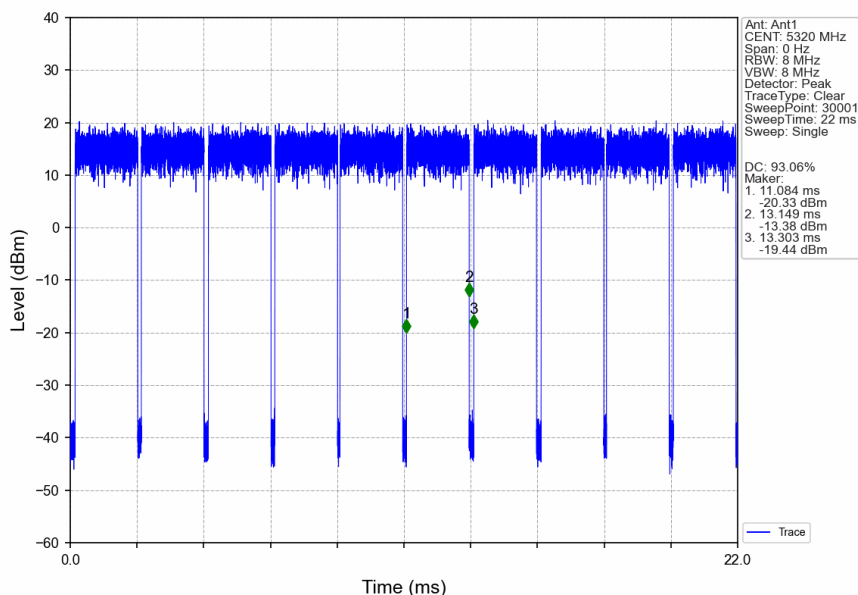
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802.11a_MCH_5300MHz_Ant1_NTNV



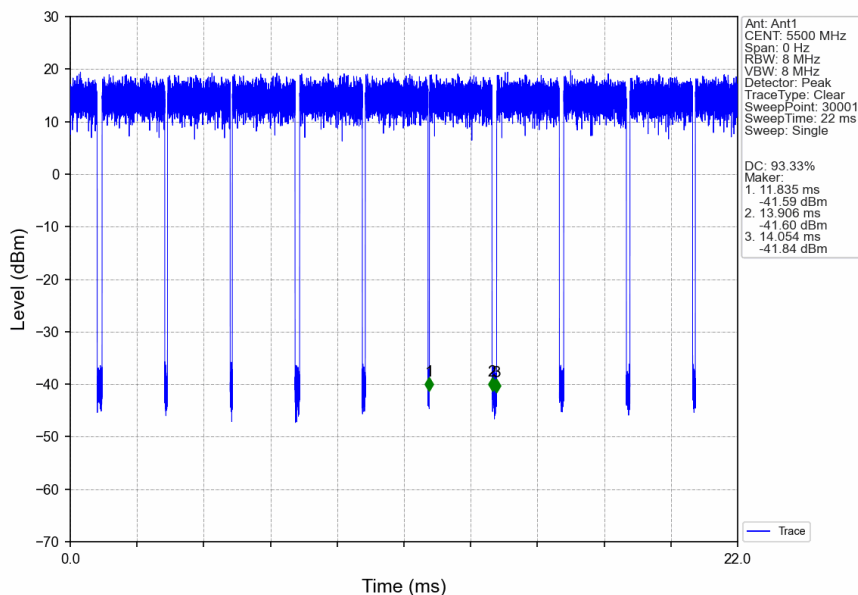
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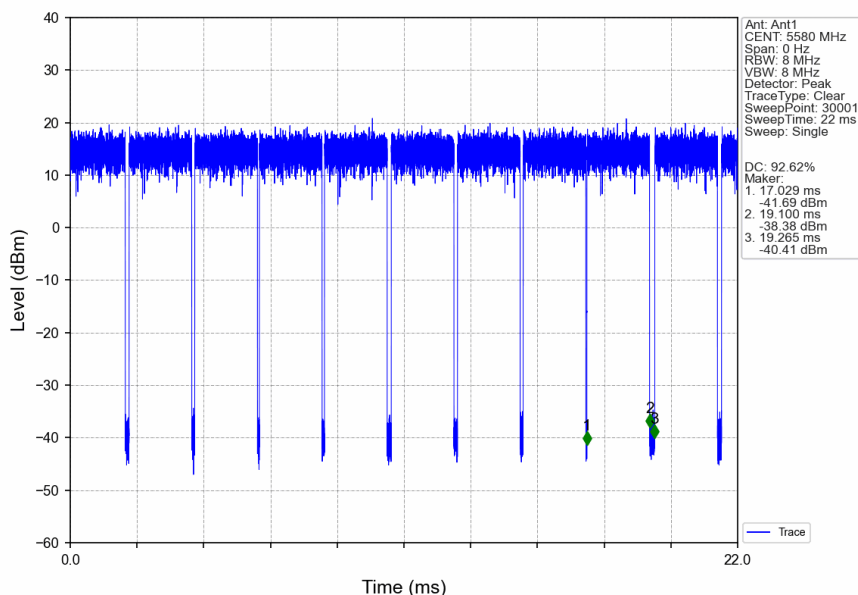
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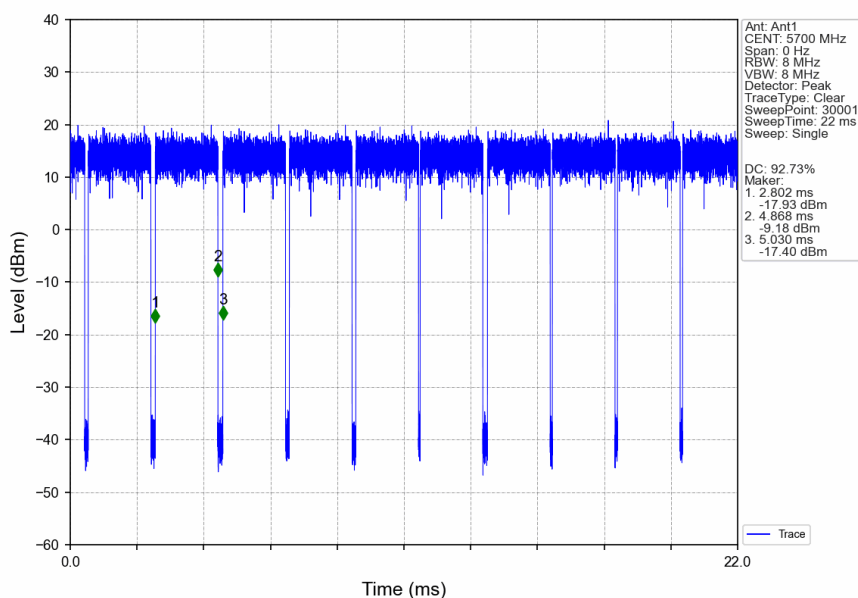
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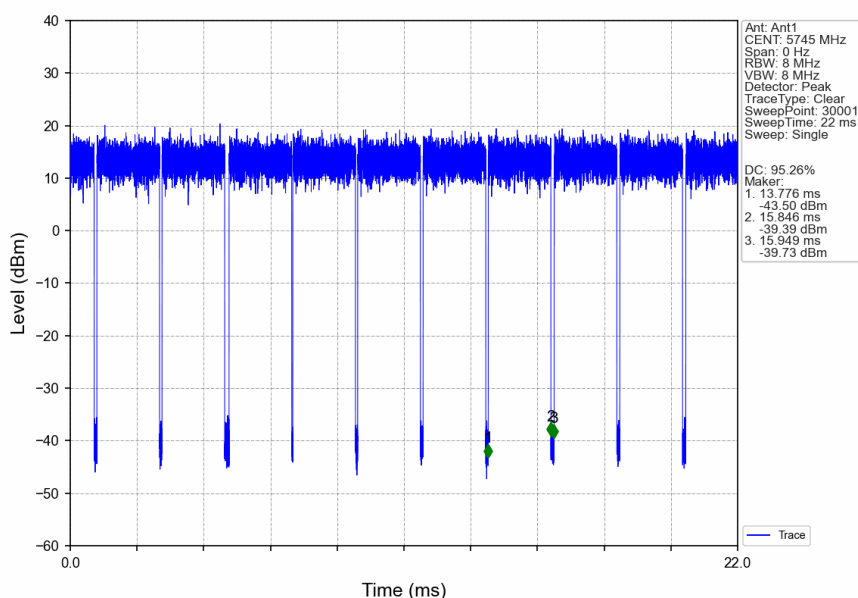
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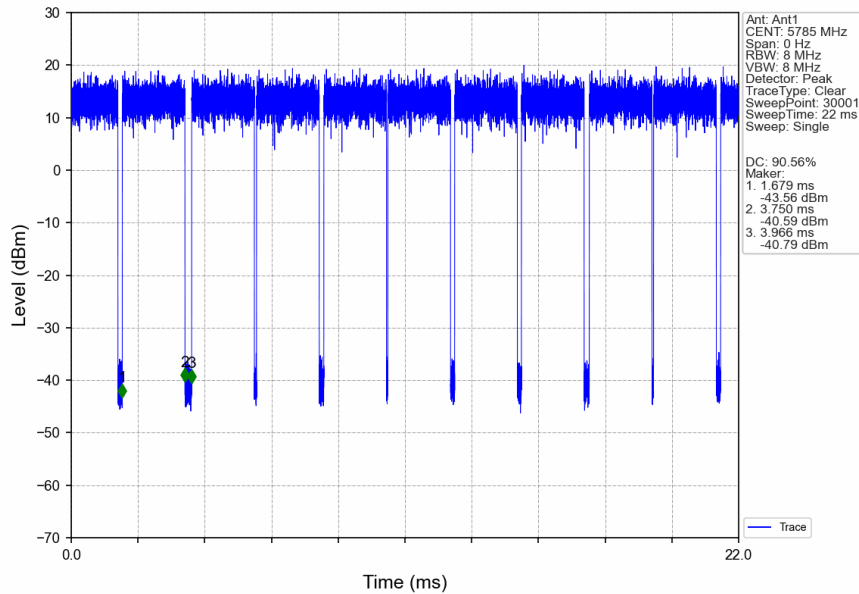
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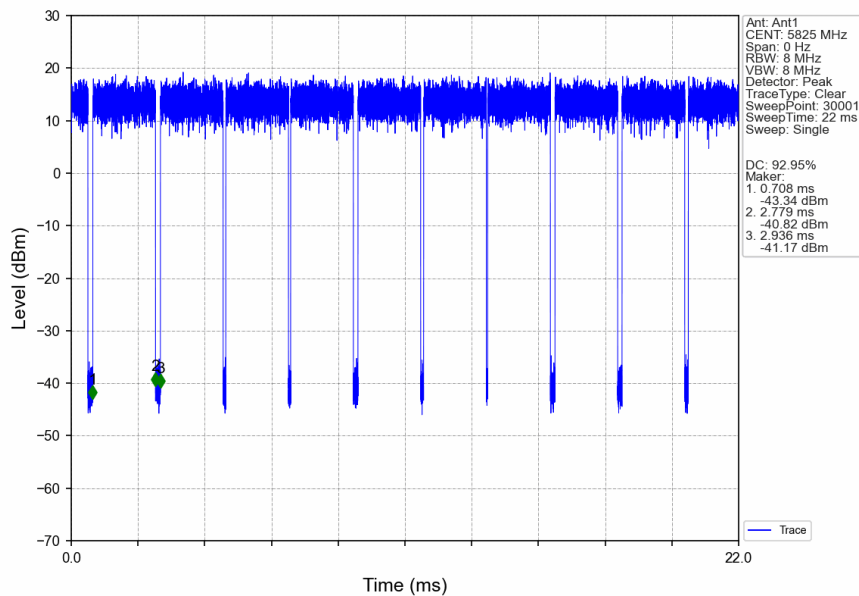
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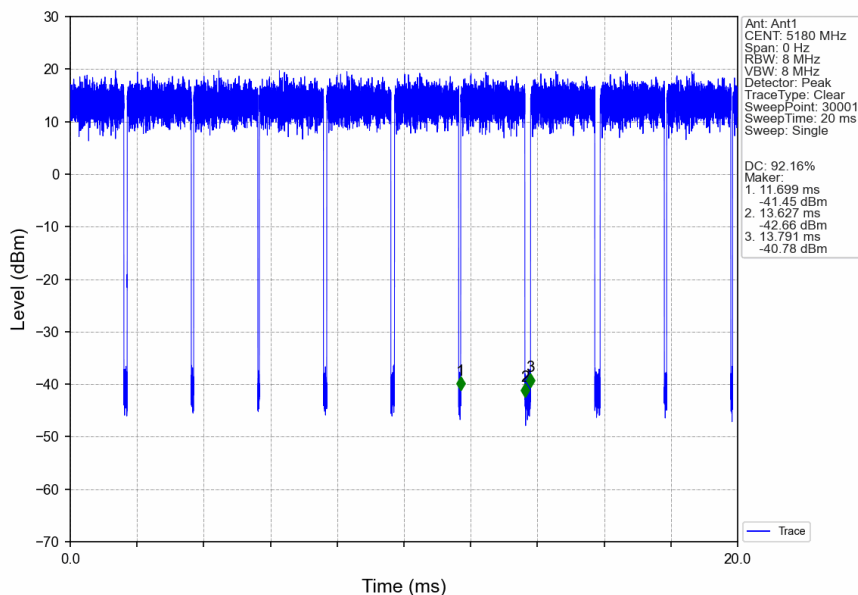
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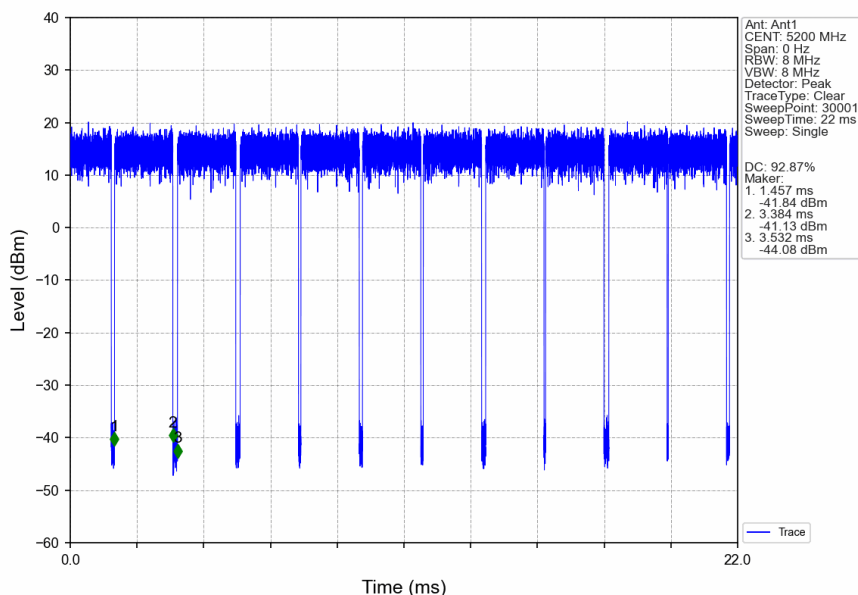
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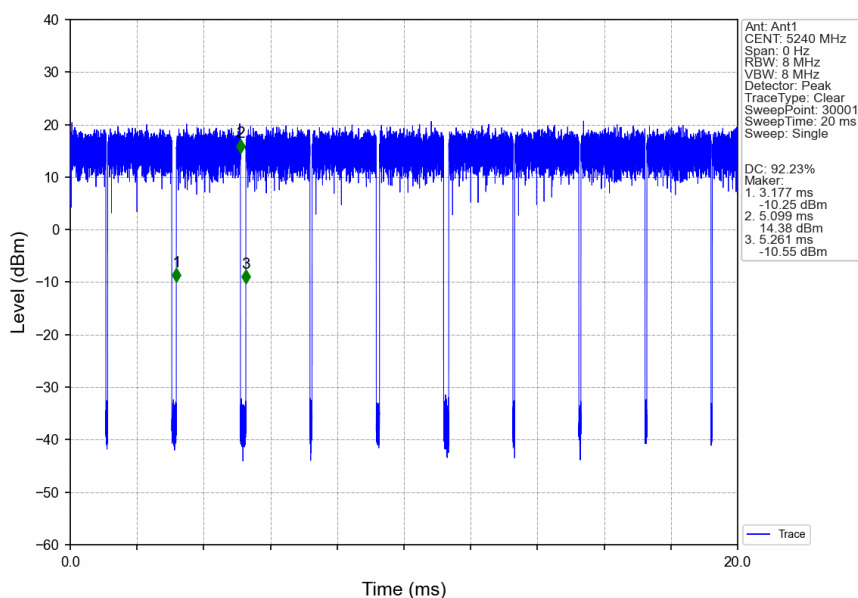
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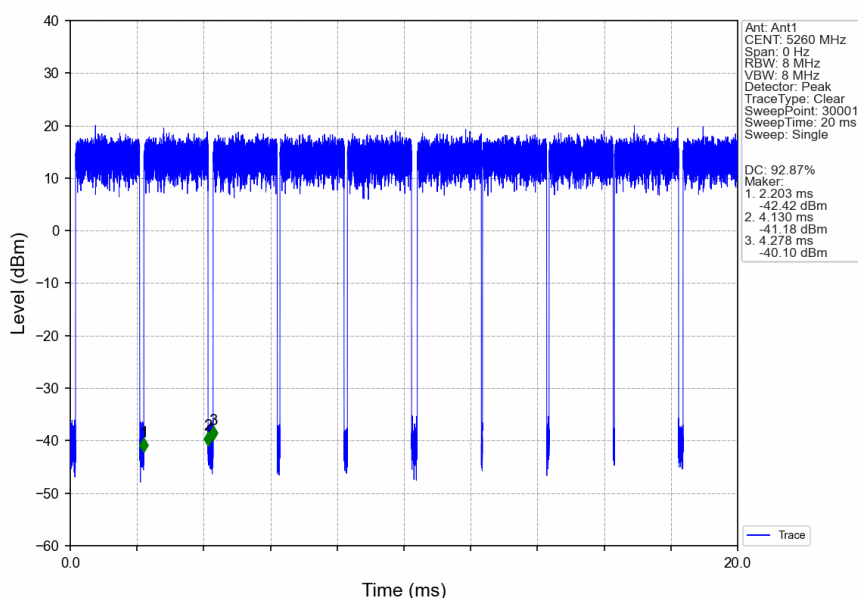
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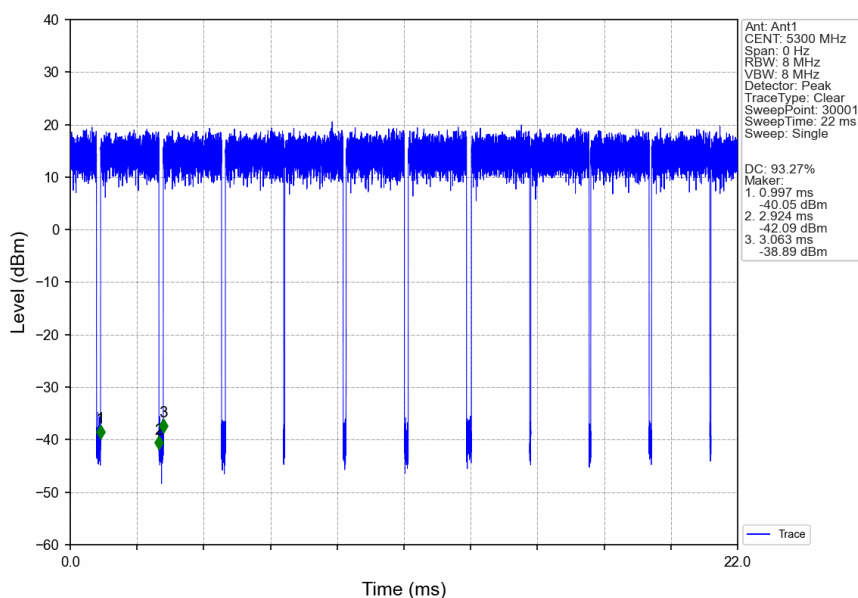
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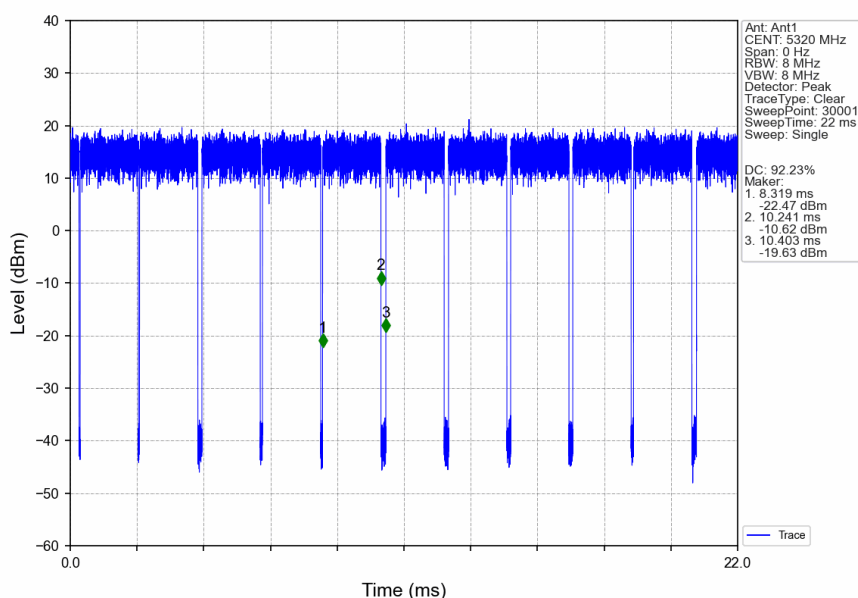
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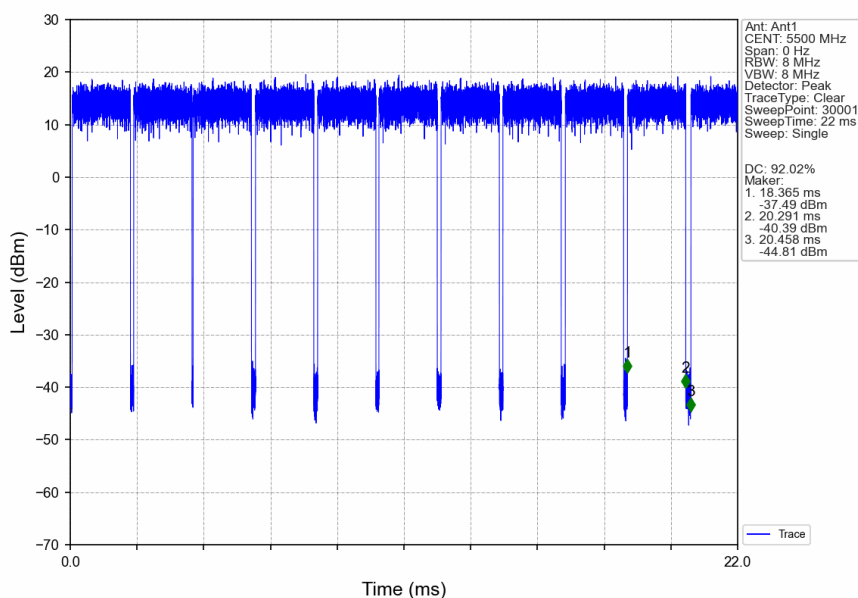
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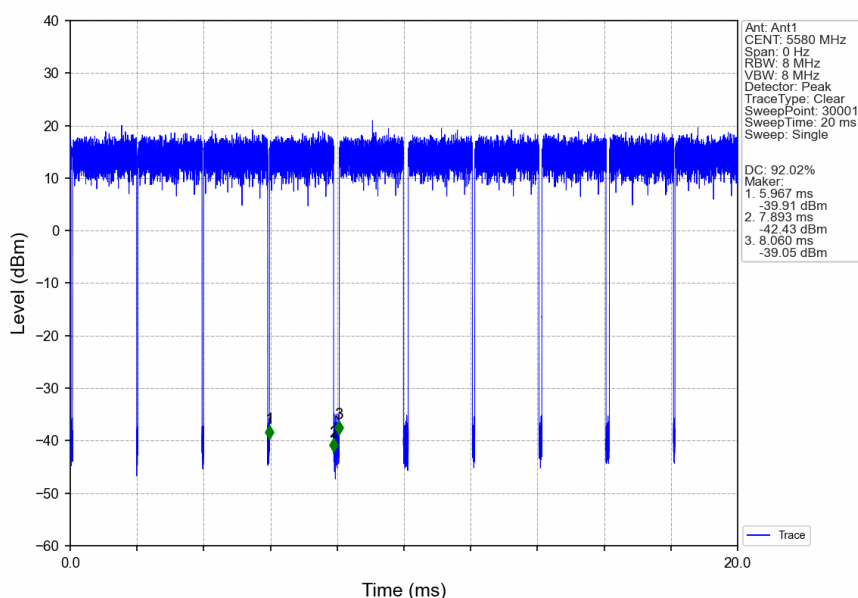
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802.11n(HT20)_LCH_5500MHz_Ant1_NTNV



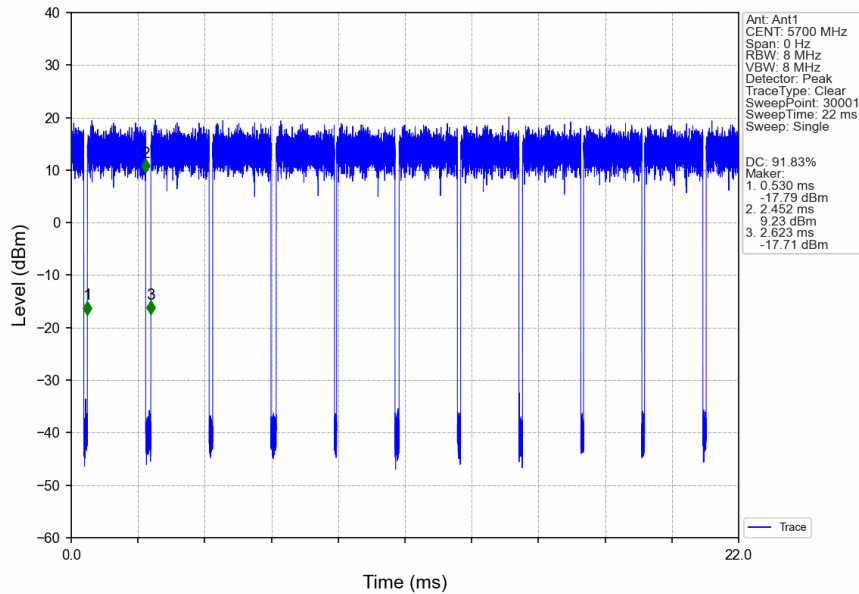
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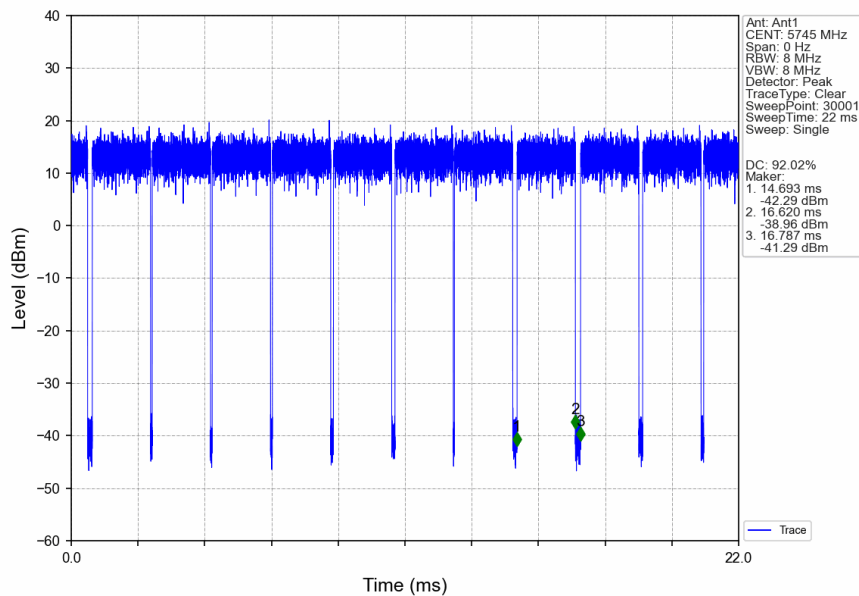
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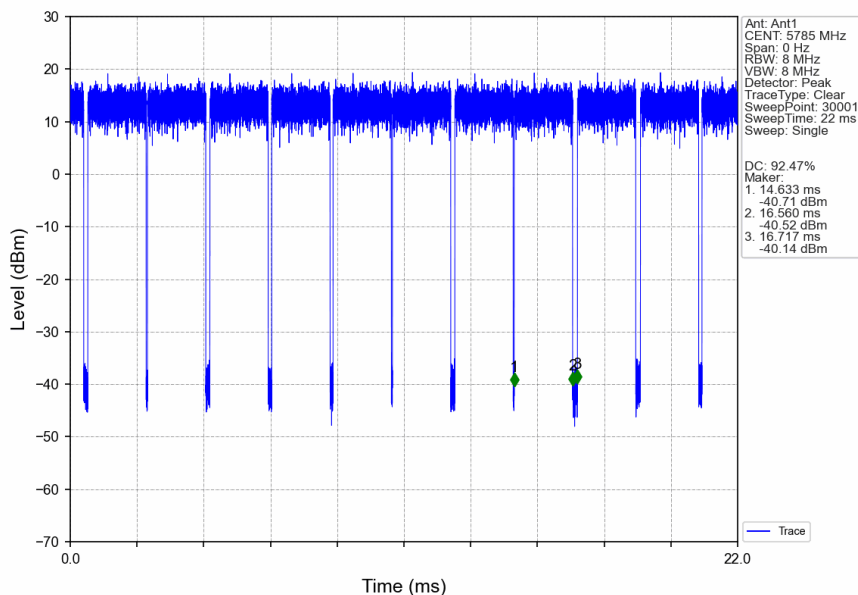
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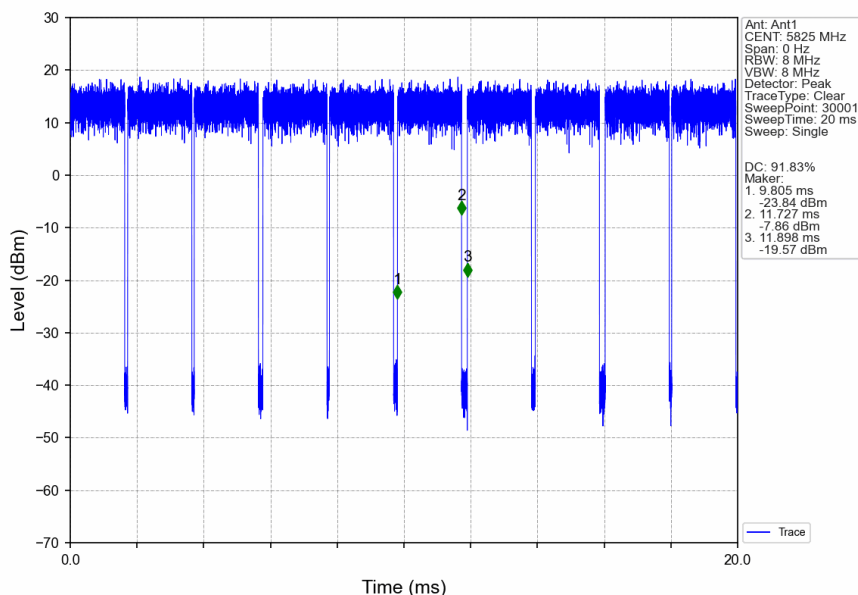
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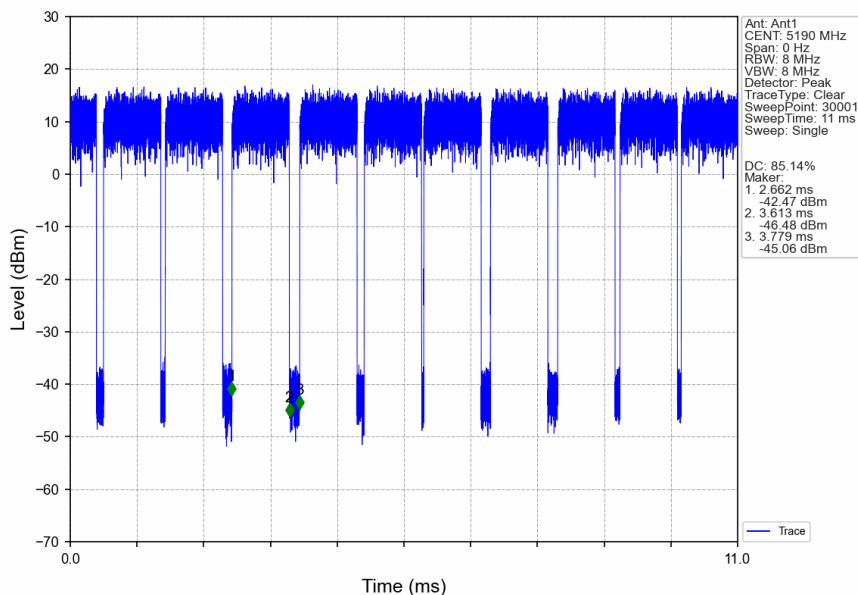
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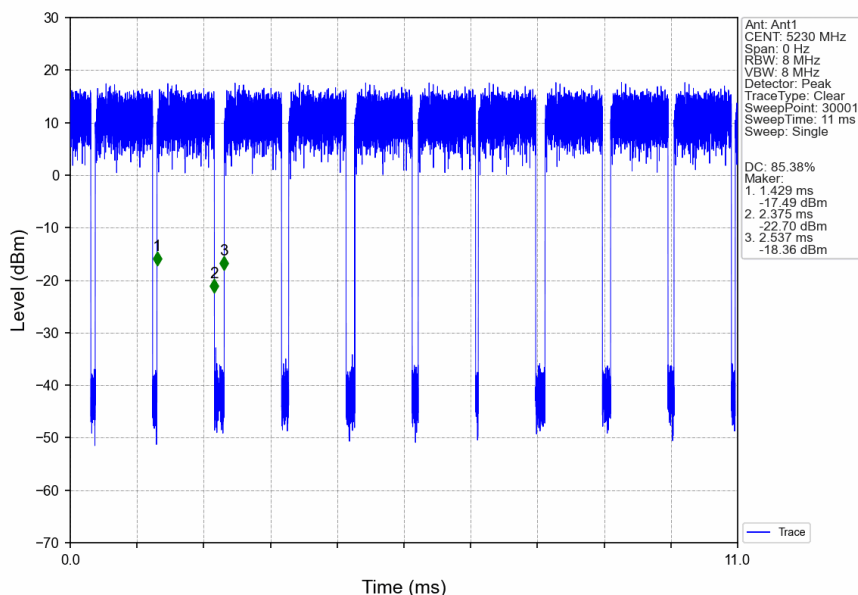
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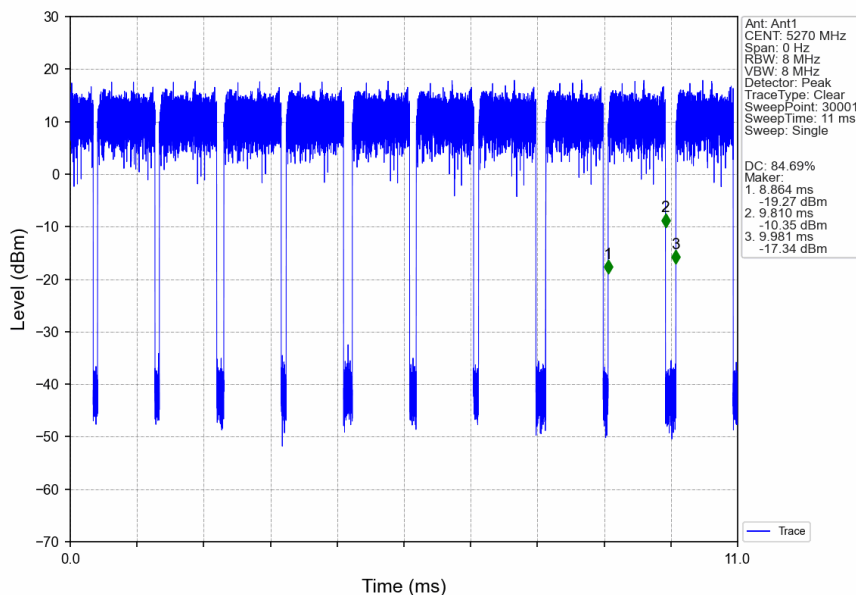
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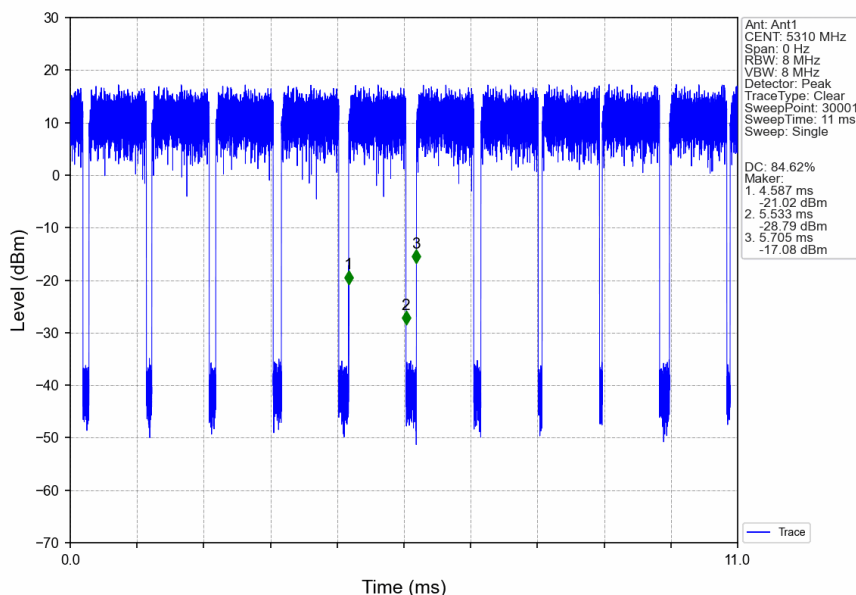
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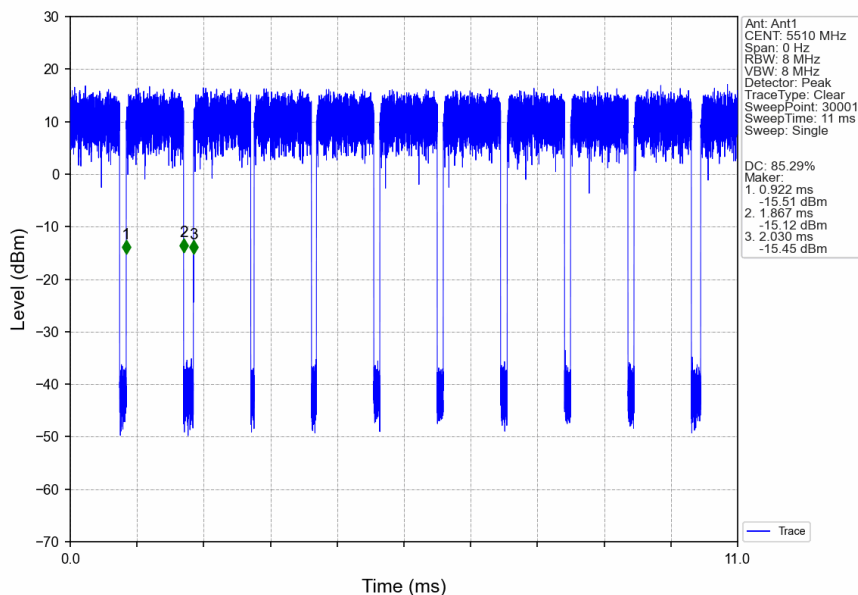
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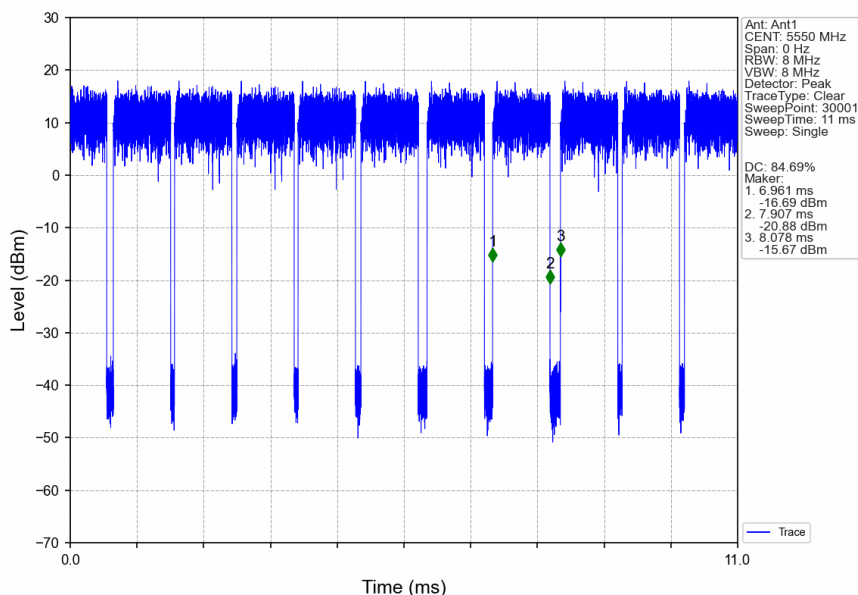
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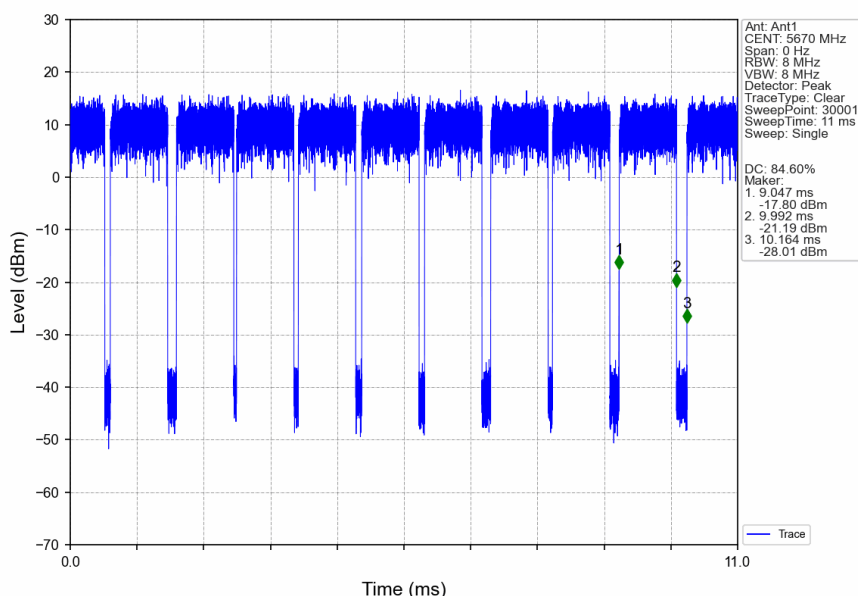
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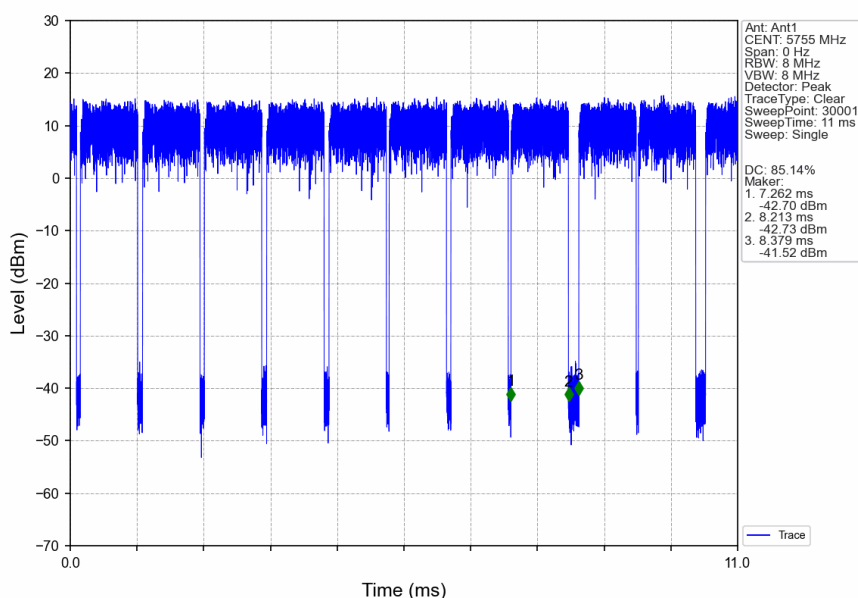
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802.11n(HT40)_HCH_5670MHz_Ant1_NTNV



802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



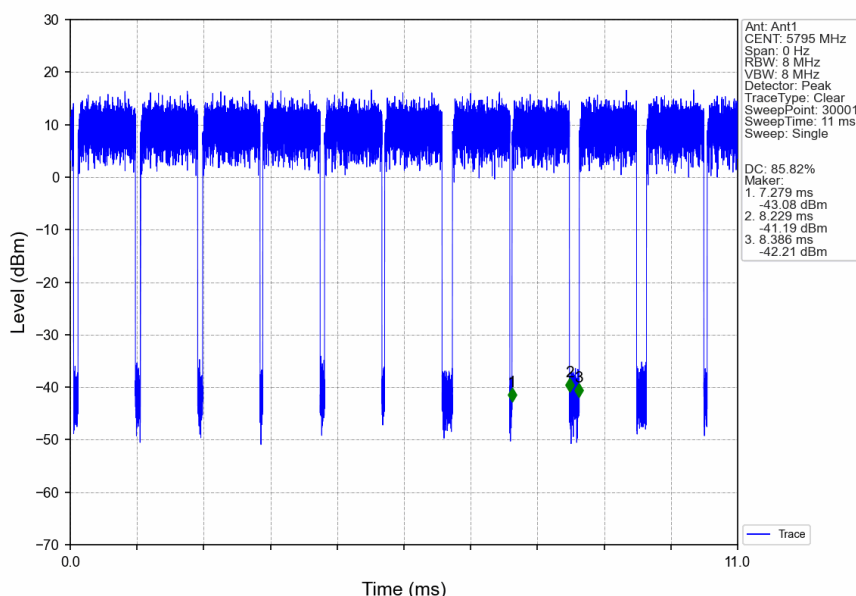
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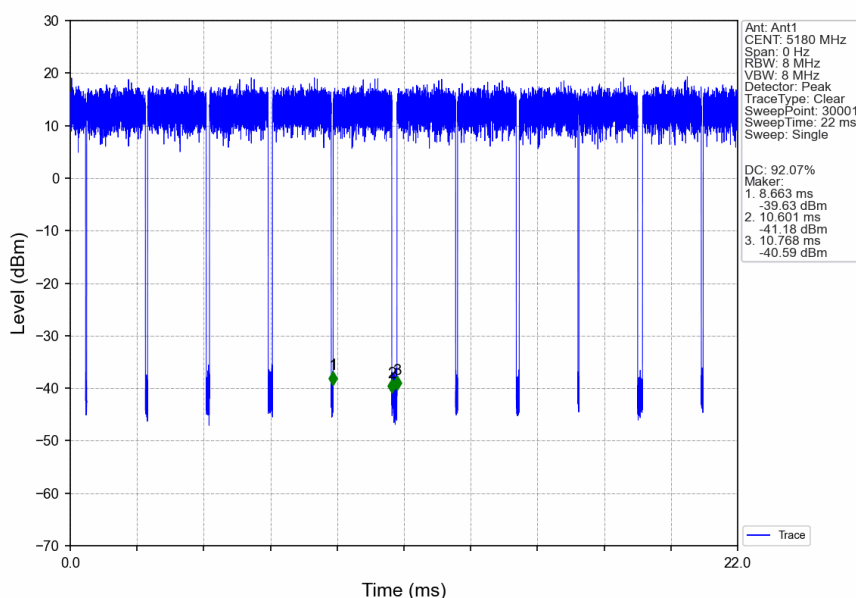
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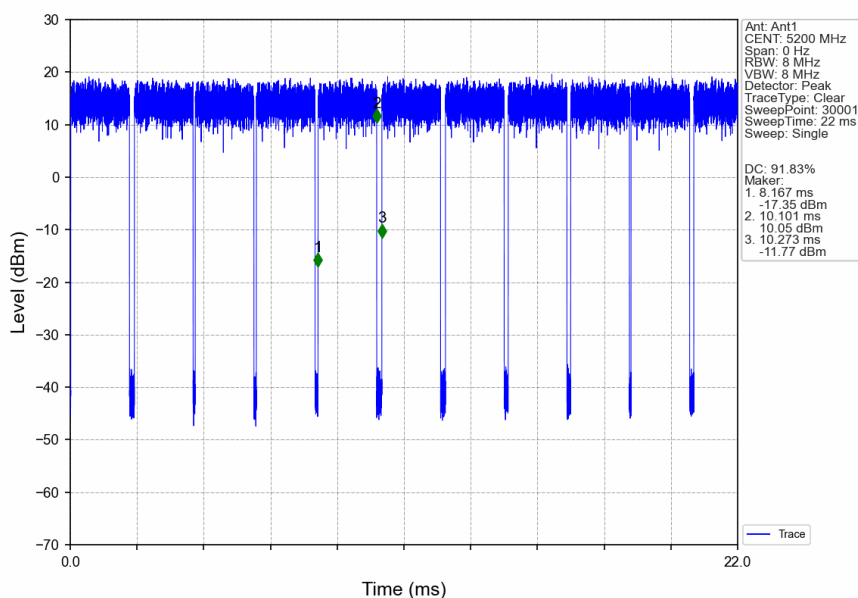
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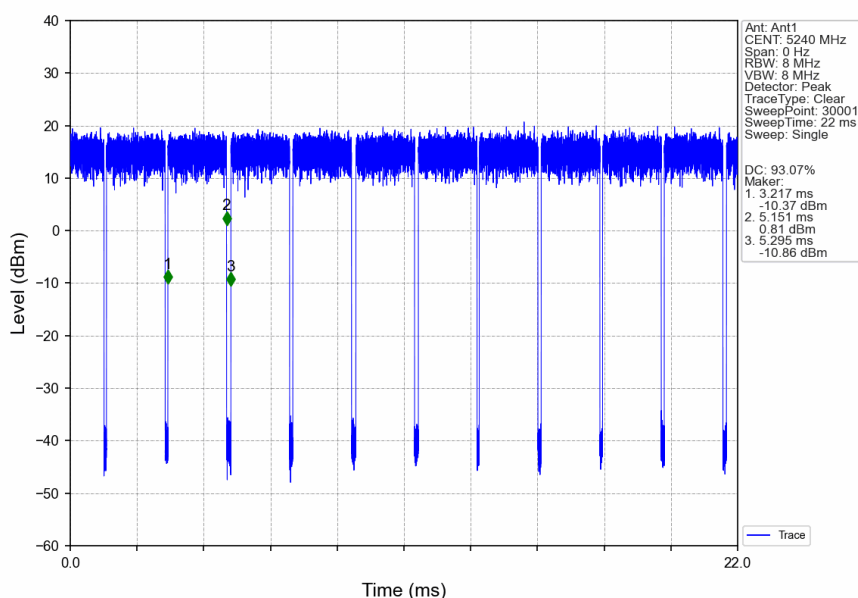
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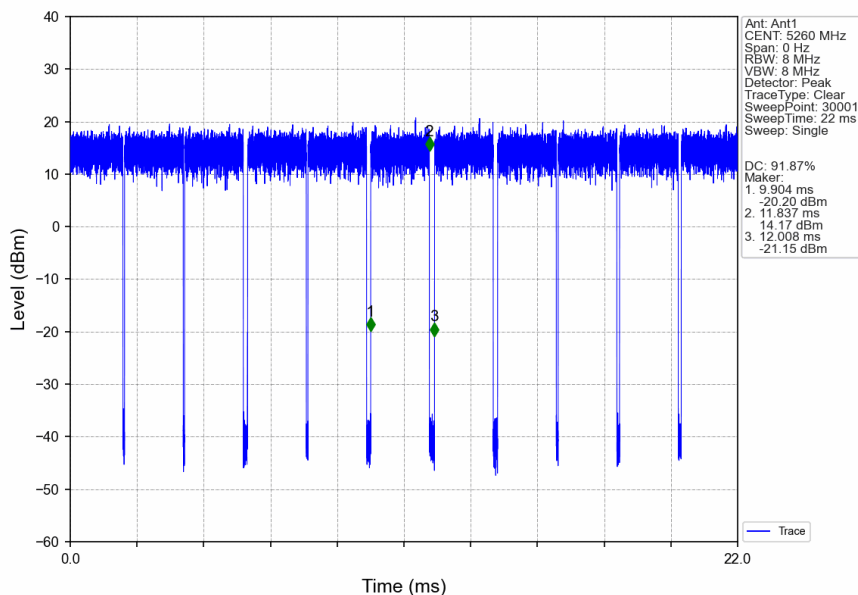
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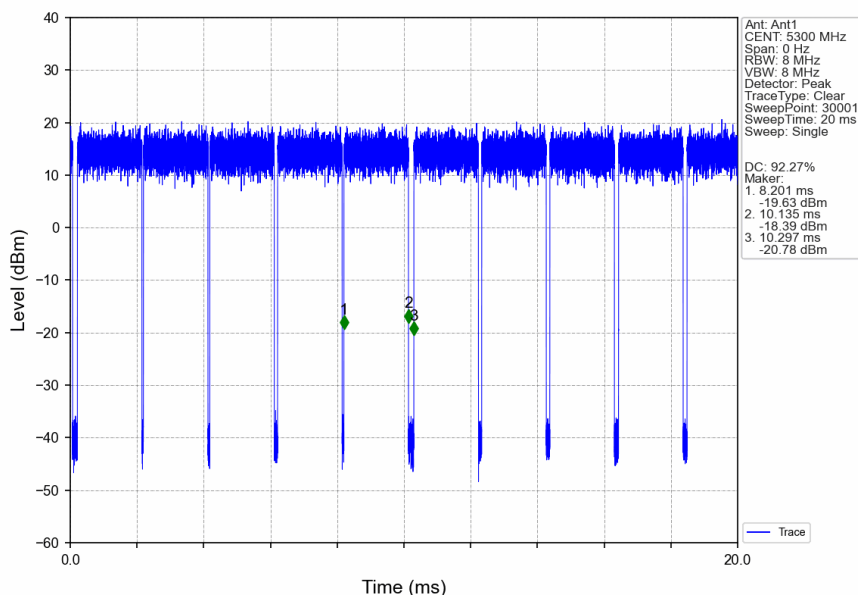
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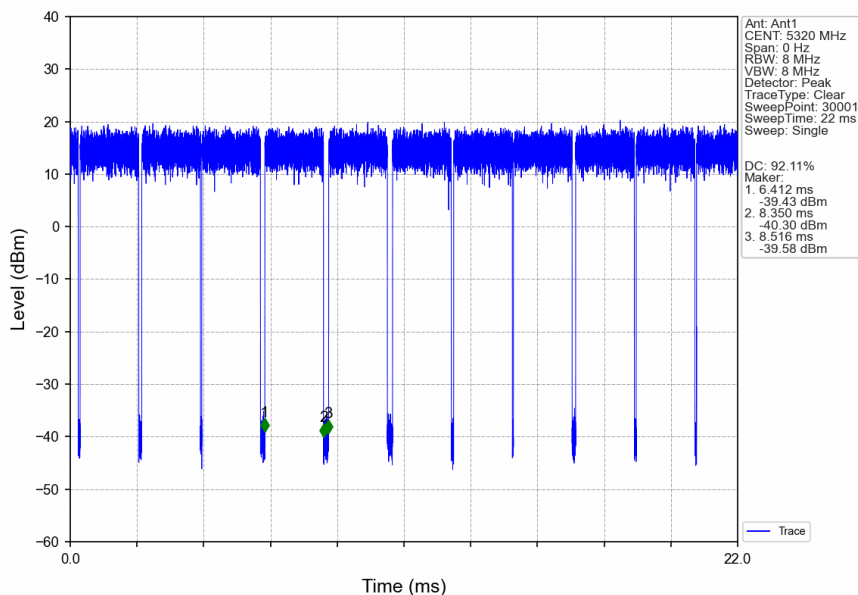
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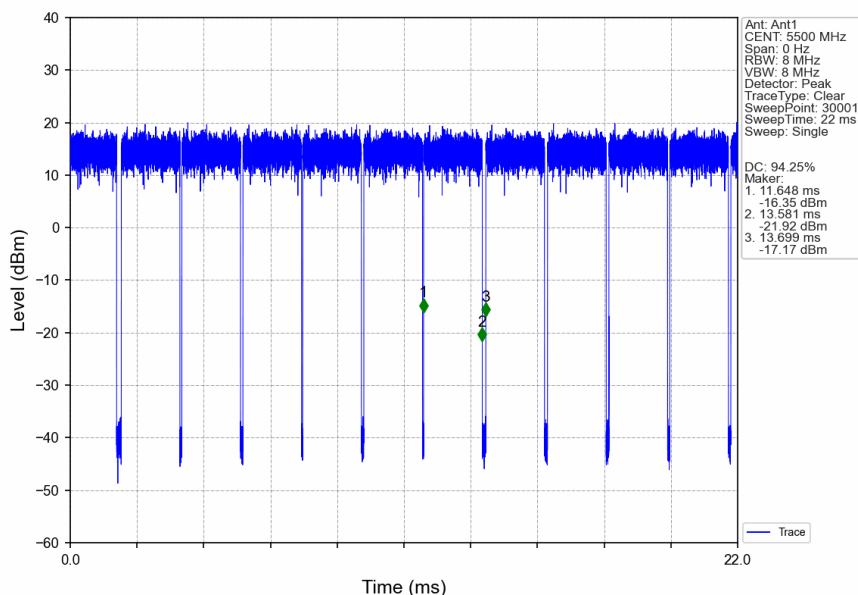
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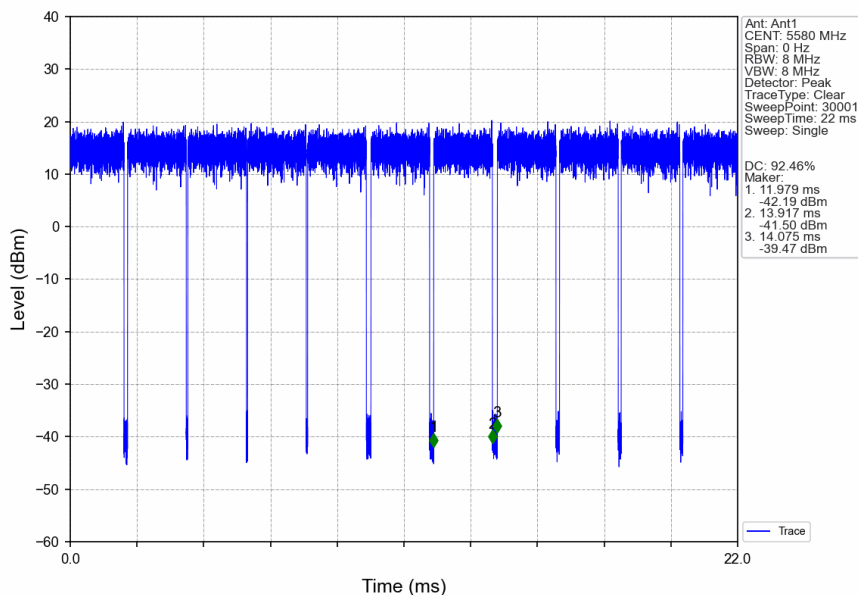
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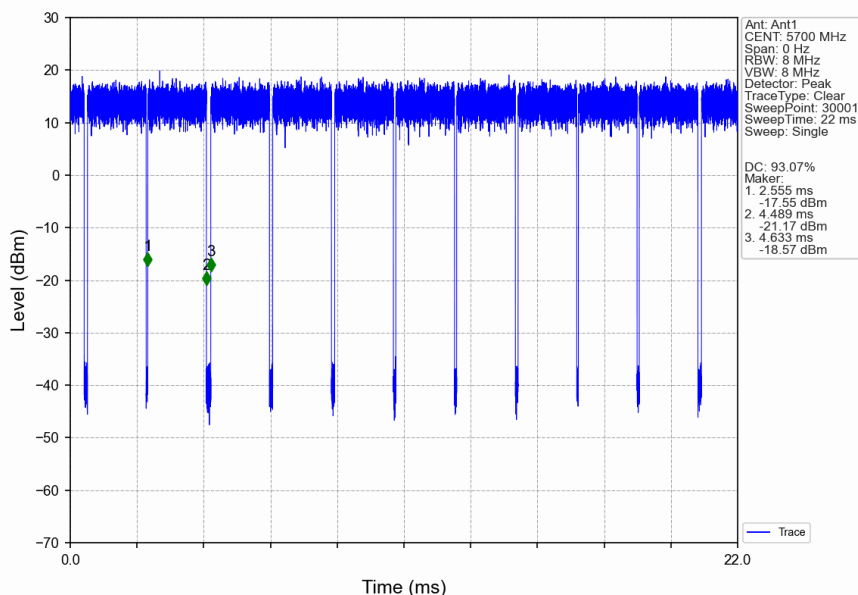
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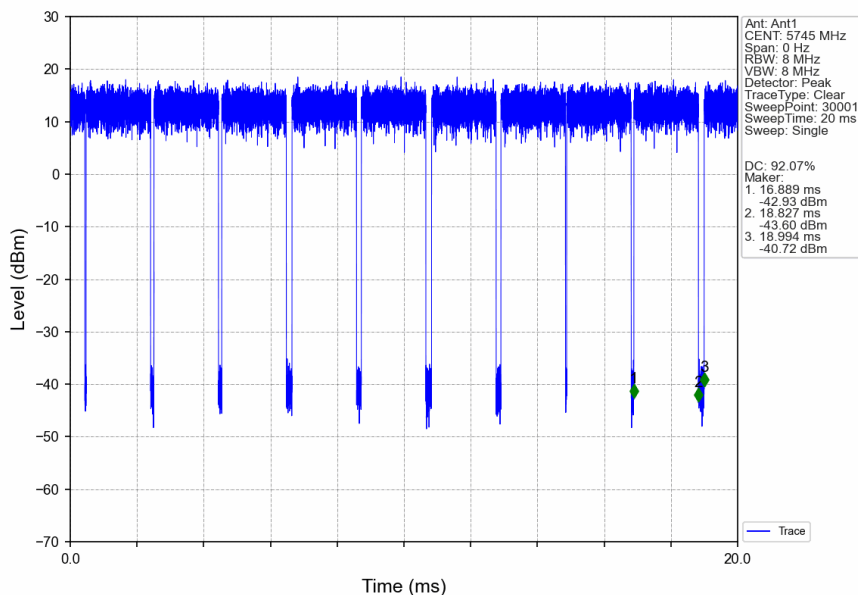
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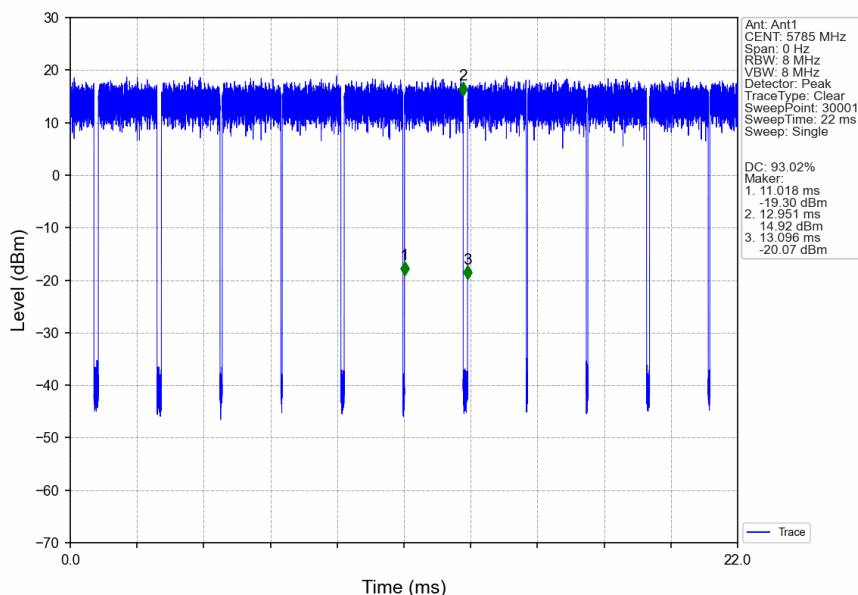
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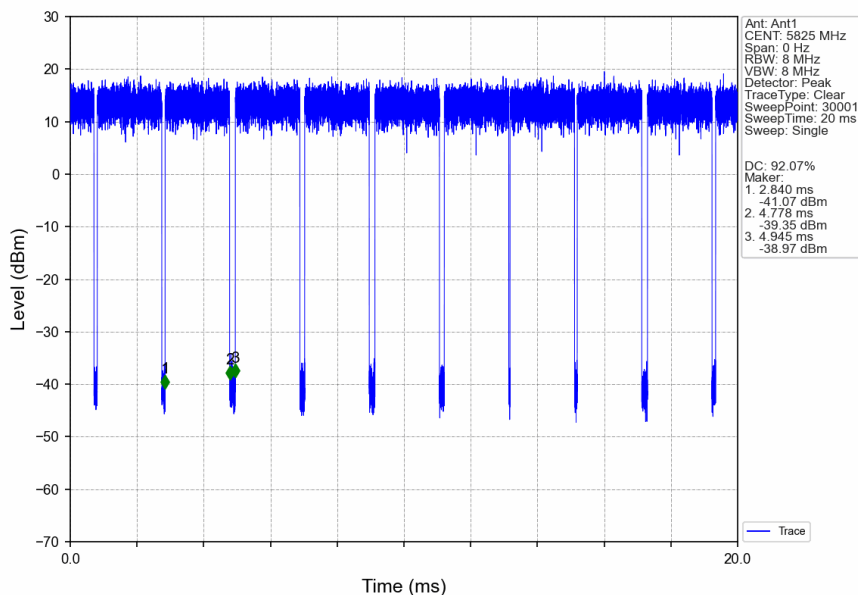
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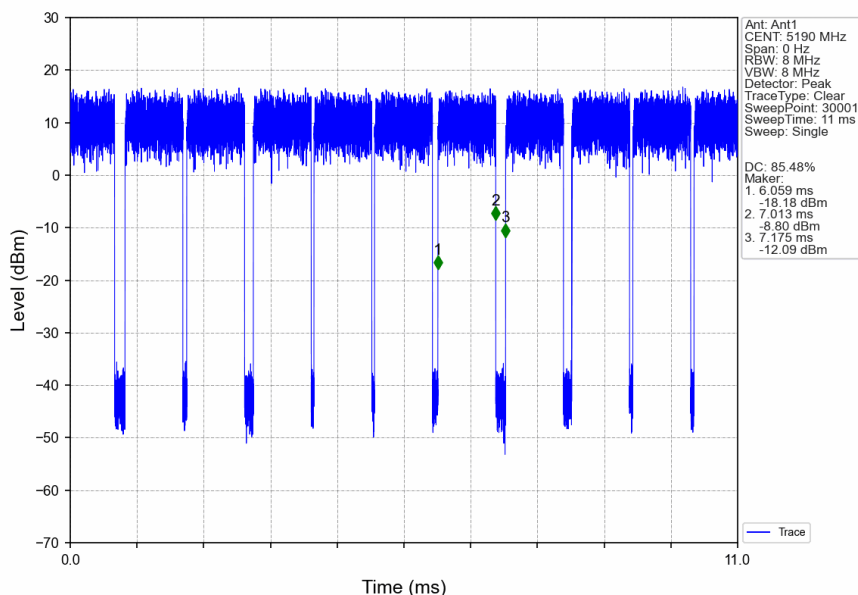
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802.11ac(VHT20)_HCH_5825MHz_Ant1_NTNV



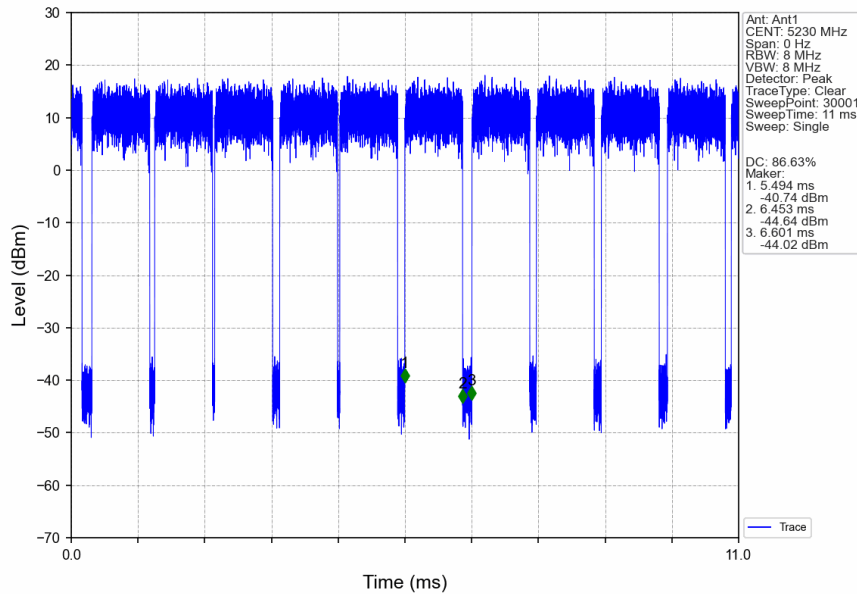
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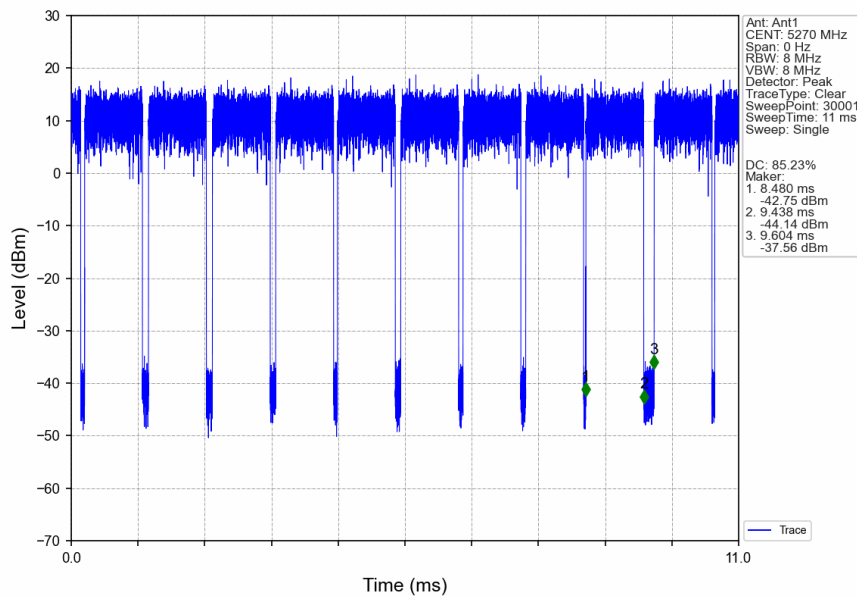
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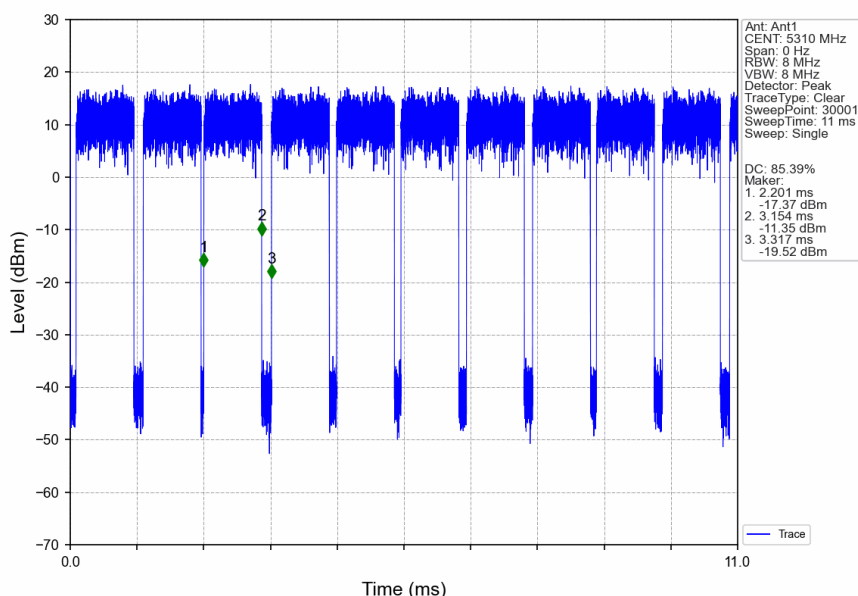
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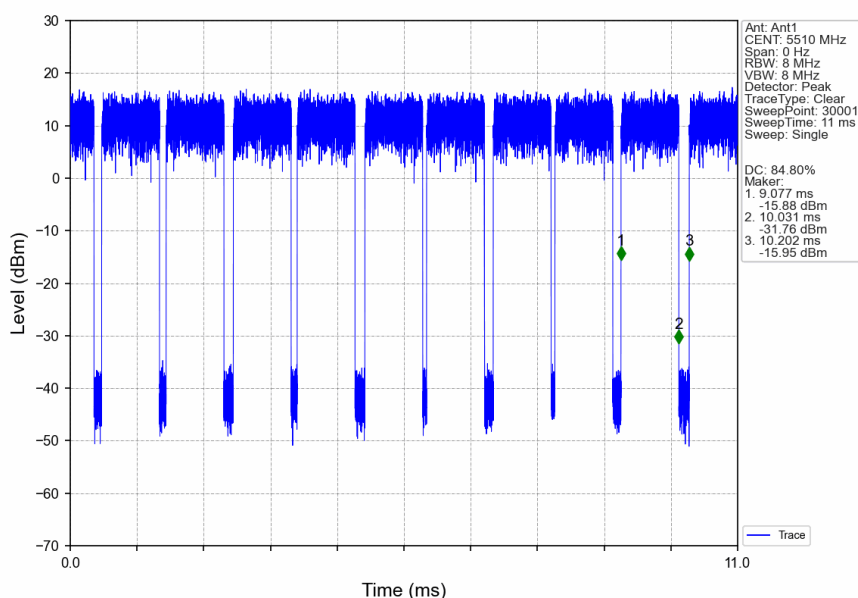
802.11ac(VHT40)_LCH_5270MHz_Ant1_NTNV



802.11ac(VHT40)_HCH_5310MHz_Ant1_NTNV



802.11ac(VHT40)_LCH_5510MHz_Ant1_NTNV



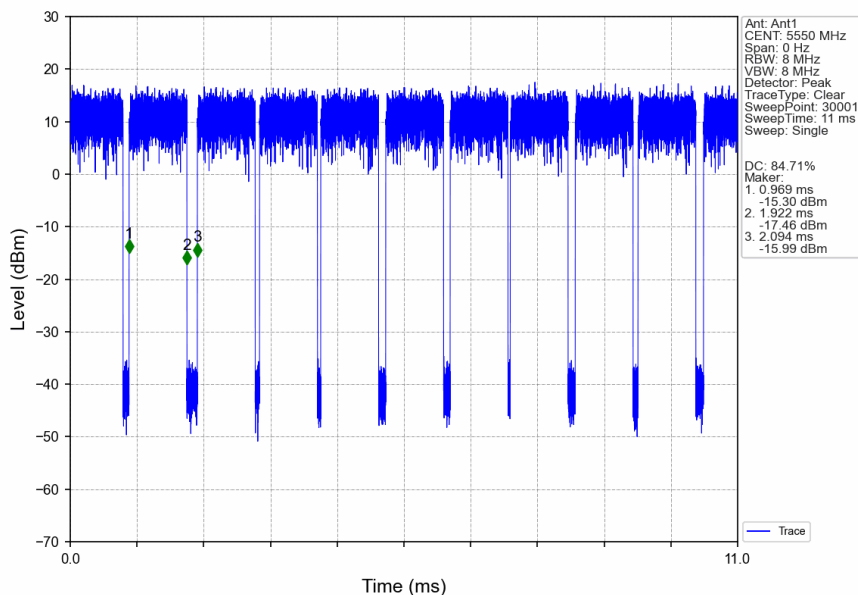
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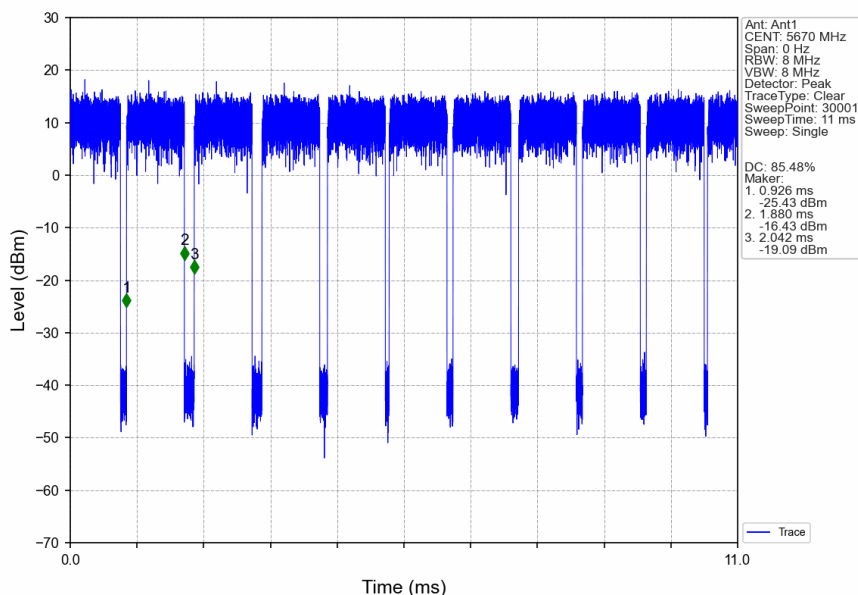
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802.11ac(VHT40)_MCH_5550MHz_Ant1_NTNV



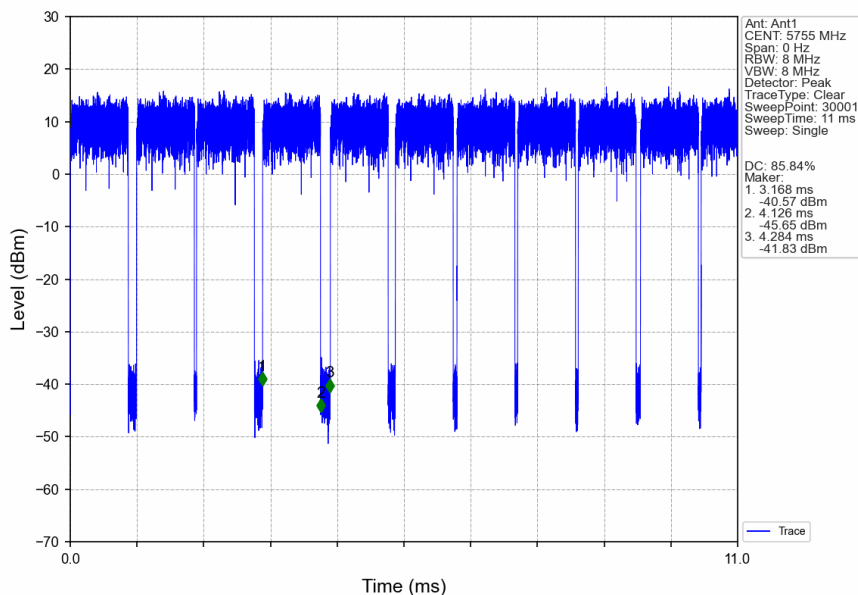
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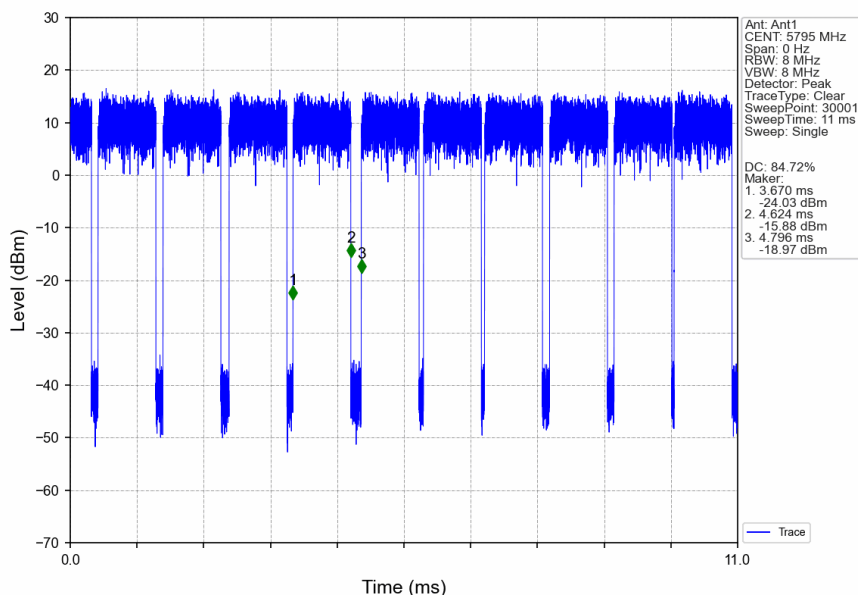
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802.11ac(VHT40)_LCH_5755MHz_Ant1_NTNV



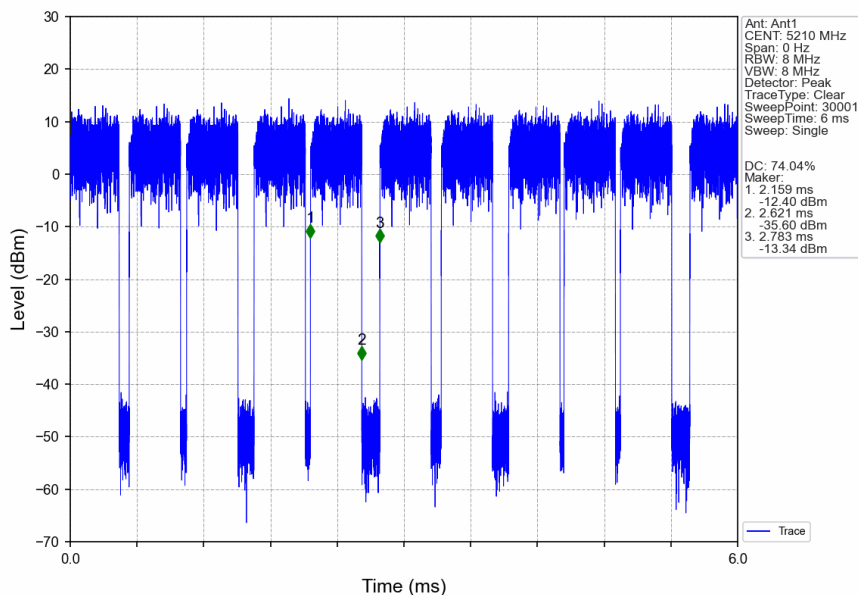
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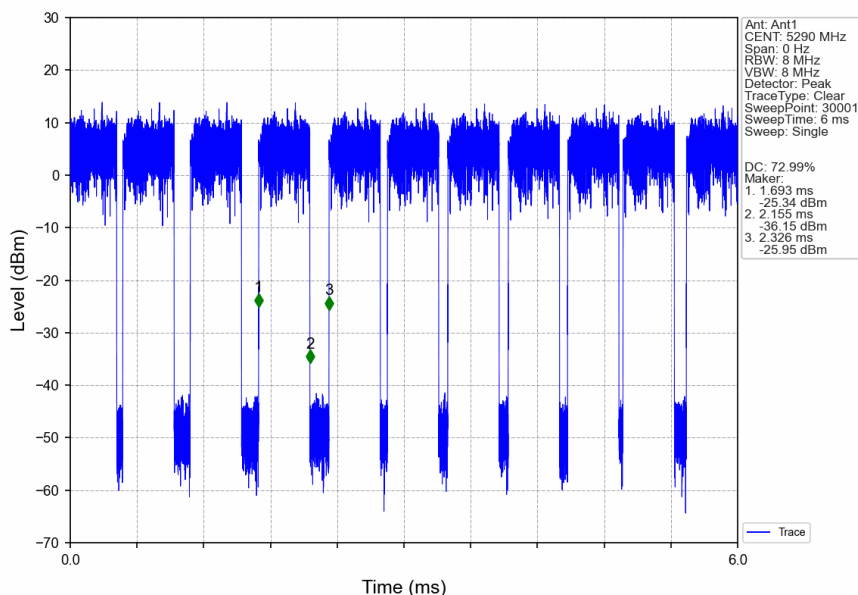
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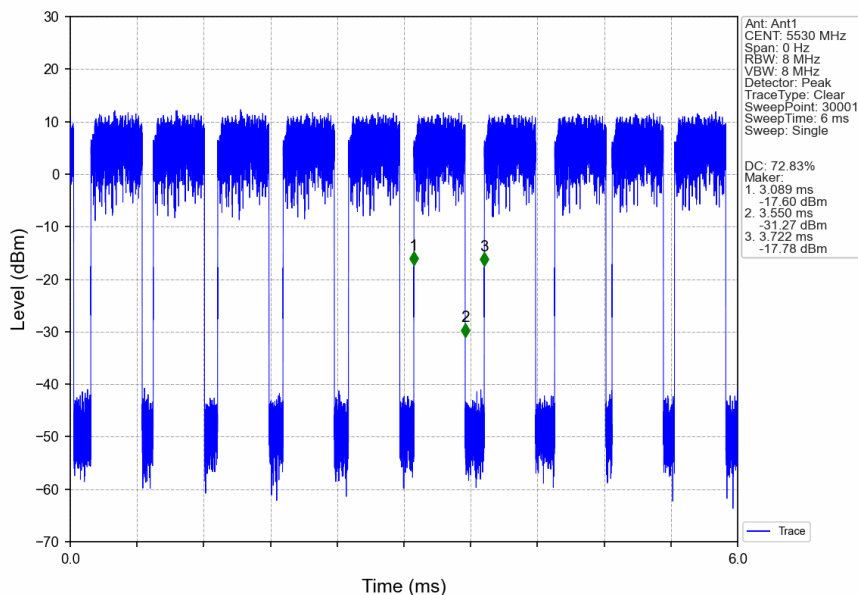
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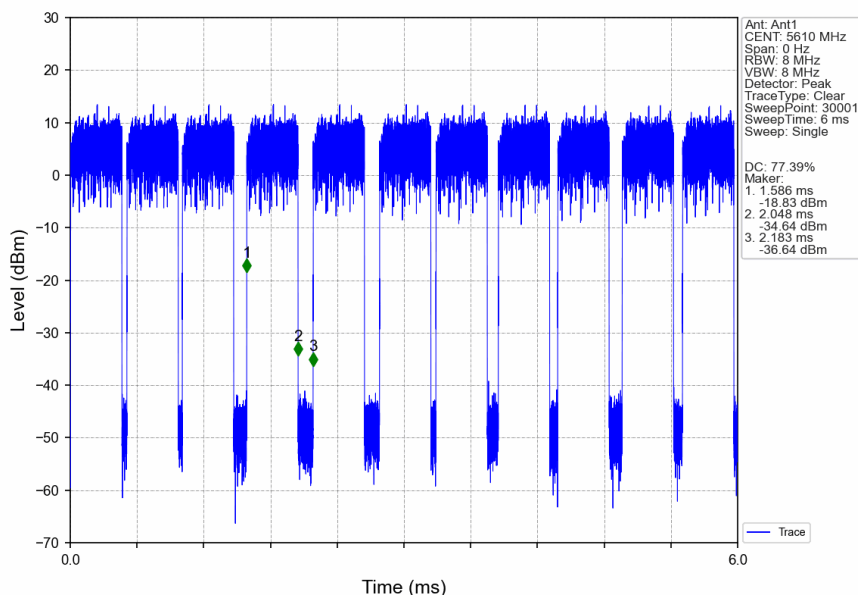
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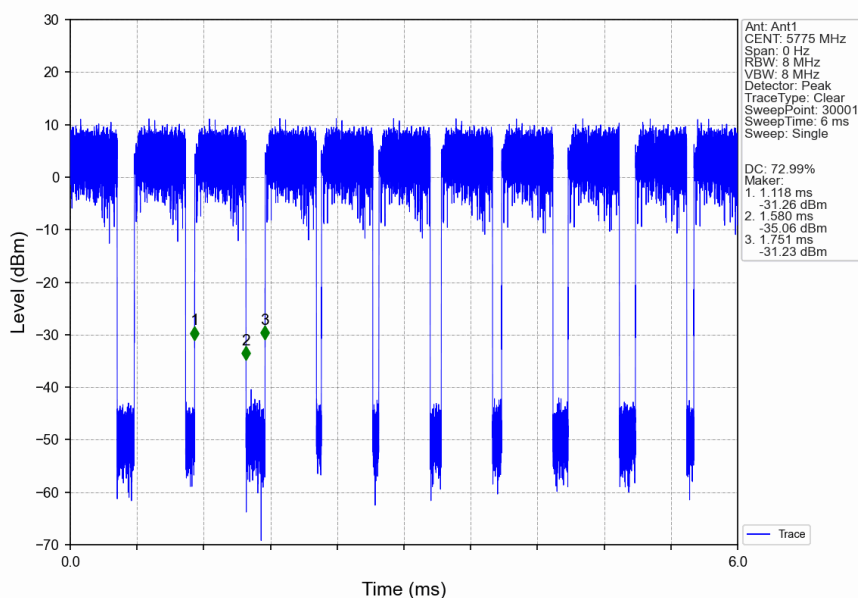
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802.11ac(VHT80)_HCH_5610MHz_Ant1_NTNV



802.11ac(VHT80)_MCH_5775MHz_Ant1_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	17.589	/	Pass
		5200	1	17.536	/	Pass
		5240	1	17.764	/	Pass
		5260	1	17.541	/	Pass
		5300	1	17.621	/	Pass
		5320	1	17.818	/	Pass
		5500	1	17.659	/	Pass
		5580	1	17.420	/	Pass
		5700	1	17.457	/	Pass
		5745	1	17.341	/	Pass
		5785	1	17.479	/	Pass
		5825	1	17.664	/	Pass
802.11n (HT20)	SISO	5180	1	18.586	/	Pass
		5200	1	18.787	/	Pass
		5240	1	18.642	/	Pass
		5260	1	18.623	/	Pass
		5300	1	18.585	/	Pass
		5320	1	18.882	/	Pass
		5500	1	18.433	/	Pass
		5580	1	18.226	/	Pass
		5700	1	18.161	/	Pass
		5745	1	18.147	/	Pass
		5785	1	18.261	/	Pass
		5825	1	18.368	/	Pass
802.11n (HT40)	SISO	5190	1	37.112	/	Pass
		5230	1	36.985	/	Pass
		5270	1	37.001	/	Pass
		5310	1	37.087	/	Pass
		5510	1	37.271	/	Pass
		5550	1	36.674	/	Pass
		5670	1	36.583	/	Pass



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		5755	1	36.928	/	Pass
		5795	1	36.639	/	Pass
802.11ac (VHT20)	SISO	5180	1	18.374	/	Pass
		5200	1	18.640	/	Pass
		5240	1	18.799	/	Pass
		5260	1	18.432	/	Pass
		5300	1	18.726	/	Pass
		5320	1	18.638	/	Pass
		5500	1	18.657	/	Pass
		5580	1	18.240	/	Pass
		5700	1	18.475	/	Pass
		5745	1	18.614	/	Pass
		5785	1	18.449	/	Pass
		5825	1	18.503	/	Pass
802.11ac (VHT40)	SISO	5190	1	36.715	/	Pass
		5230	1	36.688	/	Pass
		5270	1	36.701	/	Pass
		5310	1	36.573	/	Pass
		5510	1	36.743	/	Pass
		5550	1	36.800	/	Pass
		5670	1	36.733	/	Pass
		5755	1	36.583	/	Pass
802.11ac (VHT80)	SISO	5795	1	36.669	/	Pass
		5210	1	76.639	/	Pass
		5290	1	76.452	/	Pass
		5530	1	76.399	/	Pass
		5610	1	76.421	/	Pass
		5775	1	76.296	/	Pass

2.1.2 26dB BW

Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	21.759	/	Pass
		5200	1	23.666	/	Pass
		5240	1	20.165	/	Pass
		5260	1	22.364	/	Pass
		5300	1	33.634	/	Pass
		5320	1	34.494	/	Pass
		5500	1	30.053	/	Pass



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		5580	1	29.807	/	Pass
		5700	1	24.011	/	Pass
802.11n (HT20)	SISO	5180	1	22.427	/	Pass
		5200	1	22.781	/	Pass
		5240	1	24.096	/	Pass
		5260	1	24.012	/	Pass
		5300	1	26.540	/	Pass
		5320	1	23.857	/	Pass
		5500	1	32.132	/	Pass
		5580	1	26.597	/	Pass
		5700	1	25.929	/	Pass
802.11n (HT40)	SISO	5190	1	42.623	/	Pass
		5230	1	41.240	/	Pass
		5270	1	46.507	/	Pass
		5310	1	46.943	/	Pass
		5510	1	46.177	/	Pass
		5550	1	42.603	/	Pass
		5670	1	42.603	/	Pass
802.11ac (VHT20)	SISO	5180	1	22.075	/	Pass
		5200	1	28.483	/	Pass
		5240	1	20.974	/	Pass
		5260	1	21.933	/	Pass
		5300	1	29.468	/	Pass
		5320	1	22.843	/	Pass
		5500	1	24.916	/	Pass
		5580	1	22.067	/	Pass
802.11ac (VHT40)	SISO	5700	1	22.405	/	Pass
		5190	1	42.643	/	Pass
		5230	1	41.239	/	Pass
		5270	1	42.982	/	Pass
		5310	1	43.160	/	Pass
		5510	1	42.253	/	Pass
		5550	1	42.888	/	Pass
802.11ac (VHT80)	SISO	5670	1	42.614	/	Pass
		5210	1	81.235	/	Pass
		5290	1	86.230	/	Pass
		5530	1	81.803	/	Pass
		5610	1	82.991	/	Pass



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2.1.3 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5745	1	16.361	≥ 0.5	Pass
		5785	1	16.321	≥ 0.5	Pass
		5825	1	16.296	≥ 0.5	Pass
802.11n (HT20)	SISO	5745	1	17.054	≥ 0.5	Pass
		5785	1	16.714	≥ 0.5	Pass
		5825	1	16.947	≥ 0.5	Pass
802.11n (HT40)	SISO	5755	1	35.160	≥ 0.5	Pass
		5795	1	35.083	≥ 0.5	Pass
802.11ac (VHT20)	SISO	5745	1	17.068	≥ 0.5	Pass
		5785	1	17.566	≥ 0.5	Pass
		5825	1	17.562	≥ 0.5	Pass
802.11ac (VHT40)	SISO	5755	1	35.575	≥ 0.5	Pass
		5795	1	35.359	≥ 0.5	Pass
802.11ac (VHT80)	SISO	5775	1	74.097	≥ 0.5	Pass



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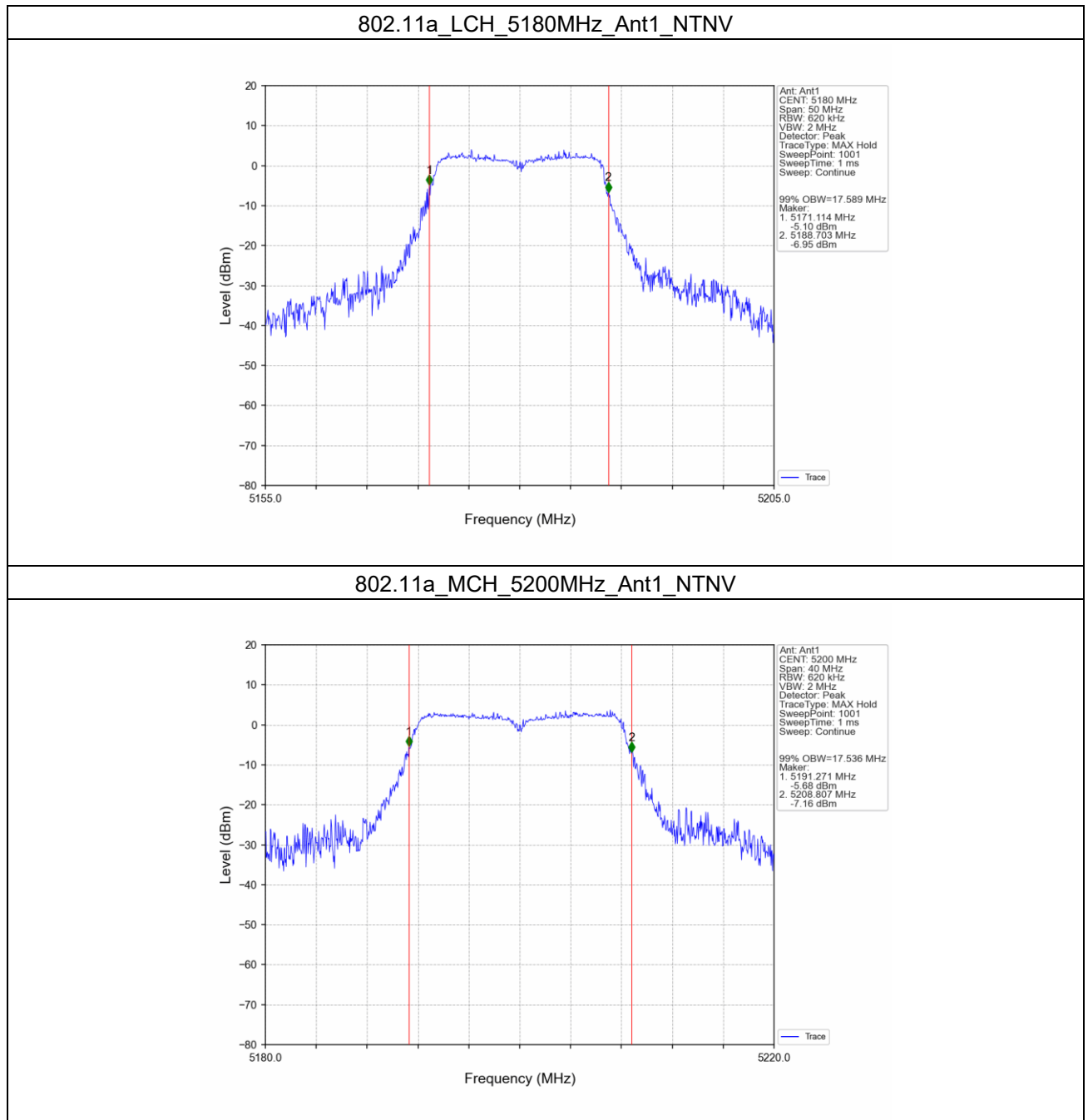
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2.2 Test Graph

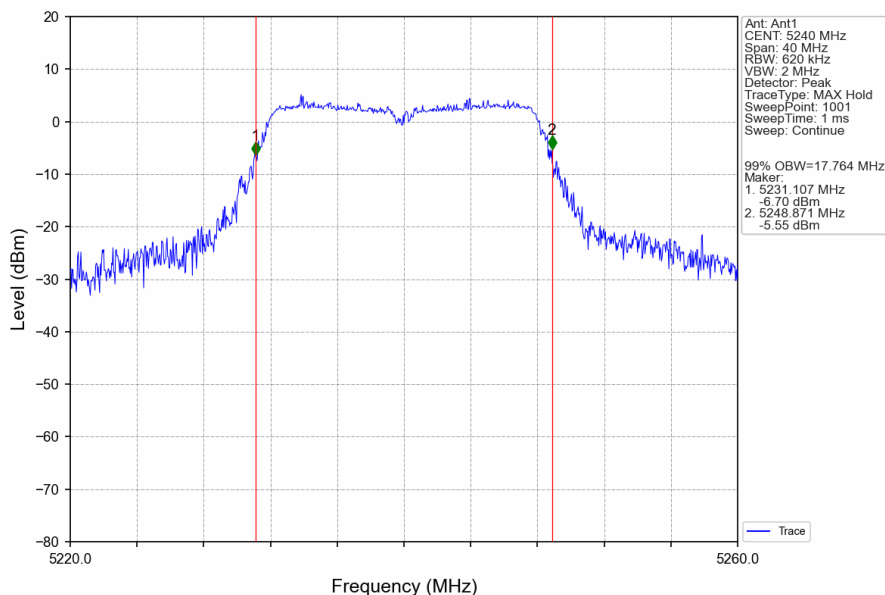
2.2.1 OBW



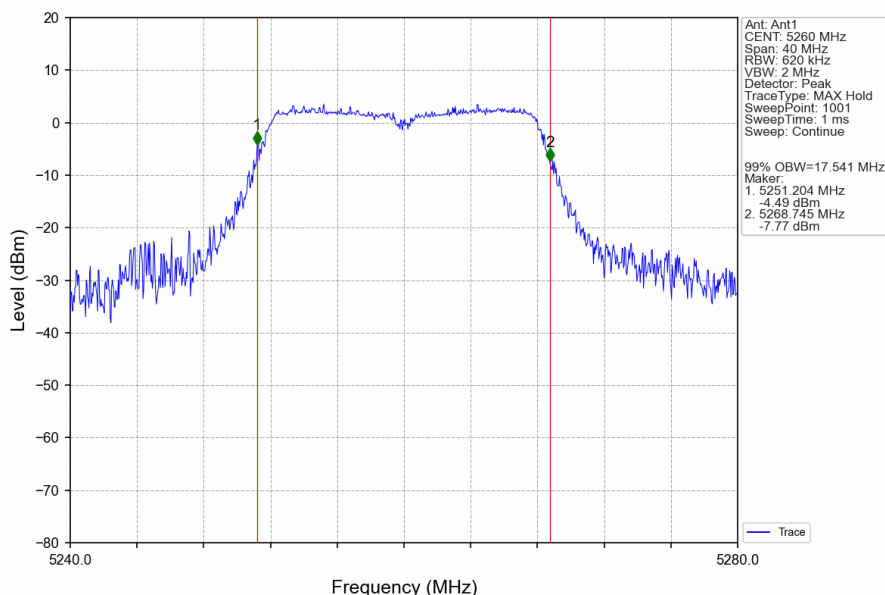
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802.11a_HCH_5240MHz_Ant1_NTNV



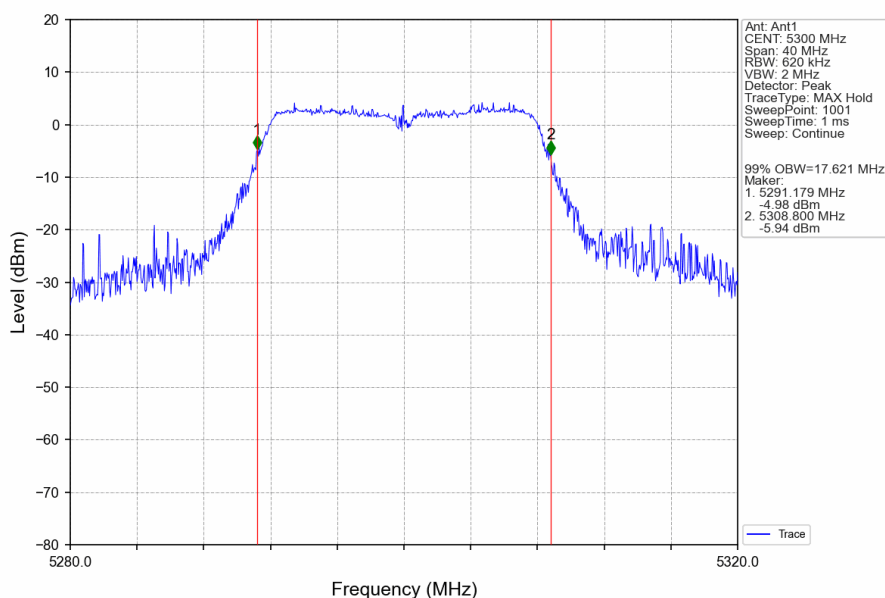
802.11a_LCH_5260MHz_Ant1_NTNV



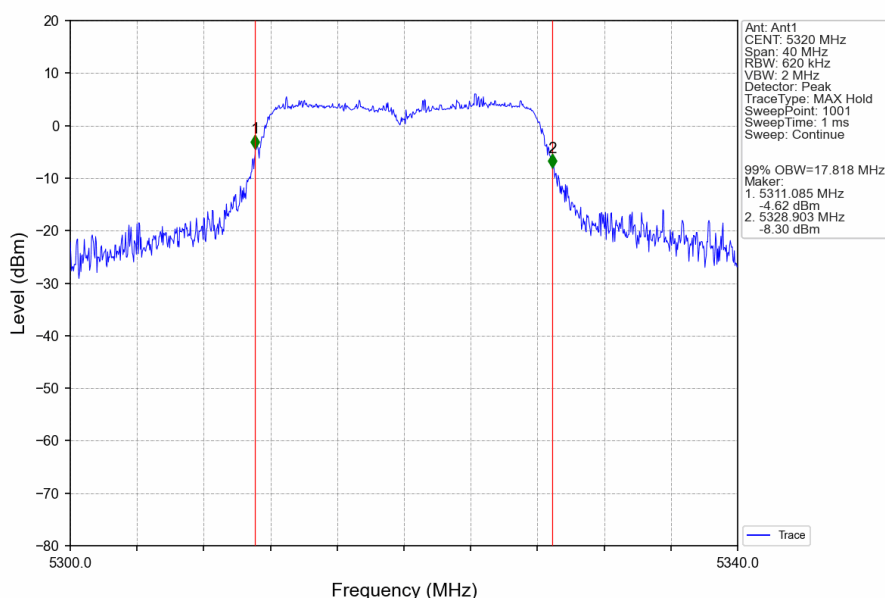
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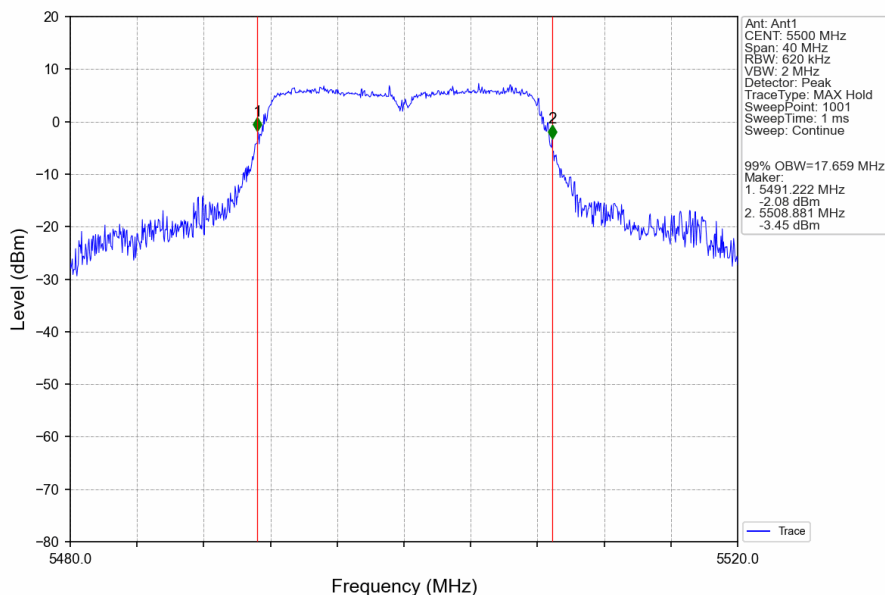
802.11a_MCH_5300MHz_Ant1_NTNV



802.11a_HCH_5320MHz_Ant1_NTNV



802.11a_LCH_5500MHz_Ant1_NTNV



802.11a_MCH_5580MHz_Ant1_NTNV

