

7.5 Duty Cycle

Test Requirement ANSI C63.10-2020+Cor.1-2023 Section 12.2

Test Method: ANSI C63.10-2020+Cor.1-2023 Section 12.2

7.5.1 E.U.T. Operation

Operating Environment:

Temperature: 23 °C

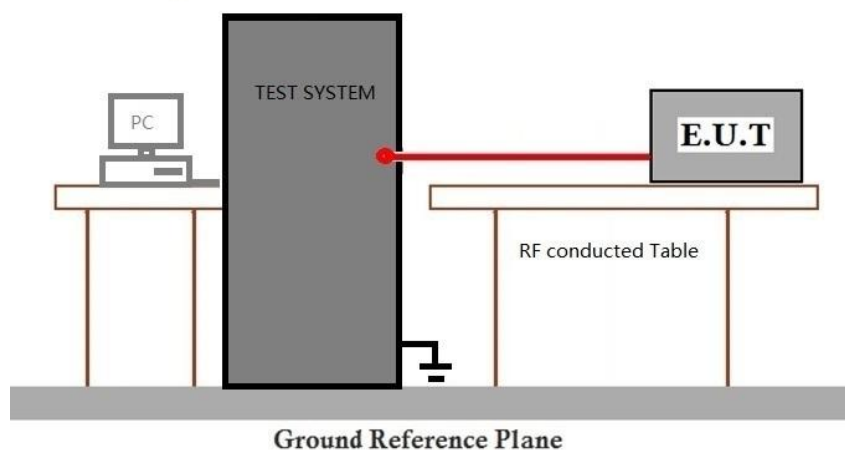
Humidity: 44 % RH

Atmospheric Pressure: 1001 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 and being charged. All data rates for each modulation type have been tested, 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 and being charged. All data rates for each modulation type have been tested, 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 and being charged. All data rates for each modulation type have been tested, 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 and being charged. All data rates for each modulation type have been tested, Only the data of worst case is recorded in the report.

7.5.3 Test Setup Diagram



7.5.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.6 99% Bandwidth

Test Requirement ANSI C63.10-2020+Cor.1-2023 Section 12.5.3

Test Method: ANSI C63.10-2020+Cor.1-2023 Section 6.9.3

7.6.1 E.U.T. Operation

Operating Environment:

Temperature: 23 °C

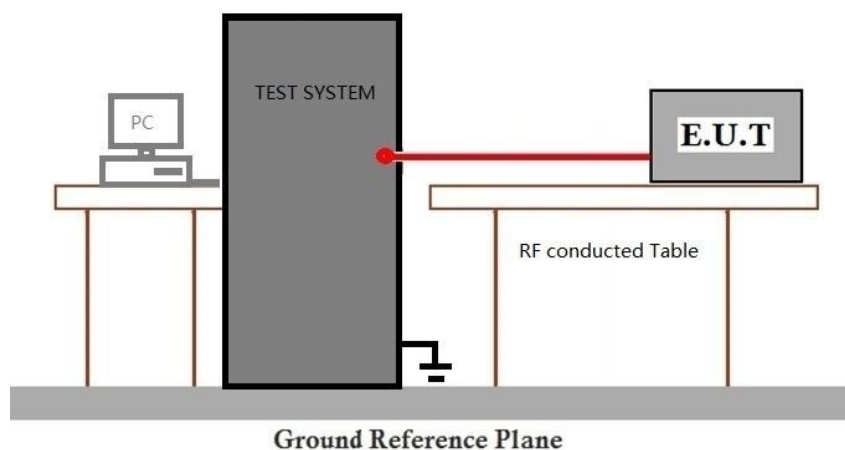
Humidity: 44 % RH

Atmospheric Pressure: 1001 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 and being charged. All data rates for each modulation type have been tested, 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 and being charged. All data rates for each modulation type have been tested, 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 and being charged. All data rates for each modulation type have been tested, 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 and being charged. All data rates for each modulation type have been tested, Only the data of worst case is recorded in the report.

7.6.3 Test Setup Diagram



7.6.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.7 26dB Emission Bandwidth

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

Test Method: ANSI C63.10-2020+Cor.1-2023 Section 12.5.2

7.7.1 E.U.T. Operation

Operating Environment:

Temperature: 23 °C

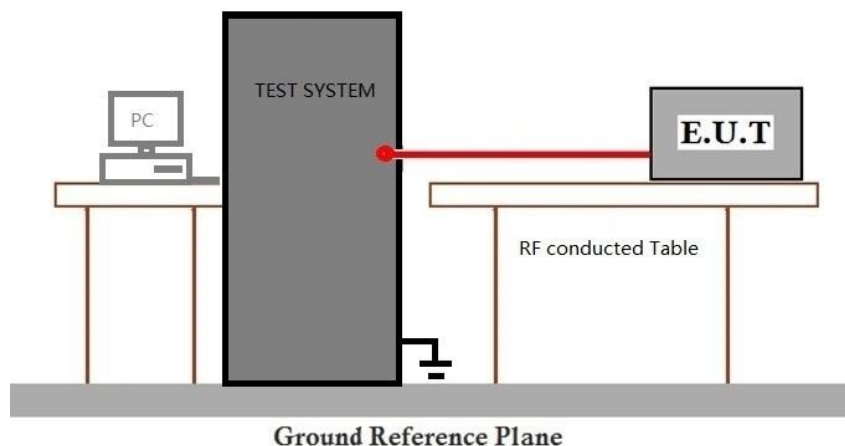
Humidity: 44 % RH

Atmospheric Pressure: 1001 mbar

7.7.2 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 and being charged. All data rates for each modulation type have been tested, 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 and being charged. All data rates for each modulation type have been tested, 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 and being charged. All data rates for each modulation type have been tested, 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

7.8 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+Cor.1-2023 Section 12.5.1

Limit:

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

7.8.1 E.U.T. Operation

Operating Environment:

Temperature: 23 °C

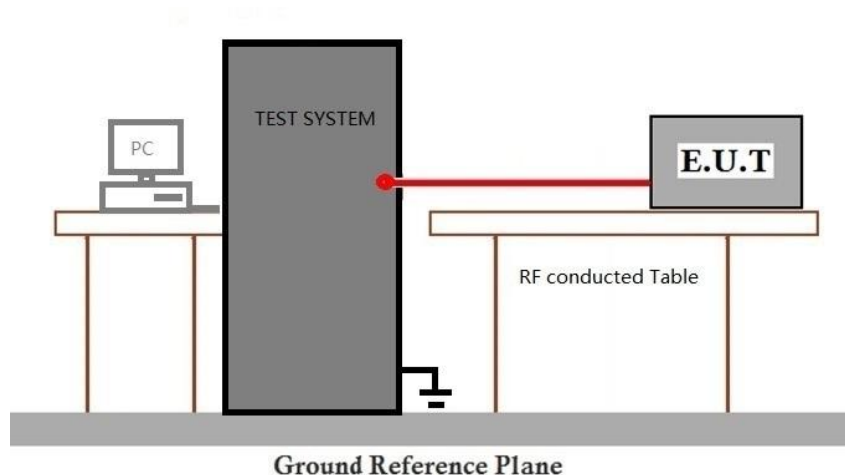
Humidity: 44 % RH

Atmospheric Pressure: 1001 mbar

7.8.2 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 and being charged. All data rates for each modulation type have been tested, Only the data of worst case is recorded in the report.

7.8.3 Test Setup Diagram



7.8.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.9 Maximum Conducted Output Power

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

Test Method: ANSI C63.10-2020+Cor.1-2023 Section 12.4

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.

7.9.1 E.U.T. Operation

Operating Environment:

Temperature: 23 °C

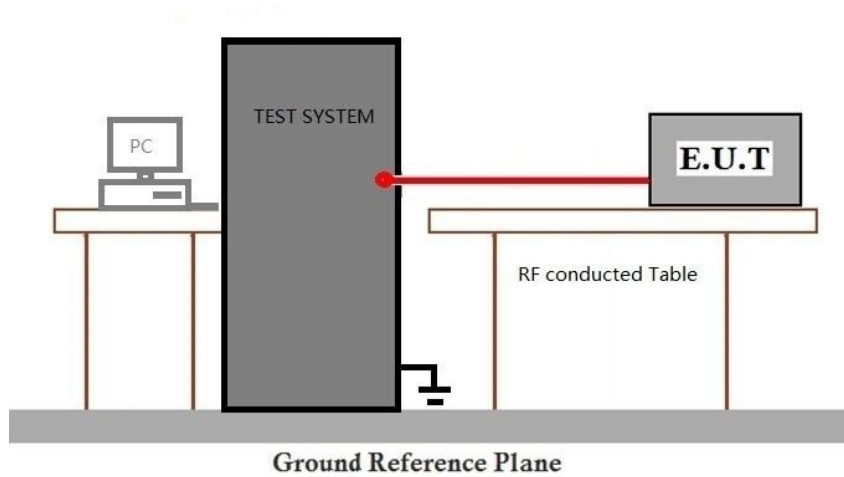
Humidity: 44 % RH

Atmospheric Pressure: 1001 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 and being charged. All data rates for each modulation type have been tested, 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 and being charged. All data rates for each modulation type have been tested, 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 and being charged. All data rates for each modulation type have been tested, 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 and being charged. All data rates for each modulation type have been tested, Only the data of worst case is recorded in the report.

7.9.3 Test Setup Diagram



7.9.4 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

7.10 Power Spectral Density

Test Requirement 47 CFR Part 15, Subpart E 15.407 (a)
Test Method: ANSI C63.10-2020+Cor.1-2023 Section 12.6

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.

7.10.1 E.U.T. Operation

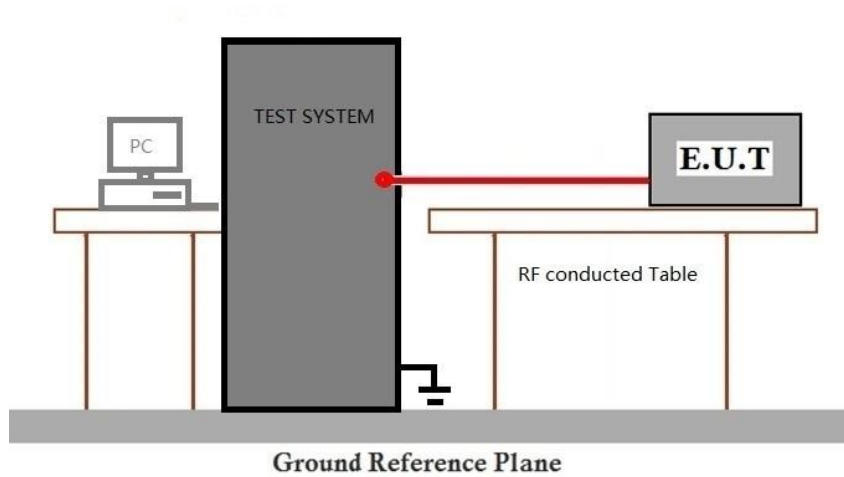
Operating Environment:

Temperature: 23 °C Humidity: 44 % RH Atmospheric Pressure: 1001 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 and being charged. All data rates for each modulation type have been tested, 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 and being charged. All data rates for each modulation type have been tested, 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 and being charged. All data rates for each modulation type have been tested, 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 and being charged. All data rates for each modulation type have been tested, Only the data of worst case is recorded in the report.

7.10.3 Test Setup Diagram



7.10.4 Measurement Procedure and Data

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

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

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

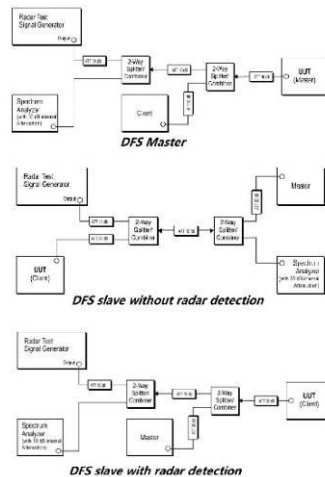
Operating Environment:

Temperature: 23 °C Humidity: 44 % RH Atmospheric Pressure: 1001 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 Frequency Stability

Test Requirement KDB 905462 D02 Section 5.1
Test Method: KDB 905462 D02 Section 7.8.3

7.12.1 E.U.T. Operation

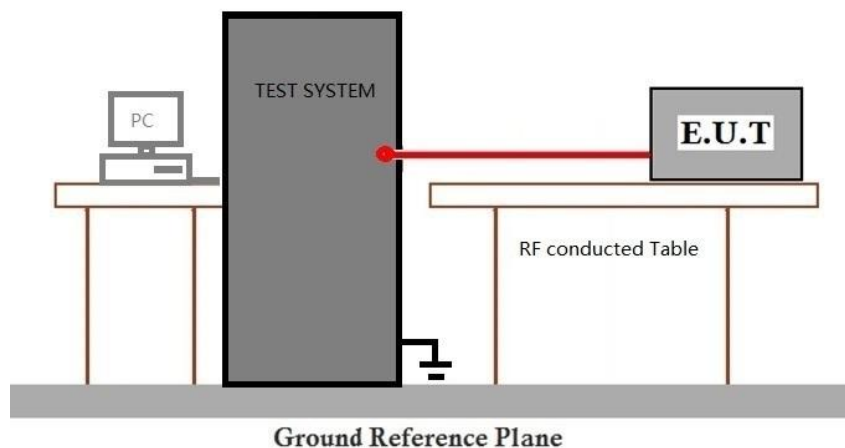
Operating Environment:

Temperature: 23 °C Humidity: 44 % RH Atmospheric Pressure: 1001 mbar

7.12.2 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 and being charged. All data rates for each modulation type have been tested, 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 and being charged. All data rates for each modulation type have been tested, 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 and being charged. All data rates for each modulation type have been tested, 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 and being charged. All data rates for each modulation type have been tested, Only the data of worst case is recorded in the report.

7.12.3 Test Setup Diagram



7.12.4 Measurement Procedure and Data

Please Refer to Appendix for Details



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8 Test Setup Photo

Refer to Appendix - Test Setup Photo for SUCR2604000317WM

9 EUT Constructional Details (EUT Photos)

Refer to External and Internal Photos for SUCR2604000317WM

10 Appendix

1. Duty Cycle

1.1 Test Result

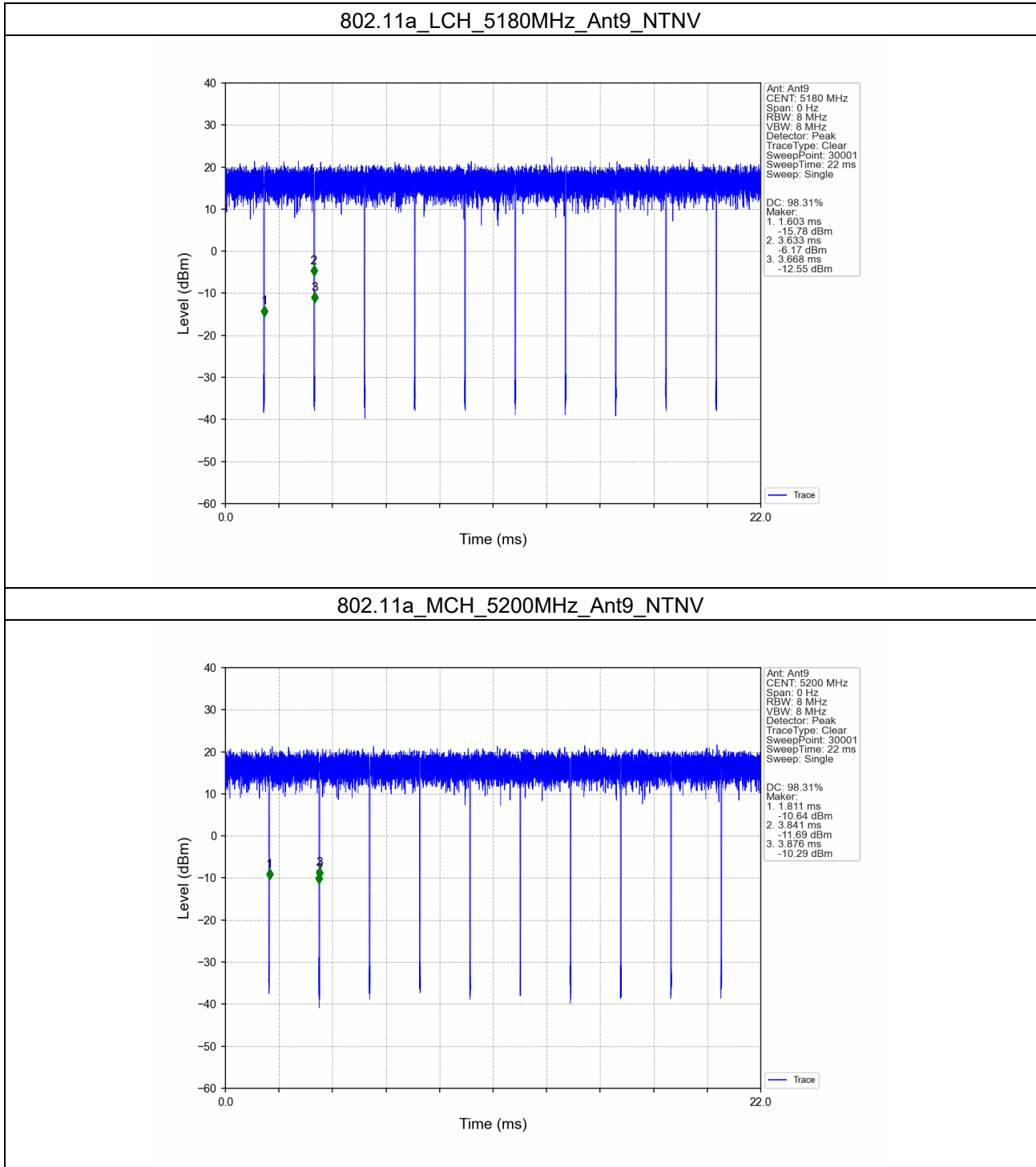
1.1.1 Ant9

Ant9							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	2.030	2.065	98.31	0.07	0.03
		5200	2.030	2.065	98.31	0.07	0.04
		5240	2.030	2.065	98.31	0.07	0.04
		5260	2.030	2.065	98.31	0.07	0.04
		5300	2.029	2.065	98.26	0.08	0.04
		5320	2.030	2.065	98.31	0.07	0.04
		5500	2.030	2.065	98.31	0.07	0.04
		5580	2.029	2.065	98.26	0.08	0.03
		5700	2.030	2.065	98.31	0.07	0.00
		5745	2.030	2.065	98.31	0.07	0.04
		5785	2.030	2.065	98.31	0.07	0.04
802.11n (HT20)	SISO	5180	1.890	1.925	98.18	0.08	0.03
		5200	1.890	1.925	98.18	0.08	0.03
		5240	1.890	1.926	98.13	0.08	0.03
		5260	1.890	1.925	98.18	0.08	0.03
		5300	1.890	1.925	98.18	0.08	0.03
		5320	1.890	1.926	98.13	0.08	0.03
		5500	1.890	1.926	98.13	0.08	0.03
		5580	1.890	1.925	98.18	0.08	0.03
		5700	1.890	1.926	98.13	0.08	0.03
		5745	1.890	1.925	98.18	0.08	0.03
		5785	1.890	1.925	98.18	0.08	0.03
802.11n (HT40)	SISO	5190	0.929	0.964	96.37	0.16	0.03
		5230	0.929	0.964	96.37	0.16	0.00
		5270	0.929	0.964	96.37	0.16	0.00
		5310	0.929	0.964	96.37	0.16	0.03
		5510	0.929	0.964	96.37	0.16	0.00
		5550	0.929	0.964	96.37	0.16	0.03

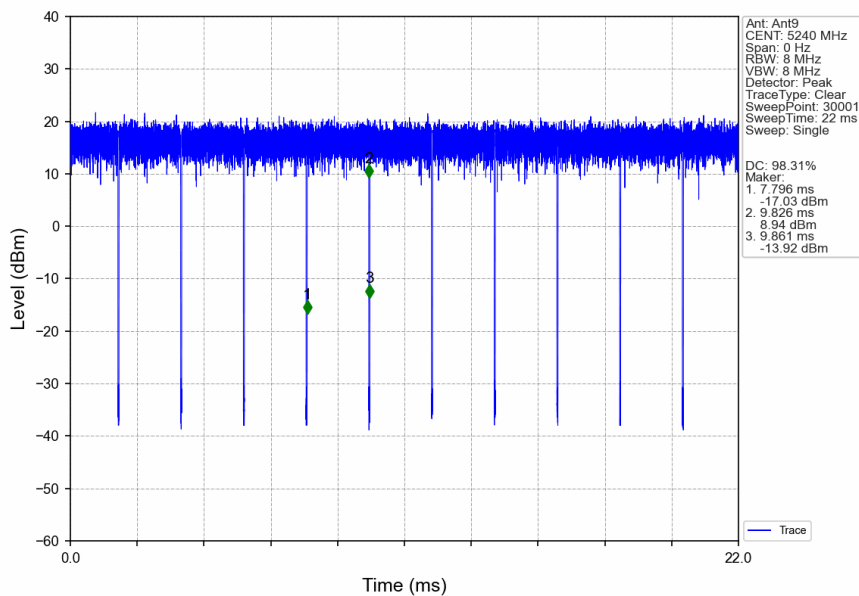
		5670	0.929	0.964	96.37	0.16	0.03
		5755	0.929	0.964	96.37	0.16	0.03
		5795	0.929	0.964	96.37	0.16	0.03
802.11ac (VHT20)	SISO	5180	1.890	1.926	98.13	0.08	0.03
		5200	1.890	1.925	98.18	0.08	0.03
		5240	1.890	1.926	98.13	0.08	0.03
		5260	1.890	1.925	98.18	0.08	0.03
		5300	1.890	1.926	98.13	0.08	0.03
		5320	1.890	1.925	98.18	0.08	0.03
		5500	1.890	1.925	98.18	0.08	0.03
		5580	1.890	1.925	98.18	0.08	0.03
		5700	1.890	1.925	98.18	0.08	0.03
		5745	1.890	1.926	98.13	0.08	0.03
		5785	1.890	1.926	98.13	0.08	0.03
		5825	1.890	1.926	98.13	0.08	0.03
802.11ac (VHT40)	SISO	5190	0.929	0.964	96.37	0.16	0.00
		5230	0.929	0.964	96.37	0.16	0.00
		5270	0.929	0.964	96.37	0.16	0.03
		5310	0.929	0.964	96.37	0.16	0.03
		5510	0.930	0.964	96.47	0.16	0.00
		5550	0.929	0.964	96.37	0.16	0.00
		5670	0.929	0.964	96.37	0.16	0.03
		5755	0.929	0.964	96.37	0.16	0.00
		5795	0.929	0.964	96.37	0.16	0.03
802.11ac (VHT80)	SISO	5210	0.457	0.492	92.89	0.32	0.03
		5290	0.457	0.492	92.89	0.32	0.07
		5530	0.457	0.492	92.89	0.32	0.03
		5610	0.457	0.492	92.89	0.32	0.00
		5775	0.457	0.492	92.89	0.32	0.07

1.2 Test Graph

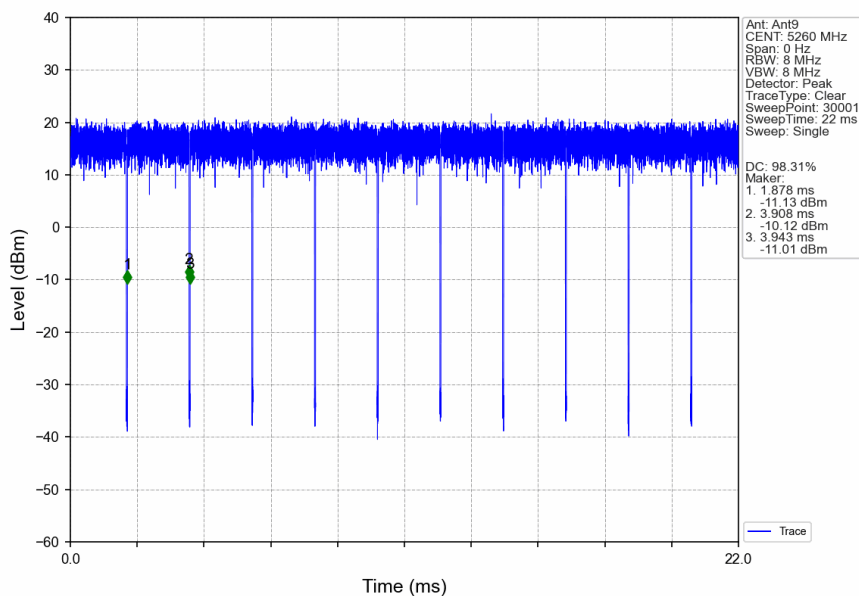
1.2.1 Ant9



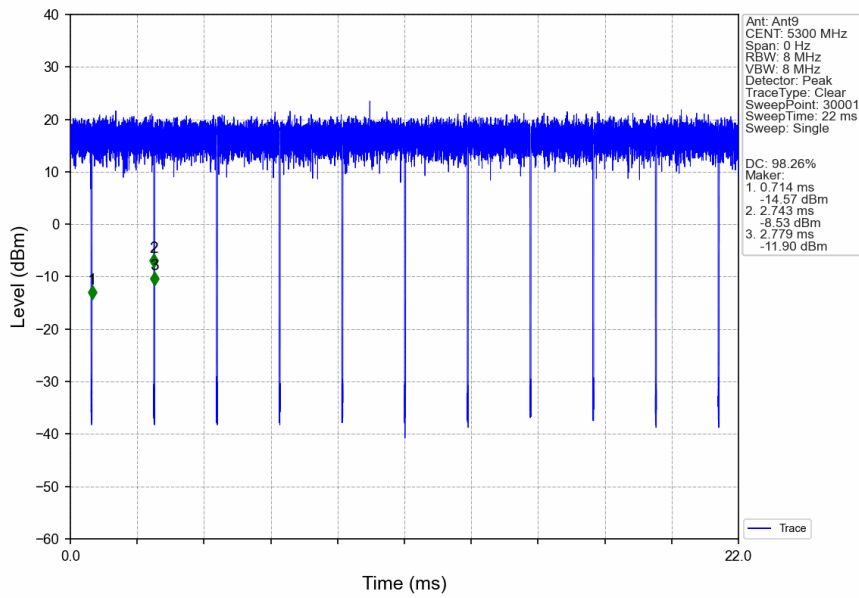
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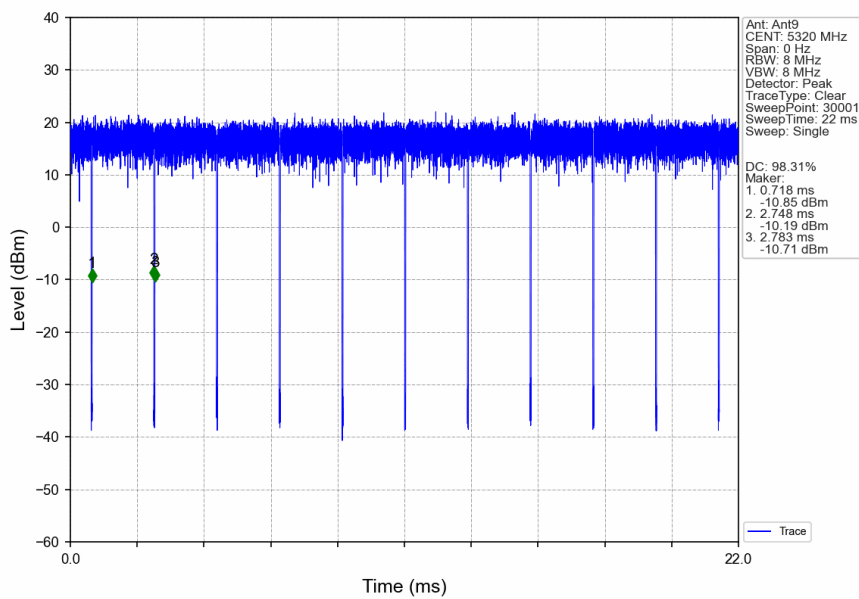
802.11a_LCH_5260MHz_Ant9_NTNV



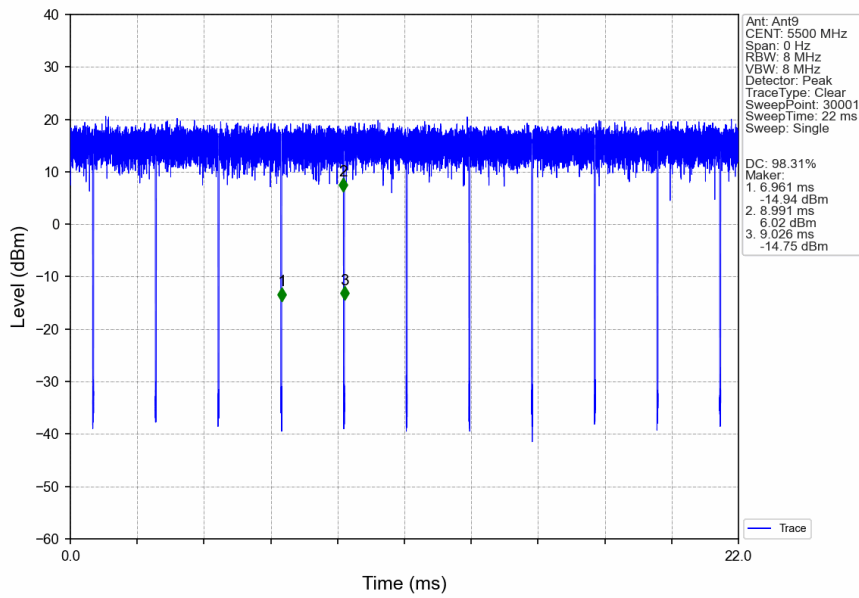
802.11a_MCH_5300MHz_Ant9_NTNV



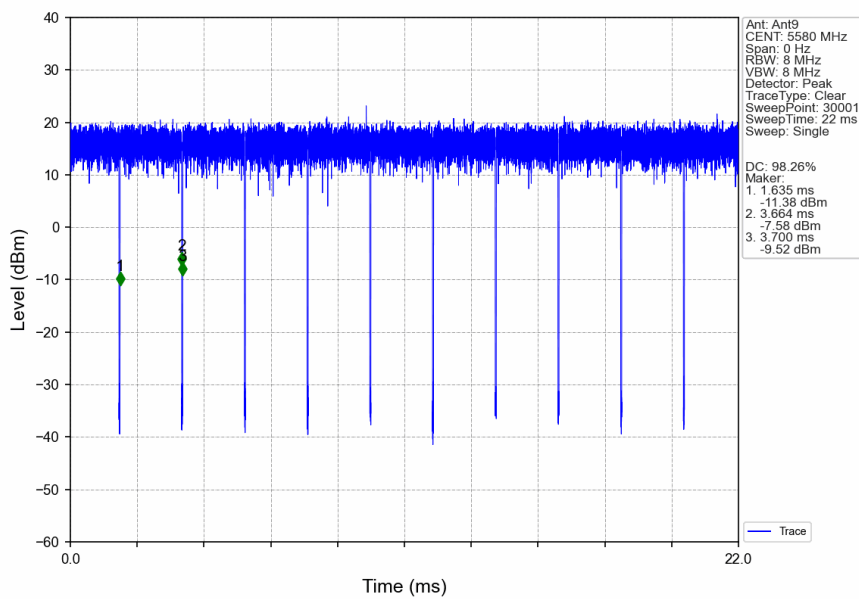
802.11a_HCH_5320MHz_Ant9_NTNV



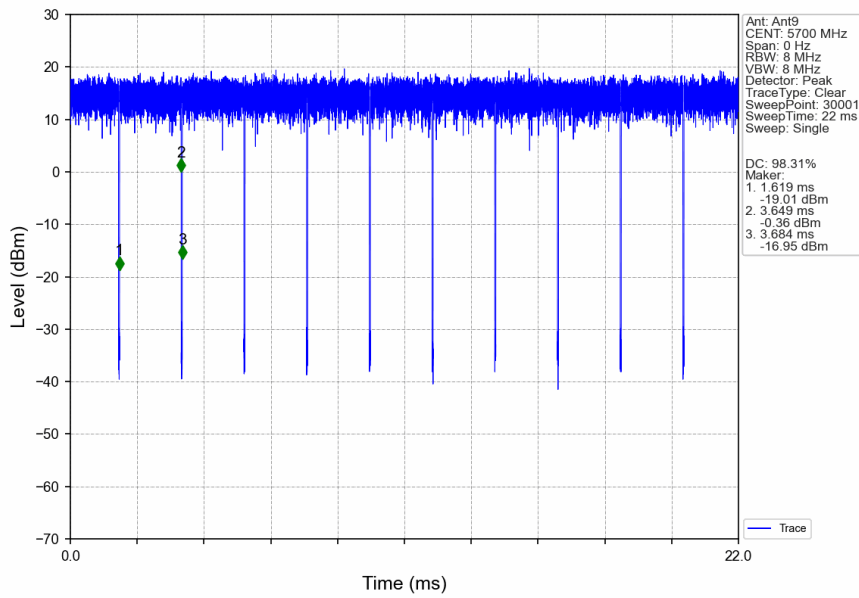
802.11a_LCH_5500MHz_Ant9_NTNV



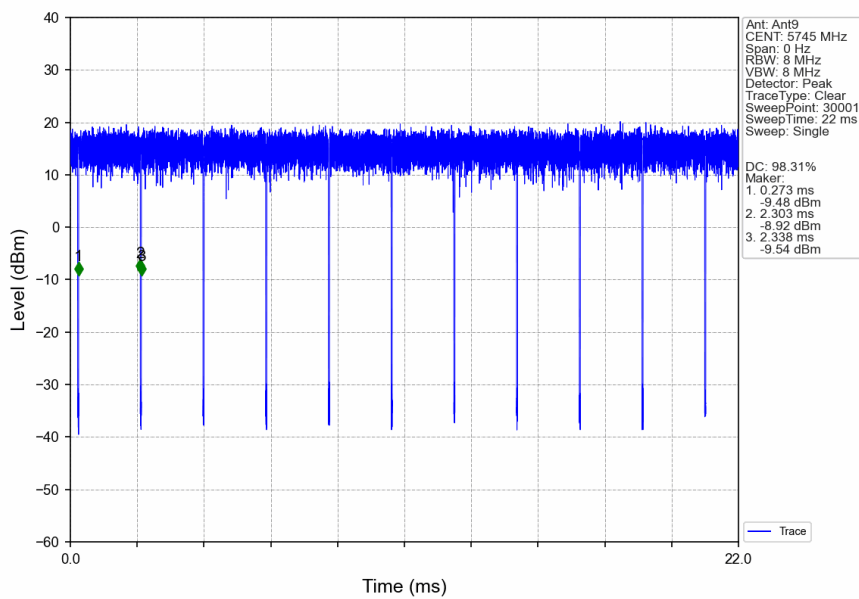
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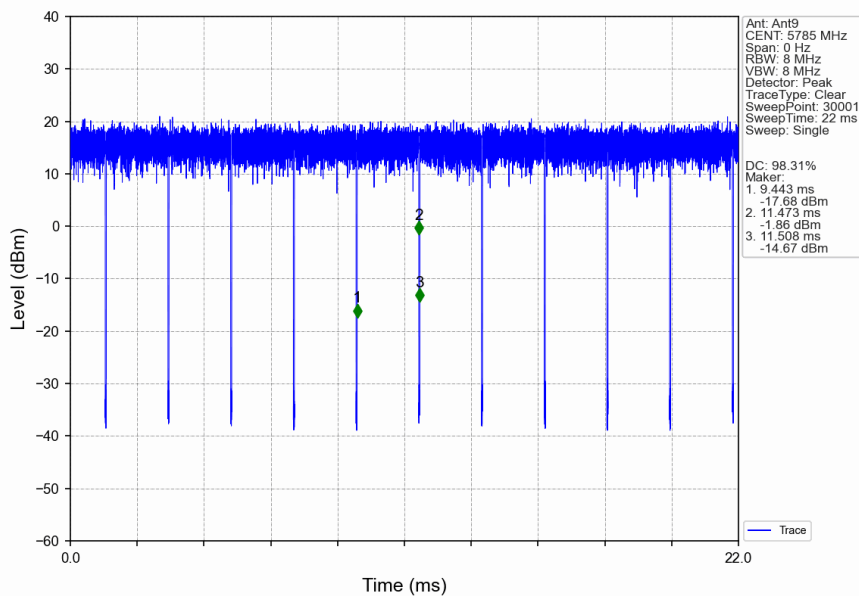
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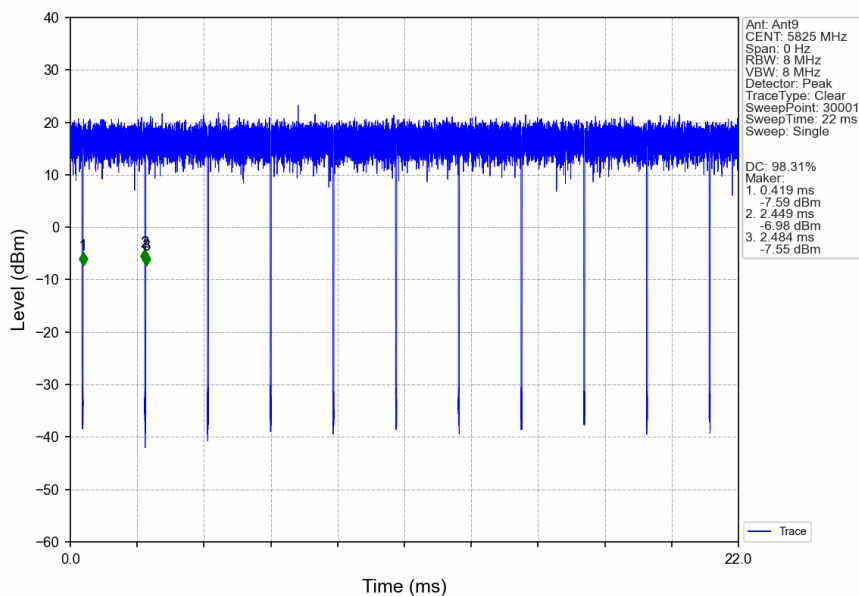
802.11a_LCH_5745MHz_Ant9_NTNV



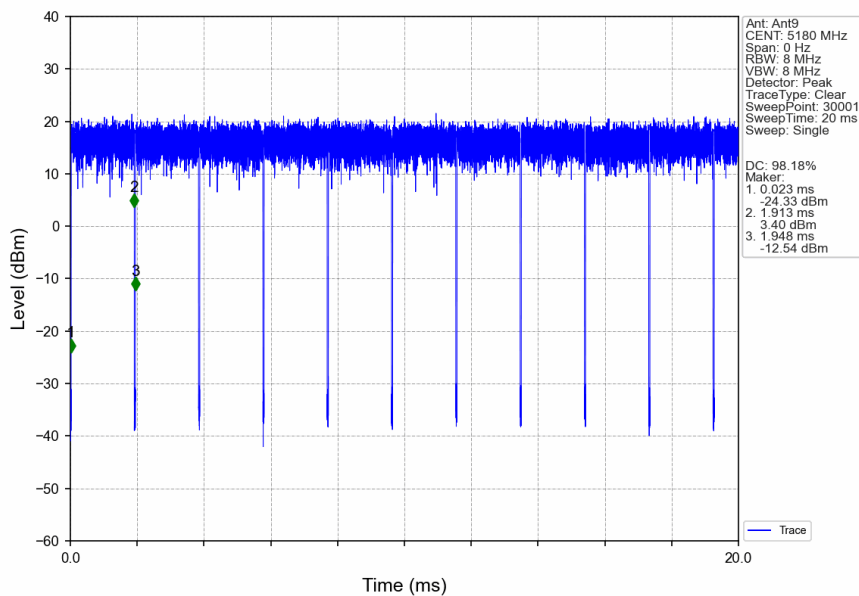
802.11a_MCH_5785MHz_Ant9_NTNV



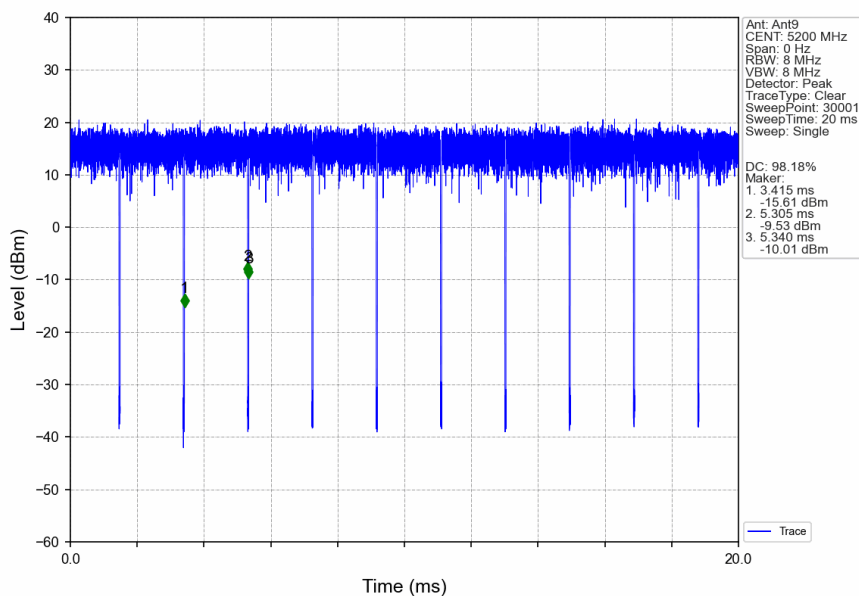
802.11a_HCH_5825MHz_Ant9_NTNV



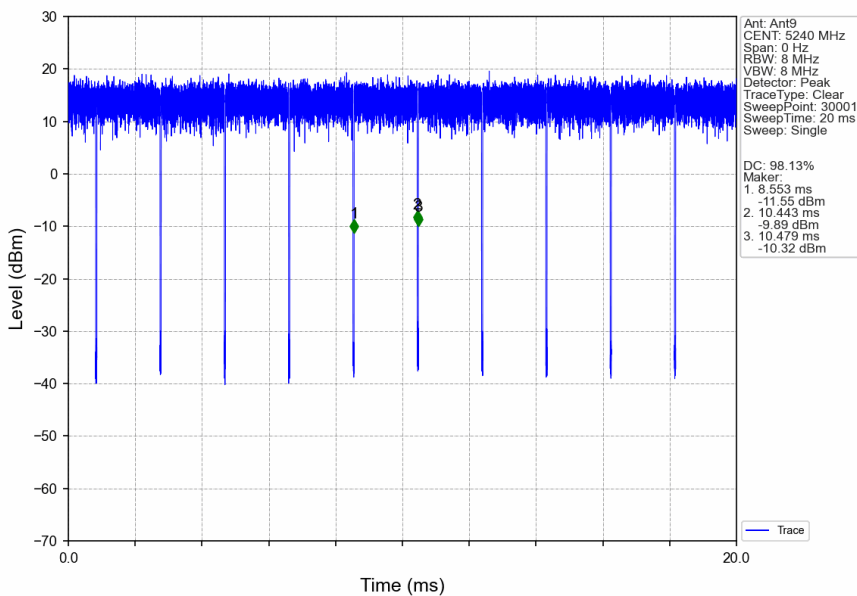
802.11n(HT20)_LCH_5180MHz_Ant9_NTNV



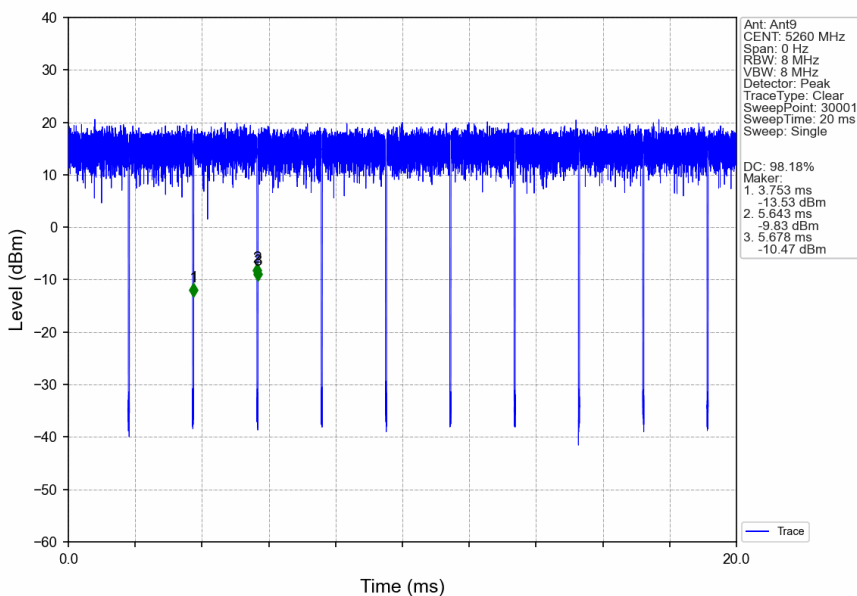
802.11n(HT20)_MCH_5200MHz_Ant9_NTNV



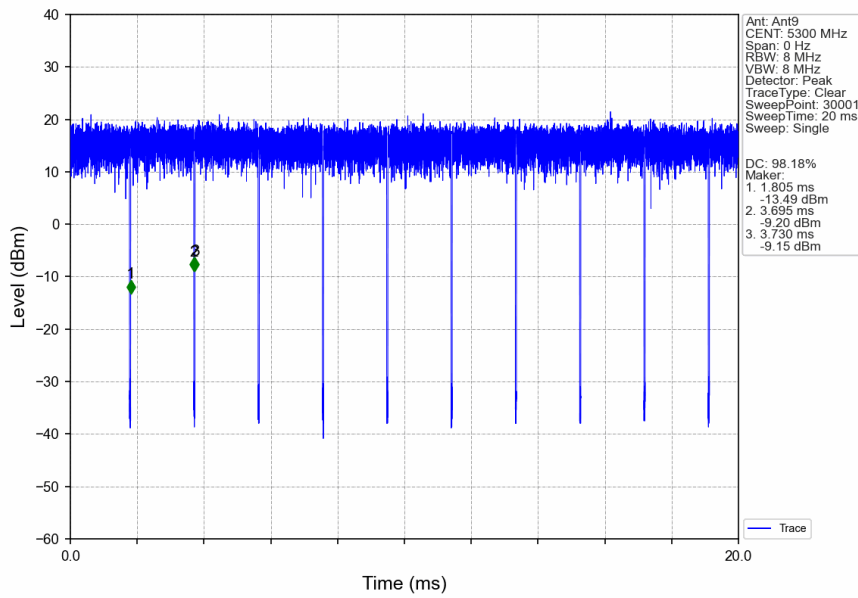
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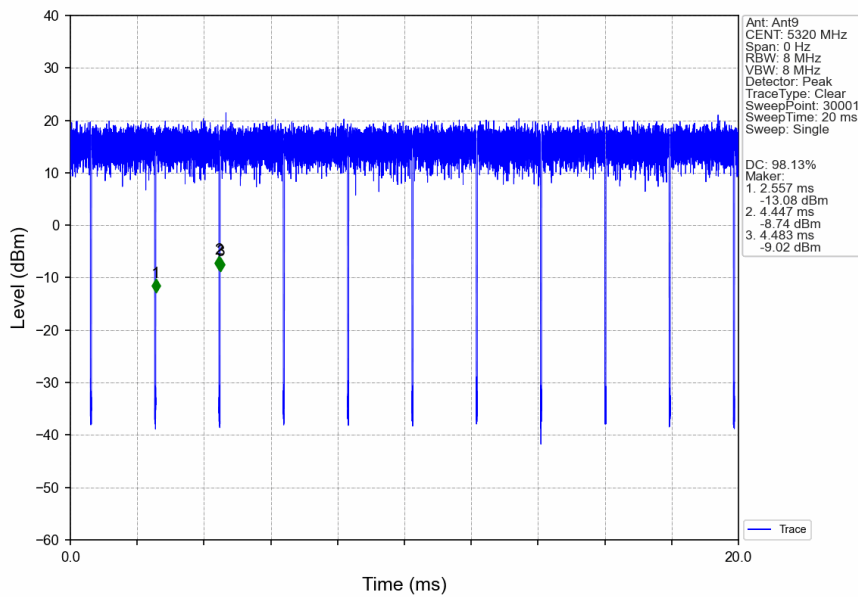
802.11n(HT20)_LCH_5260MHz_Ant9_NTNV



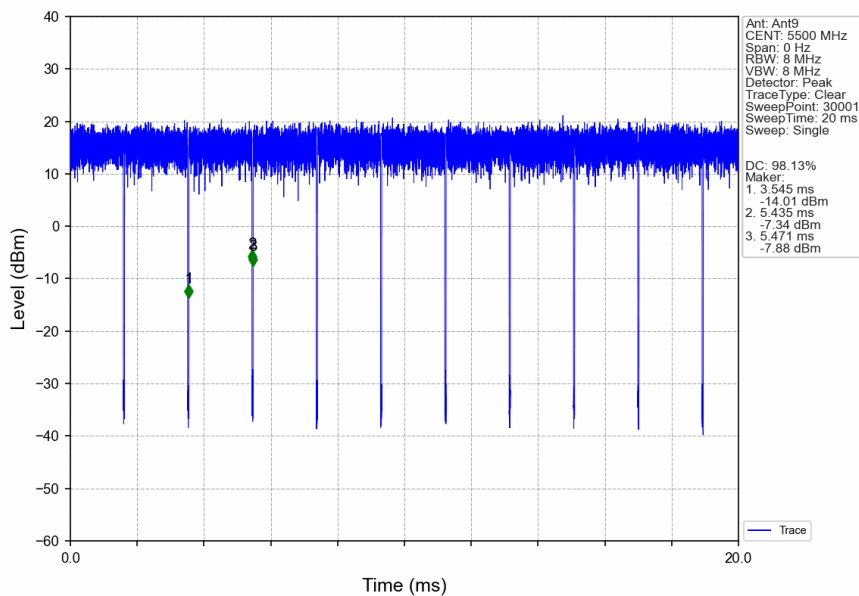
802.11n(HT20)_MCH_5300MHz_Ant9_NTNV



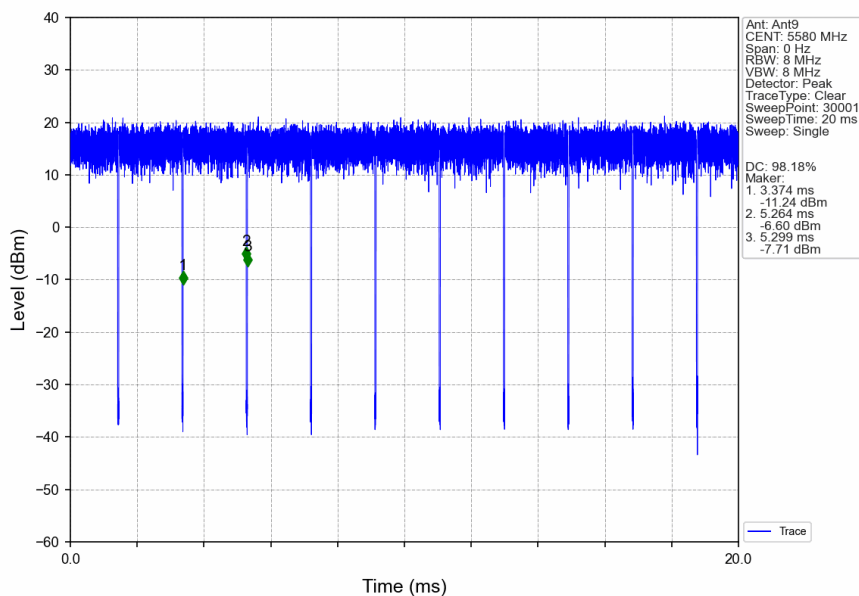
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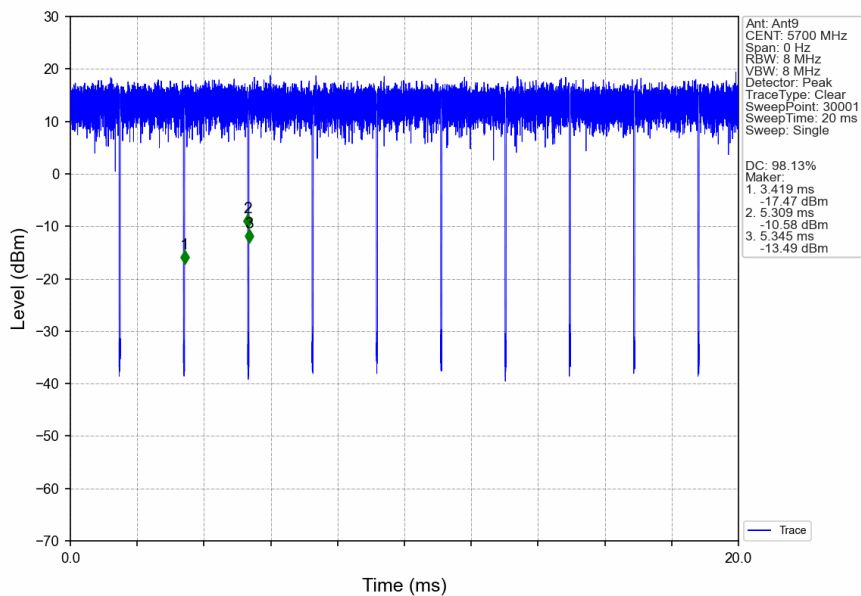
802.11n(HT20)_LCH_5500MHz_Ant9_NTNV



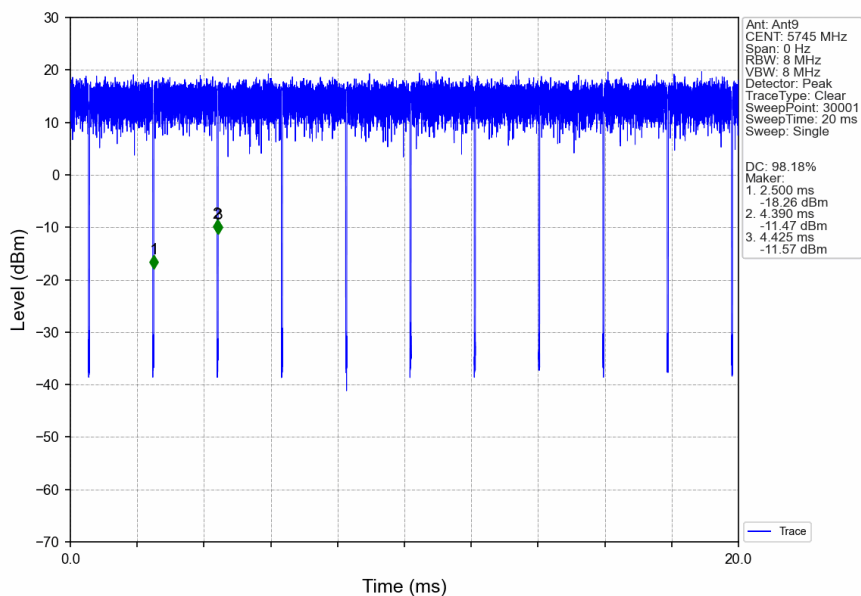
802.11n(HT20)_MCH_5580MHz_Ant9_NTNV



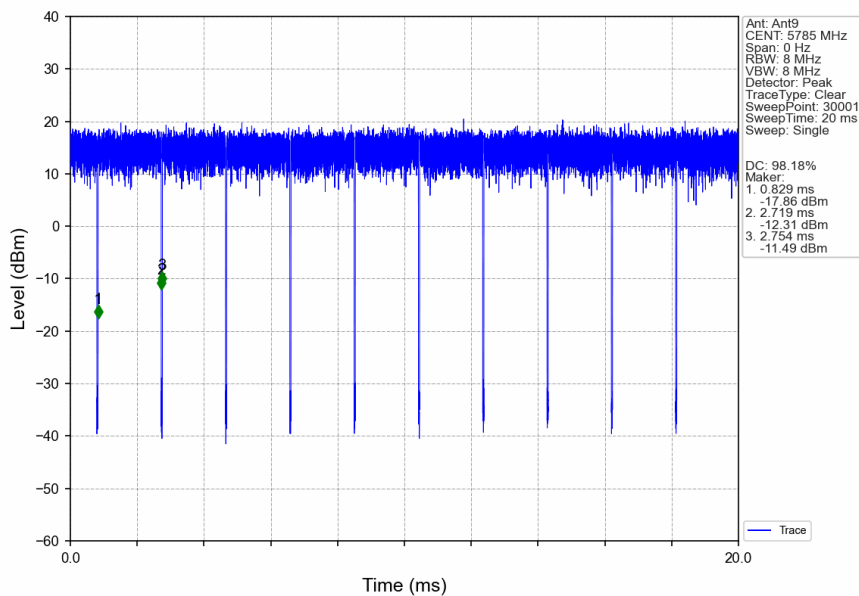
802.11n(HT20)_HCH_5700MHz_Ant9_NTNV



802.11n(HT20)_LCH_5745MHz_Ant9_NTNV



802.11n(HT20)_MCH_5785MHz_Ant9_NTNV



802.11n(HT20)_HCH_5825MHz_Ant9_NTNV

