

TEST REPORT

Application No.: SZCR2511005052WM
Applicant: TCL Communication Ltd.
Address of Applicant: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong
Manufacturer: TCL Communication Ltd.
Address of Manufacturer: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong
Equipment Under Test (EUT):
EUT Description: GSM/UMTS/LTE/NR Mobile phone
Model No.: T523SP, T523V ♣
 ♣ Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
FCC ID: 2ACCJH197
Standard(s) : 47 CFR Part 15, Subpart E 15.407
Date of Receipt: 2025-11-17
Date of Test: 2025-12-02 to 2025-12-22
Date of Issue: 2025-12-30

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.



Keny Xu
EMC Laboratory Manager





SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/2

Report No.: SZCR251100505206

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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2025-12-30		Original

Authorized for issue by:				
		Calvin Weng		
		Calvin Weng/Project Engineer		
		Eric Fu		
		Eric Fu/Reviewer		



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2 Test Summary

Radio Spectrum Technical Requirement				
Item	Standard	Method	Requirement	Result
Antenna Requirement	47 CFR Part 15, Subpart E 15.407	N/A	47 CFR Part 15, Subpart C 15.203	Pass
Transmission in the Absence of Data		N/A	47 CFR Part 15, Subpart E 15.407 (c)	Pass

Radio Spectrum Matter Part				
Item	Standard	Method	Requirement	Result
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart E 15.407	ANSI C63.10 (2020) Section 6.2	47 CFR Part 15, Subpart C 15.207 & Subpart E 15.407 b(9)	Pass
Radiated Emissions (Below 1GHz)		ANSI C63.10 (2020) Section 6.4,6.5	47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)	Pass
Radiated Emissions (Above 1GHz)		ANSI C63.10 (2020) Section 6.6	47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)	Pass
Radiated Emissions which fall in the restricted bands		ANSI C63.10 (2020) Section 6.10.5	47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)	Pass
Duty Cycle		ANSI C63.10 (2020) Section 12.2	ANSI C63.10 (2013) Section 12.2	Pass
99% Bandwidth		ANSI C63.10 (2020) Section 12.5.3	ANSI C63.10 (2013) Section 12.4.2	Pass
26dB Emission bandwidth		ANSI C63.10 (2020) Section 12.5.2	47 CFR Part 15, Subpart E 15.407 (a)	Pass
Minimum 6 dB bandwidth (5.725-5.85 GHz band)		ANSI C63.10 (2020) Section 12.5.1	47 CFR Part 15, Subpart E 15.407 (e)	Pass
Maximum Conducted output power		ANSI C63.10 (2020) Section 12.4	47 CFR Part 15, Subpart E 15.407 (a)	Pass
Peak Power spectrum density		ANSI C63.10 (2020) Section 12.6	47 CFR Part 15, Subpart E 15.407 (a)	Pass
Frequency Stability		ANSI C63.10 (2020) Section 6.8	47 CFR Part 15, Subpart E 15.407 (g)	Pass
DFS - Channel Move Time		KDB 905462 D02 Section 7.8.3	KDB 905462 D02 Section 5.1	Pass
DFS - Channel Closing Transmission Time		KDB 905462 D02 Section 7.8.3	KDB 905462 D02 Section 5.1	Pass





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Declaration of EUT Family Grouping:

Model No.: T523SP, T523V

Only T523SP were tested, since according to the declaration from the applicant, The differences between T523SP and T523V show as follow:

1. The Model Name between T523SP and T523V is different.

Except for the above-mentioned modification, all the other portions remain unchanged.



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4 General Information

4.1 Details of E.U.T.

EUT Description:	GSM/UMTS/LTE/NR Mobile phone	
Model No.:	T523SP, T523V	
Hardware Version:	07	
Software Version:	vBQSA	
Power Supply:	DC3.91V by Li-ion battery(5000mAh) Battery M/N:TLp050E7 Battery Manufacturer:Dongguan Veken Battery Co.,Ltd.	
WLAN Mode Supported:	802.11a:	20 MHz channel bandwidth
	802.11n:	20 MHz / 40 MHz channel bandwidth
	802.11ac:	20 MHz / 40 MHz / 80 MHz channel bandwidth
Operation Frequency:	5150MHz to 5250MHz 5250MHz to 5350MHz 5470MHz to 5725MHz 5725MHz to 5850MHz	
Modulation Type:	802.11a:	OFDM (BPSK, QPSK, 16QAM, 64QAM)
	802.11n:	OFDM (BPSK, QPSK, 16QAM, 64QAM)
	802.11ac:	OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)
Channel Spacing:	20MHz:	802.11a/n(HT20)/ac(VHT20)/ax(HE20)
	40MHz:	802.11n(HT40)/ac(VHT40)/ax(HE40)
	80MHz:	802.11ac(VHT80)/ax(HE80)
Antenna Type:	FPC Antenna	
Antenna Gain:	5150MHz to 5250MHz: -4.98dBi(Ant7); 5250MHz to 5350MHz: -4.98dBi(Ant7); 5470MHz to 5725MHz: -4.98dBi(Ant7); 5725MHz to 5850MHz: -4.98dBi(Ant7);	
	Note: The antenna gain are derived from the gain information report provided by the manufacturer.	
Smart System:	☒ SISO	802.11a/n/ac
	☐ MIMO	CDD: 802.11a/n/ac: Tx & Rx
		STBC: 802.11n/ac: Tx & Rx
		TXBF: 802.11n/ac: Tx & Rx
	☐ Diversity	802.11a: Tx & Rx
TPC Function:	☐ Support, ☐ Not Support	



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DFS Function:	☐ Master	
	☐ Slave with radar detection	☒ Slave without radar detection
RF Cable:	4900MHz ~ 5250MHz(1.6dB)	5250MHz ~ 5350MHz(1.7dB)
	5470MHz ~ 5725MHz(1.8dB)	5725MHz ~ 5850MHz (2dB)
Remark: As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.		

4.2 Environment Parameter

Environment Parameter	1020 mbar Selected Values During Tests	
Relative Humidity	40.5~73.5 % RH Ambient	
Value	Temperature(°C)	Voltage(V)
NTNV	23.1~25.3	3.91
Note: NV:Normal Voltage LV:Low Extreme Test Voltage HV:High Extreme Test Voltage NT:Normal Temperature LT:Low Extreme Test Temperature HT:High Extreme Test Temperature		



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4.3 Description of Support Units

Description	Manufacturer	Model No.	FCC ID	Serial No.
Router	LINKSYS	WRT32X	Q87-WRT3200ACM	22C10609709105
Adapter	Huizhou Puan Electronics Co.,Ltd.	QC16US	--	--

4.4 Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Emissions at AC Power Line (150kHz-30MHz)	$\pm 3.2\text{dB}$
Radiated Emissions (Below 1GHz)	$\pm 6.0\text{dB}$ for 3m; $\pm 5.0\text{dB}$ for 10m
Radiated Emissions (Above 1GHz)	$\pm 4.6\text{dB}$ (1-18GHz); $\pm 4.8\text{dB}$ (18-40GHz)
Radiated Emissions which fall in the restricted bands	$\pm 6.0\text{dB}$ (below 1GHz); $\pm 4.6\text{dB}$ (above 1GHz);
Duty Cycle	$\pm 0.3\%$
99% Bandwidth	$\pm 0.3\%$
26dB Emission bandwidth	$\pm 0.3\%$
Minimum 6 dB bandwidth (5.725-5.85 GHz band)	$\pm 0.3\%$
Maximum Conducted output power	$\pm 0.8\text{dB}$
Peak Power spectrum density	$\pm 0.4\text{dB}$
Frequency Stability	$\pm 5.4 \times 10^{-8}$

Remark:

The U_{lab} (lab Uncertainty) is less than $U_{\text{CISPR/ETSI}}$ (CISPR/ETSI Uncertainty), so the test results

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.



4.5 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• VCCI (Member No. 1937)

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• FCC –Designation Number: CN1336

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

4.7 Deviation from Standards

None

4.8 Abnormalities from Standard Conditions

None



5 Equipment List

Conducted Emissions at AC Power Line (150kHz-30MHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Shielding Room	ZhongYu Electron	GB-88	SEM001-06	2025-05-07	2028-05-06
EMI Test Receiver	Rohde&Schwarz	ESR	SZ-WRG-M-047	2025-01-08	2026-01-07
Matching Pad	N/A	N/A	SEM021-23	2025-03-19	2026-03-18
Matching Pad	N/A	N/A	SEM021-24	2025-03-19	2026-03-18
Measurement Software	AUDIX	e3 V8.2014-6-27a	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM024-01	2025-07-05	2026-07-04
LISN	Rohde&Schwarz	ENV216	SEM007-01	2025-07-25	2026-07-24
LISN	ETS-LINDGREN	3816/2	SEM007-02	2025-03-03	2026-03-02

Radiated Emissions (Below 1GHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Loop Antenna	ETS-Lindgren	6502	SEM003-08	2025-11-17	2027-11-16
3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2023-06-19	2026-06-18
MXE EMI Receiver	Agilent Technologies	N9038A	SEM004-15	2025-07-25	2026-07-24
BiConiLog Antenna	ETS-LINDGREN	3142C	SEM003-01	2025-08-29	2027-08-28
Pre-Amplifier	Agilent Technologies	8447D	SEM005-01	2025-03-04	2026-03-03
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM025-01	2025-07-05	2026-07-04

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Radiated Spurious Emissions Above 1GHz					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Signal & Spectrum Analyzer	Rohde & Schwarz	FSV	SZ-WRG-M-048	2025-01-07	2026-01-06
Low Noise Amplifier 1G-18GHz	Tonscend	TAP01018050	SZ-WRG-M-051	2025-01-07	2026-01-06
Low Noise Amplifier 18G-40GHz	Tonscend	TAP18040048	SZ-WRG-M-052	2025-01-08	2026-01-07
Double Ridge Horn Antenna 1GHz-18GHz	SCHWARZBECK	BBHA 9120 D	SZ-WRG-M-055	2025-12-13	2026-12-12
				2023-12-21	2025-12-20
SHF-EHF Horn 15GHz-40GHz	SCHWARZBECK	BBHA 9170	SZ-WRG-M-056	2025-12-13	2026-12-12
				2023-12-25	2025-12-24
RSE Test Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Chamber	CRTSGSSAC966	N/A	SZ-WRG-C-063	2025-01-06	2028-01-05
Humidity and Temperature Indicator	deli	8838	SEM002-46	2025-07-23	2026-07-22

Radiated Emissions which fall in the restricted bands					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Signal & Spectrum Analyzer	Rohde & Schwarz	FSV	SZ-WRG-M-048	2025-01-07	2026-01-06
Low Noise Amplifier 30M-8GHz	Tonscend	TAP30M8G30	SZ-WRG-M-050	2025-01-07	2026-01-06
Double Ridge Horn Antenna 1GHz-18GHz	SCHWARZBECK	BBHA 9120 D	SZ-WRG-M-055	2023-12-21	2025-12-20
				2025-12-13	2026-12-12
RSE Test Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Chamber	CRTSGSSAC966	N/A	SZ-WRG-C-063	2025-01-06	2028-01-05
Humidity and Temperature Indicator	deli	8838	SEM002-46	2025-07-23	2026-07-22



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RF Conducted Test					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
DC Power Supply	Chroma	62012P-80-60	SEM011-11	2025-07-24	2026-07-23
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-19	2025-03-04	2026-03-03
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2025-09-10	2026-09-09
Measurement Software	TST PASS	TST PASS V2.0	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-01	2025-07-05	2026-07-04
Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2025-03-03	2026-03-02
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2025-02-26	2026-02-25
Power Sensor	TST PASS	TSPS2023R	SEM009-26	2025-03-04	2026-03-03
Power Sensor	KEYSIGHT	U2021XA	SEM009-16	2025-03-04	2026-03-03

General used equipment					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	deli	8838	SEM002-32	2025-07-23	2026-07-22
Humidity/ Temperature Indicator	deli	8838	SEM002-33	2025-07-23	2026-07-22
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2025-03-03	2026-03-02



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6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203

The antenna is FPC Antenna and no consideration of replacement. The best case gain of the antenna is

5150MHz to 5250MHz: -4.98dBi(Ant7); *

5250MHz to 5350MHz: -4.98dBi(Ant7); *

5470MHz to 5725MHz: -4.98dBi(Ant7); *

5725MHz to 5850MHz: -4.98dBi(Ant7); *

Note:

The antenna gain are derived from the gain information report provided by the manufacturer.

Remark:

As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

6.2 Transmission in the Absence of Data

6.2.1 Test Requirement:

47 CFR Part 15, Subpart E 15.407 (c)

6.2.2 Conclusion

Standard Requirement:

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signalling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals.

Applicants shall include in their application for equipment authorization a description of how this requirement is met.

EUT Details:

WIFI chip support automatically discontinue transmission in case of either absence of information to transmit or operational failure, if the chip detect absence of information to transmit or operational failure, it will be automatically shut off.



7 Radio Spectrum Matter Test Results

7.1 Conducted Emissions at AC Power Line (150kHz-30MHz)

Test Requirement 47 CFR Part 15, Subpart C 15.207 & Subpart E 15.407 b(9)
 Test Method: ANSI C63.10 (2020) Section 6.2
 Test Engineer: Wade Li

Limit:

Frequency of emission(MHz)	Conducted limit(dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

7.1.1 E.U.T. Operation

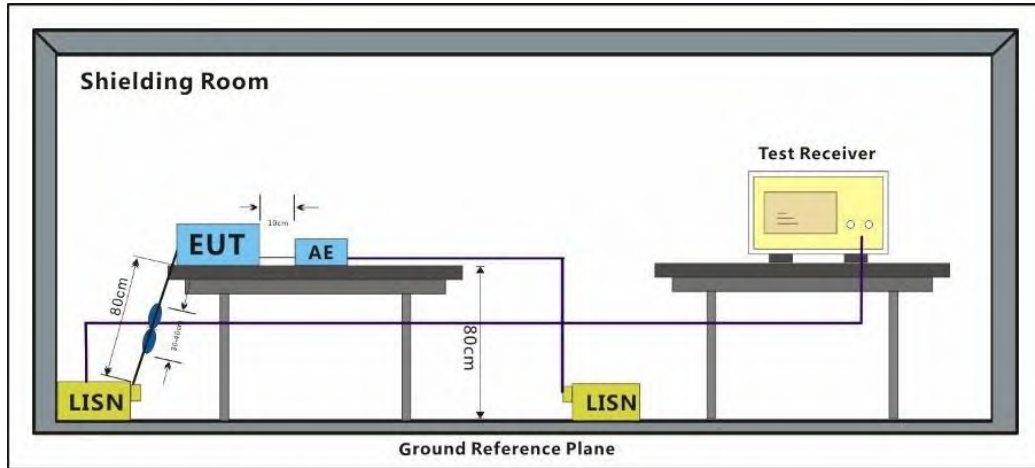
Operating Environment:
 Temperature: 25.3 °C Humidity: 40.5 % RH Atmospheric Pressure: 1020 mbar

7.1.2 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. Only the data of worst case is recorded in the report.
Pre-scan	05	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.
Pre-scan	06	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.
Pre-scan	07	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.



7.1.3 Test Setup Diagram



7.1.4 Measurement Procedure and Data

- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50μH + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,
- 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
- 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

Remark 1: Level=Read Level+ Cable Loss+ LISN Factor

Remark 2: Pre-test AC 120V/50-60Hz&AC 240V/50-60Hz then choose the AC 120/60Hz as worst case.



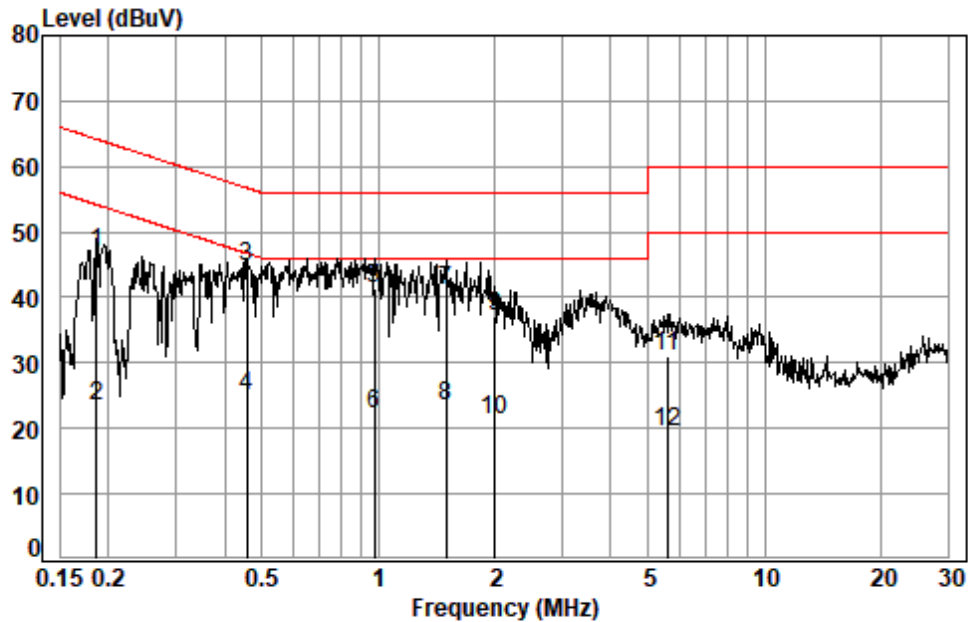
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Test Mode: 04; Line: Live line



Site : Shielding Room
Condition: Line
Job No. : 05052WM
Test mode: 04

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.1864	0.07	10.14	36.70	46.91	64.20	-17.29	QP
2	0.1864	0.07	10.14	13.36	23.57	54.20	-30.63	Average
3 *	0.4564	0.09	9.60	35.14	44.83	56.76	-11.93	QP
4 *	0.4564	0.09	9.60	15.26	24.95	46.76	-21.81	Average
5	0.9787	0.11	9.58	31.69	41.38	56.00	-14.62	QP
6	0.9787	0.11	9.58	12.60	22.29	46.00	-23.71	Average
7	1.5033	0.12	9.58	31.41	41.11	56.00	-14.89	QP
8	1.5033	0.12	9.58	13.64	23.34	46.00	-22.66	Average
9	2.0012	0.12	9.58	27.52	37.22	56.00	-18.78	QP
10	2.0012	0.12	9.58	11.55	21.25	46.00	-24.75	Average
11	5.5936	0.14	9.67	21.33	31.14	60.00	-28.86	QP
12	5.5936	0.14	9.67	9.74	19.55	50.00	-30.45	Average



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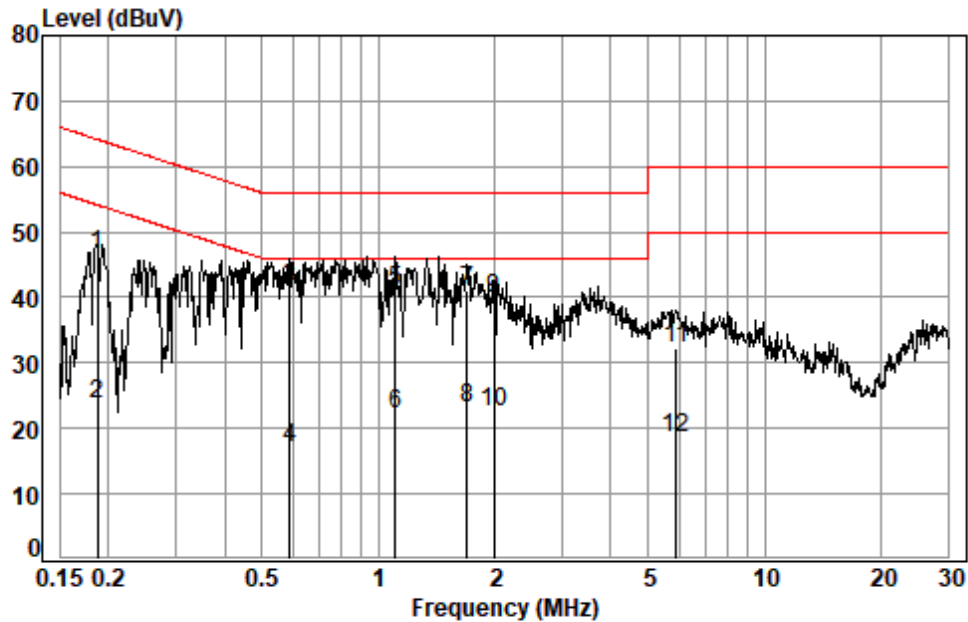
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Test Mode: 04; Line: Neutral Line



Site : Shielding Room
Condition: Neutral
Job No. : 05052WM
Test mode: 04

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.1874	0.07	10.10	36.31	46.48	64.15	-17.67	QP
2	0.1874	0.07	10.10	13.65	23.82	54.15	-30.33	Average
3 *	0.5885	0.10	9.68	31.59	41.37	56.00	-14.63	QP
4	0.5885	0.10	9.68	7.41	17.19	46.00	-28.81	Average
5	1.1056	0.11	9.54	31.31	40.96	56.00	-15.04	QP
6	1.1056	0.11	9.54	12.63	22.28	46.00	-23.72	Average
7	1.6981	0.12	9.55	31.43	41.10	56.00	-14.90	QP
8 *	1.6981	0.12	9.55	13.48	23.15	46.00	-22.85	Average
9	1.9906	0.12	9.55	30.24	39.91	56.00	-16.09	QP
10	1.9906	0.12	9.55	12.95	22.62	46.00	-23.38	Average
11	5.8980	0.14	9.60	22.37	32.11	60.00	-27.89	QP
12	5.8980	0.14	9.60	8.86	18.60	50.00	-31.40	Average



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7.2 Radiated Emissions (Below 1GHz)

Test Requirement 47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)
 Test Method: ANSI C63.10 (2020) Section 6.4,6.5
 Measurement Distance: 3m
 Test Engineer: Mason Wu

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
960-1000	500	3

7.2.1 E.U.T. Operation

Operating Environment:

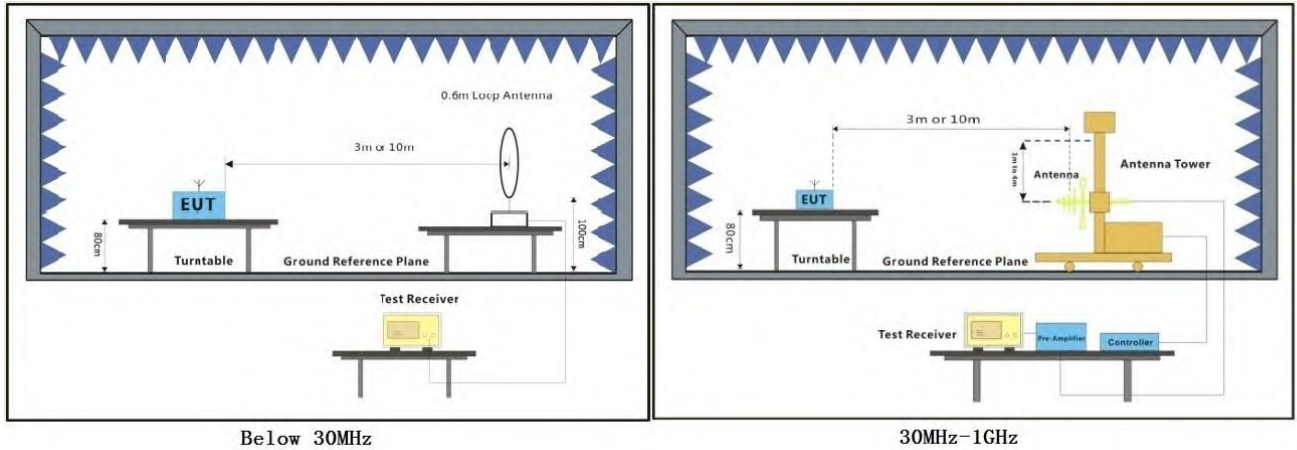
Temperature: 23.5 °C Humidity: 47.5 % RH Atmospheric Pressure: 1020 mbar

7.2.2 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. Only the data of worst case is recorded in the report.
Pre-scan	05	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.
Pre-scan	06	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.
Pre-scan	07	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.



7.2.3 Test Setup Diagram



Below 30MHz

30MHz-1GHz

7.2.4 Measurement Procedure and Data

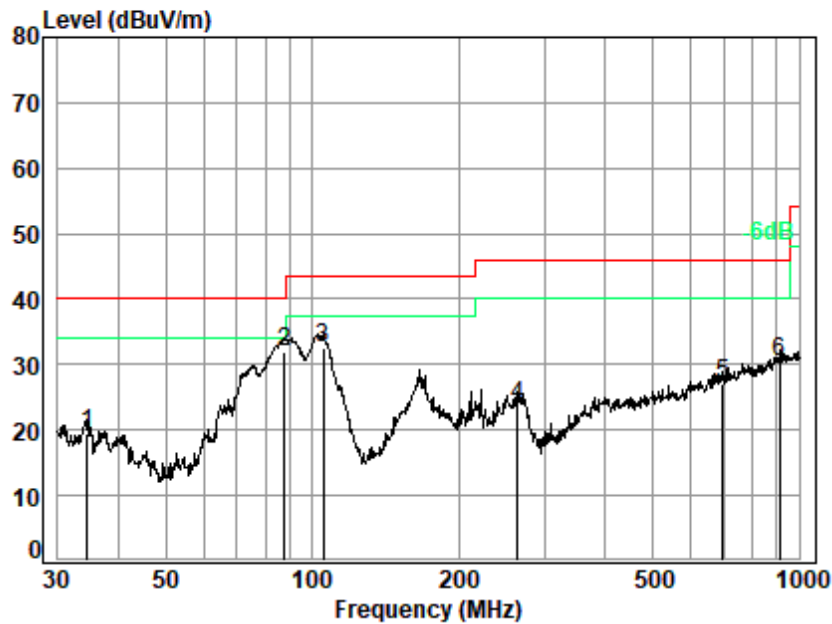
- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using quasi-peak method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
2. For emission below 1GHz, through the pre-scan found the worst case is the lowest channel of 802.11a. Only the worst case is recorded in the report.
3. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.
4. The disturbance below 1GHz was very low and the below harmonics were the highest point could be found when testing, so only the below harmonics had been displayed.



Test Mode: 04; Polarity: Horizontal

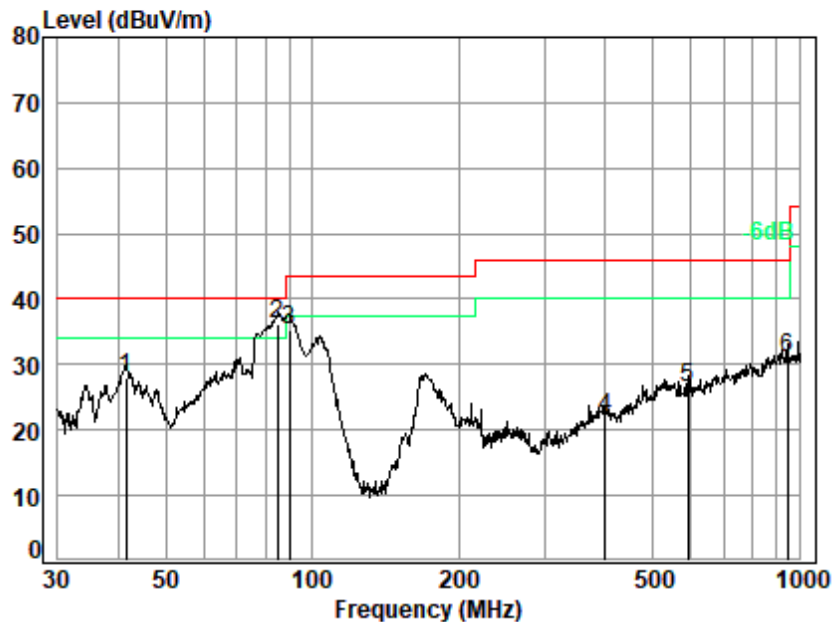


Site : chamber
Condition: 3m HORIZONTAL
Job No. : 05052WM
Test Mode: 04

	Ant	Cable	Preamp	Read		Limit	Over	
	Freq	Factor	Loss	Factor	Level	Level	Line	Limit Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB
1	34.517	19.14	0.78	27.65	27.20	19.47	40.00	-20.53 QP
2 q	87.725	11.43	1.16	27.61	47.07	32.05	40.00	-7.95 QP
3	105.272	12.19	1.26	27.61	46.80	32.64	43.50	-10.86 QP
4	263.819	17.11	1.98	27.60	32.22	23.71	46.00	-22.29 QP
5	696.857	25.88	3.40	27.84	25.49	26.93	46.00	-19.07 QP
6	912.862	28.01	4.01	26.89	25.21	30.34	46.00	-15.66 QP



Test Mode: 04; Polarity: Vertical



Site : chamber
Condition: 3m VERTICAL
Job No. : 05052WM
Test Mode: 04

		Ant	Cable	Preamp	Read	Limit	Over	
	Freq	Factor	Loss	Factor	Level	Level	Line	Limit Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB
1	41.422	15.69	0.83	27.64	39.09	27.97	40.00	-12.03 QP
2 q	84.999	11.03	1.14	27.61	51.51	36.07	40.00	-3.93 QP
3	89.905	11.72	1.18	27.60	49.91	35.21	43.50	-8.29 QP
4	400.432	20.60	2.49	27.75	26.41	21.75	46.00	-24.25 QP
5	590.974	24.44	3.08	28.09	26.93	26.36	46.00	-19.64 QP
6	945.440	28.26	4.07	26.70	25.40	31.03	46.00	-14.97 QP



7.3 Radiated Emissions (Above 1GHz)

Test Requirement 47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)
 Test Method: ANSI C63.10 (2020) Section 6.6
 Measurement Distance: 3m
 Test Engineer: Xing Guo

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

*(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

7.3.1 E.U.T. Operation

Operating Environment:

Temperature: 24.5 °C Humidity: 50.8 % RH Atmospheric Pressure: 1020 mbar

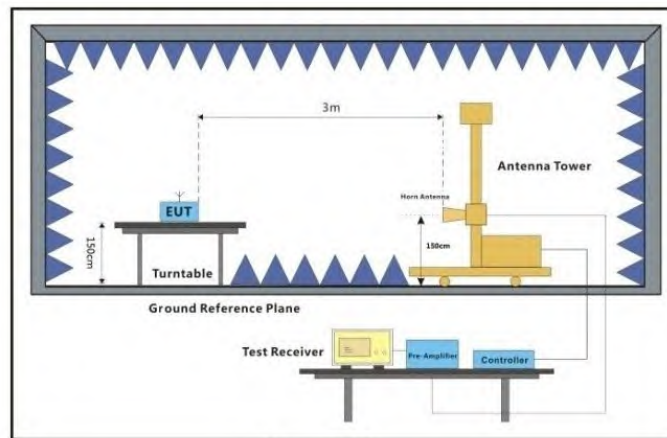


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7.3.2 Test Mode Description

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. 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. 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. 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. Only the data of worst case is recorded in the report.

7.3.3 Test Setup Diagram



Above 1GHz



7.3.4 Measurement Procedure and Data

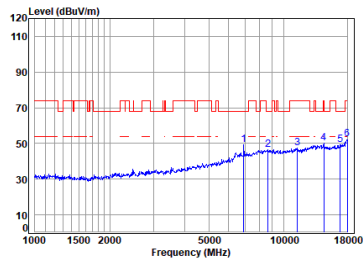
- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak or average method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
2. Scan from 18GHz to 40GHz, the disturbance above 18GHz was very low. The points marked on below plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.
3. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.
4. The disturbance above 18GHz were very low and the below harmonics were the highest point could be found when testing, so only the below harmonics had been displayed.
5. For devices with multiple operating modes, measurements on the middle channel is used to determine the worst-case mode(s). Only the worst case mode with the highest output power and the mode with the highest output power spectral density for each modulation family (e.g., OFDM and direct sequence spread spectrum) is recorded in the test report.
6. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for Peak detection (PK) and Average detection (AV) at frequency above 1GHz.
7. For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle<98%) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.



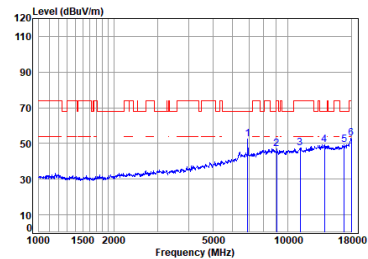
11a_TX_CH_36_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5180 TX RSE
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	6914.763	11.37	36.17	56.73	58.44	49.25	68.20	-18.95	peak	
2	8663.404	12.04	38.45	56.25	52.36	46.60	68.20	-21.60	peak	
3	11368.000	14.35	39.70	55.38	48.57	47.24	74.00	-26.76	peak	
4	14491.960	17.07	39.51	54.30	47.72	50.00	74.00	-24.00	peak	
5	pp16891.040	18.12	39.60	54.09	45.64	49.27	68.20	-18.93	peak	
6	18000.000	18.35	43.80	54.20	44.48	52.43	74.00	-21.57	peak	

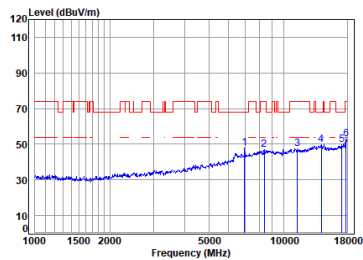
11a_TX_CH_36_Vertical



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5180 TX RSE
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	pp 6914.763	11.37	36.17	56.73	61.51	52.32	68.20	-15.88	peak	
2	9047.272	12.14	38.60	56.11	52.43	47.06	74.00	-26.94	peak	
3	11204.900	14.75	39.60	55.43	48.50	47.42	74.00	-26.58	peak	
4	14038.450	16.51	39.90	54.48	47.43	49.36	68.20	-18.84	peak	
5	16891.040	18.12	39.60	54.09	45.61	49.24	68.20	-18.96	peak	
6	18000.000	18.35	43.80	54.20	44.98	52.93	74.00	-21.07	peak	

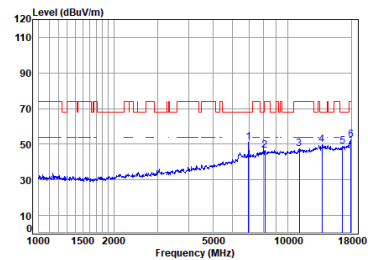
11a_TX_CH_44_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5220 TX RSE
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	6954.852	11.37	36.11	56.76	57.29	48.01	68.20	-20.19	peak	
2	8343.918	11.70	38.60	56.37	53.06	46.99	74.00	-27.01	peak	
3	11368.000	14.35	39.70	55.38	48.62	47.29	74.00	-26.71	peak	
4	pp14160.710	16.18	39.84	54.43	47.98	49.57	68.20	-18.63	peak	
5	17136.920	18.23	39.84	54.12	45.58	49.53	68.20	-18.67	peak	
6	17844.590	18.21	42.77	54.19	46.36	53.15	74.00	-20.85	peak	

11a_TX_CH_44_Vertical

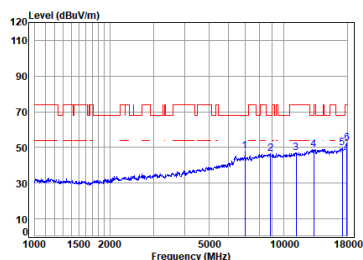


Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5220 TX RSE
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	pp 6954.852	11.37	36.11	56.76	60.50	51.22	68.20	-16.98	peak	
2	8106.200	11.46	37.81	56.46	53.56	46.37	74.00	-27.63	peak	
3	11140.310	14.70	39.54	55.44	48.71	47.51	74.00	-26.49	peak	
4	13757.270	16.15	39.94	54.58	48.26	49.77	68.20	-18.43	peak	
5	16600.640	17.65	39.20	54.06	45.98	48.77	68.20	-19.43	peak	
6	17948.050	18.30	43.44	54.20	44.92	52.46	74.00	-21.54	peak	



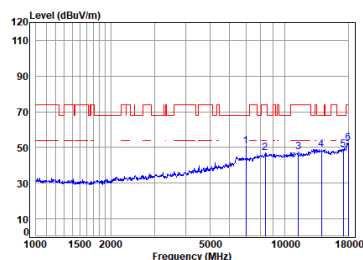
11a_TX_CH_48_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5240 TX RSE
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamplifier	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	6995.172	11.37	36.19	56.80	56.99	47.75	68.20	-20.45	peak	
2	8848.473	12.24	38.50	56.19	52.17	46.72	68.20	-21.48	peak	
3	11204.900	14.75	39.60	55.43	48.14	47.06	74.00	-26.94	peak	
4	13211.690	15.77	40.21	54.76	47.80	49.02	68.20	-19.18	peak	
5	17186.530	17.91	39.89	54.12	45.89	49.57	68.20	-18.63	peak	
6	17948.050	18.30	43.44	54.20	45.07	52.61	74.00	-21.39	peak	

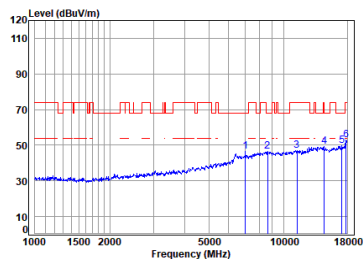
11a_TX_CH_48_Vertical



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5240 TX RSE
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamplifier	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	6995.172	11.37	36.19	56.80	59.76	50.52	68.20	-17.68	peak	
2	8343.918	11.70	38.60	56.37	52.87	46.80	74.00	-27.20	peak	
3	11335.190	14.49	39.70	55.39	48.58	47.38	74.00	-26.62	peak	
4	14079.080	16.56	39.90	54.47	47.03	49.02	68.20	-19.18	peak	
5	17186.530	17.91	39.89	54.12	45.34	49.02	68.20	-19.18	peak	
6	18000.000	18.35	43.80	54.20	44.48	52.43	74.00	-21.57	peak	

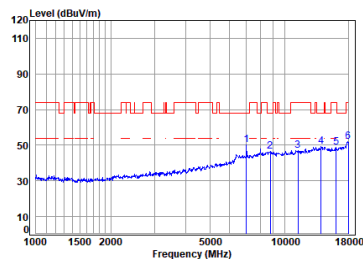
11a_TX_CH_52_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5260 TX RSE
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamplifier	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7015.420	11.47	36.23	56.80	55.83	46.73	68.20	-21.47	peak	
2	8613.468	11.98	38.47	56.27	52.53	46.71	68.20	-21.49	peak	
3	11302.480	14.63	39.70	55.40	48.00	46.93	74.00	-27.07	peak	
4	14533.910	16.79	39.43	54.28	47.40	49.34	68.20	-18.86	peak	
5	17136.920	18.23	39.84	54.12	45.89	49.84	68.20	-18.36	peak	
6	17793.090	18.18	42.45	54.18	46.42	52.87	74.00	-21.13	peak	

11a_TX_CH_52_Vertical



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5260 TX RSE
: 5G Wi-Fi 11a

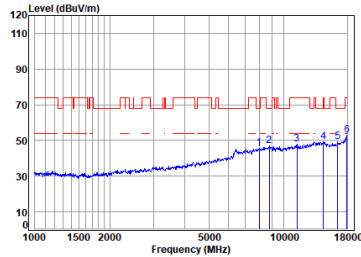
	Freq	Cable Loss	Factor	Ant Factor	Preamplifier	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7015.420	11.47	36.23	56.80	59.09	49.99	68.20	-18.21	peak	
2	8738.852	12.15	38.52	56.22	51.96	46.41	68.20	-21.79	peak	
3	11302.480	14.63	39.70	55.40	48.29	47.22	74.00	-26.78	peak	
4	13997.930	16.46	39.90	54.50	47.28	49.14	68.20	-19.06	peak	
5	16127.690	17.11	38.50	54.01	47.27	48.87	74.00	-25.13	peak	
6	18000.000	18.35	43.80	54.20	44.29	52.24	74.00	-21.76	peak	



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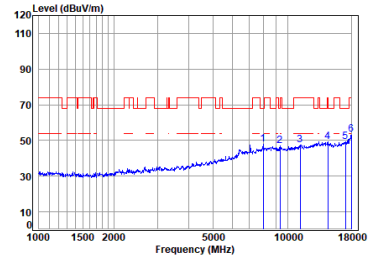
11a_TX_CH_60_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5300 TX RSE
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit	Over	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7966.832	11.55	37.73	56.51	52.88	45.65	68.20	-22.55	peak	
2	8738.852	12.15	38.52	56.22	52.48	46.93	68.20	-21.27	peak	
3	11302.400	14.63	39.70	55.40	48.98	47.91	74.00	-26.09	peak	
4	14450.130	16.98	39.55	54.32	46.86	49.07	68.20	-19.13	peak	
5	pp16504.960	17.74	38.91	54.05	46.88	49.48	68.20	-18.72	peak	
6	17948.050	18.30	43.44	54.20	45.23	52.77	74.00	-21.23	peak	

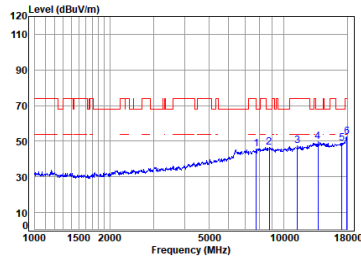
11a_TX_CH_60_Vertical



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5300 TX RSE
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit	Over	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7966.832	11.55	37.73	56.51	55.28	48.05	68.20	-20.15	peak	
2	9312.588	12.19	38.80	56.02	51.96	46.93	74.00	-27.07	peak	
3	11204.900	14.75	39.60	55.43	48.55	47.47	74.00	-26.53	peak	
4	14491.960	17.07	39.51	54.30	46.96	49.24	74.00	-24.76	peak	
5	pp17087.460	18.42	39.79	54.11	45.19	49.29	68.20	-18.91	peak	
6	18000.000	18.35	43.80	54.20	45.46	53.41	74.00	-20.59	peak	

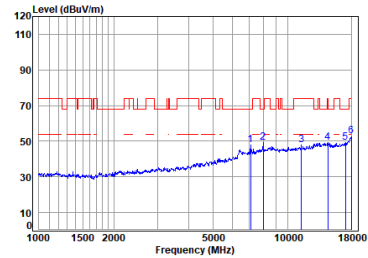
11a_TX_CH_64_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5320 TX RSE
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit	Over	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7762.260	11.36	37.05	56.57	53.83	45.67	68.20	-22.53	peak	
2	8764.146	12.19	38.50	56.21	51.91	46.39	68.20	-21.81	peak	
3	11335.190	14.49	39.70	55.39	48.50	47.30	74.00	-26.70	peak	
4	pp13757.270	16.15	39.94	54.58	48.03	49.54	68.20	-18.66	peak	
5	17136.920	18.23	39.84	54.12	44.86	48.81	68.20	-19.39	peak	
6	17948.050	18.30	43.44	54.20	45.03	52.57	74.00	-21.43	peak	

11a_TX_CH_64_Vertical

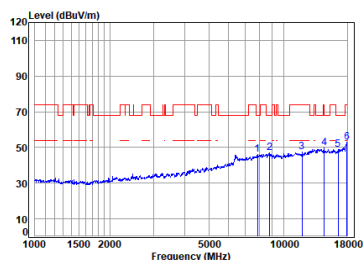


Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5320 TX RSE
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit	Over	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7996.999	11.97	36.39	56.77	56.27	47.86	68.20	-20.34	Peak	
2	pp 7966.832	11.55	37.73	56.51	56.42	49.19	68.20	-19.01	peak	
3	11335.190	14.49	39.70	55.39	48.89	47.69	74.00	-26.31	peak	
4	14491.960	17.07	39.51	54.30	46.83	49.11	74.00	-24.89	peak	
5	17087.460	18.42	39.79	54.11	45.02	49.12	68.20	-19.08	peak	
6	18000.000	18.35	43.80	54.20	44.99	52.94	74.00	-21.06	peak	



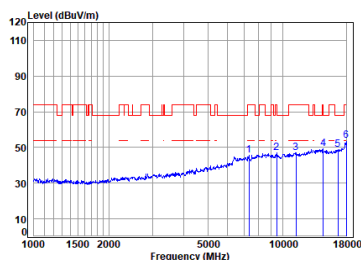
11a_TX_CH_100_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5500 TX RSE
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7852.524	11.43	37.41	56.54	53.73	46.03	68.20	-22.17	peak	
2	8789.516	12.23	38.50	56.20	52.28	46.81	68.20	-21.39	peak	
3	11871.710	14.62	39.67	55.24	48.18	47.43	74.00	-26.57	peak	
4	pp14533.910	16.79	39.43	54.28	47.98	49.92	68.20	-18.28	peak	
5	16552.730	17.69	39.06	54.06	46.16	48.85	68.20	-19.35	peak	
6	17948.050	18.30	43.44	54.20	45.20	52.74	74.00	-21.26	peak	

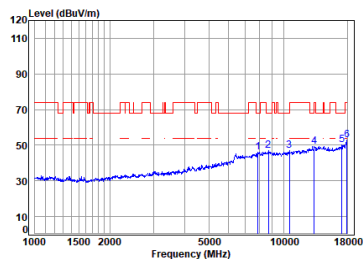
11a_TX_CH_100_Vertical



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5500 TX RSE
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7326.267	11.51	36.75	56.70	54.21	45.77	74.00	-28.23	peak	
2	9448.149	12.43	38.80	55.98	51.55	46.80	74.00	-27.20	peak	
3	11302.480	14.63	39.70	55.40	48.16	47.09	74.00	-26.91	peak	
4	pp14533.910	16.79	39.43	54.28	47.12	49.06	68.20	-19.14	peak	
5	16696.880	17.59	39.39	54.07	46.06	48.97	68.20	-19.23	peak	
6	18000.000	18.35	43.80	54.20	45.71	53.66	74.00	-20.34	peak	

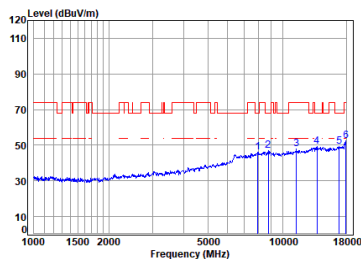
11a_TX_CH_116_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5580 TX RSE
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7875.254	11.48	37.50	56.54	53.57	46.01	68.20	-22.19	peak	
2	8688.480	12.08	38.55	56.24	52.45	46.84	68.20	-21.36	peak	
3	10545.010	13.62	39.19	55.63	49.69	46.87	68.20	-21.33	peak	
4	13288.280	16.44	40.29	54.74	47.28	49.27	74.00	-24.73	peak	
5	pp17136.920	18.23	39.84	54.12	46.14	50.09	68.20	-18.11	peak	
6	17948.050	18.30	43.44	54.20	45.43	52.97	74.00	-21.03	peak	

11a_TX_CH_116_Vertical

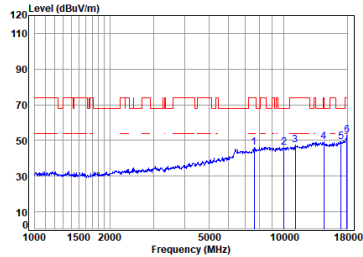


Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5580 TX RSE
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7943.838	11.55	37.69	56.52	53.53	46.25	68.20	-21.95	peak	
2	8738.852	12.15	38.52	56.22	52.77	47.22	68.20	-20.98	peak	
3	11368.000	14.35	39.70	55.38	49.07	47.74	74.00	-26.26	peak	
4	13717.560	16.33	39.98	54.59	47.49	49.21	68.20	-18.99	peak	
5	pp16891.040	18.12	39.60	54.09	45.80	49.43	68.20	-18.77	peak	
6	17948.050	18.30	43.44	54.20	45.01	52.55	74.00	-21.45	peak	



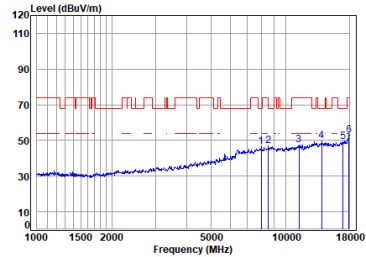
11a_TX_CH_140_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5700 TX RSE
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	7606.788	11.11	36.81	56.61	54.82	46.13	74.00	-27.87	peak	
2	10010.420	13.04	38.92	55.80	50.13	46.29	68.20	-21.91	peak	
3	11140.310	14.70	39.54	55.44	48.64	47.44	74.00	-26.56	peak	
4	14491.960	17.07	39.51	54.30	46.82	49.10	74.00	-24.90	peak	
5	pp16988.970	18.08	39.69	54.10	45.60	49.27	68.20	-18.93	peak	
6	17948.050	18.30	43.44	54.20	45.36	52.90	74.00	-21.10	peak	

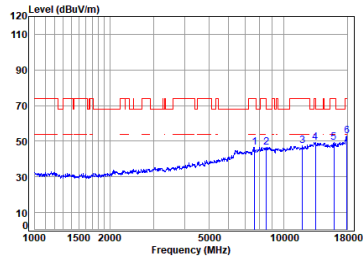
11a_TX_CH_140_Vertical



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5700 TX RSE
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	7989.893	11.56	37.78	56.50	53.82	46.66	68.20	-21.54	peak	
2	8514.456	12.26	38.30	56.30	52.58	46.84	68.20	-21.36	peak	
3	11302.480	14.63	39.70	55.40	48.68	47.61	74.00	-26.39	peak	
4	pp13957.530	16.25	39.90	54.51	47.92	49.56	68.20	-18.64	peak	
5	17038.150	18.22	39.74	54.11	45.28	49.13	68.20	-19.07	peak	
6	17948.050	18.30	43.44	54.20	45.16	52.70	74.00	-21.30	peak	

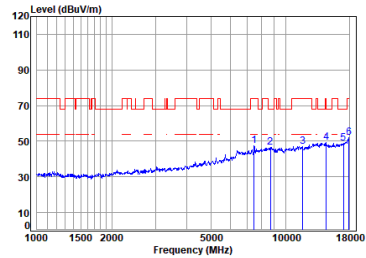
11a_Straddle_TX_CH_144_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5720 TX RSE
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	7628.806	11.19	36.86	56.61	55.16	46.60	74.00	-27.40	peak	
2	8514.456	12.26	38.30	56.30	52.28	46.54	68.20	-21.66	peak	
3	11906.070	14.89	39.71	55.23	47.91	47.28	74.00	-26.72	peak	
4	pp13404.010	15.91	40.29	54.70	47.90	49.40	68.20	-18.80	peak	
5	15896.290	17.27	38.69	54.01	47.38	49.33	74.00	-24.67	peak	
6	17948.050	18.30	43.44	54.20	45.20	52.74	74.00	-21.26	peak	

11a_Straddle_TX_CH_144_Vertical



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5720 TX RSE
: 5G Wi-Fi 11a

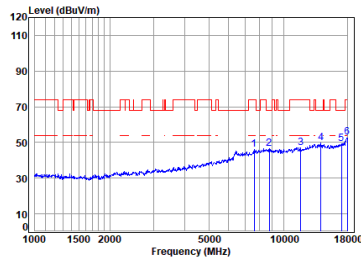
	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	7476.806	11.29	36.80	56.65	56.08	47.52	74.00	-26.48	peak	
2	8688.480	12.08	38.55	56.24	51.97	46.36	68.20	-21.84	peak	
3	11701.380	14.73	39.50	55.28	47.98	46.93	74.00	-27.07	peak	
4	pp14533.910	16.79	39.43	54.28	47.19	49.13	68.20	-19.07	peak	
5	17087.460	18.42	39.79	54.11	44.82	48.92	68.20	-19.28	peak	
6	17948.050	18.30	43.44	54.20	44.61	52.15	74.00	-21.85	peak	



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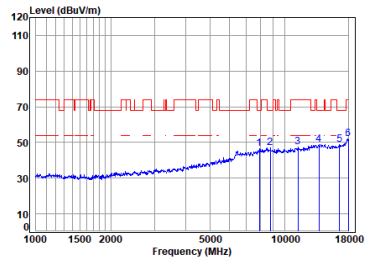
11ac_40M_Straddle_TX_CH_142_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5710 TX RSE
: 5G Wi-Fi 11ac40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7606.788	11.11	36.81	56.61	54.91	46.22	74.00	-27.78	peak
2	8764.146	12.19	38.50	56.21	52.17	46.65	68.20	-21.55	peak
3	11735.250	14.68	39.54	55.27	48.26	47.21	74.00	-26.79	peak
4	pp14119.830	16.45	39.88	54.45	47.69	49.57	68.20	-18.63	peak
5	17087.460	18.42	39.79	54.11	45.04	49.14	68.20	-19.06	peak
6	18000.000	18.35	43.80	54.20	44.92	52.87	74.00	-21.13	peak

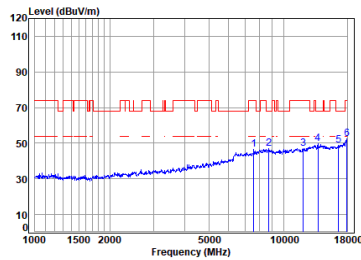
11ac_40M_Straddle_TX_CH_142_Vertical



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5710 TX RSE
: 5G Wi-Fi 11ac40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7898.049	11.54	37.59	56.53	54.09	46.69	68.20	-21.51	peak
2	8764.146	12.19	38.50	56.21	52.35	46.83	68.20	-21.37	peak
3	11302.480	14.63	39.70	55.40	48.31	47.24	74.00	-26.76	peak
4	pp13717.560	16.33	39.98	54.59	47.15	48.87	68.20	-19.33	peak
5	16600.640	17.65	39.20	54.06	46.03	48.82	68.20	-19.38	peak
6	18000.000	18.35	43.80	54.20	44.17	52.12	74.00	-21.88	peak

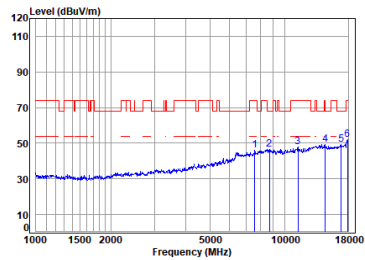
11ac_80M_Straddle_TX_CH_138_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5690 TX RSE
: 5G Wi-Fi 11ac80

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7584.833	11.11	36.80	56.62	55.17	46.46	74.00	-27.54	peak
2	8713.630	12.11	38.57	56.23	52.53	46.98	68.20	-21.22	peak
3	11975.100	14.65	39.78	55.21	47.65	46.87	74.00	-27.13	peak
4	pp13717.560	16.33	39.98	54.59	48.01	49.73	68.20	-18.47	peak
5	16600.640	17.65	39.20	54.06	46.13	48.92	68.20	-19.28	peak
6	17948.050	18.30	43.44	54.20	44.91	52.45	74.00	-21.55	peak

11ac_80M_Straddle_TX_CH_138_Vertical

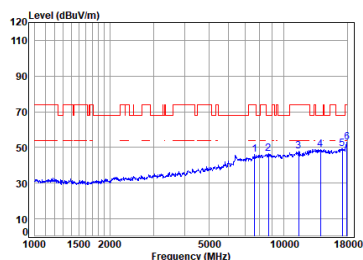


Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5690 TX RSE
: 5G Wi-Fi 11ac80

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7584.833	11.11	36.80	56.62	54.65	45.94	74.00	-28.06	peak
2	8688.480	12.08	38.55	56.24	52.36	46.75	68.20	-21.45	peak
3	11302.480	14.63	39.70	55.40	48.82	47.75	74.00	-26.25	peak
4	pp14533.910	16.79	39.43	54.28	47.52	49.46	68.20	-18.74	peak
5	16891.040	18.12	39.60	54.09	45.64	49.27	68.20	-18.93	peak
6	17896.250	18.25	43.08	54.19	45.00	52.14	74.00	-21.86	peak



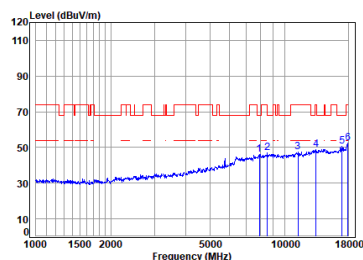
11a_TX_CH_149_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5745 TX RSE
: 5.8G Wi-Fi 11a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7650.888	11.27	36.90	56.60	54.35	45.92	74.00	-28.08	peak
2	8688.480	12.08	38.55	56.24	51.95	46.34	68.20	-21.86	peak
3	11467.000	14.77	39.63	55.35	49.01	48.06	74.00	-25.94	peak
4	14038.450	16.51	39.90	54.48	47.06	48.99	68.20	-19.21	peak
5	pp17186.530	17.91	39.89	54.12	45.55	49.23	68.20	-18.97	peak
6	17948.050	18.30	43.44	54.20	45.30	52.84	74.00	-21.16	peak

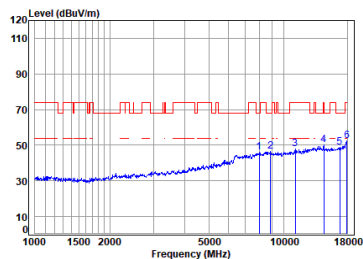
11a_TX_CH_149_Vertical



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5745 TX RSE
: 5.8G Wi-Fi 11a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7920.911	11.54	37.64	56.52	53.36	46.02	68.20	-22.18	peak
2	8514.456	12.26	38.30	56.30	52.73	46.99	68.20	-21.21	peak
3	11302.480	14.63	39.70	55.40	48.57	47.50	74.00	-26.50	peak
4	13365.320	16.13	40.30	54.71	47.10	48.82	74.00	-25.18	peak
5	pp17038.150	18.22	39.74	54.11	46.69	50.54	68.20	-17.66	peak
6	17948.050	18.30	43.44	54.20	44.93	52.47	74.00	-21.53	peak

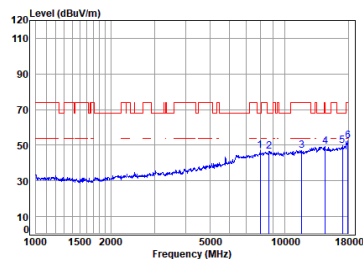
11a_TX_CH_157_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5785 TX RSE
: 5.8G Wi-Fi 11a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7989.893	11.56	37.78	56.50	53.30	46.14	68.20	-22.06	peak
2	8866.062	12.23	38.53	56.18	52.06	46.64	68.20	-21.56	peak
3	11140.310	14.70	39.54	55.44	48.91	47.71	74.00	-26.29	peak
4	14491.960	17.07	39.51	54.30	48.09	50.37	74.00	-23.63	peak
5	pp16842.290	17.77	39.60	54.09	45.38	48.66	68.20	-19.54	peak
6	17948.050	18.30	43.44	54.20	44.73	52.27	74.00	-21.73	peak

11a_TX_CH_157_Vertical

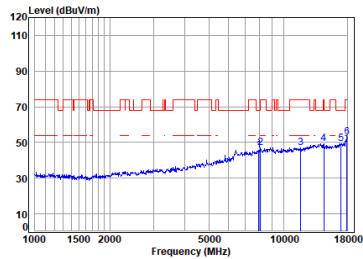


Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5785 TX RSE
: 5.8G Wi-Fi 11a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7989.893	11.56	37.78	56.50	54.12	46.96	68.20	-21.24	peak
2	8663.404	12.04	38.45	56.25	52.49	46.73	68.20	-21.47	peak
3	11701.380	14.73	39.50	55.28	48.24	47.19	74.00	-26.81	peak
4	14533.910	16.79	39.43	54.28	47.20	49.14	68.20	-19.06	peak
5	pp17087.460	18.42	39.79	54.11	45.49	49.59	68.20	-18.61	peak
6	17948.050	18.30	43.44	54.20	44.72	52.26	74.00	-21.74	peak



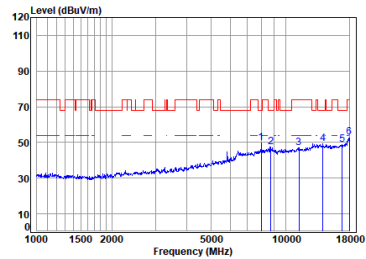
11a_TX_CH_165_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5825 TX RSE
: 5.8G Wi-Fi 11a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7943.838	11.55	37.69	56.52	52.98	45.70	68.20	-22.50	peak
2	8059.475	11.49	37.80	56.48	54.36	47.17	74.00	-26.83	peak
3	11735.250	14.68	39.54	55.27	47.90	46.85	74.00	-27.15	peak
4	14491.960	17.07	39.51	54.30	46.91	49.19	74.00	-24.81	peak
5	17038.150	18.22	39.74	54.11	45.56	49.41	68.20	-18.79	peak
6	17948.050	18.30	43.44	54.20	45.23	52.77	74.00	-21.23	peak

11a_TX_CH_165_Vertical



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5825 TX RSE
: 5.8G Wi-Fi 11a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7989.893	11.56	37.78	56.50	57.08	49.92	68.20	-18.28	peak
2	8713.630	12.11	38.57	56.23	52.99	47.44	68.20	-20.76	peak
3	11302.480	14.63	39.70	55.40	48.08	47.01	74.00	-26.99	peak
4	14119.830	16.45	39.88	54.45	47.52	49.40	68.20	-18.80	peak
5	16891.040	18.12	39.60	54.09	44.99	48.62	68.20	-19.58	peak
6	18000.000	18.35	43.80	54.20	45.19	53.14	74.00	-20.86	peak



7.4 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)
 Test Method: ANSI C63.10 (2020) Section 6.10.5
 Measurement Distance: 3m
 Test Engineer: Xing Guo

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

*(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

7.4.1 E.U.T. Operation

Operating Environment:

Temperature: 24.5 °C Humidity: 50.8 % RH Atmospheric Pressure: 1020 mbar



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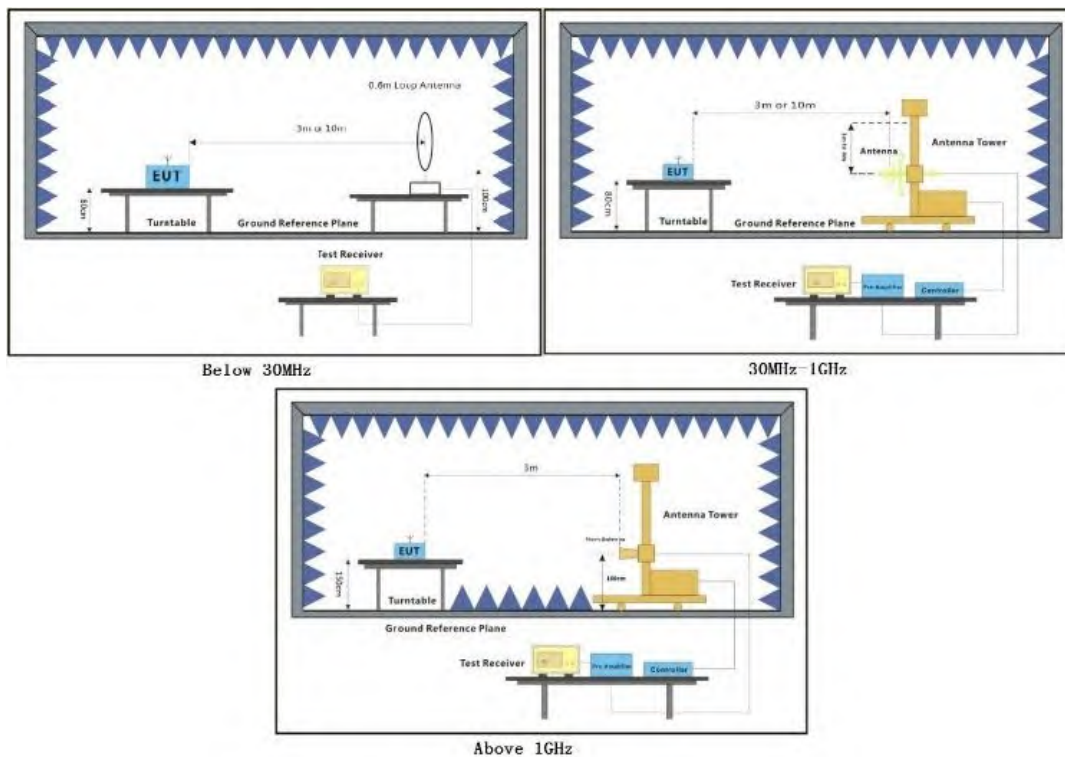
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7.4.2 Test Mode Description

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. 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. 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. 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. Only the data of worst case is recorded in the report.

7.4.3 Test Setup Diagram



7.4.4 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j. Repeat above procedures until all frequencies measured was complete.

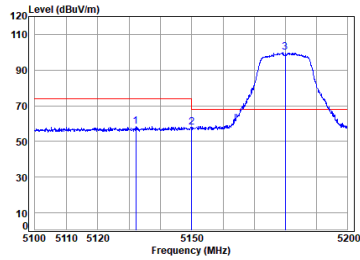
Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Remark 2: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for Peak detection (PK) and Average detection (AV) at frequency above 1GHz.

Remark 3: For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.



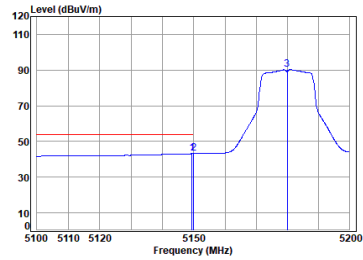
11a_TX_CH_36_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5180 Band edge
: 5G Wi-Fi 11a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5132.088	10.07	32.36	30.54	46.45	58.34	74.00	-15.66	peak
2	5149.980	10.14	32.40	30.55	46.02	58.01	74.00	-15.99	peak
3 pp	5180.000	10.25	32.46	30.56	87.57	99.72	68.20	31.52	peak

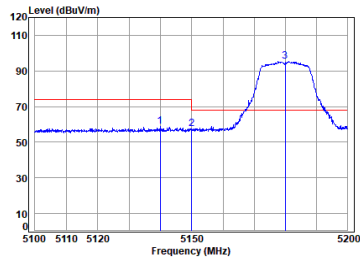
11a_TX_CH_36_Horizontal-Avg



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5180 Band edge
: 5G Wi-Fi 11a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5149.458	10.14	32.40	30.55	31.16	43.15	54.00	-10.85	Average
2 pp	5149.980	10.14	32.40	30.55	31.19	43.18	54.00	-10.82	Average
3	5180.000	10.25	32.46	30.56	78.09	90.24	-----	-----	Average

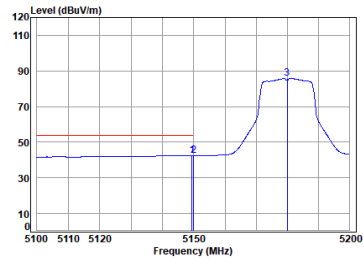
11a_TX_CH_36_Vertical-Peak



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5180 Band edge
: 5G Wi-Fi 11a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5139.867	10.10	32.38	30.55	46.78	58.71	74.00	-15.29	peak
2	5149.980	10.14	32.40	30.55	45.49	57.48	74.00	-16.52	peak
3 pp	5180.000	10.25	32.46	30.56	83.13	95.28	68.20	27.08	peak

11a_TX_CH_36_Vertical-Avg

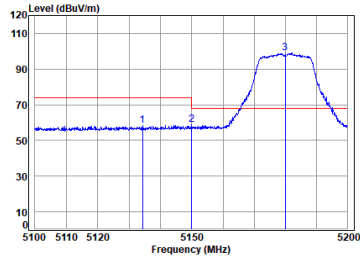


Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5180 Band edge
: 5G Wi-Fi 11a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5149.458	10.14	32.40	30.55	30.47	42.46	54.00	-11.54	Average
2 pp	5149.980	10.14	32.40	30.55	30.53	42.52	54.00	-11.48	Average
3	5180.000	10.25	32.46	30.56	73.81	85.96	-----	-----	Average



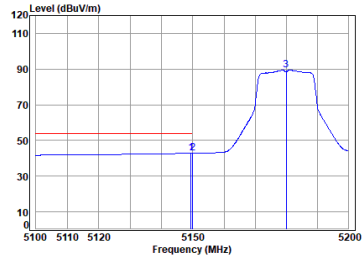
11ac_VHT(20M)_TX_CH_36_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5180 Band edge
: 5G Wi-Fi 11ac20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5134.281	10.08	32.37	30.54	46.51	58.42	74.00	-15.58	peak
2	5149.980	10.14	32.40	30.55	47.06	59.05	74.00	-14.95	peak
3	5180.000	10.25	32.46	30.56	86.93	99.08	68.20	30.88	peak

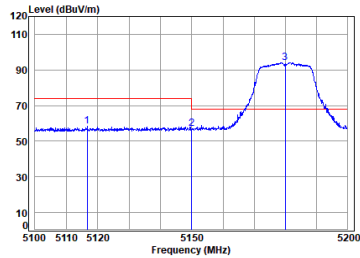
11ac_VHT(20M)_TX_CH_36_Horizontal-Avg



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5180 Band edge
: 5G Wi-Fi 11ac20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5149.458	10.14	32.40	30.55	30.82	42.81	54.00	-11.19	Average
2	5149.980	10.14	32.40	30.55	30.88	42.87	54.00	-11.13	Average
3	5180.000	10.25	32.46	30.56	77.32	89.47	-----	-----	Average

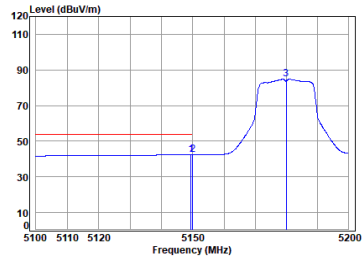
11ac_VHT(20M)_TX_CH_36_Vertical-Peak



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5180 Band edge
: 5G Wi-Fi 11ac20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5116.665	10.01	32.33	30.54	46.79	58.59	74.00	-15.41	peak
2	5149.980	10.14	32.40	30.55	45.02	57.01	74.00	-16.99	peak
3	5180.000	10.25	32.46	30.56	81.96	94.11	68.20	25.91	peak

11ac_VHT(20M)_TX_CH_36_Vertical-Avg

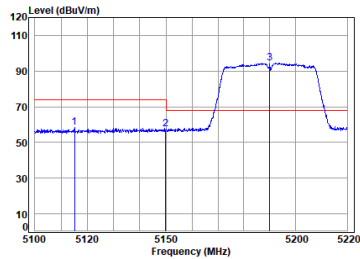


Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5180 Band edge
: 5G Wi-Fi 11ac20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5149.458	10.14	32.40	30.55	30.42	42.41	54.00	-11.59	Average
2	5149.980	10.14	32.40	30.55	30.45	42.44	54.00	-11.56	Average
3	5180.000	10.25	32.46	30.56	72.63	84.78	-----	-----	Average



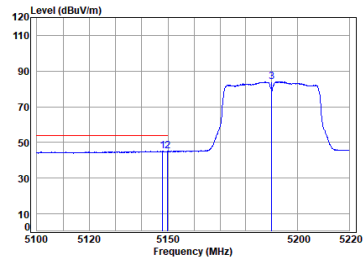
11ac_VHT(40M)_TX_CH_38_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5190 Band edge
: 5G Wi-Fi 11ac40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5115.086	10.01	32.33	30.54	46.42	58.22	74.00	-15.78	peak
2	5149.980	10.14	32.40	30.55	45.55	57.54	74.00	-16.46	peak
3 pp	5190.000	10.29	32.48	30.56	82.29	94.50	68.20	26.30	peak

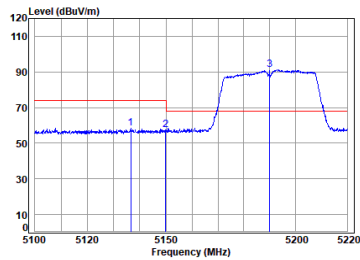
11ac_VHT(40M)_TX_CH_38_Horizontal-Avg



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5190 Band edge
: 5G Wi-Fi 11ac40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5147.905	10.13	32.40	30.55	33.09	45.07	54.00	-8.93	Average
2	5149.980	10.14	32.40	30.55	33.01	45.00	54.00	-9.00	Average
3	5190.000	10.29	32.48	30.56	71.78	83.99	-----	-----	Average

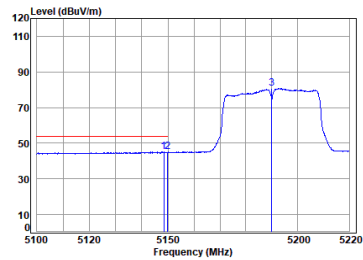
11ac_VHT(40M)_TX_CH_38_Vertical-Peak



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5190 Band edge
: 5G Wi-Fi 11ac40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5136.543	10.09	32.37	30.54	46.47	58.39	74.00	-15.61	peak
2	5149.980	10.14	32.40	30.55	45.49	57.48	74.00	-16.52	peak
3 pp	5190.000	10.29	32.48	30.56	79.09	91.30	68.20	23.10	peak

11ac_VHT(40M)_TX_CH_38_Vertical-Avg



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5190 Band edge
: 5G Wi-Fi 11ac40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5148.593	10.14	32.40	30.55	33.11	45.10	54.00	-8.90	Average
2	5149.980	10.14	32.40	30.55	33.06	45.05	54.00	-8.95	Average
3	5190.000	10.29	32.48	30.56	68.68	80.89	-----	-----	Average



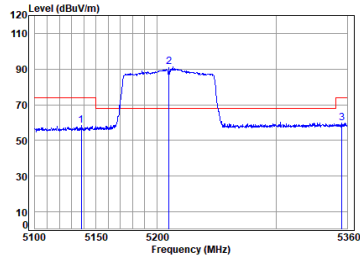
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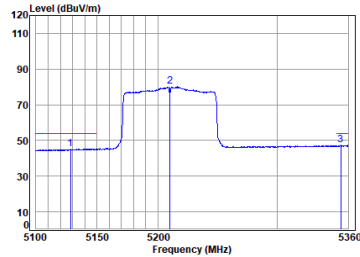
11ac_VHT(80M)_TX_CH_42_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5210 Band edge
: 5G Wi-Fi 11ac80

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5137.670	10.09	32.38	30.54	46.27	58.20	74.00	-15.80	peak
2	5210.000	10.32	32.52	30.57	79.16	91.43	68.20	23.23	peak
3	5355.471	10.47	32.80	30.61	47.02	59.68	74.00	-14.32	peak

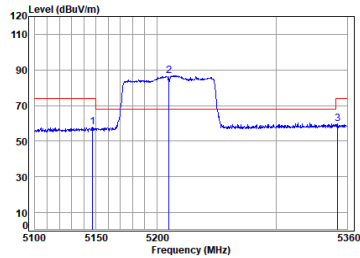
11ac_VHT(80M)_TX_CH_42_Horizontal-Avg



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5210 Band edge
: 5G Wi-Fi 11ac80

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5128.226	10.06	32.36	30.54	33.39	45.27	54.00	-8.73	Average
2	5210.000	10.32	32.52	30.57	67.81	80.08	54.00	26.08	Average
3	5353.607	10.46	32.80	30.61	34.68	47.33	54.00	-6.67	Average

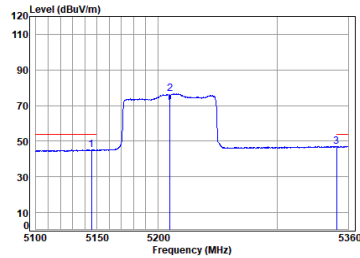
11ac_VHT(80M)_TX_CH_42_Vertical-Peak



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5210 Band edge
: 5G Wi-Fi 11ac80

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5147.130	10.13	32.39	30.55	45.85	57.82	74.00	-16.18	peak
2	5210.000	10.32	32.52	30.57	74.60	86.87	68.20	18.67	peak
3	5351.744	10.46	32.80	30.61	46.96	59.61	74.00	-14.39	peak

11ac_VHT(80M)_TX_CH_42_Vertical-Avg



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5210 Band edge
: 5G Wi-Fi 11ac80

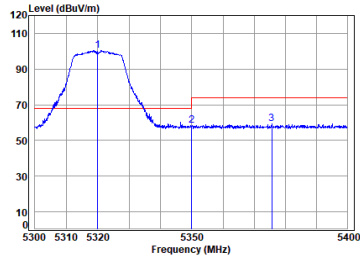
	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5145.339	10.12	32.39	30.55	33.18	45.14	54.00	-8.86	Average
2	5210.000	10.32	32.52	30.57	64.39	76.66	54.00	22.66	Average
3	5350.148	10.45	32.80	30.61	34.52	47.16	54.00	-6.84	Average



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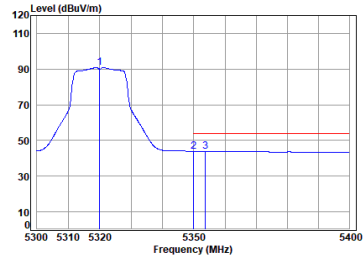
11a_TX_CH_64_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5320 Band edge
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit	Over	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	pp 5320.000	10.35	32.74	30.60	88.01	100.50	68.20	32.30	peak	
2	5350.020	10.45	32.80	30.61	45.99	58.63	74.00	-15.37	peak	
3	5375.628	10.54	32.80	30.62	46.54	59.26	74.00	-14.74	peak	

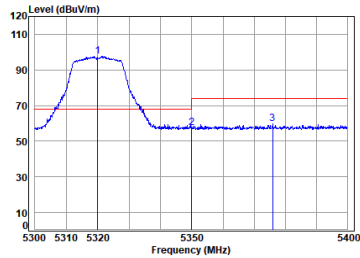
11a_TX_CH_64_Horizontal-Avg



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5320 Band edge
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit	Over	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5320.000	10.35	32.74	30.60	78.39	90.88	-----	-----	Average	
2	pp 5350.020	10.45	32.80	30.61	31.28	43.92	54.00	-10.08	Average	
3	5375.768	10.46	32.80	30.61	31.26	43.91	54.00	-10.09	Average	

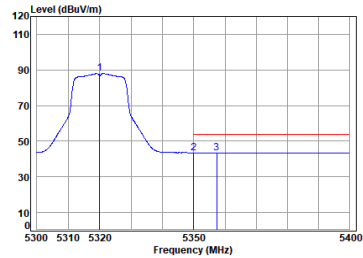
11a_TX_CH_64_Vertical-Peak



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5320 Band edge
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit	Over	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	pp 5320.000	10.35	32.74	30.60	85.34	97.83	68.20	29.63	peak	
2	5350.020	10.45	32.80	30.61	44.79	57.43	74.00	-16.57	peak	
3	5375.930	10.54	32.80	30.62	46.83	59.55	74.00	-14.45	peak	

11a_TX_CH_64_Vertical-Avg

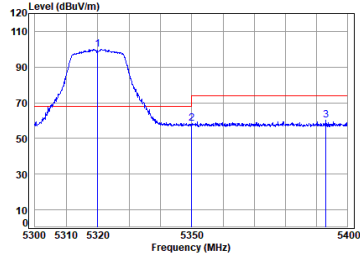


Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5320 Band edge
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit	Over	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5320.000	10.35	32.74	30.60	75.52	88.01	-----	-----	Average	
2	5350.020	10.45	32.80	30.61	30.88	43.52	54.00	-10.48	Average	
3	pp 5375.372	10.48	32.80	30.61	30.89	43.56	54.00	-10.44	Average	



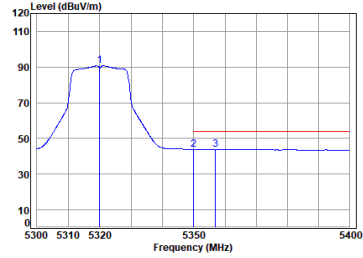
11ac_VHT(20M)_TX_CH_64_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5320 Band edge
: 5G Wi-Fi 11ac20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	pp 5320.000	10.35	32.74	30.60	87.45	99.94	68.20	31.74	peak
2	5350.020	10.45	32.80	30.61	45.57	58.21	74.00	-15.79	peak
3	5393.141	10.60	32.80	30.62	47.28	60.06	74.00	-13.94	peak

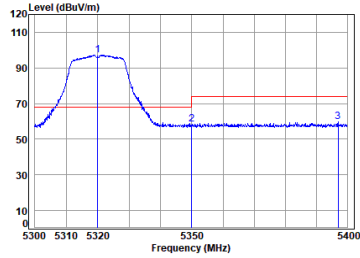
11ac_VHT(20M)_TX_CH_64_Horizontal-Avg



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5320 Band edge
: 5G Wi-Fi 11ac20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5320.000	10.35	32.74	30.60	78.21	90.70	-----	-----	Average
2	pp 5350.020	10.45	32.80	30.61	31.30	43.94	54.00	-10.06	Average
3	5393.971	10.47	32.80	30.61	31.27	43.93	54.00	-10.07	Average

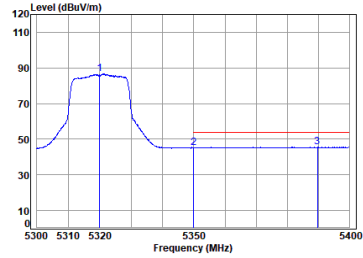
11ac_VHT(20M)_TX_CH_64_Vertical-Peak



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5320 Band edge
: 5G Wi-Fi 11ac20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	pp 5320.000	10.35	32.74	30.60	84.75	97.24	68.20	29.04	Peak
2	5350.020	10.45	32.80	30.61	45.91	58.55	74.00	-15.45	Peak
3	5397.074	10.61	32.80	30.63	46.85	59.63	74.00	-14.37	Peak

11ac_VHT(20M)_TX_CH_64_Vertical-Avg

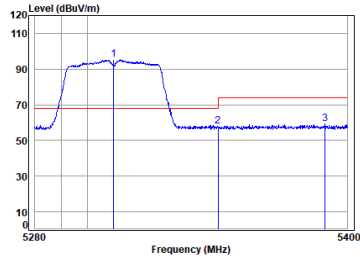


Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5320 Band edge
: 5G Wi-Fi 11ac20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5320.000	10.35	32.74	30.60	74.33	86.82	-----	-----	Average
2	5350.020	10.45	32.80	30.61	32.65	45.29	54.00	-8.71	Average
3	pp 5389.714	10.59	32.80	30.62	32.83	45.60	54.00	-8.40	Average



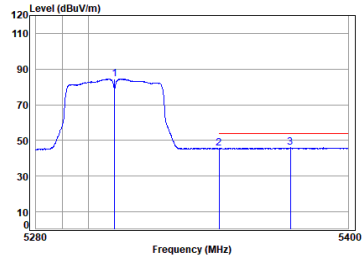
11ac_VHT(40M)_TX_CH_62_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5310 Band edge
: 5G Wi-Fi 11ac40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5310.000	10.31	32.72	30.60	82.76	95.19	68.20	26.99	peak
2	5350.020	10.45	32.80	30.61	45.17	57.81	74.00	-16.19	peak
3	5391.391	10.59	32.80	30.62	46.39	59.16	74.00	-14.84	peak

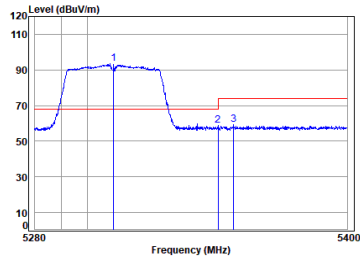
11ac_VHT(40M)_TX_CH_62_Horizontal-Avg



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5310 Band edge
: 5G Wi-Fi 11ac40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5310.000	10.31	32.72	30.60	72.07	84.50	-----	-----	Average
2	5350.020	10.45	32.80	30.61	32.85	45.49	54.00	-8.51	Average
3 pp	5377.596	10.54	32.80	30.62	33.16	45.88	54.00	-8.12	Average

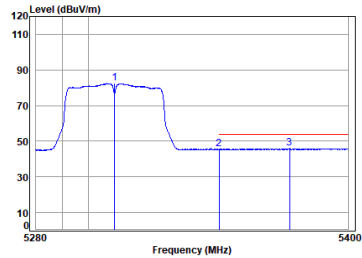
11ac_VHT(40M)_TX_CH_62_Vertical-Peak



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5310 Band edge
: 5G Wi-Fi 11ac40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5310.000	10.31	32.72	30.60	81.12	93.55	68.20	25.35	peak
2	5350.020	10.45	32.80	30.61	46.31	58.95	74.00	-15.05	peak
3	5356.128	10.47	32.80	30.61	46.82	59.48	74.00	-14.52	peak

11ac_VHT(40M)_TX_CH_62_Vertical-Avg

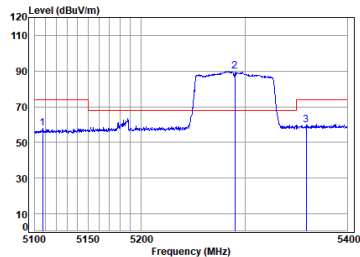


Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5310 Band edge
: 5G Wi-Fi 11ac40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5310.000	10.31	32.72	30.60	69.96	82.39	-----	-----	Average
2	5350.020	10.45	32.80	30.61	32.88	45.52	54.00	-8.48	Average
3 pp	5377.354	10.54	32.80	30.62	33.23	45.95	54.00	-8.05	Average



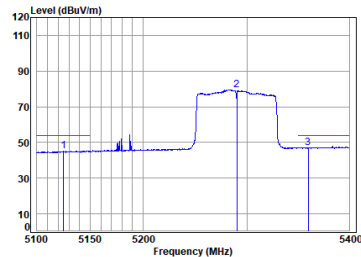
11ac_VHT(80M)_TX_CH_58_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5290 Band edge
: 5G Wi-Fi 11ac80

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5107.293	9.98	32.31	30.53	46.21	57.97	74.00	-16.03	peak
2	5290.000	10.28	32.68	30.59	77.46	89.83	68.20	21.63	peak
3	5359.717	10.48	32.80	30.61	47.24	59.91	74.00	-14.09	peak

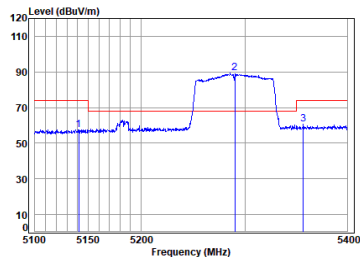
11ac_VHT(80M)_TX_CH_58_Horizontal-Avg



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5290 Band edge
: 5G Wi-Fi 11ac80

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5124.838	10.05	32.35	30.54	33.37	45.23	54.00	-8.77	Average
2	5290.000	10.28	32.68	30.59	67.08	79.45	54.00	25.45	Average
3	5359.717	10.48	32.80	30.61	34.50	47.17	54.00	-6.83	Average

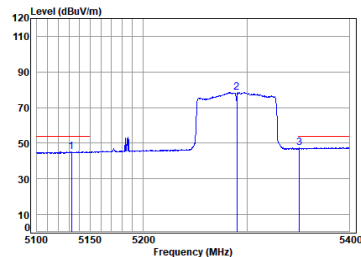
11ac_VHT(80M)_TX_CH_58_Vertical-Peak



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5290 Band edge
: 5G Wi-Fi 11ac80

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5141.269	10.11	32.38	30.55	45.60	57.54	74.00	-16.46	peak
2	5290.000	10.28	32.68	30.59	77.83	89.40	68.20	21.20	peak
3	5356.960	10.47	32.80	30.61	47.82	60.48	74.00	-13.52	peak

11ac_VHT(80M)_TX_CH_58_Vertical-Avg

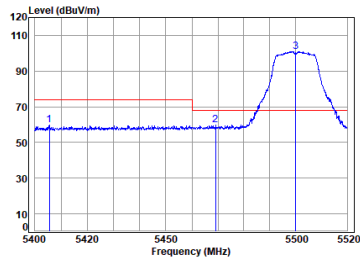


Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5290 Band edge
: 5G Wi-Fi 11ac80

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5132.460	10.07	32.36	30.54	33.36	45.25	54.00	-8.75	Average
2	5290.000	10.28	32.68	30.59	66.06	78.43	54.00	24.43	Average
3	5351.146	10.45	32.80	30.61	34.61	47.25	54.00	-6.75	Average



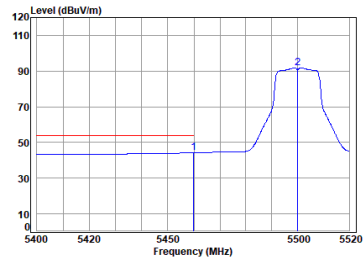
11a_TX_CH_100_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5500 Band edge
: 5G Wi-Fi 11a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5405.462	10.62	32.81	30.63	47.12	59.92	74.00	-14.08	peak
2	5469.038	10.59	32.90	30.65	46.87	59.71	68.20	-8.49	peak
3 pp	5500.000	10.58	32.90	30.66	88.21	101.03	68.20	32.83	peak

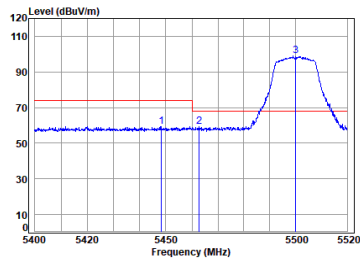
11a_TX_CH_100_Horizontal-Avg



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5500 Band edge
: 5G Wi-Fi 11a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5459.910	10.60	32.90	30.64	31.40	44.26	54.00	-9.74	Average
2	5500.000	10.58	32.90	30.66	79.05	91.87	-----	-----	Average

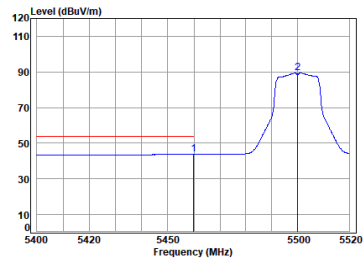
11a_TX_CH_100_Vertical-Peak



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5500 Band edge
: 5G Wi-Fi 11a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5448.282	10.60	32.90	30.64	46.61	59.47	74.00	-14.53	peak
2	5462.791	10.59	32.90	30.65	46.49	59.33	68.20	-8.87	peak
3 pp	5500.000	10.58	32.90	30.66	85.99	98.81	68.20	30.61	peak

11a_TX_CH_100_Vertical-Avg

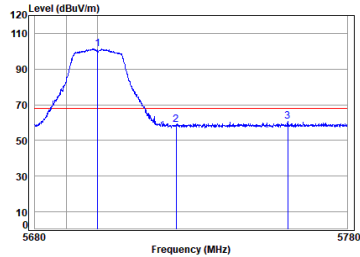


Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5500 Band edge
: 5G Wi-Fi 11a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5459.910	10.60	32.90	30.64	31.02	43.88	54.00	-10.12	Average
2	5500.000	10.58	32.90	30.66	76.61	89.43	-----	-----	Average



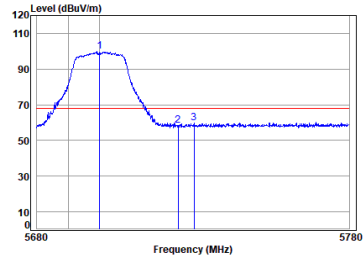
11a_TX_CH_140_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5700 Band edge
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit	Over	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5700.000	10.56		33.20	30.72	88.37	101.41	68.20	33.21	peak
2	5725.000	10.68		33.25	30.72	45.49	58.70	68.20	-9.50	peak
3	5760.865	10.84		33.32	30.73	47.06	60.49	68.20	-7.71	peak

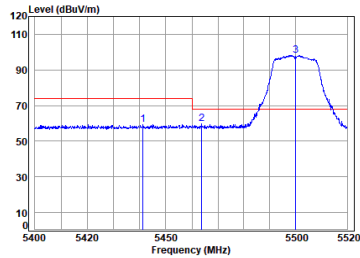
11a_TX_CH_140_Vertical-Peak



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5700 Band edge
: 5G Wi-Fi 11a

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit	Over	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5700.000	10.56		33.20	30.72	86.67	99.71	68.20	31.51	peak
2	5725.000	10.68		33.25	30.72	45.30	58.51	68.20	-9.69	peak
3	5730.082	10.70		33.26	30.72	46.66	59.90	68.20	-8.30	peak

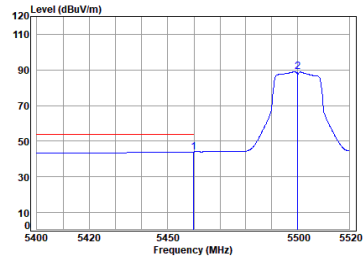
11ac_VHT(20M)_TX_CH_100_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5500 Band edge
: 5G Wi-Fi 11ac20

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit	Over	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5441.222	10.60		32.88	30.64	46.36	59.20	74.00	-14.80	peak
2	5463.752	10.59		32.90	30.65	46.72	59.56	68.20	-8.64	peak
3 pp	5500.000	10.58		32.90	30.66	85.33	98.15	68.20	29.95	peak

11ac_VHT(20M)_TX_CH_100_Horizontal-Avg

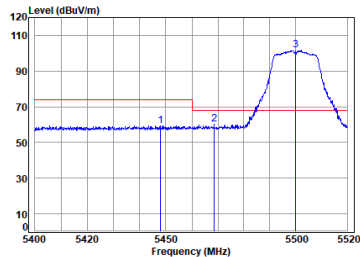


Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5500 Band edge
: 5G Wi-Fi 11ac20

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit	Over	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5459.910	10.60		32.90	30.64	31.16	44.02	54.00	-9.98	Average
2	5500.000	10.58		32.90	30.66	76.19	89.01	-----	-----	Average



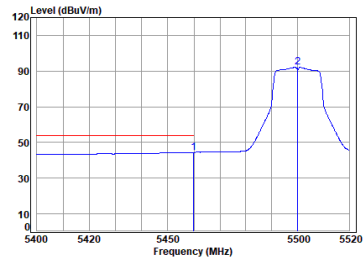
11ac_VHT(20M)_TX_CH_100_Vertical-Peak



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5500 Band edge
: 5G Wi-Fi 11ac20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5447.923	10.60	32.90	30.64	46.48	59.34	74.00	-14.66	peak
2	5468.557	10.59	32.90	30.65	47.43	60.27	68.20	-7.93	peak
3 pp	5500.000	10.58	32.90	30.66	88.79	101.61	68.20	33.41	peak

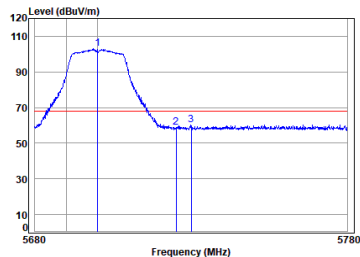
11ac_VHT(20M)_TX_CH_100_Vertical-Avg



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5500 Band edge
: 5G Wi-Fi 11ac20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5459.910	10.60	32.90	30.64	31.57	44.43	54.00	-9.57	Average
2	5500.000	10.58	32.90	30.66	79.29	92.11	-----	-----	Average

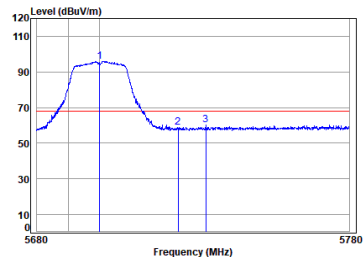
11ac_VHT(20M)_TX_CH_140_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5700 Band edge
: 5G Wi-Fi 11ac20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5700.000	10.56	33.20	30.72	89.89	102.93	68.20	34.73	peak
2	5725.000	10.68	33.25	30.72	45.46	58.67	68.20	-9.53	peak
3	5729.782	10.70	33.26	30.72	46.82	60.06	68.20	-8.14	peak

11ac_VHT(20M)_TX_CH_140_Vertical-Peak



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5700 Band edge
: 5G Wi-Fi 11ac20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5700.000	10.56	33.20	30.72	82.97	96.01	68.20	27.81	peak
2	5725.000	10.68	33.25	30.72	45.54	58.75	68.20	-9.45	peak
3	5733.883	10.72	33.27	30.73	46.81	60.07	68.20	-8.13	peak



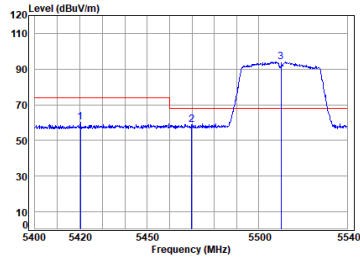
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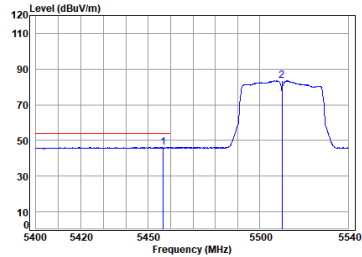
11ac_VHT(40M)_TX_CH_102_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5510 Band edge
: 5G Wi-Fi 11ac40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5420.217	10.61	32.84	30.63	47.35	60.17	74.00	-13.83	peak
2	5469.832	10.59	32.90	30.65	46.17	59.01	68.20	-9.19	peak
3 pp	5510.000	10.56	32.90	30.66	81.21	94.01	68.20	25.81	peak

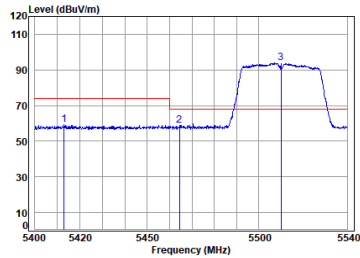
11ac_VHT(40M)_TX_CH_102_Horizontal-Avg



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5510 Band edge
: 5G Wi-Fi 11ac40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5456.688	10.60	32.90	30.64	33.25	46.11	54.00	-7.89	Average
2	5510.000	10.56	32.90	30.66	70.62	83.42	-----	-----	Average

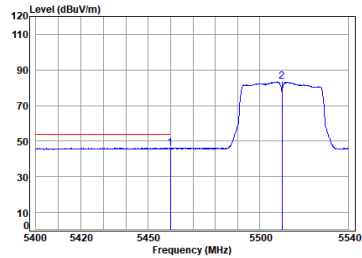
11ac_VHT(40M)_TX_CH_102_Vertical-Peak



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5510 Band edge
: 5G Wi-Fi 11ac40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5413.008	10.61	32.83	30.63	46.34	59.15	74.00	-14.85	peak
2	5464.375	10.59	32.90	30.65	46.11	58.95	68.20	-9.25	peak
3 pp	5510.000	10.56	32.90	30.66	80.97	93.77	68.20	25.57	peak

11ac_VHT(40M)_TX_CH_102_Vertical-Avg

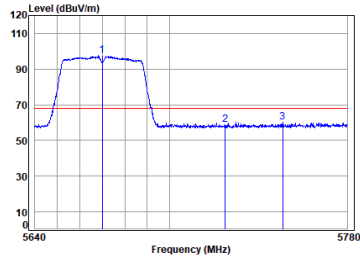


Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5510 Band edge
: 5G Wi-Fi 11ac40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5459.901	10.60	32.90	30.64	33.40	46.26	54.00	-7.74	Average
2	5510.000	10.56	32.90	30.66	70.51	83.31	-----	-----	Average



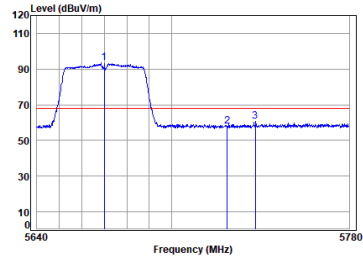
11ac_VHT(40M)_TX_CH_134_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5670 Band edge
: 5G Wi-Fi 11ac40

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit	Over	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5670.000	10.52	33.14	30.71	84.84	97.79	68.20	29.59	peak	
2	5725.000	10.68	33.25	30.72	45.49	58.70	68.20	-9.50	peak	
3	5750.738	10.79	33.30	30.73	46.88	60.24	68.20	-7.96	peak	

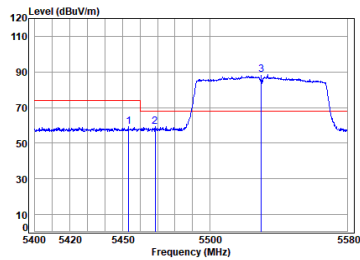
11ac_VHT(40M)_TX_CH_134_Vertical-Peak



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5670 Band edge
: 5G Wi-Fi 11ac40

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit	Over	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5670.000	10.52	33.14	30.71	80.42	93.37	68.20	25.17	peak	
2	5725.000	10.68	33.25	30.72	44.85	58.06	68.20	-10.14	peak	
3	5737.639	10.73	33.28	30.73	47.31	60.59	68.20	-7.61	peak	

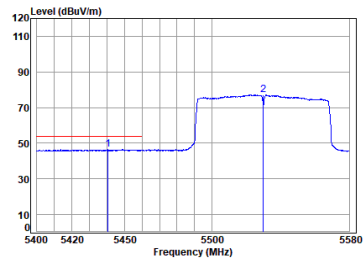
11ac_VHT(80M)_TX_CH_106_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5530 Band edge
: 5G Wi-Fi 11ac80

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit	Over	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5453.382	10.60	32.90	30.64	46.46	59.32	74.00	-14.68	peak	
2	5468.602	10.59	32.90	30.65	46.46	59.30	68.20	-8.90	peak	
3 pp	5530.000	10.53	32.90	30.67	75.67	88.43	68.20	20.23	peak	

11ac_VHT(80M)_TX_CH_106_Horizontal-Avg

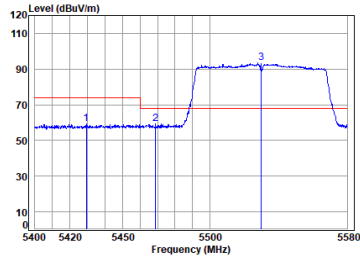


Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5530 Band edge
: 5G Wi-Fi 11ac80

	Freq	Cable Loss	Factor	Ant Factor	Preamp	Read Level	Level	Limit	Over	Remark
	MHz	dB		dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5440.522	10.60	32.88	30.64	33.57	46.41	54.00	-7.59	Average	
2	5530.000	10.53	32.90	30.67	64.41	77.17	-----	-----	Average	



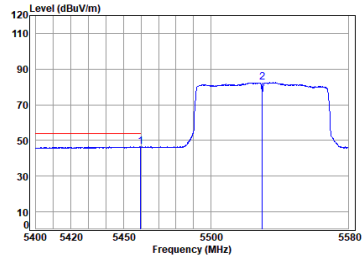
11ac_VHT(80M)_TX_CH_106_Vertical-Peak



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5530 Band edge
: 5G Wi-Fi 11ac80

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5429.295	10.61	32.86	30.64	46.69	59.52	74.00	-14.48	peak
2	5468.781	10.59	32.90	30.65	46.38	59.22	68.20	-8.98	peak
3 pp	5530.000	10.53	32.90	30.67	80.58	93.34	68.20	25.14	peak

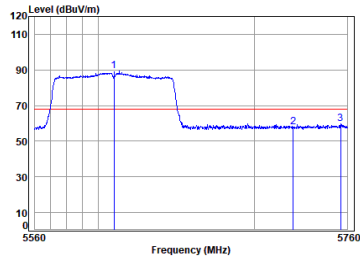
11ac_VHT(80M)_TX_CH_106_Vertical-Avg



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5530 Band edge
: 5G Wi-Fi 11ac80

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5459.644	10.60	32.90	30.64	33.58	46.44	54.00	-7.56	Average
2	5530.000	10.53	32.90	30.67	69.74	82.58	68.20	14.38	Average

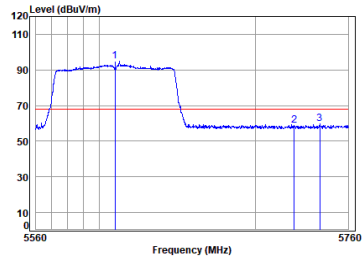
11ac_VHT(80M)_TX_CH_122_Horizontal-Peak



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5610 Band edge
: 5G Wi-Fi 11ac80

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5610.000	10.43	33.02	30.69	76.73	89.49	68.20	21.29	peak
2	5725.000	10.68	33.25	30.72	44.94	58.15	68.20	-10.05	peak
3	5755.727	10.82	33.31	30.73	46.55	59.95	68.20	-8.25	peak

11ac_VHT(80M)_TX_CH_122_Vertical-Peak



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5610 Band edge
: 5G Wi-Fi 11ac80

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5610.000	10.43	33.02	30.69	82.04	94.80	68.20	26.60	peak
2	5725.000	10.68	33.25	30.72	45.56	58.77	68.20	-9.43	peak
3	5741.506	10.75	33.28	30.73	46.47	59.77	68.20	-8.43	peak



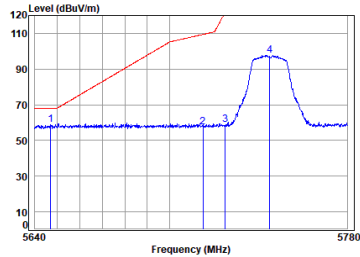
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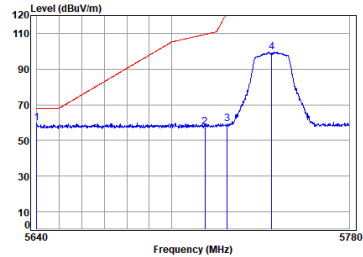
11a_TX_CH_149_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5745 Band edge
: 5.8G Wi-Fi 11a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5646.919	10.48	33.09	30.70	45.99	58.86	68.20	-9.34	peak
2	5715.000	10.63	33.23	30.72	44.55	57.69	109.40	-51.71	peak
3	5725.000	10.68	33.25	30.72	45.74	58.95	122.20	-63.25	peak
4	5745.000	10.77	33.29	30.73	84.37	97.70	-----	-----	peak

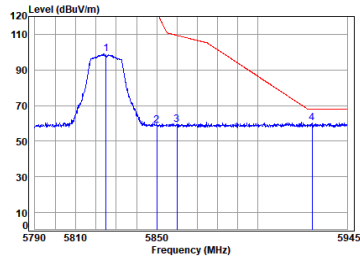
11a_TX_CH_149_Vertical



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5745 Band edge
: 5.8G Wi-Fi 11a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5640.000	10.47	33.08	30.70	46.78	59.63	68.20	-8.57	peak
2	5715.000	10.63	33.23	30.72	44.51	57.65	109.40	-51.75	peak
3	5725.000	10.68	33.25	30.72	46.17	59.38	122.20	-62.82	peak
4	5745.000	10.77	33.29	30.73	86.09	99.42	-----	-----	peak

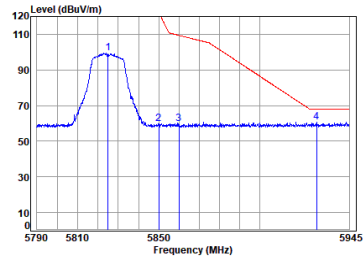
11a_TX_CH_165_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5825 Band edge
: 5.8G Wi-Fi 11a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5825.000	10.99	33.50	30.75	85.15	98.89	-----	-----	peak
2	5850.000	10.95	33.60	30.76	45.17	58.96	122.20	-63.24	peak
3	5860.000	10.94	33.58	30.76	45.62	59.38	109.40	-50.02	peak
4 pp	5927.279	10.87	33.55	30.78	46.56	60.20	68.20	-8.00	peak

11a_TX_CH_165_Vertical

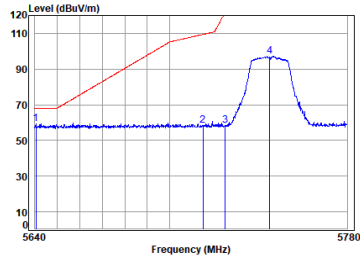


Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5825 Band edge
: 5.8G Wi-Fi 11a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5825.000	10.99	33.50	30.75	85.67	99.41	-----	-----	peak
2	5850.000	10.95	33.60	30.76	45.85	59.64	122.20	-62.56	peak
3	5860.000	10.94	33.58	30.76	46.02	59.78	109.40	-49.62	peak
4 pp	5928.688	10.87	33.56	30.78	47.12	60.77	68.20	-7.43	peak



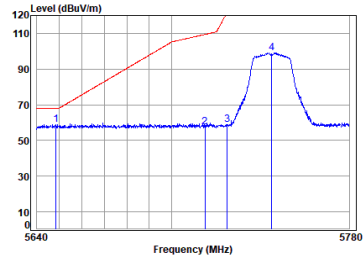
11ac_VHT(20M)_TX_CH_149_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5745 Band edge
: 5.8G Wi-Fi 11ac20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5640.415	10.47	33.08	30.70	46.35	59.20	68.20	-9.00	peak
2	5715.000	10.63	33.23	30.72	45.10	58.24	109.40	-51.16	peak
3	5725.000	10.68	33.25	30.72	45.27	58.48	122.20	-63.72	peak
4	5745.000	10.77	33.29	30.73	83.90	97.23	-----	-----	peak

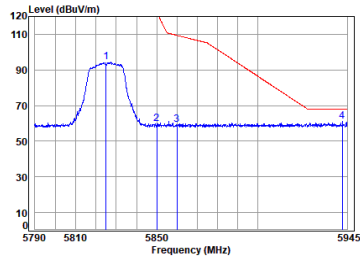
11ac_VHT(20M)_TX_CH_149_Vertical



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5745 Band edge
: 5.8G Wi-Fi 11ac20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5648.442	10.48	33.10	30.70	45.91	58.79	68.20	-9.41	peak
2	5715.000	10.63	33.23	30.72	44.34	57.48	109.40	-51.92	peak
3	5725.000	10.68	33.25	30.72	45.49	58.70	122.20	-63.50	peak
4	5745.000	10.77	33.29	30.73	85.87	99.20	-----	-----	peak

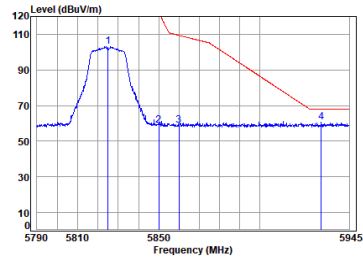
11ac_VHT(20M)_TX_CH_165_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5825 Band edge
: 5.8G Wi-Fi 11ac20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5825.000	10.99	33.50	30.75	80.84	94.58	-----	-----	peak
2	5850.000	10.95	33.60	30.76	45.96	59.75	122.20	-62.45	peak
3	5860.000	10.94	33.58	30.76	45.41	59.17	109.40	-50.23	peak
4 pp	5942.645	10.86	33.59	30.78	47.36	61.03	68.20	-7.17	peak

11ac_VHT(20M)_TX_CH_165_Vertical

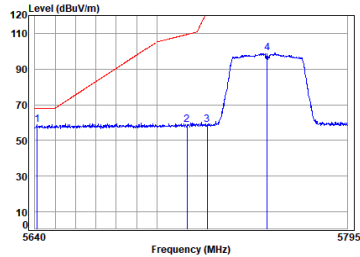


Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5825 Band edge
: 5.8G Wi-Fi 11ac20

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5825.000	10.99	33.50	30.75	89.28	103.02	-----	-----	peak
2	5850.000	10.95	33.60	30.76	45.26	59.05	122.20	-63.15	peak
3	5860.000	10.94	33.58	30.76	45.20	58.96	109.40	-50.44	peak
4 pp	5930.882	10.87	33.56	30.78	47.09	60.74	68.20	-7.46	peak



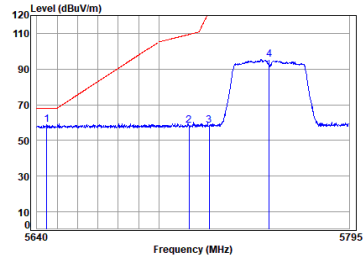
11ac_VHT(40M)_TX_CH_151_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5755 Band edge
: 5.8G Wi-Fi 11ac40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5641.070	10.47	33.08	30.70	45.98	58.83	68.20	-9.37	peak
2	5715.000	10.63	33.23	30.72	45.68	58.82	109.40	-50.58	peak
3	5725.000	10.68	33.25	30.72	45.84	59.05	122.20	-63.15	peak
4	5755.000	10.81	33.31	30.73	85.61	99.00	-----	-----	peak

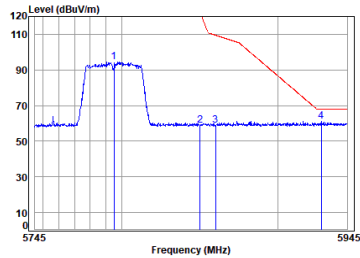
11ac_VHT(40M)_TX_CH_151_Vertical



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5755 Band edge
: 5.8G Wi-Fi 11ac40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5644.895	10.48	33.09	30.70	45.83	58.70	68.20	-9.50	peak
2	5715.000	10.63	33.23	30.72	45.31	58.45	109.40	-50.95	peak
3	5725.000	10.68	33.25	30.72	45.13	58.34	122.20	-63.86	peak
4	5755.000	10.81	33.31	30.73	81.85	95.24	-----	-----	peak

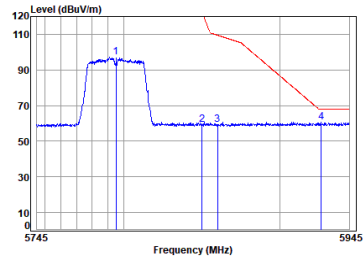
11ac_VHT(40M)_TX_CH_159_Horizontal



Condition: 3m HORIZONTAL
Job No : 05052MM
Mode : 5795 Band edge
: 5.8G Wi-Fi 11ac40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5795.000	11.00	33.39	30.74	80.90	94.55	-----	-----	peak
2	5850.000	10.95	33.60	30.76	45.22	59.01	122.20	-63.19	peak
3	5860.000	10.94	33.58	30.76	45.29	59.05	109.40	-50.35	peak
4	5928.138	10.87	33.56	30.78	47.64	61.29	68.20	-6.91	peak

11ac_VHT(40M)_TX_CH_159_Vertical



Condition: 3m VERTICAL
Job No : 05052MM
Mode : 5795 Band edge
: 5.8G Wi-Fi 11ac40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5795.000	11.00	33.39	30.74	83.70	97.35	-----	-----	peak
2	5850.000	10.95	33.60	30.76	45.46	59.25	122.20	-62.95	peak
3	5860.000	10.94	33.58	30.76	45.49	59.25	109.40	-50.15	peak
4	5926.718	10.87	33.55	30.78	46.98	60.62	68.20	-7.58	peak



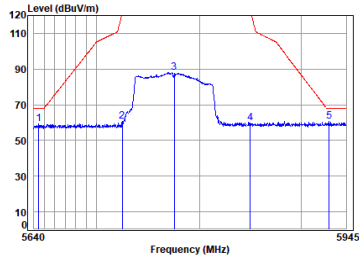
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11ac_VHT(80M)_TX_CH_155_Horizontal



Condition: 3m HORIZONTAL

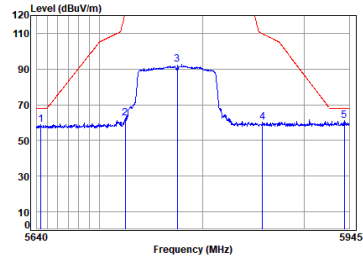
Job No : 05052MM

Mode : 5775 Band edge

: 5.8G Wi-Fi 11ac80

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5644.754	10.48	33.09	30.70	46.46	59.33	68.20	-8.87	peak
2	5724.691	10.67	33.25	30.72	47.51	60.71	121.50	-60.79	peak
3	5775.000	10.91	33.35	30.74	74.73	88.25	-----	-----	peak
4	5849.650	10.96	33.60	30.76	45.79	59.59	-----	-----	peak
5 pp	5928.117	10.87	33.56	30.78	46.92	60.57	68.20	-7.63	peak

11ac_VHT(80M)_TX_CH_155_Vertical



Condition: 3m VERTICAL

Job No : 05052MM

Mode : 5775 Band edge

: 5.8G Wi-Fi 11ac80

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5643.863	10.48	33.09	30.70	45.80	58.67	68.20	-9.53	peak
2	5724.691	10.67	33.25	30.72	49.25	62.45	121.50	-59.05	peak
3	5775.000	10.91	33.35	30.74	78.99	92.51	-----	-----	peak
4	5858.900	10.94	33.58	30.76	46.36	60.12	109.71	-49.59	peak
5 pp	5939.993	10.86	33.58	30.78	47.65	61.31	68.20	-6.89	peak



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7.5 Duty Cycle

Test Requirement: ANSI C63.10 (2013) Section 12.2
 Test Method: ANSI C63.10 (2020) Section 12.2
 Test Engineer: Linvo Ding

7.5.1 E.U.T. Operation

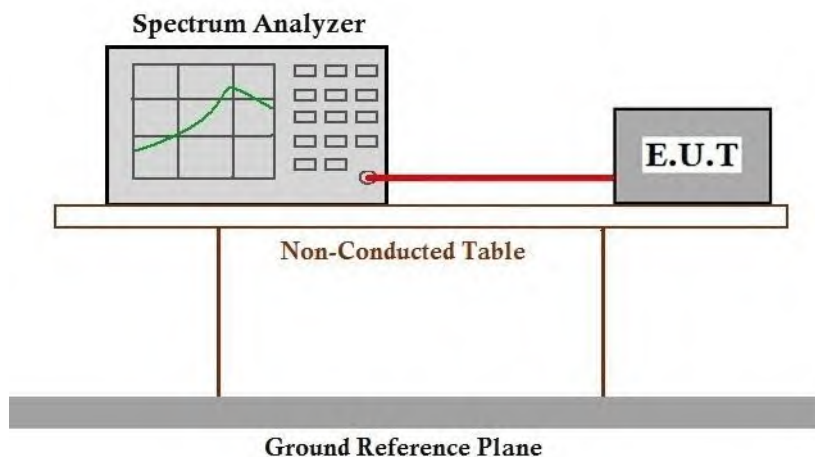
Operating Environment:

Temperature: 23.1 °C Humidity: 73.5 % 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. 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. 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. 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. 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 (2013) Section 12.4.2
 Test Method: ANSI C63.10 (2020) Section 12.5.3
 Test Engineer: Linvo Ding

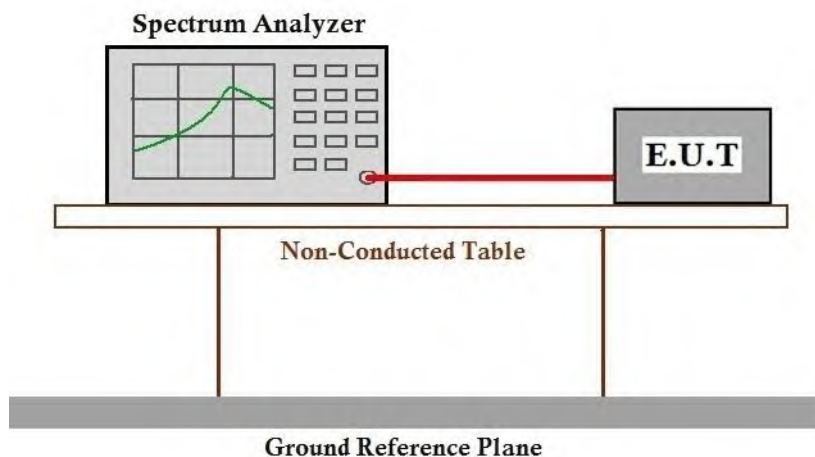
7.6.1 E.U.T. Operation

Operating Environment:
 Temperature: 23.1 °C Humidity: 73.5 % 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. 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. 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. 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. 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) Section 12.5.2
 Test Engineer: Linvo Ding

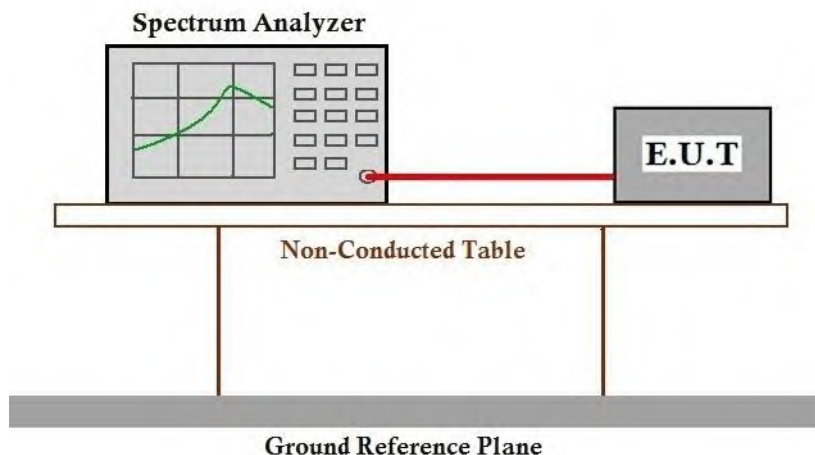
7.7.1 E.U.T. Operation

Operating Environment:
 Temperature: 23.1 °C Humidity: 73.5 % RH Atmospheric Pressure: 1020 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. 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. 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. 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) Section 12.5.1

Test Engineer: Linvo Ding

Limit:

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

7.8.1 E.U.T. Operation

Operating Environment:

Temperature: 23.1 °C

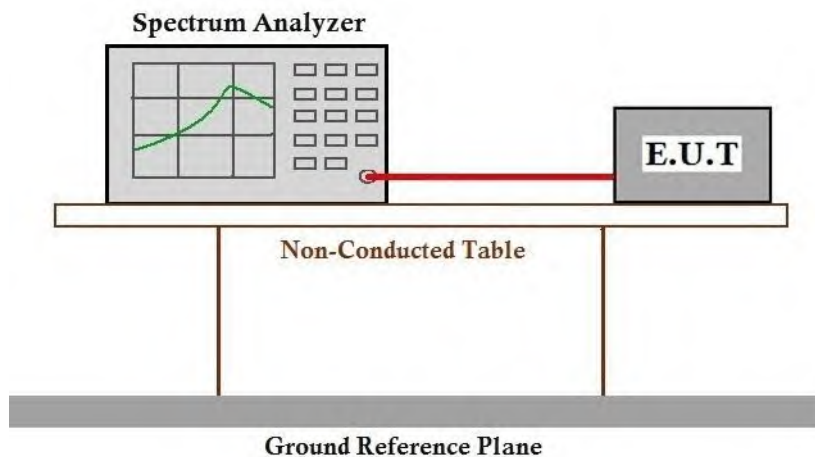
Humidity: 73.5 % RH

Atmospheric Pressure: 1020 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. 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) Section 12.4

Test Engineer: Linvo Ding

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: 23.1 °C

Humidity: 73.5 % RH

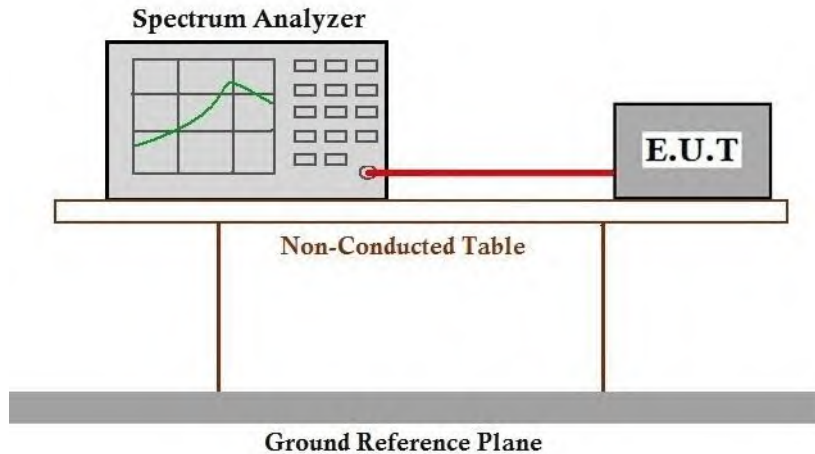
Atmospheric Pressure: 1020 mbar

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. 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. 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. 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. Only the data of worst case is recorded in the report.



7.9.3 Test Setup Diagram



7.9.4 Measurement Procedure and Data

$$\text{AV Output power Level} = \text{Reading level} + \text{Cable loss} + \text{DCCF}$$

Please Refer to Appendix for Details

7.10 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: Linvo Ding

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: 23.1 °C

Humidity: 73.5 % RH

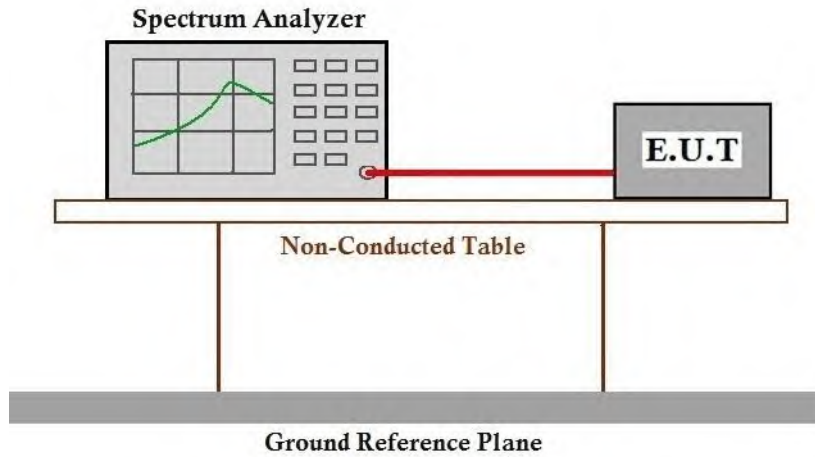
Atmospheric Pressure: 1020 mbar

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. 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. 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. 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. 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 Frequency Stability

Test Requirement 47 CFR Part 15, Subpart E 15.407 (g)
 Test Method: ANSI C63.10 (2020) Section 6.8
 Test Engineer: Linvo Ding

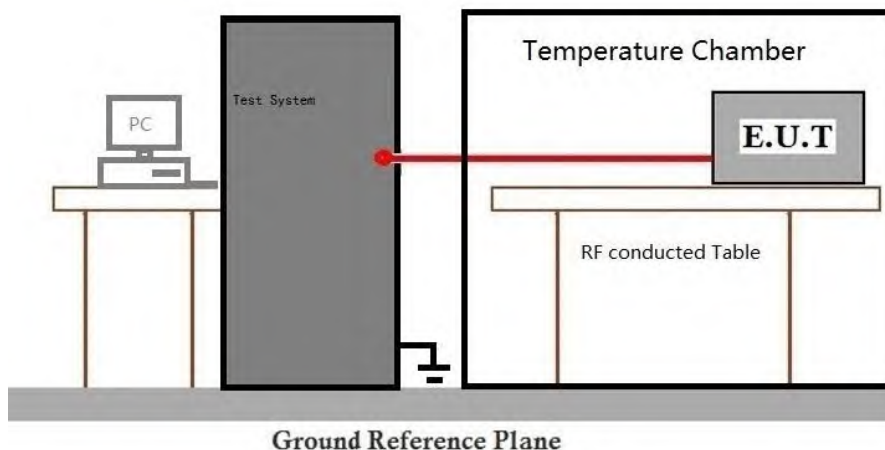
7.11.1 E.U.T. Operation

Operating Environment:
 Temperature: 23.1 °C Humidity: 73.5 % RH Atmospheric Pressure: 1020 mbar

7.11.2 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. 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. 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. 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. Only the data of worst case is recorded in the report.

7.11.3 Test Setup Diagram



7.11.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.12 DFS - Channel Move Time

Test Requirement KDB 905462 D02 Section 5.1
 Test Method: KDB 905462 D02 Section 7.8.3
 Test Engineer: Byron Liang

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:

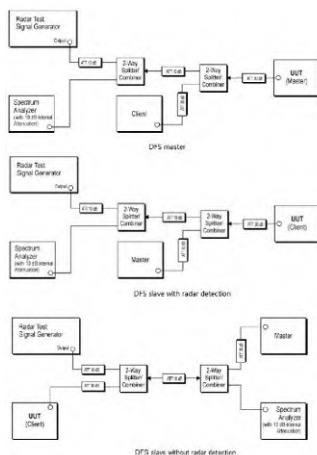
Temperature: 20.5 °C Humidity: 67.8 % RH Atmospheric Pressure: 1020 mbar



7.12.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	08	Normal Operation:Keep the EUT companion with other 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



7.13 DFS - Channel Closing Transmission Time

Test Requirement KDB 905462 D02 Section 5.1
 Test Method: KDB 905462 D02 Section 7.8.3
 Test Engineer: Byron Liang

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.

7.13.1 E.U.T. Operation

Operating Environment:

Temperature: 20.5 °C Humidity: 67.8 % RH Atmospheric Pressure: 1020 mbar



7.13.4 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

Please refer to SZCR2511005052WM Appendix_ Setup Photo-WLAN

9 EUT Constructional Details (EUT Photos)

Refer to External and Internal Photos for SZCR2511005052WM



10 Appendix

1. Duty Cycle

1.1 Test Result

1.1.1 Ant7

Ant7							
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	0.00
		5200	2.029	2.064	98.30	0.07	0.00
		5240	2.029	2.065	98.26	0.08	0.03
		5260	2.029	2.065	98.26	0.08	0.00
		5300	2.030	2.065	98.31	0.07	0.00
		5320	2.030	2.066	98.26	0.08	0.04
		5500	2.030	2.065	98.31	0.07	0.03
		5580	2.029	2.064	98.30	0.07	0.00
		5700	2.029	2.064	98.30	0.07	0.00
		5745	2.030	2.065	98.31	0.07	0.04
		5785	2.029	2.065	98.26	0.08	0.04
		5825	2.030	2.066	98.26	0.08	0.04
		5720	2.030	2.065	98.31	0.07	0.03
802.11n (HT20)	SISO	5180	1.890	1.925	98.18	0.08	0.03
		5200	1.889	1.924	98.18	0.08	0.03
		5240	1.889	1.924	98.18	0.08	0.03
		5260	1.890	1.925	98.18	0.08	0.03
		5300	1.889	1.925	98.13	0.08	0.00
		5320	1.889	1.924	98.18	0.08	0.03
		5500	1.889	1.924	98.18	0.08	0.00
		5580	1.889	1.924	98.18	0.08	0.00
		5700	1.890	1.926	98.13	0.08	0.03
		5745	1.889	1.924	98.18	0.08	0.03
		5785	1.890	1.926	98.13	0.08	0.03
		5825	1.889	1.924	98.18	0.08	0.03
		5720	1.890	1.925	98.18	0.08	0.00
802.11n (HT40)	SISO	5190	0.929	0.964	96.37	0.16	0.00
		5230	0.929	0.964	96.37	0.16	0.00



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		5270	0.928	0.964	96.27	0.17	0.03
		5310	0.928	0.964	96.27	0.17	0.07
		5510	0.929	0.964	96.37	0.16	0.00
		5550	0.929	0.964	96.37	0.16	0.04
		5670	0.929	0.964	96.37	0.16	0.00
		5755	0.929	0.964	96.37	0.16	0.03
		5795	0.929	0.964	96.37	0.16	0.00
		5710	0.929	0.964	96.37	0.16	0.00
802.11ac (VHT20)	SISO	5180	1.890	1.925	98.18	0.08	0.00
		5200	1.890	1.925	98.18	0.08	0.03
		5240	1.890	1.925	98.18	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	1.889	1.925	98.13	0.08	0.03
		5500	1.889	1.925	98.13	0.08	0.03
		5580	1.889	1.925	98.13	0.08	0.00
		5700	1.890	1.925	98.18	0.08	0.03
		5745	1.890	1.926	98.13	0.08	0.03
		5785	1.889	1.924	98.18	0.08	0.03
		5825	1.890	1.925	98.18	0.08	0.03
802.11ac (VHT40)	SISO	5720	1.889	1.924	98.18	0.08	0.03
		5190	0.929	0.964	96.37	0.16	0.00
		5230	0.929	0.964	96.37	0.16	0.03
		5270	0.929	0.964	96.37	0.16	0.04
		5310	0.929	0.964	96.37	0.16	0.00
		5510	0.929	0.964	96.37	0.16	0.03
		5550	0.929	0.964	96.37	0.16	0.00
		5670	0.929	0.964	96.37	0.16	0.04
		5755	0.929	0.964	96.37	0.16	0.07
		5795	0.929	0.964	96.37	0.16	0.00
802.11ac (VHT80)	SISO	5710	0.929	0.964	96.37	0.16	0.03
		5210	0.456	0.492	92.68	0.33	0.03
		5290	0.456	0.492	92.68	0.33	0.07
		5530	0.457	0.492	92.89	0.32	0.03
		5610	0.456	0.492	92.68	0.33	0.03
		5775	0.457	0.493	92.70	0.33	0.10
		5690	0.457	0.492	92.89	0.32	0.03



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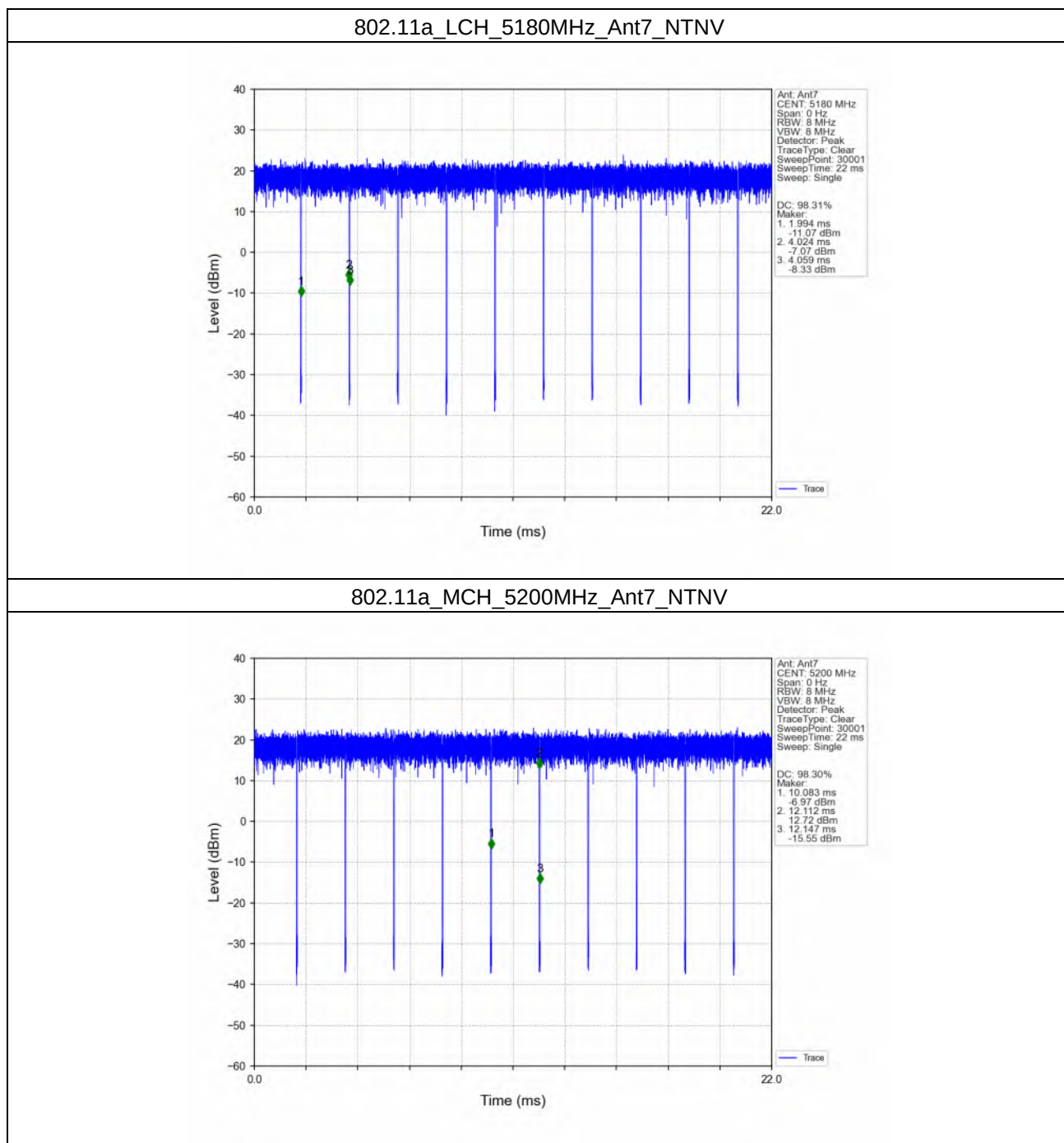
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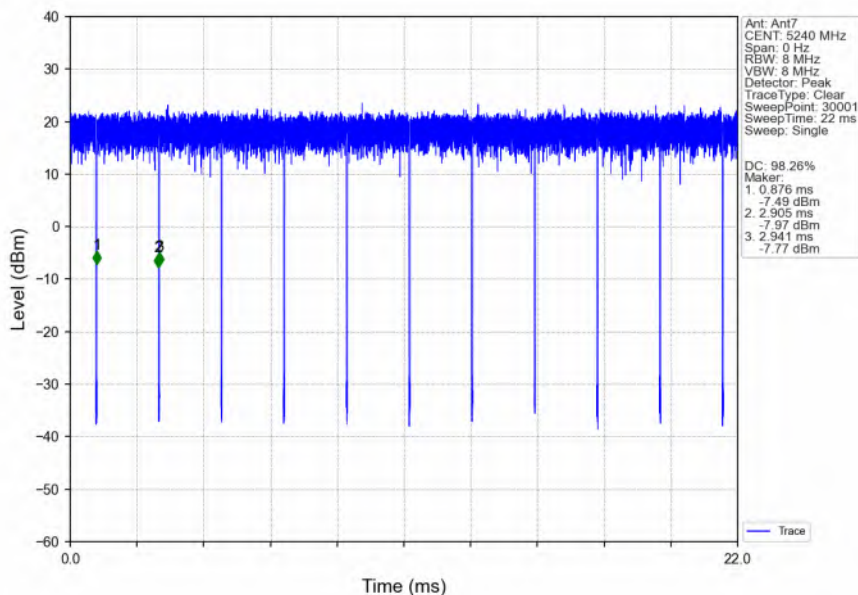
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn
中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

1.2 Test Graph

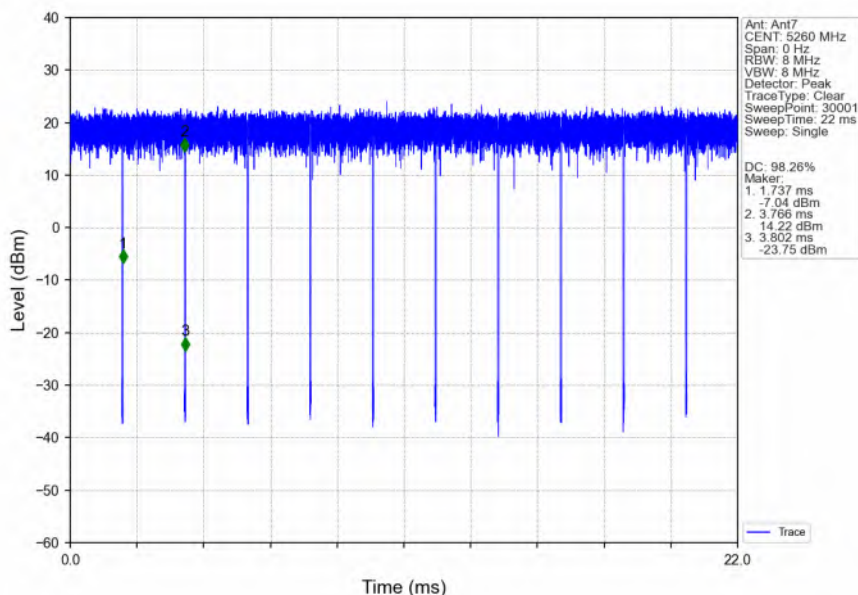
1.2.1 Ant7



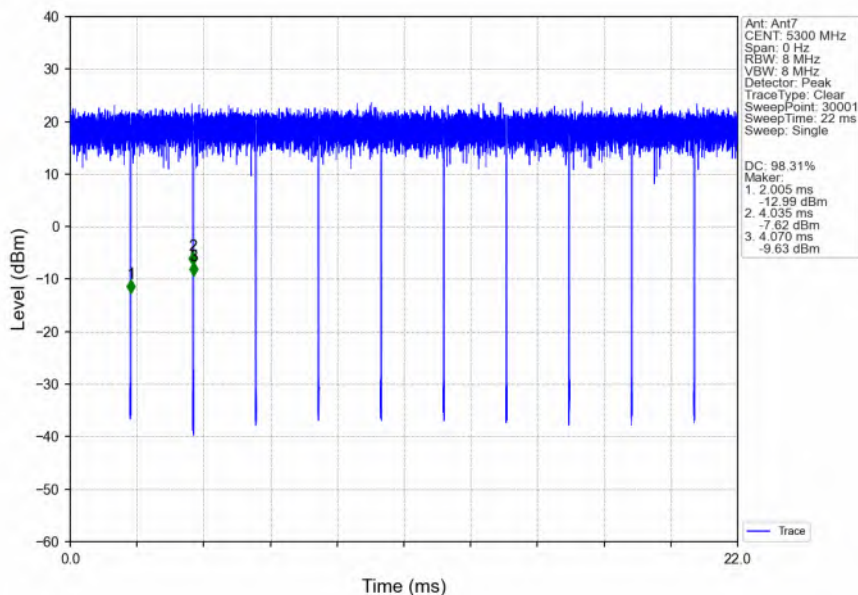
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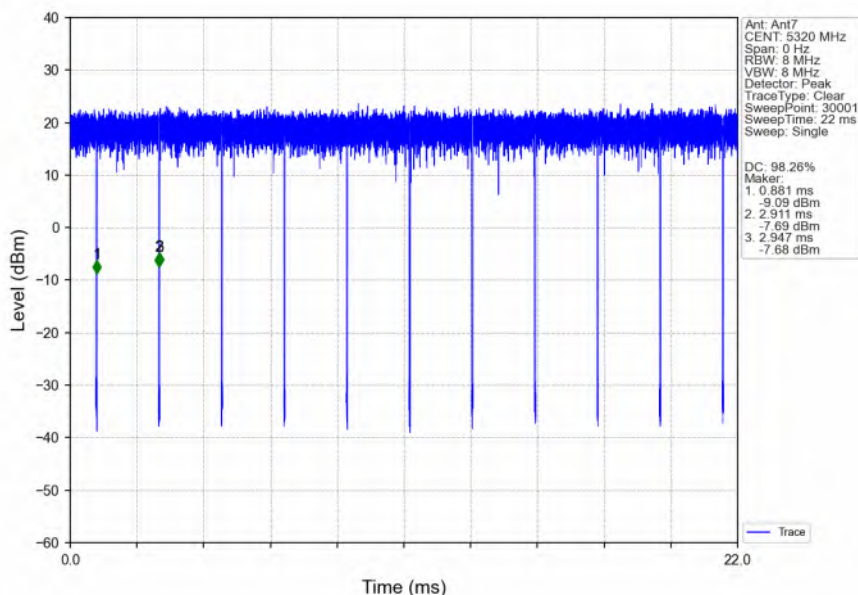
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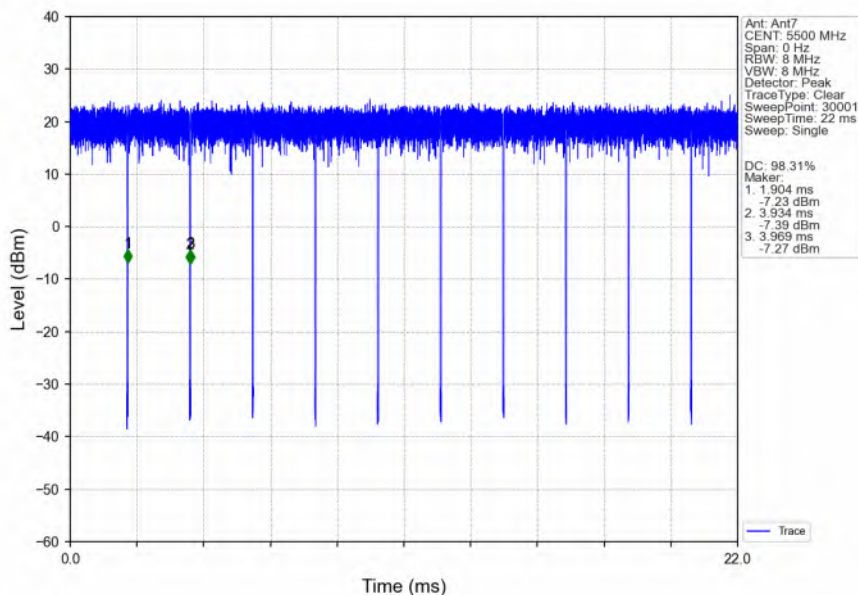
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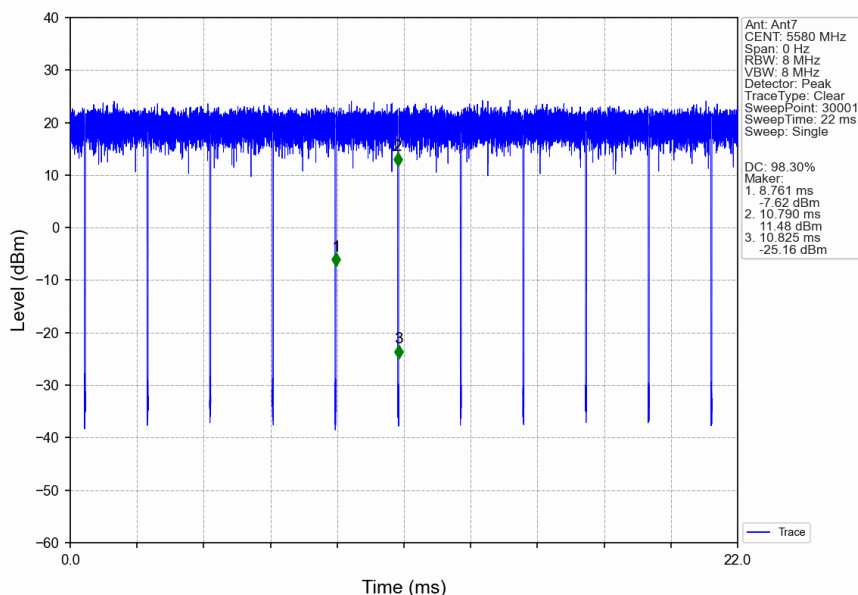
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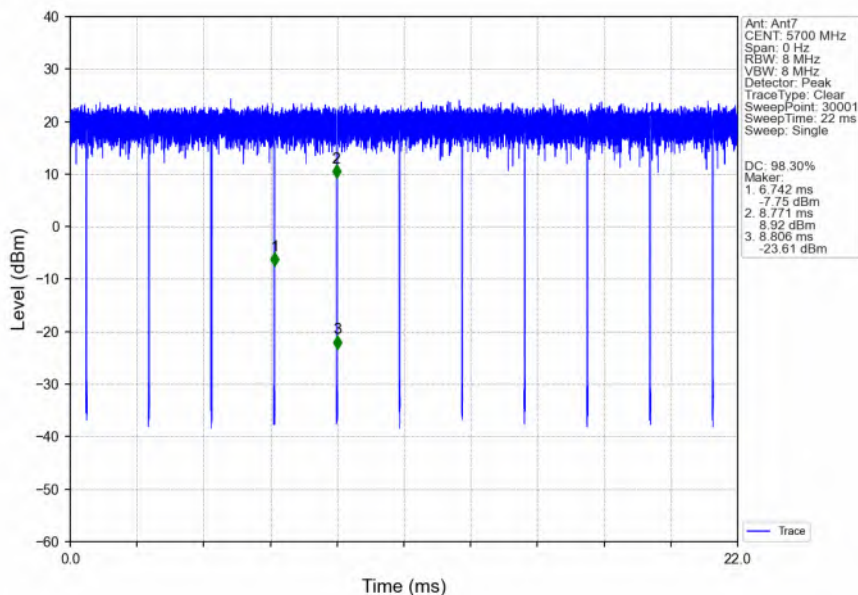
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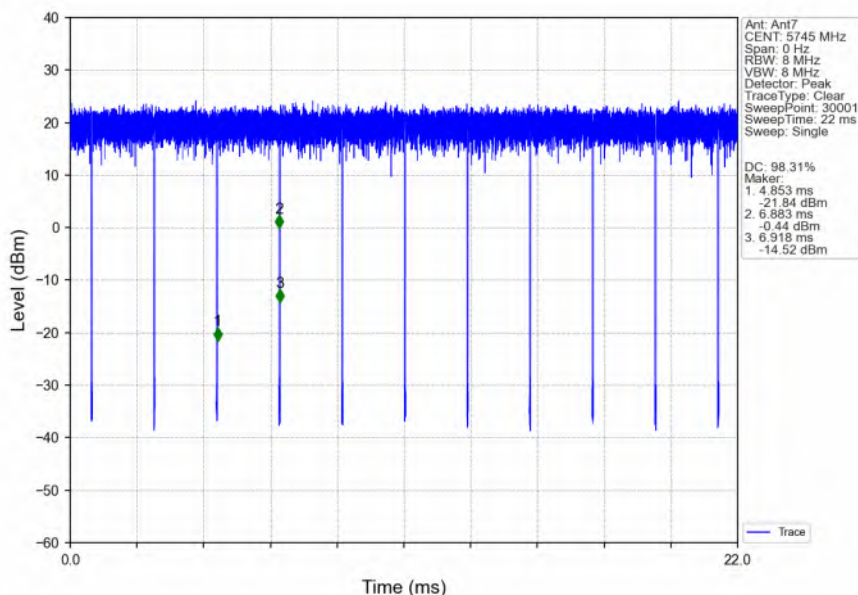
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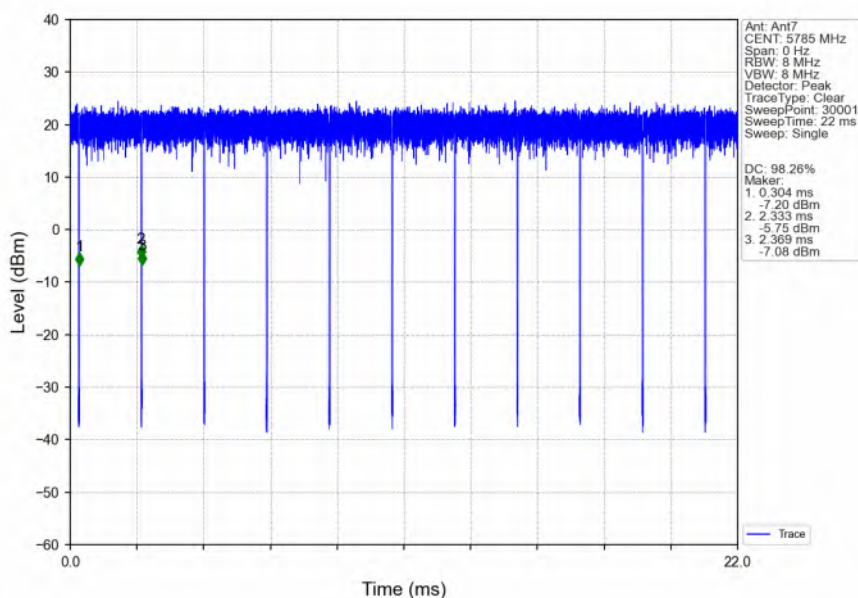
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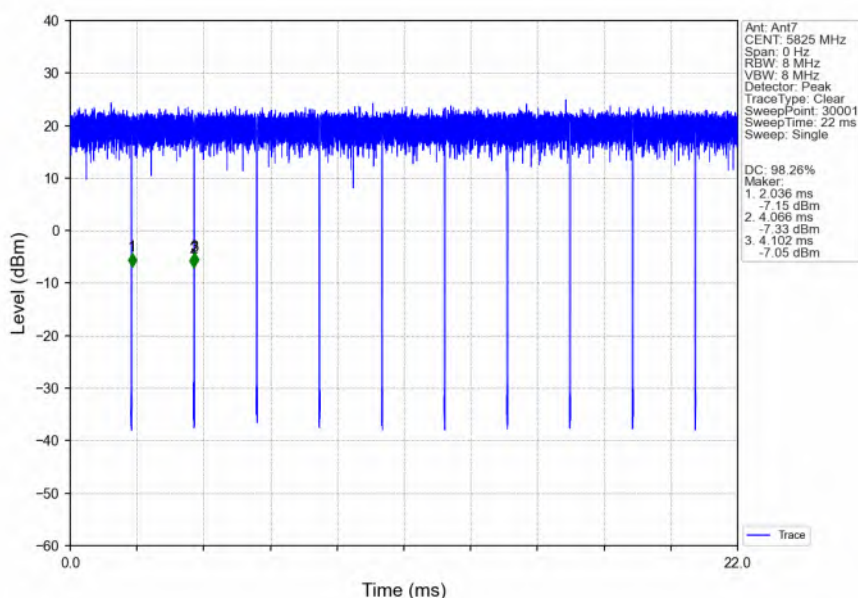
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802.11a_MCH_5785MHz_Ant7_NTNV



802.11a_HCH_5825MHz_Ant7_NTNV



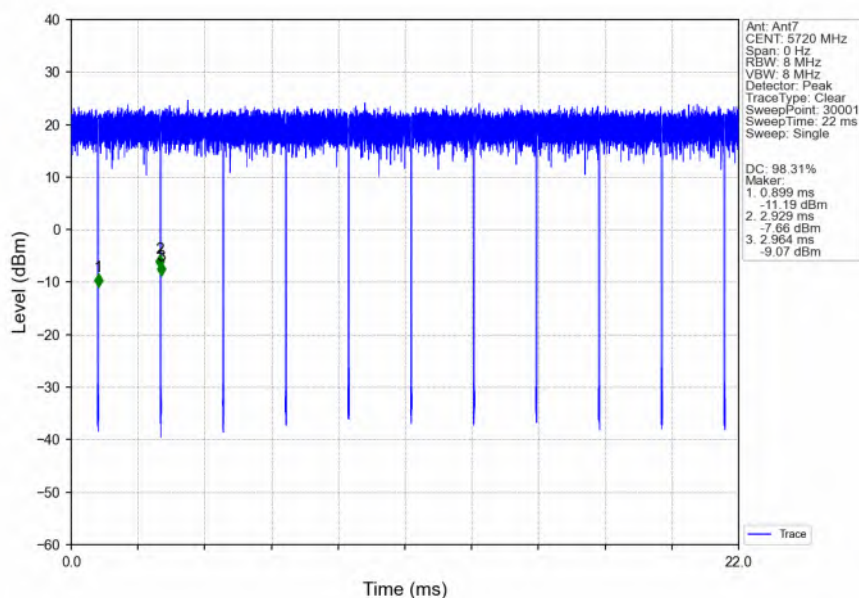
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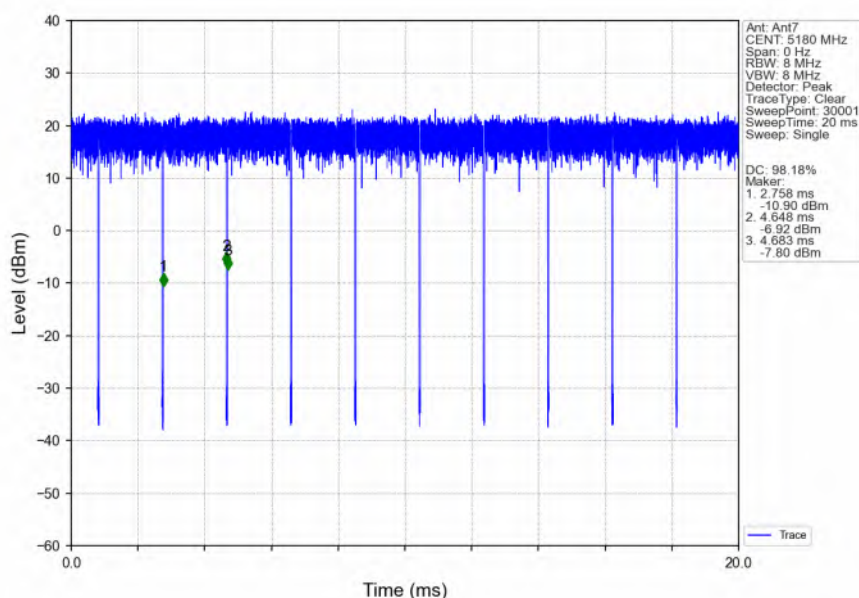
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Shenzhen Branch Testing & Calibration Laboratory

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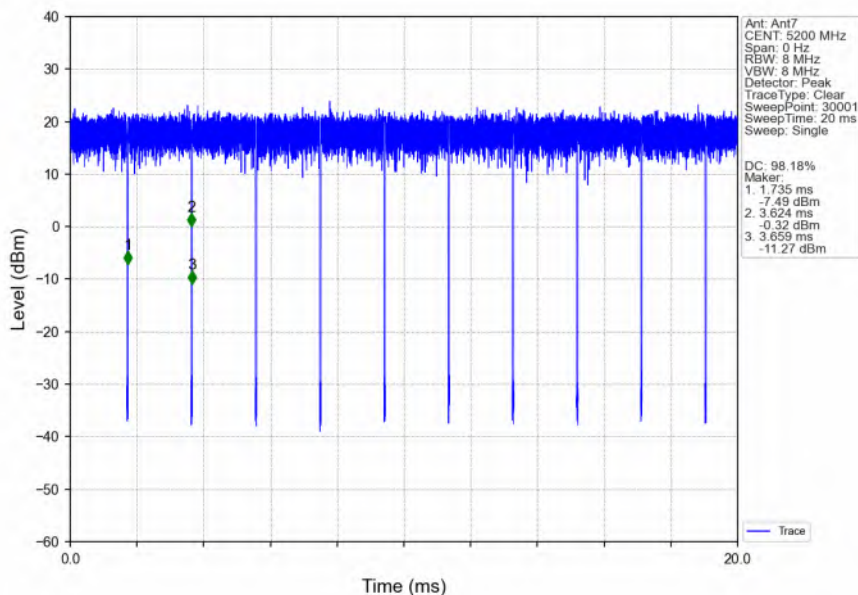
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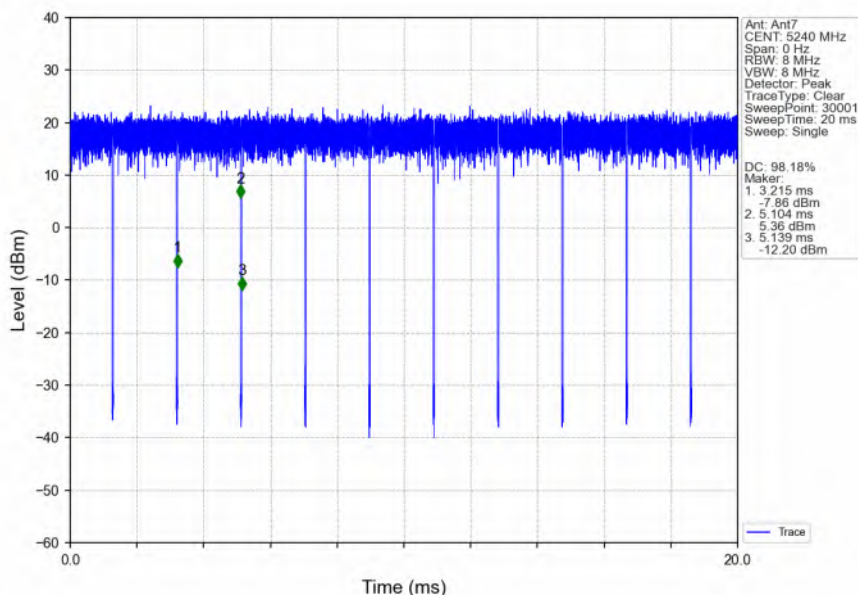
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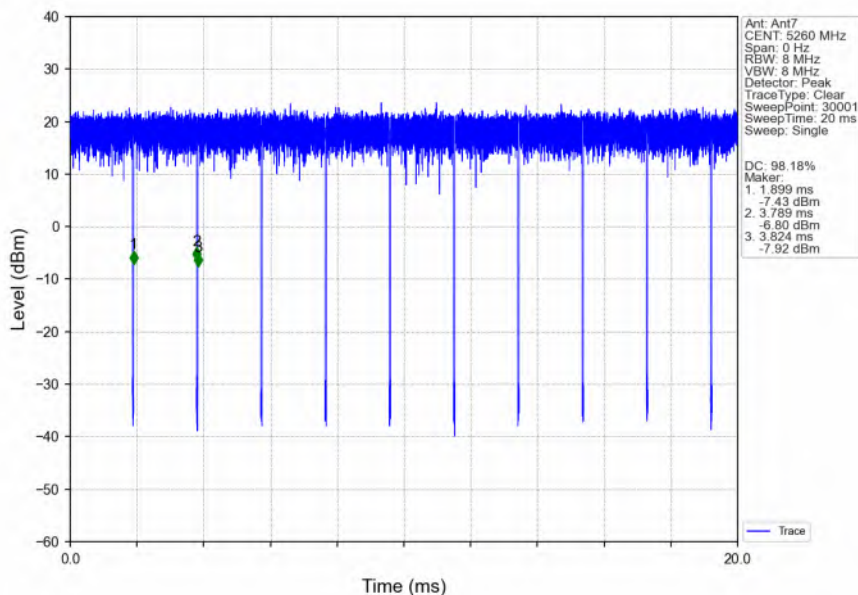
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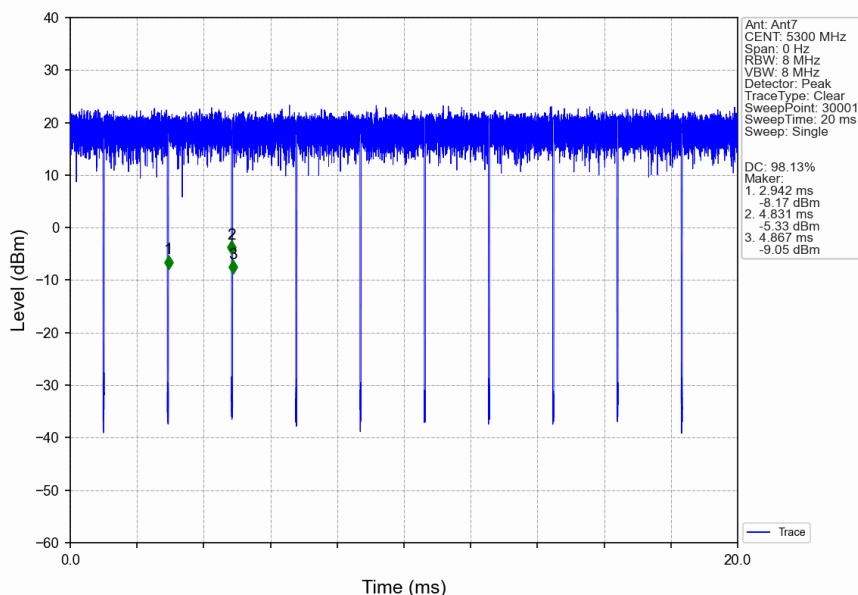
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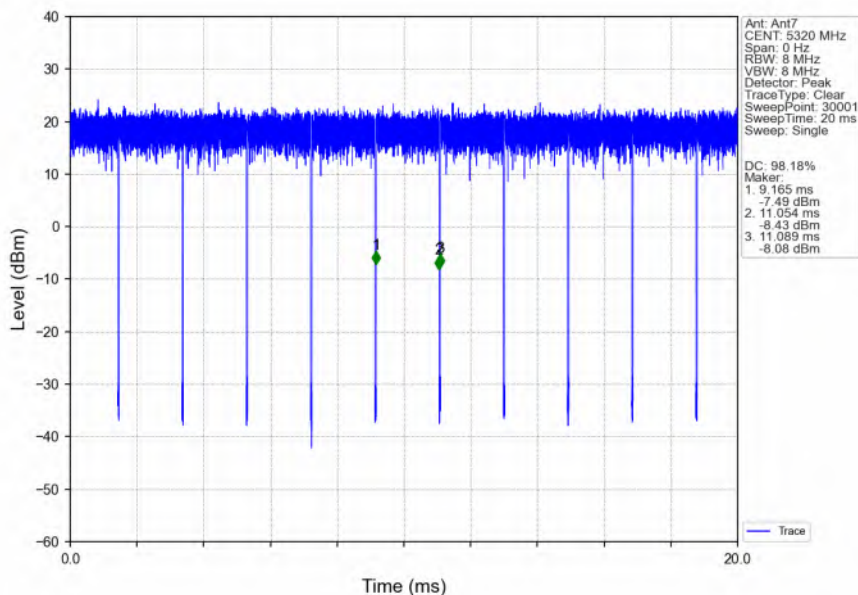
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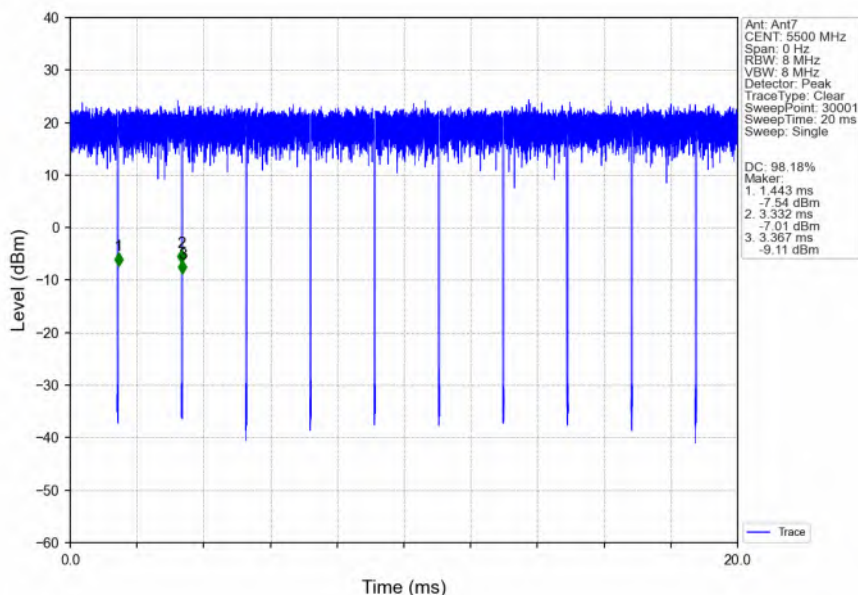
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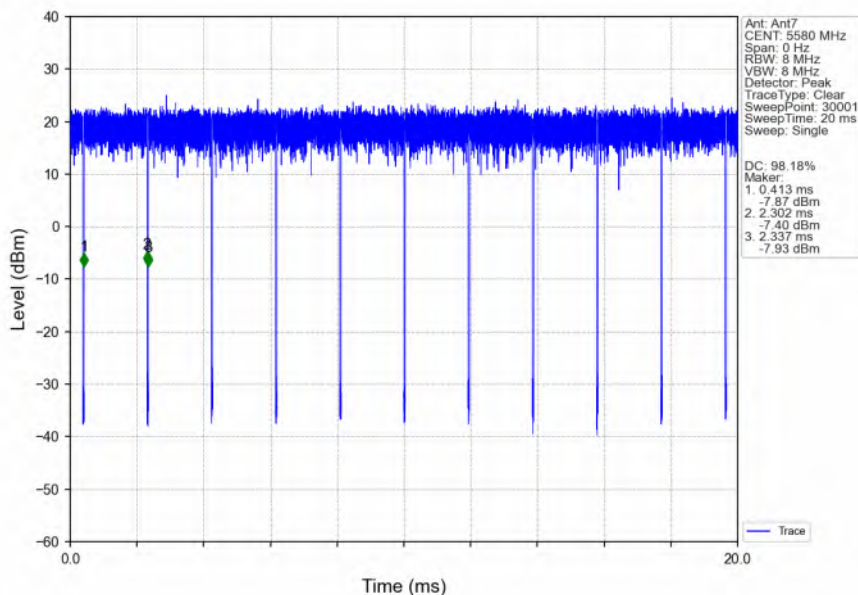
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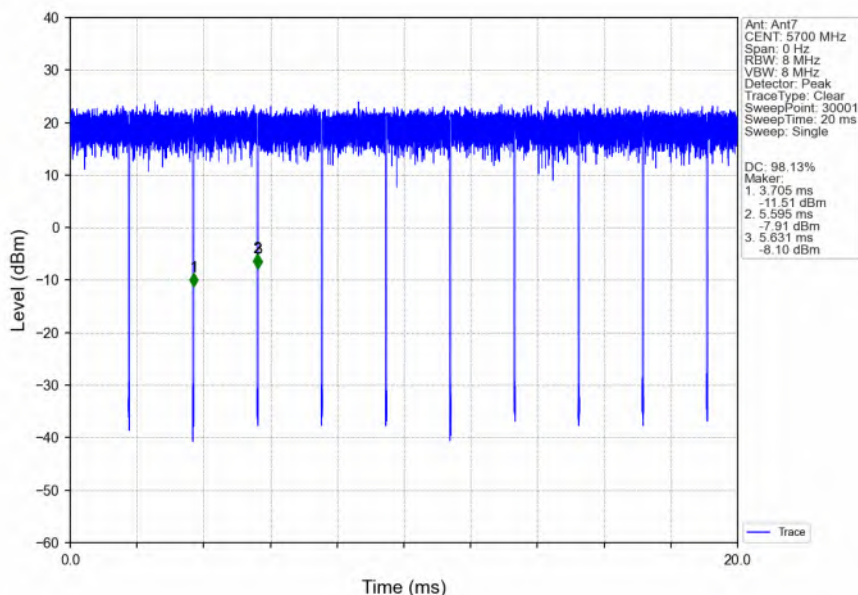
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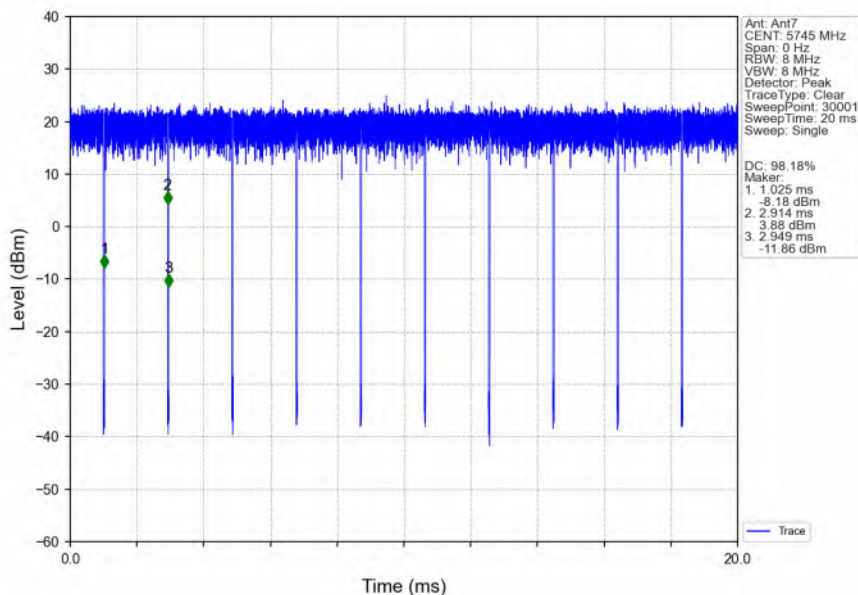
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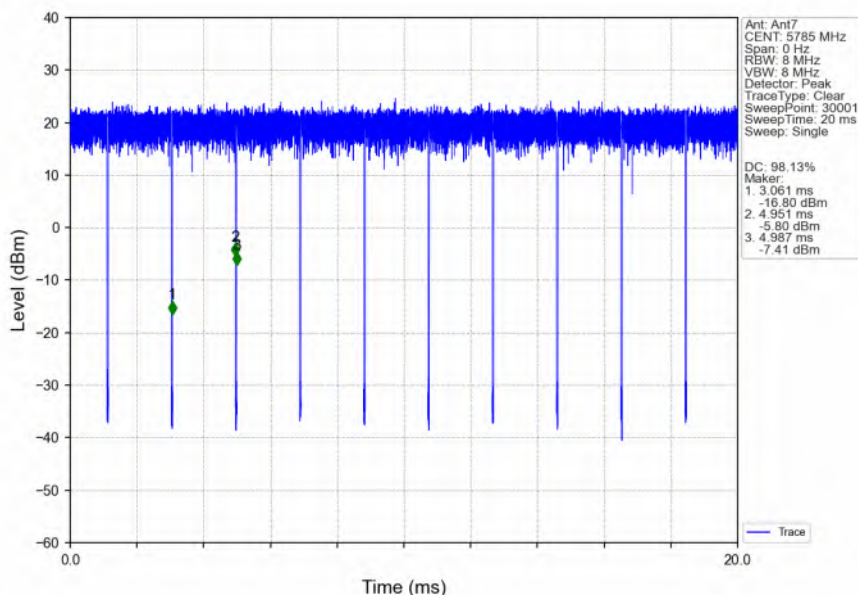
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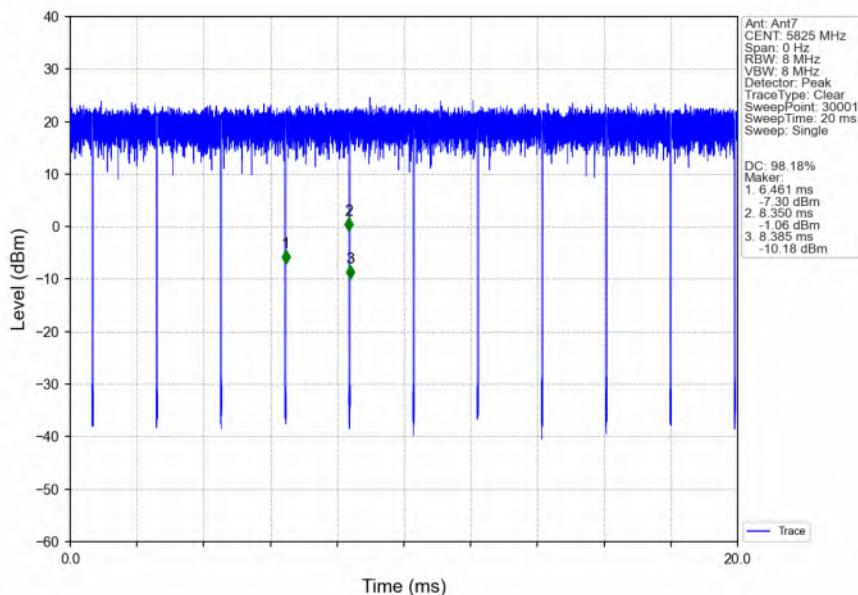
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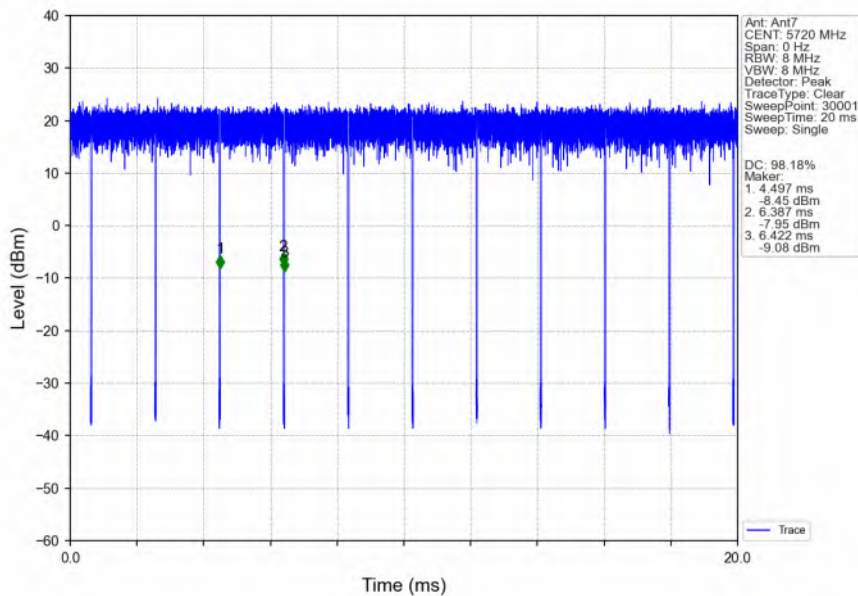
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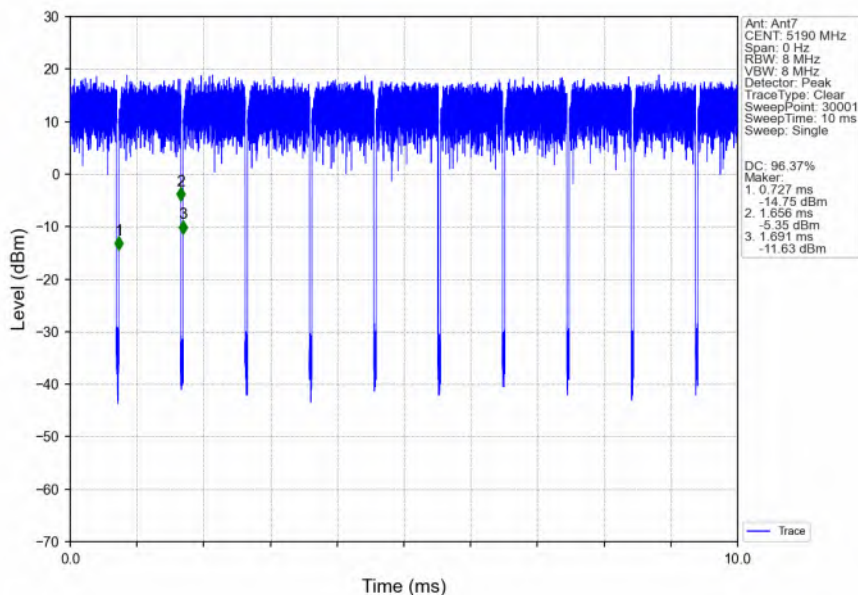
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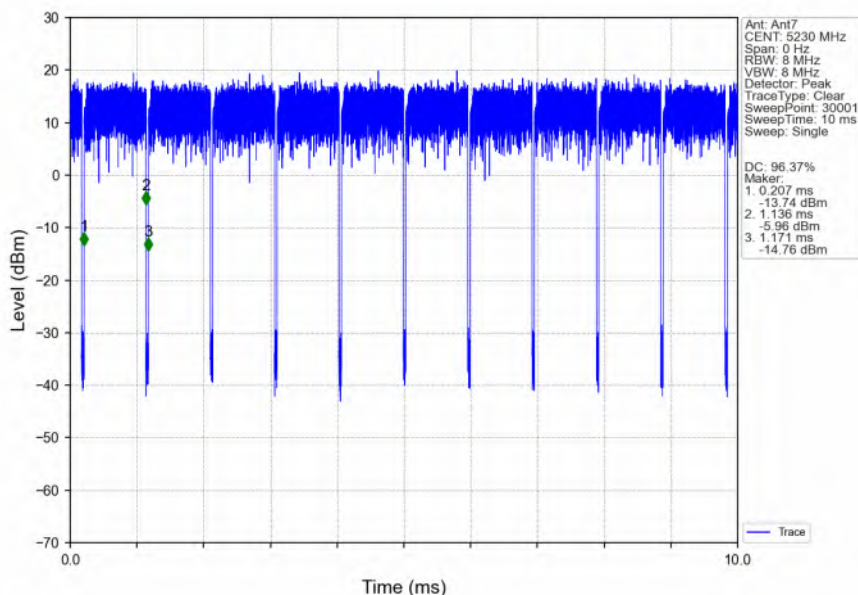
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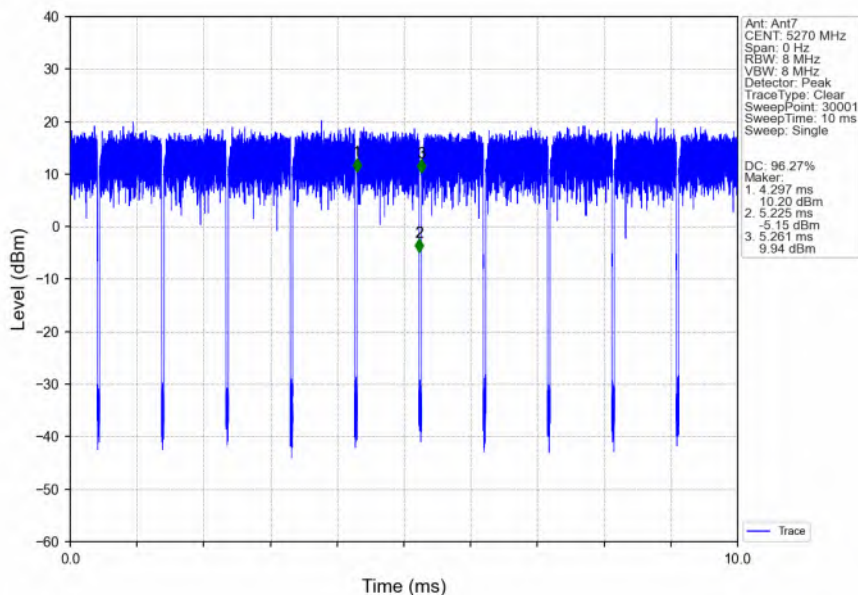
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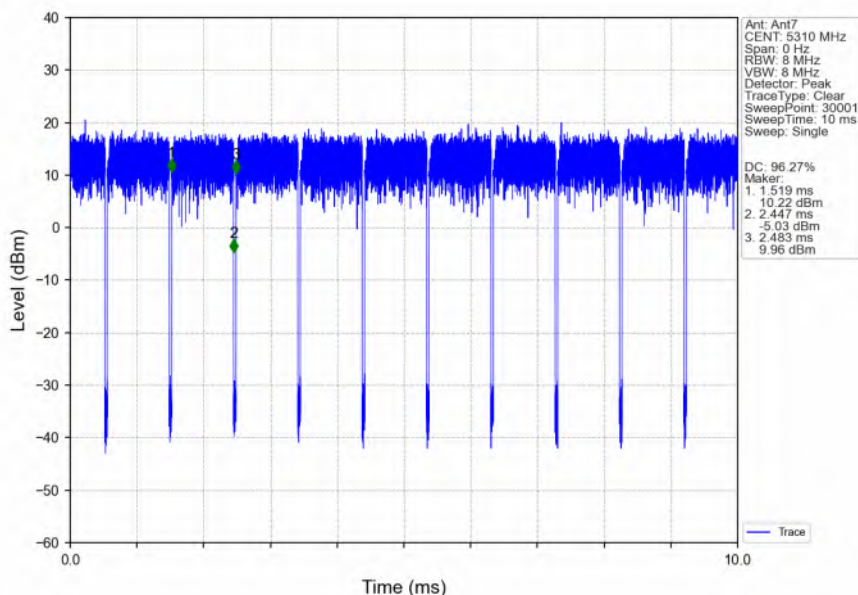
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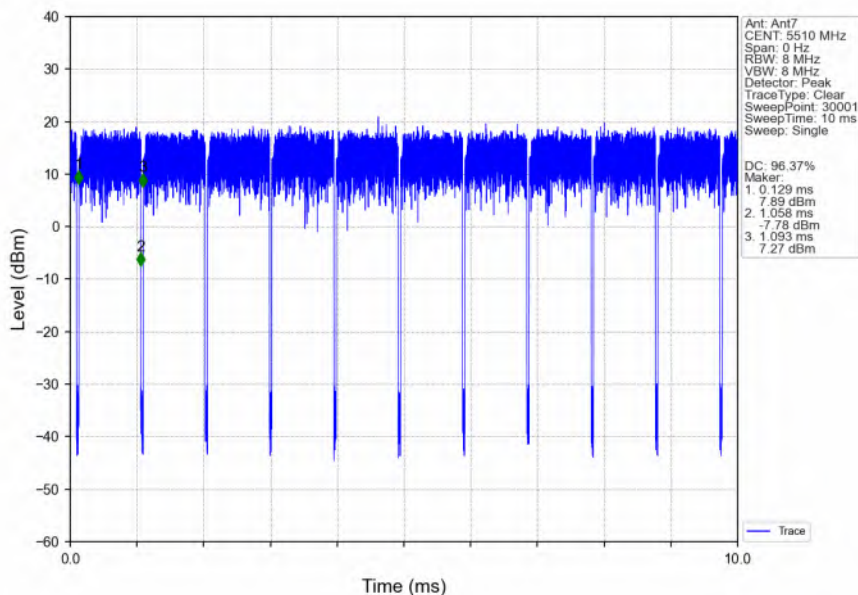
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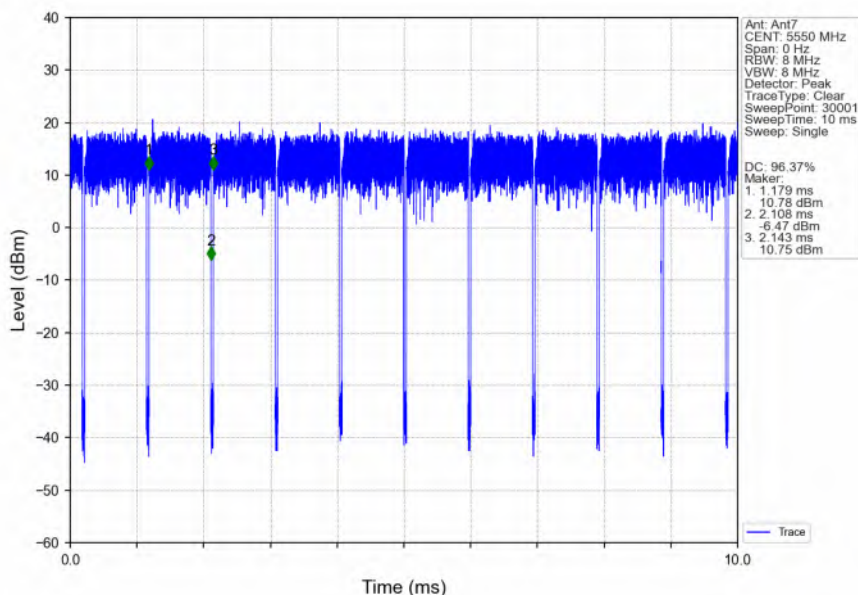
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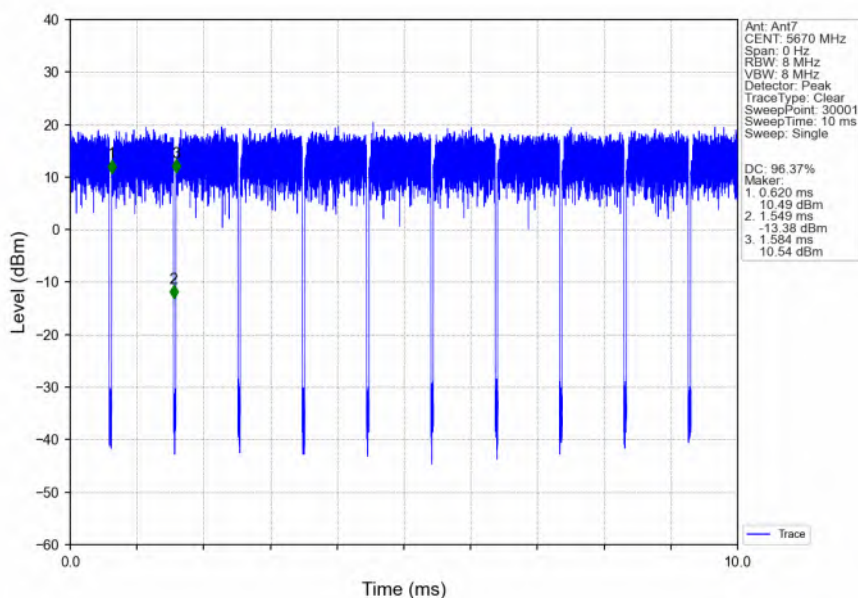
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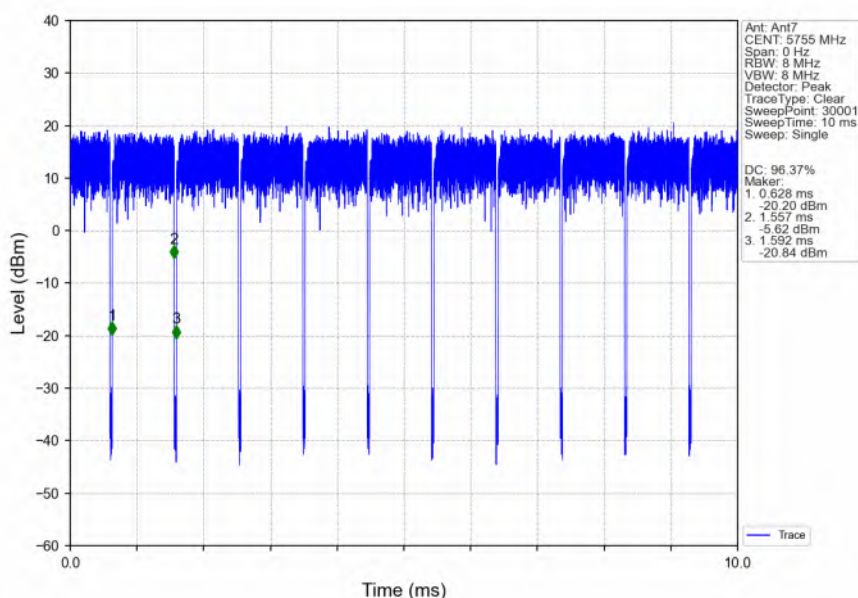
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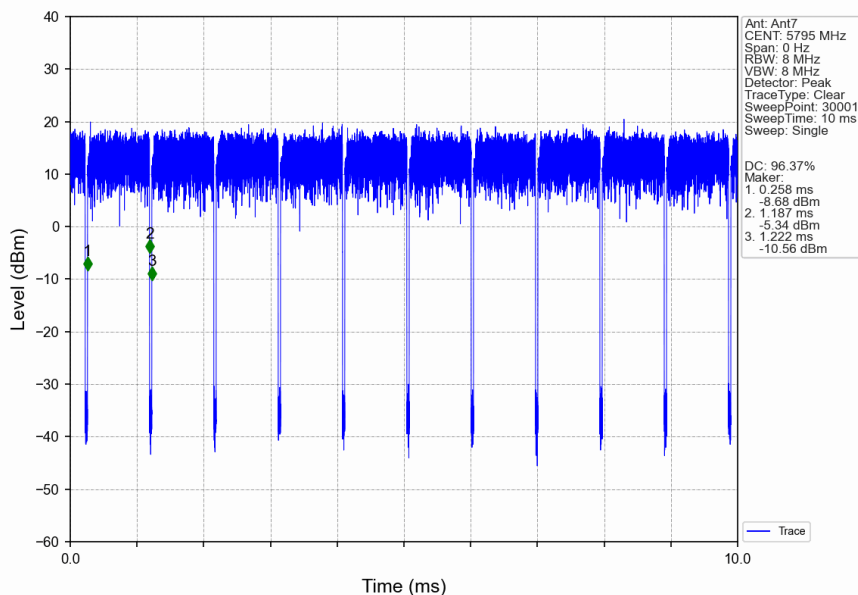
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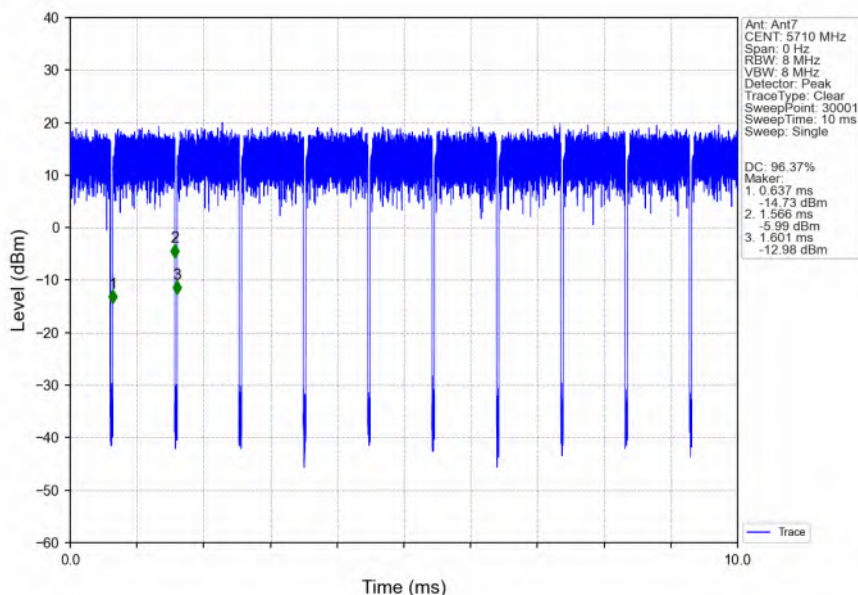
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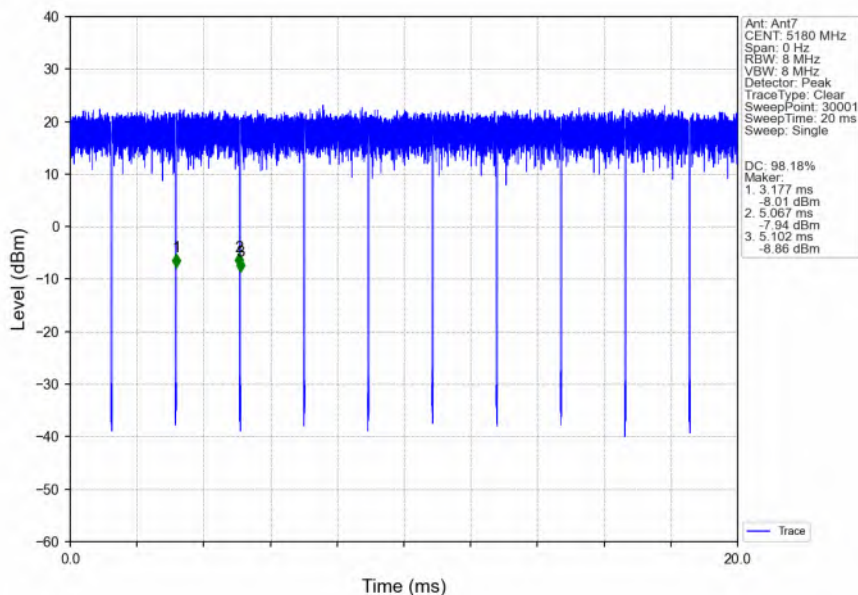
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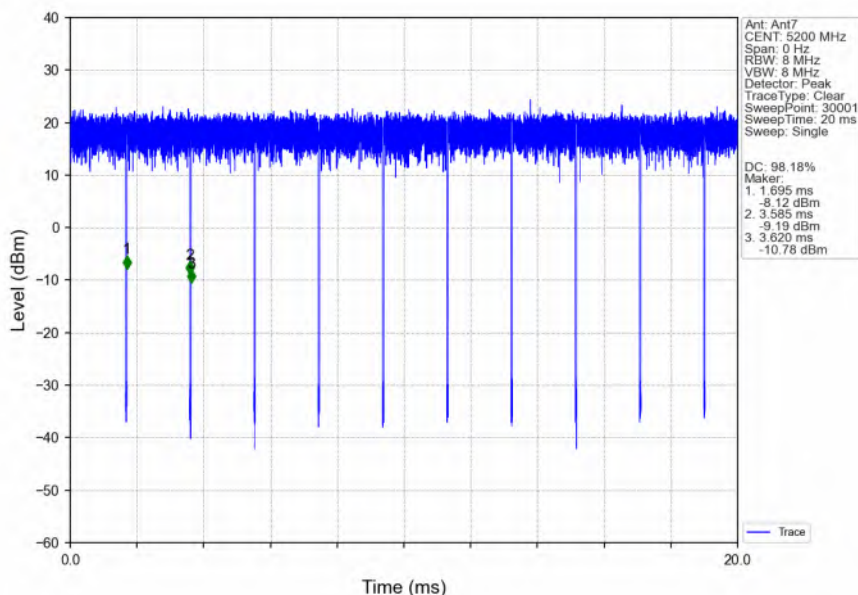
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802.11ac(VHT20)_LCH_5180MHz_Ant7_NTNV



802.11ac(VHT20)_MCH_5200MHz_Ant7_NTNV



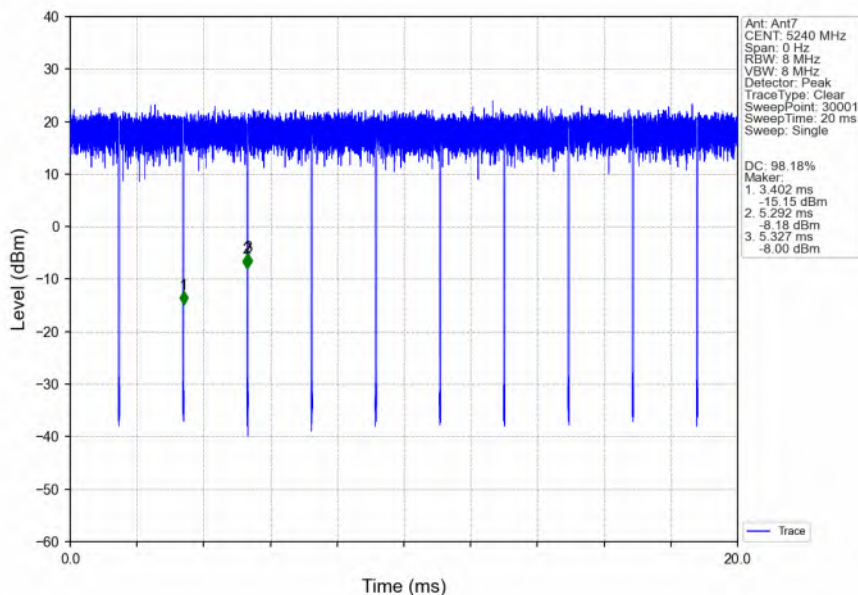
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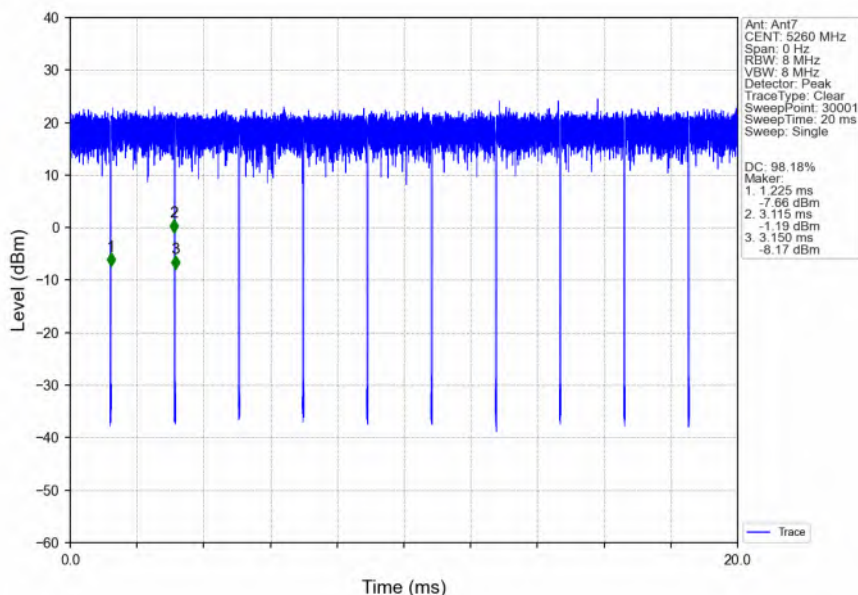
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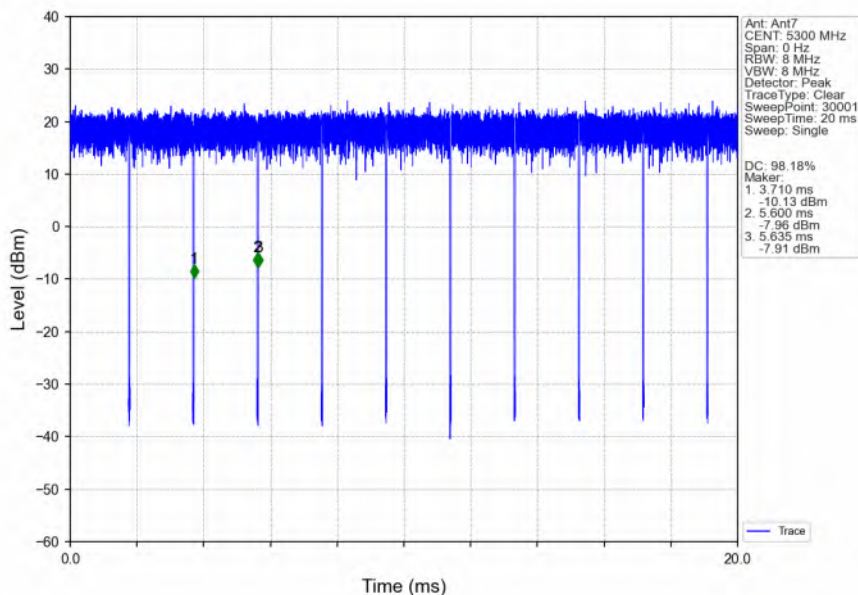
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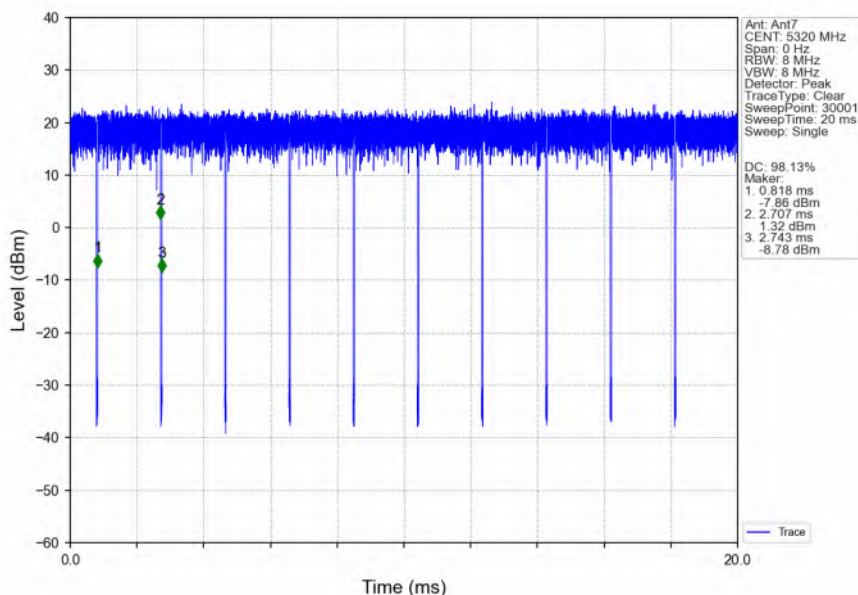
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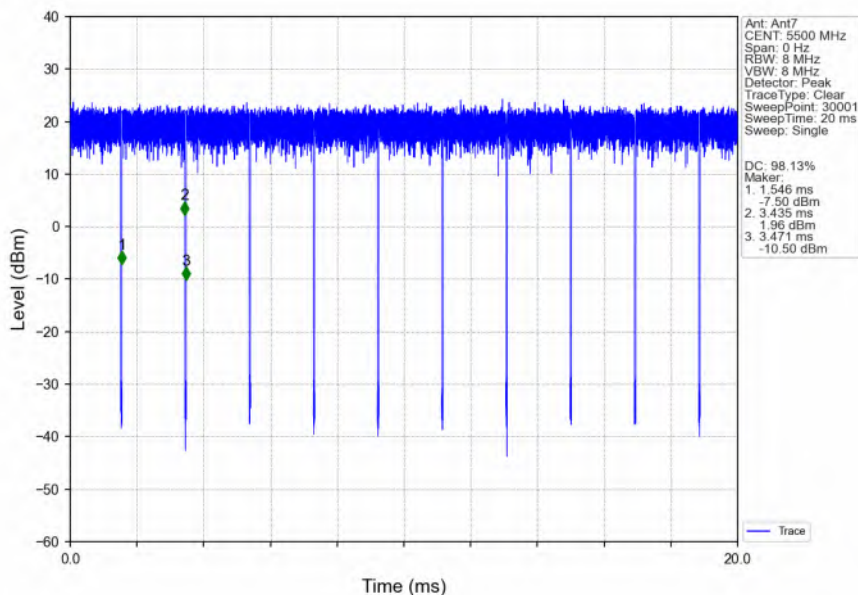
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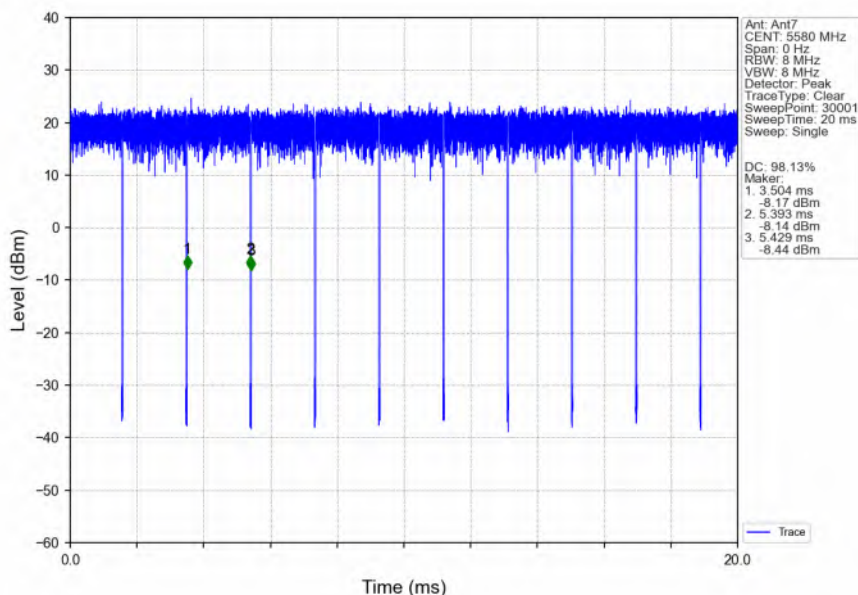
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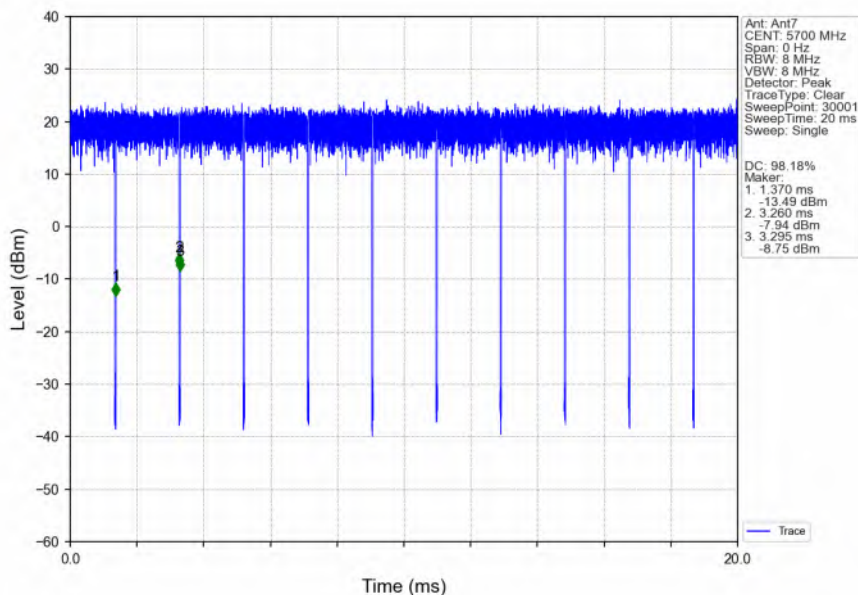
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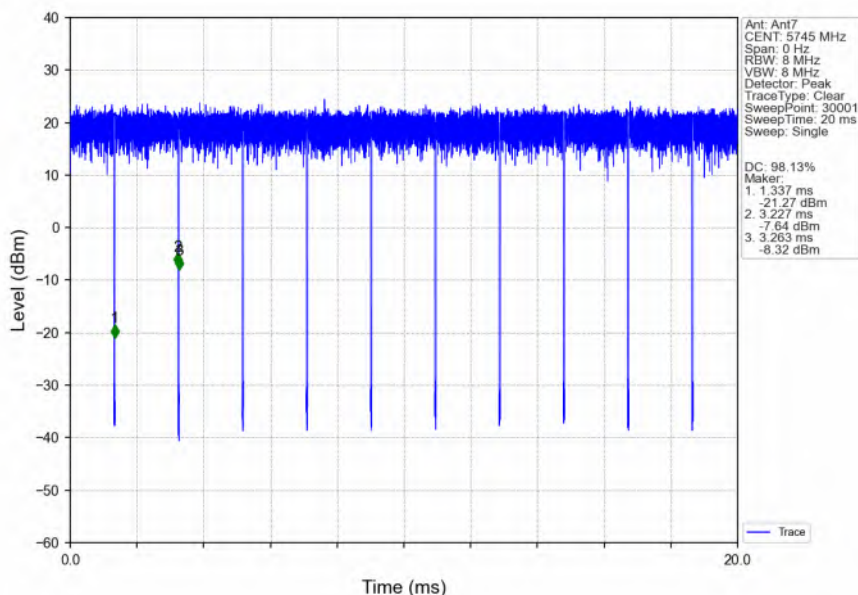
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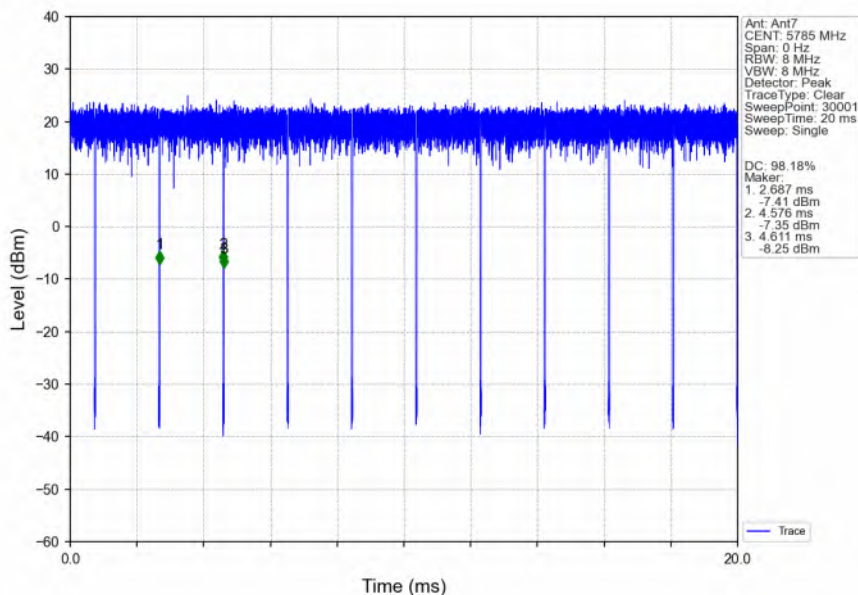
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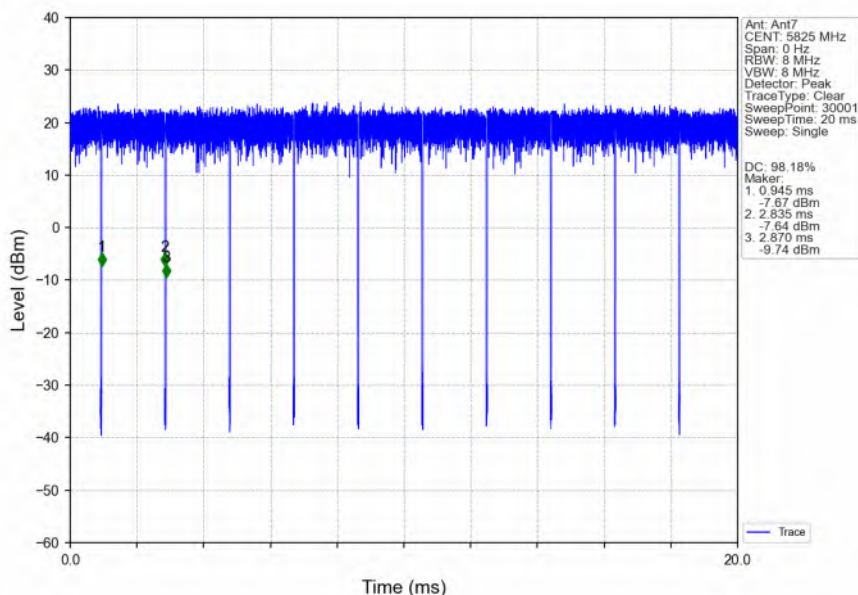
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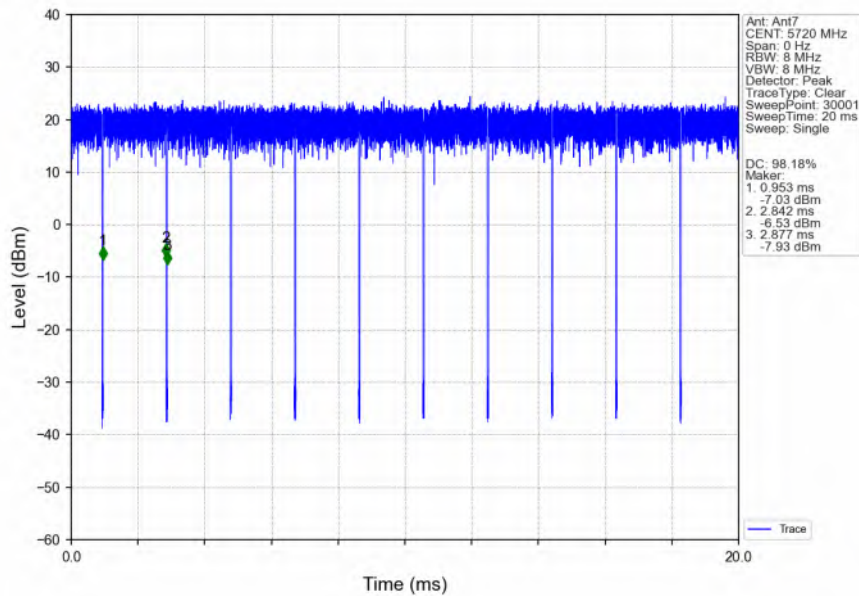
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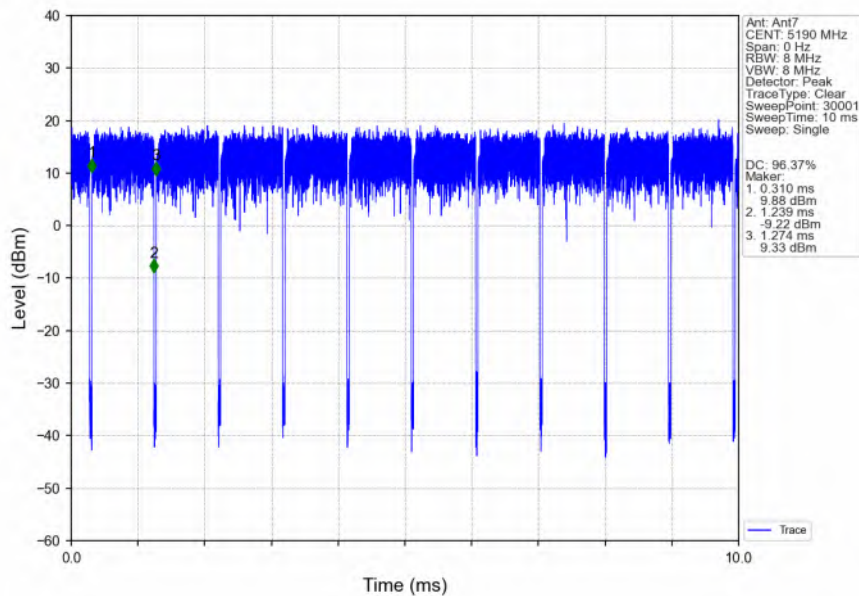
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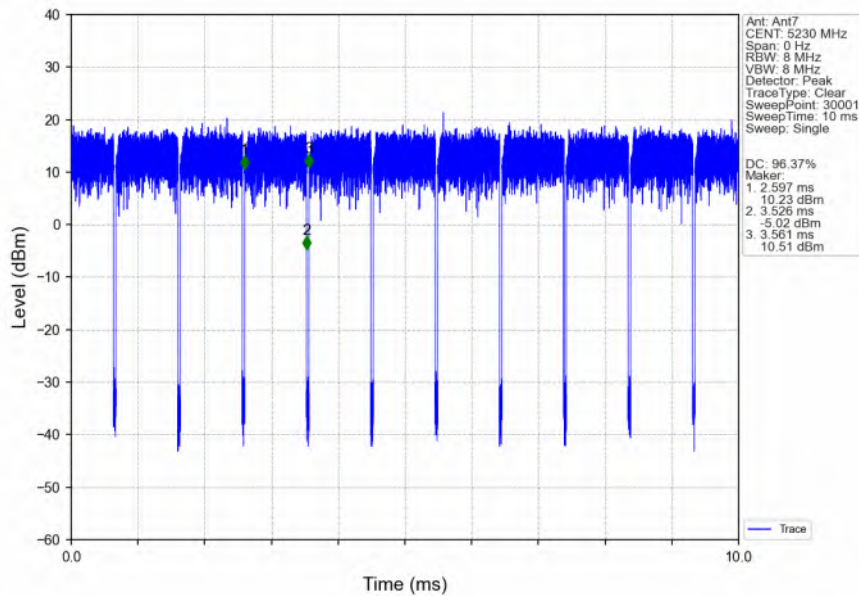
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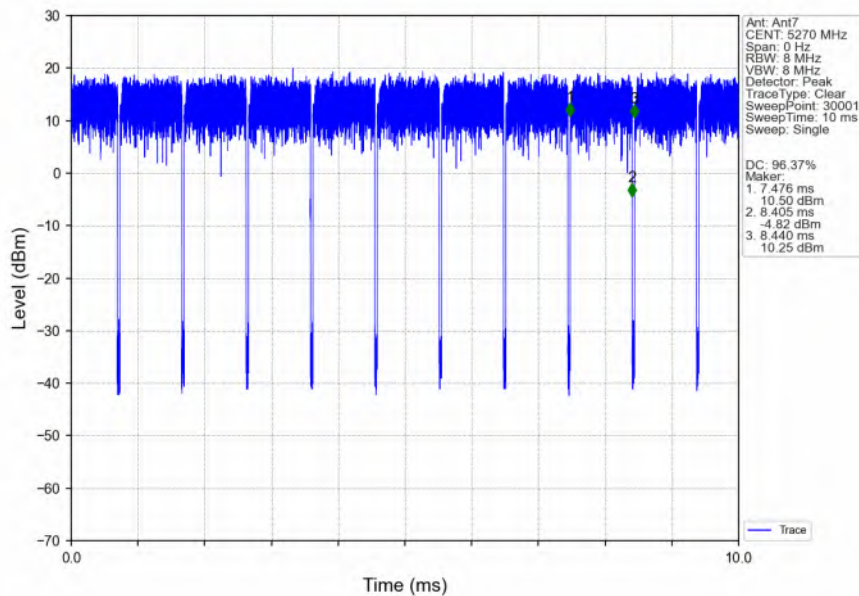
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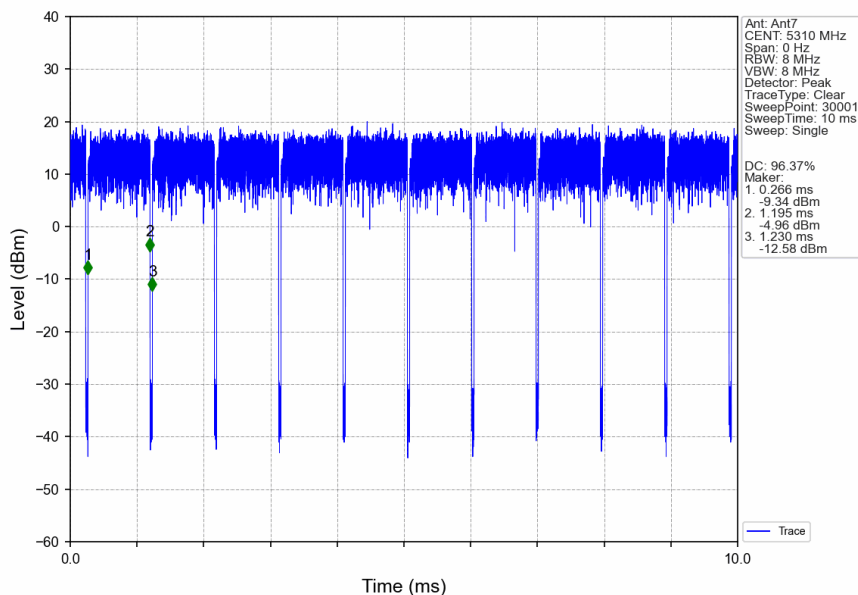
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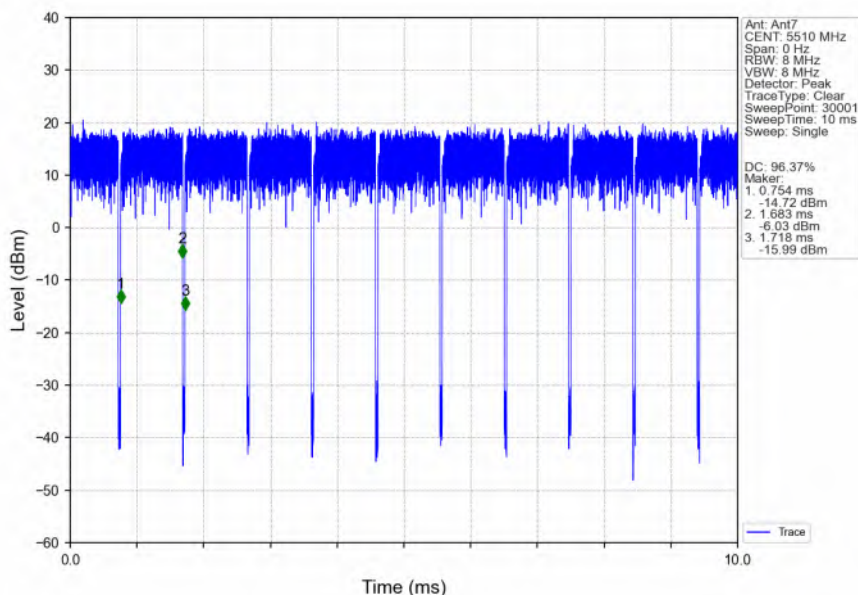
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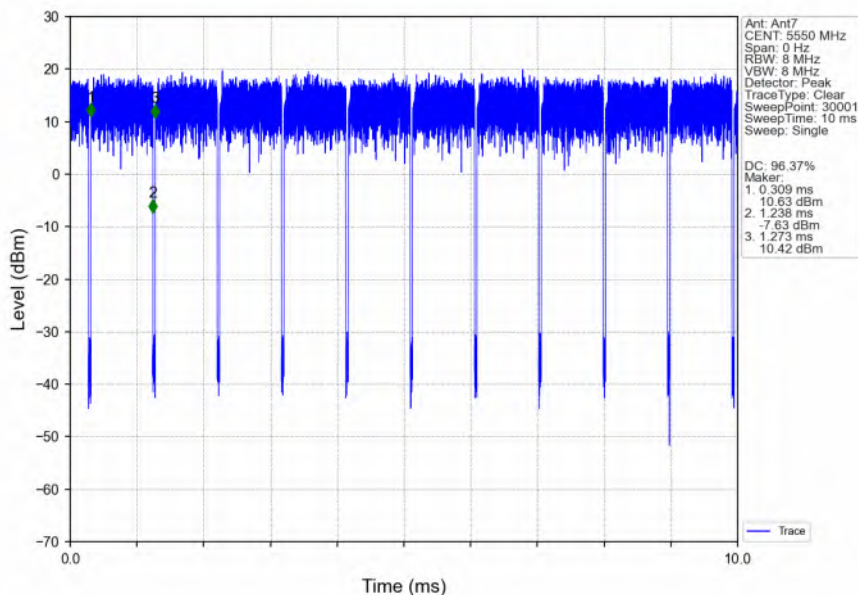
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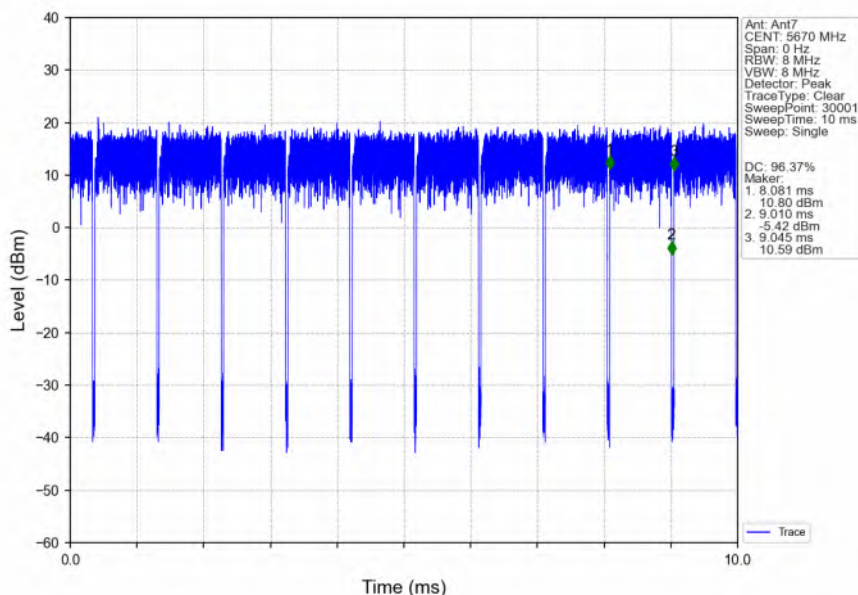
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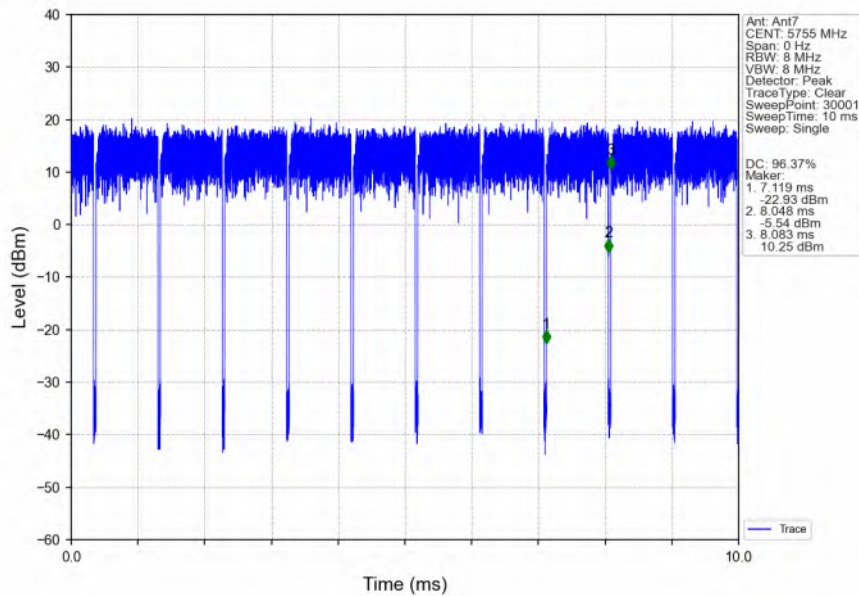
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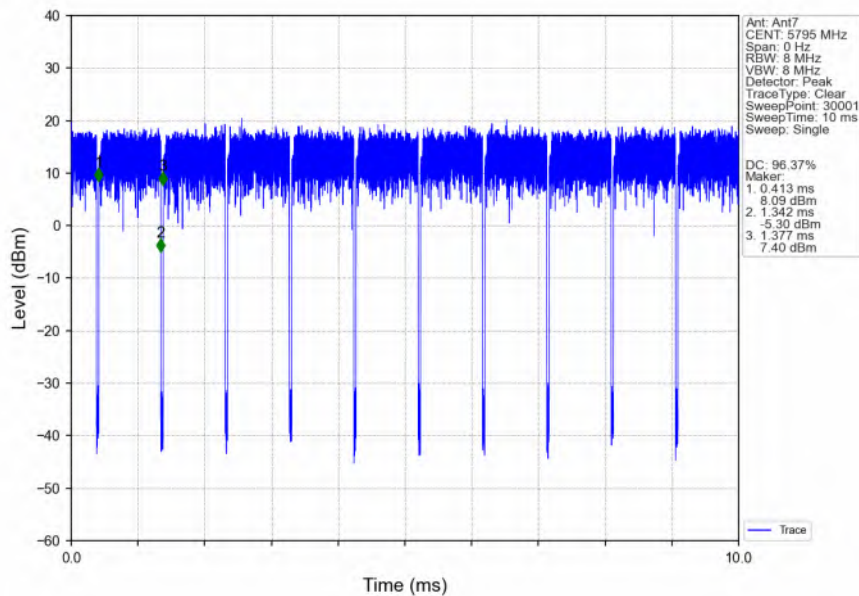
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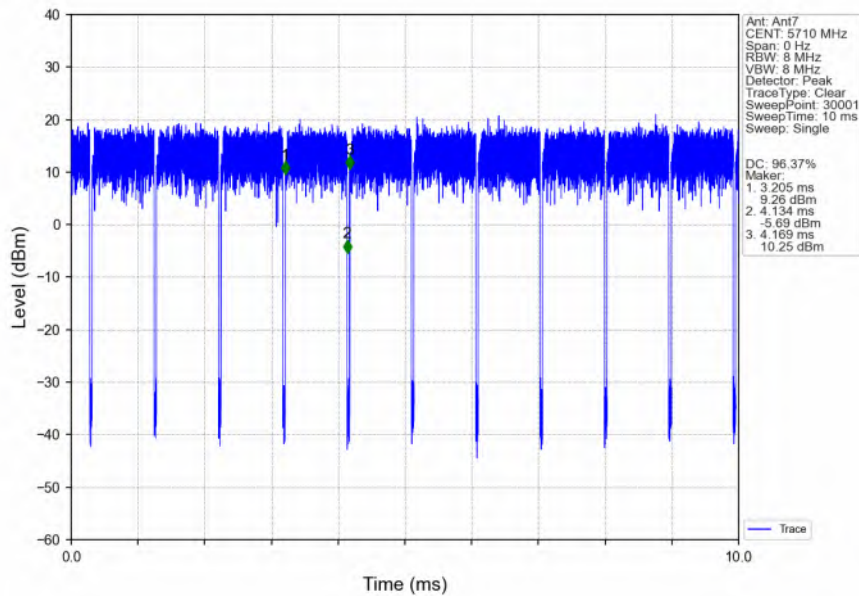
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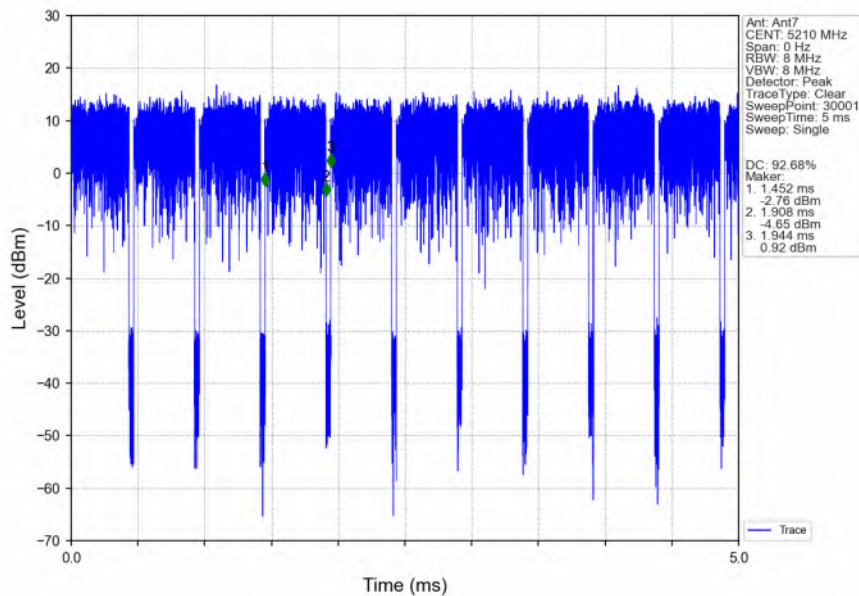
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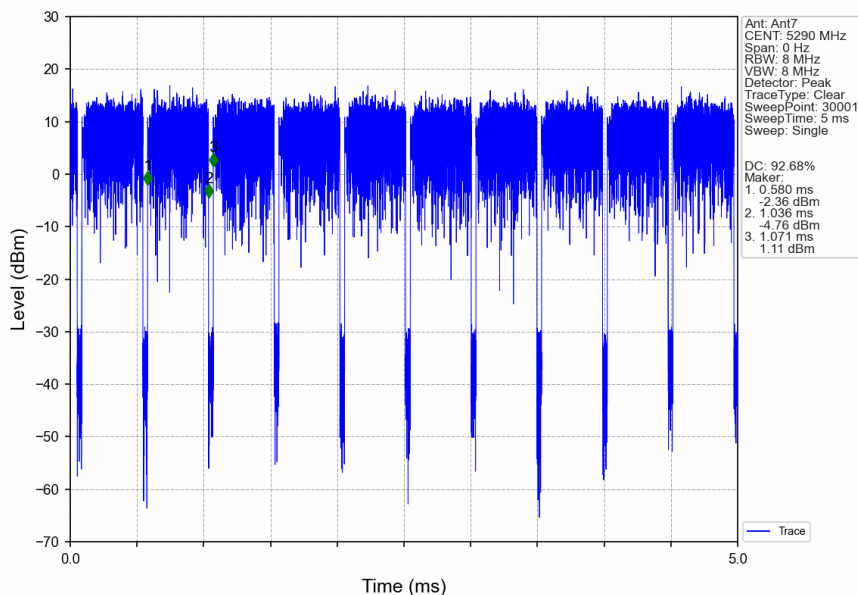
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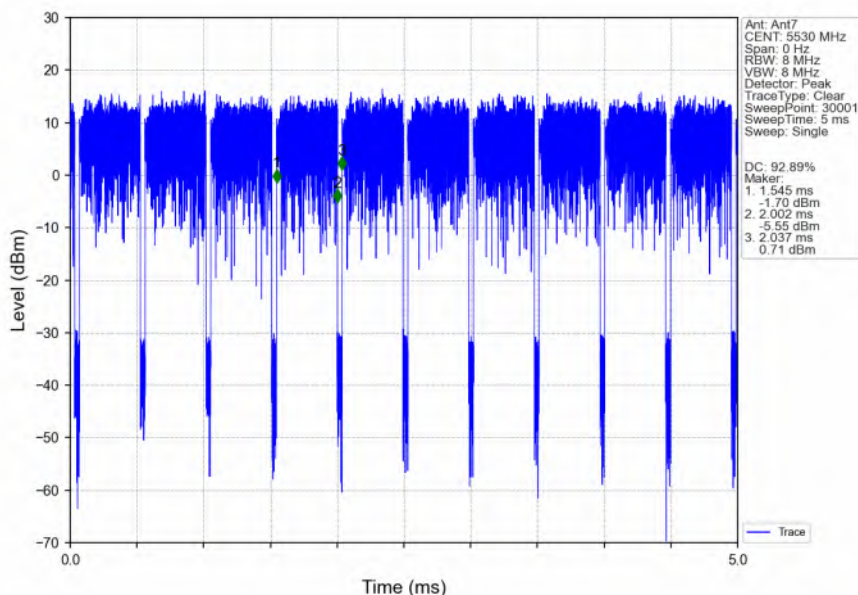
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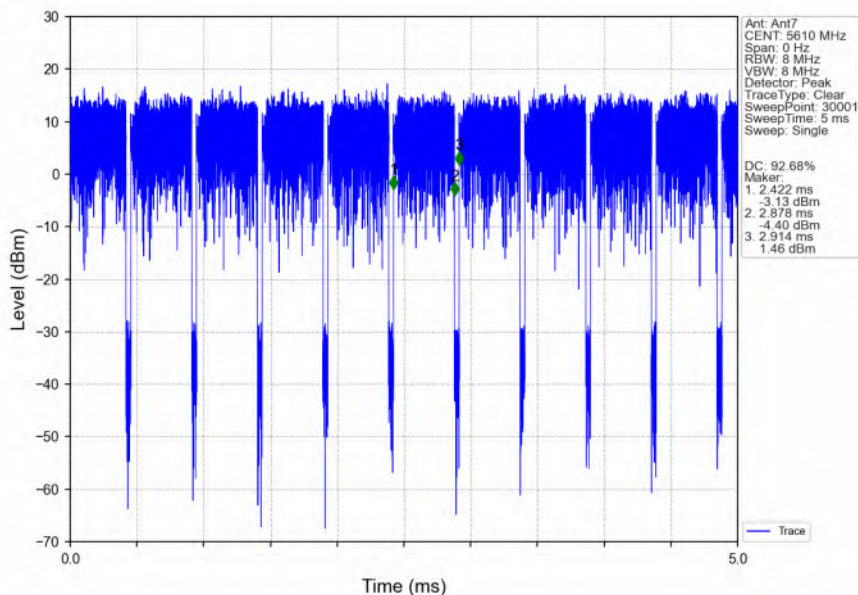
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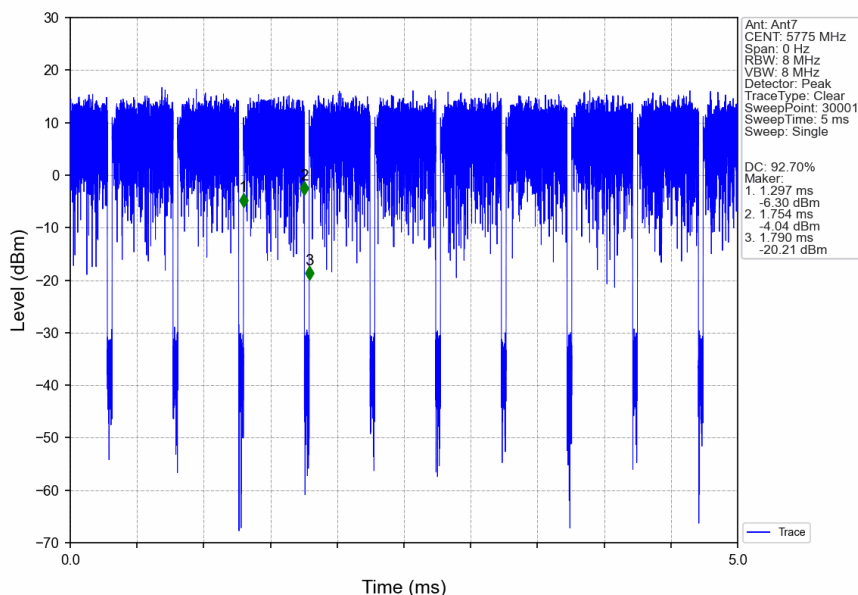
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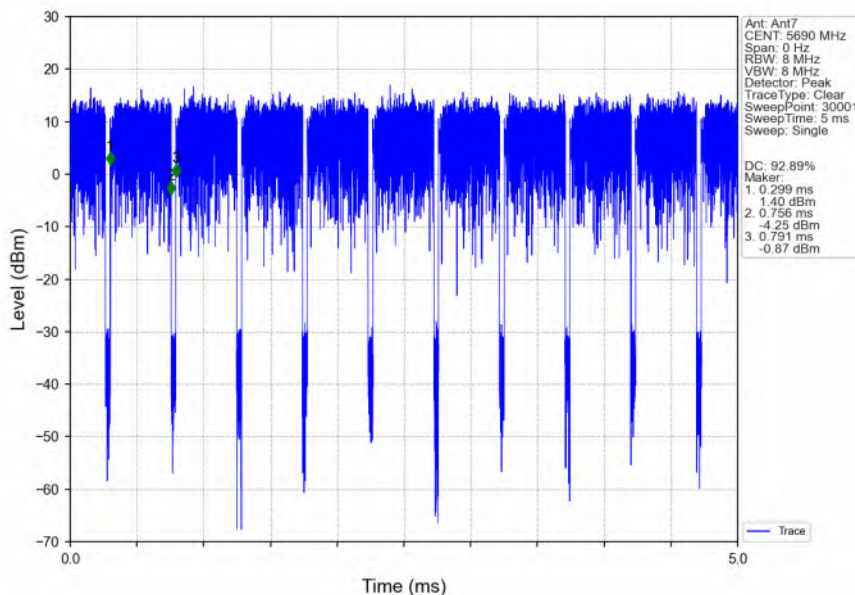
802.11ac(VHT80)_HCH_5610MHz_Ant7_NTNV



802.11ac(VHT80)_MCH_5775MHz_Ant7_NTNV



802.11ac(VHT80)_HCH_5690MHz_Ant7_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	7	17.524	/	Pass
		5200	7	17.587	/	Pass
		5240	7	17.463	/	Pass
		5260	7	17.434	/	Pass
		5300	7	17.465	/	Pass
		5320	7	17.480	/	Pass
		5500	7	17.580	/	Pass
		5580	7	17.542	/	Pass
		5700	7	17.672	/	Pass
		5745	7	17.702	/	Pass
		5785	7	18.230	/	Pass
		5825	7	18.277	/	Pass
		5720	7	17.723	/	Pass
802.11n (HT20)	SISO	5180	7	18.563	/	Pass
		5200	7	18.592	/	Pass
		5240	7	18.533	/	Pass
		5260	7	18.604	/	Pass
		5300	7	18.627	/	Pass
		5320	7	18.560	/	Pass
		5500	7	18.658	/	Pass
		5580	7	18.594	/	Pass
		5700	7	18.676	/	Pass
		5745	7	18.740	/	Pass
		5785	7	19.223	/	Pass
		5825	7	19.187	/	Pass
		5720	7	18.690	/	Pass
802.11n (HT40)	SISO	5190	7	36.702	/	Pass
		5230	7	36.640	/	Pass
		5270	7	36.701	/	Pass
		5310	7	36.621	/	Pass
		5510	7	36.654	/	Pass
		5550	7	36.649	/	Pass



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		5670	7	36.724	/	Pass
		5755	7	36.729	/	Pass
		5795	7	36.704	/	Pass
		5710	7	36.771	/	Pass
802.11ac (VHT20)	SISO	5180	7	18.617	/	Pass
		5200	7	18.669	/	Pass
		5240	7	18.568	/	Pass
		5260	7	18.613	/	Pass
		5300	7	18.554	/	Pass
		5320	7	18.583	/	Pass
		5500	7	18.709	/	Pass
		5580	7	18.691	/	Pass
		5700	7	18.722	/	Pass
		5745	7	18.783	/	Pass
		5785	7	19.460	/	Pass
		5825	7	19.412	/	Pass
		5720	7	18.666	/	Pass
802.11ac (VHT40)	SISO	5190	7	36.691	/	Pass
		5230	7	36.657	/	Pass
		5270	7	36.624	/	Pass
		5310	7	36.650	/	Pass
		5510	7	36.726	/	Pass
		5550	7	36.810	/	Pass
		5670	7	36.688	/	Pass
		5755	7	36.776	/	Pass
		5795	7	36.803	/	Pass
		5710	7	36.686	/	Pass
802.11ac (VHT80)	SISO	5210	7	76.503	/	Pass
		5290	7	76.589	/	Pass
		5530	7	76.743	/	Pass
		5610	7	76.743	/	Pass
		5775	7	77.044	/	Pass
		5690	7	76.686	/	Pass

2.1.2 26dB BW

Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	7	27.447	/	Pass
		5200	7	25.425	/	Pass



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		5240	7	26.078	/	Pass
		5260	7	26.769	/	Pass
		5300	7	26.753	/	Pass
		5320	7	27.258	/	Pass
		5500	7	28.215	/	Pass
		5580	7	27.647	/	Pass
		5700	7	26.644	/	Pass
		5720	7	27.596	/	Pass
802.11n (HT20)	SISO	5180	7	28.346	/	Pass
		5200	7	29.290	/	Pass
		5240	7	26.611	/	Pass
		5260	7	29.429	/	Pass
		5300	7	28.101	/	Pass
		5320	7	27.607	/	Pass
		5500	7	29.324	/	Pass
		5580	7	28.446	/	Pass
		5700	7	30.084	/	Pass
		5720	7	28.913	/	Pass
802.11n (HT40)	SISO	5190	7	41.884	/	Pass
		5230	7	42.825	/	Pass
		5270	7	41.947	/	Pass
		5310	7	41.522	/	Pass
		5510	7	41.549	/	Pass
		5550	7	41.822	/	Pass
		5670	7	41.725	/	Pass
		5710	7	41.801	/	Pass
802.11ac (VHT20)	SISO	5180	7	28.011	/	Pass
		5200	7	30.611	/	Pass
		5240	7	28.867	/	Pass
		5260	7	26.596	/	Pass
		5300	7	26.527	/	Pass
		5320	7	26.617	/	Pass
		5500	7	29.249	/	Pass
		5580	7	28.730	/	Pass
		5700	7	30.098	/	Pass
		5720	7	28.663	/	Pass
802.11ac (VHT40)	SISO	5190	7	41.454	/	Pass
		5230	7	41.665	/	Pass
		5270	7	42.005	/	Pass
		5310	7	41.568	/	Pass



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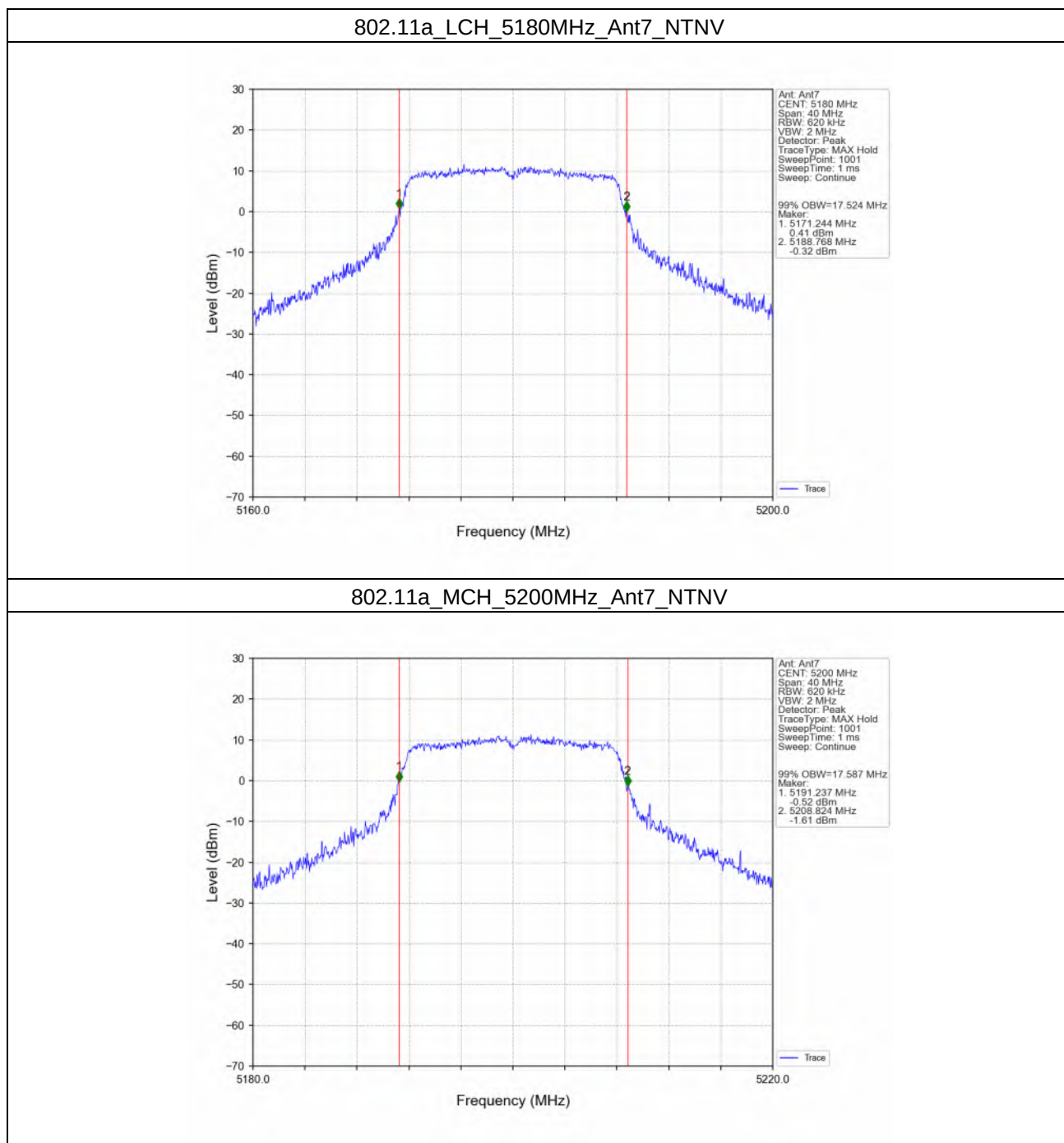
		5510	7	41.596	/	Pass
		5550	7	41.742	/	Pass
		5670	7	41.961	/	Pass
		5710	7	41.998	/	Pass
802.11ac (VHT80)	SISO	5210	7	90.986	/	Pass
		5290	7	101.612	/	Pass
		5530	7	104.216	/	Pass
		5610	7	94.141	/	Pass
		5690	7	103.638	/	Pass

2.1.3 6dB BW

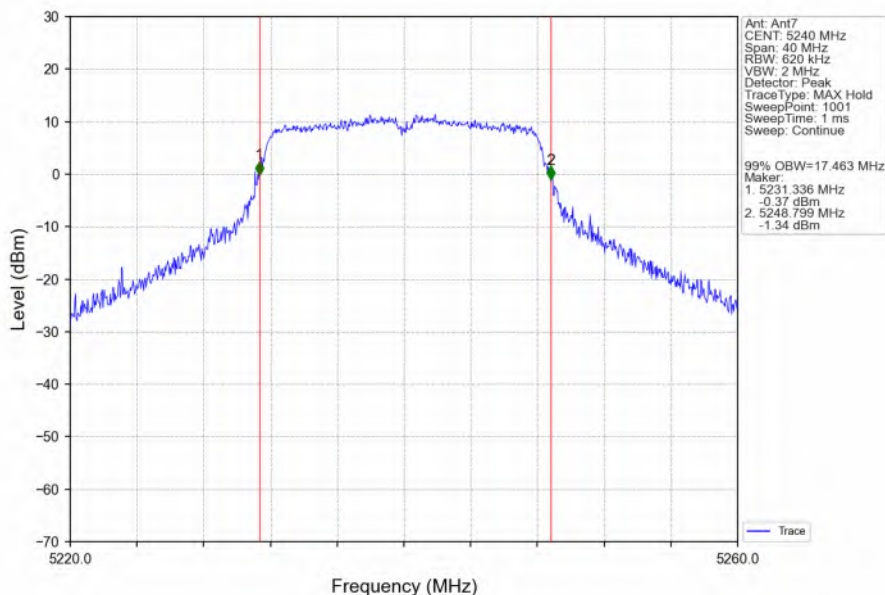
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5745	7	16.342	>=0.5	Pass
		5785	7	15.465	>=0.5	Pass
		5825	7	16.300	>=0.5	Pass
802.11n (HT20)	SISO	5745	7	17.049	>=0.5	Pass
		5785	7	16.917	>=0.5	Pass
		5825	7	15.124	>=0.5	Pass
802.11n (HT40)	SISO	5755	7	35.141	>=0.5	Pass
		5795	7	35.129	>=0.5	Pass
802.11ac (VHT20)	SISO	5745	7	17.201	>=0.5	Pass
		5785	7	17.133	>=0.5	Pass
		5825	7	15.141	>=0.5	Pass
802.11ac (VHT40)	SISO	5755	7	35.541	>=0.5	Pass
		5795	7	35.913	>=0.5	Pass
802.11ac (VHT80)	SISO	5775	7	75.168	>=0.5	Pass

2.2 Test Graph

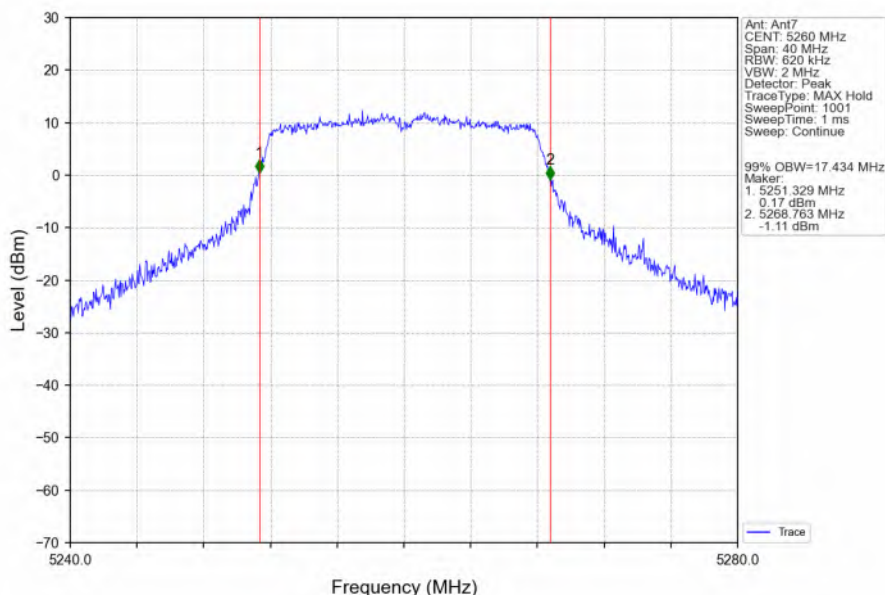
2.2.1 OBW



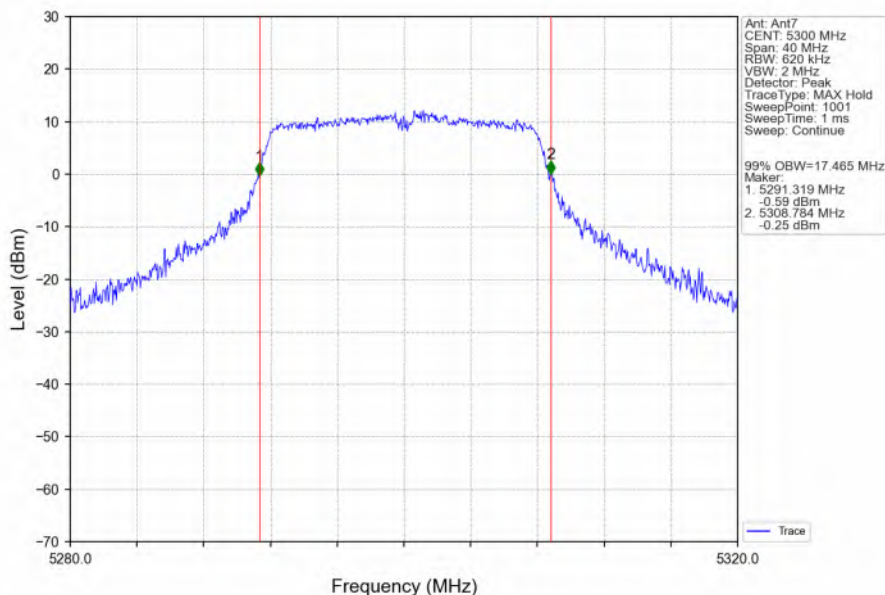
802.11a_HCH_5240MHz_Ant7_NTNV



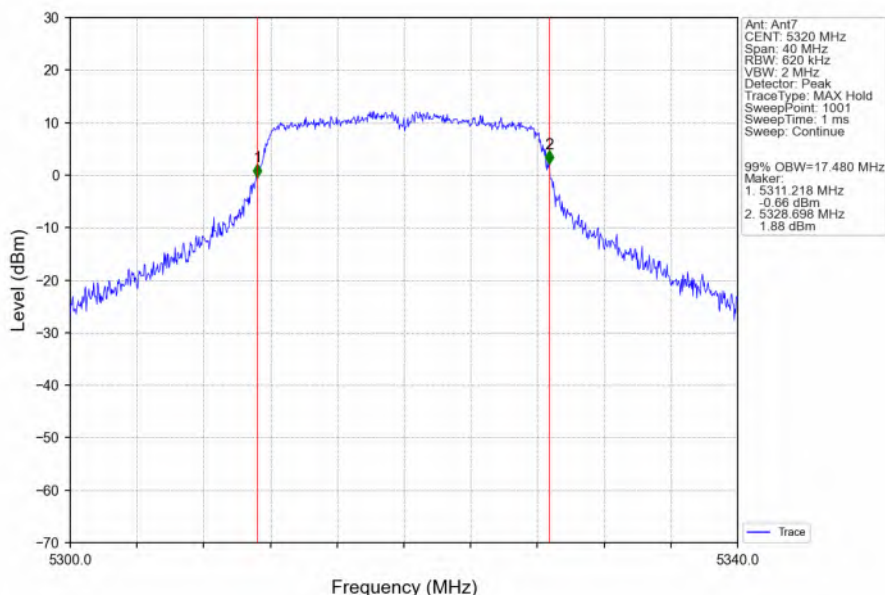
802.11a_LCH_5260MHz_Ant7_NTNV



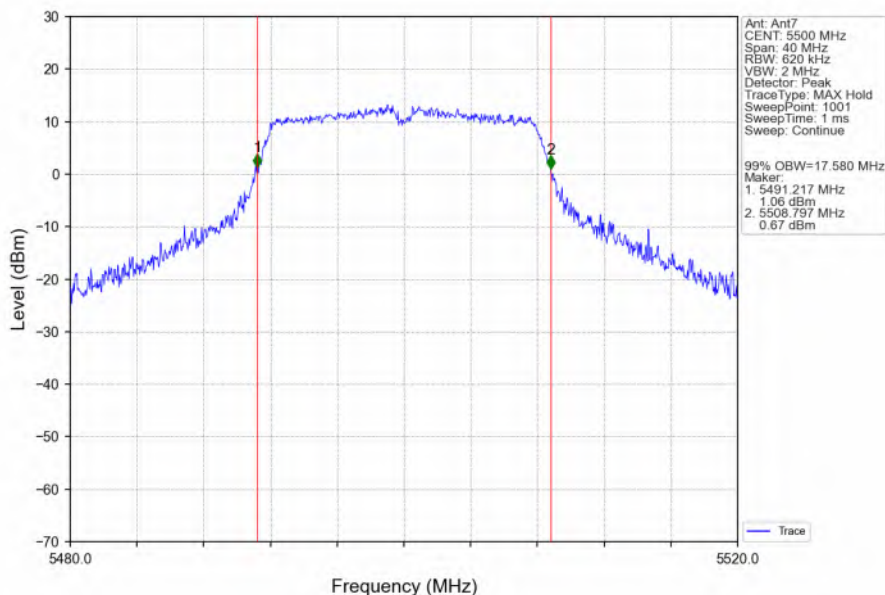
802.11a_MCH_5300MHz_Ant7_NTNV



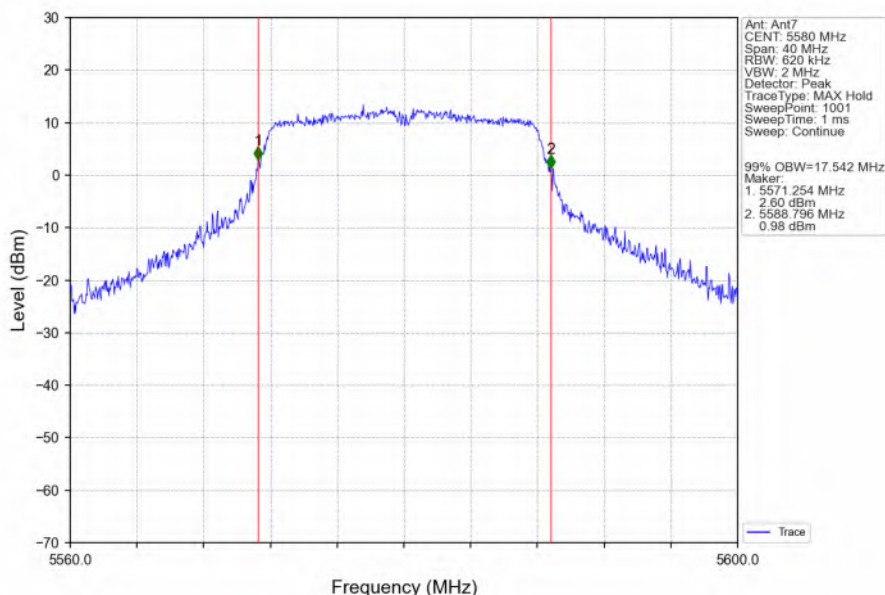
802.11a_HCH_5320MHz_Ant7_NTNV



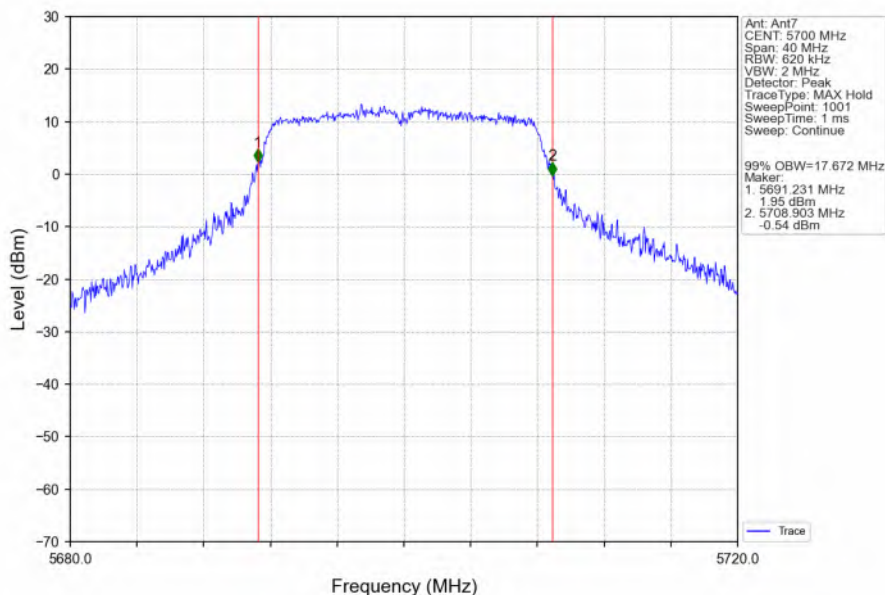
802.11a_LCH_5500MHz_Ant7_NTNV



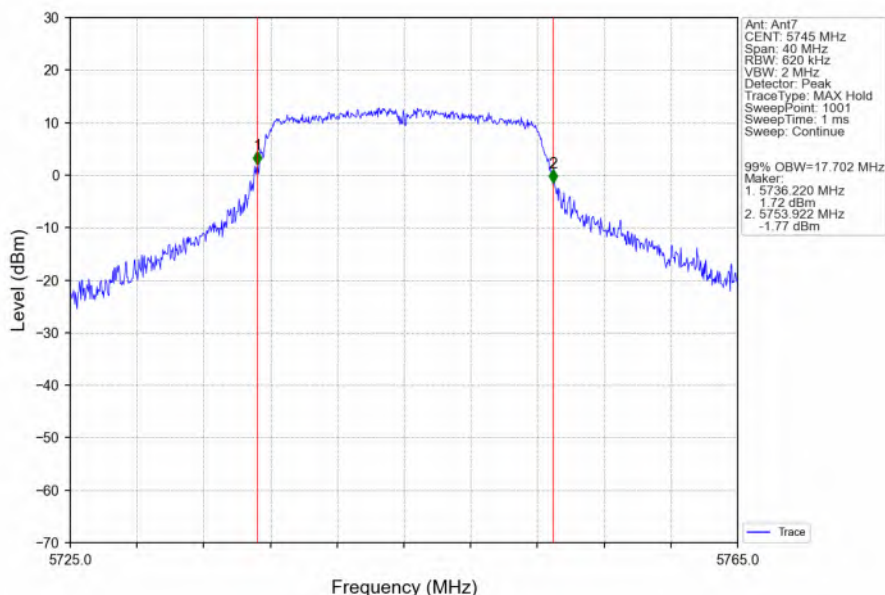
802.11a_MCH_5580MHz_Ant7_NTNV



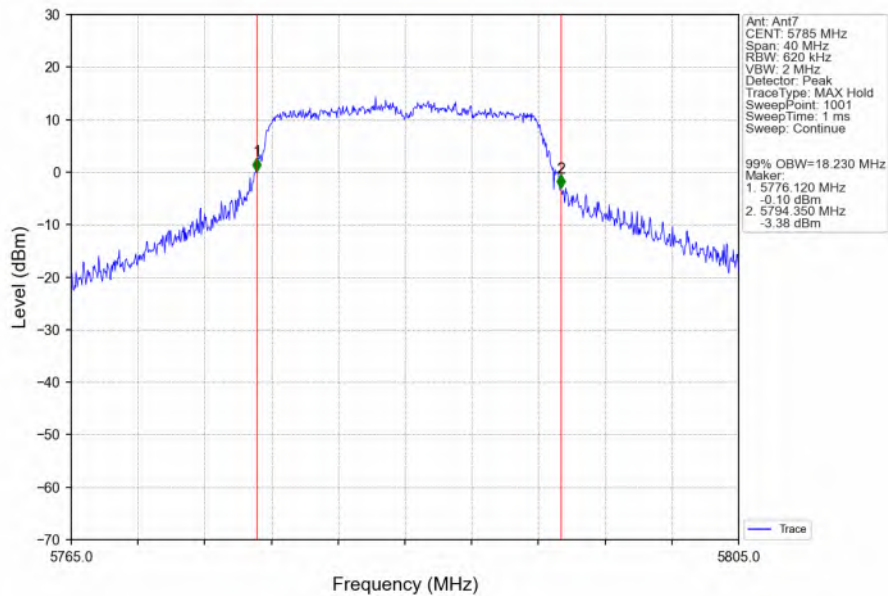
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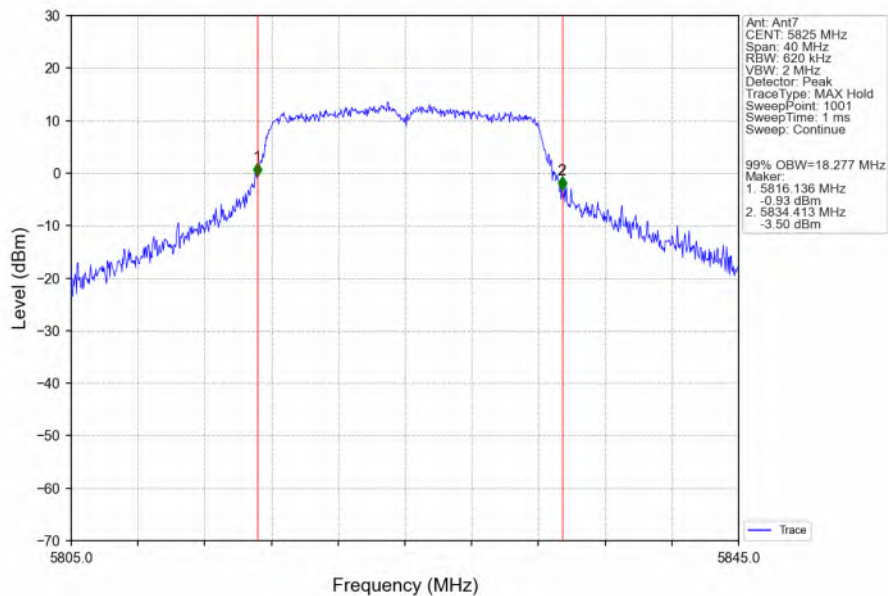
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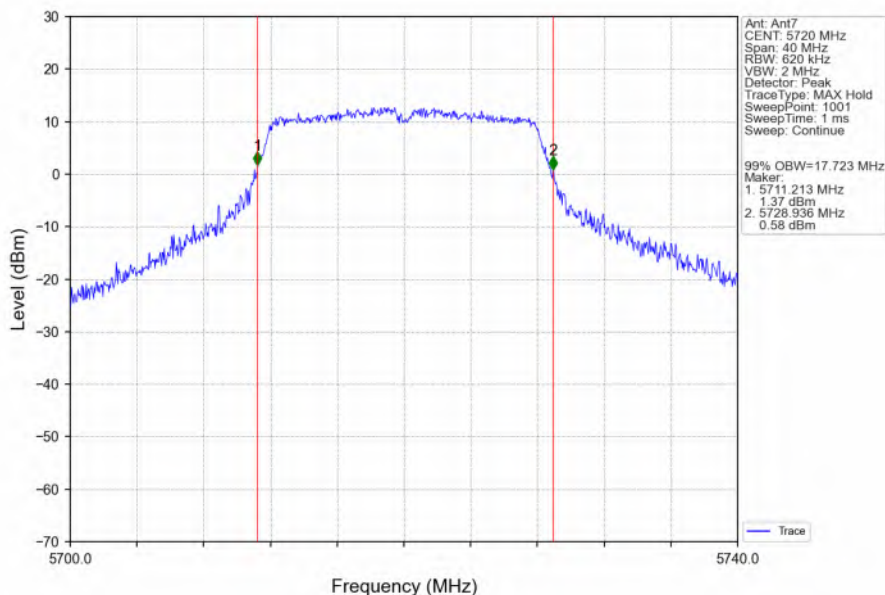
802.11a_MCH_5785MHz_Ant7_NTNV



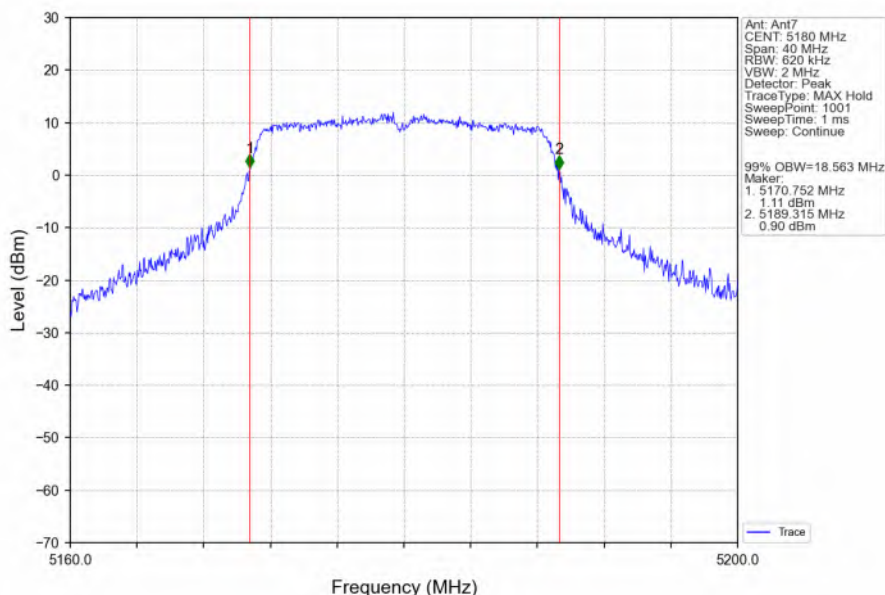
802.11a_HCH_5825MHz_Ant7_NTNV



802.11a_HCH_5720MHz_Ant7_NTNV



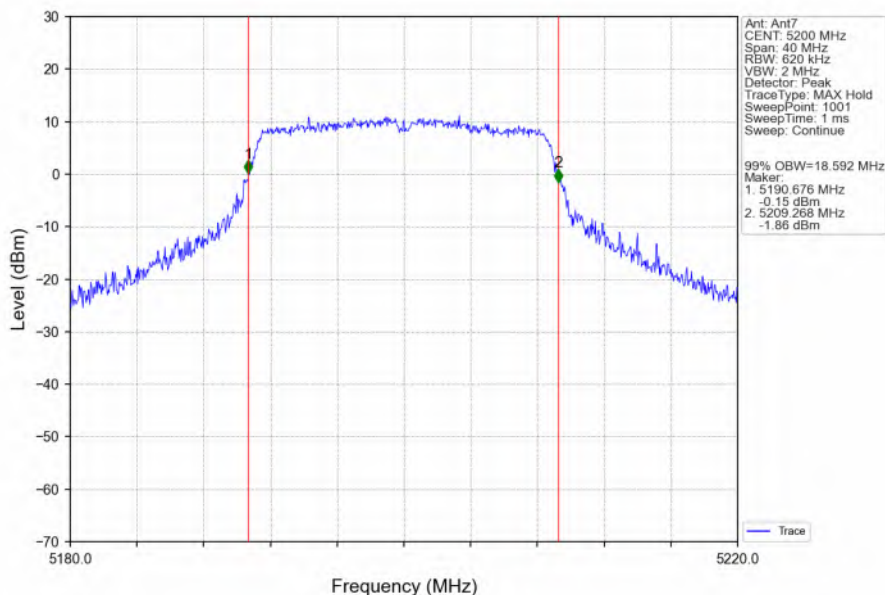
802.11n(HT20)_LCH_5180MHz_Ant7_NTNV



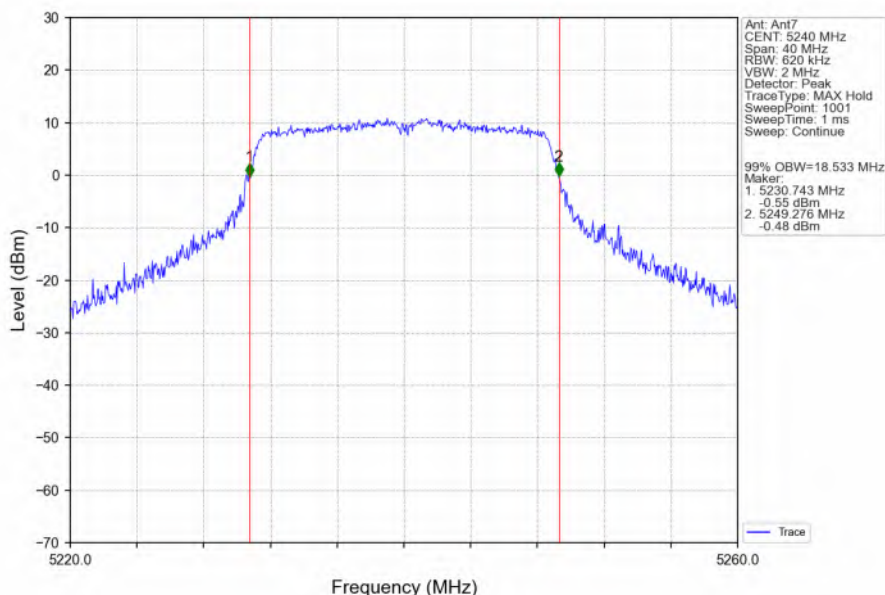
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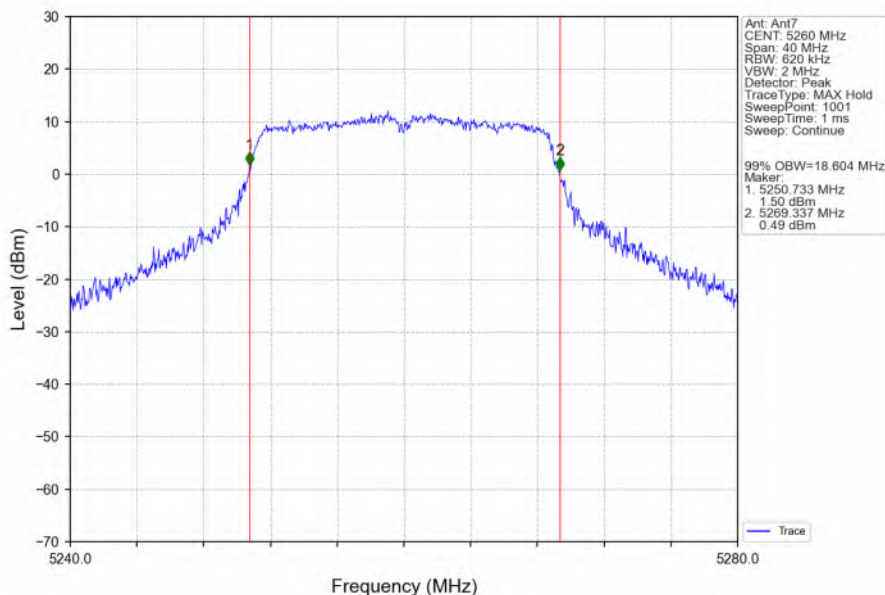
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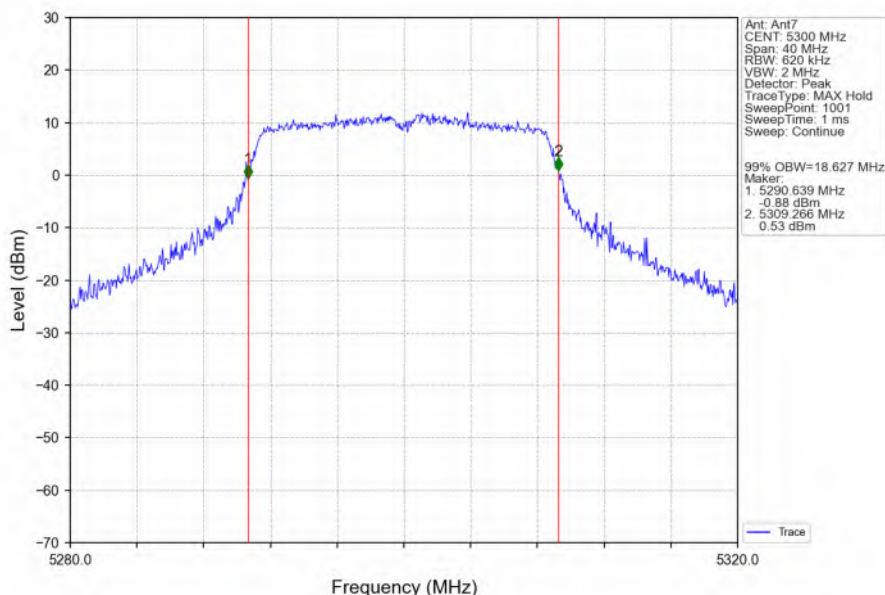
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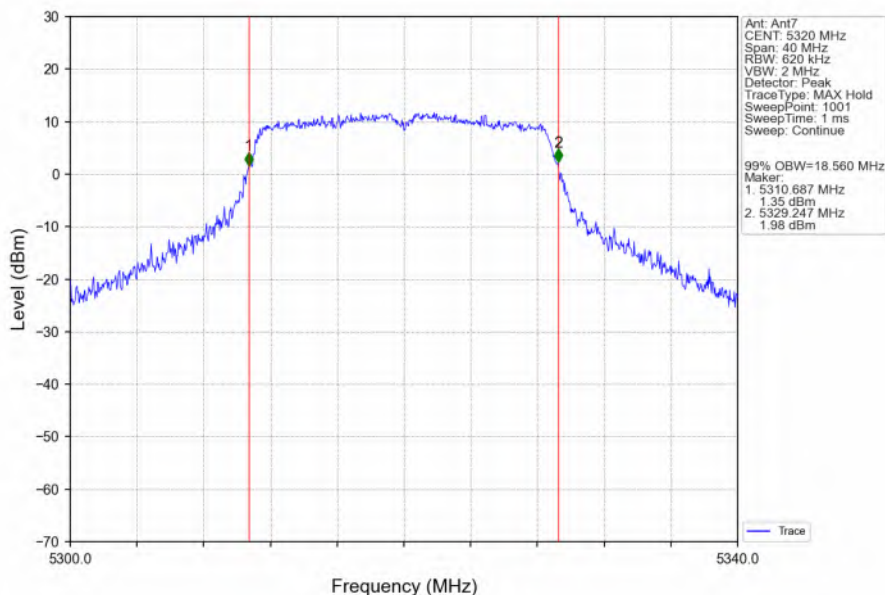
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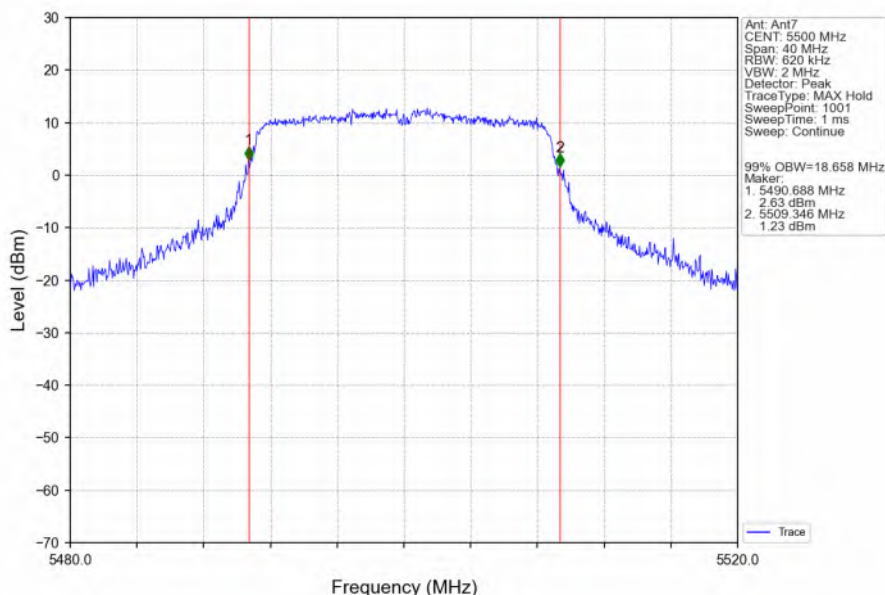
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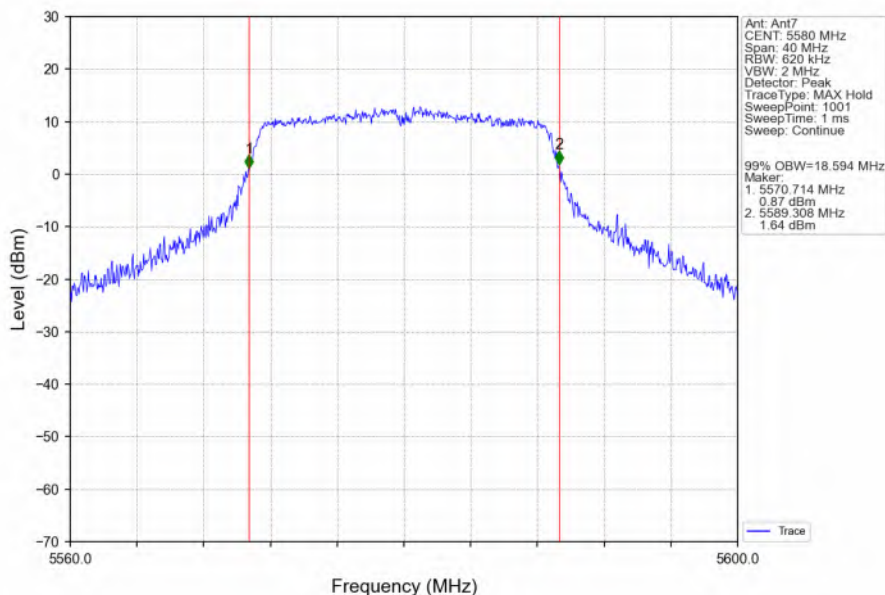
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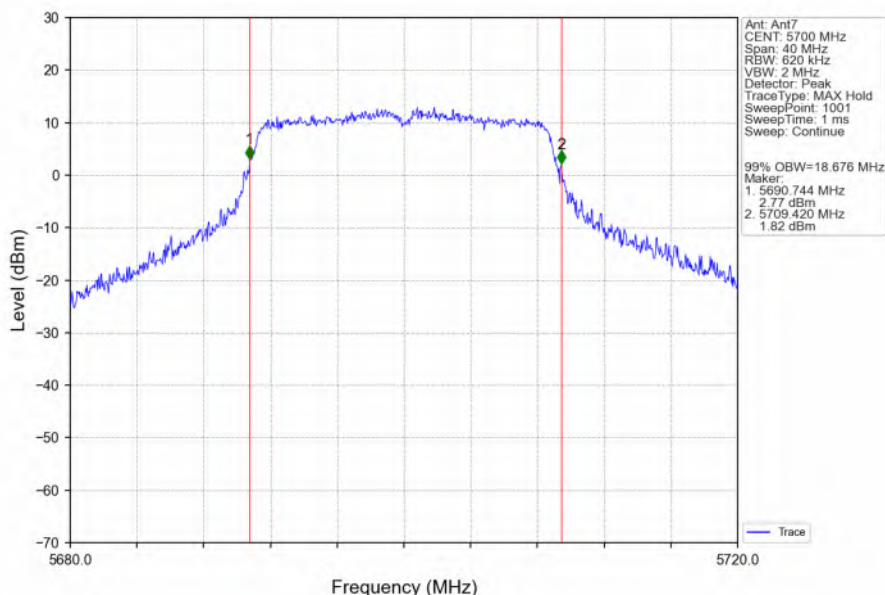
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802.11n(HT20)_MCH_5580MHz_Ant7_NTNV



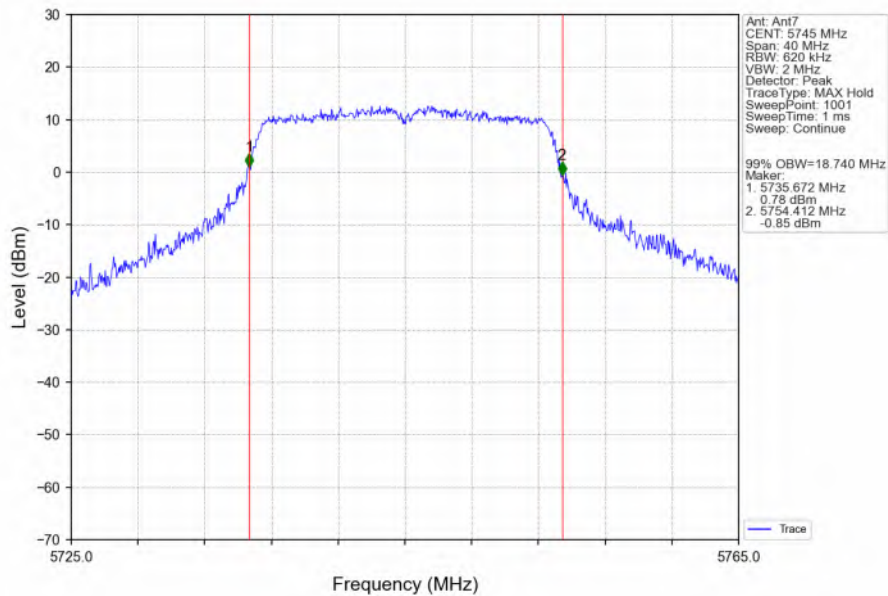
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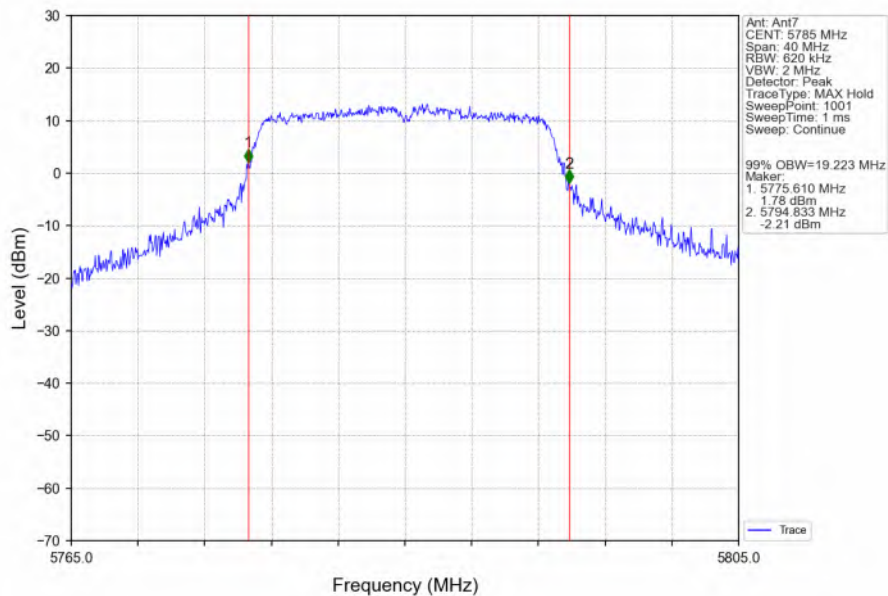
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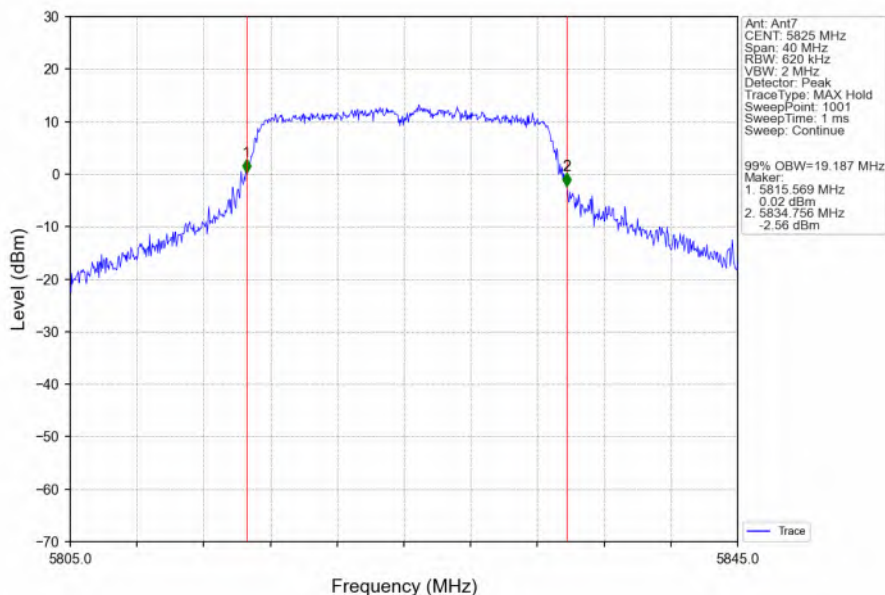
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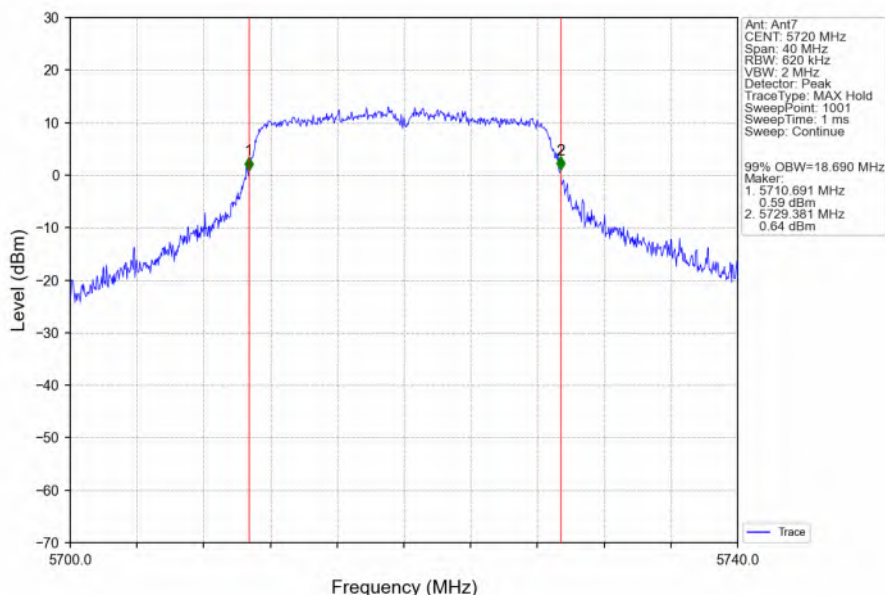
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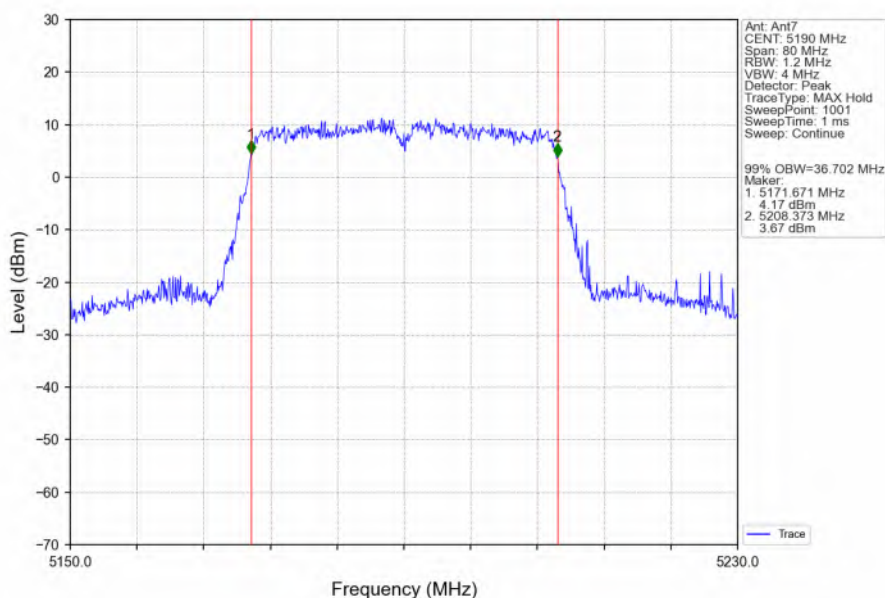
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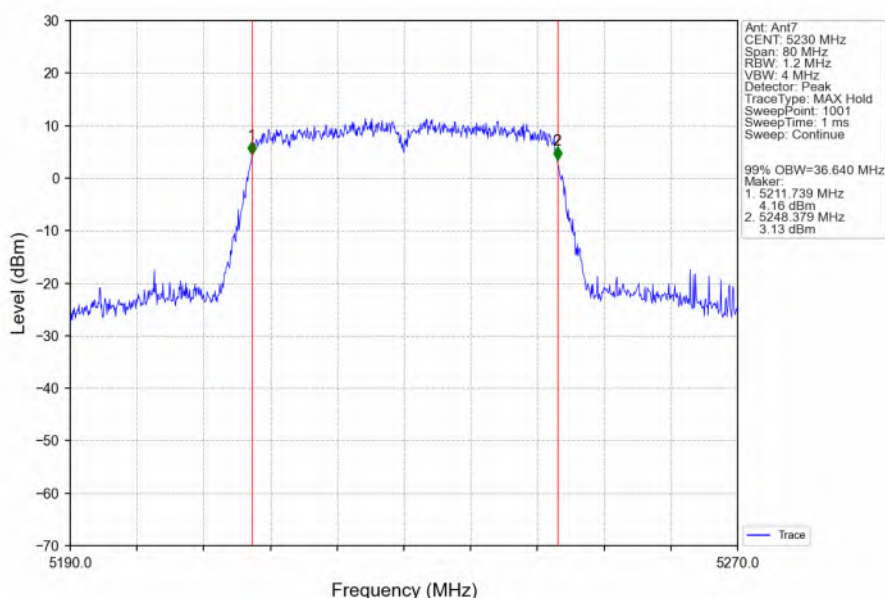
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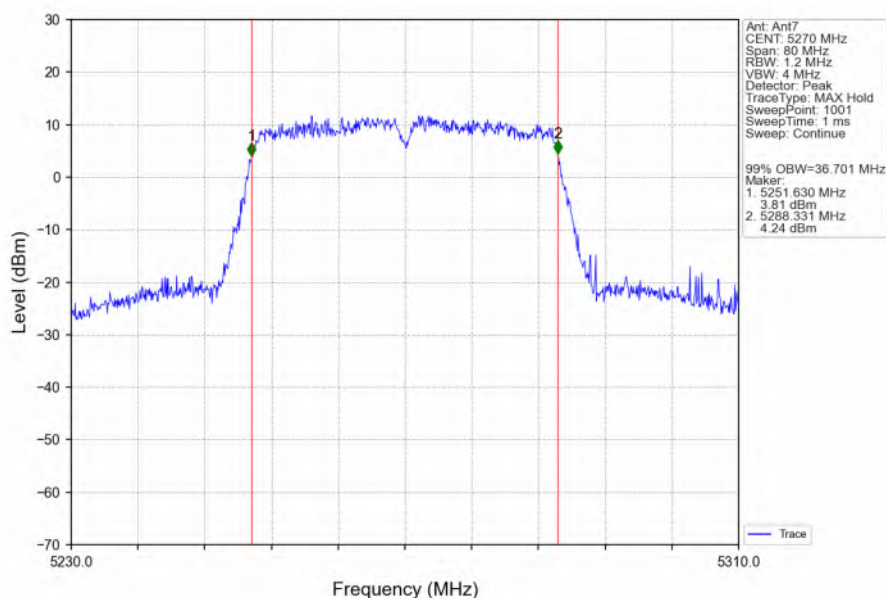
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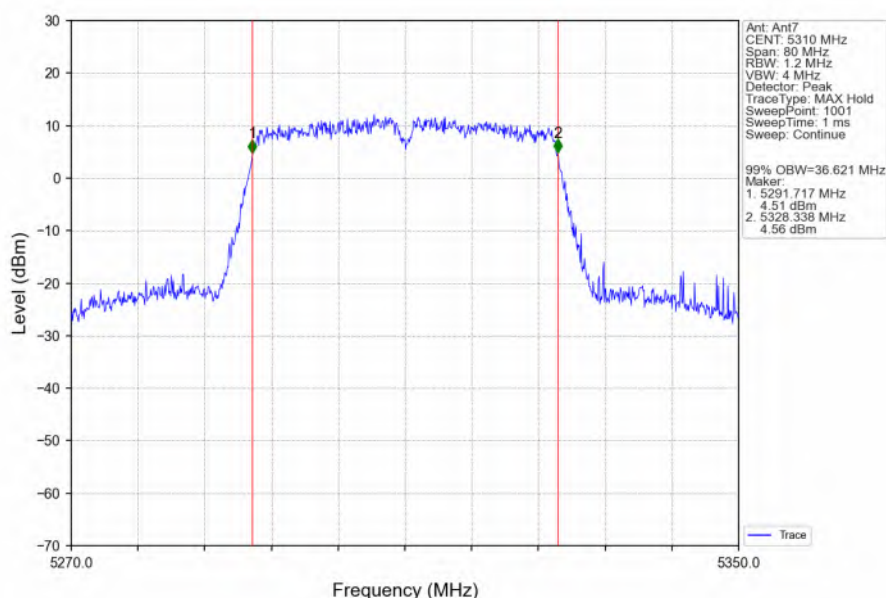
802.11n(HT40)_HCH_5230MHz_Ant7_NTNV



802.11n(HT40)_LCH_5270MHz_Ant7_NTNV



802.11n(HT40)_HCH_5310MHz_Ant7_NTNV



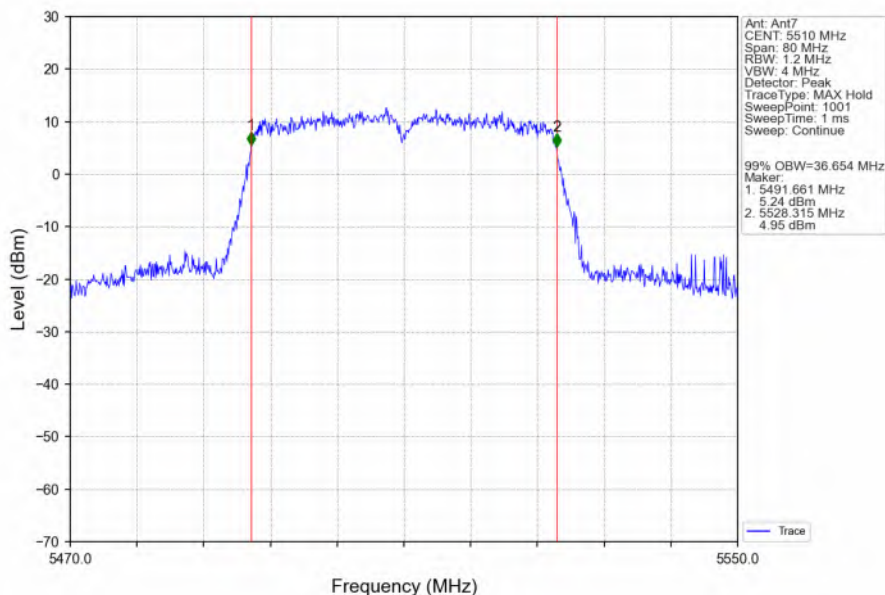
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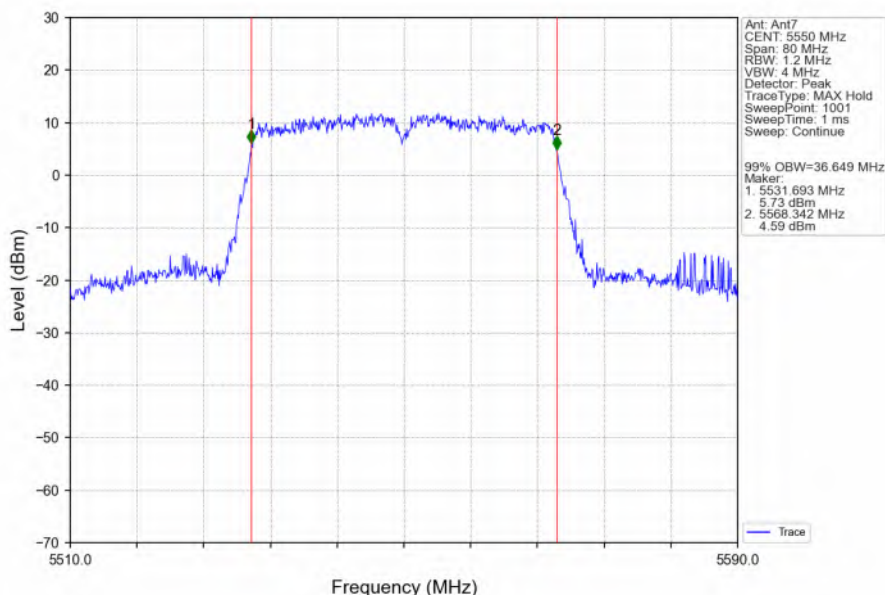
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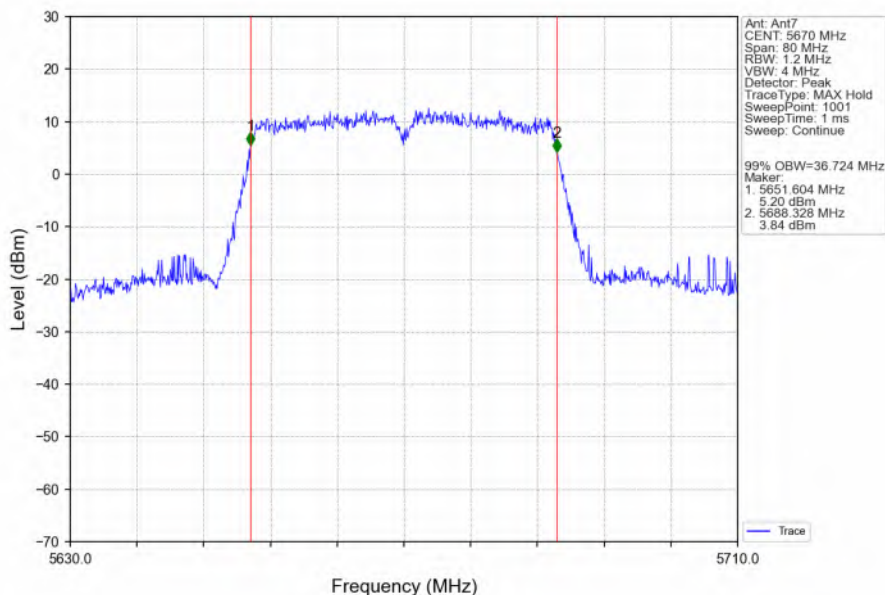
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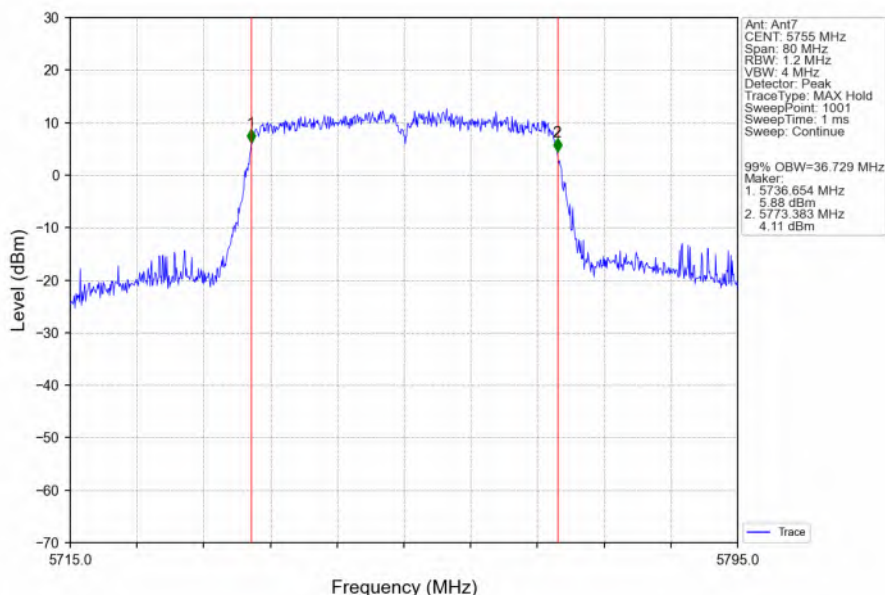
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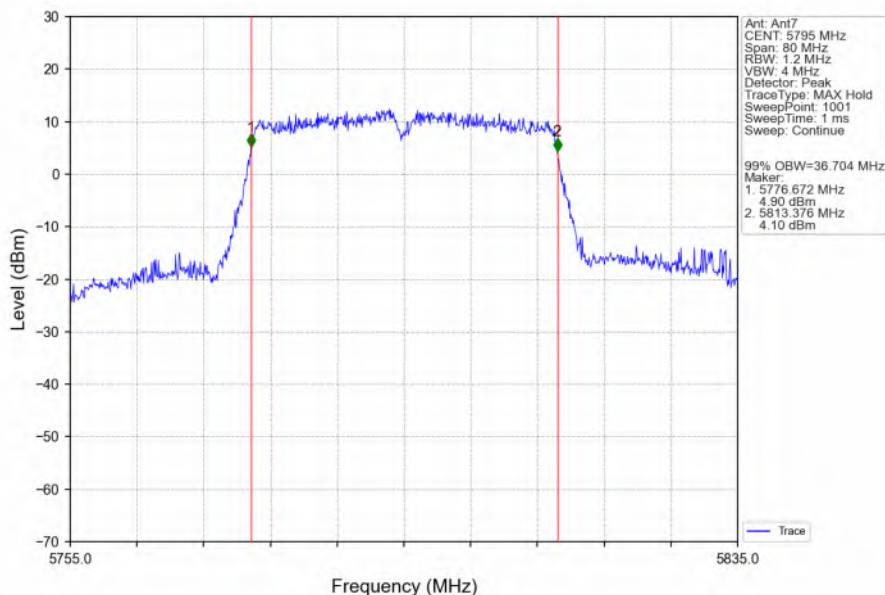
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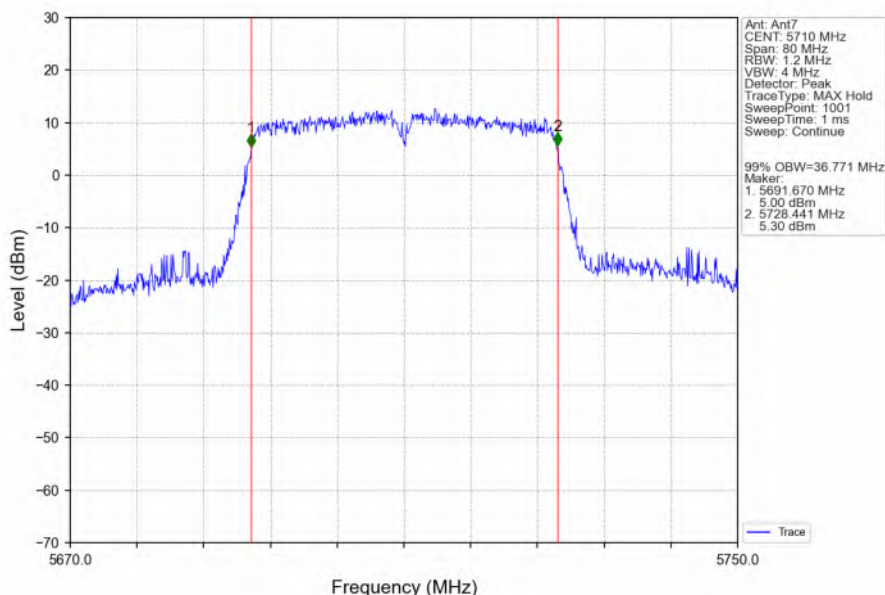
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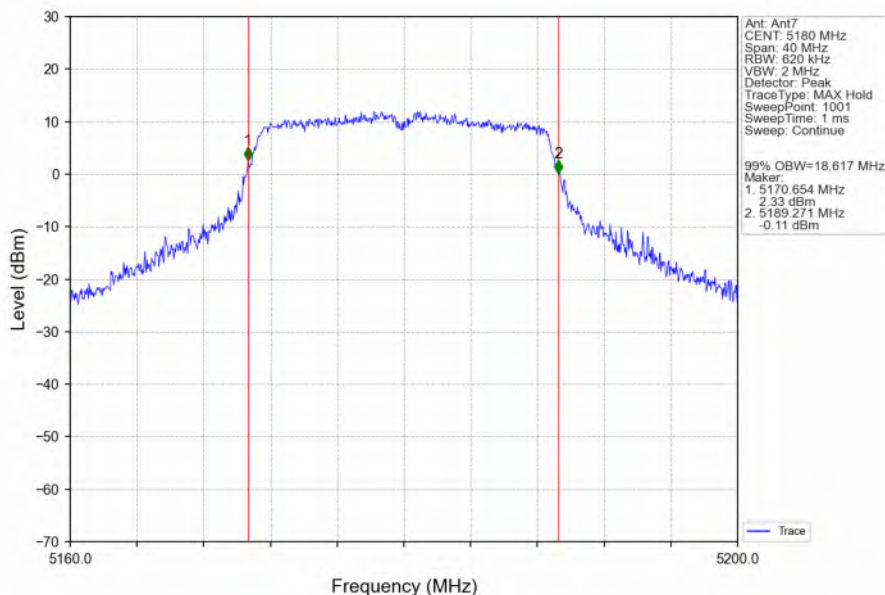
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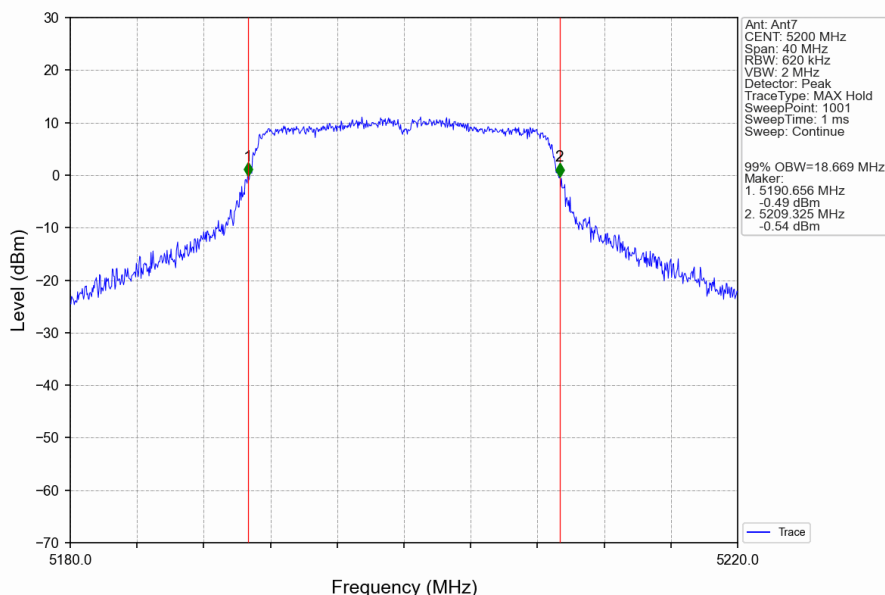
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802.11ac(VHT20)_LCH_5180MHz_Ant7_NTNV



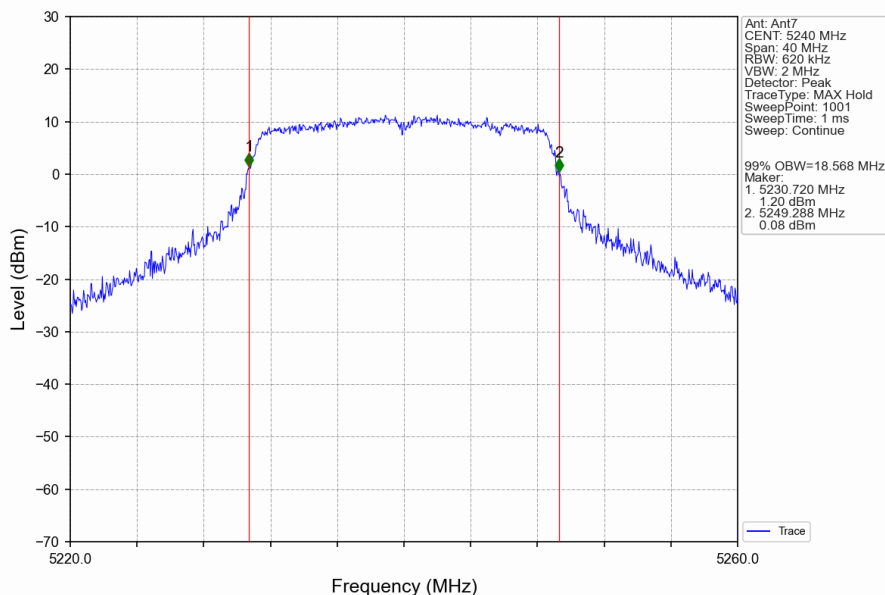
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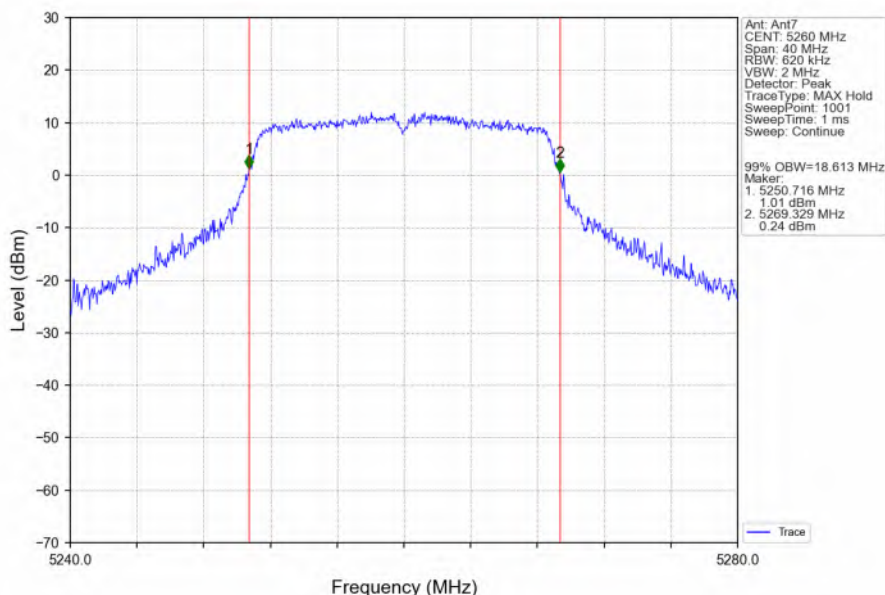
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802.11ac(VHT20)_HCH_5240MHz_Ant7_NTNV



802.11ac(VHT20)_LCH_5260MHz_Ant7_NTNV



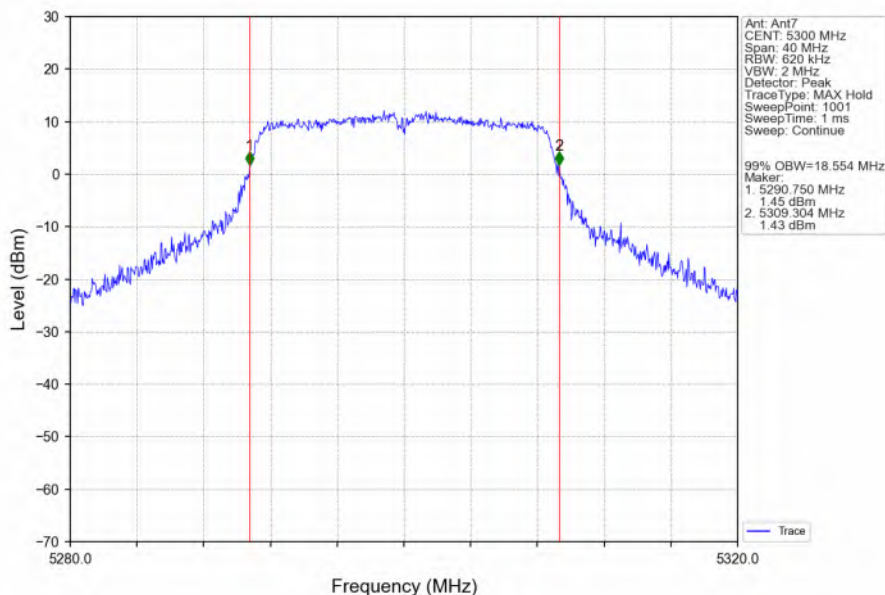
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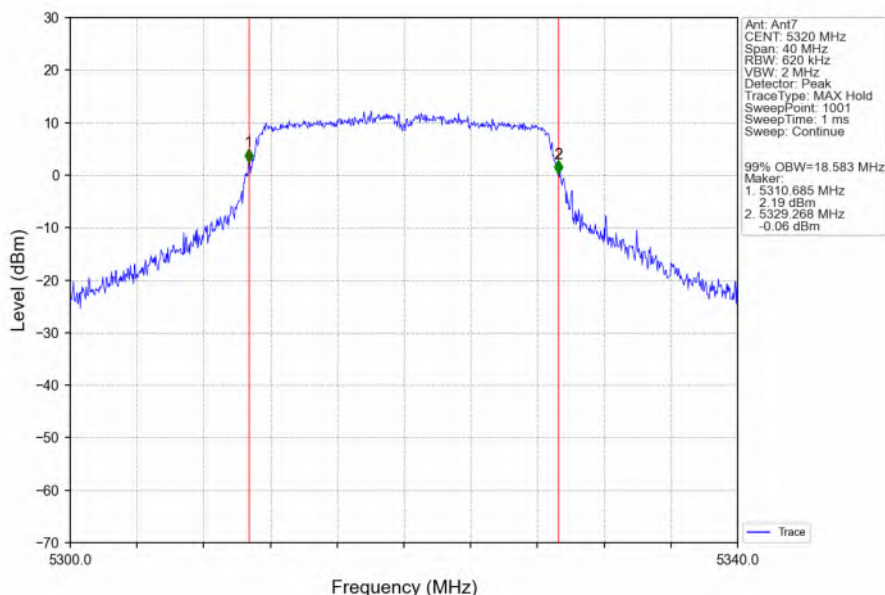
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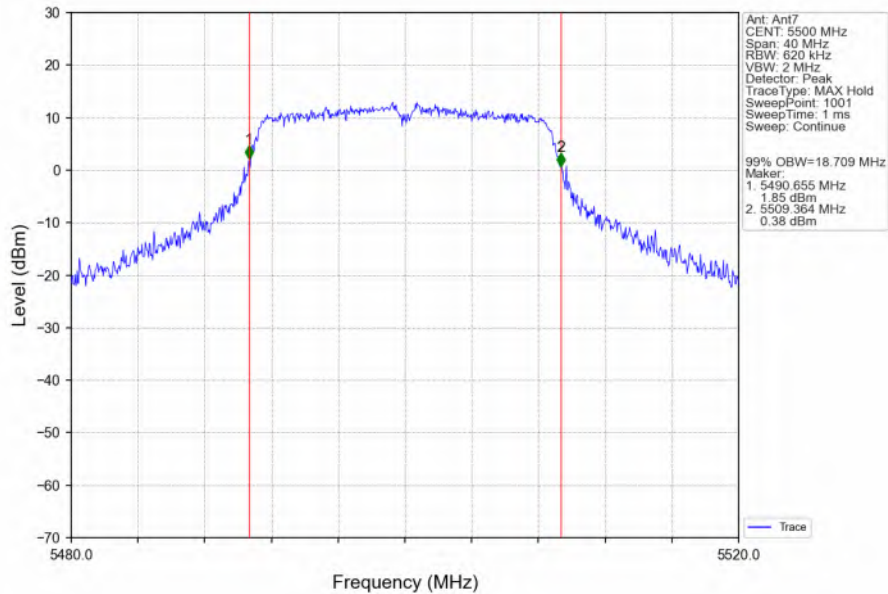
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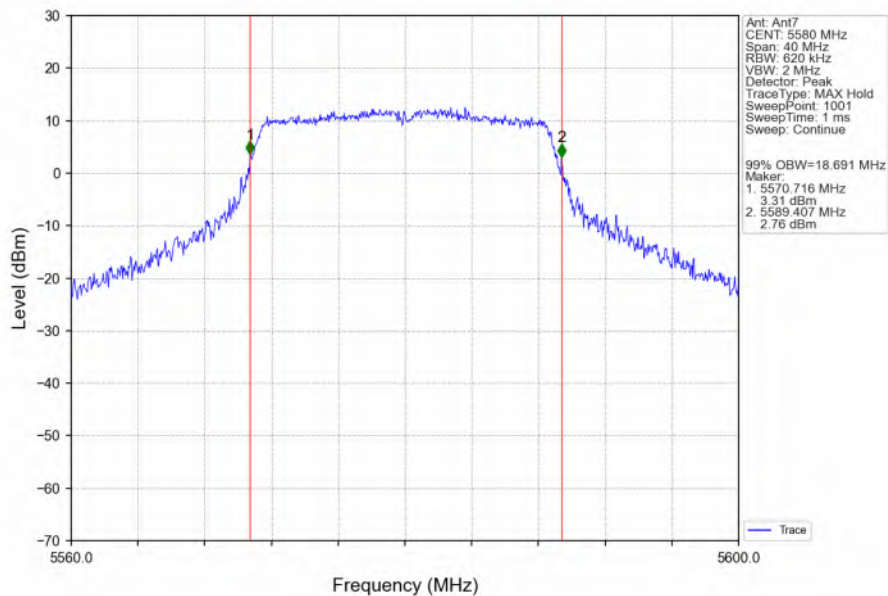
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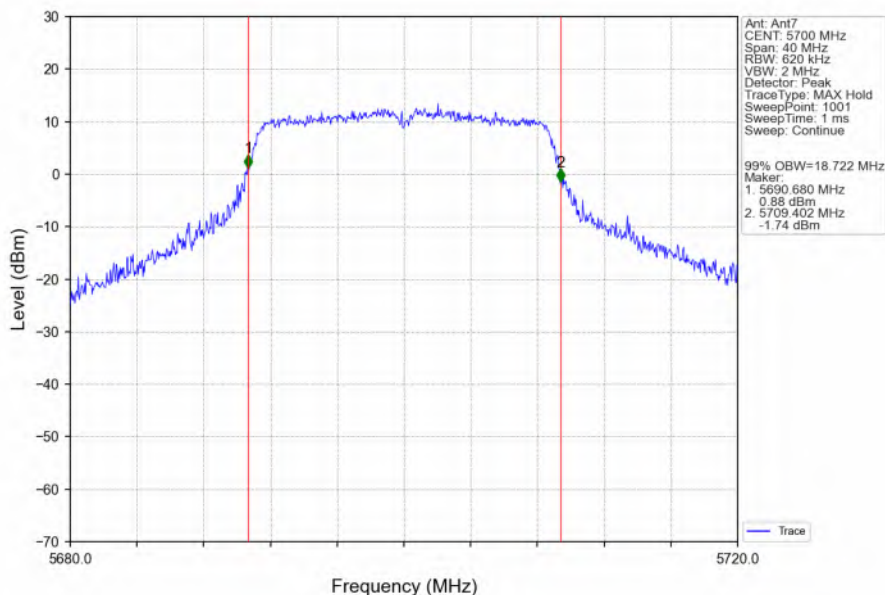
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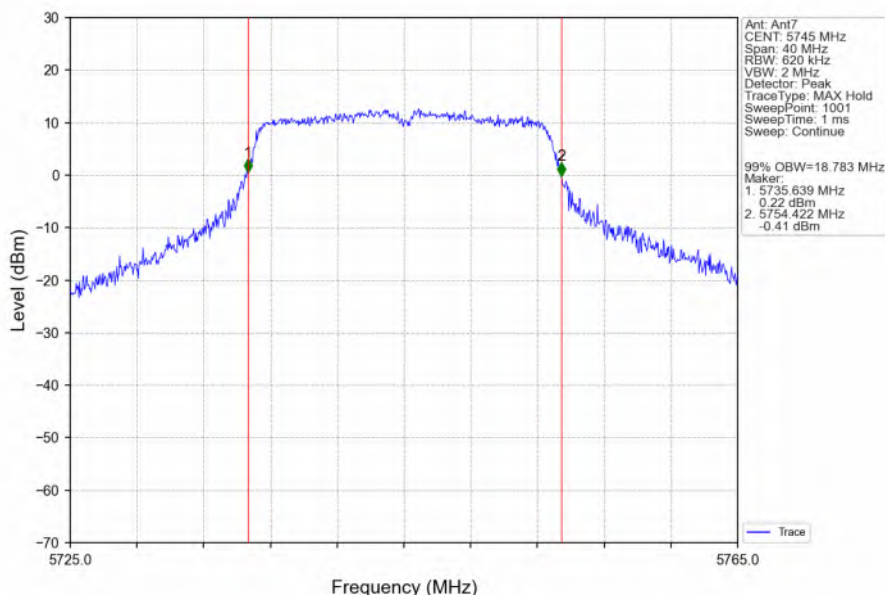
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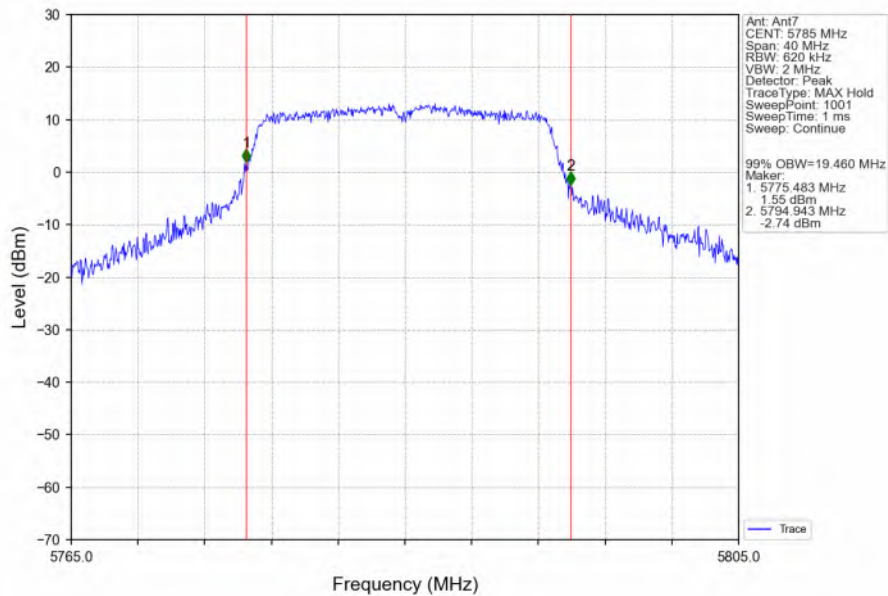
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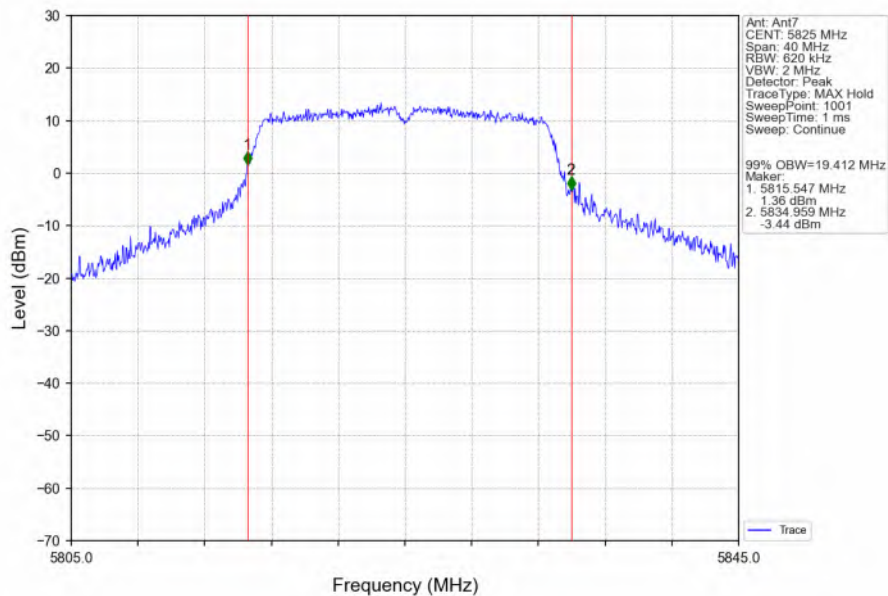
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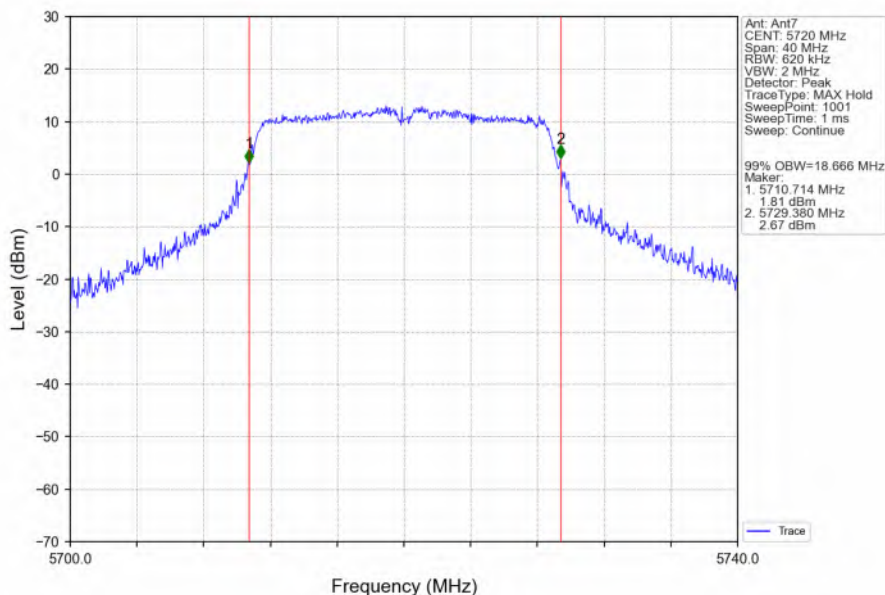
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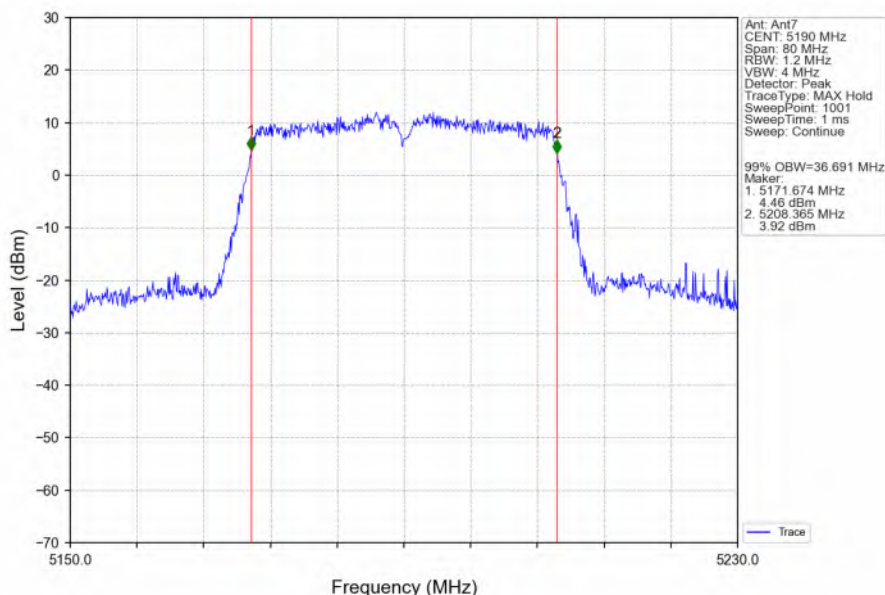
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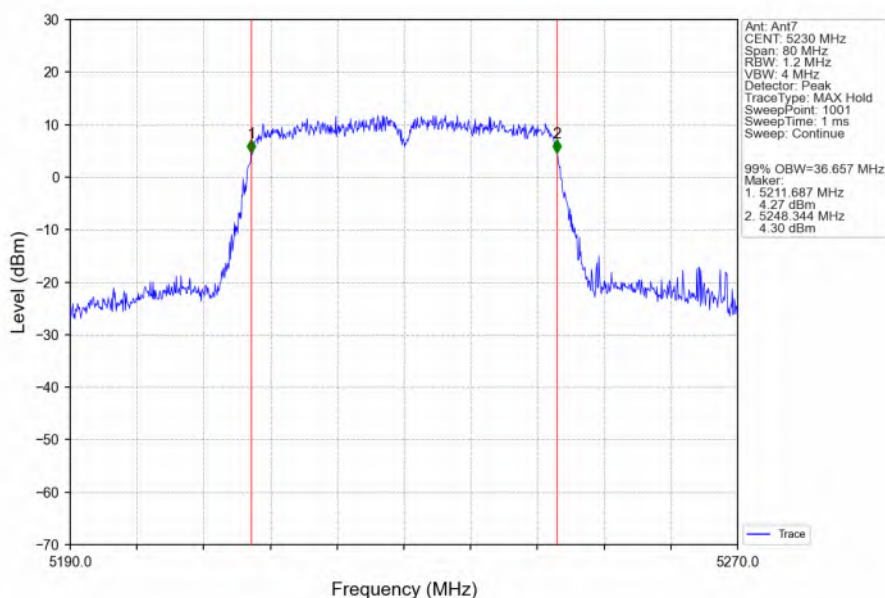
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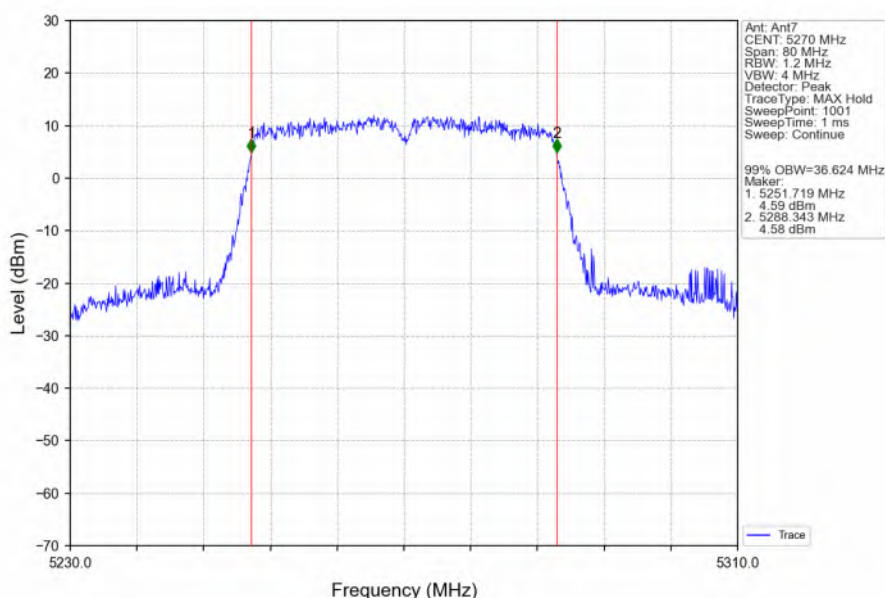
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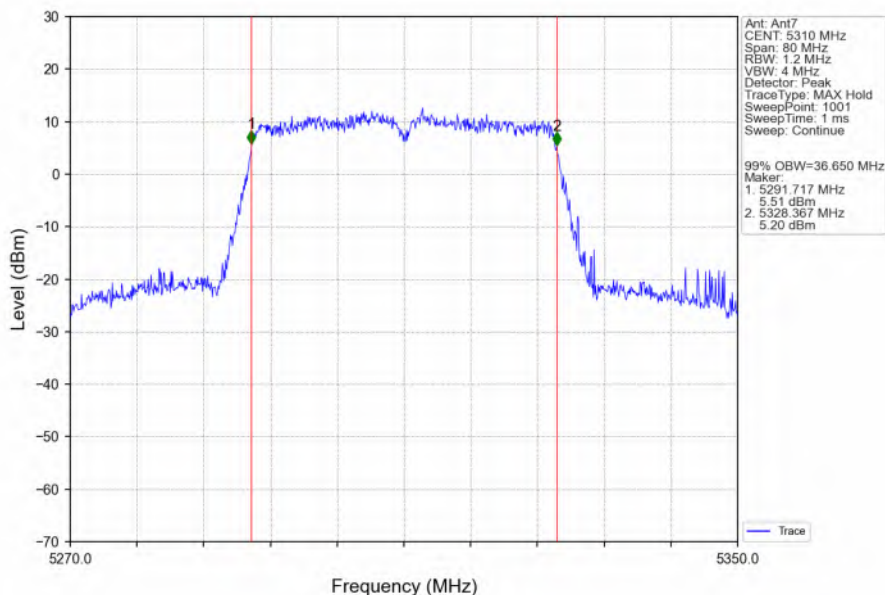
802.11ac(VHT40)_HCH_5230MHz_Ant7_NTNV



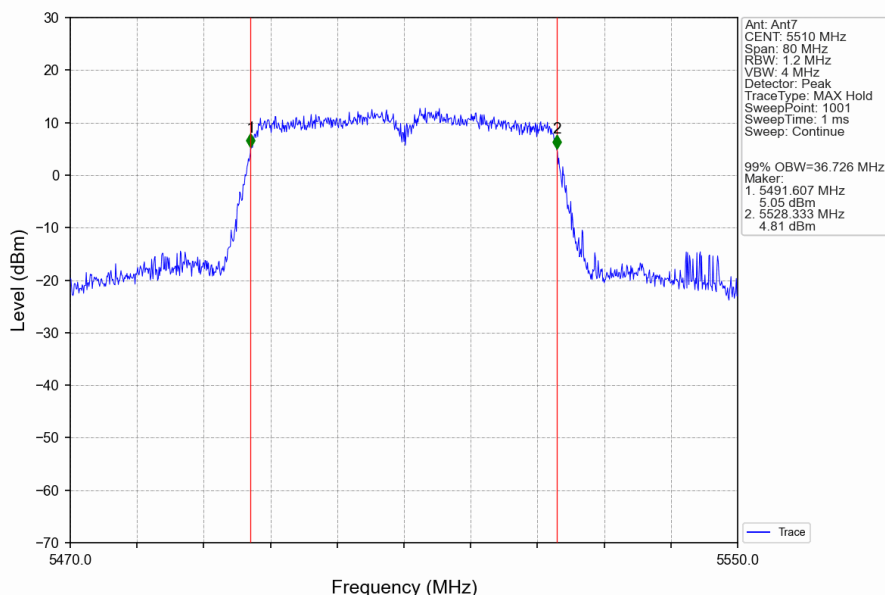
802.11ac(VHT40)_LCH_5270MHz_Ant7_NTNV



802.11ac(VHT40)_HCH_5310MHz_Ant7_NTNV



802.11ac(VHT40)_LCH_5510MHz_Ant7_NTNV



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