

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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250700320905

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TEST REPORT

Application No.: SZCR2507003209AT
Applicant: Vanstone Electronic (Beijing) Co., Ltd.
Address of Applicant: 3F No.2 Building, Aisino Corporation Park 18A, Xingshikou Road, Haidian District, Beijing, China 100195
Manufacturer: Vanstone Electronic (Beijing) Co., Ltd.
Address of Manufacturer: 3F No.2 Building, Aisino Corporation Park 18A, Xingshikou Road, Haidian District, Beijing, China 100195
Equipment Under Test (EUT):
EUT Name: Android POS Terminal
Model No.: A99
Trade Mark: 
FCC ID: OWL-A99-B
Standard(s): 47 CFR Part 15, Subpart E 15.407
Date of Receipt: 2025-07-22
Date of Test: 2025-07-25 to 2025-08-04
Date of Issue: 2025-08-06

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 (EMC Laboratory)

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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2025-08-06		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
Channel Move Time		KDB 905462 D02 Section 7.8.3	KDB 905462 D02 Section 5.1	Pass
Channel Closing Transmission Time		KDB 905462 D02 Section 7.8.3	KDB 905462 D02 Section 5.1	Pass



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4 General Information

4.1 Details of E.U.T.

Power supply:	DC7.6V by li-ion battery(3000mAh) Battery M/N:BT-991 Battery Manufacture:Hunan Gaoyuan Battery Co.,Ltd. Recharged by AC/DC adapter Adapter M/N:SW-0983 Adapter Input:AC100-240V, 50/60Hz, 0.5A Adapter Output: DC5V/2A
Cable(s):	USB type C cable: 1.5m unshielded cable without ferrite core
Cable Loss (for RF conducted test):	1.5dB
Operation Frequency/Number of channels (20MHz):	U-NII-1: 5180-5240MHz (4 Channels); U-NII-2A: 5260-5320MHz (4 Channels); U-NII-2C: 5500-5700MHz (11 Channels); U-NII-3: 5745-5825MHz (5 Channels)
Operation Frequency/Number of channels/(40MHz):	U-NII-1: 5190-5230MHz (2 Channels); U-NII-2A: 5270-5310MHz (2 Channels); U-NII-2C: 5510-5670MHz (5 Channels); U-NII-3: 5755-5795MHz (2 Channels)
Operation Frequency/Number of channels (80MHz):	U-NII-1: 5210MHz (1 Channel); U-NII-2A: 5290MHz (1 Channels); U-NII-2C: 5530-5610MHz (2 Channels); U-NII-3: 5775MHz (1 Channel)
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:	802.11a/n/ac20: 20MHz; 802.11n/ac40: 40MHz; 802.11ac 80: 80MHz
DFS Function:	Slave without Radar detection
TPC Function:	Without TPC function
Antenna Type:	PIFA Antenna
Antenna Gain:	U-NII-1/2A:4.25dBi, U-NII-2C:2.96dBi, U-NII-3: 3.31dBi

Remark:The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
--	--	--	--
The EUT has been tested as an independent unit.			



4.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Emissions at AC Power Line (150kHz-30MHz)	$\pm 3.1\text{dB}$
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	$\pm 0.37\%$
99% Bandwidth	$\pm 3\%$
26dB Emission bandwidth	$\pm 3\%$
Minimum 6 dB bandwidth (5.725-5.85 GHz band)	$\pm 3\%$
Maximum Conducted output power	$\pm 0.75\text{dB}$
Peak Power spectrum density	$\pm 2.84\text{dB}$
Frequency Stability	$\pm 7.25 \times 10^{-8}$

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.



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4.4 Test Location

All tests were performed at:

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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.

4.5 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.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None



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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	2023-11-20	2025-11-19
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	2023-09-16	2025-09-15
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

Radiated 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	2023-12-21	2025-12-20
SHF-EHF Horn 15GHz-40GHz	SCHWARZBECK	BBHA 9170	SZ-WRG-M-056	2023-12-25	2025-12-24
RSE Test Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A



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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
SHF-EHF Horn 15GHz-40GHz	SCHWARZBECK	BBHA 9170	SZ-WRG-M-056	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

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	2024-09-14	2025-09-13
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
Manual Step Attenuator	KEYSIGHT	8494B	SEM021-05	2025-03-03	2026-03-02
Manual Step Attenuator	KEYSIGHT	8496B	SEM021-06	2025-03-03	2026-03-02
MXG Vector Signal Generator	Agilent	N5182A	SEM006-21	2025-03-03	2026-03-02
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-22	2025-03-04	2026-03-03



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SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250700320905

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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

6.1.2 Conclusion

15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna are U-NII-1/2A:4.25dBi, U-NII-2C:2.96dBi, U-NII-3: 3.31dBi.

Antenna location: Refer to internal photos



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

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: 22.5 °C

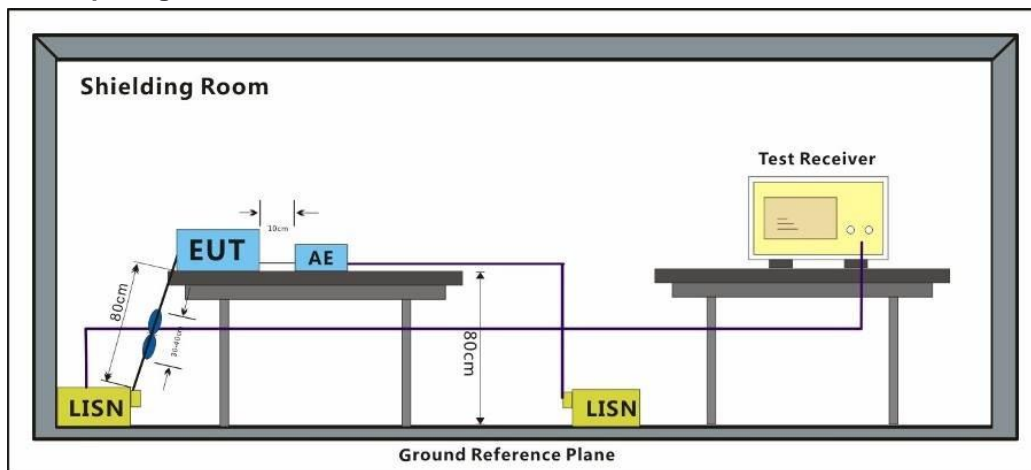
Humidity: 44.5 % RH

Atmospheric Pressure: 1020 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_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

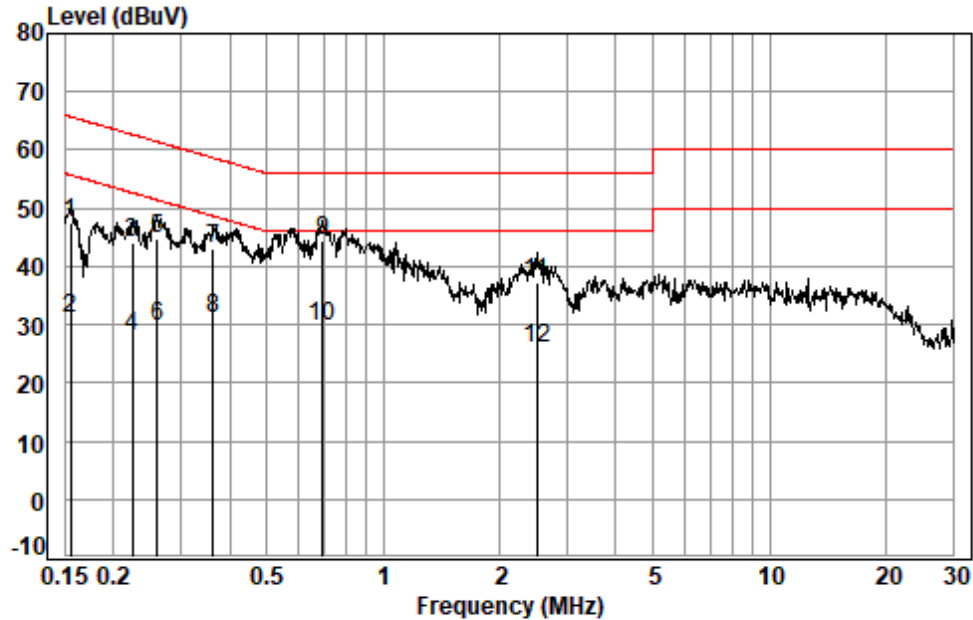
- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50μH + 5ohm linear impedance. The power cables of all other units of the EUT were connected to 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.



Test Mode: 04; Line: Live line

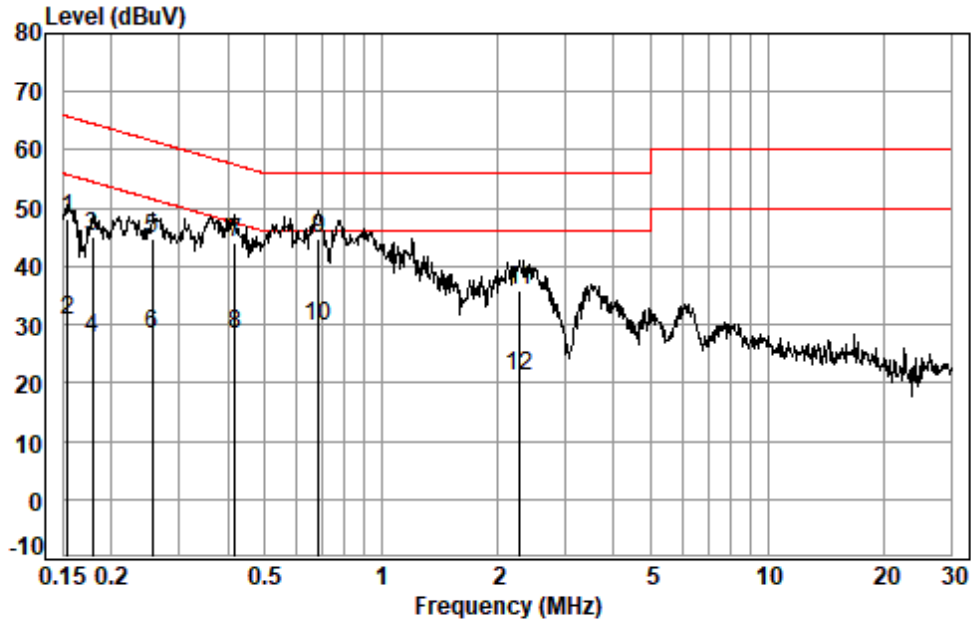


Site : Shielding Room
Condition: Line
Job No. : 03209AT
Test mode: 04

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.1548	0.05	10.19	37.28	47.52	65.74	-18.22	QP
2	0.1548	0.05	10.19	20.83	31.07	55.74	-24.67	Average
3	0.2244	0.06	10.04	33.82	43.92	62.66	-18.74	QP
4	0.2244	0.06	10.04	17.99	28.09	52.66	-24.57	Average
5	0.2603	0.06	9.94	34.85	44.85	61.42	-16.57	QP
6	0.2603	0.06	9.94	19.57	29.57	51.42	-21.85	Average
7	0.3634	0.07	9.73	33.27	43.07	58.65	-15.58	QP
8	0.3634	0.07	9.73	21.12	30.92	48.65	-17.73	Average
9 *	0.6973	0.09	9.65	34.56	44.30	56.00	-11.70	QP
10 *	0.6973	0.09	9.65	20.00	29.74	46.00	-16.26	Average
11	2.5000	0.12	9.62	27.51	37.25	56.00	-18.75	QP
12	2.5000	0.12	9.62	16.24	25.98	46.00	-20.02	Average



Test Mode: 04; Line: Neutral Line



Site : Shielding Room
Condition: Neutral
Job No. : 03209AT
Test mode: 04

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.1540	0.05	10.14	38.11	48.30	65.78	-17.48	QP
2	0.1540	0.05	10.14	20.58	30.77	55.78	-25.01	Average
3	0.1787	0.06	10.11	34.97	45.14	64.55	-19.41	QP
4	0.1787	0.06	10.11	17.44	27.61	54.55	-26.94	Average
5	0.2562	0.06	9.89	34.83	44.78	61.56	-16.78	QP
6	0.2562	0.06	9.89	18.48	28.43	51.56	-23.13	Average
7	0.4171	0.08	9.73	34.37	44.18	57.51	-13.33	QP
8	0.4171	0.08	9.73	18.38	28.19	47.51	-19.32	Average
9 *	0.6899	0.09	9.65	35.04	44.78	56.00	-11.22	QP
10 *	0.6899	0.09	9.65	19.95	29.69	46.00	-16.31	Average
11	2.2847	0.12	9.55	26.28	35.95	56.00	-20.05	QP
12	2.2847	0.12	9.55	11.62	21.29	46.00	-24.71	Average



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

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: 23.4 °C

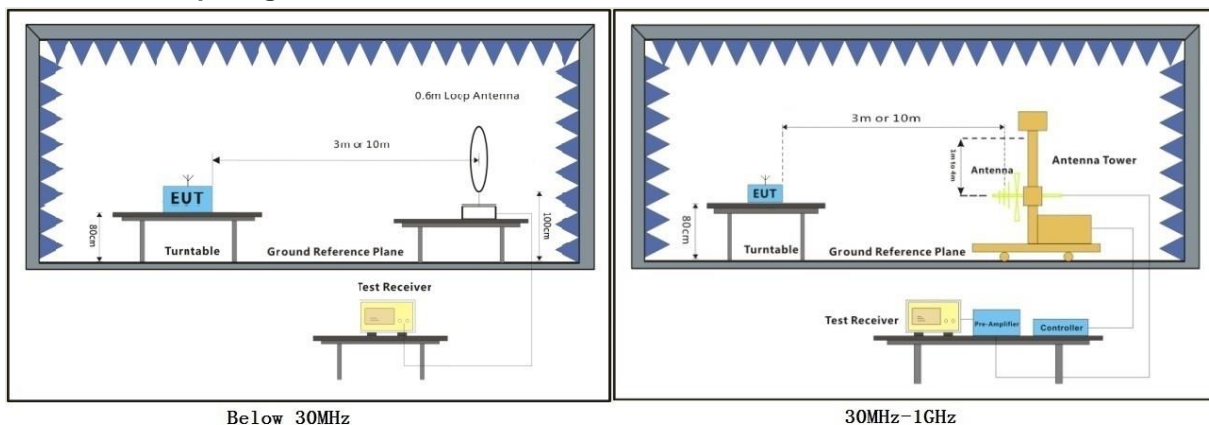
Humidity: 42.5 % RH

Atmospheric Pressure: 1020 mbar

7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_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



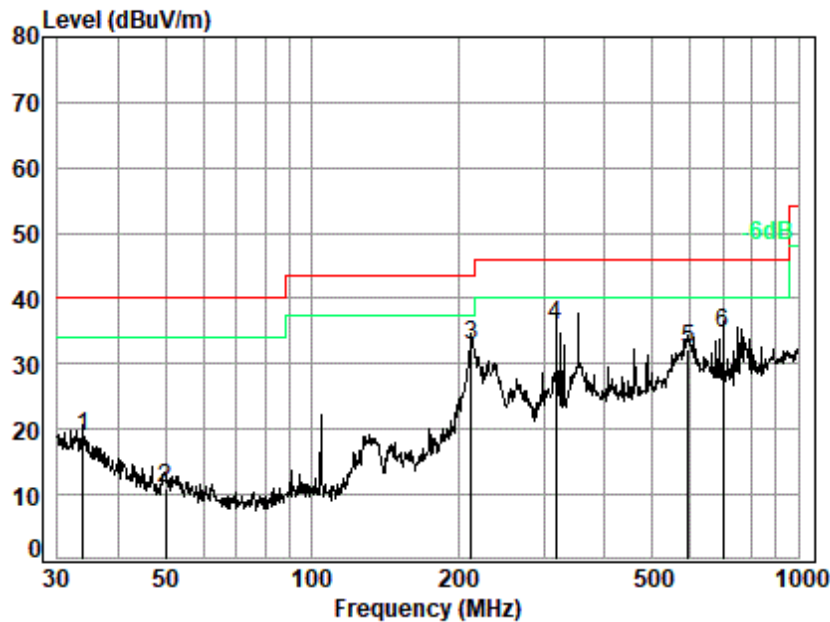
7.2.4 Measurement Procedure and Data

- 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.

Test Mode: 04; Polarity: Horizontal

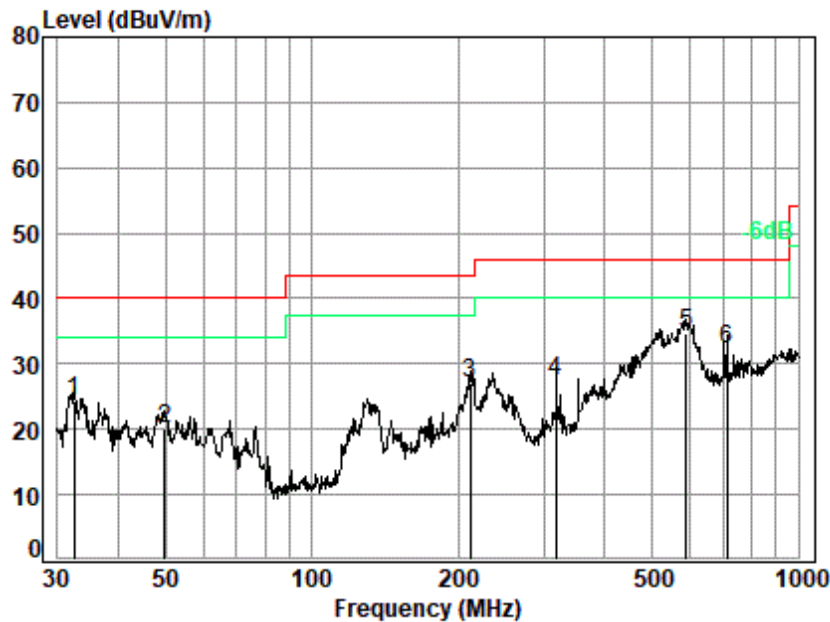


Site : chamber
Condition: 3m HORIZONTAL
Job No. : 03209AT
Test Mode: 04

	Ant	Cable	Preamp	Read	Limit	Over	
Freq	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB
1	33.917	19.47	0.72	27.78	26.37	18.78	40.00 -21.22 QP
2	50.057	12.75	0.86	27.73	25.19	11.07	40.00 -28.93 QP
3	212.270	14.79	1.82	27.12	43.29	32.78	43.50 -10.72 QP
4 q	317.701	18.46	2.28	26.82	41.90	35.82	46.00 -10.18 QP
5	595.133	24.47	3.23	27.95	32.62	32.37	46.00 -13.63 QP
6	701.761	25.95	3.55	27.72	32.80	34.58	46.00 -11.42 QP



Test Mode: 04; Polarity: Vertical



Site : chamber
Condition: 3m VERTICAL
Job No. : 03209AT
Test Mode: 04

	Ant	Cable	Preamp	Read	Limit	Over	
Freq	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB
1	32.406	20.11	0.70	27.79	31.38	24.40	40.00 -15.60 QP
2	49.881	12.79	0.86	27.73	34.18	20.10	40.00 -19.90 QP
3	211.527	14.79	1.82	27.12	37.48	26.97	43.50 -16.53 QP
4	317.701	18.46	2.28	26.82	33.57	27.49	46.00 -18.51 QP
5 q	588.905	24.37	3.21	27.92	35.03	34.69	46.00 -11.31 QP
6	714.173	26.14	3.59	27.69	30.27	32.31	46.00 -13.69 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

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: 23.0 °C

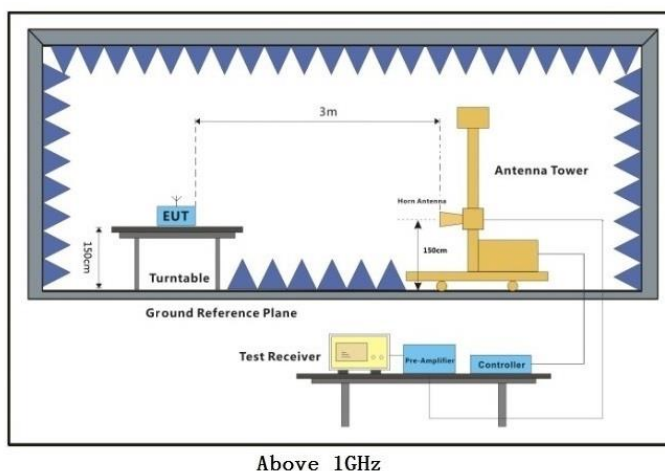
Humidity: 52.5 % RH

Atmospheric Pressure: 1020 mbar

7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_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



7.3.4 Measurement Procedure and Data

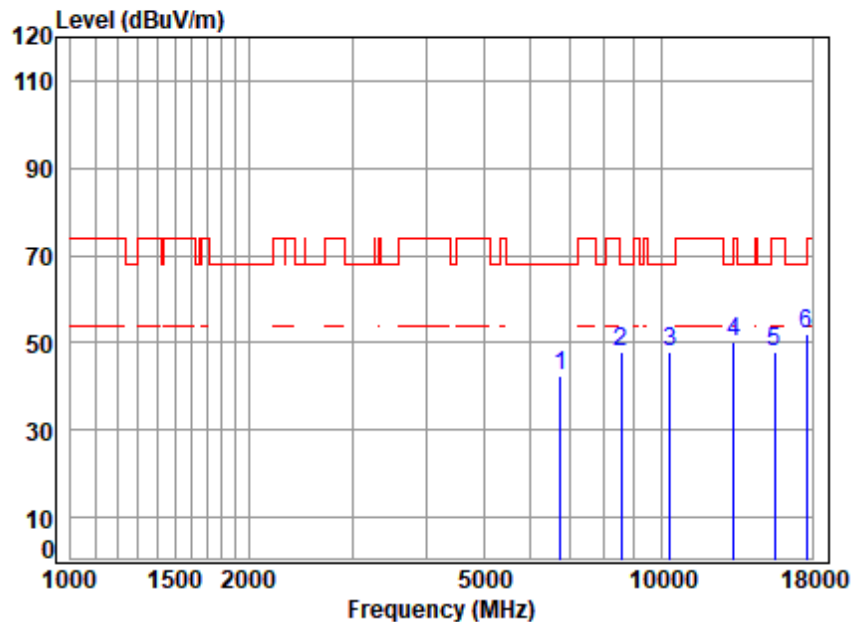
- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which 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 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.
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 harmonics were the highest point could be found when testing, so only the above 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.



Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Condition: 3m HORIZONTAL

Job No : 03209AT

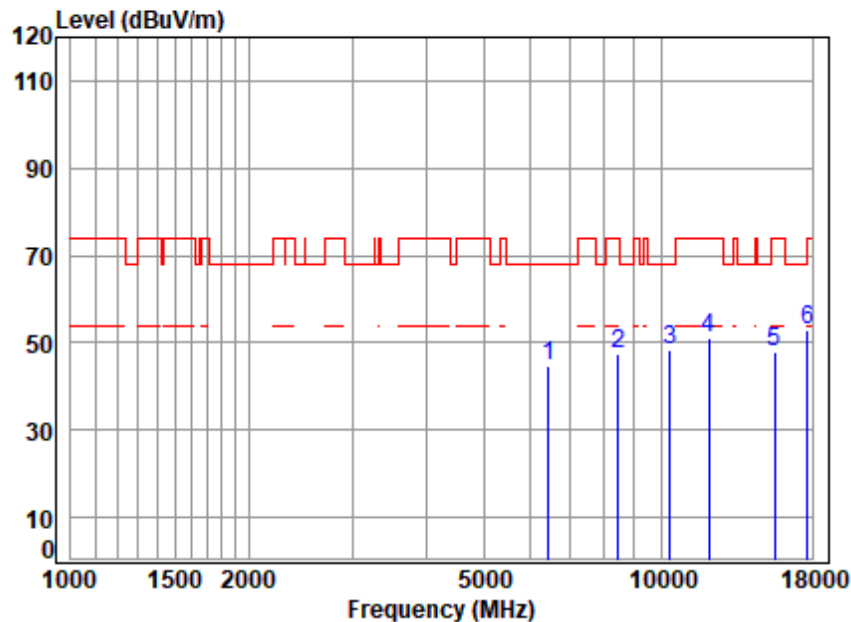
Mode : 5180 TX RSE

: 5G Wi-Fi 11A

	Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	6737.207	11.40	35.62	56.75	52.28	42.55	68.20	-25.65 Peak
2	8539.102	12.17	38.30	55.41	52.68	47.74	68.20	-20.46 Peak
3	10360.000	13.60	39.00	53.88	49.34	48.06	68.20	-20.14 peak
4	13288.280	16.44	40.29	54.47	47.84	50.10	74.00	-23.90 Peak
5	15540.000	17.00	38.56	54.14	46.37	47.79	74.00	-26.21 peak
6	pp17639.470	19.52	40.89	54.43	45.99	51.97	68.20	-16.23 Peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Condition: 3m VERTICAL

Job No : 03209AT

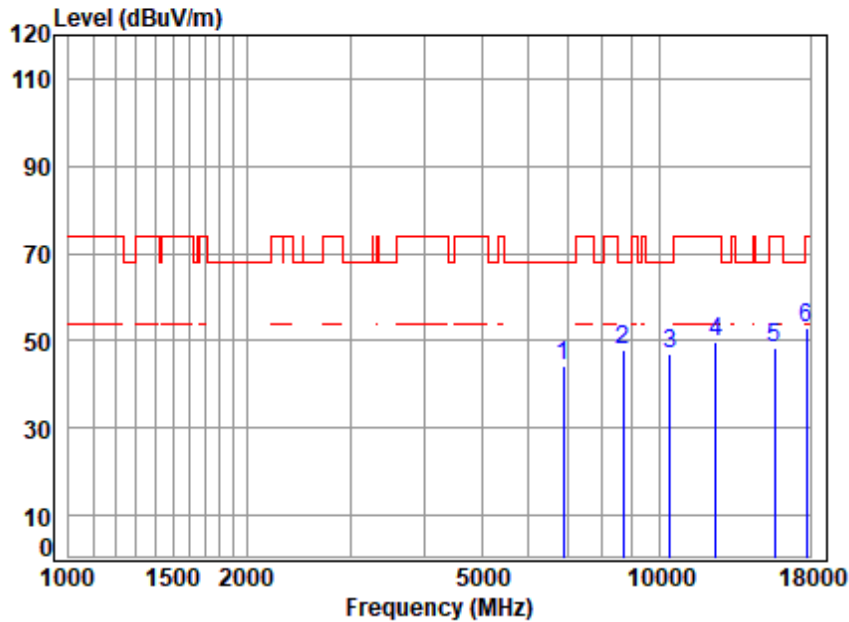
Mode : 5180 TX RSE

: 5G Wi-Fi 11A

	Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	6432.732	12.79	34.80	56.81	53.73	44.51	68.20	-23.69 Peak
2	8465.379	12.07	38.37	55.48	52.42	47.38	74.00	-26.62 Peak
3	10360.000	13.60	39.00	53.88	49.67	48.39	68.20	-19.81 peak
4	12044.520	14.63	39.76	53.83	50.54	51.10	74.00	-22.90 Peak
5	15540.000	17.00	38.56	54.14	46.60	48.02	74.00	-25.98 peak
6	pp17690.530	19.16	41.66	54.44	46.59	52.97	68.20	-15.23 Peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:middle



Condition: 3m HORIZONTAL

Job No : 03209AT

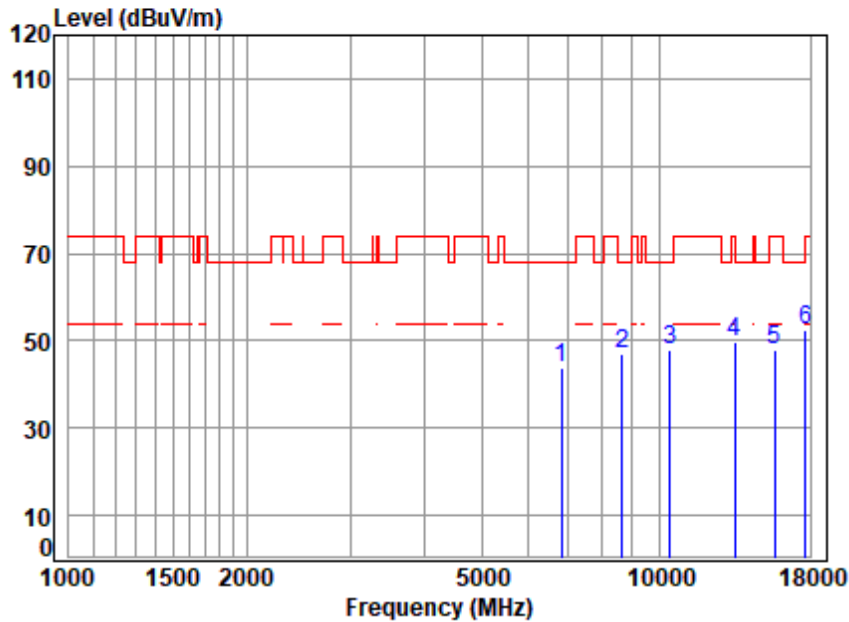
Mode : 5220 TX RSE

: 5G Wi-Fi 11A

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	6874.906	11.37	36.10	56.73	53.44	44.18	68.20	-24.02	peak
2	pp 8688.480	12.08	38.55	55.28	52.47	47.82	68.20	-20.38	Peak
3	10440.000	13.63	39.04	53.84	48.10	46.93	68.20	-21.27	peak
4	12469.610	15.43	39.90	54.13	48.72	49.92	74.00	-24.08	peak
5	15660.000	17.23	38.56	54.10	46.56	48.25	74.00	-25.75	peak
6	17741.740	18.87	42.09	54.45	46.32	52.83	74.00	-21.17	peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:middle



Condition: 3m VERTICAL

Job No : 03209AT

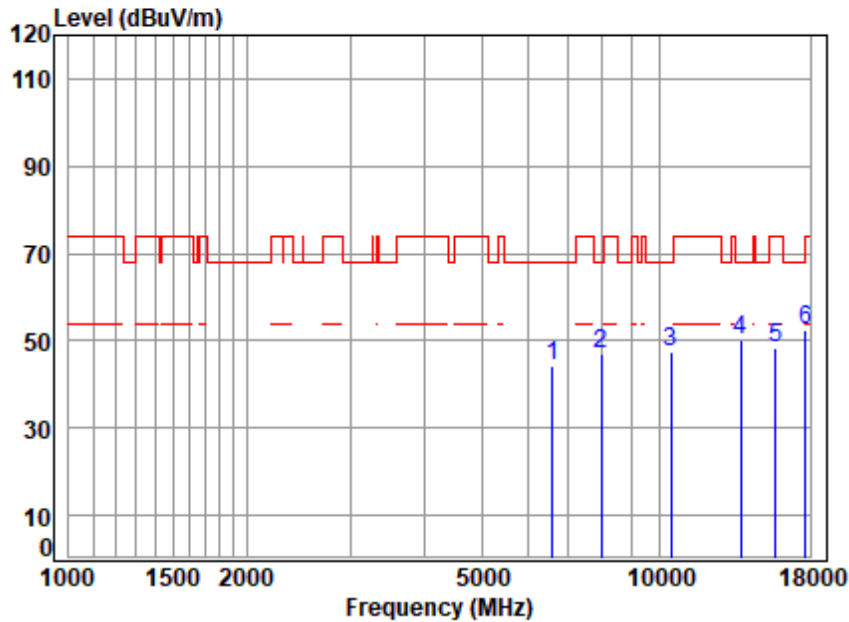
Mode : 5220 TX RSE

: 5G Wi-Fi 11A

	Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	6815.551	11.37	35.93	56.74	53.28	43.84	68.20 -24.36 peak
2	8663.404	12.04	38.45	55.30	52.02	47.21	68.20 -20.99 Peak
3	10440.000	13.63	39.04	53.84	48.99	47.82	68.20 -20.38 peak
4	13442.810	15.87	40.21	54.46	47.99	49.61	68.20 -18.59 Peak
5	15660.000	17.23	38.56	54.10	46.19	47.88	74.00 -26.12 peak
6	pp17690.530	19.16	41.66	54.44	46.12	52.50	68.20 -15.70 peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High



Condition: 3m HORIZONTAL

Job No : 03209AT

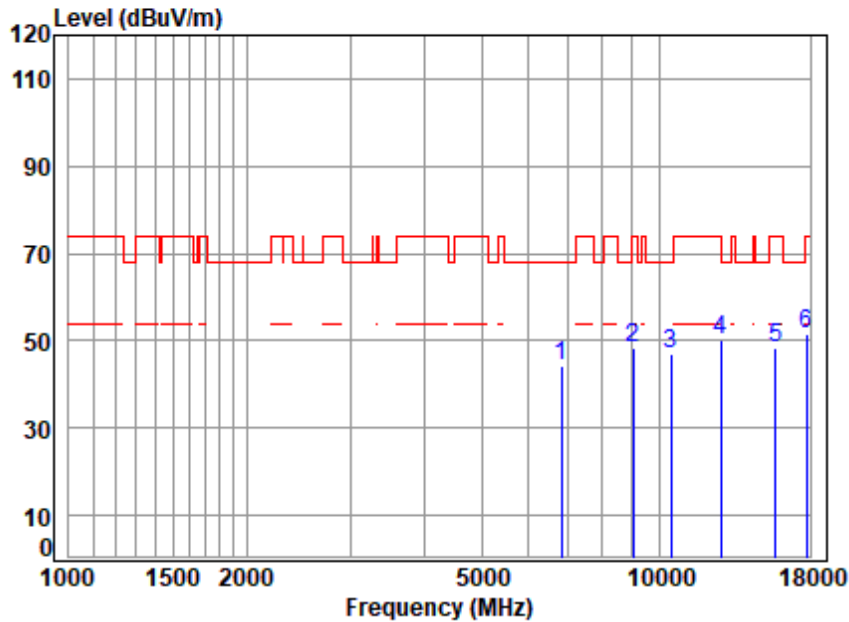
Mode : 5240 TX RSE

: 5G Wi-Fi 11A

	Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	6602.265	11.60	35.21	56.78	54.07	44.10	68.20	-24.10 peak
2	7989.893	11.56	37.78	55.91	53.40	46.83	68.20	-21.37 Peak
3	10480.000	13.64	39.08	53.81	48.55	47.46	68.20	-20.74 peak
4	13717.560	16.33	39.98	54.43	48.43	50.31	68.20	-17.89 peak
5	15720.000	17.22	38.58	54.08	46.65	48.37	74.00	-25.63 peak
6	pp17690.530	19.16	41.66	54.44	46.14	52.52	68.20	-15.68 peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High



Condition: 3m VERTICAL

Job No : 03209AT

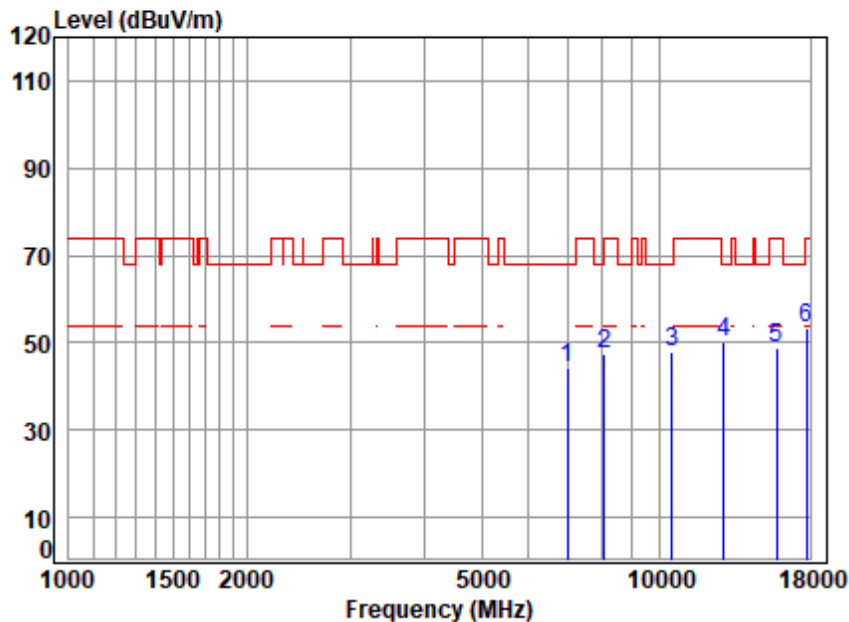
Mode : 5240 TX RSE

: 5G Wi-Fi 11A

	Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	6835.278	11.37	35.97	56.73	53.72	44.33	68.20 -23.87 peak
2	9021.160	12.14	38.60	54.98	52.73	48.49	74.00 -25.51 Peak
3	pp10480.000	13.64	39.08	53.81	48.24	47.15	68.20 -21.05 peak
4	12687.750	15.49	40.19	54.28	48.90	50.30	74.00 -23.70 peak
5	15720.000	17.22	38.58	54.08	46.50	48.22	74.00 -25.78 peak
6	17741.740	18.87	42.09	54.45	45.04	51.55	74.00 -22.45 peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Condition: 3m HORIZONTAL

Job No : 03209AT

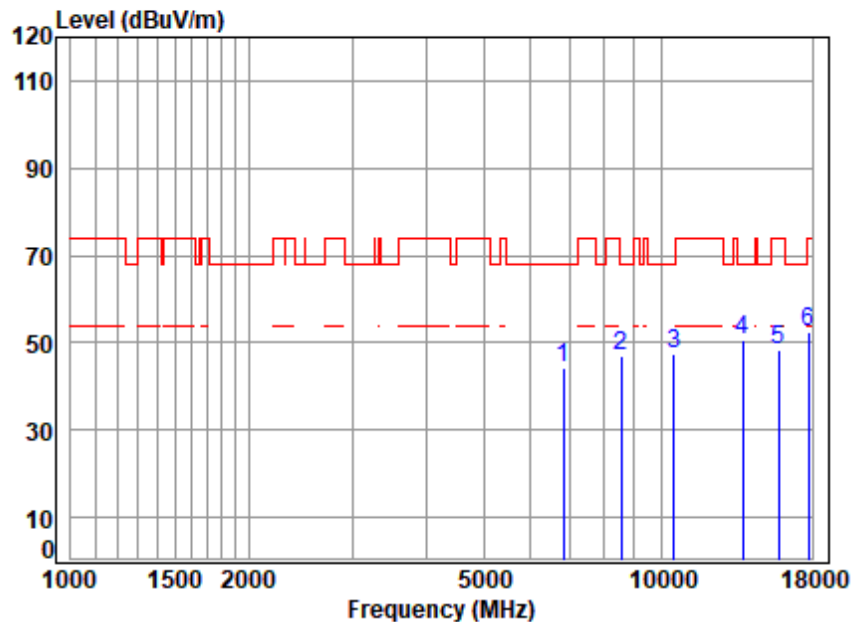
Mode : 5260 TX RSE

: 5G Wi-Fi 11A

	Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	6995.172	11.37	36.19	56.70	53.33	44.19	68.20	-24.01 peak
2	8082.804	11.47	37.80	55.83	53.91	47.35	74.00	-26.65 Peak
3	10520.000	13.63	39.14	53.79	48.87	47.85	68.20	-20.35 peak
4	pp12835.290	15.55	40.34	54.38	48.88	50.39	68.20	-17.81 peak
5	15780.000	17.08	38.52	54.07	47.23	48.76	74.00	-25.24 peak
6	17741.740	18.87	42.09	54.45	46.96	53.47	74.00	-20.53 peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Condition: 3m VERTICAL

Job No : 03209AT

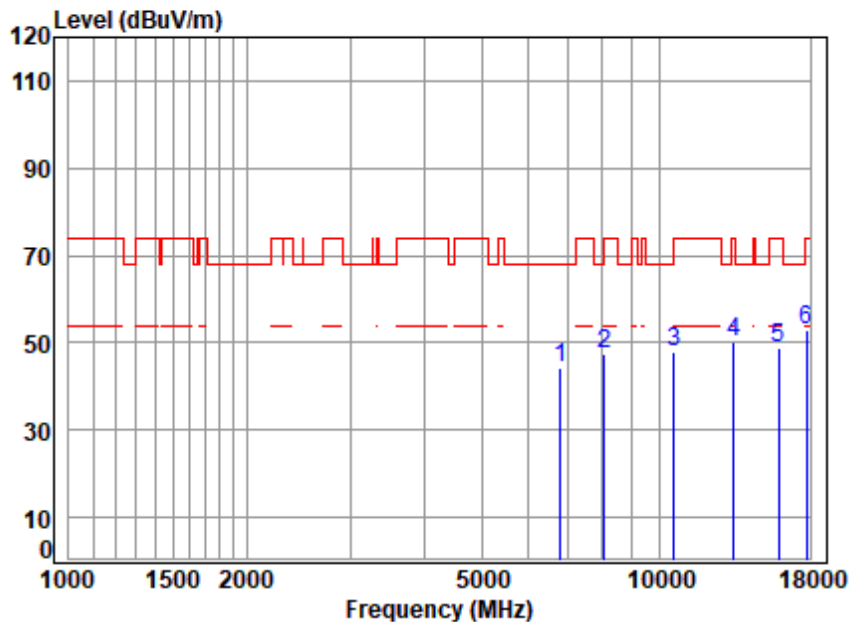
Mode : 5260 TX RSE

: 5G Wi-Fi 11A

	Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	6835.278	11.37	35.97	56.73	53.58	44.19	68.20	-24.01 peak
2	8563.818	12.09	38.36	55.39	52.14	47.20	68.20	-21.00 Peak
3	10520.000	13.63	39.14	53.79	48.52	47.50	68.20	-20.70 peak
4	pp13717.560	16.33	39.98	54.43	48.65	50.53	68.20	-17.67 peak
5	15780.000	17.08	38.52	54.07	46.94	48.47	74.00	-25.53 peak
6	17741.740	18.87	42.09	54.45	46.18	52.69	74.00	-21.31 peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:middle



Condition: 3m HORIZONTAL

Job No : 03209AT

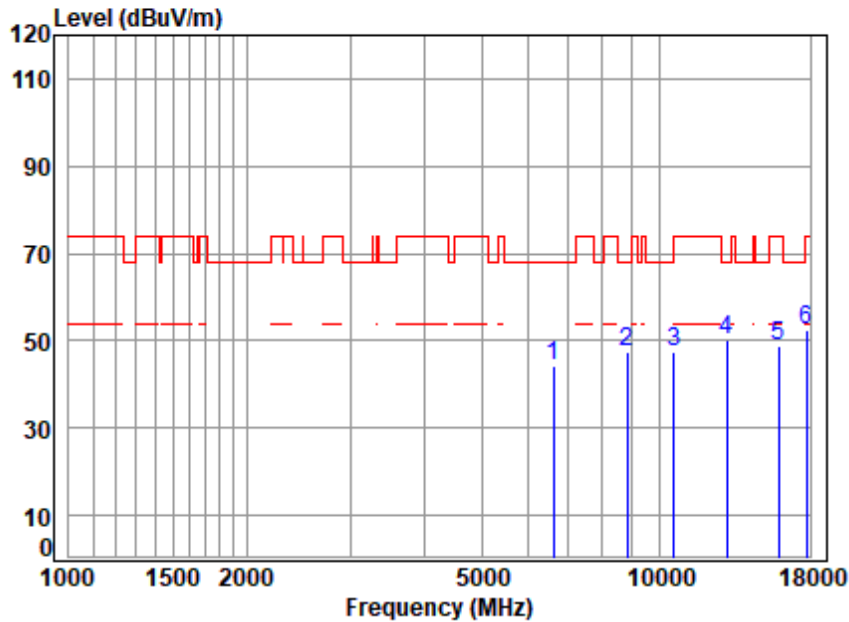
Mode : 5300 TX RSE

: 5G Wi-Fi 11A

	Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	6795.879	11.37	35.88	56.74	53.66	44.17	68.20	-24.03 peak
2	8082.804	11.47	37.80	55.83	53.95	47.39	74.00	-26.61 Peak
3	pp10600.000	13.59	39.30	53.74	48.94	48.09	68.20	-20.11 peak
4	13365.320	16.13	40.30	54.46	48.24	50.21	74.00	-23.79 peak
5	15900.000	17.28	38.70	54.03	46.70	48.65	74.00	-25.35 peak
6	17741.740	18.87	42.09	54.45	46.61	53.12	74.00	-20.88 peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:middle



Condition: 3m VERTICAL

Job No : 03209AT

Mode : 5300 TX RSE

: 5G Wi-Fi 11A

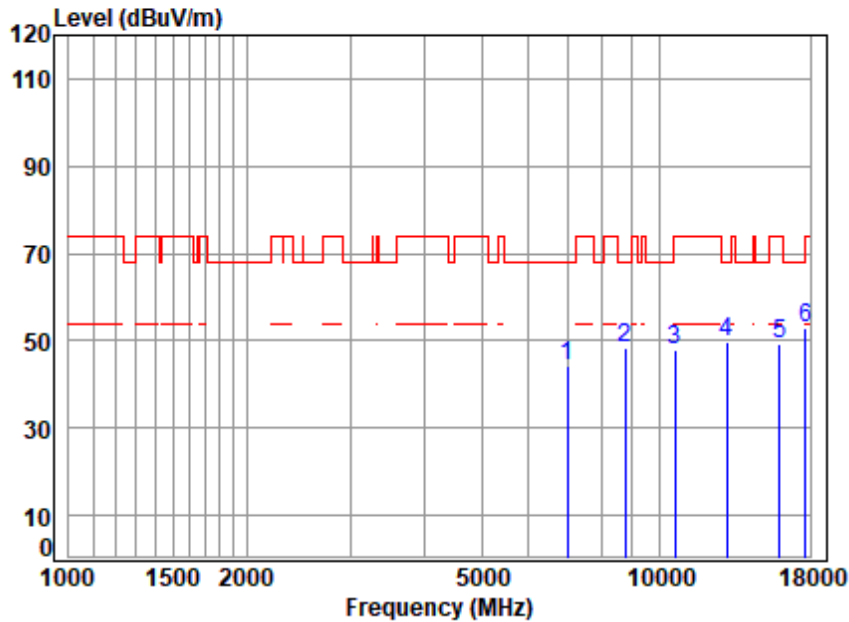
	Cable	Ant	Preamp	Read	Limit	Over		
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	6621.375	11.56	35.33	56.78	54.03	44.14	68.20	-24.06 peak
2	8814.957	12.25	38.50	55.17	52.08	47.66	68.20	-20.54 Peak
3	10600.000	13.59	39.30	53.74	48.42	47.57	68.20	-20.63 peak
4	pp12984.540	15.88	40.32	54.49	48.35	50.06	68.20	-18.14 peak
5	15900.000	17.28	38.70	54.03	47.09	49.04	74.00	-24.96 peak
6	17741.740	18.87	42.09	54.45	45.97	52.48	74.00	-21.52 peak



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Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High



Condition: 3m HORIZONTAL

Job No : 03209AT

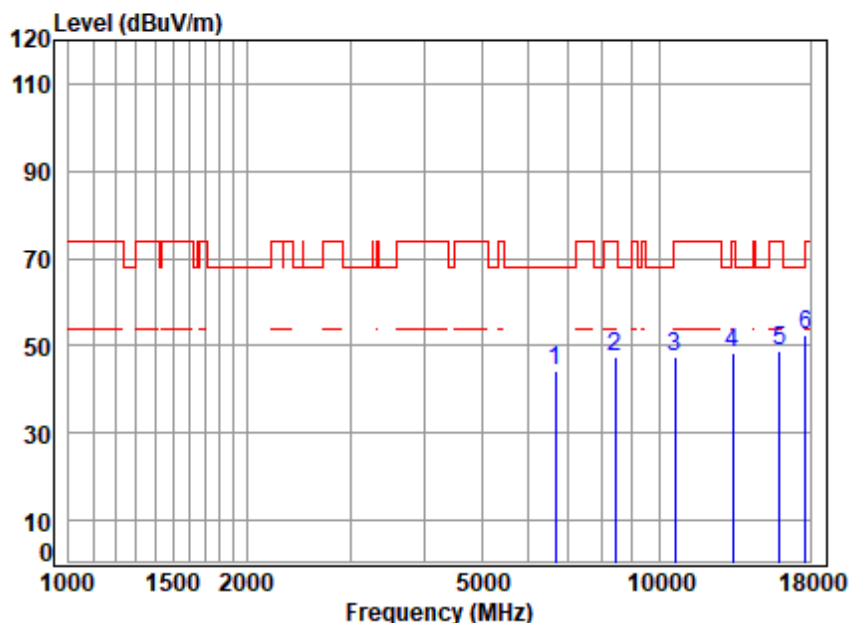
Mode : 5320 TX RSE

: 5G Wi-Fi 11A

	Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	6995.172	11.37	36.19	56.70	53.42	44.28	68.20	-23.92 peak
2	8764.146	12.19	38.50	55.21	52.85	48.33	68.20	-19.87 Peak
3	10640.000	13.77	39.34	53.72	48.42	47.81	74.00	-26.19 peak
4	12984.540	15.88	40.32	54.49	48.25	49.96	68.20	-18.24 peak
5	15960.000	17.20	38.64	54.01	47.60	49.43	74.00	-24.57 peak
6	pp17690.530	19.16	41.66	54.44	46.37	52.75	68.20	-15.45 peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High



Condition: 3m VERTICAL

Job No : 03209AT

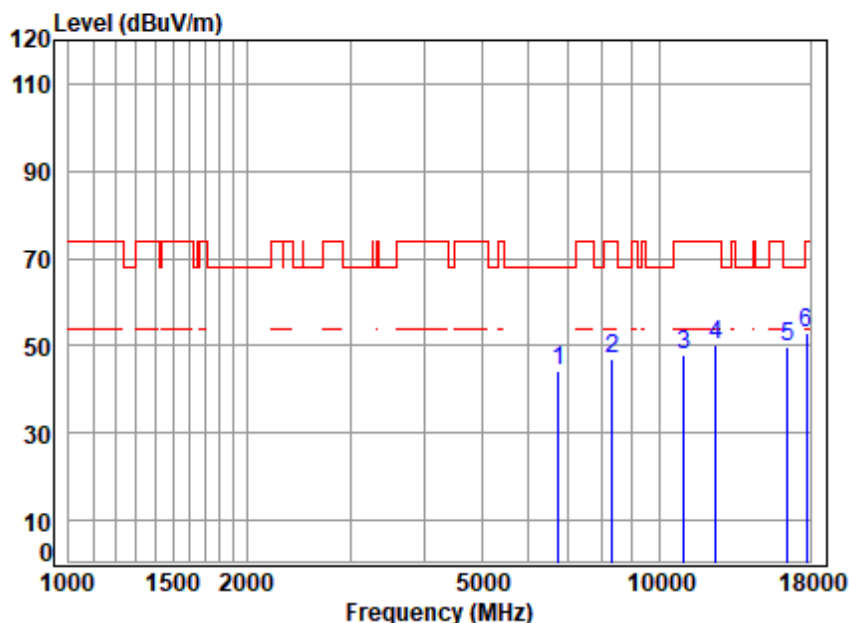
Mode : 5320 TX RSE

: 5G Wi-Fi 11A

	Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	6679.040	11.45	35.44	56.76	54.05	44.18	68.20	-24.02 peak
2	8416.584	11.74	38.53	55.53	52.63	47.37	74.00	-26.63 Peak
3	10640.000	13.77	39.34	53.72	48.14	47.53	74.00	-26.47 peak
4	13326.750	16.37	40.30	54.47	46.29	48.49	74.00	-25.51 Peak
5	15960.000	17.20	38.64	54.01	47.03	48.86	74.00	-25.14 peak
6	pp17690.530	19.16	41.66	54.44	46.17	52.55	68.20	-15.65 peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Condition: 3m HORIZONTAL

Job No : 03209AT

Mode : 5500 TX RSE

: 5G Wi-Fi 11A

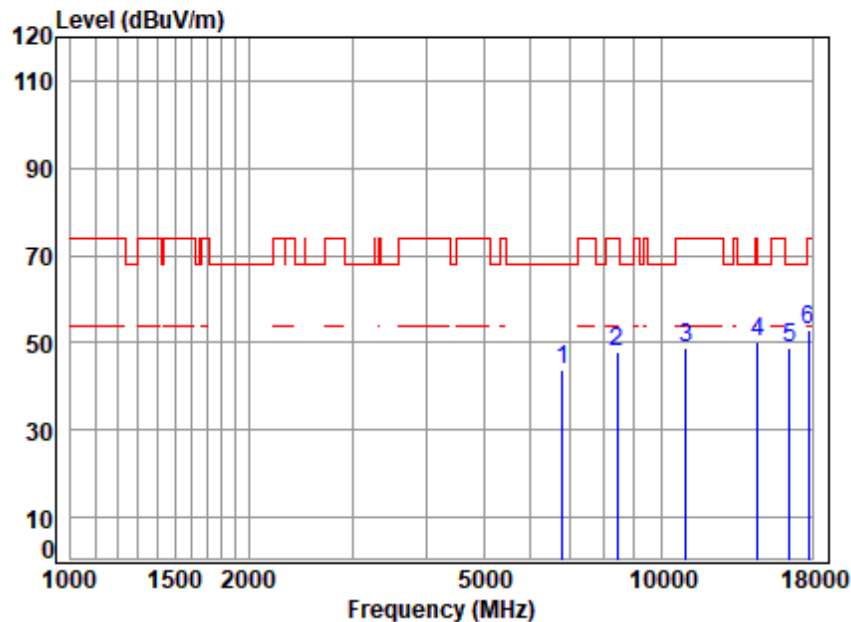
	Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	6756.708	11.39	35.73	56.75	54.10	44.47	68.20 -23.73 peak
2	8319.836	11.73	38.22	55.61	52.68	47.02	74.00 -26.98 Peak
3	11000.000	14.17	39.40	53.50	48.04	48.11	74.00 -25.89 peak
4	12469.610	15.43	39.90	54.13	48.99	50.19	74.00 -23.81 peak
5	pp16500.000	17.74	38.90	54.15	47.04	49.53	68.20 -18.67 peak
6	17741.740	18.87	42.09	54.45	46.25	52.76	74.00 -21.24 peak



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Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Condition: 3m VERTICAL

Job No : 03209AT

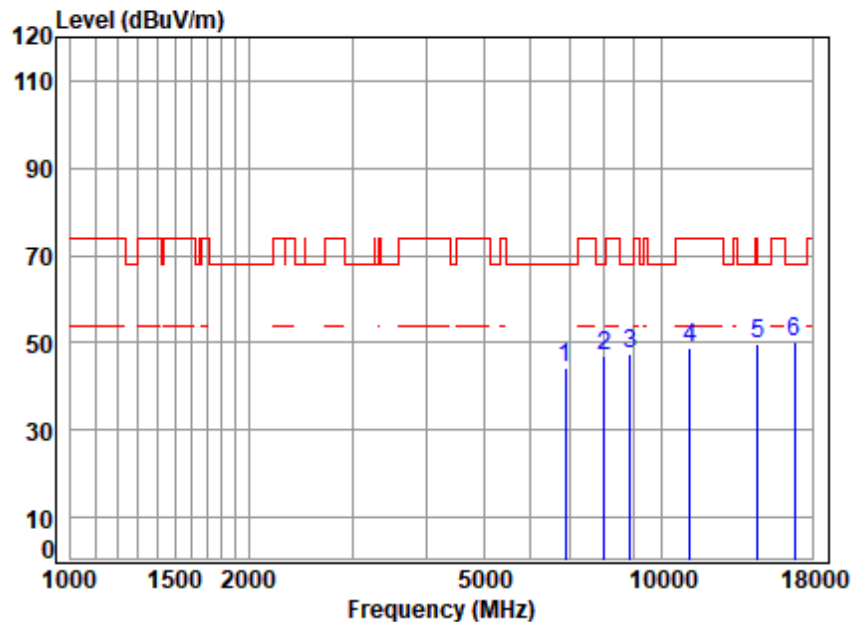
Mode : 5500 TX RSE

: 5G Wi-Fi 11A

	Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	6795.879	11.37	35.88	56.74	53.18	43.69	68.20	-24.51 peak
2	8416.584	11.74	38.53	55.53	52.99	47.73	74.00	-26.27 Peak
3	11000.000	14.17	39.40	53.50	48.64	48.71	74.00	-25.29 peak
4	pp14533.910	16.79	39.43	54.35	48.45	50.32	68.20	-17.88 Peak
5	16500.000	17.74	38.90	54.15	46.25	48.74	68.20	-19.46 peak
6	17741.740	18.87	42.09	54.45	46.53	53.04	74.00	-20.96 peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:middle



Condition: 3m HORIZONTAL

Job No : 03209AT

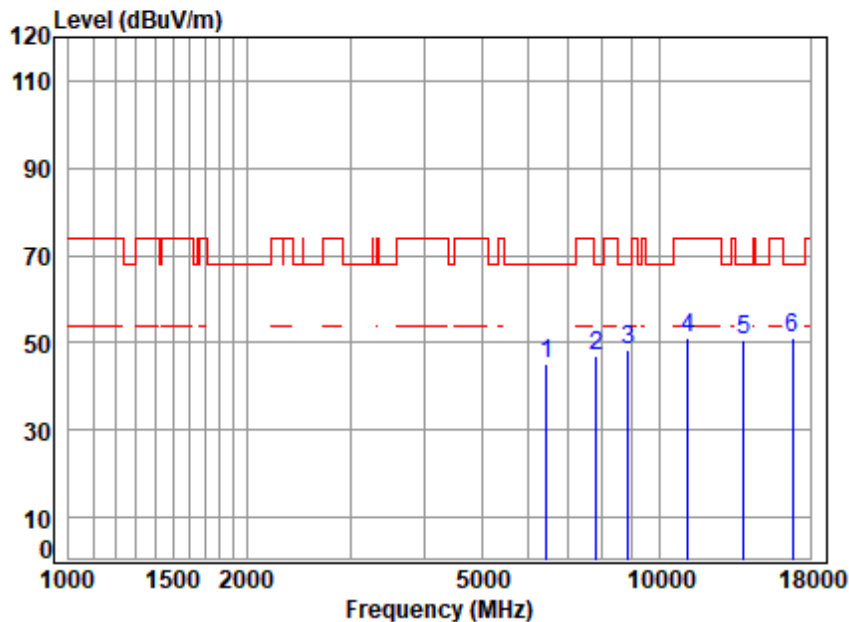
Mode : 5600 TX RSE

: 5G Wi-Fi 11A

	Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	6874.906	11.37	36.10	56.73	53.74	44.48	68.20	-23.72 Peak
2	8013.020	11.55	37.80	55.89	53.44	46.90	68.20	-21.30 Peak
3	8866.062	12.23	38.53	55.12	51.81	47.45	68.20	-20.75 peak
4	11200.000	14.76	39.60	53.56	48.18	48.98	74.00	-25.02 peak
5	14533.910	16.79	39.43	54.35	48.07	49.94	68.20	-18.26 Peak
6	pp16800.000	17.46	39.60	54.24	47.18	50.00	68.20	-18.20 peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:middle



Condition: 3m VERTICAL

Job No : 03209AT

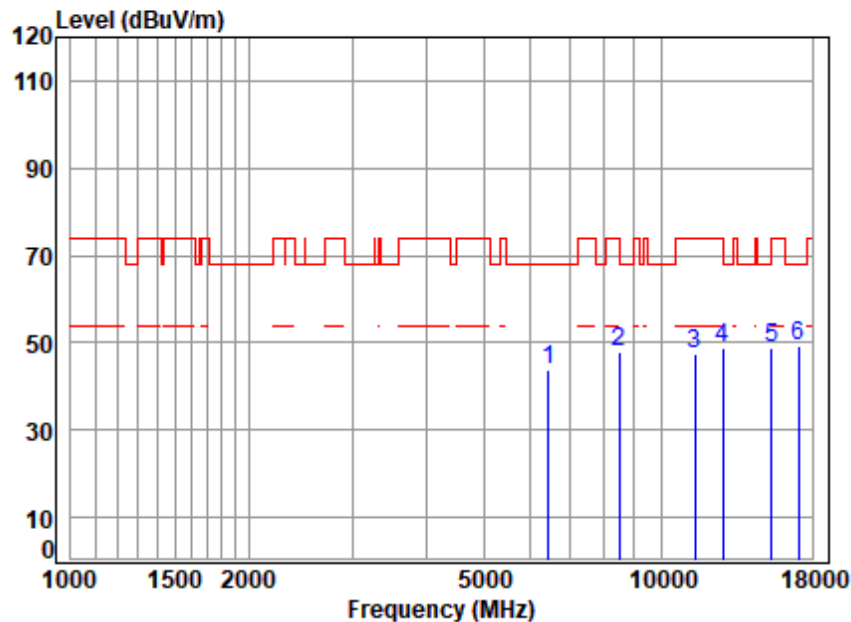
Mode : 5600 TX RSE

: 5G Wi-Fi 11A

	Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	6451.353	12.48	34.80	56.81	54.76	45.23	68.20	-22.97 Peak
2	7829.860	11.38	37.32	56.04	54.30	46.96	68.20	-21.24 Peak
3	8840.473	12.24	38.50	55.14	52.95	48.55	68.20	-19.65 peak
4	11200.000	14.76	39.60	53.56	50.15	50.95	74.00	-23.05 peak
5	13877.080	15.94	39.90	54.41	49.39	50.82	68.20	-17.38 Peak
6	pp16800.000	17.46	39.60	54.24	48.32	51.14	68.20	-17.06 peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High



Condition: 3m HORIZONTAL

Job No : 03209AT

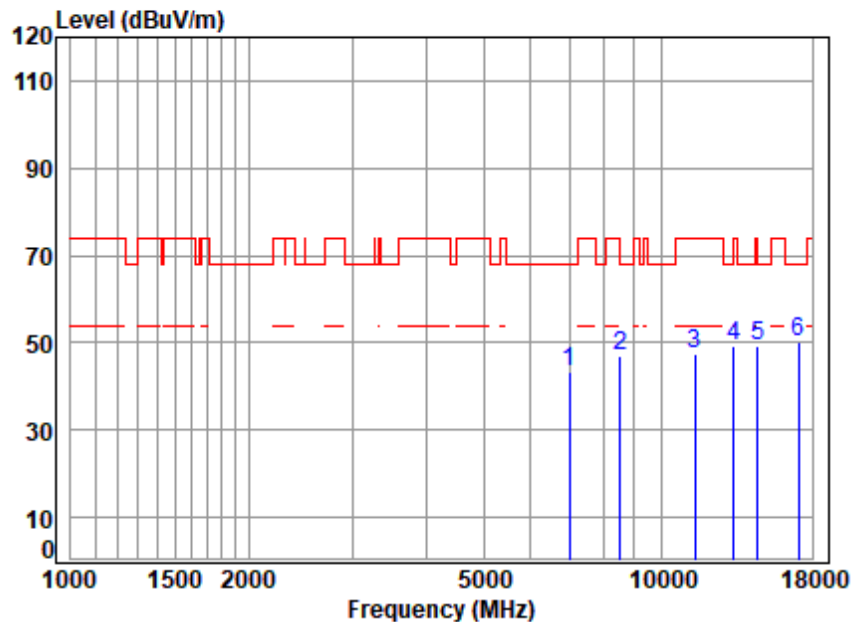
Mode : 5700 TX RSE

: 5G Wi-Fi 11A

	Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	6432.732	12.79	34.80	56.81	53.05	43.83	68.20 -24.37 Peak
2	8489.882	12.24	38.32	55.46	52.60	47.70	74.00 -26.30 Peak
3	11400.000	14.21	39.70	53.62	47.38	47.67	74.00 -26.33 peak
4	12724.470	15.53	40.22	54.31	47.41	48.85	68.20 -19.35 Peak
5	15398.830	16.77	38.60	54.18	47.83	49.02	74.00 -24.98 Peak
6	pp17100.000	18.47	39.80	54.32	45.19	49.14	68.20 -19.06 peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High



Condition: 3m VERTICAL

Job No : 03209AT

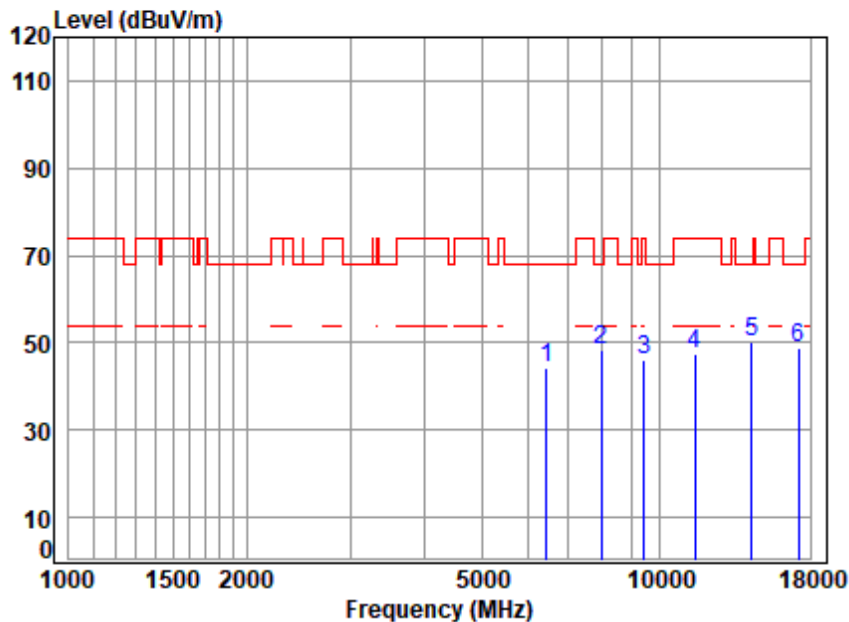
Mode : 5700 TX RSE

: 5G Wi-Fi 11A

	Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	6995.172	11.37	36.19	56.70	52.44	43.30	68.20 -24.90 peak
2	8514.456	12.26	38.30	55.44	52.00	47.12	68.20 -21.08 Peak
3	11400.000	14.21	39.70	53.62	47.25	47.54	74.00 -26.46 peak
4	13288.280	16.44	40.29	54.47	47.12	49.38	74.00 -24.62 Peak
5	14533.910	16.79	39.43	54.35	47.42	49.29	68.20 -18.91 Peak
6	pp17100.000	18.47	39.80	54.32	46.10	50.05	68.20 -18.15 peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Condition: 3m HORIZONTAL

Job No : 03209AT

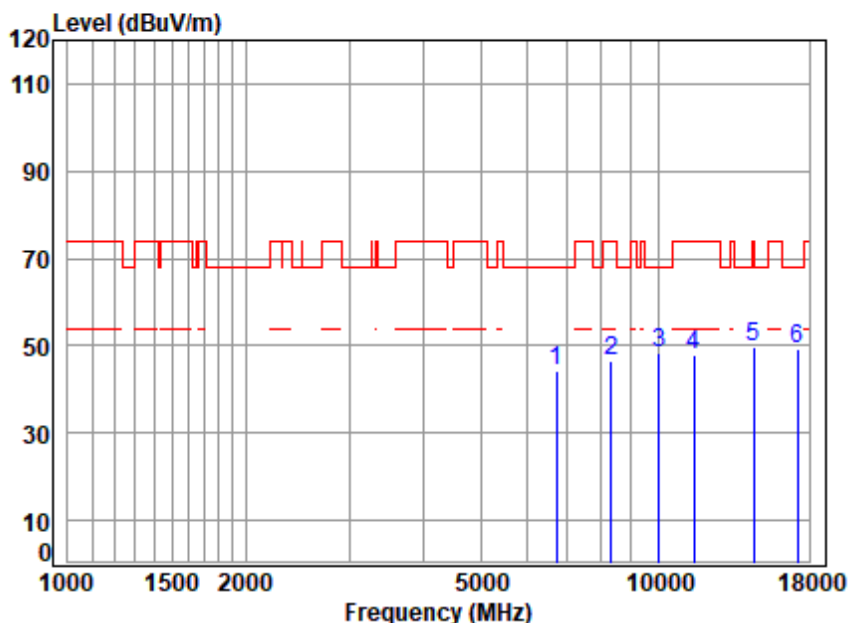
Mode : 5745 TX RSE

: 5.8G Wi-Fi 11A

	Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	6451.353	12.48	34.80	56.81	53.63	44.10	68.20	-24.10 Peak
2	7989.893	11.56	37.78	55.91	54.98	48.41	68.20	-19.79 Peak
3	9420.880	12.35	38.80	54.62	49.55	46.08	74.00	-27.92 Peak
4	11490.000	14.97	39.61	53.65	46.67	47.60	74.00	-26.40 peak
5	pp14325.370	16.51	39.75	54.37	48.14	50.03	68.20	-18.17 Peak
6	17235.000	17.83	40.01	54.35	45.15	48.64	68.20	-19.56 peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Condition: 3m VERTICAL

Job No : 03209AT

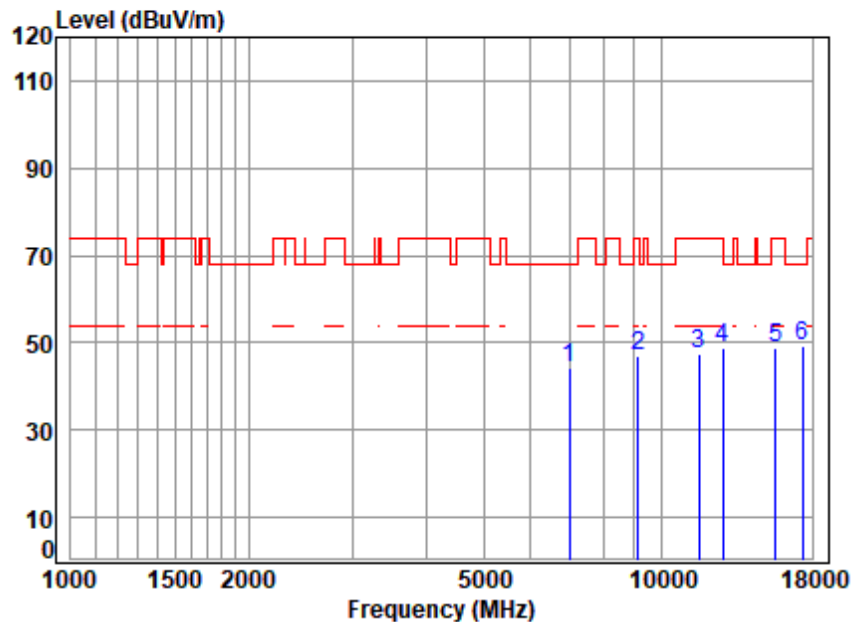
Mode : 5745 TX RSE

: 5.8G Wi-Fi 11A

	Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	6717.762	11.40	35.51	56.76	53.99	44.14	68.20	-24.06 Peak
2	8319.836	11.73	38.22	55.61	52.35	46.69	74.00	-27.31 Peak
3	10010.420	13.04	38.92	54.09	50.40	48.27	68.20	-19.93 Peak
4	11490.000	14.97	39.61	53.65	47.18	48.11	74.00	-25.89 peak
5	14491.960	17.07	39.51	54.35	47.38	49.61	74.00	-24.39 Peak
6	pp17235.000	17.83	40.01	54.35	45.95	49.44	68.20	-18.76 peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:middle



Condition: 3m HORIZONTAL

Job No : 03209AT

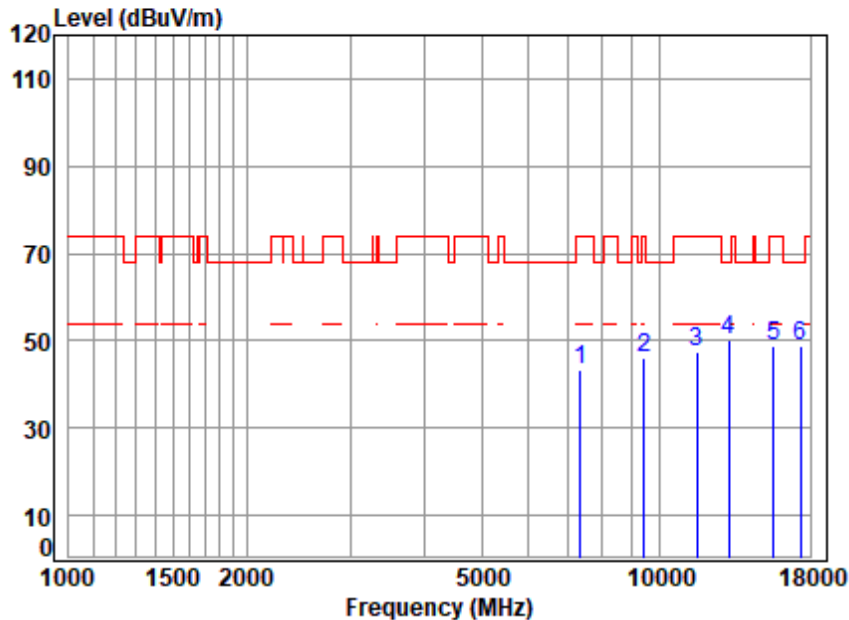
Mode : 5785 TX RSE

: 5.8G Wi-Fi 11A

	Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	6974.982	11.37	36.15	56.71	53.43	44.24	68.20 -23.96 Peak
2	9126.063	12.17	38.65	54.89	50.90	46.83	74.00 -27.17 Peak
3	11570.000	14.78	39.60	53.67	46.66	47.37	74.00 -26.63 peak
4	12687.750	15.49	40.19	54.28	47.40	48.80	74.00 -25.20 Peak
5	15622.990	17.19	38.52	54.11	47.35	48.95	74.00 -25.05 Peak
6	pp17355.000	18.00	40.31	54.37	45.30	49.24	68.20 -18.96 peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:middle



Condition: 3m VERTICAL

Job No : 03209AT

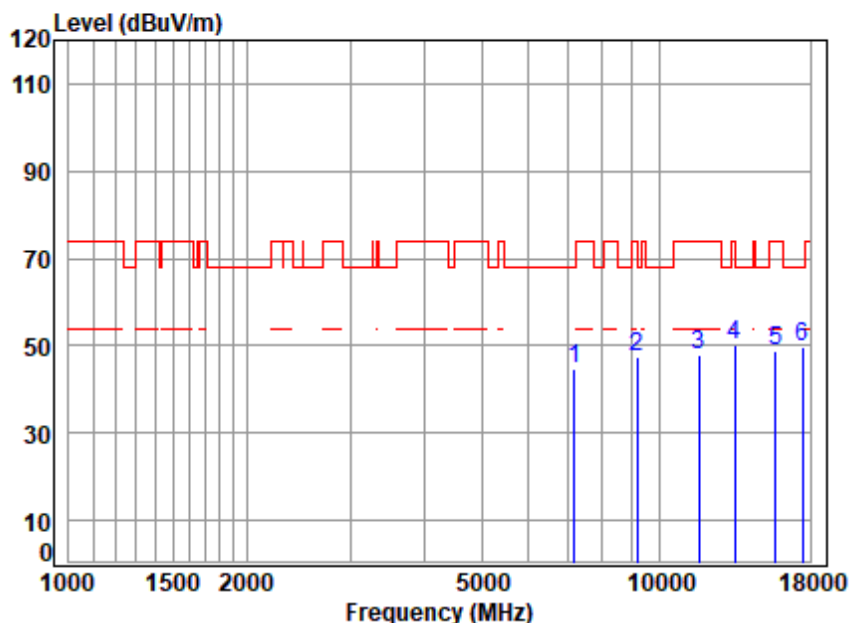
Mode : 5785 TX RSE

: 5.8G Wi-Fi 11A

	Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7347.474	11.51	36.79	56.42	51.40	43.28	74.00	-30.72 Peak
2	9420.880	12.35	38.80	54.62	49.47	46.00	74.00	-28.00 Peak
3	11570.000	14.78	39.60	53.67	46.92	47.63	74.00	-26.37 peak
4	pp13097.620	15.58	40.30	54.49	48.75	50.14	68.20	-18.06 Peak
5	15622.990	17.19	38.52	54.11	47.33	48.93	74.00	-25.07 Peak
6	17355.000	18.00	40.31	54.37	45.10	49.04	68.20	-19.16 peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High



Condition: 3m HORIZONTAL

Job No : 03209AT

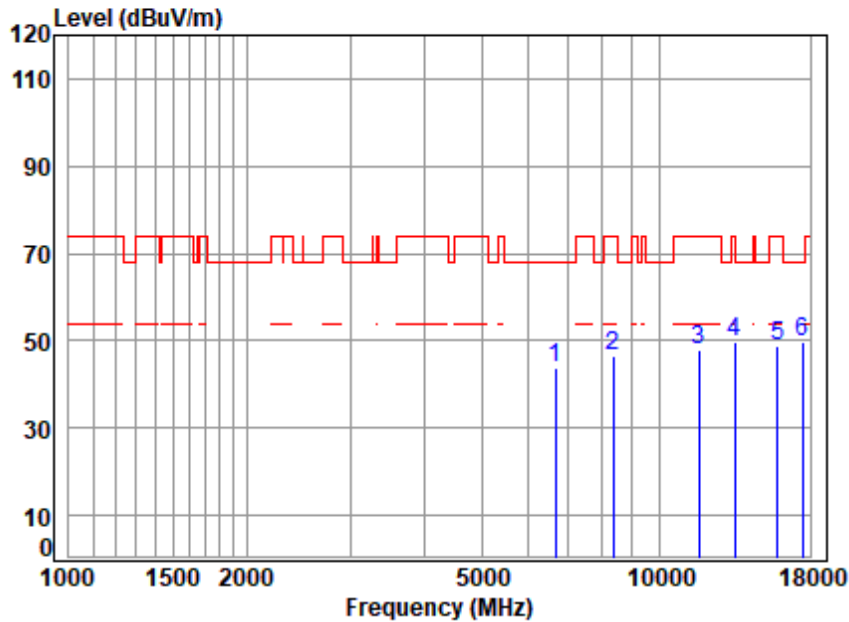
Mode : 5825 TX RSE

: 5.8G Wi-Fi 11A

	Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	7179.527	11.62	36.56	56.56	53.26	44.88	68.20	-23.32 Peak
2	9178.972	12.28	38.12	54.84	51.93	47.49	74.00	-26.51 Peak
3	11650.000	14.69	39.55	53.69	47.47	48.02	74.00	-25.98 peak
4	pp13404.010	15.91	40.29	54.46	48.52	50.26	68.20	-17.94 Peak
5	15759.050	17.13	38.54	54.07	47.39	48.99	74.00	-25.01 Peak
6	17475.000	18.35	40.78	54.40	45.02	49.75	68.20	-18.45 peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High



Condition: 3m VERTICAL

Job No : 03209AT

Mode : 5825 TX RSE

: 5.8G Wi-Fi 11A

	Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	6659.763	11.49	35.48	56.77	53.52	43.72	68.20 -24.48 Peak
2	8343.918	11.70	38.60	55.59	51.87	46.58	74.00 -27.42 Peak
3	11650.000	14.69	39.55	53.69	47.25	47.80	74.00 -26.20 peak
4	pp13404.010	15.91	40.29	54.46	48.18	49.92	68.20 -18.28 Peak
5	15850.410	17.16	38.60	54.04	47.15	48.87	74.00 -25.13 Peak
6	17475.000	18.35	40.78	54.40	45.14	49.87	68.20 -18.33 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

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: 22.2 °C

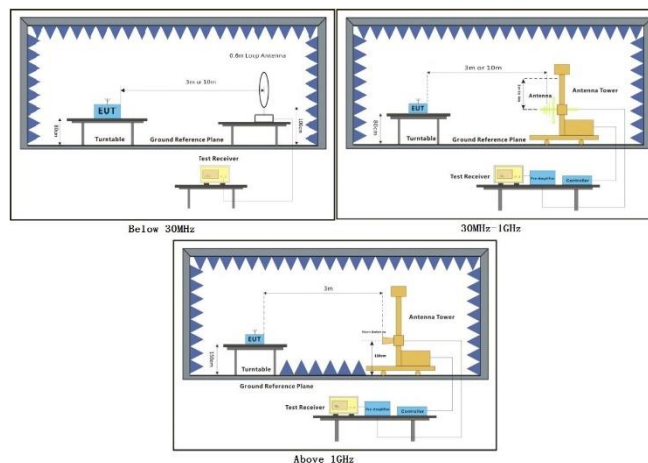
Humidity: 51.0 % RH

Atmospheric Pressure: 1020 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_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.

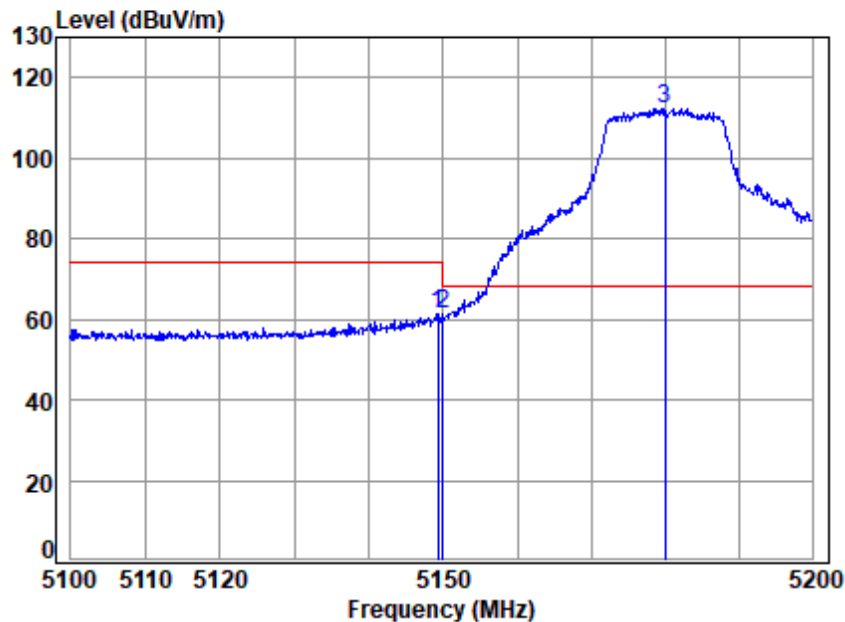
Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

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.



Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Condition: 3m HORIZONTAL

Job No : 03209AT

Mode : 5180 Band edge
: 5G Wi-Fi 11A

		Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5149.257	10.14	32.40	30.84	49.56	61.26	74.00	-12.74	peak
2	5149.980	10.14	32.40	30.84	49.75	61.45	74.00	-12.55	peak
3	pp 5180.000	10.25	32.46	30.83	100.37	112.25	68.20	44.05	peak



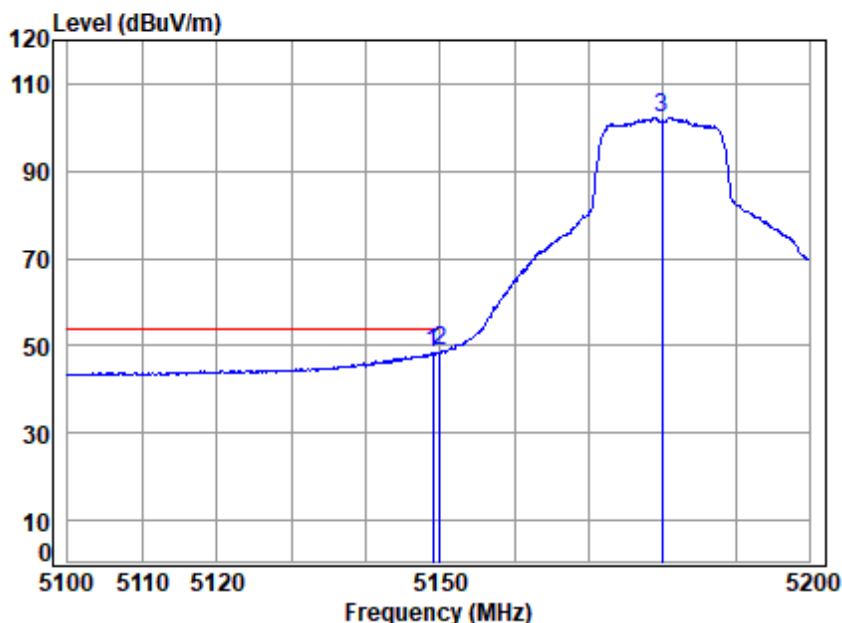
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Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Condition: 3m HORIZONTAL

Job No : 03209AT

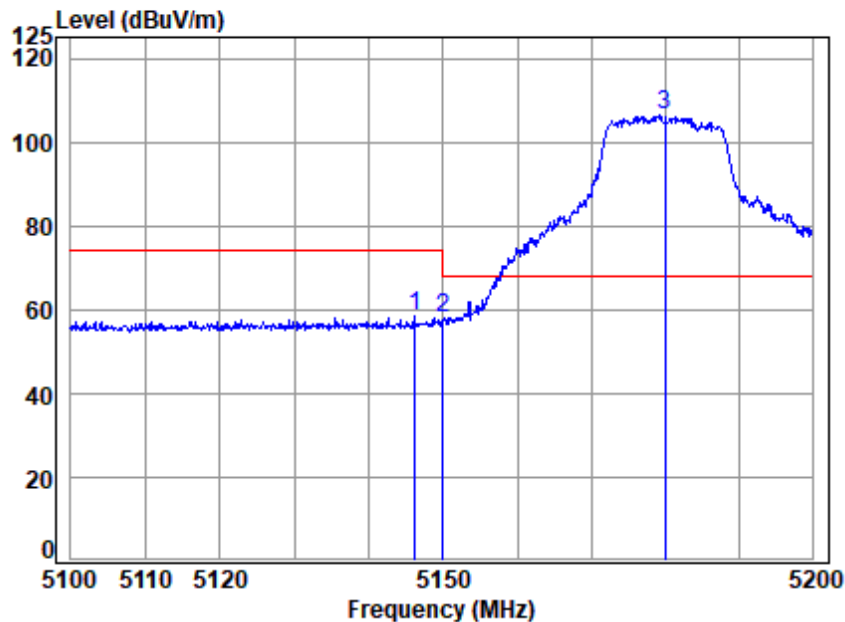
Mode : 5180 Band edge

: 5G Wi-Fi 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5149.057	10.14	32.40	30.84	36.56	48.26	54.00	-5.74	Average
2 pp	5149.980	10.14	32.40	30.84	36.95	48.65	54.00	-5.35	Average
3	5180.000	10.25	32.46	30.83	90.48	102.36	-----	-----	Average



Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Condition: 3m VERTICAL

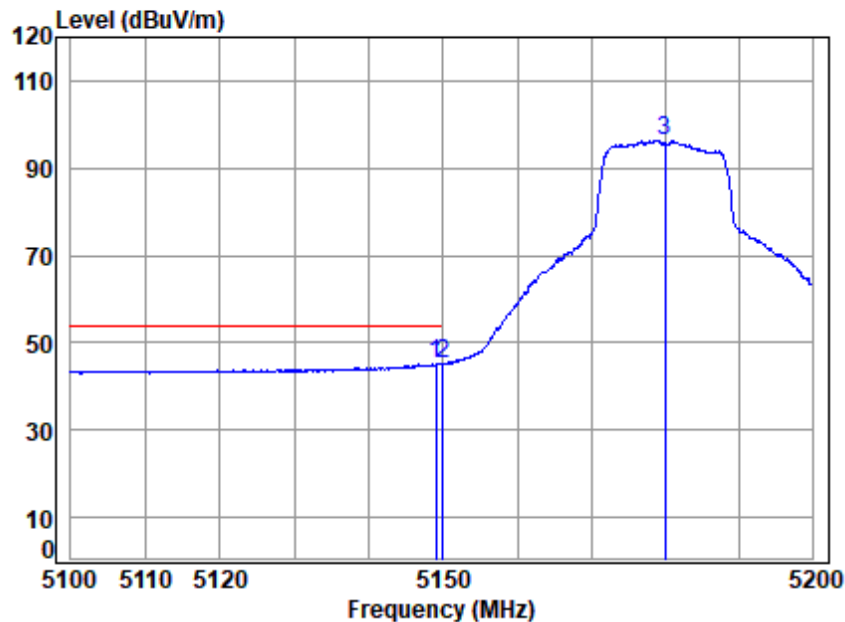
Job No : 03209AT

Mode : 5180 Band edge
: 5G Wi-Fi 11A

	Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	5146.159	10.13	32.39	30.84	46.95	58.63	74.00 -15.37 Peak
2	5149.980	10.14	32.40	30.84	46.07	57.77	74.00 -16.23 Peak
3	pp 5180.000	10.25	32.46	30.83	94.51	106.39	68.20 38.19 Peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Condition: 3m VERTICAL

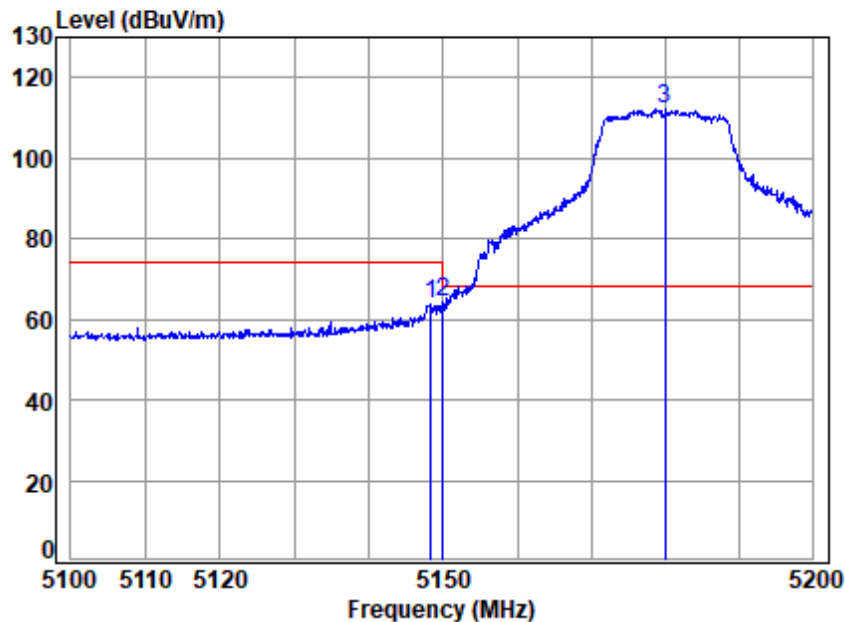
Job No : 03209AT

Mode : 5180 Band edge
: 5G Wi-Fi 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5148.958	10.14	32.40	30.84	33.37	45.07	54.00	-8.93	Average
2 pp	5149.980	10.14	32.40	30.84	33.59	45.29	54.00	-8.71	Average
3	5180.000	10.25	32.46	30.83	84.56	96.44	-----	-----	Average



Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



Condition: 3m HORIZONTAL

Job No : 03209AT

Mode : 5180 Band edge
: 5G Wi-Fi 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5148.357	10.13	32.40	30.84	52.18	63.87	74.00	-10.13	peak
2	5149.980	10.14	32.40	30.84	52.50	64.20	74.00	-9.80	peak
3 pp	5180.000	10.25	32.46	30.83	100.28	112.16	68.20	43.96	peak



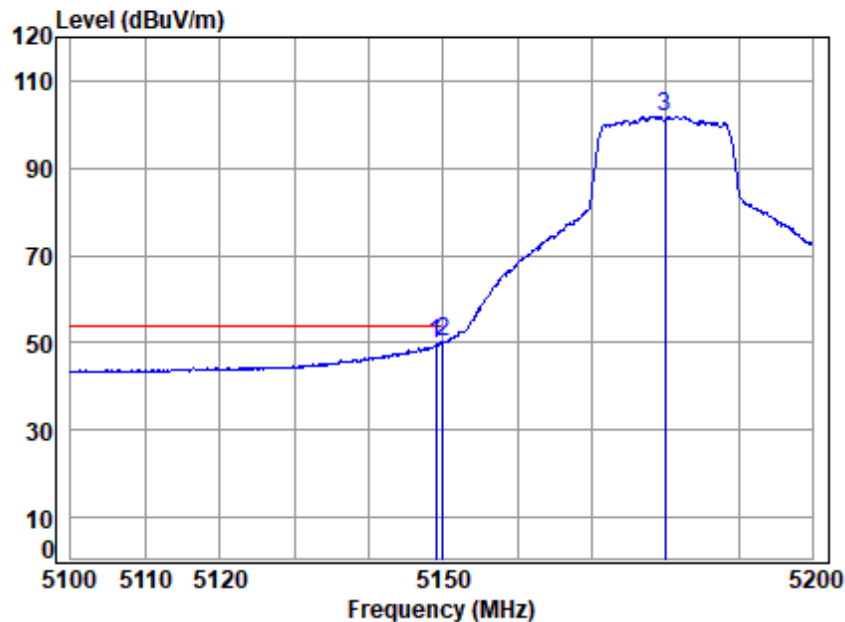
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Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



Condition: 3m HORIZONTAL

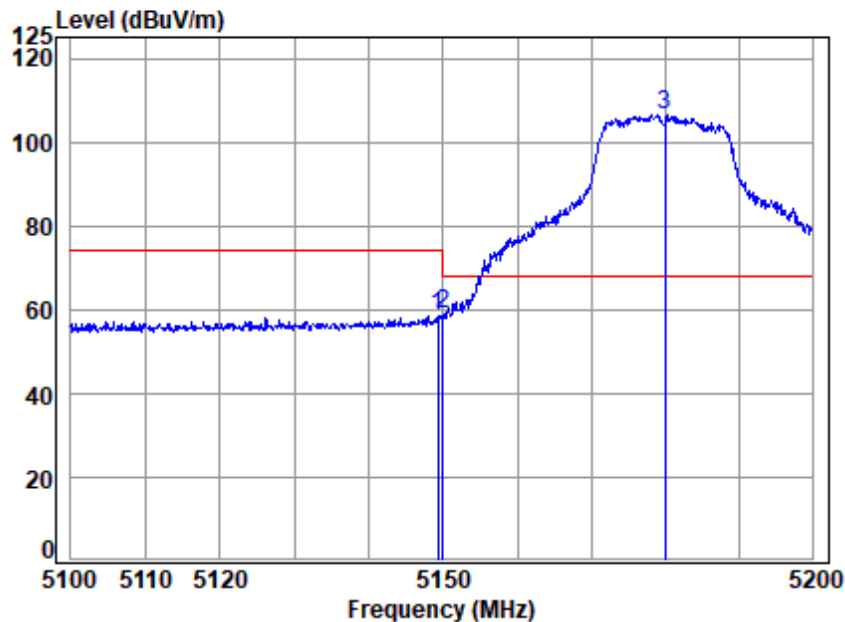
Job No : 03209AT

Mode : 5180 Band edge
: 5G Wi-Fi 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5149.057	10.14	32.40	30.84	38.03	49.73	54.00	-4.27	Average
2 pp	5149.980	10.14	32.40	30.84	38.61	50.31	54.00	-3.69	Average
3	5180.000	10.25	32.46	30.83	89.99	101.87	-----	-----	Average



Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



Condition: 3m VERTICAL

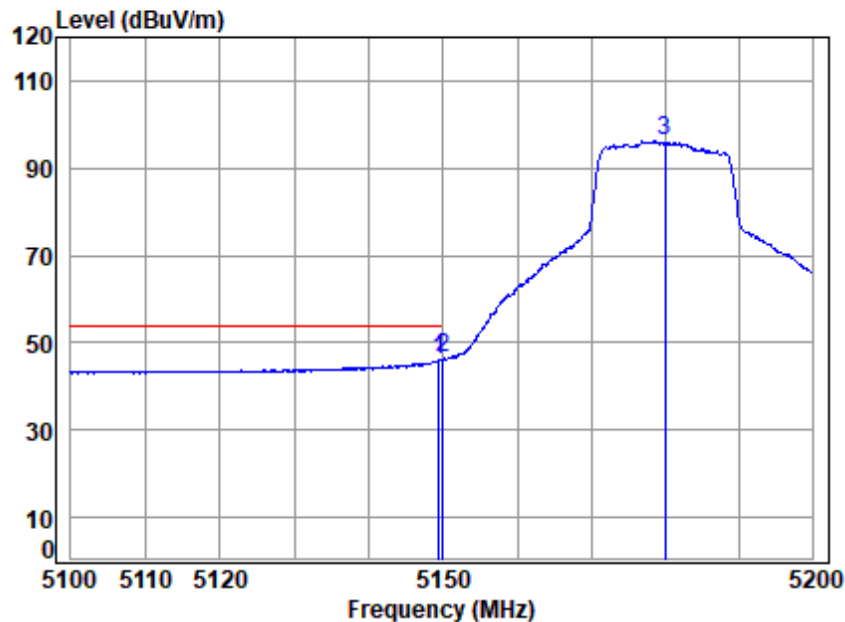
Job No : 03209AT

Mode : 5180 Band edge
: 5G Wi-Fi 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5149.257	10.14	32.40	30.84	46.66	58.36	74.00	-15.64	Peak
2	5149.980	10.14	32.40	30.84	47.29	58.99	74.00	-15.01	Peak
3	pp 5180.000	10.25	32.46	30.83	94.55	106.43	68.20	38.23	Peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



Condition: 3m VERTICAL

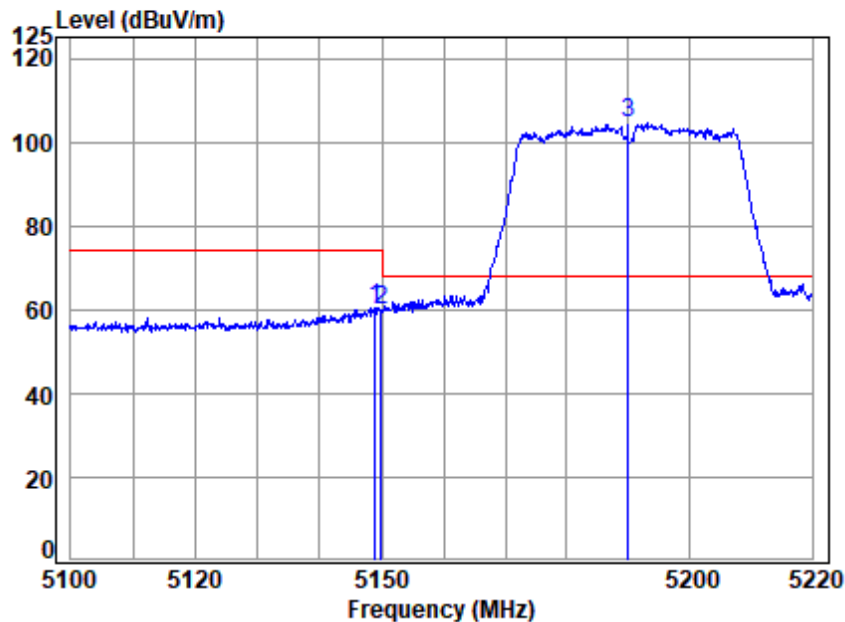
Job No : 03209AT

Mode : 5180 Band edge
: 5G Wi-Fi 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5149.458	10.14	32.40	30.84	34.24	45.94	54.00	-8.06	Average
2 pp	5149.980	10.14	32.40	30.84	34.73	46.43	54.00	-7.57	Average
3	5180.000	10.25	32.46	30.83	84.48	96.36	-----	-----	Average



Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



Condition: 3m HORIZONTAL

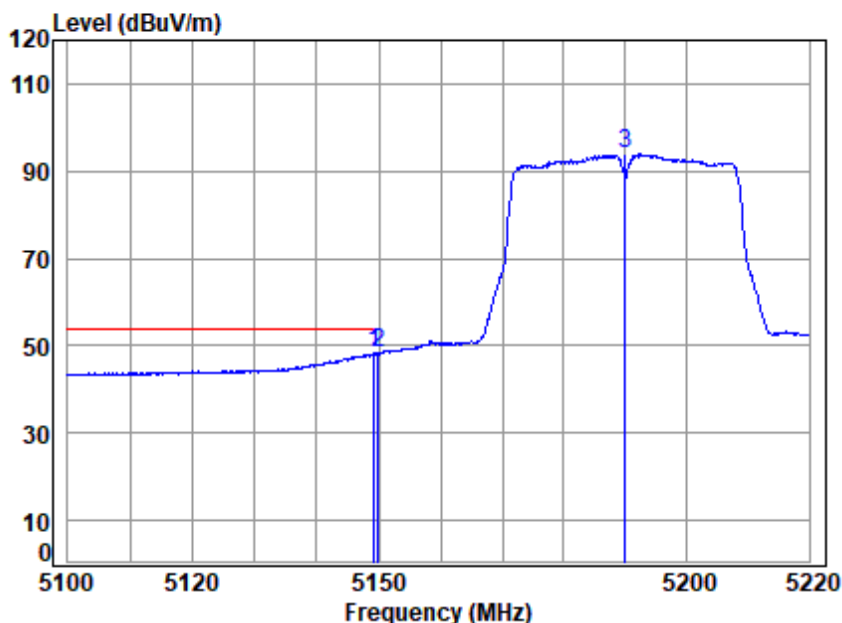
Job No : 03209AT

Mode : 5190 Band edge
: 5G Wi-Fi 11N40

		Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5148.863	10.14	32.40	30.84	48.76	60.46	74.00	-13.54 peak
2	5149.980	10.14	32.40	30.84	48.33	60.03	74.00	-13.97 peak
3	pp 5190.000	10.29	32.48	30.82	92.81	104.76	68.20	36.56 peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



Condition: 3m HORIZONTAL

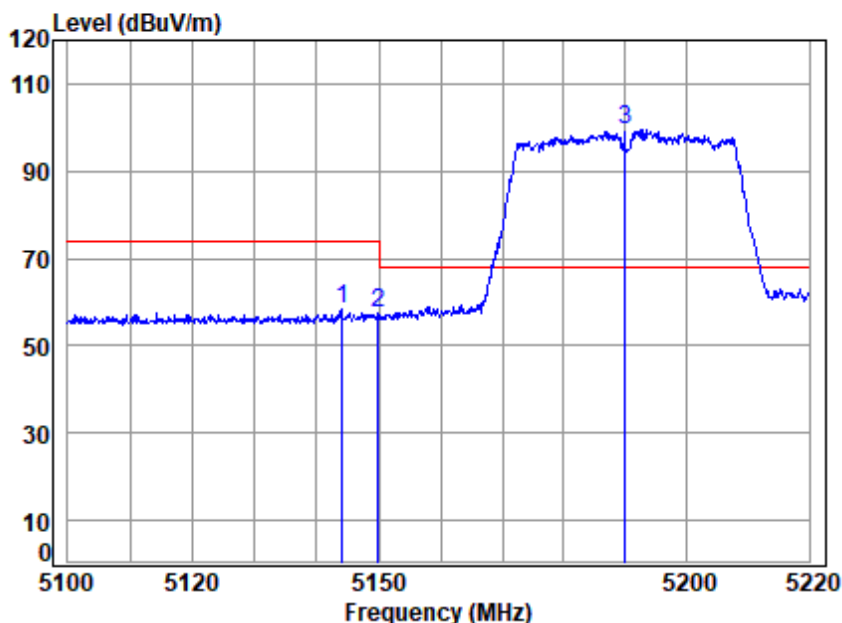
Job No : 03209AT

Mode : 5190 Band edge
: 5G Wi-Fi 11N40

		Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5149.342	10.14	32.40	30.84	36.45	48.15	54.00	-5.85 Average
2 pp	5149.980	10.14	32.40	30.84	36.86	48.56	54.00	-5.44 Average
3	5190.000	10.29	32.48	30.82	81.86	93.81	-----	----- Average



Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



Condition: 3m VERTICAL

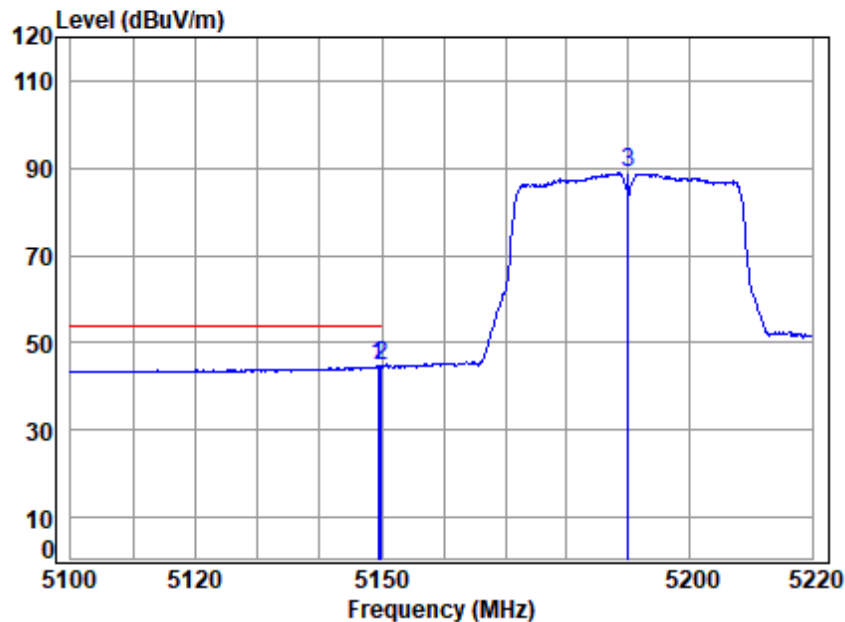
Job No : 03209AT

Mode : 5190 Band edge
: 5G Wi-Fi 11N40

	Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	5144.075	10.12	32.39	30.84	46.74	58.41	74.00 -15.59 Peak
2	5149.980	10.14	32.40	30.84	45.81	57.51	74.00 -16.49 Peak
3	pp 5190.000	10.29	32.48	30.82	87.51	99.46	68.20 31.26 Peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



Condition: 3m VERTICAL

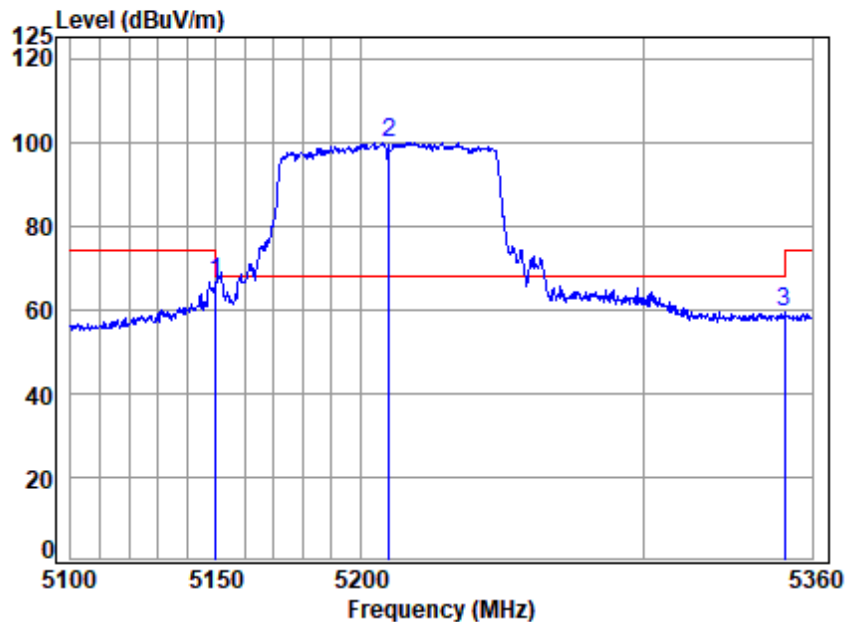
Job No : 03209AT

Mode : 5190 Band edge
: 5G Wi-Fi 11N40

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	5149.461	10.14	32.40	30.84	32.86	44.56	54.00	-9.44 Average
2 pp	5149.980	10.14	32.40	30.84	32.88	44.58	54.00	-9.42 Average
3	5190.000	10.29	32.48	30.82	76.87	88.82	-----	----- Average



Test Mode: 04; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:80MHz; Channel:middle



Condition: 3m HORIZONTAL

Job No : 03209AT

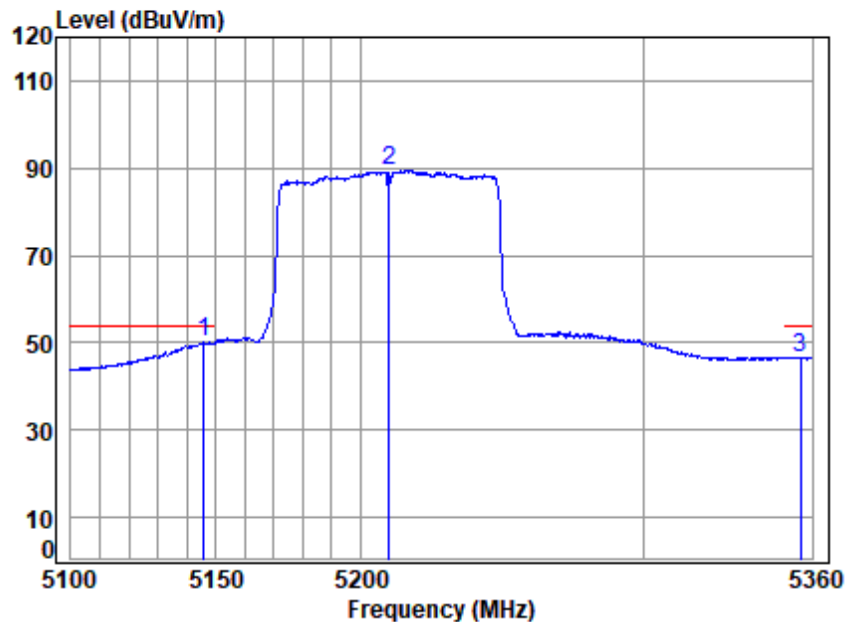
Mode : 5210 Band edge

: 5G Wi-Fi 11AC80

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5149.690	10.14	32.40	30.84	55.00	66.70	74.00	-7.30	peak
2 pp	5210.000	10.32	32.52	30.82	87.80	99.82	68.20	31.62	peak
3	5350.148	10.45	32.80	30.76	47.01	59.50	74.00	-14.50	peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:80MHz; Channel:middle



Condition: 3m HORIZONTAL

Job No : 03209AT

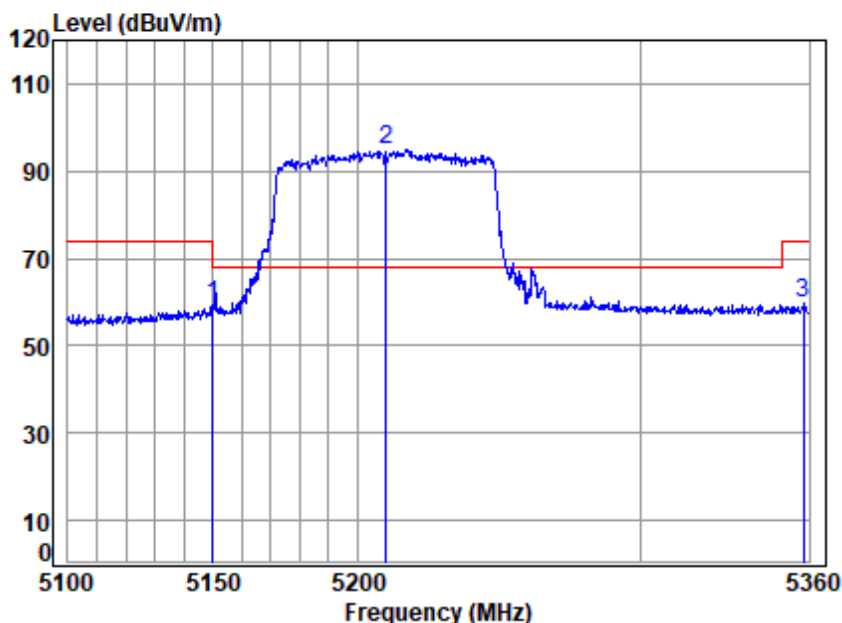
Mode : 5210 Band edge

: 5G Wi-Fi 11AC80

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5145.595	10.12	32.39	30.84	38.44	50.11	54.00	-3.89	Average
2	5210.000	10.32	32.52	30.82	77.54	89.56	-----	-----	Average
3	5356.004	10.47	32.80	30.76	34.18	46.69	54.00	-7.31	Average



Test Mode: 04; Polarity: Vertical; Modulation:802.11ac; Bandwidth:80MHz; Channel:middle



Condition: 3m VERTICAL

Job No : 03209AT

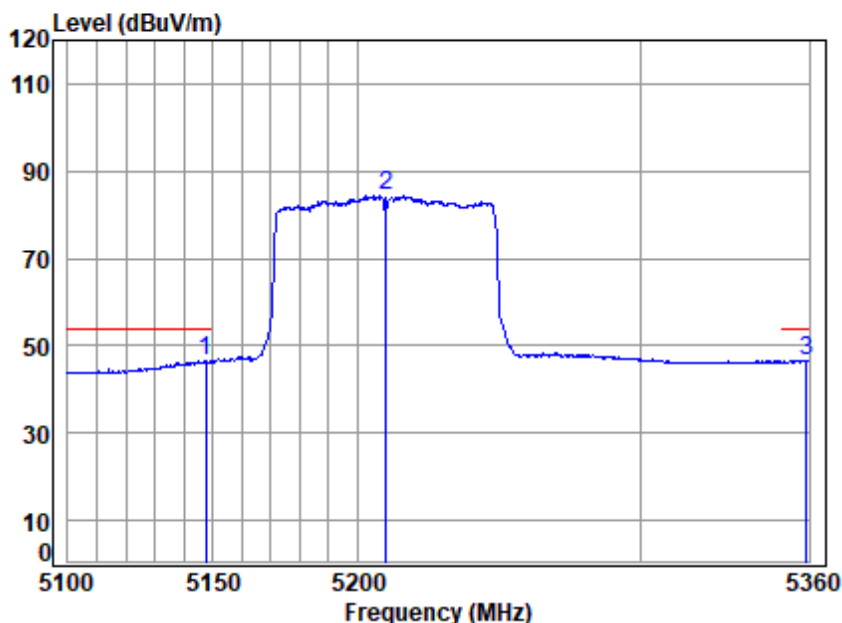
Mode : 5210 Band edge

: 5G Wi-Fi 11AC80

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5149.947	10.14	32.40	30.84	47.77	59.47	74.00	-14.53	Peak
2 pp	5210.000	10.32	32.52	30.82	83.04	95.06	68.20	26.86	Peak
3	5358.135	10.48	32.80	30.76	47.15	59.67	74.00	-14.33	Peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11ac; Bandwidth:80MHz; Channel:middle



Condition: 3m VERTICAL

Job No : 03209AT

Mode : 5210 Band edge

: 5G Wi-Fi 11AC80

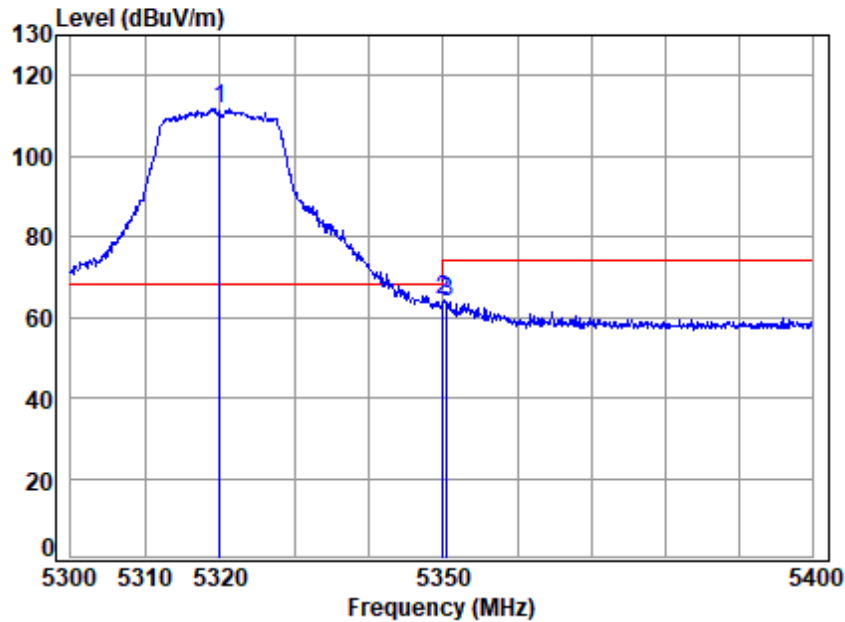
		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5147.386	10.13	32.39	30.84	35.01	46.69	54.00	-7.31	Average
2	5210.000	10.32	32.52	30.82	72.27	84.29	-----	-----	Average
3	5359.201	10.48	32.80	30.76	33.99	46.51	54.00	-7.49	Average



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Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High



Condition: 3m HORIZONTAL

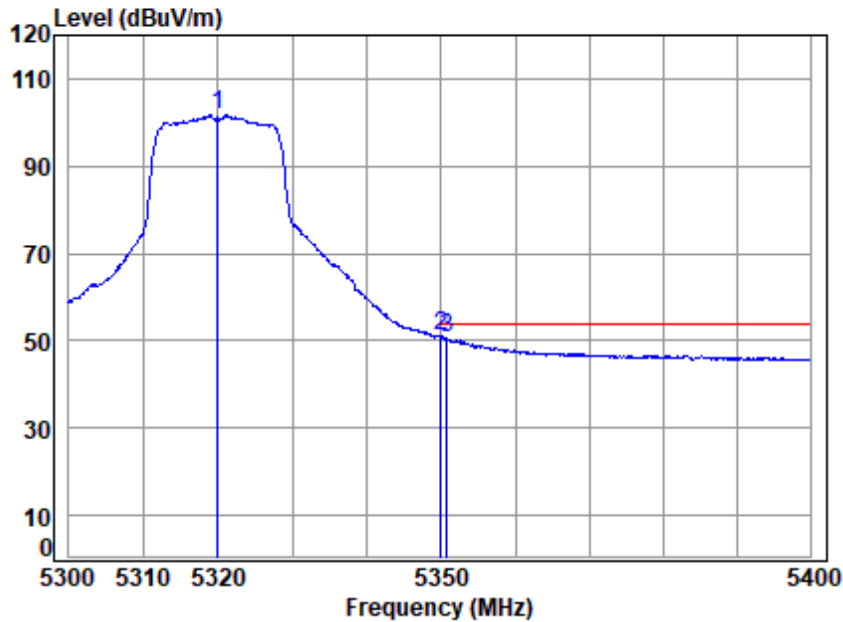
Job No : 03209AT

Mode : 5320 Band edge
: 5G Wi-Fi 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5320.000	10.35	32.74	30.77	99.45	111.77	68.20	43.57	peak
2	5350.020	10.45	32.80	30.76	51.86	64.35	74.00	-9.65	peak
3	5350.566	10.45	32.80	30.76	51.38	63.87	74.00	-10.13	peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High



Condition: 3m HORIZONTAL

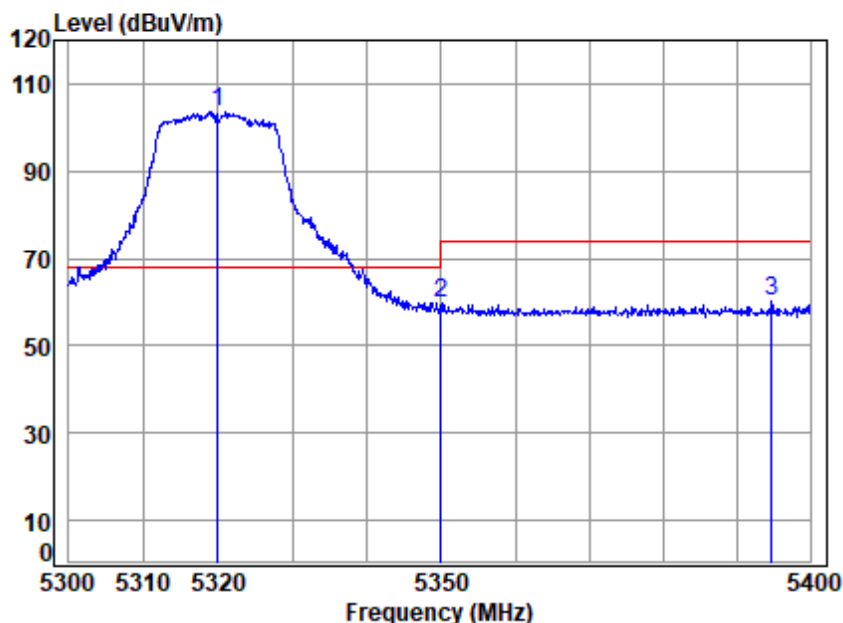
Job No : 03209AT

Mode : 5320 Band edge
: 5G Wi-Fi 11A

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5320.000	10.35	32.74	30.77	89.45	101.77	-----	-----	Average
2	pp 5350.020	10.45	32.80	30.76	38.47	50.96	54.00	-3.04	Average
3	5350.767	10.45	32.80	30.76	37.94	50.43	54.00	-3.57	Average



Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High



Condition: 3m VERTICAL

Job No : 03209AT

Mode : 5320 Band edge

: 5G Wi-Fi 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5320.000	10.35	32.74	30.77	91.10	103.42	68.20	35.22	Peak
2	5350.020	10.45	32.80	30.76	47.22	59.71	74.00	-14.29	Peak
3	5394.754	10.60	32.80	30.74	47.51	60.17	74.00	-13.83	Peak



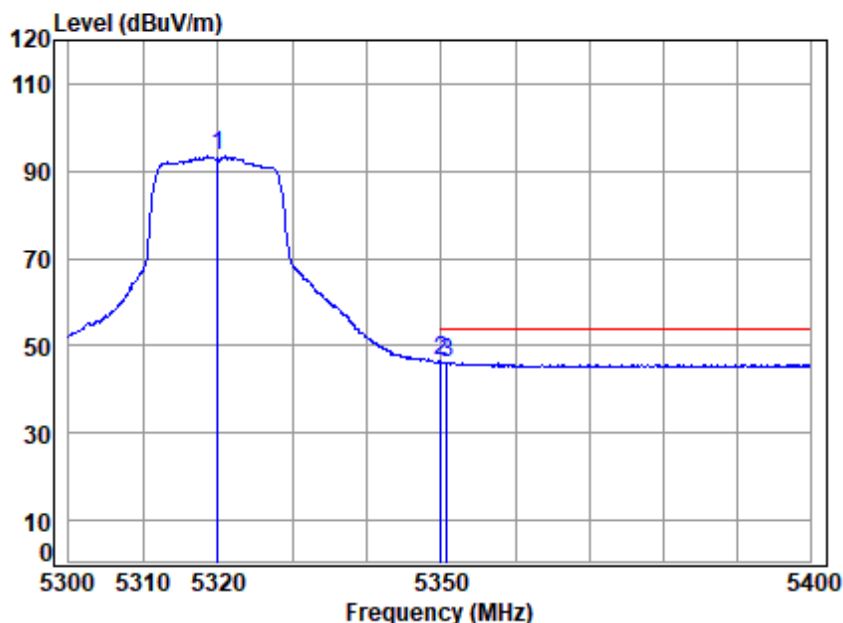
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Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High



Condition: 3m VERTICAL

Job No : 03209AT

Mode : 5320 Band edge

: 5G Wi-Fi 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5320.000	10.35	32.74	30.77	81.07	93.39	-----	-----	Average
2 pp	5350.020	10.45	32.80	30.76	33.86	46.35	54.00	-7.65	Average
3	5350.767	10.45	32.80	30.76	33.75	46.24	54.00	-7.76	Average



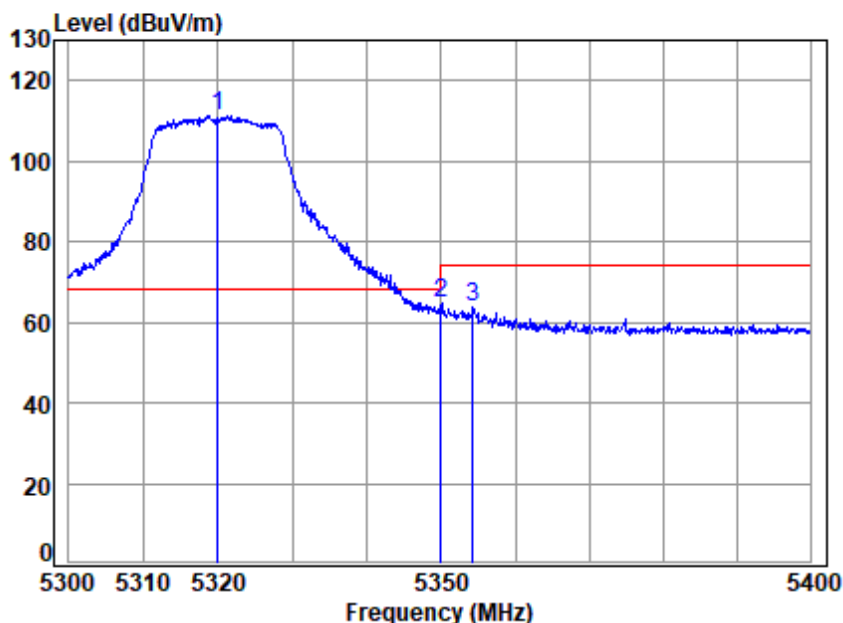
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Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High



Condition: 3m HORIZONTAL

Job No : 03209AT

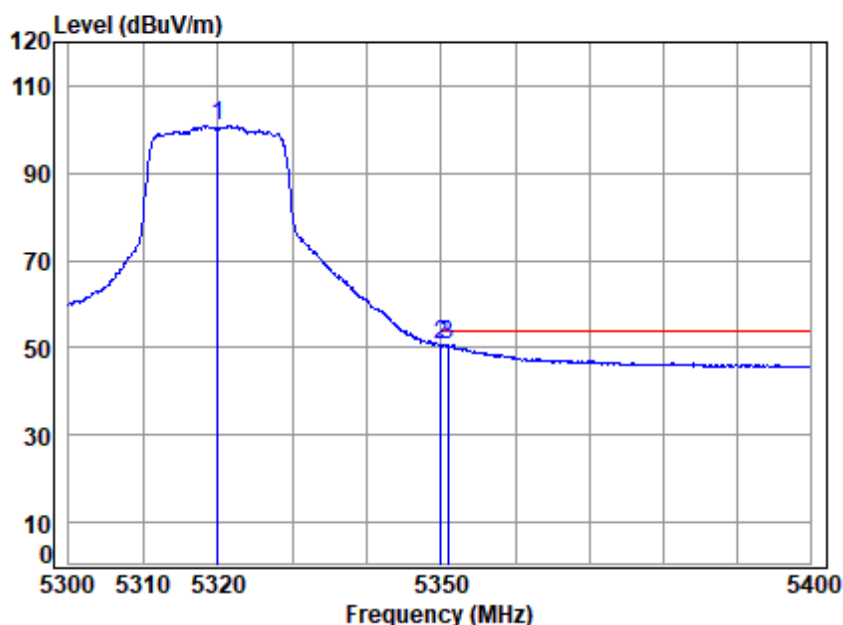
Mode : 5320 Band edge

: 5G Wi-Fi 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5320.000	10.35	32.74	30.77	99.11	111.43	68.20	43.23	peak
2	5350.020	10.45	32.80	30.76	52.32	64.81	74.00	-9.19	peak
3	5354.268	10.46	32.80	30.76	51.21	63.71	74.00	-10.29	peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High



Condition: 3m HORIZONTAL

Job No : 03209AT

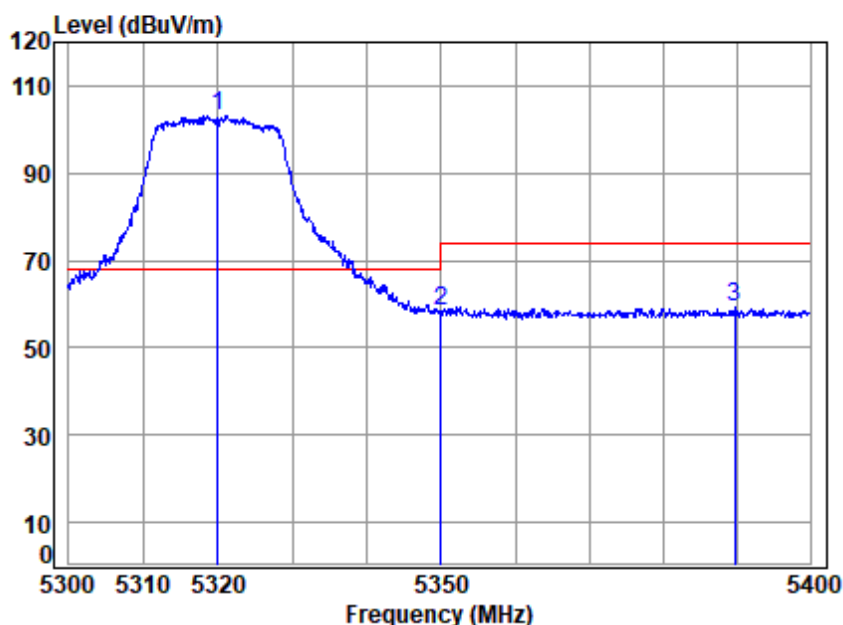
Mode : 5320 Band edge

: 5G Wi-Fi 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5320.000	10.35	32.74	30.77	88.54	100.86	-----	-----	Average
2	5350.020	10.45	32.80	30.76	38.17	50.66	54.00	-3.34	Average
3 pp	5350.866	10.45	32.80	30.76	38.33	50.82	54.00	-3.18	Average



Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High



Condition: 3m VERTICAL

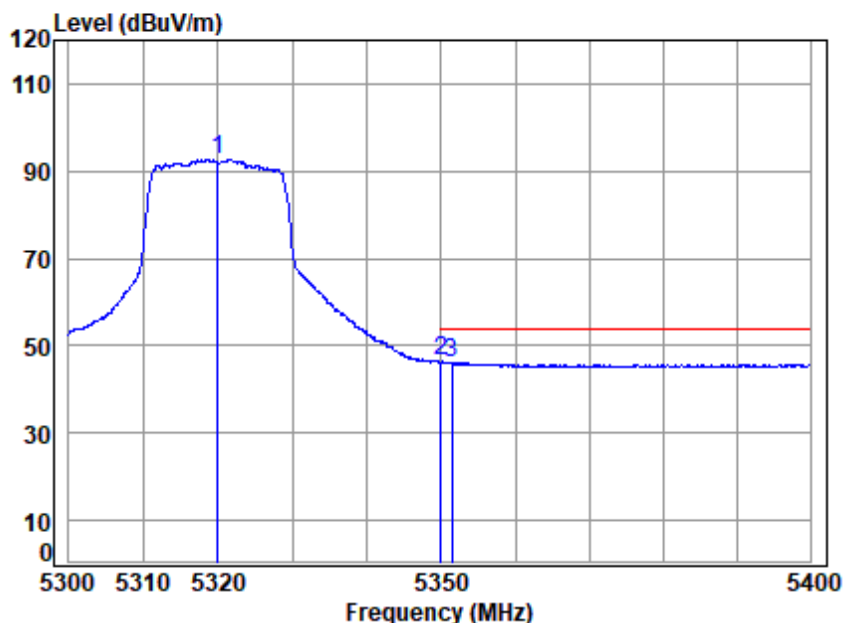
Job No : 03209AT

Mode : 5320 Band edge
: 5G Wi-Fi 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5320.000	10.35	32.74	30.77	91.02	103.34	68.20	35.14	Peak
2	5350.020	10.45	32.80	30.76	45.84	58.33	74.00	-15.67	Peak
3	5389.714	10.59	32.80	30.74	46.69	59.34	74.00	-14.66	Peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High



Condition: 3m VERTICAL

Job No : 03209AT

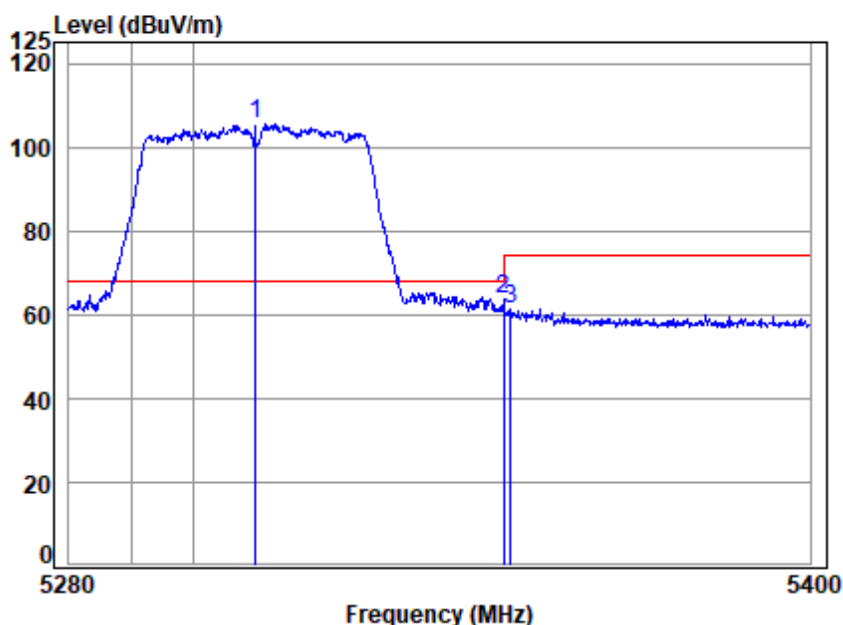
Mode : 5320 Band edge

: 5G Wi-Fi 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5320.000	10.35	32.74	30.77	80.45	92.77	-----	-----	Average
2 pp	5350.020	10.45	32.80	30.76	33.85	46.34	54.00	-7.66	Average
3	5351.467	10.45	32.80	30.76	33.73	46.22	54.00	-7.78	Average



Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High



Condition: 3m HORIZONTAL

Job No : 03209AT

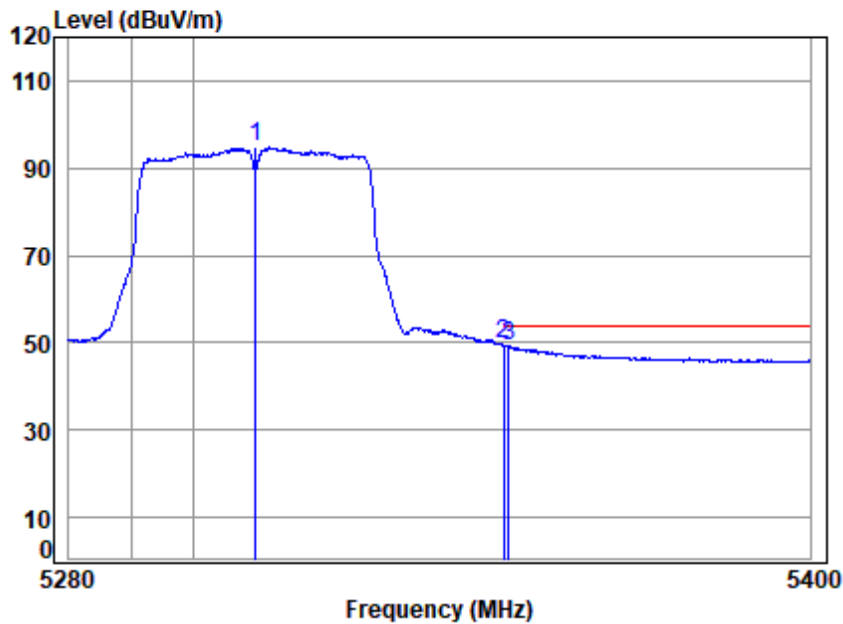
Mode : 5310 Band edge

: 5G Wi-Fi 11N40

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5310.000	10.31	32.72	30.78	93.41	105.66	68.20	37.46	peak
2	5350.020	10.45	32.80	30.76	51.02	63.51	74.00	-10.49	peak
3	5351.195	10.45	32.80	30.76	48.83	61.32	74.00	-12.68	peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High



Condition: 3m HORIZONTAL

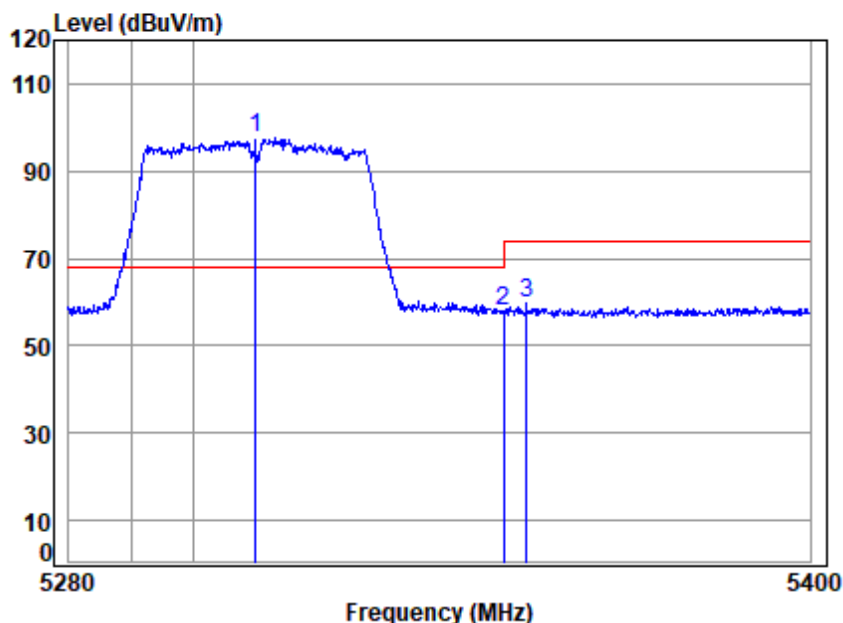
Job No : 03209AT

Mode : 5310 Band edge
: 5G Wi-Fi 11N40

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5310.000	10.31	32.72	30.78	82.46	94.71	-----	-----	Average
2 pp	5350.020	10.45	32.80	30.76	37.20	49.69	54.00	-4.31	Average
3	5350.955	10.45	32.80	30.76	36.73	49.22	54.00	-4.78	Average



Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High



Condition: 3m VERTICAL

Job No : 03209AT

Mode : 5310 Band edge
: 5G Wi-Fi 11N40

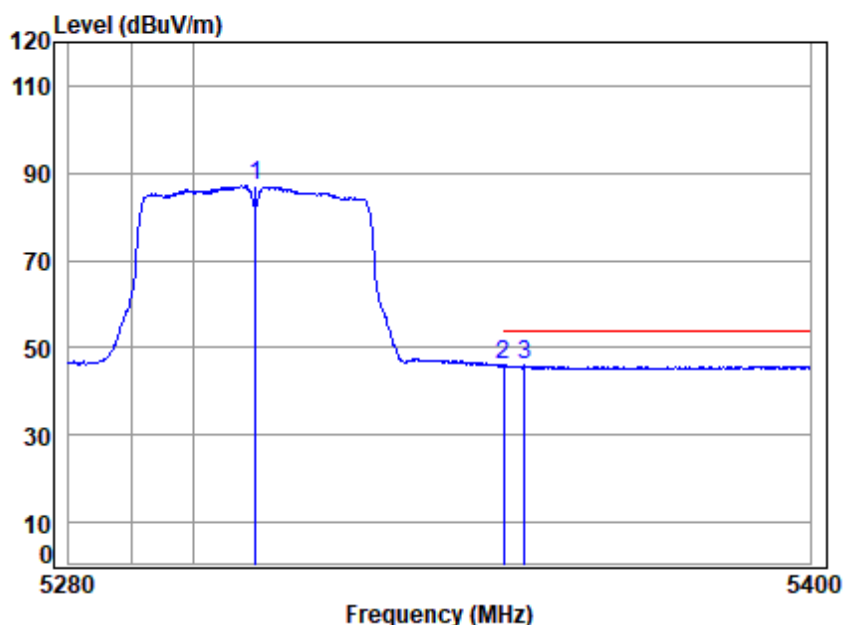
		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5310.000	10.31	32.72	30.78	85.32	97.57	68.20	29.37	Peak
2	5350.020	10.45	32.80	30.76	45.67	58.16	74.00	-15.84	Peak
3	5353.721	10.46	32.80	30.76	47.45	59.95	74.00	-14.05	Peak



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Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High



Condition: 3m VERTICAL

Job No : 03209AT

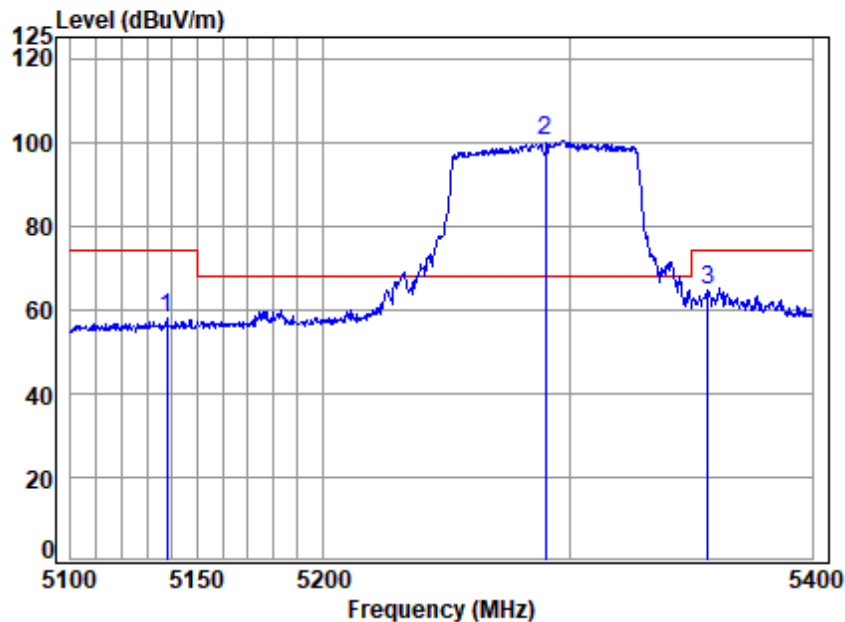
Mode : 5310 Band edge

: 5G Wi-Fi 11N40

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5310.000	10.31	32.72	30.78	74.93	87.18	-----	-----	Average
2 pp	5350.020	10.45	32.80	30.76	33.51	46.00	54.00	-8.00	Average
3	5353.480	10.46	32.80	30.76	33.44	45.94	54.00	-8.06	Average



Test Mode: 04; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:80MHz; Channel:middle



Condition: 3m HORIZONTAL

Job No : 03209AT

Mode : 5290 Band edge

: 5G Wi-Fi 11AC80

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	5138.037	10.09	32.38	30.84	46.25	57.88	74.00	-16.12 peak
2 pp	5290.000	10.28	32.68	30.78	88.28	100.46	68.20	32.26 peak
3	5356.960	10.47	32.80	30.76	52.23	64.74	74.00	-9.26 peak



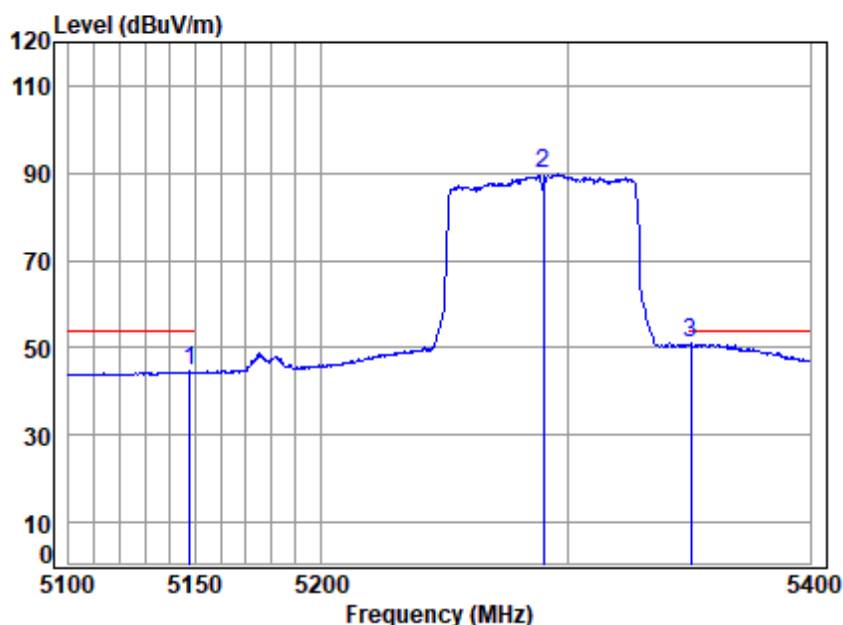
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Test Mode: 04; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:80MHz; Channel:middle



Condition: 3m HORIZONTAL

Job No : 03209AT

Mode : 5290 Band edge

: 5G Wi-Fi 11AC80

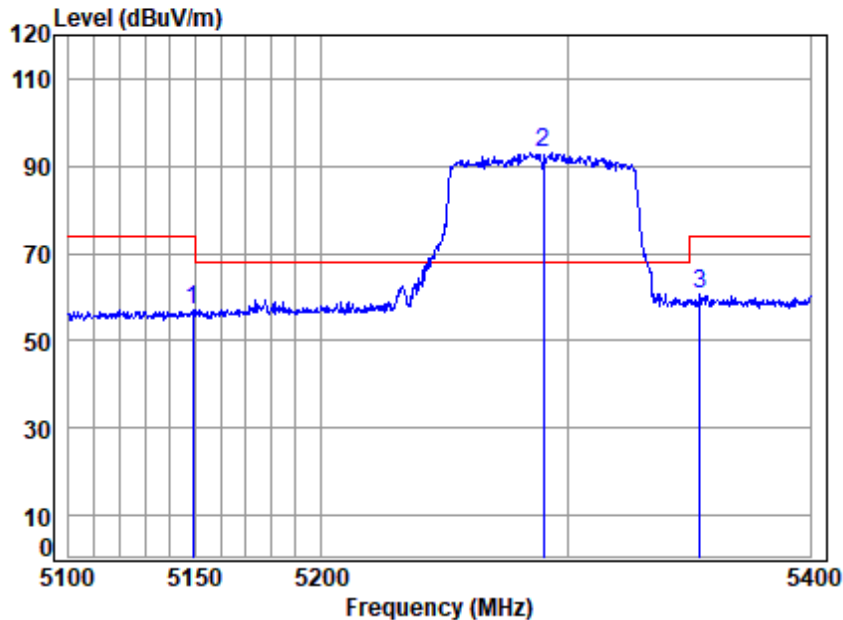
		Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5148.032	10.13	32.40	30.84	32.87	44.56	54.00	-9.44 Average
2	5290.000	10.28	32.68	30.78	77.50	89.68	-----	----- Average
3	pp 5350.535	10.45	32.80	30.76	38.46	50.95	54.00	-3.05 Average



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Test Mode: 04; Polarity: Vertical; Modulation:802.11ac; Bandwidth:80MHz; Channel:middle



Condition: 3m VERTICAL

Job No : 03209AT

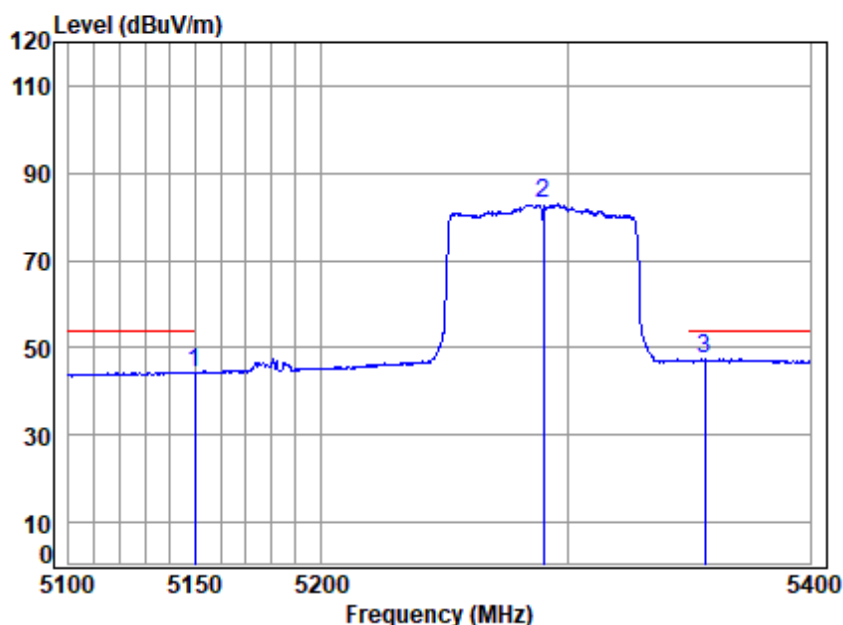
Mode : 5290 Band edge

: 5G Wi-Fi 11AC80

	Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 5149.209	10.14	32.40	30.84	45.26	56.96	74.00	-17.04 Peak
2 pp 5290.000	10.28	32.68	30.78	80.82	93.00	68.20	24.80 Peak
3 5354.512	10.47	32.80	30.76	47.96	60.47	74.00	-13.53 Peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11ac; Bandwidth:80MHz; Channel:middle



Condition: 3m VERTICAL

Job No : 03209AT

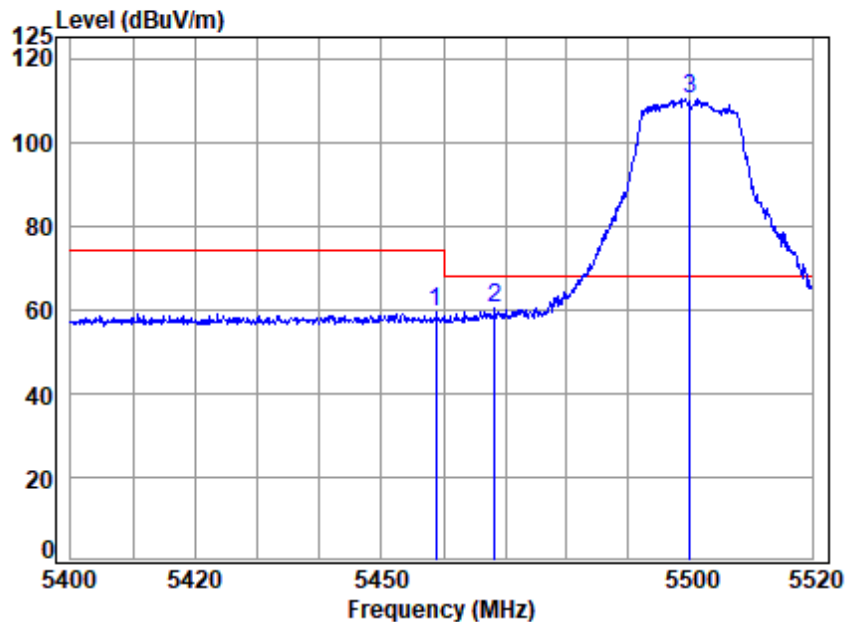
Mode : 5290 Band edge

: 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	5149.798	10.14	32.40	30.84	32.73	44.43	54.00	-9.57	Average
2	5290.000	10.28	32.68	30.78	70.65	82.83	-----	-----	Average
3 pp	5356.348	10.47	32.80	30.76	34.84	47.35	54.00	-6.65	Average



Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Condition: 3m HORIZONTAL

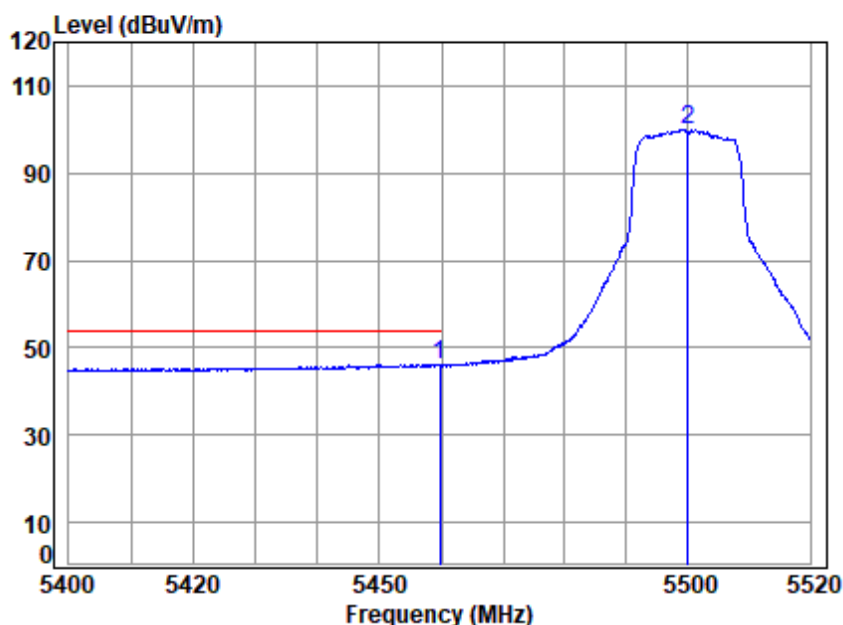
Job No : 03209AT

Mode : 5500 Band edge
: 5G Wi-Fi 11A

		Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5458.831	10.60	32.90	30.72	46.52	59.30	74.00	-14.70	peak
2	5468.317	10.59	32.90	30.71	47.35	60.13	68.20	-8.07	peak
3	pp 5500.000	10.58	32.90	30.70	97.41	110.19	68.20	41.99	peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Condition: 3m HORIZONTAL

Job No : 03209AT

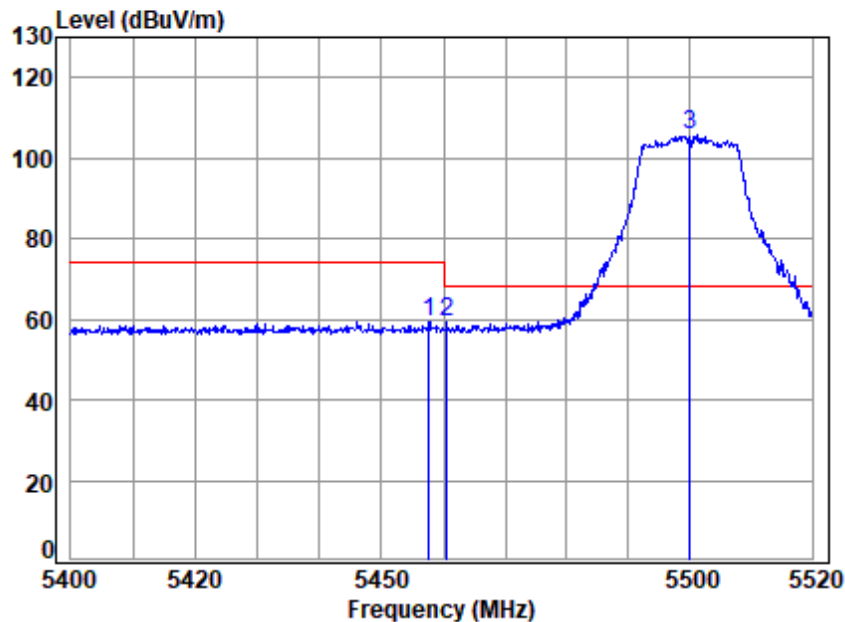
Mode : 5500 Band edge

: 5G Wi-Fi 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5459.791	10.60	32.90	30.72	33.37	46.15	54.00	-7.85	Average
2	5500.000	10.58	32.90	30.70	87.29	100.07	-----	-----	Average



Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Condition: 3m VERTICAL

Job No : 03209AT

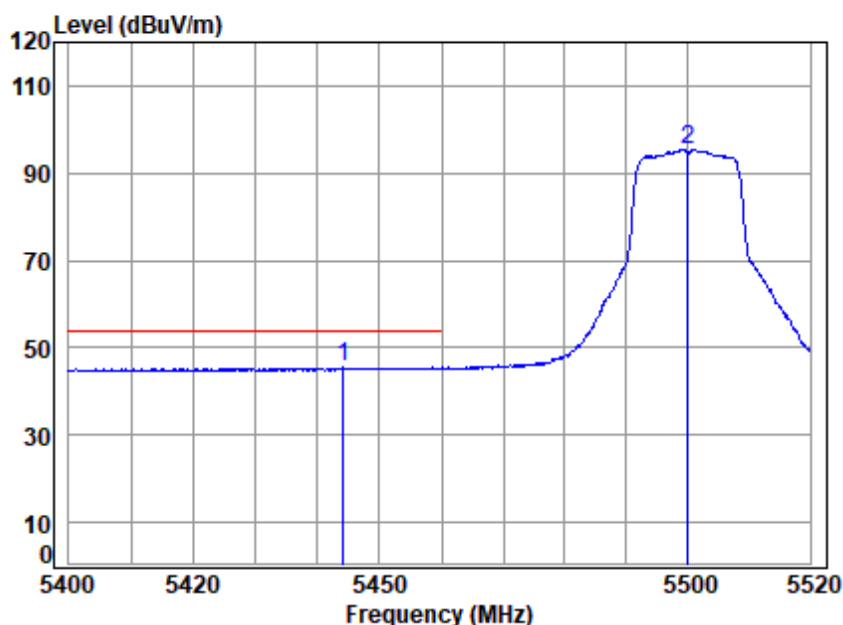
Mode : 5500 Band edge

: 5G Wi-Fi 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5457.631	10.60	32.90	30.72	46.42	59.20	74.00	-14.80	Peak
2	5460.510	10.60	32.90	30.72	46.38	59.16	68.20	-9.04	peak
3 pp	5500.000	10.58	32.90	30.70	92.91	105.69	68.20	37.49	Peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Condition: 3m VERTICAL

Job No : 03209AT

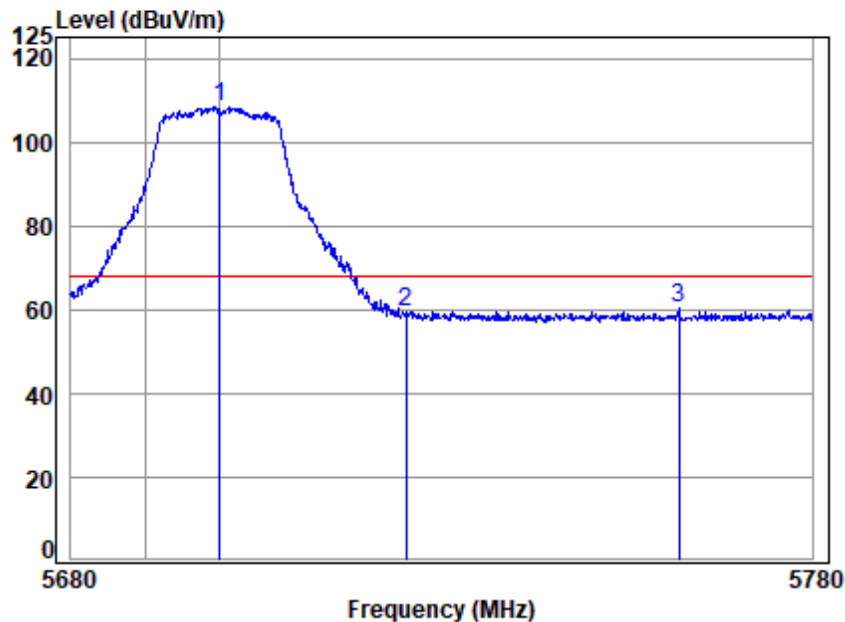
Mode : 5500 Band edge

: 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	5444.093	10.60	32.89	30.72	32.69	45.46	54.00	-8.54	Average
2	5500.000	10.58	32.90	30.70	82.64	95.42	-----	-----	Average



Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High



Condition: 3m HORIZONTAL

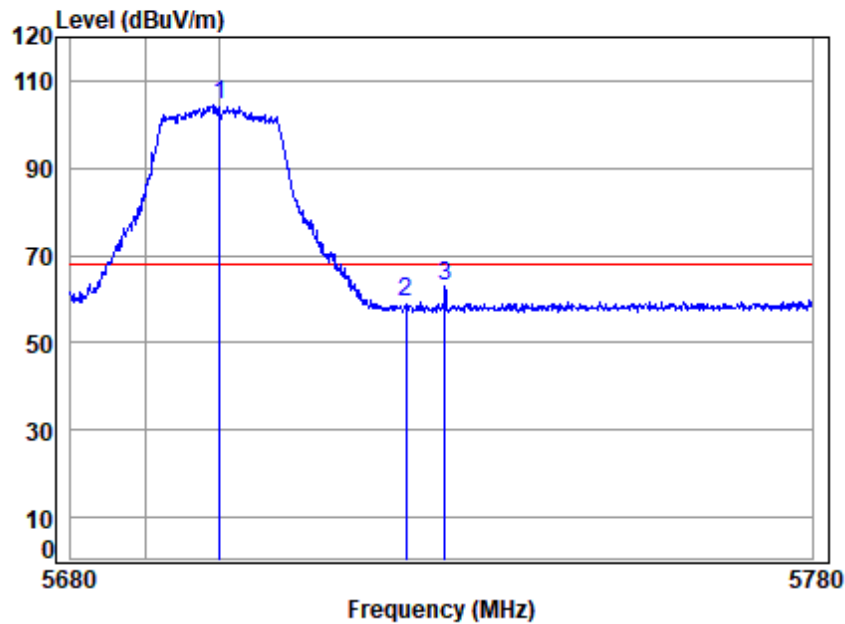
Job No : 03209AT

Mode : 5700 Band edge
: 5G Wi-Fi 11A

		Cable	Ant	Preamp	Read		Limit	Over	
Freq		Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5700.000	10.56	33.20	30.62	95.31	108.45	68.20	40.25	peak
2	5725.000	10.68	33.25	30.61	46.33	59.65	68.20	-8.55	peak
3	5761.871	10.84	33.32	30.60	46.67	60.23	68.20	-7.97	peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High



Condition: 3m VERTICAL

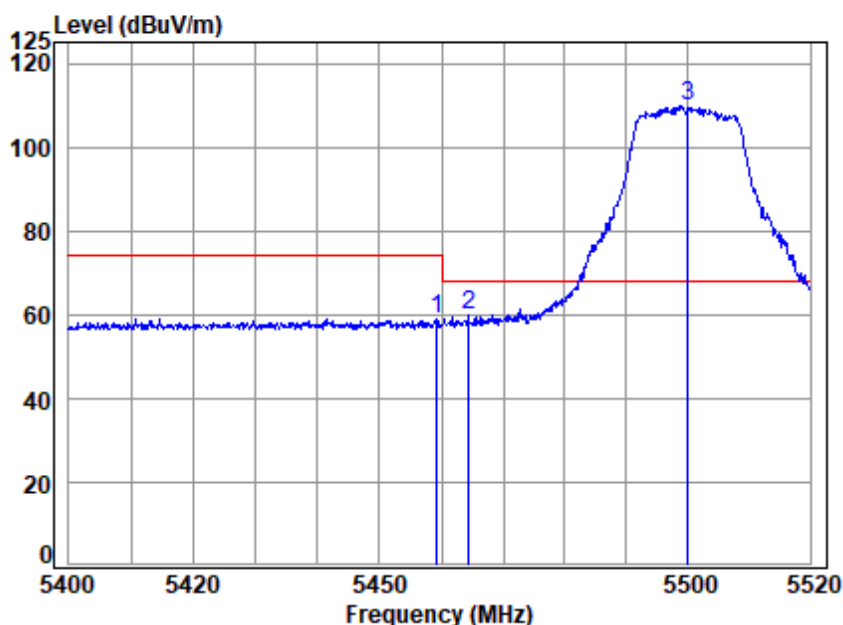
Job No : 03209AT

Mode : 5700 Band edge
: 5G Wi-Fi 11A

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5700.000	10.56	33.20	30.62	91.27	104.41	68.20	36.21	Peak
2	5725.000	10.68	33.25	30.61	46.03	59.35	68.20	-8.85	Peak
3	5730.282	10.70	33.26	30.61	49.74	63.09	68.20	-5.11	Peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



Condition: 3m HORIZONTAL

Job No : 03209AT

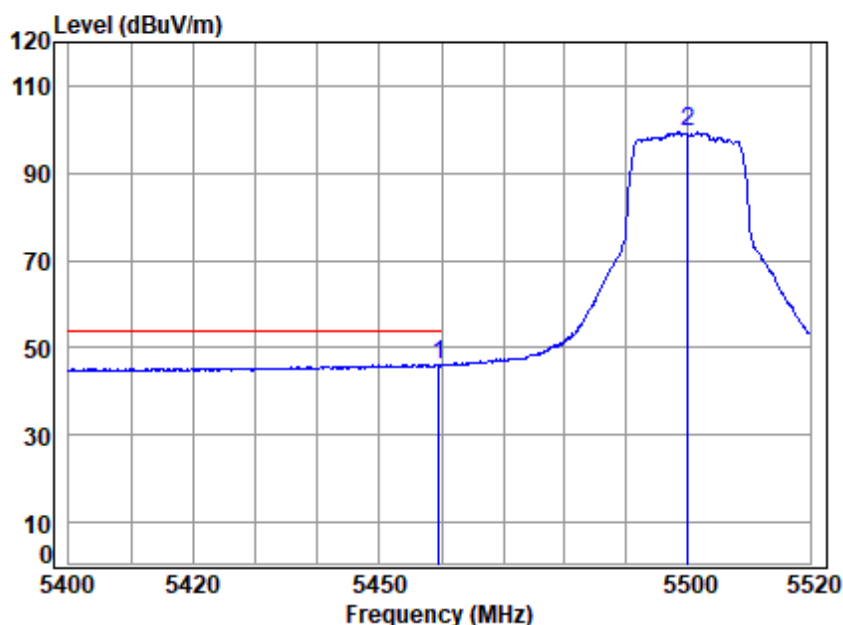
Mode : 5500 Band edge

: 5G Wi-Fi 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5459.311	10.60	32.90	30.72	46.22	59.00	74.00	-15.00	peak
2	5464.352	10.59	32.90	30.71	47.04	59.82	68.20	-8.38	peak
3 pp	5500.000	10.58	32.90	30.70	96.91	109.69	68.20	41.49	peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



Condition: 3m HORIZONTAL

Job No : 03209AT

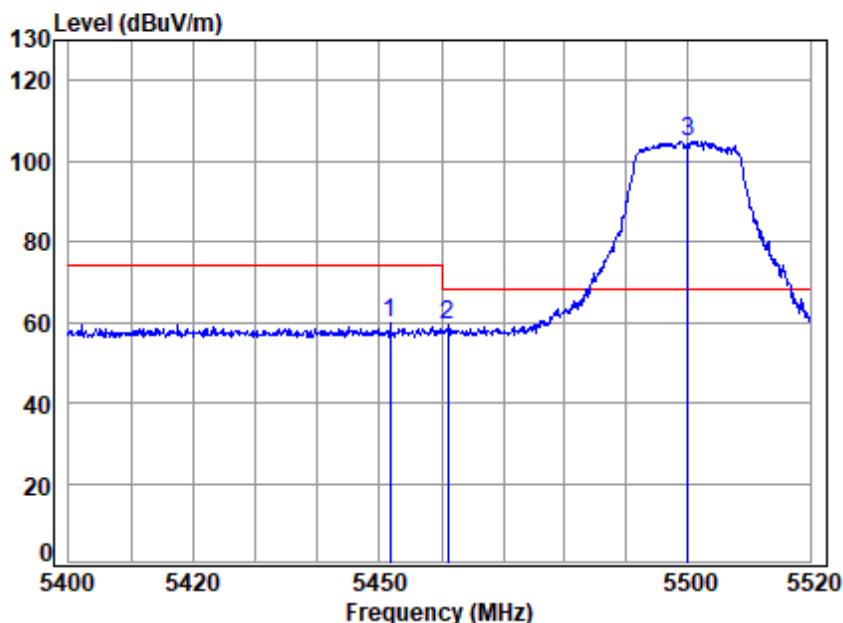
Mode : 5500 Band edge

: 5G Wi-Fi 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5459.550	10.60	32.90	30.72	33.47	46.25	54.00	-7.75	Average
2	5500.000	10.58	32.90	30.70	86.67	99.45	-----	-----	Average



Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



Condition: 3m VERTICAL

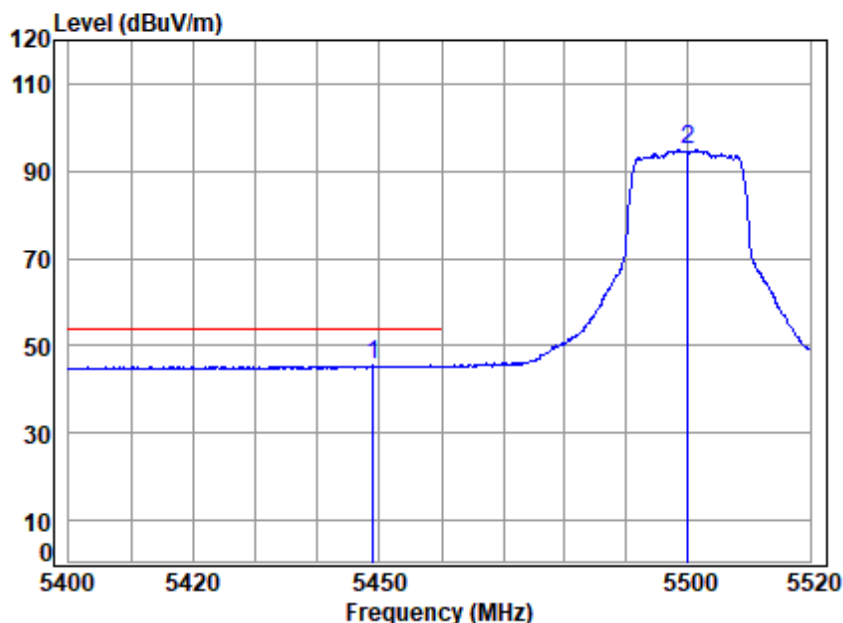
Job No : 03209AT

Mode : 5500 Band edge
: 5G Wi-Fi 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5451.756	10.60	32.90	30.72	46.93	59.71	74.00	-14.29	Peak
2	5460.990	10.60	32.90	30.72	46.74	59.52	68.20	-8.68	peak
3	pp 5500.000	10.58	32.90	30.70	92.18	104.96	68.20	36.76	Peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



Condition: 3m VERTICAL

Job No : 03209AT

Mode : 5500 Band edge

: 5G Wi-Fi 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp 5449.001	10.60	32.90	30.72	32.68	45.46	54.00	-8.54	Average	
2 5500.000	10.58	32.90	30.70	82.09	94.87	-----	-----	Average	



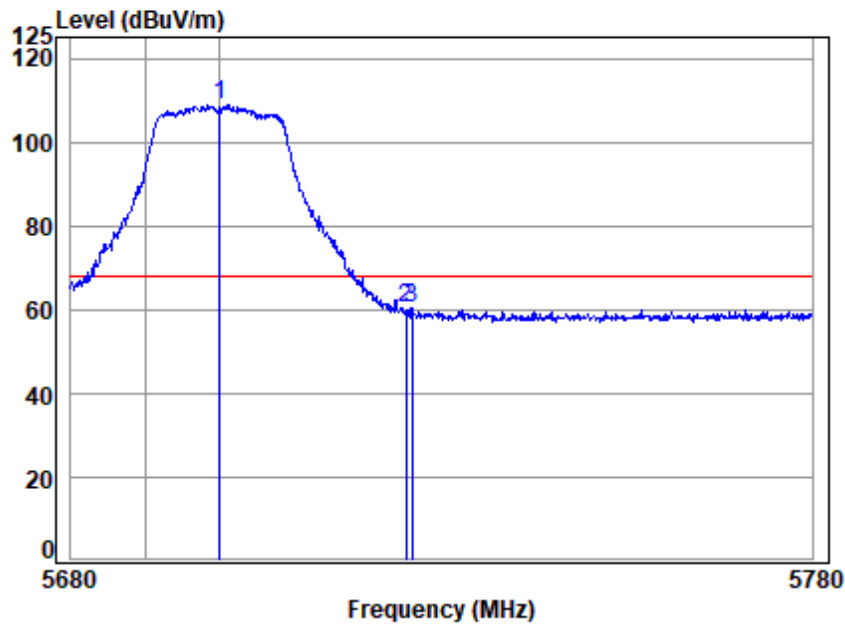
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Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High



Condition: 3m HORIZONTAL

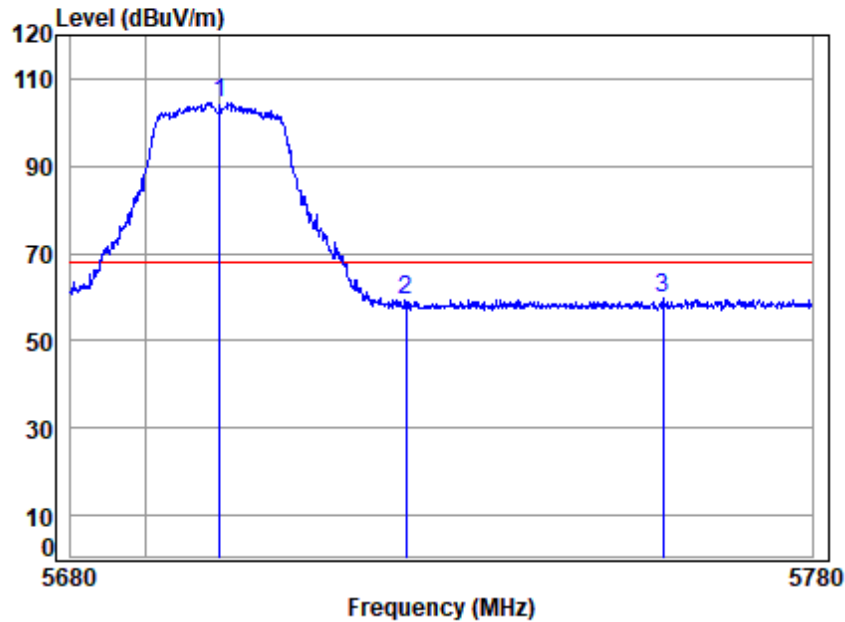
Job No : 03209AT

Mode : 5700 Band edge
: 5G Wi-Fi 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5700.000	10.56	33.20	30.62	95.66	108.80	68.20	40.60	peak
2	5725.000	10.68	33.25	30.61	47.18	60.50	68.20	-7.70	peak
3	5725.883	10.68	33.25	30.61	47.18	60.50	68.20	-7.70	peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High



Condition: 3m VERTICAL

Job No : 03209AT

Mode : 5700 Band edge
: 5G Wi-Fi 11N20

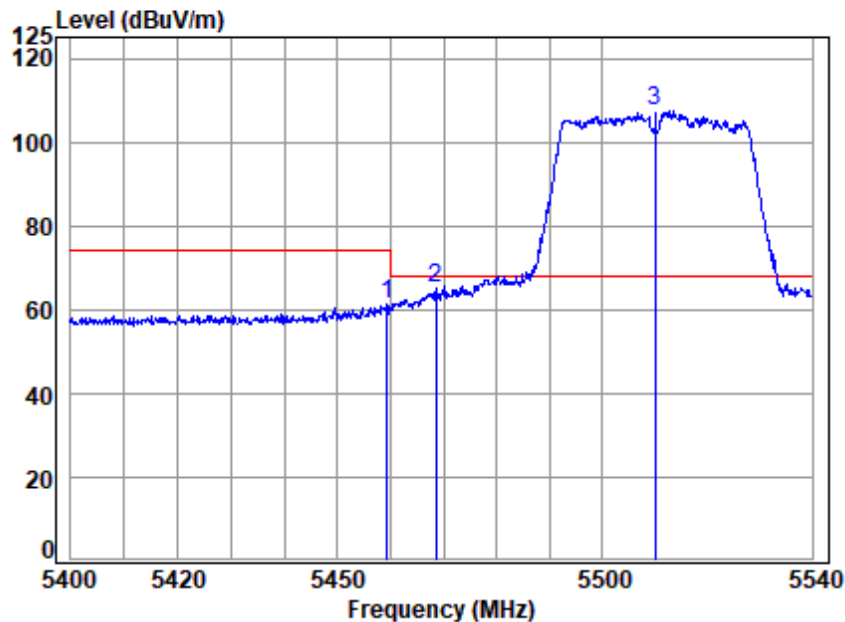
		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5700.000	10.56	33.20	30.62	91.57	104.71	68.20	36.51	Peak
2	5725.000	10.68	33.25	30.61	45.88	59.20	68.20	-9.00	Peak
3	5759.760	10.83	33.32	30.60	46.03	59.58	68.20	-8.62	Peak



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Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



Condition: 3m HORIZONTAL

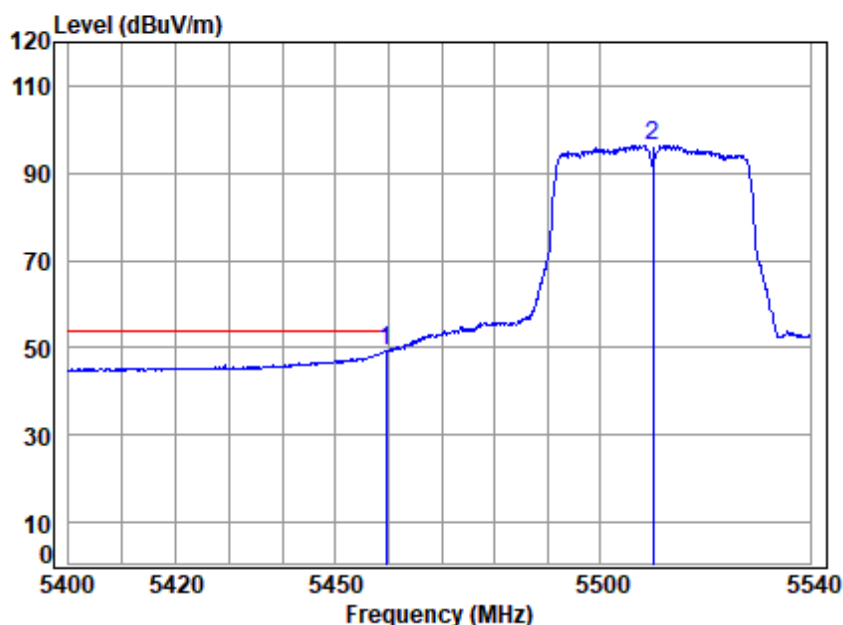
Job No : 03209AT

Mode : 5510 Band edge
: 5G Wi-Fi 11N40

		Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5459.342	10.60	32.90	30.72	48.74	61.52	74.00	-12.48 peak
2	5468.432	10.59	32.90	30.71	52.19	64.97	68.20	-3.23 peak
3	pp 5510.000	10.56	32.90	30.70	94.52	107.28	68.20	39.08 peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



Condition: 3m HORIZONTAL

Job No : 03209AT

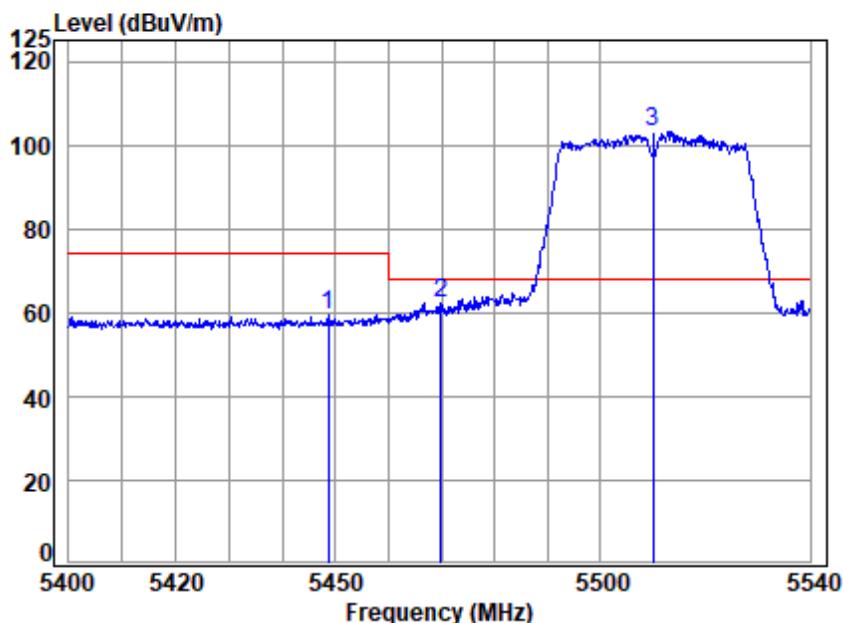
Mode : 5510 Band edge

: 5G Wi-Fi 11N40

		Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp 5459.481	10.60	32.90	30.72	36.62	49.40	54.00	-4.60	Average
2 5510.000	10.56	32.90	30.70	83.64	96.40	-----	-----	Average



Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



Condition: 3m VERTICAL

Job No : 03209AT

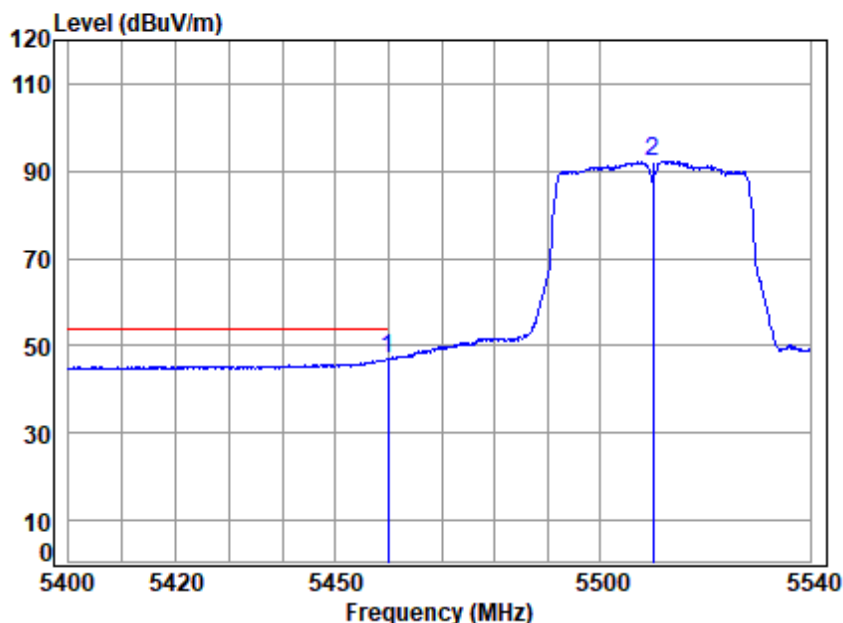
Mode : 5510 Band edge

: 5G Wi-Fi 11N40

		Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5448.593	10.60	32.90	30.72	46.71	59.49	74.00	-14.51	Peak
2	5469.832	10.59	32.90	30.71	49.64	62.42	68.20	-5.78	peak
3	pp 5510.000	10.56	32.90	30.70	90.51	103.27	68.20	35.07	Peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



Condition: 3m VERTICAL

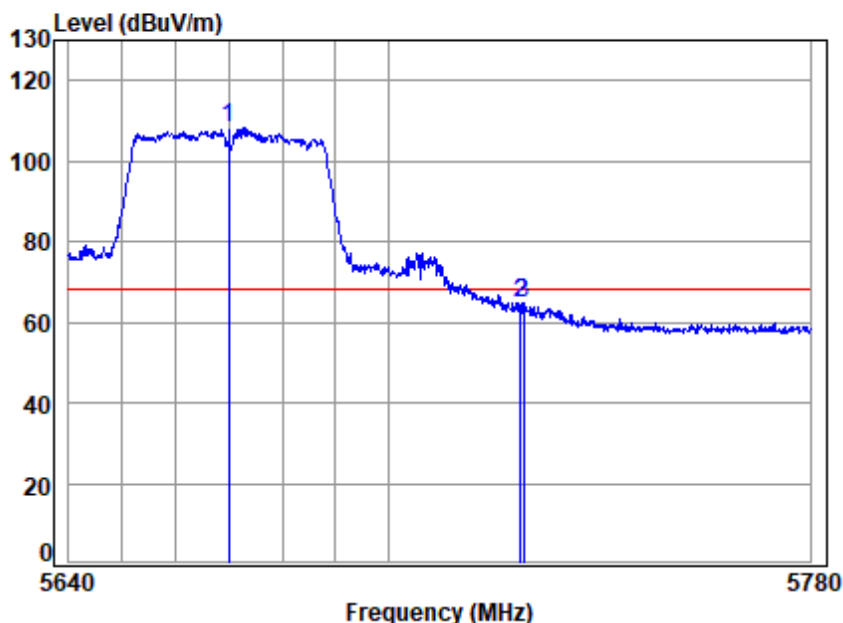
Job No : 03209AT

Mode : 5510 Band edge
: 5G Wi-Fi 11N40

		Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp 5459.901	10.60	32.90	30.72	34.23	47.01	54.00	-6.99	Average
2 5510.000	10.56	32.90	30.70	79.44	92.20	-----	-----	Average



Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High



Condition: 3m HORIZONTAL

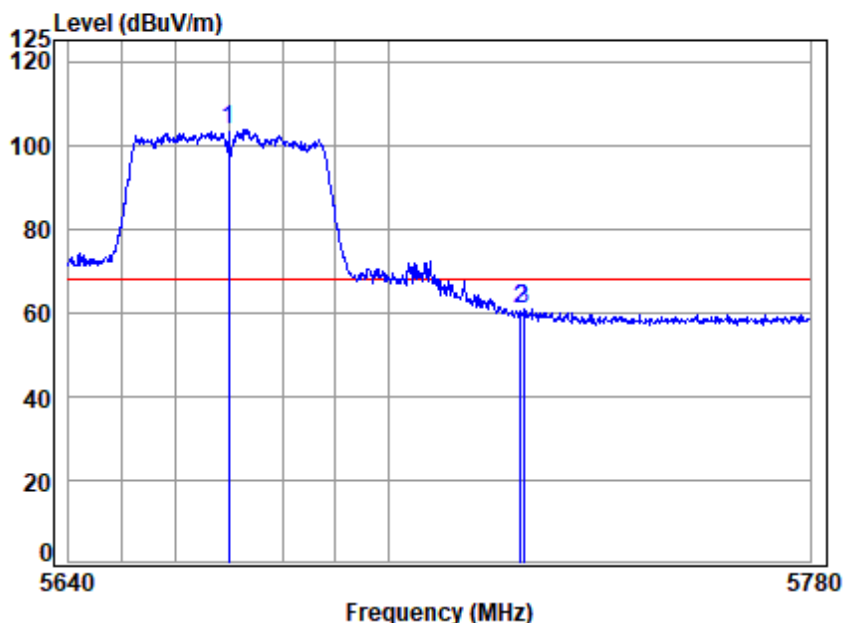
Job No : 03209AT

Mode : 5670 Band edge
: 5G Wi-Fi 11N40

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5670.000	10.52	33.14	30.63	95.16	108.19	68.20	39.99	peak
2	5725.000	10.68	33.25	30.61	51.66	64.98	68.20	-3.22	peak
3	5725.553	10.68	33.25	30.61	51.66	64.98	68.20	-3.22	peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High



Condition: 3m VERTICAL

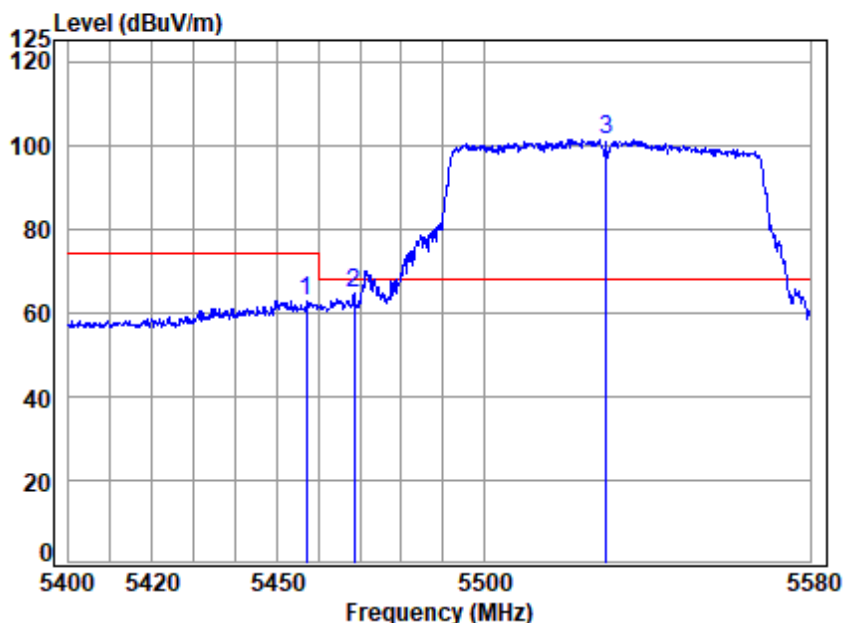
Job No : 03209AT

Mode : 5670 Band edge
: 5G Wi-Fi 11N40

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5670.000	10.52	33.14	30.63	90.61	103.64	68.20	35.44	Peak
2	5725.000	10.68	33.25	30.61	47.63	60.95	68.20	-7.25	Peak
3	5725.553	10.68	33.25	30.61	47.63	60.95	68.20	-7.25	Peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:80MHz; Channel:Low



Condition: 3m HORIZONTAL

Job No : 03209AT

Mode : 5530 Band edge

: 5G Wi-Fi 11AC80

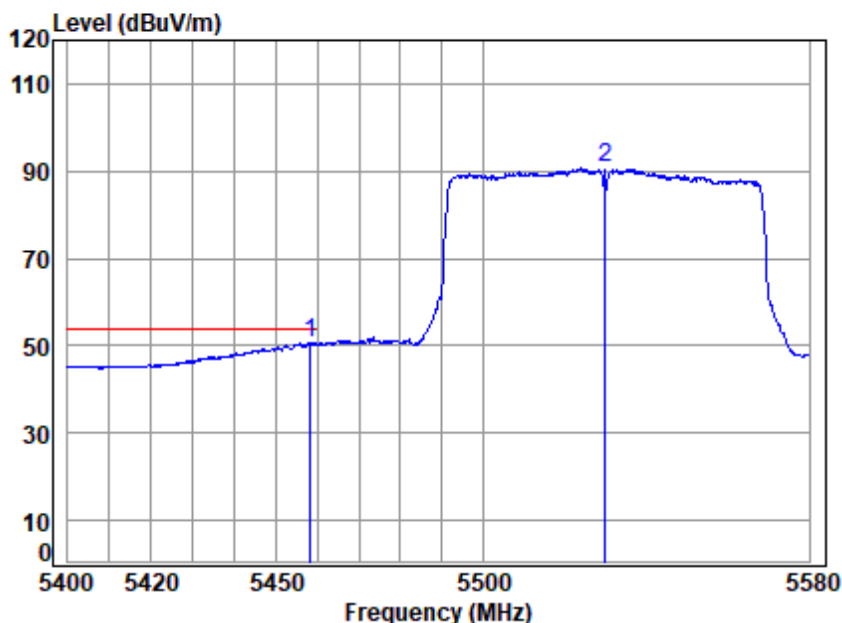
		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	5456.959	10.60	32.90	30.72	50.01	62.79	74.00	-11.21 peak
2	5468.602	10.59	32.90	30.71	51.72	64.50	68.20	-3.70 peak
3 pp	5530.000	10.53	32.90	30.69	88.47	101.21	68.20	33.01 peak



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Test Mode: 04; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:80MHz; Channel:Low



Condition: 3m HORIZONTAL

Job No : 03209AT

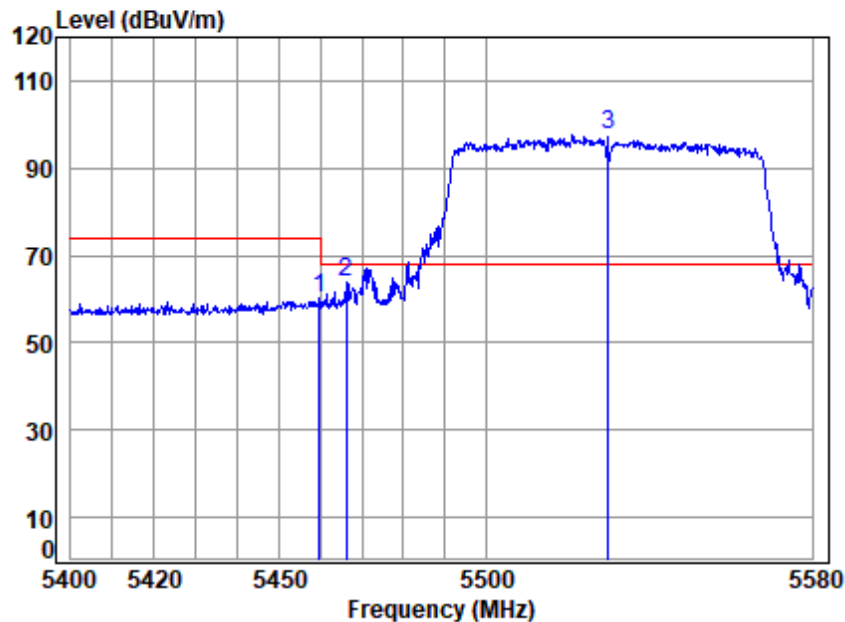
Mode : 5530 Band edge

: 5G Wi-Fi 11AC80

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5458.391	10.60	32.90	30.72	37.86	50.64	54.00	-3.36	Average
2	5530.000	10.53	32.90	30.69	77.84	90.58	-----	-----	Average



Test Mode: 04; Polarity: Vertical; Modulation:802.11ac; Bandwidth:80MHz; Channel:Low



Condition: 3m VERTICAL

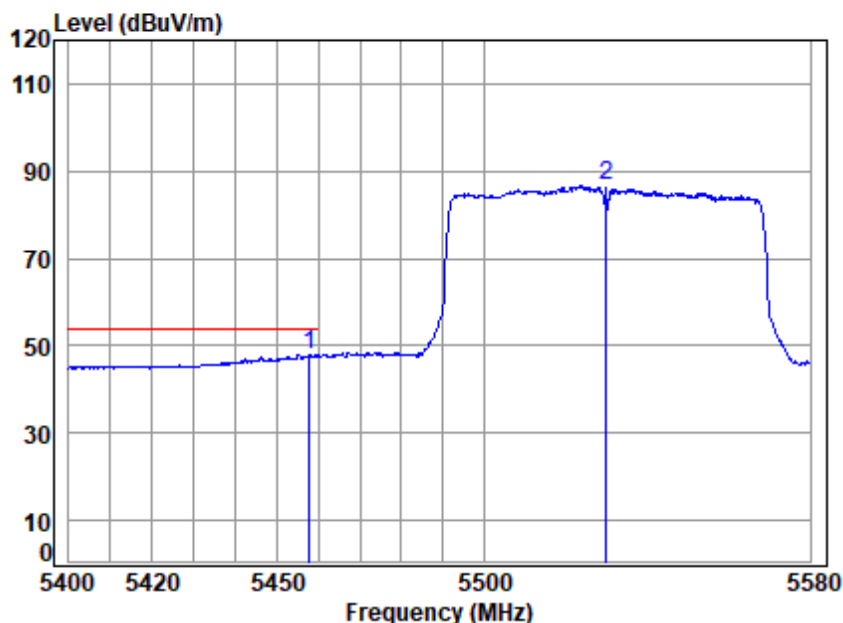
Job No : 03209AT

Mode : 5530 Band edge
: 5G Wi-Fi 11AC80

	Cable	Ant	Preamp	Read	Limit	Over		
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5459.823	10.60	32.90	30.72	47.54	60.32	74.00	-13.68 Peak
2	5466.271	10.59	32.90	30.71	50.97	63.75	68.20	-4.45 peak
3	pp 5530.000	10.53	32.90	30.69	84.68	97.42	68.20	29.22 Peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11ac; Bandwidth:80MHz; Channel:Low



Condition: 3m VERTICAL

Job No : 03209AT

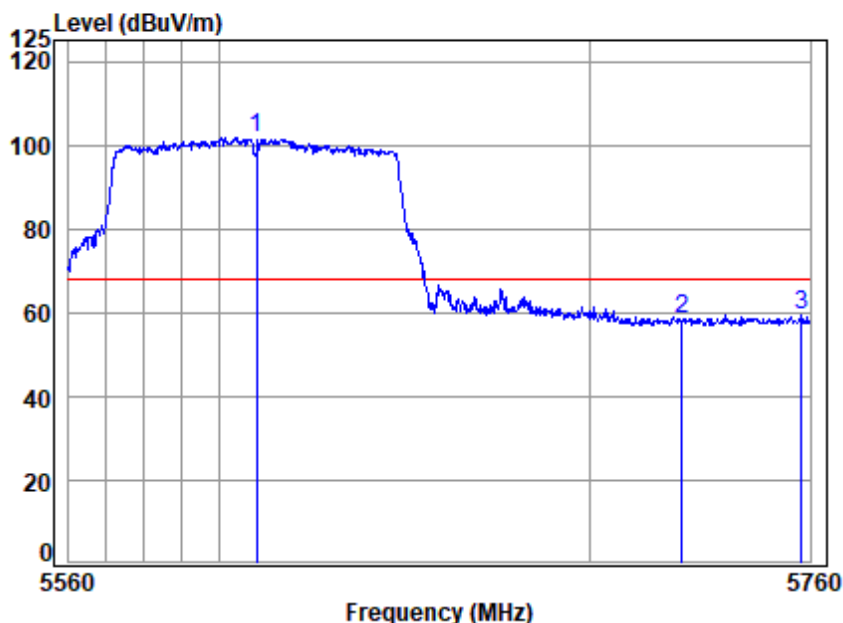
Mode : 5530 Band edge

: 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 pp	5457.675	10.60	32.90	30.72	35.08	47.86	54.00	-6.14	Average
2	5530.000	10.53	32.90	30.69	73.83	86.57	-----	-----	Average



Test Mode: 04; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:80MHz; Channel:High



Condition: 3m HORIZONTAL

Job No : 03209AT

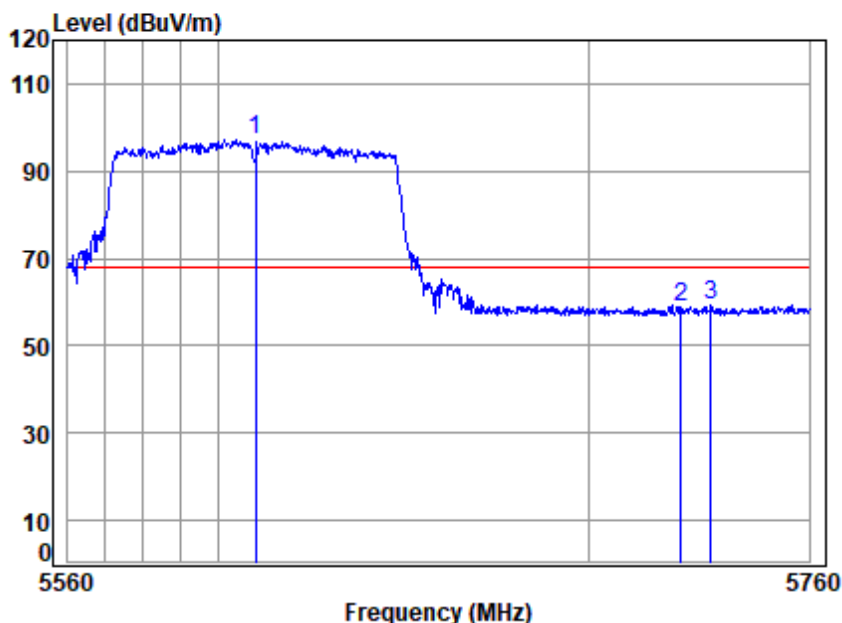
Mode : 5610 Band edge

: 5G Wi-Fi 11AC80

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5610.000	10.43	33.02	30.66	88.84	101.63	68.20	33.43	peak
2	5725.000	10.68	33.25	30.61	45.30	58.62	68.20	-9.58	peak
3	5757.761	10.83	33.32	30.60	46.07	59.62	68.20	-8.58	peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11ac; Bandwidth:80MHz; Channel:High



Condition: 3m VERTICAL

Job No : 03209AT

Mode : 5610 Band edge

: 5G Wi-Fi 11AC80

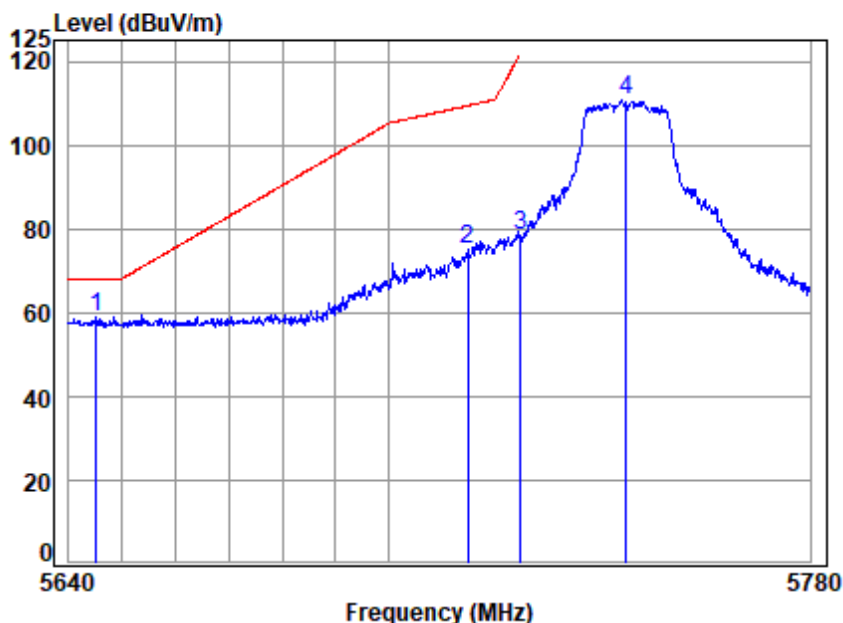
		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5610.000	10.43	33.02	30.66	84.56	97.35	68.20	29.15	Peak
2	5725.000	10.68	33.25	30.61	45.71	59.03	68.20	-9.17	peak
3	5732.991	10.71	33.27	30.61	46.01	59.38	68.20	-8.82	Peak



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Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Condition: 3m HORIZONTAL

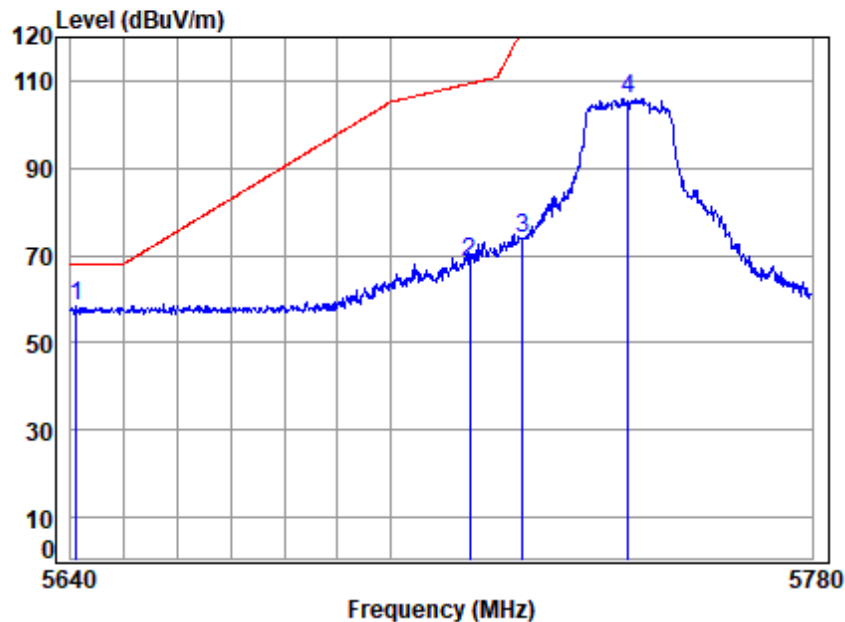
Job No : 03209AT

Mode : 5745 Band edge
: 5.8G Wi-Fi 11A

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 pp	5645.119	10.48	33.09	30.64	46.05	58.98	68.20	-9.22 peak
2	5715.000	10.63	33.23	30.61	61.81	75.06	109.40	-34.34 peak
3	5725.000	10.68	33.25	30.61	64.96	78.28	122.20	-43.92 peak
4	5745.000	10.77	33.29	30.60	97.26	110.72	-----	----- peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Condition: 3m VERTICAL

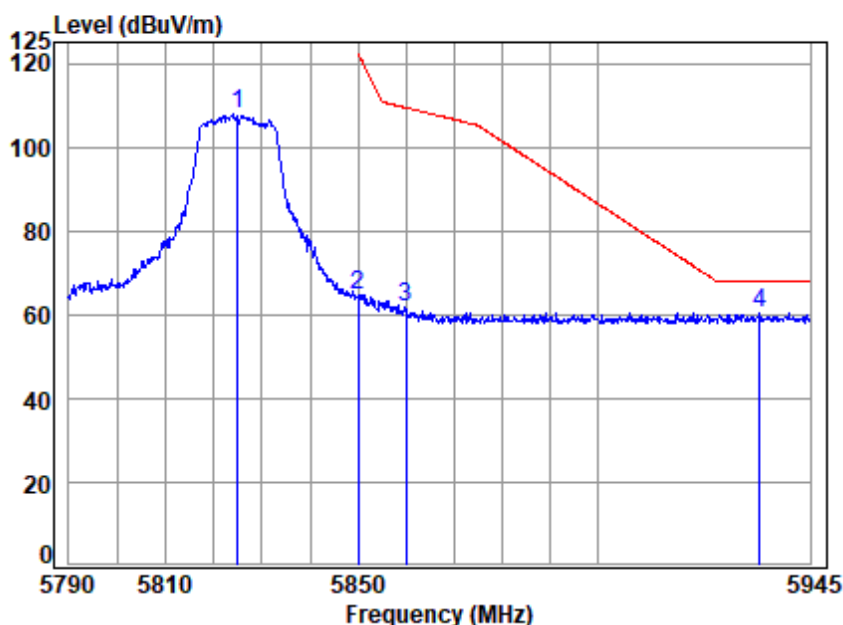
Job No : 03209AT

Mode : 5745 Band edge
: 5.8G Wi-Fi 11A

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 pp	5640.968	10.47	33.08	30.64	45.49	58.40	68.20	-9.80 peak
2	5715.000	10.63	33.23	30.61	55.13	68.38	109.40	-41.02 peak
3	5725.000	10.68	33.25	30.61	60.74	74.06	122.20	-48.14 peak
4	5745.000	10.77	33.29	30.60	92.53	105.99	-----	----- peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High



Condition: 3m HORIZONTAL

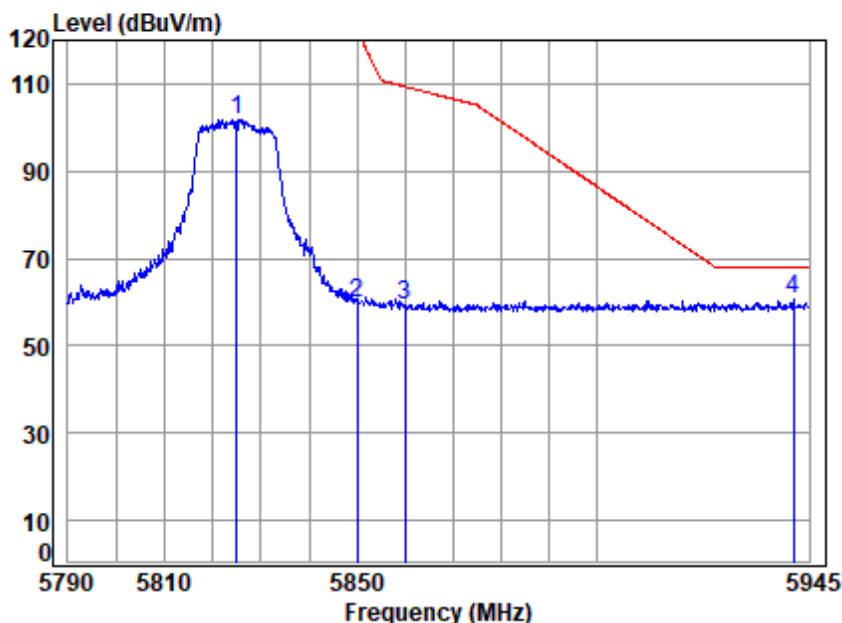
Job No : 03209AT

Mode : 5825 Band edge
: 5.8G Wi-Fi 11A

		Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 5825.000	10.99	33.50	30.57	93.91	107.83	-----	-----	peak
2 5850.000	10.95	33.60	30.56	50.78	64.77	122.20	-57.43	peak
3 5860.000	10.94	33.58	30.56	47.98	61.94	109.40	-47.46	peak
4 pp 5934.330	10.86	33.57	30.53	46.49	60.39	68.20	-7.81	peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High



Condition: 3m VERTICAL

Job No : 03209AT

Mode : 5825 Band edge
: 5.8G Wi-Fi 11A

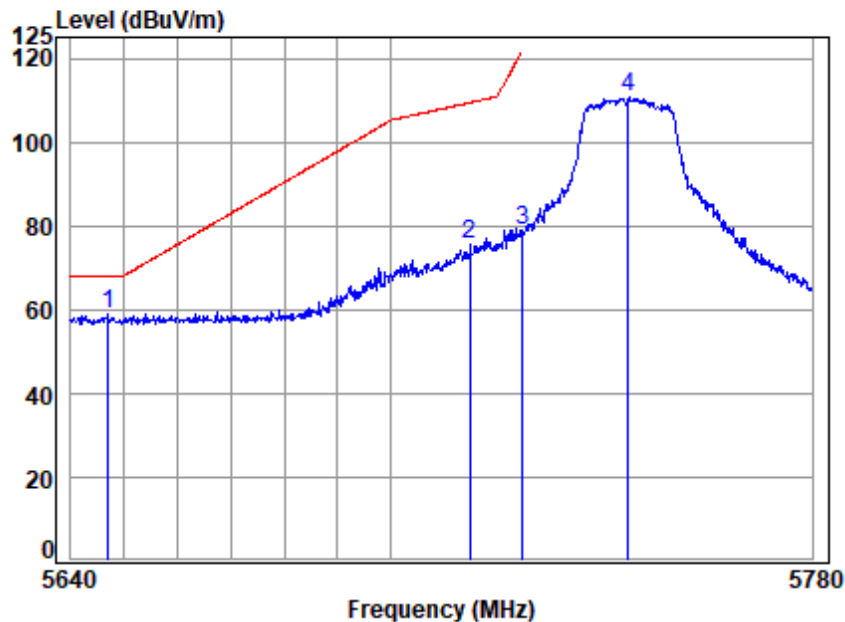
		Cable	Ant	Preamp	Read		Limit	Over	
Freq	Loss	Factor	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5825.000	10.99	33.50	30.57	88.05	101.97	-----	-----	peak
2	5850.000	10.95	33.60	30.56	45.93	59.92	122.20	-62.28	peak
3	5860.000	10.94	33.58	30.56	45.42	59.38	109.40	-50.02	peak
4 pp	5941.703	10.86	33.58	30.52	46.70	60.62	68.20	-7.58	peak



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Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



Condition: 3m HORIZONTAL

Job No : 03209AT

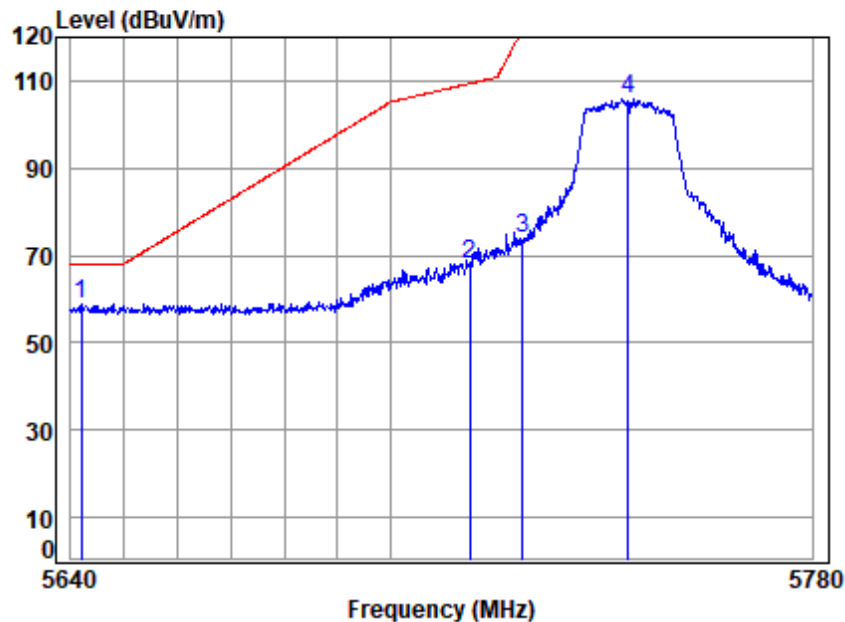
Mode : 5745 Band edge

: 5.8G Wi-Fi 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5646.919	10.48	33.09	30.64	45.87	58.80	68.20	-9.40	peak
2	5715.000	10.63	33.23	30.61	62.32	75.57	109.40	-33.83	peak
3	5725.000	10.68	33.25	30.61	65.53	78.85	122.20	-43.35	peak
4	5745.000	10.77	33.29	30.60	97.06	110.52	-----	-----	peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low



Condition: 3m VERTICAL

Job No : 03209AT

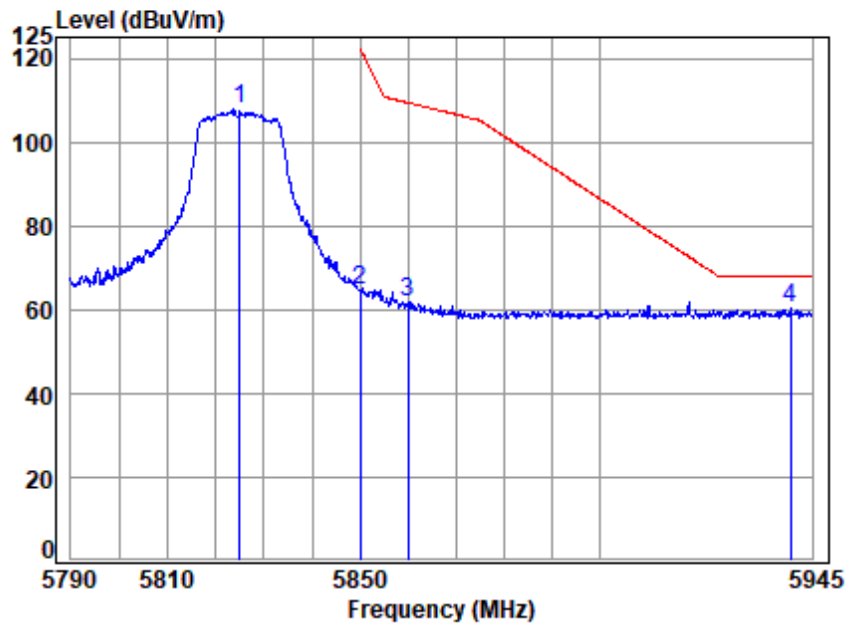
Mode : 5745 Band edge

: 5.8G Wi-Fi 11N20

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 pp	5641.937	10.47	33.08	30.64	46.00	58.91	68.20	-9.29 peak
2	5715.000	10.63	33.23	30.61	54.69	67.94	109.40	-41.46 peak
3	5725.000	10.68	33.25	30.61	60.77	74.09	122.20	-48.11 peak
4	5745.000	10.77	33.29	30.60	92.46	105.92	-----	----- peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High



Condition: 3m HORIZONTAL

Job No : 03209AT

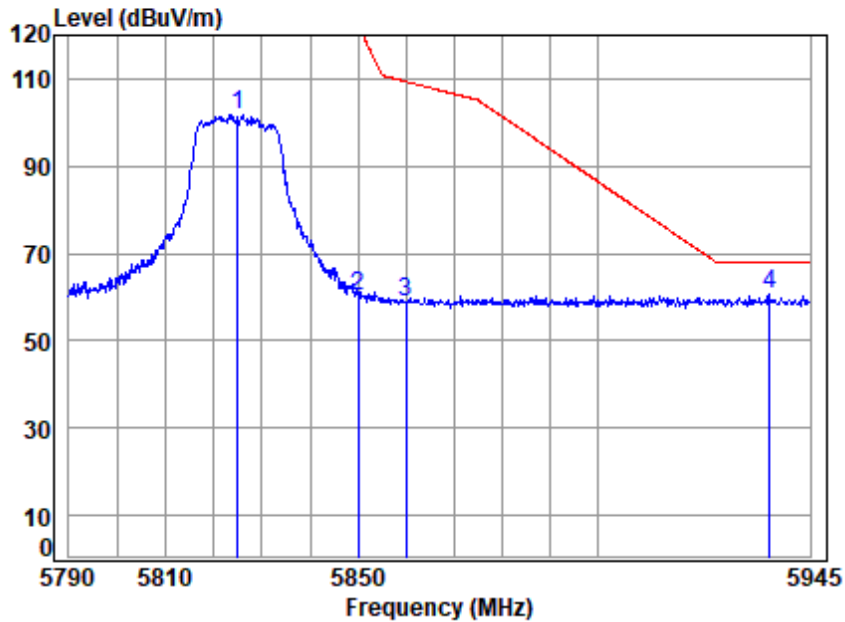
Mode : 5825 Band edge

: 5.8G Wi-Fi 11N20

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5825.000	10.99	33.50	30.57	93.87	107.79	-----	-----	peak
2	5850.000	10.95	33.60	30.56	50.42	64.41	122.20	-57.79	peak
3	5860.000	10.94	33.58	30.56	47.60	61.56	109.40	-47.84	peak
4 pp	5940.447	10.86	33.58	30.52	46.30	60.22	68.20	-7.98	peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High



Condition: 3m VERTICAL

Job No : 03209AT

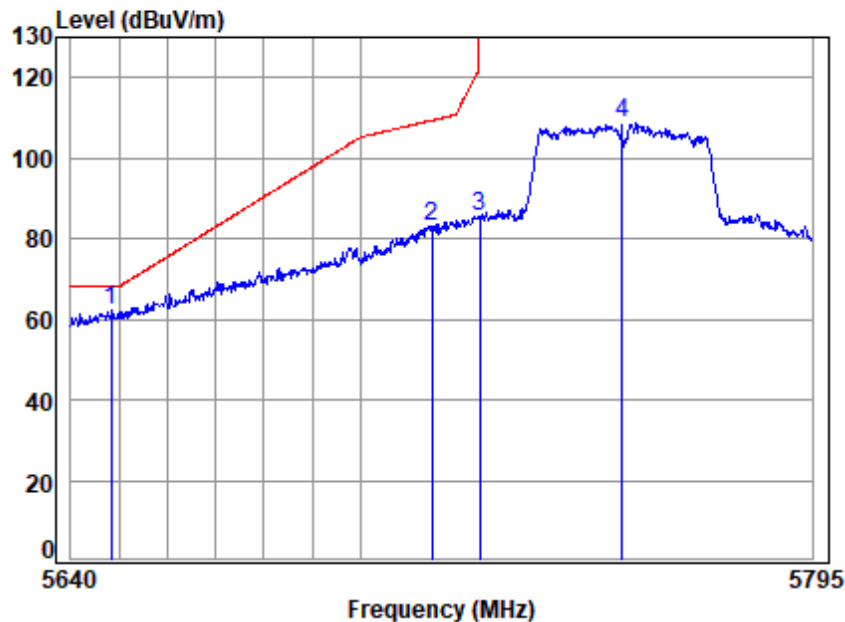
Mode : 5825 Band edge

: 5.8G Wi-Fi 11N20

	Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 5825.000	10.99	33.50	30.57	87.79	101.71	-----	----- peak
2 5850.000	10.95	33.60	30.56	46.36	60.35	122.20	-61.85 peak
3 5860.000	10.94	33.58	30.56	45.12	59.08	109.40	-50.32 peak
4 pp 5936.368	10.86	33.57	30.53	46.58	60.48	68.20	-7.72 peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



Condition: 3m HORIZONTAL

Job No : 03209AT

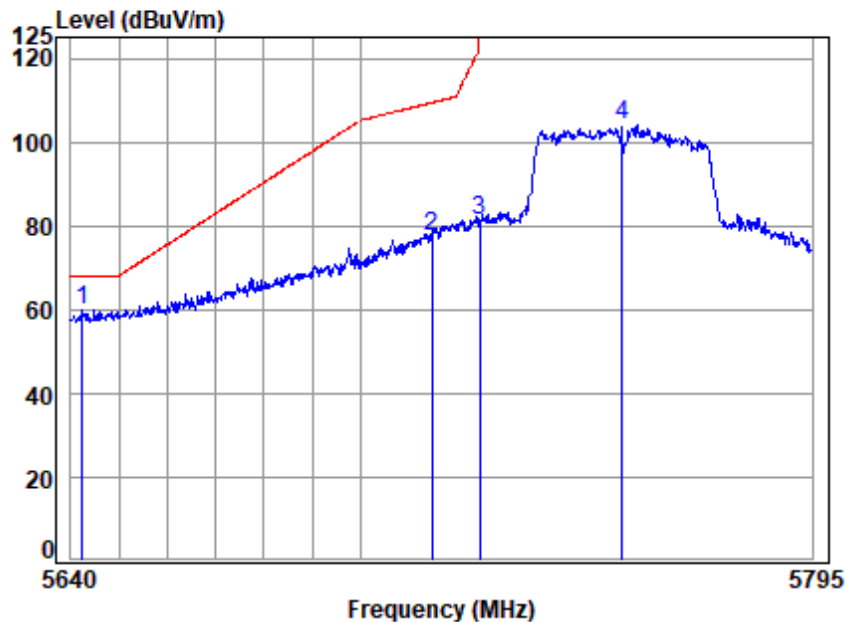
Mode : 5755 Band edge

: 5.8G Wi-Fi 11N40

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5648.416	10.48	33.10	30.64	49.30	62.24	68.20	-5.96	peak
2	5715.000	10.63	33.23	30.61	69.87	83.12	109.40	-26.28	peak
3	5725.000	10.68	33.25	30.61	72.32	85.64	122.20	-36.56	peak
4	5755.000	10.81	33.31	30.60	95.06	108.58	-----	-----	peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low



Condition: 3m VERTICAL

Job No : 03209AT

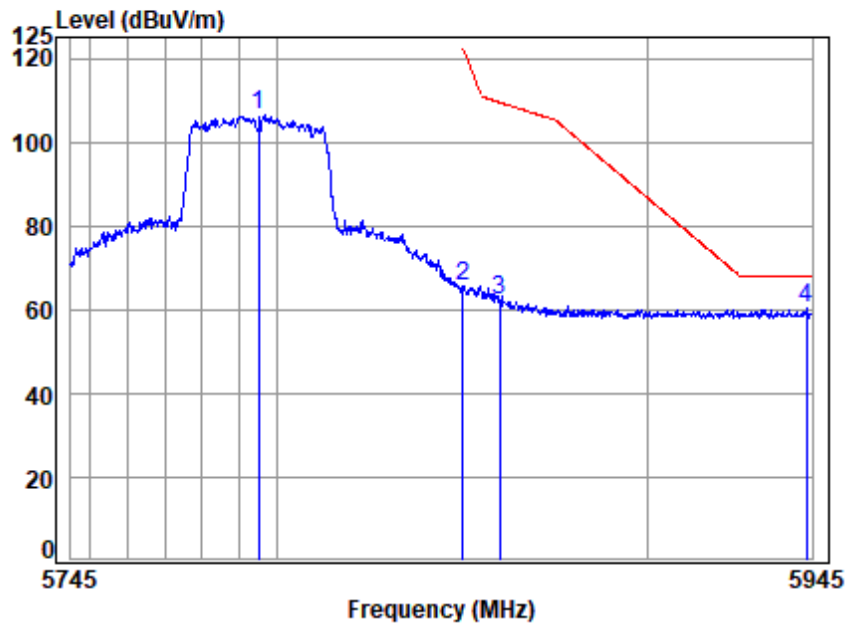
Mode : 5755 Band edge

: 5.8G Wi-Fi 11N40

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5642.447	10.47	33.08	30.64	47.06	59.97	68.20	-8.23	peak
2	5715.000	10.63	33.23	30.61	64.45	77.70	109.40	-31.70	peak
3	5725.000	10.68	33.25	30.61	67.93	81.25	122.20	-40.95	peak
4	5755.000	10.81	33.31	30.60	90.43	103.95	-----	-----	peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High



Condition: 3m HORIZONTAL

Job No : 03209AT

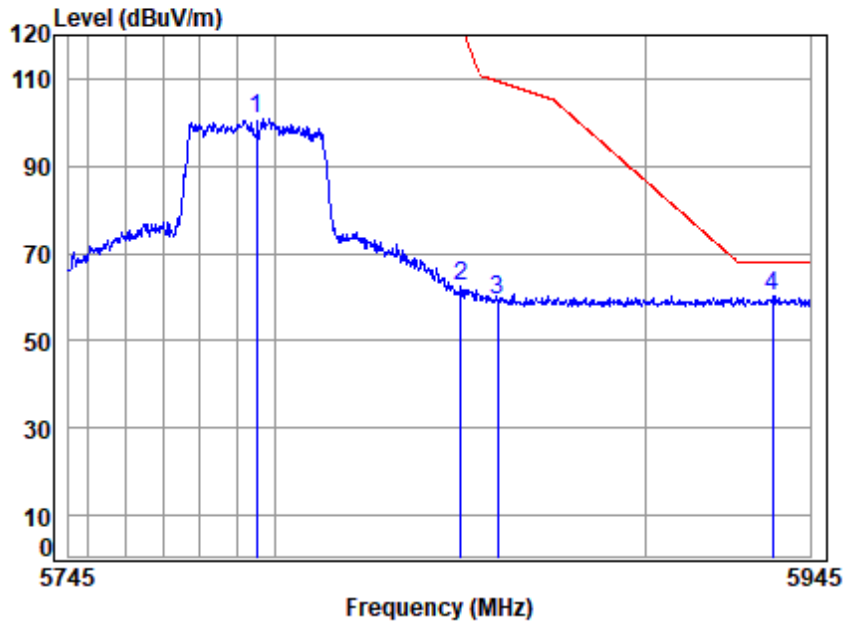
Mode : 5795 Band edge

: 5.8G Wi-Fi 11N40

		Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5795.000	11.00	33.39	30.58	92.62	106.43	-----	peak
2	5850.000	10.95	33.60	30.56	51.66	65.65	122.20	-56.55 peak
3	5860.000	10.94	33.58	30.56	48.12	62.08	109.40	-47.32 peak
4 pp	5943.576	10.86	33.59	30.52	46.31	60.24	68.20	-7.96 peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High



Condition: 3m VERTICAL

Job No : 03209AT

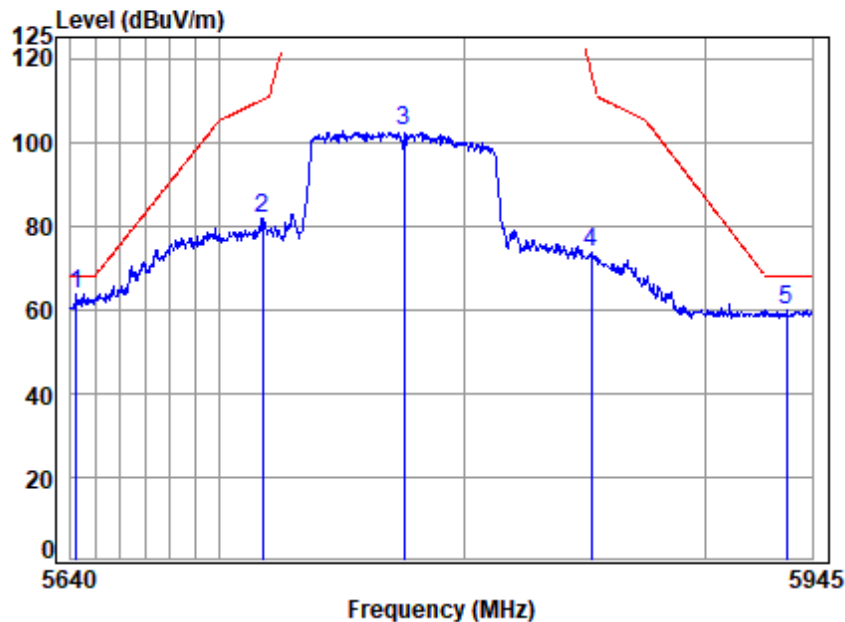
Mode : 5795 Band edge

: 5.8G Wi-Fi 11N40

	Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 5795.000	11.00	33.39	30.58	86.90	100.71	-----	----- peak
2 5850.000	10.95	33.60	30.56	48.36	62.35	122.20	-59.85 peak
3 5860.000	10.94	33.58	30.56	45.42	59.38	109.40	-50.02 peak
4 pp 5934.633	10.86	33.57	30.53	46.39	60.29	68.20	-7.91 peak



Test Mode: 04; Polarity: Horizontal; Modulation:802.11ac; Bandwidth:80MHz; Channel:middle



Condition: 3m HORIZONTAL

Job No : 03209AT

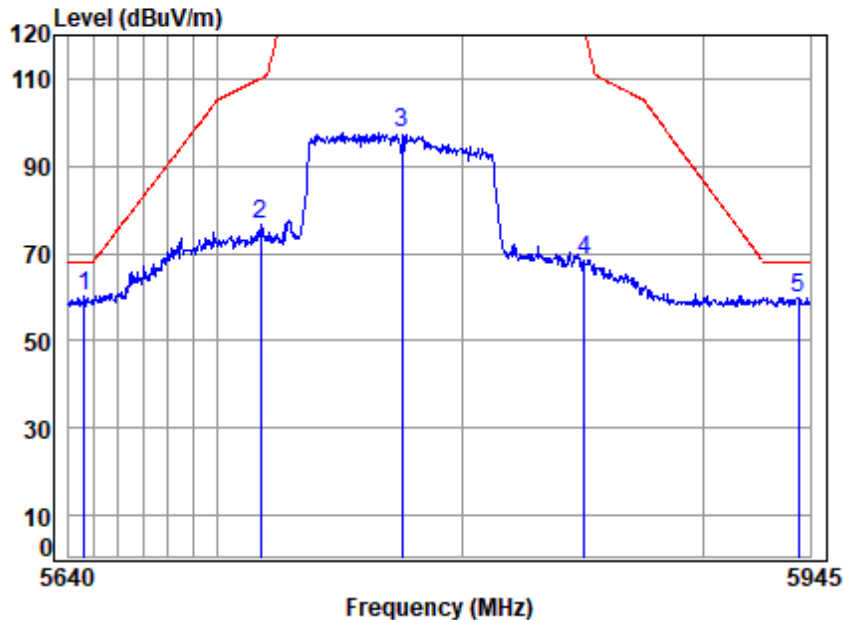
Mode : 5775 Band edge

: 5.8G Wi-Fi 11AC80

		Cable	Ant	Preamp	Read		Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 pp	5642.080	10.47	33.08	30.64	50.64	63.55	68.20	-4.65	Peak
2	5717.460	10.64	33.23	30.61	68.49	81.75	110.09	-28.34	peak
3	5775.000	10.91	33.35	30.59	88.83	102.50	-----	-----	peak
4	5852.424	10.95	33.60	30.56	59.51	73.50	116.67	-43.17	peak
5	5934.364	10.86	33.57	30.53	46.18	60.08	68.20	-8.12	peak



Test Mode: 04; Polarity: Vertical; Modulation:802.11ac; Bandwidth:80MHz; Channel:middle



Condition: 3m VERTICAL

Job No : 03209AT

Mode : 5775 Band edge

: 5.8G Wi-Fi 11AC80

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 pp	5646.241	10.48	33.09	30.64	47.11	60.04	68.20	-8.16 Peak
2	5717.460	10.64	33.23	30.61	63.42	76.68	110.09	-33.41 peak
3	5775.000	10.91	33.35	30.59	83.95	97.62	-----	----- peak
4	5850.267	10.95	33.60	30.56	54.49	68.48	121.59	-53.11 peak
5	5939.993	10.86	33.58	30.52	46.06	59.98	68.20	-8.22 peak



7.5 Duty Cycle

Test Requirement ANSI C63.10 (2013) Section 12.2

Test Method: ANSI C63.10 (2020) Section 12.2

7.5.1 E.U.T. Operation

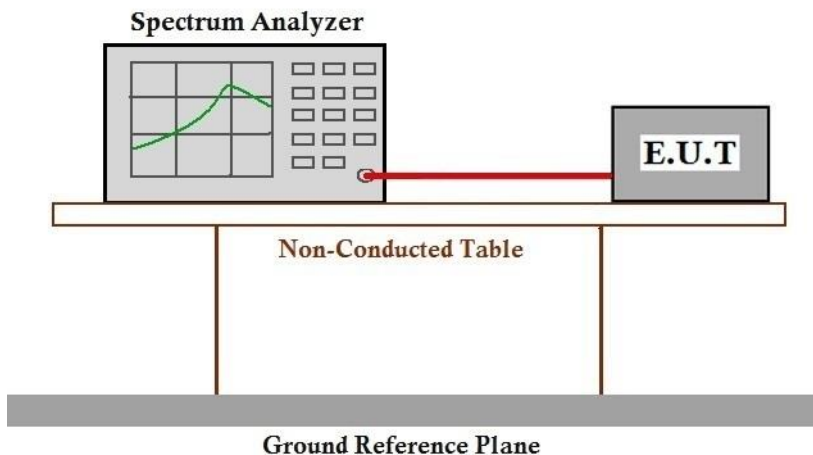
Operating Environment:

Temperature: 27.1 °C Humidity: 38.6 % RH Atmospheric Pressure: 1020 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_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

7.6.1 E.U.T. Operation

Operating Environment:

Temperature: 27.1 °C

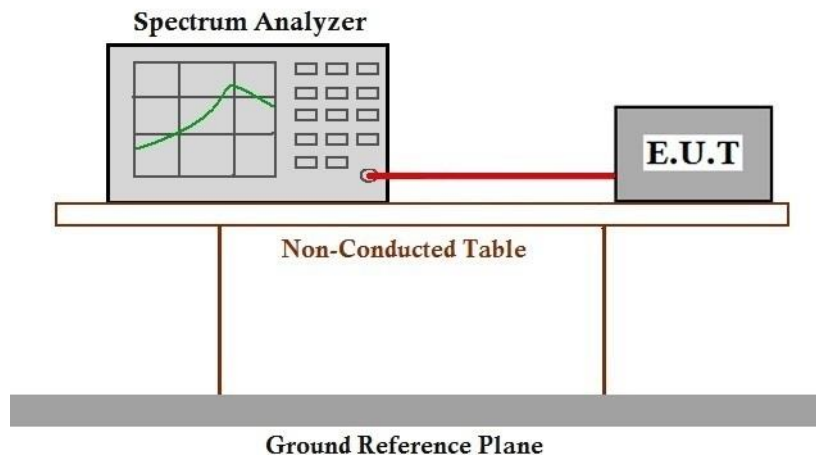
Humidity: 38.6 % RH

Atmospheric Pressure: 1020 mbar

7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_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

7.7.1 E.U.T. Operation

Operating Environment:

Temperature: 27.1 °C

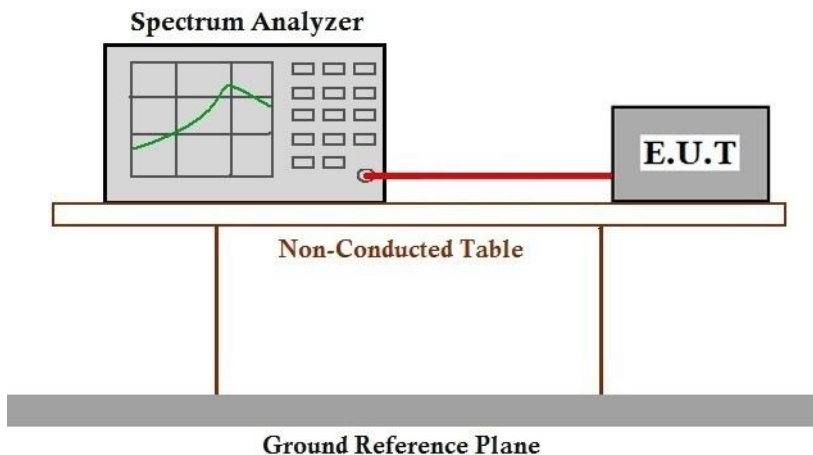
Humidity: 38.6 % RH

Atmospheric Pressure: 1020 mbar

7.7.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_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

Limit:

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

7.8.1 E.U.T. Operation

Operating Environment:

Temperature: 27.1 °C

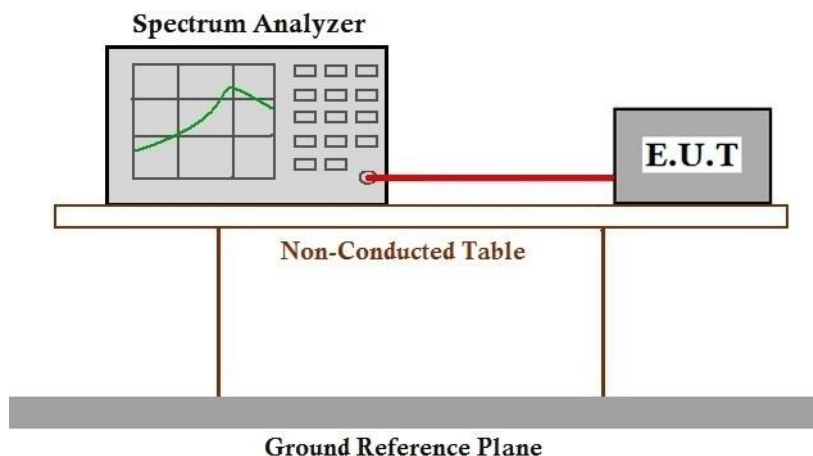
Humidity: 38.6 % RH

Atmospheric Pressure: 1020 mbar

7.8.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_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

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:	<p>* Where B is the 26dB emission bandwidth in MHz.</p> <p>The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.</p>

7.9.1 E.U.T. Operation

Operating Environment:

Temperature: 27.1 °C

Humidity: 38.6 % RH

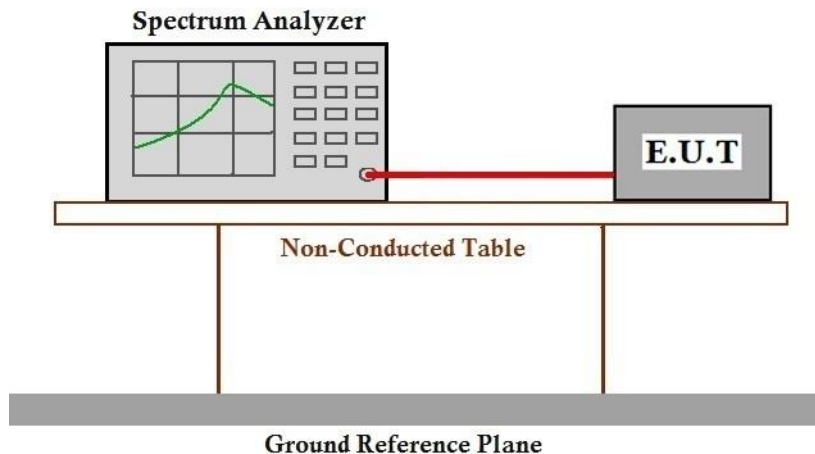
Atmospheric Pressure: 1020 mbar

7.9.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_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

Note:

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

Please Refer to Appendix for Details



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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

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:

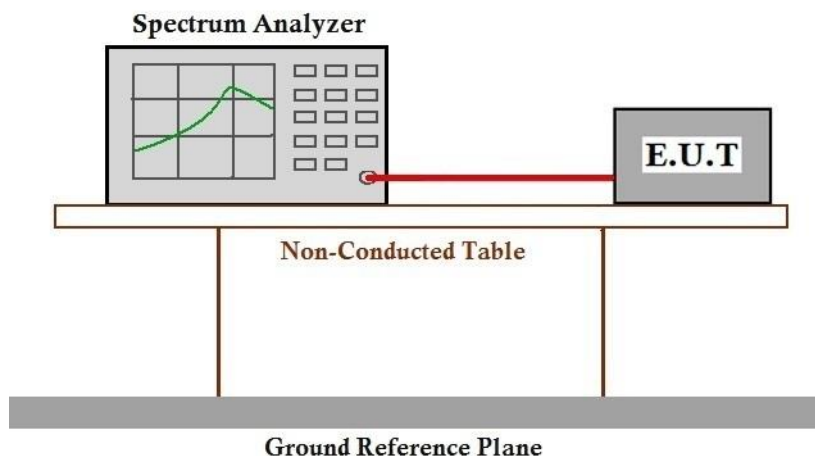
Temperature: 27.1 °C Humidity: 38.6 % RH Atmospheric Pressure: 1020 mbar

7.10.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_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



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7.11 Frequency Stability

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

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

7.11.1 E.U.T. Operation

Operating Environment:

Temperature: 27.1 °C

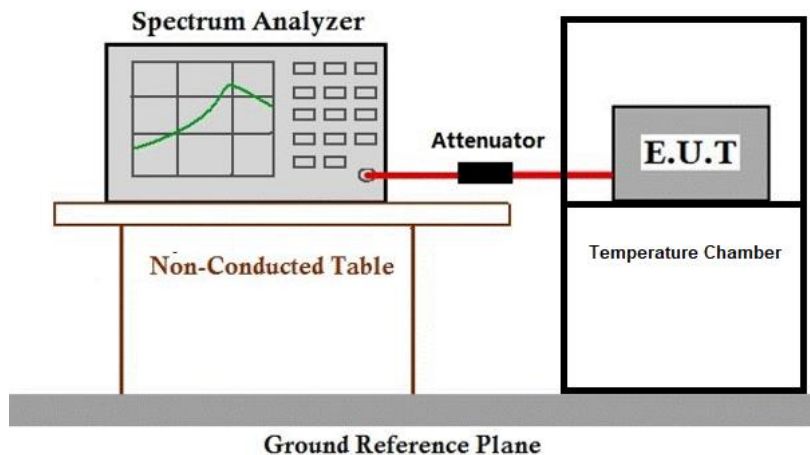
Humidity: 38.6 % RH

Atmospheric Pressure: 1020 mbar

7.11.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode_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 Channel Move Time

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

Limit:

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

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

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

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

7.12.1 E.U.T. Operation

Operating Environment:

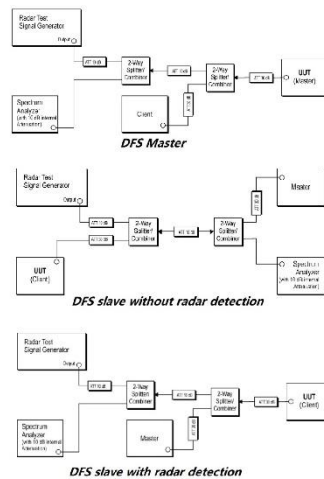
Temperature: 21 °C Humidity: 45 % RH Atmospheric Pressure: 1020 mbar



7.12.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	05	Normal operating_Keep the EUT communication with the companion device.

7.12.3 Test Setup Diagram



7.12.4 Measurement Procedure and Data

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

Please Refer to Appendix for Details

7.13 Channel Closing Transmission Time

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

Limit:

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

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

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

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

7.13.1 E.U.T. Operation

Operating Environment:

Temperature: 21 °C Humidity: 45 % RH Atmospheric Pressure: 1020 mbar



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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

Refer to Appendix - Test Setup Photo for SZCR2507003209AT

9 EUT Constructional Details (EUT Photos)

Refer to Appendix – External and Internal Photos for SZCR2507003209AT



10 Appendix

1. Duty Cycle

1.1 Test Result

1.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	2.029	2.065	98.26	0.08	0.04
		5200	2.029	2.065	98.26	0.08	0.04
		5240	2.029	2.065	98.26	0.08	0.04
		5260	2.030	2.065	98.31	0.07	0.03
		5300	2.030	2.065	98.31	0.07	0.00
		5320	2.029	2.064	98.30	0.07	0.00
		5500	2.030	2.065	98.31	0.07	0.03
		5580	2.029	2.065	98.26	0.08	0.04
		5700	2.029	2.065	98.26	0.08	0.04
		5745	2.029	2.065	98.26	0.08	0.04
		5785	2.029	2.065	98.26	0.08	0.04
		5825	2.029	2.065	98.26	0.08	0.04
802.11n (HT20)	SISO	5180	1.889	1.925	98.13	0.08	0.03
		5200	1.890	1.925	98.18	0.08	0.00
		5240	1.890	1.925	98.18	0.08	0.03
		5260	1.890	1.925	98.18	0.08	0.00
		5300	1.890	1.925	98.18	0.08	0.03
		5320	1.889	1.924	98.18	0.08	0.03
		5500	1.890	1.925	98.18	0.08	0.00
		5580	1.889	1.925	98.13	0.08	0.07
		5700	1.890	1.926	98.13	0.08	0.03
		5745	1.889	1.925	98.13	0.08	0.03
		5785	1.890	1.926	98.13	0.08	0.03
		5825	1.890	1.925	98.18	0.08	0.03
802.11n (HT40)	SISO	5190	0.929	0.964	96.37	0.16	0.00
		5230	0.929	0.964	96.37	0.16	0.03
		5270	0.929	0.964	96.37	0.16	0.03
		5310	0.929	0.964	96.37	0.16	0.00



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		5510	0.929	0.964	96.37	0.16	0.03
		5550	0.929	0.964	96.37	0.16	0.03
		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
802.11ac (VHT20)	SISO	5180	1.889	1.924	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	0.00
		5260	1.890	1.925	98.18	0.08	0.00
		5300	1.890	1.925	98.18	0.08	0.00
		5320	1.889	1.924	98.18	0.08	0.00
		5500	1.889	1.924	98.18	0.08	0.00
		5580	1.889	1.925	98.13	0.08	0.03
		5700	1.889	1.924	98.18	0.08	0.00
		5745	1.889	1.924	98.18	0.08	0.00
		5785	1.889	1.925	98.13	0.08	0.03
		5825	1.889	1.925	98.13	0.08	0.03
802.11ac (VHT40)	SISO	5190	0.929	0.964	96.37	0.16	0.00
		5230	0.929	0.964	96.37	0.16	0.03
		5270	0.929	0.964	96.37	0.16	0.03
		5310	0.929	0.964	96.37	0.16	0.00
		5510	0.929	0.964	96.37	0.16	0.00
		5550	0.929	0.964	96.37	0.16	0.00
		5670	0.929	0.964	96.37	0.16	0.03
		5755	0.929	0.964	96.37	0.16	0.00
		5795	0.930	0.964	96.47	0.16	0.00
802.11ac (VHT80)	SISO	5210	0.248	0.284	87.32	0.59	0.04
		5290	0.249	0.284	87.68	0.57	0.03
		5530	0.249	0.284	87.68	0.57	0.04
		5610	0.456	0.492	92.68	0.33	0.03
		5775	0.457	0.492	92.89	0.32	0.07



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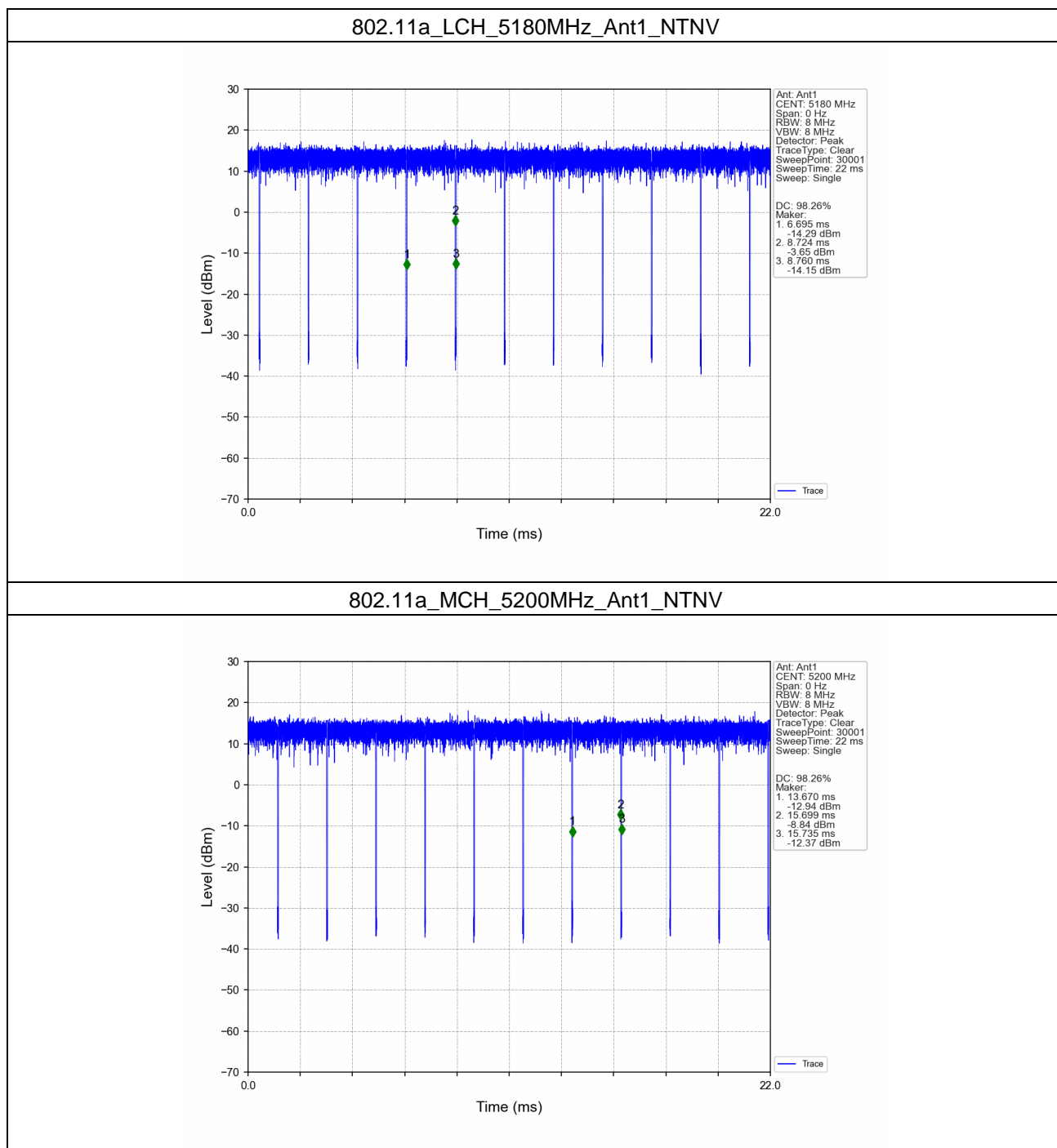
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1.2 Test Graph

1.2.1 Ant1



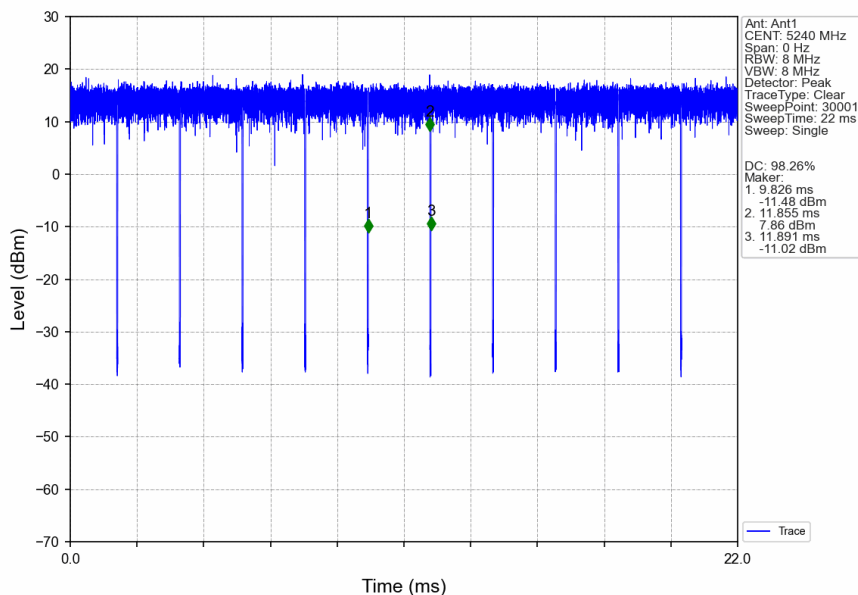
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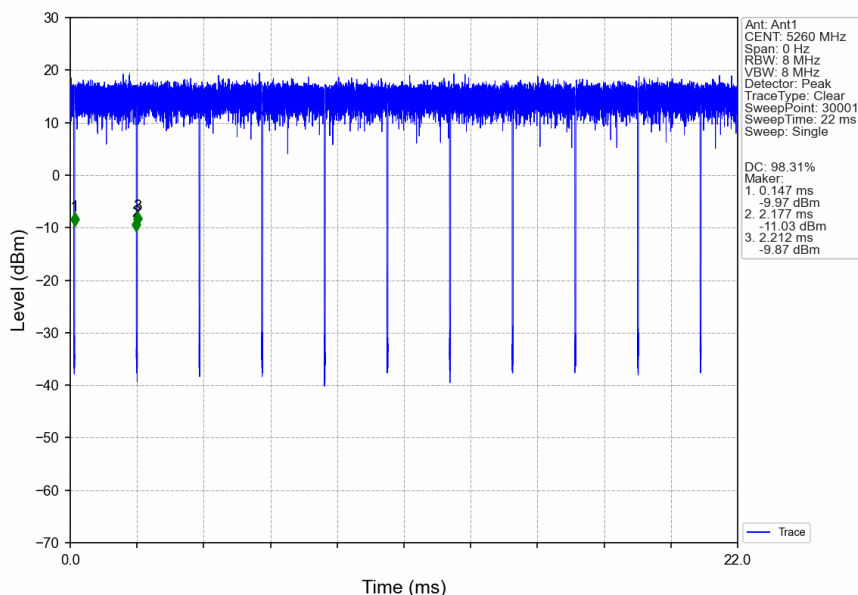
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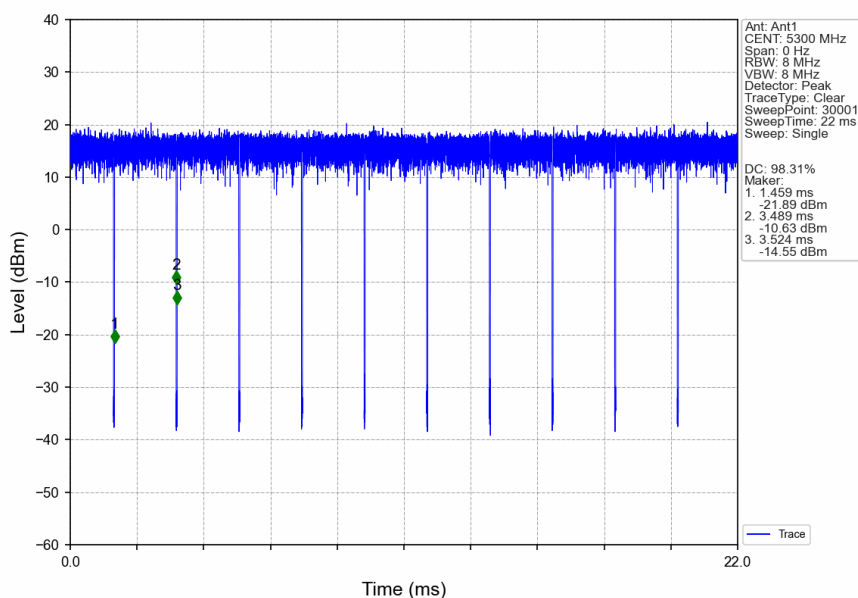
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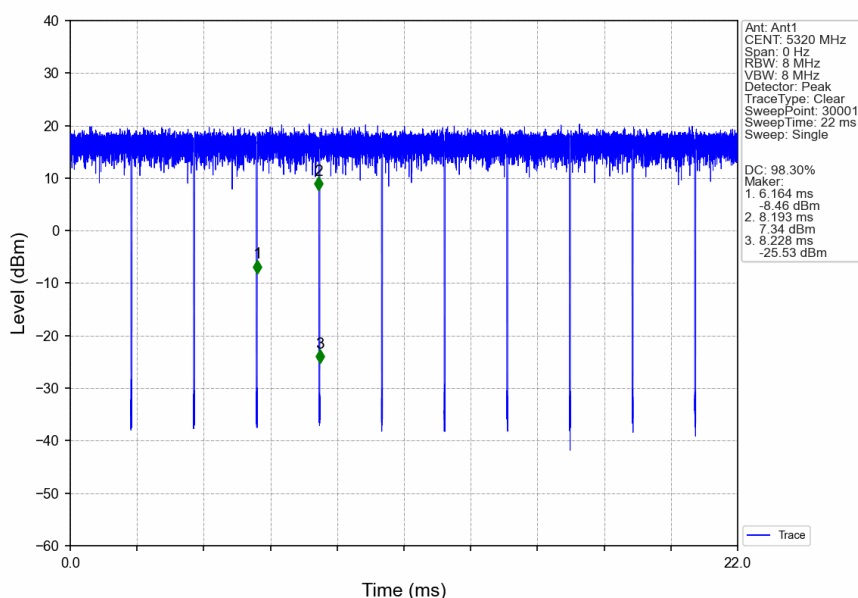
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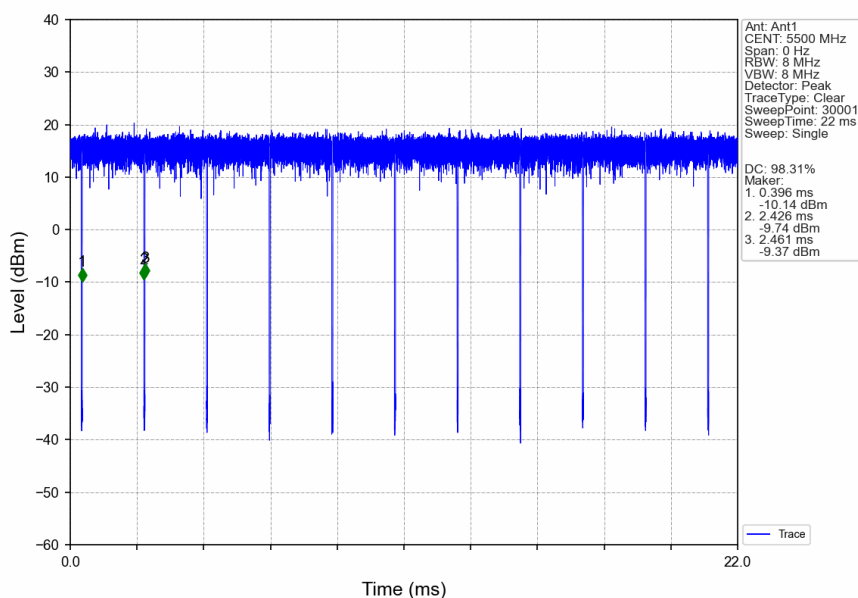
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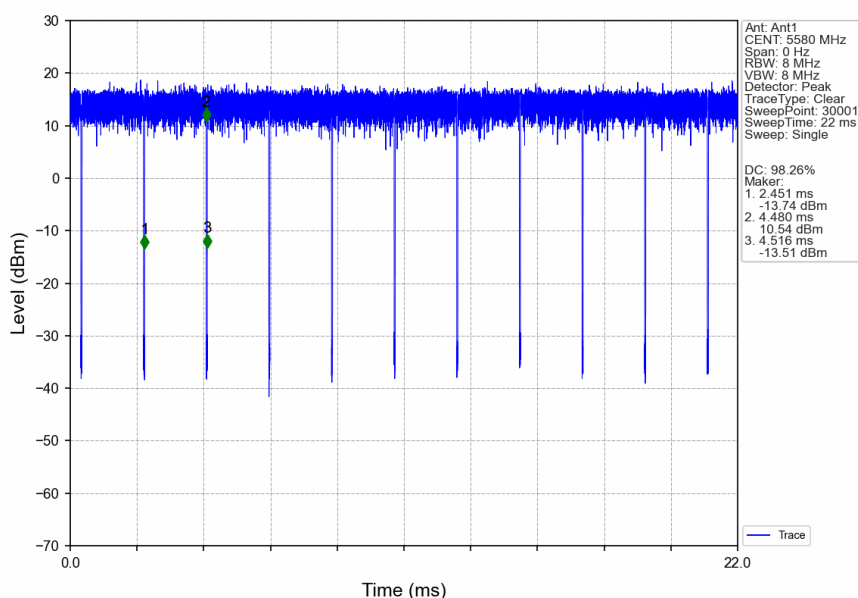
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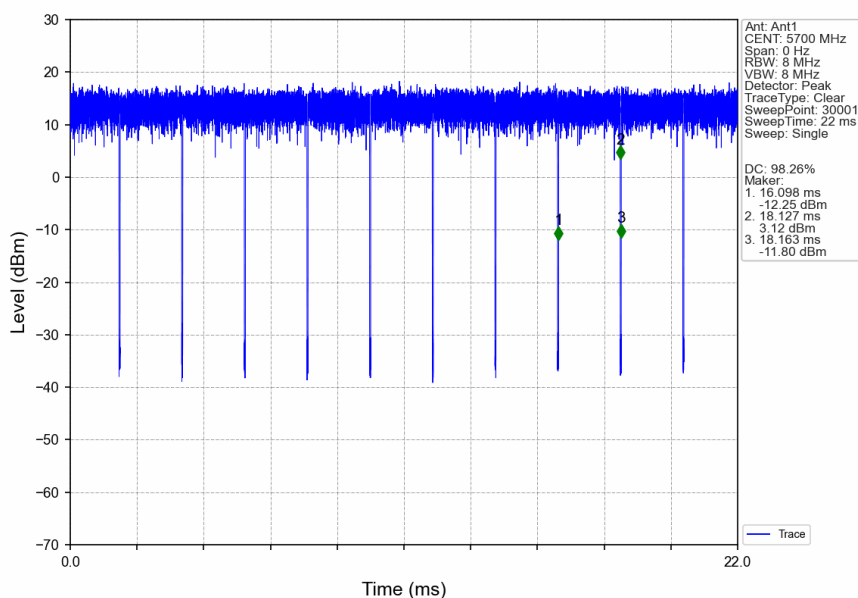
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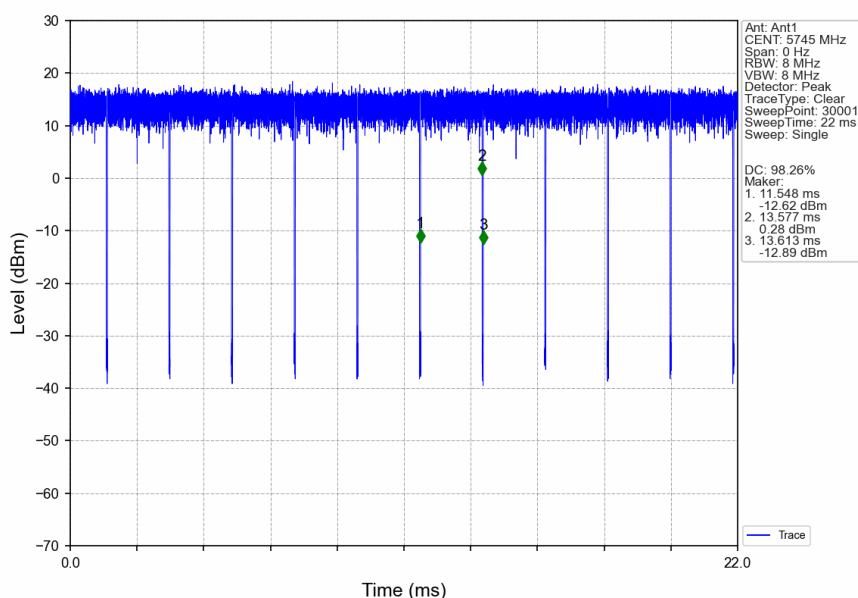
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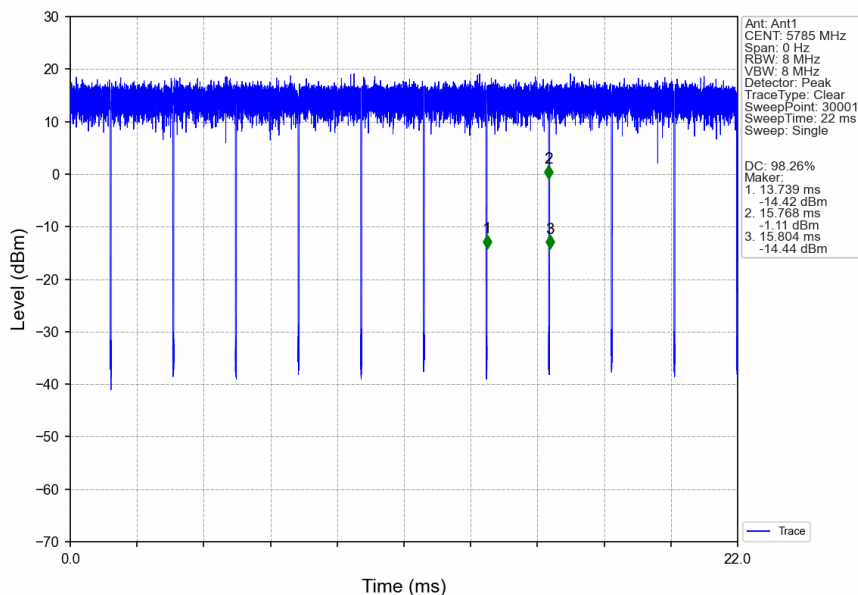
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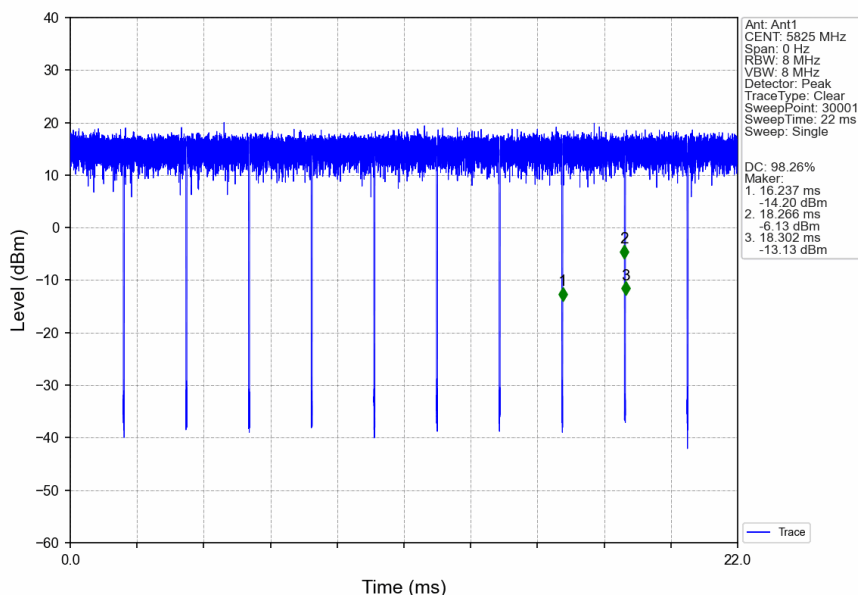
802.11a_LCH_5745MHz_Ant1_NTNV



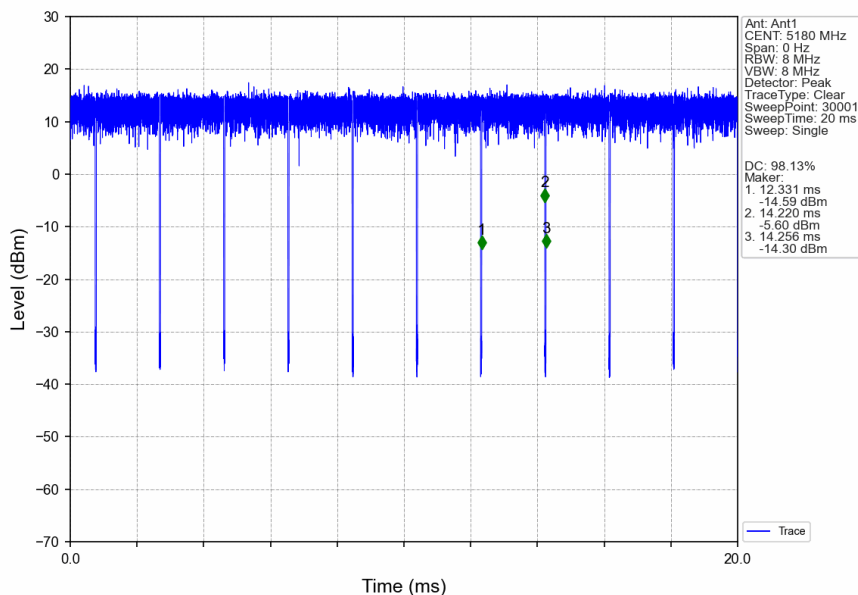
802.11a_MCH_5785MHz_Ant1_NTNV



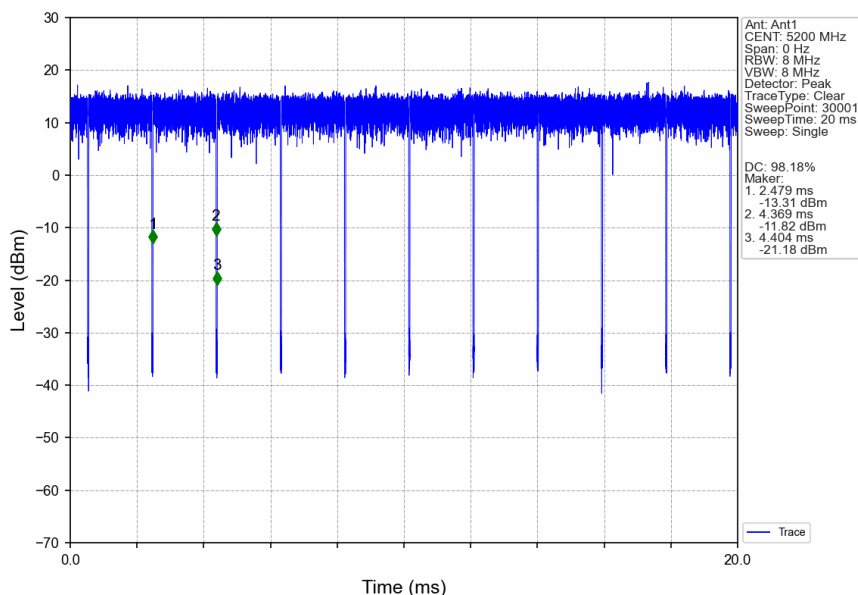
802.11a_HCH_5825MHz_Ant1_NTNV



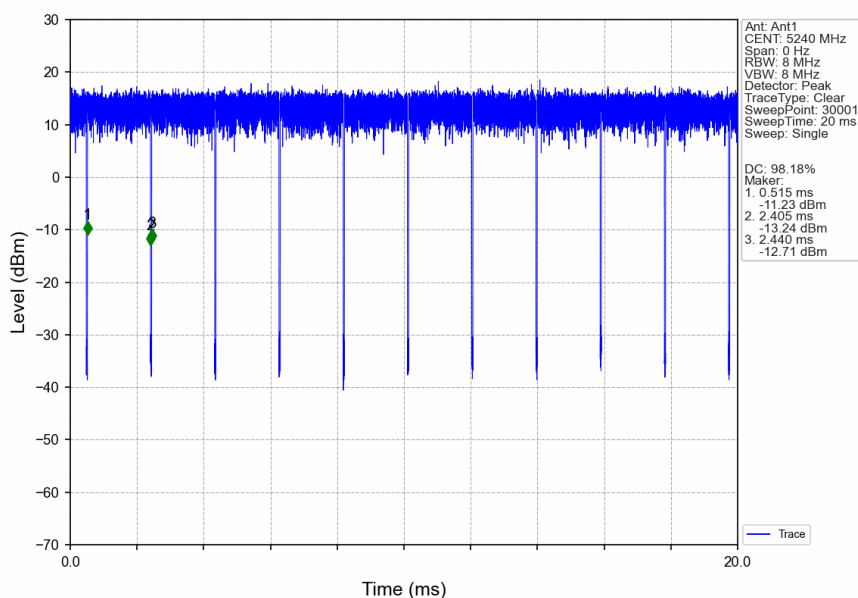
802.11n(HT20)_LCH_5180MHz_Ant1_NTNV



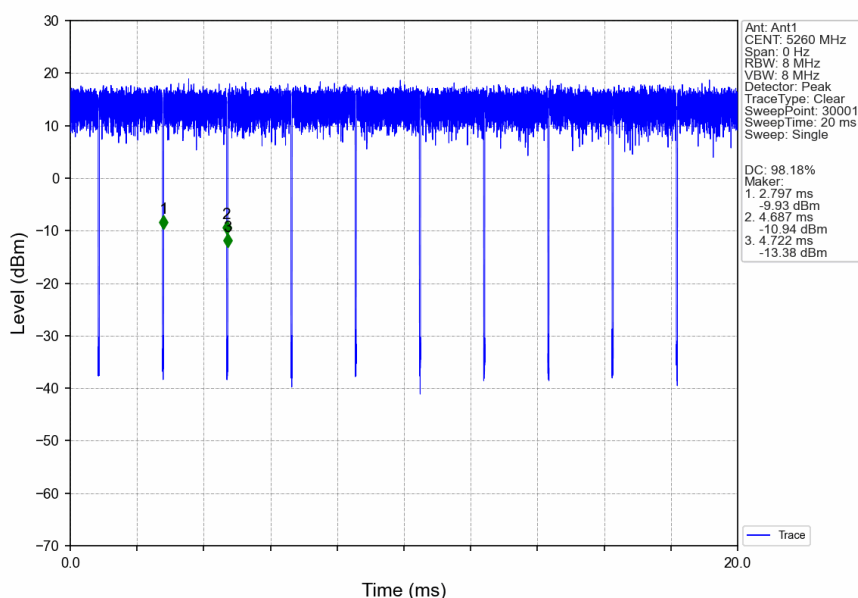
802.11n(HT20)_MCH_5200MHz_Ant1_NTNV



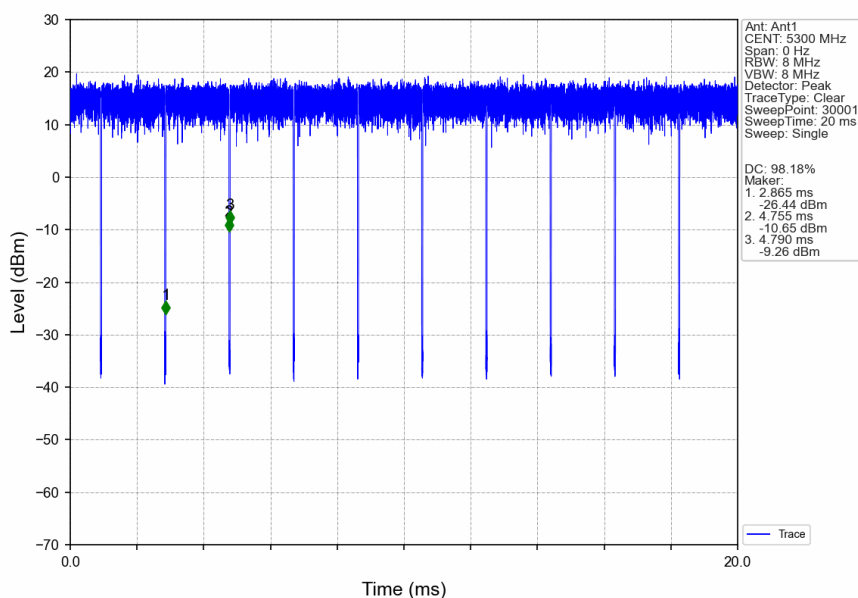
802.11n(HT20)_HCH_5240MHz_Ant1_NTNV



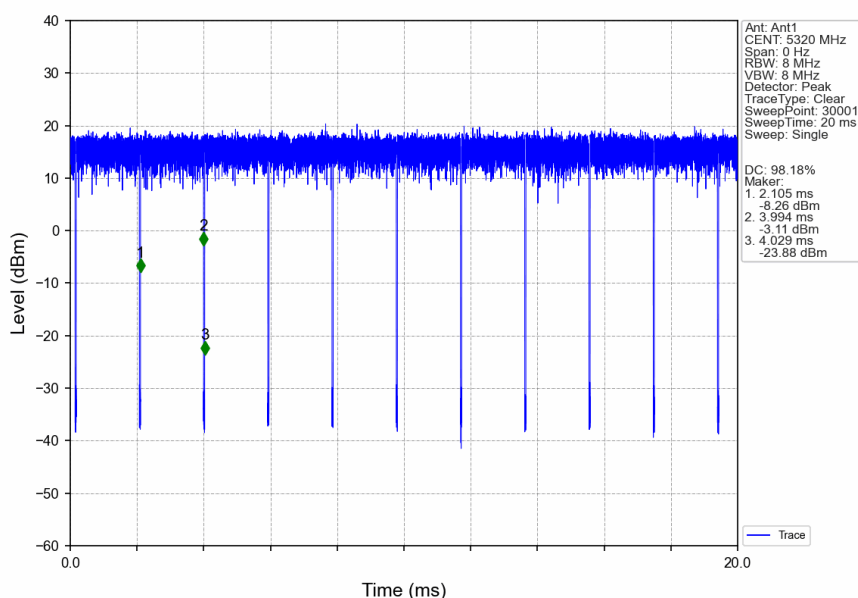
802.11n(HT20)_LCH_5260MHz_Ant1_NTNV



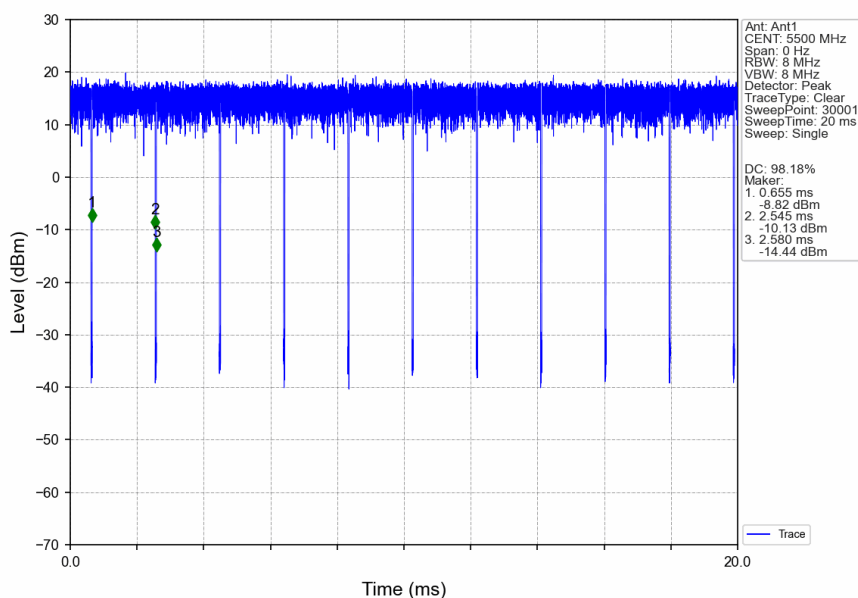
802.11n(HT20)_MCH_5300MHz_Ant1_NTNV



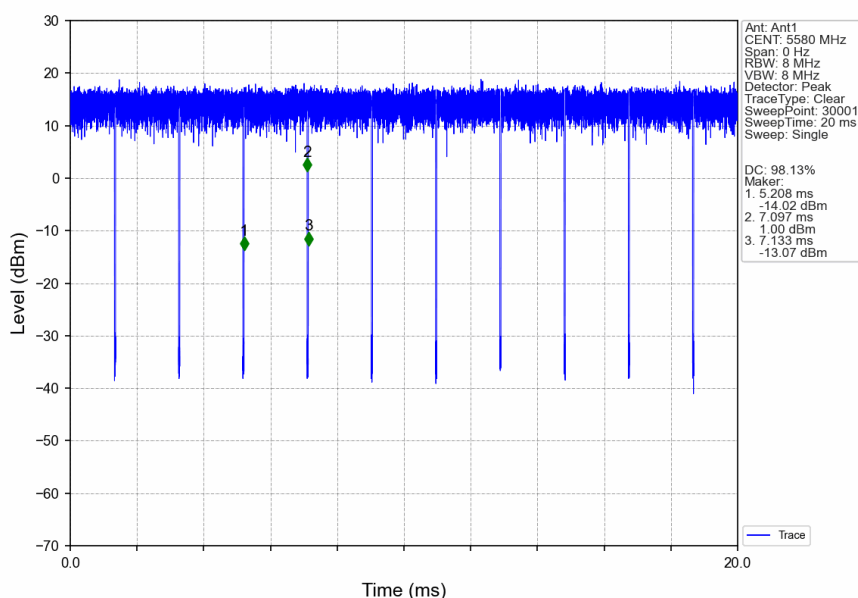
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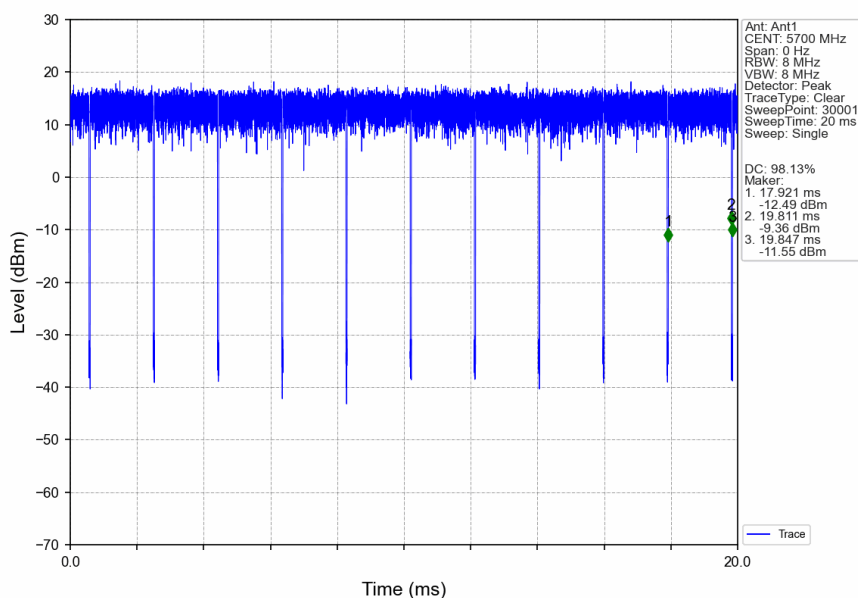
802.11n(HT20)_LCH_5500MHz_Ant1_NTNV



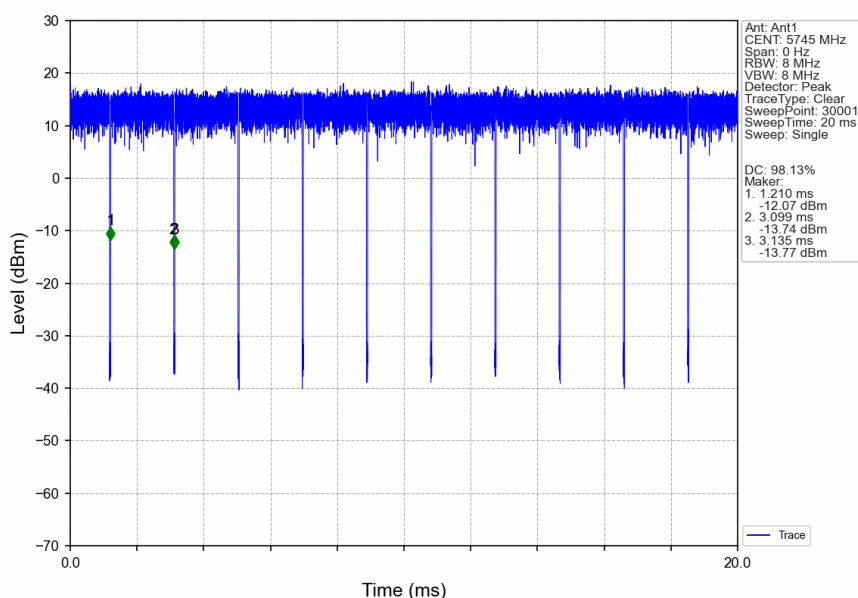
802.11n(HT20)_MCH_5580MHz_Ant1_NTNV



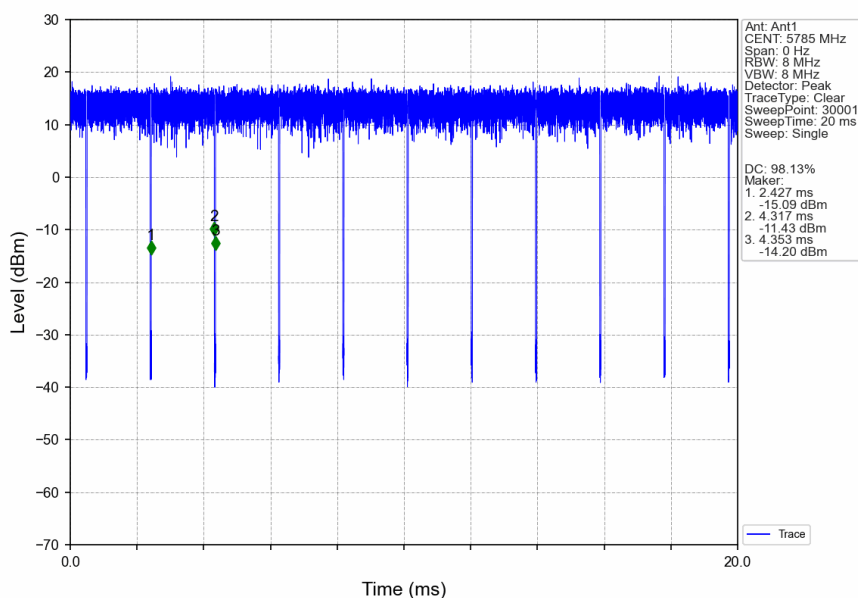
802.11n(HT20)_HCH_5700MHz_Ant1_NTNV



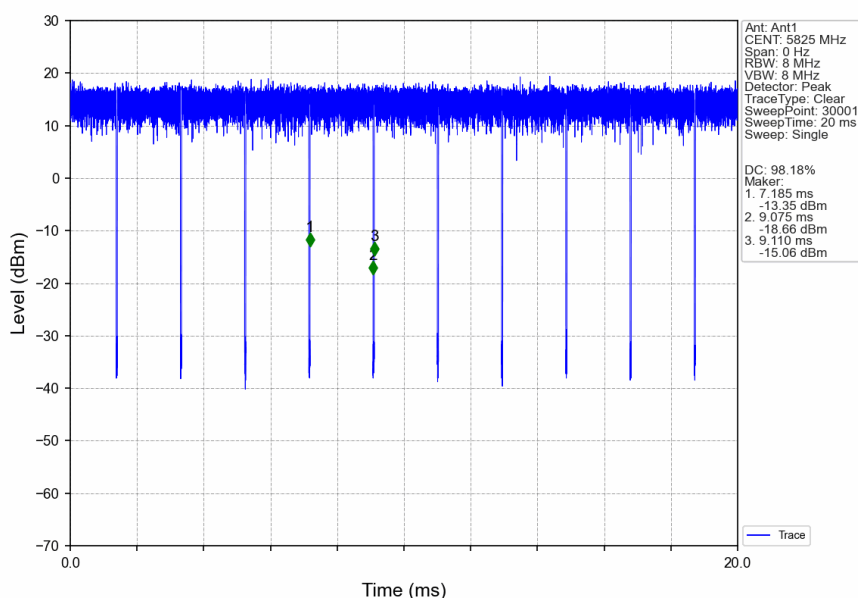
802.11n(HT20)_LCH_5745MHz_Ant1_NTNV



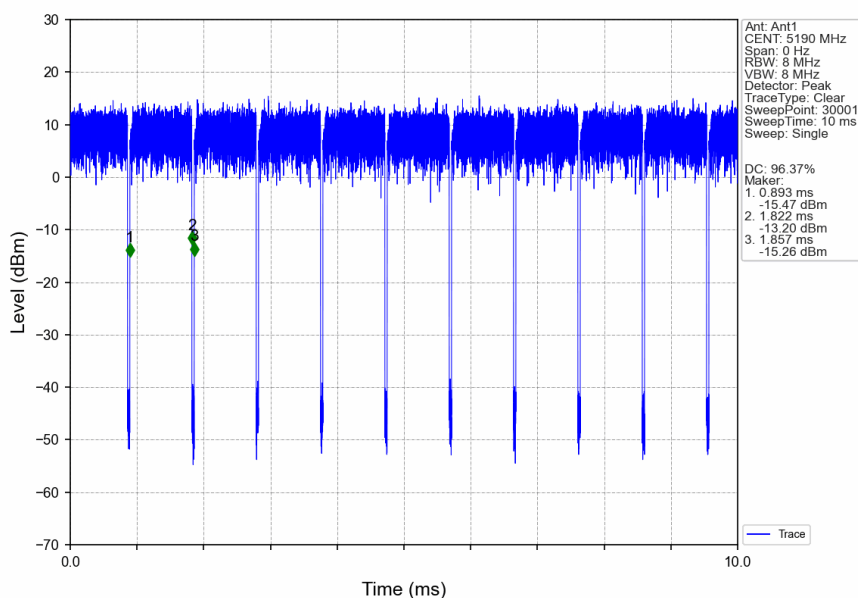
802.11n(HT20)_MCH_5785MHz_Ant1_NTNV



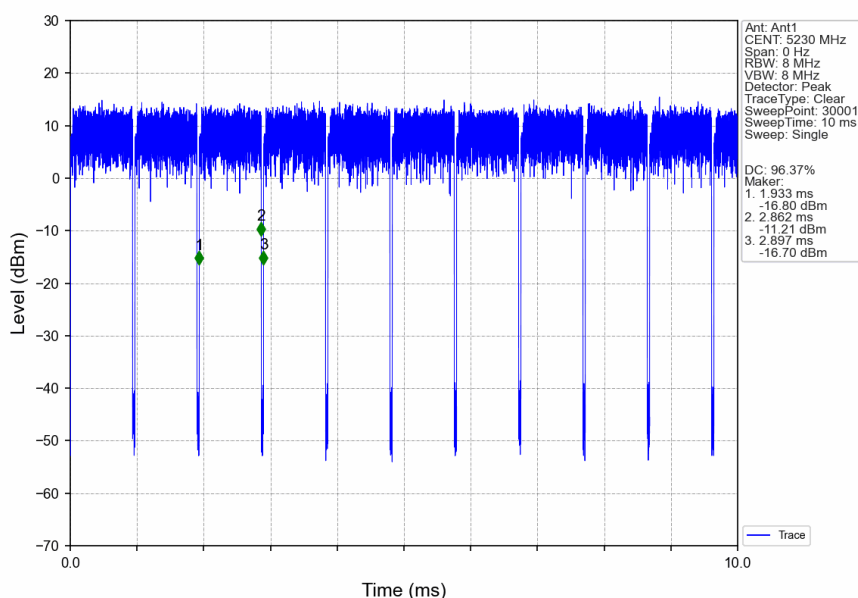
802.11n(HT20)_HCH_5825MHz_Ant1_NTNV



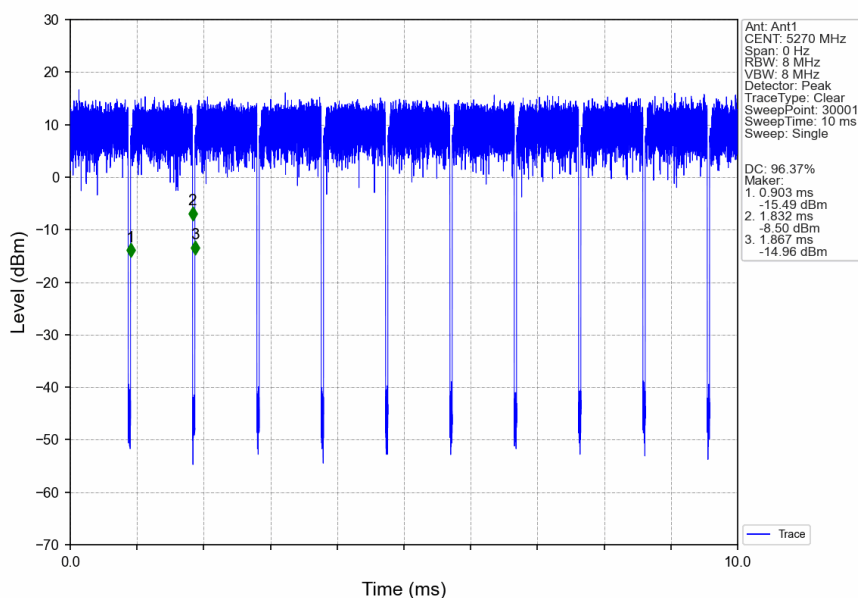
802.11n(HT40)_LCH_5190MHz_Ant1_NTNV



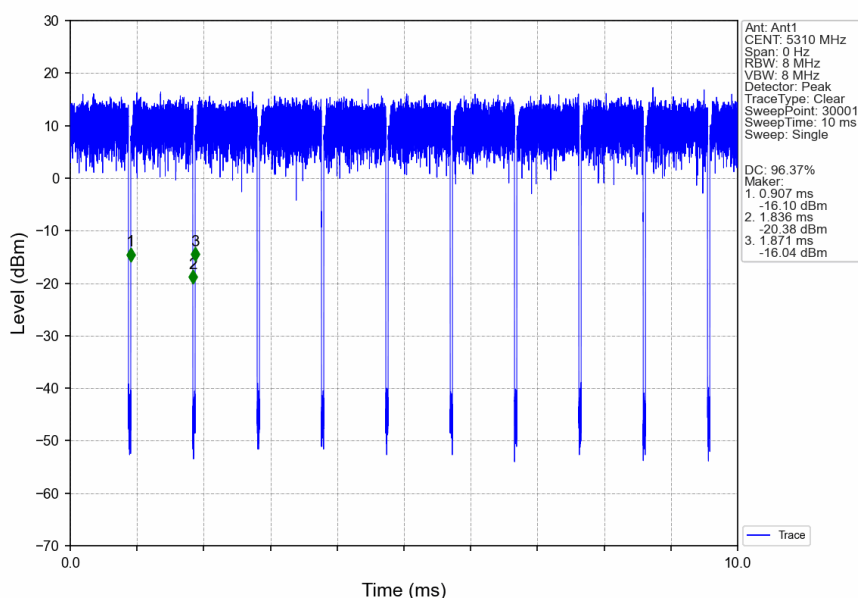
802.11n(HT40)_HCH_5230MHz_Ant1_NTNV



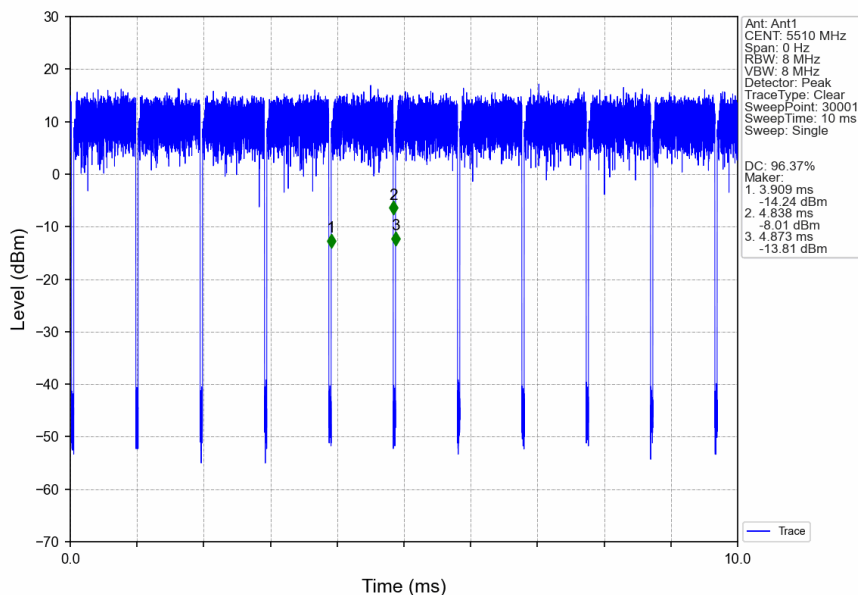
802.11n(HT40)_LCH_5270MHz_Ant1_NTNV



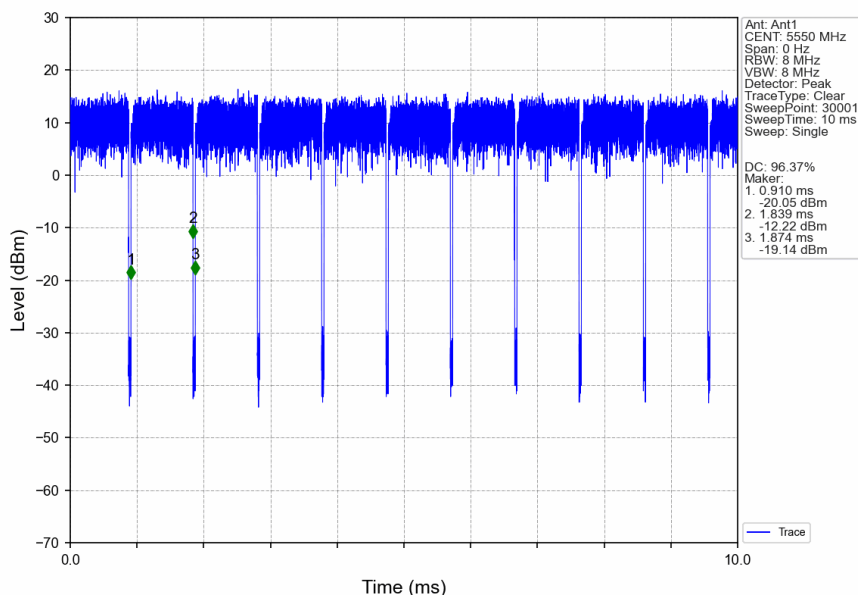
802.11n(HT40)_HCH_5310MHz_Ant1_NTNV



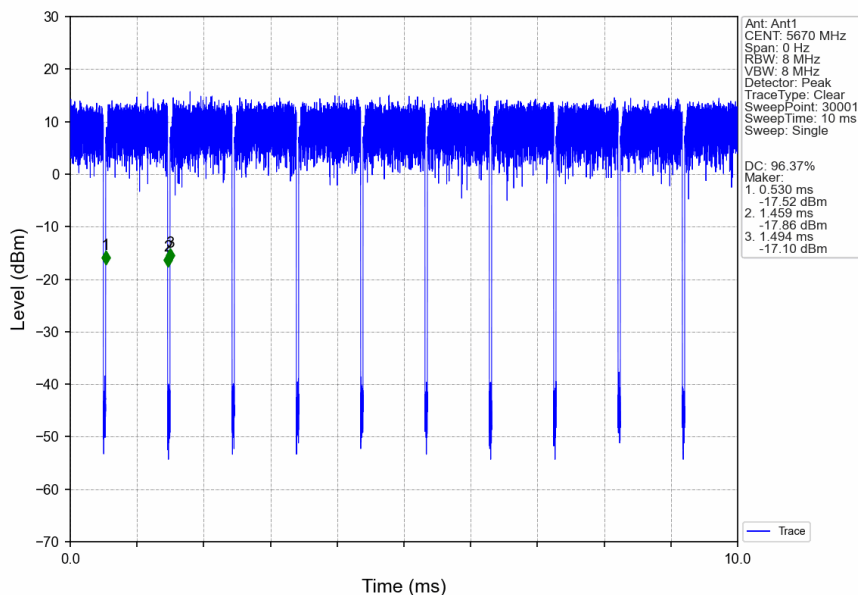
802.11n(HT40)_LCH_5510MHz_Ant1_NTNV



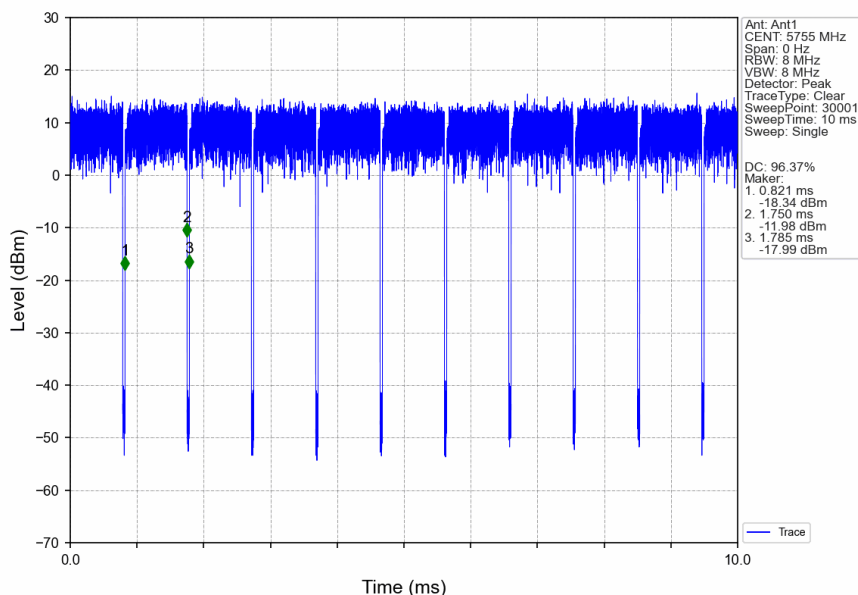
802.11n(HT40)_MCH_5550MHz_Ant1_NTNV



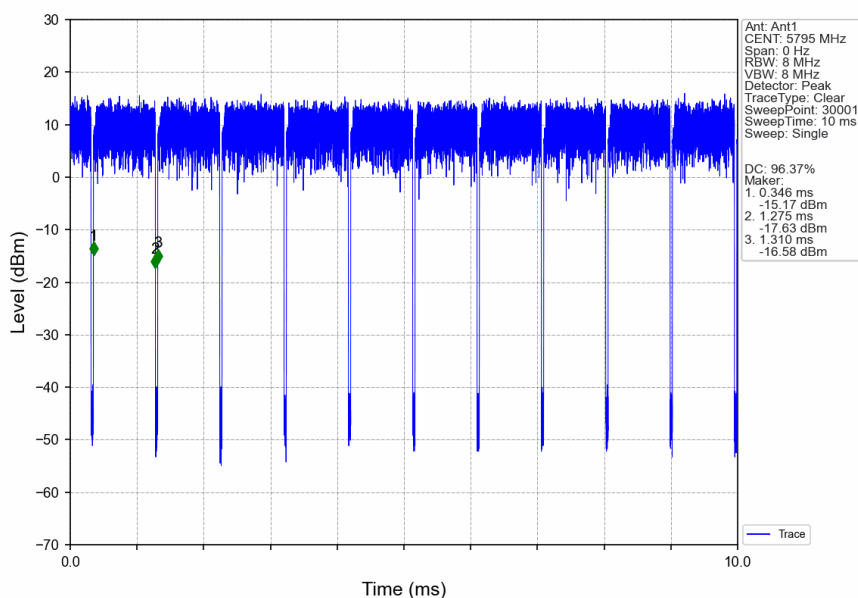
802.11n(HT40)_HCH_5670MHz_Ant1_NTNV



802.11n(HT40)_LCH_5755MHz_Ant1_NTNV



802.11n(HT40)_HCH_5795MHz_Ant1_NTNV



802.11ac(VHT20)_LCH_5180MHz_Ant1_NTNV

