

TEST REPORT

Application No.: SZCR2410003911AT
Applicant: Guangdong Shiji Technology Co.,Ltd
Address of Applicant: No.5 ,2nd Sanlian Longtan Area, Lianshang Town, Liannan Industrial Zone,Chenghai District, Shantou, China

Equipment Under Test (EUT):

EUT Name: RC QUADCOPTER
Model No.: F22 S3 PRO, S70W1080P(GPS), S70W1080P-5G(GPS), X300-1, F11 4K PRO, F11s 4K PRO, F11s 4K PRO+, F11s 4K PRO+ R, F22 S2+ XR, F11s 4K, F11s 2.7K PRO+, F11a PRO, F11s 6K PRO+, F11 S2 PRO, F11 S2 PRO R, F11 S2 PRO+, F11 S3 PRO, F11 S3 PRO R, F11 S3 PRO+, F11 X3 PRO+, F7s 2.7K PRO+, F7 4K , F7 4K PRO, F7s 4K, F7s 4K PRO, F7s 4K PRO+, F5, F5 PRO, F5s PRO, F5s PRO+, F5 4K PRO, F5s 4K PRO+, F5 6K PRO, F5s 6K PRO+, F5s PRO-C02, F5 S3 PRO, F5 S3 PRO-C02, F5 S3 PRO R, F5-C01, F5-C02, F15, F15 PRO, F15s PRO, F15s PRO+, F15s 4K, F15s 4K PRO+, F15s 6K PRO+, F22 S2 XR, F22 4K PRO, F22s 4K PRO, F22s 4K PRO+, F22s 6K PRO+, F22 S2 PRO, F22 S2 PRO R, F22 S2 PRO+, F22 S2 PRO+ R, F22 S3 PRO, F22 S3 PRO R, F22 S3 PRO+, F22 S3 XR, SJ200, SJ250, SJ2001, X200-1, X200-2, F22PRO, F35PRO, TF770S, F11, F11PRO, F11GIM2, F11GIM3, F7GB2, R111, V113, V11, V11PRO, B112, G115, BTW001, XR-1

* Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.

FCC ID: 2ALUJF22S3PRO
Standard(s) : 47 CFR Part 15, Subpart E 15.407
Date of Receipt: 2024-10-22
Date of Test: 2024-11-04 to 2024-12-08
Date of Issue: 2024-12-16

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

Keny Xu
EMC Laboratory Manager



Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2024-12-16		Original

Authorized for issue by:			
		Gebin Sun	
		_____ Gebin Sun/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
Maximum Conducted output power	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II E	47 CFR Part 15, Subpart E 15.407 (a)	Pass
Radiated Emissions (Below 1GHz)		KDB 789033 D02 II G	47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)	Pass
Radiated Emissions (Above 1GHz)		KDB 789033 D02 II G	47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)	Pass
Radiated Emissions which fall in the restricted bands		KDB 789033 D02 II G	47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)	Pass
Duty Cycle		KDB 789033 D02 II B 1	KDB 789033 D02 II B 1	Pass
99% Bandwidth		KDB 789033 D02 II D	N/A	Pass
26dB Emission bandwidth		KDB 789033 D02 II C 1	47 CFR Part 15, Subpart E 15.407 (a)	Pass
Peak Power spectrum density		KDB 789033 D02 II F	47 CFR Part 15, Subpart E 15.407 (a)	Pass
Frequency Stability		ANSI C63.10 (2013) Section 6.8	47 CFR Part 15, Subpart E 15.407 (g)	Pass



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Declaration of EUT Family Grouping:

Model No.: F22 S3 PRO, S70W1080P(GPS), S70W1080P-5G(GPS), X300-1, F11 4K PRO, F11s 4K PRO, F11s 4K PRO+, F11s 4K PRO+ R, F22 S2+ XR, F11s 4K, F11s 2.7K PRO+, F11a PRO, F11s 6K PRO+, F11 S2 PRO, F11 S2 PRO R, F11 S2 PRO+, F11 S3 PRO, F11 S3 PRO R, F11 S3 PRO+, F11 X3 PRO+, F7s 2.7K PRO+, F7 4K, F7 4K PRO, F7s 4K, F7s 4K PRO, F7s 4K PRO+, F5, F5 PRO, F5s PRO, F5s PRO+, F5 4K PRO, F5s 4K PRO+, F5 6K PRO, F5s 6K PRO+, F5s PRO-C02, F5 S3 PRO, F5 S3 PRO-C02, F5 S3 PRO R, F5-C01, F5-C02, F15, F15 PRO, F15s PRO, F15s PRO+, F15s 4K, F15s 4K PRO+, F15s 6K PRO+, F22 S2 XR, F22 4K PRO, F22s 4K PRO, F22s 4K PRO+, F22s 6K PRO+, F22 S2 PRO, F22 S2 PRO R, F22 S2 PRO+, F22 S2 PRO+ R, F22 S3 PRO, F22 S3 PRO R, F22 S3 PRO+, F22 S3 XR, SJ200, SJ250, SJ2001, X200-1, X200-2, F22PRO, F35PRO, TF770S, F11, F11PRO, F11GIM2, F11GIM3, F7GB2, R111, V113, V11, V11PRO, B112, G115, BTW001, XR-1

Only the model F22 S3 PRO was tested, since according to the declaration from the applicant, the electrical circuit design, PCB layout, components used, internal wiring and functions were identical for all the above models, with only difference on appearance, color and model name for commercial purpose.



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4 General Information

4.1 Details of E.U.T.

Power supply:	Rechargeable battery DC7.4V, 550mAh x 2pcs for Remote controller, charged by USB DC5V
Operating Frequency:	5180MHz to 5240MHz
Channel number:	4
Channel Spacing	20MHz
Modulation Type:	802.11a: OFDM(16QAM, 64QAM, QPSK, BPSK)
Antenna Type:	PCB Antenna
Antenna gain:	2.10dBi

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.
RF cable	supplied by SGS	N/A(cable loss:0.6dB)	REF. No.SEL000089

4.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Maximum Conducted output power	± 0.75dB
Radiated Emissions (Below 1GHz)	± 6.0dB for 3m; ± 5.0dB for 10m
Radiated Emissions (Above 1GHz)	± 4.6dB (1-18GHz); ± 4.8dB (18-40GHz)
Radiated Emissions which fall in the restricted bands	± 6.0dB (below 1GHz); ± 4.6dB (above 1GHz);
Duty Cycle	± 0.37%
99% Bandwidth	± 3%
26dB Emission bandwidth	± 3%
Peak Power spectrum density	± 2.84dB
Frequency Stability	± 7.25 x 10 ⁻⁸

Remark:

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

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



4.4 Test Location

All tests were performed at:

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

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

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

No tests were sub-contracted.

4.5 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



5 Equipment List

Maximum Conducted output power					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Power Sensor	TST PASS	TSPS2023R	SEM009-26	2024-03-27	2025-03-26
Power Sensor	KEYSIGHT	U2021XA	SEM009-16	2024-03-14	2025-03-13
DC Power Supply	Chroma	62012P-80-60	SEM011-11	2024-08-14	2025-08-13
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-19	2024-03-14	2025-03-13
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	2024-07-06	2025-07-05
Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2024-03-27	2025-03-26
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2024-03-19	2025-03-18

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	2024-08-14	2025-08-13
BiConiLog Antenna	ETS-LINDGREN	3142C	SEM003-01	2023-09-16	2025-09-15
Pre-Amplifier	Agilent Technologies	8447D	SEM005-01	2024-03-14	2025-03-13
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM025-01	2024-07-06	2025-07-05

Radiated Emissions (Above 1GHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
3m Fully-Anechoic Chamber	AUDIX	N/A	SEM001-02	2024-05-11	2027-05-10
Signal Analyzer	Rohde & Schwarz	FSV40	SEM008-04	2024-03-15	2025-03-14
Horn Antenna	Rohde&Schwarz	HF907	SEM003-07	2023-07-23	2025-07-22
Microwave system amplifier	Agilent	83017A	SEM005-25	2024-09-14	2025-09-13
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2024-07-06	2025-07-05



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Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	SEM003-15	2024-08-10	2025-08-09
Pre-Amplifier	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2024-03-15	2025-03-14

Radiated Emissions which fall in the restricted bands

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
3m Fully-Anechoic Chamber	AUDIX	N/A	SEM001-02	2024-05-11	2027-05-10
Signal Analyzer	Rohde & Schwarz	FSV40	SEM008-04	2024-03-15	2025-03-14
Horn Antenna	Rohde&Schwarz	HF907	SEM003-07	2023-07-23	2025-07-22
Microwave system amplifier	Agilent	83017A	SEM005-25	2024-09-14	2025-09-13
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2024-07-06	2025-07-05

RF Conducted Test

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
DC Power Supply	Chroma	62012P-80-60	SEM011-11	2024-08-14	2025-08-13
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-19	2024-03-14	2025-03-13
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	2024-07-06	2025-07-05
Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2024-03-27	2025-03-26
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2024-03-19	2025-03-18

General used equipment

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	deli	8838	SEM002-32	2024-07-24	2025-07-23
Humidity/ Temperature Indicator	deli	8838	SEM002-33	2024-07-24	2025-07-23
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2024-03-18	2025-03-17



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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 is 2.10dBi.

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.



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7 Radio Spectrum Matter Test Results

7.1 Maximum Conducted output power

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

Test Method: KDB 789033 D02 II E

Limit:

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

7.1.1 E.U.T. Operation

Operating Environment:

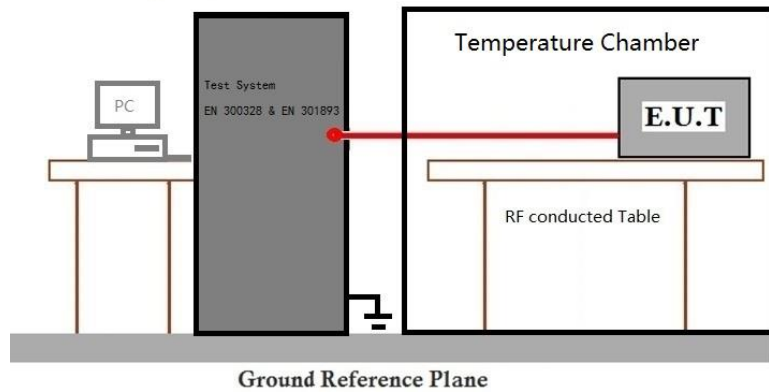
Temperature: 23.8 °C Humidity: 38.1 % RH Atmospheric Pressure: 1020 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a, Only the data of worst case is recorded in the report.



7.1.3 Test Setup Diagram



7.1.4 Measurement Procedure and Data

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

Please Refer to Appendix for Details



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7.2 Radiated Emissions (Below 1GHz)

Test Requirement 47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)

Test Method: KDB 789033 D02 II G

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: 23.2 °C Humidity: 45.8 % RH Atmospheric Pressure: 1020 mbar

7.2.2 Test Mode Description

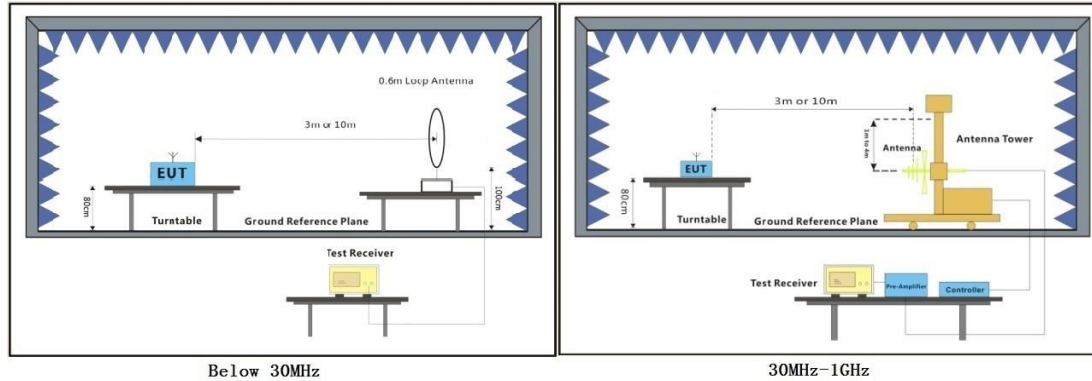
Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a, Only the data of worst case is recorded in the report.



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7.2.3 Test Setup Diagram



7.2.4 Measurement Procedure and Data

- 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.
- 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.
- 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.
- 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.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- 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.
- Test the EUT in the lowest channel, the middle channel, the Highest channel.
- 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.
- Repeat above procedures until all frequencies measured was complete.

Remark:

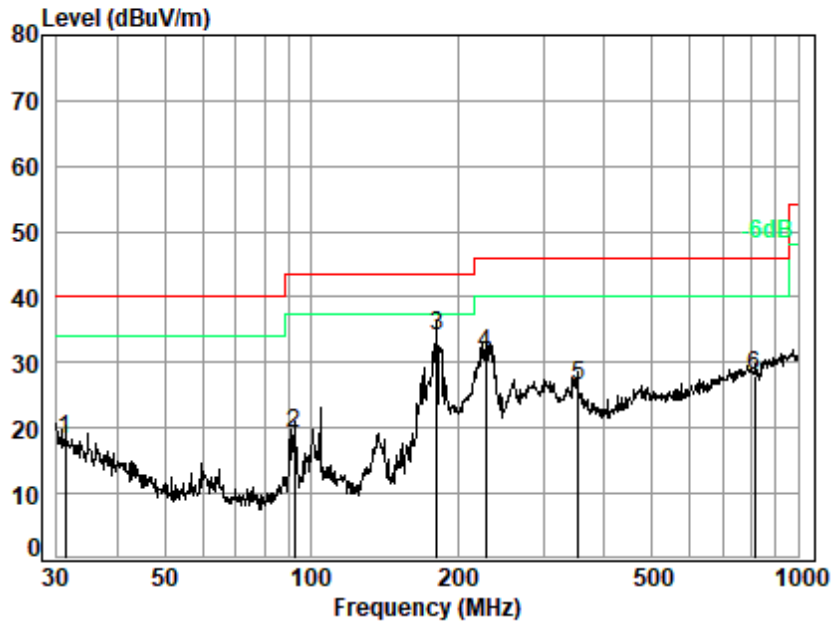
- Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
- For emission below 1GHz, through the pre-scan found the worst case is the lowest channel of 802.11a. Only the worst case is recorded in the report.
- Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on 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.
- The disturbance below 1GHz was very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.



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Test Mode: 00; Polarity: Horizontal



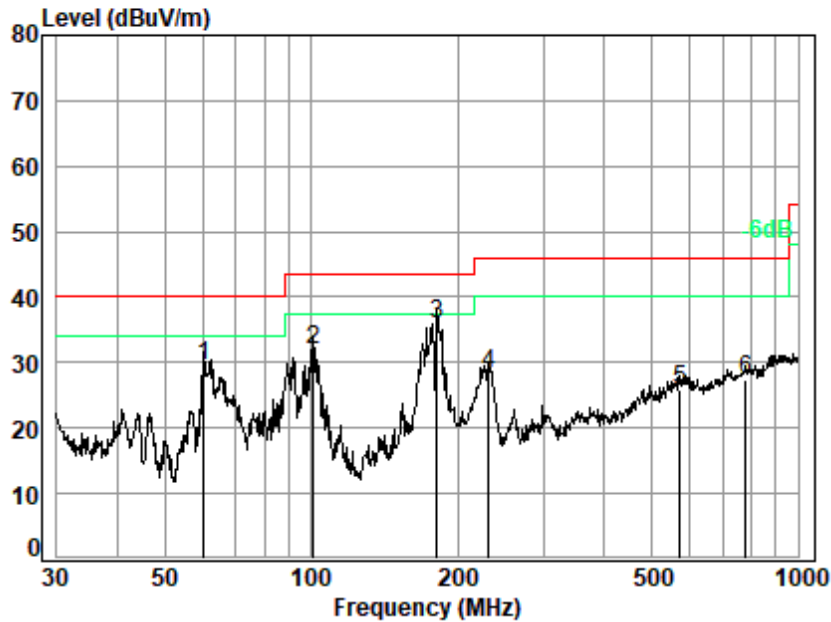
Site : chamber
 Condition: 3m HORIZONTAL
 Job No. : 03911AT
 Test Mode: 00

	Ant Freq	Cable Factor	Preamp Loss	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	31.289	20.60	0.69	27.79	24.88	40.00	-21.62	QP
2	92.462	11.94	1.18	27.61	33.57	43.50	-24.42	QP
3 q	181.283	14.13	1.68	27.25	45.59	43.50	-9.35	QP
4	228.490	16.23	1.90	27.05	40.19	46.00	-14.73	QP
5	352.943	20.01	2.41	26.97	31.09	46.00	-19.46	QP
6	815.968	26.56	3.90	27.37	24.85	46.00	-18.06	QP



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Test Mode: 00; Polarity: Vertical



Site : chamber
 Condition: 3m VERTICAL
 Job No. : 03911AT
 Test Mode: 00

	Ant Freq	Cable Factor	Preamp Loss	Read Preamp	Level	Limit	Over	Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dB	
1	60.280	11.45	0.95	27.70	44.91	29.61	40.00	-10.39 QP
2	100.934	12.33	1.23	27.59	46.10	32.07	43.50	-11.43 QP
3 q	181.283	14.13	1.68	27.25	47.38	35.94	43.50	-7.56 QP
4	231.718	16.66	1.92	27.04	36.61	28.15	46.00	-17.85 QP
5	572.614	23.73	3.16	27.86	26.93	25.96	46.00	-20.04 QP
6	779.607	27.03	3.80	27.53	24.18	27.48	46.00	-18.52 QP



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7.3 Radiated Emissions (Above 1GHz)

Test Requirement 47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)

Test Method: KDB 789033 D02 II G

Measurement Distance: 3m

7.3.1 E.U.T. Operation

Operating Environment:

Temperature: 24.2 °C

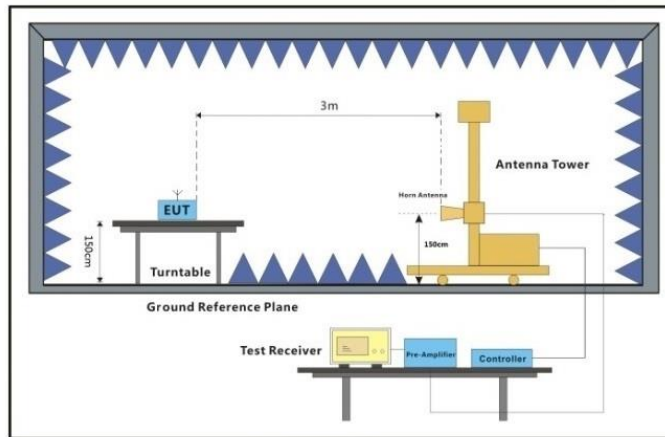
Humidity: 57.9 % RH

Atmospheric Pressure: 1020 mbar

7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a, Only the data of worst case is recorded in the report.

7.3.3 Test Setup Diagram



Above 1GHz

7.3.4 Measurement Procedure and Data



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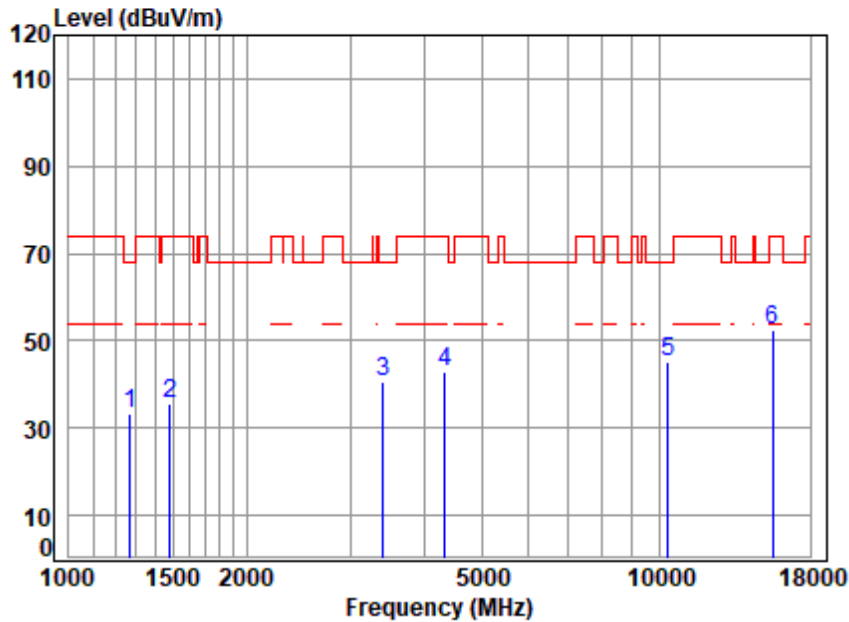
- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which 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: 00; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 03911AT
 Mode : 5180 TX RSE
 Note : 5G WIFI 11A

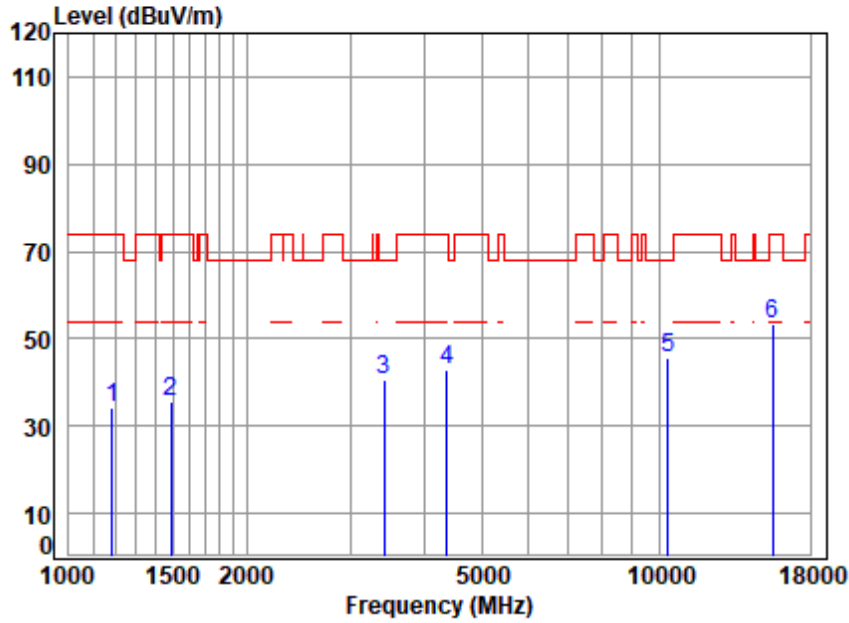
	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1271.123	3.77	24.97	61.41	66.13	33.46	68.20	-34.74	peak
2	1481.553	4.02	26.28	61.48	66.96	35.78	74.00	-38.22	peak
3	3405.929	6.44	32.33	61.55	63.38	40.60	68.20	-27.60	peak
4	4329.354	7.05	34.23	61.23	62.62	42.67	74.00	-31.33	peak
5	10360.000	11.14	37.10	61.44	58.52	45.32	68.20	-22.88	peak
6	p15540.000	13.79	41.10	61.25	58.74	52.38	74.00	-21.62	peak



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Test Mode: 00; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Site : chamber
 Condition: 3m VERTICAL
 Job No : 03911AT
 Mode : 5180 TX RSE
 Note : 5G WIFI 11A

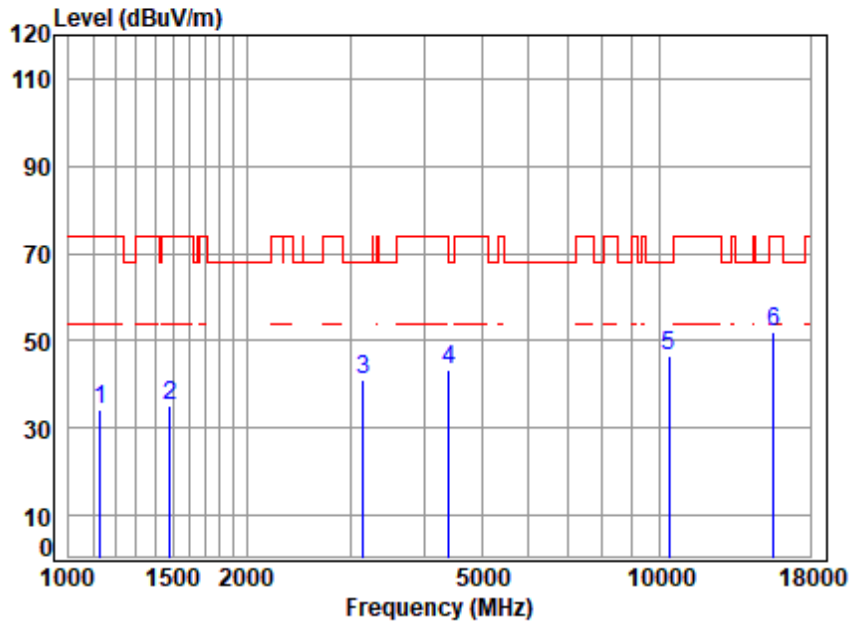
	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1185.936	3.66	24.26	61.38	67.79	34.33	74.00	-39.67	peak
2	1490.142	4.03	26.52	61.48	66.54	35.61	74.00	-38.39	peak
3	3425.675	6.46	32.09	61.54	63.47	40.48	68.20	-27.72	peak
4	4367.058	7.10	34.54	61.21	62.65	43.08	74.00	-30.92	peak
5	10360.000	11.14	37.10	61.44	59.04	45.84	68.20	-22.36	peak
6	p15540.000	13.79	41.10	61.25	59.53	53.17	74.00	-20.83	peak



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Test Mode: 00; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:middle



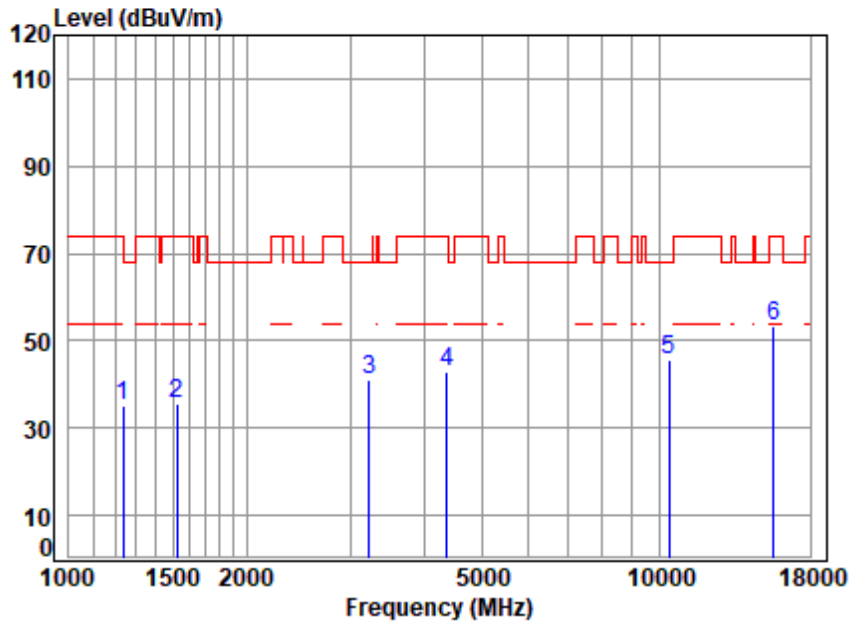
Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 03911AT
 Mode : 5200 TX RSE
 Note : 5G WIFI 11A

	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	1132.340	3.59	23.83	61.36	68.16	34.22	74.00	-39.78	peak
2	1485.841	4.02	26.40	61.48	66.32	35.26	74.00	-38.74	peak
3	3150.237	6.21	32.50	61.63	63.82	40.90	68.20	-27.30	peak
4	4405.090	7.14	34.74	61.20	62.66	43.34	68.20	-24.86	peak
5	10400.000	11.20	37.10	61.44	59.70	46.56	68.20	-21.64	peak
6	15600.000	13.86	41.10	61.24	58.14	51.86	74.00	-22.14	peak



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Test Mode: 00; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:middle



Site : chamber
 Condition: 3m VERTICAL
 Job No : 03911AT
 Mode : 5200 TX RSE
 Note : 5G WIFI 11A

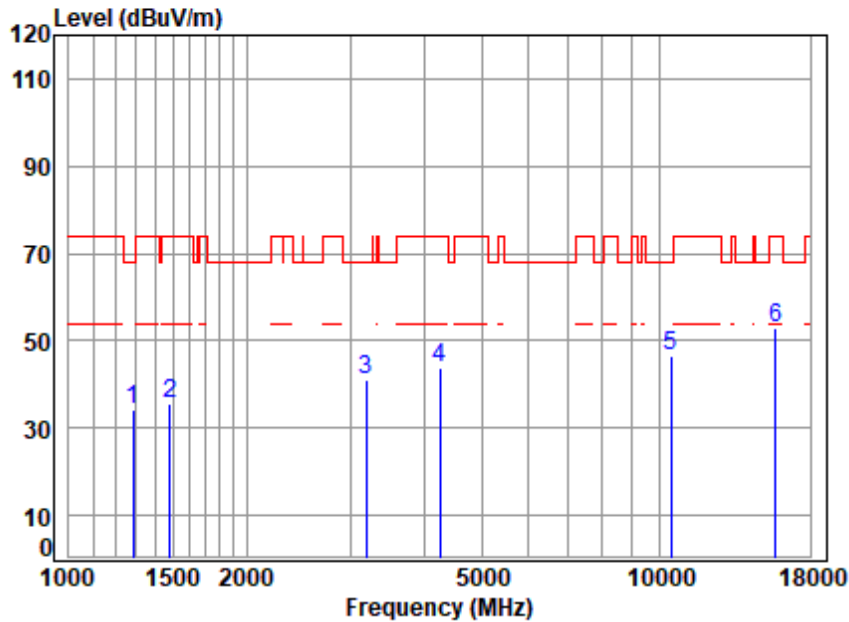
	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1234.909	3.73	24.89	61.40	67.95	35.17	74.00	-38.83	peak
2	1525.000	4.08	26.90	61.49	65.98	35.47	74.00	-38.53	peak
3	3223.928	6.28	32.52	61.60	64.04	41.24	68.20	-26.96	peak
4	4367.058	7.10	34.54	61.21	62.58	43.01	74.00	-30.99	peak
5	10400.000	11.20	37.10	61.44	58.69	45.55	68.20	-22.65	peak
6	p15600.000	13.86	41.10	61.24	59.58	53.30	74.00	-20.70	peak



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Test Mode: 00; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High



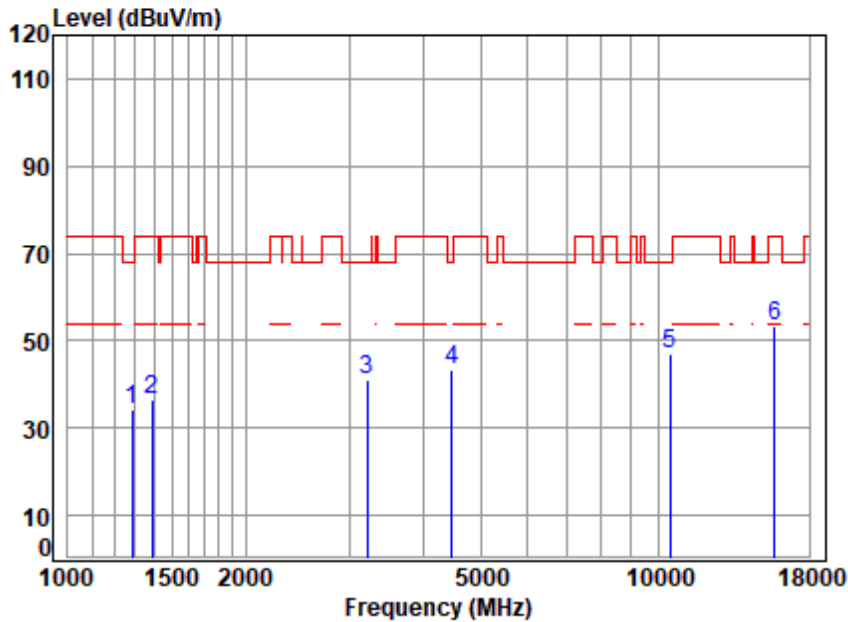
Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 03911AT
 Mode : 5240 TX RSE
 Note : 5G WIFI 11A

	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	1285.904	3.79	24.88	61.42	66.80	34.05	68.20	-34.15	peak
2	1485.841	4.02	26.40	61.48	66.78	35.72	74.00	-38.28	peak
3	3186.869	6.25	32.79	61.62	63.58	41.00	68.20	-27.20	peak
4	4242.641	6.95	33.80	61.27	64.46	43.94	74.00	-30.06	peak
5	10480.000	11.33	37.26	61.44	59.24	46.39	68.20	-21.81	peak
6	p15720.000	14.01	41.22	61.22	58.70	52.71	74.00	-21.29	peak



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Test Mode: 00; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High



Site : chamber
 Condition: 3m VERTICAL
 Job No : 03911AT
 Mode : 5240 TX RSE
 Note : 5G WIFI 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	1285.904	3.79	24.88	61.42	67.02	34.27	68.20	-33.93	peak
2	1390.276	3.92	24.58	61.45	69.26	36.31	74.00	-37.69	peak
3	3214.623	6.27	32.67	61.61	63.67	41.00	68.20	-27.20	peak
4	4469.214	7.22	33.97	61.17	63.38	43.40	68.20	-24.80	peak
5	10480.000	11.33	37.26	61.44	59.86	47.01	68.20	-21.19	peak
6	p15720.000	14.01	41.22	61.22	59.36	53.37	74.00	-20.63	peak



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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: KDB 789033 D02 II G

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.



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7.4.1 E.U.T. Operation

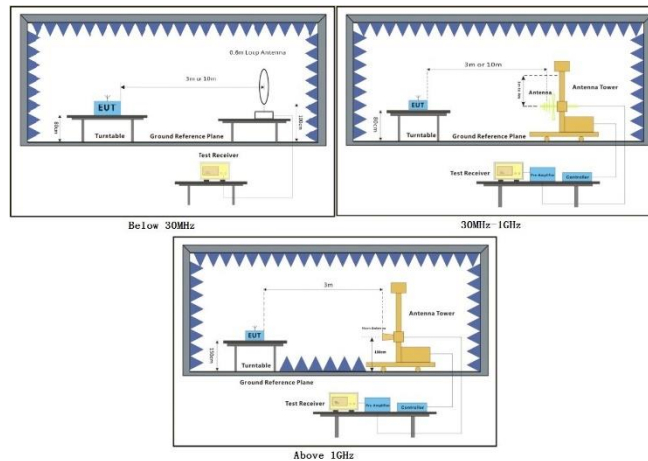
Operating Environment:

Temperature: 24.2 °C Humidity: 57.7 % RH Atmospheric Pressure: 1020 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a, Only the data of worst case is recorded in the report.

7.4.3 Test Setup Diagram



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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.

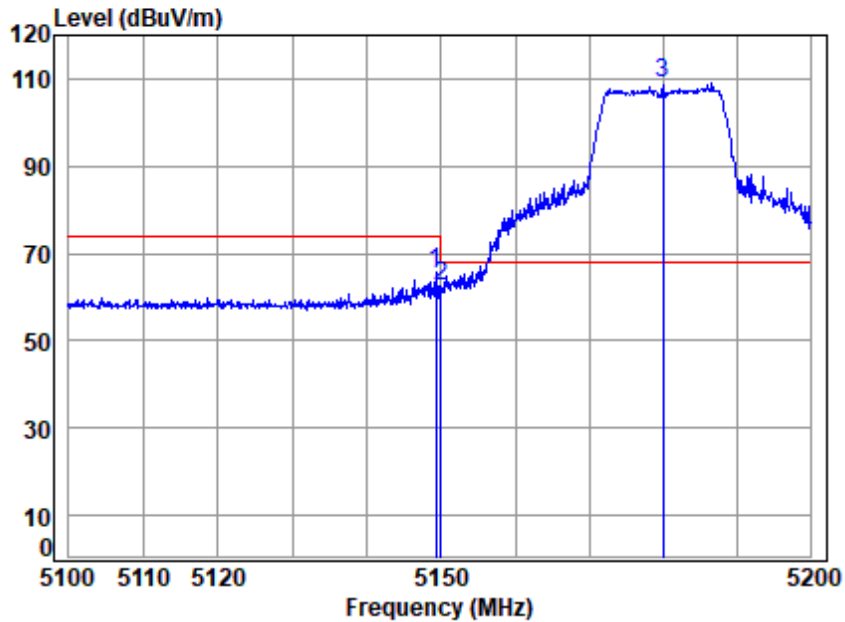
Remark 3. For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle<98%) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.



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Test Mode: 00; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 03911AT
 Mode : 5180 Band edge
 : 5G WIFI 11A

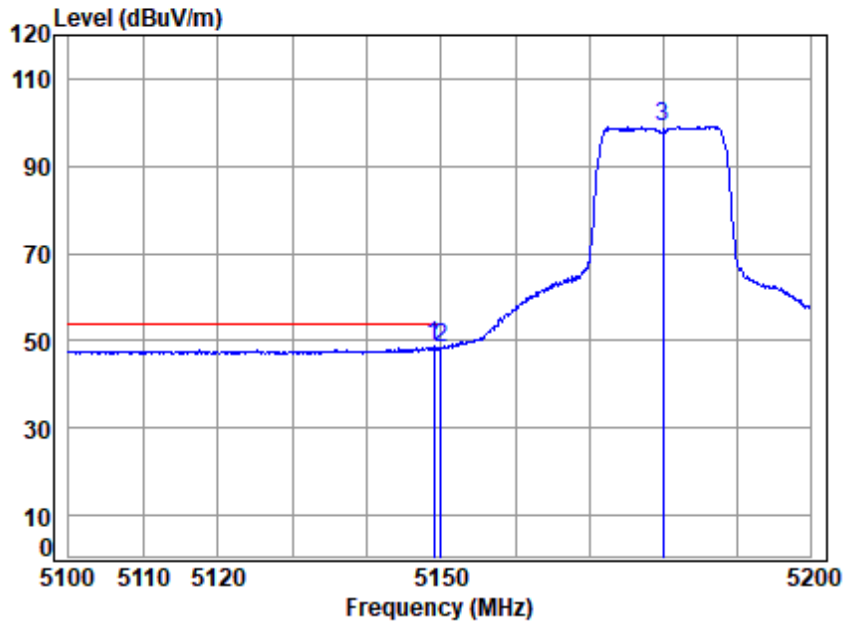
	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	5149.257	18.83	33.90	31.28	44.23	65.68	74.00	-8.32 peak
2	5149.980	18.83	33.90	31.28	41.14	62.59	74.00	-11.41 peak
3 p	5180.000	18.88	33.96	31.30	87.44	108.98	68.20	40.78 peak



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Test Mode: 00; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 03911AT
 Mode : 5180 Band edge
 : 5G WIFI 11A

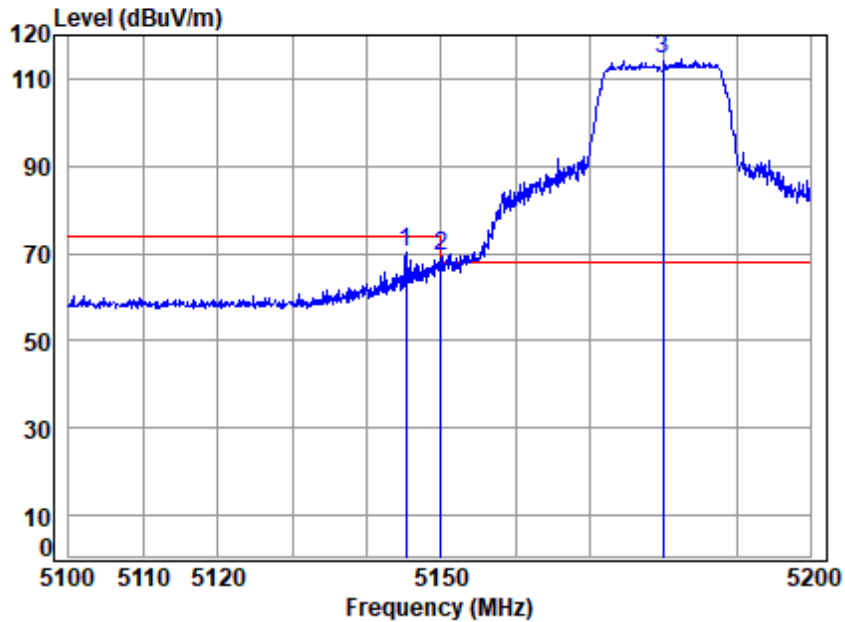
		Cable	Ant	Preamp	Read	Limit	Over		
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	q 5149.057	18.83	33.90	31.28	27.37	48.82	54.00	-5.18	Average
2	5149.980	18.83	33.90	31.28	27.09	48.54	54.00	-5.46	Average
3	5180.000	18.88	33.96	31.30	77.53	99.07	-----	-----	Average



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Test Mode: 00; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



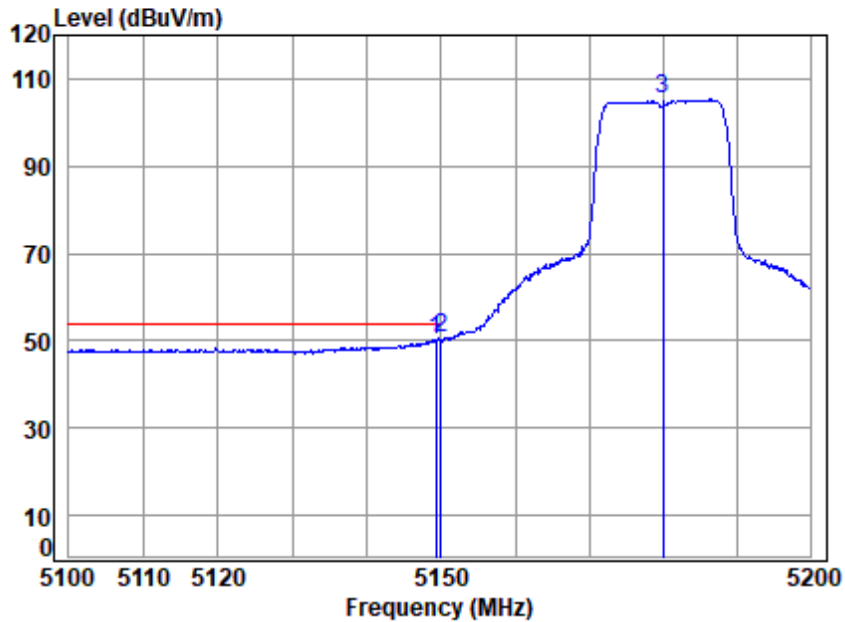
Site : chamber
 Condition: 3m VERTICAL
 Job No : 03911AT
 Mode : 5180 Band edge
 : 5G WIFI 11A

	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	5145.259	18.83	33.91	31.28	48.87	70.33	74.00	-3.67	Peak
2	5149.980	18.83	33.90	31.28	47.70	69.15	74.00	-4.85	Peak
3 p	5180.000	18.88	33.96	31.30	93.10	114.64	68.20	46.44	Peak



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Test Mode: 00; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low



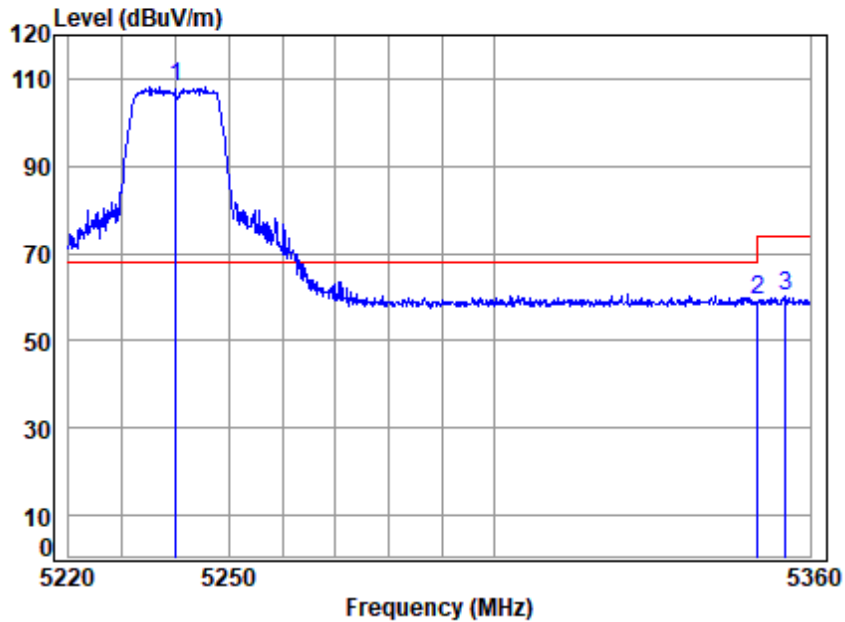
Site : chamber
 Condition: 3m VERTICAL
 Job No : 03911AT
 Mode : 5180 Band edge
 : 5G WIFI 11A

		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	5149.257	18.83	33.90	31.28	28.82	50.27	54.00	-3.73	Average
2 q	5149.980	18.83	33.90	31.28	29.17	50.62	54.00	-3.38	Average
3	5180.000	18.88	33.96	31.30	83.76	105.30	-----	-----	Average



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Test Mode: 00; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High



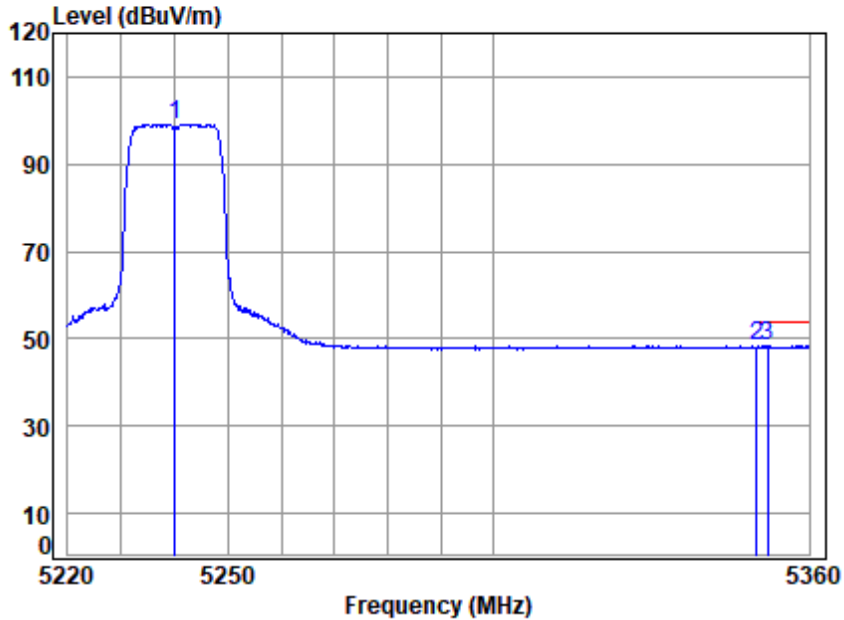
Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 03911AT
 Mode : 5240 Band edge
 : 5G WIFI 11A

		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 p 5240.000	18.96	34.08	31.33	86.59	108.30	68.20	40.10	peak
2 5350.020	19.11	34.40	31.39	37.09	59.21	74.00	-14.79	peak
3 5355.321	19.12	34.42	31.39	38.07	60.22	74.00	-13.78	peak



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Test Mode: 00; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High



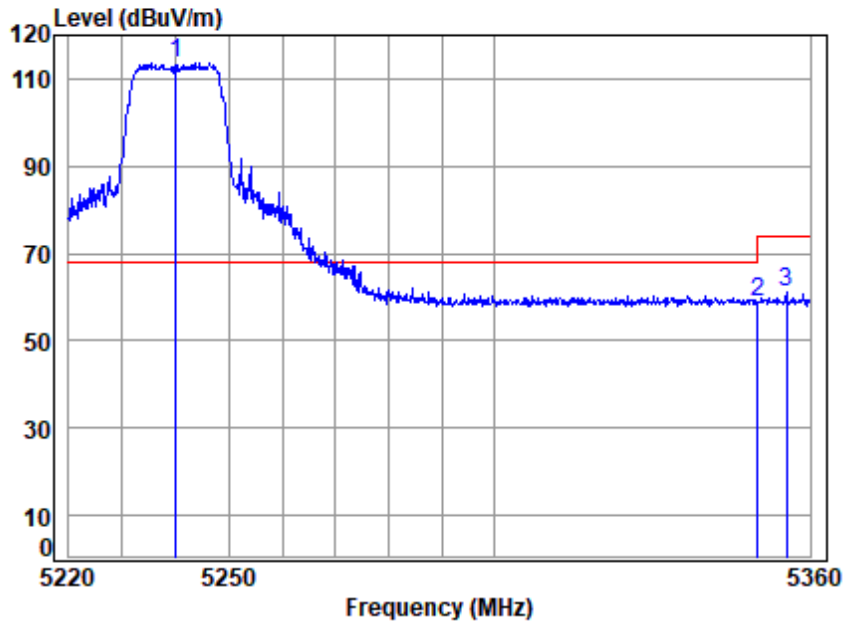
Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 03911AT
 Mode : 5240 Band edge
 : 5G WIFI 11A

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5240.000	18.96	34.08	31.33	77.52	99.23	-----	-----	Average
2	5350.020	19.11	34.40	31.39	26.20	48.32	54.00	-5.68	Average
3 q	5352.062	19.11	34.41	31.39	26.27	48.40	54.00	-5.60	Average



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Test Mode: 00; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High



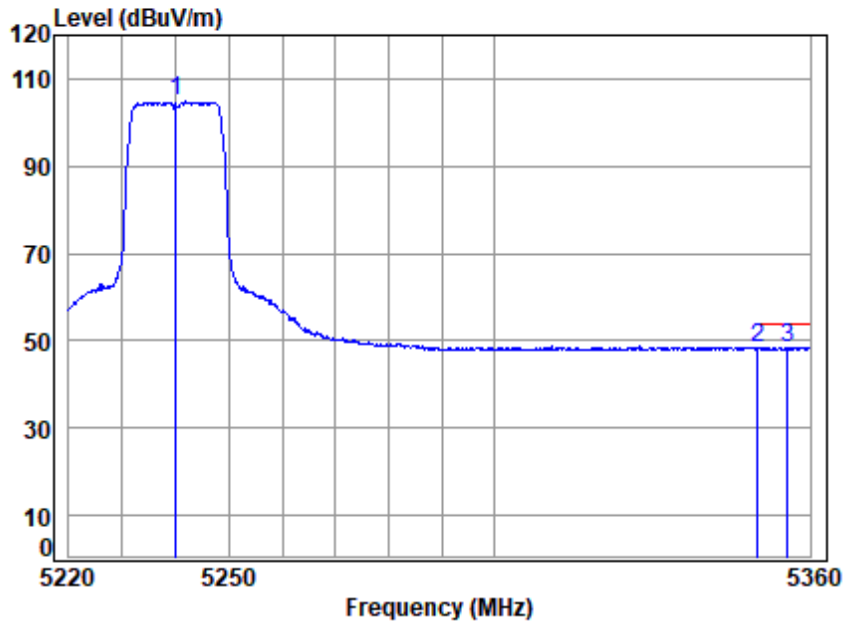
Site : chamber
 Condition: 3m VERTICAL
 Job No : 03911AT
 Mode : 5240 Band edge
 : 5G WIFI 11A

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 p	5240.000	18.96	34.08	31.33	92.05	113.76	68.20	45.56 Peak
2	5350.020	19.11	34.40	31.39	36.73	58.85	74.00	-15.15 Peak
3	5355.462	19.12	34.42	31.39	38.86	61.01	74.00	-12.99 Peak



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 中国·广东·深圳市南山区科技园中区M-10栋1号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

Test Mode: 00; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High



Site : chamber
 Condition: 3m VERTICAL
 Job No : 03911AT
 Mode : 5240 Band edge
 : 5G WIFI 11A

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5240.000	18.96	34.08	31.33	83.08	104.79	-----	-----	Average
2	5350.020	19.11	34.40	31.39	26.15	48.27	54.00	-5.73	Average
3 q	5355.604	19.12	34.42	31.39	26.27	48.42	54.00	-5.58	Average



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7.5 Duty Cycle

Test Requirement KDB 789033 D02 II B 1
 Test Method: KDB 789033 D02 II B 1

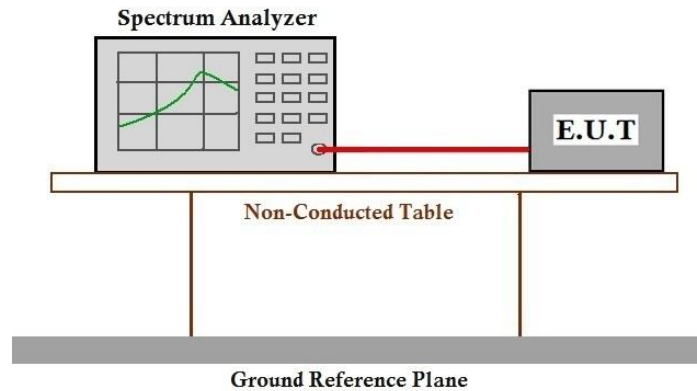
7.5.1 E.U.T. Operation

Operating Environment:
 Temperature: 23.8 °C Humidity: 38.1 % RH Atmospheric Pressure: 1020 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a, 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 N/A
 Test Method: KDB 789033 D02 II D

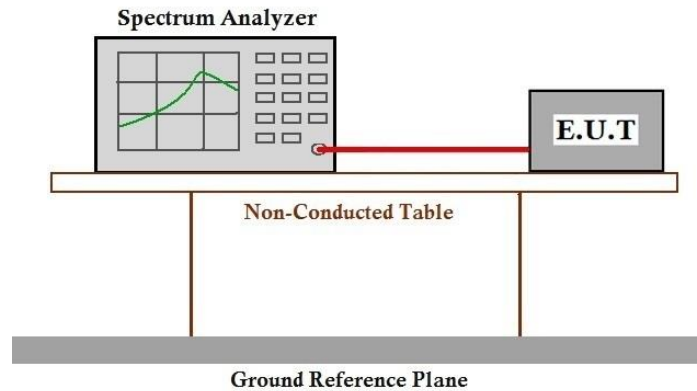
7.6.1 E.U.T. Operation

Operating Environment:
 Temperature: 23.8 °C Humidity: 38.1 % RH Atmospheric Pressure: 1020 mbar

7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a, 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: KDB 789033 D02 II C 1

7.7.1 E.U.T. Operation

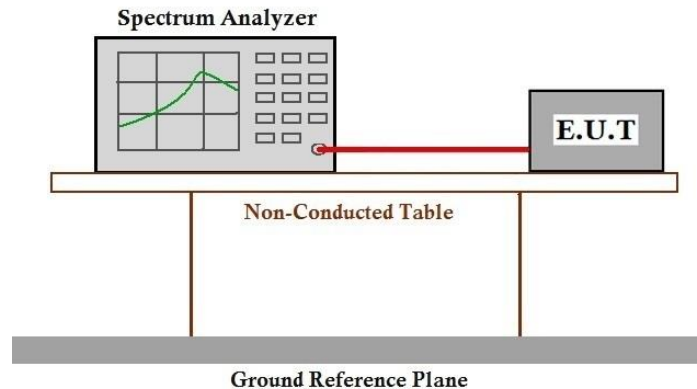
Operating Environment:

Temperature: 23.8 °C Humidity: 38.1 % RH Atmospheric Pressure: 1020 mbar

7.7.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a, 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 Peak Power spectrum density

Test Requirement 47 CFR Part 15, Subpart E 15.407 (a)
 Test Method: KDB 789033 D02 II F

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.

7.8.1 E.U.T. Operation

Operating Environment:

Temperature: 23.8 °C Humidity: 38.1 % RH Atmospheric Pressure: 1020 mbar

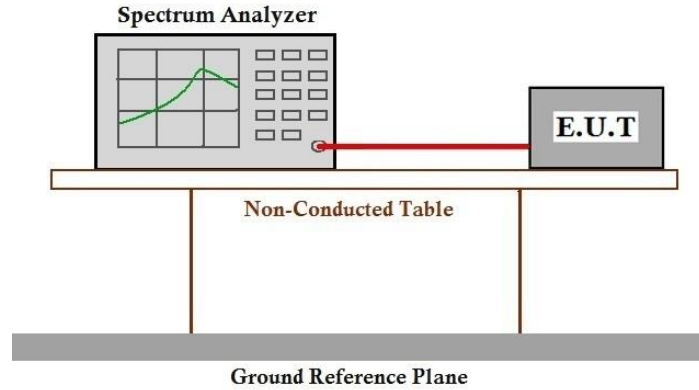
7.8.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a, Only the data of worst case is recorded in the report.



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7.8.3 Test Setup Diagram



7.8.4 Measurement Procedure and Data

Please Refer to Appendix for Details



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7.9 Frequency Stability

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

Test Method: ANSI C63.10 (2013) Section 6.8

7.9.1 E.U.T. Operation

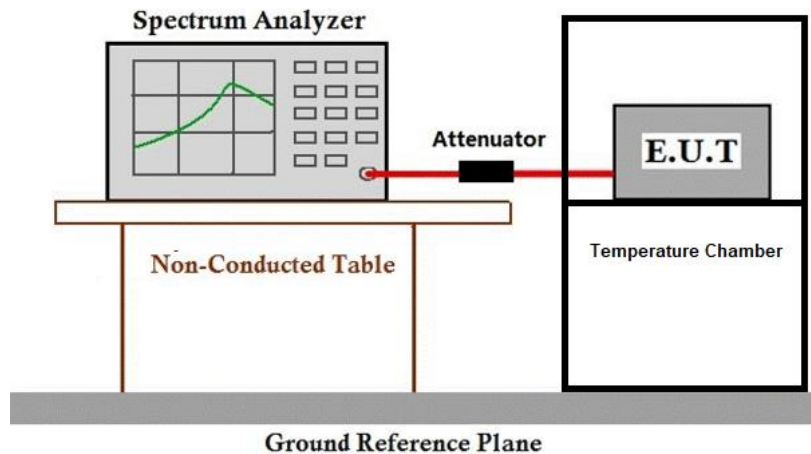
Operating Environment:

Temperature: 23.8 °C Humidity: 38.1 % RH Atmospheric Pressure: 1020 mbar

7.9.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a, Only the data of worst case is recorded in the report.

7.9.3 Test Setup Diagram



7.9.4 Measurement Procedure and Data

Please Refer to Appendix for Details



8 Test Setup Photo

Refer to Appendix - Test Setup Photo for SZCR2410003911AT

9 EUT Constructional Details (EUT Photos)

Refer to Appendix – External and Internal Photos for SZCR2410003911AT



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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	2.728	2.774	98.34	0.07	0.46
		5200	2.729	2.775	98.34	0.07	0.07
		5240	2.728	2.774	98.34	0.07	0.00

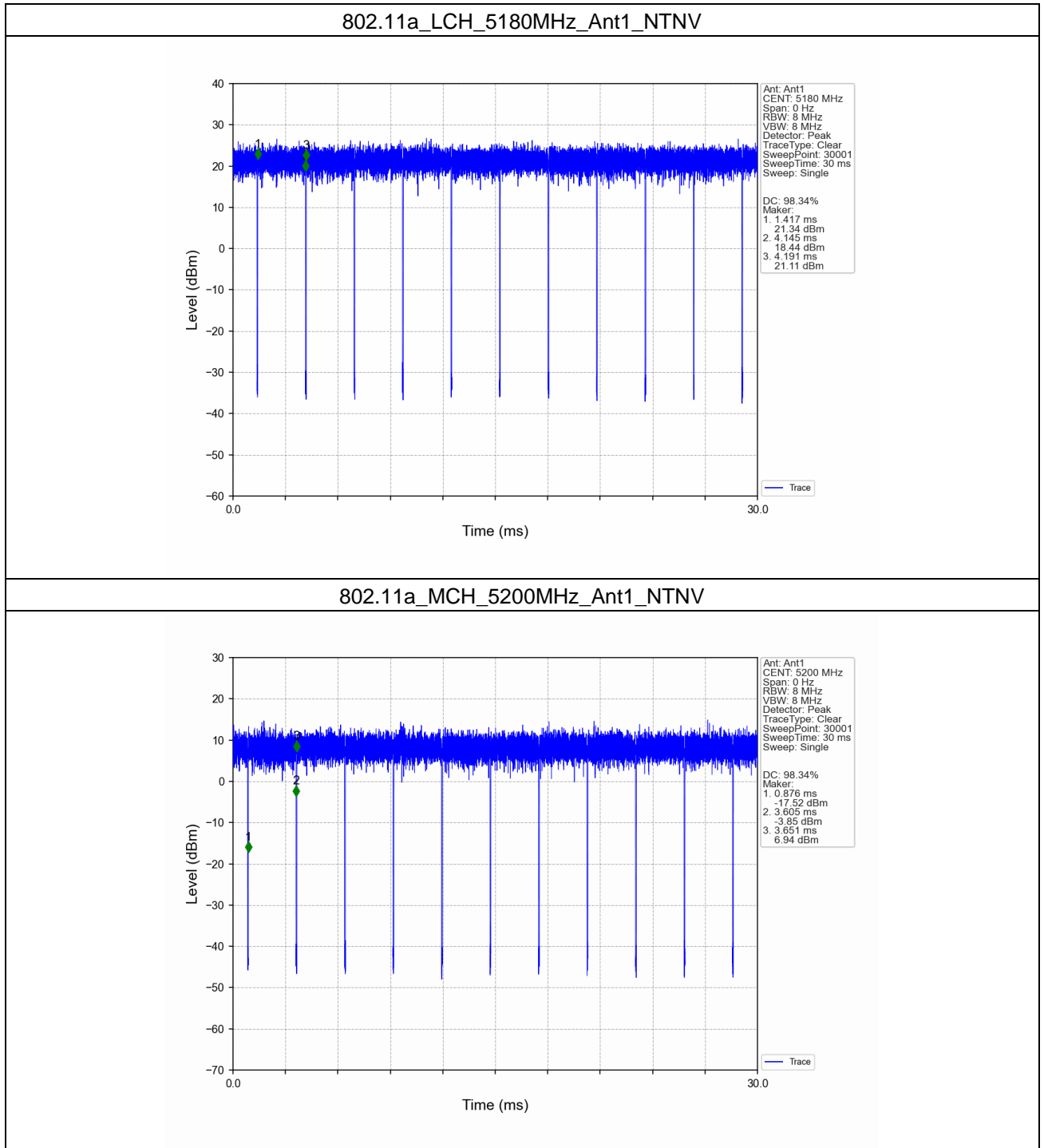


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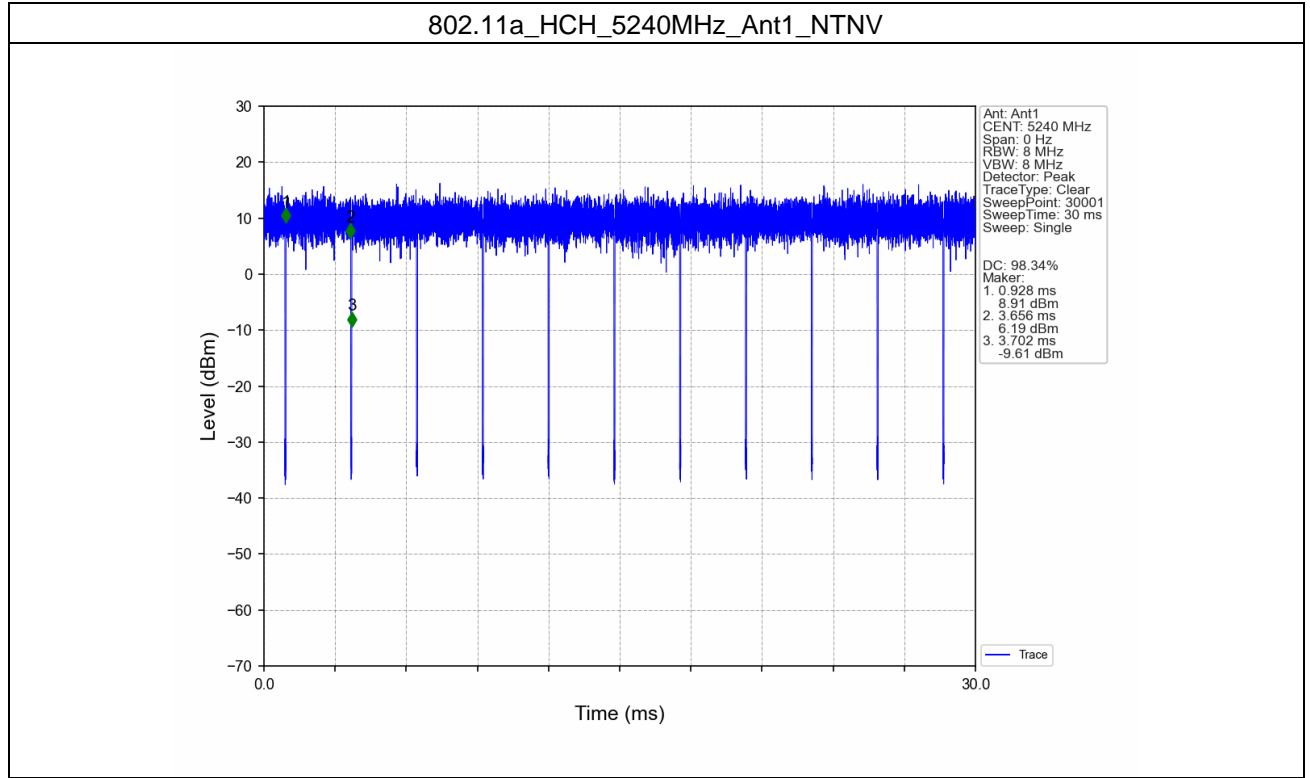
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1.2 Test Graph

1.2.1 Ant1



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2. Bandwidth

2.1 Test Result

2.1.1 OBW

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	17.543	/	Pass
		5200	1	17.099	/	Pass
		5240	1	17.129	/	Pass

2.1.2 26dB BW

Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	24.524	/	Pass
		5200	1	19.380	/	Pass
		5240	1	19.271	/	Pass

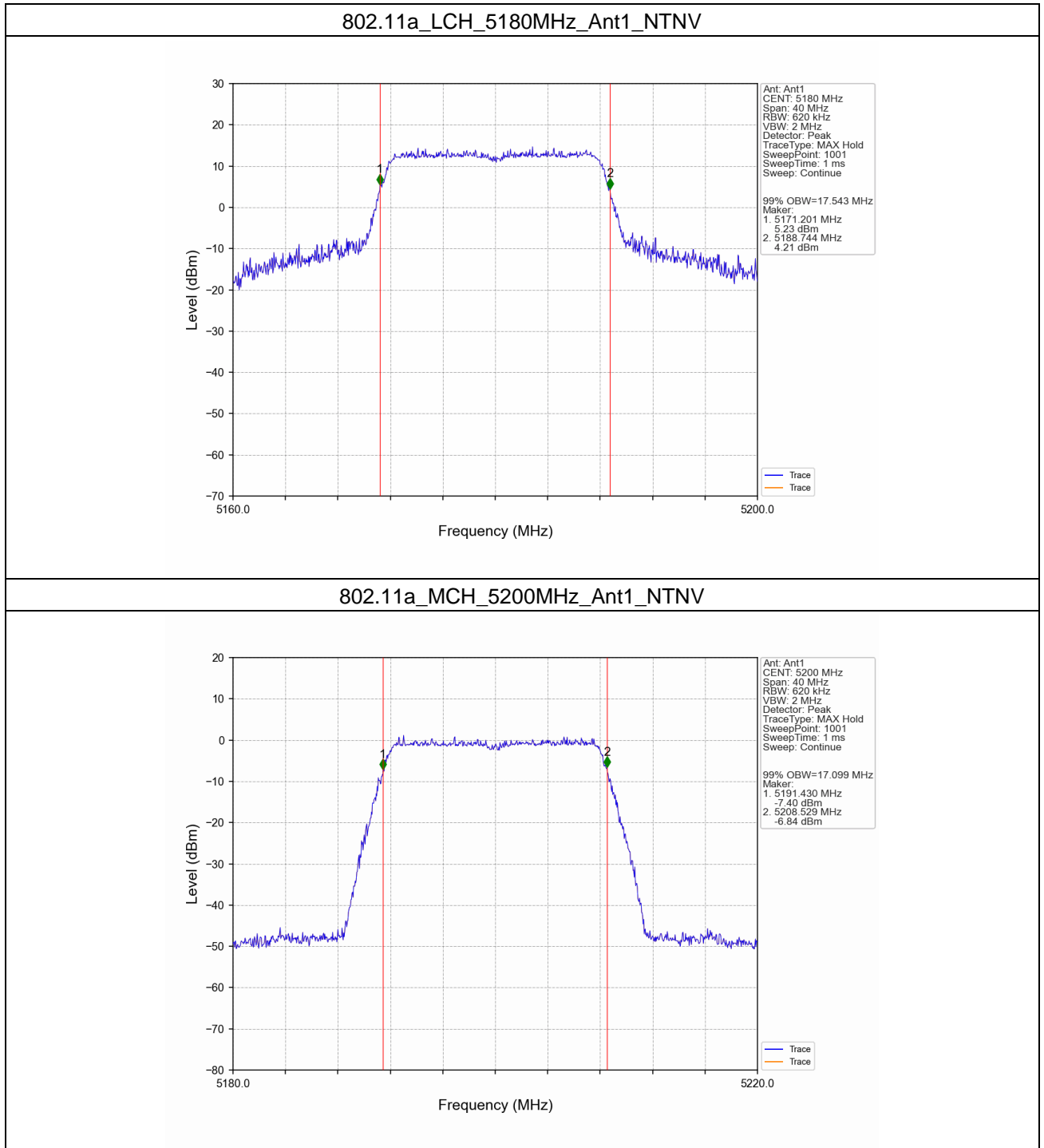


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2.2 Test Graph

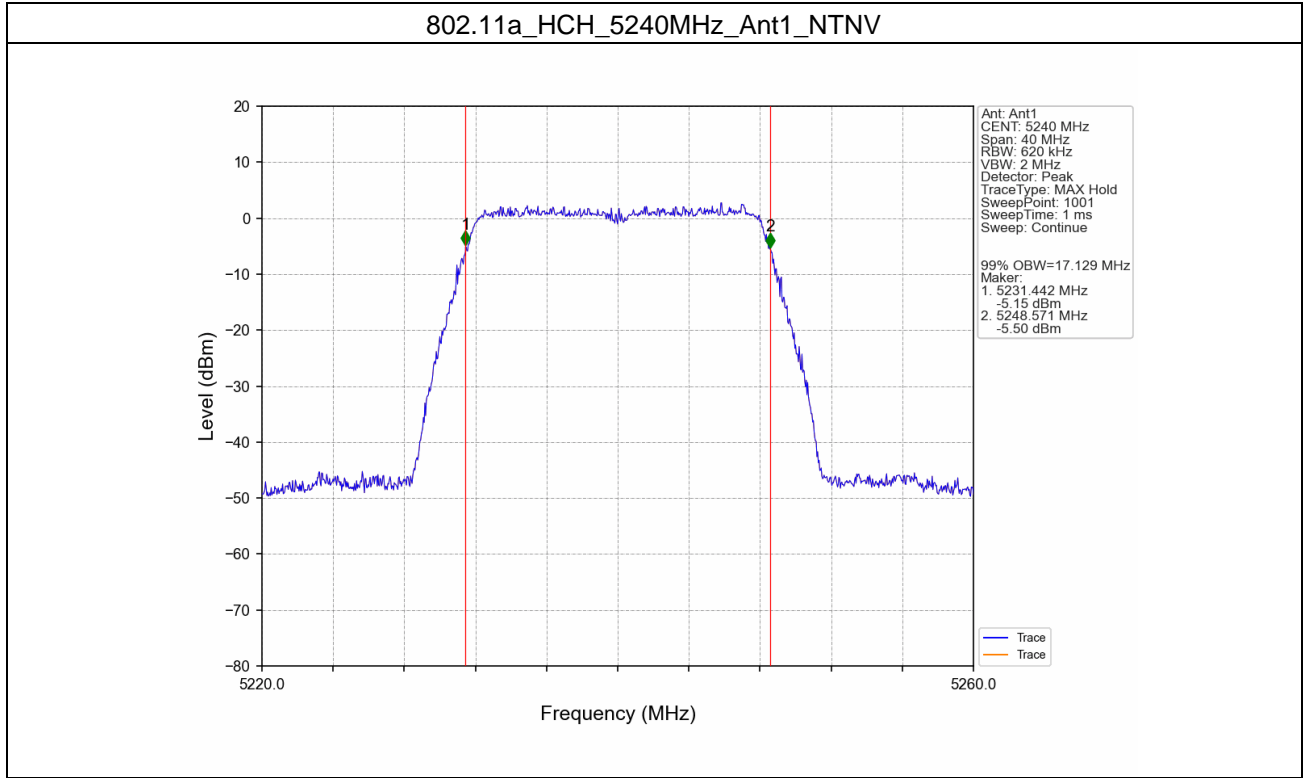
2.2.1 OBW



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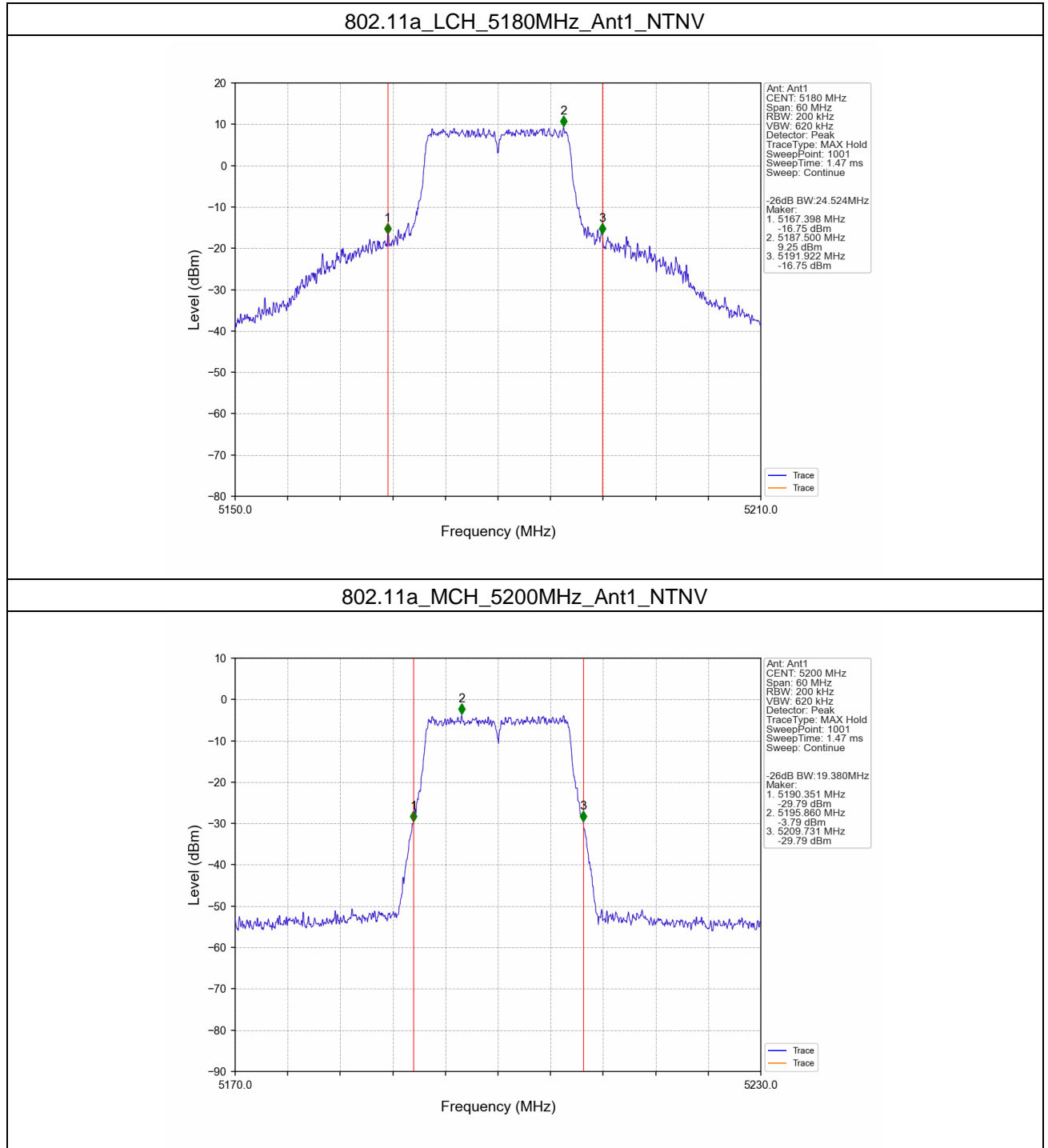
802.11a_HCH_5240MHz_Ant1_NTNV



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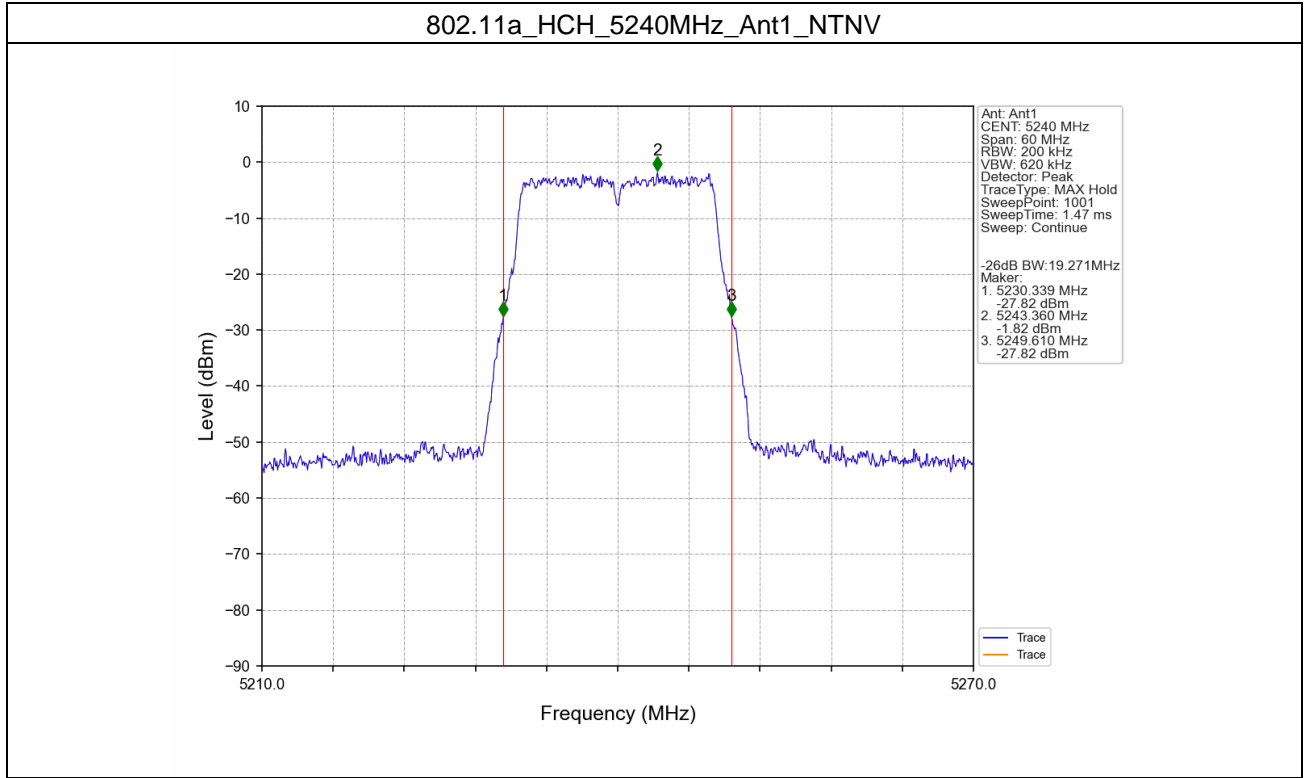
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2.2.2 26dB BW



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802.11a_HCH_5240MHz_Ant1_NTNV



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3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	6.85	<=23.98	Pass
		5200	6.66	<=23.98	Pass
		5240	7.28	<=23.98	Pass



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4. Maximum Power Spectral Density

4.1 Test Result

4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/MHz)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	-4.50	<=11	Pass
		5200	-4.85	<=11	Pass
		5240	-4.02	<=11	Pass

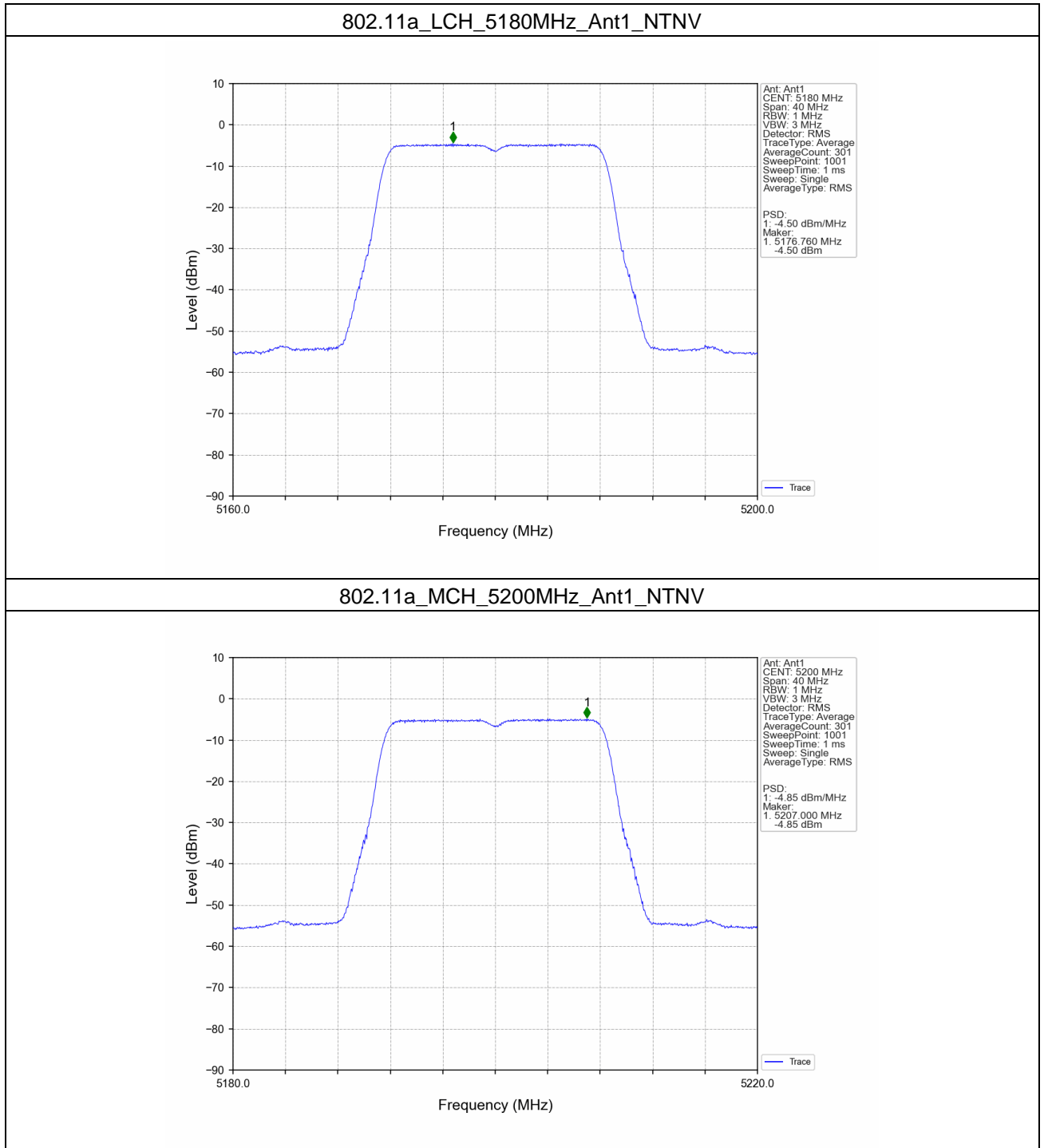


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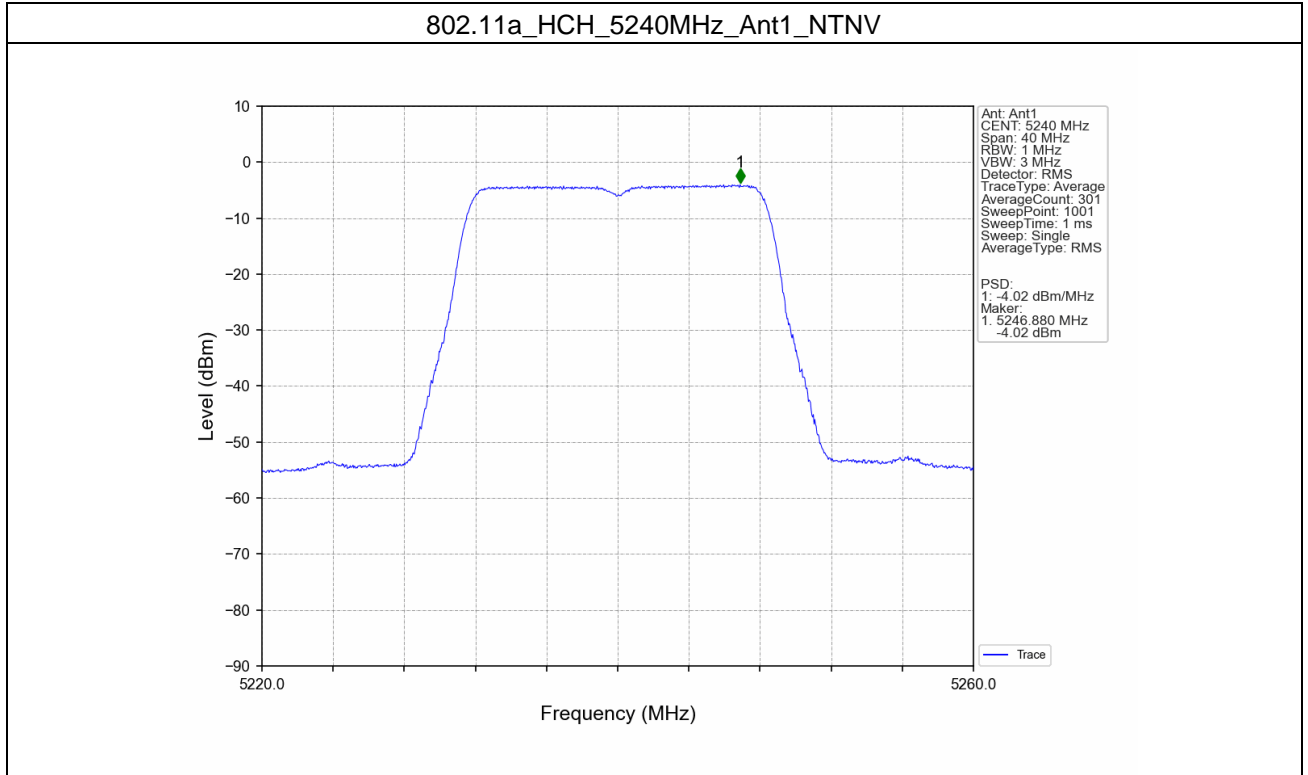
4.2 Test Graph

4.2.1 PSD



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802.11a_HCH_5240MHz_Ant1_NTNV



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5. Frequency Stability

5.1 Test Result

5.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	Temperature (°C)	Voltage (VDC)	Measured Frequency (MHz)	Limit (MHz)	Verdict
802.11a	SISO	5180	20	6.29	5180.040	5150 to 5250	Pass
				7.4	5180.060	5150 to 5250	Pass
				8.51	5180.000	5150 to 5250	Pass
			-30	7.4	5180.000	5150 to 5250	Pass
				7.4	5179.980	5150 to 5250	Pass
			-20	7.4	5180.020	5150 to 5250	Pass
				7.4	5179.980	5150 to 5250	Pass
			0	7.4	5180.020	5150 to 5250	Pass
				7.4	5179.980	5150 to 5250	Pass
			10	7.4	5180.000	5150 to 5250	Pass
		7.4		5179.980	5150 to 5250	Pass	
		5200	20	6.29	5200.000	5150 to 5250	Pass
				7.4	5199.960	5150 to 5250	Pass
				8.51	5200.020	5150 to 5250	Pass
			-30	7.4	5199.980	5150 to 5250	Pass
				7.4	5199.920	5150 to 5250	Pass
			-20	7.4	5199.980	5150 to 5250	Pass
				7.4	5200.020	5150 to 5250	Pass
			0	7.4	5200.000	5150 to 5250	Pass
				7.4	5200.000	5150 to 5250	Pass
			10	7.4	5199.980	5150 to 5250	Pass
		7.4		5200.000	5150 to 5250	Pass	
		5240	20	6.29	5239.960	5150 to 5250	Pass
				7.4	5239.980	5150 to 5250	Pass
				8.51	5239.960	5150 to 5250	Pass
			-30	7.4	5240.020	5150 to 5250	Pass
				7.4	5240.020	5150 to 5250	Pass
			-20	7.4	5240.020	5150 to 5250	Pass
				7.4	5240.020	5150 to 5250	Pass
			-10	7.4	5240.020	5150 to 5250	Pass
7.4	5240.040			5150 to 5250	Pass		
10	7.4		5239.980	5150 to 5250	Pass		



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			30	7.4	5240.020	5150 to 5250	Pass
			40	7.4	5240.040	5150 to 5250	Pass
			50	7.4	5239.960	5150 to 5250	Pass

- End of the Report -



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Shenzhen Branch (SZEMC) Laboratory

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