

TEST REPORT

Application No.: SZCR2306001904AT
Applicant: Harman International Industries, Inc.
Address of Applicant: 8500 Balboa Boulevard, Northridge, California, 91329, United States
Manufacturer: Harman International Industries, Inc.
Address of Manufacturer: 8500 Balboa Boulevard, Northridge, California, 91329, United States
Factory: Guangzhou Panyu Juda Car Audio Equipment Co., Ltd
Address of Factory: NO.5 Building, No.139, Zhouxing Street, Dongchong Town, Nansha District, Guangzhou City, Guangdong Province, China

Equipment Under Test (EUT):

EUT Name: Smart Speaker
Model No.: VIRTUO
Trade Mark: harman/kardon
Standard(s) : 47 CFR Part 15, Subpart E 15.407
Date of Receipt: 2023-06-16
Date of Test: 2023-06-19 to 2023-06-21
Date of Issue: 2023-06-25

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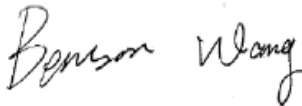
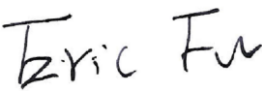
* In the configuration tested, the EUT complied with the standards specified above.



Keny Xu
EMC Laboratory Manager



Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2023-06-25		Original

Authorized for issue by:			
			
		Benson Wang/Project Engineer	
			
		Eric Fu/Reviewer	



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 (2013) Section 6.2	47 CFR Part 15, Subpart C 15.207 & Subpart E 15.407 b(9)	Pass
Duty Cycle		KDB 789033 II B 1	KDB 789033 D02 II B 1	Pass
99% Bandwidth		KDB 789033 II D	N/A	Pass
26dB Emission bandwidth		KDB 789033 D02 II C 1	47 CFR Part 15, Subpart E 15.407 (a)	Pass
Minimum 6 dB bandwidth (5.725-5.85 GHz band)		KDB 789033 D02 II C 2	47 CFR Part 15, Subpart E 15.407 (e)	Pass
Maximum Conducted output power		KDB 789033 D02 II E	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
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
Frequency Stability		ANSI C63.10 (2013) Section 6.8	47 CFR Part 15, Subpart E 15.407 (g)	Pass
Radiated Emissions (Below 1GHz)		KDB 789033 D02 II G	47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)	Pass

Note:

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.



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4 General Information

4.1 Details of E.U.T.

Power supply:	AC 100-240 V, 50/60 Hz, 45 W
Cable(s):	AC mains ports with unshielded cables (2m) Aux in ports LAN ports Type C ports
Test Voltage:	AC 120 V, 60 Hz
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) U-NII-1: 5190-5230MHz (2 Channels);
Operation Frequency /Number of channels (40MHz):	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 (64QAM, 16QAM, QPSK, BPSK); 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM); 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM); 802.11ax: OFDMA (BPSK, QPSK, 16QAM, 64QAM, 256QAM) 802.11a/n(HT20)/ac(VHT20)/ax(HEW20): 20MHz;
Channel Spacing:	802.11n(HT40)/ac(VHT40)/ax(HEW40): 40MHz; 802.11ac(VHT80)/ax(HEW80): 80MHz
DFS Function:	Slave without Radar detection
TPC Function:	Without TPC function
Antenna Type:	Integral Antenna
Antenna Gain:	2.85 dBi for antenna 0, 2.92 dBi for antenna 1
Remark:	Two antennas can simultaneous transmission
Antenna Number:	2

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.
Note Book Computer	LENOVO	ThinkPad T490	PF1D1MVJ



4.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Emissions at AC Power Line (150kHz-30MHz)	± 3.0dB (150kHz to 30MHz)
Duty Cycle	± 0.37%
99% Bandwidth	± 3%
26dB Emission bandwidth	± 3%
Minimum 6 dB bandwidth (5.725-5.85 GHz band)	± 3%
Maximum Conducted output power	± 0.75dB
Peak Power spectrum density	± 2.84dB
Radiated Emissions (Above 1GHz)	± 4.8dB
Radiated Emissions which fall in the restricted bands	± 4.5dB (below 1GHz); ± 4.8dB (above 1GHz);
Frequency Stability	± 7.25 x 10 ⁻⁸
Radiated Emissions (Below 1GHz)	± 4.5dB
<p>Remark:</p> <p>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.</p>	

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.

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.

- **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

Conducted Emissions at AC Power Line (150kHz-30MHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Due Date
Shielding Room	HongYu Electron	GB-88	EM001-06	22-05-14	2025-05-13
EMI Test Receiver	Rohde&Schwarz	ESCI	SEM004-02	2023-03-20	2024-03-19
Matching Pad	N/A	N/A	SEM021-23	2023-03-22	2024-03-21
Matching Pad	N/A	N/A	SEM021-24	2023-03-22	2024-03-21
Measurement Software	AUDIX	e3 V8.2014-6-27a	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM024-01	2022-07-08	2023-07-07
LISN	Rohde&Schwarz	ENV216	SEM007-01	2022-09-20	2023-09-19
LISN	ETS-LINDGREN	3816/2	SEM007-02	2023-03-20	2024-03-19

Duty Cycle					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
DC Power Supply	Chroma	62012P-80-60	SEM011-11	2022-10-20	2023-10-19
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-19	2023-03-21	2024-03-20
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2022-09-29	2023-09-28
Measurement Software	TST PASS	TST PASS V2.0	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-01	2022-07-08	2023-07-07
Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2022-04-01 2023-03-31	2023-03-31 2024-03-30
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2023-03-21	2024-03-20

99% Bandwidth					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
DC Power Supply	Chroma	62012P-80-60	SEM011-11	2022-10-20	2023-10-19
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-19	2023-03-21	2024-03-20
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2022-09-29	2023-09-28
Measurement Software	TST PASS	TST PASS V2.0	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-01	2022-07-08	2023-07-07
Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2022-04-01 2023-03-31	2023-03-31 2024-03-30
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2023-03-21	2024-03-20



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26dB Emission bandwidth					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
DC Power Supply	Chroma	62012P-80-60	SEM011-11	2022-10-20	2023-10-19
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-19	2023-03-21	2024-03-20
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2022-09-29	2023-09-28
Measurement Software	TST PASS	TST PASS V2.0	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-01	2022-07-08	2023-07-07
Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2022-04-01 2023-03-31	2023-03-31 2024-03-30
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2023-03-21	2024-03-20

Minimum 6 dB bandwidth (5.725-5.85 GHz band)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
DC Power Supply	Chroma	62012P-80-60	SEM011-11	2022-10-20	2023-10-19
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-19	2023-03-21	2024-03-20
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2022-09-29	2023-09-28
Measurement Software	TST PASS	TST PASS V2.0	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-01	2022-07-08	2023-07-07
Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2022-04-01 2023-03-31	2023-03-31 2024-03-30
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2023-03-21	2024-03-20

Maximum Conducted output power					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
DC Power Supply	Chroma	62012P-80-60	SEM011-11	2022-10-20	2023-10-19
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-19	2023-03-21	2024-03-20
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2022-09-29	2023-09-28
Measurement Software	TST PASS	TST PASS V2.0	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-01	2022-07-08	2023-07-07
Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2022-04-01 2023-03-31	2023-03-31 2024-03-30
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2023-03-21	2024-03-20
Power Sensor	TST PASS	TSPS2023R	SEM009-26	2022-04-02 2023-04-01	2023-04-01 2024-03-31
Power Sensor	KEYSIGHT	U2021XA	SEM009-16	2023-03-21	2024-03-20



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Peak Power spectrum density					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
DC Power Supply	Chroma	62012P-80-60	SEM011-11	2022-10-20	2023-10-19
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-19	2023-03-21	2024-03-20
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2022-09-29	2023-09-28
Measurement Software	TST PASS	TST PASS V2.0	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-01	2022-07-08	2023-07-07
Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2022-04-01 2023-03-31	2023-03-31 2024-03-30
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2023-03-21	2024-03-20

Radiated Emissions (Above 1GHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2022-04-02	2025-04-01
Signal Analyzer	Rohde & Schwarz	FSV40	SEM008-04	2023-03-20	2024-03-19
Horn Antenna	Rohde&Schwarz	HF907	SEM003-07	2022-07-24	2024-07-23
Microwave system amplifier	Agilent	83017A	SEM005-25	2022-09-21	2023-09-20
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2022-07-08	2023-07-07

Radiated Emissions which fall in the restricted bands					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2022-04-02	2025-04-01
Signal Analyzer	Rohde & Schwarz	FSV40	SEM008-04	2023-03-20	2024-03-19
Horn Antenna	Rohde&Schwarz	HF907	SEM003-07	2022-07-24	2024-07-23
Microwave system amplifier	Agilent	83017A	SEM005-25	2022-09-21	2023-09-20
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2022-07-08	2023-07-07



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Frequency Stability					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
DC Power Supply	Chroma	62012P-80-60	SEM011-11	2022-10-20	2023-10-19
MXA Signal Analyzer	KEYSIGHT	N9020A	SEM004-19	2023-03-21	2024-03-20
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2022-09-29	2023-09-28
Measurement Software	TST PASS	TST PASS V2.0	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-01	2022-07-08	2023-07-07
Attenuator	Huber+Suhner	6620_SMA-50-1	SEM021-09	2022-04-01 2023-03-31	2023-03-31 2024-03-30
Programmable Temperature & Humidity Chamber	Votsch Industrietechnik GmbH	VT 4002	SEM002-15	2023-03-21	2024-03-20

Radiated Emissions (Below 1GHz)					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2020-07-19	2023-07-18
MXE EMI Receiver	Agilent Technologies	N9038A	SEM004-15	2022-10-20	2023-10-19
BiConiLog Antenna	ETS-LINDGREN	3142C	SEM003-01	2021-09-17	2023-09-16
Pre-Amplifier	Agilent Technologies	8447D	SEM005-01	2023-03-20	2024-03-19
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM025-01	2022-07-08	2023-07-07
Loop Antenna	ETS-Lindgren	6502	SEM003-08	2021-11-30	2023-11-29

General used equipment					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	Mingle	N/A	SEM002-08	2022-09-04	2023-09-03
Humidity/ Temperature Indicator	Anymetre	TH101B	SEM002-09	2022-09-04	2023-09-03
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2023-03-23	2024-03-22



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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

Standard 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 an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit permanently attached antenna or of an 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 1: 2.85dBi; Antenna 2: 2.92dBi; the directional gain is 5.89 dBi.

Antenna location: Refer to internal photo.

$$\text{Directional gain} = 10 \log \left[\left(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20} \right)^2 / N_{\text{ANT}} \right] \text{ dBi}$$

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 (2013) Section 6.2

Limit:

Frequency of emission(MHz)	Conducted limit(dBμV)	
	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: 24.9 °C Humidity: 50.6 % RH Atmospheric Pressure: 1008 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Pre-scan	05	<p>TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80), data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.</p> <p>TX mode (U-NII-2A)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80), data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.</p>
Final test	06	



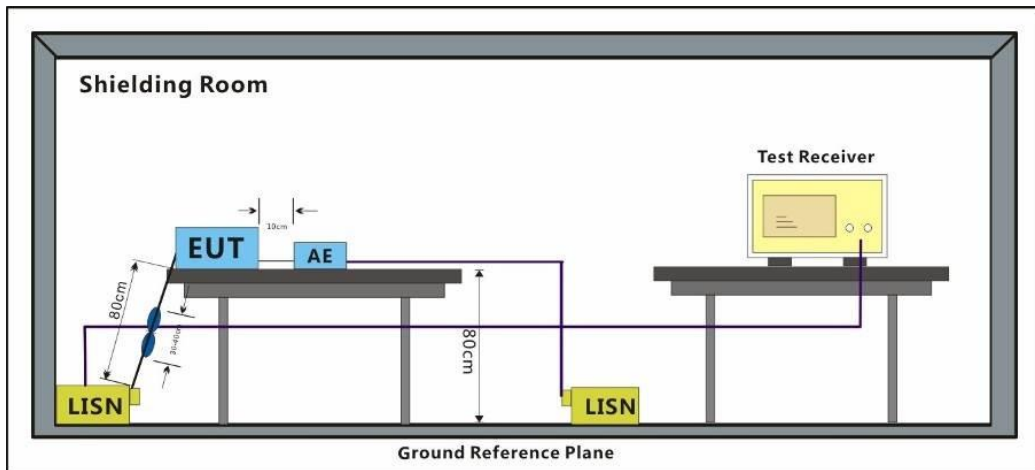
Pre-scan 07

TX mode (U-NII-2C)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.

Pre-scan 08

TX mode (U-NII-3)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.

7.1.3 Test Setup Diagram



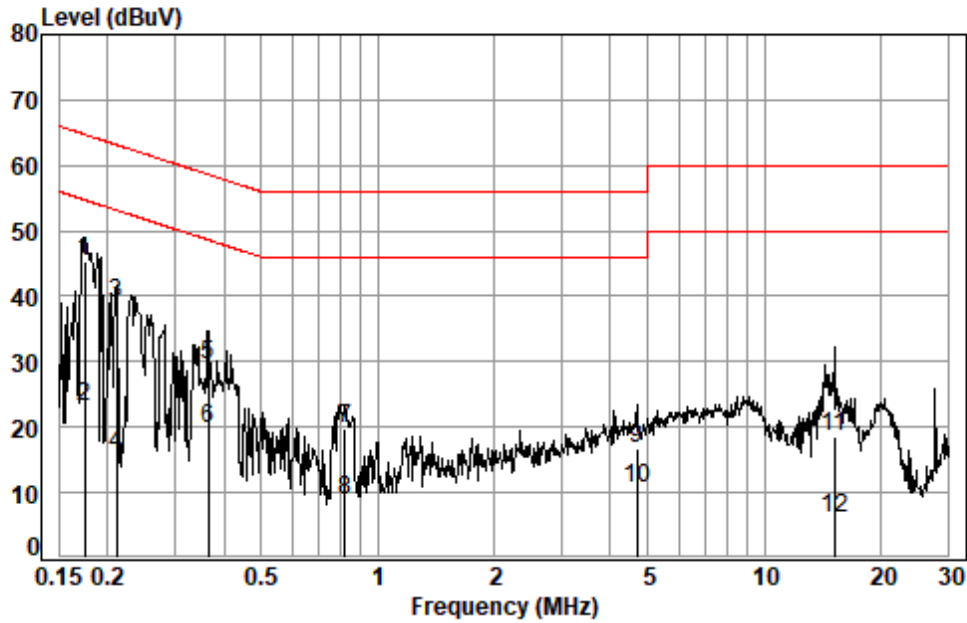
7.1.4 Measurement Procedure and Data

- 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: Level=Read Level+ Cable Loss+ LISN Factor



Test Mode: 06; Line: Live line

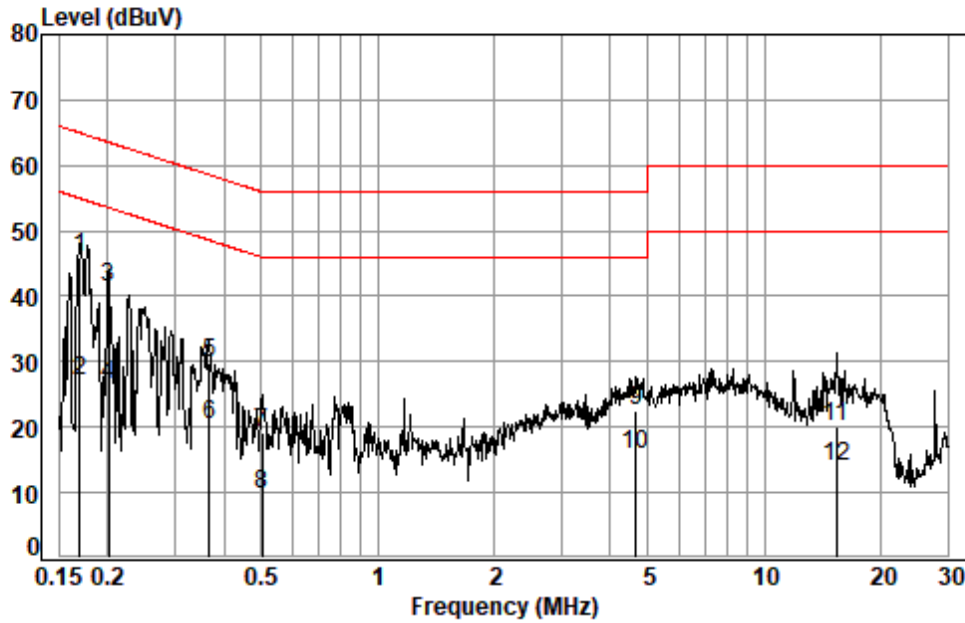


Site : Shielding Room
 Condition: Line
 Job No. : 01904AT
 Test mode: 06

	Freq	Cable Loss	LISN Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1 *	0.1749	0.03	9.62	35.81	45.46	64.72	-19.26	QP
2	0.1749	0.03	9.62	13.41	23.06	54.72	-31.66	Average
3	0.2117	0.04	9.62	29.21	38.87	63.14	-24.27	QP
4	0.2117	0.04	9.62	6.11	15.77	53.14	-37.37	Average
5	0.3653	0.05	9.62	19.89	29.56	58.61	-29.05	QP
6 *	0.3653	0.05	9.62	10.13	19.80	48.61	-28.81	Average
7	0.8217	0.07	9.62	10.17	19.86	56.00	-36.14	QP
8	0.8217	0.07	9.62	-0.85	8.84	46.00	-37.16	Average
9	4.6964	0.15	9.67	6.95	16.77	56.00	-39.23	QP
10	4.6964	0.15	9.67	0.76	10.58	46.00	-35.42	Average
11	15.2261	0.14	9.85	8.53	18.52	60.00	-41.48	QP
12	15.2261	0.14	9.85	-3.78	6.21	50.00	-43.79	Average



Test Mode: 06; Line: Neutral Line



Site : Shielding Room
 Condition: Neutral
 Job No. : 01904AT
 Test mode: 06

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1 *	0.1694	0.03	9.62	36.32	45.97	64.99	-19.02	QP
2	0.1694	0.03	9.62	17.50	27.15	54.99	-27.84	Average
3	0.2018	0.04	9.62	31.82	41.48	63.54	-22.06	QP
4 *	0.2018	0.04	9.62	16.66	26.32	53.54	-27.22	Average
5	0.3673	0.05	9.62	20.00	29.67	58.56	-28.89	QP
6	0.3673	0.05	9.62	10.63	20.30	48.56	-28.26	Average
7	0.5020	0.06	9.62	9.41	19.09	56.00	-36.91	QP
8	0.5020	0.06	9.62	0.04	9.72	46.00	-36.28	Average
9	4.6715	0.15	9.68	12.68	22.51	56.00	-33.49	QP
10	4.6715	0.15	9.68	6.10	15.93	46.00	-30.07	Average
11	15.3883	0.14	9.95	9.99	20.08	60.00	-39.92	QP
12	15.3883	0.14	9.95	3.86	13.95	50.00	-36.05	Average



7.2 Duty Cycle

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

7.2.1 E.U.T. Operation

Operating Environment:
 Temperature: 24.9 °C Humidity: 68.7 % RH Atmospheric Pressure: 1008 mbar

7.2.2 Test Mode Description

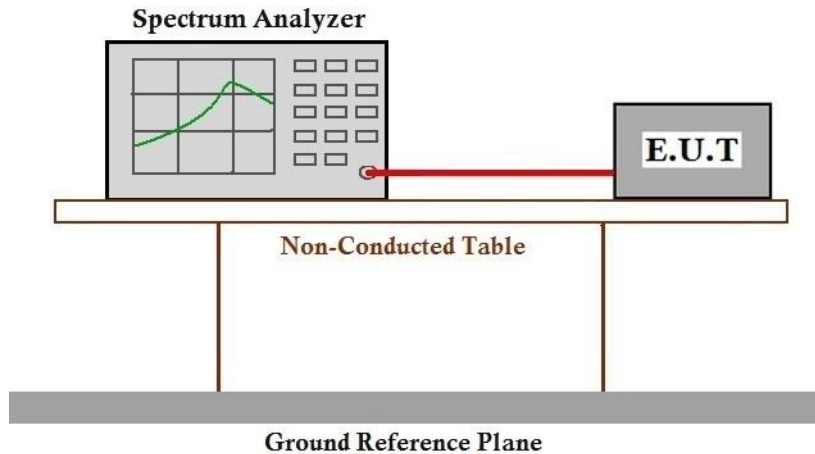
Pre-scan / Final test	Mode Code	Description
Final test	05	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80), data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2A)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80), data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.
Final test	07	TX mode (U-NII-2C)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.



Final test 08

TX mode (U-NII-3)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.

7.2.3 Test Setup Diagram



7.2.4 Measurement Procedure and Data

Please Refer to Appendix for Details



7.3 99% Bandwidth

Test Requirement N/A
 Test Method: KDB 789033 II D

7.3.1 E.U.T. Operation

Operating Environment:
 Temperature: 24.9 °C Humidity: 68.7 % RH Atmospheric Pressure: 1008 mbar

7.3.2 Test Mode Description

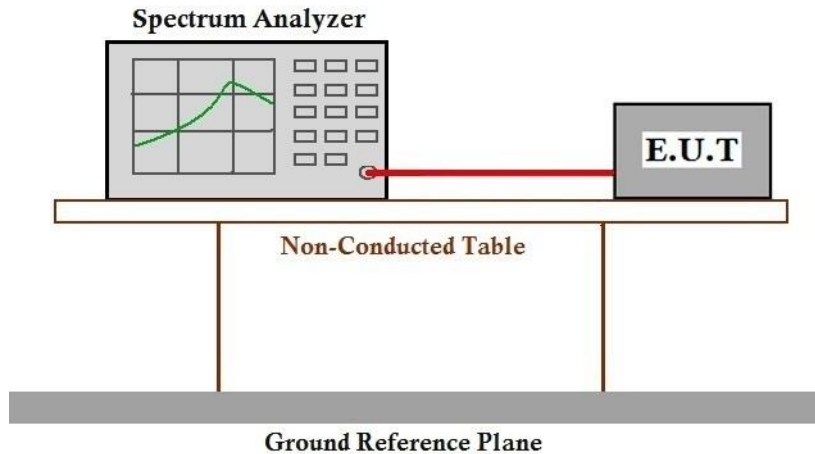
Pre-scan / Final test	Mode Code	Description
Final test	05	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80), data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2A)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80), data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.
Final test	07	TX mode (U-NII-2C)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.



Final test 08

TX mode (U-NII-3)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.

7.3.3 Test Setup Diagram



7.3.4 Measurement Procedure and Data

Please Refer to Appendix for Details



7.4 26dB Emission bandwidth

Test Requirement 47 CFR Part 15, Subpart E 15.407 (a)
 Test Method: KDB 789033 D02 II C 1

7.4.1 E.U.T. Operation

Operating Environment:
 Temperature: 24.9 °C Humidity: 68.7 % RH Atmospheric Pressure: 1008 mbar

7.4.2 Test Mode Description

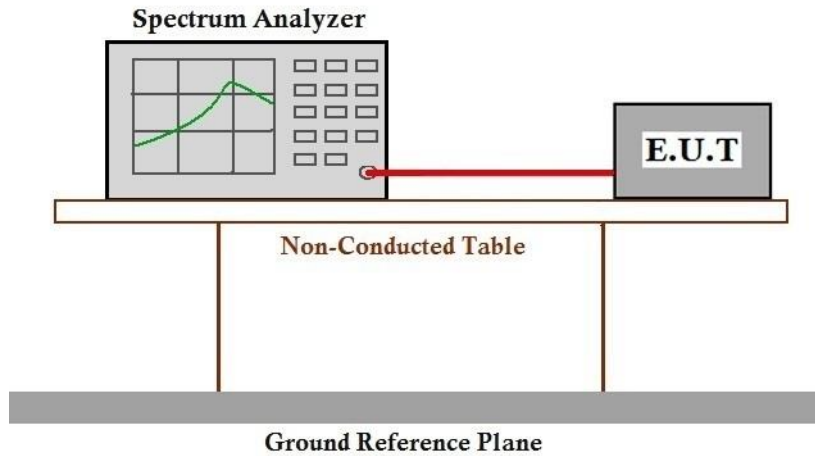
Pre-scan / Final test	Mode Code	Description
Final test	05	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80), data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2A)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80), data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.
Final test	07	TX mode (U-NII-2C)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.



Final test 08

TX mode (U-NII-3)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.

7.4.3 Test Setup Diagram



7.4.4 Measurement Procedure and Data

Please Refer to Appendix for Details



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

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

Test Method: KDB 789033 D02 II C 2

Limit:

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

7.5.1 E.U.T. Operation

Operating Environment:

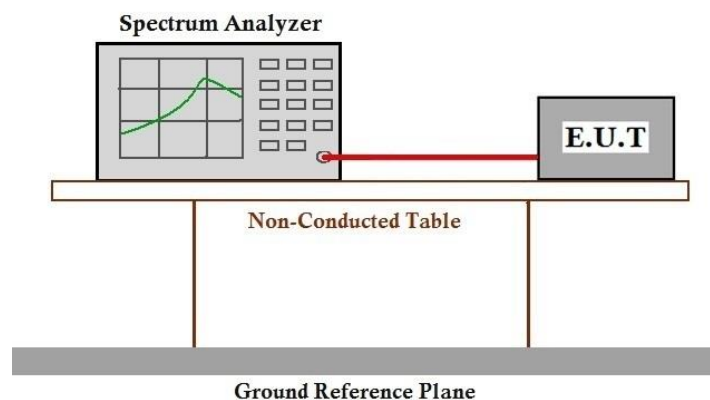
Temperature: 24.9 °C Humidity: 68.7 % RH Atmospheric Pressure: 1008 mbar

7.5.2 Test Mode Description

Pre-scan / Mode	Description
Final test Code	

Final test	08	TX mode (U-NII-3)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.
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7.5.3 Test Setup Diagram



7.5.4 Measurement Procedure and Data

Please Refer to Appendix for Details



7.6 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) for client device or 11dBm+10logB*
5470-5725	≤250mW(24dBm) for client device 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.

7.6.1 E.U.T. Operation

Operating Environment:

Temperature: 24.9 °C Humidity: 68.7 % RH Atmospheric Pressure: 1008 mbar

7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	05	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80), data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2A)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80), data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.



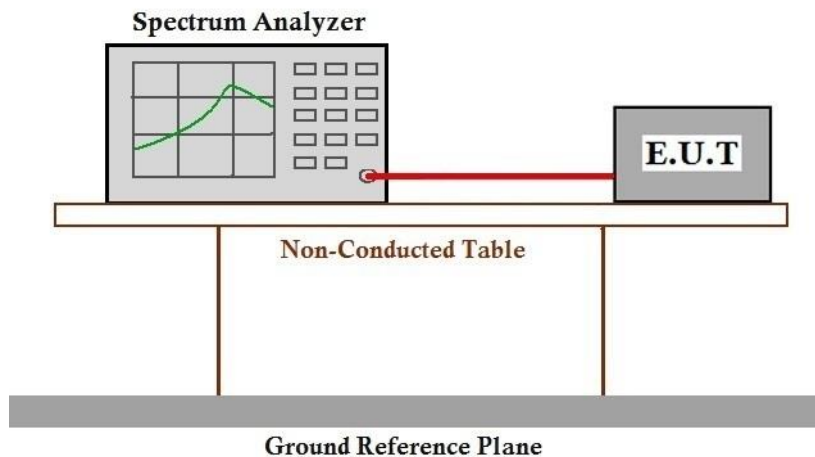
Final test 07

TX mode (U-NII-2C)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.

Final test 08

TX mode (U-NII-3)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.

7.6.3 Test Setup Diagram



7.6.4 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



7.7 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.

7.7.1 E.U.T. Operation

Operating Environment:

Temperature: 24.9 °C Humidity: 68.7 % RH Atmospheric Pressure: 1008 mbar

7.7.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	05	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80), data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2A)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80), data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.



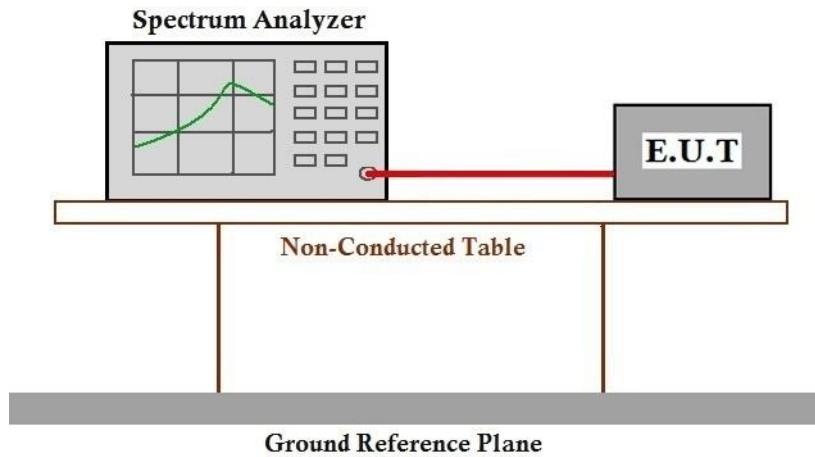
Final test 07

TX mode (U-NII-2C)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.

Final test 08

TX mode (U-NII-3)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. 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 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
 Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
Above 1GHz	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.		

7.8.1 E.U.T. Operation

Operating Environment:
 Temperature: 24.2 °C Humidity: 57.3 % RH Atmospheric Pressure: 1008 mbar

7.8.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	05	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80), data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2A)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been



tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80), data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.

Final test 07

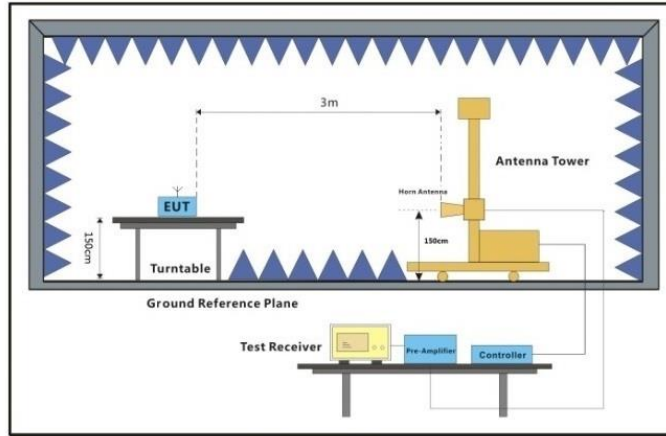
TX mode (U-NII-2C)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.

Final test 08

TX mode (U-NII-3)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.



7.8.3 Test Setup Diagram



Above 1GHz



7.8.4 Measurement Procedure and Data

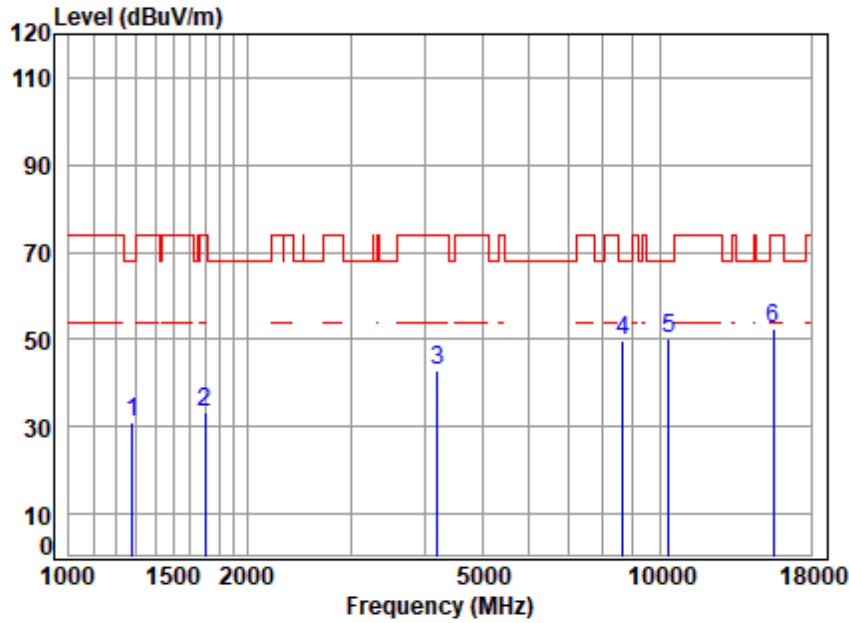
- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which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



Test Mode: 05; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

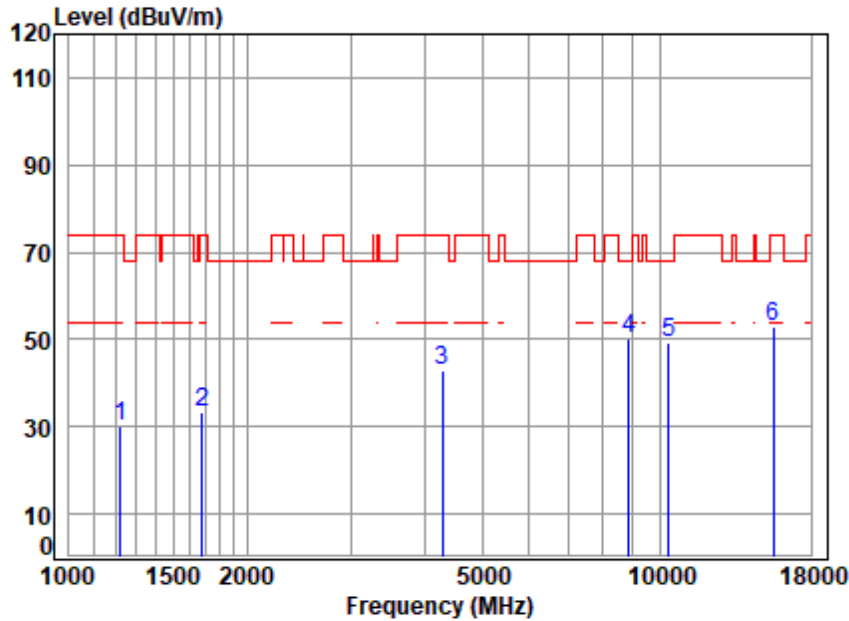


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5180 TX RSE
 Note : 5G WIFI 11A

	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	1282.193	2.93	24.63	37.46	40.90	31.00	68.20	-37.20	peak
2	1697.129	3.49	26.79	36.41	39.61	33.48	74.00	-40.52	peak
3	4193.872	6.48	33.36	34.47	37.38	42.75	74.00	-31.25	peak
4	8638.399	9.81	36.60	35.71	39.14	49.84	68.20	-18.36	peak
5	10360.000	10.81	37.46	35.74	37.87	50.40	68.20	-17.80	peak
6	15540.000	13.61	40.94	37.47	35.57	52.65	74.00	-21.35	peak



Test Mode: 05; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

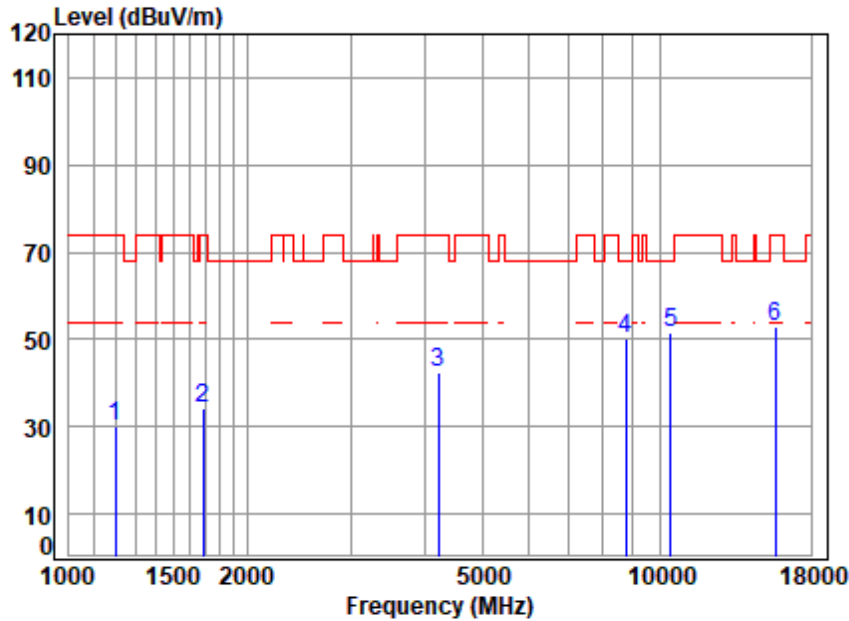


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5180 TX RSE
 Note : 5G WIFI 11A

	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	1224.247	2.84	24.45	37.64	40.32	29.97	74.00	-44.03	peak
2	1677.621	3.46	26.76	36.45	39.48	33.25	74.00	-40.75	peak
3	4291.977	6.57	33.60	34.54	37.21	42.84	74.00	-31.16	peak
4 q	8866.062	10.01	36.70	35.58	39.20	50.33	68.20	-17.87	peak
5	10360.000	10.81	37.46	35.74	36.95	49.48	68.20	-18.72	peak
6	15540.000	13.61	40.94	37.47	35.79	52.87	74.00	-21.13	peak



Test Mode: 05; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:middle

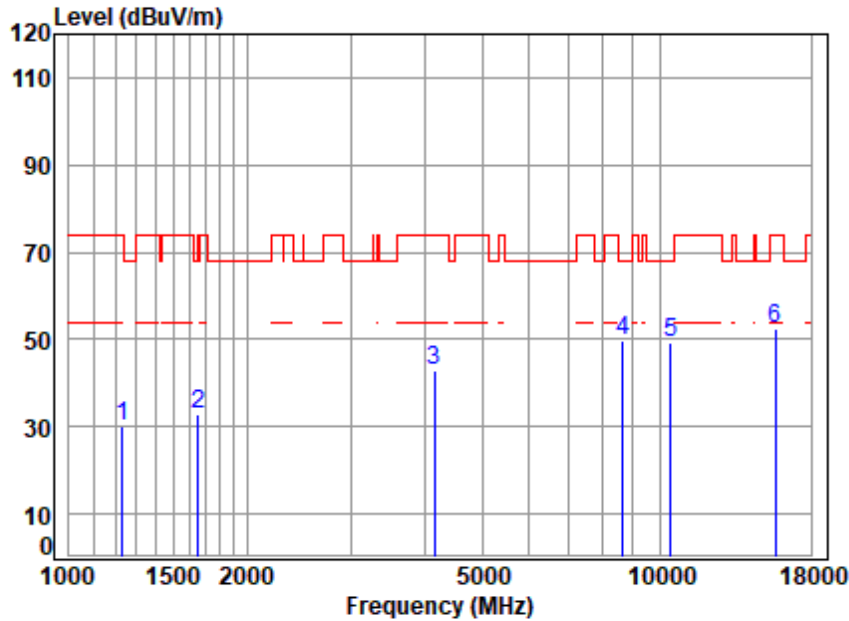


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5200 TX RSE
 Note : 5G WIFI 11A

	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	1196.264	2.79	24.39	37.73	40.61	30.06	74.00	-43.94	peak
2	1687.347	3.47	26.77	36.43	40.47	34.28	74.00	-39.72	peak
3	4218.186	6.50	33.47	34.48	37.14	42.63	74.00	-31.37	peak
4	8764.146	9.92	36.70	35.63	39.31	50.30	68.20	-17.90	peak
5	10440.000	10.87	37.50	35.77	38.75	51.35	68.20	-16.85	peak
6	15660.000	13.75	41.06	37.52	35.50	52.79	74.00	-21.21	peak



Test Mode: 05; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:middle

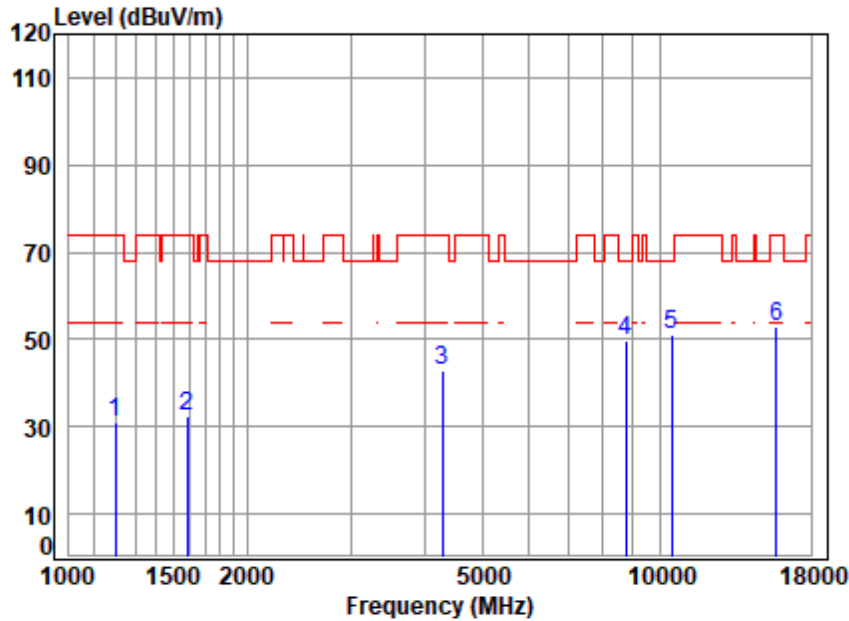


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5200 TX RSE
 Note : 5G WIFI 11A

	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	1231.345	2.85	24.46	37.62	40.62	30.31	74.00	-43.69 peak
2	1653.550	3.43	26.71	36.51	39.34	32.97	68.20	-35.23 peak
3	4157.664	6.44	33.15	34.44	37.70	42.85	74.00	-31.15 peak
4 q	8638.399	9.81	36.60	35.71	39.16	49.86	68.20	-18.34 peak
5	10440.000	10.87	37.50	35.77	36.85	49.45	68.20	-18.75 peak
6	15660.000	13.75	41.06	37.52	35.35	52.64	74.00	-21.36 peak



Test Mode: 05; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High

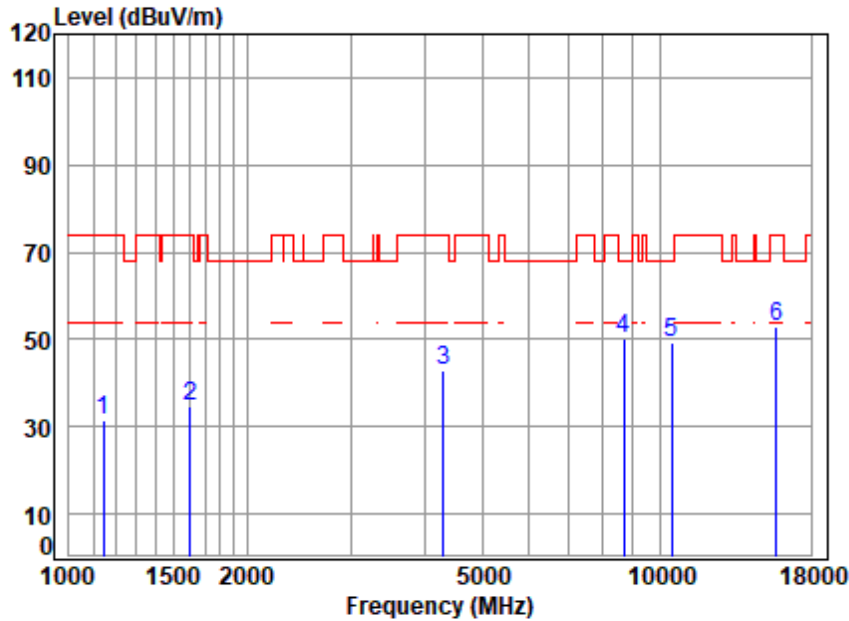


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5240 TX RSE
 Note : 5G WIFI 11A

	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	1199.726	2.80	24.40	37.71	41.42	30.91	74.00	-43.09 peak
2	1587.975	3.35	26.36	36.66	39.49	32.54	74.00	-41.46 peak
3	4291.977	6.57	33.60	34.54	37.33	42.96	74.00	-31.04 peak
4	8738.852	9.90	36.70	35.65	38.82	49.77	68.20	-18.43 peak
5	10480.000	10.90	37.50	35.79	38.30	50.91	68.20	-17.29 peak
6	15720.000	13.83	41.14	37.54	35.61	53.04	74.00	-20.96 peak



Test Mode: 05; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High

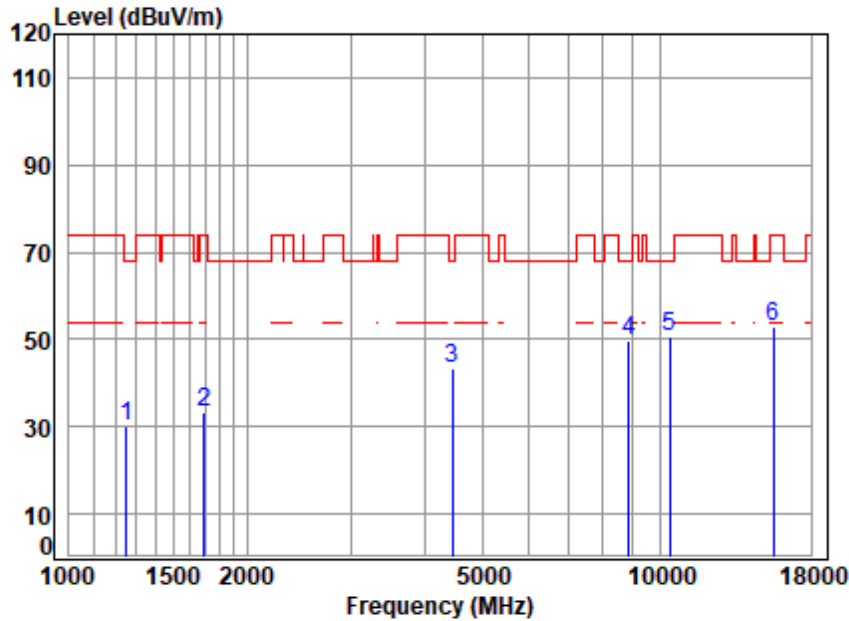


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5240 TX RSE
 Note : 5G WIFI 11A

	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	1142.201	2.70	24.17	37.90	42.48	74.00	-42.55	peak
2	1601.804	3.37	26.51	36.63	41.55	74.00	-39.20	peak
3	4304.400	6.59	33.60	34.54	37.04	74.00	-31.31	peak
4 q	8688.480	9.86	36.68	35.68	39.49	68.20	-17.85	peak
5	10480.000	10.90	37.50	35.79	36.72	68.20	-18.87	peak
6	15720.000	13.83	41.14	37.54	35.62	74.00	-20.95	peak



Test Mode: 05; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

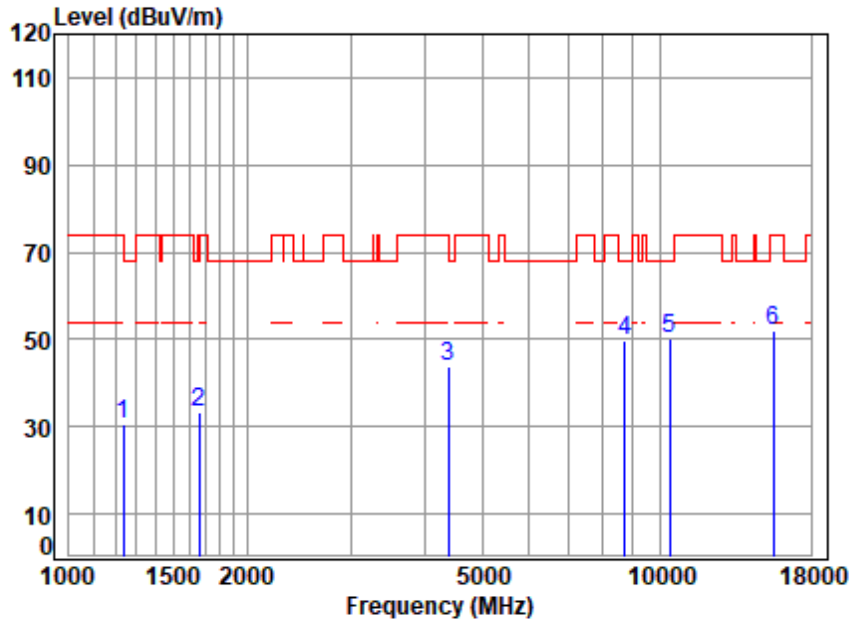


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5190 TX RSE
 Note : 5G WIFI 11N40

	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	1252.885	2.89	24.51	37.55	40.17	30.02	68.20	-38.18 peak
2	1692.231	3.48	26.78	36.42	39.49	33.33	74.00	-40.67 peak
3	4456.315	6.73	33.50	34.64	37.75	43.34	68.20	-24.86 peak
4	8866.062	10.01	36.70	35.58	38.69	49.82	68.20	-18.38 peak
5	10380.000	10.83	37.48	35.74	38.01	50.58	68.20	-17.62 peak
6	15570.000	13.65	40.97	37.48	35.99	53.13	74.00	-20.87 peak



Test Mode: 05; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

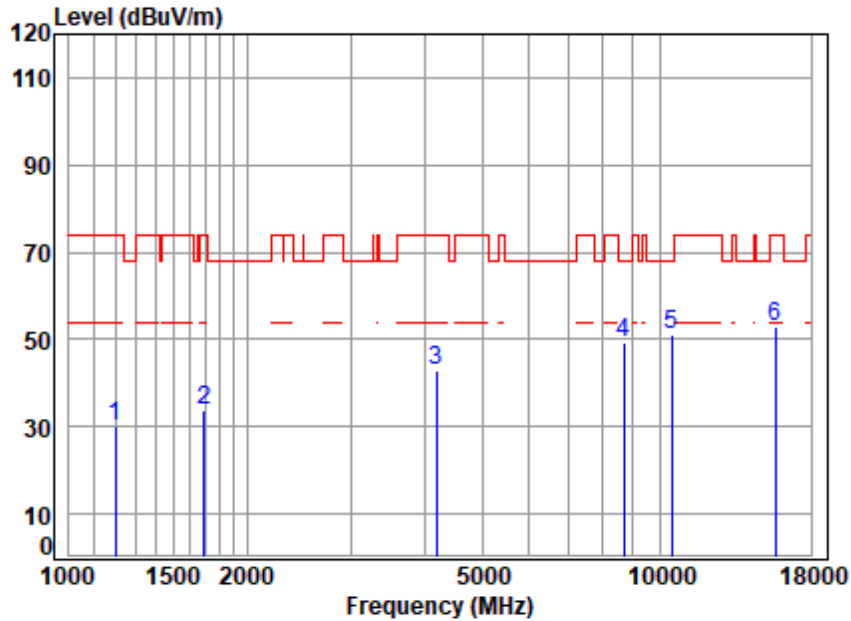


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5190 TX RSE
 Note : 5G WIFI 11N40

	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	1234.909	2.86	24.47	37.61	40.94	30.66	74.00	-43.34	peak
2	1663.137	3.45	26.73	36.48	39.83	33.53	74.00	-40.47	peak
3	4379.699	6.66	33.54	34.59	37.98	43.59	74.00	-30.41	peak
4	8713.630	9.88	36.70	35.66	38.84	49.76	68.20	-18.44	peak
5	10380.000	10.83	37.48	35.74	37.68	50.25	68.20	-17.95	peak
6	15570.000	13.65	40.97	37.48	35.07	52.21	74.00	-21.79	peak



Test Mode: 05; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High

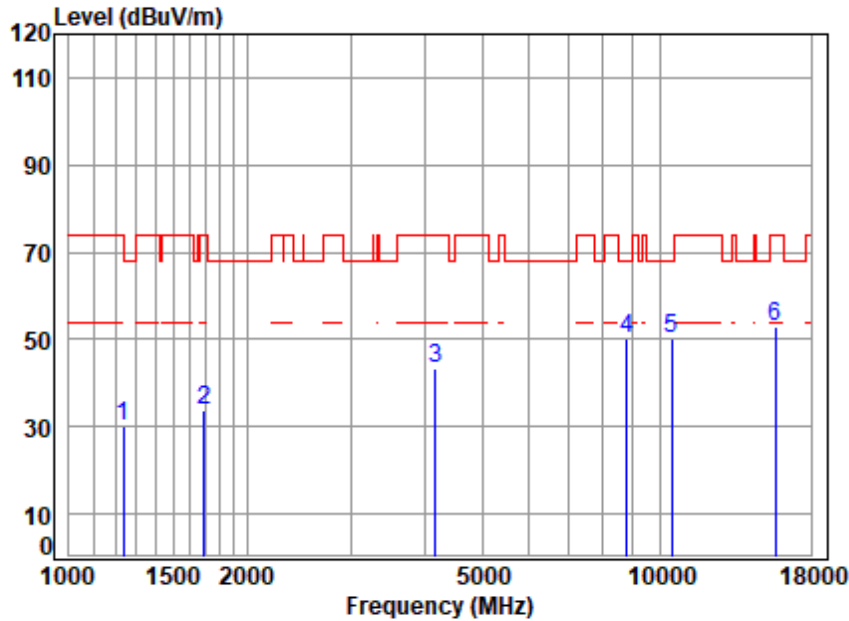


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5230 TX RSE
 Note : 5G WIFI 11N40

	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	1199.726	2.80	24.40	37.71	40.48	29.97	74.00	-44.03 peak
2	1692.231	3.48	26.78	36.42	39.82	33.66	74.00	-40.34 peak
3	4181.768	6.47	33.29	34.46	37.61	42.91	74.00	-31.09 peak
4	8688.480	9.86	36.68	35.68	38.21	49.07	68.20	-19.13 peak
5	10460.000	10.89	37.50	35.78	38.44	51.05	68.20	-17.15 peak
6	15690.000	13.79	41.09	37.53	35.60	52.95	74.00	-21.05 peak



Test Mode: 05; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High

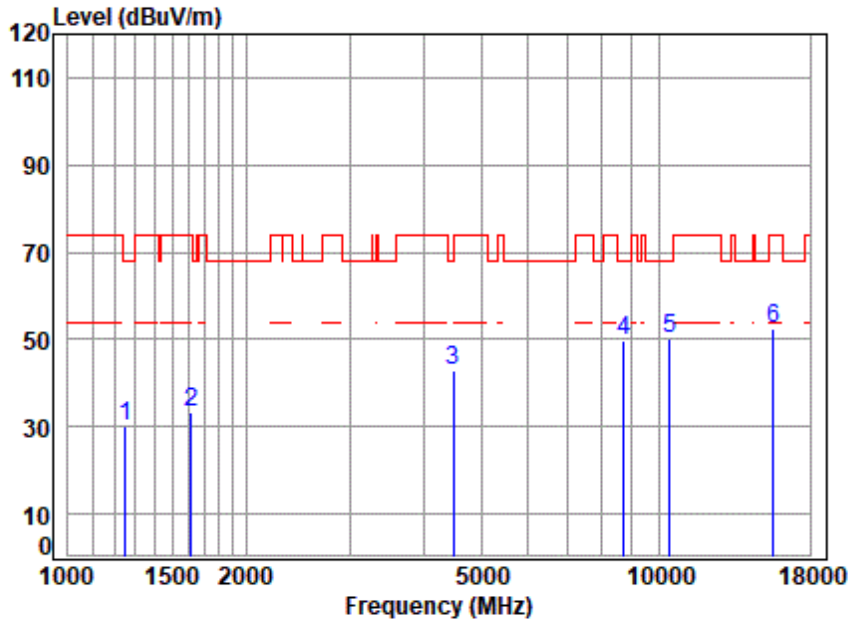


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5230 TX RSE
 Note : 5G WIFI 11N40

	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	1234.909	2.86	24.47	37.61	40.60	30.32	74.00	-43.68	peak
2	1692.231	3.48	26.78	36.42	39.76	33.60	74.00	-40.40	peak
3	4169.698	6.45	33.22	34.45	38.32	43.54	74.00	-30.46	peak
4	8789.516	9.95	36.70	35.62	38.98	50.01	68.20	-18.19	peak
5	10460.000	10.89	37.50	35.78	37.66	50.27	68.20	-17.93	peak
6	15690.000	13.79	41.09	37.53	35.41	52.76	74.00	-21.24	peak



Test Mode: 05; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:80MHz

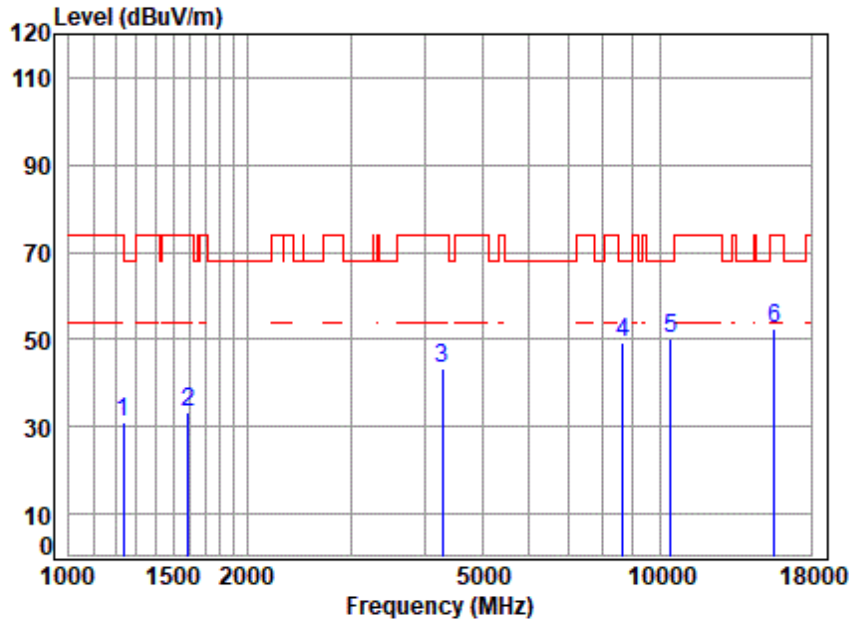


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5210 TX RSE
 Note : 5G WIFI 11AX80

	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	1252.885	2.89	24.51	37.55	40.13	29.98	68.20	-38.22 peak
2	1615.754	3.39	26.56	36.59	39.93	33.29	74.00	-40.71 peak
3	4495.125	6.77	33.50	34.67	37.46	43.06	68.20	-25.14 peak
4	8713.630	9.88	36.70	35.66	38.93	49.85	68.20	-18.35 peak
5	10420.000	10.86	37.50	35.76	37.47	50.07	68.20	-18.13 peak
6	15630.000	13.72	41.03	37.50	35.39	52.64	74.00	-21.36 peak



Test Mode: 05; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:80MHz

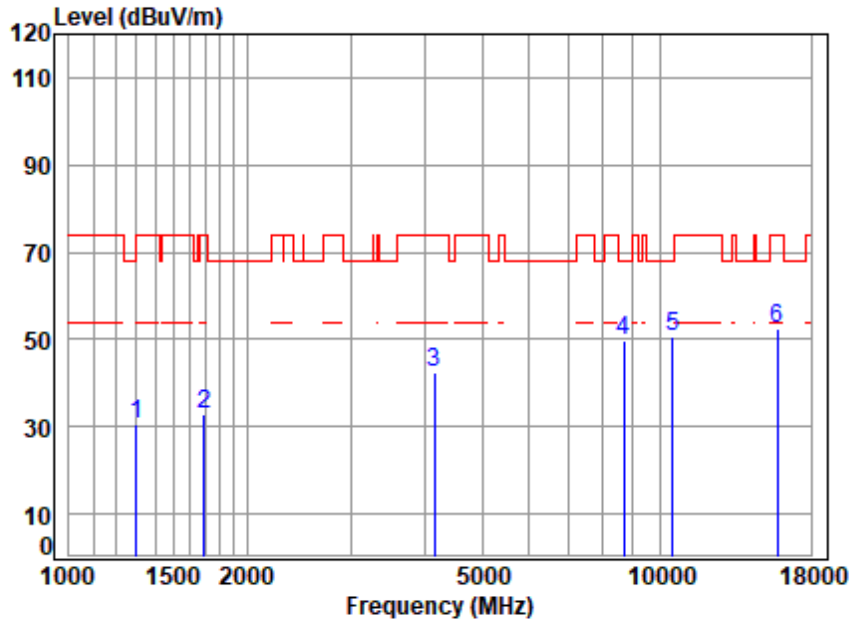


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5210 TX RSE
 Note : 5G WIFI 11AX80

	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	1234.909	2.86	24.47	37.61	41.08	30.80	74.00	-43.20 peak
2	1592.571	3.36	26.41	36.65	40.25	33.37	74.00	-40.63 peak
3	4279.589	6.56	33.60	34.53	37.58	43.21	74.00	-30.79 peak
4	8663.404	9.84	36.63	35.69	38.65	49.43	68.20	-18.77 peak
5	10420.000	10.86	37.50	35.76	37.70	50.30	68.20	-17.90 peak
6	15630.000	13.72	41.03	37.50	35.32	52.57	74.00	-21.43 peak



Test Mode: 06; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

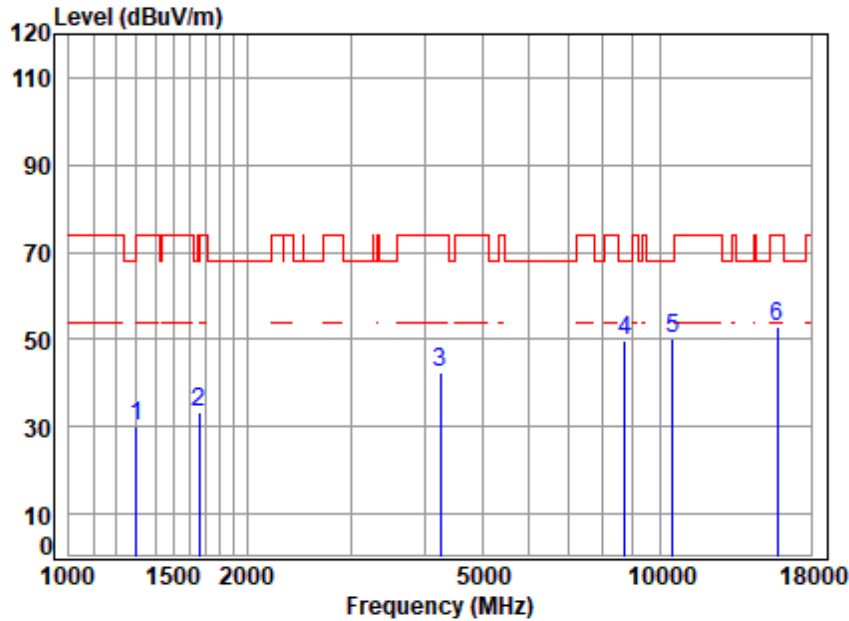


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5260 TX RSE
 Note : 5G WIFI 11A

	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	1300.858	2.96	24.70	37.41	40.42	30.67	74.00	-43.33	peak
2	1692.231	3.48	26.78	36.42	39.05	32.89	74.00	-41.11	peak
3	4157.664	6.44	33.15	34.44	37.22	42.37	74.00	-31.63	peak
4	8688.480	9.86	36.68	35.68	39.00	49.86	68.20	-18.34	peak
5	10520.000	10.93	37.52	35.80	37.84	50.49	68.20	-17.71	peak
6	15780.000	13.90	41.26	37.56	34.87	52.47	74.00	-21.53	peak



Test Mode: 06; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

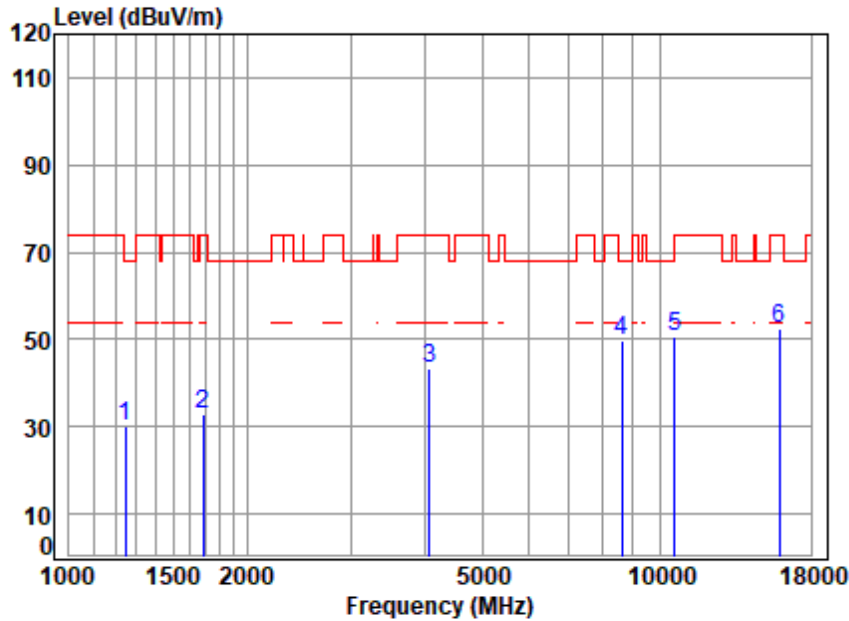


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5260 TX RSE
 Note : 5G WIFI 11A

	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	1300.858	2.96	24.70	37.41	39.97	30.22	74.00	-43.78	peak
2	1663.137	3.45	26.73	36.48	39.44	33.14	74.00	-40.86	peak
3	4242.641	6.53	33.57	34.50	37.01	42.61	74.00	-31.39	peak
4	8713.630	9.88	36.70	35.66	38.96	49.88	68.20	-18.32	peak
5	10520.000	10.93	37.52	35.80	37.45	50.10	68.20	-18.10	peak
6	15780.000	13.90	41.26	37.56	35.55	53.15	74.00	-20.85	peak



Test Mode: 06; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:middle

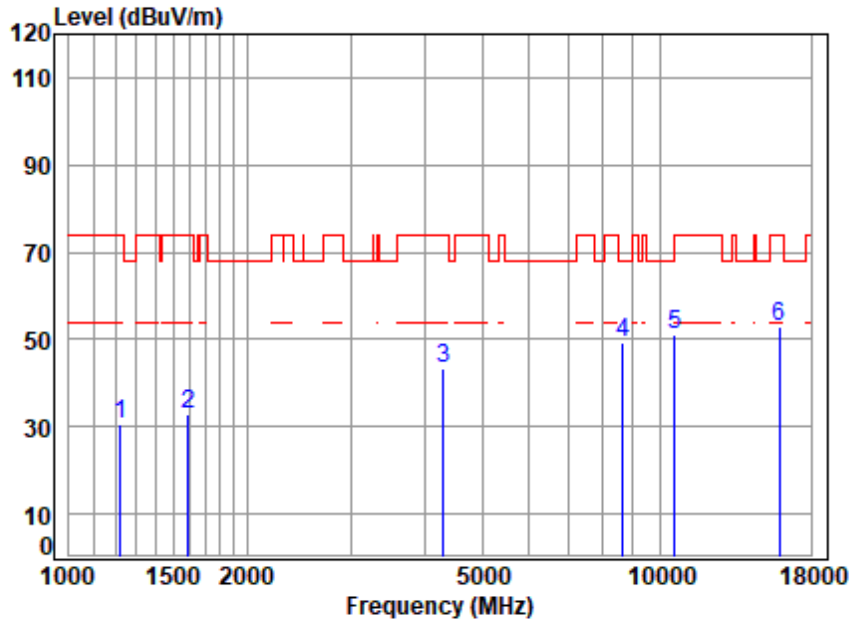


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5300 TX RSE
 Note : 5G WIFI 11A

	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	1245.663	2.87	24.49	37.57	40.36	30.15	68.20	-38.05 peak
2	1687.347	3.47	26.77	36.43	39.18	32.99	74.00	-41.01 peak
3	4074.388	6.36	32.95	34.38	38.25	43.18	74.00	-30.82 peak
4	8613.468	9.79	36.60	35.72	39.22	49.89	68.20	-18.31 peak
5	10600.000	10.98	37.60	35.84	38.07	50.81	68.20	-17.39 peak
6	15900.000	14.04	41.50	37.61	34.55	52.48	74.00	-21.52 peak



Test Mode: 06; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:middle

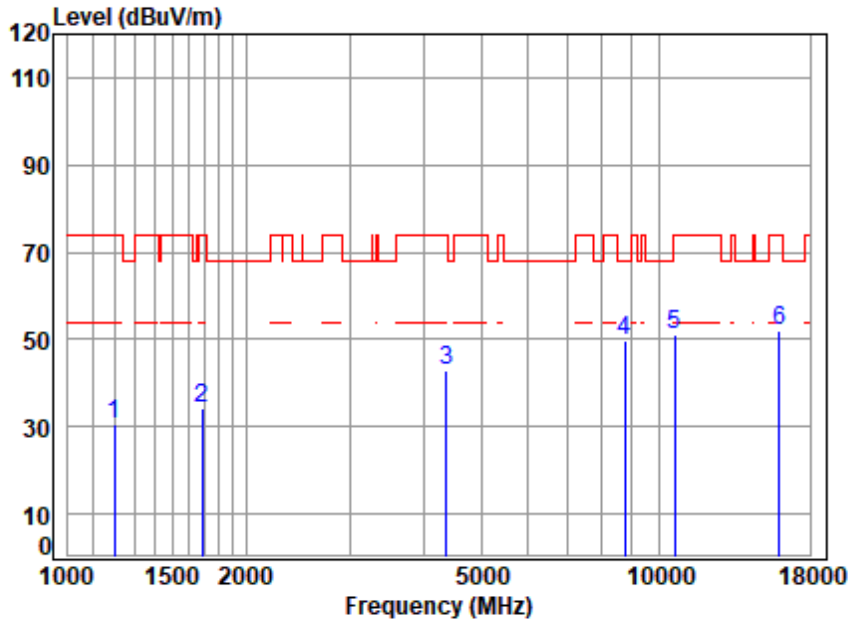


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5300 TX RSE
 Note : 5G WIFI 11A

	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	1220.714	2.83	24.44	37.65	40.97	30.59	74.00	-43.41 peak
2	1592.571	3.36	26.41	36.65	39.84	32.96	74.00	-41.04 peak
3	4304.400	6.59	33.60	34.54	37.87	43.52	74.00	-30.48 peak
4	8663.404	9.84	36.63	35.69	38.58	49.36	68.20	-18.84 peak
5	10600.000	10.98	37.60	35.84	38.20	50.94	68.20	-17.26 peak
6	15900.000	14.04	41.50	37.61	34.93	52.86	74.00	-21.14 peak



Test Mode: 06; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High

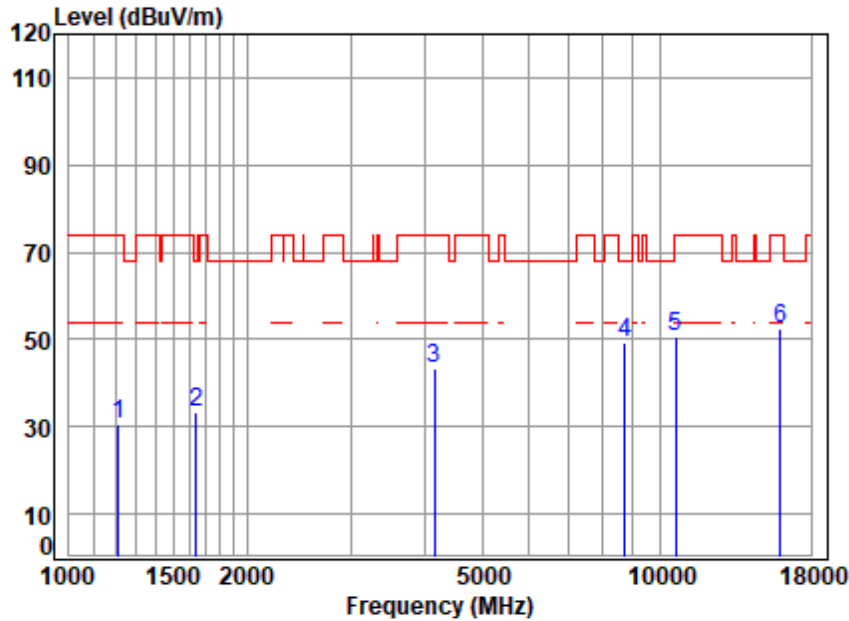


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5320 TX RSE
 Note : 5G WIFI 11A

	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	1196.264	2.79	24.39	37.73	41.26	30.71	74.00	-43.29 peak
2	1687.347	3.47	26.77	36.43	40.31	34.12	74.00	-39.88 peak
3	4367.058	6.65	33.57	34.59	37.24	42.87	74.00	-31.13 peak
4 q	8738.852	9.90	36.70	35.65	38.85	49.80	68.20	-18.40 peak
5	10640.000	11.01	37.60	35.85	38.38	51.14	74.00	-22.86 peak
6	15960.000	14.11	41.56	37.63	34.18	52.22	74.00	-21.78 peak



Test Mode: 06; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High

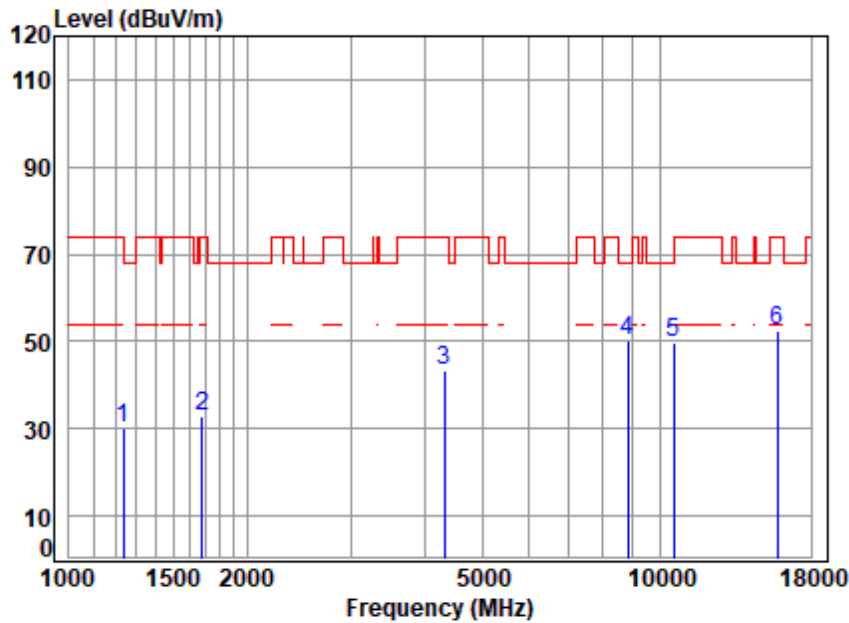


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5320 TX RSE
 Note : 5G WIFI 11A

	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	1210.174	2.82	24.42	37.68	40.86	30.42	74.00	-43.58	peak
2	1644.019	3.42	26.68	36.53	39.84	33.41	68.20	-34.79	peak
3	4157.664	6.44	33.15	34.44	37.99	43.14	74.00	-30.86	peak
4 q	8713.630	9.88	36.70	35.66	38.48	49.40	68.20	-18.80	peak
5	10640.000	11.01	37.60	35.85	37.96	50.72	74.00	-23.28	peak
6	15960.000	14.11	41.56	37.63	34.58	52.62	74.00	-21.38	peak



Test Mode: 06; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

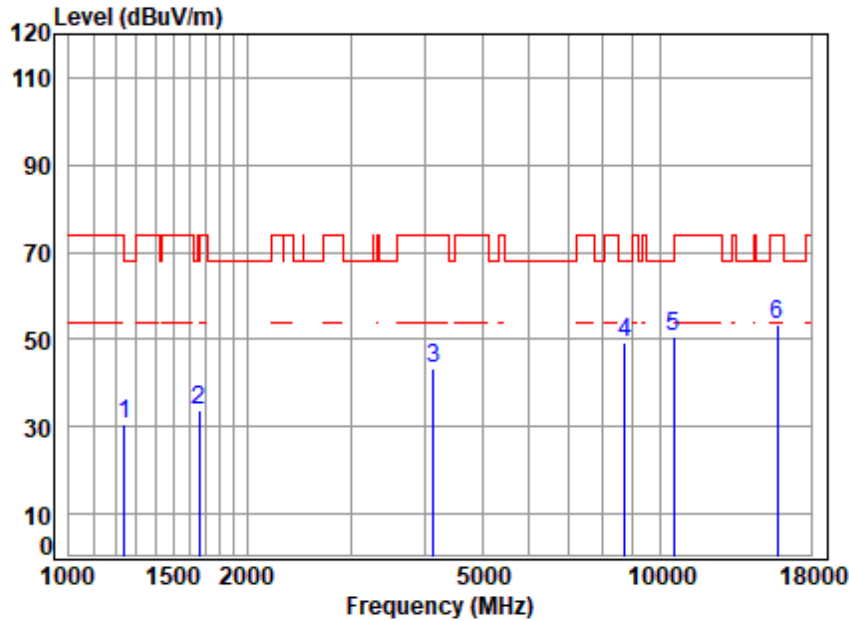


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5270 TX RSE
 Note : 5G WIFI 11N40

	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	1238.483	2.86	24.48	37.59	40.50	30.25	74.00	-43.75	peak
2	1677.621	3.46	26.76	36.45	39.30	33.07	74.00	-40.93	peak
3	4316.859	6.60	33.60	34.55	37.49	43.14	74.00	-30.86	peak
4 q	8814.957	9.97	36.70	35.60	38.98	50.05	68.20	-18.15	peak
5	10540.000	10.94	37.54	35.81	36.99	49.66	68.20	-18.54	peak
6	15810.000	13.93	41.32	37.58	34.92	52.59	74.00	-21.41	peak



Test Mode: 06; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

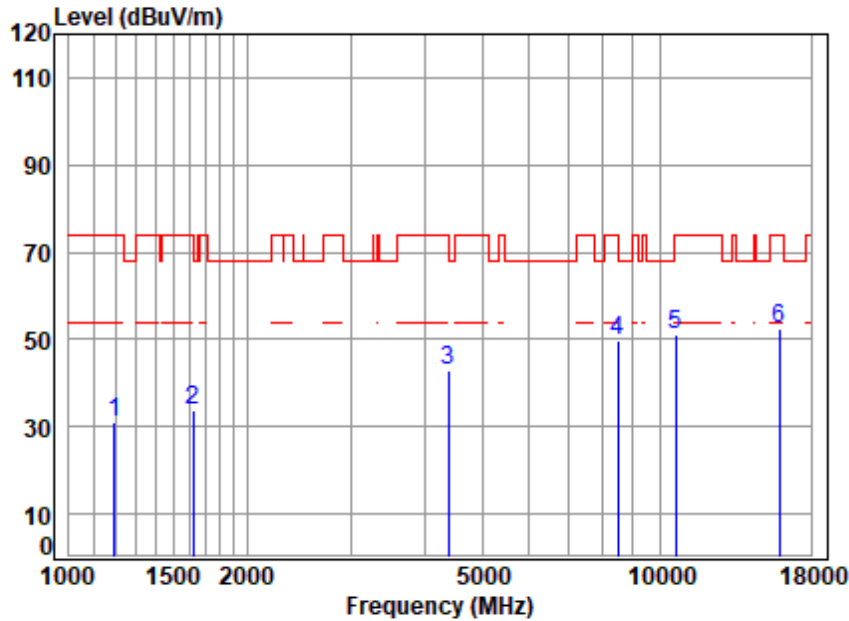


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5270 TX RSE
 Note : 5G WIFI 11N40

	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	1242.068	2.87	24.48	37.58	40.90	30.67	68.20	-37.53	peak
2	1658.337	3.44	26.72	36.50	40.22	33.88	68.20	-34.32	peak
3	4133.699	6.42	33.07	34.43	38.40	43.46	74.00	-30.54	peak
4	8713.630	9.88	36.70	35.66	38.31	49.23	68.20	-18.97	peak
5	10540.000	10.94	37.54	35.81	37.79	50.46	68.20	-17.74	peak
6	15810.000	13.93	41.32	37.58	35.54	53.21	74.00	-20.79	peak



Test Mode: 06; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High

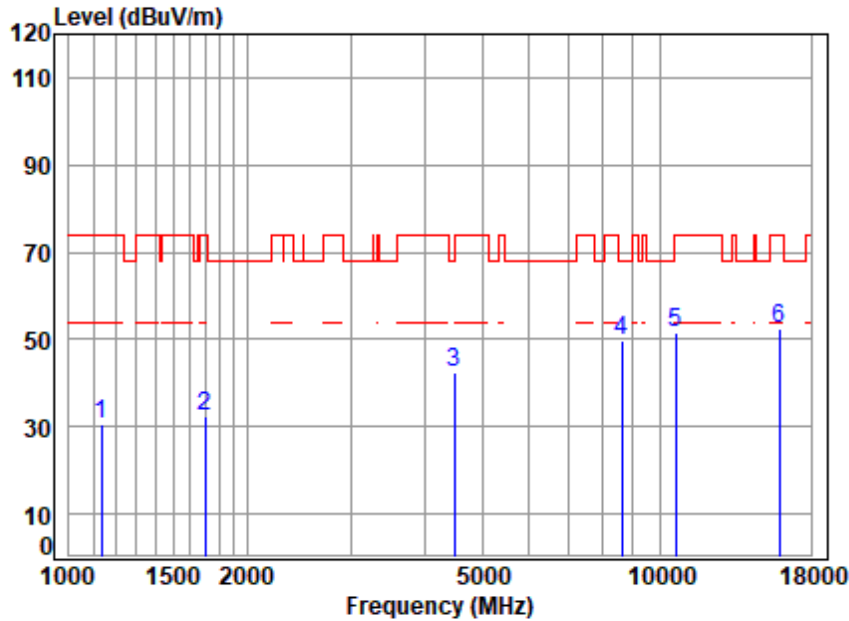


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5310 TX RSE
 Note : 5G WIFI 11N40

	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	1192.811	2.79	24.37	37.74	41.71	31.13	74.00	-42.87	peak
2	1625.121	3.40	26.60	36.57	40.54	33.97	74.00	-40.03	peak
3	4379.699	6.66	33.54	34.59	37.23	42.84	74.00	-31.16	peak
4	8489.882	9.68	36.48	35.79	39.34	49.71	74.00	-24.29	peak
5	10620.000	11.00	37.60	35.85	38.13	50.88	74.00	-23.12	peak
6	q15930.000	14.08	41.53	37.62	34.44	52.43	74.00	-21.57	peak



Test Mode: 06; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High

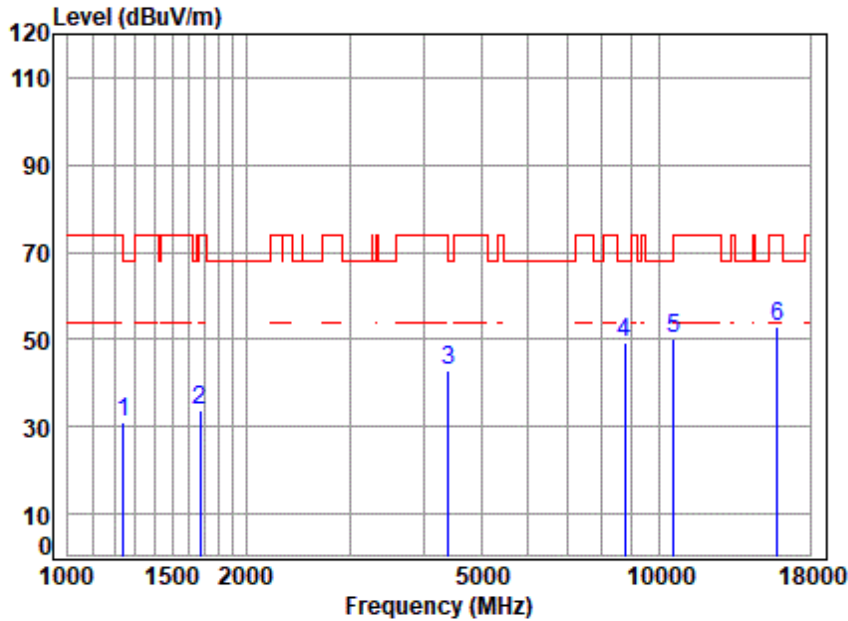


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5310 TX RSE
 Note : 5G WIFI 11N40

	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	1135.617	2.69	24.14	37.92	41.75	30.66	74.00	-43.34	peak
2	1702.042	3.49	26.80	36.40	38.68	32.57	74.00	-41.43	peak
3	4482.150	6.75	33.50	34.66	36.92	42.51	68.20	-25.69	peak
4 q	8613.468	9.79	36.60	35.72	39.26	49.93	68.20	-18.27	peak
5	10620.000	11.00	37.60	35.85	38.93	51.68	74.00	-22.32	peak
6	15930.000	14.08	41.53	37.62	34.65	52.64	74.00	-21.36	peak



Test Mode: 06; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:80MHz

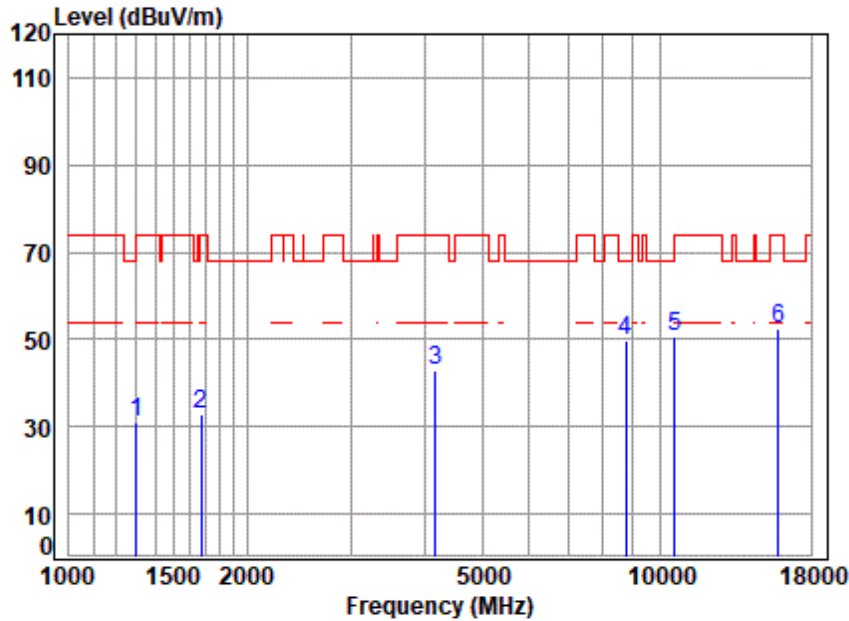


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5290 TX RSE
 Note : 5G WIFI 11AX80

	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	1242.068	2.87	24.48	37.58	41.21	30.98	68.20	-37.22 peak
2	1672.779	3.46	26.75	36.46	39.93	33.68	74.00	-40.32 peak
3	4405.090	6.68	33.50	34.61	37.28	42.85	68.20	-25.35 peak
4	8738.852	9.90	36.70	35.65	38.50	49.45	68.20	-18.75 peak
5	10580.000	10.97	37.58	35.83	37.59	50.31	68.20	-17.89 peak
6	15870.000	14.01	41.44	37.60	34.85	52.70	74.00	-21.30 peak



Test Mode: 06; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:80MHz

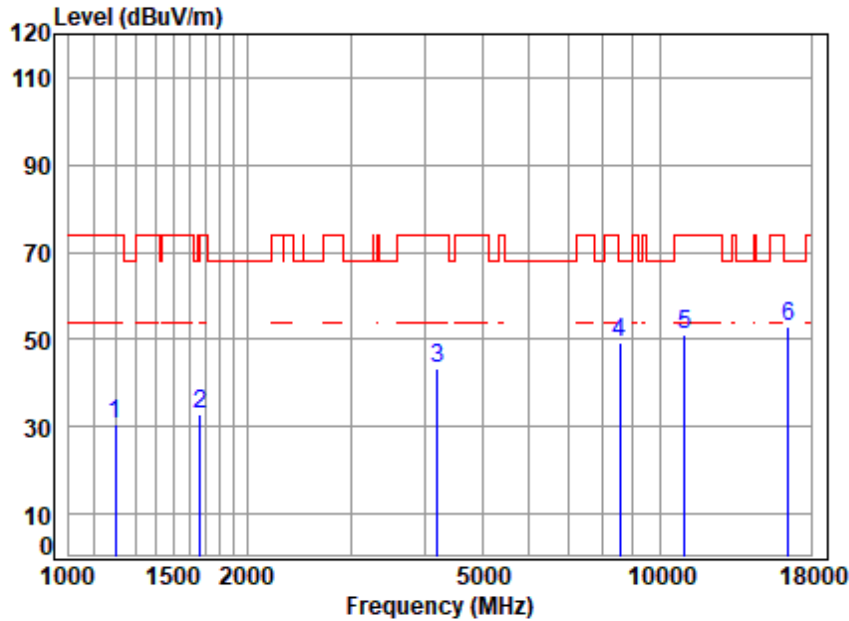


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5290 TX RSE
 Note : 5G WIFI 11AX80

	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	1300.858	2.96	24.70	37.41	40.75	31.00	74.00	-43.00 peak
2	1672.779	3.46	26.75	36.46	39.27	33.02	74.00	-40.98 peak
3	4169.698	6.45	33.22	34.45	37.46	42.68	74.00	-31.32 peak
4	8764.146	9.92	36.70	35.63	38.86	49.85	68.20	-18.35 peak
5	10580.000	10.97	37.58	35.83	38.01	50.73	68.20	-17.47 peak
6	15870.000	14.01	41.44	37.60	34.67	52.52	74.00	-21.48 peak



Test Mode: 07; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

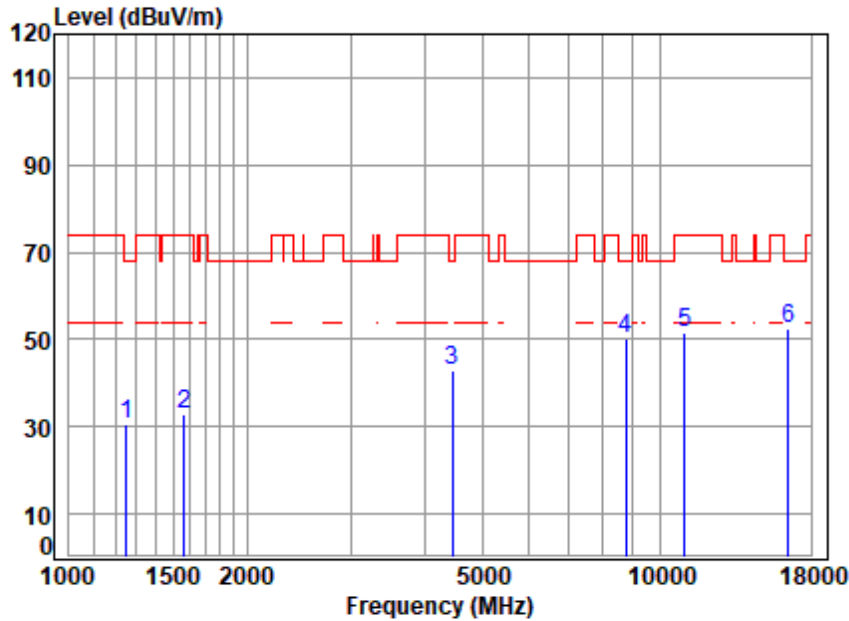


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5500 TX RSE
 Note : 5G WIFI 11A

	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	1196.264	2.79	24.39	37.73	41.14	30.59	74.00	-43.41	peak
2	1667.951	3.45	26.74	36.47	39.11	32.83	74.00	-41.17	peak
3	4206.011	6.49	33.42	34.48	37.85	43.28	74.00	-30.72	peak
4	8563.818	9.75	36.53	35.75	38.59	49.12	68.20	-19.08	peak
5	11000.000	11.26	37.70	36.00	38.26	51.22	74.00	-22.78	peak
6	q16500.000	14.16	42.40	37.56	34.08	53.08	68.20	-15.12	peak



Test Mode: 07; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

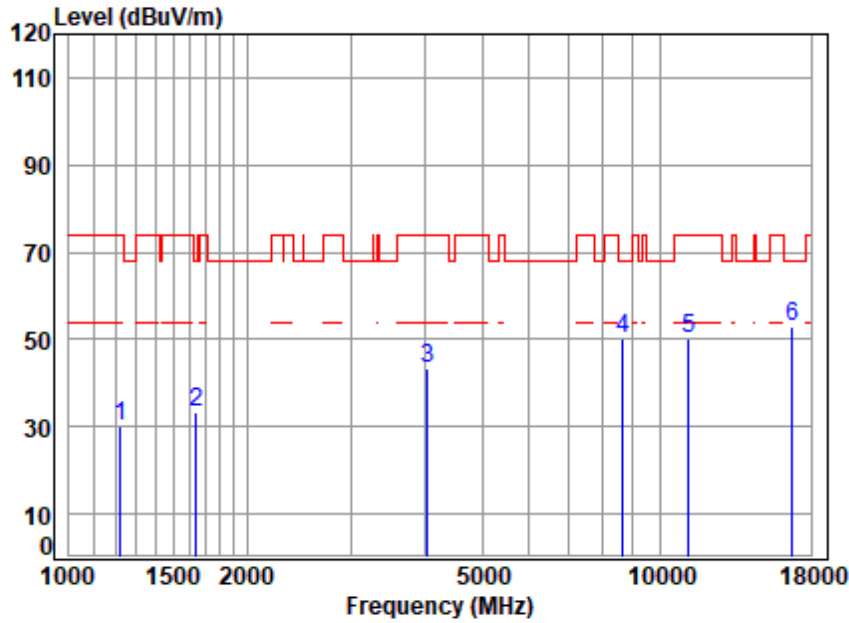


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5500 TX RSE
 Note : 5G WIFI 11A

	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	1249.269	2.88	24.50	37.56	40.93	30.75	68.20	-37.45	peak
2	1569.721	3.33	26.14	36.70	39.85	32.62	74.00	-41.38	peak
3	4456.315	6.73	33.50	34.64	37.45	43.04	68.20	-25.16	peak
4	8738.852	9.90	36.70	35.65	39.44	50.39	68.20	-17.81	peak
5	11000.000	11.26	37.70	36.00	38.63	51.59	74.00	-22.41	peak
6	q16500.000	14.16	42.40	37.56	33.32	52.32	68.20	-15.88	peak



Test Mode: 07; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:middle

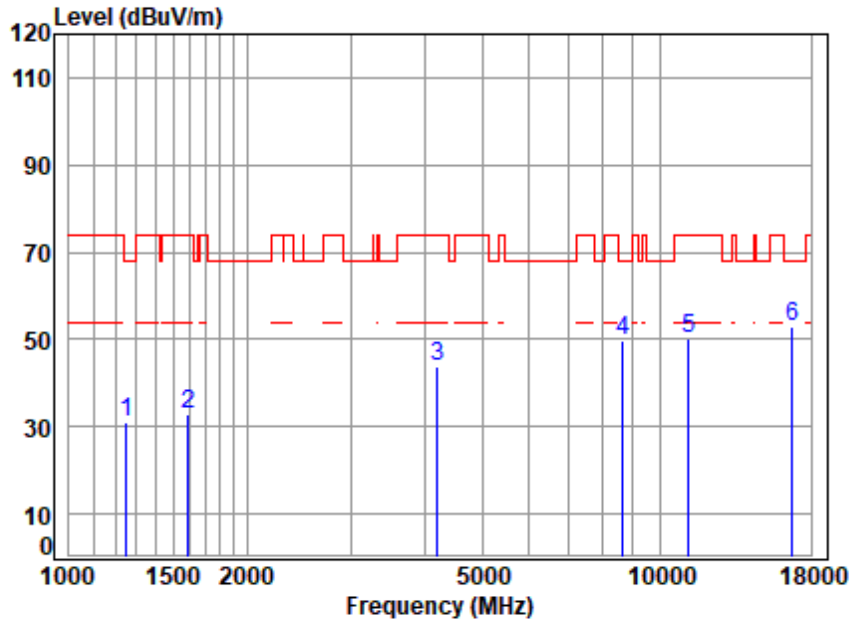


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5580 TX RSE
 Note : 5G WIFI 11A

	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	1220.714	2.83	24.44	37.65	40.51	30.13	74.00	-43.87	peak
2	1644.019	3.42	26.68	36.53	39.86	33.43	68.20	-34.77	peak
3	4039.212	6.32	32.86	34.36	38.45	43.27	74.00	-30.73	peak
4	8638.399	9.81	36.60	35.71	39.56	50.26	68.20	-17.94	peak
5	11160.000	11.36	37.80	36.10	37.10	50.16	74.00	-23.84	peak
6	q16740.000	14.16	42.80	37.52	33.41	52.85	68.20	-15.35	peak



Test Mode: 07; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:middle

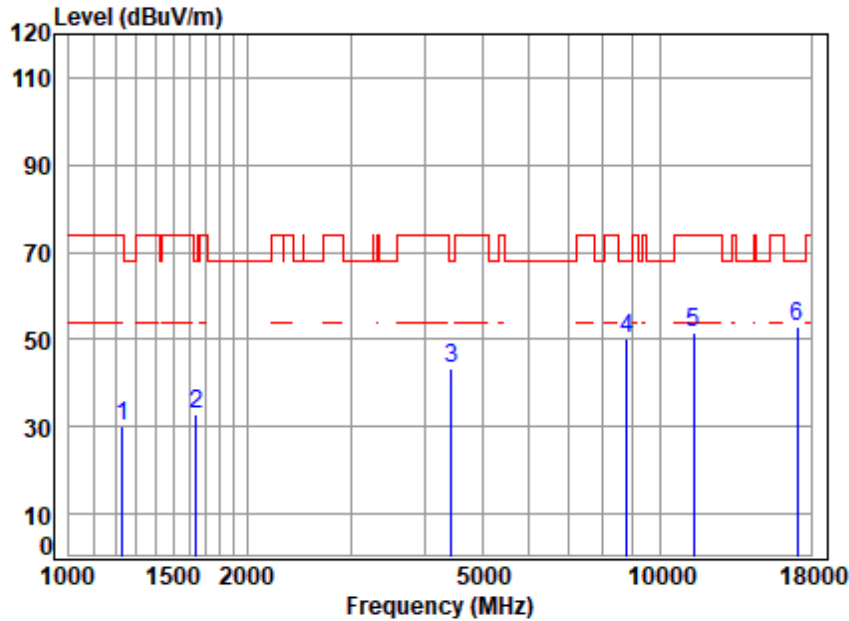


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5580 TX RSE
 Note : 5G WIFI 11A

	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	1252.885	2.89	24.51	37.55	41.10	30.95	68.20	-37.25	peak
2	1592.571	3.36	26.41	36.65	39.89	33.01	74.00	-40.99	peak
3	4206.011	6.49	33.42	34.48	38.38	43.81	74.00	-30.19	peak
4	8638.399	9.81	36.60	35.71	39.10	49.80	68.20	-18.40	peak
5	11160.000	11.36	37.80	36.10	36.95	50.01	74.00	-23.99	peak
6	q16740.000	14.16	42.80	37.52	33.31	52.75	68.20	-15.45	peak



Test Mode: 07; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High

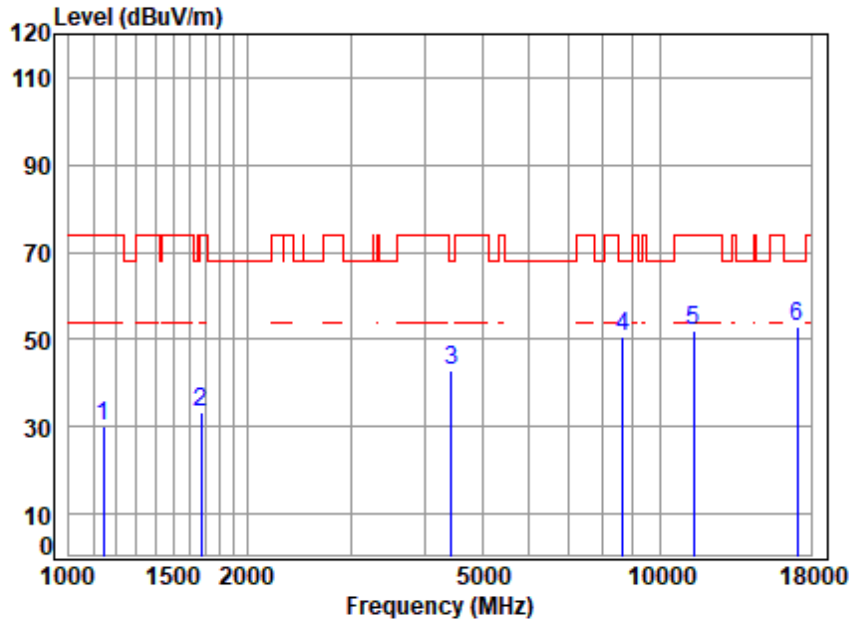


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5700 TX RSE
 Note : 5G WIFI 11A

	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	1231.345	2.85	24.46	37.62	40.43	30.12	74.00	-43.88	peak
2	1644.019	3.42	26.68	36.53	39.31	32.88	68.20	-35.32	peak
3	4443.453	6.72	33.50	34.64	37.70	43.28	68.20	-24.92	peak
4	8789.516	9.95	36.70	35.62	38.95	49.98	68.20	-18.22	peak
5	11400.000	11.52	37.90	36.24	38.43	51.61	74.00	-22.39	peak
6	q17100.000	14.17	43.10	37.47	33.27	53.07	68.20	-15.13	peak



Test Mode: 07; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High

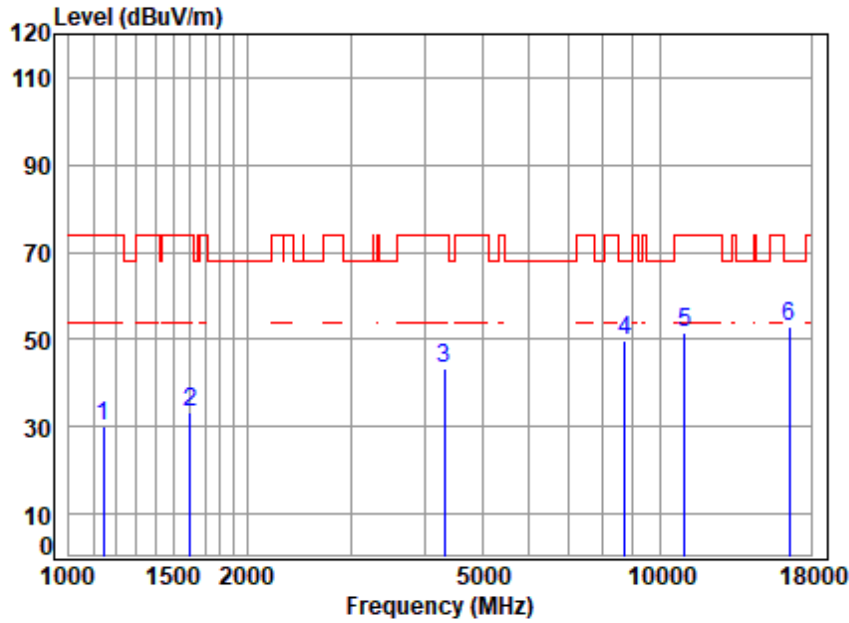


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5700 TX RSE
 Note : 5G WIFI 11A

	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	1142.201	2.70	24.17	37.90	41.18	30.15	74.00	-43.85	peak
2	1672.779	3.46	26.75	36.46	39.72	33.47	74.00	-40.53	peak
3	4443.453	6.72	33.50	34.64	37.45	43.03	68.20	-25.17	peak
4	8638.399	9.81	36.60	35.71	39.92	50.62	68.20	-17.58	peak
5	11400.000	11.52	37.90	36.24	38.78	51.96	74.00	-22.04	peak
6	q17100.000	14.17	43.10	37.47	33.15	52.95	68.20	-15.25	peak



Test Mode: 07; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

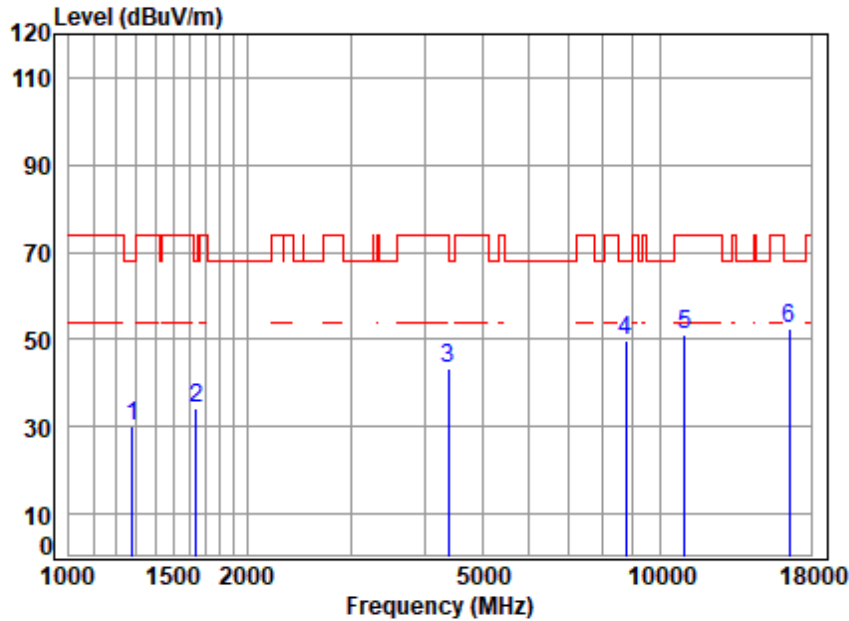


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5510 TX RSE
 Note : 5G WIFI 11N40

	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	1142.201	2.70	24.17	37.90	41.12	30.09	74.00	-43.91 peak
2	1601.804	3.37	26.51	36.63	39.84	33.09	74.00	-40.91 peak
3	4316.859	6.60	33.60	34.55	37.52	43.17	74.00	-30.83 peak
4	8713.630	9.88	36.70	35.66	38.83	49.75	68.20	-18.45 peak
5	11020.000	11.27	37.72	36.01	38.79	51.77	74.00	-22.23 peak
6	q16530.000	14.16	42.43	37.56	33.97	53.00	68.20	-15.20 peak



Test Mode: 07; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

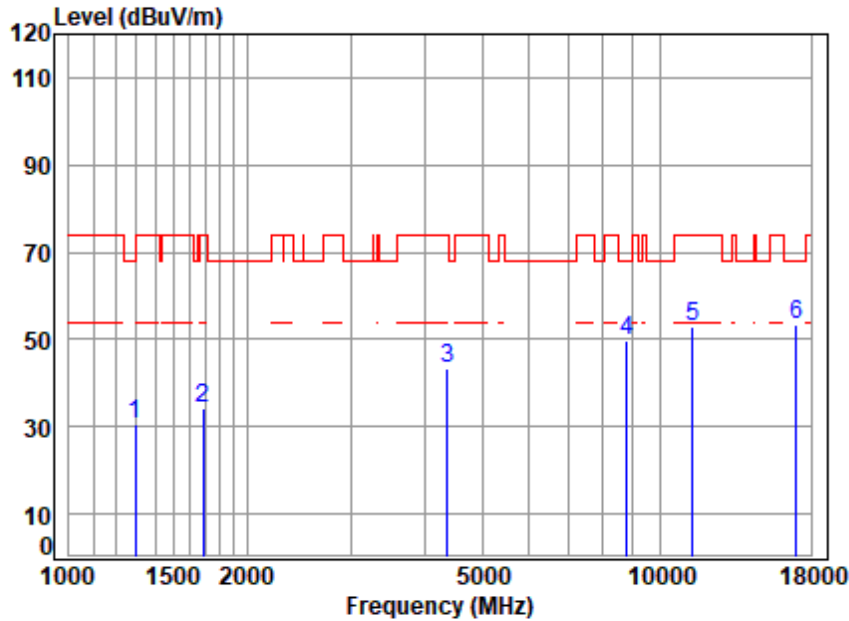


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5510 TX RSE
 Note : 5G WIFI 11N40

	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	1282.193	2.93	24.63	37.46	39.82	29.92	68.20	-38.28	peak
2	1644.019	3.42	26.68	36.53	40.87	34.44	68.20	-33.76	peak
3	4379.699	6.66	33.54	34.59	37.54	43.15	74.00	-30.85	peak
4	8738.852	9.90	36.70	35.65	38.97	49.92	68.20	-18.28	peak
5	11020.000	11.27	37.72	36.01	38.26	51.24	74.00	-22.76	peak
6	q16530.000	14.16	42.43	37.56	33.43	52.46	68.20	-15.74	peak



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

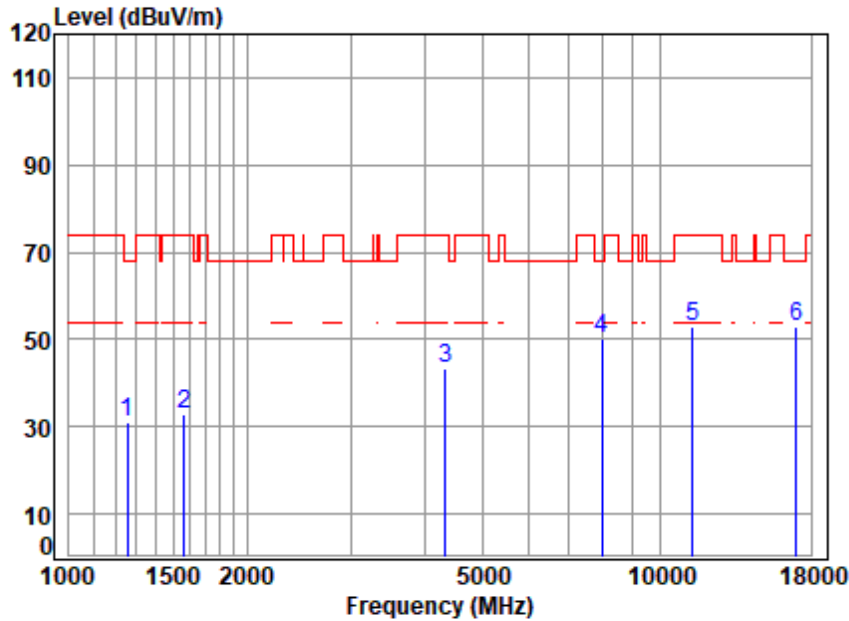


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5670 TX RSE
 Note : 5G WIFI 11N40

	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	1297.103	2.95	24.69	37.42	40.56	30.78	68.20	-37.42 peak
2	1687.347	3.47	26.77	36.43	40.24	34.05	74.00	-39.95 peak
3	4367.058	6.65	33.57	34.59	37.87	43.50	74.00	-30.50 peak
4	8789.516	9.95	36.70	35.62	38.60	49.63	68.20	-18.57 peak
5	11340.000	11.48	37.84	36.20	39.66	52.78	74.00	-21.22 peak
6	q17010.000	14.16	42.92	37.48	33.83	53.43	68.20	-14.77 peak



Test Mode: 07; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High

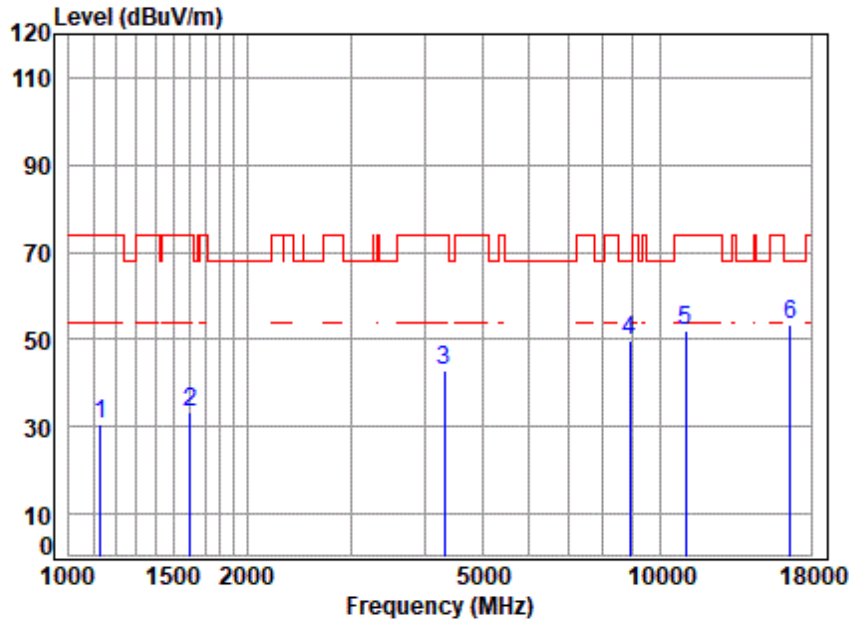


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5670 TX RSE
 Note : 5G WIFI 11N40

	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	1256.512	2.89	24.53	37.54	41.00	30.88	68.20	-37.32	peak
2	1565.191	3.33	26.08	36.71	40.25	32.95	74.00	-41.05	peak
3	4341.886	6.62	33.60	34.57	37.59	43.24	74.00	-30.76	peak
4	7989.893	9.21	36.20	36.09	40.72	50.04	68.20	-18.16	peak
5	11340.000	11.48	37.84	36.20	39.66	52.78	74.00	-21.22	peak
6	q17101.000	14.16	42.92	37.48	33.14	52.74	68.20	-15.46	peak



Test Mode: 07; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:80MHz; Channel:Low

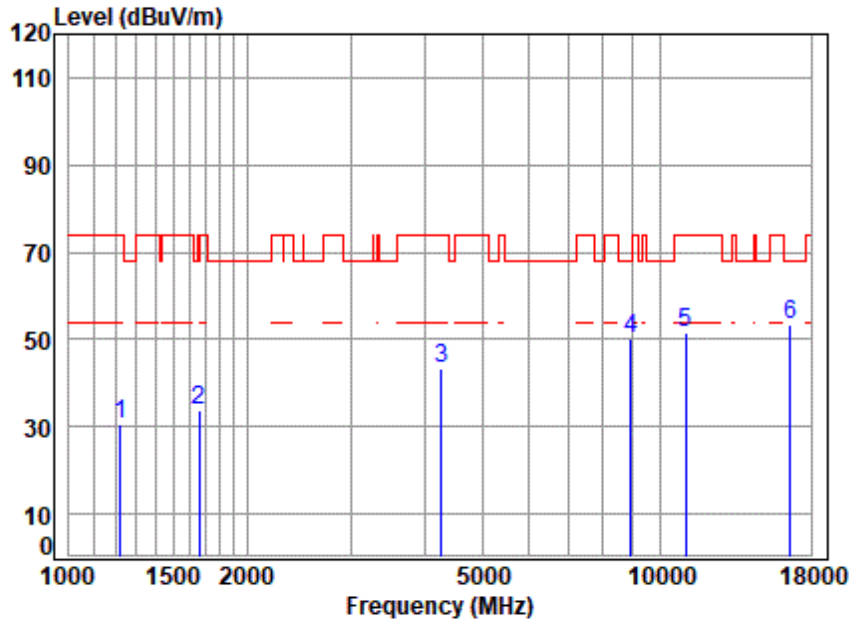


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5530 TX RSE
 Note : 5G WIFI 11AX80

	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	1132.340	2.69	24.13	37.93	41.45	30.34	74.00	-43.66	peak
2	1606.441	3.38	26.53	36.62	39.85	33.14	74.00	-40.86	peak
3	4316.859	6.60	33.60	34.55	37.40	43.05	74.00	-30.95	peak
4	8891.725	10.04	36.70	35.56	38.33	49.51	68.20	-18.69	peak
5	11060.000	11.30	37.76	36.04	38.80	51.82	74.00	-22.18	peak
6	q16590.000	14.16	42.49	37.55	34.26	53.36	68.20	-14.84	peak



Test Mode: 07; Polarity: Horizontal; Modulation:802.11 ax(Full RU0); Bandwidth:80MHz; Channel:Low

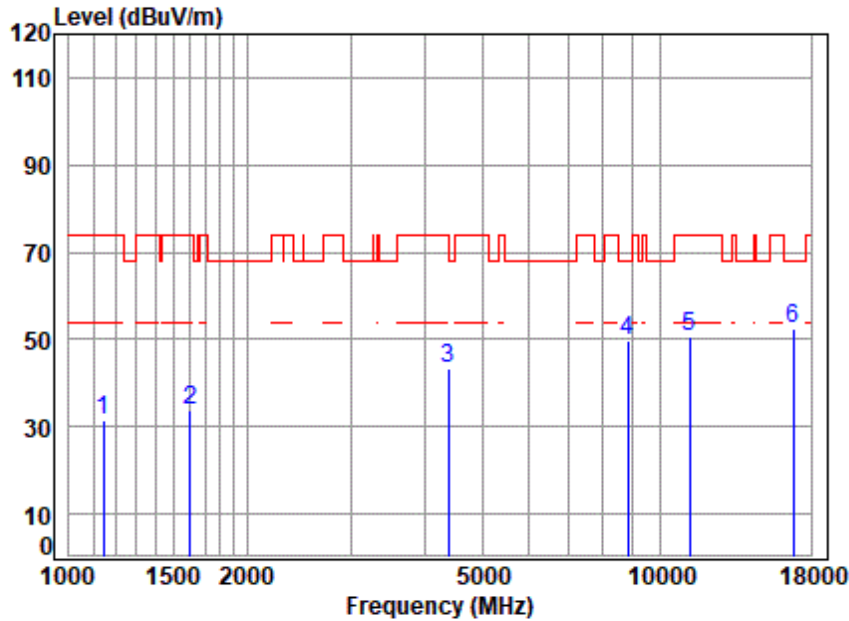


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5530 TX RSE
 Note : 5G WIFI 11AX80

	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	1220.714	2.83	24.44	37.65	40.95	30.57	74.00	-43.43	peak
2	1658.337	3.44	26.72	36.50	40.27	33.93	68.20	-34.27	peak
3	4267.237	6.55	33.60	34.52	37.68	43.31	74.00	-30.69	peak
4	8917.462	10.06	36.70	35.55	39.13	50.34	68.20	-17.86	peak
5	11060.000	11.30	37.76	36.04	38.50	51.52	74.00	-22.48	peak
6	16590.000	14.16	42.49	37.55	34.09	53.19	68.20	-15.01	peak



Test Mode: 07; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:80MHz; Channel:High

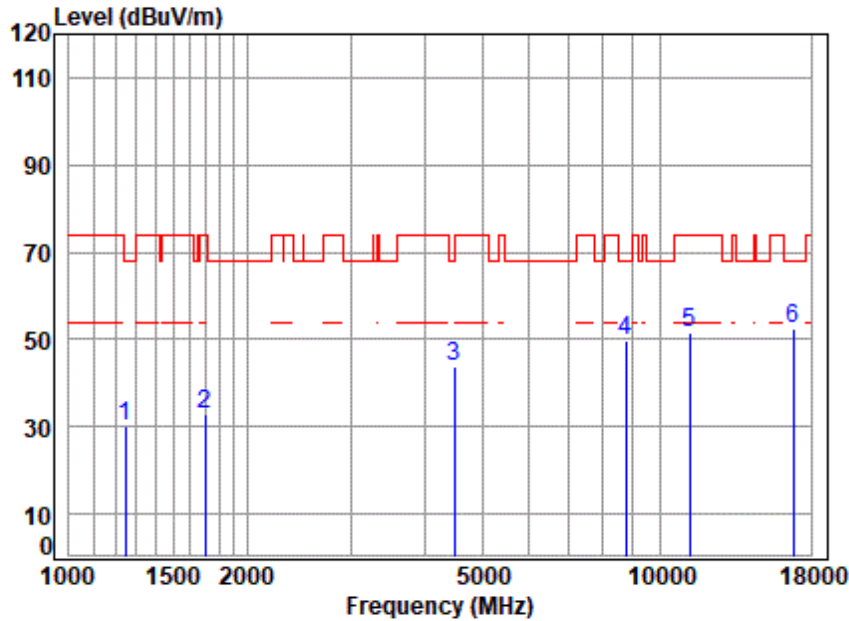


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5610 TX RSE
 Note : 5G WIFI 11AX80

	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	1145.507	2.71	24.18	37.89	42.63	31.63	74.00	-42.37	peak
2	1601.804	3.37	26.51	36.63	40.45	33.70	74.00	-40.30	peak
3	4392.376	6.67	33.52	34.60	37.73	43.32	74.00	-30.68	peak
4	8814.957	9.97	36.70	35.60	38.68	49.75	68.20	-18.45	peak
5	11220.000	11.40	37.80	36.13	37.64	50.71	74.00	-23.29	peak
6	q16830.000	14.16	42.77	37.51	32.98	52.40	68.20	-15.80	peak



Test Mode: 07; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:80MHz; Channel:High

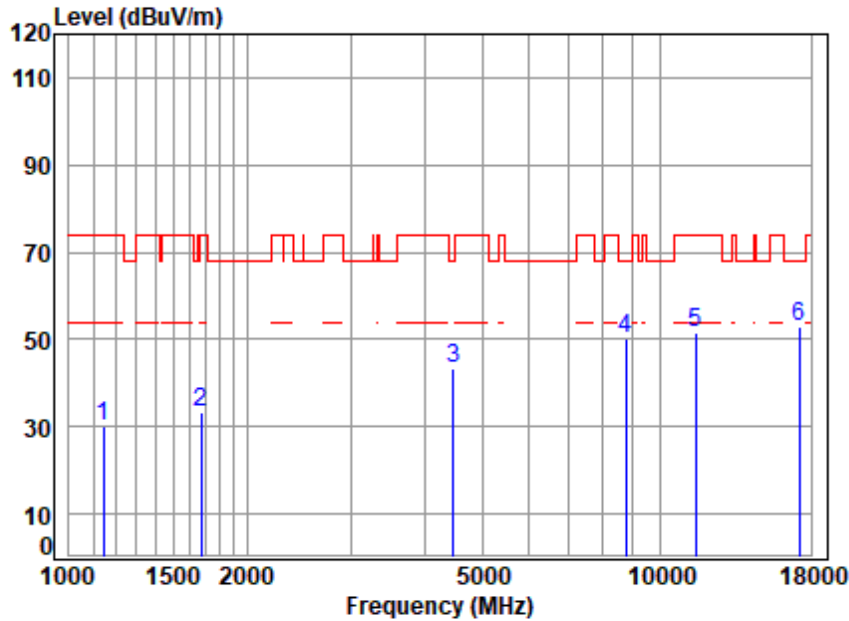


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5610 TX RSE
 Note : 5G WIFI 11AX80

	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	1245.663	2.87	24.49	37.57	40.31	30.10	68.20	-38.10	peak
2	1697.129	3.49	26.79	36.41	39.17	33.04	74.00	-40.96	peak
3	4482.150	6.75	33.50	34.66	38.05	43.64	68.20	-24.56	peak
4	8738.852	9.90	36.70	35.65	38.90	49.85	68.20	-18.35	peak
5	11220.000	11.40	37.80	36.13	38.38	51.45	74.00	-22.55	peak
6	q16830.000	14.16	42.77	37.51	33.07	52.49	68.20	-15.71	peak



Test Mode: 08; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

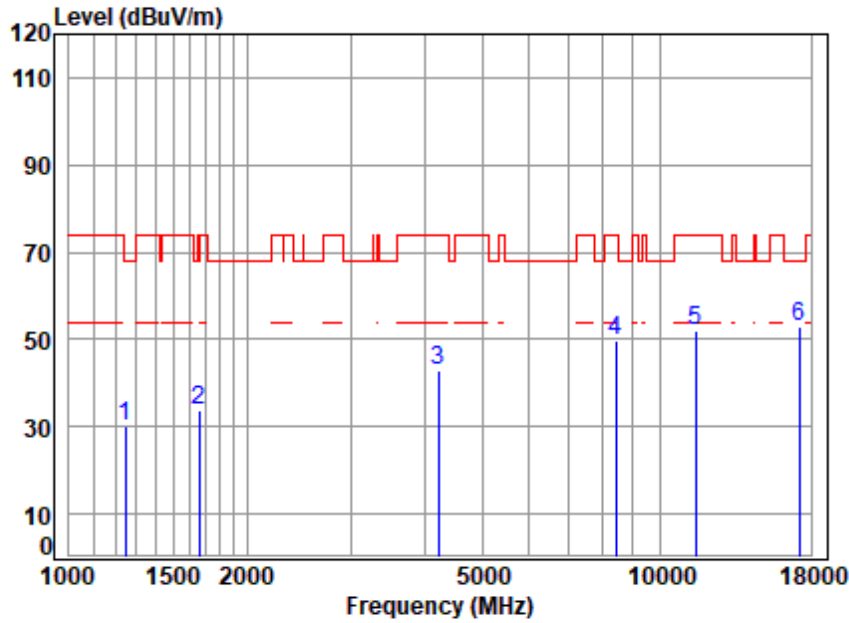


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5745 TX RSE
 Note : 5G WIFI 11A

	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	1142.201	2.70	24.17	37.90	41.27	30.24	74.00	-43.76 peak
2	1672.779	3.46	26.75	36.46	39.38	33.13	74.00	-40.87 peak
3	4469.214	6.74	33.50	34.65	37.69	43.28	68.20	-24.92 peak
4	8764.146	9.92	36.70	35.63	39.01	50.00	68.20	-18.20 peak
5	11490.000	11.58	37.99	36.29	38.16	51.44	74.00	-22.56 peak
6	q17235.000	14.18	43.34	37.46	32.72	52.78	68.20	-15.42 peak



Test Mode: 08; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

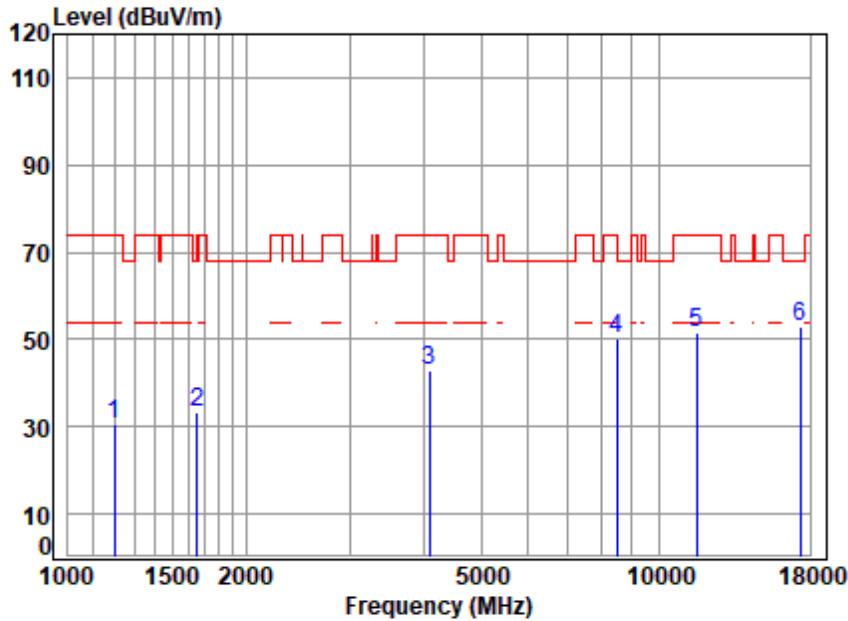


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5745 TX RSE
 Note : 5G WIFI 11A

	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	1245.663	2.87	24.49	37.57	40.23	30.02	68.20	-38.18 peak
2	1658.337	3.44	26.72	36.50	40.05	33.71	68.20	-34.49 peak
3	4218.186	6.50	33.47	34.48	37.50	42.99	74.00	-31.01 peak
4	8416.584	9.61	36.40	35.84	39.70	49.87	74.00	-24.13 peak
5	11490.000	11.58	37.99	36.29	38.59	51.87	74.00	-22.13 peak
6	q17235.000	14.18	43.34	37.46	33.03	53.09	68.20	-15.11 peak



Test Mode: 08; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:middle

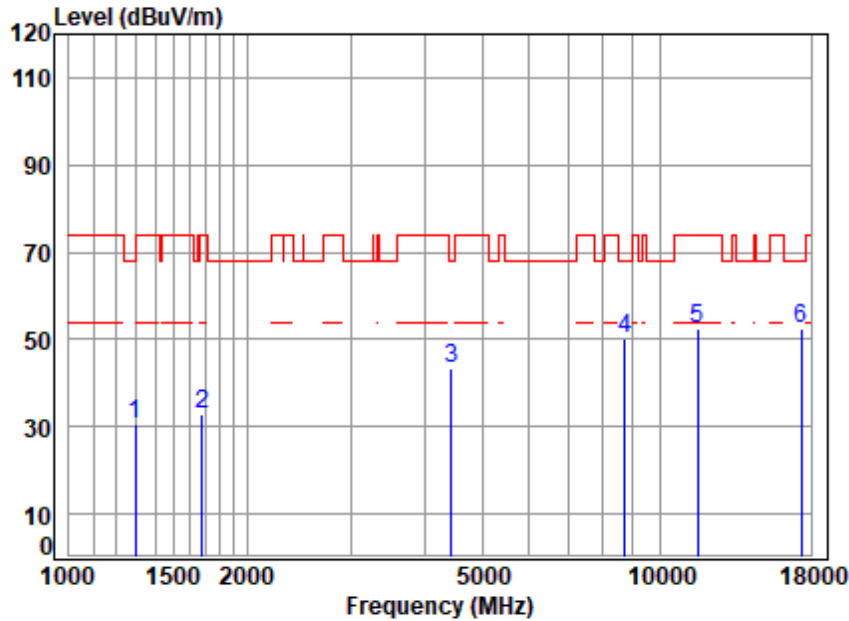


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5785 TX RSE
 Note : 5G WIFI 11A

	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	1199.726	2.80	24.40	37.71	41.20	30.69	74.00	-43.31	peak
2	1653.550	3.43	26.71	36.51	39.51	33.14	68.20	-35.06	peak
3	4086.182	6.37	32.97	34.39	37.75	42.70	74.00	-31.30	peak
4	8489.882	9.68	36.48	35.79	39.65	50.02	74.00	-23.98	peak
5	11570.000	11.63	38.00	36.34	38.13	51.42	74.00	-22.58	peak
6	q17355.000	14.19	43.46	37.45	32.54	52.74	68.20	-15.46	peak



Test Mode: 08; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:middle

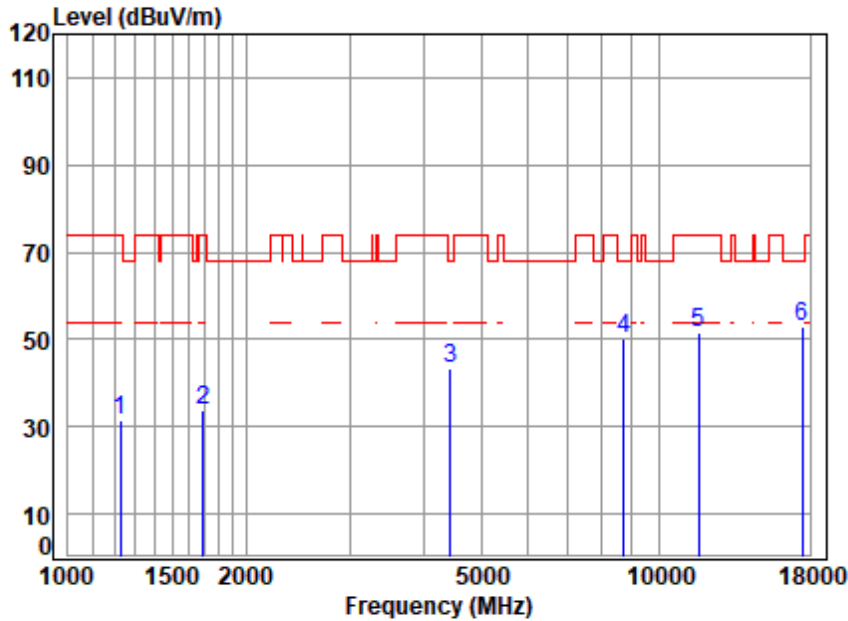


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5785 TX RSE
 Note : 5G WIFI 11A

	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	1293.359	2.95	24.67	37.43	40.39	30.58	68.20	-37.62	peak
2	1682.477	3.47	26.77	36.44	39.22	33.02	74.00	-40.98	peak
3	4430.628	6.71	33.50	34.63	37.54	43.12	68.20	-25.08	peak
4	8713.630	9.88	36.70	35.66	39.46	50.38	68.20	-17.82	peak
5	11570.000	11.63	38.00	36.34	39.14	52.43	74.00	-21.57	peak
6	q17355.000	14.19	43.46	37.45	32.32	52.52	68.20	-15.68	peak



Test Mode: 08; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High

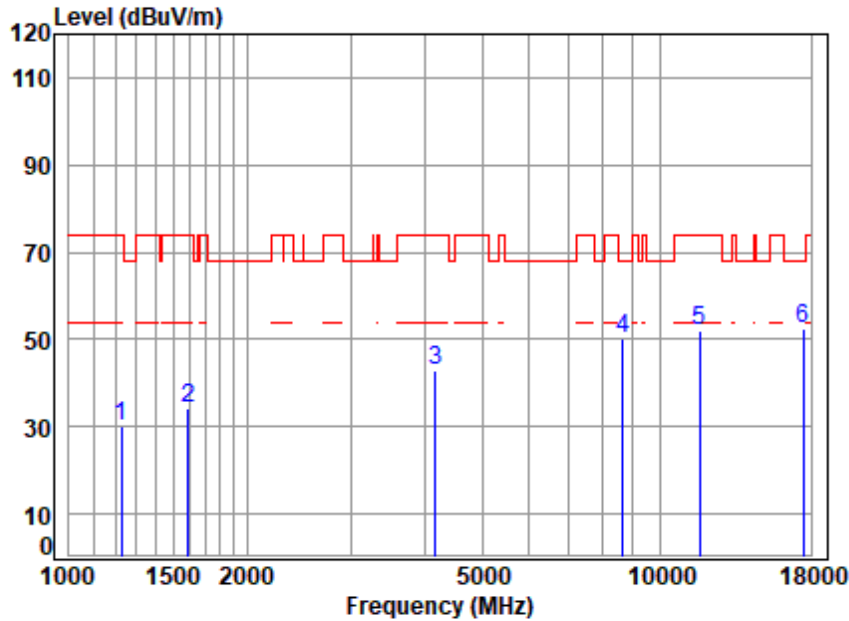


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5825 TX RSE
 Note : 5G WIFI 11A

	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	1227.791	2.85	24.46	37.63	41.87	31.55	74.00	-42.45 peak
2	1692.231	3.48	26.78	36.42	39.90	33.74	74.00	-40.26 peak
3	4443.453	6.72	33.50	34.64	37.59	43.17	68.20	-25.03 peak
4	8713.630	9.88	36.70	35.66	39.06	49.98	68.20	-18.22 peak
5	11650.000	11.68	38.00	36.38	38.14	51.44	74.00	-22.56 peak
6	q17475.000	14.20	43.58	37.44	32.81	53.15	68.20	-15.05 peak



Test Mode: 08; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High

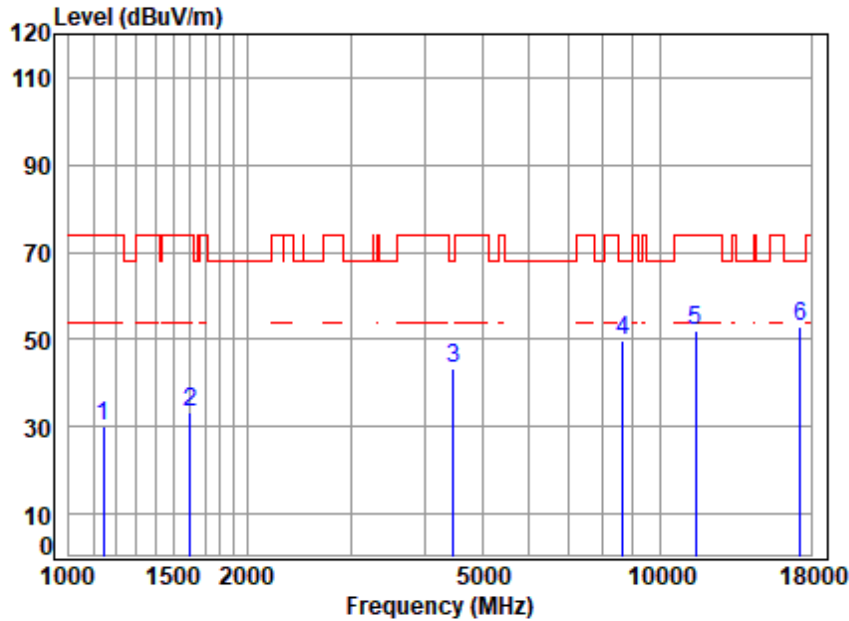


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5825 TX RSE
 Note : 5G WIFI 11A

	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	1227.791	2.85	24.46	37.63	40.58	30.26	74.00	-43.74	peak
2	1592.571	3.36	26.41	36.65	41.16	34.28	74.00	-39.72	peak
3	4169.698	6.45	33.22	34.45	37.52	42.74	74.00	-31.26	peak
4	8638.399	9.81	36.60	35.71	39.60	50.30	68.20	-17.90	peak
5	11650.000	11.68	38.00	36.38	38.76	52.06	74.00	-21.94	peak
6	q17475.000	14.20	43.58	37.44	32.28	52.62	68.20	-15.58	peak



Test Mode: 08; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

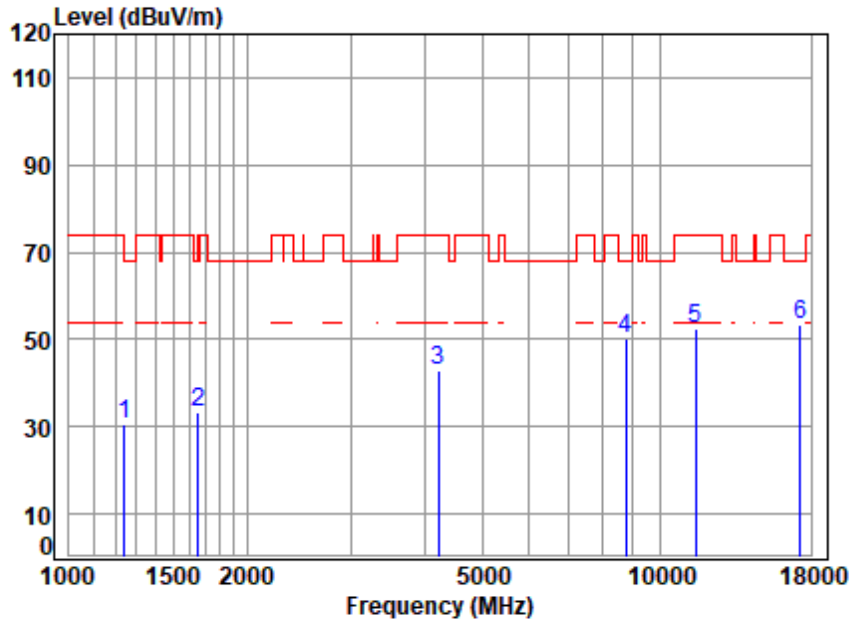


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5755 TX RSE
 Note : 5G WIFI 11N40

	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	1145.507	2.71	24.18	37.89	40.95	29.95	74.00	-44.05	peak
2	1601.804	3.37	26.51	36.63	40.14	33.39	74.00	-40.61	peak
3	4469.214	6.74	33.50	34.65	37.67	43.26	68.20	-24.94	peak
4	8663.404	9.84	36.63	35.69	39.14	49.92	68.20	-18.28	peak
5	11510.000	11.59	38.00	36.30	38.84	52.13	74.00	-21.87	peak
6	q17265.000	14.18	43.37	37.46	33.01	53.10	68.20	-15.10	peak



Test Mode: 08; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

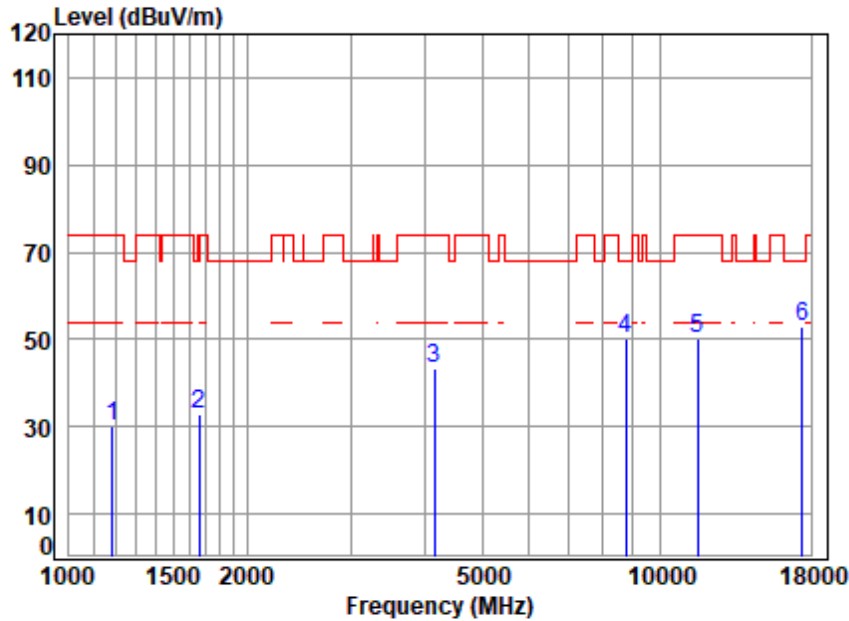


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5755 TX RSE
 Note : 5G WIFI 11N40

	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	1242.068	2.87	24.48	37.58	40.73	30.50	68.20	-37.70 peak
2	1653.550	3.43	26.71	36.51	39.60	33.23	68.20	-34.97 peak
3	4218.186	6.50	33.47	34.48	37.23	42.72	74.00	-31.28 peak
4	8738.852	9.90	36.70	35.65	39.31	50.26	68.20	-17.94 peak
5	11510.000	11.59	38.00	36.30	38.99	52.28	74.00	-21.72 peak
6	q17265.000	14.18	43.37	37.46	33.17	53.26	68.20	-14.94 peak



Test Mode: 08; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High

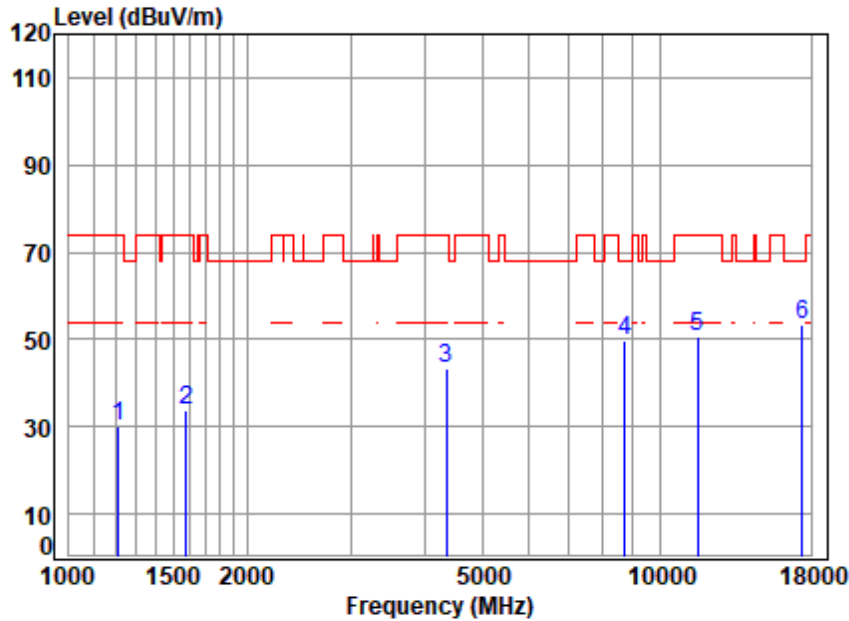


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5795 TX RSE
 Note : 5G WIFI 11N40

	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	1185.936	2.78	24.34	37.76	40.72	30.08	74.00	-43.92	peak
2	1658.337	3.44	26.72	36.50	39.33	32.99	68.20	-35.21	peak
3	4145.664	6.43	33.09	34.43	38.10	43.19	74.00	-30.81	peak
4	8764.146	9.92	36.70	35.63	39.26	50.25	68.20	-17.95	peak
5	11590.000	11.64	38.00	36.35	36.86	50.15	74.00	-23.85	peak
6	q17385.000	14.20	43.49	37.44	32.64	52.89	68.20	-15.31	peak



Test Mode: 08; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High

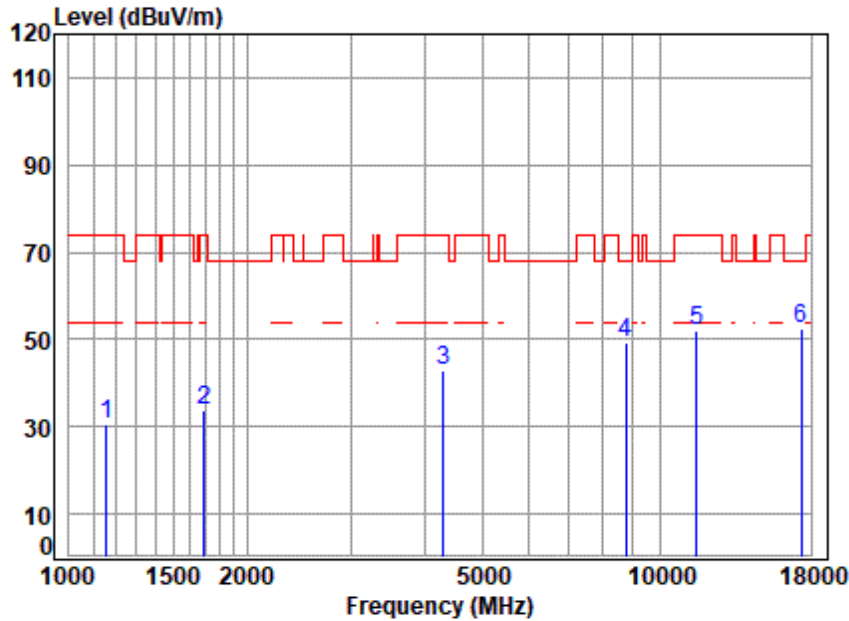


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5795 TX RSE
 Note : 5G WIFI 11N40

	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	1213.677	2.82	24.43	37.67	40.60	30.18	74.00	-43.82	peak
2	1578.822	3.34	26.25	36.68	40.77	33.68	74.00	-40.32	peak
3	4354.454	6.63	33.59	34.58	37.52	43.16	74.00	-30.84	peak
4	8713.630	9.88	36.70	35.66	38.87	49.79	68.20	-18.41	peak
5	11590.000	11.64	38.00	36.35	37.43	50.72	74.00	-23.28	peak
6	q17385.000	14.20	43.49	37.44	33.01	53.26	68.20	-14.94	peak



Test Mode: 08; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:80MHz

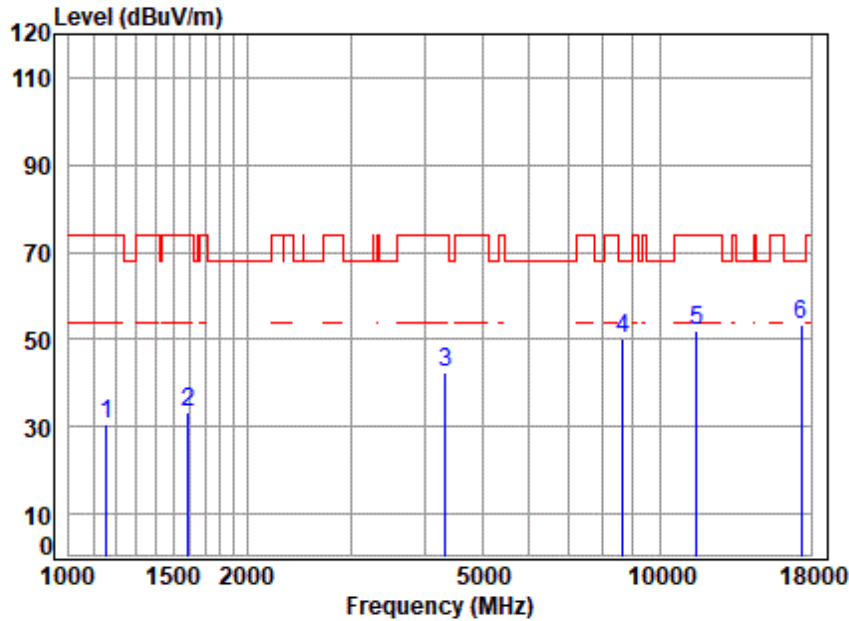


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT/01905AT
 Mode : 5775 TX RSE
 Note : 5G WIFI 11AX80

	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	1158.828	2.73	24.24	37.84	41.22	30.35	74.00	-43.65	peak
2	1692.231	3.48	26.78	36.42	39.99	33.83	74.00	-40.17	peak
3	4304.400	6.59	33.60	34.54	37.41	43.06	74.00	-30.94	peak
4	8738.852	9.90	36.70	35.65	38.33	49.28	68.20	-18.92	peak
5	11550.000	11.61	38.00	36.33	38.79	52.07	74.00	-21.93	peak
6	q17325.000	14.19	43.43	37.45	32.53	52.70	68.20	-15.50	peak



Test Mode: 08; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:80MHz



Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT/01905AT
 Mode : 5775 TX RSE
 Note : 5G WIFI 11AX80

	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	1155.483	2.73	24.22	37.86	41.49	30.58	74.00	-43.42 peak
2	1592.571	3.36	26.41	36.65	40.07	33.19	74.00	-40.81 peak
3	4341.886	6.62	33.60	34.57	36.73	42.38	74.00	-31.62 peak
4	8663.404	9.84	36.63	35.69	39.24	50.02	68.20	-18.18 peak
5	11550.000	11.61	38.00	36.33	38.95	52.23	74.00	-21.77 peak
6	q17325.000	14.19	43.43	37.45	33.08	53.25	68.20	-14.95 peak



7.9 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

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.

7.9.1 E.U.T. Operation

Operating Environment:

Temperature: 24.2 °C Humidity: 57.3 % RH Atmospheric Pressure: 1008 mbar

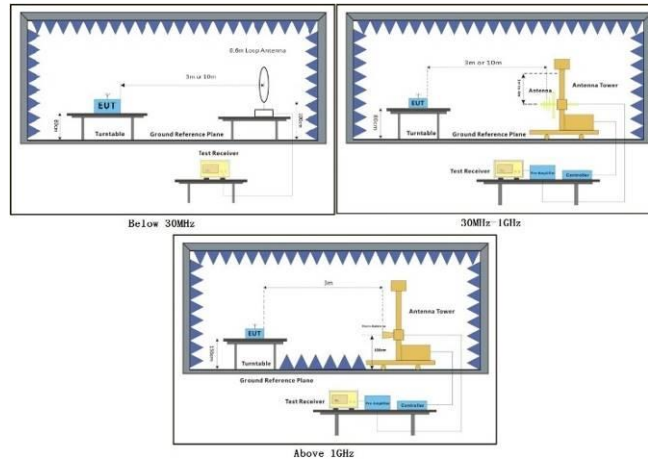


7.9.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	05	<p>TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80), data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.</p> <p>TX mode (U-NII-2A)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80), data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.</p> <p>TX mode (U-NII-2C)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.</p> <p>TX mode (U-NII-3)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.</p>
Final test	06	
Final test	07	
Final test	08	



7.9.3 Test Setup Diagram



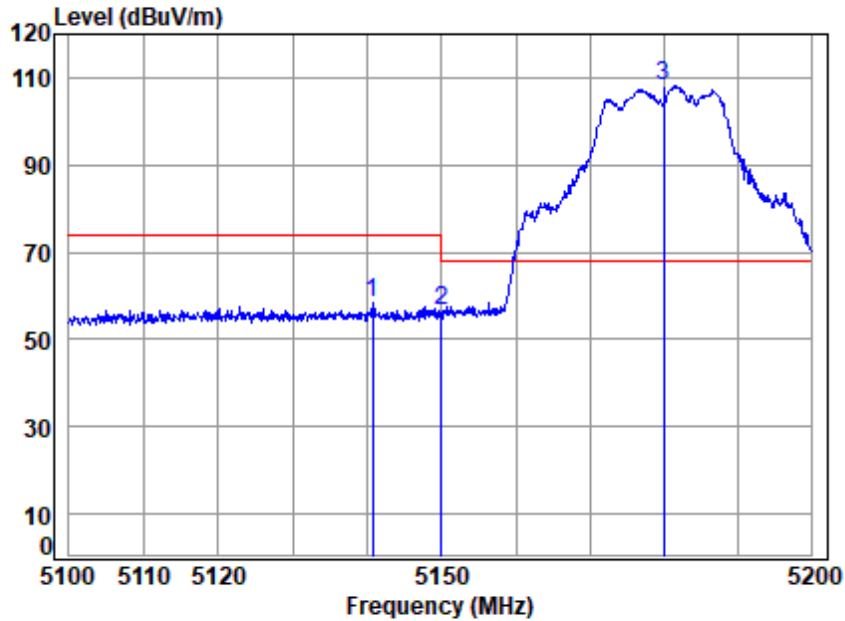
7.9.4 Measurement Procedure and Data

- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- 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.
- 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 peak, quasi-peak or average method as specified and then reported in a data sheet.
- Test the EUT in the lowest 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



Test Mode: 05; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

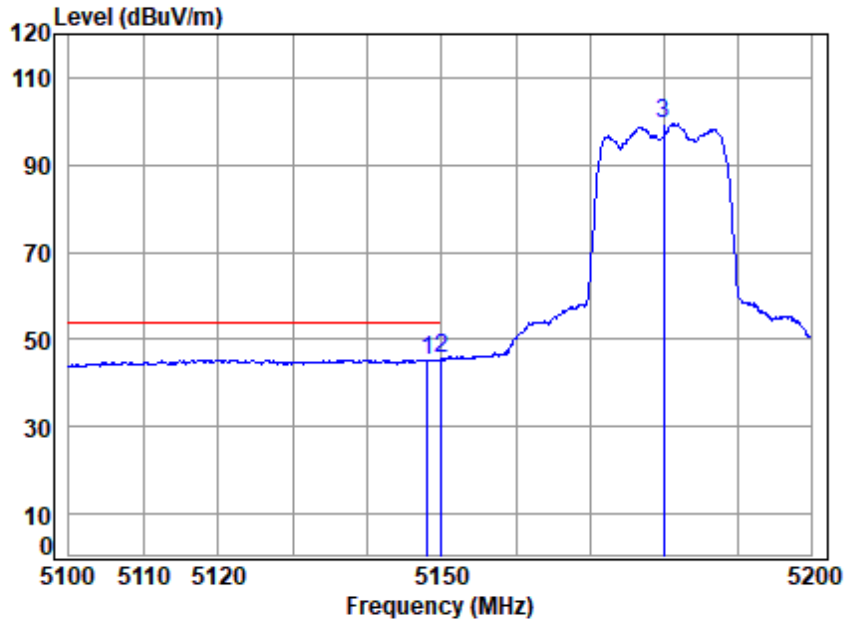


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5180 Band edge
 : 5G WIFI 11A

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5140.666	7.35	34.02	34.99	51.90	58.28	74.00	-15.72	Peak
2	5149.980	7.36	34.00	34.99	50.18	56.55	74.00	-17.45	Peak
3 q	5180.000	7.39	34.00	34.99	101.74	108.14	68.20	39.94	Peak



Test Mode: 05; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

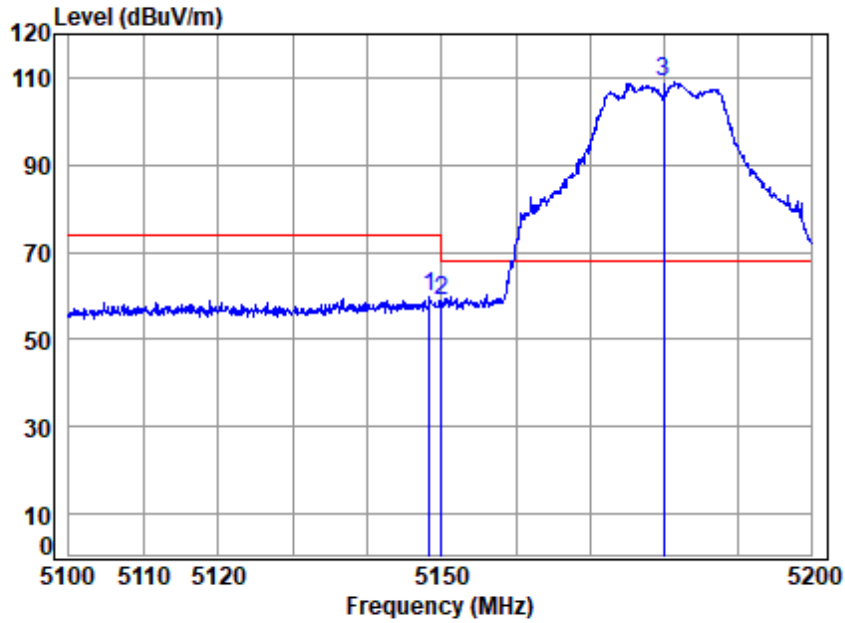


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5180 Band edge
 : 5G WIFI 11A

	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	5148.058	7.36	34.00	34.99	39.00	45.37	54.00	-8.63	Average
2 q	5149.980	7.36	34.00	34.99	39.29	45.66	54.00	-8.34	Average
3	5180.000	7.39	34.00	34.99	93.04	99.44	-----	-----	Average



Test Mode: 05; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

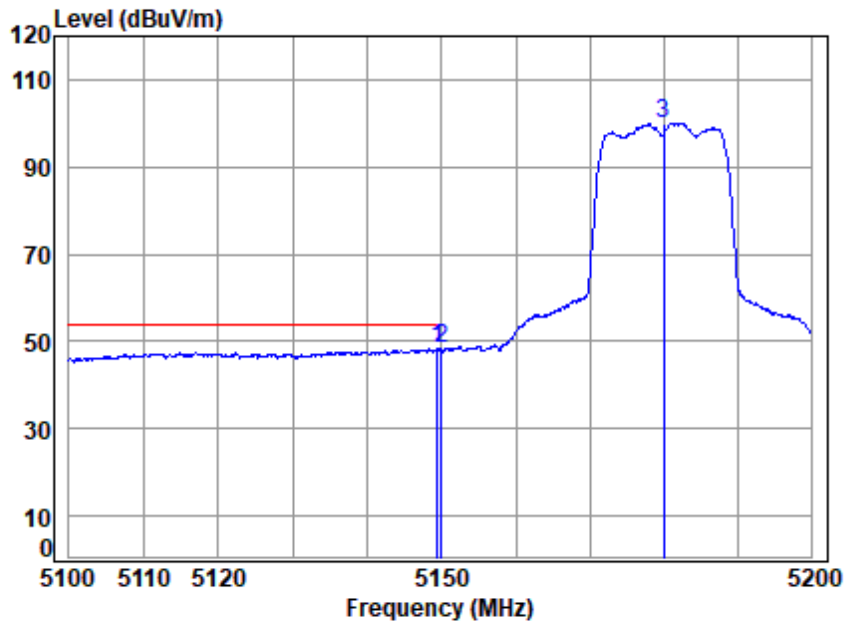


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5180 Band edge
 : 5G WIFI 11A

	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	5148.357	7.36	34.00	34.99	53.24	59.61	74.00	-14.39	peak
2	5149.980	7.36	34.00	34.99	52.62	58.99	74.00	-15.01	peak
3 q	5180.000	7.39	34.00	34.99	102.49	108.89	68.20	40.69	peak



Test Mode: 05; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

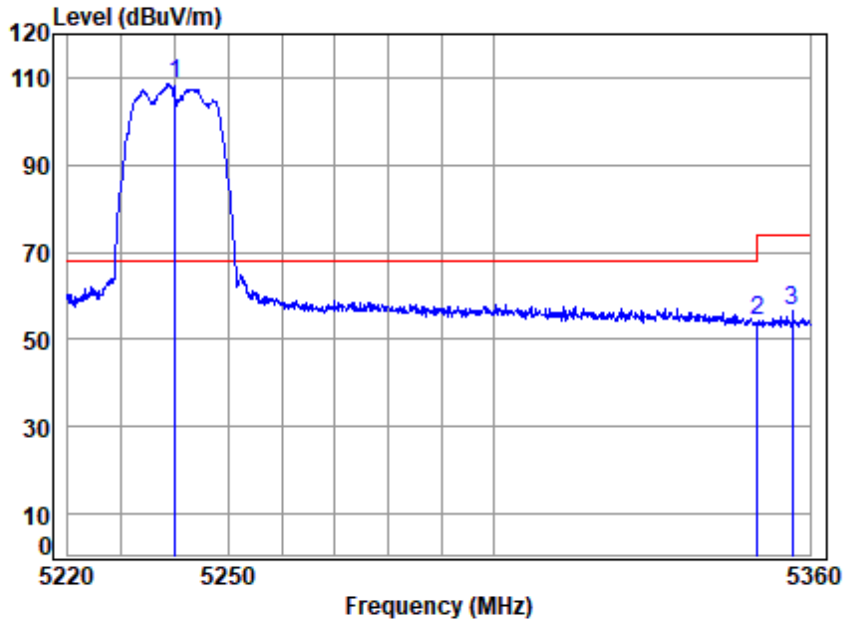


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5180 Band edge
 : 5G WIFI 11A

		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 5149.458	7.36	34.00	34.99	41.88	48.25	54.00	-5.75	Average
2	5149.980	7.36	34.00	34.99	41.85	48.22	54.00	-5.78	Average
3	5180.000	7.39	34.00	34.99	93.65	100.05	-----	-----	Average



Test Mode: 05; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High

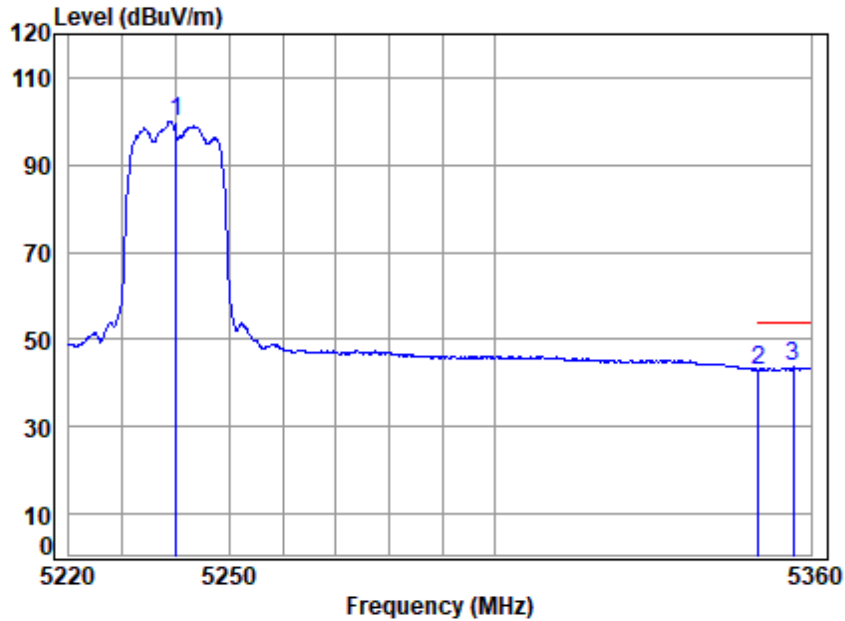


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5240 Band edge
 : 5G WIFI 11A

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Line	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 q	5240.000	7.45	34.00	35.00	102.04	108.49	68.20	40.29 Peak
2	5350.020	7.56	34.30	35.00	47.31	54.17	74.00	-19.83 Peak
3	5356.738	7.57	34.33	35.00	49.89	56.79	74.00	-17.21 Peak



Test Mode: 05; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High

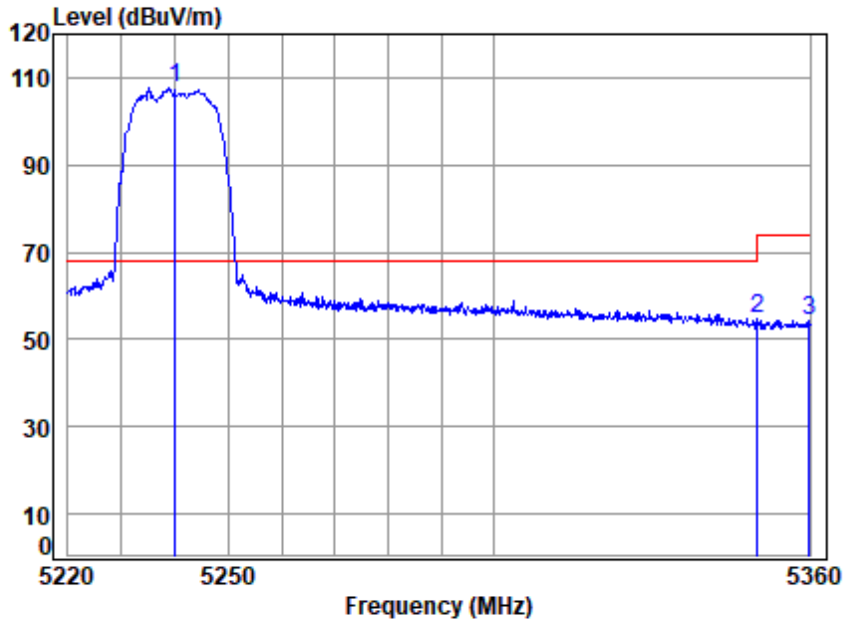


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5240 Band edge
 : 5G WIFI 11A

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5240.000	7.45	34.00	35.00	93.51	99.96	-----	-----	Average
2	5350.020	7.56	34.30	35.00	36.26	43.12	54.00	-10.88	Average
3	5356.596	7.57	34.33	35.00	36.70	43.60	54.00	-10.40	Average



Test Mode: 05; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High

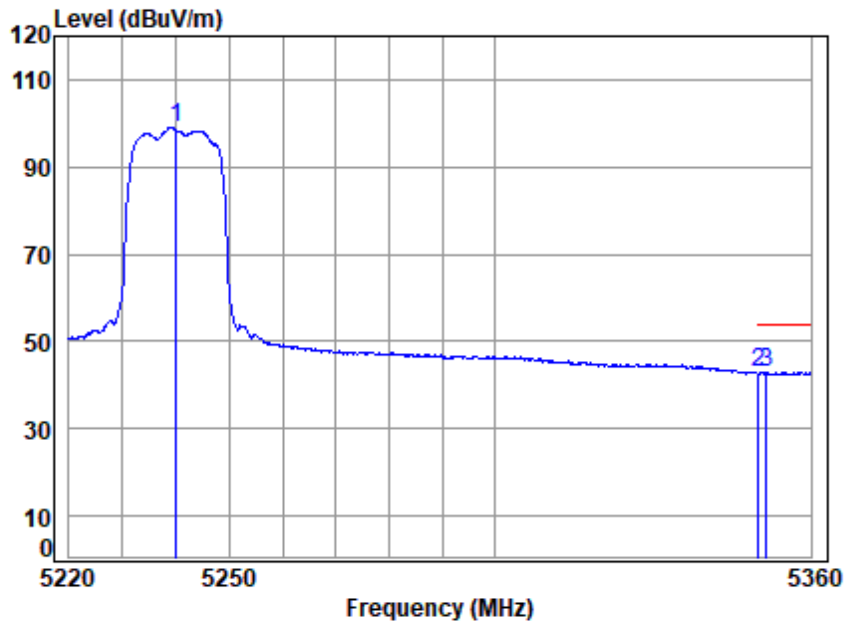


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5240 Band edge
 : 5G WIFI 11A

		Cable	Ant	Preamp	Read	Limit	Over	
Freq		Loss	Factor	Factor	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 q	5240.000	7.45	34.00	35.00	101.20	107.65	68.20	39.45 peak
2	5350.020	7.56	34.30	35.00	48.07	54.93	74.00	-19.07 peak
3	5359.858	7.57	34.34	35.00	47.51	54.42	74.00	-19.58 peak



Test Mode: 05; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High

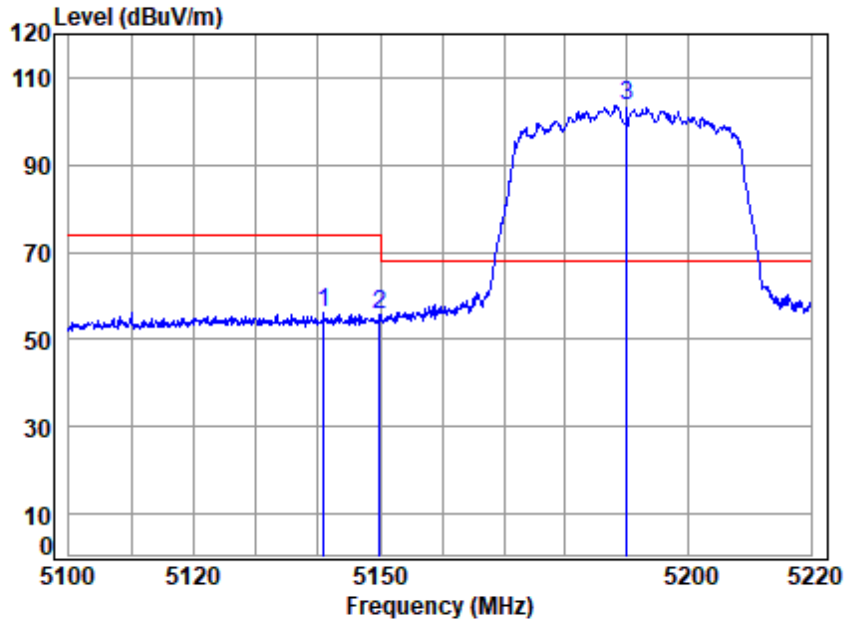


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5240 Band edge
 : 5G WIFI 11A

	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	5240.000	7.45	34.00	35.00	92.51	98.96	-----	-----	Average
2	5350.020	7.56	34.30	35.00	35.84	42.70	54.00	-11.30	Average
3	q 5351.495	7.56	34.31	35.00	36.03	42.90	54.00	-11.10	Average



Test Mode: 05; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

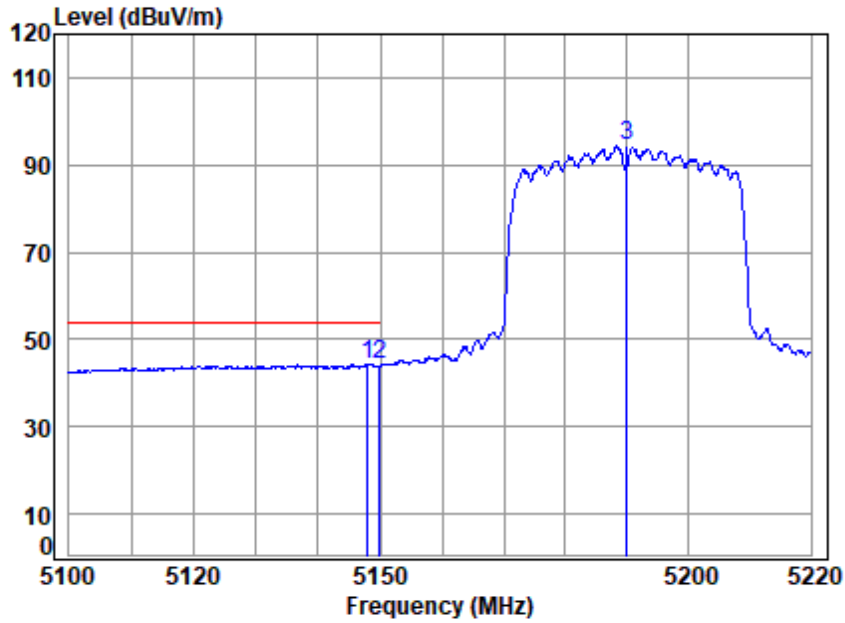


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5190 Band edge
 : 5G WIFI 11N40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Line	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	5140.846	7.35	34.02	34.99	49.83	56.21	74.00	-17.79 Peak
2	5149.980	7.36	34.00	34.99	49.50	55.87	74.00	-18.13 Peak
3 q	5190.000	7.40	34.00	34.99	97.29	103.70	68.20	35.50 Peak



Test Mode: 05; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

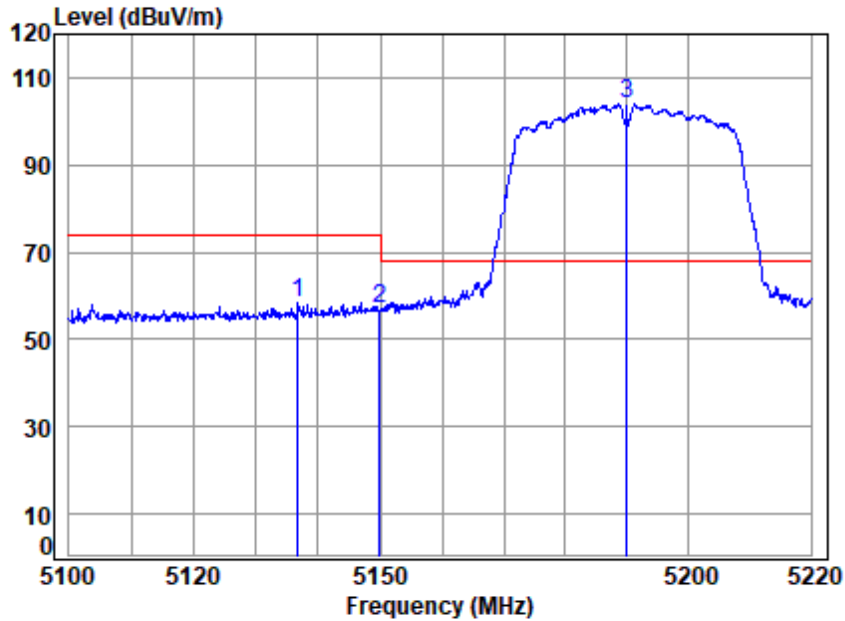


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5190 Band edge
 : 5G WIFI 11N40

		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	q 5148.024	7.36	34.00	34.99	37.89	44.26	54.00	-9.74	Average
2	5149.980	7.36	34.00	34.99	37.75	44.12	54.00	-9.88	Average
3	5190.000	7.40	34.00	34.99	88.06	94.47	-----	-----	Average



Test Mode: 05; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

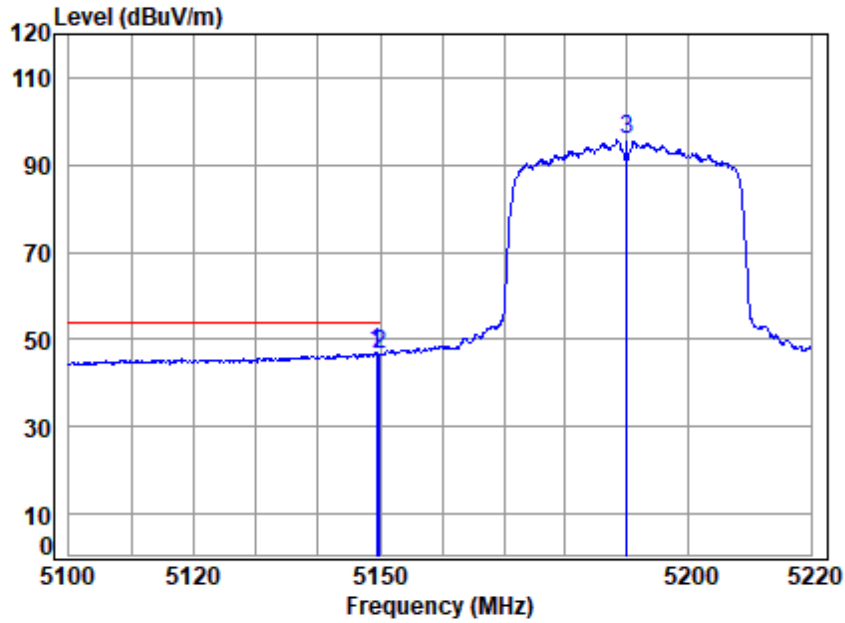


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5190 Band edge
 : 5G WIFI 11N40

	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	5136.663	7.35	34.03	34.99	51.98	58.37	74.00	-15.63 peak
2	5149.980	7.36	34.00	34.99	50.48	56.85	74.00	-17.15 peak
3 q	5190.000	7.40	34.00	34.99	97.63	104.04	68.20	35.84 peak



Test Mode: 05; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

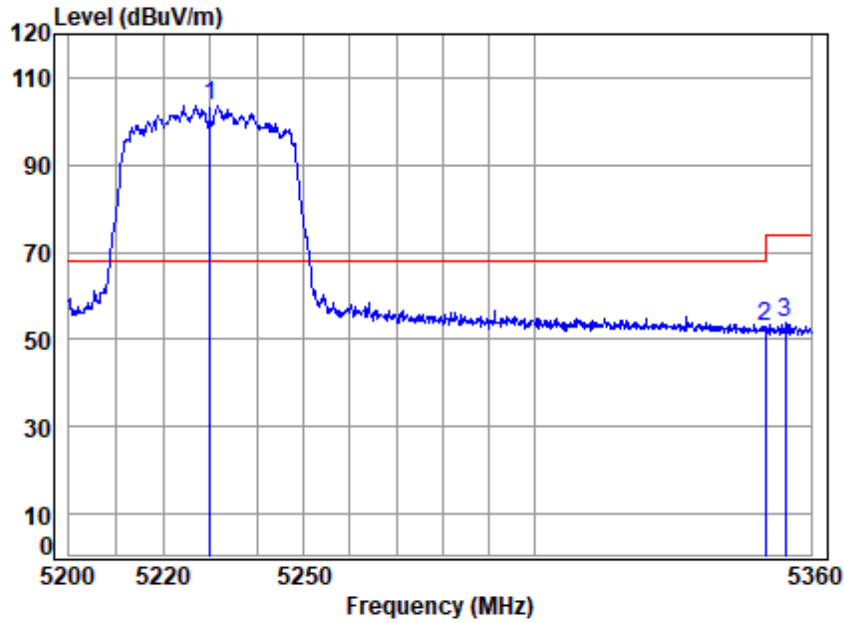


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5190 Band edge
 : 5G WIFI 11N40

		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 q	5149.461	7.36	34.00	34.99	40.60	46.97	54.00	-7.03	Average
2	5149.980	7.36	34.00	34.99	40.30	46.67	54.00	-7.33	Average
3	5190.000	7.40	34.00	34.99	89.27	95.68	-----	-----	Average



Test Mode: 05; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High

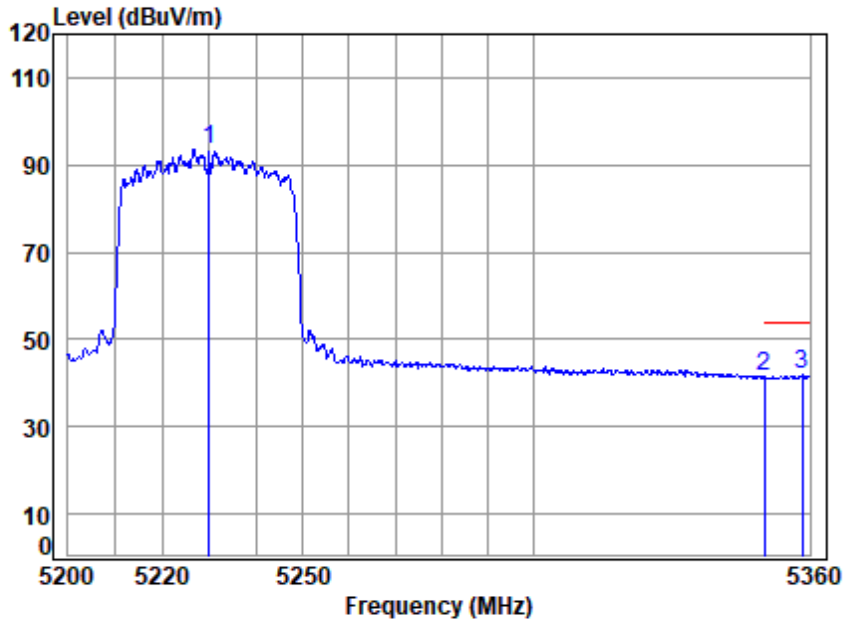


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5230 Band edge
 : 5G WIFI 11N40

		Cable	Ant	Preamp	Read	Limit	Over	
Freq		Loss	Factor	Factor	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 q	5230.000	7.44	34.00	34.99	97.29	103.74	68.20	35.54 Peak
2	5350.020	7.56	34.30	35.00	46.01	52.87	74.00	-21.13 Peak
3	5354.318	7.57	34.32	35.00	46.74	53.63	74.00	-20.37 Peak



Test Mode: 05; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High

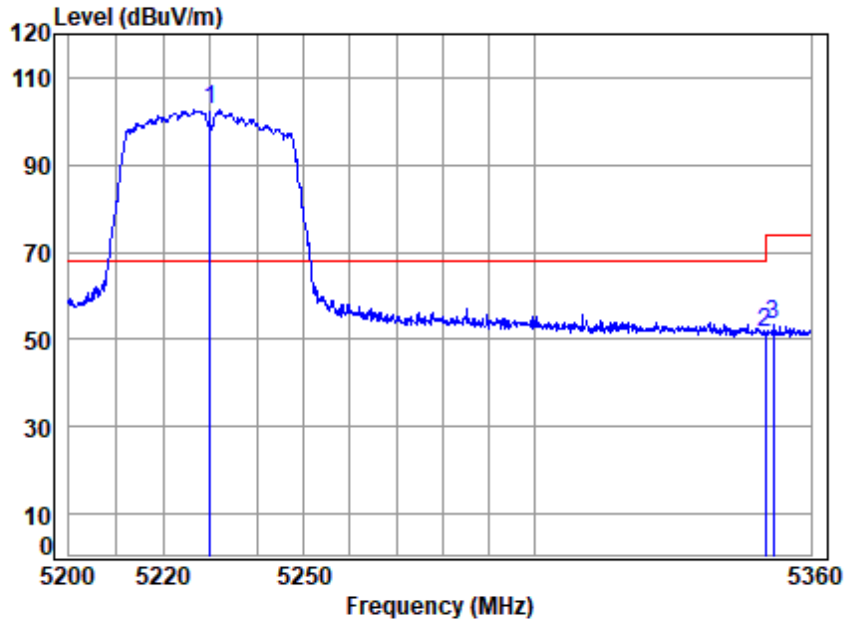


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5230 Band edge
 : 5G WIFI 11N40

	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	5230.000	7.44	34.00	34.99	87.11	93.56	-----	-----	Average
2	5350.020	7.56	34.30	35.00	34.60	41.46	54.00	-12.54	Average
3	5358.376	7.57	34.33	35.00	34.85	41.75	54.00	-12.25	Average



Test Mode: 05; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High

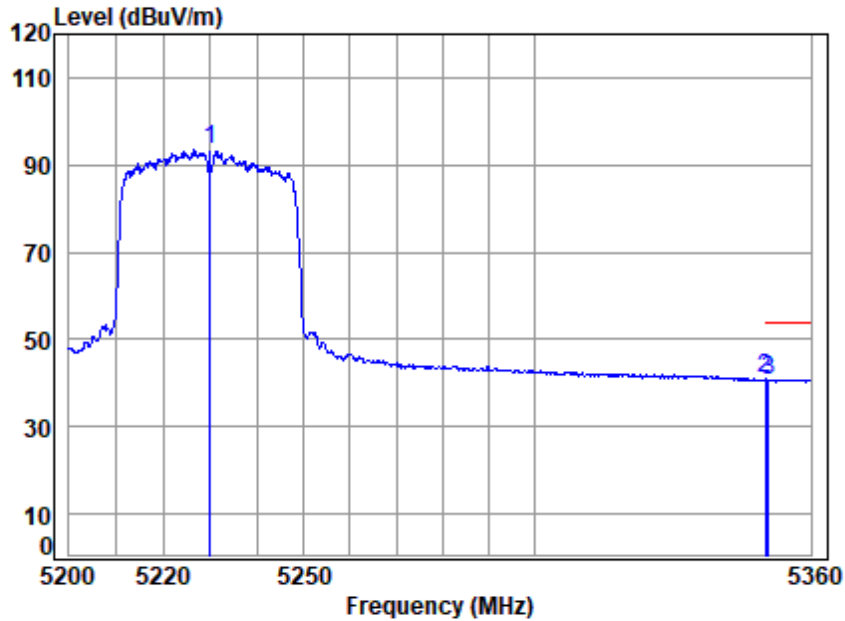


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5230 Band edge
 : 5G WIFI 11N40

		Cable	Ant	Preamp	Read	Limit	Over	
Freq		Loss	Factor	Factor	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dB	
1 q	5230.000	7.44	34.00	34.99	96.13	102.58	68.20	34.38 peak
2	5350.020	7.56	34.30	35.00	44.69	51.55	74.00	-22.45 peak
3	5351.884	7.56	34.31	35.00	46.32	53.19	74.00	-20.81 peak



Test Mode: 05; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High

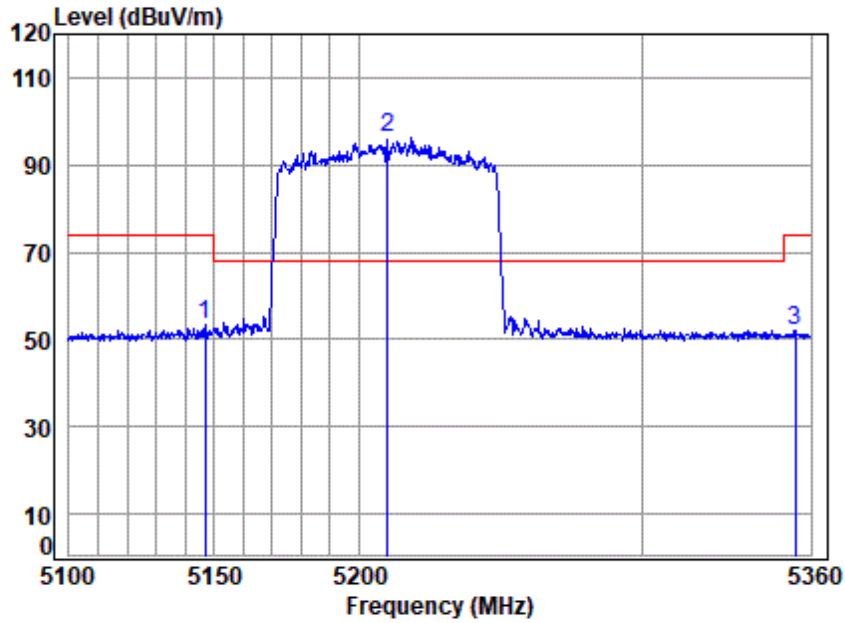


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5230 Band edge
 : 5G WIFI 11N40

	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	5230.000	7.44	34.00	34.99	87.04	93.49	-----	Average
2 q	5350.020	7.56	34.30	35.00	34.09	40.95	54.00	-13.05 Average
3	5350.749	7.56	34.30	35.00	33.96	40.82	54.00	-13.18 Average



Test Mode: 05; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:80MHz

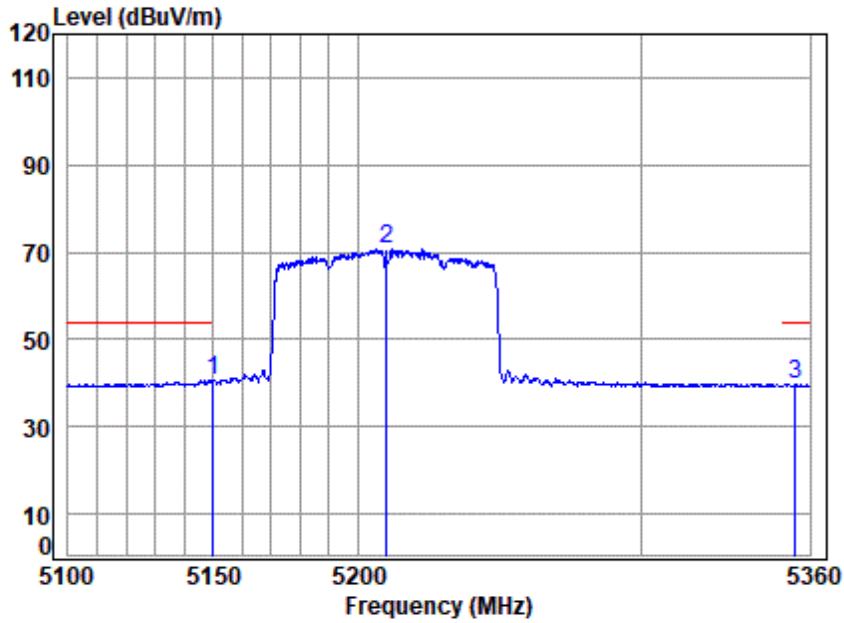


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5210 Band edge
 : 5G WIFI 11AX80

	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	5146.619	7.36	34.01	34.99	47.02	53.40	74.00	-20.60 Peak
2 q	5210.000	7.42	34.00	34.99	90.06	96.49	68.20	28.29 Peak
3	5354.406	7.57	34.32	35.00	45.11	52.00	74.00	-22.00 Peak



Test Mode: 05; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:80MHz

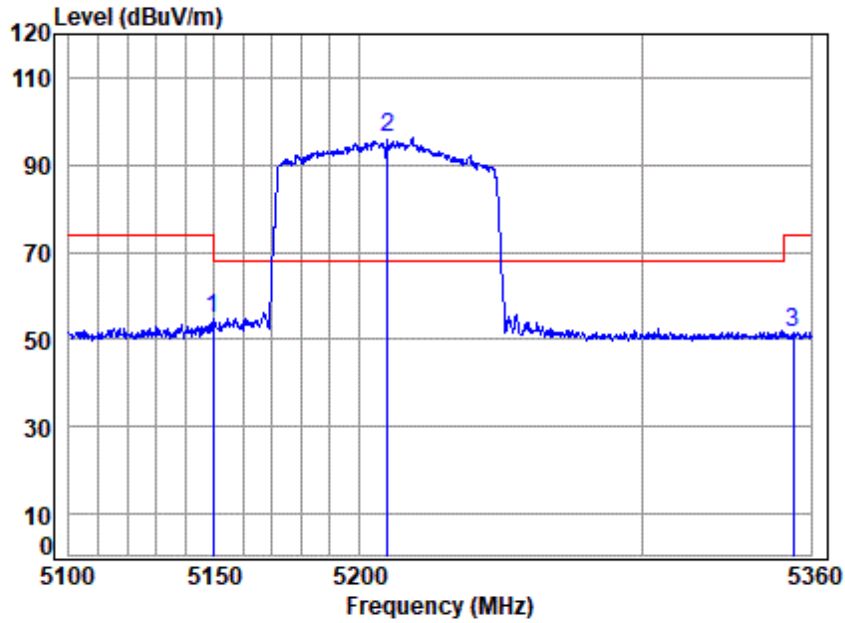


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5210 Band edge
 : 5G WIFI 11AX80

		Cable	Ant	Preamp	Read	Limit	Over		
	Freq	Loss	Factor	Factor	Level	Line	Limit	Remark	
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	q 5149.947	7.36	34.00	34.99	34.29	40.66	54.00	-13.34	Average
2	5210.000	7.42	34.00	34.99	64.15	70.58	-----	-----	Average
3	5354.938	7.57	34.32	35.00	32.73	39.62	54.00	-14.38	Average



Test Mode: 05; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:80MHz

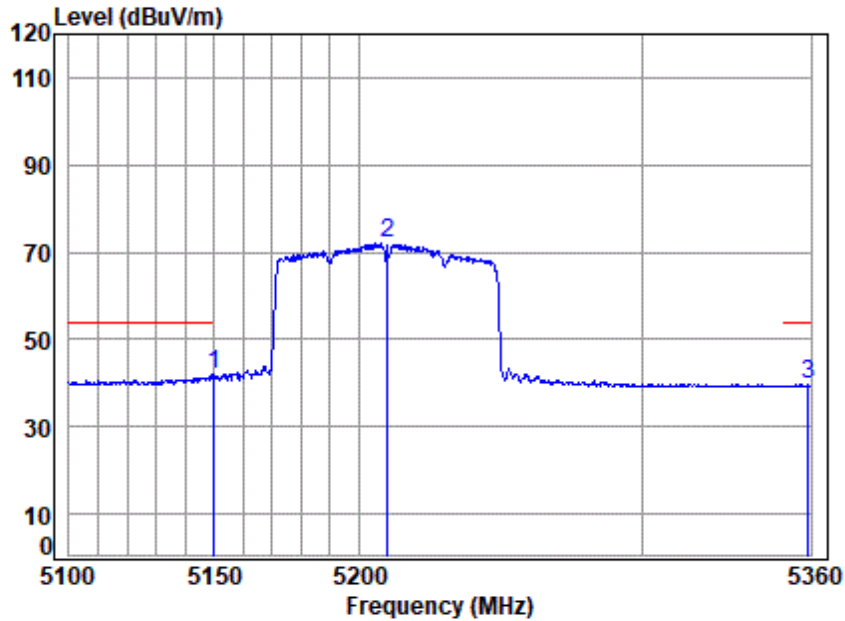


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5210 Band edge
 : 5G WIFI 11AX80

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5149.435	7.36	34.00	34.99	48.42	54.79	74.00	-19.21	peak
2 q	5210.000	7.42	34.00	34.99	89.83	96.26	68.20	28.06	peak
3	5353.607	7.57	34.31	35.00	44.59	51.47	74.00	-22.53	peak



Test Mode: 05; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:80MHz

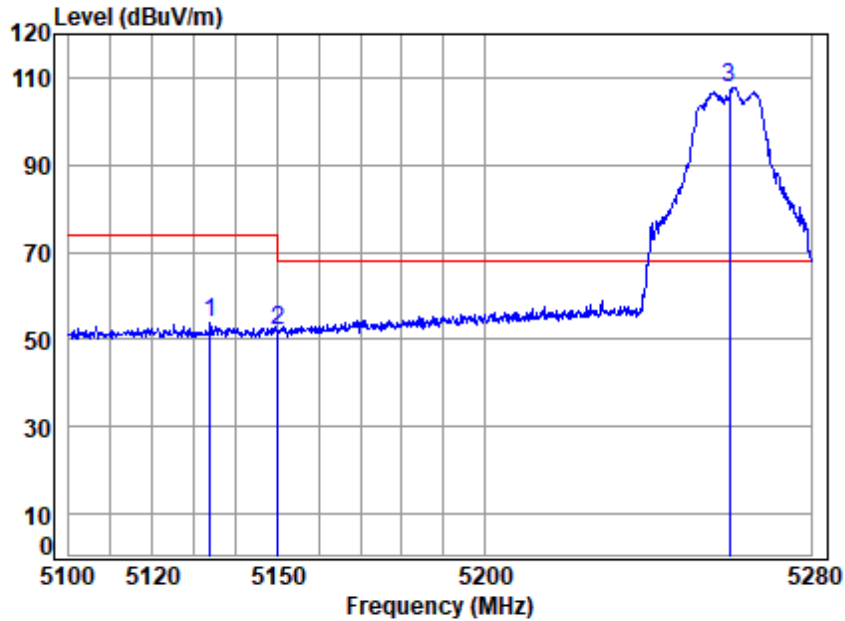


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5210 Band edge
 : 5G WIFI 11AX80

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	q 5149.690	7.36	34.00	34.99	35.46	41.83	54.00	-12.17 Average
2	5210.000	7.42	34.00	34.99	65.47	71.90	-----	----- Average
3	5358.934	7.57	34.34	35.00	32.78	39.69	54.00	-14.31 Average



Test Mode: 06; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

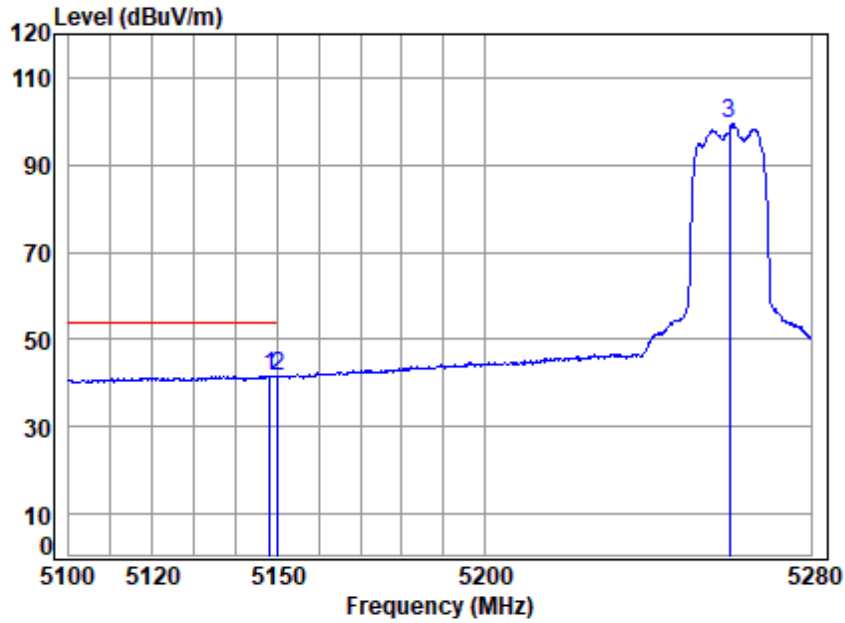


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5260 Band edge
 : 5G WIFI 11A

	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	7.35	34.03	34.99	47.52	53.91	74.00	-20.09	Peak
2	7.36	34.00	34.99	45.79	52.16	74.00	-21.84	Peak
3 q	7.47	34.04	35.00	101.29	107.80	68.20	39.60	Peak



Test Mode: 06; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

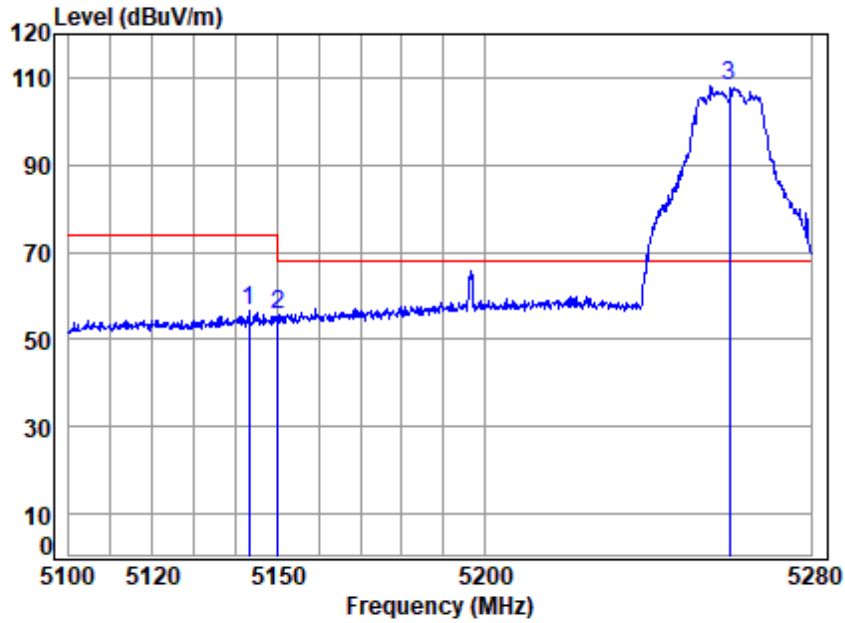


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5260 Band edge
 : 5G WIFI 11A

		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 5148.165	7.36	34.00	34.99	35.32	41.69	54.00	-12.31	Average
2	5149.980	7.36	34.00	34.99	35.29	41.66	54.00	-12.34	Average
3	5260.000	7.47	34.04	35.00	93.02	99.53	-----	-----	Average



Test Mode: 06; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

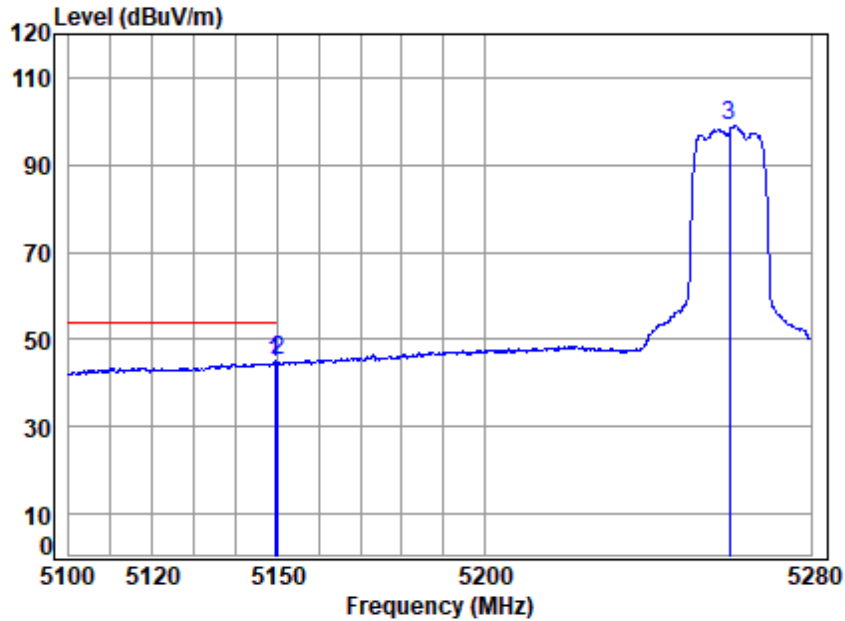


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5260 Band edge
 : 5G WIFI 11A

	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	7.36	34.01	34.99	50.13	56.51	74.00	-17.49	peak
2	7.36	34.00	34.99	49.10	55.47	74.00	-18.53	peak
3 q	7.47	34.04	35.00	101.47	107.98	68.20	39.78	peak



Test Mode: 06; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

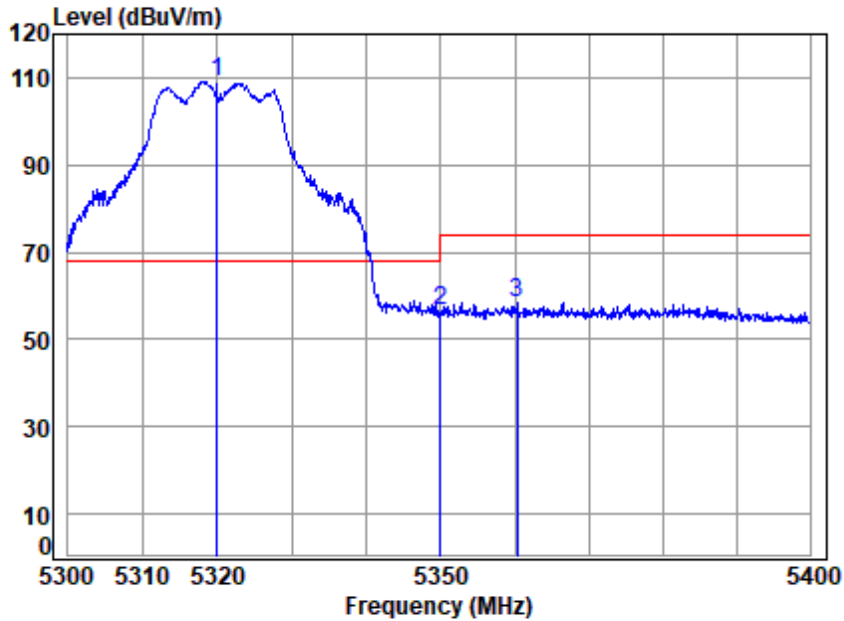


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5260 Band edge
 : 5G WIFI 11A

	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	5149.415	7.36	34.00	34.99	38.38	44.75	54.00	-9.25	Average
2 q	5149.980	7.36	34.00	34.99	38.58	44.95	54.00	-9.05	Average
3	5260.000	7.47	34.04	35.00	92.54	99.05	-----	-----	Average



Test Mode: 06; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High

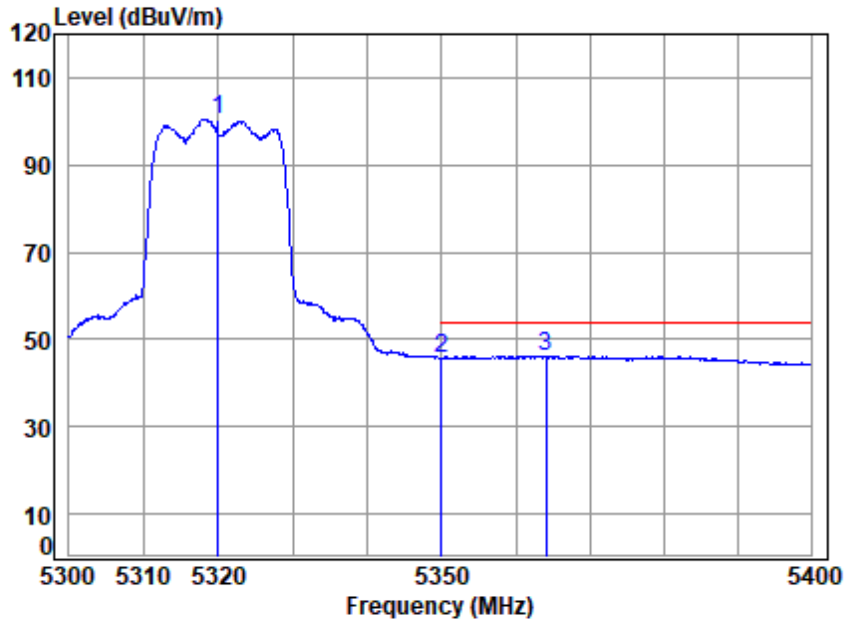


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5320 Band edge
 : 5G WIFI 11A

	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 5320.000	7.53	34.24	35.00	102.40	109.17	68.20	40.97 Peak
2 5350.020	7.56	34.30	35.00	49.62	56.48	74.00	-17.52 Peak
3 5360.376	7.57	34.34	35.00	51.52	58.43	74.00	-15.57 Peak



Test Mode: 06; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High

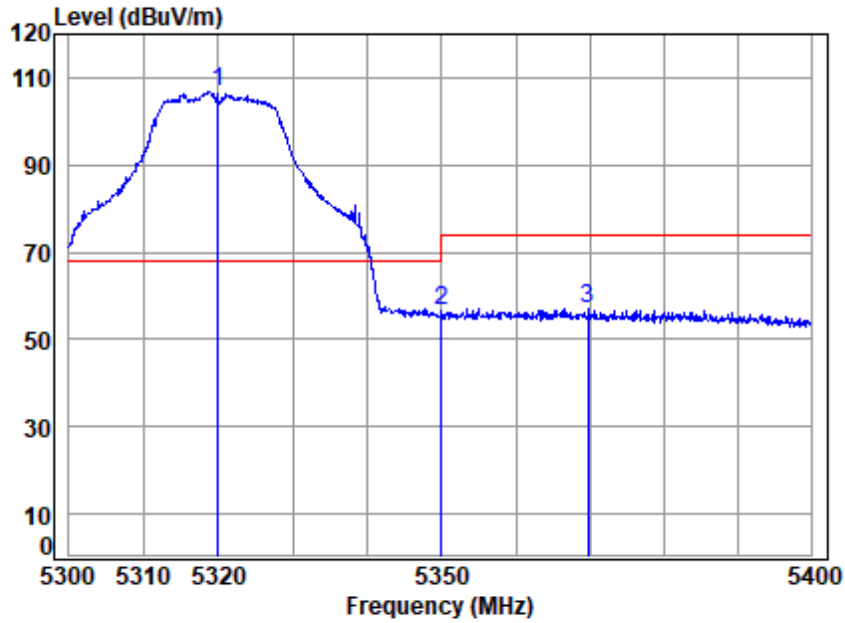


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5320 Band edge
 : 5G WIFI 11A

	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	5320.000	7.53	34.24	35.00	93.69	100.46	-----	-----	Average
2	5350.020	7.56	34.30	35.00	38.91	45.77	54.00	-8.23	Average
3 q	5364.085	7.58	34.36	35.00	39.34	46.28	54.00	-7.72	Average



Test Mode: 06; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High

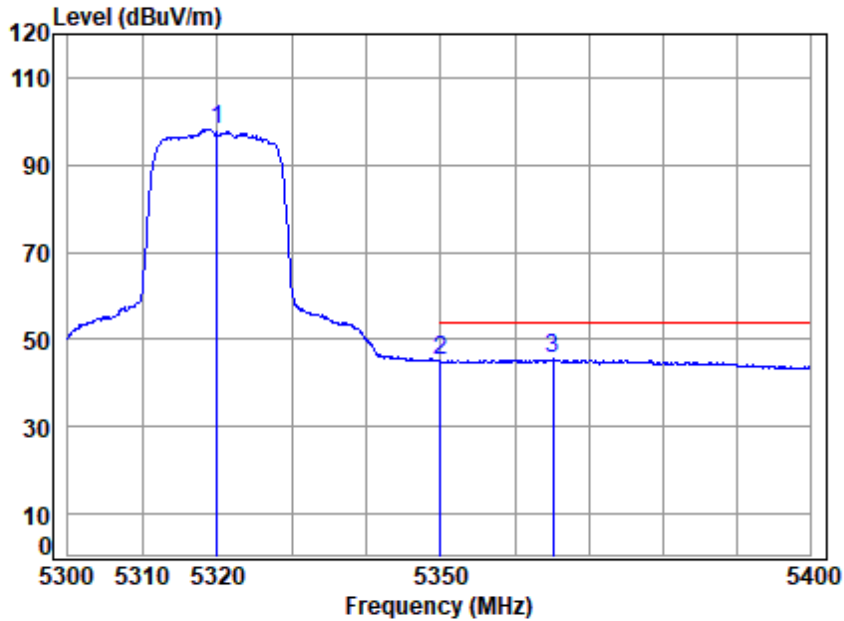


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5320 Band edge
 : 5G WIFI 11A

	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	q 5320.000	7.53	34.24	35.00	99.93	106.70	68.20	38.50 peak
2	5350.020	7.56	34.30	35.00	49.56	56.42	74.00	-17.58 peak
3	5369.804	7.58	34.38	35.00	50.08	57.04	74.00	-16.96 peak



Test Mode: 06; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High

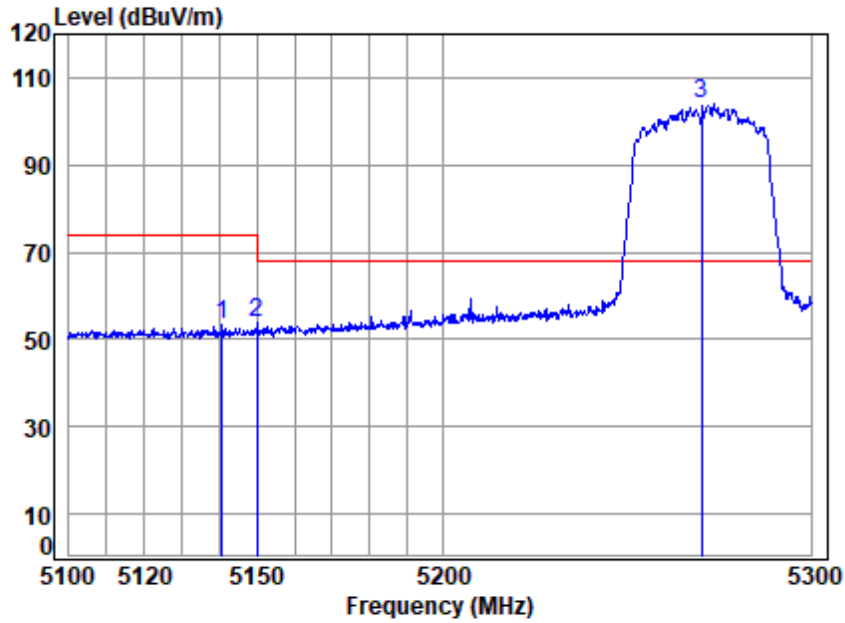


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5320 Band edge
 : 5G WIFI 11A

	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	5320.000	7.53	34.24	35.00	91.46	98.23	-----	-----	Average
2	5350.020	7.56	34.30	35.00	38.34	45.20	54.00	-8.80	Average
3	5365.188	7.58	34.36	35.00	38.51	45.45	54.00	-8.55	Average



Test Mode: 06; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

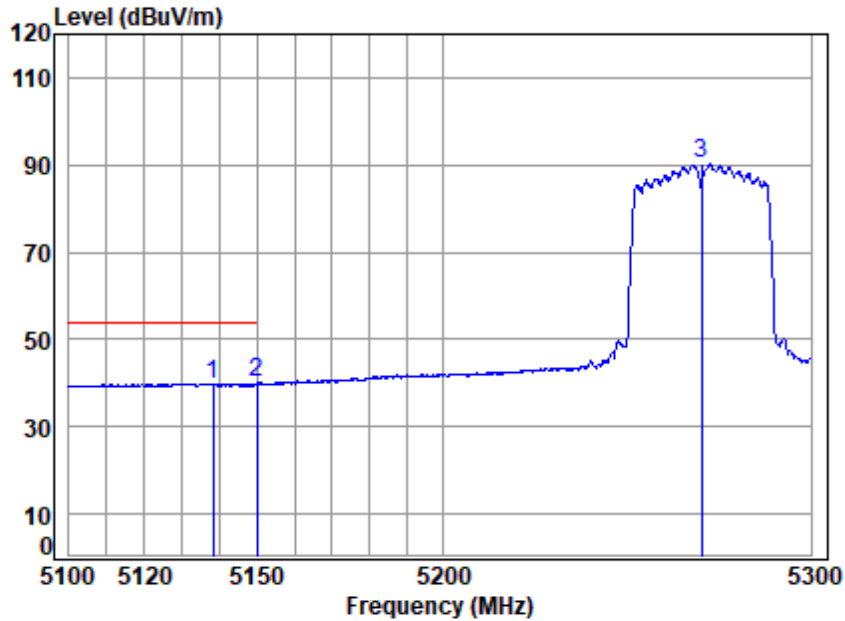


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5270 Band edge
 : 5G WIFI 11N40

	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	5140.771	7.35	34.02	34.99	47.05	53.43	74.00	-20.57	Peak
2	5149.980	7.36	34.00	34.99	47.39	53.76	74.00	-20.24	Peak
3	5270.000	7.48	34.08	35.00	97.53	104.09	68.20	35.89	Peak



Test Mode: 06; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

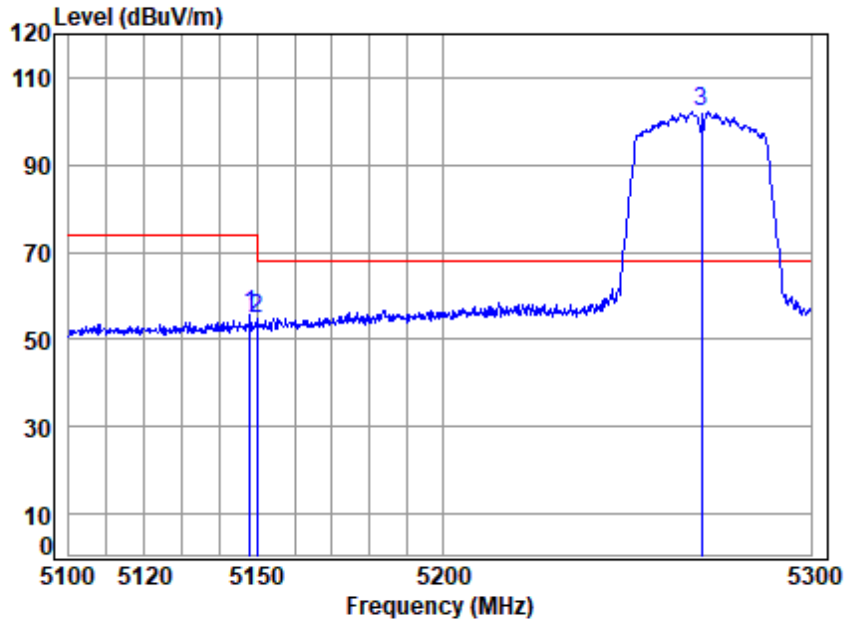


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5270 Band edge
 : 5G WIFI 11N40

	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	5138.201	7.35	34.02	34.99	33.51	39.89	54.00	-14.11 Average
2 q	5149.980	7.36	34.00	34.99	33.71	40.08	54.00	-13.92 Average
3	5270.000	7.48	34.08	35.00	83.80	90.36	-----	----- Average



Test Mode: 06; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

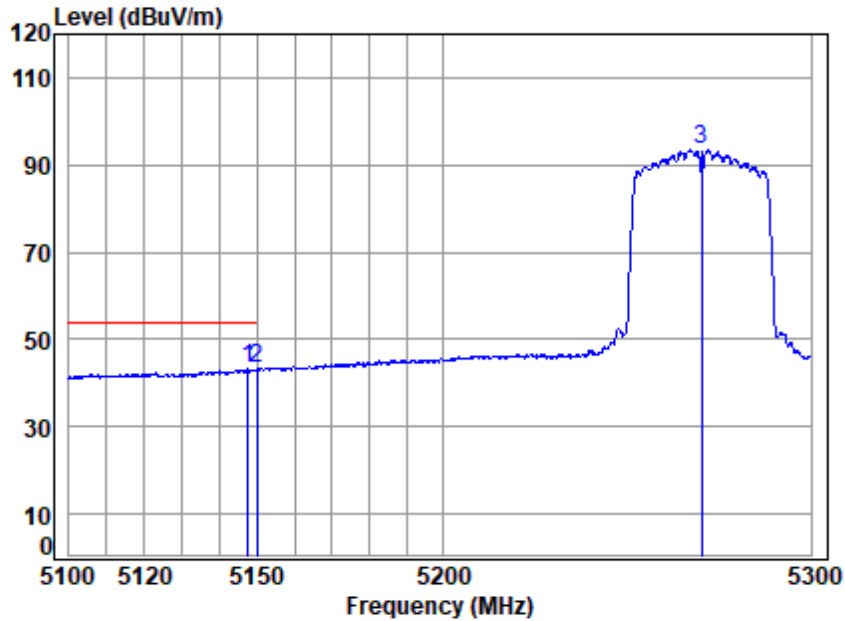


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5270 Band edge
 : 5G WIFI 11N40

	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	5148.093	7.36	34.00	34.99	49.44	55.81	74.00	-18.19 peak
2	5149.980	7.36	34.00	34.99	48.24	54.61	74.00	-19.39 peak
3 q	5270.000	7.48	34.08	35.00	95.48	102.04	68.20	33.84 peak



Test Mode: 06; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

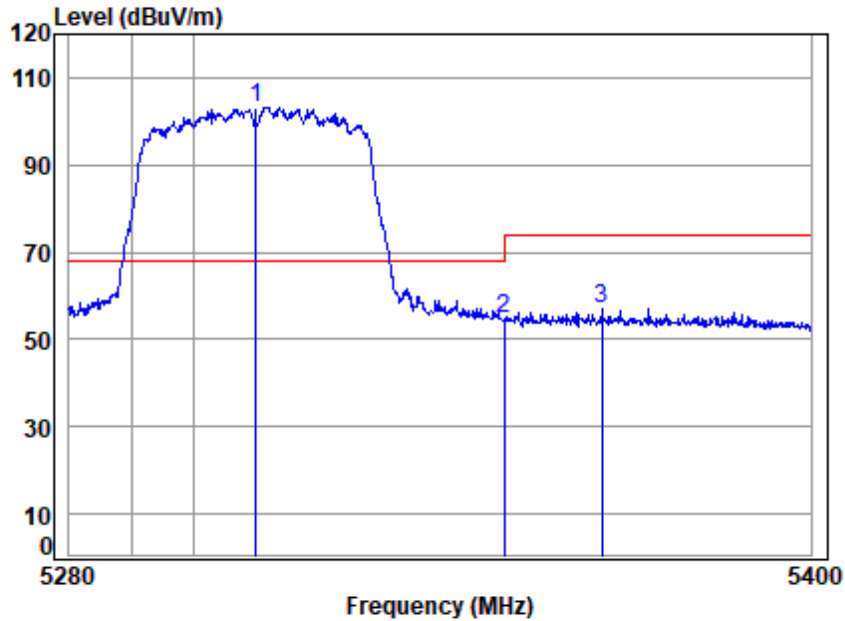


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5270 Band edge
 : 5G WIFI 11N40

	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	q 5147.697	7.36	34.00	34.99	36.79	43.16	54.00	-10.84 Average
2	5149.980	7.36	34.00	34.99	36.79	43.16	54.00	-10.84 Average
3	5270.000	7.48	34.08	35.00	87.15	93.71	-----	----- Average



Test Mode: 06; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High

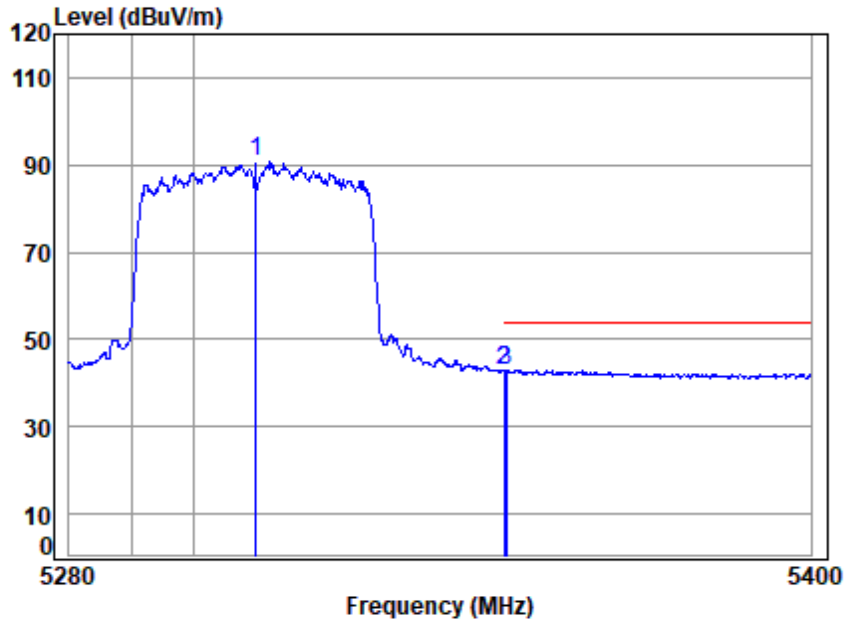


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5310 Band edge
 : 5G WIFI 11N40

	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 q 5310.000	7.52	34.22	35.00	96.59	103.33	68.20	35.13 Peak
2 5350.020	7.56	34.30	35.00	48.06	54.92	74.00	-19.08 Peak
3 5366.007	7.58	34.36	35.00	50.26	57.20	74.00	-16.80 Peak



Test Mode: 06; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High

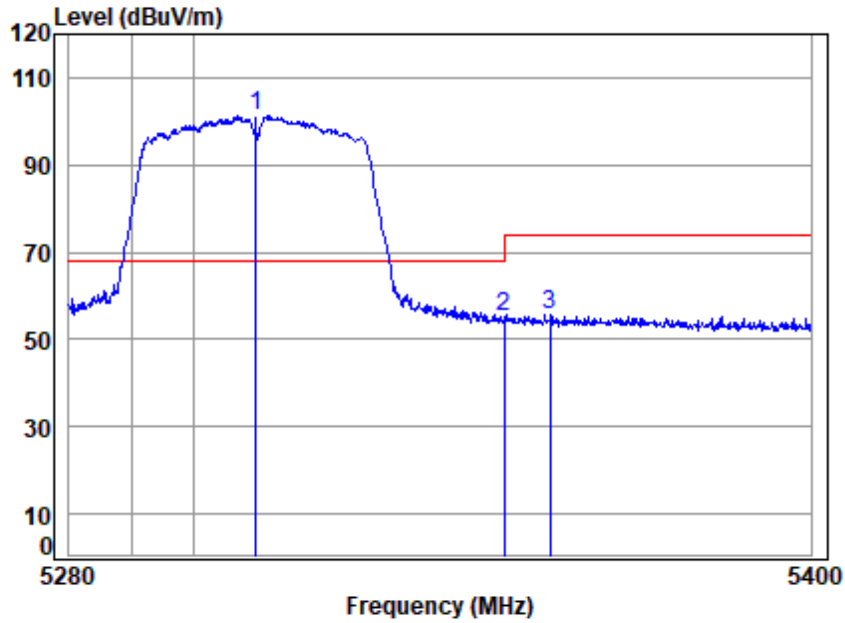


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5310 Band edge
 : 5G WIFI 11N40

	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	5310.000	7.52	34.22	35.00	83.85	90.59	-----	-----	Average
2	5350.020	7.56	34.30	35.00	36.04	42.90	54.00	-11.10	Average
3	5350.474	7.56	34.30	35.00	36.22	43.08	54.00	-10.92	Average



Test Mode: 06; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High

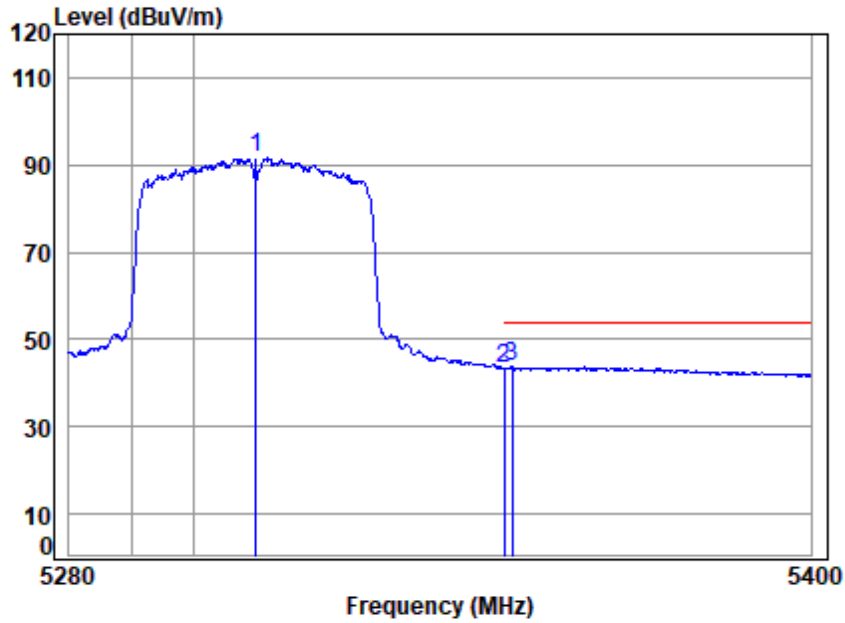


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5310 Band edge
 : 5G WIFI 11N40

		Cable	Ant	Preamp	Read	Limit	Over	
Freq		Loss	Factor	Factor	Level	Line	Limit	Remark
MHz		dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 q	5310.000	7.52	34.22	35.00	94.51	101.25	68.20	33.05 peak
2	5350.020	7.56	34.30	35.00	48.38	55.24	74.00	-18.76 peak
3	5357.572	7.57	34.33	35.00	48.86	55.76	74.00	-18.24 peak



Test Mode: 06; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High

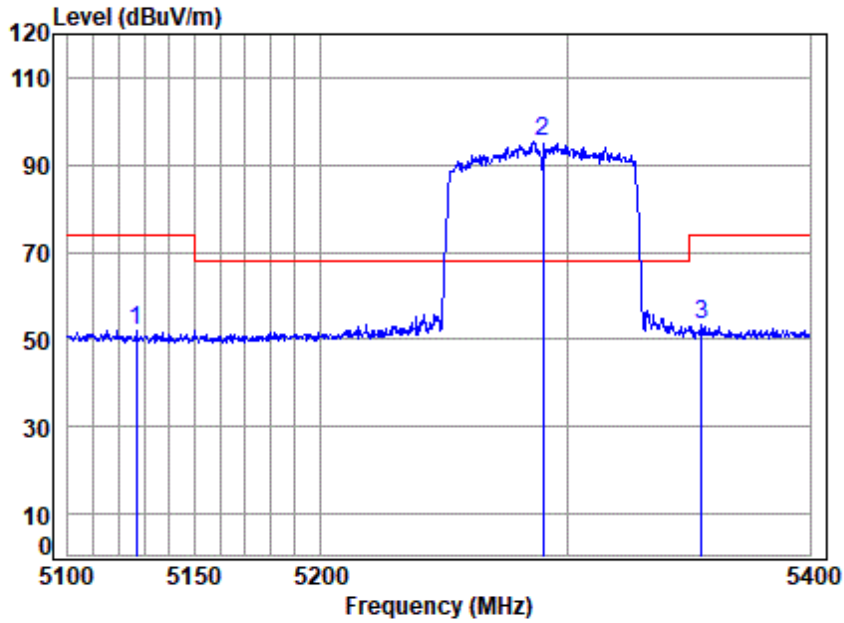


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5310 Band edge
 : 5G WIFI 11N40

	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	5310.000	7.52	34.22	35.00	84.82	91.56	-----	-----	Average
2	5350.020	7.56	34.30	35.00	36.60	43.46	54.00	-10.54	Average
3 q	5351.436	7.56	34.31	35.00	36.83	43.70	54.00	-10.30	Average



Test Mode: 06; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:80MHz

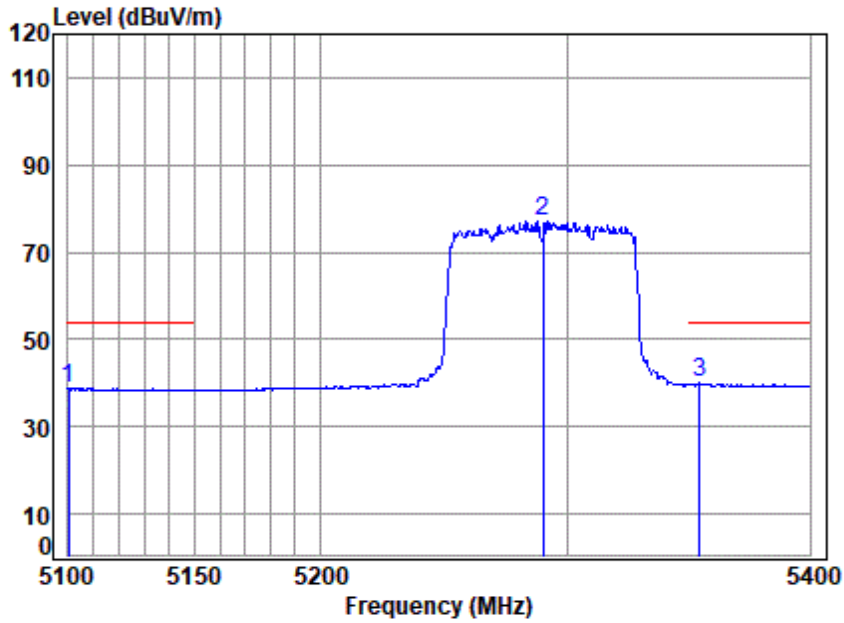


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5290 Band edge
 : 5G WIFI 11AX80

	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	5126.889	7.34	34.05	34.99	45.83	52.23	74.00	-21.77	Peak
2 q	5290.000	7.50	34.16	35.00	88.50	95.16	68.20	26.96	Peak
3	5355.124	7.57	34.32	35.00	46.51	53.40	74.00	-20.60	Peak



Test Mode: 06; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:80MHz

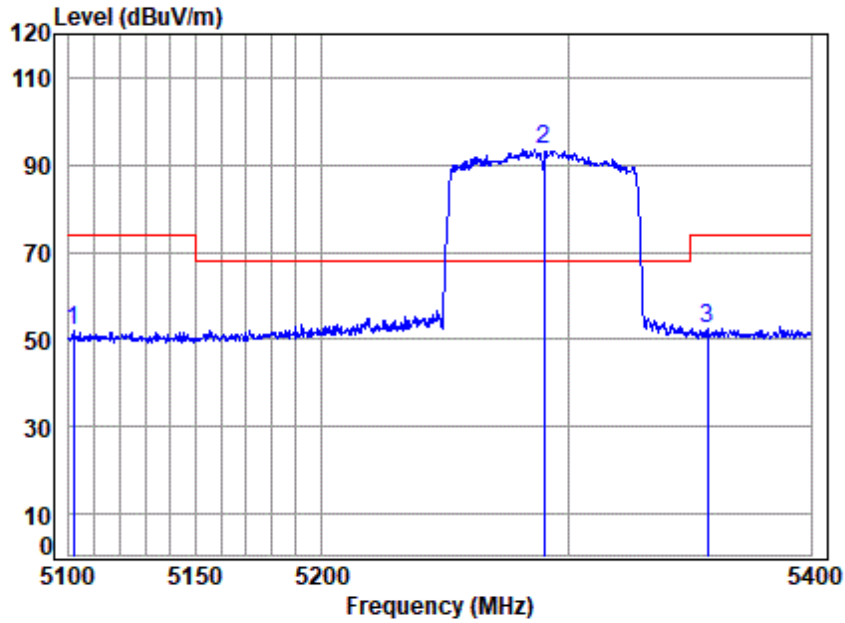


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5290 Band edge
 : 5G WIFI 11AX80

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5100.292	7.31	34.10	34.99	32.25	38.67	54.00	-15.33	Average
2	5290.000	7.50	34.16	35.00	70.44	77.10	-----	-----	Average
3 q	5354.512	7.57	34.32	35.00	33.05	39.94	54.00	-14.06	Average



Test Mode: 06; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:80MHz

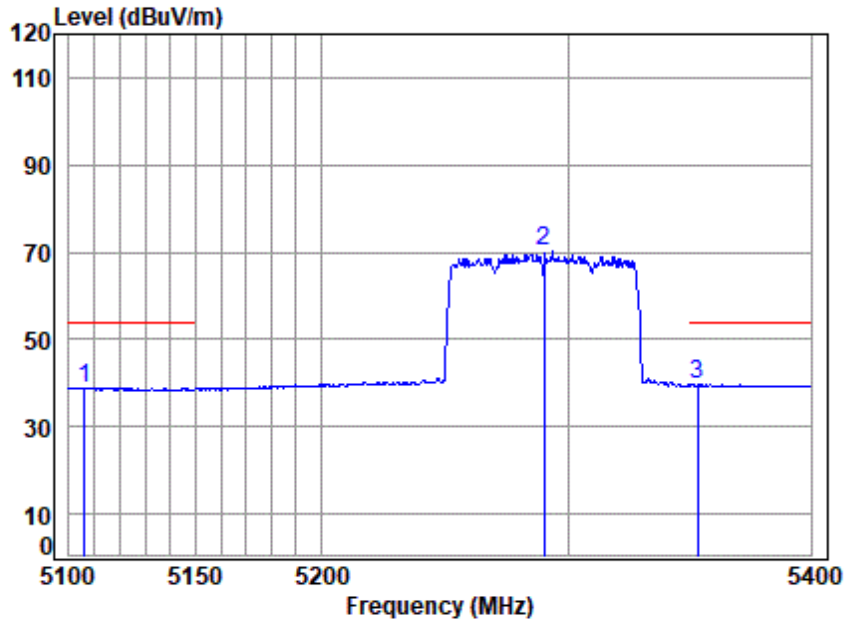


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5290 Band edge
 : 5G WIFI 11AX80

	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	5101.750	7.31	34.10	34.99	45.77	52.19	74.00	-21.81 peak
2 q	5290.000	7.50	34.16	35.00	86.99	93.65	68.20	25.45 peak
3	5357.267	7.57	34.33	35.00	45.75	52.65	74.00	-21.35 peak



Test Mode: 06; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:80MHz

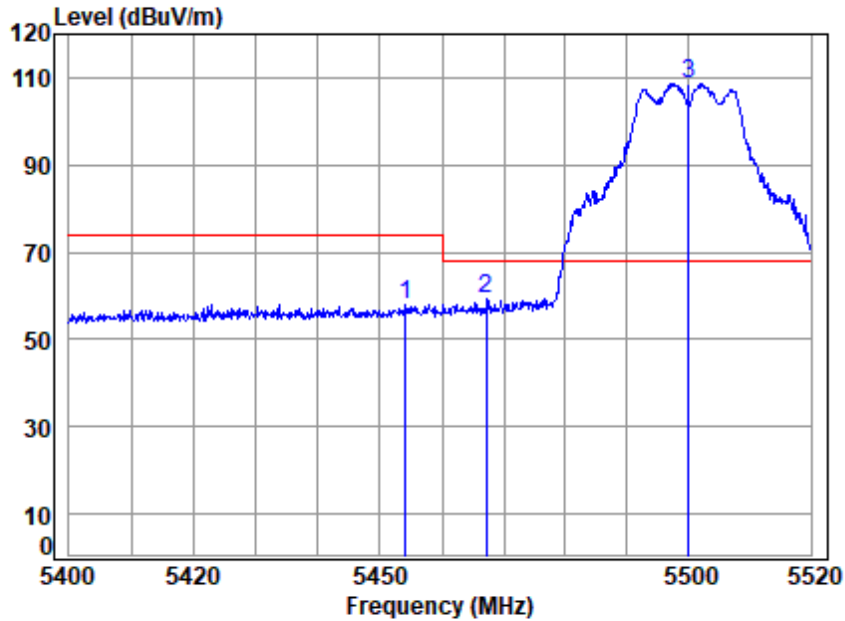


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5290 Band edge
 : 5G WIFI 11AX80

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	5106.125	7.32	34.09	34.99	32.49	38.91	54.00	-15.09 Average
2	5290.000	7.50	34.16	35.00	63.39	70.05	-----	----- Average
3 q	5352.981	7.57	34.31	35.00	32.77	39.65	54.00	-14.35 Average



Test Mode: 07; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

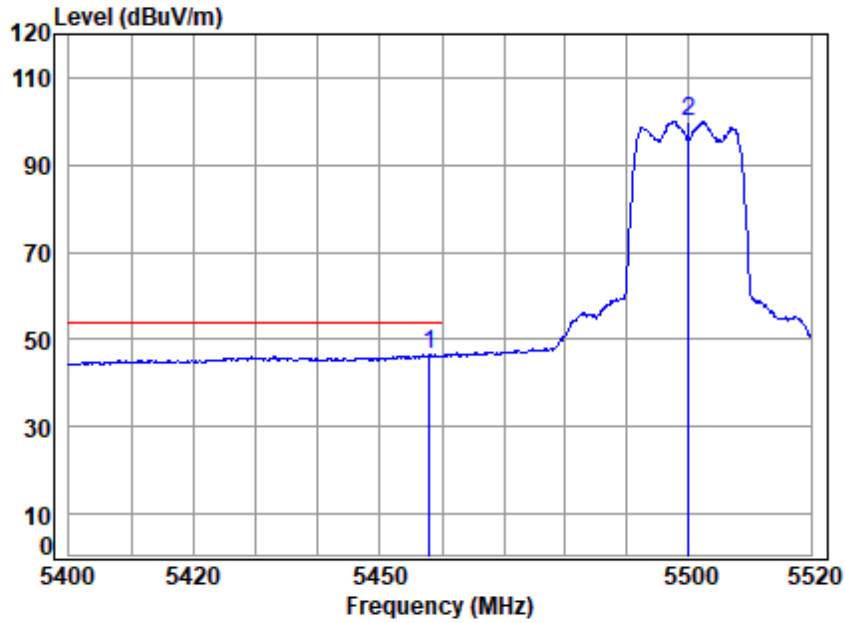


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5500 Band edge
 : 5G WIFI 11A

	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	5454.033	7.66	34.60	35.01	50.67	57.92	74.00 -16.08 Peak
2	5467.235	7.68	34.60	35.01	51.86	59.13	68.20 -9.07 peak
3	q 5500.000	7.71	34.60	35.01	101.36	108.66	68.20 40.46 Peak



Test Mode: 07; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

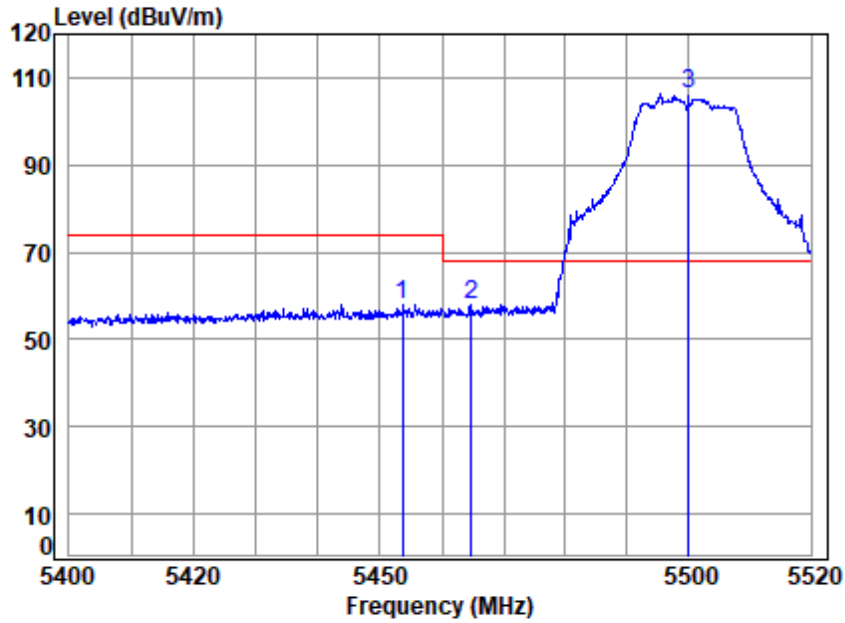


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5500 Band edge
 : 5G WIFI 11A

	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 q	5457.991	7.67	34.60	35.01	39.16	46.42	54.00	-7.58 Average
2	5500.000	7.71	34.60	35.01	92.51	99.81	-----	----- Average



Test Mode: 07; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

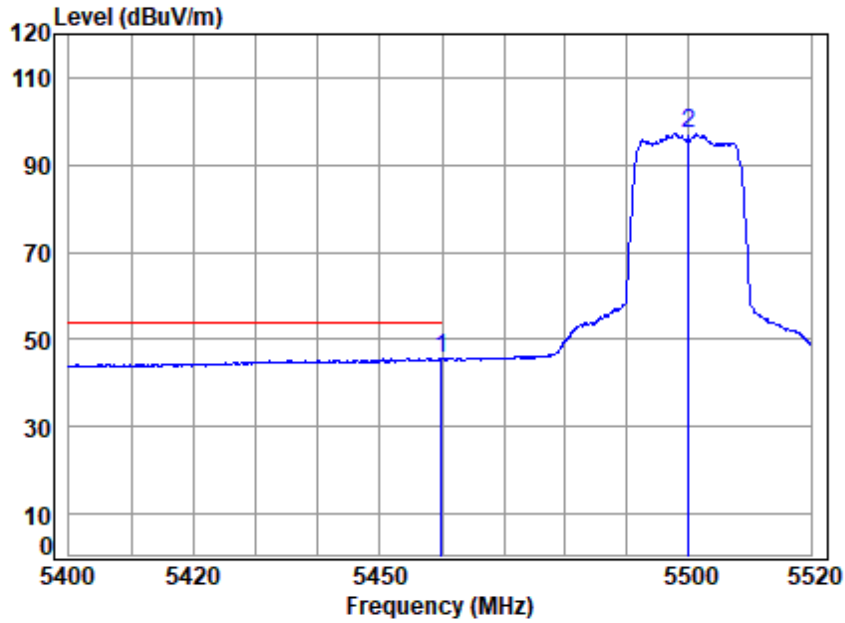


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5500 Band edge
 : 5G WIFI 11A

	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	5453.674	7.66	34.60	35.01	50.67	57.92	74.00 -16.08 peak
2	5464.712	7.67	34.60	35.01	50.76	58.02	68.20 -10.18 peak
3	q 5500.000	7.71	34.60	35.01	98.79	106.09	68.20 37.89 peak



Test Mode: 07; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

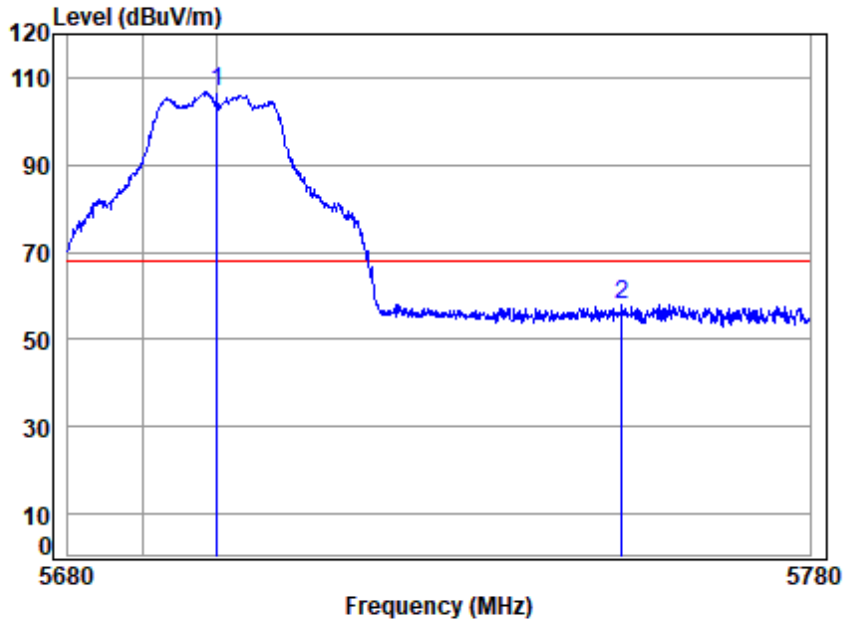


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5500 Band edge
 : 5G WIFI 11A

	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	q 5459.910	7.67	34.60	35.01	38.53	45.79	54.00	-8.21	Average
2	5500.000	7.71	34.60	35.01	89.87	97.17	-----	-----	Average



Test Mode: 07; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High

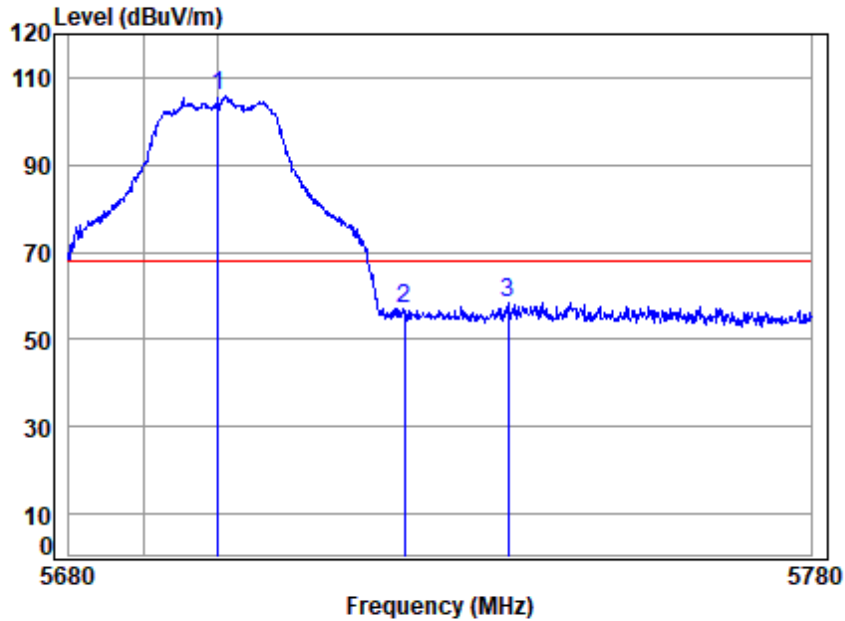


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5700 Band edge
 : 5G WIFI 11A

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 q	5700.000	7.89	34.50	35.02	99.33	106.70	68.20	38.50 Peak
2	5754.435	7.94	34.51	35.03	50.56	57.98	68.20	-10.22 Peak



Test Mode: 07; Polarity: Horizontal; Modulation:802.11 a; Bandwidth:20MHz; Channel:High

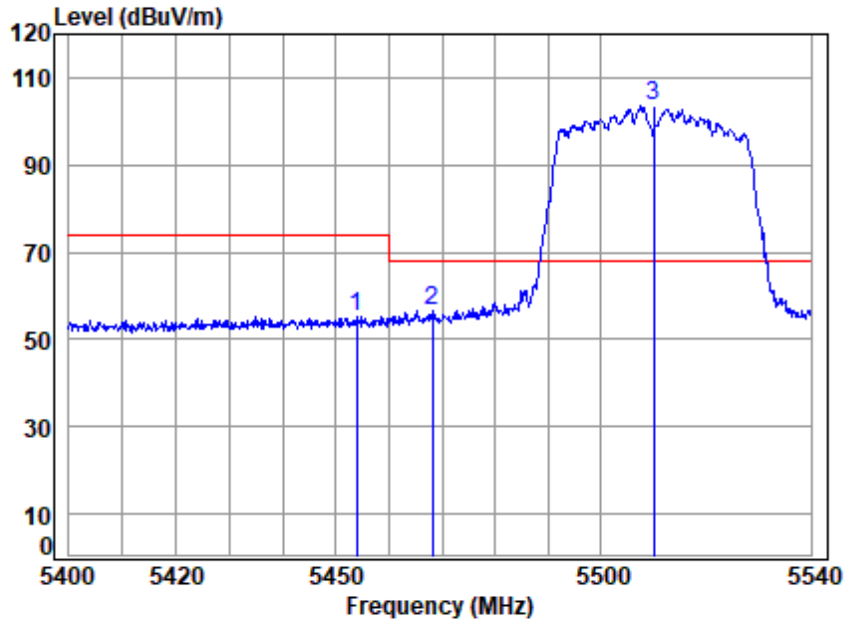


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5700 Band edge
 : 5G WIFI 11A

	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 q	5700.000	7.89	34.50	35.02	98.29	105.66	68.20	37.46 peak
2	5725.000	7.92	34.50	35.02	49.42	56.82	68.20	-11.38 peak
3	5738.989	7.93	34.50	35.03	51.13	58.53	68.20	-9.67 Peak



Test Mode: 07; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

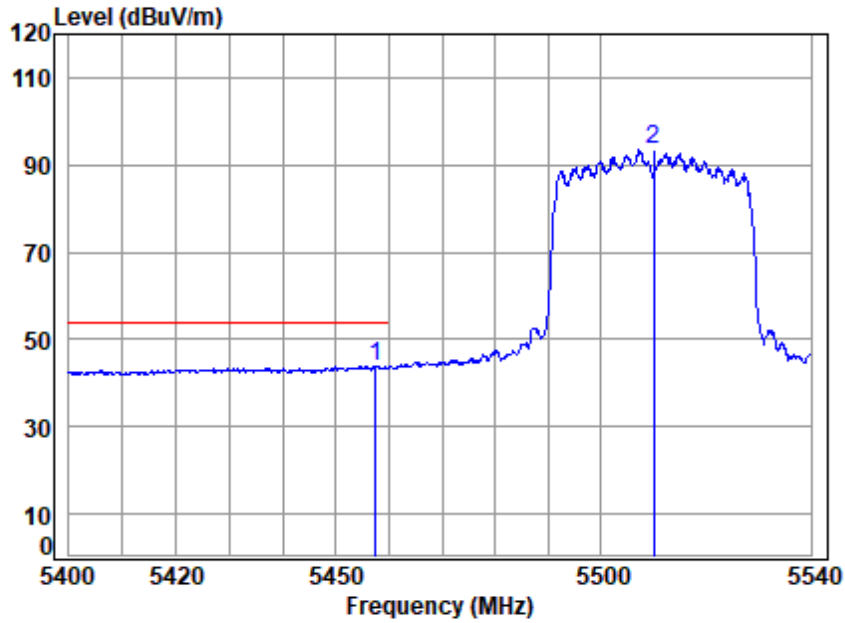


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5510 Band edge
 : 5G WIFI 11N40

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Line	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	5453.895	7.66	34.60	35.01	48.18	55.43	74.00	-18.57 Peak
2	5468.152	7.68	34.60	35.01	49.25	56.52	68.20	-11.68 peak
3 q	5510.000	7.72	34.60	35.01	96.06	103.37	68.20	35.17 Peak



Test Mode: 07; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

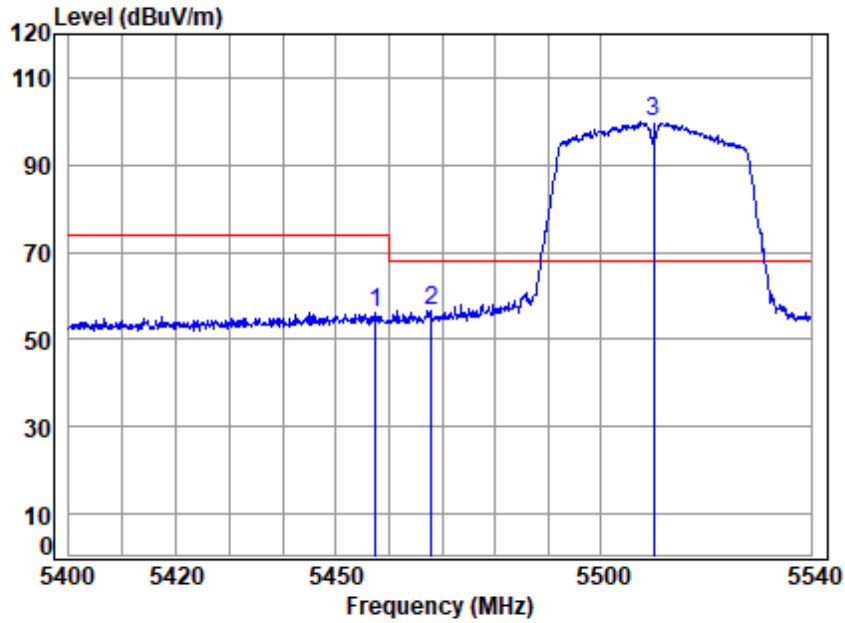


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5510 Band edge
 : 5G WIFI 11N40

	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 q	5457.386	7.67	34.60	35.01	36.57	43.83	54.00	-10.17 Average
2	5510.000	7.72	34.60	35.01	86.02	93.33	-----	----- Average



Test Mode: 07; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

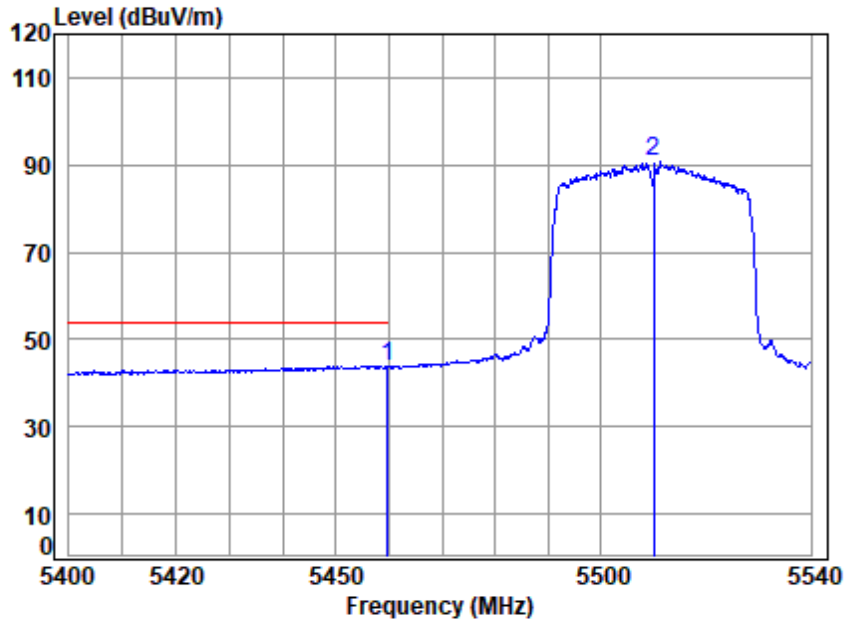


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5510 Band edge
 : 5G WIFI 11N40

	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	5457.526	7.67	34.60	35.01	49.08	56.34	74.00	-17.66 peak
2	5467.873	7.68	34.60	35.01	49.21	56.48	68.20	-11.72 peak
3 q	5510.000	7.72	34.60	35.01	92.52	99.83	68.20	31.63 peak



Test Mode: 07; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

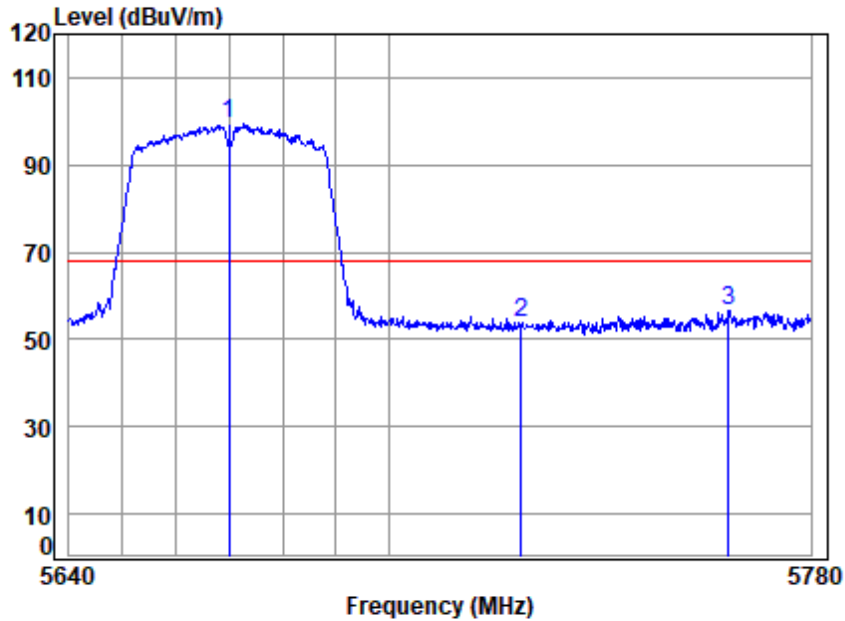


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5510 Band edge
 : 5G WIFI 11N40

	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 q	5459.761	7.67	34.60	35.01	36.75	44.00	54.00	-9.99 Average
2	5510.000	7.72	34.60	35.01	83.35	90.66	-----	----- Average



Test Mode: 07; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High

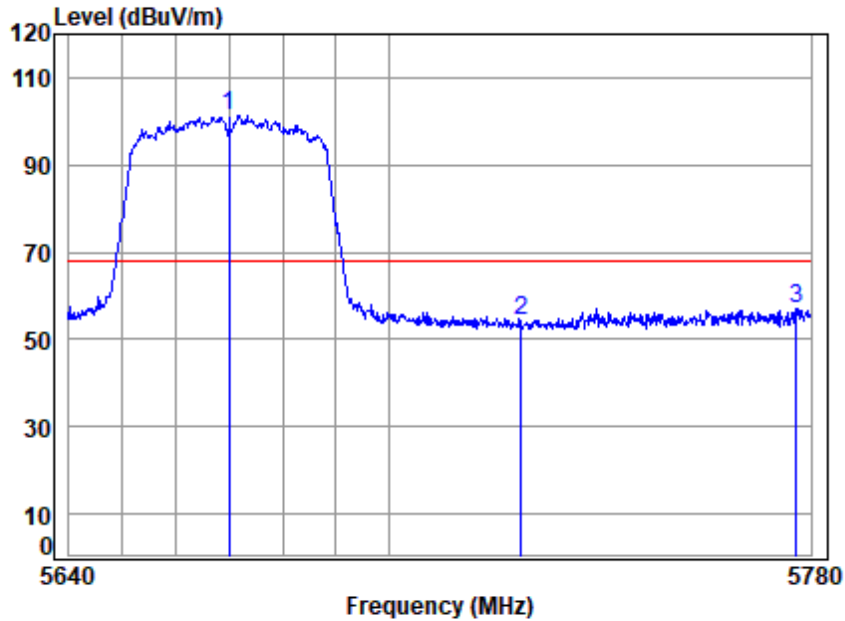


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5670 Band edge
 : 5G WIFI 11N40

	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	q 5670.000	7.87	34.50	35.02	91.90	99.25	68.20	31.05 peak
2	5725.000	7.92	34.50	35.02	46.46	53.86	68.20	-14.34 peak
3	5764.290	7.95	34.53	35.03	49.12	56.57	68.20	-11.63 Peak



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

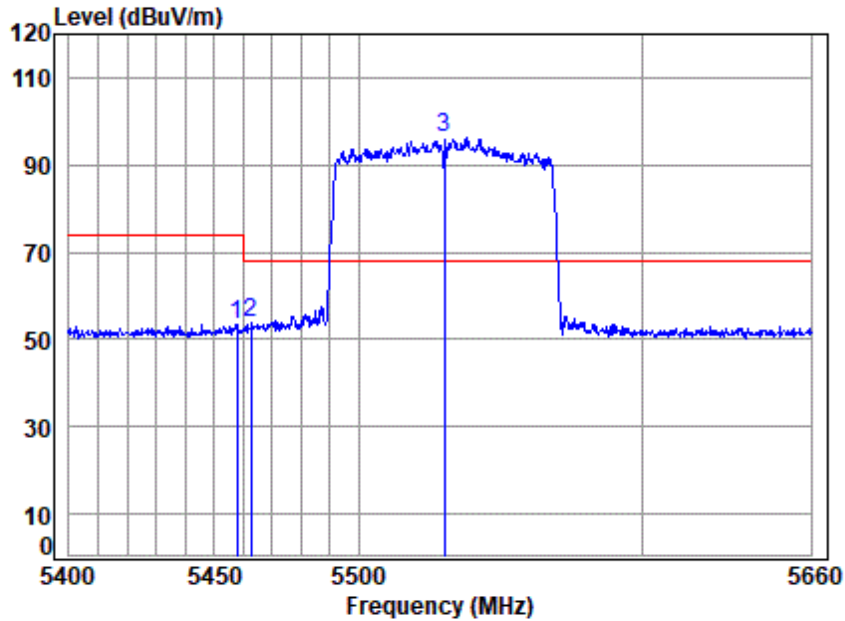


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5670 Band edge
 : 5G WIFI 11N40

	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	q 5670.000	7.87	34.50	35.02	93.99	101.34	68.20	33.14 Peak
2	5725.000	7.92	34.50	35.02	46.84	54.24	68.20	-13.96 Peak
3	5777.166	7.96	34.55	35.03	49.57	57.05	68.20	-11.15 Peak



Test Mode: 07; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:80MHz; Channel:Low

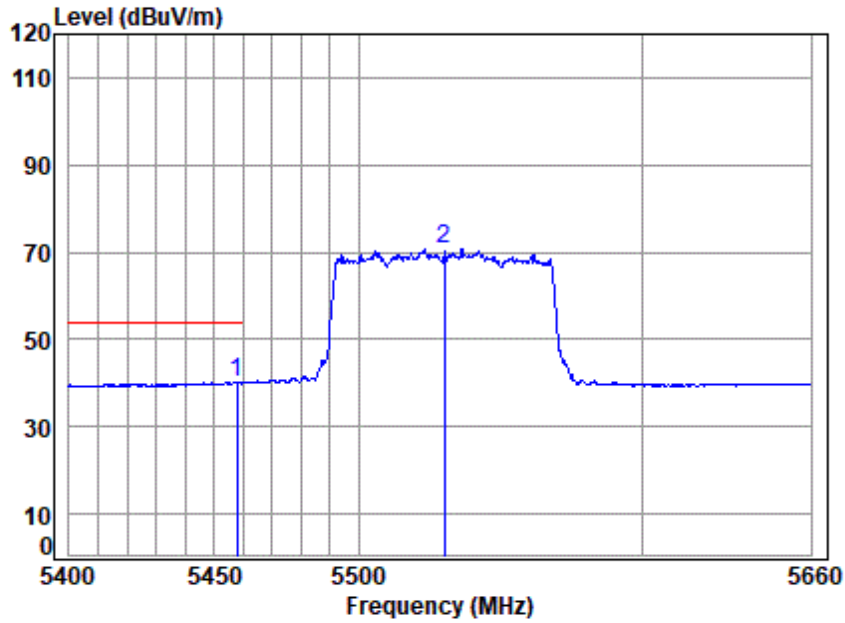


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5530 Band edge
 : 5G WIFI 11AX80

	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	5457.695	7.67	34.60	35.01	46.25	53.51	74.00	-20.49 Peak
2	5462.831	7.67	34.60	35.01	46.76	54.02	68.20	-14.18 peak
3 q	5530.000	7.73	34.60	35.01	89.00	96.32	68.20	28.12 Peak



Test Mode: 07; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:80MHz; Channel:Low

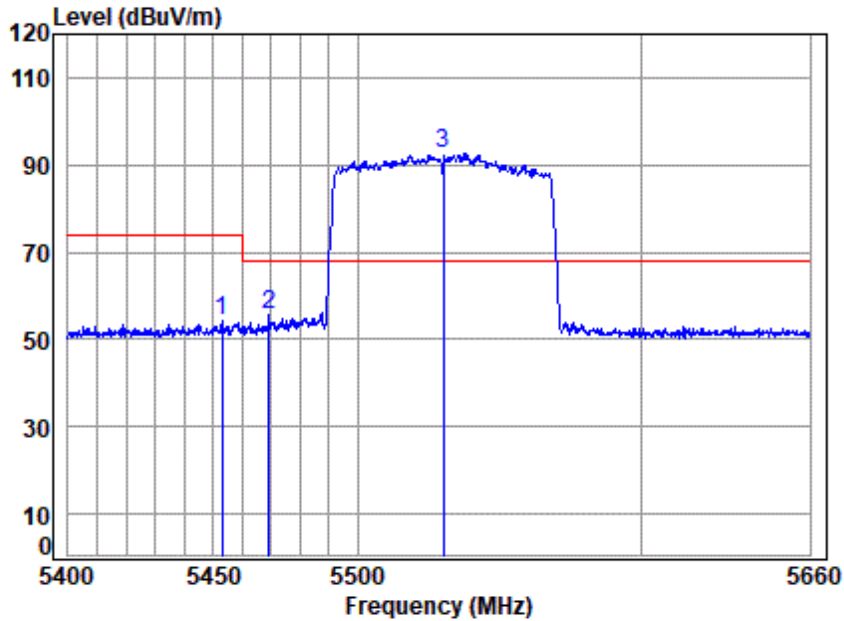


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5530 Band edge
 : 5G WIFI 11AX80

	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 q	5457.695	7.67	34.60	35.01	33.10	40.36	54.00	-13.64 Average
2	5530.000	7.73	34.60	35.01	63.57	70.89	-----	----- Average



Test Mode: 07; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:80MHz; Channel:Low

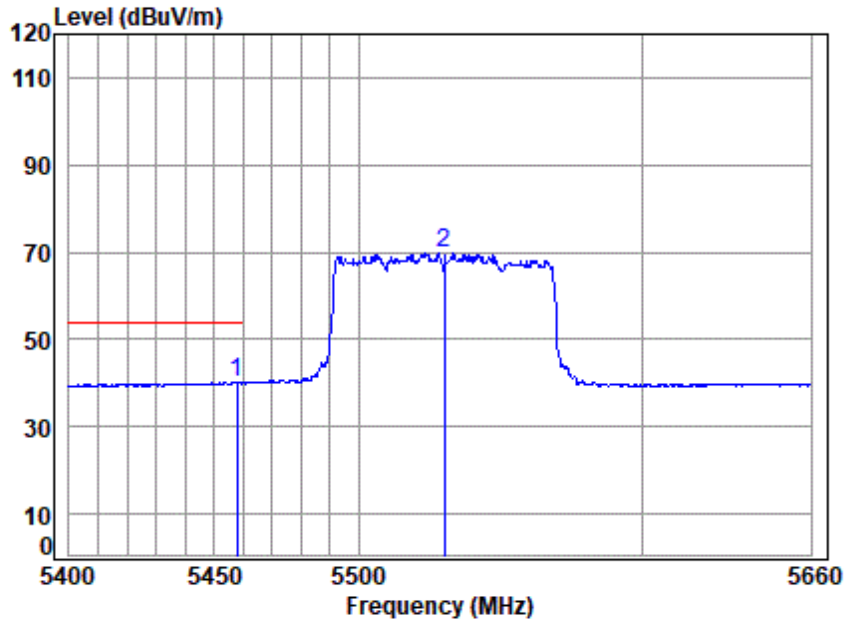


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5530 Band edge
 : 5G WIFI 11AX80

	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	5453.078	7.66	34.60	35.01	46.82	54.07	74.00	-19.93 peak
2	5469.257	7.68	34.60	35.01	48.59	55.86	68.20	-12.34 peak
3 q	5530.000	7.73	34.60	35.01	85.30	92.62	68.20	24.42 peak



Test Mode: 07; Polarity: Horizontal; Modulation:802.11 ax(Full RU0); Bandwidth:80MHz; Channel:Low

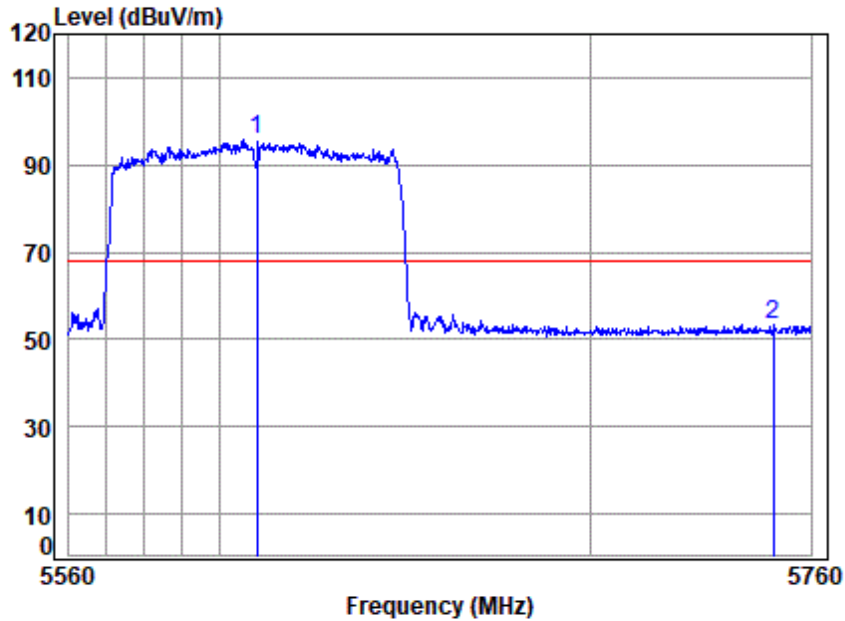


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5530 Band edge
 : 5G WIFI 11AX80

	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 q	5457.952	7.67	34.60	35.01	33.00	40.26	54.00	-13.74 Average
2	5530.000	7.73	34.60	35.01	62.59	69.91	-----	----- Average



Test Mode: 07; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:80MHz; Channel:High

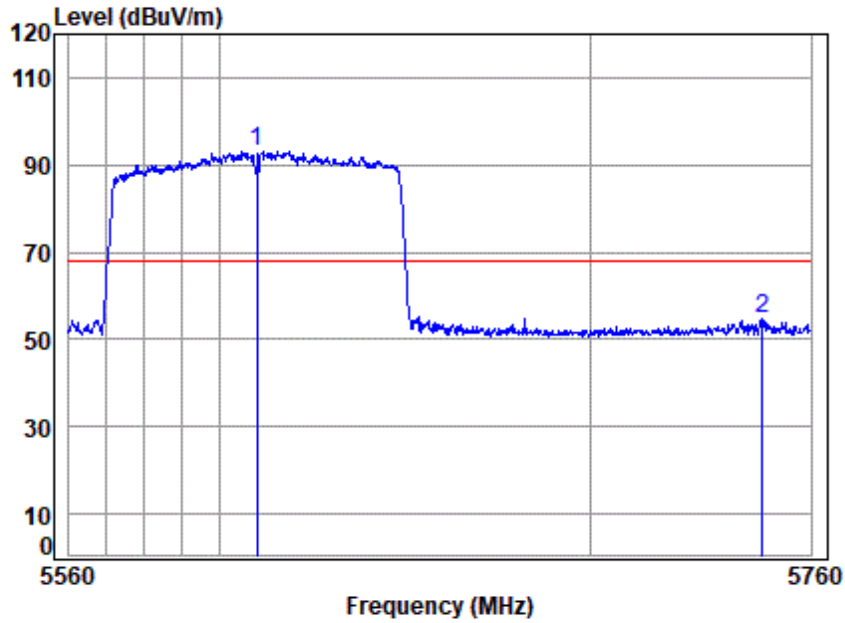


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5610 Band edge
 : 5G WIFI 11AX80

	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 q	5610.000	7.81	34.50	35.02	88.65	95.94	68.20	27.74 Peak
2	5749.628	7.94	34.50	35.03	46.17	53.58	68.20	-14.62 Peak



Test Mode: 07; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:80MHz; Channel:High

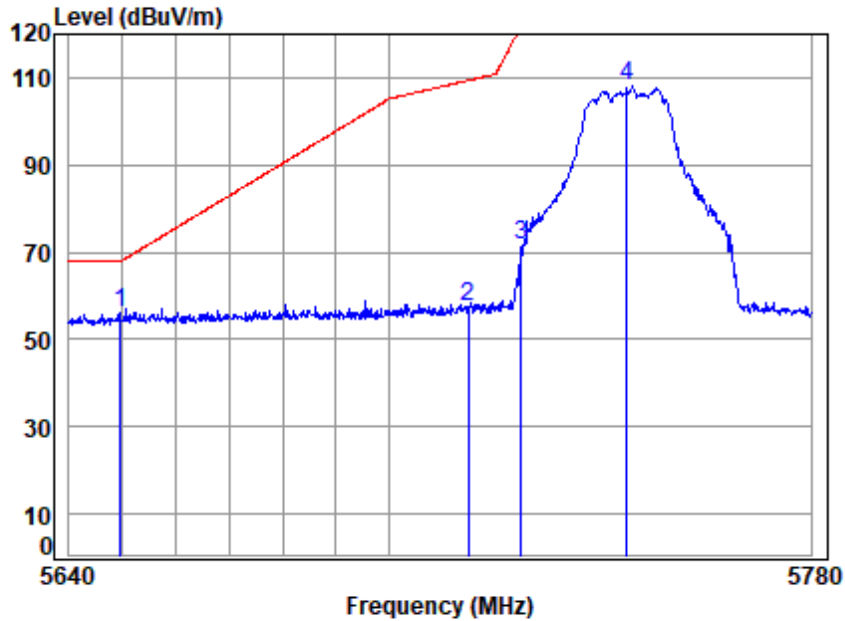


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5610 Band edge
 : 5G WIFI 11AX80

	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 q	5610.000	7.81	34.50	35.02	85.85	93.14	68.20	24.94 peak
2	5746.784	7.94	34.50	35.03	47.22	54.63	68.20	-13.57 Peak



Test Mode: 08; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

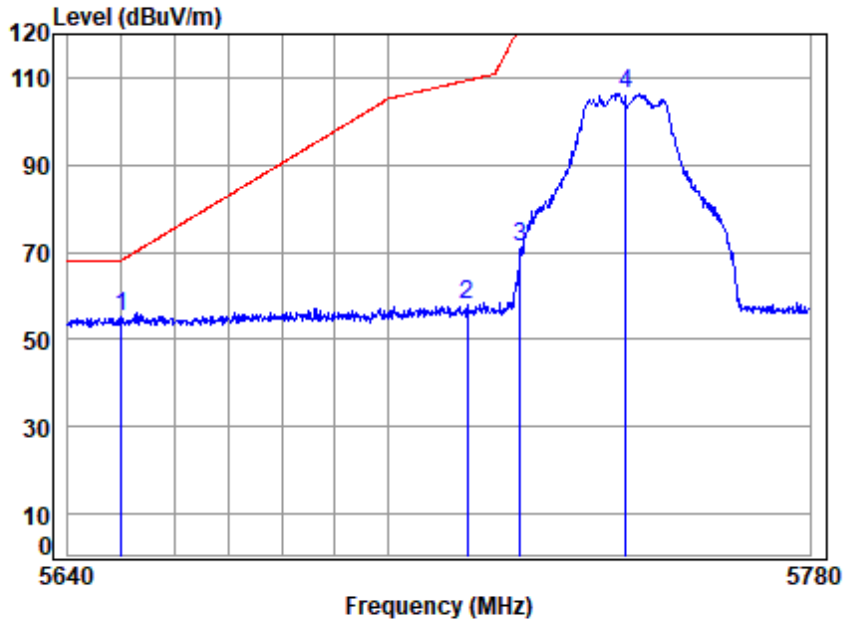


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5745 Band edge
 : 5G WIFI 11A

	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	5649.550	7.85	34.50	35.02	48.57	55.90	68.20	-12.30	peak
2	5715.000	7.91	34.50	35.02	50.02	57.41	109.40	-51.99	peak
3	5725.000	7.92	34.50	35.02	64.04	71.44	122.20	-50.76	peak
4	5745.000	7.93	34.50	35.03	100.61	108.01	-----	-----	peak



Test Mode: 08; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

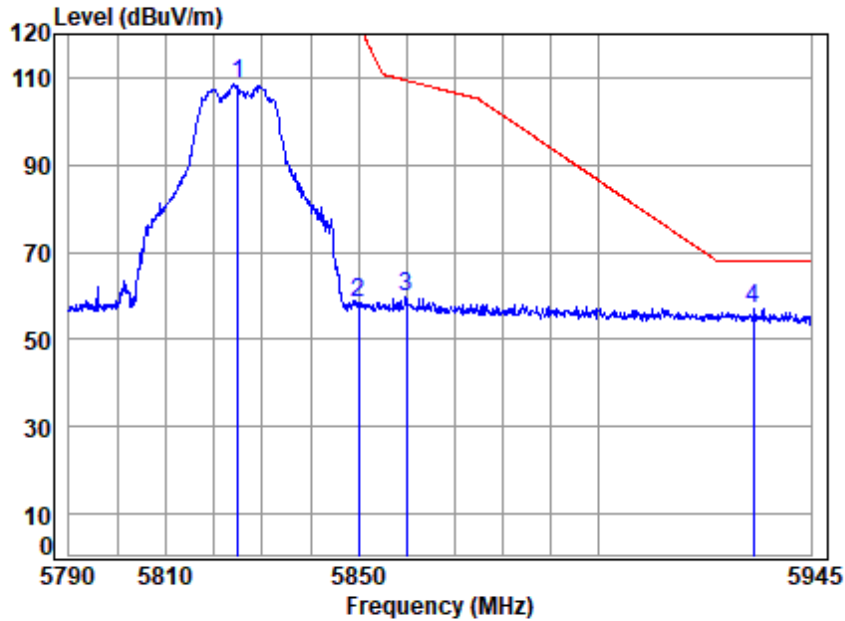


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5745 Band edge
 : 5G WIFI 11A

		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 5649.966	7.85	34.50	35.02	48.08	55.41	68.20	-12.79	peak
2	5715.000	7.91	34.50	35.02	50.38	57.77	109.40	-51.63	peak
3	5725.000	7.92	34.50	35.02	63.89	71.29	122.20	-50.91	peak
4	5745.000	7.93	34.50	35.03	99.08	106.48	-----	-----	peak



Test Mode: 08; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High

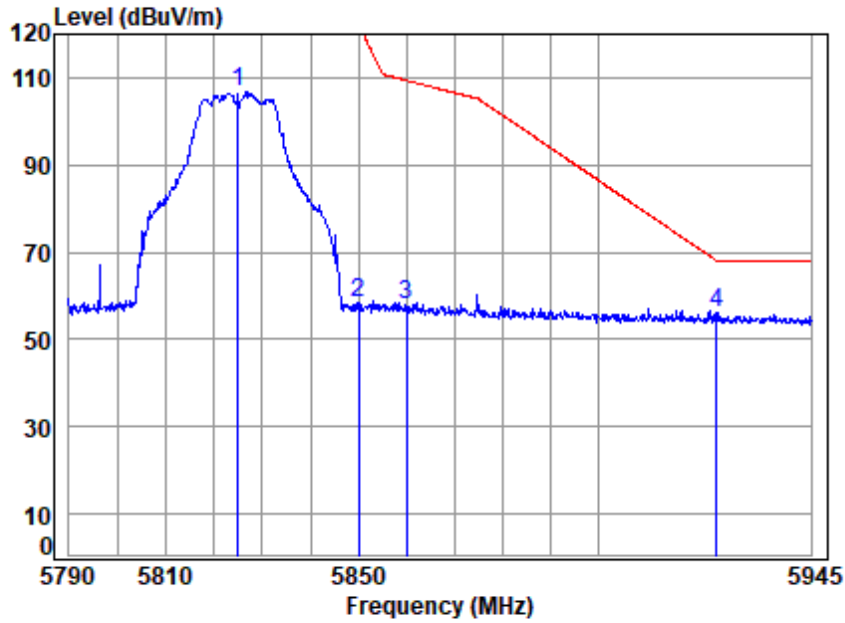


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5825 Band edge
 : 5G WIFI 11A

	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	5825.000	8.01	34.65	35.03	100.74	108.37	-----	-----	peak
2	5850.000	8.03	34.70	35.03	50.87	58.57	122.20	-63.63	peak
3	5860.000	8.04	34.72	35.03	51.84	59.57	109.40	-49.83	peak
4 q	5932.919	8.10	34.87	35.04	49.02	56.95	68.20	-11.25	peak



Test Mode: 08; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High

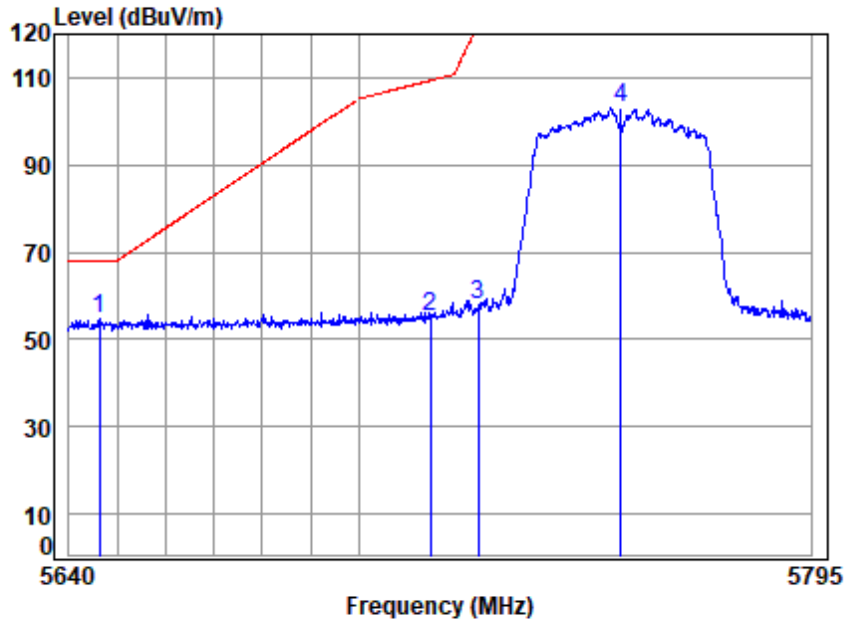


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5825 Band edge
 : 5G WIFI 11A

	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	5825.000	8.01	34.65	35.03	99.11	106.74	-----	-----	peak
2	5850.000	8.03	34.70	35.03	50.81	58.51	122.20	-63.69	peak
3	5860.000	8.04	34.72	35.03	50.05	57.78	109.40	-51.62	peak
4 q	5925.087	8.09	34.85	35.04	48.16	56.06	68.20	-12.14	peak



Test Mode: 08; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

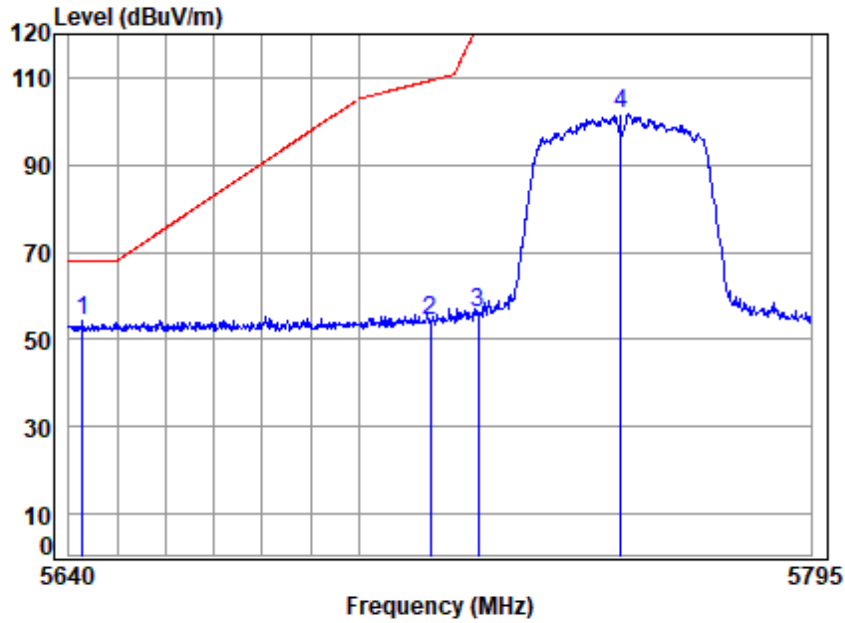


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5755 Band edge
 : 5G WIFI 11N40

		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 q	5646.273	7.84	34.50	35.02	47.57	54.89	68.20	-13.31 peak
2	5715.000	7.91	34.50	35.02	47.89	55.28	109.40	-54.12 peak
3	5725.000	7.92	34.50	35.02	50.35	57.75	122.20	-64.45 peak
4	5755.000	7.94	34.51	35.03	95.56	102.98	-----	----- peak



Test Mode: 08; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

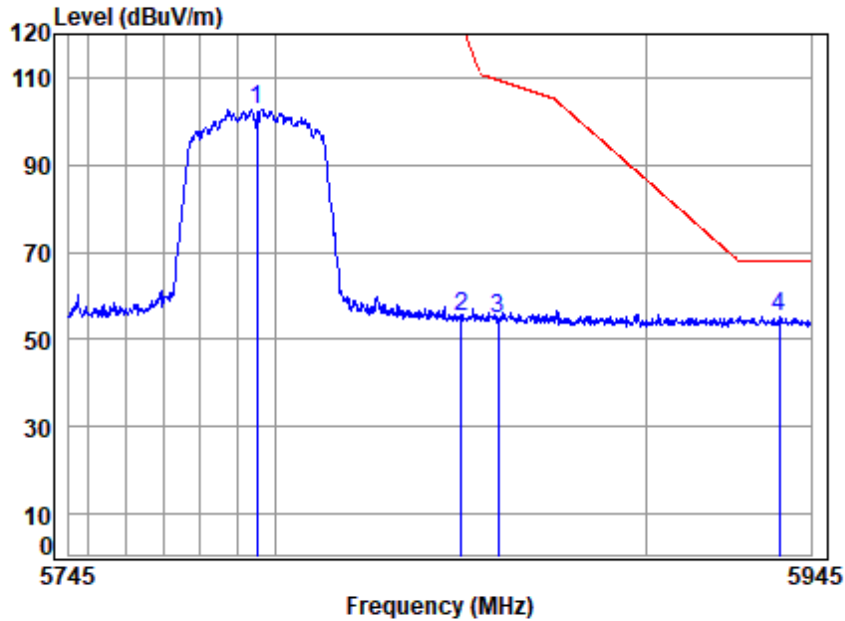


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5755 Band edge
 : 5G WIFI 11N40

		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	q 5642.753	7.84	34.50	35.02	46.81	54.13	68.20	-14.07 peak
2	5715.000	7.91	34.50	35.02	47.11	54.50	109.40	-54.90 peak
3	5725.000	7.92	34.50	35.02	48.66	56.06	122.20	-66.14 peak
4	5755.000	7.94	34.51	35.03	94.11	101.53	-----	----- peak



Test Mode: 08; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High

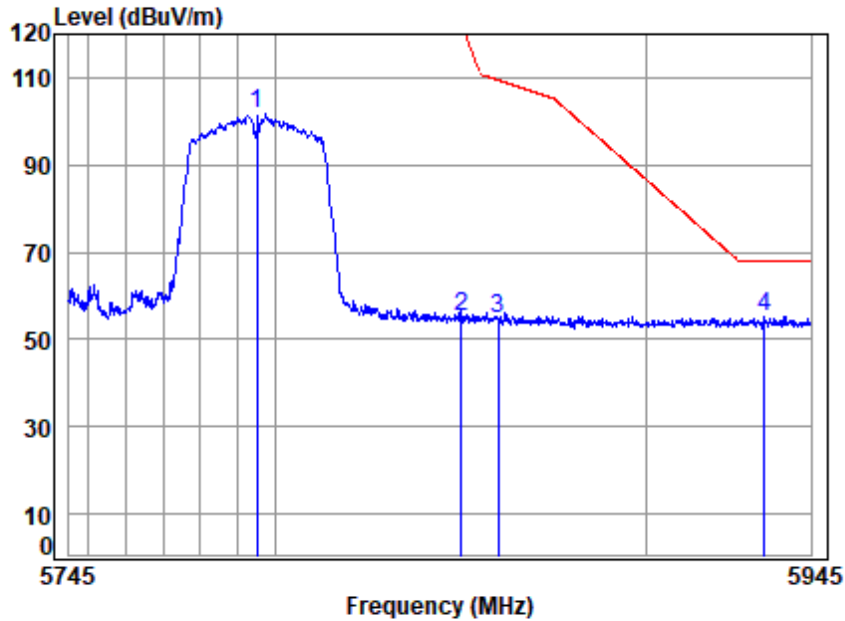


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5795 Band edge
 : 5G WIFI 11N40

	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	5795.000	7.98	34.59	35.03	95.25	102.79	-----	-----	peak
2	5850.000	8.03	34.70	35.03	47.52	55.22	122.20	-66.98	peak
3	5860.000	8.04	34.72	35.03	46.87	54.60	109.40	-54.80	peak
4 q	5936.258	8.10	34.87	35.04	47.39	55.32	68.20	-12.88	peak



Test Mode: 08; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High

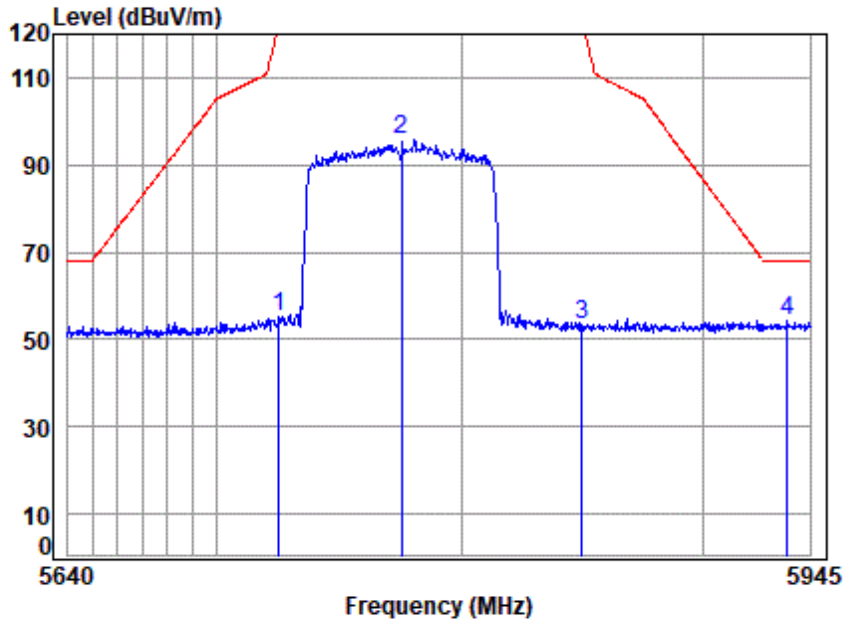


Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5795 Band edge
 : 5G WIFI 11N40

	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	5795.000	7.98	34.59	35.03	93.99	101.53	-----	-----	peak
2	5850.000	8.03	34.70	35.03	47.32	55.02	122.20	-67.18	peak
3	5860.000	8.04	34.72	35.03	46.90	54.63	109.40	-54.77	peak
4 q	5932.400	8.10	34.86	35.04	47.17	55.09	68.20	-13.11	peak



Test Mode: 08; Polarity: Vertical; Modulation:802.11ax(Full RU0); Bandwidth:80MHz

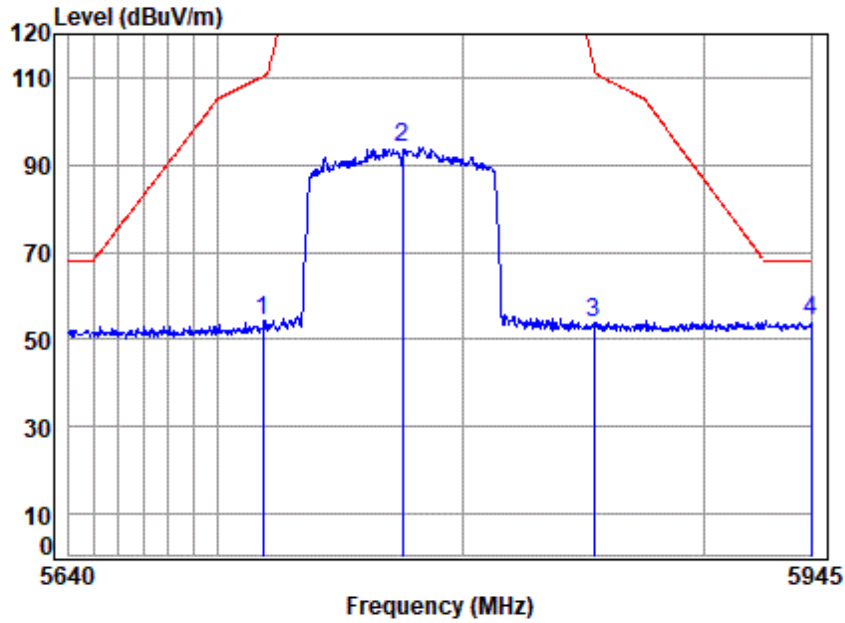


Site : chamber
 Condition: 3m VERTICAL
 Job No : 01904AT
 Mode : 5775 Band edge
 : 5G WIFI 11AX80

	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	5724.993	7.92	34.50	35.02	47.60	55.00	122.18	-67.18	peak
2	5775.000	7.96	34.55	35.03	88.15	95.63	-----	-----	peak
3	5849.650	8.03	34.70	35.03	45.63	53.33	-----	-----	peak
4 q	5935.302	8.10	34.87	35.04	46.22	54.15	68.20	-14.05	peak



Test Mode: 08; Polarity: Horizontal; Modulation:802.11ax(Full RU0); Bandwidth:80MHz



Site : chamber
 Condition: 3m HORIZONTAL
 Job No : 01904AT
 Mode : 5775 Band edge
 : 5G WIFI 11AX80

	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	5718.364	7.91	34.50	35.02	47.08	54.47	110.34	-55.87	peak
2	5775.000	7.96	34.55	35.03	86.67	94.15	-----	-----	peak
3	5853.965	8.03	34.71	35.03	46.01	53.72	113.16	-59.44	peak
4 q	5945.000	8.11	34.89	35.04	46.28	54.24	68.20	-13.96	peak



7.10 Frequency Stability

Test Requirement 47 CFR Part 15, Subpart E 15.407 (g)
 Test Method: ANSI C63.10 (2013) Section 6.8

7.10.1 E.U.T. Operation

Operating Environment:
 Temperature: 24.9 °C Humidity: 68.7 % RH Atmospheric Pressure: 1008 mbar

7.10.2 Test Mode Description

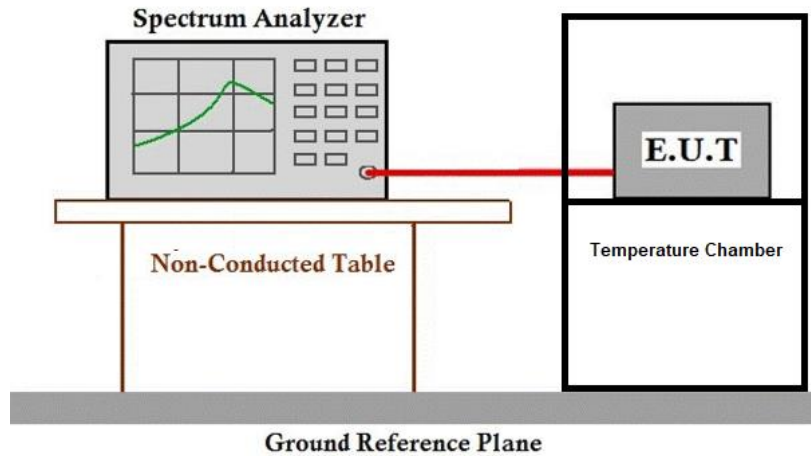
Pre-scan / Final test	Mode Code	Description
Final test	05	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80), data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2A)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80), data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.
Final test	07	TX mode (U-NII-2C)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.



Final test 08

TX mode (U-NII-3)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.

7.10.3 Test Setup Diagram



7.10.4 Measurement Procedure and Data

Please Refer to Appendix for Details



7.11 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

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

7.11.1 E.U.T. Operation

Operating Environment:

Temperature: 23.6 °C Humidity: 56.3 % RH Atmospheric Pressure: 1008 mbar

7.11.2 Test Mode Description

Pre-scan /	Mode	Description
Final test	Code	

Final test	05	<p>TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80), data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.</p>
------------	----	---

Pre-scan	06	<p>TX mode (U-NII-2A)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80), data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.</p>
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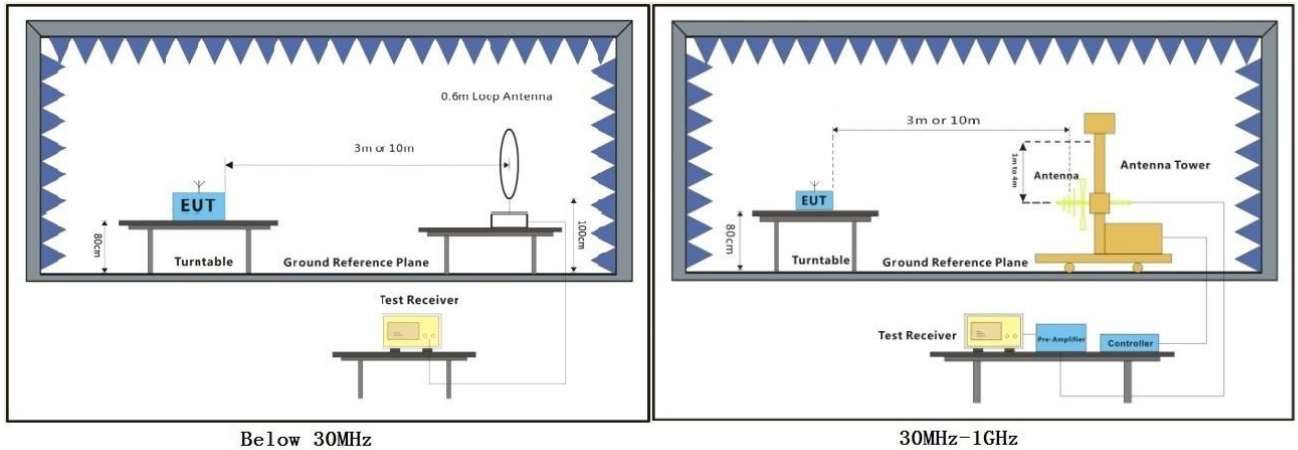
Pre-scan 07

TX mode (U-NII-2C)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.

Pre-scan 08

TX mode (U-NII-3)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT80); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW20); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW40); data rate @ MCS0 is the worst case of IEEE 802.11ax(HEW80), final test modes are considering the modulation and worse data rates. Only the data of worst case is recorded in the report.

7.11.3 Test Setup Diagram



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Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

7.11.4 Measurement Procedure and Data

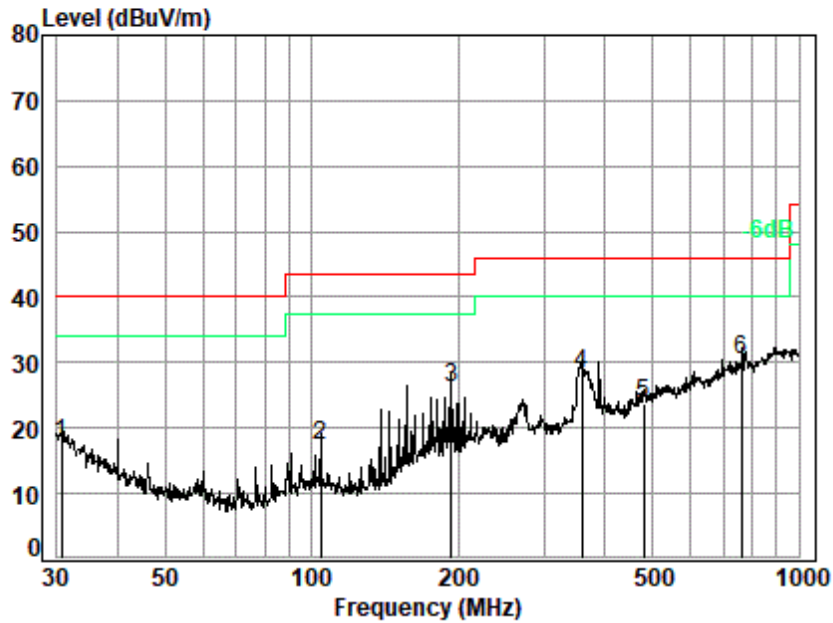
- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 or 10 meters away from the interference-receiving antenna,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

Remark:

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



Test Mode: 05; Polarity: Horizontal

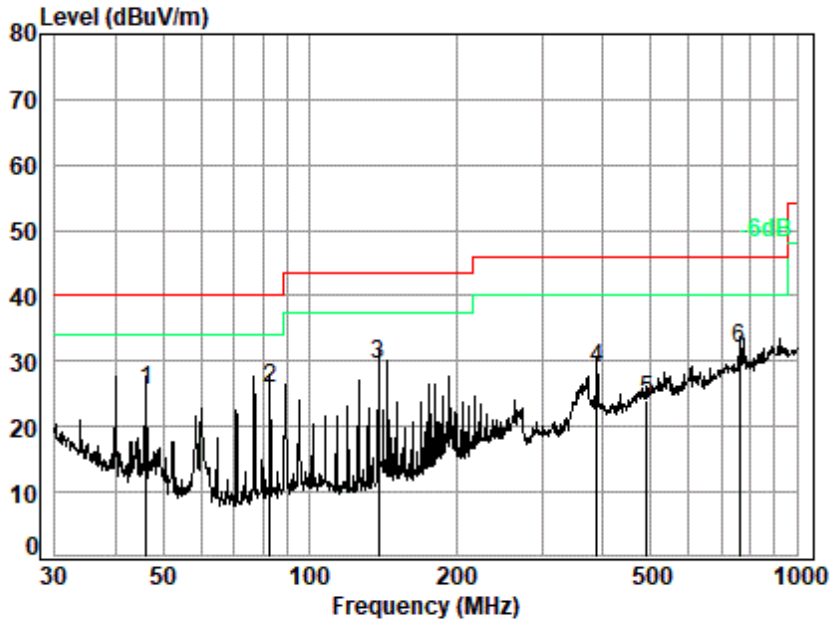


Site : chamber
 Condition: 3m HORIZONTAL
 Job No. : 01904AT/01905AT
 Test Mode: 05

	Ant Freq	Cable Factor	Preamp Loss	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	30.64	21.07	0.63	27.23	23.30	40.00	-22.23	QP
2	104.17	12.96	1.16	26.98	30.14	43.50	-26.22	QP
3	193.77	14.57	1.66	26.62	36.58	43.50	-17.31	QP
4	359.19	20.71	2.33	26.38	31.74	46.00	-17.60	QP
5	480.53	23.19	2.75	26.74	24.55	46.00	-22.25	QP
6 q	763.38	26.64	3.58	26.45	26.52	46.00	-15.71	QP



Test Mode: 05; Polarity: Vertical



Site : chamber
 Condition: 3m VERTICAL
 Job No. : 01904AT/01905AT
 Test Mode: 05

	Ant Freq	Ant Factor	Cable Loss	Preamp Factor	Read Level	Limit Level	Over Line	Over Limit	Remark
	MHz	dB/m	dB	dB	dBuV	dBuV/m	dBuV/m	dB	
1	46.18	13.29	0.74	27.18	38.82	25.67	40.00	-14.33	QP
2	82.94	11.02	1.03	27.06	40.86	25.85	40.00	-14.15	QP
3 q	138.39	11.88	1.35	26.85	43.10	29.48	43.50	-14.02	QP
4	389.35	21.40	2.44	26.47	31.45	28.82	46.00	-17.18	QP
5	490.74	22.94	2.78	26.77	25.23	24.18	46.00	-21.82	QP
6	763.38	26.64	3.58	26.45	28.06	31.83	46.00	-14.17	QP



8 Test Setup Photo

Refer to Appendix - Test Setup Photo for SZCR230600190405

9 EUT Constructional Details (EUT Photos)

Refer to Appendix - External and Internal Photos for SZCR2306001904AT



10 Appendix

1. Duty Cycle

1.1 Ant1

1.1.1 Test Result

Ant1									
Mode	TX Type	Frequency (MHz)	RU	RU Pos	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	/	/	66.320	67.377	98.43	0.07	0.00
		5200	/	/	36.533	37.590	97.19	0.12	0.00
		5240	/	/	31.863	32.847	97.00	0.13	0.00
		5260	/	/	1.392	2.021	68.88	1.62	0.30
		5300	/	/	36.820	37.880	97.20	0.12	0.00
		5320	/	/	35.640	36.700	97.11	0.13	0.00
		5500	/	/	61.877	62.930	98.33	0.07	0.00
		5580	/	/	78.767	79.823	98.68	0.06	0.00
		5700	/	/	1.392	1.427	97.55	0.11	0.03
		5745	/	/	80.480	81.540	98.70	0.06	0.00
		5785	/	/	1.398	1.436	97.35	0.12	0.61
5825	/	/	22.087	23.147	95.42	0.20	0.00		
802.11n (HT20)	MIMO	5180	/	/	100.000	100.000	100.00	0.00	0.00
		5200	/	/	11.847	12.800	92.55	0.34	0.00
		5240	/	/	34.713	35.600	97.51	0.11	0.00
		5260	/	/	6.660	6.687	99.60	0.02	0.00
		5300	/	/	10.900	11.863	91.88	0.37	0.00
		5320	/	/	38.693	38.733	99.90	0.00	0.00
		5500	/	/	50.477	51.433	98.14	0.08	0.00
		5580	/	/	38.200	39.157	97.56	0.11	0.00
		5700	/	/	1.300	2.361	55.06	2.59	12.68
		5745	/	/	29.347	30.287	96.90	0.14	0.00
		5785	/	/	77.487	78.443	98.78	0.05	0.00
5825	/	/	20.807	21.763	95.61	0.20	0.00		
802.11n (HT40)	MIMO	5190	/	/	22.870	23.520	97.24	0.12	0.00
		5230	/	/	95.653	96.290	99.34	0.03	0.00
		5270	/	/	22.527	23.150	97.31	0.12	0.00
		5310	/	/	29.354	29.384	99.90	0.00	0.00



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		5510	/	/	39.710	40.343	98.43	0.07	0.00
		5550	/	/	0.649	0.684	94.88	0.23	0.07
		5670	/	/	37.140	37.793	98.27	0.08	0.00
		5755	/	/	15.010	15.040	99.80	0.01	0.11
		5795	/	/	23.893	24.523	97.43	0.11	0.00
802.11ac (VHT20)	MIMO	5180	/	/	1.312	1.376	95.35	0.21	2.08
		5200	/	/	1.312	1.347	97.40	0.11	0.03
		5240	/	/	1.315	3.178	41.38	3.83	30.69
		5260	/	/	1.312	1.347	97.40	0.11	0.03
		5300	/	/	1.313	1.376	95.42	0.20	2.08
		5320	/	/	1.312	1.347	97.40	0.11	0.03
		5500	/	/	1.312	1.347	97.40	0.11	0.04
		5580	/	/	1.312	1.347	97.40	0.11	0.03
		5700	/	/	1.313	1.348	97.40	0.11	0.07
		5745	/	/	1.313	1.977	66.41	1.78	1.56
		5785	/	/	1.313	1.347	97.48	0.11	0.03
		5825	/	/	1.312	1.347	97.40	0.11	0.03
802.11ac (VHT40)	MIMO	5190	/	/	0.652	0.688	94.77	0.23	0.13
		5230	/	/	0.652	0.688	94.77	0.23	0.10
		5270	/	/	0.652	0.687	94.91	0.23	0.07
		5310	/	/	0.652	0.688	94.77	0.23	0.10
		5510	/	/	0.652	0.687	94.91	0.23	0.03
		5550	/	/	0.652	0.686	95.04	0.22	0.04
		5670	/	/	0.652	0.687	94.91	0.23	0.13
		5755	/	/	0.654	1.299	50.35	2.98	0.72
802.11ac (VHT80)	MIMO	5795	/	/	0.652	0.687	94.91	0.23	0.03
		5210	/	/	0.324	0.359	90.25	0.45	0.07
		5290	/	/	0.324	0.359	90.25	0.45	0.04
		5530	/	/	0.324	0.359	90.25	0.45	0.07
		5610	/	/	0.324	0.359	90.25	0.45	0.03
802.11ax (HEW20)	MIMO	5775	/	/	0.324	0.359	90.25	0.45	0.10
		5180	RU242	Left	38.787	39.447	98.33	0.07	0.00
		5200	RU242	Left	67.124	67.800	99.00	0.04	0.00
		5240	RU242	Left	24.123	24.156	99.86	0.01	0.00
		5260	RU242	Left	7.927	8.597	92.21	0.35	0.00
		5300	RU242	Left	11.820	12.487	94.66	0.24	0.00
		5320	RU242	Left	54.523	54.556	99.94	0.00	0.00
		5500	RU242	Left	24.697	25.363	97.37	0.12	0.00
		5580	RU242	Left	16.760	16.780	99.88	0.01	0.00
5700	RU242	Left	28.297	28.330	99.88	0.01	0.04		



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		5745	RU242	Left	17.803	17.850	99.74	0.01	0.00
		5785	RU242	Left	31.787	32.463	97.92	0.09	0.00
		5825	RU242	Left	73.173	73.850	99.08	0.04	0.00
802.11ax (HEW40)	MIMO	5190	RU484	Left	73.697	74.170	99.36	0.03	0.00
		5230	RU484	Left	0.153	0.190	80.53	0.94	17.30
		5270	RU484	Left	64.163	64.660	99.23	0.03	0.00
		5310	RU484	Left	2.036	2.073	98.22	0.08	1.36
		5510	RU484	Left	0.067	0.085	78.82	1.03	0.18
		5550	RU484	Left	89.497	89.947	99.50	0.02	0.00
		5670	RU484	Left	2.037	2.073	98.26	0.08	1.44
		5755	RU484	Left	48.530	49.007	99.03	0.04	0.00
		5795	RU484	Left	2.037	2.073	98.26	0.08	1.44
802.11ax (HEW80)	MIMO	5210	RU996	Left	5.290	5.577	94.85	0.23	4.83
		5290	RU996	Left	66.727	66.977	99.63	0.02	0.00
		5530	RU996	Left	0.177	0.194	91.24	0.40	6.84
		5610	RU996	Left	30.603	30.836	99.24	0.03	0.71
		5775	RU996	Left	22.533	22.540	99.97	0.00	0.00



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Shenzhen Branch Testing & Calibration Laboratory

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1.1.2 Test Graph

