FCC PART 15C TEST REPORT FOR CERTIFICATION
On Behalf of

IAdea Corporation

Smart Signboard

IAD-18001

FCC ID: Y9E-IAD18009

Prepared for : IAdea Corporation
3F, No.21, Lane 168, Xingshan Road, Neihu Dist. Taipei, 114
Taiwan

Prepared By : Audix Technology (Shenzhen) Co., Ltd.
No. 6, Kefeng Road, Science & Technology Park,
Nanshan District , Shenzhen, Guangdong, China

Tel: (0755) 26639496

Report Number	:	ACS-F20013
Date of Test	:	Dec.04,2019~Jan.20,2020
Date of Report	:	Feb.20,2020

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TEST REPORT CERTIFICATION

Applicant	:	IAdea Corporation
Manufacturer	:	IAdea Corporation
Product	:	Smart Signboard
FCC ID	:	Y9E-IAD18009
		(A) Model No. : IAD-18001
		(B) Test Voltage : AC 120V/60Hz

Tested for comply with:
FCC CFR 47 Part 15 Subpart C

Test procedure used:
ANSI C63.10: 2013
KDB 558074 D01v05r02

The device described above is tested by AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. to confirm comply with all the FCC Part 15 Subpart C requirements. The test results are contained in this test report and AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. is assumed full responsibility for the accuracy and completeness of these tests. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC and IC requirements. This report contains data that are not covered by the NVLAP accreditation.

This Report is made under FCC Part 2.1074. No modifications were required during testing to bring this product into compliance.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : Dec.04,2019~Jan.20,2020 Report of date: Feb.20,2020

Prepared by : Brave Zhang / Assistant

Reviewed by : Sunny Lu / Deputy Manager

AUDIX® 信華科技（深圳）有限公司
Audix Technology (Shenzhen) Co., Ltd.
EMC 部門報告專用章
Stamp only for EMC Dept. Report

Approved & Authorized Signer : Signature: David Jin
David Jin / Deputy General Manager

1. SUMMARY OF STANDARDS AND RESULTS

1.1.Description of Standards and Results

The EUT has been tested according to the applicable standards as referenced below.

EMISSION		
Description of Test Item	**Standard**	**Results**
Power Line Conducted Emission	FCC Part 15: 15.207	PASS
Radiated Emission	FCC Part 15: 15.209 FCC Part 15: 15.205	PASS
Band Edge Compliance	FCC Part 15: 15.247(d)	PASS
Conducted spurious emissions	FCC Part 15: 15.247(d)	PASS
6dB Bandwidth Test	FCC Part 15: 15.247(a)(2)	PASS
Peak Output Power	FCC Part 15: 15.247(b)(3)	PASS
Power Spectral Density	FCC Part 15: 15.247(e)	PASS
Antenna requirement	FCC Part 15: 15.203	PASS

2. GENERAL INFORMATION

2.1.Description of Equipment Under Test

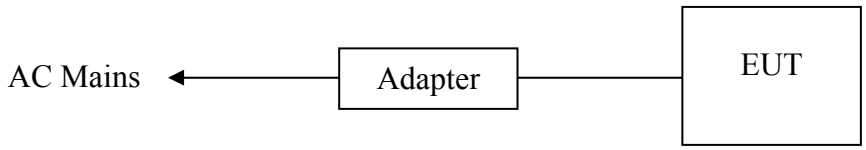
Applicant	IAdea Corporation 3F, No.21, Lane 168, Xingshan Road, Neihu Dist. Taipei, 114 Taiwan
Manufacturer	IAdea Corporation 3F, No.21, Lane 168, Xingshan Road, Neihu Dist. Taipei, 114 Taiwan
Product	Smart Signboard
Model No.	IAD-18001
FCC ID	Y9E-IAD18009
Support Modes	802.11b/g/n20/n40
Frequency Range	2412-2462MHz
Type of Modulation	802.11b(DSSS): CCK, QPSK, BPSK; 802.11g/n(OFDM): 64QAM,16QAM, QPSK, BPSK
Data Rate	802.11b: 11/5.5/2/1 Mbps; 802.11g: 54/48/36/24/18/12/9/6 Mbps; 802.11n: up to 150Mbps
Channel Separation	5MHz
Power Adapter	Manufacture: Asian Power Devices Inc. M/N: WB-18D12R Input:100-240V~ 0.5A 50-60Hz Output:12V, 1.5A DC Cable: Unshielded, Detachable, 1.8m
Sample Type	Prototype production
Date of Receipt	Dec.03,2019
Date of Test	Dec.04,2019~Jan.20,2020

Antenna System	
Type of Antenna	Internal Antenna
Antenna Peak Gain	1.98dBi

2.2. Tested Supporting System Details

[None]

2.3. Block diagram of connection between the EUT and simulators



(EUT: Smart Signboard)

2.4. Test Information

A special test software was used to control EUT work in Continuous TX mode(The duty cycle of the test signal is 100%), and select test channel, wireless mode and data rate.

Tested mode, channel, and data rate information			
Mode	data rate (Mbps)(see Note)	Channel	Frequency (MHz)
IEEE 802.11b	1	Low :CH1	2412
	1	Middle: CH6	2437
	1	High: CH11	2462
IEEE 802.11g	6	Low :CH1	2412
	6	Middle: CH6	2437
	6	High: CH11	2462
IEEE 802.11n HT20	MCS0	Low :CH1	2412
	MCS0	Middle: CH6	2437
	MCS0	High: CH11	2462
IEEE 802.11n HT40	MCS0	Low :CH3	2422
	MCS0	Middle: CH6	2437
	MCS0	High: CH9	2452
Note: According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test.			

2.5. Test Facility

Site Description

Name of Firm	:	Audix Technology (Shenzhen) Co., Ltd. No. 6, Kefeng Road, Science & Technology Park, Nanshan District , Shenzhen, Guangdong, China
EMC Lab.	:	Certificated by Industry Canada Registration Number: IC 5183A-1 Valid Date: May.07, 2020
	:	Certificated by DAkkS, Germany Registration No: D-PL-12151-01-00 Valid Date: Dec.07, 2021
	:	Accredited by NVLAP, USA NVLAP Code: 200372-0 Valid Date: Mar.31, 2020
	:	Certificated by FCC USA. Designation No.: CN5022 Valid Date: Mar.31, 2020

2.6.Measurement Uncertainty (95% confidence levels, k=2)

Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 1 Conduction	2.6dB(150KHz to 30MHz)
Uncertainty for Radiation Emission test in 3m chamber	3.6dB(30~200MHz, Polarization: H)
	4.0dB(30~200MHz, Polarization: V)
	3.6dB(200M~1GHz, Polarization: H)
	3.8dB(200M~1GHz, Polarization: V)
Uncertainty for Radiation Emission test in 3m chamber(1GHz-25GHz)	4.6dB(1~6GHz, Distance: 3m)
	4.6dB(6~25GHz, Distance: 3m)
Uncertainty for Radiated Spurious Emission test in RF chamber	3.7dB(30MHz~1000MHz)
	3.3dB(1~26.5GHz)
Uncertainty for Conduction Spurious emission test	2.0dB
Uncertainty for Output power test	0.8dB
Uncertainty for Bandwidth test	83kHz
Uncertainty for DC power test	0.1%
Uncertainty for test site temperature and humidity	0.6℃
	3%

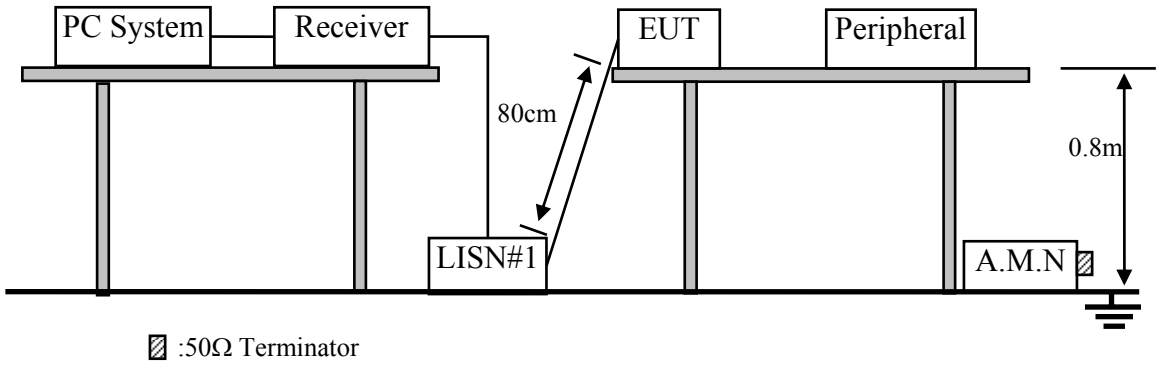
Note: EMI uncertainty is evaluated by CISPR16-4-2.
The value of measurement uncertainty of EMI is less than U_{CISPR}.
The value is not calculated in the test results.

3. POWER LINE CONDUCTED EMISSION TEST

3.1.Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	1# Shielding Room	AUDIX	N/A	N/A	May.17,18	3 Year
2.	EMI Test Receiver	Rohde & Schwarz	ESCI	100842	Apr.14,19	1 Year
3.	L.I.S.N.#1	Rohde & Schwarz	ENV216	102160	Oct.13,19	1 Year
4.	A.M.N	Kyoritsu	K NW-403D	8-1750-2	Apr.18,19	1 Year
5.	Terminator	Hubersuhner	50Ω	No.1	Apr.14,19	1 Year
6.	Terminator	Hubersuhner	50Ω	No.2	Apr.14,19	1 Year
7.	RF Cable	Fujikura	RG55/U	No.2	Apr.13,19	1 Year
8.	Test Software	AUDIX	e3	6.100913a	N/A	N/A
Note: N/A means Not applicable.						

3.2.Block Diagram of Test Setup



3.3.Power Line Conducted Emission Test Limits

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. * Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

3.4. Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

3.4.1. Smart Signboard (EUT)

Model No. : IAD-18001
Serial No. : N/A

3.4.2. Support Equipment: As Tested Supporting System Details, in Section 2.2.

3.5. Operating Condition of EUT

3.5.1. Setup the EUT and simulator as shown as Section 3.2.

3.5.2. Turn on the power of all equipments.

3.5.3. PC run test software to control EUT work in Tx (WiFi 2.4GHz) mode.

3.6. Test Procedure

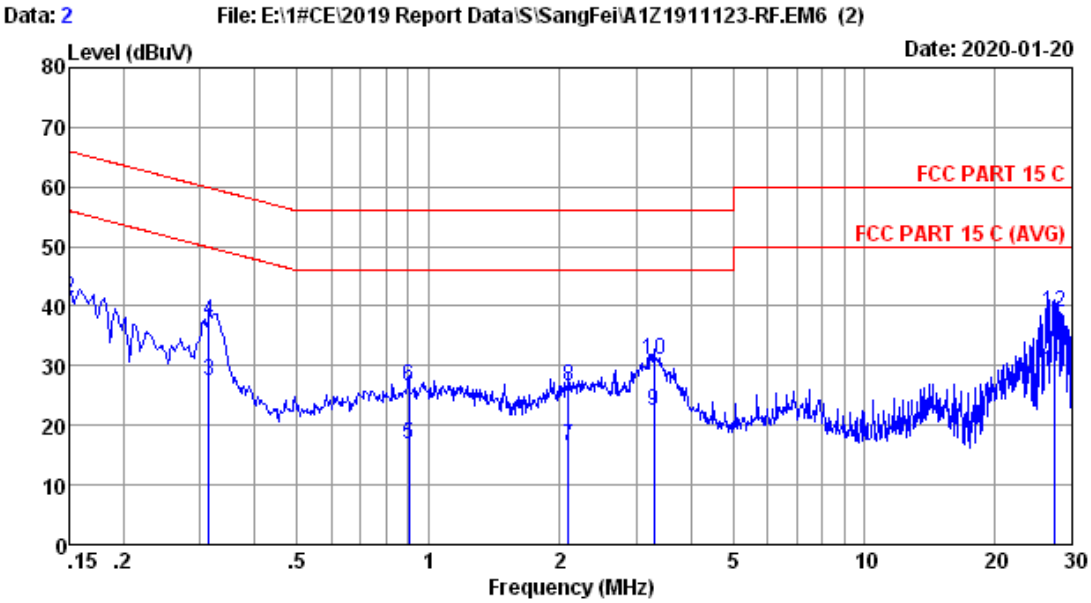
The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power Via PC connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs). The AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2013 on Conducted Emission Test.

The bandwidth of test receiver (R & S ESCI) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

3.7. Power Line Conducted Emission Test Results

PASS. **(**All emissions not reported below are too low against the prescribed limits.)

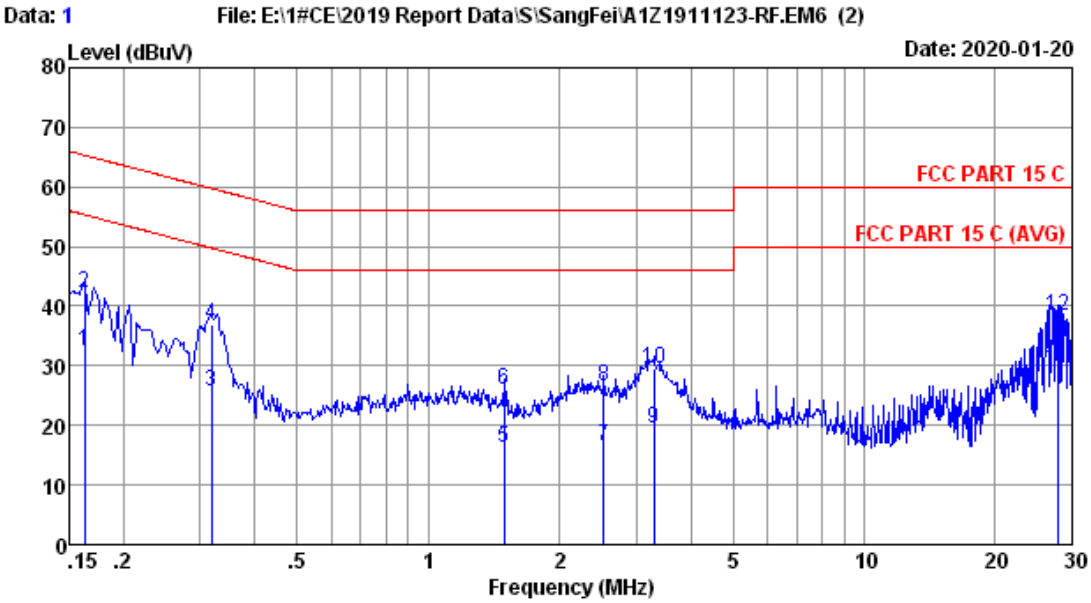


Site no :1# Conduction
Dis./Lisn :2019 ENV216 L
Limit :FCC PART 15 C
Env./Ins. :23.8*C/50%
EUT :
Power Rating :AC 120V/60Hz
Test Mode :WIFI 2.4G TX

Data No :2
LISN phase:
Engineer :THOMAX

No	Freq (MHz)	LISN Factor (dB)	Cable loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.150	9.60	0.04	22.60	32.24	56.00	23.76	Average
2	0.150	9.60	0.04	31.54	41.18	66.00	24.82	QP
3	0.313	9.60	0.05	17.80	27.45	49.88	22.43	Average
4	0.313	9.60	0.05	27.84	37.49	59.88	22.39	QP
5	0.904	9.60	0.06	7.20	16.86	46.00	29.14	Average
6	0.904	9.60	0.06	16.82	26.48	56.00	29.52	QP
7	2.099	9.60	0.07	6.90	16.57	46.00	29.43	Average
8	2.099	9.60	0.07	17.03	26.70	56.00	29.30	QP
9	3.293	9.60	0.08	12.90	22.58	46.00	23.42	Average
10	3.293	9.60	0.08	21.21	30.89	56.00	25.11	QP
11	27.416	9.55	0.19	19.20	28.94	50.00	21.06	Average
12	27.416	9.55	0.19	29.23	38.97	60.00	21.03	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
2.If the average limit is met when using a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.



Site no :1# Conduction
Dis./Lisn :2019 ENV216 N
Limit :FCC PART 15 C
Env./Ins. :23.8*C/50%
EUT :
Power Rating :AC 120V/60Hz
Test Mode :WIFI 2.4G TX

Data No :1
LISN phase:
Engineer :THOMAX

No	Freq (MHz)	LISN Factor (dB)	Cable loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.162	9.60	0.04	22.90	32.54	55.34	22.80	Average
2	0.162	9.60	0.04	32.59	42.23	65.34	23.11	QP
3	0.318	9.60	0.05	15.90	25.55	49.75	24.20	Average
4	0.318	9.60	0.05	27.35	37.00	59.75	22.75	QP
5	1.495	9.60	0.06	6.70	16.36	46.00	29.64	Average
6	1.495	9.60	0.06	16.20	25.86	56.00	30.14	QP
7	2.527	9.60	0.08	6.90	16.58	46.00	29.42	Average
8	2.527	9.60	0.08	16.79	26.47	56.00	29.53	QP
9	3.293	9.60	0.08	9.70	19.38	46.00	26.62	Average
10	3.293	9.60	0.08	19.88	29.56	56.00	26.44	QP
11	27.855	9.70	0.19	19.50	29.39	50.00	20.61	Average
12	27.855	9.70	0.19	28.38	38.27	60.00	21.73	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
2.If the average limit is met when using a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

4. RADIATED EMISSION TEST

4.1. Test Equipment

4.1.1. For frequency range 30MHz~1000MHz (In 3m Anechoic Chamber)

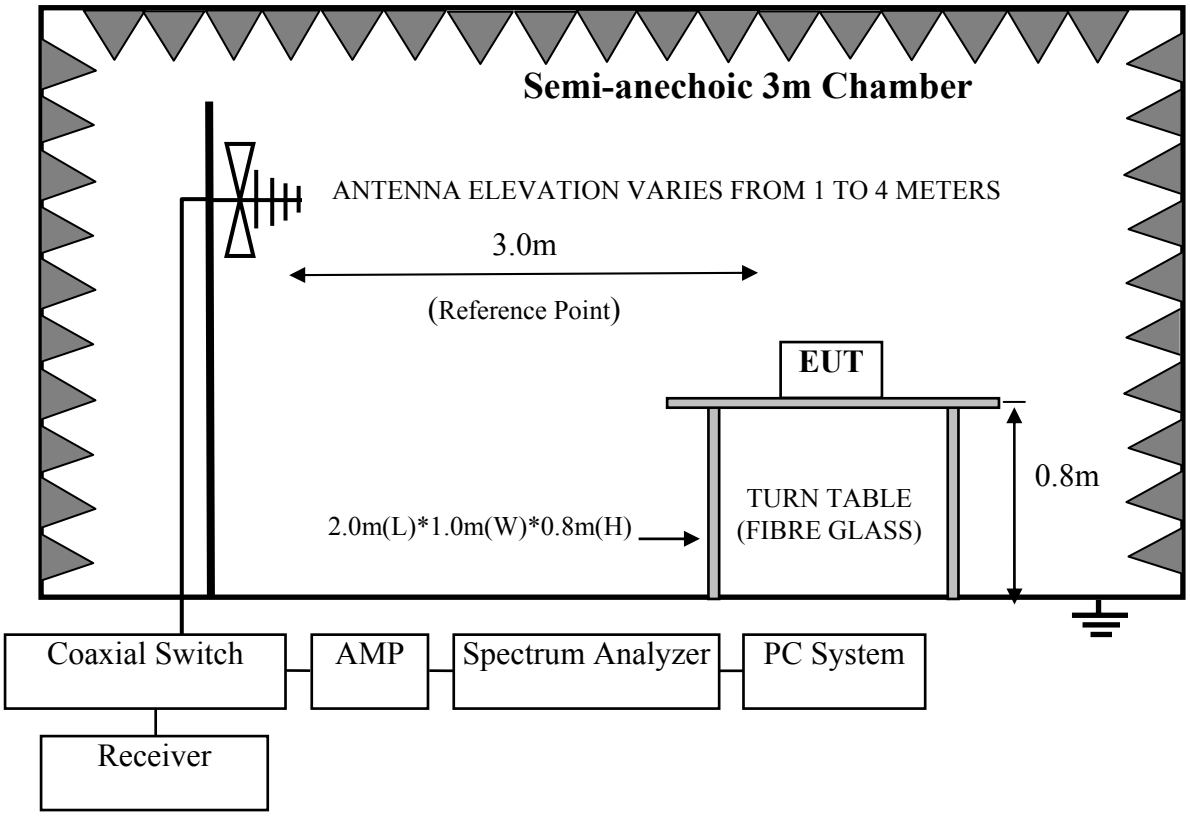
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	3#Chamber(NSA)	AUDIX	N/A	N/A	May.10,19	1 Year
2.	3#Chamber(SE)	AUDIX	N/A	N/A	May.17,18	3 Year
3.	Signal Analyzer	Rohde & Schwarz	FSV30	104050	Apr.14,19	1 Year
4.	EMI Test Receiver	Rohde & Schwarz	ESR7	101547	Apr.14,19	1 Year
5.	Amplifier	HP	8447D	2648A04738	Apr.14,19	1 Year
6.	Tri-log-Broadband Antenna	SCHWARZBECK	VULB 9168	493	Jul.24,19	1 Year
7.	NSA Cable	HUBER+SUHNER	CFD400NL-LW	No.3	Oct.13,19	1 Year
8.	Coaxial Switch	Anritsu	MP59B	6201397222	Apr.14,19	1 Year
9.	Test Software	AUDIX	e3	6.2009-5-21a(n)	N/A	N/A
Note: N/A means Not applicable.						

4.1.2. For frequency range 1GHz~25GHz (In 3m Anechoic Chamber)

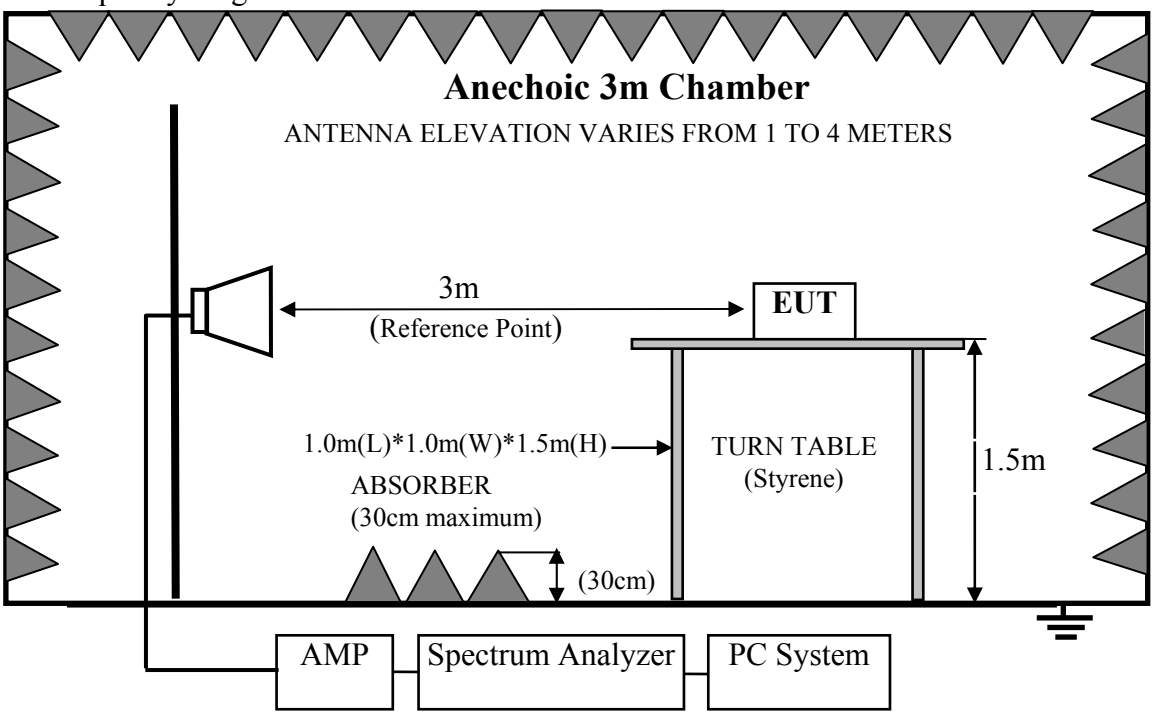
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	3#Chamber(Svswr)	AUDIX	N/A	N/A	Apr.18,19	1 Year
2.	3#Chamber(SE)	AUDIX	N/A	N/A	May.17,18	3 Year
3.	Signal Analyzer	Rohde & Schwarz	FSV30	104050	Apr.14,19	1 Year
4.	Horn Antenna	EMCO	3115	9510-4580	Dec.13,18	3 Year
5.	Horn Antenna	ETS	3116	00060089	Dec.02,19	1 Year
6.	Amplifier	Agilent	83017A	MY53270084	Oct.13,19	1 Year
7.	RF Cable	Hubersuhner	SUCOFLEX-106	505238/6	Apr.13,19	1 Year
8.	Test Software	AUDIX	e3	6.2009-5-21a(n)	N/A	N/A
Note: N/A means Not applicable.						

4.2.Block Diagram of Test Setup

For frequency range 30MHz-1000MHz



For frequency range 1GHz-25GHz



4.3.Radiated Emission Limit

4.3.1. 15.247&209 limits

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Remark： (1) Emission level dBμV = 20 log Emission level μV/m

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

4.3.2. 15.205 Restricted bands of operation

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	([2])

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

4.4.EUT Configuration on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

4.4.1. Smart Signboard (EUT)

Model No. : IAD-18001

Serial No. : N/A

4.4.2. Support Equipment: As Tested Supporting System Details, in Section 2.2.

4.5. Operating Condition of EUT

4.5.1. Setup the EUT and simulator as shown as Section 4.2.

4.5.2. Turn on the power of all equipments.

4.5.3. Let EUT work in Tx(WiFi 2.4GHz) mode

4.6. Test Procedure

Frequency below 30MHz:
The EUT setup on the turn table which has 0.8 m height to the ground. The turn table rotated 360 degrees and antenna fixed to 1 m to find the maximum emission level. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10-2013 regulation.

EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground for frequency 30MHz~1000MHz, 1.5 meter high above ground for frequency above 1GHz and put the absorbing with 2.4m(L)*2.4m(W)*0.3m(H) on the ground . The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it working in test mode, then test it.EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna for frequency 30MHz~1000MHz, and the Horm antenna is used as receiving antenna for frequency above 1GHz. Both horizontal and vertical polarization of the antenna is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.10-2013 on radiated emission Test.

This test was performed with EUT in X, Y, Z position, and the worse case was found when EUT in X position as test photo indicated.

The bandwidth of the EMI test receiver (R&S ESR7) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz

The frequency range from 30MHz to 10^{th} harmonic (25GHz) are checked. and no any emissions were found from 18GHz to 25GHz, So the radiated emissions from 18GHz to 25GHz were not record.

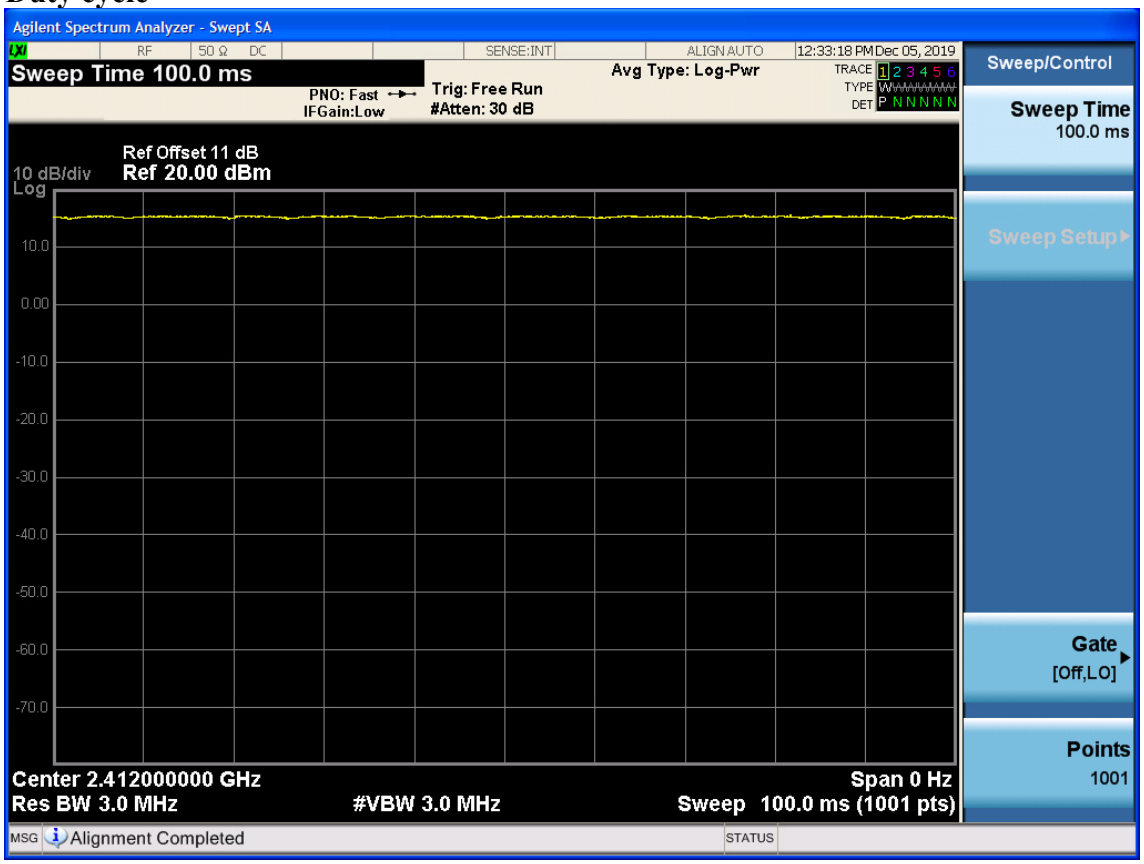
4.7. Radiated Emission Test Results

PASS.

All the emissions from 30MHz to 25 GHz were comply with 15.209 limits.

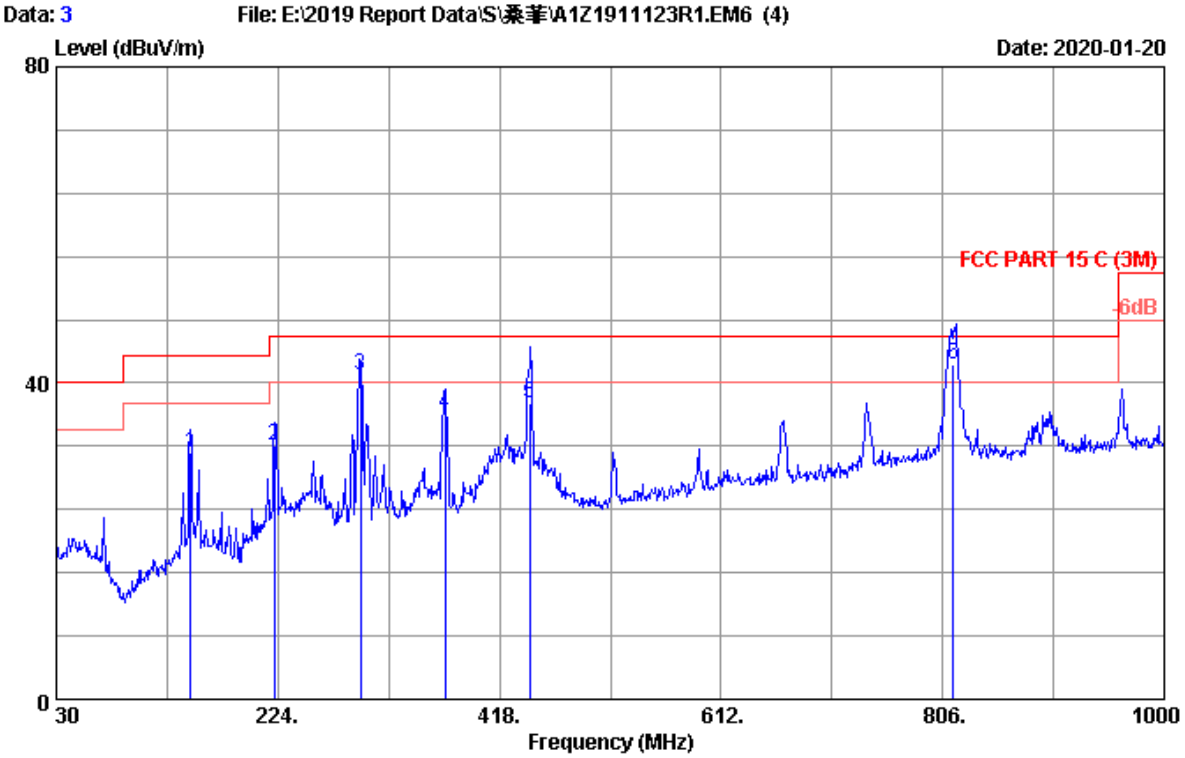
Note 1: For emissions above 1GHz, if peak level comply with average limit, then the average level is deemed to comply with average limit.
Note 2: The emissions (9kHz~30MHz) not reported for there is no emission be found.

Duty cycle



Note: The duty cycle of the test signal is 100%.

Frequency: 30MHz~1GHz

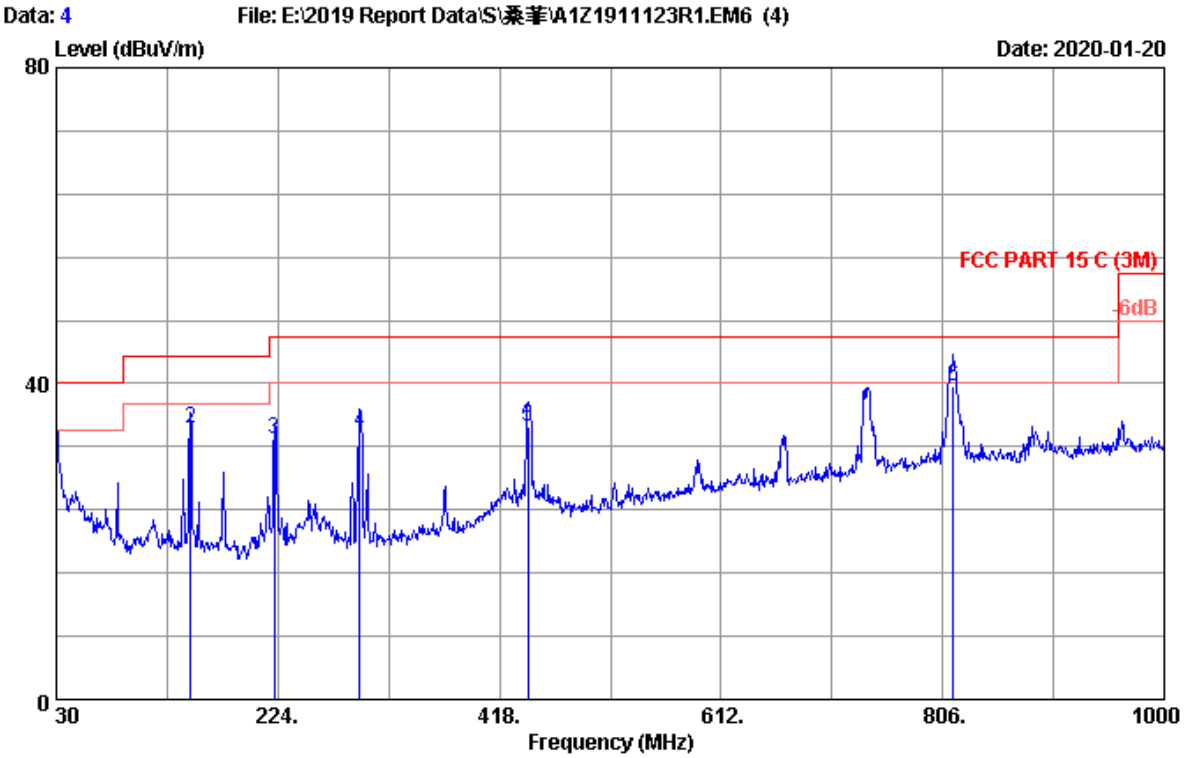


Site no. : 3m Chamber
Dis. / Ant. : 3m 2019 VULB9168-493
Limit : FCC PART 15 C (3M)
Env. / Ins. : 25.5*C/54%
EUT :
Power rating : AC 120V/60Hz
Test Mode : WIFI 2.4G TX

Data no. : 3
Ant. pol. : HORIZONTAL
Engineer : Bruce

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	147.370	19.80	1.21	10.14	31.15	43.50	12.35	QP
2	221.090	16.82	1.52	13.67	32.01	46.00	13.99	QP
3	296.568	19.78	1.80	19.40	40.98	46.00	5.02	QP
4	370.470	21.70	1.98	12.47	36.15	46.00	9.85	QP
5	444.119	23.28	2.18	11.90	37.36	46.00	8.64	QP
6	815.112	28.40	3.21	10.80	42.41	46.00	3.59	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

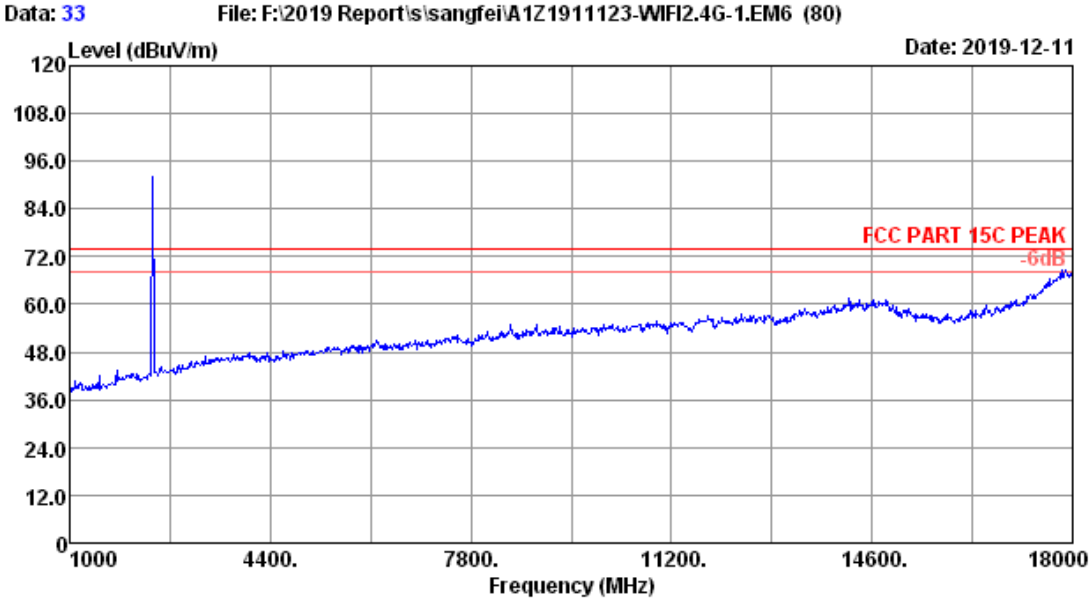


Site no. : 3m Chamber
Data no. : 4
Dis. / Ant. : 3m 2019 VULB9168-493
Ant. pol. : VERTICAL
Limit : FCC PART 15 C (3M)
Env. / Ins. : 25.5*C/54%
Engineer : Bruce
EUT :
Power rating : AC 120V/60Hz
Test Mode : WIFI 2.4G TX

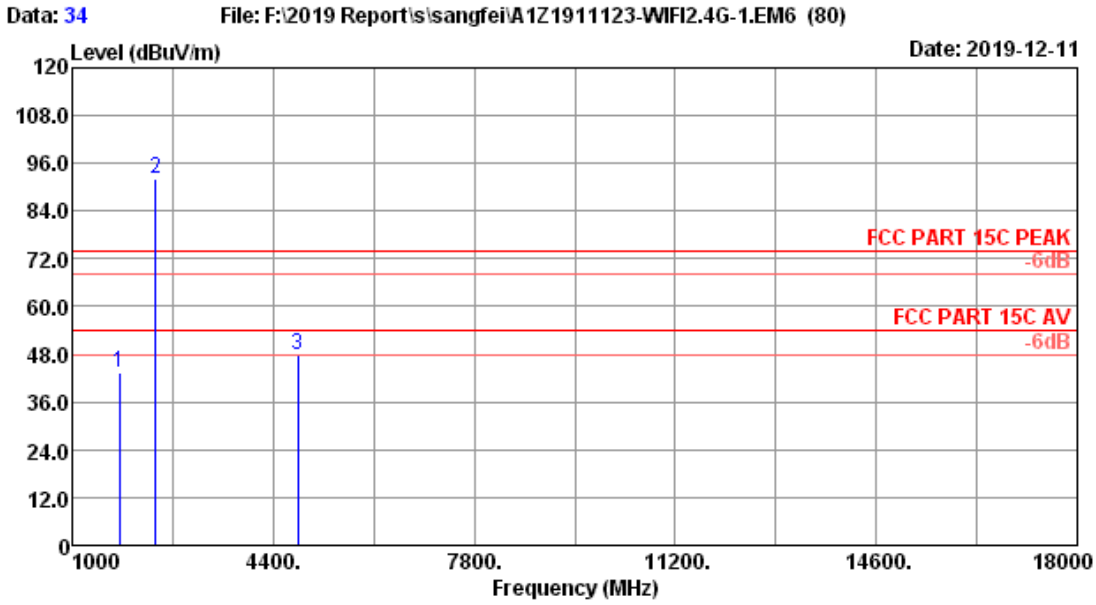
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.000	19.50	0.53	12.64	32.67	40.00	7.33	QP
2	147.370	19.80	1.21	13.39	34.40	43.50	9.10	QP
3	221.090	16.82	1.52	14.69	33.03	46.00	12.97	QP
4	295.780	19.74	1.80	12.31	33.85	46.00	12.15	QP
5	443.220	23.26	2.18	9.13	34.57	46.00	11.43	QP
6	815.700	28.44	3.21	8.06	39.71	46.00	6.29	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Frequency: 1GHz~18GHz



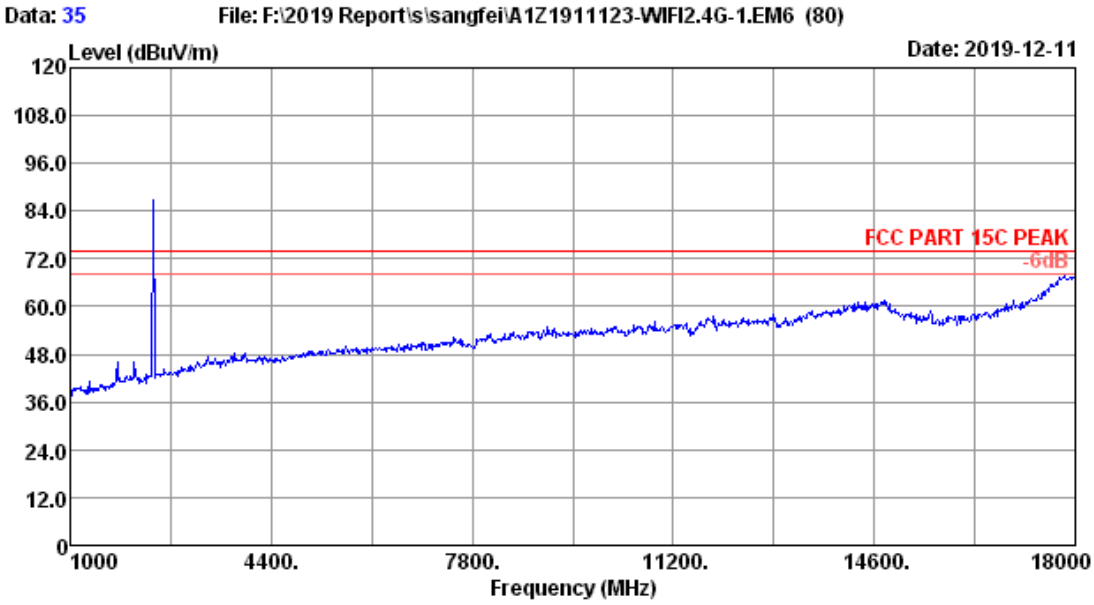
Site no.	: 3m Chamber	Data no.	: 33
Dis. / Ant.	: 3m 2018 3115-4580	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 23.4*C/52.9%	Engineer	: Garry
Power rating	: AC120V/60Hz		
Test Mode	: 802.11b 2412MHz Tx Mode		



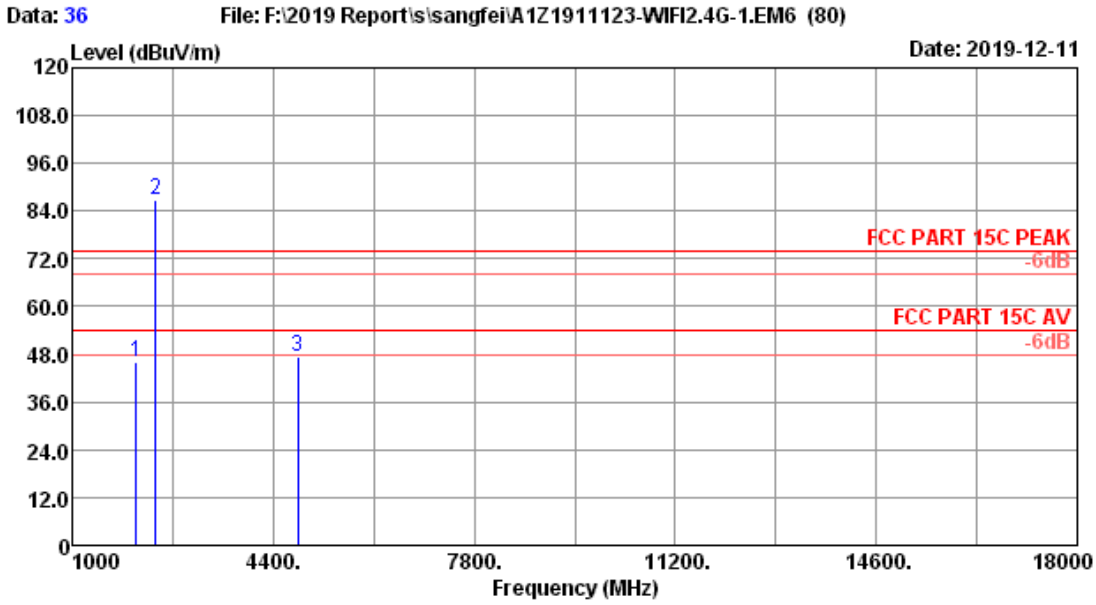
Site no. : 3m Chamber
Data no. : 34
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11b 2412MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1799.00	26.17	2.63	49.97	35.48	43.29	74.00	30.71	Peak
2	2412.00	27.77	3.05	96.18	35.04	91.96	74.00	-17.96	Peak
3	4824.00	32.13	4.28	45.79	34.37	47.83	74.00	26.17	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



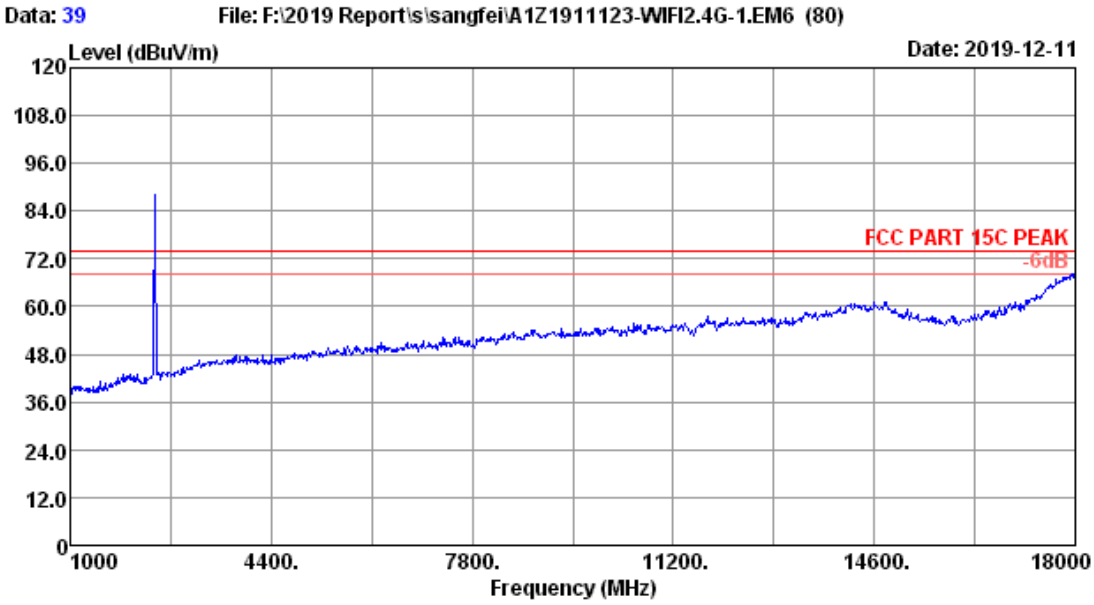
Site no. : 3m Chamber
Data no. : 35
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11b 2412MHz Tx Mode



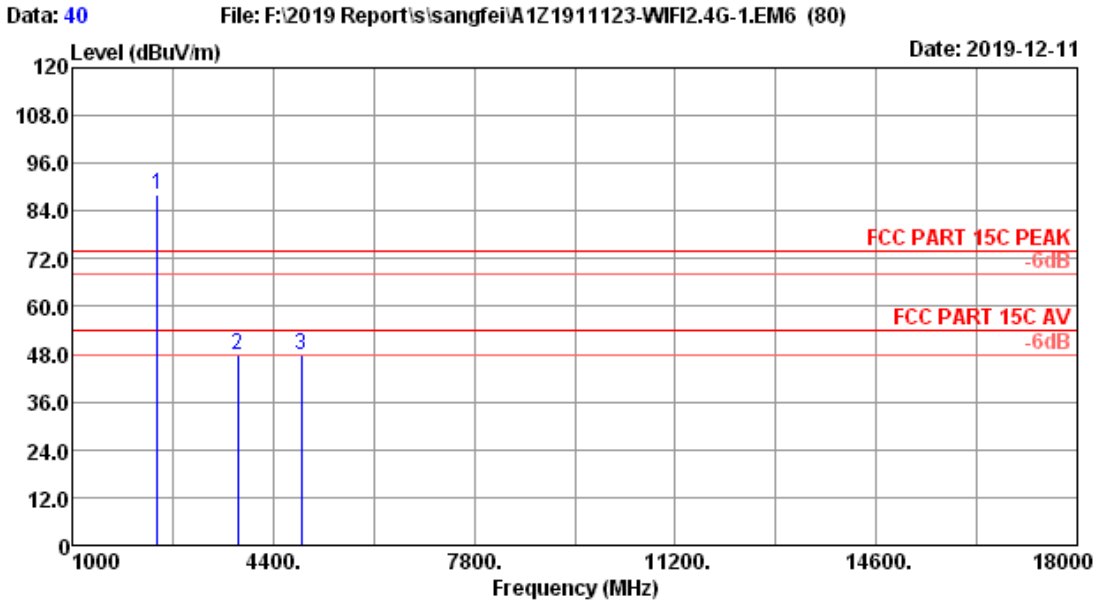
Site no. : 3m Chamber
Data no. : 36
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11b 2412MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2088.00	27.34	2.83	51.26	35.17	46.26	74.00	27.74	Peak
2	2412.00	27.77	3.05	91.01	35.04	86.79	74.00	-12.79	Peak
3	4824.00	32.13	4.28	45.14	34.37	47.18	74.00	26.82	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



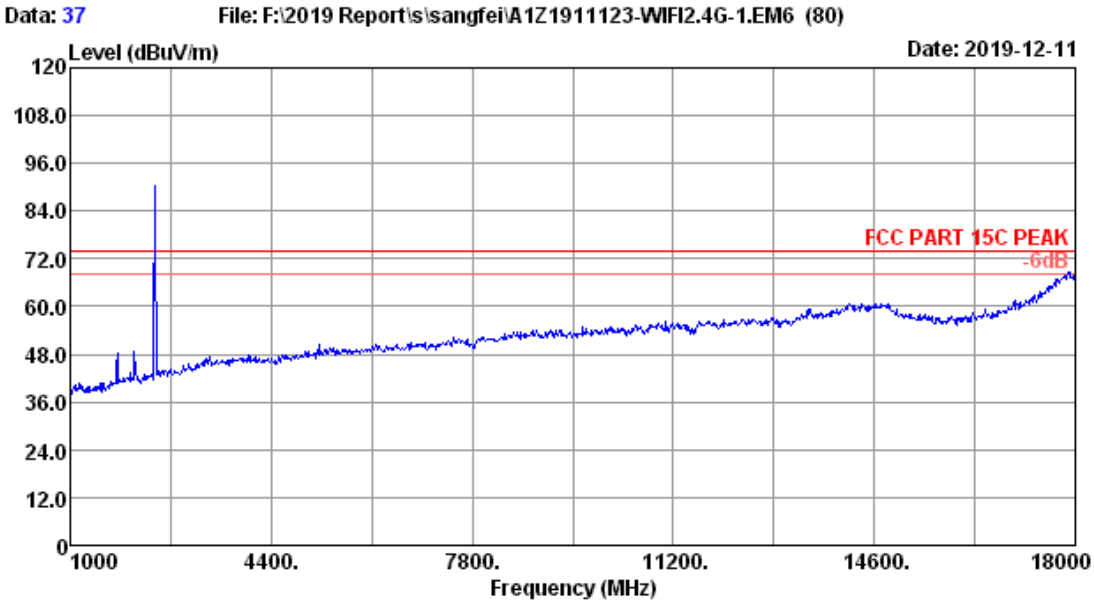
Site no. : 3m Chamber
Data no. : 39
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11b 2437MHz Tx Mode



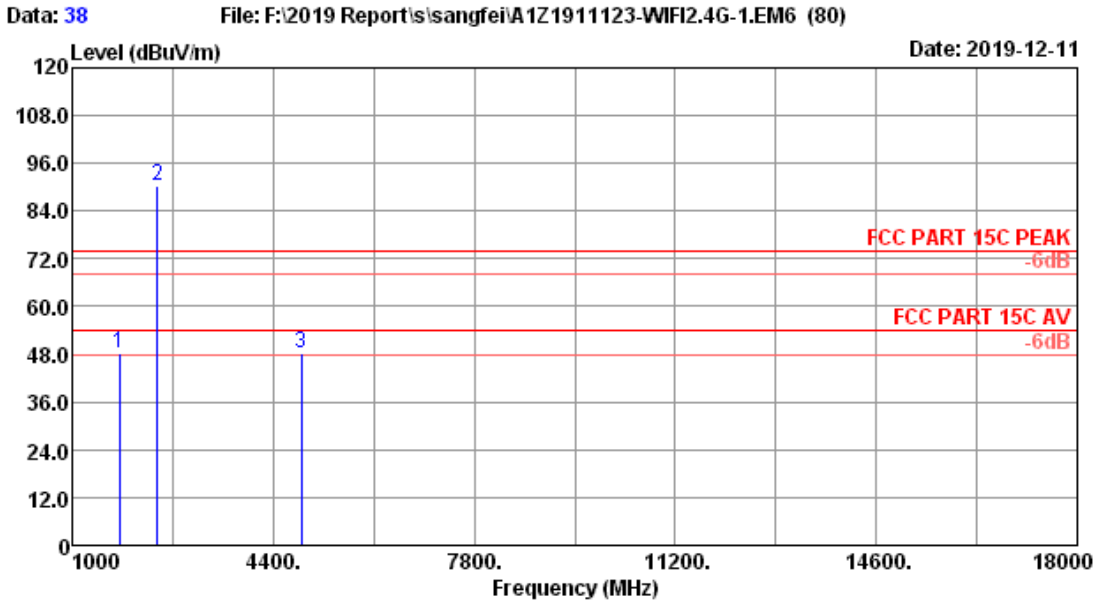
Site no. : 3m Chamber
Data no. : 40
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11b 2437MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2437.00	27.87	3.08	92.35	35.02	88.28	74.00	-14.28	Peak
2	3805.00	31.50	3.89	46.87	34.31	47.95	74.00	26.05	Peak
3	4874.00	32.25	4.30	45.75	34.38	47.92	74.00	26.08	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



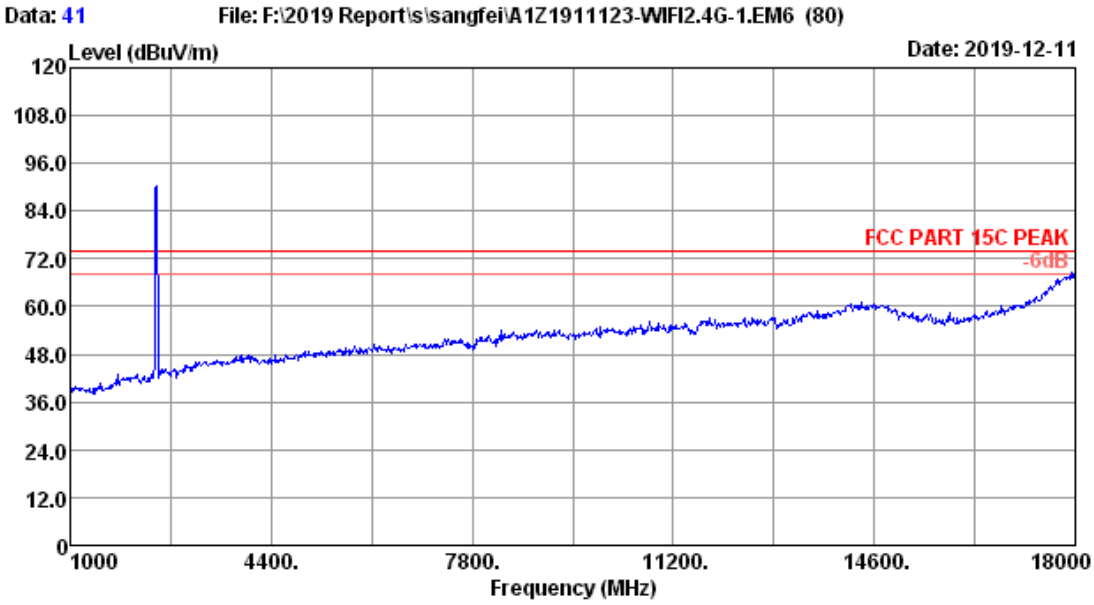
Site no. : 3m Chamber
Data no. : 37
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11b 2437MHz Tx Mode



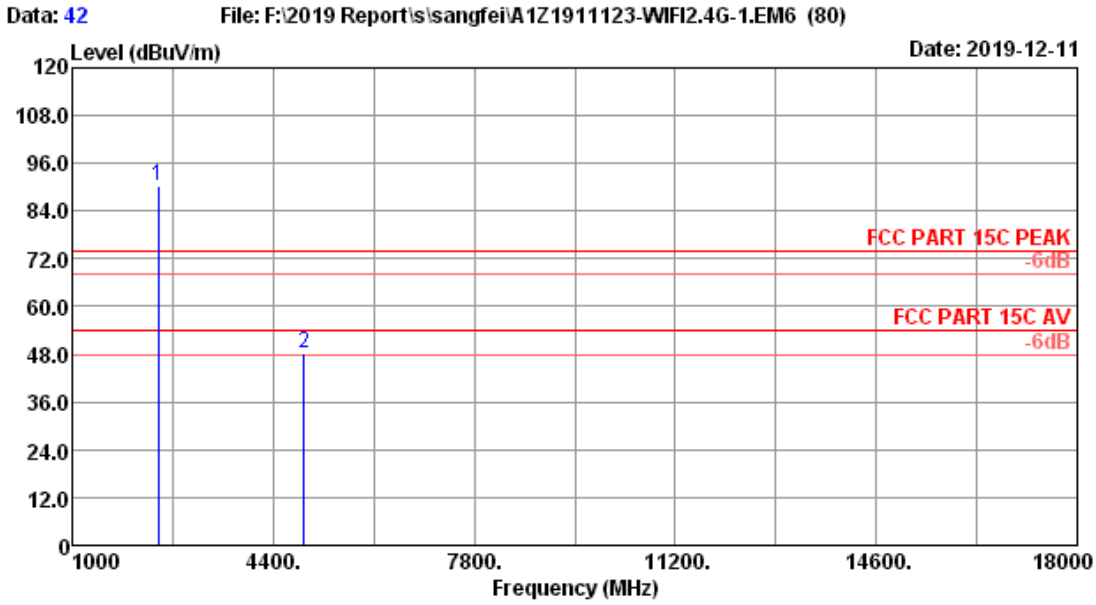
Site no. : 3m Chamber
Data no. : 38
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11b 2437MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1799.00	26.17	2.63	55.08	35.48	48.40	74.00	25.60	Peak
2	2437.00	27.87	3.08	94.20	35.02	90.13	74.00	-16.13	Peak
3	4874.00	32.25	4.30	46.26	34.38	48.43	74.00	25.57	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



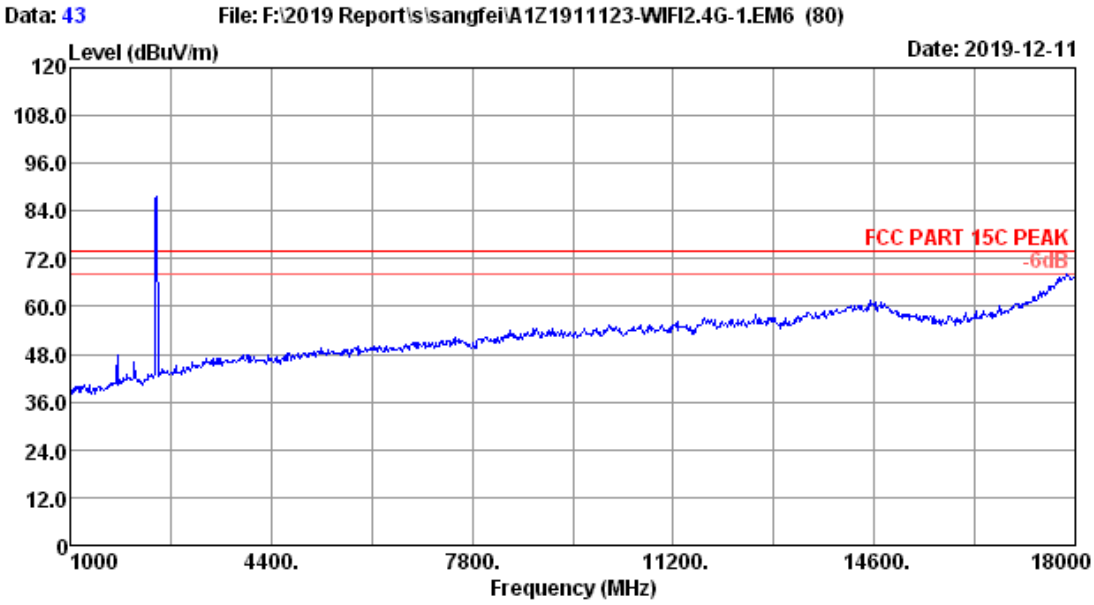
Site no. : 3m Chamber
Data no. : 41
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11b 2462MHz Tx Mode



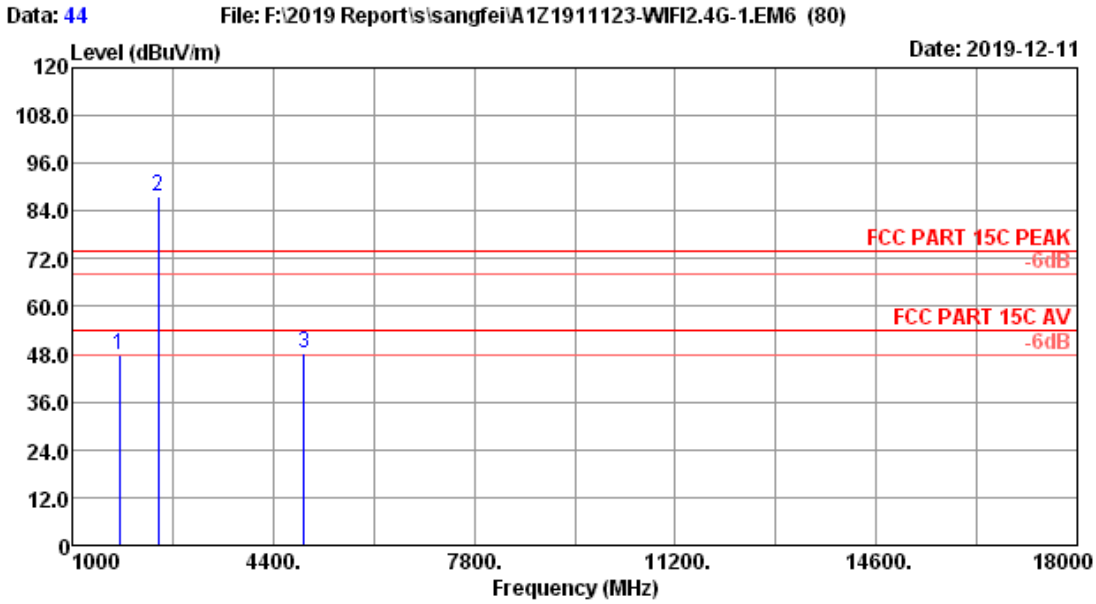
Site no. : 3m Chamber
Data no. : 42
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11b 2462MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.00	27.93	3.09	94.33	35.02	90.33	74.00	-16.33	Peak
2	4924.00	32.36	4.32	45.79	34.39	48.08	74.00	25.92	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



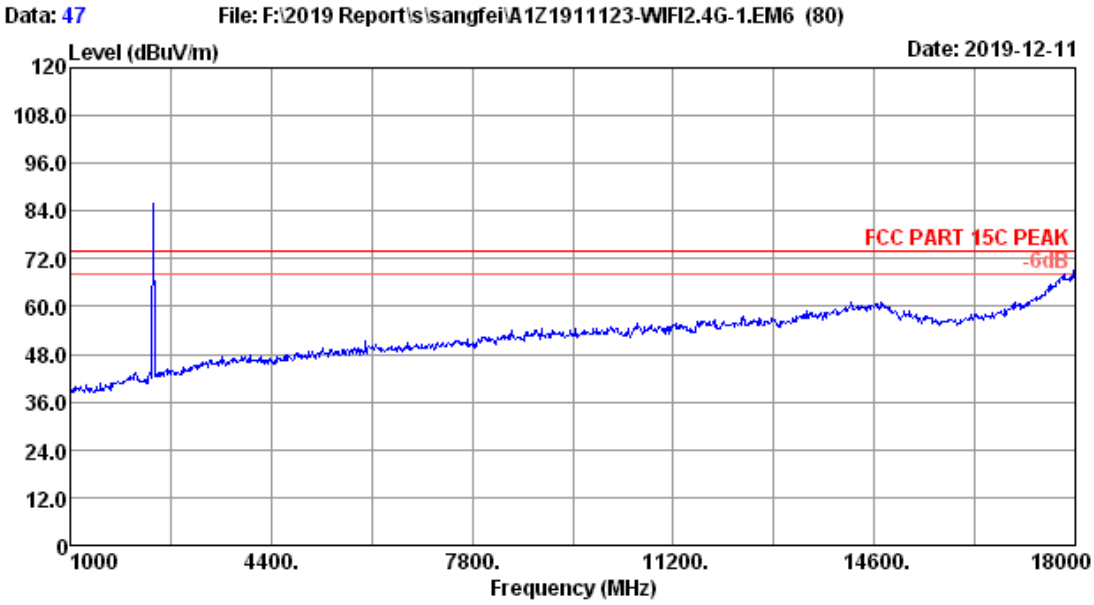
Site no. : 3m Chamber
Data no. : 43
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11b 2462MHz Tx Mode



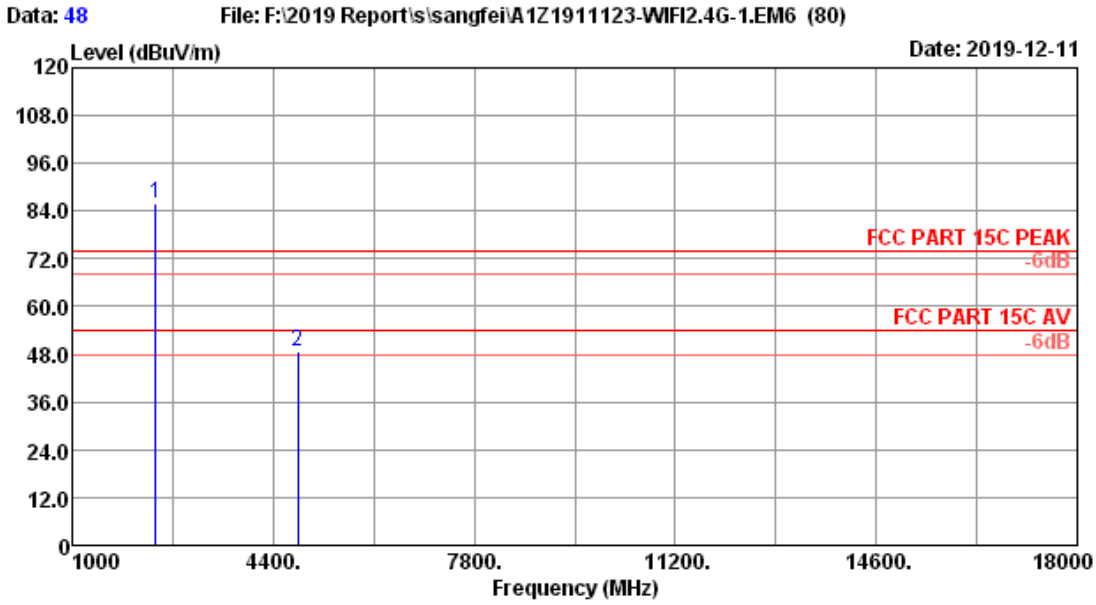
Site no. : 3m Chamber
Data no. : 44
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11b 2462MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1799.00	26.17	2.63	54.29	35.48	47.61	74.00	26.39	Peak
2	2462.00	27.93	3.09	91.55	35.02	87.55	74.00	-13.55	Peak
3	4924.00	32.36	4.32	45.90	34.39	48.19	74.00	25.81	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



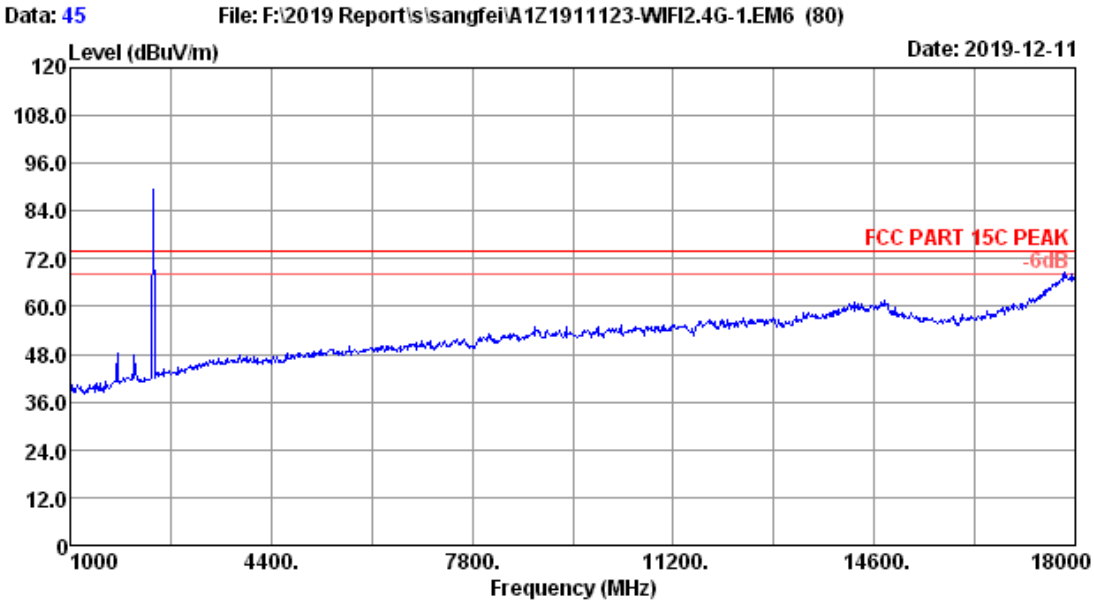
Site no. : 3m Chamber
Data no. : 47
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11g 2412MHz Tx Mode



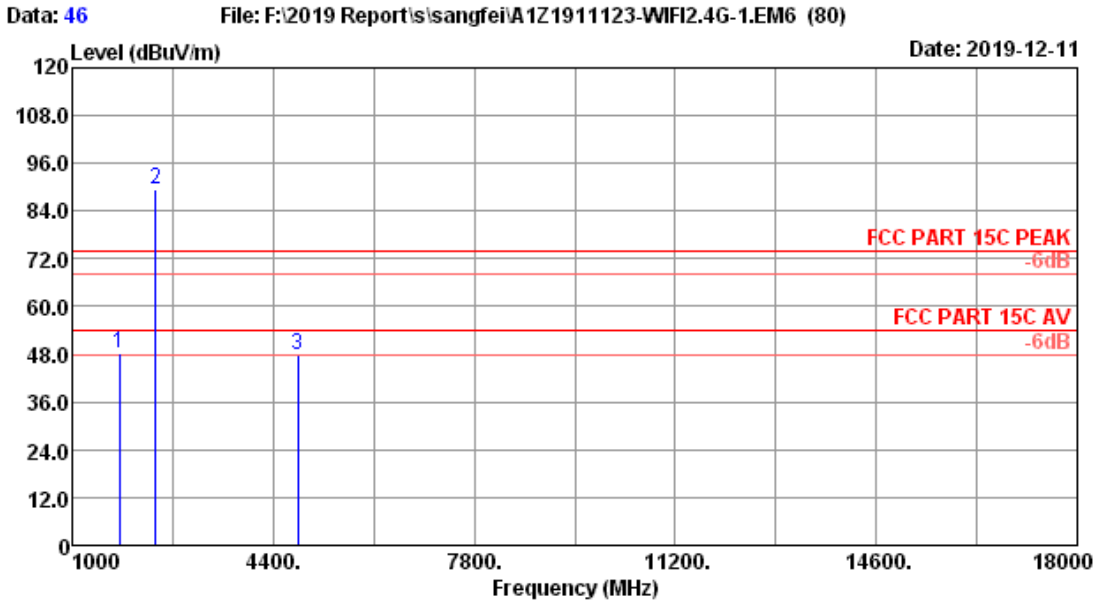
Site no. : 3m Chamber
Data no. : 48
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11g 2412MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2412.00	27.77	3.05	90.11	35.04	85.89	74.00	-11.89	Peak
2	4824.00	32.13	4.28	46.57	34.37	48.61	74.00	25.39	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



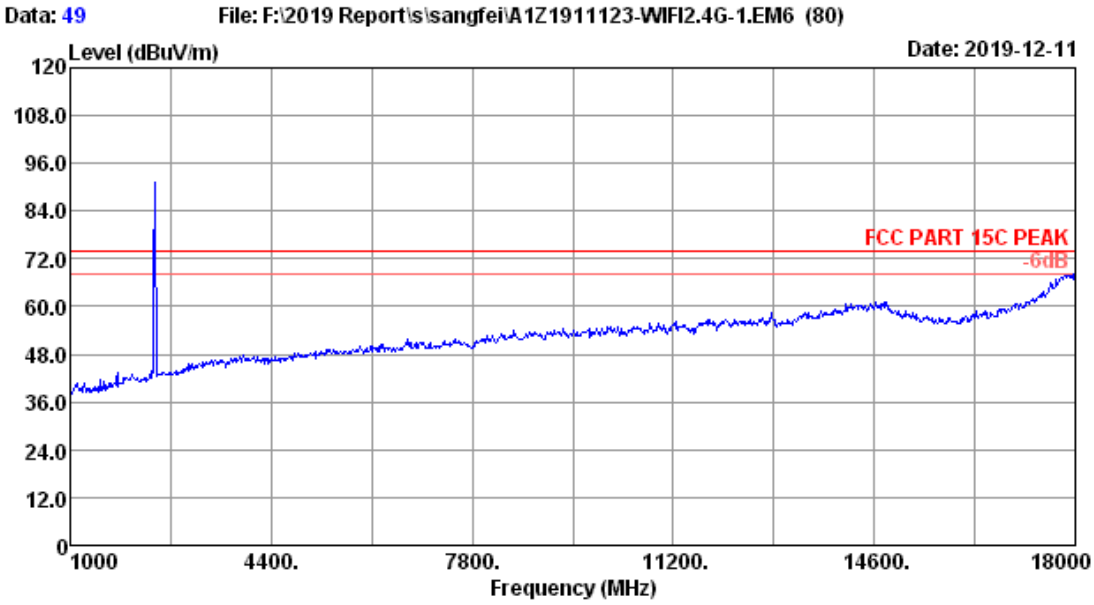
Site no. : 3m Chamber
Data no. : 45
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11g 2412MHz Tx Mode



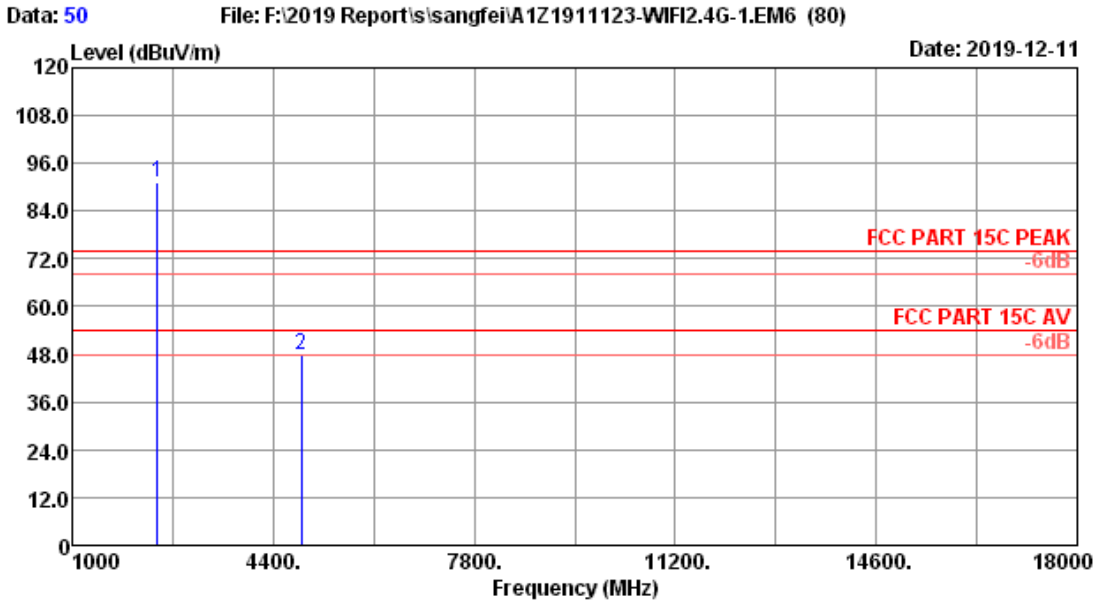
Site no. : 3m Chamber
Data no. : 46
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11g 2412MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1799.00	26.17	2.63	54.87	35.48	48.19	74.00	25.81	Peak
2	2412.00	27.77	3.05	93.45	35.04	89.23	74.00	-15.23	Peak
3	4824.00	32.13	4.28	45.82	34.37	47.86	74.00	26.14	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



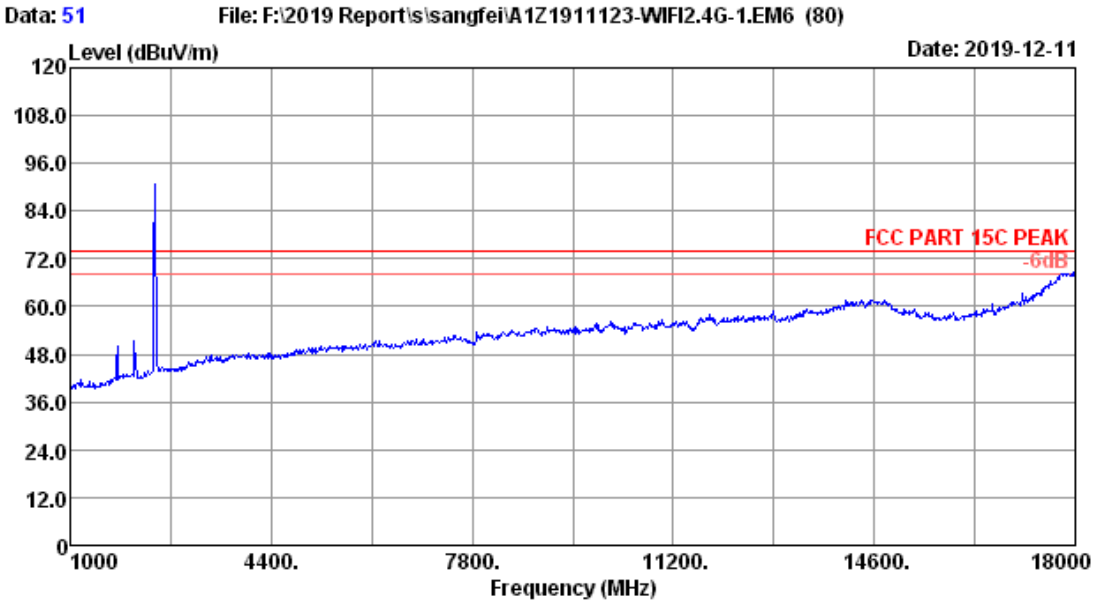
Site no. : 3m Chamber
Data no. : 49
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11g 2437MHz Tx Mode



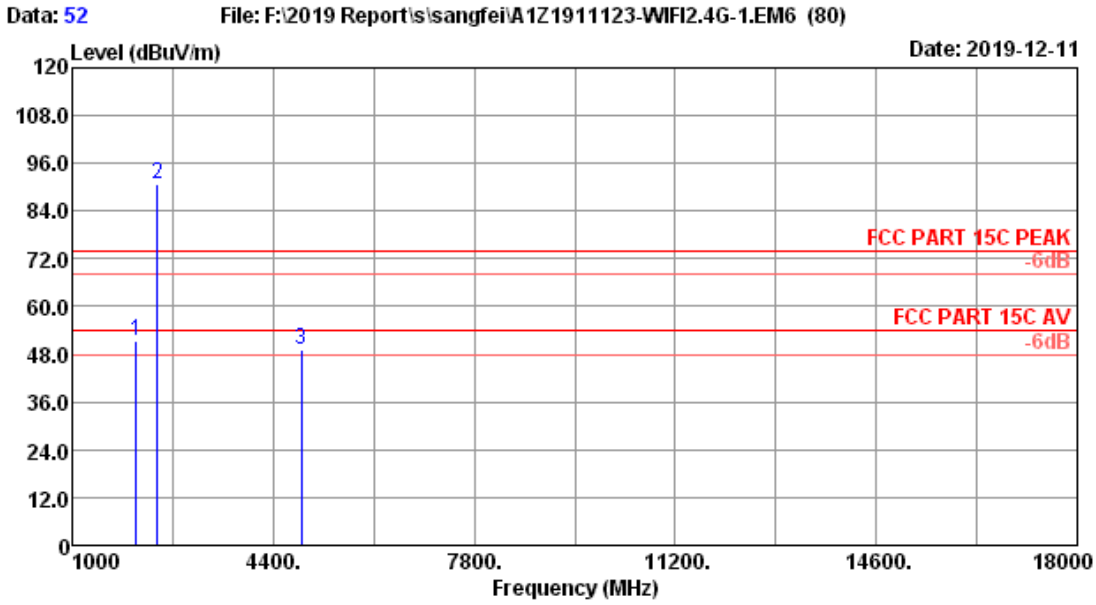
Site no. : 3m Chamber
Data no. : 50
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11g 2437MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2437.00	27.87	3.08	95.23	35.02	91.16	74.00	-17.16	Peak
2	4874.00	32.25	4.30	45.44	34.38	47.61	74.00	26.39	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



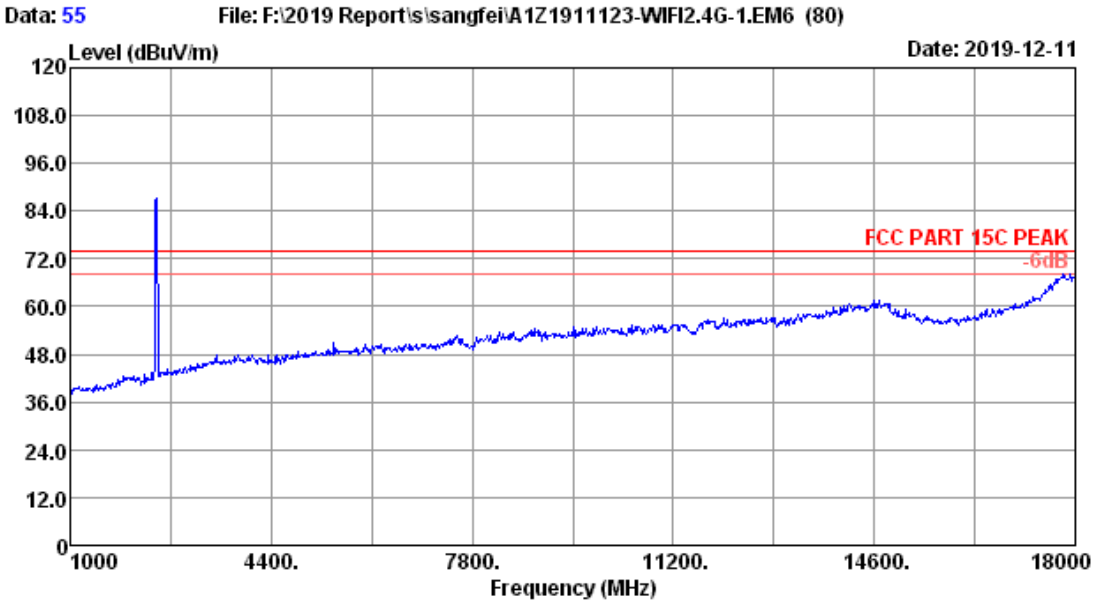
Site no. : 3m Chamber
Data no. : 51
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11g 2437MHz Tx Mode



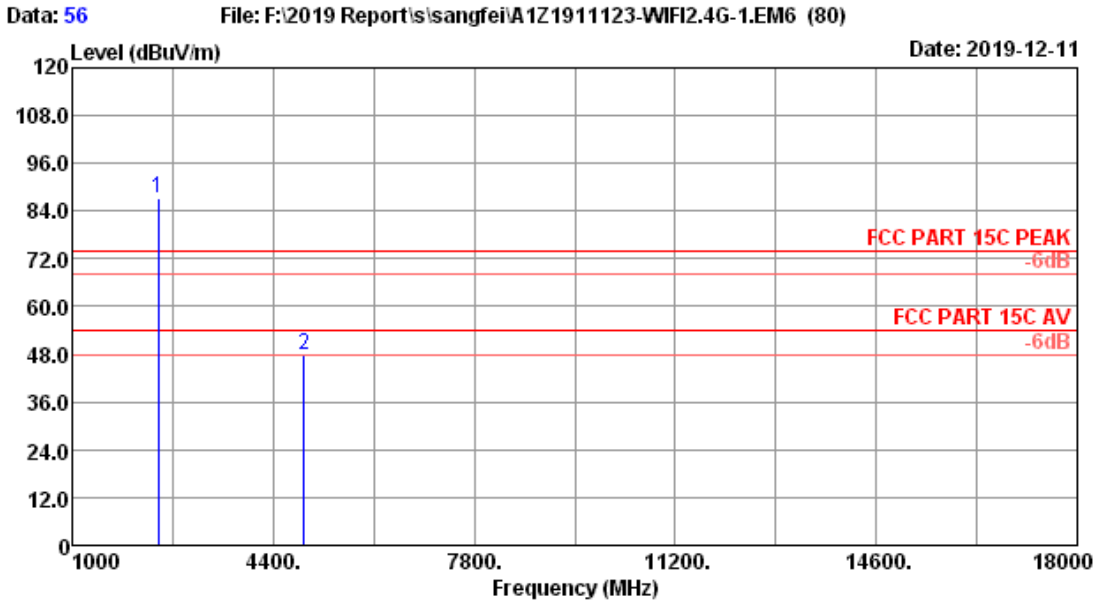
Site no. : 3m Chamber
Data no. : 52
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11g 2437MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2088.00	27.34	2.83	56.20	35.17	51.20	74.00	22.80	Peak
2	2437.00	27.87	3.08	94.71	35.02	90.64	74.00	-16.64	Peak
3	4874.00	32.25	4.30	47.00	34.38	49.17	74.00	24.83	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



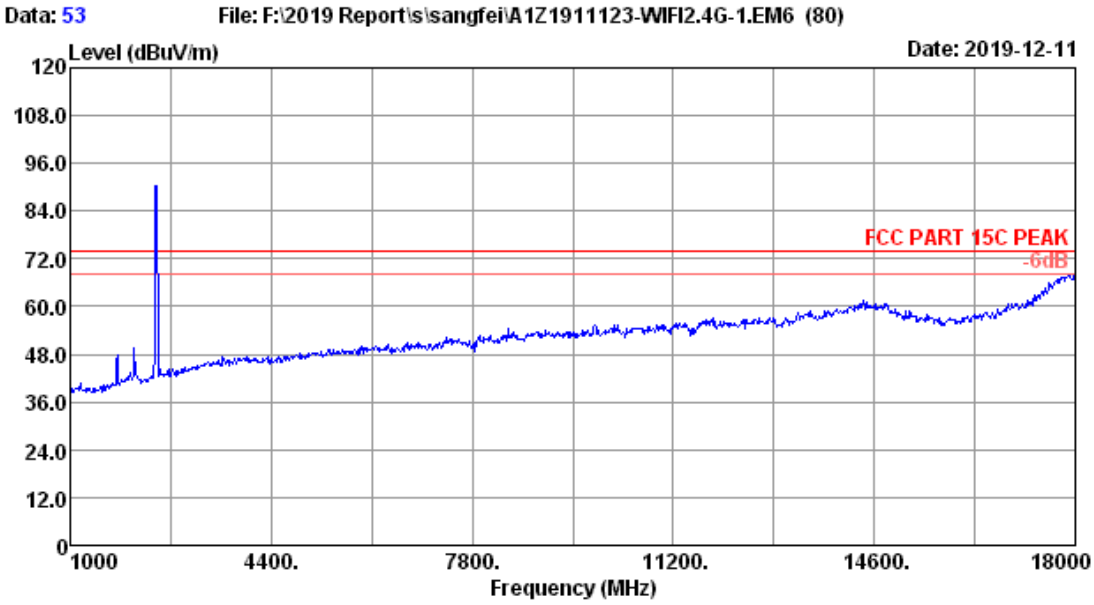
Site no. : 3m Chamber
Data no. : 55
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11g 2462MHz Tx Mode



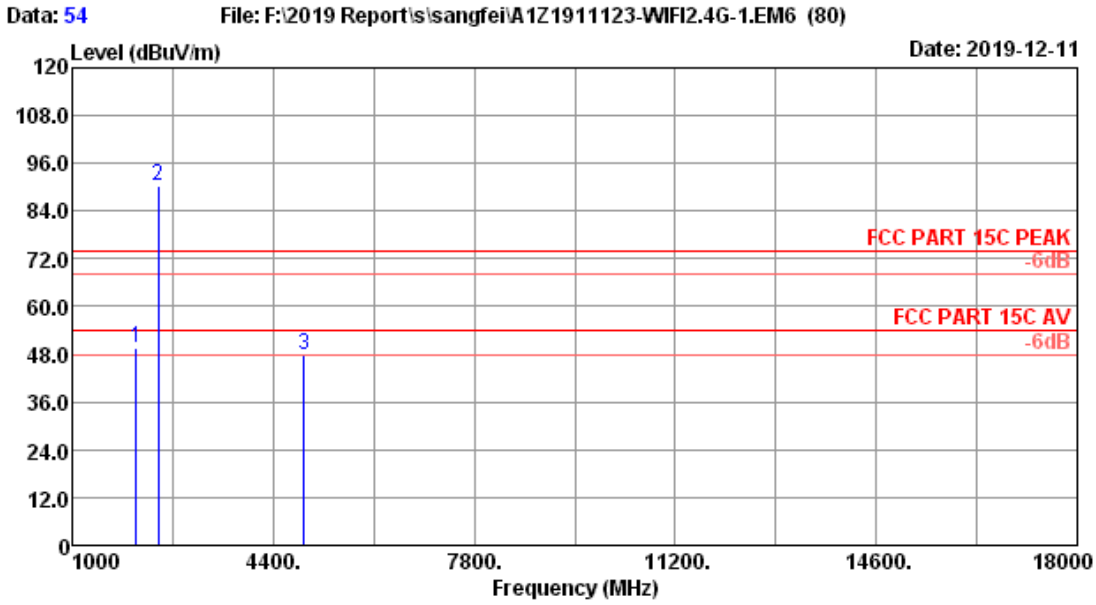
Site no. : 3m Chamber
Data no. : 56
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11g 2462MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.00	27.93	3.09	91.09	35.02	87.09	74.00	-13.09	Peak
2	4924.00	32.36	4.32	45.75	34.39	48.04	74.00	25.96	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



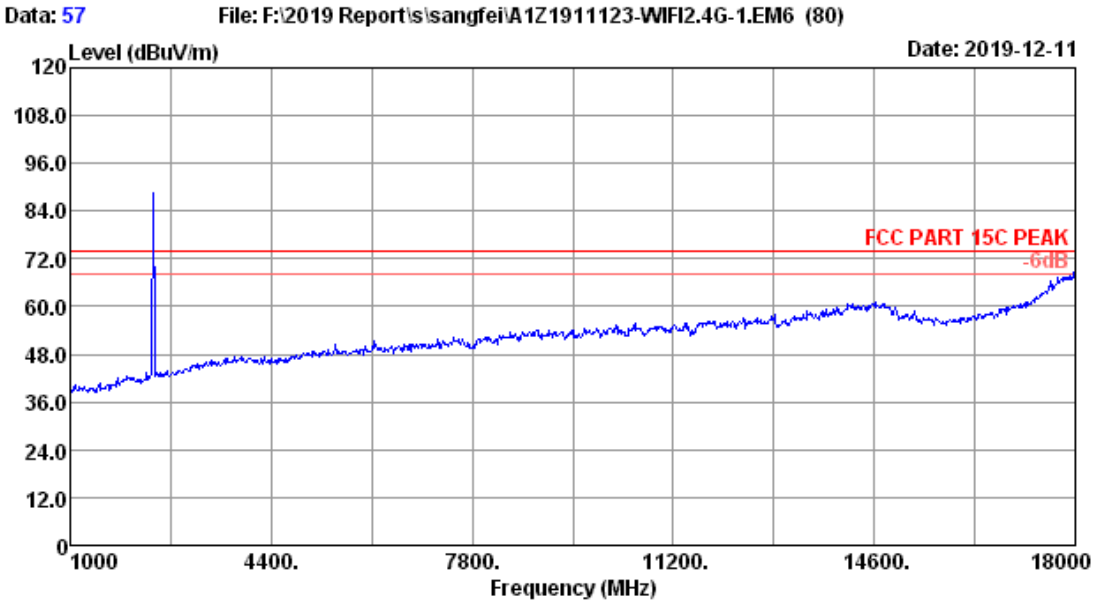
Site no. : 3m Chamber
Data no. : 53
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11g 2462MHz Tx Mode



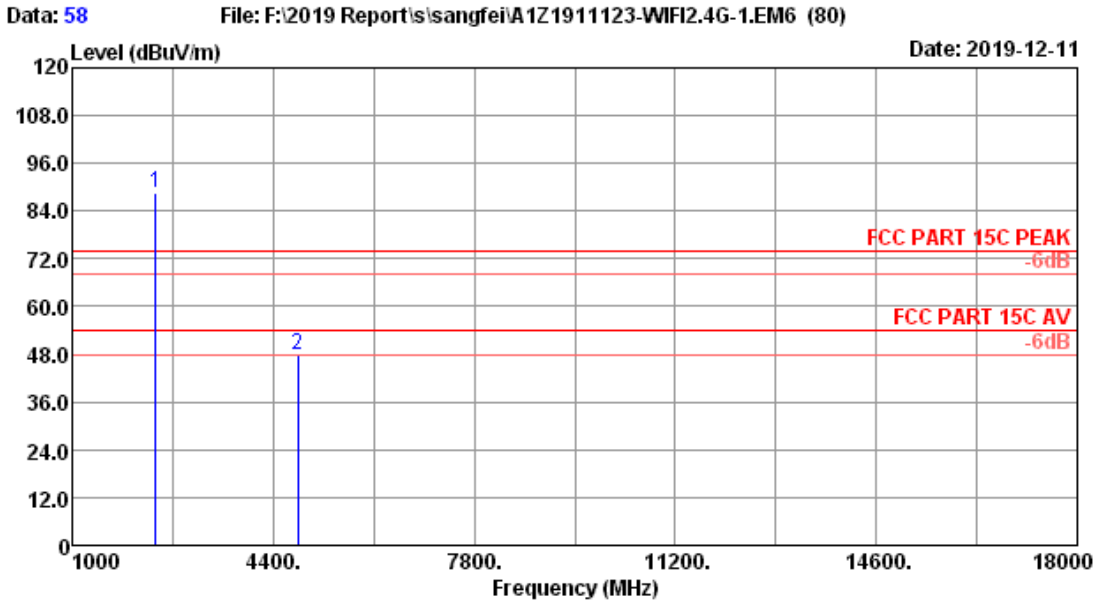
Site no. : 3m Chamber
Data no. : 54
Dis. / Ant. : 3m 2018 3115-4580
Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9%
Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11g 2462MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2088.00	27.34	2.83	54.67	35.17	49.67	74.00	24.33	Peak
2	2462.00	27.93	3.09	94.20	35.02	90.20	74.00	-16.20	Peak
3	4924.00	32.36	4.32	45.62	34.39	47.91	74.00	26.09	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



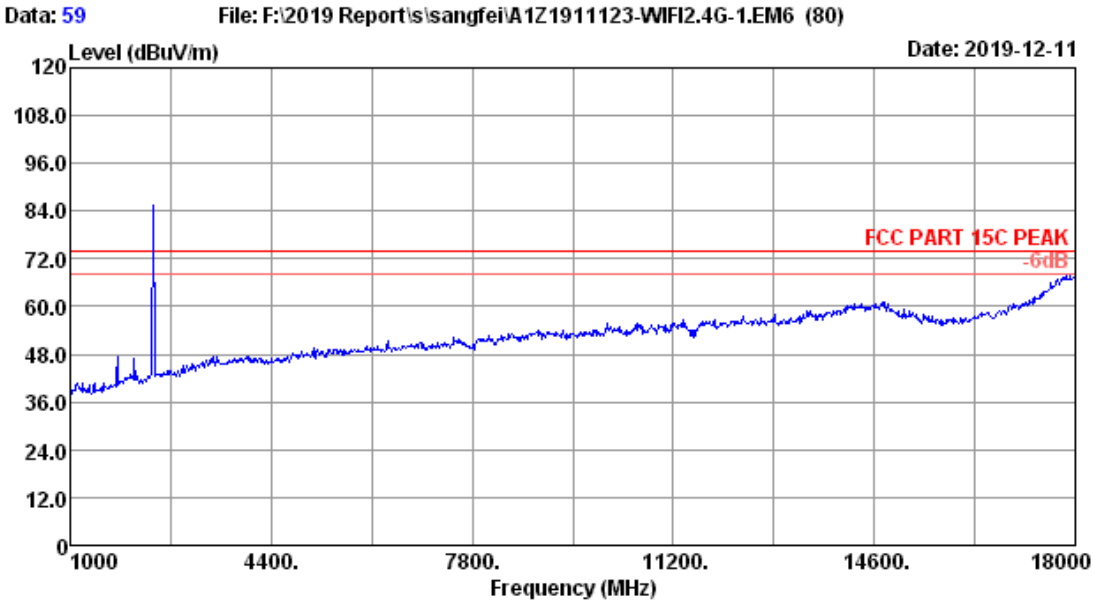
Site no. : 3m Chamber Data no. : 57
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT20 2412MHz Tx Mode



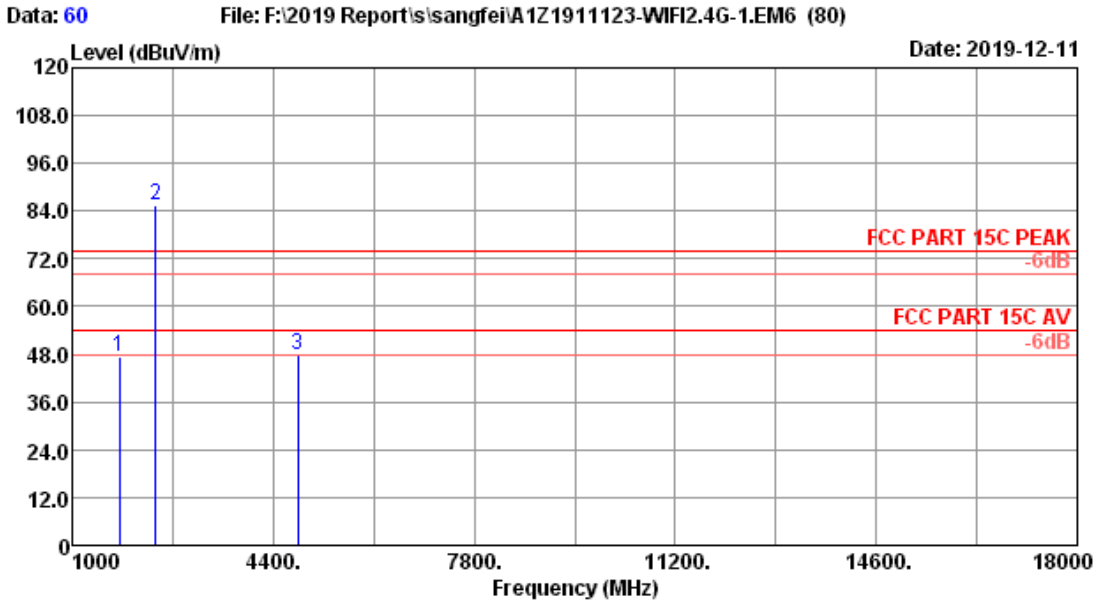
Site no. : 3m Chamber Data no. : 58
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT20 2412MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2412.00	27.77	3.05	92.84	35.04	88.62	74.00	-14.62	Peak
2	4824.00	32.13	4.28	45.62	34.37	47.66	74.00	26.34	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



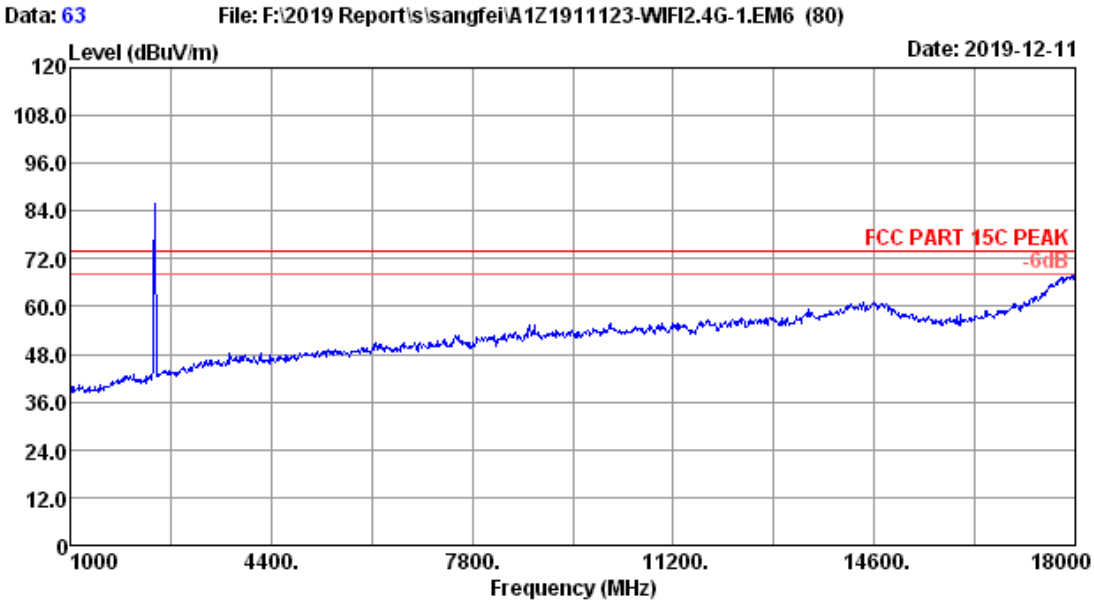
Site no. : 3m Chamber Data no. : 59
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT20 2412MHz Tx Mode



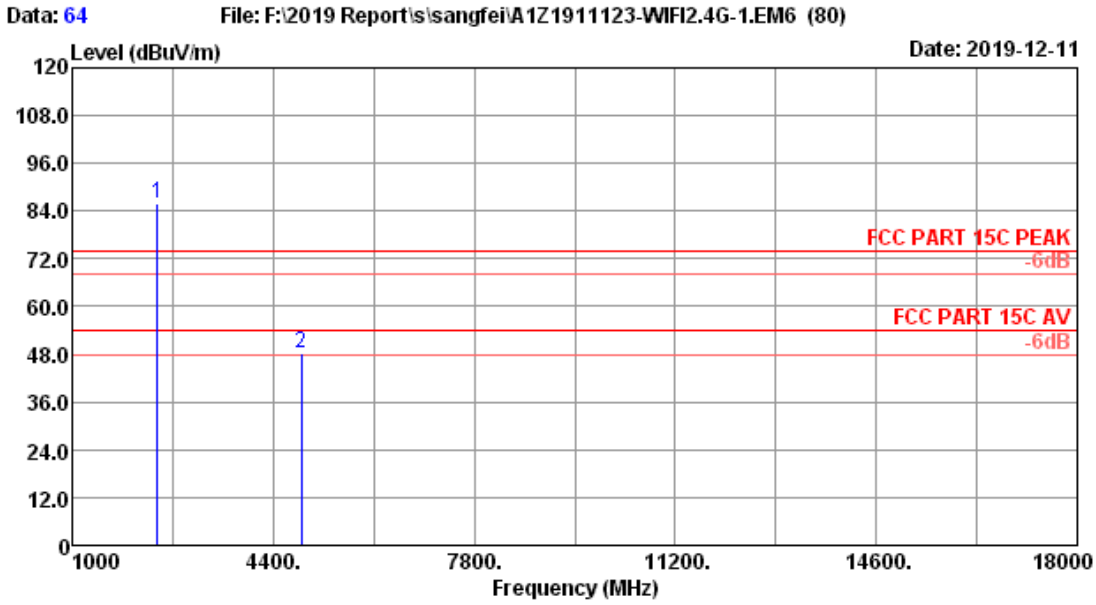
Site no. : 3m Chamber Data no. : 60
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT20 2412MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1799.00	26.17	2.63	54.11	35.48	47.43	74.00	26.57	Peak
2	2412.00	27.77	3.05	89.57	35.04	85.35	74.00	-11.35	Peak
3	4824.00	32.13	4.28	45.88	34.37	47.92	74.00	26.08	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



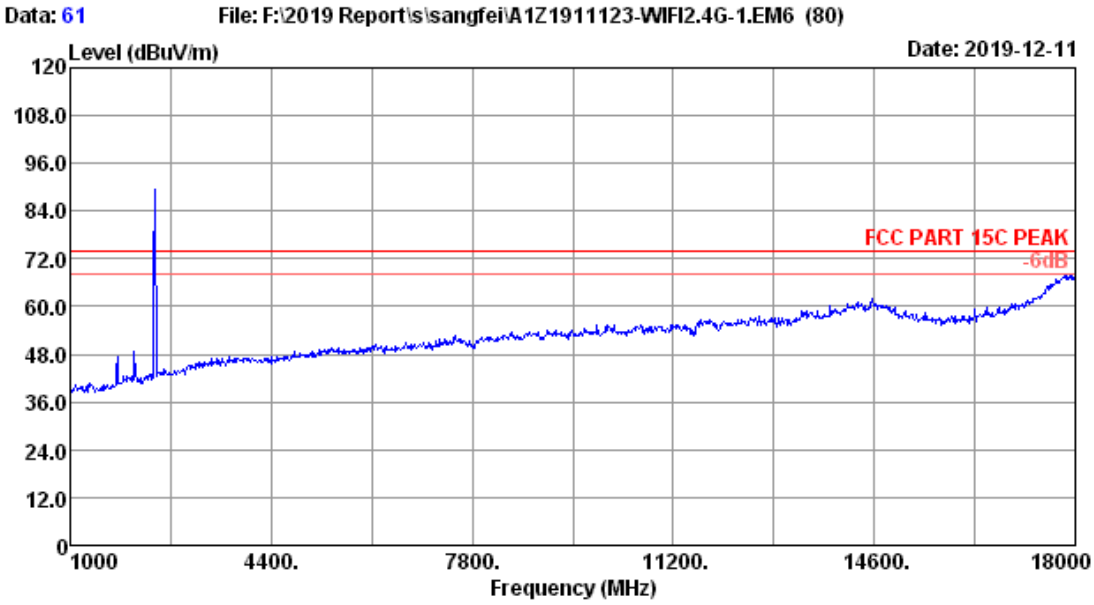

```
Site no.      : 3m Chamber                    Data no.   : 63
Dis. / Ant.   : 3m   2018 3115-4580           Ant. pol.  : HORIZONTAL
Limit         : FCC PART 15C PEAK
Env. / Ins.   : 23.4*C/52.9%                  Engineer   : Garry
Power rating  : AC120V/60Hz
Test Mode     : 802.11nHT20  2437MHz Tx Mode
```



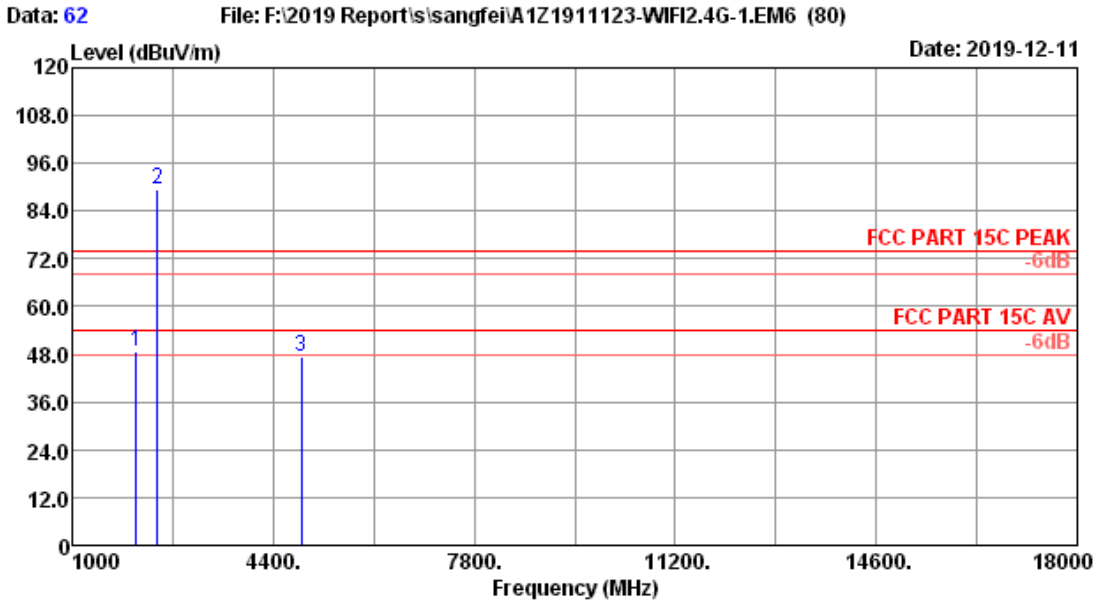
Site no. : 3m Chamber Data no. : 64
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT20 2437MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2437.00	27.87	3.08	90.18	35.02	86.11	74.00	-12.11	Peak
2	4874.00	32.25	4.30	45.90	34.38	48.07	74.00	25.93	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



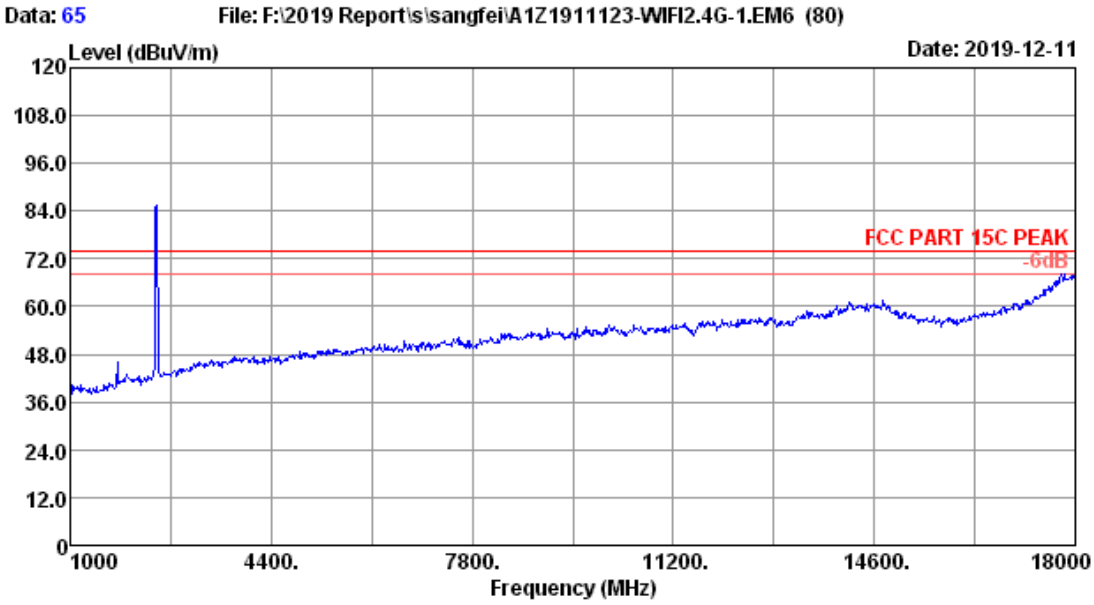
Site no. : 3m Chamber Data no. : 61
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT20 2437MHz Tx Mode



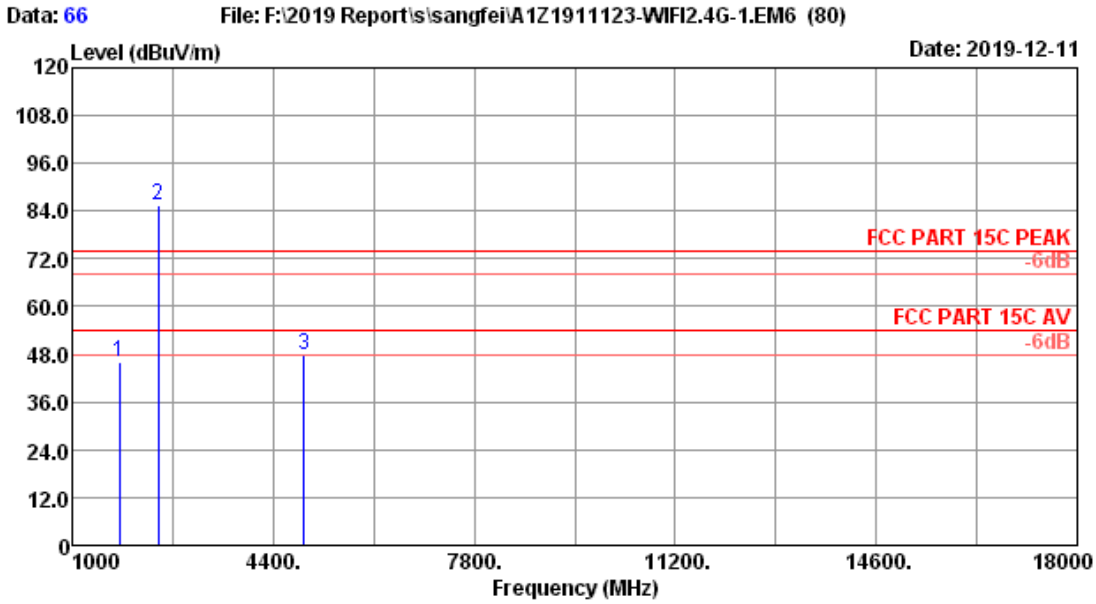
Site no. : 3m Chamber Data no. : 62
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT20 2437MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2088.00	27.34	2.83	53.51	35.17	48.51	74.00	25.49	Peak
2	2437.00	27.87	3.08	93.62	35.02	89.55	74.00	-15.55	Peak
3	4874.00	32.25	4.30	45.42	34.38	47.59	74.00	26.41	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



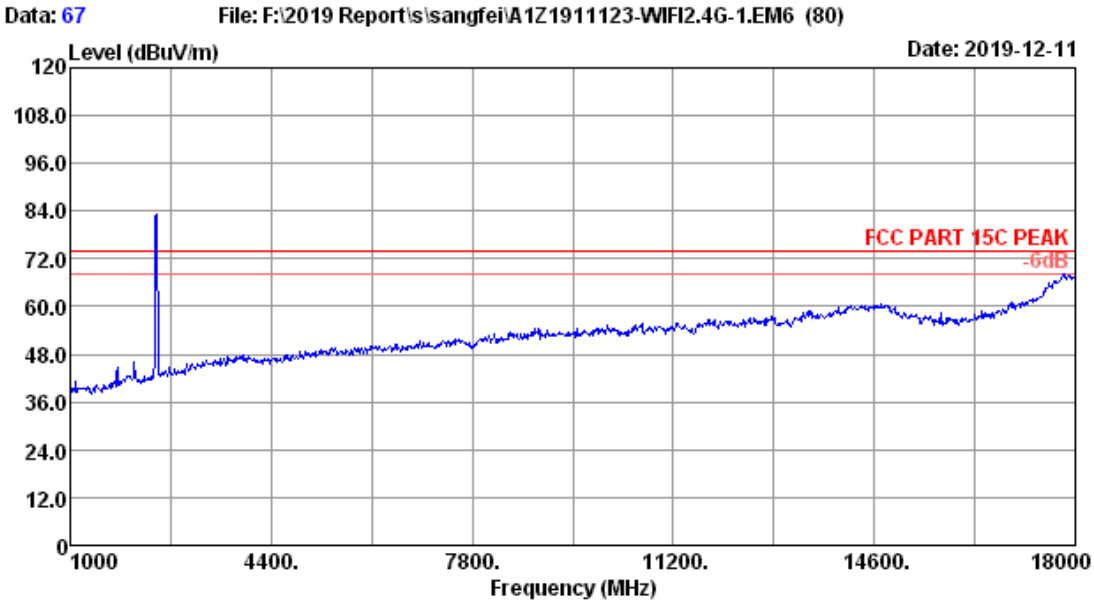
Site no. : 3m Chamber Data no. : 65
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT20 2462MHz Tx Mode



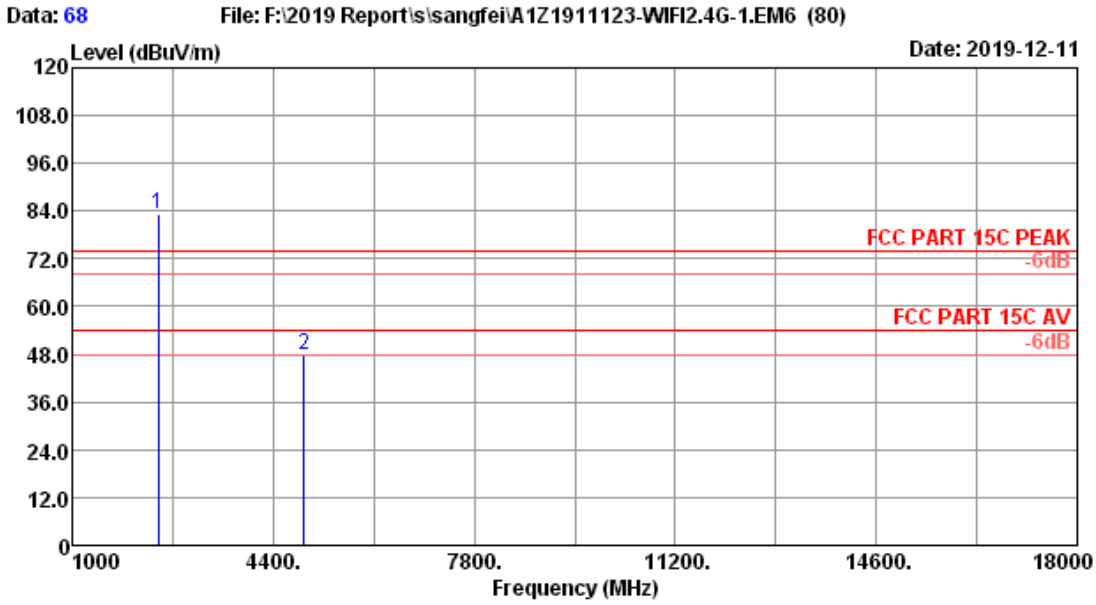
Site no. : 3m Chamber Data no. : 66
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT20 2462MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1799.00	26.17	2.63	52.95	35.48	46.27	74.00	27.73	Peak
2	2462.00	27.93	3.09	89.60	35.02	85.60	74.00	-11.60	Peak
3	4924.00	32.36	4.32	45.46	34.39	47.75	74.00	26.25	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



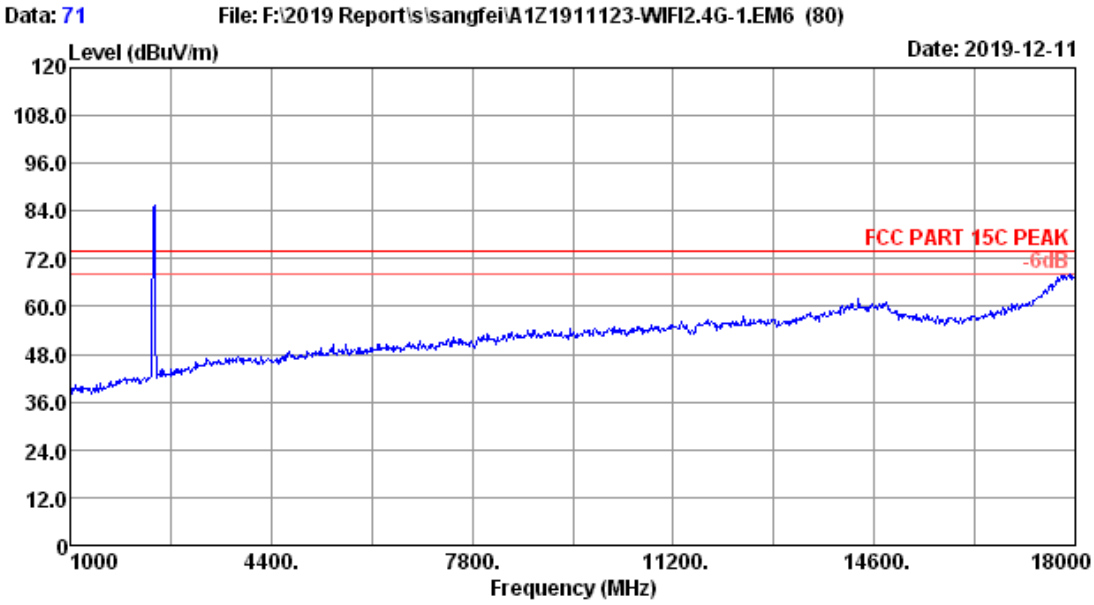
Site no. : 3m Chamber Data no. : 67
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT20 2462MHz Tx Mode



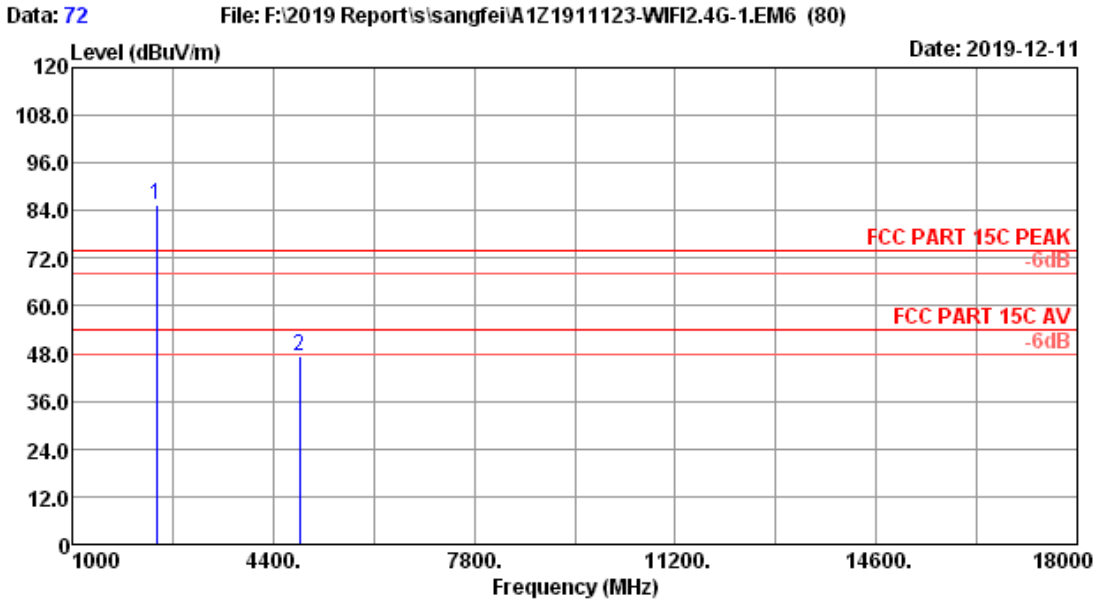
Site no. : 3m Chamber Data no. : 68
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT20 2462MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.00	27.93	3.09	87.29	35.02	83.29	74.00	-9.29	Peak
2	4924.00	32.36	4.32	45.62	34.39	47.91	74.00	26.09	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



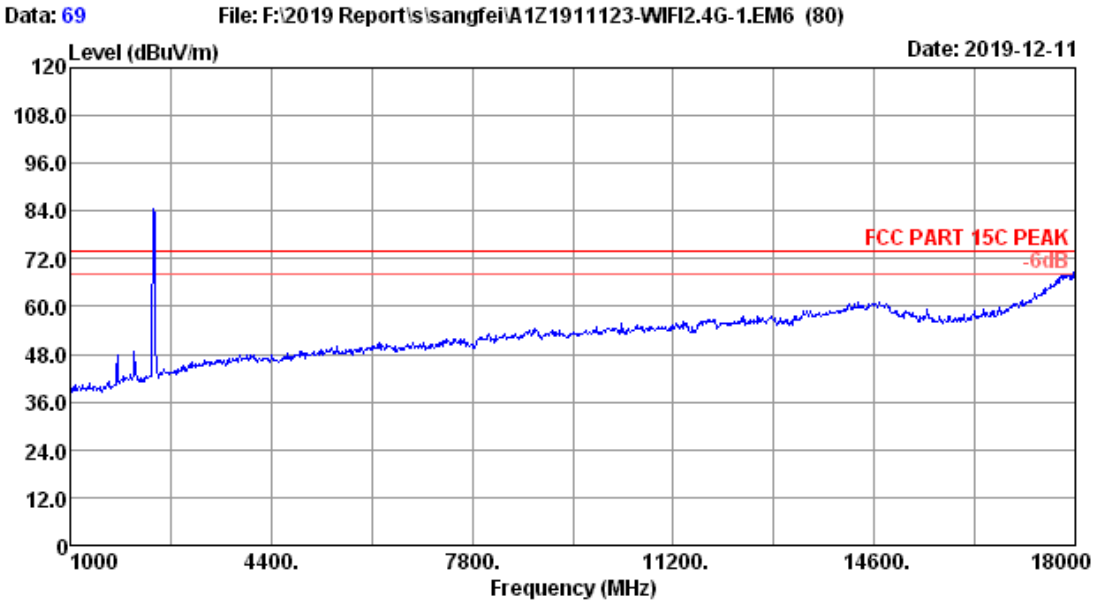
Site no. : 3m Chamber Data no. : 71
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT40 2422MHz Tx Mode



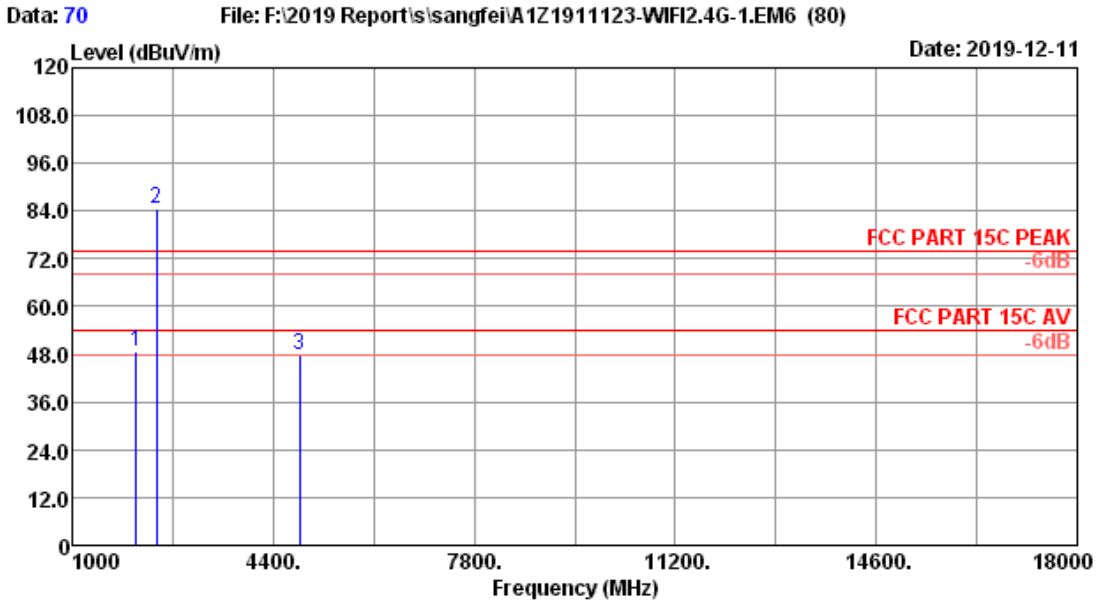
Site no. : 3m Chamber Data no. : 72
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT40 2422MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2422.00	27.82	3.07	89.77	35.03	85.63	74.00	-11.63	Peak
2	4844.00	32.17	4.29	45.35	34.37	47.44	74.00	26.56	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



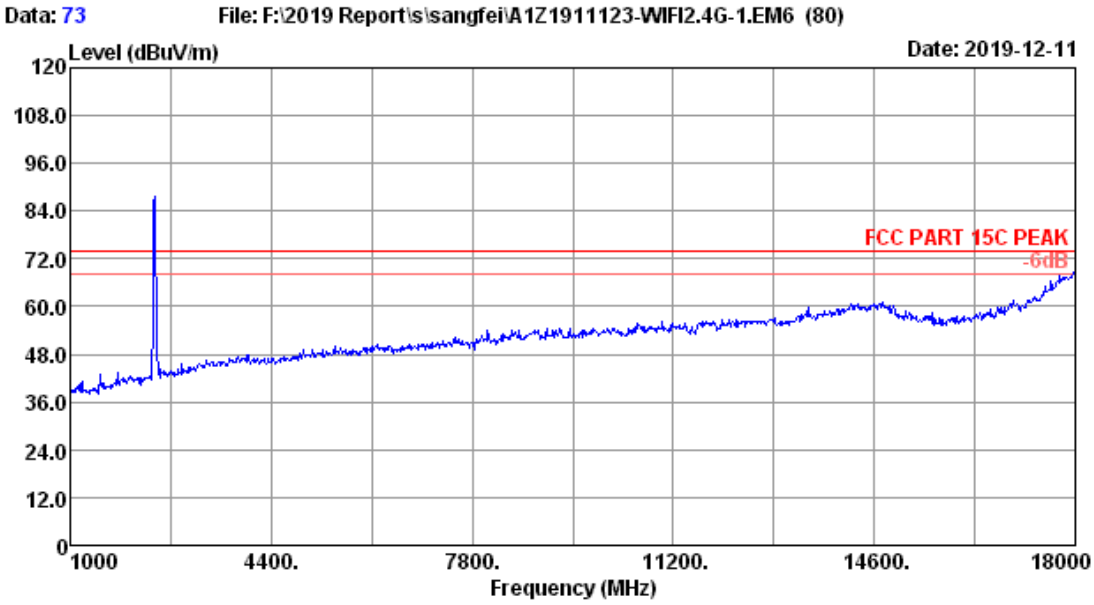
Site no. : 3m Chamber Data no. : 69
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT40 2422MHz Tx Mode



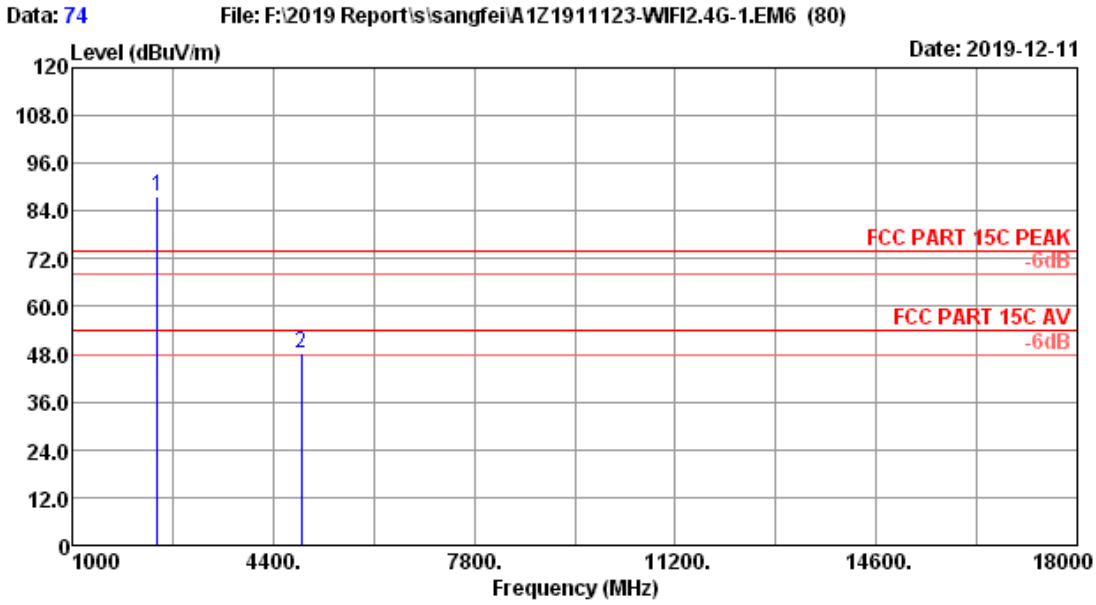
Site no. : 3m Chamber Data no. : 70
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT40 2422MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2088.00	27.34	2.83	53.75	35.17	48.75	74.00	25.25	Peak
2	2422.00	27.82	3.07	88.52	35.03	84.38	74.00	-10.38	Peak
3	4844.00	32.17	4.29	45.71	34.37	47.80	74.00	26.20	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



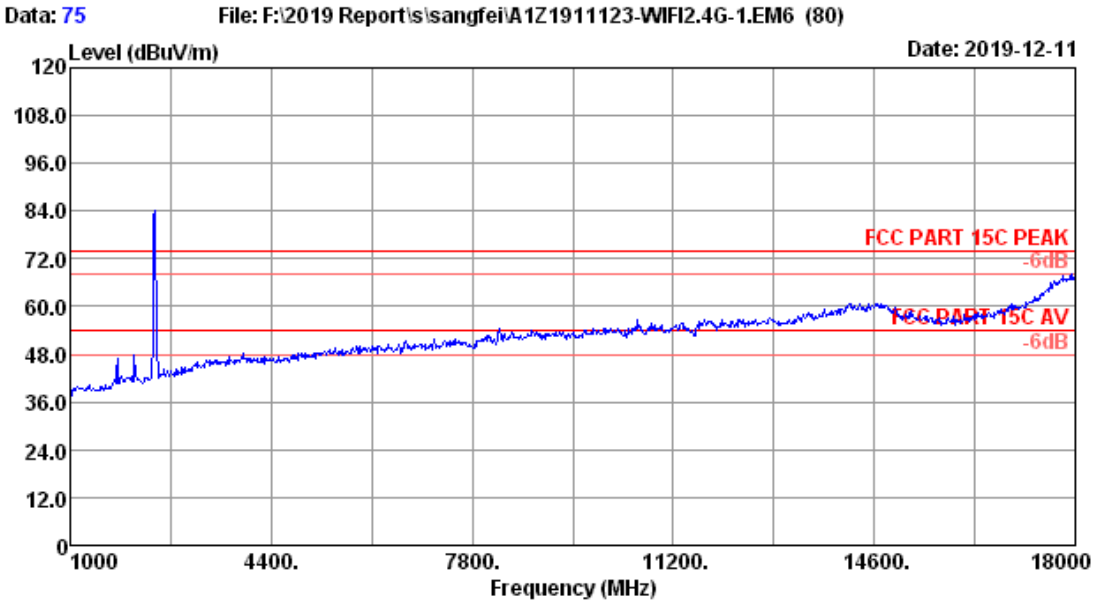
Site no. : 3m Chamber Data no. : 73
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT40 2437MHz Tx Mode



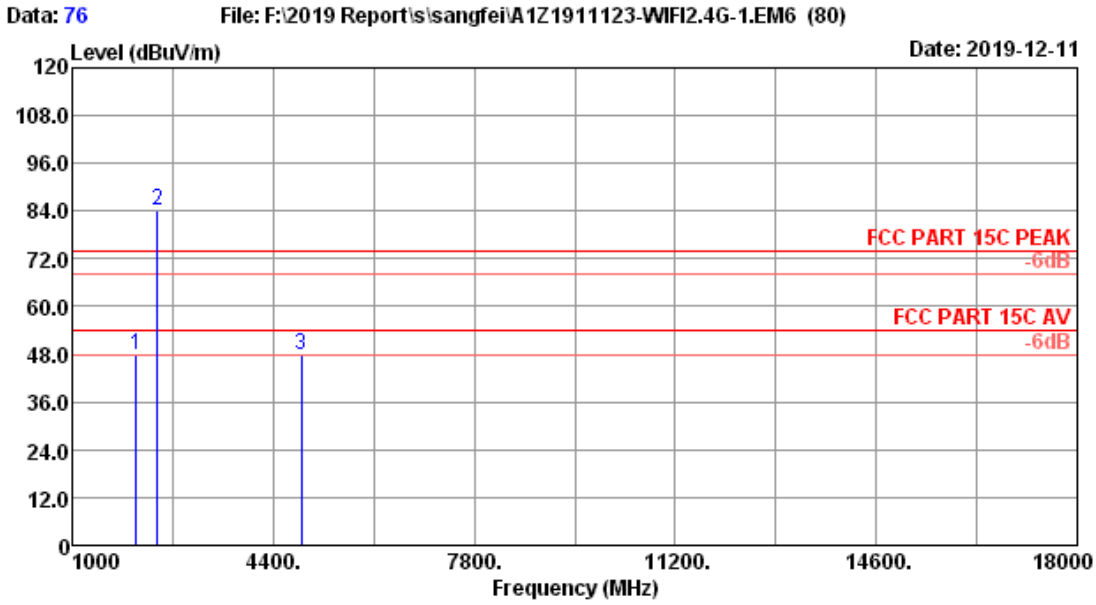
Site no. : 3m Chamber Data no. : 74
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT40 2437MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2437.00	27.87	3.08	91.54	35.02	87.47	74.00	-13.47	Peak
2	4874.00	32.25	4.30	45.88	34.38	48.05	74.00	25.95	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



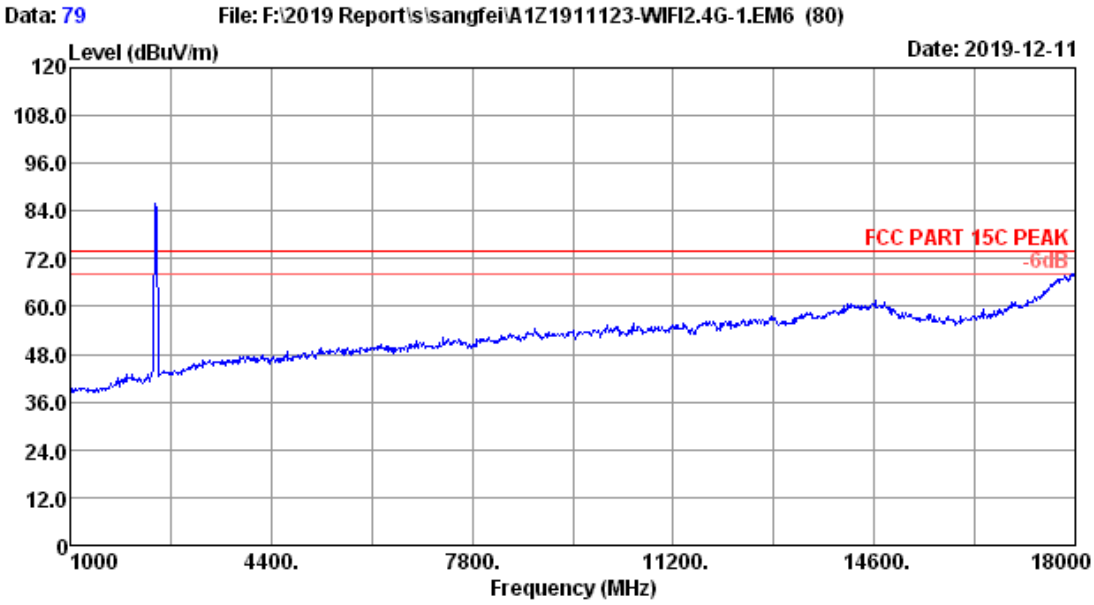
Site no. : 3m Chamber Data no. : 75
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT40 2437MHz Tx Mode



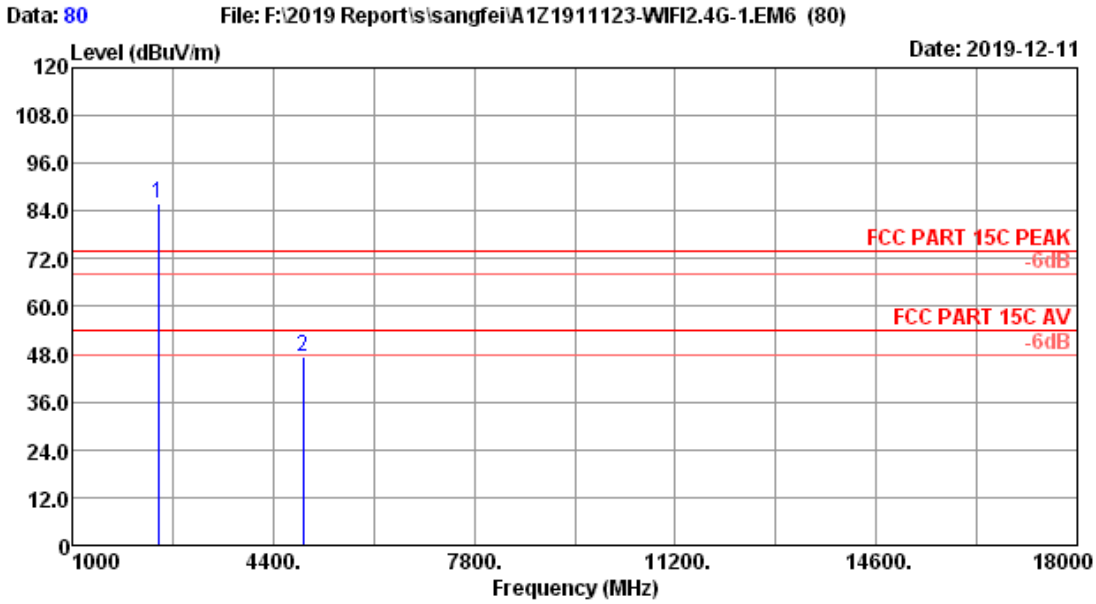
Site no. : 3m Chamber Data no. : 76
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT40 2437MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2088.00	27.34	2.83	52.68	35.17	47.68	74.00	26.32	Peak
2	2437.00	27.87	3.08	88.30	35.02	84.23	74.00	-10.23	Peak
3	4874.00	32.25	4.30	45.47	34.38	47.64	74.00	26.36	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



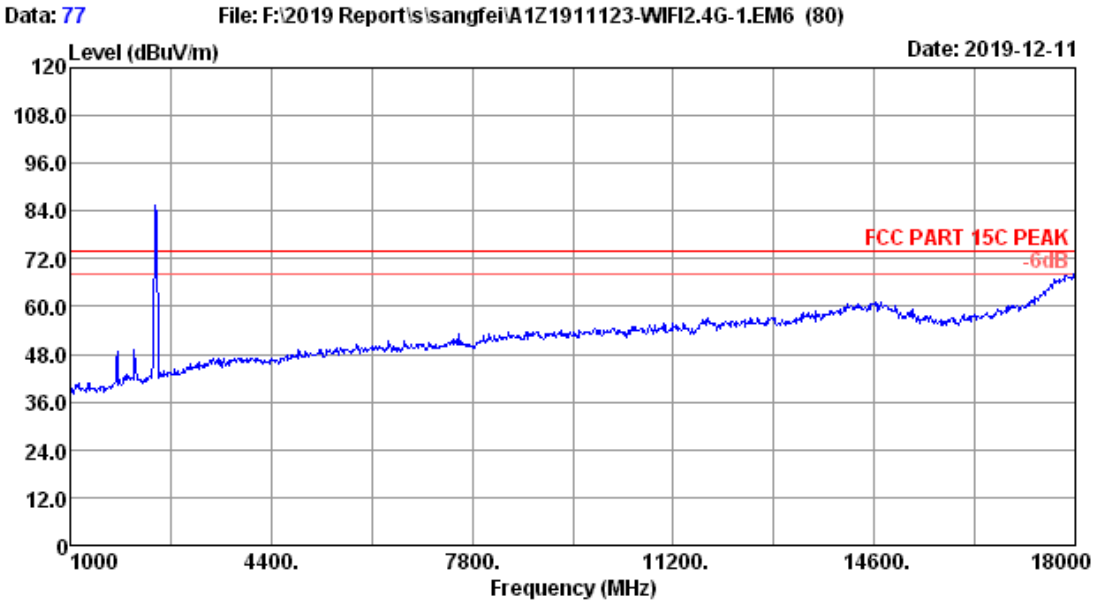
Site no. : 3m Chamber Data no. : 79
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT40 2452MHz Tx Mode



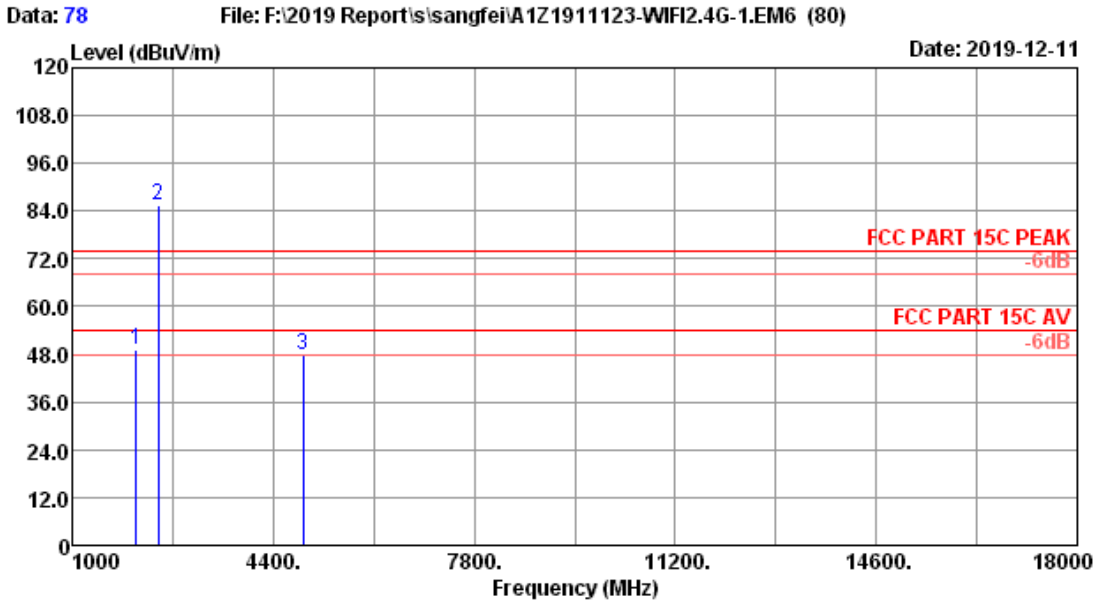
Site no. : 3m Chamber Data no. : 80
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT40 2452MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2452.00	27.87	3.08	90.10	35.02	86.03	74.00	-12.03	Peak
2	4904.00	32.32	4.31	45.10	34.38	47.35	74.00	26.65	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 77
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT40 2452MHz Tx Mode



Site no. : 3m Chamber Data no. : 78
Dis. / Ant. : 3m 2018 3115-4580 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4*C/52.9% Engineer : Garry
Power rating : AC120V/60Hz
Test Mode : 802.11nHT40 2452MHz Tx Mode

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2088.00	27.34	2.83	54.16	35.17	49.16	74.00	24.84	Peak
2	2452.00	27.87	3.08	89.45	35.02	85.38	74.00	-11.38	Peak
3	4904.00	32.32	4.31	45.39	34.38	47.64	74.00	26.36	Peak

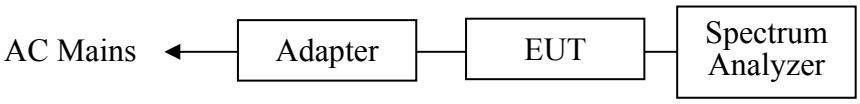
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.

5. CONDUCTED SPURIOUS EMISSIONS

5.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Jun.30,19	1 Year
2.	Attenuator	Agilent	8491B	MY39269201	Oct.13,19	1 Year
3.	RF Cable	EMCI	EMC102-KM-KM 3500	170702	May.13,19	1 Year

5.2. Block Diagram of Test Setup



5.3. Limit

In any 100kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.

5.4. Test Procedure

Use the test method descried in ANSI C63.10:
The transmitter output was connected to a spectrum analyzer, The resolution bandwidth is set to 100 kHz, The video bandwidth is set to 300 kHz and measure all the emissions with peak detector.

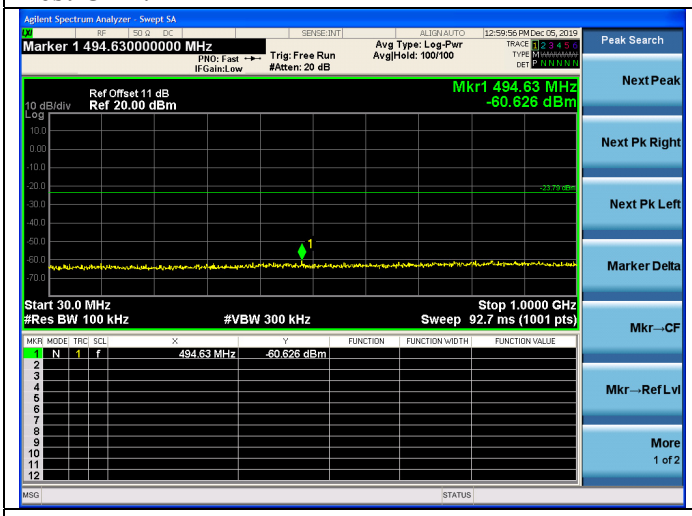
Note: The cable loss and attenuator loss were offset into spectrum analyzer as an amplitude offset.

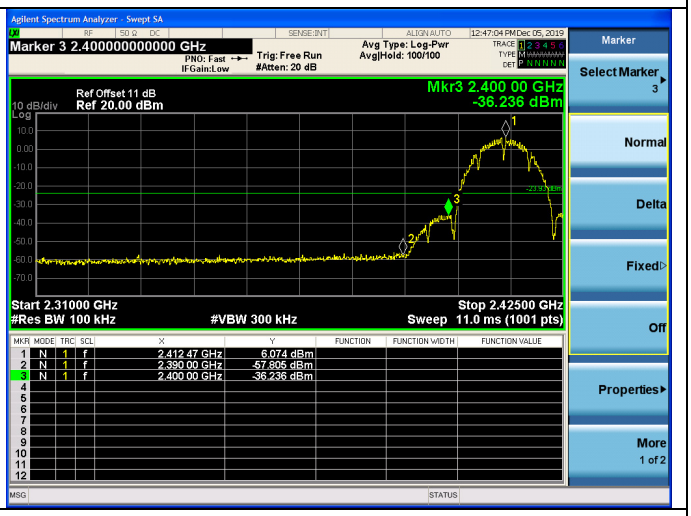
5.5. Test result

PASS (The testing data was attached in the next pages.)

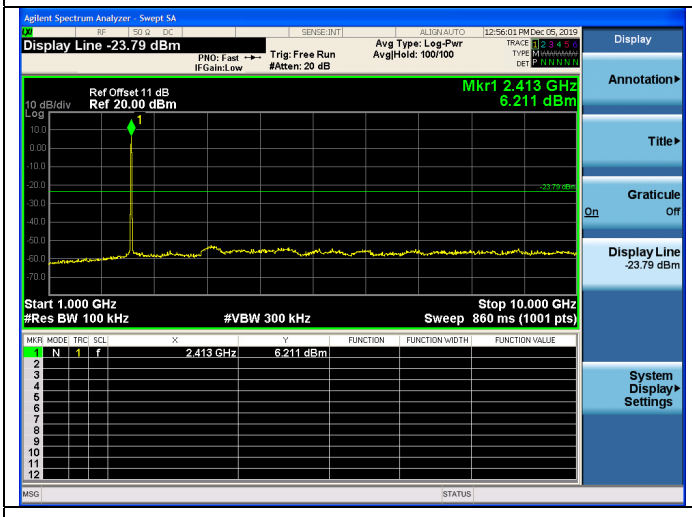
EUT: Smart Signboard		
M/N: IAD-18001		
Test date: 2019-12-05	Pressure: 102.1±1.0 kpa	Humidity: 51.1±3.0%
Tested by: Allen	Test site: RF site	Temperature:22.8±0.6 ℃

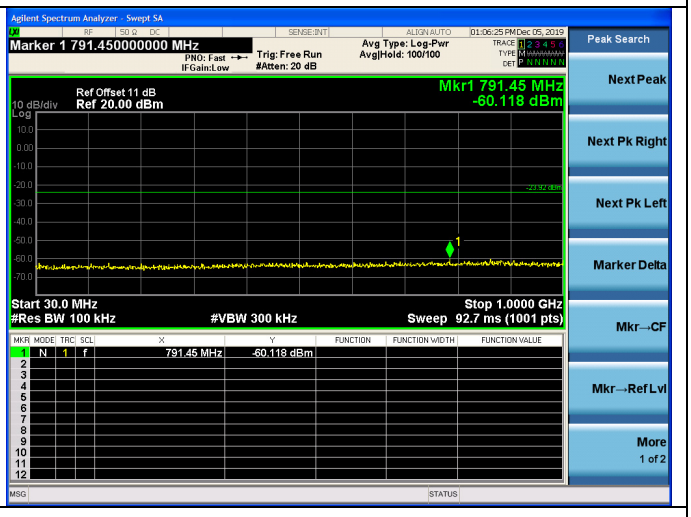
Test Mode: IEEE 802.11b
Test CH1: 2412MHz

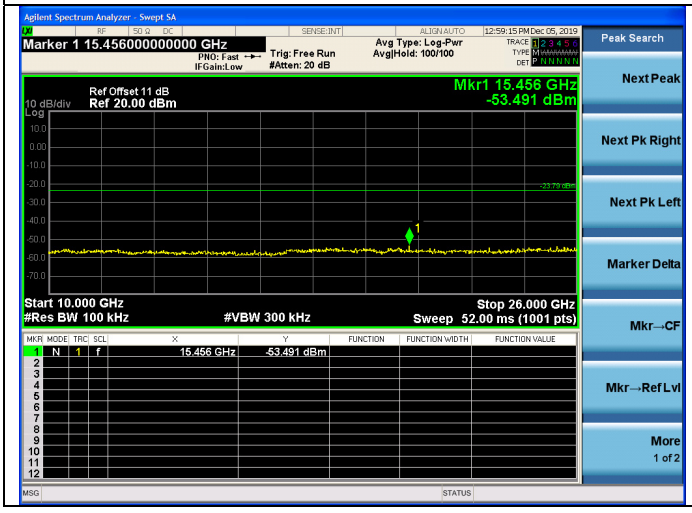


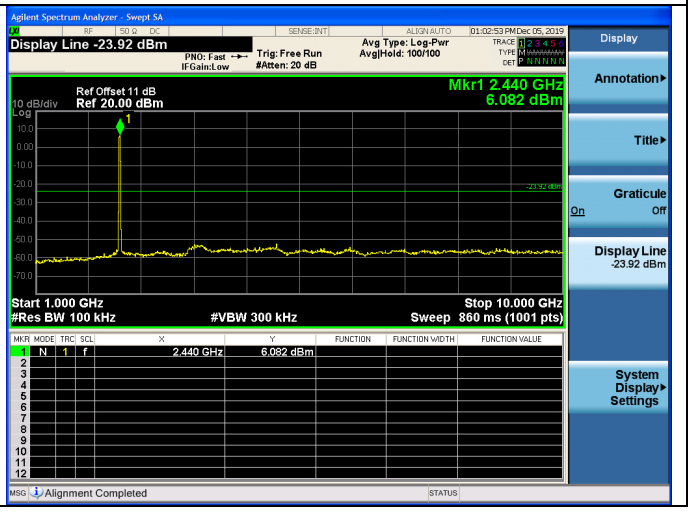


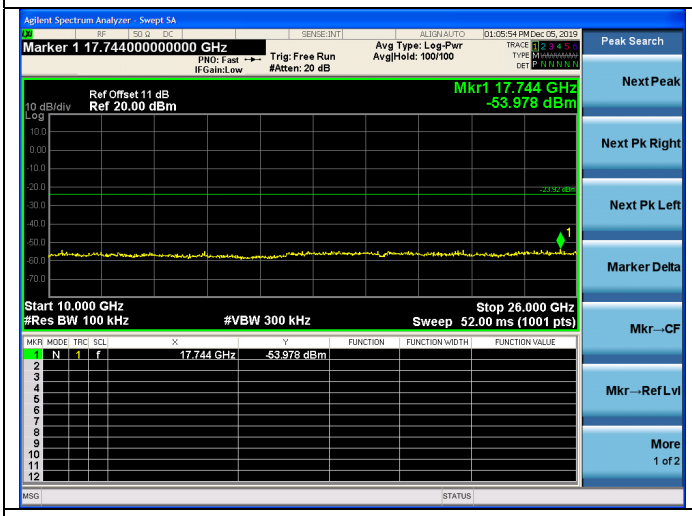
Test CH6: 2437MHz

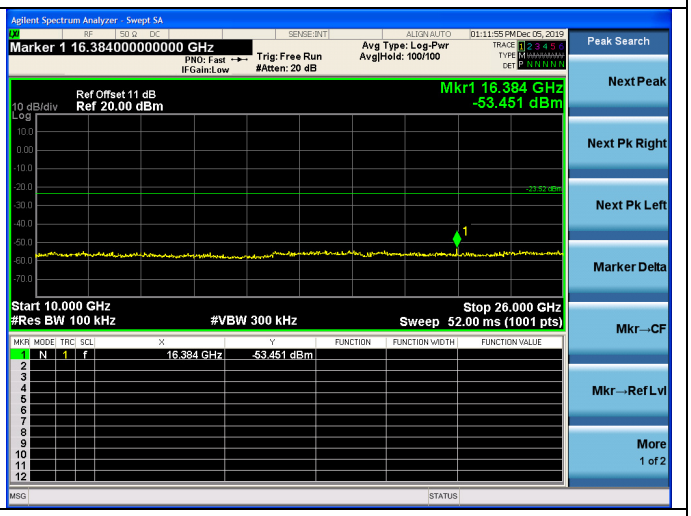




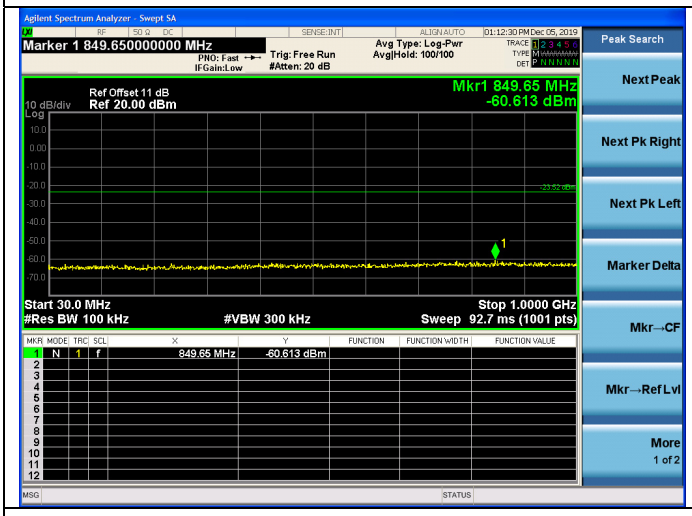








Test CH11: 2462MHz



Test Mode: IEEE 802.11g
Test CH1: 2412MHz