

FCC PART 15C TEST REPORT FOR CERTIFICATION
On Behalf of

Funai Electric R & D (Shenzhen) Co., Ltd.

WiFi module

Model No.: U9W34

FCC ID: 2AU3BU9W34

Prepared for : Funai Electric R & D (Shenzhen) Co., Ltd.
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Date of Report : Jan.18, 2021

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Appendix A. Photograph of Test

Appendix B. Photo of the EUT

TEST REPORT CERTIFICATION

Applicant : Funai Electric R & D (Shenzhen) Co., Ltd.
Manufacturer : Funai Electric R & D (Shenzhen) Co., Ltd.
Product : WiFi module
FCC ID : 2AU3BU9W34
(A) Model No. : U9W34
(B) Test Voltage : DC 5V From Notebook Input AC 120V/60Hz

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

Test procedure used:
ANSI C63.10: 2013
KDB 558074 D01v05

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 2.1075. No modifications were required during testing to bring this product into compliance.

This report applies to single evaluation of one sample of above mentioned product. 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 : Oct.15, 2020~Jan.14, 2021 Report of date: Jan.18, 2021

Prepared by : Brave Zhang / Assistant Reviewed by : Sunny Lu / Deputy Manager



Approved & Authorized Signer : 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	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	Funai Electric R & D (Shenzhen) Co., Ltd.
Applicant Address	B303 Technology Building II, 1057 Nanhai Road, Nanshan District, Shenzhen, China 518067
Manufacturer	Funai Electric R & D (Shenzhen) Co., Ltd.
Manufacturer Address	B303 Technology Building II, 1057 Nanhai Road, Nanshan District, Shenzhen, China 518067
Factory	Funai (Thailand) Company Limited
Factory Address	835 Moo18, Pakchong-Lumsompung Road, Tambon, Chantuek, Amphur Pakchong, Nakhon Ratchasima 30130, Thailand
Product	WiFi module
Model No.	U9W34
FCC ID	2AU3BU9W34
Sample Type	Prototype production
Date of Receipt	Sep.23,2020
Date of Test	Oct.15, 2020~Jan.14, 2021
Remark: This report only for WIFI 2.4GHz.	

2.2.Feature of Equipment Under Test

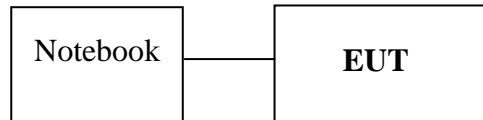
Product Feature & Specification	
Product	WiFi module
Model No.	U9W34
Radio	IEEE802.11 a/b/g/n/ac
Power Source	<input type="checkbox"/> Commercial Power AC 100 ~ 240V
	<input checked="" type="checkbox"/> External Power Source DC 5V
	<input type="checkbox"/> Lithium battery DC V, mAh
	<input type="checkbox"/> UM battery DC V
2.4GHz Wi-Fi	
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: 1/2/5.5/11 Mbps; 802.11g: 6/9/12/18/24/36/48/54 Mbps; 802.11n: up to 150Mbps
Channel Separation	5MHz
5GHz Wi-Fi	
Support Modes	802.11a/n20/n40/ac20/ac40/ac80
Frequency Range	5180-5240MHz, 5745-5825MHz
Type of Modulation	802.11a/n (OFDM): QPSK, BPSK, 16QAM, 64QAM 802.11ac (OFDM): QPSK, BPSK, 16QAM, 64QAM,256QAM
Data Rate	802.11a: 6/9/12/18/24/36/48/54 Mbps; 802.11n: up to 150Mbps; 802.11ac: up to 433Mbps
Channel Separation	5MHz

Antenna System	
Type of Antenna	monopole Antenna
Antenna Peak Gain	DTS Band (2400-2483.5MHz) Peak Gain: ANT A: 2.55dBi; ANT B: 0.94dBi. U-NII-1 Band(5150-5250MHz) Peak Gain: ANT A: 1.90dBi; ANT B: 0.8dBi. U-NII-3 Band (5725-5850MHz) Peak Gain: ANT A: -0.04dBi; ANT B: -3.17dBi.

2.3. Tested Supporting System Details

No.	Description	ACS No.	Manufacturer	Model	Serial Number
1.	Notebook	N/A	acer	ZOW	NVX7C
USB Cable: Shielded, Detachable, 1.0m					

2.4. Block diagram of connection between the EUT and simulators



(EUT: WiFi module)

2.5. Test Information

A special test software(MP Tool) was used to control EUT work in Continuous TX mode(The duty cycle of the test signal is 100%), and select tested mode, channel, power setting and data rate information as below:

---	Channel	Frequency (MHz)	Power setting	Channel	Frequency (MHz)	Power setting
Mode	IEEE 802.11b			IEEE 802.11g		
Info.	CH1	2412	37	CH1	2412	42
	CH2	2417	37	CH2	2417	42
	CH3	2422	37	CH3	2422	42
	CH4	2427	37	CH4	2427	42
	CH5	2432	37	CH5	2432	42
	CH6	2437	37	CH6	2437	42
	CH7	2442	37	CH7	2442	42
	CH8	2447	37	CH8	2447	42
	CH9	2452	37	CH9	2452	42
	CH10	2457	37	CH10	2457	42
	CH11	2462	37	CH11	2462	42
Data Rate (Mbps) (see Note)	1			6		
Mode	IEEE 802.11n HT20			IEEE 802.11n HT40		
Info.	CH1	2412	42	CH3	2422	45
	CH2	2417	42	CH4	2427	45
	CH3	2422	42	CH5	2432	45
	CH4	2427	42	CH6	2437	45
	CH5	2432	42	CH7	2442	45
	CH6	2437	42	CH8	2447	45
	CH7	2442	42	CH9	2452	45
	CH8	2447	42	---	---	---
	CH9	2452	42	---	---	---
	CH10	2457	42	---	---	---
	CH11	2462	42	---	---	---
Data Rate (Mbps) (see Note)	MCS0			MCS0		
Note: 1. According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test. Note: 2. This is SISO device for 2.4GHz band, Use ANTB which has the worst case emission for the radiated emission and band edge measurement, test compliance with KDB 662911 D01.						

2.6. 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.

Accredited by Industry Canada
: Registration Number: IC 5183A-1
Valid Date: Mar.31, 2021

Accredited 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, 2021

Certificated by FCC USA.
: Designation No.: CN5022
Valid Date: Mar.31, 2021

2.7.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	1.9%
Uncertainty for test site temperature and humidity	0.6°C
	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.

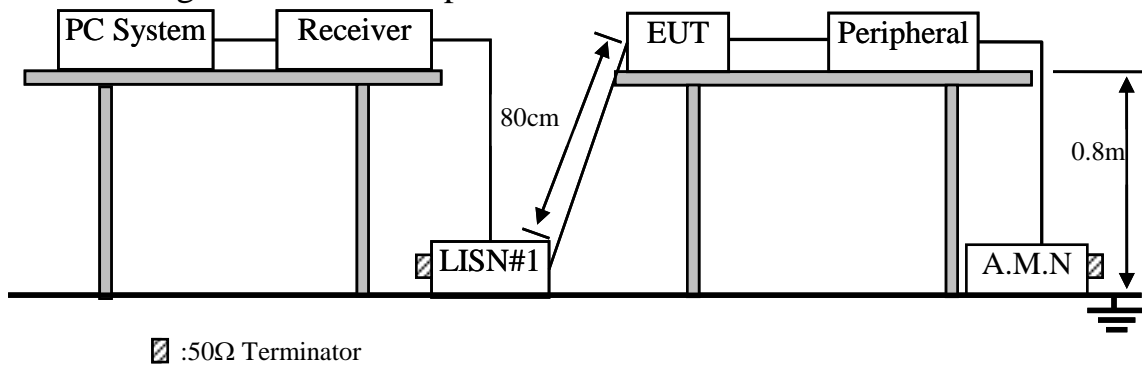
3. POWER LINE CONDUCTED EMISSION TEST

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.12,20	1 Year
3.	L.I.S.N.#1	Rohde & Schwarz	ENV216	102160	Oct.11,20	1 Year
4.	A.M.N	Kyoritsu	KNW-403D	8-1750-2	Apr.12,20	1 Year
5.	Terminator	Hubersuhner	50Ω	No.1	Apr.12,20	1 Year
6.	Terminator	Hubersuhner	50Ω	No.2	Apr.12,20	1 Year
7.	RF Cable	EMCI	EMCCFD30 0-BM-NM-2 000	190422	Apr.12,20	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. WiFi module (EUT)

Model No. : U9W34

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 as shown as Section 3.2.
- 3.5.2. Turn on the power of EUT.
- 3.5.3. PC run test software to control EUT work in Tx mode.

3.6. Test Procedure

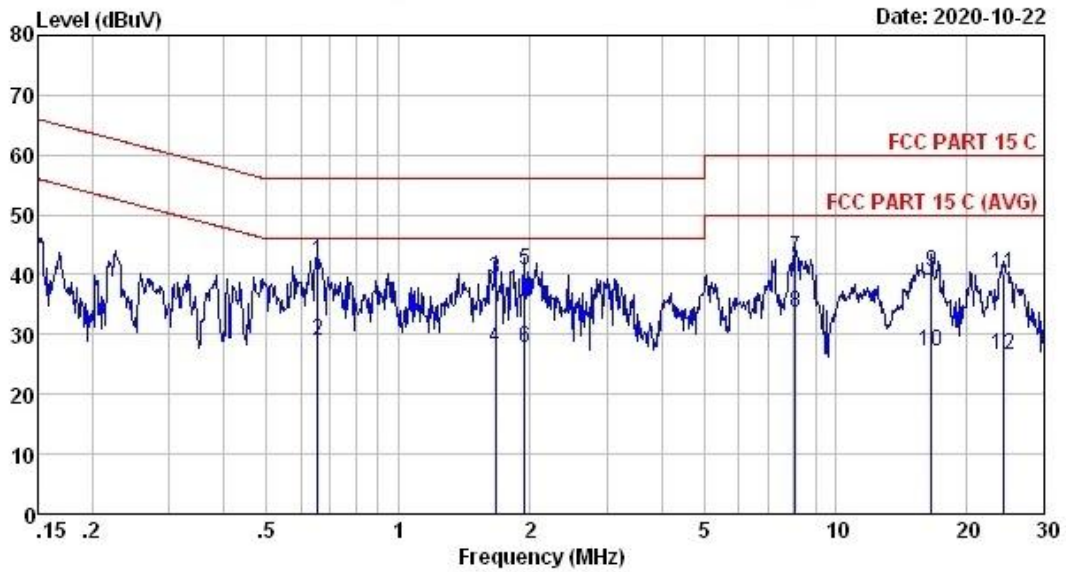
The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power Via AC unit connected to the power mains through a line impedance stabilization network (L.I.S.N. #1). This provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs). 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

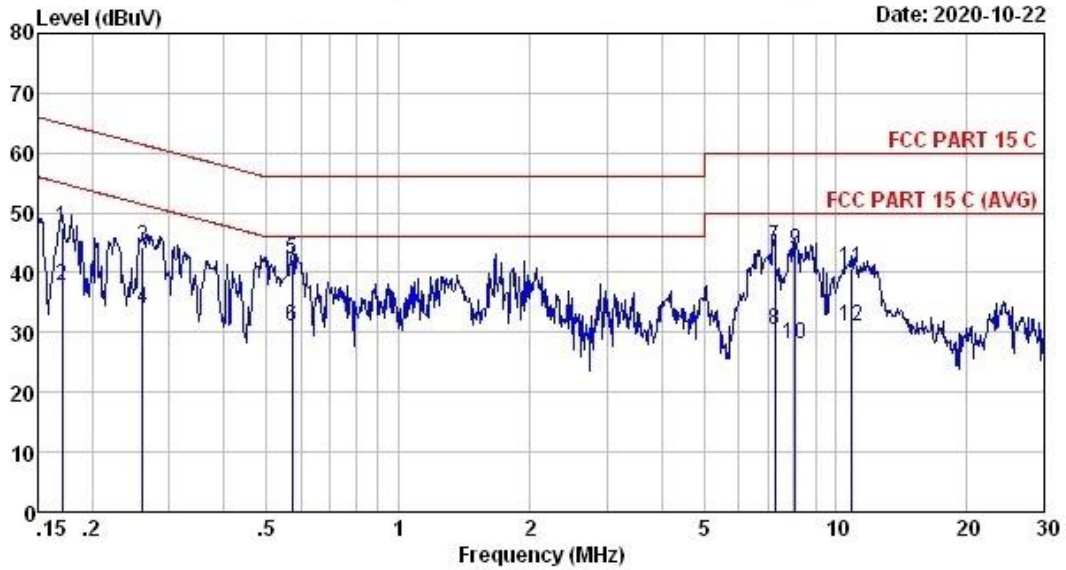
PASS. (All emissions not reported below are too low against the prescribed limits.)



Site no :1# Conduction Data No :2
 Dis./Lisn :2020 ENV216 L LISN phase:
 Limit :FCC PART 15 C
 Env./Ins. :22.1*C/52% Engineer :Evan
 EUT :
 Power Rating :DC 5V From notebook Input AC 120V/60Hz
 Test Mode :TX Mode

No	Freq (MHz)	LISN Factor (dB)	Cable loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.654	9.60	0.05	32.55	42.20	56.00	13.80	QP
2	0.654	9.60	0.05	19.26	28.91	46.00	17.09	Average
3	1.671	9.60	0.07	29.53	39.20	56.00	16.80	QP
4	1.671	9.60	0.07	18.13	27.80	46.00	18.20	Average
5	1.949	9.60	0.07	31.16	40.83	56.00	15.17	QP
6	1.949	9.60	0.07	17.97	27.64	46.00	18.36	Average
7	8.105	9.70	0.12	32.94	42.76	60.00	17.24	QP
8	8.105	9.70	0.12	23.85	33.67	50.00	16.33	Average
9	16.573	9.70	0.16	30.52	40.38	60.00	19.62	QP
10	16.573	9.70	0.16	17.17	27.03	50.00	22.97	Average
11	24.142	9.62	0.18	30.42	40.22	60.00	19.78	QP
12	24.142	9.62	0.18	16.88	26.68	50.00	23.32	Average

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 Data No :1
 Dis./Lisn :2020 ENV216 N LISN phase:
 Limit :FCC PART 15 C
 Env./Ins. :22.1*C/52% Engineer :Evan
 EUT :
 Power Rating :DC 5V From notebook Input AC 120V/60Hz
 Test Mode :TX Mode

No	Freq (MHz)	LISN Factor (dB)	Cable loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.170	9.60	0.04	38.03	47.67	64.94	17.27	QP
2	0.170	9.60	0.04	28.27	37.91	54.94	17.03	Average
3	0.260	9.60	0.05	34.66	44.31	61.42	17.11	QP
4	0.260	9.60	0.05	24.22	33.87	51.42	17.55	Average
5	0.573	9.60	0.05	32.56	42.21	56.00	13.79	QP
6	0.573	9.60	0.05	21.27	30.92	46.00	15.08	Average
7	7.252	9.60	0.11	34.66	44.37	60.00	15.63	QP
8	7.252	9.60	0.11	20.58	30.29	50.00	19.71	Average
9	8.105	9.60	0.12	34.04	43.76	60.00	16.24	QP
10	8.105	9.60	0.12	18.28	28.00	50.00	22.00	Average
11	10.847	9.60	0.13	31.11	40.84	60.00	19.16	QP
12	10.847	9.60	0.13	21.18	30.91	50.00	19.09	Average

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.03,20	1 Year
2.	3#Chamber(SE)	AUDIX	N/A	N/A	May.17,18	3 Year
3.	Signal Analyzer	Rohde & Schwarz	FSV30	104050	Apr.11,20	1 Year
4.	EMI Test Receiver	Rohde & Schwarz	ESR7	101547	Apr.12,20	1 Year
5.	Amplifier	HP	8447D	2648A04738	Apr.11,20	1 Year
6.	Bi log Antenna	TESEQ	CBL6112D	25237	Nov.26,19	1 Year
7.	NSA Cable	HUBER+SUHNER	CFD400NL-LW	No.3	Oct.11,20	1 Year
8.	Coaxial Switch	Anritsu	MP59B	6201397222	Apr.11,20	1 Year
9.	NSA Cable	HUBER+SUHNER	CFD400NL-LW	No.3	Oct.11,20	N/A

Note: N/A means Not applicable.

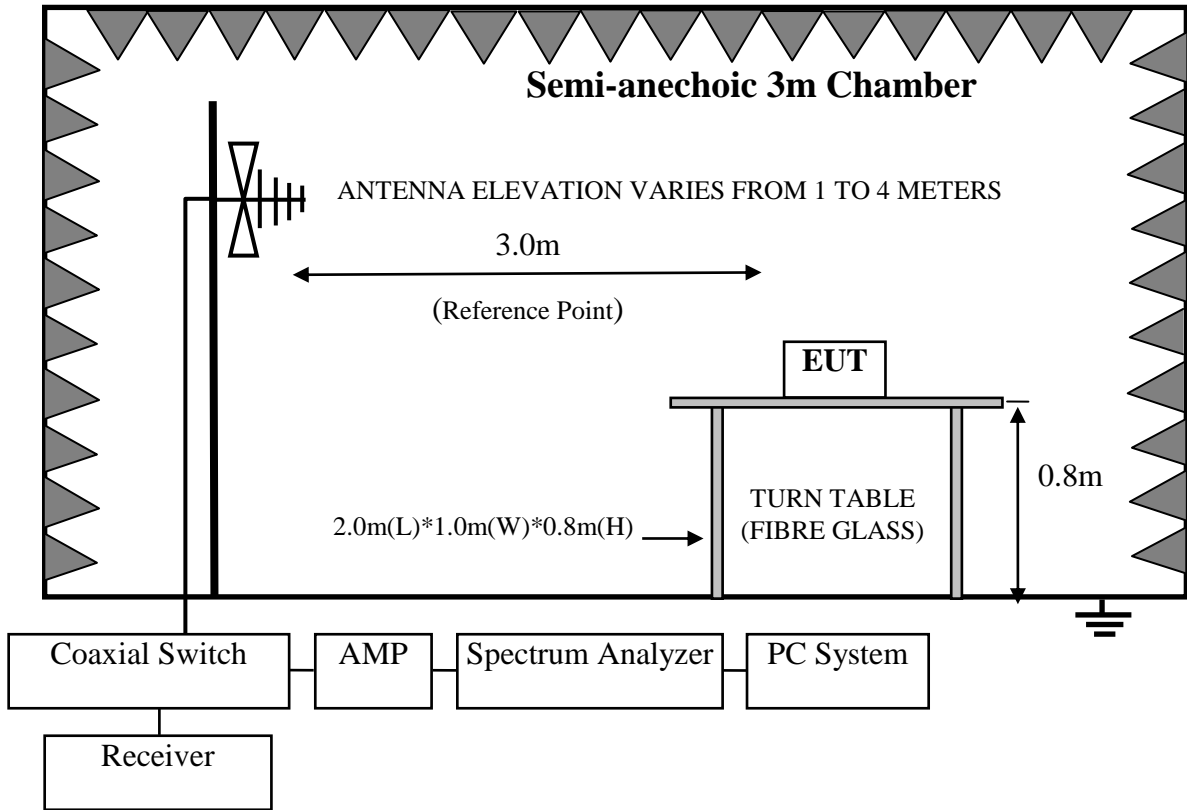
4.1.2. For frequency range 1GHz~25GHz (In 3m Anechoic Chamber)

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	3#Chamber(Svswr)	AUDIX	N/A	N/A	Apr.15,20	1 Year
2.	3#Chamber(SE)	AUDIX	N/A	N/A	May.17,18	3 Year
3.	Signal Analyzer	Rohde & Schwarz	FSV30	104050	Apr.11,20	1 Year
4.	Horn Antenna	ETC	MCTD 1209	DRH15F03007	Jul.30,20	1 Year
5.	Horn Antenna	ETS	3116	00060089	Dec.02,19	1 Year
6.	Amplifier	Agilent	83017A	MY53270084	Oct.11,20	1 Year
7.	RF Cable	Hubersuhner	SUCOFLEX-106	505238/6	Apr.11,20	1 Year
8.	Test Software	AUDIX	e3	6.2009-5-21a(n)	N/A	N/A

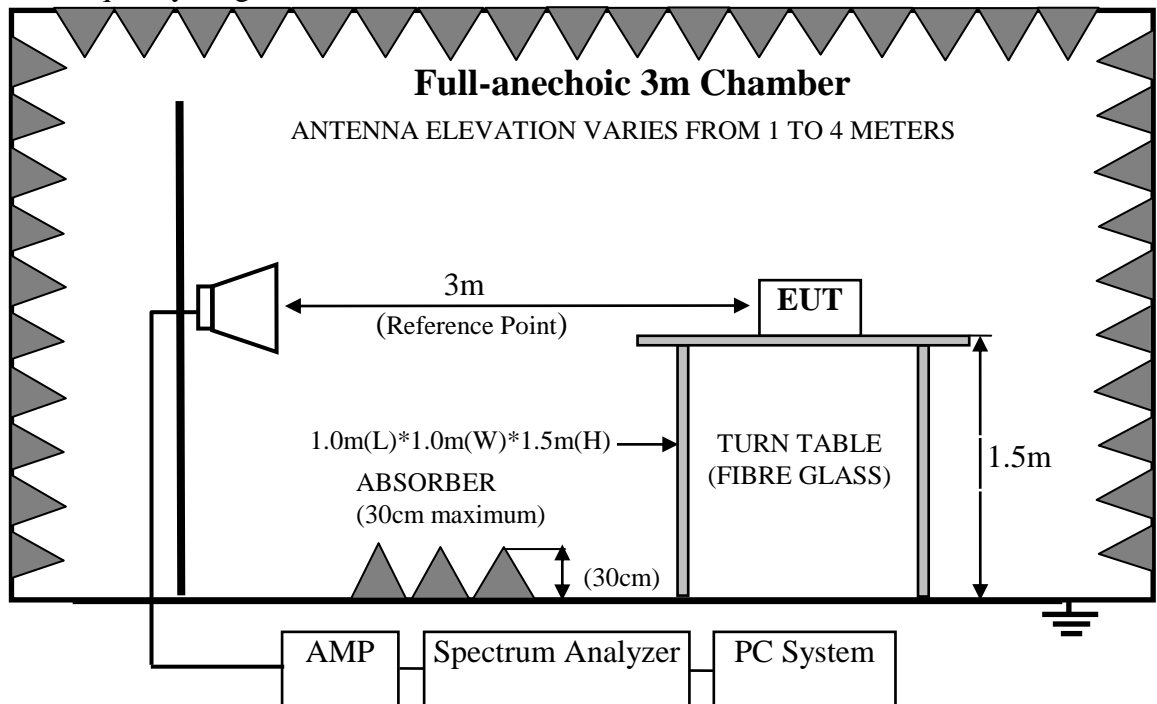
Note: N/A means Not applicable.

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. WiFi module (EUT)

Model No. : U9W34

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 Horn antenna is used as receiving antenna for frequency above 1GHz. Both horizontal and vertical polarization of the antenna are set on 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 10th 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

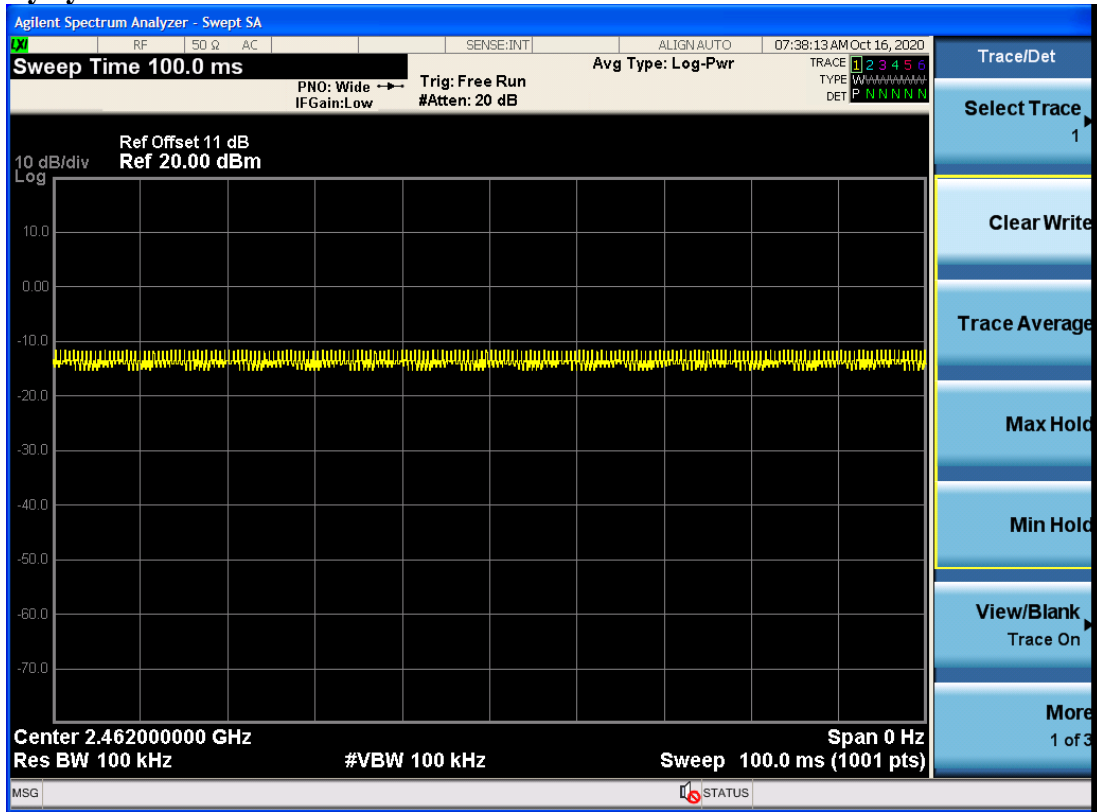
PASS.

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.

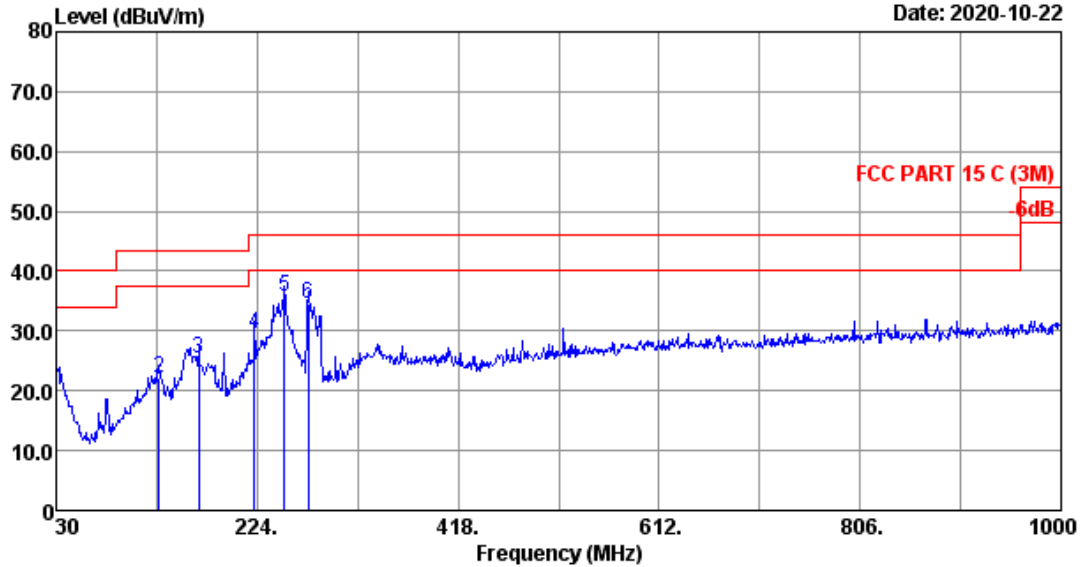
Duty cycle



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

Frequency: 30MHz~1GHz

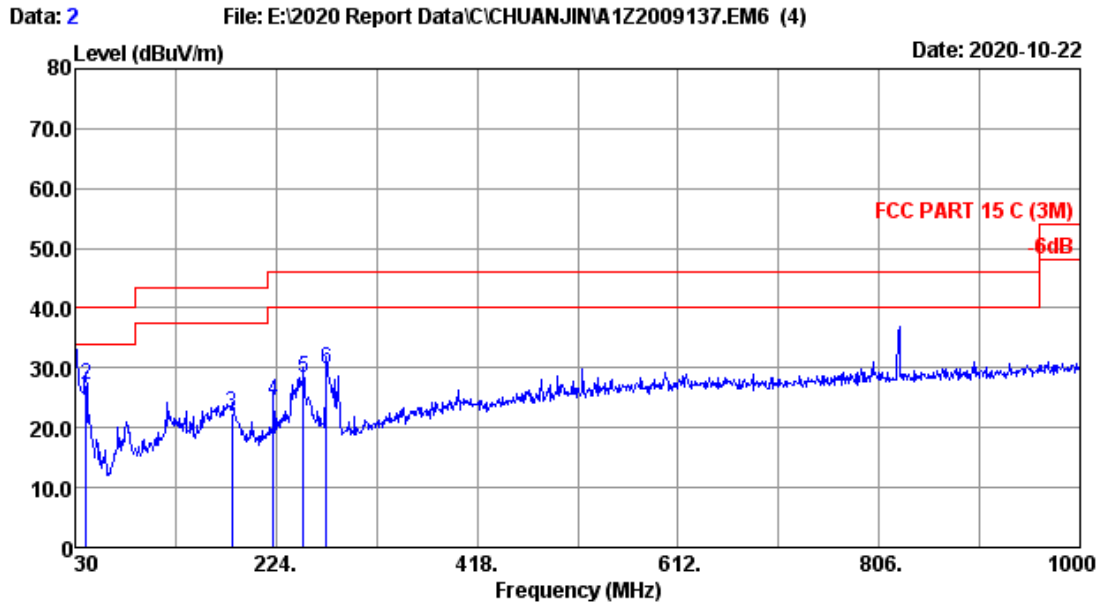
Data: 1 File: E:\2020 Report Data\C\CHUANJIN\A1Z2009137.EM6 (4) Date: 2020-10-22



Site no. : 3m Chamber Data no. : 1
 Dis. / Ant. : 3m 2019 CBL6112D-25237 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 C (3M)
 Env. / Ins. : 25.3°C/55% Engineer : The Shine
 EUT :
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : TX Mode

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	24.20	0.63	-2.38	22.45	40.00	17.55	QP
2	128.940	17.65	1.14	3.28	22.07	43.50	21.43	QP
3	167.740	15.33	1.32	8.68	25.33	43.50	18.17	QP
4	221.090	15.10	1.50	12.87	29.47	46.00	16.53	QP
5	250.190	18.30	1.58	15.72	35.60	46.00	10.40	QP
6	273.470	18.87	1.65	13.99	34.51	46.00	11.49	QP

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



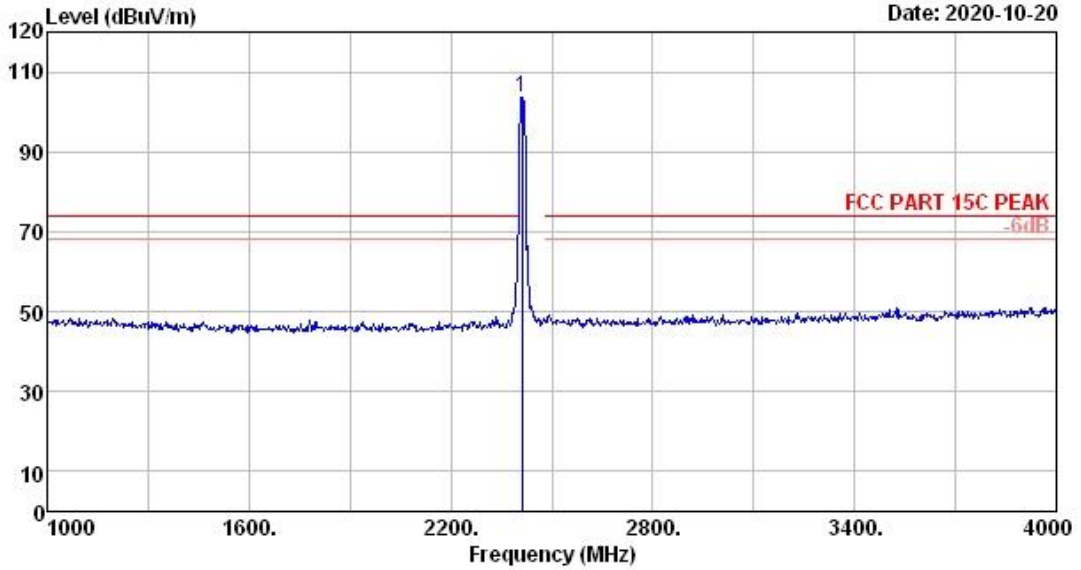
Site no. : 3m Chamber Data no. : 2
 Dis. / Ant. : 3m 2019 CBL6112D-25237 Ant. pol. : VERTICAL
 Limit : FCC PART 15 C (3M)
 Env. / Ins. : 25.3°C/55% Engineer : The Shine
 EUT :
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : TX Mode

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	24.20	0.63	7.09	31.92	40.00	8.08	QP
2	40.670	18.65	0.70	7.93	27.28	40.00	12.72	QP
3	181.320	14.90	1.39	6.06	22.35	43.50	21.15	QP
4	221.090	15.10	1.50	7.78	24.38	46.00	21.62	QP
5	250.190	18.30	1.58	8.36	28.24	46.00	17.76	QP
6	272.500	18.90	1.65	9.40	29.95	46.00	16.05	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

Data: 1 File: F:\2020 Report\C\A1Z2009137\A1Z2009137-FCC2.4G-update.EM6 (86) Date: 2020-10-20

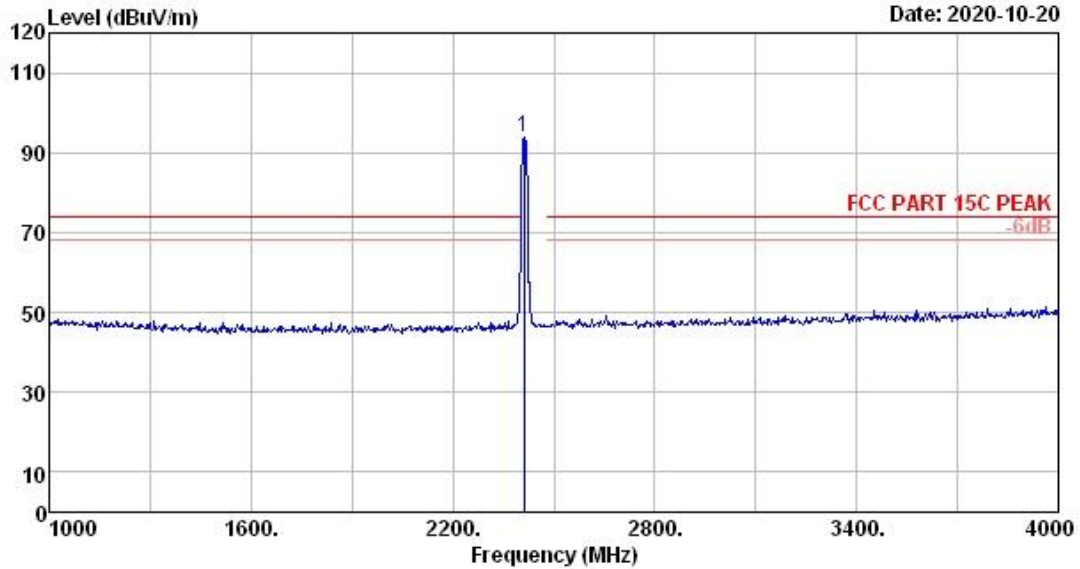


Site no. : 3m Chamber Data no. : 1
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11b 2412MHz Tx Mode

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	2412.00	27.83	5.99	103.44	33.48	103.78	-----	-----	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.

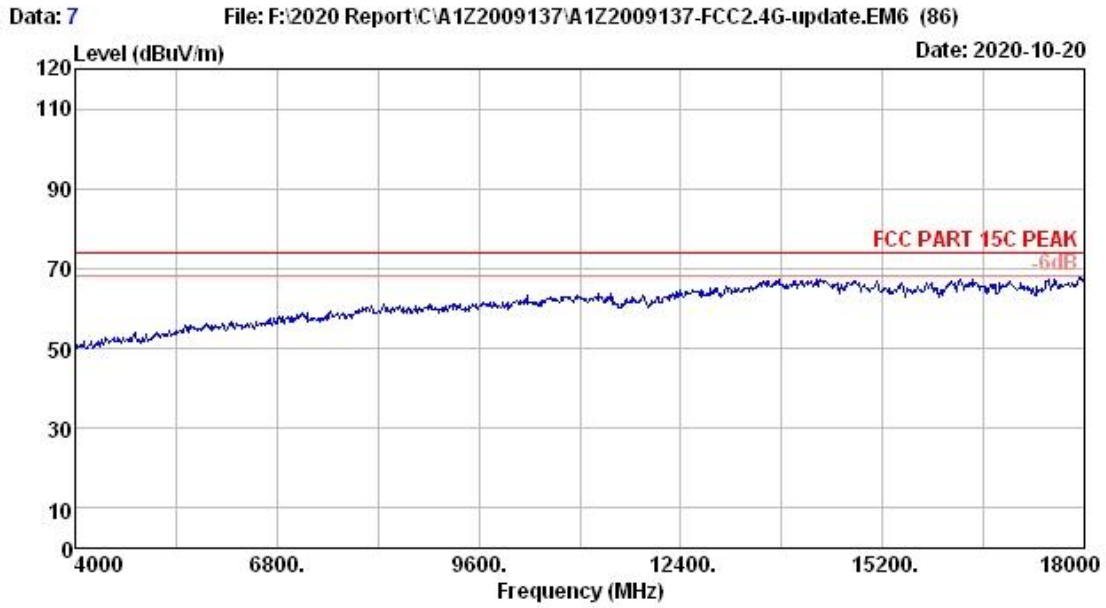
Data: 2 File: F:\2020 Report\C\A1Z2009137\A1Z2009137-FCC2.4G-update.EM6 (86) Date: 2020-10-20



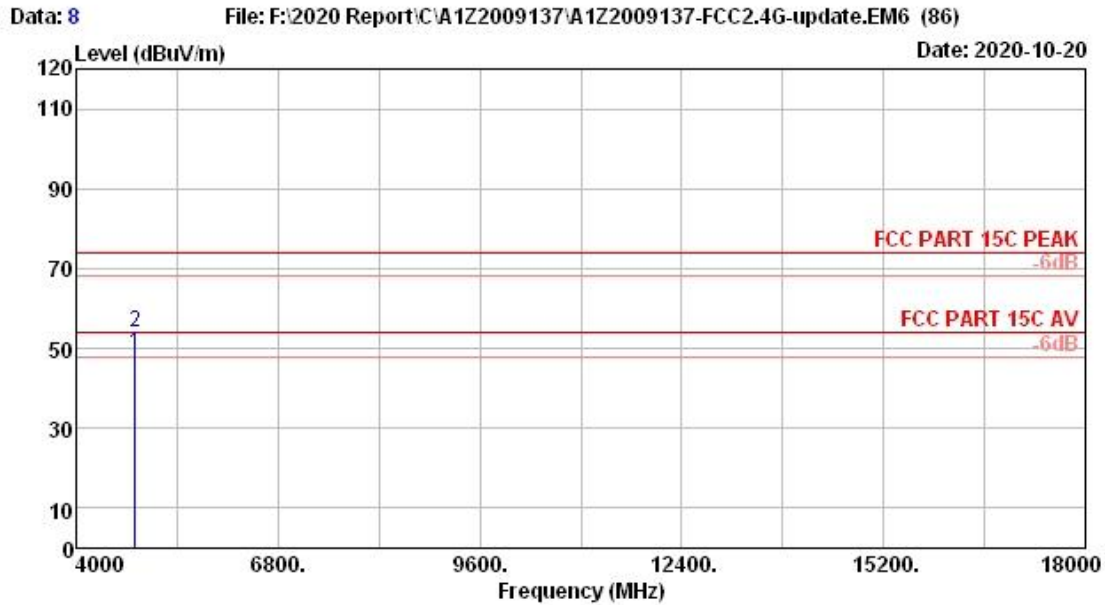
Site no. : 3m Chamber Data no. : 2
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11b 2412MHz Tx Mode

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	2412.00	27.83	5.99	93.69	33.48	94.03	-----	-----	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.



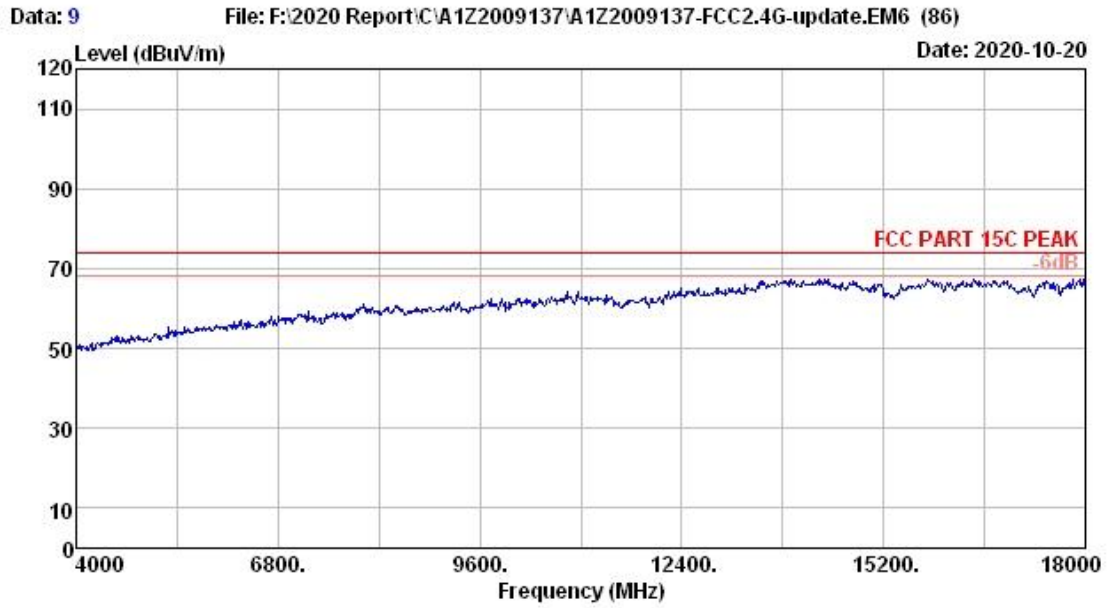
Site no. : 3m Chamber Data no. : 7
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11b 2412MHz Tx Mode



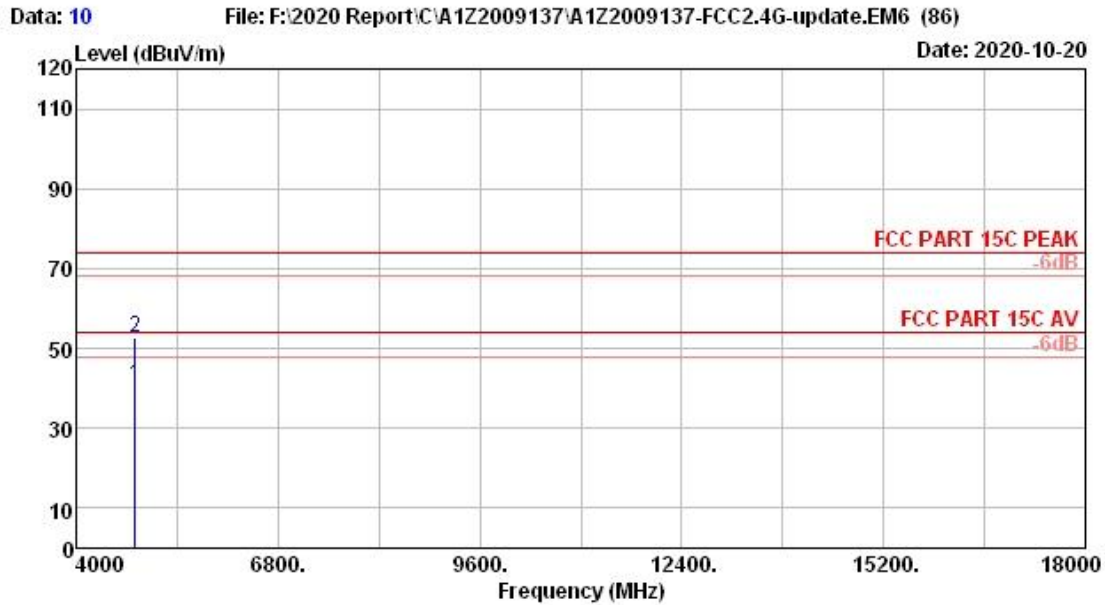
Site no. : 3m Chamber Data no. : 8
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11b 2412MHz Tx Mode

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	4824.00	32.53	7.41	41.76	33.18	48.52	54.00	5.48	Average
2	4824.00	32.53	7.41	47.22	33.18	53.98	74.00	20.02	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.



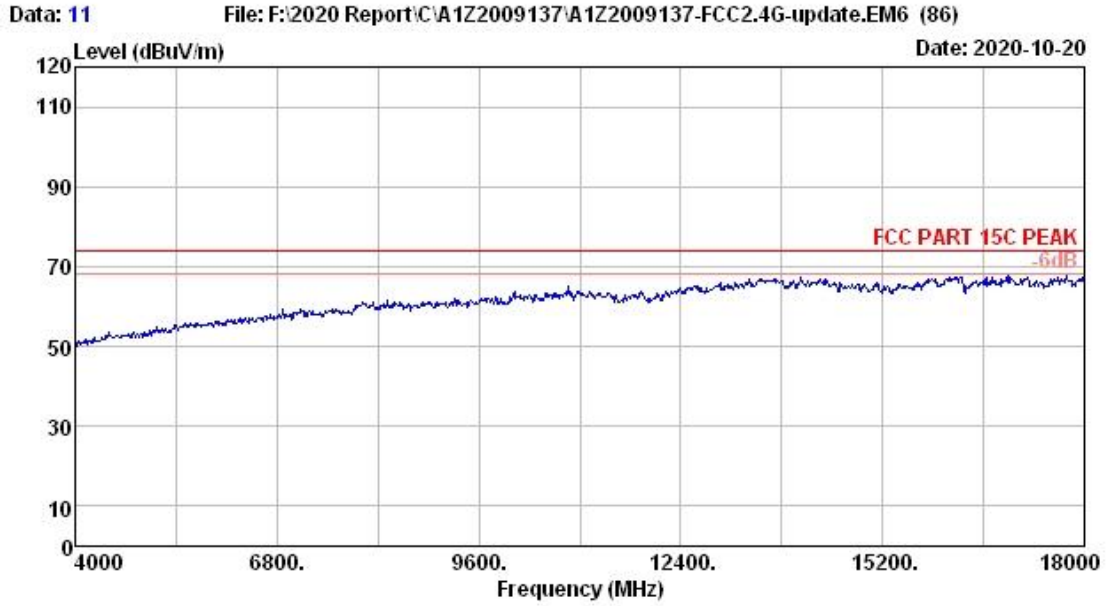
Site no. : 3m Chamber Data no. : 9
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11b 2412MHz Tx Mode



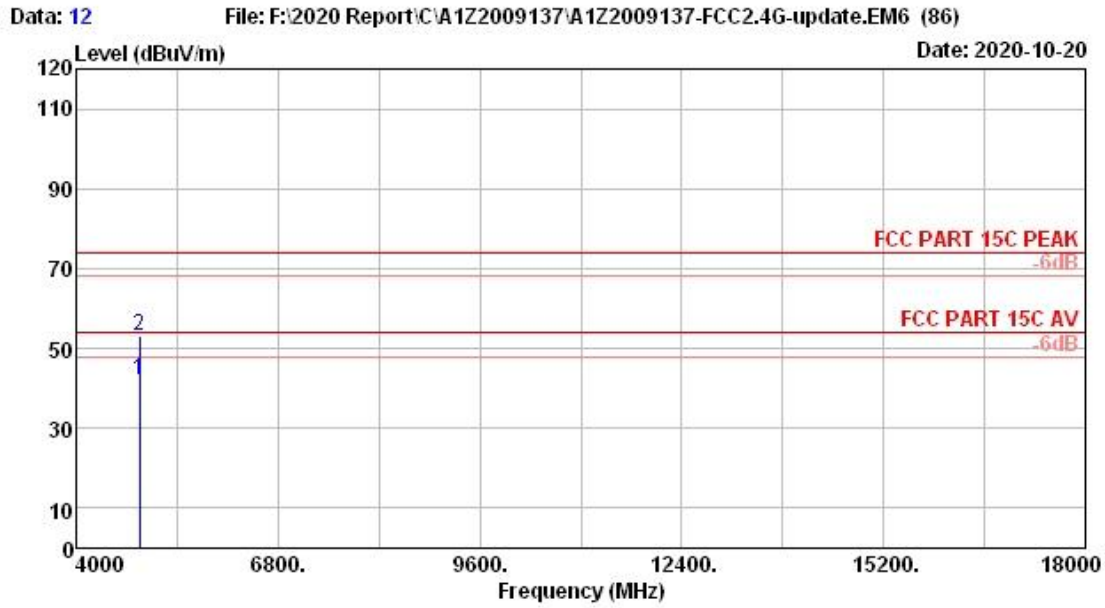
Site no. : 3m Chamber Data no. : 10
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11b 2412MHz Tx Mode

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	4824.00	32.53	7.41	33.99	33.18	40.75	54.00	13.25	Average
2	4824.00	32.53	7.41	46.07	33.18	52.83	74.00	21.17	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.



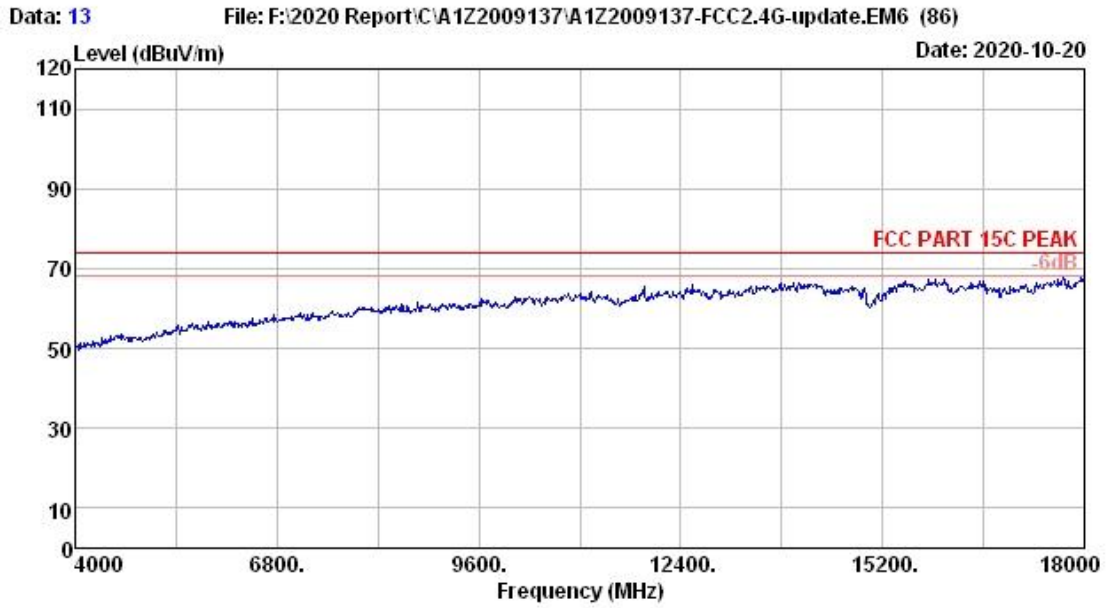
Site no. : 3m Chamber Data no. : 11
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11b 2437MHz Tx Mode



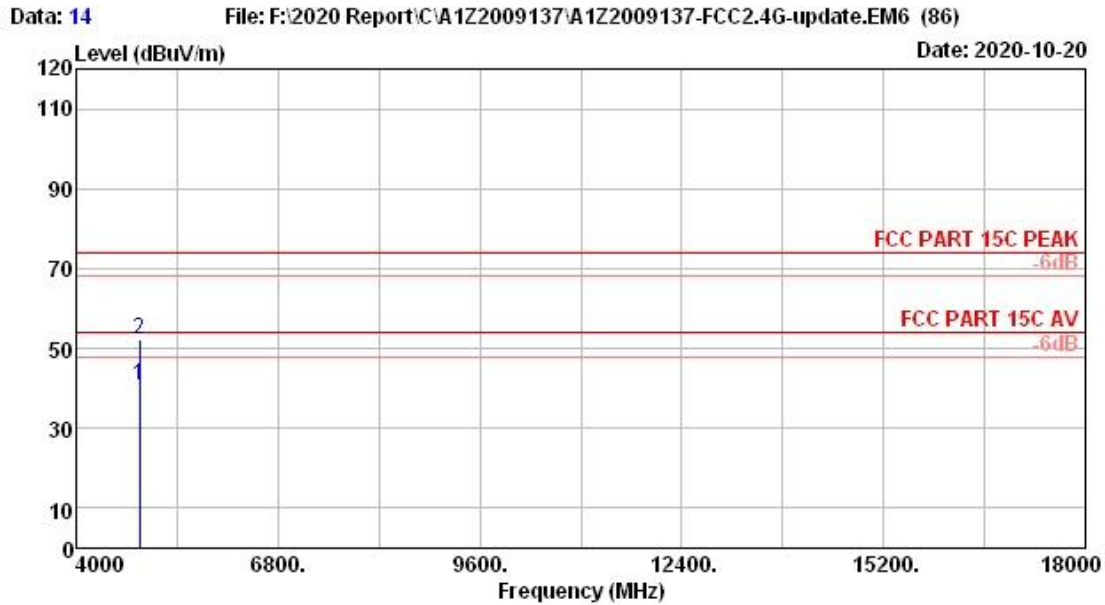
Site no. : 3m Chamber Data no. : 12
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11b 2437MHz Tx Mode

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	4874.00	32.55	7.44	35.40	33.19	42.20	54.00	11.80	Average
2	4874.00	32.55	7.44	46.35	33.19	53.15	74.00	20.85	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.



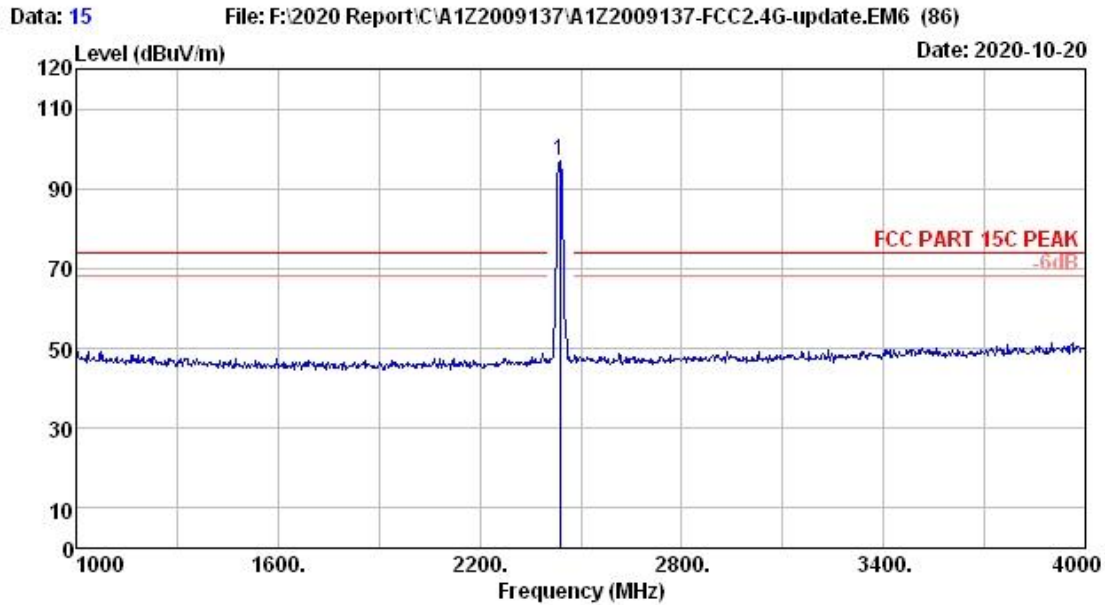
Site no. : 3m Chamber Data no. : 13
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11b 2437MHz Tx Mode



Site no. : 3m Chamber Data no. : 14
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/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	4874.00	32.55	7.44	34.00	33.19	40.80	74.00	33.20	Average
2	4874.00	32.55	7.44	45.32	33.19	52.12	74.00	21.88	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.

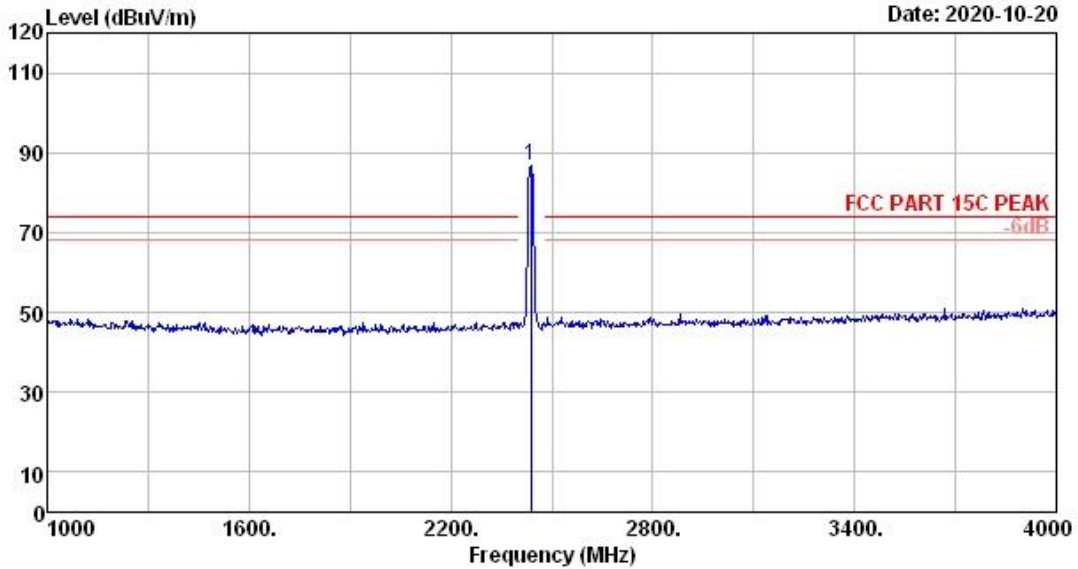


Site no. : 3m Chamber Data no. : 15
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11b 2437MHz Tx Mode

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	27.90	6.01	96.62	33.47	97.06	-----	-----	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.

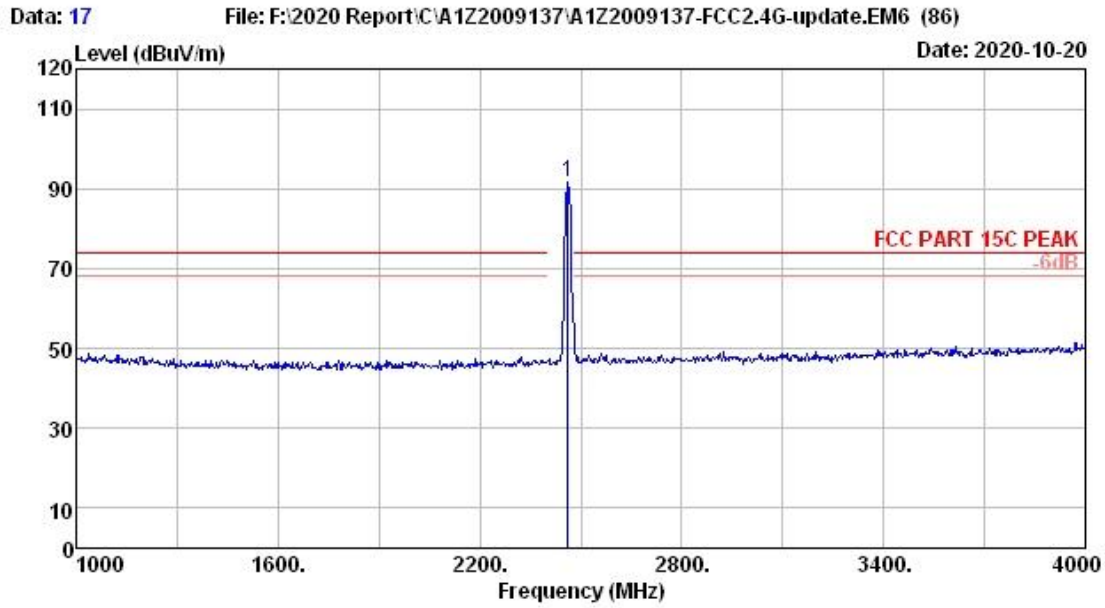
Data: 16 File: F:\2020 Report\C\A1Z2009137\A1Z2009137-FCC2.4G-update.EM6 (86) Date: 2020-10-20



Site no. : 3m Chamber Data no. : 16
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/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	27.90	6.01	86.36	33.47	86.80	-----	-----	Peak

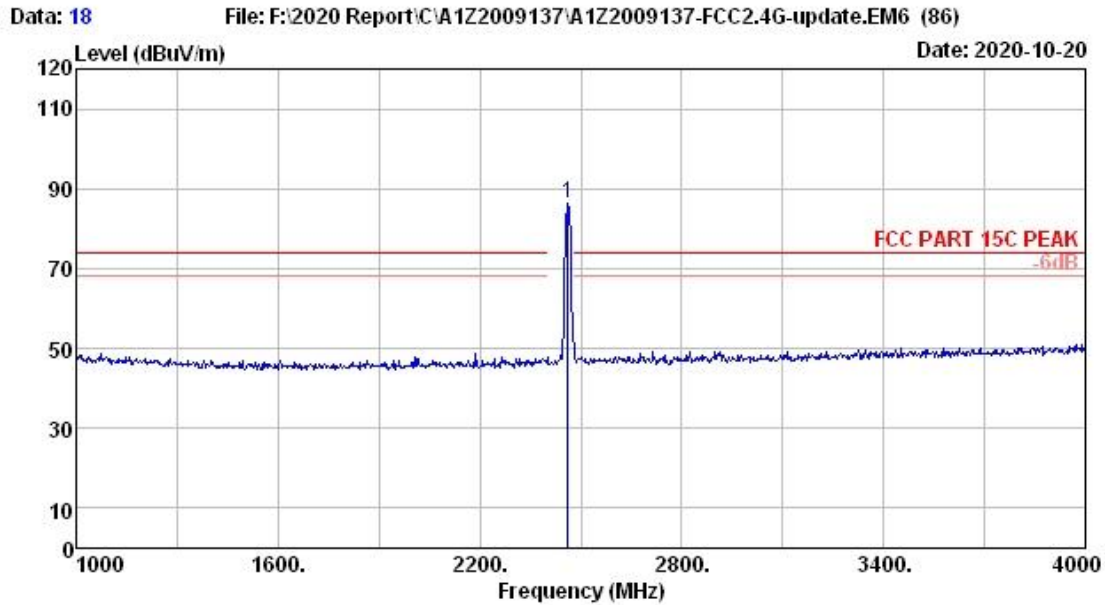
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 17
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/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	6.02	91.08	33.46	91.57	-----	-----	Peak

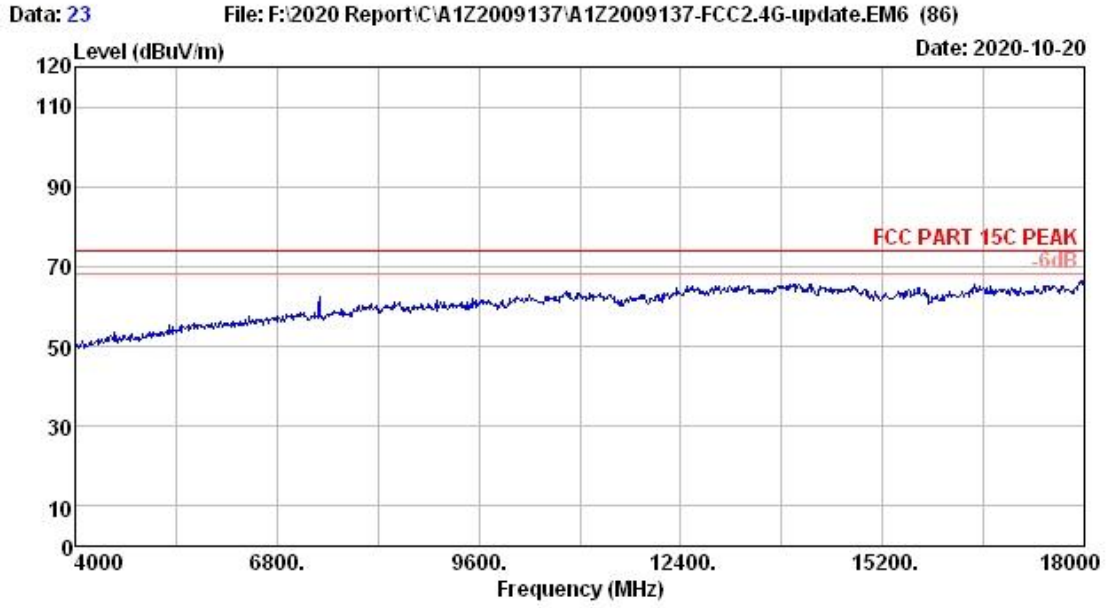
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



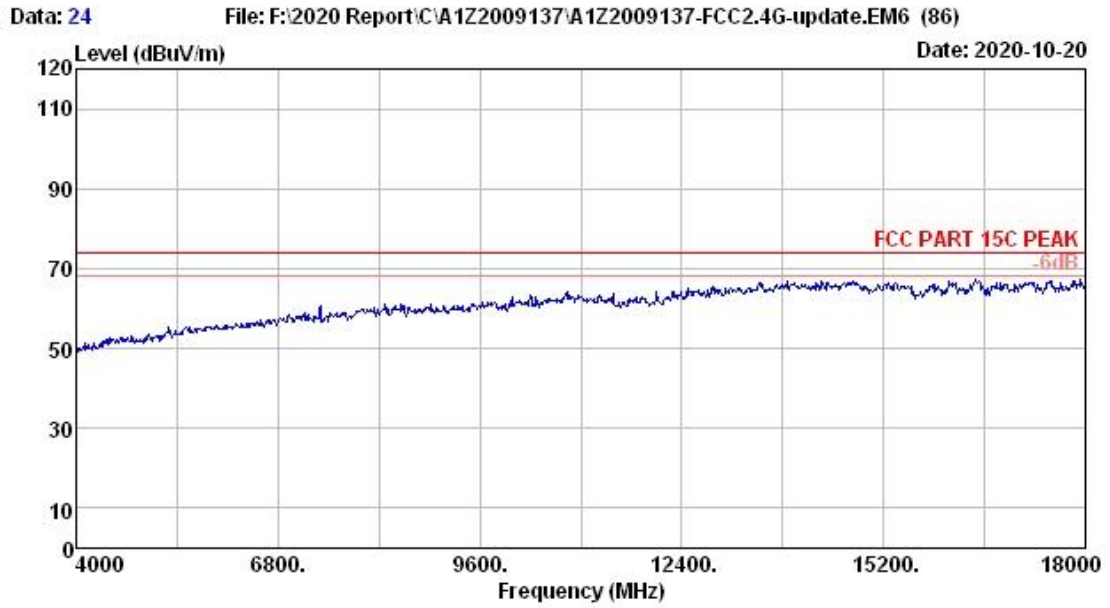
Site no. : 3m Chamber Data no. : 18
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11b 2462MHz Tx Mode

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	6.02	85.97	33.46	86.46	-----	-----	Peak

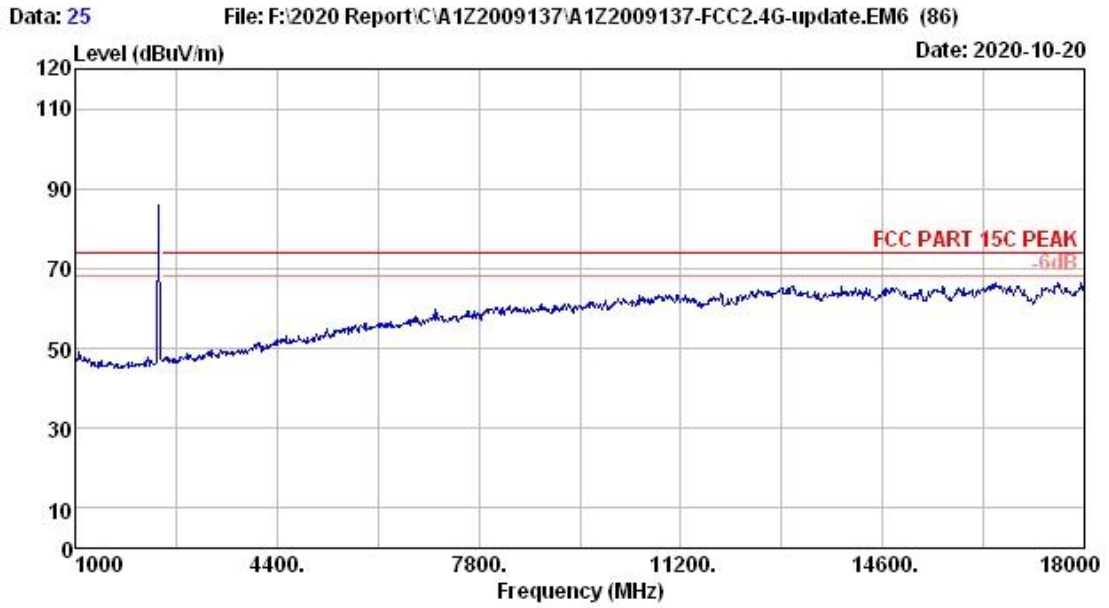
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading -Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 23
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11b 2462MHz Tx Mode

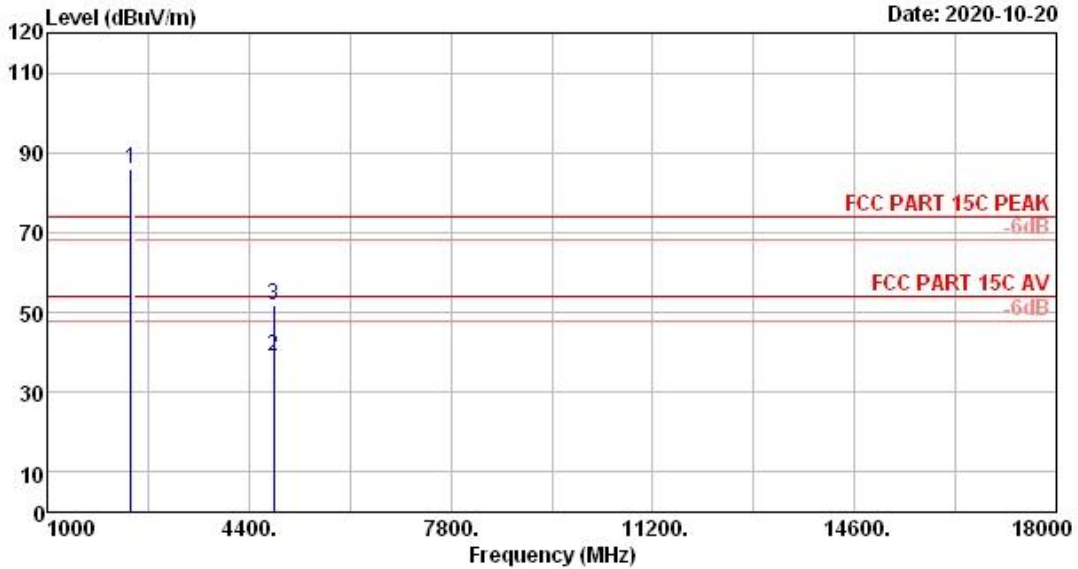


Site no. : 3m Chamber Data no. : 24
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11b 2462MHz Tx Mode



Site no. : 3m Chamber Data no. : 25
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11g 2412MHz Tx Mode

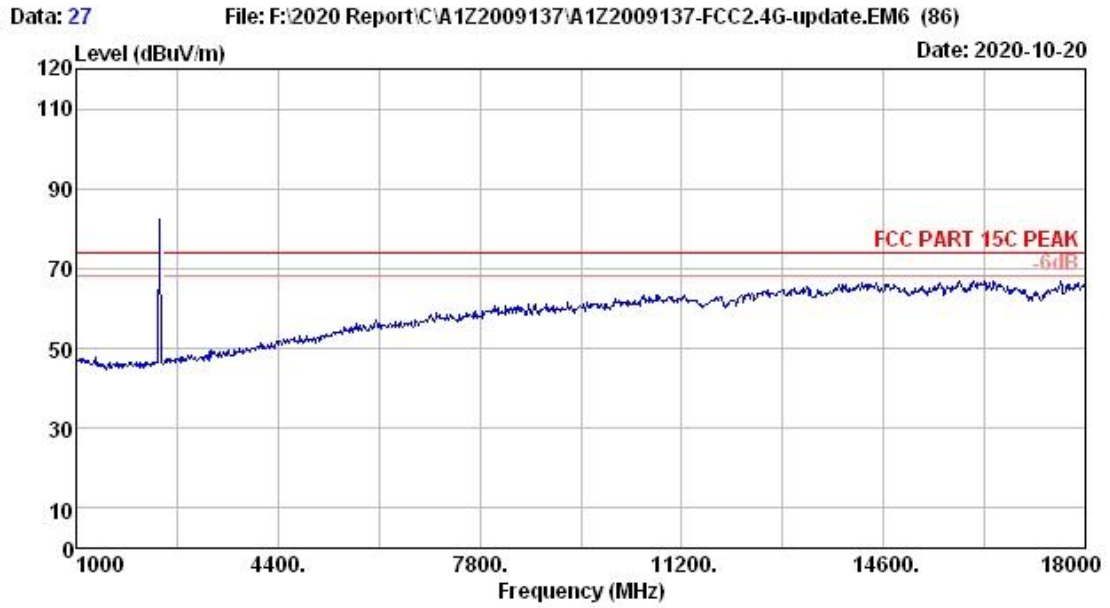
Data: 26 File: F:\2020 Report\C\A1Z2009137\A1Z2009137-FCC2.4G-update.EM6 (86) Date: 2020-10-20



Site no. : 3m Chamber Data no. : 26
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11g 2412MHz Tx Mode

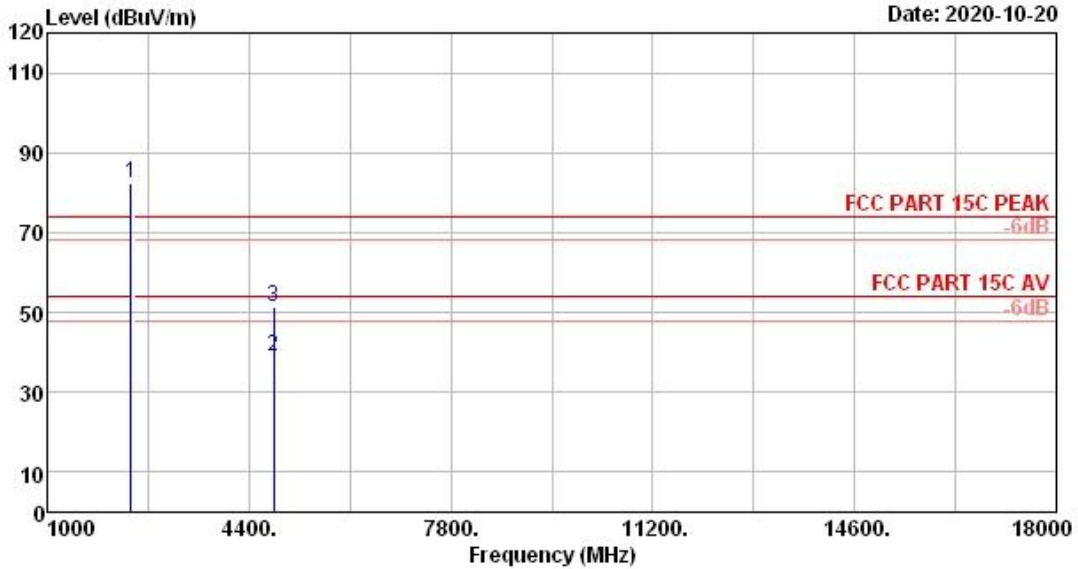
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2412.00	27.83	5.99	85.69	33.48	86.03	-----	-----	Peak
2	4824.00	32.53	7.41	32.19	33.18	38.95	54.00	15.05	Average
3	4824.00	32.53	7.41	44.91	33.18	51.67	74.00	22.33	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. : 27
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11g 2412MHz Tx Mode

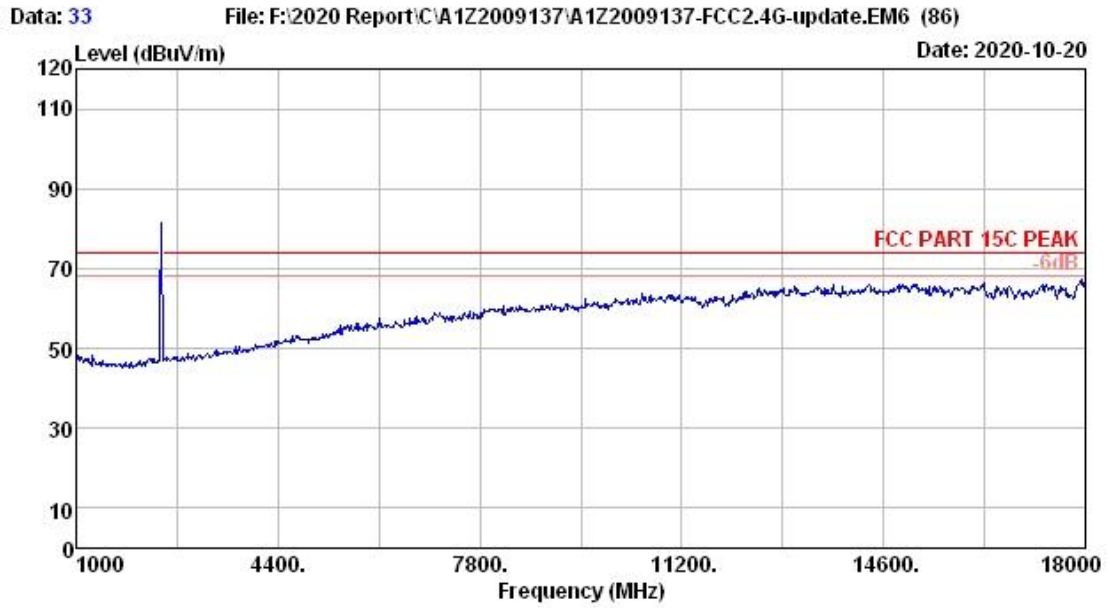
Data: 28 File: F:\2020 Report\C\A1Z2009137\A1Z2009137-FCC2.4G-update.EM6 (86) Date: 2020-10-20



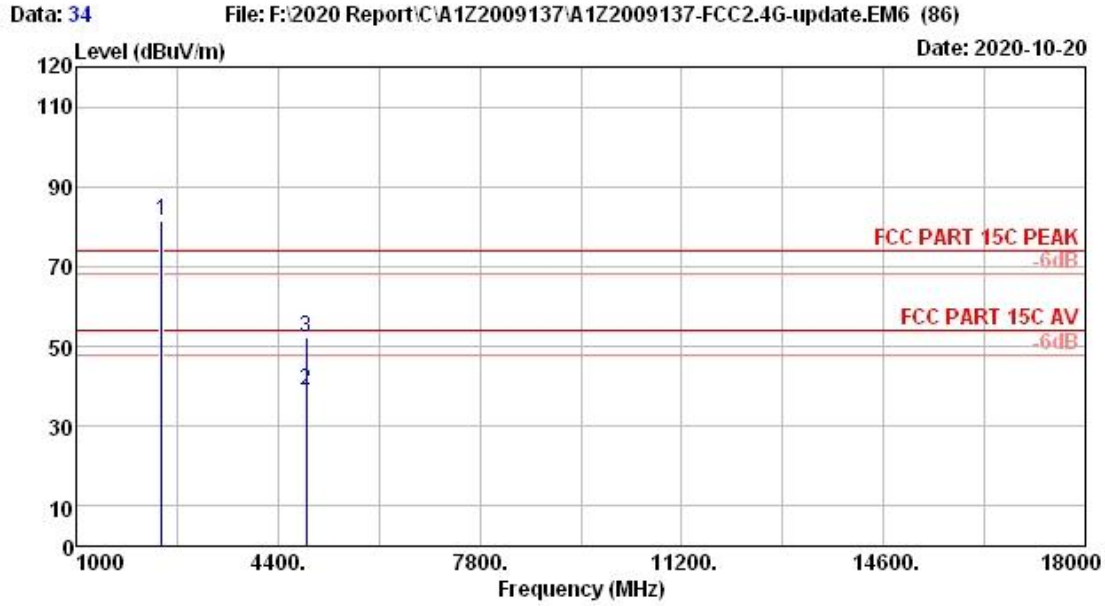
Site no. : 3m Chamber Data no. : 28
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11g 2412MHz Tx Mode

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	27.83	5.99	81.86	33.48	82.20	-----	-----	Peak
2	4824.00	32.53	7.41	31.99	33.18	38.75	54.00	15.25	Average
3	4824.00	32.53	7.41	44.53	33.18	51.29	74.00	22.71	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.



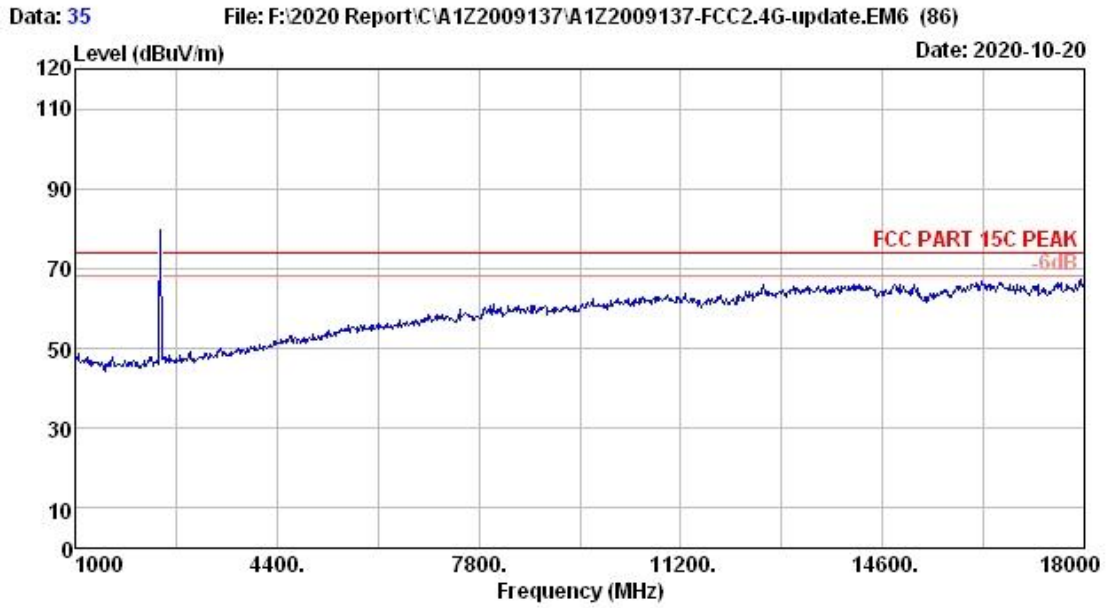
Site no. : 3m Chamber Data no. : 33
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11g 2437MHz Tx Mode



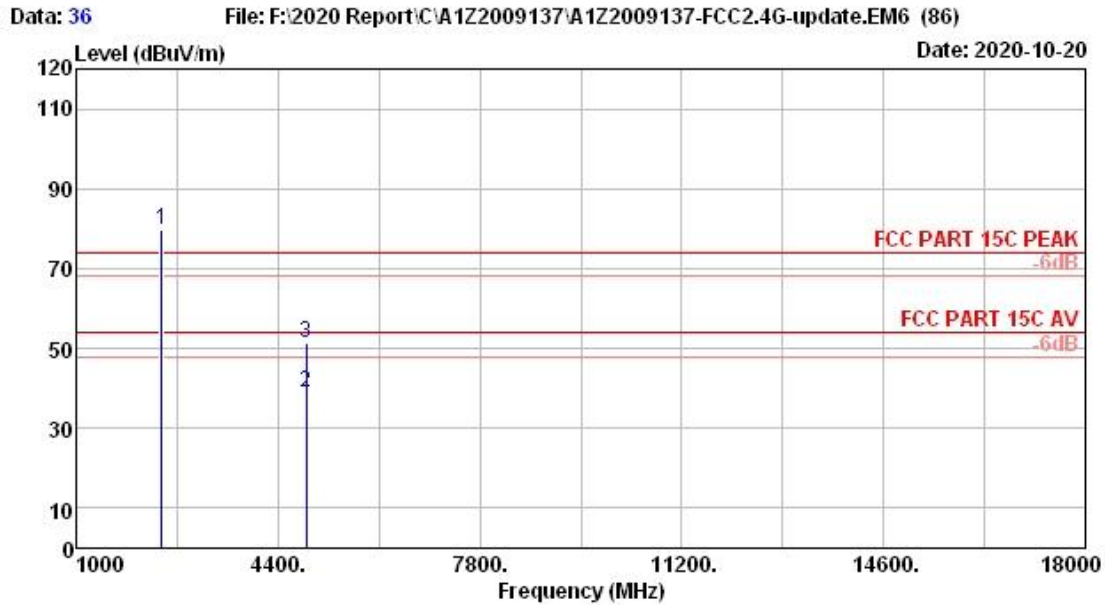
Site no. : 3m Chamber Data no. : 34
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11g 2437MHz Tx Mode

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	27.90	6.01	80.92	33.47	81.36	-----	-----	Peak
2	4874.00	32.55	7.44	32.20	33.19	39.00	54.00	15.00	Average
3	4874.00	32.55	7.44	45.57	33.19	52.37	74.00	21.63	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.



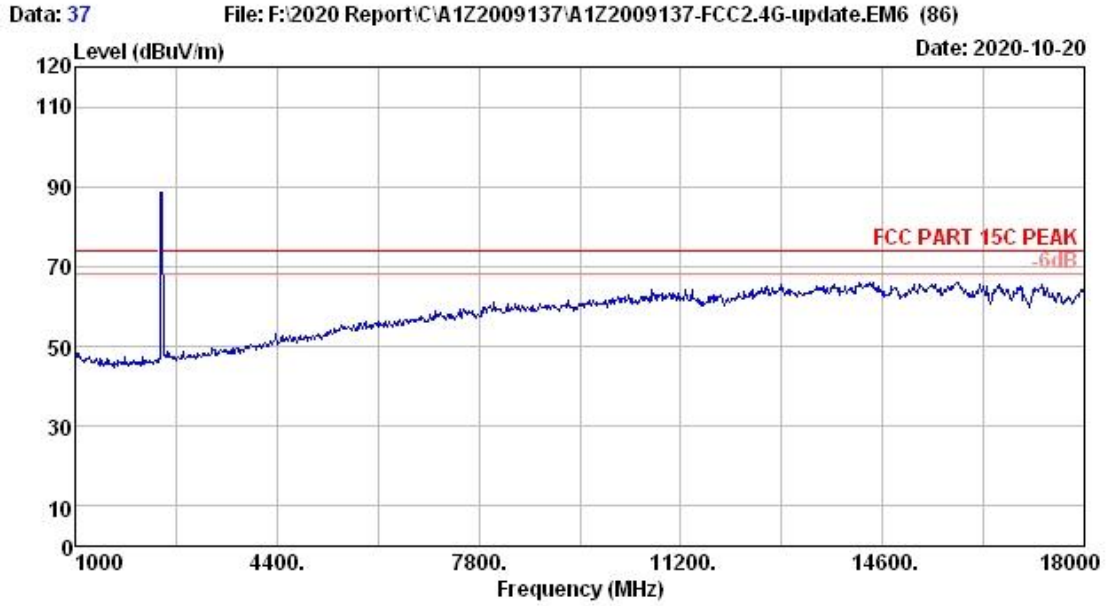
Site no. : 3m Chamber Data no. : 35
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11g 2437MHz Tx Mode



Site no. : 3m Chamber Data no. : 36
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11g 2437MHz Tx Mode

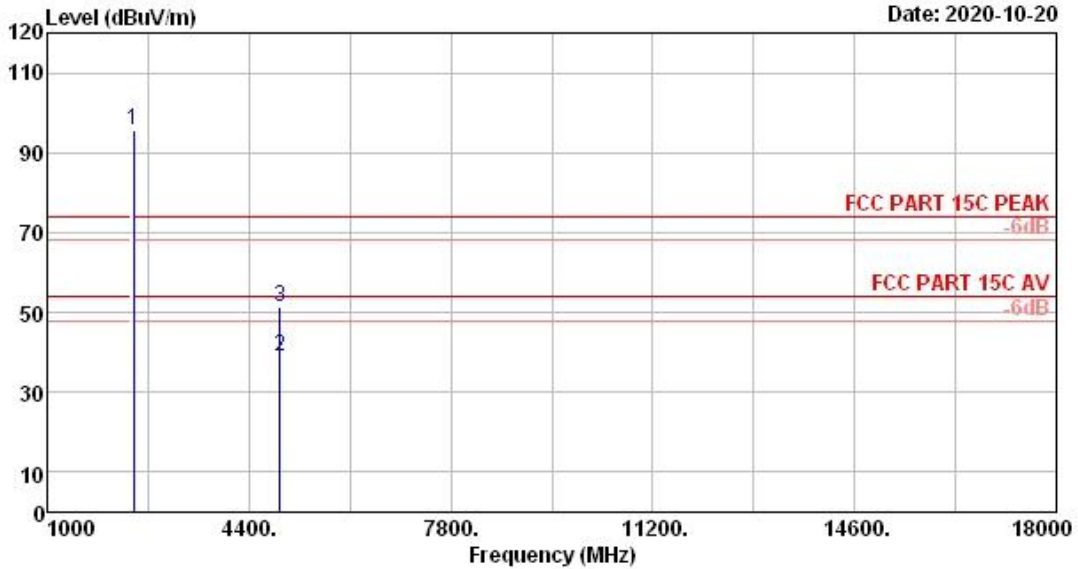
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2437.00	27.90	6.01	79.30	33.47	79.74	-----	-----	Peak
2	4874.00	32.55	7.44	32.20	33.19	39.00	54.00	15.00	Average
3	4874.00	32.55	7.44	44.78	33.19	51.58	74.00	22.42	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 2020 MCTD1209-3007 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11g 2462MHz Tx Mode

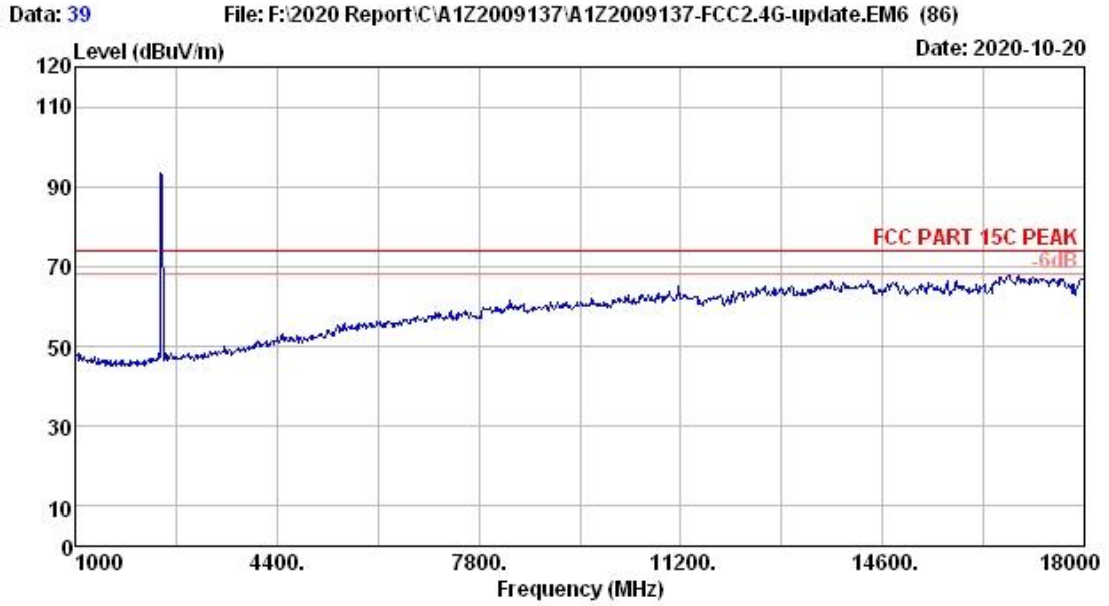
Data: 38 File: F:\2020 Report\C\A1Z2009137\A1Z2009137-FCC2.4G-update.EM6 (86) Date: 2020-10-20



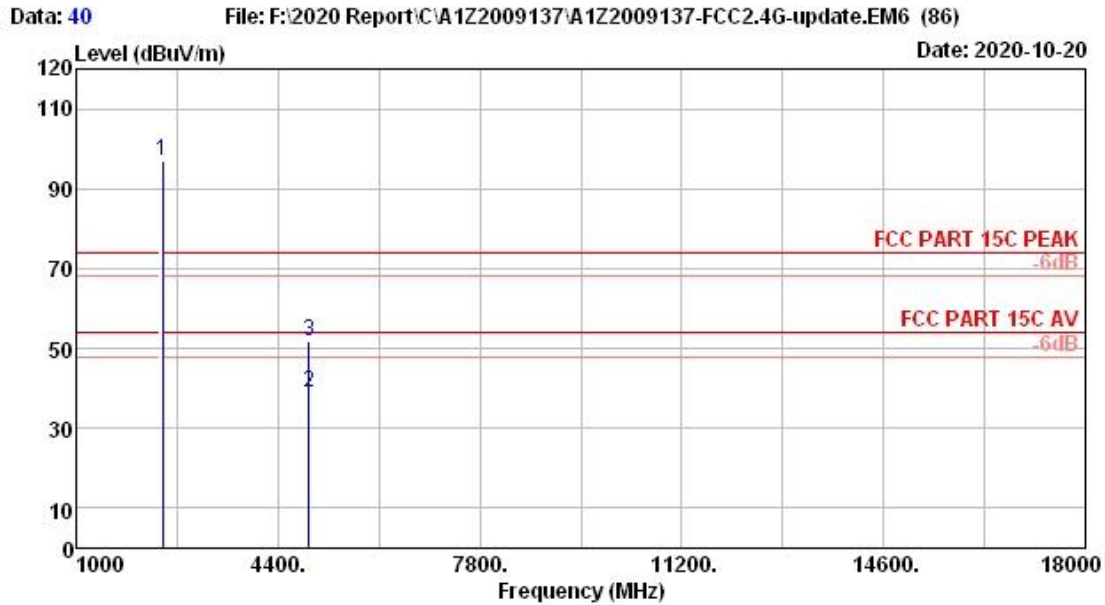
Site no. : 3m Chamber Data no. : 38
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11g 2462MHz Tx Mode

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	6.02	94.99	33.46	95.48	-----	-----	Peak
2	4924.00	32.57	7.47	31.99	33.19	38.84	54.00	15.16	Average
3	4924.00	32.57	7.47	44.48	33.19	51.33	74.00	22.67	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.



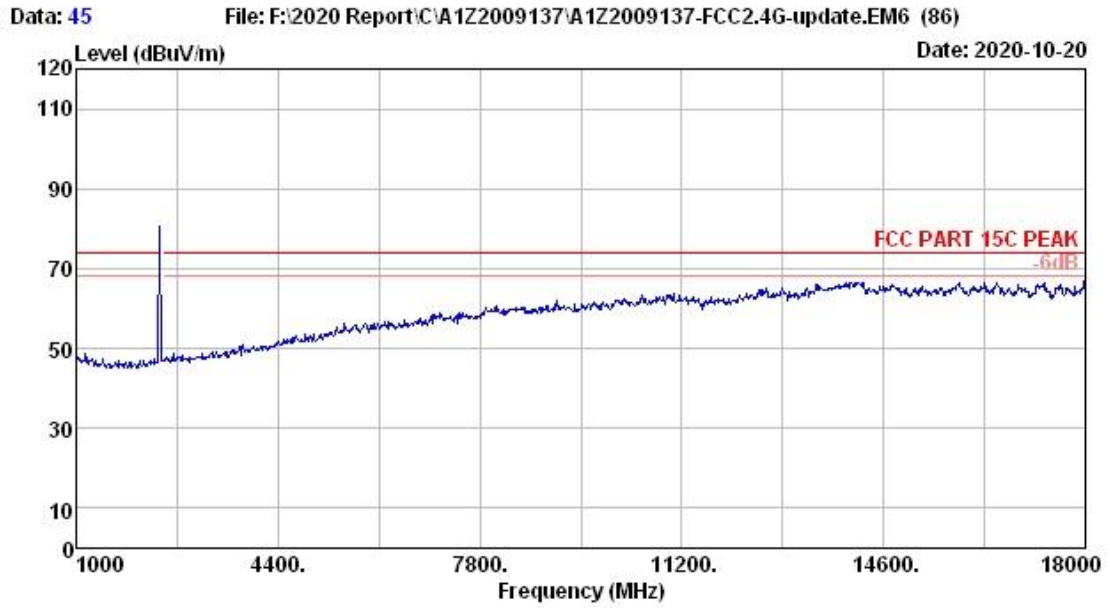
Site no. : 3m Chamber Data no. : 39
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11g 2462MHz Tx Mode



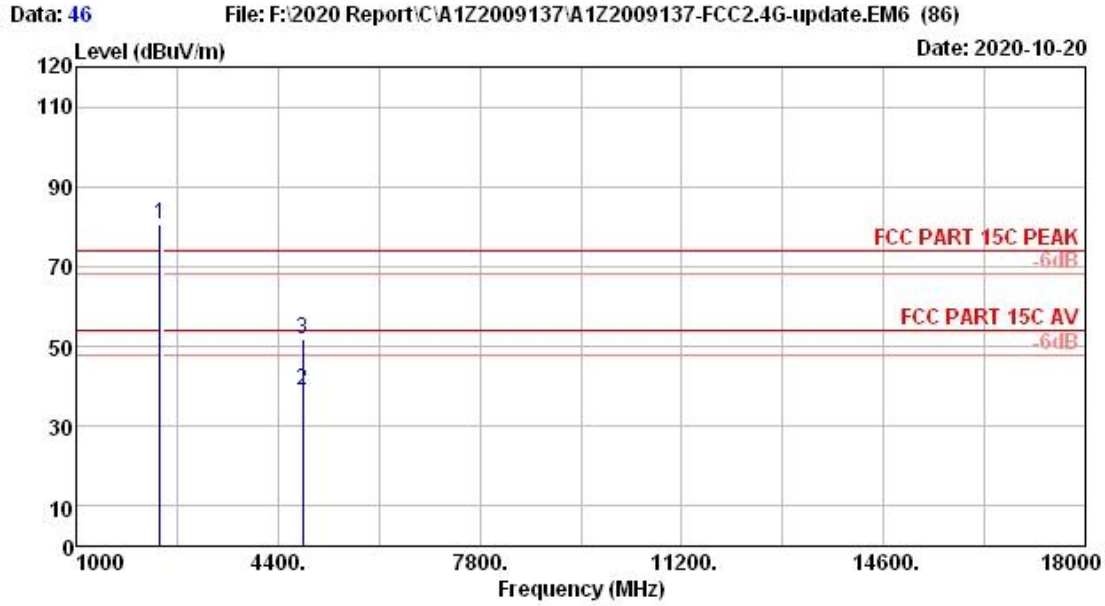
Site no. : 3m Chamber Data no. : 40
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11g 2462MHz Tx Mode

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	6.02	96.62	33.46	97.11	-----	-----	Peak
2	4924.00	32.57	7.47	32.29	33.19	39.14	54.00	14.86	Average
3	4924.00	32.57	7.47	44.83	33.19	51.68	74.00	22.32	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.



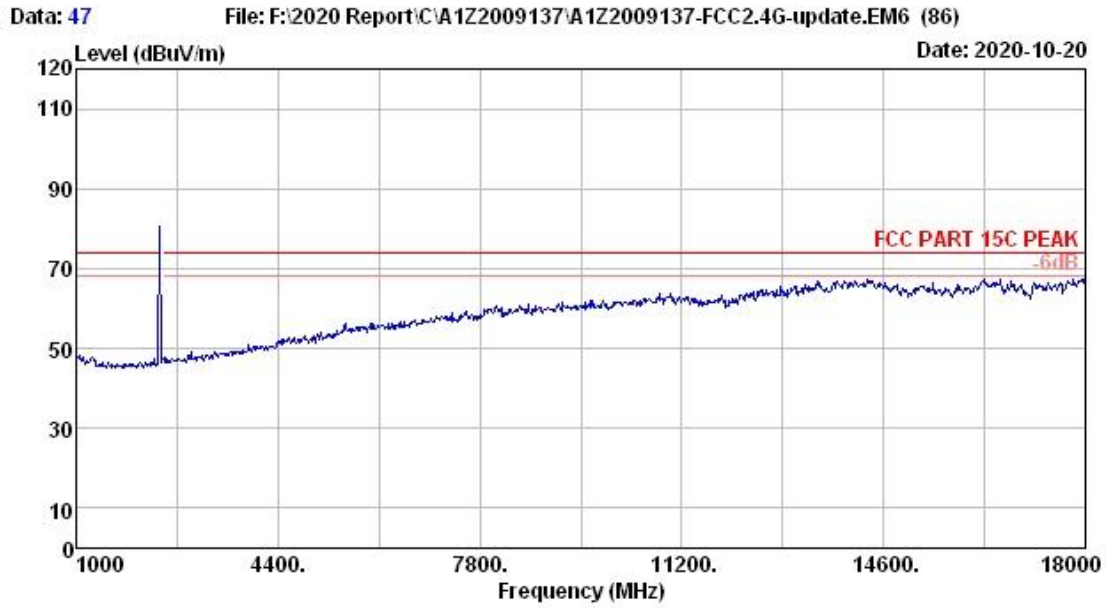
Site no. : 3m Chamber Data no. : 45
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11nHT20 2412MHz Tx Mode



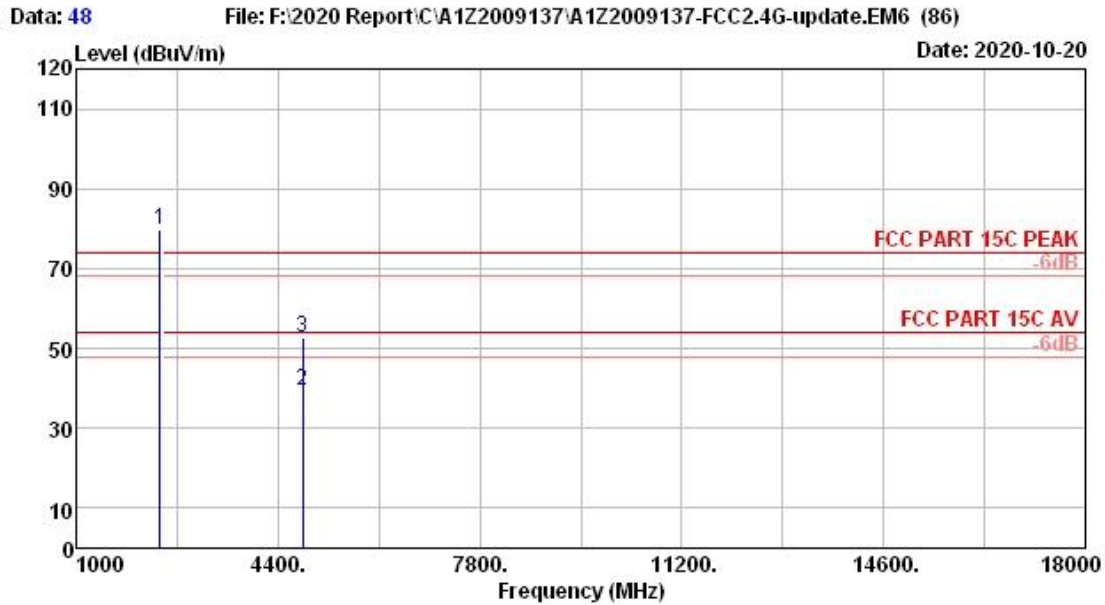
Site no. : 3m Chamber Data no. : 46
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11nHT20 2412MHz Tx Mode

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	27.83	5.99	80.25	33.48	80.59	-----	-----	Peak
2	4824.00	32.53	7.41	32.00	33.18	38.76	74.00	35.24	Average
3	4824.00	32.53	7.41	45.05	33.18	51.81	74.00	22.19	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.



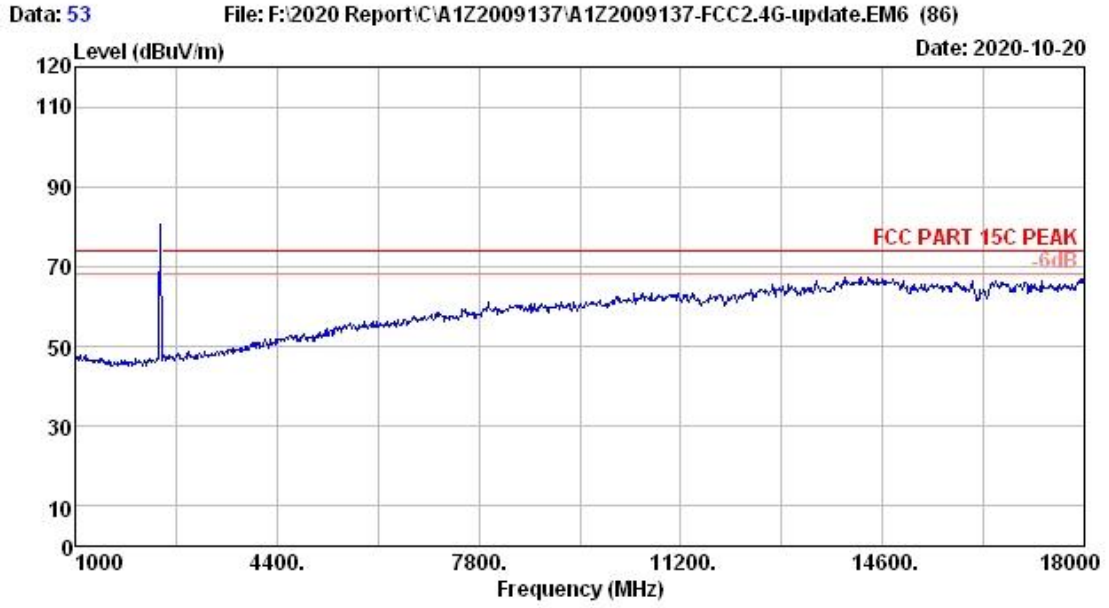
Site no. : 3m Chamber Data no. : 47
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11nHT20 2412MHz Tx Mode



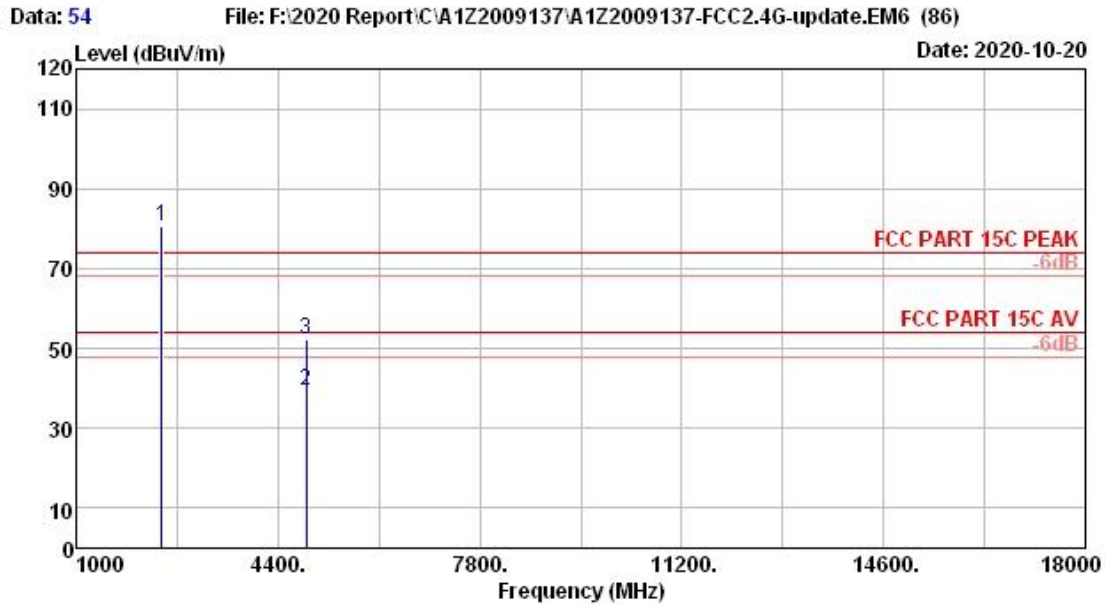
Site no. : 3m Chamber Data no. : 48
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11nHT20 2412MHz Tx Mode

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	27.83	5.99	79.40	33.48	79.74	-----	-----	Peak
2	4824.00	32.53	7.41	32.49	33.18	39.25	54.00	14.75	Average
3	4824.00	32.53	7.41	46.03	33.18	52.79	74.00	21.21	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.



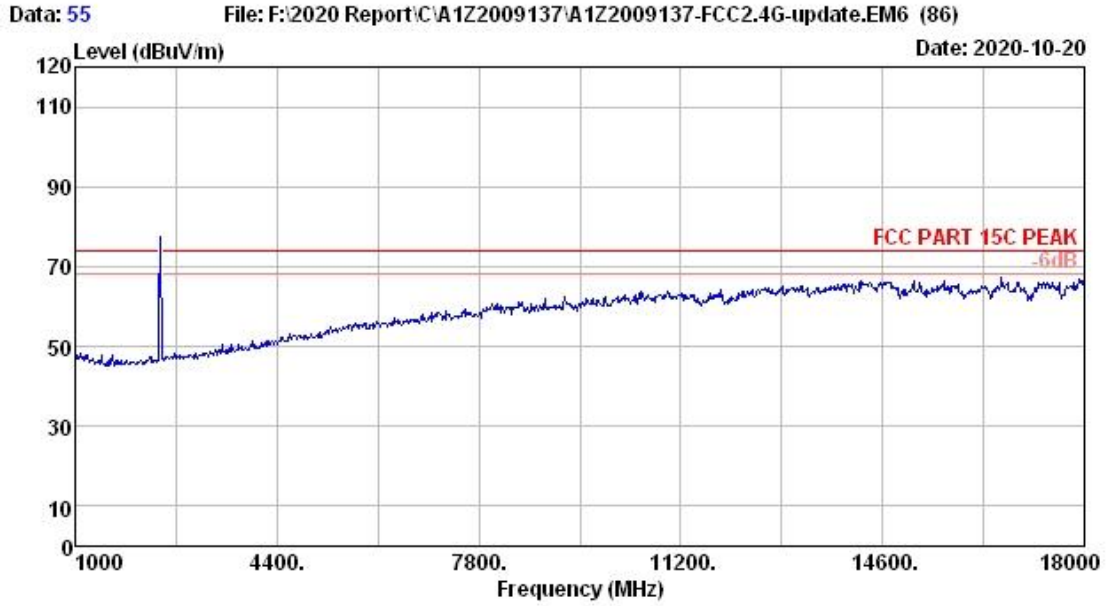
Site no. : 3m Chamber Data no. : 53
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11nHT20 2437MHz Tx Mode



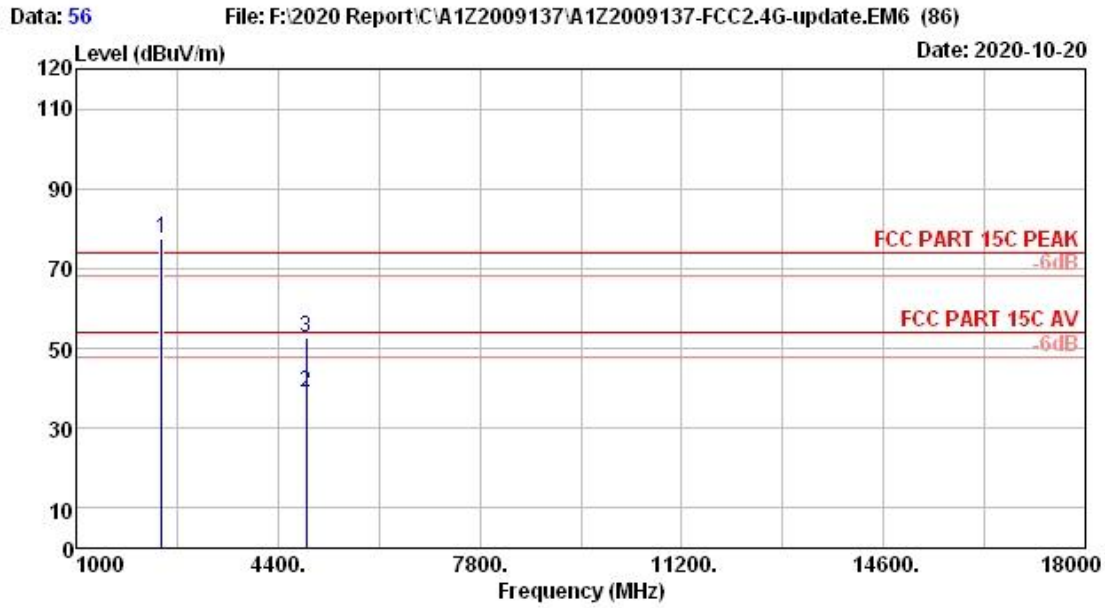
Site no. : 3m Chamber Data no. : 54
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11nHT20 2437MHz Tx Mode

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	27.90	6.01	80.02	33.47	80.46	-----	-----	Peak
2	4874.00	32.55	7.44	32.50	33.19	39.30	54.00	14.70	Average
3	4874.00	32.55	7.44	45.59	33.19	52.39	74.00	21.61	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.



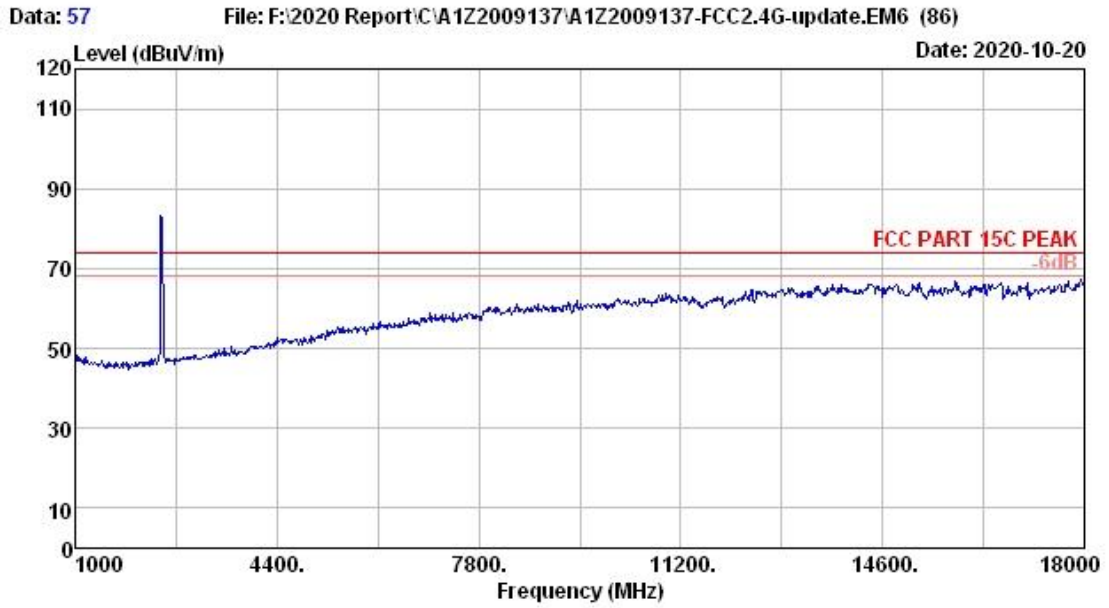
Site no. : 3m Chamber Data no. : 55
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11nHT20 2437MHz Tx Mode



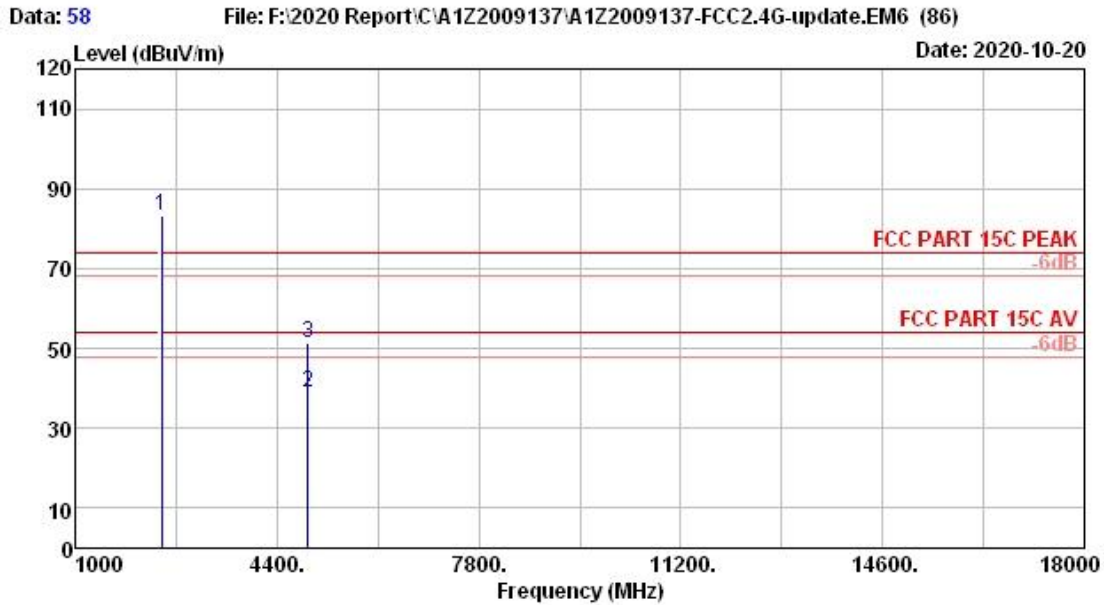
Site no. : 3m Chamber Data no. : 56
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11nHT20 2437MHz Tx Mode

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	27.90	6.01	77.02	33.47	77.46	-----	-----	Peak
2	4874.00	32.55	7.44	32.26	33.19	39.06	54.00	14.94	Average
3	4874.00	32.55	7.44	45.76	33.19	52.56	74.00	21.44	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.



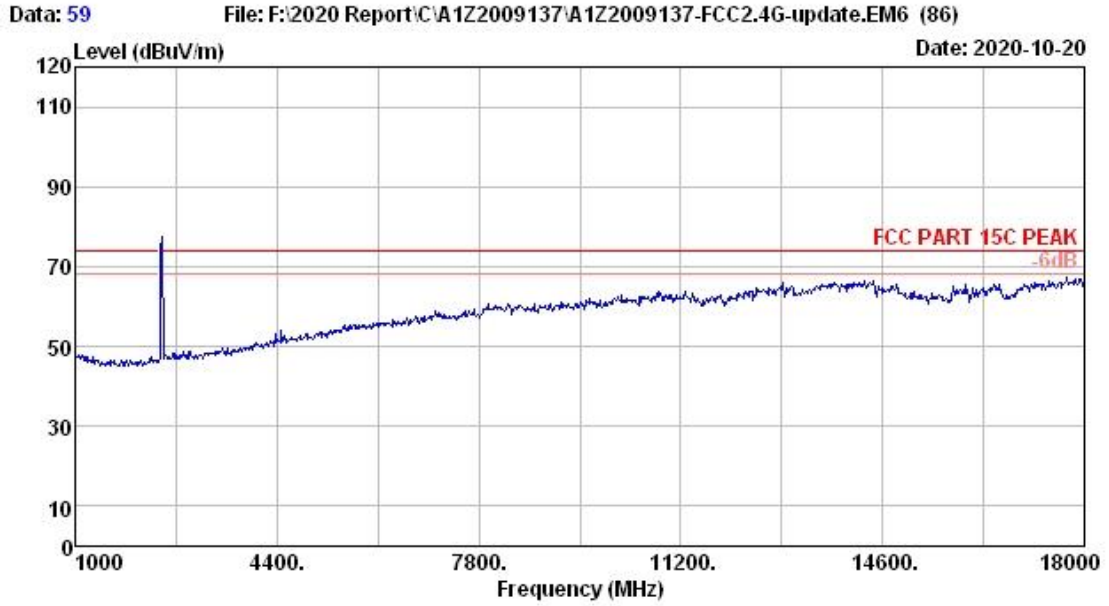
Site no. : 3m Chamber Data no. : 57
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11nHT20 2462MHz Tx Mode



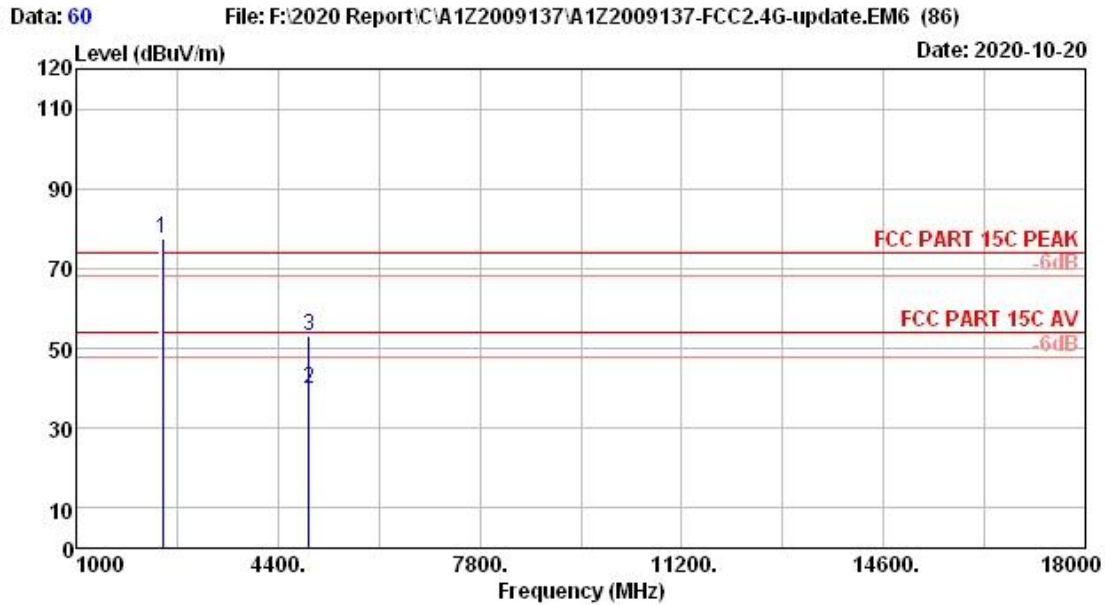
Site no. : 3m Chamber Data no. : 58
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11nHT20 2462MHz Tx Mode

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	6.02	82.90	33.46	83.39	-----	-----	Peak
2	4924.00	32.57	7.47	32.04	33.19	38.89	54.00	15.11	Average
3	4924.00	32.57	7.47	44.58	33.19	51.43	74.00	22.57	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.



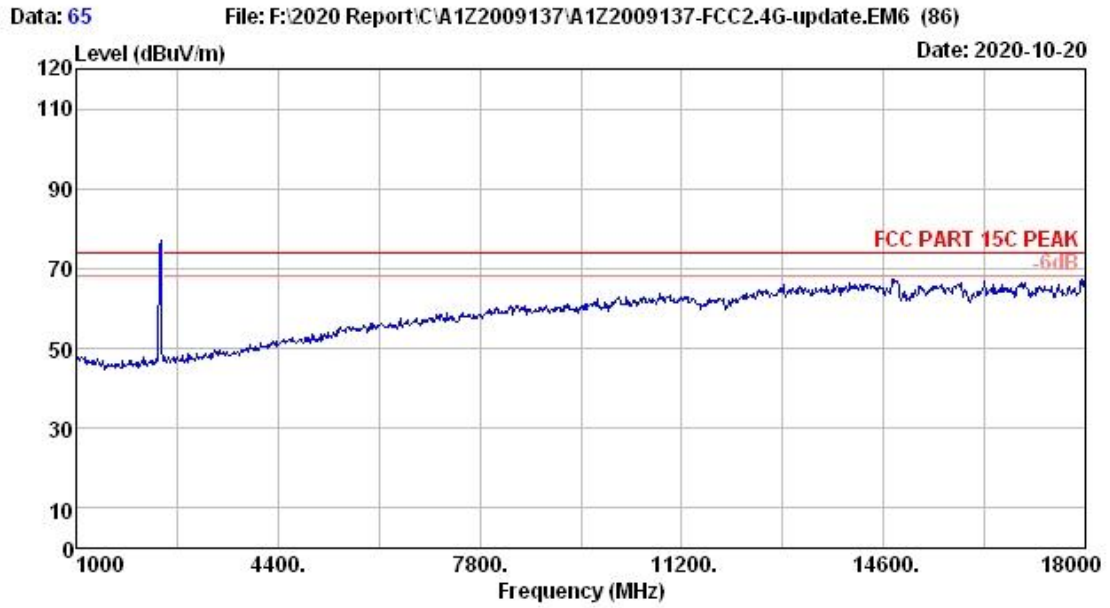
Site no. : 3m Chamber Data no. : 59
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11nHT20 2462MHz Tx Mode



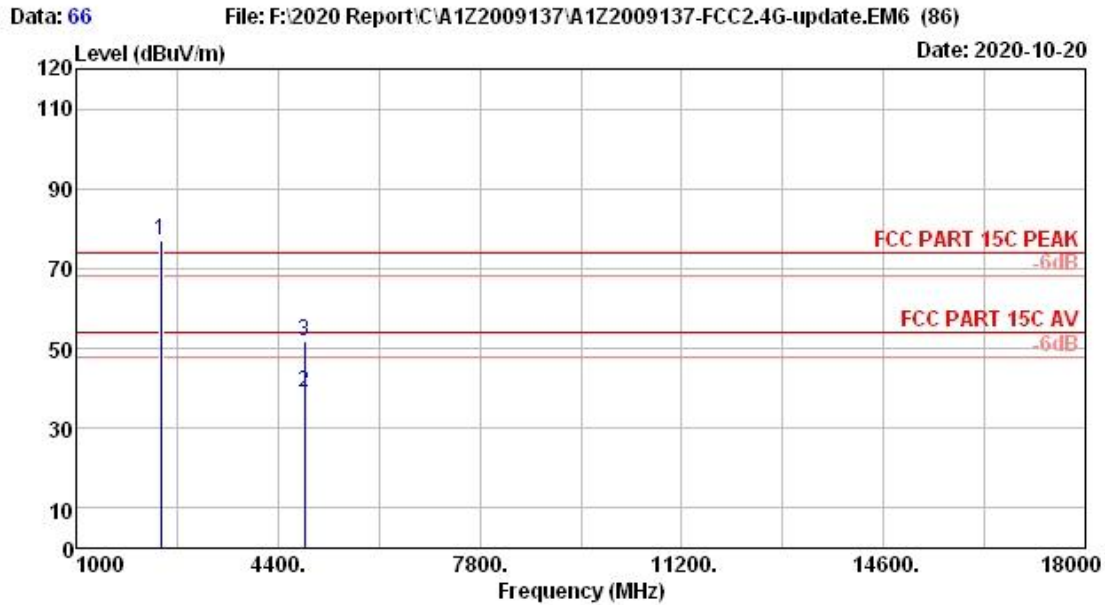
Site no. : 3m Chamber Data no. : 60
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11nHT20 2462MHz Tx Mode

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	6.02	76.92	33.46	77.41	-----	-----	Peak
2	4924.00	32.57	7.47	32.99	33.19	39.84	54.00	14.16	Average
3	4924.00	32.57	7.47	46.42	33.19	53.27	74.00	20.73	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.



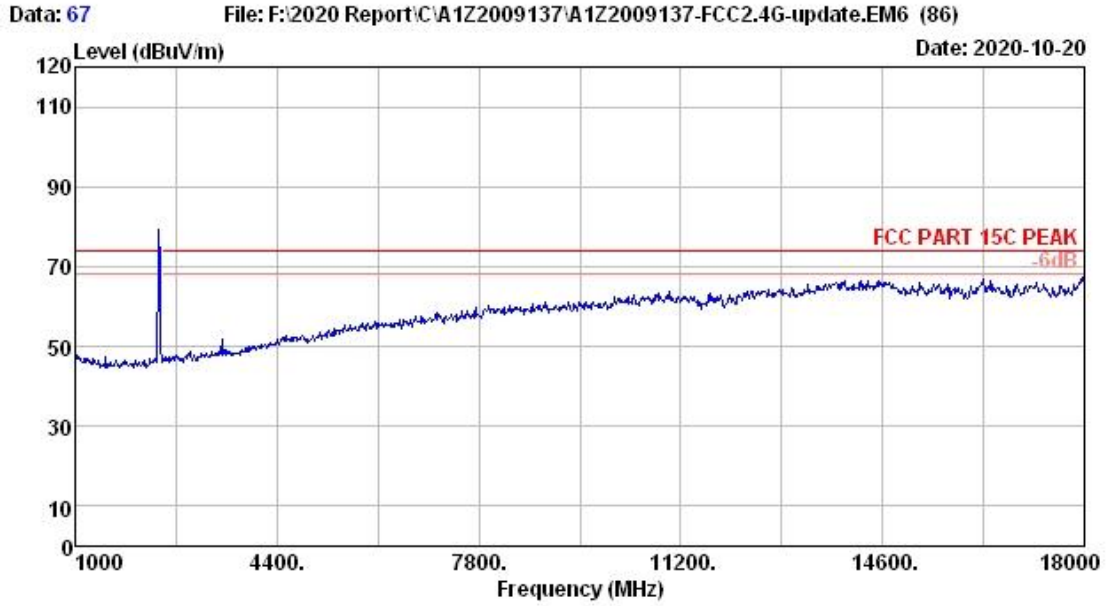
Site no.	: 3m Chamber	Data no.	: 65
Dis. / Ant.	: 3m 2020 MCTD1209-3007	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15C PEAK		
Env. / Ins.	: 23.1°C/51.5%	Engineer	: Garry
Power rating	: DC 5V From Notebook Input AC 120V/60Hz		
Test Mode	: 802.11nHT40 2422MHz Tx Mode		



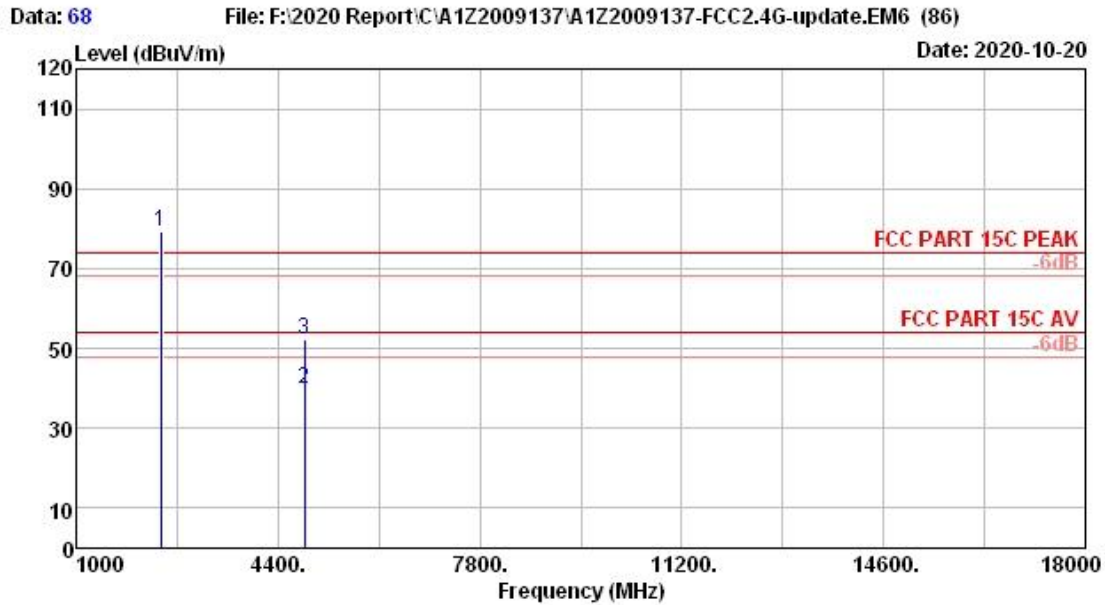
Site no. : 3m Chamber Data no. : 66
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11nHT40 2422MHz Tx Mode

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	27.86	6.00	76.47	33.47	76.86	-----	-----	Peak
2	4844.00	32.54	7.42	32.15	33.18	38.93	54.00	15.07	Average
3	4844.00	32.54	7.42	45.07	33.18	51.85	74.00	22.15	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.



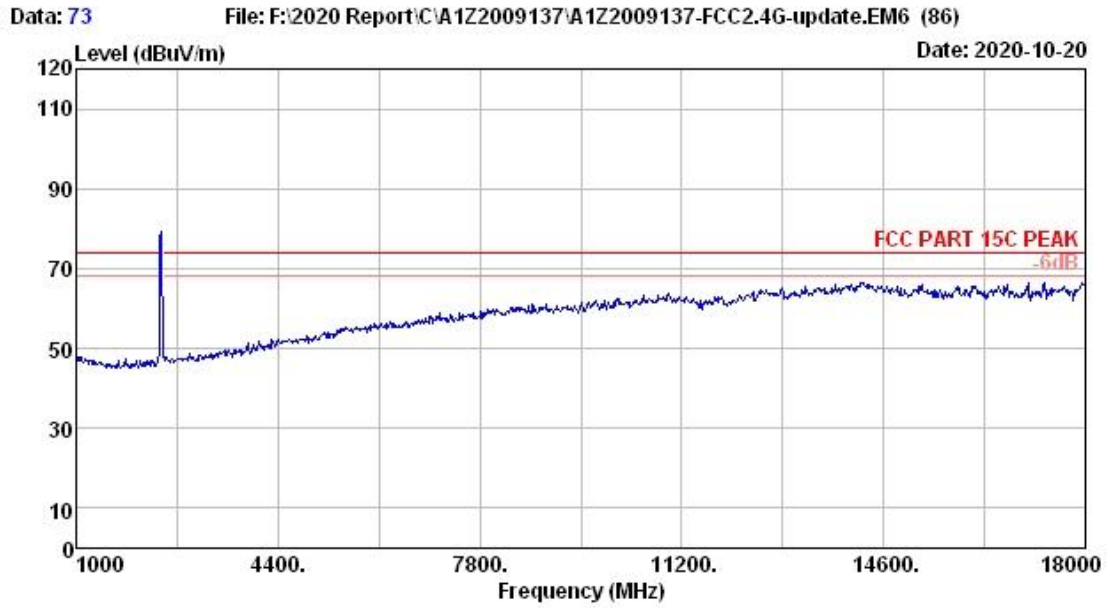
Site no. : 3m Chamber Data no. : 67
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11nHT40 2422MHz Tx Mode



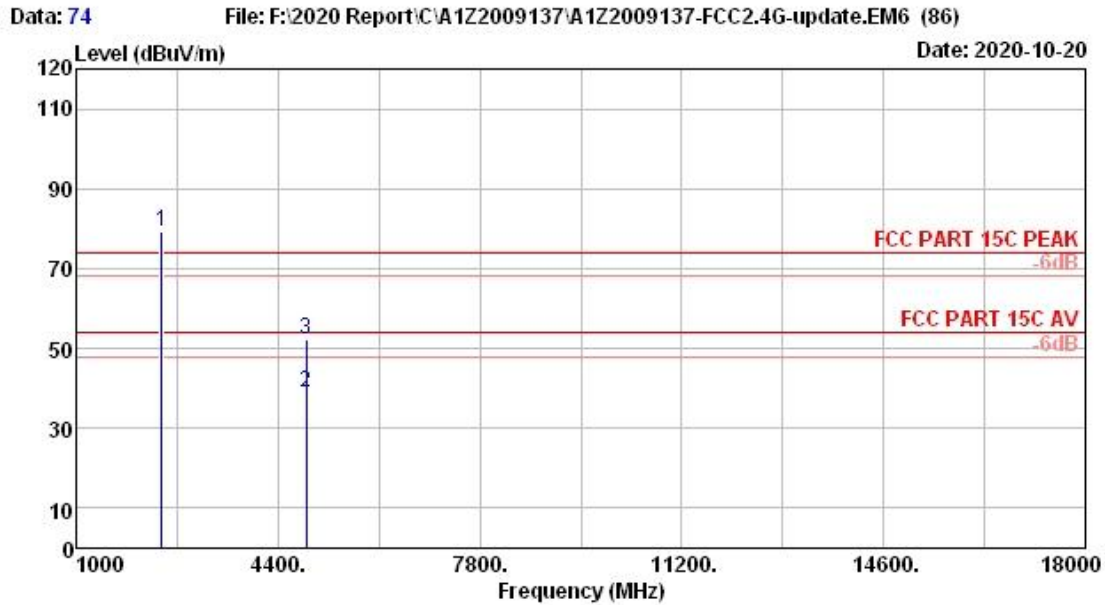
Site no. : 3m Chamber Data no. : 68
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11nHT40 2422MHz Tx Mode

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	27.86	6.00	78.86	33.47	79.25	-----	-----	Peak
2	4844.00	32.54	7.42	33.21	33.18	39.99	54.00	14.01	Average
3	4844.00	32.54	7.42	45.34	33.18	52.12	74.00	21.88	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.



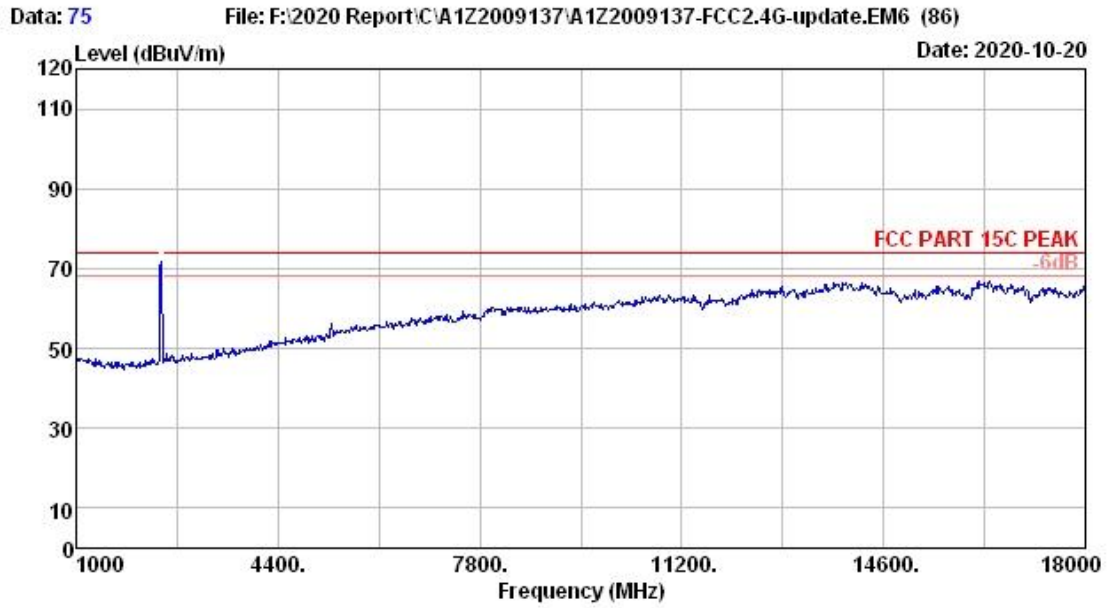
Site no. : 3m Chamber Data no. : 73
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11nHT40 2437MHz Tx Mode



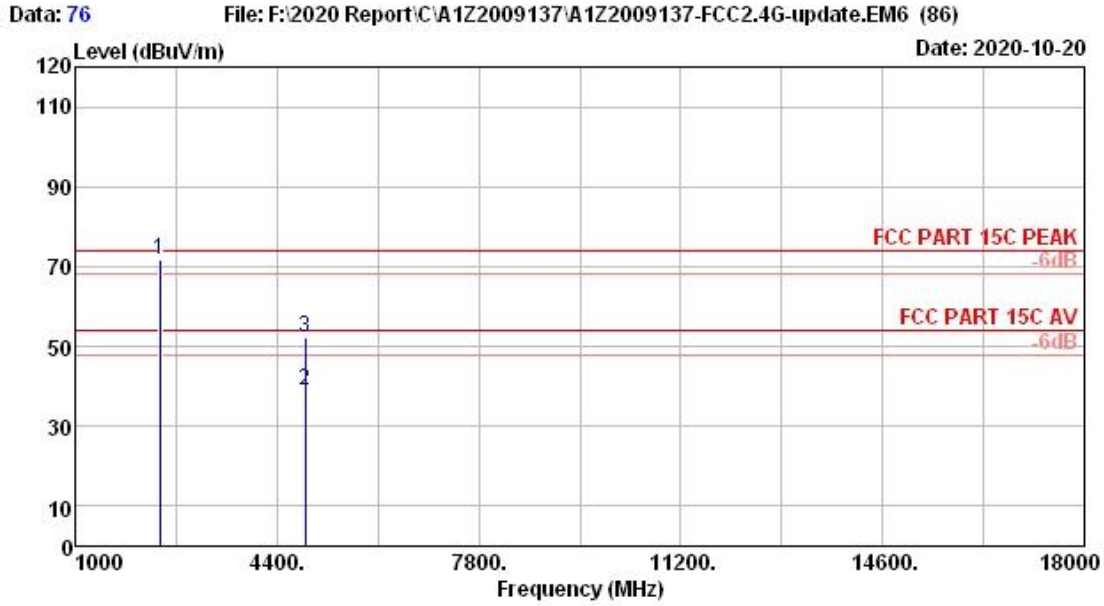
Site no. : 3m Chamber Data no. : 74
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11nHT40 2437MHz Tx Mode

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	27.90	6.01	78.62	33.47	79.06	-----	-----	Peak
2	4874.00	32.55	7.44	32.11	33.19	38.91	54.00	15.09	Average
3	4874.00	32.55	7.44	45.25	33.19	52.05	74.00	21.95	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.



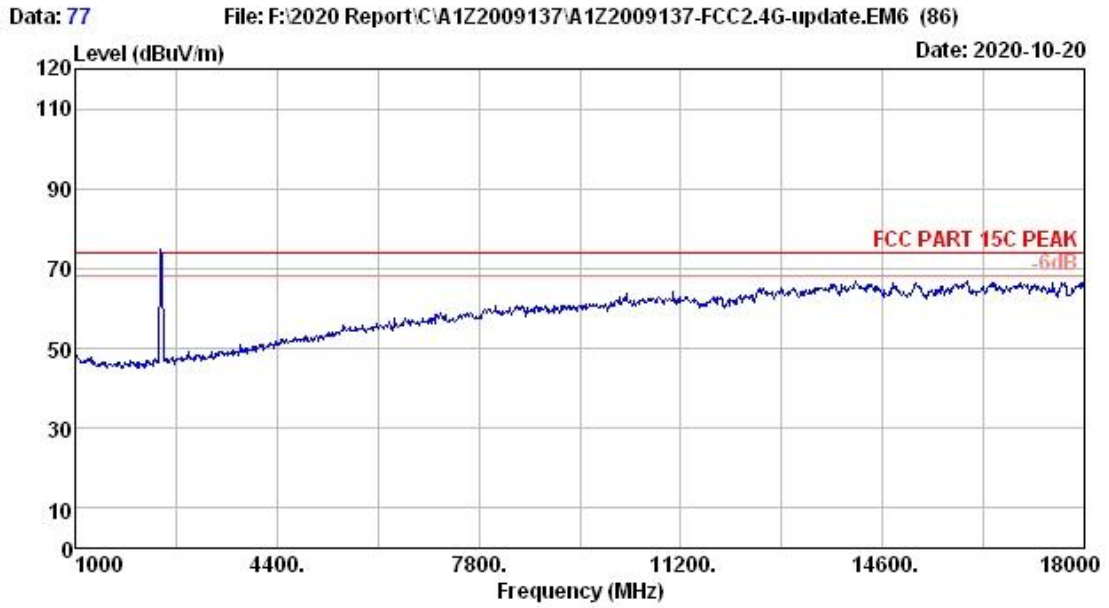
Site no. : 3m Chamber Data no. : 75
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11nHT40 2437MHz Tx Mode



Site no. : 3m Chamber Data no. : 76
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11nHT40 2437MHz Tx Mode

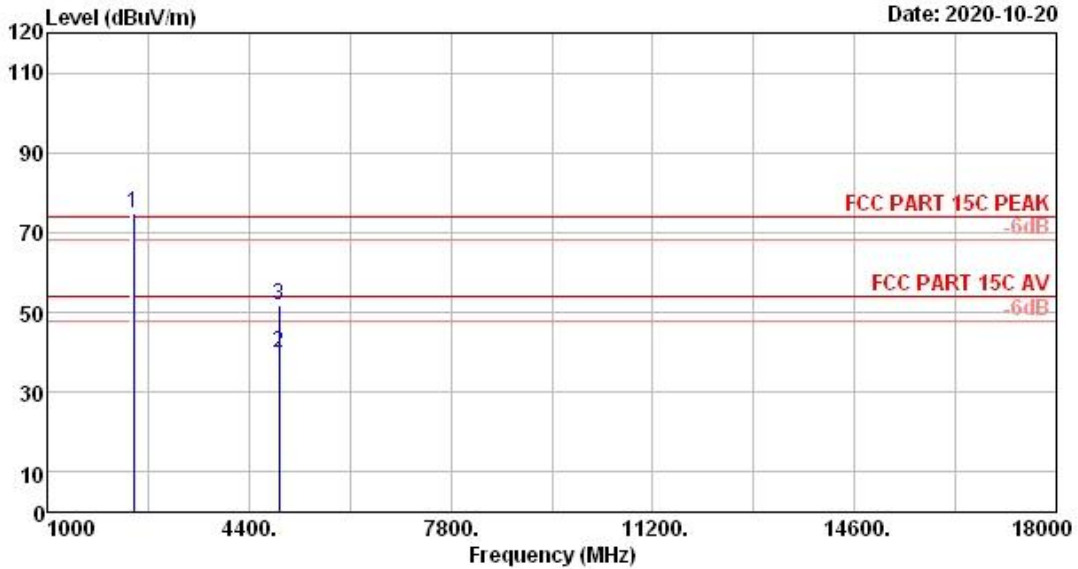
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Amp factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2428.00	27.86	6.00	71.47	33.47	71.86	-----	-----	Peak
2	4874.00	32.55	7.44	32.24	33.19	39.04	54.00	14.96	Average
3	4874.00	32.55	7.44	45.23	33.19	52.03	74.00	21.97	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 2020 MCTD1209-3007 Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11nHT40 2452MHz Tx Mode

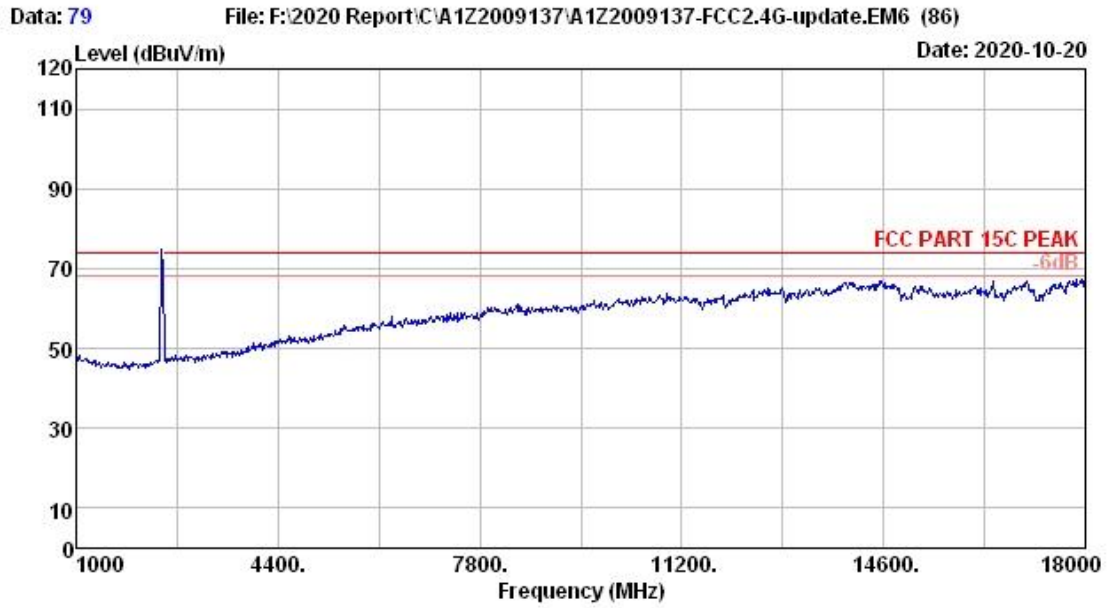
Data: 78 File: F:\2020 Report\C\A1Z2009137\A1Z2009137-FCC2.4G-update.EM6 (86) Date: 2020-10-20



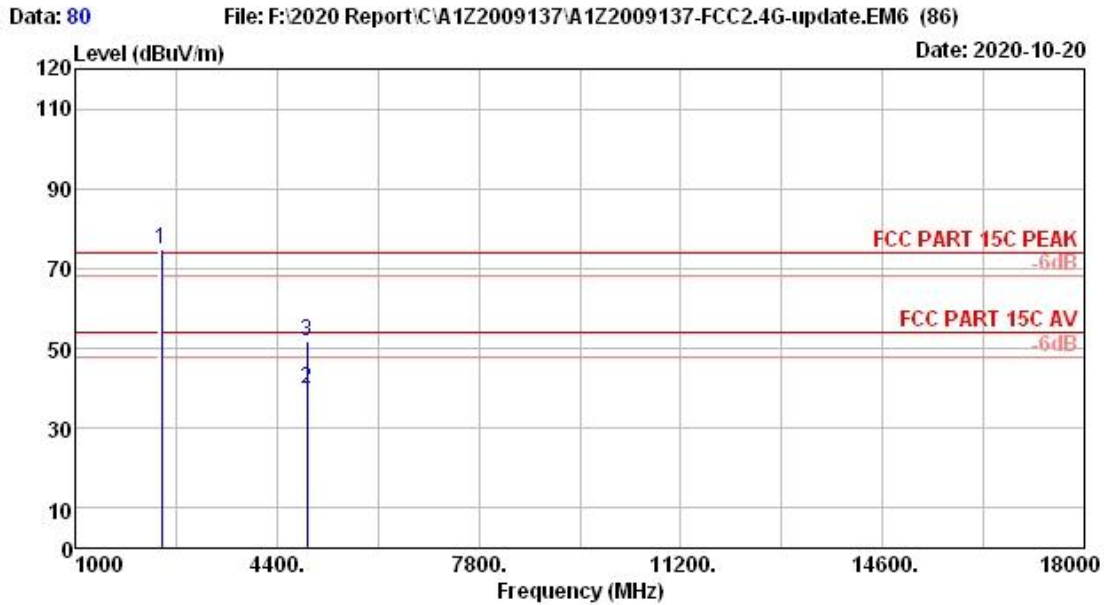
Site no. : 3m Chamber Data no. : 78
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/60Hz
 Test Mode : 802.11nHT40 2452MHz Tx Mode

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	27.90	6.01	74.40	33.47	74.84	-----	-----	Peak
2	4904.00	32.57	7.46	33.19	33.19	40.03	54.00	13.97	Average
3	4904.00	32.57	7.46	45.04	33.19	51.88	74.00	22.12	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.



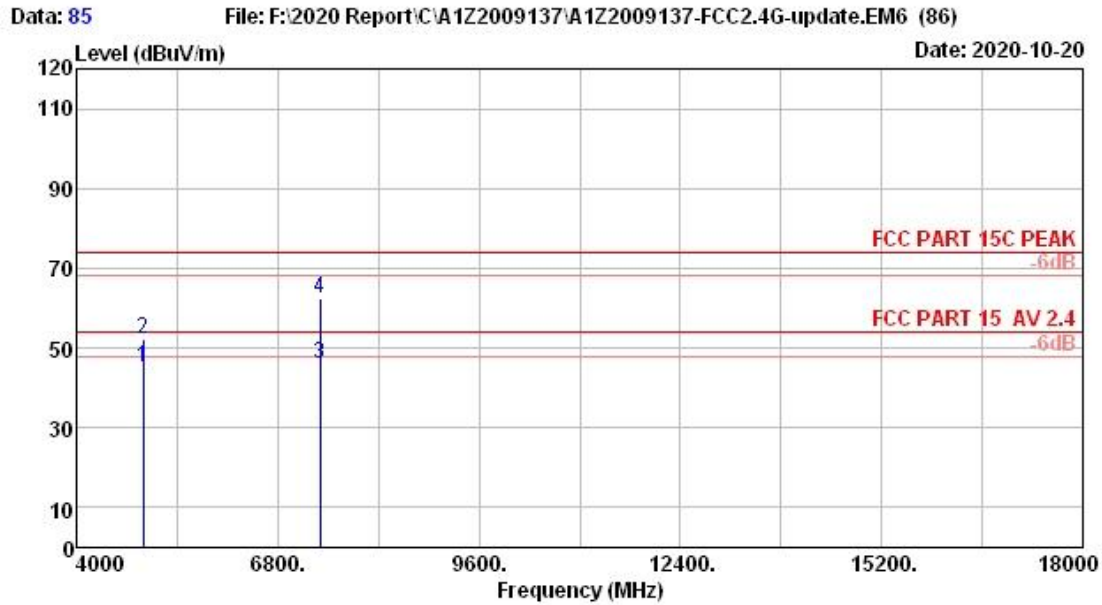
Site no. : 3m Chamber Data no. : 79
Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.1°C/51.5% Engineer : Garry
Power rating : DC 5V From Notebook Input AC 120V/60Hz
Test Mode : 802.11nHT40 2452MHz Tx Mode



Site no. : 3m Chamber Data no. : 80
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/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	27.90	6.01	74.31	33.47	74.75	-----	-----	Peak
2	4904.00	32.57	7.46	33.09	33.19	39.93	54.00	14.07	Average
3	4904.00	32.57	7.46	45.15	33.19	51.99	74.00	22.01	Peak

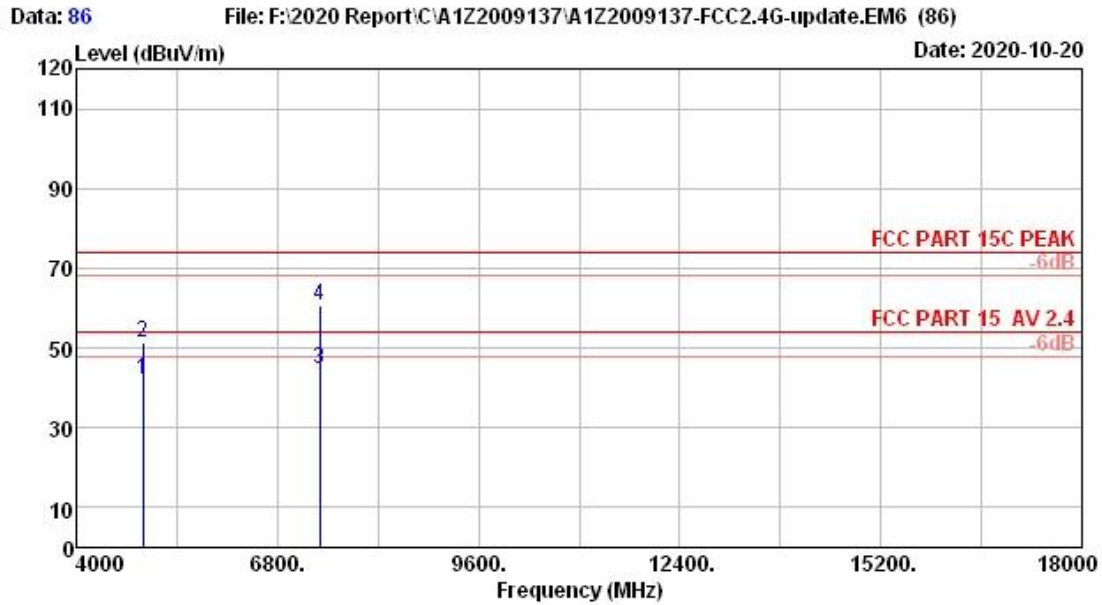
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading - Amp factor.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 3m Chamber Data no. : 85
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/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	4924.00	32.57	7.47	38.26	33.19	45.11	54.00	8.89	Average
2	4924.00	32.57	7.47	45.38	33.19	52.23	74.00	21.77	Peak
3	7386.00	36.08	8.90	34.27	33.04	46.21	54.00	7.79	Average
4	7386.00	36.08	8.90	50.46	33.04	62.40	74.00	11.60	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. : 86
 Dis. / Ant. : 3m 2020 MCTD1209-3007 Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : 23.1°C/51.5% Engineer : Garry
 Power rating : DC 5V From Notebook Input AC 120V/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	4924.00	32.57	7.47	35.29	33.19	42.14	54.00	11.86	Average
2	4924.00	32.57	7.47	44.31	33.19	51.16	74.00	22.84	Peak
3	7386.00	36.08	8.90	32.58	33.04	44.52	54.00	9.48	Average
4	7386.00	36.08	8.90	48.73	33.04	60.67	74.00	13.33	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	Apr.12,20	1 Year
2.	Attenuator	Agilent	8491B	MY39269201	Oct.12,20	1 Year
3.	RF Cable	EMCI	EMC102-KM-KM 3500	170702	Apr.12,20	1 Year

5.2. Limit

If maximum conducted (average) output power was used to determine compliance as described in ANSI C63.10 clause 11.9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc).

5.3. Test Procedure

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.

5.4. Test result

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

EUT: WiFi module		
M/N: U9W34		
Test date: 2021-1-14	Pressure: 102.2 ±1.0 kpa	Humidity: 51.3 ±3.0%
Tested by: Leo	Test site: RF site	Temperature: 22.8 ±0.6 °C