



FCC ID: 2AF3K-SPD1

AUDIX Technology (Shenzhen) Co., Ltd.

FCC PART 15C TEST REPORT FOR CERTIFICATION
On Behalf of

Square Inc.

POS Terminal

SPD1-XX

FCC ID: 2AF3K-SPD1

Prepared for : Square Inc.
1455 Market St. Suite 600 San Francisco, California United
States 94103

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Date of Test : Sep.18~29, 2018
Date of Report : Oct.12, 2018

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TEST REPORT CERTIFICATION

Applicant : Square Inc.
 Manufacturer : Square Inc.
 Product : POS Terminal
 FCC ID : 2AF3K-SPD1
 (A) Model No. : SPD1-XX
 (B) Serial No. : N/A
 (C) Test Voltage : DC 20V From Adapter 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 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 : Sep.18~29, 2018 Report of date: Oct.12, 2018

Prepared by : Monica Liu Reviewed by : Sunny Jin
Monica Liu / Assistant Sunny Lu / Deputy Manager



Approved & Authorized Signer :

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 Device (EUT)

Product : POS Terminal

Model No. : SPD1-XX

FCC ID : 2AF3K-SPD1

Radio : IEEE802.11 a/b/g/n/ac; Bluetooth V3.0+EDR; Bluetooth V4.2; NFC

Operation Frequency : IEEE 802.11a:
5180MHz—5240MHz; 5260MHz—5320MHz
5500MHz—5700MHz; 5745MHz—5825MHz
IEEE 802.11ac VHT20:
5180MHz—5240MHz; 5260MHz—5320MHz
5500MHz—5700MHz; 5745MHz—5825MHz
IEEE 802.11ac VHT40:
5190MHz—5230MHz; 5270MHz—5310MHz
5510MHz—5670MHz; 5755MHz—5795MHz
IEEE 802.11ac VHT80: 5210MHz, 5290MHz; 5530MHz—5610MHz;
5775MHz
IEEE 802.11b: 2412MHz—2462MHz
IEEE 802.11g: 2412MHz—2462MHz
IEEE802.11nHT20: 2412MHz—2462MHz;
5180MHz—5240MHz; 5260MHz—5320MHz
5500MHz—5700MHz; 5745MHz—5825MHz
IEEE802.11nHT40:
5190MHz—5230MHz; 5270MHz—5310MHz
5510MHz—5670MHz; 5755MHz—5795MHz
Bluetooth : 2402-2480MHz
NFC: 13.56MHz

Modulation Technology : IEEE 802.11b: DSSS(CCK,DQPSK,DBPSK)
IEEE 802.11a/g: OFDM(64QAM, 16QAM, QPSK, BPSK)
IEEE 802.11ac VHT20, VHT40, VHT80: OFDM(16QAM, 64QAM,
256QAM, QPSK, BPSK)
IEEE 802.11n HT20, HT40: OFDM (64QAM, 16QAM,QPSK,BPSK)
Bluetooth V3.0+EDR: GFSK, $\pi/4$ DQPSK,8-DPSK
Bluetooth V4.2:GFSK
NFC: ASK

Antenna : PIFA Antenna,
Assembly Gain Bluetooth: 1.99dBi
WIFI 2.4GHz:ANT 0:1.99dBi; ANT 1: 4.06dBi
WIFI 5GHz:
Band 1: ANT 0: 3.07dBi; ANT 1: 5.05dBi
Band 2: ANT 0: 3.07dBi; ANT 1: 5.05dBi
Band 3: ANT 0: 3.38dBi; ANT 1: 6.18dBi
Band 4: ANT 0: 2.96dBi; ANT 1: 6.58dBi

Applicant : Square Inc.
1455 Market St. Suite 600 San Francisco, California United States 94103

Manufacturer : Square Inc.
1455 Market St. Suite 600 San Francisco, California United States 94103

Factory : Fu Tai Hua Industry (ShenZhen) Co., Ltd.
5/F, Building 11, G Area, No. 2, 2nd Donghuan Road, Longhua District,
Shenzhen, Guangdong Province, P.R. China

Rechargeable Li-ion Battery : Manufacturer: Getac Technology(Kunshan) Co., Ltd. M/N: 2ICR19/66;
Output: DC 7.2V, 3135mAh(22.57Wh).

Power Adapter : Manufacturer: Dongguan Fuqiang Electronics Co., Ltd., M/N: SWD4-01;
Input: 100-240V~, 50/60Hz, 1.4A;
Output: 5V dc, 3.0A; 9V dc, 3.0A; 15V dc, 3.0A; 20V dc, 3.0A;
Cable: Unshielded, Detachable, 1.2m

Accessory Hub : Manufacturer: Square, Inc., M/N: SHD3-01;
Cable: Unshielded, Detachable, 1.25m

Power Cable : Unshielded, Detachable, 1.3m

Date of Test : Sep.18~29, 2018

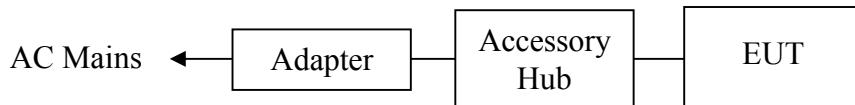
Date of Receipt : Sep.15, 2018

Sample Type : Prototype production

2.2. Tested Supporting System Details

[None]

2.3. Block diagram of connection between the EUT and simulators



(EUT: POS Terminal)

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 |

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 device support Antenna switched diversity and can not working at the same time, choose Ant 0 which has the maximum power for the radiated emission and band edge compliance 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, 2019

: Certificated by FCC USA.
 : Designation No.: CN5022
 Valid Date: Mar.31, 2019

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

| Test Item | Uncertainty |
|---|-----------------------------------|
| Uncertainty for Conduction emission test in No. 1 Conduction | 3.6dB (150kHz to 30MHz) |
| Uncertainty for Radiation Emission test in 3m chamber | 4.0dB(30~200MHz, Polarization: H) |
| | 4.0dB(30~200MHz, Polarization: V) |
| | 4.4dB(200M~1GHz, Polarization: H) |
| | 4.4dB(200M~1GHz, Polarization: V) |
| Uncertainty for Radiation Emission test in 3m chamber | 5.0dB (1~6GHz, Distance: 3m) |
| | 5.4dB (6~18GHz, Distance: 3m) |
| | 5.4dB (Above 18GHz, Distance: 3m) |
| Uncertainty for Radiated Spurious Emission test in RF chamber | 3.6dB |
| 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°C |
| | 3% |

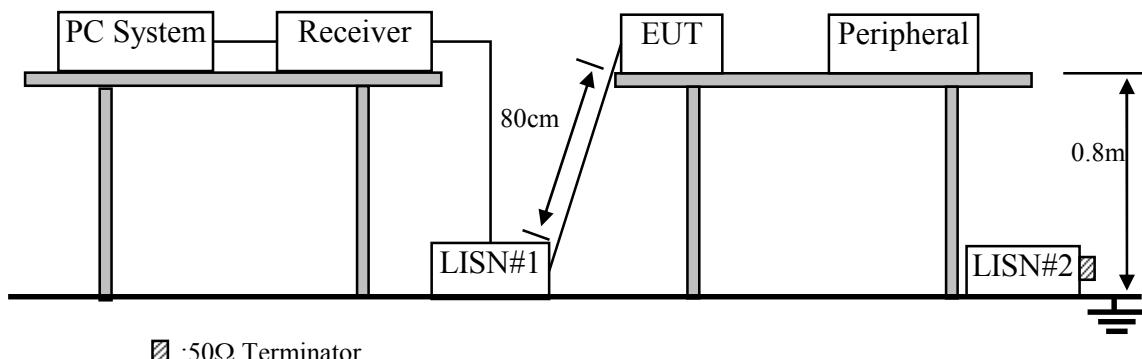
3. POWER LINE CONDUCTED EMISSION TEST

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 | 1 Year |
| 2. | Test Receiver | Rohde & Schwarz | ESCI | 100842 | Apr.23,18 | 1 Year |
| 3. | L.I.S.N.#1 | Rohde & Schwarz | ENV216 | 102160 | Jan.12.18 | 1 Year |
| 4. | L.I.S.N.#2 | Kyoritsu | K NW-403D | 8-1750-2 | Apr.23,18 | 1 Year |
| 5. | Terminator | Hubersuhner | 50Ω | No.1 | Apr.23,18 | 1 Year |
| 6. | Terminator | Hubersuhner | 50Ω | No.2 | Apr.23,18 | 1 Year |
| 7. | RF Cable | Fujikura | RG55/U | No.2 | Apr.23.18 | 1 Year |
| 8. | Coaxial Switch | Anritsu | MP59B | 6201397223 | Apr.23,18 | 1 Year |
| 9. | 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. POS Terminal (EUT)

Model No. : SPD1-01
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

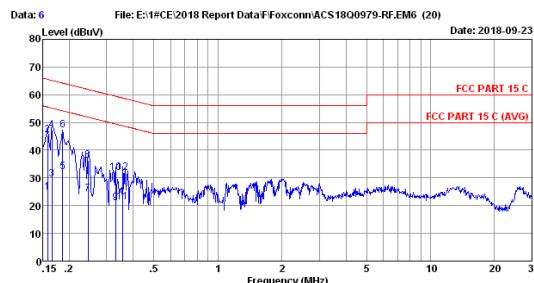
The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power Via PC connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs).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

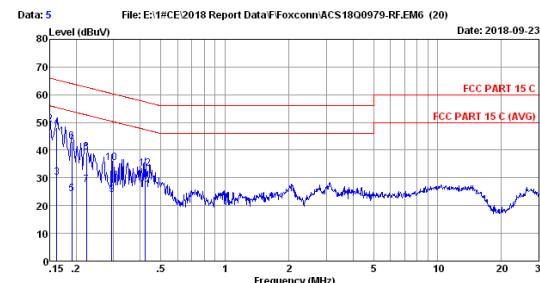
PASS. (All emissions not reported below are too low against the prescribed limits.)



Site no :1# CE Data No :6
Dis./Lisn :2018 LISN ENV216-L
Limit :FCC PART 15 C
Env./Ins. :21.0°C/55%
EUT :POS Terminal M/N:SPDI-01
Power Rating :AC 120V/60Hz
Test Mode :WIFI 2.4G

| No | Freq (MHz) | LISN Factor | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV) | Limits (dBuV) | Margin (dB) | Remark |
|----|------------|-------------|-----------------|----------------|-----------------------|---------------|-------------|---------|
| 1 | 0.158 | 9.56 | 0.15 | 15.20 | 24.91 | 55.56 | 30.65 | Average |
| 2 | 0.158 | 9.56 | 0.15 | 35.73 | 45.44 | 65.56 | 20.12 | QP |
| 3 | 0.166 | 9.53 | 0.19 | 19.80 | 29.52 | 55.16 | 25.64 | Average |
| 4 | 0.166 | 9.53 | 0.19 | 37.60 | 47.32 | 65.16 | 17.84 | QP |
| 5 | 0.186 | 9.53 | 0.19 | 22.60 | 32.32 | 54.20 | 21.88 | Average |
| 6 | 0.186 | 9.53 | 0.19 | 37.65 | 47.37 | 64.20 | 16.83 | QP |
| 7 | 0.246 | 9.35 | 0.19 | 14.70 | 24.24 | 51.91 | 27.67 | Average |
| 8 | 0.246 | 9.35 | 0.19 | 26.73 | 36.27 | 61.91 | 25.64 | QP |
| 9 | 0.330 | 9.20 | 0.19 | 11.50 | 20.89 | 49.44 | 28.55 | Average |
| 10 | 0.330 | 9.20 | 0.19 | 22.49 | 31.88 | 59.44 | 27.56 | QP |
| 11 | 0.356 | 9.35 | 0.19 | 11.70 | 21.24 | 48.78 | 27.54 | Average |
| 12 | 0.356 | 9.35 | 0.19 | 22.38 | 31.92 | 56.78 | 26.86 | 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# CE Data No :5
Dis./Lisn :2018 LISN ENV216-N
Limit :FCC PART 15 C
Env./Ins. :21.0°C/55%
EUT :POS Terminal M/N:SPDI-01
Power Rating :AC 120V/60Hz
Test Mode :WIFI 2.4G

| No | Freq (MHz) | LISN Factor | Cable Loss (dB) | Reading (dBuV) | Emission Level (dBuV) | Limits (dBuV) | Margin (dB) | Remark |
|----|------------|-------------|-----------------|----------------|-----------------------|---------------|-------------|---------|
| 1 | 0.150 | 9.49 | 0.15 | 19.70 | 29.34 | 56.00 | 26.66 | Average |
| 2 | 0.150 | 9.49 | 0.15 | 39.70 | 49.34 | 66.00 | 16.66 | QP |
| 3 | 0.162 | 9.49 | 0.19 | 20.30 | 29.98 | 55.36 | 25.38 | Average |
| 4 | 0.162 | 9.49 | 0.19 | 38.50 | 48.18 | 65.36 | 17.18 | QP |
| 5 | 0.190 | 9.48 | 0.19 | 14.60 | 24.27 | 54.02 | 29.75 | Average |
| 6 | 0.190 | 9.48 | 0.19 | 33.43 | 43.18 | 64.02 | 20.92 | QP |
| 7 | 0.223 | 9.47 | 0.19 | 17.90 | 27.56 | 52.70 | 25.14 | Average |
| 8 | 0.223 | 9.47 | 0.19 | 29.53 | 39.19 | 62.70 | 23.51 | QP |
| 9 | 0.294 | 9.44 | 0.19 | 14.40 | 24.03 | 50.41 | 26.38 | Average |
| 10 | 0.294 | 9.44 | 0.19 | 25.69 | 35.32 | 60.41 | 25.09 | QP |
| 11 | 0.422 | 9.41 | 0.19 | 16.00 | 25.60 | 47.41 | 21.81 | Average |
| 12 | 0.422 | 9.41 | 0.19 | 23.90 | 33.58 | 57.41 | 23.91 | 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 | AUDIX | N/A | N/A | Jun.19,18 | 1 Year |
| 2. | Signal Analyzer | Rohde & Schwarz | FSV30 | 104051 | Apr.23,18 | 1 Year |
| 3. | EMI Test Receiver | Rohde & Schwarz | ESR7 | 101547 | Apr.23,18 | 1 Year |
| 4. | Amplifier | HP | 8447D | 2648A04738 | Apr.23,18 | 1 Year |
| 5. | Tri-log-Broadband Antenna | Schwarzbeck | VULB 9168 | 710 | Aug.22,18 | 1 Year |
| 6. | Loop Antenna | Chase | HLA6120 | 1062 | Oct.17,17 | 1 Year |
| 7. | RF Cable | SPUMA | CFD400NL-LW | No.3 | Sep.02,18 | 1 Year |
| 8. | Coaxial Switch | Anritsu | MP59B | 6201397222 | Apr.23,18 | 1 Year |
| 9. | Test Software | AUDIX | e3 | 6.2009-5-21a(n) | N/A | N/A |

Note: N/A means Not applicable.

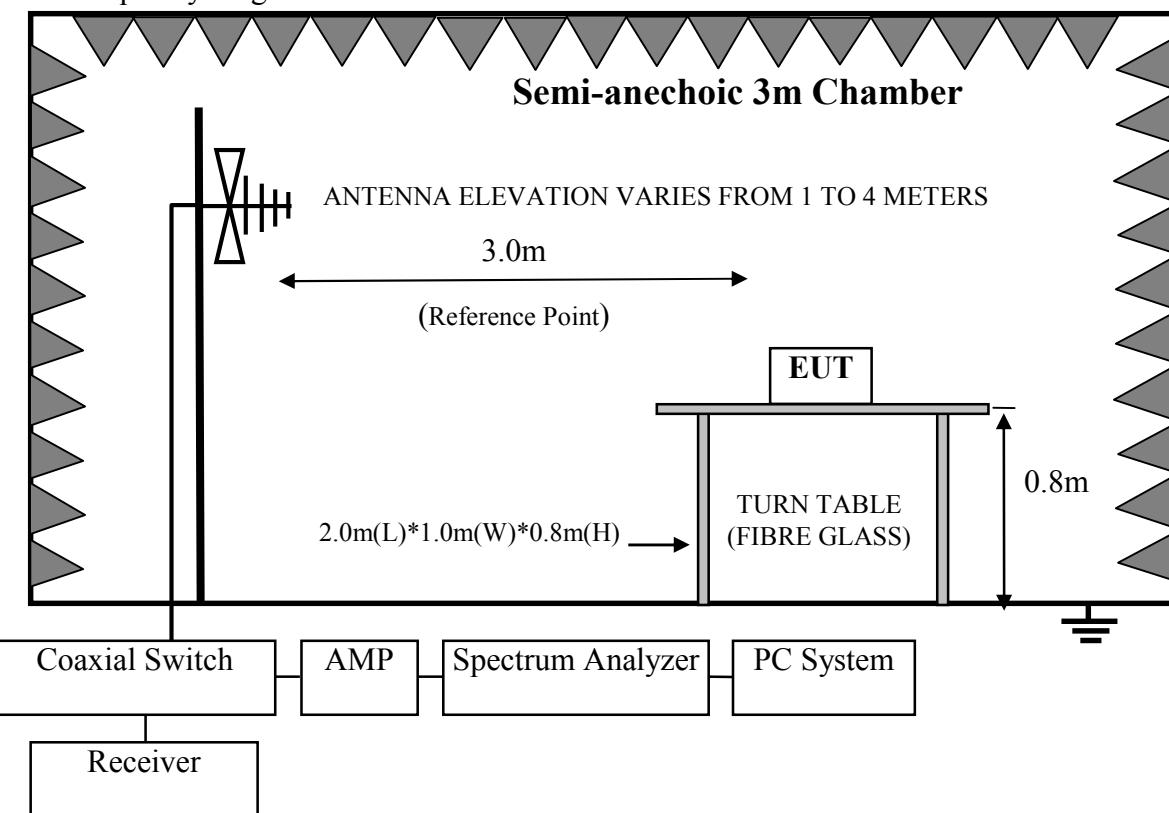
4.1.2. For frequency range 1GHz~40GHz (In 3m Anechoic Chamber)

| Item | Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Cal. Interval |
|------|---------------|--------------|-------------------|-----------------|-----------|---------------|
| 1. | RF Chamber | AUDIX | N/A | N/A | May.17,18 | 1 Year |
| 2. | EMC Analyzer | Agilent | N9030A | MY51380221 | Sep.08,18 | 1 Year |
| 3. | Horn Antenna | ETS | 3115 | 9510-4580 | Dec.01,17 | 1 Year |
| 4. | Amplifier | Agilent | 8449B | 3008A00863 | Apr.23,18 | 1 Year |
| 5. | Amplifier | EMCI | EMC184040SE | 980507 | Jul.07,18 | 1 Year |
| 6. | RF Cable | Hubersuhner | EMC102-KM-KM-3500 | 170702 | Oct.15,17 | 1 Year |
| 7. | RF Cable | Hubersuhner | N/A | No.5 | Oct.15,17 | 1 Year |
| 8. | Horn Antenna | ETS | 3116 | 00060089 | Dec.03,17 | 1 Year |
| 9. | Test Software | AUDIX | e3 | 6.2009-5-21a(n) | N/A | N/A |

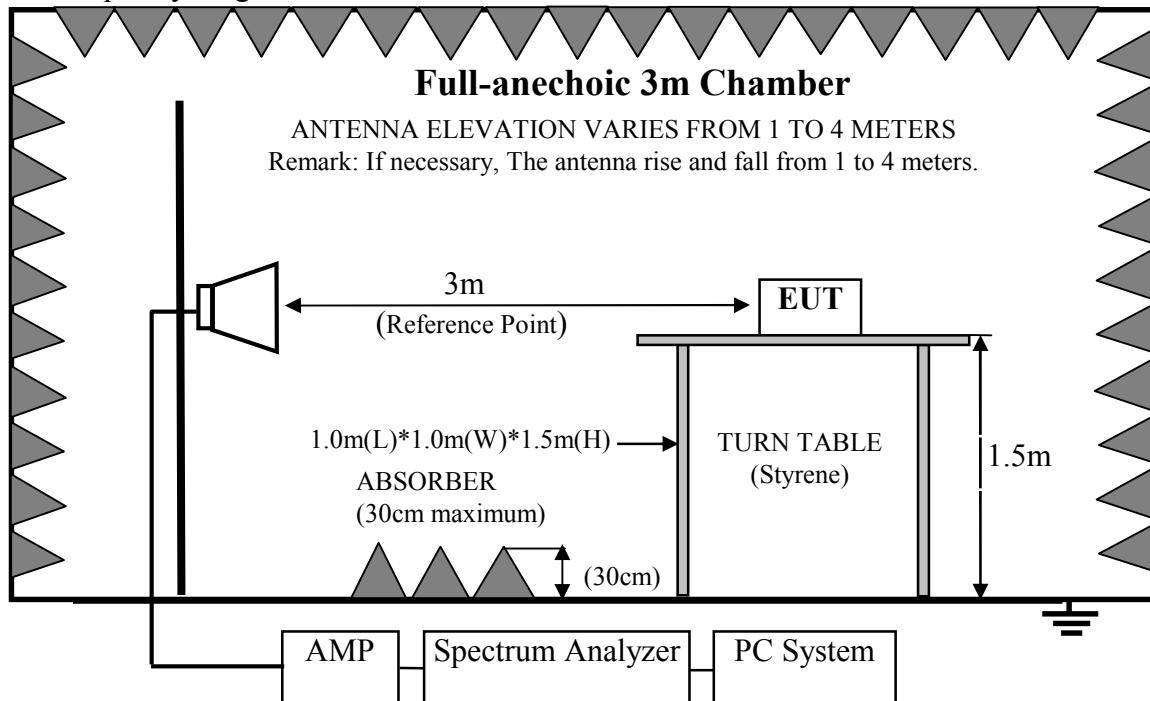
Note: N/A means Not applicable.

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 dB μ V = 20 log Emission level μ V/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. POS Terminal (EUT)

Model No. : SPD1-01

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 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.

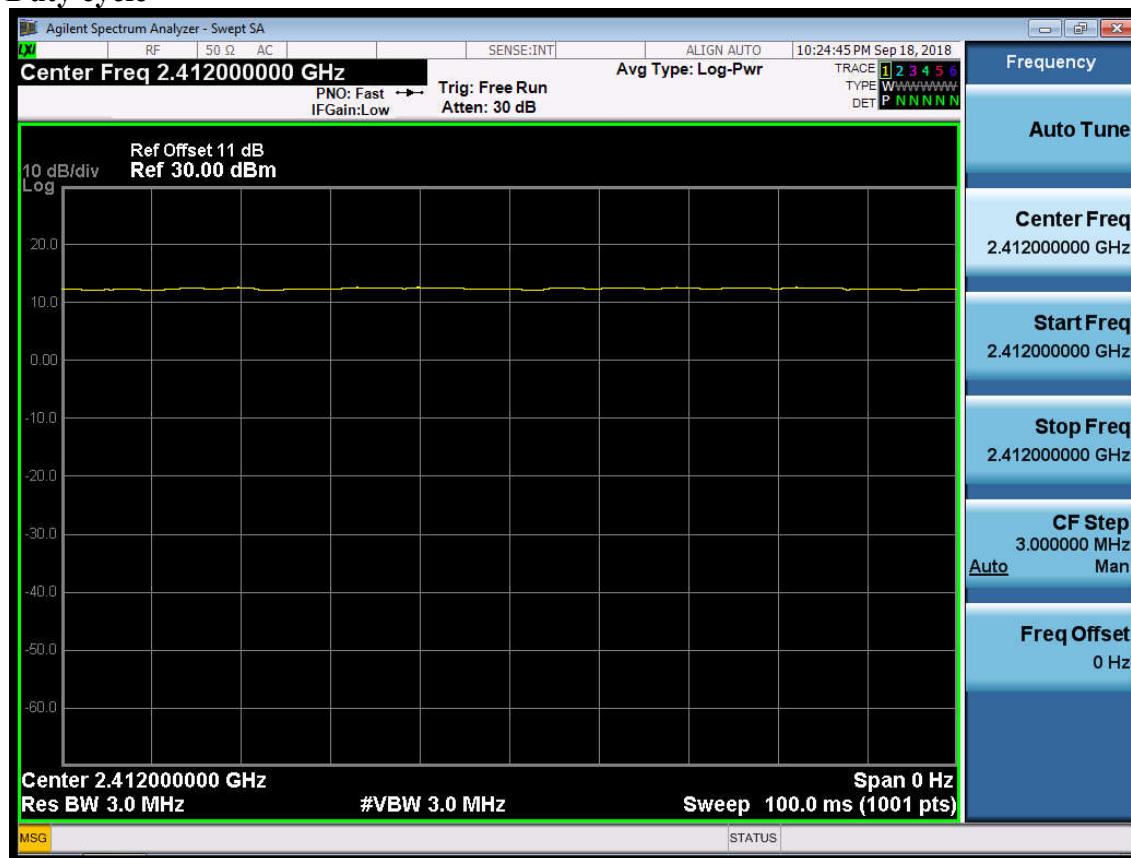
4.7.Radiated Emission Test Results

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%.

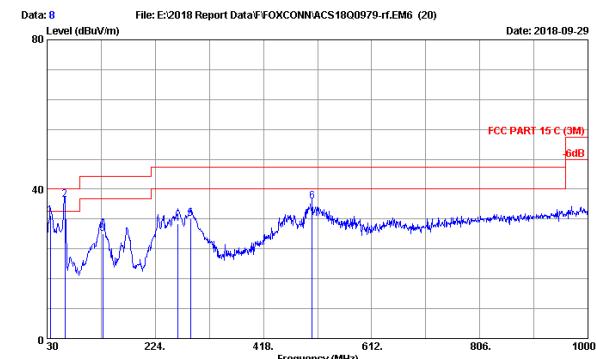
Frequency: 30MHz~1GHz



Site no. : 3m Chamber Data no. : 7
Dim. / Ant. : 3m 2018 VULB 9168-710 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 C (3M)
Env. / Ins. : 22.7C/52% Engineer : Lynn
EUT : POS Terminal M/N:SPD1-01
Power rating : AC 120V/60Hz
Test Mode : WIFI2.4G Tx Mode

| No. | Freq. (MHz) | Ant. (dB/m) | Cable (dB) | Emission | | | Margin (dB) | Remark |
|-----|----------------|----------------|---------------|----------------|--------------|---------------------|-------------------|--------------------|
| | | | | Factor (dB) | Loss (dB) | Reading (dBuV/m) | Level (dBuV/m) | Limits (dBuV/m) |
| 1 | 30.000 | 19.10 | 0.58 | 11.41 | 31.09 | 40.00 | 8.91 | QP |
| 2 | 37.760 | 19.74 | 0.65 | 7.56 | 27.95 | 40.00 | 12.05 | QP |
| 3 | 130.880 | 18.02 | 1.26 | 11.45 | 30.73 | 43.50 | 12.77 | QP |
| 4 | 232.730 | 17.68 | 1.93 | 14.88 | 34.49 | 46.00 | 11.51 | QP |
| 5 | 284.140 | 19.48 | 2.34 | 17.03 | 38.85 | 46.00 | 7.15 | QP |
| 6 | 507.240 | 24.04 | 3.41 | 8.55 | 36.00 | 46.00 | 10.00 | QP |

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

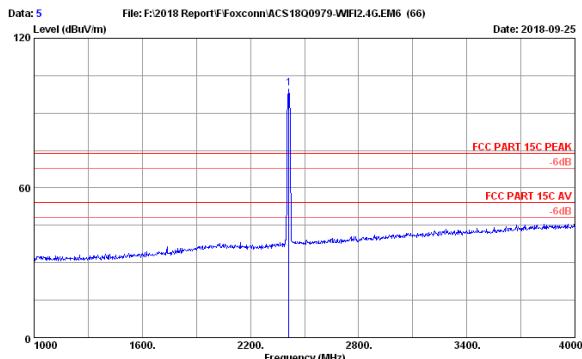


Site no. : 3m Chamber Data no. : 8
Dim. / Ant. : 3m 2018 VULB 9168-710 Ant. pol. : VERTICAL
Limit : FCC PART 15 C (3M)
Env. / Ins. : 22.7C/52% Engineer : Lynn
EUT : POS Terminal M/N:SPD1-01
Power rating : AC 120V/60Hz
Test Mode : WIFI2.4G Tx Mode

| No. | Freq. (MHz) | Ant. (dB/m) | Cable (dB) | Emission | | | Margin (dB) | Remark |
|-----|----------------|----------------|---------------|----------------|--------------|---------------------|-------------------|--------------------|
| | | | | Factor (dB) | Loss (dB) | Reading (dBuV/m) | Level (dBuV/m) | Limits (dBuV/m) |
| 1 | 35.820 | 19.58 | 0.63 | 12.71 | 32.92 | 40.00 | 7.08 | QP |
| 2 | 62.010 | 19.42 | 0.81 | 16.90 | 37.13 | 40.00 | 2.87 | QP |
| 3 | 129.910 | 17.90 | 1.25 | 8.94 | 28.09 | 43.50 | 15.41 | QP |
| 4 | 263.770 | 18.43 | 2.18 | 10.04 | 30.65 | 46.00 | 15.35 | QP |
| 5 | 287.050 | 19.54 | 2.37 | 10.10 | 32.01 | 46.00 | 13.99 | QP |
| 6 | 505.300 | 24.00 | 3.40 | 9.34 | 36.74 | 46.00 | 9.26 | QP |

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

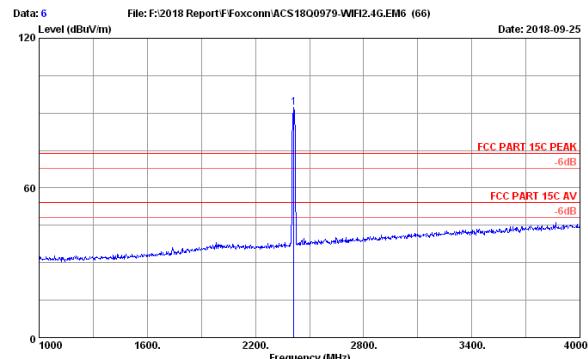
Frequency: 1GHz~18GHz



Site no. : 3m Chamber Data no. : 5
Dim. / Ant. : 3m 2017 3115(4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4°C/52.9% Engineer : Lynn
EUT : POS Terminal M/N:SPD1-01
Power rating : AC120V/60Hz
Test Mode : 802.11b 2412MHz Tx Mode

| No. | Ant. | Cable | Amp | Emission | Margin | Remark | | | | | |
|-----|---------|--------|-------|----------|--------|--------|--------|----------|----------|------|------|
| No. | Freq. | Factor | Loss | Reading | factor | Level | Limits | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 2412.00 | 27.87 | 10.31 | 94.15 | 32.53 | 99.80 | 74.00 | -25.80 | - | - | Peak |

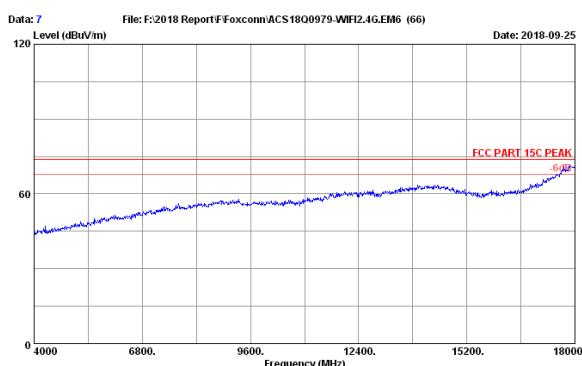
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
-Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



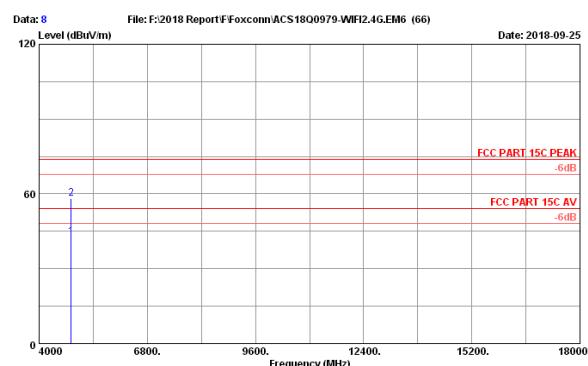
Site no. : 3m Chamber Data no. : 6
Dim. / Ant. : 3m 2017 3115(4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4°C/52.9% Engineer : Lynn
EUT : POS Terminal M/N:SPD1-01
Power rating : AC120V/60Hz
Test Mode : 802.11b 2412MHz Tx Mode

| No. | Ant. | Cable | Amp | Emission | Margin | Remark | | | | | |
|-----|---------|--------|-------|----------|--------|--------|--------|----------|----------|------|------|
| No. | Freq. | Factor | Loss | Reading | factor | Level | Limits | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 2412.00 | 27.87 | 10.31 | 86.64 | 32.53 | 92.29 | 74.00 | -18.29 | - | - | 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.



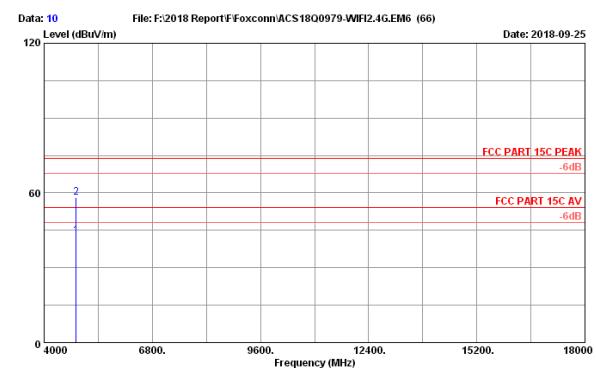
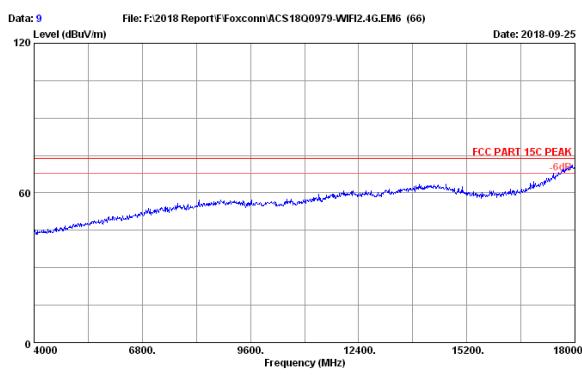
Site no. : 3m Chamber Data no. : 7
Dim. / Ant. : 3m 2017 3115(4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4°C/52.9% Engineer : Lynn
EUT : POS Terminal M/N:SPD1-01
Power rating : AC120V/60Hz
Test Mode : 802.11b 2412MHz Tx Mode



Site no. : 3m Chamber Data no. : 8
Dim. / Ant. : 3m 2017 3115(4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4°C/52.9% Engineer : Lynn
EUT : POS Terminal M/N:SPD1-01
Power rating : AC120V/60Hz
Test Mode : 802.11b 2412MHz Tx Mode

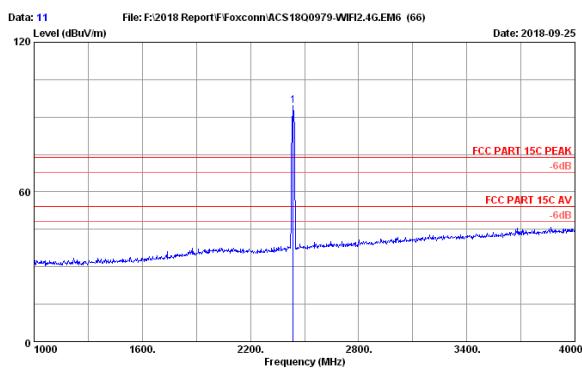
| No. | Ant. | Cable | Amp | Emission | Margin | Remark | | | | | |
|-----|---------|--------|-------|----------|--------|--------|--------|----------|----------|------|---------|
| No. | Freq. | Factor | Loss | Reading | factor | Level | Limits | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 4824.00 | 32.66 | 14.56 | 26.29 | 30.79 | 42.72 | 54.00 | 11.28 | - | - | Average |
| 2 | 4824.00 | 32.66 | 14.56 | 41.83 | 30.79 | 58.26 | 74.00 | 15.74 | - | - | 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.



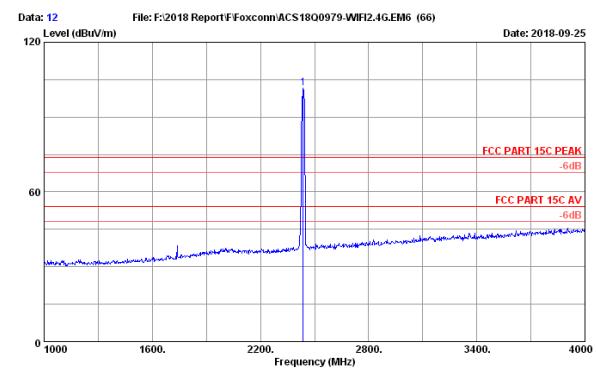
| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Amp factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-----|----------------|--------------------------|-----------------------|-------------------|-----------------------|-------------------------------|--------------------|----------------|---------|
| 1 | 4824.00 | 32.66 | 14.56 | 26.28 | 30.79 | 42.71 | 54.00 | 11.29 | Average |
| 2 | 4824.00 | 32.66 | 14.56 | 41.81 | 30.79 | 58.24 | 74.00 | 15.76 | 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.



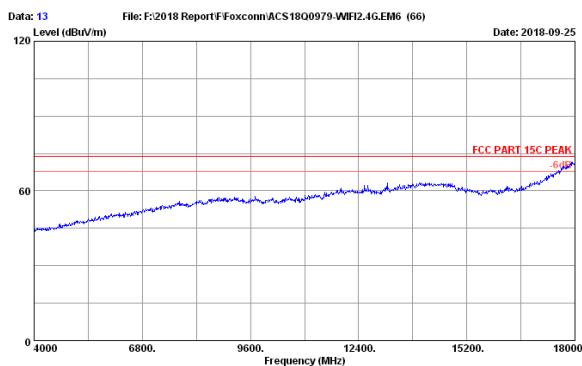
| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Amp factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-----|----------------|--------------------------|-----------------------|-------------------|-----------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 2437.00 | 28.08 | 10.38 | 88.79 | 32.53 | 94.66 | 74.00 | -20.68 | 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.

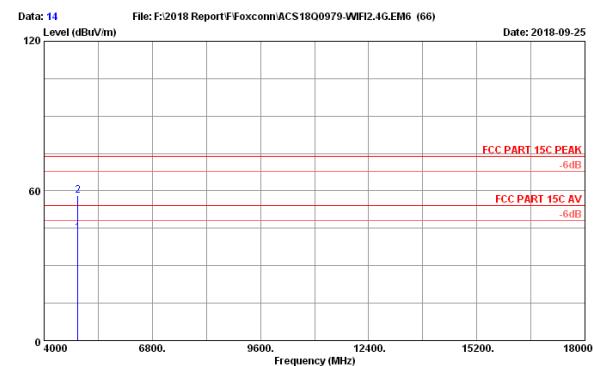


| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Amp factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-----|----------------|--------------------------|-----------------------|-------------------|-----------------------|-------------------------------|--------------------|----------------|--------|
| 1 | 2437.00 | 28.04 | 10.38 | 95.99 | 32.53 | 101.48 | 74.00 | -27.48 | 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.



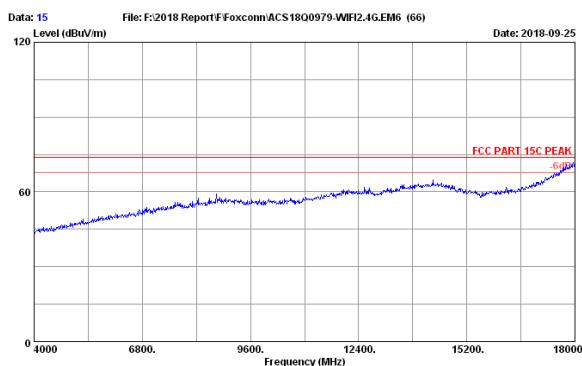
Site no. : 3m Chamber Data no. : 13
Dis. / Ant. : 3m 2017 3115(4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4°C/52.9% Engineer : Lynn
EUT : POS Terminal H/N:SPD1-O1
Power rating : AC120V/60Hz
Test Mode : 802.11b 2437MHz Tx Mode



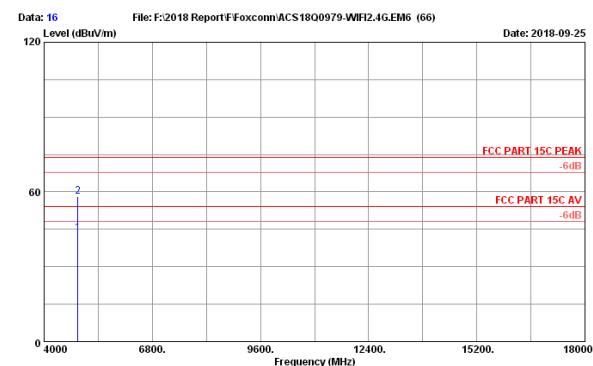
Site no. : 3m Chamber Data no. : 14
Dis. / Ant. : 3m 2017 3115(4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4°C/52.9% Engineer : Lynn
EUT : POS Terminal H/N:SPD1-O1
Power rating : AC120V/60Hz
Test Mode : 802.11b 2437MHz Tx Mode

| 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 | 4874.00 | 32.76 | 14.63 | 26.47 | 30.76 | 43.10 | 54.00 | 10.90 | Average |
| 2 | 4874.00 | 32.76 | 14.63 | 41.59 | 30.76 | 58.22 | 74.00 | 15.78 | 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.



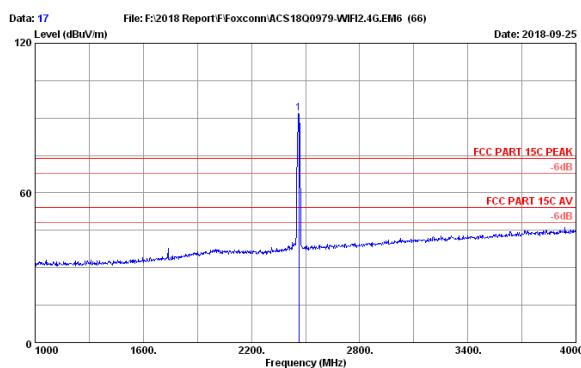
Site no. : 3m Chamber Data no. : 15
Dis. / Ant. : 3m 2017 3115(4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4°C/52.9% Engineer : Lynn
EUT : POS Terminal H/N:SPD1-O1
Power rating : AC120V/60Hz
Test Mode : 802.11b 2437MHz Tx Mode



Site no. : 3m Chamber Data no. : 16
Dis. / Ant. : 3m 2017 3115(4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4°C/52.9% Engineer : Lynn
EUT : POS Terminal H/N:SPD1-O1
Power rating : AC120V/60Hz
Test Mode : 802.11b 2437MHz Tx Mode

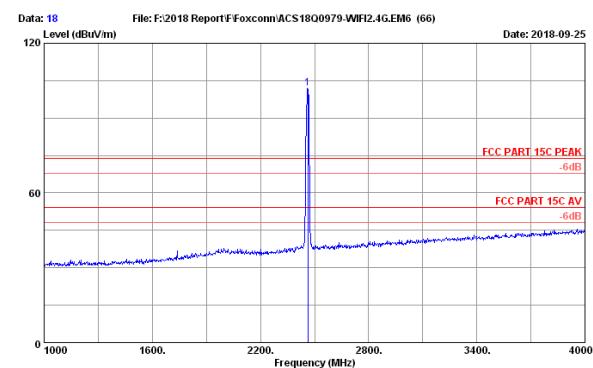
| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Amp factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-----|----------------|--------------------------|-----------------------|-------------------|-----------------------|-------------------------------|--------------------|----------------|---------|
| 1 | 4874.00 | 32.76 | 14.63 | 26.71 | 30.76 | 43.34 | 54.00 | 10.66 | Average |
| 2 | 4874.00 | 32.76 | 14.63 | 41.65 | 30.76 | 58.28 | 74.00 | 15.72 | 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.



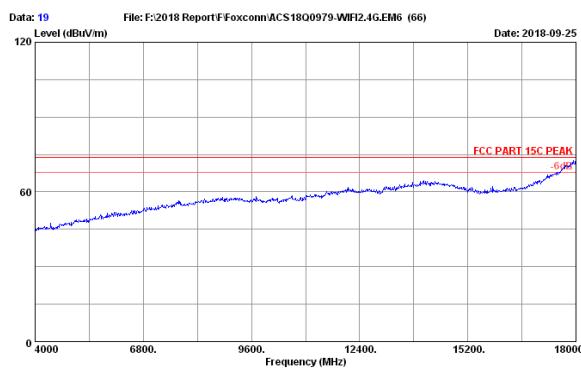
| No. | Freq. (MHz) | Ant. Factor | Cable Loss (dB/m) | Reading (dBmV) | Amp factor (dB) | Emission Level (dBmV/m) | Limits (dBmV/m) | Margin (dB) | Remark |
|-----|-------------|-------------|-------------------|----------------|-----------------|-------------------------|-----------------|-------------|--------|
| 1 | 2462.00 | 28.13 | 10.42 | 85.74 | 32.51 | 91.78 | 74.00 | -17.78 | 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.

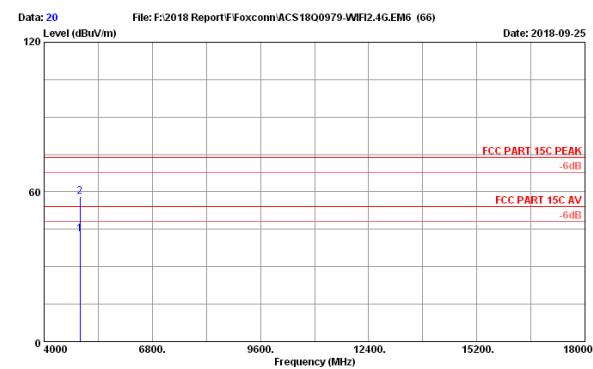


| No. | Freq. (MHz) | Ant. Factor | Cable Loss (dB/m) | Reading (dBmV) | Amp factor (dB) | Emission Level (dBmV/m) | Limits (dBmV/m) | Margin (dB) | Remark |
|-----|-------------|-------------|-------------------|----------------|-----------------|-------------------------|-----------------|-------------|--------|
| 1 | 2462.00 | 28.13 | 10.42 | 95.75 | 32.51 | 101.79 | 74.00 | -27.79 | 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.

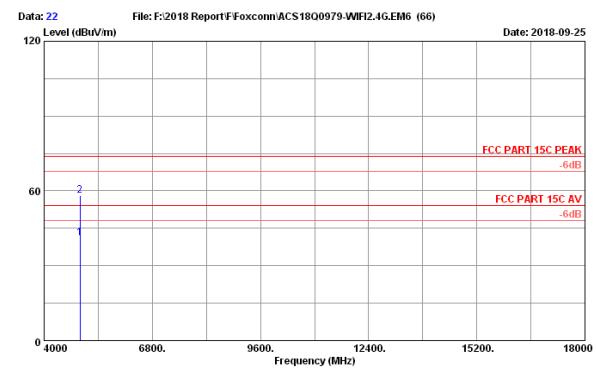
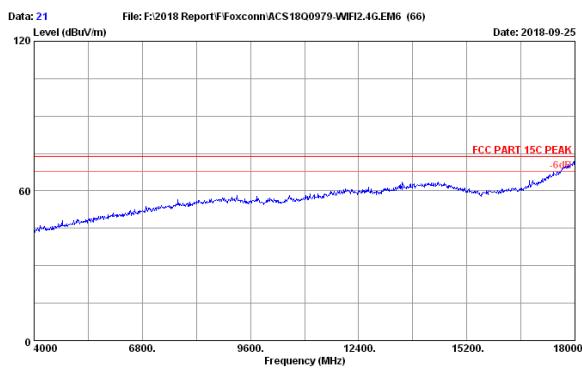


Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
-Amp factor.
2. The emission levels that are 20dB below the official limit are not reported.



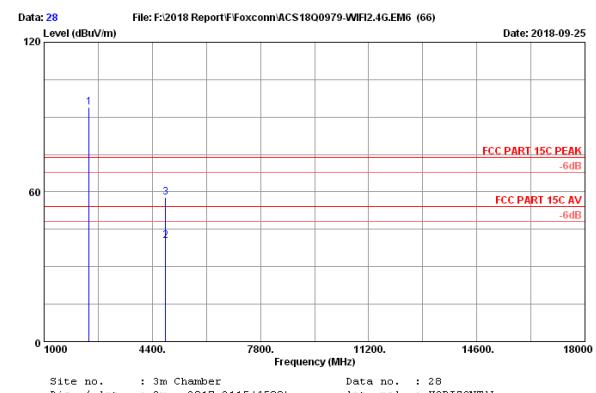
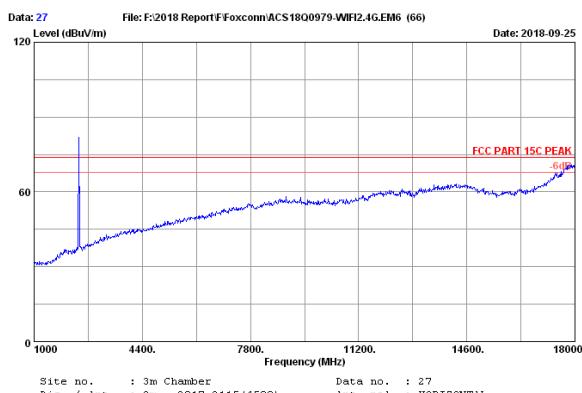
| No. | Freq. (MHz) | Ant. Factor | Cable Loss (dB/m) | Reading (dBmV) | Amp factor (dB) | Emission Level (dBmV/m) | Limits (dBmV/m) | Margin (dB) | Remark |
|-----|-------------|-------------|-------------------|----------------|-----------------|-------------------------|-----------------|-------------|---------|
| 1 | 4924.00 | 32.86 | 14.71 | 26.39 | 30.73 | 43.23 | 54.00 | 10.77 | Average |
| 2 | 4924.00 | 32.86 | 14.71 | 41.26 | 30.73 | 56.10 | 74.00 | 15.90 | 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.



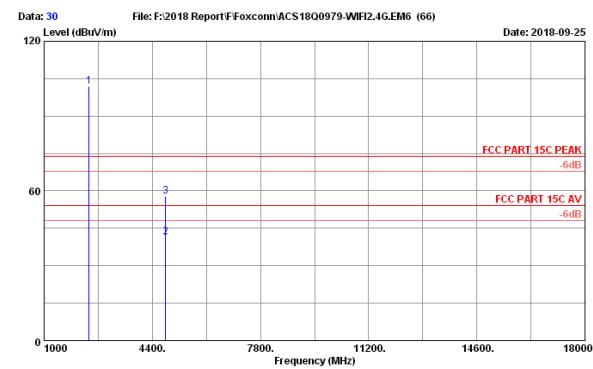
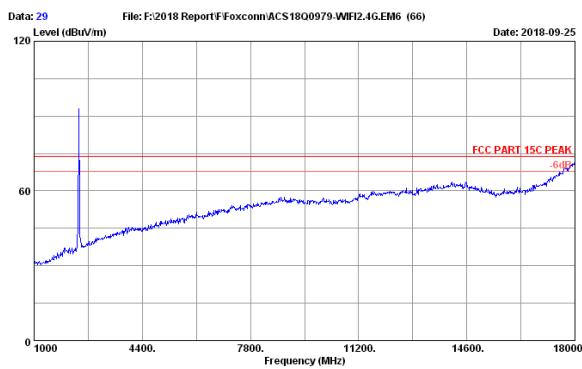
| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBmW) | Amp factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-----|----------------|--------------------------|-----------------------|-------------------|-----------------------|-------------------------------|--------------------|----------------|---------|
| 1 | 4924.00 | 32.86 | 14.71 | 24.12 | 30.73 | 40.96 | 54.00 | 13.04 | Average |
| 2 | 4924.00 | 32.86 | 14.71 | 41.32 | 30.73 | 58.16 | 74.00 | 15.84 | 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.



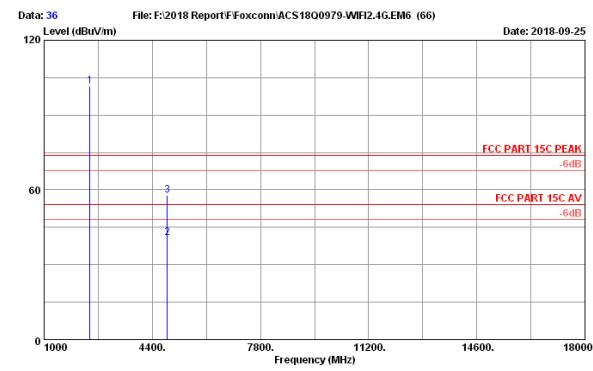
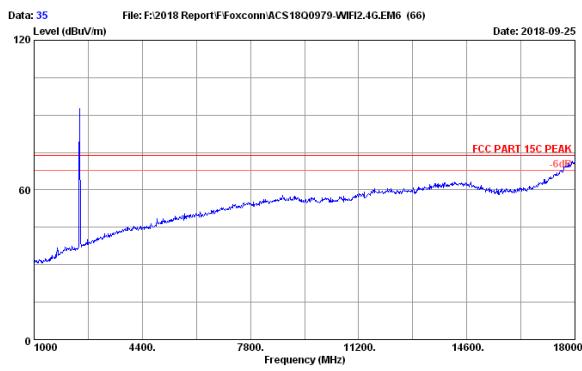
| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBmW) | Amp factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-----|----------------|--------------------------|-----------------------|-------------------|-----------------------|-------------------------------|--------------------|----------------|---------|
| 1 | 2412.00 | 27.87 | 10.31 | 88.36 | 32.53 | 94.01 | 74.00 | -20.01 | Peak |
| 2 | 4824.00 | 32.66 | 14.56 | 24.04 | 30.79 | 40.47 | 54.00 | 13.53 | Average |
| 3 | 4824.00 | 32.66 | 14.56 | 41.26 | 30.79 | 57.69 | 74.00 | 16.31 | 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.



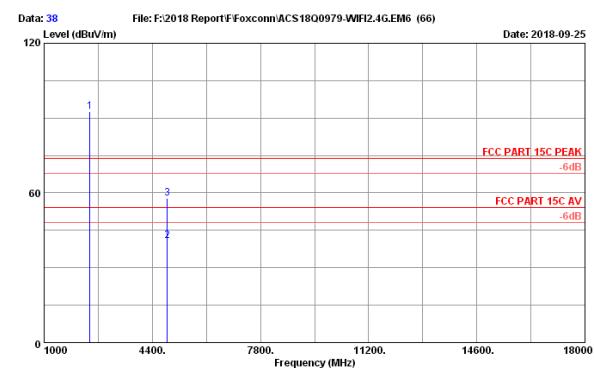
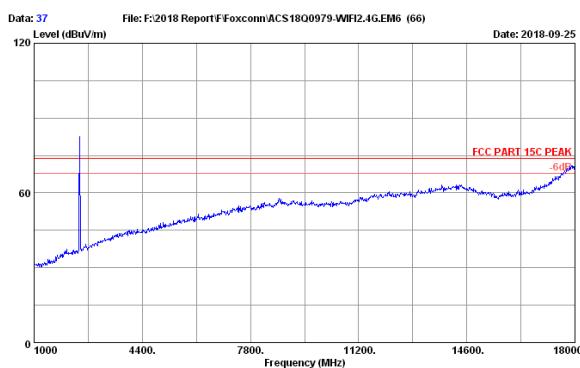
| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Amp factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-----|----------------|--------------------------|-----------------------|-------------------|-----------------------|-------------------------------|--------------------|----------------|---------|
| 1 | 2412.00 | 27.87 | 10.31 | 96.25 | 32.53 | 101.90 | 74.00 | -27.90 | Peak |
| 2 | 4824.00 | 32.66 | 14.56 | 25.11 | 30.79 | 41.54 | 54.00 | 12.46 | Average |
| 3 | 4824.00 | 32.66 | 14.56 | 41.26 | 30.79 | 57.69 | 74.00 | 16.31 | 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.



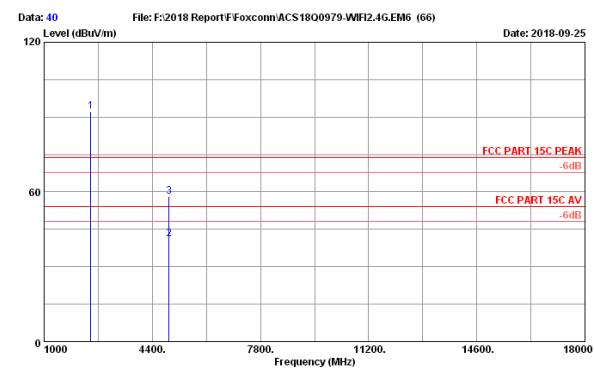
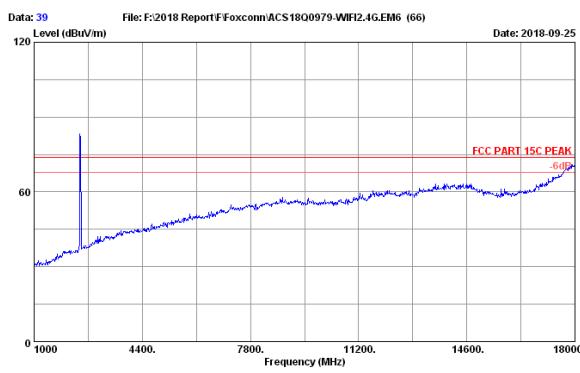
| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Amp factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-----|----------------|--------------------------|-----------------------|-------------------|-----------------------|-------------------------------|--------------------|----------------|---------|
| 1 | 2437.00 | 28.04 | 10.36 | 95.77 | 32.53 | 101.66 | 74.00 | -27.66 | Peak |
| 2 | 4874.00 | 32.76 | 14.63 | 24.17 | 30.76 | 40.80 | 54.00 | 13.20 | Average |
| 3 | 4874.00 | 32.76 | 14.63 | 41.18 | 30.76 | 57.81 | 74.00 | 16.19 | 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.



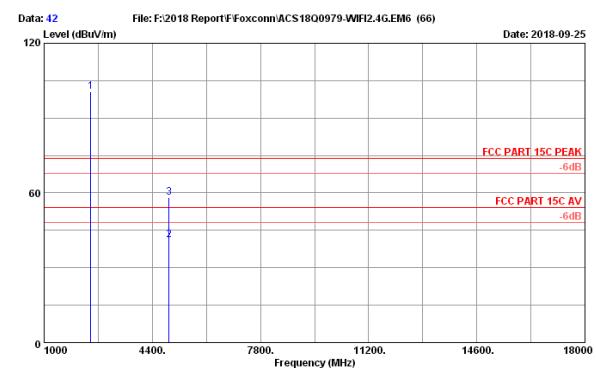
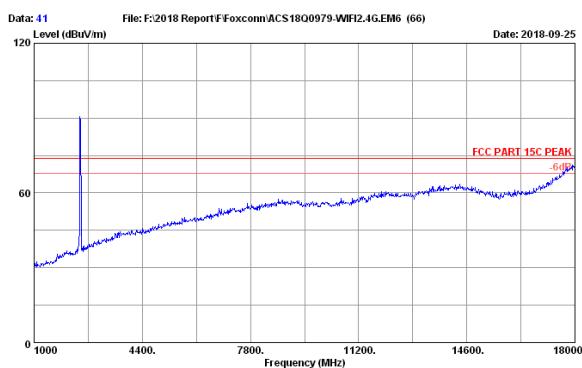
| No. | Freq. (MHz) | Ant. (dB/m) | Cable (dB/uV) | Reading (dB) | Amp factor | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-----|----------------|----------------|------------------|-----------------|---------------|-------------------------------|--------------------|----------------|---------|
| 1 | 2437.00 | 28.04 | 10.38 | 86.63 | 32.53 | 92.52 | 74.00 | -18.52 | Peak |
| 2 | 4874.00 | 32.76 | 14.63 | 24.15 | 30.76 | 40.78 | 54.00 | 13.22 | Average |
| 3 | 4874.00 | 32.76 | 14.63 | 41.36 | 30.76 | 57.99 | 74.00 | 16.01 | 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.



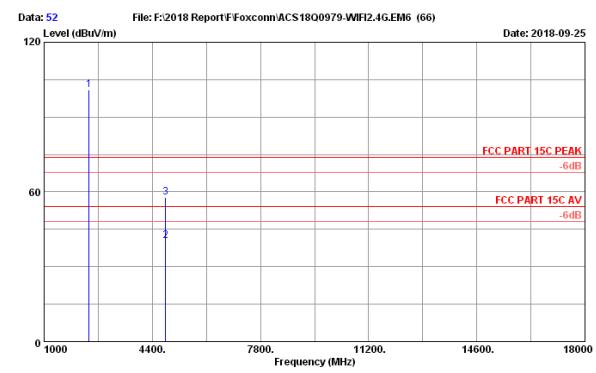
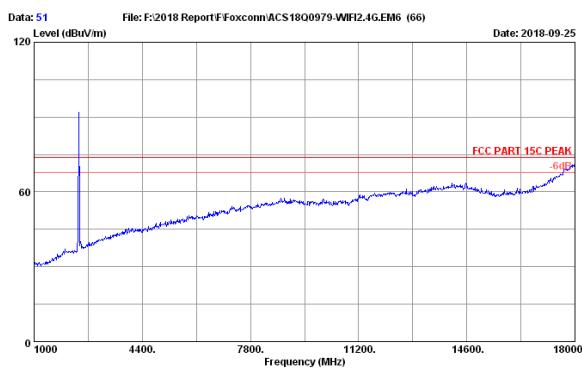
| No. | Freq. (MHz) | Ant. (dB/m) | Cable (dB/uV) | Reading (dB) | Amp factor | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-----|----------------|----------------|------------------|-----------------|---------------|-------------------------------|--------------------|----------------|---------|
| 1 | 2462.00 | 28.13 | 10.42 | 86.11 | 32.51 | 92.15 | 74.00 | -18.15 | Peak |
| 2 | 4924.00 | 32.86 | 14.71 | 24.23 | 30.73 | 41.07 | 54.00 | 12.93 | Average |
| 3 | 4924.00 | 32.86 | 14.71 | 41.27 | 30.73 | 58.11 | 74.00 | 15.89 | 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.



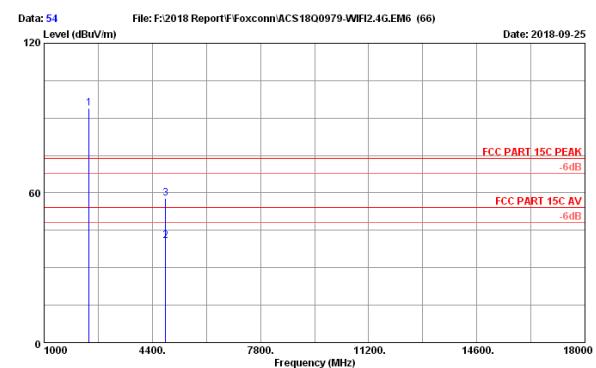
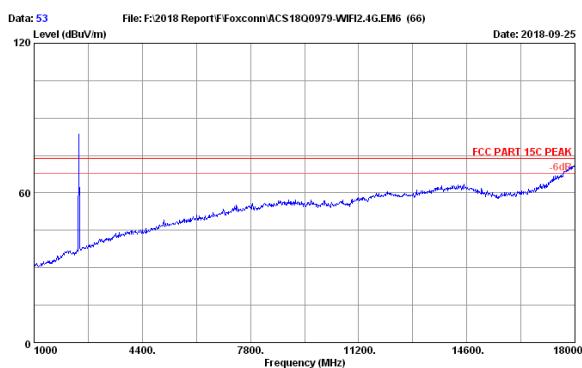
| No. | Freq. (MHz) | Ant. (dB/m) | Cable Loss (dB) | Reading (dBmW) | Amp factor | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-----|----------------|----------------|-----------------------|-------------------|---------------|-------------------------------|--------------------|----------------|---------|
| 1 | 2462.00 | 28.13 | 10.42 | 94.61 | 32.51 | 100.65 | 74.00 | -26.65 | Peak |
| 2 | 4924.00 | 32.86 | 14.71 | 24.18 | 30.73 | 41.02 | 54.00 | 12.98 | Average |
| 3 | 4924.00 | 32.86 | 14.71 | 41.36 | 30.73 | 58.20 | 74.00 | 15.80 | 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.



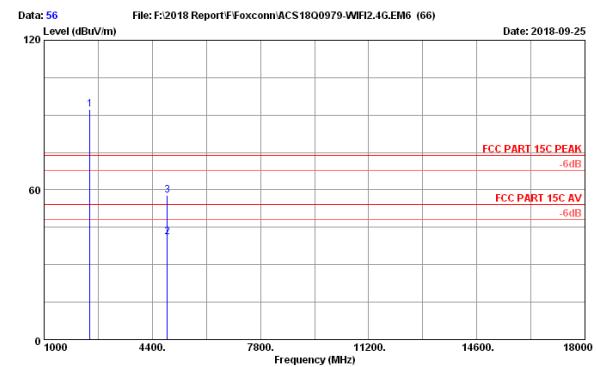
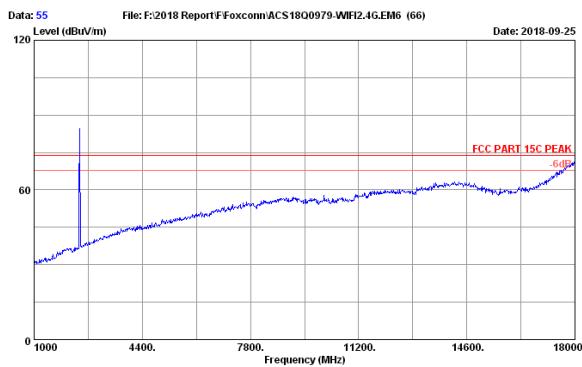
| No. | Freq. (MHz) | Ant. (dB/m) | Cable Loss (dB) | Reading (dBmW) | Amp factor | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-----|----------------|----------------|-----------------------|-------------------|---------------|-------------------------------|--------------------|----------------|---------|
| 1 | 2412.00 | 27.87 | 10.31 | 95.36 | 32.53 | 101.01 | 74.00 | -27.01 | Peak |
| 2 | 4824.00 | 32.66 | 14.56 | 24.06 | 30.79 | 40.49 | 54.00 | 13.51 | Average |
| 3 | 4824.00 | 32.66 | 14.56 | 41.31 | 30.79 | 57.74 | 74.00 | 16.26 | 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.



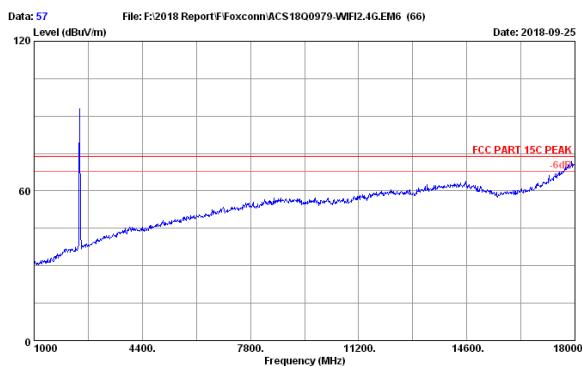
| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Amp factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-----|----------------|--------------------------|-----------------------|-------------------|-----------------------|-------------------------------|--------------------|----------------|---------|
| 1 | 2412.00 | 27.87 | 10.31 | 88.26 | 32.53 | 93.91 | 74.00 | -19.91 | Peak |
| 2 | 4824.00 | 32.66 | 14.56 | 24.35 | 30.79 | 40.78 | 54.00 | 13.22 | Average |
| 3 | 4824.00 | 32.66 | 14.56 | 41.52 | 30.79 | 57.95 | 74.00 | 16.05 | 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.

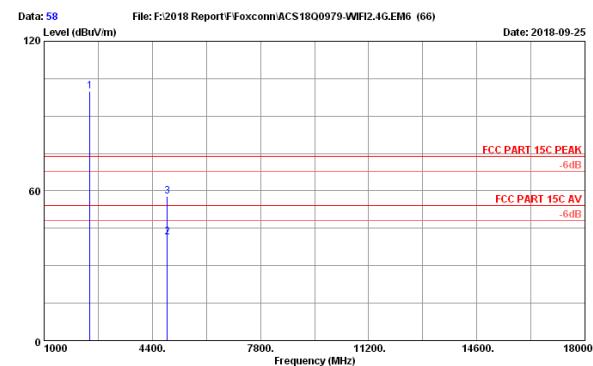


| No. | Freq. (MHz) | Ant. Factor (dB/m) | Cable Loss (dB) | Reading (dBuV) | Amp factor (dB) | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-----|----------------|--------------------------|-----------------------|-------------------|-----------------------|-------------------------------|--------------------|----------------|---------|
| 1 | 2437.00 | 28.04 | 10.36 | 86.35 | 32.53 | 92.24 | 74.00 | -18.24 | Peak |
| 2 | 4874.00 | 32.76 | 14.63 | 24.34 | 30.76 | 40.97 | 54.00 | 13.03 | Average |
| 3 | 4874.00 | 32.76 | 14.63 | 41.08 | 30.76 | 57.71 | 74.00 | 16.29 | 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.



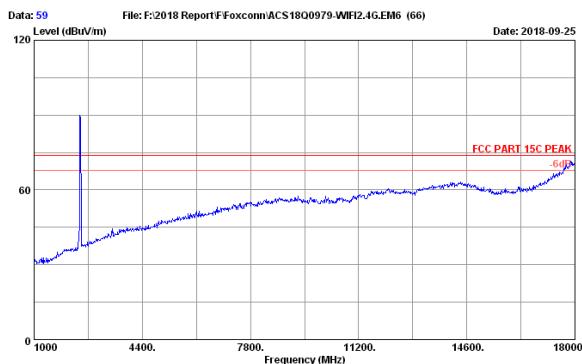
Site no. : 3m Chamber Data no. : 57
Dis. / Ant. : 3m 2017 3115(4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4°C/52.9% Engineer : Lynn
EUT : POS Terminal M/N:SPD1-O1
Power rating : AC120V/60Hz
Test Mode : 802.11nHT20 2437MHz Tx Mode



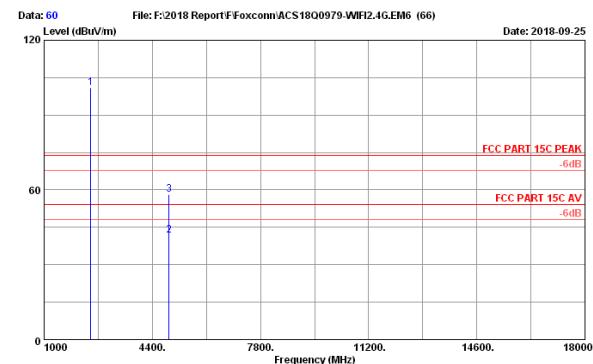
Site no. : 3m Chamber Data no. : 58
Dis. / Ant. : 3m 2017 3115(4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4°C/52.9% Engineer : Lynn
EUT : POS Terminal M/N:SPD1-O1
Power rating : AC120V/60Hz
Test Mode : 802.11nHT20 2437MHz Tx Mode

| 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 | 28.04 | 10.38 | 94.21 | 32.53 | 100.10 | 74.00 | -26.10 | Peak |
| 2 | 4874.00 | 32.76 | 14.63 | 24.82 | 30.76 | 41.45 | 54.00 | 12.55 | Average |
| 3 | 4874.00 | 32.76 | 14.63 | 41.18 | 30.76 | 57.81 | 74.00 | 16.19 | 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.



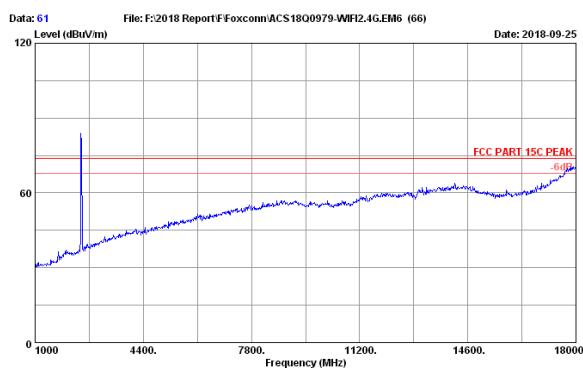
Site no. : 3m Chamber Data no. : 59
Dis. / Ant. : 3m 2017 3115(4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4°C/52.9% Engineer : Lynn
EUT : POS Terminal M/N:SPD1-O1
Power rating : AC120V/60Hz
Test Mode : 802.11nHT20 2437MHz Tx Mode



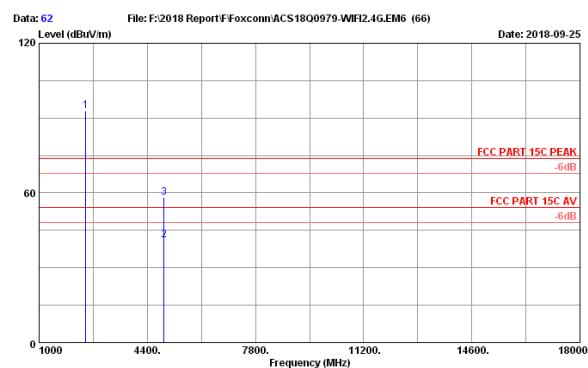
Site no. : 3m Chamber Data no. : 60
Dis. / Ant. : 3m 2017 3115(4580) Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4°C/52.9% Engineer : Lynn
EUT : POS Terminal M/N:SPD1-O1
Power rating : AC120V/60Hz
Test Mode : 802.11nHT20 2462MHz Tx Mode

| 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 | 28.13 | 10.45 | 94.85 | 32.51 | 100.87 | 74.00 | -26.87 | Peak |
| 2 | 4824.00 | 32.86 | 14.71 | 24.91 | 30.73 | 41.75 | 54.00 | 12.25 | Average |
| 3 | 4924.00 | 32.86 | 14.71 | 41.27 | 30.73 | 58.11 | 74.00 | 15.89 | 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 2017 3115(4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4°C/52.9% Engineer : Lynn
EUT : POS Terminal H/N:SPD1-O1
Power rating : AC120V/60Hz
Test Mode : 802.11nHT20 2462MHz Tx Mode



Site no. : 3m Chamber Data no. : 62
Dis. / Ant. : 3m 2017 3115(4580) Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23.4°C/52.9% Engineer : Lynn
EUT : POS Terminal H/N:SPD1-O1
Power rating : AC120V/60Hz
Test Mode : 802.11nHT20 2462MHz Tx Mode

| No. | Freq. (MHz) | Ant. (dB/m) | Cable (dB) | Reading (dBmW) | Amp factor | Emission Level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Remark |
|-----|----------------|----------------|---------------|-------------------|---------------|-------------------------------|--------------------|----------------|---------|
| 1 | 2462.00 | 28.13 | 10.42 | 86.81 | 32.51 | 92.85 | 74.00 | -18.85 | Peak |
| 2 | 4924.00 | 32.86 | 14.71 | 24.42 | 30.73 | 41.26 | 54.00 | 12.74 | Average |
| 3 | 4924.00 | 32.86 | 14.71 | 41.20 | 30.73 | 58.04 | 74.00 | 15.96 | 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.

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 | Sep.08,18 | 1 Year |
| 2. | Attenuator | Agilent | 8491B | MY39262165 | Oct.14,17 | 1 Year |
| 3. | RF Cable | Hubersuhner | 141 | NO.1 | Oct.14,17 | 1 Year |

5.2. Limit

In any 100kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is 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.

5.3. 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.

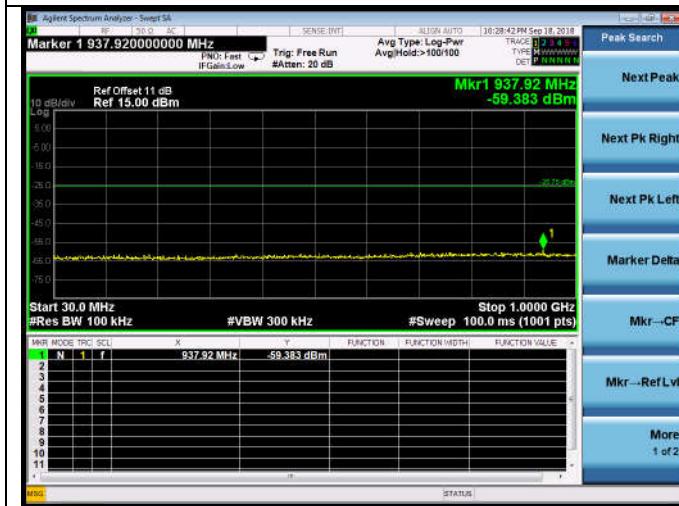
5.4. Test result

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

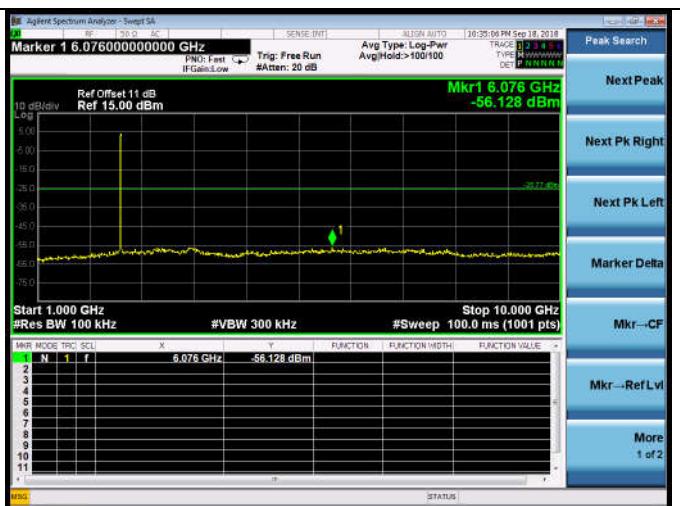
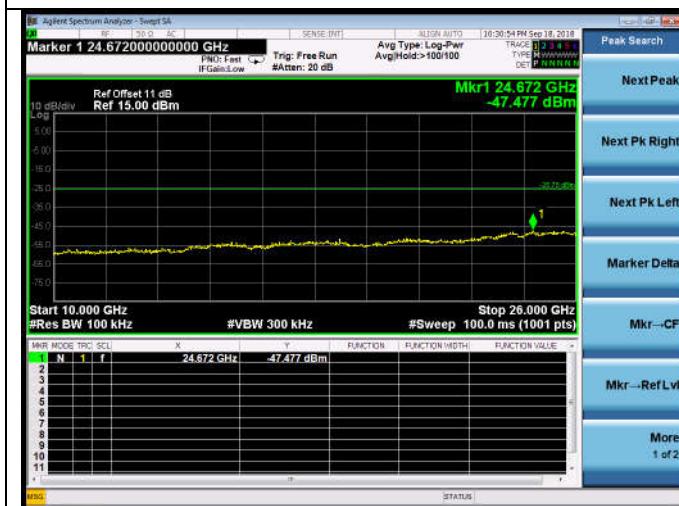
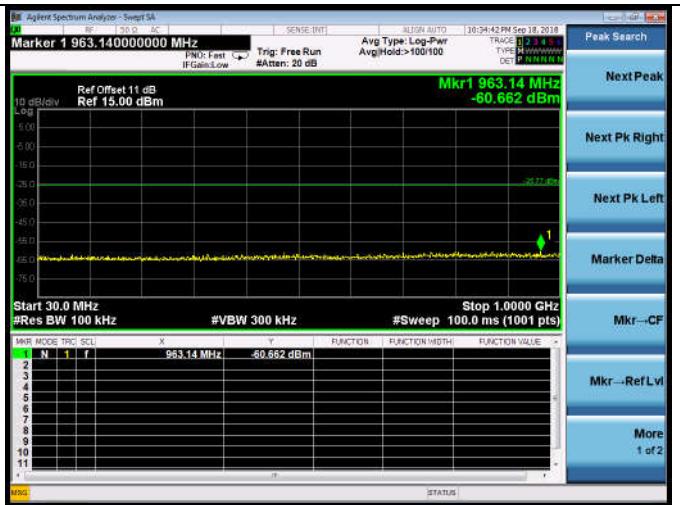
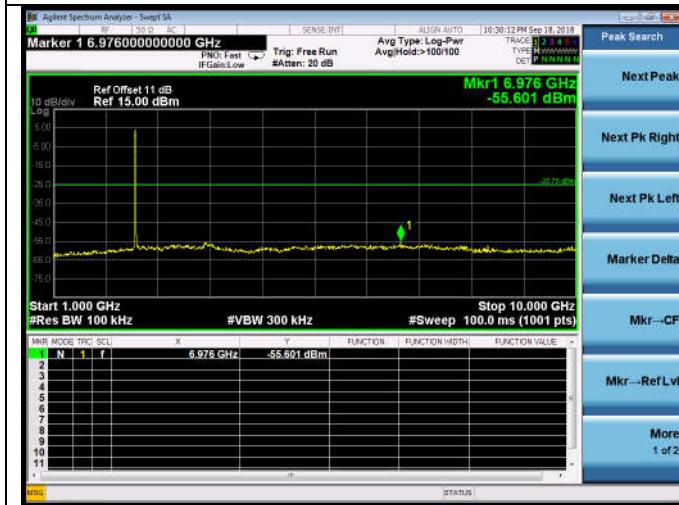
ANT0:

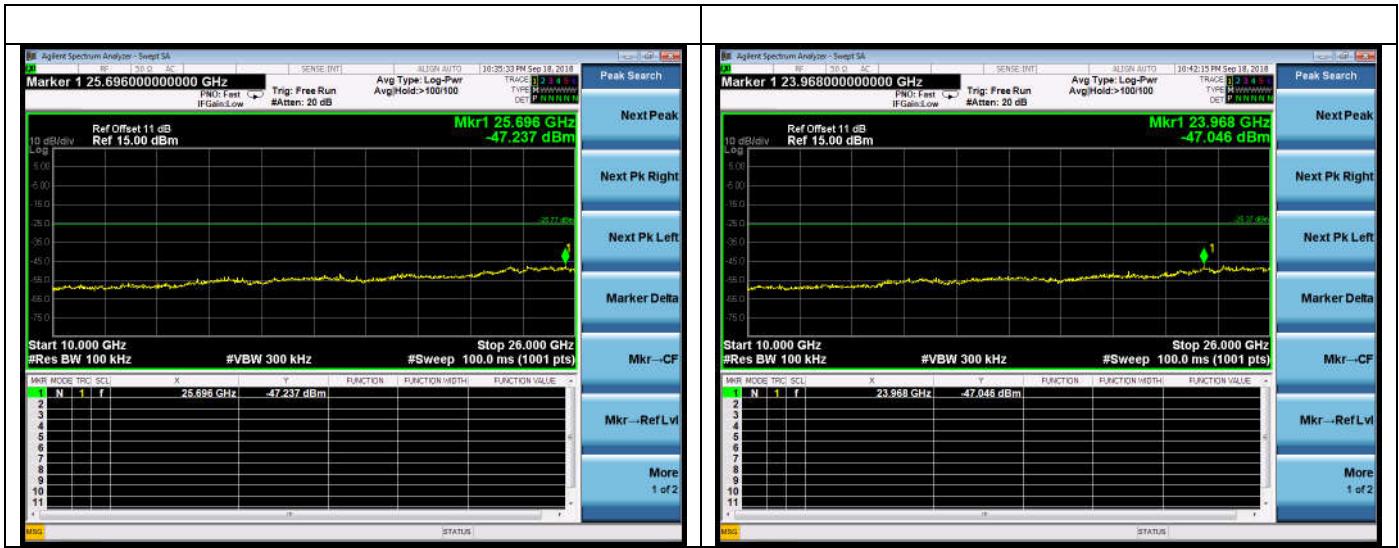
Test Mode: IEEE 802.11b

Test CH1: 2412MHz

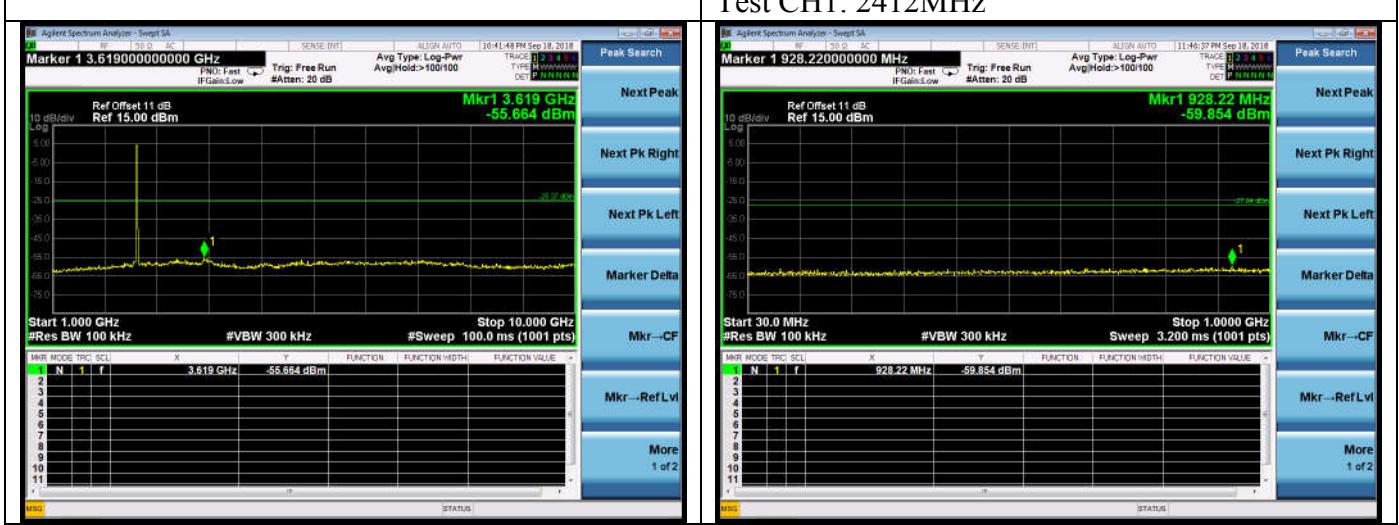
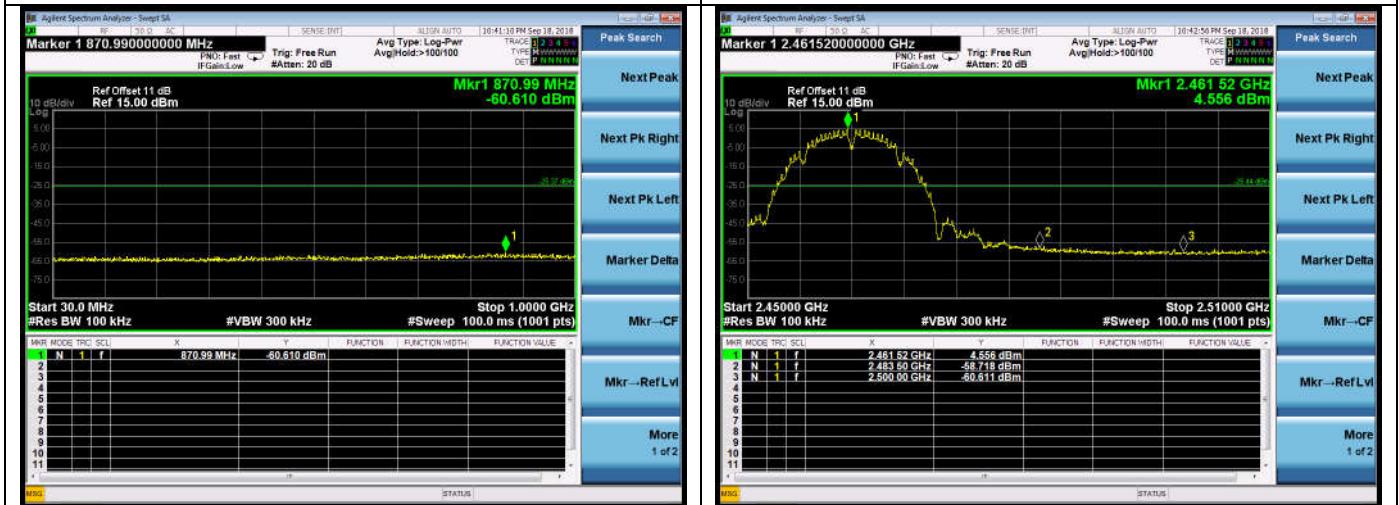


Test CH6: 2437MHz

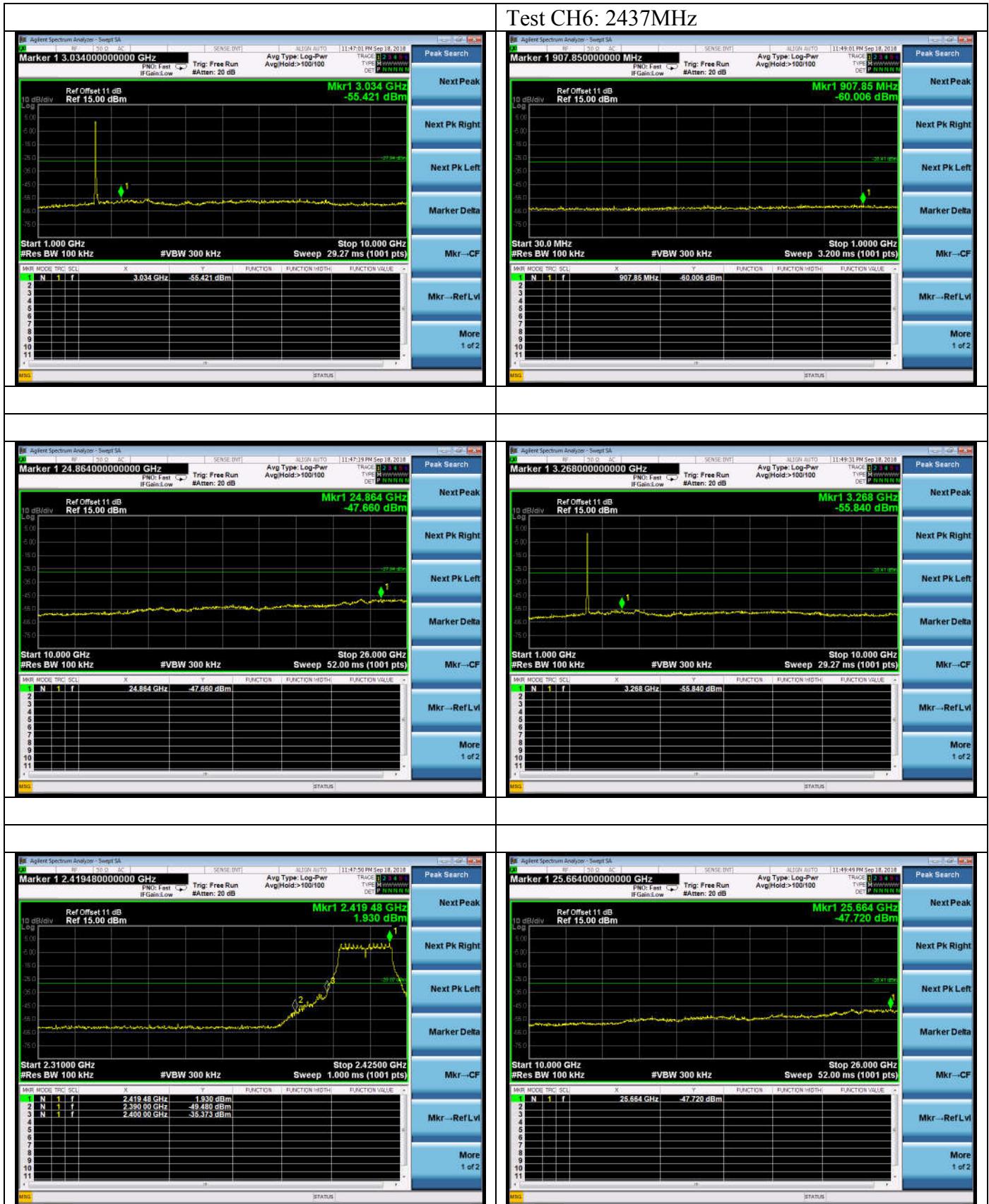


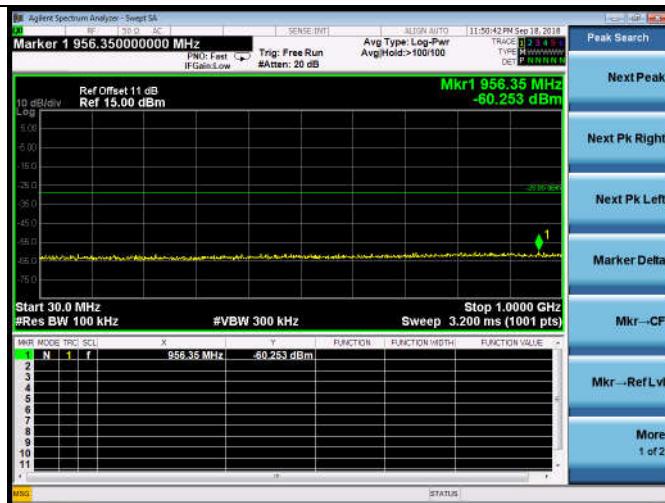
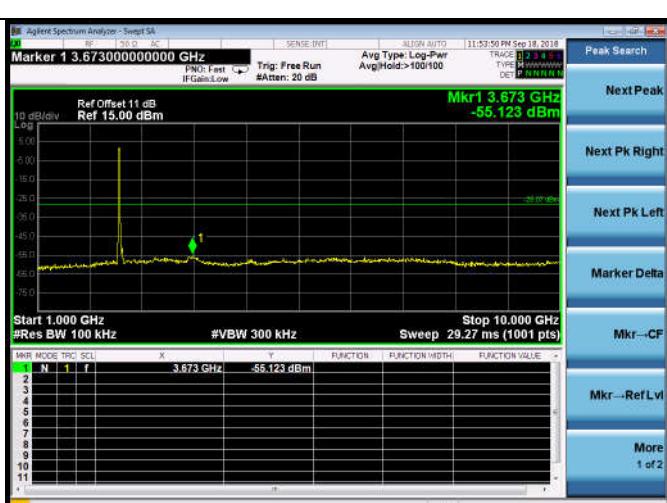
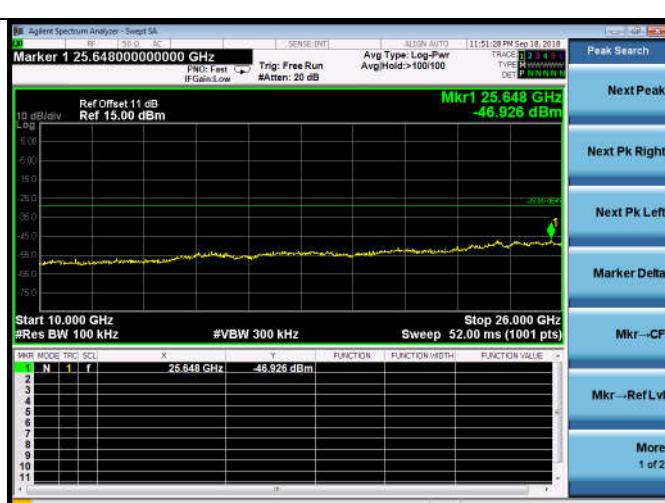
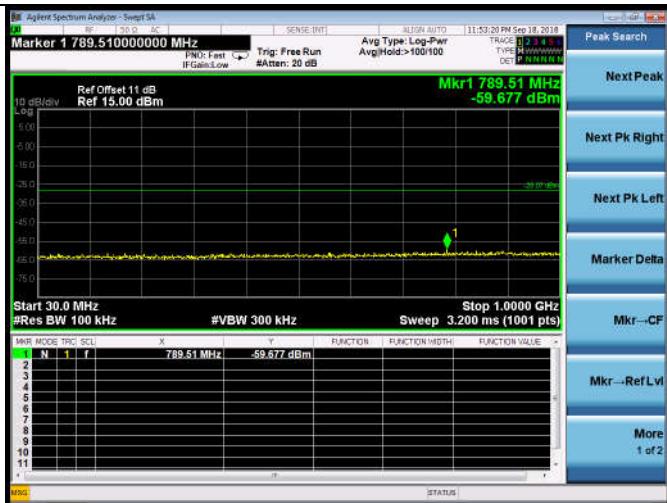
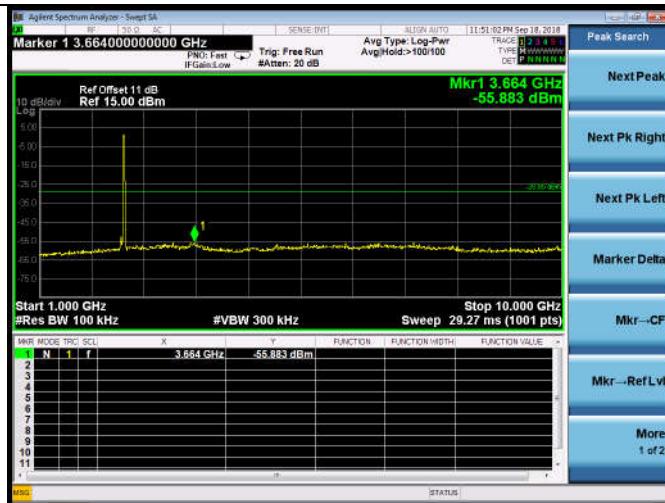


Test CH11: 2462MHz



Test Mode: IEEE 802.11g
Test CH1: 2412MHz



Test CH11: 2462MHz

**Test Mode: IEEE 802.11n HT20
Test CH1: 2412MHz**


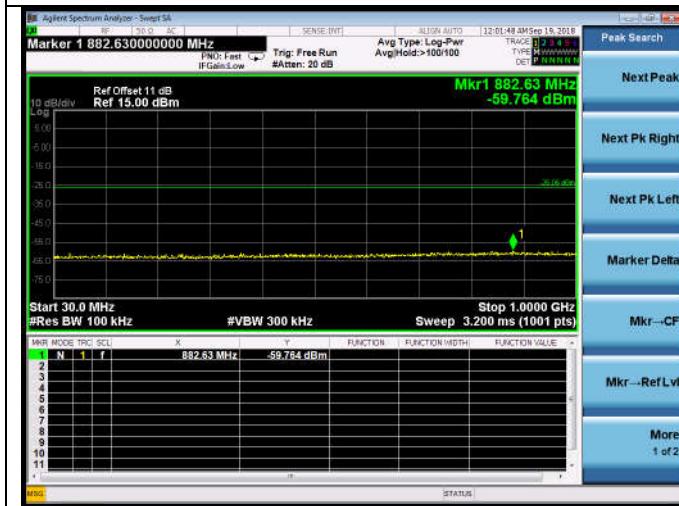




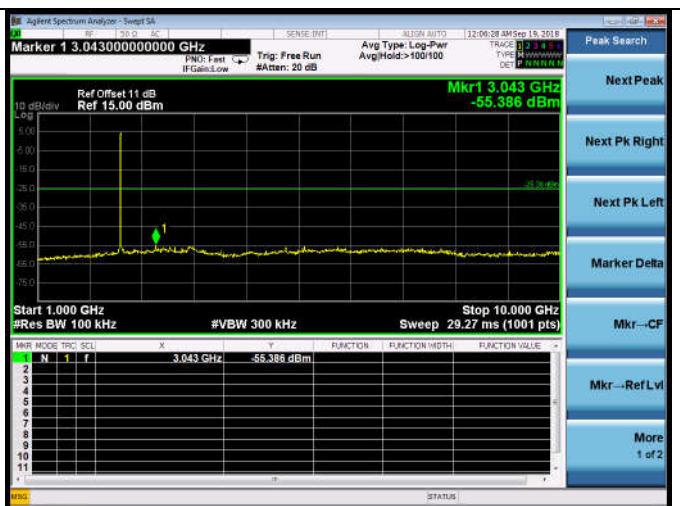
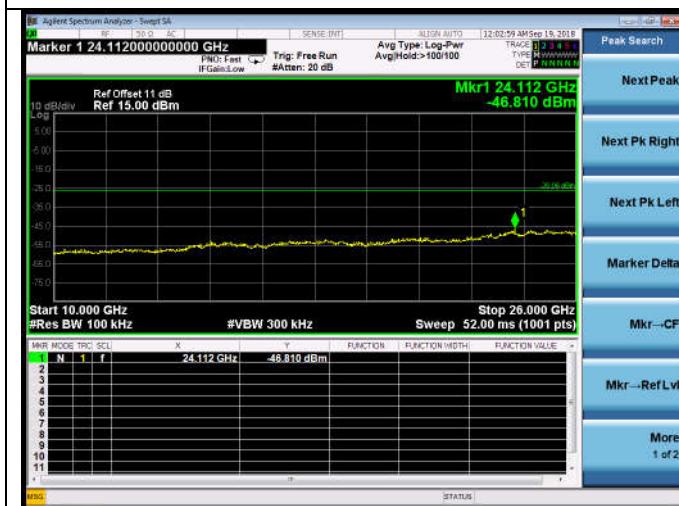
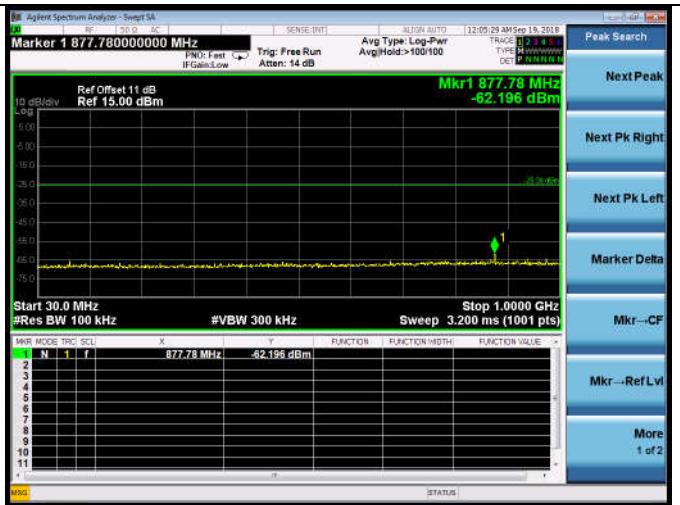
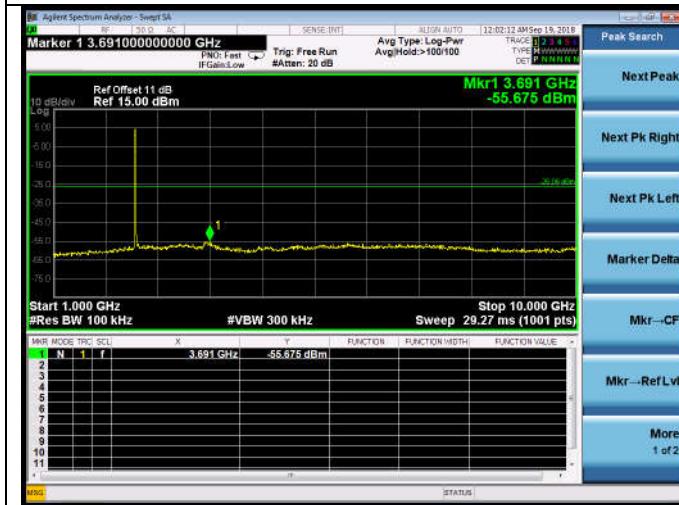
ANT1:

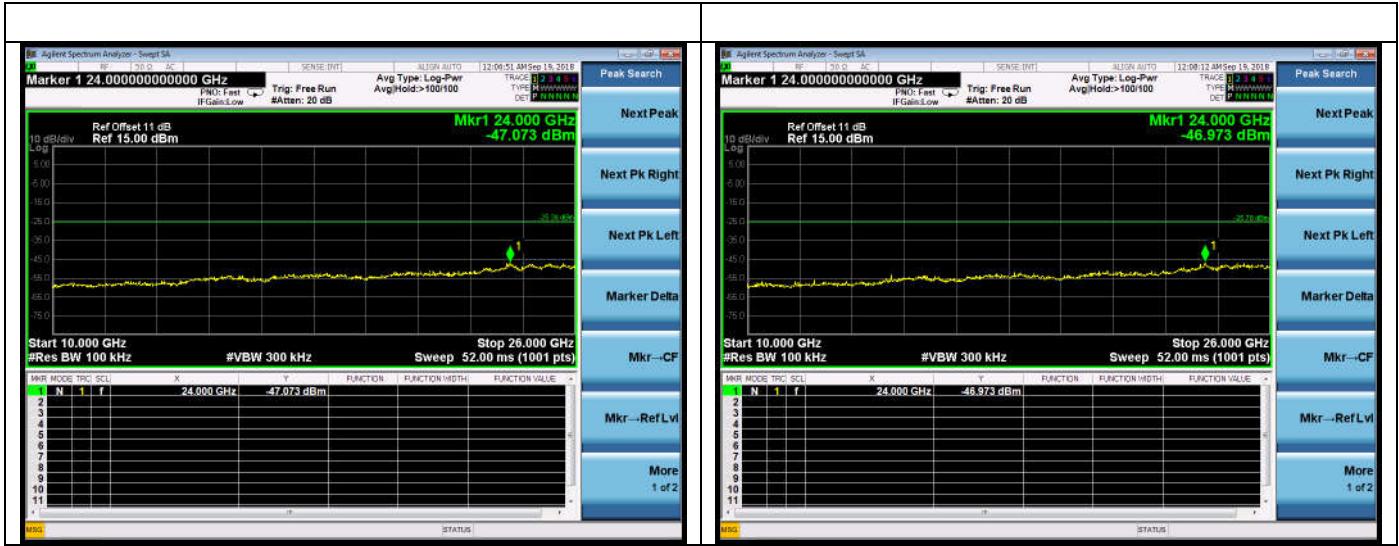
Test Mode: IEEE 802.11b

Test CH1: 2412MHz

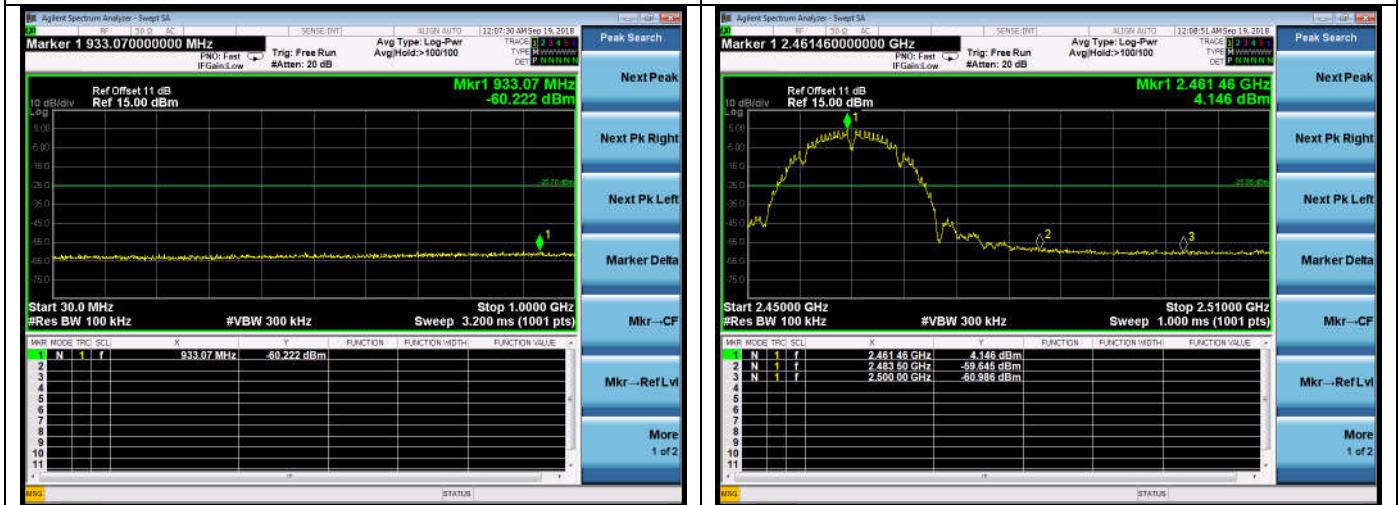


Test CH6: 2437MHz

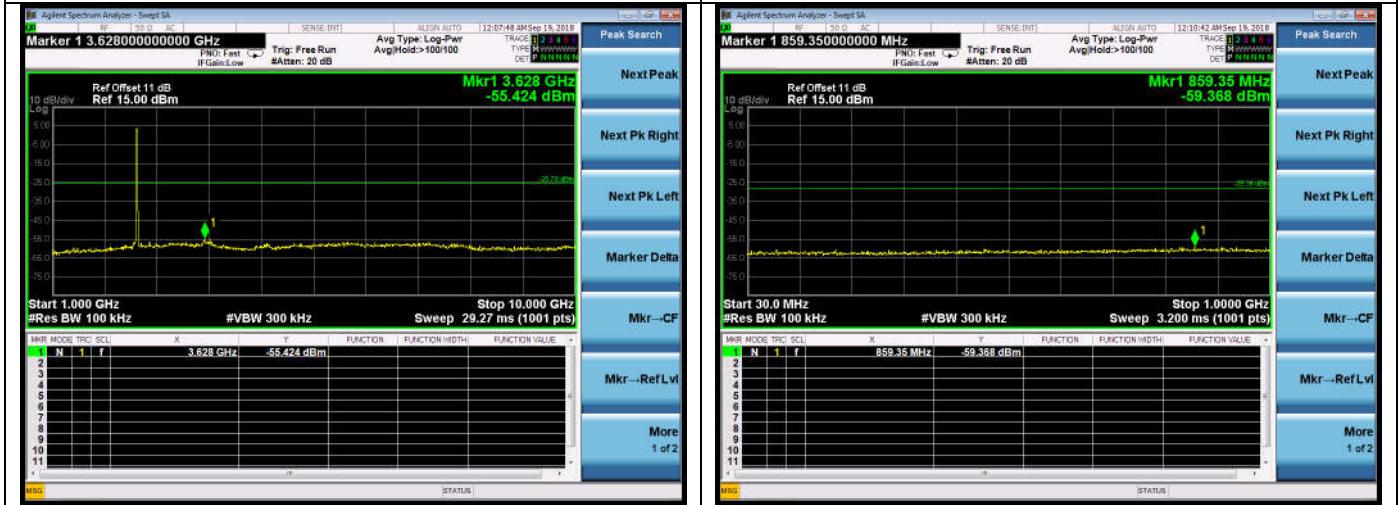




Test CH11: 2462MHz

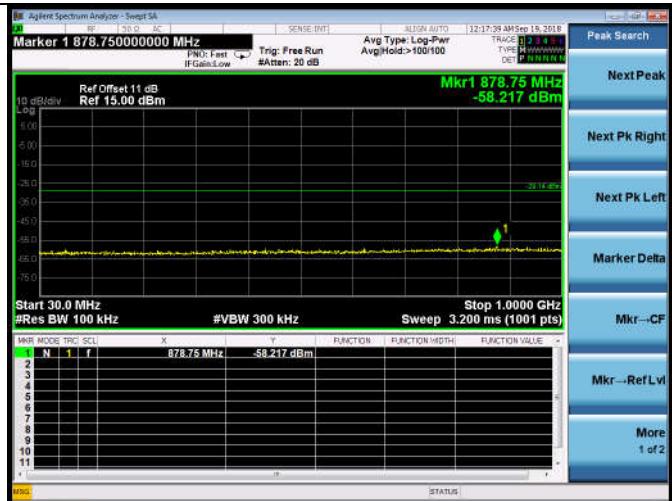


Test Mode: IEEE 802.11g Test CH1: 2412MHz





Test CH11: 2462MHz



Test Mode: IEEE 802.11n HT20
Test CH1: 2412MHz

