



REPORT No.: SZ16010086W01

FCC RF TEST REPORT

APPLICANT : SZ DJI TECHNOLOGY CO.,LTD
PRODUCT NAME : DJI Camera
MODEL NAME : FC200
TRADE NAME : DJI
BRAND NAME : DJI
FCC ID : SS3-SF2001307
STANDARD(S) : 47 CFR Part 15 Subpart C
ISSUE DATE : 2016-01-28



SHENZHEN MORLAB COMMUNICATIONS TECHNOLOGY Co., Ltd.

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| Change History | | |
|----------------|------------|-------------------|
| Issue | Date | Reason for change |
| 1.0 | 2016-01-28 | First edition |
| | | |

**TEST REPORT DECLARATION**

| | |
|----------------------|---|
| Applicant | SZ DJI TECHNOLOGY CO.,LTD |
| Applicant Address | Room 613、 614, 6/F, HKUST SZ IER Bldg, No.9 Yuexing 1st Rd Hi-Tech Park(south), Nanshan District, Shenzhen, Guangdong, China |
| Manufacturer | SZ DJI TECHNOLOGY CO., LTD |
| Manufacturer Address | Room 613、 614, 6/F, HKUST SZ IER Bldg, No.9 Yuexing, 1st Rd Hi-Tech Park(south), Nanshan District, Shenzhen, Guangdong, China |
| Product Name | DJI Camera |
| Model Name | FC200 |
| Brand Name | DJI |
| HW Version | V4.0 |
| SW Version | V2.0.0 |
| Test Standards | 47 CFR Part 15 Subpart C |
| Test Date | 2016-01-16 to 2016-01-28 |
| Test Result | PASS |

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Approved by : Peng Huarui
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1. TECHNICAL INFORMATION

Note: Provide by applicant.

1.1 Applicant Information

| | |
|----------|---|
| Company: | SZ DJI TECHNOLOGY CO.,LTD |
| Address: | Room 613、 614, 6/F, HKUST SZ IER Bldg, No.9 Yuexing 1st Rd Hi-Tech Park(south), Nanshan District, Shenzhen, Guangdong, China |

1.2 Equipment under Test (EUT) Description

| | |
|------------------|--|
| Brand Name: | DJI |
| Trade Name: | DJI |
| Model Name: | FC200 |
| Frequency Range: | 802.11b/g/n-20MHz: 2.412GHz - 2.462GHz |
| Channel Number: | 802.11b/g/n-20MHz: 11 |
| Modulation Type: | DSSS, OFDM |
| Antenna Type: | Integral Antenna |
| Antenna Gain: | ANT 1: 1dBi ANT 2: 1dBi |

NOTE:

- The EUT is a DJI Camera, it contains WIFI operating at 2.4GHz ISM; it supports 802.11b, 802.11g, 802.11n and they are all tested in this report.
- For 802.11b/g/n-20MHz (2.4GHz band), the frequencies allocated is $F \text{ (MHz)} = 2412 + 5 * (n - 1)$ ($1 \leq n \leq 11$). The lowest, middle, highest channel numbers of the EUT used and tested in this report are separately 1 (2412MHz), 6 (2437MHz) and 11 (2462MHz).
- The EUT has 2 antennas, the EUT incorporates a MIMO function.
- The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers (2T2R) for 2.4GHz band.

| Operation mode mode | ANT |
|------------------------|-----------------|
| 802.11b | ANT 1 and ANT 2 |
| 802.11g | ANT 1 and ANT 2 |
| 802.11n(20MHz) | ANT 1 and ANT 2 |

According to KDB 662911 D01, the directional gain = $G_{ANT} + 10 \log(N_{ANT})$ dBi, where G_{ANT} is the antenna gain in dBi, N_{ANT} is the number of outputs.

- For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.
- The antenna connector of EUT is designed with permanent attachment and no consideration of replacement.



1.2.1 Identification of all used EUTs

The EUT identity consists of numerical and letter characters, the letter character indicates the test sample, and the following two numerical characters indicate the software version of the test sample.

| EUT Identity | Hardware Version | Software Version |
|--------------|------------------|------------------|
| A01 | V4.0 | V2.0.0 |

1.3 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart C (Bluetooth, 2.4GHz ISM band radiators) for the EUT FCC ID Certification:

| No. | Identity | Document Title |
|-----|-------------------------------------|-------------------------|
| 1 | 47 CFR Part 15 (10-1-13 Edition) | Radio Frequency Devices |

Test detailed items/section required by FCC rules and results are as below:

| No. | Section | Description | Test Date | Result |
|-----|-------------------|---|--------------|--------------------|
| 1 | 15.203 | Antenna Requirement | N.A | <u>PASS</u> |
| 2 | 15.247(b) | Peak Output Power | Jan 28, 2016 | <u>PASS</u> |
| 3 | 15.247(a) | Bandwidth | Jan 28, 2016 | <u>PASS</u> |
| 4 | 15.247(d) | Conducted Spurious Emission and Band Edge | Jan 28, 2016 | <u>PASS</u> |
| 5 | 15.247(d) | Restricted Frequency Bands | Jan 28, 2016 | <u>PASS</u> |
| 6 | 15.209 ,15.247(d) | Radiated Emission | Jan 28, 2016 | <u>PASS</u> |
| 7 | 15.247(e) | Power spectral density (PSD) | Jan 28, 2016 | <u>PASS</u> |

The tests of Conducted Emission and Radiated Emission were performed according to the method of measurements prescribed in ANSI C63.10, 2013.

1.3.1 Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

| | |
|-----------------------------|---------|
| Temperature (°C): | 15 - 35 |
| Relative Humidity (%): | 30 -60 |
| Atmospheric Pressure (kPa): | 86-106 |

2. 47 CFR PART 15C REQUIREMENTS

2.1 Antenna requirement

2.1.1 Applicable Standard

According to FCC 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

2.1.2 Result: Compliant

The maximum gain of antenna was defined by manufacturer. The max gain of the antenna1 is 1dBi, The max gain of the antenna2 is 1dBi.

For more info, please refer to the user manual.

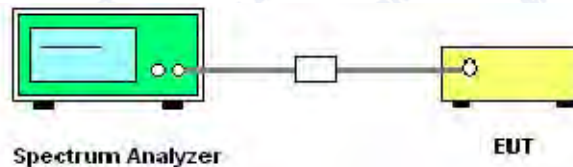
2.2 On time, duty cycle and measurement methods

2.2.1 Limits

None; For reporting purposes only.

2.2.2 Test description

A. Test set



The EUT is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

B. Equipments List:

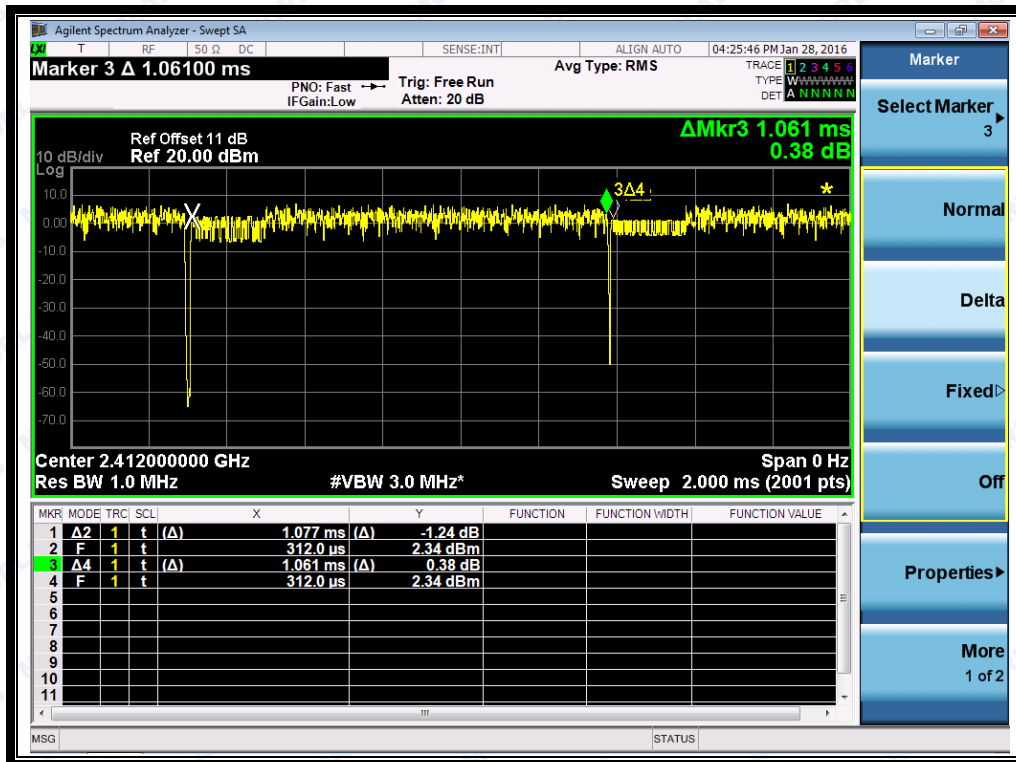
Please reference ANNEX A(1.4).

2.2.3 Test result

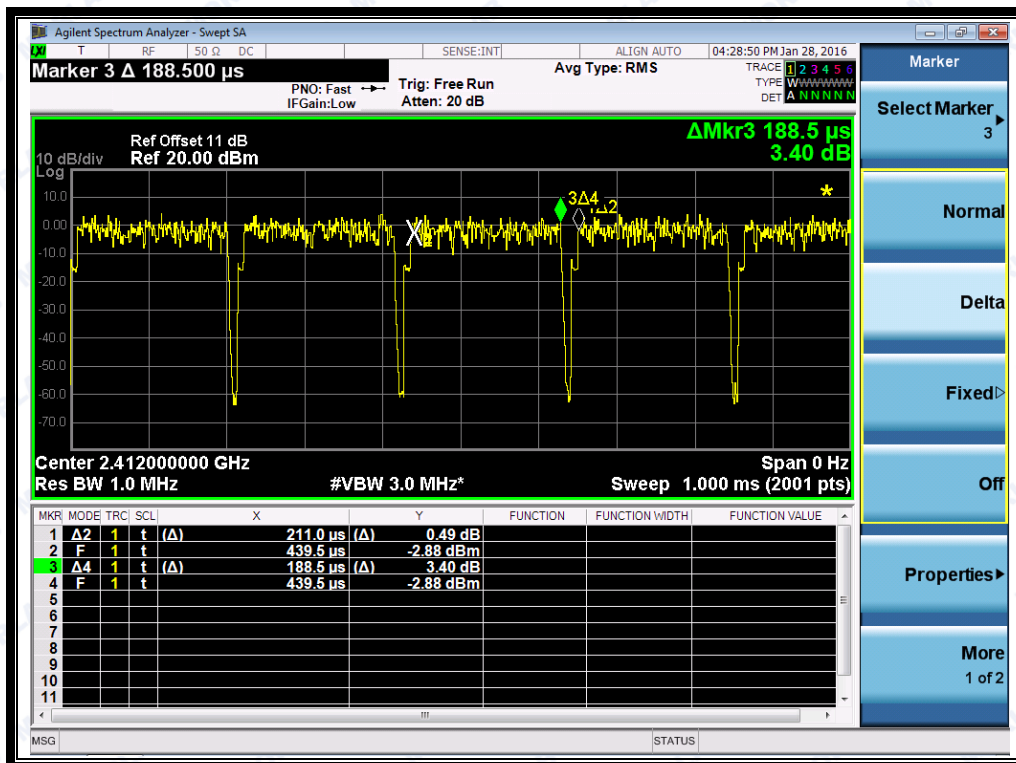
A. Test verdict:

| Test mode | Frequency (MHz) | On Time (msec) | Period (msec) | Duty Cycle x(linear) | Duty Cycle (%) | Refer to Plot |
|-----------|-----------------|----------------|---------------|----------------------|----------------|---------------|
| B | 2415 | 1.061 | 1.077 | 0.9851 | 98.51 | Plot A |
| G | 2434 | 0.188 | 0.211 | 0.8910 | 89.10 | Plot B |
| N | 2454 | 1.506 | 1.543 | 0.9760 | 97.60 | Plot C |

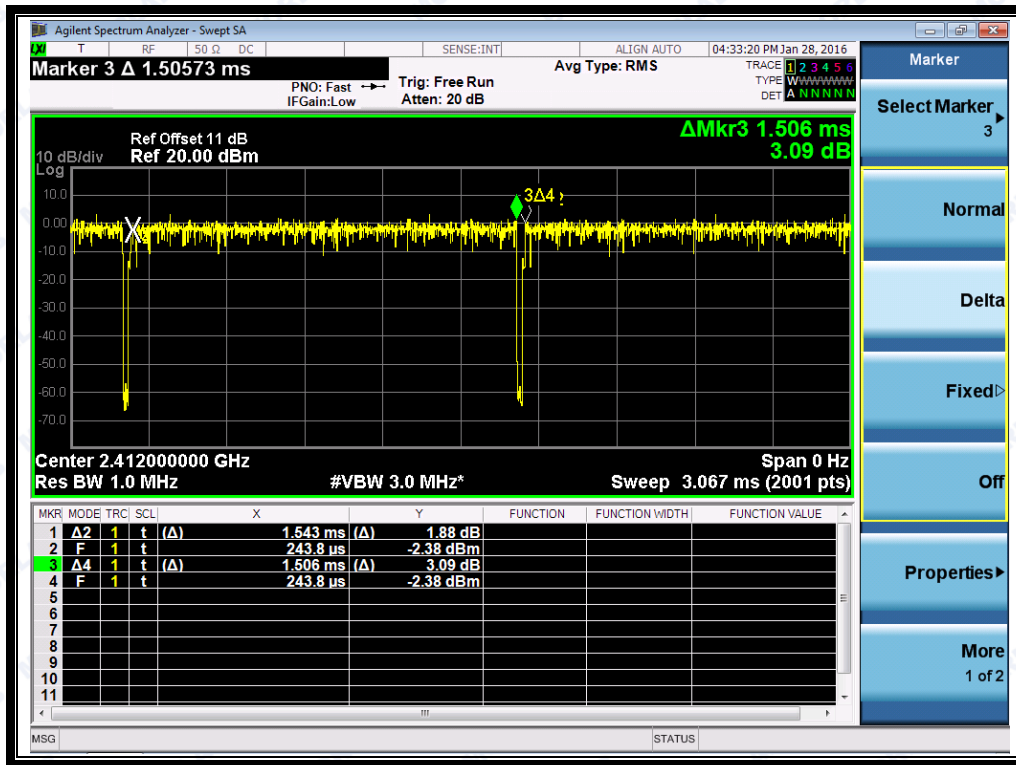
B. Test plots



(PlotA: @ 802.11b)



(PlotB: @ 802.11g)



(PlotC: @ 802.11n-20MHz)

2.3 Peak Output Power

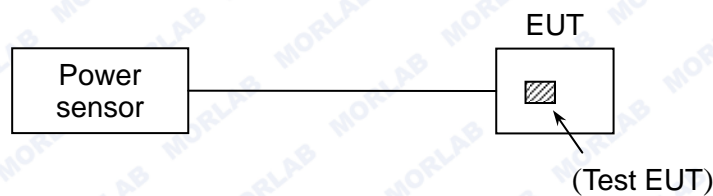
2.3.1 Requirement

According to FCC section 15.247(b)(3), For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: The maximum peak conducted output power of the intentional radiator shall not exceed 1 Watt.

2.3.2 Test Description

The measured output power was calculated by the reading of the Power sensor and calibration.

A. Test Setup:



The EUT (Equipment under the test) which is coupled to the Power sensor; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading, all test result in Power sensor.

B. Equipments List:

Please reference ANNEX A(1.4).

2.3.3 Test Result

The lowest, middle and highest channels are selected to perform testing to verify the conducted RF output peak power of the EUT.

2.3.3.1 802.11b Test Mode

Peak power:

ANT 1:

| Channel | Frequency (MHz) | Measured Output Peak Power | | Limit | | Verdict |
|---------|-----------------|----------------------------|---------|-------|---|---------|
| | | dBm | W | dBm | W | |
| 1 | 2412 | 7.63 | 0.00579 | 30 | 1 | PASS |
| 6 | 2437 | 9.62 | 0.00916 | | | PASS |
| 11 | 2462 | 7.65 | 0.00582 | | | PASS |



ANT 2:

| Channel | Frequency (MHz) | Measured Output Peak Power | | Limit | | Verdict |
|---------|-----------------|----------------------------|---------|-------|---|---------|
| | | dBm | W | dBm | W | |
| 1 | 2412 | 2.45 | 0.00176 | 30 | 1 | PASS |
| 6 | 2437 | 3.31 | 0.00214 | | | PASS |
| 11 | 2462 | 2.36 | 0.00172 | | | PASS |

ANT 1+ANT 2:

| Channel | Frequency (MHz) | Measured Output Peak Power | | Limit | | Verdict |
|---------|-----------------|----------------------------|---------|-------|---|---------|
| | | dBm | W | dBm | W | |
| 1 | 2412 | 8.78 | 0.00755 | 30 | 1 | PASS |
| 6 | 2437 | 10.53 | 0.01131 | | | PASS |
| 11 | 2462 | 8.78 | 0.00754 | | | PASS |

Average power:

ANT 1:

| Channel | Frequency (MHz) | Measured Output (average) Power(dBm) | 10log(1/x) | Maximum Conducted Output (average) Power | | Limit | | Verdict |
|---------|-----------------|--------------------------------------|------------|--|---------|-------|---|---------|
| | | | | dBm | W | dBm | W | |
| | | | | | | | | |
| 1 | 2412 | 5.08 | 0.07 | 5.15 | 0.00327 | 30 | 1 | PASS |
| 6 | 2437 | 7.22 | 0.07 | 7.29 | 0.00536 | | | PASS |
| 11 | 2462 | 5.12 | 0.07 | 5.19 | 0.00330 | | | PASS |

Note: x refers to duty cycle.

ANT 2:

| Channel | Frequency (MHz) | Measured Output (average) Power(dBm) | 10log(1/x) | Maximum Conducted Output (average) Power | | Limit | | Verdict |
|---------|-----------------|--------------------------------------|------------|--|---------|-------|---|---------|
| | | | | dBm | W | dBm | W | |
| | | | | | | | | |
| 1 | 2412 | 0.09 | 0.07 | 0.16 | 0.00104 | 30 | 1 | PASS |
| 6 | 2437 | 0.94 | 0.07 | 1.01 | 0.00126 | | | PASS |
| 11 | 2462 | 0.03 | 0.07 | 0.1 | 0.00102 | | | PASS |

Note: x refers to duty cycle.

ANT 1+ANT 2:

| Channel | Frequency (MHz) | Measured Output Peak Power | | Limit | | Verdict |
|---------|-----------------|----------------------------|---------|-------|---|---------|
| | | dBm | W | dBm | W | |
| 1 | 2412 | 6.35 | 0.00431 | 30 | 1 | PASS |
| 6 | 2437 | 8.21 | 0.00662 | | | PASS |
| 11 | 2462 | 6.36 | 0.00433 | | | PASS |



2.3.3.2 802.11g Test mode

Peak power:

ANT 1:

| Channel | Frequency (MHz) | Measured Output Peak Power | | Limit | | Verdict |
|---------|-----------------|----------------------------|---------|-------|---|---------|
| | | dBm | W | dBm | W | |
| 1 | 2412 | 2.36 | 0.00172 | 30 | 1 | PASS |
| 6 | 2437 | 3.85 | 0.00243 | | | PASS |
| 11 | 2462 | 2.62 | 0.00183 | | | PASS |

ANT 2:

| Channel | Frequency (MHz) | Measured Output Peak Power | | Limit | | Verdict |
|---------|-----------------|----------------------------|---------|-------|---|---------|
| | | dBm | W | dBm | W | |
| 1 | 2412 | 7.22 | 0.00527 | 30 | 1 | PASS |
| 6 | 2437 | 8.06 | 0.00640 | | | PASS |
| 11 | 2462 | 7.52 | 0.00565 | | | PASS |

ANT 1+ANT 2:

| Channel | Frequency (MHz) | Measured Output Peak Power | | Limit | | Verdict |
|---------|-----------------|----------------------------|---------|-------|---|---------|
| | | dBm | W | dBm | W | |
| 1 | 2412 | 8.45 | 0.00699 | 30 | 1 | PASS |
| 6 | 2437 | 9.46 | 0.00882 | | | PASS |
| 11 | 2462 | 8.74 | 0.00748 | | | PASS |

Average power:

ANT 1:

| Channel | Frequency (MHz) | Measured Output (average) Power(dBm) | 10log(1/x) | Maximum Conducted Output (average) Power | | Limit | | Verdict |
|---------|-----------------|--------------------------------------|------------|--|---------|-------|---|---------|
| | | | | dBm | W | dBm | W | |
| | | | | | | | | |
| 1 | 2412 | 1.82 | 0.50 | 2.32 | 0.00171 | 30 | 1 | PASS |
| 6 | 2437 | 2.67 | 0.50 | 3.17 | 0.00207 | | | PASS |
| 11 | 2462 | 1.39 | 0.50 | 1.89 | 0.00155 | | | PASS |

Note: x refers to duty cycle.



ANT 2:

| Channel | Frequency (MHz) | Measured Output (average) Power(dBm) | 10log(1/x) | Maximum Conducted Output (average) Power | | Limit | | Verdict |
|---------|-----------------|--------------------------------------|------------|--|---------|-------|---|---------|
| | | | | dBm | W | dBm | W | |
| | | | | | | | | |
| 1 | 2412 | 5.76 | 0.50 | 6.26 | 0.00423 | 30 | 1 | PASS |
| 6 | 2437 | 7.25 | 0.50 | 7.75 | 0.00596 | | | PASS |
| 11 | 2462 | 6.02 | 0.50 | 6.52 | 0.00449 | | | PASS |

Note: x refers to duty cycle.

ANT 1+ANT 2:

| Channel | Frequency (MHz) | Measured Output Peak Power | | Limit | | Verdict |
|---------|-----------------|----------------------------|---------|-------|---|---------|
| | | dBm | W | dBm | W | |
| 1 | 2412 | 7.73 | 0.00593 | 30 | 1 | PASS |
| 6 | 2437 | 9.05 | 0.00803 | | | PASS |
| 11 | 2462 | 7.81 | 0.00603 | | | PASS |

2.3.3.3 802.11n-20MHz Test mode

Peak power:

ANT 1:

| Channel | Frequency (MHz) | Measured Output Peak Power | | Limit | | Verdict |
|---------|-----------------|----------------------------|---------|-------|---|---------|
| | | dBm | W | dBm | W | |
| 1 | 2412 | 3.08 | 0.00203 | 30 | 1 | PASS |
| 6 | 2437 | 4.3 | 0.00269 | | | PASS |
| 11 | 2462 | 4.26 | 0.00267 | | | PASS |

ANT 2:

| Channel | Frequency (MHz) | Measured Output Peak Power | | Limit | | Verdict |
|---------|-----------------|----------------------------|---------|-------|---|---------|
| | | dBm | W | dBm | W | |
| 1 | 2412 | 7.53 | 0.00566 | 30 | 1 | PASS |
| 6 | 2437 | 9.23 | 0.00838 | | | PASS |
| 11 | 2462 | 7.36 | 0.00545 | | | PASS |

ANT 1+ANT 2:

| Channel | Frequency (MHz) | Measured Output Peak Power | | Limit | | Verdict |
|---------|-----------------|----------------------------|---------|-------|---|---------|
| | | dBm | W | dBm | W | |
| 1 | 2412 | 8.86 | 0.00769 | 30 | 1 | PASS |
| 6 | 2437 | 10.44 | 0.01107 | | | PASS |
| 11 | 2462 | 9.09 | 0.00811 | | | PASS |



Average power:

ANT 1:

| Channel | Frequency (MHz) | Measured Output (average) Power(dBm) | 10log(1/x) | Maximum Conducted Output (average) Power | | Limit | | Verdict |
|---------|-----------------|--------------------------------------|------------|--|---------|-------|---|---------|
| | | | | dBm | W | dBm | W | |
| | | | | | | | | |
| 1 | 2412 | 2.02 | 0.11 | 2.13 | 0.00163 | 30 | 1 | PASS |
| 6 | 2437 | 2.93 | 0.11 | 3.04 | 0.00201 | | | PASS |
| 11 | 2462 | 2.89 | 0.11 | 3 | 0.00200 | | | PASS |

Note: x refers to duty cycle.

ANT 2:

| Channel | Frequency (MHz) | Measured Output (average) Power(dBm) | 10log(1/x) | Maximum Conducted Output (average) Power | | Limit | | Verdict |
|---------|-----------------|--------------------------------------|------------|--|---------|-------|---|---------|
| | | | | dBm | W | dBm | W | |
| | | | | | | | | |
| 1 | 2412 | 6.14 | 0.11 | 6.25 | 0.00422 | 30 | 1 | PASS |
| 6 | 2437 | 7.73 | 0.11 | 7.84 | 0.00608 | | | PASS |
| 11 | 2462 | 5.81 | 0.11 | 5.92 | 0.00391 | | | PASS |

Note: x refers to duty cycle.

ANT 1+ANT 2:

| Channel | Frequency (MHz) | Measured Output Average Power | | Limit | | Verdict |
|---------|-----------------|-------------------------------|---------|-------|---|---------|
| | | dBm | W | dBm | W | |
| 1 | 2412 | 7.67 | 0.00585 | 30 | 1 | PASS |
| 6 | 2437 | 9.08 | 0.00810 | | | PASS |
| 11 | 2462 | 7.71 | 0.00590 | | | PASS |

Note: Each antenna port was measured individually, and the aggregated power was summed mathematically.

Remark:

- 1) The MIMO test requirement, RF conducted output power shall measure each transmitter chain. And after obtain each individual transmitter chain power, then sum the output power by using the following formula;

$$((\text{dBm}/\text{Chain 1})/10^{\text{Log}}) + (\text{dBm}/\text{Chain 2})/10^{\text{Log}} + (\text{dBm}/\text{Chain N})/10^{\text{Log}} = \text{Combined peak output power in mW.}$$

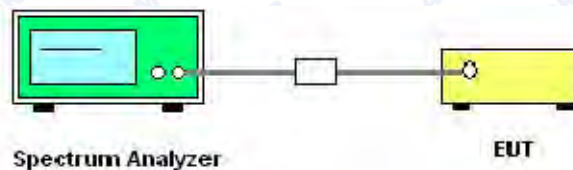
2.4 Bandwidth

2.4.1 Requirement

According to FCC section 15.247(a) (2), Systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz, and 5725 - 5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

2.4.2 Test Description

A. Test Set:



The EUT is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

B. Equipments List:

Please reference ANNEX A(1.4).

2.4.3 Test Result

The lowest, middle and highest channels are selected to perform testing to record the 6 dB bandwidth of the EUT.

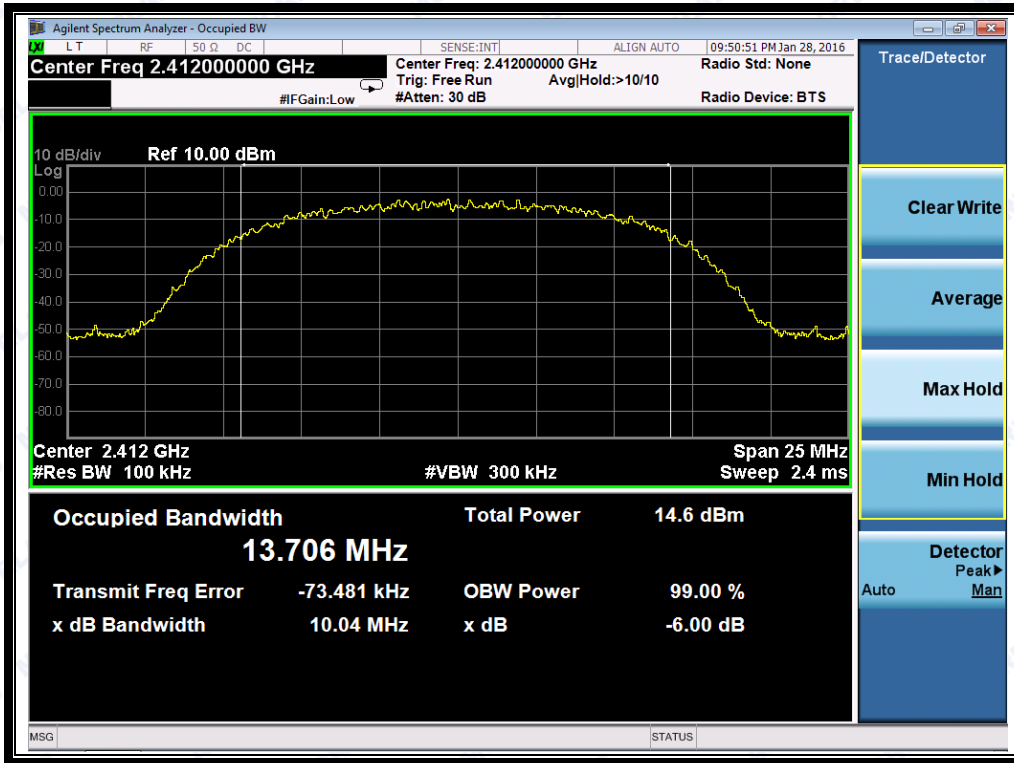
2.4.3.1 802.11b Test mode

ANT 1:

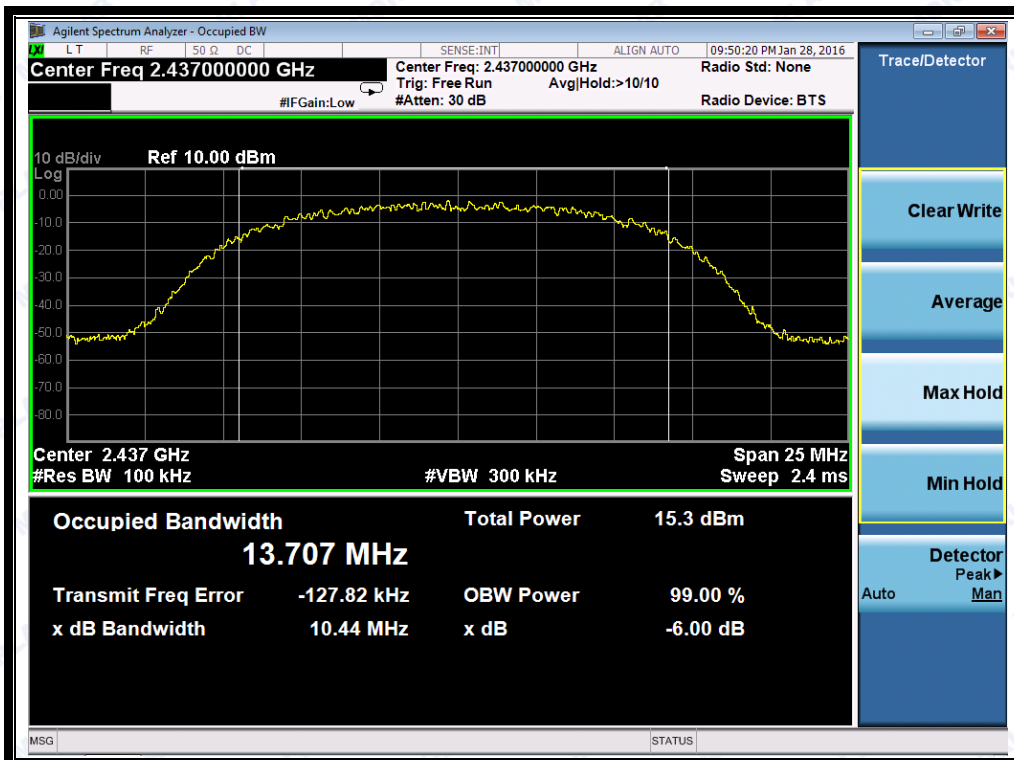
A. Test Verdict:

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Limits(kHz) | Result |
|---------|-----------------|----------------------|-------------|--------|
| 1 | 2412 | 10.04 | ≥500 | PASS |
| 6 | 2437 | 10.44 | ≥500 | PASS |
| 11 | 2462 | 10.44 | ≥500 | PASS |

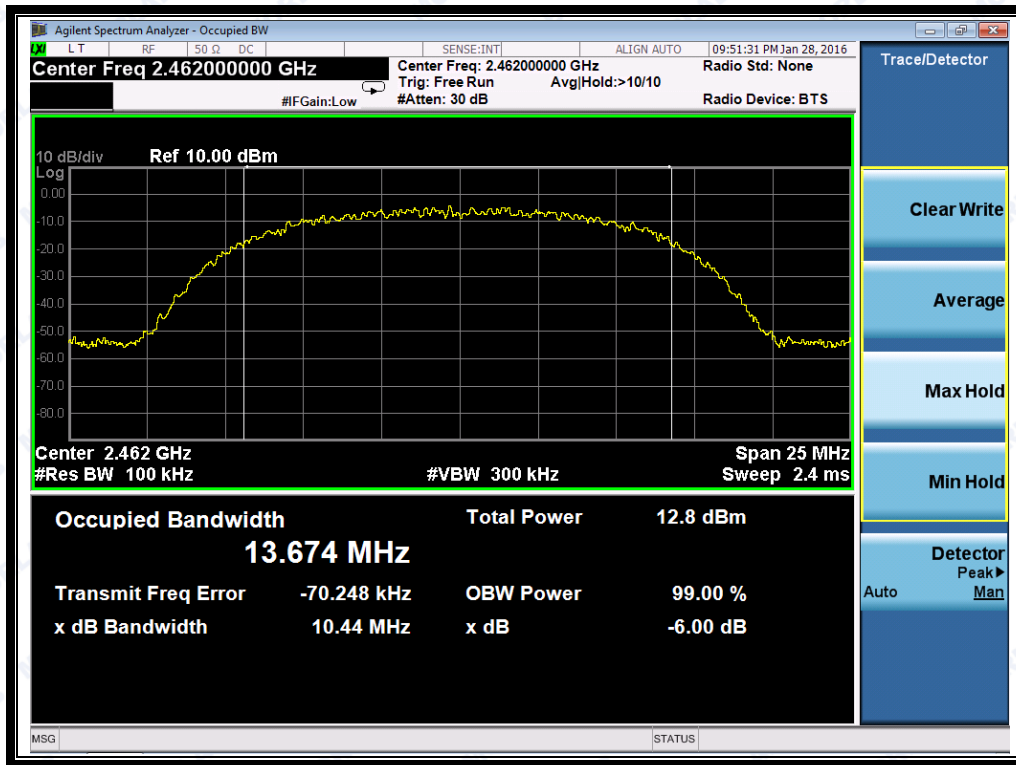
B. Test Plots



(Channel 1: 2412MHz @ 802.11b)



(Channel 6: 2437 MHz @ 802.11b)



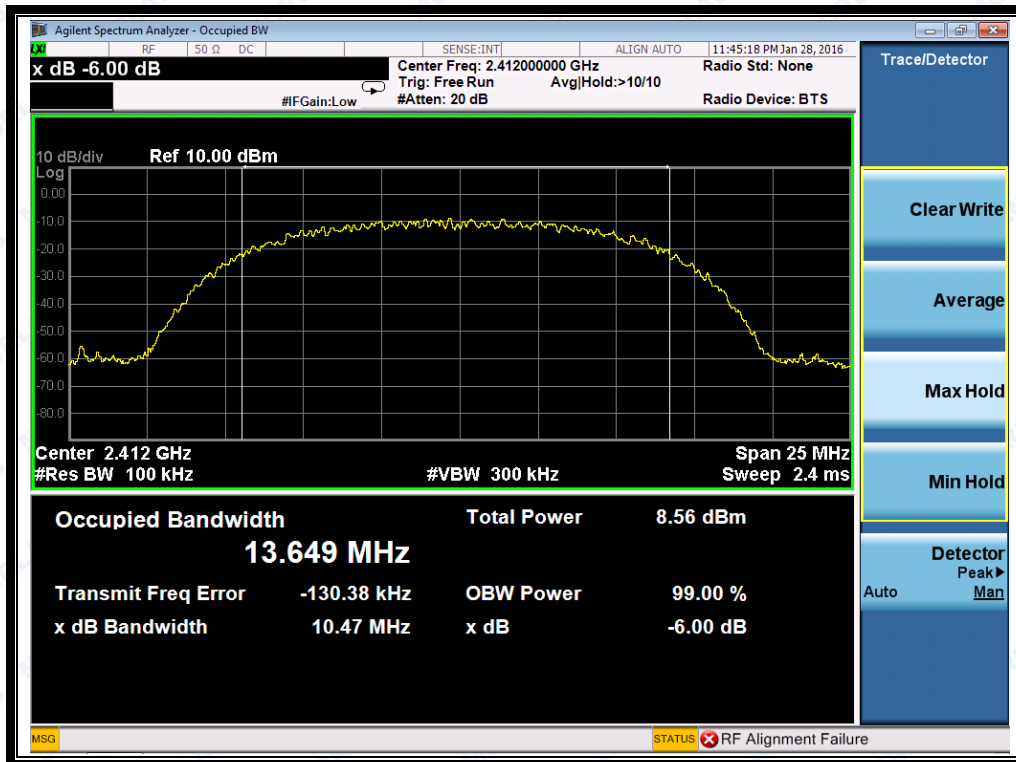
(Channel 11: 2462MHz @ 802.11b)

ANT 2:

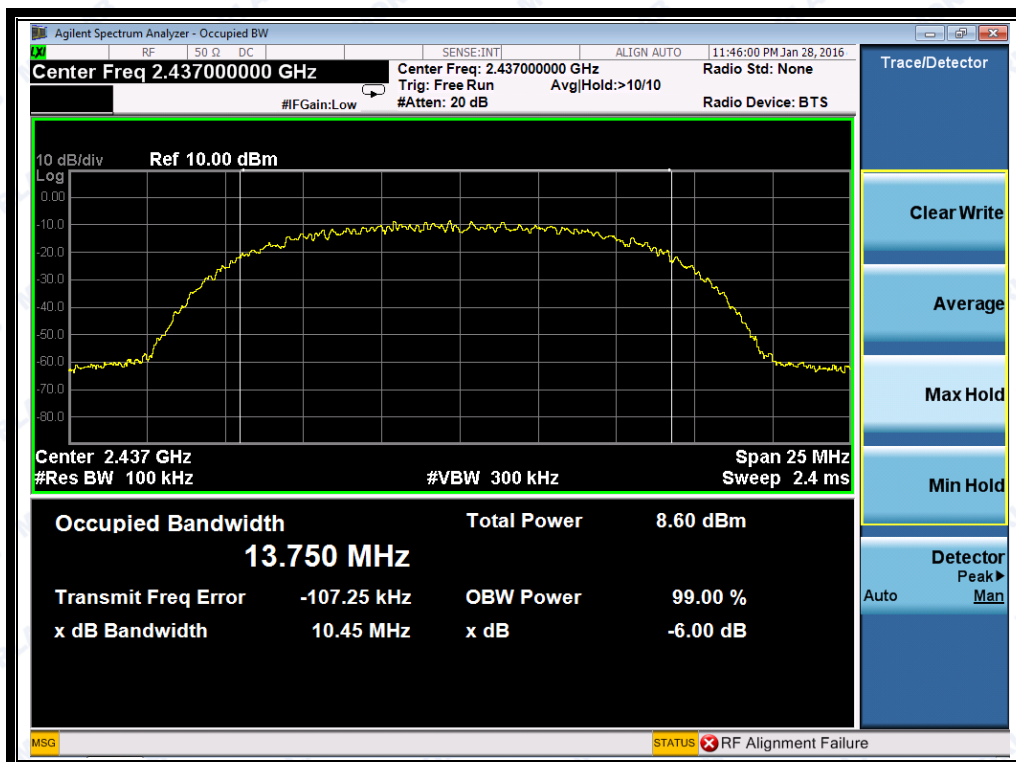
C. Test Verdict:

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Limits(kHz) | Result |
|---------|-----------------|----------------------|-------------|--------|
| 1 | 2412 | 10.47 | ≥500 | PASS |
| 6 | 2437 | 10.45 | ≥500 | PASS |
| 11 | 2462 | 10.44 | ≥500 | PASS |

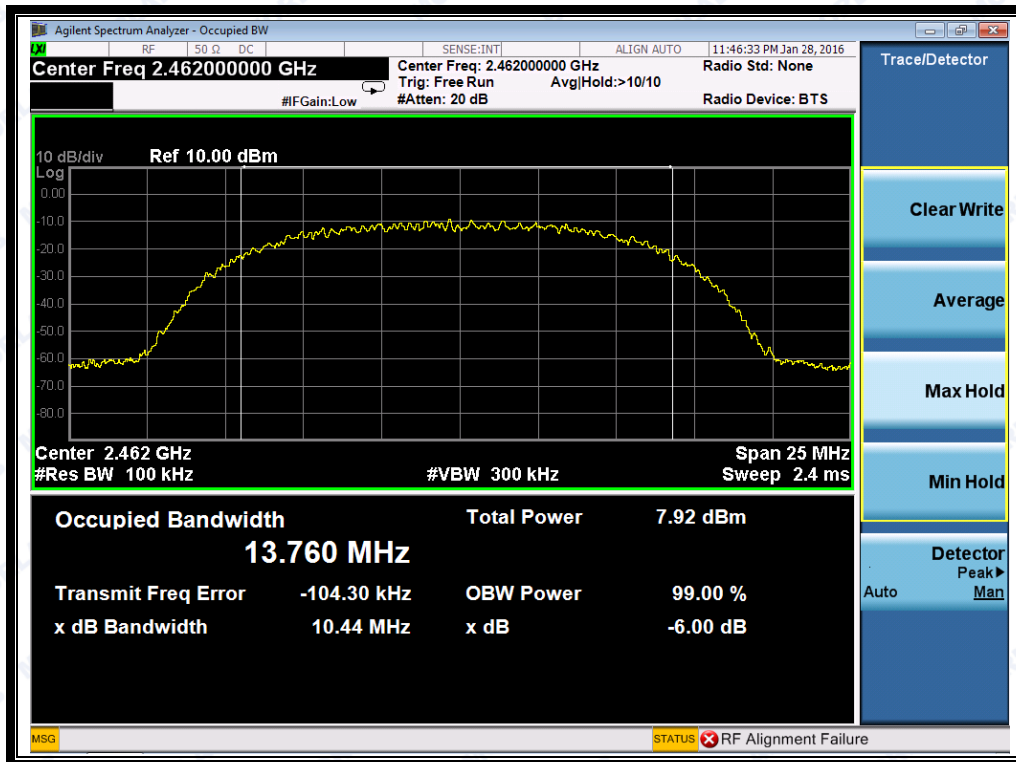
D. Test Plots



(Channel 1: 2412MHz @ 802.11b)



(Channel 6: 2437 MHz @ 802.11b)



(Channel 11: 2462MHz @ 802.11b)

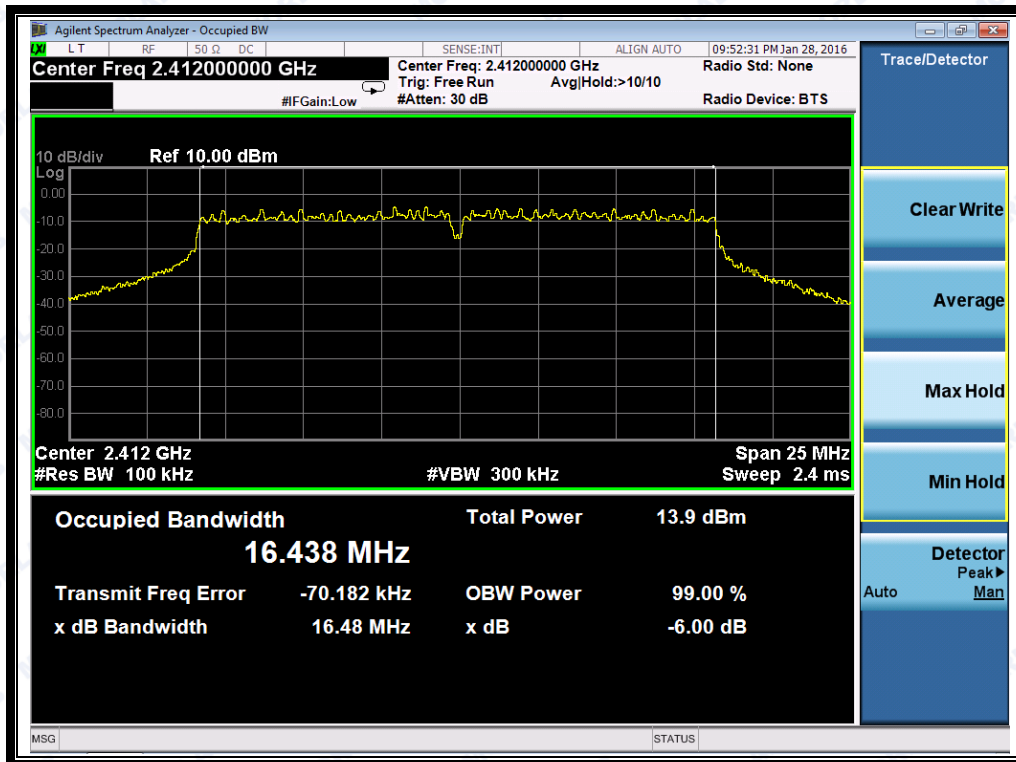
2.4.3.2 802.11g Test mode

ANT 1:

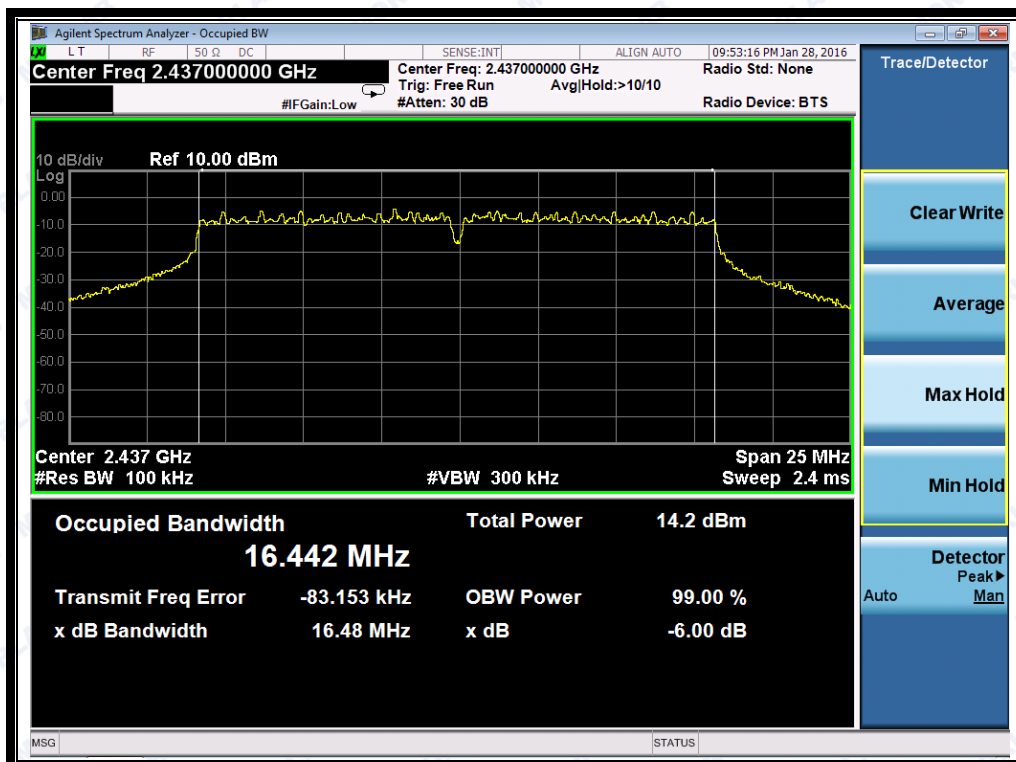
A. Test Verdict:

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Limits (kHz) | Result |
|---------|-----------------|----------------------|--------------|--------|
| 1 | 2412 | 16.48 | ≥500 | PASS |
| 6 | 2437 | 16.48 | ≥500 | PASS |
| 11 | 2462 | 16.49 | ≥500 | PASS |

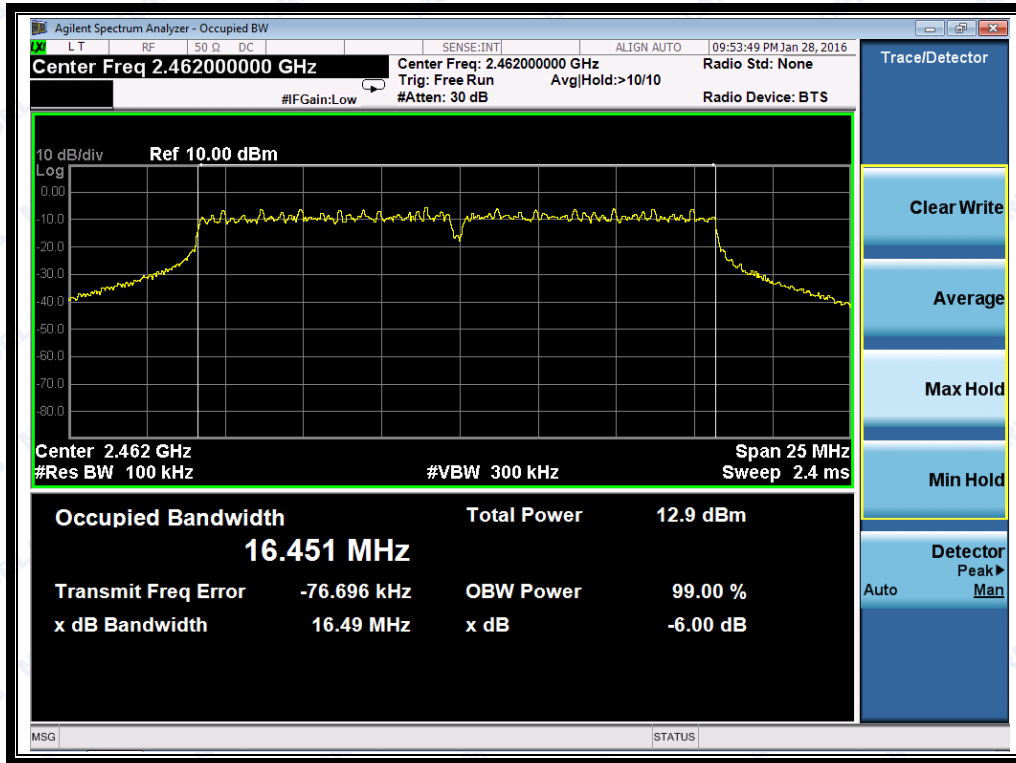
B. Test Plots:



(Channel 1: 2412MHz @ 802.11g)



(Channel 6: 2437MHz @ 802.11g)



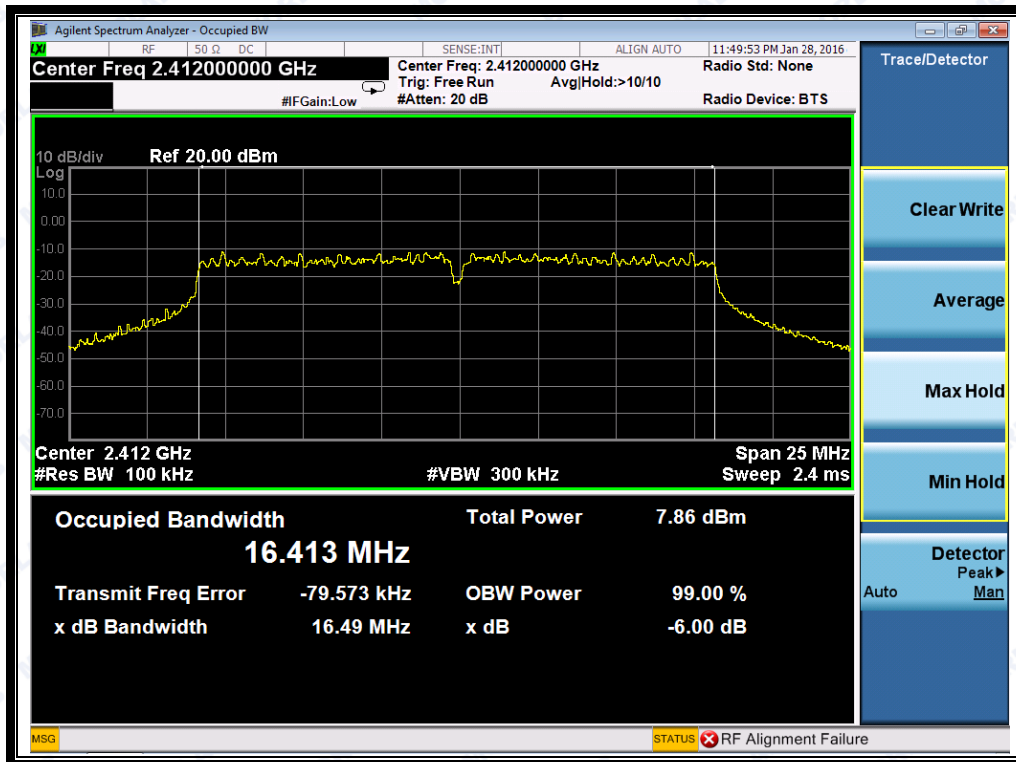
(Channel 11: 2462MHz @ 802.11g)

ANT 2:

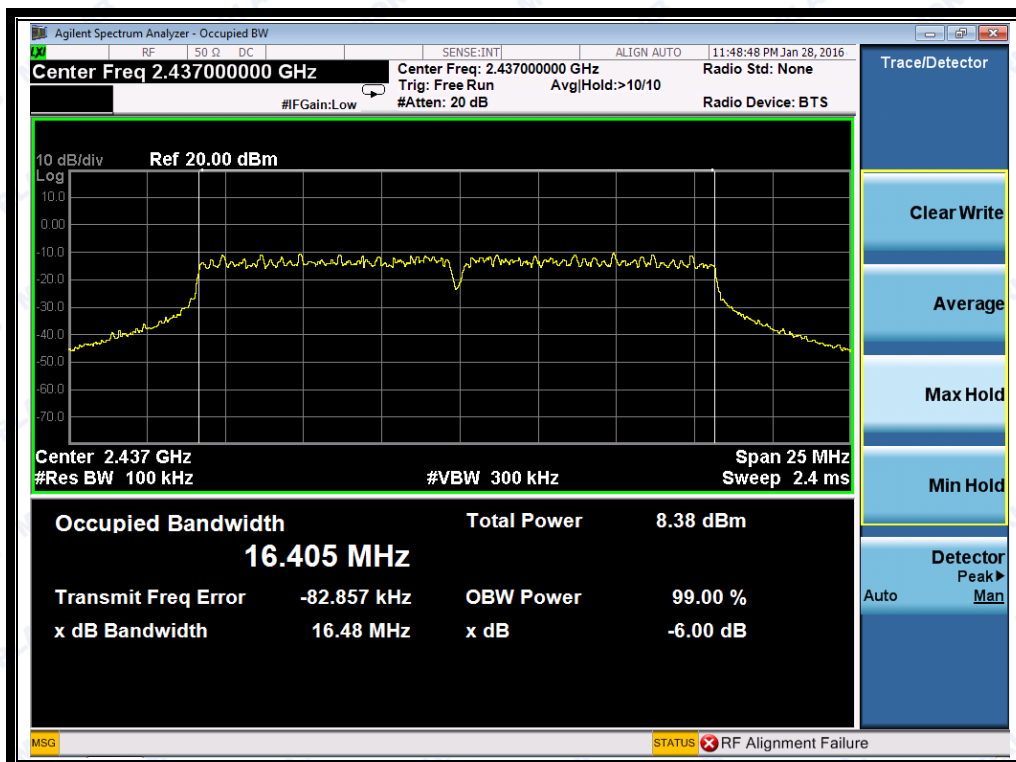
C. Test Verdict:

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Limits (kHz) | Result |
|---------|-----------------|----------------------|--------------|--------|
| 1 | 2412 | 16.49 | ≥500 | PASS |
| 6 | 2437 | 16.48 | ≥500 | PASS |
| 11 | 2462 | 16.43 | ≥500 | PASS |

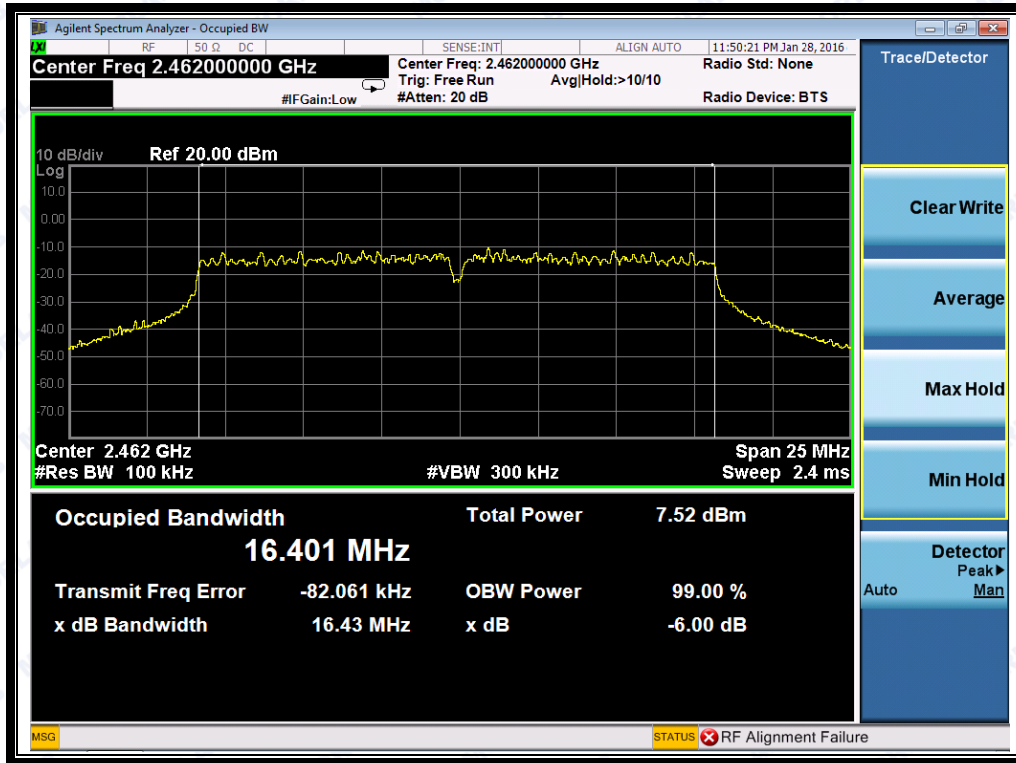
D. Test Plots:



(Channel 1: 2412MHz @ 802.11g)



(Channel 6: 2437MHz @ 802.11g)



(Channel 11: 2462MHz @ 802.11g)

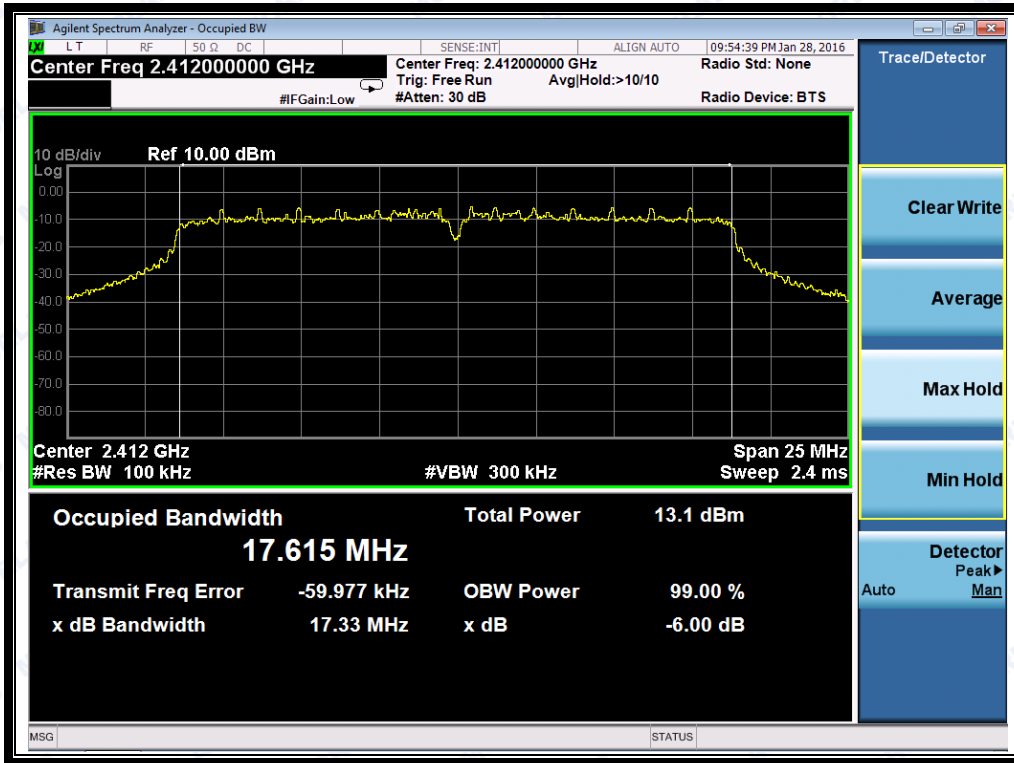
2.4.3.3 802.11n-20 Test mode

ANT 1:

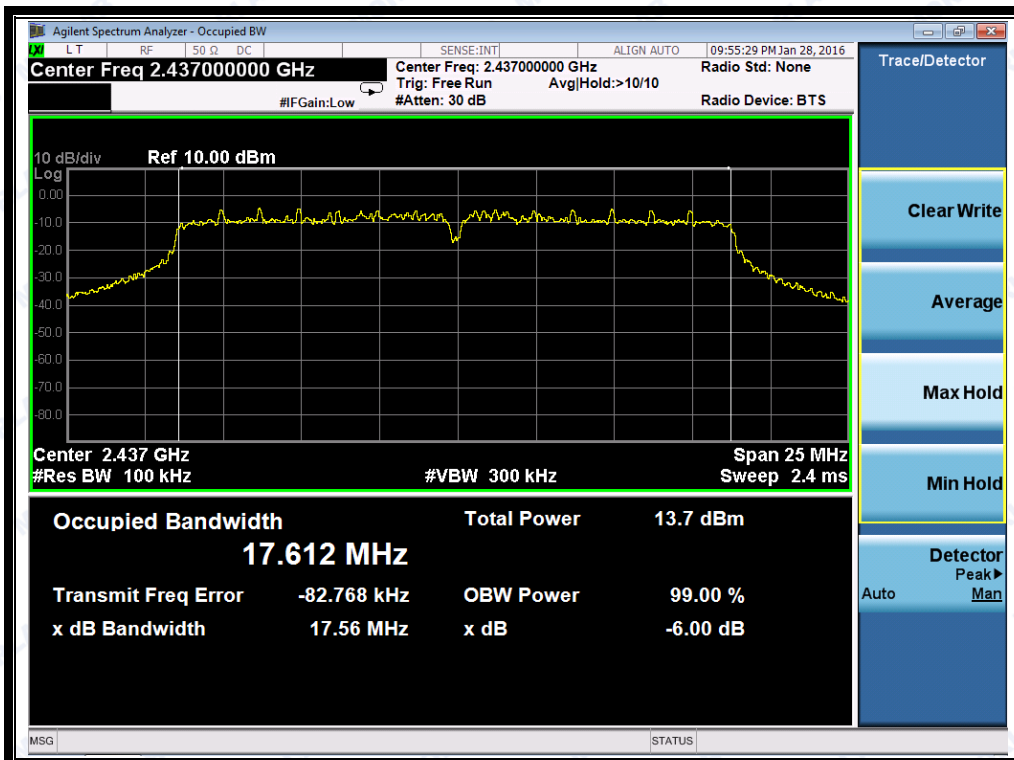
B. Test Verdict:

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Limits (kHz) | Result |
|---------|-----------------|----------------------|--------------|--------|
| 1 | 2412 | 17.33 | ≥500 | PASS |
| 6 | 2437 | 17.56 | ≥500 | PASS |
| 11 | 2462 | 17.58 | ≥500 | PASS |

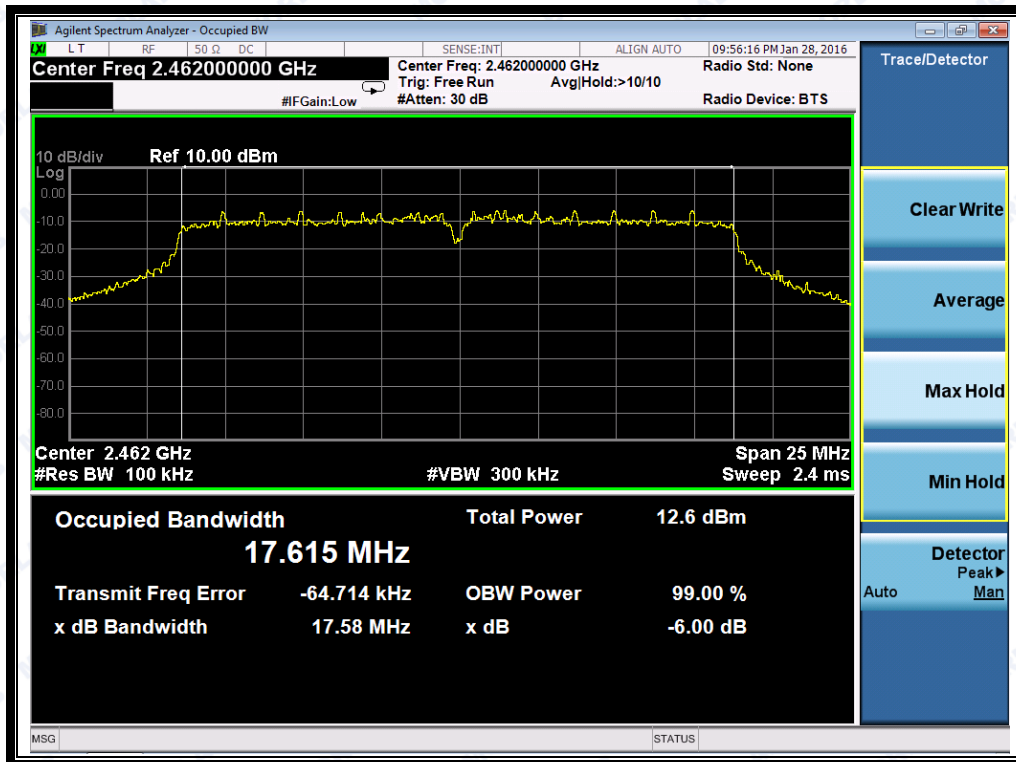
B. Test Plots:



(Channel 1: 2412MHz @ 802.11n-20)



(Channel 6: 2437MHz @ 802.11n-20)



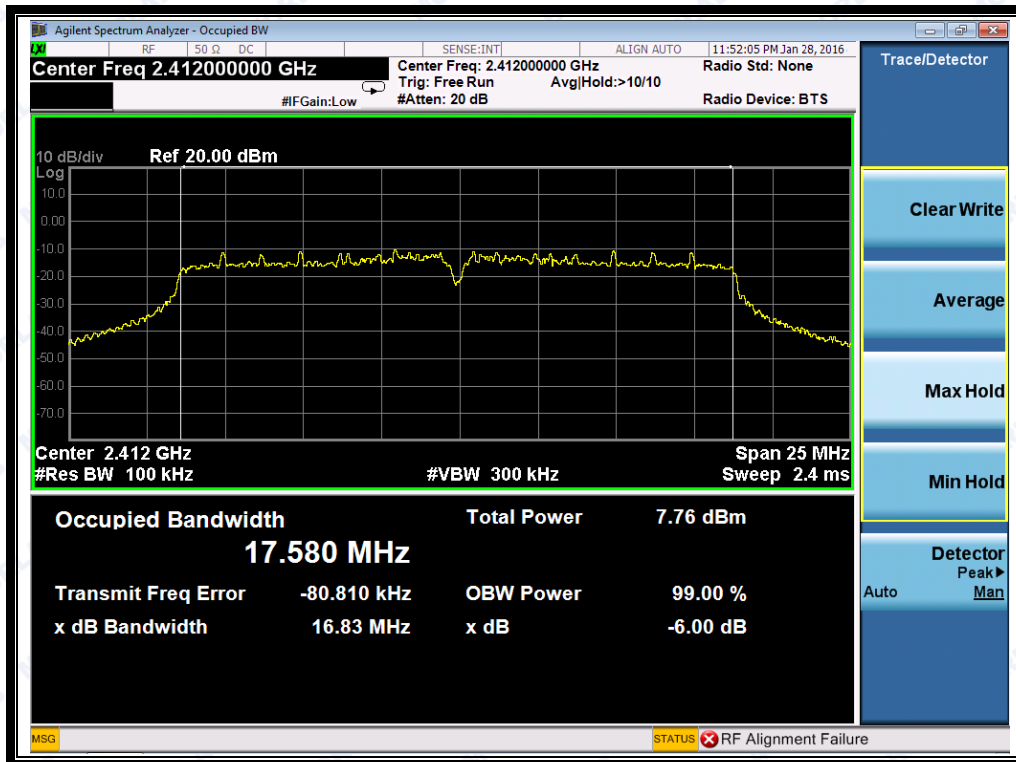
(Channel 11: 2462MHz @ 802.11n-20)

ANT 2:

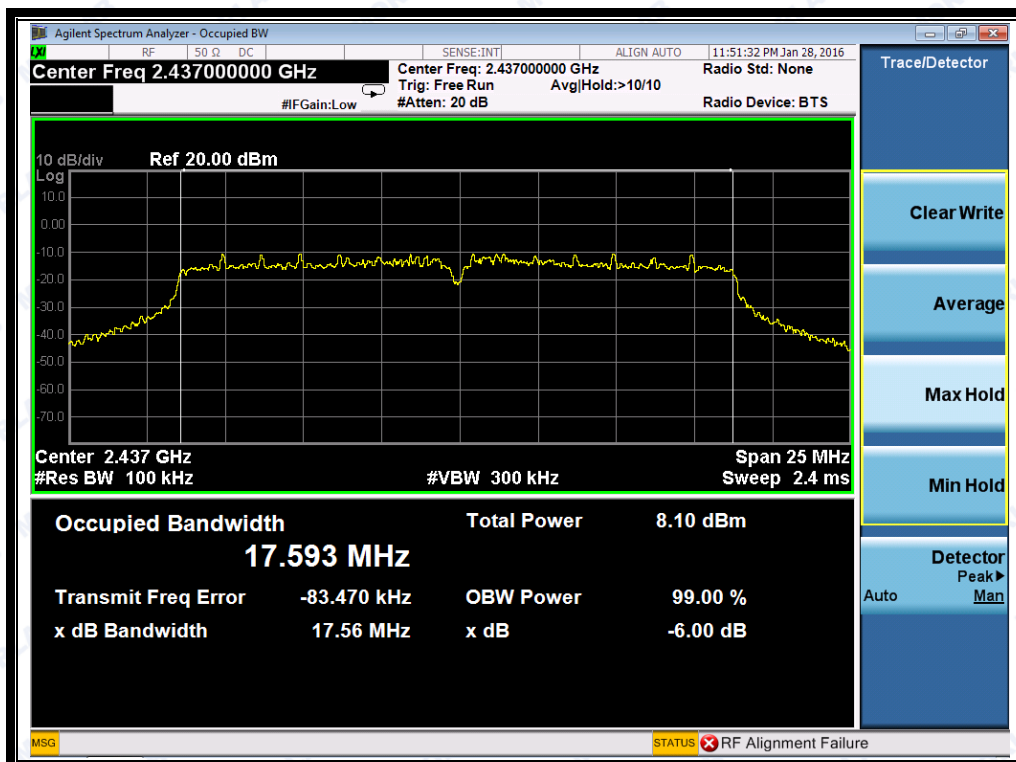
A. Test Verdict:

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Limits(kHz) | Result |
|---------|-----------------|----------------------|-------------|--------|
| 1 | 2412 | 16.83 | ≥500 | PASS |
| 6 | 2437 | 17.56 | ≥500 | PASS |
| 11 | 2462 | 16.53 | ≥500 | PASS |

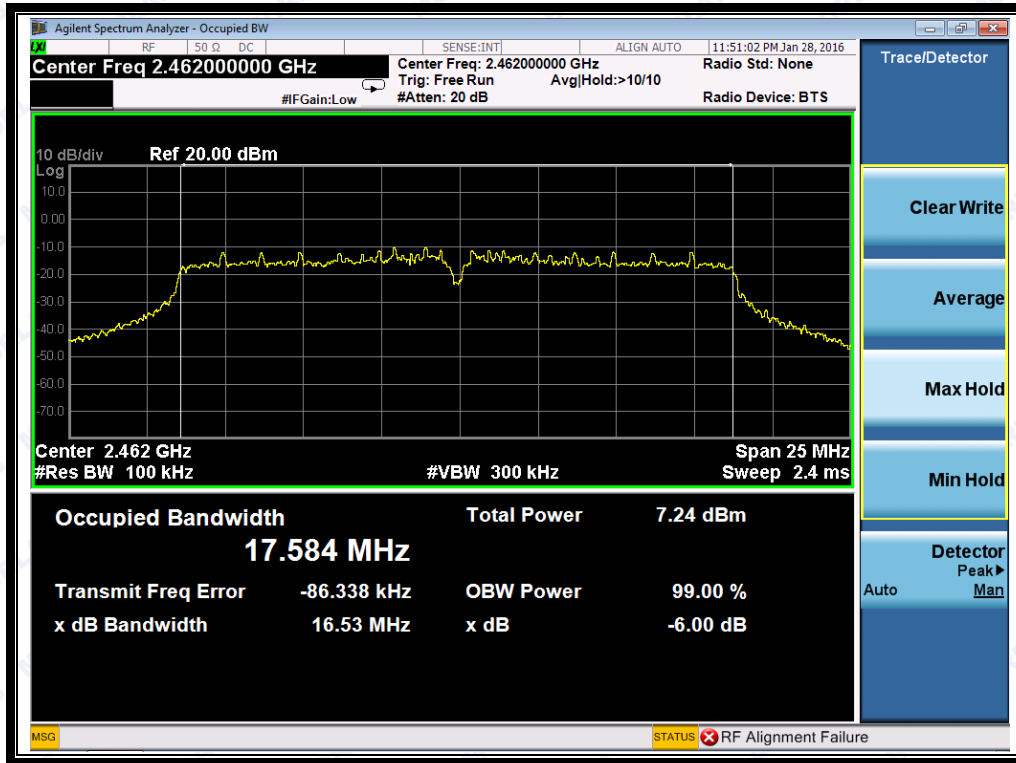
B. Test Plots



(Channel 1: 2412MHz @ 802.11 n-20)



(Channel 6: 2437 MHz @ 802.11 n-20)



(Channel 11: 2462MHz @ 802.11 n-20)

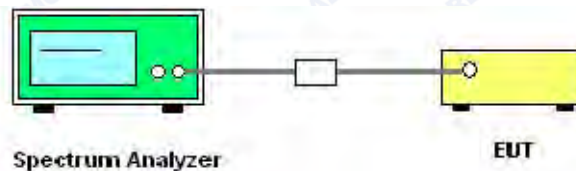
2.5 Conducted Spurious Emissions and Band Edge

2.5.1 Requirement

According to FCC section 15.247(c), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, based on either an RF conducted or a radiated measurement.

2.5.2 Test Description

A. Test Set:



The EUT is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

B. Equipments List:

Please reference ANNEX A(1.4).

2.5.3 Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions.



2.5.3.1 802.11b Test mode

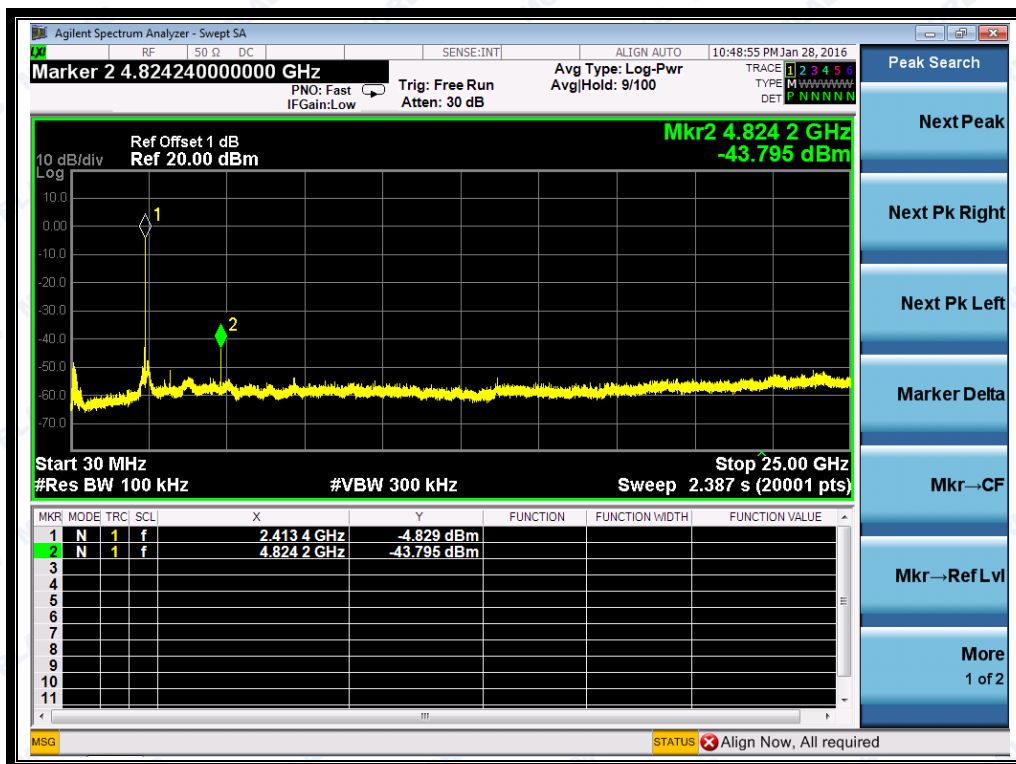
ANT 1:

A. Test Verdict:

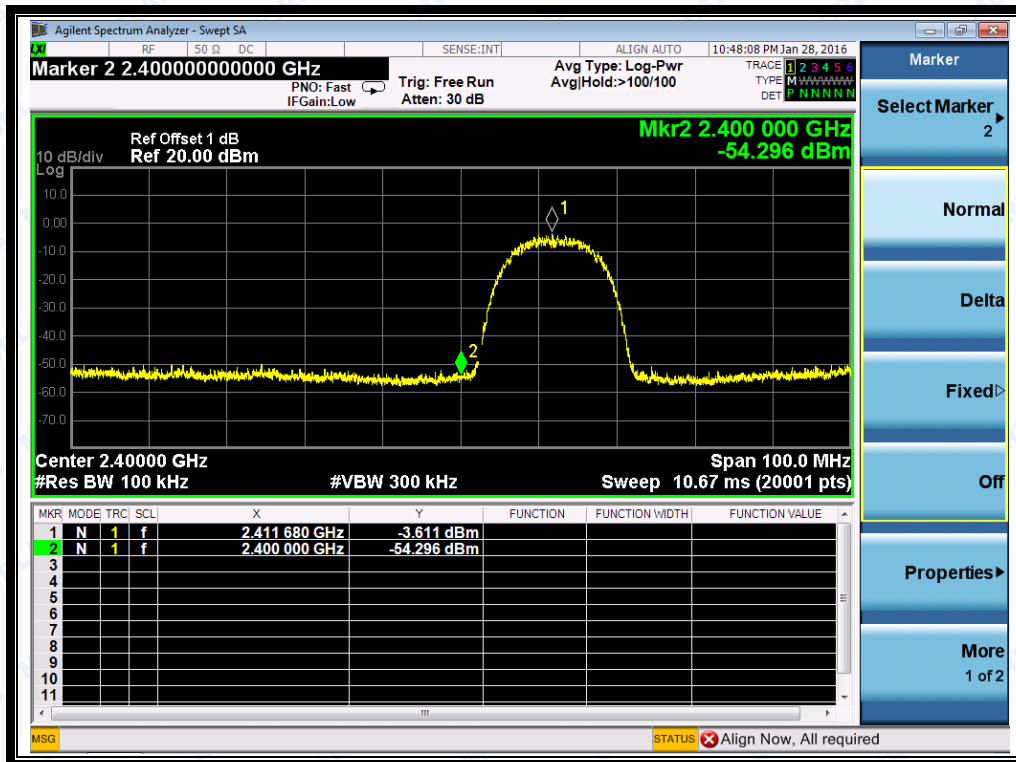
| Channel | Frequency (MHz) | Measured Max. Out of Band Emission (dBm) | Limit (dBm) | | Verdict |
|---------|-----------------|--|---------------|-------------------------|---------|
| | | | Carrier Level | Calculated -20dBc Limit | |
| 1 | 2412 | -43.80 | -4.83 | -24.83 | PASS |
| 6 | 2437 | -41.56 | -4.08 | -24.08 | PASS |
| 11 | 2462 | -45.86 | -6.08 | -26.08 | PASS |

B. Test Plots:

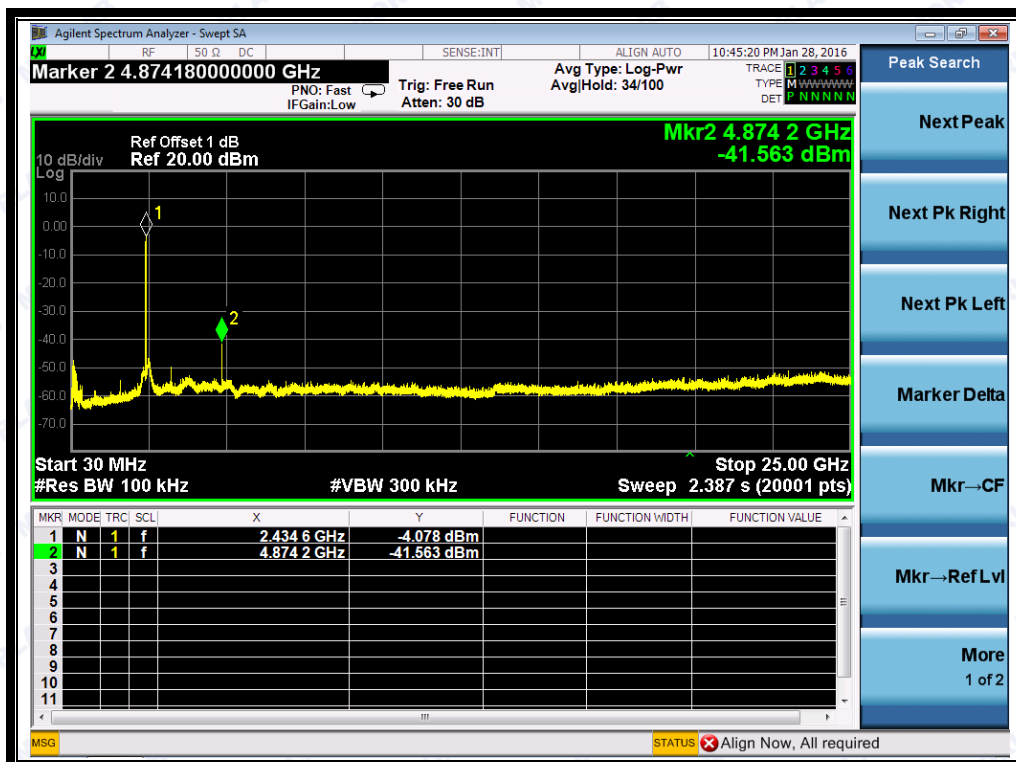
Note: the power of the EUT transmitting frequency should be ignored.



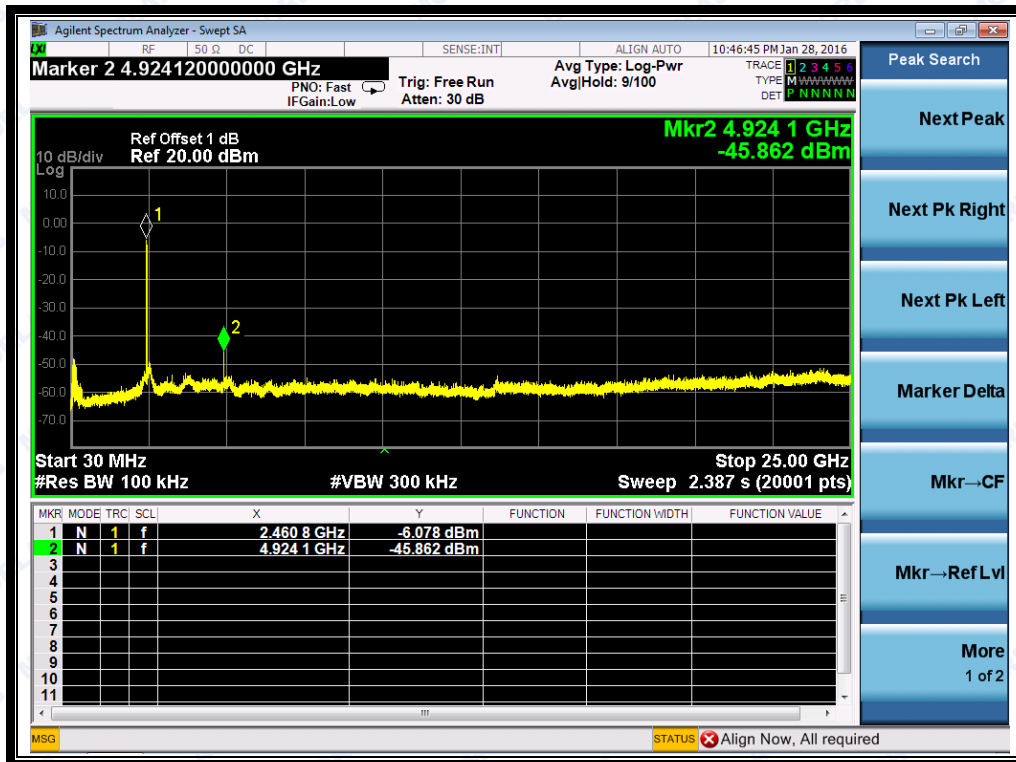
(Channel = 1, 30MHz to 25GHz)



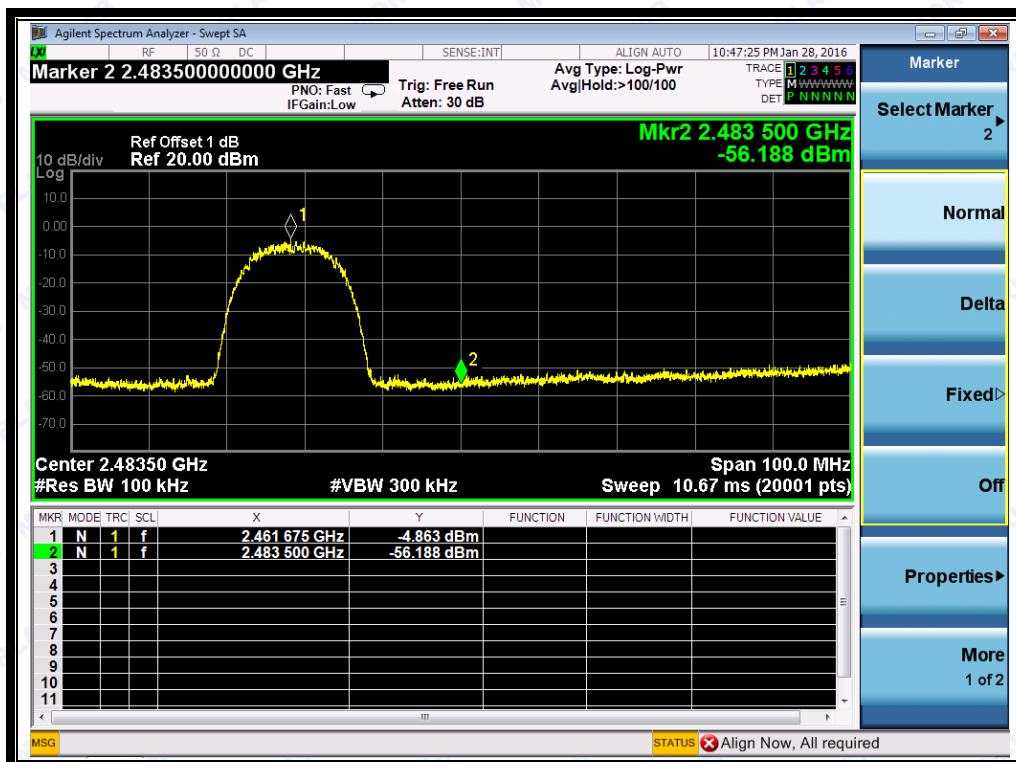
(Band Edge @ Channel = 1)



(Channel = 6, 30MHz to 25GHz)



(Channel = 11, 30MHz to 25GHz)



(Band Edge @ Channel = 11)



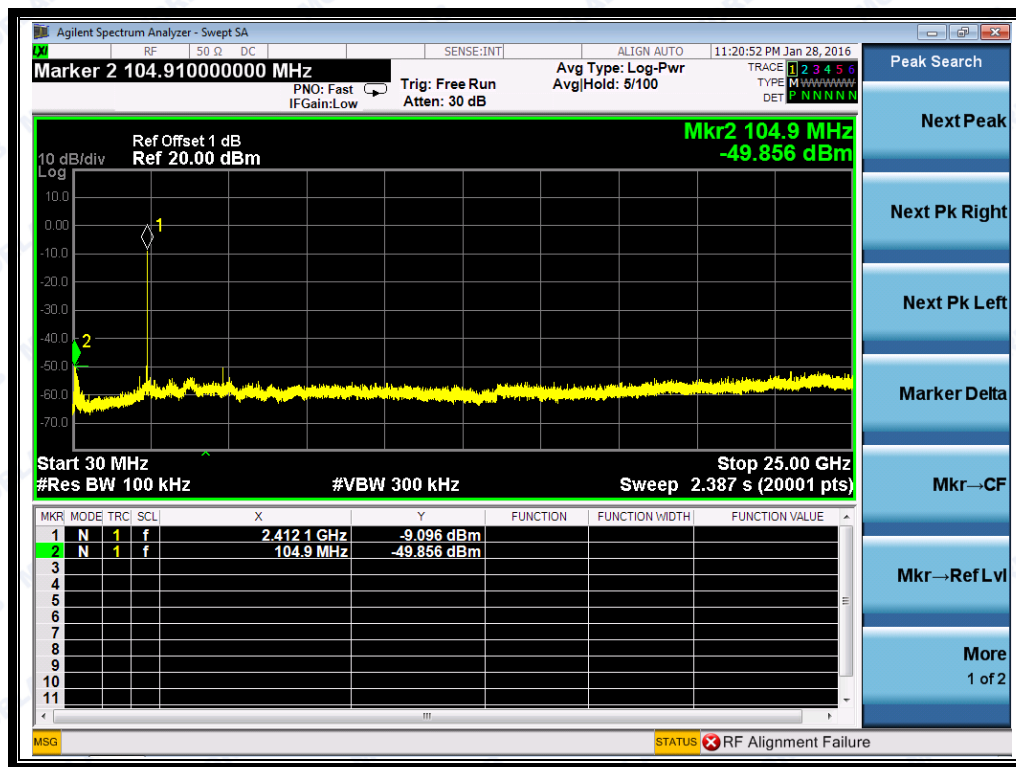
ANT 2:

C. Test Verdict:

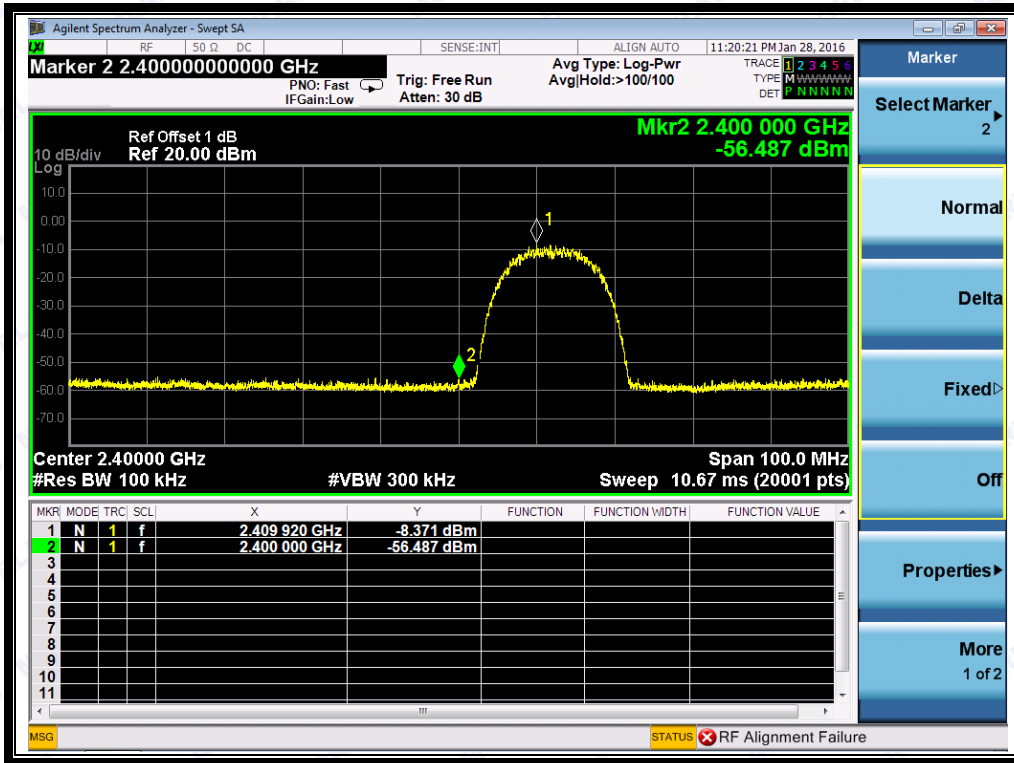
| Channel | Frequency (MHz) | Measured Max. Out of Band Emission (dBm) | Limit (dBm) | | Verdict |
|---------|-----------------|--|---------------|-------------------------|---------|
| | | | Carrier Level | Calculated -20dBc Limit | |
| 1 | 2412 | -49.86 | -9.10 | -29.10 | PASS |
| 6 | 2437 | -50.00 | -10.84 | -30.84 | PASS |
| 11 | 2462 | -50.60 | -11.42 | -31.42 | PASS |

D. Test Plots:

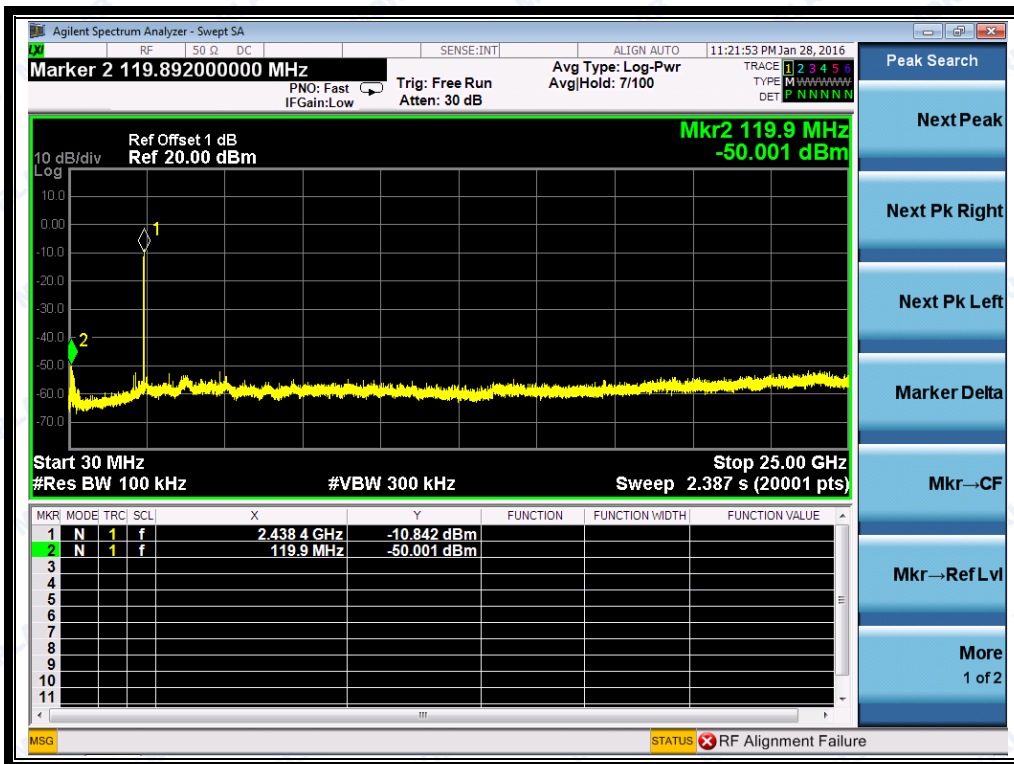
Note: the power of the EUT transmitting frequency should be ignored.



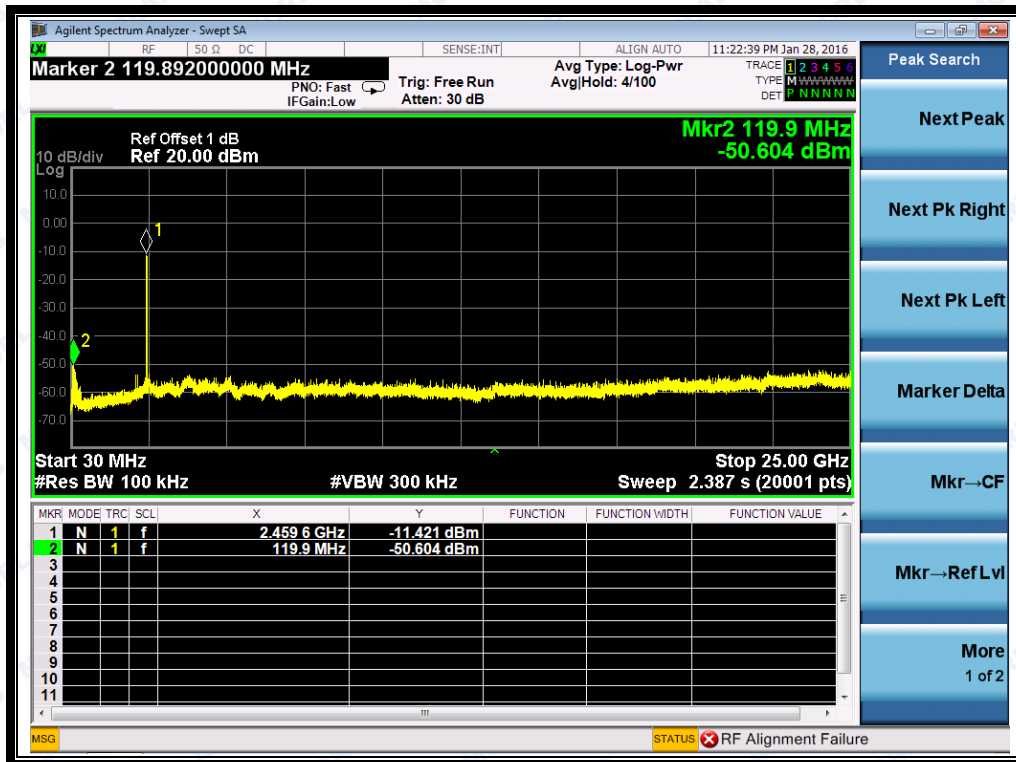
(Channel = 1, 30MHz to 25GHz)



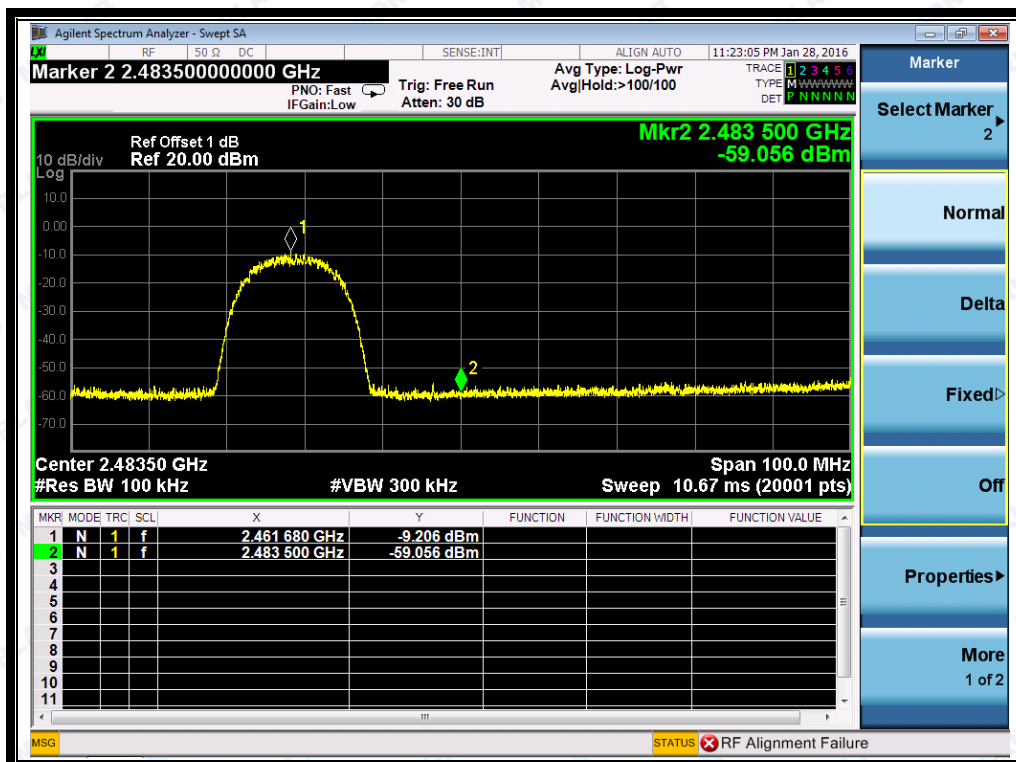
(Band Edge @ Channel = 1)



(Channel = 6, 30MHz to 25GHz)



(Channel = 11, 30MHz to 25GHz)



(Band Edge @ Channel = 11)



2.5.3.2 802.11g Test mode

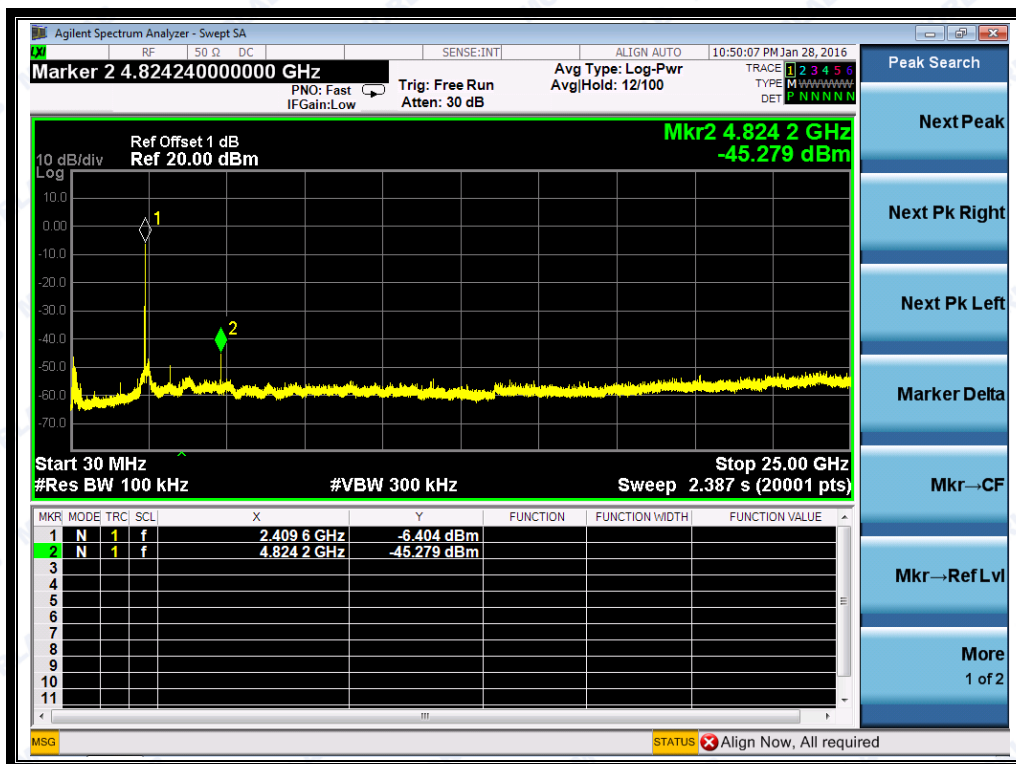
ANT 1:

A. Test Verdict:

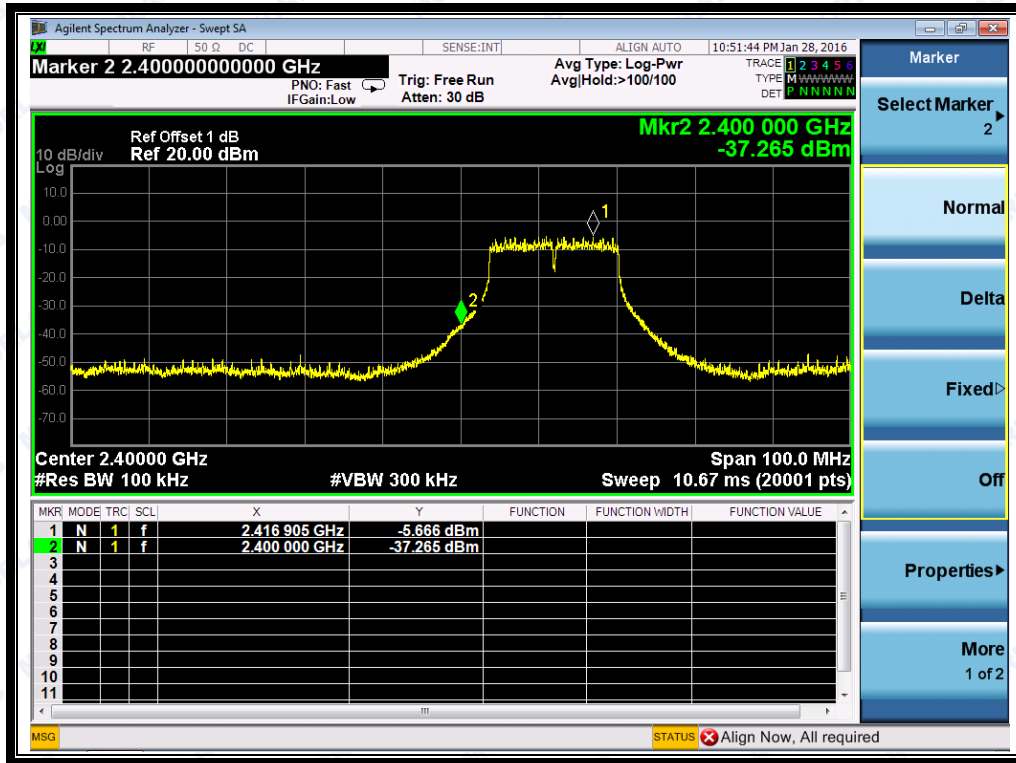
| Channel | Frequency (MHz) | Measured Max. Out of Band Emission (dBm) | Limit (dBm) | | Verdict |
|---------|-----------------|--|---------------|-------------------------|---------|
| | | | Carrier Level | Calculated -20dBc Limit | |
| 1 | 2412 | -45.28 | -6.40 | -26.40 | PASS |
| 6 | 2437 | -48.14 | -5.19 | -25.19 | PASS |
| 11 | 2462 | -49.85 | -6.18 | -26.18 | PASS |

B. Test Plots:

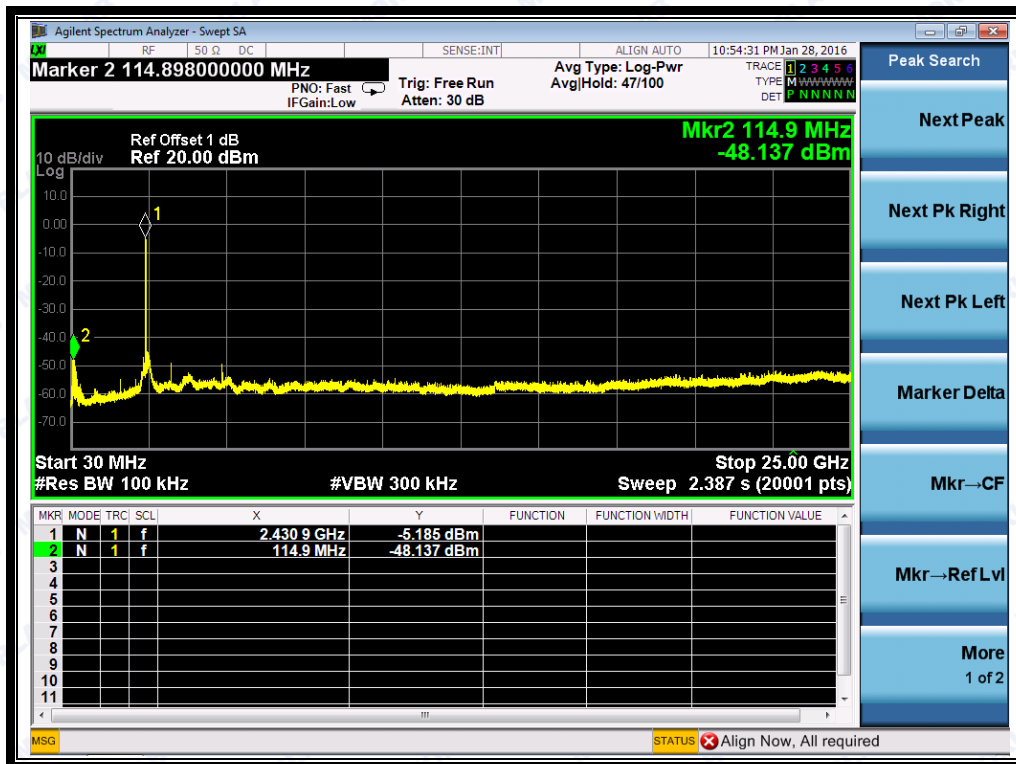
Note: the power of the EUT transmitting frequency should be ignored.



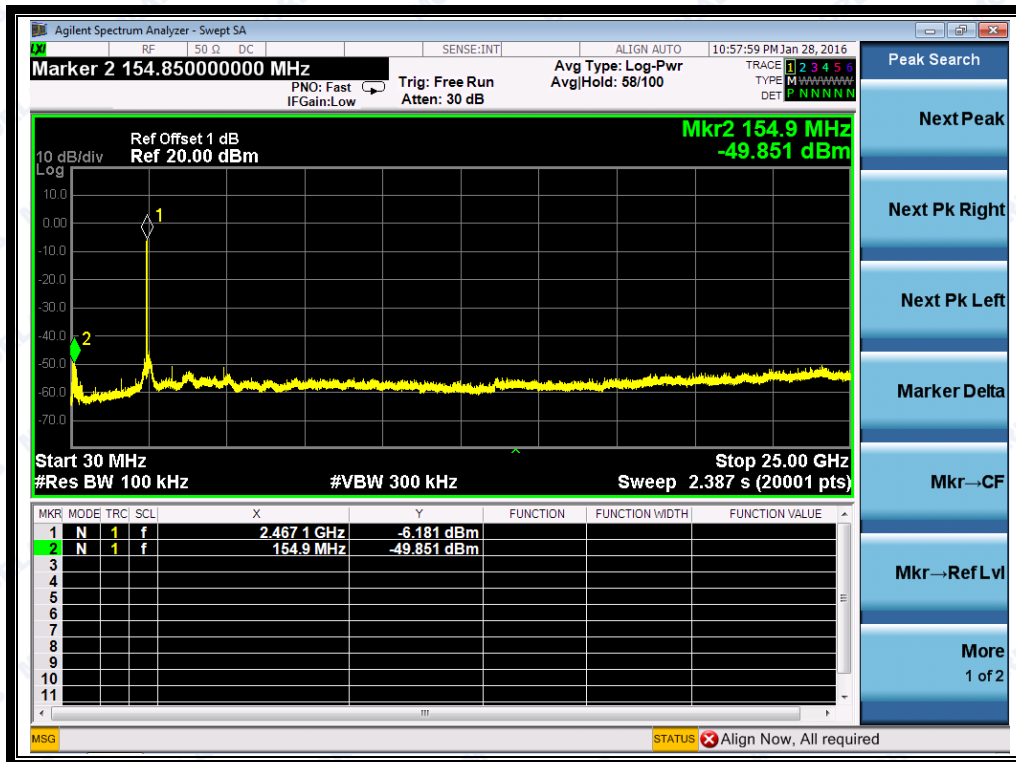
(Channel = 1, 30MHz to 25GHz)



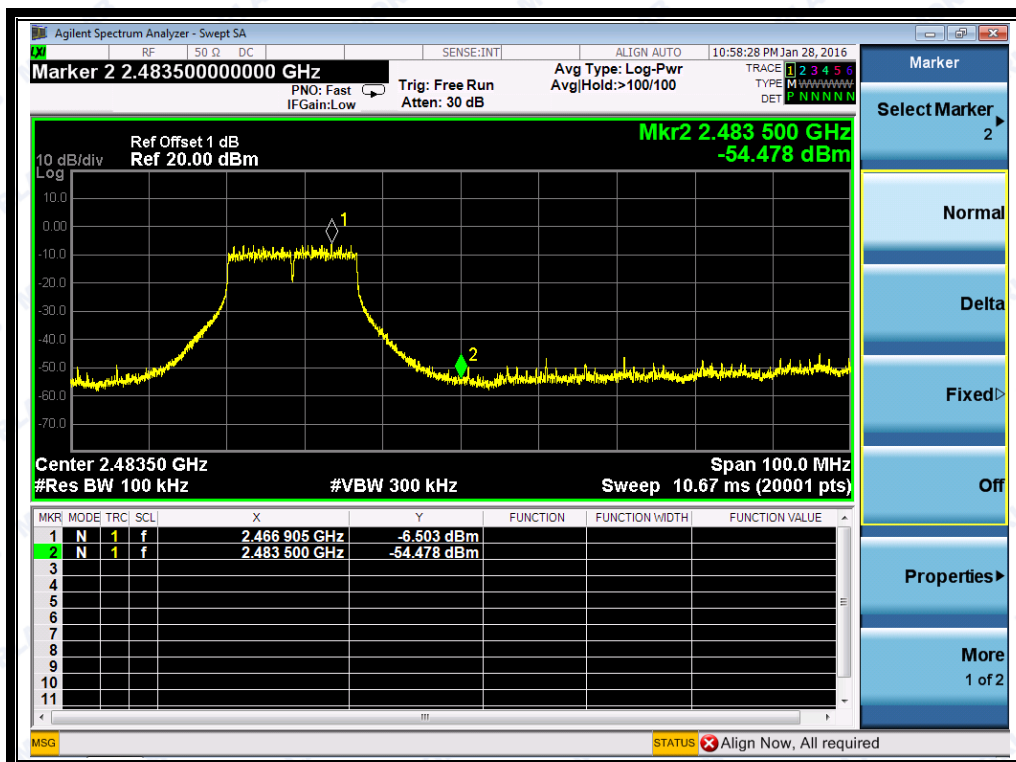
(Band Edge @ Channel = 1)



(Channel = 6, 30MHz to 25GHz)



(Channel = 11, 30MHz to 25GHz)



(Band Edge @ Channel = 11)



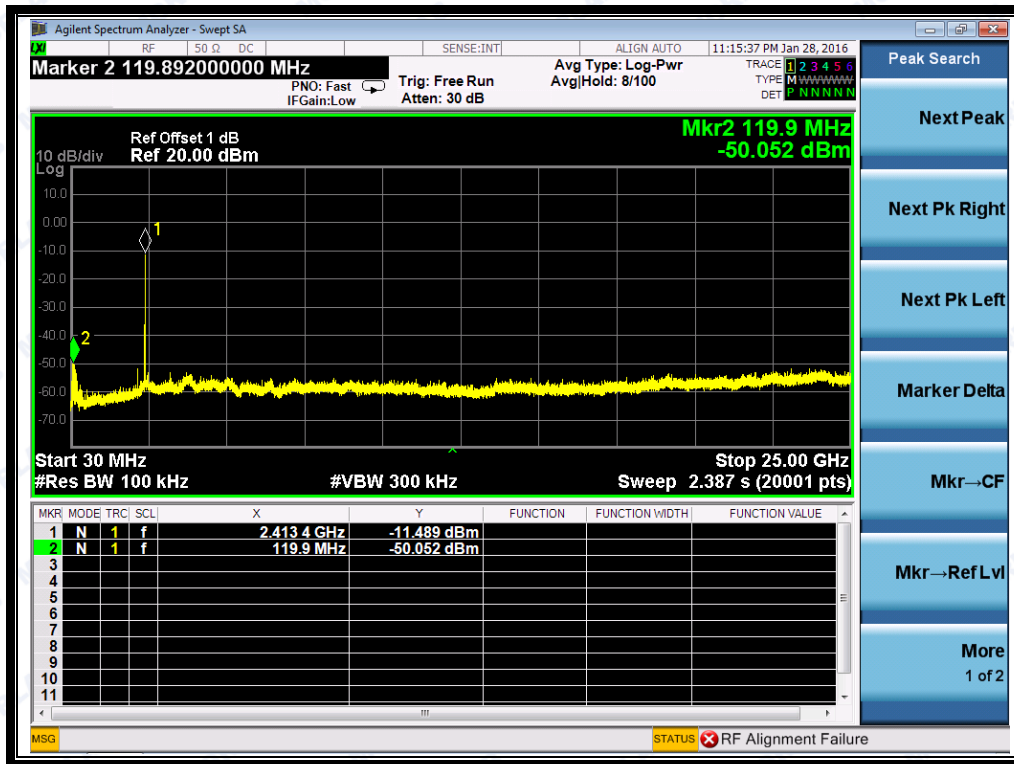
ANT 2:

C. Test Verdict:

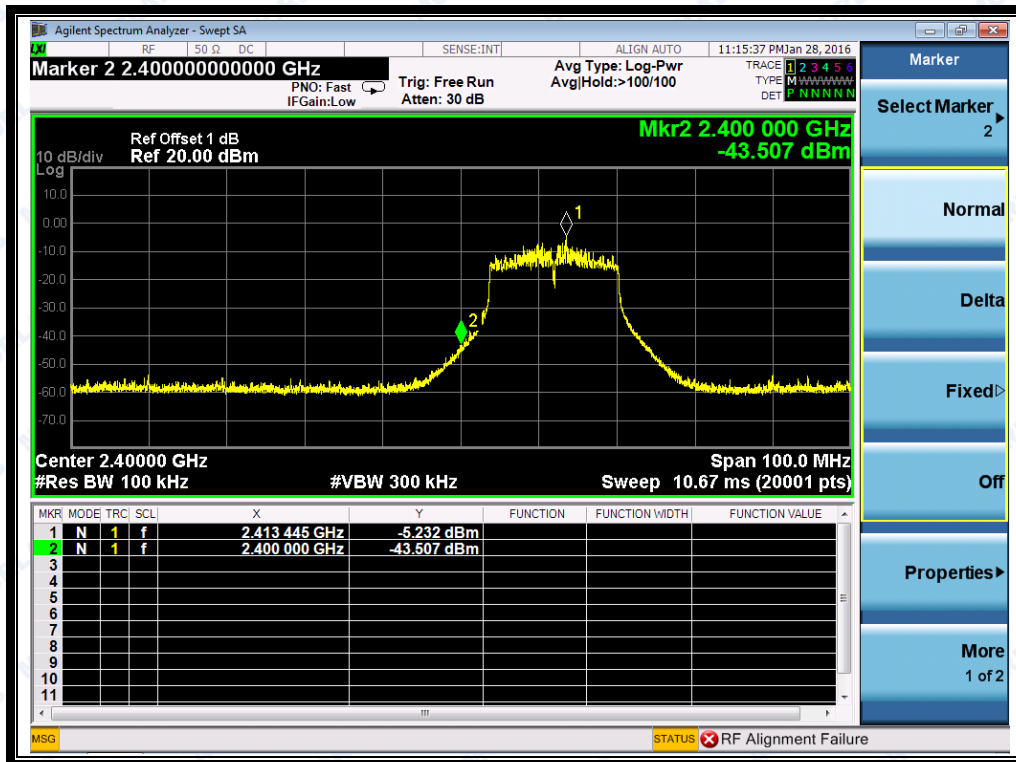
| Channel | Frequency (MHz) | Measured Max. Out of Band Emission (dBm) | Limit (dBm) | | Verdict |
|---------|-----------------|--|---------------|-------------------------|---------|
| | | | Carrier Level | Calculated -20dBc Limit | |
| 1 | 2412 | -50.05 | -11.49 | -31.49 | PASS |
| 6 | 2437 | -50.50 | -11.12 | -31.12 | PASS |
| 11 | 2462 | -50.60 | -12.12 | -32.12 | PASS |

D. Test Plots:

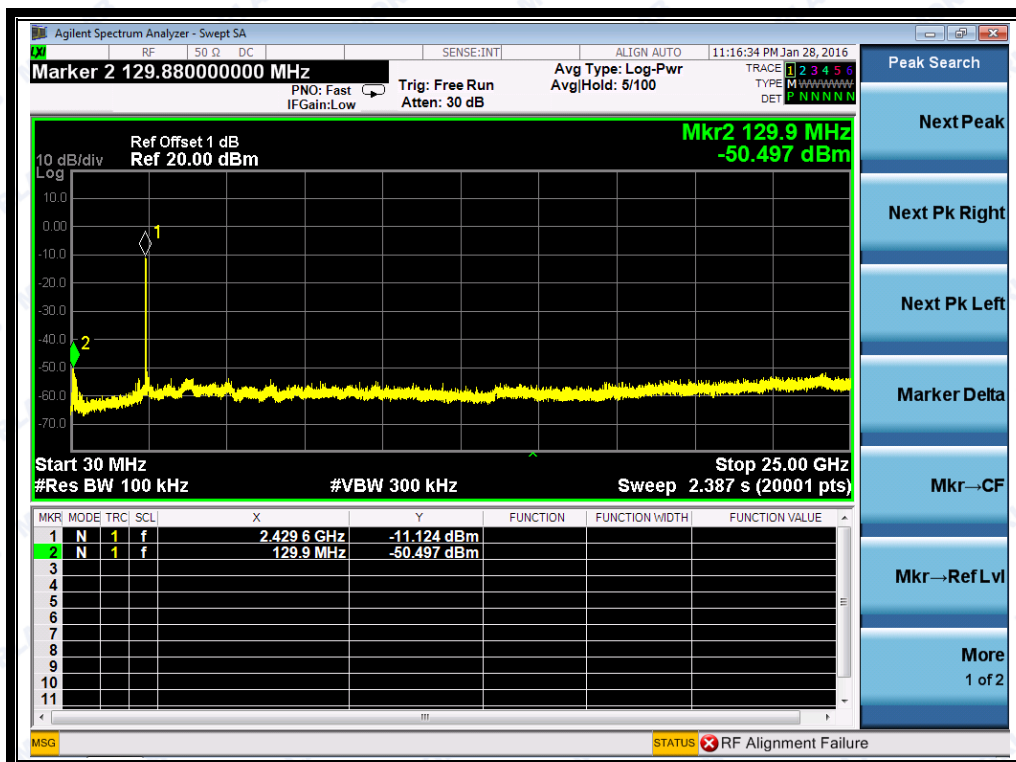
Note: the power of the EUT transmitting frequency should be ignored.



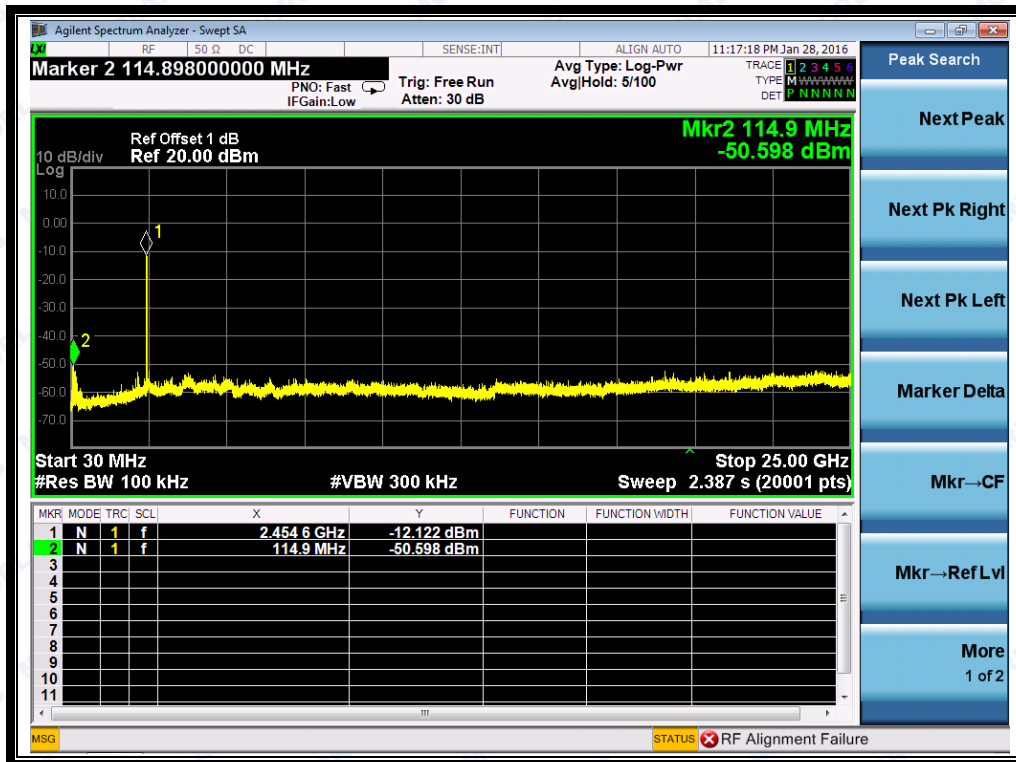
(Channel = 1, 30MHz to 25GHz)



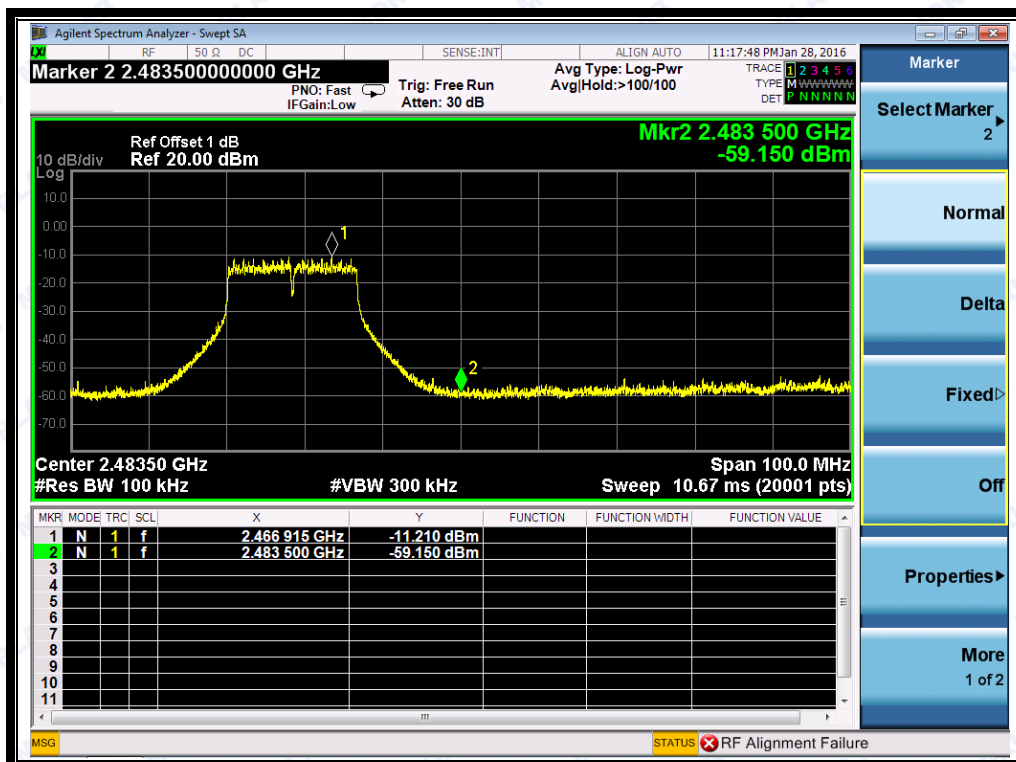
(Band Edge @ Channel = 1)



(Channel = 6, 30MHz to 25GHz)



(Channel = 11, 30MHz to 25GHz)



(Band Edge @ Channel = 11)



2.5.3.3 802.11n -20MHz Test mode

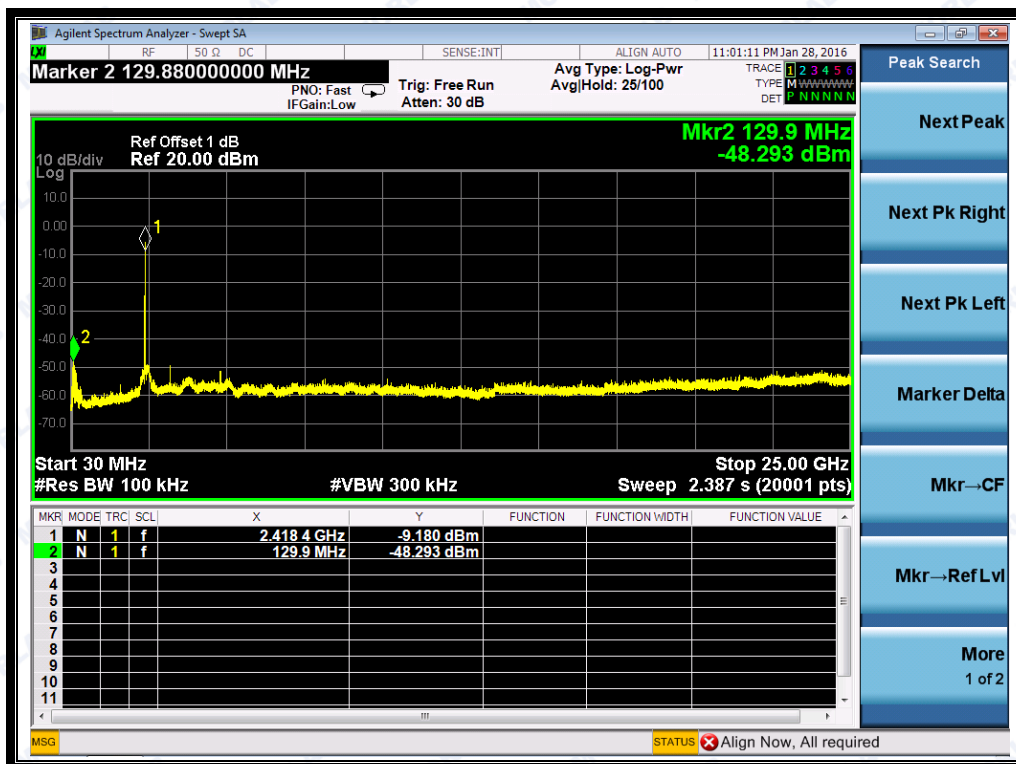
ANT 1:

A. Test Verdict:

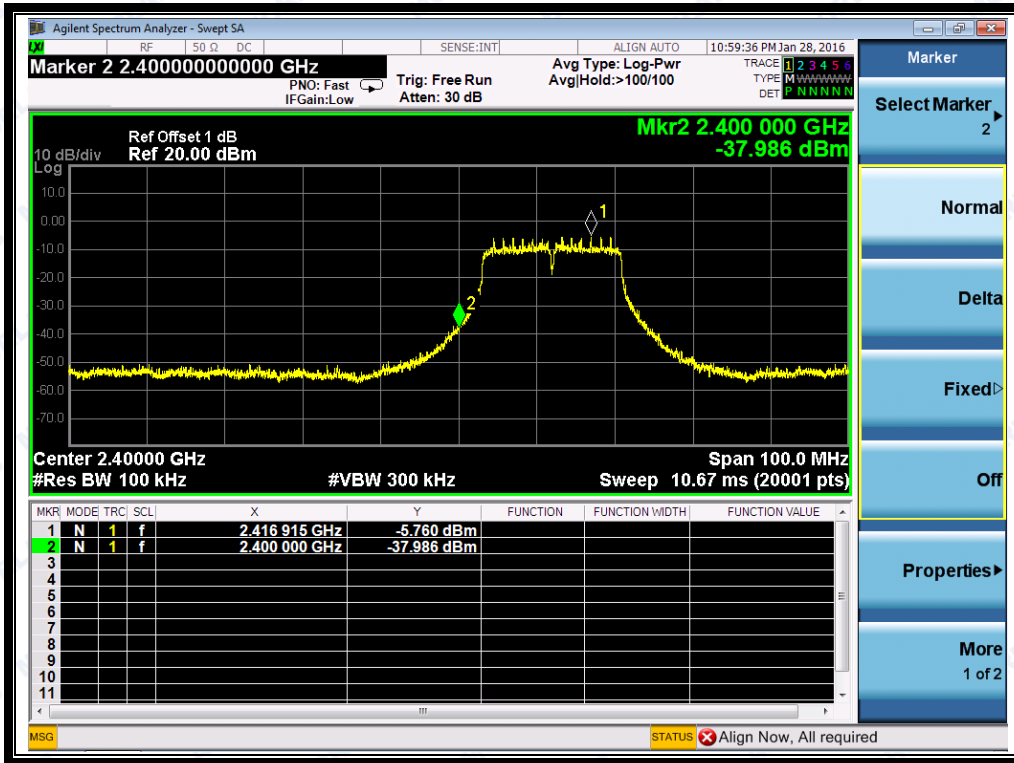
| Channel | Frequency (MHz) | Measured Max. Out of Band Emission (dBm) | Limit (dBm) | | Verdict |
|---------|-----------------|--|---------------|-------------------------|---------|
| | | | Carrier Level | Calculated -20dBc Limit | |
| 1 | 2412 | -48.29 | -9.18 | -29.18 | PASS |
| 6 | 2437 | -48.38 | -7.85 | -27.85 | PASS |
| 11 | 2462 | -48.00 | -7.64 | -27.64 | PASS |

B. Test Plots:

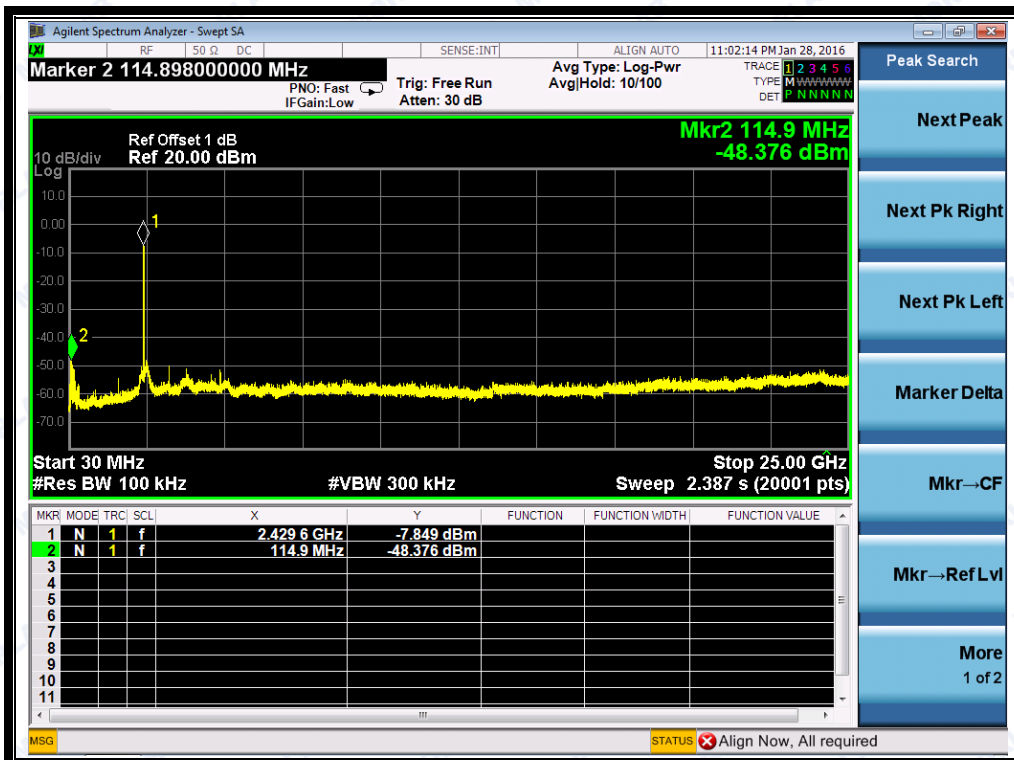
Note: the power of the EUT transmitting frequency should be ignored.



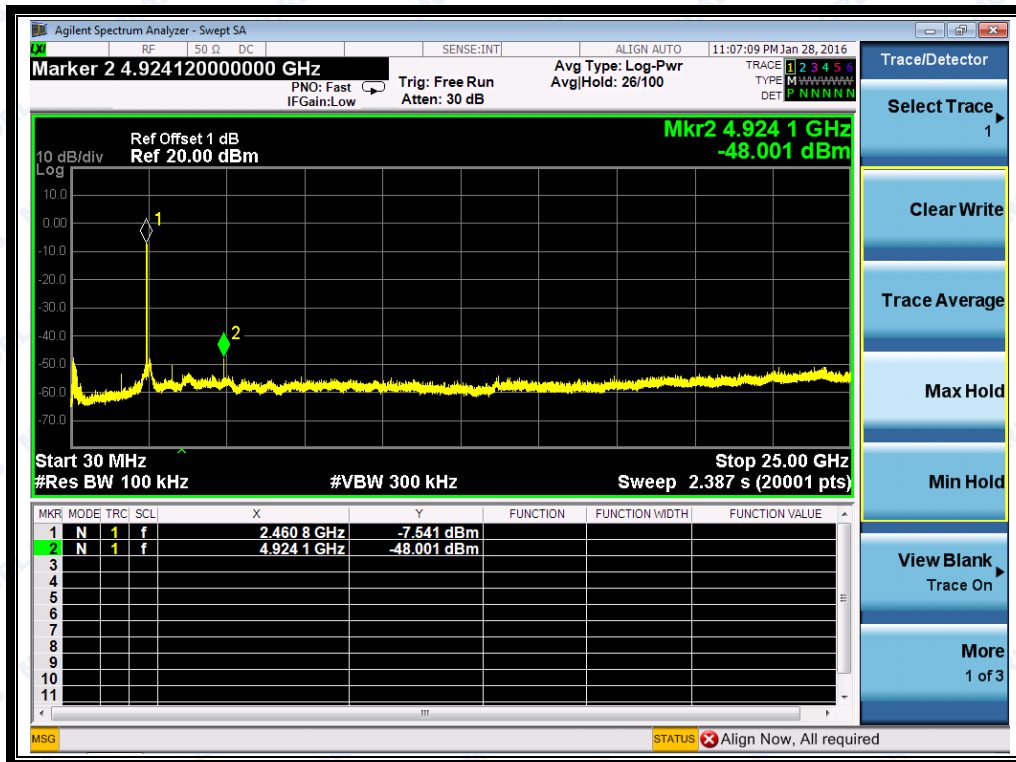
(Channel = 1, 30MHz to 25GHz)



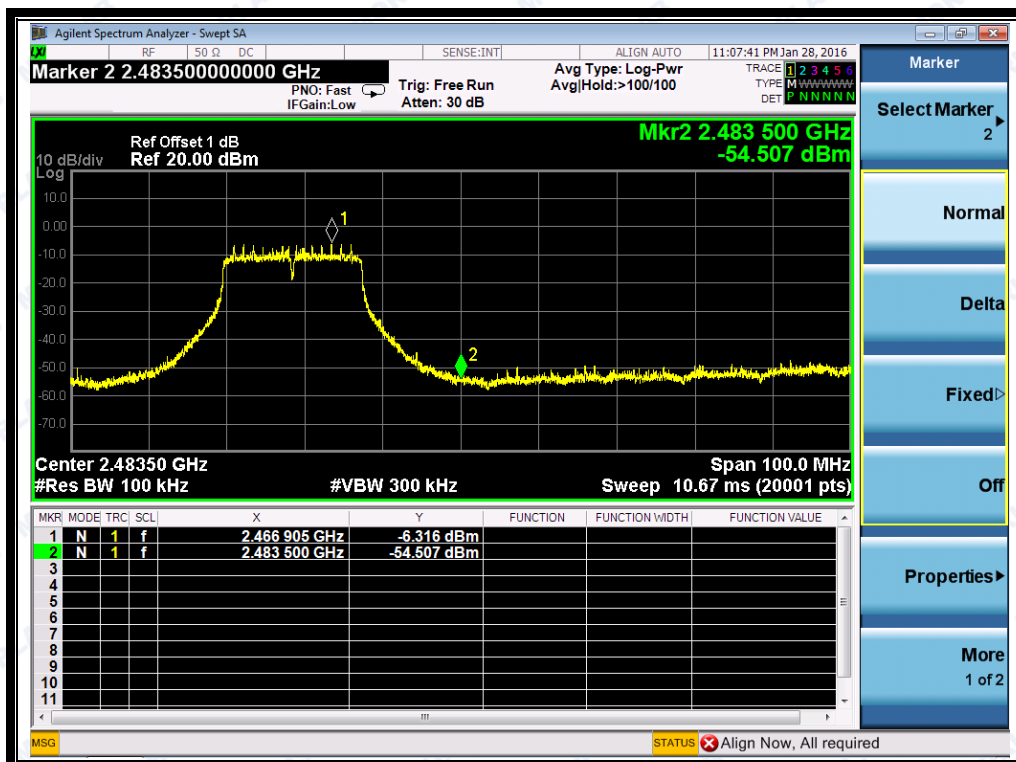
(Band Edge @ Channel = 1)



(Channel = 6, 30MHz to 25GHz)



(Channel = 11, 30MHz to 25GHz)



(Band Edge @ Channel = 11)



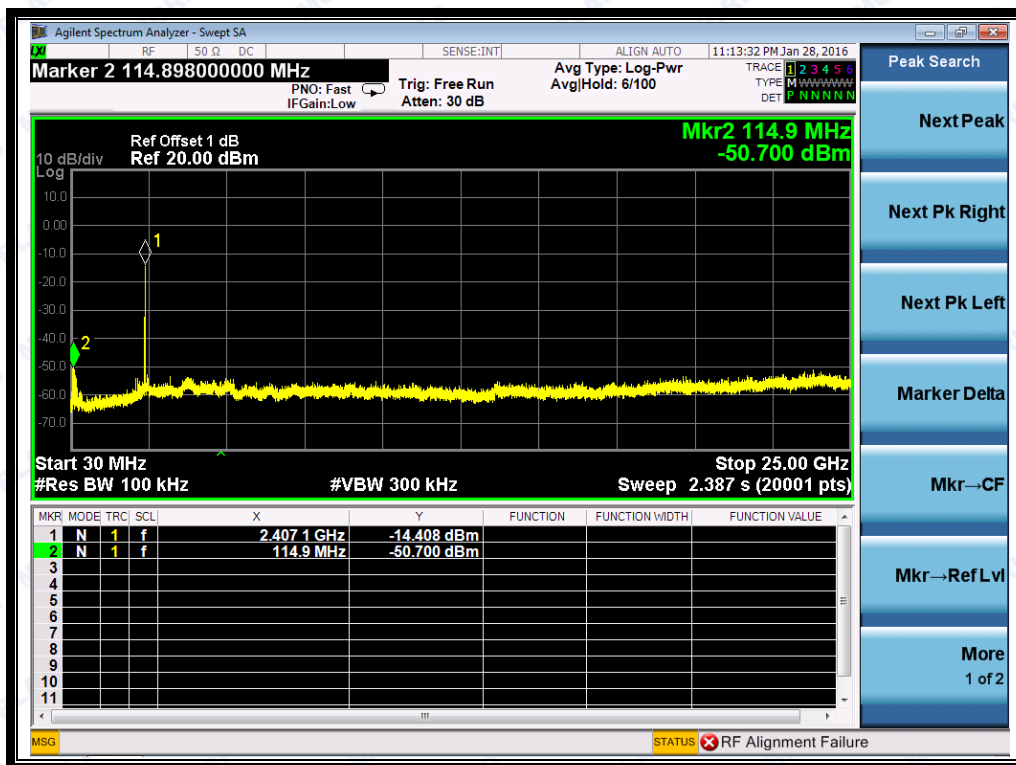
ANT 2:

A. Test Verdict:

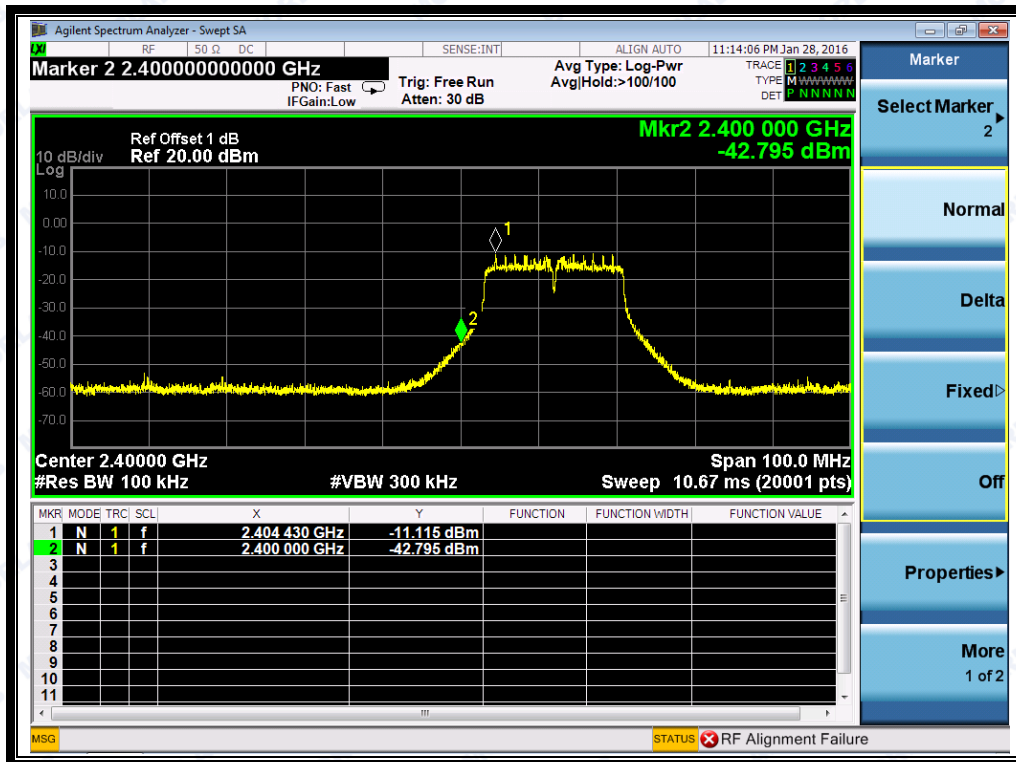
| Channel | Frequency (MHz) | Measured Max. Out of Band Emission (dBm) | Limit (dBm) | | Verdict |
|---------|-----------------|--|---------------|-------------------------|---------|
| | | | Carrier Level | Calculated -20dBc Limit | |
| 1 | 2412 | -50.70 | -14.41 | -34.41 | PASS |
| 6 | 2437 | -50.54 | -12.30 | -32.30 | PASS |
| 11 | 2462 | -50.06 | -14.83 | -34.83 | PASS |

B. Test Plots:

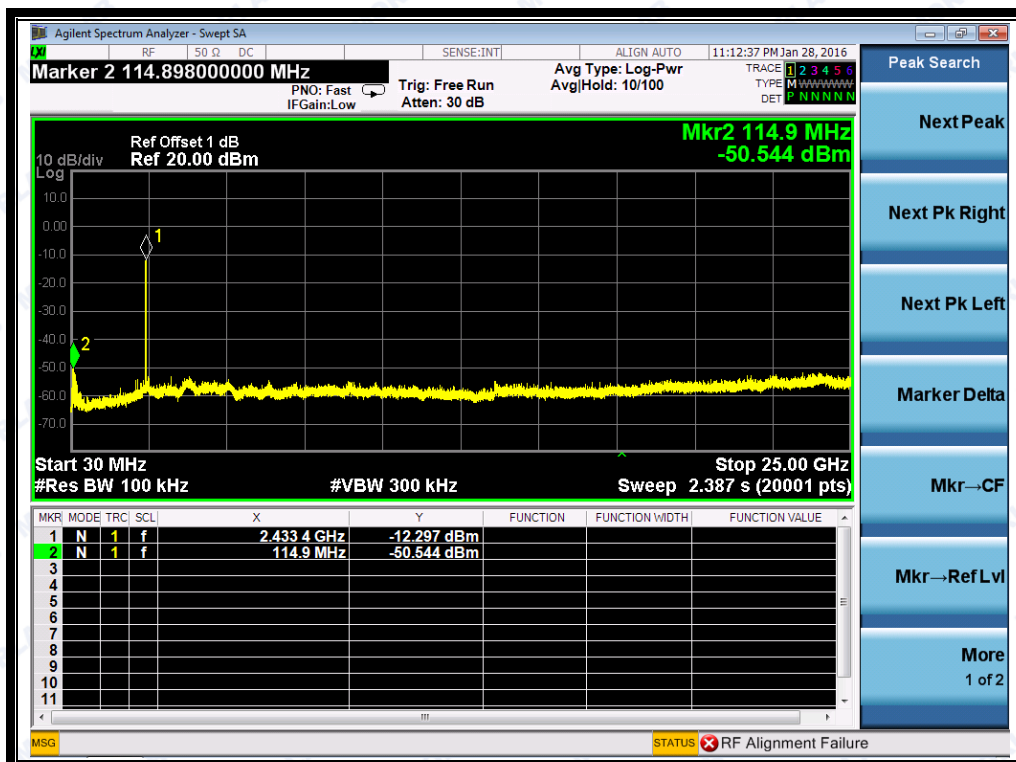
Note: the power of the EUT transmitting frequency should be ignored.



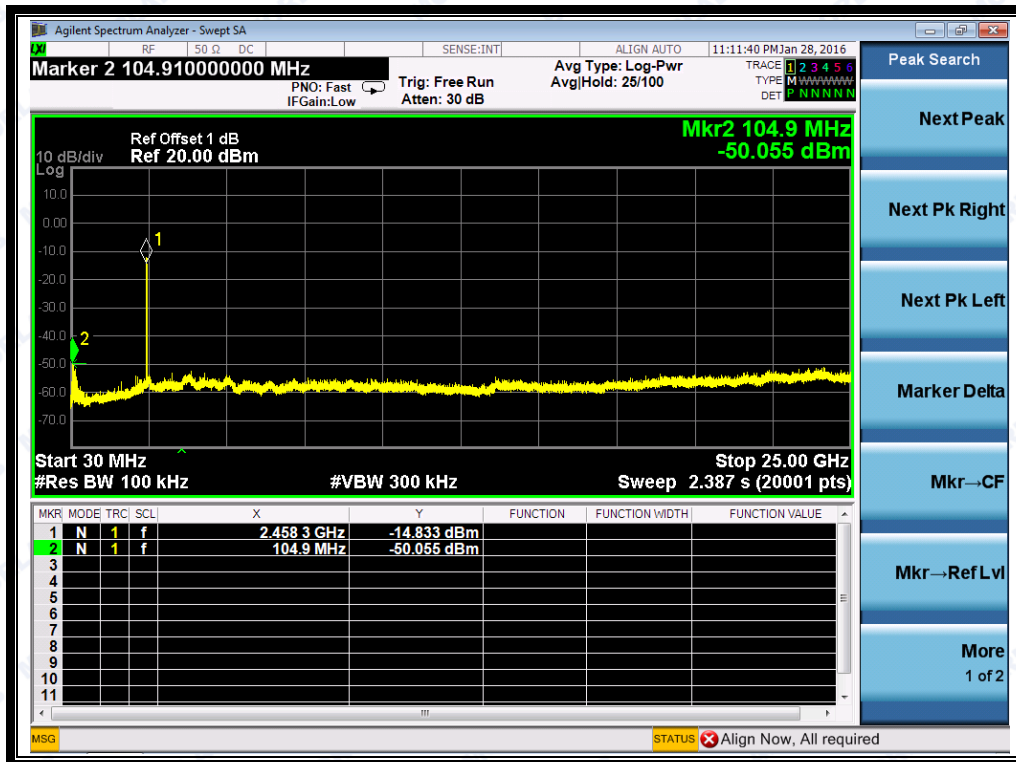
(Channel = 1, 30MHz to 25GHz)



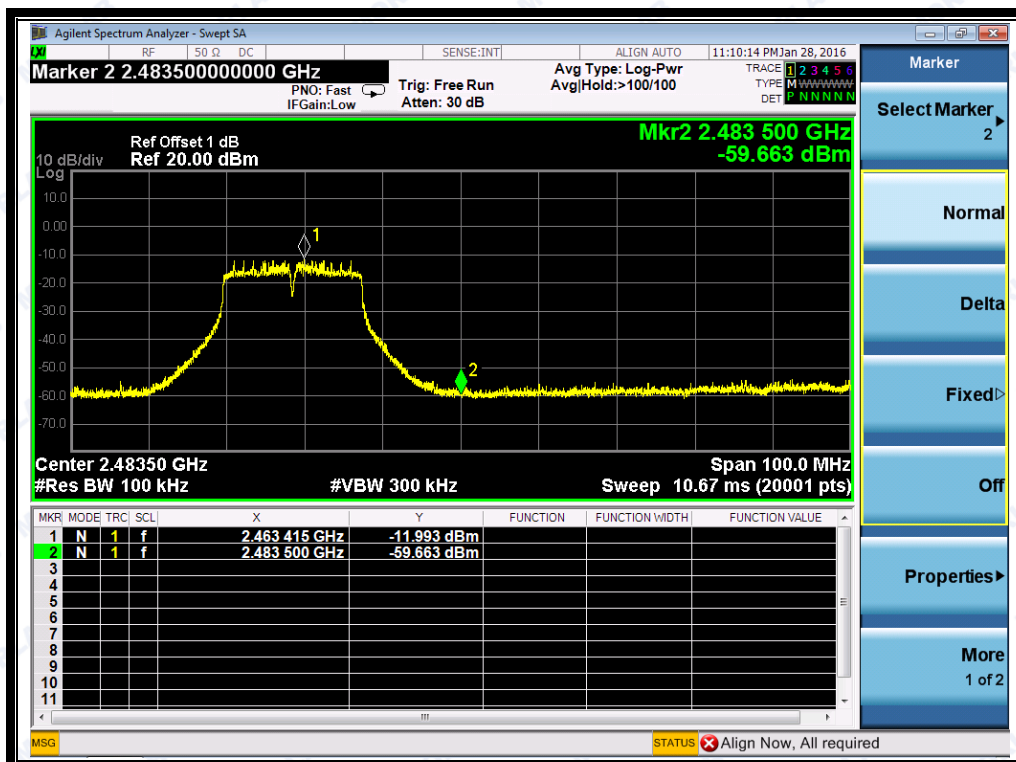
(Band Edge @ Channel = 1)



(Channel = 6, 30MHz to 25GHz)



(Channel = 11, 30MHz to 25GHz)



(Band Edge @ Channel = 11)

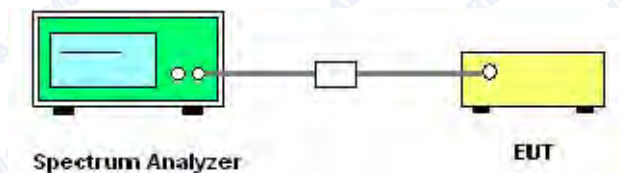
2.6 Power spectral density (PSD)

2.6.1 Requirement

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

2.5.2 Test Description

A. Test Set:



The EUT is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

B. Equipments List:

Please reference ANNEX A(1.4).



2.5.3 Test Result

2.5.3.1 802.11b Test mode

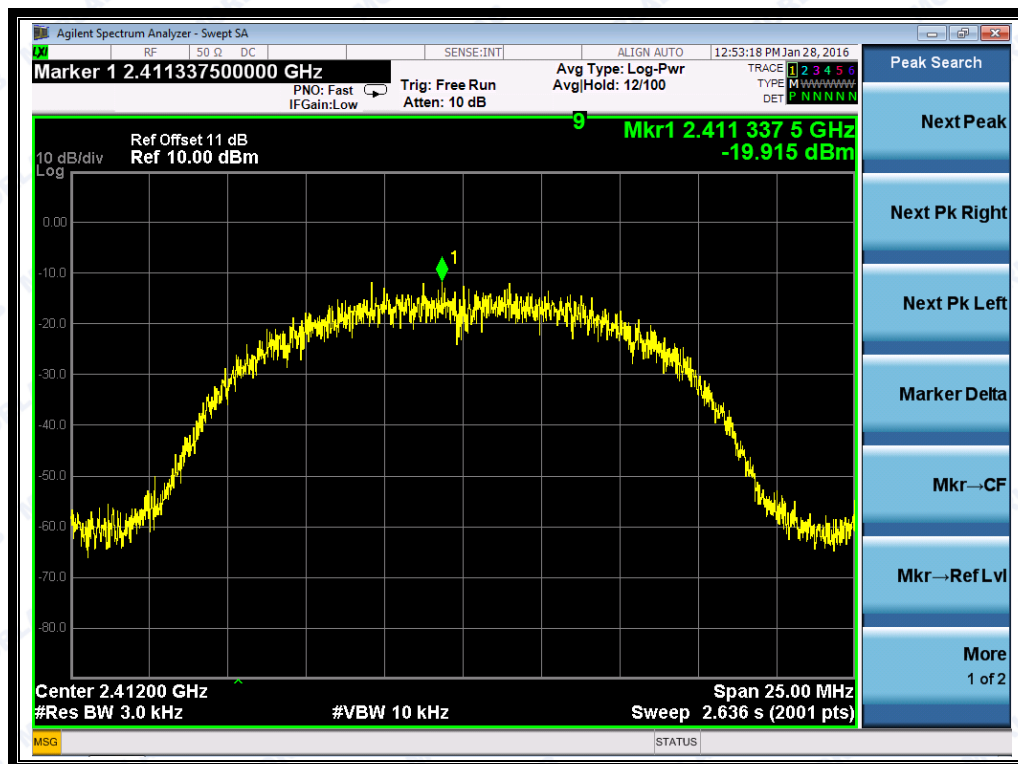
ANT 1:

A. Test Verdict:

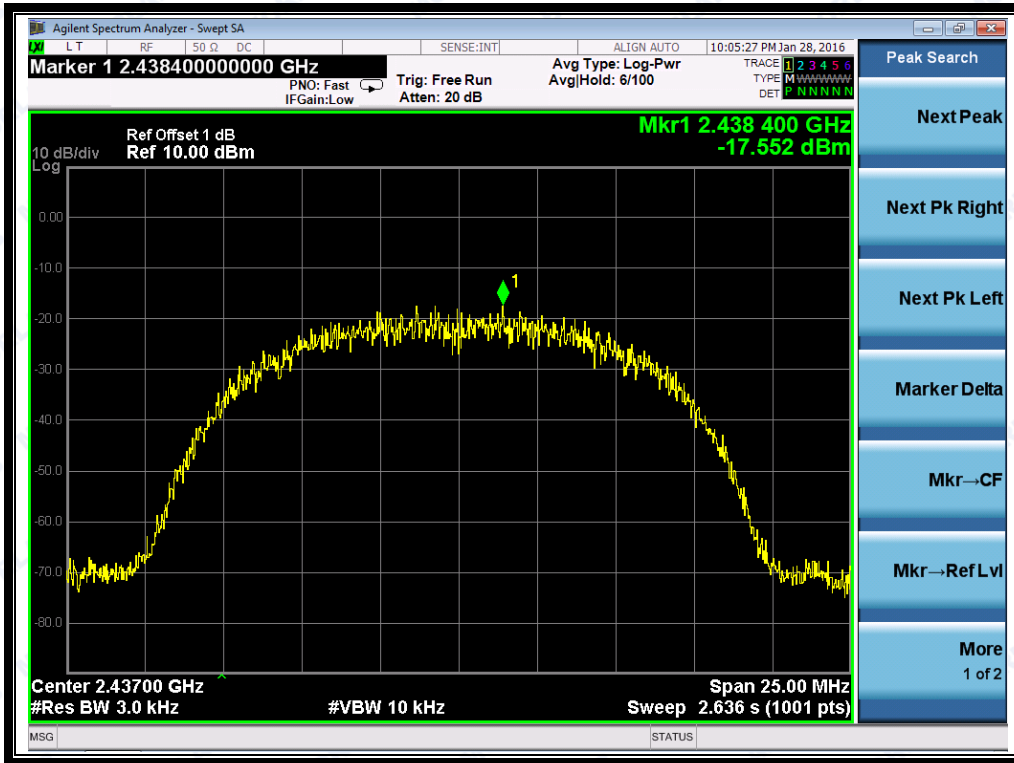
| Spectral power density (dBm/3kHz) | | | | |
|-----------------------------------|-----------------|-------------------------|------------------|---------|
| Channel | Frequency (MHz) | Measured PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
| 1 | 2412 | -19.92 | 8 | PASS |
| 6 | 2437 | -17.55 | 8 | PASS |
| 11 | 2462 | -19.55 | 8 | PASS |

Measurement uncertainty: ± 1.3 dB

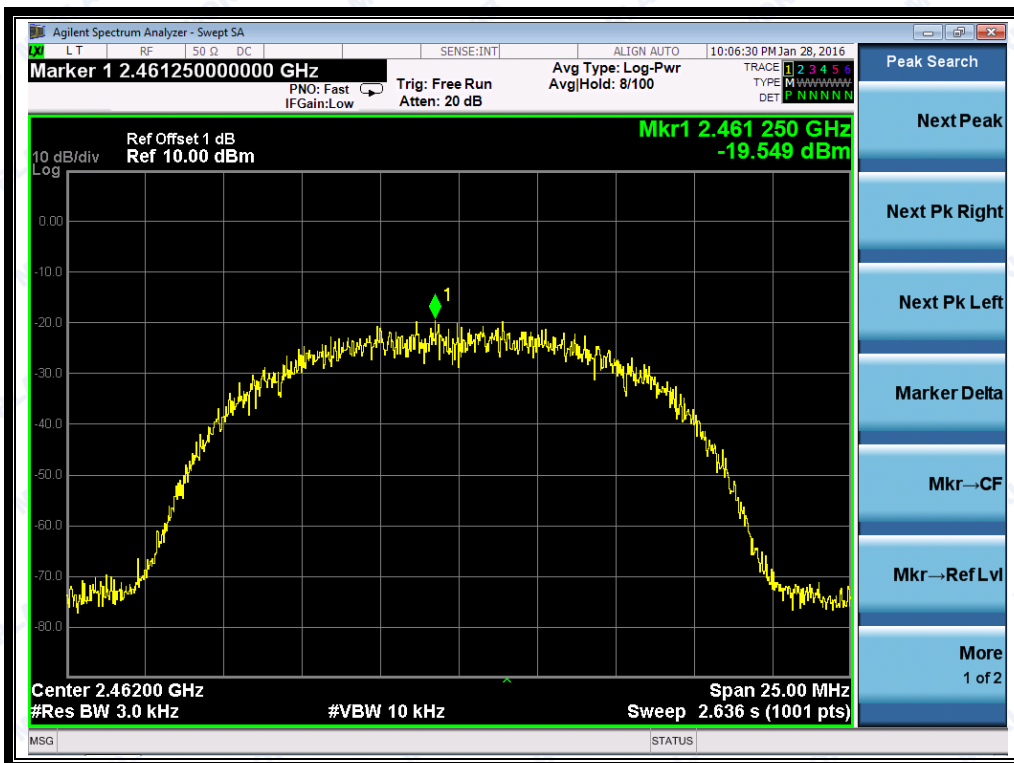
B. Test Plots:



(Channel = 1 @ 802.11b)



(Channel = 6 @ 802.11b)



(Channel = 11 @ 802.11b)



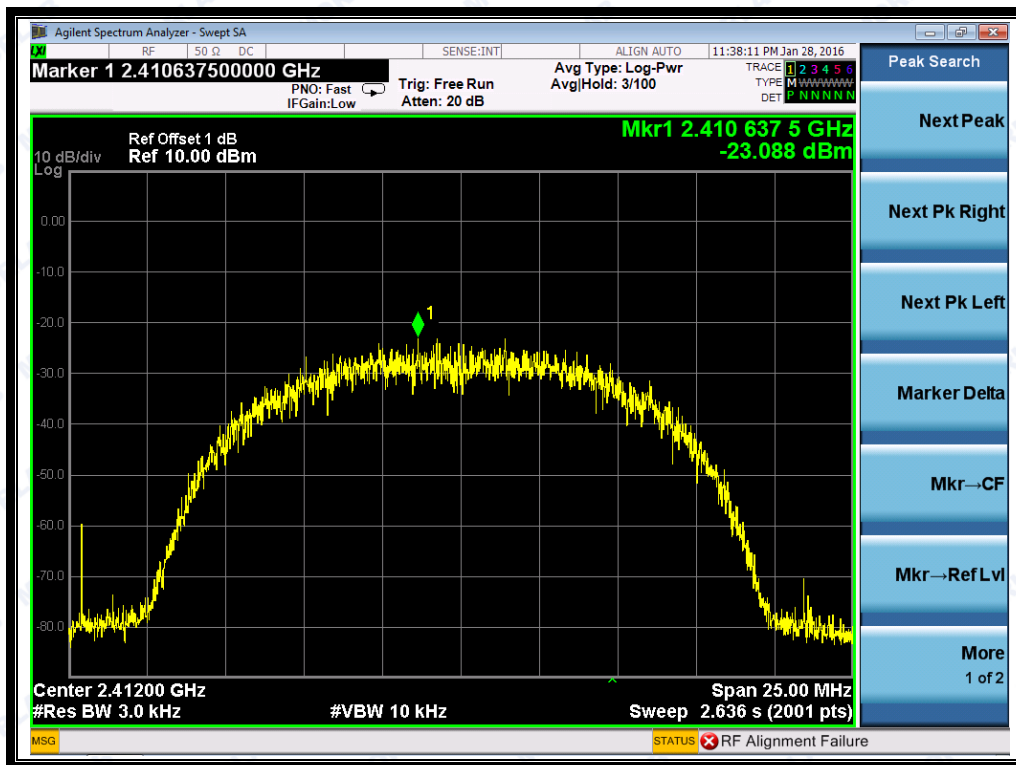
ANT 2:

C. Test Verdict:

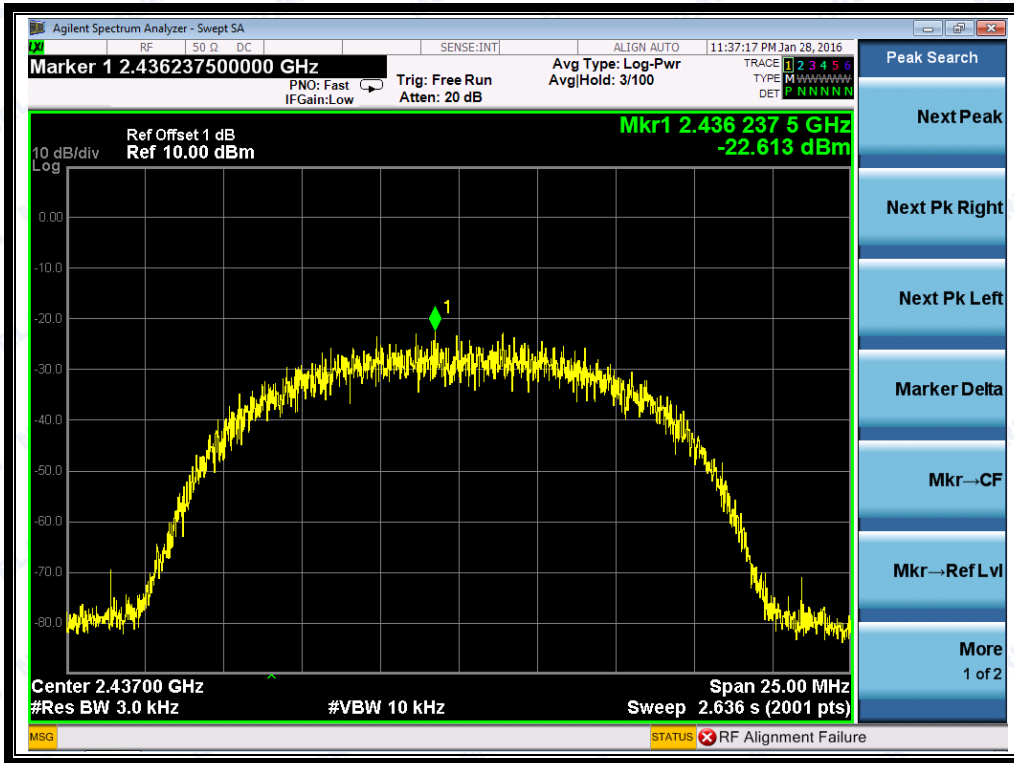
| Spectral power density (dBm/3kHz) | | | | |
|-----------------------------------|-----------------|-------------------------|------------------|---------|
| Channel | Frequency (MHz) | Measured PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
| 1 | 2412 | -23.09 | 8 | PASS |
| 6 | 2437 | -22.61 | 8 | PASS |
| 11 | 2462 | -23.47 | 8 | PASS |

Measurement uncertainty: ± 1.3 dB

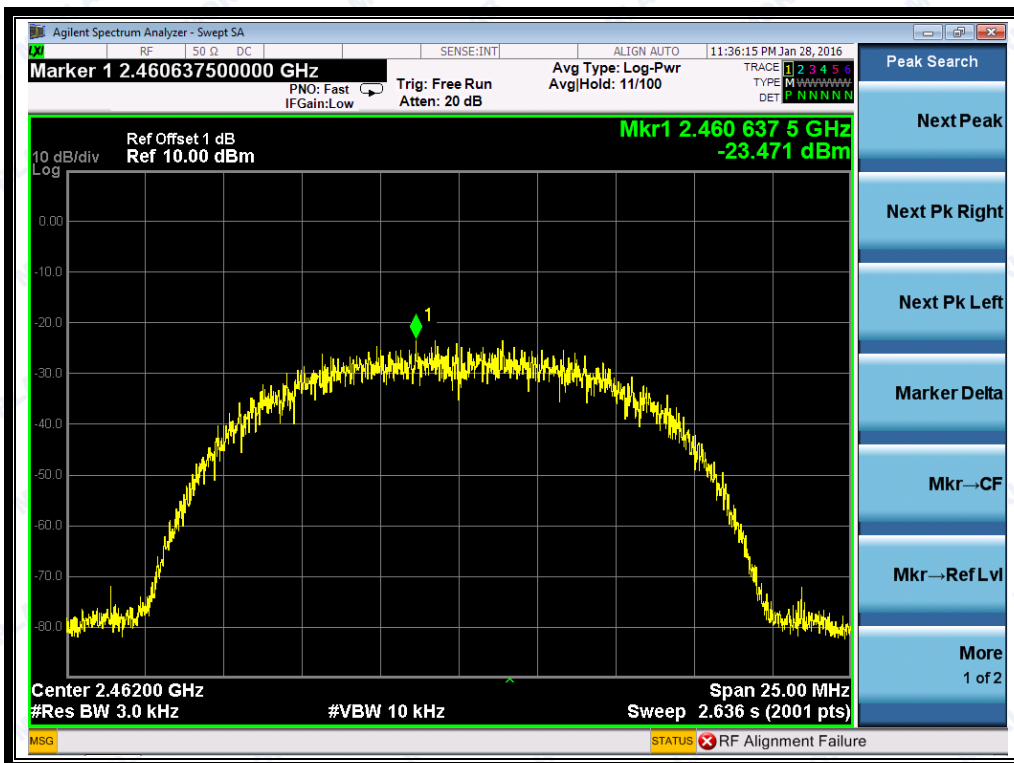
D. Test Plots:



(Channel = 1 @ 802.11b)



(Channel = 6 @ 802.11b)



(Channel = 11 @ 802.11b)



Ant 1 + Ant 2:

E. Test Verdict:

| Spectral power density (dBm/3kHz) | | | | |
|-----------------------------------|-----------------|-------------------------|------------------|---------|
| Channel | Frequency (MHz) | Measured PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
| 1 | 2412 | -18.21 | 8 | PASS |
| 6 | 2437 | -16.37 | 8 | PASS |
| 11 | 2462 | -18.07 | 8 | PASS |

Measurement uncertainty: $\pm 1.3\text{dB}$

2.5.3.2 802.11g Test mode

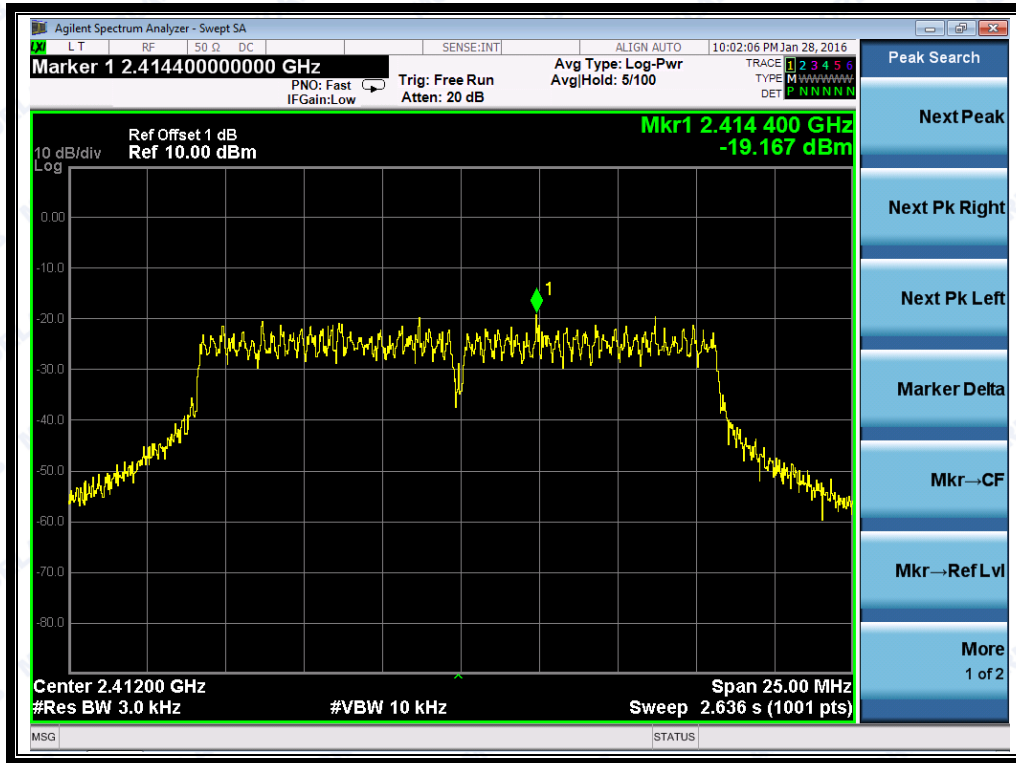
ANT 1:

A. Test Verdict:

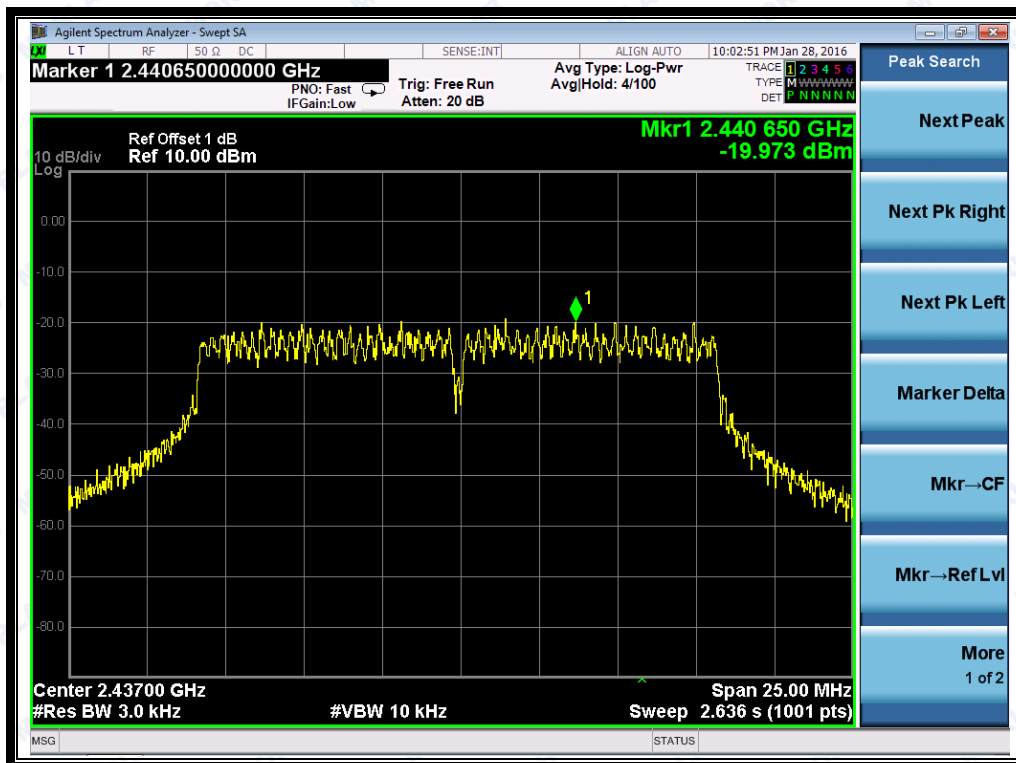
| Spectral power density (dBm/3kHz) | | | | |
|-----------------------------------|-----------------|-------------------------|------------------|---------|
| Channel | Frequency (MHz) | Measured PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
| 1 | 2412 | -19.17 | 8 | PASS |
| 6 | 2437 | -19.97 | 8 | PASS |
| 11 | 2462 | -20.11 | 8 | PASS |

Measurement uncertainty: $\pm 1.3\text{dB}$

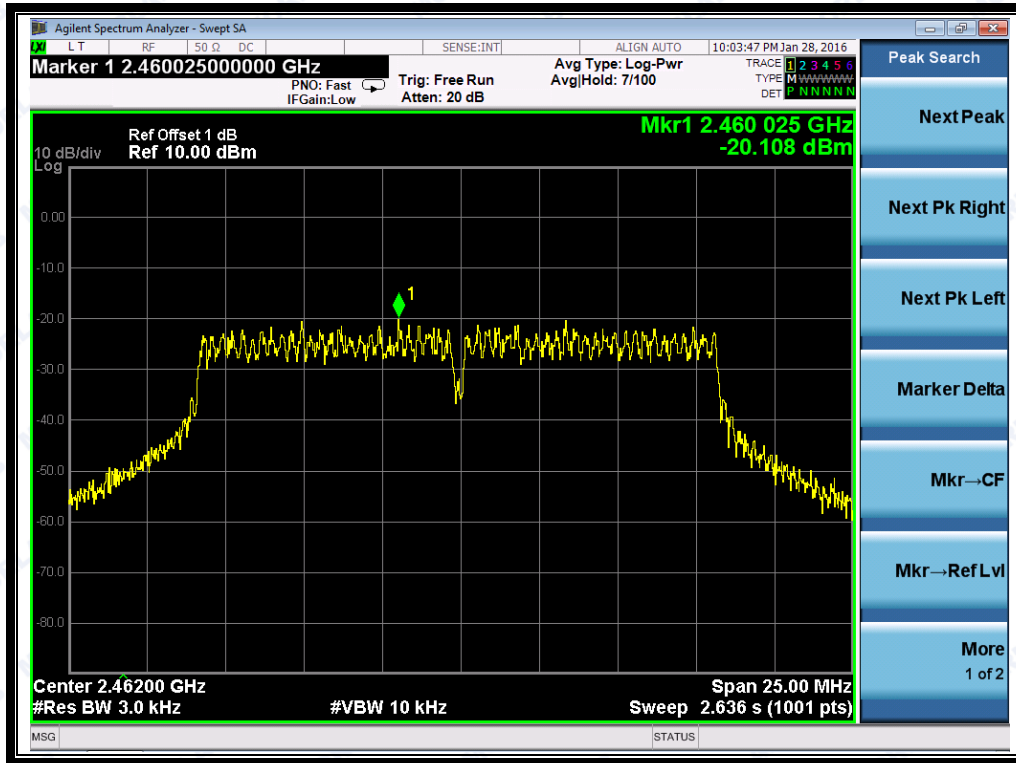
B. Test Plots:



(Channel = 1 @ 802.11g)



(Channel = 6 @ 802.11g)



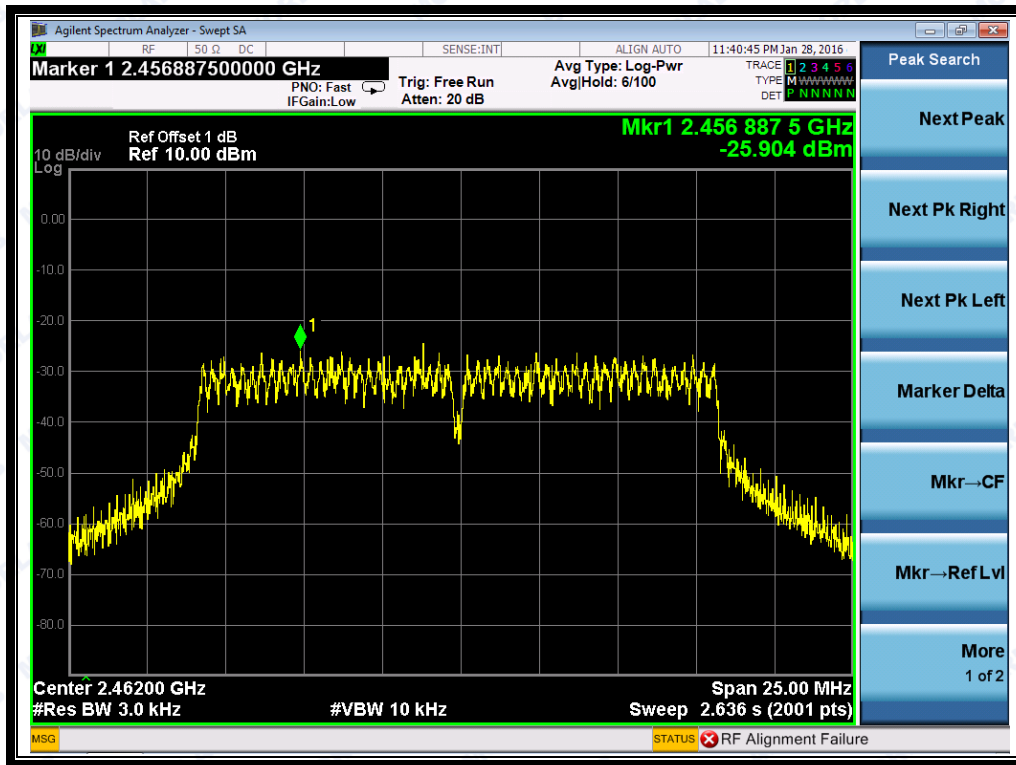
(Channel = 11 @ 802.11g)

ANT 2:

C. Test Verdict:

| Spectral power density (dBm/3kHz) | | | | |
|-----------------------------------|-----------------|-------------------------|------------------|---------|
| Channel | Frequency (MHz) | Measured PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
| 1 | 2412 | -25.31 | 8 | PASS |
| 6 | 2437 | -25.11 | 8 | PASS |
| 11 | 2462 | -25.90 | 8 | PASS |
| Measurement uncertainty: ±1.3dB | | | | |

D. Test Plots:



(Channel = 11 @ 802.11g)

Ant 1 + Ant 2:

E. Test Verdict:

| Spectral power density (dBm/3kHz) | | | | |
|-----------------------------------|-----------------|-------------------------|------------------|---------|
| Channel | Frequency (MHz) | Measured PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
| 1 | 2412 | -18.22 | 8 | PASS |
| 6 | 2437 | -18.81 | 8 | PASS |
| 11 | 2462 | -19.09 | 8 | PASS |
| Measurement uncertainty: ±1.3dB | | | | |



2.5.3.3 802.11n-20MHz Test mode

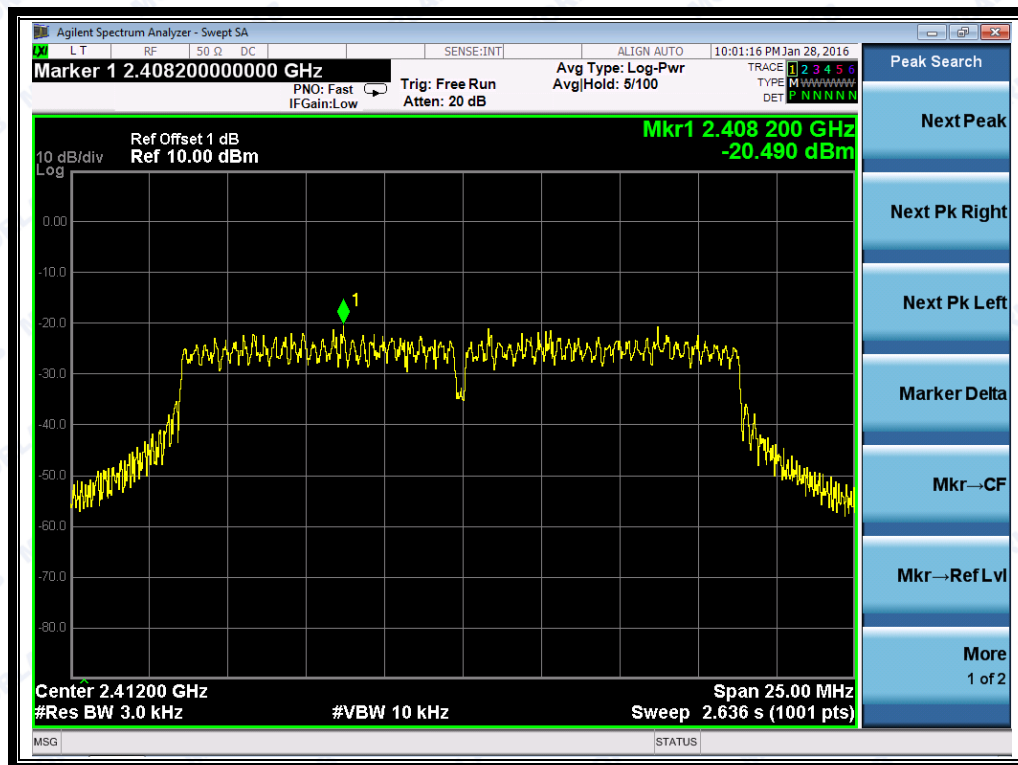
ANT 1:

A. Test Verdict:

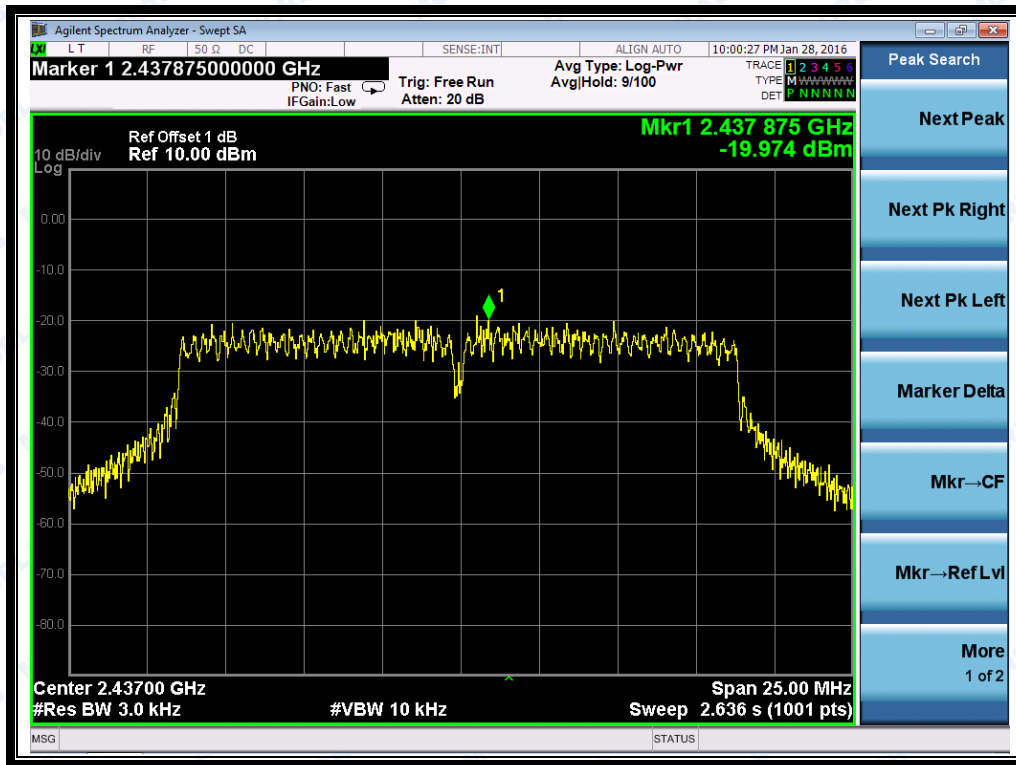
| Spectral power density (dBm/3kHz) | | | | |
|-----------------------------------|-----------------|-------------------------|------------------|---------|
| Channel | Frequency (MHz) | Measured PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
| 1 | 2412 | -20.49 | 8 | PASS |
| 6 | 2437 | -19.97 | 8 | PASS |
| 11 | 2462 | -20.27 | 8 | PASS |

Measurement uncertainty: ±1.3dB

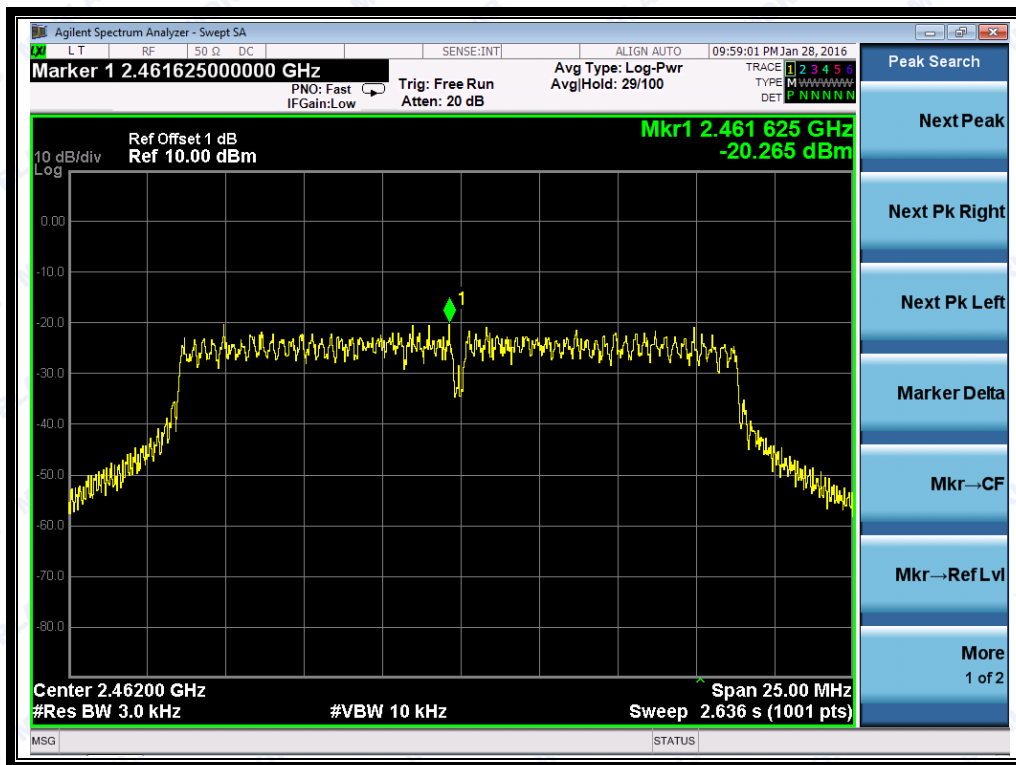
B. Test Plots:



(Channel = 1 @ 802.11n-20MHz)



(Channel = 6 @ 802.11n-20MHz)



(Channel = 11 @ 802.11n-20MHz)



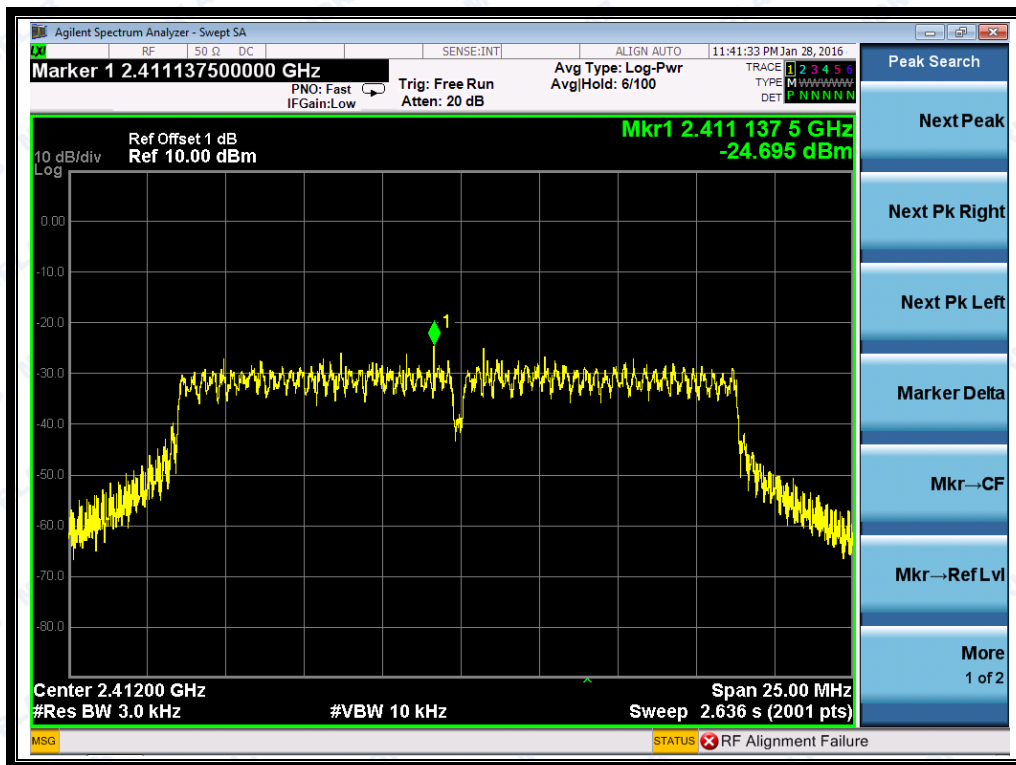
ANT 2:

A. Test Verdict:

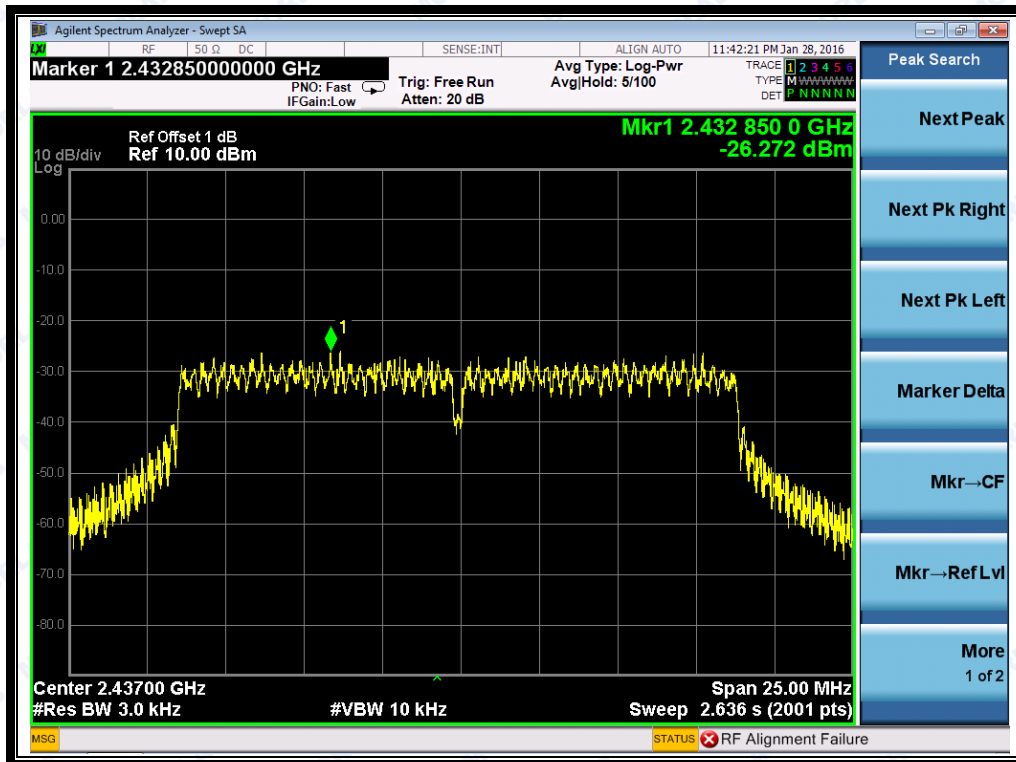
| Spectral power density (dBm/3kHz) | | | | |
|-----------------------------------|-----------------|-------------------------|------------------|---------|
| Channel | Frequency (MHz) | Measured PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
| 1 | 2412 | -24.70 | 8 | PASS |
| 6 | 2437 | -26.27 | 8 | PASS |
| 11 | 2462 | -24.73 | 8 | PASS |

Measurement uncertainty: $\pm 1.3\text{dB}$

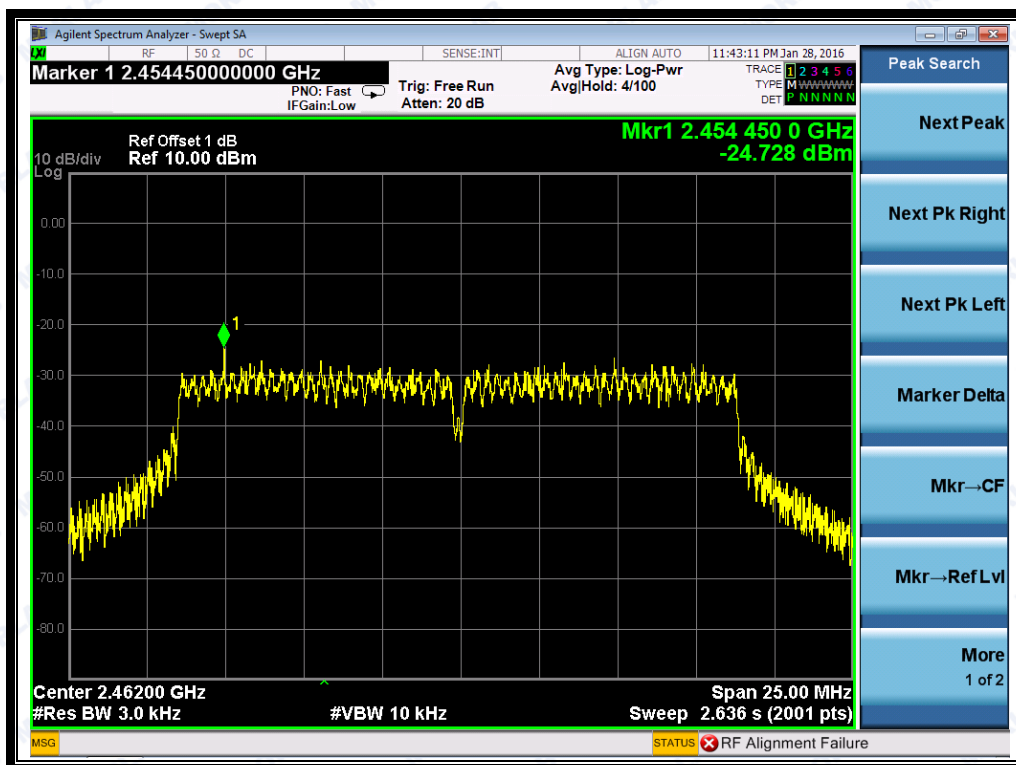
B. Test Plots:



(Channel = 1 @ 802.11n-20MHz)



(Channel = 6 @ 802.11n-20MHz)



(Channel = 11 @ 802.11n-20MHz)



Ant 1 + Ant 2:

B. Test Verdict:

| Spectral power density (dBm/3kHz) | | | | |
|-----------------------------------|-----------------|-------------------------|------------------|---------|
| Channel | Frequency (MHz) | Measured PSD (dBm/3kHz) | Limit (dBm/3kHz) | Verdict |
| 1 | 2412 | -19.09 | 8 | PASS |
| 6 | 2437 | -19.06 | 8 | PASS |
| 11 | 2462 | -18.94 | 8 | PASS |

Measurement uncertainty: $\pm 1.3\text{dB}$

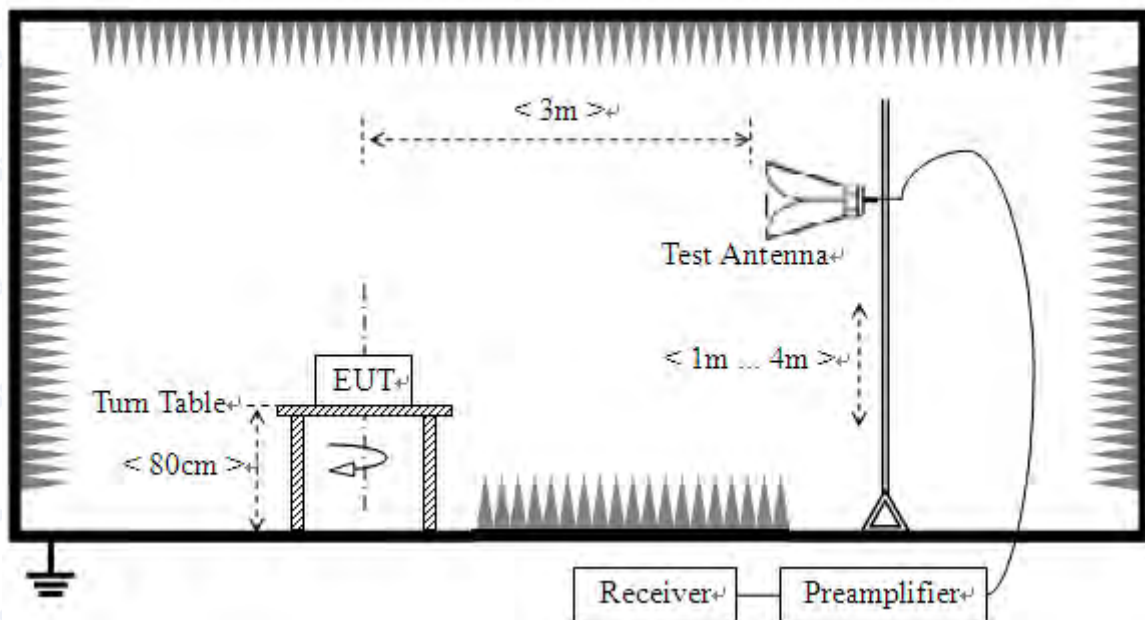
2.6 Restricted Frequency Bands

2.6.1 Requirement

According to FCC section 15.247(d), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, In addition, radiated emissions which fall in the restricted bands, as defined in 15.205(a), must also comply with the radiated emission limits specified in 15.209(a).

2.6.2 Test Description

A. Test Setup



The EUT is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading.

For the Test Antenna:

Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength.

B. Equipments List:

Please reference ANNEX A(1.4).



2.6.3 Test Result

The lowest and highest channels are tested to verify Restricted Frequency Bands.

The measurement results are obtained as below:

$$E \text{ [dB}\mu\text{V/m]} = U_R + A_T + A_{\text{Factor}} \text{ [dB]}; A_T = L_{\text{Cable loss}} \text{ [dB]} - G_{\text{preamp}} \text{ [dB]}$$

A_T : Total correction Factor except Antenna

U_R : Receiver Reading

G_{preamp} : Preamplifier Gain

A_{Factor} : Antenna Factor at 3m

Note: Restricted Frequency Bands were performed when antenna was at vertical and horizontal polarity, and only the worse test condition (vertical) was recorded in this test report.

2.6.3.1 802.11b Test mode

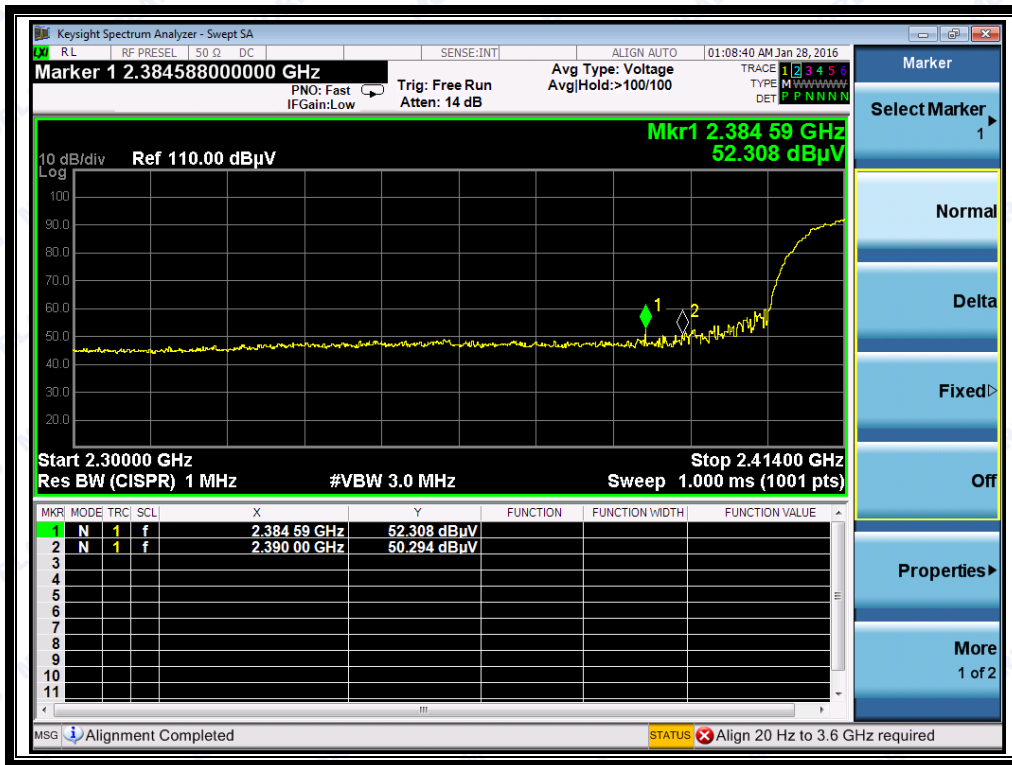
The lowest and highest channels are tested to verify the band edge emissions.

ANT 1:

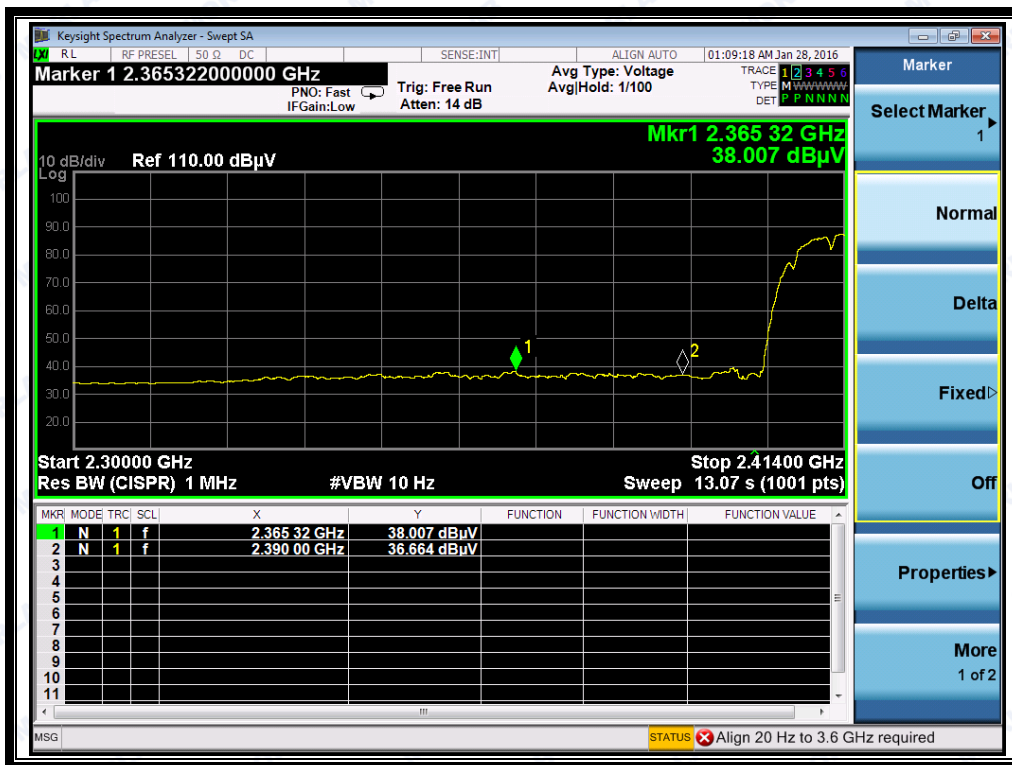
A. Test Verdict:

| Channel | Frequency (MHz) | Detector | Receiver Reading | A_T (dB) | A_{Factor} (dB@3m) | Max. Emission E (dB μ V/m) | Limit (dB μ V/m) | Verdict |
|---------|-----------------|----------|--------------------|------------|-----------------------------|--------------------------------|----------------------|---------|
| | | PK/ AV | U_R (dB μ V) | | | | | |
| 1 | 2384.59 | PK | 52.31 | -33.63 | 32.56 | 51.24 | 74 | Pass |
| 1 | 2365.32 | AV | 38.01 | -33.63 | 32.56 | 36.94 | 54 | Pass |
| 11 | 2485.37 | PK | 48.29 | -33.18 | 32.5 | 47.61 | 74 | Pass |
| 11 | 2489.66 | AV | 36.13 | -33.18 | 32.5 | 35.45 | 54 | Pass |

B. Test Plots:



(Channel = 1 PEAK @ 802.11b)



(Channel = 1 AVG @ 802.11b)



(Channel = 11 PEAK @ 802.11b)



(Channel = 11 AVG @ 802.11b)

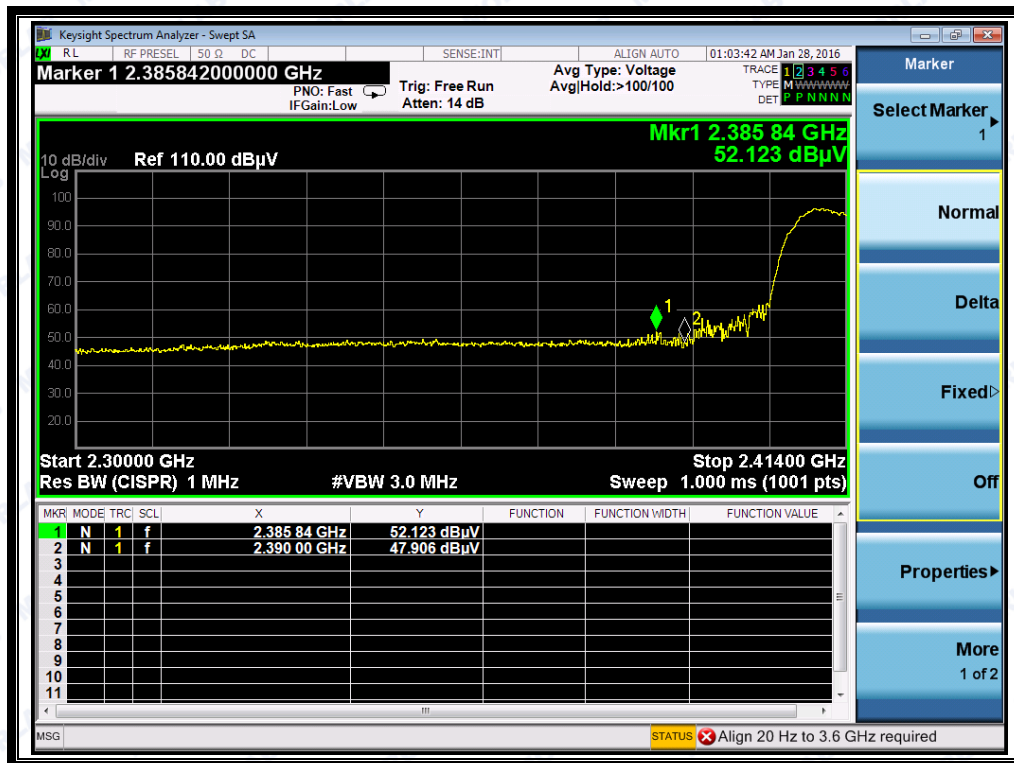


ANT 2:

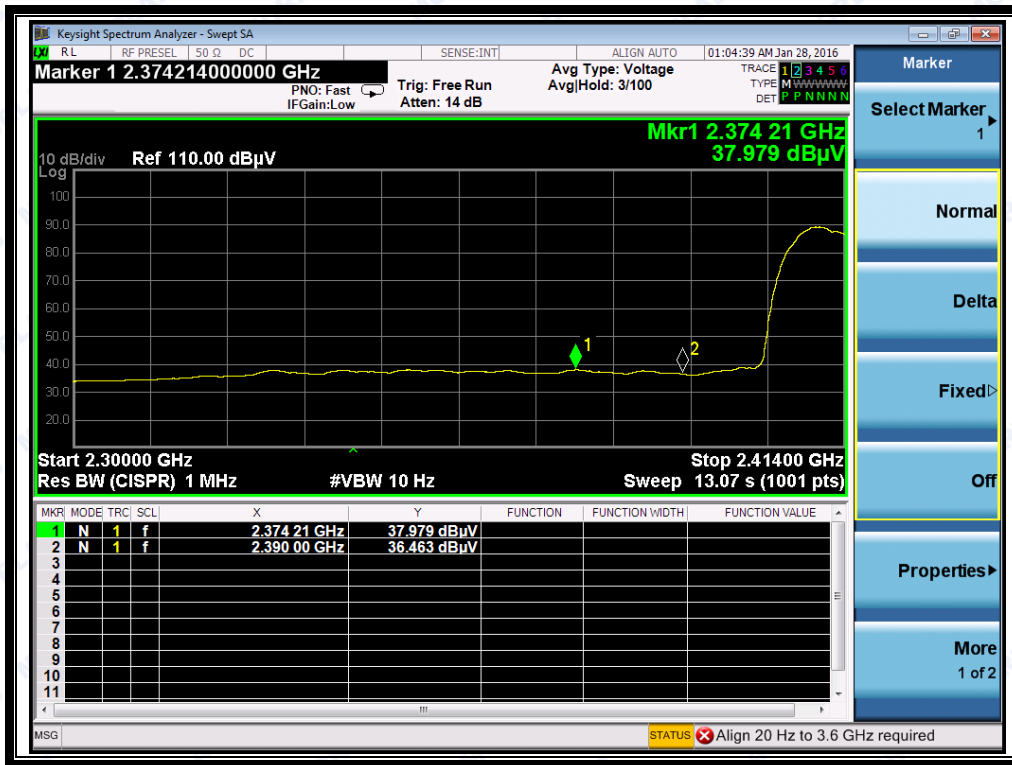
C. Test Verdict:

| Channel | Frequency (MHz) | Detector | Receiver Reading | A _T (dB) | A _{Factor} (dB@3m) | Max. Emission E (dBμV/m) | Limit (dBμV/m) | Verdict |
|---------|-----------------|----------|-----------------------|---------------------|-----------------------------|--------------------------|----------------|---------|
| | | PK/ AV | U _R (dBuV) | | | | | |
| 1 | 2385.84 | PK | 52.12 | -33.63 | 32.56 | 51.05 | 74 | Pass |
| 1 | 2374.21 | AV | 37.98 | -33.63 | 32.56 | 36.91 | 54 | Pass |
| 11 | 2488.87 | PK | 47.73 | -33.18 | 32.5 | 47.05 | 74 | Pass |
| 11 | 2489.47 | AV | 35.30 | -33.18 | 32.5 | 34.62 | 54 | Pass |

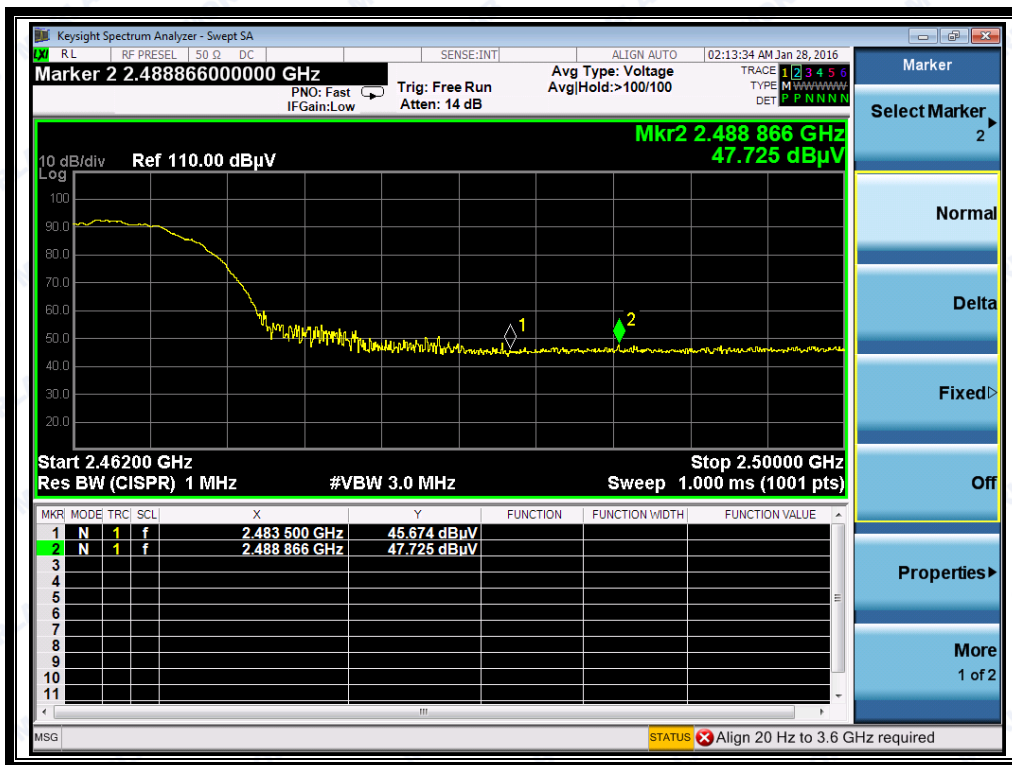
D. Test Plots:



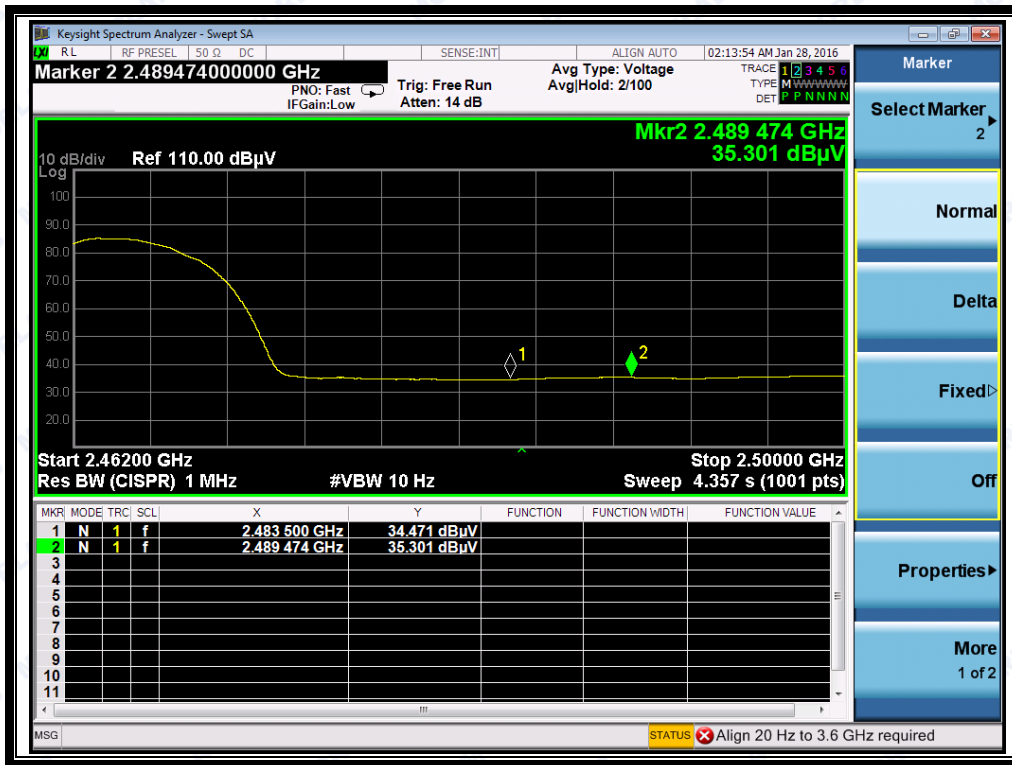
(Channel = 1 PEAK @ 802.11b)



(Channel = 1 AVG @ 802.11b)



(Channel = 11 PEAK @ 802.11b)



(Channel = 11 AVG @ 802.11b)

2.6.3.2 802.11g Test mode

The lowest and highest channels are tested to verify the band edge emissions.

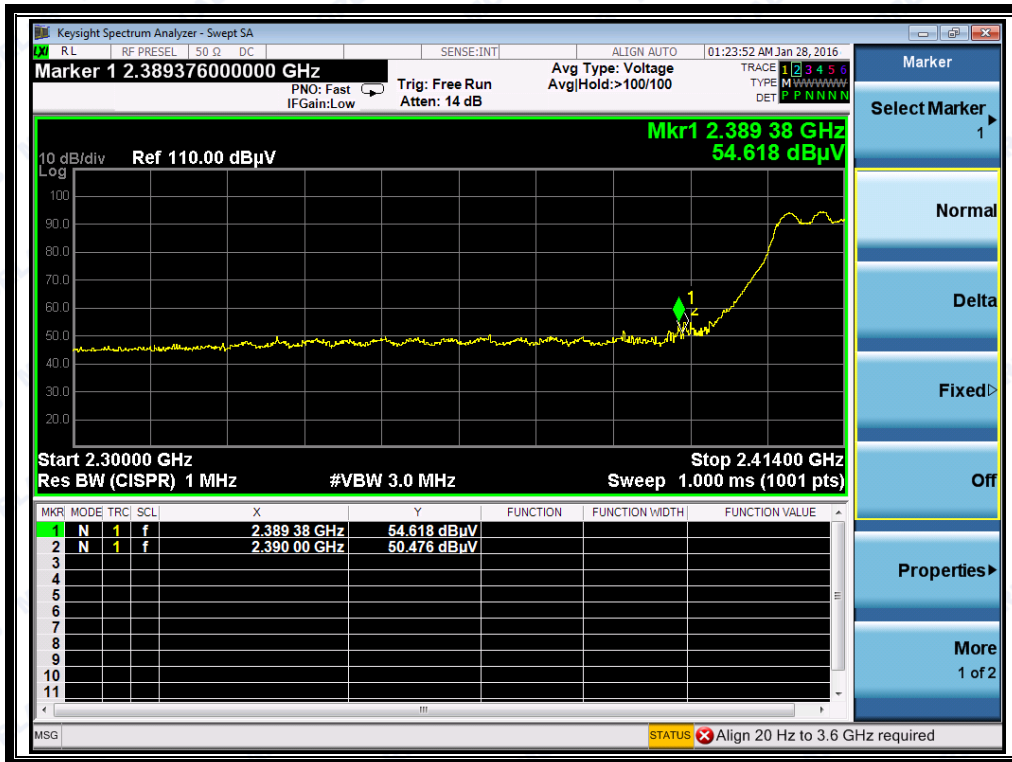
ANT 1:

A. Test Verdict:

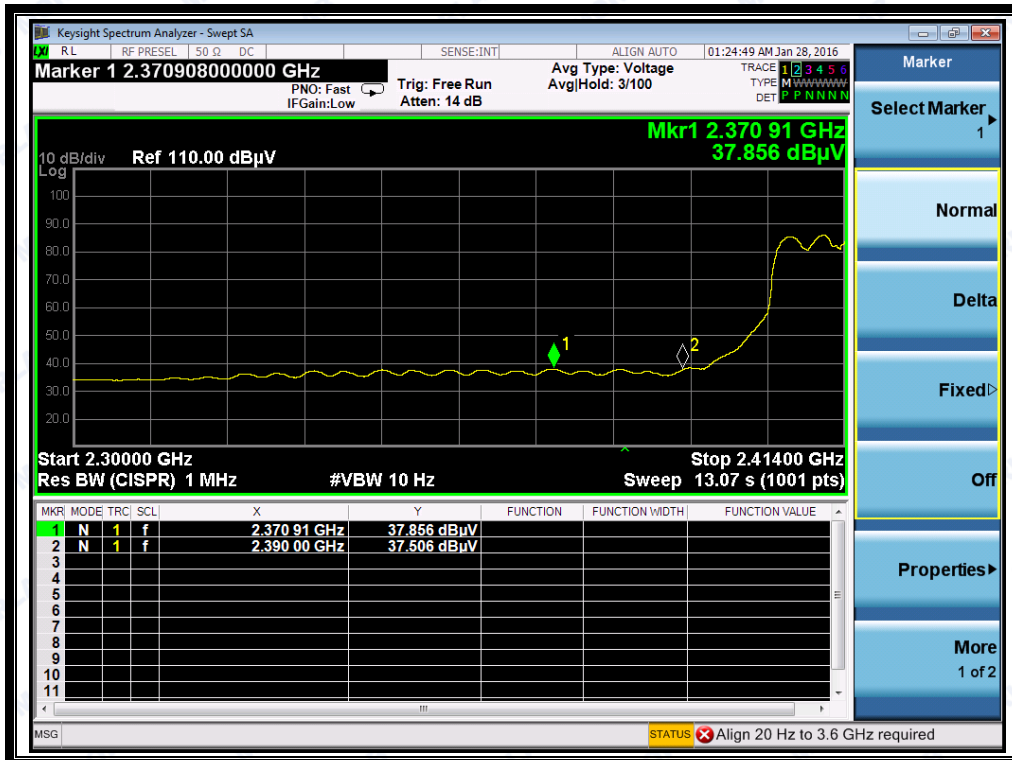
| Channel | Frequency (MHz) | Detector | Receiver Reading U_R (dBμV) | A_T (dB) | A_{Factor} (dB@3m) | Max. Emission E (dBμV/m) | Limit (dBμV/m) | Verdict |
|---------|-----------------|----------|-------------------------------|------------|----------------------|--------------------------|----------------|---------|
| | | PK/ AV | | | | | | |
| 1 | 2389.38 | PK | 54.62 | -33.63 | 32.56 | 53.55 | 74 | Pass |
| 1 | 2370.91 | AV | 37.86 | -33.63 | 32.56 | 36.79 | 54 | Pass |
| 11 | 2483.89 | PK | 48.74 | -33.18 | 32.5 | 48.06 | 74 | Pass |
| 11 | 2483.89 | AV | 34.71 | -33.18 | 32.5 | 34.03 | 54 | Pass |



B. Test Plots:



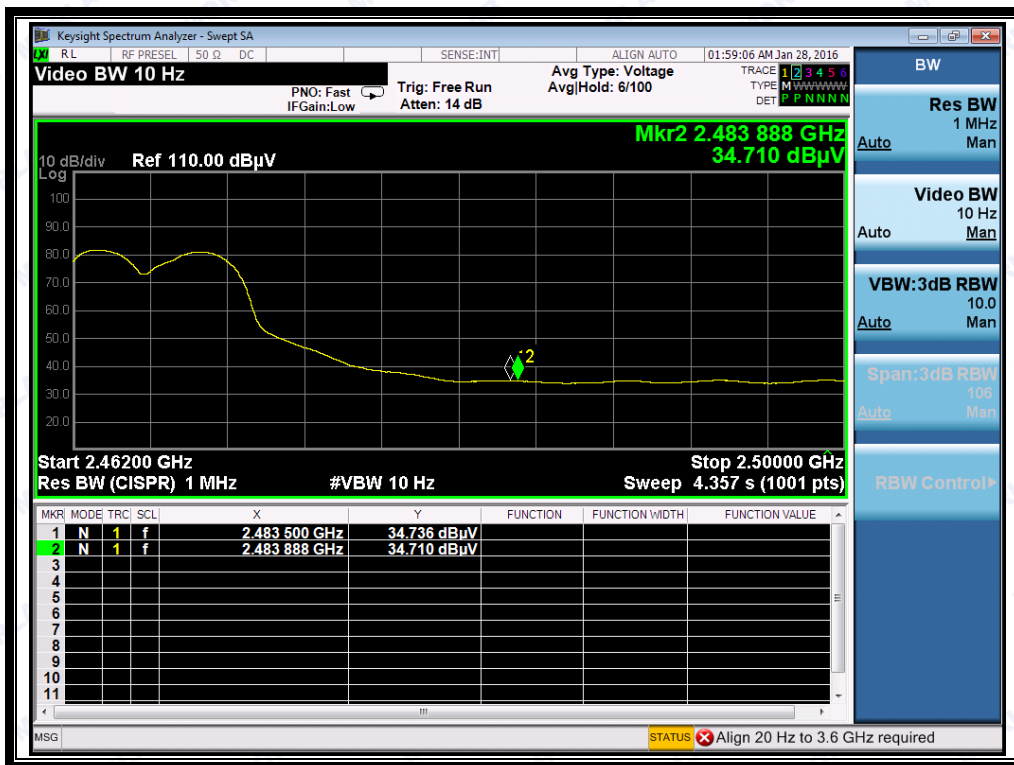
(Channel = 1 PEAK @ 802.11g)



(Channel = 1 AVG @ 802.11g)



(Channel = 11 PEAK @ 802.11g)



(Channel = 11 AVG @ 802.11g)

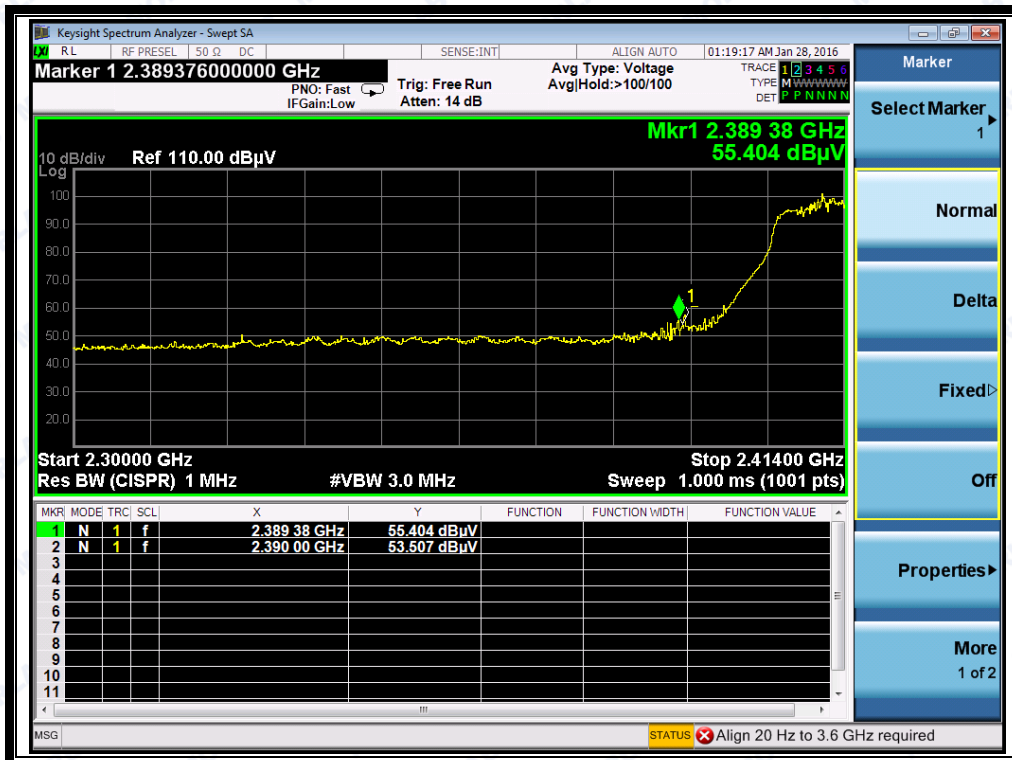


ANT 1:

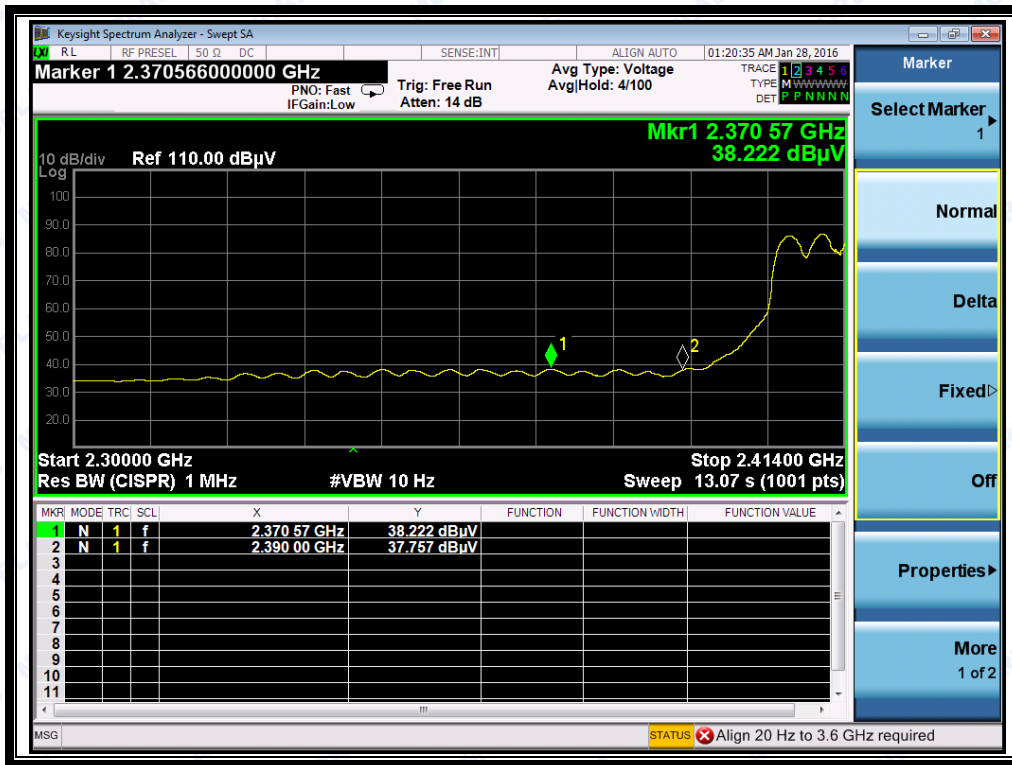
C. Test Verdict:

| Channel | Frequency (MHz) | Detector | Receiver Reading | A _T (dB) | A _{Factor} (dB@3m) | Max. Emission E (dBμV/m) | Limit (dBμV/m) | Verdict |
|---------|-----------------|----------|-----------------------|---------------------|-----------------------------|--------------------------|----------------|---------|
| | | PK/ AV | U _R (dBuV) | | | | | |
| 1 | 2389.38 | PK | 55.40 | -33.63 | 32.56 | 54.33 | 74 | Pass |
| 1 | 2370.57 | AV | 38.22 | -33.63 | 32.56 | 37.15 | 54 | Pass |
| 11 | 2486.43 | PK | 49.38 | -33.18 | 32.5 | 48.70 | 74 | Pass |
| 11 | 2483.77 | AV | 34.69 | -33.18 | 32.5 | 34.01 | 54 | Pass |

D. Test Plots:



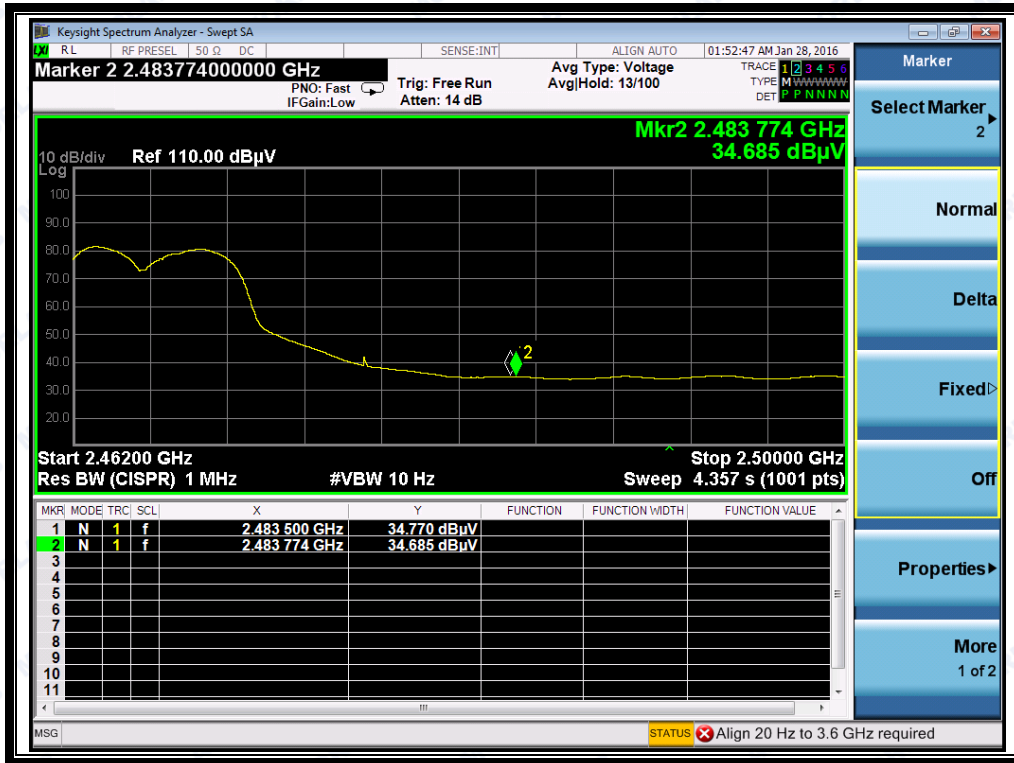
(Channel = 1 PEAK @ 802.11g)



(Channel = 1 AVG @ 802.11g)



(Channel = 11 PEAK @ 802.11g)



(Channel = 11 AVG @ 802.11g)

2.6.3.3 802.11n-20MHz Test mode

The lowest and highest channels are tested to verify the band edge emissions.

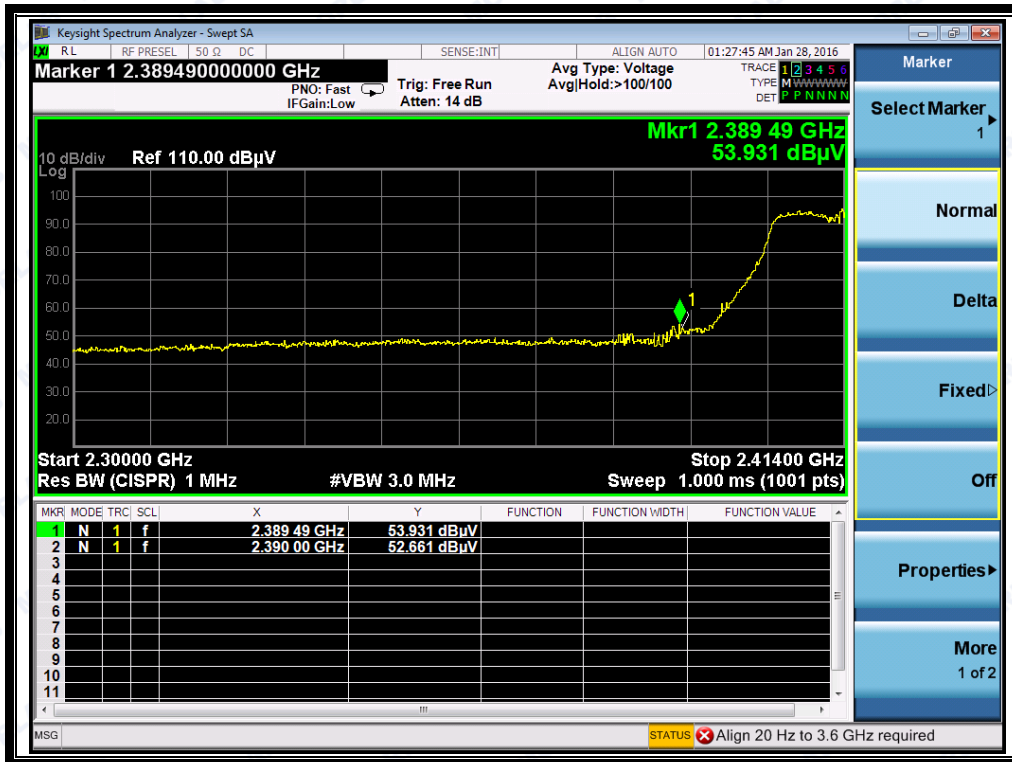
ANT 1:

A. Test Verdict:

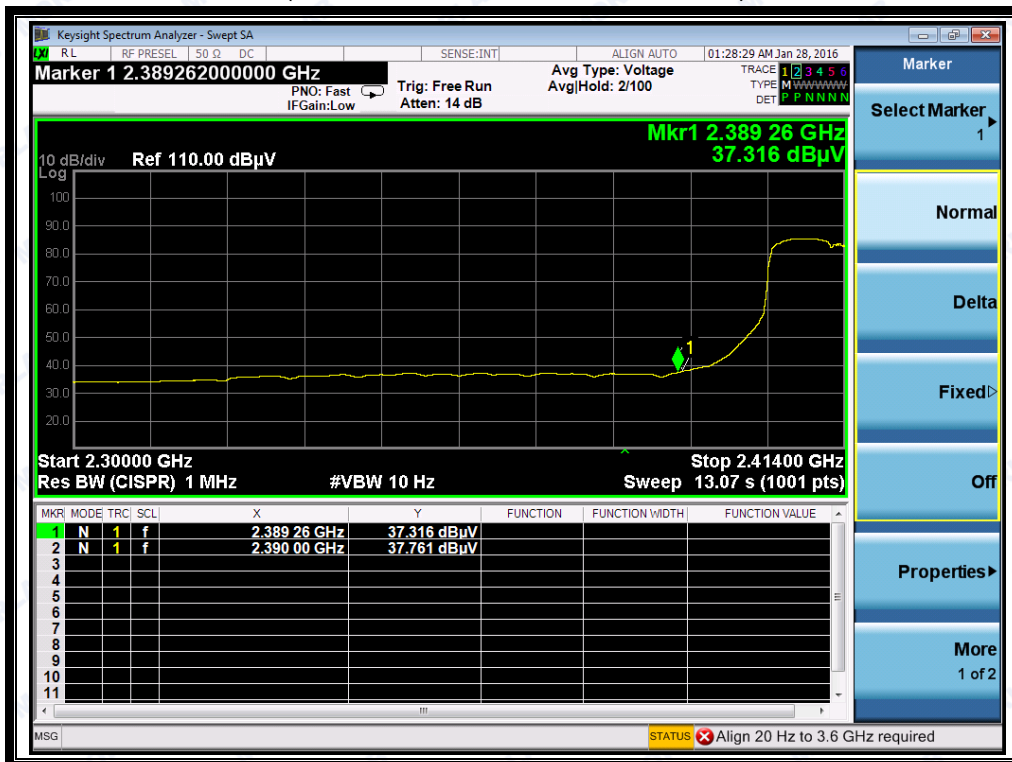
| Channel | Frequency (MHz) | Detector | Receiver Reading U_R (dBμV) | A_T (dB) | A_{Factor} (dB@3m) | Max. Emission E (dBμV/m) | Limit (dBμV/m) | Verdict |
|---------|-----------------|----------|-------------------------------|------------|----------------------|--------------------------|----------------|---------|
| | | PK/ AV | | | | | | |
| 1 | 2389.49 | PK | 53.93 | -33.63 | 32.56 | 52.85 | 74 | Pass |
| 1 | 2389.26 | AV | 37.32 | -33.63 | 32.56 | 36.25 | 54 | Pass |
| 11 | 2485.14 | PK | 49.08 | -33.18 | 32.5 | 48.40 | 74 | Pass |
| 11 | 2483.85 | AV | 34.43 | -33.18 | 32.5 | 33.75 | 54 | Pass |



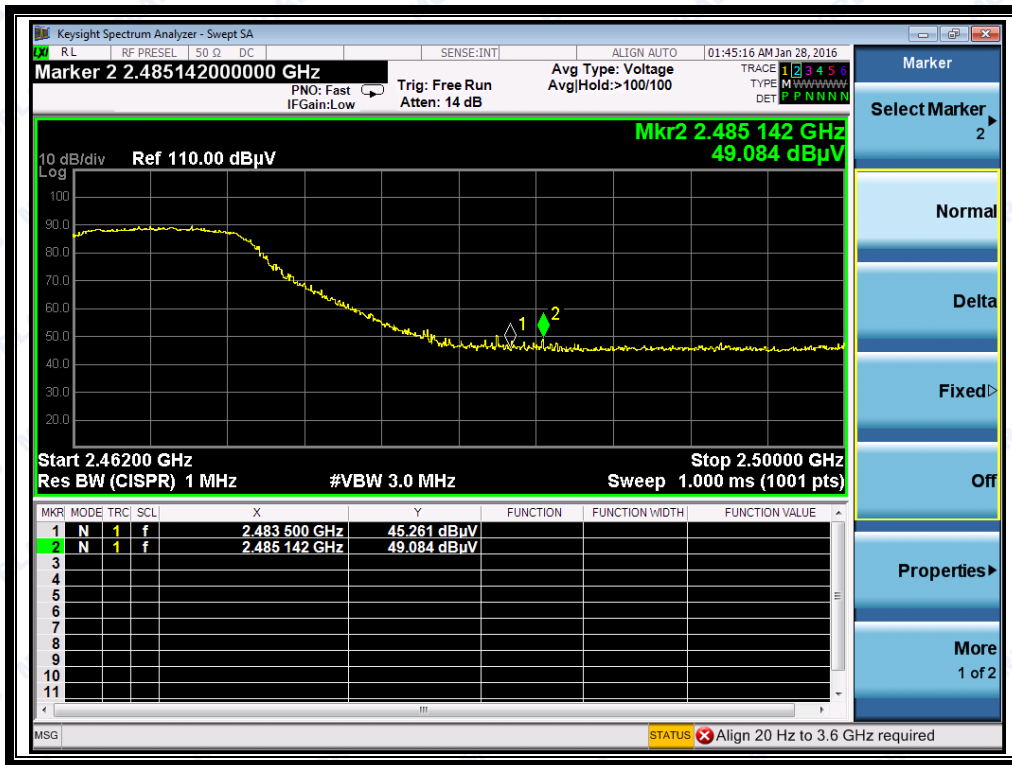
B. Test Plots:



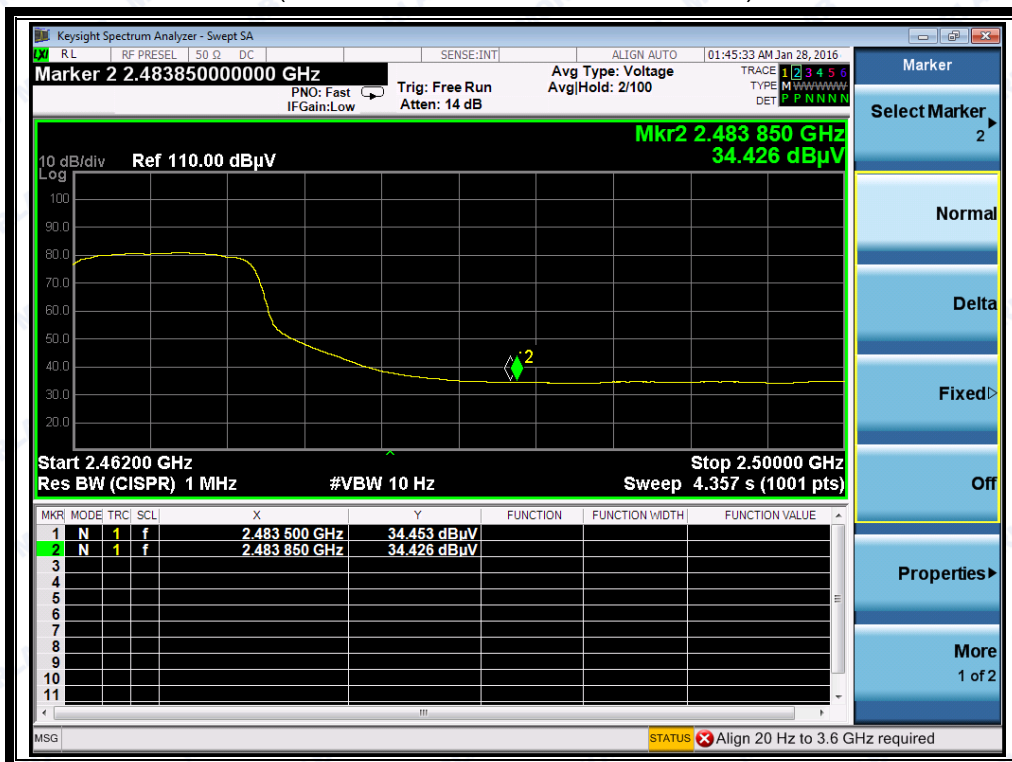
(Channel = 1 PEAK @ 802.11n-20)



(Channel = 1 AVG @ 802.11n-20)



(Channel = 11 PEAK @ 802.11n-20)



(Channel = 11 AVG @ 802.11n-20)

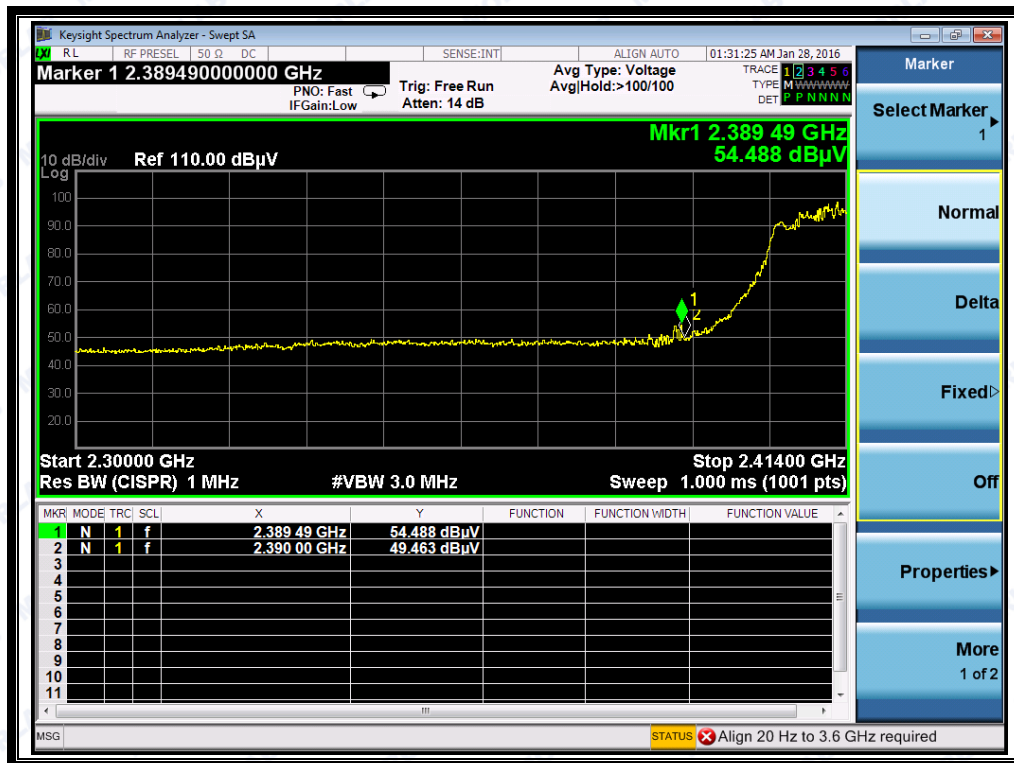


ANT 2:

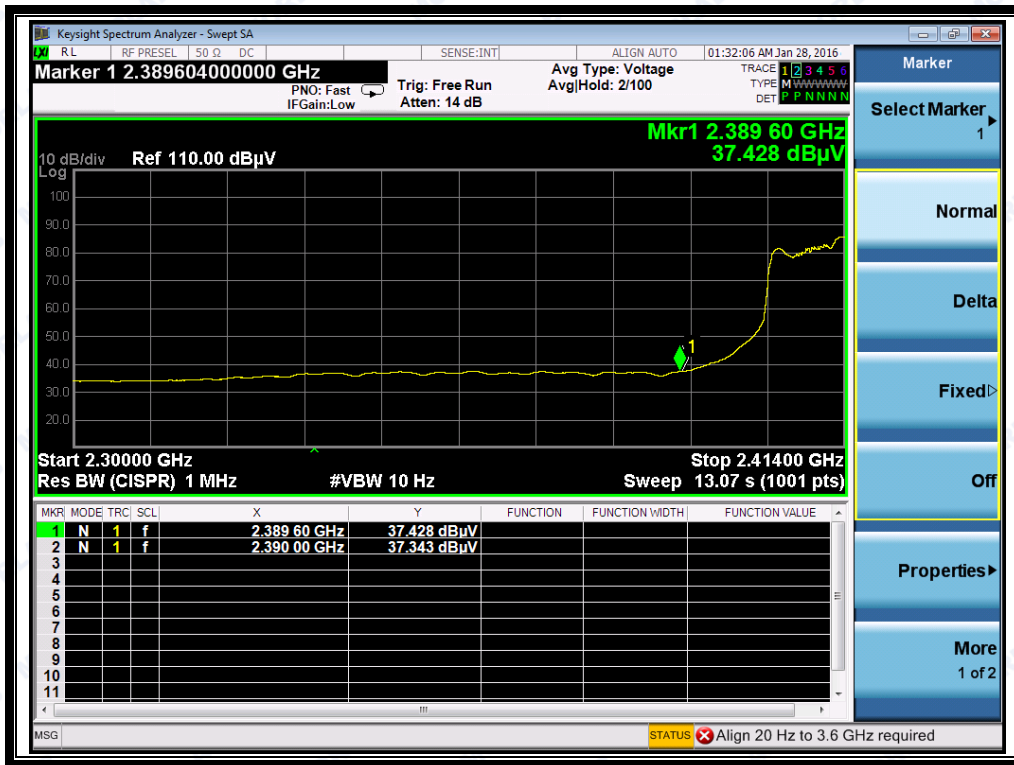
C. Test Verdict:

| Channel | Frequency (MHz) | Detector | Receiver Reading | A _T (dB) | A _{Factor} (dB@3m) | Max. Emission E (dBμV/m) | Limit (dBμV/m) | Verdict |
|---------|-----------------|----------|-----------------------|---------------------|-----------------------------|--------------------------|----------------|---------|
| | | PK/ AV | U _R (dBuV) | | | | | |
| 1 | 2389.49 | PK | 54.49 | -33.63 | 32.56 | 53.42 | 74 | Pass |
| 1 | 2389.60 | AV | 37.43 | -33.63 | 32.56 | 36.36 | 54 | Pass |
| 11 | 2484.88 | PK | 54.16 | -33.18 | 32.5 | 53.48 | 74 | Pass |
| 11 | 2483.77 | AV | 34.71 | -33.18 | 32.5 | 34.03 | 54 | Pass |

D. Test Plots:



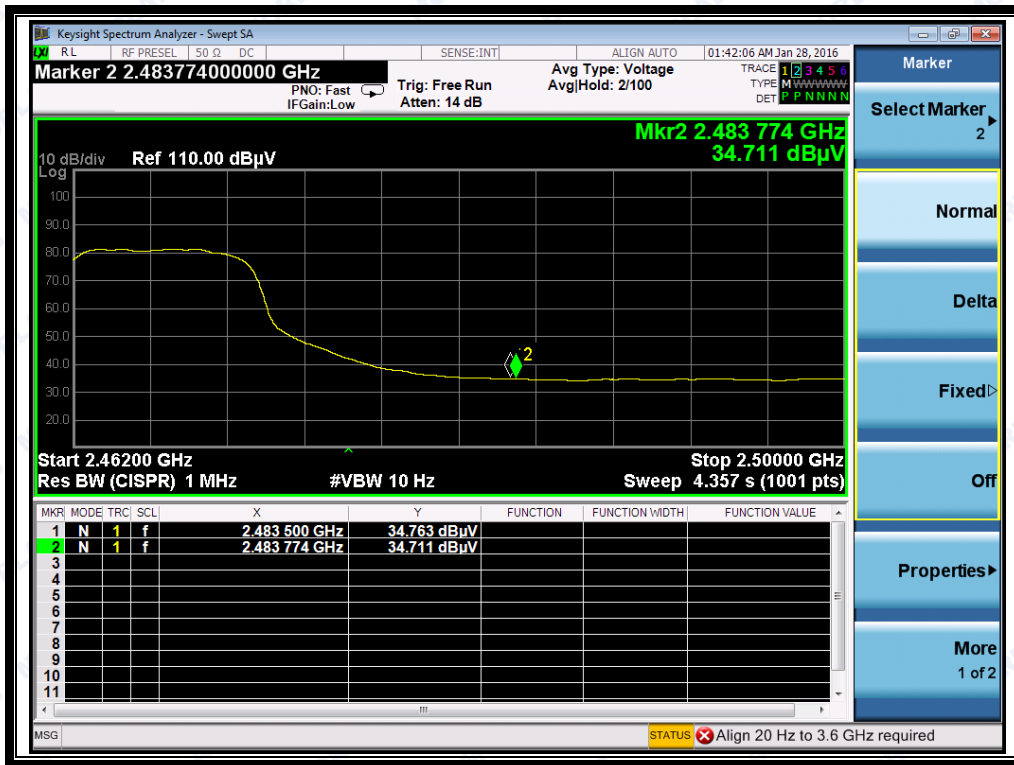
(Channel = 1 PEAK @ 802.11n-20)



(Channel = 1 AVG @ 802.11n-20)



(Channel = 11 PEAK @ 802.11n-20)



(Channel = 11 AVG @ 802.11n-20)



2.7 Radiated Emission

2.7.1 Requirement

According to FCC section 15.247(d), radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

| Frequency (MHz) | Field Strength ($\mu\text{V}/\text{m}$) | Measurement Distance (m) |
|-----------------|---|--------------------------|
| 0.009 - 0.490 | 2400/F(kHz) | 300 |
| 0.490 - 1.705 | 24000/F(kHz) | 30 |
| 1.705 - 30.0 | 30 | 30 |
| 30 - 88 | 100 | 3 |
| 88 - 216 | 150 | 3 |
| 216 - 960 | 200 | 3 |
| Above 960 | 500 | 3 |

Note:

For Above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.

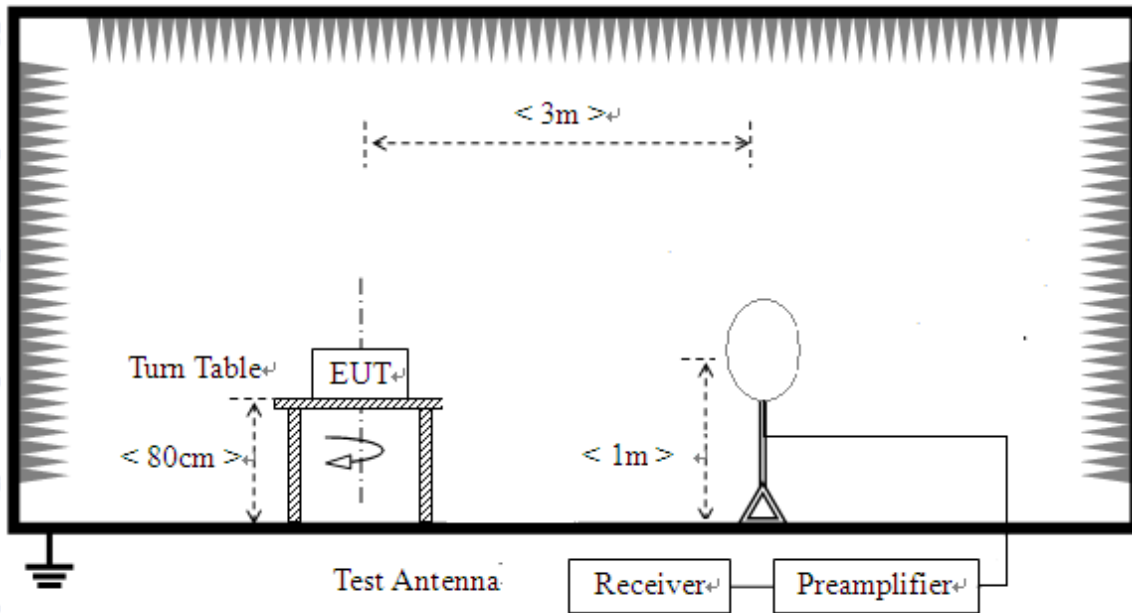
For above 1000MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK)

In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), also should comply with the radiated emission limits specified in Section 15.209(a)(above table)

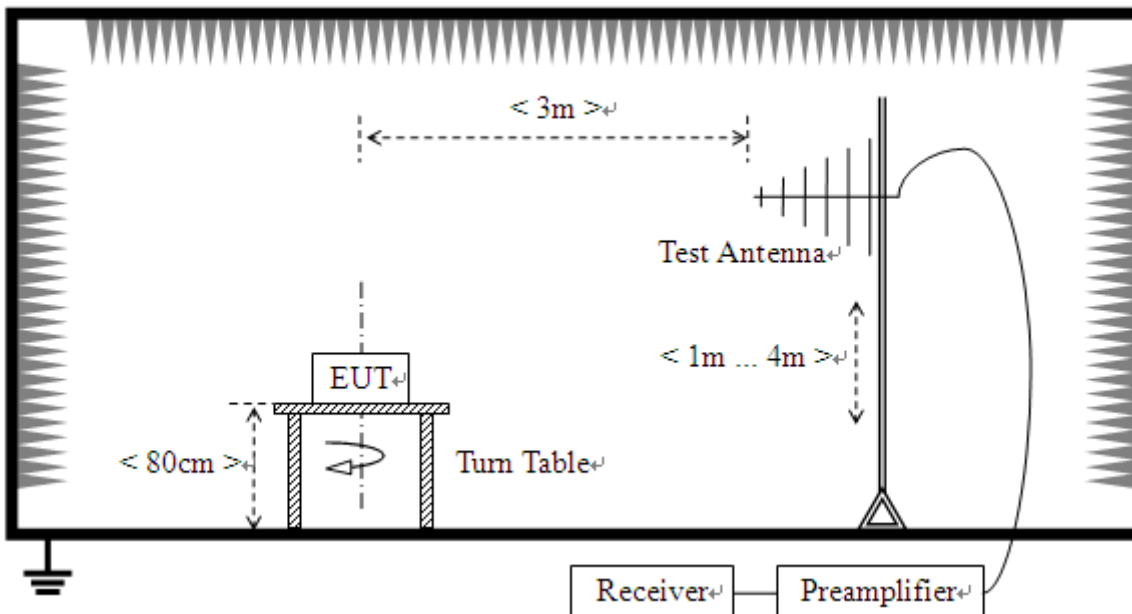
2.7.2 Test Description

A. Test Setup:

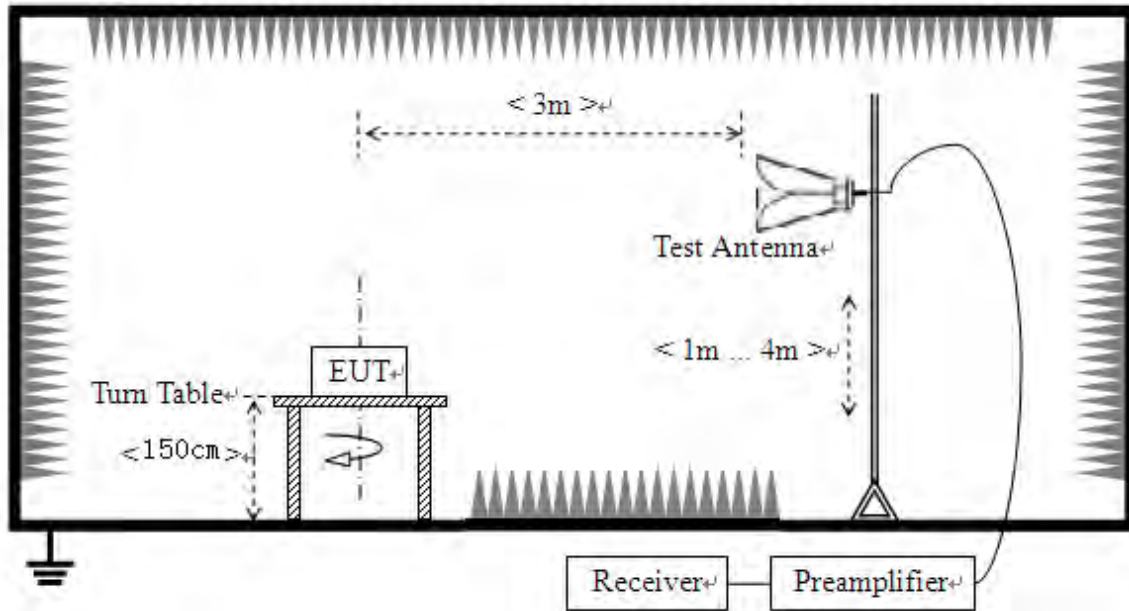
- 1) For radiated emissions from 9kHz to 30MHz



- 2) For radiated emissions from 30MHz to 1GHz



3) For radiated emissions above 1GHz



The test site semi-anechoic chamber has met the requirement of NSA tolerance 4dB according to the standards: ANSI C63.10-2013. For radiated emissions below or equal to 1GHz, The EUT was set-up on insulator 80cm above the Ground Plane, For radiated emissions above 1GHz, The EUT was set-up on insulator 1.5m above the Ground Plane. The set-up and test methods were according to ANSI C63.10-2013.

For the radiated emission test above 1GHz:

Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

The EUT is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading

For the Test Antenna:

(a) In the frequency range of 9kHz to 30MHz, magnetic field is measured with Loop Test Antenna.



The Test Antenna is positioned with its plane vertical at 1m distance from the EUT. The center of the Loop Test Antenna is 1m above the ground. During the measurement the Loop Test Antenna rotates about its vertical axis for maximum response at each azimuth about the EUT.

(b) In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. The emission levels at both horizontal and vertical polarizations should be tested.

B. Equipments List:

Please reference ANNEX A(1.4).

2.7.3 Test Result

According to ANSI C63.10, because of peak detection will yield amplitudes equal to or greater than amplitudes measured with the quasi-peak (or average) detector, the measurement data from a spectrum analyzer peak detector will represent the worst-case results, if the peak measured value complies with the quasi-peak limit, it is unnecessary to perform an quasi-peak measurement.

The measurement results are obtained as below:

$$E \text{ [dB}\mu\text{V/m]} = U_R + A_T + A_{\text{Factor}} \text{ [dB]}; A_T = L_{\text{Cable loss}} \text{ [dB]} - G_{\text{preamp}} \text{ [dB]}$$

A_T : Total correction Factor except Antenna

U_R : Receiver Reading

G_{preamp} : Preamplifier Gain

A_{Factor} : Antenna Factor at 3m

During the test, the total correction Factor A_T and A_{Factor} were built in test software.

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

2.7.3.1 802.11b Test mode

ANT 1:

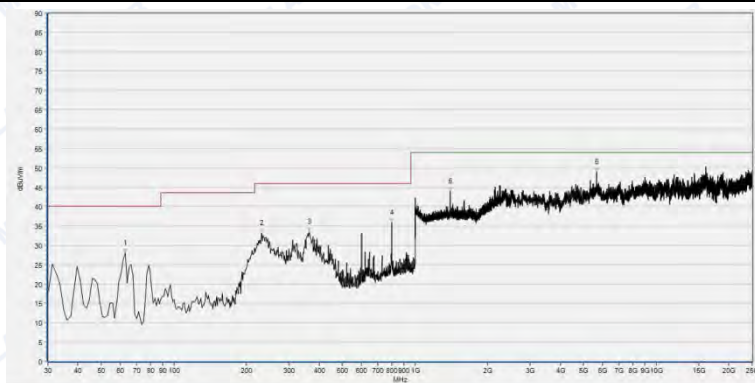
A. Test Plots for the Whole Measurement Frequency Range:

Plots for Channel = 1



| Fre. (MHz) | Pk | QP | AV | Limit-PK | Limit-QP | Limit-AV | Antenna | Verdict |
|------------|-------|-----|-----|----------|----------|----------|------------|---------|
| 230.313 | 37.90 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 357.785 | 33.65 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 799.687 | 33.15 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 2714.057 | 46.03 | N.A | N.A | 74.0 | N.A | 54.0 | Horizontal | N.A |
| 4824.113 | 49.01 | N.A | N.A | 74.0 | N.A | 54.0 | Horizontal | PASS |
| 5651.027 | 51.04 | N.A | N.A | 74.0 | N.A | 54.0 | Horizontal | PASS |

(Antenna Horizontal, 30MHz to 25GHz)

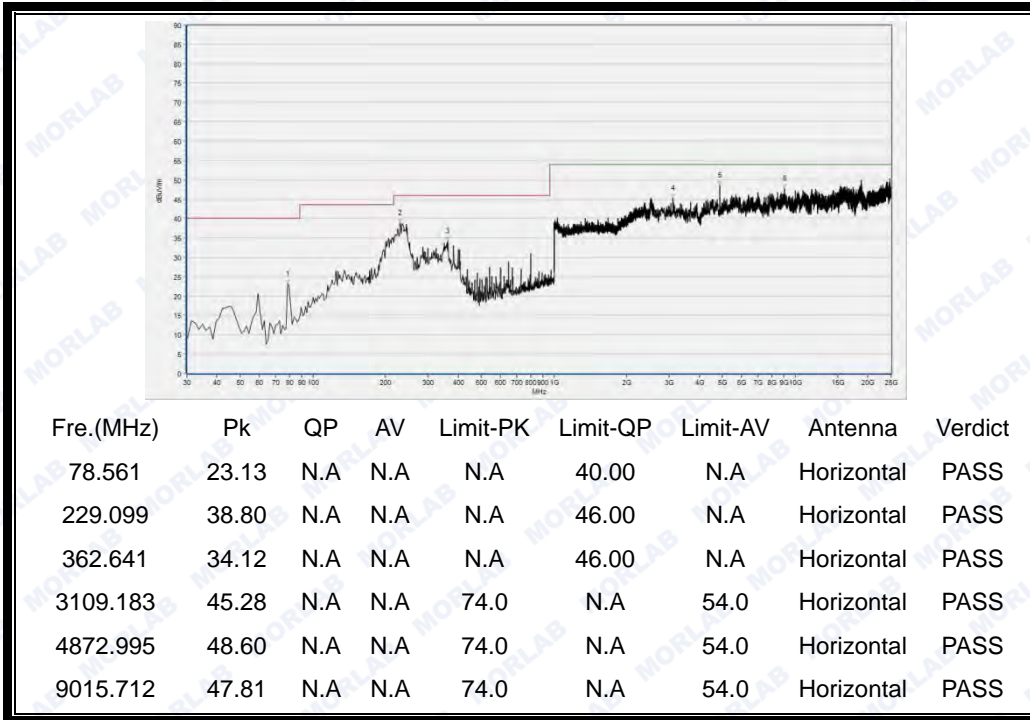


| Fre. (MHz) | Pk | QP | AV | Limit-PK | Limit-QP | Limit-AV | Antenna | Verdict |
|------------|-------|-----|-----|----------|----------|----------|----------|---------|
| 62.778 | 28.07 | N.A | N.A | N.A | 40.00 | N.A | Vertical | PASS |
| 231.527 | 33.21 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 365.069 | 33.56 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 799.687 | 35.85 | N.A | N.A | N.A | 46.00 | N.A | Vertical | N.A |
| 1399.520 | 43.84 | N.A | N.A | 74.0 | N.A | 54.0 | Vertical | PASS |
| 5651.027 | 48.88 | N.A | N.A | 74.0 | N.A | 54.0 | Vertical | PASS |

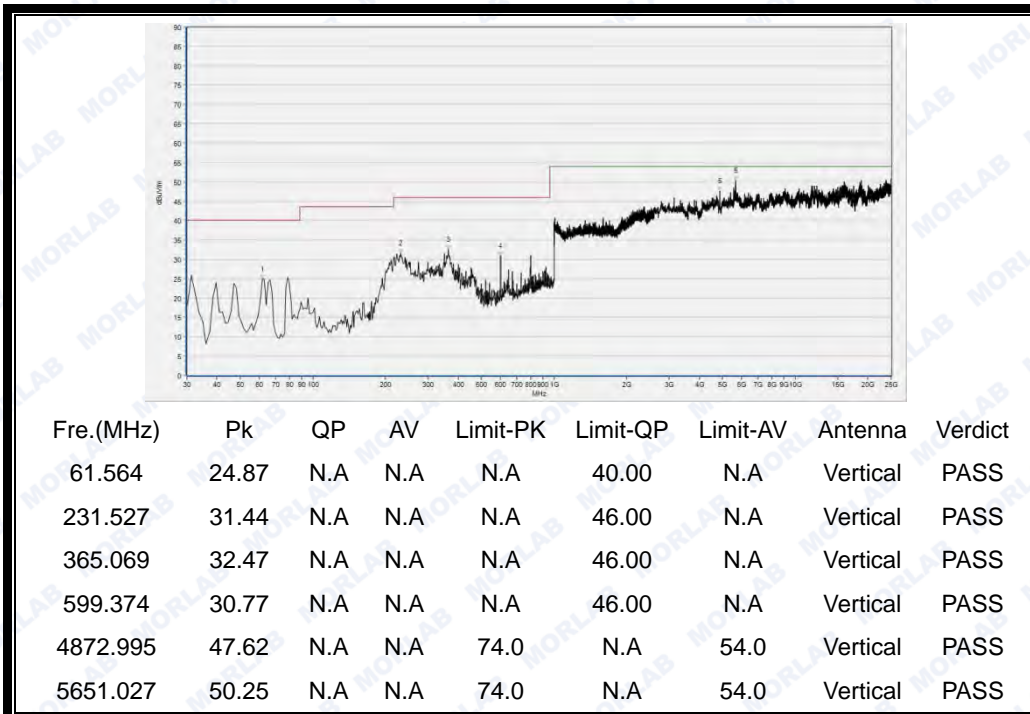
(Antenna Vertical, 30MHz to 25GHz)



Plot for Channel = 6



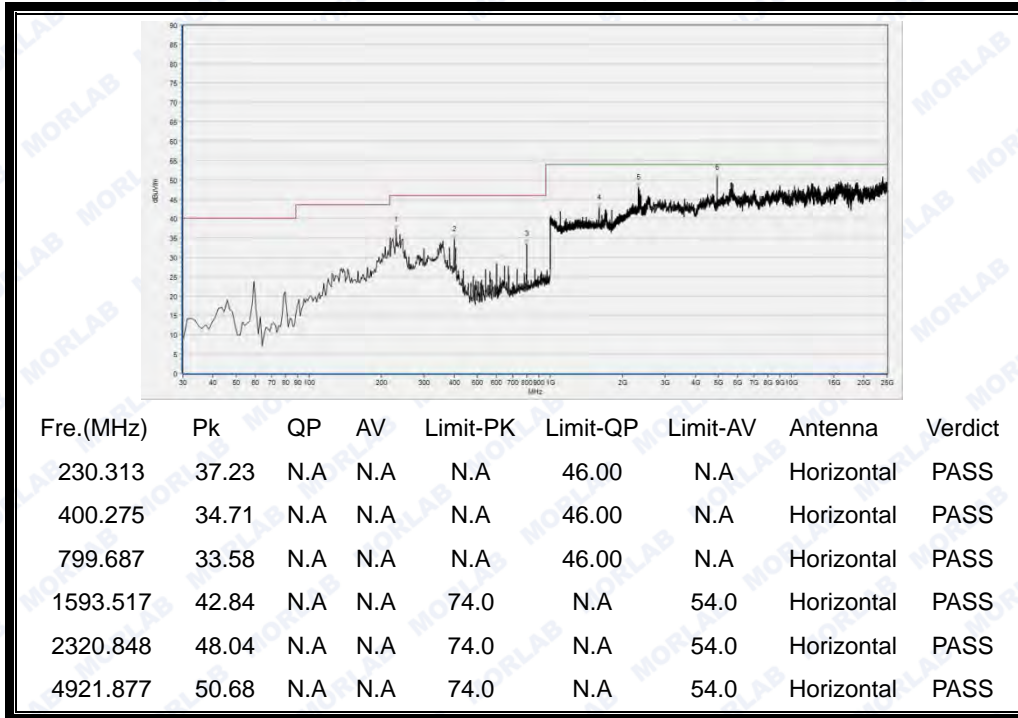
(Antenna Horizontal, 30MHz to 25GHz)



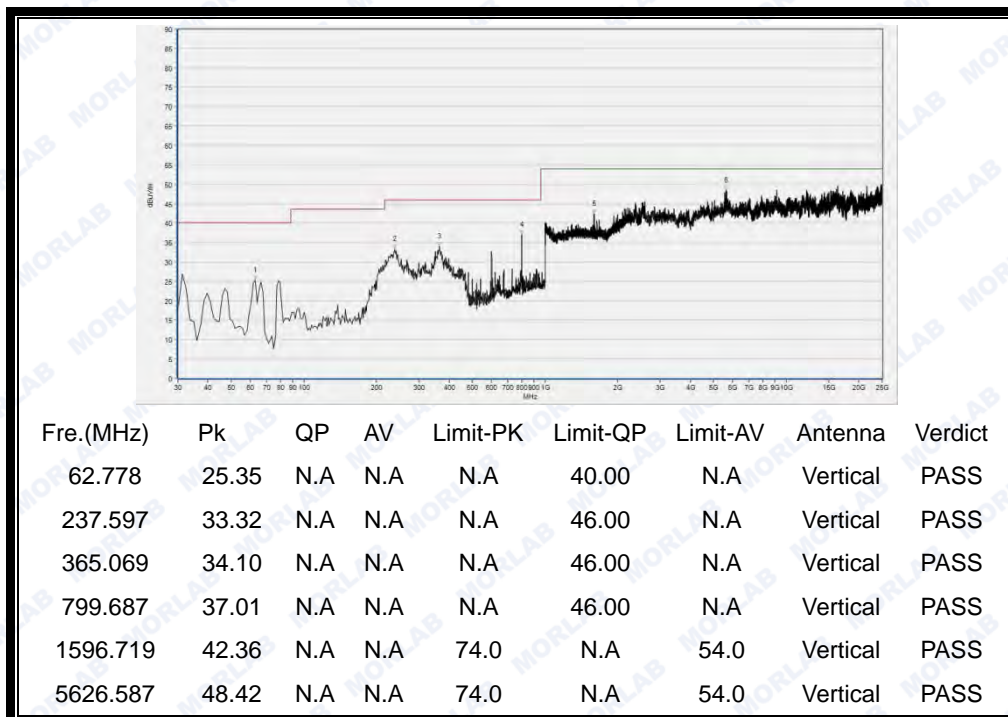
(Antenna Vertical, 30MHz to 25GHz)



Plot for Channel = 11



(Antenna Horizontal, 30MHz to 25GHz)



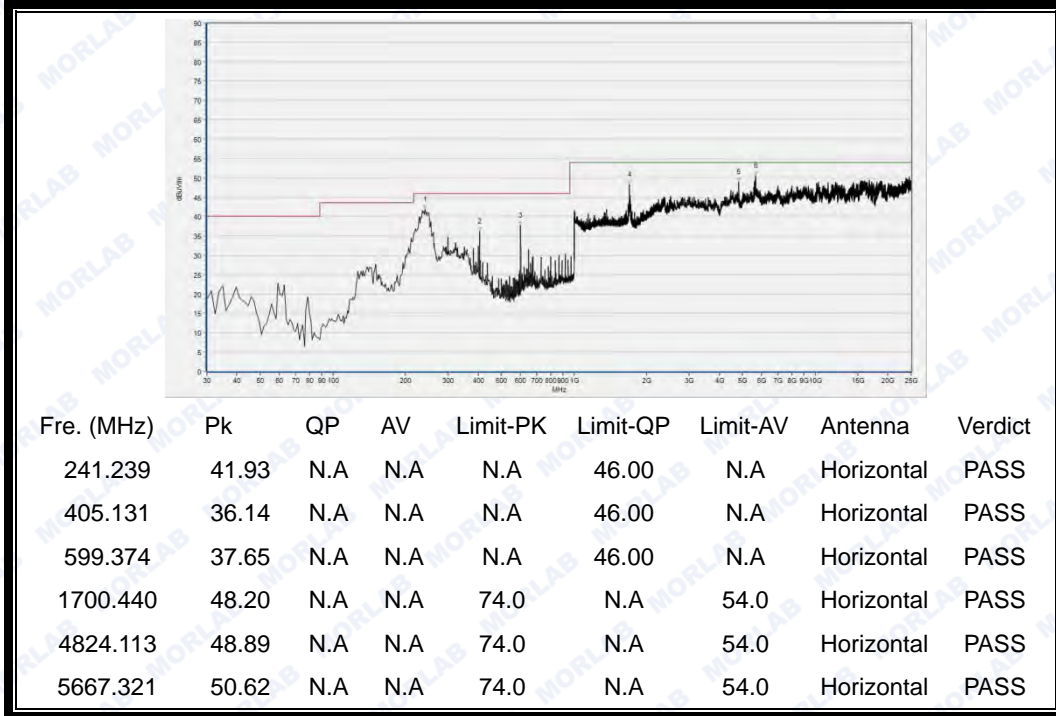
(Antenna Vertical, 30MHz to 25GHz)



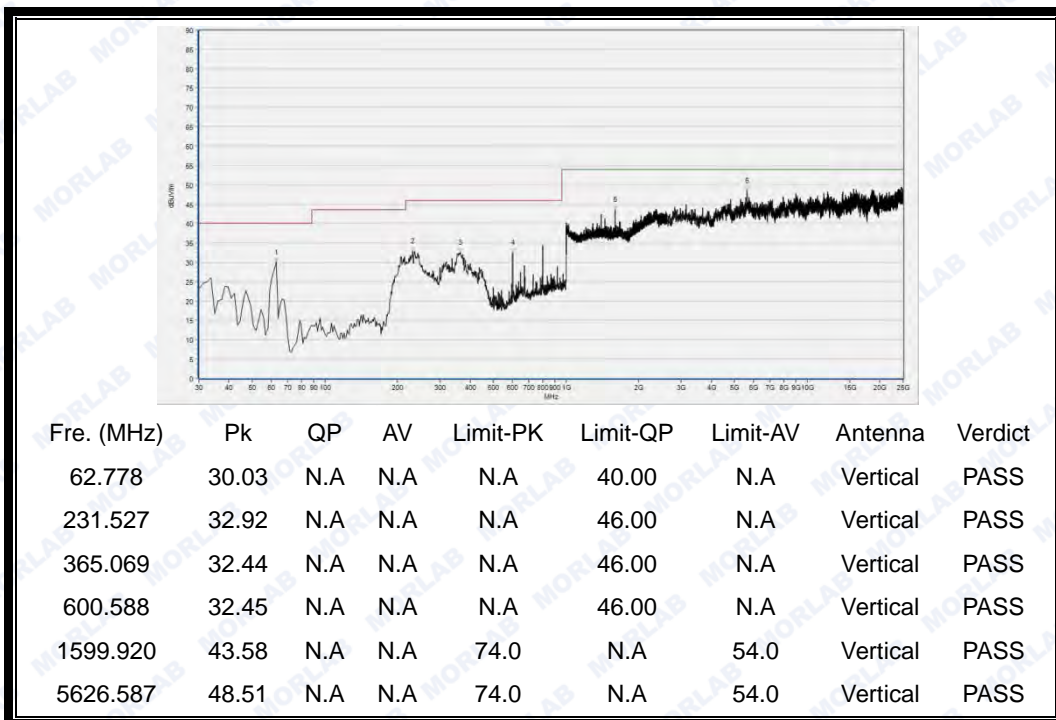
ANT 2:

B. Test Plots for the Whole Measurement Frequency Range:

Plots for Channel = 1



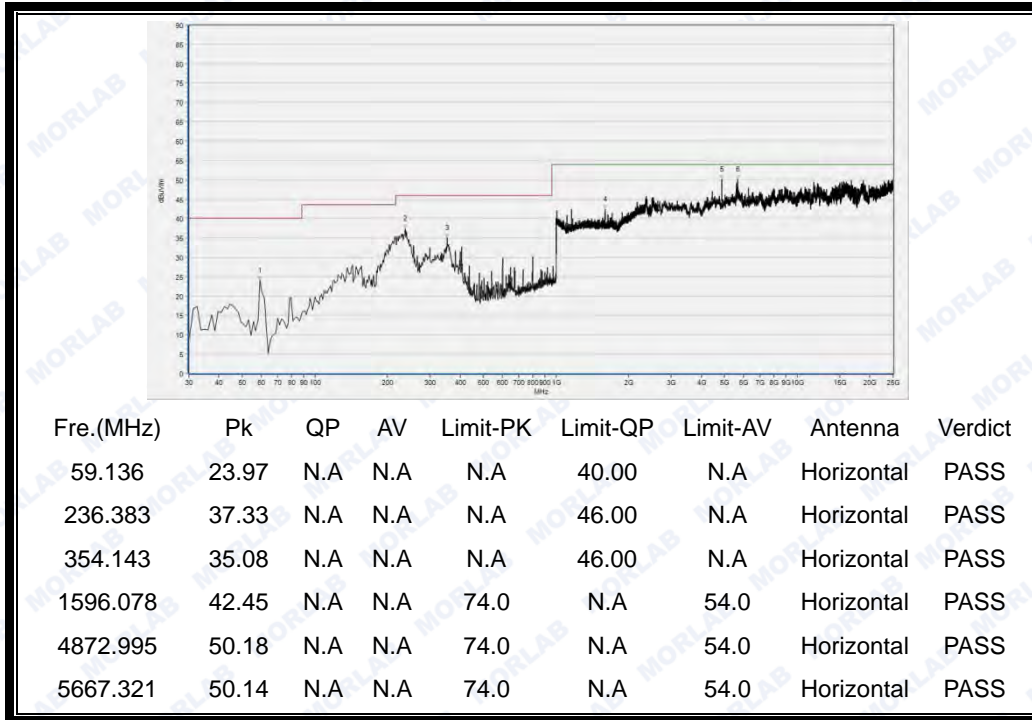
(Antenna Horizontal, 30MHz to 25GHz)



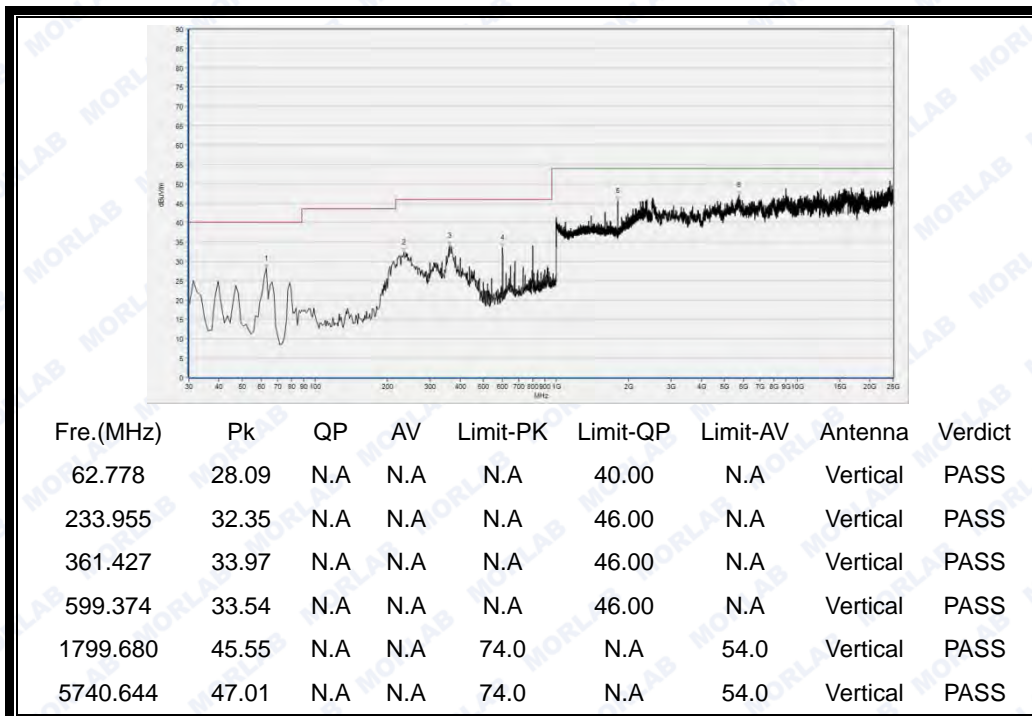
(Antenna Vertical, 30MHz to 25GHz)



Plot for Channel = 6



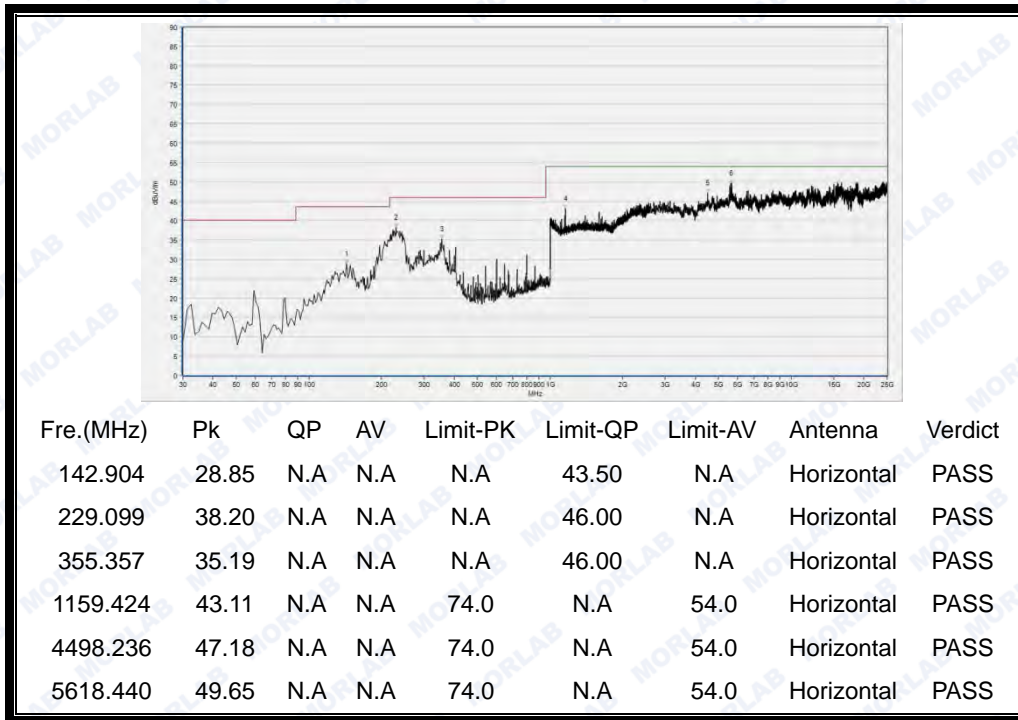
(Antenna Horizontal, 30MHz to 25GHz)



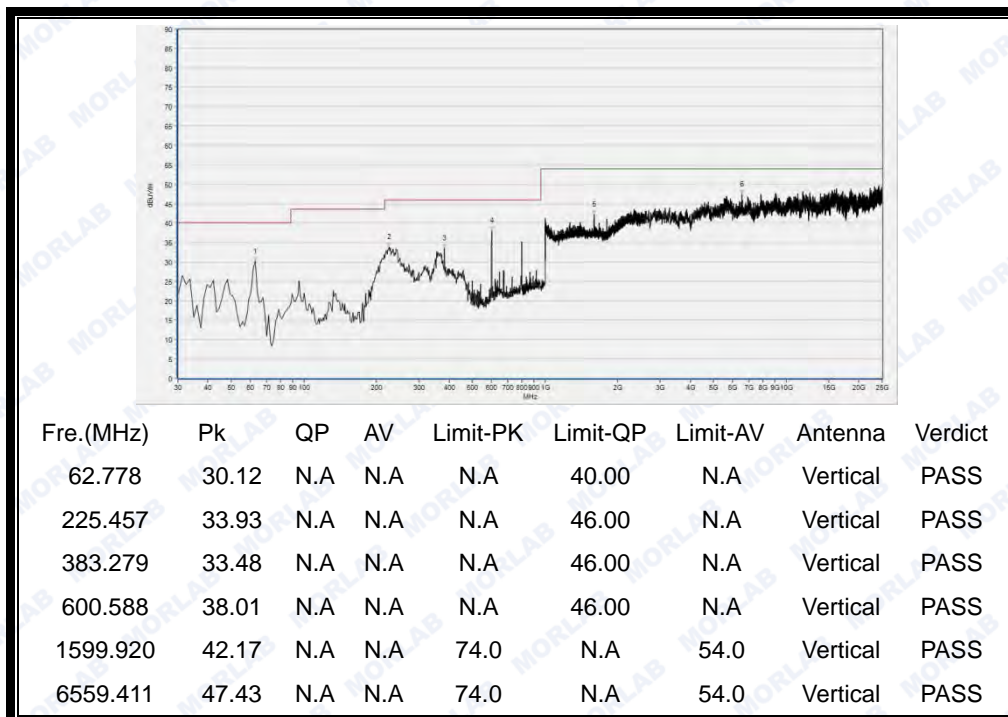
(Antenna Vertical, 30MHz to 25GHz)



Plot for Channel = 11



(Antenna Horizontal, 30MHz to 25GHz)



(Antenna Vertical, 30MHz to 25GHz)

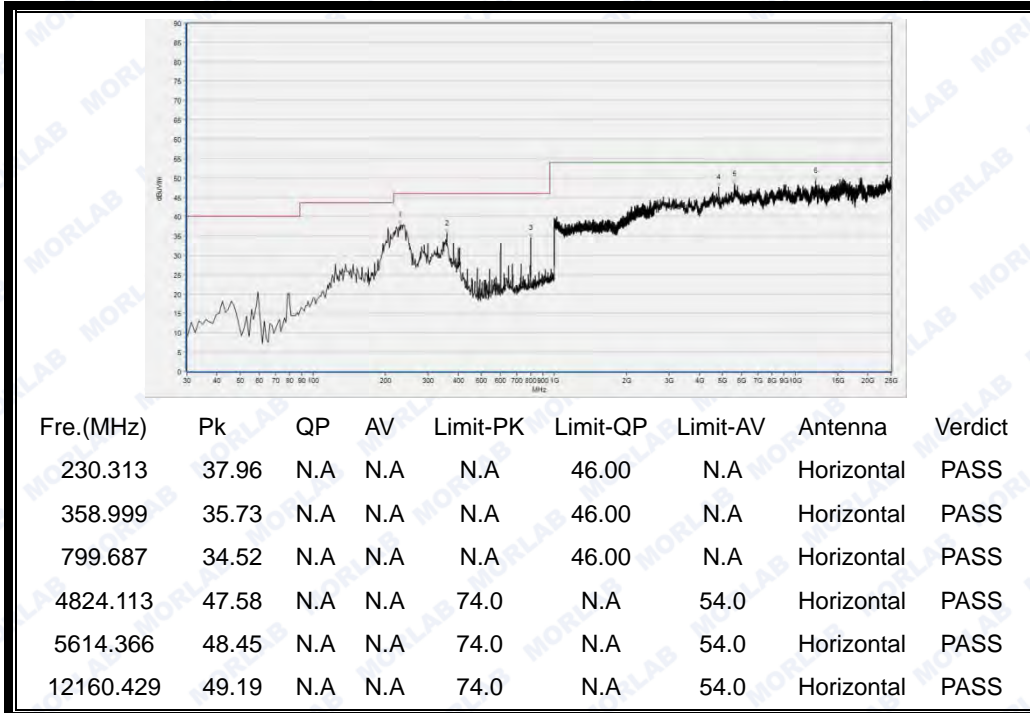


2.7.3.2 802.11g Test mode

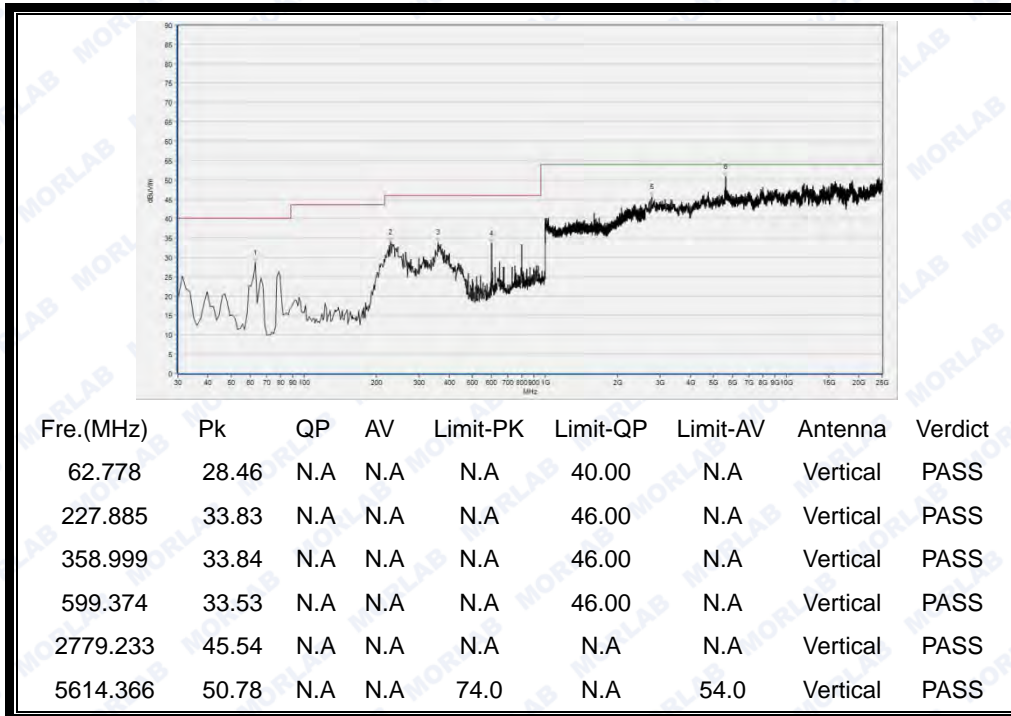
ANT 1:

A. Test Plots for the Whole Measurement Frequency Range:

Plots for Channel = 1

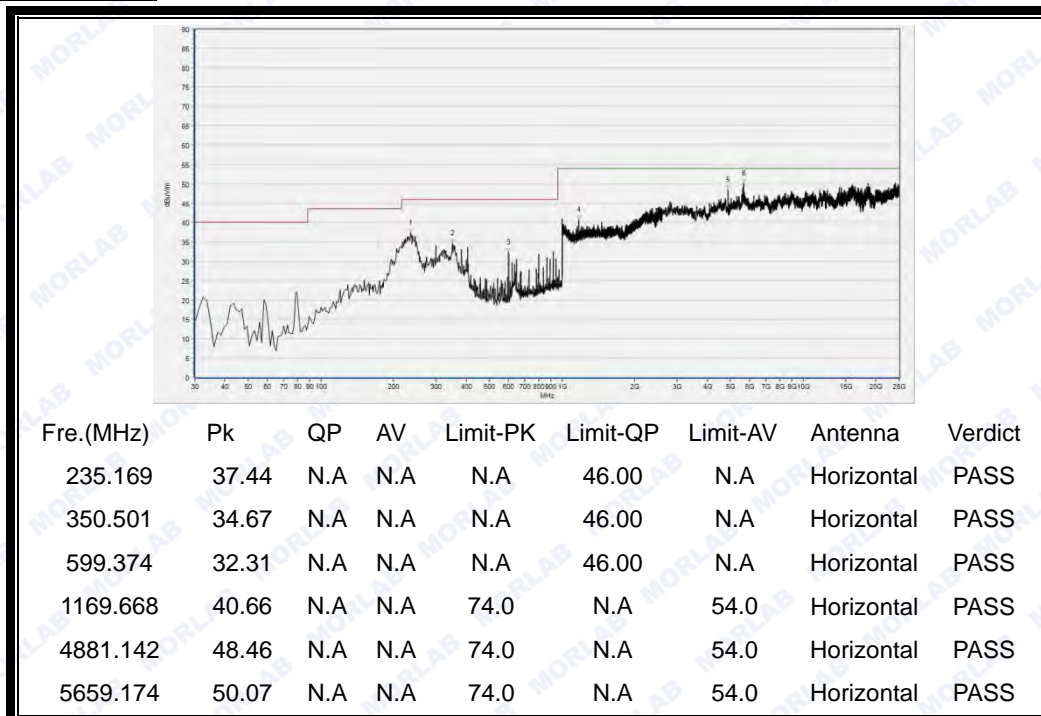


(Antenna Horizontal, 30MHz to 25GHz)

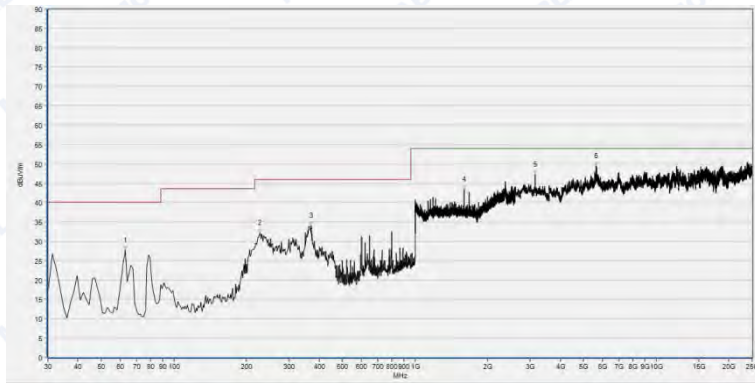


(Antenna Vertical, 30MHz to 25GHz)

Plot for Channel = 6



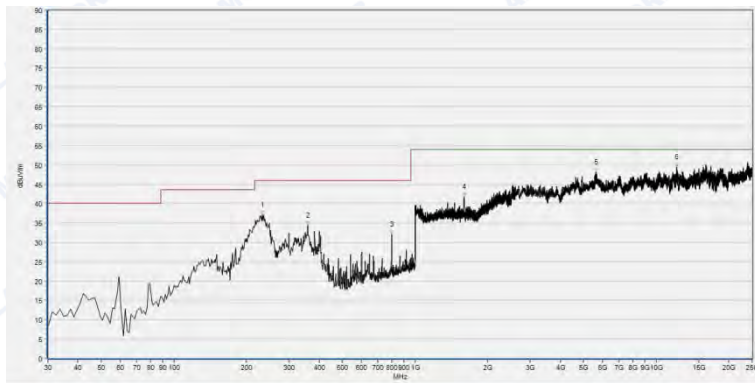
(Antenna Horizontal, 30MHz to 25GHz)



| Fre.(MHz) | Pk | QP | AV | Limit-PK | Limit-QP | Limit-AV | Antenna | Verdict |
|-----------|-------|-----|-----|----------|----------|----------|----------|---------|
| 62.778 | 27.69 | N.A | N.A | N.A | 40.00 | N.A | Vertical | PASS |
| 226.671 | 32.22 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 371.139 | 34.04 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 1599.920 | 43.38 | N.A | N.A | 74.0 | N.A | 54.0 | Vertical | PASS |
| 3145.845 | 47.28 | N.A | N.A | 74.0 | N.A | 54.0 | Vertical | PASS |
| 5626.587 | 49.52 | N.A | N.A | 74.0 | N.A | 54.0 | Vertical | PASS |

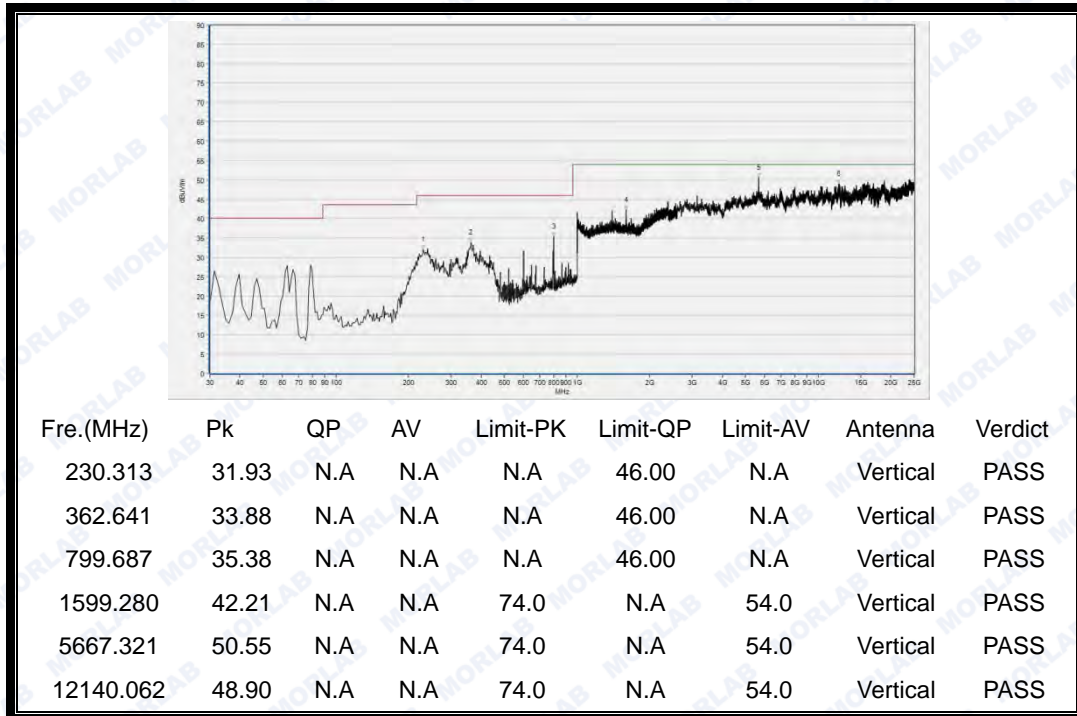
(Antenna Vertical, 30MHz to 25GHz)

Plot for Channel = 11



| Fre.(MHz) | Pk | QP | AV | Limit-PK | Limit-QP | Limit-AV | Antenna | Verdict |
|-----------|-------|-----|-----|----------|----------|----------|------------|---------|
| 232.741 | 37.06 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 358.999 | 34.38 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 799.687 | 31.98 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 1594.798 | 41.78 | N.A | N.A | 74.0 | N.A | 54.0 | Horizontal | PASS |
| 5626.587 | 48.18 | N.A | N.A | 74.0 | N.A | 54.0 | Horizontal | PASS |
| 12144.135 | 49.52 | N.A | N.A | 74.0 | N.A | 54.0 | Horizontal | PASS |

(Antenna Horizontal, 30MHz to 25GHz)



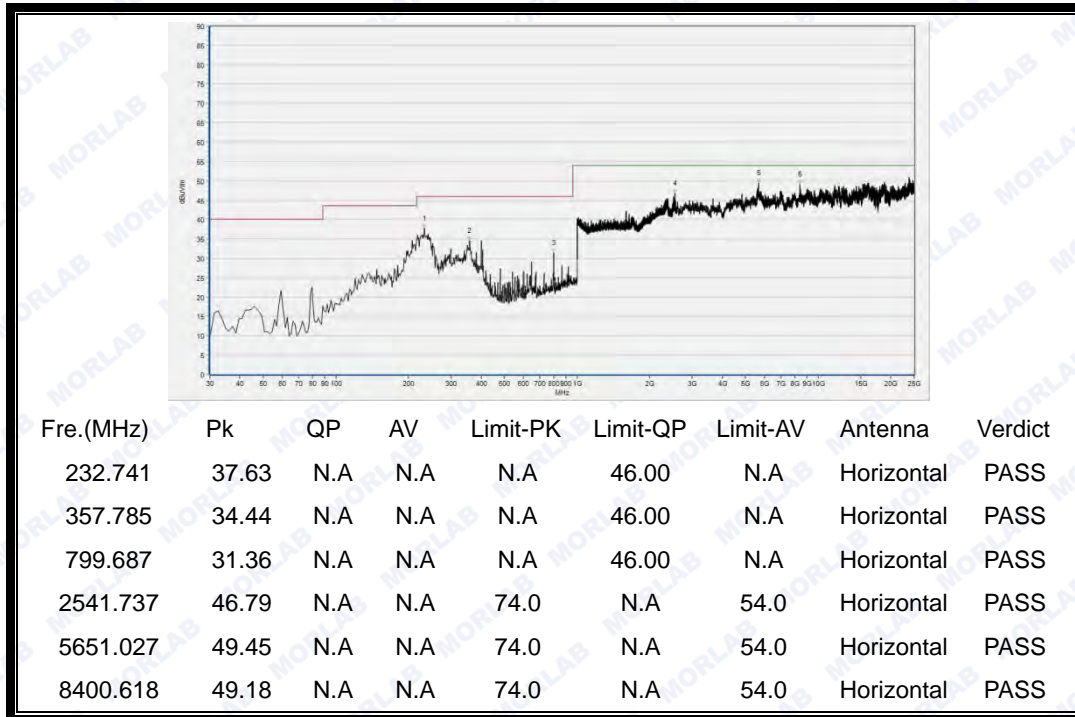
(Antenna Vertical, 30MHz to 25GHz)

ANT 2:

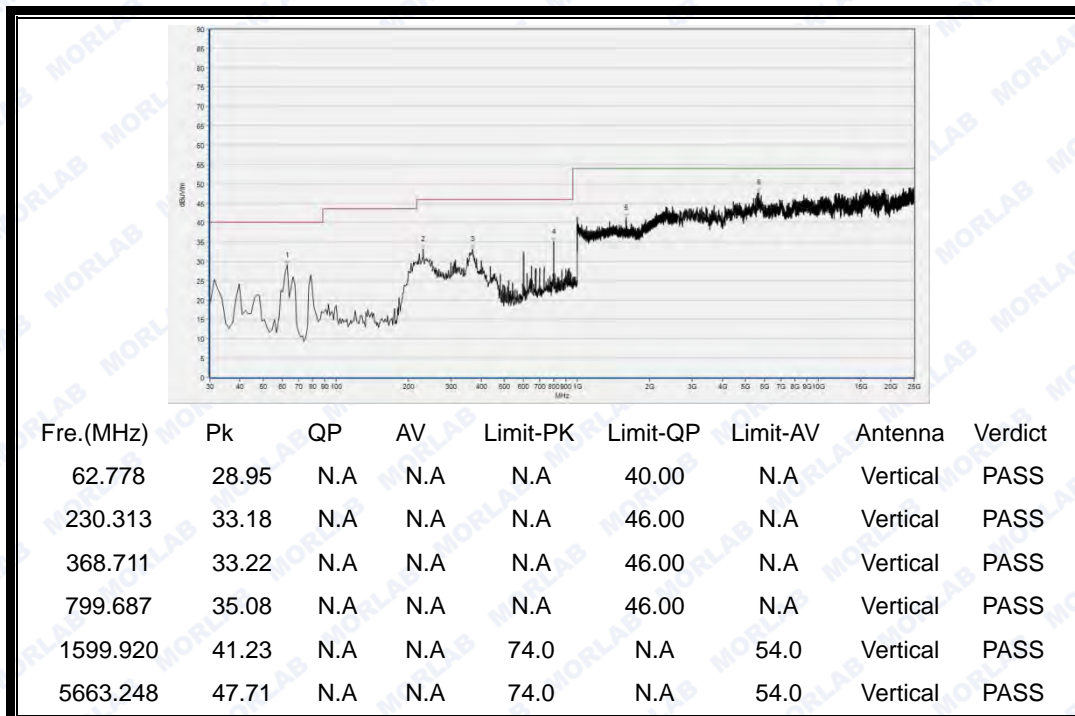
B. Test Plots for the Whole Measurement Frequency Range:



Plots for Channel = 1



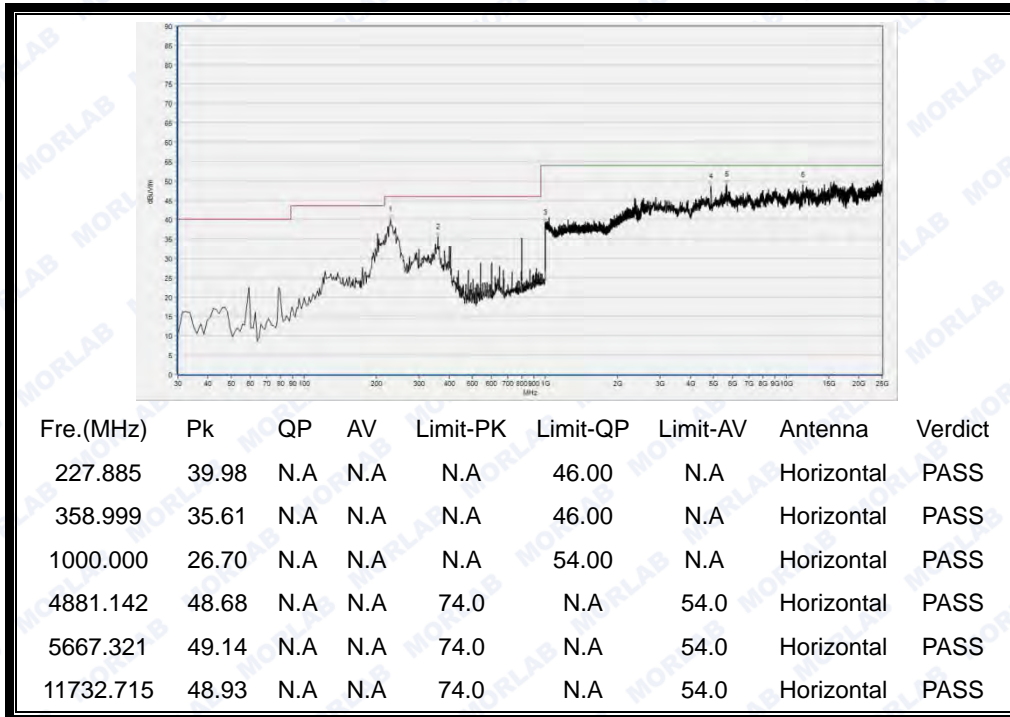
(Antenna Horizontal, 30MHz to 25GHz)



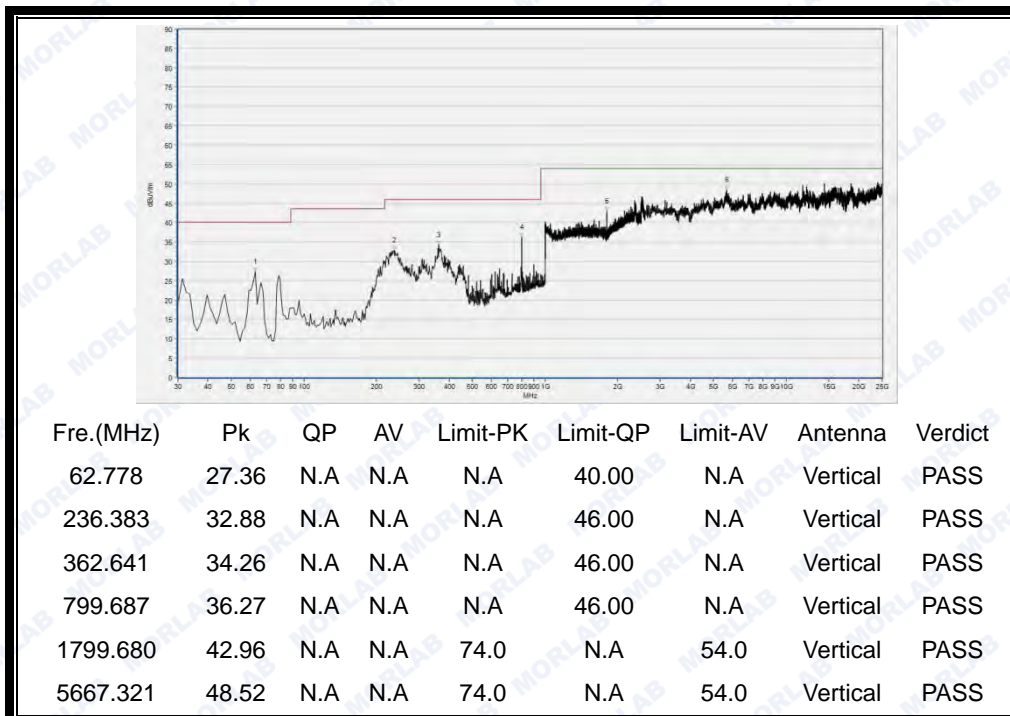
(Antenna Vertical, 30MHz to 25GHz)



Plot for Channel = 6



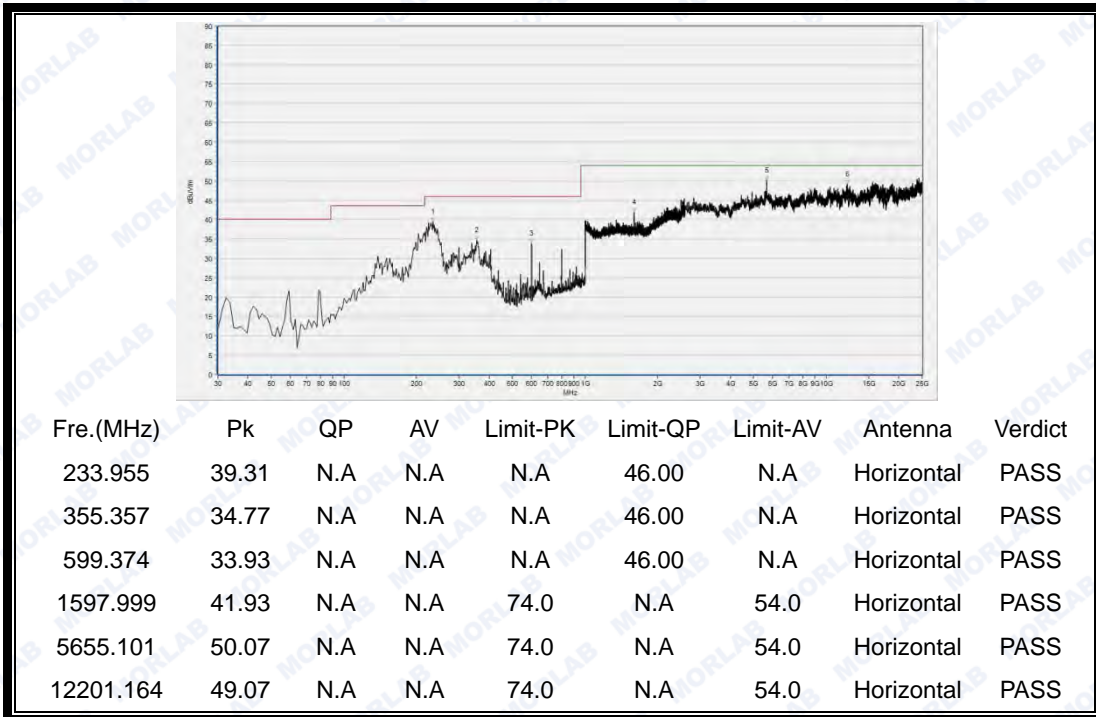
(Antenna Horizontal, 30MHz to 25GHz)



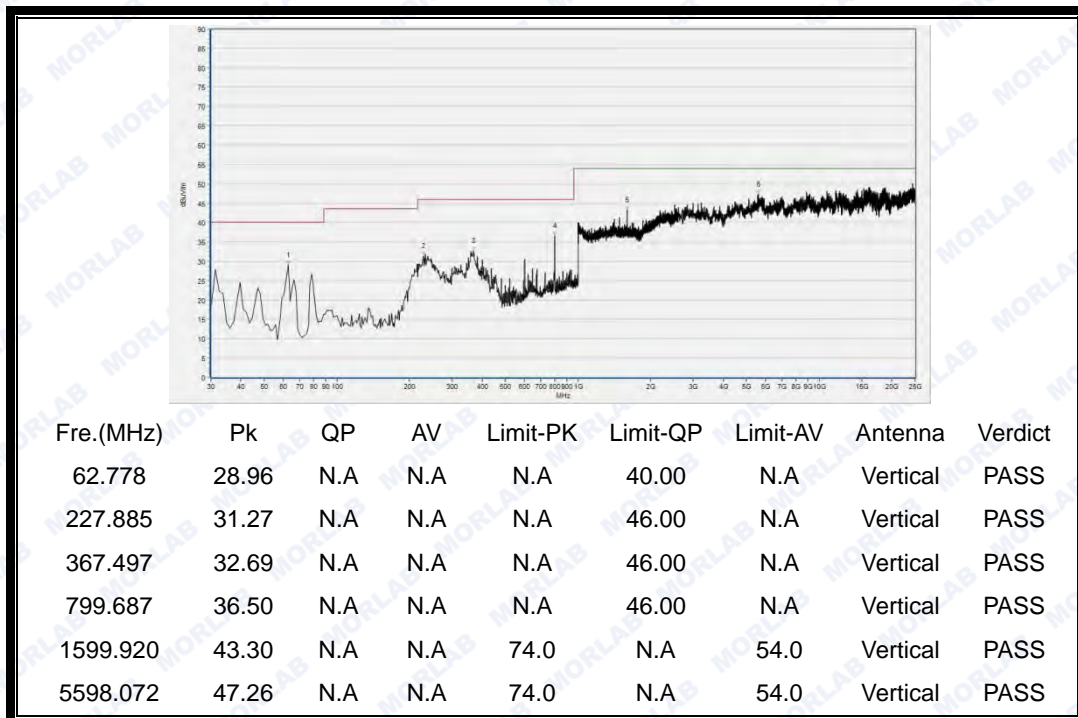
(Antenna Vertical, 30MHz to 25GHz)



Plot for Channel = 11



(Antenna Horizontal, 30MHz to 25GHz)



(Antenna Vertical, 30MHz to 25GHz)

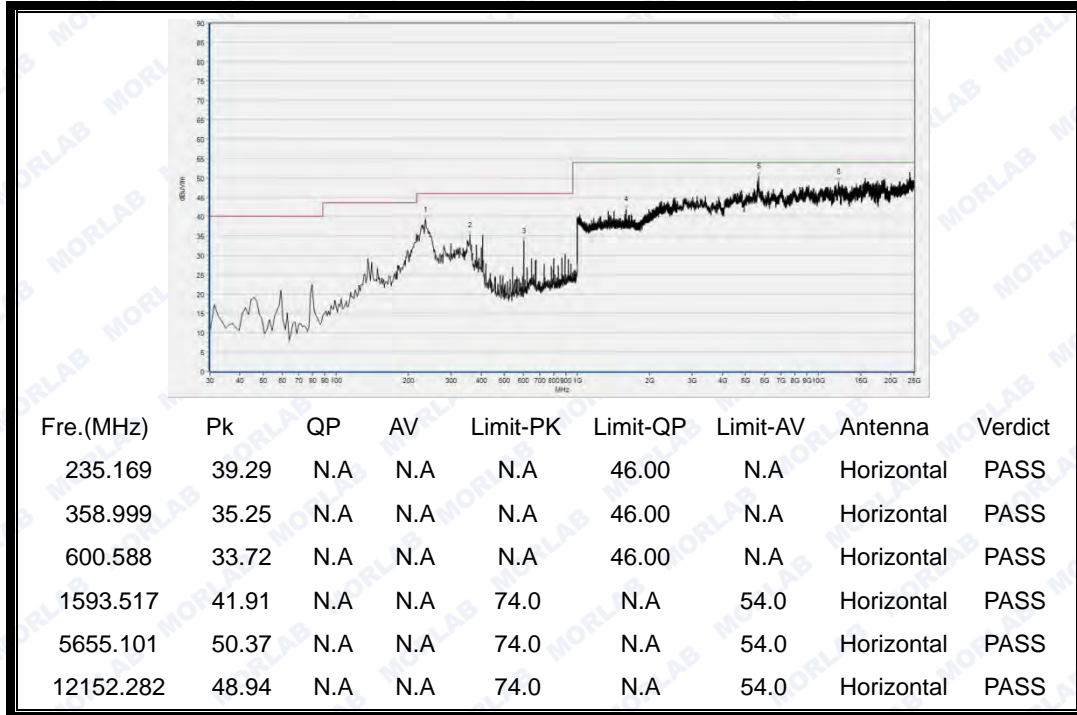


2.7.3.3 802.11n-20MHz Test mode

ANT 1:

A. Test Plots for the Whole Measurement Frequency Range:

Plots for Channel = 1



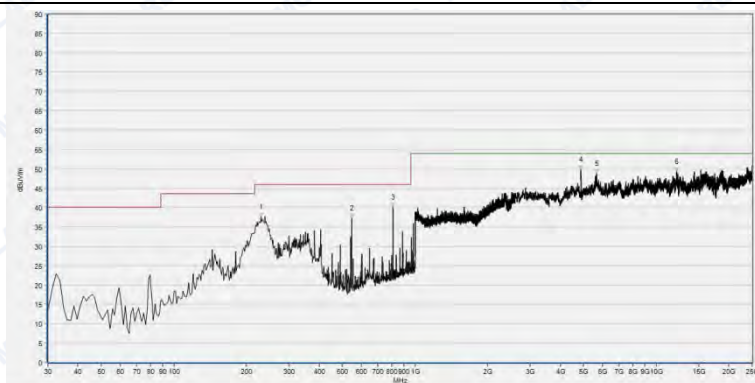
(Antenna Horizontal, 30MHz to 25GHz)



| Fre.(MHz) | Pk | QP | AV | Limit-PK | Limit-QP | Limit-AV | Antenna | Verdict |
|-----------|-------|-----|-----|----------|----------|----------|----------|---------|
| 231.527 | 33.49 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 357.785 | 33.63 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 799.687 | 37.46 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 1400.160 | 44.45 | N.A | N.A | 74.0 | N.A | 54.0 | Vertical | PASS |
| 3907.583 | 46.74 | N.A | N.A | 74.0 | N.A | 54.0 | Vertical | PASS |
| 5667.321 | 49.65 | N.A | N.A | 74.0 | N.A | 54.0 | Vertical | PASS |

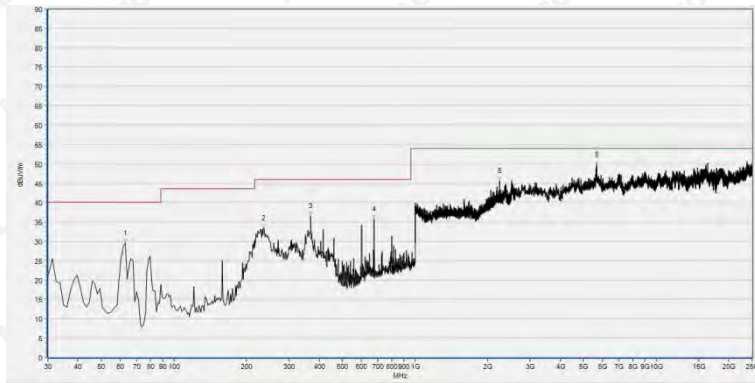
(Antenna Vertical, 30MHz to 25GHz)

Plot for Channel = 6



| Fre.(MHz) | Pk | QP | AV | Limit-PK | Limit-QP | Limit-AV | Antenna | Verdict |
|-----------|-------|-----|-----|----------|----------|----------|------------|---------|
| 229.099 | 37.57 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 545.957 | 37.18 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 810.613 | 40.12 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 4877.069 | 49.74 | N.A | N.A | 74.0 | N.A | 54.0 | Horizontal | PASS |
| 5667.321 | 48.84 | N.A | N.A | 74.0 | N.A | 54.0 | Horizontal | PASS |
| 12148.209 | 49.25 | N.A | N.A | 74.0 | N.A | 54.0 | Horizontal | PASS |

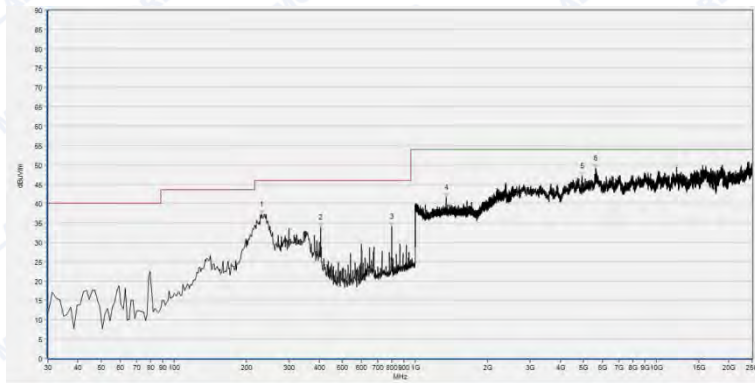
(Antenna Horizontal, 30MHz to 25GHz)



| Fre.(MHz) | Pk | QP | AV | Limit-PK | Limit-QP | Limit-AV | Antenna | Verdict |
|-----------|-------|-----|-----|----------|----------|----------|----------|---------|
| 62.778 | 29.41 | N.A | N.A | N.A | 40.00 | N.A | Vertical | PASS |
| 235.169 | 33.42 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 368.711 | 36.48 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 677.071 | 35.72 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 2246.579 | 45.51 | N.A | N.A | 74.0 | N.A | 54.0 | Vertical | PASS |
| 5667.321 | 49.75 | N.A | N.A | 74.0 | N.A | 54.0 | Vertical | PASS |

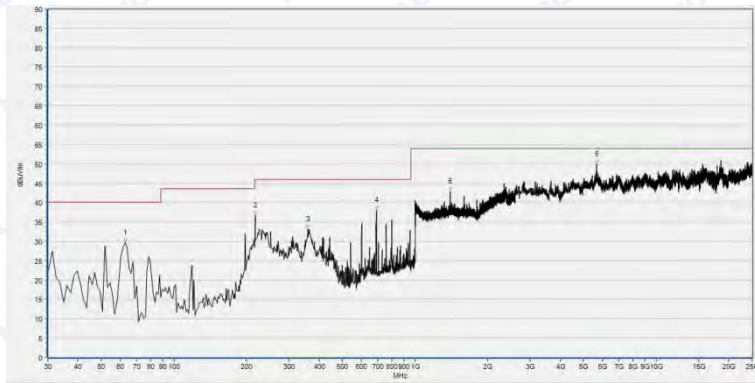
(Antenna Vertical, 30MHz to 25GHz)

Plot for Channel = 11



| Fre.(MHz) | Pk | QP | AV | Limit-PK | Limit-QP | Limit-AV | Antenna | Verdict |
|-----------|-------|-----|-----|----------|----------|----------|------------|---------|
| 231.527 | 37.18 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 405.131 | 33.80 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 799.687 | 34.07 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 1343.818 | 41.55 | N.A | N.A | 74.0 | N.A | 54.0 | Horizontal | PASS |
| 4921.877 | 47.14 | N.A | N.A | 74.0 | N.A | 54.0 | Horizontal | PASS |
| 5614.366 | 49.03 | N.A | N.A | 74.0 | N.A | 54.0 | Horizontal | PASS |

(Antenna Horizontal, 30MHz to 25GHz)



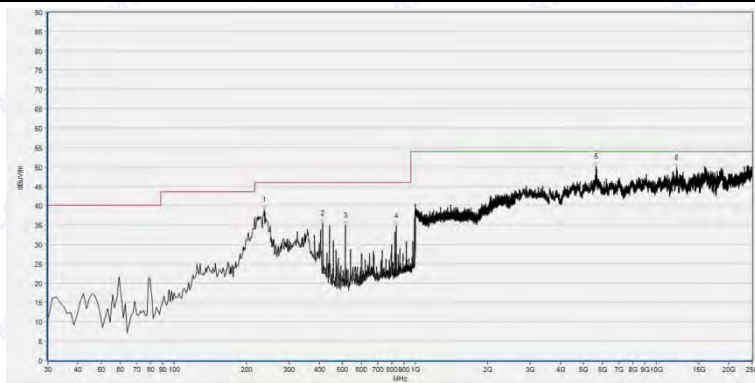
| Fre.(MHz) | Pk | QP | AV | Limit-PK | Limit-QP | Limit-AV | Antenna | Verdict |
|-----------|-------|-----|-----|----------|----------|----------|----------|---------|
| 62.778 | 29.70 | N.A | N.A | N.A | 40.00 | N.A | Vertical | PASS |
| 216.959 | 36.63 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 358.999 | 33.24 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 692.854 | 37.98 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 1398.880 | 42.83 | N.A | N.A | 74.0 | N.A | 54.0 | Vertical | PASS |
| 5667.321 | 49.98 | N.A | N.A | 74.0 | N.A | 54.0 | Vertical | PASS |

(Antenna Vertical, 30MHz to 25GHz)

ANT 2:

B. Test Plots for the Whole Measurement Frequency Range:

Plots for Channel = 1



| Fre.(MHz) | Pk | QP | AV | Limit-PK | Limit-QP | Limit-AV | Antenna | Verdict |
|-----------|-------|-----|-----|----------|----------|----------|------------|---------|
| 236.383 | 38.89 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 413.630 | 35.32 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 513.179 | 34.79 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 834.894 | 34.61 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 5622.513 | 50.12 | N.A | N.A | 74.0 | N.A | 54.0 | Horizontal | PASS |
| 12148.209 | 49.71 | N.A | N.A | 74.0 | N.A | 54.0 | Horizontal | PASS |

(Antenna Horizontal, 30MHz to 25GHz)



| Fre.(MHz) | Pk | QP | AV | Limit-PK | Limit-QP | Limit-AV | Antenna | Verdict |
|-----------|-------|-----|-----|----------|----------|----------|----------|---------|
| 62.778 | 28.85 | N.A | N.A | N.A | 40.00 | N.A | Vertical | PASS |
| 240.025 | 33.31 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 365.069 | 34.60 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 799.687 | 37.75 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 5651.027 | 49.02 | N.A | N.A | 74.0 | N.A | 54.0 | Vertical | PASS |
| 10343.662 | 48.32 | N.A | N.A | 74.0 | N.A | 54.0 | Vertical | PASS |

(Antenna Vertical, 30MHz to 25GHz)

Plot for Channel = 6



| Fre.(MHz) | Pk | QP | AV | Limit-PK | Limit-QP | Limit-AV | Antenna | Verdict |
|-----------|-------|-----|-----|----------|----------|----------|------------|---------|
| 235.169 | 38.62 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 357.785 | 33.57 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 799.687 | 32.59 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 3642.808 | 46.17 | N.A | N.A | 74.0 | N.A | 54.0 | Horizontal | PASS |
| 4881.142 | 47.99 | N.A | N.A | 74.0 | N.A | 54.0 | Horizontal | PASS |
| 5634.734 | 48.59 | N.A | N.A | 74.0 | N.A | 54.0 | Horizontal | PASS |

(Antenna Horizontal, 30MHz to 25GHz)



| Fre.(MHz) | Pk | QP | AV | Limit-PK | Limit-QP | Limit-AV | Antenna | Verdict |
|-----------|-------|-----|-----|----------|----------|----------|----------|---------|
| 61.564 | 26.53 | N.A | N.A | N.A | 40.00 | N.A | Vertical | PASS |
| 237.597 | 32.01 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 365.069 | 33.04 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 799.687 | 32.36 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 2153.741 | 45.67 | N.A | N.A | 74.0 | N.A | 54.0 | Vertical | PASS |
| 5651.027 | 48.55 | N.A | N.A | 74.0 | N.A | 54.0 | Vertical | PASS |

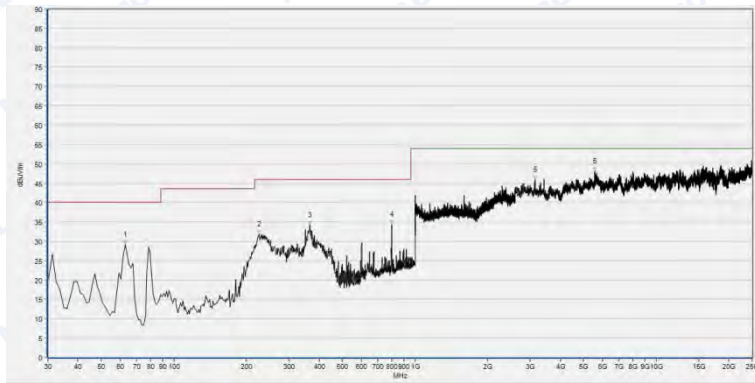
(Antenna Vertical, 30MHz to 25GHz)

Plot for Channel = 11



| Fre.(MHz) | Pk | QP | AV | Limit-PK | Limit-QP | Limit-AV | Antenna | Verdict |
|-----------|-------|-----|-----|----------|----------|----------|------------|---------|
| 230.313 | 38.41 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 358.999 | 34.26 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 799.687 | 32.75 | N.A | N.A | N.A | 46.00 | N.A | Horizontal | PASS |
| 3027.714 | 46.12 | N.A | N.A | 74.0 | N.A | 54.0 | Horizontal | PASS |
| 5606.219 | 49.91 | N.A | N.A | 74.0 | N.A | 54.0 | Horizontal | PASS |
| 11728.642 | 49.17 | N.A | N.A | 74.0 | N.A | 54.0 | Horizontal | PASS |

(Antenna Horizontal, 30MHz to 25GHz)



| Fre.(MHz) | Pk | QP | AV | Limit-PK | Limit-QP | Limit-AV | Antenna | Verdict |
|-----------|-------|-----|-----|----------|----------|----------|----------|---------|
| 62.778 | 29.15 | N.A | N.A | N.A | 40.00 | N.A | Vertical | PASS |
| 225.457 | 31.85 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 366.283 | 34.14 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 799.687 | 34.32 | N.A | N.A | N.A | 46.00 | N.A | Vertical | PASS |
| 3145.845 | 45.92 | N.A | N.A | 74.0 | N.A | 54.0 | Vertical | PASS |
| 5557.338 | 48.10 | N.A | N.A | 74.0 | N.A | 54.0 | Vertical | PASS |

(Antenna Vertical, 30MHz to 25GHz)



ANNEX A GENERAL INFORMATION

1.1 Identification of the Responsible Testing Laboratory

| | |
|-------------------------------|--|
| Company Name: | Shenzhen Morlab Communications Technology Co., Ltd. |
| Department: | Morlab Laboratory |
| Address: | FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China |
| Responsible Test Lab Manager: | Mr. Su Feng |
| Telephone: | +86 755 36698555 |
| Facsimile: | +86 755 36698525 |

1.2 Identification of the Responsible Testing Location

| | |
|----------|--|
| Name: | Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory |
| Address: | FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China |

1.3 Facilities and Accreditations

Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L3572.

All measurement facilities used to collect the measurement data are located at FL.1, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.10,2013 and CISPR Publication 22; the FCC registration number is 695796.

1.4 Maximum measurement uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for test performed on the EUT as specified in CISPR 16-1-2:

| Measurements | Frequency | Uncertainty(dB) |
|---------------------|----------------|-----------------|
| Conducted emissions | 9KHz~30MHz | 2.44 |
| Radiated emissions | 9KHz~30MHz | 2.44 |
| | 30MHz~200MHz | 2.93 |
| | 200MHz~1000MHz | 2.95 |
| | 1GHz~18GHz | 2.26 |
| | 18GHz~40GHz | 1.94 |



This uncertainty represent an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2

1.5 Test Equipments Utilized

1.5.1 Conducted Test Equipments

| Conducted Test Equipment | | | | | | |
|--------------------------|---------------------------|------------|---------|--------------|------------|------------|
| No. | Equipment Name | Serial No. | Type | Manufacturer | Cal. Date | Cal. Due |
| 1 | Spectrum Analyzer | MY45101810 | E4407B | Agilent | 2015.03.28 | 2016.03.27 |
| 2 | USB Wideband Power Sensor | MY54210011 | U2021XA | Agilent | 2015.03.28 | 2016.03.27 |
| 3 | EXA Signal Analyzer | MY53470838 | N9010A | Agilent | 2015.08.26 | 2016.08.25 |
| 4 | RF cable | CB01 | RF01 | Morlab | N/A | N/A |
| 5 | Attenuator | (n.a.) | 10dB | Resnet | N/A | N/A |
| 6 | SMA connector | CN01 | RF03 | HUBER-SUHNER | N/A | N/A |

1.5.2 Conducted Emission Test Equipments

| Conducted Emission Test Equipments | | | | | | |
|------------------------------------|----------------------|------------|-------------|-----------------|------------|------------|
| No. | Equipment Name | Serial No. | Type | Manufacturer | Cal. Date | Cal. Due |
| 1 | Receiver | 595WX11007 | PMM9010 | Narda S.T.S/PMM | 2015.05.07 | 2016.05.06 |
| 2 | LISN | 812744 | NSLK 8127 | Schwarzbeck | 2015.06.18 | 2016.06.17 |
| 3 | Pulse Limiter (20dB) | 9391 | VTSD 9561-D | Schwarzbeck | 2015.05.07 | 2016.05.06 |
| 4 | Coaxial cable(BNC) | CB01 | EMC01 | Morlab | N/A | N/A |

1.5.3 Auxiliary Test Equipment

| Auxiliary Test Equipment | | | | | | |
|--------------------------|----------------|------------|------|--------------|----------|--------------|
| No. | Equipment Name | Serial No. | Type | Manufacturer | Cal.Date | Cal.Due Date |
| 1 | Computer | N.A | N.A | Asus | N.A | N.A |



1.5.4 Radiated Test Equipments

Radiated Test Equipments

| No. | Equipment Name | Serial No. | Type | Manufacturer | Cal. Date | Cal.Due Date |
|-----|-----------------------------|----------------|-----------------|---------------|------------|--------------|
| 1 | System Simulator | GB4536084 6 | 8960-E5515 C | Agilent | 2015.05.07 | 2016.05.06 |
| 2 | Receiver | MY5413001 6 | N9038A | Agilent | 2015.05.07 | 2016.05.06 |
| 3 | Test Antenna - Bi-Log | N/A | VULB9163 | Schwarzbeck | 2015.05.14 | 2016.05.13 |
| 4 | Test Antenna - Horn | 9170C-531 | BBHA9170 | Schwarzbeck | 2015.03.31 | 2016.03.30 |
| 5 | Test Antenna - Loop | 1519-022 | FMZB1519 | Schwarzbeck | 2015.02.26 | 2016.02.25 |
| 6 | Test Antenna - Horn | 71688 | BBHA 9120D | Schwarzbeck | 2015.02.26 | 2016.02.25 |
| 7 | Coaxial cable(N male) | CB02 | EMC02 | Morlab | N/A | N/A |
| 8 | Coaxial cable(N male) | CB03 | EMC03 | Morlab | N/A | N/A |
| 9 | 1-18GHz pre-Amplifier | MA02 | TS-PR18 | Rohde&Schwarz | 2015.02.26 | 2016.02.25 |
| 10 | 18-26.5GHz pre-Amplifier | MA03 | TS-PR18 | Rohde&Schwarz | 2015.02.26 | 2016.02.25 |

1.5.5 Climate Chamber

Climate Chamber

| No. | Equipment Name | Serial No. | Type | Manufacturer | Cal.Date | Cal.Due Date |
|-----|-----------------|------------|---------|--------------|------------|--------------|
| 1 | Climate Chamber | 2004012 | HL4003T | Yinhe | 2015.02.26 | 2016.02.25 |

1.5.6 Vibration Table

Vibration Table

| No. | Equipment Name | Serial No. | Type | Manufacturer | Cal.Date | Cal.Due Date |
|-----|-----------------|------------|-------------------|--------------|------------|--------------|
| 1 | Vibration Table | N/A | ACT2000- S015L | CMI-COM | 2015.02.26 | 2016.02.25 |

1.5.7 Anechoic Chamber

Anechoic Chamber

| No. | Equipment Name | Serial No. | Type | Manufacturer | Cal.Date | Cal.Due Date |
|-----|------------------|------------|----------|--------------|------------|--------------|
| 1 | Anechoic Chamber | N/A | 9m*6m*6m | Changing | 2015.05.14 | 2016.05.13 |

***** END OF REPORT *****