## 5.2<u>G</u>

| Test date: 2017-5-5 | Test site: 1 | RF site T    | ested by: Simple C | luan  |
|---------------------|--------------|--------------|--------------------|-------|
| Mode                | Frequency    | 26dB E<br>(N | Limit              |       |
|                     | (MHz)        | ANT0         | ANT1               | (kHz) |
| IEEE 802.11 a with  | 5180         | 20.22        | 20.17              | N/A   |
| 5.2G                | 5200         | 21.23        | 19.83              | N/A   |
| 3.20                | 5240         | 21.47        | 26.46              | N/A   |
| IEEE 802.11         | 5180         | 24.08        | 22.72              | N/A   |
| n/HT20 with 5.2G    | 5200         | 24.58        | 21.02              | N/A   |
| 11/11120 with 5.20  | 5240         | 25.29        | 23.14              | N/A   |
| IEEE 802.11         | 5190         | 56.47        | 45.53              | N/A   |
| n/HT40 with 5.2G    | 5230         | 47.81        | 43.45              | N/A   |

| Test date: 2017-5-5    | Test site: | RF site Te   | ested by: Simple G | uan   |
|------------------------|------------|--------------|--------------------|-------|
| Mode                   | Frequency  | 99% Ba<br>(M | Limit              |       |
|                        | (MHz)      | ANT0         | ANT1               | (kHz) |
| IEEE 802.11 a with5.2G | 5180       | 16.539       | 16.702             | N/A   |
|                        | 5200       | 16.591       | 16.690             | N/A   |
|                        | 5240       | 16.536       | 16.816             | N/A   |
| IEEE 802.11            | 5180       | 17.756       | 17.741             | N/A   |
| n/HT20 with 5.2G       | 5200       | 17.787       | 17.758             | N/A   |
| II/11120 WIUI 3.20     | 5240       | 17.781       | 17.778             | N/A   |
| IEEE 802.11            | 5190       | 36.272       | 36.284             | N/A   |
| n/HT40 with 5.2G       | 5230       | 36.236       | 36.243             | N/A   |

### 5.8G

| Fest date: 2017-5-5     | Test site: | RF site | Tested by: Simple C | uan   |
|-------------------------|------------|---------|---------------------|-------|
| Mode                    | Frequency  | 26dB    | Limit               |       |
|                         | (MHz)      | ANT0    | ANT1                | (kHz) |
| IEEE 802.11 a with 5.8G | 5745       | 19.66   | 19.21               | N/A   |
|                         | 5785       | 19.24   | 19.40               | N/A   |
| 3.00                    | 5825       | 19.38   | 19.36               | N/A   |
| IEEE 802.11             | 5745       | 19.87   | 19.97               | N/A   |
| n/HT20 with 5.8G        | 5785       | 19.60   | 19.82               | N/A   |
| 11/11/20 With 3.00      | 5825       | 19.75   | 19.63               | N/A   |
| IEEE 802.11             | 5755       | 39.79   | 39.80               | N/A   |
| n/HT40 with 5.8G        | 5795       | 39.60   | 39.50               | N/A   |

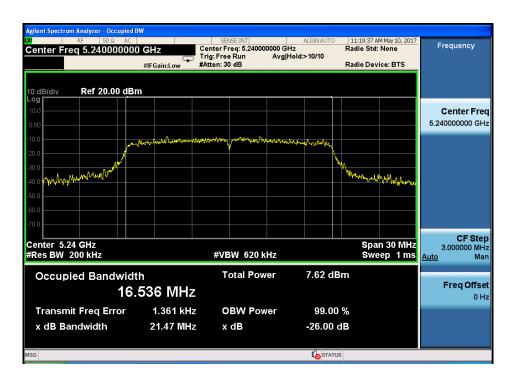
| EUT: 300M 2.4G&50   |            |         |                     |       |
|---------------------|------------|---------|---------------------|-------|
| Test date: 2017-5-5 | Test site: | KF site | Tested by: Simple G | uan   |
| Mode                | Frequency  | 99%     | Limit               |       |
|                     | (MHz)      | ANT0    | ANT1                | (kHz) |
| IEEE 802.11 a with  | 5745       | 16.592  | 16.603              | N/A   |
|                     | 5785       | 16.592  | 16.619              | N/A   |
| 3.00                | 5825       | 16.593  | 16.579              | N/A   |
| IEEE 802.11         | 5745       | 17.718  | 17.724              | N/A   |
| n/HT20 with 5.8G    | 5785       | 17.684  | 17.719              | N/A   |
|                     | 5825       | 17.698  | 17.688              | N/A   |
| IEEE 802.11         | 5755       | 36.177  | 36.181              | N/A   |
| n/HT40 with 5.8G    | 5795       | 36.161  | 36.130              | N/A   |
| Conclusion: PASS    |            |         |                     |       |

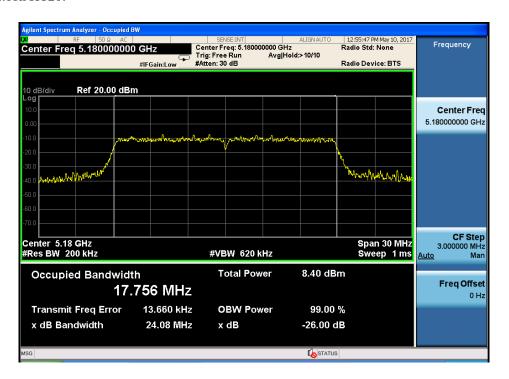
| EUT: 300M 2.4G&50       | G wireless adapte | er M/N: S | SC-1              |         |
|-------------------------|-------------------|-----------|-------------------|---------|
| Test date: 2017-5-5     | Test site:        | RF site   | Tested by: Simple | e Guan  |
| Mode                    | Frequency         | 6d        | Limit             |         |
|                         | (MHz)             | ANT0      | ANT1              | (kHz)   |
| IEEE 802.11 a with 5.8G | 5745              | 16.36     | 16.39             | ≥500KHz |
|                         | 5785              | 16.38     | 16.35             | ≥500KHz |
| 3.00                    | 5825              | 16.36     | 16.36             | ≥500KHz |
| IEEE 802.11             | 5745              | 17.60     | 17.58             | ≥500KHz |
| n/HT20 with 5.8G        | 5785              | 17.61     | 17.59             | ≥500KHz |
|                         | 5825              | 17.67     | 17.60             | ≥500KHz |
| IEEE 802.11             | 5755              | 36.041    | 36.05             | ≥500KHz |
| n/HT40 with 5.8G        | 5795              | 36.082    | 36.03             | ≥500KHz |
| Conclusion: PASS        |                   |           | ·                 | •       |

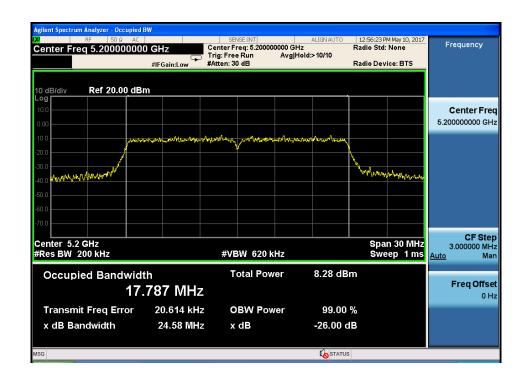
#### 5.2G ANT 0 IEEE 802.11a

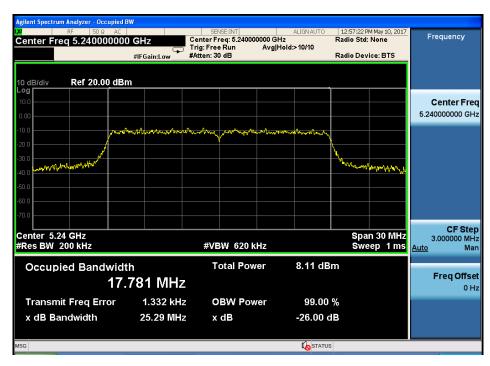


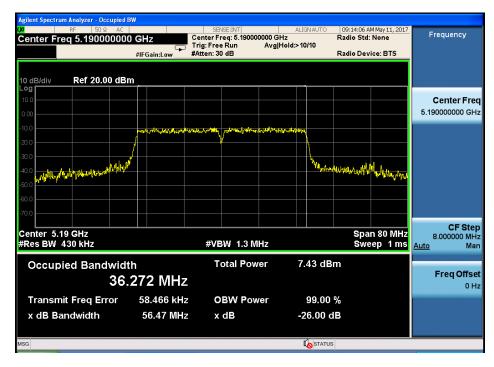


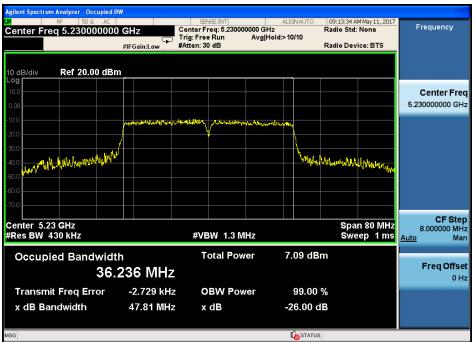




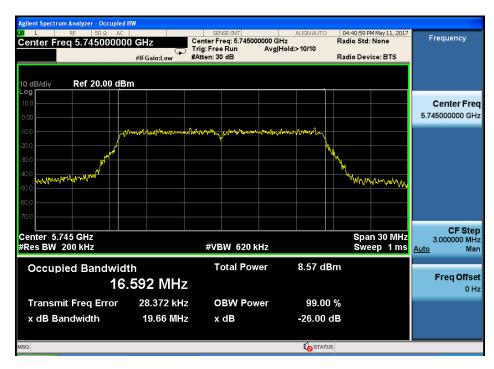






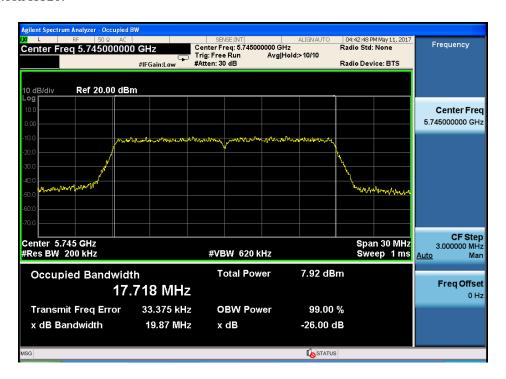


#### 5.8 ANT 0 IEEE 802.11a

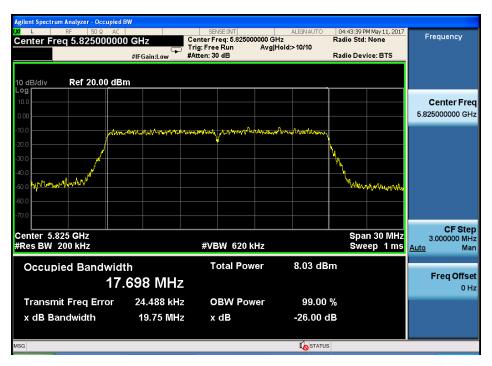








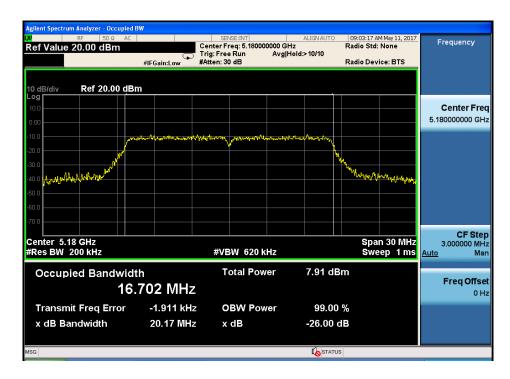


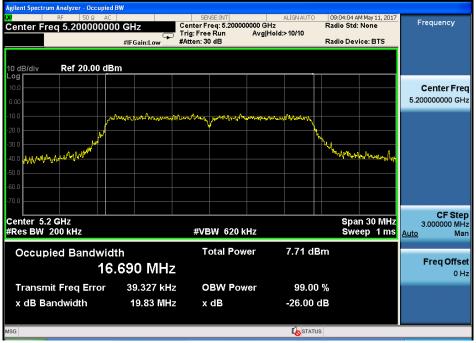


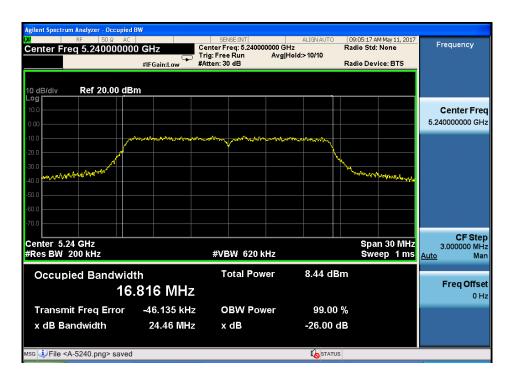


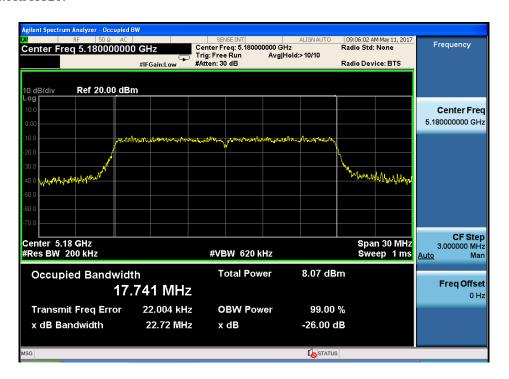


#### 5.2G ANT 1 IEEE 802.11a

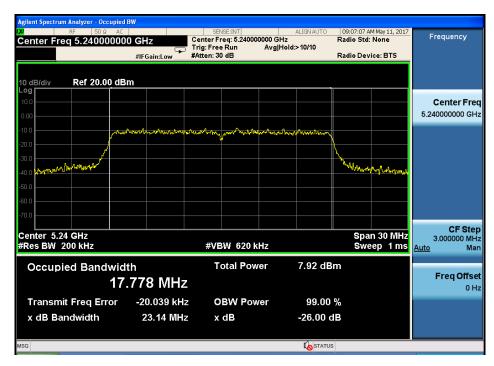


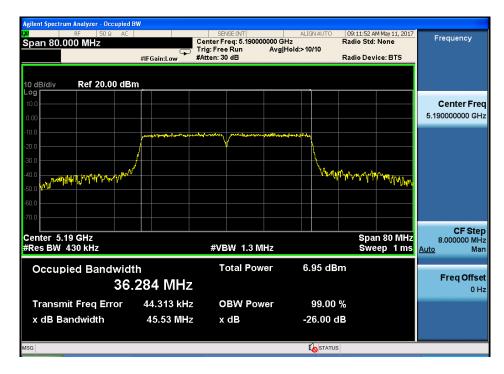


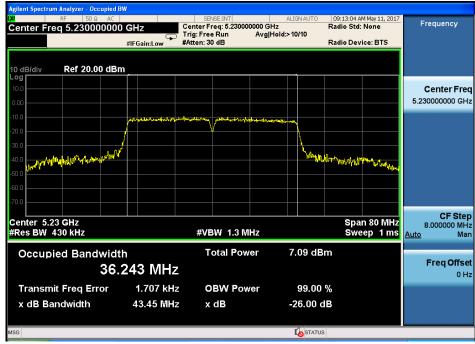






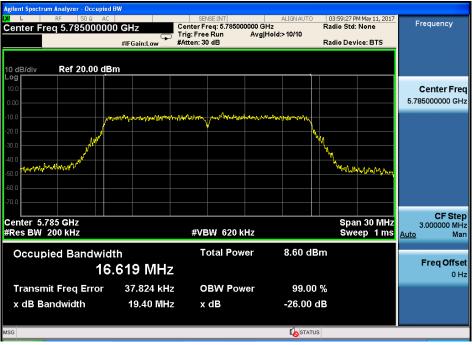




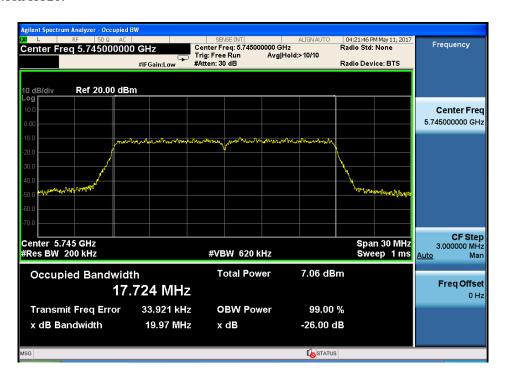


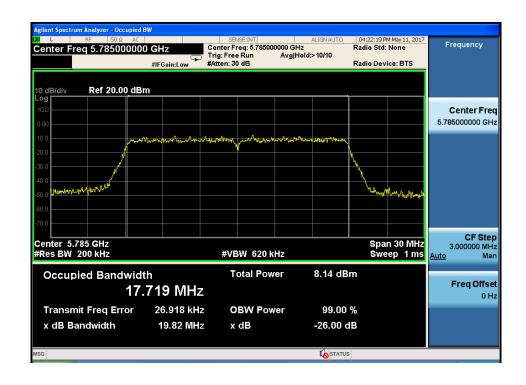
#### 5.8 ANT 1 IEEE 802.11a

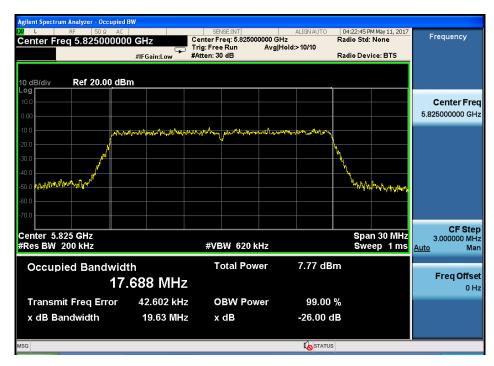


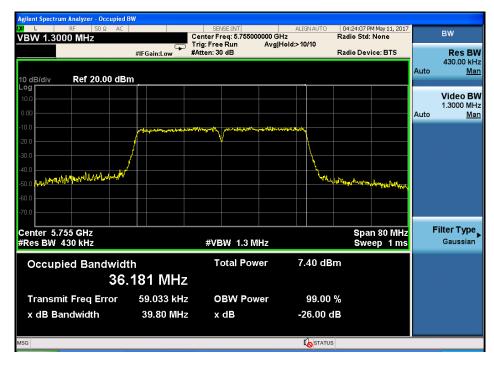


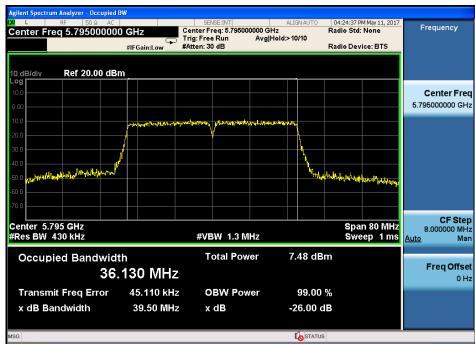




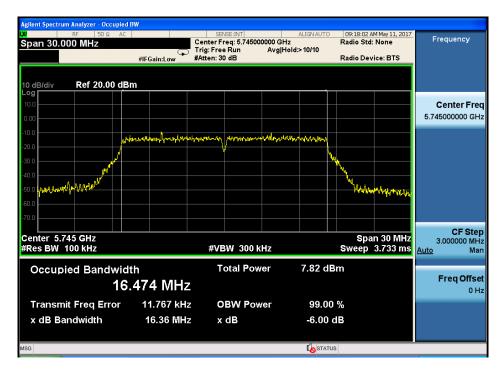




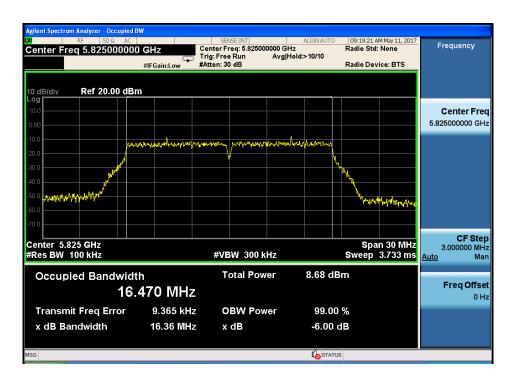




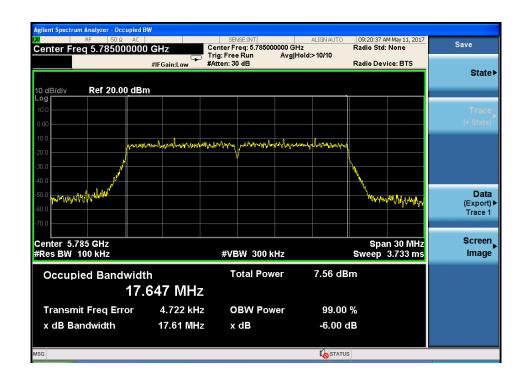
## 6dB Band width 5.8 ANT 0 IEEE 802.11a

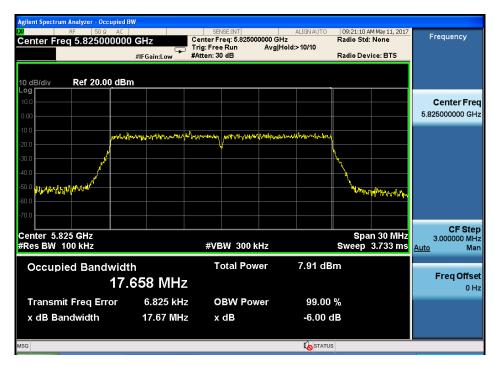


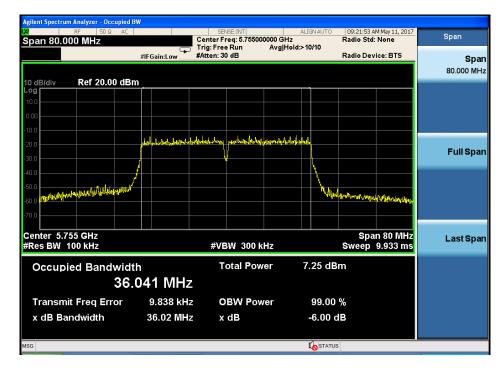


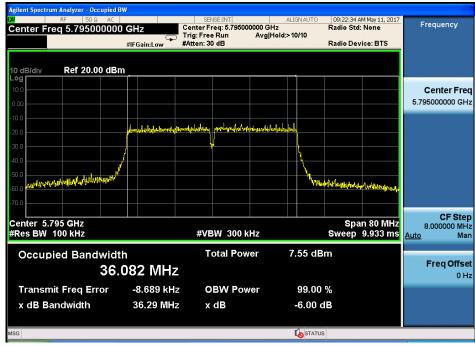




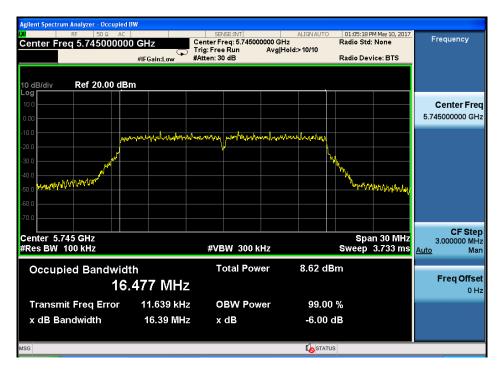


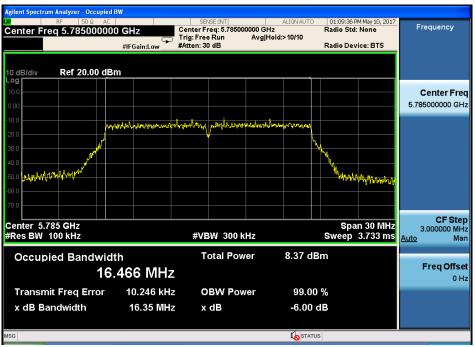


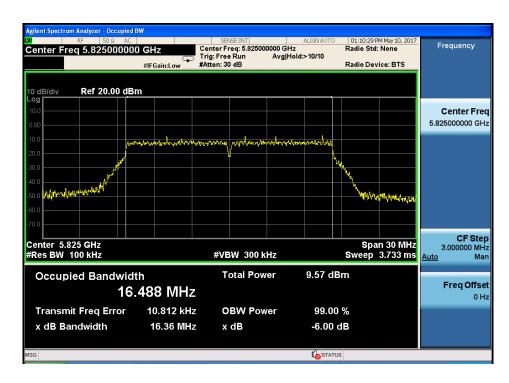


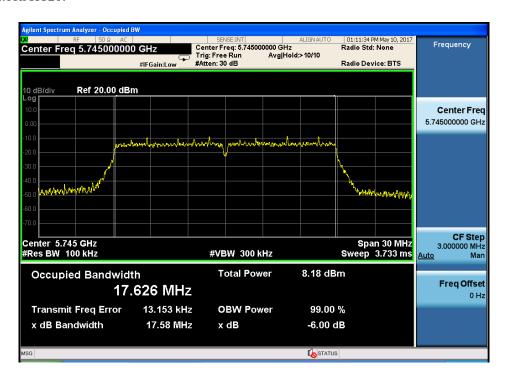


## 6dB Band width 5.8 ANT 1 IEEE 802.11a

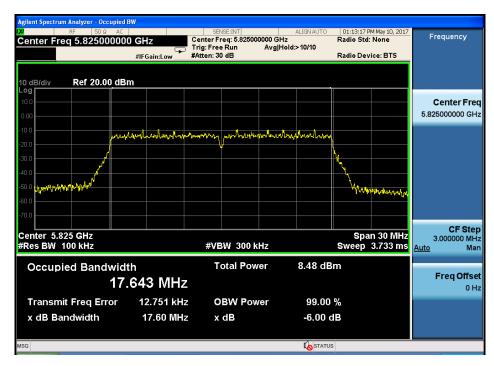


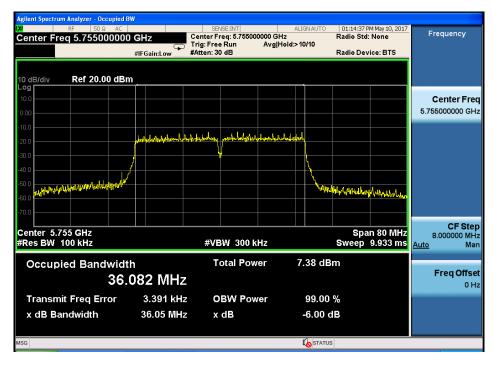


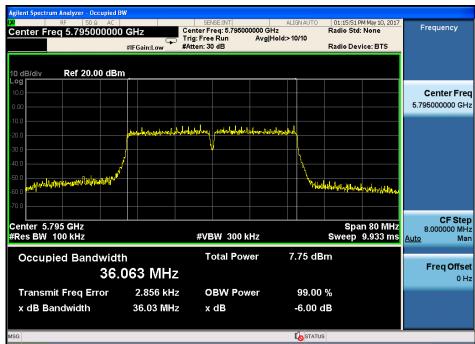












### 10 Undesirable emission

#### 10.1 Test limit

Except as shown in paragraph (7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of −27 dBm/MHz.
- (5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.
- (6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in \$15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in \$15.207.
- (7) The provisions of §15.205 apply to intentional radiators operating under this section.
- (8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits

#### 10.2 Test Procedure

- 12.2.1 Put the EUT on a 0.8m high table, power on the EUT. Emissions were scanned and measured rotating the EUT to 360 degrees, Find the maximum Emission
- 12.2.2 Check the spurious emissions out of band.
- 12.2.3 RBW 1MHz ,VBW 3MHz ,peak detector for peak value , RBW 1MHz ,VBW 3MHz , RMS detector for AV value.

## 10.3 Test Setup

Same as 5.2.2.

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### 10.4 Test Result

PASS.

Detailed information please see the following page.

5.2G Band

Radiated Method:

IEEE 802.11a CH LOW

| Band Edge Tes  | st result                 |                             |                 |                       |                 |           |                |        |
|----------------|---------------------------|-----------------------------|-----------------|-----------------------|-----------------|-----------|----------------|--------|
| EUT: 300M 2    | 2.4G&5G w                 | rireless ad                 | lapter          |                       | M/N: SC-        | 1         |                |        |
| Power: DC 5    | V from USI                | 3 Port                      |                 |                       |                 |           |                |        |
| Test date: 201 | 17-5-5                    | Test site:                  | 3m Cha          | mber                  | Tested by:      | Simple Gu | ıan            |        |
| Test mode: T   | X Low                     |                             |                 |                       |                 |           |                |        |
| Antenna pola   | rity: Vertica             | al                          |                 |                       |                 |           |                |        |
| Freq (MHz)     | Read<br>Level<br>(dBuV/m) | Antenna<br>Factor<br>(dB/m) | Cable loss(d B) | Amp<br>Factor<br>(dB) | Result (dBuV/m) |           | Margin<br>(dB) | Remark |
| 5150           | 42.38                     | 31.65                       | 5.92            | 33.9                  | 46.05           | 68.2      | 22.15          | PK     |
|                |                           |                             |                 |                       |                 |           |                |        |
|                |                           |                             |                 |                       |                 |           |                |        |
|                |                           |                             |                 |                       |                 |           |                |        |
|                |                           |                             |                 |                       |                 |           |                |        |
| Antenna Pola   | rity: Horizo              | ntal                        |                 |                       |                 |           |                |        |
| 5150           | 43.11                     | 31.65                       | 5.92            | 33.9                  | 46.78           | 68.2      | 21.42          | PK     |
|                |                           |                             |                 |                       |                 |           |                |        |
|                |                           |                             |                 |                       |                 |           |                |        |
|                |                           |                             |                 |                       |                 |           |                |        |
|                |                           |                             |                 |                       |                 |           |                |        |

#### Note:

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Result = Read level + Antenna factor + cable loss-Amp factor
- 3, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

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## IEEE 802.11a CH High

| Ballu Euge Tes | st resuit                 |                             |        |                       |                 |                   |                |        |
|----------------|---------------------------|-----------------------------|--------|-----------------------|-----------------|-------------------|----------------|--------|
| EUT: 300M 2    | 2.4G&5G w                 | rireless ad                 | apter  |                       | M/N: SC-        | 1                 |                |        |
| Power: DC 5    | V from USI                | 3 Port                      |        |                       |                 |                   |                |        |
| Test date: 201 | 17-5-5                    | Test site:                  | 3m Cha | ımber                 | Tested by:      | Simple Gu         | ıan            |        |
| Test mode: T   | X High                    |                             |        |                       |                 |                   |                |        |
| Antenna pola   | rity: Vertica             | al                          |        |                       |                 |                   |                |        |
| Freq (MHz)     | Read<br>Level<br>(dBuV/m) | Antenna<br>Factor<br>(dB/m) |        | Amp<br>Factor<br>(dB) | Result (dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
| 5350           | 43.26                     | 31.73                       | 6.05   | 33.73                 | 47.31           | 68.2              | 20.89          | PK     |
|                |                           | -                           | 1      |                       |                 |                   |                |        |
|                |                           |                             |        |                       |                 |                   |                |        |
|                |                           |                             |        |                       |                 |                   |                |        |
|                |                           |                             |        |                       |                 |                   |                |        |
| Antenna Pola   | rity: Horizo              | ontal                       |        |                       |                 |                   |                |        |
| 5350           | 42.54                     | 31.73                       | 6.05   | 33.73                 | 46.59           | 68.2              | 21.61          | PK     |
|                |                           |                             |        |                       |                 |                   |                |        |
|                |                           |                             |        |                       |                 |                   |                |        |
|                |                           |                             |        |                       |                 |                   |                |        |
|                |                           |                             |        |                       |                 |                   |                |        |
| 3 T            | ·                         |                             |        |                       | ·               | ·                 | ·              |        |

#### Note:

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Result = Read level + Antenna factor + cable loss-Amp factor
- 3, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

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#### IEEE 802.11n HT20 CH Low

| Band Edge Tes | st result                 |                             |                 |                       |                 |                |                |        |
|---------------|---------------------------|-----------------------------|-----------------|-----------------------|-----------------|----------------|----------------|--------|
| EUT: 300M 2   | 2.4G&5G w                 | rireless ad                 | apter           |                       | M/N: SC-        | 1              |                |        |
| Power: DC 5   | V from USI                | 3 Port                      |                 |                       |                 |                |                |        |
| Test date: 20 | 17-5-5                    | Test site:                  | 3m Cha          | mber                  | Tested by:      | Simple Gu      | uan            |        |
| Test mode: T  | X Low                     |                             |                 |                       |                 |                |                |        |
| Antenna pola  | rity: Vertica             | al                          |                 |                       |                 |                |                |        |
| Freq (MHz)    | Read<br>Level<br>(dBuV/m) | Antenna<br>Factor<br>(dB/m) | Cable loss(d B) | Amp<br>Factor<br>(dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin<br>(dB) | Remark |
| 5150          | 43.12                     | 31.65                       | 5.92            | 33.9                  | 46.79           | 68.2           | 21.41          | PK     |
|               |                           |                             |                 |                       |                 |                |                |        |
|               |                           |                             |                 |                       |                 |                |                |        |
|               |                           |                             |                 |                       |                 |                |                |        |
|               |                           |                             |                 |                       |                 |                |                |        |
| Antenna Pola  | rity: Horizo              | ontal                       |                 |                       |                 |                |                |        |
| 5150          | 42.15                     | 31.65                       | 5.92            | 33.9                  | 45.82           | 68.2           | 22.38          | PK     |
|               |                           |                             |                 |                       |                 |                |                |        |
|               |                           |                             |                 |                       |                 |                |                |        |
|               |                           |                             |                 |                       |                 |                |                |        |
|               |                           |                             |                 |                       |                 |                |                |        |
| N.T.          |                           |                             |                 |                       |                 |                |                |        |

#### Note:

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Result = Read level + Antenna factor + cable loss-Amp factor
- 3, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

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#### IEEE 802.11n HT20 CH High

Band Edge Test result

| EUT: 300M 2   | 2.4G&5G w                 | rireless ad                 | apter           |                       | M/N: SC-        | 1                 |                |        |
|---------------|---------------------------|-----------------------------|-----------------|-----------------------|-----------------|-------------------|----------------|--------|
| Power: DC 5   | V from USI                | B Port                      |                 |                       |                 |                   |                |        |
| Test date: 20 | 17-5-5                    | Test site:                  | 3m Cha          | amber                 | Tested by:      | Simple Gu         | uan            |        |
| Test mode: T  | X High                    |                             |                 |                       |                 |                   |                |        |
| Antenna pola  | rity: Vertica             | al                          |                 |                       |                 |                   |                |        |
| Freq (MHz)    | Read<br>Level<br>(dBuV/m) | Antenna<br>Factor<br>(dB/m) | Cable loss(d B) | Amp<br>Factor<br>(dB) | Result (dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
| 5350          | 43.27                     | 31.73                       | 6.05            | 33.73                 | 47.32           | 68.2              | 20.88          | PK     |
|               |                           |                             | 1               |                       |                 |                   |                |        |
|               |                           |                             |                 |                       |                 |                   |                |        |
|               |                           |                             |                 |                       |                 |                   |                |        |
|               |                           |                             |                 |                       |                 |                   |                |        |
| Antenna Pola  | rity: Horizo              | ontal                       |                 |                       |                 |                   |                |        |
| 5350          | 41.26                     | 31.73                       | 6.05            | 33.73                 | 45.31           | 68.2              | 22.89          | PK     |
|               |                           |                             |                 |                       |                 |                   |                |        |
|               |                           |                             |                 |                       |                 |                   |                |        |
|               |                           |                             |                 |                       |                 |                   |                |        |
|               |                           |                             |                 |                       |                 |                   |                |        |
| Notes         |                           |                             |                 |                       |                 |                   | _              | _      |

#### Note:

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Result = Read level + Antenna factor + cable loss-Amp factor
- 3, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

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#### IEEE 802.11n HT40 CH Low

Band Edge Test result

| &              |                           |                             |                 |                       |                 |           |                |        |
|----------------|---------------------------|-----------------------------|-----------------|-----------------------|-----------------|-----------|----------------|--------|
| EUT: 300M 2    | 2.4G&5G w                 | rireless ad                 | lapter          |                       | M/N: SC-        | 1         |                |        |
| Power: DC 5    | V from US                 | B Port                      |                 |                       |                 |           |                |        |
| Test date: 201 | 17-5-5                    | Test site:                  | 3m Cha          | amber                 | Tested by:      | Simple Gu | ıan            |        |
| Test mode: T   | X Low                     |                             |                 |                       |                 |           |                |        |
| Antenna pola   | rity: Vertica             | al                          |                 |                       |                 |           |                |        |
| Freq (MHz)     | Read<br>Level<br>(dBuV/m) | Antenna<br>Factor<br>(dB/m) | Cable loss(d B) | Amp<br>Factor<br>(dB) | Result (dBuV/m) |           | Margin<br>(dB) | Remark |
| 5150           | 43.24                     | 31.65                       | 5.92            | 33.9                  | 46.91           | 68.2      | 21.29          | PK     |
|                |                           |                             |                 |                       |                 |           |                |        |
|                |                           |                             |                 |                       |                 |           |                |        |
|                |                           |                             |                 |                       |                 |           |                |        |
|                |                           |                             |                 |                       |                 |           |                |        |
| Antenna Pola   | rity: Horizo              | ontal                       |                 |                       |                 |           |                |        |
| 5150           | 42.19                     | 31.65                       | 5.92            | 33.9                  | 45.86           | 68.2      | 22.34          | PK     |
|                |                           |                             |                 |                       |                 |           |                |        |
|                |                           |                             |                 |                       |                 |           |                |        |
|                |                           |                             |                 |                       |                 |           |                |        |
|                |                           |                             |                 |                       |                 |           |                |        |
| Note:          |                           |                             |                 |                       |                 |           |                |        |

#### Note:

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Result = Read level + Antenna factor + cable loss-Amp factor
- 3, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

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#### IEEE 802.11n HT40 CH High

| Band Edge Tes  | st result                 |                             |                 |                       |                 |                   |                |        |
|----------------|---------------------------|-----------------------------|-----------------|-----------------------|-----------------|-------------------|----------------|--------|
| EUT: 300M 2    | 2.4G&5G w                 | ireless ad                  | apter           |                       | M/N: SC-        | 1                 |                |        |
| Power: DC 5    | V from USI                | B Port                      |                 |                       |                 |                   |                |        |
| Test date: 201 | 17-5-5                    | Test site:                  | 3m Cha          | ımber                 | Tested by:      | Simple G          | uan            |        |
| Test mode: T   | X High                    |                             |                 |                       |                 |                   |                |        |
| Antenna pola   | rity: Vertica             | al                          |                 |                       |                 |                   |                |        |
| Freq (MHz)     | Read<br>Level<br>(dBuV/m) | Antenna<br>Factor<br>(dB/m) | Cable loss(d B) | Amp<br>Factor<br>(dB) | Result (dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
| 5350           | 43.79                     | 31.73                       | 6.05            | 33.73                 | 47.84           | 68.2              | 20.36          | PK     |
|                |                           |                             |                 |                       |                 |                   |                |        |
|                |                           |                             |                 |                       |                 |                   |                |        |
|                |                           |                             |                 |                       |                 |                   |                |        |
|                |                           |                             |                 |                       |                 |                   |                |        |
| Antenna Pola   | rity: Horizo              | ntal                        |                 |                       |                 |                   |                |        |
| 5350           | 42.36                     | 31.73                       | 6.05            | 33.73                 | 46.41           | 68.2              | 21.79          | PK     |
|                |                           |                             |                 |                       |                 |                   |                |        |
|                |                           |                             |                 |                       |                 |                   |                |        |
|                |                           |                             |                 |                       |                 |                   |                |        |
| <b>D.</b> T    |                           |                             |                 |                       |                 |                   |                |        |

#### Note:

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Result = Read level + Antenna factor + cable loss-Amp factor
- 3, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

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5.8G Band Radiated Method: IEEE 802.11a CH LOW

| Band Edge Tes     | st result                 |                             |                 |                       |                 |                   |                |        |  |
|-------------------|---------------------------|-----------------------------|-----------------|-----------------------|-----------------|-------------------|----------------|--------|--|
| EUT: 300M 2       | 2.4G&5G w                 | ireless ad                  | apter           |                       | M/N: SC-        | 1                 |                |        |  |
| Power: DC 5       | V from USF                | 3 Port                      |                 |                       |                 |                   |                |        |  |
| Test date: 201    | 17-5-5                    | Test site:                  | 3m Cha          | mber                  | Tested by:      | Simple Gu         | ıan            |        |  |
| Test mode: TX Low |                           |                             |                 |                       |                 |                   |                |        |  |
| Antenna pola      | rity: Vertica             | al                          |                 |                       |                 |                   |                |        |  |
| Freq<br>(MHz)     | Read<br>Level<br>(dBuV/m) | Antenna<br>Factor<br>(dB/m) | Cable loss(d B) | Amp<br>Factor<br>(dB) | Result (dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |  |
| 5460              | 43.27                     | 31.81                       | 6.11            | 33.68                 | 47.51           | 68.2              | 20.69          | PK     |  |
| 5725              | 43.16                     | 32.17                       | 6.26            | 33.58                 | 48.01           | 78.2              | 30.19          | PK     |  |
| -                 |                           |                             | -               | 1                     |                 |                   |                |        |  |
|                   |                           |                             |                 |                       |                 |                   |                |        |  |
|                   |                           |                             |                 |                       |                 |                   |                |        |  |
| Antenna Pola      | rity: Horizo              | ntal                        |                 |                       |                 |                   |                |        |  |
| 5460              | 41.86                     | 31.81                       | 6.11            | 33.68                 | 46.1            | 68.2              | 22.1           | PK     |  |
| 5725              | 42.54                     | 32.17                       | 6.26            | 33.58                 | 47.39           | 78.2              | 30.81          | PK     |  |
|                   |                           |                             |                 |                       |                 |                   |                |        |  |
|                   |                           | ·                           |                 |                       |                 |                   |                |        |  |
|                   |                           |                             | _               |                       |                 |                   |                |        |  |

#### Note:

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Result = Read level + Antenna factor + cable loss-Amp factor
- 3, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Note: According to KDB 789033, EIRP 【dBm】 =E 【dBuV/m】 -95.2, thus, limit for 5460MHz is -27+95.2=68.2 dBuV/m. Limit for 5725MHz is -17+95.2=78.2 dBuV/m.

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# IEEE 802.11a CH High Band Edge Test result

| <u>~</u>                                     |                           |                             |                 |                       |                 |             |                |        |
|--|---------------------------|-----------------------------|-----------------|-----------------------|-----------------|-------------|----------------|--------|
| EUT: 300M 2.4G&5G wireless adapter M/N: SC-1 |                           |                             |                 |                       |                 |             |                |        |
| Power: DC 5V from USB Port                   |                           |                             |                 |                       |                 |             |                |        |
| Test date: 2017-5-5                          |                           | Test site: 3m Chamb         |                 | amber                 | Tested by:      | Simple Guan |                |        |
| Test mode: TX High                           |                           |                             |                 |                       |                 |             |                |        |
| Antenna polarity: Vertical                   |                           |                             |                 |                       |                 |             |                |        |
| Freq (MHz)                                   | Read<br>Level<br>(dBuV/m) | Antenna<br>Factor<br>(dB/m) | Cable loss(d B) | Amp<br>Factor<br>(dB) | Result (dBuV/m) |             | Margin<br>(dB) | Remark |
| 5850   | 42.57                     | 32.5                        | 6.33            | 33.64                 | 47.76           | 78.2        | 30.44          | PK     |
|  |                           |                             |                 |                       |                 |             |                |        |
|  |                           |                             |                 |                       |                 |             |                |        |
|  |                           |                             |                 |                       |                 |             |                |        |
|  |                           |                             |                 |                       |                 |             |                |        |
| Antenna Polarity: Horizontal                 |                           |                             |                 |                       |                 |             |                |        |
| 5850   | 42.68                     | 32.5                        | 6.33            | 33.64                 | 47.87           | 78.2        | 30.33          | PK     |
|  |                           |                             |                 |                       |                 | -           |                | -      |
|  |                           |                             |                 |                       |                 |             |                |        |
|  |                           |                             |                 |                       |                 |             |                |        |
|  |                           |                             |                 |                       |                 |             |                |        |
|  |                           |                             |                 |                       |                 |             |                |        |

#### Note:

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Result = Read level + Antenna factor + cable loss-Amp factor
- 3, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Note: According to KDB 789033, EIRP 【dBm】 =E 【dBuV/m】 -95.2, thus, limit for 5460MHz is -27+95.2=68.2 dBuV/m. Limit for 5725MHz is -17+95.2=78.2 dBuV/m.

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#### IEEE 802.11n HT20 CH Low

| Band Edge Tes | st result                 |                             |                 |                       |                 |                   |                |        |
|---------------|---------------------------|-----------------------------|-----------------|-----------------------|-----------------|-------------------|----------------|--------|
| EUT: 300M 2   | 2.4G&5G w                 | ireless ad                  | apter           |                       | M/N: SC-        | 1                 |                |        |
| Power: DC 5   | V from USF                | 3 Port                      |                 |                       |                 |                   |                |        |
| Test date: 20 | 17-5-5                    | Test site:                  | 3m Cha          | ımber                 | Tested by:      | Simple G          | uan            |        |
| Test mode: T  | X Low                     |                             |                 |                       |                 |                   |                |        |
| Antenna pola  | rity: Vertica             | al                          |                 |                       |                 |                   |                |        |
| Freq (MHz)    | Read<br>Level<br>(dBuV/m) | Antenna<br>Factor<br>(dB/m) | Cable loss(d B) | Amp<br>Factor<br>(dB) | Result (dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
| 5460          | 41.36                     | 31.81                       | 6.11            | 33.68                 | 45.6            | 68.2              | 22.6           | PK     |
| 5725          | 42.38                     | 32.17                       | 6.26            | 33.58                 | 47.23           | 78.2              | 30.97          | PK     |
|               |                           |                             |                 |                       |                 |                   |                |        |
|               |                           |                             |                 |                       |                 |                   |                |        |
| Antenna Pola  | rity: Horizo              | ntal                        |                 |                       |                 |                   |                |        |
| 5460          | 41.57                     | 31.81                       | 6.11            | 33.68                 | 45.81           | 68.2              | 22.39          | PK     |
| 5725          | 42.36                     | 32.17                       | 6.26            | 33.58                 | 47.21           | 78.2              | 30.99          | PK     |
|               |                           |                             |                 |                       |                 |                   |                |        |
|               |                           |                             |                 |                       |                 |                   |                |        |
| NT 4          |                           |                             |                 |                       |                 |                   |                |        |

#### Note:

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Result = Read level + Antenna factor + cable loss-Amp factor
- 3, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

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#### IEEE 802.11n HT20 CH High

Band Edge Test result

| &              |                           |                             |                 |                       |                 |                   |                |        |
|----------------|---------------------------|-----------------------------|-----------------|-----------------------|-----------------|-------------------|----------------|--------|
| EUT: 300M 2    | 2.4G&5G w                 | rireless ad                 | lapter          |                       | M/N: SC-        | 1                 |                |        |
| Power: DC 5    | V from US                 | B Port                      |                 |                       |                 |                   |                |        |
| Test date: 201 | 17-5-5                    | Test site:                  | 3m Cha          | amber                 | Tested by:      | Simple G          | uan            |        |
| Test mode: T   | X High                    |                             |                 |                       |                 |                   |                |        |
| Antenna pola   | rity: Vertica             | al                          |                 |                       |                 |                   |                |        |
| Freq (MHz)     | Read<br>Level<br>(dBuV/m) | Antenna<br>Factor<br>(dB/m) | Cable loss(d B) | Amp<br>Factor<br>(dB) | Result (dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
| 5850           | 43.06                     | 32.5                        | 6.33            | 33.64                 | 48.25           | 78.2              | 29.95          | PK     |
|                |                           |                             |                 |                       |                 |                   |                |        |
|                |                           |                             |                 |                       |                 |                   |                |        |
|                |                           |                             |                 |                       |                 |                   |                |        |
|                |                           |                             |                 |                       |                 |                   |                |        |
| Antenna Pola   | rity: Horizo              | ontal                       |                 |                       |                 |                   |                |        |
| 5850           | 42.57                     | 32.5                        | 6.33            | 33.64                 | 47.76           | 78.2              | 30.44          | PK     |
|                |                           |                             |                 |                       |                 |                   |                |        |
|                |                           |                             |                 |                       |                 |                   |                |        |
|                |                           |                             |                 |                       |                 |                   |                |        |
|                |                           |                             |                 |                       |                 |                   |                |        |
| Note:          |                           |                             |                 |                       |                 |                   |                |        |

#### Note:

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Result = Read level + Antenna factor + cable loss-Amp factor
- 3, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

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#### IEEE 802.11n HT40 CH Low

| Band Edge Tes  | st result                 |                             |                 |                       |                 |                   |                |        |
|----------------|---------------------------|-----------------------------|-----------------|-----------------------|-----------------|-------------------|----------------|--------|
| EUT: 300M 2    | 2.4G&5G w                 | ireless ad                  | apter           |                       | M/N: SC-        | 1                 |                |        |
| Power: DC 5    | V from USI                | 3 Port                      |                 |                       |                 |                   |                |        |
| Test date: 201 | 17-5-5                    | Test site:                  | 3m Cha          | ımber                 | Tested by:      | Simple G          | uan            |        |
| Test mode: T   | X Low                     |                             |                 |                       |                 |                   |                |        |
| Antenna pola   | rity: Vertica             | al                          |                 |                       |                 |                   |                |        |
| Freq (MHz)     | Read<br>Level<br>(dBuV/m) | Antenna<br>Factor<br>(dB/m) | Cable loss(d B) | Amp<br>Factor<br>(dB) | Result (dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
| 5460           | 41.38                     | 31.81                       | 6.11            | 33.68                 | 45.62           | 68.2              | 22.58          | PK     |
| 5725           | 43.22                     | 32.17                       | 6.26            | 33.58                 | 48.07           | 78.2              | 30.13          | PK     |
|                |                           |                             |                 |                       |                 |                   |                |        |
|                |                           |                             |                 |                       |                 |                   |                |        |
| Antenna Pola   | rity: Horizo              | ntal                        |                 |                       |                 |                   |                |        |
| 5460           | 41.57                     | 31.81                       | 6.11            | 33.68                 | 45.81           | 68.2              | 22.39          | PK     |
| 5725           | 43.24                     | 32.17                       | 6.26            | 33.58                 | 48.09           | 78.2              | 30.11          | PK     |
|                |                           |                             |                 |                       |                 |                   |                |        |
|                |                           |                             |                 |                       |                 |                   |                |        |
| NT - 4         |                           |                             |                 |                       |                 |                   |                |        |

#### Note:

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Result = Read level + Antenna factor + cable loss-Amp factor
- 3, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

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#### IEEE 802.11n HT40 CH High

| Band Edge Tes  | st result                 |                             |        |                       |                 |                   |                |        |
|----------------|---------------------------|-----------------------------|--------|-----------------------|-----------------|-------------------|----------------|--------|
| EUT: 300M 2    | 2.4G&5G w                 | ireless ad                  | apter  |                       | M/N: SC-        | 1                 |                |        |
| Power: DC 5    | V from USI                | 3 Port                      |        |                       |                 |                   |                |        |
| Test date: 201 | 17-5-5                    | Test site:                  | 3m Cha | mber                  | Tested by:      | Simple Gu         | ıan            |        |
| Test mode: T   | X High                    |                             |        |                       |                 |                   |                |        |
| Antenna pola   | rity: Vertica             | al                          |        |                       |                 |                   |                |        |
| Freq (MHz)     | Read<br>Level<br>(dBuV/m) | Antenna<br>Factor<br>(dB/m) |        | Amp<br>Factor<br>(dB) | Result (dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
| 5850           | 42.53                     | 32.5                        | 6.33   | 33.64                 | 47.72           | 78.2              | 30.48          | PK     |
|                |                           |                             |        | -                     |                 |                   |                |        |
|                |                           |                             |        |                       |                 |                   |                |        |
|                |                           |                             |        |                       |                 |                   |                |        |
|                |                           |                             |        |                       |                 |                   |                |        |
| Antenna Pola   | rity: Horizo              | ntal                        |        |                       |                 |                   |                |        |
| 5850           | 42.31                     | 32.5                        | 6.33   | 33.64                 | 47.5            | 78.2              | 30.7           | PK     |
|                |                           |                             |        |                       |                 |                   |                |        |
|                |                           |                             |        |                       |                 |                   |                |        |
|                |                           |                             |        |                       |                 |                   |                |        |
|                |                           |                             |        |                       |                 |                   |                |        |

#### Note:

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Result = Read level + Antenna factor + cable loss-Amp factor
- 3, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

## 11 Frequency stability

### 11.1 Limit of Frequency Stability

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an Emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

### 11.2 Measuring Instruments

See list of measuring instruments of this test report.

#### 11.3 Test Procedures

- 1. To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
- 2. The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10dB lower than the measured peak value.
- 3. The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

#### 11.4 Test SETUP



#### 11.5 TEST RESULTS

NOTE: 1. Antenna A Power> Antenna B Power, Both antenna A and B have all bandwidth and mode been test, Only the worst data

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|-------------|-------------|
|-------------|-------------|

| EUT: 300M 2.4G&5G wireless adapter M/N: SC-1 |  |                   |           |                        |           |  |  |
|--|--|-------------------|-----------|------------------------|-----------|--|--|
| Power: DC 5V                                 | from USB Port                                  |                   |           |                        |           |  |  |
| Ambient Temperat                             | nbient Temperature:23°C Relative Humidity: 60% |                   |           |                        |           |  |  |
| Test date: 2017-5-                           | 5  | Test site: RF sit | te        | Tested by: Simple Guan |           |  |  |
| Conclusion: PASS                             |  |                   |           |                        |           |  |  |
| Mode   | Voltage  | $FH_L$            | Deviation | $FH_H$                 | Deviation |  |  |
|  | (V)  | (5180MHz)         | (KHz)     | (5240MHz)              | (KHz)     |  |  |
|  | 132 V  | 5179.980          | 20        | 5239.980               | 20        |  |  |
| 5.2G Band                                    | 120 V  | 5179.980          | 20        | 5239.980               | 20        |  |  |
|  | 108 V  | 5179.980          | 20        | 5239.980               | 20        |  |  |
|  | Voltage  | FHL               | Deviation | FHH                    | Deviation |  |  |
|  | (V)  | (5745MHz)         | (KHz)     | (5825MHz)              | (KHz)     |  |  |
| 5.8G Band                                    | 132 V  | 5744.975          | 25        | 5824.975               | 25        |  |  |
|  | 120 V  | 5744.975          | 25        | 5824.975               | 25        |  |  |
|  | 108 V  | 5744.975          | 25        | 5824.975               | 25        |  |  |

| Mode      | Temperature          | $FH_L$                                       | Deviation            | $FH_H$   | Deviation                  |
|-----------|----------------------|--|----------------------|--|----------------------------|
|           | (°C)                 | (5180MHz)                                    | (KHz)                | (5240MHz)  | (KHz)                      |
|           | -30                  | 5179.935                                     | 65                   | 5239.964   | 36                         |
|           | -20                  | 5179.941                                     | 59                   | 5239.943   | 57                         |
|           | -10                  | 5179.956                                     | 44                   | 5239.952   | 48                         |
|           | 0                    | 5179.937                                     | 63                   | 5239.966   | 34                         |
| 5.2G Band | 10                   | 5179.968                                     | 32                   | 5239.971   | 29                         |
|           | 20                   | 5179.954                                     | 46                   | 5239.959   | 41                         |
|           | 30                   | 5179.961                                     | 39                   | 5239.946   | 54                         |
|           | 40                   | 5179.967                                     | 33                   | 5239.943   | 57                         |
|           | 50                   | 5179.968                                     | 32                   | 5239.958   | 42                         |
|           | Temperature          | $\mathrm{FH}_{\mathrm{L}}$                   | Deviation            | $FH_H$   | Deviation                  |
|           | (℃)                  | (5745MHz)                                    | (KHz)                | (5825MHz)  | (KHz)                      |
|           | -30                  | 5744.961                                     | 39                   | 5824.947   | 53                         |
|           |                      |  |                      | 00=  | 55                         |
|           | -20                  | 5744.957                                     | 43                   | 5824.936   | 64                         |
|           | -20<br>-10           | 5744.957<br>5744.949                         | 43<br>51             |  |                            |
| 5.8G Band |                      |  |                      | 5824.936   | 64                         |
| 5.8G Band | -10                  | 5744.949                                     | 51                   | 5824.936<br>5824.957                                     | 64<br>43                   |
| 5.8G Band | -10<br>0             | 5744.949<br>5744.957                         | 51<br>43             | 5824.936<br>5824.957<br>5824.949                         | 64<br>43<br>51             |
| 5.8G Band | -10<br>0<br>10       | 5744.949<br>5744.957<br>5744.949             | 51<br>43<br>51       | 5824.936<br>5824.957<br>5824.949<br>5824.962             | 64<br>43<br>51<br>38       |
| 5.8G Band | -10<br>0<br>10<br>20 | 5744.949<br>5744.957<br>5744.949<br>5744.961 | 51<br>43<br>51<br>39 | 5824.936<br>5824.957<br>5824.949<br>5824.962<br>5824.957 | 64<br>43<br>51<br>38<br>43 |

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## 12 Antenna Requirement

#### 12.1 Standard Requirement

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of 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. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

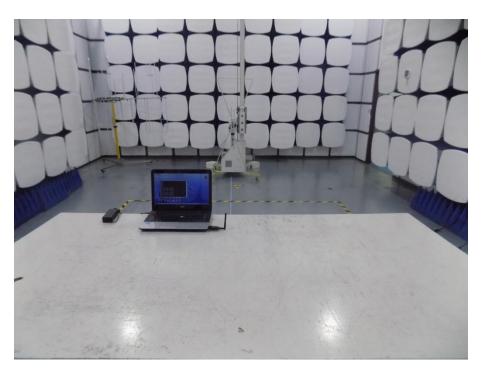
#### 12.2 Antenna Connected Construction

The antenna connector is unique antenna and no consideration of replacement. Please see EUT photo for details.

#### 12.3 Result

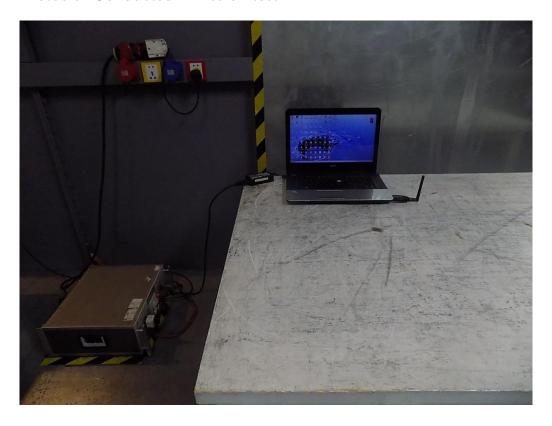
The EUT antenna is unique Antenna. It comply with the standard requirement.

# 13 Test setup photo13.1 Photos of Radiated emission





## 13.2 Photos of Conducted Emission test



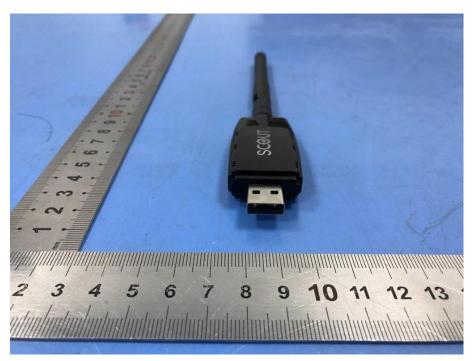
## 14 Photographs of EUT





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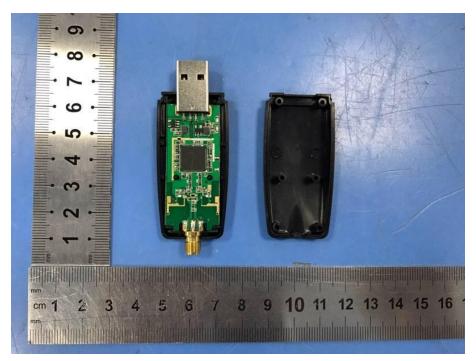
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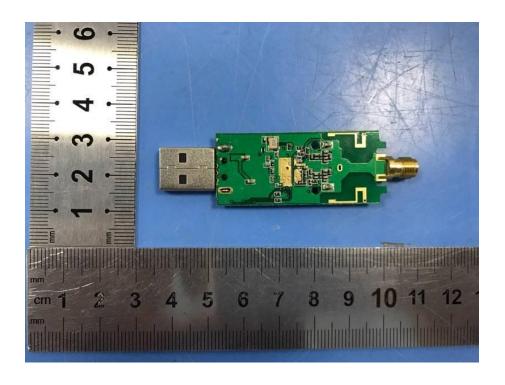


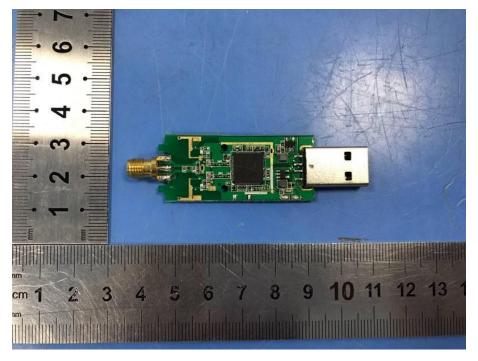


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