

## FCC CERTIFICATION TEST REPORT

### FOR

|                             |   |                                                                                   |
|-----------------------------|---|-----------------------------------------------------------------------------------|
| <b>Applicant</b>            | : | Digital China Networks (Beijing) Limited                                          |
| <b>Address</b>              | : | Digital Technology Plaza, No.9 shangdi 9th street, Haidian District Beijing China |
| <b>Equipment under Test</b> | : | Outdoor Access Point                                                              |
| <b>Model No</b>             | : | DCWL-7962OT                                                                       |
| <b>FCC ID</b>               | : | 2ABKCDCWL-7962OT                                                                  |
| <b>Trade Mark</b>           | : | <b>DCN</b>                                                                        |
| <b>Manufacturer</b>         | : | Digital China Networks (Beijing) Limited                                          |
| <b>Address</b>              | : | Digital Technology Plaza, No.9 shangdi 9th street, Haidian District Beijing China |

**Issued By: Dongguan Dongdian Testing Service Co., Ltd.**

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Guangdong Province, China, 523808

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# REPORT

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## TEST REPORT DECLARE

|                             |   |                                                                                      |
|-----------------------------|---|--------------------------------------------------------------------------------------|
| <b>Applicant</b>            | : | Digital China Networks (Beijing) Limited                                             |
| <b>Address</b>              | : | Digital Technology Plaza, No.9 shangdi 9th street, Haidian District<br>Beijing China |
| <b>Equipment under Test</b> | : | Outdoor Access Point                                                                 |
| <b>Model No</b>             | : | DCWL-7962OT                                                                          |
| <b>FCC ID</b>               | : | 2ABKCDCWL-7962OT                                                                     |
| <b>Trade Mark</b>           | : | <b>DCN</b>                                                                           |
| <b>Manufacturer</b>         | : | Digital China Networks (Beijing) Limited                                             |
| <b>Address</b>              | : | Digital Technology Plaza, No.9 shangdi 9th street, Haidian District<br>Beijing China |

**Test Standard Used:** FCC Rules and Regulations Part 15 Subpart C: 2015.

**Test procedure used:** ANSI C63.4:2014, 789033 D02 General UNII Test Procedures New Rules v01.

**We Declare:**

The equipment described above is tested by Dongguan Dongdian Testing Service Co., Ltd and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Dongguan Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these tests.

**After test and evaluation, our opinion is that the equipment provided for test compliance with the requirement of the above FCC standards.**

|                      |                              |                        |               |
|----------------------|------------------------------|------------------------|---------------|
| <b>Report No:</b>    | DDT-R15Q0831-1E3             |                        |               |
| <b>Date of Test:</b> | Sept. 24, 2015~Oct. 20, 2015 | <b>Date of Report:</b> | Oct. 21, 2015 |

**Prepared By:**



**Leo Liu/Engineer**



Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

## 1. Summary of test results

| The EUT have been tested according to the applicable standards as referenced below. |                                               |         |
|-------------------------------------------------------------------------------------|-----------------------------------------------|---------|
| Description of Test Item                                                            | Standard                                      | Results |
| Emission Bandwidth                                                                  | FCC Part 15: 15.407(a)                        | PASS    |
| Peak Output Power                                                                   | FCC Part 15: 15.407(a)                        | PASS    |
| Power Spectral Density                                                              | FCC Part 15: 15.407(a)                        | PASS    |
| Frequency Stability Measurement                                                     | FCC Part 15: 15.407(g)                        | PASS    |
| Emissions in restricted frequency bands                                             | FCC Part 15: 15.209<br>FCC Part 15: 15.407(a) | PASS    |
| Band Edge Compliance                                                                | FCC Part 15: 15.209<br>FCC Part 15: 15.407(a) | PASS    |
| Power Line Conducted Emission                                                       | FCC Part 15: 15.207<br>ANSI C63.4:2014        | PASS    |
| Antenna requirement                                                                 | FCC Part 15: 15.203                           | PASS    |

## 2. General test information

### 2.1. Description of EUT

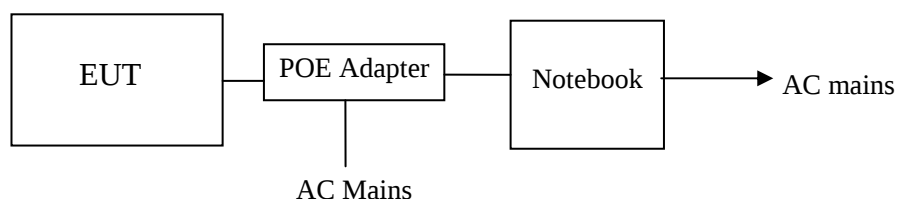
|                          |   |                                                                                                                                                           |
|--------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| EUT* Name                | : | Outdoor Access Point                                                                                                                                      |
| Model Number             | : | DCWL-7962OT                                                                                                                                               |
| EUT function description | : | Please reference user manual of this device                                                                                                               |
| Power supply             | : | DC 50V from external POE adapter<br>Note: This device not sales with power adapter, and a typical power adapter was by provided by Manufacturer for test. |
| Radio Technology         | : | IEEE802.11n/a                                                                                                                                             |
| FCC Operation frequency  | : | IEEE 802.11n HT20: 5180MHz—5240MHz,5745MHz—5825MHz<br>IEEE 802.11n HT40: 5190MHz—5230MHz,5755MHz—5795MHz<br>IEEE 802.11a:5180MHz—5240MHz,5745MHz—5825MHz  |
| Modulation               | : | IEEE 802.11n HT20, HT40: OFDM (64QAM, 16QAM, QPSK,BPSK)<br>IEEE 802.11a: OFDM (64QAM, 16QAM, QPSK,BPSK)                                                   |
| Antenna Type             | : | 5G: External Antenna, 3.4dBi Single root Antenna gain,<br>MIMO 2X2.Total ANT=3.4+10*LOG(2)=6.4dBi                                                         |
| Date of Receipt          | : | 2015/9/24                                                                                                                                                 |
| Sample Type              | : | Series production                                                                                                                                         |

Note: EUT is the ab.of equipment under test.

### 2.2. Assistant equipment used for test

| Description of Assistant equipment | Manufacturer                             | Model number or Type | EMC Compliance | SN                 |
|------------------------------------|------------------------------------------|----------------------|----------------|--------------------|
| Notebook                           | DELL                                     | Latitude D610        | FCC DOC        | 00045-534-136-300  |
| Mouse                              | HP                                       | M-SBF96              | FCC DOC        | 417441-001         |
| Earphone                           | Apple inc                                | A1429                | FCC DOC        | /                  |
| POE Adapter                        | Digital China Networks (Beijing) Limited | DCWL-PoEINJ-G+(R3)   | FCC VOC        | WL005630DC30000223 |
| Printer                            | HP                                       | LaserJet 1020 plus   | FCC DOC        | CNCFV90866         |
| Keyboard                           | HP                                       | KB-0316              | FCC DOC        | BAUEK0OVB 2B0VB    |

### 2.3. Block diagram of EUT configuration for test



EUT was connected to control to provided by manufacturer which has a standard RSS-232 connector to connect to Notebook, and the Notebook will run a special test software “artgui” provided by manufacturer to control EUT work in Continuous TX mode (>98% duty cycle), and select test channel, wireless mode and data rate.

| Tested mode, channel, and data rate information                                                                                     |                                |               |                    |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------|--------------------|
| Mode                                                                                                                                | data rate (Mbps)<br>(see Note) | Channel       | Frequency<br>(MHz) |
| IEEE 802.11n HT20                                                                                                                   | 6.5                            | Low :CH36     | 5180               |
|                                                                                                                                     | 6.5                            | Middle: CH40  | 5200               |
|                                                                                                                                     | 6.5                            | High: CH48    | 5240               |
|                                                                                                                                     | 6.5                            | Low :CH149    | 5745               |
|                                                                                                                                     | 6.5                            | Middle: CH157 | 5785               |
|                                                                                                                                     | 6.5                            | High: CH165   | 5825               |
| IEEE 802.11n HT40                                                                                                                   | 13.5                           | Low :CH38     | 5190               |
|                                                                                                                                     | 13.5                           | High: CH46    | 5230               |
|                                                                                                                                     | 13.5                           | Low :CH151    | 5755               |
|                                                                                                                                     | 13.5                           | High: CH159   | 5795               |
| IEEE 802.11a                                                                                                                        | 6                              | Low :CH36     | 5180               |
|                                                                                                                                     | 6                              | Middle: CH40  | 5200               |
|                                                                                                                                     | 6                              | High: CH48    | 5240               |
|                                                                                                                                     | 6                              | Low :CH149    | 5745               |
|                                                                                                                                     | 6                              | Middle: CH157 | 5785               |
|                                                                                                                                     | 6                              | High: CH165   | 5825               |
| Note: According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test. |                                |               |                    |
| After verification, all tests were carried out with the worst case test modes as shown in this report                               |                                |               |                    |

## 2.4. Deviations of test standard

No Deviation.

## 2.5. Test environment conditions

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

|                    |           |
|--------------------|-----------|
| Temperature range: | 21-25℃    |
| Humidity range:    | 40-75%    |
| Pressure range:    | 86-106kPa |

## 2.6. Test laboratory

Dongguan Dongdian Testing Service Co., Ltd

Add: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808 Tel: +86-0769-22891499 <http://www.dgddt.com>

FCC Registration Number: 270092 Industry Canada site registration number: 10288A-1

**2.7. Measurement uncertainty**

| Test Item                                                                                                                                     | Uncertainty           |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Occupied Channel Bandwidth                                                                                                                    | ±1%                   |
| Uncertainty for radio frequency                                                                                                               | $1 \times 10^{-9}$    |
| RF Output power, conducted                                                                                                                    | ±0.6dB                |
| Power Spectral Density, Conducted                                                                                                             | ±1.2dB                |
| Unwanted Emissions, Conducted                                                                                                                 | ±0.6dB                |
| Temperature                                                                                                                                   | ±0.2°C                |
| Humidity                                                                                                                                      | ±1%                   |
| DC and Low frequency voltage                                                                                                                  | ±0.5%                 |
| Time                                                                                                                                          | ±1%                   |
| Duty Cycle                                                                                                                                    | ±1%                   |
| Uncertainty for Radiation Emission test<br>(30MHz-1GHz)                                                                                       | 3.14 dB (Polarize: V) |
|                                                                                                                                               | 3.16 dB (Polarize: H) |
| Uncertainty for Radiation Emission test<br>(1GHz to 25GHz)                                                                                    | 2.08dB(Polarize: V)   |
|                                                                                                                                               | 2.56dB (Polarize: H)  |
| Uncertainty for Conduction emission test(150KHz-30MHz)                                                                                        | 2.44dB                |
| Uncertainty for Radiation Emission test (9KHz-150KHz)                                                                                         | 3.89dB                |
| Uncertainty for Radiation Emission test (150KHz-30MHz)                                                                                        | 3.21dB                |
| Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2. |                       |

### 3. Equipment used during test

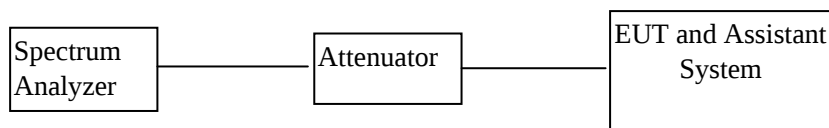
| Equipment                                  | Manufacturer  | Model No.    | Serial No.   | Last Cal.  | Cal. Interval |
|--------------------------------------------|---------------|--------------|--------------|------------|---------------|
| <b>RF Connected Test</b>                   |               |              |              |            |               |
| Spectrum analyzer                          | R&S           | FSU26        | 1166.1660.26 | 2014/10/25 | 1Year         |
| Attenuator                                 | Mini-Circuits | BW-S10W2     | 101109       | 2014/10/25 | 1Year         |
| RF Cable                                   | Micable       | C10-01-01-1  | 100309       | 2015/08/18 | 1Year         |
| <b>Radiated Emission Test</b>              |               |              |              |            |               |
| Spectrum analyzer                          | Agilent       | E4447A       | MY52090876   | 2015/09/22 | 1 Year        |
| Trilog Broadband Antenna                   | Schwarzbeck   | VULB9163     | 9163-462     | 2015/05/30 | 1 Year        |
| Active Loop antenna                        | Schwarzbeck   | FMZB-1519    | 1519-038     | 2014/11/01 | 1 Year        |
| Double Ridged Horn Antenna                 | R&S           | HF907        | 100276       | 2014/11/01 | 1 Year        |
| Pre-amplifier                              | A.H.          | PAM-0118     | 360          | 2015/08/18 | 1 Year        |
| RF Cable                                   | HUBSER        | CP-X2        | W11.03       | 2014/10/25 | 1Year         |
| RF Cable                                   | HUBSER        | CP-X1        | W12.02       | 2014/10/25 | 1 Year        |
| MI Cable                                   | HUBSER        | C10-01-01-1M | 1091629      | 2014/10/25 | 1 Year        |
| Test software                              | Audix         | E3           | V 6.11111b   | /          | /             |
| <b>Power Line Conducted Emissions Test</b> |               |              |              |            |               |
| Test Receiver                              | R&S           | ESU8         | 100316       | 2014/10/25 | 1 Year        |
| LISN 1                                     | R&S           | ENV216       | 101109       | 2014/10/25 | 1 Year        |
| Pulse Limiter                              | R&S           | ESH3-Z2      | 101242       | 2014/10/25 | 1 Year        |
| CE Cable 1                                 | HUBSER        | ESU8/RF2     | W10.01       | 2014/10/25 | 1 Year        |
| Test software                              | Audix         | E3           | V 6.11111b   | /          | /             |

### 4. 26dB Bandwidth and 6dB Bandwidth

#### 4.1. Test equipment

Please refer to Section 3 this report.

#### 4.2. Block diagram of test setup



#### 4.3. Test Procedure

- (1) Configure EUT and assistant system according clause 2.3 and 4.2

(2) Connect EUT's antenna output to spectrum analyzer by RF cable.

(3) Configure EUT work in test mode as stated in clause 2.3.

(4) Set the spectrum analyzer as follows:

|                |          |
|----------------|----------|
| RBW:           | 100KHz   |
| VBW:           | 300KHz   |
| Detector Mode: | Peak     |
| Sweep time:    | auto     |
| Trace mode     | Max hold |

(5) Allow the trace to stabilize, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 26 dB and 6dB relative to the maximum level measured in the fundamental emission.

#### 4.4. Test Result

| 5180-5240MHz Band/Mode |                 |                             |                      |                 |                             |
|------------------------|-----------------|-----------------------------|----------------------|-----------------|-----------------------------|
| Mode                   | CH or Frequency | 26dB bandwidth Result (MHz) | Mode                 | CH or Frequency | 26dB bandwidth Result (MHz) |
| 11a                    | CH36            | 26.410                      | N/A                  | N/A             | N/A                         |
|                        | CH40            | 26.731                      |                      | N/A             | N/A                         |
|                        | CH48            | 26.218                      |                      | N/A             | N/A                         |
| 11n HT20 /Chain 0      | CH36            | 27.372                      | 11n HT20 /Chain 1    | CH36            | 27.436                      |
|                        | CH40            | 27.308                      |                      | CH40            | 26.859                      |
|                        | CH48            | 27.608                      |                      | CH48            | 27.821                      |
| 11n HT40 /Chain 0      | CH38            | 51.410                      | 11n HT40 /Chain 1    | CH38            | 51.667                      |
|                        | CH46            | 51.538                      |                      | CH46            | 51.026                      |
| Conclusion: Pass       |                 |                             |                      |                 |                             |
| Test Date : 2015/10/13 |                 |                             | Test Engineer : Toby |                 |                             |

| 5745-5825MHz Band/Mode |                 |                             |                            |                   |                 |                             |                            |
|------------------------|-----------------|-----------------------------|----------------------------|-------------------|-----------------|-----------------------------|----------------------------|
| Mode                   | CH or Frequency | 26dB bandwidth Result (MHz) | 6dB bandwidth Result (MHz) | Mode              | CH or Frequency | 26dB bandwidth Result (MHz) | 6dB bandwidth Result (MHz) |
| 11a                    | CH149           | 26.282                      | 16.410                     | N/A               | N/A             | N/A                         | N/A                        |
|                        | CH157           | 26.667                      | 16.410                     |                   | N/A             | N/A                         | N/A                        |
|                        | CH165           | 26.667                      | 16.410                     |                   | N/A             | N/A                         | N/A                        |
| 11n HT20 /Chain 0      | CH149           | 27.179                      | 17.564                     | 11n HT20 /Chain 1 | CH149           | 26.731                      | 17.821                     |
|                        | CH157           | 27.051                      | 17.564                     |                   | CH157           | 27.372                      | 17.821                     |
|                        | CH165           | 27.372                      | 17.564                     |                   | CH165           | 27.436                      | 17.821                     |
| 11n HT40 /Chain 0      | CH151           | 49.103                      | 36.538                     | 11n HT40 /Chain 1 | CH151           | 50.641                      | 36.538                     |
|                        | CH159           | 50.256                      | 36.667                     |                   | CH159           | 51.154                      | 36.667                     |

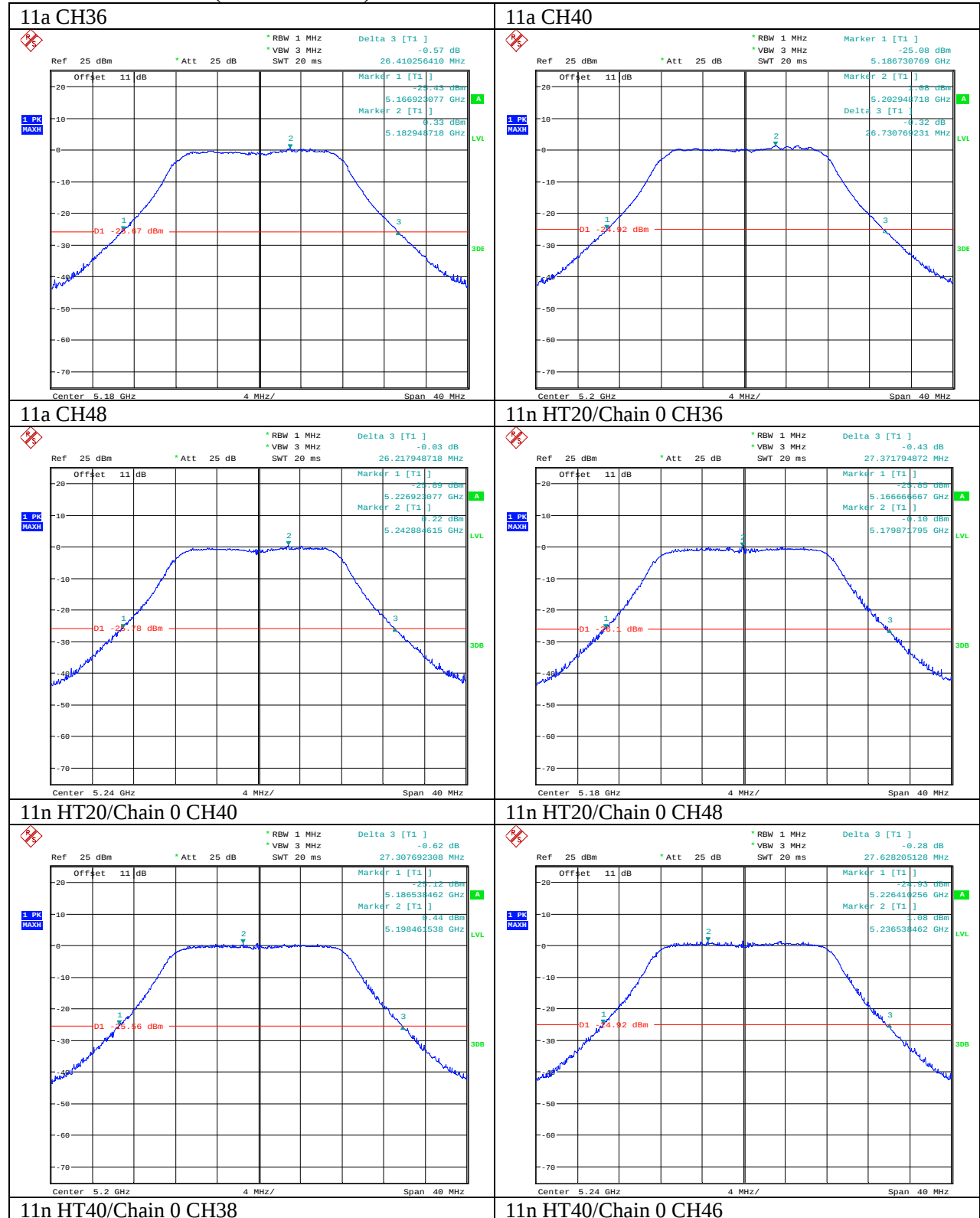
Conclusion: Pass

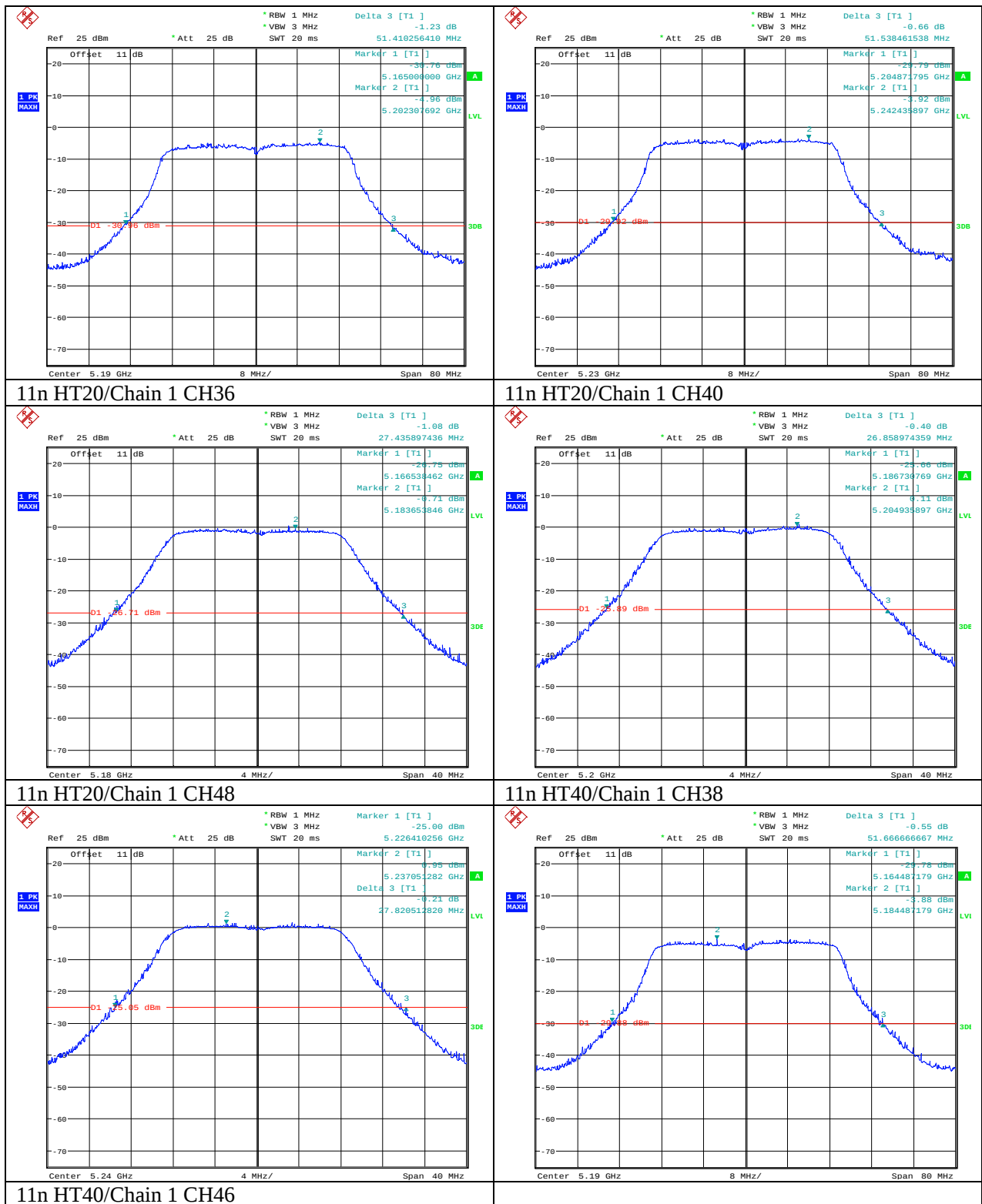
Test Date : 2015/10/13

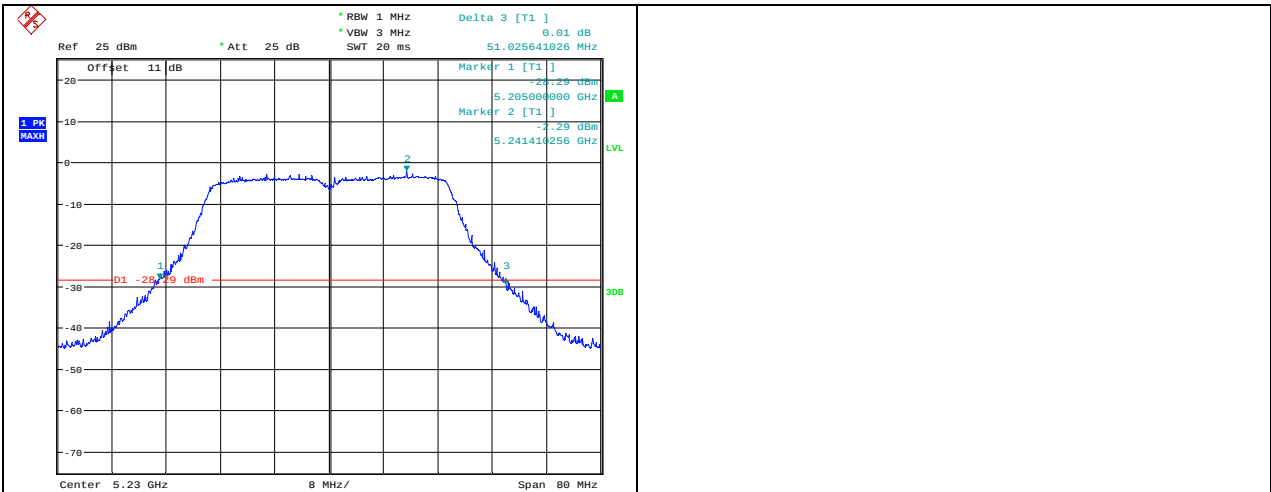
Test Engineer : Toby

#### 4.5. Original test data

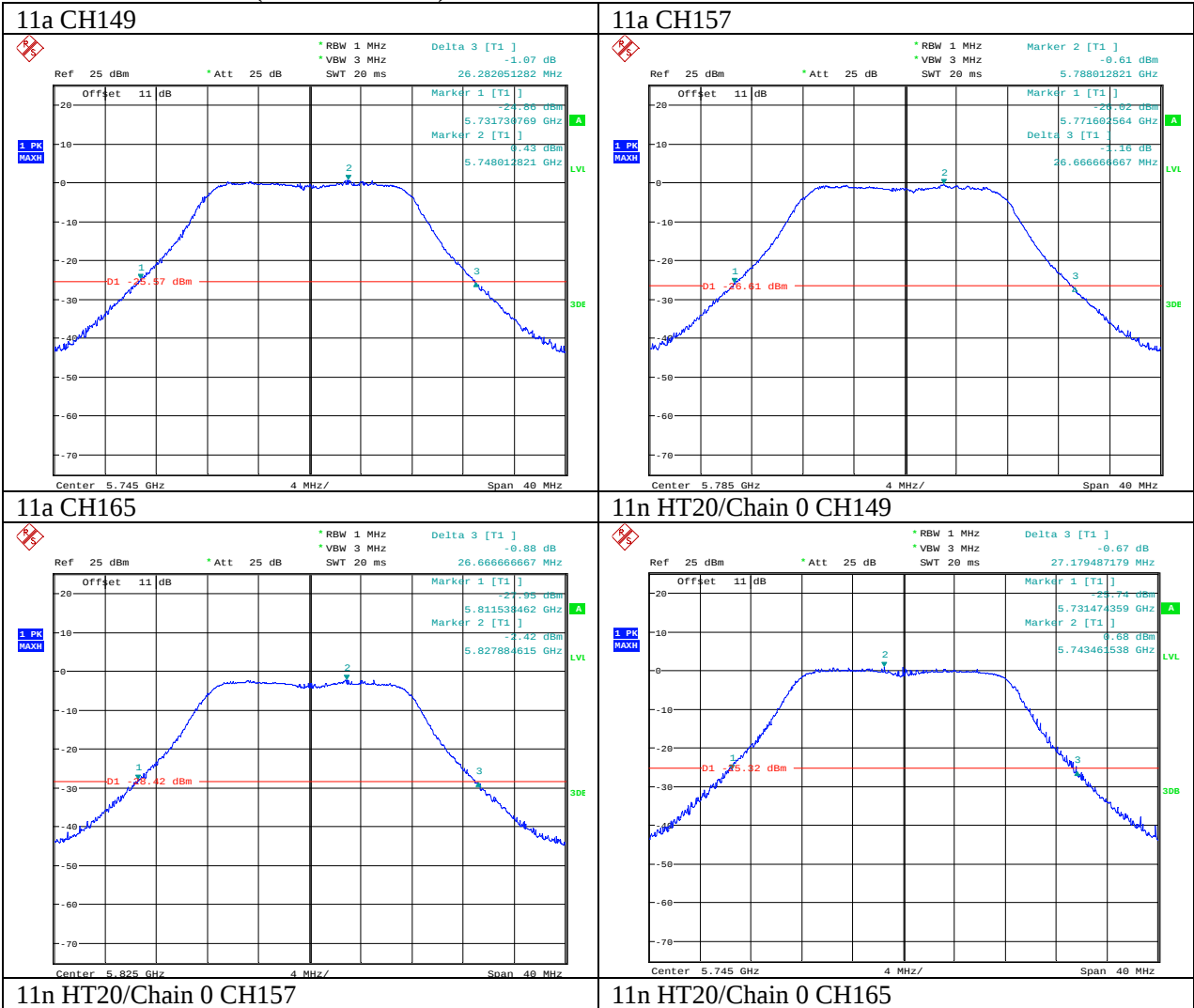
5180-5240MHz Band (26dB bandwidth)

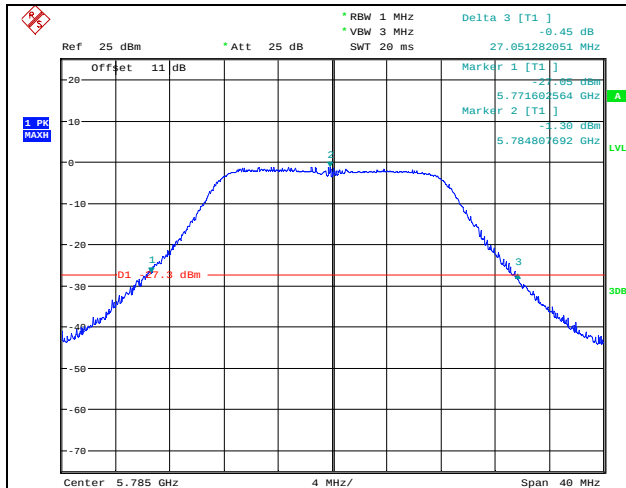




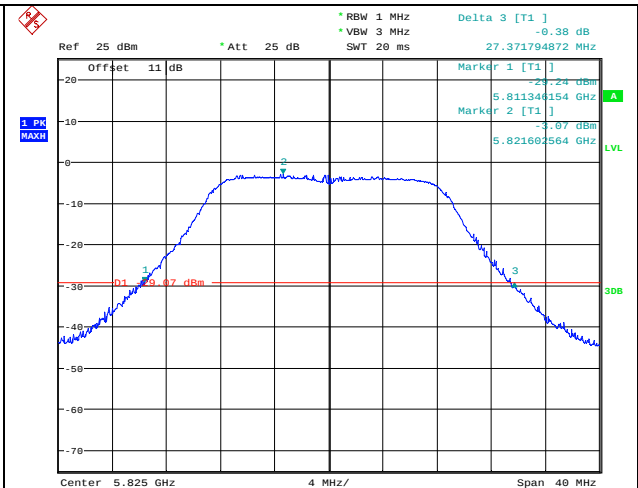


5745-5825MHz Band (26dB bandwidth)

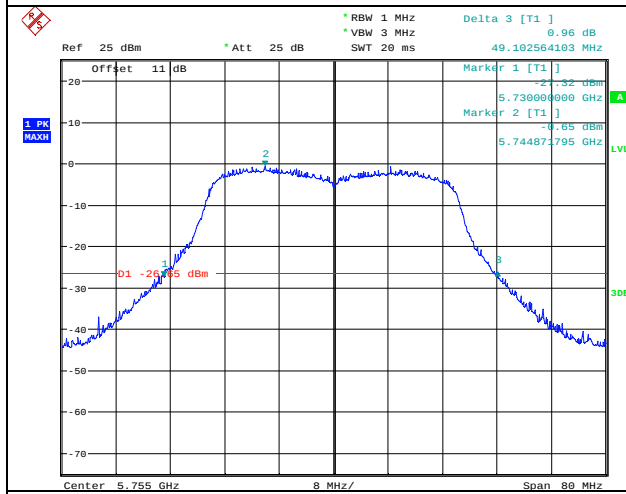




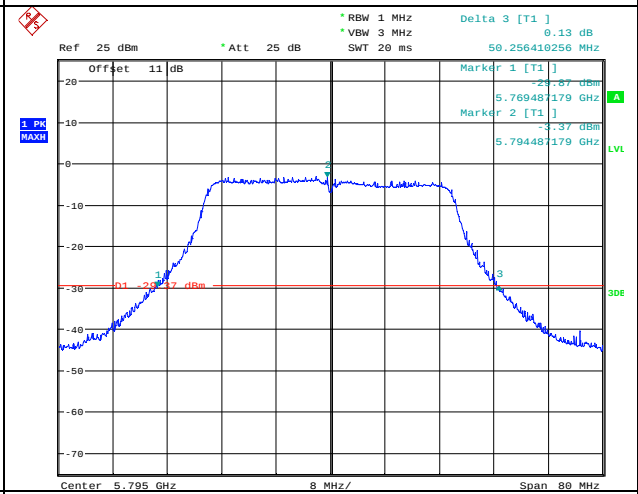
11n HT40/Chain 0 CH151



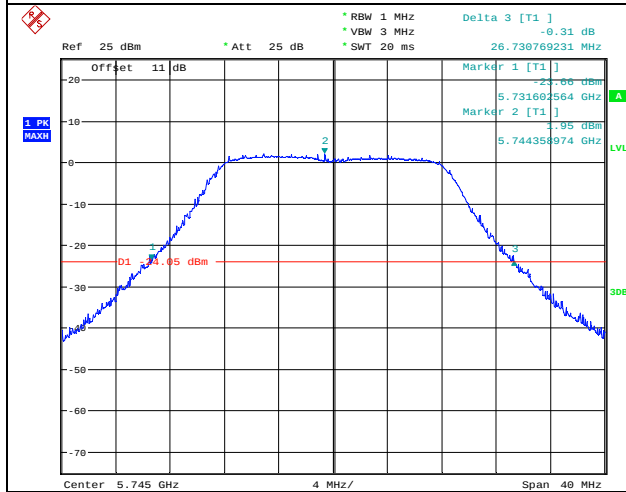
11n HT40/Chain 0 CH159



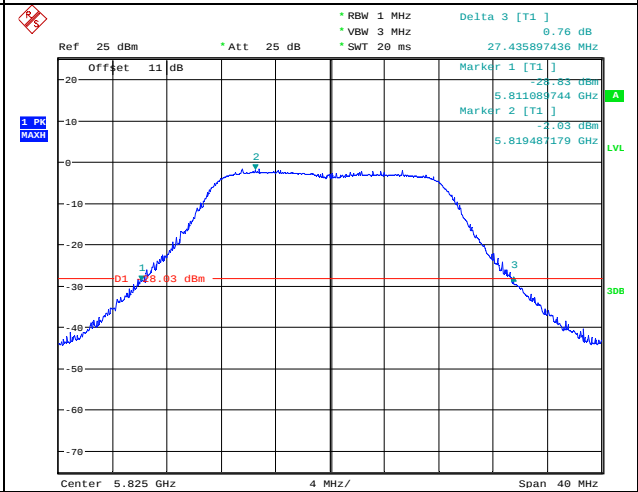
11n HT20/Chain 1 CH149



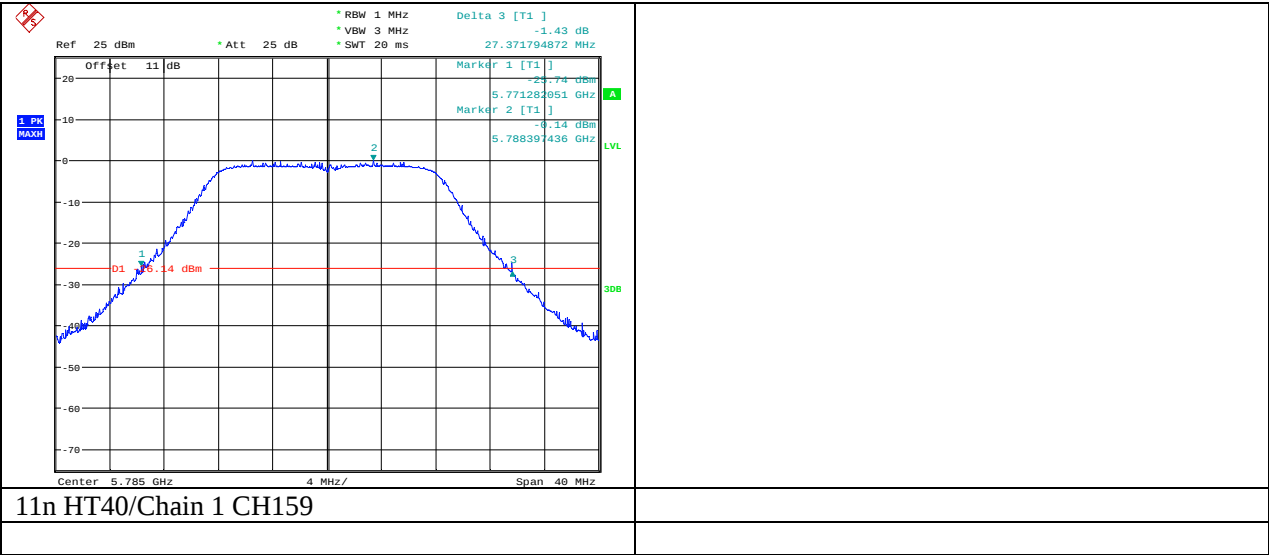
11n HT20/Chain 1 CH157



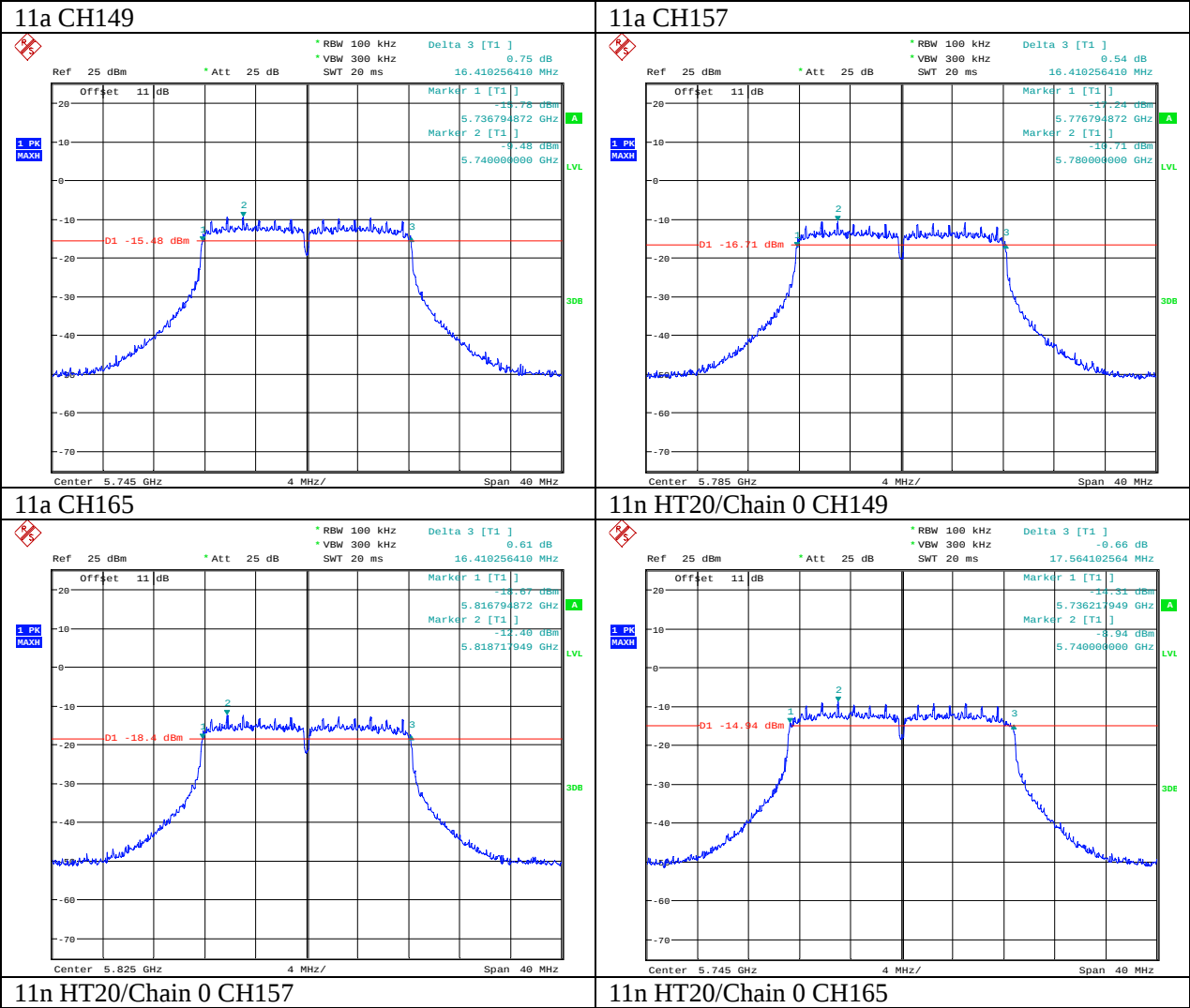
11n HT20/Chain 1 CH165

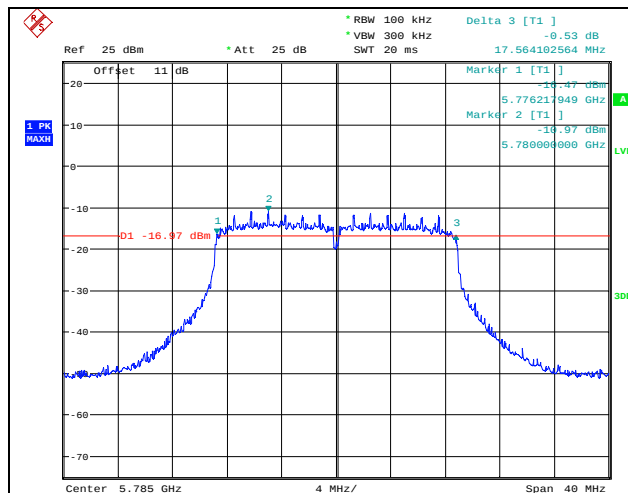


11n HT40/Chain 1 CH151

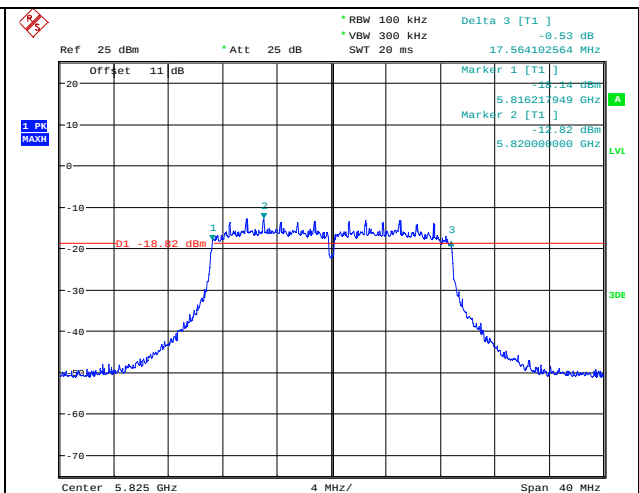


5745-5825MHz Band (6dB bandwidth)

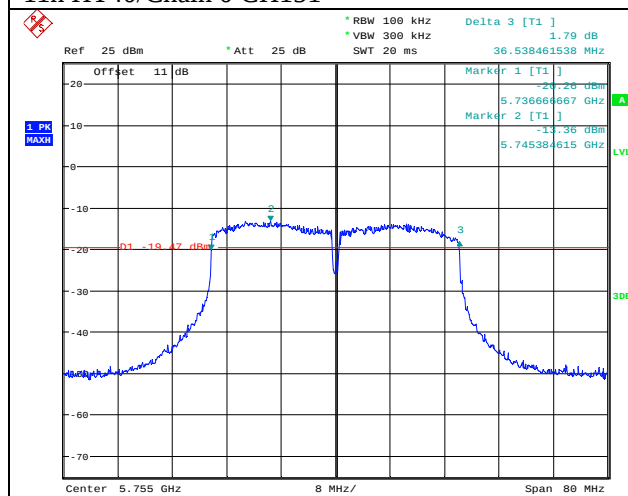




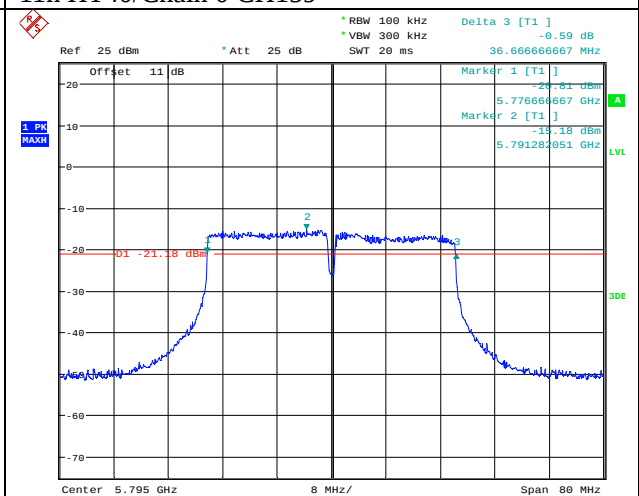
11n HT40/Chain 0 CH151



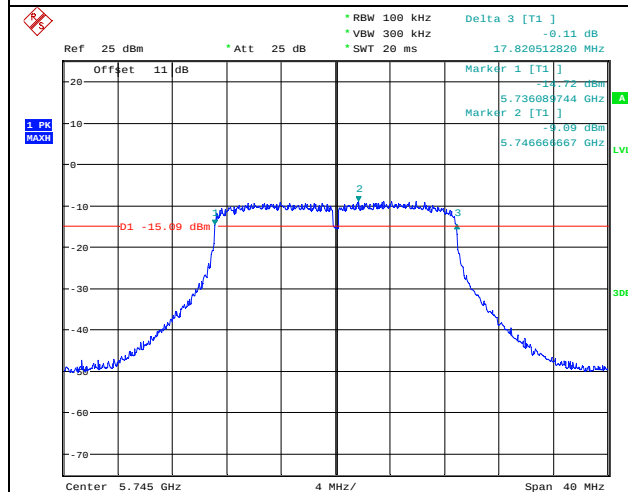
11n HT40/Chain 0 CH159



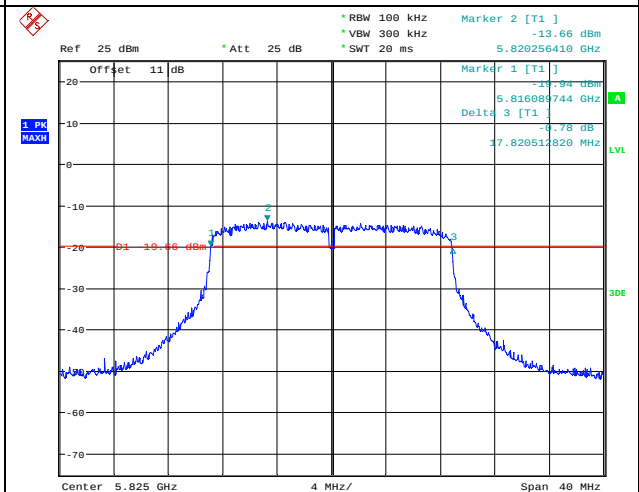
11n HT20/Chain 1 CH149



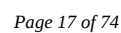
11n HT20/Chain 1 CH157



11n HT20/Chain 1 CH165



11n HT40/Chain 1 CH151

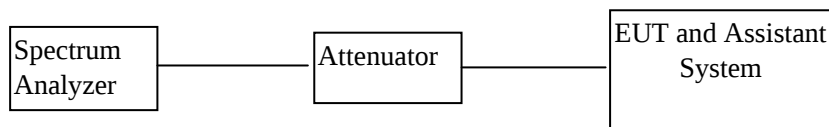


## 5. Maximum Peak Output Power

### 5.1. Test equipment

Please refer to Section 3 this report.

### 5.2. Block diagram of test setup



### 5.3. Limits

For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

### 5.4. Test Procedure

- (1) Configure EUT and assistant system according clause 2.3 and 5.2

Connect each EUT's antenna output to Spectrum Analyzer by RF cable and attenuator

- (2) Configure EUT work in test mode as stated in clause 2.3.
- (3) Add each antenna port's results to get the total output power of EUT.

### 5.5. Test Result

| 5180-5240MHz Band |      |                |                |                    |
|-------------------|------|----------------|----------------|--------------------|
| Mode              | CH   | Channel0       | Channel1       | Result             |
|                   |      | PK Level (dBm) | PK Level (dBm) | PK Total/Max Power |
| 11a               | CH36 | N/A            | N/A            | 10.57              |
|                   | CH40 | N/A            | N/A            | 10.38              |
|                   | CH48 | N/A            | N/A            | 10.22              |
| 11n<br>HT20       | CH36 | 10.47          | 10.42          | 13.46              |
|                   | CH40 | 10.77          | 10.49          | 13.64              |
|                   | CH48 | 9.90           | 11.16          | 13.59              |
| 11n<br>HT40       | CH38 | 9.65           | 9.58           | 12.63              |
|                   | CH46 | 9.03           | 10.18          | 12.65              |

|                                                                                                                        |                      |
|------------------------------------------------------------------------------------------------------------------------|----------------------|
| Limit: 29.6dBm                                                                                                         | Conclusion: PASS     |
| Test Date : 2015/10/13                                                                                                 | Test Engineer : Toby |
| Remark: 1.Total Output Power (w) = Chain 0 (10^(Output Power /10)/1000)+ Chain 1 (10^(Output Power /10)/1000)          |                      |
| 2. The maximum antenna gain is 6.4dBi; therefore the reduction due to antenna gain is 0.4dBi, so the limit is 29.6dBm. |                      |

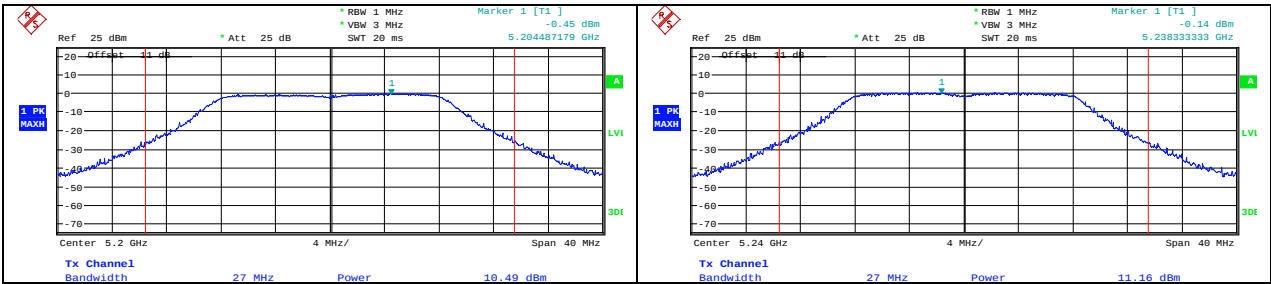
| 5745-5825MHz Band                                                                                                      |       |                |                      |                    |
|------------------------------------------------------------------------------------------------------------------------|-------|----------------|----------------------|--------------------|
| Mode                                                                                                                   | CH    | Channel0       | Channel1             | Result             |
|                                                                                                                        |       | PK Level (dBm) | PK Level (dBm)       | PK Total/Max Power |
| 11a                                                                                                                    | CH149 | N/A            | N/A                  | 9.65               |
|                                                                                                                        | CH157 | N/A            | N/A                  | 9.31               |
|                                                                                                                        | CH165 | N/A            | N/A                  | 10.67              |
| 11n<br>HT20                                                                                                            | CH149 | 10.33          | 11.36                | 13.89              |
|                                                                                                                        | CH157 | 9.22           | 10.49                | 12.91              |
|                                                                                                                        | CH165 | 8.87           | 9.64                 | 12.28              |
| 11n<br>HT40                                                                                                            | CH151 | 9.03           | 10.71                | 12.96              |
|                                                                                                                        | CH159 | 8.60           | 10.29                | 12.54              |
| Limit: 29.6dBm                                                                                                         |       |                | Conclusion: PASS     |                    |
| Test Date : 2015/10/13                                                                                                 |       |                | Test Engineer : Toby |                    |
| Remark: 1.Total Output Power (w) = Chain 0 (10^(Output Power /10)/1000)+ Chain 1 (10^(Output Power /10)/1000)          |       |                |                      |                    |
| 2. The maximum antenna gain is 6.4dBi; therefore the reduction due to antenna gain is 0.4dBi, so the limit is 29.6dBm. |       |                |                      |                    |

## 5.6. The worst of the original test data

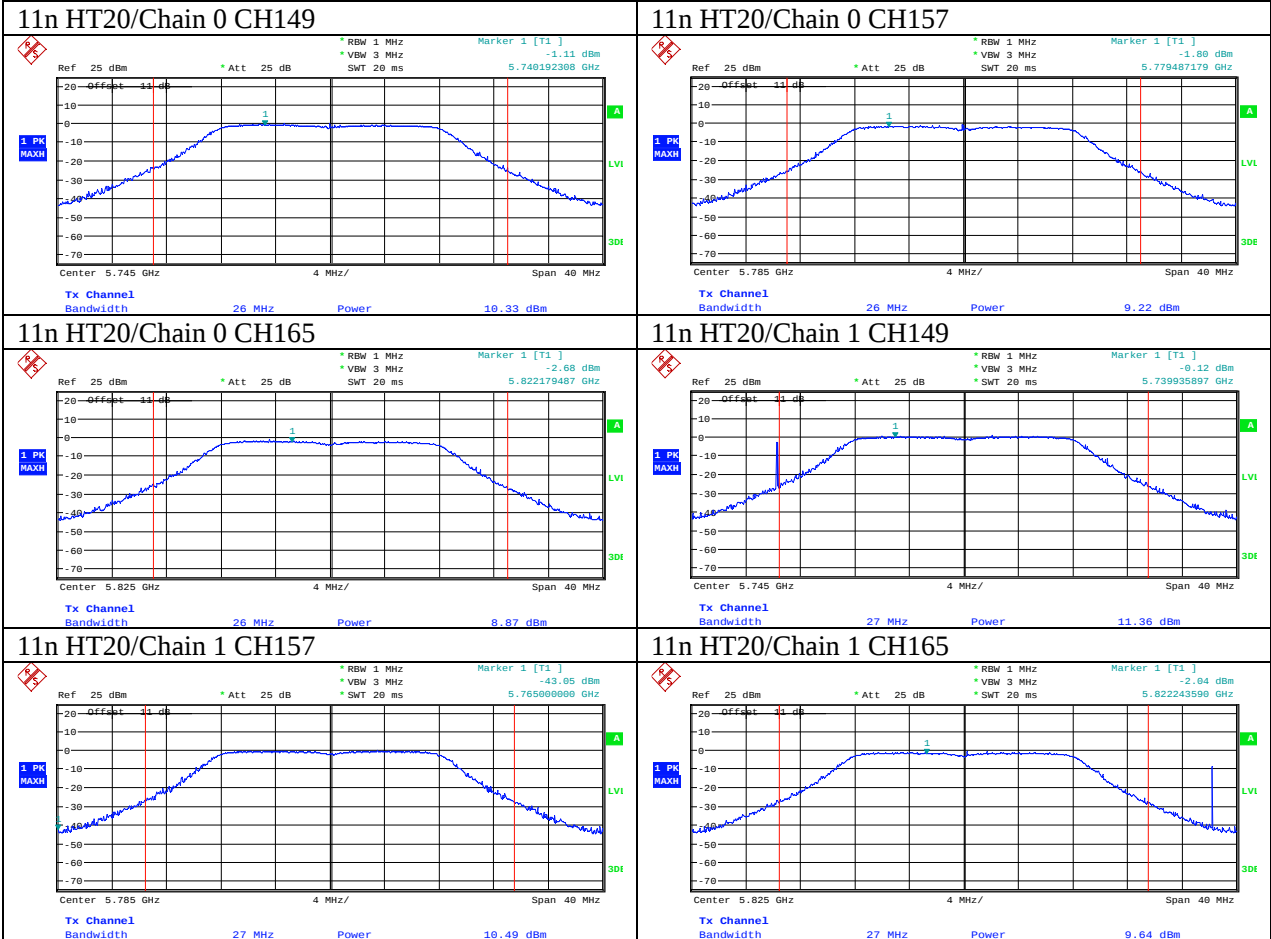
The worst case is 11n HT20 mode was selected and recorded in this report

5180-5240MHz Band

|                                  |                                  |
|----------------------------------|----------------------------------|
| <b>11n HT20/Chain 0 CH36</b><br> | <b>11n HT20/Chain 0 CH40</b><br> |
| <b>11n HT20/Chain 0 CH48</b><br> | <b>11n HT20/Chain 1 CH36</b><br> |
| <b>11n HT20/Chain 1 CH40</b>     | <b>11n HT20/Chain 1 CH48</b>     |



5745-5825MHz Band



6. Power Spectral Density

6.1. Test equipment

Please refer to Section 3 this report.

6.2. Block diagram of test setup

Same with 4.2

6.3. Limits

For the band 5.15-5.25 GHz, the peak power spectral density shall not exceed 17 dBm in any 1-MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, the peak power spectral density

shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.  
For the band 5.825-5.85 GHz,, 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

#### 6.4. Test Procedure

The transmitter output was connected to a spectrum analyzer. Power density was measured by spectrum analyzer with 1MHz RBW and 3MHz VBW.

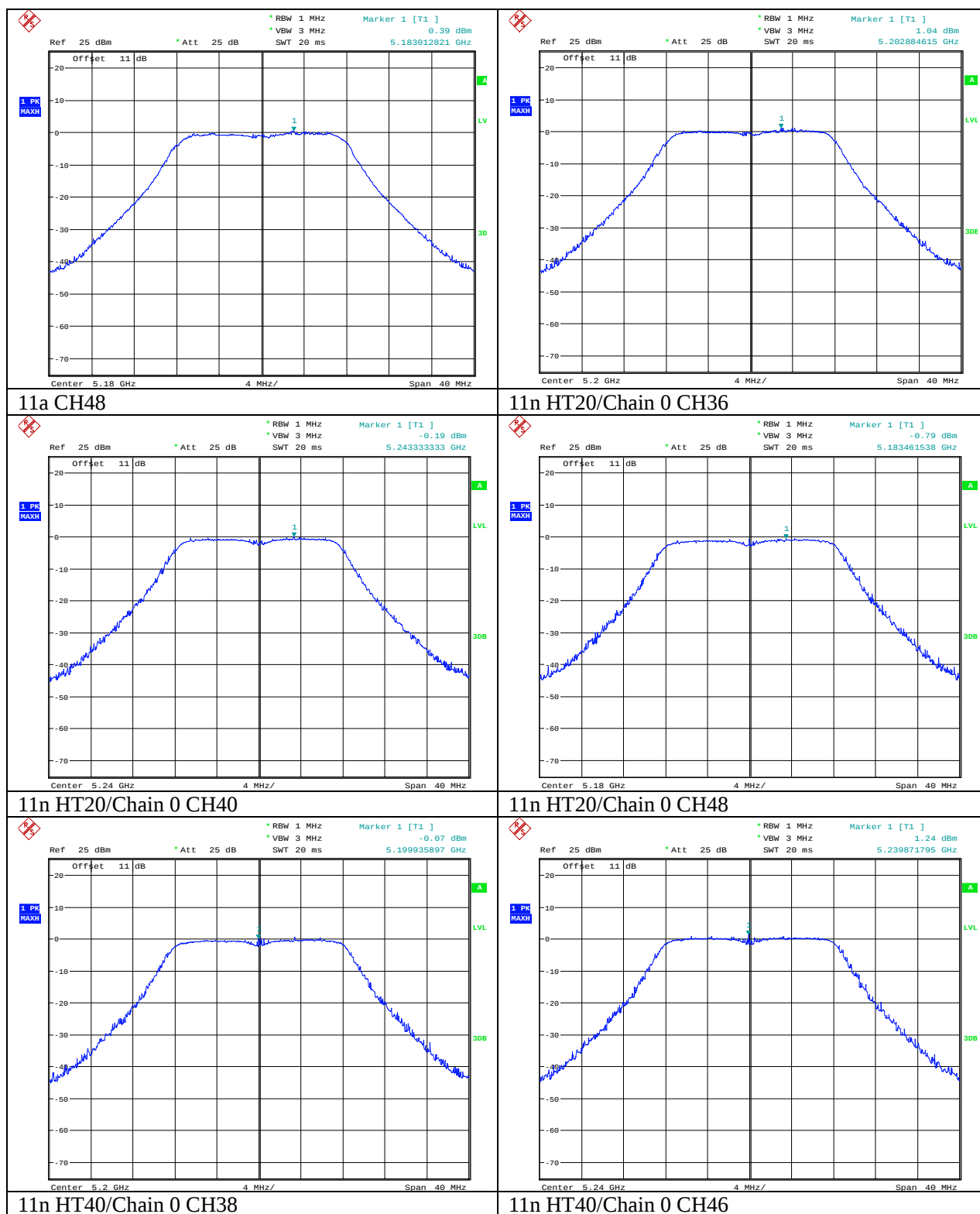
#### 6.5. Test Result

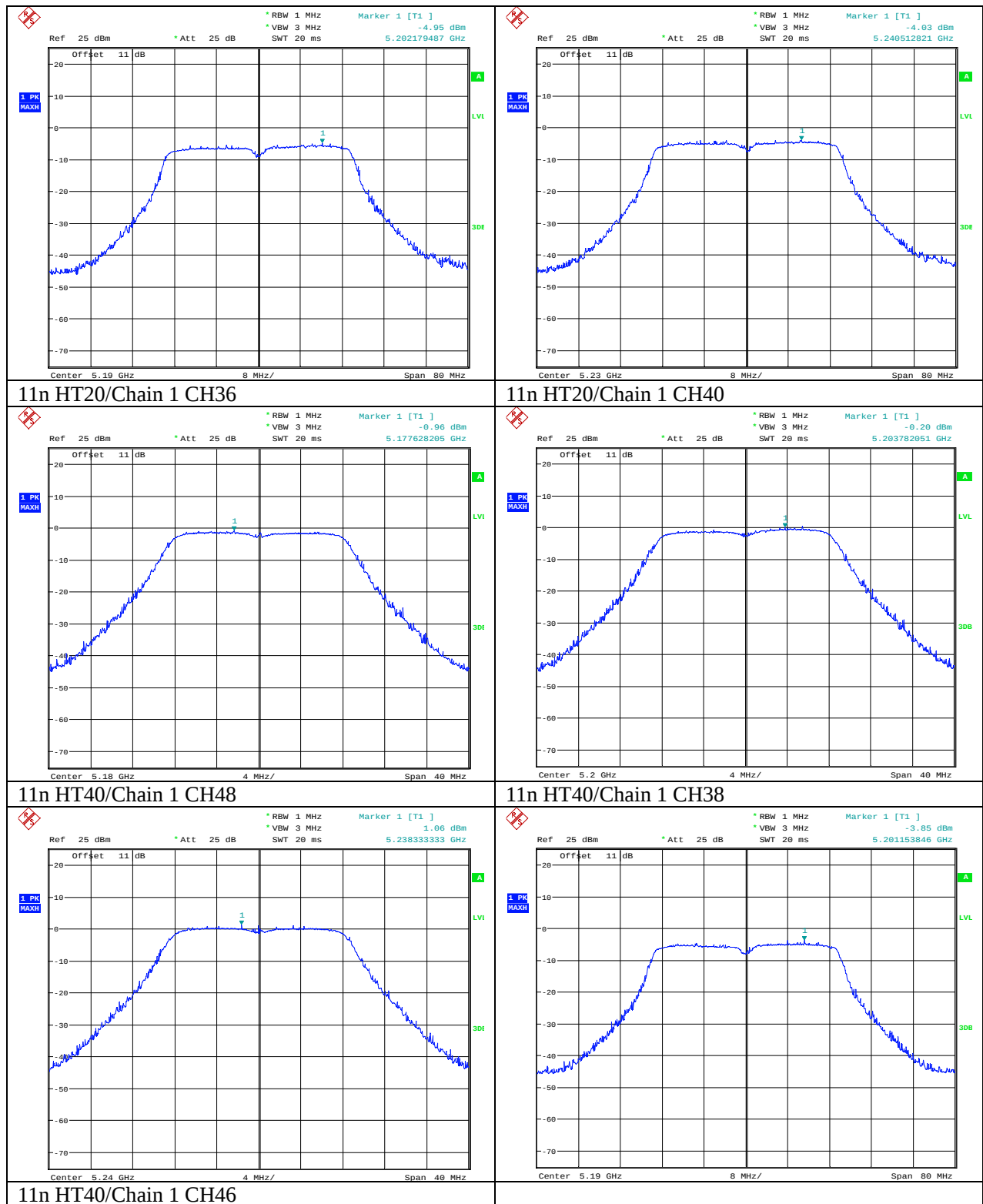
| 5180-5240MHz Band                                                                                                                                                                                                                       |       |                        |                          |                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------------|--------------------------|------------------------|
| Mode                                                                                                                                                                                                                                    | CH    | Channel0<br>(dBm/1MHz) | Channel1<br>(dBm/1MHz)   | Result<br>(dBm/1MHz)   |
| 11a                                                                                                                                                                                                                                     | CH36  | N/A                    | N/A                      | 1.04                   |
|                                                                                                                                                                                                                                         | CH40  | N/A                    | N/A                      | -0.19                  |
|                                                                                                                                                                                                                                         | CH48  | N/A                    | N/A                      | 0.39                   |
| 11n<br>HT20                                                                                                                                                                                                                             | CH36  | -0.79                  | -0.96                    | 2.14                   |
|                                                                                                                                                                                                                                         | CH40  | -0.07                  | -0.20                    | 2.88                   |
|                                                                                                                                                                                                                                         | CH48  | -1.24                  | 1.06                     | 3.07                   |
| 11n<br>HT40                                                                                                                                                                                                                             | CH38  | -4.95                  | -3.85                    | -1.35                  |
|                                                                                                                                                                                                                                         | CH46  | -4.03                  | -3.11                    | -0.54                  |
| Limit: 16.6dBm/1MHz                                                                                                                                                                                                                     |       |                        | Conclusion: PASS         |                        |
| Test Date : 2015/10/13                                                                                                                                                                                                                  |       |                        | Test Engineer : Toby     |                        |
| Remark: 1.Total Output Power (w) = Chain 0 (10^(Output Power /10)/1000)+ Chain 1 (10^(Output Power /10)/1000)<br>2. The maximum antenna gain is 6.4dBi; therefore the reduction due to antenna gain is 0.4dBi, so the limit is 16.6dBm. |       |                        |                          |                        |
|                                                                                                                                                                                                                                         |       |                        |                          |                        |
| 5725-5850MHz Band                                                                                                                                                                                                                       |       |                        |                          |                        |
| Mode                                                                                                                                                                                                                                    | CH    | Channel0<br>(dBm/1MHz) | Channel1<br>(dBm/0.5MHz) | Result<br>(dBm/0.5MHz) |
| 11a                                                                                                                                                                                                                                     | CH149 | N/A                    | N/A                      | -3.21                  |
|                                                                                                                                                                                                                                         | CH157 | N/A                    | N/A                      | -4.15                  |
|                                                                                                                                                                                                                                         | CH165 | N/A                    | N/A                      | -6.26                  |
| 11n<br>HT20                                                                                                                                                                                                                             | CH149 | -3.64                  | -1.98                    | 0.28                   |
|                                                                                                                                                                                                                                         | CH157 | -5.52                  | -4.66                    | -2.06                  |
|                                                                                                                                                                                                                                         | CH165 | -7.47                  | -5.58                    | -3.41                  |
| 11n<br>HT40                                                                                                                                                                                                                             | CH151 | -5.64                  | -7.03                    | -3.27                  |
|                                                                                                                                                                                                                                         | CH159 | -7.43                  | -7.03                    | -4.22                  |
| Limit: 29.6dBm/500KHz                                                                                                                                                                                                                   |       |                        | Conclusion: PASS         |                        |
| Test Date : 2015/10/13                                                                                                                                                                                                                  |       |                        | Test Engineer : Toby     |                        |
| Remark: 1.Total Output Power (w) = Chain 0 (10^(Output Power /10)/1000)+ Chain 1 (10^(Output Power /10)/1000)<br>2. The maximum antenna gain is 6.4dBi; therefore the reduction due to antenna gain is 0.4dBi, so the limit is 29.6dBm. |       |                        |                          |                        |

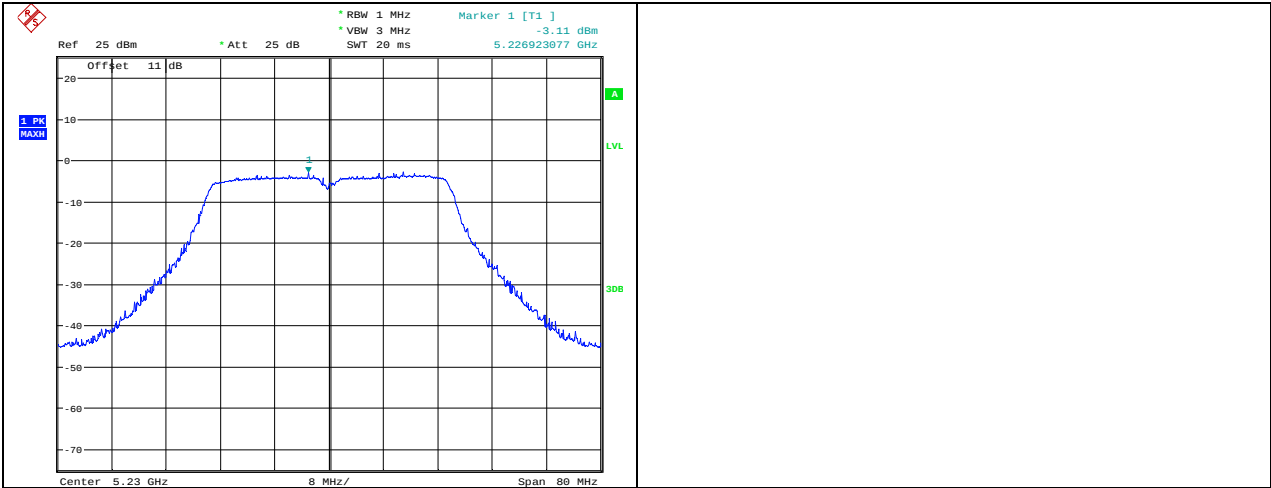
#### 6.6. The worst of the original test data

5180-5240MHz Band

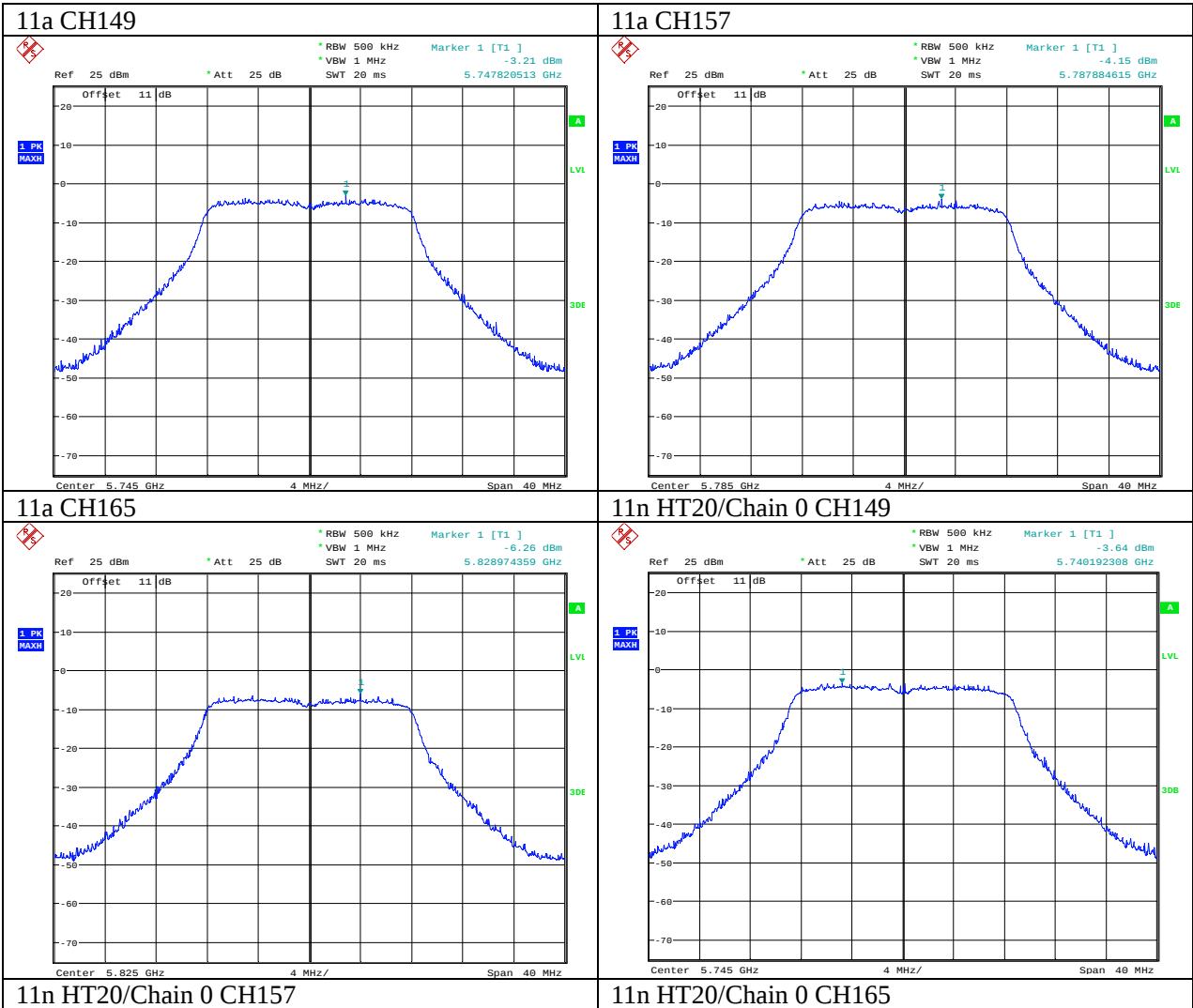
|          |          |
|----------|----------|
| 11a CH36 | 11a CH40 |
|----------|----------|

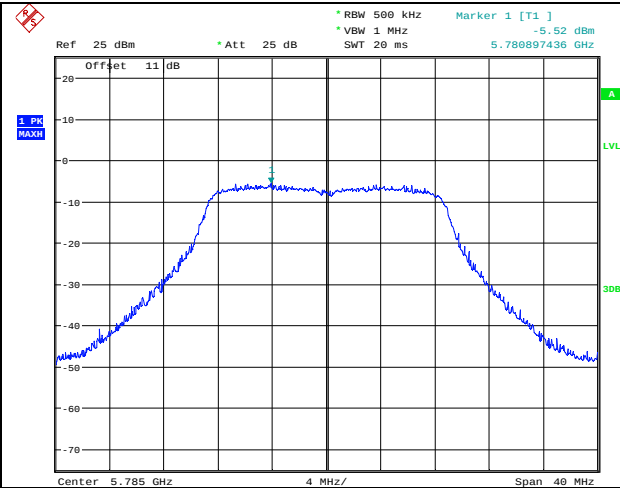




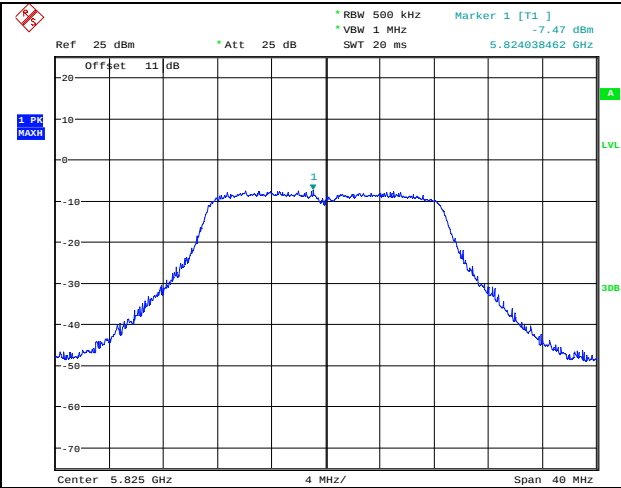


5745-5825MHz Band

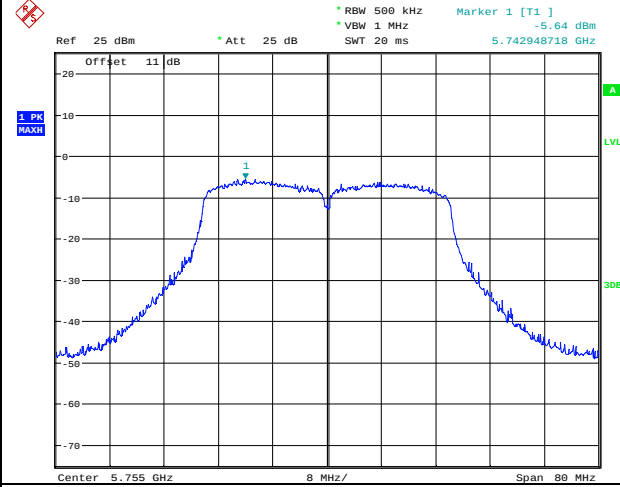




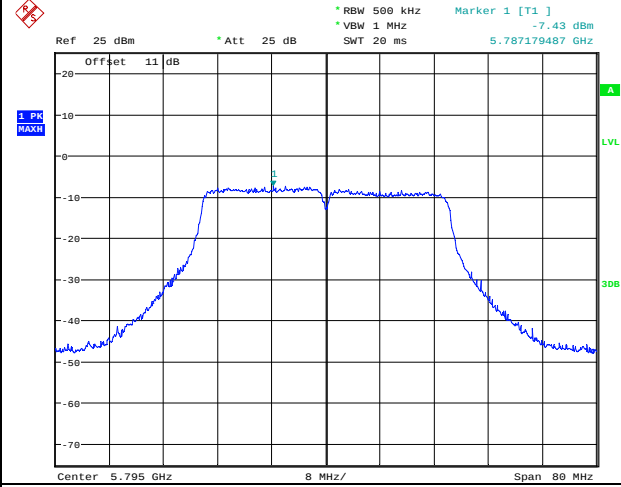
11n HT40/Chain 0 CH151



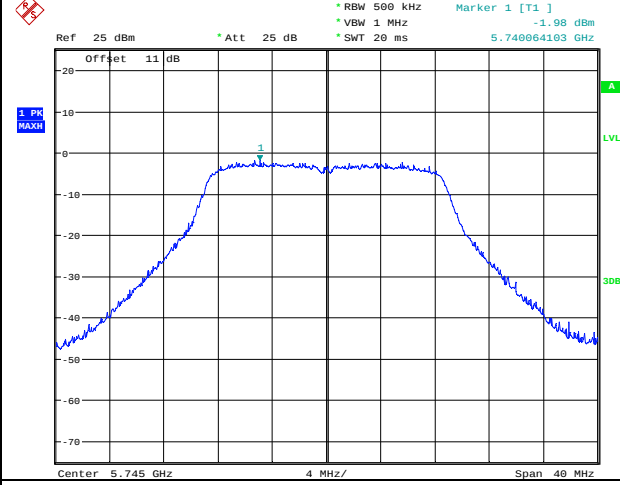
11n HT40/Chain 0 CH159



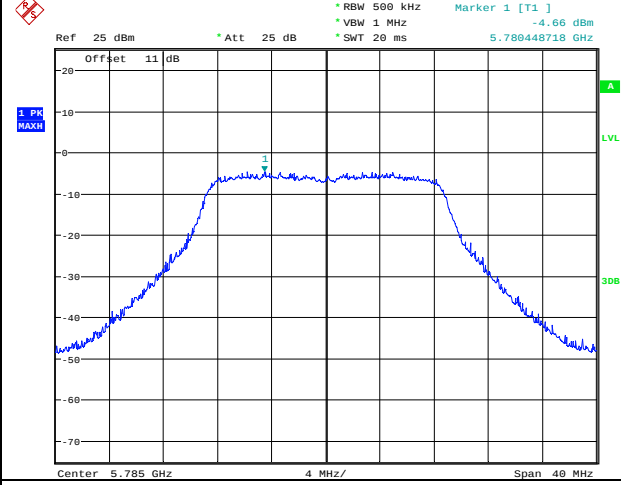
11n HT20/Chain 1 CH149



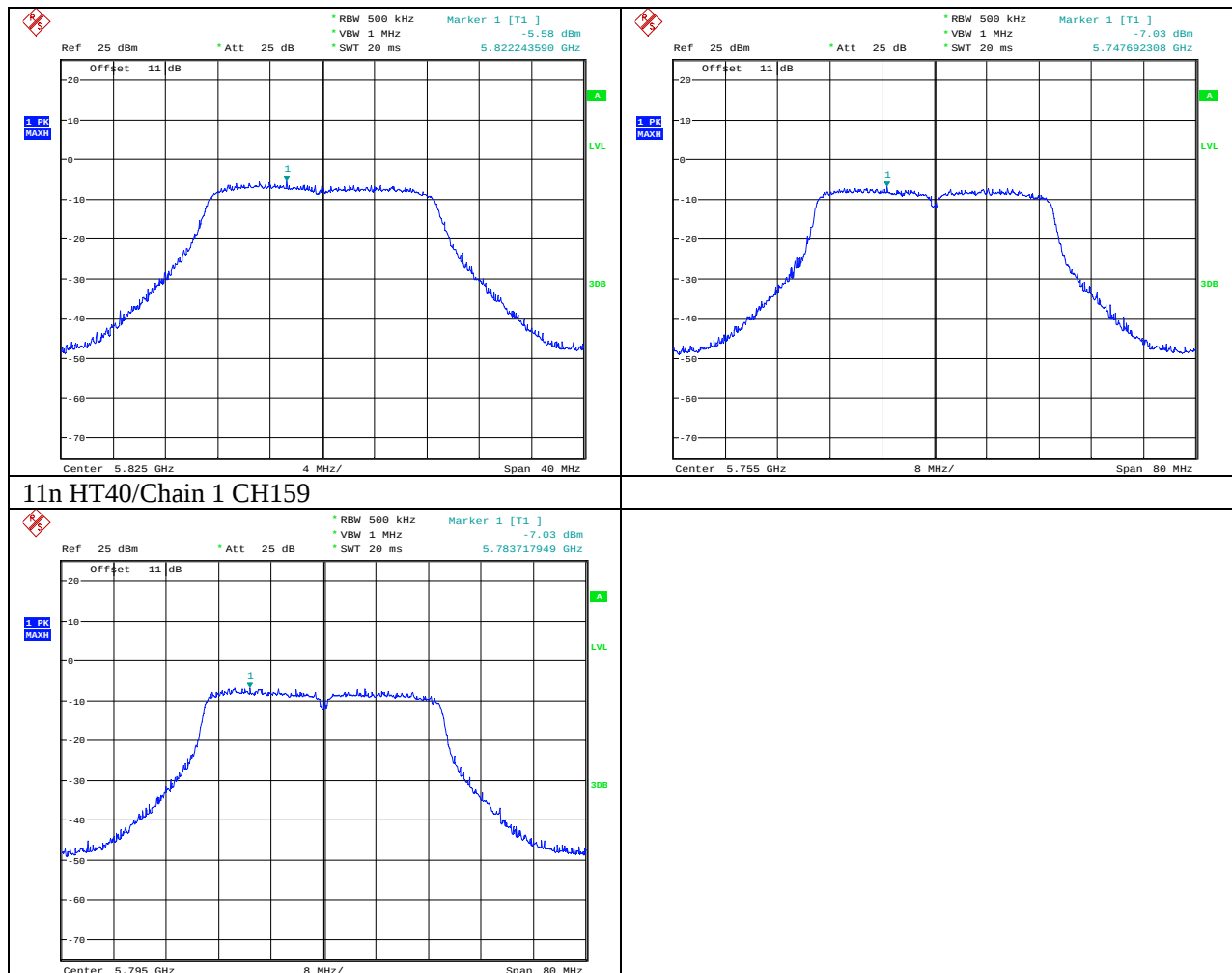
11n HT20/Chain 1 CH157



11n HT40/Chain 1 CH165



11n HT40/Chain 1 CH151



## 7. Frequency Stability Measurement

### 7.1. 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.

### 7.2. Measuring Instruments

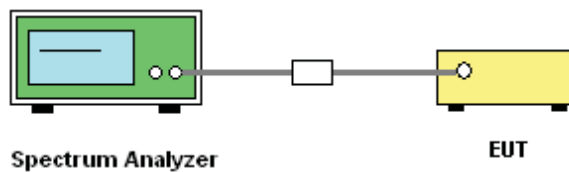
The measuring equipment is listed in the section 4 of this test report.

### 7.3. 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.

#### 7.4. Test Setup



#### 7.5. Test Result of Frequency Stability

| Mod. | Data Rate | NT X | Channel | Freq. (MHz) | Center Frequency (MHz) | Frequency Deviation (MHz) | Frequency Stability (ppm) | Temperature (C-) | Voltage (V) |
|------|-----------|------|---------|-------------|------------------------|---------------------------|---------------------------|------------------|-------------|
| 11a  | 6Mbps     | 1    | 36      | 5180        | 5180.019               | 0.019                     | 3.67                      | 25               | 45          |
| 11a  | 6Mbps     | 1    | 36      | 5180        | 5180.024               | 0.024                     | 4.63                      | 25               | 55          |
| 11a  | 6Mbps     | 1    | 36      | 5180        | 5180.025               | 0.025                     | 4.83                      | 55               | 50          |
| 11a  | 6Mbps     | 1    | 36      | 5180        | 5180.031               | 0.031                     | 5.98                      | 45               | 50          |
| 11a  | 6Mbps     | 1    | 36      | 5180        | 5180.029               | 0.029                     | 5.6                       | 35               | 50          |
| 11a  | 6Mbps     | 1    | 36      | 5180        | 5180.041               | 0.041                     | 7.92                      | 25               | 50          |
| 11a  | 6Mbps     | 1    | 36      | 5180        | 5180.044               | 0.044                     | 8.49                      | 10               | 50          |
| 11a  | 6Mbps     | 1    | 36      | 5180        | 5180.054               | 0.054                     | 1.04                      | 0                | 50          |
| 11a  | 6Mbps     | 1    | 36      | 5180        | 5180.032               | 0.032                     | 6.18                      | -10              | 50          |

Note1: Center Frequency = (Low Frequency + High Frequency) / 2.

Note2: The frequency band 5180-5240MHz which was verified by testing against other standard is less than 20 ppm which is sufficient to maintain the signal within the 5150-5250MHz band.

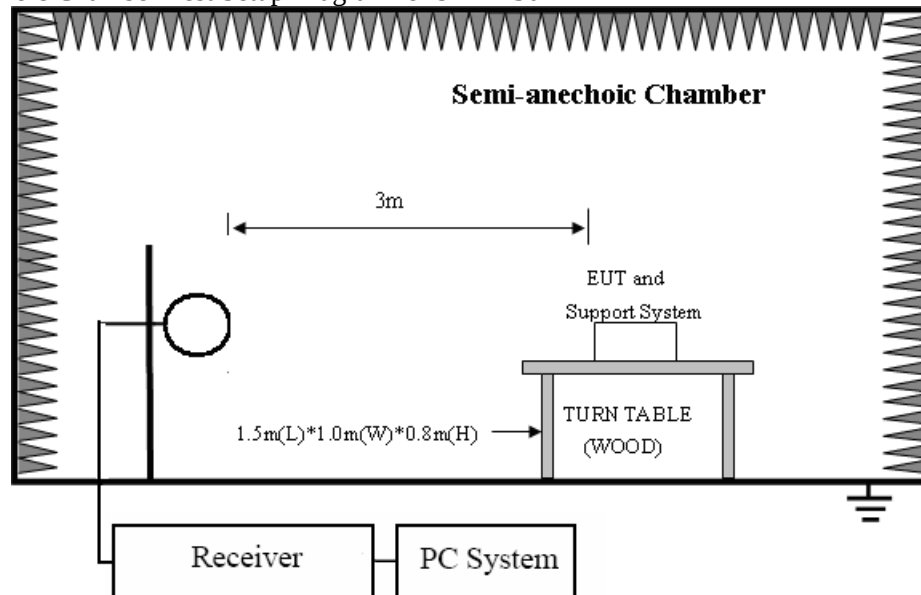
## 8. Emissions in restricted frequency bands

### 8.1. Test equipment

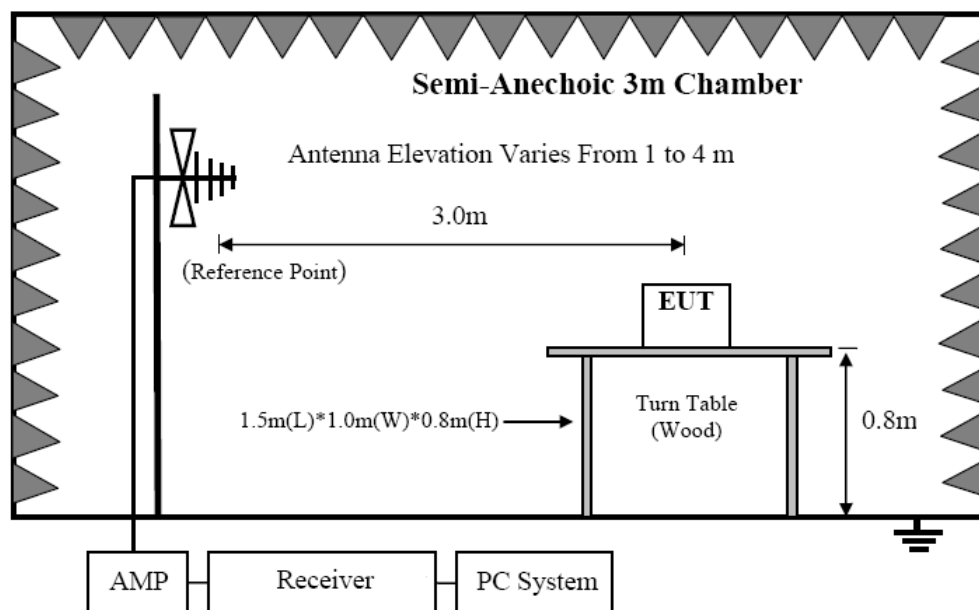
Please refer to Section 3 this report.

### 8.2. Block diagram of test setup

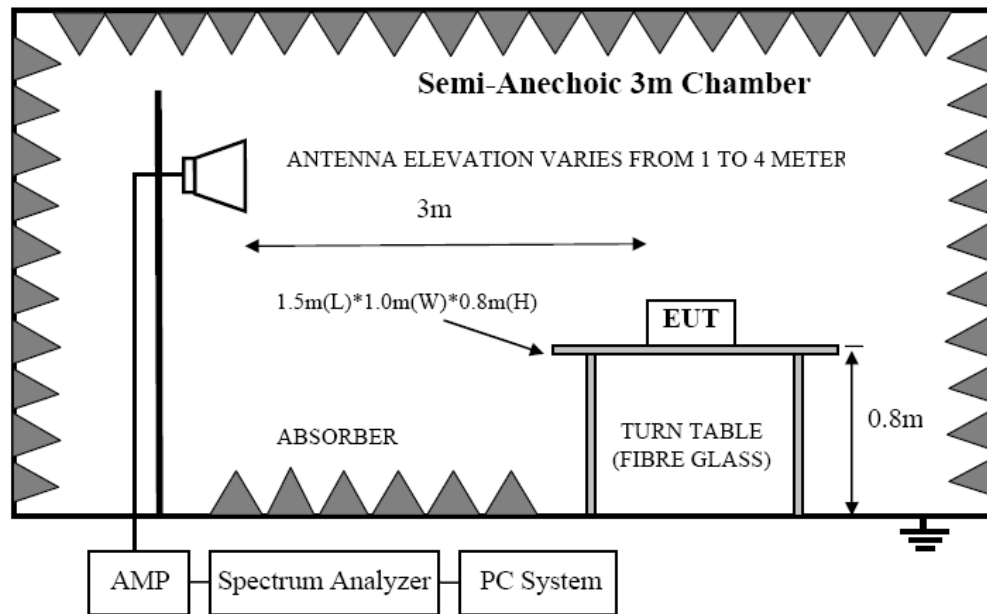
In 3m Anechoic Chamber Test Setup Diagram for 9KHz-30MHz



In 3m Anechoic Chamber Test Setup Diagram for 30MHz-1GHz



In 3m Anechoic Chamber Test Setup Diagram for frequency above 1GHz



Note: For harmonic emissions test a appropriate high pass filter was inserted in the input port of AMP.

### 8.3. Limit

#### 8.3.1 FCC 15.205 Restricted frequency band

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

#### 8.3.2 FCC 15.209 Limit.

| FREQUENCY<br>MHz | DISTANCE<br>Meters | FIELD STRENGTHS LIMIT |               |
|------------------|--------------------|-----------------------|---------------|
|                  |                    | μV/m                  | dB(μV)/m      |
| 0.009 ~ 0.490    | 300                | 2400/F(KHz)           | 67.6-20log(F) |
| 0.490 ~ 1.705    | 30                 | 24000/F(KHz)          | 87.6-20log(F) |
| 1.705 ~ 30.0     | 30                 | 30                    | 29.54         |
| 30 ~ 88          | 3                  | 100                   | 40.0          |
| 88 ~ 216         | 3                  | 150                   | 43.5          |
| 216 ~ 960        | 3                  | 200                   | 46.0          |

|            |   |                                                 |      |
|------------|---|-------------------------------------------------|------|
| 960 ~ 1000 | 3 | 500                                             | 54.0 |
| Above 1000 | 3 | 74.0 dB(μV)/m (Peak)<br>54.0 dB(μV)/m (Average) |      |

Note: (1) The emission limits shown in the above table are based on measurements employing a CISPR QP detector except for the frequency bands 9-90KHz, 110-490KHz and above 1000MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector.

(2) At frequencies below 30MHz, measurement may be performed at a distance closer than that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$$\text{Limit}_{3m}(\text{dBuV/m}) = \text{Limit}_{30m}(\text{dBuV/m}) + 40\text{Log}(30m/3m)$$

### 8.3.3 Limit for this EUT

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

## 8.4. Test Procedure

- (1) EUT height should be 0.8m for below 1GHz at a semi - anechoic chamber while EUT height should be 1.5m for above 1GHz at full chamber or semi - anechoic chamber ground with absorbers
- (2) Setup EUT and assistant system according clause 2.3 and 8.2
- (3) Test antenna was located 3m from the EUT on an adjustable mast, and the antenna used as below table.

| Test frequency range | Test antenna used                      |
|----------------------|----------------------------------------|
| 9KHz-30MHz           | Active Loop antenna                    |
| 30MHz-1GHz           | Trilog Broadband Antenna               |
| 1GHz-18GHz           | Double Ridged Horn Antenna(1GHz-18GHz) |
| 18GHz-40GHz          | Horn Antenna(18GHz-40GHz)              |

According ANSI C63.10:2013 clause 6.4.4.2 and 6.5.3, for measurements below 30 MHz, the loop antenna was positioned with its plane vertical from the EUT and rotated about its vertical axis for maximum response at each azimuth position around the EUT. And the loop antenna also be positioned with its plane horizontal at the specified distance from the EUT. The center of the loop is 1 m above the ground. for measurement above 30MHz, the Trilog Broadband Antenna or Horn Antenna was located 3m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

- (4) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions from 9KHz to 25GHz:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1m to 4m(Except loop antenna, it's fixed 1m above ground.)

(b) Change work frequency or channel of device if practicable.

- (c) Change modulation type of device if practicable.
- (d) Change power supply range from 85% to 115% of the rated supply voltage
- (e) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

Spectrum frequency from 9KHz to 25GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 9KHz to 30MHz and 18GHz to 25GHz, so below final test was performed with frequency range from 30MHz to 18GHz.

- (5) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10 2013 on Radiated Emission test.
- (6) The emissions from 9KHz to 1GHz were measured based on CISPR QP detector except for the frequency bands 9-90KHz, 110-490KHz, for emissions from 9KHz-90KHz, 110KHz-490KHz and above 1GHz were measured based on average detector, for emissions above 1GHz, peak emissions also be measured and need comply with Peak limit.
- (7) The emissions from 9KHz to 1GHz, QP or average values were measured with EMI receiver with below RBW

| Frequency band | RBW    |
|----------------|--------|
| 9KHz-150KHz    | 200Hz  |
| 150KHz-30MHz   | 9KHz   |
| 30MHz-1GHz     | 120KHz |

- (8) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1MHz, VBW is set at 3MHz, Peak detector for Peak measure, RMS detector for AV value

## 8.5. Test result

### PASS. (See below detailed test result)

All the emissions except fundamental emission from 9KHz to 40GHz were comply with 15.209 limit.

Note1: According exploratory test no any obvious emission were detected from 9KHz to 30MHz and 18GHz to 40GHz, so the final test was performed with frequency range from 30MHz to 18GHz and recorded in below.

Note2: For emissions below 1GHz, according exploratory explorer test, when change Tx mode and channel, have no distinct influence on emissions level, so for emissions below 1GHz, the final test was only performed with EUT working in 11a, Tx CH40 mode.

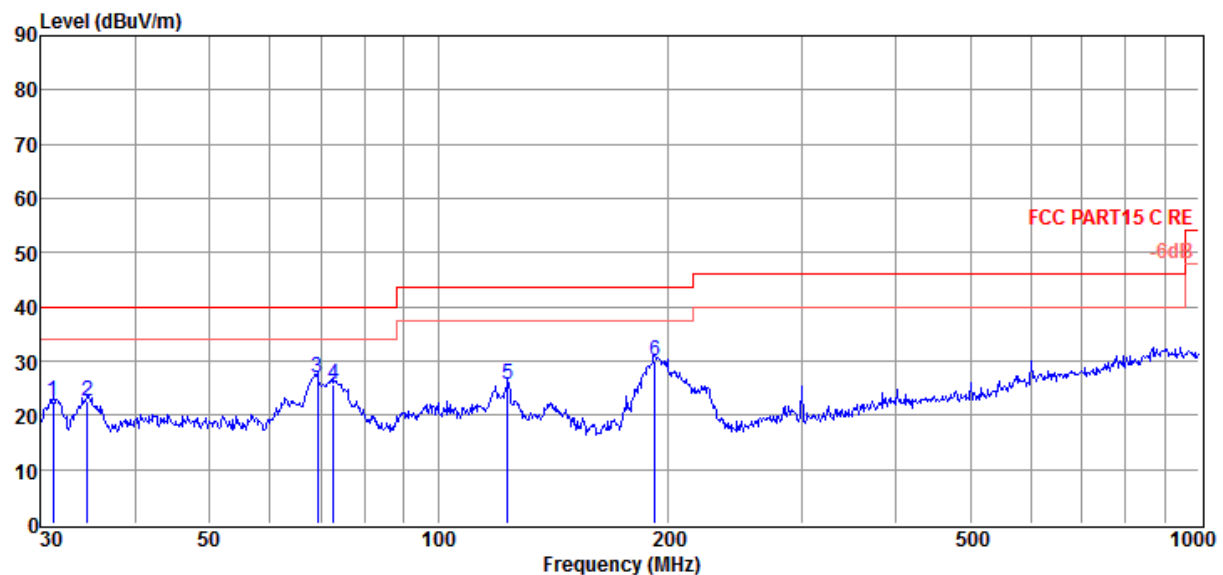
Note3: For below test data, when the limit tabular marked “/” means this frequency point is the fundamental emission and no need comply with this limit.

## Radiated Emission test (below 1GHz)

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:\2015 Report Data\15Q0831-1\RE.EM6**  
**Test Date** : 2015-09-24 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : TX Mode  
**Condition** : Temp:24.5'C,Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 VULB 9163/3m/HORIZONTAL  
**Memo** :

Data: 3



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 31.18         | 9.77                    | 11.95                       | 0.92                | 22.64                       | 40.00                     | -17.36                | QP       | HORIZONTAL   |
| 2              | 34.52         | 9.35                    | 12.30                       | 0.94                | 22.59                       | 40.00                     | -17.41                | QP       | HORIZONTAL   |
| 3              | 69.36         | 16.54                   | 9.10                        | 1.20                | 26.84                       | 40.00                     | -13.16                | QP       | HORIZONTAL   |
| 4              | 72.85         | 17.36                   | 7.20                        | 1.25                | 25.81                       | 40.00                     | -14.19                | QP       | HORIZONTAL   |
| 5              | 123.27        | 14.80                   | 9.37                        | 1.58                | 25.75                       | 43.50                     | -17.75                | QP       | HORIZONTAL   |
| 6              | 192.42        | 17.48                   | 10.53                       | 2.12                | 30.13                       | 43.50                     | -13.37                | QP       | HORIZONTAL   |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

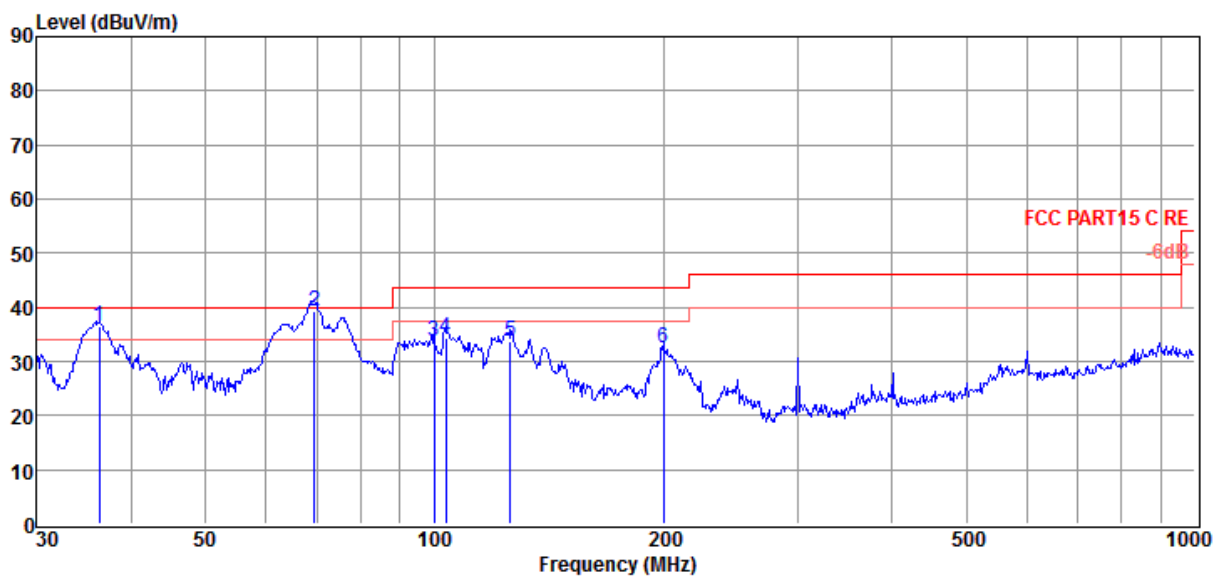
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:\2015 Report Data\15Q0831-1\RE.EM6**  
**Test Date** : 2015-09-24 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : TX Mode  
**Condition** : Temp:24.5'C,Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 VULB 9163/3m/VERTICAL  
**Memo** :

Data: 4



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 36.25         | 23.12                   | 12.30                       | 0.95                | 36.37                       | 40.00                     | -3.63                 | QP       | VERTICAL     |
| 2              | 69.60         | 28.92                   | 9.10                        | 1.21                | 39.23                       | 40.00                     | -0.77                 | QP       | VERTICAL     |
| 3              | 99.88         | 19.86                   | 12.50                       | 1.49                | 33.85                       | 43.50                     | -9.65                 | QP       | VERTICAL     |
| 4              | 103.44        | 20.44                   | 12.43                       | 1.50                | 34.37                       | 43.50                     | -9.13                 | QP       | VERTICAL     |
| 5              | 125.89        | 23.41                   | 8.83                        | 1.59                | 33.83                       | 43.50                     | -9.67                 | QP       | VERTICAL     |
| 6              | 199.99        | 20.45                   | 9.80                        | 2.15                | 32.40                       | 43.50                     | -11.10                | QP       | VERTICAL     |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.  
 2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.  
 3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

**Radiated Emission test (above 1GHz)**

| Freq<br>(MHz)          | Read<br>level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>(dB) | Cable<br>Loss<br>(dB) | Result<br>Level<br>(dBμV/m) | Limit<br>(dBμ<br>V/m) | Margin<br>(dB) | Detector<br>type | Polarization |
|------------------------|-------------------------|-----------------------------|-----------------------|-----------------------|-----------------------------|-----------------------|----------------|------------------|--------------|
| <b>11a CH36</b>        |                         |                             |                       |                       |                             |                       |                |                  |              |
| 10360.00               | 32.48                   | 38.55                       | 33.64                 | 11.24                 | 48.63                       | 74.00                 | -25.37         | Peak             | HORIZONTAL   |
| 16606.00               | 34.71                   | 43.68                       | 36.72                 | 13.79                 | 55.46                       | 74.00                 | -18.54         | Peak             | HORIZONTAL   |
| 16606.00               | 20.30                   | 43.68                       | 36.72                 | 13.79                 | 41.05                       | 54.00                 | -12.95         | Average          | HORIZONTAL   |
| 10360.00               | 33.95                   | 38.55                       | 33.64                 | 11.24                 | 50.10                       | 74.00                 | -23.90         | Peak             | VERTICAL     |
| 16589.00               | 34.47                   | 43.68                       | 36.69                 | 13.78                 | 55.24                       | 74.00                 | -18.76         | Peak             | VERTICAL     |
| 16589.00               | 20.80                   | 43.68                       | 36.69                 | 13.78                 | 41.57                       | 54.00                 | -12.43         | Average          | VERTICAL     |
| <b>11a CH40</b>        |                         |                             |                       |                       |                             |                       |                |                  |              |
| 10400.00               | 33.36                   | 38.56                       | 33.66                 | 11.26                 | 49.52                       | 74.00                 | -24.48         | Peak             | HORIZONTAL   |
| 16521.00               | 34.79                   | 43.70                       | 36.67                 | 13.77                 | 55.59                       | 74.00                 | -18.41         | Peak             | HORIZONTAL   |
| 16521.00               | 21.10                   | 43.70                       | 36.67                 | 13.77                 | 41.90                       | 54.00                 | -12.10         | Average          | HORIZONTAL   |
| 10400.00               | 36.15                   | 38.56                       | 33.66                 | 11.26                 | 52.31                       | 74.00                 | -21.69         | Peak             | VERTICAL     |
| 16844.00               | 34.86                   | 43.63                       | 36.88                 | 13.85                 | 55.46                       | 74.00                 | -18.54         | Peak             | VERTICAL     |
| 16844.00               | 21.00                   | 43.63                       | 36.88                 | 13.85                 | 41.60                       | 54.00                 | -12.40         | Average          | VERTICAL     |
| <b>11a CH48</b>        |                         |                             |                       |                       |                             |                       |                |                  |              |
| 10480.00               | 32.11                   | 38.59                       | 33.69                 | 11.30                 | 48.31                       | 74.00                 | -25.69         | Peak             | HORIZONTAL   |
| 16674.00               | 34.54                   | 43.67                       | 36.74                 | 13.80                 | 55.27                       | 74.00                 | -18.73         | Peak             | HORIZONTAL   |
| 16674.00               | 21.19                   | 43.67                       | 36.74                 | 13.80                 | 41.92                       | 54.00                 | -12.08         | Average          | HORIZONTAL   |
| 10480.00               | 36.68                   | 38.59                       | 33.69                 | 11.30                 | 52.88                       | 74.00                 | -21.12         | Peak             | VERTICAL     |
| 16521.00               | 35.18                   | 43.70                       | 36.67                 | 13.77                 | 55.98                       | 74.00                 | -18.02         | Peak             | VERTICAL     |
| 16521.00               | 21.00                   | 43.70                       | 36.67                 | 13.77                 | 41.80                       | 54.00                 | -12.20         | Average          | VERTICAL     |
| Conclusion: Pass       |                         |                             |                       |                       |                             |                       |                |                  |              |
| Test Date : 2015/10/19 |                         |                             |                       |                       | Test Engineer: Toby         |                       |                |                  |              |

Note: 1.30MHz~18GHz: (Scan with 11a, 11n HT20 and 11n HT40, the worst case is 11a Mode)

2. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

| Freq<br>(MHz)          | Read<br>level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>(dB) | Cable<br>Loss<br>(dB) | Result<br>Level<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Detector<br>type | Polarization |
|------------------------|-------------------------|-----------------------------|-----------------------|-----------------------|-----------------------------|-------------------|----------------|------------------|--------------|
| <b>11a CH149</b>       |                         |                             |                       |                       |                             |                   |                |                  |              |
| 8055.00                | 34.66                   | 37.52                       | 31.24                 | 10.39                 | 51.33                       | 74.00             | -22.67         | Peak             | HORIZONTAL   |
| 11490.00               | 31.34                   | 38.90                       | 34.37                 | 12.08                 | 47.95                       | 74.00             | -26.05         | Peak             | HORIZONTAL   |
| 16436.00               | 33.97                   | 43.62                       | 36.62                 | 13.75                 | 54.72                       | 74.00             | -19.28         | Peak             | HORIZONTAL   |
| 16436.00               | 21.01                   | 43.62                       | 36.62                 | 13.75                 | 41.76                       | 54.00             | -12.24         | Average          | HORIZONTAL   |
| 6984.00                | 34.44                   | 37.07                       | 29.42                 | 9.84                  | 51.93                       | 74.00             | -22.07         | Peak             | VERTICAL     |
| 11490.00               | 32.41                   | 38.90                       | 34.37                 | 12.08                 | 49.02                       | 74.00             | -24.98         | Peak             | VERTICAL     |
| 16640.00               | 35.47                   | 43.67                       | 36.74                 | 13.80                 | 56.20                       | 74.00             | -17.80         | Peak             | VERTICAL     |
| 16640.00               | 21.70                   | 43.67                       | 36.74                 | 13.80                 | 42.43                       | 54.00             | -11.57         | Average          | VERTICAL     |
| <b>11a CH157</b>       |                         |                             |                       |                       |                             |                   |                |                  |              |
| 7001.00                | 34.33                   | 37.10                       | 29.42                 | 9.86                  | 51.87                       | 74.00             | -22.13         | Peak             | HORIZONTAL   |
| 11570.00               | 32.25                   | 38.93                       | 34.40                 | 12.12                 | 48.90                       | 74.00             | -25.10         | Peak             | HORIZONTAL   |
| 16606.00               | 35.22                   | 43.68                       | 36.72                 | 13.79                 | 55.97                       | 74.00             | -18.03         | Peak             | HORIZONTAL   |
| 16606.00               | 21.20                   | 43.68                       | 36.72                 | 13.79                 | 41.95                       | 54.00             | -12.05         | Average          | HORIZONTAL   |
| 7035.00                | 34.98                   | 37.12                       | 29.42                 | 9.86                  | 52.54                       | 74.00             | -21.46         | Peak             | VERTICAL     |
| 11570.00               | 32.16                   | 38.93                       | 34.40                 | 12.12                 | 48.81                       | 74.00             | -25.19         | Peak             | VERTICAL     |
| 16521.00               | 34.87                   | 43.70                       | 36.67                 | 13.77                 | 55.67                       | 74.00             | -18.33         | Peak             | VERTICAL     |
| 16521.00               | 21.20                   | 43.70                       | 36.67                 | 13.77                 | 42.00                       | 54.00             | -12.00         | Average          | VERTICAL     |
| <b>11a CH165</b>       |                         |                             |                       |                       |                             |                   |                |                  |              |
| 7205.00                | 34.91                   | 37.22                       | 29.68                 | 9.94                  | 52.39                       | 74.00             | -21.61         | Peak             | HORIZONTAL   |
| 11650.00               | 31.17                   | 38.96                       | 34.44                 | 12.16                 | 47.85                       | 74.00             | -26.15         | Peak             | HORIZONTAL   |
| 16470.00               | 34.51                   | 43.66                       | 36.63                 | 13.76                 | 55.30                       | 74.00             | -18.70         | Peak             | HORIZONTAL   |
| 16470.00               | 20.69                   | 43.66                       | 36.63                 | 13.76                 | 41.48                       | 54.00             | -12.52         | Average          | HORIZONTAL   |
| 11650.00               | 33.16                   | 38.96                       | 34.44                 | 12.16                 | 49.84                       | 74.00             | -24.16         | Peak             | VERTICAL     |
| 16470.00               | 34.23                   | 43.66                       | 36.63                 | 13.76                 | 55.02                       | 74.00             | -18.98         | Peak             | VERTICAL     |
| 16470.00               | 21.89                   | 43.66                       | 36.63                 | 13.76                 | 42.68                       | 54.00             | -11.32         | Average          | VERTICAL     |
| Conclusion: Pass       |                         |                             |                       |                       |                             |                   |                |                  |              |
| Test Date : 2015/10/19 |                         |                             |                       |                       | Test Engineer: Toby         |                   |                |                  |              |

Note: 1.30MHz~18GHz: (Scan with 11a, 11n HT20 and 11n HT40, the worst case is 11a Mode)

2. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

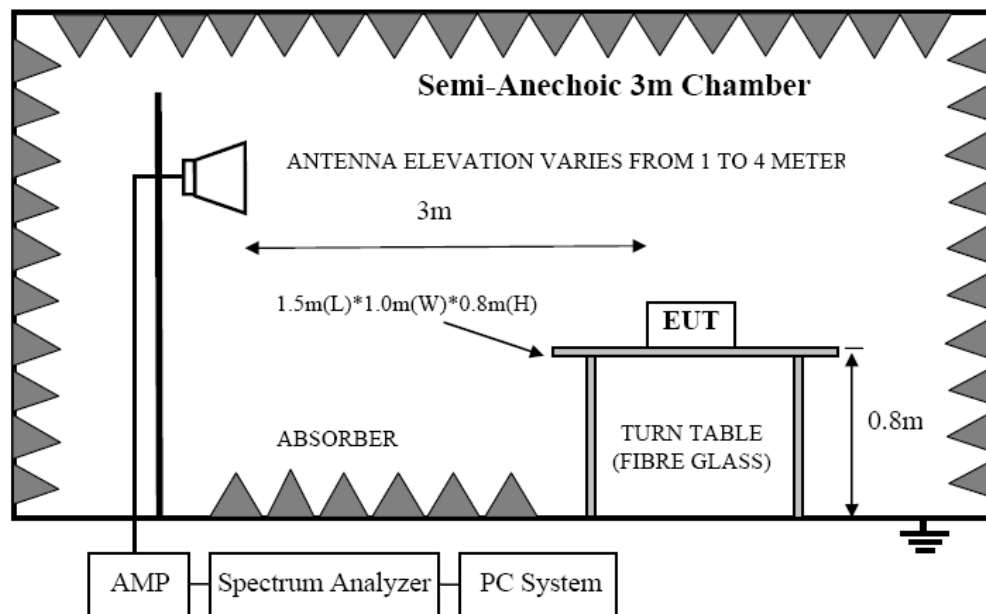
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## 9. Band Edge Compliance

### 9.1. Test equipment

Please refer to Section 3 this report.

### 9.2. Block diagram of test setup



### 9.3. Limit

For transmitters operating in the 5.15-5.25 GHz and 5.725-5.85G band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.

### 9.4. Test Procedure

Same with clause 7.4 except change investigated frequency range from 5.15-5.25 GHz, 5.725-5.85G.

Remark: All restriction band have been tested, and only the worse case is shown in report.

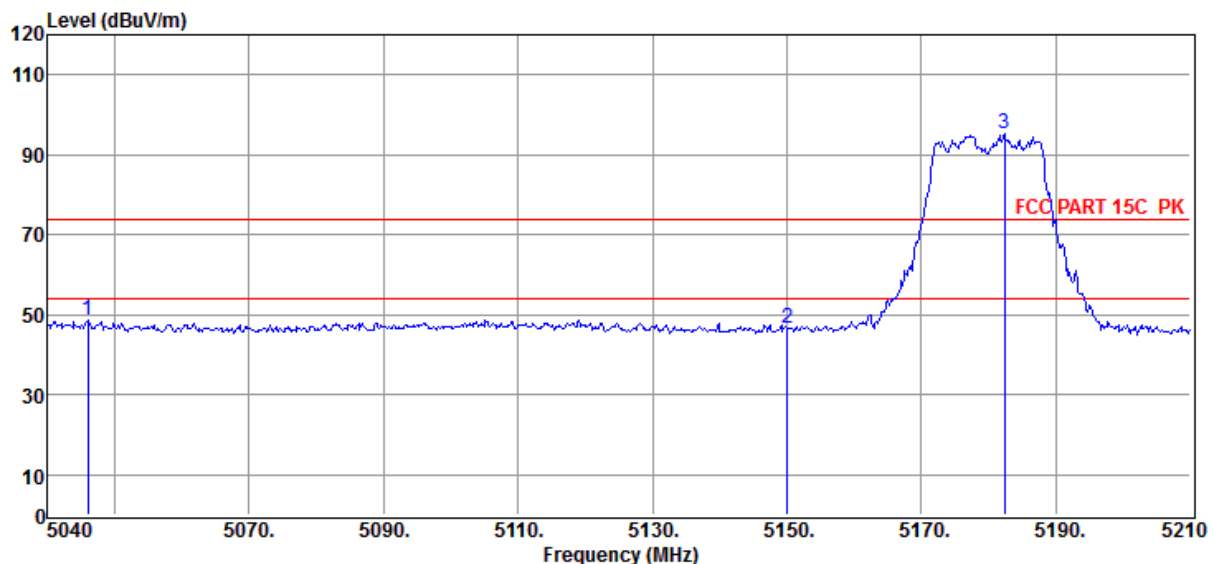
### 9.5. Test result

**PASS. (See below detailed test result)**

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:\2015 Report Data\15Q0831-1\RE.EM6**  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11a Tx mode 5180MHz  
**Condition** : Temp:24.5'C,Humi:55%,  
                   Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/HORIZONTAL  
**Memo** :

Data: 79



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5045.95       | 33.79                   | 35.66                       | 29.02               | 8.22                | 48.65                       | 74.00                     | -25.35                | Peak     | HORIZONTAL   |
| 2              | 5150.00       | 31.93                   | 35.58                       | 29.04               | 8.28                | 46.75                       | 74.00                     | -27.25                | Peak     | HORIZONTAL   |
| 3              | 5182.29       | 80.38                   | 35.55                       | 29.04               | 8.30                | 95.19                       | /                         | /                     | Peak     | HORIZONTAL   |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

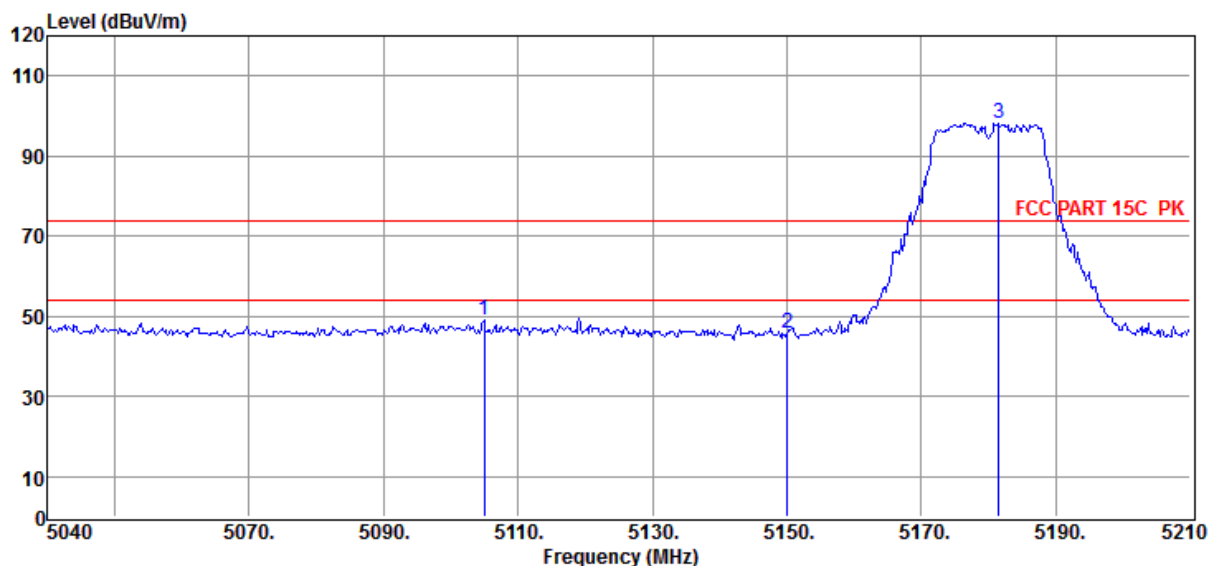
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:\2015 Report Data\15Q0831-1\RE.EM6**  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11a Tx mode 5180MHz  
**Condition** : Temp:24.5°C,Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/VERTICAL  
**Memo** :

Data: 80



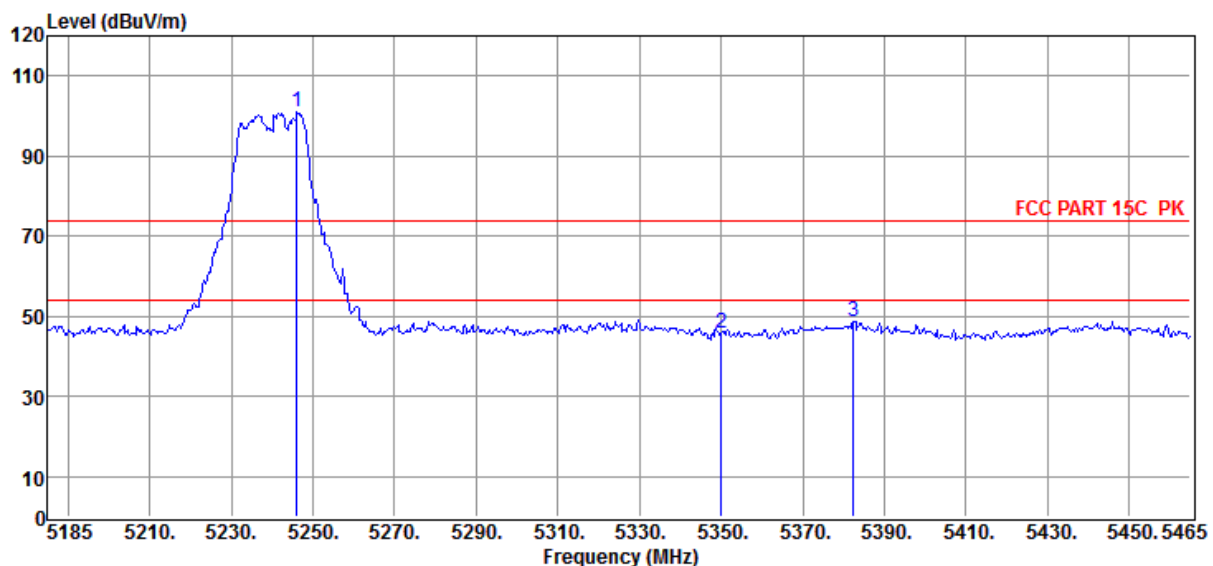
| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5104.94       | 34.38                   | 35.62                       | 29.03               | 8.26                | 49.23                       | 74.00                     | -24.77                | Peak     | VERTICAL     |
| 2              | 5150.00       | 30.80                   | 35.58                       | 29.04               | 8.28                | 45.62                       | 74.00                     | -28.38                | Peak     | VERTICAL     |
| 3              | 5181.44       | 83.45                   | 35.55                       | 29.04               | 8.30                | 98.26                       | /                         | /                     | Peak     | VERTICAL     |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:** \2015 Report Data\15Q0831-1\RE.EM6  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11a Tx mode 5240MHz  
**Condition** : Temp:24.5°C, Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/VERTICAL  
**Memo** :

Data: 85



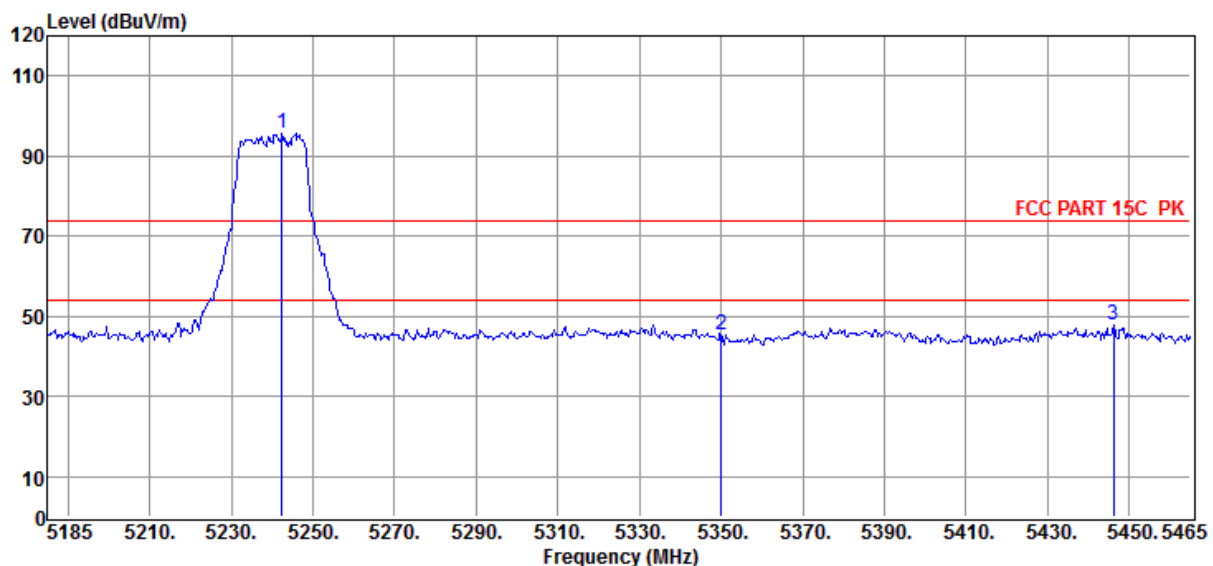
| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5246.04       | 86.18                   | 35.50                       | 29.05               | 8.32                | 100.95                      | /                         | /                     | Peak     | VERTICAL     |
| 2              | 5350.00       | 30.95                   | 35.42                       | 29.06               | 8.39                | 45.70                       | 74.00                     | -28.30                | Peak     | VERTICAL     |
| 3              | 5382.40       | 33.95                   | 35.39                       | 29.07               | 8.41                | 48.68                       | 74.00                     | -25.32                | Peak     | VERTICAL     |

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:** \2015 Report Data\15Q0831-1\RE.EM6  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11a Tx mode 5240MHz  
**Condition** : Temp:24.5°C, Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/HORIZONTAL  
**Memo** :

Data: 86



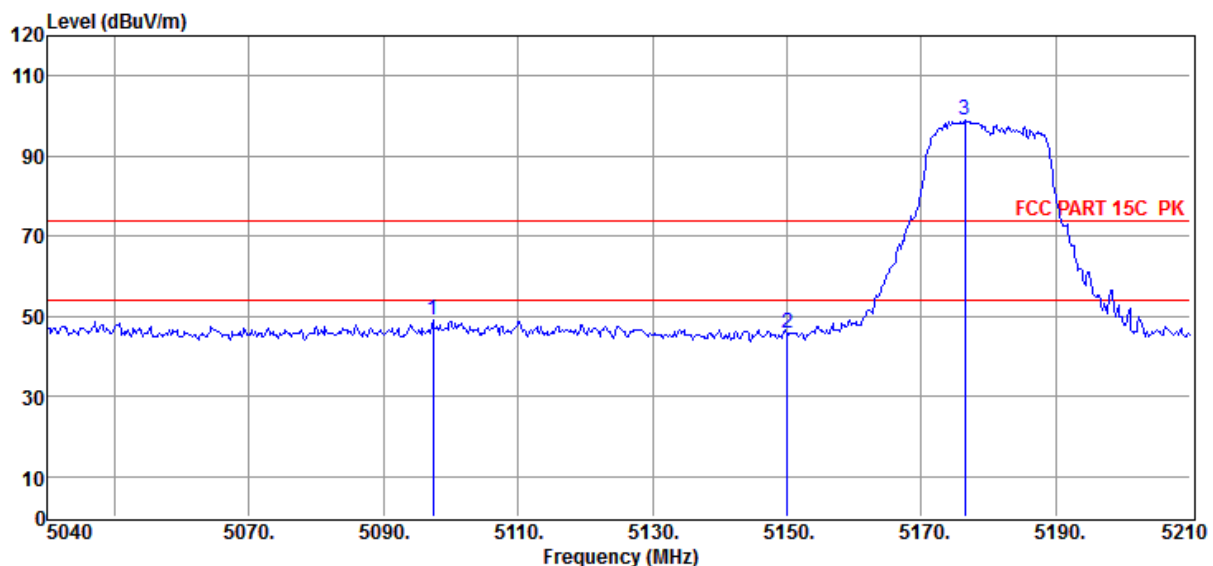
| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5242.40       | 80.91                   | 35.50                       | 29.05               | 8.32                | 95.68                       | /                         | /                     | Peak     | HORIZONTAL   |
| 2              | 5350.00       | 30.55                   | 35.42                       | 29.06               | 8.39                | 45.30                       | 74.00                     | -28.70                | Peak     | HORIZONTAL   |
| 3              | 5446.24       | 32.96                   | 35.34                       | 29.08               | 8.44                | 47.66                       | 74.00                     | -26.34                | Peak     | HORIZONTAL   |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:** \2015 Report Data\15Q0831-1\RE.EM6  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11n HT20 Tx mode 5180MHz  
**Condition** : Temp:24.5°C, Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/VERTICAL  
**Memo** :

Data: 89



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5097.29       | 34.13                   | 35.62                       | 29.03               | 8.24                | 48.96                       | 74.00                     | -25.04                | Peak     | VERTICAL     |
| 2              | 5150.00       | 31.06                   | 35.58                       | 29.04               | 8.28                | 45.88                       | 74.00                     | -28.12                | Peak     | VERTICAL     |
| 3              | 5176.51       | 84.02                   | 35.55                       | 29.04               | 8.28                | 98.81                       | /                         | /                     | Peak     | VERTICAL     |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

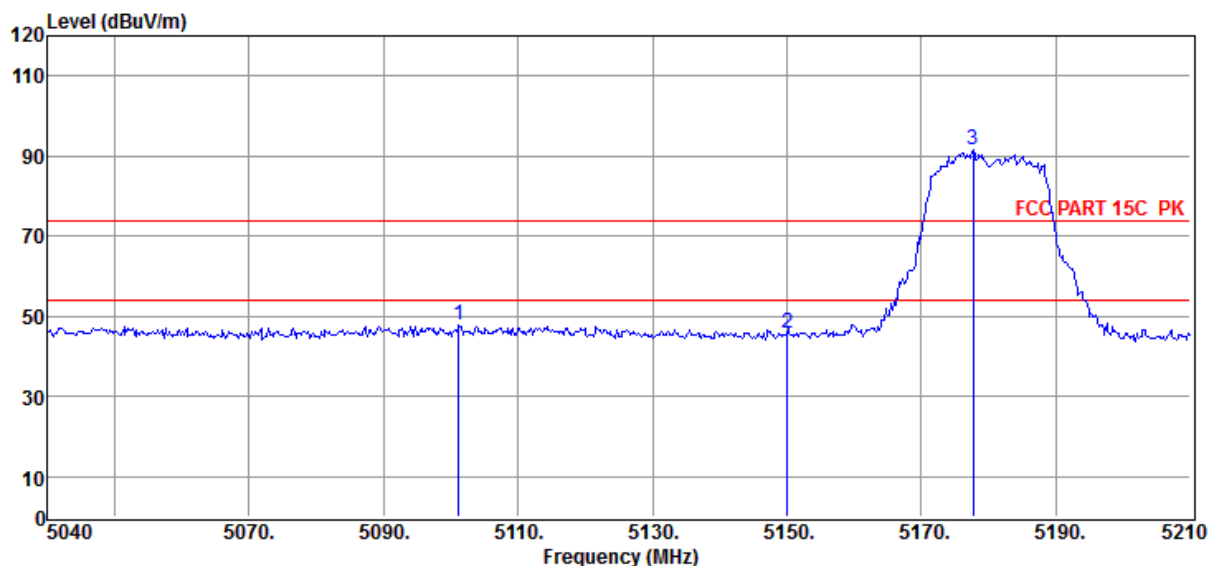
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:**2015 Report Data\15Q0831-1\RE.EM6  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11n HT20 Tx mode 5180MHz  
**Condition** : Temp:24.5°C,Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/HORIZONTAL  
**Memo** :

Data: 90



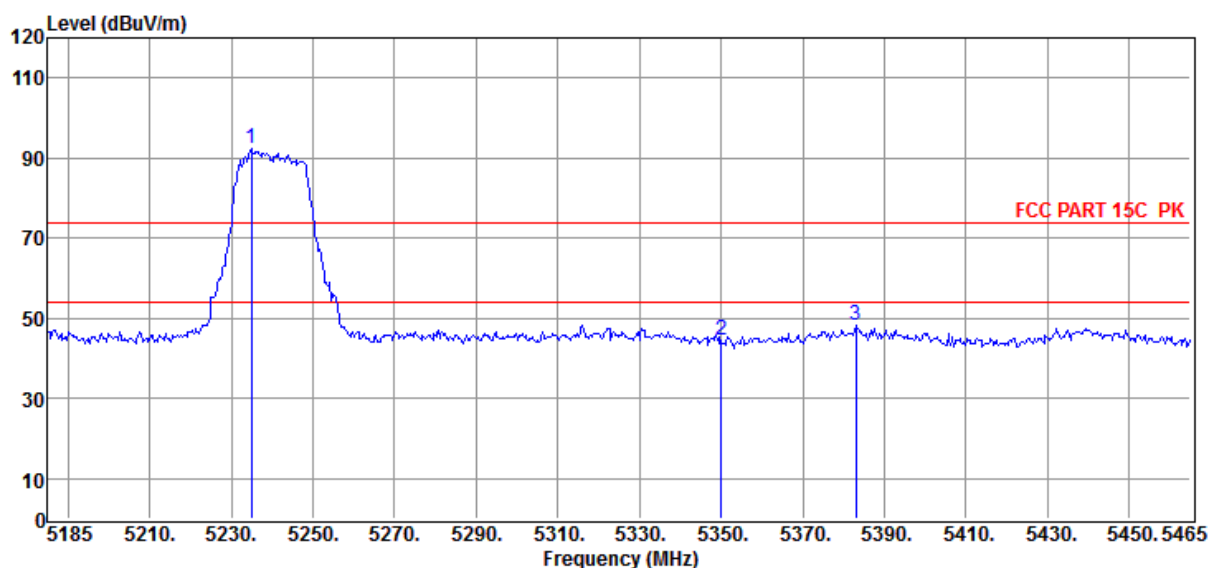
| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5101.20       | 32.84                   | 35.62                       | 29.03               | 8.24                | 47.67                       | 74.00                     | -26.33                | Peak     | HORIZONTAL   |
| 2              | 5150.00       | 30.98                   | 35.58                       | 29.04               | 8.28                | 45.80                       | 74.00                     | -28.20                | Peak     | HORIZONTAL   |
| 3              | 5177.70       | 76.86                   | 35.55                       | 29.04               | 8.28                | 91.65                       | /                         | /                     | Peak     | HORIZONTAL   |

- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:** \2015 Report Data\15Q0831-1\RE.EM6  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11n HT20 Tx mode 5240MHz  
**Condition** : Temp:24.5°C, Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/HORIZONTAL  
**Memo** :

Data: 95



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5234.84       | 77.63                   | 35.51                       | 29.05               | 8.32                | 92.41                       | /                         | /                     | Peak     | HORIZONTAL   |
| 2              | 5350.00       | 29.81                   | 35.42                       | 29.06               | 8.39                | 44.56                       | 74.00                     | -29.44                | Peak     | HORIZONTAL   |
| 3              | 5382.96       | 33.38                   | 35.39                       | 29.07               | 8.41                | 48.11                       | 74.00                     | -25.89                | Peak     | HORIZONTAL   |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

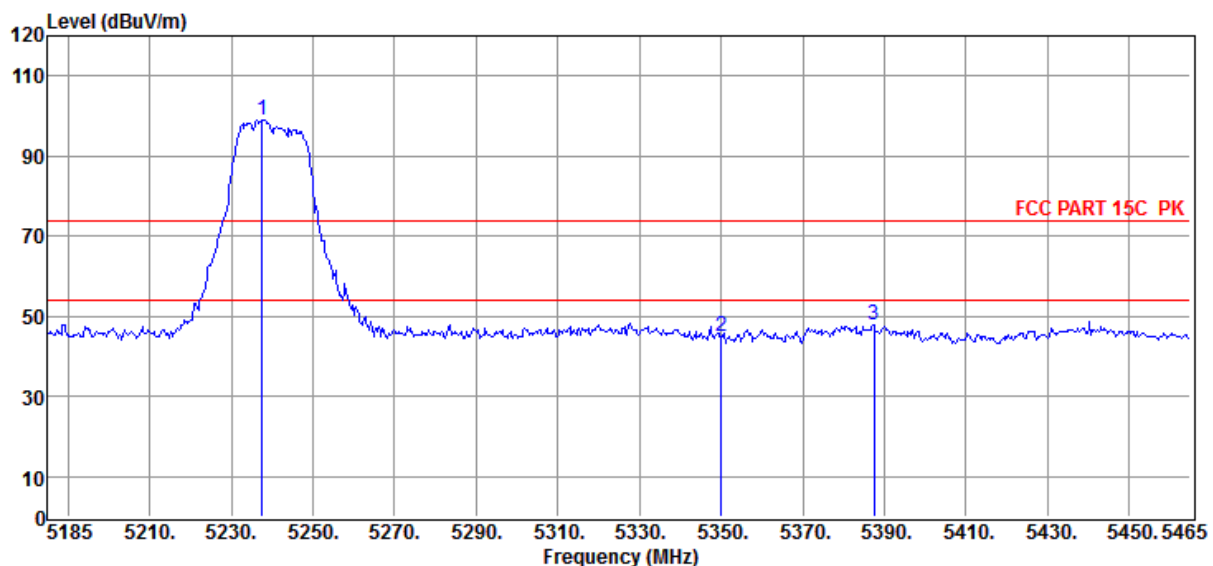
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:** \2015 Report Data\15Q0831-1\RE.EM6  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11n HT20 Tx mode 5240MHz  
**Condition** : Temp:24.5°C, Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/VERTICAL  
**Memo** :

Data: 96



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5237.64       | 84.38                   | 35.51                       | 29.05               | 8.32                | 99.16                       | /                         | /                     | Peak     | VERTICAL     |
| 2              | 5350.00       | 30.24                   | 35.42                       | 29.06               | 8.39                | 44.99                       | 74.00                     | -29.01                | Peak     | VERTICAL     |
| 3              | 5387.44       | 33.15                   | 35.39                       | 29.07               | 8.41                | 47.88                       | 74.00                     | -26.12                | Peak     | VERTICAL     |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

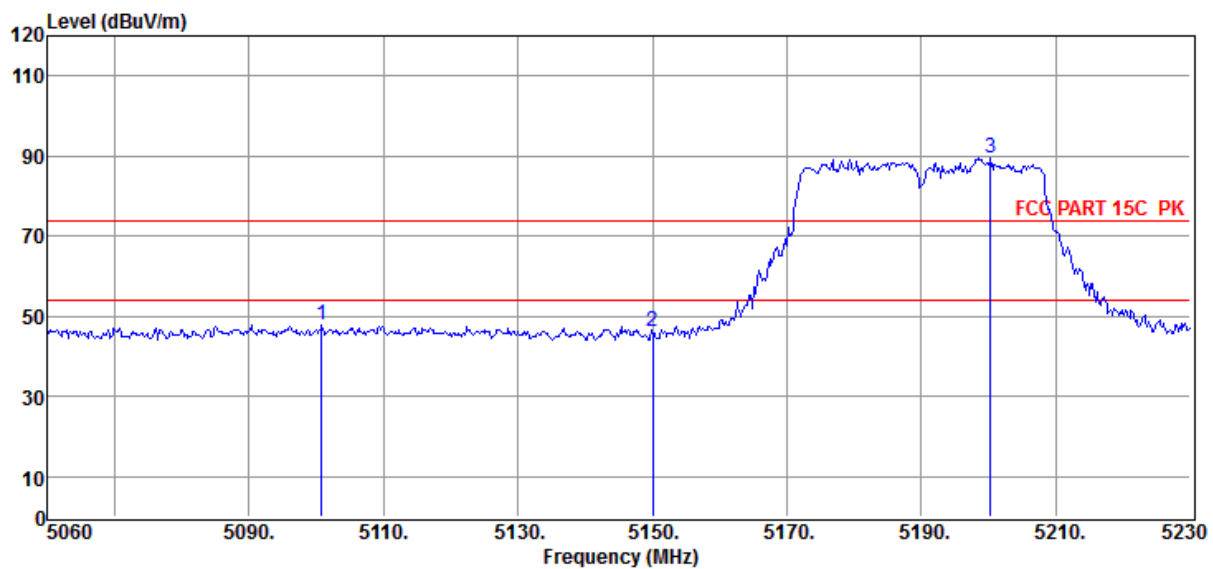
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:**2015 Report Data\15Q0831-1\RE.EM6  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11n HT40 Tx mode 5190MHz  
**Condition** : Temp:24.5°C,Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/HORIZONTAL  
**Memo** :

Data: 99



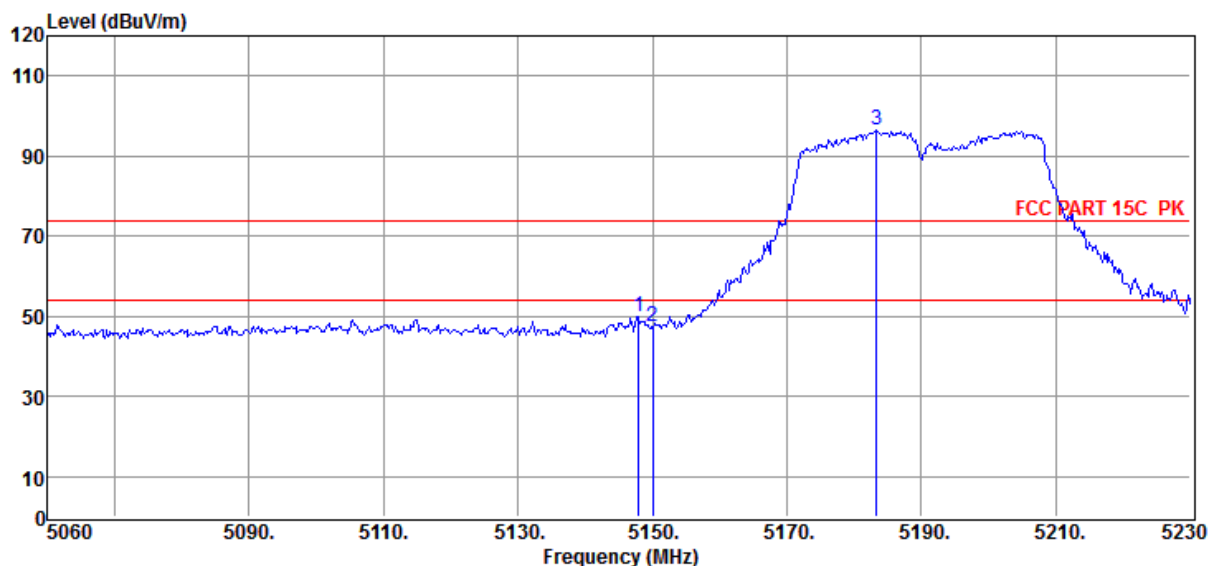
| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5100.80       | 32.94                   | 35.62                       | 29.03               | 8.24                | 47.77                       | 74.00                     | -26.23                | Peak     | HORIZONTAL   |
| 2              | 5150.00       | 31.41                   | 35.58                       | 29.04               | 8.28                | 46.23                       | 74.00                     | -27.77                | Peak     | HORIZONTAL   |
| 3              | 5200.25       | 74.60                   | 35.54                       | 29.04               | 8.30                | 89.40                       | /                         | /                     | Peak     | HORIZONTAL   |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:\2015 Report Data\15Q0831-1\RE.EM6**  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11n HT40 Tx mode 5190MHz  
**Condition** : Temp:24.5°C,Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/VERTICAL  
**Memo** :

Data: 100



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5147.89       | 35.07                   | 35.58                       | 29.04               | 8.28                | 49.89                       | 74.00                     | -24.11                | Peak     | VERTICAL     |
| 2              | 5150.00       | 32.41                   | 35.58                       | 29.04               | 8.28                | 47.23                       | 74.00                     | -26.77                | Peak     | VERTICAL     |
| 3              | 5183.25       | 81.62                   | 35.55                       | 29.04               | 8.30                | 96.43                       | /                         | /                     | Peak     | VERTICAL     |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

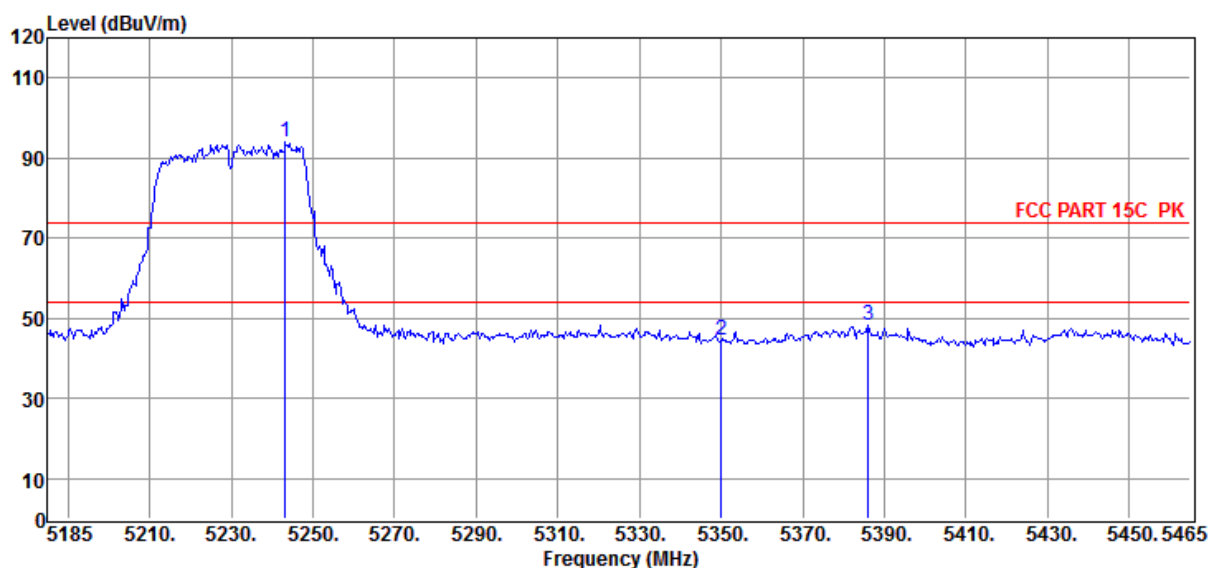
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:\2015 Report Data\15Q0831-1\RE.EM6**  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11n HT40 Tx mode 5230MHz  
**Condition** : Temp:24.5°C,Humi:55%,  
Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/HORIZONTAL  
**Memo** :

Data: 103



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5243.24       | 79.12                   | 35.50                       | 29.05               | 8.32                | 93.89                       | /                         | /                     | Peak     | HORIZONTAL   |
| 2              | 5350.00       | 29.76                   | 35.42                       | 29.06               | 8.39                | 44.51                       | 74.00                     | -29.49                | Peak     | HORIZONTAL   |
| 3              | 5386.04       | 33.55                   | 35.39                       | 29.07               | 8.41                | 48.28                       | 74.00                     | -25.72                | Peak     | HORIZONTAL   |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

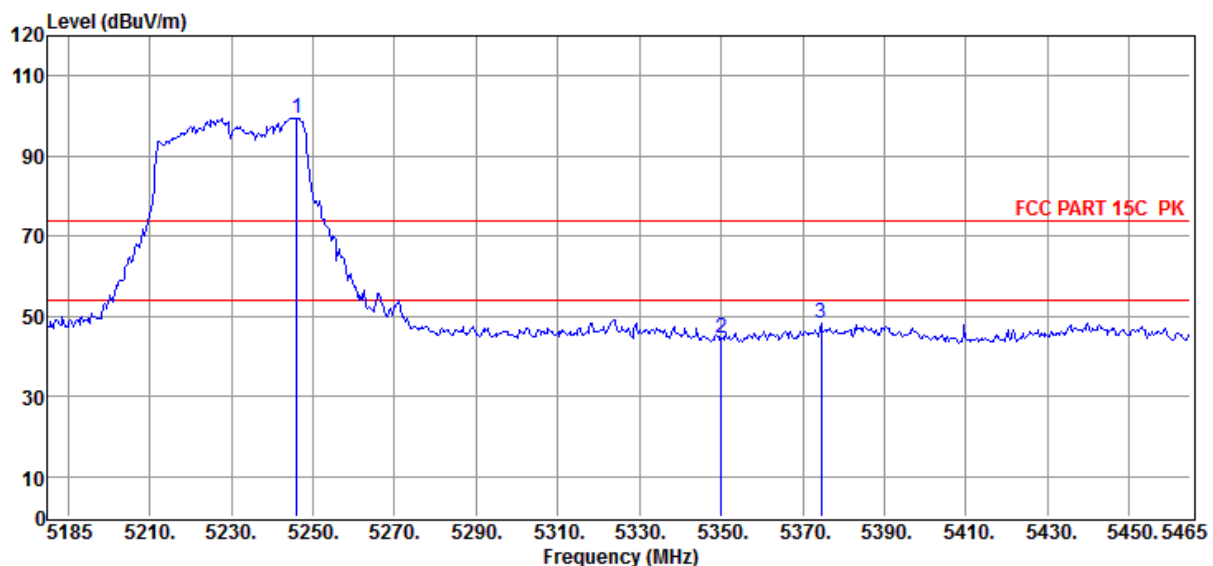
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:** \2015 Report Data\15Q0831-1\RE.EM6  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11n HT40 Tx mode 5230MHz  
**Condition** : Temp:24.5°C, Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/VERTICAL  
**Memo** :

Data: 104



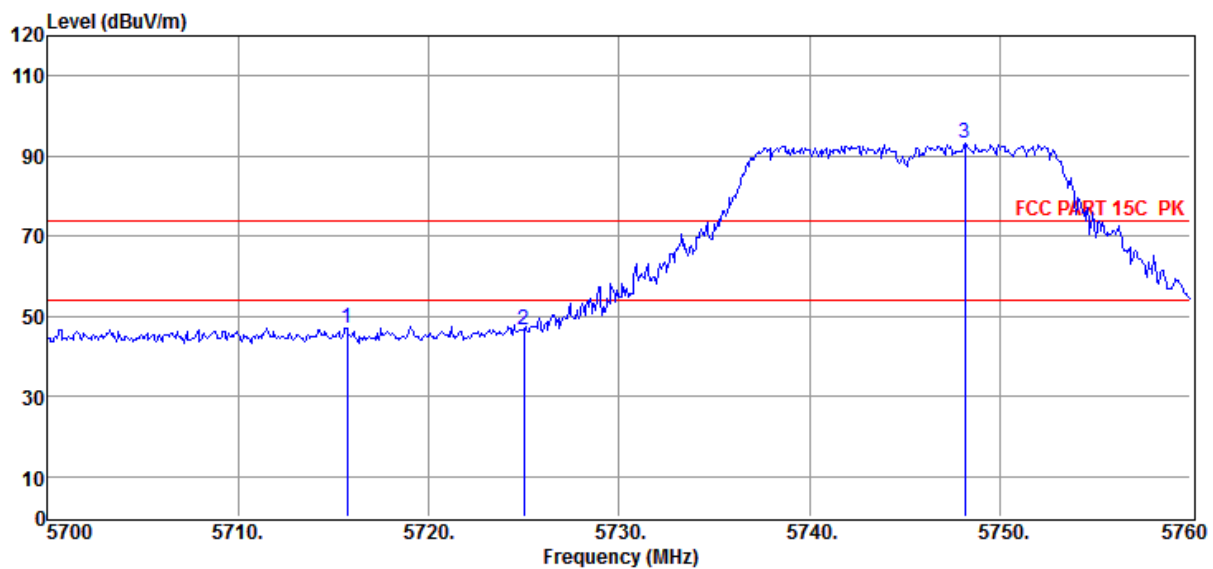
| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5246.04       | 84.79                   | 35.50                       | 29.05               | 8.32                | 99.56                       | /                         | /                     | Peak     | VERTICAL     |
| 2              | 5350.00       | 29.61                   | 35.42                       | 29.06               | 8.39                | 44.36                       | 74.00                     | -29.64                | Peak     | VERTICAL     |
| 3              | 5374.56       | 33.52                   | 35.41                       | 29.06               | 8.39                | 48.26                       | 74.00                     | -25.74                | Peak     | VERTICAL     |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:** \2015 Report Data\15Q0831-1\RE.EM6  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11a Tx mode 5745MHz  
**Condition** : Temp:24.5°C, Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/HORIZONTAL  
**Memo** :

Data: 107



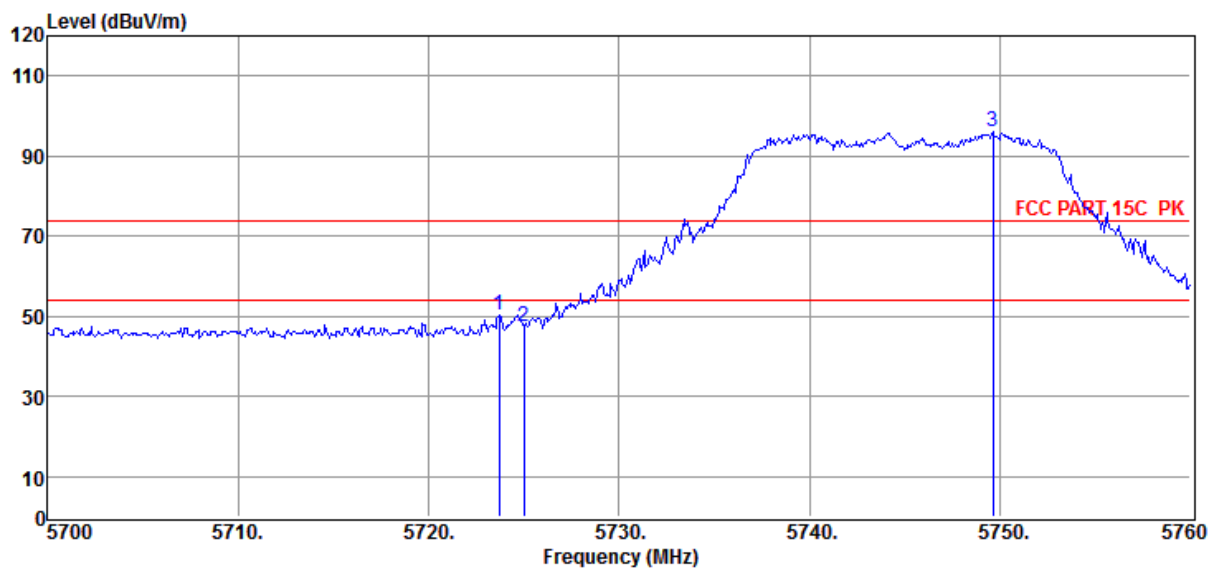
| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5715.72       | 32.01                   | 35.63                       | 29.13               | 8.65                | 47.16                       | 74.00                     | -26.84                | Peak     | HORIZONTAL   |
| 2              | 5725.00       | 31.58                   | 35.66                       | 29.13               | 8.65                | 46.76                       | 74.00                     | -27.24                | Peak     | HORIZONTAL   |
| 3              | 5748.18       | 77.88                   | 35.69                       | 29.14               | 8.69                | 93.12                       | /                         | /                     | Peak     | HORIZONTAL   |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:**2015 Report Data\15Q0831-1\RE.EM6  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11a Tx mode 5745MHz  
**Condition** : Temp:24.5°C,Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/VERTICAL  
**Memo** :

Data: 108



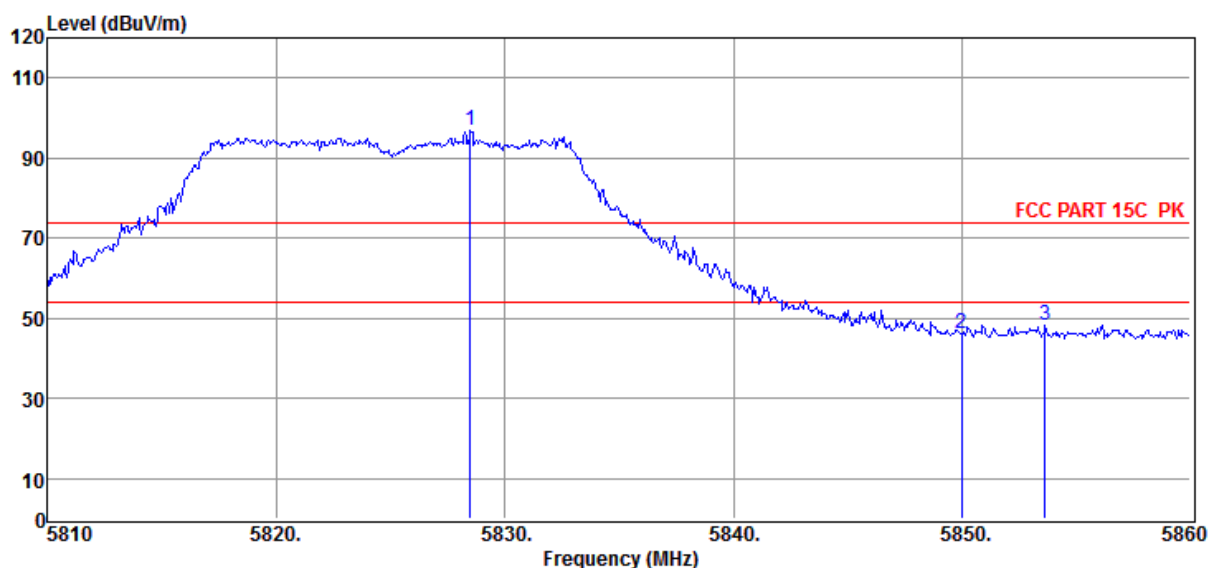
| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5723.70       | 35.18                   | 35.66                       | 29.13               | 8.65                | 50.36                       | 74.00                     | -23.64                | Peak     | VERTICAL     |
| 2              | 5725.00       | 32.44                   | 35.66                       | 29.13               | 8.65                | 47.62                       | 74.00                     | -26.38                | Peak     | VERTICAL     |
| 3              | 5749.62       | 80.81                   | 35.69                       | 29.14               | 8.69                | 96.05                       | /                         | /                     | Peak     | VERTICAL     |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:** 2015 Report Data\15Q0831-1\RE.EM6  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11a Tx mode 5825MHz  
**Condition** : Temp:24.5°C, Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/VERTICAL  
**Memo** :

Data: 113



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5828.50       | 81.27                   | 35.82                       | 29.16               | 8.77                | 96.70                       | /                         | /                     | Peak     | VERTICAL     |
| 2              | 5850.00       | 30.75                   | 35.85                       | 29.16               | 8.77                | 46.21                       | 74.00                     | -27.79                | Peak     | VERTICAL     |
| 3              | 5853.65       | 32.68                   | 35.88                       | 29.17               | 8.81                | 48.20                       | 74.00                     | -25.80                | Peak     | VERTICAL     |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

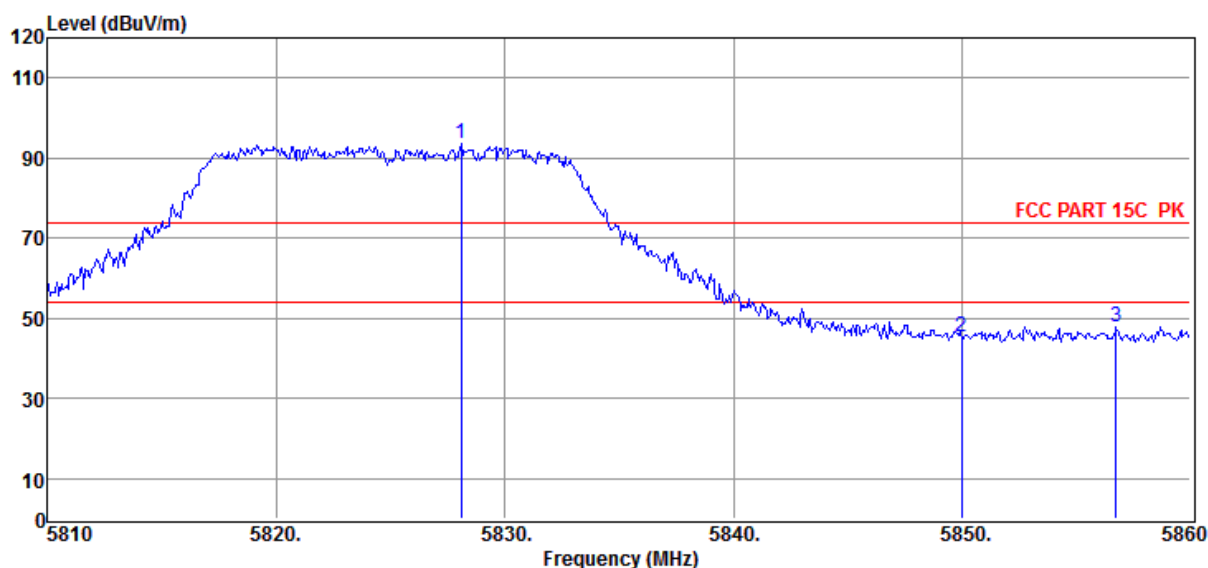
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:**2015 Report Data\15Q0831-1\RE.EM6  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11a Tx mode 5825MHz  
**Condition** : Temp:24.5'C,Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/HORIZONTAL  
**Memo** :

Data: 114



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5828.10       | 78.21                   | 35.82                       | 29.16               | 8.77                | 93.64                       | /                         | /                     | Peak     | HORIZONTAL   |
| 2              | 5850.00       | 29.87                   | 35.85                       | 29.16               | 8.77                | 45.33                       | 74.00                     | -28.67                | Peak     | HORIZONTAL   |
| 3              | 5856.75       | 32.17                   | 35.88                       | 29.17               | 8.81                | 47.69                       | 74.00                     | -26.31                | Peak     | HORIZONTAL   |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

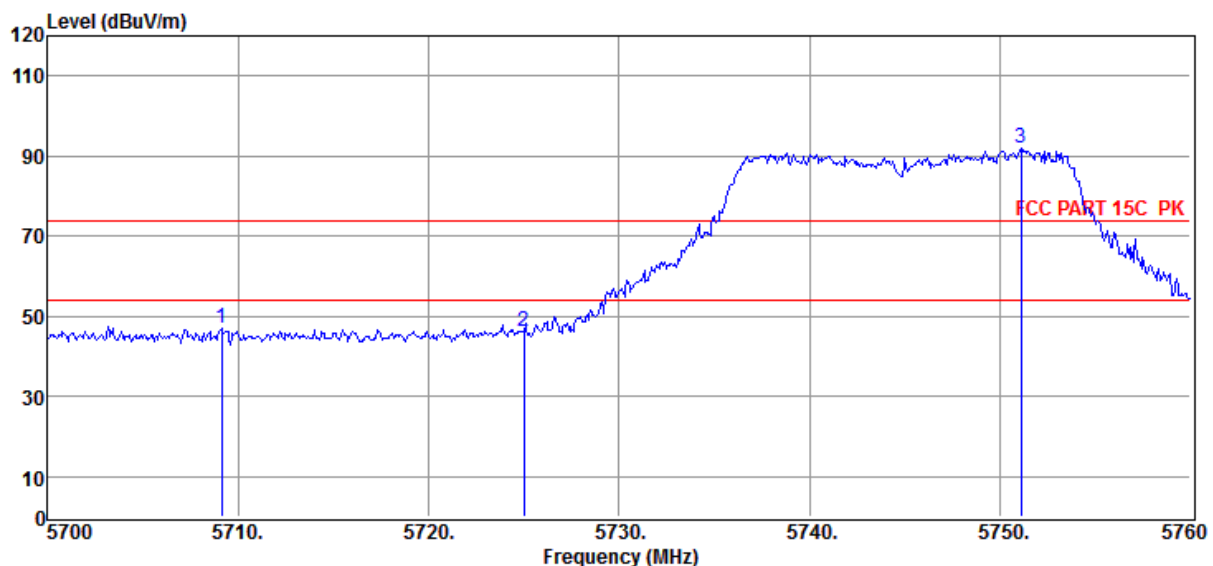
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:** \2015 Report Data\15Q0831-1\RE.EM6  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11n HT20 Tx mode 5745MHz  
**Condition** : Temp:24.5°C, Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/HORIZONTAL  
**Memo** :

Data: 117



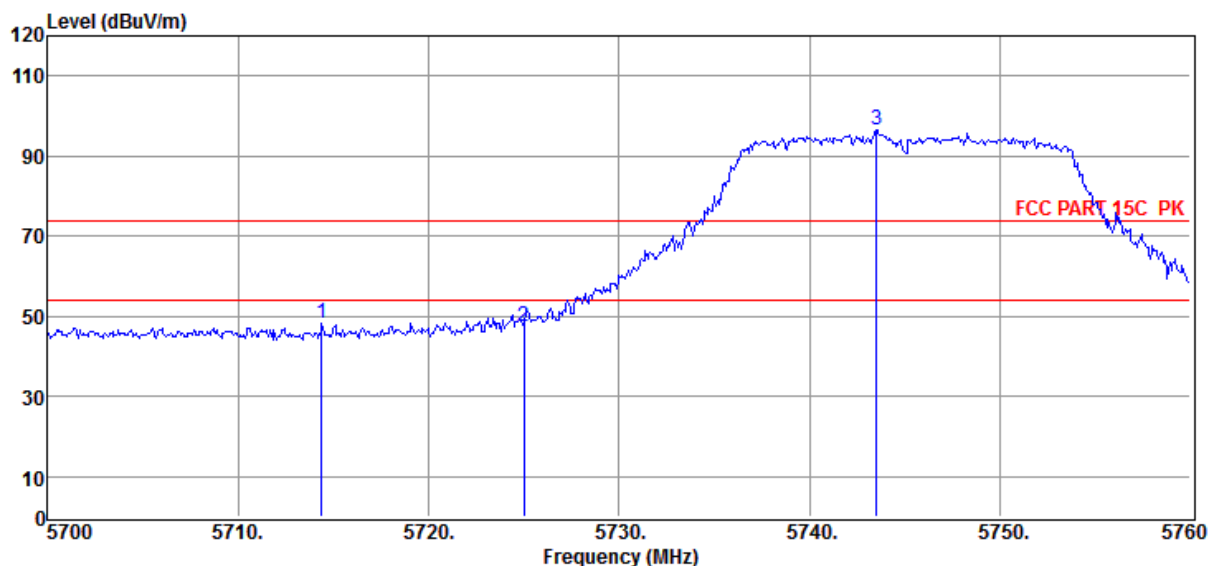
| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5709.12       | 31.85                   | 35.63                       | 29.13               | 8.65                | 47.00                       | 74.00                     | -27.00                | Peak     | HORIZONTAL   |
| 2              | 5725.00       | 31.02                   | 35.66                       | 29.13               | 8.65                | 46.20                       | 74.00                     | -27.80                | Peak     | HORIZONTAL   |
| 3              | 5751.12       | 76.52                   | 35.69                       | 29.14               | 8.69                | 91.76                       | /                         | /                     | Peak     | HORIZONTAL   |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.  
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.  
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:**2015 Report Data\15Q0831-1\RE.EM6  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11n HT20 Tx mode 5745MHz  
**Condition** : Temp:24.5°C,Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/VERTICAL  
**Memo** :

Data: 118



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5714.40       | 33.04                   | 35.63                       | 29.13               | 8.65                | 48.19                       | 74.00                     | -25.81                | Peak     | VERTICAL     |
| 2              | 5725.00       | 32.08                   | 35.66                       | 29.13               | 8.65                | 47.26                       | 74.00                     | -26.74                | Peak     | VERTICAL     |
| 3              | 5743.50       | 81.25                   | 35.69                       | 29.14               | 8.69                | 96.49                       | /                         | /                     | Peak     | VERTICAL     |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

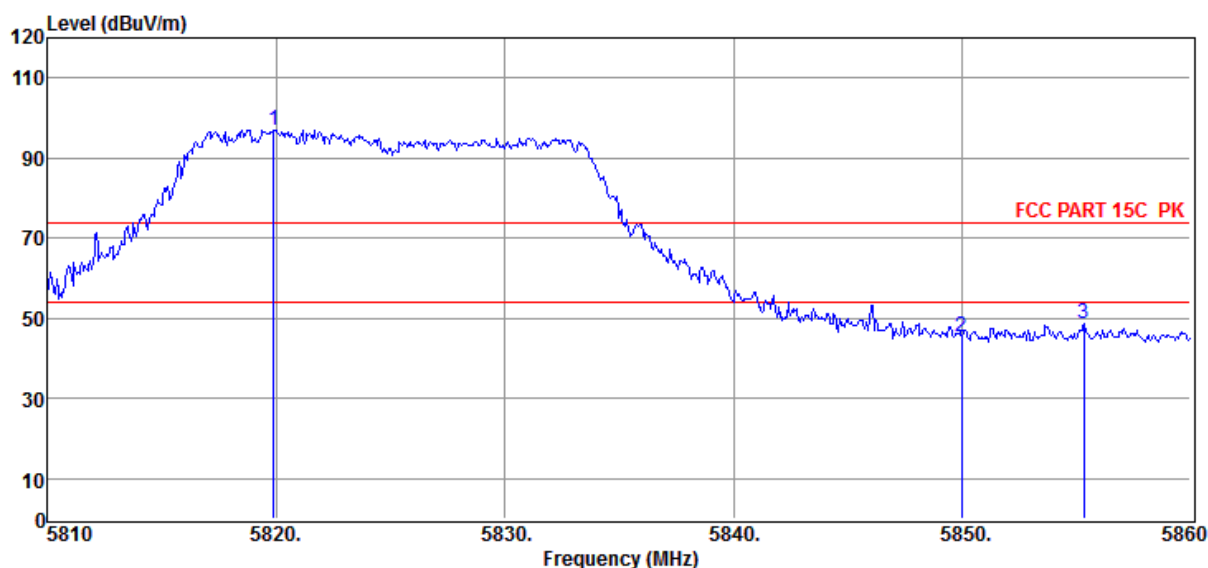
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:**2015 Report Data\15Q0831-1\RE.EM6  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11n HT20 Tx mode 5825MHz  
**Condition** : Temp:24.5°C,Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/VERTICAL  
**Memo** :

Data: 123



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5819.90       | 81.58                   | 35.82                       | 29.16               | 8.77                | 97.01                       | /                         | /                     | Peak     | VERTICAL     |
| 2              | 5850.00       | 29.71                   | 35.85                       | 29.16               | 8.77                | 45.17                       | 74.00                     | -28.83                | Peak     | VERTICAL     |
| 3              | 5855.35       | 33.04                   | 35.88                       | 29.17               | 8.81                | 48.56                       | 74.00                     | -25.44                | Peak     | VERTICAL     |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

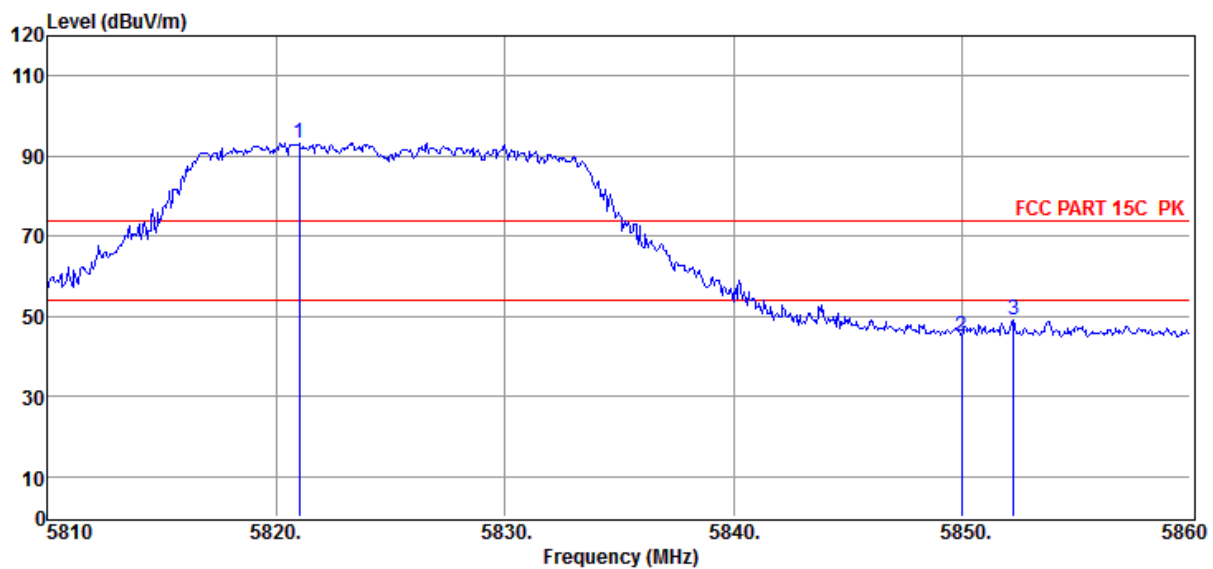
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:\2015 Report Data\15Q0831-1\RE.EM6**  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11n HT20 Tx mode 5825MHz  
**Condition** : Temp:24.5°C,Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/HORIZONTAL  
**Memo** :

Data: 124



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5821.00       | 77.80                   | 35.82                       | 29.16               | 8.77                | 93.23                       | /                         | /                     | Peak     | HORIZONTAL   |
| 2              | 5850.00       | 29.65                   | 35.85                       | 29.16               | 8.77                | 45.11                       | 74.00                     | -28.89                | Peak     | HORIZONTAL   |
| 3              | 5852.25       | 33.46                   | 35.85                       | 29.17               | 8.81                | 48.95                       | 74.00                     | -25.05                | Peak     | HORIZONTAL   |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

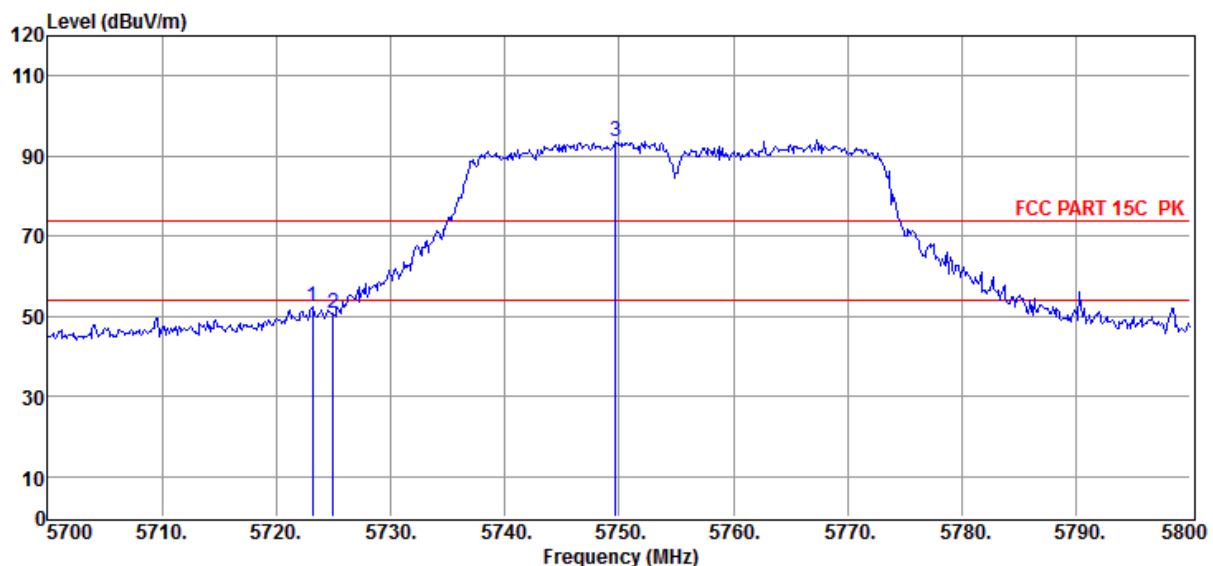
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:\2015 Report Data\15Q0831-1\RE.EM6**  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11n HT40 Tx mode 5755MHz  
**Condition** : Temp:24.5°C,Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/VERTICAL  
**Memo** :

Data: 127



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5723.20       | 37.34                   | 35.66                       | 29.13               | 8.65                | 52.52                       | 74.00                     | -21.48                | Peak     | VERTICAL     |
| 2              | 5725.00       | 35.73                   | 35.66                       | 29.13               | 8.65                | 50.91                       | 74.00                     | -23.09                | Peak     | VERTICAL     |
| 3              | 5749.70       | 78.55                   | 35.69                       | 29.14               | 8.69                | 93.79                       | /                         | /                     | Peak     | VERTICAL     |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

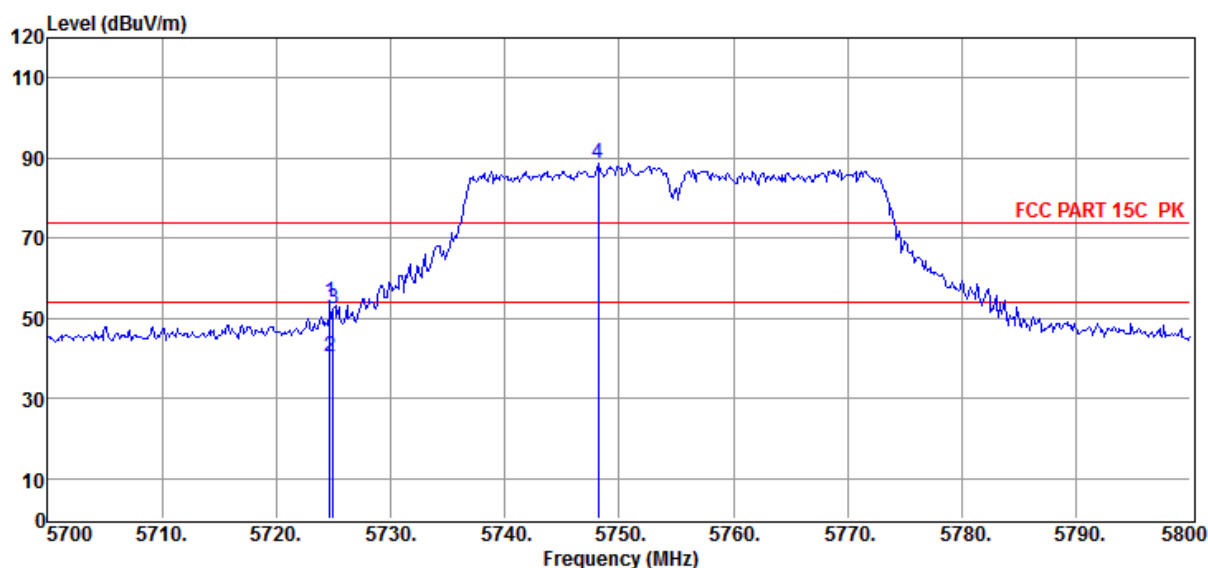
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:**2015 Report Data\15Q0831-1\RE.EM6  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11n HT40 Tx mode 5755MHz  
**Condition** : Temp:24.5'C,Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/HORIZONTAL  
**Memo** :

Data: 128



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5724.70       | 38.94                   | 35.66                       | 29.13               | 8.65                | 54.12                       | 74.00                     | -19.88                | Peak     | HORIZONTAL   |
| 2              | 5724.70       | 25.10                   | 35.66                       | 29.13               | 8.65                | 40.28                       | 54.00                     | -13.72                | Average  | HORIZONTAL   |
| 3              | 5725.00       | 37.30                   | 35.66                       | 29.13               | 8.65                | 52.48                       | 74.00                     | -21.52                | Peak     | HORIZONTAL   |
| 4              | 5748.20       | 73.54                   | 35.69                       | 29.14               | 8.69                | 88.78                       | /                         | /                     | Peak     | HORIZONTAL   |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

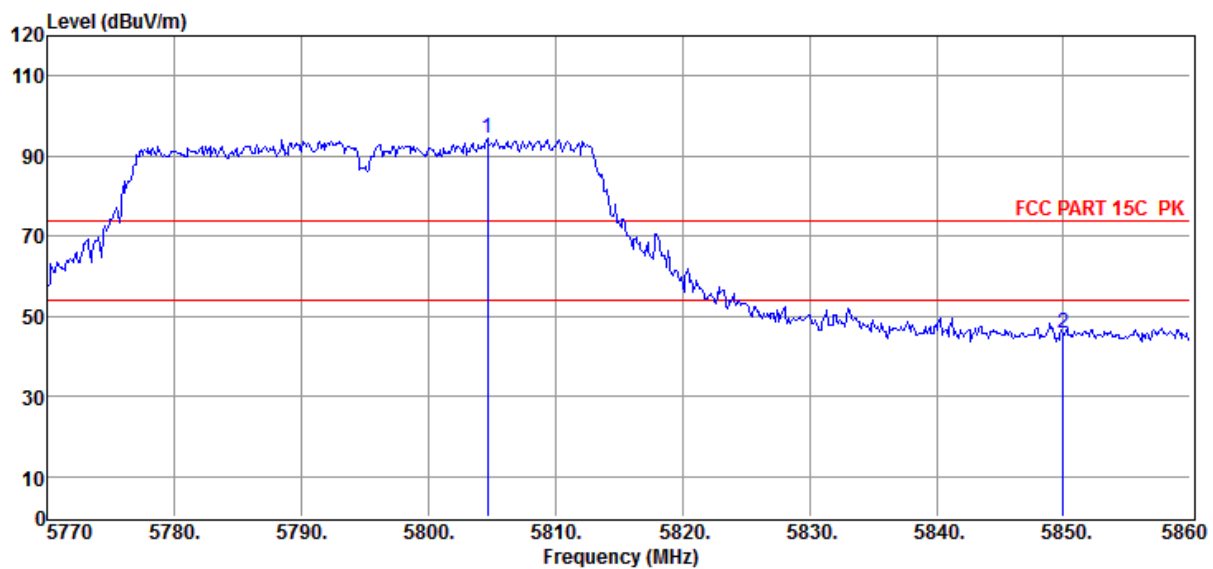
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:** \2015 Report Data\15Q0831-1\RE.EM6  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11n HT40 Tx mode 5795MHz  
**Condition** : Temp:24.5°C, Humi:55%,  
                   Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/VERTICAL  
**Memo** :

Data: 131



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5804.65       | 78.90                   | 35.80                       | 29.15               | 8.73                | 94.28                       | /                         | /                     | Peak     | VERTICAL     |
| 2              | 5850.00       | 30.20                   | 35.85                       | 29.16               | 8.77                | 45.66                       | 74.00                     | -28.34                | Peak     | VERTICAL     |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

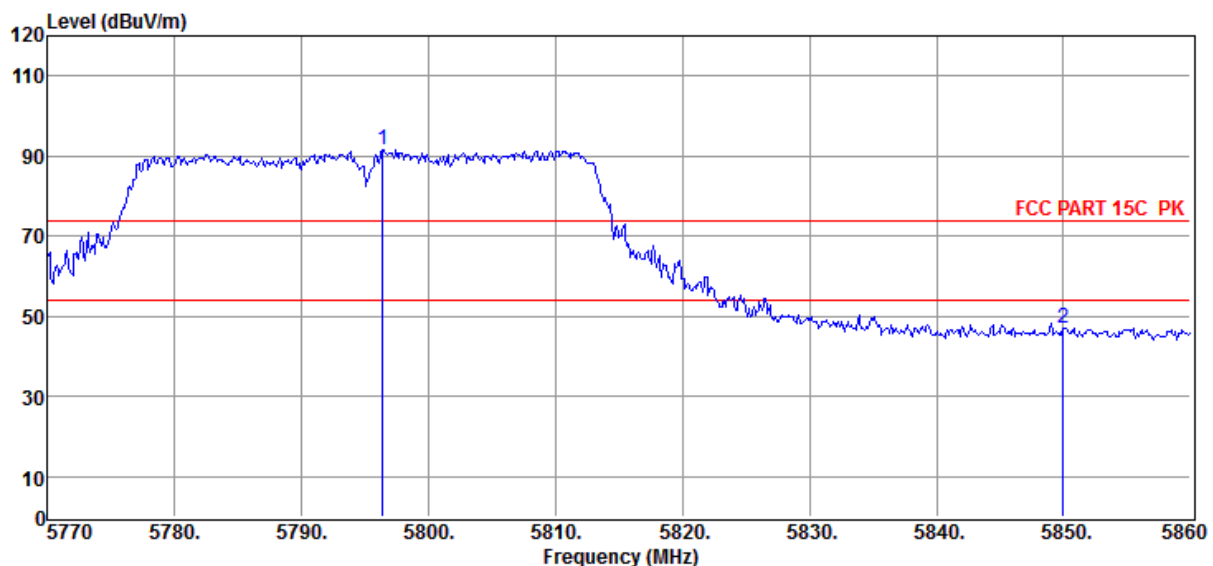
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## TR-4-E-009 Radiated Emission Test Result

**Test Site** : DDT 3m Chamber **E:\2015 Report Data\15Q0831-1\RE.EM6**  
**Test Date** : 2015-10-19 **Tested By** : Toby  
**EUT** : Outdoor Access Point **Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter **Test Mode** : 11n HT40 Tx mode 5795MHz  
**Condition** : Temp:24.5°C,Humi:55%,  
 Press:100.1kPa **Antenna/Distance** : 2014 HF907/3m/HORIZONTAL  
**Memo** :

Data: 132



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>(dB/m) | PRM<br>Factor<br>dB | Cable<br>Loss<br>dB | Result<br>Level<br>(dBμV/m) | Limit<br>Line<br>(dBμV/m) | Over<br>Limit<br>(dB) | Detector | Polarization |
|----------------|---------------|-------------------------|-----------------------------|---------------------|---------------------|-----------------------------|---------------------------|-----------------------|----------|--------------|
| 1              | 5796.37       | 76.05                   | 35.77                       | 29.15               | 8.73                | 91.40                       | /                         | /                     | Peak     | HORIZONTAL   |
| 2              | 5850.00       | 31.59                   | 35.85                       | 29.16               | 8.77                | 47.05                       | 74.00                     | -26.95                | Peak     | HORIZONTAL   |

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

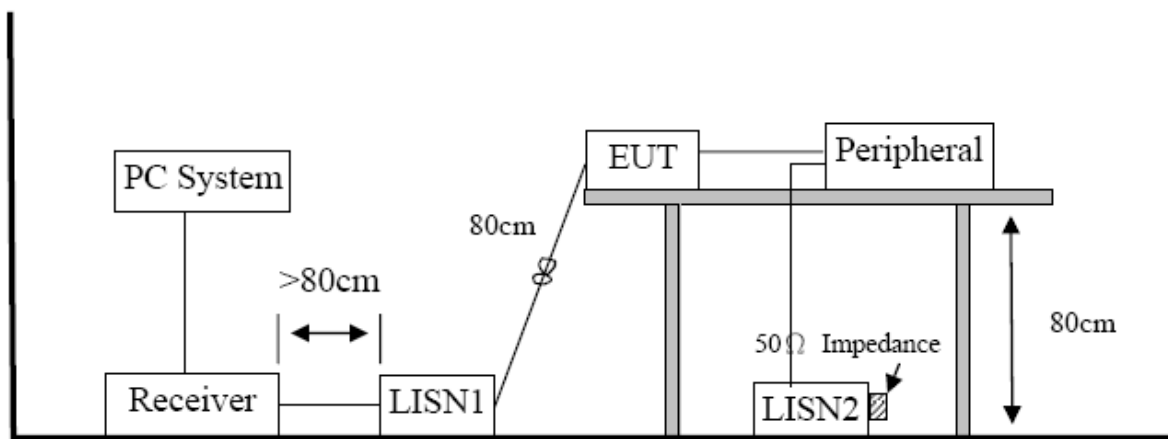
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

## 10. Power Line Conducted Emission

### 10.1. Test equipment

Please refer to Section 3 this report.

### 10.2. Block diagram of test setup



### 10.3. Power Line Conducted Emission Limits(Class B)

| Frequency       | Quasi-Peak Level<br>dB(μV) | Average Level<br>dB(μV) |
|-----------------|----------------------------|-------------------------|
| 150kHz ~ 500kHz | 66 ~ 56*                   | 56 ~ 46*                |
| 500kHz ~ 5MHz   | 56                         | 46                      |
| 5MHz ~ 30MHz    | 60                         | 50                      |

Note 1: \* Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies.

### 10.4. Test Procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80cm above the ground plane.

Configuration EUT to simulate typical usage as described in clause 2.3 and test equipment as described in clause 10.2 of this report.

All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

The test mode(s) described in clause 2.3 were scanned during the preliminary test.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions.

Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.

The bandwidth of test receiver is set at 9 KHz.

## **10.5. Test Result**

### **PASS. (See below detailed test result)**

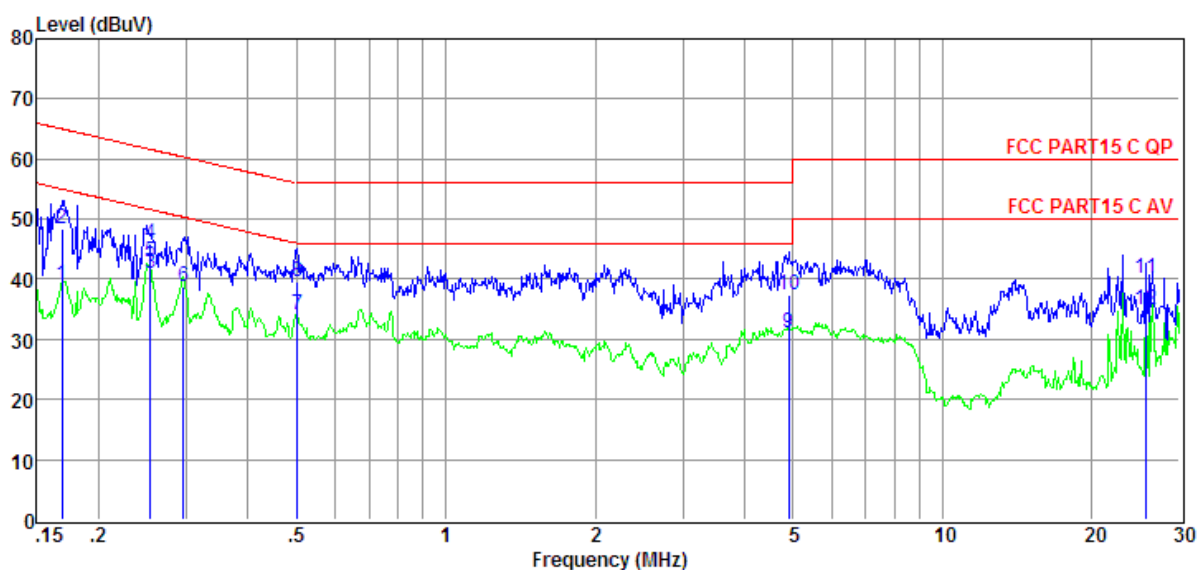
Note1: All emissions not reported below are too low against the prescribed limits.

Note2: “----” means peak detection; “-----” mans average detection

## TR-4-E-010 Conducted Emission Test Result

: DDT 1# Shield Room  
 E:\2015 report data\15Q0831-1\CE.EM6  
**Test Date** : 2015-09-24  
**Tested By** : Sincere  
**EUT** : Outdoor Access Point  
**Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter  
**Test Mode** : TX Mode  
**Condition** : Temp:24.5°C,Humi:55%,  
 Press:100.1kPa  
**LISN** : 2014 ENV216/LINE  
**Memo** :

Data: 14



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | LISN<br>Factor<br>(dB) | Cable<br>Loss<br>(dB) | Pulse<br>Limiter<br>Factor<br>(dB) | Result<br>Level<br>(dBμV) | Limit<br>Line<br>(dBμV) | Over<br>Limit<br>(dB) | Detector | Phase |
|----------------|---------------|-------------------------|------------------------|-----------------------|------------------------------------|---------------------------|-------------------------|-----------------------|----------|-------|
| 1              | 0.17          | 19.47                   | 9.61                   | 0.01                  | 9.84                               | 38.93                     | 55.04                   | -16.11                | Average  | LINE  |
| 2              | 0.17          | 28.97                   | 9.61                   | 0.01                  | 9.84                               | 48.43                     | 65.04                   | -16.61                | QP       | LINE  |
| 3              | 0.25          | 21.48                   | 9.62                   | 0.02                  | 9.85                               | 40.97                     | 51.61                   | -10.64                | Average  | LINE  |
| 4              | 0.25          | 26.37                   | 9.62                   | 0.02                  | 9.85                               | 45.86                     | 61.61                   | -15.75                | QP       | LINE  |
| 5              | 0.25          | 23.51                   | 9.62                   | 0.02                  | 9.85                               | 43.00                     | 61.61                   | -18.61                | QP       | LINE  |
| 6              | 0.30          | 19.26                   | 9.62                   | 0.02                  | 9.85                               | 38.75                     | 50.34                   | -11.59                | Average  | LINE  |
| 7              | 0.50          | 14.62                   | 9.63                   | 0.03                  | 9.87                               | 34.15                     | 46.00                   | -11.85                | Average  | LINE  |
| 8              | 0.50          | 20.14                   | 9.63                   | 0.03                  | 9.87                               | 39.67                     | 56.00                   | -16.33                | QP       | LINE  |
| 9              | 4.90          | 11.32                   | 9.68                   | 0.11                  | 9.88                               | 30.99                     | 46.00                   | -15.01                | Average  | LINE  |
| 10             | 4.90          | 17.85                   | 9.68                   | 0.11                  | 9.88                               | 37.52                     | 56.00                   | -18.48                | QP       | LINE  |
| 11             | 25.59         | 20.15                   | 9.97                   | 0.17                  | 9.97                               | 40.26                     | 60.00                   | -19.74                | QP       | LINE  |
| 12             | 25.65         | 14.87                   | 9.98                   | 0.17                  | 9.97                               | 34.99                     | 50.00                   | -15.01                | Average  | LINE  |

Note: 1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.

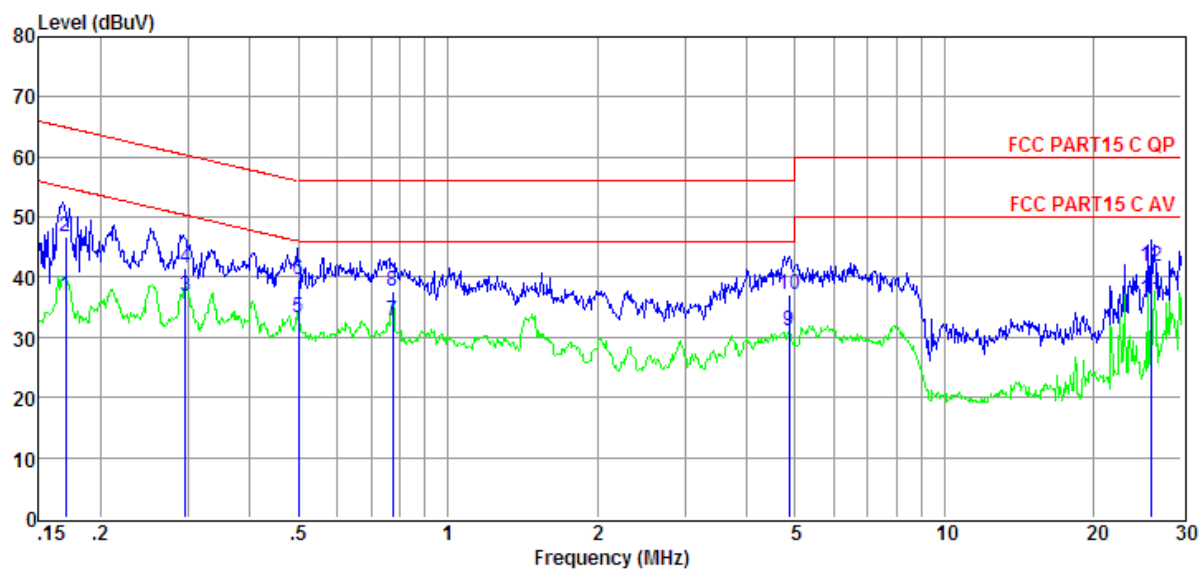
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz), Step size: 4 kHz, Scan time: auto.

## TR-4-E-010 Conducted Emission Test Result

: DDT 1# Shield Room  
 E:\2015 report data\15Q0831-1\CE.EM6  
**Test Date** : 2015-09-24  
**Tested By** : Sincere  
**EUT** : Outdoor Access Point  
**Model Number** : DCWL-7962OT  
**Power Supply** : DC 50V from external POE adapter  
**Test Mode** : TX Mode  
**Condition** : Temp:24.5°C,Humi:55%,  
 Press:100.1kPa  
**LISN** : 2014 ENV216/NEUTRAL  
**Memo** :

Data: 16



| Item<br>(Mark) | Freq<br>(MHz) | Read<br>Level<br>(dBμV) | LISN<br>Factor<br>(dB) | Cable<br>Loss<br>(dB) | Pulse<br>Limiter<br>Factor<br>(dB) | Result<br>Level<br>(dBμV) | Limit<br>Line<br>(dBμV) | Over<br>Limit<br>(dB) | Detector | Phase   |
|----------------|---------------|-------------------------|------------------------|-----------------------|------------------------------------|---------------------------|-------------------------|-----------------------|----------|---------|
| 1              | 0.17          | 17.46                   | 9.60                   | 0.01                  | 9.84                               | 36.91                     | 54.95                   | -18.04                | Average  | NEUTRAL |
| 2              | 0.17          | 27.37                   | 9.60                   | 0.01                  | 9.84                               | 46.82                     | 64.95                   | -18.13                | QP       | NEUTRAL |
| 3              | 0.30          | 17.25                   | 9.60                   | 0.02                  | 9.85                               | 36.72                     | 50.34                   | -13.62                | Average  | NEUTRAL |
| 4              | 0.30          | 22.14                   | 9.60                   | 0.02                  | 9.85                               | 41.61                     | 60.34                   | -18.73                | QP       | NEUTRAL |
| 5              | 0.50          | 13.87                   | 9.61                   | 0.03                  | 9.87                               | 33.38                     | 46.00                   | -12.62                | Average  | NEUTRAL |
| 6              | 0.50          | 20.14                   | 9.61                   | 0.03                  | 9.87                               | 39.65                     | 56.00                   | -16.35                | QP       | NEUTRAL |
| 7              | 0.78          | 13.25                   | 9.61                   | 0.08                  | 9.86                               | 32.80                     | 46.00                   | -13.20                | Average  | NEUTRAL |
| 8              | 0.78          | 18.01                   | 9.61                   | 0.08                  | 9.86                               | 37.56                     | 56.00                   | -18.44                | QP       | NEUTRAL |
| 9              | 4.87          | 11.54                   | 9.62                   | 0.11                  | 9.88                               | 31.15                     | 46.00                   | -14.85                | Average  | NEUTRAL |
| 10             | 4.87          | 17.54                   | 9.62                   | 0.11                  | 9.88                               | 37.15                     | 56.00                   | -18.85                | QP       | NEUTRAL |
| 11             | 26.05         | 16.16                   | 10.03                  | 0.17                  | 9.97                               | 36.33                     | 50.00                   | -13.67                | Average  | NEUTRAL |
| 12             | 26.05         | 21.49                   | 10.03                  | 0.17                  | 9.97                               | 41.66                     | 60.00                   | -18.34                | QP       | NEUTRAL |

Note: 1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.

2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz), Step size: 4 kHz, Scan time: auto.

## 11. Antenna Requirements

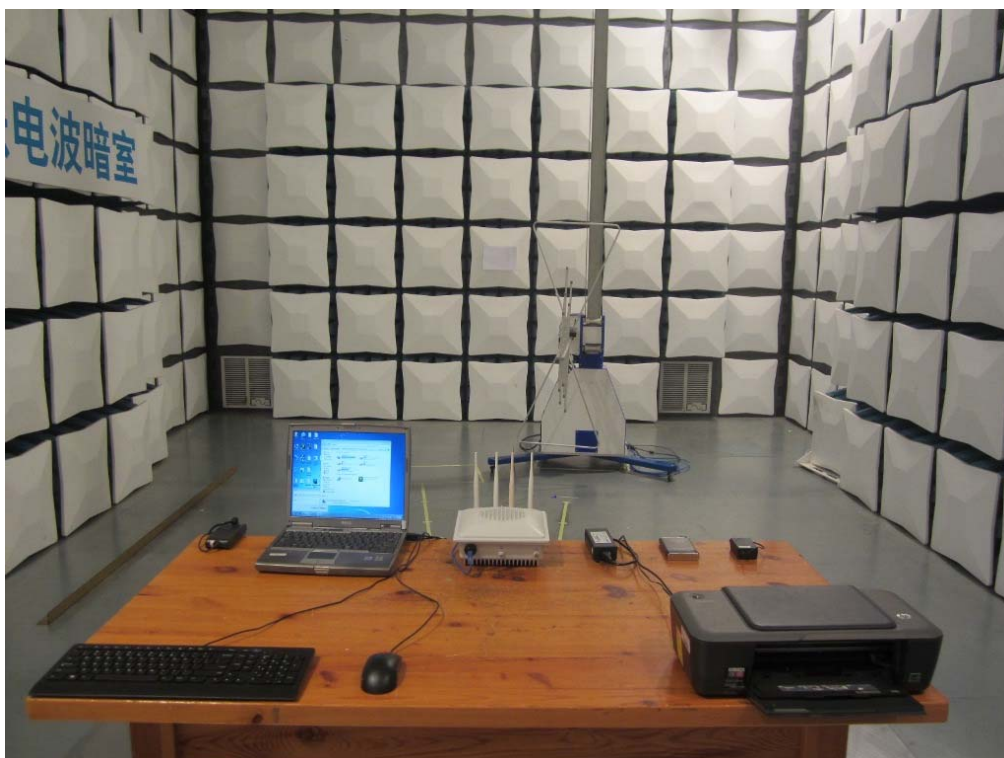
### 11.1. Limit

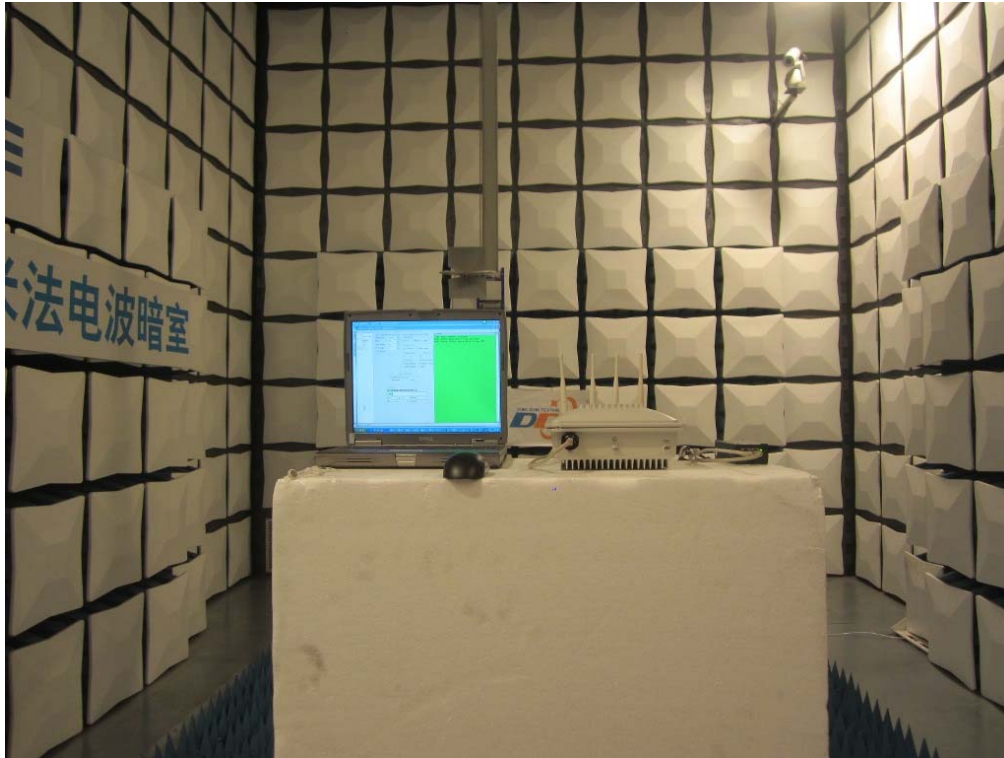
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### 11.2. Result

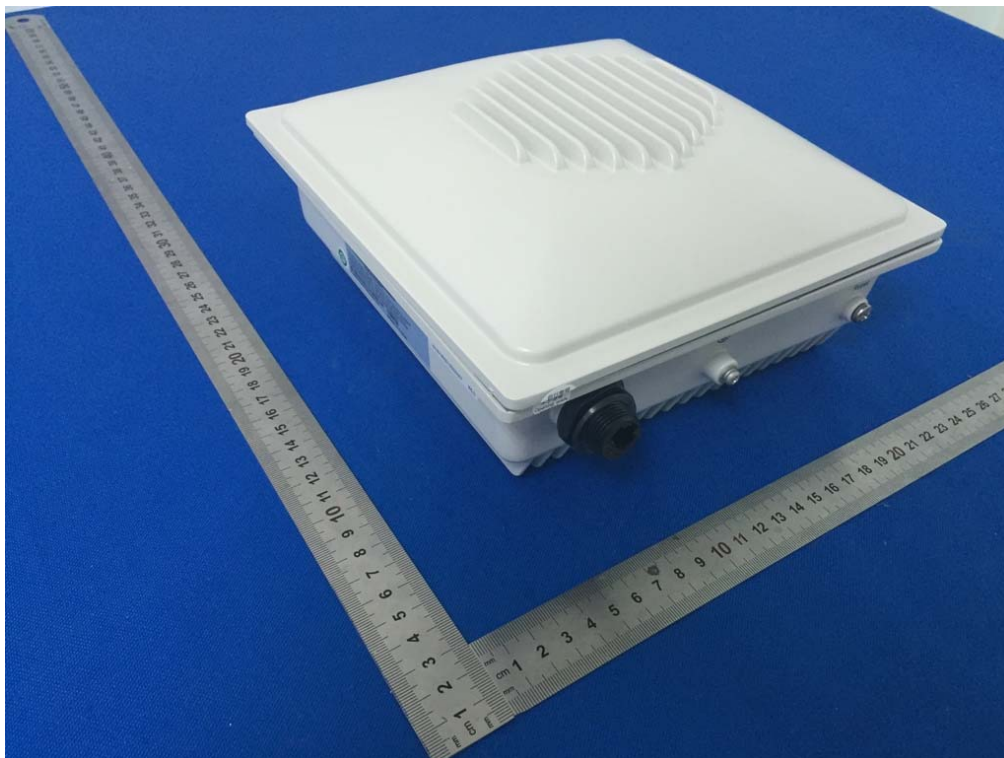
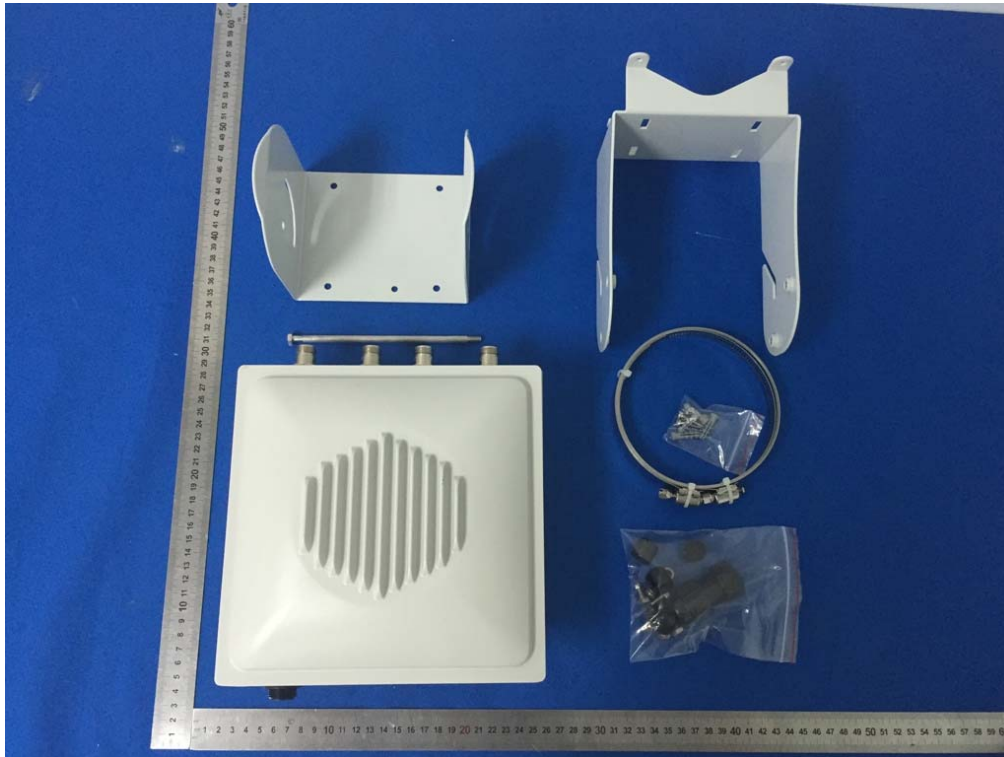
The antennas used for this product are external antenna MIMO 2x2, this requirement must be professionally installed, the maximum antenna gain 3.4dBi Single root Antenna and MIMO 2X2. Total  $ANT = 3.4 + 10 * \log(2) = 6.4\text{dBi}$ ; therefore power limit reduction due to antenna gain is 0.4dBi.

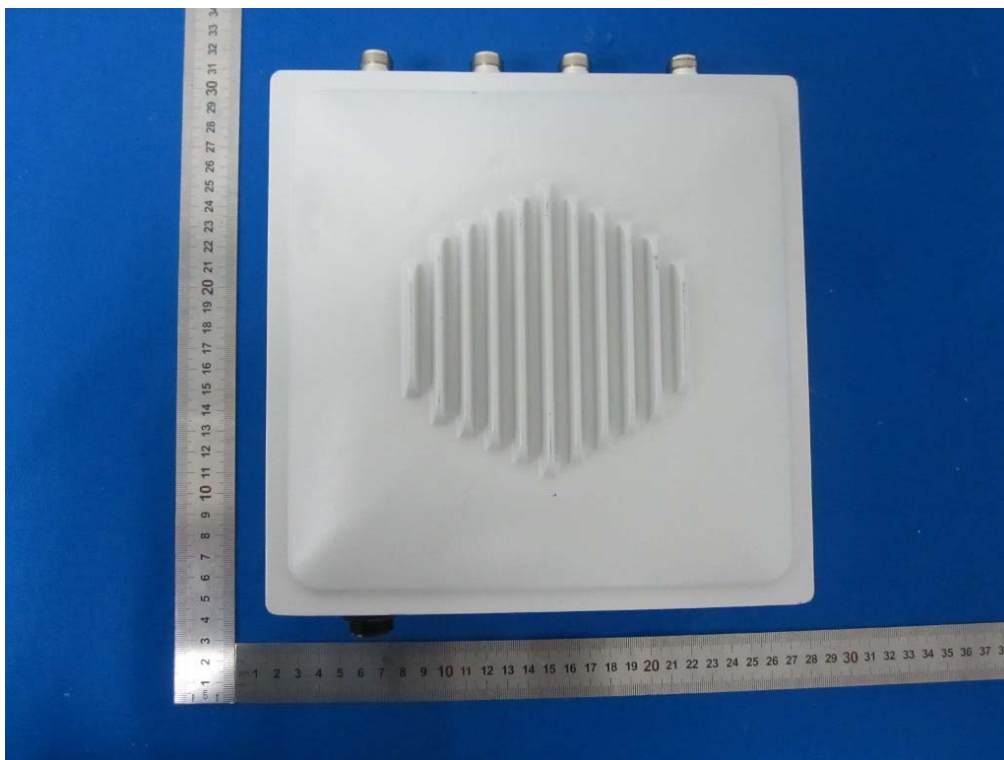
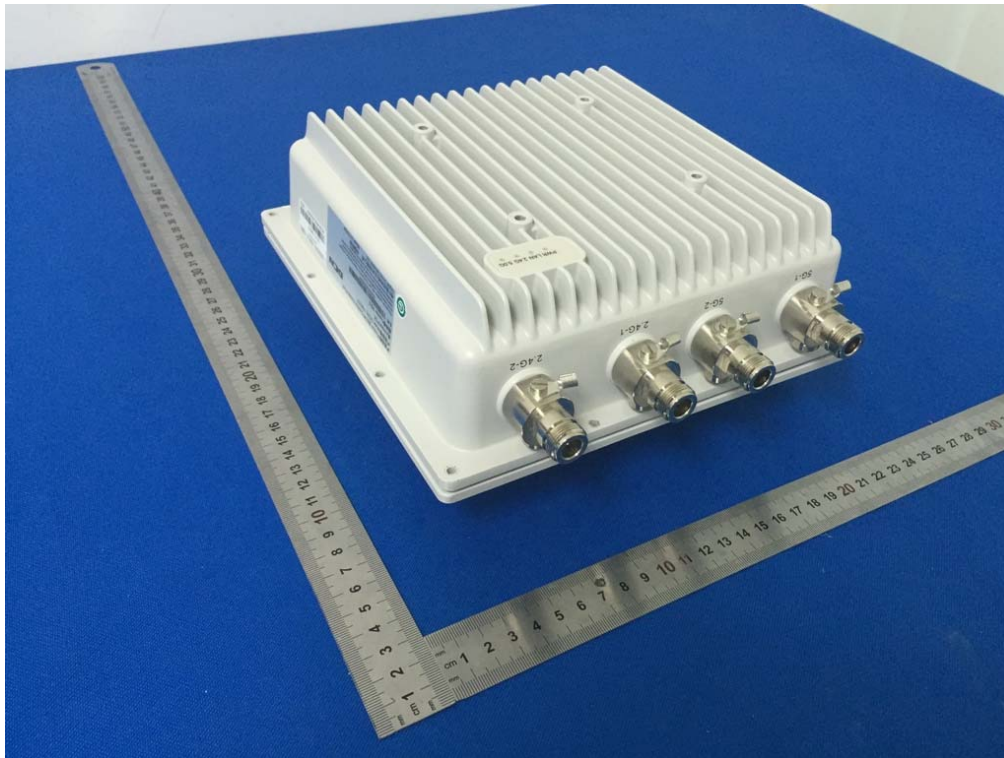
## 12. Test setup photograph



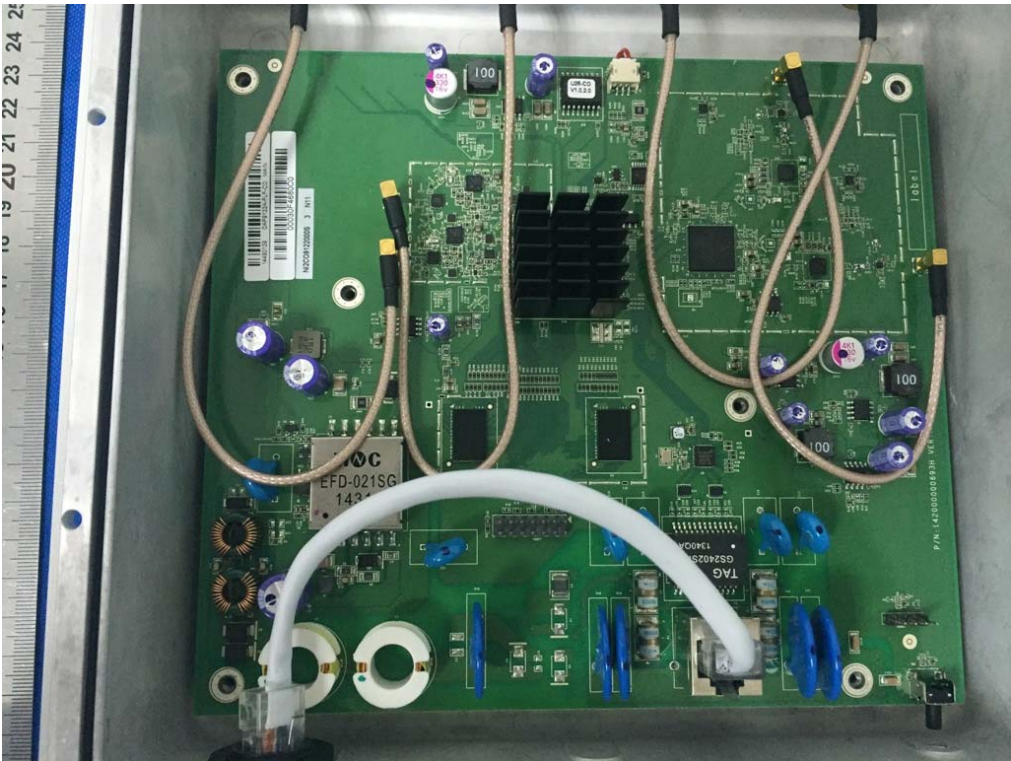
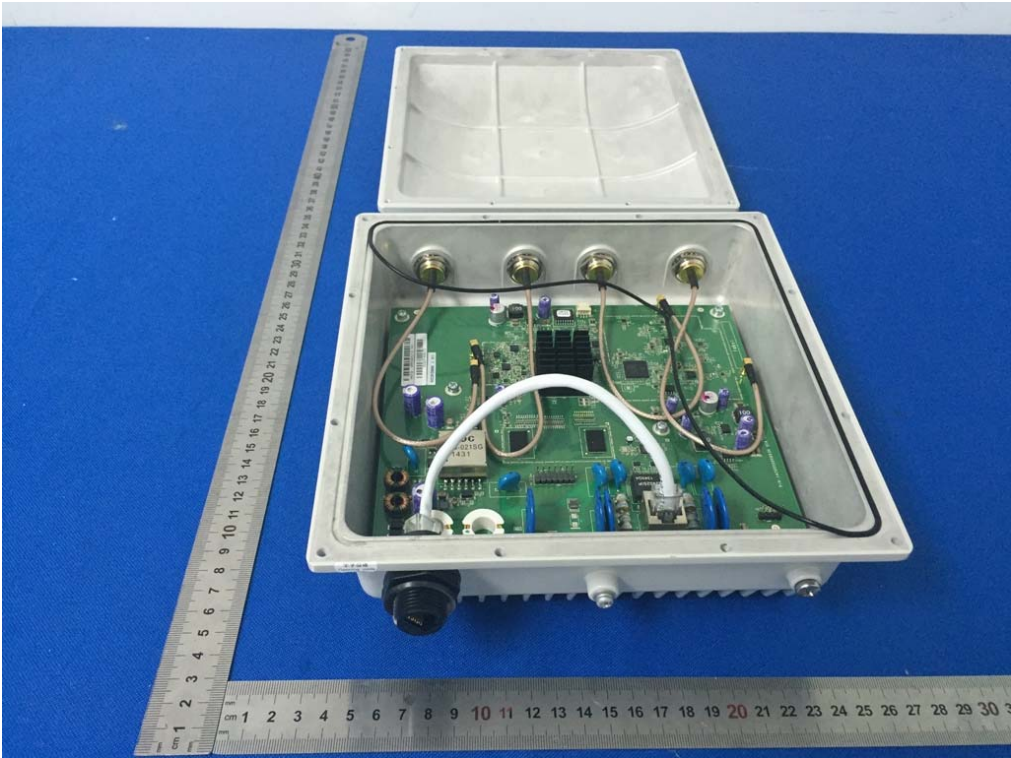


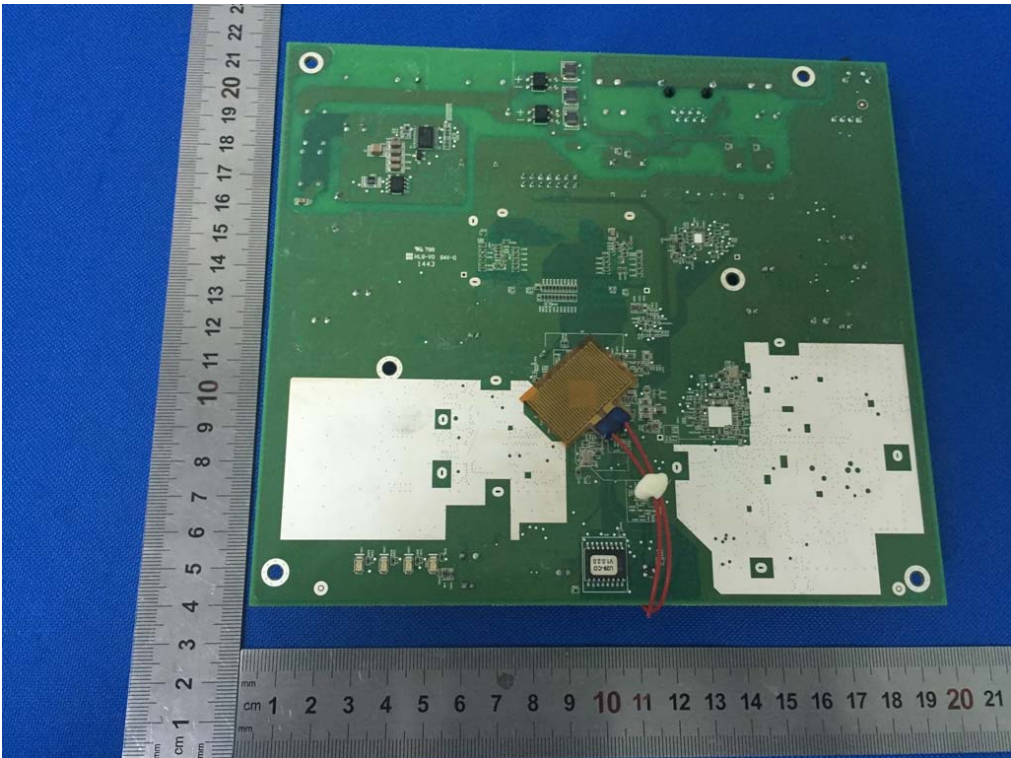
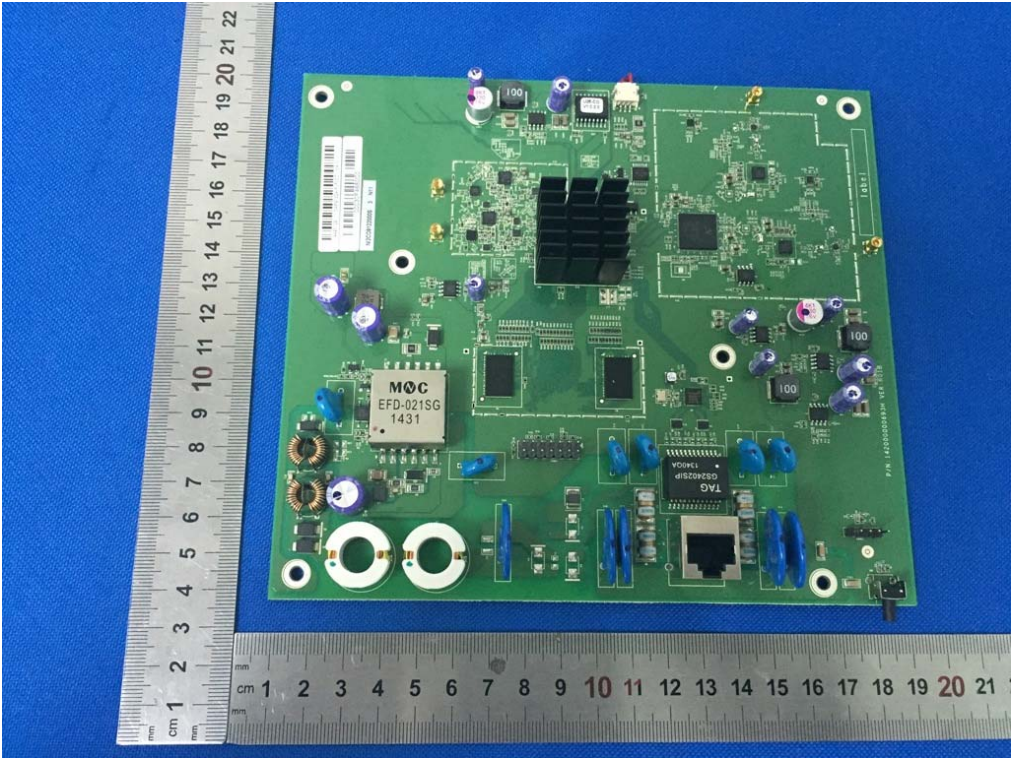
### 13. Photos of the EUT

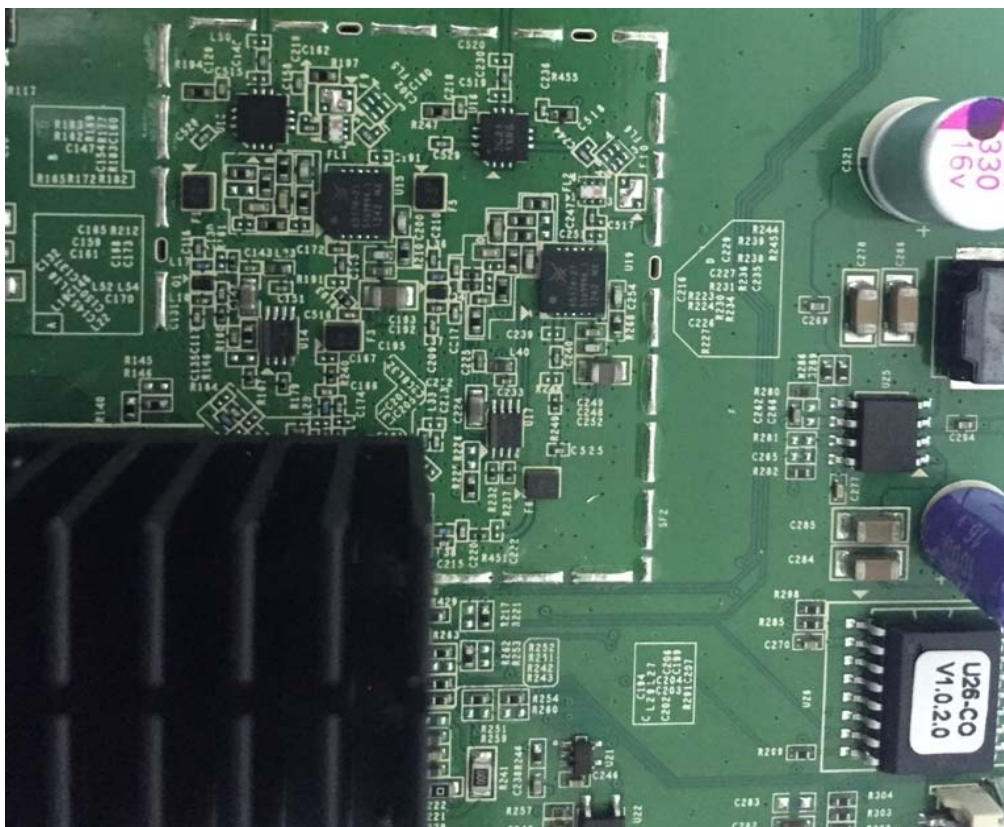
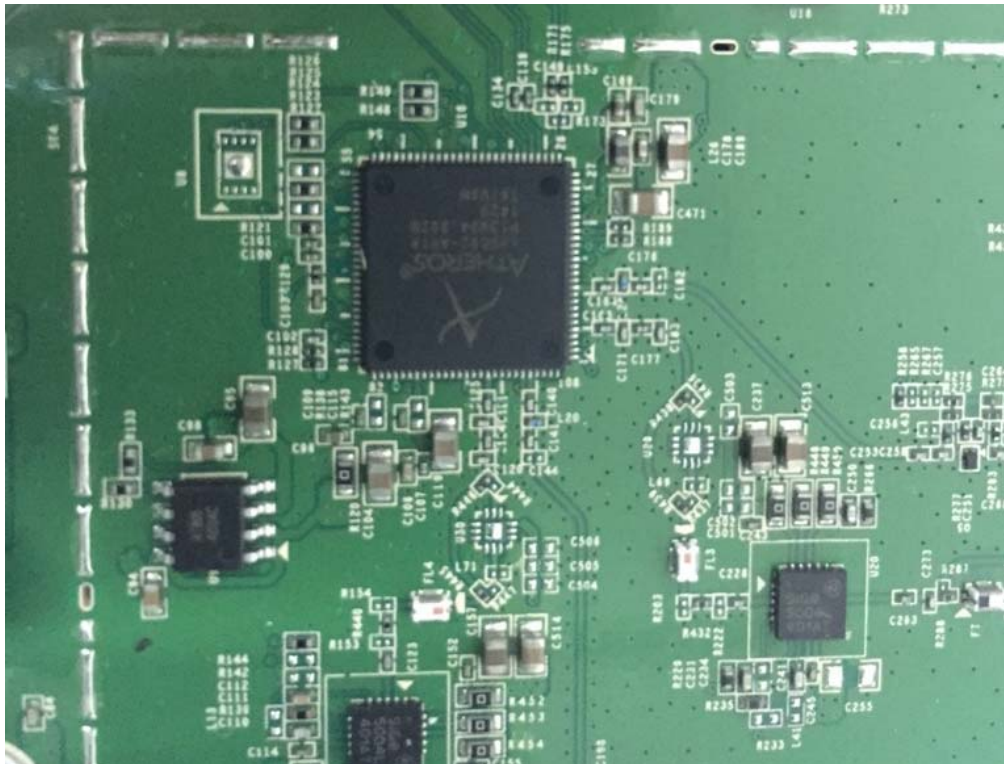


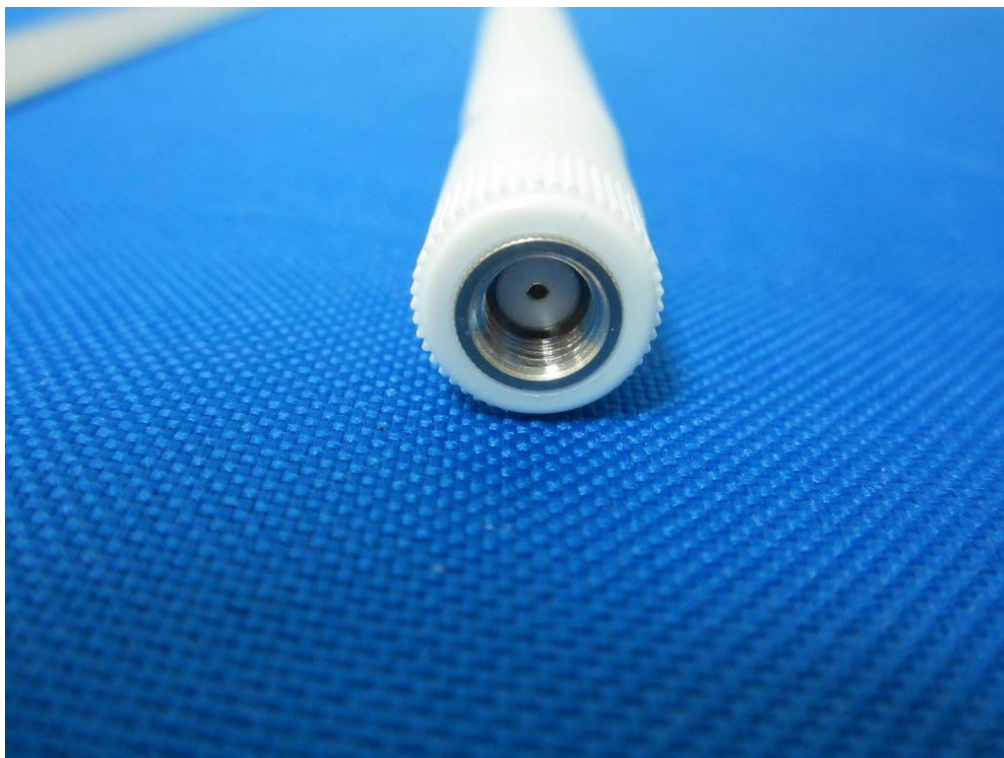












**END OF REPORT**