



LCIE

WIFI 5GHz Template: Release October 03rd, 2016

# TEST REPORT

N°: 146019-698067D

Version : 01

## Subject

Radio spectrum matters  
tests according to standards:  
47 CFR Part 15.407 (RF Test Only)

## Issued to

**SAGEMCOM BROADBAND SAS**  
250 Route de l' Empereur  
92500 - RUEIL MALMAISON  
FRANCE

## Apparatus under test

- ↳ Product
- ↳ Trade mark
- ↳ Manufacturer
- ↳ Model under test
- ↳ Serial number
- ↳ FCC ID

**DCIWA384 UHD Alt US**  
**SAGEMCOM**  
**SAGEMCOM**  
**MiniBox (253697290)**  
**616476080862**  
**VW3DCIWA384**

## Test date

: December 5, 2016 to January 22, 2016

## Test location

Fontenay Aux Roses & Ecuelles

## Composition of document

203 pages

## Document issued on

February 13, 2017

**Written by :**  
**Mathieu CERISIER**  
**Tests operator**



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## SUMMARY

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## 1. TEST PROGRAM

### References

- 47 CFR Part 15.407
- KDB 789033 D02 General U-NII Tests Procedures New Rules v01r02
- KDB 662911 D01 Multiple Transmitter Output v02r01
- ANSI C63.10-2013

### Radio requirement:

| Clause (47CFR Part 15.407)<br>Test Description              | Test result - Comments                   |                               |                                |                                |
|-------------------------------------------------------------|------------------------------------------|-------------------------------|--------------------------------|--------------------------------|
| Occupied Bandwidth <a href="#">↗</a>                        | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL | <input type="checkbox"/> NA    | <input type="checkbox"/> NP(1) |
| 26dB Bandwidth <a href="#">↗</a>                            | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL | <input type="checkbox"/> NA(2) | <input type="checkbox"/> NP(1) |
| 6dB Bandwidth <a href="#">↗</a>                             | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL | <input type="checkbox"/> NA(3) | <input type="checkbox"/> NP(1) |
| Duty Cycle <a href="#">↗</a>                                | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL | <input type="checkbox"/> NA    | <input type="checkbox"/> NP(1) |
| EIRP <a href="#">↗</a>                                      | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL | <input type="checkbox"/> NA    | <input type="checkbox"/> NP(1) |
| Maximum Conducted Output Power <a href="#">↗</a>            | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL | <input type="checkbox"/> NA    | <input type="checkbox"/> NP(1) |
| Power Spectral Density <a href="#">↗</a>                    | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL | <input type="checkbox"/> NA    | <input type="checkbox"/> NP(1) |
| Transmit Power Control <a href="#">↗</a>                    | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL | <input type="checkbox"/> NA(4) | <input type="checkbox"/> NP(1) |
| AC Power Line Conducted Emission <a href="#">↗</a>          | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL | <input type="checkbox"/> NA(5) | <input type="checkbox"/> NP(1) |
| Unwanted Emissions & Undesirable Emission <a href="#">↗</a> | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL | <input type="checkbox"/> NA    | <input type="checkbox"/> NP(1) |
| Frequency Stability <a href="#">↗</a>                       | <input checked="" type="checkbox"/> PASS | <input type="checkbox"/> FAIL | <input type="checkbox"/> NA    | <input type="checkbox"/> NP(1) |

This table is a summary of test report, see conclusion of each clause of this test report for detail.

(1): Limited program

(2): EUT only operates outside the 5725MHz-5850MHz band

(3): EUT only operates inside the 5725MHz-5850MHz band

(4): EIRP below 27dBm or EUT only operates inside 5150MHz-5250MHz or/and 5725MHz-5850MHz bands

(5): EUT not directly or indirectly connected to the AC Power Public Network

## 2. EQUIPMENT UNDER TEST: CONFIGURATION (DECLARED BY PROVIDER)

### 2.1. HARDWARE IDENTIFICATION (EUT AND AUXILIARIES):

Equipment under test (EUT):

SAGEMCOM MiniBox (253697290)

Serial Number: 616476080862



Equipment Under Test



Equipment Under Test

**Inputs/outputs - Cable:**

| Access | Type         | Length used (m) | Declared <3m                        | Shielded                            | Under test                          | Comments |
|--------|--------------|-----------------|-------------------------------------|-------------------------------------|-------------------------------------|----------|
| 1      | Power supply | 2               | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |          |
| 2      | Ethernet     | 2.5             | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |          |

**Auxiliary equipment used during test:**

| Type           | Reference             | Sn           | Comments           |
|----------------|-----------------------|--------------|--------------------|
| Laptop         |                       |              | Use to set the EUT |
| Power supply°1 | MSA-Z3800IC12.0-48W-P | 191360131-XX | -                  |
| Power supply°2 | NBS42C120380M2        | 191357366-XX | -                  |
| Power supply°3 | LPL-C64612038026      | 191359307-XX | -                  |

**Equipment information:**

|                                                     |                                                                                                                                                                                |                                                     |                                                                   |                                           |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------|
| Type:                                               | <b>WIFI</b>                                                                                                                                                                    |                                                     |                                                                   |                                           |
| Frequency band:                                     | <input checked="" type="checkbox"/> 5150MHz-5250MHz                                                                                                                            | <input checked="" type="checkbox"/> 5250MHz-5350MHz | <input checked="" type="checkbox"/> 5470MHz-5725MHz               |                                           |
|                                                     | <input checked="" type="checkbox"/> 5725MHz-5850MHz                                                                                                                            |                                                     |                                                                   |                                           |
| Standard:                                           | <input checked="" type="checkbox"/> 802.11a                                                                                                                                    | <input checked="" type="checkbox"/> 802.11n HT20    | <input checked="" type="checkbox"/> 802.11n HT40                  |                                           |
|                                                     | <input checked="" type="checkbox"/> 802.11ac VHT20                                                                                                                             | <input checked="" type="checkbox"/> 802.11ac VHT40  | <input checked="" type="checkbox"/> 802.11ac VHT80                |                                           |
|                                                     | <input type="checkbox"/> 802.11ac VHT160                                                                                                                                       |                                                     |                                                                   |                                           |
| Spectrum Modulation:                                | <input checked="" type="checkbox"/> OFDM                                                                                                                                       |                                                     |                                                                   |                                           |
| Channel bandwidth:                                  | <input checked="" type="checkbox"/> 20MHz                                                                                                                                      | <input checked="" type="checkbox"/> 40MHz           | <input checked="" type="checkbox"/> 80MHz                         | <input type="checkbox"/> 160MHz           |
| Antenna Type:                                       | <input checked="" type="checkbox"/> Integral                                                                                                                                   | <input type="checkbox"/> External                   | <input type="checkbox"/> Dedicated                                |                                           |
| Antenna connector:                                  | <input checked="" type="checkbox"/> Yes                                                                                                                                        | <input type="checkbox"/> No                         | <input type="checkbox"/> Temporary for test                       |                                           |
| Transmit chains:                                    | <input type="checkbox"/> 1                                                                                                                                                     | <input type="checkbox"/> 2                          | <input type="checkbox"/> 3                                        | <input checked="" type="checkbox"/> 4     |
|                                                     | <input type="checkbox"/> 5                                                                                                                                                     | <input type="checkbox"/> 6                          | <input type="checkbox"/> 7                                        | <input type="checkbox"/> 8                |
| TPC:                                                | <input checked="" type="checkbox"/> Yes                                                                                                                                        |                                                     | <input type="checkbox"/> No                                       |                                           |
| Receiver chains:                                    | <input type="checkbox"/> 1                                                                                                                                                     | <input type="checkbox"/> 2                          | <input type="checkbox"/> 3                                        | <input checked="" type="checkbox"/> 4     |
|                                                     | <input type="checkbox"/> 5                                                                                                                                                     | <input type="checkbox"/> 6                          | <input type="checkbox"/> 7                                        | <input type="checkbox"/> 8                |
| Type of equipment:                                  | <input checked="" type="checkbox"/> Stand-alone                                                                                                                                | <input type="checkbox"/> Plug-in                    | <input type="checkbox"/> Combined                                 |                                           |
| Operating temperature range:                        | Tmin:                                                                                                                                                                          | <input type="checkbox"/> -20°C                      | <input checked="" type="checkbox"/> 0°C                           | <input type="checkbox"/> X °C             |
|                                                     | Tnom:                                                                                                                                                                          | 20°C                                                |                                                                   |                                           |
|                                                     | Tmax:                                                                                                                                                                          | <input type="checkbox"/> 35°C                       | <input type="checkbox"/> 55°C                                     | <input checked="" type="checkbox"/> 45 °C |
| Type of power source:                               | <input checked="" type="checkbox"/> AC power supply                                                                                                                            | <input type="checkbox"/> DC power supply            | <input type="checkbox"/> Battery Battery Type                     |                                           |
| Operating voltage range:                            | Vnom:                                                                                                                                                                          | <input checked="" type="checkbox"/> 120V/60Hz       | <input type="checkbox"/> X Vdc                                    |                                           |
| Mode:                                               | <input checked="" type="checkbox"/> Master                                                                                                                                     | <input type="checkbox"/> Slave with radar detection | <input checked="" type="checkbox"/> Slave without radar detection |                                           |
|                                                     | <input checked="" type="checkbox"/> Bridge                                                                                                                                     |                                                     | <input type="checkbox"/> Mesh                                     |                                           |
| Fixed outdoor P to P/M application:                 | <input type="checkbox"/> Yes                                                                                                                                                   |                                                     | <input checked="" type="checkbox"/> No                            |                                           |
| System architectures:                               | <input checked="" type="checkbox"/> IP based                                                                                                                                   |                                                     | <input type="checkbox"/> Frame based                              |                                           |
| Time require for EUT to complete its power cycle on | X s                                                                                                                                                                            |                                                     |                                                                   |                                           |
| User access restriction:                            | <input checked="" type="checkbox"/> Yes (The manufacturer declares that information regarding the parameters of the detected Radar Waveforms is not available to the end user) |                                                     | <input type="checkbox"/> No                                       |                                           |



| Antenna Characteristic |            |                      |                       |
|------------------------|------------|----------------------|-----------------------|
| Antenna assembly       | Gain (dBi) | Frequency Band (MHz) | Impedance( $\Omega$ ) |
| 1                      | 2.6        | 5180-5825            | 50                    |
| 2                      | 2.6        | 5180-5825            | 50                    |
| 3                      | 2.6        | 5180-5825            | 50                    |
| 4                      | 2.6        | 5180-5825            | 50                    |
| Accumulated            | 8.65       | 5180-5825            | 50                    |

Note: Calculated according to KDB 662911 D01 Multiple Transmitter Output v02r01 F) 2) d) (i). All antennas can transmit simultaneously

| CHANNEL PLAN                           |                 |                                     |
|----------------------------------------|-----------------|-------------------------------------|
| 802.11a / 802.11n HT20/ 802.11ac VHT20 |                 |                                     |
| Channel                                | Frequency (MHz) | Available Channel                   |
| C1=36                                  | 5180            | <input checked="" type="checkbox"/> |
| C2=40                                  | 5200            | <input checked="" type="checkbox"/> |
| 44                                     | 5220            | <input checked="" type="checkbox"/> |
| C3=48                                  | 5240            | <input checked="" type="checkbox"/> |
| C4=52                                  | 5260            | <input checked="" type="checkbox"/> |
| 56                                     | 5280            | <input checked="" type="checkbox"/> |
| C5=60                                  | 5300            | <input checked="" type="checkbox"/> |
| C6=64                                  | 5320            | <input checked="" type="checkbox"/> |
| C7=100                                 | 5500            | <input checked="" type="checkbox"/> |
| 104                                    | 5520            | <input checked="" type="checkbox"/> |
| 108                                    | 5540            | <input checked="" type="checkbox"/> |
| 112                                    | 5560            | <input checked="" type="checkbox"/> |
| C8=116                                 | 5580            | <input checked="" type="checkbox"/> |
| 120                                    | 5600            | <input checked="" type="checkbox"/> |
| 124                                    | 5620            | <input checked="" type="checkbox"/> |
| 128                                    | 5640            | <input checked="" type="checkbox"/> |
| 132                                    | 5660            | <input checked="" type="checkbox"/> |
| 136                                    | 5680            | <input checked="" type="checkbox"/> |
| C9=140                                 | 5700            | <input checked="" type="checkbox"/> |
| C10=144                                | 5720            | <input checked="" type="checkbox"/> |
| C11=149                                | 5745            | <input checked="" type="checkbox"/> |
| 153                                    | 5765            | <input checked="" type="checkbox"/> |
| C12=157                                | 5785            | <input checked="" type="checkbox"/> |
| 161                                    | 5805            | <input checked="" type="checkbox"/> |
| C13=165                                | 5825            | <input checked="" type="checkbox"/> |

| CHANNEL PLAN                 |                 |                                     |
|------------------------------|-----------------|-------------------------------------|
| 802.11n HT40/ 802.11ac VHT40 |                 |                                     |
| Channel                      | Frequency (MHz) | Available Channel                   |
| C14=36+40                    | 5190            | <input checked="" type="checkbox"/> |
| C15=44+48                    | 5230            | <input checked="" type="checkbox"/> |
| C16=52+56                    | 5270            | <input checked="" type="checkbox"/> |
| C17=60+64                    | 5310            | <input checked="" type="checkbox"/> |
| C18=100+104                  | 5510            | <input checked="" type="checkbox"/> |
| C19=108+112                  | 5550            | <input checked="" type="checkbox"/> |
| 116+120                      | 5590            | <input checked="" type="checkbox"/> |
| 124+128                      | 5630            | <input checked="" type="checkbox"/> |
| C20=132+136                  | 5670            | <input checked="" type="checkbox"/> |
| C21=140+144                  | 5710            | <input checked="" type="checkbox"/> |
| C22=149+153                  | 5755            | <input checked="" type="checkbox"/> |
| C23=157+161                  | 5795            | <input checked="" type="checkbox"/> |

| CHANNEL PLAN        |                 |                                     |
|---------------------|-----------------|-------------------------------------|
| 802.11ac VHT80      |                 |                                     |
| Channel             | Frequency (MHz) | Available Channel                   |
| C24=36+40+44+48     | 5210            | <input checked="" type="checkbox"/> |
| C25=52+56+60+64     | 5290            | <input checked="" type="checkbox"/> |
| C26=100+104+108+112 | 5530            | <input checked="" type="checkbox"/> |
| C27=116+120+124+128 | 5610            | <input checked="" type="checkbox"/> |
| C28=132+136+140+144 | 5690            | <input checked="" type="checkbox"/> |
| C29=149+153+157+161 | 5775            | <input checked="" type="checkbox"/> |

|                     |
|---------------------|
| No DFS Channel      |
| DFS Channel         |
| Weather DFS Channel |

| DATA RATE        |                 |                                     |
|------------------|-----------------|-------------------------------------|
| 802.11a          |                 |                                     |
| Data Rate (Mbps) | Modulation Type | Modulation Worst Case               |
| 6                | BPSK            | <input checked="" type="checkbox"/> |
| 9                | BPSK            | <input type="checkbox"/>            |
| 12               | QPSK            | <input type="checkbox"/>            |
| 18               | QPSK            | <input type="checkbox"/>            |
| 24               | 16-QAM          | <input type="checkbox"/>            |
| 36               | 16-QAM          | <input type="checkbox"/>            |
| 48               | 64-QAM          | <input type="checkbox"/>            |
| 54               | 64-QAM          | <input type="checkbox"/>            |



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| DATA RATE                           |              |                    |            |        |        |        |                  |              |                                     |
|-------------------------------------|--------------|--------------------|------------|--------|--------|--------|------------------|--------------|-------------------------------------|
| 802.11n HT20                        |              |                    |            |        |        |        |                  |              |                                     |
| Available<br>for EUT                | MCS<br>Index | Spatial<br>streams | Modulation |        |        |        | Data Rate (Mbps) |              | Worst Case<br>Modulation            |
|                                     |              |                    |            |        |        |        | (GI = 800ns)     | (GI = 400ns) |                                     |
| <input checked="" type="checkbox"/> | 0            | 1                  | BPSK       |        |        |        | 6.5              | 7.2          | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | 1            | 1                  | QPSK       |        |        |        | 13               | 14.4         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 2            | 1                  | QPSK       |        |        |        | 19.5             | 21.7         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 3            | 1                  | 16-QAM     |        |        |        | 26               | 28.9         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 4            | 1                  | 16-QAM     |        |        |        | 39               | 43.3         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 5            | 1                  | 64-QAM     |        |        |        | 52               | 57.8         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 6            | 1                  | 64-QAM     |        |        |        | 58.5             | 65           | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 7            | 1                  | 64-QAM     |        |        |        | 65               | 72.2         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 8            | 2                  | BPSK       |        |        |        | 13               | 14.4         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 9            | 2                  | QPSK       |        |        |        | 26               | 28.9         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 10           | 2                  | QPSK       |        |        |        | 39               | 43.3         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 11           | 2                  | 16-QAM     |        |        |        | 52               | 57.8         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 12           | 2                  | 16-QAM     |        |        |        | 78               | 86.7         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 13           | 2                  | 64-QAM     |        |        |        | 104              | 115.6        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 14           | 2                  | 64-QAM     |        |        |        | 117              | 130.3        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 15           | 2                  | 64-QAM     |        |        |        | 130              | 144.4        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 16           | 3                  | BPSK       |        |        |        | 19.5             | 21.7         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 17           | 3                  | QPSK       |        |        |        | 39               | 43.3         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 18           | 3                  | QPSK       |        |        |        | 58.5             | 65           | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 19           | 3                  | 16-QAM     |        |        |        | 78               | 86.7         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 20           | 3                  | 16-QAM     |        |        |        | 117              | 130          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 21           | 3                  | 64-QAM     |        |        |        | 156              | 173.3        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 22           | 3                  | 64-QAM     |        |        |        | 175.5            | 195          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 23           | 3                  | 64-QAM     |        |        |        | 195              | 216.7        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 24           | 4                  | BPSK       |        |        |        | 26               | 28.9         | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | 25           | 4                  | QPSK       |        |        |        | 52               | 57.8         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 26           | 4                  | QPSK       |        |        |        | 78               | 86.7         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 27           | 4                  | 16-QAM     |        |        |        | 104              | 115.6        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 28           | 4                  | 16-QAM     |        |        |        | 156              | 173.3        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 29           | 4                  | 64-QAM     |        |        |        | 208              | 231.1        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 30           | 4                  | 64-QAM     |        |        |        | 234              | 260          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 31           | 4                  | 64-QAM     |        |        |        | 260              | 288.9        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 32           | 1                  | BPSK       | -      | -      | -      | -                | -            | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 33           | 2                  | 16-QAM     | QPSK   | -      | -      | 39               | 43.3         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 34           | 2                  | 64-QAM     | QPSK   | -      | -      | 52               | 57.8         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 35           | 2                  | 64-QAM     | 16-QAM | -      | -      | 65               | 72.2         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 36           | 2                  | 16-QAM     | QPSK   | -      | -      | 58.5             | 65           | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 37           | 2                  | 64-QAM     | QPSK   | -      | -      | 78               | 86.7         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 38           | 2                  | 64-QAM     | 16-QAM | -      | -      | 97.5             | 108.3        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 39           | 3                  | 16-QAM     | QPSK   | QPSK   | -      | 52               | 57.8         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 40           | 3                  | 16-QAM     | 16-QAM | QPSK   | -      | 65               | 72.2         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 41           | 3                  | 64-QAM     | QPSK   | QPSK   | -      | 65               | 72.2         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 42           | 3                  | 64-QAM     | 16-QAM | QPSK   | -      | 78               | 86.7         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 43           | 3                  | 64-QAM     | 16-QAM | 16-QAM | -      | 91               | 101.1        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 44           | 3                  | 64-QAM     | 64-QAM | QPSK   | -      | 91               | 101.1        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 45           | 3                  | 64-QAM     | 64-QAM | 16-QAM | -      | 104              | 115.6        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 46           | 3                  | 16-QAM     | QPSK   | QPSK   | -      | 78               | 86.7         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 47           | 3                  | 16-QAM     | 16-QAM | QPSK   | -      | 97.5             | 108.3        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 48           | 3                  | 64-QAM     | QPSK   | QPSK   | -      | 97.5             | 108.3        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 49           | 3                  | 64-QAM     | 16-QAM | QPSK   | -      | 117              | 130          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 50           | 3                  | 64-QAM     | 16-QAM | 16-QAM | -      | 136.5            | 151.7        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 51           | 3                  | 64-QAM     | 64-QAM | QPSK   | -      | 136.5            | 151.7        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 52           | 3                  | 64-QAM     | 64-QAM | 16-QAM | -      | 156              | 173.3        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 53           | 4                  | 16-QAM     | QPSK   | QPSK   | QPSK   | 65               | 72.2         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 54           | 4                  | 16-QAM     | 16-QAM | QPSK   | QPSK   | 78               | 86.7         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 55           | 4                  | 16-QAM     | 16-QAM | 16-QAM | QPSK   | 91               | 101.1        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 56           | 4                  | 64-QAM     | QPSK   | QPSK   | QPSK   | 78               | 86.7         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 57           | 4                  | 64-QAM     | 16-QAM | QPSK   | QPSK   | 91               | 101.1        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 58           | 4                  | 64-QAM     | 16-QAM | 16-QAM | QPSK   | 104              | 115.6        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 59           | 4                  | 64-QAM     | 16-QAM | 16-QAM | 16-QAM | 117              | 130          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 60           | 4                  | 64-QAM     | QPSK   | QPSK   | QPSK   | 104              | 115.6        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 61           | 4                  | 64-QAM     | 16-QAM | 16-QAM | QPSK   | 117              | 130          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 62           | 4                  | 64-QAM     | 16-QAM | 16-QAM | 16-QAM | 130              | 144.4        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 63           | 4                  | 64-QAM     | 64-QAM | 64-QAM | QPSK   | 130              | 144.4        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 64           | 4                  | 64-QAM     | 64-QAM | 64-QAM | 16-QAM | 143              | 158.9        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 65           | 4                  | 16-QAM     | QPSK   | QPSK   | QPSK   | 97.5             | 108.3        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 66           | 4                  | 16-QAM     | 16-QAM | QPSK   | QPSK   | 117              | 130          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 67           | 4                  | 16-QAM     | 16-QAM | 16-QAM | QPSK   | 136.5            | 151.7        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 68           | 4                  | 64-QAM     | QPSK   | QPSK   | QPSK   | 117              | 130          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 69           | 4                  | 64-QAM     | 16-QAM | QPSK   | QPSK   | 136.5            | 151.7        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 70           | 4                  | 64-QAM     | 16-QAM | 16-QAM | QPSK   | 156              | 173.3        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 71           | 4                  | 64-QAM     | 16-QAM | 16-QAM | 16-QAM | 175.5            | 195          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 72           | 4                  | 64-QAM     | 64-QAM | QPSK   | QPSK   | 156              | 173.3        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 73           | 4                  | 64-QAM     | 64-QAM | 16-QAM | QPSK   | 175.5            | 195          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 74           | 4                  | 64-QAM     | 64-QAM | 16-QAM | 16-QAM | 195              | 216.7        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 75           | 4                  | 64-QAM     | 64-QAM | 64-QAM | QPSK   | 195              | 216.7        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 76           | 4                  | 64-QAM     | 64-QAM | 64-QAM | 16-QAM | 214.5            | 238.3        | <input type="checkbox"/>            |



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| DATA RATE                           |              |                    |            |        |        |        |                  |              |                                     |
|-------------------------------------|--------------|--------------------|------------|--------|--------|--------|------------------|--------------|-------------------------------------|
| 802.11n HT40                        |              |                    |            |        |        |        |                  |              |                                     |
| Available<br>for EUT                | MCS<br>Index | Spatial<br>streams | Modulation |        |        |        | Data Rate (Mbps) |              | Worst Case<br>Modulation            |
|                                     |              |                    |            |        |        |        | (GI = 800ns)     | (GI = 400ns) |                                     |
| <input checked="" type="checkbox"/> | 0            | 1                  | BPSK       |        |        |        | 13               | 15           | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | 1            | 1                  | QPSK       |        |        |        | 27               | 30           | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 2            | 1                  | QPSK       |        |        |        | 40.5             | 45           | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 3            | 1                  | 16-QAM     |        |        |        | 54               | 60           | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 4            | 1                  | 16-QAM     |        |        |        | 81               | 90           | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 5            | 1                  | 64-QAM     |        |        |        | 108              | 120          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 6            | 1                  | 64-QAM     |        |        |        | 121.5            | 135          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 7            | 1                  | 64-QAM     |        |        |        | 135              | 150          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 8            | 2                  | BPSK       |        |        |        | 27               | 30           | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 9            | 2                  | QPSK       |        |        |        | 54               | 60           | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 10           | 2                  | QPSK       |        |        |        | 81               | 90           | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 11           | 2                  | 16-QAM     |        |        |        | 108              | 120          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 12           | 2                  | 16-QAM     |        |        |        | 162              | 180          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 13           | 2                  | 64-QAM     |        |        |        | 216              | 240          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 14           | 2                  | 64-QAM     |        |        |        | 243              | 270          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 15           | 2                  | 64-QAM     |        |        |        | 270              | 300          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 16           | 3                  | BPSK       |        |        |        | 40.5             | 45           | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 17           | 3                  | QPSK       |        |        |        | 81               | 90           | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 18           | 3                  | QPSK       |        |        |        | 121.5            | 135          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 19           | 3                  | 16-QAM     |        |        |        | 162              | 180          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 20           | 3                  | 16-QAM     |        |        |        | 243              | 270          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 21           | 3                  | 64-QAM     |        |        |        | 324              | 360          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 22           | 3                  | 64-QAM     |        |        |        | 364.5            | 405          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 23           | 3                  | 64-QAM     |        |        |        | 405              | 450          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 24           | 4                  | BPSK       |        |        |        | 54               | 60           | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | 25           | 4                  | QPSK       |        |        |        | 108              | 120          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 26           | 4                  | QPSK       |        |        |        | 162              | 180          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 27           | 4                  | 16-QAM     |        |        |        | 216              | 240          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 28           | 4                  | 16-QAM     |        |        |        | 324              | 360          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 29           | 4                  | 64-QAM     |        |        |        | 432              | 480          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 30           | 4                  | 64-QAM     |        |        |        | 486              | 540          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 31           | 4                  | 64-QAM     |        |        |        | 540              | 600          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 32           | 1                  | BPSK       | -      | -      | -      | 6.0              | 6.7          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 33           | 2                  | 16-QAM     | QPSK   | -      | -      | 81               | 90.0         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 34           | 2                  | 64-QAM     | QPSK   | -      | -      | 108              | 120          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 35           | 2                  | 64-QAM     | 16-QAM | -      | -      | 135              | 150          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 36           | 2                  | 16-QAM     | QPSK   | -      | -      | 121.5            | 135          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 37           | 2                  | 64-QAM     | QPSK   | -      | -      | 162              | 180          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 38           | 2                  | 64-QAM     | 16-QAM | -      | -      | 202.5            | 225          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 39           | 3                  | 16-QAM     | QPSK   | QPSK   | -      | 108              | 120          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 40           | 3                  | 16-QAM     | 16-QAM | QPSK   | -      | 135              | 150          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 41           | 3                  | 64-QAM     | QPSK   | QPSK   | -      | 135              | 150          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 42           | 3                  | 64-QAM     | 16-QAM | QPSK   | -      | 162              | 180          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 43           | 3                  | 64-QAM     | 16-QAM | 16-QAM | -      | 189              | 210          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 44           | 3                  | 64-QAM     | 64-QAM | QPSK   | -      | 189              | 210          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 45           | 3                  | 64-QAM     | 64-QAM | 16-QAM | -      | 216              | 240          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 46           | 3                  | 16-QAM     | QPSK   | QPSK   | -      | 162              | 180          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 47           | 3                  | 16-QAM     | 16-QAM | QPSK   | -      | 202.5            | 225          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 48           | 3                  | 64-QAM     | QPSK   | QPSK   | -      | 202.5            | 225          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 49           | 3                  | 64-QAM     | 16-QAM | QPSK   | -      | 243              | 270          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 50           | 3                  | 64-QAM     | 16-QAM | 16-QAM | -      | 283.5            | 315          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 51           | 3                  | 64-QAM     | 64-QAM | QPSK   | -      | 283.5            | 315          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 52           | 3                  | 64-QAM     | 64-QAM | 16-QAM | -      | 324              | 360          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 53           | 4                  | 16-QAM     | QPSK   | QPSK   | QPSK   | 135              | 150          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 54           | 4                  | 16-QAM     | 16-QAM | QPSK   | QPSK   | 162              | 180          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 55           | 4                  | 16-QAM     | 16-QAM | 16-QAM | QPSK   | 189              | 210          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 56           | 4                  | 64-QAM     | QPSK   | QPSK   | QPSK   | 162              | 180          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 57           | 4                  | 64-QAM     | 16-QAM | QPSK   | QPSK   | 189              | 210          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 58           | 4                  | 64-QAM     | 16-QAM | 16-QAM | QPSK   | 216              | 240          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 59           | 4                  | 64-QAM     | 16-QAM | 16-QAM | 16-QAM | 243              | 270          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 60           | 4                  | 64-QAM     | QPSK   | QPSK   | QPSK   | 216              | 240          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 61           | 4                  | 64-QAM     | 16-QAM | 16-QAM | QPSK   | 243              | 270          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 62           | 4                  | 64-QAM     | 16-QAM | 16-QAM | 16-QAM | 270              | 300          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 63           | 4                  | 64-QAM     | 64-QAM | 64-QAM | QPSK   | 270              | 300          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 64           | 4                  | 64-QAM     | 64-QAM | 64-QAM | 16-QAM | 297              | 330          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 65           | 4                  | 16-QAM     | QPSK   | QPSK   | QPSK   | 202.5            | 225          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 66           | 4                  | 16-QAM     | 16-QAM | QPSK   | QPSK   | 243              | 270          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 67           | 4                  | 16-QAM     | 16-QAM | 16-QAM | QPSK   | 283.5            | 315          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 68           | 4                  | 64-QAM     | QPSK   | QPSK   | QPSK   | 243              | 270          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 69           | 4                  | 64-QAM     | 16-QAM | QPSK   | QPSK   | 283.5            | 315          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 70           | 4                  | 64-QAM     | 16-QAM | 16-QAM | QPSK   | 324              | 360          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 71           | 4                  | 64-QAM     | 16-QAM | 16-QAM | 16-QAM | 364.5            | 405          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 72           | 4                  | 64-QAM     | 64-QAM | QPSK   | QPSK   | 324              | 360          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 73           | 4                  | 64-QAM     | 64-QAM | 16-QAM | QPSK   | 364.5            | 405          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 74           | 4                  | 64-QAM     | 64-QAM | 16-QAM | 16-QAM | 405              | 450          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 75           | 4                  | 64-QAM     | 64-QAM | 64-QAM | QPSK   | 405              | 450          | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 76           | 4                  | 64-QAM     | 64-QAM | 64-QAM | 16-QAM | 445.5            | 495          | <input type="checkbox"/>            |



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| DATA RATE: 802.11ac VHT20           |           |                        |                             |             |            |            |                                     |
|-------------------------------------|-----------|------------------------|-----------------------------|-------------|------------|------------|-------------------------------------|
| Available for EUT                   | MCS Index | Nbr of spatial streams | Modulation (Stream 1/2/3/4) | Coding rate | GI = 800ns | GI = 400ns | Worst Case Modulation               |
| <input checked="" type="checkbox"/> | 0         | 1                      | BPSK                        | 1/2         | 6,5        | 7,2        | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | 1         | 1                      | QPSK                        | 1/2         | 13         | 14,4       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 2         | 1                      | QPSK                        | 3/4         | 19,5       | 21,7       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 3         | 1                      | 16-QAM                      | 1/2         | 26         | 28,9       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 4         | 1                      | 16-QAM                      | 3/4         | 39         | 43,3       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 5         | 1                      | 64-QAM                      | 2/3         | 52         | 57,8       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 6         | 1                      | 64-QAM                      | 3/4         | 58,5       | 65         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 7         | 1                      | 64-QAM                      | 5/6         | 65         | 72,2       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 8         | 1                      | 256-QAM                     | 3/4         | 78         | 86,7       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 9         | 1                      | 256-QAM                     | 5/6         | N/A        | N/A        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 10        | 2                      | BPSK                        | 1/2         | 13         | 14,4       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 11        | 2                      | QPSK                        | 1/2         | 26         | 28,8       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 12        | 2                      | QPSK                        | 3/4         | 39         | 43,4       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 13        | 2                      | 16-QAM                      | 1/2         | 52         | 57,8       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 14        | 2                      | 16-QAM                      | 3/4         | 78         | 86,6       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 15        | 2                      | 64-QAM                      | 2/3         | 104        | 115,6      | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 16        | 2                      | 64-QAM                      | 3/4         | 117        | 130        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 17        | 2                      | 64-QAM                      | 5/6         | 130        | 144,4      | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 18        | 2                      | 256-QAM                     | 3/4         | 156        | 173,4      | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 19        | 2                      | 256-QAM                     | 5/6         | N/A        | N/A        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 20        | 3                      | BPSK                        | 1/2         | 19,5       | 21,6       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 21        | 3                      | QPSK                        | 1/2         | 39         | 43,2       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 22        | 3                      | QPSK                        | 3/4         | 58,5       | 65,1       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 23        | 3                      | 16-QAM                      | 1/2         | 78         | 86,7       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 24        | 3                      | 16-QAM                      | 3/4         | 117        | 129,9      | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 25        | 3                      | 64-QAM                      | 2/3         | 156        | 173,4      | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 26        | 3                      | 64-QAM                      | 3/4         | 175,5      | 195        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 27        | 3                      | 64-QAM                      | 5/6         | 195        | 216,6      | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 28        | 3                      | 256-QAM                     | 3/4         | 234        | 260,1      | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 29        | 3                      | 256-QAM                     | 5/6         | N/A        | N/A        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 30        | 4                      | BPSK                        | 1/2         | 26         | 28,8       | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | 31        | 4                      | QPSK                        | 1/2         | 52         | 57,6       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 32        | 4                      | QPSK                        | 3/4         | 78         | 86,8       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 33        | 4                      | 16-QAM                      | 1/2         | 104        | 115,6      | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 34        | 4                      | 16-QAM                      | 3/4         | 156        | 173,2      | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 35        | 4                      | 64-QAM                      | 2/3         | 208        | 231,2      | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 36        | 4                      | 64-QAM                      | 3/4         | 234        | 260        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 37        | 4                      | 64-QAM                      | 5/6         | 260        | 288,8      | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 38        | 4                      | 256-QAM                     | 3/4         | 312        | 346,8      | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 39        | 4                      | 256-QAM                     | 5/6         | N/A        | N/A        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 40        | 5                      | BPSK                        | 1/2         | 32,5       | 36         | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 41        | 5                      | QPSK                        | 1/2         | 65         | 72         | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 42        | 5                      | QPSK                        | 3/4         | 97,5       | 108,5      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 43        | 5                      | 16-QAM                      | 1/2         | 130        | 144,5      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 44        | 5                      | 16-QAM                      | 3/4         | 195        | 216,5      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 45        | 5                      | 64-QAM                      | 2/3         | 260        | 289        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 46        | 5                      | 64-QAM                      | 3/4         | 292,5      | 325        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 47        | 5                      | 64-QAM                      | 5/6         | 325        | 361        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 48        | 5                      | 256-QAM                     | 3/4         | 390        | 433,5      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 49        | 5                      | 256-QAM                     | 5/6         | N/A        | N/A        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 50        | 6                      | BPSK                        | 1/2         | 39         | 43,2       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 51        | 6                      | QPSK                        | 1/2         | 78         | 86,4       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 52        | 6                      | QPSK                        | 3/4         | 117        | 130,2      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 53        | 6                      | 16-QAM                      | 1/2         | 156        | 173,4      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 54        | 6                      | 16-QAM                      | 3/4         | 234        | 259,8      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 55        | 6                      | 64-QAM                      | 2/3         | 312        | 346,8      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 56        | 6                      | 64-QAM                      | 3/4         | 351        | 390        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 57        | 6                      | 64-QAM                      | 5/6         | 390        | 433,2      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 58        | 6                      | 256-QAM                     | 3/4         | 468        | 520,2      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 59        | 6                      | 256-QAM                     | 5/6         | N/A        | N/A        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 60        | 7                      | BPSK                        | 1/2         | 45,5       | 50,4       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 61        | 7                      | QPSK                        | 1/2         | 91         | 100,8      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 62        | 7                      | QPSK                        | 3/4         | 136,5      | 151,9      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 63        | 7                      | 16-QAM                      | 1/2         | 182        | 202,3      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 64        | 7                      | 16-QAM                      | 3/4         | 273        | 303,1      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 65        | 7                      | 64-QAM                      | 2/3         | 364        | 404,6      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 66        | 7                      | 64-QAM                      | 3/4         | 409,5      | 455        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 67        | 7                      | 64-QAM                      | 5/6         | 455        | 505,4      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 68        | 7                      | 256-QAM                     | 3/4         | 546        | 606,9      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 69        | 7                      | 256-QAM                     | 5/6         | N/A        | N/A        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 70        | 8                      | BPSK                        | 1/2         | 52         | 57,6       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 71        | 8                      | QPSK                        | 1/2         | 104        | 115,2      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 72        | 8                      | QPSK                        | 3/4         | 156        | 173,6      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 73        | 8                      | 16-QAM                      | 1/2         | 208        | 231,2      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 74        | 8                      | 16-QAM                      | 3/4         | 312        | 346,4      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 75        | 8                      | 64-QAM                      | 2/3         | 416        | 462,4      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 76        | 8                      | 64-QAM                      | 3/4         | 468        | 520        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 77        | 8                      | 64-QAM                      | 5/6         | 520        | 577,6      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 78        | 8                      | 256-QAM                     | 3/4         | 624        | 693,6      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 79        | 8                      | 256-QAM                     | 5/6         | N/A        | N/A        | <input type="checkbox"/>            |



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| DATA RATE: 802.11ac VHT40           |           |                        |                             |             |            |            |                                     |
|-------------------------------------|-----------|------------------------|-----------------------------|-------------|------------|------------|-------------------------------------|
| Available for EUT                   | MCS Index | Nbr of spatial streams | Modulation (Stream 1/2/3/4) | Coding rate | GI = 800ns | GI = 400ns | Worst Case Modulation               |
| <input checked="" type="checkbox"/> | 0         | 1                      | BPSK                        | 1/2         | 13,5       | 15         | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | 1         | 1                      | QPSK                        | 1/2         | 27         | 30         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 2         | 1                      | QPSK                        | 3/4         | 40,5       | 45         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 3         | 1                      | 16-QAM                      | 1/2         | 54         | 60         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 4         | 1                      | 16-QAM                      | 3/4         | 81         | 90         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 5         | 1                      | 64-QAM                      | 2/3         | 108        | 120        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 6         | 1                      | 64-QAM                      | 3/4         | 121,5      | 135        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 7         | 1                      | 64-QAM                      | 5/6         | 135        | 150        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 8         | 1                      | 256-QAM                     | 3/4         | 162        | 180        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 9         | 1                      | 256-QAM                     | 5/6         | 180        | 200        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 10        | 2                      | BPSK                        | 1/2         | 27         | 30         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 11        | 2                      | QPSK                        | 1/2         | 54         | 60         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 12        | 2                      | QPSK                        | 3/4         | 81         | 90         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 13        | 2                      | 16-QAM                      | 1/2         | 108        | 120        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 14        | 2                      | 16-QAM                      | 3/4         | 162        | 180        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 15        | 2                      | 64-QAM                      | 2/3         | 216        | 240        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 16        | 2                      | 64-QAM                      | 3/4         | 243        | 270        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 17        | 2                      | 64-QAM                      | 5/6         | 270        | 300        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 18        | 2                      | 256-QAM                     | 3/4         | 324        | 360        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 19        | 2                      | 256-QAM                     | 5/6         | 360        | 400        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 20        | 3                      | BPSK                        | 1/2         | 40,5       | 45         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 21        | 3                      | QPSK                        | 1/2         | 81         | 90         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 22        | 3                      | QPSK                        | 3/4         | 121,5      | 135        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 23        | 3                      | 16-QAM                      | 1/2         | 162        | 180        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 24        | 3                      | 16-QAM                      | 3/4         | 243        | 270        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 25        | 3                      | 64-QAM                      | 2/3         | 324        | 360        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 26        | 3                      | 64-QAM                      | 3/4         | 364,5      | 405        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 27        | 3                      | 64-QAM                      | 5/6         | 405        | 450        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 28        | 3                      | 256-QAM                     | 3/4         | 486        | 540        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 29        | 3                      | 256-QAM                     | 5/6         | 540        | 600        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 30        | 4                      | BPSK                        | 1/2         | 54         | 60         | <input checked="" type="checkbox"/> |
| <input type="checkbox"/>            | 31        | 4                      | QPSK                        | 1/2         | 108        | 120        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 32        | 4                      | QPSK                        | 3/4         | 162        | 180        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 33        | 4                      | 16-QAM                      | 1/2         | 216        | 240        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 34        | 4                      | 16-QAM                      | 3/4         | 324        | 360        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 35        | 4                      | 64-QAM                      | 2/3         | 432        | 480        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 36        | 4                      | 64-QAM                      | 3/4         | 486        | 540        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 37        | 4                      | 64-QAM                      | 5/6         | 540        | 600        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 38        | 4                      | 256-QAM                     | 3/4         | 648        | 720        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 39        | 4                      | 256-QAM                     | 5/6         | 720        | 800        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 40        | 5                      | BPSK                        | 1/2         | 67,5       | 75         | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 41        | 5                      | QPSK                        | 1/2         | 135        | 150        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 42        | 5                      | QPSK                        | 3/4         | 202,5      | 225        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 43        | 5                      | 16-QAM                      | 1/2         | 270        | 300        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 44        | 5                      | 16-QAM                      | 3/4         | 405        | 450        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 45        | 5                      | 64-QAM                      | 2/3         | 540        | 600        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 46        | 5                      | 64-QAM                      | 3/4         | 607,5      | 675        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 47        | 5                      | 64-QAM                      | 5/6         | 675        | 750        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 48        | 5                      | 256-QAM                     | 3/4         | 810        | 900        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 49        | 5                      | 256-QAM                     | 5/6         | 900        | 1000       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 50        | 6                      | BPSK                        | 1/2         | 81         | 90         | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 51        | 6                      | QPSK                        | 1/2         | 162        | 180        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 52        | 6                      | QPSK                        | 3/4         | 243        | 270        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 53        | 6                      | 16-QAM                      | 1/2         | 324        | 360        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 54        | 6                      | 16-QAM                      | 3/4         | 486        | 540        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 55        | 6                      | 64-QAM                      | 2/3         | 648        | 720        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 56        | 6                      | 64-QAM                      | 3/4         | 729        | 810        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 57        | 6                      | 64-QAM                      | 5/6         | 810        | 900        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 58        | 6                      | 256-QAM                     | 3/4         | 972        | 1080       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 59        | 6                      | 256-QAM                     | 5/6         | 1080       | 1200       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 60        | 7                      | BPSK                        | 1/2         | 94,5       | 105        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 61        | 7                      | QPSK                        | 1/2         | 189        | 210        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 62        | 7                      | QPSK                        | 3/4         | 283,5      | 315        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 63        | 7                      | 16-QAM                      | 1/2         | 378        | 420        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 64        | 7                      | 16-QAM                      | 3/4         | 567        | 630        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 65        | 7                      | 64-QAM                      | 2/3         | 756        | 840        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 66        | 7                      | 64-QAM                      | 3/4         | 850,5      | 945        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 67        | 7                      | 64-QAM                      | 5/6         | 945        | 1050       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 68        | 7                      | 256-QAM                     | 3/4         | 1134       | 1260       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 69        | 7                      | 256-QAM                     | 5/6         | 1260       | 1400       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 70        | 8                      | BPSK                        | 1/2         | 108        | 120        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 71        | 8                      | QPSK                        | 1/2         | 216        | 240        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 72        | 8                      | QPSK                        | 3/4         | 324        | 360        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 73        | 8                      | 16-QAM                      | 1/2         | 432        | 480        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 74        | 8                      | 16-QAM                      | 3/4         | 648        | 720        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 75        | 8                      | 64-QAM                      | 2/3         | 864        | 960        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 76        | 8                      | 64-QAM                      | 3/4         | 972        | 1080       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 77        | 8                      | 64-QAM                      | 5/6         | 1080       | 1200       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 78        | 8                      | 256-QAM                     | 3/4         | 1296       | 1440       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 79        | 8                      | 256-QAM                     | 5/6         | 1440       | 1600       | <input type="checkbox"/>            |



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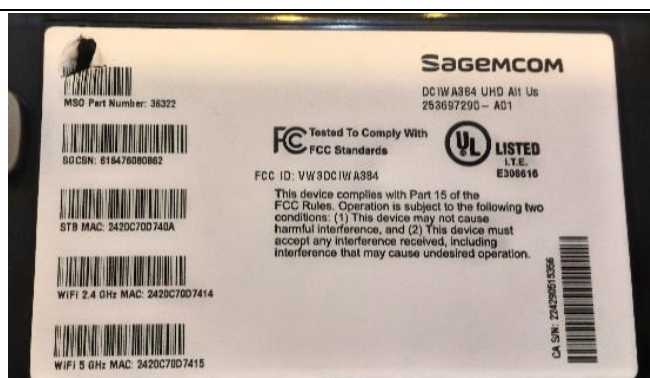
| DATA RATE: 802.11ac VHT80           |           |                        |                             |             |            |            |                                     |
|-------------------------------------|-----------|------------------------|-----------------------------|-------------|------------|------------|-------------------------------------|
| Available for EUT                   | MCS Index | Nbr of spatial streams | Modulation (Stream 1/2/3/4) | Coding rate | GI = 800ns | GI = 400ns | Worst Case Modulation               |
| <input checked="" type="checkbox"/> | 0         | 1                      | BPSK                        | 1/2         | 29.3       | 32.5       | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | 1         | 1                      | QPSK                        | 1/2         | 58.5       | 65         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 2         | 1                      | QPSK                        | 3/4         | 87.8       | 97.5       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 3         | 1                      | 16-QAM                      | 1/2         | 117        | 130        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 4         | 1                      | 16-QAM                      | 3/4         | 175.5      | 195        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 5         | 1                      | 64-QAM                      | 2/3         | 234        | 260        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 6         | 1                      | 64-QAM                      | 3/4         | 263.3      | 292.5      | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 7         | 1                      | 64-QAM                      | 5/6         | 292.5      | 325        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 8         | 1                      | 256-QAM                     | 3/4         | 351        | 390        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 9         | 1                      | 256-QAM                     | 5/6         | 390        | 433.3      | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 10        | 2                      | BPSK                        | 1/2         | 58.6       | 65         | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 11        | 2                      | QPSK                        | 1/2         | 117        | 130        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 12        | 2                      | QPSK                        | 3/4         | 175.6      | 195        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 13        | 2                      | 16-QAM                      | 1/2         | 234        | 260        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 14        | 2                      | 16-QAM                      | 3/4         | 351        | 390        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 15        | 2                      | 64-QAM                      | 2/3         | 468        | 520        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 16        | 2                      | 64-QAM                      | 3/4         | 526.6      | 585        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 17        | 2                      | 64-QAM                      | 5/6         | 585        | 650        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 18        | 2                      | 256-QAM                     | 3/4         | 702        | 780        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 19        | 2                      | 256-QAM                     | 5/6         | 780        | 866.6      | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 20        | 3                      | BPSK                        | 1/2         | 87.9       | 97.5       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 21        | 3                      | QPSK                        | 1/2         | 175.5      | 195        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 22        | 3                      | QPSK                        | 3/4         | 263.4      | 292.5      | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 23        | 3                      | 16-QAM                      | 1/2         | 351        | 390        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 24        | 3                      | 16-QAM                      | 3/4         | 526.5      | 585        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 25        | 3                      | 64-QAM                      | 2/3         | 702        | 780        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 26        | 3                      | 64-QAM                      | 3/4         | 789.9      | 877.5      | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 27        | 3                      | 64-QAM                      | 5/6         | 877.5      | 975        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 28        | 3                      | 256-QAM                     | 3/4         | 1053       | 1170       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 29        | 3                      | 256-QAM                     | 5/6         | 1170       | 1299.9     | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 30        | 4                      | BPSK                        | 1/2         | 117.2      | 130        | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | 31        | 4                      | QPSK                        | 1/2         | 234        | 260        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 32        | 4                      | QPSK                        | 3/4         | 351.2      | 390        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 33        | 4                      | 16-QAM                      | 1/2         | 468        | 520        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 34        | 4                      | 16-QAM                      | 3/4         | 702        | 780        | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 35        | 4                      | 64-QAM                      | 2/3         | 936        | 1040       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 36        | 4                      | 64-QAM                      | 3/4         | 1053.2     | 1170       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 37        | 4                      | 64-QAM                      | 5/6         | 1170       | 1300       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 38        | 4                      | 256-QAM                     | 3/4         | 1404       | 1560       | <input type="checkbox"/>            |
| <input checked="" type="checkbox"/> | 39        | 4                      | 256-QAM                     | 5/6         | 1560       | 1733.2     | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 40        | 5                      | BPSK                        | 1/2         | 146.5      | 162.5      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 41        | 5                      | QPSK                        | 1/2         | 292.5      | 325        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 42        | 5                      | QPSK                        | 3/4         | 439        | 487.5      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 43        | 5                      | 16-QAM                      | 1/2         | 585        | 650        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 44        | 5                      | 16-QAM                      | 3/4         | 877.5      | 975        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 45        | 5                      | 64-QAM                      | 2/3         | 1170       | 1300       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 46        | 5                      | 64-QAM                      | 3/4         | 1316.5     | 1462.5     | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 47        | 5                      | 64-QAM                      | 5/6         | 1462.5     | 1625       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 48        | 5                      | 256-QAM                     | 3/4         | 1755       | 1950       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 49        | 5                      | 256-QAM                     | 5/6         | 1950       | 2166.5     | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 50        | 6                      | BPSK                        | 1/2         | 175.8      | 195        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 51        | 6                      | QPSK                        | 1/2         | 351        | 390        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 52        | 6                      | QPSK                        | 3/4         | 526.8      | 585        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 53        | 6                      | 16-QAM                      | 1/2         | 702        | 780        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 54        | 6                      | 16-QAM                      | 3/4         | 1053       | 1170       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 55        | 6                      | 64-QAM                      | 2/3         | 1404       | 1560       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 56        | 6                      | 64-QAM                      | 3/4         | 1579.8     | 1755       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 57        | 6                      | 64-QAM                      | 5/6         | 1755       | 1950       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 58        | 6                      | 256-QAM                     | 3/4         | 2106       | 2340       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 59        | 6                      | 256-QAM                     | 5/6         | 2340       | 2599.8     | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 60        | 7                      | BPSK                        | 1/2         | 205.1      | 227.5      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 61        | 7                      | QPSK                        | 1/2         | 409.5      | 455        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 62        | 7                      | QPSK                        | 3/4         | 614.6      | 682.5      | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 63        | 7                      | 16-QAM                      | 1/2         | 819        | 910        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 64        | 7                      | 16-QAM                      | 3/4         | 1228.5     | 1365       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 65        | 7                      | 64-QAM                      | 2/3         | 1638       | 1820       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 66        | 7                      | 64-QAM                      | 3/4         | 1843.1     | 2047.5     | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 67        | 7                      | 64-QAM                      | 5/6         | 2047.5     | 2275       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 68        | 7                      | 256-QAM                     | 3/4         | 2457       | 2730       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 69        | 7                      | 256-QAM                     | 5/6         | 2730       | 3033.1     | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 70        | 8                      | BPSK                        | 1/2         | 234.4      | 260        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 71        | 8                      | QPSK                        | 1/2         | 468        | 520        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 72        | 8                      | QPSK                        | 3/4         | 702.4      | 780        | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 73        | 8                      | 16-QAM                      | 1/2         | 936        | 1040       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 74        | 8                      | 16-QAM                      | 3/4         | 1404       | 1560       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 75        | 8                      | 64-QAM                      | 2/3         | 1872       | 2080       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 76        | 8                      | 64-QAM                      | 3/4         | 2106.4     | 2340       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 77        | 8                      | 64-QAM                      | 5/6         | 2340       | 2600       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 78        | 8                      | 256-QAM                     | 3/4         | 2808       | 3120       | <input type="checkbox"/>            |
| <input type="checkbox"/>            | 79        | 8                      | 256-QAM                     | 5/6         | 3120       | 3466.4     | <input type="checkbox"/>            |

## 2.2. RUNNING MODE

The EUT is set in the following modes during tests:

- Permanent emission with modulation on a fixed channel in the data rate that produced the highest power
- Permanent emission with modulation on a fixed channel in the data rate that produced the lowest power
- Permanent reception

## 2.3. EQUIPMENT LABELLING



Power supply n°1



Power supply n°2



Power supply n°3

## 2.4. EQUIPMENT MODIFICATION

☒ None ☐ Modification:

### 3. OCCUPIED BANDWIDTH

#### 3.1. TEST CONDITIONS

Test performed by : Mathieu CERISIER  
Date of test : December 19, 2016  
Ambient temperature : 25 °C  
Relative humidity : 42 %

#### 3.2. TEST SETUP

- The Equipment Under Test is installed:

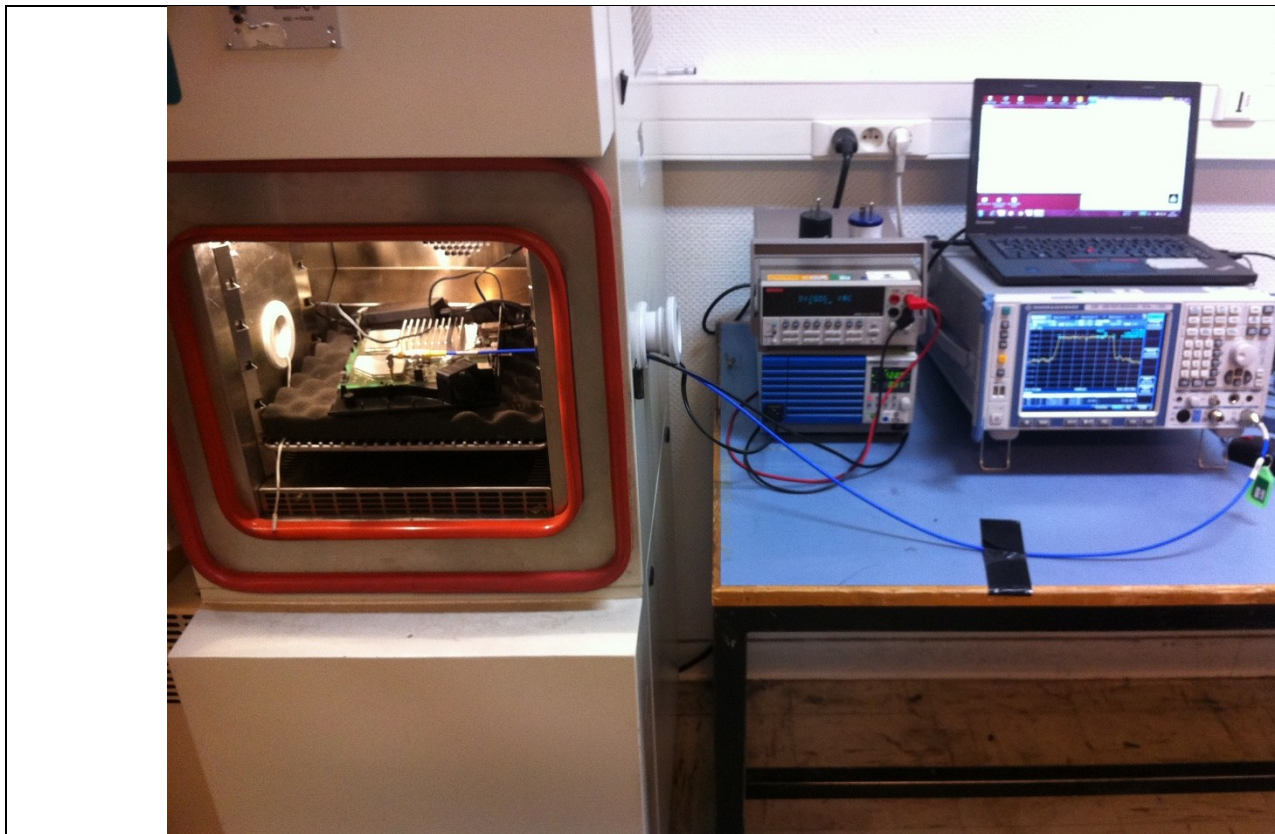
- ☐ On a table
- ☐ In an anechoic chamber
- ☒ In climatic chamber

- Measurement is performed with a spectrum analyzer in:

- ☒ Conducted Method
- ☐ Radiated Method

- Test Procedure:

- ☒ KDB 789033 D02 General UNII Test Procedures New Rules v01r02 § D



Photograph for Occupied bandwidth



### 3.1. LIMIT

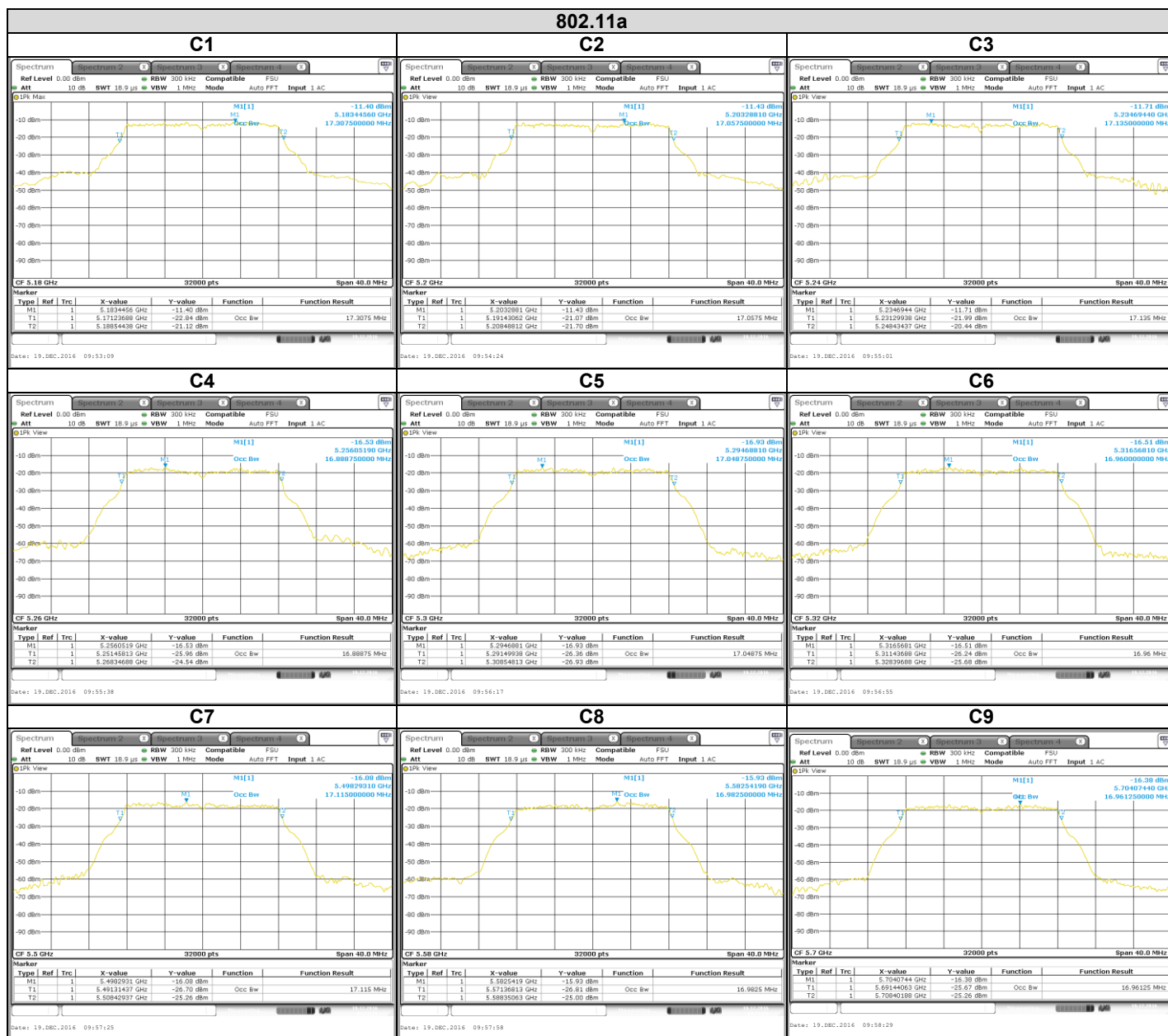
None

### 3.2. TEST EQUIPMENT LIST

| DESCRIPTION                     | MANUFACTURER    | MODEL        | N° LCIE  | Calibration date                    | Calibration due                     |
|---------------------------------|-----------------|--------------|----------|-------------------------------------|-------------------------------------|
| Multi-meter                     | KEITHLEY        | 2000         | A1242090 | 2015/06                             | 2017/06                             |
| Programmable AC/DC power supply | -; KIKUSUI      | PCR500M      | A7040079 | Verified with calibrated multimeter | Verified with calibrated multimeter |
| EMI receiver                    | ROHDE & SCHWARZ | ESR 7        | A2642023 | 2016/09                             | 2017/09                             |
| RF cable & 20 dB attenuator     | Télédyne        | 920-0202-048 | A5329676 | 2016/09                             | 2017/09                             |

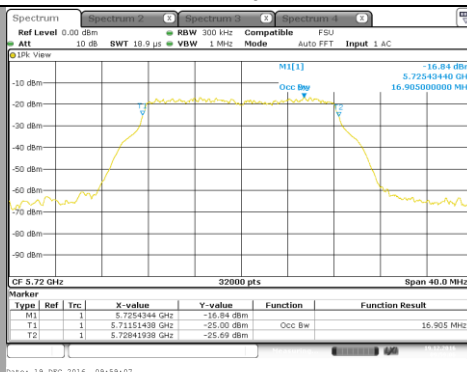
Note: In our quality system, the test equipment calibration due is more & less 2 months

### 3.3. RESULTS

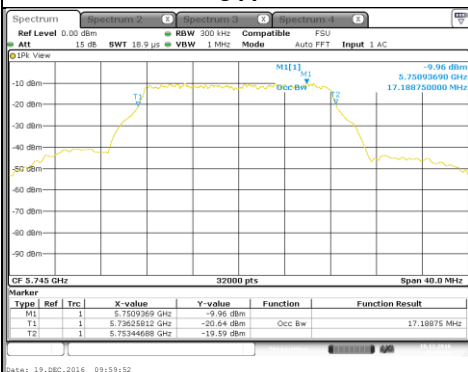


## 802.11a

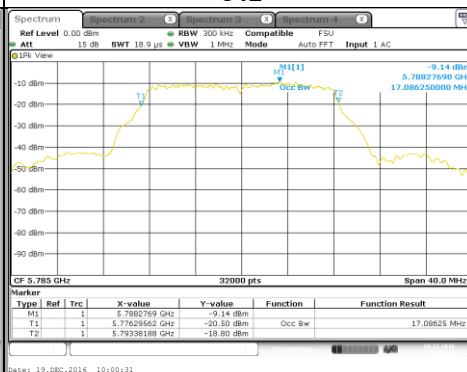
### C10



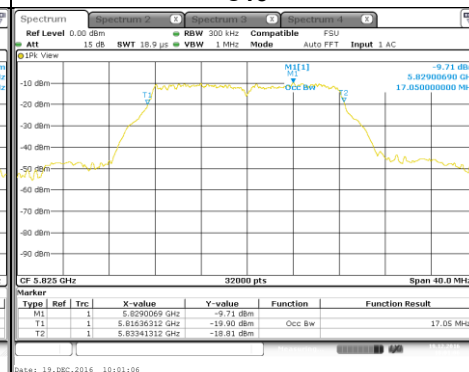
### C11



### C12



### C13

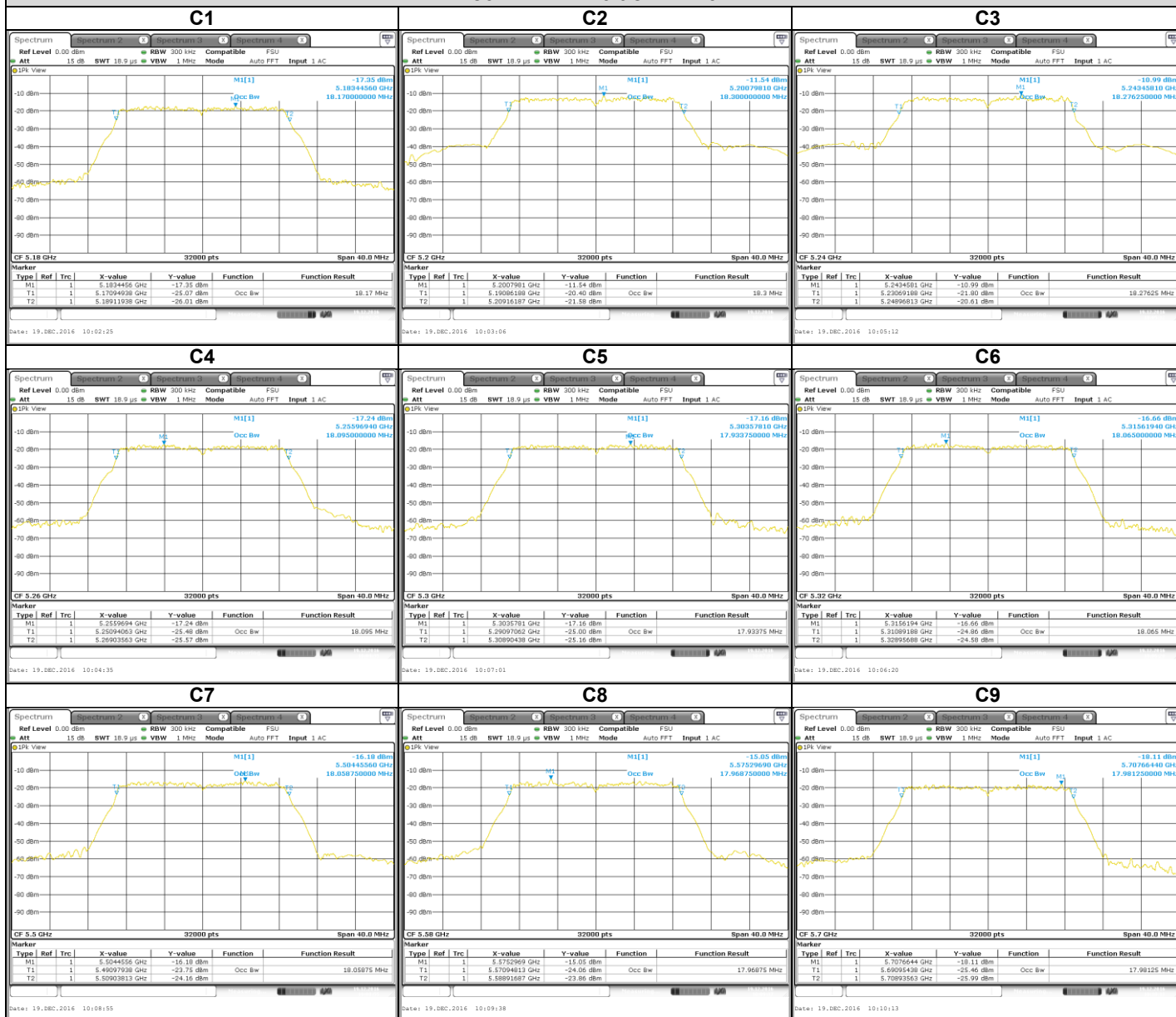


### Channel

### Occupied Channel Bandwidth (MHz)

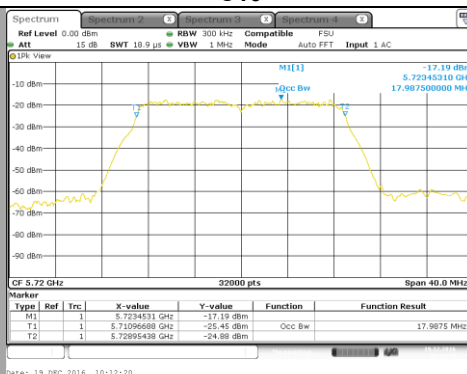
|     |       |
|-----|-------|
| C1  | 17,31 |
| C2  | 17,06 |
| C3  | 17,14 |
| C4  | 16,89 |
| C5  | 17,05 |
| C6  | 16,96 |
| C7  | 17,12 |
| C8  | 16,98 |
| C9  | 16,96 |
| C10 | 16,91 |
| C11 | 17,19 |
| C12 | 17,09 |
| C13 | 17,05 |

## 802.11n HT20/ac VHT20

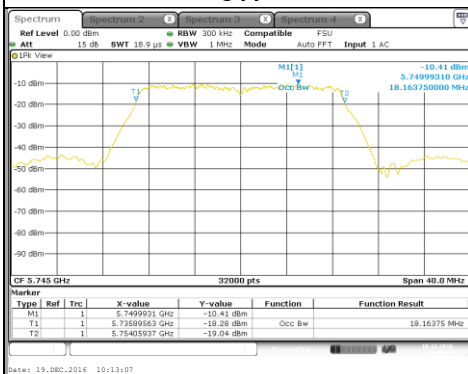


## 802.11n HT20/ac VHT20

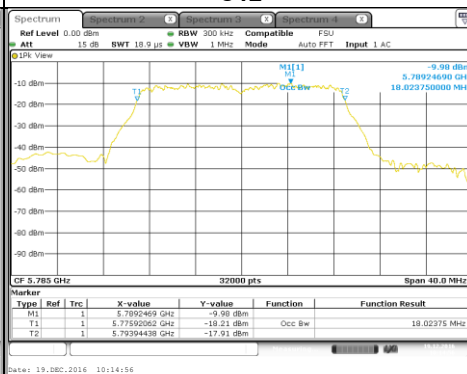
### C10



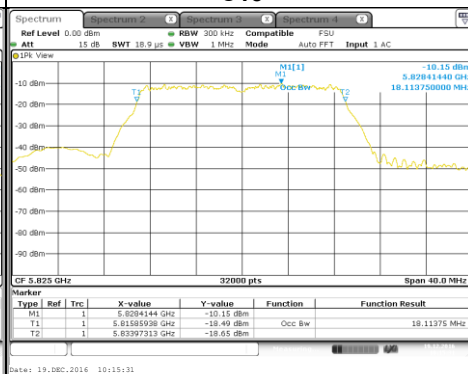
### C11



### C12



### C13



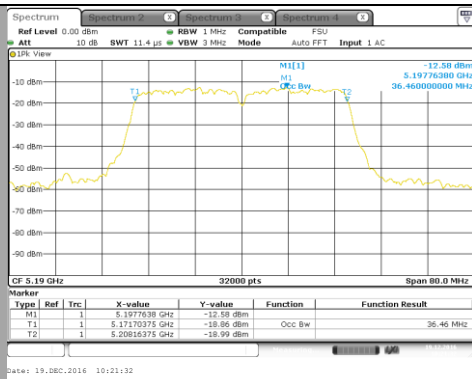
### Channel

### Occupied Channel Bandwidth (MHz)

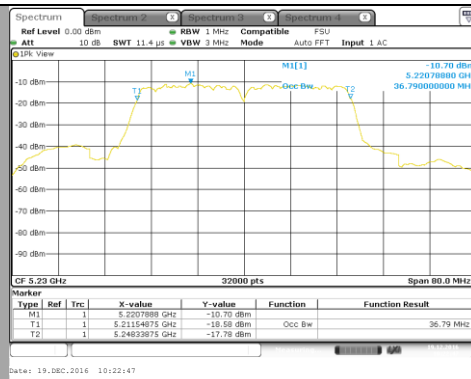
|     |       |
|-----|-------|
| C1  | 18,17 |
| C2  | 18,3  |
| C3  | 18,28 |
| C4  | 18,1  |
| C5  | 17,93 |
| C6  | 18,07 |
| C7  | 18,06 |
| C8  | 17,97 |
| C9  | 17,98 |
| C10 | 17,99 |
| C11 | 18,16 |
| C12 | 18,02 |
| C13 | 18,11 |

## 802.11n HT40/ac VHT40

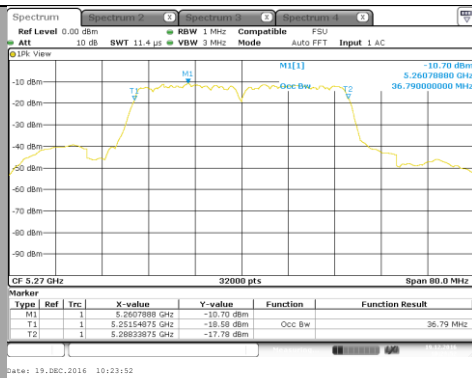
**C14**



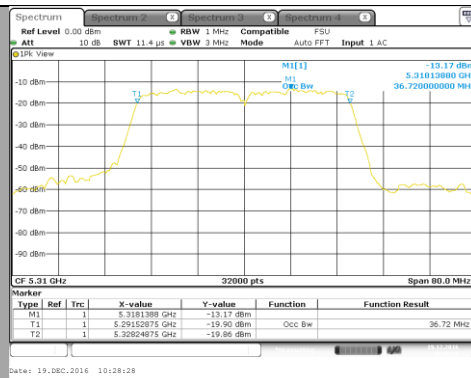
**C15**



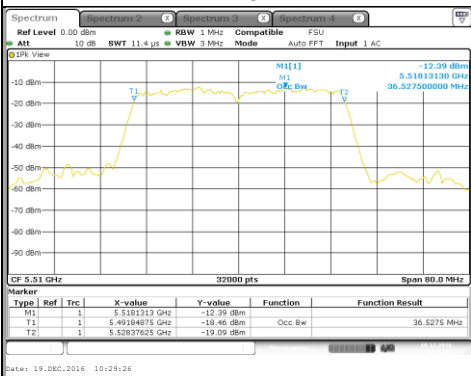
**C16**



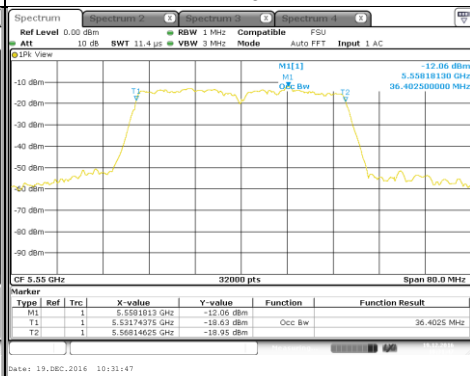
**C17**



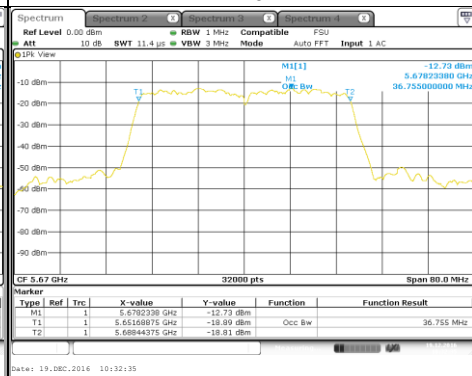
**C18**



**C19**

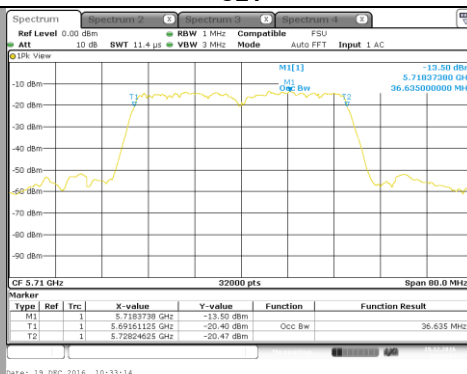


**C20**

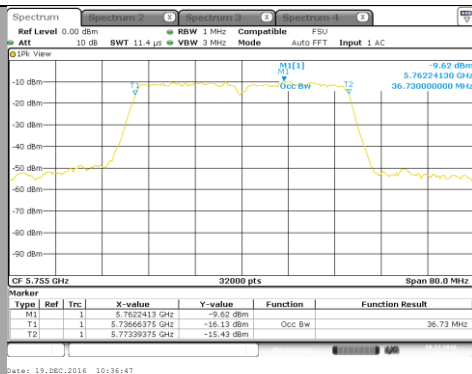


## 802.11n HT40/ac VHT40

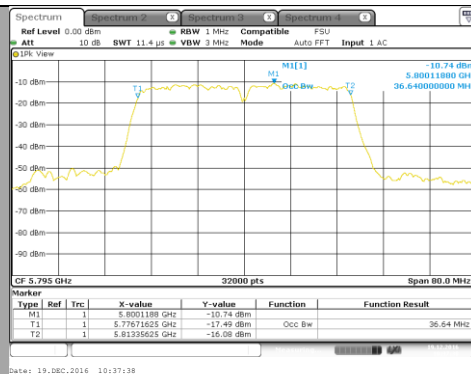
### C21



### C22



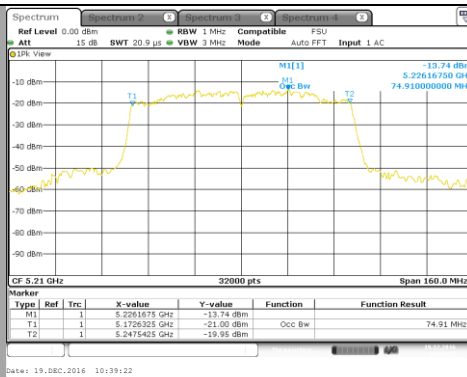
### C23



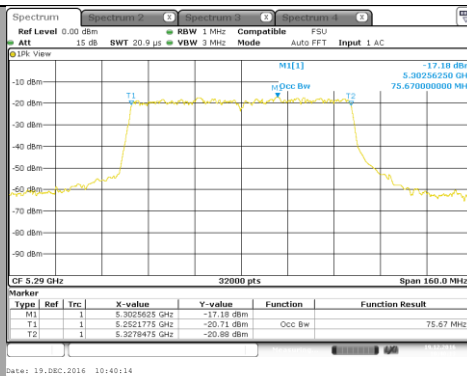
| Channel | Occupied Channel Bandwidth (MHz) |
|---------|----------------------------------|
| C14     | 36,46                            |
| C15     | 36,79                            |
| C16     | 36,79                            |
| C17     | 36,72                            |
| C18     | 36,53                            |
| C19     | 36,4                             |
| C20     | 36,76                            |
| C21     | 36,64                            |
| C22     | 36,73                            |
| C23     | 36,64                            |

## 802.11ac VHT80

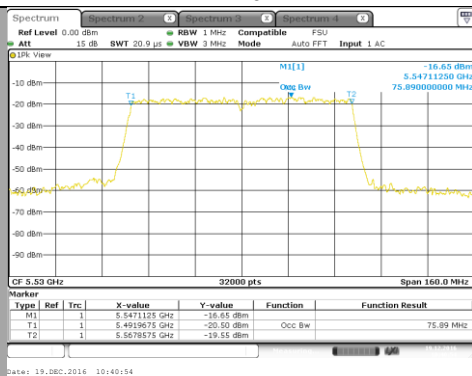
### C24



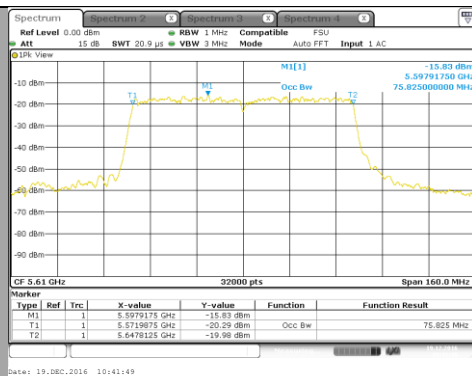
### C25



### C26

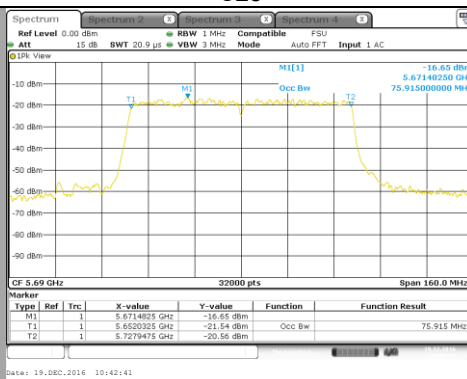


### C27

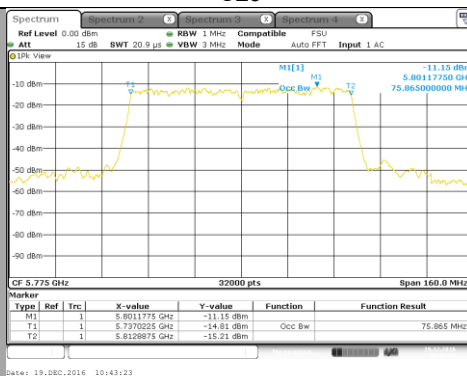


## 802.11ac VHT80

### C28



### C29



| Channel | Occupied Channel Bandwidth (MHz) |
|---------|----------------------------------|
| C24     | 74,91                            |
| C25     | 75,67                            |
| C26     | 75,89                            |
| C27     | 75,83                            |
| C28     | 75,92                            |
| C29     | 75,87                            |

### 3.1. CONCLUSION

Occupied Channel Bandwidth measurement performed on the sample of the product **SAGEMCOM MiniBox (253697290)**, SN: **616476080862**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.407** limits.

## 4. CARRIER FREQUENCIES

### 4.1. TEST CONDITIONS

Test performed by : Mathieu CERISIER  
Date of test : November 30, 2016  
Ambient temperature : 22 °C  
Relative humidity : 37 %

### 4.2. TEST SETUP

- The Equipment under Test is installed:

- ☒ In the climatic chamber
- ☐ On a table
- ☐ In an anechoic chamber

-Measurement is performed with a spectrum analyzer

- ☒ On the EUT conducted access
- ☐ With a test fixture

-Method of measurement

- ☐ Unmodulated (Spectrum Analyzer Counter Function)
- ☒ Modulated (Spectrum Analyzer NdB down Function)

In case of smart antenna systems operating in a multiple transmit chains active simultaneously, the measurement is only performed on one of the active transmit chains.



Photograph for Carrier Frequencies



#### 4.3. LIMIT

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 users manual.

#### 4.4. TEST EQUIPMENT LIST

| DESCRIPTION                     | MANUFACTURER        | MODEL        | N° LCIE  | Cal_Date                             | Cal_Due                              |
|---------------------------------|---------------------|--------------|----------|--------------------------------------|--------------------------------------|
| Multi-meter                     | KEITHLEY            | 2000         | A1241084 | 2016/05                              | 2018/05                              |
| Programmable AC/DC power supply | -; KIKUSUI          | PCR500M      | A7040079 | Verified with calibrated multimeter  | Verified with calibrated multimeter  |
| EMI receiver                    | ROHDE & SCHWARZ     | ESR 7        | A2642023 | 2016/03                              | 2017/03                              |
| RF cable & 20 dB attenuator     | Télédyn             | 920-0202-048 | A5329676 | 2016/09                              | 2017/09                              |
| Climatic chamber                | SECASI Technologies | SLT-34       | D1024029 | Verified with calibrated Thermometer | Verified with calibrated Thermometer |
| Thermometer                     | AOIP                | TM 6630      | B4041042 | 2016/09                              | 2018/03                              |

Note: In our quality system, the test equipment calibration due is more & less 2 months

#### 4.5. DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION

☒ None ☐ Divergence:

## 4.6. RESULTS



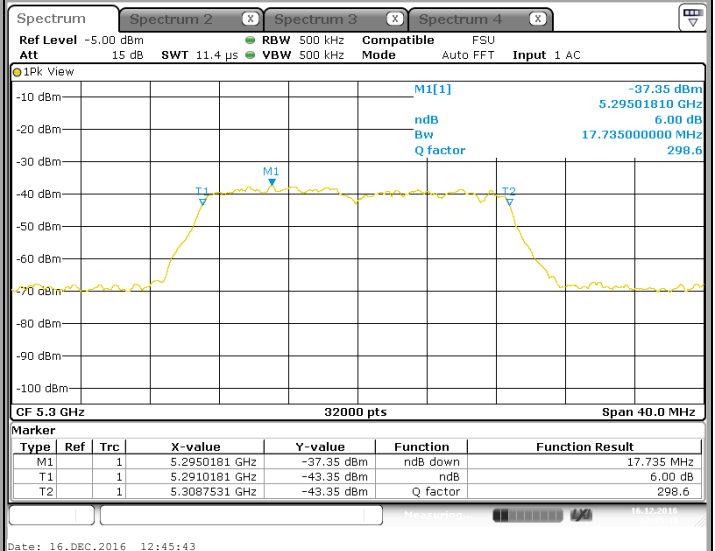
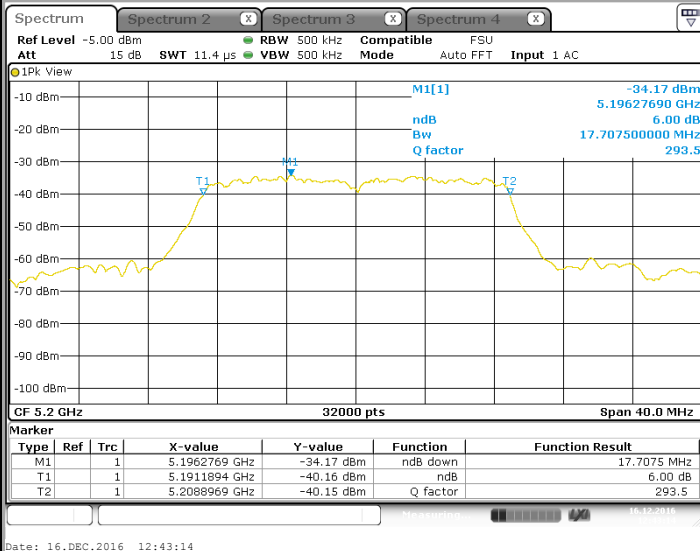
## 802.11a/802.11nHT20/ac VHT20

Tmin

Vnom

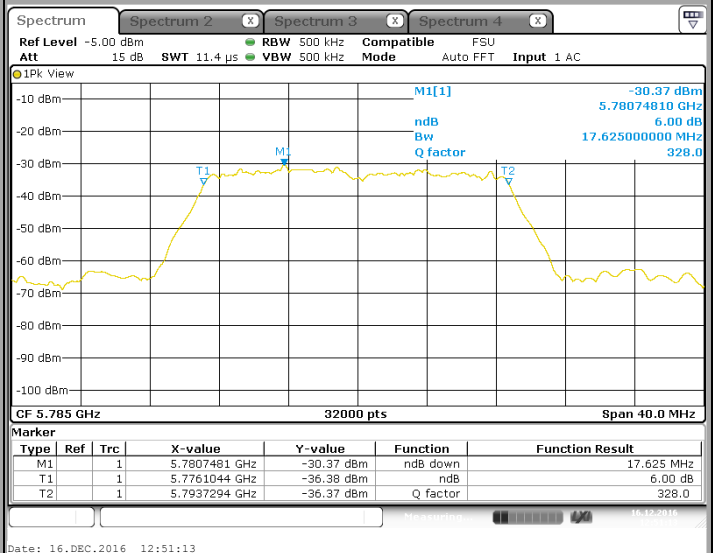
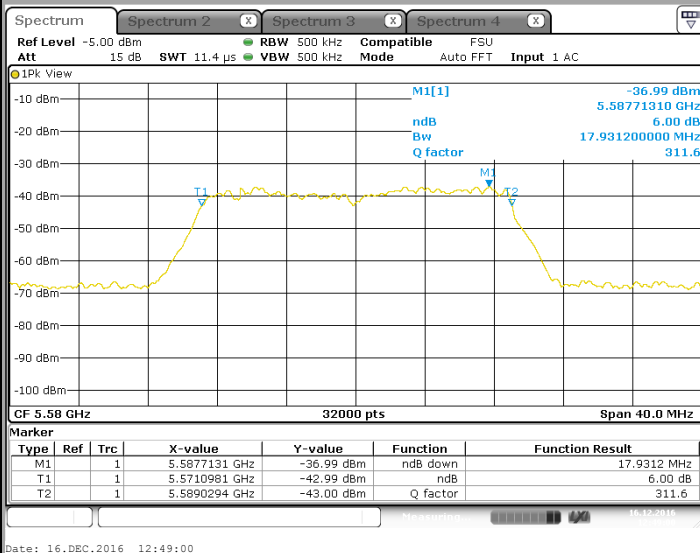
**C2**

**C5**



**C8**

**C12**



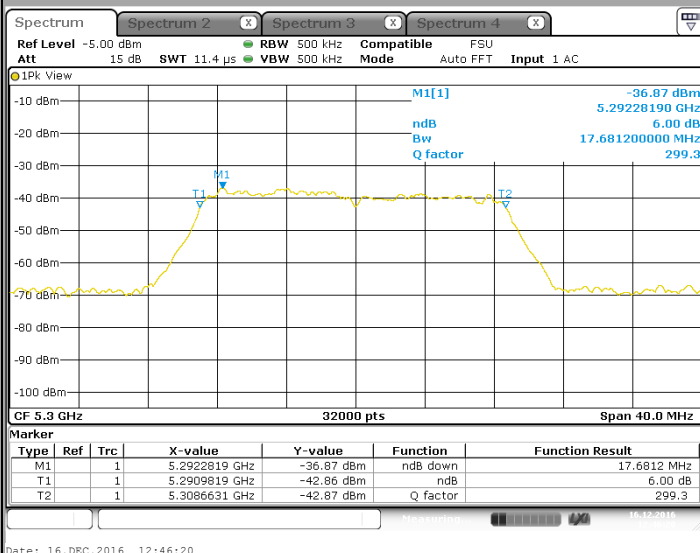
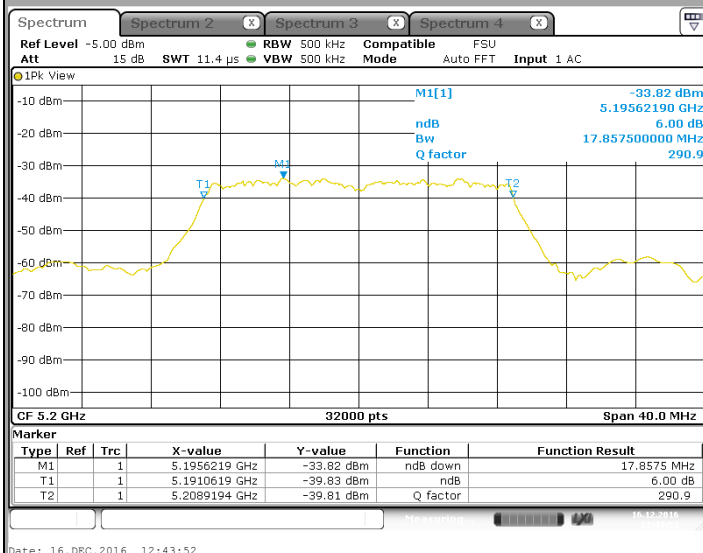
## 802.11a/802.11nHT20/ac VHT20

Tmin

Vmax

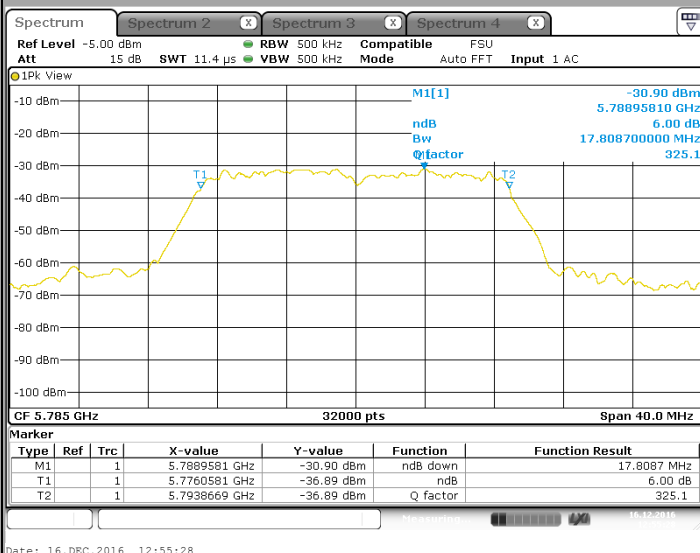
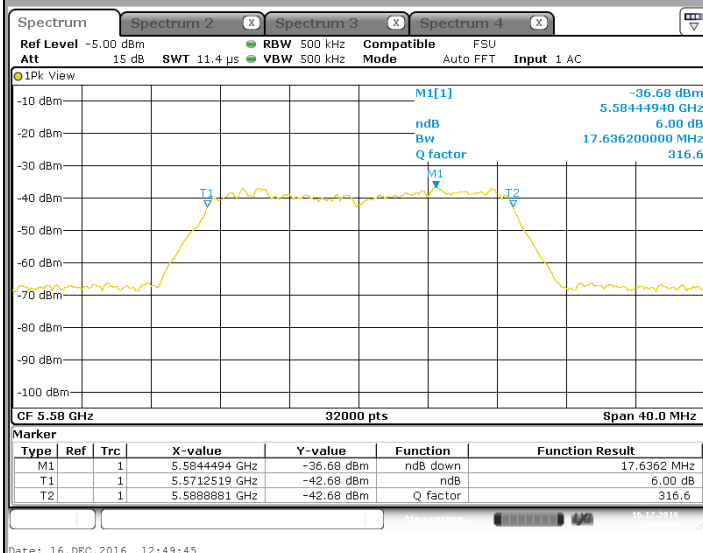
**C2**

**C5**



**C8**

**C12**



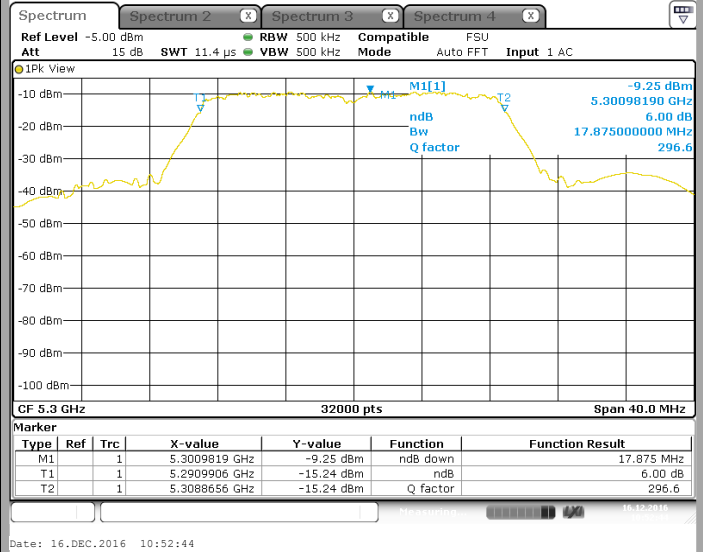
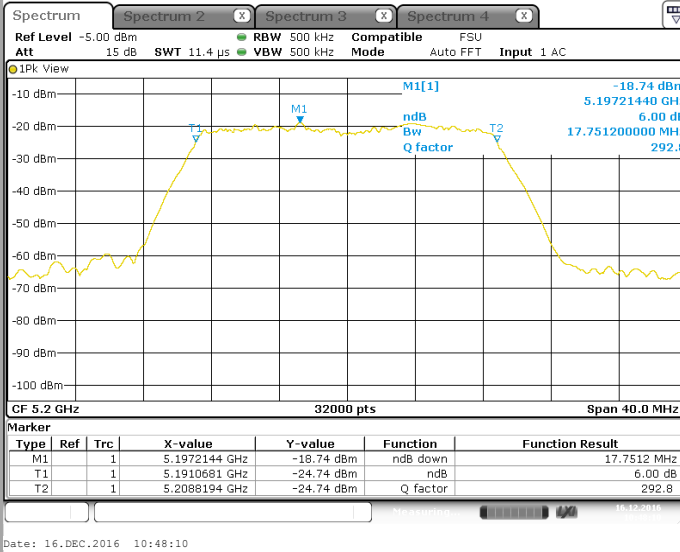
## 802.11a/802.11nHT20/ac VHT20

Tnom

Vmin

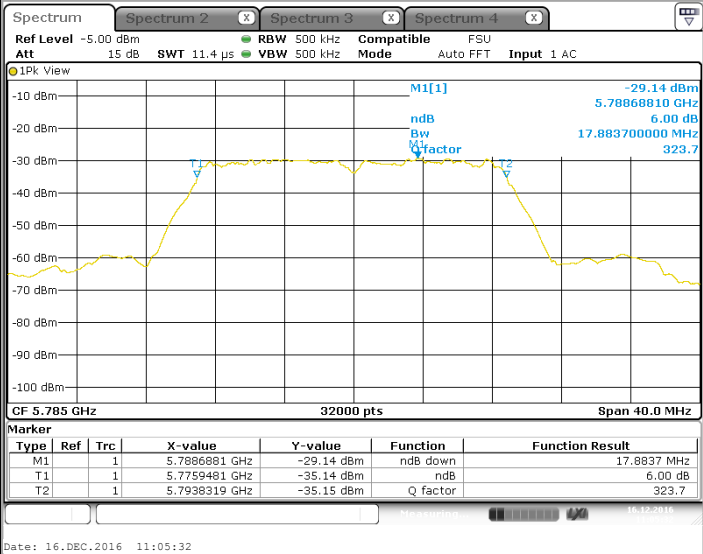
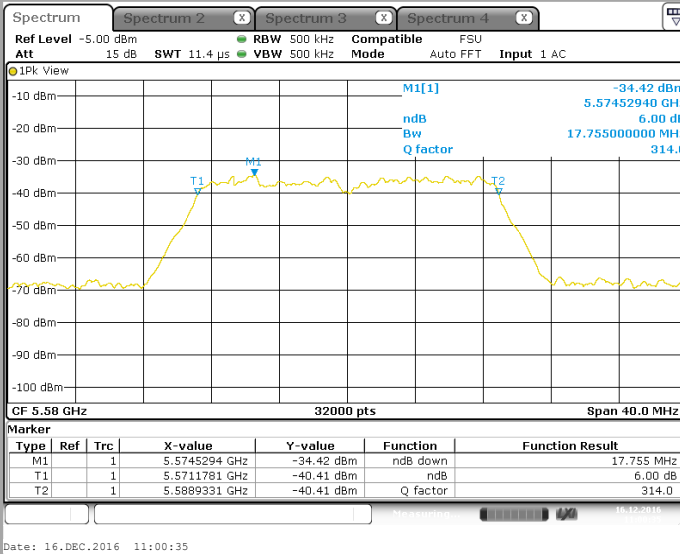
**C2**

**C5**



**C8**

**C12**

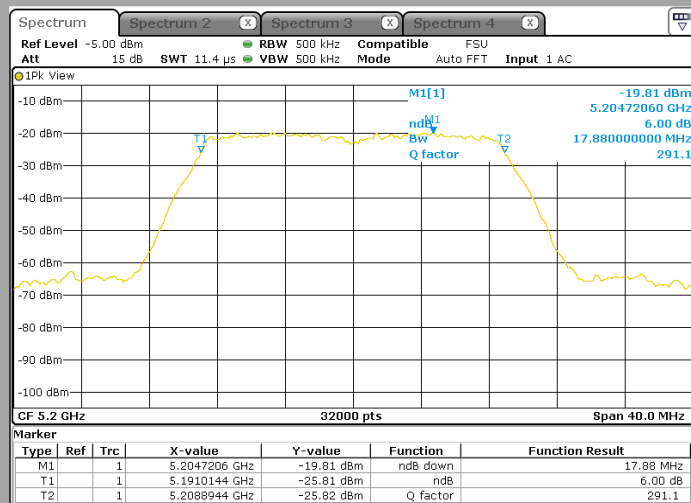


## 802.11a/802.11nHT20/ac VHT20

Tnom

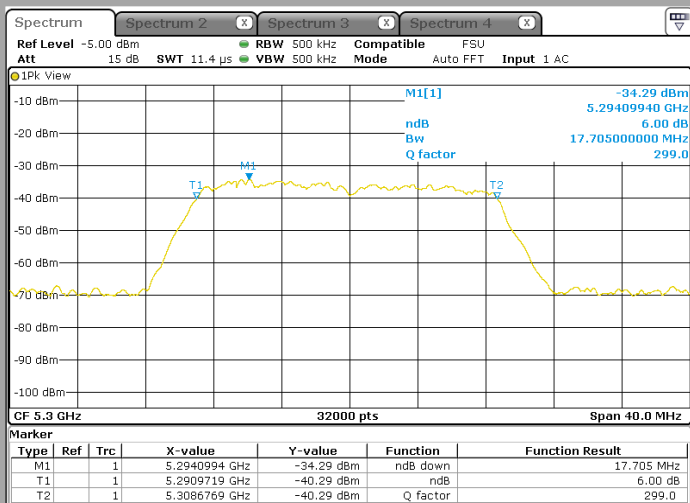
Vnom

**C2**



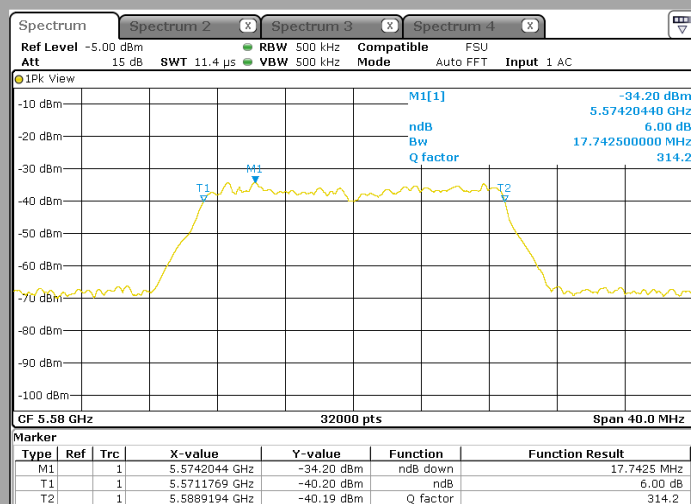
Date: 16.DEC.2016 10:47:18

**C5**



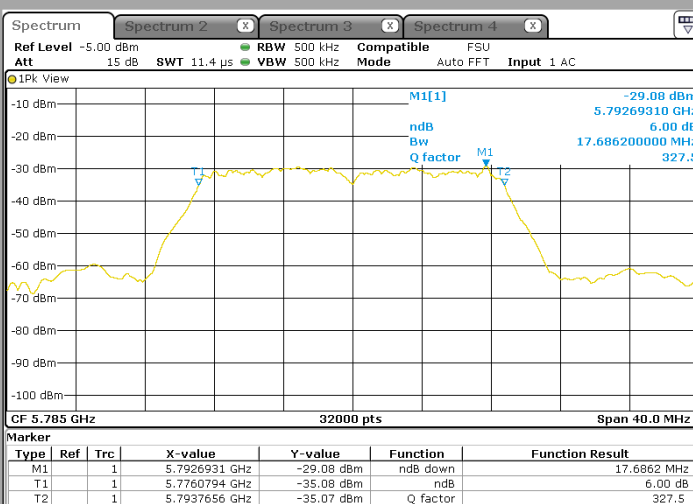
Date: 16.DEC.2016 10:58:33

**C8**



Date: 16.DEC.2016 11:01:08

**C12**



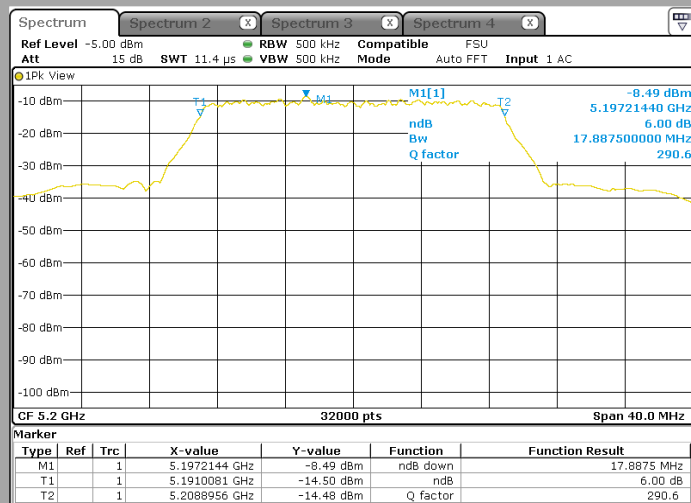
Date: 16.DEC.2016 11:08:16

## 802.11a/802.11nHT20/ac VHT20

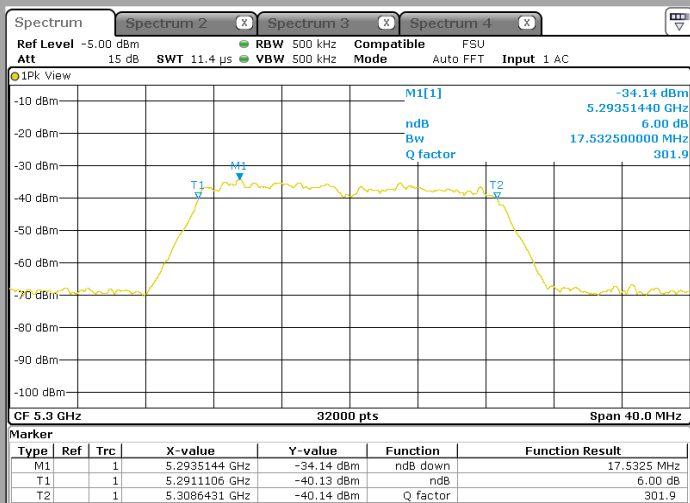
Tnom

Vmax

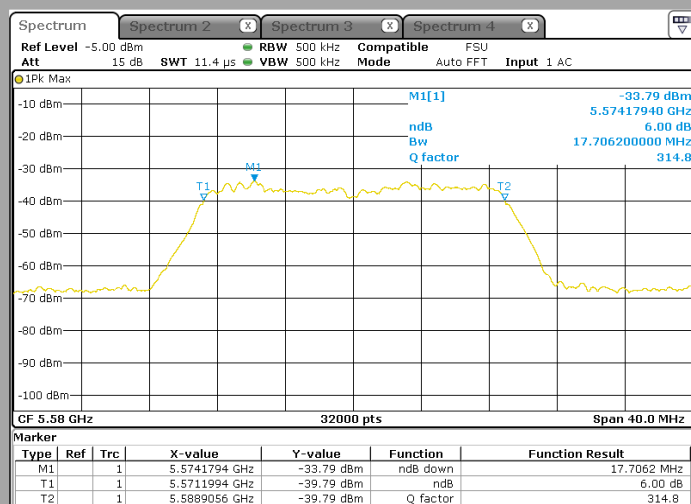
**C2**



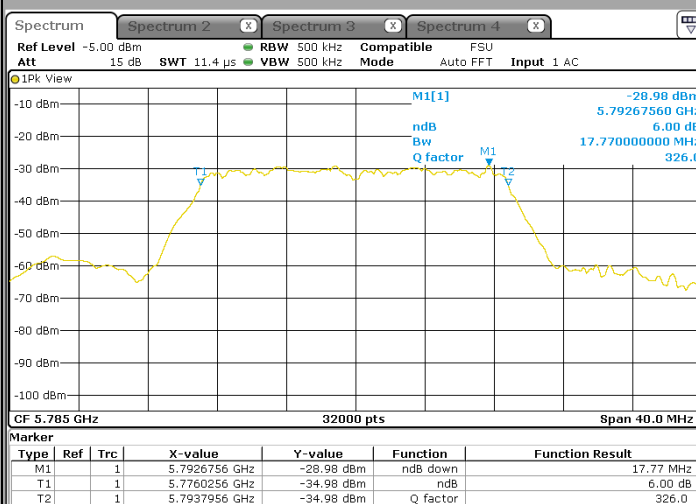
**C5**



**C8**



**C12**



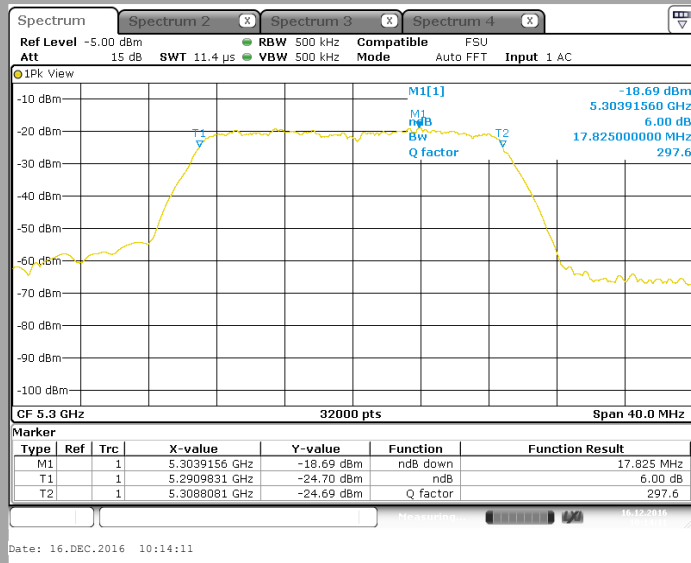
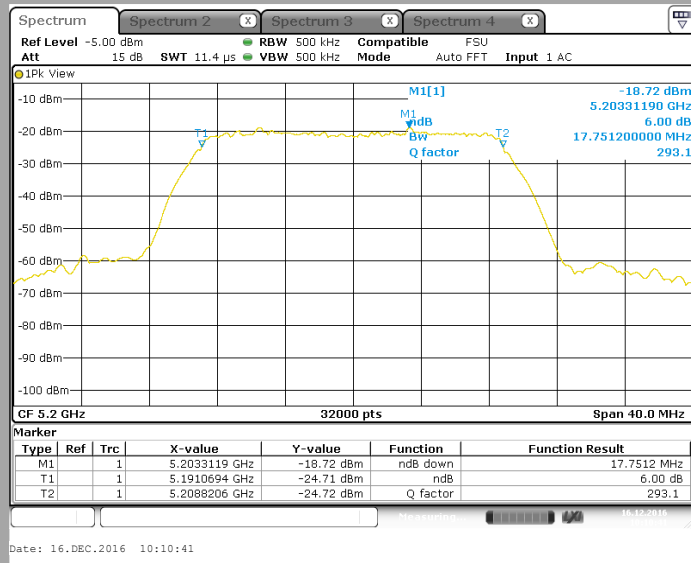
## 802.11a/802.11nHT20/ac VHT20

Tmax

Vmin

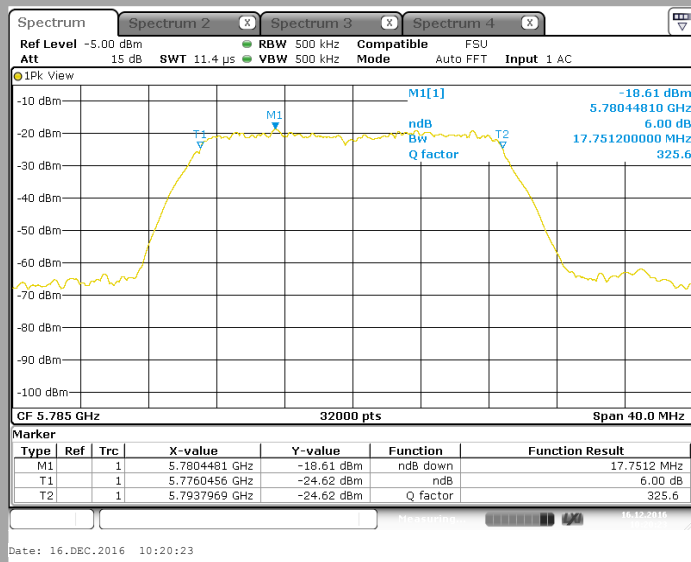
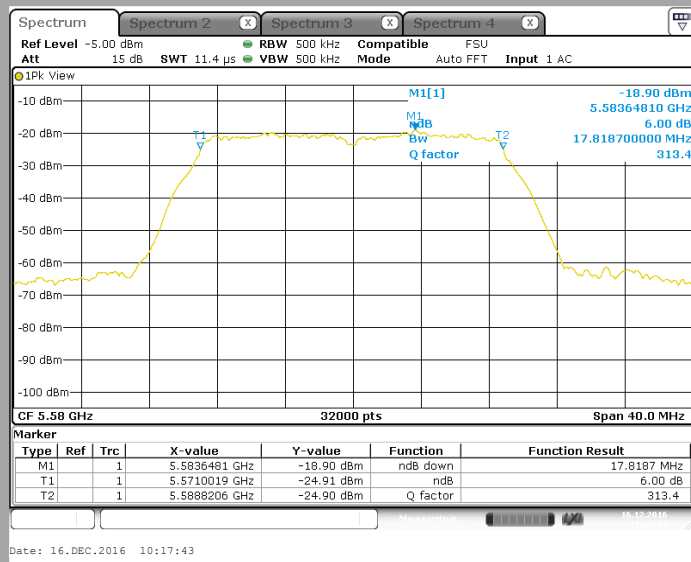
C2

C5



C8

C12

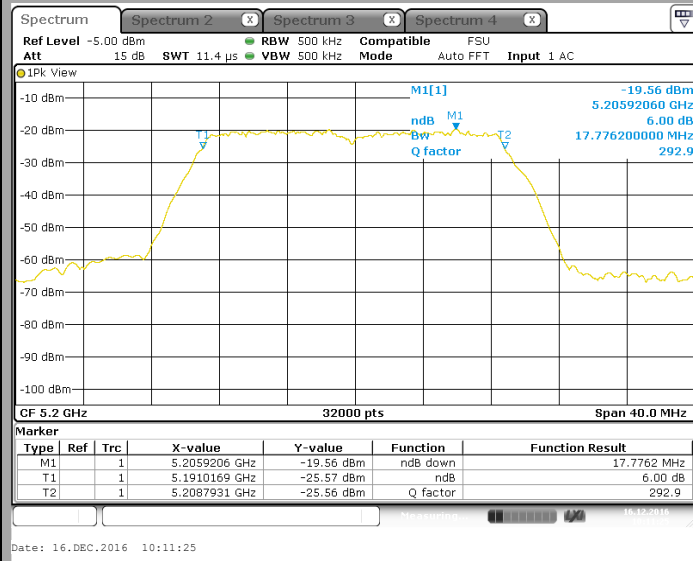


## 802.11a/802.11nHT20/ac VHT20

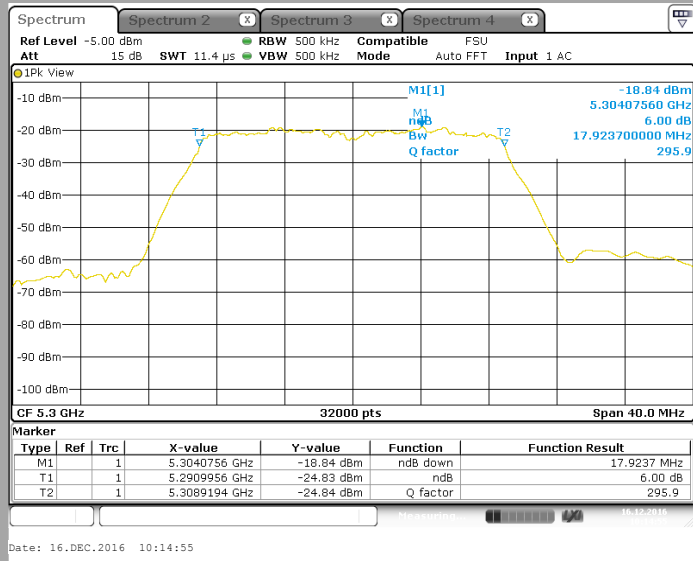
Tmax

Vnom

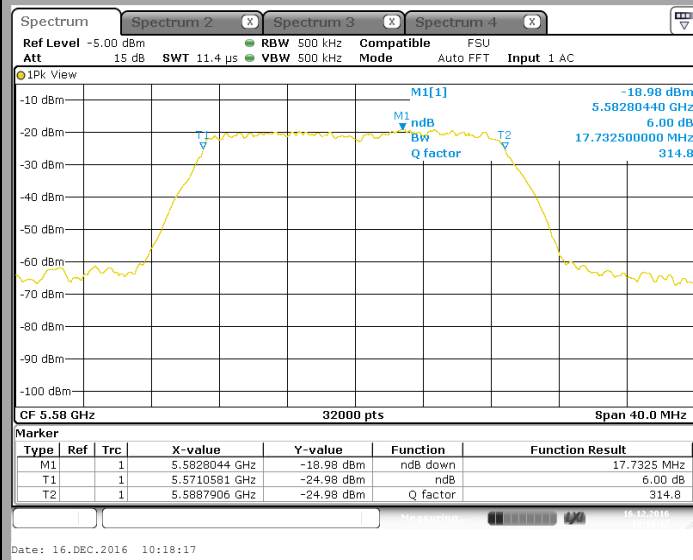
C2



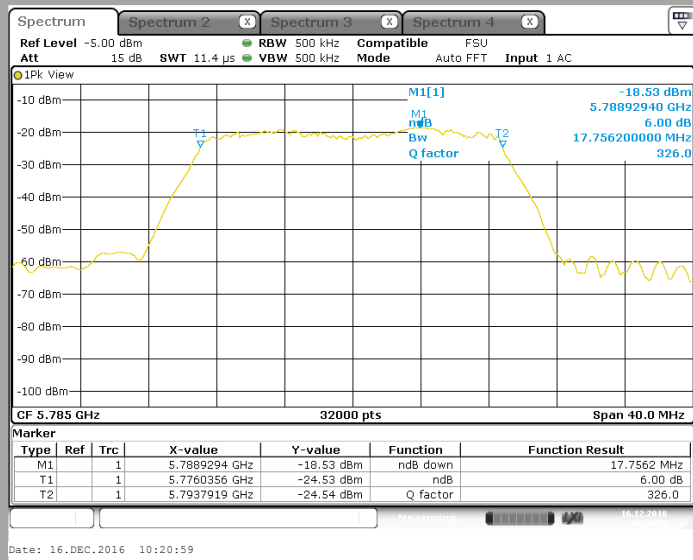
C5



C8



C12

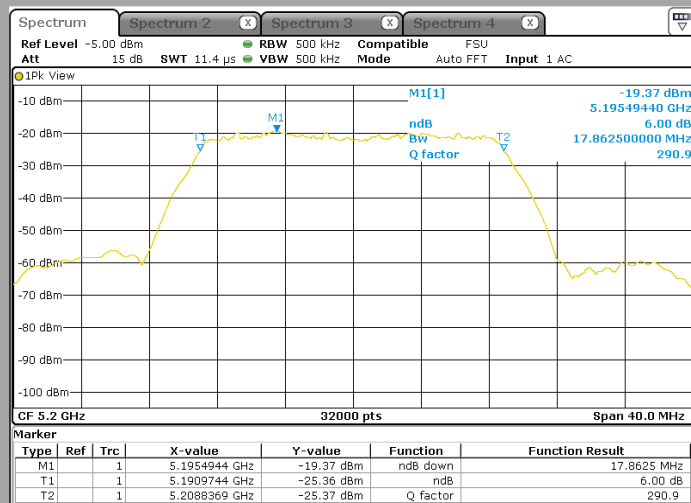


## 802.11a/802.11nHT20/ac VHT20

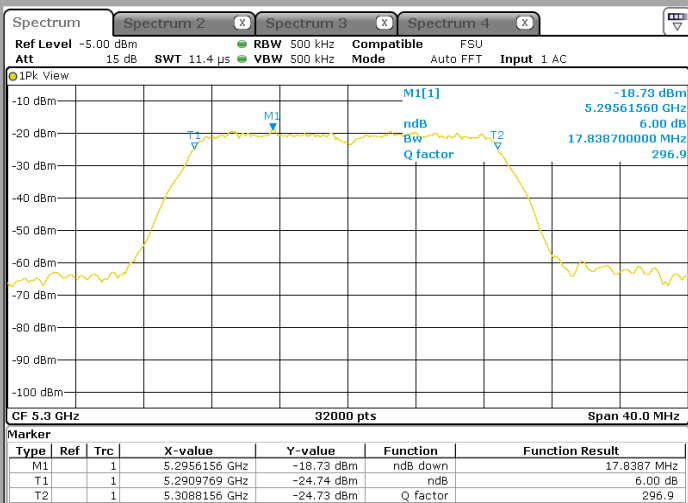
Tmax

Vmax

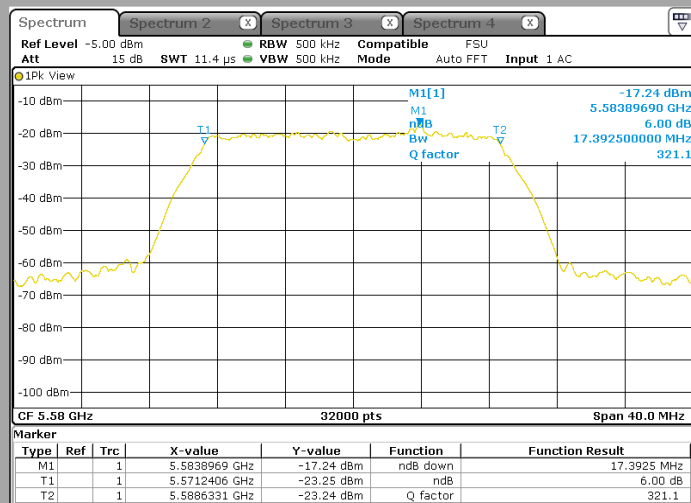
**C2**



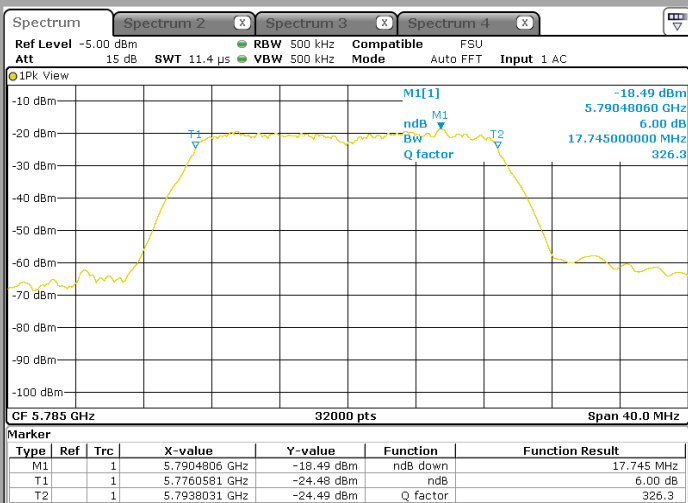
**C5**



**C8**



**C12**





#### 802.11a/802.11nHT20/ac VHT20

| Temperature           | Tmin |       |      |       | Tnom  |       |      |       | Tmax  |       |       |       |
|-----------------------|------|-------|------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| Voltage               | Vmin |       |      |       |       |       |      |       |       |       |       |       |
| Channel               | C2   | C5    | C8   | C12   | C2    | C5    | C8   | C12   | C2    | C5    | C8    | C12   |
| Frequency drift (ppm) | 0,5  | -25,9 | 11,8 | -6,6  | -8,8  | -13,6 | 10,0 | -19,0 | -10,6 | -19,7 | -15,9 | -13,6 |
| Voltage               | Vnom |       |      |       |       |       |      |       |       |       |       |       |
| Channel               | C2   | C5    | C8   | C12   | C2    | C5    | C8   | C12   | C2    | C5    | C8    | C12   |
| Frequency drift (ppm) | 8,3  | -21,6 | 11,4 | -14,4 | -10,8 | -33,1 | 8,6  | -13,4 | -18,3 | -8,0  | -13,6 | -14,9 |
| Voltage               | Vmax |       |      |       |       |       |      |       |       |       |       |       |
| Channel               | C2   | C5    | C8   | C12   | C2    | C5    | C8   | C12   | C2    | C5    | C8    | C12   |
| Frequency drift (ppm) | -1,8 | -33,5 | 12,5 | -6,5  | -9,3  | -23,2 | 9,4  | -15,5 | -18,1 | -19,6 | -11,3 | -12,0 |

#### 4.7. CONCLUSION

Carrier frequencies measurement performed on the sample of the product **SAGEMCOM MiniBox (253697290)**, SN: **616400107098** in configuration and description presented in this test report, show levels **compliant** to the 47 CFR PART 15.407 limits.

## 5. 26dB EMISSION BANDWIDTH

### 5.1. TEST CONDITIONS

Test performed by : Mathieu CERISIER  
Date of test : December 19, 2016  
Ambient temperature : 25 °C  
Relative humidity : 42 %

### 5.2. TEST SETUP

- The Equipment Under Test is installed:

- ☐ On a table
- ☐ In an anechoic chamber
- ☒ In climatic chamber

- Measurement is performed with a spectrum analyzer in:

- ☒ Conducted Method
- ☐ Radiated Method

- Test Procedure:

- ☒ KDB 789033 D02 General UNII Test Procedures New Rules v01r02 § C1



Photograph for 26dB emission bandwidth



### 5.3. LIMIT

None

### 5.4. TEST EQUIPMENT LIST

| DESCRIPTION                     | MANUFACTURER    | MODEL        | N° LCIE  | Calibration date                    | Calibration due                     |
|---------------------------------|-----------------|--------------|----------|-------------------------------------|-------------------------------------|
| Multi-meter                     | KEITHLEY        | 2000         | A1242090 | 2015/06                             | 2017/06                             |
| Programmable AC/DC power supply | -; KIKUSUI      | PCR500M      | A7040079 | Verified with calibrated multimeter | Verified with calibrated multimeter |
| EMI receiver                    | ROHDE & SCHWARZ | ESR 7        | A2642023 | 2016/09                             | 2017/09                             |
| RF cable & 20 dB attenuator     | Télédyné        | 920-0202-048 | A5329676 | 2016/09                             | 2017/09                             |

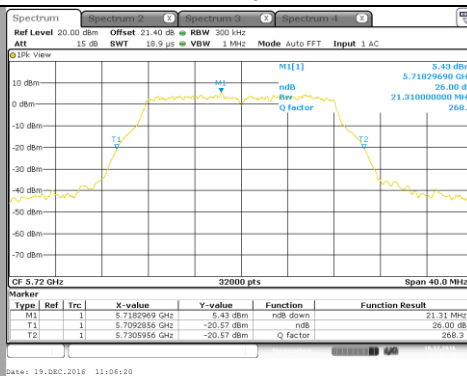
Note: In our quality system, the test equipment calibration due is more & less 2 months

## 5.5. RESULTS



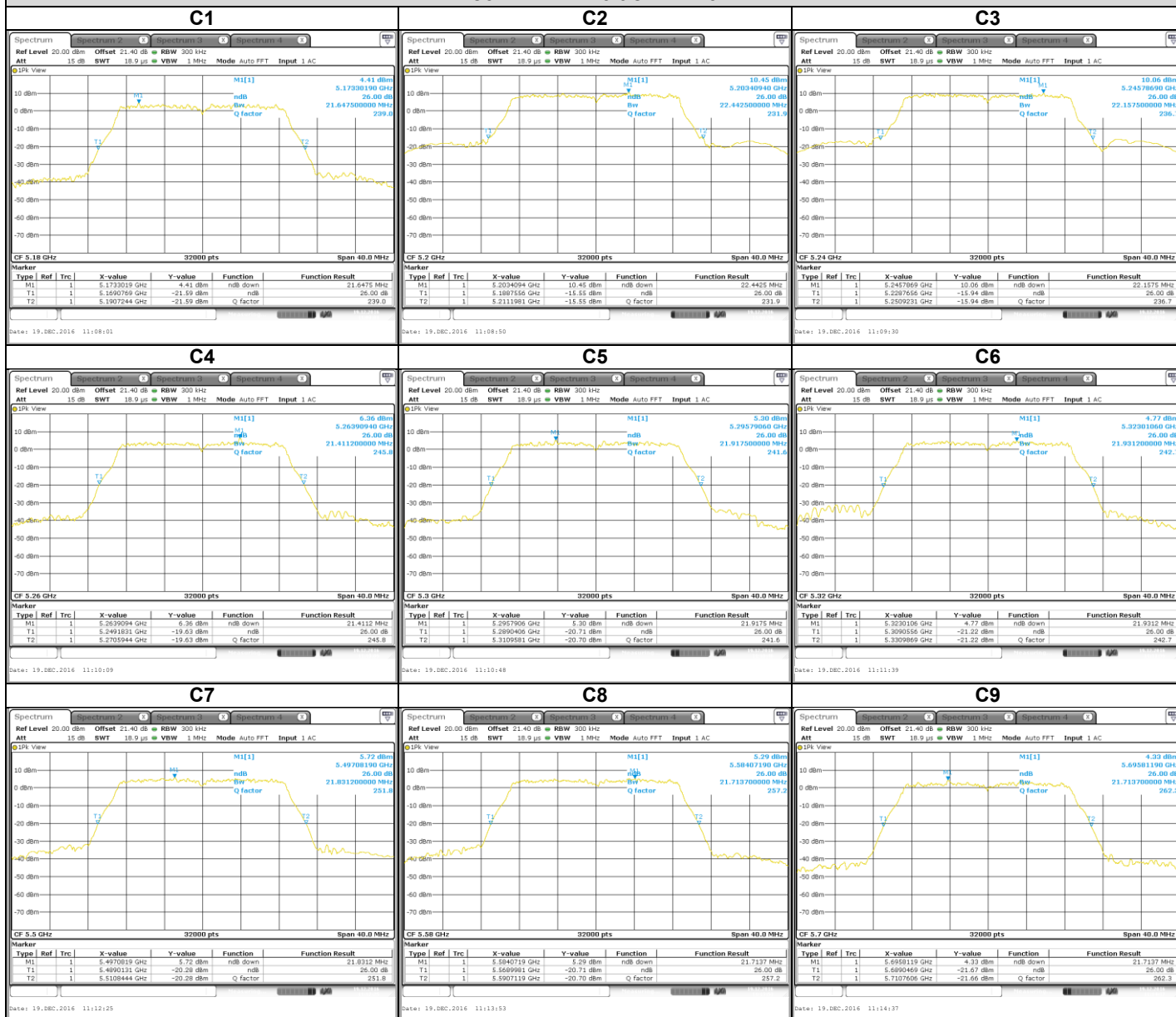
**802.11a**

**C10**



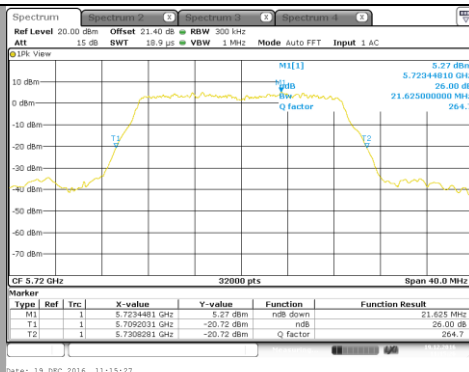
| Channel | 26dB Emission Bandwidth (MHz) |
|---------|-------------------------------|
| C1      | 21,71                         |
| C2      | 21,64                         |
| C3      | 21,71                         |
| C4      | 21,6                          |
| C5      | 21,42                         |
| C6      | 21,69                         |
| C7      | 21,38                         |
| C8      | 21,42                         |
| C9      | 21,66                         |
| C10     | 21,31                         |

## 802.11n HT20/ac VHT20



# 802.11n HT20/ac VHT20

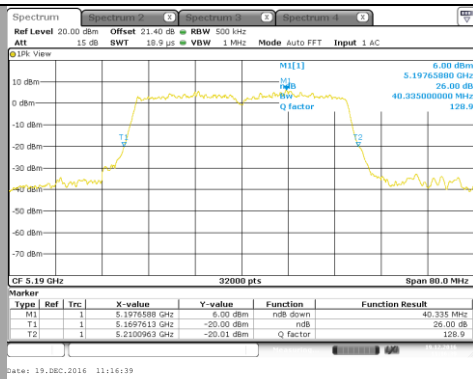
## C10



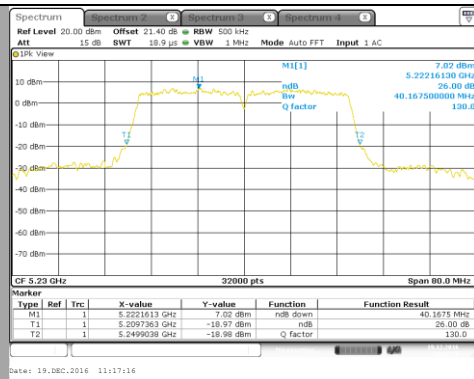
| Channel | 26dB Emission Bandwidth (MHz) |
|---------|-------------------------------|
| C1      | 21,65                         |
| C2      | 22,44                         |
| C3      | 22,16                         |
| C4      | 21,41                         |
| C5      | 21,92                         |
| C6      | 21,93                         |
| C7      | 21,83                         |
| C8      | 21,71                         |
| C9      | 21,71                         |
| C10     | 21,63                         |

## 802.11n HT40/ac VHT40

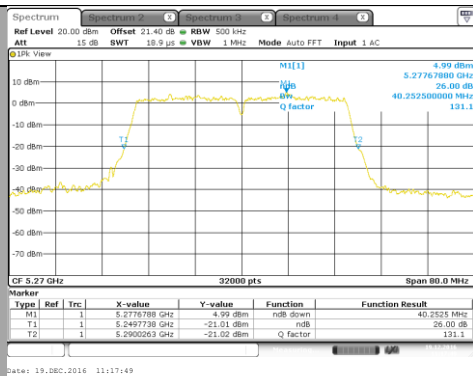
**C14**



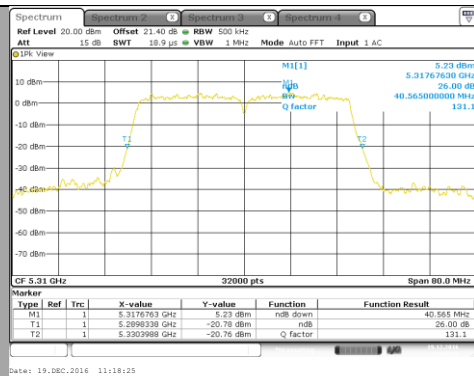
**C15**



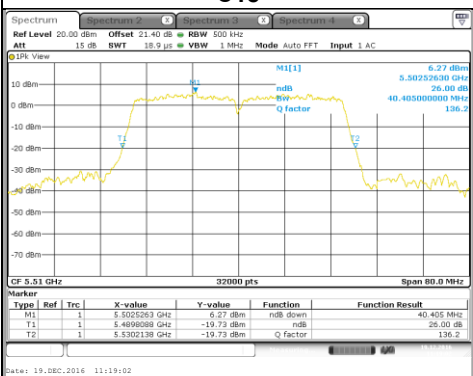
**C16**



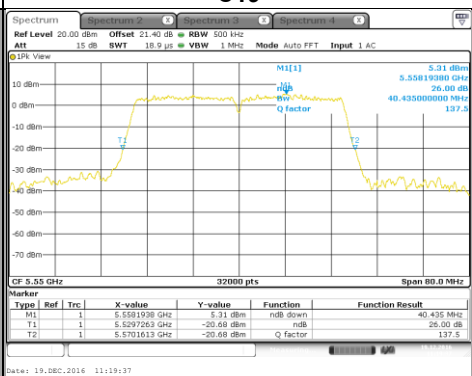
**C17**



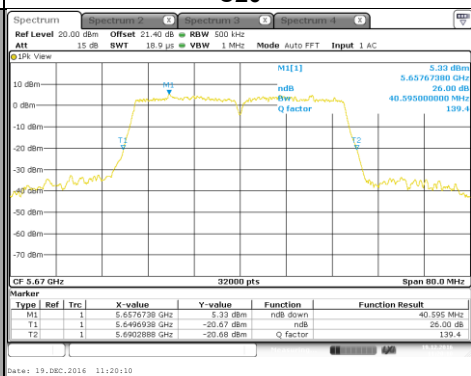
**C18**



**C19**

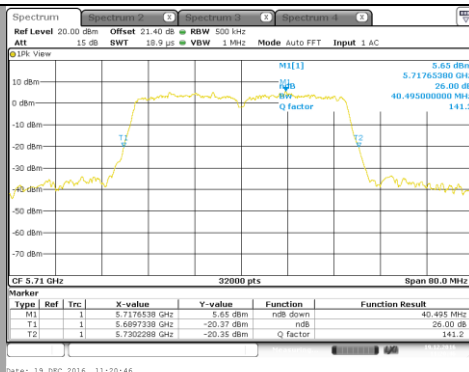


**C20**



# 802.11n HT40/ac VHT40

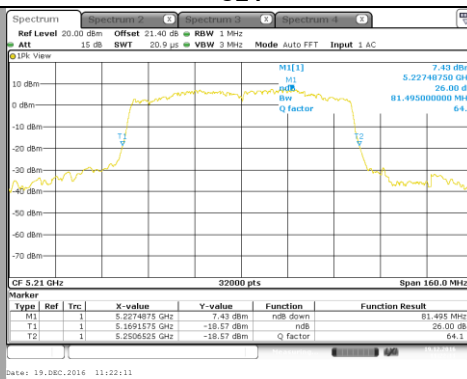
## C21



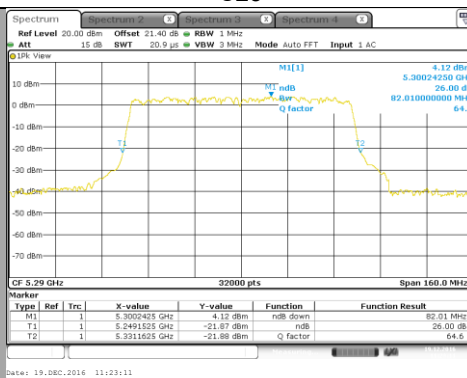
| Channel | 26dB Emission Bandwidth (MHz) |
|---------|-------------------------------|
| C14     | 40,34                         |
| C15     | 40,17                         |
| C16     | 40,26                         |
| C17     | 40,57                         |
| C18     | 40,41                         |
| C19     | 40,44                         |
| C20     | 40,6                          |
| C21     | 40,5                          |

## 802.11ac VHT80

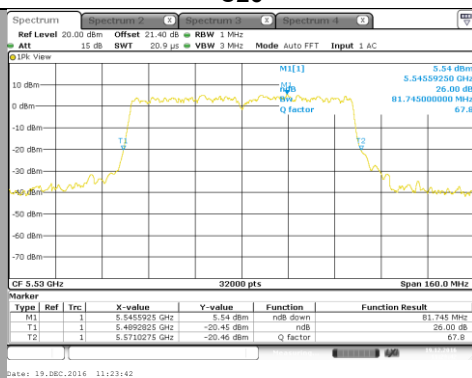
### C24



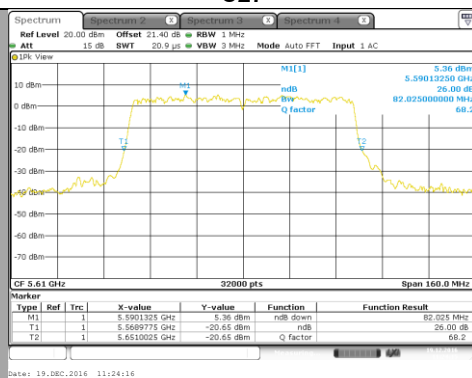
### C25

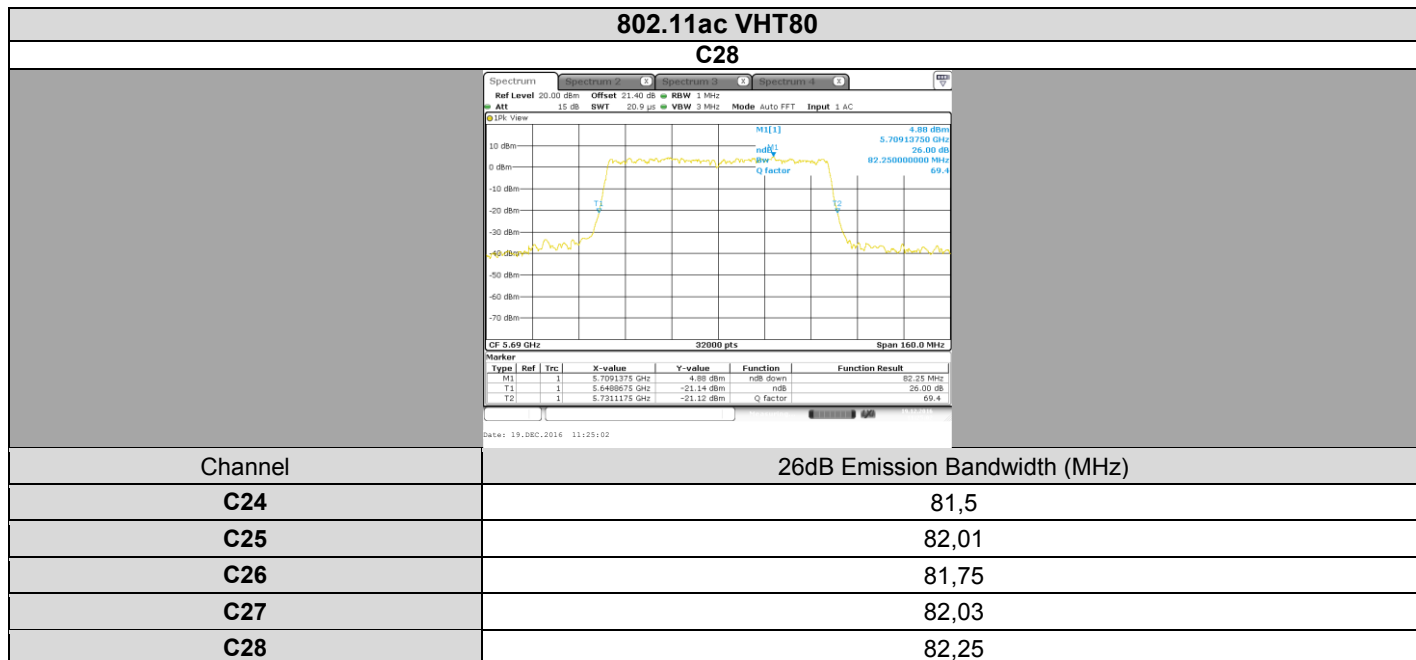


### C26



### C27





## 5.6. CONCLUSION

26dB Emission Bandwidth measurement performed on the sample of the product **SAGEMCOM MiniBox (253697290)**, SN: **616476080862**, in configuration and description presented in this test report, show levels **compliant** to the **47 CFR PART 15.407** limits.