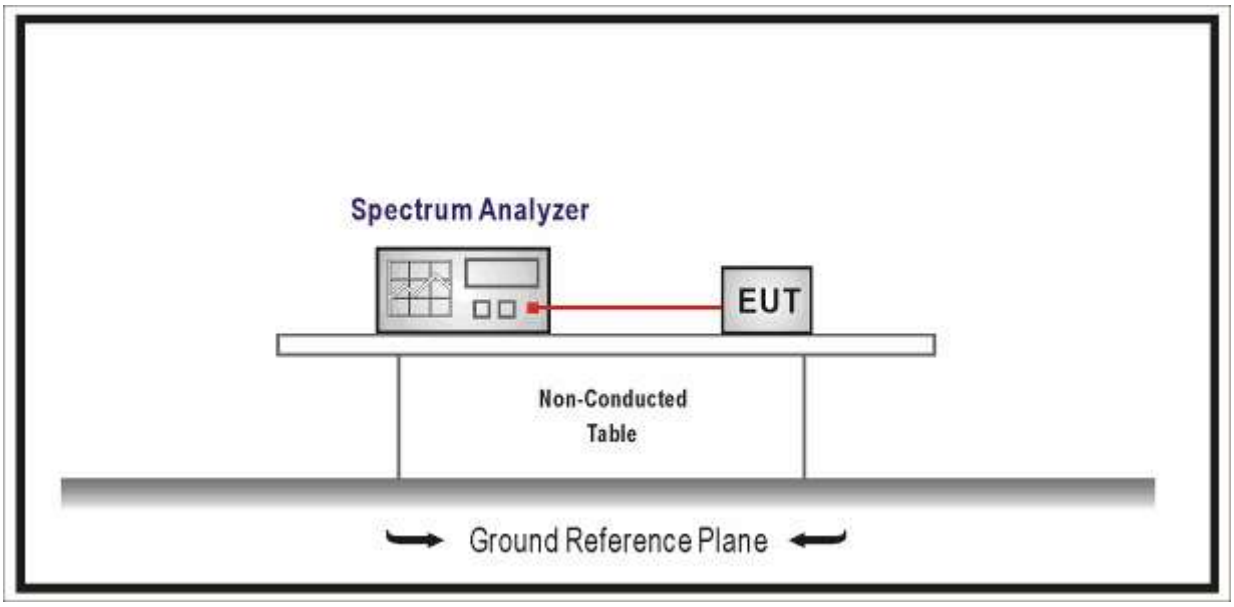
## 6.2. Test Setup



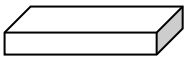
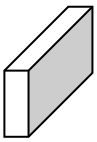
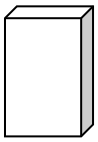
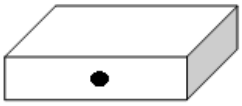
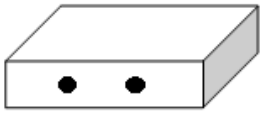

## 6.3. Limit

| Band edge Limit | | | | |
|---|---|---|---|---|
| Frequency bands (MHz) | Detector | Limit (dBµV/m) | RBW (MHz) | Distance (m) |
| 2310-2390<br>2483.5-2500 | PK | 74 | 1 | 3 |
| | AV | 54 | 1 | 3 |
| Note: The field strength of emissions appearing within these frequency bands shall not exceed the limits. | | | | |

## 6.4. Test Procedure

| Test Method | | | | | | |
|---|---|---|---|---|---|---|
| | References Rule | | | | Chapter | Description |
| ☒ | ANSI C63.10 | | | | 6.10 | Band-edge testing |
| | ☒ | ANSI C63.10 | | | 6.10.5 | Restricted-band band-edge measurements |
| | ☐ | ANSI C63.10 | | | 6.10.6 | Marker-delta method |
| ☐ | ANSI C63.10 | | | | 11.12 | Emissions in restricted frequency bands |
| | ☐ | ANSI C63.10 | | | 11.12.1 | Radiated emission measurements |
| | ☐ | ANSI C63.10 | | | 11.12.2.7 | Radiated spurious emission test |
| ☐ | ANSI C63.10 | | | | 6.4 | Radiated emissions from unlicensed wireless devices below 30 MHz |
| ☐ | ANSI C63.10 | | | | 6.5 | Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz |
| ☐ | ANSI C63.10 | | | | 6.6 | Radiated emissions from unlicensed wireless devices above 1 GHz |
| | ☒ | ANSI C63.10 | | | 11.12.2 | Antenna-port conducted measurements |
| | | ☐ | ANSI C63.10 | | 11.12.2.3 | Quasi-peak measurement procedure |
| | | ☒ | ANSI C63.10 | | 11.12.2.4 | Peak power measurement procedure |
| | | ☒ | ANSI C63.10 | | 11.12.2.5 | Average power measurement procedures |
| | | | ☐ | ANSI C63.10 | 11.12.2.5.1 | Trace averaging with continuous EUT transmission at full power |
| | | | ☐ | ANSI C63.10 | 11.12.2.5.2 | Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction |
| | | | ☒ | ANSI C63.10 | 11.12.2.5.3 | Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold |

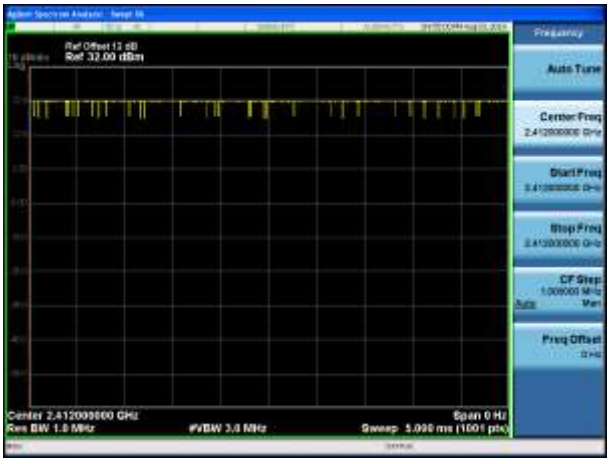
## 6.5. EUT test definition

<table>
<tr><th>Item</th><th colspan="4">Radiated Emission Band Edge</th></tr>
<tr><td rowspan="3">Device Category</td><td>☐</td><td colspan="3">Fixed point-to-point</td></tr>
<tr><td>☐</td><td colspan="3">Emit multiple directional beams, simultaneously or sequentially</td></tr>
<tr><td>☒</td><td colspan="3">Other cases</td></tr>
<tr><td>Test mode</td><td colspan="4">Mode 1~5</td></tr>
<tr><td rowspan="12">Test method</td><td>☐</td><td colspan="3">Radiated</td></tr>
<tr><td rowspan="3"></td><td>X Axis</td><td>Y Axis</td><td>Z Axis</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Worst Axis ☐</td><td>Worst Axis ☐</td><td>Worst Axis ☐</td></tr>
<tr><td>☒</td><td colspan="3">Conducted</td></tr>
<tr><td>☒</td><td colspan="3">Chain 1</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 1</td><td colspan="2">Chain 2</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 1</td><td>Chain 2</td><td>Chain 3</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
</table>

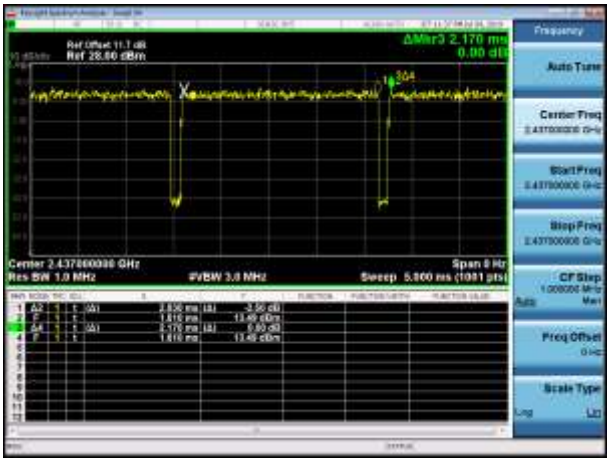
## 6.6. Duty Cycle

| Test Mode | Tx On (ms) | Tx Off (ms) | VBW | Tx On + Tx Off (ms) | Duty Cycle (%) |
|---|---|---|---|---|---|
| 802.11b | N/A | N/A | 10Hz | N/A | 100.00 |
| 802.11g | 2.030 | 0.140 | 500Hz | 2.170 | 93.55 |
| 802.11n(20MHz) | 1.900 | 0.125 | 1kHz | 2.025 | 93.83 |
| 802.11ac(20MHz) | 1.905 | 0.051 | 1kHz | 1.956 | 97.39 |
| 802.11ax(20MHz) | 1.464 | 0.072 | 1kHz | 1.536 | 95.31 |
| 802.11n(20MHz) with Beamforming | 1.904 | 0.119 | 1kHz | 2.023 | 94.12 |
| 802.11ac(20MHz) with Beamforming | 1.905 | 0.053 | 1kHz | 1.958 | 97.29 |
| 802.11ax(20MHz) with Beamforming | 1.470 | 0.048 | 1kHz | 1.518 | 96.84 |

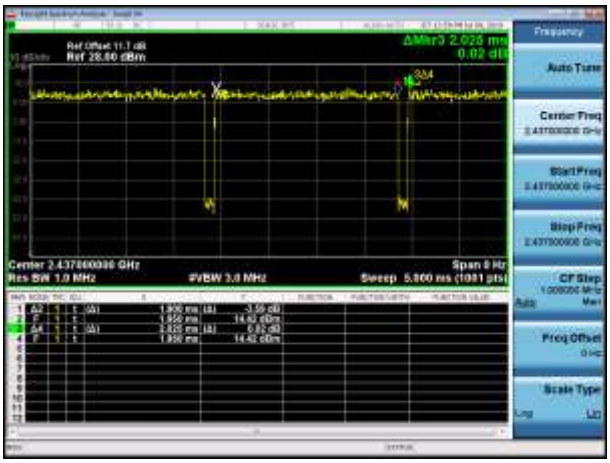
802.11b



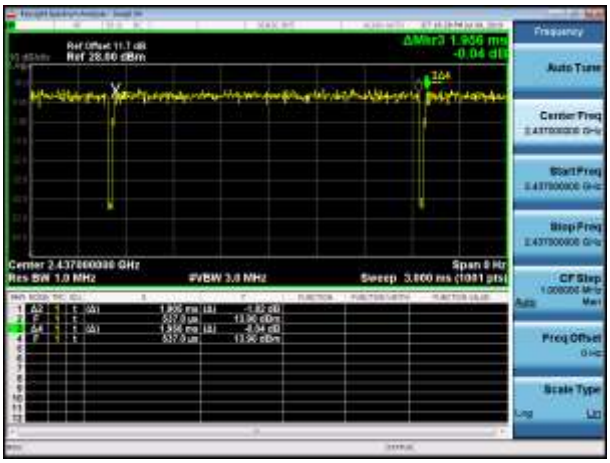
802.11g

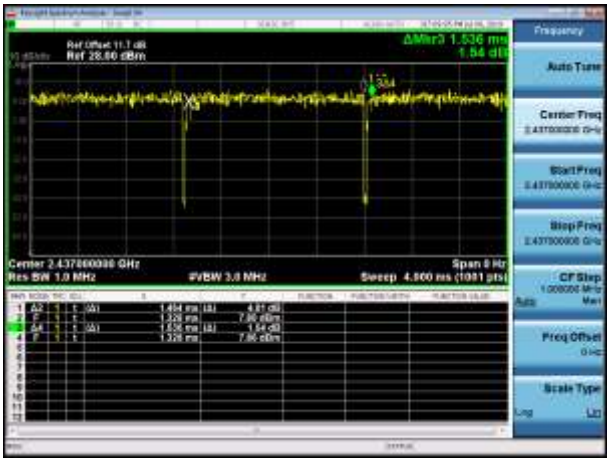
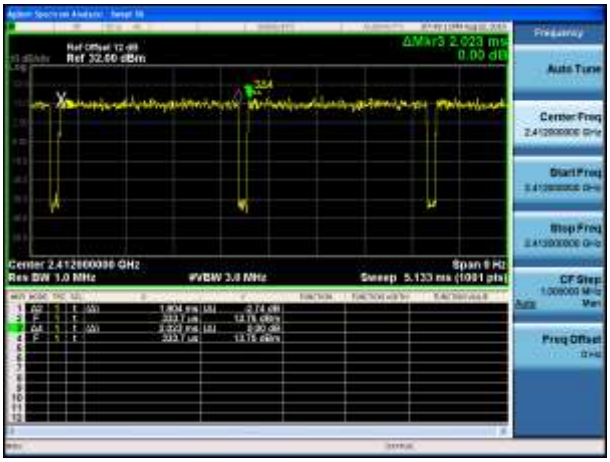
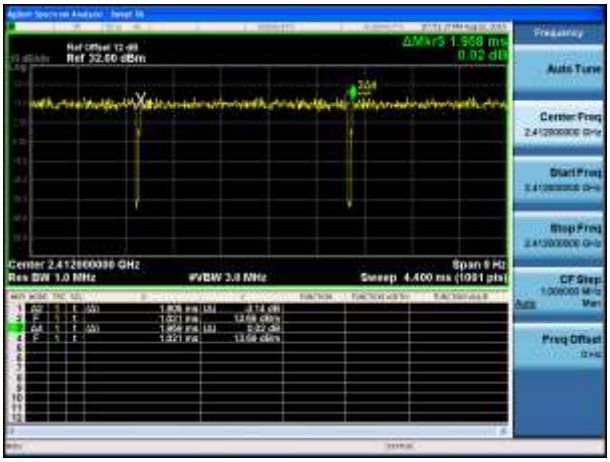
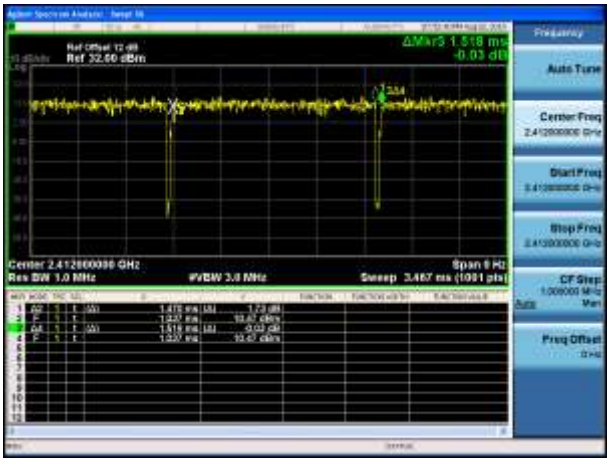


802.11n(20MHz)



802.11ac(20MHz)



| | |
|---|---|
| 802.11ax(20MHz) | 802.11n(20MHz) with Beamforming |
|  |  |
| 802.11ac(20MHz) with Beamforming | 802.11ax(20MHz) with Beamforming |
|  |  |

## 6.7. Test Result

**SISO PK Limit=74dBuV/m-95.2-2.67(Antenna Gain)=-23.87dBm**

**SISO AV Limit=54dBuV/m-95.2-2.67(Antenna Gain)=-43.87dBm**

**CDD PK Limit=74dBuV/m-95.2-10lg2(2Tx)-5.67(Directional Gain)=-29.87dBm**

**CDD AV Limit=54dBuV/m-95.2-10lg2(2Tx)-5.67(Directional Gain)=-49.87dBm**

**Beamforming PK Limit=74dBuV/m-95.2-10lg2(2Tx)-5.67(Directional Gain)=-29.87dBm**

**Beamforming AV Limit=54dBuV/m-95.2-10lg2(2Tx)-5.67(Directional Gain)=-49.87dBm**

Note: Above limit is the worst case of AP305C and AP305CX.

**AV Limit-SISO:**

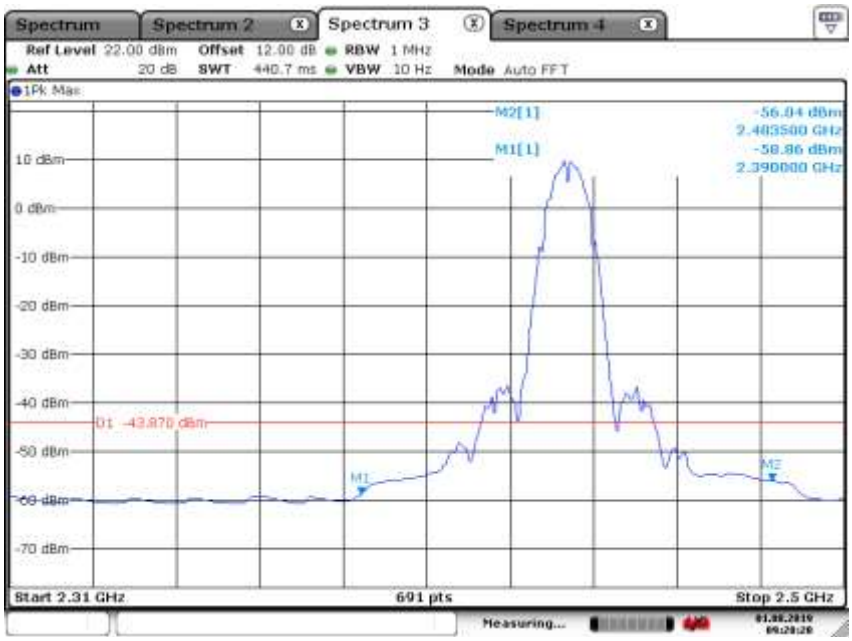
**2412MHz by 802.11b:**


Date: 1.AUG.2019 09:21:39

**2417MHz by 802.11b:**


Date: 1.AUG.2019 09:25:05

**2437MHz by 802.11b:**




Date: 1.AUG.2019 09:28:20

**2457MHz by 802.11b:**


Date: 1.AUG.2019 09:31:10

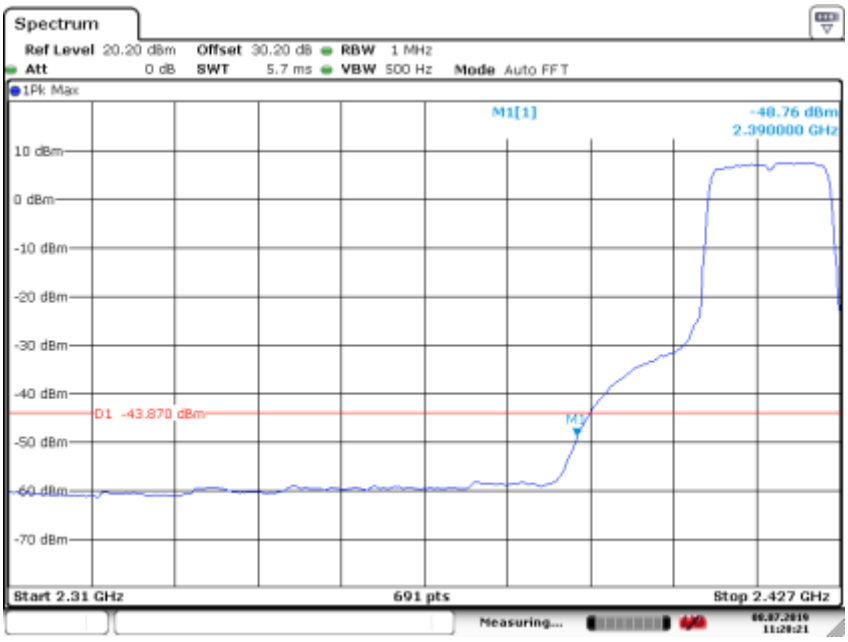
**2462MHz by 802.11b:**


Date: 1.AUG.2019 09:46:53

**2412MHz by 802.11g:**


Date: 8.JUL.2019 11:26:16

**2417MHz by 802.11g:**

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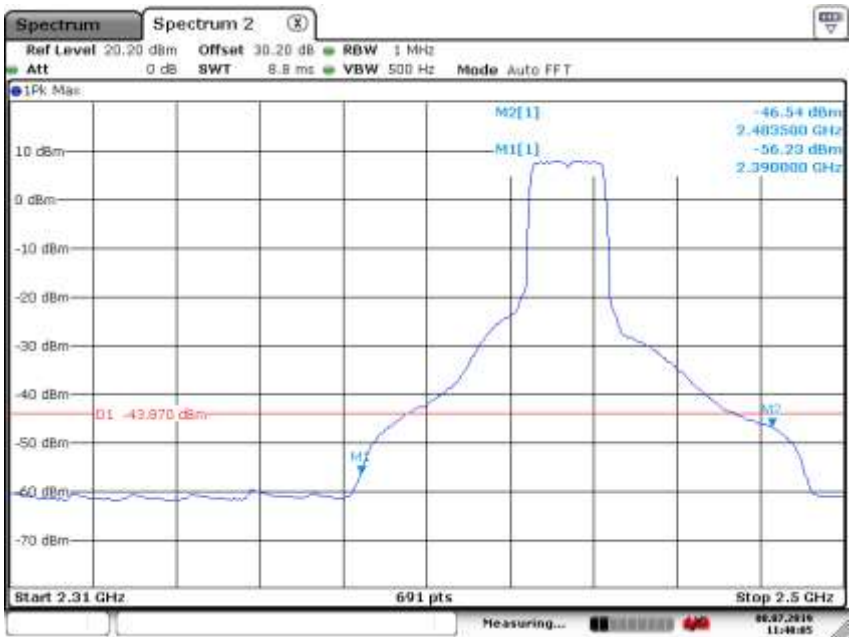
**2437MHz by 802.11g:**




Date: 8.JUL.2019 11:48:05

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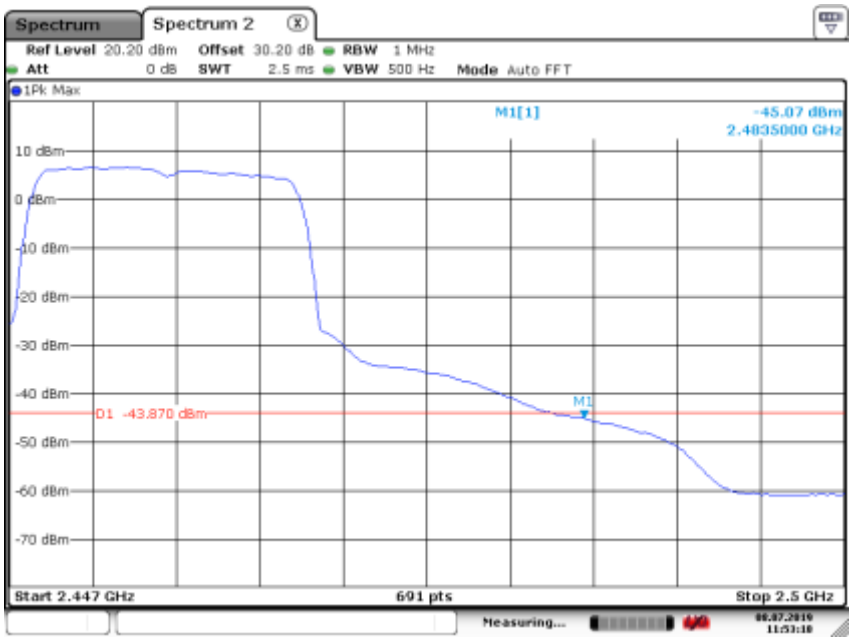


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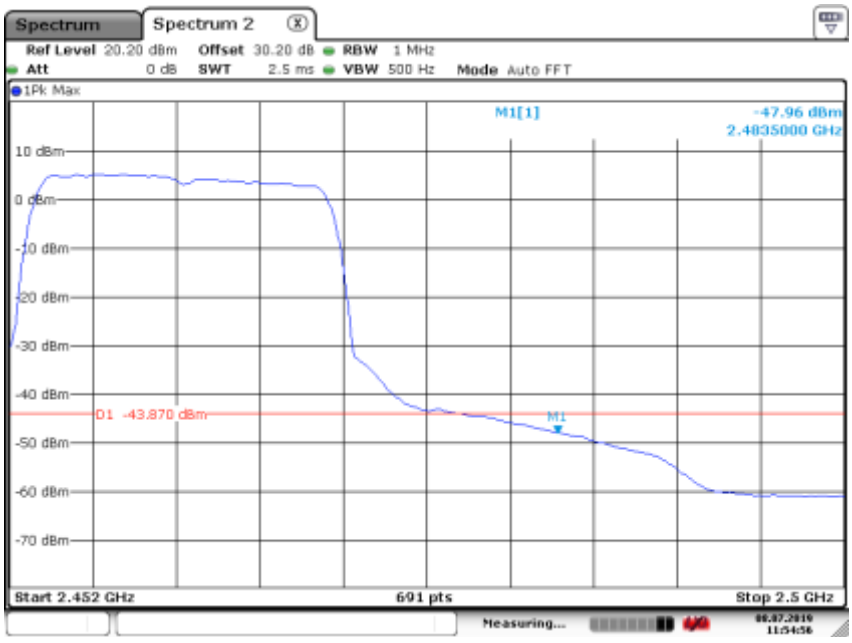
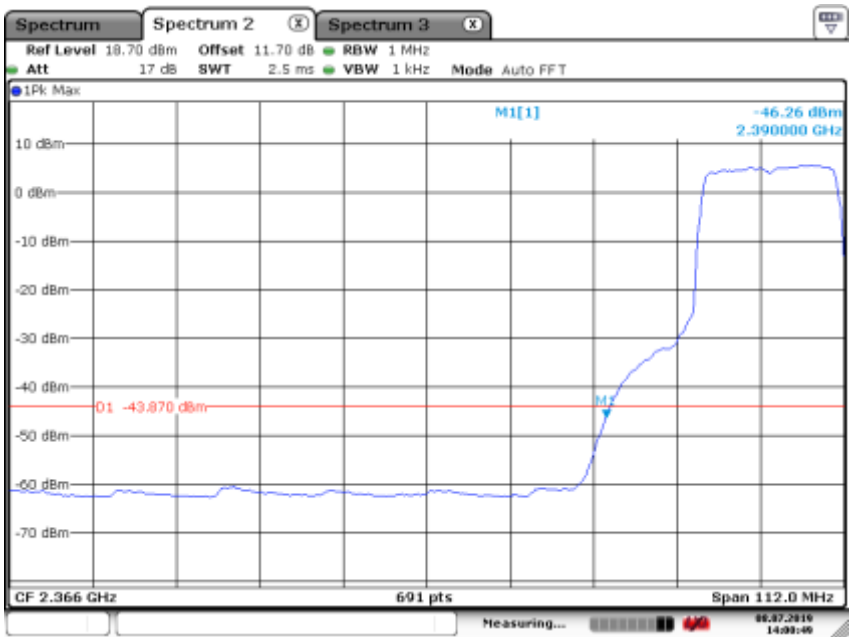
**2462MHz by 802.11g:**



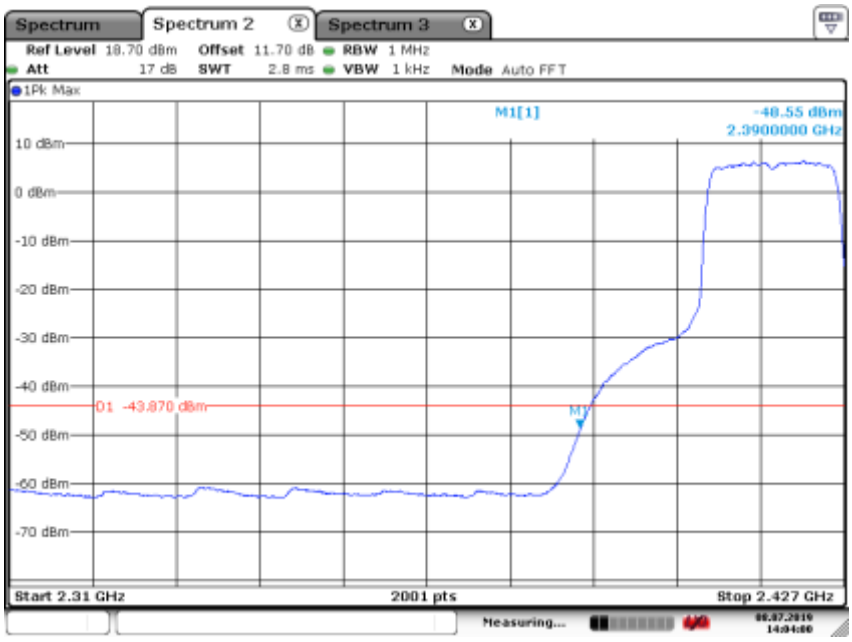

Date: 8.JUL.2019 11:54:56

**2412MHz by 802.11n(20MHz):**




Date: 8.JUL.2019 14:00:49

**2417MHz by 802.11n(20MHz):**

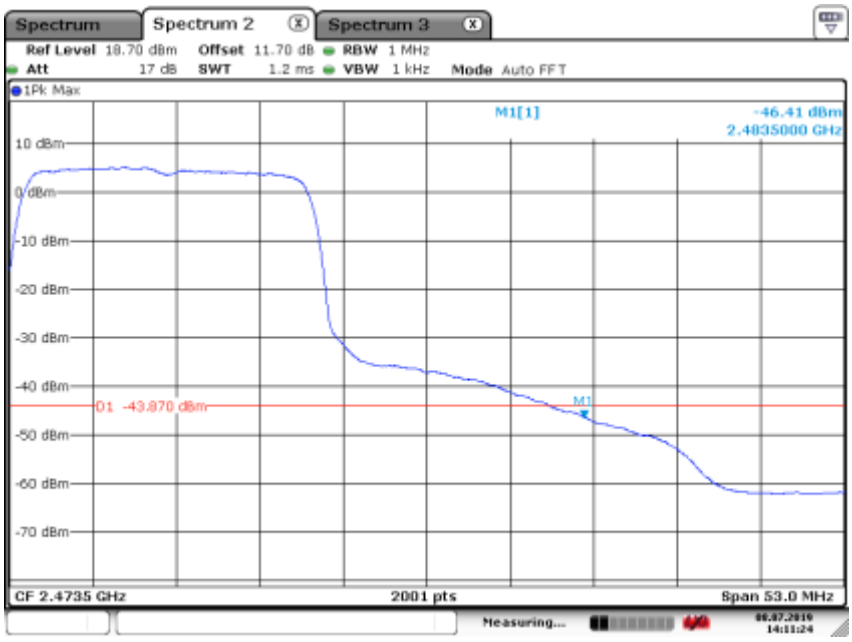



Date: 8.JUL.2019 14:04:00

**2437MHz by 802.11n(20MHz):**

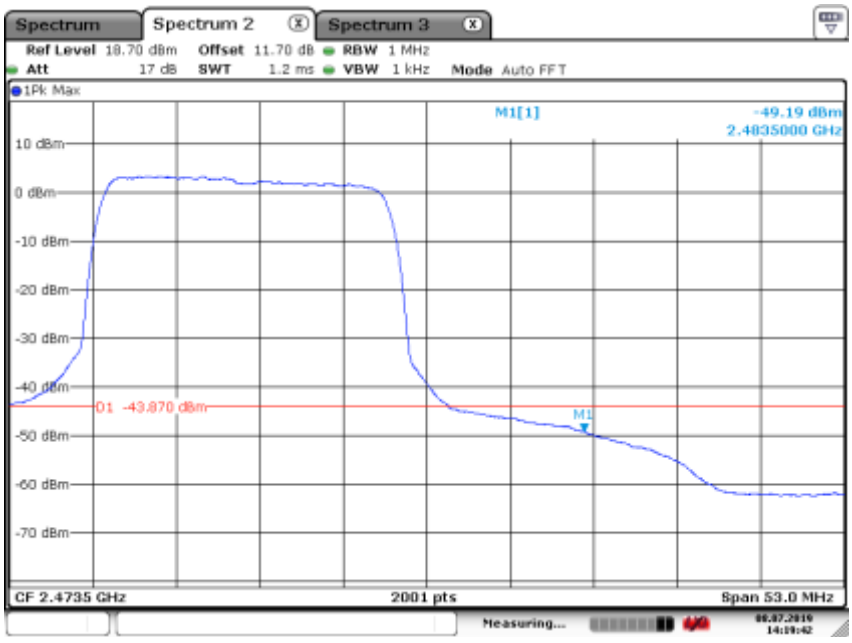

Date: 8.JUL.2019 14:06:11

**2457MHz by 802.11n(20MHz):**



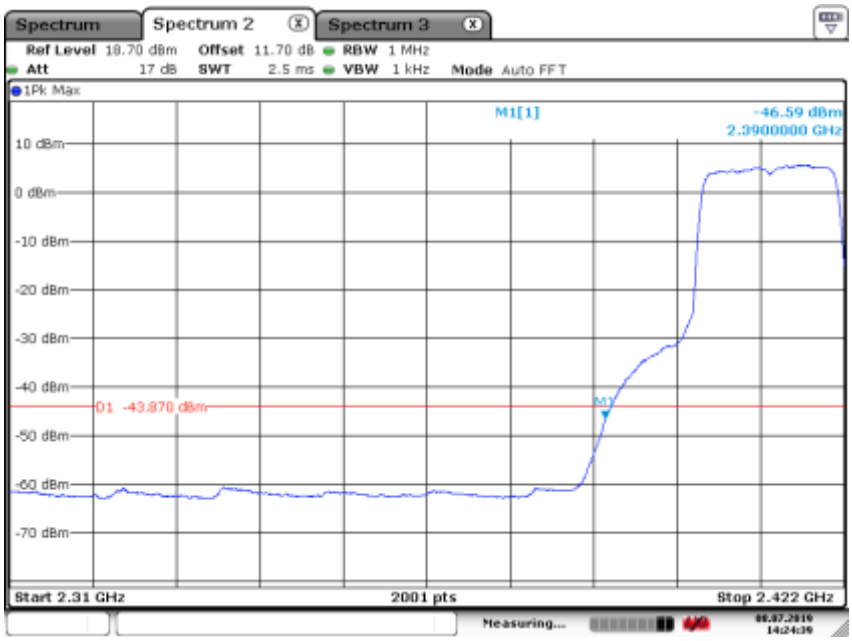

Date: 8.JUL.2019 14:11:24

**2462MHz by 802.11n(20MHz):**



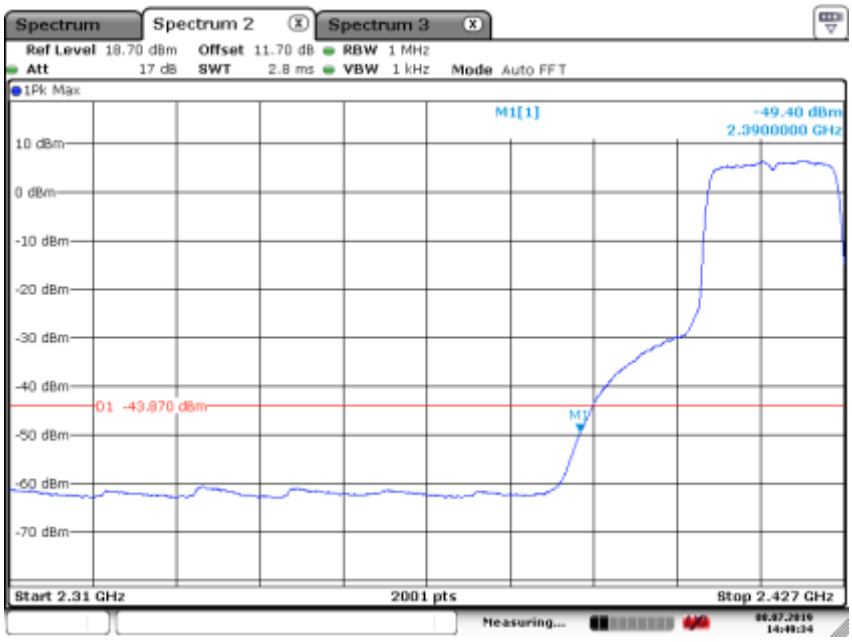

Date: 8.JUL.2019 14:19:43

**2412MHz by 802.11ac(20MHz):**




Date: 8.JUL.2019 14:24:40

**2417MHz by 802.11ac(20MHz):**

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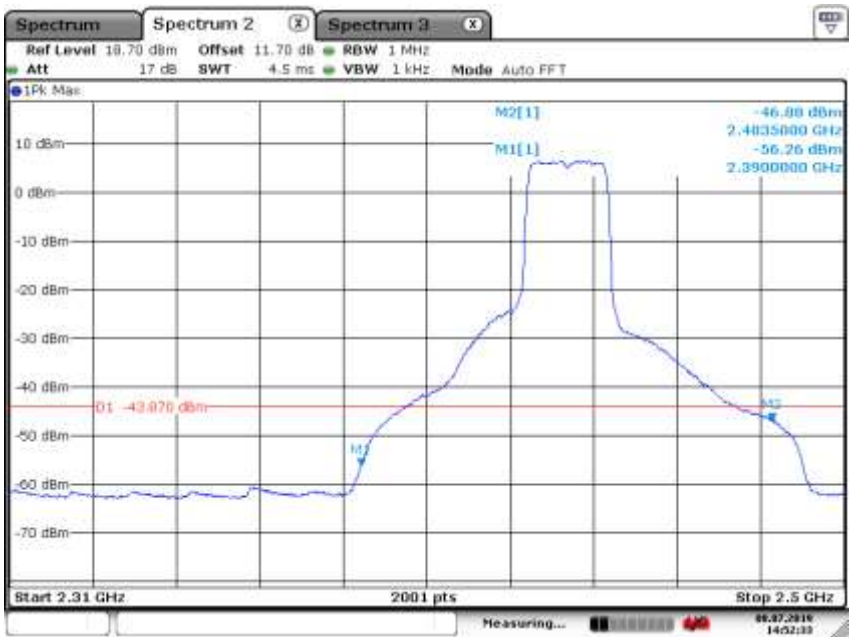
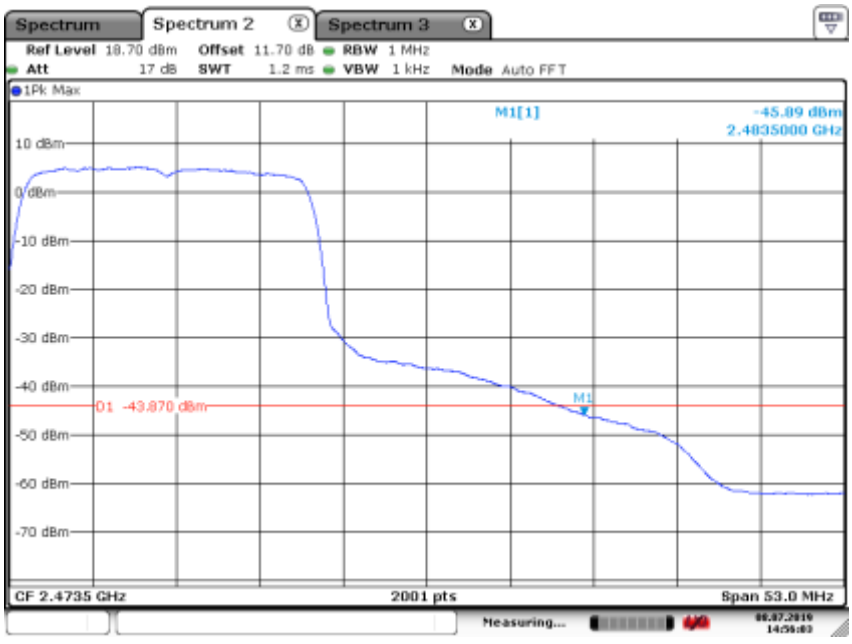
**2437MHz by 802.11ac(20MHz):**



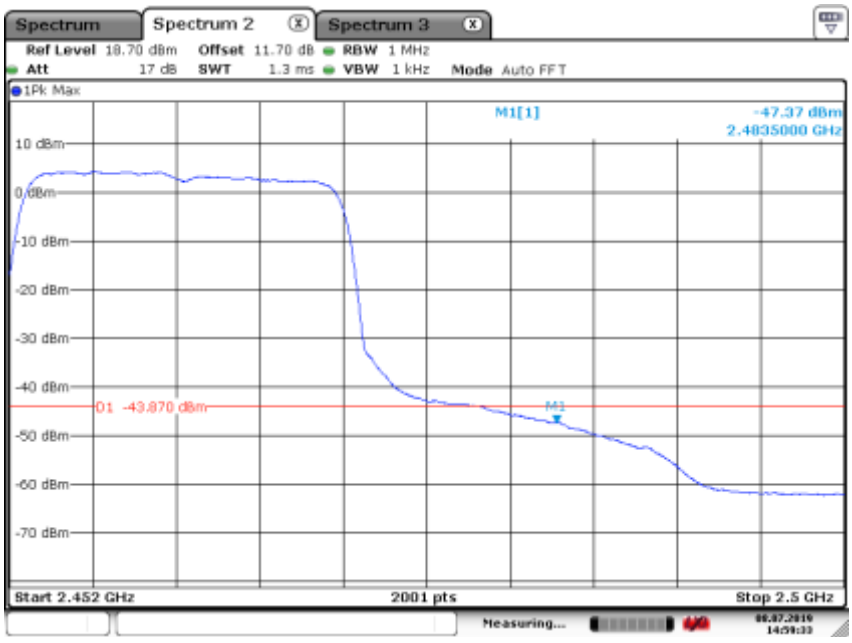

Date: 8.JUL.2019 14:52:34

**2457MHz by 802.11ac(20MHz):**



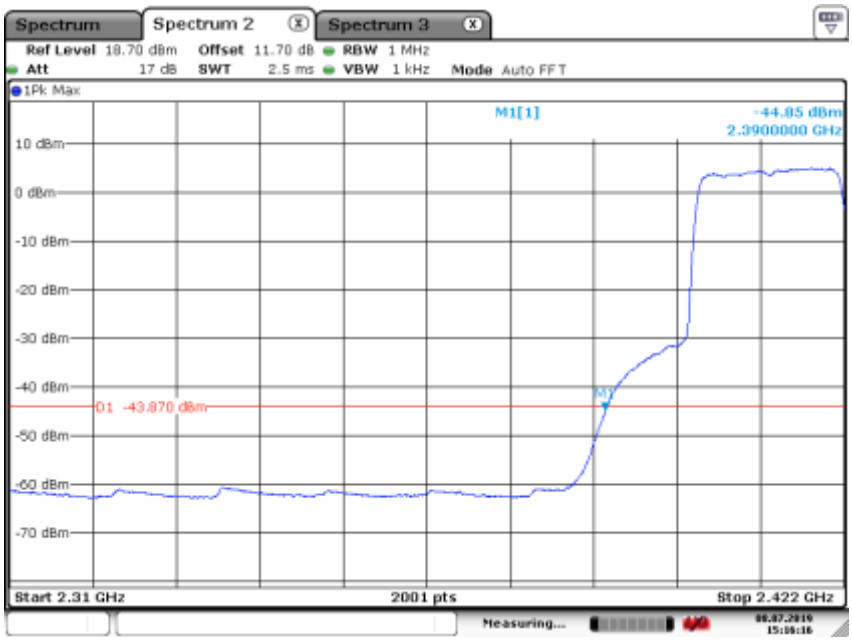

Date: 8.JUL.2019 14:56:04

**2462MHz by 802.11ac(20MHz):**



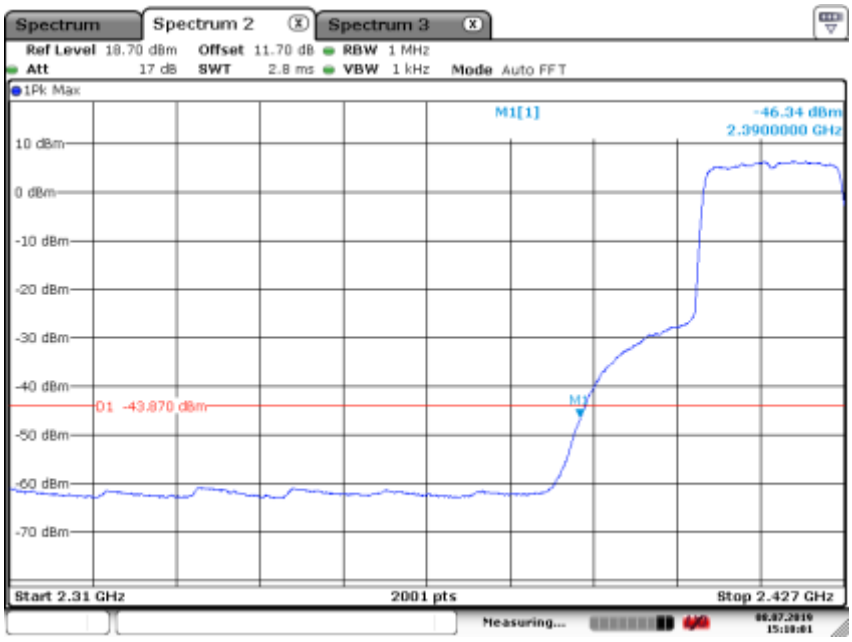

Date: 8.JUL.2019 14:59:33

**2412MHz by 802.11ax(20MHz):**




Date: 8.JUL.2019 15:16:17

**2417MHz by 802.11ax(20MHz):**




Date: 8.JUL.2019 15:18:01

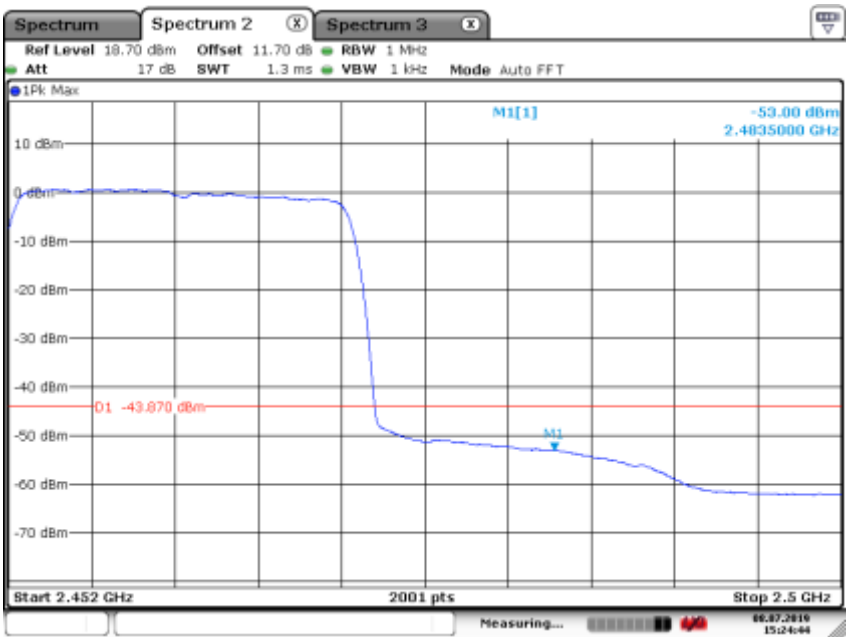
**2437MHz by 802.11ax(20MHz):**


Date: 8.JUL.2019 15:19:31

**2457MHz by 802.11ax(20MHz):**

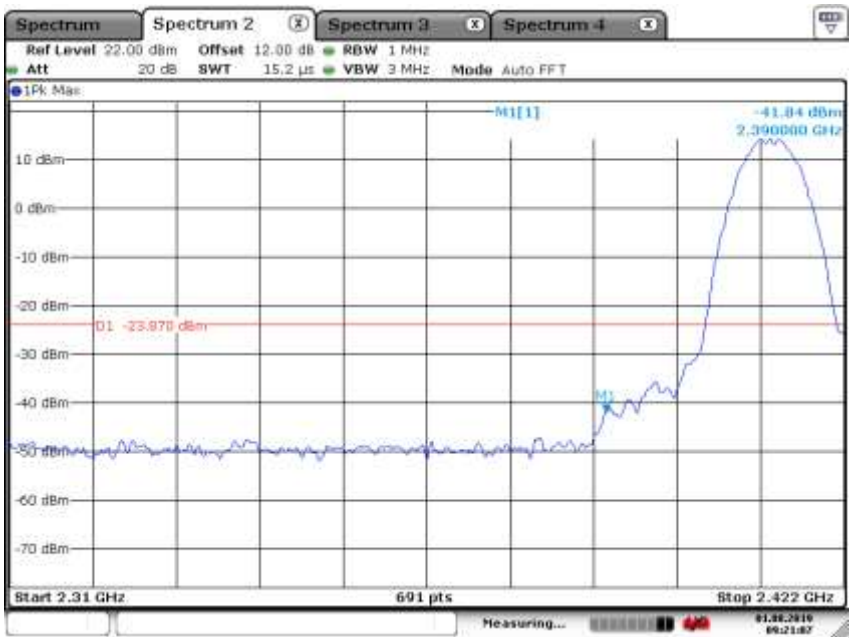

Date: 8.JUL.2019 15:22:38

**2462MHz by 802.11ax(20MHz):**



**PK Limit-SISO:**

**2412MHz by 802.11b:**




Date: 1.AUG.2019 09:21:07

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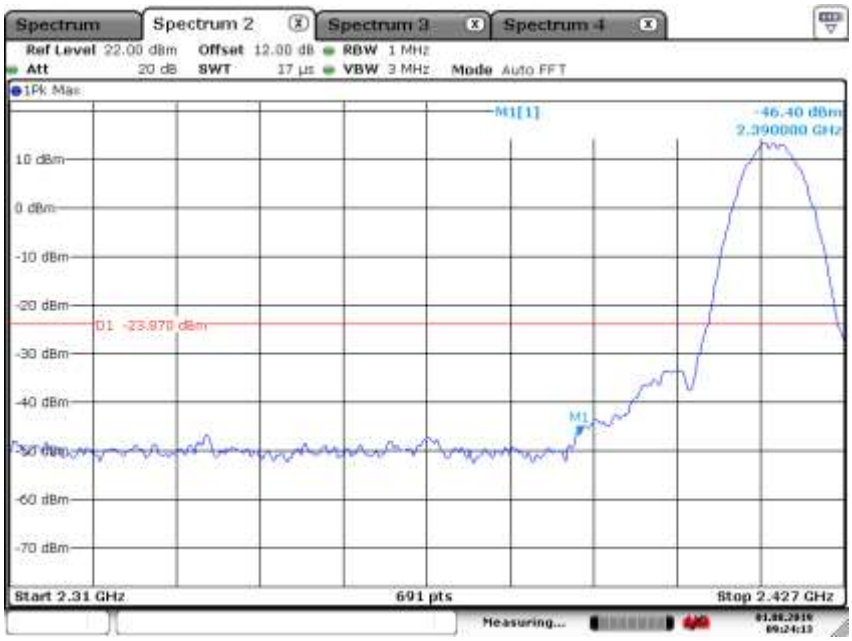
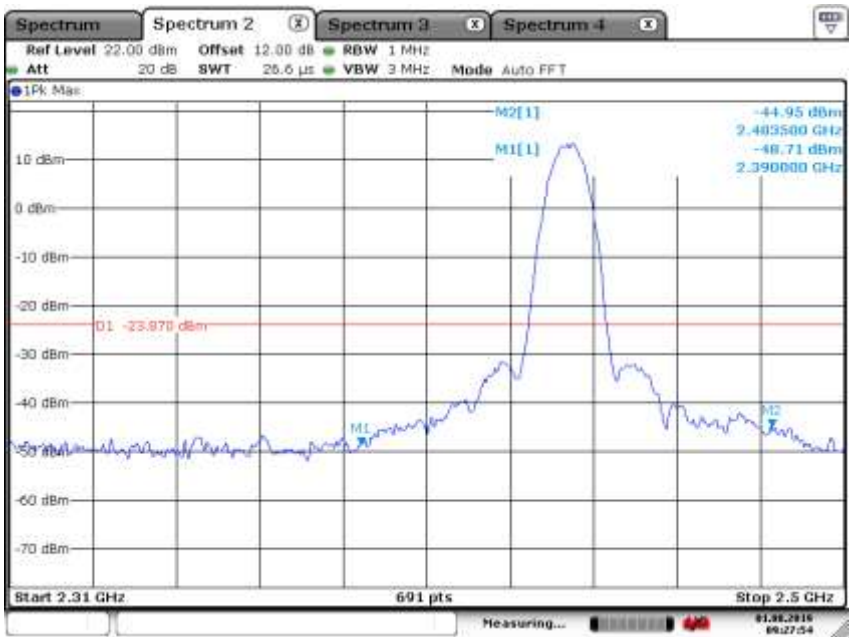



Date: 1.AUG.2019 09:24:13

**2437MHz by 802.11b:**




Date: 1.AUG.2019 09:27:54

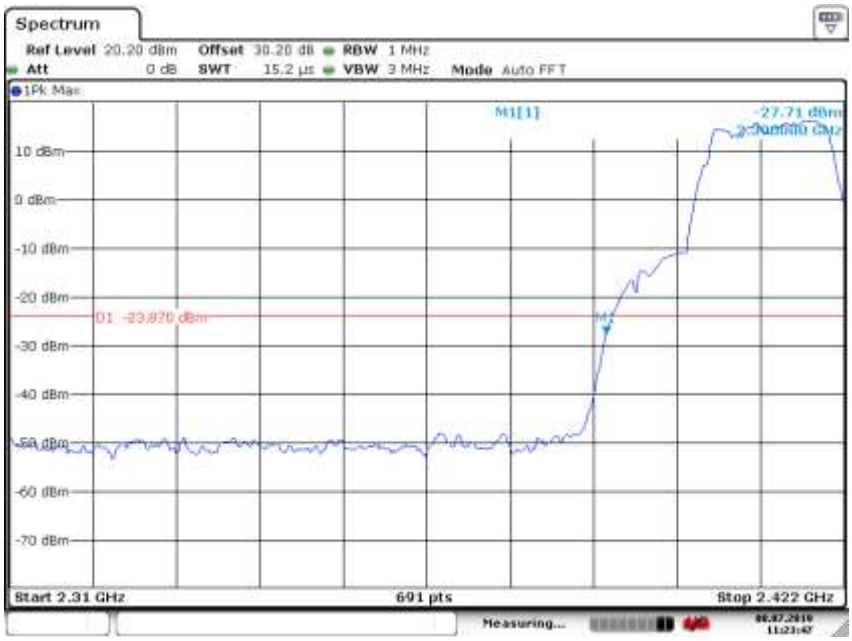
**2457MHz by 802.11b:**


Date: 1.AUG.2019 09:30:52

**2462MHz by 802.11b:**


Date: 1.AUG.2019 09:46:38

**2412MHz by 802.11g:**

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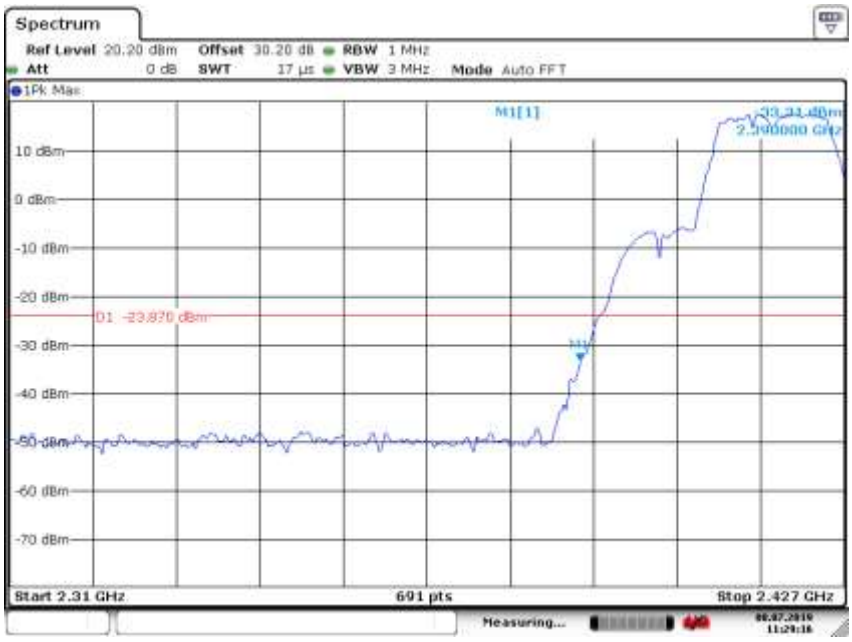


Date: 8.JUL.2019 11:29:15

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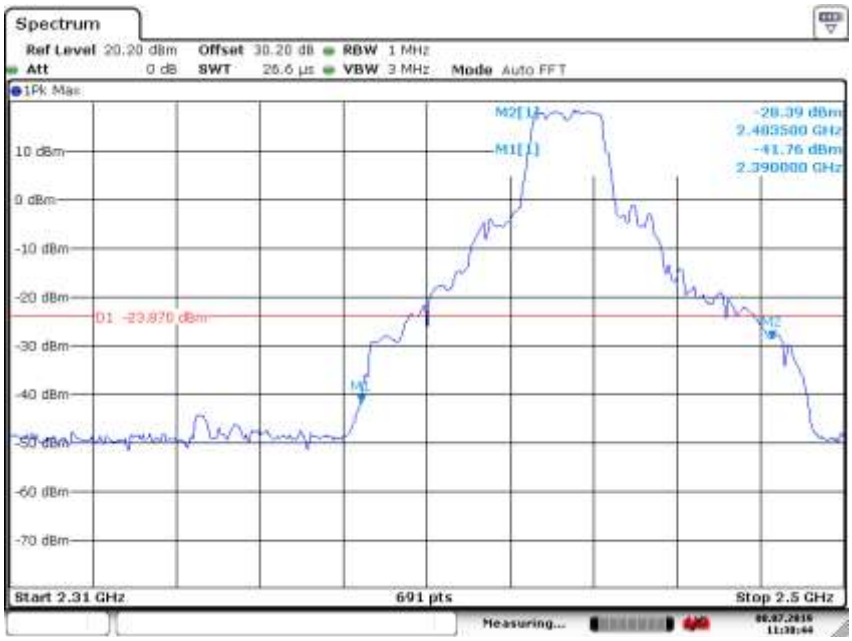


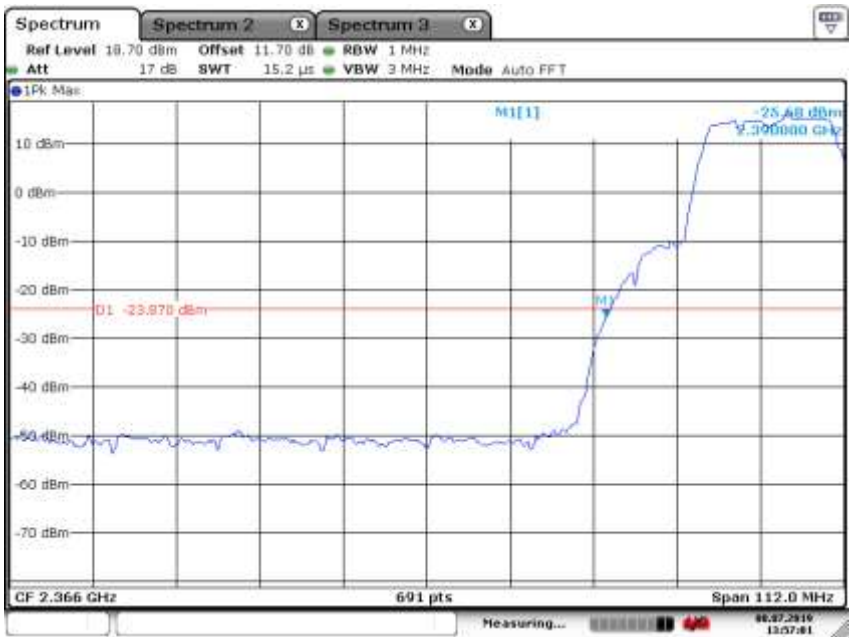

Date: 8.JUL.2019 11:38:44

**2457MHz by 802.11g:**


Date: 8.JUL.2019 11:51:36

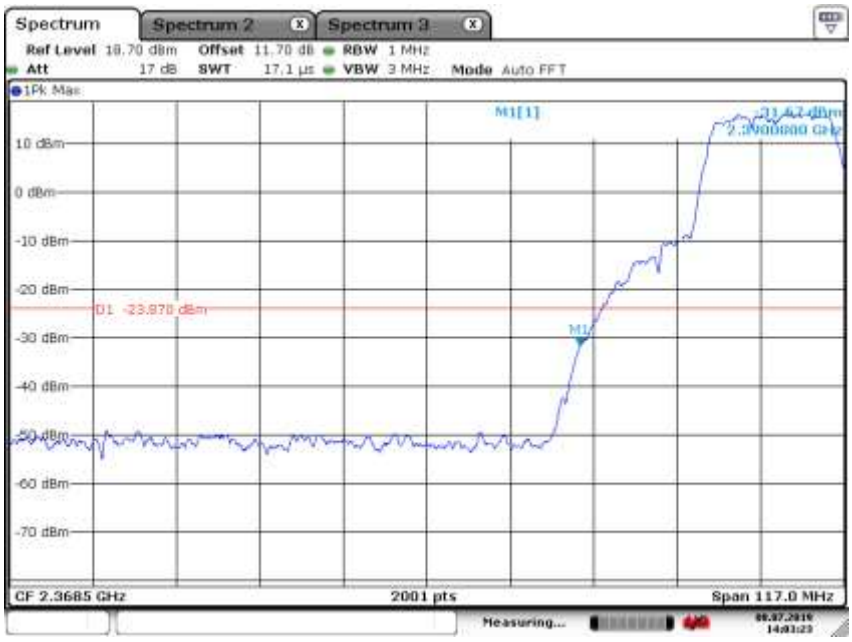
**2462MHz by 802.11g:**

**2412MHz by 802.11n(20MHz):**



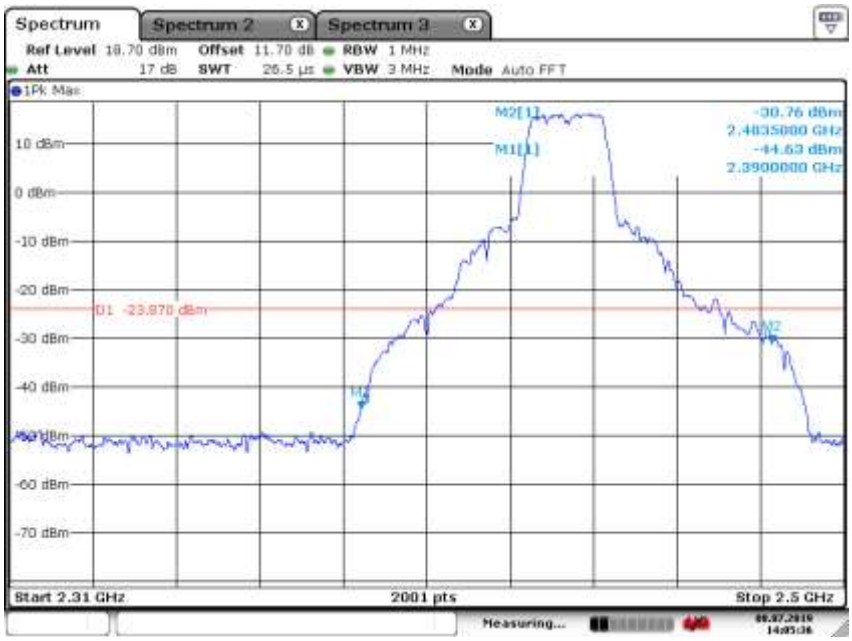

Date: 8.JUL.2019 13:57:02

**2417MHz by 802.11n(20MHz):**




Date: 8.JUL.2019 14:03:24

**2437MHz by 802.11n(20MHz):**



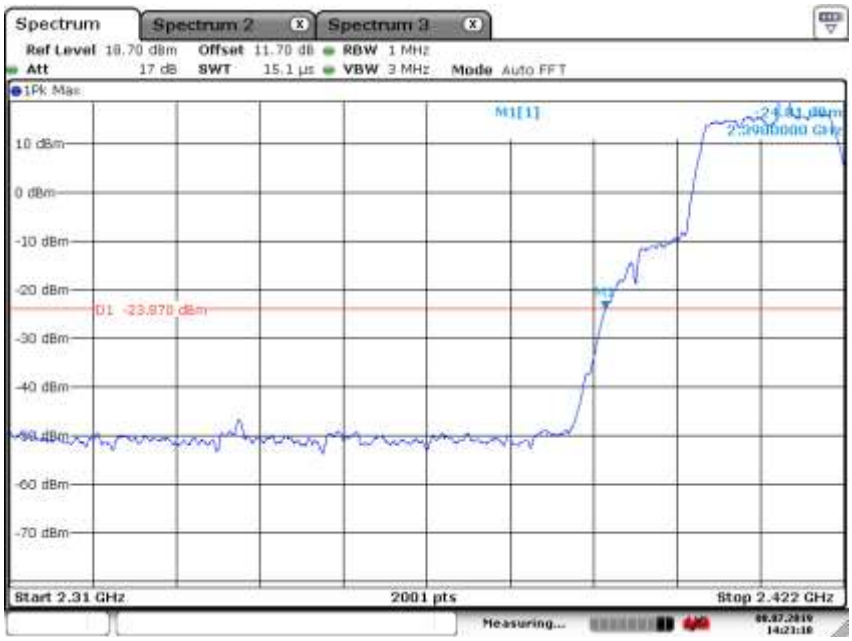

Date: 8.JUL.2019 14:05:36

**2457MHz by 802.11n(20MHz):**


Date: 8.JUL.2019 14:10:09

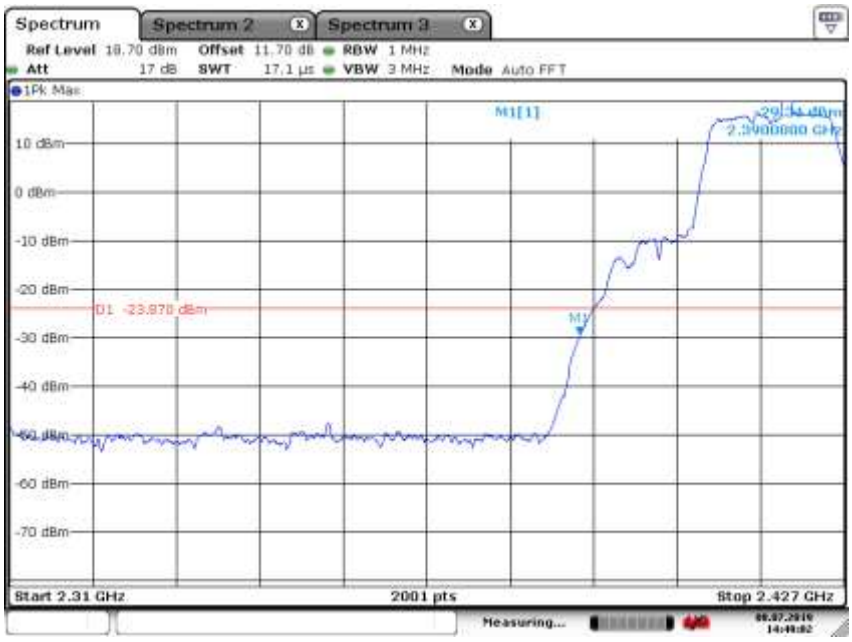
**2462MHz by 802.11n(20MHz):**

**2412MHz by 802.11ac(20MHz):**




Date: 8.JUL.2019 14:23:11

**2417MHz by 802.11ac(20MHz):**




Date: 8.JUL.2019 14:49:02

**2437MHz by 802.11ac(20MHz):**

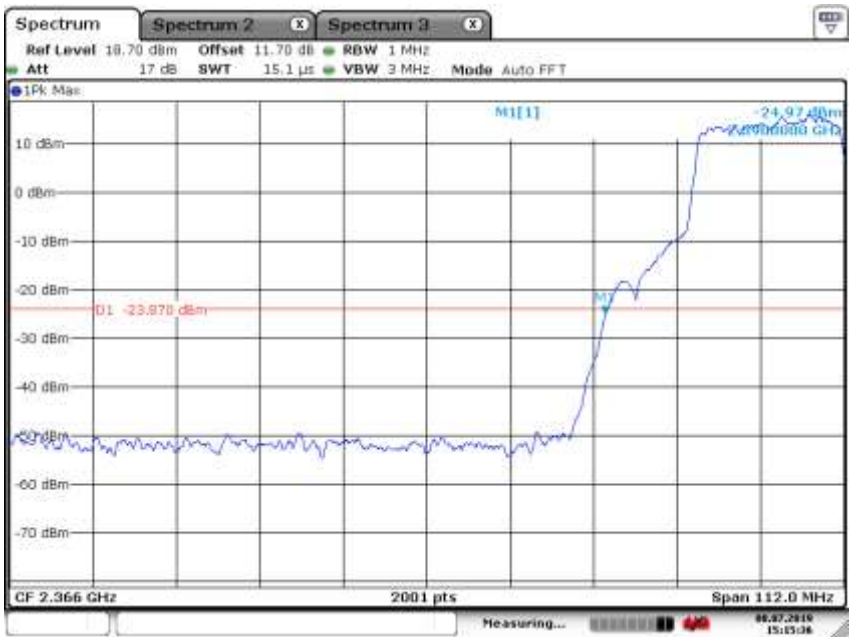

Date: 8.JUL.2019 14:52:03

**2457MHz by 802.11ac(20MHz):**


Date: 8.JUL.2019 14:54:52

**2462MHz by 802.11ac(20MHz):**

**2412MHz by 802.11ax(20MHz):**

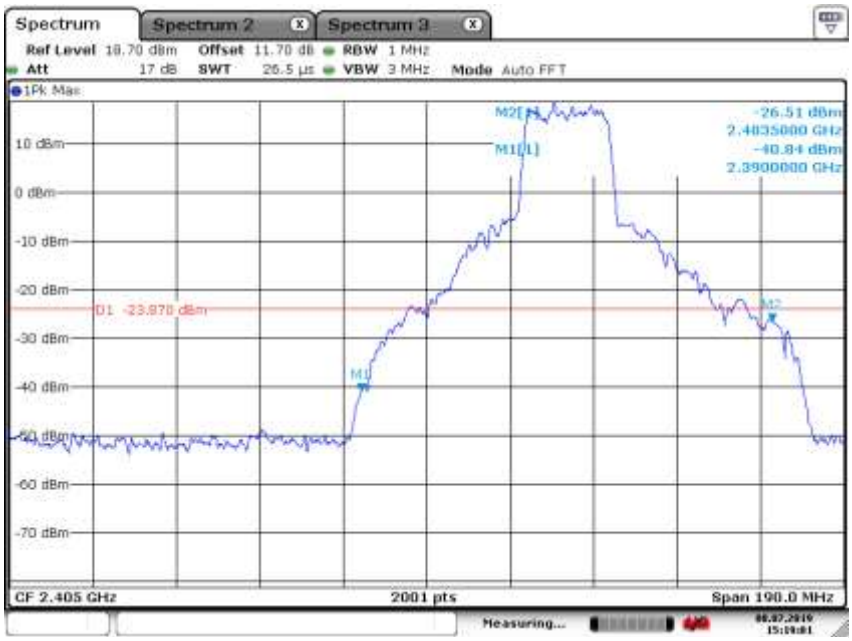



Date: 8.JUL.2019 15:15:37

**2417MHz by 802.11ax(20MHz):**

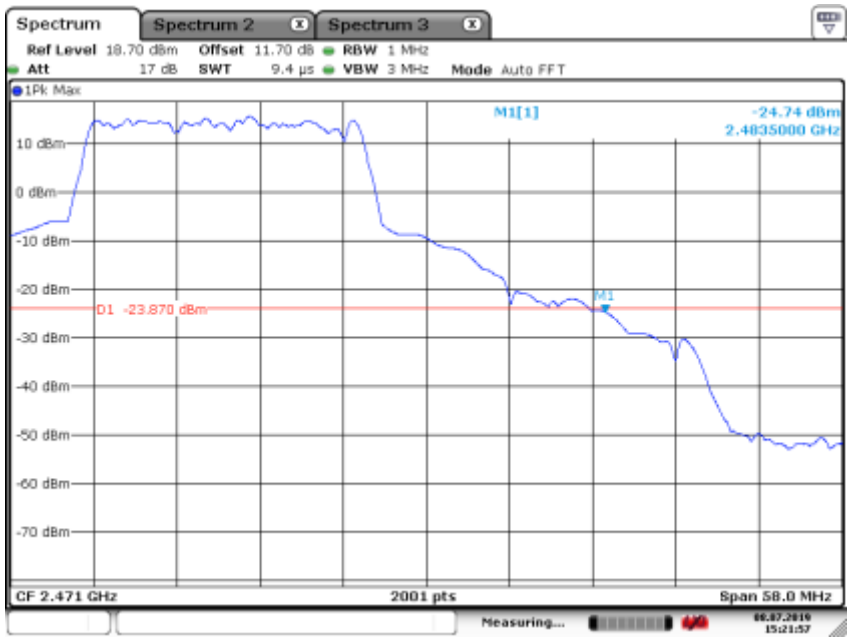

Date: 8.JUL.2019 15:17:36

**2437MHz by 802.11ax(20MHz):**




Date: 8.JUL.2019 15:19:02

**2457MHz by 802.11ax(20MHz):**

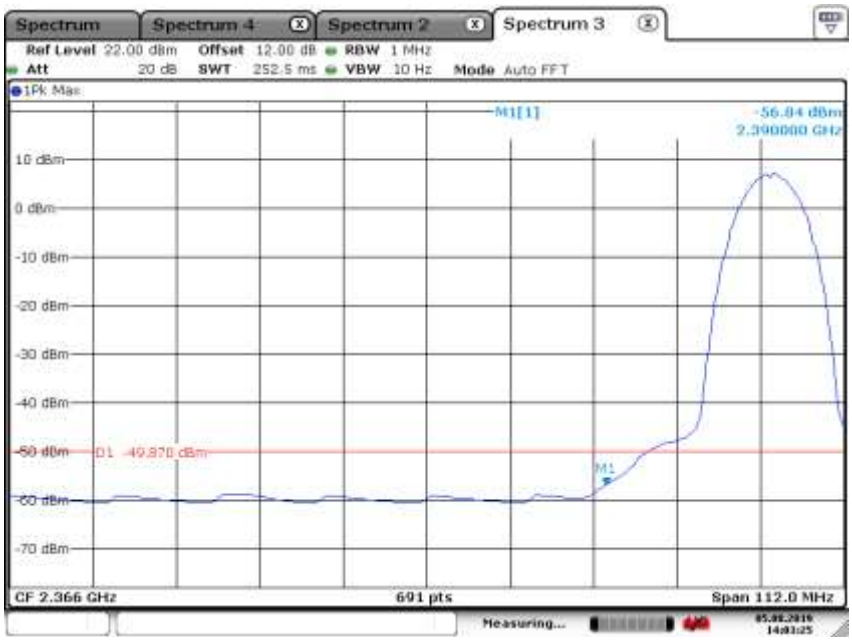



Date: 8.JUL.2019 15:21:58

**2462MHz by 802.11ax(20MHz):**

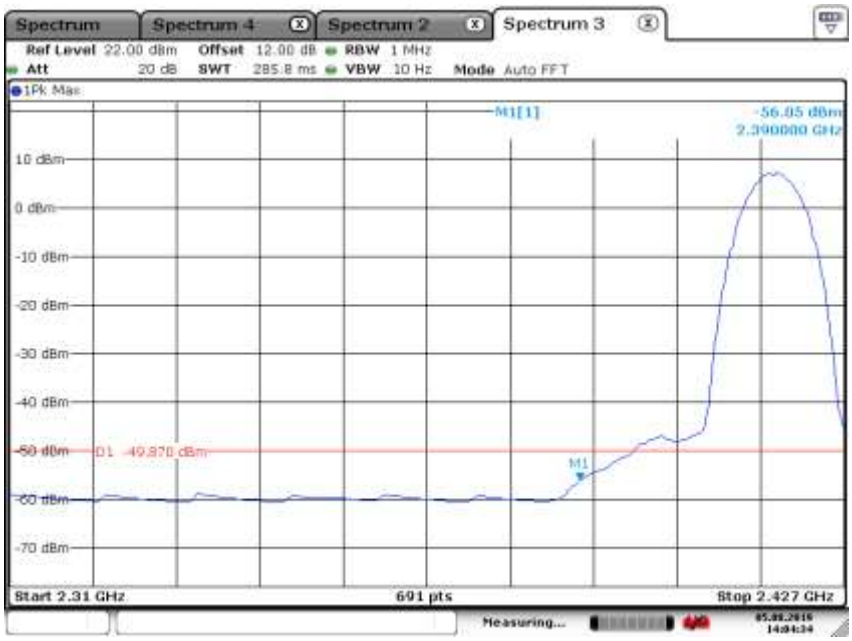
**AV Limit-CDD:**

**2412MHz by 802.11b:**



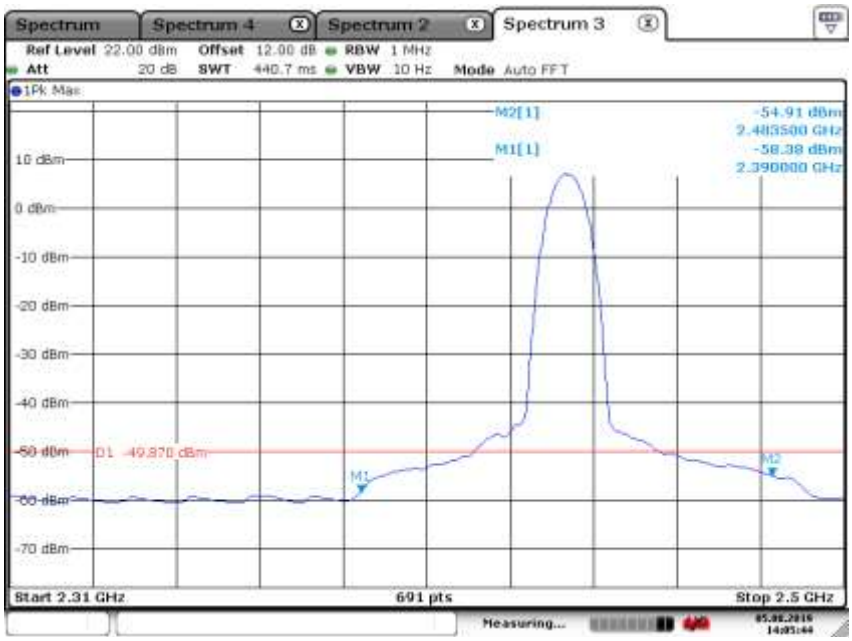

Date: 5.AUG.2019 14:03:25

**2417MHz by 802.11b:**




Date: 5.AUG.2019 14:04:34

**2437MHz by 802.11b:**




Date: 5.AUG.2019 14:05:44

**2457MHz by 802.11b:**

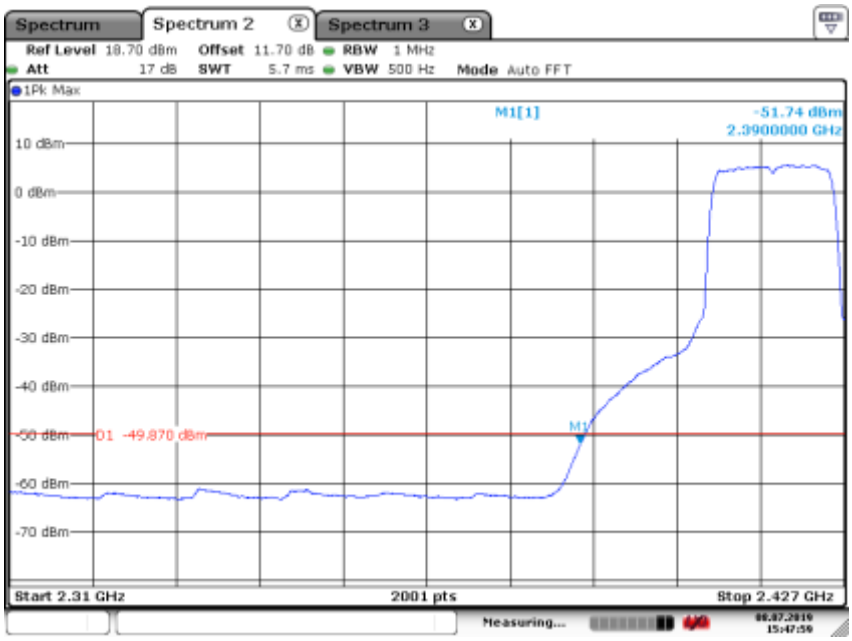

Date: 5.AUG.2019 14:07:03

**2462MHz by 802.11b:**

**2412MHz by 802.11g:**

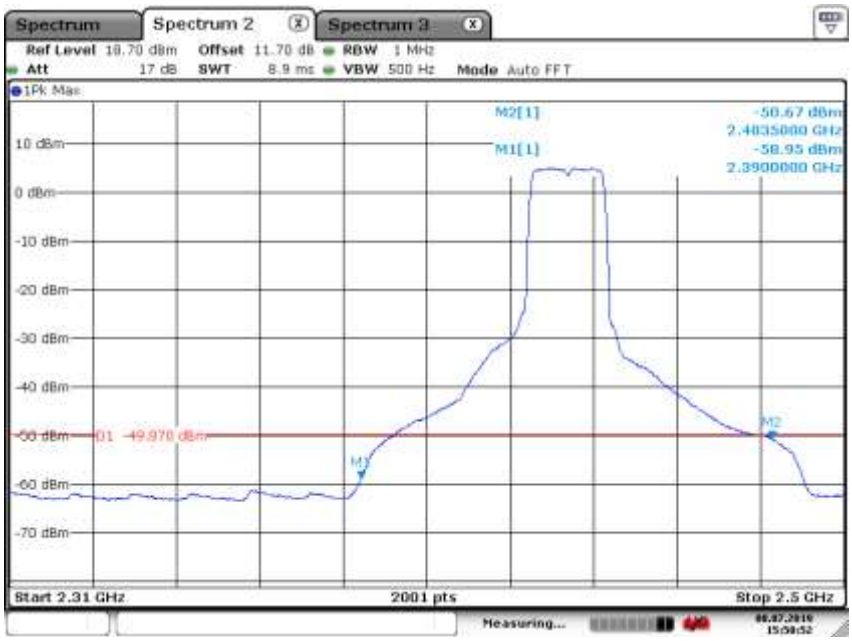

Date: 8.JUL.2019 15:45:24

**2417MHz by 802.11g:**




Date: 8.JUL.2019 15:48:00

**2437MHz by 802.11g:**




Date: 8.JUL.2019 15:50:53

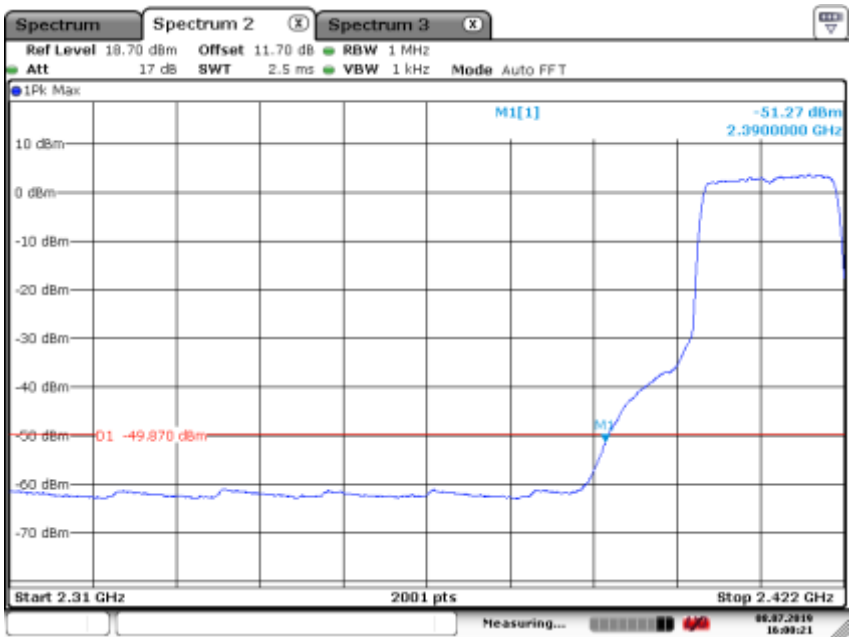
**2457MHz by 802.11g:**


Date: 8.JUL.2019 15:53:58

**2462MHz by 802.11g:**


Date: 8.JUL.2019 15:58:24

**2412MHz by 802.11n(20MHz):**

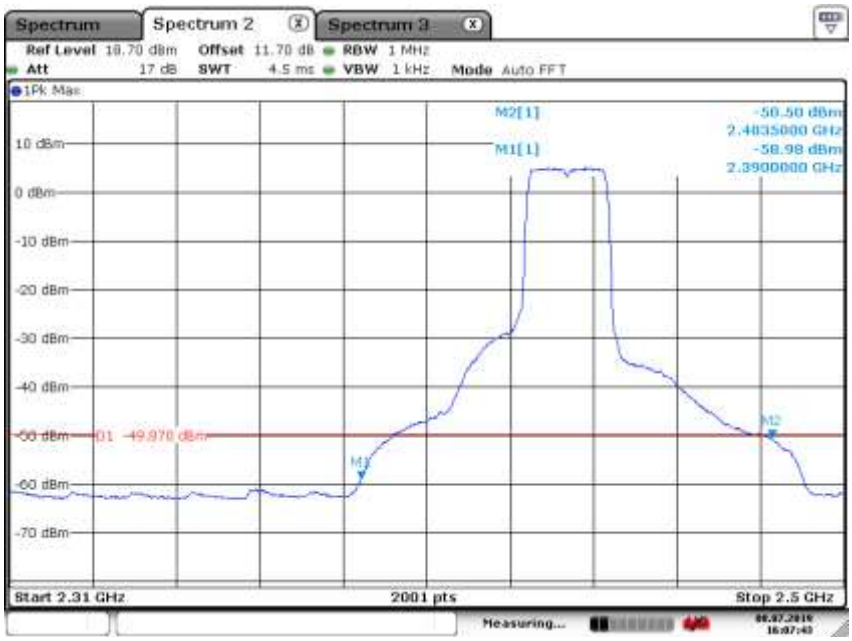



Date: 8.JUL.2019 16:00:22

**2417MHz by 802.11n(20MHz):**


Date: 8.JUL.2019 16:05:24

**2437MHz by 802.11n(20MHz):**

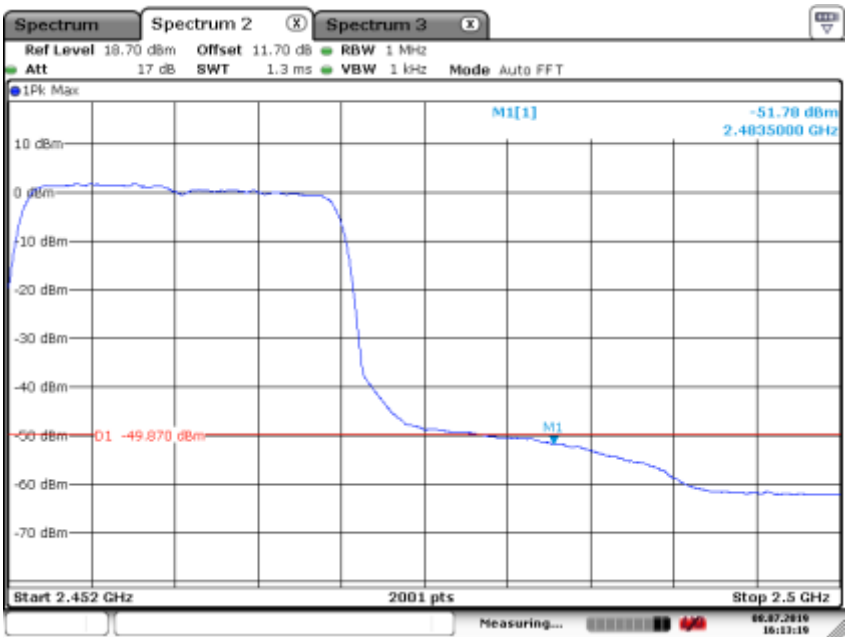



Date: 8.JUL.2019 16:07:43

**2457MHz by 802.11n(20MHz):**

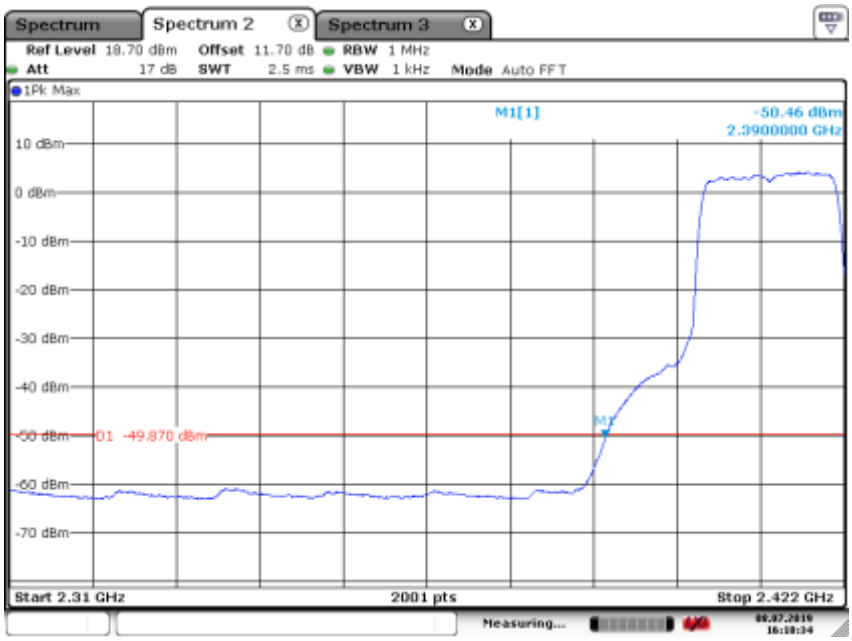

Date: 8.JUL.2019 16:10:28

**2462MHz by 802.11n(20MHz):**




Date: 8.JUL.2019 16:13:19

**2412MHz by 802.11ac(20MHz):**

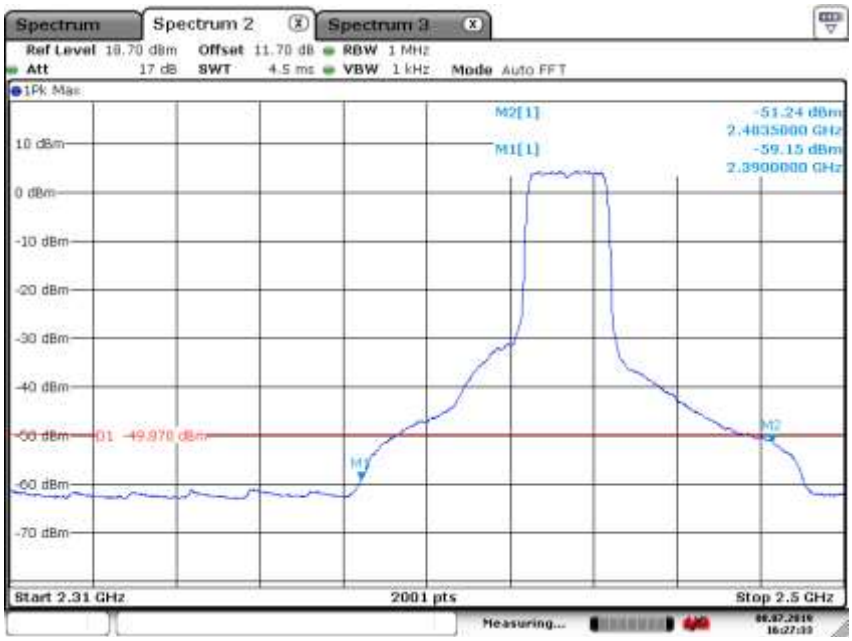



Date: 8.JUL.2019 16:18:34

**2417MHz by 802.11ac(20MHz):**


Date: 8.JUL.2019 16:21:43

**2437MHz by 802.11ac(20MHz):**




Date: 8.JUL.2019 16:27:33

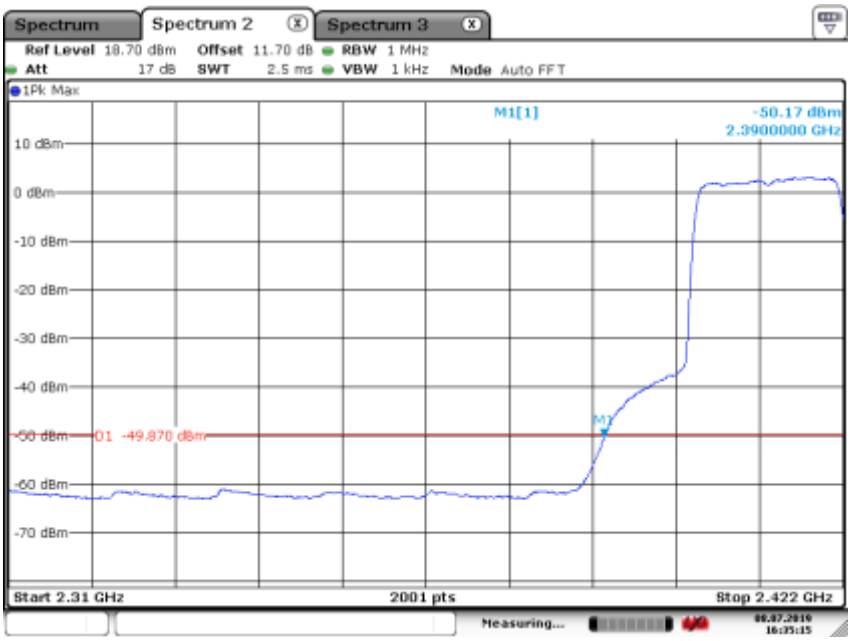
**2457MHz by 802.11ac(20MHz):**


Date: 8.JUL.2019 16:30:17

**2462MHz by 802.11ac(20MHz):**

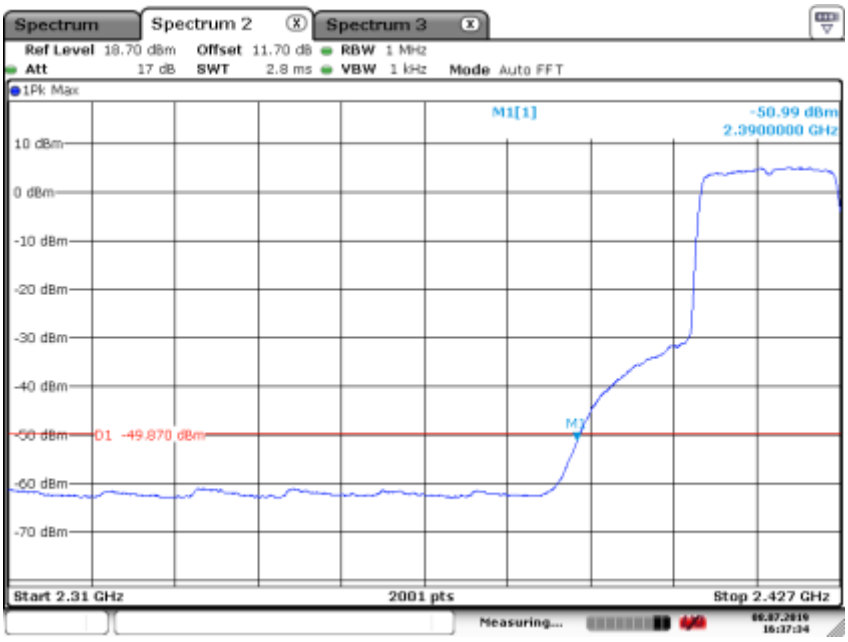

Date: 8.JUL.2019 16:32:07

**2412MHz by 802.11ax(20MHz):**



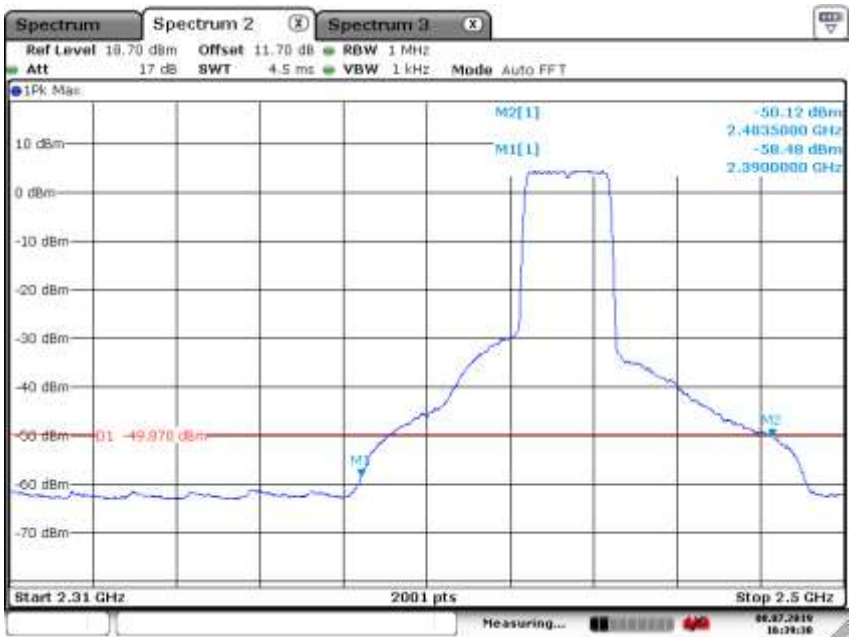

Date: 8.JUL.2019 16:35:15

**2417MHz by 802.11ax(20MHz):**




Date: 8.JUL.2019 16:37:34

**2437MHz by 802.11ax(20MHz):**

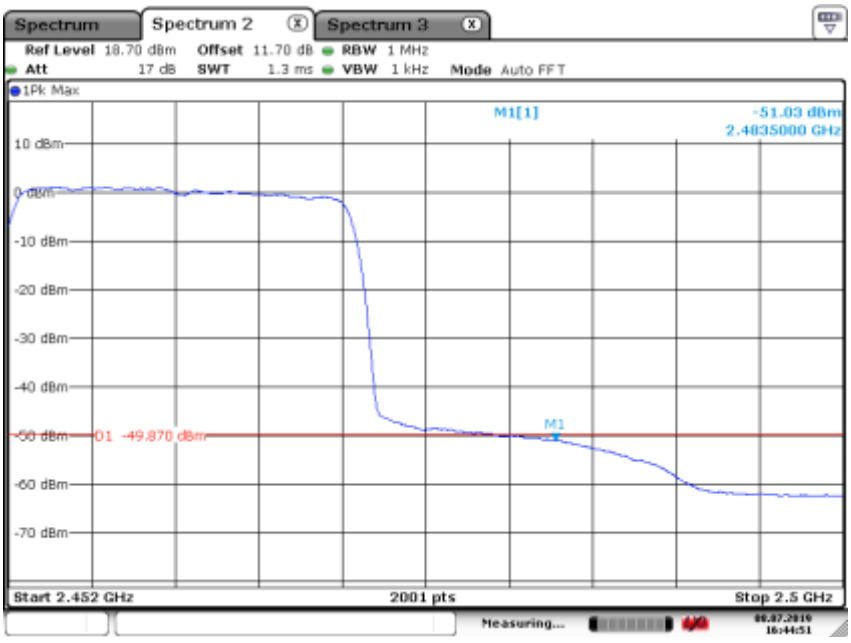



Date: 8.JUL.2019 16:39:30

**2457MHz by 802.11ax(20MHz):**

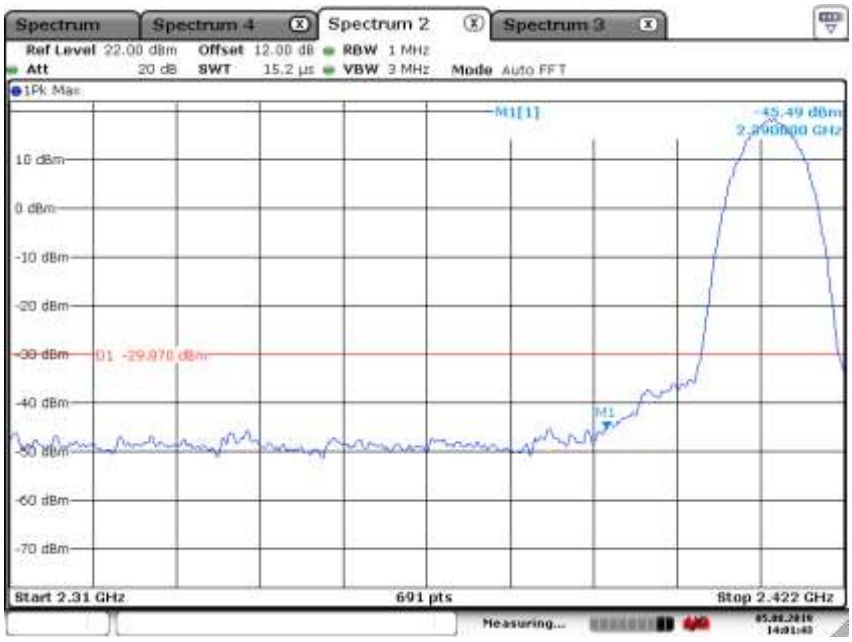

Date: 8.JUL.2019 16:42:19

**2462MHz by 802.11ax(20MHz):**



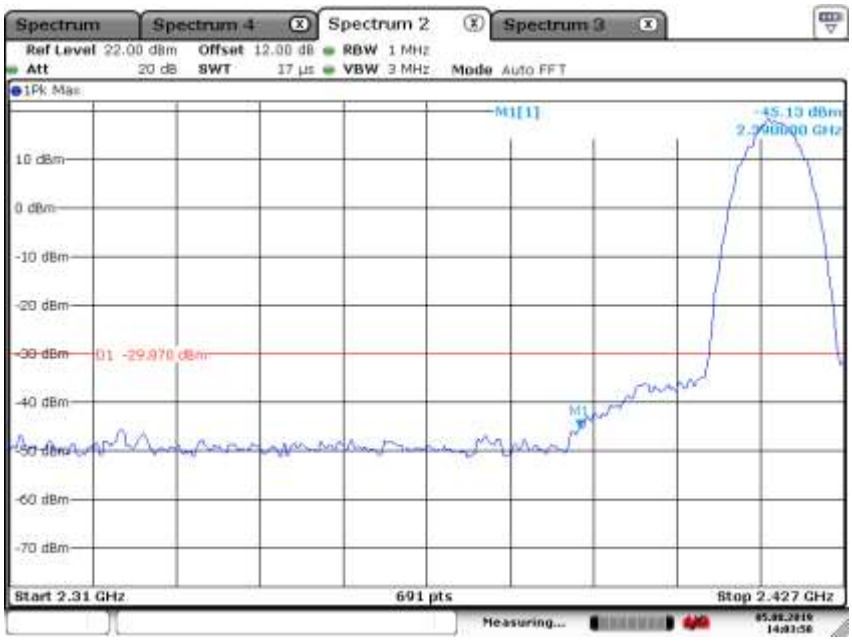
**PK Limit-CDD:**

**2412MHz by 802.11b:**



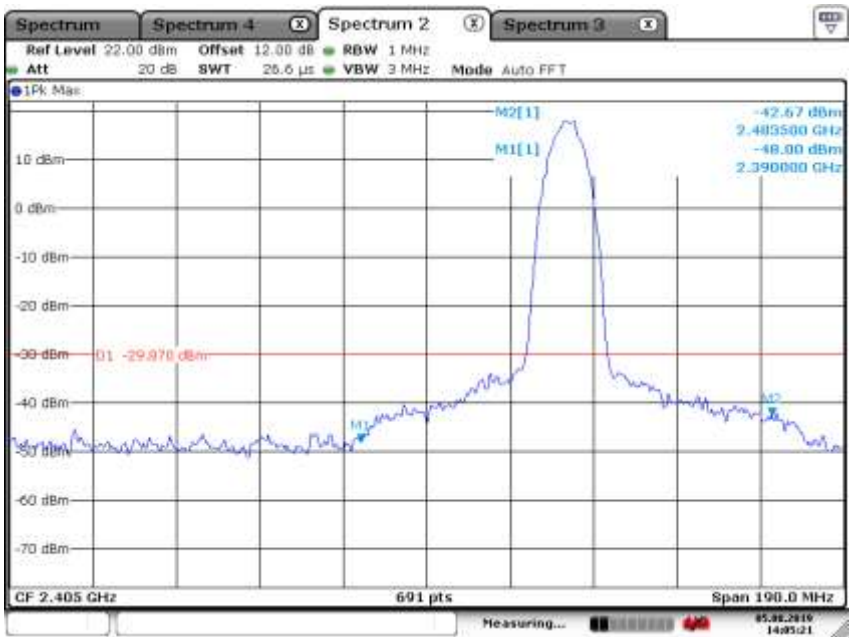

Date: 5.AUG.2019 14:01:43

**2417MHz by 802.11b:**




Date: 5.AUG.2019 14:03:58

**2437MHz by 802.11b:**




Date: 5.AUG.2019 14:05:21

**2457MHz by 802.11b:**


Date: 5.AUG.2019 14:06:50

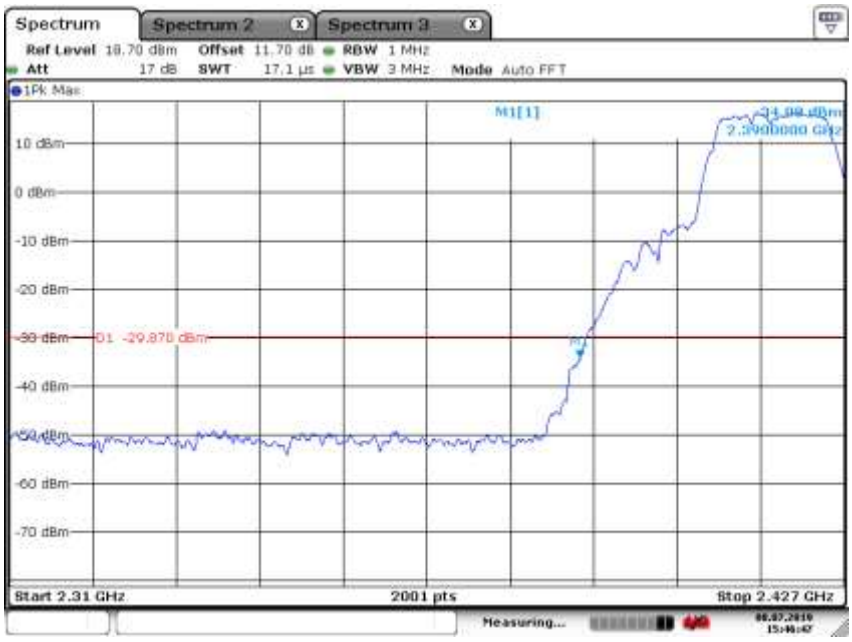
**2462MHz by 802.11b:**


Date: 5.AUG.2019 14:07:44

**2412MHz by 802.11g:**


Date: 8.JUL.2019 15:44:15

**2417MHz by 802.11g:**




Date: 8.JUL.2019 15:46:47

**2437MHz by 802.11g:**

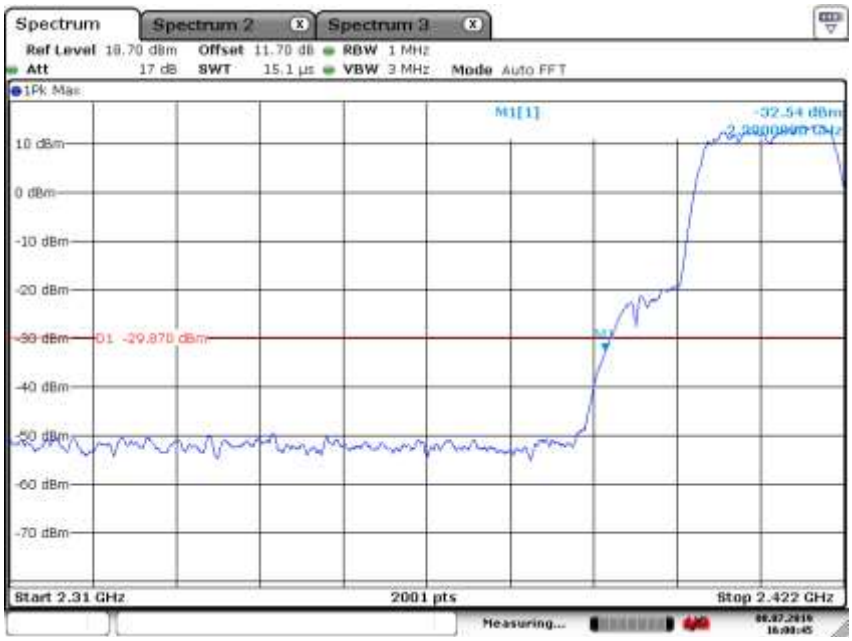

Date: 8.JUL.2019 15:51:40

**2457MHz by 802.11g:**


Date: 8.JUL.2019 15:56:09

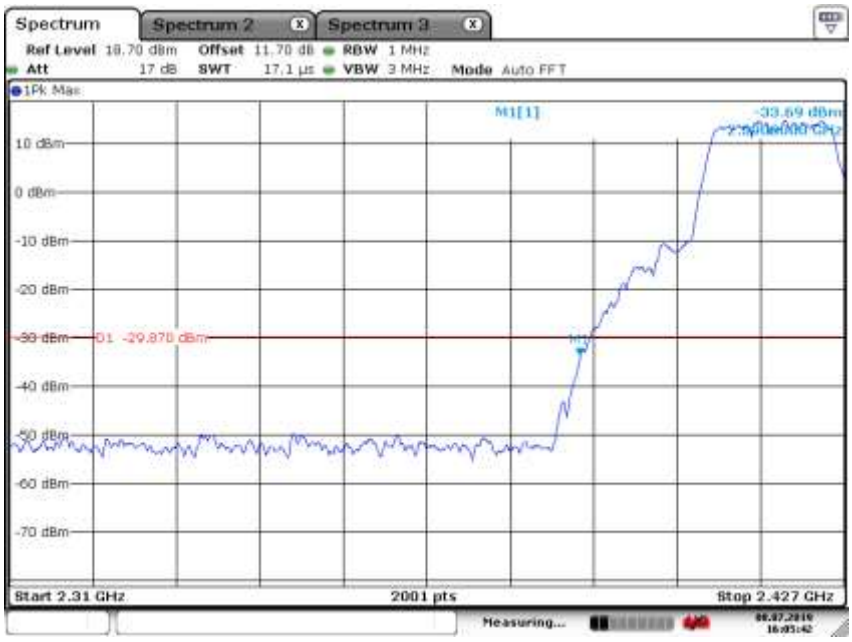
**2462MHz by 802.11g:**

**2412MHz by 802.11n(20MHz):**




Date: 8.JUL.2019 16:00:46

**2417MHz by 802.11n(20MHz):**




Date: 8.JUL.2019 16:05:41

**2437MHz by 802.11n(20MHz):**


Date: 8.JUL.2019 16:08:44

**2457MHz by 802.11n(20MHz):**


Date: 8.JUL.2019 16:12:05

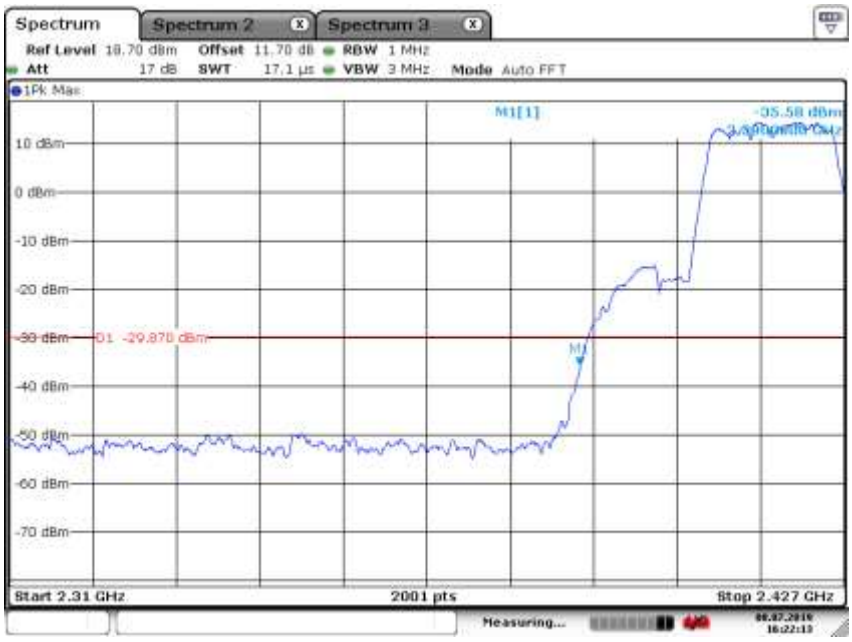
**2462MHz by 802.11n(20MHz):**


Date: 8.JUL.2019 16:14:46

**2412MHz by 802.11ac(20MHz):**

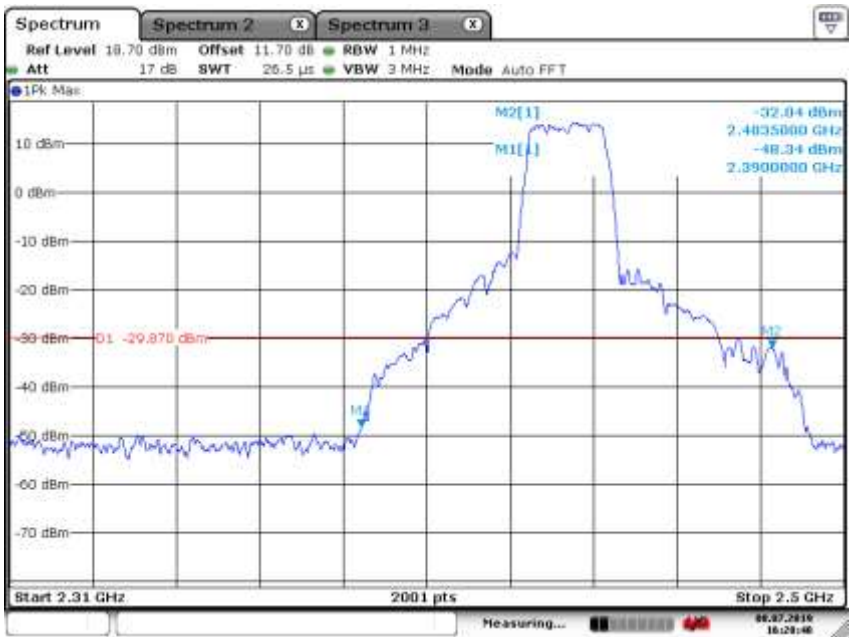

Date: 8.JUL.2019 16:18:55

**2417MHz by 802.11ac(20MHz):**




Date: 8.JUL.2019 16:22:13

**2437MHz by 802.11ac(20MHz):**




Date: 8.JUL.2019 16:28:48

**2457MHz by 802.11ac(20MHz):**


Date: 8.JUL.2019 16:30:57

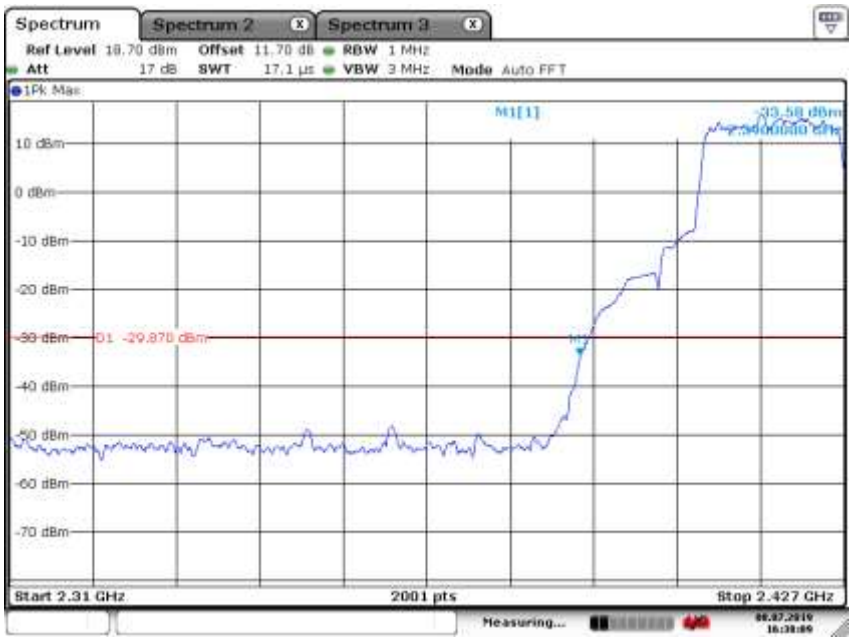
**2462MHz by 802.11ac(20MHz):**


Date: 8.JUL.2019 16:33:14

**2412MHz by 802.11ax(20MHz):**


Date: 8.JUL.2019 16:35:45

**2417MHz by 802.11ax(20MHz):**

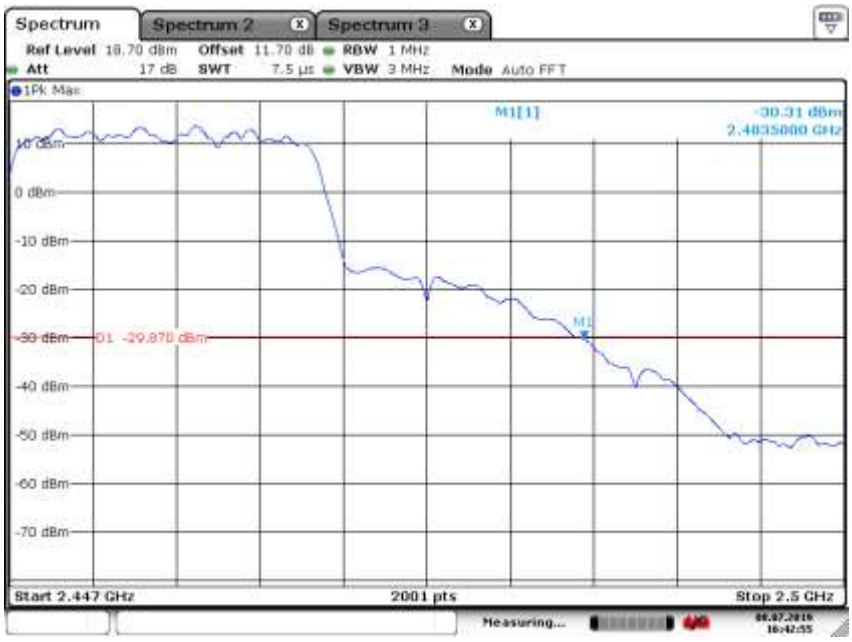



Date: 8.JUL.2019 16:38:09

**2437MHz by 802.11ax(20MHz):**


Date: 8.JUL.2019 16:40:36

**2457MHz by 802.11ax(20MHz):**



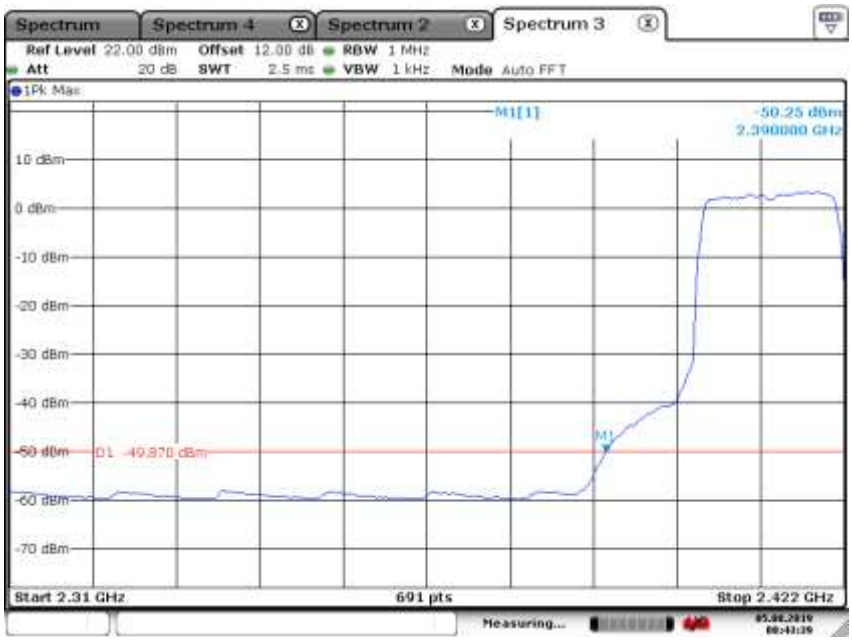

Date: 8.JUL.2019 16:42:56

**2462MHz by 802.11ax(20MHz):**


Date: 8.JUL.2019 16:45:30

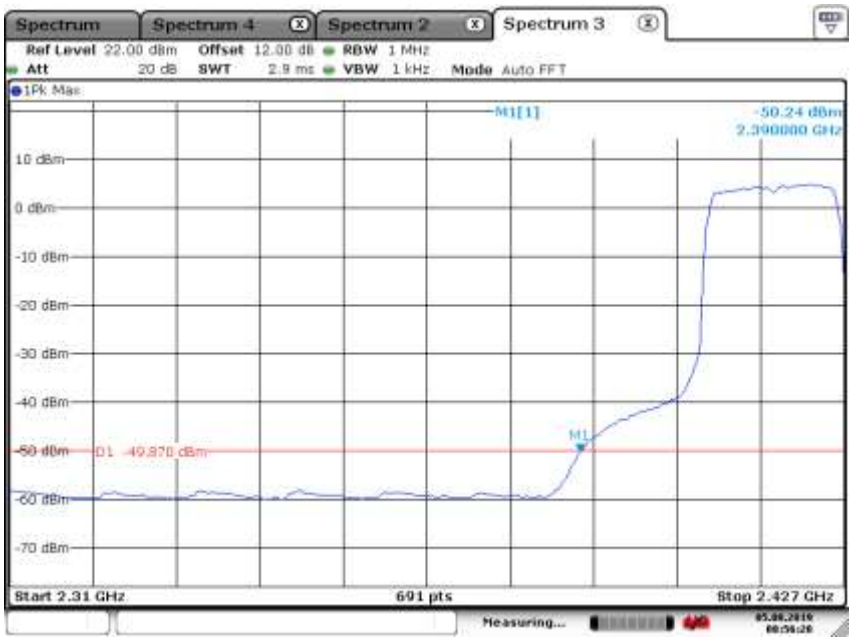
**AV Limit-Beamforming:**

**2412MHz by 802.11n(20MHz):**



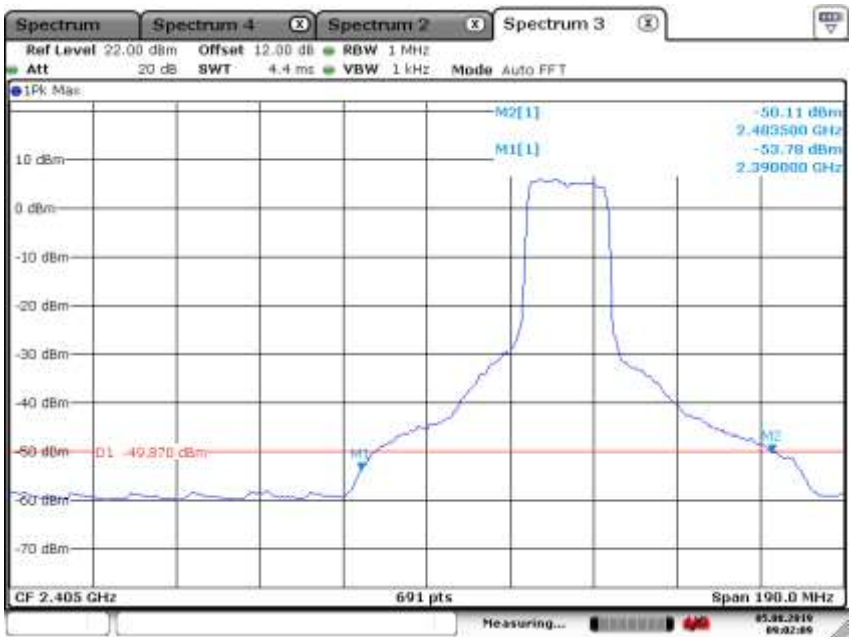

Date: 5.AUG.2019 08:43:39

**2417MHz by 802.11n(20MHz):**



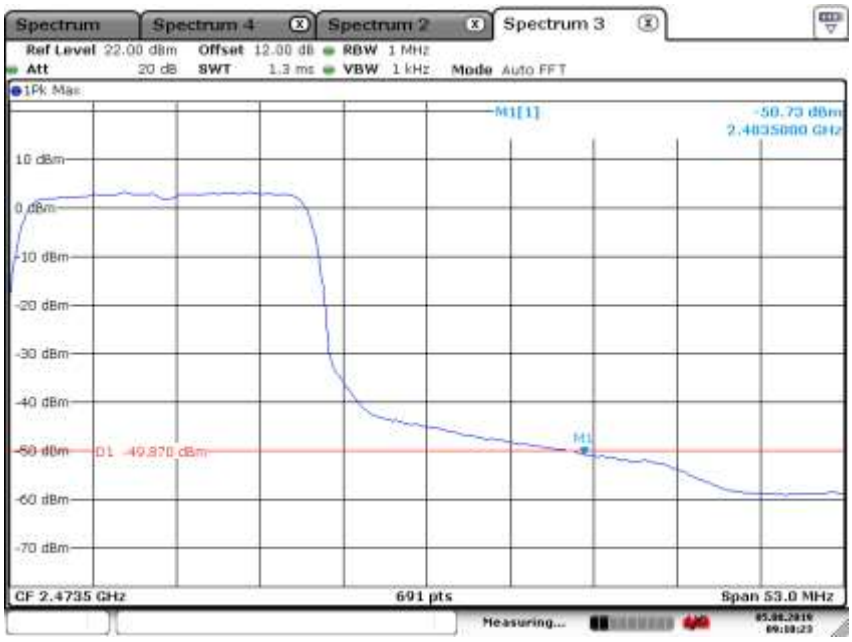

Date: 5.AUG.2019 08:56:28

**2437MHz by 802.11n(20MHz):**



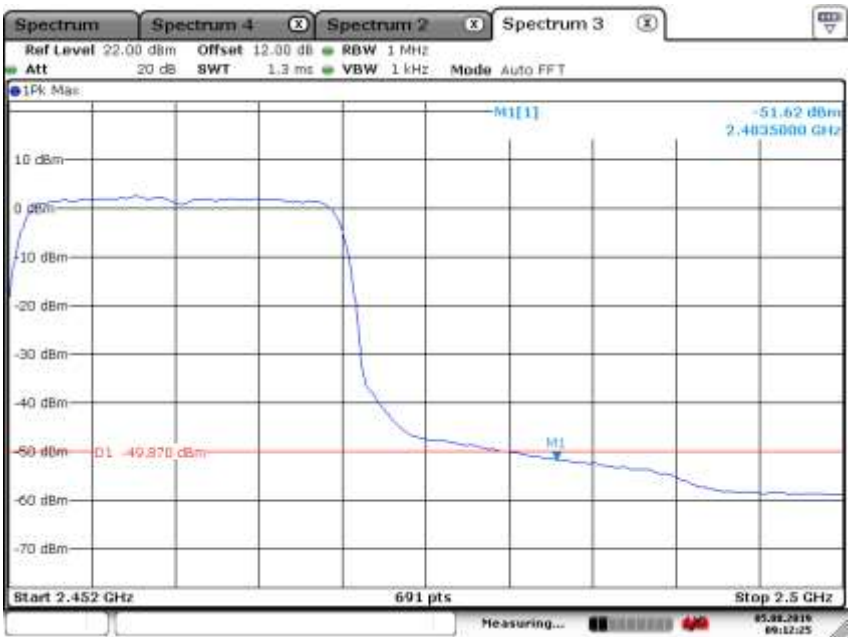

Date: 5.AUG.2019 09:02:09

**2457MHz by 802.11n(20MHz):**

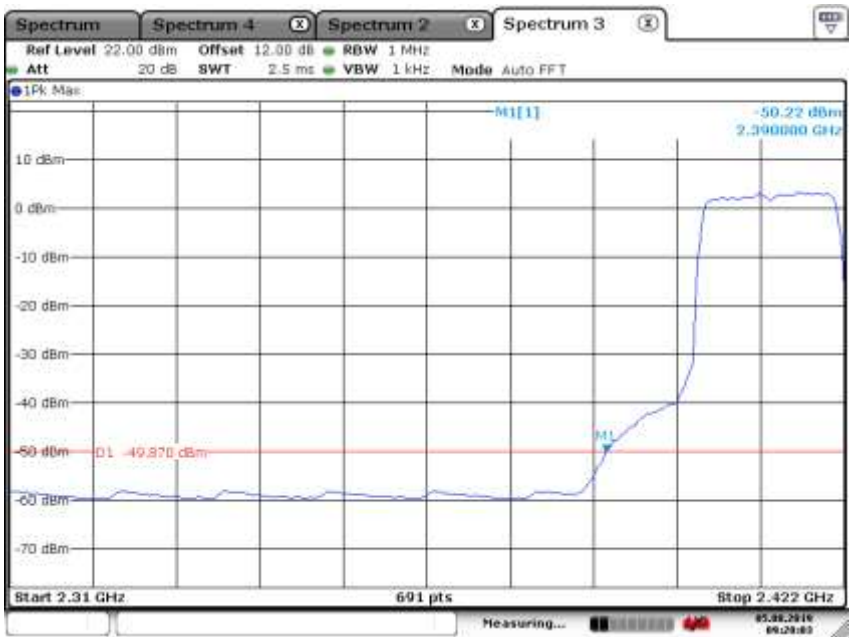



Date: 5.AUG.2019 09:10:23

**2462MHz by 802.11n(20MHz):**

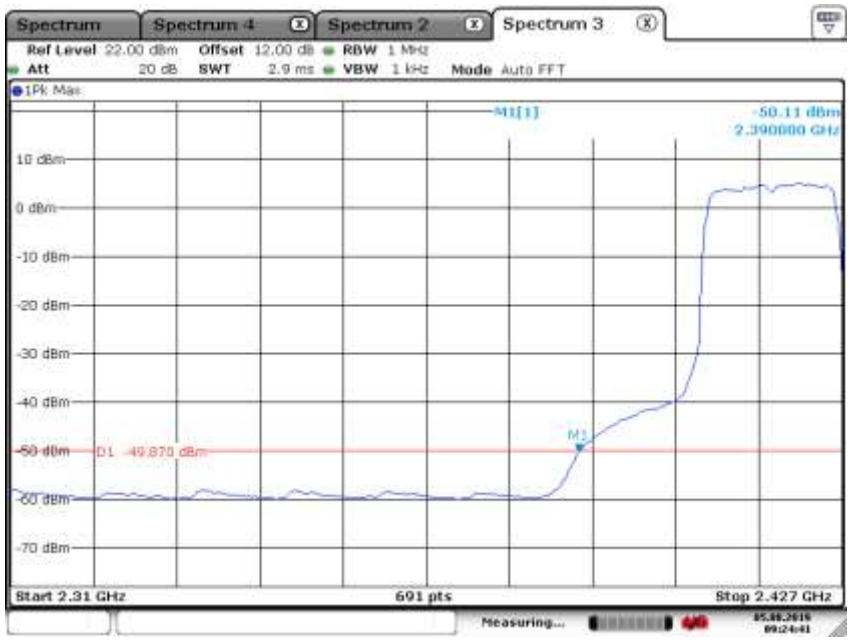


**2412MHz by 802.11ac(20MHz):**



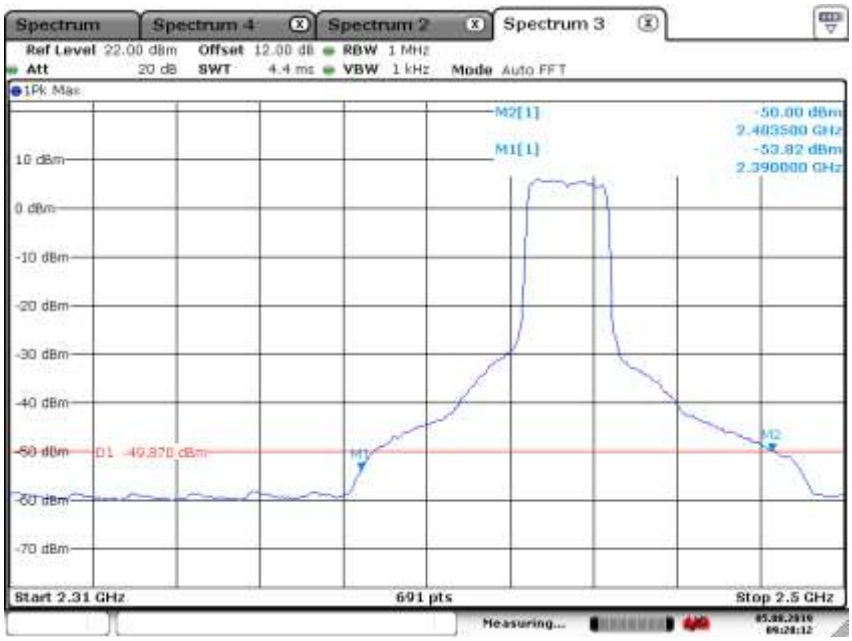

Date: 5.AUG.2019 09:20:03

**2417MHz by 802.11ac(20MHz):**



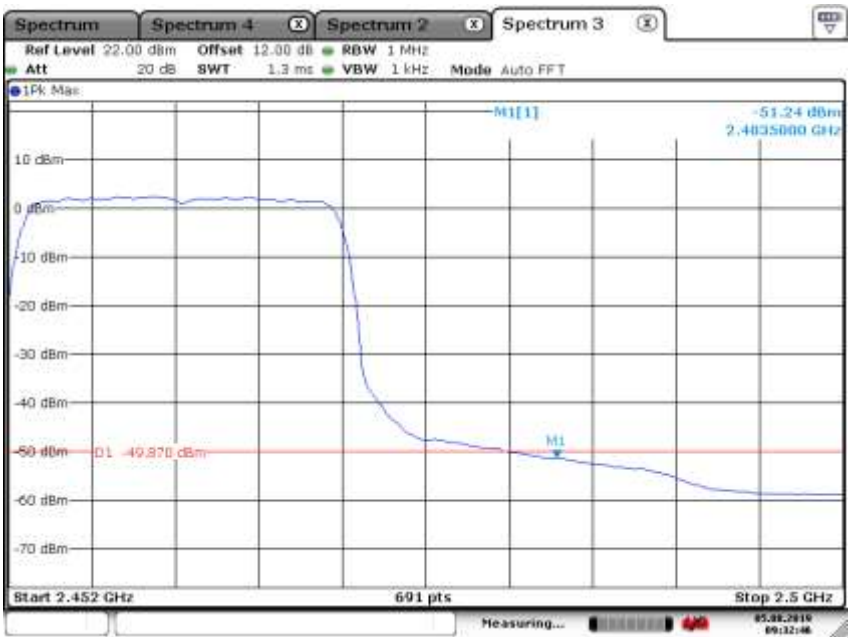

Date: 5.AUG.2019 09:24:41

**2437MHz by 802.11ac(20MHz):**

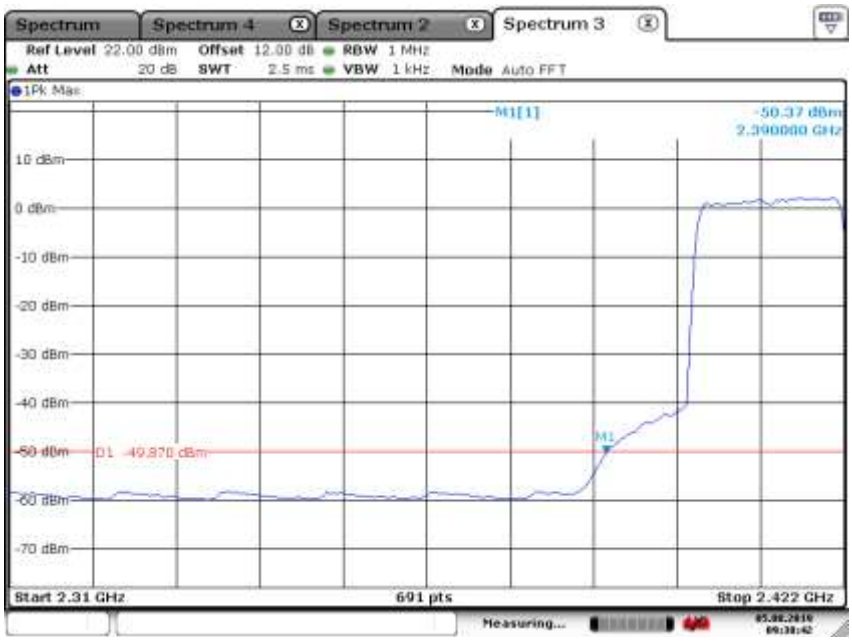



**2457MHz by 802.11ac(20MHz):**

**2462MHz by 802.11ac(20MHz):**

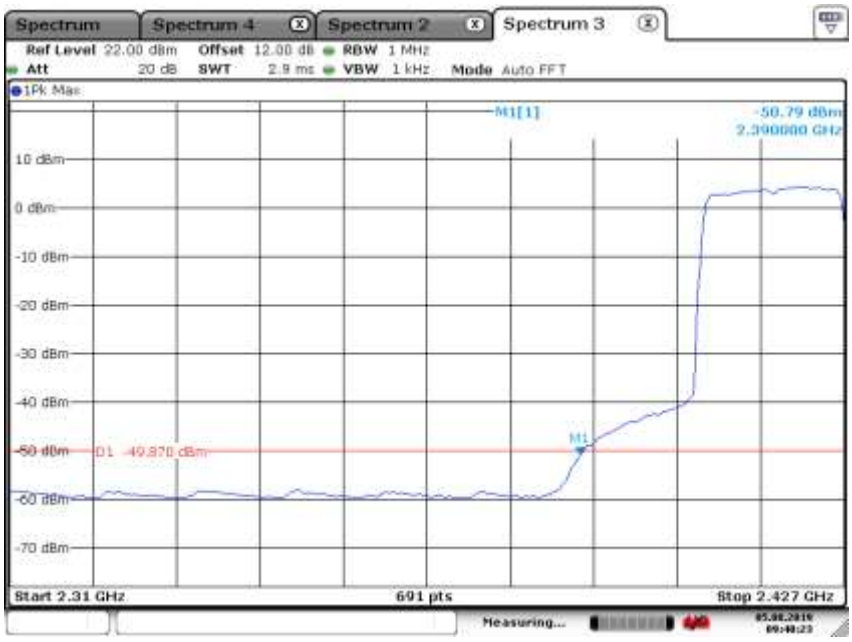


**2412MHz by 802.11ax(20MHz):**



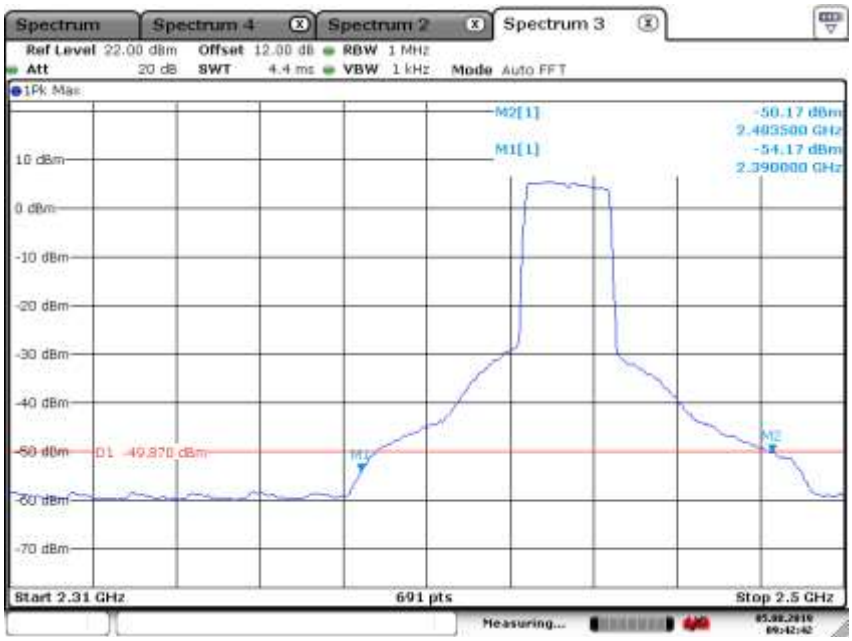

Date: 5.AUG.2019 09:38:42

**2417MHz by 802.11ax(20MHz):**



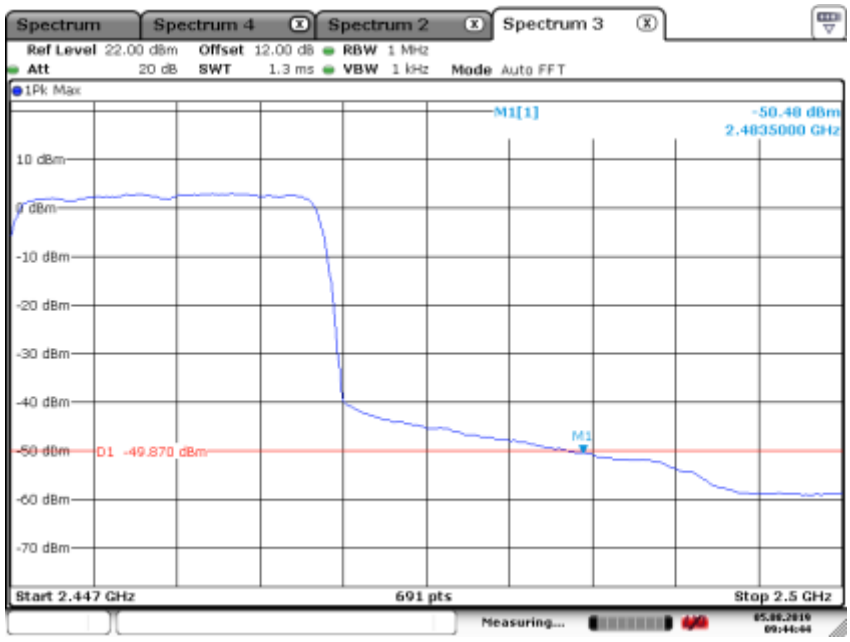

Date: 5.AUG.2019 09:40:23

**2437MHz by 802.11ax(20MHz):**



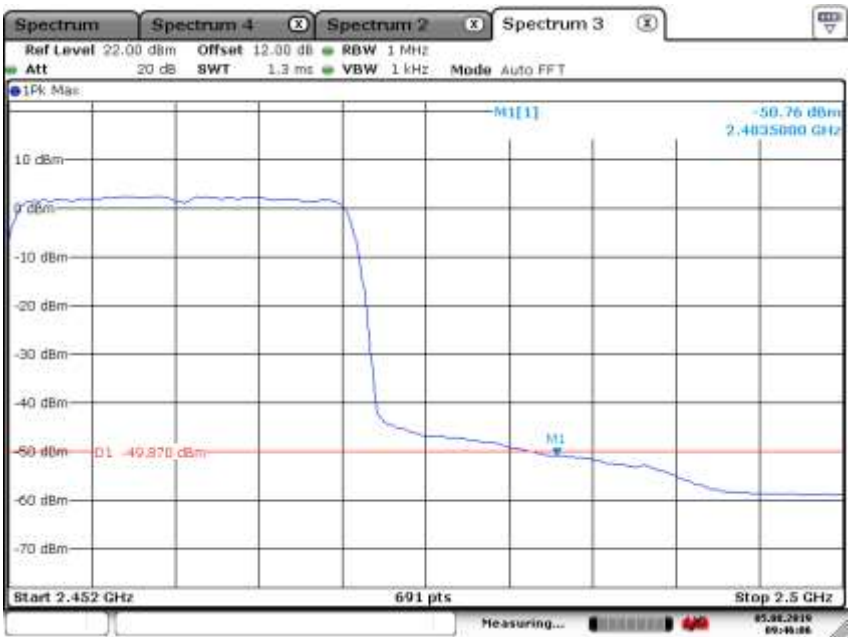

Date: 5.AUG.2019 09:42:42

**2457MHz by 802.11ax(20MHz):**




Date: 5.AUG.2019 09:44:44

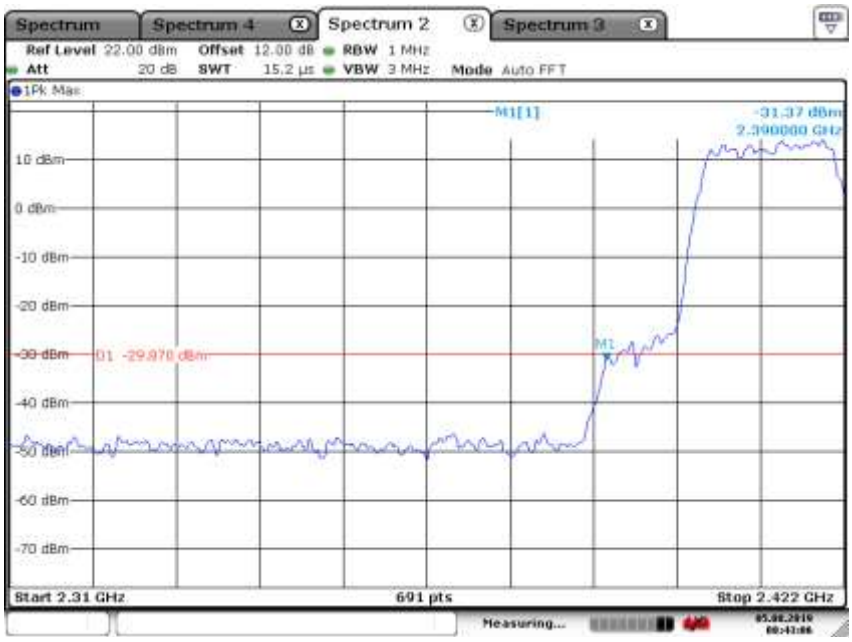
**2462MHz by 802.11ax(20MHz):**




Date: 5.AUG.2019 09:46:06

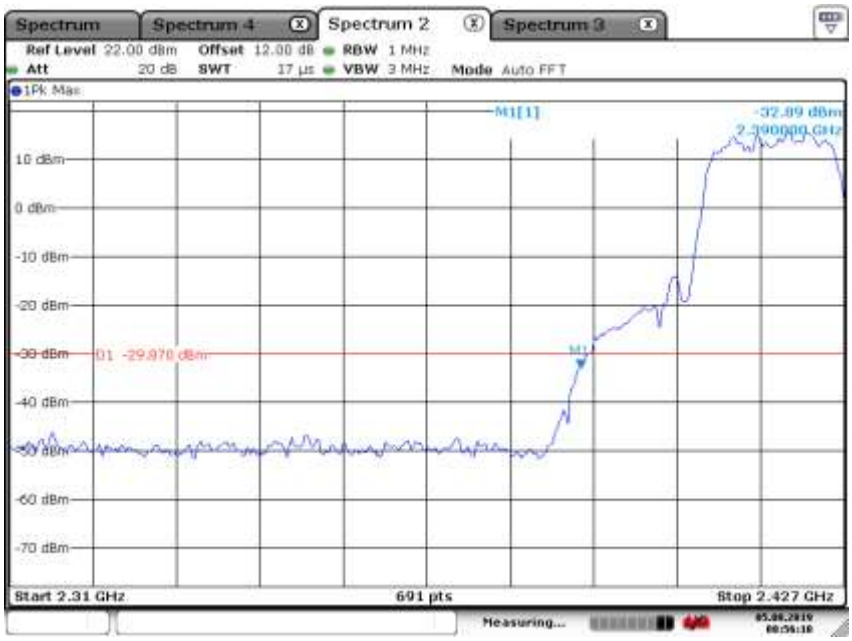
**PK Limit-Beamforming**

**2412MHz by 802.11n(20MHz):**



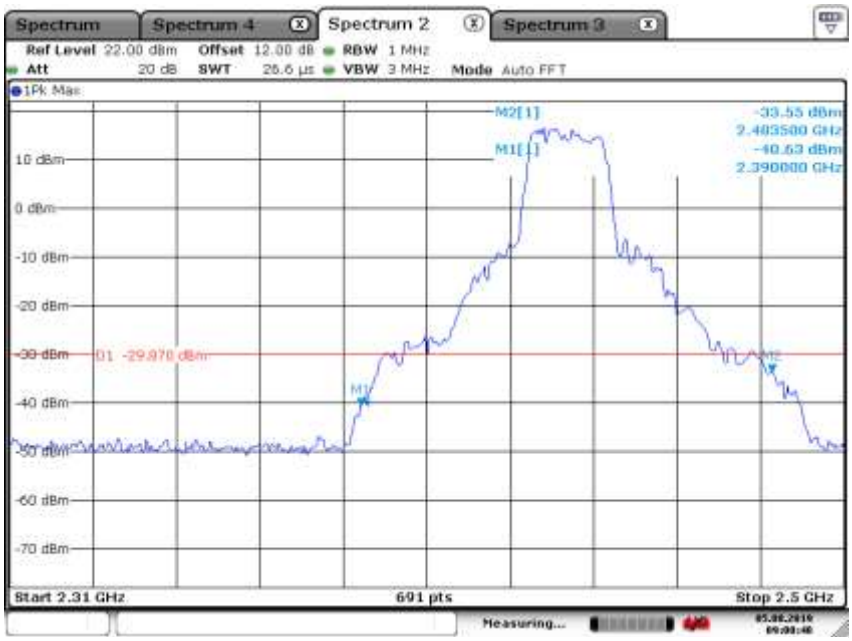

Date: 5.AUG.2019 08:43:06

**2417MHz by 802.11n(20MHz):**




Date: 5.AUG.2019 08:56:10

**2437MHz by 802.11n(20MHz):**




Date: 5.AUG.2019 09:00:48

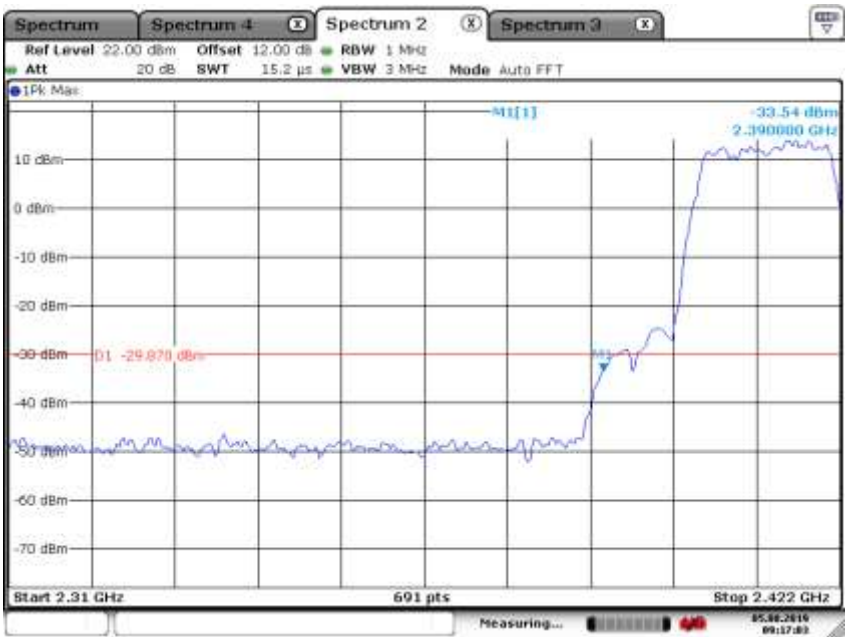
**2457MHz by 802.11n(20MHz):**


Date: 5.AUG.2019 09:10:01

**2462MHz by 802.11n(20MHz):**

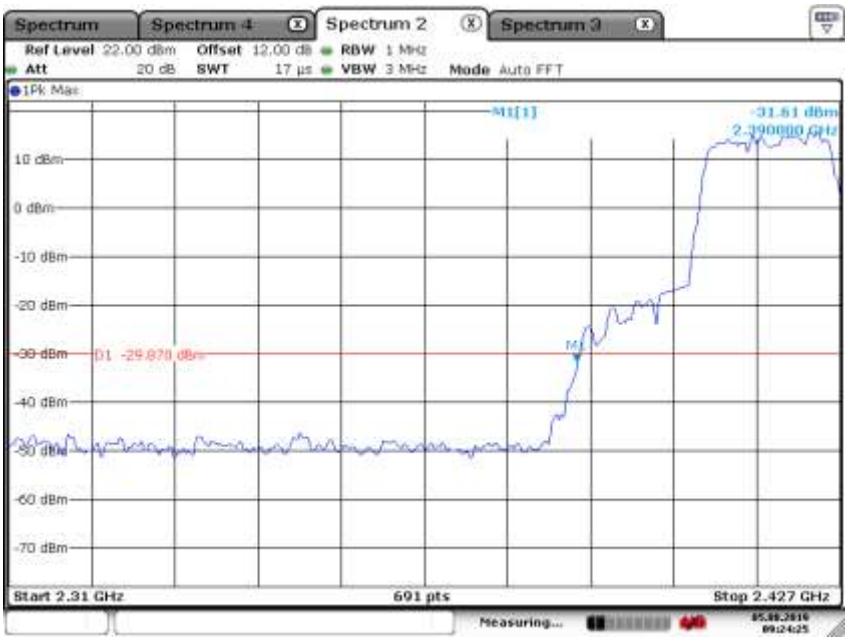

Date: 5.AUG.2019 09:12:05

**2412MHz by 802.11ac(20MHz):**



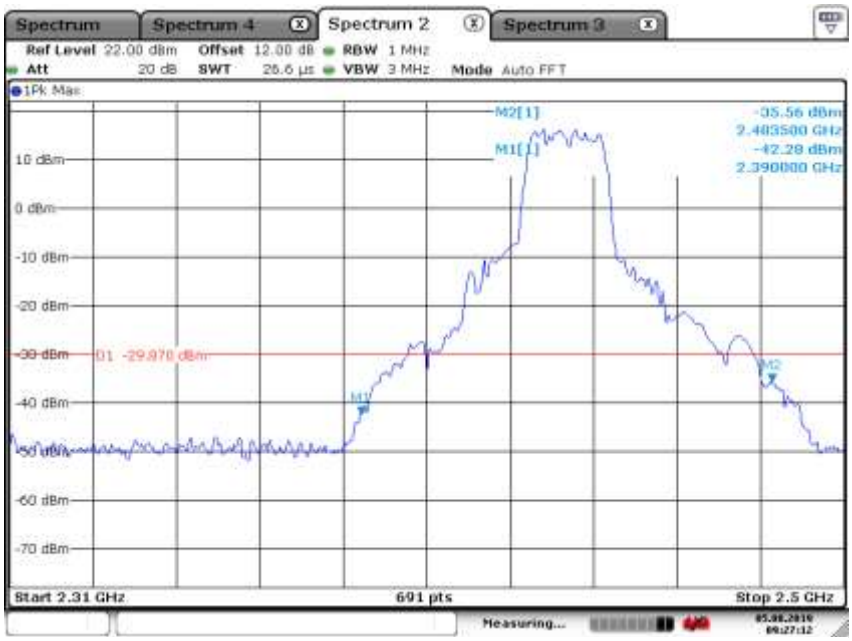

Date: 5.AUG.2019 09:17:03

**2417MHz by 802.11ac(20MHz):**




Date: 5.AUG.2019 09:24:25

**2437MHz by 802.11ac(20MHz):**



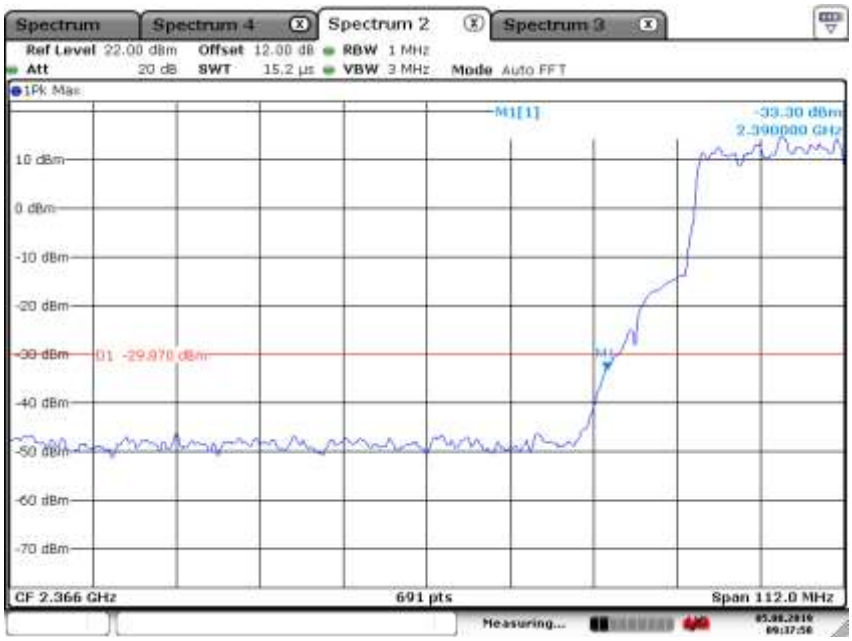

Date: 5.AUG.2019 09:27:12

**2457MHz by 802.11ac(20MHz):**


Date: 5.AUG.2019 09:31:16

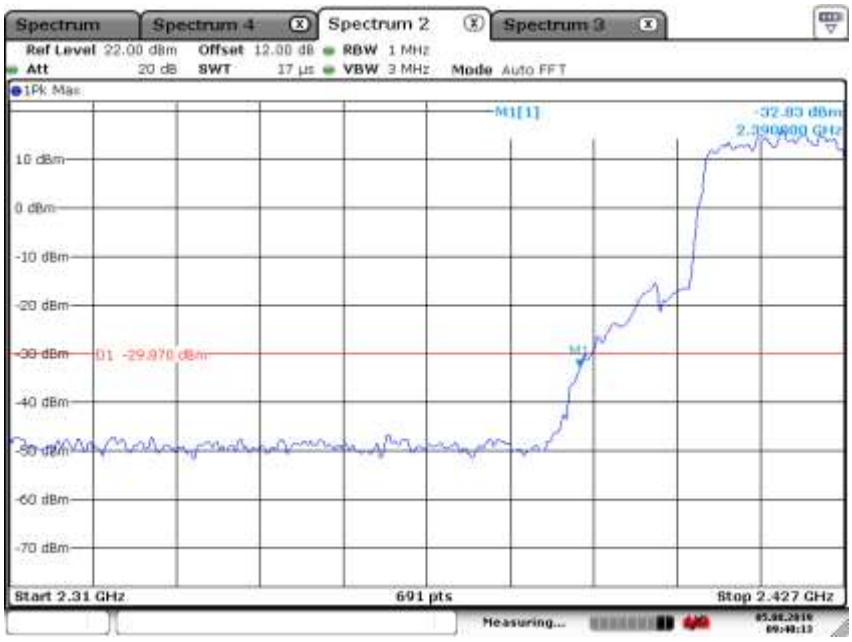
**2462MHz by 802.11ac(20MHz):**

**2412MHz by 802.11ax(20MHz):**



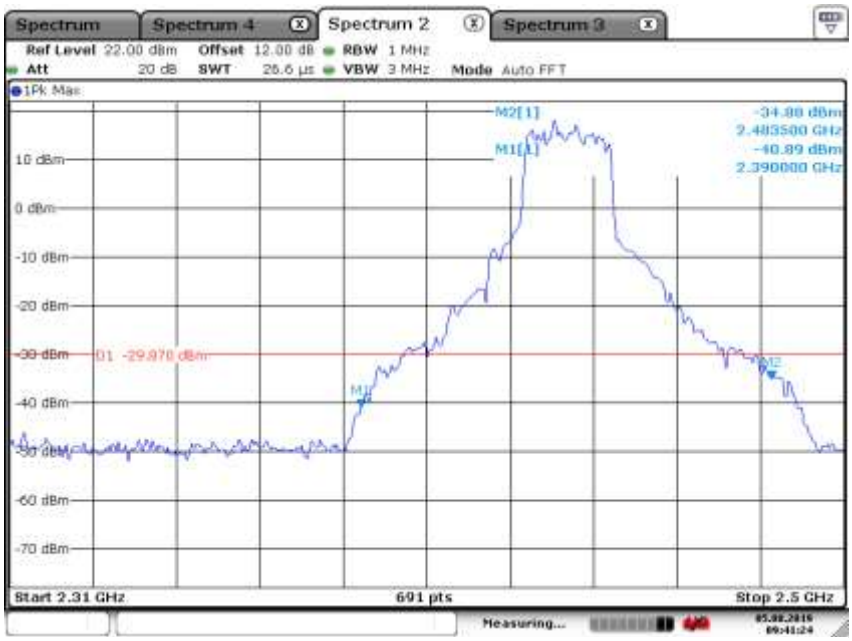

Date: 5.AUG.2019 09:37:58

**2417MHz by 802.11ax(20MHz):**




Date: 5.AUG.2019 09:40:13

**2437MHz by 802.11ax(20MHz):**

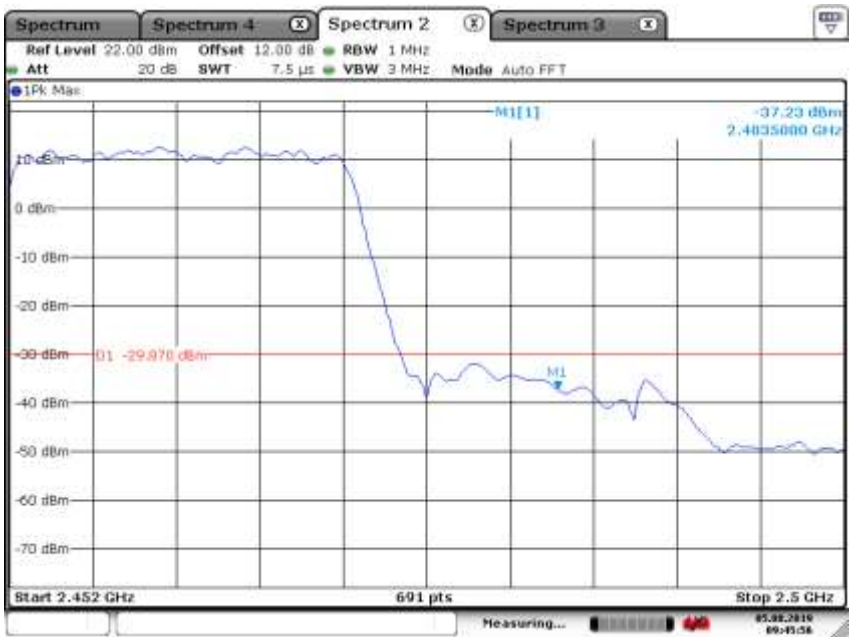



Date: 5.AUG.2019 09:41:24

**2457MHz by 802.11ax(20MHz):**


Date: 5.AUG.2019 09:44:24

**2462MHz by 802.11ax(20MHz):**



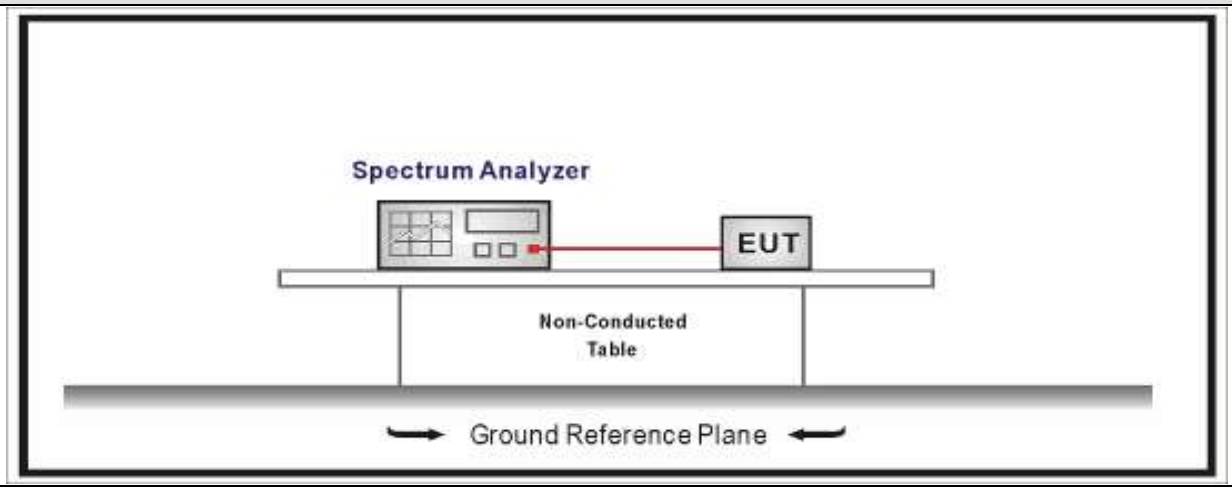
# 7. Occupied Bandwidth

## 7.1. Test Equipment

| Occupied Bandwidth / TR-8 | | | | | |
|---|---|---|---|---|---|
| Instrument | Manufacturer | Type No. | Serial No. | Cal. Date | Cal. Due Date |
| Spectrum Analyzer | Agilent | N9010A | MY48030494 | 2019.02.04 | 2020.02.03 |
| EXA Spectrum Analyzer | Keysight | N9010A | MY55370495 | 2019.04.09 | 2020.04.08 |
| MXA Signal Anlyzer | Keysight | N9020A | MY56060147 | 2019.04.09 | 2020.04.08 |
| Temperature/Humidity Meter | zhichen | ZC1-2 | TR8-TH | 2019.04.10 | 2020.04.09 |
| Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards. | | | | | |

## 7.2. Test Setup

Occupied Bandwidth test setup:



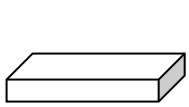
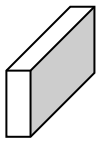
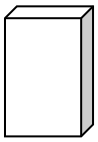
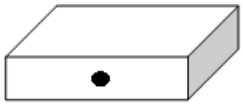
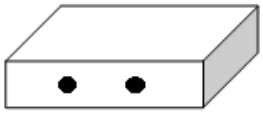
## 7.3. Limit

| Occupied Bandwidth |
|---|
| Systems using digital modulation techniques operate in the2400-2483.5 MHz .The minimum 6 dB bandwidth shall be at least 500 kHz |

## 7.4. Test Procedure

| Test Method | | | | |
|---|---|---|---|---|
| | Reference Rule | | Chapter | Description |
| ☒ | ANSI C63.10 | | 11.8 | DTS bandwidth |
| | ☐ | ANSI C63.10 | 11.8.1 | Option 1 |
| | ☒ | ANSI C63.10 | 11.8.2 | Option 2 |

## 7.5. EUT test definition

<table>
<tr><th>Item</th><th colspan="4">Occupied Bandwidth</th></tr>
<tr><td rowspan="3">Device Category</td><td>☐</td><td colspan="3">Fixed point-to-point</td></tr>
<tr><td>☐</td><td colspan="3">Emit multiple directional beams, simultaneously or sequentially</td></tr>
<tr><td>☒</td><td colspan="3">Other cases</td></tr>
<tr><td>Test mode</td><td colspan="4">Mode 1~5</td></tr>
<tr><td rowspan="12">Test method</td><td>☐</td><td colspan="3">Radiated</td></tr>
<tr><td rowspan="3"></td><td>X Axis</td><td>Y Axis</td><td>Z Axis</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Worst Axis ☐</td><td>Worst Axis ☐</td><td>Worst Axis ☐</td></tr>
<tr><td>☒</td><td colspan="3">Conducted</td></tr>
<tr><td>☒</td><td colspan="3">Chain 1</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☒</td><td>Chain 1</td><td colspan="2">Chain 2</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 1</td><td>Chain 2</td><td>Chain 3</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
</table>

## 7.6. Test Result

| | | | | | |
|---|---|---|---|---|---|
| Product Name | : | Wireless Access Point | Power | : | AC 120V/60Hz |
| Test Mode | : | Mode1~5 | Test Site | : | TR8 |
| Test Date | : | 2019.07.09 | Test Engineer | : | Eric |

| Mode | CH. | Test Freq. (MHz) | 99% Occupied Bandwidth (MHz) | 6dB Occupied Bandwidth (MHz) | Limit (kHz) | Result |
|---|---|---|---|---|---|---|
| 1 | 01 | 2412 | 10.692 | 7.069 | >500 | Pass |
| 1 | 06 | 2437 | 10.952 | 7.089 | >500 | Pass |
| 1 | 11 | 2462 | 10.574 | 7.094 | >500 | Pass |
| 2 | 01 | 2412 | 16.530 | 16.37 | >500 | Pass |
| 2 | 06 | 2437 | 16.639 | 16.41 | >500 | Pass |
| 2 | 11 | 2462 | 16.491 | 15.99 | >500 | Pass |
| 3 | 01 | 2412 | 17.743 | 17.58 | >500 | Pass |
| 3 | 06 | 2437 | 17.817 | 17.64 | >500 | Pass |
| 3 | 11 | 2462 | 17.710 | 17.22 | >500 | Pass |
| 4 | 01 | 2412 | 17.719 | 17.59 | >500 | Pass |
| 4 | 06 | 2437 | 17.797 | 17.63 | >500 | Pass |
| 4 | 11 | 2462 | 17.680 | 17.23 | >500 | Pass |
| 5 | 01 | 2412 | 18.979 | 18.93 | >500 | Pass |
| 5 | 06 | 2437 | 19.033 | 18.95 | >500 | Pass |
| 5 | 11 | 2462 | 18.918 | 18.81 | >500 | Pass |
| Note : The worst case of Occupied Bandwidth as below in next page: | | | | | | |

**Mode 1 CH01 (2412MHz)**

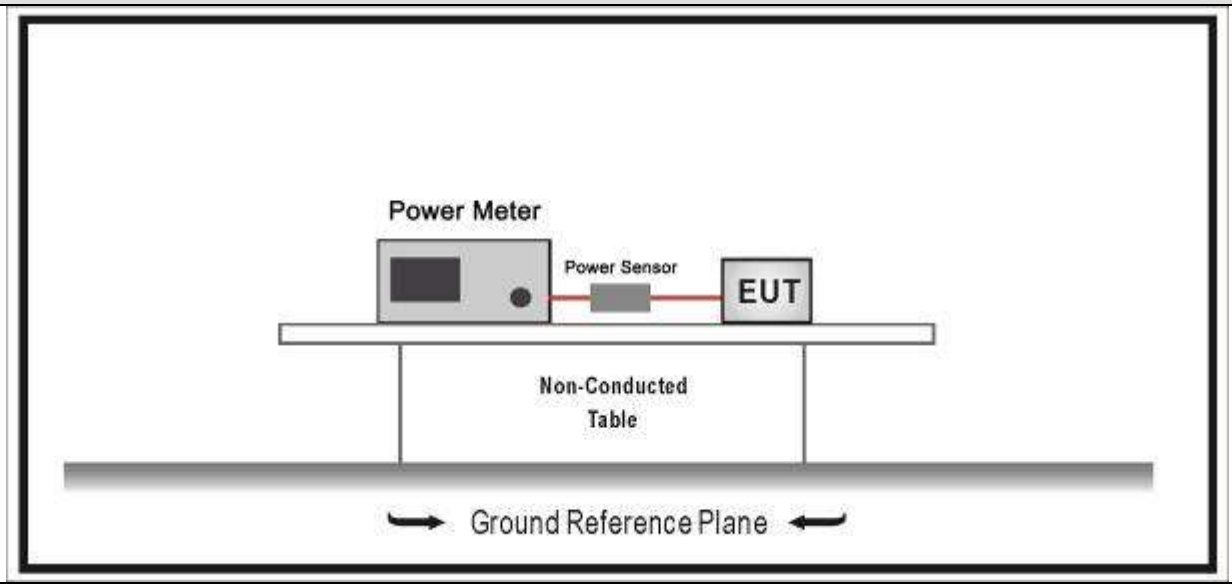
# 8. Fundamental emission output power

## 8.1. Test Equipment

| Fundamental emission output power/ TR-8 | | | | | |
|---|---|---|---|---|---|
| Instrument | Manufacturer | Type No. | Serial No. | Cal. Date | Cal. Due Date |
| Spectrum Analyzer | Agilent | E4446A | MY45300103 | 2019.01.04 | 2020.01.03 |
| Spectrum Analyzer | Agilent | N9010A | MY48030494 | 2019.02.04 | 2020.02.03 |
| Wideband Peak Power Meter | Anritsu | ML2495A | 0905006 | 2018.10.14 | 2019.10.13 |
| Power Sensor | Anritsu | MA2411B | 0846014 | 2018.10.14 | 2019.10.13 |
| Temperature/Humidity Meter | zhicheng | ZC1-2 | TR8-TH | 2019.04.10 | 2020.04.09 |
| Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards. | | | | | |

## 8.2. Test Setup

Fundamental emission output power test setup



## 8.3. Limit

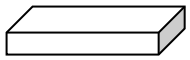
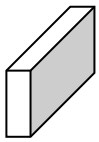
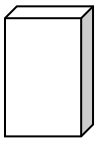
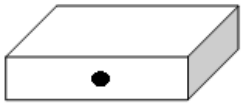
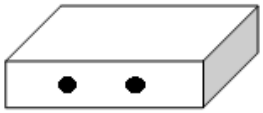
| Fundamental emission output power Limit | | | |
|---|---|---|---|
| ☒ | $G_{TX}$ ＜6dBi | | $P_{out}$≤30dBm |
| ☐ | $G_{TX}$ ＞6dBi | | |
| | ☐ | Non-Fix point-point | $P_{out}$≤30-( $G_{TX}$ -6) |
| | ☐ | Fix point-point | $P_{out}$≤30-[($G_{TX}$-6)]/3 |
| | ☐ | Point-to-multipoint | Pout≤30-(GTX-6) |
| | ☐ | Overlap Beams | $P_{out}$≤30-[($G_{TX}$-6)]/3 |
| | ☐ | Aggregate power transmitted simultaneously on all beams | $P_{out}$≤30-[($G_{TX}$-6)]/3 |
| | ☐ | single directional beam | $P_{out}$≤30-[($G_{TX}$-6)]/3+8dB |
| Note 1 : $G_{TX}$ directional gain of transmitting antennas.<br>Note 2 : $P_{out}$ is maximum peak conducted output power . | | | |

## 8.4. Test Procedure

| Fundamental emission output power Test Method | | | | | | |
|---|---|---|---|---|---|---|
| | References Rule | | | | Chapter | Description |
| ☒ | ANSI C63.10 | | | | 11.9 | Fundamental emission output power |
| | ☐ | ANSI C63.10 | | | 11.9.1 | Maximum peak conducted output power |
| | | ☐ | ANSI C63.10 | | 11.9.1.1 | RBW ≥ DTS bandwidth |
| | | ☐ | ANSI C63.10 | | 11.9.1.2 | Integrated band power method |
| | | ☐ | ANSI C63.10 | | 11.9.1.3 | PKPM1 Peak power meter method |
| | ☒ | ANSI C63.10 | | | 11.9.2 | Maximum conducted (average) output power |
| | | ☐ | ANSI C63.10 | | 11.9.2.2 | Measurement using a spectrum analyzer (SA) |
| | | | ☐ | ANSI C63.10 | 11.9.2.2.2 | Method AVGSA-1(Duty cycle⩾98%) |
| | | | ☐ | ANSI C63.10 | 11.9.2.2.3 | Method AVGSA-1A(Duty cycle⩾98%) |
| | | | ☐ | ANSI C63.10 | 11.9.2.2.4 | Method AVGSA-2(Duty cycle⩽98%) |
| | | | ☐ | ANSI C63.10 | 11.9.2.2.5 | Method AVGSA-2A(Duty cycle⩽98%) |
| | | | ☐ | ANSI C63.10 | 11.9.2.2.4 | Method AVGSA-3 |
| | | | ☐ | ANSI C63.10 | 11.9.2.2.5 | Method AVGSA-3A |
| | | ☒ | ANSI C63.10 | | 11.9.2.3 | Measurement using a power meter (PM) |
| | | | ☒ | ANSI C63.10 | 11.9.2.3.1 | Method AVGPM |
| | | | ☐ | ANSI C63.10 | 11.9.2.3.2 | Method AVGPM-G |

| Directional Gain Calculations for In-Band test method | | | | |
|---|---|---|---|---|
| | References Rule | | Chapter | Description |
| ☐ | KDB 662911 | | F2)a) | Basic methodology |
| | ☐ | KDB 662911 | F2)a) (i) | transmit signals are correlated |
| | ☐ | KDB 662911 | F2)a) (ii) | transmit signals are uncorrelated |
| ☐ | KDB 662911 | | F2)b) | Sectorized antenna systems. |
| ☐ | KDB 662911 | | F2)c) | Cross-polarized antennas |
| | ☐ | ANSI C63.10 | F2)c) (i) | Cross-polarized antennas |
| | ☐ | ANSI C63.10 | F2)c) (ii) | Multiple antennas |
| ☐ | KDB 662911 | | F2)e) | Spatial Multiplexing |
| | ☐ | KDB 662911 | F2)e) (i) | Antennas have the same gain |
| | ☐ | KDB 662911 | F2)e) (ii) | Antenna have the different gain with one spatial stream |
| | ☒ | KDB 662911 | F2)e) (iii) | Antenna have the different gain with more than one spatial stream |
| ☒ | KDB 662911 | | F2)f) | Cyclic Delay Diversity (CDD) |
| | ☐ | KDB 662911 | F2)f) (i) | Antennas have the same gain |
| | ☒ | KDB 662911 | F2)f) (ii) | Antenna have the different gain with one spatial stream |
| | ☐ | KDB 662911 | F2)f) (iii) | Antenna have the different gain with more than one spatial stream |

## 8.5. EUT test definition

<table>
<tr><th>Item</th><th colspan="4">Fundamental emission output power</th></tr>
<tr><td rowspan="3">Device Category</td><td>☐</td><td colspan="3">Fixed point-to-point</td></tr>
<tr><td>☐</td><td colspan="3">Emit multiple directional beams, simultaneously or sequentially</td></tr>
<tr><td>☒</td><td colspan="3">Other cases</td></tr>
<tr><td>Test mode</td><td colspan="4">Mode 1~5</td></tr>
<tr><td rowspan="12">Test method</td><td>☐</td><td colspan="3">Radiated</td></tr>
<tr><td rowspan="3"></td><td>X Axis</td><td>Y Axis</td><td>Z Axis</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Worst Axis ☐</td><td>Worst Axis ☐</td><td>Worst Axis ☐</td></tr>
<tr><td>☒</td><td colspan="3">Conducted</td></tr>
<tr><td>☒</td><td colspan="3">Chain 1</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☒</td><td>Chain 1</td><td colspan="2">Chain 2</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 1</td><td>Chain 2</td><td>Chain 3</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
</table>

## 8.6. Test Result

| | | | | | |
|---|---|---|---|---|---|
| Product Name | : | Wireless Access Point | Power | : | AC 120V/60Hz |
| Test Mode | : | Mode1~3 | Test Site | : | TR8 |
| Test Date | : | 2019.08.01 | Test Engineer | : | Eric |

**SISO:**

| Mode | Channel | Test Frequency (MHz) | Conducted Power Output (dBm) | | Limit (dBm) | Result |
|---|---|---|---|---|---|---|
| | | | Ant 1 | Ant 2 | | |
| 1 | 01 | 2412 | 18.58 | 18.85 | 30 | Pass |
| 1 | 02 | 2417 | 18.84 | 18.79 | 30 | Pass |
| 1 | 06 | 2437 | 19.19 | 18.66 | 30 | Pass |
| 1 | 10 | 2457 | 18.84 | 18.95 | 30 | Pass |
| 1 | 11 | 2462 | 18.96 | 18.85 | 30 | Pass |
| 2 | 01 | 2412 | 17.38 | 17.87 | 30 | Pass |
| 2 | 02 | 2417 | 18.21 | 19.62 | 30 | Pass |
| 2 | 06 | 2437 | 18.96 | 19.51 | 30 | Pass |
| 2 | 10 | 2457 | 18.77 | 19.92 | 30 | Pass |
| 2 | 11 | 2462 | 16.22 | 16.03 | 30 | Pass |
| 3 | 01 | 2412 | 17.43 | 18.52 | 30 | Pass |
| 3 | 02 | 2417 | 18.29 | 19.85 | 30 | Pass |
| 3 | 06 | 2437 | 18.83 | 19.71 | 30 | Pass |
| 3 | 10 | 2457 | 18.32 | 19.12 | 30 | Pass |
| 3 | 11 | 2462 | 16.64 | 15.65 | 30 | Pass |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4 | 01 | 2412 | 17.12 | 18.21 | 30 | Pass |
| 4 | 02 | 2417 | 18.47 | 19.78 | 30 | Pass |
| 4 | 06 | 2437 | 19.01 | 19.73 | 30 | Pass |
| 4 | 10 | 2457 | 18.74 | 18.62 | 30 | Pass |
| 4 | 11 | 2462 | 16.32 | 15.83 | 30 | Pass |
| 5 | 01 | 2412 | 17.61 | 18.07 | 30 | Pass |
| 5 | 02 | 2417 | 18.66 | 20.15 | 30 | Pass |
| 5 | 06 | 2437 | 19.18 | 19.94 | 30 | Pass |
| 5 | 10 | 2457 | 17.93 | 18.07 | 30 | Pass |
| 5 | 11 | 2462 | 16.69 | 16.18 | 30 | Pass |

| Mode | Channel | Test Frequency (MHz) | E.I.R.P (dBm) | | Limit (dBm) | Result |
|---|---|---|---|---|---|---|
| | | | Ant 1 | Ant 2 | | |
| 1 | 01 | 2412 | 21.25 | 21.22 | 36 | Pass |
| 1 | 02 | 2417 | 21.51 | 21.16 | 36 | Pass |
| 1 | 06 | 2437 | 21.86 | 21.03 | 36 | Pass |
| 1 | 10 | 2457 | 21.51 | 21.32 | 36 | Pass |
| 1 | 11 | 2462 | 21.63 | 21.22 | 36 | Pass |
| 2 | 01 | 2412 | 20.05 | 20.24 | 36 | Pass |
| 2 | 02 | 2417 | 20.88 | 21.99 | 36 | Pass |
| 2 | 06 | 2437 | 21.63 | 21.88 | 36 | Pass |
| 2 | 10 | 2457 | 21.44 | 22.29 | 36 | Pass |
| 2 | 11 | 2462 | 18.89 | 18.40 | 36 | Pass |
| 3 | 01 | 2412 | 20.10 | 20.89 | 36 | Pass |
| 3 | 02 | 2417 | 20.96 | 22.22 | 36 | Pass |
| 3 | 06 | 2437 | 21.50 | 22.08 | 36 | Pass |
| 3 | 10 | 2457 | 20.99 | 21.49 | 36 | Pass |
| 3 | 11 | 2462 | 19.31 | 18.02 | 36 | Pass |
| 4 | 01 | 2412 | 19.79 | 20.58 | 36 | Pass |
| 4 | 02 | 2417 | 21.14 | 22.15 | 36 | Pass |
| 4 | 06 | 2437 | 21.68 | 22.10 | 36 | Pass |
| 4 | 10 | 2457 | 21.41 | 20.99 | 36 | Pass |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4 | 11 | 2462 | 18.99 | 18.20 | 36 | Pass |
| 5 | 01 | 2412 | 20.28 | 20.44 | 36 | Pass |
| 5 | 02 | 2417 | 21.33 | 22.52 | 36 | Pass |
| 5 | 06 | 2437 | 21.85 | 22.31 | 36 | Pass |
| 5 | 10 | 2457 | 20.60 | 20.44 | 36 | Pass |
| 5 | 11 | 2462 | 19.36 | 18.55 | 36 | Pass |

Note: E.I.R.P for AP305C.

| Mode | Channel | Test Frequency (MHz) | E.I.R.P (dBm) | | Limit (dBm) | Result |
|---|---|---|---|---|---|---|
| | | | Ant 1 | Ant 2 | | |
| 1 | 01 | 2412 | 21.21 | 20.87 | 36 | Pass |
| 1 | 02 | 2417 | 21.47 | 20.81 | 36 | Pass |
| 1 | 06 | 2437 | 21.82 | 20.68 | 36 | Pass |
| 1 | 10 | 2457 | 21.47 | 20.97 | 36 | Pass |
| 1 | 11 | 2462 | 21.59 | 20.87 | 36 | Pass |
| 2 | 01 | 2412 | 20.01 | 19.89 | 36 | Pass |
| 2 | 02 | 2417 | 20.84 | 21.64 | 36 | Pass |
| 2 | 06 | 2437 | 21.59 | 21.53 | 36 | Pass |
| 2 | 10 | 2457 | 21.40 | 21.94 | 36 | Pass |
| 2 | 11 | 2462 | 18.85 | 18.05 | 36 | Pass |
| 3 | 01 | 2412 | 20.06 | 20.54 | 36 | Pass |
| 3 | 02 | 2417 | 20.92 | 21.87 | 36 | Pass |
| 3 | 06 | 2437 | 21.46 | 21.73 | 36 | Pass |
| 3 | 10 | 2457 | 20.95 | 21.14 | 36 | Pass |
| 3 | 11 | 2462 | 19.27 | 17.67 | 36 | Pass |
| 4 | 01 | 2412 | 19.75 | 20.23 | 36 | Pass |
| 4 | 02 | 2417 | 21.10 | 21.80 | 36 | Pass |
| 4 | 06 | 2437 | 21.64 | 21.75 | 36 | Pass |
| 4 | 10 | 2457 | 21.37 | 20.64 | 36 | Pass |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4 | 11 | 2462 | 18.95 | 17.85 | 36 | Pass |
| 5 | 01 | 2412 | 20.24 | 20.09 | 36 | Pass |
| 5 | 02 | 2417 | 21.29 | 22.17 | 36 | Pass |
| 5 | 06 | 2437 | 21.81 | 21.96 | 36 | Pass |
| 5 | 10 | 2457 | 20.56 | 20.09 | 36 | Pass |
| 5 | 11 | 2462 | 19.32 | 18.20 | 36 | Pass |

Note: E.I.R.P for AP305CX.

**CDD:**

| Mode | Channel | Test Frequency (MHz) | Conducted Power Output (dBm) | | Total Power (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|---|---|
| | | | Ant 1 | Ant 2 | | | |
| 1 | 01 | 2412 | 18.71 | 18.88 | 21.81 | 30 | Pass |
| 1 | 02 | 2417 | 18.68 | 18.89 | 21.80 | 30 | Pass |
| 1 | 06 | 2437 | 19.15 | 18.68 | 21.93 | 30 | Pass |
| 1 | 10 | 2457 | 18.79 | 19.02 | 21.92 | 30 | Pass |
| 1 | 11 | 2462 | 18.73 | 18.65 | 21.70 | 30 | Pass |
| 2 | 01 | 2412 | 15.71 | 16.89 | 19.35 | 30 | Pass |
| 2 | 02 | 2417 | 18.17 | 19.68 | 22.00 | 30 | Pass |
| 2 | 06 | 2437 | 18.91 | 19.45 | 22.20 | 30 | Pass |
| 2 | 10 | 2457 | 16.12 | 17.36 | 19.79 | 30 | Pass |
| 2 | 11 | 2462 | 14.41 | 15.31 | 17.89 | 30 | Pass |
| 3 | 01 | 2412 | 16.03 | 17.38 | 19.77 | 30 | Pass |
| 3 | 02 | 2417 | 18.12 | 19.56 | 21.91 | 30 | Pass |
| 3 | 06 | 2437 | 18.87 | 19.65 | 22.29 | 30 | Pass |
| 3 | 10 | 2457 | 16.15 | 17.38 | 19.82 | 30 | Pass |
| 3 | 11 | 2462 | 14.19 | 15.17 | 17.72 | 30 | Pass |
| 4 | 01 | 2412 | 16.51 | 17.87 | 20.25 | 30 | Pass |
| 4 | 02 | 2417 | 18.37 | 19.83 | 22.17 | 30 | Pass |
| 4 | 06 | 2437 | 18.98 | 19.73 | 22.38 | 30 | Pass |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4 | 10 | 2457 | 16.15 | 17.54 | 19.91 | 30 | Pass |
| 4 | 11 | 2462 | 14.44 | 15.43 | 17.97 | 30 | Pass |
| 5 | 01 | 2412 | 16.33 | 17.62 | 20.03 | 30 | Pass |
| 5 | 02 | 2417 | 18.68 | 20.02 | 22.41 | 30 | Pass |
| 5 | 06 | 2437 | 19.27 | 19.93 | 22.62 | 30 | Pass |
| 5 | 10 | 2457 | 16.46 | 17.72 | 20.15 | 30 | Pass |
| 5 | 11 | 2462 | 14.71 | 15.75 | 18.27 | 30 | Pass |

| Mode | Channel | Test Frequency (MHz) | E.I.R.P (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|
| 1 | 01 | 2412 | 21.25 | 36 | Pass |
| 1 | 02 | 2417 | 21.26 | 36 | Pass |
| 1 | 06 | 2437 | 21.05 | 36 | Pass |
| 1 | 10 | 2457 | 21.39 | 36 | Pass |
| 1 | 11 | 2462 | 21.02 | 36 | Pass |
| 2 | 01 | 2412 | 19.26 | 36 | Pass |
| 2 | 02 | 2417 | 22.05 | 36 | Pass |
| 2 | 06 | 2437 | 21.82 | 36 | Pass |
| 2 | 10 | 2457 | 19.73 | 36 | Pass |
| 2 | 11 | 2462 | 17.68 | 36 | Pass |
| 3 | 01 | 2412 | 19.75 | 36 | Pass |
| 3 | 02 | 2417 | 21.93 | 36 | Pass |
| 3 | 06 | 2437 | 22.02 | 36 | Pass |
| 3 | 10 | 2457 | 19.75 | 36 | Pass |
| 3 | 11 | 2462 | 17.54 | 36 | Pass |
| 4 | 01 | 2412 | 20.24 | 36 | Pass |
| 4 | 02 | 2417 | 22.20 | 36 | Pass |
| 4 | 06 | 2437 | 22.10 | 36 | Pass |
| 4 | 10 | 2457 | 19.91 | 36 | Pass |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 11 | 2462 | 17.80 | 36 | Pass |
| 5 | 01 | 2412 | 19.99 | 36 | Pass |
| 5 | 02 | 2417 | 22.39 | 36 | Pass |
| 5 | 06 | 2437 | 22.30 | 36 | Pass |
| 5 | 10 | 2457 | 20.09 | 36 | Pass |
| 5 | 11 | 2462 | 18.12 | 36 | Pass |

Note: E.I.R.P for AP305C.

| Mode | Channel | Test Frequency (MHz) | E.I.R.P (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|
| 1 | 01 | 2412 | 24.14 | 36 | Pass |
| 1 | 02 | 2417 | 24.12 | 36 | Pass |
| 1 | 06 | 2437 | 24.28 | 36 | Pass |
| 1 | 10 | 2457 | 24.24 | 36 | Pass |
| 1 | 11 | 2462 | 24.04 | 36 | Pass |
| 2 | 01 | 2412 | 21.64 | 36 | Pass |
| 2 | 02 | 2417 | 24.28 | 36 | Pass |
| 2 | 06 | 2437 | 24.52 | 36 | Pass |
| 2 | 10 | 2457 | 22.09 | 36 | Pass |
| 2 | 11 | 2462 | 20.20 | 36 | Pass |
| 3 | 01 | 2412 | 22.06 | 36 | Pass |
| 3 | 02 | 2417 | 24.20 | 36 | Pass |
| 3 | 06 | 2437 | 24.60 | 36 | Pass |
| 3 | 10 | 2457 | 22.11 | 36 | Pass |
| 3 | 11 | 2462 | 20.02 | 36 | Pass |
| 4 | 01 | 2412 | 22.54 | 36 | Pass |
| 4 | 02 | 2417 | 24.46 | 36 | Pass |
| 4 | 06 | 2437 | 24.69 | 36 | Pass |
| 4 | 10 | 2457 | 22.20 | 36 | Pass |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 11 | 2462 | 20.27 | 36 | Pass |
| 5 | 01 | 2412 | 22.32 | 36 | Pass |
| 5 | 02 | 2417 | 24.70 | 36 | Pass |
| 5 | 06 | 2437 | 24.94 | 36 | Pass |
| 5 | 10 | 2457 | 22.44 | 36 | Pass |
| 5 | 11 | 2462 | 20.57 | 36 | Pass |

Note: E.I.R.P for AP305CX.

**Beamforming:**

| Mode | Channel | Test Frequency (MHz) | Peak Power Output (dBm) | | Total Power (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|---|---|
| | | | Ant 1 | Ant 2 | | | |
| 3 | 01 | 2412 | 16.19 | 17.22 | 19.75 | 30 | Pass |
| 3 | 02 | 2417 | 18.01 | 19.37 | 21.75 | 30 | Pass |
| 3 | 06 | 2437 | 18.67 | 19.42 | 22.07 | 30 | Pass |
| 3 | 10 | 2457 | 16.31 | 17.28 | 19.83 | 30 | Pass |
| 3 | 11 | 2462 | 14.39 | 15.72 | 18.12 | 30 | Pass |
| 4 | 01 | 2412 | 16.23 | 17.71 | 20.04 | 30 | Pass |
| 4 | 02 | 2417 | 18.09 | 19.77 | 22.02 | 30 | Pass |
| 4 | 06 | 2437 | 18.82 | 19.66 | 22.27 | 30 | Pass |
| 4 | 10 | 2457 | 16.23 | 17.17 | 19.74 | 30 | Pass |
| 4 | 11 | 2462 | 14.39 | 15.62 | 18.06 | 30 | Pass |
| 5 | 01 | 2412 | 16.22 | 17.48 | 19.91 | 30 | Pass |
| 5 | 02 | 2417 | 18.52 | 19.92 | 22.29 | 30 | Pass |
| 5 | 06 | 2437 | 19.33 | 19.76 | 22.56 | 30 | Pass |
| 5 | 10 | 2457 | 16.54 | 17.61 | 20.12 | 30 | Pass |
| 5 | 11 | 2462 | 14.58 | 15.68 | 18.18 | 30 | Pass |

| Mode | Channel | Test Frequency (MHz) | E.I.R.P (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|
| 3 | 01 | 2412 | 22.25 | 36 | Pass |
| 3 | 02 | 2417 | 24.25 | 36 | Pass |
| 3 | 06 | 2437 | 24.58 | 36 | Pass |
| 3 | 10 | 2457 | 22.34 | 36 | Pass |
| 3 | 11 | 2462 | 20.62 | 36 | Pass |
| 4 | 01 | 2412 | 22.54 | 36 | Pass |
| 4 | 02 | 2417 | 24.51 | 36 | Pass |
| 4 | 06 | 2437 | 24.78 | 36 | Pass |
| 4 | 10 | 2457 | 22.24 | 36 | Pass |
| 4 | 11 | 2462 | 20.56 | 36 | Pass |
| 5 | 01 | 2412 | 22.41 | 36 | Pass |
| 5 | 02 | 2417 | 24.79 | 36 | Pass |
| 5 | 06 | 2437 | 25.08 | 36 | Pass |
| 5 | 10 | 2457 | 22.62 | 36 | Pass |
| 5 | 11 | 2462 | 20.68 | 36 | Pass |

Note: E.I.R.P for AP305C.

| Mode | Channel | Test Frequency (MHz) | E.I.R.P (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|---|
| 3 | 01 | 2412 | 22.05 | 36 | Pass |
| 3 | 02 | 2417 | 24.04 | 36 | Pass |
| 3 | 06 | 2437 | 24.38 | 36 | Pass |
| 3 | 10 | 2457 | 22.13 | 36 | Pass |
| 3 | 11 | 2462 | 20.41 | 36 | Pass |
| 4 | 01 | 2412 | 22.33 | 36 | Pass |
| 4 | 02 | 2417 | 24.30 | 36 | Pass |
| 4 | 06 | 2437 | 24.58 | 36 | Pass |
| 4 | 10 | 2457 | 22.04 | 36 | Pass |
| 4 | 11 | 2462 | 20.35 | 36 | Pass |
| 5 | 01 | 2412 | 22.20 | 36 | Pass |
| 5 | 02 | 2417 | 24.57 | 36 | Pass |
| 5 | 06 | 2437 | 24.88 | 36 | Pass |
| 5 | 10 | 2457 | 22.42 | 36 | Pass |
| 5 | 11 | 2462 | 20.47 | 36 | Pass |

Note: E.I.R.P for AP305CX.

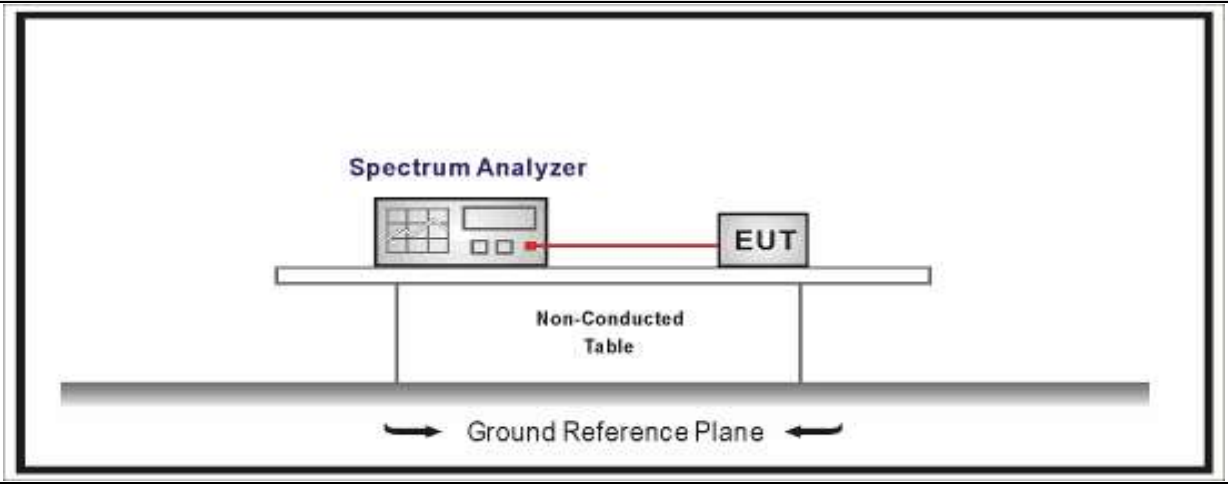
# 9. Power Spectral Density

## 9.1. Test Equipment

| Power Spectral Density / TR-8 | | | | | |
|---|---|---|---|---|---|
| Instrument | Manufacturer | Type No. | Serial No. | Cal. Date | Cal. Due Date |
| Spectrum Analyzer | Agilent | N9010A | MY48030494 | 2019.02.04 | 2020.02.03 |
| EXA Spectrum Analyzer | Keysight | N9010A | MY55370495 | 2019.04.09 | 2020.04.08 |
| MXA Signal Anlyzer | Keysight | N9020A | MY56060147 | 2019.04.09 | 2020.04.08 |
| Temperature/Humidity Meter | zhichen | ZC1-2 | TR8-TH | 2019.04.10 | 2020.04.09 |
| Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards. | | | | | |

## 9.2. Test Setup

Power Spectral Density test setup




## 9.3. Limit

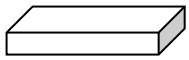
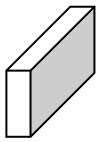
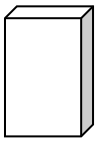
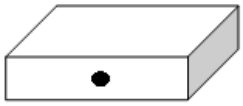
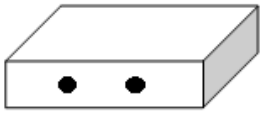
| Power Spectral Density Limit |
|---|
| Power Spectral Density≤8dBm/3kHz |

## 9.4. Test Procedure

| Power Spectral Density Test Method | | | | |
|---|---|---|---|---|
| | References Rule | | Chapter | Description |
| ☒ | ANSI C63.10 | | 11.10 | Maximum power spectral density level in the fundamental emission |
| | ☐ | ANSI C63.10 | 11.10.2 | Method PKPSD (peak PSD) |
| | ☒ | ANSI C63.10 | 11.10.3 | Method AVGPSD-1(Duty cycle≥98%) |
| | ☐ | ANSI C63.10 | 11.10.4 | Method AVGPSD-1A(Duty cycle≥98%) |
| | ☒ | ANSI C63.10 | 11.10.5 | Method AVGPSD-2(Duty cycle＜98%) |
| | ☐ | ANSI C63.10 | 11.10.6 | Method AVGPSD-2A(Duty cycle＜98%) |
| | ☐ | ANSI C63.10 | 11.10.7 | Method AVGPSD-3 |
| | ☐ | ANSI C63.10 | 11.10.8 | Method AVGPSD-3A |

| Directional Gain Calculations for In-Band test method | | | | |
|---|---|---|---|---|
| | Referred Rule | | Chapter | Description |
| ☐ | KDB 662911 | | F2)a) | Basic methodology |
| | ☐ | KDB 662911 | F2)a) (i) | transmit signals are correlated |
| | ☐ | KDB 662911 | F2)a) (ii) | transmit signals are uncorrelated |
| ☐ | KDB 662911 | | F2)b) | Sectorized antenna systems. |
| ☐ | KDB 662911 | | F2)c) | Cross-polarized antennas |
| | ☐ | ANSI C63.10 | F2)c) (i) | Cross-polarized antennas |
| | ☐ | ANSI C63.10 | F2)c) (ii) | Multiple antennas |
| ☒ | KDB 662911 | | F2)e) | Spatial Multiplexing |
| | ☐ | KDB 662911 | F2)e) (i) | Antennas have the same gain |
| | ☐ | KDB 662911 | F2)e) (ii) | Antenna have the different gain with one spatial stream |
| | ☒ | KDB 662911 | F2)e) (iii) | Antenna have the different gain with more than one spatial stream |
| ☒ | KDB 662911 | | F2)f) | Cyclic Delay Diversity (CDD) |
| | ☐ | KDB 662911 | F2)f) (i) | Antennas have the same gain |
| | ☒ | KDB 662911 | F2)f) (ii) | Antenna have the different gain with one spatial stream |
| | ☐ | KDB 662911 | F2)f) (iii) | Antenna have the different gain with more than one spatial stream |

## 9.5. EUT test definition

<table>
<tr><th>Item</th><th colspan="4">Power Spectral Density Test Method</th></tr>
<tr><td rowspan="3">Device Category</td><td>☐</td><td colspan="3">Fixed point-to-point</td></tr>
<tr><td>☐</td><td colspan="3">Emit multiple directional beams, simultaneously or sequentially</td></tr>
<tr><td>☒</td><td colspan="3">Other cases</td></tr>
<tr><td>Test mode</td><td colspan="4">Mode 1~5</td></tr>
<tr><td rowspan="14">Test method</td><td>☐</td><td colspan="3">Radiated</td></tr>
<tr><td rowspan="3"></td><td>X Axis</td><td>Y Axis</td><td>Z Axis</td></tr>
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>Worst Axis ☐</td><td>Worst Axis ☐</td><td>Worst Axis ☐</td></tr>
<tr><td>☒</td><td colspan="3">Conducted</td></tr>
<tr><td>☒</td><td colspan="3">Chain 1</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☒</td><td>Chain 1</td><td colspan="2">Chain 2</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
<tr><td>☐</td><td>Chain 1</td><td>Chain 2</td><td>Chain 3</td></tr>
<tr><td></td><td colspan="3">  </td></tr>
</table>

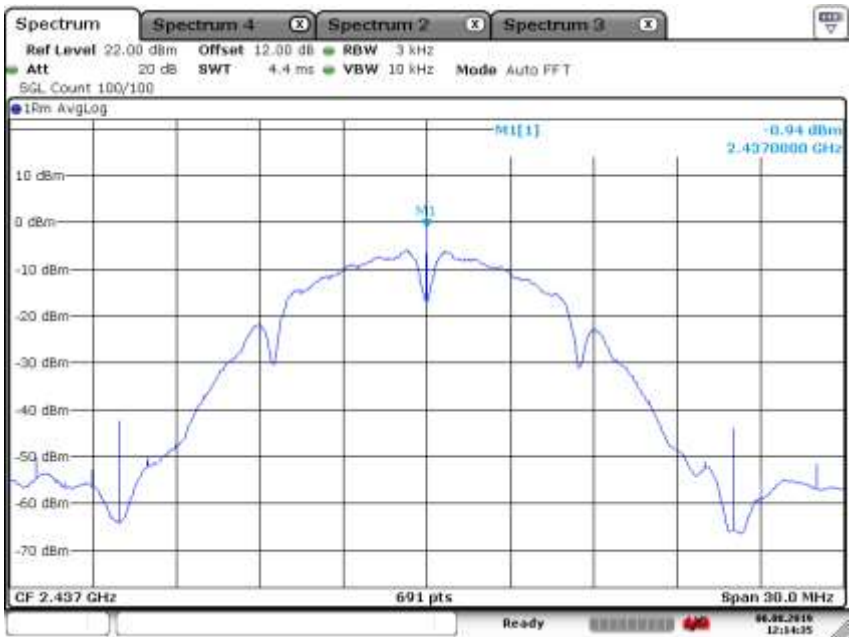
## 9.6. Test Result

| | | | | | |
|---|---|---|---|---|---|
| Product Name | : | Wireless Access Point | Power | : | AC 120V/60Hz |
| Test Mode | : | Mode1~5 | Test Site | : | TR8 |
| Test Date | : | 2019.08.06 | Test Engineer | : | Eric |

**SISO**

| Mode | Channel | Test Frequency (MHz) | Measurement PSD (dBm/3kHz) | | Duty factor | Limit (dBm/3kHz) | Result |
|---|---|---|---|---|---|---|---|
| | | | Ant 1 | Ant 2 | | | |
| 1 | 01 | 2412 | -5.88 | -1.09 | 0 | 8.0 | Pass |
| 1 | 06 | 2437 | -5.06 | -0.94 | 0 | 8.0 | Pass |
| 1 | 11 | 2462 | -5.05 | -1.02 | 0 | 8.0 | Pass |
| 2 | 01 | 2412 | -15.27 | -15.87 | 0.29 | 8.0 | Pass |
| 2 | 06 | 2437 | -13.73 | -13.58 | 0.29 | 8.0 | Pass |
| 2 | 11 | 2462 | -16.18 | -17.40 | 0.29 | 8.0 | Pass |
| 3 | 01 | 2412 | -14.92 | -15.37 | 0.28 | 8.0 | Pass |
| 3 | 06 | 2437 | -13.99 | -14.62 | 0.28 | 8.0 | Pass |
| 3 | 11 | 2462 | -16.98 | -18.01 | 0.28 | 8.0 | Pass |
| 4 | 01 | 2412 | -15.78 | -15.49 | 0.11 | 8.0 | Pass |
| 4 | 06 | 2437 | -13.67 | -14.37 | 0.11 | 8.0 | Pass |
| 4 | 11 | 2462 | -17.43 | -18.55 | 0.11 | 8.0 | Pass |
| 5 | 01 | 2412 | -16.01 | -16.24 | 0.21 | 8.0 | Pass |
| 5 | 06 | 2437 | -14.52 | -14.80 | 0.21 | 8.0 | Pass |
| 5 | 11 | 2462 | -17.98 | -18.57 | 0.21 | 8.0 | Pass |

Mode 1 CH06(2437MHz) Ant 2



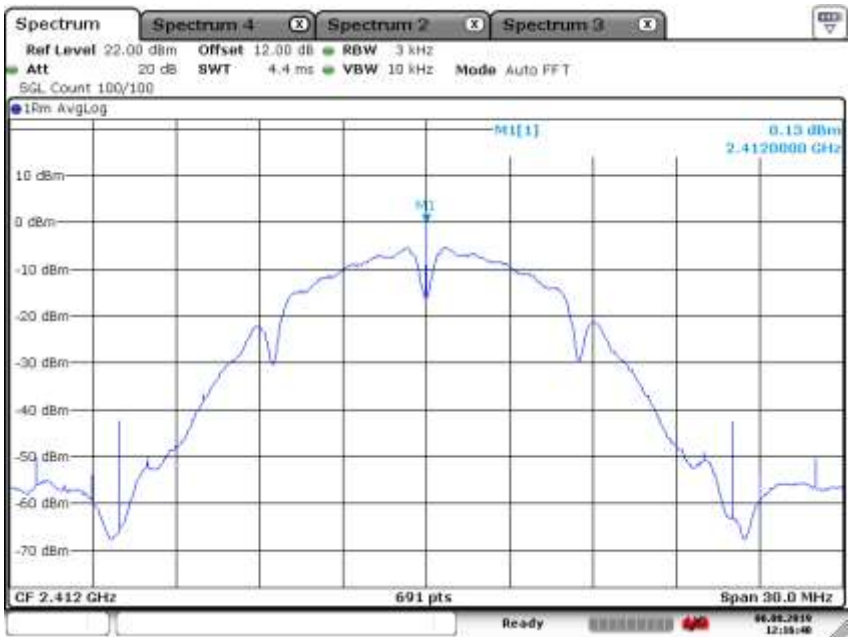

Date: 6.AUG.2019 12:14:35

**CDD**

| Mode | Channel | Test Frequency (MHz) | Measurement PSD (dBm/3kHz) | | Duty Factor | Total Measurement PSD (dBm/3kHz) | Limit (dBm/3kHz) | Result |
|---|---|---|---|---|---|---|---|---|
| | | | Ant 1 | Ant 2 | | | | |
| 1 | 01 | 2412 | -4.93 | 0.13 | 0 | 1.31 | 8.0 | Pass |
| 1 | 06 | 2437 | -4.23 | -0.50 | 0 | 1.03 | 8.0 | Pass |
| 1 | 11 | 2462 | -4.47 | -0.84 | 0 | 0.72 | 8.0 | Pass |
| 2 | 01 | 2412 | -17.88 | -17.33 | 0.29 | -14.30 | 8.0 | Pass |
| 2 | 06 | 2437 | -14.36 | -13.55 | 0.29 | -10.64 | 8.0 | Pass |
| 2 | 11 | 2462 | -18.75 | -18.35 | 0.29 | -15.25 | 8.0 | Pass |
| 3 | 01 | 2412 | -17.54 | -16.84 | 0.28 | -13.89 | 8.0 | Pass |
| 3 | 06 | 2437 | -14.51 | -14.65 | 0.28 | -11.29 | 8.0 | Pass |
| 3 | 11 | 2462 | -19.23 | -19.01 | 0.28 | -15.83 | 8.0 | Pass |
| 4 | 01 | 2412 | -17.00 | -16.67 | 0.11 | -13.71 | 8.0 | Pass |
| 4 | 06 | 2437 | -13.73 | -14.24 | 0.11 | -10.86 | 8.0 | Pass |
| 4 | 11 | 2462 | -18.86 | -18.58 | 0.11 | -15.60 | 8.0 | Pass |
| 5 | 01 | 2412 | -17.69 | -17.49 | 0.21 | -14.37 | 8.0 | Pass |
| 5 | 06 | 2437 | -14.79 | -14.38 | 0.21 | -11.36 | 8.0 | Pass |
| 5 | 11 | 2462 | -18.91 | -18.61 | 0.21 | -15.54 | 8.0 | Pass |

Mode 1 CH01(2412MHz) Ant 1

Mode 1 CH01(2412MHz) Ant 2

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# 10. Antenna Requirement

## 10.1. Limit

| Antenna Requirement Limit |
|---|
| An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded. |

## 10.2. Antenna Connector Construction

| Antenna Connector Construction | |
|---|---|
| ☒ | The use of a permanently attached antenna |
| ☐ | The antenna use of a unique coupling to the intentional radiator |
| ☐ | The use of a nonstandard antenna jack or electrical connector |
| Please refer to the attached document “Internal Photograph” to show the antenna connector. | |

The End