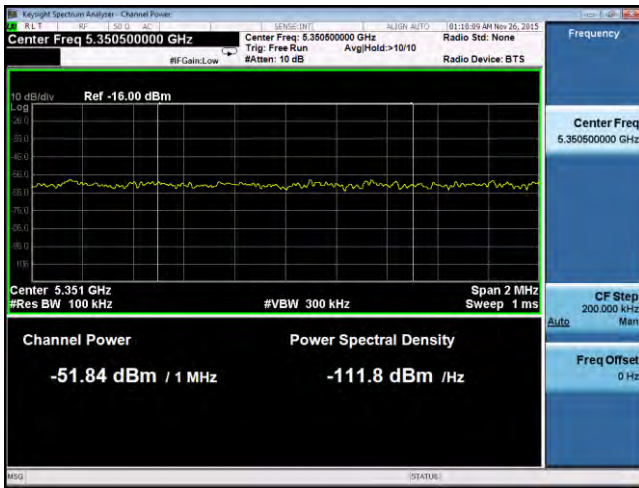




Band Edge -802.11n-20M-5240M-chain1



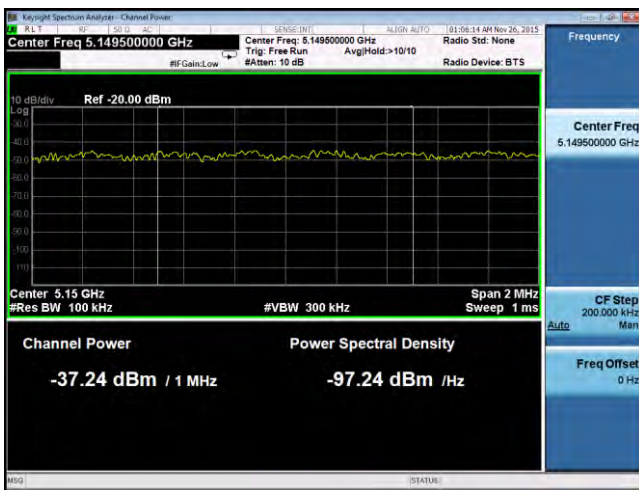
Band Edge -802.11n-20M-5240M-chain2



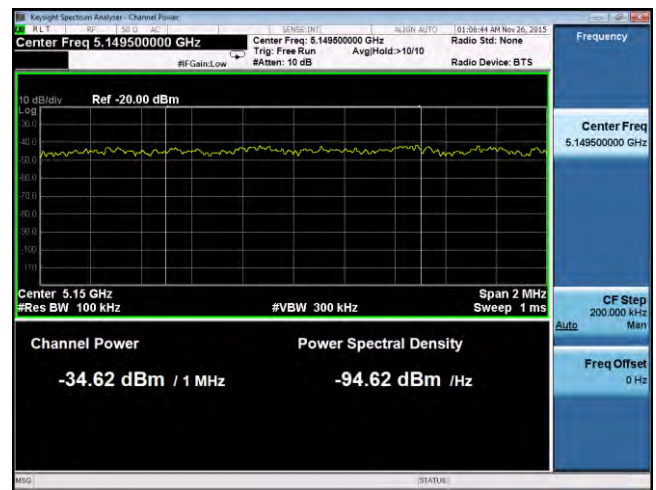
Band Edge -802.11n-20M-5240M-chain3



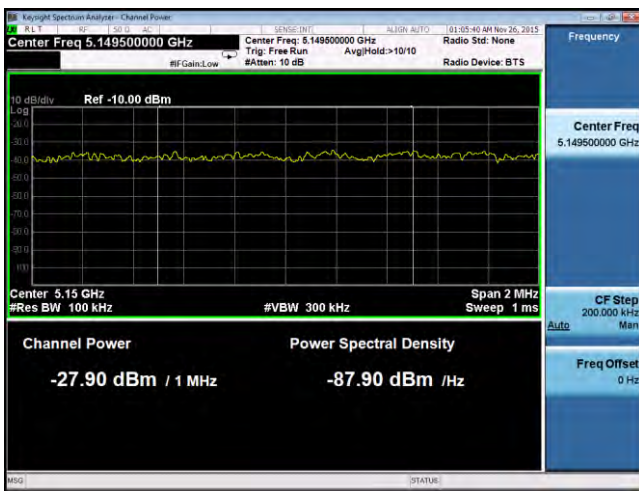
Band Edge -802.11n-20M-5240M-chain4



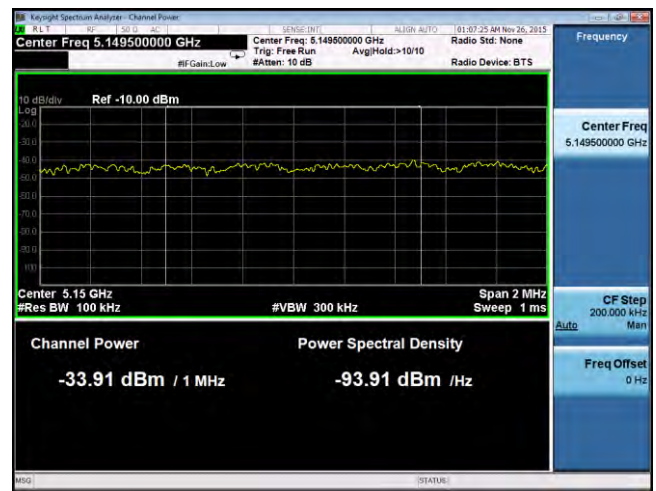
**Band Edge -802.11n-40M-5190M-chain1**



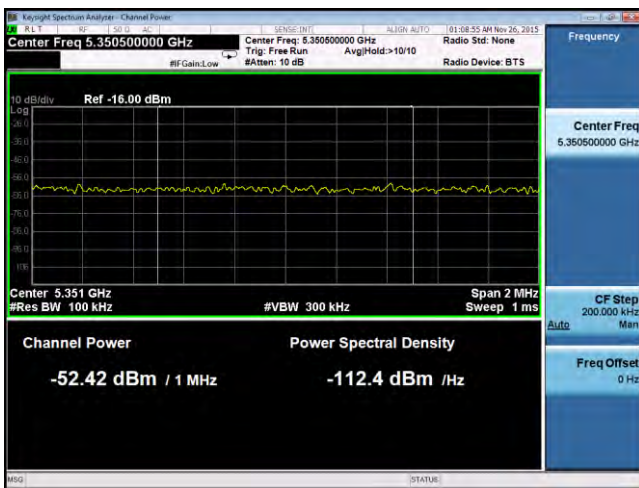
**Band Edge -802.11n-40M-5190M-chain2**



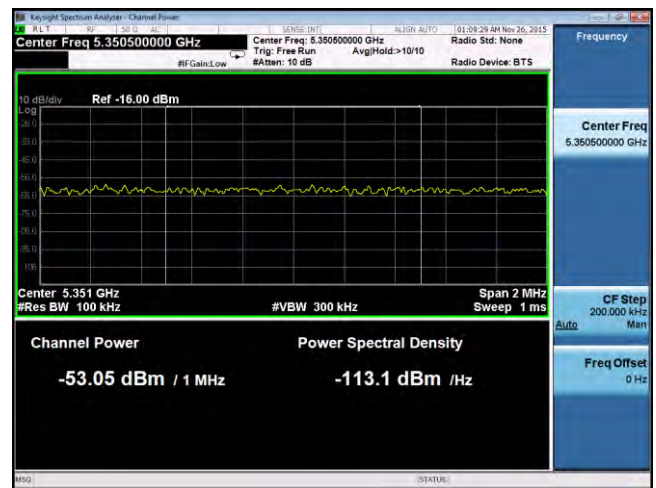
**Band Edge -802.11n-40M-5190M-chain3**



**Band Edge -802.11n-40M-5190M-chain4**

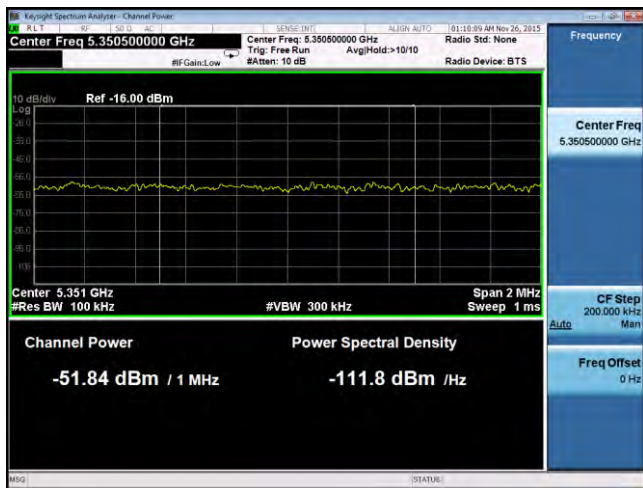


**Band Edge -802.11n-40M-5230M-chain1**

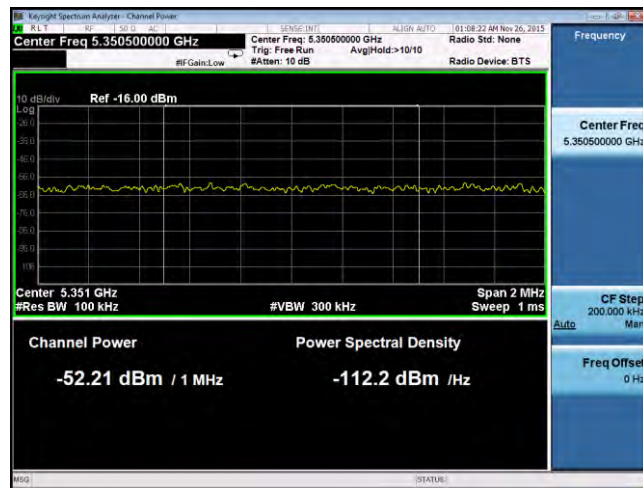


**Band Edge -802.11n-40M-5230M-chain2**

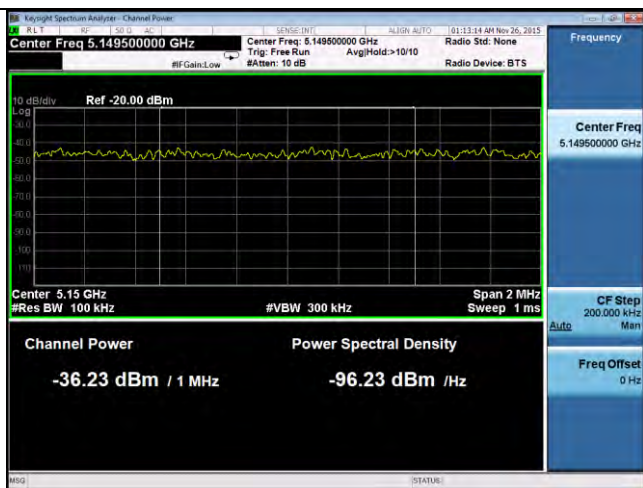




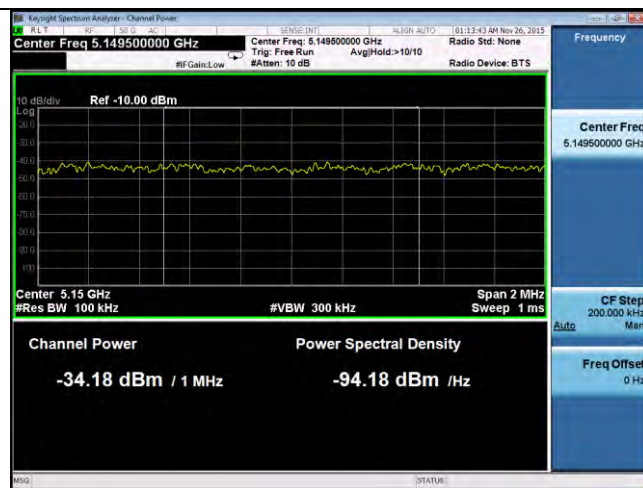
**Band Edge -802.11n-40M-5230M-chain3**



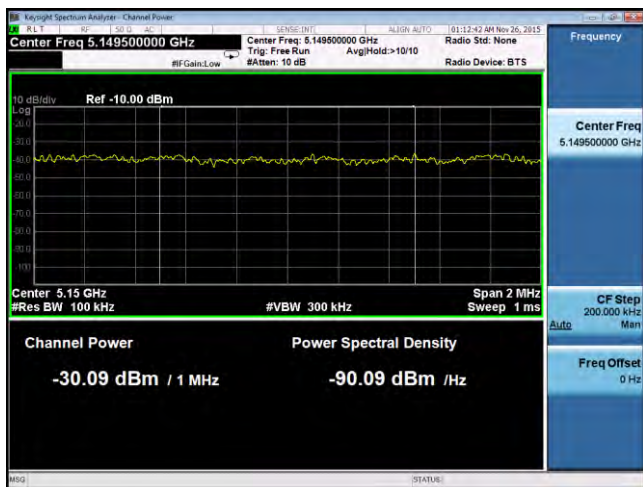
**Band Edge -802.11n-40M-5230M-chain4**



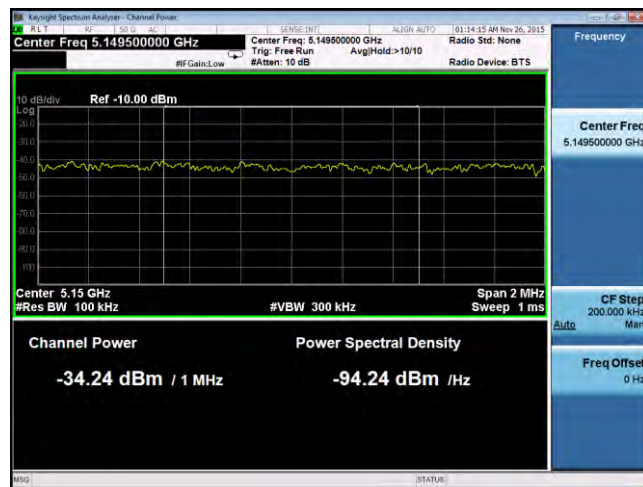
**Band Edge -802.11ac-80M-5210M-chain1 (Left)**



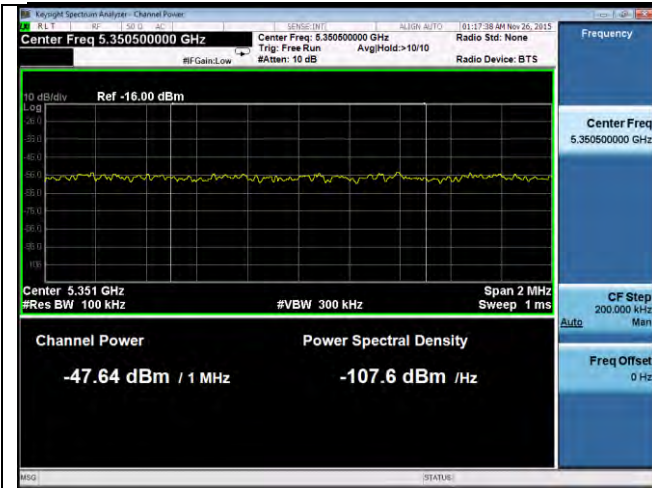
**Band Edge -802.11ac-80M-5210M-chain2 (Left)**



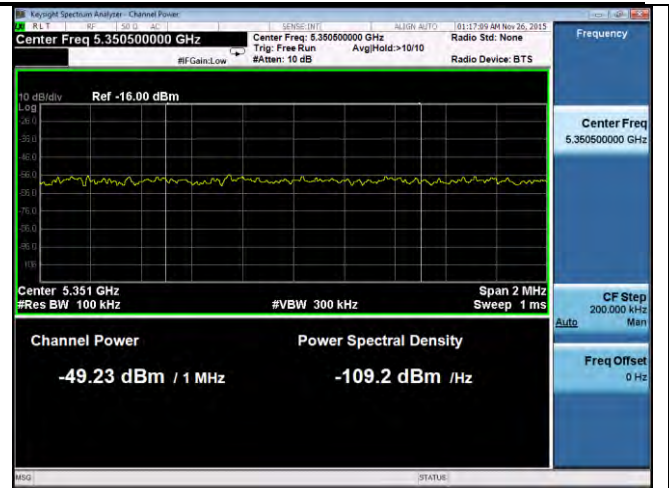
**Band Edge -802.11ac-80M-5210M-chain3 (Left)**



**Band Edge -802.11ac-80M-5210M-chain4 (Left)**



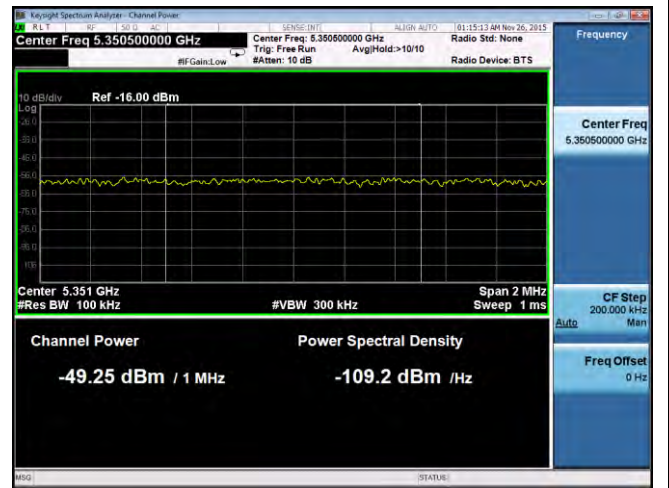
**Band Edge -802.11ac-80M-5210M-chain1 (Right)**



**Band Edge -802.11ac-80M-5210M-chain2 (Right)**



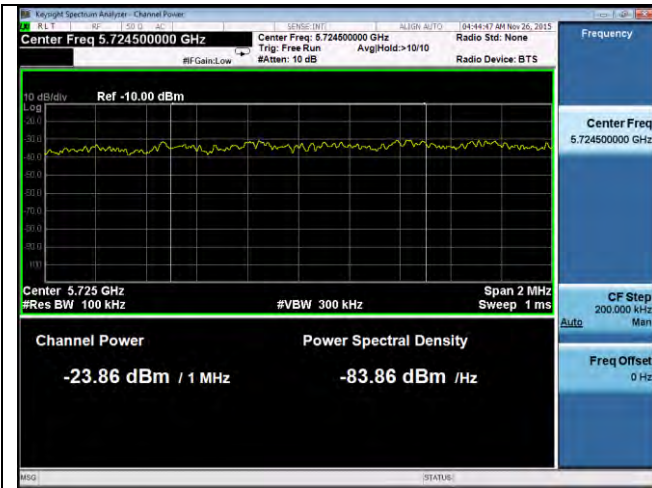
**Band Edge -802.11ac-80M-5210M-chain3 (Right)**



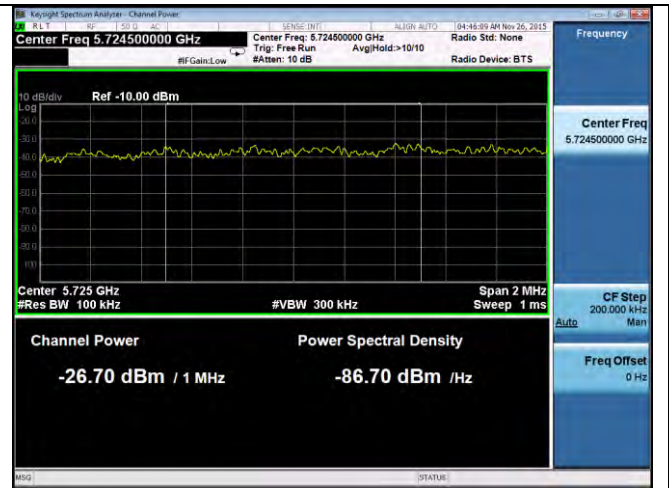
**Band Edge -802.11ac-80M-5210M-chain4 (Right)**



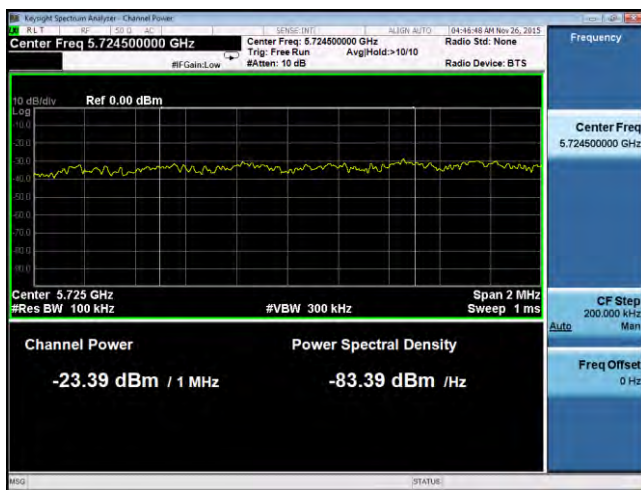
**5.8GHz band: (10MHz offset)**



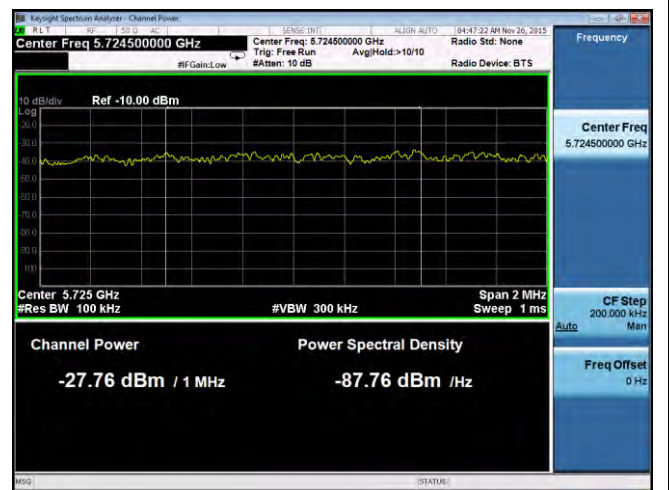
**Band Edge -802.11a-5745M-chain1**



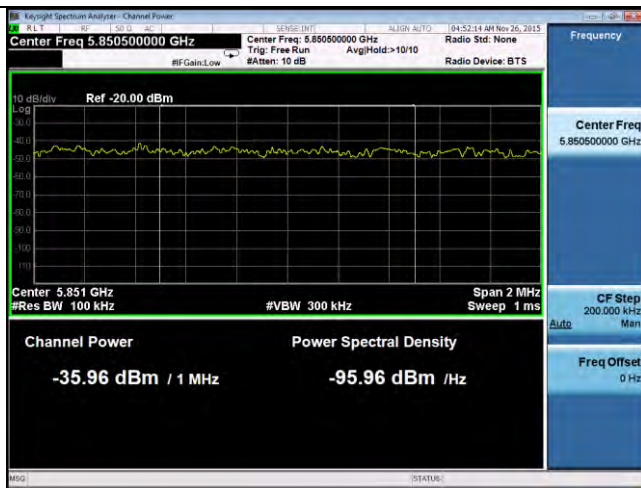
**Band Edge -802.11a-5745M-chain2**



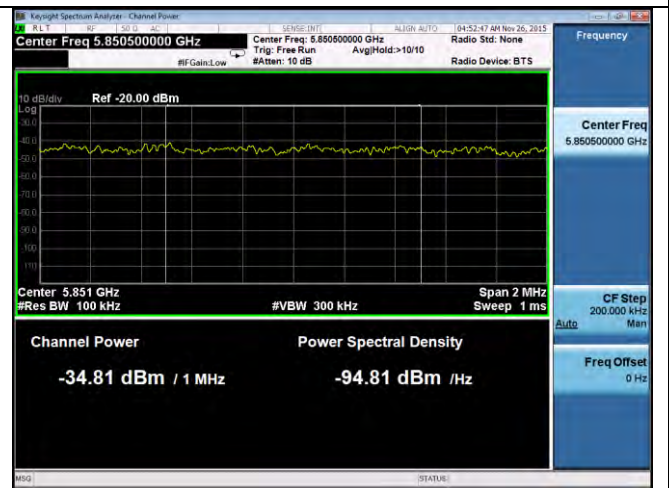
**Band Edge -802.11a-5745M-chain3**



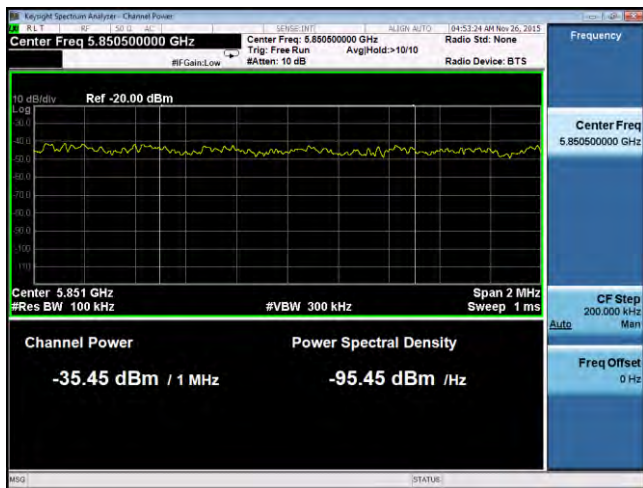
**Band Edge -802.11a-5745M-chain4**



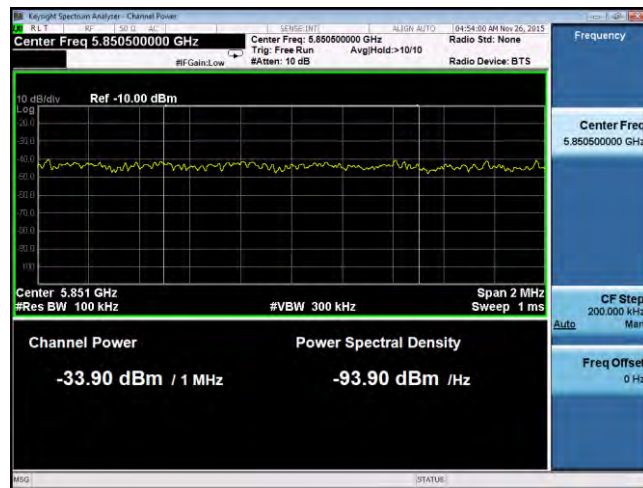
**Band Edge -802.11a-5785M-chain1**



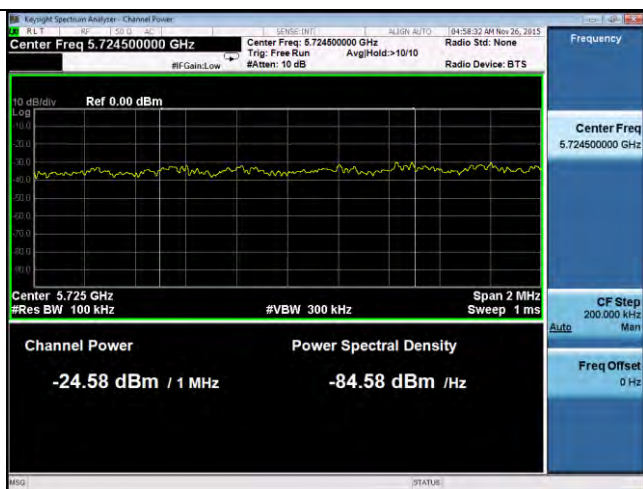
**Band Edge -802.11a-5785M-chain2**



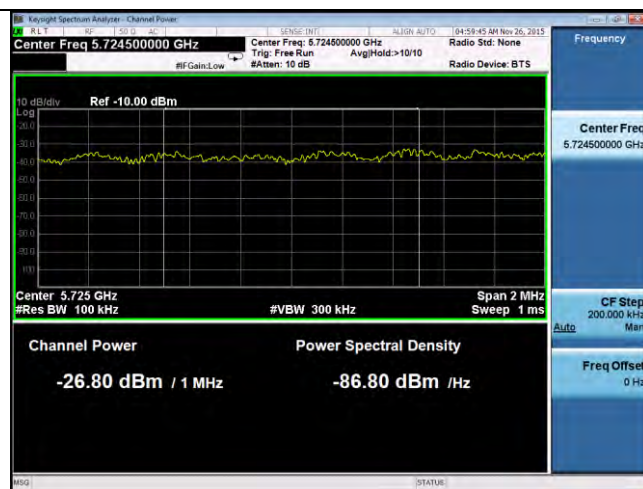
Band Edge -802.11a-5785M-chain3



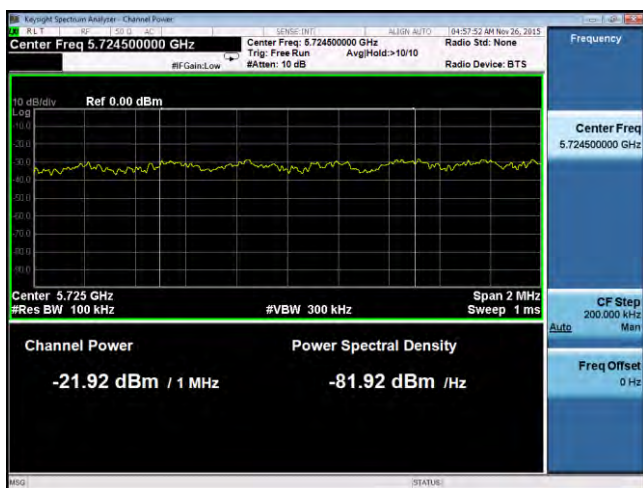
Band Edge -802.11a-5785M-chain4



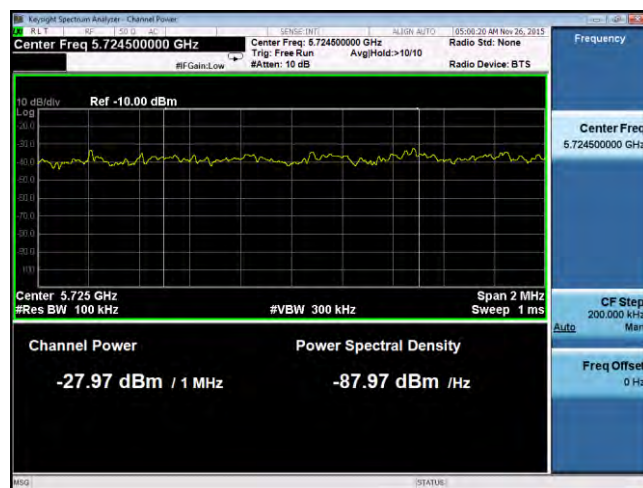
Band Edge -802.11n-20M -5745M-chain1



Band Edge -802.11n-20M -5745M-chain2

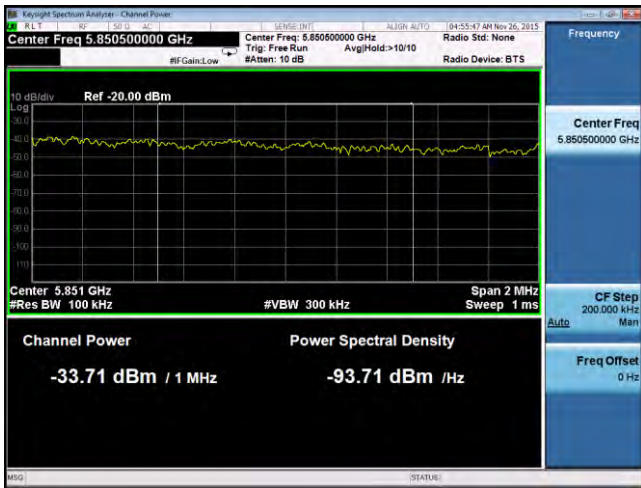


Band Edge -802.11n-20M -5745M-chain3

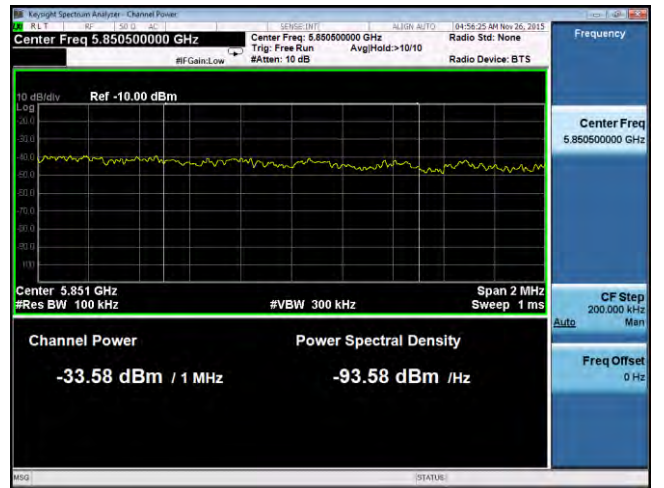


Band Edge -802.11n-20M -5745M-chain4

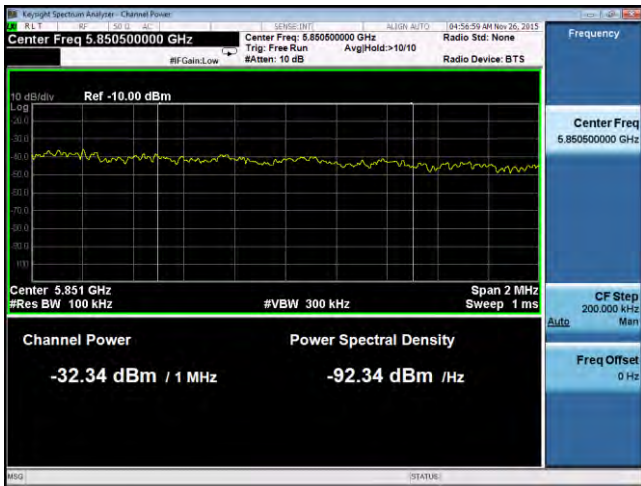




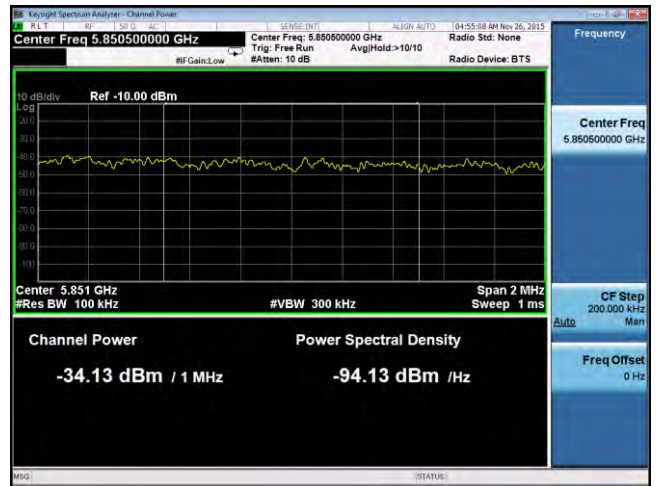
**Band Edge -802.11n-20M-5825M-chain1**



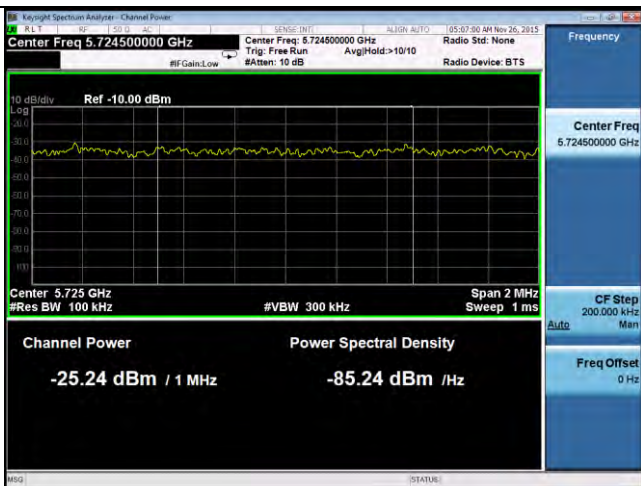
**Band Edge -802.11n-20M-5825M-chain2**



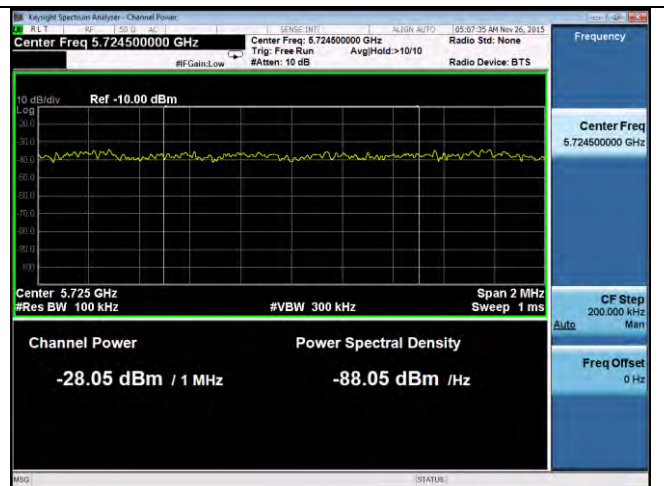
**Band Edge -802.11n-20M-5825M-chain3**



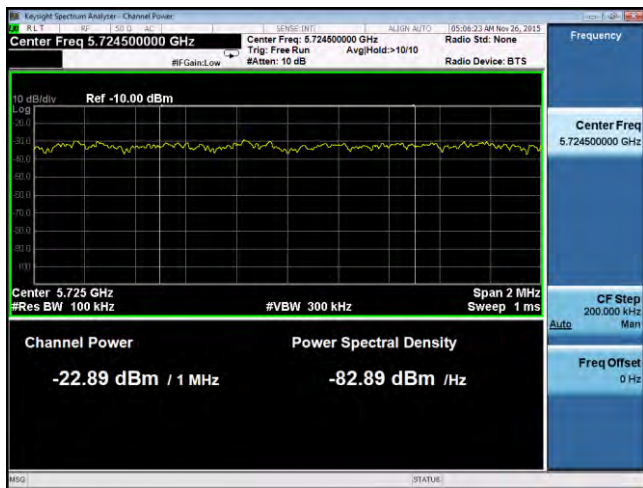
**Band Edge -802.11n-20M-5825M-chain4**



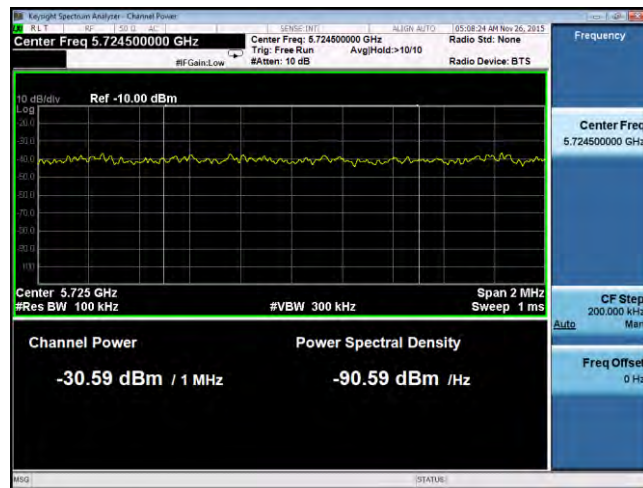
**Band Edge -802.11n-40M-5755M-chain1**



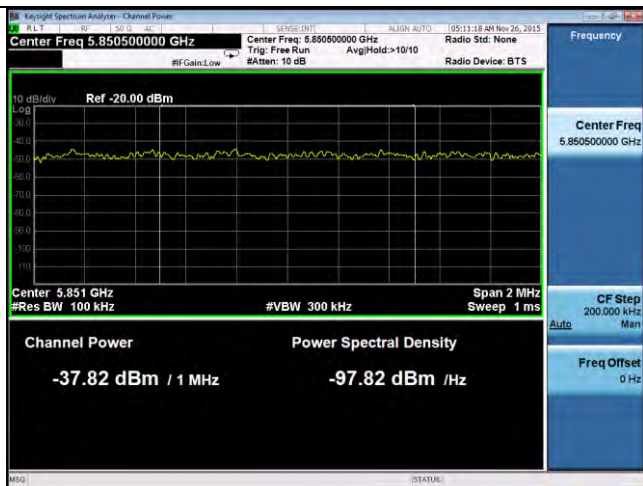
**Band Edge -802.11n-40M-5755M-chain2**



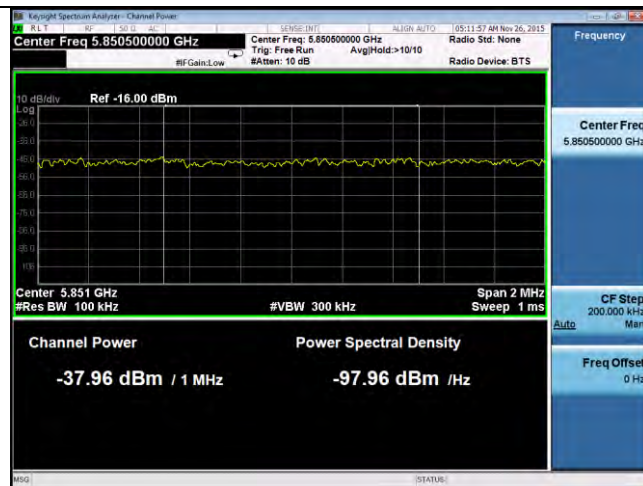
**Band Edge -802.11n-40M-5755M-chain3**



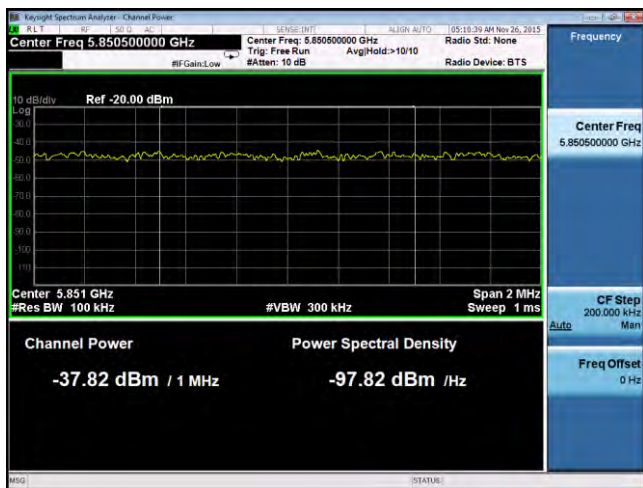
**Band Edge -802.11n-40M-5755M-chain4**



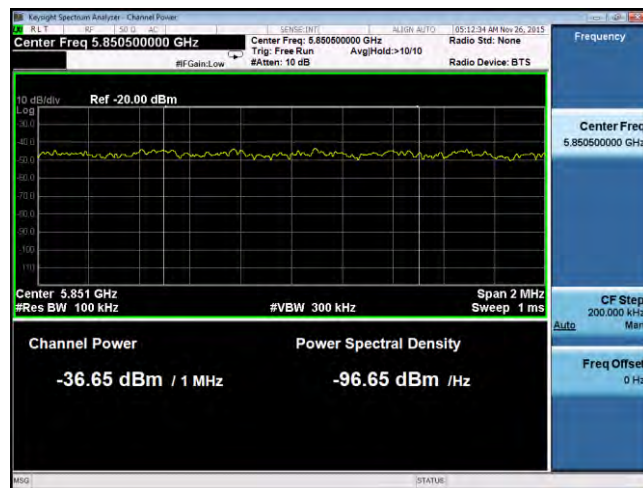
**Band Edge -802.11n-40M-5795M-chain1**



**Band Edge -802.11n-40M-5795M-chain2**

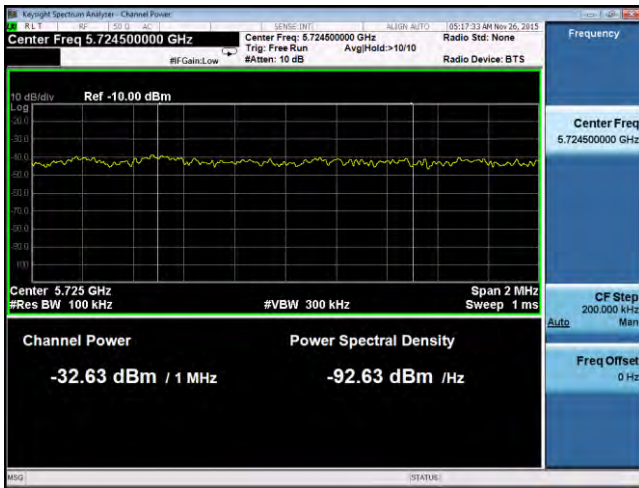


**Band Edge -802.11n-40M-5795M-chain3**

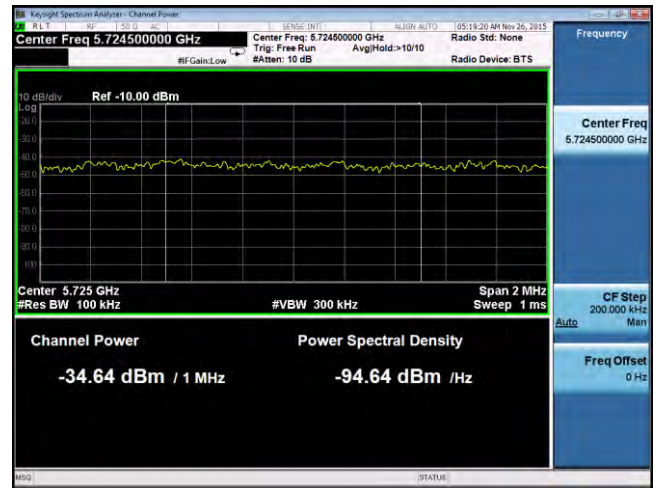


**Band Edge -802.11n-40M-5795M-chain4**

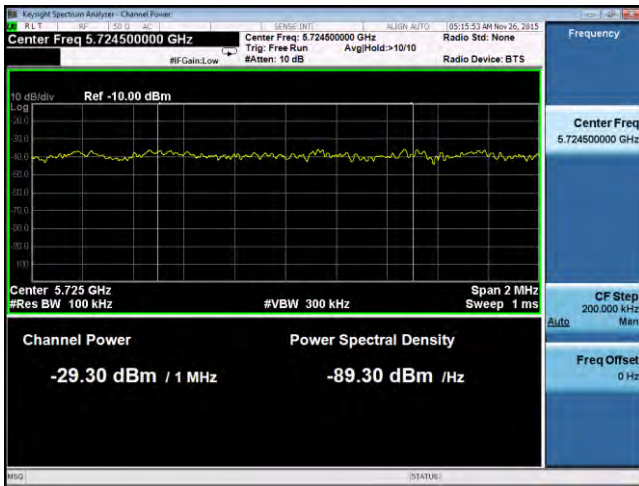




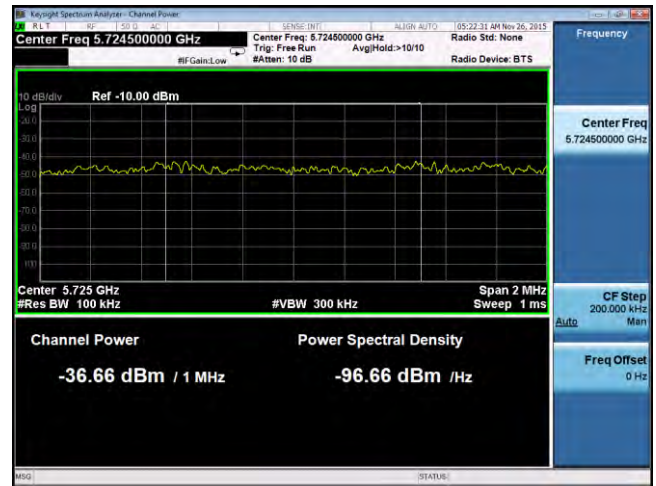
Band Edge -802.11ac-80M-5775M-chain1 (Left)



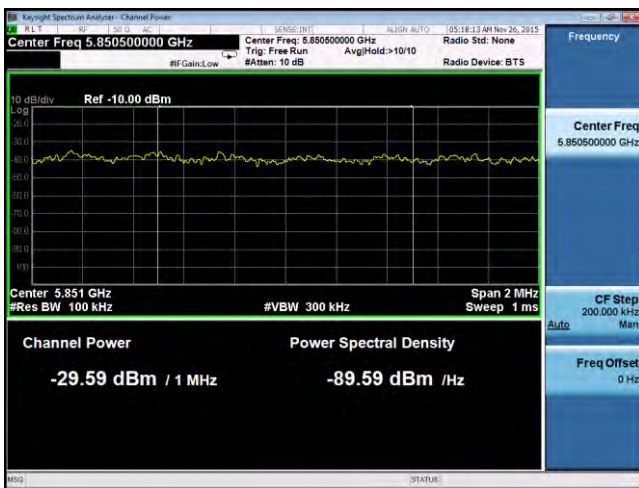
Band Edge -802.11ac-80M-5775M-chain2 (Left)



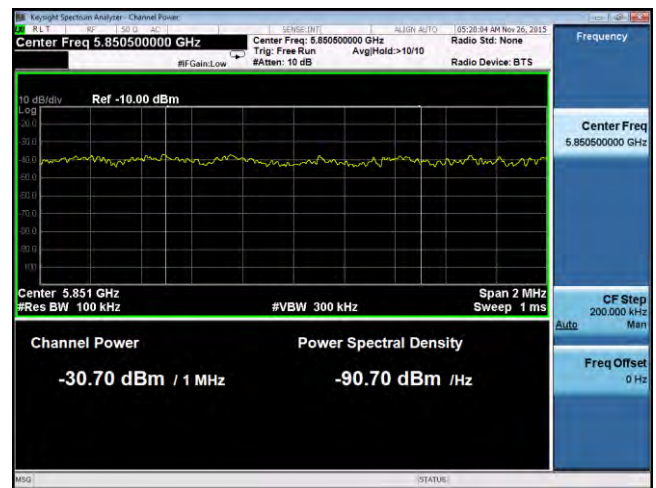
Band Edge -802.11ac-80M-5775M-chain3 (Left)



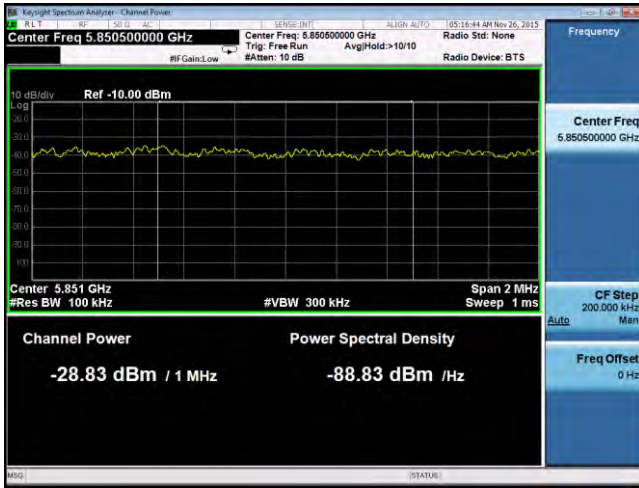
Band Edge -802.11ac-80M-5775M-chain4 (Left)



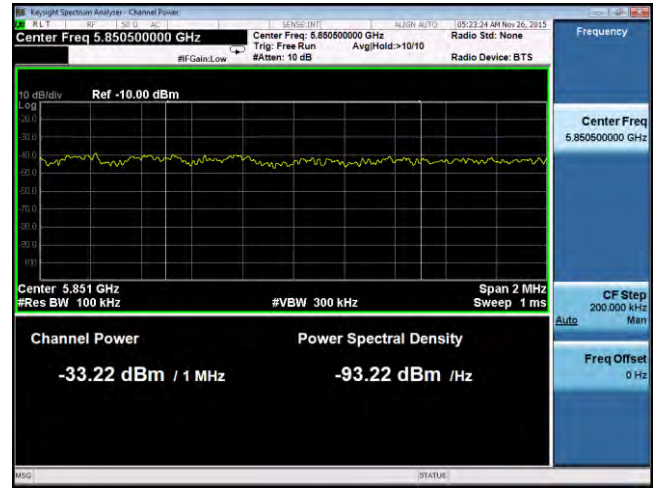
Band Edge -802.11ac-80M-5775M-chain1 (Right)



Band Edge -802.11ac-80M-5775M-chain2 (Right)



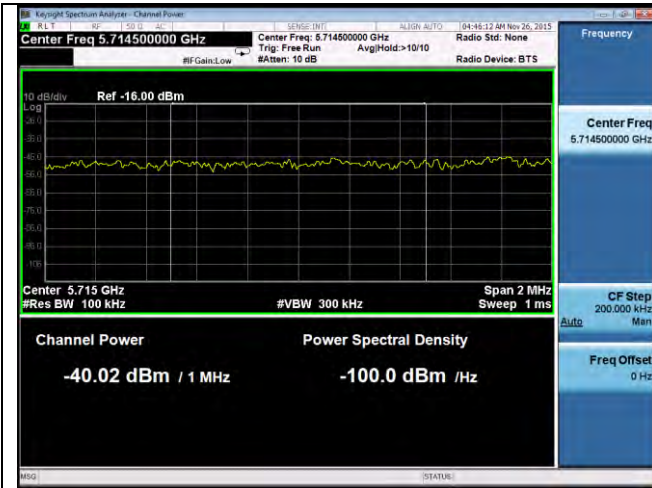
**Band Edge -802.11ac-80M-5775M-chain3 (Right)**



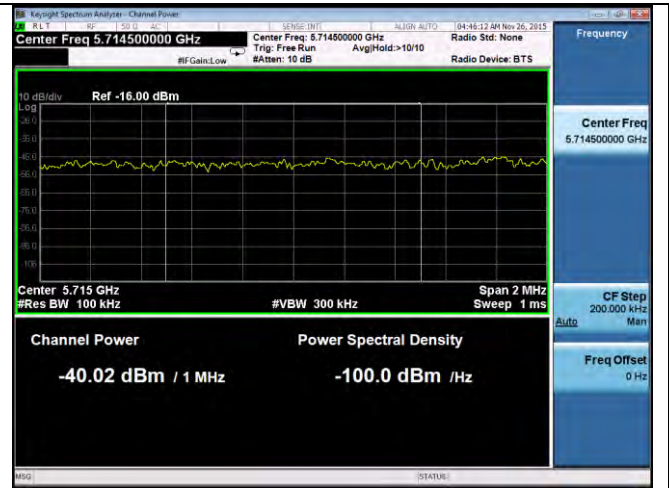
**Band Edge -802.11ac-80M-5775M-chain4 (Right)**



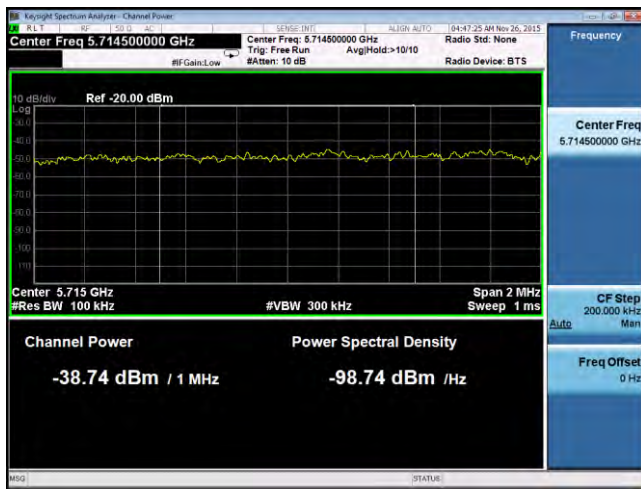
5.8GHz band: (20MHz offset)



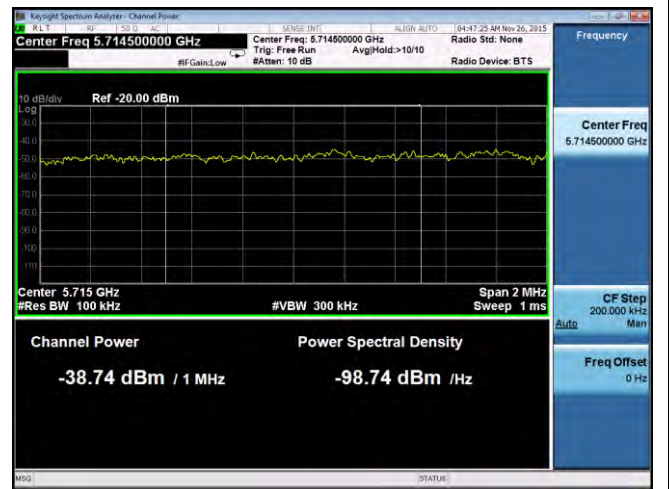
Band Edge -802.11a-5745M-chain1



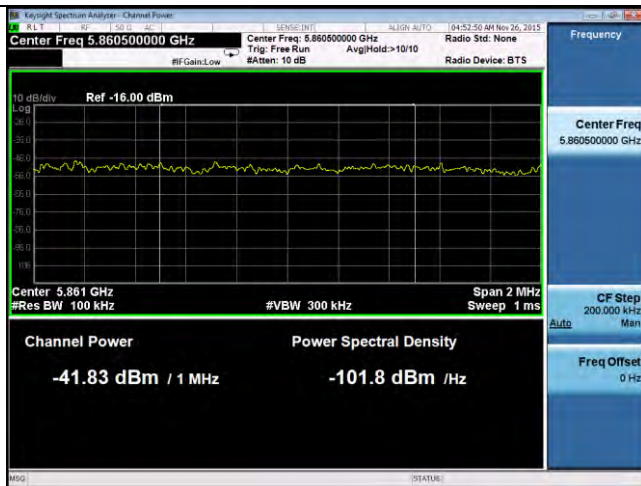
Band Edge -802.11a-5745M-chain2



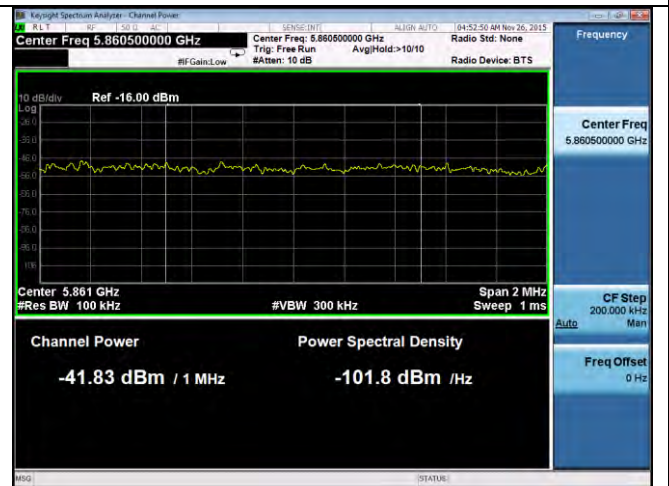
Band Edge -802.11a-5745M-chain3



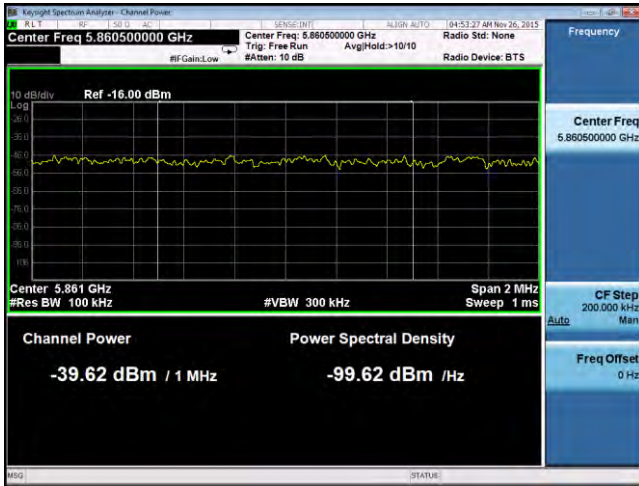
Band Edge -802.11a-5745M-chain4



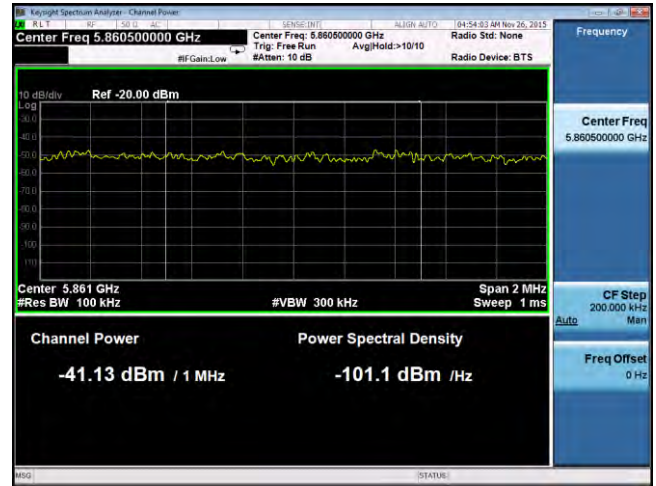
Band Edge -802.11a-5785M-chain1



Band Edge -802.11a-5785M-chain2

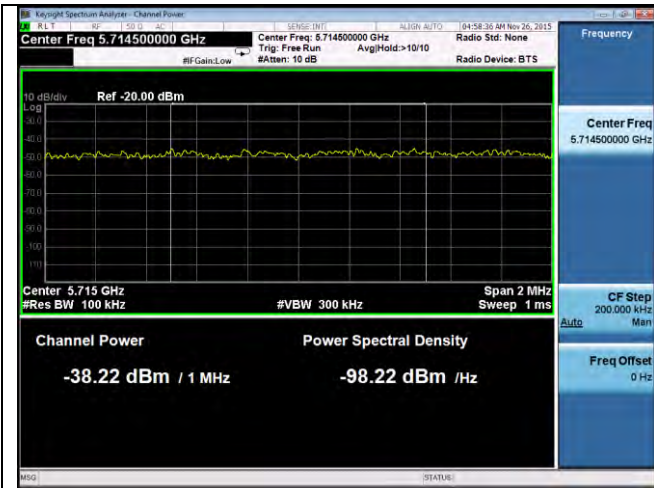


Band Edge -802.11a-5785M-chain3

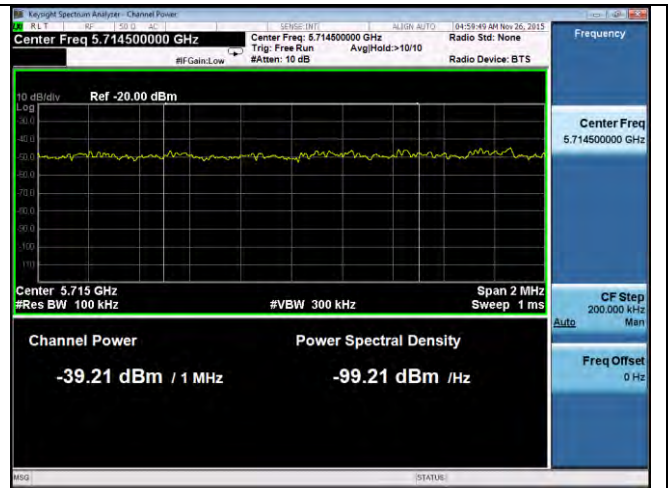


Band Edge -802.11a-5785M-chain4

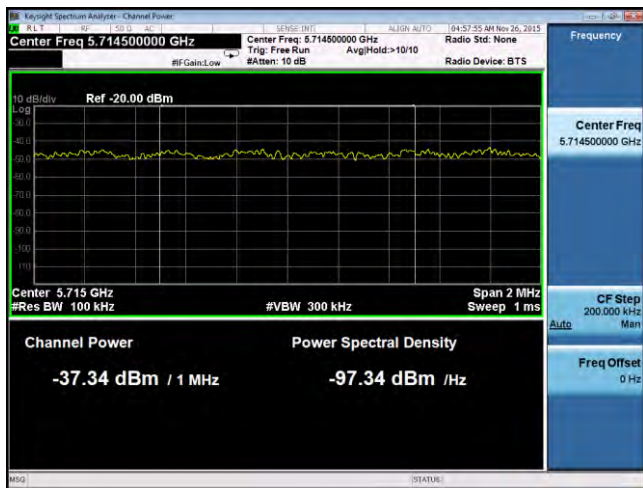




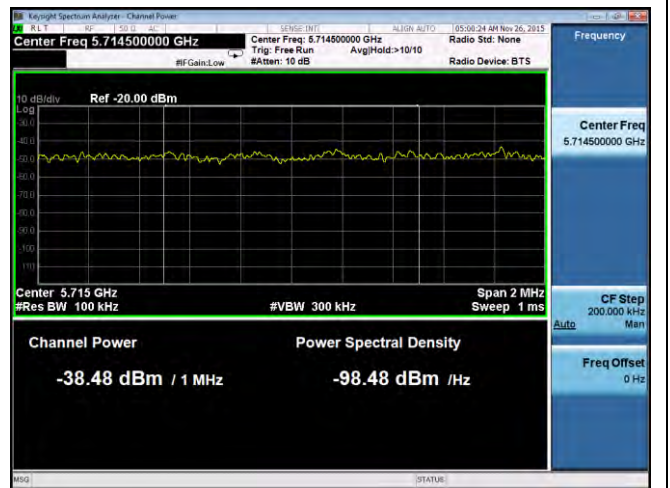
**Band Edge -802.11n-20M -5745M-chain1**



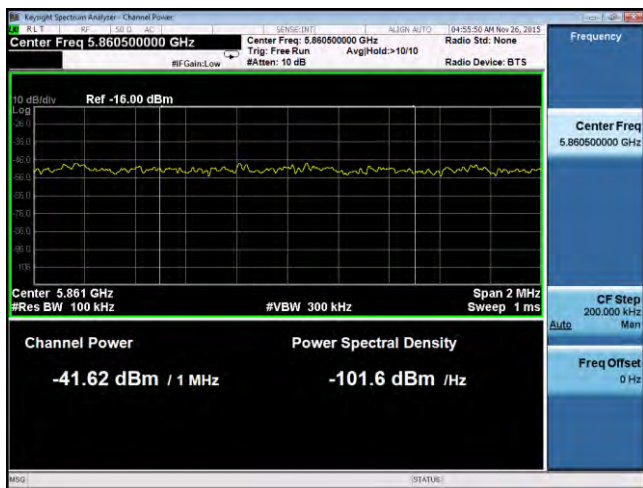
**Band Edge -802.11n-20M -5745M-chain2**



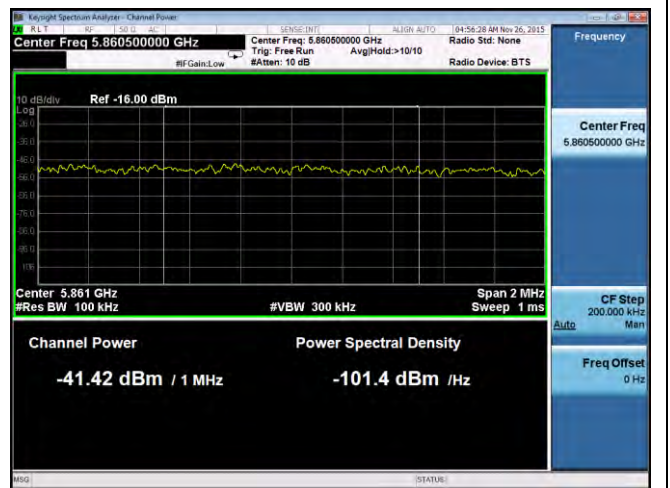
**Band Edge -802.11n-20M -5745M-chain3**



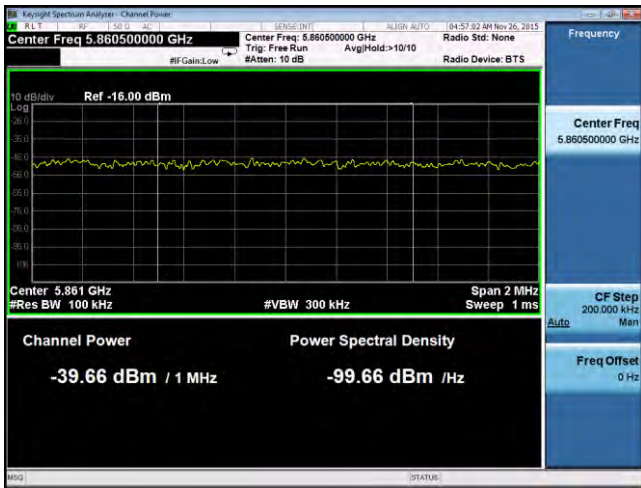
**Band Edge -802.11n-20M -5745M-chain4**



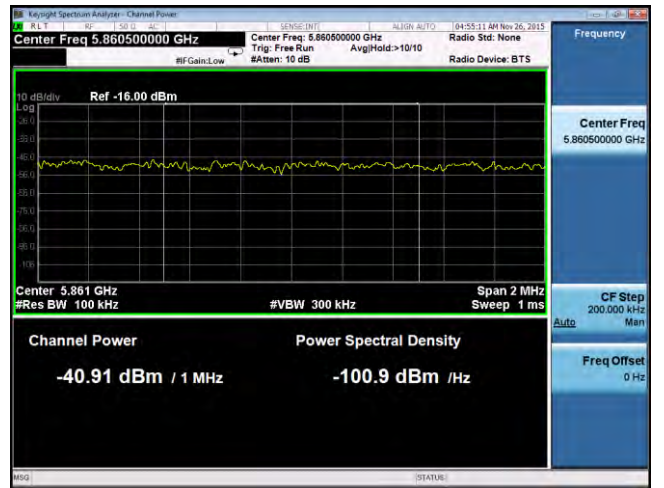
**Band Edge -802.11n-20M-5825M-chain1**



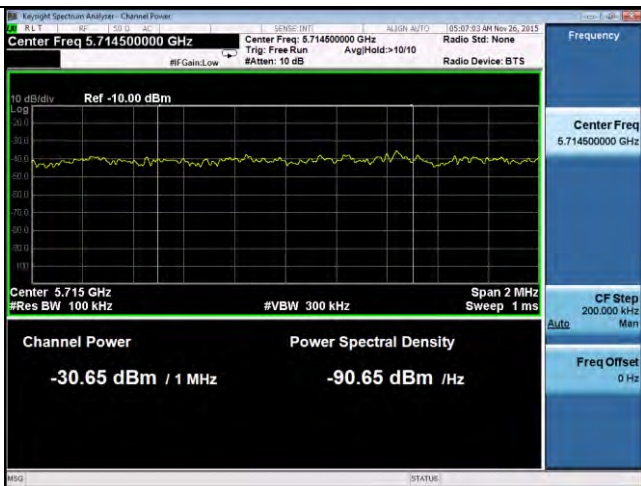
**Band Edge -802.11n-20M-5825M-chain2**



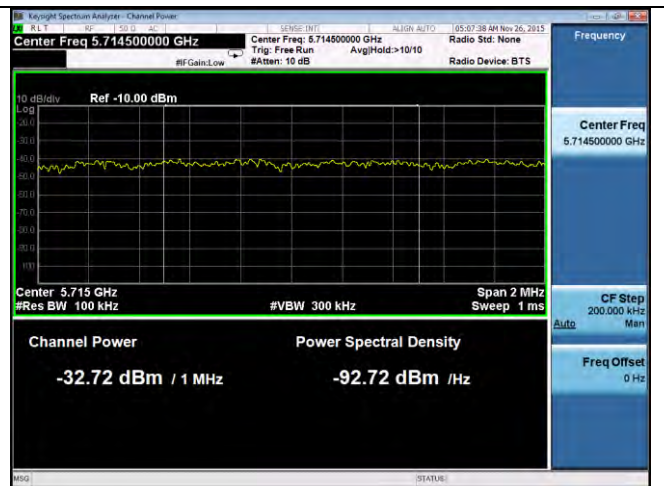
**Band Edge -802.11n-20M-5825M-chain3**



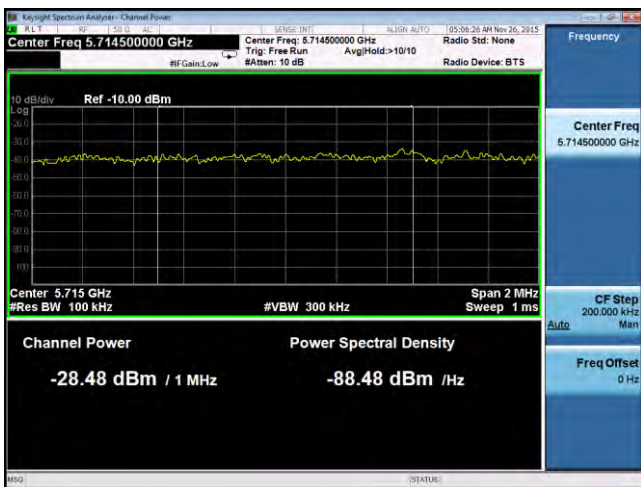
**Band Edge -802.11n-20M-5825M-chain4**



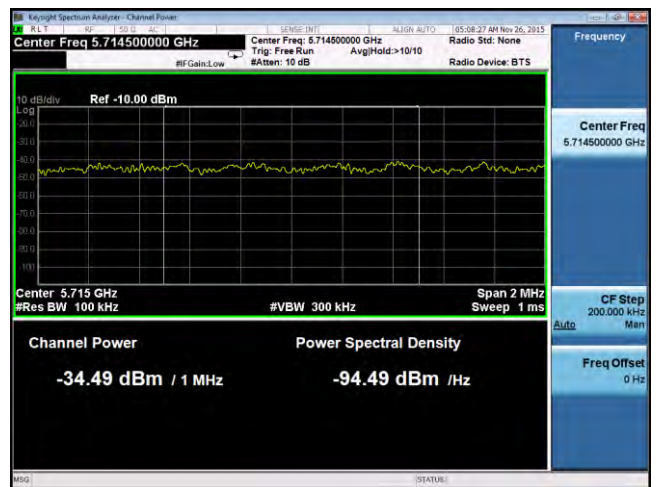
**Band Edge -802.11n-40M-5755M-chain1**



**Band Edge -802.11n-40M-5755M-chain2**

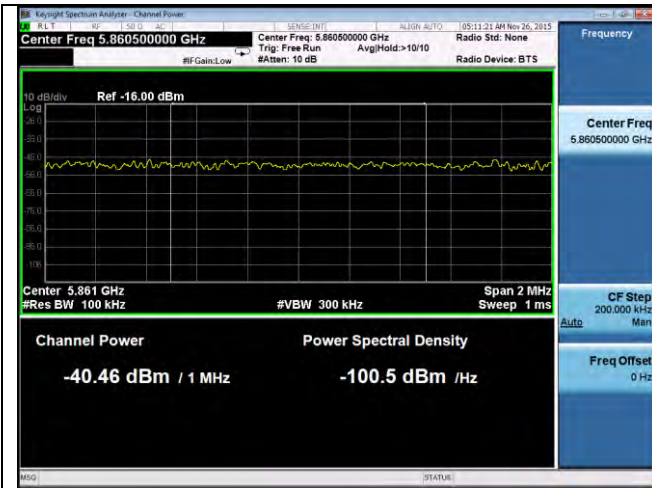


**Band Edge -802.11n-40M-5755M-chain3**

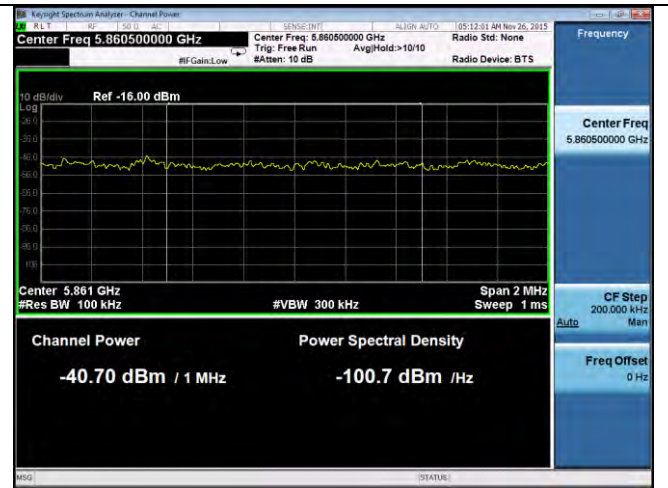


**Band Edge -802.11n-40M-5755M-chain4**

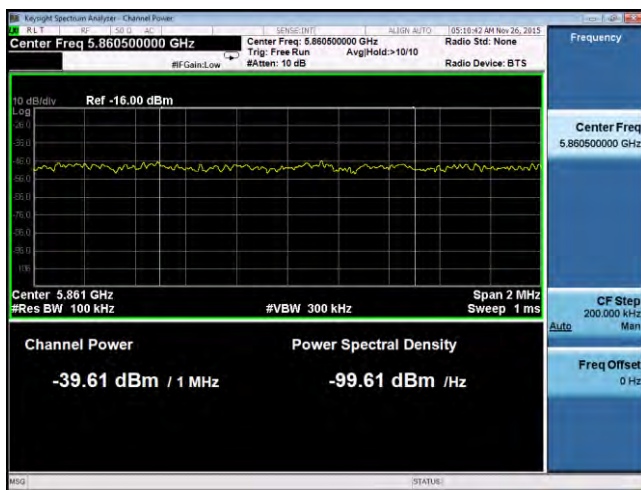




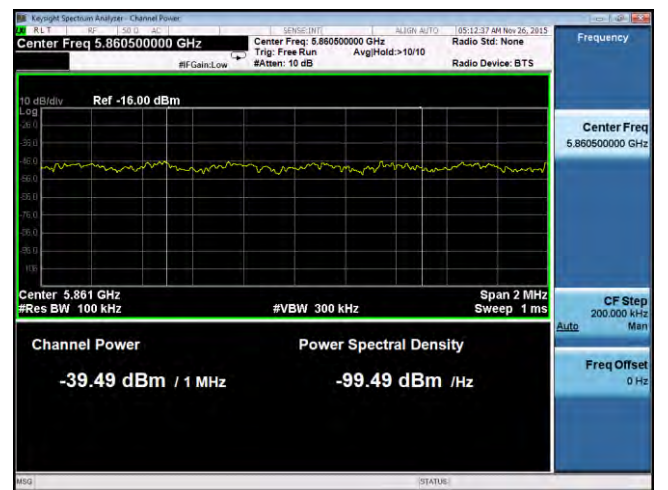
**Band Edge -802.11n-40M-5795M-chain1**



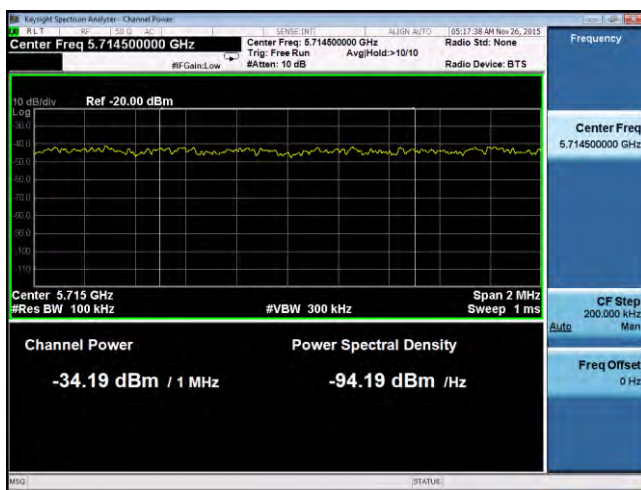
**Band Edge -802.11n-40M-5795M-chain2**



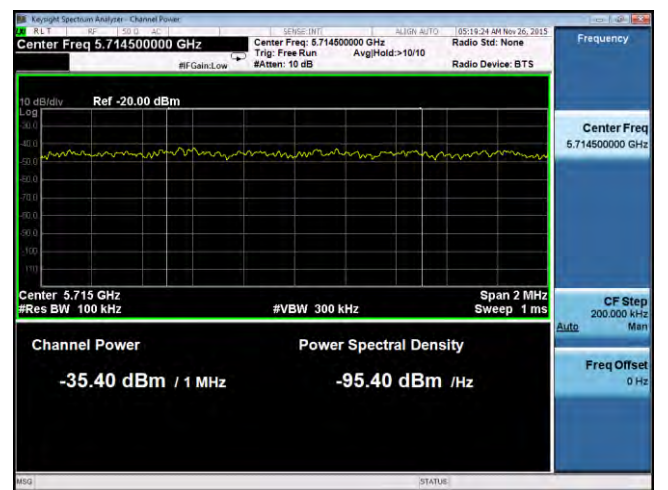
**Band Edge -802.11n-40M-5795M-chain3**



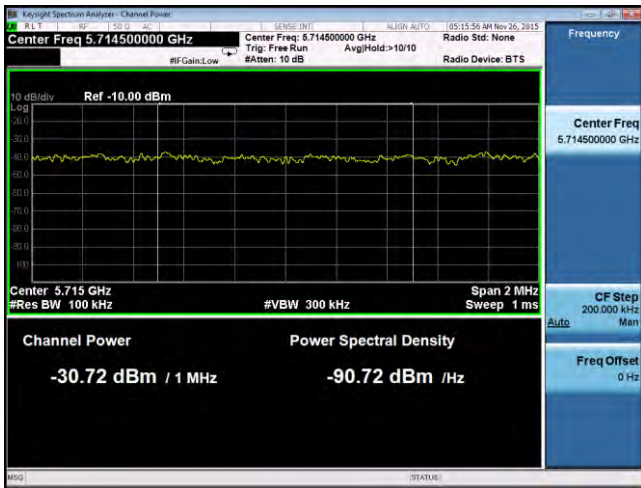
**Band Edge -802.11n-40M-5795M-chain4**



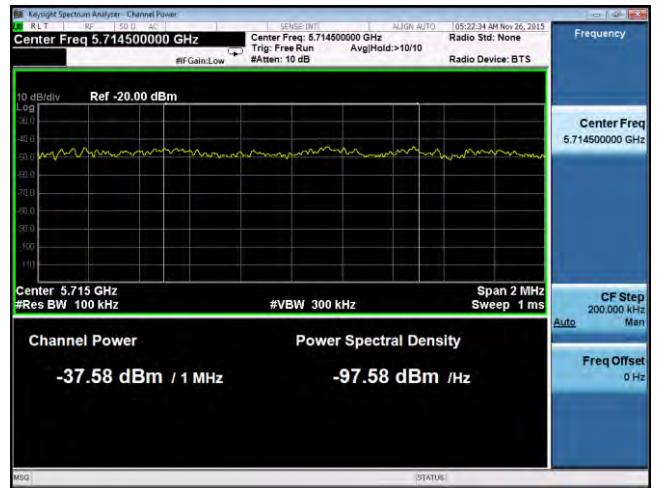
**Band Edge -802.11ac-80M-5775M-chain1 (Left)**



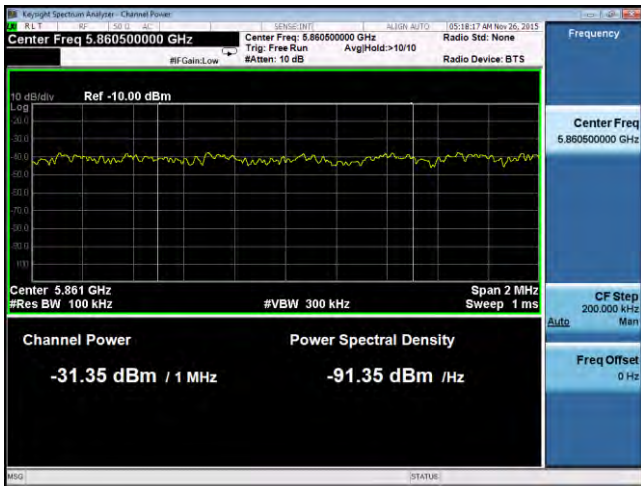
**Band Edge -802.11ac-80M-5775M-chain2 (Left)**



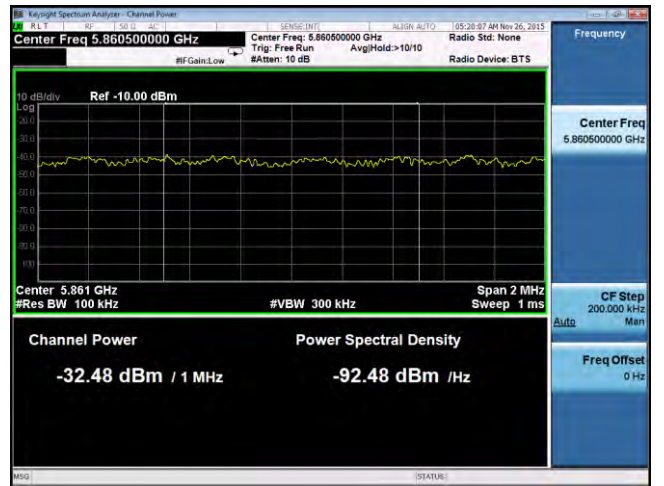
Band Edge -802.11ac-80M-5775M-chain3 (Left)



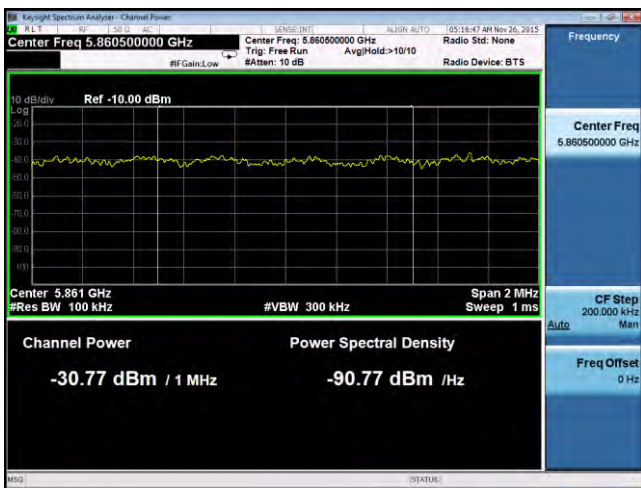
Band Edge -802.11ac-80M-5775M-chain4 (Left)



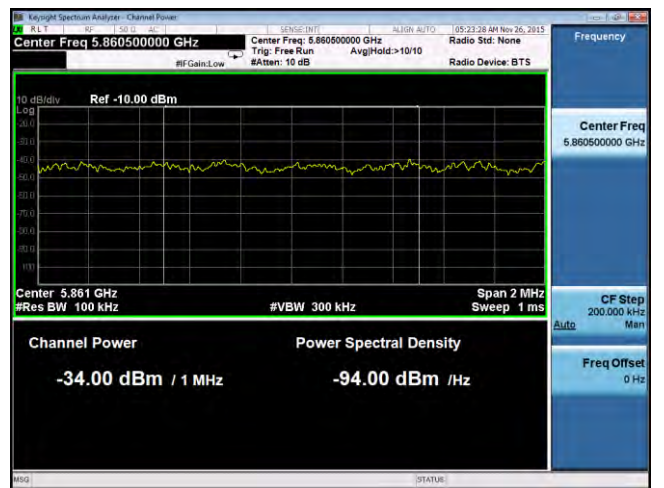
Band Edge -802.11ac-80M-5775M-chain1 (Right)



Band Edge -802.11ac-80M-5775M-chain2 (Right)



Band Edge -802.11ac-80M-5775M-chain3 (Right)



Band Edge -802.11ac-80M-5775M-chain4 (Right)



## 10.6 Radiated Spurious Emissions below 1GHz

### Requirement(s):

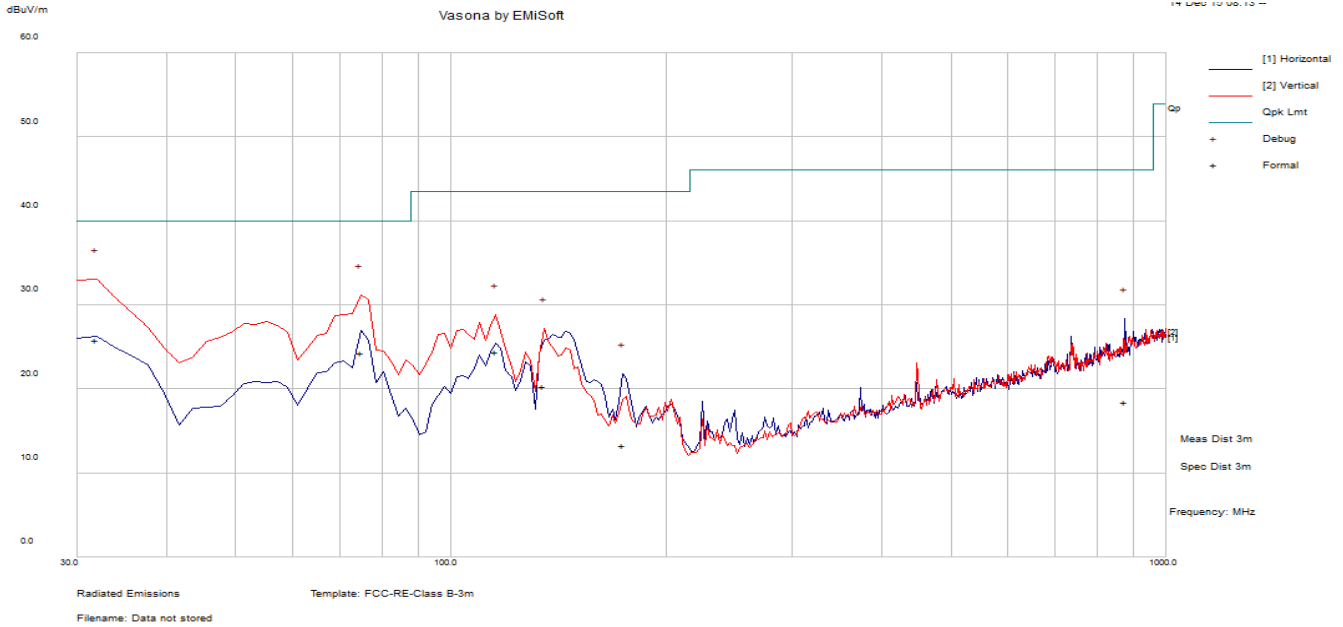
| Spec                              | Requirement  | Applicable            |                       |         |     |          |     |         |     |           |     |   |
|-----------------------------------|--|-----------------------|-----------------------|---------|-----|----------|-----|---------|-----|-----------|-----|---|
| 47CFR§<br>15.407(b)<br>15.209 (a) | <p>Except higher limit as specified elsewhere in other section, the emissions from the low-power radio-frequency devices shall not exceed the field strength levels specified in the following table and the level of any unwanted emissions shall not exceed the level of the fundamental emission. The tighter limit applies at the band edges</p> <table border="1"> <thead> <tr> <th>Frequency range (MHz)</th> <th>Field Strength (uV/m)</th> </tr> </thead> <tbody> <tr> <td>30 – 88</td> <td>100</td> </tr> <tr> <td>88 – 216</td> <td>150</td> </tr> <tr> <td>216 960</td> <td>200</td> </tr> <tr> <td>Above 960</td> <td>500</td> </tr> </tbody> </table>   | Frequency range (MHz) | Field Strength (uV/m) | 30 – 88 | 100 | 88 – 216 | 150 | 216 960 | 200 | Above 960 | 500 | ☒ |
| Frequency range (MHz)             | Field Strength (uV/m)  |                       |                       |         |     |          |     |         |     |           |     |   |
| 30 – 88                           | 100  |                       |                       |         |     |          |     |         |     |           |     |   |
| 88 – 216                          | 150  |                       |                       |         |     |          |     |         |     |           |     |   |
| 216 960                           | 200  |                       |                       |         |     |          |     |         |     |           |     |   |
| Above 960                         | 500  |                       |                       |         |     |          |     |         |     |           |     |   |
| Test Setup                        |  |                       |                       |         |     |          |     |         |     |           |     |   |
| Procedure                         | <ol style="list-style-type: none"> <li>The EUT was switched on and allowed to warm up to its normal operating condition.</li> <li>The test was carried out at the selected frequency points obtained from the EUT characterisation. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner: <ol style="list-style-type: none"> <li>Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen.</li> <li>The EUT was then rotated to the direction that gave the maximum emission.</li> <li>Finally, the antenna height was adjusted to the height that gave the maximum emission.</li> </ol> </li> <li>A Quasi-peak measurement was then made for that frequency point.</li> <li>Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.</li> </ol> |                       |                       |         |     |          |     |         |     |           |     |   |
| Remark                            | The EUT was scanned up to 1GHz. Both horizontal and vertical polarities were investigated. The results show only the worst case.   |                       |                       |         |     |          |     |         |     |           |     |   |
| Result                            | ☒ Pass      ☐ Fail   |                       |                       |         |     |          |     |         |     |           |     |   |

**Test Data**    ☒ Yes (See below)      ☐ N/A

**Test Plot**    ☒ Yes (See below)      ☐ N/A

### Radiated Emission Test Results (Below 1GHz)

|                           |                     |      |  |        |      |
|---------------------------|---------------------|------|--|--------|------|
| Test specification        | below 1GHz          |      |  | Result | Pass |
| Environmental Conditions: | Temp (°C):          | 26.1 |  |        |      |
|                           | Humidity (%):       | 47.5 |  |        |      |
|                           | Atmospheric (mbar): | 1020 |  |        |      |
| Mains Power:              | 120VAC, 60Hz        |      |  |        |      |
| Tested by:                | Gary Chou           |      |  |        |      |
| Test Date:                | 11/29/2015          |      |  |        |      |
| Remarks:                  | N/A                 |      |  |        |      |



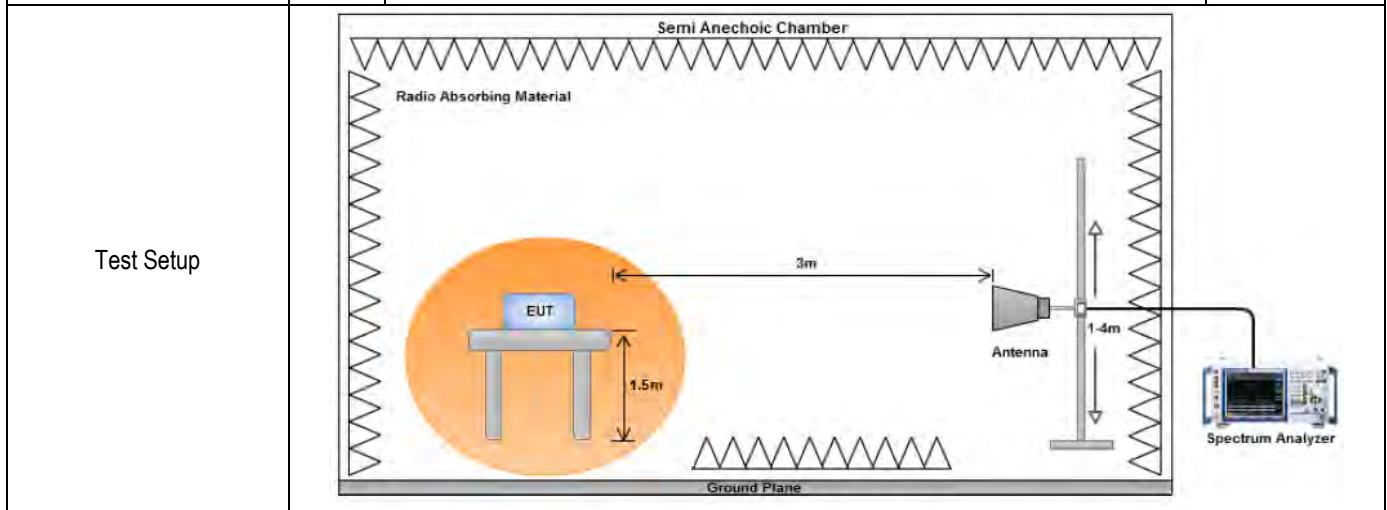
| Frequency MHz | Raw dBuV | Cable Loss | AF dB  | Level dBuV/m | Measurement Type | Po l | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|--------|--------------|------------------|------|--------|---------|--------------|-----------|------------|
| 31.85         | 41.1     | 0.82       | -16.09 | 25.82        | Quasi Max        | V    | 104    | 148     | 40           | -14.18    | Pass       |
| 74.94         | 53.25    | 1.37       | -30.35 | 24.27        | Quasi Max        | V    | 122    | 220     | 40           | -15.73    | Pass       |
| 115.58        | 47.83    | 1.76       | -25.13 | 24.47        | Quasi Max        | V    | 110    | 175     | 43.52        | -19.05    | Pass       |
| 134.85        | 43.29    | 1.92       | -24.88 | 20.32        | Quasi Max        | V    | 133    | 213     | 43.52        | -23.2     | Pass       |
| 875.37        | 29.55    | 5.33       | -16.39 | 18.49        | Quasi Max        | H    | 197    | 344     | 46.02        | -27.53    | Pass       |
| 173.75        | 38.4     | 2.24       | -27.37 | 13.26        | Quasi Max        | H    | 129    | 67      | 43.52        | -30.26    | Pass       |

Note: Both horizontal and vertical polarities were investigated. The results above show only the worst case.

## 10.7 Radiated Spurious Emissions above 1GHz

### Requirement(s):

| Spec                                    | Item | Requirement  | Applicable                          |
|---|------|--|-------------------------------------|
| 47CFR§<br>15.407(b)(2),<br>15.407(b)(6) | (1)  | For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.   | <input checked="" type="checkbox"/> |
|   | (2)  | For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band. | <input type="checkbox"/>            |
|   | (3)  | For transmitters operating in the 5.47-5.725 GHz band: all emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.   | <input type="checkbox"/>            |
|   | (4)  | For transmitters operating in the 5.725-5.825 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an EIRP of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an EIRP of -27 dBm/MHz.   | <input checked="" type="checkbox"/> |
|   | (5)  | Restricted band, emission must also comply with the radiated emission limits specified in 15.209   | <input checked="" type="checkbox"/> |



|           |   |
|-----------|---|
| Procedure | <ol style="list-style-type: none"> <li>1. The EUT was switched on and allowed to warm up to its normal operating condition.</li> <li>2. The test was carried out at the selected frequency points obtained from the EUT characterisation. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner: <ol style="list-style-type: none"> <li>a. Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen.</li> <li>b. The EUT was then rotated to the direction that gave the maximum emission.</li> <li>c. Finally, the antenna height was adjusted to the height that gave the maximum emission.</li> </ol> </li> <li>3. An average measurement was then made for that frequency point.</li> <li>4. Steps 2 and 3 were repeated for the next frequency point, until all selected frequency points were measured.</li> </ol> |
|-----------|---|

|        |   |
|--------|---|
| Remark | The EUT was scanned up to 40GHz. Both horizontal and vertical polarities were investigated. The results show only the worst case. |
|--------|---|

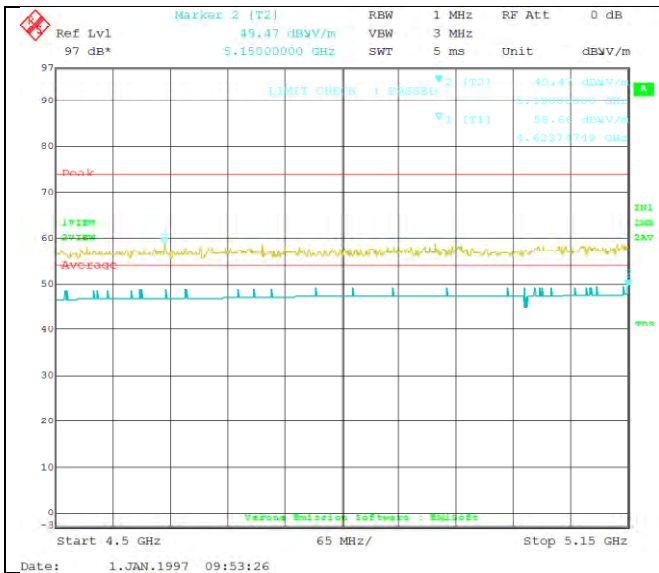
|        |  |
|--------|--|
| Result | <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail |
|--------|--|

**Test Data**    Yes (See below)       N/A

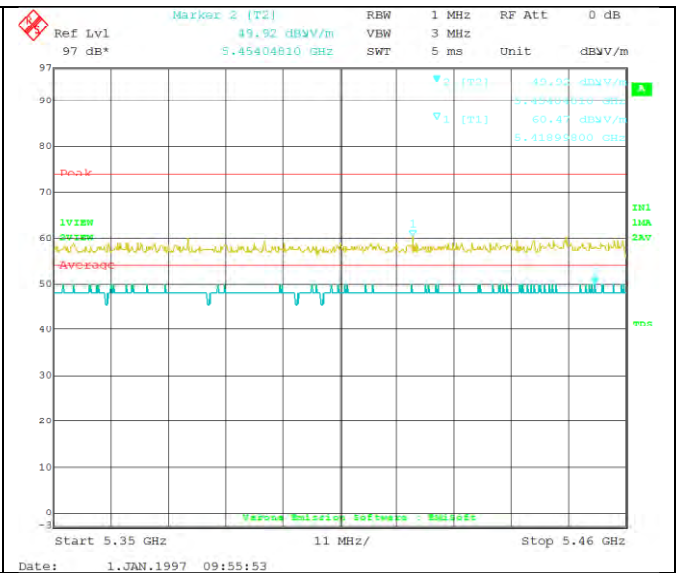
**Test Plot**    Yes (See below)       N/A



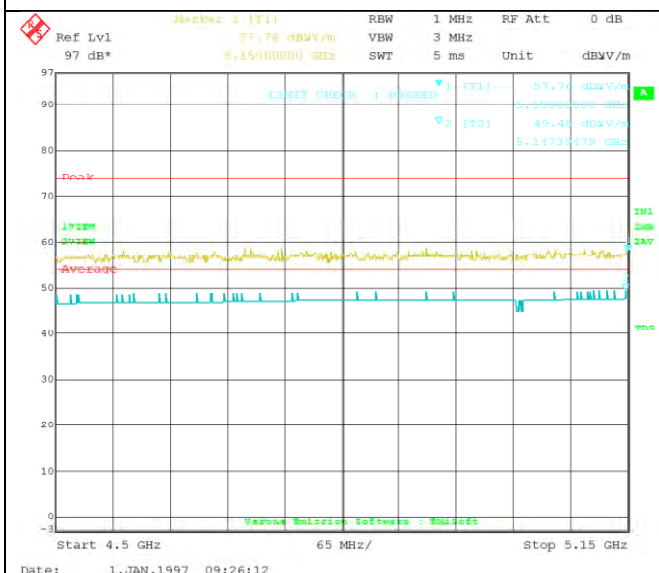
**Radiated Restricted band and Band Edge Measurement Plots:**



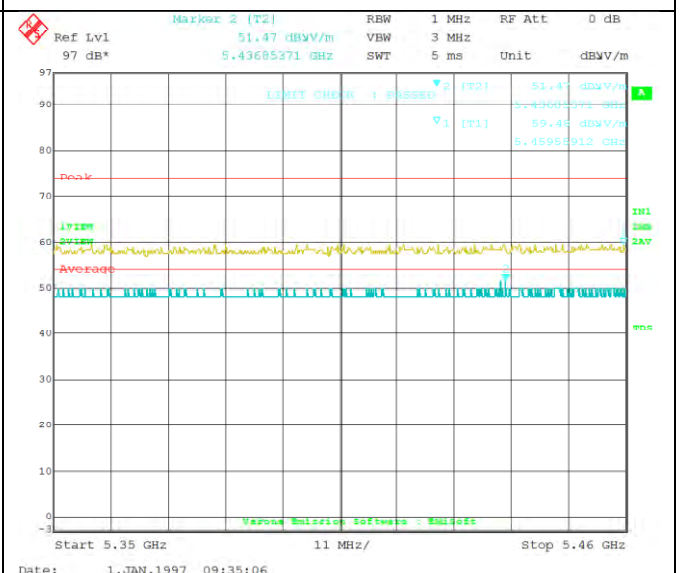
**802.11a 5180M**



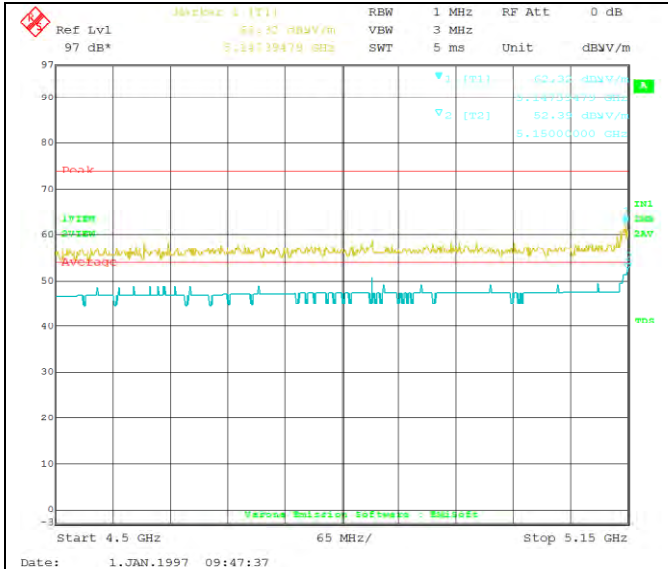
**802.11a 5240M**



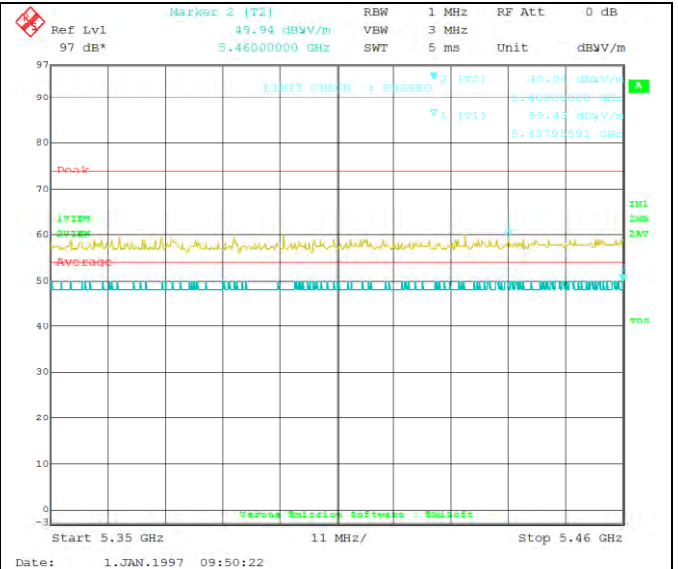
**802.11n-HT20 5180M**



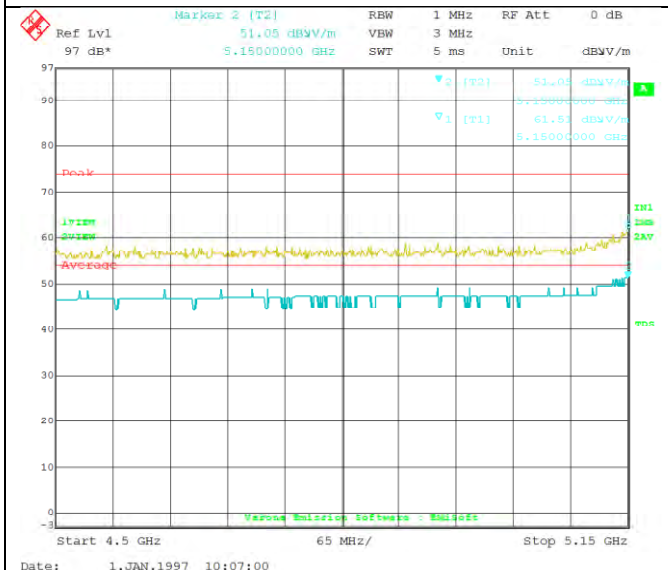
**802.11n-HT20 5240M**



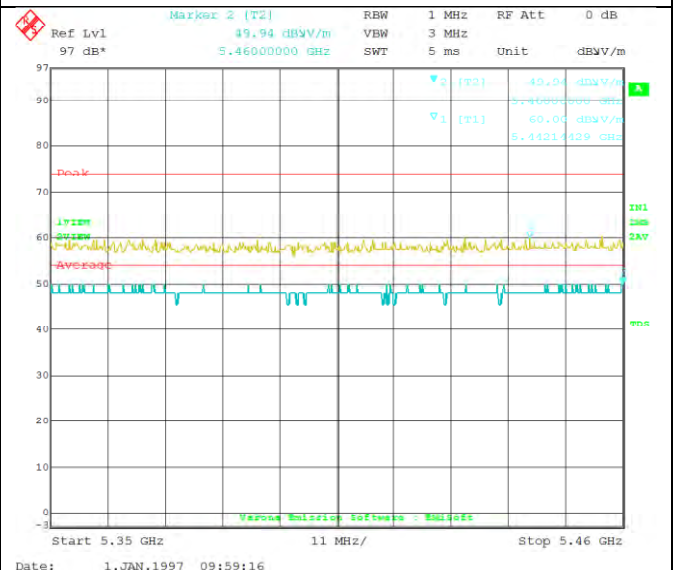
**802.11n-HT40 5190M**



**802.11n-HT40 5230M**



**802.1ac-VHT80 5210M(4500-5150MHz)**



**802.1ac-VHT80 5210M(5320-5460MHz)**

## Radiated Emission Test Results (Above 1GHz)

W52 band:

Above 1GHz-40GHz – 802.11a – 5180MHz

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 4111.96       | 37.58    | 8.78       | 15.26 | 61.63        | Peak Max         | H   | 163    | 127     | 74           | -12.37    | Pass       |
| 6153.79       | 37.08    | 10.67      | 14.22 | 61.97        | Peak Max         | H   | 147    | 136     | 74           | -12.03    | Pass       |
| 1000.00       | 35.29    | 3.35       | 13.2  | 51.84        | Peak Max         | H   | 156    | 177     | 74           | -22.16    | Pass       |
| 4111.96       | 26.11    | 8.78       | 15.26 | 50.15        | Average Max      | H   | 163    | 127     | 54           | -3.85     | Pass       |
| 6153.79       | 25.54    | 10.67      | 14.22 | 50.44        | Average Max      | H   | 147    | 136     | 54           | -3.57     | Pass       |
| 1000.00       | 31.89    | 3.35       | 13.2  | 48.44        | Average Max      | H   | 156    | 177     | 54           | -5.56     | Pass       |

Above 1GHz-40GHz – 802.11a – 5200MHz

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 4208.37       | 38.04    | 9.02       | 14.84 | 61.91        | Peak Max         | H   | 210    | 124     | 74           | -12.09    | Pass       |
| 6162.44       | 36.99    | 10.68      | 14.2  | 61.87        | Peak Max         | V   | 118    | 10      | 74           | -12.13    | Pass       |
| 1020.07       | 42.95    | 3.38       | 13.17 | 59.5         | Peak Max         | V   | 199    | 152     | 74           | -14.5     | Pass       |
| 4208.37       | 26.37    | 9.02       | 14.84 | 50.23        | Average Max      | H   | 210    | 124     | 54           | -3.77     | Pass       |
| 6162.44       | 25.46    | 10.68      | 14.2  | 50.34        | Average Max      | V   | 118    | 10      | 54           | -3.66     | Pass       |
| 1020.07       | 31.68    | 3.38       | 13.17 | 48.22        | Average Max      | V   | 199    | 152     | 54           | -5.78     | Pass       |

Above 1GHz-40GHz – 802.11a – 5240MHz

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 4124.90       | 37.36    | 8.82       | 15.2  | 61.38        | Peak Max         | H   | 171    | 117     | 74           | -12.62    | Pass       |
| 6143.25       | 36.87    | 10.66      | 14.24 | 61.78        | Peak Max         | V   | 113    | 185     | 74           | -12.23    | Pass       |
| 1000.20       | 44.13    | 3.35       | 13.2  | 60.68        | Peak Max         | H   | 178    | 157     | 74           | -13.32    | Pass       |
| 4124.90       | 25.96    | 8.82       | 15.2  | 49.98        | Average Max      | H   | 171    | 117     | 54           | -4.02     | Pass       |
| 6143.25       | 24.81    | 10.66      | 14.24 | 49.72        | Average Max      | V   | 113    | 185     | 54           | -4.28     | Pass       |
| 1000.20       | 31.88    | 3.35       | 13.2  | 48.43        | Average Max      | H   | 178    | 157     | 54           | -5.57     | Pass       |



**Above 1GHz-40GHz – 802.11n-20M – 5180MHz**

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 4156.24       | 37.72    | 8.89       | 15.07 | 61.68        | Peak Max         | V   | 126    | 262     | 74           | -12.32    | Pass       |
| 6226.32       | 35.92    | 10.76      | 14.05 | 60.73        | Peak Max         | H   | 244    | 98      | 74           | -13.27    | Pass       |
| 2092.91       | 39.34    | 4.36       | 14.7  | 58.41        | Peak Max         | V   | 149    | 61      | 74           | -15.59    | Pass       |
| 4156.24       | 25.88    | 8.89       | 15.07 | 49.84        | Average Max      | V   | 126    | 262     | 54           | -4.16     | Pass       |
| 6226.32       | 24.61    | 10.76      | 14.05 | 49.41        | Average Max      | H   | 244    | 98      | 54           | -4.59     | Pass       |
| 2092.91       | 28       | 4.36       | 14.7  | 47.07        | Average Max      | V   | 149    | 61      | 54           | -6.93     | Pass       |

**Above 1GHz-40GHz – 802.11n-20M – 5200MHz**

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 4080.78       | 37.56    | 8.71       | 15.39 | 61.66        | Peak Max         | H   | 207    | 179     | 74           | -12.34    | Pass       |
| 6321.49       | 35.99    | 10.88      | 13.82 | 60.69        | Peak Max         | V   | 182    | 101     | 74           | -13.31    | Pass       |
| 1968.66       | 39.51    | 4.26       | 14.75 | 58.53        | Peak Max         | H   | 180    | 341     | 74           | -15.48    | Pass       |
| 4080.78       | 25.8     | 8.71       | 15.39 | 49.9         | Average Max      | H   | 207    | 179     | 54           | -4.11     | Pass       |
| 6321.49       | 24.41    | 10.88      | 13.82 | 49.11        | Average Max      | V   | 182    | 101     | 54           | -4.89     | Pass       |
| 1968.66       | 27.93    | 4.26       | 14.75 | 46.95        | Average Max      | H   | 180    | 341     | 54           | -7.05     | Pass       |

**Above 1GHz-40GHz – 802.11n-20M – 5240MHz**

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 4241.47       | 37.6     | 9.1        | 14.7  | 61.41        | Peak Max         | V   | 122    | 124     | 74           | -12.59    | Pass       |
| 6120.38       | 36.39    | 10.63      | 14.3  | 61.32        | Peak Max         | V   | 151    | 158     | 74           | -12.68    | Pass       |
| 2159.74       | 38.88    | 4.41       | 14.5  | 57.79        | Peak Max         | H   | 247    | 102     | 74           | -16.21    | Pass       |
| 4241.47       | 25.92    | 9.1        | 14.7  | 49.73        | Average Max      | V   | 122    | 124     | 54           | -4.27     | Pass       |
| 6120.38       | 24.62    | 10.63      | 14.3  | 49.55        | Average Max      | V   | 151    | 158     | 54           | -4.45     | Pass       |
| 2159.74       | 27.82    | 4.41       | 14.5  | 46.73        | Average Max      | H   | 247    | 102     | 54           | -7.27     | Pass       |

**Above 1GHz-40GHz – 802.11n-40M – 5190MHz**

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 4164.74       | 37.52    | 8.91       | 15.03 | 61.47        | Peak Max         | V   | 206    | 331     | 74           | -12.53    | Pass       |
| 6111.45       | 35.91    | 10.62      | 14.32 | 60.85        | Peak Max         | H   | 117    | 148     | 74           | -13.15    | Pass       |
| 2092.42       | 40.85    | 4.36       | 14.71 | 59.92        | Peak Max         | H   | 235    | 296     | 74           | -14.08    | Pass       |
| 4164.74       | 26.07    | 8.91       | 15.03 | 50.01        | Average Max      | V   | 206    | 331     | 54           | -3.99     | Pass       |
| 6111.45       | 24.42    | 10.62      | 14.32 | 49.36        | Average Max      | H   | 117    | 148     | 54           | -4.64     | Pass       |
| 2092.42       | 28.24    | 4.36       | 14.71 | 47.31        | Average Max      | H   | 235    | 296     | 54           | -6.69     | Pass       |

**Above 1GHz-40GHz – 802.11n-40M – 5230MHz**

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 4134.60       | 38.06    | 8.84       | 15.16 | 62.06        | Peak Max         | V   | 139    | 316     | 74           | -11.94    | Pass       |
| 6324.47       | 36.61    | 10.88      | 13.82 | 61.31        | Peak Max         | H   | 223    | 223     | 74           | -12.69    | Pass       |
| 1998.17       | 39.82    | 4.28       | 14.99 | 59.09        | Peak Max         | H   | 116    | 35      | 74           | -14.91    | Pass       |
| 4134.60       | 25.92    | 8.84       | 15.16 | 49.92        | Average Max      | V   | 139    | 316     | 54           | -4.08     | Pass       |
| 6324.47       | 24.44    | 10.88      | 13.82 | 49.14        | Average Max      | H   | 223    | 223     | 54           | -4.86     | Pass       |
| 1998.17       | 27.86    | 4.28       | 14.99 | 47.12        | Average Max      | H   | 116    | 35      | 54           | -6.88     | Pass       |

**Above 1GHz-40GHz – 802.11ac-80M – 5210MHz**

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 4261.74       | 37.12    | 9.15       | 14.62 | 60.89        | Peak Max         | H   | 197    | 75      | 74           | -13.11    | Pass       |
| 6130.92       | 36.93    | 10.64      | 14.27 | 61.85        | Peak Max         | V   | 166    | 0       | 74           | -12.15    | Pass       |
| 2124.31       | 39.8     | 4.38       | 14.61 | 58.79        | Peak Max         | V   | 149    | 350     | 74           | -15.21    | Pass       |
| 4261.74       | 25.49    | 9.15       | 14.62 | 49.26        | Average Max      | H   | 197    | 75      | 54           | -4.74     | Pass       |
| 6130.92       | 24.55    | 10.64      | 14.27 | 49.47        | Average Max      | V   | 166    | 0       | 54           | -4.53     | Pass       |
| 2124.31       | 27.89    | 4.38       | 14.61 | 46.88        | Average Max      | V   | 149    | 350     | 54           | -7.12     | Pass       |

**W58 band:**

**Above 1GHz-40GHz – 802.11a – 5745MHz**

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 4200.00       | 37.32    | 9          | 14.88 | 61.2         | Peak Max         | V   | 235    | 293     | 74           | -12.8     | Pass       |
| 6217.66       | 37.12    | 10.75      | 14.07 | 61.94        | Peak Max         | H   | 117    | 79      | 74           | -12.06    | Pass       |
| 1989.61       | 39.64    | 4.27       | 14.92 | 58.83        | Peak Max         | V   | 193    | 173     | 74           | -15.17    | Pass       |
| 4200.00       | 25.94    | 9          | 14.88 | 49.82        | Average Max      | V   | 235    | 293     | 54           | -4.18     | Pass       |
| 6217.66       | 24.8     | 10.75      | 14.07 | 49.61        | Average Max      | H   | 117    | 79      | 54           | -4.39     | Pass       |
| 1989.61       | 28.34    | 4.27       | 14.92 | 47.54        | Average Max      | V   | 193    | 173     | 54           | -6.46     | Pass       |

**Above 1GHz-40GHz – 802.11a – 5785MHz**

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 4251.17       | 37.46    | 9.13       | 14.66 | 61.25        | Peak Max         | V   | 184    | 199     | 74           | -12.75    | Pass       |
| 6249.35       | 37.1     | 10.79      | 13.99 | 61.88        | Peak Max         | V   | 110    | 158     | 74           | -12.12    | Pass       |
| 1989.00       | 40.39    | 4.27       | 14.91 | 59.58        | Peak Max         | H   | 156    | 248     | 74           | -14.42    | Pass       |
| 4251.17       | 25.96    | 9.13       | 14.66 | 49.75        | Average Max      | V   | 184    | 199     | 54           | -4.25     | Pass       |
| 6249.35       | 24.69    | 10.79      | 13.99 | 49.48        | Average Max      | V   | 110    | 158     | 54           | -4.53     | Pass       |
| 1989.00       | 28.32    | 4.27       | 14.91 | 47.51        | Average Max      | H   | 156    | 248     | 54           | -6.49     | Pass       |

**Above 1GHz-40GHz – 802.11a – 5825MHz**

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 4081.13       | 37.89    | 8.71       | 15.39 | 61.99        | Peak Max         | H   | 155    | 224     | 74           | -12.01    | Pass       |
| 6163.90       | 36.71    | 10.69      | 14.19 | 61.59        | Peak Max         | H   | 109    | 171     | 74           | -12.41    | Pass       |
| 2114.92       | 40.85    | 4.38       | 14.64 | 59.86        | Peak Max         | V   | 158    | 82      | 74           | -14.14    | Pass       |
| 4081.13       | 26.21    | 8.71       | 15.39 | 50.31        | Average Max      | H   | 155    | 224     | 54           | -3.69     | Pass       |
| 6163.90       | 24.72    | 10.69      | 14.19 | 49.6         | Average Max      | H   | 109    | 171     | 54           | -4.41     | Pass       |
| 2114.92       | 28.16    | 4.38       | 14.64 | 47.18        | Average Max      | V   | 158    | 82      | 54           | -6.82     | Pass       |



**Above 1GHz-40GHz – 802.11n-20M – 5745MHz**

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 4228.42       | 37.5     | 9.07       | 14.76 | 61.33        | Peak Max         | V   | 243    | 116     | 74           | -12.67    | Pass       |
| 6132.98       | 36.05    | 10.65      | 14.27 | 60.96        | Peak Max         | H   | 224    | 300     | 74           | -13.04    | Pass       |
| 2062.36       | 39.91    | 4.34       | 14.8  | 59.04        | Peak Max         | H   | 194    | 108     | 74           | -14.96    | Pass       |
| 4228.42       | 25.86    | 9.07       | 14.76 | 49.69        | Average Max      | V   | 243    | 116     | 54           | -4.31     | Pass       |
| 6132.98       | 24.75    | 10.65      | 14.27 | 49.67        | Average Max      | H   | 224    | 300     | 54           | -4.33     | Pass       |
| 2062.36       | 28.32    | 4.34       | 14.8  | 47.46        | Average Max      | H   | 194    | 108     | 54           | -6.54     | Pass       |

**Above 1GHz-40GHz – 802.11n-20M – 5785MHz**

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 4219.81       | 37.63    | 9.05       | 14.8  | 61.48        | Peak Max         | H   | 229    | 111     | 74           | -12.52    | Pass       |
| 6111.73       | 36.16    | 10.62      | 14.32 | 61.1         | Peak Max         | H   | 168    | 281     | 74           | -12.9     | Pass       |
| 2028.71       | 39.62    | 4.31       | 14.91 | 58.84        | Peak Max         | H   | 171    | 227     | 74           | -15.16    | Pass       |
| 4219.81       | 25.77    | 9.05       | 14.8  | 49.61        | Average Max      | H   | 229    | 111     | 54           | -4.39     | Pass       |
| 6111.73       | 24.58    | 10.62      | 14.32 | 49.52        | Average Max      | H   | 168    | 281     | 54           | -4.48     | Pass       |
| 2028.71       | 28.27    | 4.31       | 14.91 | 47.48        | Average Max      | H   | 171    | 227     | 54           | -6.52     | Pass       |

**Above 1GHz-40GHz – 802.11n-20M – 5825MHz**

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 4102.97       | 37.06    | 8.76       | 15.3  | 61.12        | Peak Max         | V   | 123    | 144     | 74           | -12.88    | Pass       |
| 6226.52       | 36.13    | 10.76      | 14.05 | 60.94        | Peak Max         | H   | 211    | 359     | 74           | -13.06    | Pass       |
| 2010.25       | 39.98    | 4.29       | 14.97 | 59.24        | Peak Max         | H   | 220    | 45      | 74           | -14.76    | Pass       |
| 4102.97       | 25.61    | 8.76       | 15.3  | 49.67        | Average Max      | V   | 123    | 144     | 54           | -4.33     | Pass       |
| 6226.52       | 24.6     | 10.76      | 14.05 | 49.41        | Average Max      | H   | 211    | 359     | 54           | -4.59     | Pass       |
| 2010.25       | 28.15    | 4.29       | 14.97 | 47.41        | Average Max      | H   | 220    | 45      | 54           | -6.59     | Pass       |

**Above 1GHz-40GHz – 802.11n-40M – 5755MHz**

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 4242.55       | 38.04    | 9.1        | 14.7  | 61.85        | Peak Max         | V   | 224    | 106     | 74           | -12.15    | Pass       |
| 6292.46       | 36.01    | 10.84      | 13.89 | 60.74        | Peak Max         | H   | 243    | 200     | 74           | -13.26    | Pass       |
| 2000.71       | 39.95    | 4.28       | 15    | 59.23        | Peak Max         | H   | 126    | 261     | 74           | -14.77    | Pass       |
| 4242.55       | 25.8     | 9.1        | 14.7  | 49.6         | Average Max      | V   | 224    | 106     | 54           | -4.4      | Pass       |
| 6292.46       | 24.58    | 10.84      | 13.89 | 49.31        | Average Max      | H   | 243    | 200     | 54           | -4.69     | Pass       |
| 2000.71       | 28.33    | 4.28       | 15    | 47.61        | Average Max      | H   | 126    | 261     | 54           | -6.39     | Pass       |

**Above 1GHz-40GHz – 802.11n-40M – 5795MHz**

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 4124.90       | 38.11    | 8.82       | 15.2  | 62.13        | Peak Max         | H   | 139    | 273     | 74           | -11.87    | Pass       |
| 6271.89       | 36.29    | 10.82      | 13.94 | 61.05        | Peak Max         | H   | 215    | 183     | 74           | -12.95    | Pass       |
| 2093.51       | 40.35    | 4.36       | 14.7  | 59.41        | Peak Max         | H   | 146    | 347     | 74           | -14.59    | Pass       |
| 4124.90       | 25.84    | 8.82       | 15.2  | 49.86        | Average Max      | H   | 139    | 273     | 54           | -4.14     | Pass       |
| 6271.89       | 24.54    | 10.82      | 13.94 | 49.3         | Average Max      | H   | 215    | 183     | 54           | -4.7      | Pass       |
| 2093.51       | 28.07    | 4.36       | 14.7  | 47.14        | Average Max      | H   | 146    | 347     | 54           | -6.86     | Pass       |

**Above 1GHz-40GHz – 802.11ac-80M – 5775MHz**

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 1999.51       | 28.13    | 4.28       | 15    | 47.4         | Average Max      | H   | 225    | 91      | 54           | -6.6      | Pass       |
| 1999.51       | 40.16    | 4.28       | 15    | 59.43        | Peak Max         | H   | 225    | 91      | 74           | -14.57    | Pass       |
| 4196.93       | 25.62    | 8.99       | 14.89 | 49.51        | Average Max      | V   | 137    | 16      | 54           | -4.49     | Pass       |
| 4196.93       | 37.36    | 8.99       | 14.89 | 61.25        | Peak Max         | V   | 137    | 16      | 74           | -12.75    | Pass       |
| 6227.41       | 24.47    | 10.76      | 14.04 | 49.27        | Average Max      | H   | 227    | 245     | 54           | -4.73     | Pass       |
| 6227.41       | 36.43    | 10.76      | 14.04 | 61.24        | Peak Max         | H   | 227    | 245     | 74           | -12.76    | Pass       |


















**1GHz-40GHz- Collocation testing (2.4GHz WLAN & 5GHz WLAN on the main-board transmitting simultaneously)**

| Frequency MHz | Raw dBuV | Cable Loss | AF dB | Level dBuV/m | Measurement Type | Pol | Hgt cm | Azt Deg | Limit dBuV/m | Margin dB | Pass /Fail |
|---------------|----------|------------|-------|--------------|------------------|-----|--------|---------|--------------|-----------|------------|
| 4251.28       | 37.65    | 9.13       | 14.66 | 61.44        | Peak Max         | H   | 251    | 197     | 74           | -12.56    | Pass       |
| 2446.68       | 38.33    | 4.76       | 13.69 | 56.77        | Peak Max         | H   | 251    | 267     | 74           | -17.23    | Pass       |
| 6270.03       | 36.25    | 10.82      | 13.94 | 61           | Peak Max         | H   | 251    | 346     | 74           | -13       | Pass       |
| 4251.28       | 25.82    | 9.13       | 14.66 | 49.61        | Average Max      | H   | 251    | 197     | 54           | -4.39     | Pass       |
| 2446.68       | 25.16    | 4.76       | 13.69 | 43.61        | Average Max      | H   | 251    | 267     | 54           | -10.39    | Pass       |
| 6270.03       | 24.53    | 10.82      | 13.94 | 49.29        | Average Max      | H   | 251    | 346     | 54           | -4.71     | Pass       |








**Annex A. TEST INSTRUMENT**

| Instrument                         | Model    | Serial # | Cal Date   | Cal Cycle | Cal Due    | In use                              |
|------------------------------------|----------|----------|------------|-----------|------------|-------------------------------------|
| <b>Conducted Emissions</b>         |          |          |            |           |            |                                     |
| R & S Receiver                     | ESIB 40  | 100179   | 05/23/2015 | 1 Year    | 05/23/2016 | <input checked="" type="checkbox"/> |
| CHASE LISN                         | MN2050B  | 1018     | 08/07/2015 | 1 Year    | 08/07/2016 | <input checked="" type="checkbox"/> |
| <b>Radiated Emissions</b>          |          |          |            |           |            |                                     |
| R & S Receiver                     | ESL6     | 100178   | 05/27/2015 | 1 Year    | 05/27/2016 | <input checked="" type="checkbox"/> |
| R & S Receiver                     | ESIB 40  | 100179   | 05/23/2015 | 1 Year    | 05/23/2016 | <input checked="" type="checkbox"/> |
| ETS-Lingren Loop Antenna           | 6512     | 00049120 | 05/12/2015 | 1 Year    | 05/12/2016 | <input checked="" type="checkbox"/> |
| Bi-Log antenna (30MHz~2GHz)        | JB1      | A030702  | 08/12/2015 | 1 Year    | 08/12/2016 | <input checked="" type="checkbox"/> |
| 3 Meters SAC                       | 3M       | N/A      | 08/08/2015 | 1 Year    | 08/08/2016 | <input checked="" type="checkbox"/> |
| 10 Meters SAC                      | 10M      | N/A      | 09/05/2015 | 1 Year    | 09/05/2016 | <input checked="" type="checkbox"/> |
| <b>RF Conducted Measurement</b>    |          |          |            |           |            |                                     |
| Spectrum Analyzer                  | N9010A   | 10SL0219 | 08/20/2015 | 1 Year    | 08/20/2016 | <input checked="" type="checkbox"/> |
| R & S Receiver                     | ESIB 40  | 100179   | 05/23/2015 | 1 Year    | 05/23/2016 | <input checked="" type="checkbox"/> |
| ETS-Lingren<br>USB RF Power Sensor | 7002-006 | 10SL0190 | 09/03/2015 | 1 Year    | 09/03/2016 | <input checked="" type="checkbox"/> |

## Annex B. SIEMIC Accreditation

| Accreditations                          | Document  | Scope / Remark  |
|---|---|---|
| ISO 17025 (A2LA)                        |    | Please see the documents for the detailed scope   |
| ISO Guide 65 (A2LA)                     |    | Please see the documents for the detailed scope   |
| TCB Designation                         |   | <a href="#">A1</a> , <a href="#">A2</a> , <a href="#">A3</a> , <a href="#">A4</a> , <a href="#">B1</a> , <a href="#">B2</a> , <a href="#">B3</a> , <a href="#">B4</a> , C |
| FCC DoC Accreditation                   |    | FCC Declaration of Conformity Accreditation   |
| FCC Site Registration                   |    | 3 meter site  |
| FCC Site Registration                   |    | 10 meter site   |
| IC Site Registration                    |    | 3 meter site  |
| IC Site Registration                    |    | 10 meter site   |
| EU NB                                   |    | <b>Radio &amp; Telecommunications Terminal Equipment:</b><br>EN45001 – EN ISO/IEC 17025   |
|   |  | <b>Electromagnetic Compatibility:</b><br>EN45001 – EN ISO/IEC 17025   |
| Singapore iDA<br>CB(Certification Body) |  | <a href="#">Phase I</a> , <a href="#">Phase II</a>  |
| Vietnam MIC<br>CAB Accreditation        |  | Please see the document for the detailed scope  |
| Hong Kong OFCA                          |  | <b>(Phase II)</b> OFCA Foreign Certification Body for Radio and Telecom   |
|   |  | <b>(Phase I)</b> Conformity Assessment Body for Radio and Telecom   |
| Industry Canada CAB                     |  | <b>Radio:</b> Scope A – All Radio Standard Specification in Category I  |
|   |  | <b>Telecom:</b> CS-03 Part I, II, V, VI, VII, VIII  |



|   |   |  |
|---|---|--|
| Japan Recognized Certification Body Designation |    | <p><b>Radio:</b> A1. Terminal equipment for purpose of calling</p> <p><b>Telecom:</b> B1. Specified radio equipment specified in Article 38-2, Paragraph 1, Item 1 of the Radio Law</p>  |
| Korea CAB Accreditation                         |    | <p><b>EMI:</b> KCC Notice 2008-39, RRL Notice 2008-3: CA Procedures for EMI<br/>KN22: Test Method for EMI</p> <p><b>EMS:</b> KCC Notice 2008-38, RRL Notice 2008-4: CA Procedures for EMS<br/>KN24, KN61000-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11: Test Method for EMS</p> <p><b>Radio:</b> RRL Notice 2008-26, RRL Notice 2008-2, RRL Notice 2008-10, RRL Notice 2007-49, RRL Notice 2007-20, RRL Notice 2007-21, RRL Notice 2007-80, RRL Notice 2004-68</p> <p><b>Telecom:</b> President Notice 20664, RRL Notice 2007-30, RRL Notice 2008-7 with attachments 1, 3, 5, 6; President Notice 20664, RRL Notice 2008-7 with attachment 4</p> |
| Taiwan NCC CAB Recognition                      |    | LP0002, PSTN01, ADSL01, ID0002, IS6100, CNS14336, PLMN07, PLMN01, PLMN08   |
| Taiwan BSMI CAB Recognition                     |  | CNS 13438  |
| Japan VCCI                                      |  | <p>R-3083: Radiation 3 meter site</p> <p>C-3421: Main Ports Conducted Interference Measurement</p> <p>T-1597: Telecommunication Ports Conducted Interference Measurement</p>   |
| Australia CAB Recognition                       |  | <p><b>EMC:</b> AS/NZS CISPR 11, AS/NZS CISPR 14.1, AS/NZS CISPR22, AS/NZS 61000.6.3, AS/NZS 61000.6.4</p> <p><b>Radio communications:</b> AS/NZS 4281, AS/NZS 4268, AS/NZS 4280.1, AS/NZS 4280.2, AS/NZS 4295, AS/NZS 4582, AS/NZS 4583, AS/NZS 4769.1, AS/NZS 4769.2, AS/NZS 4770, AS/NZS 4771</p> <p><b>Telecommunications:</b> AS/ACIF S002:05, AS/ACIF S003:06, AS/ACIF S004:06 AS/ACIF S006:01, AS/ACIF S016:01, AS/ACIF S031:01, AS/ACIF S038:01, AS/ACIF S040:01, AS/ACIF S041:05, AS/ACIF S043.2:06, AS/ACIF S60950.1</p>  |
| Australia NATA Recognition                      |  | AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, AS/ACIF S006, AS/ACIF S016, AS/ACIF S031, AS/ACIF S038, AS/ACIF S040, AS/ACIF S041, AS/ACIF S043.2   |