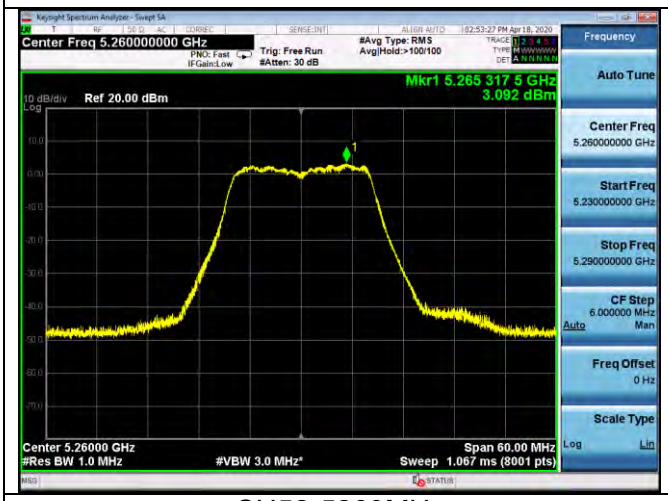
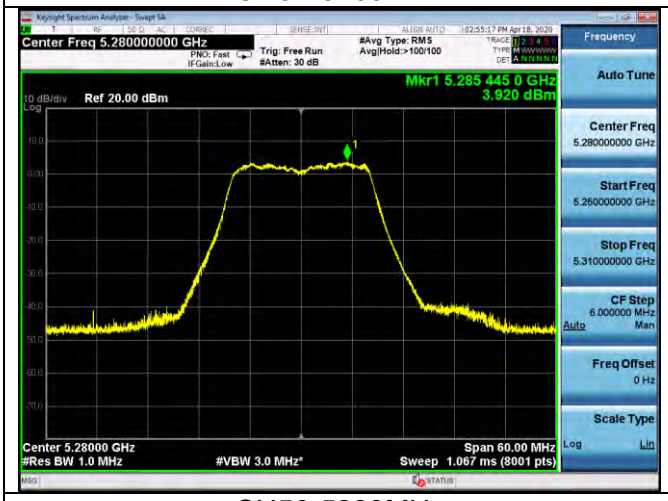
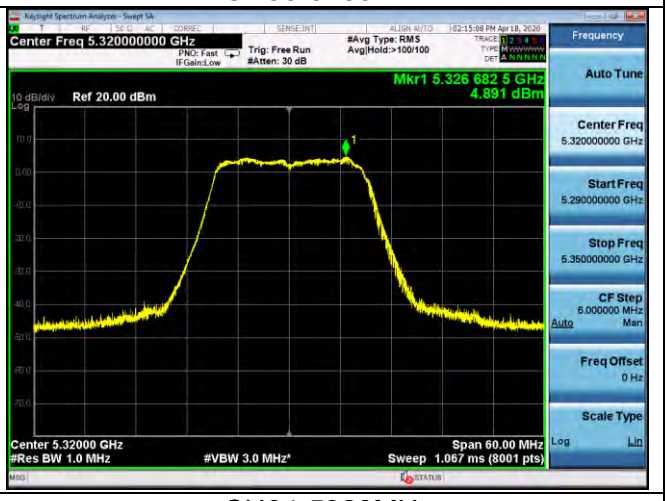
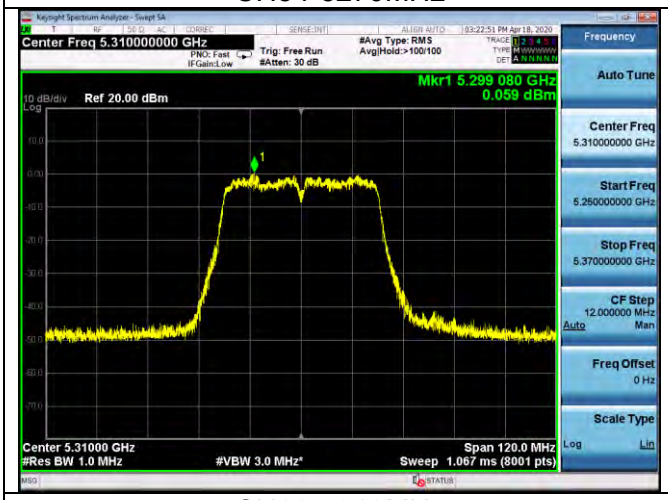
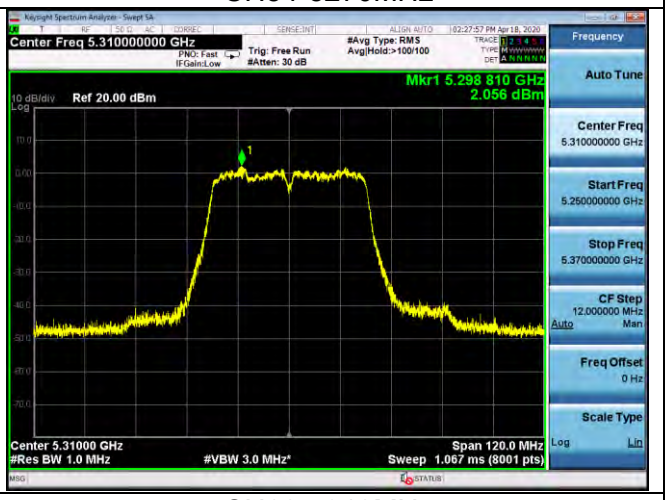
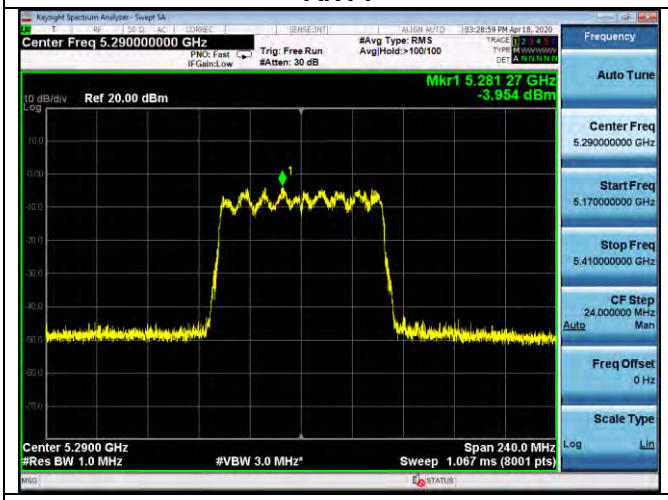
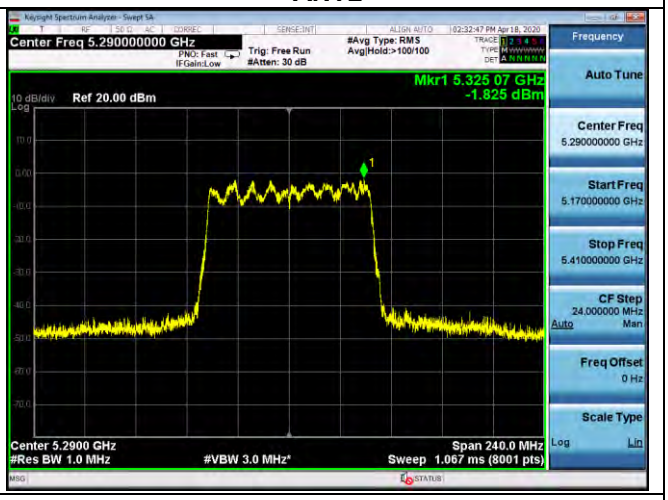
## band 2A -- ac (20MHz)

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH52-5260MHz | CH52-5260MHz |
|  |  |
| CH56-5280MHz | CH56-5280MHz |
|  |  |
| CH64-5320MHz | CH64-5320MHz |

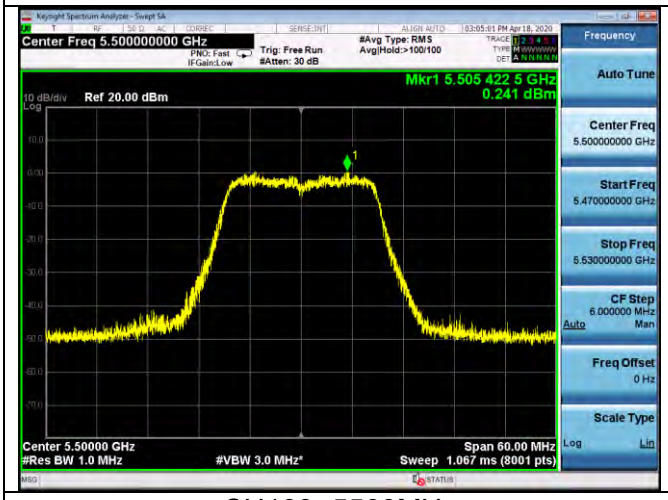
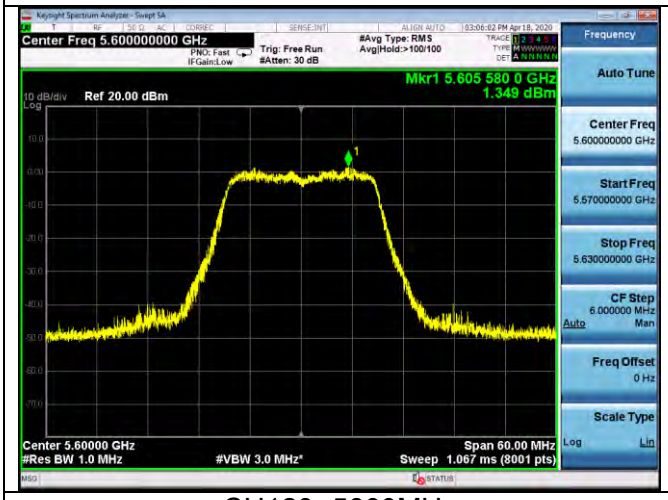
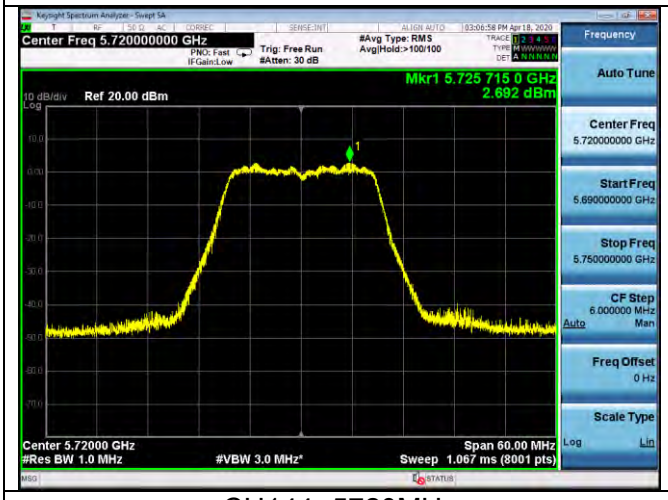
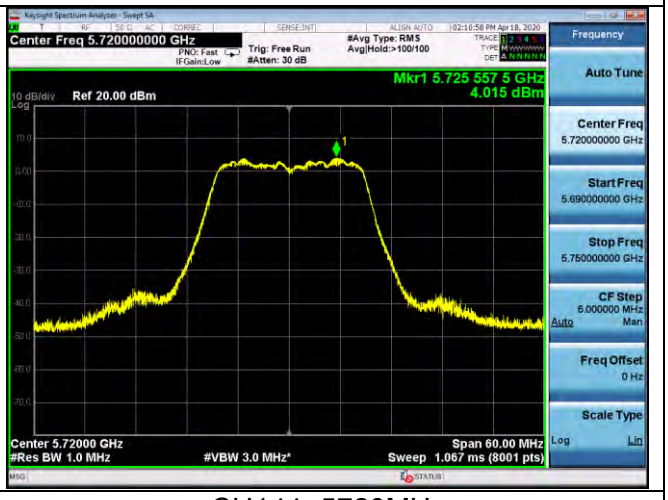
## band 2A -- ac (40MHz)

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH54-5270MHz | CH54-5270MHz |
|  |  |
| CH62-5310MHz | CH62-5310MHz |

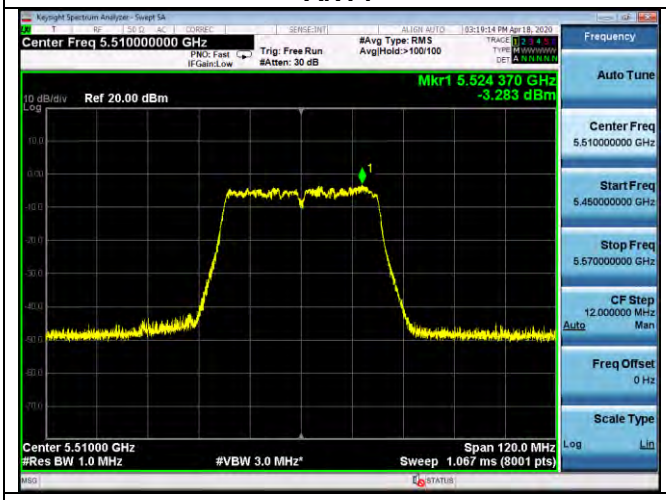
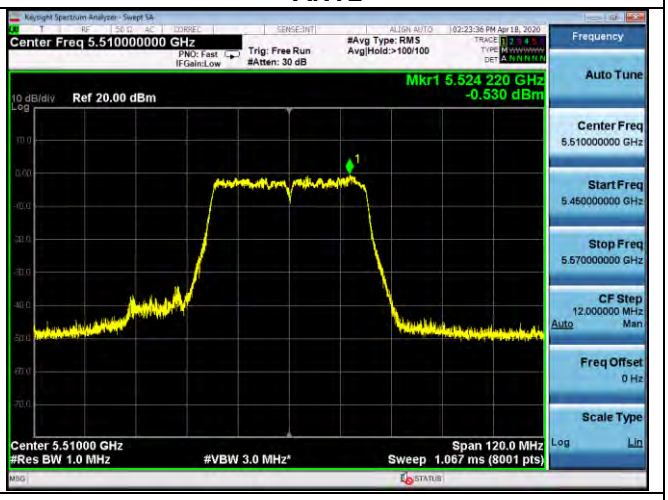
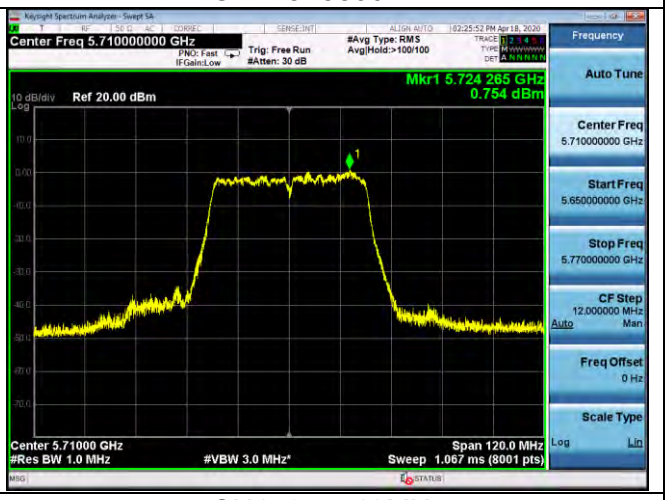
## band 2A -- ac (80MHz)

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH58- 5290MHz | CH58- 5290MHz |

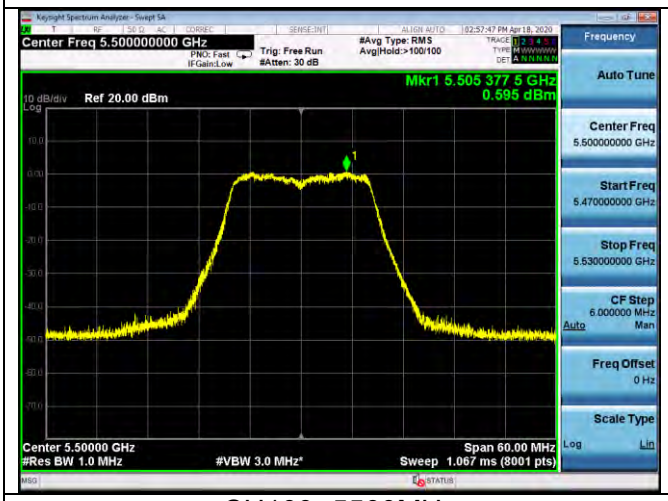
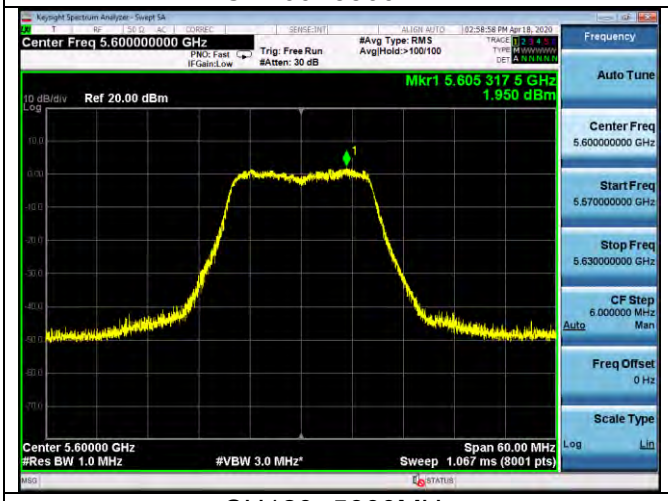
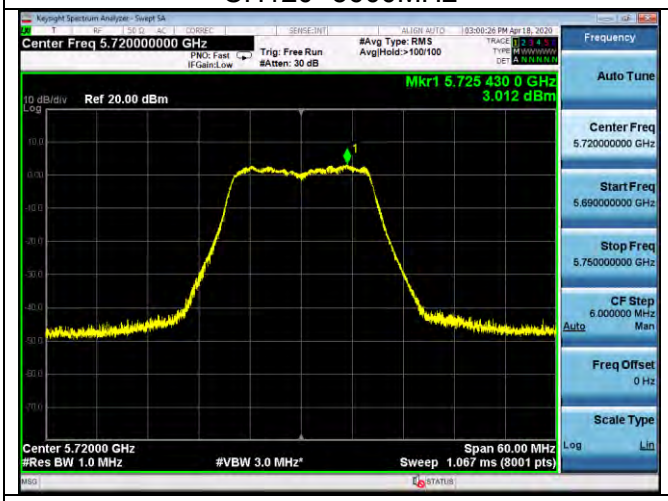
**band 2C -- n (20MHz)**

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH100- 5500MHz | CH100- 5500MHz |
|  |  |
| CH120- 5600MHz | CH120- 5600MHz |
|  |  |
| CH144 -5720MHz | CH144 -5720MHz |

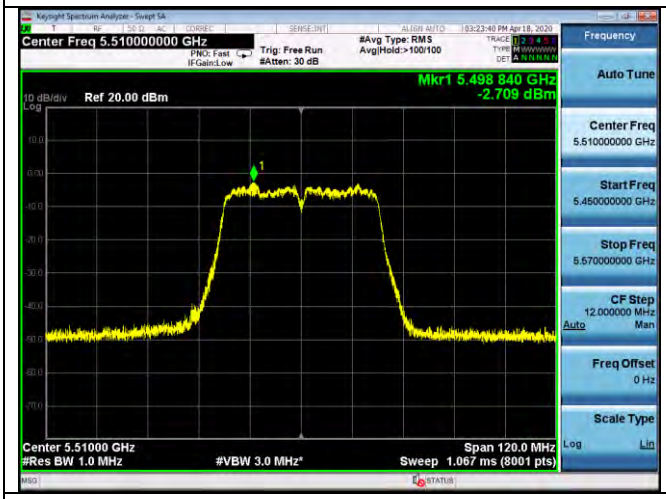
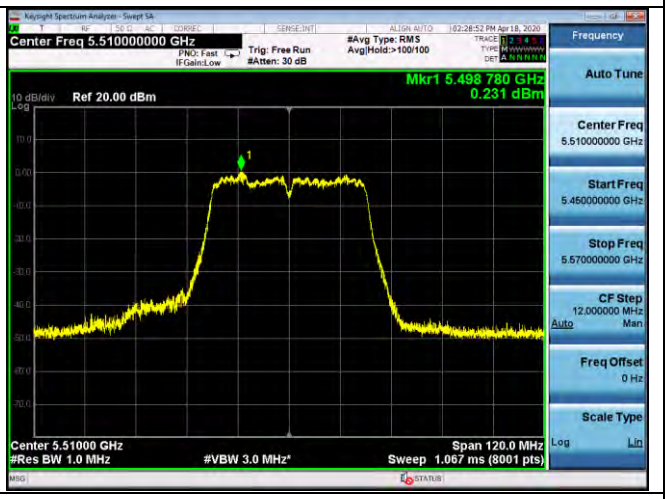
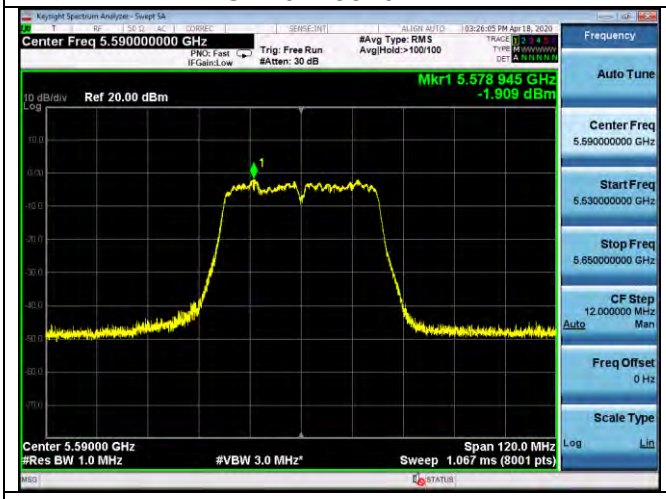
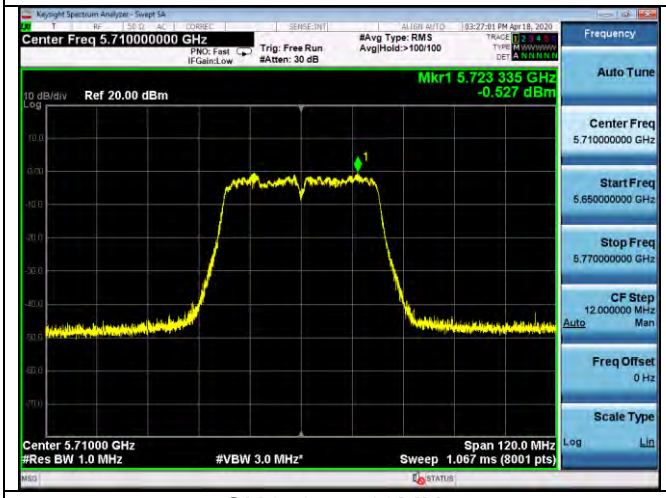
**band 2C -- n (40MHz)**

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH102 -5510MHz | CH102 -5510MHz |
|  |  |
| CH118 -5590MHz | CH118 -5590MHz |
|  |  |
| CH142 -5710MHz | CH142 -5710MHz |

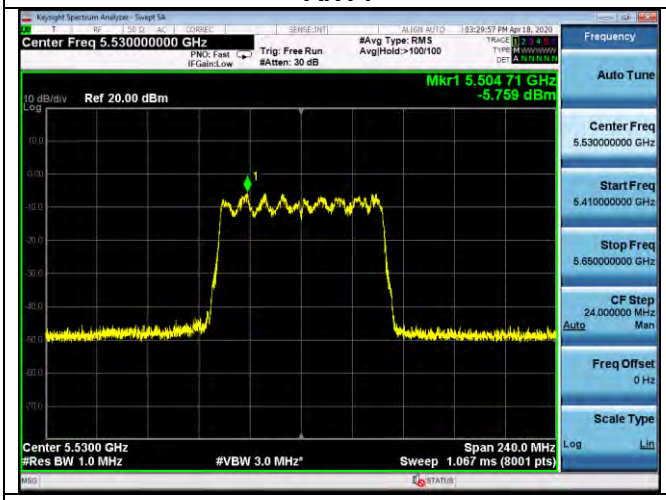
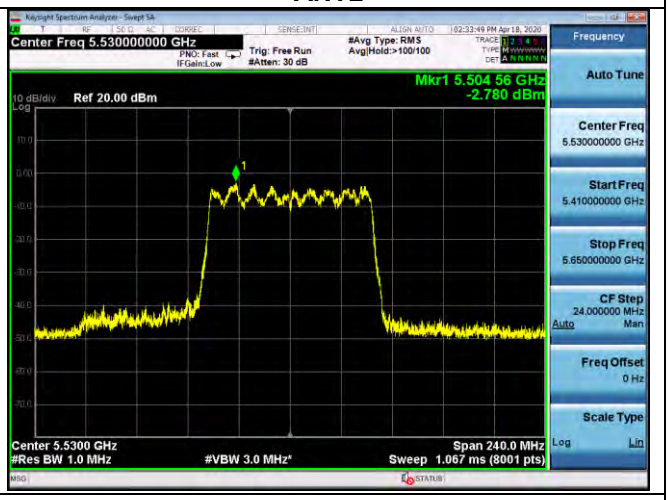
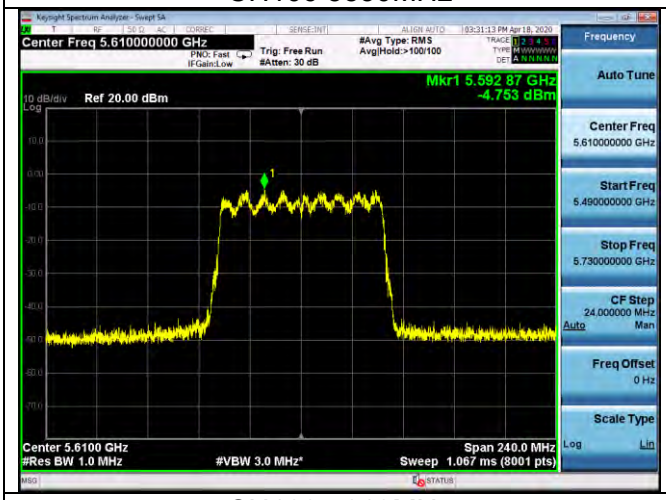
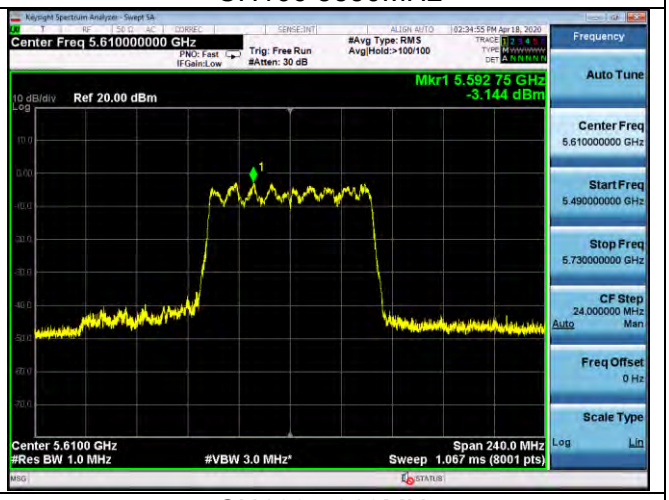
## band 2C -- ac (20MHz)

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH100- 5500MHz | CH100- 5500MHz |
|  |  |
| CH120- 5600MHz | CH120- 5600MHz |
|  |  |
| CH144 -5720MHz | CH144 -5720MHz |

## band 2C -- ac (40MHz)

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH102 -5510MHz | CH102 -5510MHz |
|  |  |
| CH118 -5590MHz | CH118 -5590MHz |
|  |  |
| CH142 -5710MHz | CH142 -5710MHz |

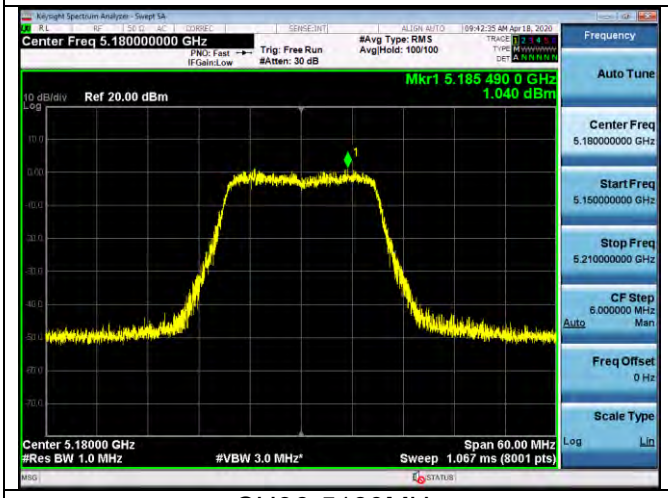
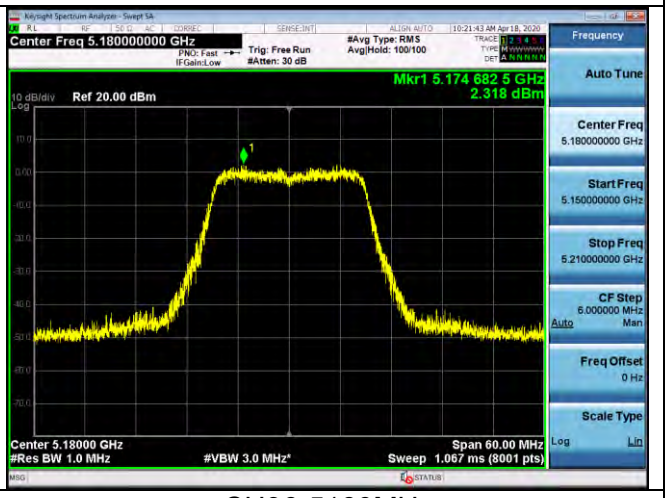
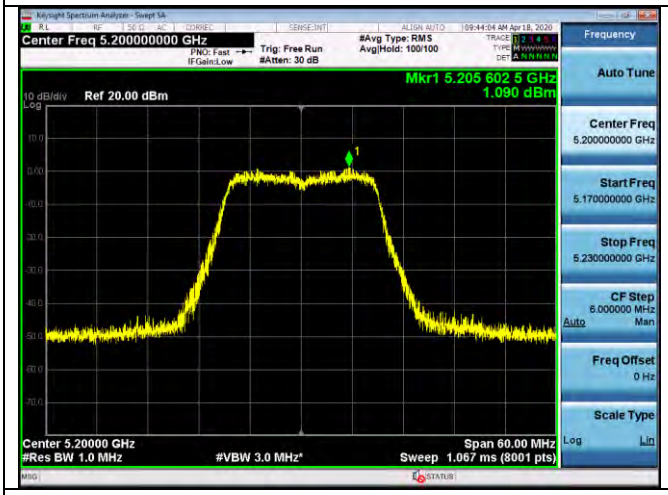
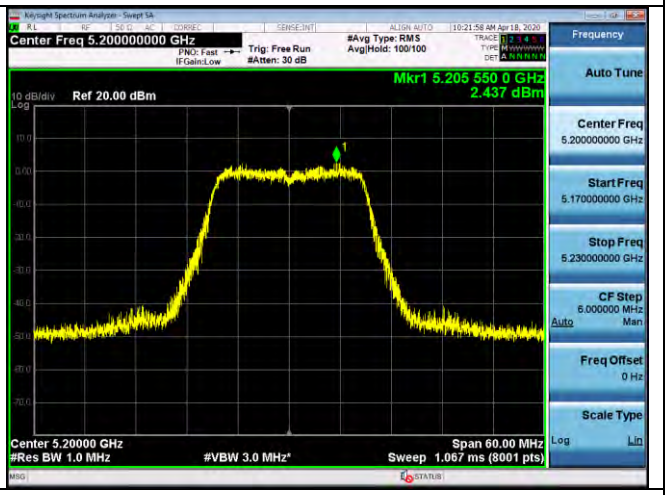
## band 2C -- ac (80MHz)

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH106 5530MHz | CH106 5530MHz |
|  |  |
| CH122 5610MHz | CH122 5610MHz |

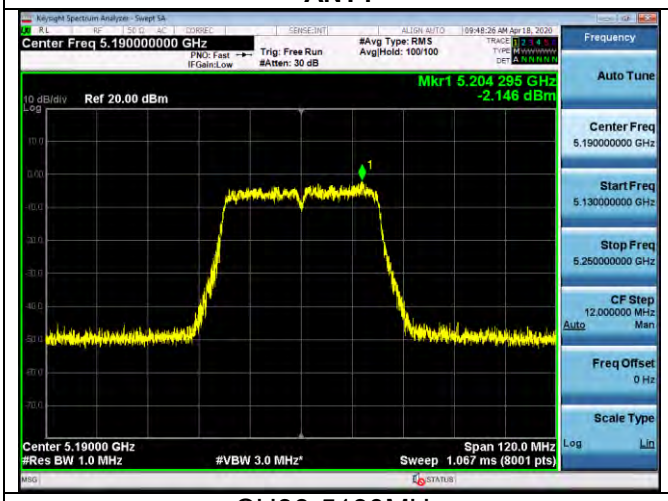
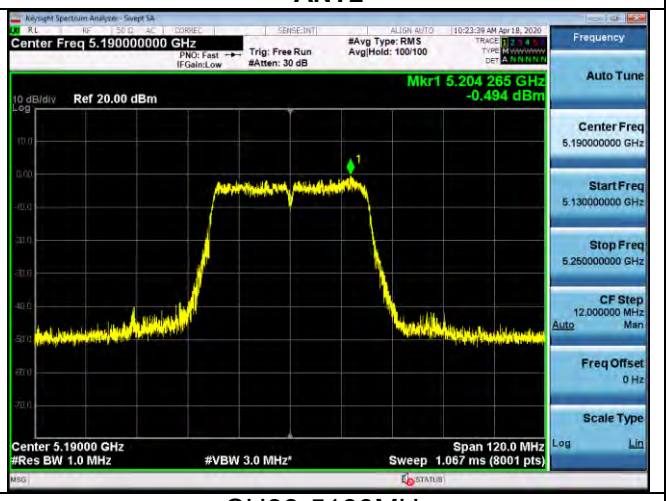
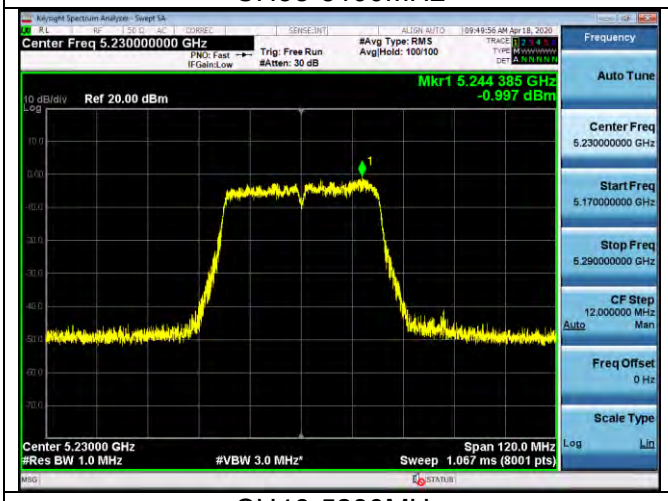
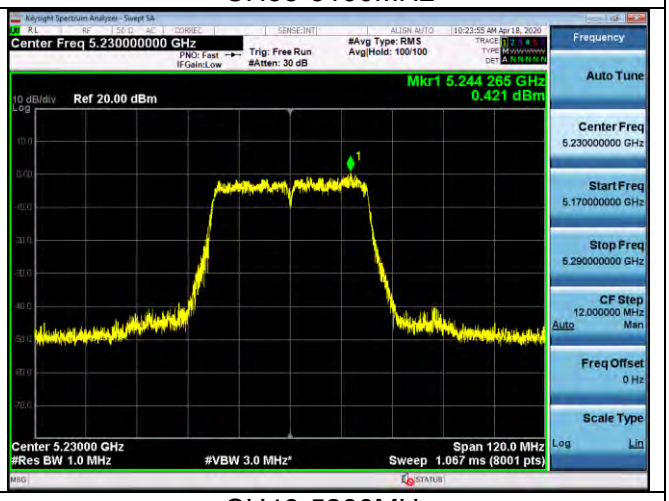
## Summed MIMO/CDD Power Spectral Density Measurements

| BAND | 802.11 Mode | Channel No. | Frequency [MHz] | Measured Power Spectral Density [dBm/MHz] | | MIMO/CDD Power Density [dBm/MHz] | Limit [dBm/MHz] |
|---|---|---|---|---|---|---|---|
| | | | | ANT1 | ANT2 | | |
| BAND 1 | n (20MHz) | 36 | 5180 | 1.040 | 2.318 | 4.736 | 16.99 |
| | | 40 | 5200 | 1.090 | 2.437 | 4.826 | 16.99 |
| | | 48 | 5240 | 2.437 | 3.369 | 5.938 | 16.99 |
| | n (40MHz) | 38 | 5190 | -2.146 | -0.494 | 1.768 | 16.99 |
| | | 46 | 5230 | -0.997 | 0.421 | 2.780 | 16.99 |
| | ac (20MHz) | 36 | 5180 | -0.135 | 1.689 | 3.882 | 16.99 |
| | | 40 | 5200 | 0.376 | 1.746 | 4.125 | 16.99 |
| | | 48 | 5240 | 1.662 | 2.639 | 5.188 | 16.99 |
| | ac(40MHz) | 38 | 5190 | -2.264 | -0.404 | 1.775 | 16.99 |
| | | 46 | 5230 | -1.167 | 0.274 | 2.623 | 16.99 |
| | ac(80MHz) | 42 | 5210 | -5.541 | -3.558 | -1.427 | 10.99 |
| BAND 2A | n (20MHz) | 52 | 5260 | 2.479 | 4.672 | 6.723 | 10.99 |
| | | 56 | 5280 | 2.937 | 5.349 | 7.319 | 10.99 |
| | | 64 | 5320 | 3.588 | 6.149 | 8.065 | 10.99 |
| | n (40MHz) | 54 | 5270 | -0.702 | 1.677 | 3.659 | 10.99 |
| | | 62 | 5310 | -0.095 | 2.057 | 4.123 | 10.99 |
| | ac (20MHz) | 52 | 5260 | 1.672 | 3.757 | 5.849 | 10.99 |
| | | 56 | 5280 | 2.237 | 4.259 | 6.375 | 10.99 |
| | | 64 | 5320 | 2.255 | 4.522 | 6.545 | 10.99 |
| | ac(40MHz) | 54 | 5270 | -0.549 | 1.582 | 3.656 | 10.99 |
| | | 62 | 5310 | 0.235 | 2.064 | 4.255 | 10.99 |
| | ac(80MHz) | 58 | 5290 | -3.974 | -1.847 | 0.229 | 10.99 |
| BAND 2C | n (20MHz) | 100 | 5500 | 0.427 | 3.728 | 5.394 | 10.99 |
| | | 120 | 5600 | 1.386 | 3.604 | 5.645 | 10.99 |
| | | 144 | 5720 | 2.650 | 4.059 | 6.422 | 10.99 |
| | n (40MHz) | 102 | 5510 | -3.356 | -0.561 | 1.273 | 10.99 |
| | | 118 | 5590 | -1.941 | -0.116 | 2.077 | 10.99 |
| | | 142 | 5710 | -0.512 | 0.764 | 3.183 | 10.99 |
| | ac (20MHz) | 100 | 5500 | -0.634 | 2.281 | 4.074 | 10.99 |
| | | 120 | 5600 | 0.655 | 2.635 | 4.767 | 10.99 |
| | | 144 | 5720 | 1.976 | 3.255 | 5.673 | 10.99 |
| | ac(40MHz) | 102 | 5510 | -2.770 | 0.232 | 1.996 | 10.99 |
| | | 118 | 5590 | -1.982 | -0.066 | 2.091 | 10.99 |
| | | 142 | 5710 | -0.582 | 0.405 | 2.950 | 10.99 |
| | ac(80MHz) | 106 | 5530 | -5.777 | -3.233 | -1.311 | 10.99 |
| | | 122 | 5610 | -4.631 | -3.002 | -0.730 | 10.99 |

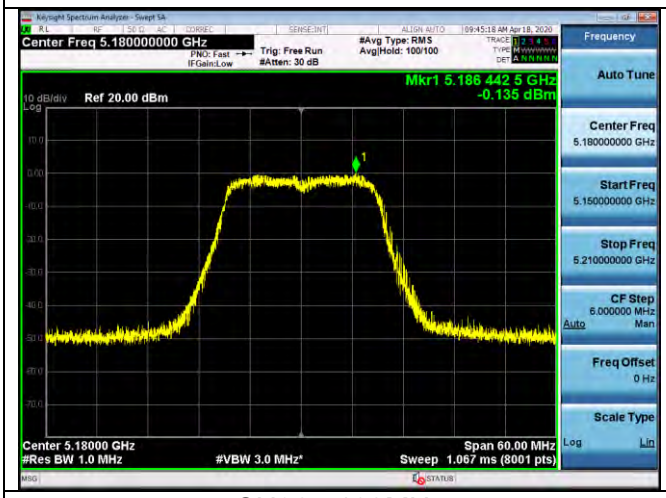
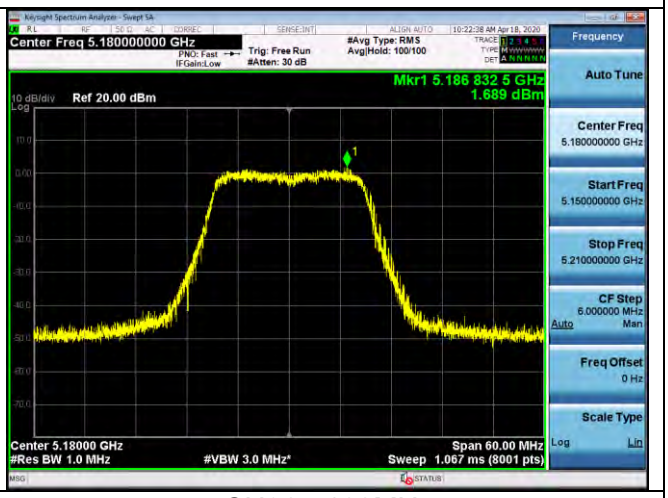
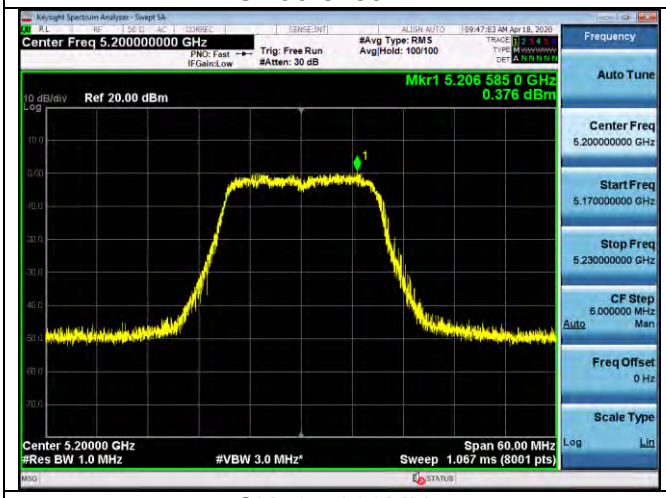
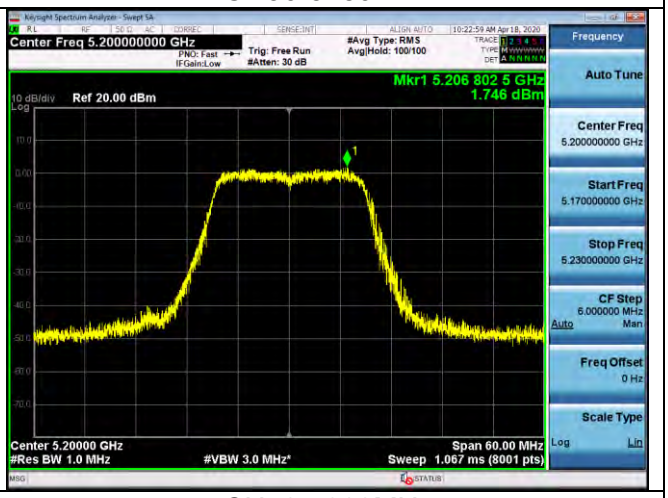
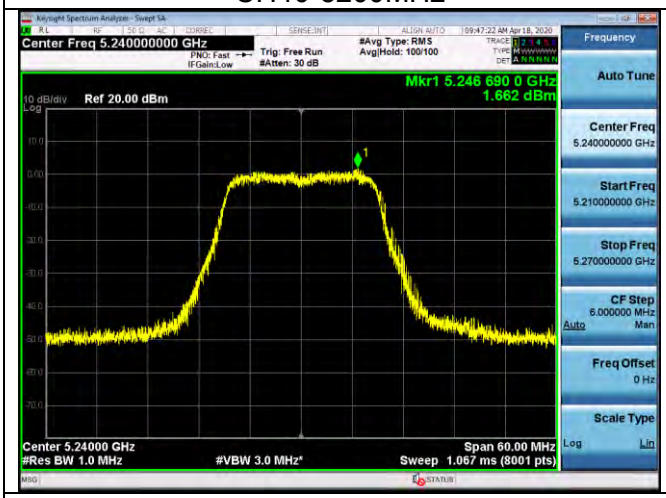
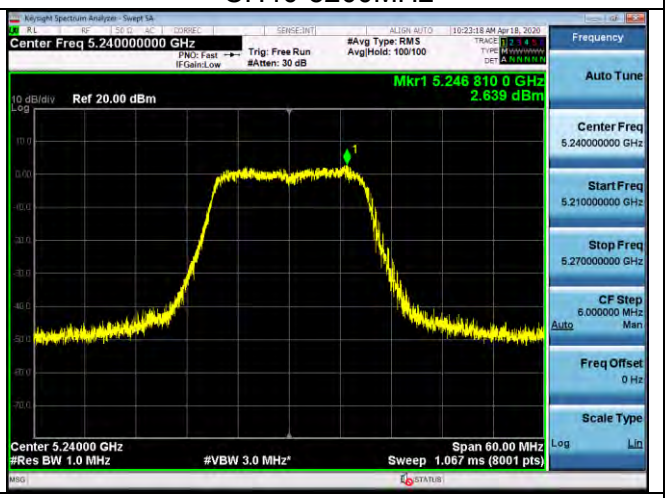
## band 1 -- n (20MHz)

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH36-5180MHz | CH36-5180MHz |
|  |  |
| CH40-5200MHz | CH40-5200MHz |
|  |  |
| CH38-5190MHz | CH38-5190MHz |

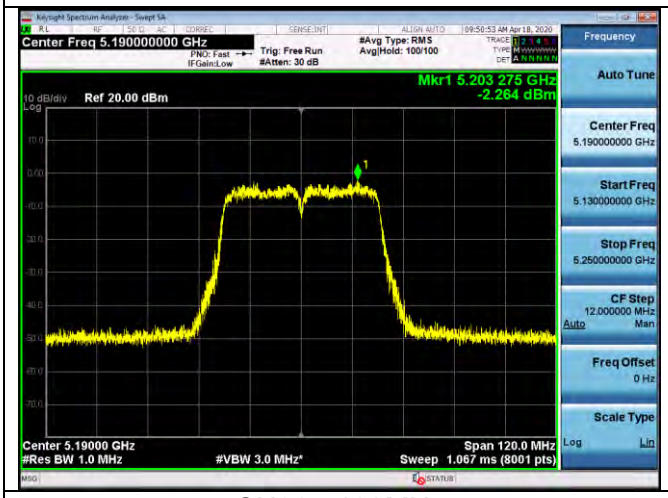
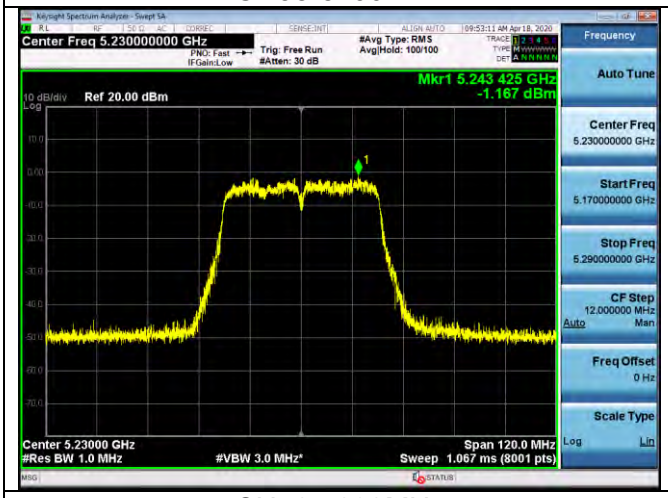
**band 1 -- n (40MHz)**

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH38-5190MHz | CH38-5190MHz |
|  |  |
| CH46-5230MHz | CH46-5230MHz |

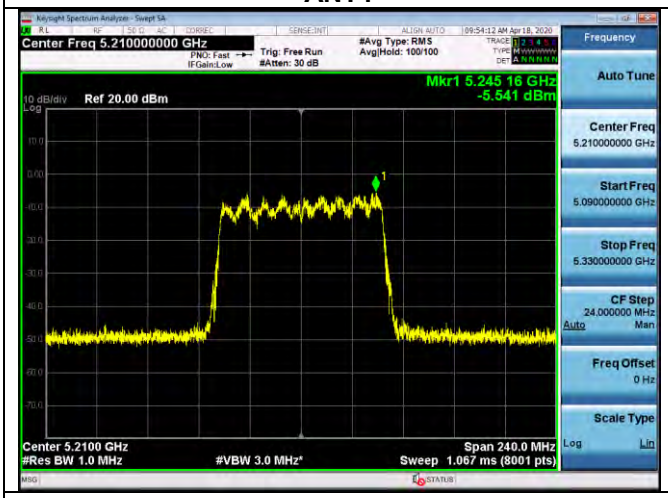
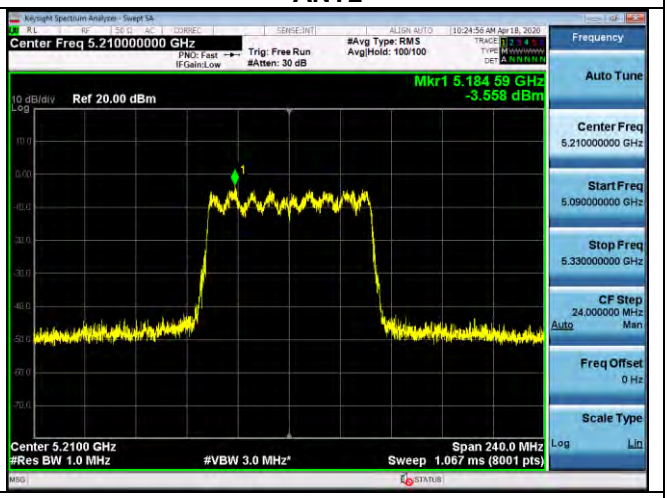
## band 1 -- ac(20MHz)

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH36-5180MHz | CH36-5180MHz |
|  |  |
| CH40-5200MHz | CH40-5200MHz |
|  |  |
| CH48-5240MHz | CH48-5240MHz |

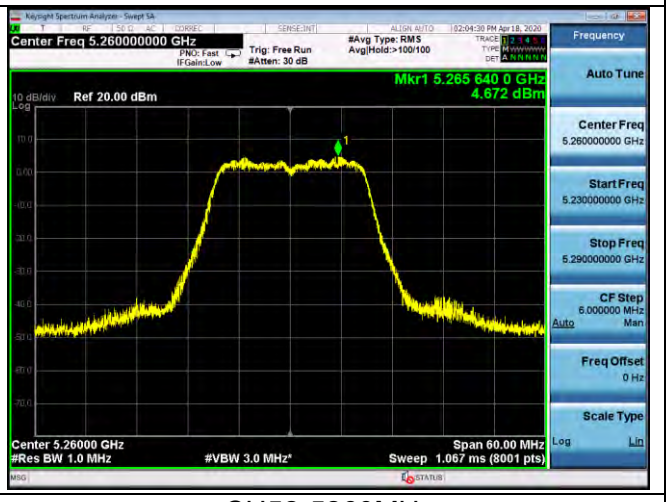
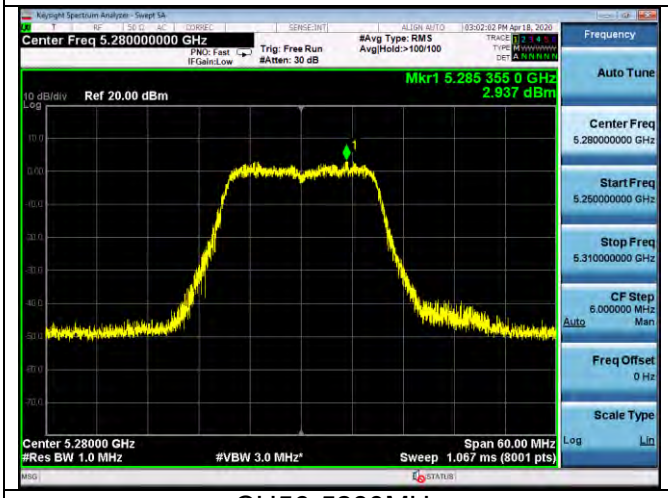
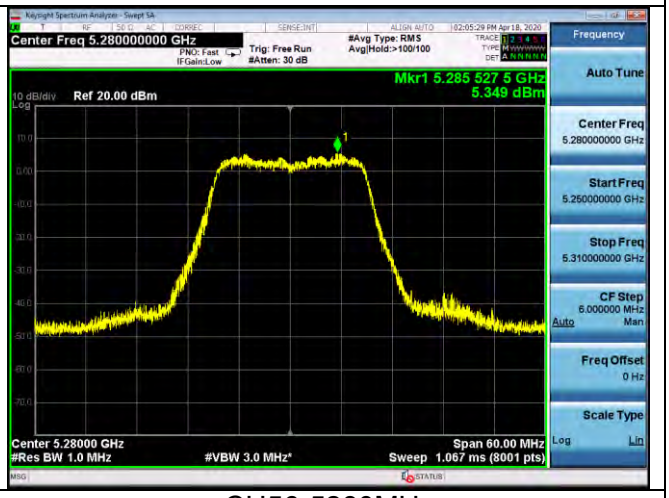
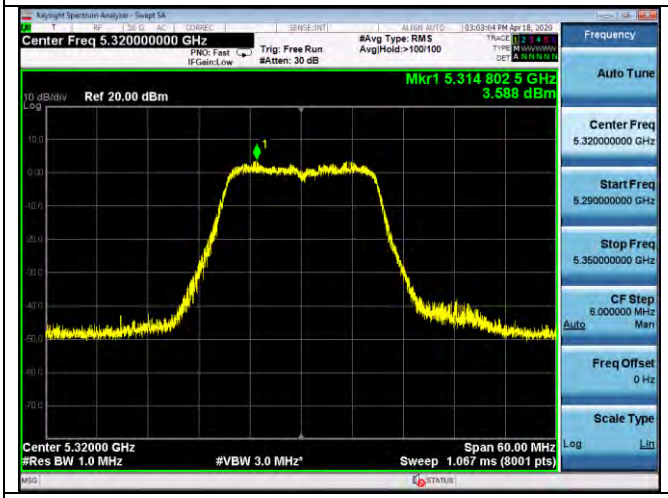
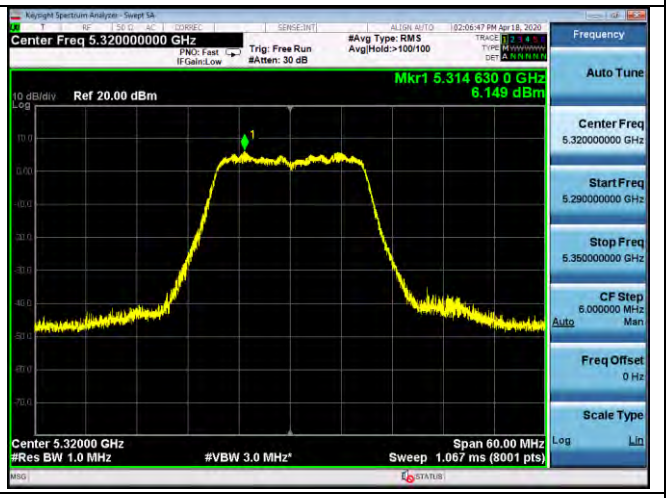
## band 1 --ac (40MHz)

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH38-5190MHz | CH38-5190MHz |
|  |  |
| CH46-5230MHz | CH46-5230MHz |

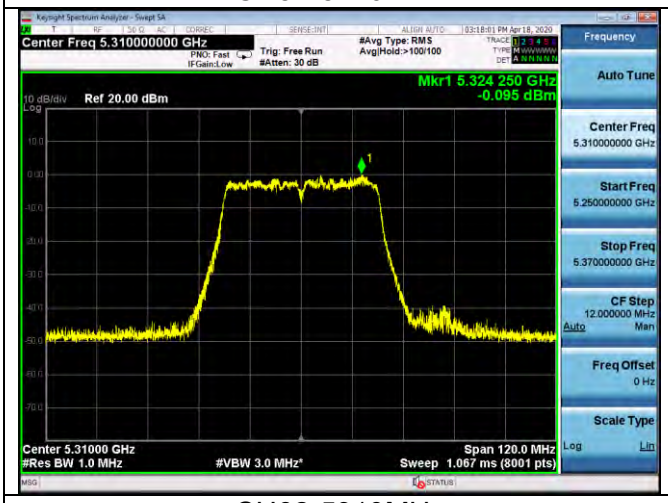
## band 1 --ac (80MHz)

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH42 5210MHz | CH42 5210MHz |

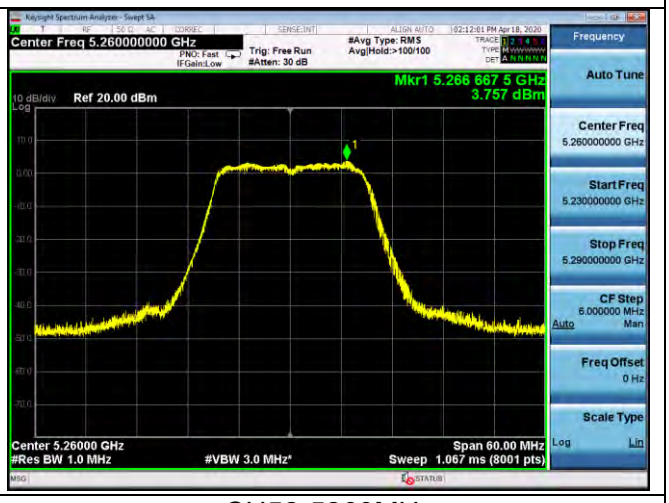
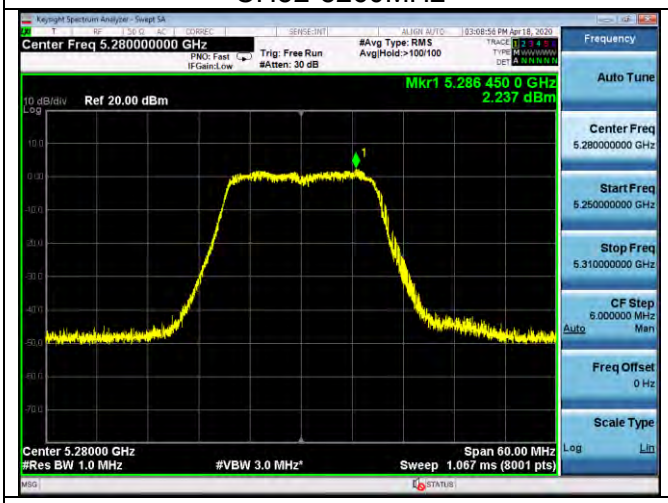
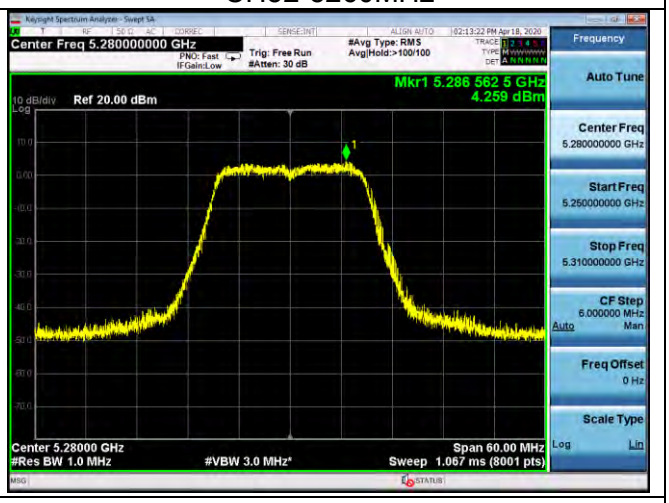
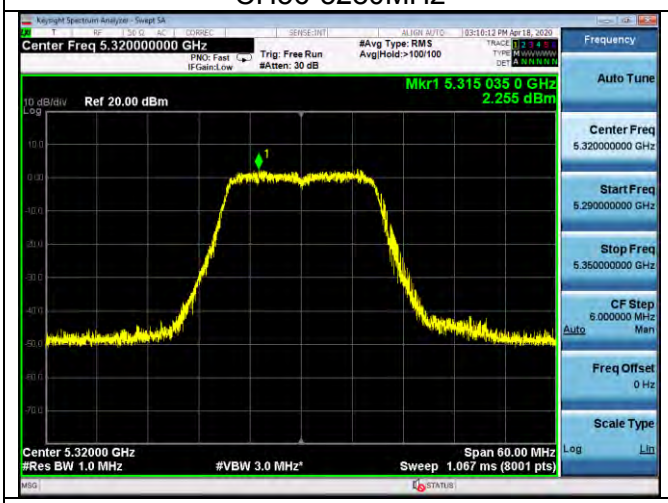
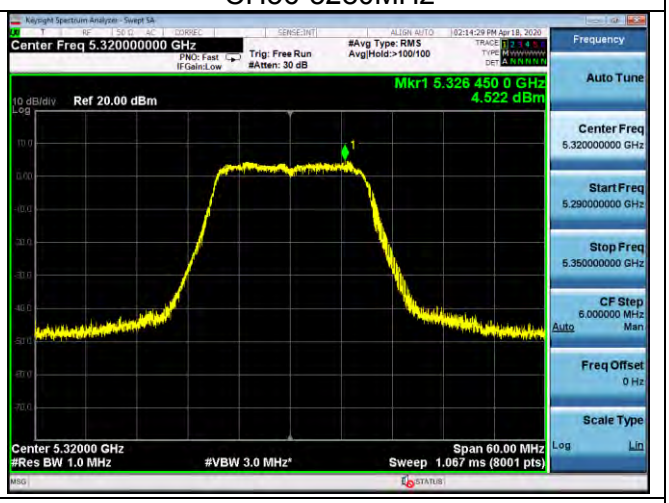
**band 2A -- n (20MHz)**

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH52-5260MHz | CH52-5260MHz |
|  |  |
| CH56-5280MHz | CH56-5280MHz |
|  |  |
| CH64-5320MHz | CH64-5320MHz |

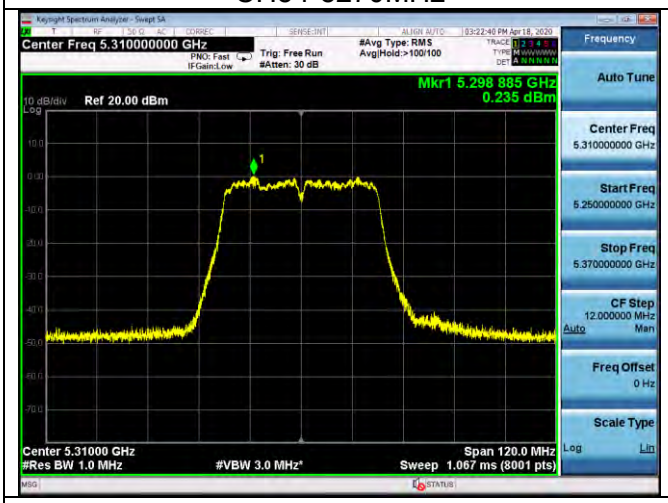
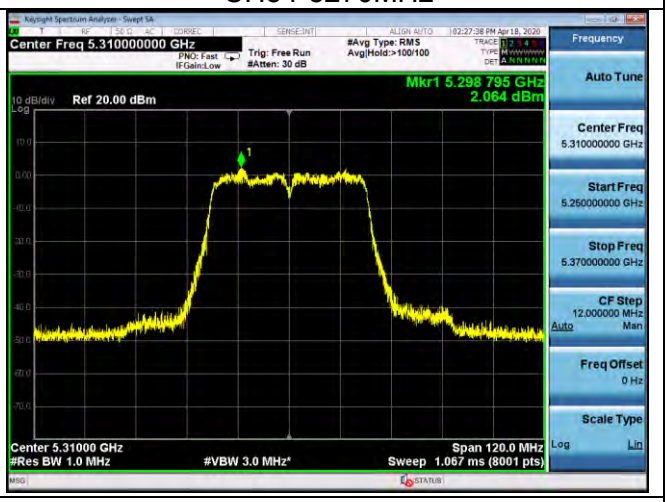
**band 2A -- n (40MHz)**

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH54-5270MHz | CH54-5270MHz |
|  |  |
| CH62-5310MHz | CH62-5310MHz |

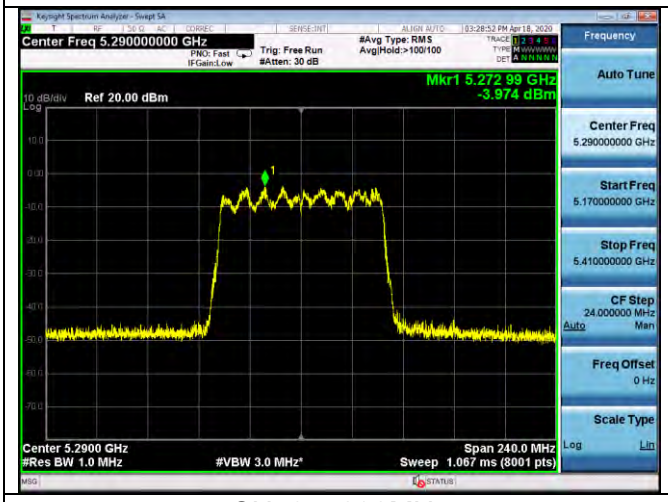
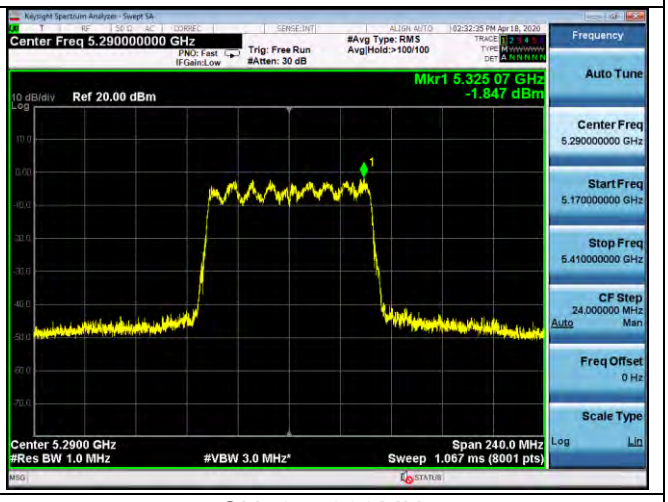
**band 2A -- ac (20MHz)**

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH52-5260MHz | CH52-5260MHz |
|  |  |
| CH56-5280MHz | CH56-5280MHz |
|  |  |
| CH64-5320MHz | CH64-5320MHz |

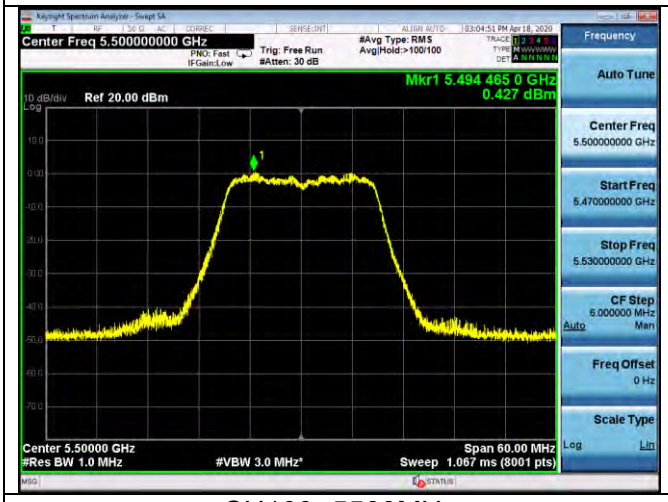
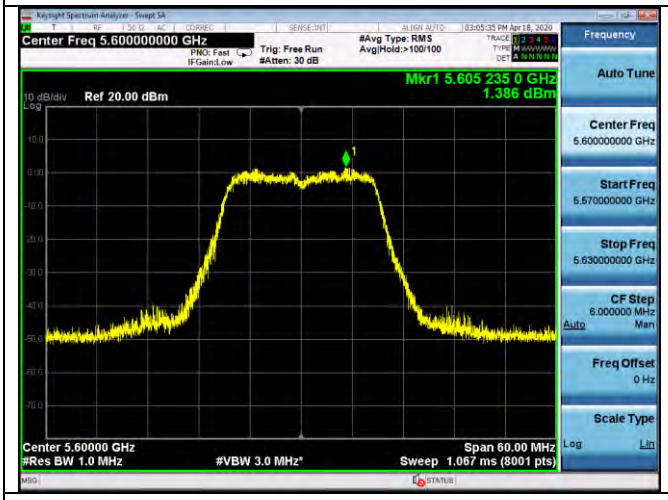
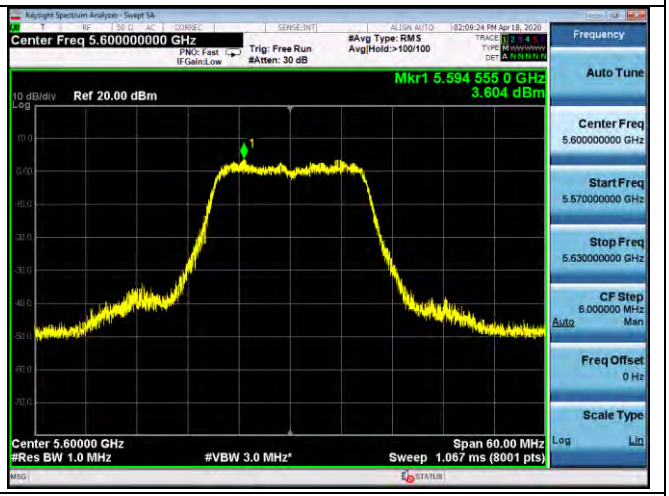
## band 2A -- ac (40MHz)

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH54-5270MHz | CH54-5270MHz |
|  |  |
| CH62-5310MHz | CH62-5310MHz |

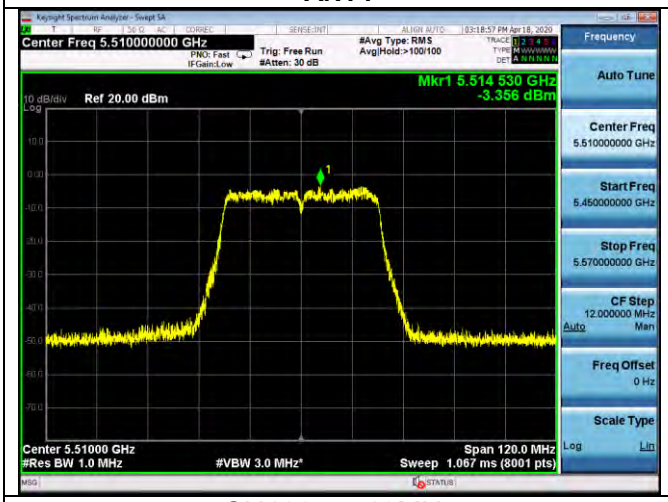
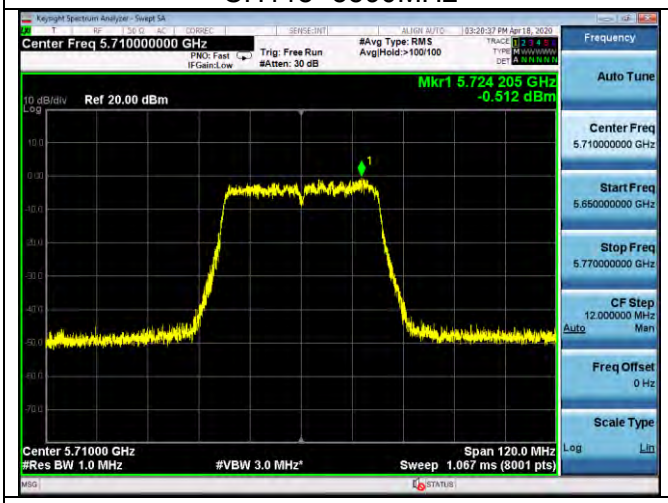
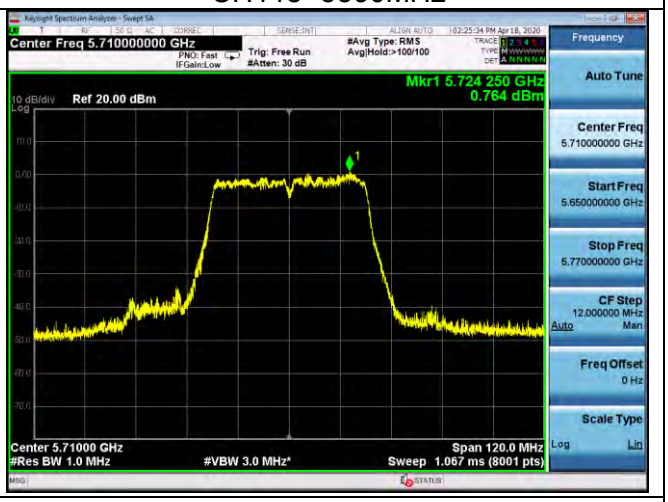
## band 2A -- ac (80MHz)

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH58- 5290MHz | CH58- 5290MHz |

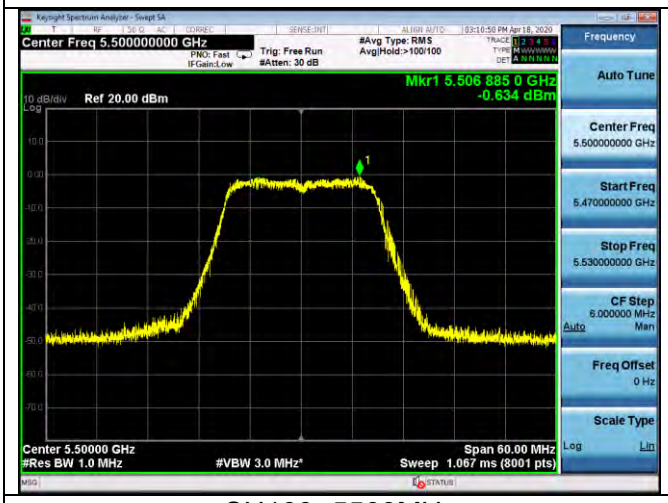
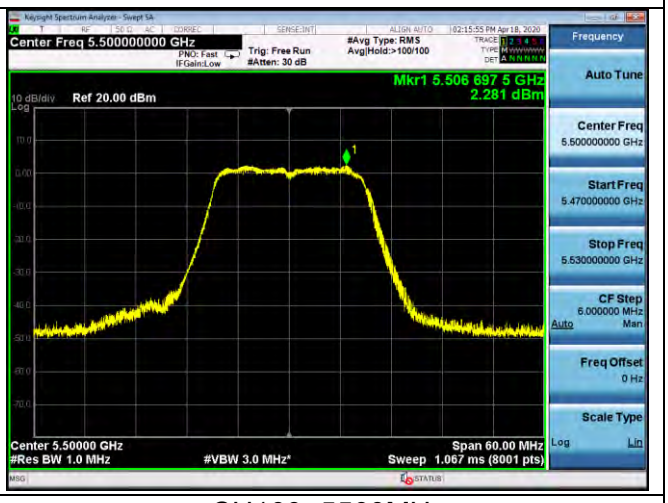
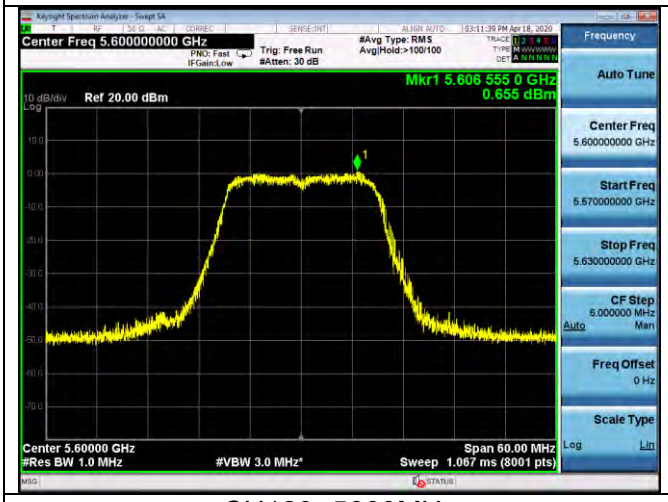
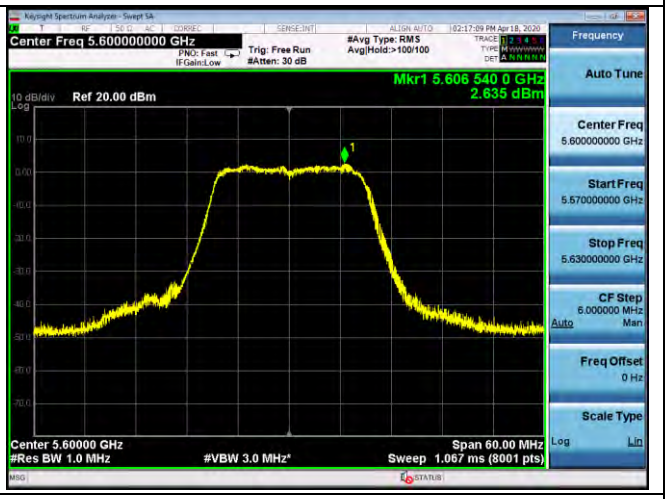
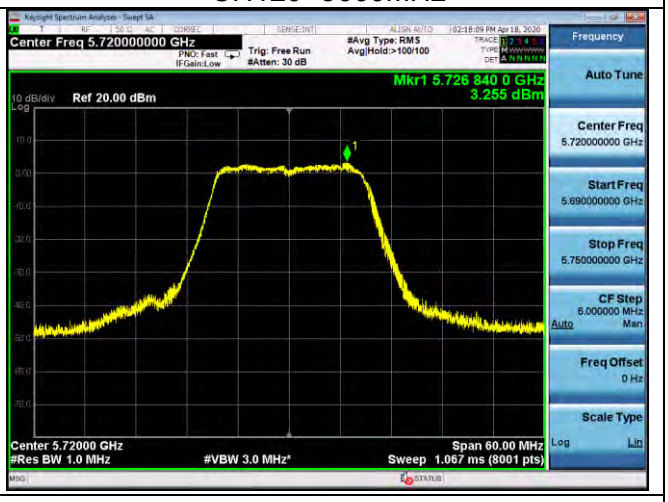
**band 2C -- n (20MHz)**

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH100- 5500MHz | CH100- 5500MHz |
|  |  |
| CH120- 5600MHz | CH120- 5600MHz |
|  |  |
| CH144 -5720MHz | CH144 -5720MHz |

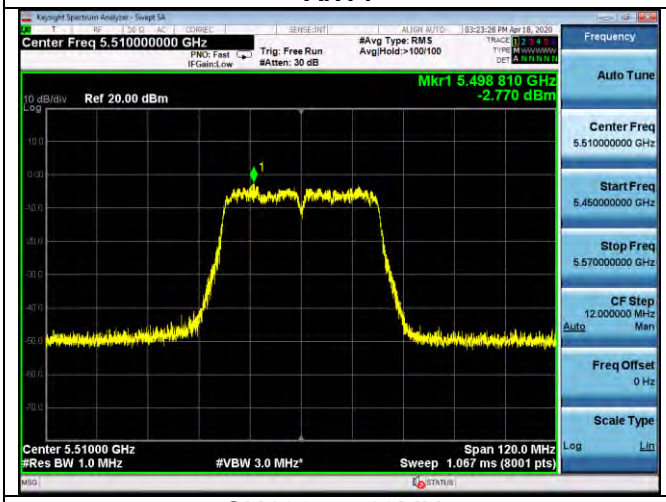
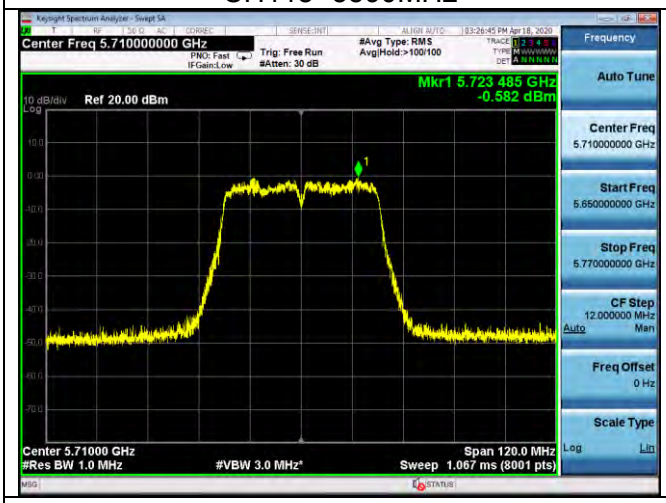
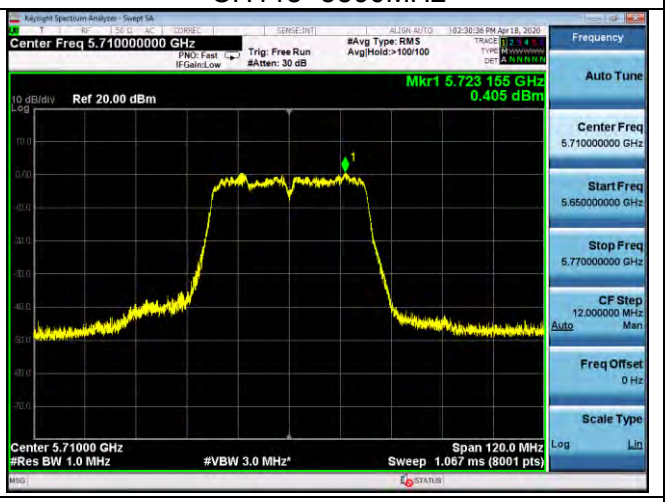
**band 2C -- n (40MHz)**

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH102 -5510MHz | CH102 -5510MHz |
|  |  |
| CH118 -5590MHz | CH118 -5590MHz |
|  |  |
| CH142 -5710MHz | CH142 -5710MHz |

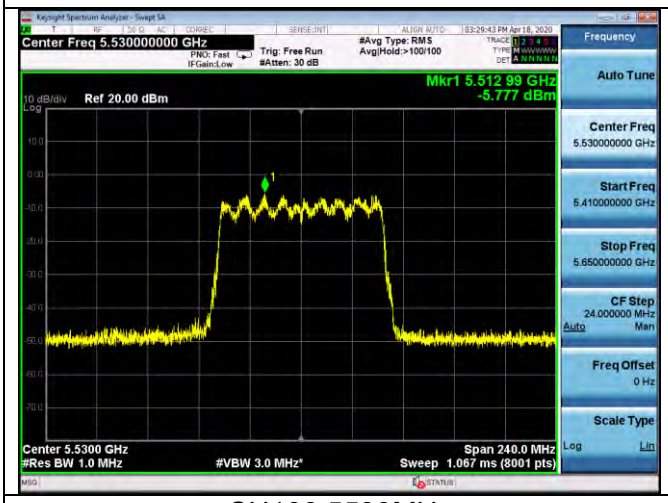
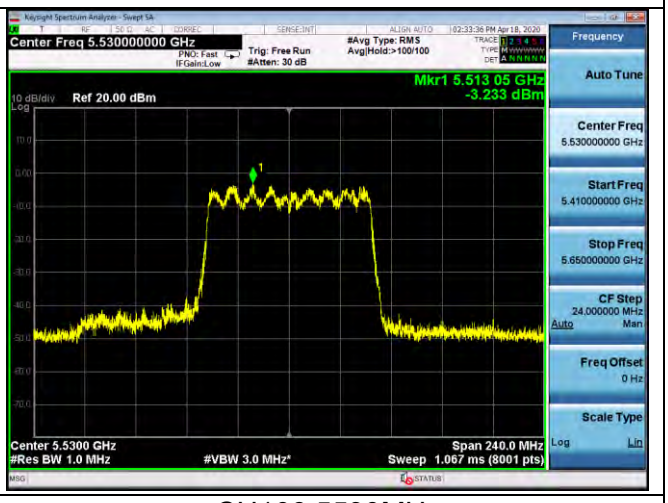
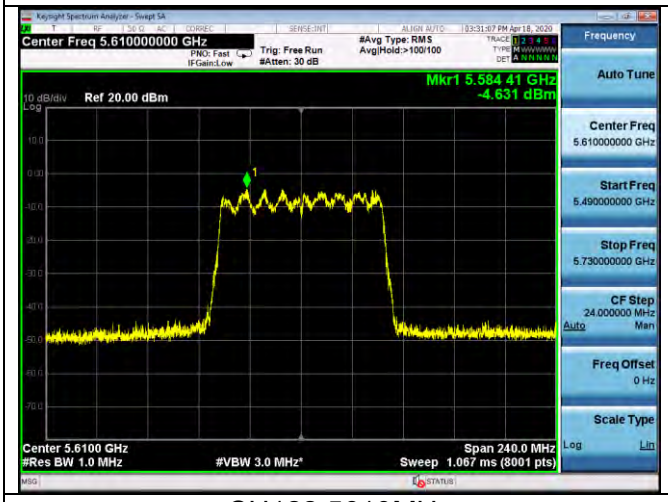
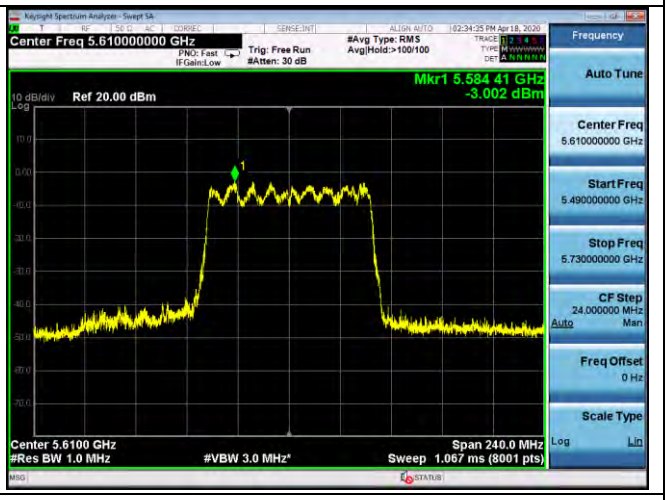
**band 2C -- ac (20MHz)**

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH100- 5500MHz | CH100- 5500MHz |
|  |  |
| CH120- 5600MHz | CH120- 5600MHz |
|  |  |
| CH144 -5720MHz | CH144 -5720MHz |

**band 2C -- ac (40MHz)**

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH102 -5510MHz | CH102 -5510MHz |
|  |  |
| CH118 -5590MHz | CH118 -5590MHz |
|  |  |
| CH142 -5710MHz | CH142 -5710MHz |

**band 2C -- ac (80MHz)**

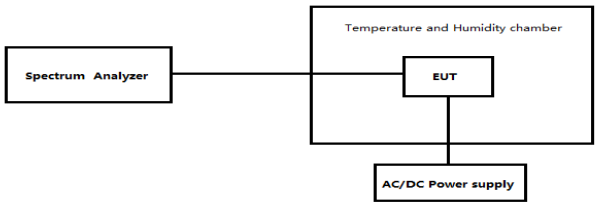
| ANT1 | ANT2 |
|---|---|
|  |  |
| CH106 5530MHz | CH106 5530MHz |
|  |  |
| CH122 5610MHz | CH122 5610MHz |

## 4.5 FREQUENCY STABILITY MEASUREMENT

**LIMIT**

According to§15.407(g),Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

**TESTCONFIGURATION**




**TESTPROCEDURE**

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

**TESTRESULTS**

The report only shows the test results in the worst test mode:

| MODE | CH. | FRE. | |
|---|---|---|---|
| 802.11n(HT20) | 36 | 5180 | ANT1/ANT2 |
| 802.11n(HT20) | 52 | 5260 | ANT1/ANT2 |
| 802.11n(HT20) | 100 | 5500 | ANT1/ANT2 |
| 802.11n(HT40) | 46 | 5230 | ANT1/ANT2 |
| 802.11ac(HT20) | 36 | 5180 | ANT1/ANT2 |
| 802.11ac(HT20) | 52 | 5260 | ANT1/ANT2 |
| 802.11ac(HT20) | 100 | 5500 | ANT1/ANT2 |
| 802.11ac(HT40) | 46 | 5230 | ANT1/ANT2 |
| 802.11ac(HT80) | 42 | 5210 | ANT1/ANT2 |

ANT1-- 802.11n(HT20)-CH36

| Temperature (°C) | Voltage (V) | Freq.(MHz) | Center Frequency (MHz) | Frequency Deviation (MHz) | Frequency Stability (ppm) |
|---|---|---|---|---|---|
| 25 | Vmin | 5180 | 5180.026 | 0.026 | 5.048 |
| 25 | Vmax | 5180 | 5180.001 | 0.001 | 0.283 |
| 25 | Vnor | 5180 | 5180.020 | 0.020 | 3.905 |
| -10 | Vnor | 5180 | 5179.998 | -0.002 | -0.478 |
| 40 | Vnor | 5180 | 5180.024 | 0.024 | 4.669 |

ANT1-- 802.11n(HT20)-CH52

| Temperature (°C) | Voltage (V) | Freq.(MHz) | Center Frequenc y (MHz) | Frequency Deviation (MHz) | Frequ ency Stabilit |
|---|---|---|---|---|---|
| 25 | $V_{min}$ | 5260 | 5260.038 | 0.038 | 7.139 |
| 25 | $V_{max}$ | 5260 | 5260.045 | 0.045 | 8.462 |
| 25 | $V_{nor}$ | 5260 | 5259.996 | -0.004 | -0.754 |
| -10 | $V_{nor}$ | 5260 | 5260.049 | 0.049 | 9.368 |
| 40 | $V_{nor}$ | 5260 | 5259.994 | -0.006 | -1.162 |

ANT1-- 802.11n(HT20)-CH100

| Temperature (°C) | Voltage (V) | Freq.(MHz) | Center Frequenc y (MHz) | Frequency Deviation (MHz) | Frequ ency Stabilit |
|---|---|---|---|---|---|
| 25 | $V_{min}$ | 5500 | 5500.002 | 0.002 | 0.277 |
| 25 | $V_{max}$ | 5500 | 5500.003 | 0.003 | 0.509 |
| 25 | $V_{nor}$ | 5500 | 5500.030 | 0.030 | 5.428 |
| -10 | $V_{nor}$ | 5500 | 5499.997 | -0.003 | -0.458 |
| 40 | $V_{nor}$ | 5500 | 5499.992 | -0.008 | -1.486 |

ANT1-- 802.11n(HT40)-CH46

| Temperature (°C) | Voltage (V) | Freq.(MHz) | Center Frequenc y (MHz) | Frequency Deviation (MHz) | Frequ ency Stabilit |
|---|---|---|---|---|---|
| 25 | $V_{min}$ | 5230 | 5229.987 | -0.013 | -2.409 |
| 25 | $V_{max}$ | 5230 | 5230.014 | 0.014 | 2.726 |
| 25 | $V_{nor}$ | 5230 | 5230.024 | 0.024 | 4.622 |
| -10 | $V_{nor}$ | 5230 | 5230.052 | 0.052 | 9.851 |
| 40 | $V_{nor}$ | 5230 | 5230.011 | 0.011 | 2.008 |

ANT1-- 802.11ac(HT20)-CH36

| Temperature (°C) | Voltage (V) | Freq.(MHz) | Center Frequenc y (MHz) | Frequency Deviation (MHz) | Frequ ency Stabilit |
|---|---|---|---|---|---|
| 25 | $V_{min}$ | 5180 | 5180.041 | 0.041 | 8.005 |
| 25 | $V_{max}$ | 5180 | 5179.998 | -0.002 | -0.326 |
| 25 | $V_{nor}$ | 5180 | 5180.003 | 0.003 | 0.487 |
| -10 | $V_{nor}$ | 5180 | 5180.029 | 0.029 | 5.556 |
| 40 | $V_{nor}$ | 5180 | 5180.020 | 0.020 | 3.777 |

ANT1-- 802.11ac(HT20)-CH52

| Temperature (°C) | Voltage (V) | Freq.(MHz) | Center Frequency (MHz) | Frequency Deviation (MHz) | Frequency Stabilit |
|---|---|---|---|---|---|
| 25 | $V_{min}$ | 5260 | 5260.000 | 0.000 | 0.067 |
| 25 | $V_{max}$ | 5260 | 5260.047 | 0.047 | 8.876 |
| 25 | $V_{nor}$ | 5260 | 5260.021 | 0.021 | 4.039 |
| -10 | $V_{nor}$ | 5260 | 5259.992 | -0.008 | -1.444 |
| 40 | $V_{nor}$ | 5260 | 5260.009 | 0.009 | 1.774 |

ANT1-- 802.11ac(HT20)-CH100

| Temperature (°C) | Voltage (V) | Freq.(MHz) | Center Frequency (MHz) | Frequency Deviation (MHz) | Frequency Stabilit |
|---|---|---|---|---|---|
| 25 | $V_{min}$ | 5500 | 5500.025 | 0.025 | 4.553 |
| 25 | $V_{max}$ | 5500 | 5500.032 | 0.032 | 5.828 |
| 25 | $V_{nor}$ | 5500 | 5499.988 | -0.012 | -2.177 |
| -10 | $V_{nor}$ | 5500 | 5500.043 | 0.043 | 7.860 |
| 40 | $V_{nor}$ | 5500 | 5500.043 | 0.043 | 7.854 |

ANT1-- 802.11ac(HT40)-CH46

| Temperature (°C) | Voltage (V) | Freq.(MHz) | Center Frequency (MHz) | Frequency Deviation (MHz) | Frequency Stabilit |
|---|---|---|---|---|---|
| 25 | $V_{min}$ | 5230 | 5230.032 | 0.032 | 6.121 |
| 25 | $V_{max}$ | 5230 | 5230.002 | 0.002 | 0.388 |
| 25 | $V_{nor}$ | 5230 | 5230.019 | 0.019 | 3.628 |
| -10 | $V_{nor}$ | 5230 | 5230.023 | 0.023 | 4.380 |
| 40 | $V_{nor}$ | 5230 | 5230.037 | 0.037 | 7.010 |

ANT1-- 802.11ac(HT80)-CH42

| Temperature (°C) | Voltage (V) | Freq.(MHz) | Center Frequency (MHz) | Frequency Deviation (MHz) | Frequency Stabilit |
|---|---|---|---|---|---|
| 25 | $V_{min}$ | 5210 | 5209.991 | -0.009 | -1.689 |
| 25 | $V_{max}$ | 5210 | 5209.990 | -0.010 | -1.943 |
| 25 | $V_{nor}$ | 5210 | 5210.040 | 0.040 | 7.610 |
| -10 | $V_{nor}$ | 5210 | 5210.009 | 0.009 | 1.727 |
| 40 | $V_{nor}$ | 5210 | 5210.027 | 0.027 | 5.162 |

ANT2-- 802.11n(HT20)-CH36

| Temperature (°C) | Voltage (V) | Freq.(MHz) | Center Frequency (MHz) | Frequency Deviation (MHz) | Frequency Stabilit |
|---|---|---|---|---|---|
| 25 | $V_{min}$ | 5180 | 5180.038 | 0.038 | 7.322 |
| 25 | $V_{max}$ | 5180 | 5180.025 | 0.025 | 4.852 |
| 25 | $V_{nor}$ | 5180 | 5180.029 | 0.029 | 5.522 |
| -10 | $V_{nor}$ | 5180 | 5179.991 | -0.009 | -1.697 |
| 40 | $V_{nor}$ | 5180 | 5179.992 | -0.008 | -1.537 |

ANT2-- 802.11n(HT20)-CH52

| Temperature (°C) | Voltage (V) | Freq.(MHz) | Center Frequency (MHz) | Frequency Deviation (MHz) | Frequency Stabilit |
|---|---|---|---|---|---|
| 25 | $V_{min}$ | 5260 | 5260.043 | 0.043 | 8.105 |
| 25 | $V_{max}$ | 5260 | 5260.000 | 0.000 | 0.056 |
| 25 | $V_{nor}$ | 5260 | 5259.991 | -0.009 | -1.632 |
| -10 | $V_{nor}$ | 5260 | 5259.998 | -0.002 | -0.388 |
| 40 | $V_{nor}$ | 5260 | 5260.021 | 0.021 | 4.036 |

ANT2-- 802.11n(HT20)-CH100

| Temperature (°C) | Voltage (V) | Freq.(MHz) | Center Frequency (MHz) | Frequency Deviation (MHz) | Frequency Stabilit |
|---|---|---|---|---|---|
| 25 | $V_{min}$ | 5500 | 5499.994 | -0.006 | -1.128 |
| 25 | $V_{max}$ | 5500 | 5500.027 | 0.027 | 4.939 |
| 25 | $V_{nor}$ | 5500 | 5500.042 | 0.042 | 7.556 |
| -10 | $V_{nor}$ | 5500 | 5499.992 | -0.008 | -1.520 |
| 40 | $V_{nor}$ | 5500 | 5500.024 | 0.024 | 4.391 |

ANT2-- 802.11n(HT40)-CH46

| Temperature (°C) | Voltage (V) | Freq.(MHz) | Center Frequency (MHz) | Frequency Deviation (MHz) | Frequency Stabilit |
|---|---|---|---|---|---|
| 25 | $V_{min}$ | 5230 | 5230.012 | 0.012 | 2.389 |
| 25 | $V_{max}$ | 5230 | 5229.991 | -0.009 | -1.685 |
| 25 | $V_{nor}$ | 5230 | 5230.032 | 0.032 | 6.050 |
| -10 | $V_{nor}$ | 5230 | 5230.036 | 0.036 | 6.969 |
| 40 | $V_{nor}$ | 5230 | 5229.993 | -0.007 | -1.306 |

ANT2-- 802.11ac(HT20)-CH36

| Temperature (°C) | Voltage (V) | Freq.(MHz) | Center Frequency (MHz) | Frequency Deviation (MHz) | Frequency Stabilit |
|---|---|---|---|---|---|
| 25 | $V_{min}$ | 5180 | 5180.006 | 0.006 | 1.204 |
| 25 | $V_{max}$ | 5180 | 5180.007 | 0.007 | 1.435 |
| 25 | $V_{nor}$ | 5180 | 5179.998 | -0.002 | -0.320 |
| -10 | $V_{nor}$ | 5180 | 5180.036 | 0.036 | 6.908 |
| 40 | $V_{nor}$ | 5180 | 5180.004 | 0.004 | 0.803 |

ANT2-- 802.11ac(HT20)-CH52

| Temperature (°C) | Voltage (V) | Freq.(MHz) | Center Frequency (MHz) | Frequency Deviation (MHz) | Frequency Stabilit |
|---|---|---|---|---|---|
| 25 | $V_{min}$ | 5260 | 5260.000 | 0.000 | 0.060 |
| 25 | $V_{max}$ | 5260 | 5260.016 | 0.016 | 3.036 |
| 25 | $V_{nor}$ | 5260 | 5260.023 | 0.023 | 4.436 |
| -10 | $V_{nor}$ | 5260 | 5259.988 | -0.012 | -2.237 |
| 40 | $V_{nor}$ | 5260 | 5260.004 | 0.004 | 0.742 |

ANT2-- 802.11ac(HT20)-CH100

| Temperature (°C) | Voltage (V) | Freq.(MHz) | Center Frequency (MHz) | Frequency Deviation (MHz) | Frequency Stabilit |
|---|---|---|---|---|---|
| 25 | $V_{min}$ | 5500 | 5500.041 | 0.041 | 7.410 |
| 25 | $V_{max}$ | 5500 | 5500.004 | 0.004 | 0.784 |
| 25 | $V_{nor}$ | 5500 | 5500.048 | 0.048 | 8.717 |
| -10 | $V_{nor}$ | 5500 | 5499.997 | -0.003 | -0.542 |
| 40 | $V_{nor}$ | 5500 | 5500.024 | 0.024 | 4.374 |

ANT2-- 802.11ac(HT40)-CH46

| Temperature (°C) | Voltage (V) | Freq.(MHz) | Center Frequency (MHz) | Frequency Deviation (MHz) | Frequency Stabilit |
|---|---|---|---|---|---|
| 25 | $V_{min}$ | 5230 | 5230.045 | 0.045 | 8.509 |
| 25 | $V_{max}$ | 5230 | 5230.000 | 0.000 | -0.022 |
| 25 | $V_{nor}$ | 5230 | 5229.992 | -0.008 | -1.516 |
| -10 | $V_{nor}$ | 5230 | 5230.022 | 0.022 | 4.191 |
| 40 | $V_{nor}$ | 5230 | 5230.021 | 0.021 | 4.054 |

ANT2-- 802.11ac(HT80)-CH42

| Temperature (°C) | Voltage (V) | Freq.(MHz) | Center Frequency (MHz) | Frequency Deviation (MHz) | Frequency Stabilit |
|---|---|---|---|---|---|
| 25 | $V_{min}$ | 5210 | 5210.022 | 0.022 | 4.250 |
| 25 | $V_{max}$ | 5210 | 5209.995 | -0.005 | -1.019 |
| 25 | $V_{nor}$ | 5210 | 5210.013 | 0.013 | 2.446 |
| -10 | $V_{nor}$ | 5210 | 5210.038 | 0.038 | 7.352 |
| 40 | $V_{nor}$ | 5210 | 5210.006 | 0.006 | 1.106 |

## 4.6 RADIATED UNDESIRABLE EMISSION

**LIMIT**

Radiated emissions from9 kHz to25 GHz were measured according to the methods defines in ANSI C63.10-2013.The EUT was placed above the ground plane, 0.8 meter for frequency below 1GHzand1.5meterforfrequencyabove1GHz.Theinterfacecablesandequipmentpositionswere varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.

1. For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of –27dBm/MHz.

   For transmitters operating in the 5250-5350 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5250-5350 MHz band that generate emissions in the 5150-5250 MHz band must meet all applicable technical requirements for operation in the 5150-5250 MHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5150-5250 MHz band.

   For transmitters operating in the 5470-5600 MHz and 5650-5725MHz band: all emissions outside of the 5470-5600 MHz and 5650-5725MHz band shall not exceed an EIRPof -27 dBm/MHz.

2. KDB789033v02r01G)2)c)Asspecifiedin15.407(b),emissionsabove1000MHzthatareoutsideofthe restricted bands are subject to a peak emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in 15.407(b)(4)). However, an out-of-band emission that complies with both the average and peak limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak emission limit.

3. According to§15.209(a),exceptasprovidedelsewhereinthisSubpart,theemissionsfroman intentionalradiatorshallnotexceedthefieldstrengthlevelsspecifiedinthefollowingtable:

| FREQUENCIES(MHz) | FIELDSTRENGTH (microvolt/meter) | MEASUREMENT DISTANCE(meters) |
|---|---|---|
| 0.009~0.490 | 2400/F(kHz) | 300 |
| 0.490~1.705 | 24000/F(kHz) | 30 |
| 1.705~30.0 | 30 | 30 |
| 30~88 | 100 | 3 |
| 88~216 | 150 | 3 |
| 216~960 | 200 | 3 |
| Above 960 | 500 | 3 |

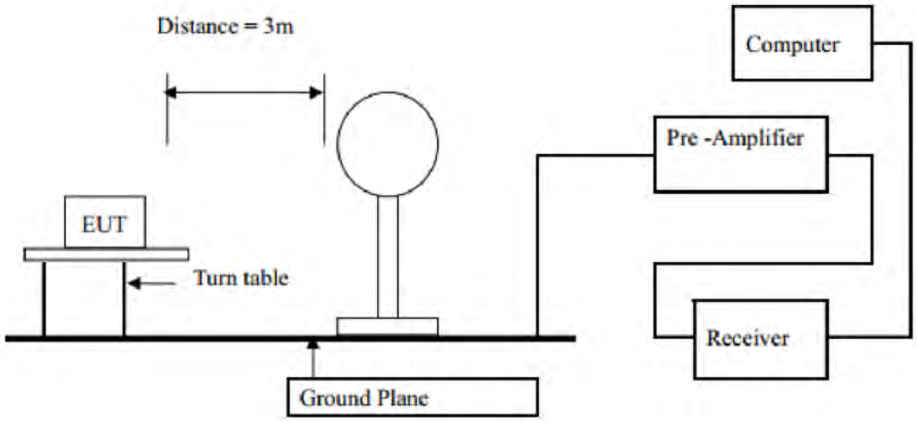
***Remark:*** *Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806MHz.However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231and 15.241.*

4. In the emission table above, the tighter limit applies at the band edges.

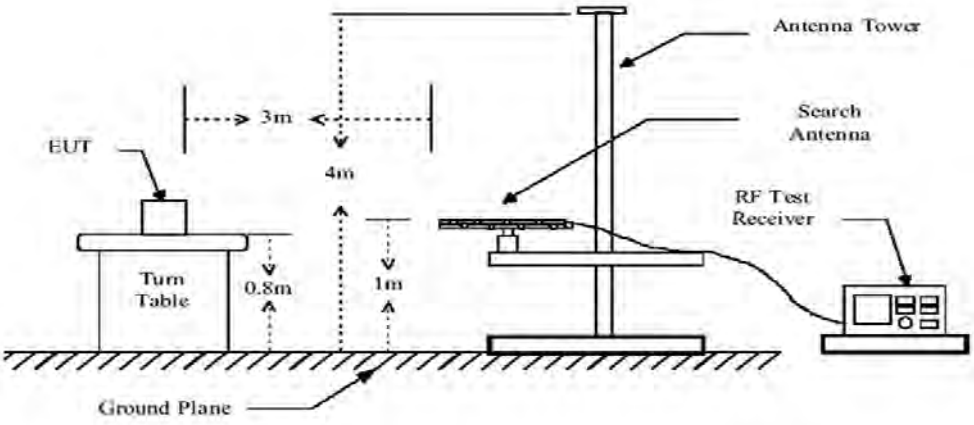
| Frequency (MHz) | Field Strength(μV/mat | Field Strength(dBμV/mat |
|---|---|---|
| 30-88 | 100 | 40 |
| 88-216 | 150 | 43.5 |
| 216-960 | 200 | 46 |
| Above 960 | 500 | 54 |

## Test Configuration

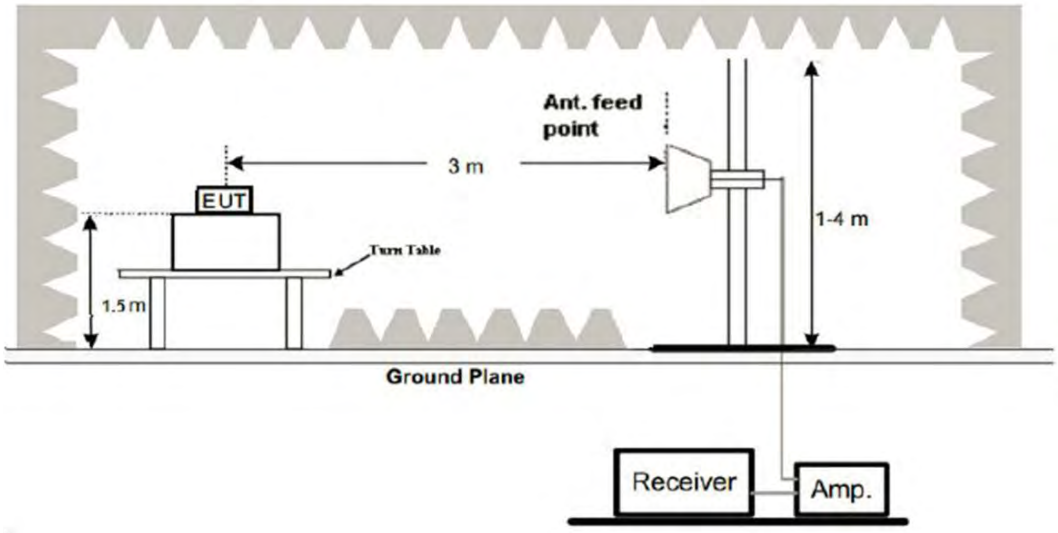
Below 30MHz




Below1GHz




Above 1 GHz



## TESTPROCEDURE

1. The EUT is placed on a turntable above ground plane, which is 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz.
2. The turntable shall be rotated for 360degrees to determine the position of maximum emission level.
3. EUTisset3mawayfromthereceivingantenna,whichisvariedfrom1mto4mtofindoutthehighest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Set the spectrum analyzer in the following setting as:

   Below 1GHz:

   RBW=100kHz/ VBW=300kHz / Sweep=AUTO

   Above 1GHz:

   (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO

   (b) AVERAGE: RBW=1MHz / Sweep=AUTO

   VBW=10Hz,whenduty cycle is no less than 98 percent.

   VBW≧1/T, when duty cycle is less than98 percent, where is the minimum transmissiondurationoverwhichthetransmitterisonandistransmittingatitsmaximun power control level for the tested mode of operation.
7. Repeat above procedures until the measurements for all frequencies are complete.

## TES TRESULTS

**Harmonics and Spurious Emissions**

**Frequency Range (9 kHz-30MHz)**

| Frequency (MHz) | Level@3m (dBμV/m) | Limit@3m (dBμV/m) |
|---|---|---|
| -- | -- | -- |
| -- | -- | -- |
| -- | -- | -- |
| -- | -- | -- |

***Note:*** *1. Emission Level=Reading+ Cable loss-Antenna factor-Amp factor*

*2. The emission levels are 20 dB below the limit value, which are not reported. It is deemed to comply with the requirement*

**Test Results**

radiated emission 30MHz – 1Ghz:

Note: The test data for the worst mode of radiation emission has been recorded in the report: HK2004170655-1E

**Above 1 GHz**

Note: The test results only show the test results of mode 802.11ac(HT20)/(HT40)/(HT80) of ANT1 and MIMO for BAND1

ANT1

| TEST BAND | BW | TEST CH. | TEST FRE.(MHz) |
|---|---|---|---|
| BAND I | 20 | 36 | 5180 |
| | | 40 | 5200 |
| | | 48 | 5240 |
| | 40 | 38 | 5190 |
| | | 46 | 5230 |
| | 80 | 42 | 5210 |
| BAND 2A | 20 | 52 | 5260 |
| | | 56 | 5280 |
| | | 64 | 5320 |
| | 40 | 54 | 5270 |
| | | 62 | 5310 |
| | 80 | 58 | 5290 |
| BAND 2C | 20 | 100 | 5500 |
| | | 120 | 5600 |
| | | 144 | 5720 |
| | 40 | 102 | 5510 |
| | | 118 | 5590 |
| | | 142 | 5710 |
| | 80 | 106 | 5530 |
| | | 122 | 5610 |

MIMO

| TEST BAND | BW | TEST CH. | TEST FRE.(MHz) |
|---|---|---|---|
| BAND I | 20 | 36 | 5180 |
| | | 40 | 5200 |
| | | 48 | 5240 |
| | 40 | 38 | 5190 |
| | | 46 | 5230 |
| | 80 | 42 | 5210 |

**BAND I**

Operation Mode: Tx / IEEE 802.11ac(HT20) Low Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10360.40 | 37.24 | 11.21 | 48.45 | 74.00 | -25.55 | | | peak |
| 2 | 15540.01 | 36.76 | 12.25 | 49.01 | 74.00 | -24.99 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10360.97 | 36.43 | 11.21 | 47.64 | 74.00 | -26.36 | | | peak |
| 2 | 15540.13 | 35.71 | 12.25 | 47.96 | 74.00 | -26.04 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: Tx / IEEE 802.11ac(HT20) Mid Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10400.32 | 36.54 | 10.64 | 47.18 | 74.00 | -26.82 | | | peak |
| 2 | 15600.48 | 30.94 | 12.29 | 43.23 | 74.00 | -30.77 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10400.58 | 38.61 | 10.64 | 49.25 | 74.00 | -24.75 | | | peak |
| 2 | 15600.62 | 35.68 | 12.29 | 47.97 | 74.00 | -26.03 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: Tx / IEEE 802.11ac(HT20) High Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10480.46 | 37.98 | 10.86 | 48.84 | 74.00 | -25.16 | | | peak |
| 2 | 15720.09 | 30.36 | 12.33 | 42.69 | 74.00 | -31.31 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10480.97 | 37.17 | 10.86 | 48.03 | 74.00 | -25.97 | | | peak |
| 2 | 15720.49 | 30.44 | 12.33 | 42.77 | 74.00 | -31.23 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: TX / IEEE 802.11ac HT40 mode /Low Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10380.07 | 36.31 | 11.21 | 47.52 | 74.00 | -26.48 | | | peak |
| 2 | 15570.42 | 35.77 | 12.25 | 48.02 | 74.00 | -25.98 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertica
l

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10380.77 | 38.91 | 11.21 | 50.12 | 74.00 | -23.88 | | | peak |
| 2 | 15570.92 | 33.73 | 12.25 | 45.98 | 74.00 | -28.02 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: TX / IEEE 802.11ac HT40mode /High Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10460.25 | 39.09 | 10.86 | 49.95 | 74.00 | -24.05 | | | peak |
| 2 | 15690.21 | 34.58 | 16.53 | 51.11 | 74.00 | -22.89 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10460.44 | 36.25 | 10.86 | 47.11 | 74.00 | -26.89 | | | peak |
| 2 | 15690.43 | 32.54 | 16.53 | 49.07 | 74.00 | -24.93 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: TX / IEEE 802.11ac HT80mode /High Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10422.94 | 38.60 | 10.64 | 49.24 | 74.00 | -24.76 | | | peak |
| 2 | 15632.90 | 35.02 | 12.29 | 47.31 | 74.00 | -26.69 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertica
l

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10423.68 | 37.39 | 10.64 | 48.03 | 74.00 | -25.97 | | | peak |
| 2 | 15634.14 | 33.93 | 12.29 | 46.22 | 74.00 | -27.78 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

**Band 2A**

Operation Mode: Tx / IEEE 802.11ac(HT20) mode Low Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10520.38 | 38.69 | 11.53 | 50.22 | 74.00 | -23.78 | | | peak |
| 2 | 15780.57 | 32.87 | 13.73 | 46.60 | 74.00 | -27.40 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10520.85 | 39.99 | 11.53 | 51.52 | 74.00 | -22.48 | | | peak |
| 2 | 15780.78 | 32.98 | 13.73 | 46.71 | 74.00 | -27.29 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: Tx / IEEE 802.11ac(HT20) mode Mid Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10560.76 | 39.89 | 11.61 | 51.50 | 74.00 | -22.50 | | | peak |
| 2 | 15840.13 | 32.45 | 13.79 | 46.24 | 74.00 | -27.76 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10560.85 | 36.73 | 11.61 | 48.34 | 74.00 | -25.66 | | | peak |
| 2 | 15840.13 | 33.35 | 13.79 | 47.14 | 74.00 | -26.86 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: Tx / IEEE 802.11ac(HT20) mode High Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10640.37 | 39.60 | 12.89 | 52.49 | 74.00 | -21.51 | | | peak |
| 2 | 15960.17 | 32.16 | 13.94 | 46.10 | 74.00 | -27.90 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10640.34 | 36.28 | 12.89 | 49.17 | 74.00 | -24.83 | | | peak |
| 2 | 15960.10 | 31.18 | 13.94 | 45.12 | 74.00 | -28.88 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: TX / IEEE 802.11ac HT40mode /Low Channel

Horizonal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10540.42 | 36.25 | 11.53 | 47.78 | 74.00 | -26.22 | | | peak |
| 2 | 15810.51 | 34.85 | 13.73 | 48.58 | 74.00 | -25.42 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertial

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10540.12 | 39.46 | 11.53 | 50.99 | 74.00 | -23.01 | | 77 | peak |
| 2 | 15810.17 | 32.54 | 13.73 | 46.27 | 74.00 | -27.73 | | 282 | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: TX / IEEE 802.11ac HT40mode /High Channel

Horizonal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10620.40 | 36.33 | 12.89 | 49.22 | 74.00 | -24.78 | | | peak |
| 2 | 15930.47 | 33.33 | 13.49 | 46.82 | 74.00 | -27.18 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertial

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10620.52 | 36.89 | 12.89 | 49.78 | 74.00 | -24.22 | | | peak |
| 2 | 15930.19 | 30.40 | 13.49 | 43.89 | 74.00 | -30.11 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: TX / IEEE 802.11ac HT80mode

Horizonal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10547.38 | 37.55 | 11.61 | 49.16 | 74.00 | -24.84 | | | peak |
| 2 | 15811.45 | 31.73 | 13.79 | 45.52 | 74.00 | -28.48 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertial

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10543.30 | 37.74 | 11.61 | 49.35 | 74.00 | -24.65 | | | peak |
| 2 | 15815.85 | 34.88 | 13.79 | 48.67 | 74.00 | -25.33 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

**Band 2C**

Operation Mode: Tx / IEEE 802.11ac(HT20) mode Low Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 11000.21 | 37.43 | 12.89 | 50.32 | 74.00 | -23.68 | | | peak |
| 2 | 16500.65 | 33.98 | 13.49 | 47.47 | 74.00 | -26.53 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 11000.08 | 39.80 | 12.89 | 52.69 | 74.00 | -21.31 | | | peak |
| 2 | 16500.95 | 35.52 | 13.49 | 49.01 | 74.00 | -24.99 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: Tx / IEEE 802.11ac(HT20) mode Mid Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 11200.66 | 39.73 | 12.94 | 52.67 | 74.00 | -21.33 | | | peak |
| 2 | 16800.48 | 34.82 | 13.53 | 48.35 | 74.00 | -25.65 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 11200.46 | 38.31 | 12.94 | 51.25 | 74.00 | -22.75 | | | peak |
| 2 | 16800.60 | 30.46 | 13.53 | 43.99 | 74.00 | -30.01 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: Tx / IEEE 802.11ac(HT20) mode High Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 11448.99 | 37.31 | 12.96 | 50.27 | 74.00 | -23.73 | | | peak |
| 2 | 17163.05 | 35.75 | 13.59 | 49.34 | 74.00 | -24.66 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 11445.00 | 36.73 | 12.96 | 49.69 | 74.00 | -24.31 | | | peak |
| 2 | 17164.01 | 33.40 | 13.59 | 46.99 | 74.00 | -27.01 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: TX / IEEE 802.11ac HT40mode / Low Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 11024.72 | 37.28 | 12.89 | 50.17 | 74.00 | -23.83 | | | peak |
| 2 | 16535.23 | 35.72 | 13.49 | 49.21 | 74.00 | -24.79 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 11020.80 | 37.36 | 12.89 | 50.25 | 74.00 | -23.75 | | | peak |
| 2 | 16536.19 | 32.72 | 13.49 | 46.21 | 74.00 | -27.79 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: TX / IEEE 802.11ac HT40mode /Mid Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 11186.08 | 39.94 | 12.91 | 52.85 | 74.00 | -21.15 | | | peak |
| 2 | 16771.51 | 32.04 | 13.52 | 45.56 | 74.00 | -28.44 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 11182.62 | 38.57 | 12.91 | 51.48 | 74.00 | -22.52 | | | peak |
| 2 | 16778.65 | 34.14 | 13.52 | 47.66 | 74.00 | -26.34 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: TX / IEEE 802.11ac HT40mode /High Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 11426.58 | 37.19 | 12.96 | 50.15 | 74.00 | -23.85 | | | peak |
| 2 | 17136.70 | 34.60 | 13.59 | 48.19 | 74.00 | -25.81 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 11427.95 | 38.83 | 12.96 | 51.79 | 74.00 | -22.21 | | | peak |
| 2 | 17137.47 | 35.90 | 13.59 | 49.49 | 74.00 | -24.51 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: TX / IEEE 802.11ac HT80mode /Low Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 11065.46 | 37.82 | 12.90 | 50.72 | 74.00 | -23.28 | | | peak |
| 2 | 16594.17 | 31.74 | 13.47 | 45.21 | 74.00 | -28.79 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 11062.31 | 38.98 | 12.90 | 51.88 | 74.00 | -22.12 | | | peak |
| 2 | 16597.81 | 32.86 | 13.47 | 46.33 | 74.00 | -27.67 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: TX / IEEE 802.11ac HT80mode /highChannel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 11228.61 | 37.00 | 12.92 | 49.92 | 74.00 | -24.08 | | | peak |
| 2 | 16836.79 | 30.92 | 13.49 | 44.41 | 74.00 | -29.59 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 11220.93 | 39.23 | 12.92 | 52.15 | 74.00 | -21.85 | | | peak |
| 2 | 16831.68 | 32.33 | 13.49 | 45.82 | 74.00 | -28.18 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

**Spurious emission for MIMO**

Operation Mode: Tx / BAND 1 -- MIMO 802.11n20 - Low Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10362.46 | 37.23 | 11.21 | 48.44 | 74.00 | -25.56 | | | peak |
| 2 | 15547.04 | 35.45 | 12.25 | 47.70 | 74.00 | -26.30 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10363.93 | 38.54 | 11.21 | 49.75 | 74.00 | -24.25 | | | peak |
| 2 | 15548.67 | 33.57 | 12.25 | 45.82 | 74.00 | -28.18 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: Tx / BAND 1 -- MIMO 802.11n20 - mid Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10403.70 | 39.48 | 10.64 | 50.12 | 74.00 | -23.88 | | | peak |
| 2 | 15606.71 | 35.89 | 12.29 | 48.18 | 74.00 | -25.82 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10408.49 | 39.18 | 10.64 | 49.82 | 74.00 | -24.18 | | | peak |
| 2 | 15601.29 | 33.73 | 12.29 | 46.02 | 74.00 | -27.98 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: Tx / BAND 1 -- MIMO 802.11 n20 High Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10483.98 | 37.90 | 10.86 | 48.76 | 74.00 | -25.24 | | | peak |
| 2 | 15721.85 | 35.31 | 12.33 | 47.64 | 74.00 | -26.36 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10484.09 | 39.16 | 10.86 | 50.02 | 74.00 | -23.98 | | | peak |
| 2 | 15723.93 | 32.15 | 12.33 | 44.48 | 74.00 | -29.52 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: TX / BAND 1 -- MIMO 802.11 n40 Low Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10380.09 | 38.72 | 11.21 | 49.93 | 74.00 | -24.07 | | | peak |
| 2 | 15571.79 | 33.34 | 12.25 | 45.59 | 74.00 | -28.41 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertica
l

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10385.68 | 39.58 | 11.21 | 50.79 | 74.00 | -23.21 | | | peak |
| 2 | 15573.68 | 31.44 | 12.25 | 43.69 | 74.00 | -30.31 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: TX / BAND 1 -- MIMO 802.11 n40 /High Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10467.63 | 39.28 | 10.86 | 50.14 | 74.00 | -23.86 | | | peak |
| 2 | 15695.34 | 30.25 | 16.53 | 46.78 | 74.00 | -27.22 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10461.76 | 37.82 | 10.86 | 48.68 | 74.00 | -25.32 | | | peak |
| 2 | 15691.96 | 30.10 | 16.53 | 46.63 | 74.00 | -27.37 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: Tx / BAND 1 -- MIMO 802.11ac 20 - Low Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10360.43 | 36.10 | 11.21 | 47.31 | 74.00 | -26.69 | | | peak |
| 2 | 15547.75 | 34.01 | 12.25 | 46.26 | 74.00 | -27.74 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10367.71 | 39.15 | 11.21 | 50.36 | 74.00 | -23.64 | | | peak |
| 2 | 15543.12 | 32.20 | 12.25 | 44.45 | 74.00 | -29.55 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: Tx / BAND 1 -- MIMO 802.11ac20 - mid Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10402.30 | 37.55 | 10.64 | 48.19 | 74.00 | -25.81 | | | peak |
| 2 | 15608.93 | 31.32 | 12.29 | 43.61 | 74.00 | -30.39 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10403.41 | 37.12 | 10.64 | 47.76 | 74.00 | -26.24 | | | peak |
| 2 | 15606.69 | 35.68 | 12.29 | 47.97 | 74.00 | -26.03 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: Tx / BAND 1 -- MIMO 802.11 ac20 High Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10481.97 | 39.17 | 10.86 | 50.03 | 74.00 | -23.97 | | | peak |
| 2 | 15722.29 | 30.07 | 12.33 | 42.40 | 74.00 | -31.60 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10488.86 | 36.90 | 10.86 | 47.76 | 74.00 | -26.24 | | | peak |
| 2 | 15721.45 | 32.44 | 12.33 | 44.77 | 74.00 | -29.23 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: TX / BAND 1 -- MIMO 802.11 ac40 Low Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10388.66 | 36.22 | 11.21 | 47.43 | 74.00 | -26.57 | | | peak |
| 2 | 15572.88 | 31.62 | 12.25 | 43.87 | 74.00 | -30.13 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertica
l

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10383.43 | 37.82 | 11.21 | 49.03 | 74.00 | -24.97 | | | peak |
| 2 | 15573.20 | 33.35 | 12.25 | 45.60 | 74.00 | -28.40 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: TX / BAND 1 -- MIMO 802.11 ac40 /High Channel

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10462.67 | 37.23 | 10.86 | 48.09 | 74.00 | -25.91 | | | peak |
| 2 | 15696.33 | 35.19 | 16.53 | 51.72 | 74.00 | -22.28 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10463.81 | 38.96 | 10.86 | 49.82 | 74.00 | -24.18 | | | peak |
| 2 | 15694.30 | 35.31 | 16.53 | 51.84 | 74.00 | -22.16 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Operation Mode: TX / MIMO 802.11 ac80

Horizontal

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10421.78 | 37.23 | 10.64 | 47.87 | 74.00 | -26.13 | | | peak |
| 2 | 15634.32 | 34.55 | 12.29 | 46.84 | 74.00 | -27.16 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Vertical

| No. | Frequency | Reading | Correct | Result | Limit | Margin | Height | Degree | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB) | (cm) | (deg.) | |
| 1 | 10420.17 | 36.68 | 10.64 | 47.32 | 74.00 | -26.68 | | | peak |
| 2 | 15631.30 | 31.87 | 12.29 | 44.16 | 74.00 | -29.84 | | | peak |
| N/A | | | | | | | | | |
| | | | | | | | | | |

Radiated Band Edge Test:

**ANT 1**

Operation Mode: BAND I--802.11ac20 Mode - CH Low

Horizontal

| Frequency | Reading | Factor | Emission level | Limits | Margin | Detector type |
|---|---|---|---|---|---|---|
| (MHz) | (dBuV) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | |
| 5150 | 53.38 | -2.49 | 50.89 | 74.00 | -23.11 | PK |
| 5150 | / | -2.49 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Vertical:

| Frequency | Reading | Factor | Emission level | Limits | Margin | Detector type |
|---|---|---|---|---|---|---|
| (MHz) | (dBuV) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | |
| 5150 | 46.77 | -2.49 | 44.28 | 74.00 | -29.72 | PK |
| 5150 | / | -2.49 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Operation Mode: BAND 2A-- 802.11ac20 Mode - CH High

Horizontal

| Frequency | Reading | Factor | Emission level | Limits | Margin | Detector type |
|---|---|---|---|---|---|---|
| (MHz) | (dBuV) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | |
| 5350 | 46.77 | -2.49 | 44.28 | 74.00 | -29.72 | PK |
| 5350 | / | -2.49 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Vertical:

| Frequency | Reading | Factor | Emission level | Limits | Margin | Detector type |
|---|---|---|---|---|---|---|
| (MHz) | (dBuV) | (dB) | (dBuV/m) | (dBuV/m) | (dB) | |
| 5350 | 48.75 | -2.49 | 46.26 | 74.00 | -27.74 | PK |
| 5350 | / | -2.49 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Operation Mode: BAND 2C-- 802.11ac20 Mode - CH Low

Horizontal

| Frequency (MHz) | Reading (dBuV) | Factor (dB) | Emission level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector type |
|---|---|---|---|---|---|---|
| 5460 | 51.94 | -2.44 | 49.50 | 74.00 | -24.50 | PK |
| 5460 | / | -2.44 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Vertical

| Frequency (MHz) | Reading (dBuV) | Factor (dB) | Emission level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector type |
|---|---|---|---|---|---|---|
| 5460 | 51.62 | -2.44 | 49.18 | 74.00 | -24.82 | PK |
| 5460 | / | -2.44 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Operation Mode: BAND 2C-- 802.11ac20 Mode - CH High

| Frequency (MHz) | Reading (dBuV) | Factor (dB) | Emission level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector type |
|---|---|---|---|---|---|---|
| 5725 | 48.22 | -2.41 | 45.81 | 74.00 | -28.19 | PK |
| 5725 | / | -2.41 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Vertical

| Frequency (MHz) | Reading (dBuV) | Factor (dB) | Emission level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector type |
|---|---|---|---|---|---|---|
| 5725 | 53.05 | -2.41 | 50.64 | 74.00 | -23.36 | PK |
| 5725 | / | -2.41 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Operation Mode: BAND I-- 802.11 ac40 Mode - CH Low

Horizontal

| Frequency (MHz) | Reading (dBuV) | Factor (dB) | Emission level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector type |
|---|---|---|---|---|---|---|
| 5150 | 49.96 | -2.49 | 47.47 | 74.00 | -26.53 | PK |
| 5150 | / | -2.49 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Vertical:

| Frequency (MHz) | Reading (dBuV) | Factor (dB) | Emission level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector type |
|---|---|---|---|---|---|---|
| 5150 | 49.46 | -2.49 | 46.97 | 74.00 | -27.03 | PK |
| 5150 | / | -2.49 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Operation Mode: BAND 2A -- 802.11 ac40 Mode - CH High

Horizontal

| Frequency (MHz) | Reading (dBuV) | Factor (dB) | Emission level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector type |
|---|---|---|---|---|---|---|
| 5350 | 49.33 | -2.49 | 46.84 | 74.00 | -27.16 | PK |
| 5350 | / | -2.49 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Vertical:

| Frequency (MHz) | Reading (dBuV) | Factor (dB) | Emission level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector type |
|---|---|---|---|---|---|---|
| 5350 | 46.49 | -2.49 | 44.00 | 74.00 | -30.00 | PK |
| 5350 | / | -2.49 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Operation Mode: BAND 2C -- 802.11 ac40 Mode - CH Low

Horizontal

| Frequency (MHz) | Reading (dBuV) | Factor (dB) | Emission level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector type |
|---|---|---|---|---|---|---|
| 5460 | 53.11 | -2.44 | 50.67 | 74.00 | -23.33 | PK |
| 5460 | / | -2.44 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Vertical:

| Frequency (MHz) | Reading (dBuV) | Factor (dB) | Emission level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector type |
|---|---|---|---|---|---|---|
| 5460 | 51.60 | -2.44 | 49.16 | 74.00 | -24.84 | PK |
| 5460 | / | -2.44 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Operation Mode: BAND 2C -- 802.11 ac40 Mode - CH High

Horizontal

| Frequency (MHz) | Reading (dBuV) | Factor (dB) | Emission level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector type |
|---|---|---|---|---|---|---|
| 5725 | 51.51 | -2.41 | 49.10 | 74.00 | -24.90 | PK |
| 5725 | / | -2.41 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Vertical:

| Frequency (MHz) | Reading (dBuV) | Factor (dB) | Emission level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector type |
|---|---|---|---|---|---|---|
| 5725 | 47.13 | -2.41 | 44.72 | 74.00 | -29.28 | PK |
| 5725 | / | -2.41 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Operation Mode: BAND I -- 802.11 ac80 Mode - CH Low

Horizontal

| Frequency (MHz) | Reading (dBuV) | Factor (dB) | Emission level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector type |
|---|---|---|---|---|---|---|
| 5150 | 46.95 | -2.49 | 44.46 | 74.00 | -29.54 | PK |
| 5150 | / | -2.49 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Vertical:

| Frequency (MHz) | Reading (dBuV) | Factor (dB) | Emission level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector type |
|---|---|---|---|---|---|---|
| 5150 | 52.01 | -2.49 | 49.52 | 74.00 | -24.48 | PK |
| 5150 | / | -2.49 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Operation Mode: BAND 2A -- 802.11 ac80 Mode - CH High

Horizontal

| Frequency (MHz) | Reading (dBuV) | Factor (dB) | Emission level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector type |
|---|---|---|---|---|---|---|
| 5350 | 52.74 | -2.49 | 50.25 | 74.00 | -23.75 | PK |
| 5350 | / | -2.49 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Vertical:

| Frequency (MHz) | Reading (dBuV) | Factor (dB) | Emission level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector type |
|---|---|---|---|---|---|---|
| 5350 | 49.60 | -2.49 | 47.11 | 74.00 | -26.89 | PK |
| 5350 | / | -2.49 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Operation Mode: BAND 2C -- 802.11 ac80 Mode - CH Low

Horizontal

| Frequency (MHz) | Reading (dBuV) | Factor (dB) | Emission level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector type |
|---|---|---|---|---|---|---|
| 5460 | 47.87 | -2.44 | 45.43 | 74.00 | -28.57 | PK |
| 5460 | / | -2.44 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Vertical:

| Frequency (MHz) | Reading (dBuV) | Factor (dB) | Emission level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector type |
|---|---|---|---|---|---|---|
| 5460 | 52.13 | -2.44 | 49.69 | 74.00 | -24.31 | PK |
| 5460 | / | -2.44 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Operation Mode: BAND 2C -- 802.11 ac80 Mode - CH High

Horizontal

| Frequency (MHz) | Reading (dBuV) | Factor (dB) | Emission level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector type |
|---|---|---|---|---|---|---|
| 5725 | 47.75 | -2.41 | 45.34 | 74.00 | -28.66 | PK |
| 5725 | / | -2.41 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

Vertical:

| Frequency (MHz) | Reading (dBuV) | Factor (dB) | Emission level (dBuV/m) | Limits (dBuV/m) | Margin (dB) | Detector type |
|---|---|---|---|---|---|---|
| 5725 | 47.49 | -2.41 | 45.08 | 74.00 | -28.92 | PK |
| 5725 | / | -2.41 | / | 54.00 | / | AV |
| Remark: Factor= Antenna Factor + Cable loss – Pre-amplifier | | | | | | |

## 4.7 POWERLINE CONDUCTED EMISSIONS

**LIMIT**

According to§15.207(a),except as shown in paragraphs (b) and(c) of this section, for an intentional radiatorthatisdesignedtobeconnectedtothepublicutility(AC)powerline,theradiofrequencyvoltagethatis conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μH/50ohms line impedancestabilizationnetwork(LISN).Compliancewiththeprovisionsofthisparagraphshallbebased on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

| Frequency Range (MHz) | Limits (dBμV) | |
|---|---|---|
| | Quasi-peak | Average |
| 0.15 to 0.50 | 66 to 56* | 56 to 46* |
| 0.50 to 5 | 56 | 46 |
| 5 to 30 | 60 | 50 |

** Decreases with the logarithm of the frequency.*

**TEST CONFIGURATION**

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

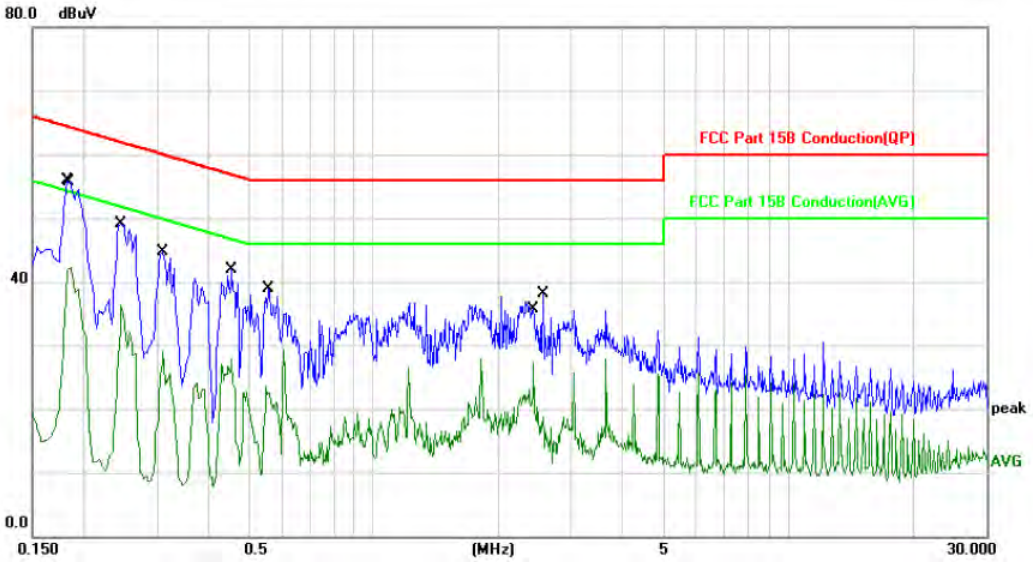
**TEST PROCEDURE**

1. The EUT was placed on a table, which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

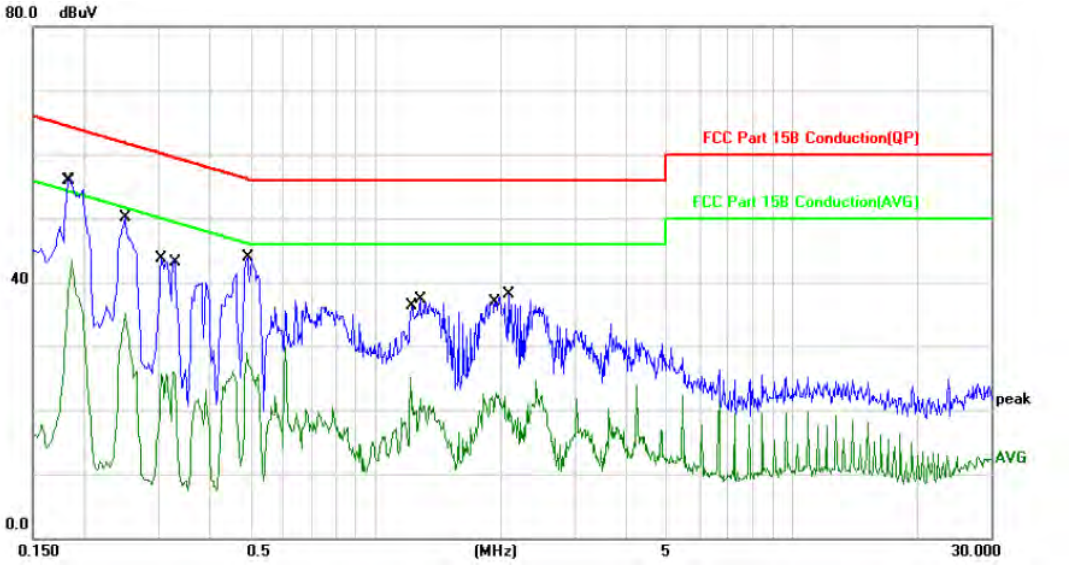
**TESTRESULTS**

The initialstepin collecting conducted dataisa spectrum analyzer peak scan of the measurement range. Significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

**TestData**



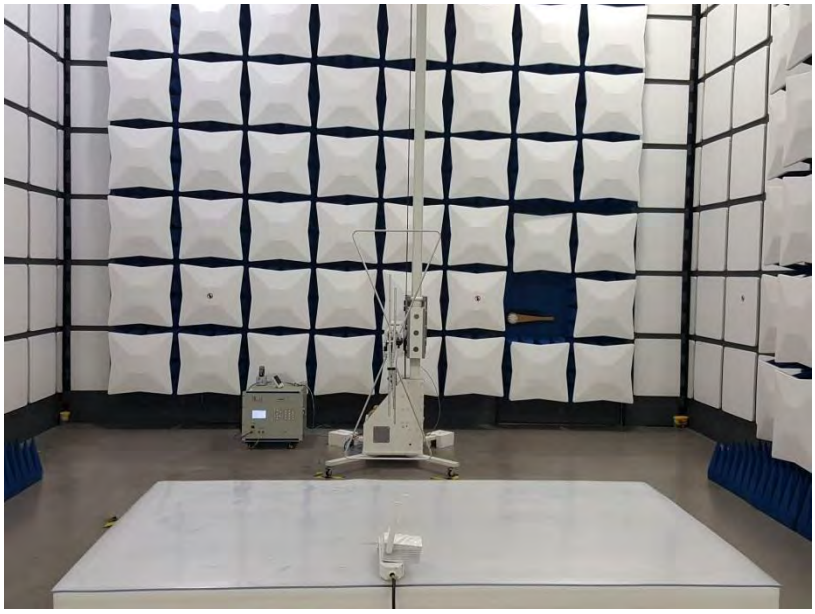

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | Detector | Comment |
| 1 | * | 0.1819 | 56.05 | -0.13 | 55.92 | 64.39 | -8.47 | QP | |
| 2 | | 0.1860 | 42.52 | -0.13 | 42.39 | 54.21 | -11.82 | AVG | |
| 3 | | 0.2460 | 49.17 | -0.11 | 49.06 | 61.89 | -12.83 | QP | |
| 4 | | 0.2460 | 36.48 | -0.11 | 36.37 | 51.89 | -15.52 | AVG | |
| 5 | | 0.3100 | 44.80 | -0.01 | 44.79 | 59.97 | -15.18 | QP | |
| 6 | | 0.3100 | 29.14 | -0.01 | 29.13 | 49.97 | -20.84 | AVG | |
| 7 | | 0.4540 | 41.90 | -0.02 | 41.88 | 56.80 | -14.92 | QP | |
| 8 | | 0.4540 | 27.91 | -0.02 | 27.89 | 46.80 | -18.91 | AVG | |
| 9 | | 0.5500 | 23.62 | -0.04 | 23.58 | 46.00 | -22.42 | AVG | |
| 10 | | 0.5580 | 39.00 | -0.04 | 38.96 | 56.00 | -17.04 | QP | |
| 11 | | 2.4219 | 27.58 | -0.23 | 27.35 | 46.00 | -18.65 | AVG | |
| 12 | | 2.5620 | 38.17 | -0.16 | 38.01 | 56.00 | -17.99 | QP | |




| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | Detector | Comment |
| 1 | * | 0.1819 | 55.99 | -0.13 | 55.86 | 64.39 | -8.53 | QP | |
| 2 | | 0.1860 | 43.62 | -0.13 | 43.49 | 54.21 | -10.72 | AVG | |
| 3 | | 0.2500 | 50.21 | -0.11 | 50.10 | 61.75 | -11.65 | QP | |
| 4 | | 0.2500 | 35.21 | -0.11 | 35.10 | 51.75 | -16.65 | AVG | |
| 5 | | 0.3060 | 43.70 | -0.01 | 43.69 | 60.08 | -16.39 | QP | |
| 6 | | 0.3260 | 26.01 | -0.02 | 25.99 | 49.55 | -23.56 | AVG | |
| 7 | | 0.4900 | 28.99 | -0.03 | 28.96 | 46.17 | -17.21 | AVG | |
| 8 | | 0.4940 | 43.88 | -0.03 | 43.85 | 56.10 | -12.25 | QP | |
| 9 | | 1.2140 | 25.24 | -0.15 | 25.09 | 46.00 | -20.91 | AVG | |
| 10 | | 1.2820 | 37.51 | -0.16 | 37.35 | 56.00 | -18.65 | QP | |
| 11 | | 1.9460 | 22.90 | -0.23 | 22.67 | 46.00 | -23.33 | AVG | |
| 12 | | 2.0780 | 38.26 | -0.23 | 38.03 | 56.00 | -17.97 | QP | |

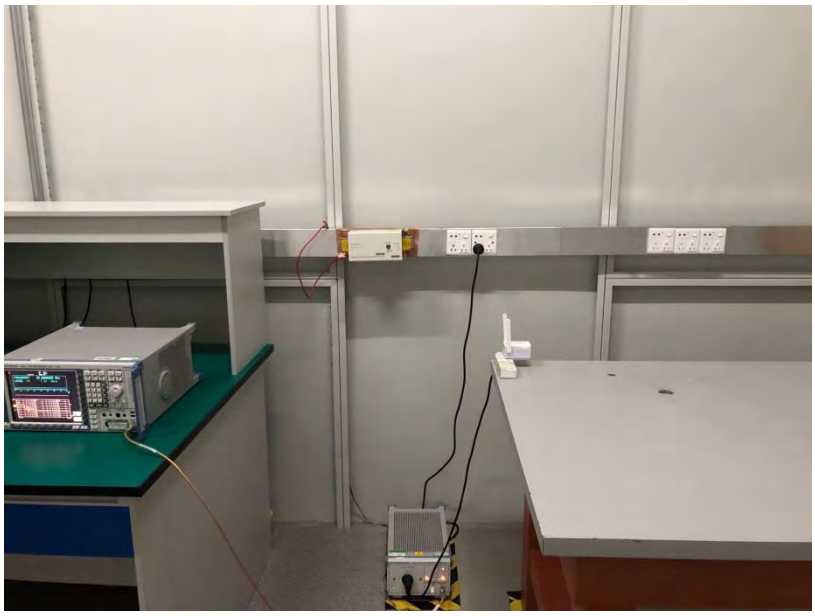
## 7 Photographs of Test Setup

Radiation Emission below 1000MHz



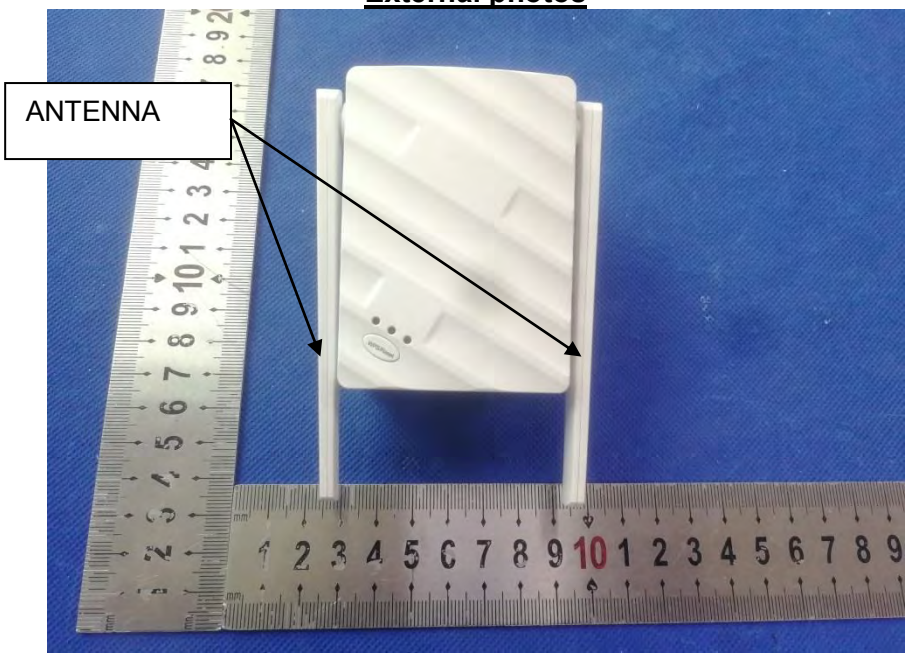
Above 1000MHz

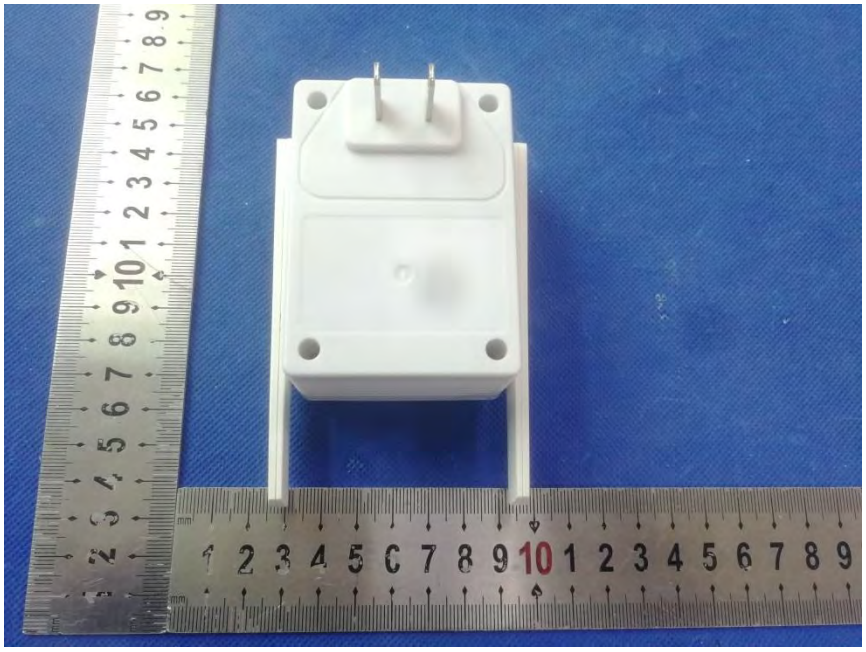
Conducted emission

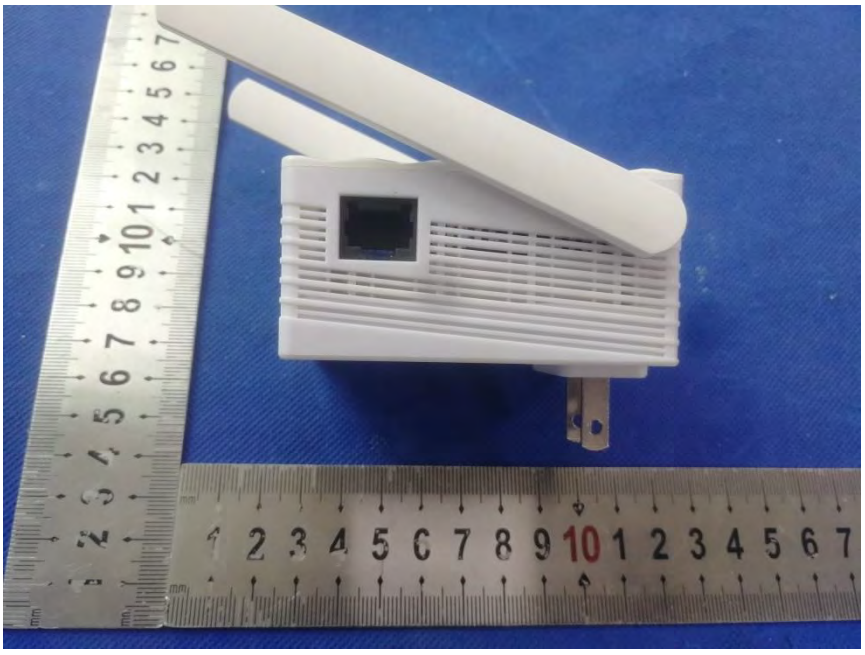


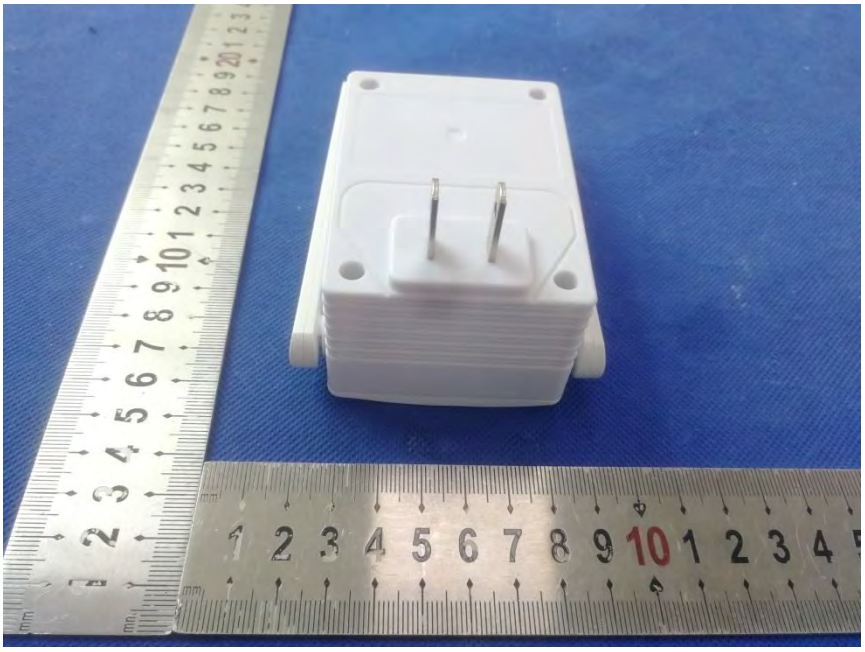
## 8 PHOTOS OF THE EUT

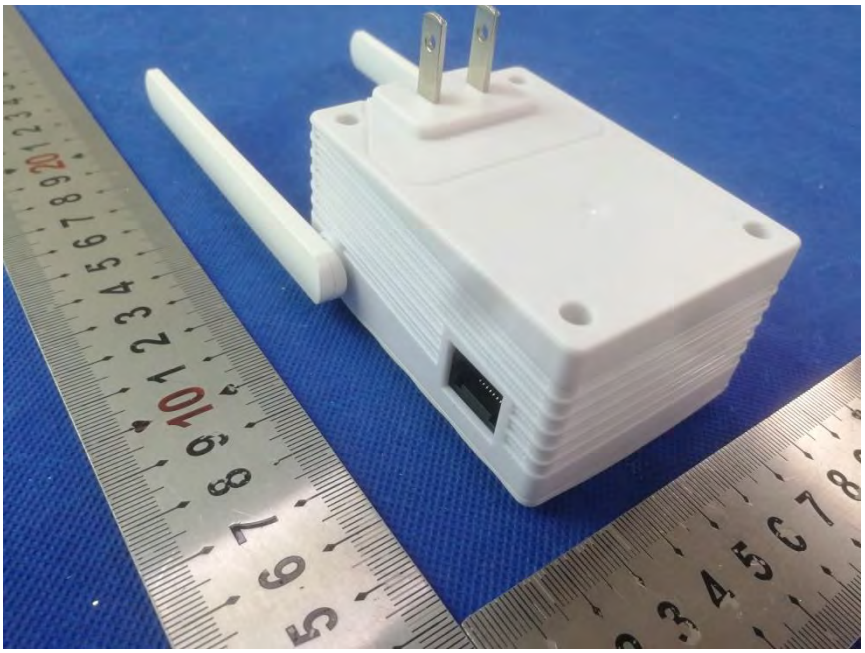
**External photos**

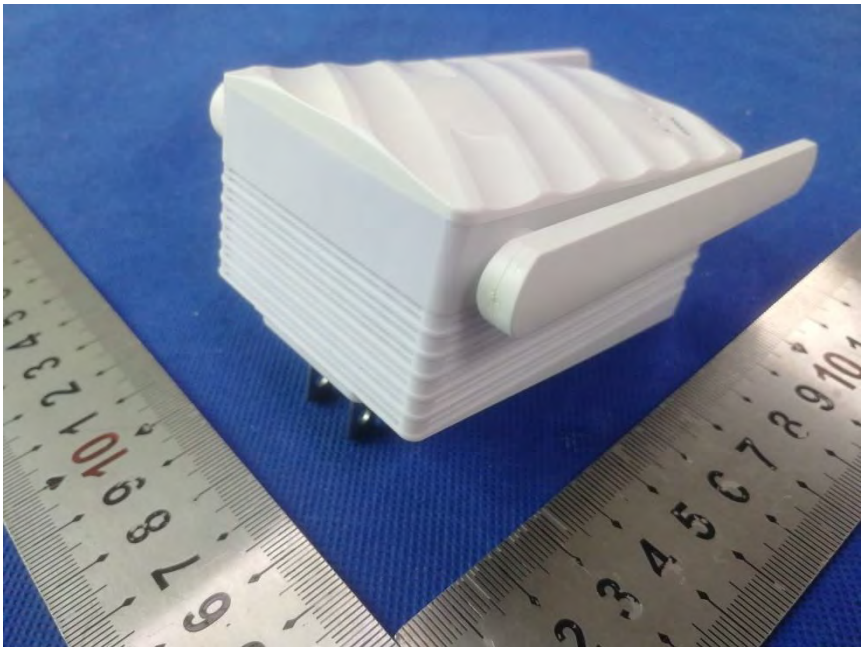


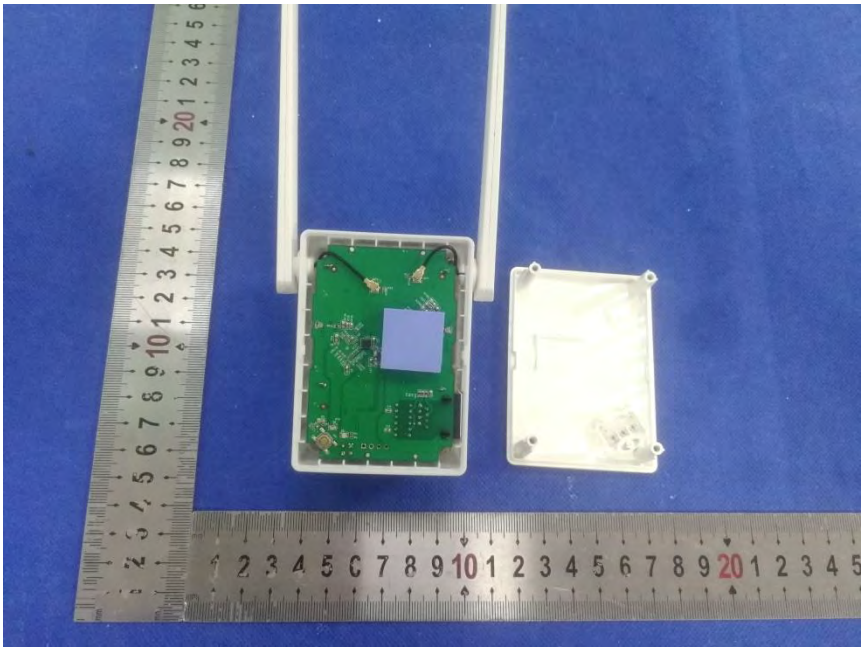


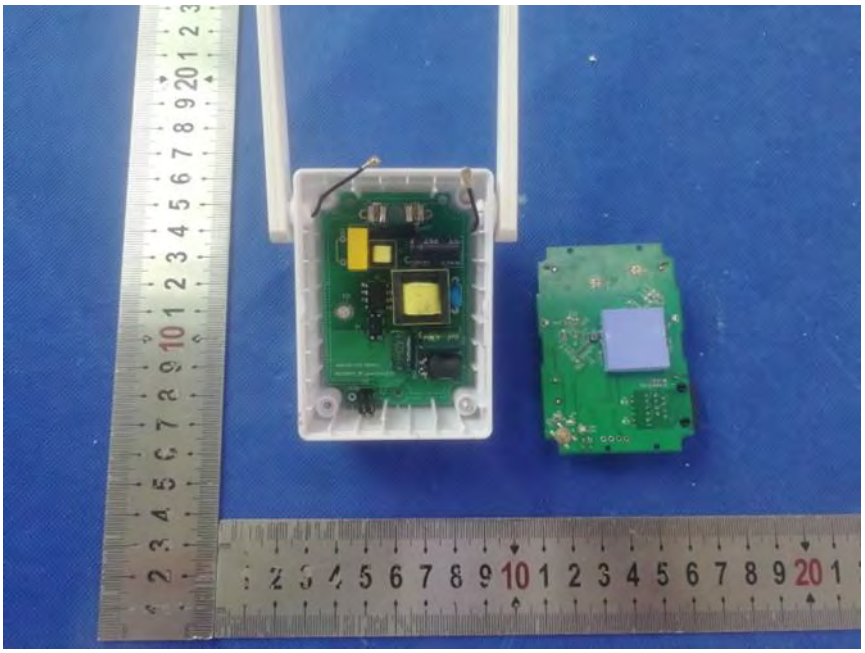


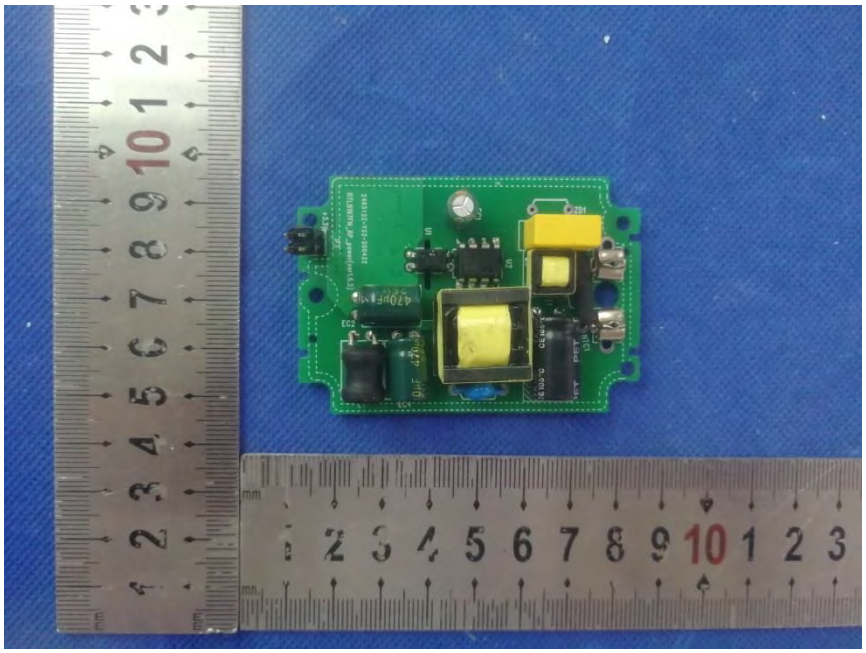


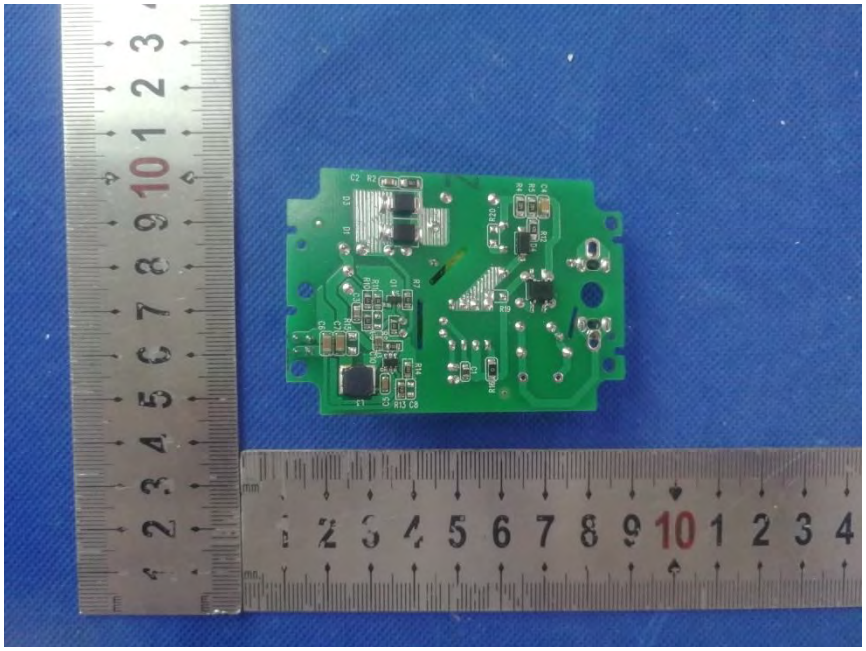


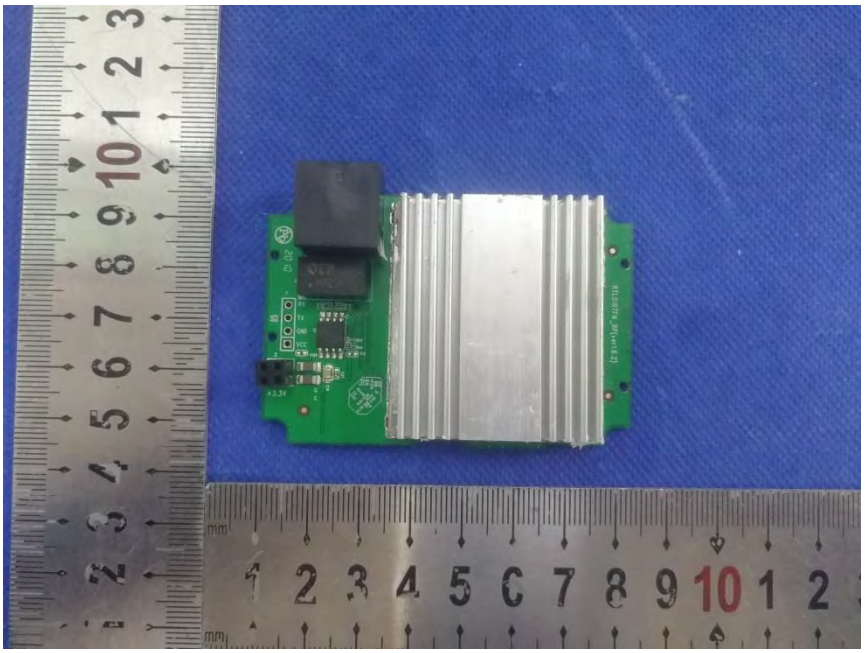
## Internal photos

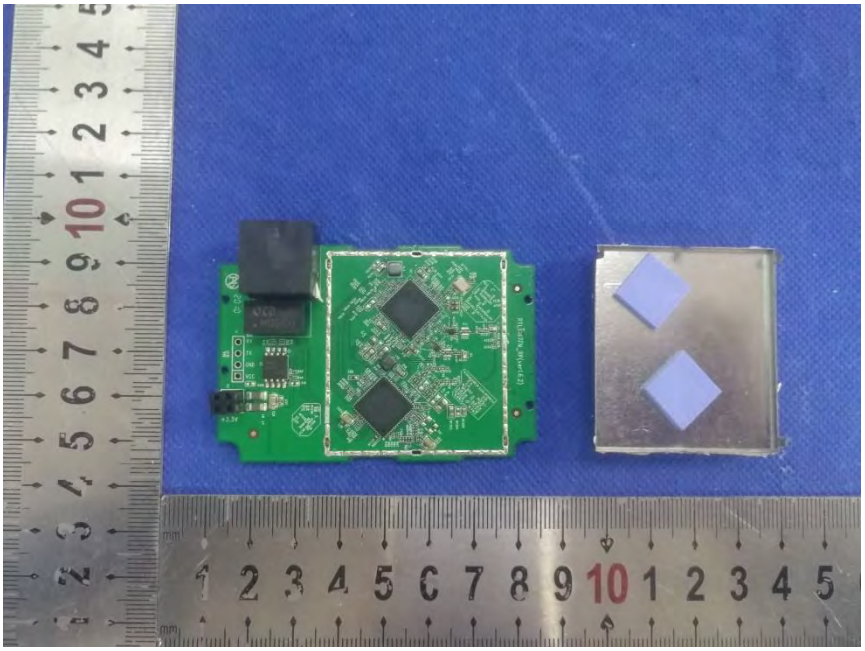


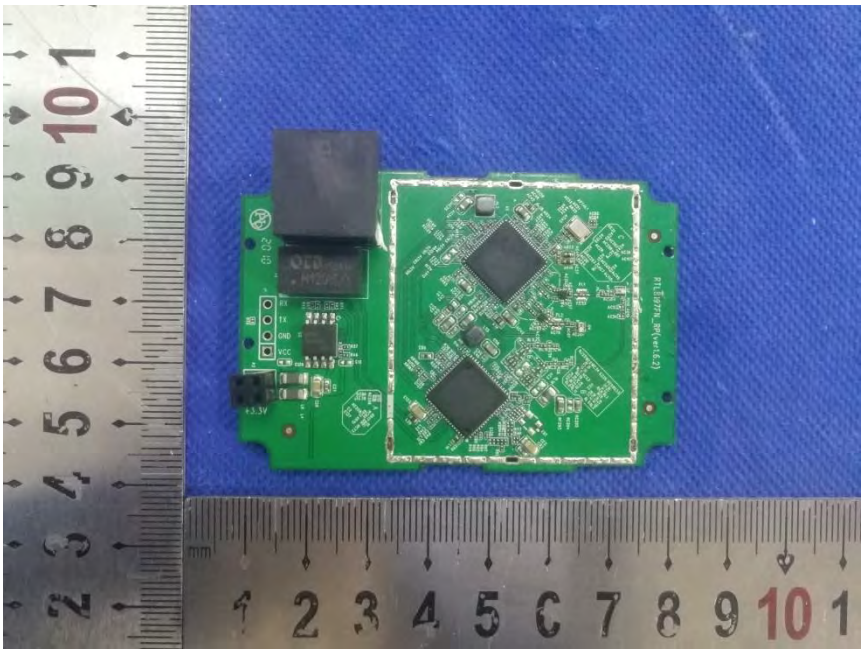


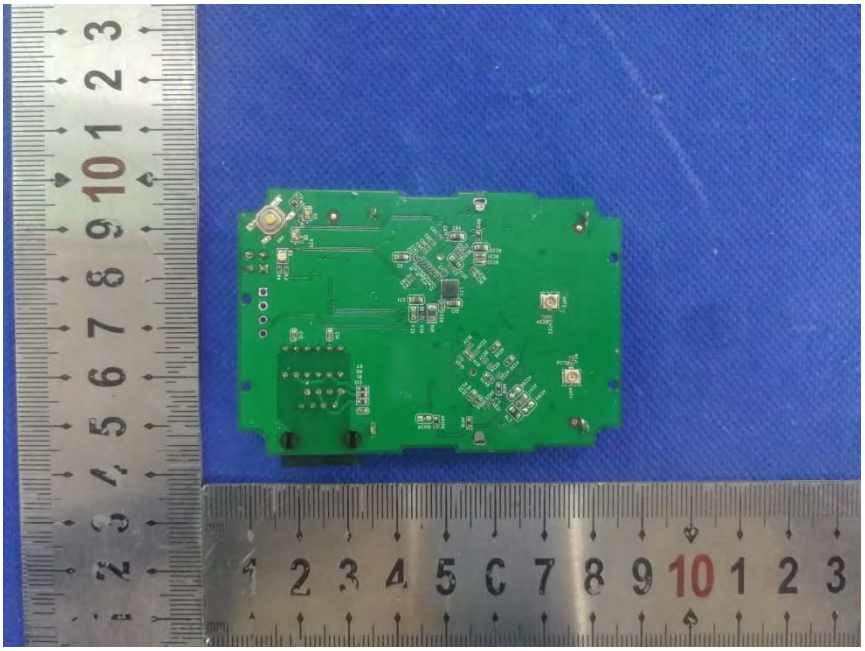


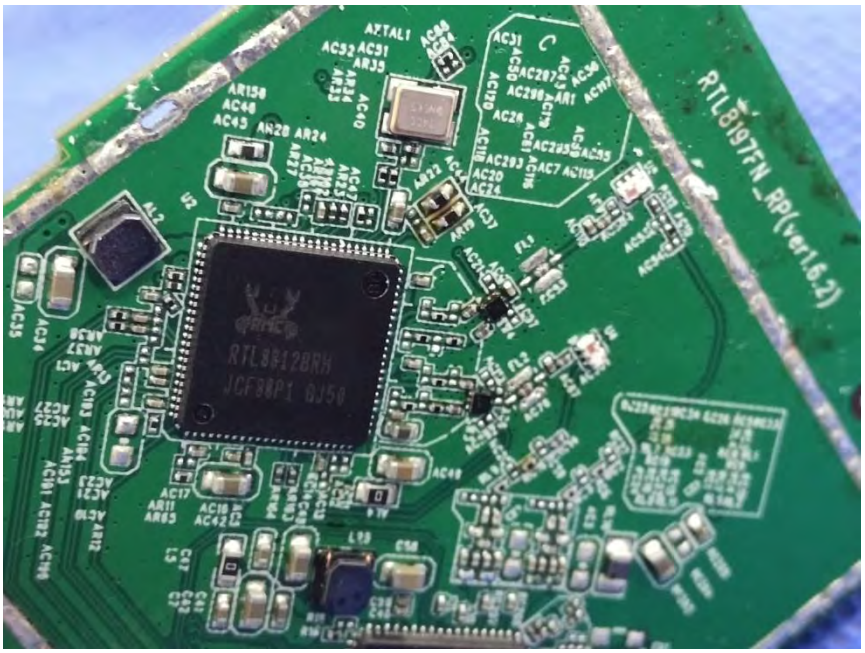













**********END OF REPORT**********