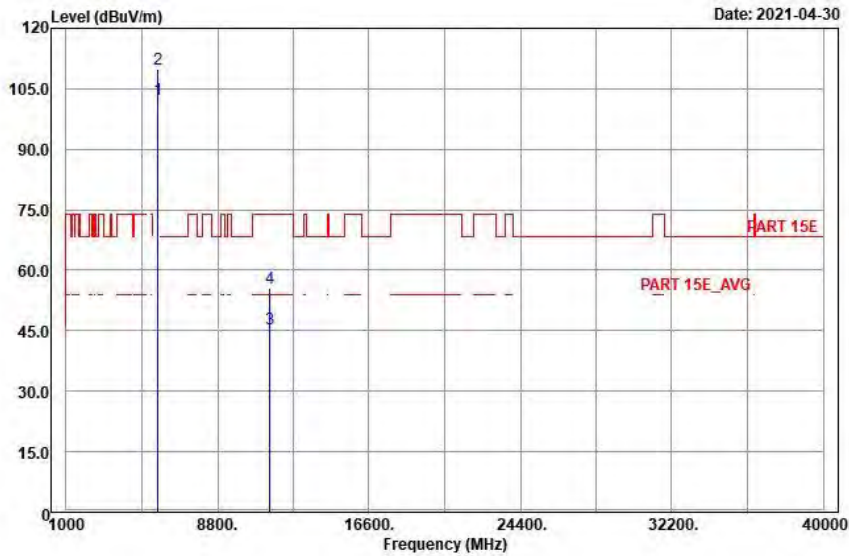
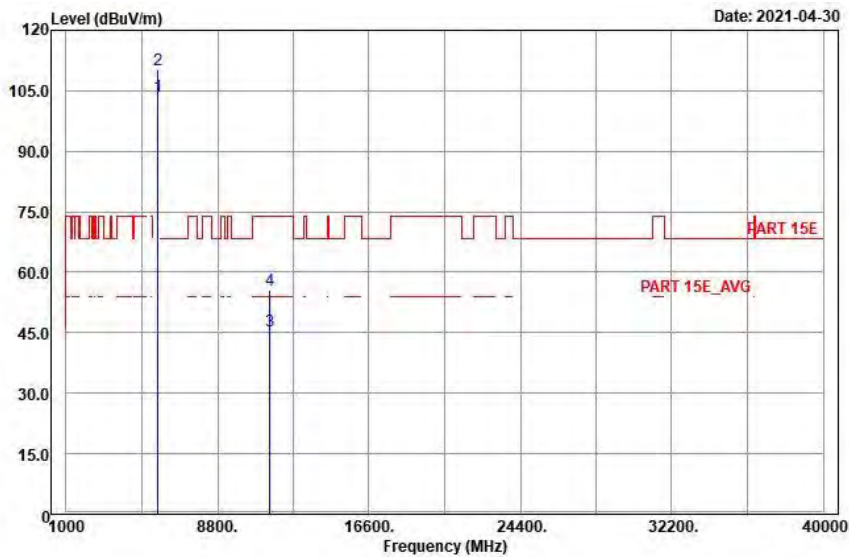


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 149 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

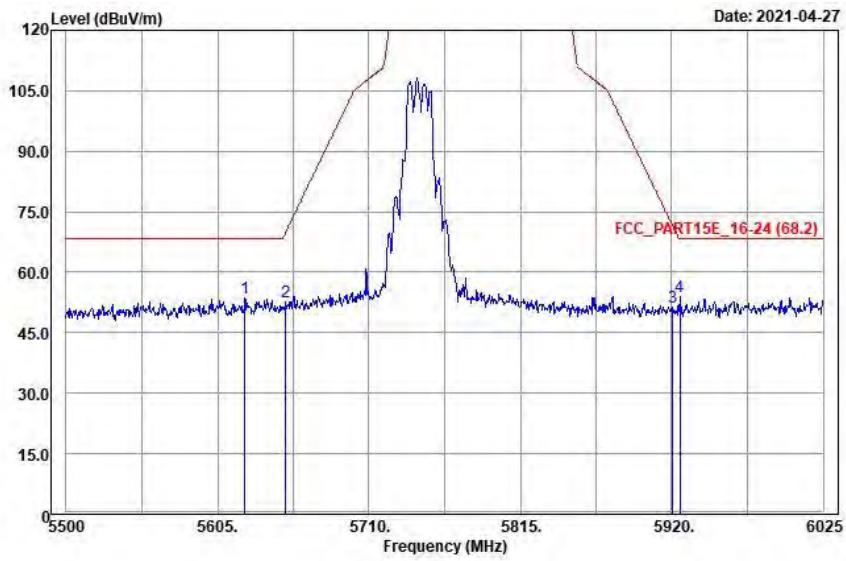
<Spurious Emission>
Horizontal



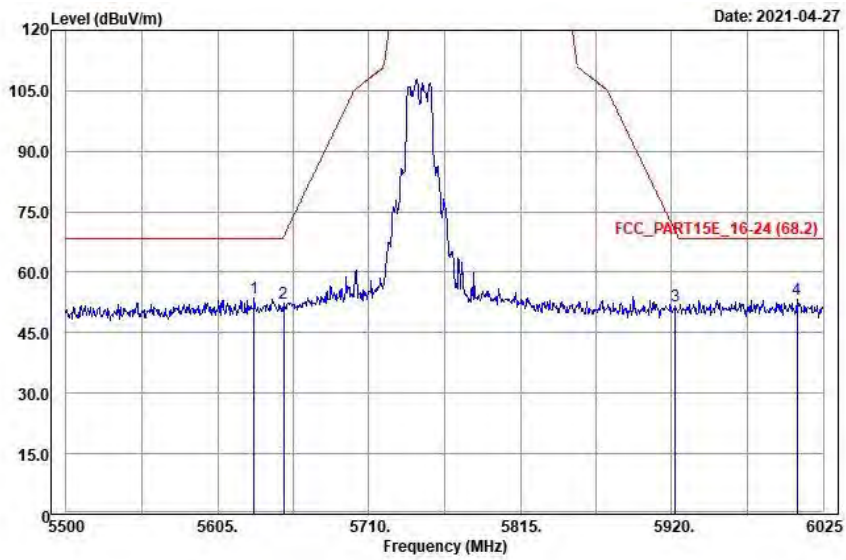
Vertical



**<Out of Band Emission (OOBE)>
Horizontal**



Vertical



<Spurious Emission>

| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5745 | 102.25 | 59.48 | 42.77 | | | 218 | 116 | Average |
| 5745 | 109.95 | 67.18 | 42.77 | | | 218 | 116 | Peak |
| 11490 | 45.47 | 29 | 16.47 | 54 | -8.53 | 126 | 171 | Average |
| 11490 | 55.7 | 39.23 | 16.47 | 74 | -18.3 | 126 | 171 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5745 | 103.64 | 92.76 | 10.88 | | | 205 | 92 | Average |
| 5745 | 110.27 | 99.39 | 10.88 | | | 205 | 92 | Peak |
| 11490 | 45.39 | 28.92 | 16.47 | 54 | -8.61 | 198 | 143 | Average |
| 11490 | 55.66 | 39.19 | 16.47 | 74 | -18.34 | 198 | 143 | Peak |

<Out of Band Emission (OOBE)>

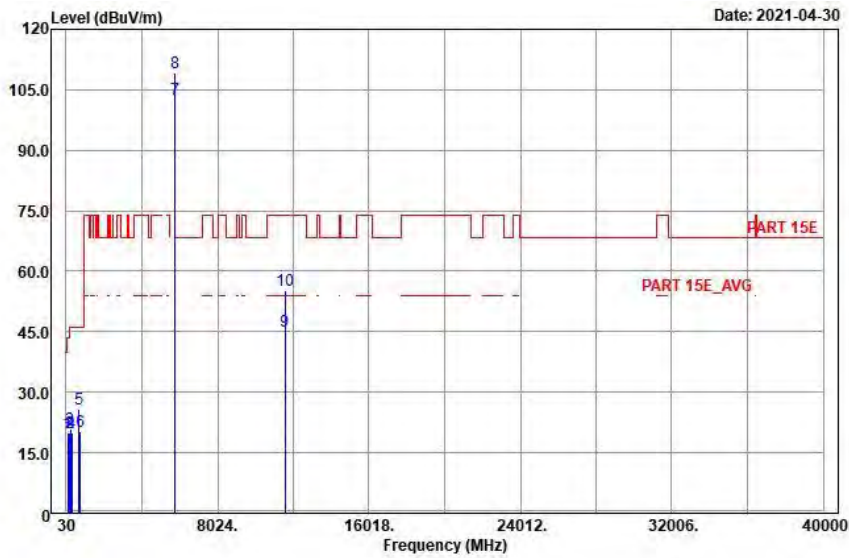
| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|--------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| *5623.9 | 53.46 | 42.67 | 10.79 | 68.2 | -14.74 | 218 | 116 | Peak |
| 5652.25 | 52.5 | 41.63 | 10.87 | 69.86 | -17.36 | 218 | 116 | Peak |
| 5920.525 | 51.34 | 40.25 | 11.09 | 71.51 | -20.17 | 218 | 116 | Peak |
| *5925.775 | 53.89 | 42.78 | 11.11 | 68.2 | -14.31 | 218 | 116 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| *5630.2 | 53.48 | 42.67 | 10.81 | 68.2 | -14.72 | 205 | 92 | Peak |
| 5650.675 | 52.29 | 41.42 | 10.87 | 68.7 | -16.41 | 205 | 92 | Peak |
| 5922.625 | 51.56 | 40.45 | 11.11 | 69.96 | -18.4 | 205 | 92 | Peak |
| *6007.15 | 53.45 | 42.1 | 11.35 | 68.2 | -14.75 | 205 | 92 | Peak |

Remarks:

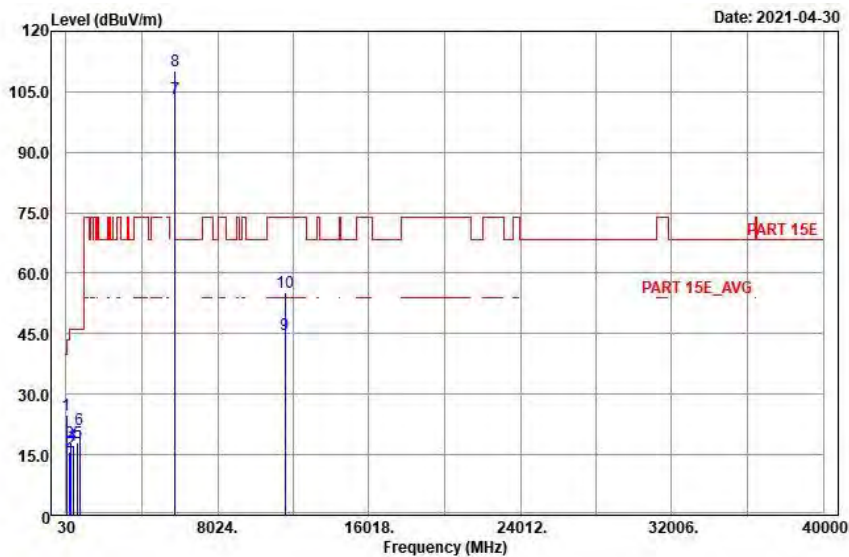
1. Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
2. 5745 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The other emission levels were very low against the limit.

| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---|
| Channel | Channel 157 | Frequency Range | 30 MHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Above 1GHz: Peak (PK) Average (AV) Below 1GHz: Quasi-Peak(QP) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

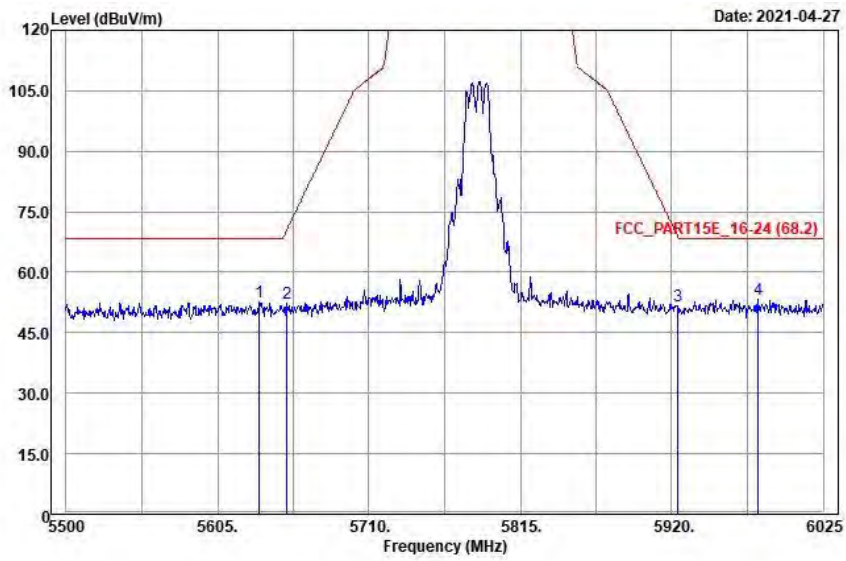
**<Spurious Emission>
Horizontal**



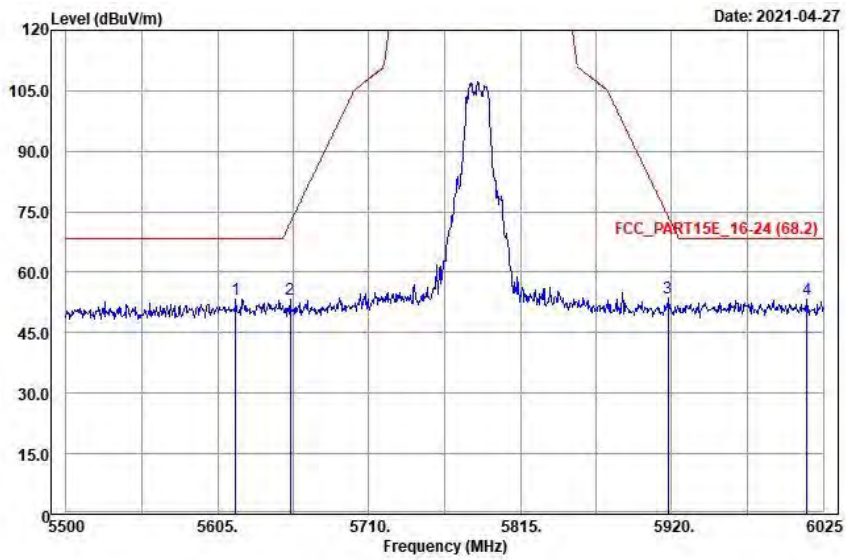
Vertical



**<Out of Band Emission (OOBE)>
Horizontal**



Vertical



<Spurious Emission>

| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 110.19 | 19.91 | 37.58 | -17.67 | 43.5 | -23.59 | 155 | 241 | QP |
| 213.6 | 20.04 | 38.09 | -18.05 | 43.5 | -23.46 | 164 | 199 | QP |
| 253.29 | 20.97 | 37.77 | -16.8 | 46 | -25.03 | 105 | 211 | QP |
| 318.2 | 19.86 | 35.43 | -15.57 | 46 | -26.14 | 165 | 196 | QP |
| 696.9 | 25.71 | 34.96 | -9.25 | 46 | -20.29 | 188 | 174 | QP |
| 786.5 | 20.35 | 28.29 | -7.94 | 46 | -25.65 | 124 | 210 | QP |
| 5785 | 102.58 | 91.77 | 10.81 | | | 218 | 116 | Average |
| 5785 | 109.3 | 98.49 | 10.81 | | | 218 | 116 | Peak |
| 11570 | 45.11 | 28.62 | 16.49 | 54 | -8.89 | 244 | 129 | Average |
| 11570 | 55.32 | 38.83 | 16.49 | 74 | -18.68 | 244 | 129 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 45.93 | 24.82 | 40.12 | -15.3 | 40 | -15.18 | 145 | 193 | QP |
| 208.2 | 15.8 | 33.95 | -18.15 | 43.5 | -27.7 | 105 | 111 | QP |
| 260.04 | 17.98 | 34.66 | -16.68 | 46 | -28.02 | 124 | 26 | QP |
| 404.3 | 17.32 | 31.17 | -13.85 | 46 | -28.68 | 162 | 266 | QP |
| 652.8 | 18.01 | 28.02 | -10.01 | 46 | -27.99 | 184 | 115 | QP |
| 734 | 21.1 | 29.73 | -8.63 | 46 | -24.9 | 134 | 178 | QP |
| 5785 | 103.33 | 92.52 | 10.81 | | | 205 | 92 | Average |
| 5785 | 110.06 | 99.25 | 10.81 | | | 205 | 92 | Peak |
| 11570 | 44.94 | 28.45 | 16.49 | 54 | -9.06 | 231 | 188 | Average |
| 11570 | 55.19 | 38.7 | 16.49 | 74 | -18.81 | 231 | 188 | Peak |

<Out of Band Emission (OOBE)>

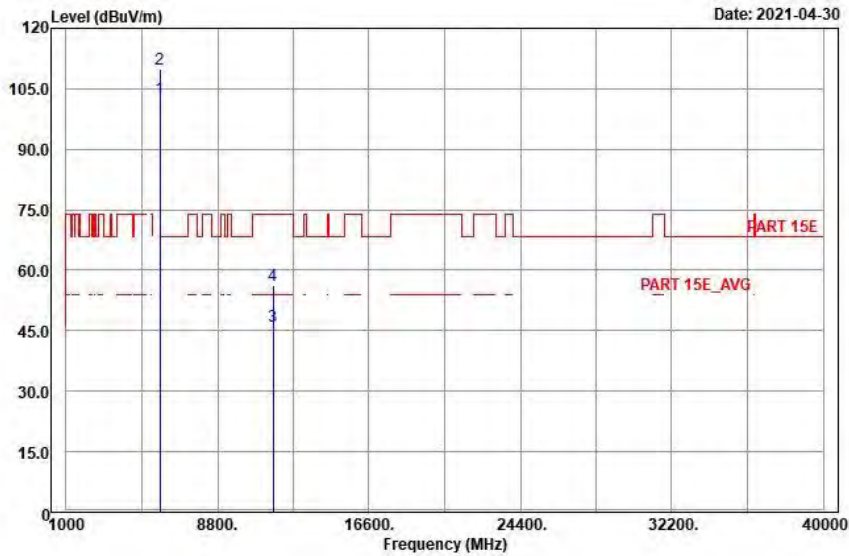
| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|--------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| *5633.875 | 52.48 | 41.65 | 10.83 | 68.2 | -15.72 | 218 | 116 | Peak |
| 5653.3 | 52.33 | 41.46 | 10.87 | 70.64 | -18.31 | 218 | 116 | Peak |
| 5924.2 | 51.75 | 40.64 | 11.11 | 68.79 | -17.04 | 218 | 116 | Peak |
| *5979.85 | 53.14 | 41.88 | 11.26 | 68.2 | -15.06 | 218 | 116 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| *5617.6 | 53.41 | 42.62 | 10.79 | 68.2 | -14.79 | 205 | 92 | Peak |
| 5655.4 | 53.31 | 42.44 | 10.87 | 72.2 | -18.89 | 205 | 92 | Peak |
| 5917.375 | 53.63 | 42.54 | 11.09 | 73.84 | -20.21 | 205 | 92 | Peak |
| *6013.975 | 53.21 | 41.86 | 11.35 | 68.2 | -14.99 | 205 | 92 | Peak |

Remarks:

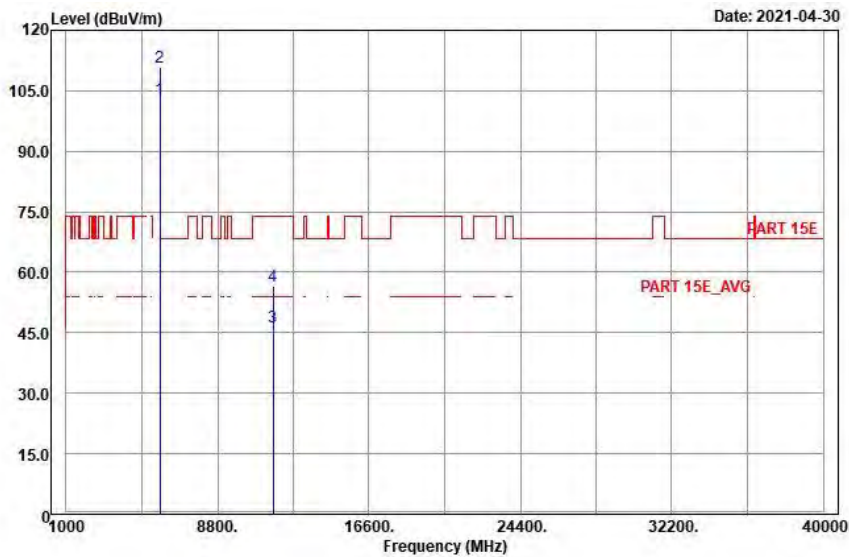
- Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
- 5785 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 165 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

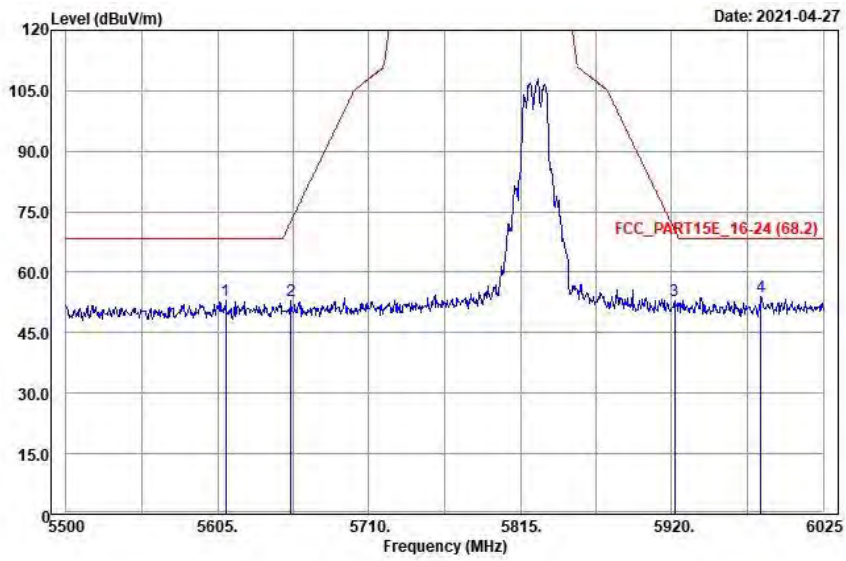
<Spurious Emission>
Horizontal



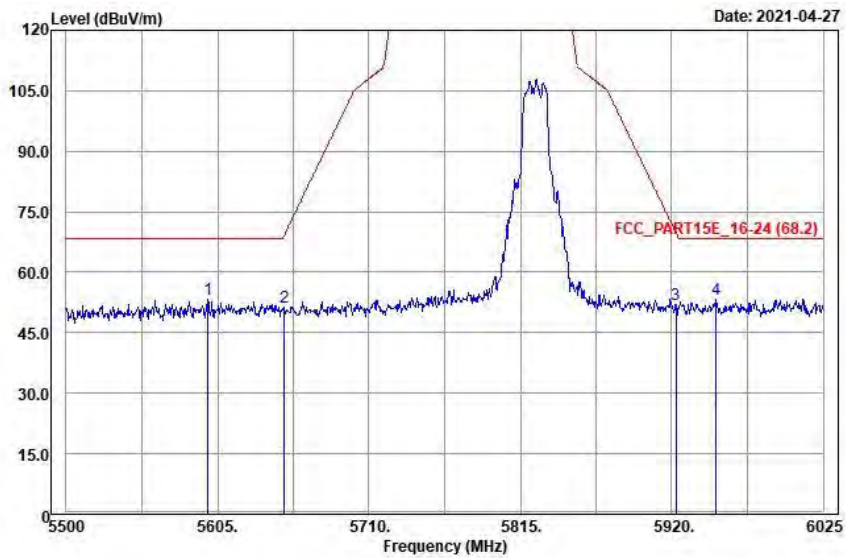
Vertical



**<Out of Band Emission (OOBE)>
Horizontal**



Vertical



<Spurious Emission>

| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5825 | 102.58 | 91.7 | 10.88 | | | 218 | 116 | Average |
| 5825 | 109.71 | 98.83 | 10.88 | | | 218 | 116 | Peak |
| 11650 | 46.06 | 29.28 | 16.78 | 54 | -7.94 | 182 | 21 | Average |
| 11650 | 56.4 | 39.62 | 16.78 | 74 | -17.6 | 182 | 21 | Peak |

| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5825 | 103.16 | 92.28 | 10.88 | | | 205 | 92 | Average |
| 5825 | 110.76 | 99.88 | 10.88 | | | 205 | 92 | Peak |
| 11650 | 46.35 | 29.57 | 16.78 | 54 | -7.65 | 292 | 132 | Average |
| 11650 | 56.44 | 39.66 | 16.78 | 74 | -17.56 | 292 | 132 | Peak |

<Out of Band Emission (OOBE)>

| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|--------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| *5610.775 | 52.97 | 42.2 | 10.77 | 68.2 | -15.23 | 218 | 116 | Peak |
| 5655.925 | 52.81 | 41.94 | 10.87 | 72.58 | -19.77 | 218 | 116 | Peak |
| 5922.1 | 52.93 | 41.82 | 11.11 | 70.35 | -17.42 | 218 | 116 | Peak |
| *5981.95 | 53.83 | 42.57 | 11.26 | 68.2 | -14.37 | 218 | 116 | Peak |

| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|--------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| *5598.175 | 53.17 | 42.42 | 10.75 | 68.2 | -15.03 | 205 | 92 | Peak |
| 5651.2 | 51.45 | 40.58 | 10.87 | 69.09 | -17.64 | 205 | 92 | Peak |
| 5923.15 | 52.13 | 41.02 | 11.11 | 69.57 | -17.44 | 205 | 92 | Peak |
| *5950.975 | 53.35 | 42.17 | 11.18 | 68.2 | -14.85 | 205 | 92 | Peak |

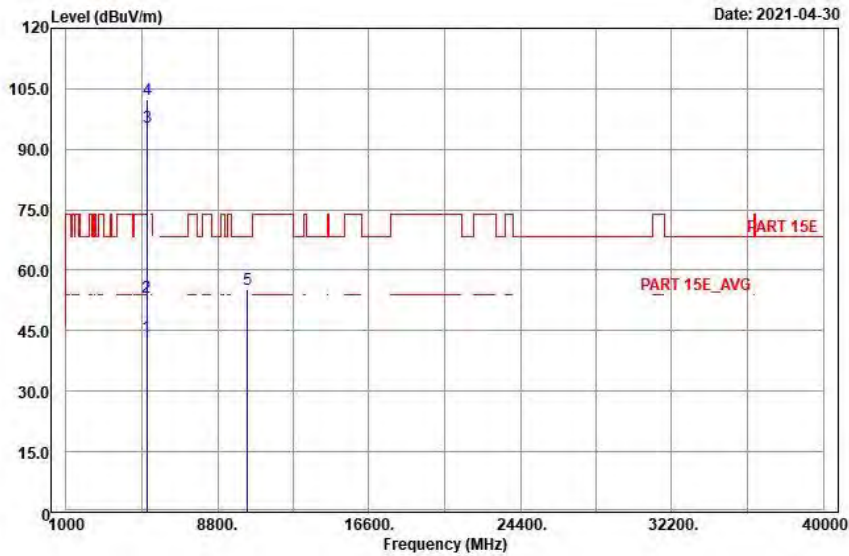
Remarks:

- Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
- 5825 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

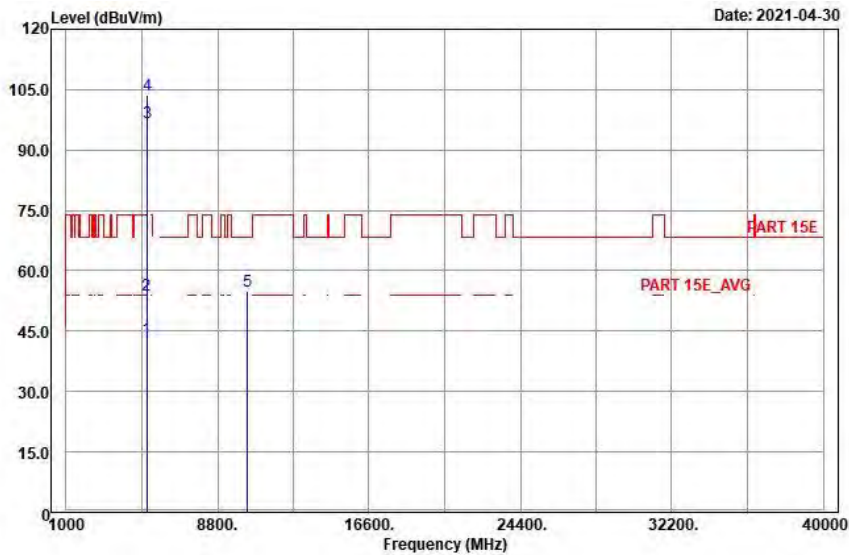
802.11ac (VHT20)

| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 36 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



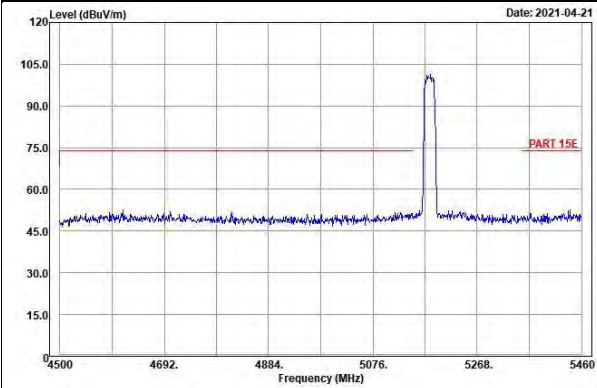
| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5150 | 43.34 | 33.29 | 10.05 | 54 | -10.66 | 218 | 144 | Average |
| 5150 | 53.21 | 43.16 | 10.05 | 74 | -20.79 | 218 | 144 | Peak |
| 5180 | 95.49 | 85.37 | 10.12 | | | 218 | 144 | Average |
| 5180 | 102.24 | 92.12 | 10.12 | | | 218 | 144 | Peak |
| *10360 | 55.34 | 39.32 | 16.02 | 68.2 | -12.86 | 247 | 171 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5150 | 43.11 | 33.06 | 10.05 | 54 | -10.89 | 205 | 86 | Average |
| 5150 | 53.95 | 43.9 | 10.05 | 74 | -20.05 | 205 | 86 | Peak |
| 5180 | 96.66 | 86.54 | 10.12 | | | 205 | 86 | Average |
| 5180 | 103.73 | 93.61 | 10.12 | | | 205 | 86 | Peak |
| *10360 | 54.86 | 38.84 | 16.02 | 68.2 | -13.34 | 159 | 228 | Peak |

Remarks:

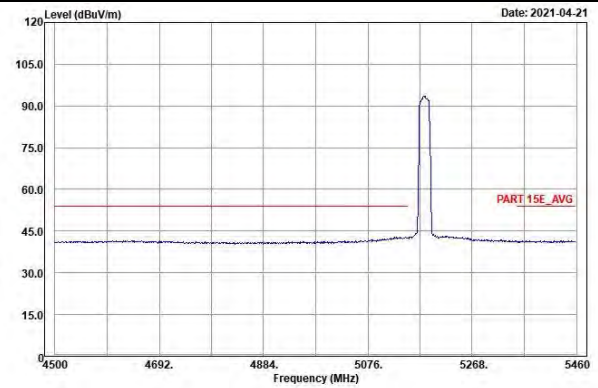
1. Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
2. 5180 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The other emission levels were very low against the limit.

Channel 36

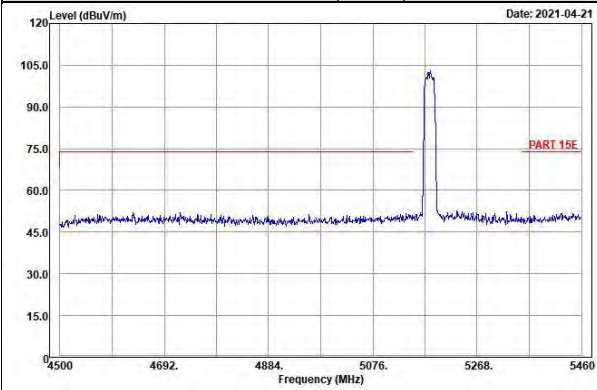
Horizontal (Peak)



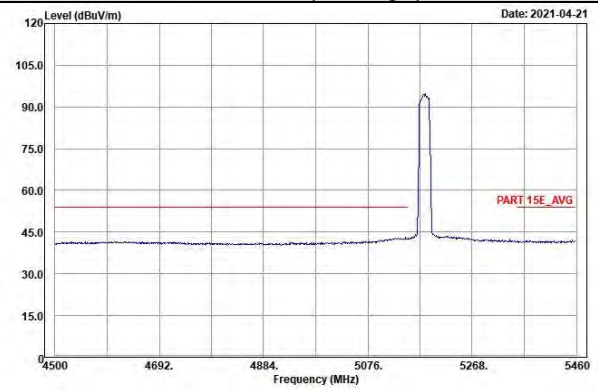
Horizontal (Average)



Vertical (Peak)

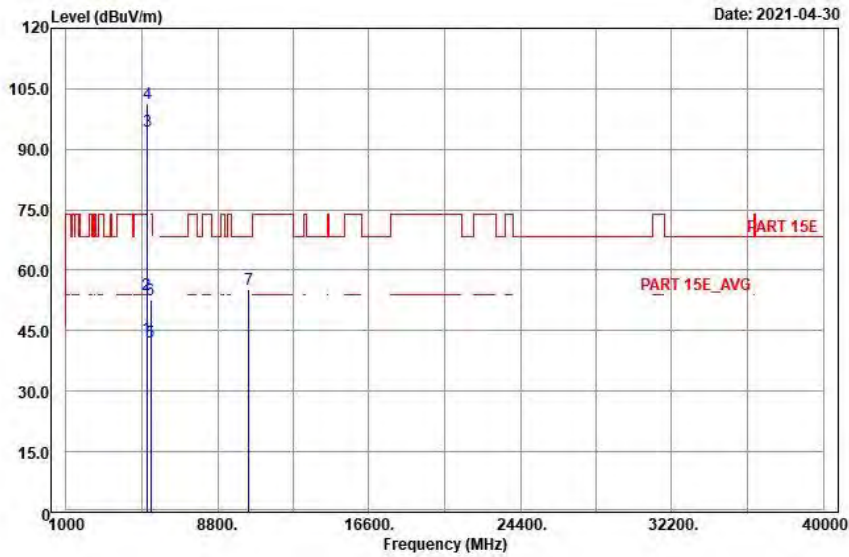


Vertical (Average)

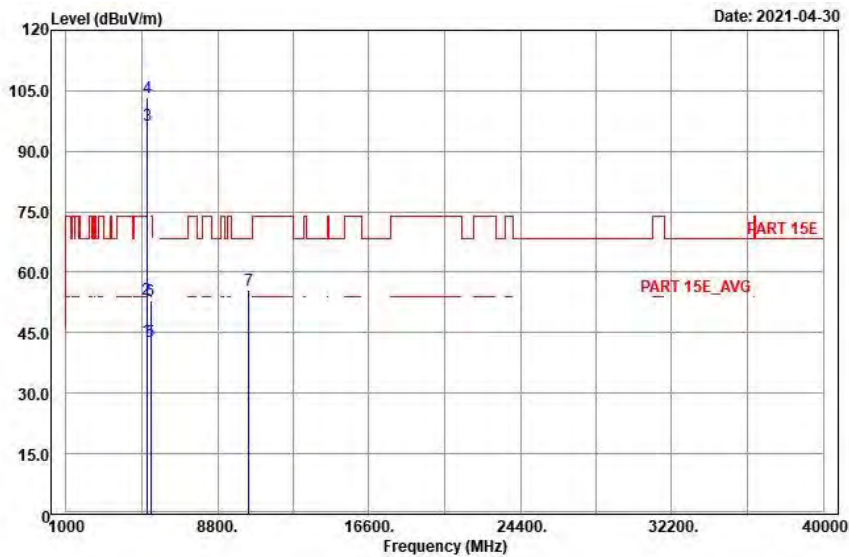


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 40 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5150 | 43.27 | 33.22 | 10.05 | 54 | -10.73 | 218 | 144 | Average |
| 5150 | 53.81 | 43.76 | 10.05 | 74 | -20.19 | 218 | 144 | Peak |
| 5200 | 94.51 | 84.35 | 10.16 | | | 218 | 144 | Average |
| 5200 | 101.4 | 91.24 | 10.16 | | | 218 | 144 | Peak |
| 5350 | 42.13 | 31.9 | 10.23 | 54 | -11.87 | 218 | 144 | Average |
| 5350 | 52.77 | 42.54 | 10.23 | 74 | -21.23 | 218 | 144 | Peak |
| *10400 | 55.37 | 39.19 | 16.18 | 68.2 | -12.83 | 129 | 335 | Peak |

Antenna Polarity & Test Distance: Vertical at 3 m

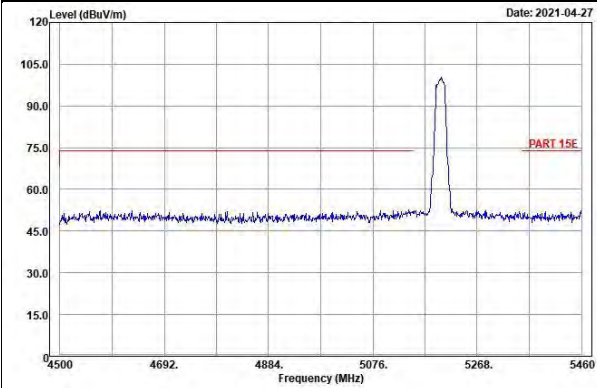
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5150 | 43.26 | 33.21 | 10.05 | 54 | -10.74 | 205 | 86 | Average |
| 5150 | 53.25 | 43.2 | 10.05 | 74 | -20.75 | 205 | 86 | Peak |
| 5200 | 96.45 | 86.29 | 10.16 | | | 205 | 86 | Average |
| 5200 | 103.2 | 93.04 | 10.16 | | | 205 | 86 | Peak |
| 5350 | 42.89 | 32.66 | 10.23 | 54 | -11.11 | 205 | 86 | Average |
| 5350 | 52.81 | 42.58 | 10.23 | 74 | -21.19 | 205 | 86 | Peak |
| *10400 | 55.46 | 39.28 | 16.18 | 68.2 | -12.74 | 211 | 175 | Peak |

Remarks:

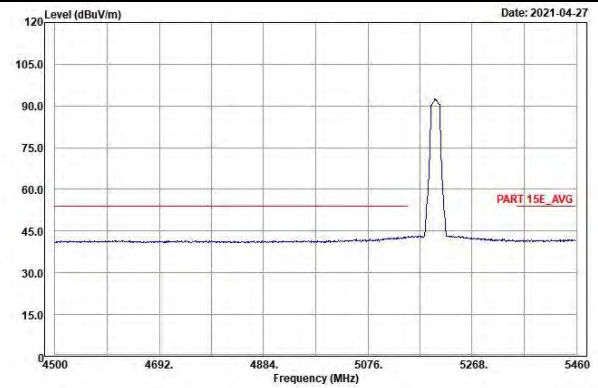
- Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
- 5200 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

Channel 40

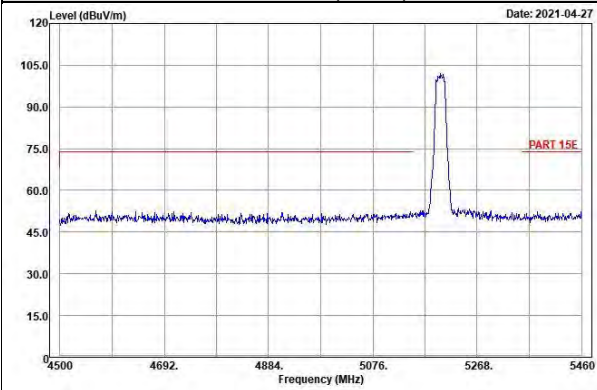
Horizontal (Peak)



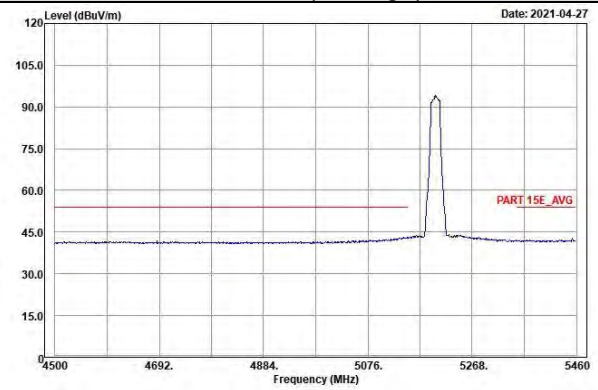
Horizontal (Average)



Vertical (Peak)

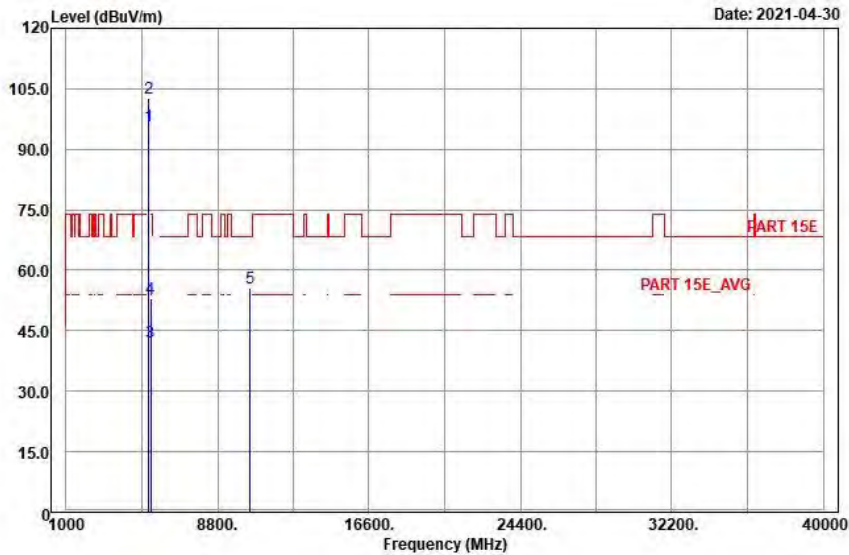


Vertical (Average)

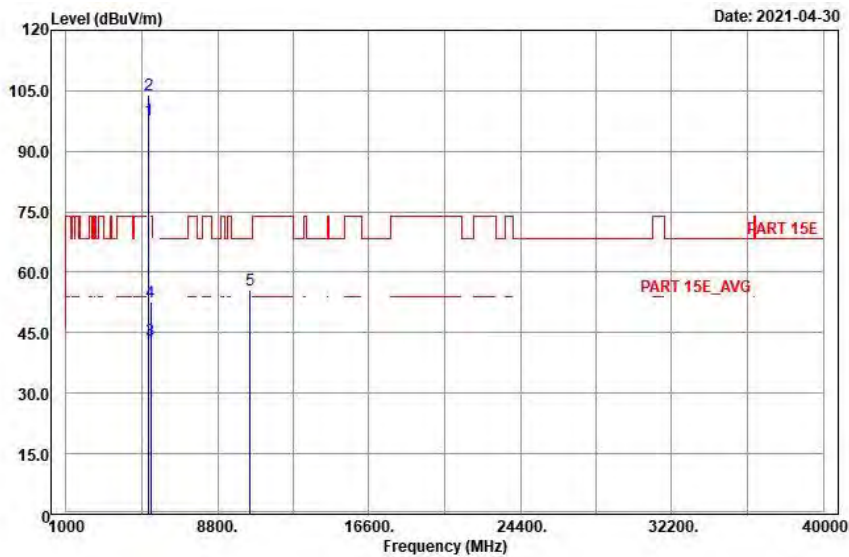


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 48 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



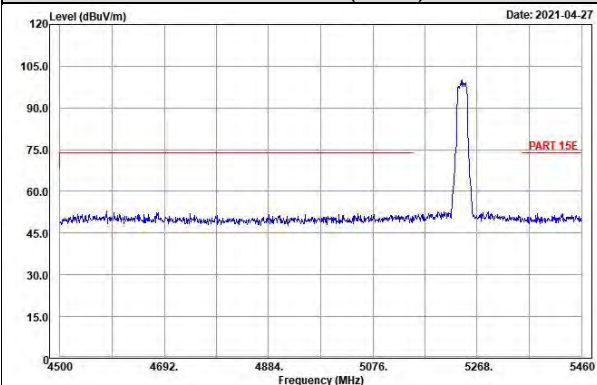
| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5240 | 95.74 | 85.6 | 10.14 | | | 218 | 144 | Average |
| 5240 | 102.51 | 92.37 | 10.14 | | | 218 | 144 | Peak |
| 5350 | 42.24 | 32.01 | 10.23 | 54 | -11.76 | 218 | 144 | Average |
| 5350 | 53.11 | 42.88 | 10.23 | 74 | -20.89 | 218 | 144 | Peak |
| *10480 | 55.73 | 39.83 | 15.9 | 68.2 | -12.47 | 192 | 157 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5240 | 97.62 | 87.48 | 10.14 | | | 205 | 86 | Average |
| 5240 | 104.08 | 93.94 | 10.14 | | | 205 | 86 | Peak |
| 5350 | 43.06 | 32.83 | 10.23 | 54 | -10.94 | 205 | 86 | Average |
| 5350 | 52.65 | 42.42 | 10.23 | 74 | -21.35 | 205 | 86 | Peak |
| *10480 | 55.49 | 39.59 | 15.9 | 68.2 | -12.71 | 151 | 38 | Peak |

Remarks:

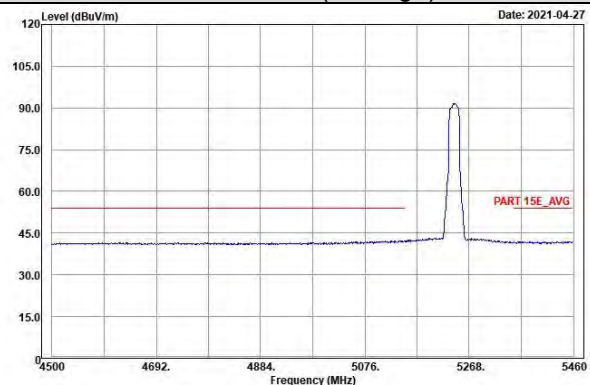
- Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
- 5240 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

Channel 48

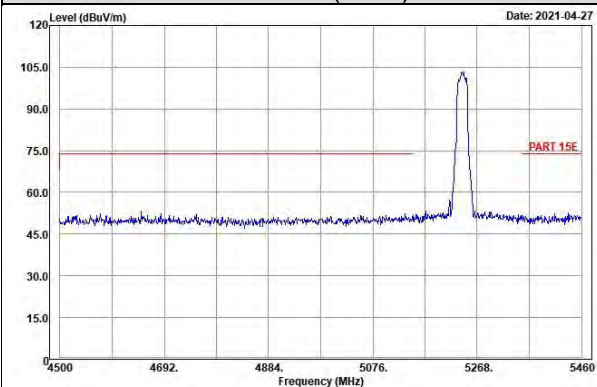
Horizontal (Peak)



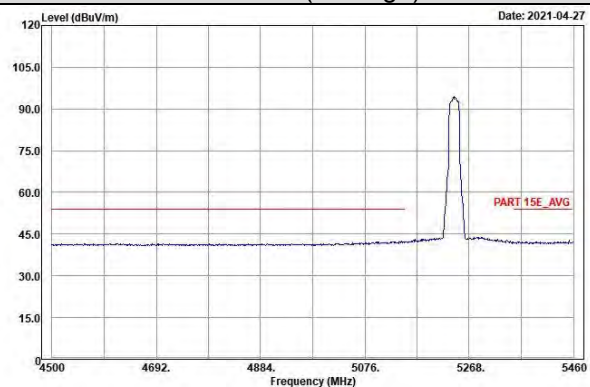
Horizontal (Average)



Vertical (Peak)

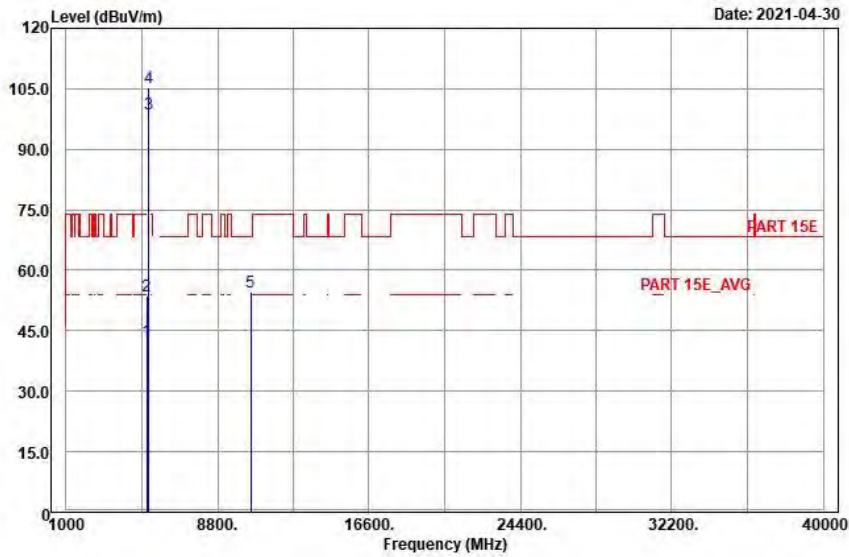


Vertical (Average)

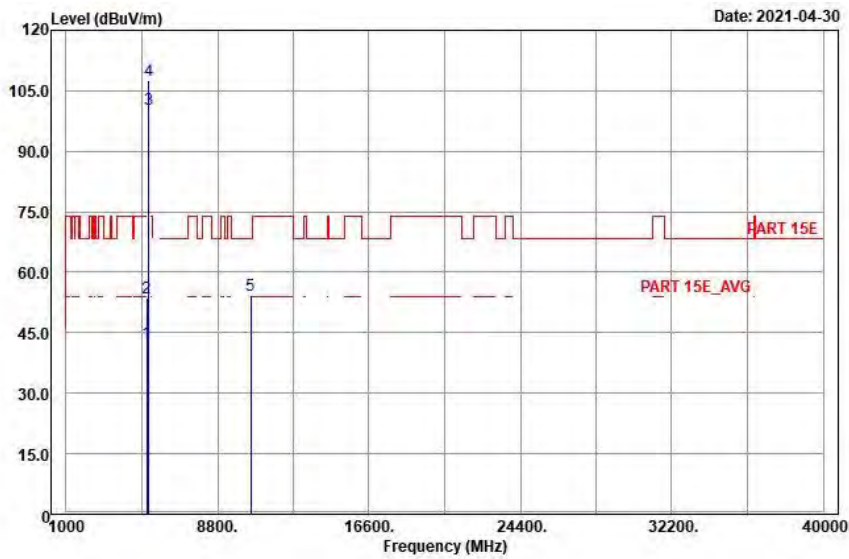


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 52 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



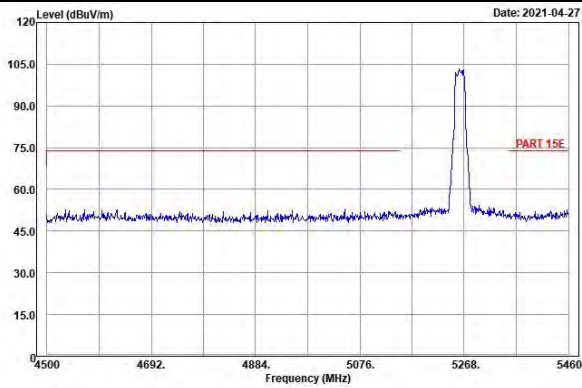
| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5150 | 42.43 | 32.38 | 10.05 | 54 | -11.57 | 218 | 144 | Average |
| 5150 | 53.56 | 43.51 | 10.05 | 74 | -20.44 | 218 | 144 | Peak |
| 5260 | 98.59 | 88.47 | 10.12 | | | 218 | 144 | Average |
| 5260 | 105.39 | 95.27 | 10.12 | | | 218 | 144 | Peak |
| *10520 | 54.47 | 38.59 | 15.88 | 68.2 | -13.73 | 147 | 161 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5150 | 42.52 | 32.47 | 10.05 | 54 | -11.48 | 205 | 86 | Average |
| 5150 | 53.63 | 43.58 | 10.05 | 74 | -20.37 | 205 | 86 | Peak |
| 5260 | 100.33 | 90.21 | 10.12 | | | 205 | 86 | Average |
| 5260 | 107.53 | 97.41 | 10.12 | | | 205 | 86 | Peak |
| *10520 | 54.43 | 38.55 | 15.88 | 68.2 | -13.77 | 196 | 135 | Peak |

Remarks:

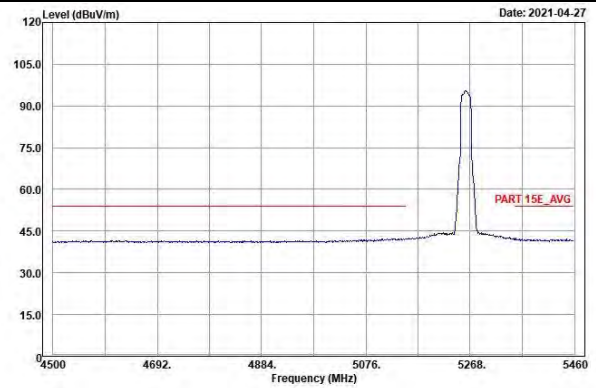
- Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
- 5260 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

Channel 52

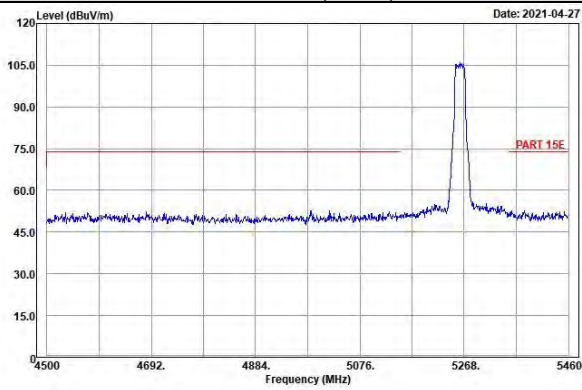
Horizontal (Peak)



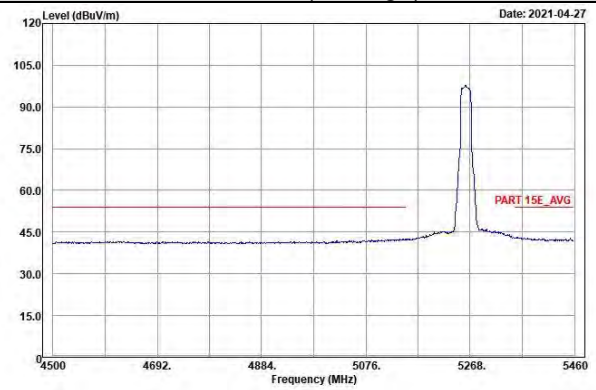
Horizontal (Average)



Vertical (Peak)

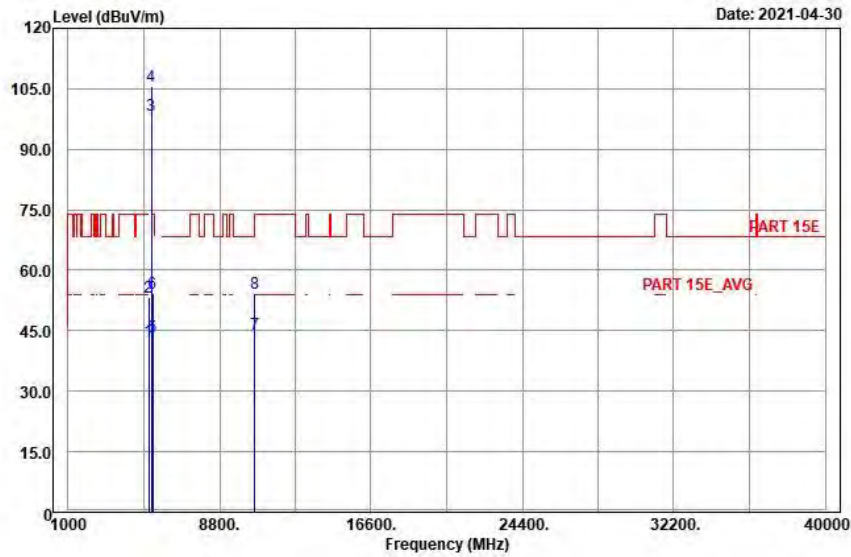


Vertical (Average)

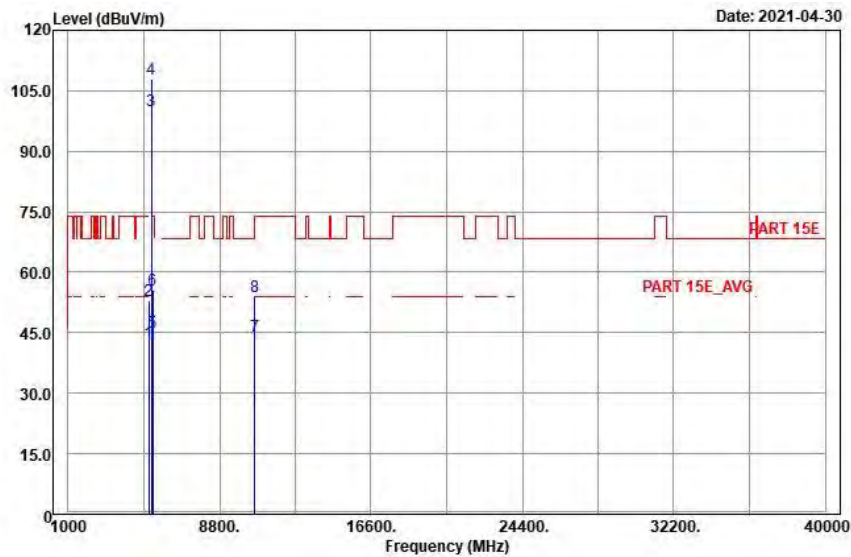


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 60 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5150 | 42.37 | 32.32 | 10.05 | 54 | -11.63 | 218 | 144 | Average |
| 5150 | 53.34 | 43.29 | 10.05 | 74 | -20.66 | 218 | 144 | Peak |
| 5300 | 98.29 | 88.23 | 10.06 | | | 218 | 144 | Average |
| 5300 | 105.74 | 95.68 | 10.06 | | | 218 | 144 | Peak |
| 5350 | 43.48 | 33.25 | 10.23 | 54 | -10.52 | 218 | 144 | Average |
| 5350 | 54.17 | 43.94 | 10.23 | 74 | -19.83 | 218 | 144 | Peak |
| 10600 | 44.16 | 28.4 | 15.76 | 54 | -9.84 | 108 | 351 | Average |
| 10600 | 54.37 | 38.61 | 15.76 | 74 | -19.63 | 108 | 351 | Peak |

Antenna Polarity & Test Distance: Vertical at 3 m

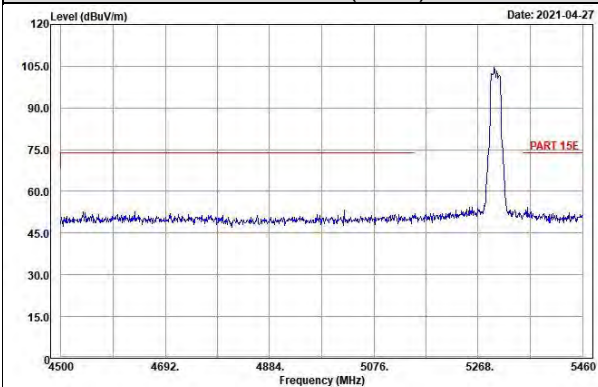
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5150 | 42.46 | 32.41 | 10.05 | 54 | -11.54 | 205 | 86 | Average |
| 5150 | 53.04 | 42.99 | 10.05 | 74 | -20.96 | 205 | 86 | Peak |
| 5300 | 100.11 | 90.05 | 10.06 | | | 205 | 86 | Average |
| 5300 | 107.87 | 97.81 | 10.06 | | | 205 | 86 | Peak |
| 5350 | 45.28 | 35.05 | 10.23 | 54 | -8.72 | 205 | 86 | Average |
| 5350 | 55.45 | 45.22 | 10.23 | 74 | -18.55 | 205 | 86 | Peak |
| 10600 | 44.25 | 28.49 | 15.76 | 54 | -9.75 | 282 | 157 | Average |
| 10600 | 54.04 | 38.28 | 15.76 | 74 | -19.96 | 282 | 157 | Peak |

Remarks:

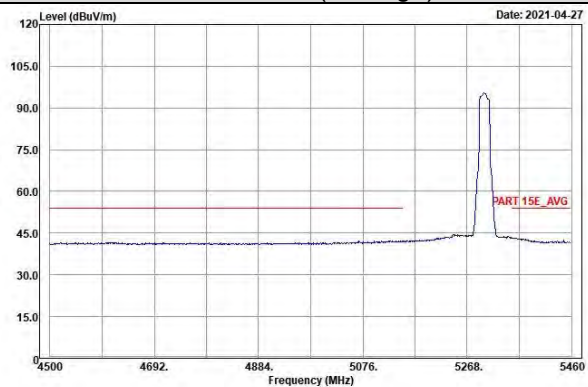
1. Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
2. 5300 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The other emission levels were very low against the limit.

Channel 60

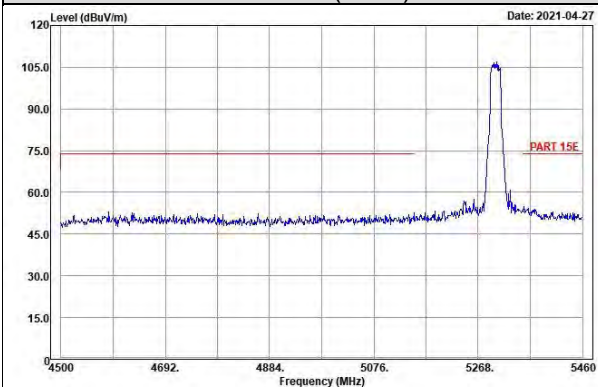
Horizontal (Peak)



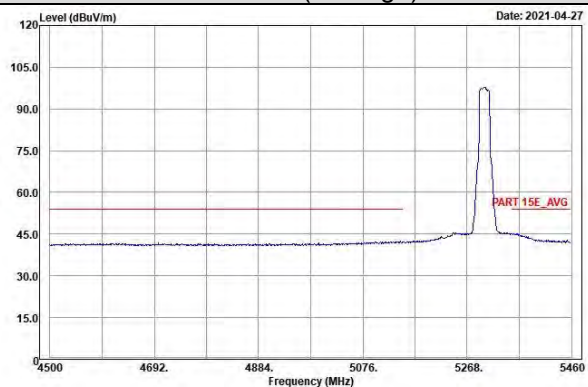
Horizontal (Average)



Vertical (Peak)

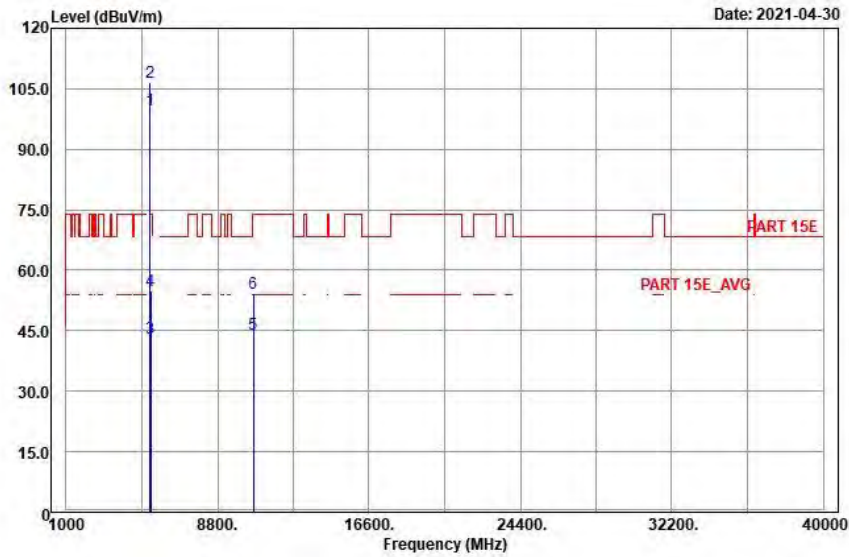


Vertical (Average)

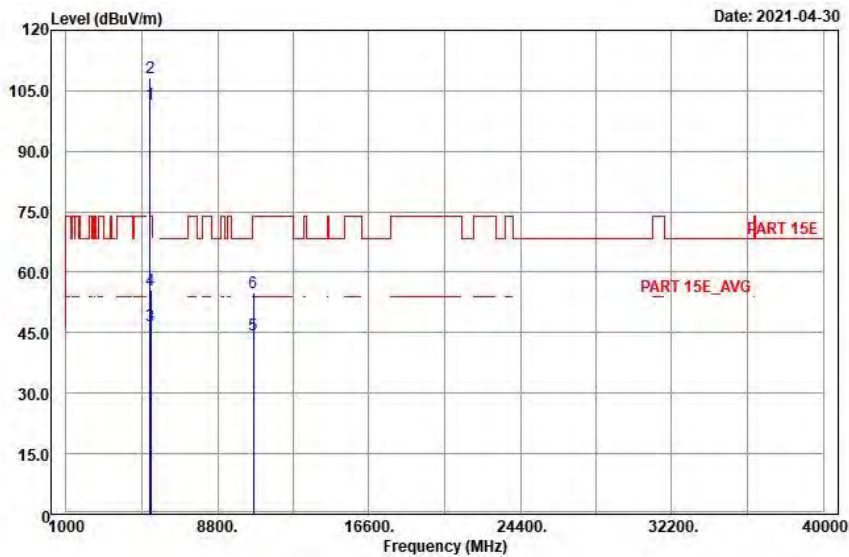


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 64 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



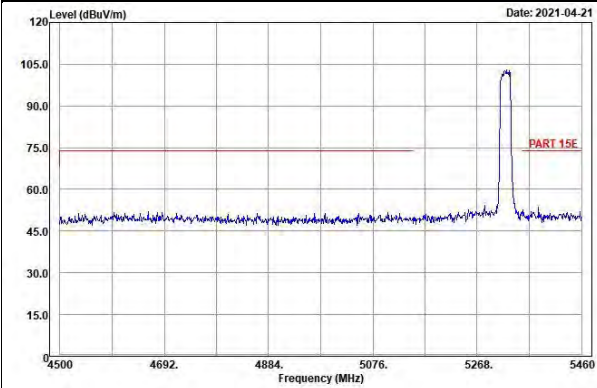
| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5320 | 99.61 | 89.52 | 10.09 | | | 218 | 144 | Average |
| 5320 | 106.53 | 96.44 | 10.09 | | | 218 | 144 | Peak |
| 5350 | 43.08 | 32.85 | 10.23 | 54 | -10.92 | 218 | 144 | Average |
| 5350 | 54.97 | 44.74 | 10.23 | 74 | -19.03 | 218 | 144 | Peak |
| 10640 | 44.29 | 28.3 | 15.99 | 54 | -9.71 | 253 | 142 | Average |
| 10640 | 54.42 | 38.43 | 15.99 | 74 | -19.58 | 253 | 142 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5320 | 101.74 | 91.65 | 10.09 | | | 205 | 86 | Average |
| 5320 | 108.37 | 98.28 | 10.09 | | | 205 | 86 | Peak |
| 5350 | 46.62 | 36.39 | 10.23 | 54 | -7.38 | 205 | 86 | Average |
| 5350 | 55.54 | 45.31 | 10.23 | 74 | -18.46 | 205 | 86 | Peak |
| 10640 | 44.61 | 28.62 | 15.99 | 54 | -9.39 | 237 | 139 | Average |
| 10640 | 54.88 | 38.89 | 15.99 | 74 | -19.12 | 237 | 139 | Peak |

Remarks:

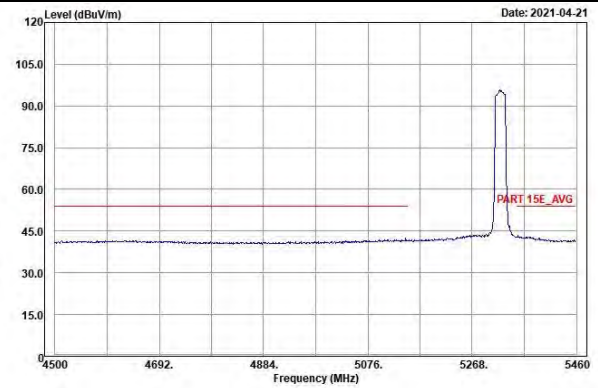
1. Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
2. 5320 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The other emission levels were very low against the limit.

Channel 64

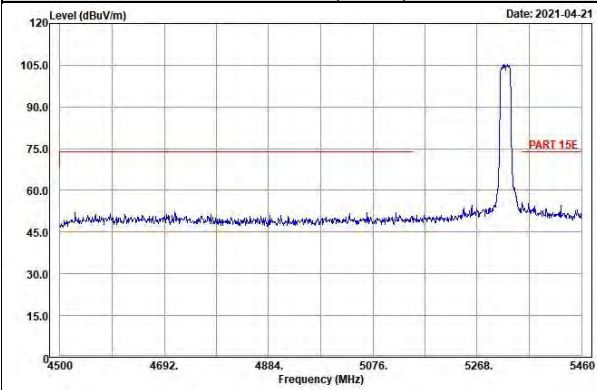
Horizontal (Peak)



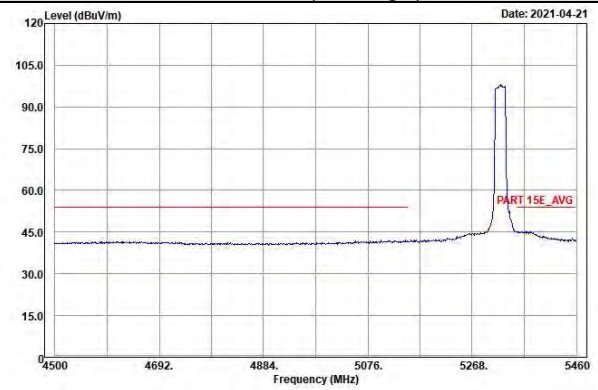
Horizontal (Average)



Vertical (Peak)

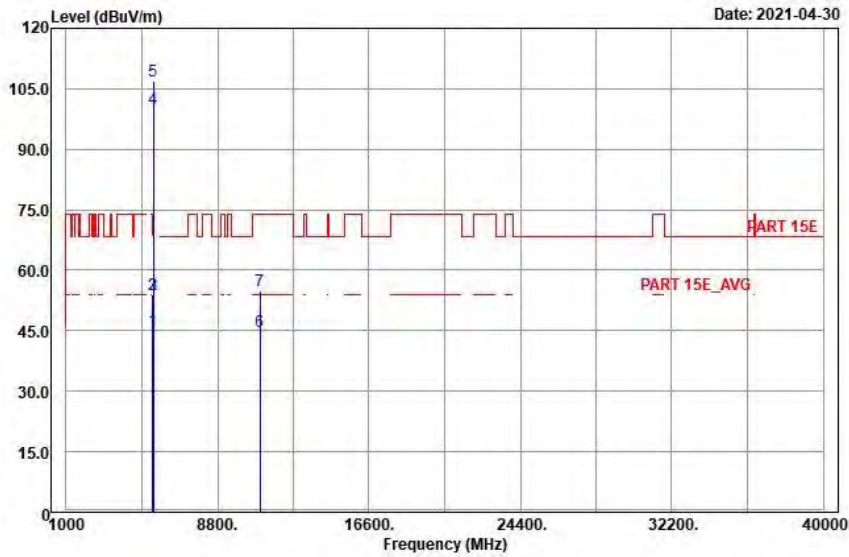


Vertical (Average)

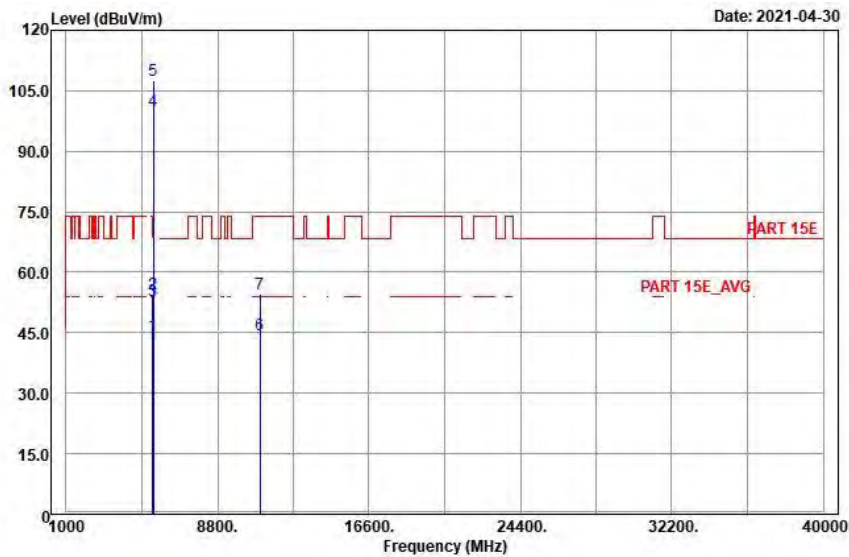


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 100 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



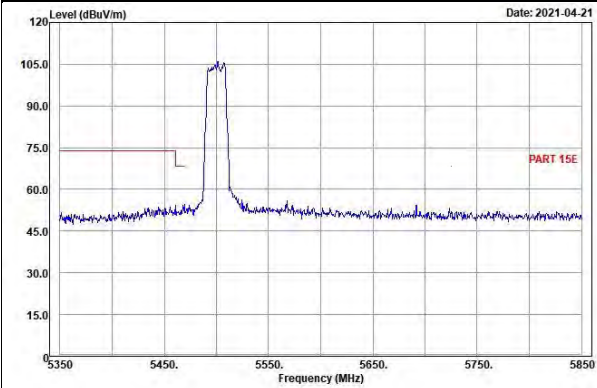
| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5460 | 45.22 | 34.71 | 10.51 | 54 | -8.78 | 218 | 116 | Average |
| 5460 | 53.97 | 43.46 | 10.51 | 74 | -20.03 | 218 | 116 | Peak |
| *5470 | 54.08 | 43.55 | 10.53 | 68.2 | -14.12 | 218 | 116 | Peak |
| 5500 | 99.91 | 89.31 | 10.6 | | | 218 | 116 | Average |
| 5500 | 106.78 | 96.18 | 10.6 | | | 218 | 116 | Peak |
| 11000 | 44.81 | 28.68 | 16.13 | 54 | -9.19 | 131 | 184 | Average |
| 11000 | 54.94 | 38.81 | 16.13 | 74 | -19.06 | 131 | 184 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5460 | 44.35 | 33.84 | 10.51 | 54 | -9.65 | 205 | 92 | Average |
| 5460 | 54.69 | 44.18 | 10.51 | 74 | -19.31 | 205 | 92 | Peak |
| *5470 | 52.95 | 42.42 | 10.53 | 68.2 | -15.25 | 205 | 92 | Peak |
| 5500 | 100.18 | 89.58 | 10.6 | | | 205 | 92 | Average |
| 5500 | 107.65 | 97.05 | 10.6 | | | 205 | 92 | Peak |
| 11000 | 44.32 | 28.19 | 16.13 | 54 | -9.68 | 257 | 120 | Average |
| 11000 | 54.6 | 38.47 | 16.13 | 74 | -19.4 | 257 | 120 | Peak |

Remarks:

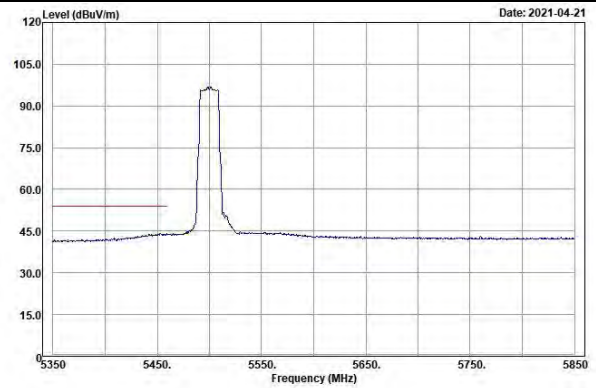
1. Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
2. 5500 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The other emission levels were very low against the limit.

Channel 100

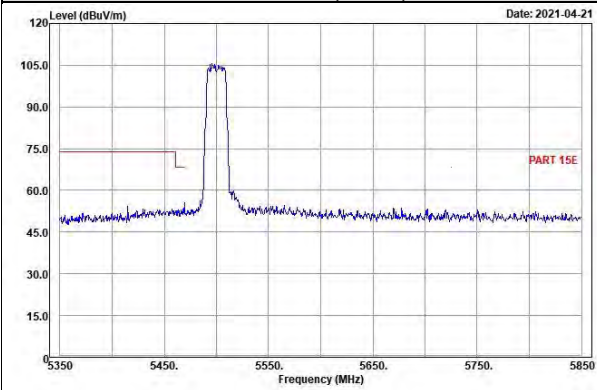
Horizontal (Peak)



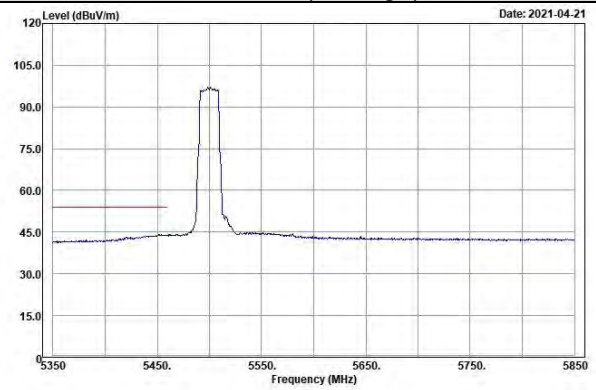
Horizontal (Average)



Vertical (Peak)

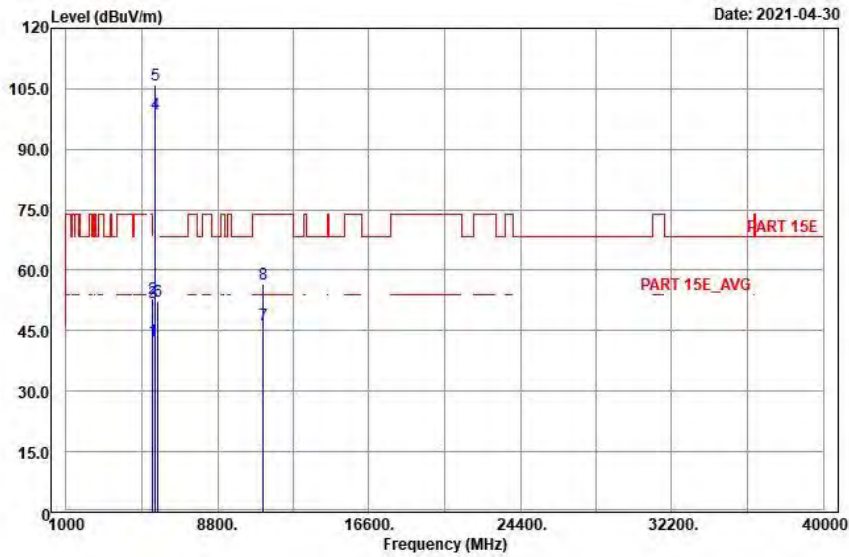


Vertical (Average)

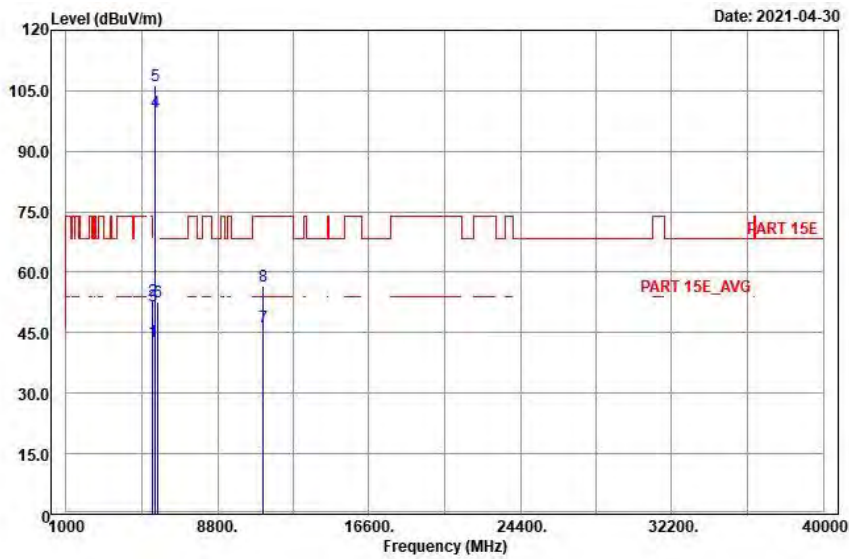


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 116 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



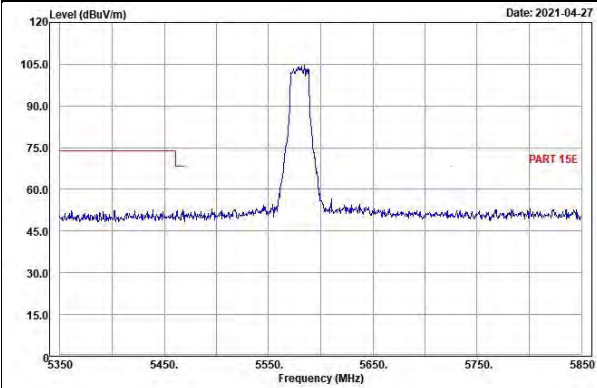
| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5460 | 42.53 | 32.02 | 10.51 | 54 | -11.47 | 218 | 116 | Average |
| 5460 | 52.95 | 42.44 | 10.51 | 74 | -21.05 | 218 | 116 | Peak |
| *5470 | 51.86 | 41.33 | 10.53 | 68.2 | -16.34 | 218 | 116 | Peak |
| 5580 | 98.85 | 88.14 | 10.71 | | | 218 | 116 | Average |
| 5580 | 105.81 | 95.1 | 10.71 | | | 218 | 116 | Peak |
| *5725 | 52.39 | 41.47 | 10.92 | 68.2 | -15.81 | 218 | 116 | Peak |
| 11160 | 46.43 | 30.07 | 16.36 | 54 | -7.57 | 181 | 175 | Average |
| 11160 | 56.59 | 40.23 | 16.36 | 74 | -17.41 | 181 | 175 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5460 | 42.87 | 32.36 | 10.51 | 54 | -11.13 | 205 | 92 | Average |
| 5460 | 53.09 | 42.58 | 10.51 | 74 | -20.91 | 205 | 92 | Peak |
| *5470 | 51.8 | 41.27 | 10.53 | 68.2 | -16.4 | 205 | 92 | Peak |
| 5580 | 99.68 | 88.97 | 10.71 | | | 205 | 92 | Average |
| 5580 | 106.39 | 95.68 | 10.71 | | | 205 | 92 | Peak |
| *5725 | 52.57 | 41.65 | 10.92 | 68.2 | -15.63 | 205 | 92 | Peak |
| 11160 | 46.27 | 29.91 | 16.36 | 54 | -7.73 | 125 | 273 | Average |
| 11160 | 56.53 | 40.17 | 16.36 | 74 | -17.47 | 125 | 273 | Peak |

Remarks:

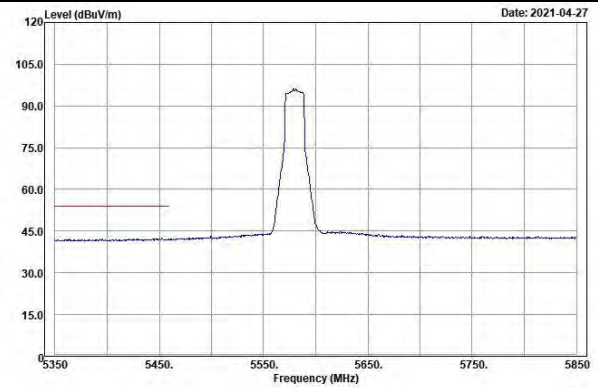
1. Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
2. 5580 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The other emission levels were very low against the limit.

Channel 116

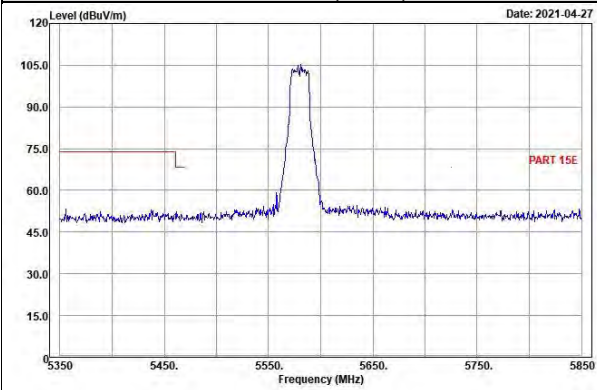
Horizontal (Peak)



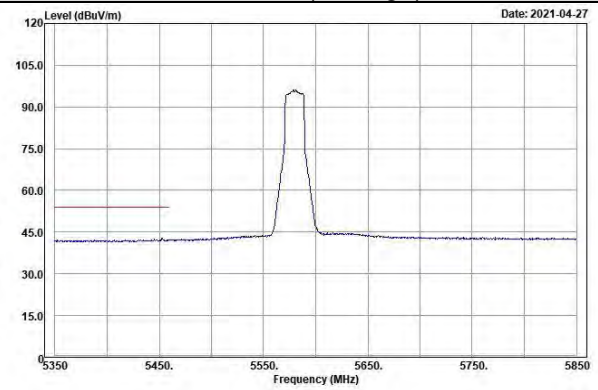
Horizontal (Average)



Vertical (Peak)

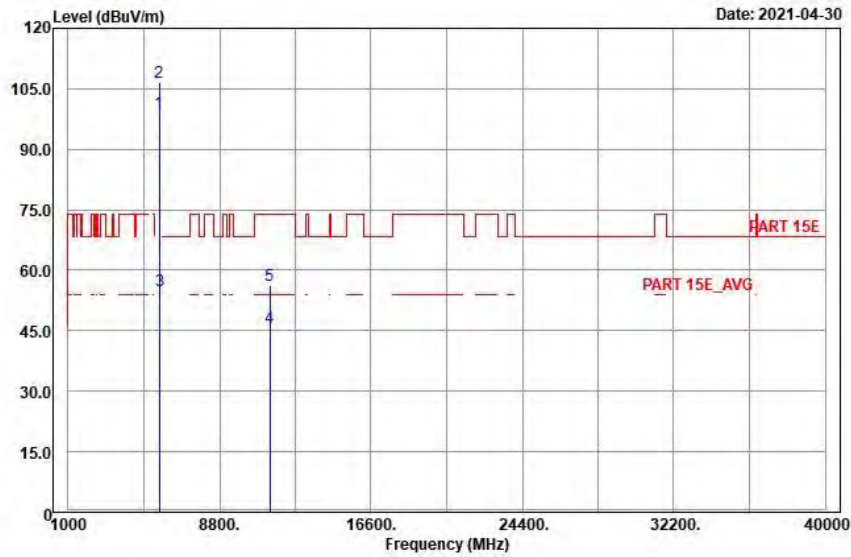


Vertical (Average)

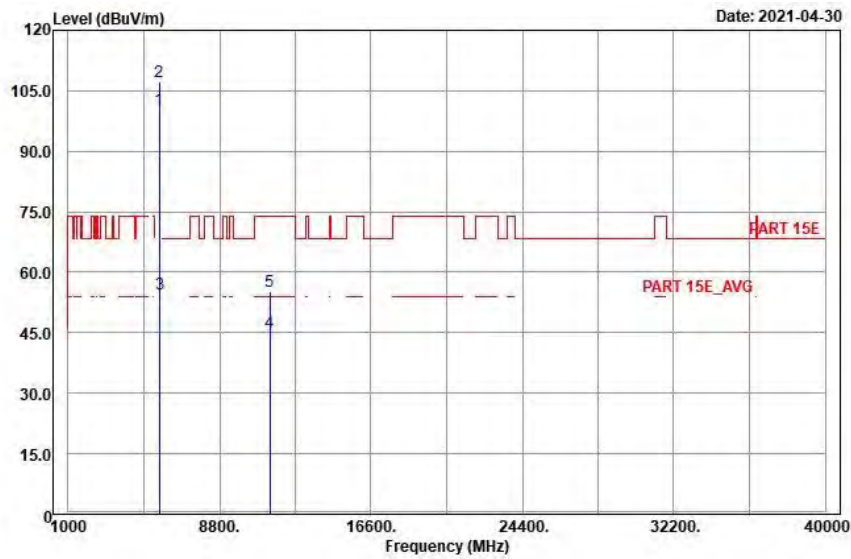


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 140 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical

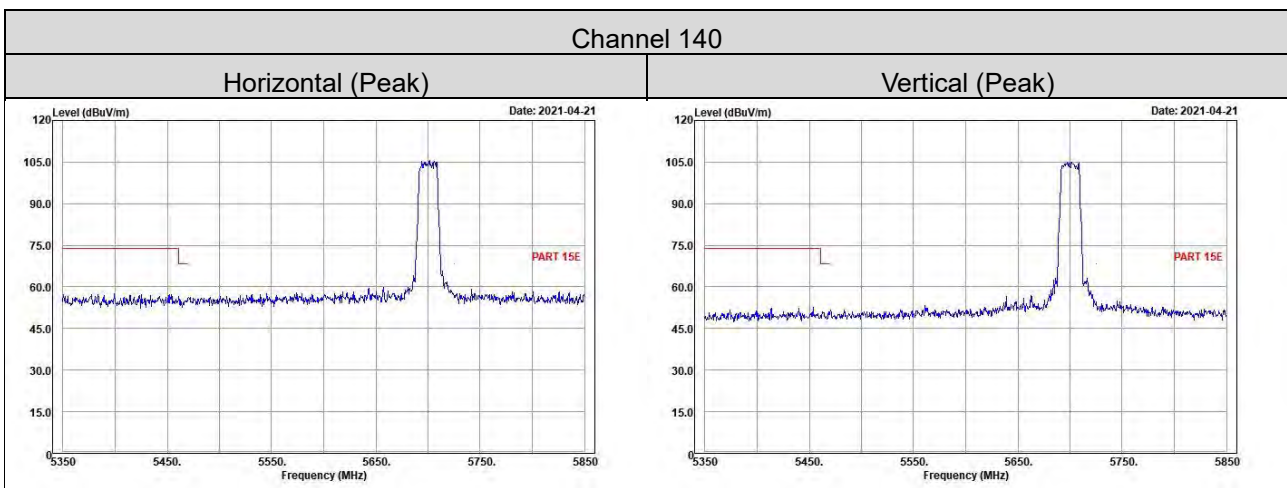


| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5700 | 99.12 | 88.17 | 10.95 | | | 218 | 116 | Average |
| 5700 | 106.5 | 95.55 | 10.95 | | | 218 | 116 | Peak |
| *5725 | 55.02 | 44.1 | 10.92 | 68.2 | -13.18 | 218 | 116 | Peak |
| 11400 | 45.85 | 29.66 | 16.19 | 54 | -8.15 | 211 | 74 | Average |
| 11400 | 56.29 | 40.1 | 16.19 | 74 | -17.71 | 211 | 74 | Peak |

| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5700 | 100.52 | 89.57 | 10.95 | | | 205 | 92 | Average |
| 5700 | 107.38 | 96.43 | 10.95 | | | 205 | 92 | Peak |
| *5725 | 54.62 | 43.7 | 10.92 | 68.2 | -13.58 | 205 | 92 | Peak |
| 11400 | 45.06 | 28.87 | 16.19 | 54 | -8.94 | 162 | 180 | Average |
| 11400 | 55.32 | 39.13 | 16.19 | 74 | -18.68 | 162 | 180 | Peak |

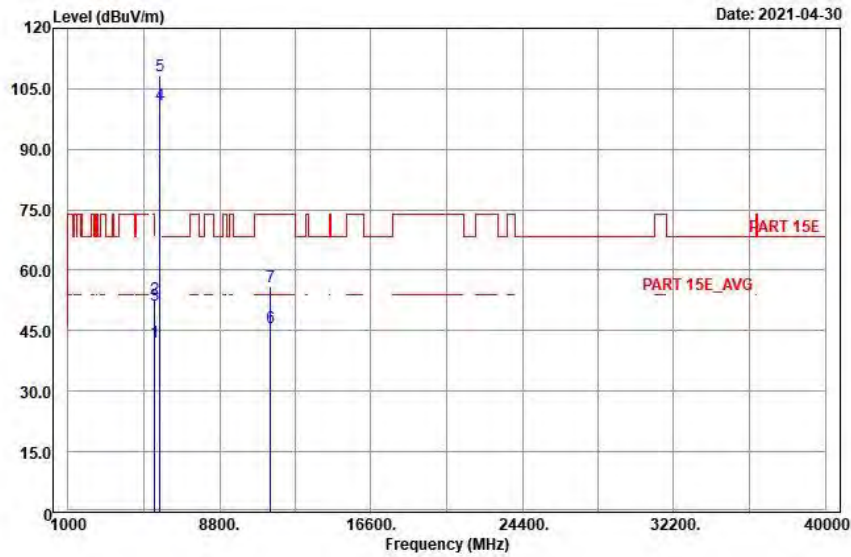
Remarks:

- Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
- 5700 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

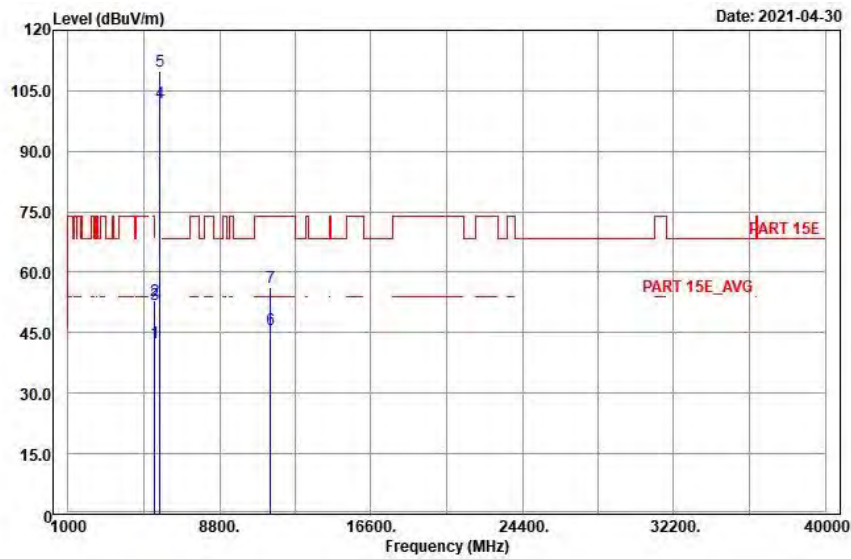


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 144 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



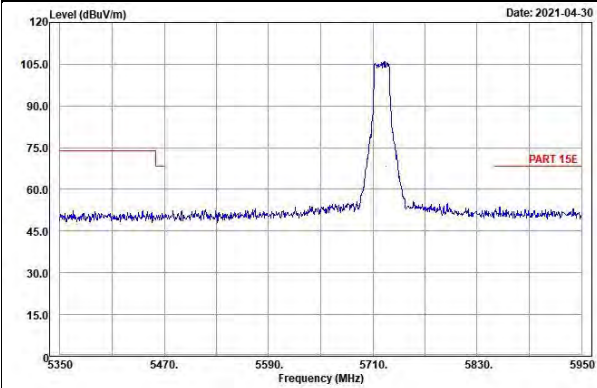
| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5460 | 42.23 | 31.72 | 10.51 | 54 | -11.77 | 218 | 116 | Average |
| 5460 | 53.03 | 42.52 | 10.51 | 74 | -20.97 | 218 | 116 | Peak |
| *5470 | 51.3 | 40.77 | 10.53 | 68.2 | -16.9 | 218 | 116 | Peak |
| 5720 | 101.18 | 90.26 | 10.92 | | | 218 | 116 | Average |
| 5720 | 108.32 | 97.4 | 10.92 | | | 218 | 116 | Peak |
| 11440 | 45.62 | 29.33 | 16.29 | 54 | -8.38 | 187 | 116 | Average |
| 11440 | 55.81 | 39.52 | 16.29 | 74 | -18.19 | 187 | 116 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5460 | 42.47 | 31.96 | 10.51 | 54 | -11.53 | 205 | 92 | Average |
| 5460 | 52.83 | 42.32 | 10.51 | 74 | -21.17 | 205 | 92 | Peak |
| *5470 | 51.89 | 41.36 | 10.53 | 68.2 | -16.31 | 205 | 92 | Peak |
| 5720 | 102.14 | 91.22 | 10.92 | | | 205 | 92 | Average |
| 5720 | 109.82 | 98.9 | 10.92 | | | 205 | 92 | Peak |
| 11440 | 45.84 | 29.55 | 16.29 | 54 | -8.16 | 326 | 142 | Average |
| 11440 | 56.14 | 39.85 | 16.29 | 74 | -17.86 | 326 | 142 | Peak |

Remarks:

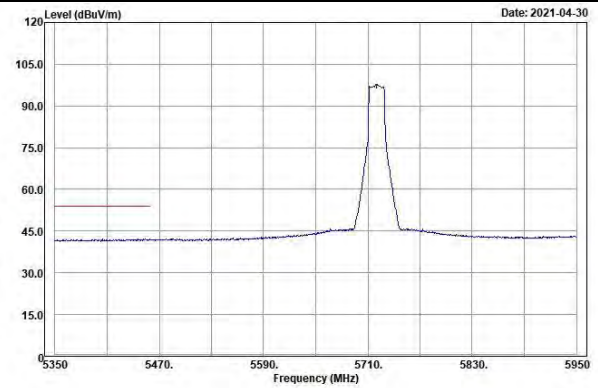
- Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
- 5720 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

Channel 144

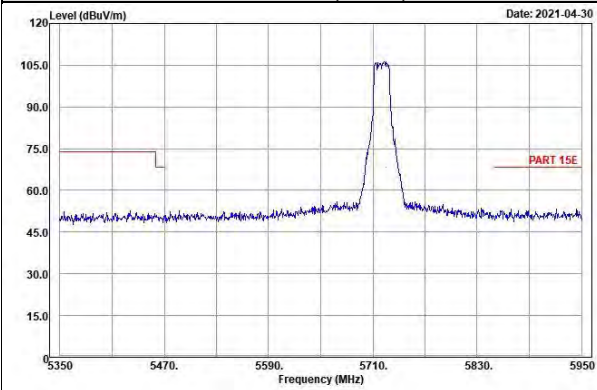
Horizontal (Peak)



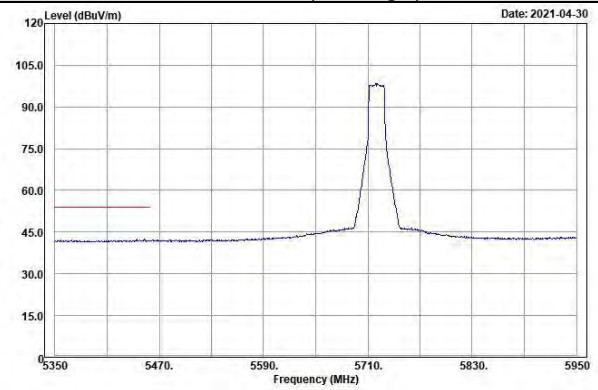
Horizontal (Average)



Vertical (Peak)

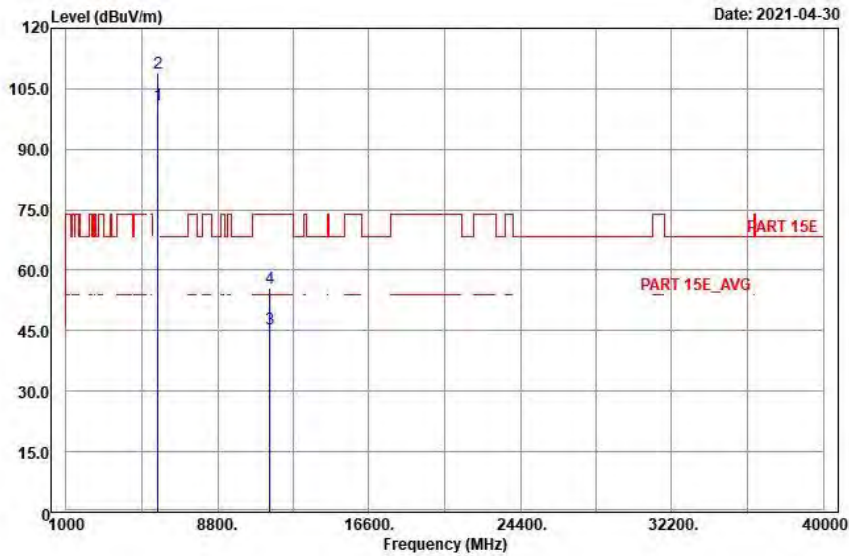


Vertical (Average)

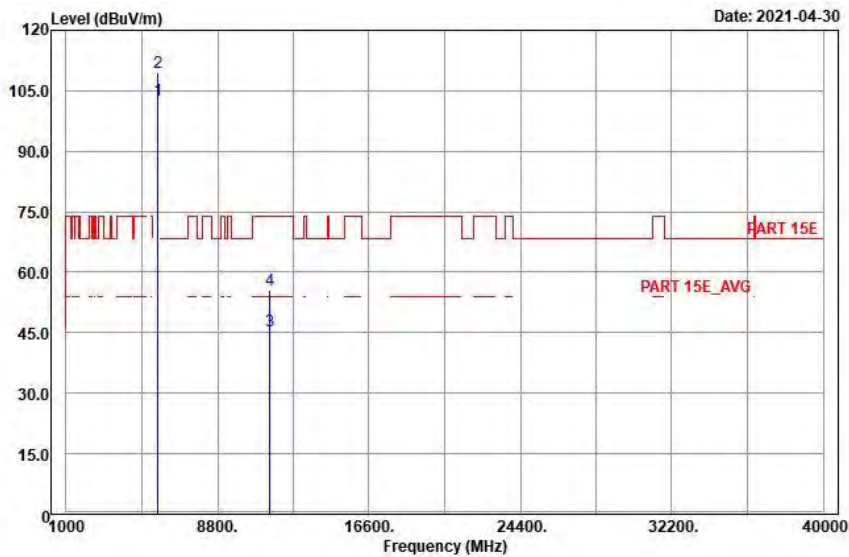


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 149 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

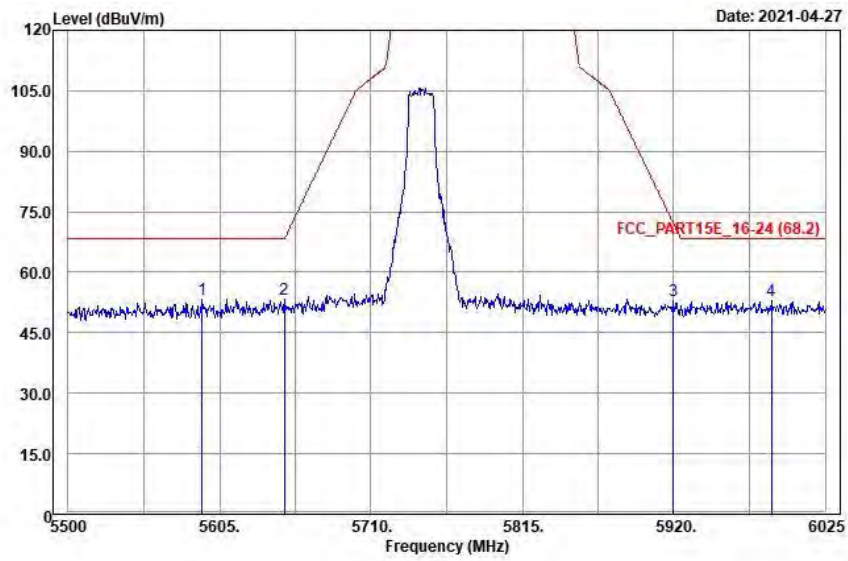
**<Spurious Emission>
Horizontal**



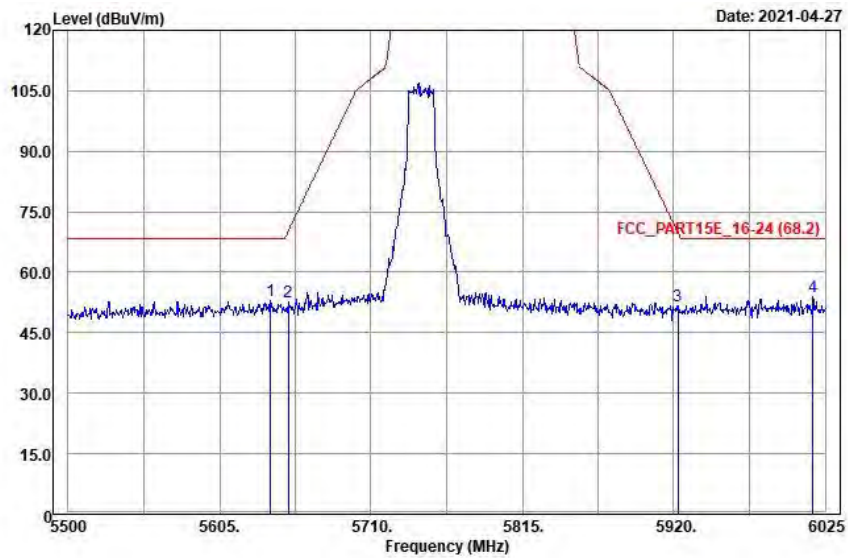
Vertical



**<Out of Band Emission (OOBE)>
Horizontal**



Vertical



<Spurious Emission>

| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5745 | 101.16 | 90.28 | 10.88 | | | 218 | 116 | Average |
| 5745 | 108.97 | 98.09 | 10.88 | | | 218 | 116 | Peak |
| 11490 | 45.31 | 28.84 | 16.47 | 54 | -8.69 | 243 | 287 | Average |
| 11490 | 55.45 | 38.98 | 16.47 | 74 | -18.55 | 243 | 287 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5745 | 102.58 | 91.7 | 10.88 | | | 205 | 92 | Average |
| 5745 | 109.62 | 98.74 | 10.88 | | | 205 | 92 | Peak |
| 11490 | 45.37 | 28.9 | 16.47 | 54 | -8.63 | 140 | 152 | Average |
| 11490 | 55.59 | 39.12 | 16.47 | 74 | -18.41 | 140 | 152 | Peak |

<Out of Band Emission (OOBE)>

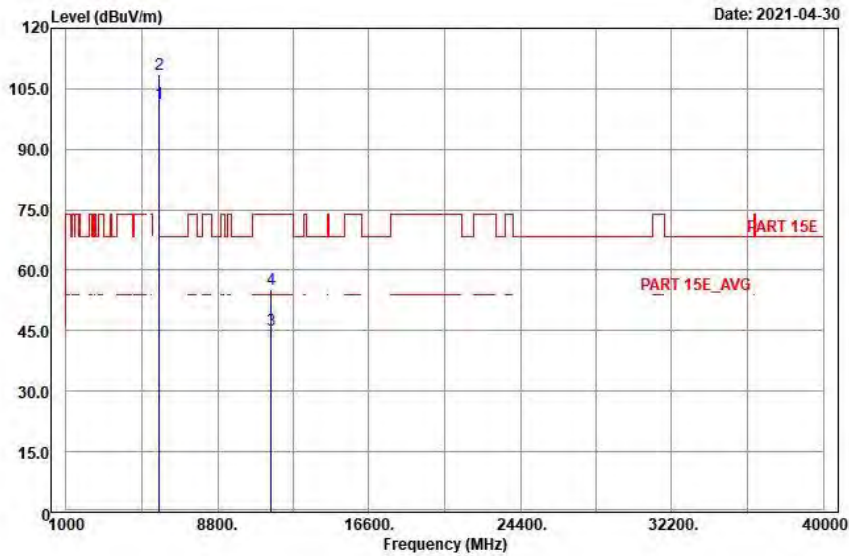
| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|--------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| *5592.925 | 53.3 | 42.55 | 10.75 | 68.2 | -14.9 | 218 | 116 | Peak |
| 5650.15 | 53.21 | 42.34 | 10.87 | 68.31 | -15.1 | 218 | 116 | Peak |
| 5920 | 52.86 | 41.77 | 11.09 | 71.9 | -19.04 | 218 | 116 | Peak |
| *5987.725 | 52.9 | 41.59 | 11.31 | 68.2 | -15.3 | 218 | 116 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| *5640.175 | 52.84 | 42.01 | 10.83 | 68.2 | -15.36 | 205 | 92 | Peak |
| 5652.775 | 52.65 | 41.78 | 10.87 | 70.25 | -17.6 | 205 | 92 | Peak |
| 5923.15 | 51.7 | 40.59 | 11.11 | 69.57 | -17.87 | 205 | 92 | Peak |
| *6016.6 | 53.93 | 42.58 | 11.35 | 68.2 | -14.27 | 205 | 92 | Peak |

Remarks:

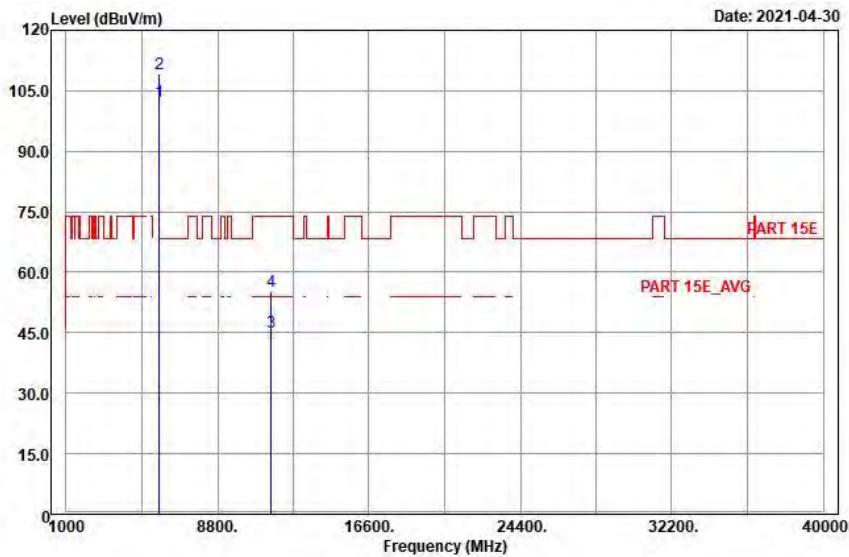
1. Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
2. 5745 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The other emission levels were very low against the limit.

| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 157 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

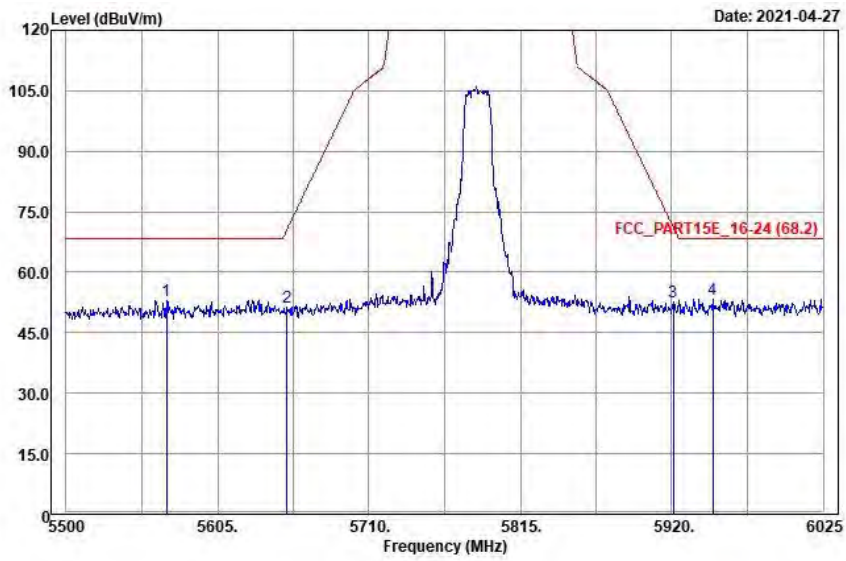
**<Spurious Emission>
Horizontal**



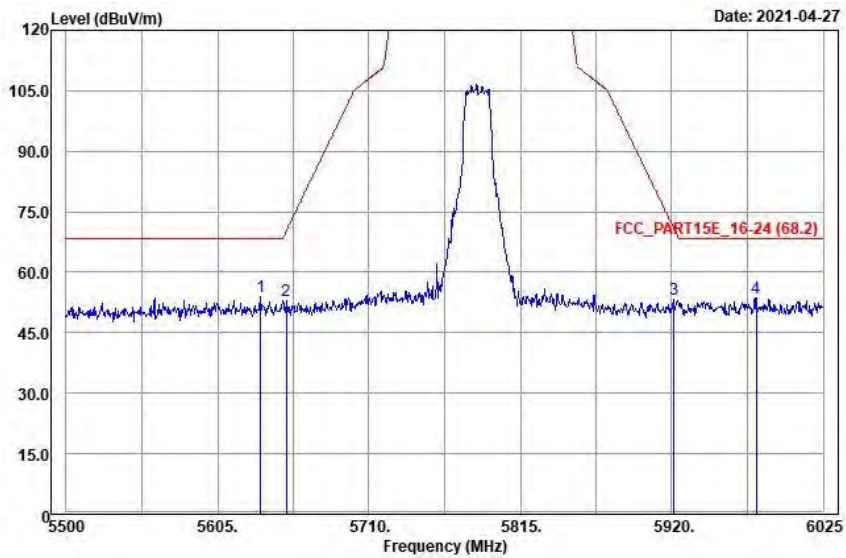
Vertical



**<Out of Band Emission (OOBE)>
Horizontal**



Vertical



<Spurious Emission>

| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5785 | 101.26 | 90.45 | 10.81 | | | 218 | 116 | Average |
| 5785 | 108.69 | 97.88 | 10.81 | | | 218 | 116 | Peak |
| 11570 | 45.07 | 28.58 | 16.49 | 54 | -8.93 | 216 | 227 | Average |
| 11570 | 55.19 | 38.7 | 16.49 | 74 | -18.81 | 216 | 227 | Peak |

| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5785 | 102.26 | 91.45 | 10.81 | | | 205 | 92 | Average |
| 5785 | 109.12 | 98.31 | 10.81 | | | 205 | 92 | Peak |
| 11570 | 45.2 | 28.71 | 16.49 | 54 | -8.8 | 314 | 126 | Average |
| 11570 | 55.11 | 38.62 | 16.49 | 74 | -18.89 | 314 | 126 | Peak |

<Out of Band Emission (OOBE)>

| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|--------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| *5569.825 | 53.08 | 42.38 | 10.7 | 68.2 | -15.12 | 218 | 116 | Peak |
| 5653.3 | 51.2 | 40.33 | 10.87 | 70.64 | -19.44 | 218 | 116 | Peak |
| 5921.05 | 52.63 | 41.54 | 11.09 | 71.12 | -18.49 | 218 | 116 | Peak |
| *5948.35 | 53.29 | 42.11 | 11.18 | 68.2 | -14.91 | 218 | 116 | Peak |

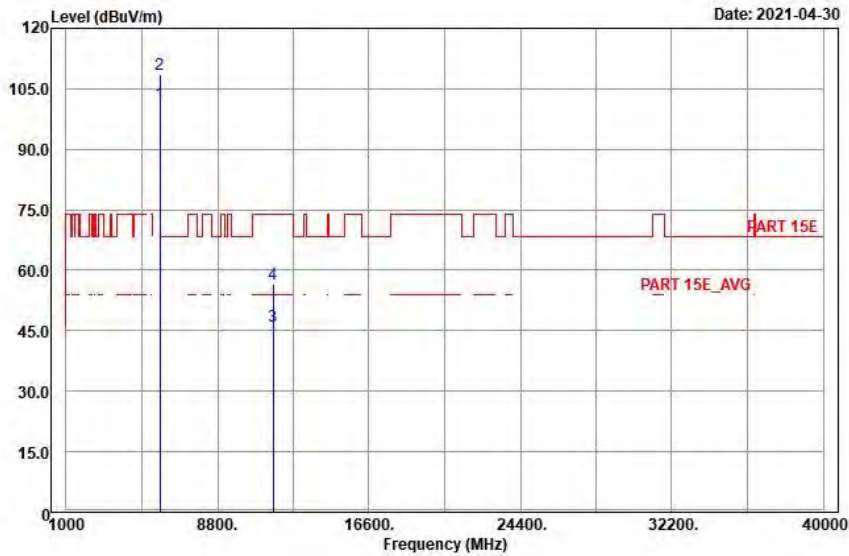
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|--------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| *5634.925 | 53.87 | 43.04 | 10.83 | 68.2 | -14.33 | 205 | 92 | Peak |
| 5652.775 | 52.83 | 41.96 | 10.87 | 70.25 | -17.42 | 205 | 92 | Peak |
| 5921.575 | 53.23 | 42.12 | 11.11 | 70.73 | -17.5 | 205 | 92 | Peak |
| *5978.8 | 53.68 | 42.42 | 11.26 | 68.2 | -14.52 | 205 | 92 | Peak |

Remarks:

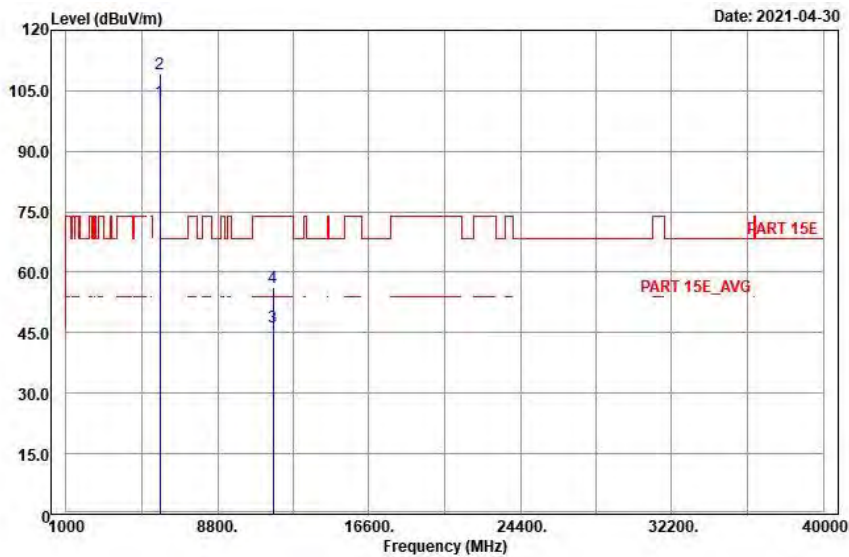
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 5785 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 165 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

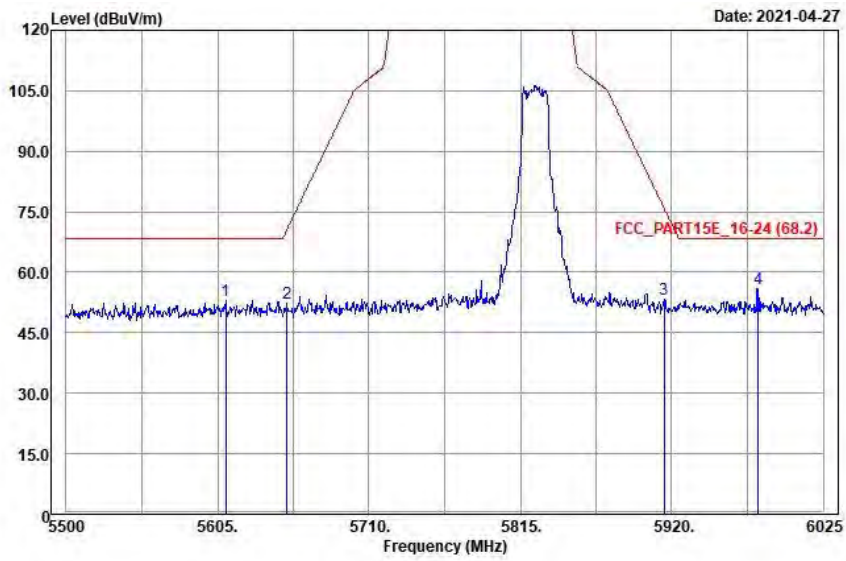
<Spurious Emission>
Horizontal



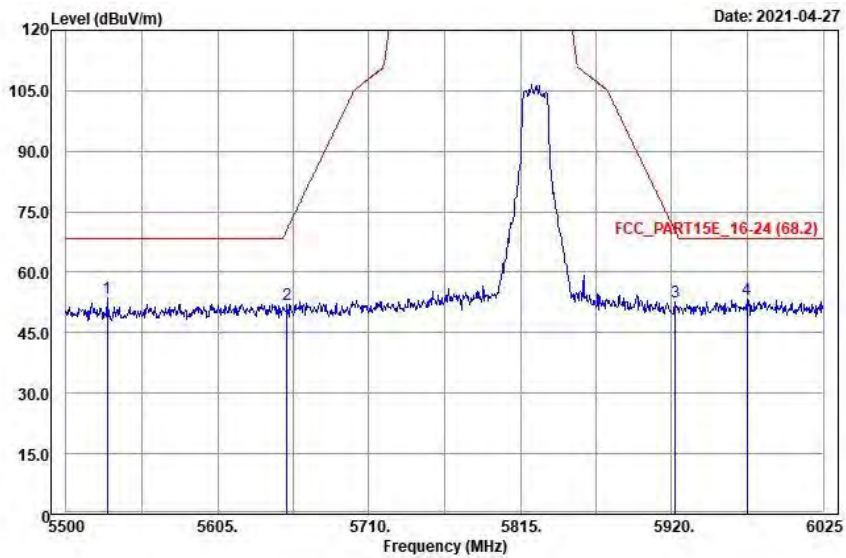
Vertical



**<Out of Band Emission (OOBE)>
Horizontal**



Vertical



<Spurious Emission>

| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5825 | 101.36 | 90.48 | 10.88 | | | 218 | 116 | Average |
| 5825 | 108.56 | 97.68 | 10.88 | | | 218 | 116 | Peak |
| 11650 | 46.11 | 29.33 | 16.78 | 54 | -7.89 | 152 | 183 | Average |
| 11650 | 56.44 | 39.66 | 16.78 | 74 | -17.56 | 152 | 183 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5825 | 102.44 | 91.56 | 10.88 | | | 205 | 92 | Average |
| 5825 | 109.27 | 98.39 | 10.88 | | | 205 | 92 | Peak |
| 11650 | 46.41 | 29.63 | 16.78 | 54 | -7.59 | 135 | 73 | Average |
| 11650 | 56.39 | 39.61 | 16.78 | 74 | -17.61 | 135 | 73 | Peak |

<Out of Band Emission (OOBE)>

| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|--------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| *5610.775 | 53.1 | 42.33 | 10.77 | 68.2 | -15.1 | 218 | 116 | Peak |
| 5653.3 | 52.46 | 41.59 | 10.87 | 70.64 | -18.18 | 218 | 116 | Peak |
| 5914.75 | 53.45 | 42.38 | 11.07 | 75.78 | -22.33 | 218 | 116 | Peak |
| *5979.85 | 55.98 | 44.72 | 11.26 | 68.2 | -12.22 | 218 | 116 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| *5528.35 | 53.53 | 42.9 | 10.63 | 68.2 | -14.67 | 205 | 92 | Peak |
| 5653.3 | 52.15 | 41.28 | 10.87 | 70.64 | -18.49 | 205 | 92 | Peak |
| 5922.625 | 52.57 | 41.46 | 11.11 | 69.96 | -17.39 | 205 | 92 | Peak |
| *5972.5 | 53.26 | 42.01 | 11.25 | 68.2 | -14.94 | 205 | 92 | Peak |

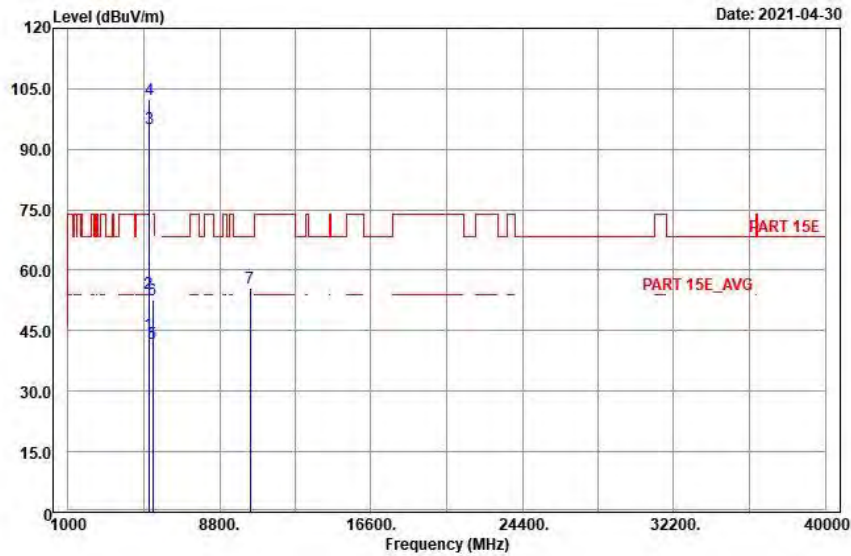
Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 5825 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

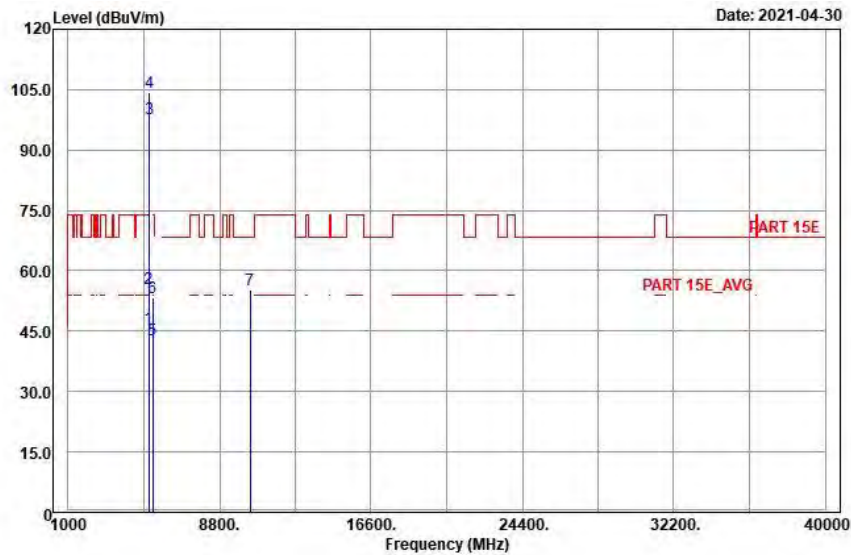
802.11ac (VHT40)

| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 38 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5150 | 44.28 | 34.23 | 10.05 | 54 | -9.72 | 218 | 144 | Average |
| 5150 | 54.41 | 44.36 | 10.05 | 74 | -19.59 | 218 | 144 | Peak |
| 5190 | 95.3 | 85.18 | 10.12 | | | 218 | 144 | Average |
| 5190 | 102.23 | 92.11 | 10.12 | | | 218 | 144 | Peak |
| 5350 | 41.91 | 31.68 | 10.23 | 54 | -12.09 | 218 | 144 | Average |
| 5350 | 52.59 | 42.36 | 10.23 | 74 | -21.41 | 218 | 144 | Peak |
| *10380 | 55.43 | 39.33 | 16.1 | 68.2 | -12.77 | 284 | 136 | Peak |

Antenna Polarity & Test Distance: Vertical at 3 m

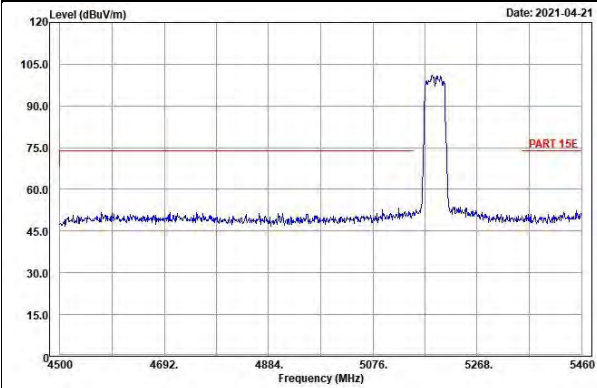
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5150 | 45.69 | 35.64 | 10.05 | 54 | -8.31 | 205 | 86 | Average |
| 5150 | 55.67 | 45.62 | 10.05 | 74 | -18.33 | 205 | 86 | Peak |
| 5190 | 97.81 | 87.69 | 10.12 | | | 205 | 86 | Average |
| 5190 | 104.21 | 94.09 | 10.12 | | | 205 | 86 | Peak |
| 5350 | 42.79 | 32.56 | 10.23 | 54 | -11.21 | 205 | 86 | Average |
| 5350 | 53.3 | 43.07 | 10.23 | 74 | -20.7 | 205 | 86 | Peak |
| *10380 | 55.22 | 39.12 | 16.1 | 68.2 | -12.98 | 194 | 274 | Peak |

Remarks:

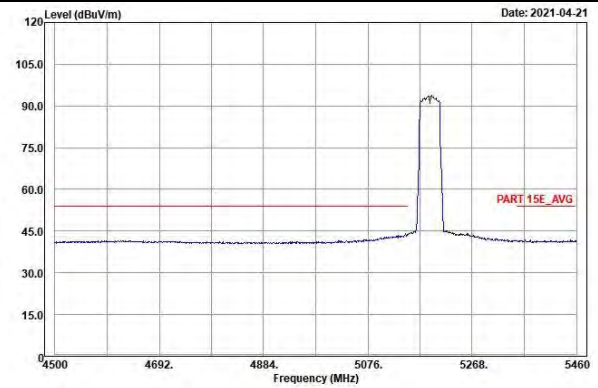
- Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
- 5190 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

Channel 38

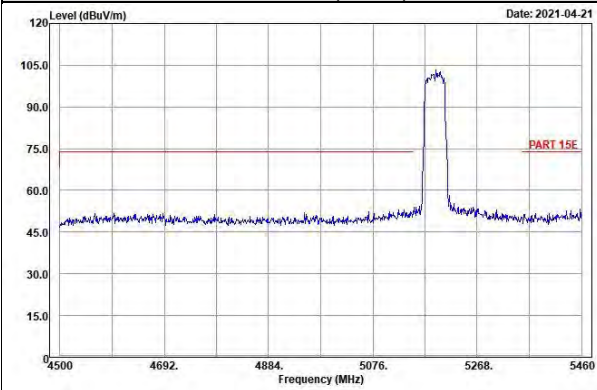
Horizontal (Peak)



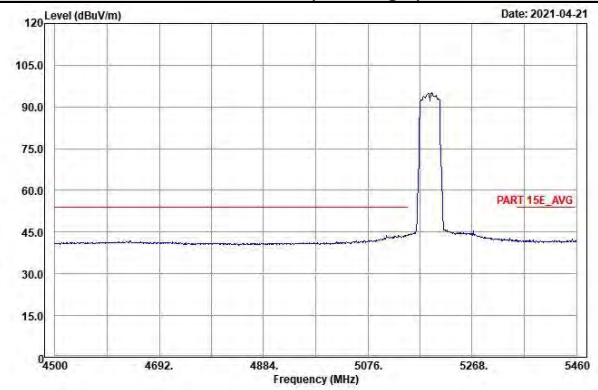
Horizontal (Average)



Vertical (Peak)

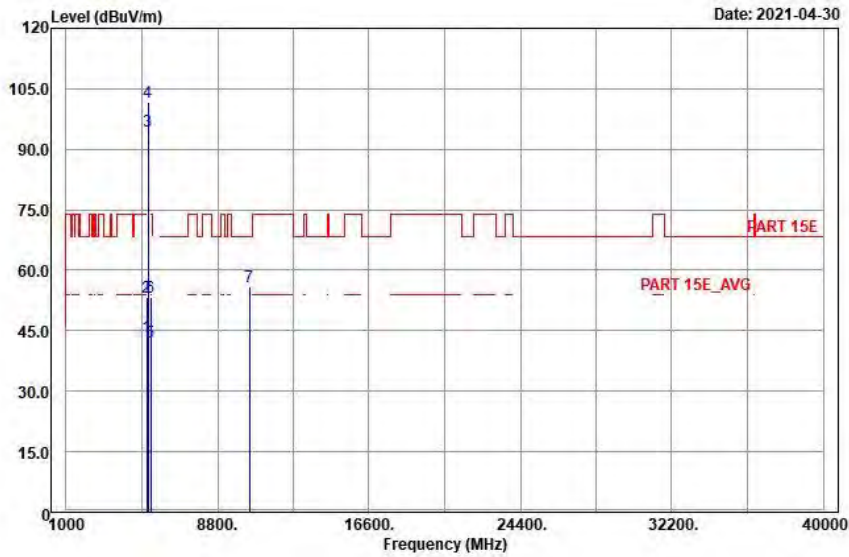


Vertical (Average)

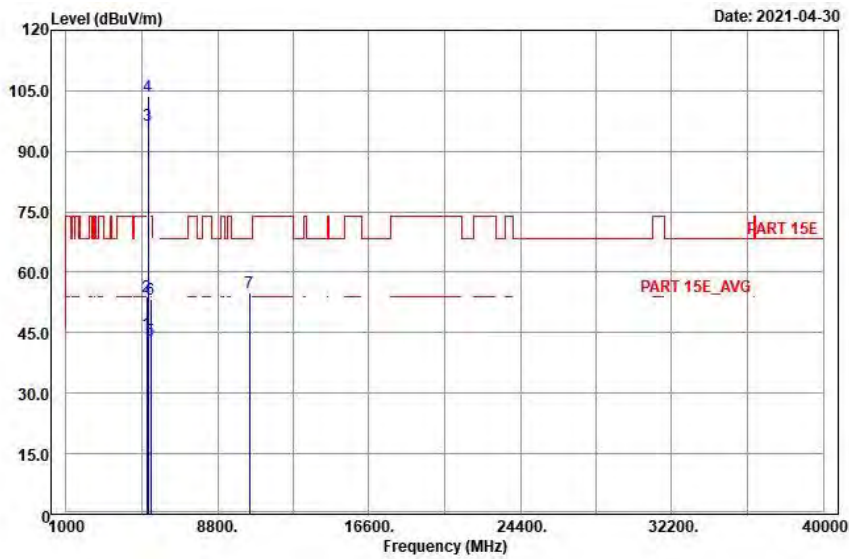


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 46 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



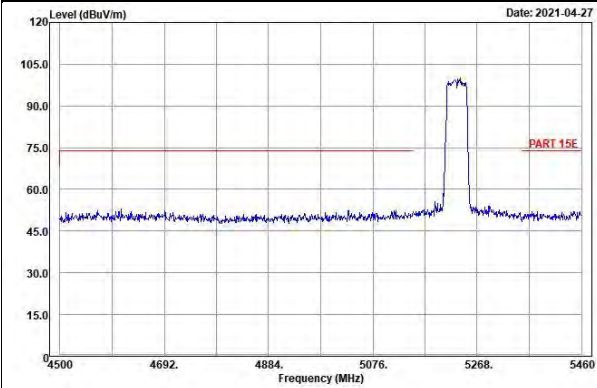
| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5150 | 43.54 | 33.49 | 10.05 | 54 | -10.46 | 218 | 144 | Average |
| 5150 | 53.23 | 43.18 | 10.05 | 74 | -20.77 | 218 | 144 | Peak |
| 5230 | 94.53 | 84.39 | 10.14 | | | 218 | 144 | Average |
| 5230 | 101.68 | 91.54 | 10.14 | | | 218 | 144 | Peak |
| 5350 | 42.22 | 31.99 | 10.23 | 54 | -11.78 | 218 | 144 | Average |
| 5350 | 53.33 | 43.1 | 10.23 | 74 | -20.67 | 218 | 144 | Peak |
| *10460 | 55.85 | 39.85 | 16 | 68.2 | -12.35 | 164 | 124 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5150 | 44.84 | 34.79 | 10.05 | 54 | -9.16 | 205 | 86 | Average |
| 5150 | 53.81 | 43.76 | 10.05 | 74 | -20.19 | 205 | 86 | Peak |
| 5230 | 96.43 | 86.29 | 10.14 | | | 205 | 86 | Average |
| 5230 | 103.6 | 93.46 | 10.14 | | | 205 | 86 | Peak |
| 5350 | 43 | 32.77 | 10.23 | 54 | -11 | 205 | 86 | Average |
| 5350 | 53.32 | 43.09 | 10.23 | 74 | -20.68 | 205 | 86 | Peak |
| *10460 | 55.03 | 39.03 | 16 | 68.2 | -13.17 | 253 | 181 | Peak |

Remarks:

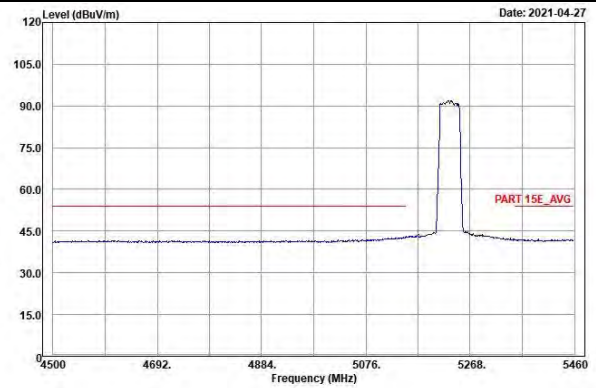
- Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
- 5230 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

Channel 46

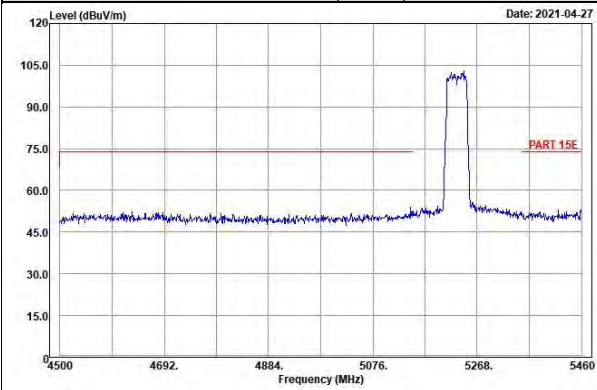
Horizontal (Peak)



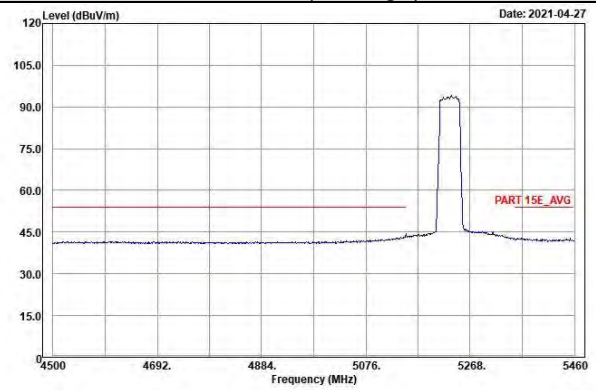
Horizontal (Average)



Vertical (Peak)

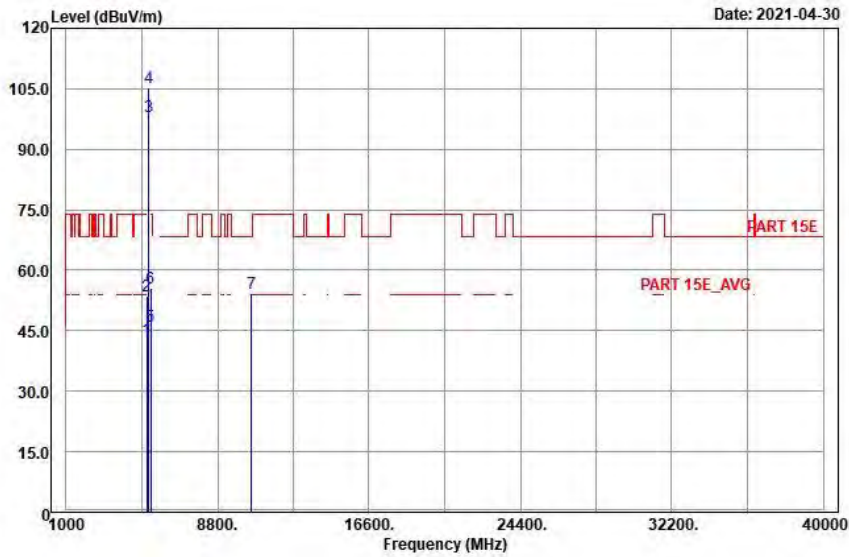


Vertical (Average)

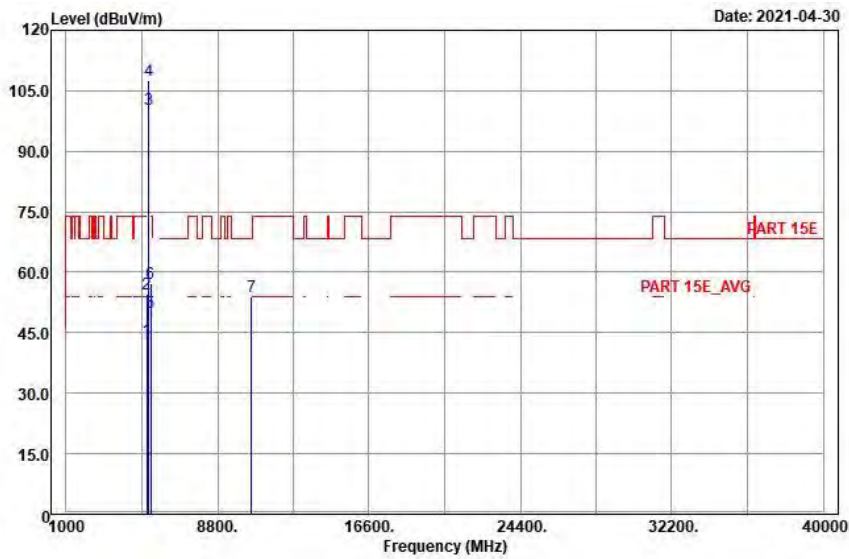


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 54 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5150 | 42.97 | 32.92 | 10.05 | 54 | -11.03 | 218 | 144 | Average |
| 5150 | 53.49 | 43.44 | 10.05 | 74 | -20.51 | 218 | 144 | Peak |
| 5270 | 98.14 | 88.02 | 10.12 | | | 218 | 144 | Average |
| 5270 | 105.19 | 95.07 | 10.12 | | | 218 | 144 | Peak |
| 5350 | 46.2 | 35.97 | 10.23 | 54 | -7.8 | 218 | 144 | Average |
| 5350 | 55.73 | 45.5 | 10.23 | 74 | -18.27 | 218 | 144 | Peak |
| *10540 | 54.21 | 38.38 | 15.83 | 68.2 | -13.99 | 228 | 161 | Peak |

Antenna Polarity & Test Distance: Vertical at 3 m

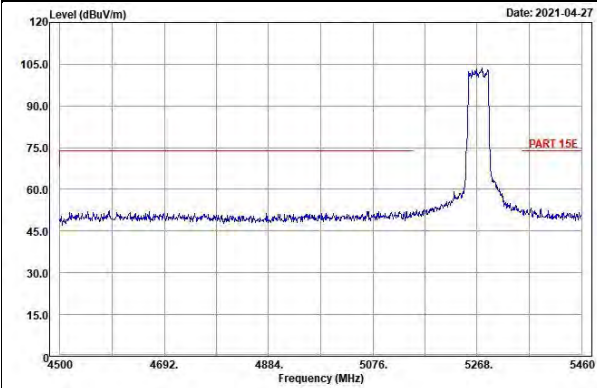
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5150 | 43.15 | 33.1 | 10.05 | 54 | -10.85 | 205 | 85 | Average |
| 5150 | 54.58 | 44.53 | 10.05 | 74 | -19.42 | 205 | 85 | Peak |
| 5270 | 100.44 | 90.32 | 10.12 | | | 205 | 85 | Average |
| 5270 | 107.68 | 97.56 | 10.12 | | | 205 | 85 | Peak |
| 5350 | 50.05 | 39.82 | 10.23 | 54 | -3.95 | 240 | 85 | Average |
| 5350 | 57.3 | 47.07 | 10.23 | 74 | -16.7 | 240 | 85 | Peak |
| *10540 | 54.02 | 38.19 | 15.83 | 68.2 | -14.18 | 217 | 131 | Peak |

Remarks:

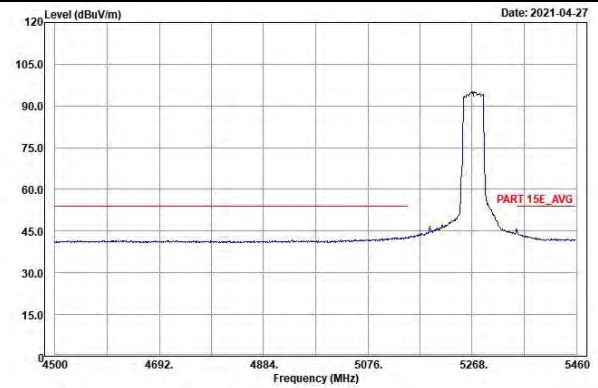
- Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
- 5270 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

Channel 54

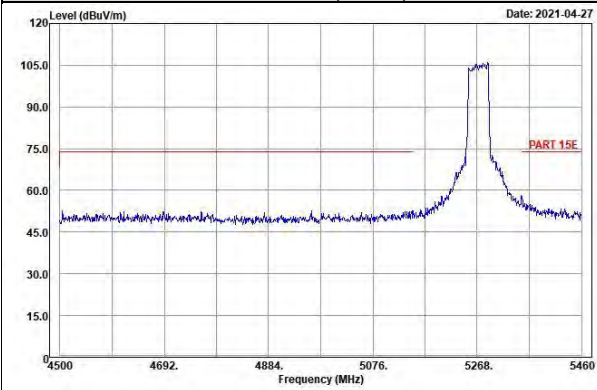
Horizontal (Peak)



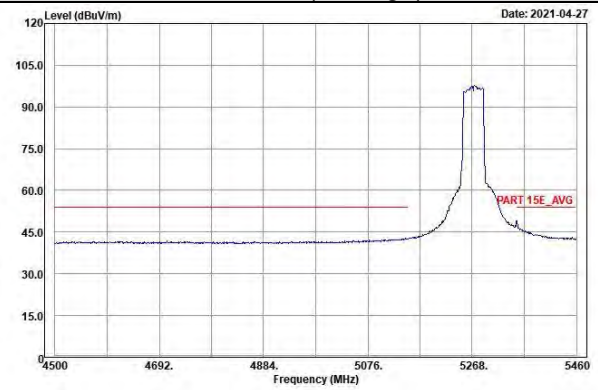
Horizontal (Average)



Vertical (Peak)

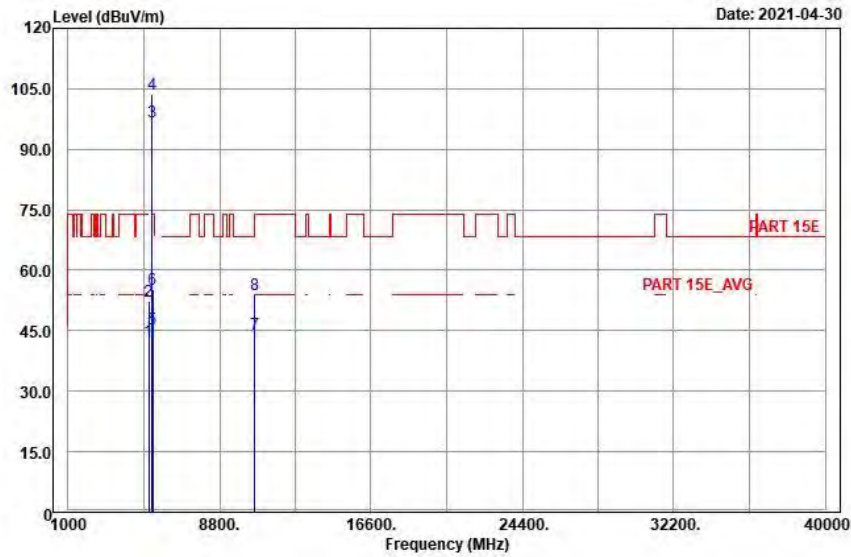


Vertical (Average)

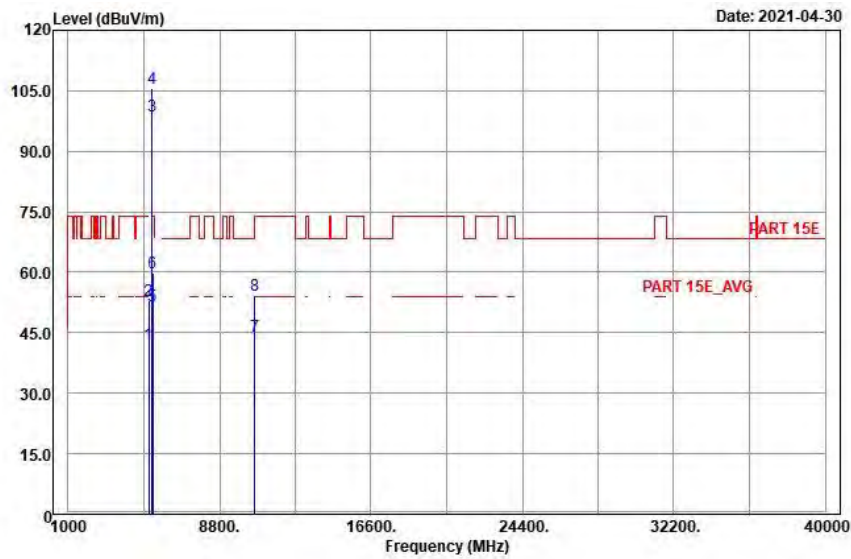


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 62 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5150 | 42.44 | 32.39 | 10.05 | 54 | -11.56 | 218 | 144 | Average |
| 5150 | 52.33 | 42.28 | 10.05 | 74 | -21.67 | 218 | 144 | Peak |
| 5310 | 96.73 | 86.64 | 10.09 | | | 218 | 144 | Average |
| 5310 | 103.66 | 93.57 | 10.09 | | | 218 | 144 | Peak |
| 5350 | 45.56 | 35.33 | 10.23 | 54 | -8.44 | 218 | 144 | Average |
| 5350 | 55.26 | 45.03 | 10.23 | 74 | -18.74 | 218 | 144 | Peak |
| 10620 | 44.16 | 28.28 | 15.88 | 54 | -9.84 | 256 | 172 | Average |
| 10620 | 54.09 | 38.21 | 15.88 | 74 | -19.91 | 256 | 172 | Peak |

Antenna Polarity & Test Distance: Vertical at 3 m

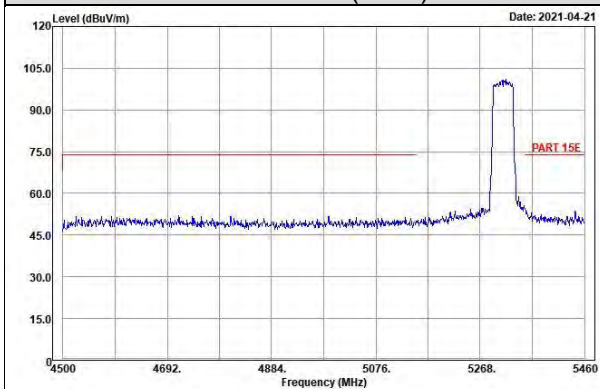
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5150 | 42.18 | 32.13 | 10.05 | 54 | -11.82 | 205 | 86 | Average |
| 5150 | 52.85 | 42.8 | 10.05 | 74 | -21.15 | 205 | 86 | Peak |
| 5310 | 98.82 | 88.73 | 10.09 | | | 205 | 86 | Average |
| 5310 | 105.51 | 95.42 | 10.09 | | | 205 | 86 | Peak |
| 5350 | 51.68 | 41.45 | 10.23 | 54 | -2.32 | 205 | 85 | Average |
| 5350 | 59.82 | 49.59 | 10.23 | 74 | -14.18 | 205 | 85 | Peak |
| 10620 | 44.26 | 28.38 | 15.88 | 54 | -9.74 | 187 | 250 | Average |
| 10620 | 54.35 | 38.47 | 15.88 | 74 | -19.65 | 187 | 250 | Peak |

Remarks:

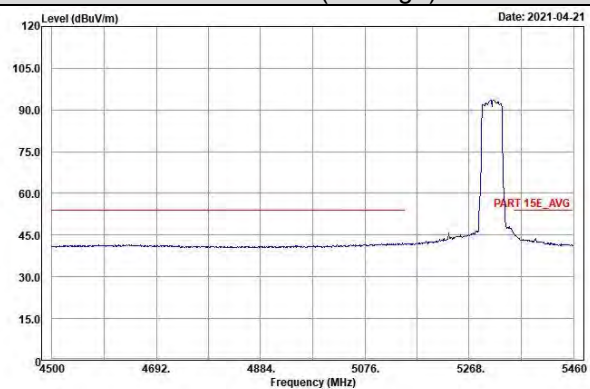
1. Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
2. 5310 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The other emission levels were very low against the limit.

Channel 62

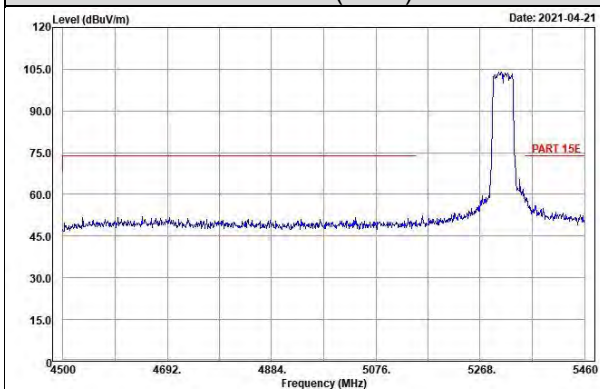
Horizontal (Peak)



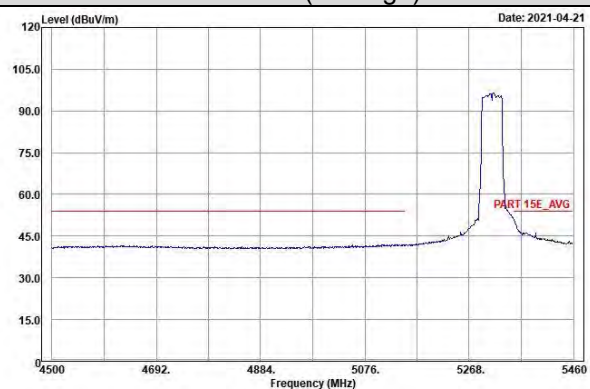
Horizontal (Average)



Vertical (Peak)

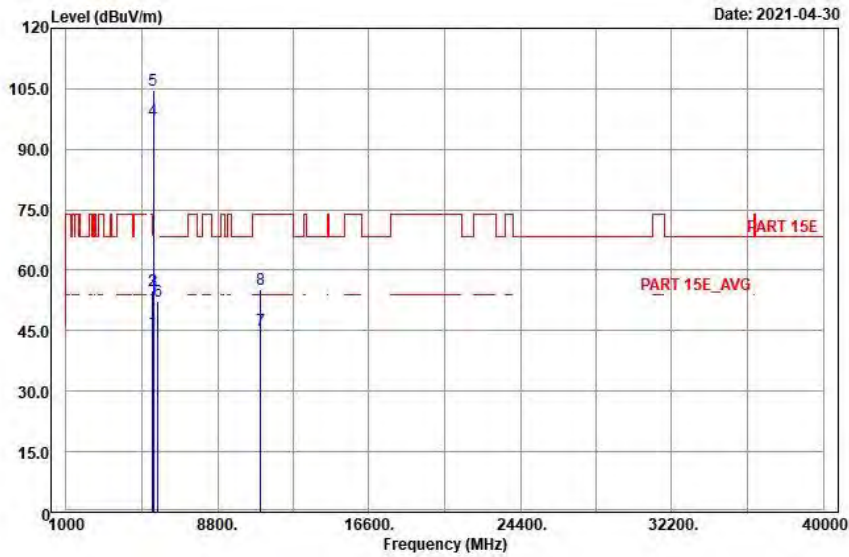


Vertical (Average)

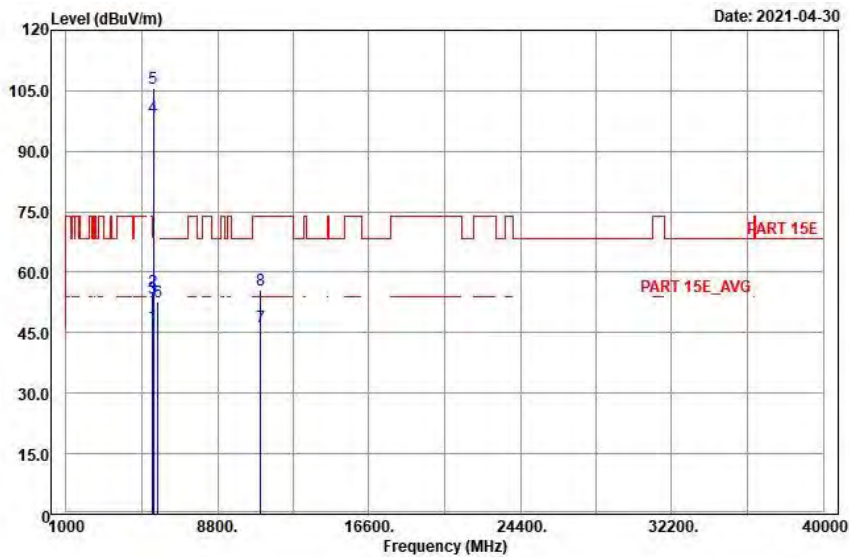


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 102 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5460 | 44.94 | 34.43 | 10.51 | 54 | -9.06 | 218 | 116 | Average |
| 5460 | 54.92 | 44.41 | 10.51 | 74 | -19.08 | 218 | 116 | Peak |
| *5470 | 54.9 | 44.37 | 10.53 | 68.2 | -13.3 | 218 | 116 | Peak |
| 5510 | 97.19 | 86.59 | 10.6 | | | 218 | 116 | Average |
| 5510 | 104.5 | 93.9 | 10.6 | | | 218 | 116 | Peak |
| *5725 | 52.47 | 41.55 | 10.92 | 68.2 | -15.73 | 218 | 116 | Peak |
| 11020 | 45.06 | 28.9 | 16.16 | 54 | -8.94 | 168 | 242 | Average |
| 11020 | 55.27 | 39.11 | 16.16 | 74 | -18.73 | 168 | 242 | Peak |

Antenna Polarity & Test Distance: Vertical at 3 m

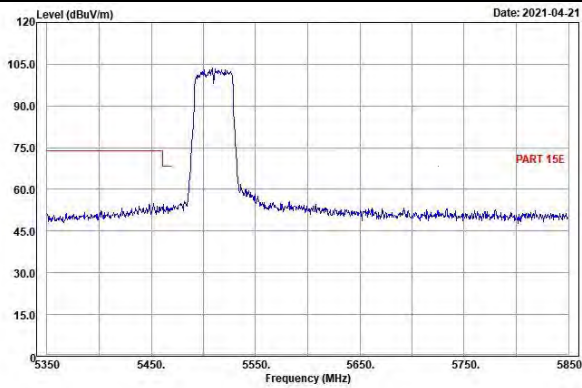
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5460 | 46.71 | 36.2 | 10.51 | 54 | -7.29 | 205 | 92 | Average |
| 5460 | 55.18 | 44.67 | 10.51 | 74 | -18.82 | 205 | 92 | Peak |
| *5470 | 53.48 | 42.95 | 10.53 | 68.2 | -14.72 | 205 | 92 | Peak |
| 5510 | 98.55 | 87.95 | 10.6 | | | 205 | 92 | Average |
| 5510 | 105.65 | 95.05 | 10.6 | | | 205 | 92 | Peak |
| *5725 | 52.51 | 41.59 | 10.92 | 68.2 | -15.69 | 205 | 92 | Peak |
| 11020 | 46.33 | 30.17 | 16.16 | 54 | -7.67 | 198 | 211 | Average |
| 11020 | 55.61 | 39.45 | 16.16 | 74 | -18.39 | 198 | 211 | Peak |

Remarks:

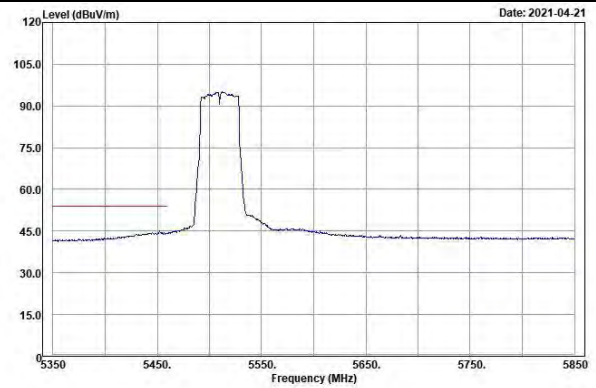
- Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
- 5510 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

Channel 102

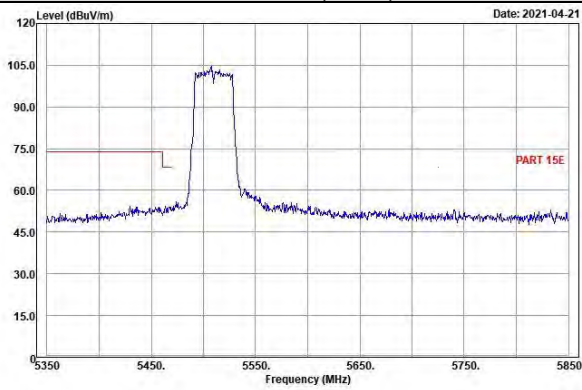
Horizontal (Peak)



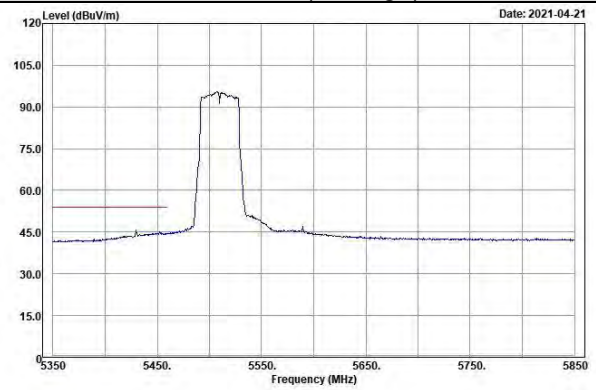
Horizontal (Average)



Vertical (Peak)

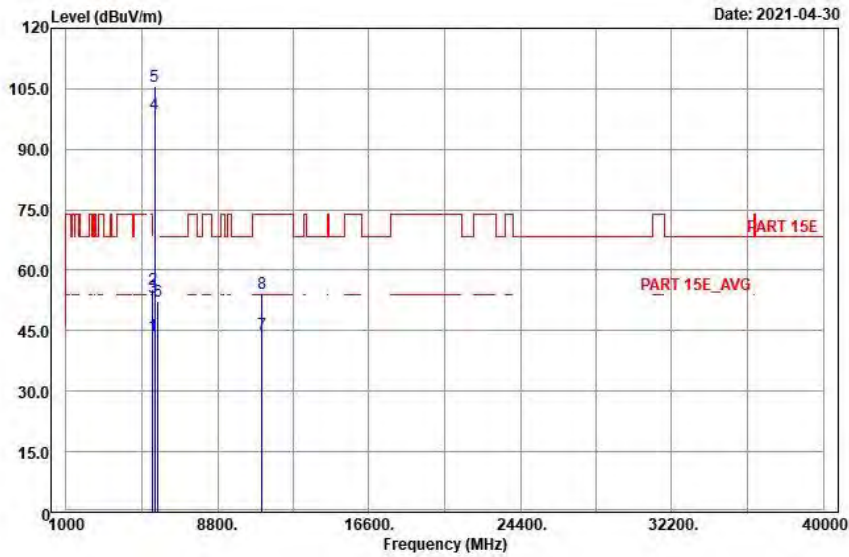


Vertical (Average)

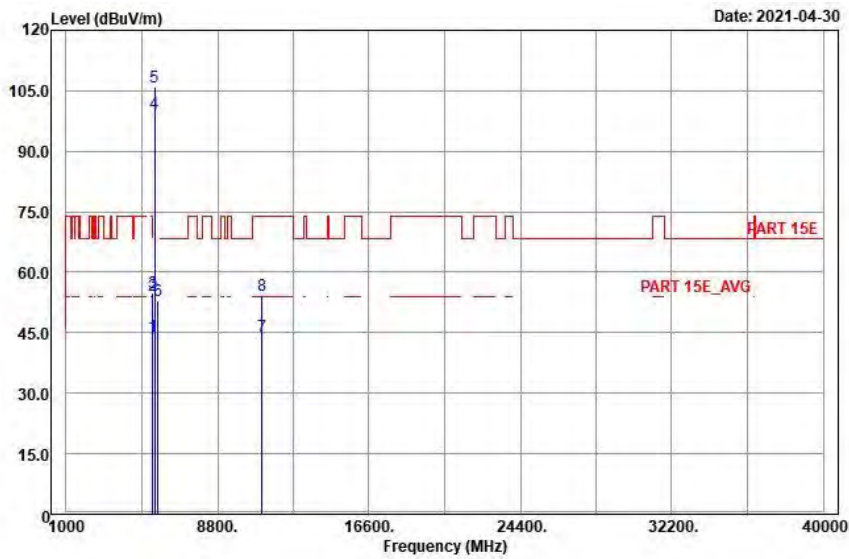


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 110 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5460 | 43.9 | 33.39 | 10.51 | 54 | -10.1 | 218 | 116 | Average |
| 5460 | 55.32 | 44.81 | 10.51 | 74 | -18.68 | 218 | 116 | Peak |
| *5470 | 53.44 | 42.91 | 10.53 | 68.2 | -14.76 | 218 | 116 | Peak |
| 5550 | 98.59 | 87.91 | 10.68 | | | 218 | 116 | Average |
| 5550 | 105.5 | 94.82 | 10.68 | | | 218 | 116 | Peak |
| *5725 | 52.28 | 41.36 | 10.92 | 68.2 | -15.92 | 218 | 116 | Peak |
| 11100 | 44.17 | 27.9 | 16.27 | 54 | -9.83 | 322 | 185 | Average |
| 11100 | 54.22 | 37.95 | 16.27 | 74 | -19.78 | 322 | 185 | Peak |

Antenna Polarity & Test Distance: Vertical at 3 m

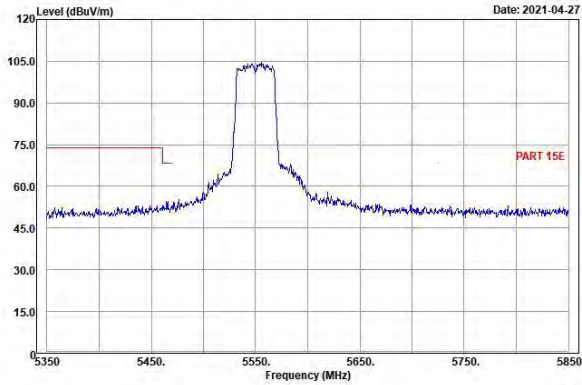
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5460 | 44.08 | 33.57 | 10.51 | 54 | -9.92 | 205 | 92 | Average |
| 5460 | 54.29 | 43.78 | 10.51 | 74 | -19.71 | 205 | 92 | Peak |
| *5470 | 55.04 | 44.51 | 10.53 | 68.2 | -13.16 | 205 | 92 | Peak |
| 5550 | 99.25 | 88.57 | 10.68 | | | 205 | 92 | Average |
| 5550 | 106.09 | 95.41 | 10.68 | | | 205 | 92 | Peak |
| *5725 | 52.82 | 41.9 | 10.92 | 68.2 | -15.38 | 205 | 92 | Peak |
| 11100 | 44.04 | 27.77 | 16.27 | 54 | -9.96 | 226 | 172 | Average |
| 11100 | 54.23 | 37.96 | 16.27 | 74 | -19.77 | 226 | 172 | Peak |

Remarks:

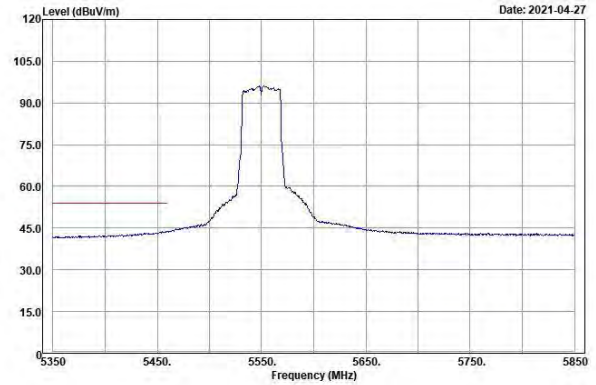
- Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
- 5550 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

Channel 110

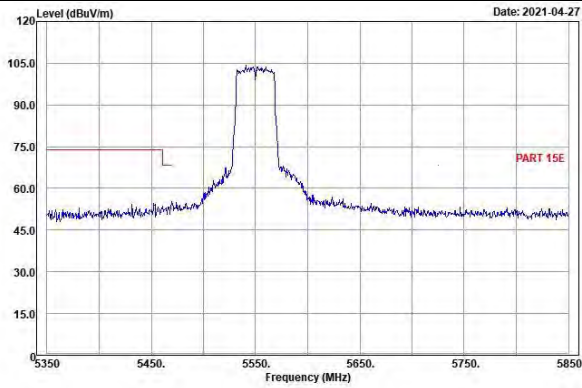
Horizontal (Peak)



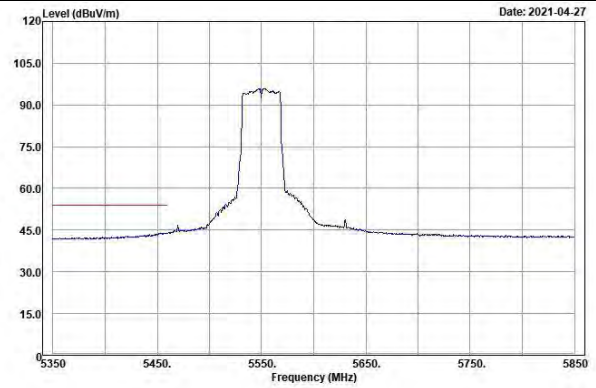
Horizontal (Average)



Vertical (Peak)

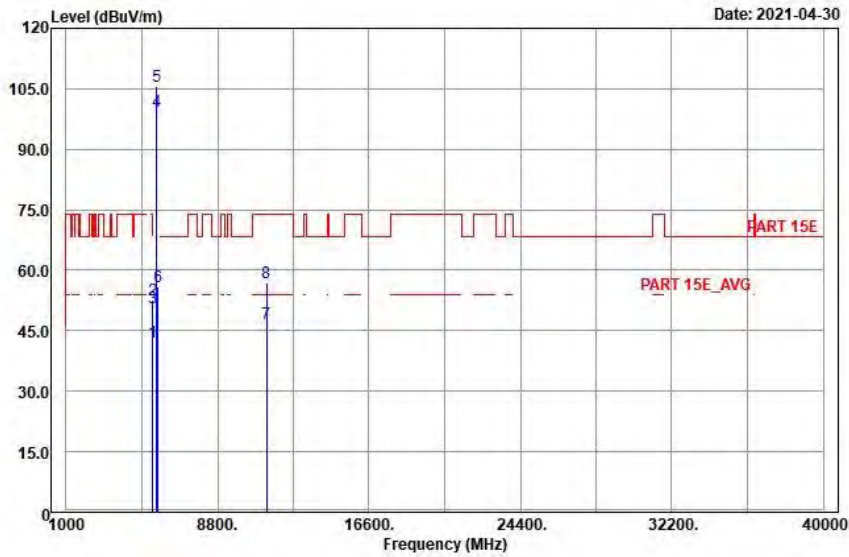


Vertical (Average)

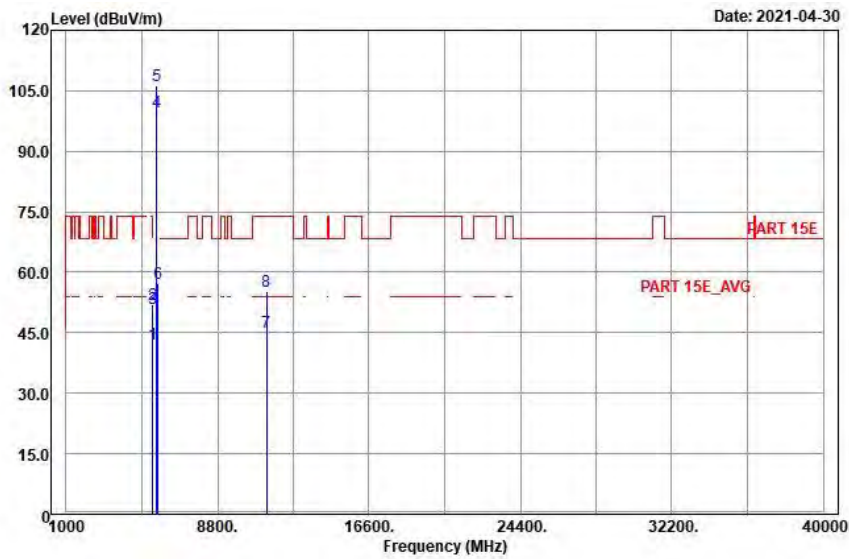


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 134 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5460 | 42.03 | 31.52 | 10.51 | 54 | -11.97 | 218 | 116 | Average |
| 5460 | 52.53 | 42.02 | 10.51 | 74 | -21.47 | 218 | 116 | Peak |
| *5470 | 50.71 | 40.18 | 10.53 | 68.2 | -17.49 | 218 | 116 | Peak |
| 5670 | 99.24 | 88.34 | 10.9 | | | 218 | 116 | Average |
| 5670 | 105.77 | 94.87 | 10.9 | | | 218 | 116 | Peak |
| *5725 | 55.81 | 44.89 | 10.92 | 68.2 | -12.39 | 218 | 116 | Peak |
| 11340 | 46.62 | 30.2 | 16.42 | 54 | -7.38 | 254 | 115 | Average |
| 11340 | 56.88 | 40.46 | 16.42 | 74 | -17.12 | 254 | 115 | Peak |

Antenna Polarity & Test Distance: Vertical at 3 m

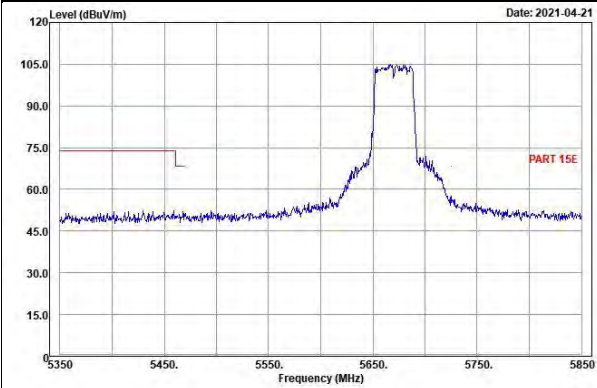
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5460 | 42.1 | 31.59 | 10.51 | 54 | -11.9 | 205 | 92 | Average |
| 5460 | 52.13 | 41.62 | 10.51 | 74 | -21.87 | 205 | 92 | Peak |
| *5470 | 51.16 | 40.63 | 10.53 | 68.2 | -17.04 | 205 | 92 | Peak |
| 5670 | 99.82 | 88.92 | 10.9 | | | 205 | 92 | Average |
| 5670 | 106.24 | 95.34 | 10.9 | | | 205 | 92 | Peak |
| *5725 | 57.21 | 46.29 | 10.92 | 68.2 | -10.99 | 205 | 92 | Peak |
| 11340 | 45.11 | 28.69 | 16.42 | 54 | -8.89 | 139 | 26 | Average |
| 11340 | 55.26 | 38.84 | 16.42 | 74 | -18.74 | 139 | 26 | Peak |

Remarks:

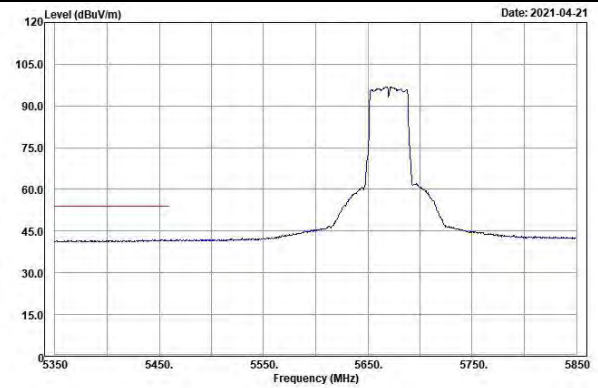
1. Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
2. 5670 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The other emission levels were very low against the limit.

Channel 134

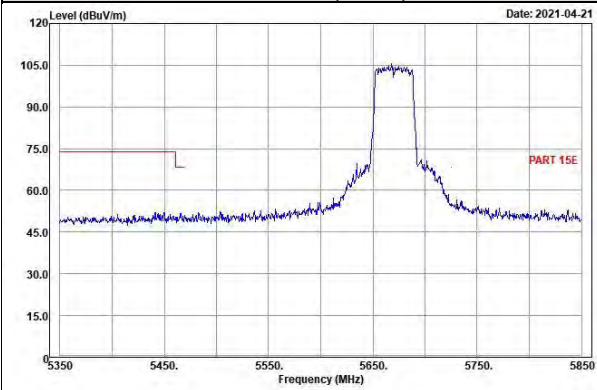
Horizontal (Peak)



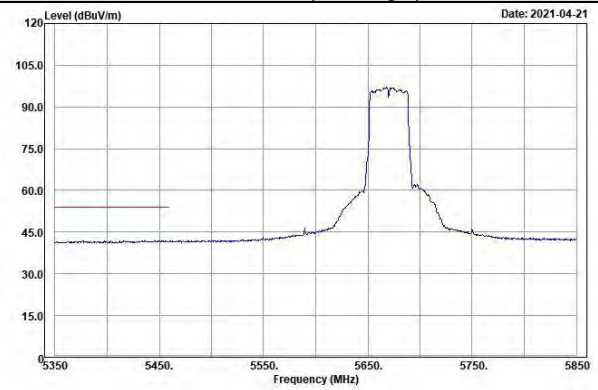
Horizontal (Average)



Vertical (Peak)

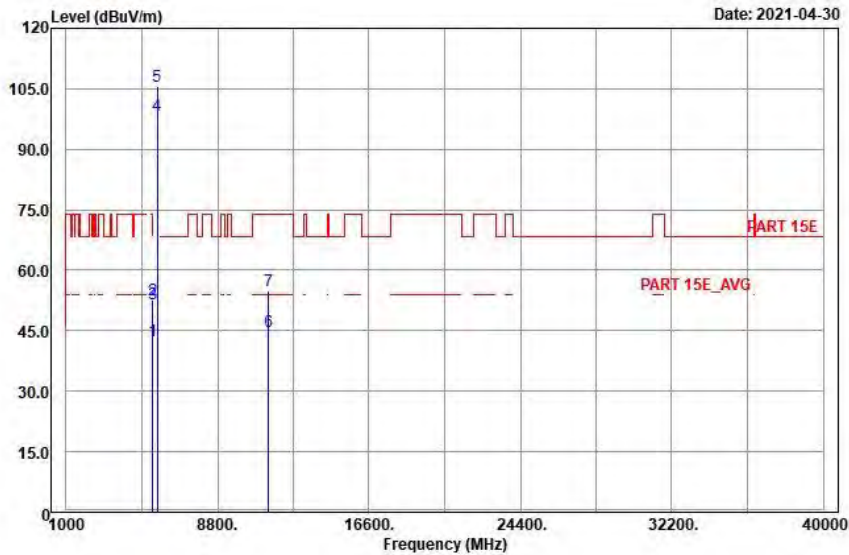


Vertical (Average)

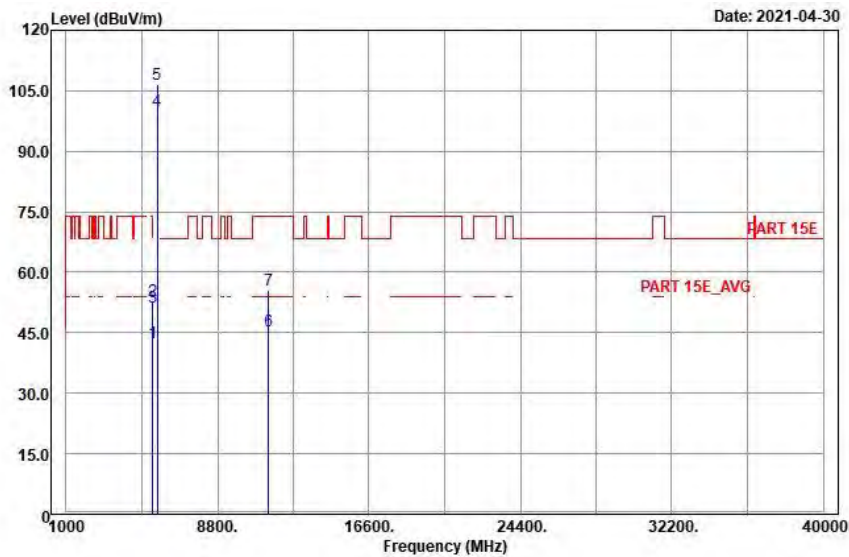


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 142 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5460 | 42.4 | 31.89 | 10.51 | 54 | -11.6 | 218 | 116 | Average |
| 5460 | 52.71 | 42.2 | 10.51 | 74 | -21.29 | 218 | 116 | Peak |
| *5470 | 51.62 | 41.09 | 10.53 | 68.2 | -16.58 | 218 | 116 | Peak |
| 5710 | 98.46 | 87.55 | 10.91 | | | 218 | 116 | Average |
| 5710 | 105.58 | 94.67 | 10.91 | | | 218 | 116 | Peak |
| 11420 | 44.76 | 28.5 | 16.26 | 54 | -9.24 | 155 | 227 | Average |
| 11420 | 54.94 | 38.68 | 16.26 | 74 | -19.06 | 155 | 227 | Peak |

Antenna Polarity & Test Distance: Vertical at 3 m

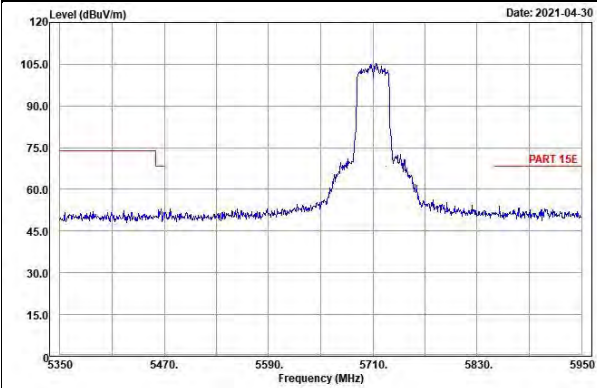
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5460 | 42.51 | 32 | 10.51 | 54 | -11.49 | 205 | 92 | Average |
| 5460 | 52.97 | 42.46 | 10.51 | 74 | -21.03 | 205 | 92 | Peak |
| *5470 | 51.27 | 40.74 | 10.53 | 68.2 | -16.93 | 205 | 92 | Peak |
| 5710 | 99.95 | 89.04 | 10.91 | | | 205 | 92 | Average |
| 5710 | 106.59 | 95.68 | 10.91 | | | 205 | 92 | Peak |
| 11420 | 45.43 | 29.17 | 16.26 | 54 | -8.57 | 304 | 182 | Average |
| 11420 | 55.55 | 39.29 | 16.26 | 74 | -18.45 | 304 | 182 | Peak |

Remarks:

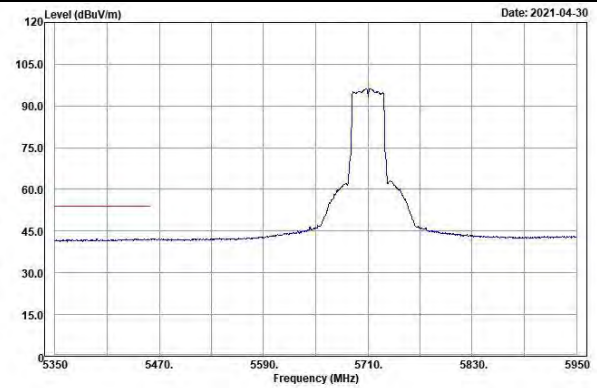
- Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
- 5710 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

Channel 142

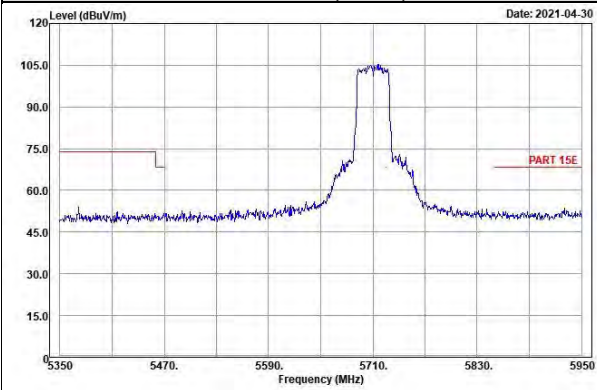
Horizontal (Peak)



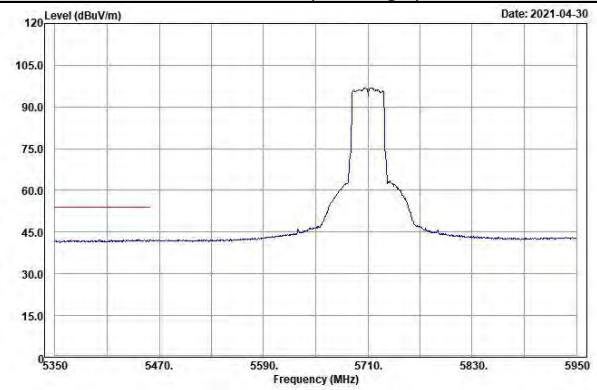
Horizontal (Average)



Vertical (Peak)

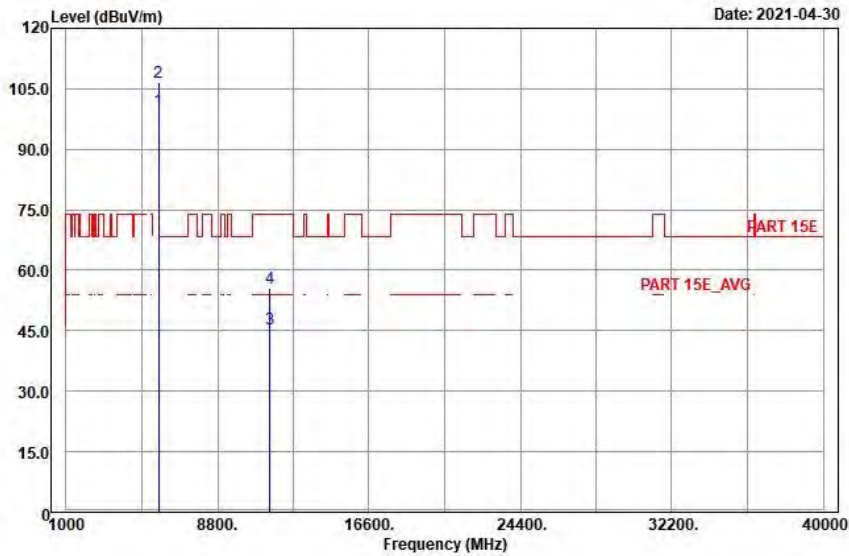


Vertical (Average)

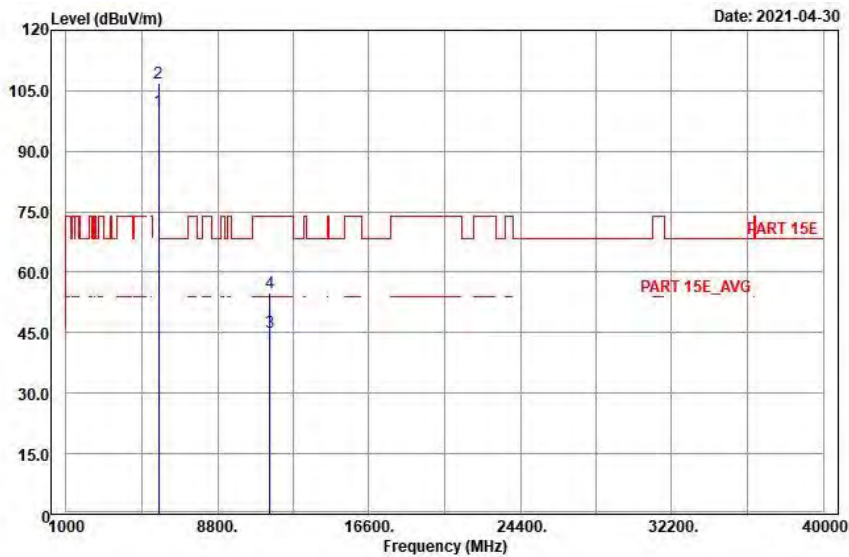


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 151 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

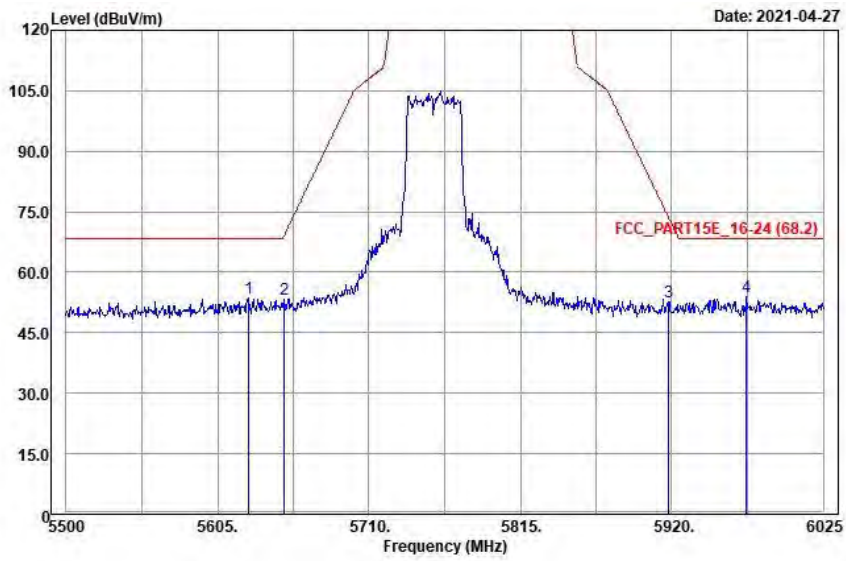
<Spurious Emission>
Horizontal



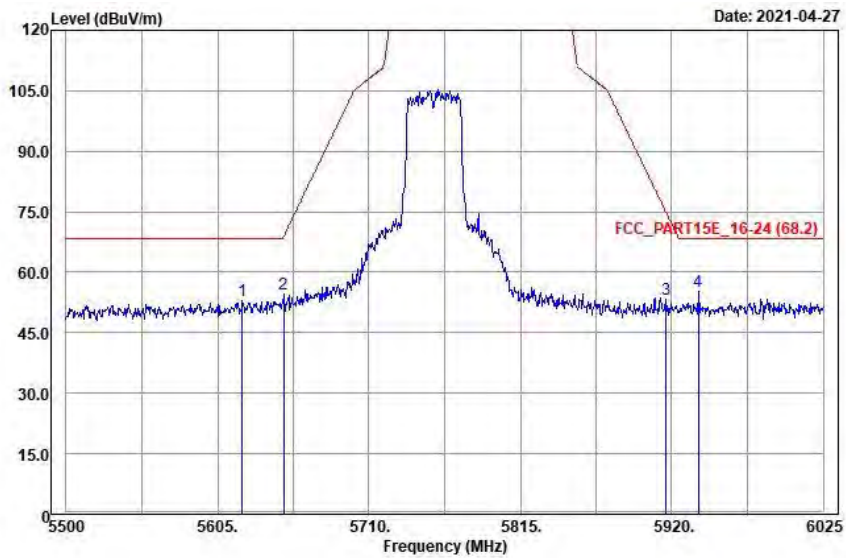
Vertical



<Out of Band Emission (OOBE)>
Horizontal



Vertical



<Spurious Emission>

| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5755 | 99.84 | 88.94 | 10.9 | | | 218 | 116 | Average |
| 5755 | 106.53 | 95.63 | 10.9 | | | 218 | 116 | Peak |
| 11510 | 45.32 | 28.81 | 16.51 | 54 | -8.68 | 218 | 61 | Average |
| 11510 | 55.56 | 39.05 | 16.51 | 74 | -18.44 | 218 | 61 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5755 | 100.14 | 89.24 | 10.9 | | | 205 | 92 | Average |
| 5755 | 107 | 96.1 | 10.9 | | | 205 | 92 | Peak |
| 11510 | 45.04 | 28.53 | 16.51 | 54 | -8.96 | 226 | 197 | Average |
| 11510 | 54.97 | 38.46 | 16.51 | 74 | -19.03 | 226 | 197 | Peak |

<Out of Band Emission (OOBE)>

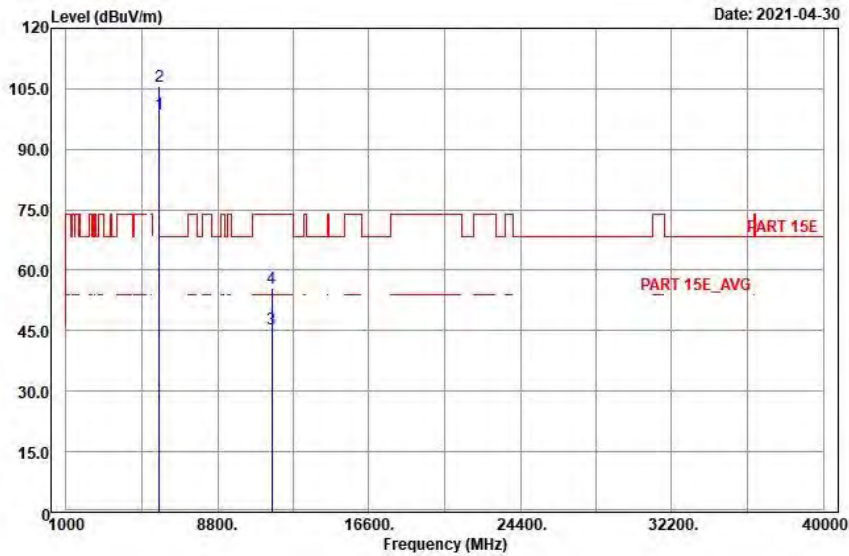
| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|--------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| *5626.525 | 53.51 | 42.72 | 10.79 | 68.2 | -14.69 | 218 | 116 | Peak |
| 5651.2 | 53.28 | 42.41 | 10.87 | 69.09 | -15.81 | 218 | 116 | Peak |
| 5917.9 | 52.68 | 41.59 | 11.09 | 73.45 | -20.77 | 218 | 116 | Peak |
| *5971.975 | 53.94 | 42.69 | 11.25 | 68.2 | -14.26 | 218 | 116 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| *5622.325 | 52.99 | 42.2 | 10.79 | 68.2 | -15.21 | 205 | 92 | Peak |
| 5650.675 | 54.76 | 43.89 | 10.87 | 68.7 | -13.94 | 205 | 92 | Peak |
| 5916.325 | 53.15 | 42.06 | 11.09 | 74.62 | -21.47 | 205 | 92 | Peak |
| *5938.375 | 55.12 | 43.96 | 11.16 | 68.2 | -13.08 | 205 | 92 | Peak |

Remarks:

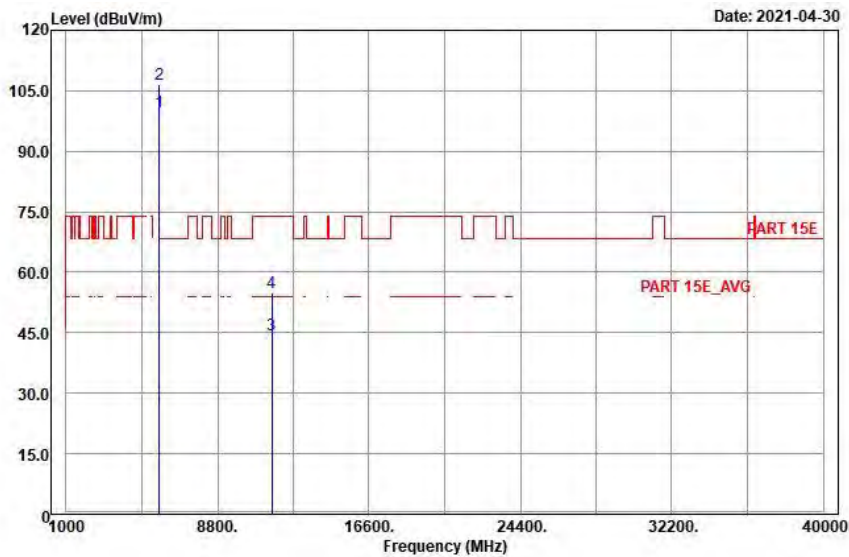
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 5755 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 159 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

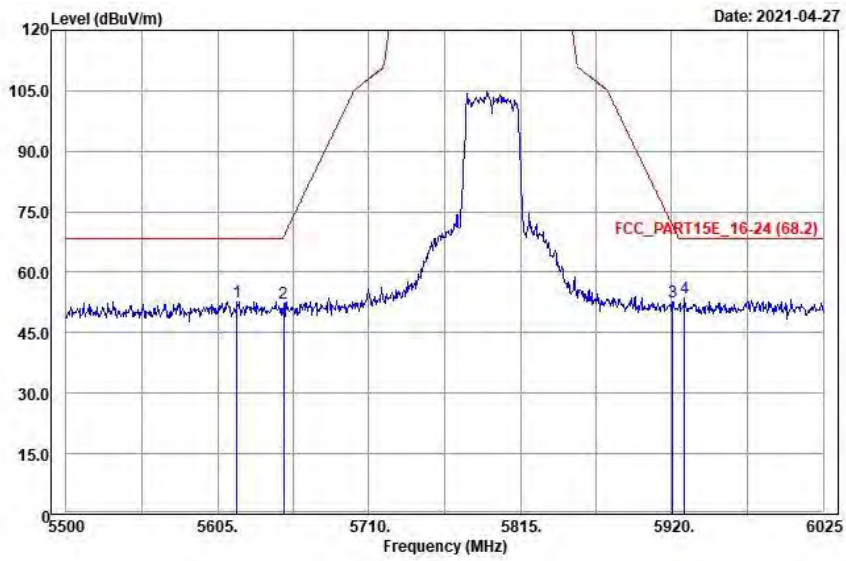
<Spurious Emission>
Horizontal



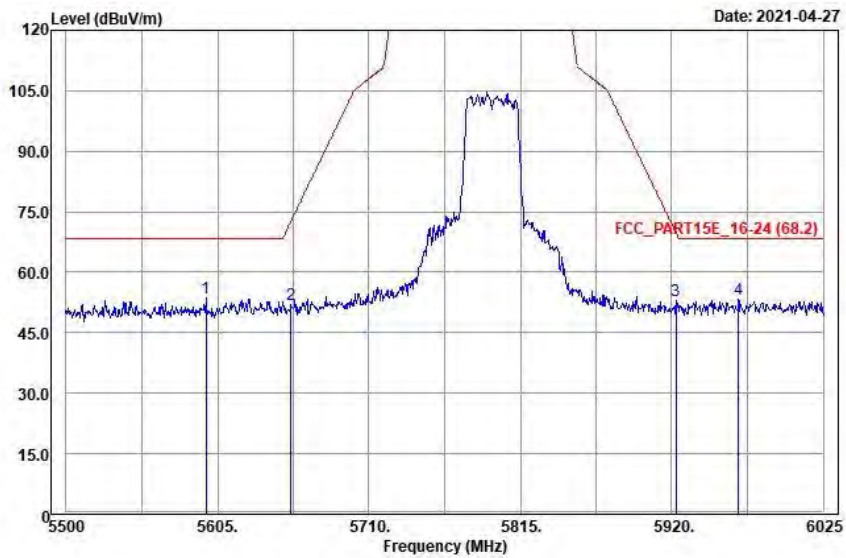
Vertical



<Out of Band Emission (OOBE)>
Horizontal



Vertical



<Spurious Emission>

| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5795 | 98.59 | 87.77 | 10.82 | | | 218 | 116 | Average |
| 5795 | 105.51 | 94.69 | 10.82 | | | 218 | 116 | Peak |
| 11590 | 45.4 | 28.89 | 16.51 | 54 | -8.6 | 156 | 332 | Average |
| 11590 | 55.71 | 39.2 | 16.51 | 74 | -18.29 | 156 | 332 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5795 | 99.68 | 88.86 | 10.82 | | | 205 | 92 | Average |
| 5795 | 106.43 | 95.61 | 10.82 | | | 205 | 92 | Peak |
| 11590 | 44.46 | 27.95 | 16.51 | 54 | -9.54 | 236 | 243 | Average |
| 11590 | 54.83 | 38.32 | 16.51 | 74 | -19.17 | 236 | 243 | Peak |

<Out of Band Emission (OOBE)>

| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|--------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| *5618.65 | 52.63 | 41.84 | 10.79 | 68.2 | -15.57 | 218 | 116 | Peak |
| 5650.675 | 52.39 | 41.52 | 10.87 | 68.7 | -16.31 | 218 | 116 | Peak |
| 5920.525 | 52.74 | 41.65 | 11.09 | 71.51 | -18.77 | 218 | 116 | Peak |
| *5928.925 | 53.65 | 42.54 | 11.11 | 68.2 | -14.55 | 218 | 116 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| *5597.125 | 53.59 | 42.84 | 10.75 | 68.2 | -14.61 | 205 | 92 | Peak |
| 5655.925 | 51.96 | 41.09 | 10.87 | 72.58 | -20.62 | 205 | 92 | Peak |
| 5923.15 | 52.99 | 41.88 | 11.11 | 69.57 | -16.58 | 205 | 92 | Peak |
| *5966.2 | 53.17 | 41.94 | 11.23 | 68.2 | -15.03 | 205 | 92 | Peak |

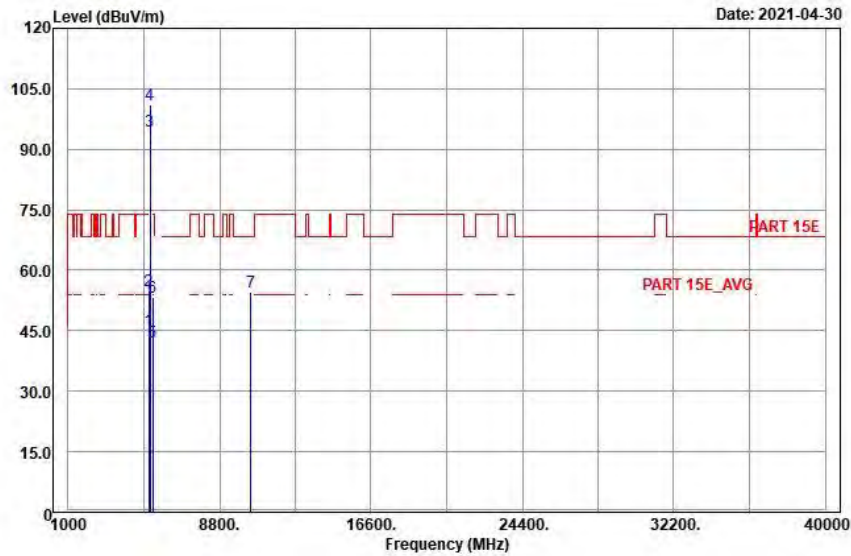
Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 5795 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

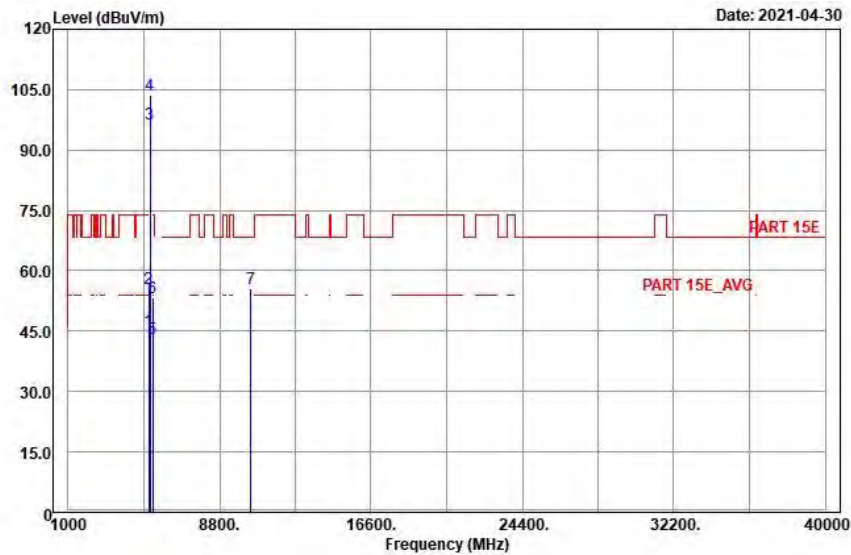
802.11ac (VHT80)

| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 42 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5150 | 45.18 | 35.13 | 10.05 | 54 | -8.82 | 218 | 144 | Average |
| 5150 | 55 | 44.95 | 10.05 | 74 | -19 | 218 | 144 | Peak |
| 5210 | 94.6 | 84.43 | 10.17 | | | 218 | 144 | Average |
| 5210 | 101.04 | 90.87 | 10.17 | | | 218 | 144 | Peak |
| 5350 | 42.1 | 31.87 | 10.23 | 54 | -11.9 | 218 | 144 | Average |
| 5350 | 53.26 | 43.03 | 10.23 | 74 | -20.74 | 218 | 144 | Peak |
| *10420 | 54.69 | 38.53 | 16.16 | 68.2 | -13.51 | 158 | 156 | Peak |

Antenna Polarity & Test Distance: Vertical at 3 m

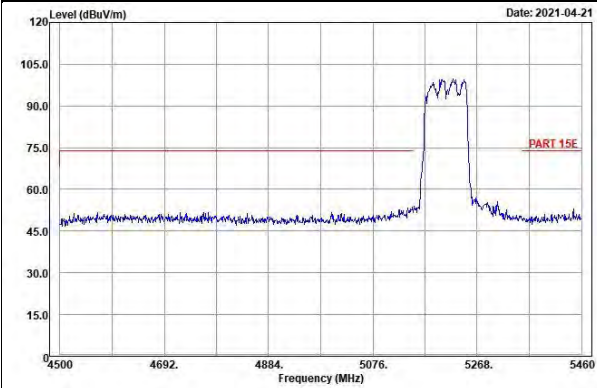
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5150 | 44.99 | 34.94 | 10.05 | 54 | -9.01 | 205 | 86 | Average |
| 5150 | 55.66 | 45.61 | 10.05 | 74 | -18.34 | 205 | 86 | Peak |
| 5210 | 96.37 | 86.2 | 10.17 | | | 205 | 86 | Average |
| 5210 | 103.74 | 93.57 | 10.17 | | | 205 | 86 | Peak |
| 5350 | 43.02 | 32.79 | 10.23 | 54 | -10.98 | 205 | 86 | Average |
| 5350 | 53.21 | 42.98 | 10.23 | 74 | -20.79 | 205 | 86 | Peak |
| *10420 | 55.73 | 39.57 | 16.16 | 68.2 | -12.47 | 273 | 164 | Peak |

Remarks:

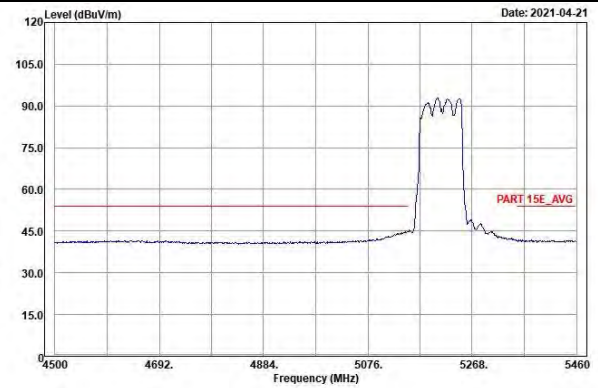
- Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
- 5210 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

Channel 42

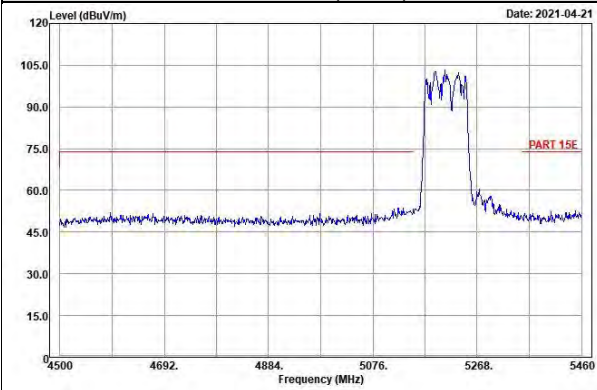
Horizontal (Peak)



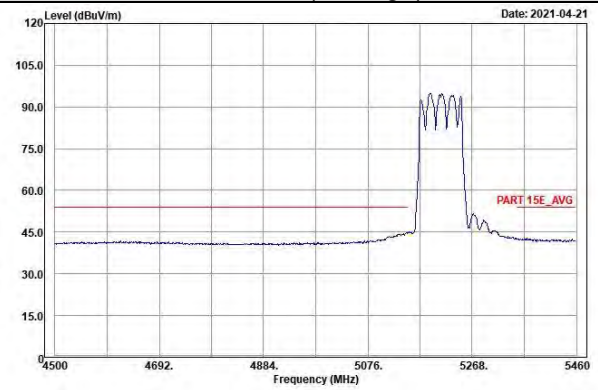
Horizontal (Average)



Vertical (Peak)

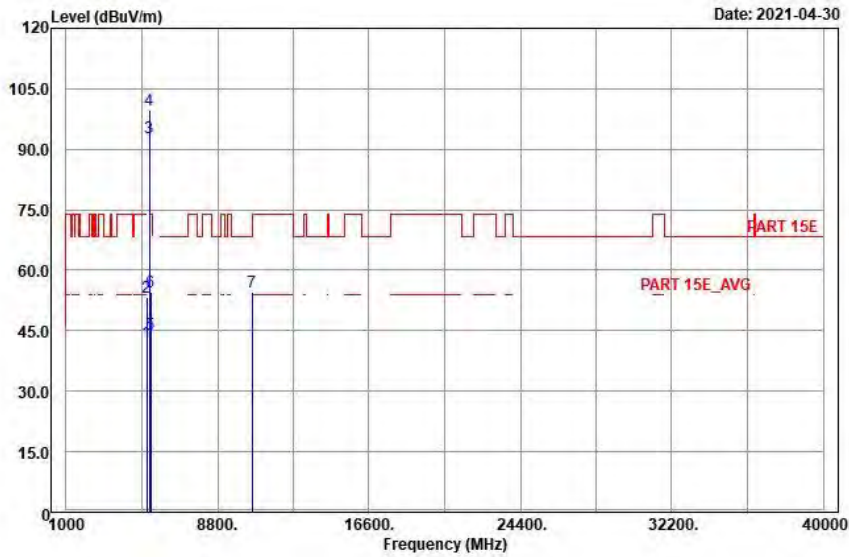


Vertical (Average)

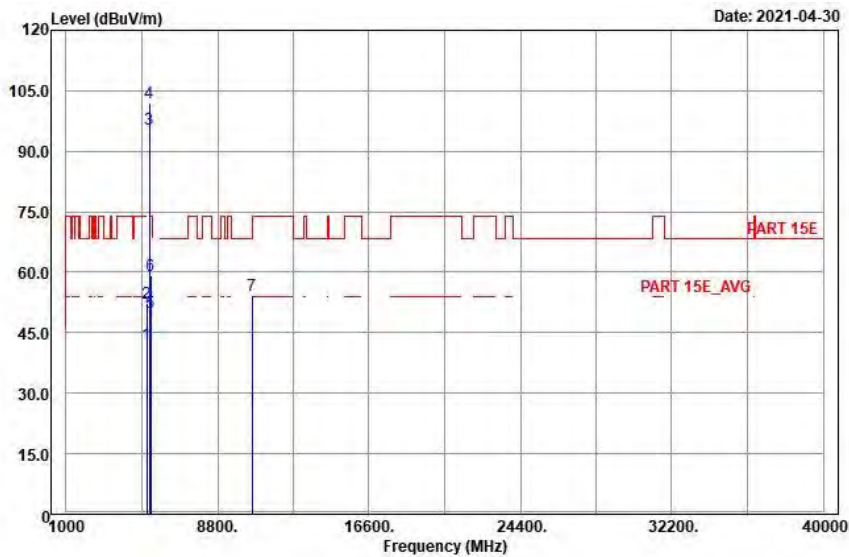


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 58 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5150 | 42.32 | 32.27 | 10.05 | 54 | -11.68 | 218 | 144 | Average |
| 5150 | 53.36 | 43.31 | 10.05 | 74 | -20.64 | 218 | 144 | Peak |
| 5290 | 92.73 | 82.63 | 10.1 | | | 218 | 144 | Average |
| 5290 | 99.8 | 89.7 | 10.1 | | | 218 | 144 | Peak |
| 5350 | 44.2 | 33.97 | 10.23 | 54 | -9.8 | 218 | 144 | Average |
| 5350 | 54.65 | 44.42 | 10.23 | 74 | -19.35 | 218 | 144 | Peak |
| *10580 | 54.49 | 38.78 | 15.71 | 68.2 | -13.71 | 142 | 39 | Peak |

Antenna Polarity & Test Distance: Vertical at 3 m

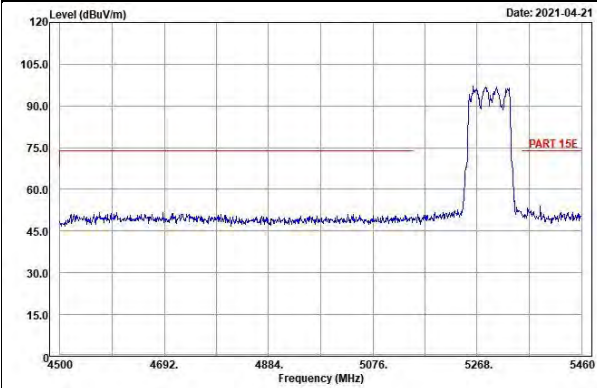
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5150 | 42.2 | 32.15 | 10.05 | 54 | -11.8 | 205 | 85 | Average |
| 5150 | 52.46 | 42.41 | 10.05 | 74 | -21.54 | 205 | 85 | Peak |
| 5290 | 95.49 | 85.39 | 10.1 | | | 205 | 85 | Average |
| 5290 | 102.01 | 91.91 | 10.1 | | | 205 | 85 | Peak |
| 5350 | 50.13 | 39.9 | 10.23 | 54 | -3.87 | 224 | 85 | Average |
| 5350 | 59.14 | 48.91 | 10.23 | 74 | -14.86 | 224 | 85 | Peak |
| *10580 | 54.36 | 38.65 | 15.71 | 68.2 | -13.84 | 231 | 101 | Peak |

Remarks:

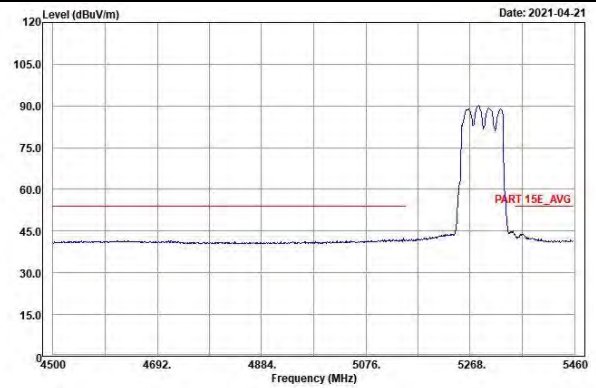
- Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
- 5290 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

Channel 58

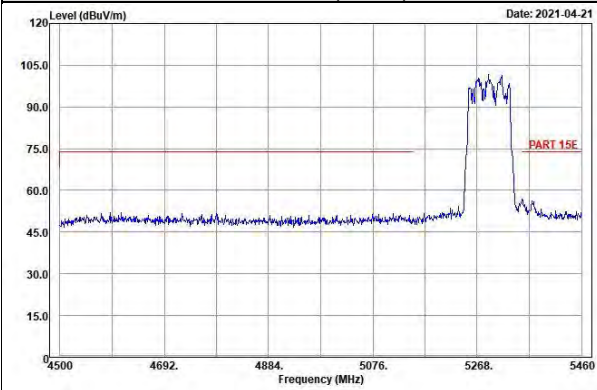
Horizontal (Peak)



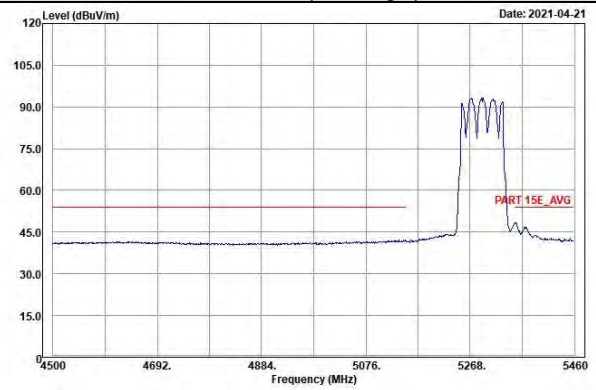
Horizontal (Average)



Vertical (Peak)

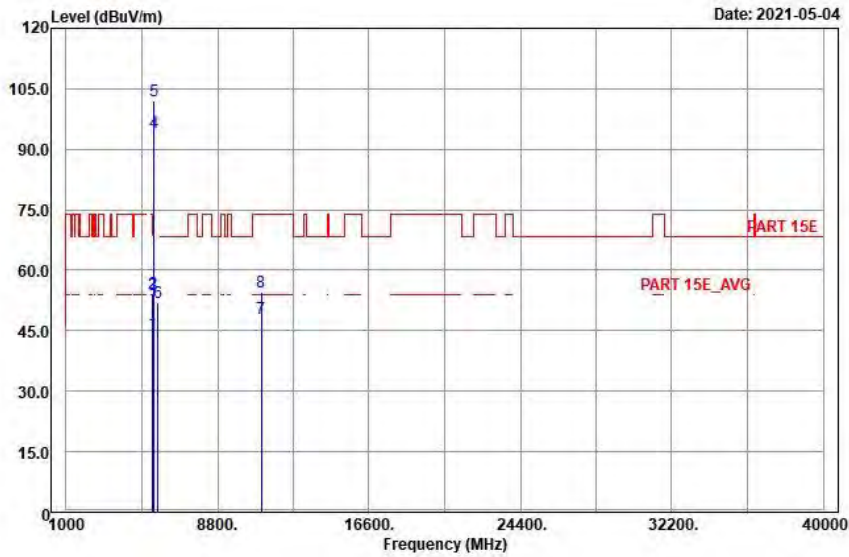


Vertical (Average)

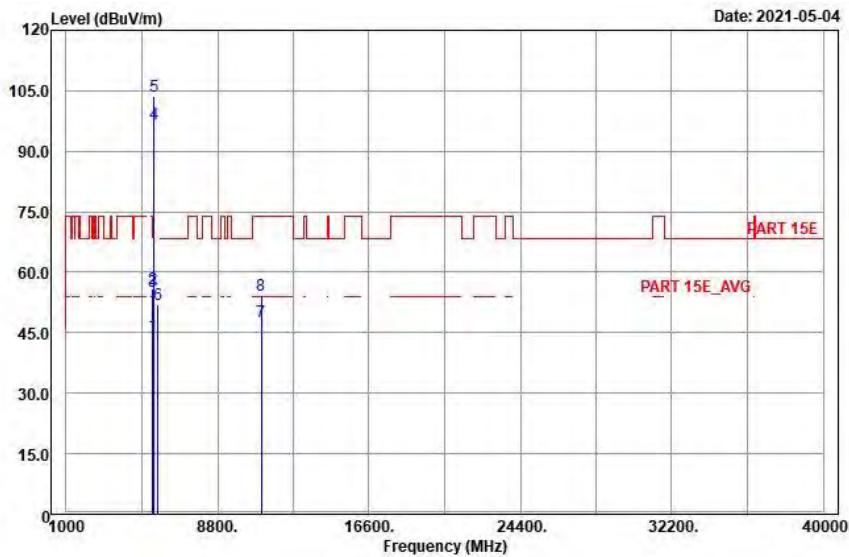


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 106 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5460 | 44.38 | 33.87 | 10.51 | 54 | -9.62 | 218 | 116 | Average |
| 5460 | 54.26 | 43.75 | 10.51 | 74 | -19.74 | 218 | 116 | Peak |
| *5470 | 53.95 | 43.42 | 10.53 | 68.2 | -14.25 | 218 | 116 | Peak |
| 5530 | 94.11 | 83.48 | 10.63 | | | 218 | 116 | Average |
| 5530 | 101.98 | 91.35 | 10.63 | | | 218 | 116 | Peak |
| *5725 | 51.86 | 40.94 | 10.92 | 68.2 | -16.34 | 218 | 116 | Peak |
| 11060 | 47.91 | 31.68 | 16.23 | 54 | -6.09 | 164 | 177 | Average |
| 11060 | 54.71 | 38.48 | 16.23 | 74 | -19.29 | 164 | 177 | Peak |

Antenna Polarity & Test Distance: Vertical at 3 m

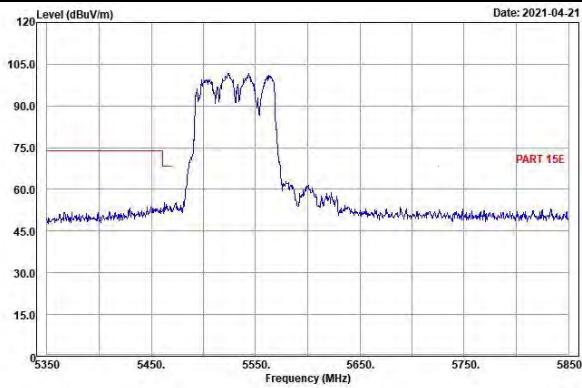
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5460 | 44.44 | 33.93 | 10.51 | 54 | -9.56 | 205 | 91 | Average |
| 5460 | 55.84 | 45.33 | 10.51 | 74 | -18.16 | 205 | 91 | Peak |
| *5470 | 55.27 | 44.74 | 10.53 | 68.2 | -12.93 | 205 | 91 | Peak |
| 5530 | 96.68 | 86.05 | 10.63 | | | 205 | 91 | Average |
| 5530 | 103.65 | 93.02 | 10.63 | | | 205 | 91 | Peak |
| *5725 | 52.08 | 41.16 | 10.92 | 68.2 | -16.12 | 205 | 91 | Peak |
| 11060 | 47.6 | 31.37 | 16.23 | 54 | -6.4 | 188 | 25 | Average |
| 11060 | 54.36 | 38.13 | 16.23 | 74 | -19.64 | 188 | 25 | Peak |

Remarks:

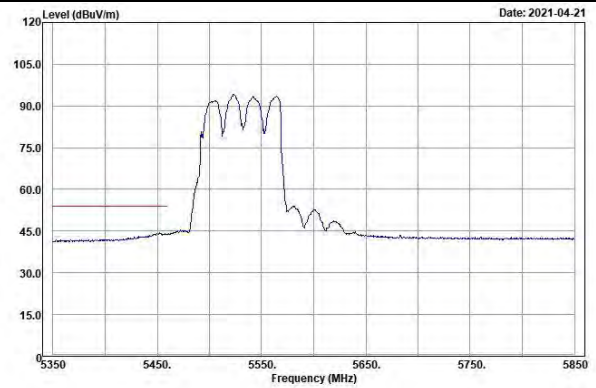
- Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
- 5530 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

Channel 106

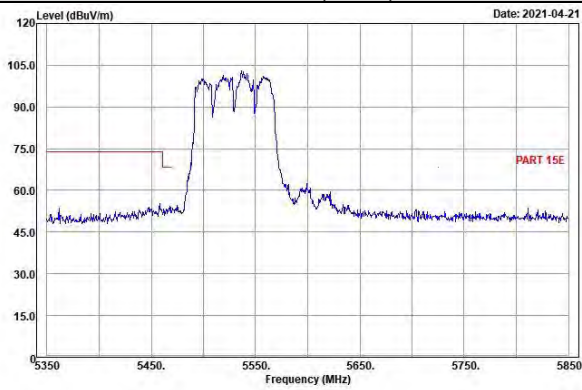
Horizontal (Peak)



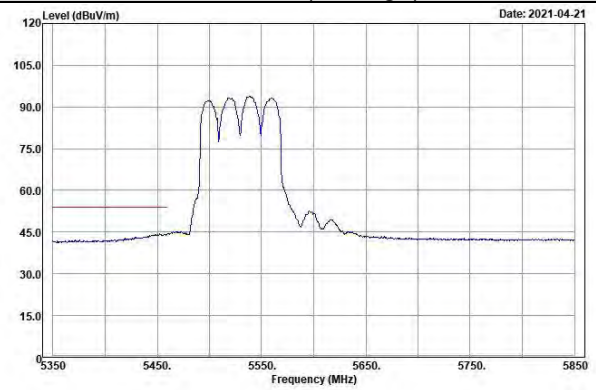
Horizontal (Average)



Vertical (Peak)

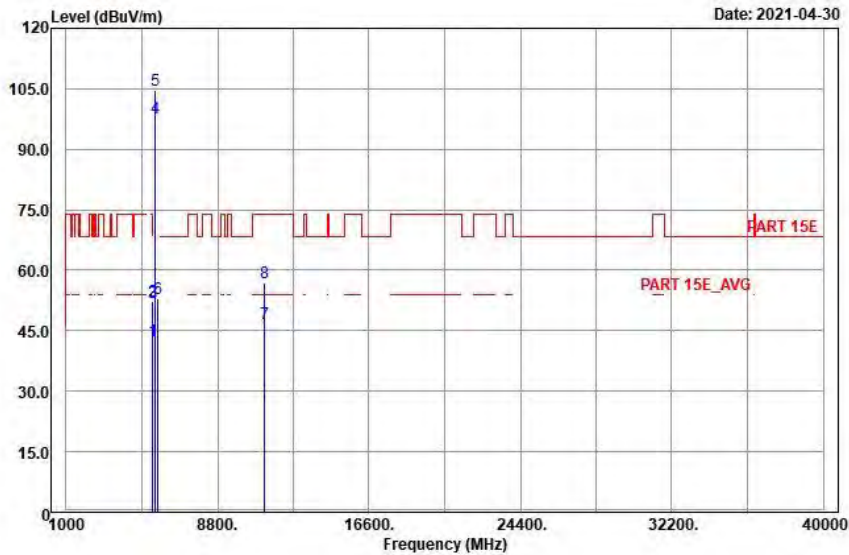


Vertical (Average)

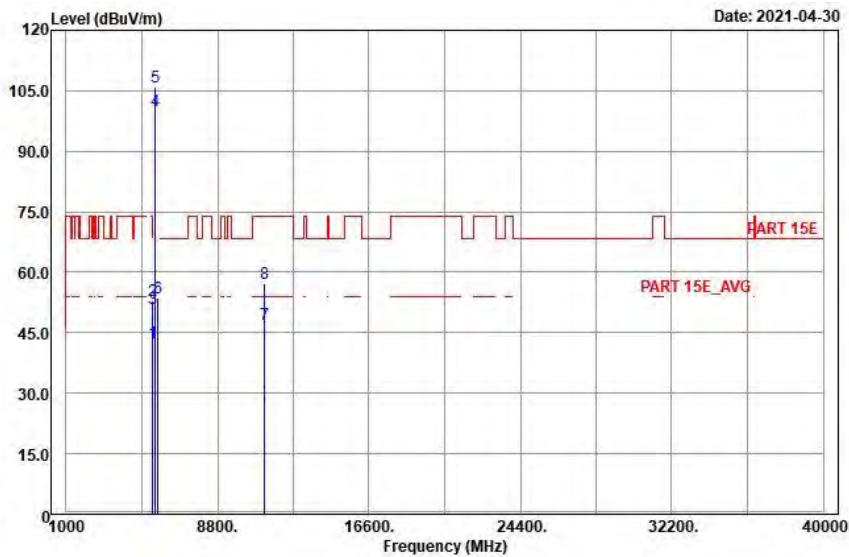


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 122 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5460 | 42.54 | 32.03 | 10.51 | 54 | -11.46 | 218 | 116 | Average |
| 5460 | 52.37 | 41.86 | 10.51 | 74 | -21.63 | 218 | 116 | Peak |
| *5470 | 52.05 | 41.52 | 10.53 | 68.2 | -16.15 | 218 | 116 | Peak |
| 5610 | 97.88 | 87.11 | 10.77 | | | 218 | 116 | Average |
| 5610 | 104.73 | 93.96 | 10.77 | | | 218 | 116 | Peak |
| *5725 | 53.03 | 42.11 | 10.92 | 68.2 | -15.17 | 218 | 116 | Peak |
| 11220 | 46.64 | 30.22 | 16.42 | 54 | -7.36 | 146 | 236 | Average |
| 11220 | 56.82 | 40.4 | 16.42 | 74 | -17.18 | 146 | 236 | Peak |

Antenna Polarity & Test Distance: Vertical at 3 m

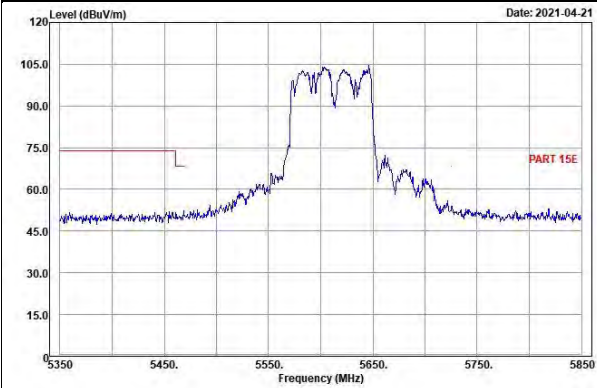
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5460 | 42.55 | 32.04 | 10.51 | 54 | -11.45 | 205 | 91 | Average |
| 5460 | 52.93 | 42.42 | 10.51 | 74 | -21.07 | 205 | 91 | Peak |
| *5470 | 51.03 | 40.5 | 10.53 | 68.2 | -17.17 | 205 | 91 | Peak |
| 5610 | 99.92 | 89.15 | 10.77 | | | 205 | 91 | Average |
| 5610 | 106.02 | 95.25 | 10.77 | | | 205 | 91 | Peak |
| *5725 | 53.47 | 42.55 | 10.92 | 68.2 | -14.73 | 205 | 91 | Peak |
| 11220 | 47.11 | 30.69 | 16.42 | 54 | -6.89 | 215 | 117 | Average |
| 11220 | 57.25 | 40.83 | 16.42 | 74 | -16.75 | 215 | 117 | Peak |

Remarks:

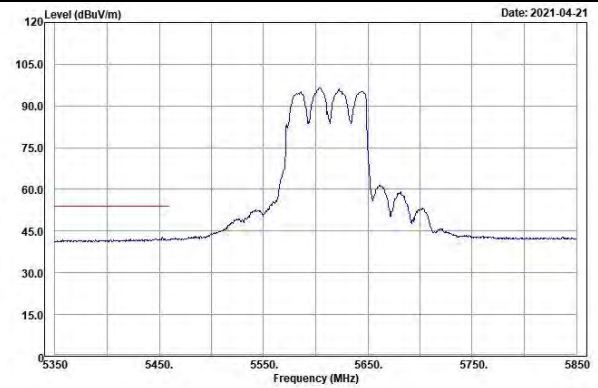
1. Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
2. 5610 MHz: Fundamental Frequency
3. *: Out of Restricted Band
4. The other emission levels were very low against the limit.

Channel 122

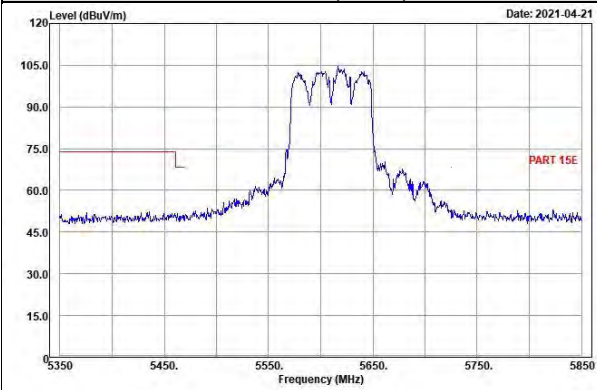
Horizontal (Peak)



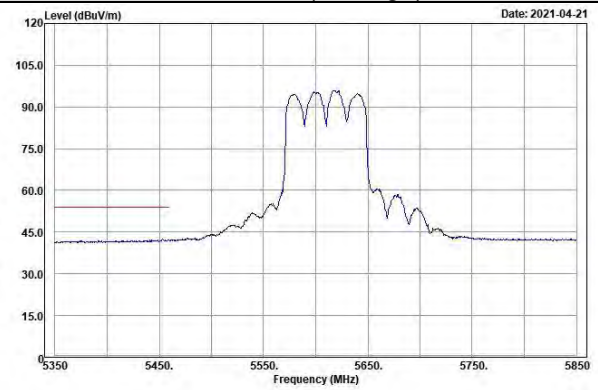
Horizontal (Average)



Vertical (Peak)

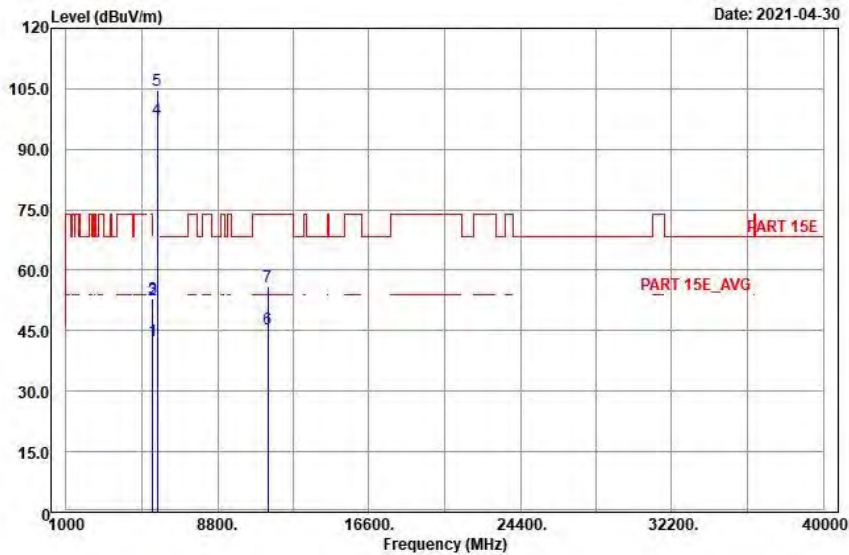


Vertical (Average)

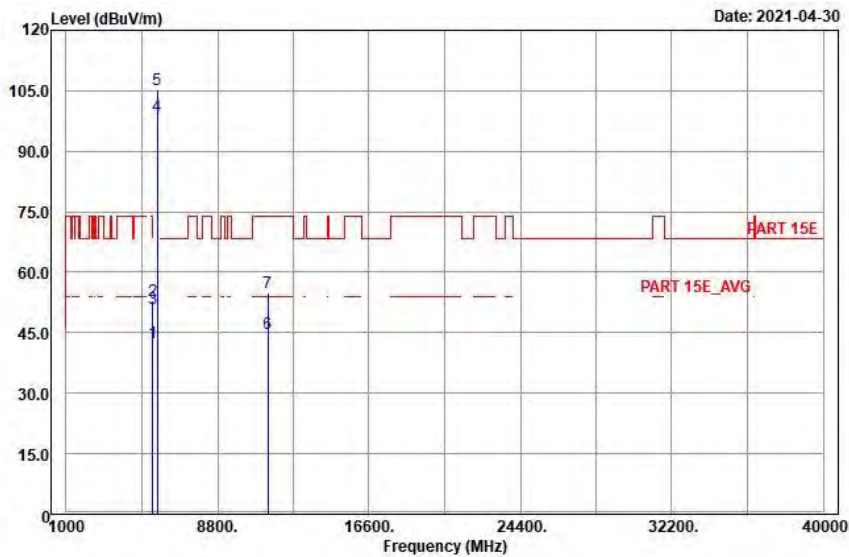


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 138 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5460 | 42.5 | 31.99 | 10.51 | 54 | -11.5 | 218 | 116 | Average |
| 5460 | 52.59 | 42.08 | 10.51 | 74 | -21.41 | 218 | 116 | Peak |
| *5470 | 52.81 | 42.28 | 10.53 | 68.2 | -15.39 | 218 | 116 | Peak |
| 5690 | 97.44 | 86.51 | 10.93 | | | 218 | 116 | Average |
| 5690 | 104.63 | 93.7 | 10.93 | | | 218 | 116 | Peak |
| 11380 | 45.46 | 29.19 | 16.27 | 54 | -8.54 | 217 | 154 | Average |
| 11380 | 55.81 | 39.54 | 16.27 | 74 | -18.19 | 217 | 154 | Peak |

Antenna Polarity & Test Distance: Vertical at 3 m

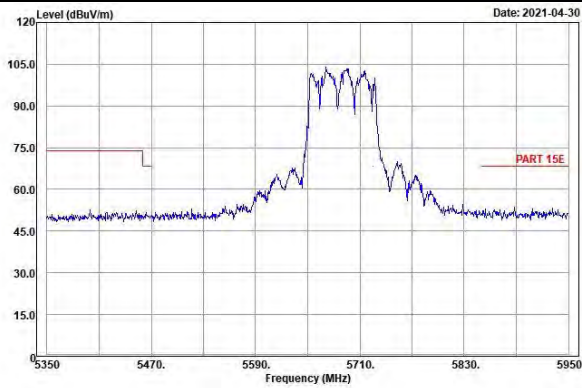
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
|-----------------|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| 5460 | 42.54 | 32.03 | 10.51 | 54 | -11.46 | 205 | 92 | Average |
| 5460 | 53.05 | 42.54 | 10.51 | 74 | -20.95 | 205 | 92 | Peak |
| *5470 | 50.9 | 40.37 | 10.53 | 68.2 | -17.3 | 205 | 92 | Peak |
| 5690 | 98.85 | 87.92 | 10.93 | | | 205 | 92 | Average |
| 5690 | 105.38 | 94.45 | 10.93 | | | 205 | 92 | Peak |
| 11380 | 44.65 | 28.38 | 16.27 | 54 | -9.35 | 272 | 143 | Average |
| 11380 | 55.09 | 38.82 | 16.27 | 74 | -18.91 | 272 | 143 | Peak |

Remarks:

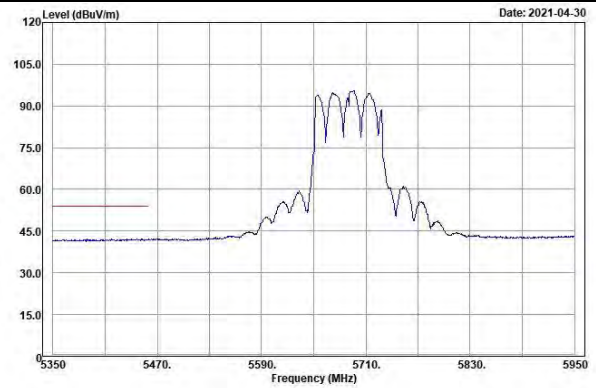
- Emission Level = Read Level + Factor
Margin Value = Emission Level – Limit value
- 5690 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

Channel 138

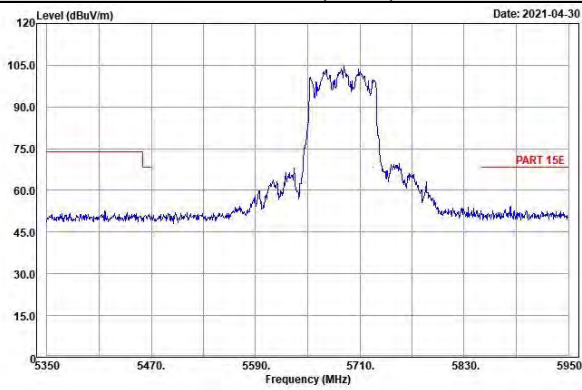
Horizontal (Peak)



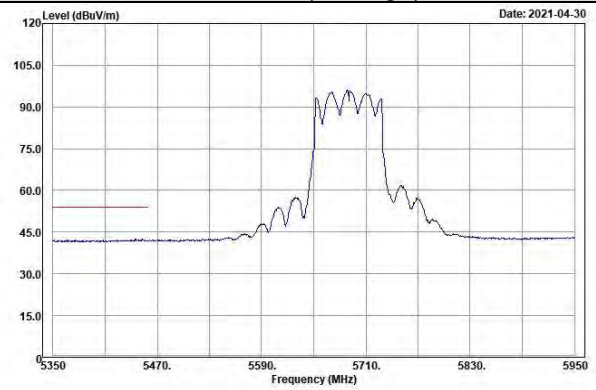
Horizontal (Average)



Vertical (Peak)

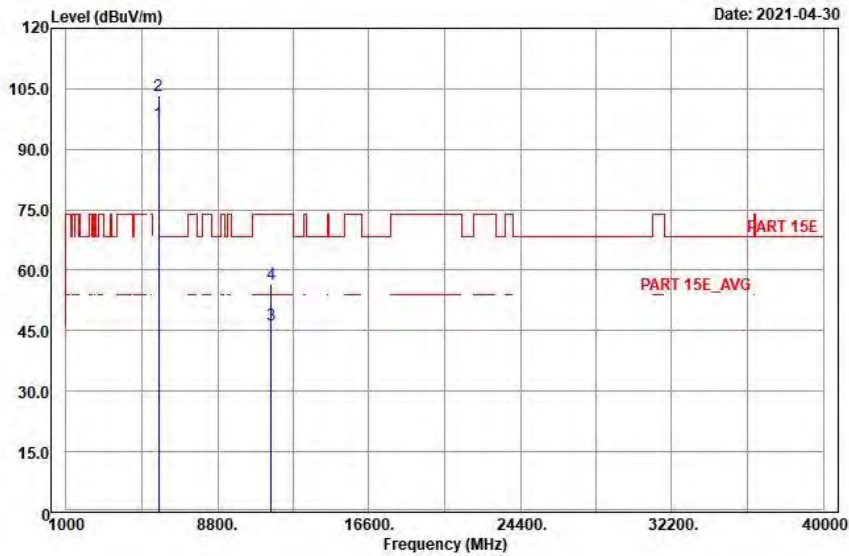


Vertical (Average)

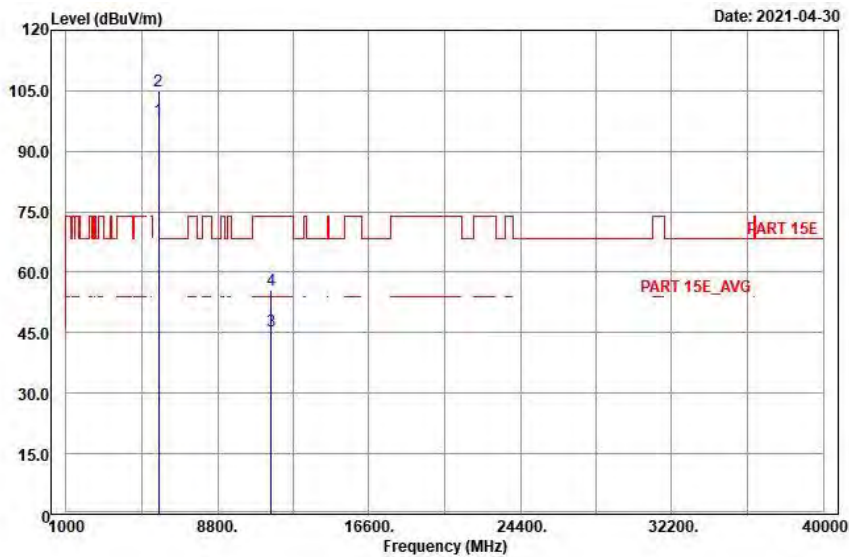


| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|---------------------------|
| Channel | Channel 155 | Frequency Range | 1 GHz ~ 40 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) Average (AV) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee, Charles Hsiao |

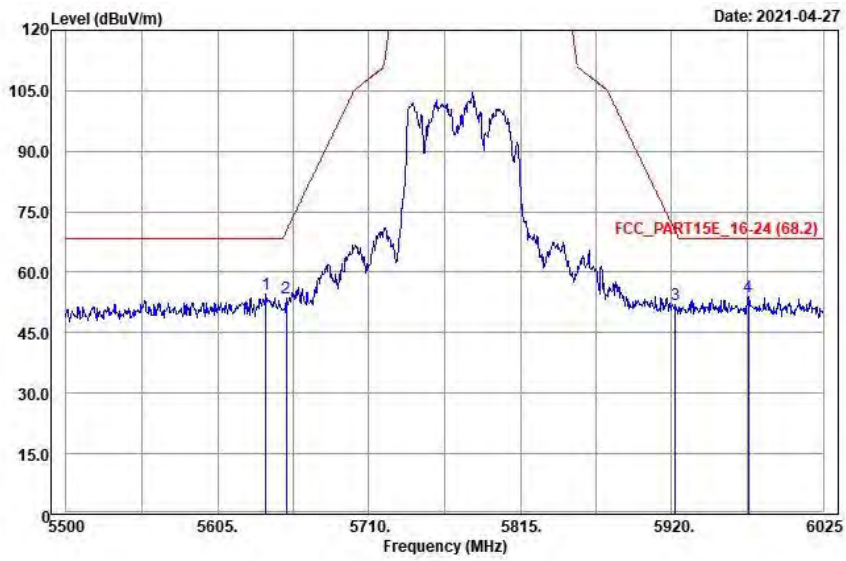
<Spurious Emission>
Horizontal



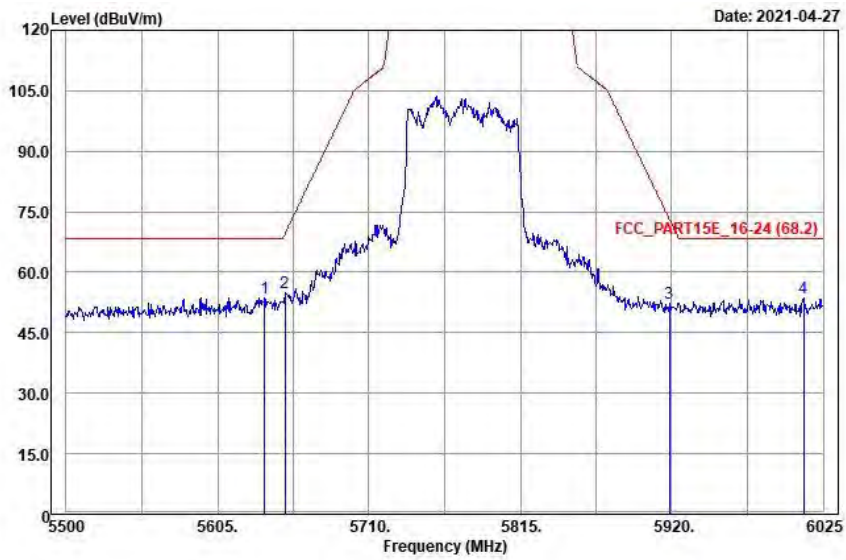
Vertical



**<Out of Band Emission (OOBE)>
Horizontal**



Vertical



<Spurious Emission>

| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|---------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5775 | 96.53 | 85.66 | 10.87 | | | 218 | 116 | Average |
| 5775 | 103.24 | 92.37 | 10.87 | | | 218 | 116 | Peak |
| 11550 | 46.52 | 30.02 | 16.5 | 54 | -7.48 | 141 | 118 | Average |
| 11550 | 56.61 | 40.11 | 16.5 | 74 | -17.39 | 141 | 118 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5775 | 97.74 | 86.87 | 10.87 | | | 205 | 92 | Average |
| 5775 | 104.91 | 94.04 | 10.87 | | | 205 | 92 | Peak |
| 11550 | 45.33 | 28.83 | 16.5 | 54 | -8.67 | 243 | 109 | Average |
| 11550 | 55.55 | 39.05 | 16.5 | 74 | -18.45 | 243 | 109 | Peak |

<Out of Band Emission (OOBE)>

| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|--------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5638.6 | 54.48 | 43.65 | 10.83 | 68.2 | -13.72 | 218 | 116 | Peak |
| 5652.775 | 53.56 | 42.69 | 10.87 | 70.25 | -16.69 | 218 | 116 | Peak |
| 5922.625 | 51.98 | 40.87 | 11.11 | 69.96 | -17.98 | 218 | 116 | Peak |
| 5973.025 | 53.83 | 42.57 | 11.26 | 68.2 | -14.37 | 218 | 116 | Peak |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 5637.55 | 53.74 | 42.91 | 10.83 | 68.2 | -14.46 | 205 | 92 | Peak |
| 5651.725 | 55 | 44.13 | 10.87 | 69.48 | -14.48 | 205 | 92 | Peak |
| 5918.425 | 52.24 | 41.15 | 11.09 | 73.07 | -20.83 | 205 | 92 | Peak |
| 6011.35 | 53.53 | 42.18 | 11.35 | 68.2 | -14.67 | 205 | 92 | Peak |

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 5775 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

9 kHz ~ 30 MHz Data:

The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

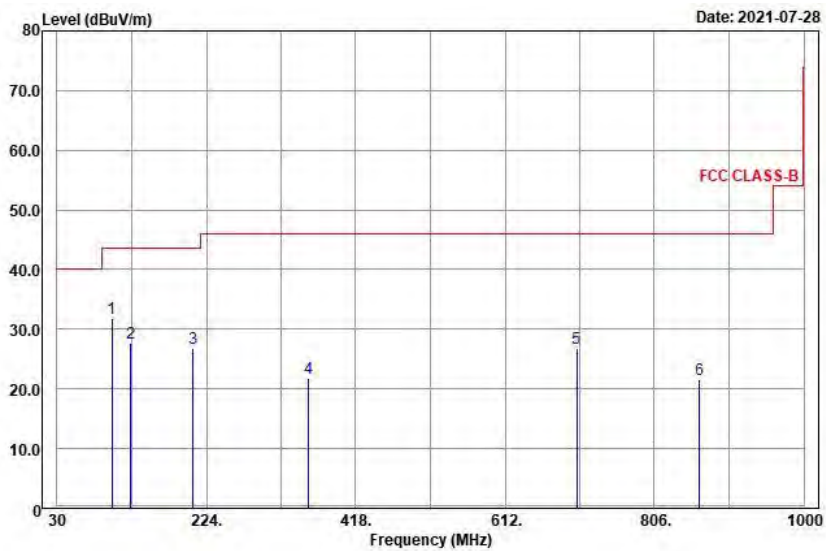
30 MHz ~ 1 GHz Worst-Case Data:

MIMO

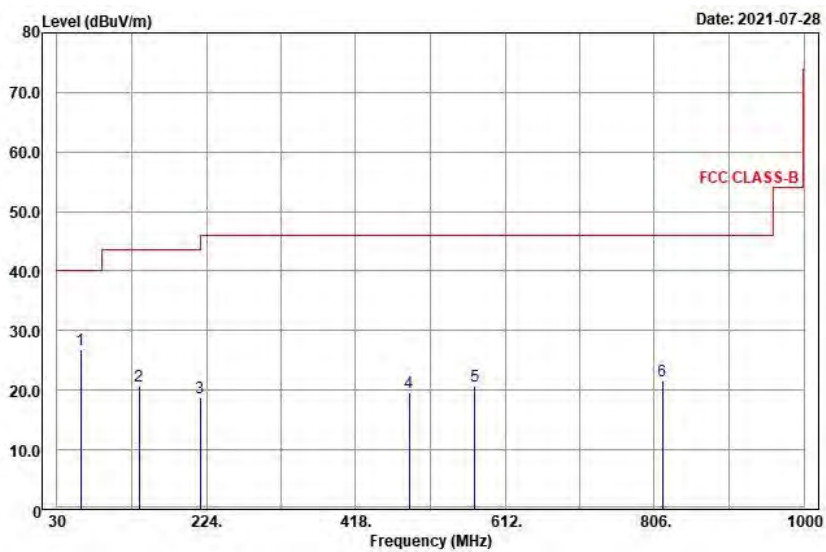
802.11a

| EUT Test Condition | | Measurement Detail | |
|--------------------------|--------------------|--------------------|------------------------------|
| Channel | Channel 157 | Frequency Range | 30 MHz ~ 1 GHz |
| Input Power | 120 Vac, 60 Hz | Detector Function | Peak (PK) or Quasi-Peak (QP) |
| Environmental Conditions | 25 deg. C, 65 % RH | Tested By | Karl Lee |

Horizontal



Vertical



| Antenna Polarity & Test Distance: Horizontal at 3 m | | | | | | | | |
|---|-------------------------|-------------------|---------------|----------------|-------------|---------------------|----------------------|--------|
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 101.56 | 31.82 | 48.98 | -17.16 | 43.5 | -11.68 | 157 | 209 | QP |
| 125.36 | 27.62 | 47.59 | -19.97 | 43.5 | -15.88 | 174 | 42 | QP |
| 206.53 | 26.87 | 45.04 | -18.17 | 43.5 | -16.63 | 139 | 225 | QP |
| 356.83 | 21.76 | 36.39 | -14.63 | 46 | -24.24 | 132 | 117 | QP |
| 705.62 | 26.83 | 35.96 | -9.13 | 46 | -19.17 | 168 | 135 | QP |
| 864.37 | 21.65 | 28.14 | -6.49 | 46 | -24.35 | 172 | 132 | QP |
| Antenna Polarity & Test Distance: Vertical at 3 m | | | | | | | | |
| Frequency (MHz) | Emission Level (dBuV/m) | Read Level (dBuV) | Factor (dB/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (cm) | Table Angle (Degree) | Remark |
| 60.86 | 26.84 | 43.26 | -16.42 | 40 | -13.16 | 298 | 167 | QP |
| 136.29 | 20.74 | 41.57 | -20.83 | 43.5 | -22.76 | 136 | 208 | QP |
| 215.67 | 18.74 | 36.73 | -17.99 | 43.5 | -24.76 | 159 | 226 | QP |
| 487.24 | 19.63 | 32.21 | -12.58 | 46 | -26.37 | 157 | 96 | QP |
| 572.63 | 20.72 | 31.82 | -11.1 | 46 | -25.28 | 129 | 336 | QP |
| 816.82 | 21.49 | 28.92 | -7.43 | 46 | -24.51 | 108 | 174 | QP |

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin Value = Emission Level – Limit value

2. The other emission levels were very low against the limit.

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

| Frequency (MHz) | Conducted Limit (dBuV) | |
|-----------------|------------------------|---------|
| | Quasi-Peak | Average |
| 0.15 - 0.5 | 66 - 56 | 56 - 46 |
| 0.50 - 5.0 | 56 | 46 |
| 5.0 - 30.0 | 60 | 50 |

- Note: 1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

4.2.2 Test Instruments

| Description & Manufacturer | Model No. | Serial No. | Date of Calibration | Due Date of Calibration |
|---|--------------------------|----------------|---------------------|-------------------------|
| Test Receiver ROHDE & SCHWARZ | ESCI | 100613 | Dec. 04, 2020 | Dec. 03, 2021 |
| RF signal cable Woken | 5D-FB | Cable-cond1-01 | Sep. 04, 2020 | Sep. 03, 2021 |
| LISN ROHDE & SCHWARZ (EUT) | ENV216 | 101826 | Feb. 25, 2021 | Feb. 24, 2022 |
| LISN ROHDE & SCHWARZ (Peripheral) | ESH3-Z5 | 100311 | Aug. 28, 2020 | Aug. 27, 2021 |
| Software ADT | BV ADT_Cond_ V7.3.7.4 | NA | NA | NA |

- Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Shielded Room 1 (Conduction 1).
 3. The VCCI Site Registration No. is C-12040.

4.2.3 Test Procedures

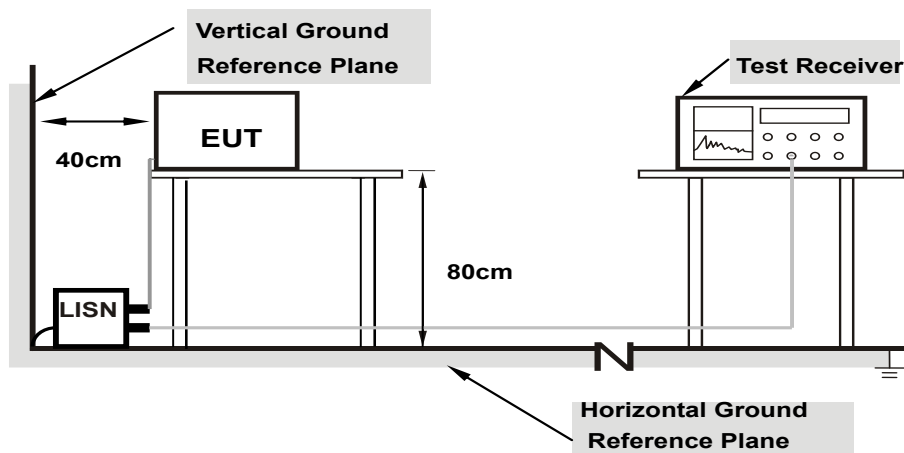
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit -20 dB) was not recorded.

Note: All modes of operation were investigated and the worst-case emissions are reported.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



- Note:**
1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.2.6 EUT Operating Conditions

- a. Placed the EUT on a testing table.
- b. Use the software to control the EUT under transmission condition continuously at specific channel frequency.

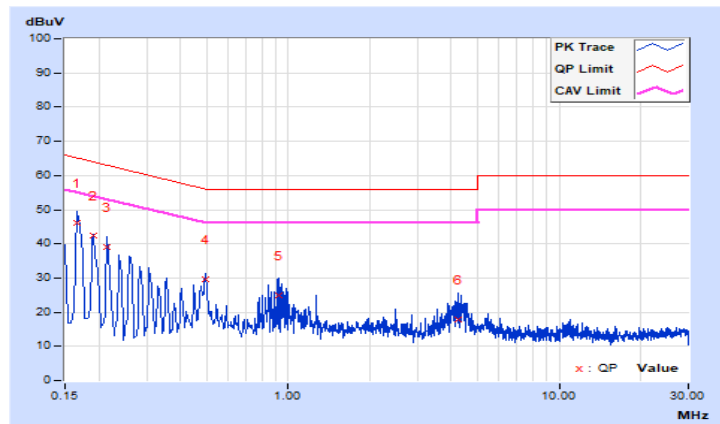
4.2.7 Test Results

| | | | |
|-----------------|----------------|--|--------------------------------------|
| Frequency Range | 150kHz ~ 30MHz | Detector Function & Resolution Bandwidth | Quasi-Peak (QP) / Average (AV), 9kHz |
| Input Power | 120Vac, 60Hz | Environmental Conditions | 22°C, 66%RH |
| Tested by | Jones Chang | Test Date | 2021/7/28 |

| Phase Of Power : Line (L) | | | | | | | | | | |
|---------------------------|-----------------|------------------------|----------------------|-------|-----------------------|-------|--------------|-------|-------------|--------|
| No | Frequency (MHz) | Correction Factor (dB) | Reading Value (dBuV) | | Emission Level (dBuV) | | Limit (dBuV) | | Margin (dB) | |
| | | | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. |
| 1 | 0.16600 | 9.71 | 36.39 | 17.81 | 46.10 | 27.52 | 65.16 | 55.16 | -19.06 | -27.64 |
| 2 | 0.19000 | 9.71 | 32.87 | 14.84 | 42.58 | 24.55 | 64.04 | 54.04 | -21.46 | -29.49 |
| 3 | 0.21400 | 9.71 | 29.34 | 11.65 | 39.05 | 21.36 | 63.05 | 53.05 | -24.00 | -31.69 |
| 4 | 0.49400 | 9.73 | 19.93 | 13.41 | 29.66 | 23.14 | 56.10 | 46.10 | -26.44 | -22.96 |
| 5 | 0.91800 | 9.76 | 15.22 | 1.63 | 24.98 | 11.39 | 56.00 | 46.00 | -31.02 | -34.61 |
| 6 | 4.25000 | 9.79 | 8.22 | 1.10 | 18.01 | 10.89 | 56.00 | 46.00 | -37.99 | -35.11 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

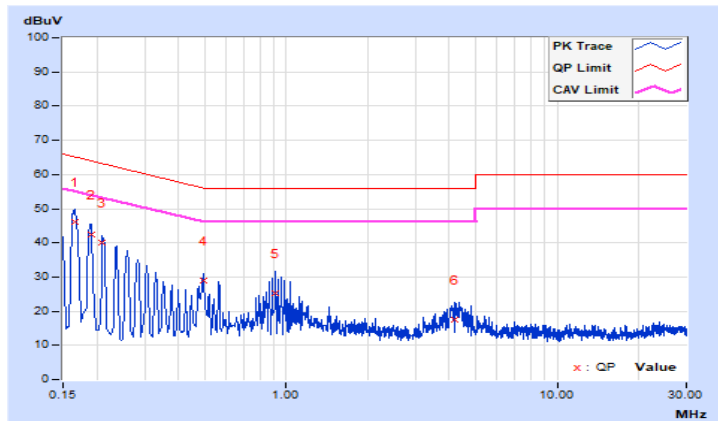


| | | | |
|-----------------|----------------|--|--------------------------------------|
| Frequency Range | 150kHz ~ 30MHz | Detector Function & Resolution Bandwidth | Quasi-Peak (QP) / Average (AV), 9kHz |
| Input Power | 120Vac, 60Hz | Environmental Conditions | 22°C, 66%RH |
| Tested by | Jones Chang | Test Date | 2021/7/28 |

| Phase Of Power : Neutral (N) | | | | | | | | | | |
|------------------------------|-----------------|------------------------|----------------------|--------------|-----------------------|--------------|--------------|--------------|---------------|---------------|
| No | Frequency (MHz) | Correction Factor (dB) | Reading Value (dBuV) | | Emission Level (dBuV) | | Limit (dBuV) | | Margin (dB) | |
| | | | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. | Q.P. | AV. |
| 1 | 0.16579 | 9.77 | 36.37 | 17.20 | 46.14 | 26.97 | 65.17 | 55.17 | -19.03 | -28.20 |
| 2 | 0.19000 | 9.77 | 32.72 | 13.82 | 42.49 | 23.59 | 64.04 | 54.04 | -21.55 | -30.45 |
| 3 | 0.21000 | 9.77 | 30.31 | 11.55 | 40.08 | 21.32 | 63.21 | 53.21 | -23.13 | -31.89 |
| 4 | 0.49400 | 9.79 | 19.03 | 10.52 | 28.82 | 20.31 | 56.10 | 46.10 | -27.28 | -25.79 |
| 5 | 0.91400 | 9.82 | 15.48 | 1.94 | 25.30 | 11.76 | 56.00 | 46.00 | -30.70 | -34.24 |
| 6 | 4.18600 | 9.85 | 7.62 | 1.37 | 17.47 | 11.22 | 56.00 | 46.00 | -38.53 | -34.78 |

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



4.3 Transmit Power Measurement

4.3.1 Limits of Transmit Power Measurement

| Operation Band | EUT Category | | Limit |
|----------------|--------------|-----------------------------------|---|
| U-NII-1 | | Outdoor Access Point | 1 Watt (30 dBm) (Max. e.i.r.p \leq 125 mW (21 dBm) at any elevation angle above 30 degrees as measured from the horizon) |
| | | Fixed point-to-point Access Point | 1 Watt (30 dBm) |
| | | Indoor Access Point | 1 Watt (30 dBm) |
| | √ | Mobile and Portable client device | 250 mW (24 dBm) |
| U-NII-2A | √ | | 250 mW (24 dBm) or 11 dBm + 10 log B* |
| U-NII-2C | √ | | 250 mW (24 dBm) or 11 dBm + 10 log B* |
| U-NII-3 | √ | | 1 Watt (30 dBm) |

*B is the 26 dB emission bandwidth in megahertz

Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

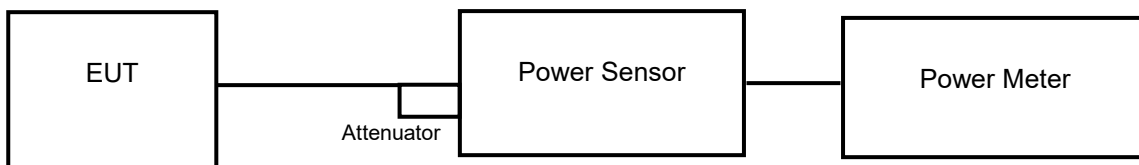
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less for 20 MHz channel widths with $N_{ANT} \geq 5$.

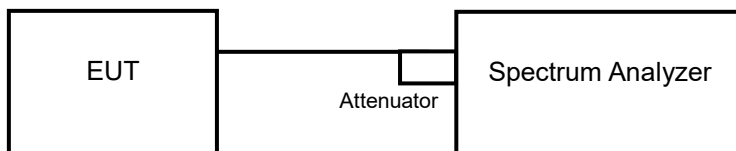
For power measurements on all other devices: Array Gain = $10 \log(N_{ANT}/N_{SS})$ dB.

4.3.2 Test Setup

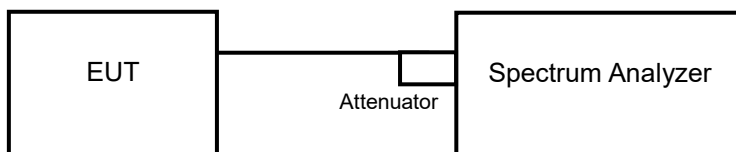
<Power Output Measurement>



or



<26 dB Bandwidth>



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

Average Power Measurement

<802.11a, 802.11n (HT20), 802.11n (HT40), 802.11ac (VHT20), 802.11ac (VHT40), 802.11ac (VHT80)>

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

<Straddle Channel (CH144,CH142,CH138)>

- a. Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99 % occupied bandwidth) of the signal.
- b. Set sweep trigger to "free run".
- c. Set RBW = 1 MHz.
- d. Set VBW \geq 3 MHz
- e. Number of points in sweep \geq 2 Span / RBW.
- f. Sweep time \leq (number of points in sweep) * T
- g. Using emission bandwidth to determine the frequency span for integration the channel bandwidth.
- h. Detector = RMS.
- i. Trace mode = max hold.
- j. Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.
- k. Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum

26 dB Bandwidth

- a. Set RBW = approximately 1 % of the emission bandwidth.
- b. Set the VBW \geq 3 x RBW.
- c. Detector = Peak.
- d. Trace mode = max hold.
- e. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1 %.

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 Test Results

Power Output:
SISO_Chain A
802.11a

| Channel | Frequency (MHz) | Maximum Conducted Power (mW) | Maximum Conducted Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------------------|-------------------------------|-------------------|-------------|
| 36 | 5180 | 45.499 | 16.58 | 24 | Pass |
| 40 | 5200 | 46.238 | 16.65 | 24 | Pass |
| 48 | 5240 | 45.604 | 16.59 | 24 | Pass |
| 52 | 5260 | 83.946 | 19.24 | 24 | Pass |
| 60 | 5300 | 85.704 | 19.33 | 24 | Pass |
| 64 | 5320 | 84.918 | 19.29 | 24 | Pass |
| 100 | 5500 | 84.528 | 19.27 | 24 | Pass |
| 116 | 5580 | 85.901 | 19.34 | 24 | Pass |
| 140 | 5700 | 84.528 | 19.27 | 24 | Pass |
| 144 | 5720 (U-NII-2C) | 66.069 | 18.20 | 22.89 | Pass |
| 144 | 5720 (U-NII-3) | 15.849 | 12.00 | 30 | Pass |
| 144 | 5720 | 81.846 | 19.13 | - | - |
| 149 | 5745 | 102.565 | 20.11 | 30 | Pass |
| 157 | 5785 | 106.66 | 20.28 | 30 | Pass |
| 165 | 5825 | 103.039 | 20.13 | 30 | Pass |

Note:
For U-NII-2A, U-NII-2C Band:

1. $11 \text{ dBm} + 10\log(20.93) = 24.21 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(20.91) = 24.20 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(20.91) = 24.20 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(20.95) = 24.21 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log(20.95) = 24.21 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log(20.94) = 24.21 \text{ dBm} > 24 \text{ dBm}$.
7. $11 \text{ dBm} + 10\log(15.44) = 22.89 \text{ dBm} < 24 \text{ dBm}$.

802.11n (HT20)

| Channel | Frequency (MHz) | Maximum Conducted Power (mW) | Maximum Conducted Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------------------|-------------------------------|-------------------|-------------|
| 36 | 5180 | 45.29 | 16.56 | 24 | Pass |
| 40 | 5200 | 45.814 | 16.61 | 24 | Pass |
| 48 | 5240 | 45.186 | 16.55 | 24 | Pass |
| 52 | 5260 | 67.764 | 18.31 | 24 | Pass |
| 60 | 5300 | 68.234 | 18.34 | 24 | Pass |
| 64 | 5320 | 67.608 | 18.30 | 24 | Pass |
| 100 | 5500 | 65.615 | 18.17 | 24 | Pass |
| 116 | 5580 | 67.764 | 18.31 | 24 | Pass |
| 140 | 5700 | 66.374 | 18.22 | 24 | Pass |
| 144 | 5720 (U-NII-2C) | 52.481 | 17.20 | 22.93 | Pass |
| 144 | 5720 (U-NII-3) | 12.078 | 10.82 | 30 | Pass |
| 144 | 5720 | 64.417 | 18.09 | - | - |
| 149 | 5745 | 83.753 | 19.23 | 30 | Pass |
| 157 | 5785 | 84.528 | 19.27 | 30 | Pass |
| 165 | 5825 | 83.56 | 19.22 | 30 | Pass |

Note:

For U-NII-2A, U-NII-2C Band:

1. $11 \text{ dBm} + 10\log (21.34) = 24.29 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (21.29) = 24.28 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (21.25) = 24.27 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (21.34) = 24.29 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (21.22) = 24.27 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (21.23) = 24.27 \text{ dBm} > 24 \text{ dBm}$.
7. $11 \text{ dBm} + 10\log (15.60) = 22.93 \text{ dBm} < 24 \text{ dBm}$.

802.11n (HT40)

| Channel | Frequency (MHz) | Maximum Conducted Power (mW) | Maximum Conducted Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------------------|-------------------------------|-------------------|-------------|
| 38 | 5190 | 67.92 | 18.32 | 24 | Pass |
| 46 | 5230 | 68.549 | 18.36 | 24 | Pass |
| 54 | 5270 | 71.45 | 18.54 | 24 | Pass |
| 62 | 5310 | 44.978 | 16.53 | 24 | Pass |
| 102 | 5510 | 45.186 | 16.55 | 24 | Pass |
| 110 | 5550 | 71.945 | 18.57 | 24 | Pass |
| 134 | 5670 | 71.779 | 18.56 | 24 | Pass |
| 142 | 5710 (U-NII-2C) | 53.703 | 17.30 | 24 | Pass |
| 142 | 5710 (U-NII-3) | 14.454 | 11.60 | 30 | Pass |
| 142 | 5710 | 68.077 | 18.33 | - | - |
| 151 | 5755 | 87.902 | 19.44 | 30 | Pass |
| 159 | 5795 | 87.498 | 19.42 | 30 | Pass |

Note:

For U-NII-2A, U-NII-2C Band:

1. $11 \text{ dBm} + 10\log (42.09) = 27.24 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (42.52) = 27.29 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (42.08) = 27.24 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (42.07) = 27.24 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (41.89) = 27.22 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (35.92) = 26.55 \text{ dBm} > 24 \text{ dBm}$.

802.11ac (VHT20)

| Channel | Frequency (MHz) | Maximum Conducted Power (mW) | Maximum Conducted Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------------------|-------------------------------|-------------------|-------------|
| 36 | 5180 | 45.604 | 16.59 | 24 | Pass |
| 40 | 5200 | 46.238 | 16.65 | 24 | Pass |
| 48 | 5240 | 45.394 | 16.57 | 24 | Pass |
| 52 | 5260 | 68.234 | 18.34 | 24 | Pass |
| 60 | 5300 | 68.865 | 18.38 | 24 | Pass |
| 64 | 5320 | 68.077 | 18.33 | 24 | Pass |
| 100 | 5500 | 66.222 | 18.21 | 24 | Pass |
| 116 | 5580 | 68.234 | 18.34 | 24 | Pass |
| 140 | 5700 | 66.681 | 18.24 | 24 | Pass |
| 144 | 5720 (U-NII-2C) | 52.845 | 17.23 | 22.93 | Pass |
| 144 | 5720 (U-NII-3) | 12.134 | 10.84 | 30 | Pass |
| 144 | 5720 | 64.979 | 18.13 | - | - |
| 149 | 5745 | 84.528 | 19.27 | 30 | Pass |
| 157 | 5785 | 85.31 | 19.31 | 30 | Pass |
| 165 | 5825 | 84.14 | 19.25 | 30 | Pass |

Note:

For U-NII-2A, U-NII-2C Band:

1. $11 \text{ dBm} + 10\log (21.34) = 24.29 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (21.29) = 24.28 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (21.25) = 24.27 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (21.34) = 24.29 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (21.22) = 24.27 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (21.23) = 24.27 \text{ dBm} > 24 \text{ dBm}$.
7. $11 \text{ dBm} + 10\log (15.60) = 22.93 \text{ dBm} < 24 \text{ dBm}$.

802.11ac (VHT40)

| Channel | Frequency (MHz) | Maximum Conducted Power (mW) | Maximum Conducted Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------------------|-------------------------------|-------------------|-------------|
| 38 | 5190 | 68.391 | 18.35 | 24 | Pass |
| 46 | 5230 | 69.024 | 18.39 | 24 | Pass |
| 54 | 5270 | 71.945 | 18.57 | 24 | Pass |
| 62 | 5310 | 45.29 | 16.56 | 24 | Pass |
| 102 | 5510 | 45.394 | 16.57 | 24 | Pass |
| 110 | 5550 | 72.611 | 18.61 | 24 | Pass |
| 134 | 5670 | 72.277 | 18.59 | 24 | Pass |
| 142 | 5710 (U-NII-2C) | 53.951 | 17.32 | 24 | Pass |
| 142 | 5710 (U-NII-3) | 14.521 | 11.62 | 30 | Pass |
| 142 | 5710 | 68.391 | 18.36 | - | - |
| 151 | 5755 | 88.512 | 19.47 | 30 | Pass |
| 159 | 5795 | 88.105 | 19.45 | 30 | Pass |

Note:

For U-NII-2A, U-NII-2C Band:

1. $11 \text{ dBm} + 10\log (42.09) = 27.24 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (42.52) = 27.29 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (42.08) = 27.24 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (42.07) = 27.24 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (41.89) = 27.22 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (35.92) = 26.55 \text{ dBm} > 24 \text{ dBm}$.

802.11ac (VHT80)

| Channel | Frequency (MHz) | Maximum Conducted Power (mW) | Maximum Conducted Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------------------|-------------------------------|-------------------|-------------|
| 42 | 5210 | 63.241 | 18.01 | 24 | Pass |
| 58 | 5290 | 36.559 | 15.63 | 24 | Pass |
| 106 | 5530 | 42.364 | 16.27 | 24 | Pass |
| 122 | 5610 | 67.764 | 18.31 | 24 | Pass |
| 138 | 5690 (U-NII-2C) | 54.325 | 17.35 | 24 | Pass |
| 138 | 5690 (U-NII-3) | 11.298 | 10.53 | 30 | Pass |
| 138 | 5690 | 65.615 | 18.17 | - | - |
| 155 | 5775 | 86.099 | 19.35 | 30 | Pass |

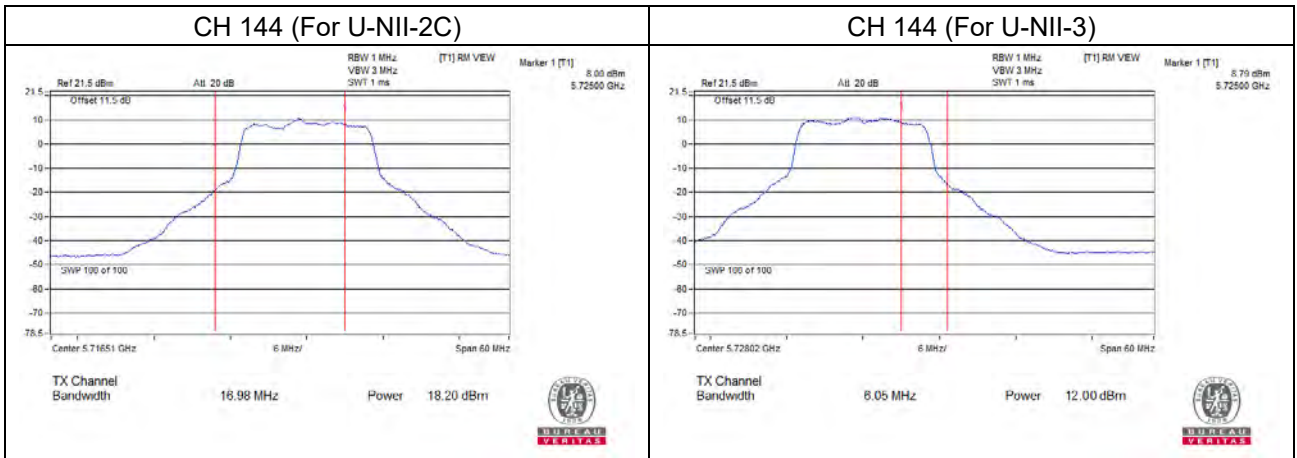
Note:

For U-NII-2A, U-NII-2C Band:

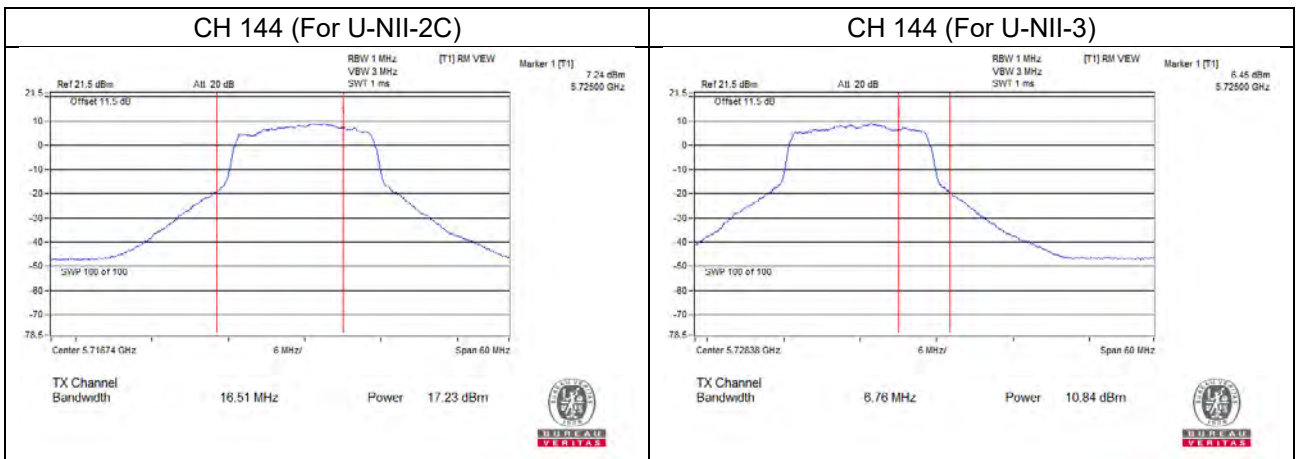
1. $11 \text{ dBm} + 10\log (84.67) = 30.28 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (84.44) = 30.27 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (84.47) = 30.27 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (77.08) = 29.87 \text{ dBm} > 24 \text{ dBm}$.

Straddle channel power plots:

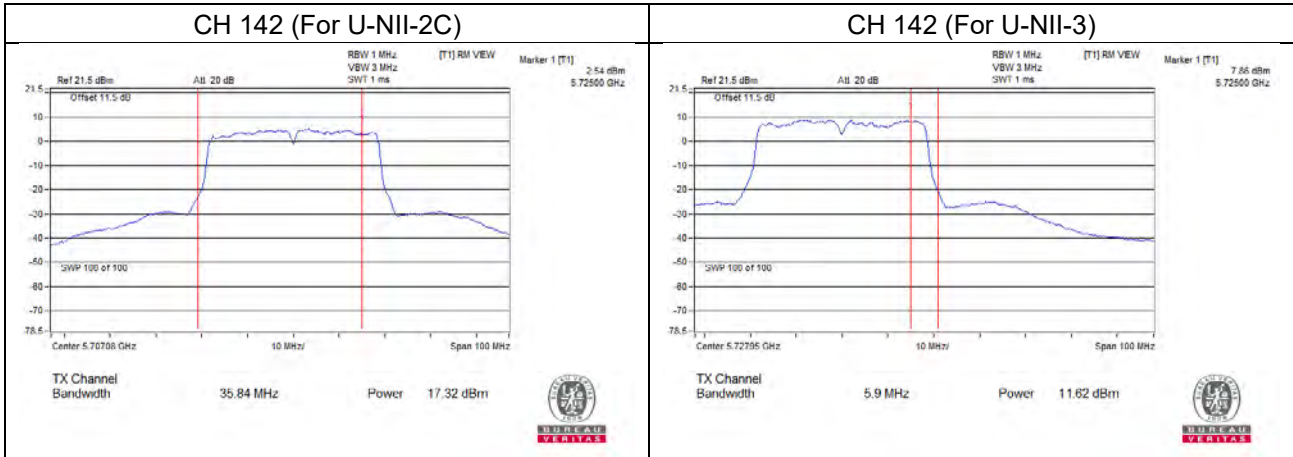
802.11a



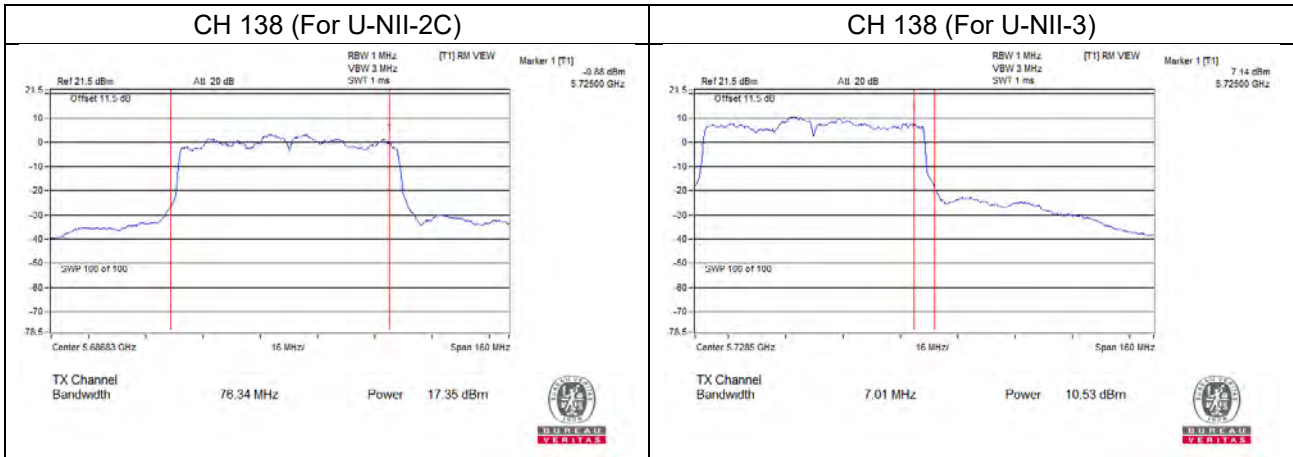
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



26 dB Bandwidth:
802.11a

| Channel | Frequency (MHz) | 26 dBc Bandwidth (MHz) |
|---------|-----------------|------------------------|
| 36 | 5180 | 20.84 |
| 40 | 5200 | 20.91 |
| 48 | 5240 | 20.90 |
| 52 | 5260 | 20.93 |
| 60 | 5300 | 20.91 |
| 64 | 5320 | 20.91 |
| 100 | 5500 | 20.95 |
| 116 | 5580 | 20.95 |
| 140 | 5700 | 20.94 |
| 144 | 5720 (U-NII-2C) | 15.44 |
| 144 | 5720 (U-NII-3) | 5.50 |

802.11ac (VHT20)

| Channel | Frequency (MHz) | 26 dBc Bandwidth (MHz) |
|---------|-----------------|------------------------|
| 36 | 5180 | 21.33 |
| 40 | 5200 | 21.30 |
| 48 | 5240 | 21.30 |
| 52 | 5260 | 21.34 |
| 60 | 5300 | 21.29 |
| 64 | 5320 | 21.25 |
| 100 | 5500 | 21.34 |
| 116 | 5580 | 21.22 |
| 140 | 5700 | 21.23 |
| 144 | 5720 (U-NII-2C) | 15.60 |
| 144 | 5720 (U-NII-3) | 5.70 |

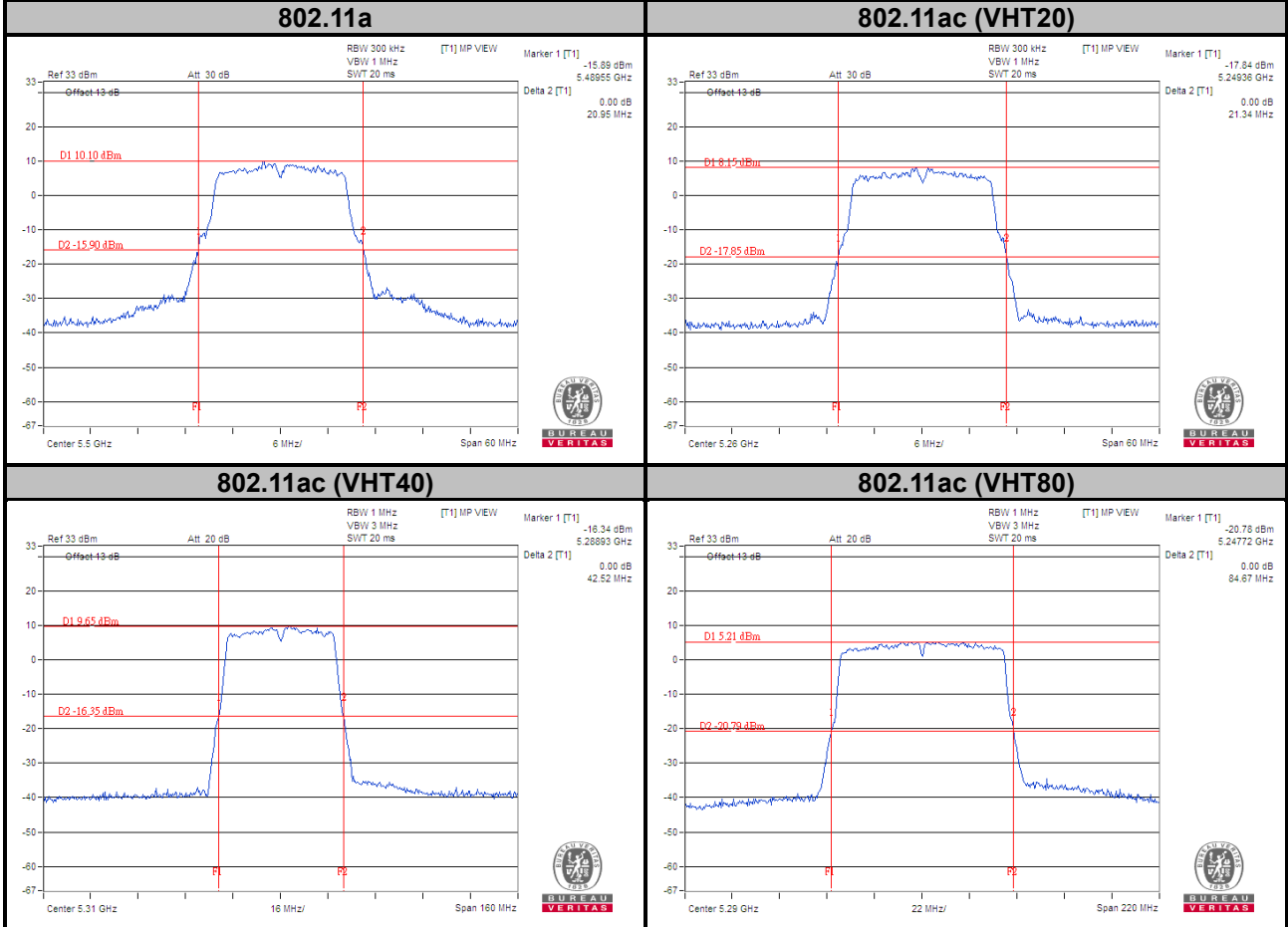
802.11ac (VHT40)

| Channel | Frequency (MHz) | 26 dBc Bandwidth (MHz) |
|---------|-----------------|------------------------|
| 38 | 5190 | 41.94 |
| 46 | 5230 | 41.99 |
| 54 | 5270 | 42.09 |
| 62 | 5310 | 42.52 |
| 102 | 5510 | 42.08 |
| 110 | 5550 | 42.07 |
| 134 | 5670 | 41.89 |
| 142 | 5710 (U-NII-2C) | 35.92 |
| 142 | 5710 (U-NII-3) | 5.96 |

802.11ac (VHT80)

| Channel | Frequency (MHz) | 26 dBc Bandwidth (MHz) |
|---------|-----------------|------------------------|
| 42 | 5210 | 84.41 |
| 58 | 5290 | 84.67 |
| 106 | 5530 | 84.44 |
| 122 | 5610 | 84.47 |
| 138 | 5690 (U-NII-2C) | 77.08 |
| 138 | 5690 (U-NII-3) | 7.30 |

Spectrum Plot of Worst Value



SISO_Chain B
 802.11a

| Channel | Frequency (MHz) | Maximum Conducted Power (mW) | Maximum Conducted Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------------------|-------------------------------|-------------------|-------------|
| 36 | 5180 | 45.186 | 16.55 | 24 | Pass |
| 40 | 5200 | 44.771 | 16.51 | 24 | Pass |
| 48 | 5240 | 45.082 | 16.54 | 24 | Pass |
| 52 | 5260 | 88.308 | 19.46 | 24 | Pass |
| 60 | 5300 | 88.716 | 19.48 | 24 | Pass |
| 64 | 5320 | 87.902 | 19.44 | 24 | Pass |
| 100 | 5500 | 89.743 | 19.53 | 24 | Pass |
| 116 | 5580 | 89.95 | 19.54 | 24 | Pass |
| 140 | 5700 | 89.331 | 19.51 | 24 | Pass |
| 144 | 5720 (U-NII-2C) | 69.502 | 18.42 | 22.91 | Pass |
| 144 | 5720 (U-NII-3) | 18.535 | 12.68 | 30 | Pass |
| 144 | 5720 | 88.037 | 19.45 | - | - |
| 149 | 5745 | 107.895 | 20.33 | 30 | Pass |
| 157 | 5785 | 109.396 | 20.39 | 30 | Pass |
| 165 | 5825 | 108.893 | 20.37 | 30 | Pass |

Note:

For U-NII-2A, U-NII-2C Band:

1. $11 \text{ dBm} + 10\log (20.91) = 24.20 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (20.94) = 24.21 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (20.91) = 24.20 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (20.95) = 24.21 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (20.99) = 24.22 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (20.91) = 24.20 \text{ dBm} > 24 \text{ dBm}$.
7. $11 \text{ dBm} + 10\log (15.51) = 22.91 \text{ dBm} < 24 \text{ dBm}$.

802.11n (HT20)

| Channel | Frequency (MHz) | Maximum Conducted Power (mW) | Maximum Conducted Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------------------|-------------------------------|-------------------|-------------|
| 36 | 5180 | 44.157 | 16.45 | 24 | Pass |
| 40 | 5200 | 44.463 | 16.48 | 24 | Pass |
| 48 | 5240 | 44.259 | 16.46 | 24 | Pass |
| 52 | 5260 | 69.823 | 18.44 | 24 | Pass |
| 60 | 5300 | 69.502 | 18.42 | 24 | Pass |
| 64 | 5320 | 70.146 | 18.46 | 24 | Pass |
| 100 | 5500 | 73.282 | 18.65 | 24 | Pass |
| 116 | 5580 | 72.946 | 18.63 | 24 | Pass |
| 140 | 5700 | 72.111 | 18.58 | 24 | Pass |
| 144 | 5720 (U-NII-2C) | 54.2 | 17.34 | 22.93 | Pass |
| 144 | 5720 (U-NII-3) | 14.322 | 11.56 | 30 | Pass |
| 144 | 5720 | 68.522 | 18.36 | - | - |
| 149 | 5745 | 85.901 | 19.34 | 30 | Pass |
| 157 | 5785 | 86.696 | 19.38 | 30 | Pass |
| 165 | 5825 | 86.298 | 19.36 | 30 | Pass |

Note:

For U-NII-2A, U-NII-2C Band:

1. $11 \text{ dBm} + 10\log (21.27) = 24.28 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (21.21) = 24.27 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (21.28) = 24.28 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (21.30) = 24.28 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (21.23) = 24.27 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (21.33) = 24.29 \text{ dBm} > 24 \text{ dBm}$.
7. $11 \text{ dBm} + 10\log (15.60) = 22.93 \text{ dBm} < 24 \text{ dBm}$.

802.11n (HT40)

| Channel | Frequency (MHz) | Maximum Conducted Power (mW) | Maximum Conducted Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------------------|-------------------------------|-------------------|-------------|
| 38 | 5190 | 71.285 | 18.53 | 24 | Pass |
| 46 | 5230 | 69.502 | 18.42 | 24 | Pass |
| 54 | 5270 | 77.804 | 18.91 | 24 | Pass |
| 62 | 5310 | 46.559 | 16.68 | 24 | Pass |
| 102 | 5510 | 49.659 | 16.96 | 24 | Pass |
| 110 | 5550 | 84.14 | 19.25 | 24 | Pass |
| 134 | 5670 | 83.368 | 19.21 | 24 | Pass |
| 142 | 5710 (U-NII-2C) | 62.661 | 17.97 | 24 | Pass |
| 142 | 5710 (U-NII-3) | 15.922 | 12.02 | 30 | Pass |
| 142 | 5710 | 78.583 | 18.95 | - | - |
| 151 | 5755 | 87.297 | 19.41 | 30 | Pass |
| 159 | 5795 | 86.298 | 19.36 | 30 | Pass |

Note:

For U-NII-2A, U-NII-2C Band:

1. $11 \text{ dBm} + 10\log (41.81) = 27.21 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (42.11) = 27.24 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (42.15) = 27.25 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (42.08) = 27.24 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (42.12) = 27.24 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (36.05) = 26.57 \text{ dBm} > 24 \text{ dBm}$.

802.11ac (VHT20)

| Channel | Frequency (MHz) | Maximum Conducted Power (mW) | Maximum Conducted Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------------------|-------------------------------|-------------------|-------------|
| 36 | 5180 | 44.463 | 16.48 | 24 | Pass |
| 40 | 5200 | 44.668 | 16.50 | 24 | Pass |
| 48 | 5240 | 44.566 | 16.49 | 24 | Pass |
| 52 | 5260 | 70.307 | 18.47 | 24 | Pass |
| 60 | 5300 | 70.146 | 18.46 | 24 | Pass |
| 64 | 5320 | 70.632 | 18.49 | 24 | Pass |
| 100 | 5500 | 73.961 | 18.69 | 24 | Pass |
| 116 | 5580 | 73.451 | 18.66 | 24 | Pass |
| 140 | 5700 | 72.778 | 18.62 | 24 | Pass |
| 144 | 5720 (U-NII-2C) | 54.45 | 17.36 | 22.93 | Pass |
| 144 | 5720 (U-NII-3) | 14.388 | 11.58 | 30 | Pass |
| 144 | 5720 | 68.838 | 18.38 | - | - |
| 149 | 5745 | 86.497 | 19.37 | 30 | Pass |
| 157 | 5785 | 87.498 | 19.42 | 30 | Pass |
| 165 | 5825 | 86.696 | 19.38 | 30 | Pass |

Note:

For U-NII-2A, U-NII-2C Band:

1. $11 \text{ dBm} + 10\log (21.27) = 24.28 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (21.21) = 24.27 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (21.28) = 24.28 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (21.30) = 24.28 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (21.23) = 24.27 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (21.33) = 24.29 \text{ dBm} > 24 \text{ dBm}$.
7. $11 \text{ dBm} + 10\log (15.60) = 22.93 \text{ dBm} < 24 \text{ dBm}$.

802.11ac (VHT40)

| Channel | Frequency (MHz) | Maximum Conducted Power (mW) | Maximum Conducted Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------------------|-------------------------------|-------------------|-------------|
| 38 | 5190 | 71.945 | 18.57 | 24 | Pass |
| 46 | 5230 | 69.984 | 18.45 | 24 | Pass |
| 54 | 5270 | 78.343 | 18.94 | 24 | Pass |
| 62 | 5310 | 46.989 | 16.72 | 24 | Pass |
| 102 | 5510 | 50.234 | 17.01 | 24 | Pass |
| 110 | 5550 | 84.723 | 19.28 | 24 | Pass |
| 134 | 5670 | 83.946 | 19.24 | 24 | Pass |
| 142 | 5710 (U-NII-2C) | 63.096 | 18.00 | 24 | Pass |
| 142 | 5710 (U-NII-3) | 16.069 | 12.06 | 30 | Pass |
| 142 | 5710 | 79.165 | 18.99 | - | - |
| 151 | 5755 | 87.902 | 19.44 | 30 | Pass |
| 159 | 5795 | 86.896 | 19.39 | 30 | Pass |

Note:

For U-NII-2A, U-NII-2C Band:

1. $11 \text{ dBm} + 10\log (41.81) = 27.21 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (42.11) = 27.24 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (42.15) = 27.25 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (42.08) = 27.24 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (42.12) = 27.24 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (36.05) = 26.57 \text{ dBm} > 24 \text{ dBm}$.

802.11ac (VHT80)

| Channel | Frequency (MHz) | Maximum Conducted Power (mW) | Maximum Conducted Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|------------------------------|-------------------------------|-------------------|-------------|
| 42 | 5210 | 67.608 | 18.30 | 24 | Pass |
| 58 | 5290 | 39.084 | 15.92 | 24 | Pass |
| 106 | 5530 | 45.499 | 16.58 | 24 | Pass |
| 122 | 5610 | 75.336 | 18.77 | 24 | Pass |
| 138 | 5690 (U-NII-2C) | 57.412 | 17.59 | 24 | Pass |
| 138 | 5690 (U-NII-3) | 14.289 | 11.55 | 30 | Pass |
| 138 | 5690 | 71.701 | 18.56 | - | - |
| 155 | 5775 | 89.331 | 19.51 | 30 | Pass |

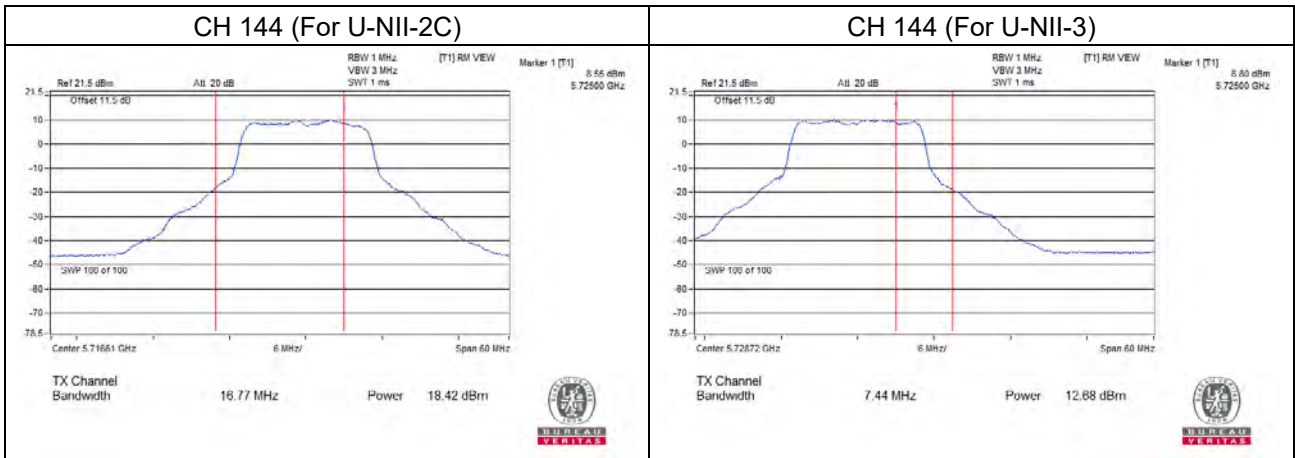
Note:

For U-NII-2A, U-NII-2C Band:

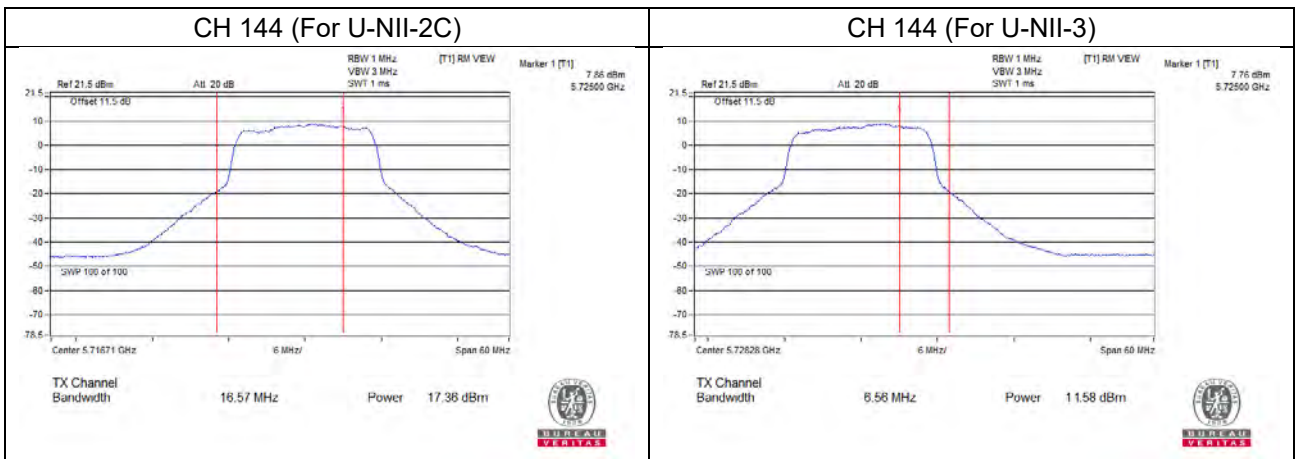
1. $11 \text{ dBm} + 10\log (84.58) = 30.27 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (84.34) = 30.26 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (84.97) = 30.29 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (77.31) = 29.88 \text{ dBm} > 24 \text{ dBm}$.

Straddle channel power plots:

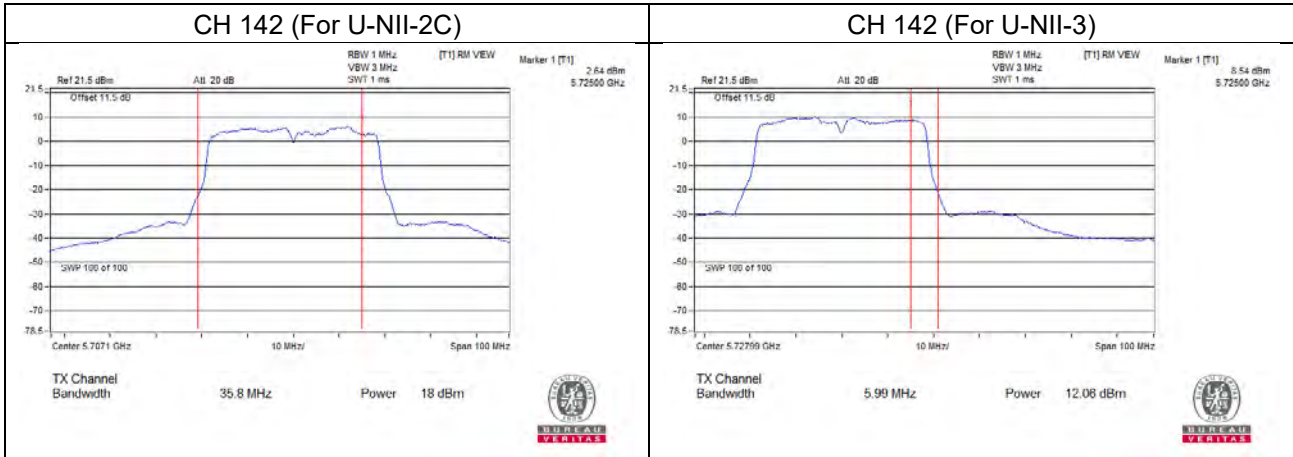
802.11a



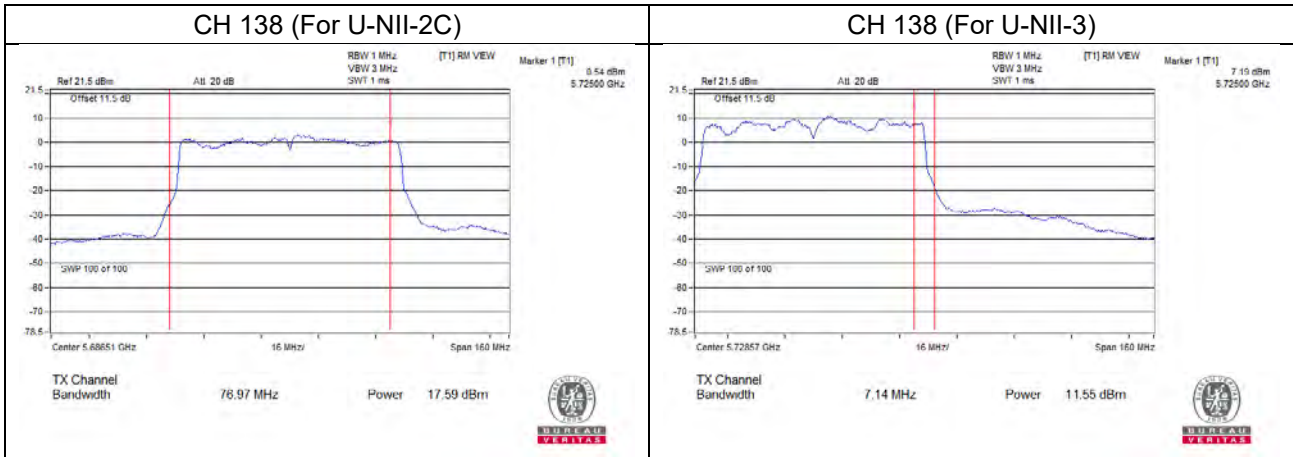
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



26 dB Bandwidth:
802.11a

| Channel | Frequency (MHz) | 26 dBc Bandwidth (MHz) |
|---------|-----------------|------------------------|
| 36 | 5180 | 20.90 |
| 40 | 5200 | 20.88 |
| 48 | 5240 | 20.90 |
| 52 | 5260 | 20.91 |
| 60 | 5300 | 20.94 |
| 64 | 5320 | 20.91 |
| 100 | 5500 | 20.95 |
| 116 | 5580 | 20.99 |
| 140 | 5700 | 20.91 |
| 144 | 5720 (U-NII-2C) | 15.51 |
| 144 | 5720 (U-NII-3) | 5.48 |

802.11ac (VHT20)

| Channel | Frequency (MHz) | 26 dBc Bandwidth (MHz) |
|---------|-----------------|------------------------|
| 36 | 5180 | 21.22 |
| 40 | 5200 | 21.25 |
| 48 | 5240 | 21.15 |
| 52 | 5260 | 21.27 |
| 60 | 5300 | 21.21 |
| 64 | 5320 | 21.28 |
| 100 | 5500 | 21.30 |
| 116 | 5580 | 21.23 |
| 140 | 5700 | 21.33 |
| 144 | 5720 (U-NII-2C) | 15.60 |
| 144 | 5720 (U-NII-3) | 5.70 |

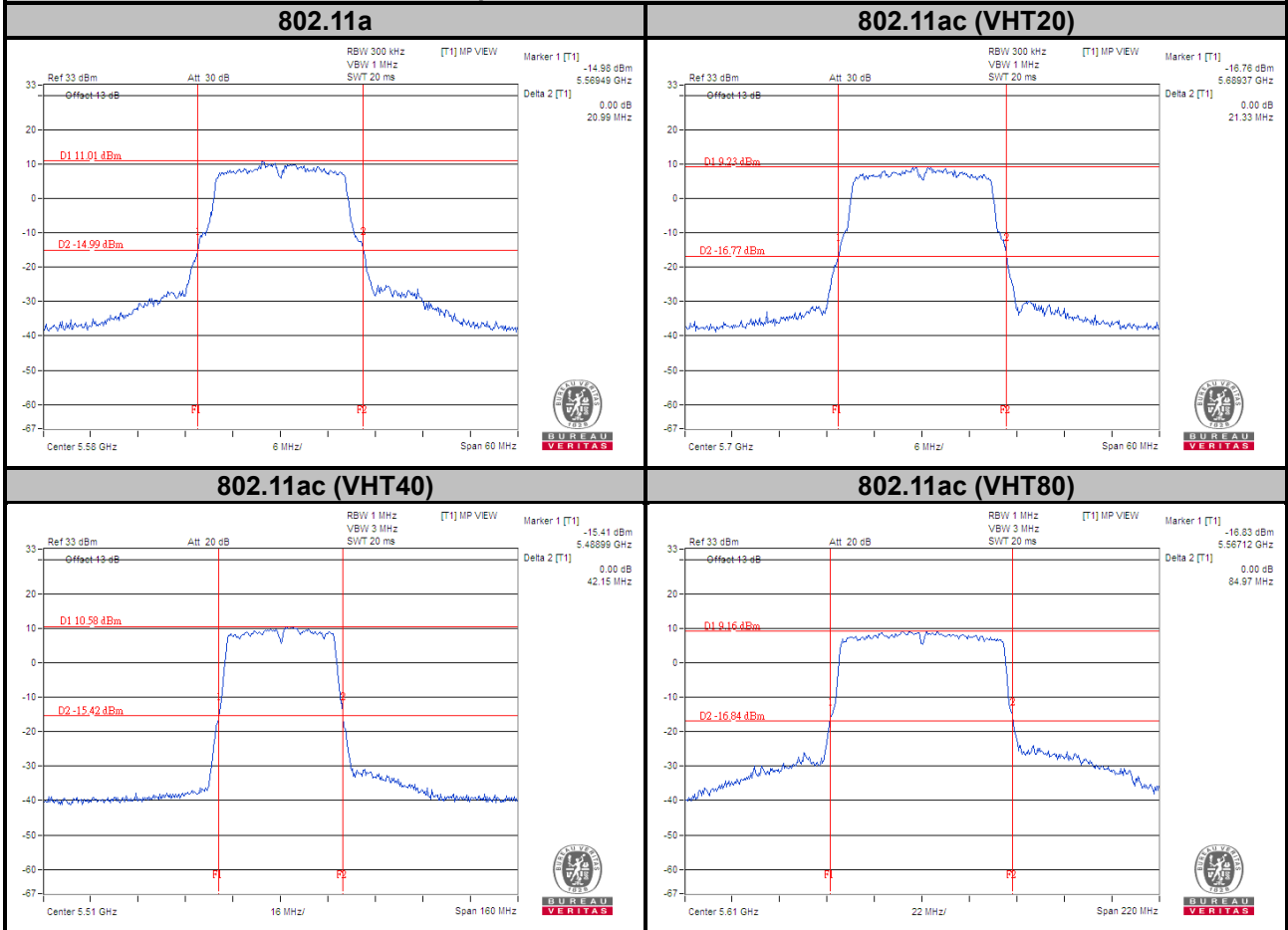
802.11ac (VHT40)

| Channel | Frequency (MHz) | 26 dBc Bandwidth (MHz) |
|---------|-----------------|------------------------|
| 38 | 5190 | 41.83 |
| 46 | 5230 | 42.07 |
| 54 | 5270 | 41.81 |
| 62 | 5310 | 42.11 |
| 102 | 5510 | 42.15 |
| 110 | 5550 | 42.08 |
| 134 | 5670 | 42.12 |
| 142 | 5710 (U-NII-2C) | 36.05 |
| 142 | 5710 (U-NII-3) | 5.95 |

802.11ac (VHT80)

| Channel | Frequency (MHz) | 26 dBc Bandwidth (MHz) |
|---------|-----------------|------------------------|
| 42 | 5210 | 84.37 |
| 58 | 5290 | 84.58 |
| 106 | 5530 | 84.34 |
| 122 | 5610 | 84.97 |
| 138 | 5690 (U-NII-2C) | 77.31 |
| 138 | 5690 (U-NII-3) | 7.10 |

Spectrum Plot of Worst Value



MIMO
802.11a

| Channel | Frequency (MHz) | Maximum Conducted Power (dBm) | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|-------------------------------|---------|------------------|-------------------|-------------------|-------------|
| | | Chain A | Chain B | | | | |
| 36 | 5180 | 10.89 | 11.34 | 25.889 | 14.13 | 24 | Pass |
| 40 | 5200 | 10.91 | 11.37 | 26.04 | 14.16 | 24 | Pass |
| 48 | 5240 | 11.85 | 11.32 | 28.863 | 14.60 | 24 | Pass |
| 52 | 5260 | 17.21 | 17.52 | 109.095 | 20.38 | 24 | Pass |
| 60 | 5300 | 17.24 | 17.57 | 110.114 | 20.42 | 24 | Pass |
| 64 | 5320 | 17.05 | 17.50 | 106.933 | 20.29 | 24 | Pass |
| 100 | 5500 | 17.50 | 17.74 | 115.663 | 20.63 | 24 | Pass |
| 116 | 5580 | 17.55 | 17.79 | 117.003 | 20.68 | 24 | Pass |
| 140 | 5700 | 17.51 | 17.71 | 115.384 | 20.62 | 24 | Pass |
| 144 | 5720 (U-NII-2C) | 16.36 | 16.40 | 86.903 | 19.39 | 22.88 | Pass |
| 144 | 5720 (U-NII-3) | 9.48 | 9.99 | 18.849 | 12.75 | 30 | Pass |
| 144 | 5720 | 17.17 | 17.29 | 105.699 | 20.24 | - | - |
| 149 | 5745 | 20.36 | 20.23 | 214.081 | 23.31 | 30 | Pass |
| 157 | 5785 | 20.41 | 20.35 | 218.293 | 23.39 | 30 | Pass |
| 165 | 5825 | 20.31 | 20.26 | 213.568 | 23.30 | 30 | Pass |

Note:

For U-NII-2A, U-NII-2C Band:

Chain A

1. $11 \text{ dBm} + 10\log (21.04) = 24.23 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (20.78) = 24.18 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (21.03) = 24.23 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (20.83) = 24.19 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (20.76) = 24.17 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (20.74) = 24.17 \text{ dBm} > 24 \text{ dBm}$.
7. $11 \text{ dBm} + 10\log (15.43) = 22.88 \text{ dBm} < 24 \text{ dBm}$.

Chain B

1. $11 \text{ dBm} + 10\log (20.87) = 24.20 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (20.84) = 24.19 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (20.86) = 24.19 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (20.86) = 24.19 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (20.87) = 24.20 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (20.89) = 24.20 \text{ dBm} > 24 \text{ dBm}$.
7. $11 \text{ dBm} + 10\log (15.50) = 22.90 \text{ dBm} < 24 \text{ dBm}$.

802.11n (HT20)

| Channel | Frequency (MHz) | Maximum Conducted Power (dBm) | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|-------------------------------|---------|------------------|-------------------|-------------------|-------------|
| | | Chain A | Chain B | | | | |
| 36 | 5180 | 11.11 | 11.52 | 27.103 | 14.33 | 24 | Pass |
| 40 | 5200 | 11.21 | 11.56 | 27.535 | 14.40 | 24 | Pass |
| 48 | 5240 | 11.10 | 11.50 | 27.008 | 14.31 | 24 | Pass |
| 52 | 5260 | 15.78 | 16.16 | 79.149 | 18.98 | 24 | Pass |
| 60 | 5300 | 15.89 | 16.21 | 80.598 | 19.06 | 24 | Pass |
| 64 | 5320 | 15.88 | 16.14 | 79.841 | 19.02 | 24 | Pass |
| 100 | 5500 | 15.94 | 16.42 | 83.118 | 19.20 | 24 | Pass |
| 116 | 5580 | 16.05 | 16.47 | 84.633 | 19.28 | 24 | Pass |
| 140 | 5700 | 16.00 | 16.40 | 83.462 | 19.21 | 24 | Pass |
| 144 | 5720 (U-NII-2C) | 15.37 | 15.33 | 68.554 | 18.36 | 22.92 | Pass |
| 144 | 5720 (U-NII-3) | 6.65 | 8.81 | 12.227 | 10.87 | 30 | Pass |
| 144 | 5720 | 15.91 | 16.20 | 80.681 | 19.07 | - | - |
| 149 | 5745 | 19.23 | 19.37 | 170.25 | 22.31 | 30 | Pass |
| 157 | 5785 | 19.32 | 19.42 | 173.005 | 22.38 | 30 | Pass |
| 165 | 5825 | 19.24 | 19.40 | 171.042 | 22.33 | 30 | Pass |

Note:

For U-NII-2A, U-NII-2C Band:

Chain A

1. $11 \text{ dBm} + 10\log (21.25) = 24.27 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (21.31) = 24.29 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (21.12) = 24.25 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (21.10) = 24.24 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (21.00) = 24.22 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (21.00) = 24.22 \text{ dBm} > 24 \text{ dBm}$.
7. $11 \text{ dBm} + 10\log (15.56) = 22.92 \text{ dBm} < 24 \text{ dBm}$.

Chain B

1. $11 \text{ dBm} + 10\log (21.40) = 24.30 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (21.41) = 24.31 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (21.48) = 24.32 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (21.27) = 24.28 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (21.37) = 24.30 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (21.28) = 24.28 \text{ dBm} > 24 \text{ dBm}$.
7. $11 \text{ dBm} + 10\log (15.61) = 22.93 \text{ dBm} < 24 \text{ dBm}$.

802.11n (HT40)

| Channel | Frequency (MHz) | Maximum Conducted Power (dBm) | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|-------------------------------|---------|------------------|-------------------|-------------------|-------------|
| | | Chain A | Chain B | | | | |
| 38 | 5190 | 14.40 | 14.50 | 55.726 | 17.46 | 24 | Pass |
| 46 | 5230 | 14.38 | 14.52 | 55.73 | 17.46 | 24 | Pass |
| 54 | 5270 | 18.50 | 18.90 | 148.419 | 21.71 | 24 | Pass |
| 62 | 5310 | 16.60 | 16.65 | 91.947 | 19.64 | 24 | Pass |
| 102 | 5510 | 16.70 | 16.82 | 94.857 | 19.77 | 24 | Pass |
| 110 | 5550 | 18.67 | 19.01 | 153.237 | 21.85 | 24 | Pass |
| 134 | 5670 | 17.65 | 18.97 | 137.096 | 21.37 | 24 | Pass |
| 142 | 5710 (U-NII-2C) | 17.26 | 17.28 | 106.667 | 20.28 | 24 | Pass |
| 142 | 5710 (U-NII-3) | 10.73 | 10.71 | 23.606 | 13.73 | 30 | Pass |
| 142 | 5710 | 18.13 | 18.14 | 130.176 | 21.15 | - | - |
| 151 | 5755 | 19.17 | 19.32 | 168.11 | 22.26 | 30 | Pass |
| 159 | 5795 | 19.22 | 19.30 | 168.674 | 22.27 | 30 | Pass |

Note:
For U-NII-2A, U-NII-2C Band:
Chain A

- $11 \text{ dBm} + 10\log(42.09) = 27.24 \text{ dBm} > 24 \text{ dBm}$.
- $11 \text{ dBm} + 10\log(42.21) = 27.25 \text{ dBm} > 24 \text{ dBm}$.
- $11 \text{ dBm} + 10\log(41.96) = 27.23 \text{ dBm} > 24 \text{ dBm}$.
- $11 \text{ dBm} + 10\log(41.90) = 27.22 \text{ dBm} > 24 \text{ dBm}$.
- $11 \text{ dBm} + 10\log(42.09) = 27.24 \text{ dBm} > 24 \text{ dBm}$.
- $11 \text{ dBm} + 10\log(35.94) = 26.56 \text{ dBm} > 24 \text{ dBm}$.

Chain B

- $11 \text{ dBm} + 10\log(42.17) = 27.25 \text{ dBm} > 24 \text{ dBm}$.
- $11 \text{ dBm} + 10\log(42.29) = 27.26 \text{ dBm} > 24 \text{ dBm}$.
- $11 \text{ dBm} + 10\log(42.20) = 27.25 \text{ dBm} > 24 \text{ dBm}$.
- $11 \text{ dBm} + 10\log(42.25) = 27.26 \text{ dBm} > 24 \text{ dBm}$.
- $11 \text{ dBm} + 10\log(42.09) = 27.24 \text{ dBm} > 24 \text{ dBm}$.
- $11 \text{ dBm} + 10\log(36.05) = 26.57 \text{ dBm} > 24 \text{ dBm}$.

802.11ac (VHT20)

| Channel | Frequency (MHz) | Maximum Conducted Power (dBm) | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|-------------------------------|---------|------------------|-------------------|-------------------|-------------|
| | | Chain A | Chain B | | | | |
| 36 | 5180 | 11.14 | 11.55 | 27.291 | 14.36 | 24 | Pass |
| 40 | 5200 | 11.25 | 11.59 | 27.756 | 14.43 | 24 | Pass |
| 48 | 5240 | 11.13 | 11.52 | 27.162 | 14.34 | 24 | Pass |
| 52 | 5260 | 15.81 | 16.19 | 79.698 | 19.01 | 24 | Pass |
| 60 | 5300 | 15.92 | 16.24 | 81.157 | 19.09 | 24 | Pass |
| 64 | 5320 | 15.91 | 16.17 | 80.394 | 19.05 | 24 | Pass |
| 100 | 5500 | 15.97 | 16.45 | 83.694 | 19.23 | 24 | Pass |
| 116 | 5580 | 16.08 | 16.51 | 85.322 | 19.31 | 24 | Pass |
| 140 | 5700 | 16.02 | 16.43 | 83.949 | 19.24 | 24 | Pass |
| 144 | 5720 (U-NII-2C) | 15.39 | 15.35 | 68.871 | 18.38 | 22.92 | Pass |
| 144 | 5720 (U-NII-3) | 8.68 | 8.84 | 15.035 | 11.77 | 30 | Pass |
| 144 | 5720 | 16.22 | 16.22 | 83.759 | 19.23 | - | - |
| 149 | 5745 | 19.27 | 19.40 | 171.624 | 22.35 | 30 | Pass |
| 157 | 5785 | 19.34 | 19.45 | 174.006 | 22.41 | 30 | Pass |
| 165 | 5825 | 19.26 | 19.42 | 171.832 | 22.35 | 30 | Pass |

Note:

For U-NII-2A, U-NII-2C Band:

Chain A

1. $11 \text{ dBm} + 10\log (21.25) = 24.27 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (21.31) = 24.29 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (21.12) = 24.25 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (21.10) = 24.24 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (21.00) = 24.22 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (21.00) = 24.22 \text{ dBm} > 24 \text{ dBm}$.
7. $11 \text{ dBm} + 10\log (15.56) = 22.92 \text{ dBm} < 24 \text{ dBm}$.

Chain B

1. $11 \text{ dBm} + 10\log (21.40) = 24.30 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (21.41) = 24.31 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (21.48) = 24.32 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (21.27) = 24.28 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log (21.37) = 24.30 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log (21.28) = 24.28 \text{ dBm} > 24 \text{ dBm}$.
7. $11 \text{ dBm} + 10\log (15.61) = 22.93 \text{ dBm} < 24 \text{ dBm}$.

802.11ac (VHT40)

| Channel | Frequency (MHz) | Maximum Conducted Power (dBm) | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|-------------------------------|---------|------------------|-------------------|-------------------|-------------|
| | | Chain A | Chain B | | | | |
| 38 | 5190 | 14.43 | 14.53 | 56.112 | 17.49 | 24 | Pass |
| 46 | 5230 | 14.42 | 14.55 | 56.18 | 17.50 | 24 | Pass |
| 54 | 5270 | 18.52 | 18.93 | 149.284 | 21.74 | 24 | Pass |
| 62 | 5310 | 16.63 | 16.67 | 92.477 | 19.66 | 24 | Pass |
| 102 | 5510 | 16.72 | 16.84 | 95.295 | 19.79 | 24 | Pass |
| 110 | 5550 | 18.71 | 19.05 | 154.655 | 21.89 | 24 | Pass |
| 134 | 5670 | 17.68 | 19.01 | 138.23 | 21.41 | 24 | Pass |
| 142 | 5710 (U-NII-2C) | 17.29 | 17.30 | 107.283 | 20.31 | 24 | Pass |
| 142 | 5710 (U-NII-3) | 10.76 | 10.73 | 23.743 | 13.76 | 30 | Pass |
| 142 | 5710 | 18.16 | 18.16 | 130.927 | 21.17 | - | - |
| 151 | 5755 | 19.21 | 19.34 | 169.269 | 22.29 | 30 | Pass |
| 159 | 5795 | 19.24 | 19.32 | 169.453 | 22.29 | 30 | Pass |

Note:
For U-NII-2A, U-NII-2C Band:
Chain A

1. $11 \text{ dBm} + 10\log(42.09) = 27.24 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(42.21) = 27.25 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(41.96) = 27.23 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(41.90) = 27.22 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log(42.09) = 27.24 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log(35.94) = 26.56 \text{ dBm} > 24 \text{ dBm}$.

Chain B

1. $11 \text{ dBm} + 10\log(42.17) = 27.25 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log(42.29) = 27.26 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log(42.20) = 27.25 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log(42.25) = 27.26 \text{ dBm} > 24 \text{ dBm}$.
5. $11 \text{ dBm} + 10\log(42.09) = 27.24 \text{ dBm} > 24 \text{ dBm}$.
6. $11 \text{ dBm} + 10\log(36.05) = 26.57 \text{ dBm} > 24 \text{ dBm}$.

802.11ac (VHT80)

| Channel | Frequency (MHz) | Maximum Conducted Power (dBm) | | Total Power (mW) | Total Power (dBm) | Power Limit (dBm) | Pass / Fail |
|---------|-----------------|-------------------------------|---------|------------------|-------------------|-------------------|-------------|
| | | Chain A | Chain B | | | | |
| 42 | 5210 | 15.93 | 16.31 | 81.93 | 19.13 | 24 | Pass |
| 58 | 5290 | 14.15 | 14.31 | 52.979 | 17.24 | 24 | Pass |
| 106 | 5530 | 16.51 | 16.75 | 92.086 | 19.64 | 24 | Pass |
| 122 | 5610 | 18.49 | 18.62 | 143.41 | 21.57 | 24 | Pass |
| 138 | 5690 (U-NII-2C) | 18.16 | 18.27 | 132.607 | 21.23 | 24 | Pass |
| 138 | 5690 (U-NII-3) | 11.82 | 11.73 | 30.099 | 14.79 | 30 | Pass |
| 138 | 5690 | 19.06 | 19.14 | 162.555 | 22.11 | - | - |
| 155 | 5775 | 19.35 | 19.44 | 174.002 | 22.41 | 30 | Pass |

Note:
For U-NII-2A, U-NII-2C Band:
Chain A

1. $11 \text{ dBm} + 10\log (83.93) = 30.24 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (84.56) = 30.27 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (83.89) = 30.24 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (77.26) = 29.88 \text{ dBm} > 24 \text{ dBm}$.

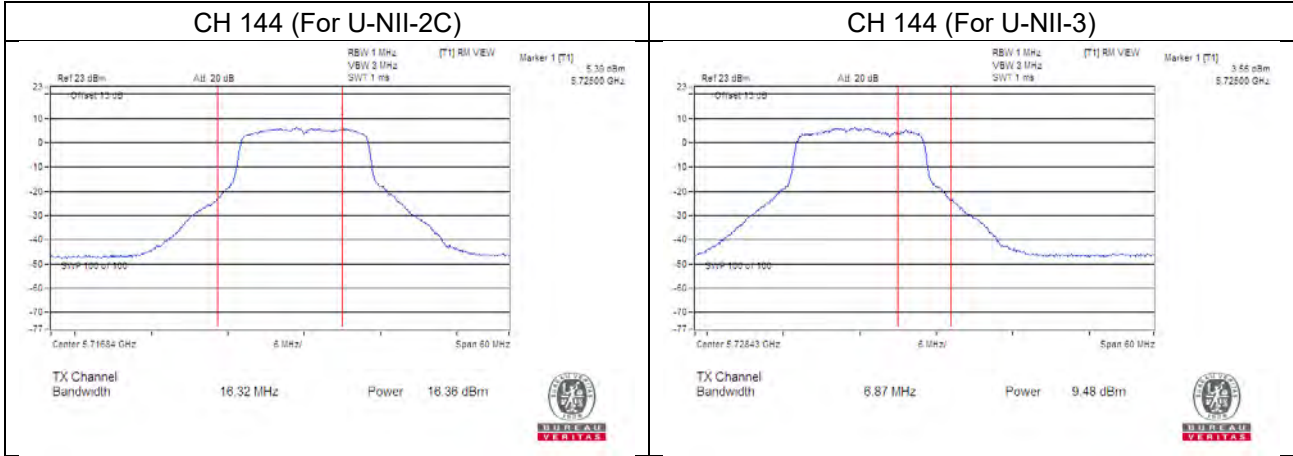
Chain B

1. $11 \text{ dBm} + 10\log (83.51) = 30.22 \text{ dBm} > 24 \text{ dBm}$.
2. $11 \text{ dBm} + 10\log (83.34) = 30.21 \text{ dBm} > 24 \text{ dBm}$.
3. $11 \text{ dBm} + 10\log (83.55) = 30.22 \text{ dBm} > 24 \text{ dBm}$.
4. $11 \text{ dBm} + 10\log (76.72) = 29.85 \text{ dBm} > 24 \text{ dBm}$.

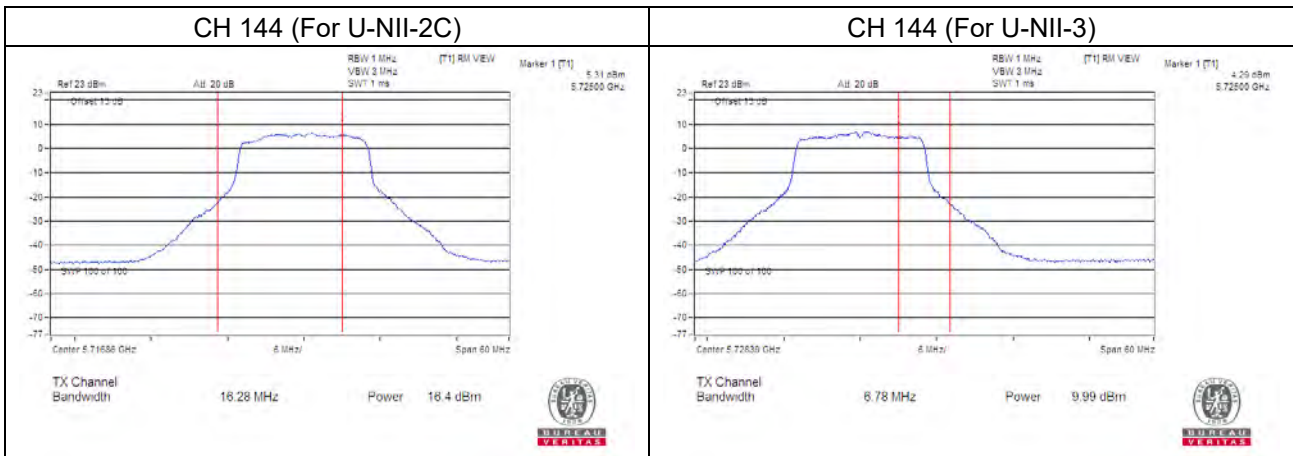
Straddle channel power plots:

802.11a

Chain A

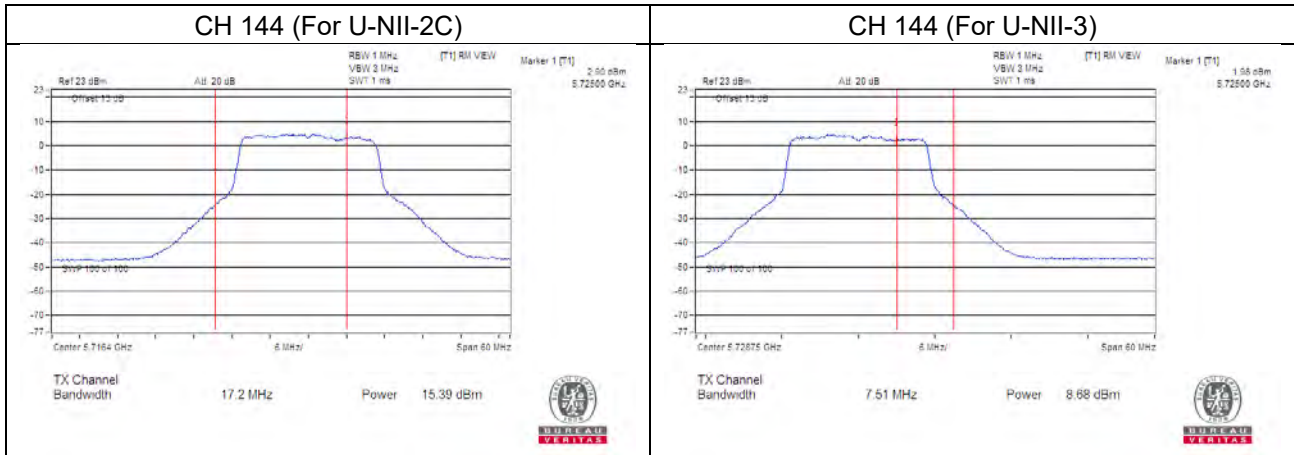


Chain B

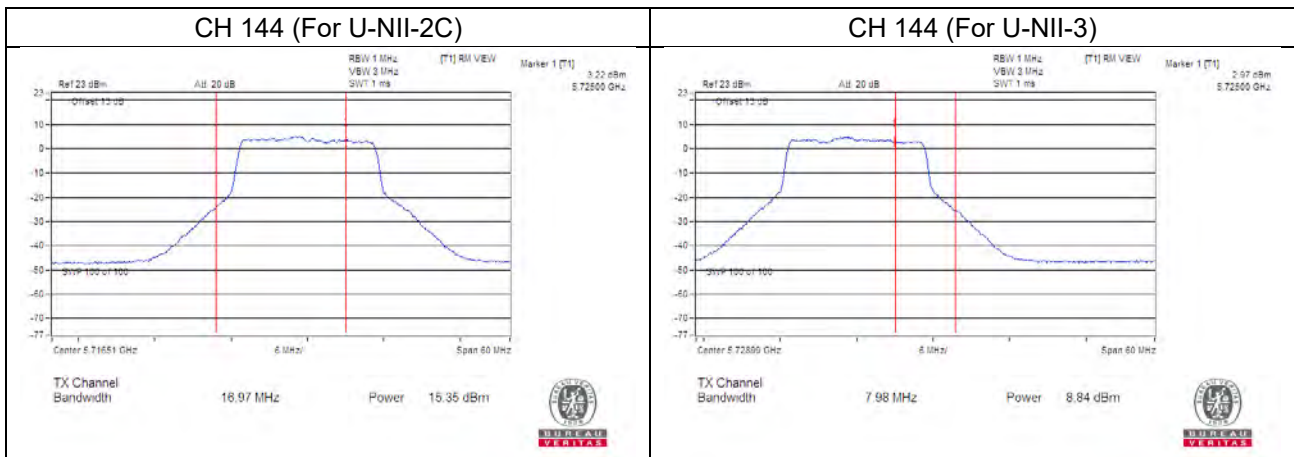


802.11ac (VHT20)

Chain A

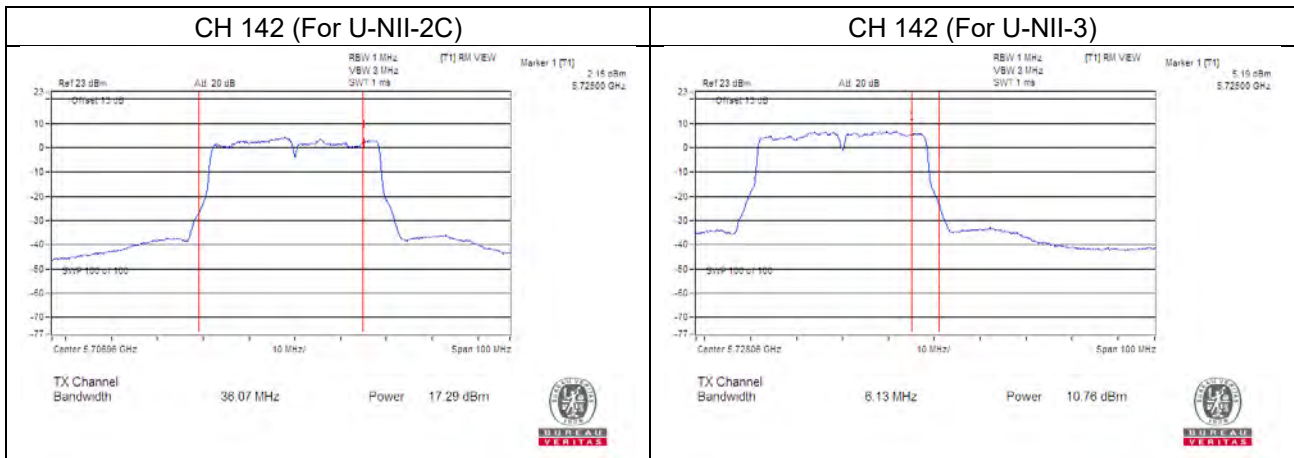


Chain B

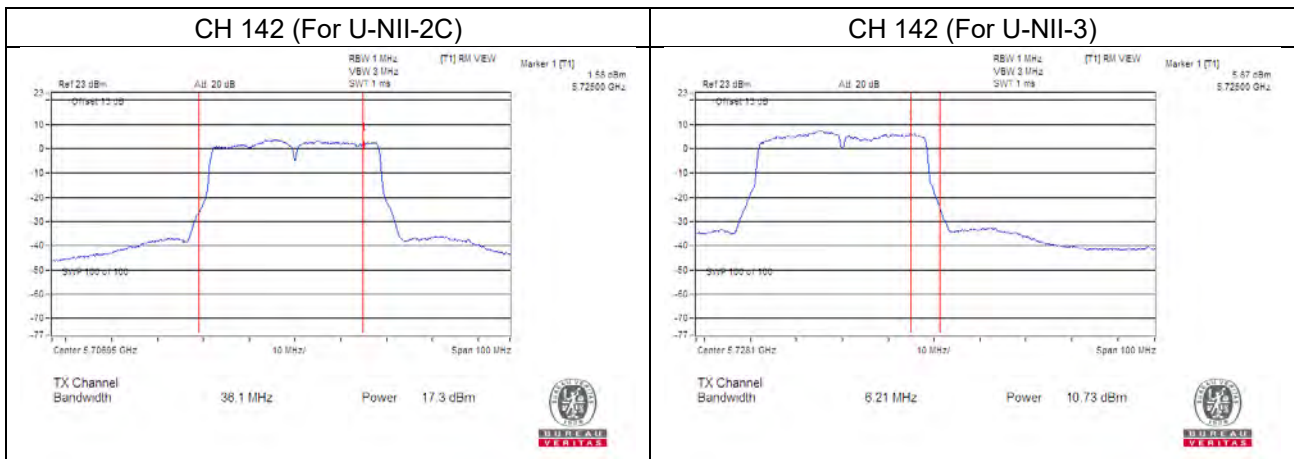


802.11ac (VHT40)

Chain A

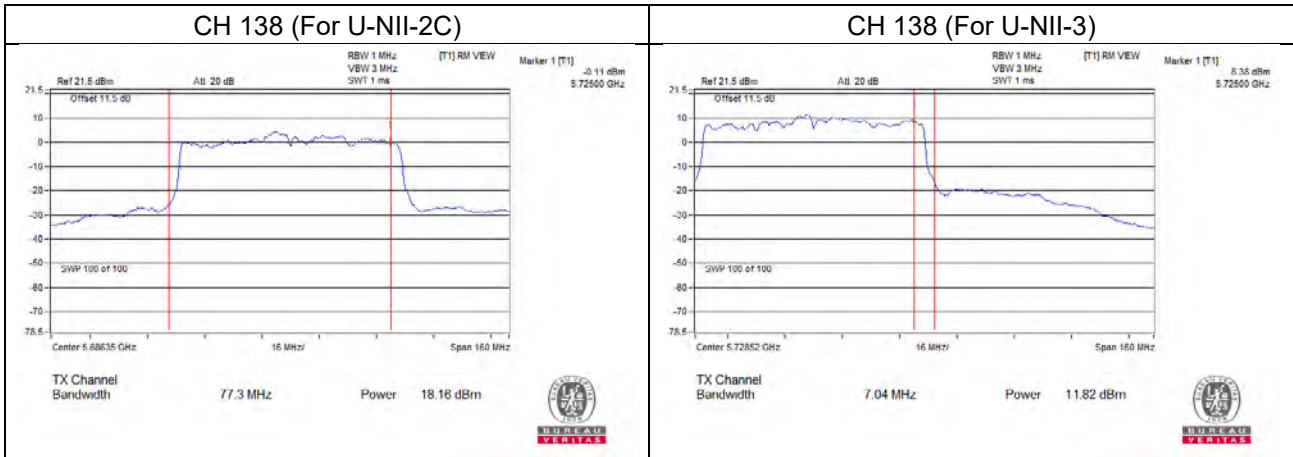


Chain B

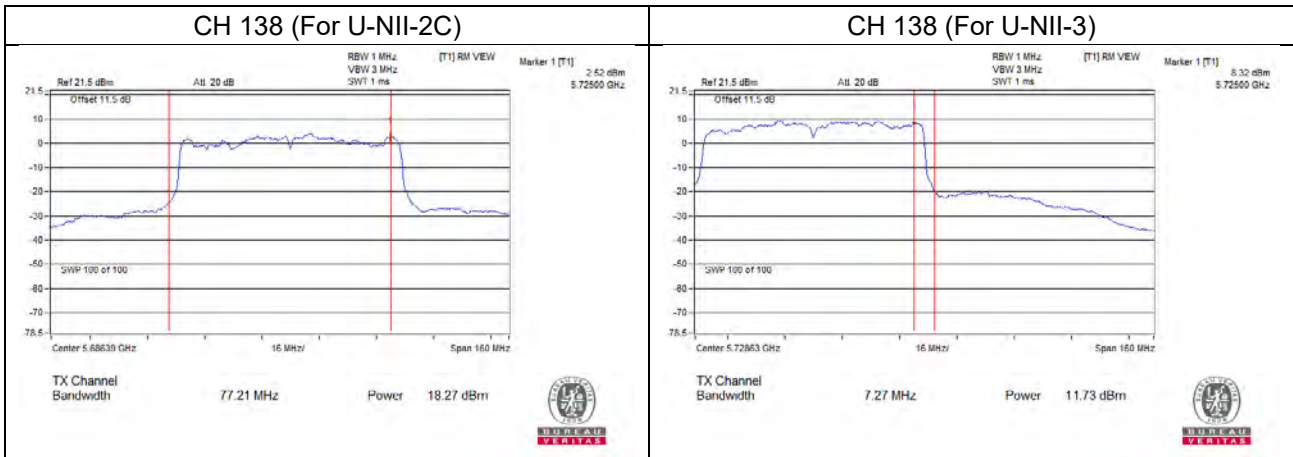


802.11ac (VHT80)

Chain A



Chain B



**26 dB Bandwidth:
802.11a**

| Channel | Frequency (MHz) | 26 dBc Bandwidth (MHz) | |
|---------|-----------------|------------------------|---------|
| | | Chain A | Chain B |
| 36 | 5180 | 20.73 | 20.87 |
| 40 | 5200 | 21.09 | 20.82 |
| 48 | 5240 | 21.00 | 20.89 |
| 52 | 5260 | 21.04 | 20.87 |
| 60 | 5300 | 20.78 | 20.84 |
| 64 | 5320 | 21.03 | 20.86 |
| 100 | 5500 | 20.83 | 20.86 |
| 116 | 5580 | 20.76 | 20.87 |
| 140 | 5700 | 20.74 | 20.89 |
| 144 | 5720 (U-NII-2C) | 15.43 | 15.50 |
| 144 | 5720 (U-NII-3) | 5.39 | 5.41 |

802.11ac (VHT20)

| Channel | Frequency (MHz) | 26 dBc Bandwidth (MHz) | |
|---------|-----------------|------------------------|---------|
| | | Chain A | Chain B |
| 36 | 5180 | 21.48 | 21.33 |
| 40 | 5200 | 21.11 | 21.25 |
| 48 | 5240 | 21.13 | 21.35 |
| 52 | 5260 | 21.25 | 21.40 |
| 60 | 5300 | 21.31 | 21.41 |
| 64 | 5320 | 21.12 | 21.48 |
| 100 | 5500 | 21.10 | 21.27 |
| 116 | 5580 | 21.00 | 21.37 |
| 140 | 5700 | 21.00 | 21.28 |
| 144 | 5720 (U-NII-2C) | 15.56 | 15.61 |
| 144 | 5720 (U-NII-3) | 5.72 | 5.77 |

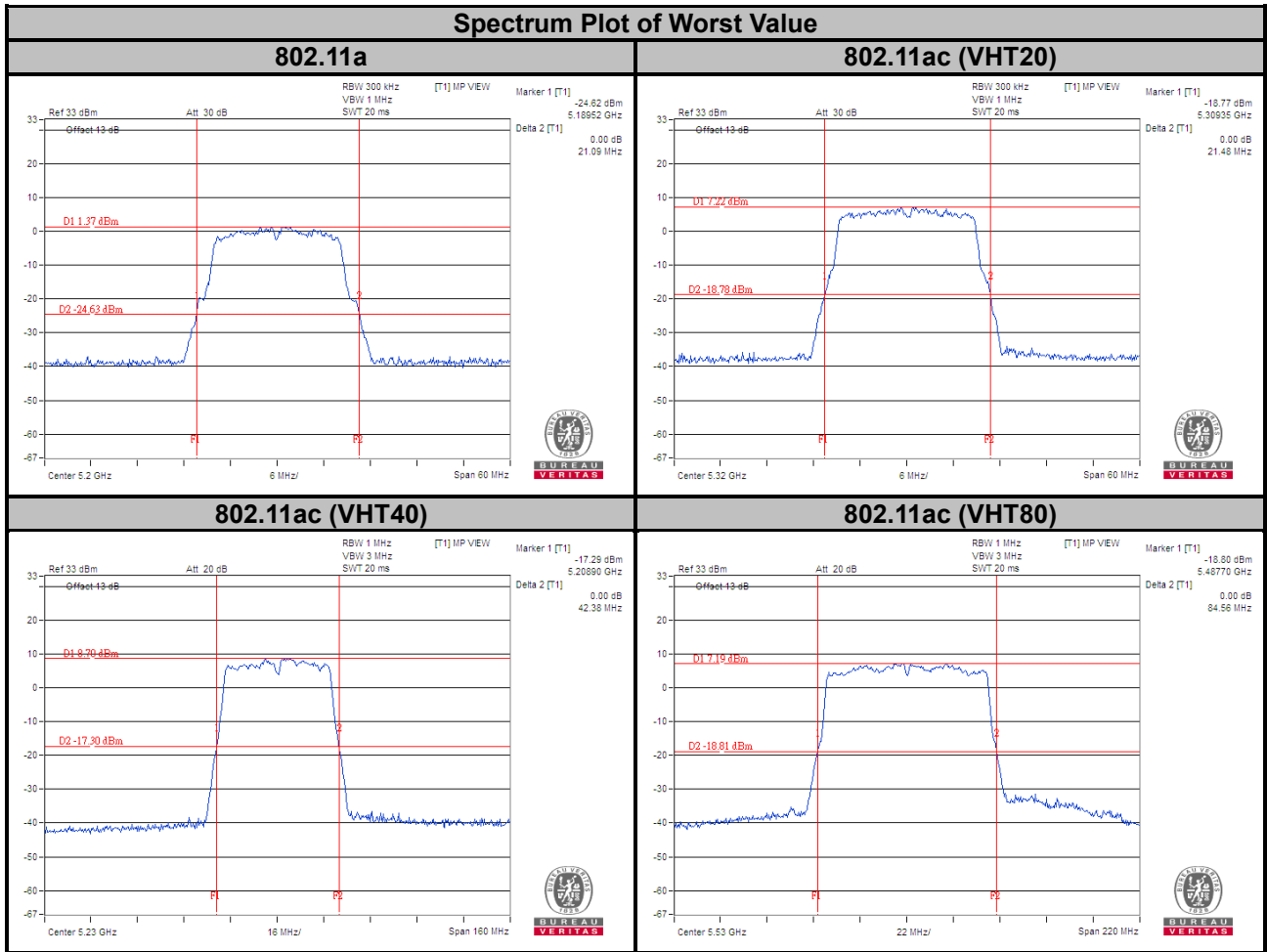
802.11ac (VHT40)

| Channel | Frequency (MHz) | 26 dBc Bandwidth (MHz) | |
|---------|-----------------|------------------------|---------|
| | | Chain A | Chain B |
| 38 | 5190 | 42.22 | 42.16 |
| 46 | 5230 | 42.03 | 42.38 |
| 54 | 5270 | 42.09 | 42.17 |
| 62 | 5310 | 42.21 | 42.29 |
| 102 | 5510 | 41.96 | 42.20 |
| 110 | 5550 | 41.90 | 42.25 |
| 134 | 5670 | 42.09 | 42.09 |
| 142 | 5710 (U-NII-2C) | 35.94 | 36.05 |
| 142 | 5710 (U-NII-3) | 5.94 | 6.08 |

802.11ac (VHT80)

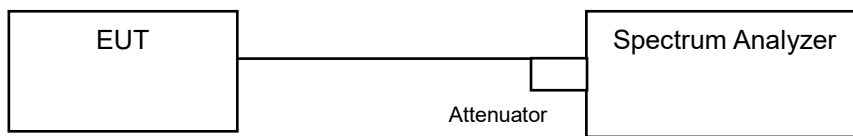
| Channel | Frequency (MHz) | 26 dBc Bandwidth (MHz) | |
|---------|-----------------|------------------------|---------|
| | | Chain A | Chain B |
| 42 | 5210 | 84.26 | 83.49 |
| 58 | 5290 | 83.93 | 83.51 |
| 106 | 5530 | 84.56 | 83.34 |
| 122 | 5610 | 83.89 | 83.55 |
| 138 | 5690 (U-NII-2C) | 77.26 | 76.72 |
| 138 | 5690 (U-NII-3) | 7.34 | 6.94 |

Spectrum Plot of Worst Value



4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1 % to 5 % of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to SAMPLE. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

4.4.4 Test Results

SISO_Chain A

802.11a

| Channel | Channel Frequency (MHz) | Occupied Bandwidth (MHz) |
|---------|-------------------------|--------------------------|
| 36 | 5180 | 16.56 |
| 40 | 5200 | 16.56 |
| 48 | 5240 | 16.56 |
| 52 | 5260 | 16.56 |
| 60 | 5300 | 16.68 |
| 64 | 5320 | 16.68 |
| 100 | 5500 | 16.56 |
| 116 | 5580 | 16.68 |
| 140 | 5700 | 16.68 |
| 144 | 5720 (U-NII-2C) | 13.40 |
| 144 | 5720 (U-NII-3) | 3.28 |
| 149 | 5745 | 16.68 |
| 157 | 5785 | 16.56 |
| 165 | 5825 | 16.68 |

802.11ac (VHT20)

| Channel | Channel Frequency (MHz) | Occupied Bandwidth (MHz) |
|---------|-------------------------|--------------------------|
| 36 | 5180 | 17.76 |
| 40 | 5200 | 17.76 |
| 48 | 5240 | 17.76 |
| 52 | 5260 | 17.76 |
| 60 | 5300 | 17.76 |
| 64 | 5320 | 17.76 |
| 100 | 5500 | 17.76 |
| 116 | 5580 | 17.76 |
| 140 | 5700 | 17.76 |
| 144 | 5720 (U-NII-2C) | 13.88 |
| 144 | 5720 (U-NII-3) | 3.88 |
| 149 | 5745 | 17.76 |
| 157 | 5785 | 17.76 |
| 165 | 5825 | 17.76 |

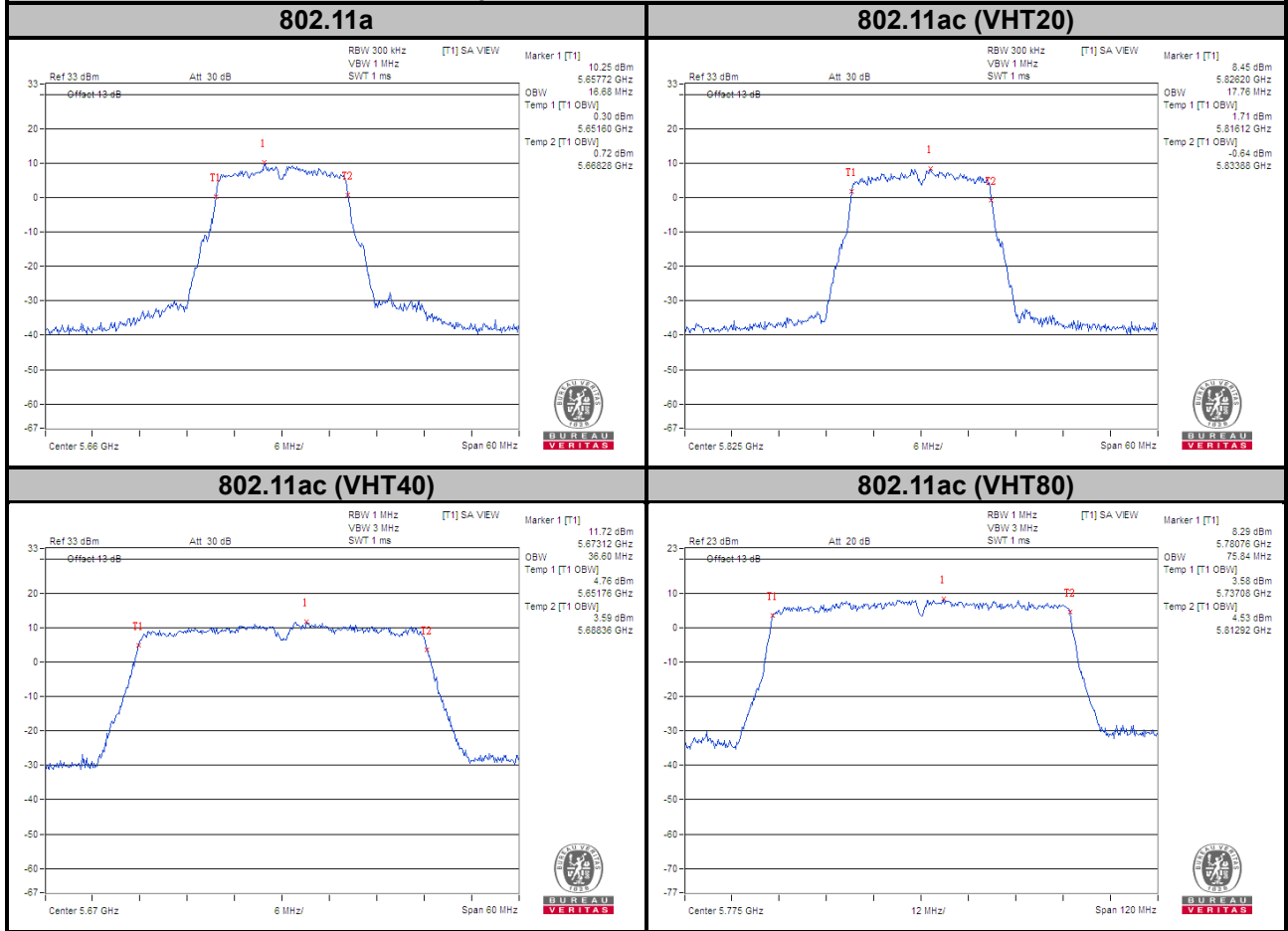
802.11ac (VHT40)

| Channel | Channel Frequency (MHz) | Occupied Bandwidth (MHz) |
|---------|-------------------------|--------------------------|
| 38 | 5190 | 36.60 |
| 46 | 5230 | 36.48 |
| 54 | 5270 | 36.60 |
| 62 | 5310 | 36.60 |
| 102 | 5510 | 36.60 |
| 110 | 5550 | 36.60 |
| 134 | 5670 | 36.60 |
| 142 | 5710 (U-NII-2C) | 33.36 |
| 142 | 5710 (U-NII-3) | 3.36 |
| 151 | 5755 | 36.48 |
| 159 | 5795 | 36.48 |

802.11ac (VHT80)

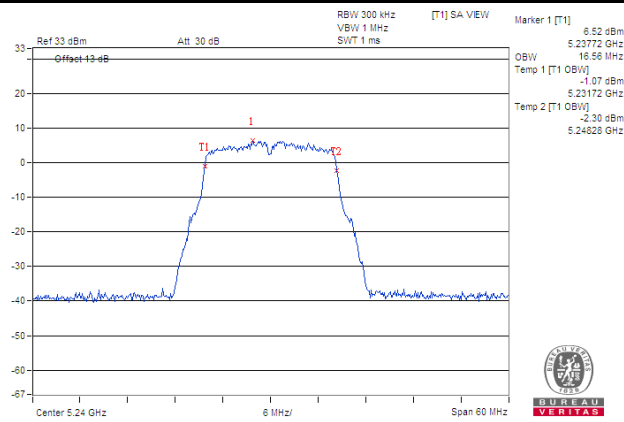
| Channel | Channel Frequency (MHz) | Occupied Bandwidth (MHz) |
|---------|-------------------------|--------------------------|
| 42 | 5210 | 75.84 |
| 58 | 5290 | 75.84 |
| 106 | 5530 | 75.84 |
| 122 | 5610 | 75.84 |
| 138 | 5690 (U-NII-2C) | 72.92 |
| 138 | 5690 (U-NII-3) | 2.92 |
| 155 | 5775 | 75.84 |

Spectrum Plot of Worst Value

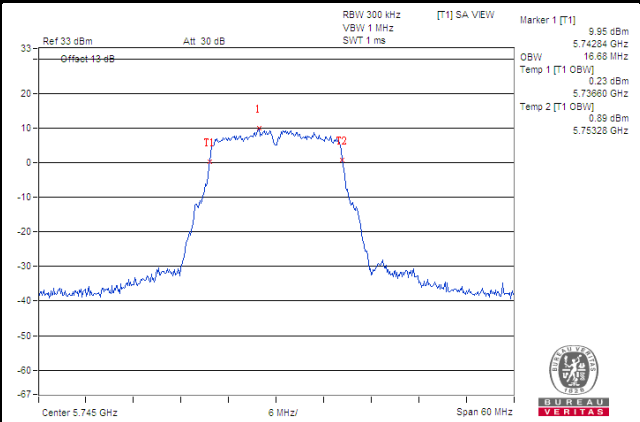


Spectrum Plot for Nearby DFS Band 802.11a

Ch 48 (5240 MHz)

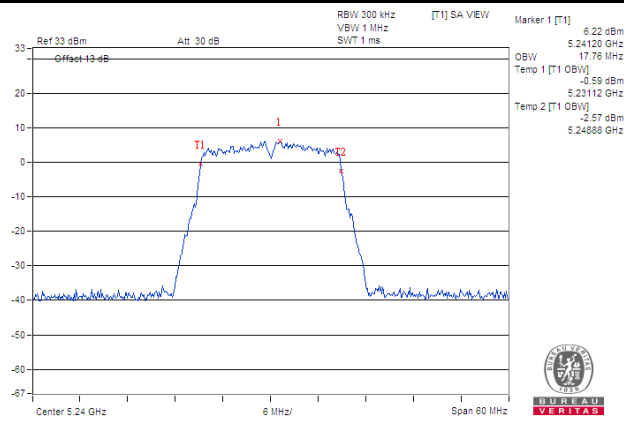


Ch 149 (5745 MHz)

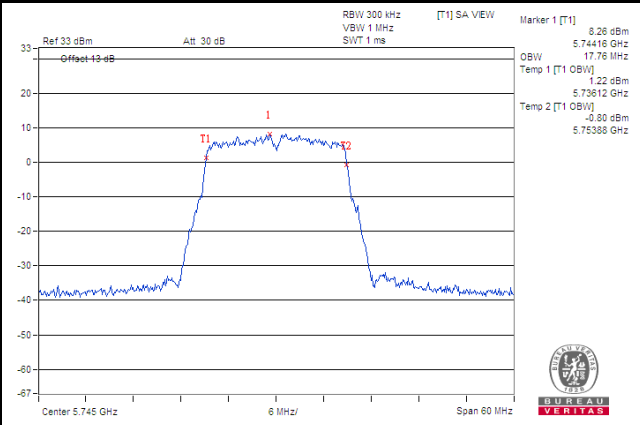


802.11ac (VHT20)

Ch 48 (5240 MHz)

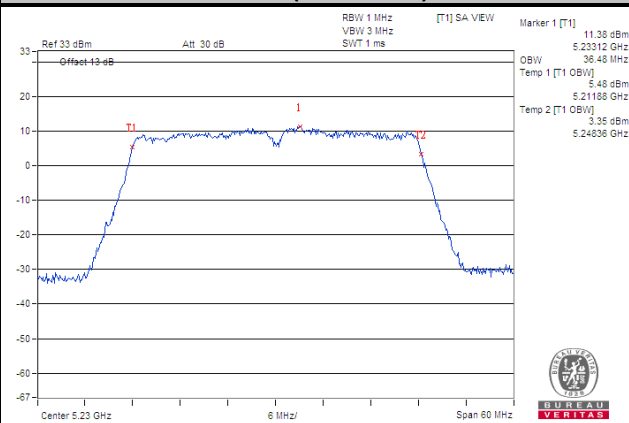


Ch 149 (5745 MHz)

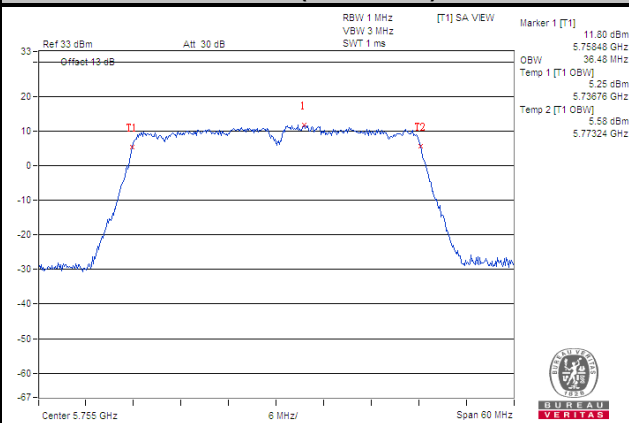


802.11ac (VHT40)

Ch 46 (5230 MHz)

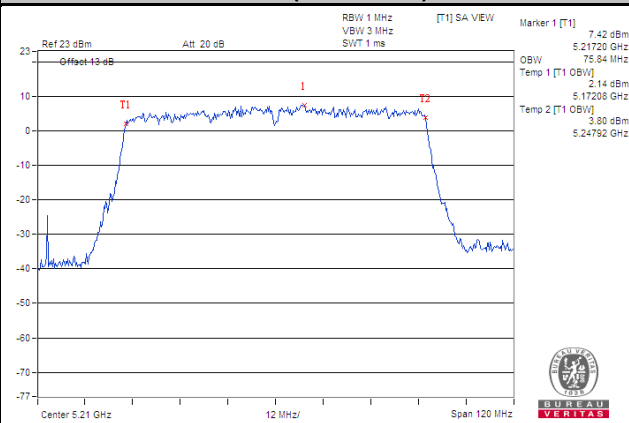


Ch 151 (5755 MHz)

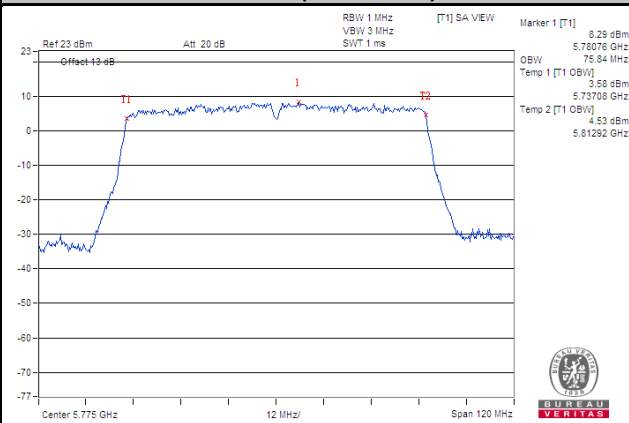


802.11ac (VHT80)

Ch 42 (5210 MHz)



Ch 155 (5775 MHz)



SISO_Chain B
802.11a

| Channel | Channel Frequency (MHz) | Occupied Bandwidth (MHz) |
|---------|-------------------------|--------------------------|
| 36 | 5180 | 16.56 |
| 40 | 5200 | 16.56 |
| 48 | 5240 | 16.56 |
| 52 | 5260 | 16.56 |
| 60 | 5300 | 16.68 |
| 64 | 5320 | 16.68 |
| 100 | 5500 | 16.68 |
| 116 | 5580 | 16.68 |
| 140 | 5700 | 16.68 |
| 144 | 5720 (U-NII-2C) | 13.40 |
| 144 | 5720 (U-NII-3) | 3.28 |
| 149 | 5745 | 16.68 |
| 157 | 5785 | 16.68 |
| 165 | 5825 | 16.68 |

802.11ac (VHT20)

| Channel | Channel Frequency (MHz) | Occupied Bandwidth (MHz) |
|---------|-------------------------|--------------------------|
| 36 | 5180 | 17.76 |
| 40 | 5200 | 17.76 |
| 48 | 5240 | 17.76 |
| 52 | 5260 | 17.76 |
| 60 | 5300 | 17.76 |
| 64 | 5320 | 17.76 |
| 100 | 5500 | 17.76 |
| 116 | 5580 | 17.76 |
| 140 | 5700 | 17.76 |
| 144 | 5720 (U-NII-2C) | 13.88 |
| 144 | 5720 (U-NII-3) | 3.88 |
| 149 | 5745 | 17.76 |
| 157 | 5785 | 17.76 |
| 165 | 5825 | 17.76 |

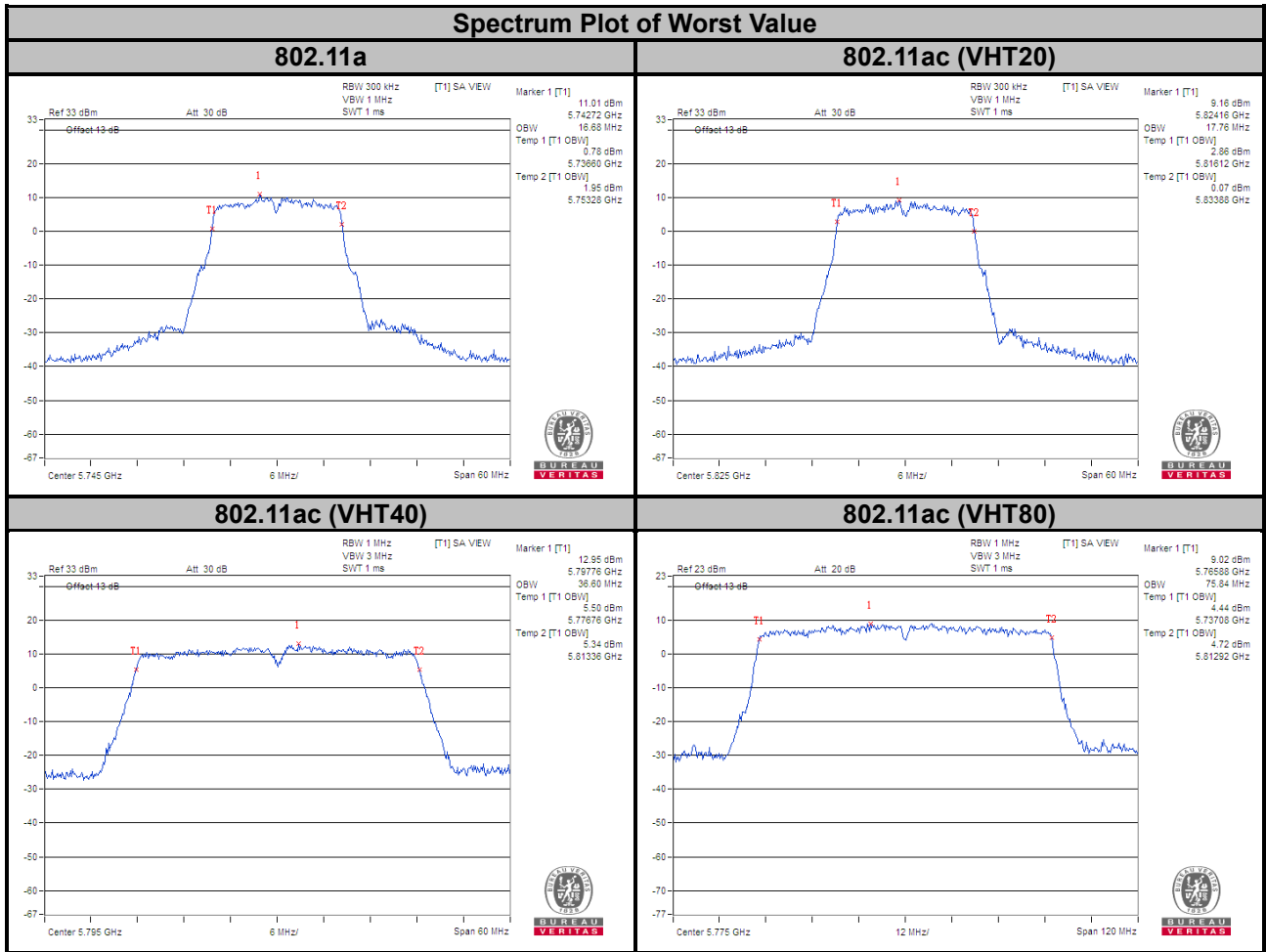
802.11ac (VHT40)

| Channel | Channel Frequency (MHz) | Occupied Bandwidth (MHz) |
|---------|-------------------------|--------------------------|
| 38 | 5190 | 36.60 |
| 46 | 5230 | 36.60 |
| 54 | 5270 | 36.60 |
| 62 | 5310 | 36.60 |
| 102 | 5510 | 36.48 |
| 110 | 5550 | 36.48 |
| 134 | 5670 | 36.48 |
| 142 | 5710 (U-NII-2C) | 33.24 |
| 142 | 5710 (U-NII-3) | 3.24 |
| 151 | 5755 | 36.48 |
| 159 | 5795 | 36.60 |

802.11ac (VHT80)

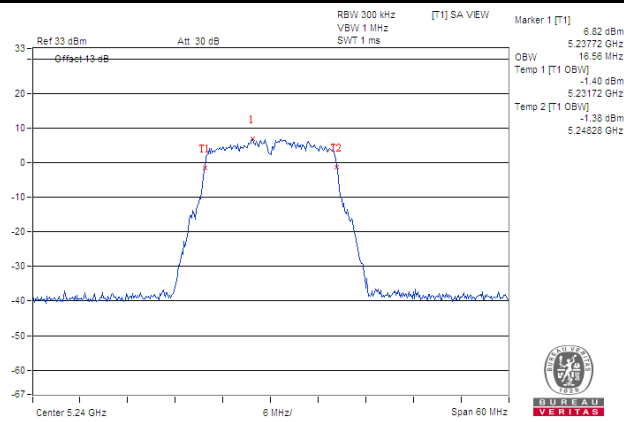
| Channel | Channel Frequency (MHz) | Occupied Bandwidth (MHz) |
|---------|-------------------------|--------------------------|
| 42 | 5210 | 75.84 |
| 58 | 5290 | 75.84 |
| 106 | 5530 | 75.84 |
| 122 | 5610 | 75.84 |
| 138 | 5690 (U-NII-2C) | 72.92 |
| 138 | 5690 (U-NII-3) | 2.92 |
| 155 | 5775 | 75.84 |

Spectrum Plot of Worst Value

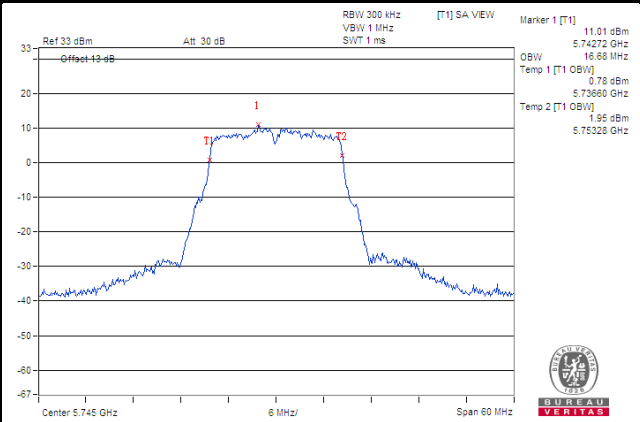


Spectrum Plot for Nearby DFS Band 802.11a

Ch 48 (5240 MHz)

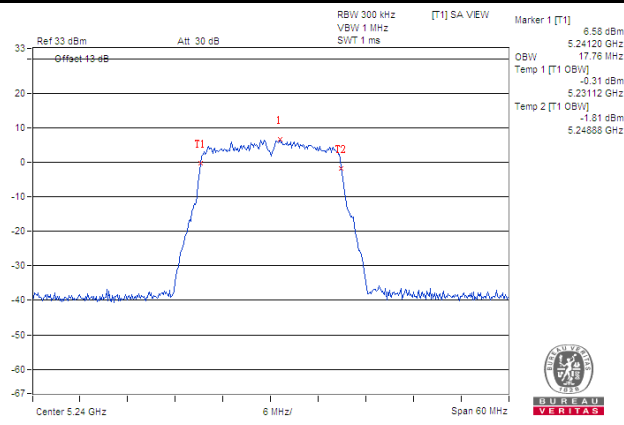


Ch 149 (5745 MHz)

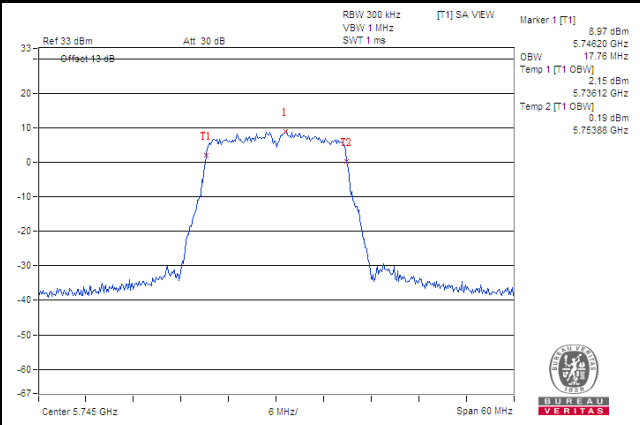


802.11ac (VHT20)

Ch 48 (5240 MHz)

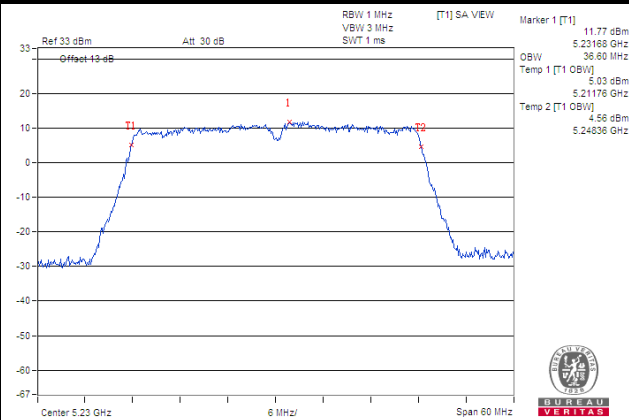


Ch 149 (5745 MHz)

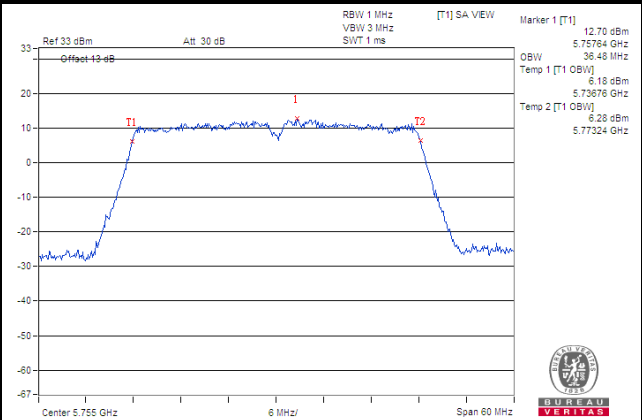


802.11ac (VHT40)

Ch 46 (5230 MHz)

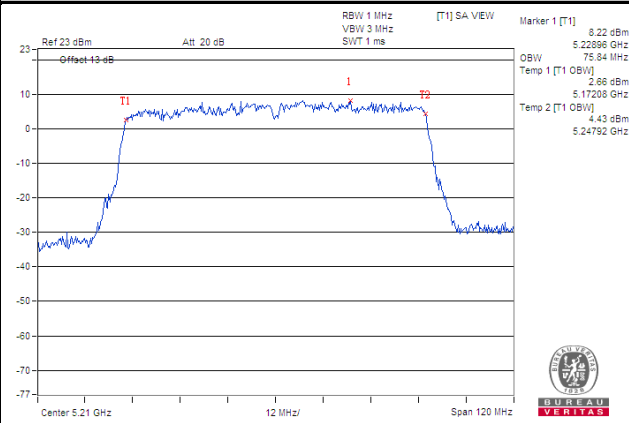


Ch 151 (5755 MHz)

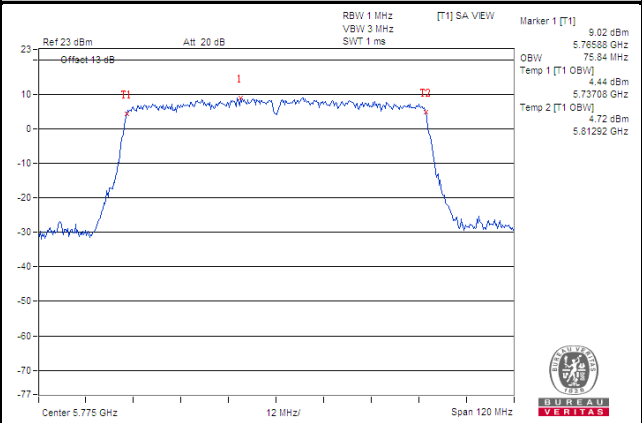


802.11ac (VHT80)

Ch 42 (5210 MHz)



Ch 155 (5775 MHz)



MIMO
802.11a

| Channel | Channel Frequency (MHz) | Occupied Bandwidth (MHz) | |
|---------|-------------------------|--------------------------|---------|
| | | Chain A | Chain B |
| 36 | 5180 | 16.68 | 16.56 |
| 40 | 5200 | 16.56 | 16.56 |
| 48 | 5240 | 16.68 | 16.56 |
| 52 | 5260 | 16.56 | 16.56 |
| 60 | 5300 | 16.68 | 16.56 |
| 64 | 5320 | 16.68 | 16.56 |
| 100 | 5500 | 16.68 | 16.56 |
| 116 | 5580 | 16.68 | 16.56 |
| 140 | 5700 | 16.56 | 16.56 |
| 144 | 5720 (U-NII-2C) | 13.40 | 13.28 |
| 144 | 5720 (U-NII-3) | 3.28 | 3.28 |
| 149 | 5745 | 16.80 | 16.56 |
| 157 | 5785 | 16.68 | 16.56 |
| 165 | 5825 | 16.68 | 16.56 |

802.11ac (VHT20)

| Channel | Channel Frequency (MHz) | Occupied Bandwidth (MHz) | |
|---------|-------------------------|--------------------------|---------|
| | | Chain A | Chain B |
| 36 | 5180 | 17.88 | 17.76 |
| 40 | 5200 | 17.76 | 17.76 |
| 48 | 5240 | 17.76 | 17.76 |
| 52 | 5260 | 17.88 | 17.76 |
| 60 | 5300 | 17.76 | 17.76 |
| 64 | 5320 | 17.76 | 17.76 |
| 100 | 5500 | 17.64 | 17.76 |
| 116 | 5580 | 17.64 | 17.76 |
| 140 | 5700 | 17.76 | 17.64 |
| 144 | 5720 (U-NII-2C) | 14.00 | 13.88 |
| 144 | 5720 (U-NII-3) | 3.88 | 3.76 |
| 149 | 5745 | 17.88 | 17.64 |
| 157 | 5785 | 17.88 | 17.76 |
| 165 | 5825 | 17.76 | 17.76 |

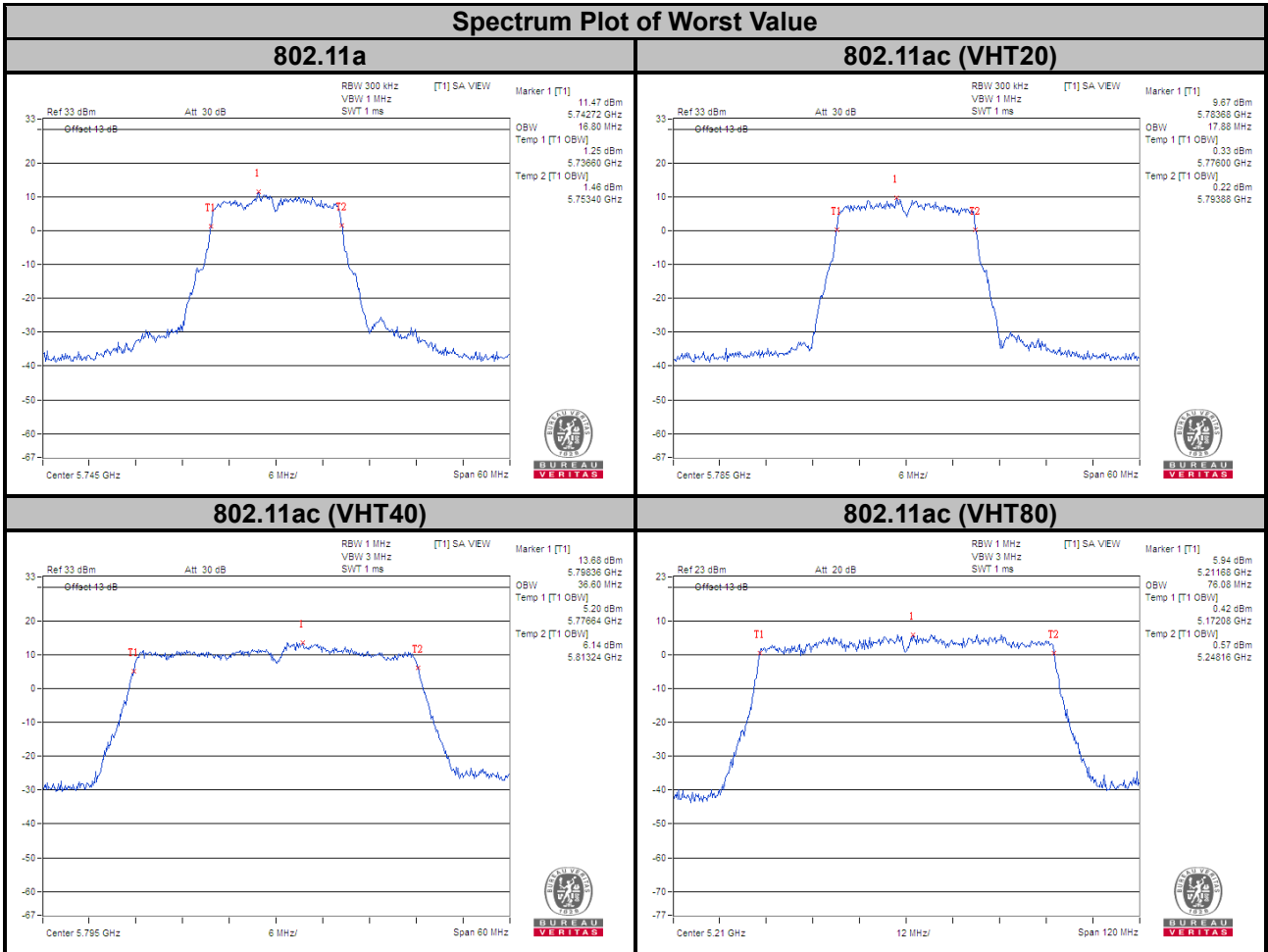
802.11ac (VHT40)

| Channel | Channel Frequency (MHz) | Occupied Bandwidth (MHz) | |
|---------|-------------------------|--------------------------|---------|
| | | Chain A | Chain B |
| 38 | 5190 | 36.48 | 36.60 |
| 46 | 5230 | 36.60 | 36.60 |
| 54 | 5270 | 36.48 | 36.48 |
| 62 | 5310 | 36.48 | 36.60 |
| 102 | 5510 | 36.36 | 36.48 |
| 110 | 5550 | 36.36 | 36.48 |
| 134 | 5670 | 36.48 | 36.48 |
| 142 | 5710 (U-NII-2C) | 33.36 | 33.24 |
| 142 | 5710 (U-NII-3) | 3.24 | 3.24 |
| 151 | 5755 | 36.60 | 36.60 |
| 159 | 5795 | 36.60 | 36.48 |

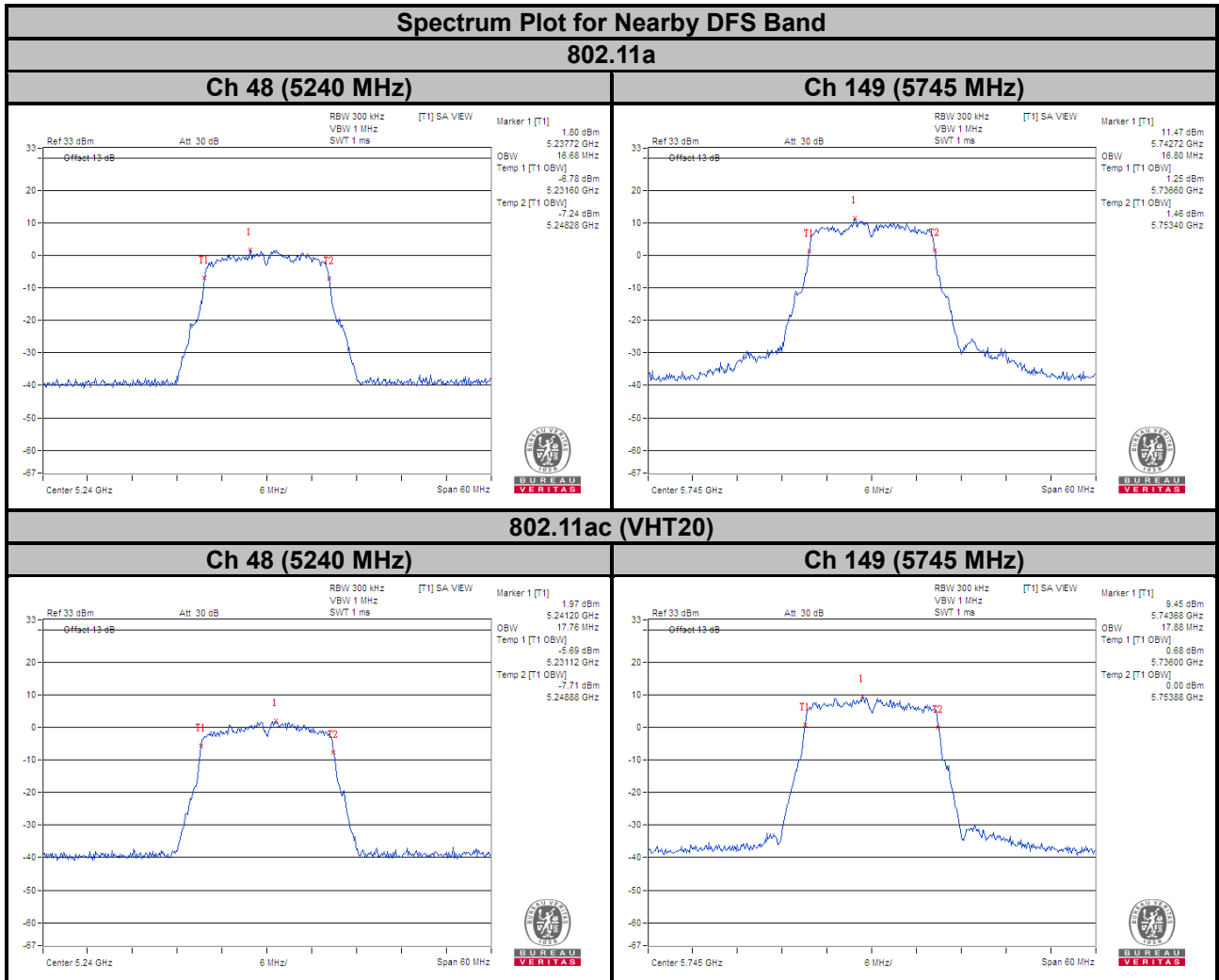
802.11ac (VHT80)

| Channel | Channel Frequency (MHz) | Occupied Bandwidth (MHz) | |
|---------|-------------------------|--------------------------|---------|
| | | Chain A | Chain B |
| 42 | 5210 | 76.08 | 75.84 |
| 58 | 5290 | 75.84 | 75.84 |
| 106 | 5530 | 75.84 | 75.84 |
| 122 | 5610 | 75.84 | 75.84 |
| 138 | 5690 (U-NII-2C) | 72.92 | 72.92 |
| 138 | 5690 (U-NII-3) | 2.92 | 2.92 |
| 155 | 5775 | 75.84 | 75.84 |

Spectrum Plot of Worst Value

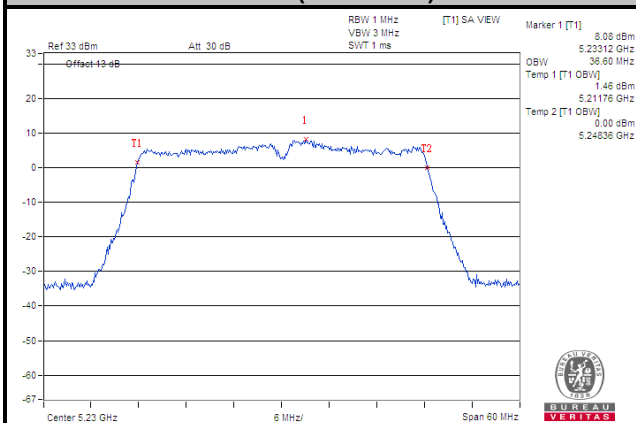


Chain A

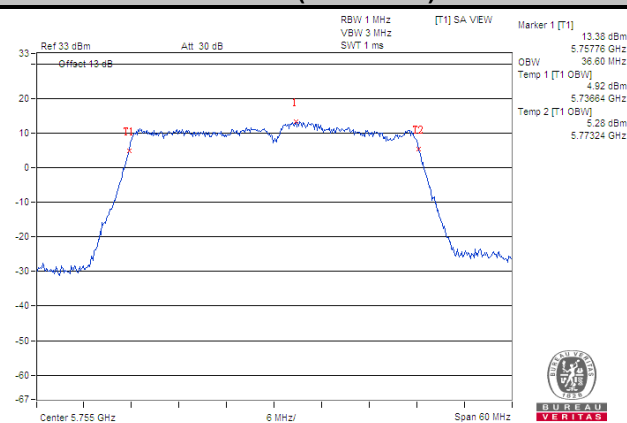


802.11ac (VHT40)

Ch 46 (5230 MHz)

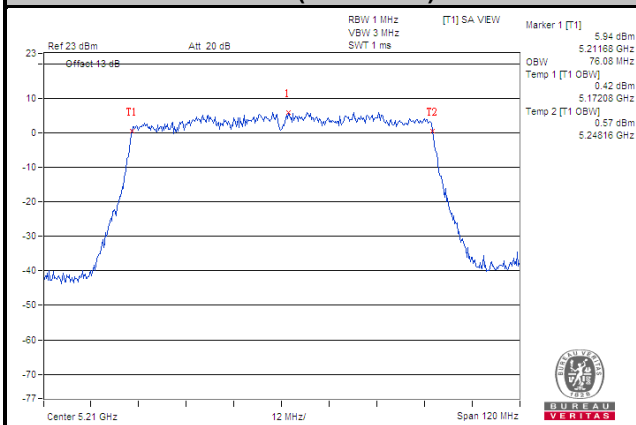


Ch 151 (5755 MHz)

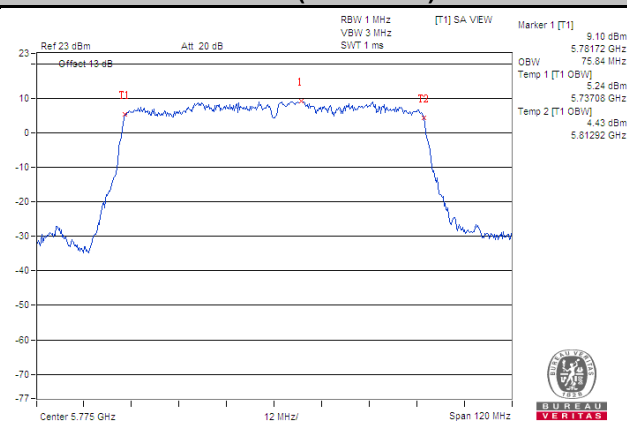


802.11ac (VHT80)

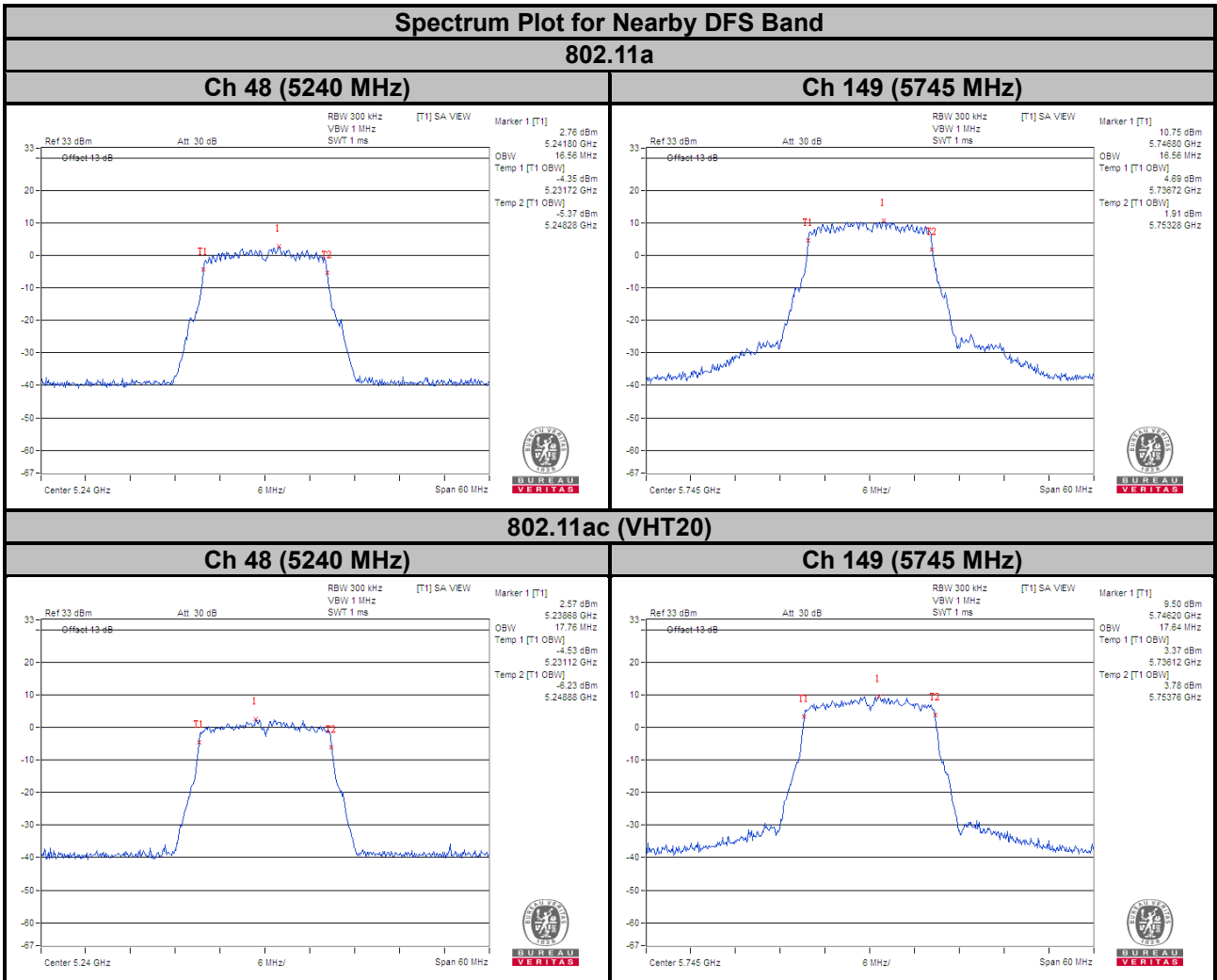
Ch 42 (5210 MHz)



Ch 155 (5775 MHz)

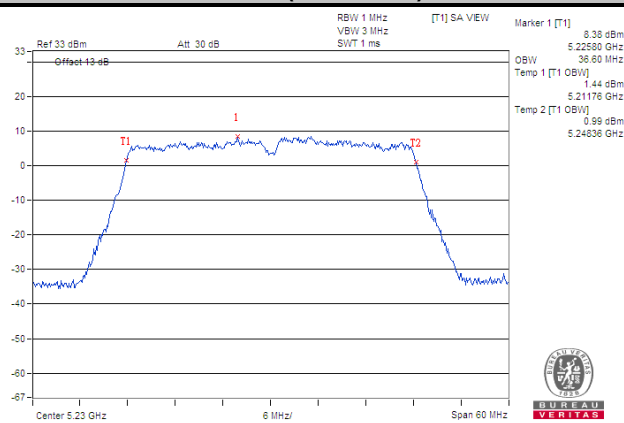


Chain B

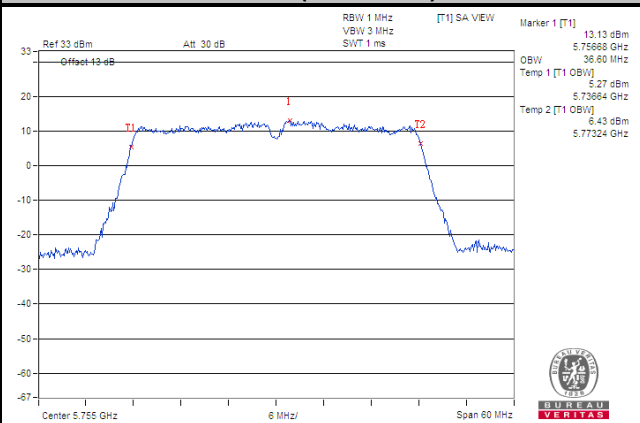


802.11ac (VHT40)

Ch 46 (5230 MHz)

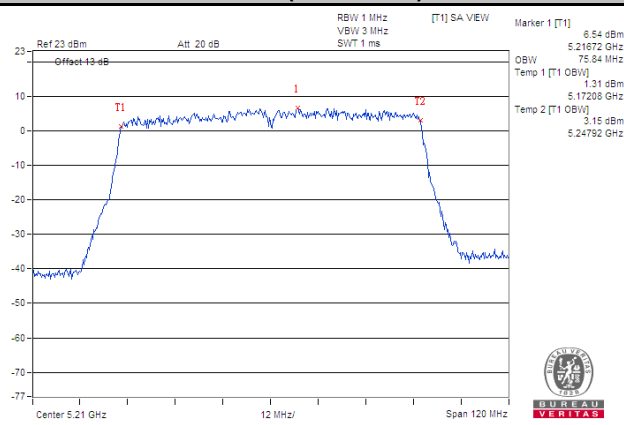


Ch 151 (5755 MHz)

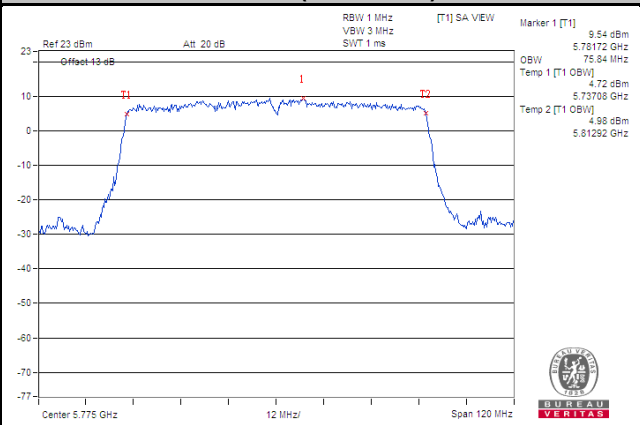


802.11ac (VHT80)

Ch 42 (5210 MHz)



Ch 155 (5775 MHz)

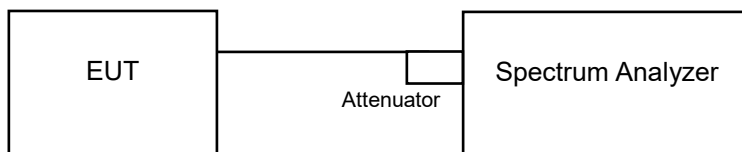


4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

| Operation Band | EUT Category | | Limit |
|----------------|--------------|-----------------------------------|----------------|
| U-NII-1 | | Outdoor Access Point | 17 dBm/MHz |
| | | Fixed point-to-point Access Point | |
| | | Indoor Access Point | |
| | √ | Mobile and Portable client device | 11 dBm/MHz |
| U-NII-2A | | √ | 11 dBm/MHz |
| U-NII-2C | | √ | 11 dBm/MHz |
| U-NII-3 | | √ | 30 dBm/500 kHz |

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

For U-NII-1, U-NII-2A, U-NII-2C band:

Using method SA-1 (Duty cycle $\geq 98\%$)

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW ≥ 3 RBW, Detector = RMS
3. Sweep time = auto, trigger set to "free run".
4. Trace average at least 100 traces in power averaging mode.
5. Record the max value

Using method SA-2 (Duty cycle $< 98\%$)

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW ≥ 3 RBW, Detector = RMS
3. Sweep time = auto, trigger set to "free run".
4. Trace average at least 100 traces in power averaging mode.
5. Record the max value and add $10 \log (1/\text{duty cycle})$

※For U-NII-3: without duty cycle & Duty cycle >98 %

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW \geq 3 RBW, Detector = RMS
3. Use the peak marker function to determine the maximum power level in any 1 MHz band segment within the fundamental EBW.
4. Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(500 \text{ kHz}/1 \text{ MHz})$
5. Sweep time = auto, trigger set to "free run".
6. Trace average at least 100 traces in power averaging mode.
7. Record the max value

※For U-NII-3: with duty cycle & Duty cycle <98 %

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW \geq 3 RBW, Detector = RMS
3. Use the peak marker function to determine the maximum power level in any 1 MHz band segment within the fundamental EBW.
4. Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(500 \text{ kHz}/1 \text{ MHz})$
5. Sweep time = auto, trigger set to "free run".
6. Trace average at least 100 traces in power averaging mode.
7. Record the max value and add $10 \log (1/\text{duty cycle})$

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.5.7 Test Results

SISO_Chain A

For U-NII-1, U-NII-2A, U-NII-2C Band

802.11a

| Channel | Frequency (MHz) | PSD (dBm/MHz) | Maximum Limit (dBm/MHz) | Pass / Fail |
|---------|-----------------|---------------|-------------------------|-------------|
| 36 | 5180 | 2.81 | 11 | Pass |
| 40 | 5200 | 2.49 | 11 | Pass |
| 48 | 5240 | 2.47 | 11 | Pass |
| 52 | 5260 | 5.05 | 11 | Pass |
| 60 | 5300 | 5.24 | 11 | Pass |
| 64 | 5320 | 5.04 | 11 | Pass |
| 100 | 5500 | 5.11 | 11 | Pass |
| 116 | 5580 | 5.12 | 11 | Pass |
| 140 | 5700 | 5.37 | 11 | Pass |
| 144 | 5720 (U-NII-2C) | 5.42 | 11 | Pass |

802.11ac (VHT20)

| Channel | Frequency (MHz) | PSD w/o Duty Factor (dBm) | Duty Factor (dB) | PSD with Duty Factor (dBm) | Maximum Limit (dBm) | Pass / Fail |
|---------|-----------------|---------------------------|------------------|----------------------------|---------------------|-------------|
| 36 | 5180 | 2.19 | 0.14 | 2.33 | 11 | Pass |
| 40 | 5200 | 1.93 | 0.14 | 2.07 | 11 | Pass |
| 48 | 5240 | 1.93 | 0.14 | 2.07 | 11 | Pass |
| 52 | 5260 | 3.53 | 0.14 | 3.67 | 11 | Pass |
| 60 | 5300 | 3.67 | 0.14 | 3.81 | 11 | Pass |
| 64 | 5320 | 3.41 | 0.14 | 3.55 | 11 | Pass |
| 100 | 5500 | 3.53 | 0.14 | 3.67 | 11 | Pass |
| 116 | 5580 | 3.57 | 0.14 | 3.71 | 11 | Pass |
| 140 | 5700 | 3.83 | 0.14 | 3.97 | 11 | Pass |
| 144 | 5720 (U-NII-2C) | 3.90 | 0.14 | 4.04 | 11 | Pass |

Note:

1. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT40)

| Channel | Frequency (MHz) | PSD w/o Duty Factor (dBm) | Duty Factor (dB) | PSD with Duty Factor (dBm) | Maximum Limit (dBm) | Pass / Fail |
|---------|-----------------|---------------------------|------------------|----------------------------|---------------------|-------------|
| 38 | 5190 | 1.07 | 0.17 | 1.24 | 11 | Pass |
| 46 | 5230 | 0.78 | 0.17 | 0.95 | 11 | Pass |
| 54 | 5270 | 1.00 | 0.17 | 1.17 | 11 | Pass |
| 62 | 5310 | -0.90 | 0.17 | -0.73 | 11 | Pass |
| 102 | 5510 | -1.00 | 0.17 | -0.83 | 11 | Pass |
| 110 | 5550 | 0.95 | 0.17 | 1.12 | 11 | Pass |
| 134 | 5670 | 1.10 | 0.17 | 1.27 | 11 | Pass |
| 142 | 5710 (U-NII-2C) | 1.31 | 0.17 | 1.48 | 11 | Pass |

Note:

1. Refer to section 3.3 for duty cycle spectrum plot.

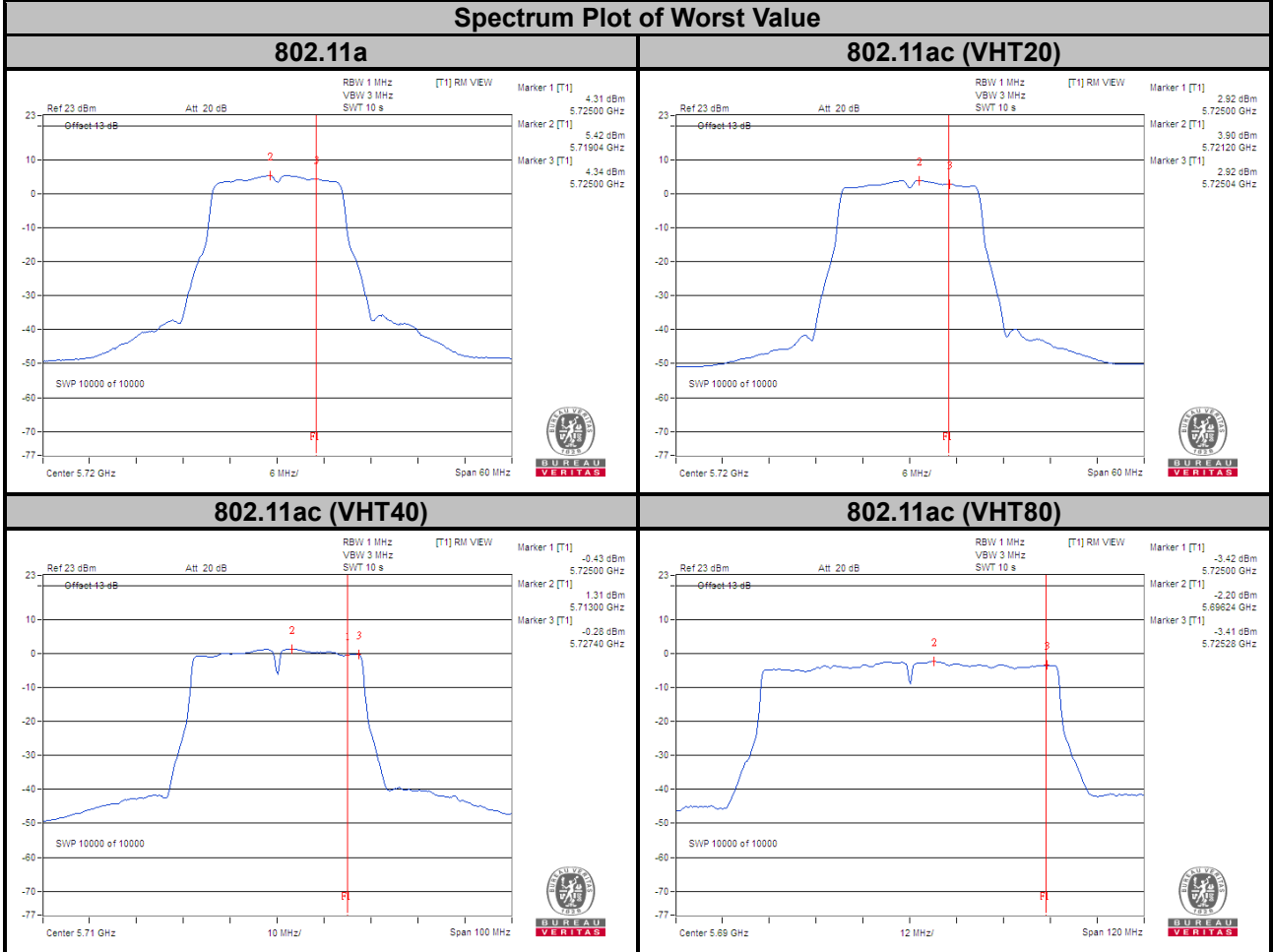
802.11ac (VHT80):

| Channel | Frequency (MHz) | PSD w/o Duty Factor (dBm) | Duty Factor (dB) | PSD with Duty Factor (dBm) | Maximum Limit (dBm) | Pass / Fail |
|---------|-----------------|---------------------------|------------------|----------------------------|---------------------|-------------|
| 42 | 5210 | -2.60 | 0.37 | -2.23 | 11 | Pass |
| 58 | 5290 | -5.06 | 0.37 | -4.69 | 11 | Pass |
| 106 | 5530 | -4.42 | 0.37 | -4.05 | 11 | Pass |
| 122 | 5610 | -2.35 | 0.37 | -1.98 | 11 | Pass |
| 138 | 5690 (U-NII-2C) | -2.20 | 0.37 | -1.83 | 11 | Pass |

Note:

1. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value



For U-NII-3 Band

802.11a

| Channel | Freq. (MHz) | PSD (dBm/1000 kHz) | PSD (dBm/500 kHz) | Limit (dBm/500 kHz) | Pass / Fail |
|---------|----------------|--------------------|-------------------|---------------------|-------------|
| 144 | 5720 (U-NII-3) | 4.36 | 1.35 | 30 | Pass |
| 149 | 5745 | 5.49 | 2.48 | 30 | Pass |
| 157 | 5785 | 5.57 | 2.56 | 30 | Pass |
| 165 | 5825 | 5.73 | 2.72 | 30 | Pass |

802.11ac (VHT20)

| Channel | Frequency (MHz) | PSD w/o Duty Factor | | Duty Factor (dB) | PSD with Duty Factor (dBm/500 kHz) | Limit (dBm/500 kHz) | Pass / Fail |
|---------|-----------------|---------------------|---------------|------------------|------------------------------------|---------------------|-------------|
| | | (dBm/1000 kHz) | (dBm/500 kHz) | | | | |
| 144 | 5720 (U-NII-3) | 2.9 | -0.11 | 0.14 | 0.03 | 30 | Pass |
| 149 | 5745 | 3.97 | 0.96 | 0.14 | 1.1 | 30 | Pass |
| 157 | 5785 | 4.04 | 1.03 | 0.14 | 1.17 | 30 | Pass |
| 165 | 5825 | 4.22 | 1.21 | 0.14 | 1.35 | 30 | Pass |

Note:

1. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT40)

| Channel | Frequency (MHz) | PSD w/o Duty Factor | | Duty Factor (dB) | PSD with Duty Factor (dBm/500 kHz) | Limit (dBm/500 kHz) | Pass / Fail |
|---------|-----------------|---------------------|---------------|------------------|------------------------------------|---------------------|-------------|
| | | (dBm/1000 kHz) | (dBm/500 kHz) | | | | |
| 142 | 5710 (U-NII-3) | -0.2 | -3.21 | 0.17 | -3.04 | 30 | Pass |
| 151 | 5755 | 1.51 | -1.5 | 0.17 | -1.33 | 30 | Pass |
| 159 | 5795 | 1.6 | -1.41 | 0.17 | -1.24 | 30 | Pass |

Note:

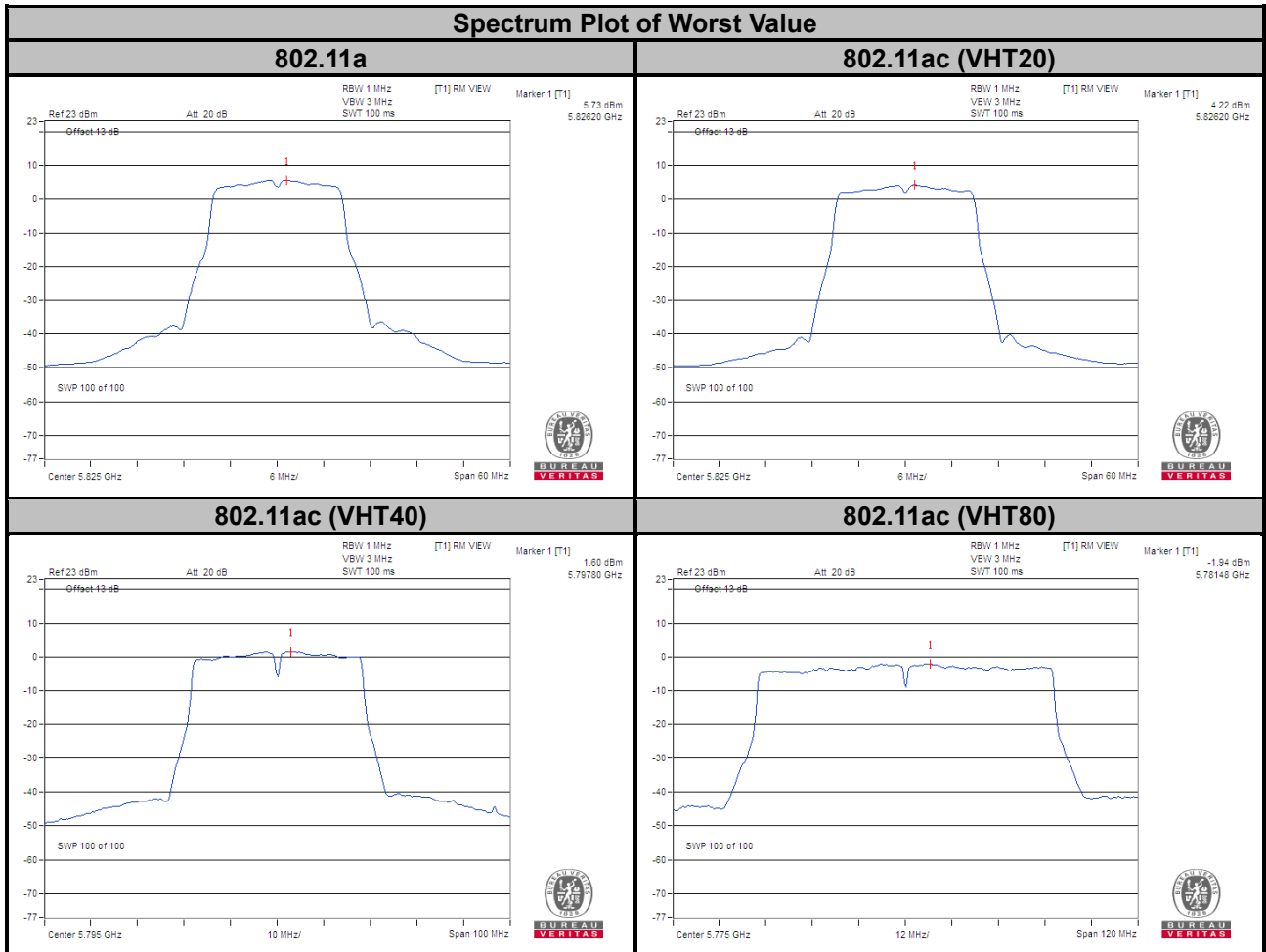
1. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80):

| Channel | Frequency (MHz) | PSD w/o Duty Factor | | Duty Factor (dB) | PSD with Duty Factor (dBm/500 kHz) | Limit (dBm/500 kHz) | Pass / Fail |
|---------|-----------------|---------------------|---------------|------------------|------------------------------------|---------------------|-------------|
| | | (dBm/1000 kHz) | (dBm/500 kHz) | | | | |
| 138 | 5690 (U-NII-3) | -3.38 | -6.39 | 0.37 | -6.02 | 30 | Pass |
| 155 | 5775 | -1.94 | -4.95 | 0.37 | -4.58 | 30 | Pass |

Note:

1. Refer to section 3.3 for duty cycle spectrum plot.



SISO_Chain B

For U-NII-1, U-NII-2A, U-NII-2C Band

802.11a

| Channel | Frequency (MHz) | PSD (dBm/MHz) | Maximum Limit (dBm/MHz) | Pass / Fail |
|---------|-----------------|---------------|-------------------------|-------------|
| 36 | 5180 | 3.02 | 11 | Pass |
| 40 | 5200 | 3.21 | 11 | Pass |
| 48 | 5240 | 2.80 | 11 | Pass |
| 52 | 5260 | 5.65 | 11 | Pass |
| 60 | 5300 | 5.73 | 11 | Pass |
| 64 | 5320 | 5.84 | 11 | Pass |
| 100 | 5500 | 5.88 | 11 | Pass |
| 116 | 5580 | 5.96 | 11 | Pass |
| 140 | 5700 | 5.92 | 11 | Pass |
| 144 | 5720 (U-NII-2C) | 6.06 | 11 | Pass |

802.11ac (VHT20)

| Channel | Frequency (MHz) | PSD w/o Duty Factor (dBm) | Duty Factor (dB) | PSD with Duty Factor (dBm) | Maximum Limit (dBm) | Pass / Fail |
|---------|-----------------|---------------------------|------------------|----------------------------|---------------------|-------------|
| 36 | 5180 | 2.32 | 0.09 | 2.41 | 11 | Pass |
| 40 | 5200 | 2.49 | 0.09 | 2.58 | 11 | Pass |
| 48 | 5240 | 2.37 | 0.09 | 2.46 | 11 | Pass |
| 52 | 5260 | 4.31 | 0.09 | 4.40 | 11 | Pass |
| 60 | 5300 | 4.39 | 0.09 | 4.48 | 11 | Pass |
| 64 | 5320 | 4.48 | 0.09 | 4.57 | 11 | Pass |
| 100 | 5500 | 4.53 | 0.09 | 4.62 | 11 | Pass |
| 116 | 5580 | 4.66 | 0.09 | 4.75 | 11 | Pass |
| 140 | 5700 | 4.72 | 0.09 | 4.81 | 11 | Pass |
| 144 | 5720 (U-NII-2C) | 4.73 | 0.09 | 4.82 | 11 | Pass |

Note:

1. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT40)

| Channel | Frequency (MHz) | PSD w/o Duty Factor (dBm) | Duty Factor (dB) | PSD with Duty Factor (dBm) | Maximum Limit (dBm) | Pass / Fail |
|---------|-----------------|---------------------------|------------------|----------------------------|---------------------|-------------|
| 38 | 5190 | 1.58 | 0.19 | 1.77 | 11 | Pass |
| 46 | 5230 | 1.54 | 0.19 | 1.73 | 11 | Pass |
| 54 | 5270 | 1.74 | 0.19 | 1.93 | 11 | Pass |
| 62 | 5310 | -0.39 | 0.19 | -0.20 | 11 | Pass |
| 102 | 5510 | -0.11 | 0.19 | 0.08 | 11 | Pass |
| 110 | 5550 | 2.13 | 0.19 | 2.32 | 11 | Pass |
| 134 | 5670 | 2.04 | 0.19 | 2.23 | 11 | Pass |
| 142 | 5710 (U-NII-2C) | 2.04 | 0.19 | 2.23 | 11 | Pass |

Note:

1. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80):

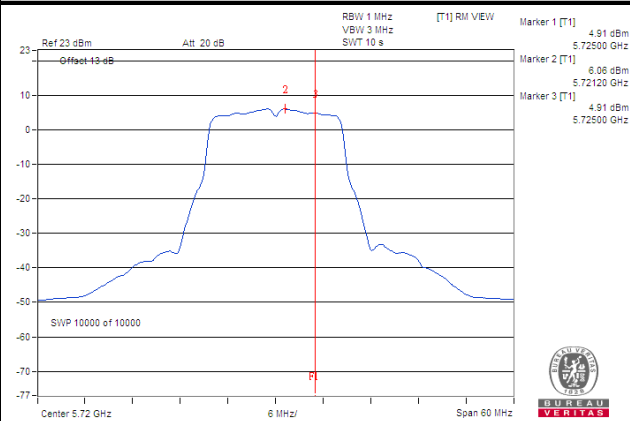
| Channel | Frequency (MHz) | PSD w/o Duty Factor (dBm) | Duty Factor (dB) | PSD with Duty Factor (dBm) | Maximum Limit (dBm) | Pass / Fail |
|---------|-----------------|---------------------------|------------------|----------------------------|---------------------|-------------|
| 42 | 5210 | -1.80 | 0.35 | -1.45 | 11 | Pass |
| 58 | 5290 | -4.22 | 0.35 | -3.87 | 11 | Pass |
| 106 | 5530 | -3.54 | 0.35 | -3.19 | 11 | Pass |
| 122 | 5610 | -1.31 | 0.35 | -0.96 | 11 | Pass |
| 138 | 5690 (U-NII-2C) | -1.27 | 0.35 | -0.92 | 11 | Pass |

Note:

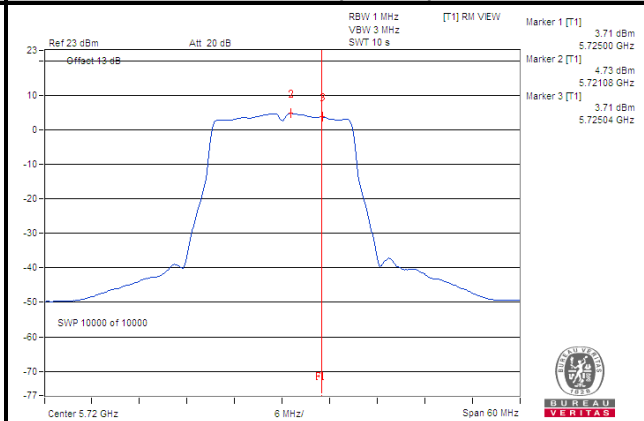
1. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

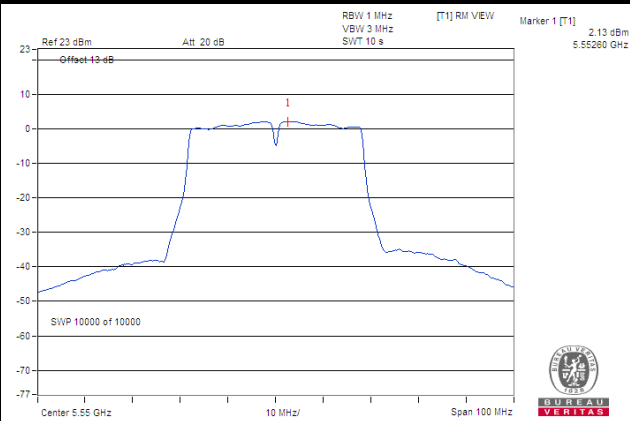
802.11a



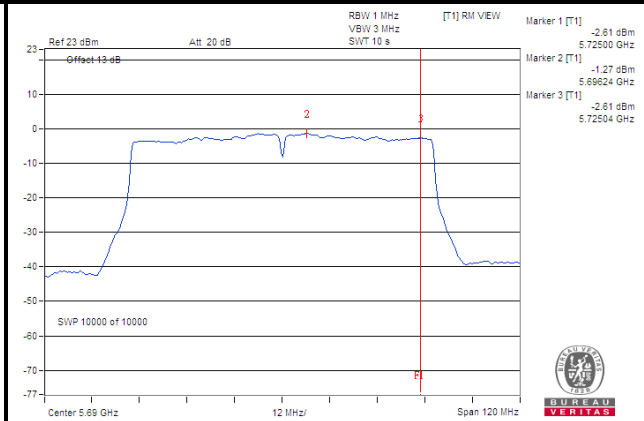
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



For U-NII-3 Band

802.11a

| Channel | Freq. (MHz) | PSD (dBm/1000 kHz) | PSD (dBm/500 kHz) | Limit (dBm/500 kHz) | Pass / Fail |
|---------|----------------|--------------------|-------------------|---------------------|-------------|
| 144 | 5720 (U-NII-3) | 4.89 | 1.88 | 30 | Pass |
| 149 | 5745 | 6.19 | 3.18 | 30 | Pass |
| 157 | 5785 | 6.18 | 3.17 | 30 | Pass |
| 165 | 5825 | 6.35 | 3.34 | 30 | Pass |

802.11ac (VHT20)

| Channel | Frequency (MHz) | PSD w/o Duty Factor | | Duty Factor (dB) | PSD with Duty Factor (dBm/500 kHz) | Limit (dBm/500 kHz) | Pass / Fail |
|---------|-----------------|---------------------|---------------|------------------|------------------------------------|---------------------|-------------|
| | | (dBm/1000 kHz) | (dBm/500 kHz) | | | | |
| 144 | 5720 (U-NII-3) | 3.68 | 0.67 | 0.09 | 0.76 | 30 | Pass |
| 149 | 5745 | 4.73 | 1.72 | 0.09 | 1.81 | 30 | Pass |
| 157 | 5785 | 4.73 | 1.72 | 0.09 | 1.81 | 30 | Pass |
| 165 | 5825 | 4.9 | 1.89 | 0.09 | 1.98 | 30 | Pass |

Note:

1. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT40)

| Channel | Frequency (MHz) | PSD w/o Duty Factor | | Duty Factor (dB) | PSD with Duty Factor (dBm/500 kHz) | Limit (dBm/500 kHz) | Pass / Fail |
|---------|-----------------|---------------------|---------------|------------------|------------------------------------|---------------------|-------------|
| | | (dBm/1000 kHz) | (dBm/500 kHz) | | | | |
| 142 | 5710 (U-NII-3) | 0.42 | -2.59 | 0.19 | -2.4 | 30 | Pass |
| 151 | 5755 | 2.21 | -0.8 | 0.19 | -0.61 | 30 | Pass |
| 159 | 5795 | 2.3 | -0.71 | 0.19 | -0.52 | 30 | Pass |

Note:

1. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80):

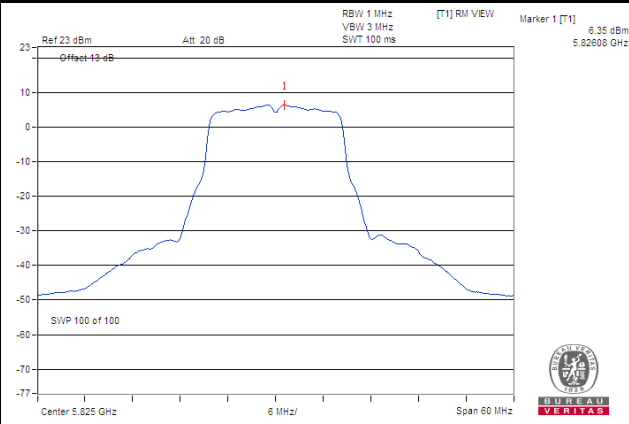
| Channel | Frequency (MHz) | PSD w/o Duty Factor | | Duty Factor (dB) | PSD with Duty Factor (dBm/500 kHz) | Limit (dBm/500 kHz) | Pass / Fail |
|---------|-----------------|---------------------|---------------|------------------|------------------------------------|---------------------|-------------|
| | | (dBm/1000 kHz) | (dBm/500 kHz) | | | | |
| 138 | 5690 (U-NII-3) | -2.63 | -5.64 | 0.35 | -5.29 | 30 | Pass |
| 155 | 5775 | -1.15 | -4.16 | 0.35 | -3.81 | 30 | Pass |

Note:

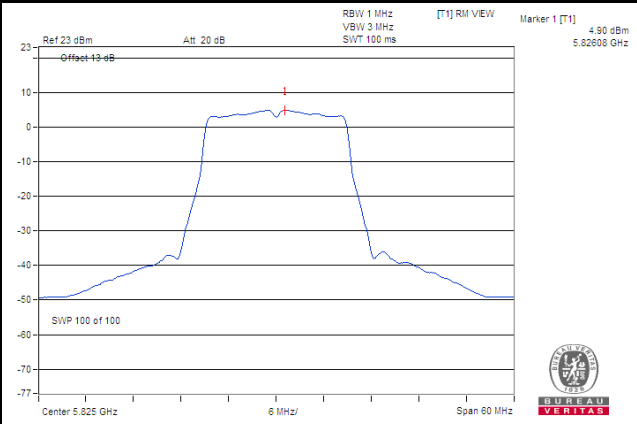
1. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

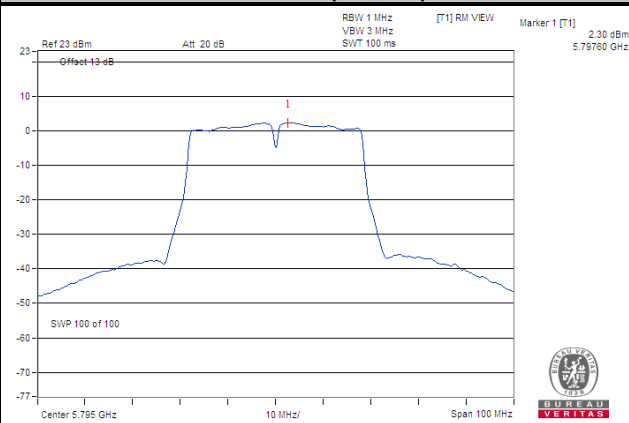
802.11a



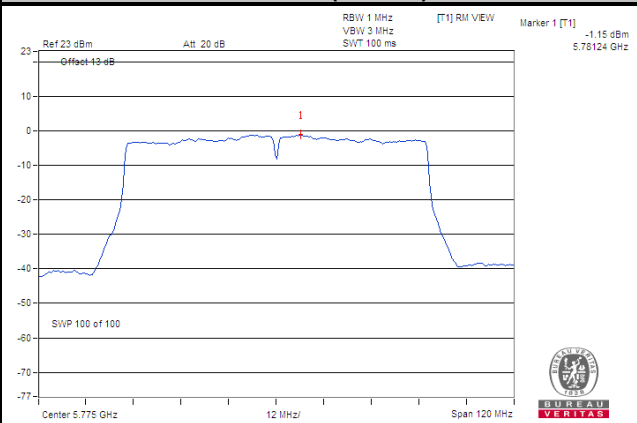
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



MIMO

For U-NII-1, U-NII-2A, U-NII-2C Band

802.11a

| Channel | Frequency (MHz) | PSD (dBm/MHz) | | Total Power Density (dBm/MHz) | Max. Limit (dBm/MHz) | Pass / Fail |
|---------|-----------------|---------------|---------|-------------------------------|----------------------|-------------|
| | | Chain A | Chain B | | | |
| 36 | 5180 | -2.93 | -1.85 | 0.65 | 10.74 | Pass |
| 40 | 5200 | -2.51 | -1.95 | 0.79 | 10.74 | Pass |
| 48 | 5240 | -2.33 | -1.82 | 0.94 | 10.74 | Pass |
| 52 | 5260 | 4.05 | 4.51 | 7.30 | 10.69 | Pass |
| 60 | 5300 | 4.12 | 4.52 | 7.34 | 10.69 | Pass |
| 64 | 5320 | 4.27 | 4.40 | 7.35 | 10.69 | Pass |
| 100 | 5500 | 4.30 | 4.20 | 7.26 | 10.49 | Pass |
| 116 | 5580 | 3.89 | 4.66 | 7.30 | 10.49 | Pass |
| 140 | 5700 | 4.65 | 4.45 | 7.56 | 10.49 | Pass |
| 144 | 5720 (U-NII-2C) | 6.81 | 6.46 | 9.65 | 10.49 | Pass |

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. For U-NII-1 Band:

Correlated, Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.26 \text{ dBi} > 6 \text{ dBi}$, so the power density limit shall be reduced to $11 - (6.26 - 6) = 10.74 \text{ dBm}$.

For U-NII-2A Band:

Correlated, Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.31 \text{ dBi} > 6 \text{ dBi}$, so the power density limit shall be reduced to $11 - (6.31 - 6) = 10.69 \text{ dBm}$.

For U-NII-2C Band:

Correlated, Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.51 \text{ dBi} > 6 \text{ dBi}$, so the power density limit shall be reduced to $11 - (6.51 - 6) = 10.49 \text{ dBm}$.

802.11ac (VHT20)

| Channel | Frequency (MHz) | PSD (dBm/MHz) | | Duty Factor (dB) | Total PSD with Duty Factor (dBm/MHz) | Max. Limit (dBm/MHz) | Pass / Fail |
|---------|-----------------|---------------|---------|------------------|--------------------------------------|----------------------|-------------|
| | | Chain A | Chain B | | | | |
| 36 | 5180 | -3.60 | -1.94 | 0.14 | 0.46 | 10.74 | Pass |
| 40 | 5200 | -2.28 | -2.05 | 0.14 | 0.98 | 10.74 | Pass |
| 48 | 5240 | -2.31 | -1.78 | 0.14 | 1.11 | 10.74 | Pass |
| 52 | 5260 | 1.50 | 2.70 | 0.14 | 5.29 | 10.69 | Pass |
| 60 | 5300 | 2.13 | 2.57 | 0.14 | 5.50 | 10.69 | Pass |
| 64 | 5320 | 2.55 | 2.62 | 0.14 | 5.73 | 10.69 | Pass |
| 100 | 5500 | 3.13 | 3.05 | 0.14 | 6.24 | 10.49 | Pass |
| 116 | 5580 | 3.26 | 3.10 | 0.14 | 6.33 | 10.49 | Pass |
| 140 | 5700 | 3.37 | 3.10 | 0.14 | 6.38 | 10.49 | Pass |
| 144 | 5720 (U-NII-2C) | 4.67 | 5.21 | 0.14 | 8.10 | 10.49 | Pass |

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- For U-NII-1 Band:**
Correlated, Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.26 \text{ dBi} > 6 \text{ dBi}$, so the power density limit shall be reduced to $11-(6.26-6) = 10.74 \text{ dBm}$.
For U-NII-2A Band:
Correlated, Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.31 \text{ dBi} > 6 \text{ dBi}$, so the power density limit shall be reduced to $11-(6.31-6) = 10.69 \text{ dBm}$.
For U-NII-2C Band:
Correlated, Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.51 \text{ dBi} > 6 \text{ dBi}$, so the power density limit shall be reduced to $11-(6.51-6) = 10.49 \text{ dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT40)

| Channel | Frequency (MHz) | PSD (dBm/MHz) | | Duty Factor (dB) | Total PSD with Duty Factor (dBm/MHz) | Max. Limit (dBm/MHz) | Pass / Fail |
|---------|-----------------|---------------|---------|------------------|--------------------------------------|----------------------|-------------|
| | | Chain A | Chain B | | | | |
| 38 | 5190 | -3.00 | -1.89 | 0.17 | 0.77 | 10.74 | Pass |
| 46 | 5230 | -2.36 | -1.93 | 0.17 | 1.04 | 10.74 | Pass |
| 54 | 5270 | 1.49 | 2.28 | 0.17 | 5.08 | 10.69 | Pass |
| 62 | 5310 | -0.13 | 0.12 | 0.17 | 3.18 | 10.69 | Pass |
| 102 | 5510 | -0.10 | 0.24 | 0.17 | 3.25 | 10.49 | Pass |
| 110 | 5550 | 1.44 | 2.67 | 0.17 | 5.28 | 10.49 | Pass |
| 134 | 5670 | 1.80 | 2.24 | 0.17 | 5.21 | 10.49 | Pass |
| 142 | 5710 (U-NII-2C) | 2.83 | 2.07 | 0.17 | 5.65 | 10.49 | Pass |

Note:

- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- For U-NII-1 Band:**
Correlated, Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.26 \text{ dBi} > 6 \text{ dBi}$, so the power density limit shall be reduced to $11-(6.26-6) = 10.74 \text{ dBm}$.
For U-NII-2A Band:
Correlated, Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.31 \text{ dBi} > 6 \text{ dBi}$, so the power density limit shall be reduced to $11-(6.31-6) = 10.69 \text{ dBm}$.
For U-NII-2C Band:
Correlated, Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.51 \text{ dBi} > 6 \text{ dBi}$, so the power density limit shall be reduced to $11-(6.51-6) = 10.49 \text{ dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80):

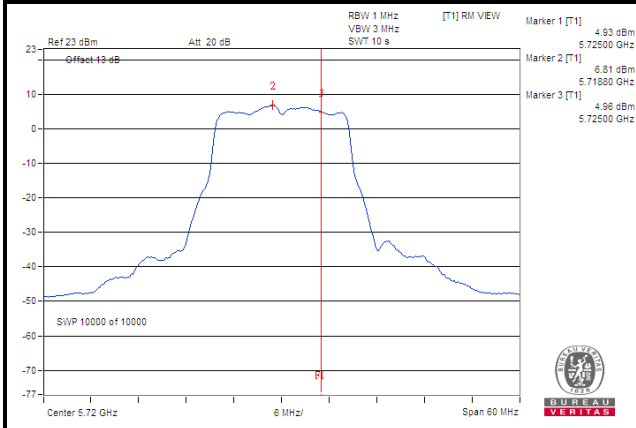
| Channel | Frequency (MHz) | PSD (dBm/MHz) | | Duty Factor (dB) | Total PSD with Duty Factor (dBm/MHz) | Max. Limit (dBm/MHz) | Pass / Fail |
|---------|-----------------|---------------|---------|------------------|--------------------------------------|----------------------|-------------|
| | | Chain A | Chain B | | | | |
| 42 | 5210 | -4.22 | -3.65 | 0.37 | -0.54 | 10.74 | Pass |
| 58 | 5290 | -5.59 | -5.29 | 0.37 | -2.06 | 10.69 | Pass |
| 106 | 5530 | -3.26 | -3.52 | 0.37 | -0.01 | 10.49 | Pass |
| 122 | 5610 | -1.16 | -1.30 | 0.37 | 2.15 | 10.49 | Pass |
| 138 | 5690 (U-NII-2C) | -0.99 | -1.29 | 0.37 | 2.24 | 10.49 | Pass |

Note:

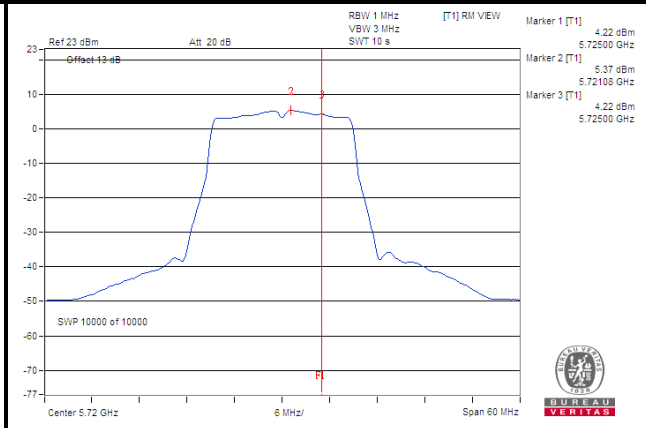
- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- For U-NII-1 Band:**
Correlated, Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.26 \text{ dBi} > 6 \text{ dBi}$, so the power density limit shall be reduced to $11-(6.26-6) = 10.74 \text{ dBm}$.
For U-NII-2A Band:
Correlated, Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.31 \text{ dBi} > 6 \text{ dBi}$, so the power density limit shall be reduced to $11-(6.31-6) = 10.69 \text{ dBm}$.
For U-NII-2C Band:
Correlated, Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.51 \text{ dBi} > 6 \text{ dBi}$, so the power density limit shall be reduced to $11-(6.51-6) = 10.49 \text{ dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

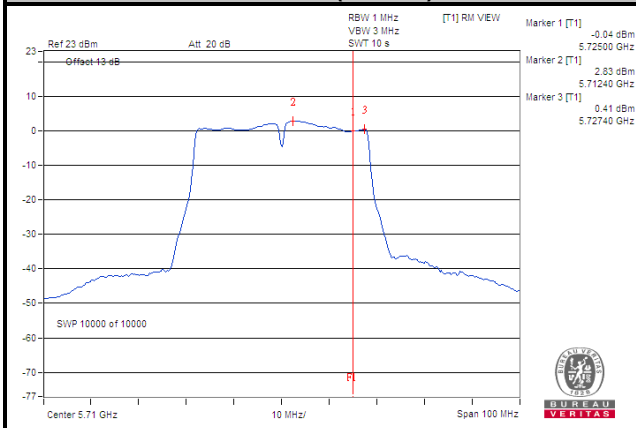
802.11a



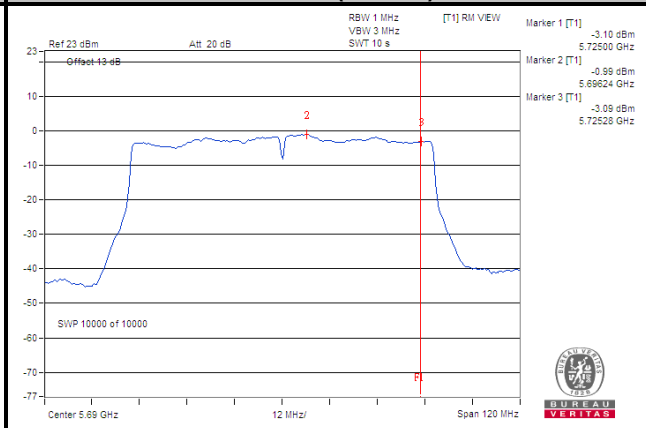
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



For U-NII-3 Band

802.11a:

| TX Chain | Channel | Freq. (MHz) | PSD | | 10 log (N=2) dB | Total PSD (dBm/500 kHz) | Limit (dBm/500 kHz) | Pass / Fail |
|----------|---------|----------------|-----------|---------------|-----------------|-------------------------|---------------------|-------------|
| | | | (dBm/MHz) | (dBm/500 kHz) | | | | |
| A | 144 | 5720 (U-NII-3) | 4.96 | 1.95 | 3.01 | 4.96 | 29.44 | Pass |
| | 149 | 5745 | 6.85 | 3.84 | 3.01 | 6.85 | 29.44 | Pass |
| | 157 | 5785 | 7.07 | 4.06 | 3.01 | 7.07 | 29.44 | Pass |
| | 165 | 5825 | 7.11 | 4.1 | 3.01 | 7.11 | 29.44 | Pass |
| B | 144 | 5720 (U-NII-3) | 5.07 | 2.06 | 3.01 | 5.07 | 29.44 | Pass |
| | 149 | 5745 | 6.5 | 3.49 | 3.01 | 6.5 | 29.44 | Pass |
| | 157 | 5785 | 6.56 | 3.55 | 3.01 | 6.56 | 29.44 | Pass |
| | 165 | 5825 | 6.71 | 3.7 | 3.01 | 6.71 | 29.44 | Pass |

NOTE:

- Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is measure value add 10 log (N_{ANT}) dB.
- Correlated, Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.56 > 6$ dBi, so the power density limit shall be reduced to $30-(6.56-6) = 29.44$ dBm.

802.11ac (VHT20):

| TX Chain | Channel | Frequency (MHz) | PSD w/o Duty Factor | | 10 log (N=2) dB | Duty Factor (dB) | Total PSD with Duty Factor (dBm/500 kHz) | Limit (dBm/500 kHz) | Pass / Fail |
|----------|---------|-----------------|---------------------|---------------|-----------------|------------------|--|---------------------|-------------|
| | | | (dBm/MHz) | (dBm/500 kHz) | | | | | |
| A | 144 | 5720 (U-NII-3) | 3.22 | 0.21 | 3.01 | 0.14 | 3.36 | 29.44 | Pass |
| | 149 | 5745 | 4.83 | 1.82 | 3.01 | 0.14 | 4.97 | 29.44 | Pass |
| | 157 | 5785 | 4.92 | 1.91 | 3.01 | 0.14 | 5.06 | 29.44 | Pass |
| | 165 | 5825 | 5.52 | 2.51 | 3.01 | 0.14 | 5.66 | 29.44 | Pass |
| B | 144 | 5720 (U-NII-3) | 4.2 | 1.19 | 3.01 | 0.14 | 4.34 | 29.44 | Pass |
| | 149 | 5745 | 5.32 | 2.31 | 3.01 | 0.14 | 5.46 | 29.44 | Pass |
| | 157 | 5785 | 4.93 | 1.92 | 3.01 | 0.14 | 5.07 | 29.44 | Pass |
| | 165 | 5825 | 4.89 | 1.88 | 3.01 | 0.14 | 5.03 | 29.44 | Pass |

NOTE:

- Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is measure value add 10 log (N_{ANT}) dB.
- Correlated, Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.56 > 6$ dBi, so the power density limit shall be reduced to $30-(6.56-6) = 29.44$ dBm.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT40):

| TX Chain | Channel | Frequency (MHz) | PSD w/o Duty Factor | | 10 log (N=2) dB | Duty Factor (dB) | Total PSD with Duty Factor (dBm/500 kHz) | Limit (dBm/500 kHz) | Pass / Fail |
|----------|---------|-----------------|---------------------|---------------|-----------------|------------------|--|---------------------|-------------|
| | | | (dBm/MHz) | (dBm/500 kHz) | | | | | |
| A | 142 | 5710 (U-NII-3) | 0.4 | 2.62 | 3.01 | 0.17 | 5.8 | 29.44 | Pass |
| | 151 | 5755 | 2.87 | 5.09 | 3.01 | 0.17 | 8.27 | 29.44 | Pass |
| | 159 | 5795 | 2.99 | 5.21 | 3.01 | 0.17 | 8.39 | 29.44 | Pass |
| B | 142 | 5710 (U-NII-3) | 0.69 | 2.91 | 3.01 | 0.17 | 6.09 | 29.44 | Pass |
| | 151 | 5755 | 2.68 | 4.9 | 3.01 | 0.17 | 8.08 | 29.44 | Pass |
| | 159 | 5795 | 2.72 | 4.94 | 3.01 | 0.17 | 8.12 | 29.44 | Pass |

NOTE:

- Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is measure value add 10 log (N_{ANT}) dB.
- Correlated, Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.56 > 6$ dBi, so the power density limit shall be reduced to $30-(6.56-6) = 29.44$ dBm.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80):

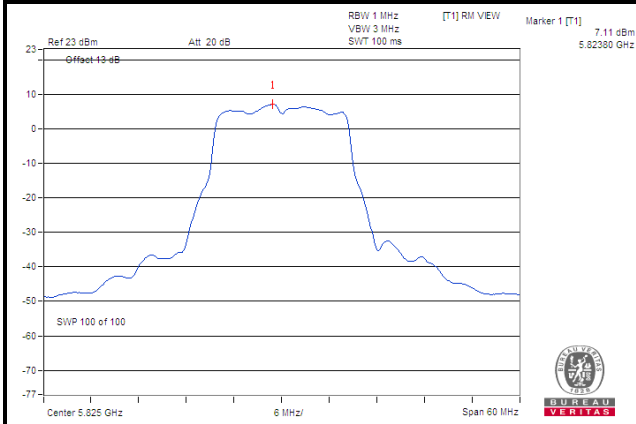
| TX Chain | Channel | Frequency (MHz) | PSD w/o Duty Factor | | 10 log (N=2) dB | Duty Factor (dB) | Total PSD with Duty Factor (dBm/500 kHz) | Limit (dBm/500 kHz) | Pass / Fail |
|----------|---------|-----------------|---------------------|---------------|-----------------|------------------|--|---------------------|-------------|
| | | | (dBm/MHz) | (dBm/500 kHz) | | | | | |
| A | 138 | 5690 (U-NII-3) | -3.1 | -0.88 | 3.01 | 0.37 | 2.5 | 29.44 | Pass |
| | 155 | 5775 | -0.5 | 1.72 | 3.01 | 0.37 | 5.1 | 29.44 | Pass |
| B | 138 | 5690 (U-NII-3) | -2.44 | -0.22 | 3.01 | 0.37 | 3.16 | 29.44 | Pass |
| | 155 | 5775 | -0.97 | 1.25 | 3.01 | 0.37 | 4.63 | 29.44 | Pass |

NOTE:

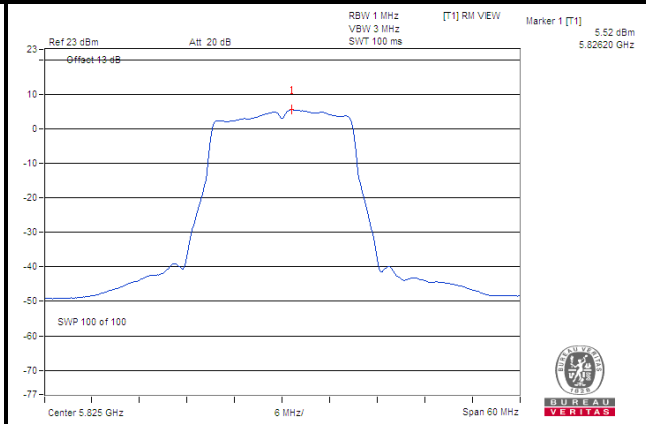
- Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is measure value add 10 log (N_{ANT}) dB.
- Correlated, Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.56 > 6$ dBi, so the power density limit shall be reduced to $30-(6.56-6) = 29.44$ dBm.
- Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

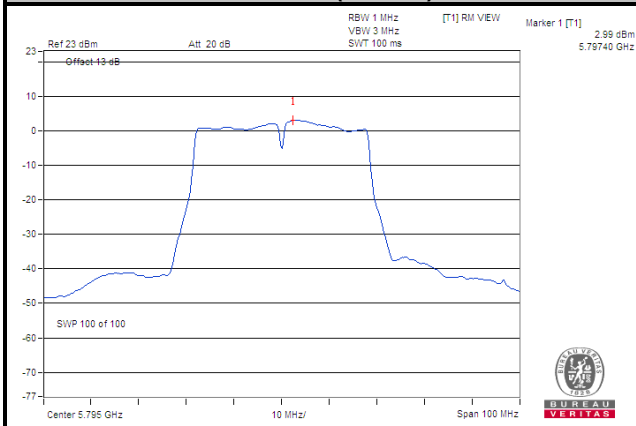
802.11a



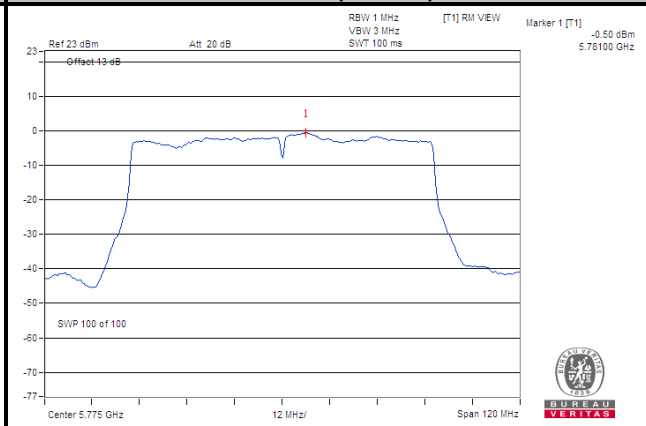
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)

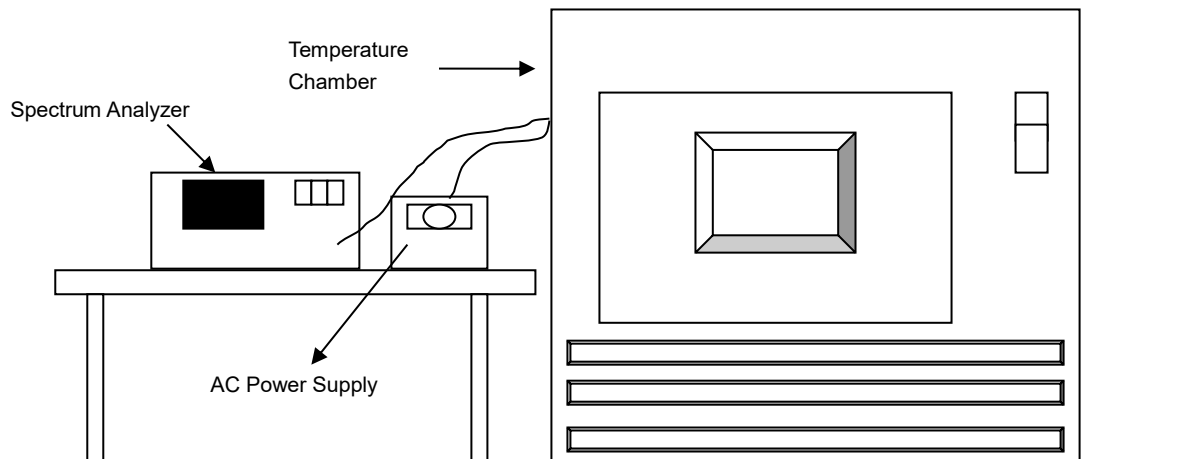


4.6 Frequency Stability

4.6.1 Limit of Frequency Stability Measurement

The frequency of the carrier signal shall be maintained within band of operation.

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

- The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- Turn the EUT on and couple its output to a spectrum analyzer.
- Turn the EUT off and set the chamber to the highest temperature specified.
- Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes.
- Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed.
- The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

Set the EUT transmit at un-modulation mode to test frequency stability.

4.6.7 Test Results

SISO_Chain A

| Frequency Stability Versus Temp. | | | | | | | | | |
|----------------------------------|--------------------|--------------------------|--------|--------------------------|--------|--------------------------|--------|--------------------------|--------|
| Operating Frequency: 5180 MHz | | | | | | | | | |
| Temp. (°C) | Power Supply (Vac) | 0 Minute | | 2 Minute | | 5 Minute | | 10 Minute | |
| | | Measured Frequency (MHz) | Result | Measured Frequency (MHz) | Result | Measured Frequency (MHz) | Result | Measured Frequency (MHz) | Result |
| 35 | 120 | 5180.0093 | PASS | 5180.0094 | PASS | 5180.0078 | PASS | 5180.0092 | PASS |
| 30 | 120 | 5180.0019 | PASS | 5179.9994 | PASS | 5180.004 | PASS | 5180.0033 | PASS |
| 20 | 120 | 5180.0224 | PASS | 5180.0228 | PASS | 5180.0202 | PASS | 5180.0232 | PASS |
| 10 | 120 | 5179.9992 | PASS | 5179.9961 | PASS | 5179.9959 | PASS | 5179.9967 | PASS |
| 0 | 120 | 5179.9926 | PASS | 5179.9927 | PASS | 5179.9942 | PASS | 5179.9932 | PASS |

| Frequency Stability Versus Voltage | | | | | | | | | |
|------------------------------------|--------------------|--------------------------|--------|--------------------------|--------|--------------------------|--------|--------------------------|--------|
| Operating Frequency: 5180 MHz | | | | | | | | | |
| Temp. (°C) | Power Supply (Vac) | 0 Minute | | 2 Minute | | 5 Minute | | 10 Minute | |
| | | Measured Frequency (MHz) | Result | Measured Frequency (MHz) | Result | Measured Frequency (MHz) | Result | Measured Frequency (MHz) | Result |
| 20 | 138 | 5180.0232 | PASS | 5180.0231 | PASS | 5180.0199 | PASS | 5180.0223 | PASS |
| | 120 | 5180.0224 | PASS | 5180.0228 | PASS | 5180.0202 | PASS | 5180.0232 | PASS |
| | 102 | 5180.0233 | PASS | 5180.0226 | PASS | 5180.0209 | PASS | 5180.0226 | PASS |

SISO_Chain B

| Frequency Stability Versus Temp. | | | | | | | | | |
|----------------------------------|--------------------------|--------------------------------|--------|--------------------------------|--------|--------------------------------|--------|--------------------------------|--------|
| Operating Frequency: 5180 MHz | | | | | | | | | |
| Temp. (°C) | Power Supply (Vac) | 0 Minute | | 2 Minute | | 5 Minute | | 10 Minute | |
| | | Measured Frequency (MHz) | Result | Measured Frequency (MHz) | Result | Measured Frequency (MHz) | Result | Measured Frequency (MHz) | Result |
| 35 | 120 | 5180.0177 | PASS | 5180.0142 | PASS | 5180.0148 | PASS | 5180.0152 | PASS |
| 30 | 120 | 5180.0241 | PASS | 5180.0274 | PASS | 5180.0254 | PASS | 5180.0226 | PASS |
| 20 | 120 | 5180.024 | PASS | 5180.0217 | PASS | 5180.0209 | PASS | 5180.0212 | PASS |
| 10 | 120 | 5180.0204 | PASS | 5180.0218 | PASS | 5180.0212 | PASS | 5180.0196 | PASS |
| 0 | 120 | 5180.021 | PASS | 5180.0229 | PASS | 5180.0207 | PASS | 5180.0207 | PASS |

| Frequency Stability Versus Voltage | | | | | | | | | |
|------------------------------------|--------------------------|--------------------------------|--------|--------------------------------|--------|--------------------------------|--------|--------------------------------|--------|
| Operating Frequency: 5180 MHz | | | | | | | | | |
| Temp. (°C) | Power Supply (Vac) | 0 Minute | | 2 Minute | | 5 Minute | | 10 Minute | |
| | | Measured Frequency (MHz) | Result | Measured Frequency (MHz) | Result | Measured Frequency (MHz) | Result | Measured Frequency (MHz) | Result |
| 20 | 138 | 5180.0247 | PASS | 5180.0207 | PASS | 5180.0199 | PASS | 5180.0222 | PASS |
| | 120 | 5180.024 | PASS | 5180.0217 | PASS | 5180.0209 | PASS | 5180.0212 | PASS |
| | 102 | 5180.0248 | PASS | 5180.0219 | PASS | 5180.0209 | PASS | 5180.0213 | PASS |

MIMO

| Frequency Stability Versus Temp. | | | | | | | | | |
|----------------------------------|--------------------|--------------------------|--------|--------------------------|--------|--------------------------|--------|--------------------------|--------|
| Operating Frequency: 5180 MHz | | | | | | | | | |
| Temp. (°C) | Power Supply (Vac) | 0 Minute | | 2 Minute | | 5 Minute | | 10 Minute | |
| | | Measured Frequency (MHz) | Result | Measured Frequency (MHz) | Result | Measured Frequency (MHz) | Result | Measured Frequency (MHz) | Result |
| 35 | 120 | 5179.9749 | PASS | 5179.974 | PASS | 5179.9775 | PASS | 5179.9733 | PASS |
| 30 | 120 | 5180.0227 | PASS | 5180.0235 | PASS | 5180.0229 | PASS | 5180.0187 | PASS |
| 20 | 120 | 5179.9772 | PASS | 5179.9761 | PASS | 5179.9746 | PASS | 5179.9787 | PASS |
| 10 | 120 | 5179.9845 | PASS | 5179.9857 | PASS | 5179.9873 | PASS | 5179.9847 | PASS |
| 0 | 120 | 5179.9799 | PASS | 5179.9791 | PASS | 5179.9798 | PASS | 5179.9808 | PASS |

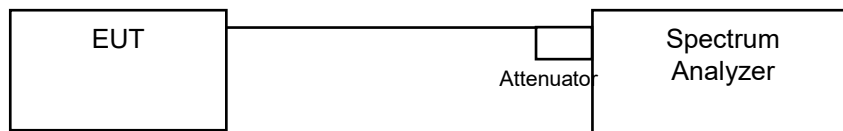
| Frequency Stability Versus Voltage | | | | | | | | | |
|------------------------------------|--------------------|--------------------------|--------|--------------------------|--------|--------------------------|--------|--------------------------|--------|
| Operating Frequency: 5180 MHz | | | | | | | | | |
| Temp. (°C) | Power Supply (Vac) | 0 Minute | | 2 Minute | | 5 Minute | | 10 Minute | |
| | | Measured Frequency (MHz) | Result | Measured Frequency (MHz) | Result | Measured Frequency (MHz) | Result | Measured Frequency (MHz) | Result |
| 20 | 138 | 5179.9773 | PASS | 5179.9757 | PASS | 5179.9746 | PASS | 5179.9794 | PASS |
| | 120 | 5179.9772 | PASS | 5179.9761 | PASS | 5179.9746 | PASS | 5179.9787 | PASS |
| | 102 | 5179.9778 | PASS | 5179.9762 | PASS | 5179.9753 | PASS | 5179.9789 | PASS |

4.7 6 dB Bandwidth Measurement

4.7.1 Limits of 6 dB Bandwidth Measurement

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

MEASUREMENT PROCEDURE REF

- Set resolution bandwidth (RBW) = 100 kHz
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.7.7 Test Results

SISO_Chain A

802.11a

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|----------------------|---------------------|-------------|
| 144 | 5720 (U-NII-3) | 2.77 | 0.5 | Pass |
| 149 | 5745 | 15.39 | 0.5 | Pass |
| 157 | 5785 | 15.38 | 0.5 | Pass |
| 165 | 5825 | 15.68 | 0.5 | Pass |

802.11ac (VHT20)

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|----------------------|---------------------|-------------|
| 144 | 5720 (U-NII-3) | 3.41 | 0.5 | Pass |
| 149 | 5745 | 16.77 | 0.5 | Pass |
| 157 | 5785 | 16.79 | 0.5 | Pass |
| 165 | 5825 | 16.83 | 0.5 | Pass |

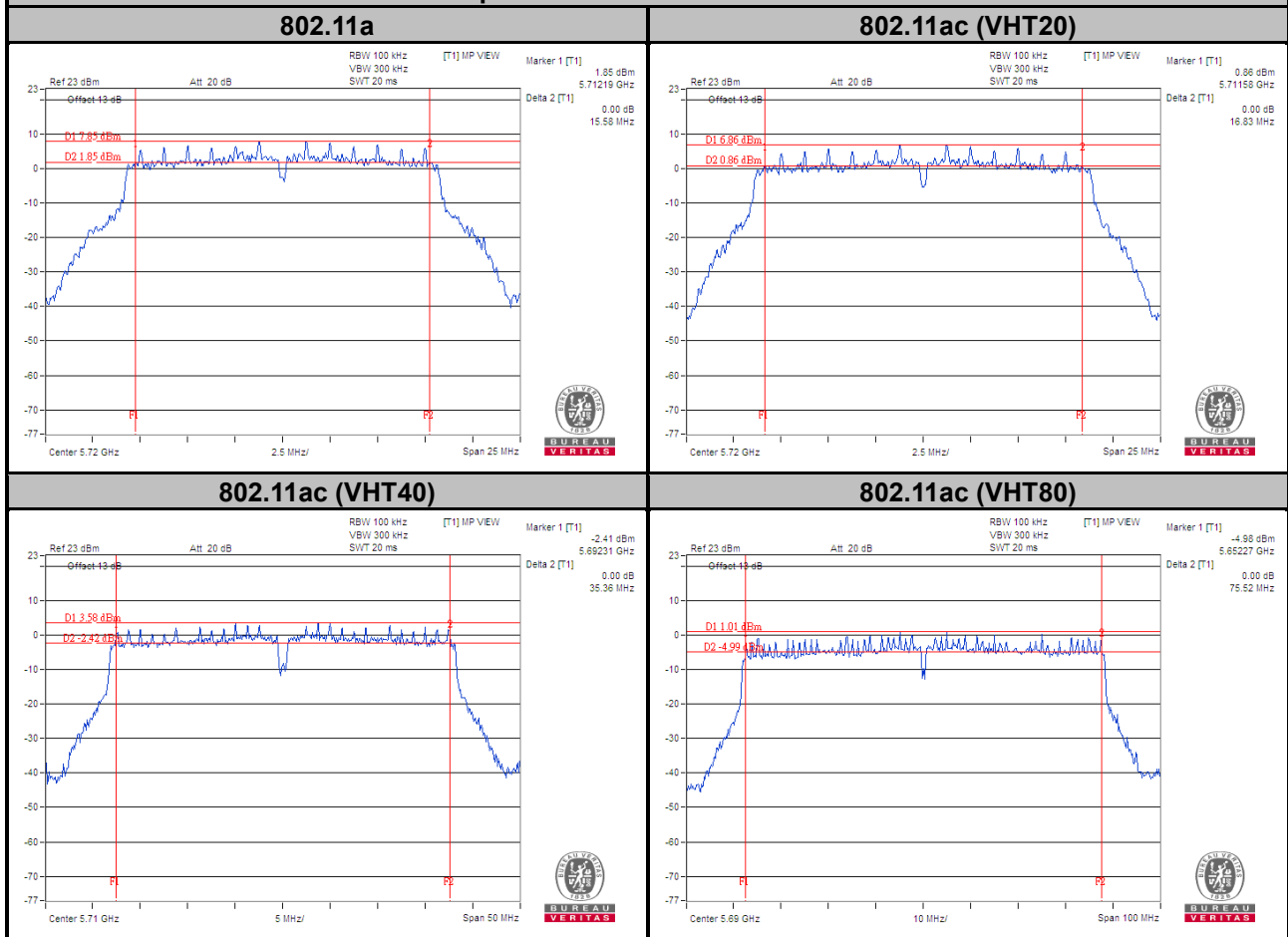
802.11ac (VHT40)

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|----------------------|---------------------|-------------|
| 142 | 5710 (U-NII-3) | 2.67 | 0.5 | Pass |
| 151 | 5755 | 35.88 | 0.5 | Pass |
| 159 | 5795 | 35.88 | 0.5 | Pass |

802.11ac (VHT80)

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|----------------------|---------------------|-------------|
| 138 | 5690 (U-NII-3) | 2.79 | 0.5 | Pass |
| 155 | 5775 | 75.56 | 0.5 | Pass |

Spectrum Plot of Worst Value



Note:

For Ch138 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz
 For Ch144 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz
 For Ch142 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz

SISO_Chain B

802.11a

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|----------------------|---------------------|-------------|
| 144 | 5720 (U-NII-3) | 2.76 | 0.5 | Pass |
| 149 | 5745 | 15.67 | 0.5 | Pass |
| 157 | 5785 | 15.54 | 0.5 | Pass |
| 165 | 5825 | 15.68 | 0.5 | Pass |

802.11ac (VHT20)

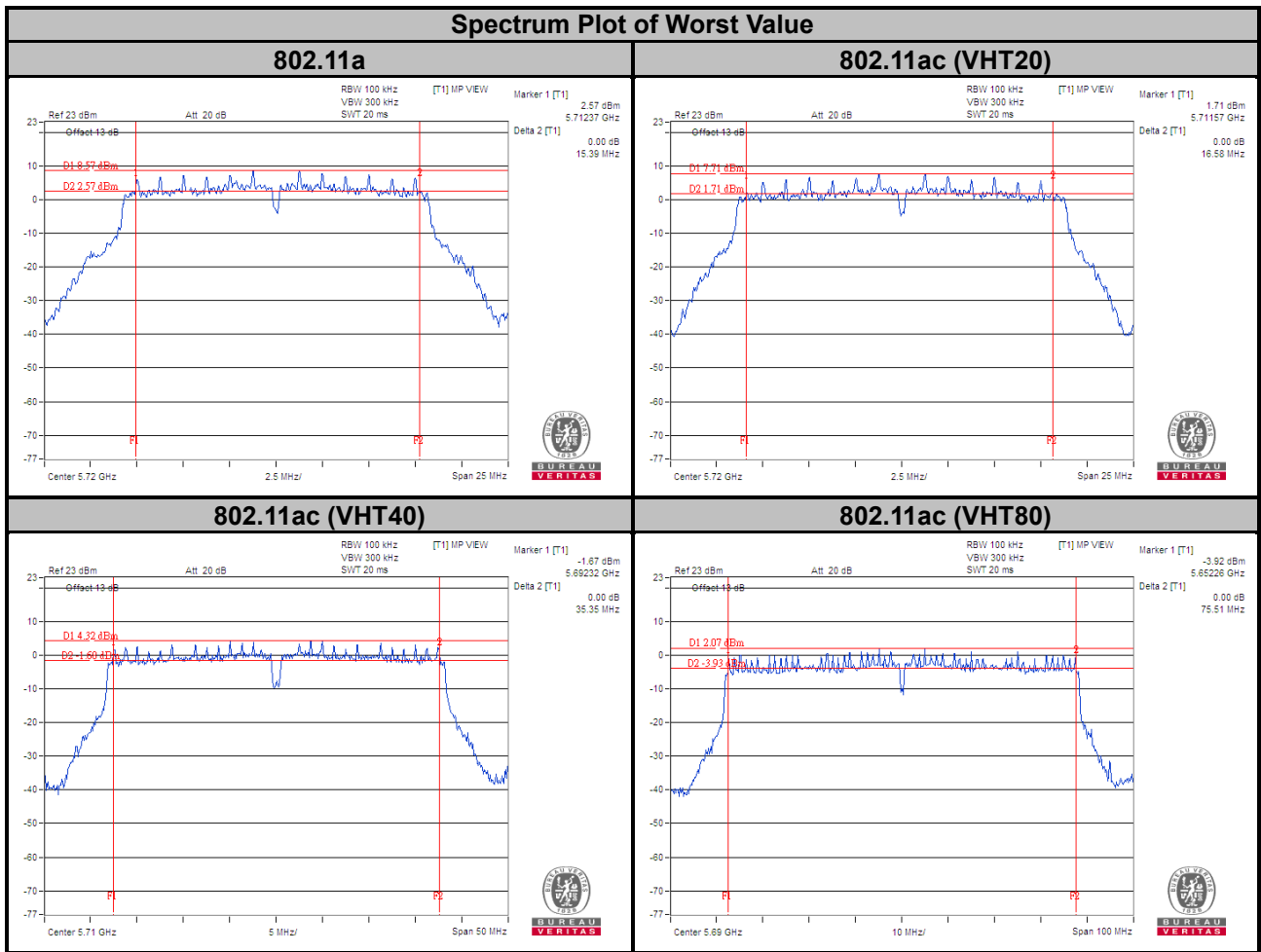
| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|----------------------|---------------------|-------------|
| 144 | 5720 (U-NII-3) | 3.15 | 0.5 | Pass |
| 149 | 5745 | 16.86 | 0.5 | Pass |
| 157 | 5785 | 16.86 | 0.5 | Pass |
| 165 | 5825 | 16.58 | 0.5 | Pass |

802.11ac (VHT40)

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|----------------------|---------------------|-------------|
| 142 | 5710 (U-NII-3) | 2.67 | 0.5 | Pass |
| 151 | 5755 | 35.36 | 0.5 | Pass |
| 159 | 5795 | 35.35 | 0.5 | Pass |

802.11ac (VHT80)

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|----------------------|---------------------|-------------|
| 138 | 5690 (U-NII-3) | 2.77 | 0.5 | Pass |
| 155 | 5775 | 75.49 | 0.5 | Pass |



Note:

For Ch138 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz
 For Ch144 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz
 For Ch142 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz

MIMO
802.11a

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|----------------------|---------|---------------------|-------------|
| | | Chain A | Chain B | | |
| 144 | 5720 (U-NII-3) | 2.76 | 2.85 | 0.5 | Pass |
| 149 | 5745 | 15.37 | 16.08 | 0.5 | Pass |
| 157 | 5785 | 15.20 | 16.34 | 0.5 | Pass |
| 165 | 5825 | 15.37 | 15.19 | 0.5 | Pass |

802.11ac (VHT20)

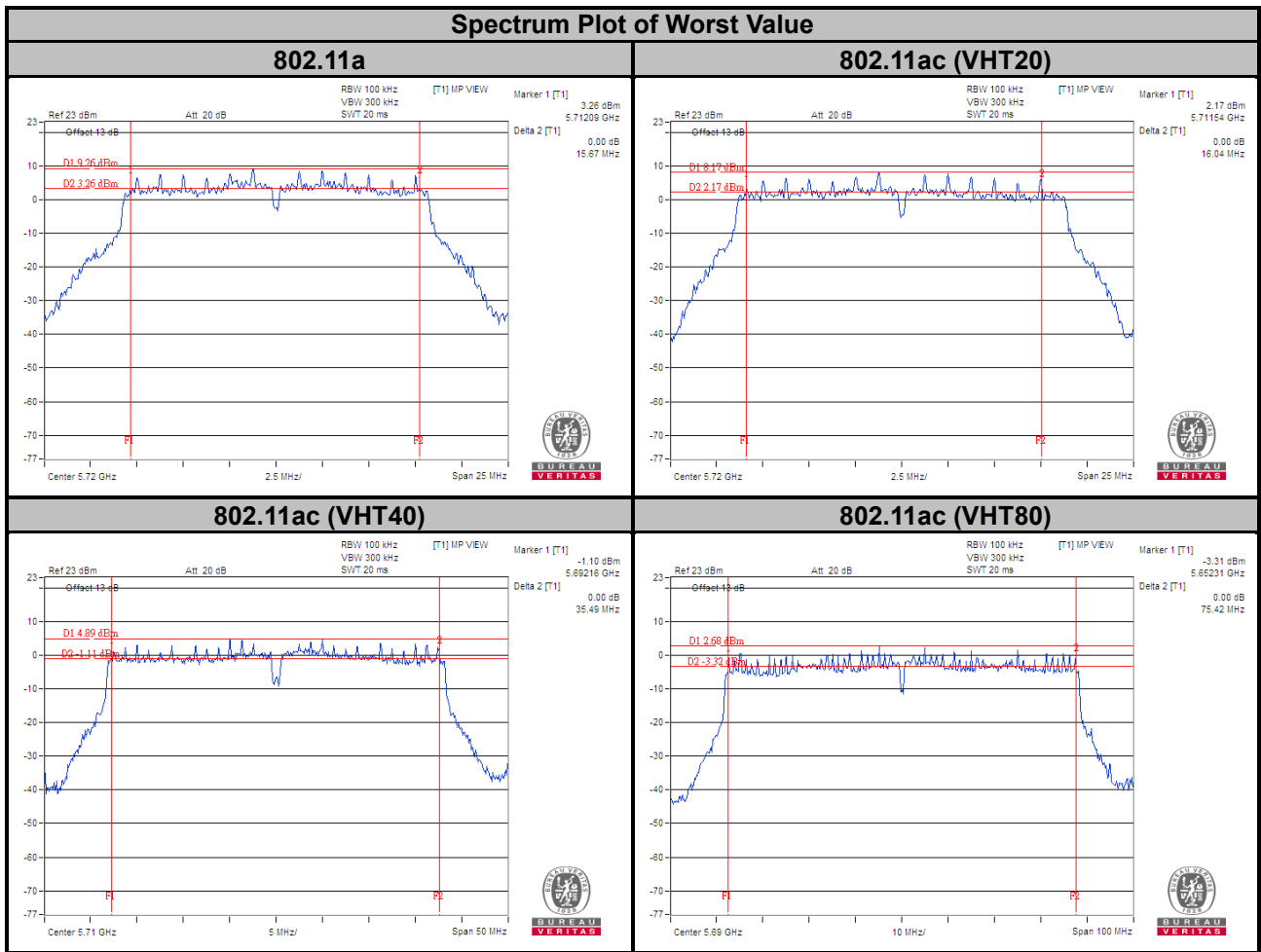
| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|----------------------|---------|---------------------|-------------|
| | | Chain A | Chain B | | |
| 144 | 5720 (U-NII-3) | 2.58 | 3.15 | 0.5 | Pass |
| 149 | 5745 | 16.01 | 16.57 | 0.5 | Pass |
| 157 | 5785 | 16.86 | 16.04 | 0.5 | Pass |
| 165 | 5825 | 15.19 | 16.87 | 0.5 | Pass |

802.11ac (VHT40)

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|----------------------|---------|---------------------|-------------|
| | | Chain A | Chain B | | |
| 142 | 5710 (U-NII-3) | 2.65 | 3.14 | 0.5 | Pass |
| 151 | 5755 | 35.51 | 35.33 | 0.5 | Pass |
| 159 | 5795 | 35.67 | 35.27 | 0.5 | Pass |

802.11ac (VHT80)

| Channel | Frequency (MHz) | 6 dB Bandwidth (MHz) | | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|----------------------|---------|---------------------|-------------|
| | | Chain A | Chain B | | |
| 138 | 5690 (U-NII-3) | 2.73 | 2.73 | 0.5 | Pass |
| 155 | 5775 | 75.46 | 75.42 | 0.5 | Pass |



Note:

For Ch138 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz
 For Ch144 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz
 For Ch142 (UNII-3 Band): The 6 dB bandwidth above 5725 MHz = Marker 1 + Delta 2 – 5725 MHz

5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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Web Site: www.bureauveritas-adt.com

The address and road map of all our labs can be found in our web site also.

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