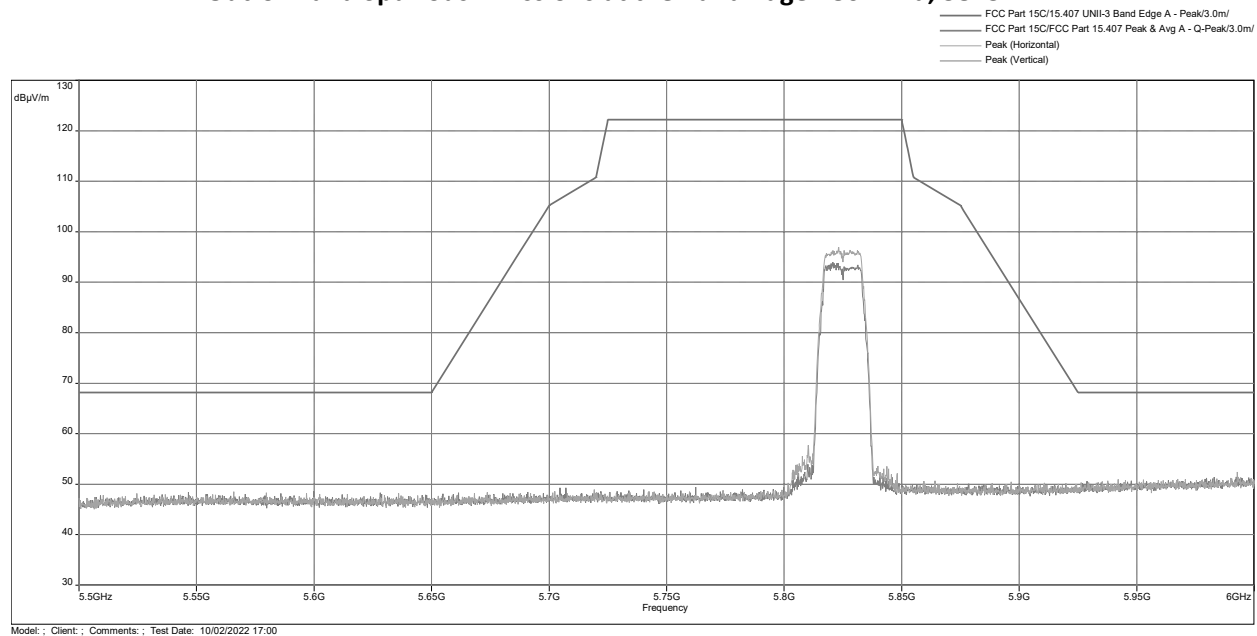
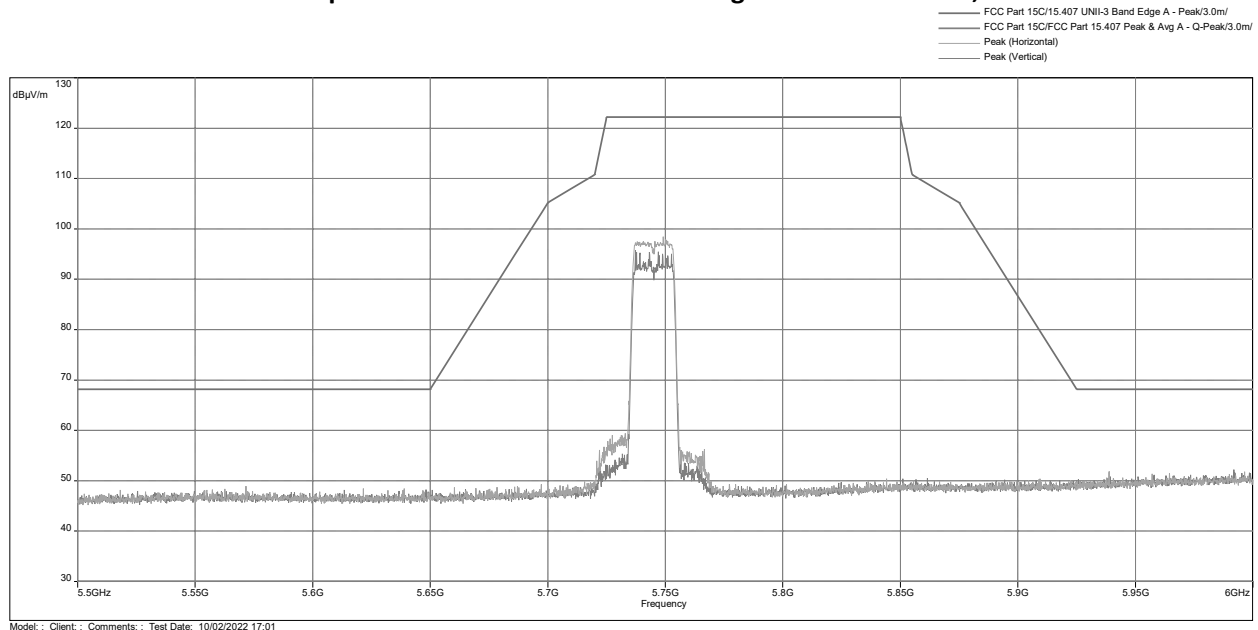


## Out-of-Band Spurious Emissions at the Band Edge - 802.11a, 5825 MHz

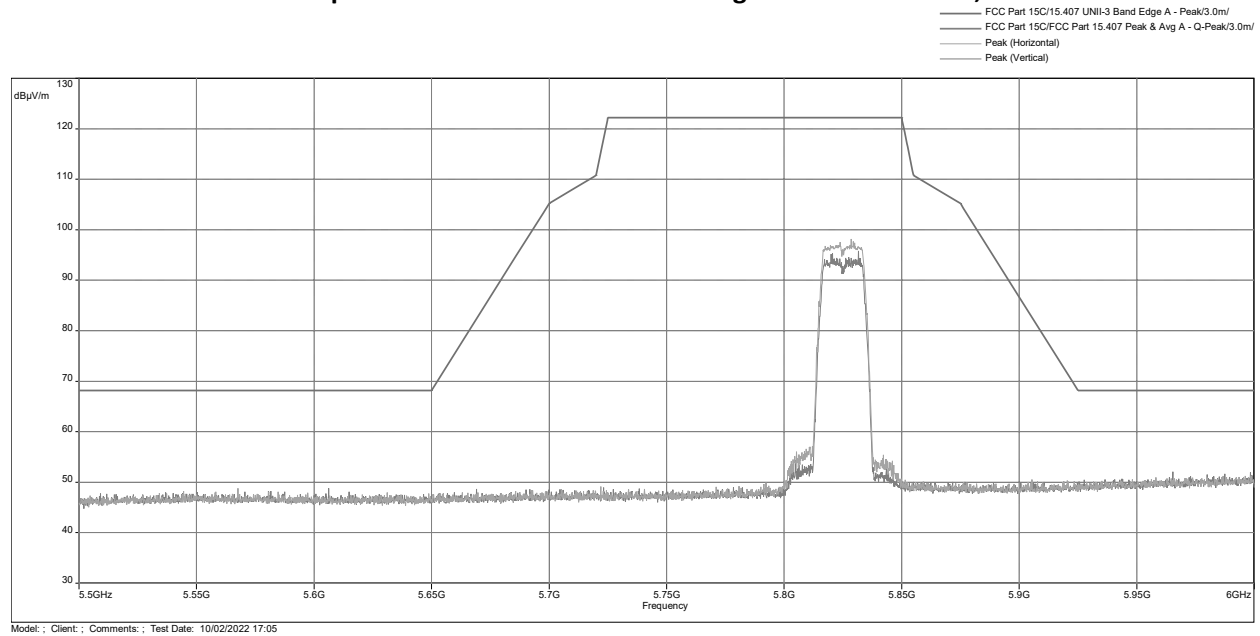


**Test Results: 15.209/15.205 Restricted Band Emissions**

**Out-of-Band Spurious Emissions at the Band Edge - 802.11n 20MHz, 5745 MHz**

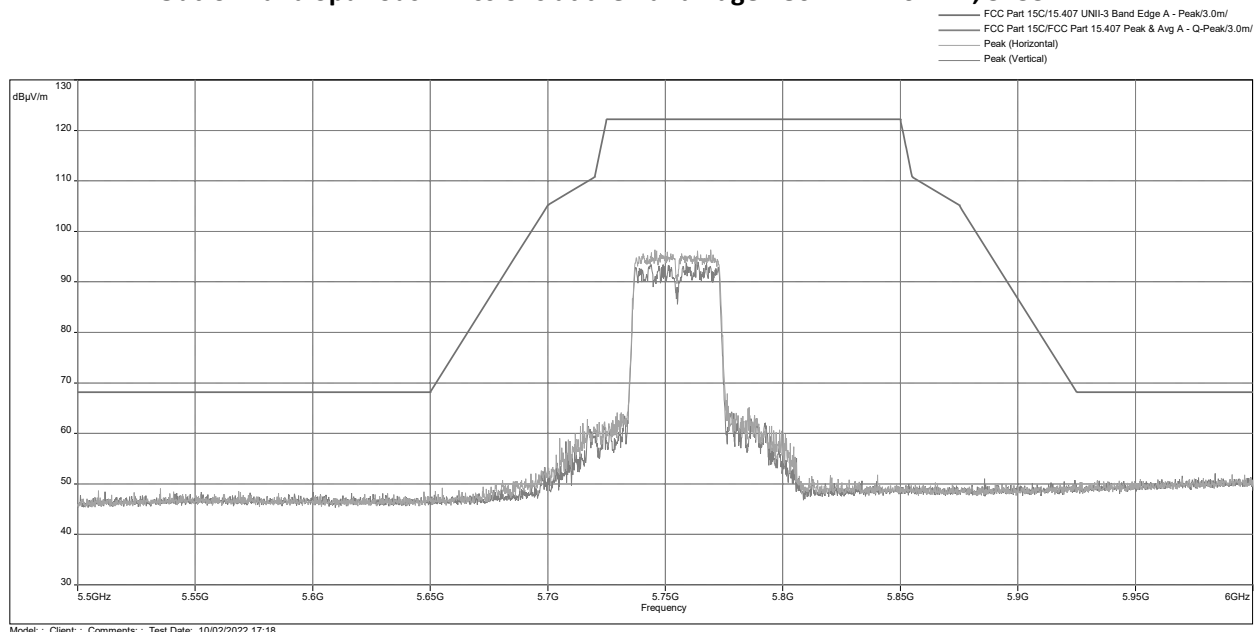


## Out-of-Band Spurious Emissions at the Band Edge - 802.11n 20MHz, 5825 MHz

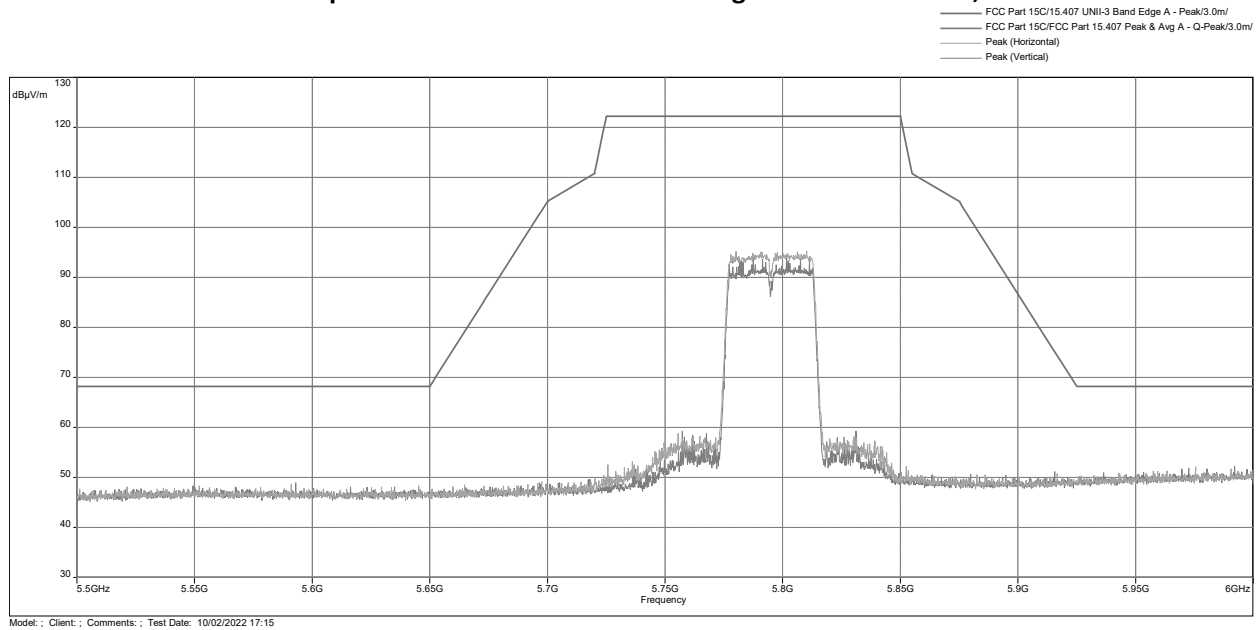


## Test Results: 15.209/15.205 Restricted Band Emissions

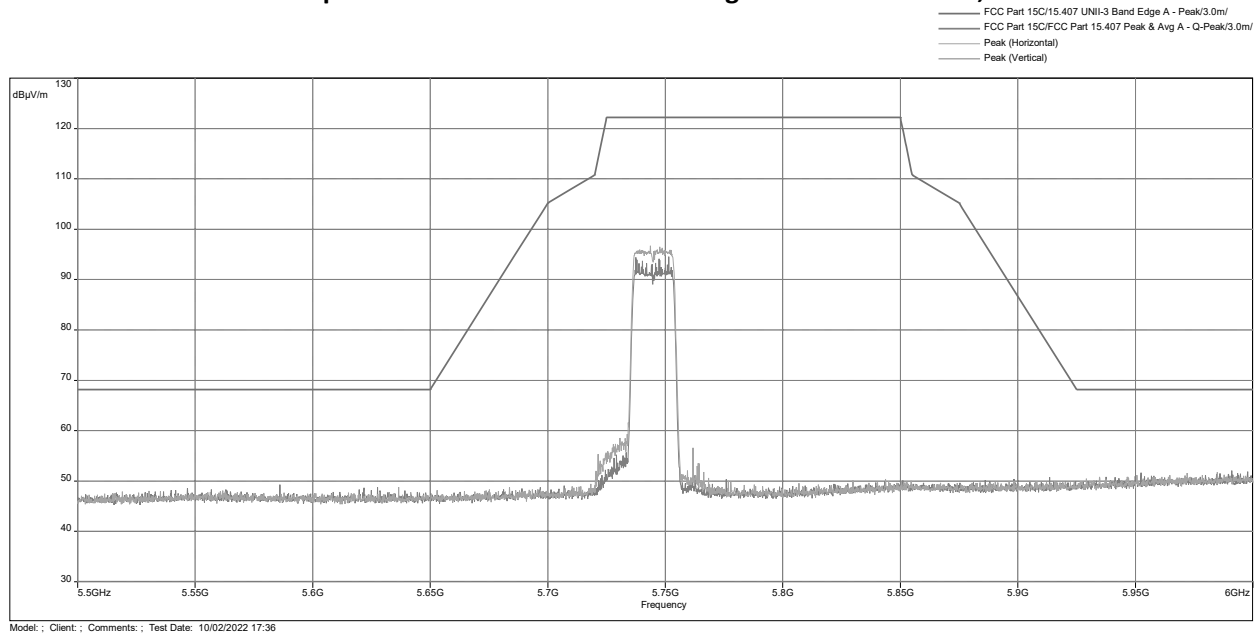
### Out-of-Band Spurious Emissions at the Band Edge - 802.11n 40MHz, 5755 MHz



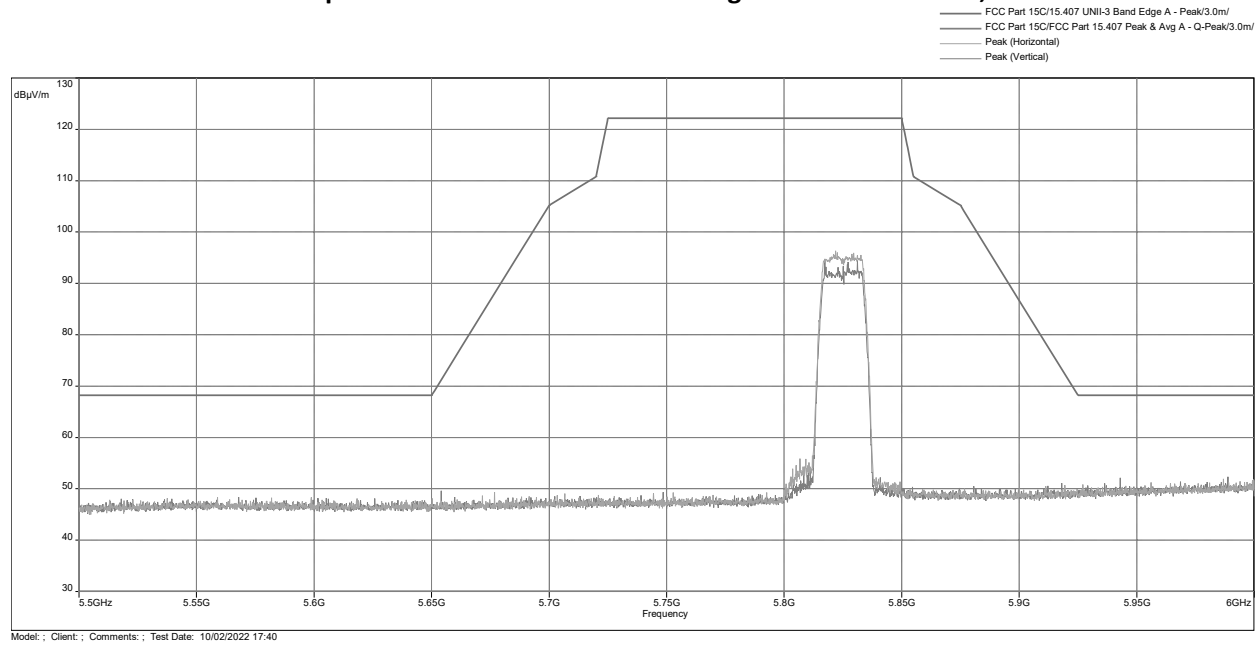
## Out-of-Band Spurious Emissions at the Band Edge - 802.11n 40MHz, 5795 MHz



## Out-of-Band Spurious Emissions at the Band Edge - 802.11ac 20MHz, 5745 MHz

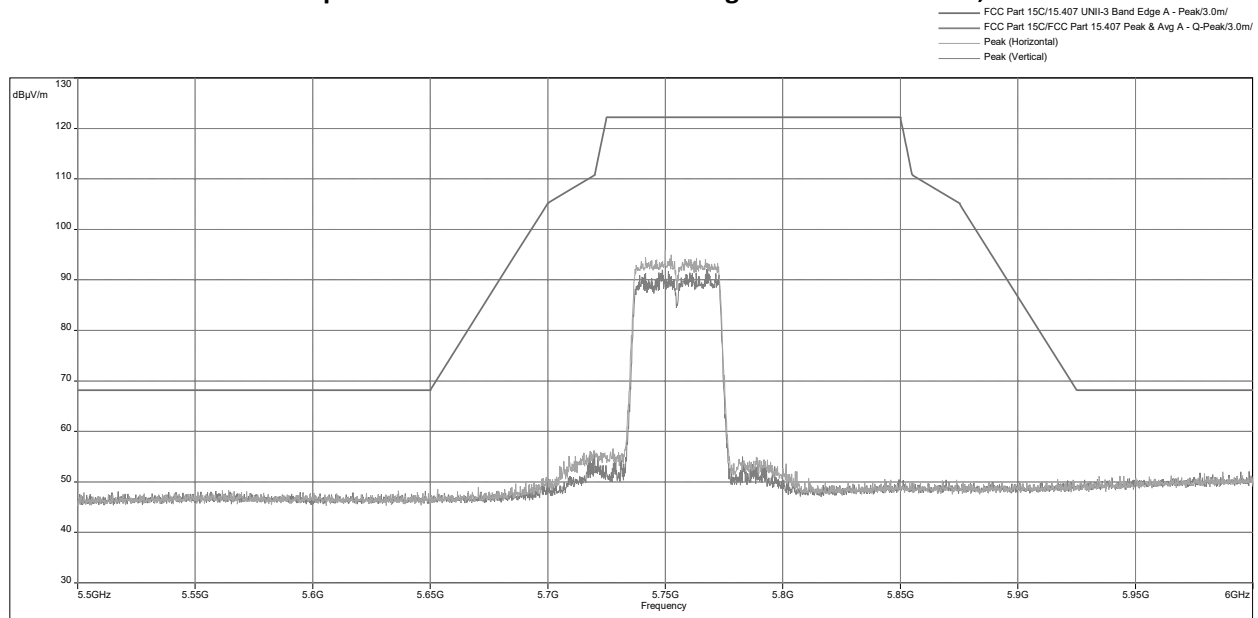


## Out-of-Band Spurious Emissions at the Band Edge - 802.11ac 20MHz, 5825 MHz

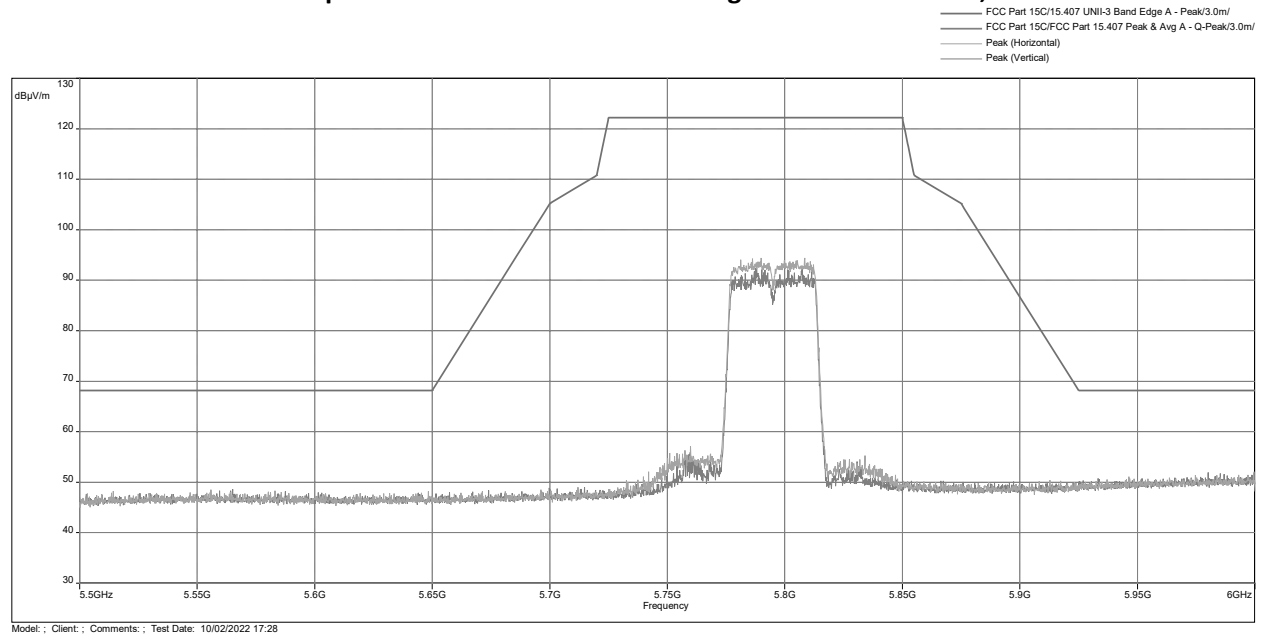


## Test Results: 15.209/15.205 Restricted Band Emissions

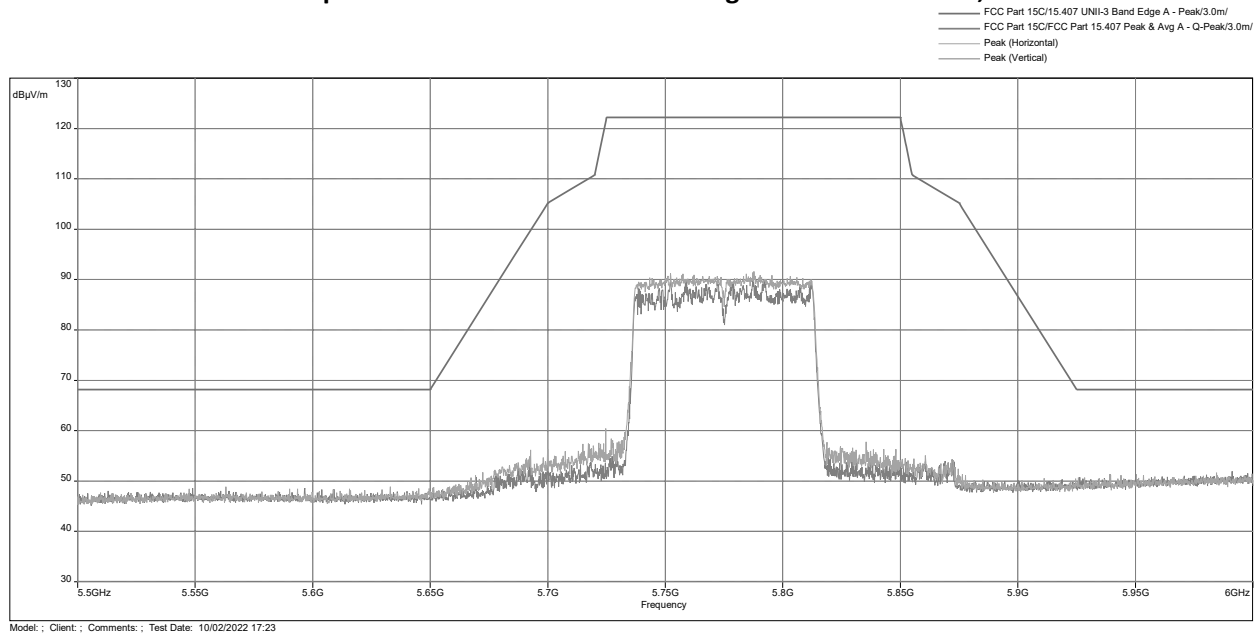
### Out-of-Band Spurious Emissions at the Band Edge - 802.11ac 40MHz, 5755 MHz



## Out-of-Band Spurious Emissions at the Band Edge - 802.11ac 40MHz, 5795 MHz

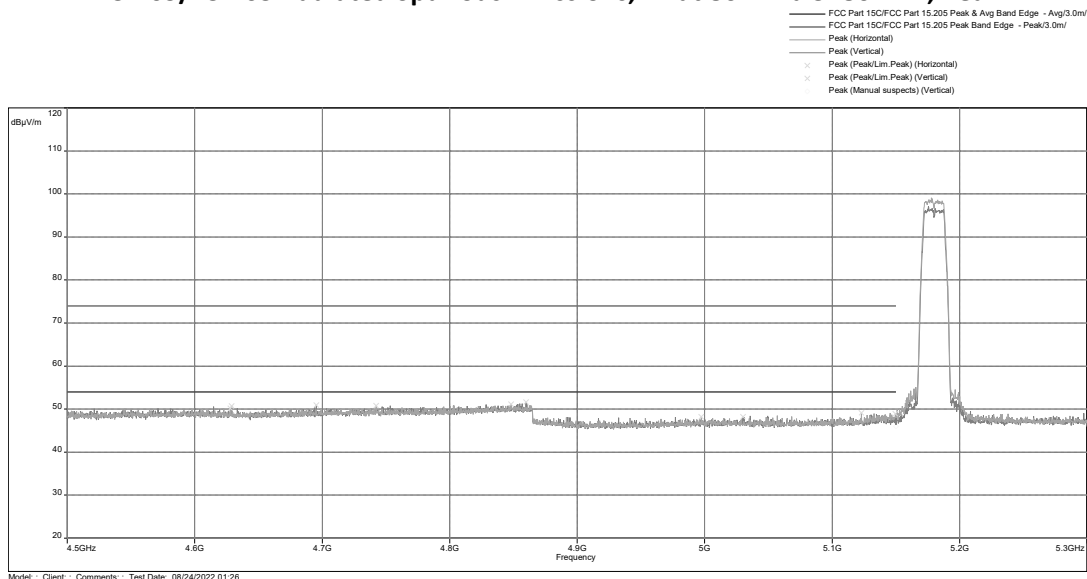


## Out-of-Band Spurious Emissions at the Band Edge - 802.11ac 80MHz, 5775 MHz



## Radiated Band Edge at the Restricted Bands

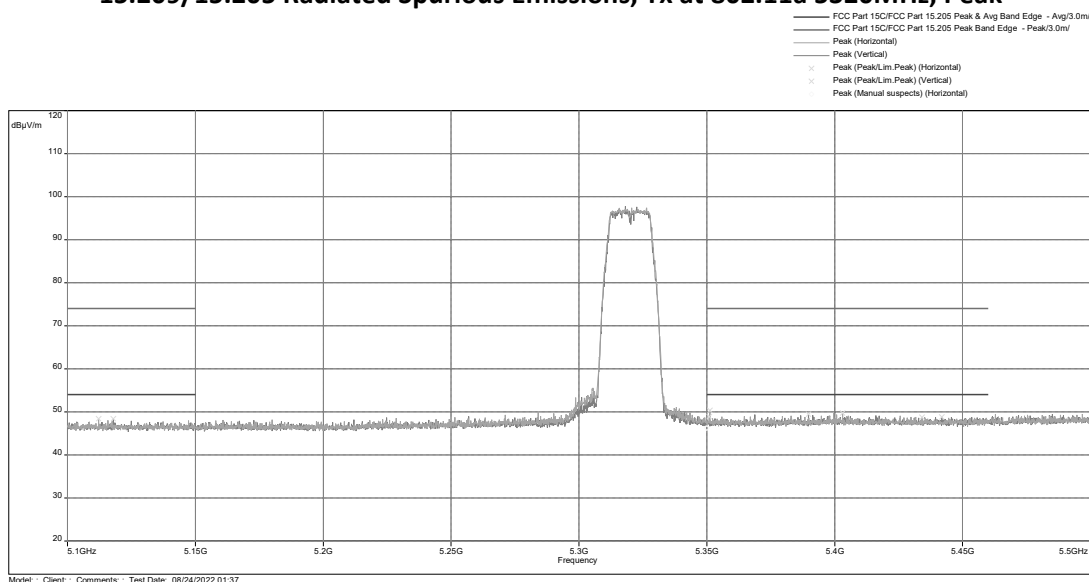
### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11a 5180MHz, Peak



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5150               | Peak     | 49.03                 | 54                | -4.97          | Pass         |

## Radiated Band Edge at the Restricted Bands

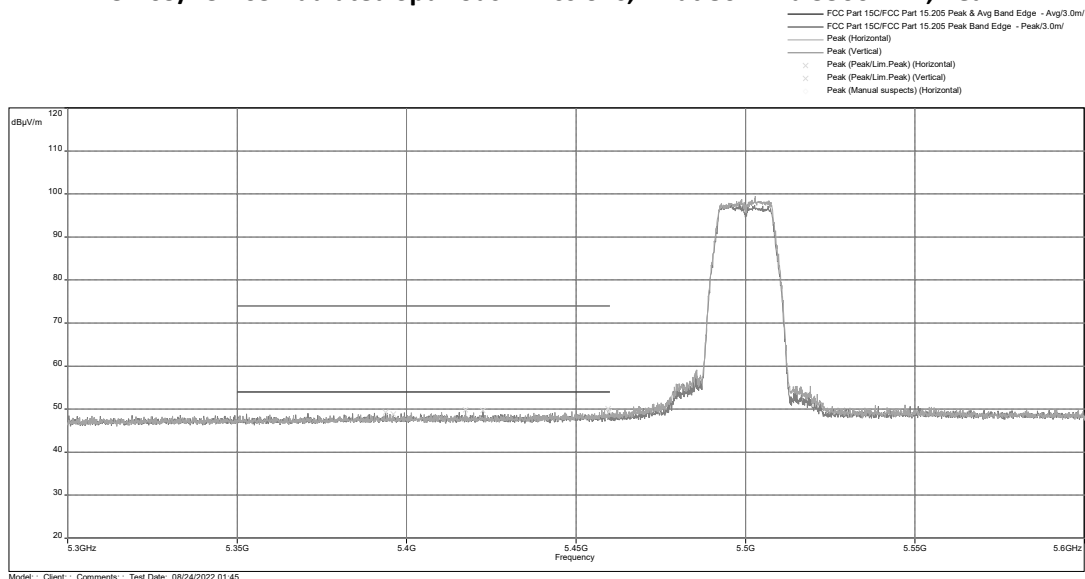
### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11a 5320MHz, Peak



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5350               | Peak     | 50.38                 | 54                | -3.62          | Pass         |

## Radiated Band Edge at the Restricted Bands

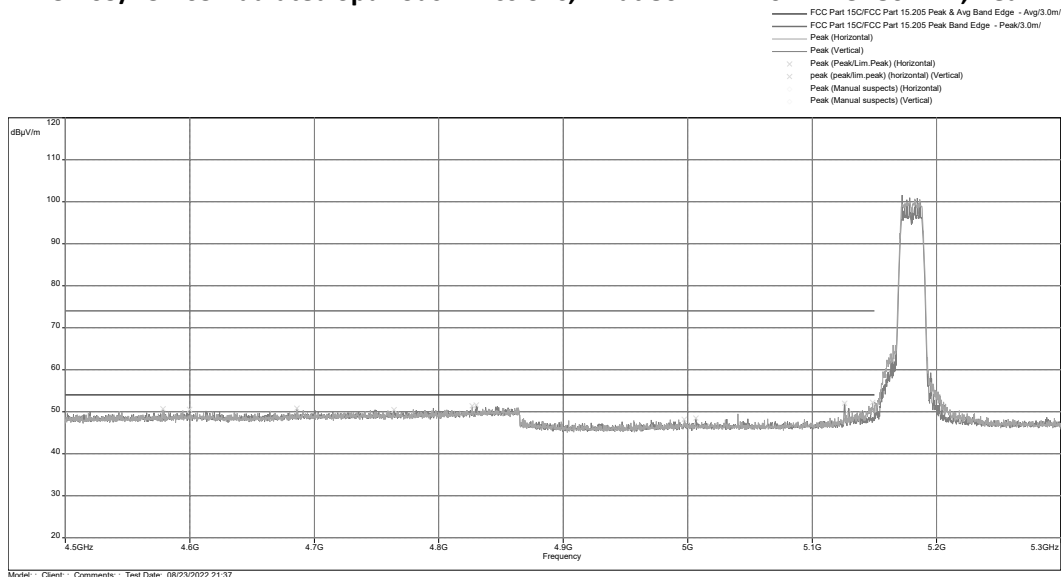
### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11a 5500MHz, Peak



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBμV/m) | Limit<br>(dBμV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5460               | Peak     | 48.05                 | 54                | -5.95          | Pass         |

## Radiated Band Edge at the Restricted Bands

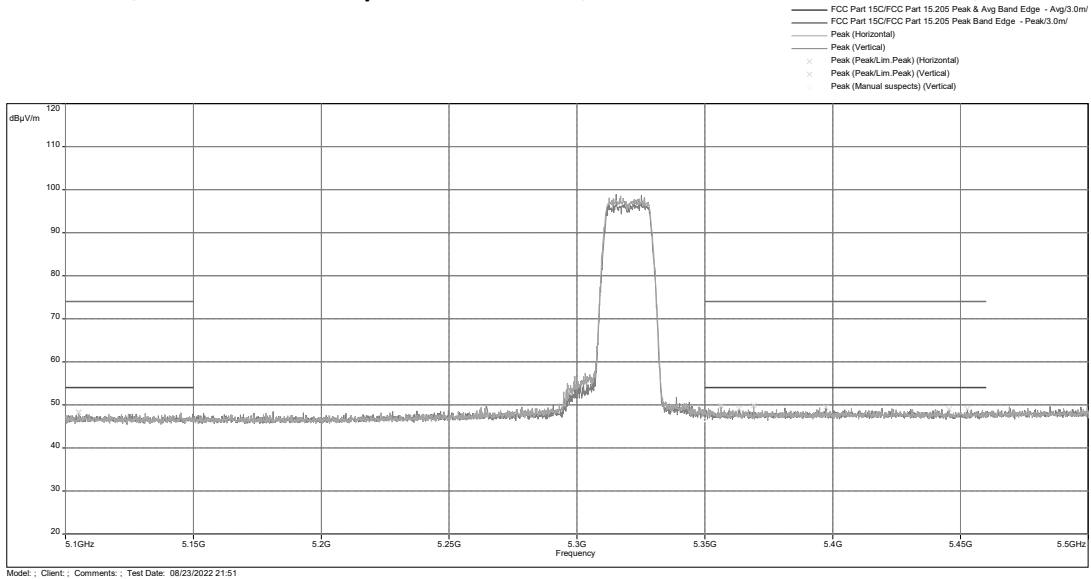
### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11n 20MHz 5180MHz, Peak



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5150               | Peak     | 49.71                 | 54                | -4.29          | Pass         |

## Radiated Band Edge at the Restricted Bands

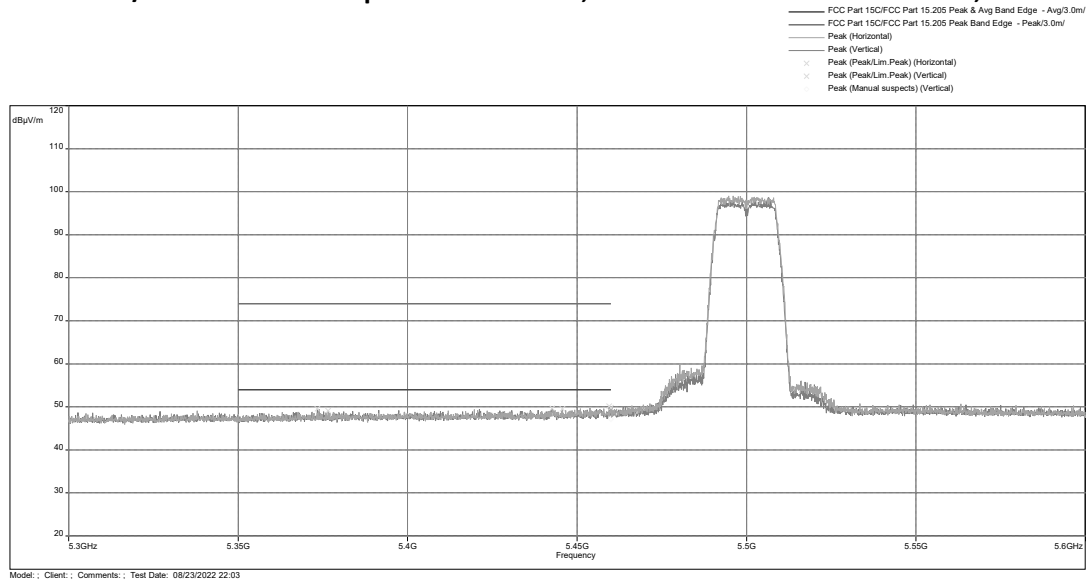
### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11n 20MHz 5320MHz, Peak



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5350               | Peak     | 46.62                 | 54                | -7.38          | Pass         |

## Radiated Band Edge at the Restricted Bands

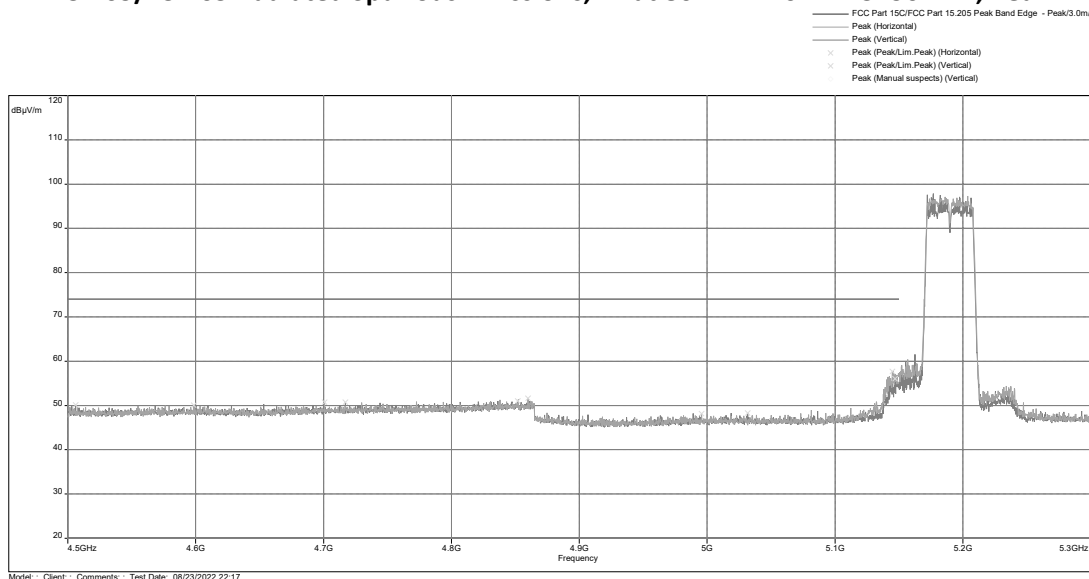
### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11n 20MHz 5500MHz, Peak



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5460               | Peak     | 47.14                 | 54                | -6.86          | Pass         |

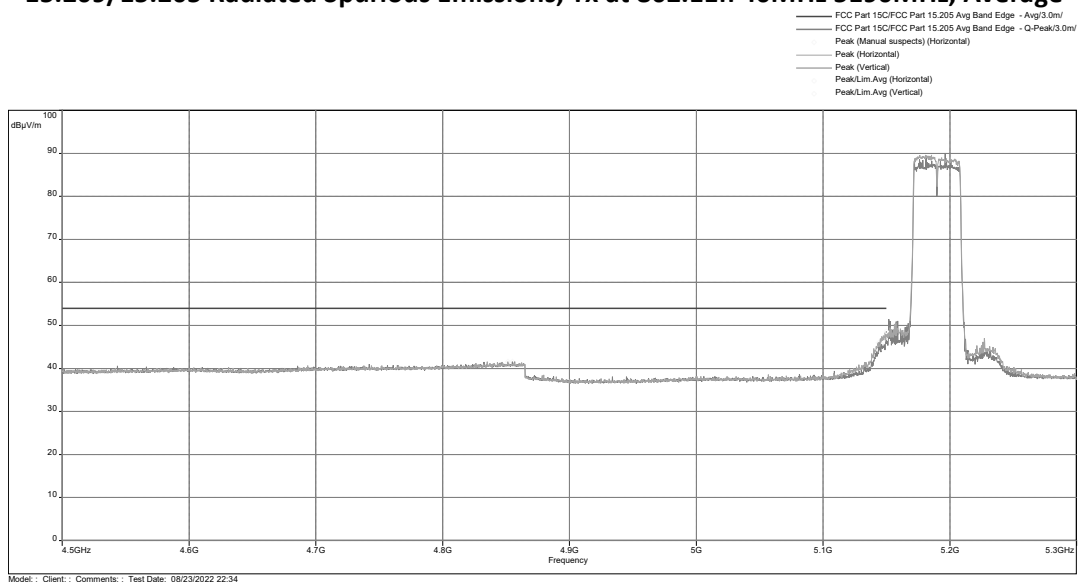
## Radiated Band Edge at the Restricted Bands

### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11n 40MHz 5190MHz, Peak



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBµV/m) | Limit<br>(dBµV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5150               | Peak     | 54.75                 | 74                | -19.25         | Pass         |

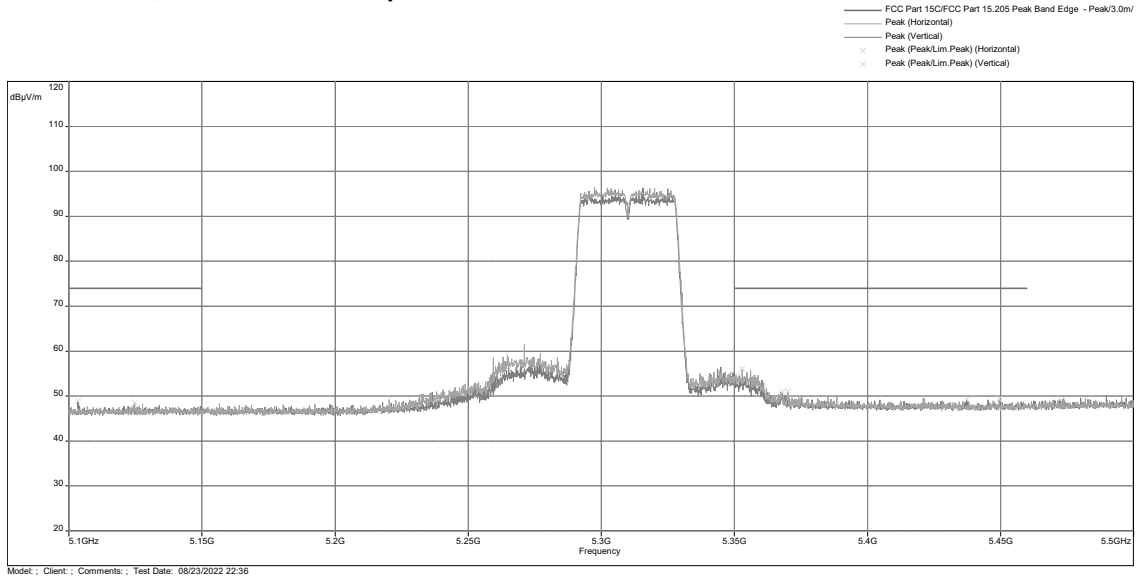
# 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11n 40MHz 5190MHz, Average



| Frequency | Detector | Amplitude | Limit    | Margin | Pass / Fail? |
|-----------|----------|-----------|----------|--------|--------------|
| (MHz)     |          | (dBuV/m)  | (dBuV/m) | (dB)   |              |
| 5150      | Average  | 48.63     | 54       | -5.37  | Pass         |

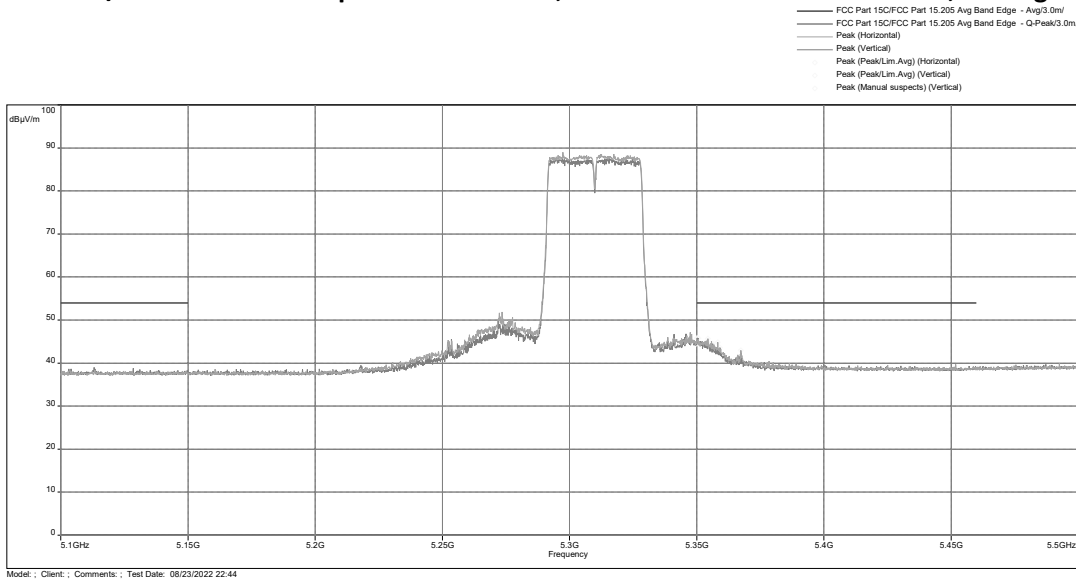
## Radiated Band Edge at the Restricted Bands

### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11n 40MHz 5310MHz, Peak



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5350               | Peak     | 52.03                 | 74                | -21.97         | Pass         |

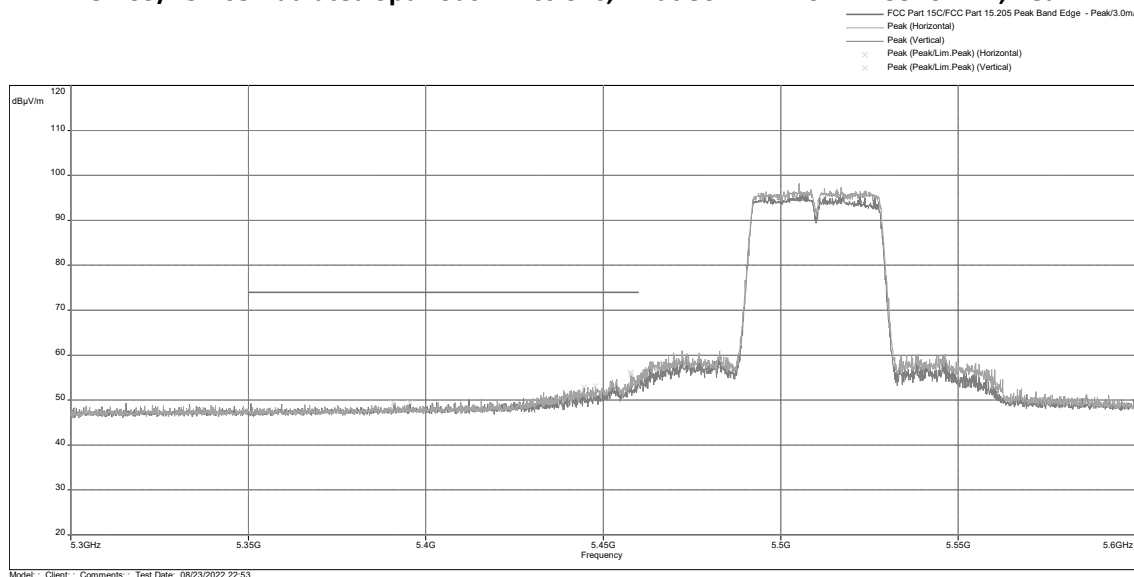
### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11n 40MHz 5310MHz, Average



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5350               | Average  | 44.53                 | 54                | -9.47          | Pass         |

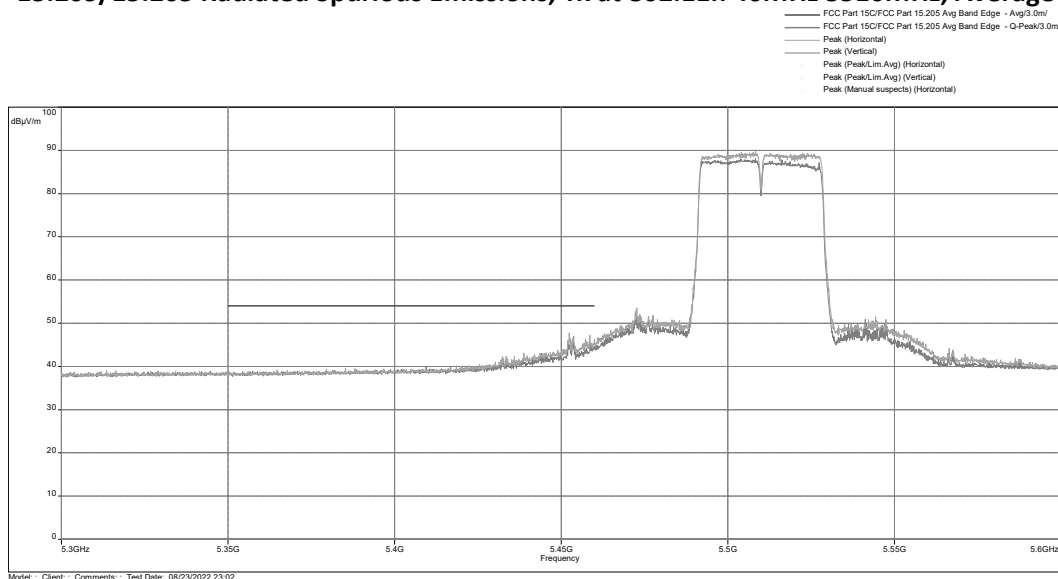
## Radiated Band Edge at the Restricted Bands

### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11n 40MHz 5510MHz, Peak



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5460               | Peak     | 52.74                 | 74                | -11.26         | Pass         |

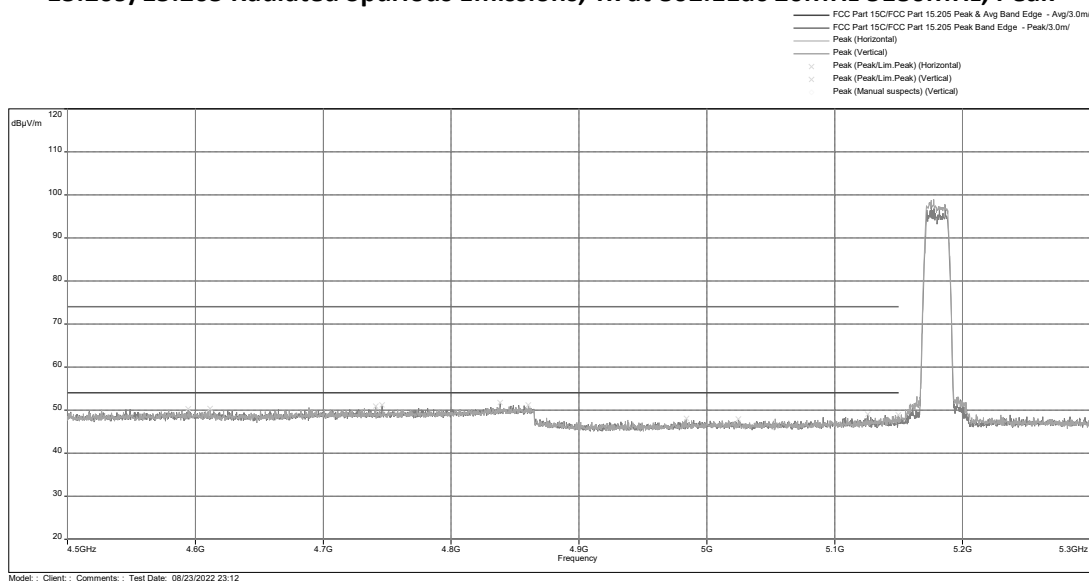
### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11n 40MHz 5510MHz, Average



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5460               | Average  | 46.35                 | 54                | -7.65          | Pass         |

## Radiated Band Edge at the Restricted Bands

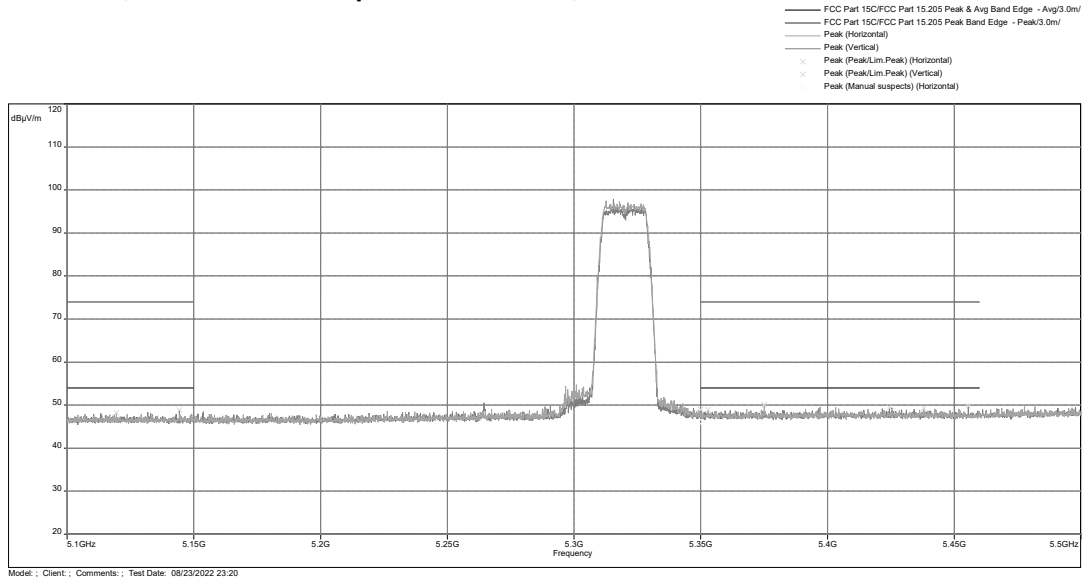
### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11ac 20MHz 5180MHz, Peak



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5150               | Peak     | 46.98                 | 54                | -7.02          | Pass         |

## Radiated Band Edge at the Restricted Bands

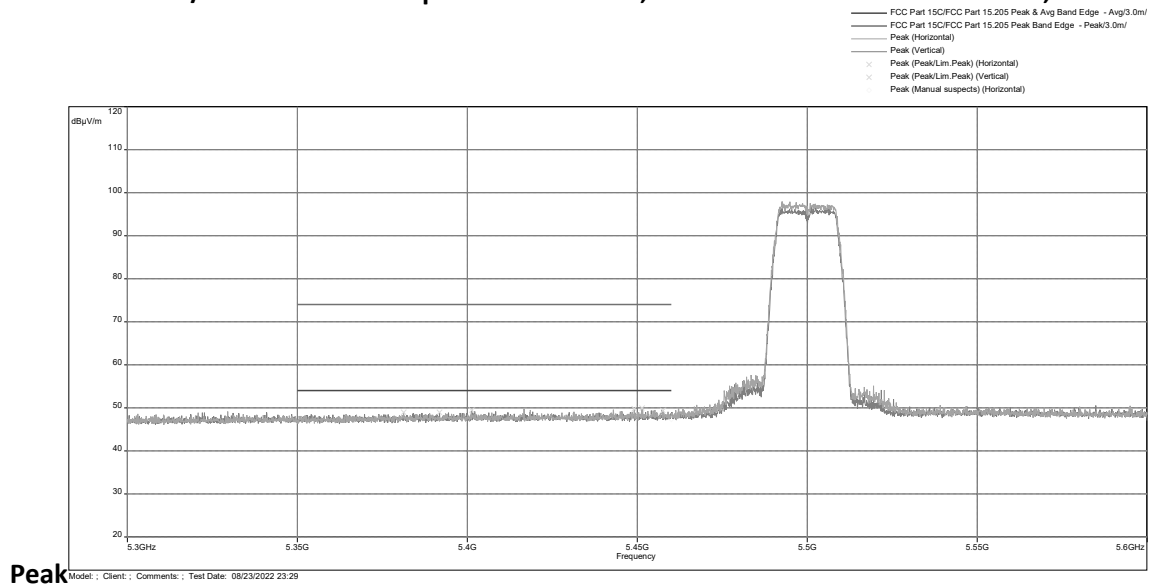
### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11ac 20MHz 5320MHz, Peak



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5350               | Peak     | 46.62                 | 54                | -7.38          | Pass         |

## Radiated Band Edge at the Restricted Bands

### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11ac 20MHz 5500MHz,

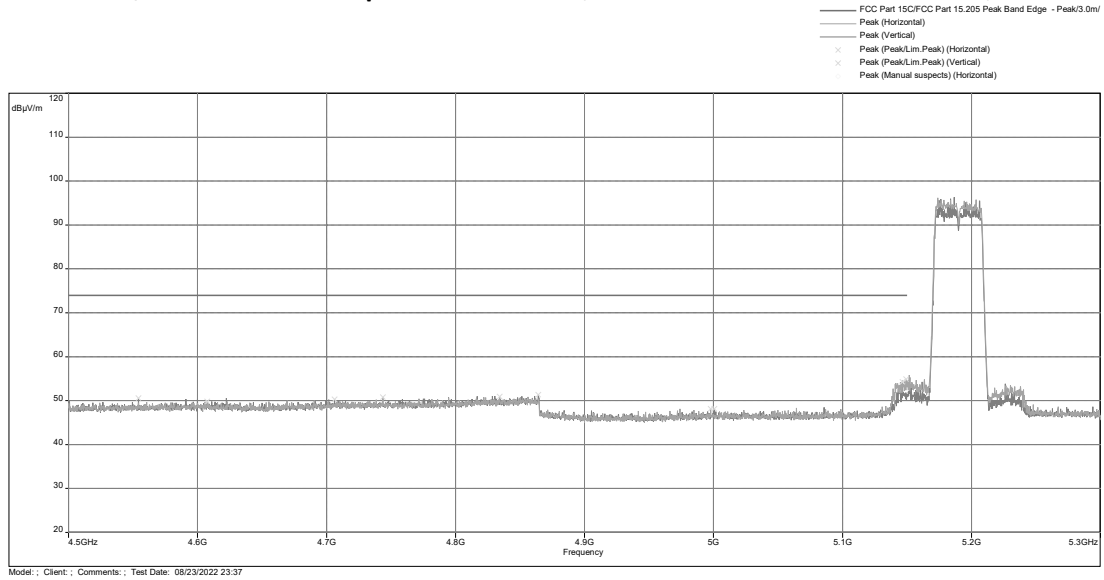


| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5500               | Peak     | 46.62                 | 54                | -7.38          | Pass         |

|      |      |       |    |       |      |
|------|------|-------|----|-------|------|
| 5460 | Peak | 47.14 | 54 | -6.86 | Pass |
|------|------|-------|----|-------|------|

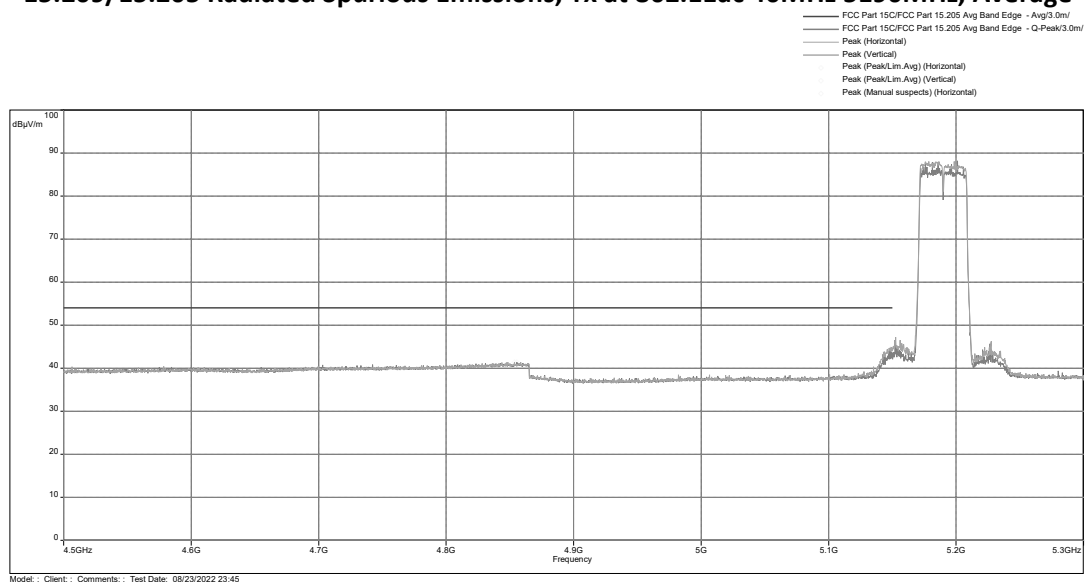
### Radiated Band Edge at the Restricted Bands

#### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11ac 40MHz 5190MHz, Peak



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5150               | Peak     | 51.31                 | 74                | -22.69         | Pass         |

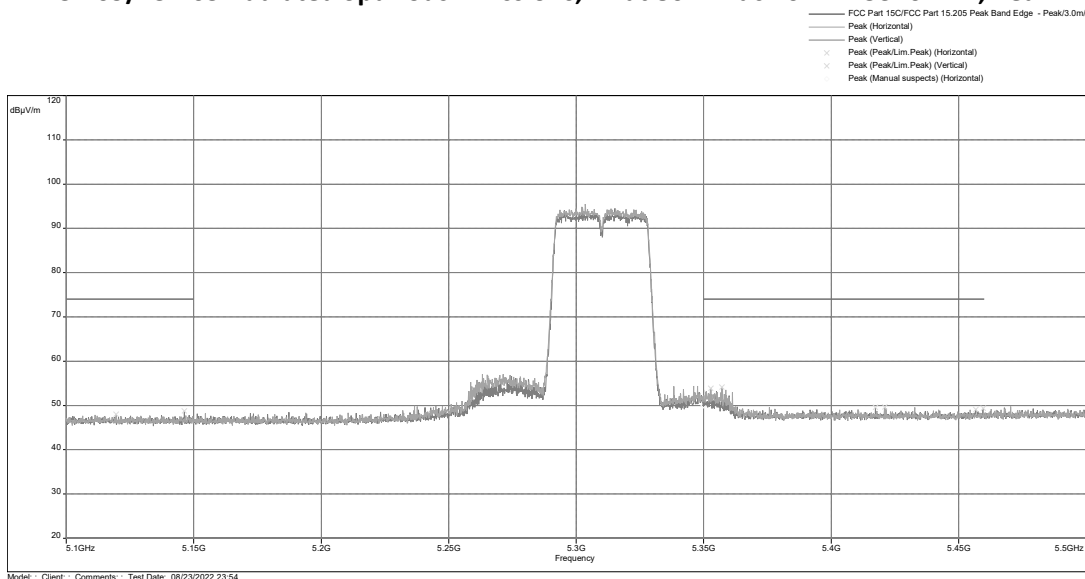
# 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11ac 40MHz 5190MHz, Average



| Frequency | Detector | Amplitude | Limit    | Margin | Pass / Fail? |
|-----------|----------|-----------|----------|--------|--------------|
| (MHz)     |          | (dBuV/m)  | (dBuV/m) | (dB)   |              |
| 5150      | Average  | 43.19     | 54       | -10.81 | Pass         |

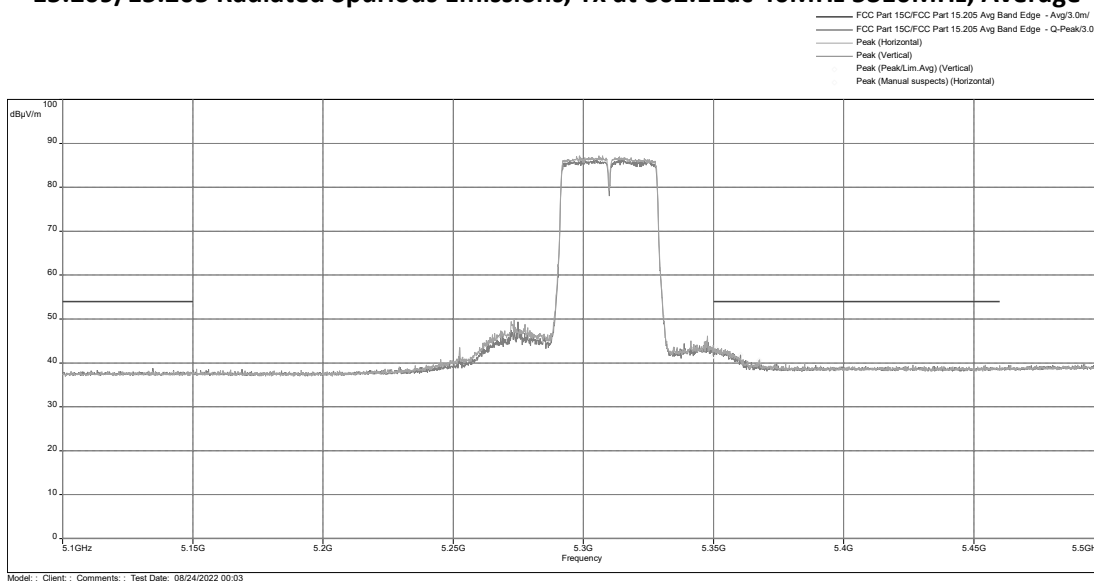
## Radiated Band Edge at the Restricted Bands

### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11ac 40MHz 5310MHz, Peak



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5350               | Peak     | 49.96                 | 74                | -24.04         | Pass         |

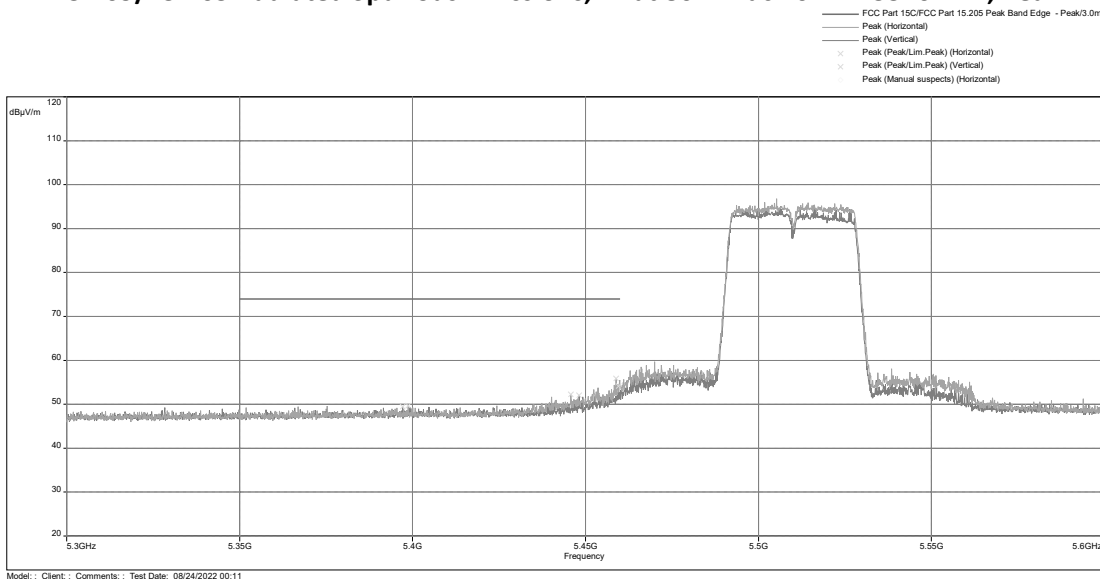
### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11ac 40MHz 5310MHz, Average



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5350               | Average  | 41.64                 | 54                | -12.36         | Pass         |

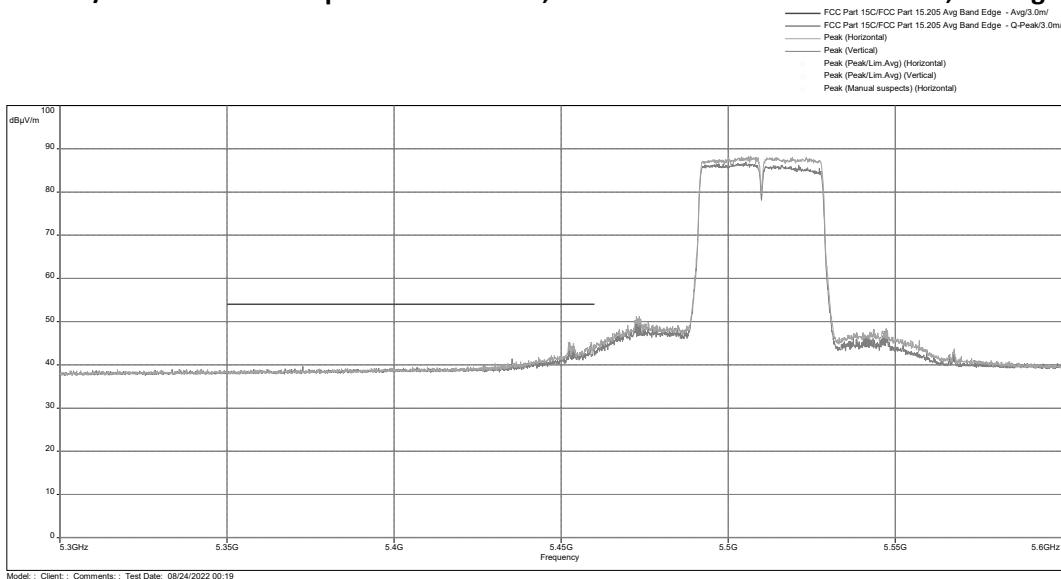
## Radiated Band Edge at the Restricted Bands

### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11ac 40MHz 5510MHz, Peak



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5460               | Peak     | 59.49                 | 74                | -14.51         | Pass         |

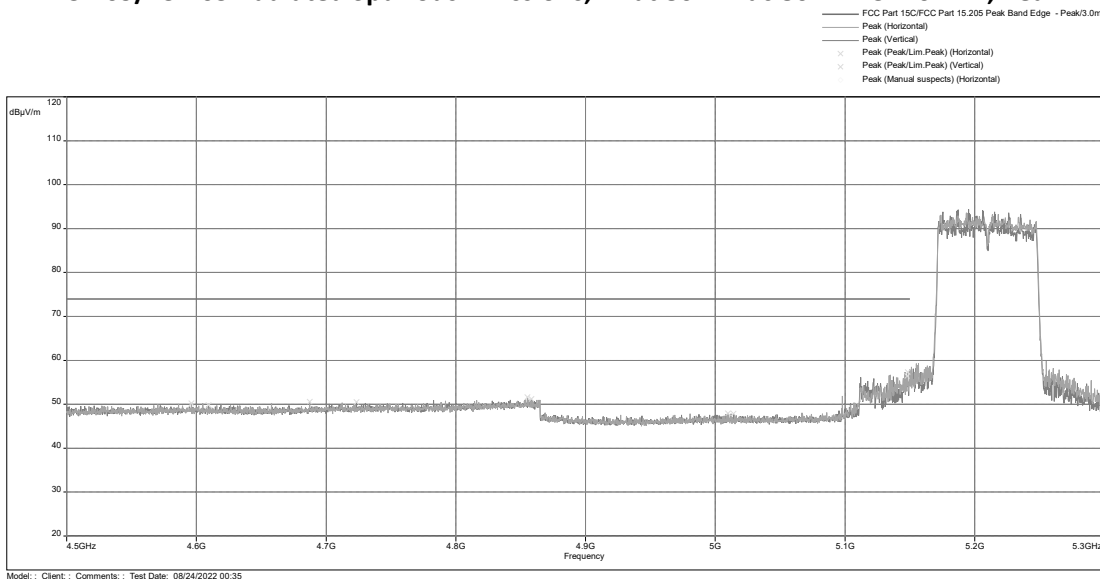
### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11ac 40MHz 5510MHz, Average



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5460               | Average  | 51.44                 | 54                | -2.56          | Pass         |

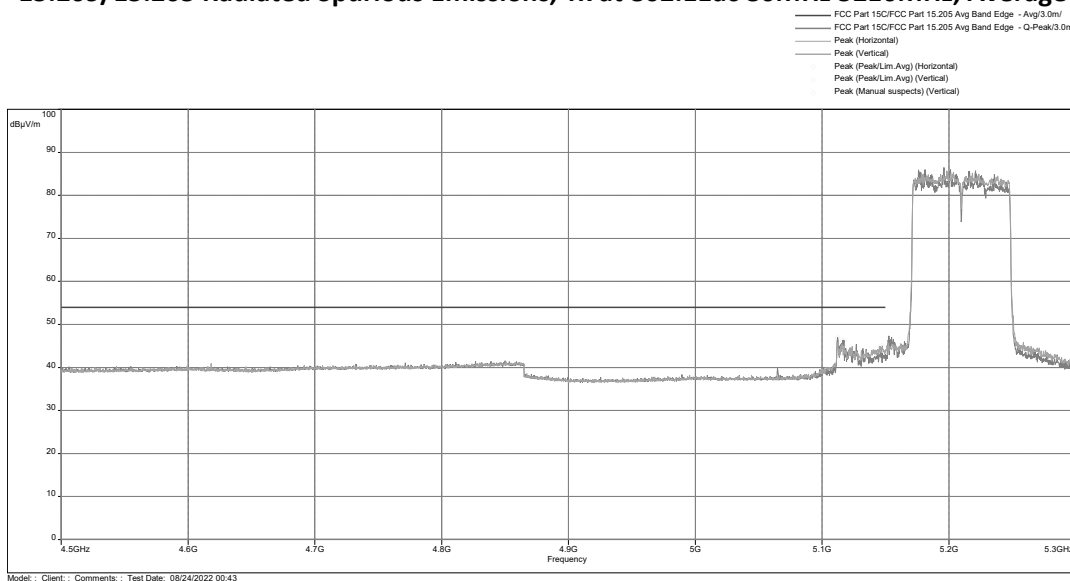
## Radiated Band Edge at the Restricted Bands

### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11ac 80MHz 5210MHz, Peak



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5150               | Peak     | 54.87                 | 74                | -19.13         | Pass         |

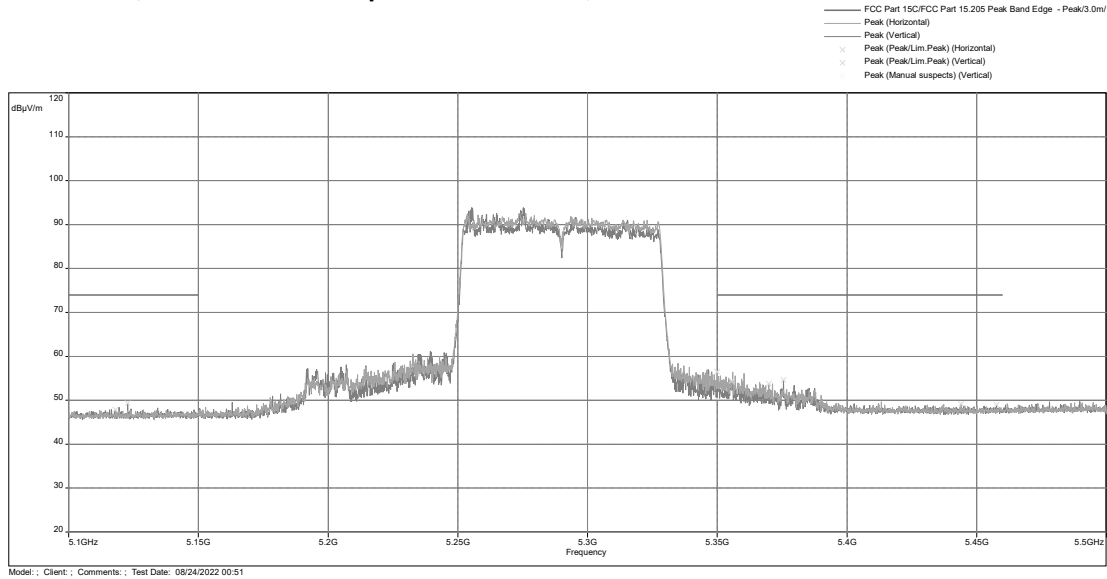
### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11ac 80MHz 5210MHz, Average



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5150               | Average  | 42.2                  | 54                | -11.8          | Pass         |

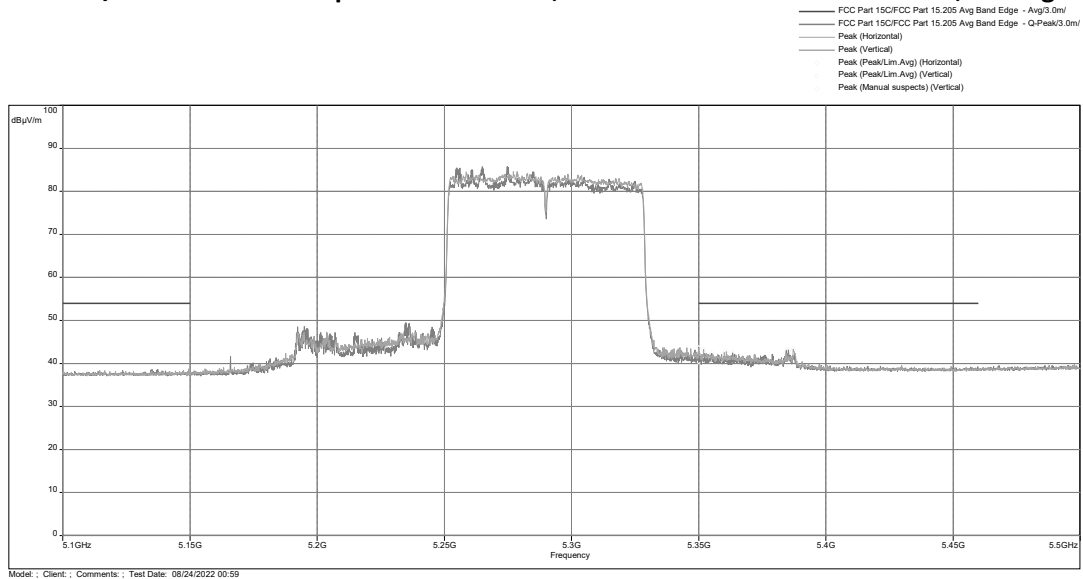
## Radiated Band Edge at the Restricted Bands

### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11ac 80MHz 5290MHz, Peak



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5350               | Peak     | 50.81                 | 74                | -23.19         | Pass         |

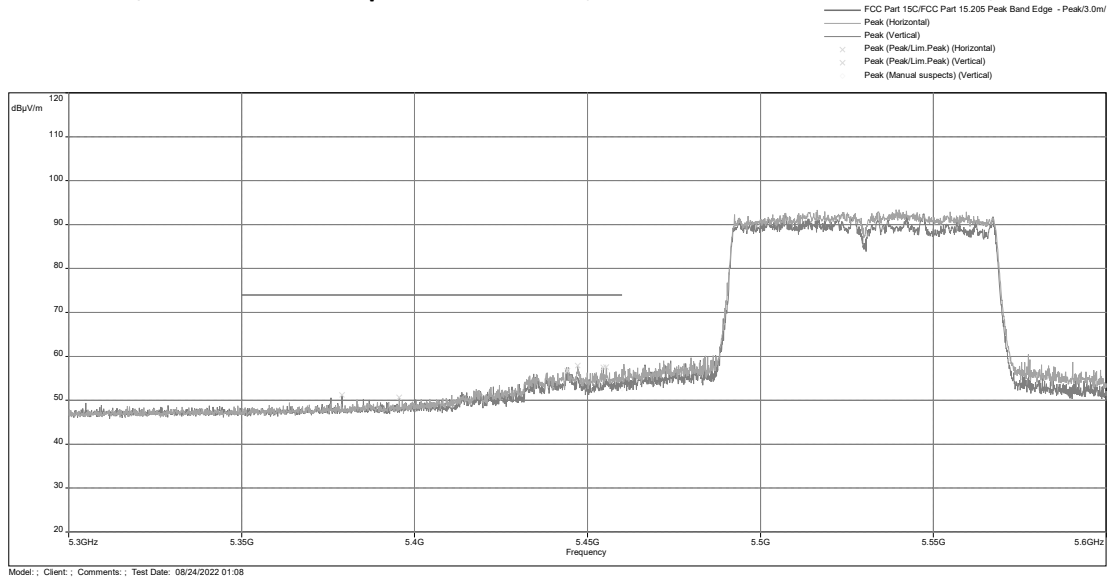
### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11ac 80MHz 5290MHz, Average



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5350               | Average  | 40.46                 | 54                | -13.54         | Pass         |

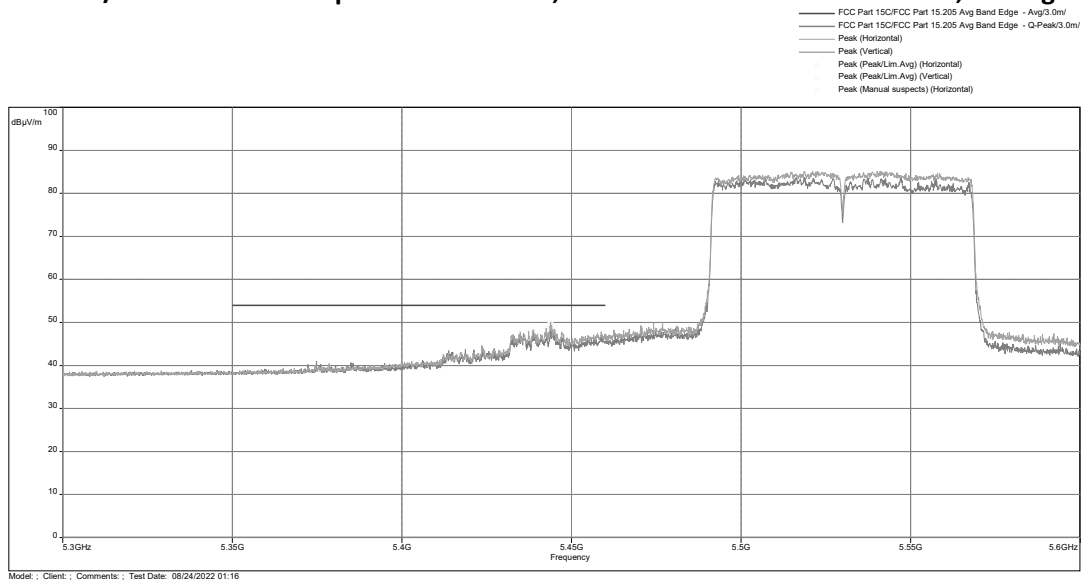
## Radiated Band Edge at the Restricted Bands

### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11ac 80MHz 5530MHz, Peak



| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5460               | Peak     | 59.49                 | 74                | -14.51         | Pass         |

### 15.209/15.205 Radiated Spurious Emissions, Tx at 802.11ac 80MHz 5530MHz, Average

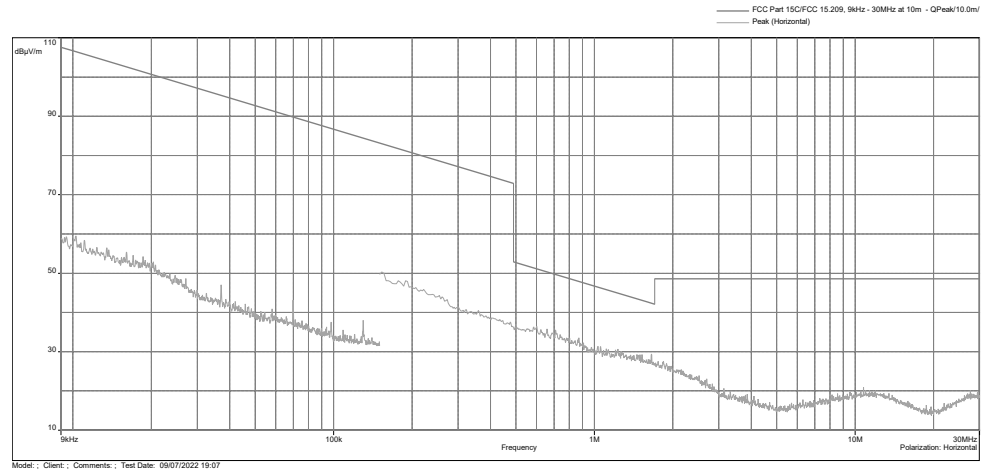


| Frequency<br>(MHz) | Detector | Amplitude<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Pass / Fail? |
|--------------------|----------|-----------------------|-------------------|----------------|--------------|
| 5460               | Average  | 45.56                 | 54                | -8.44          | Pass         |

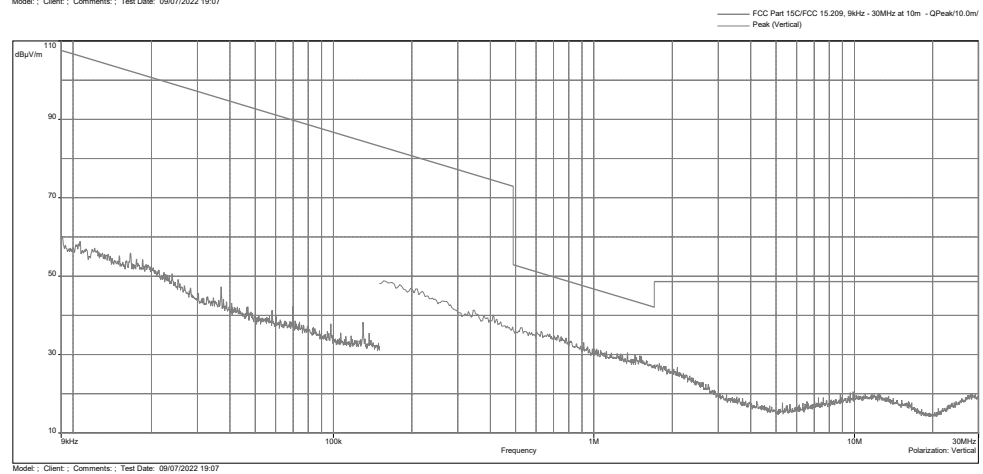
## Test Results: 15.209 Radiated Spurious Emissions, Tx at 802.11n

### Radiated Spurious Emissions 9 kHz to 30 MHz, Peak Scan vs QP Limit

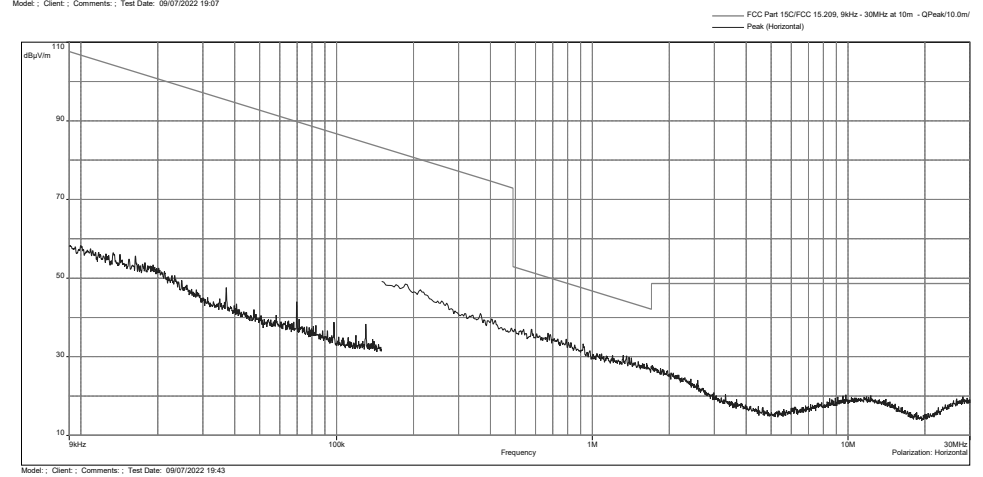
Antenna Position -  
Coaxial



Antenna Position -  
Coplanar

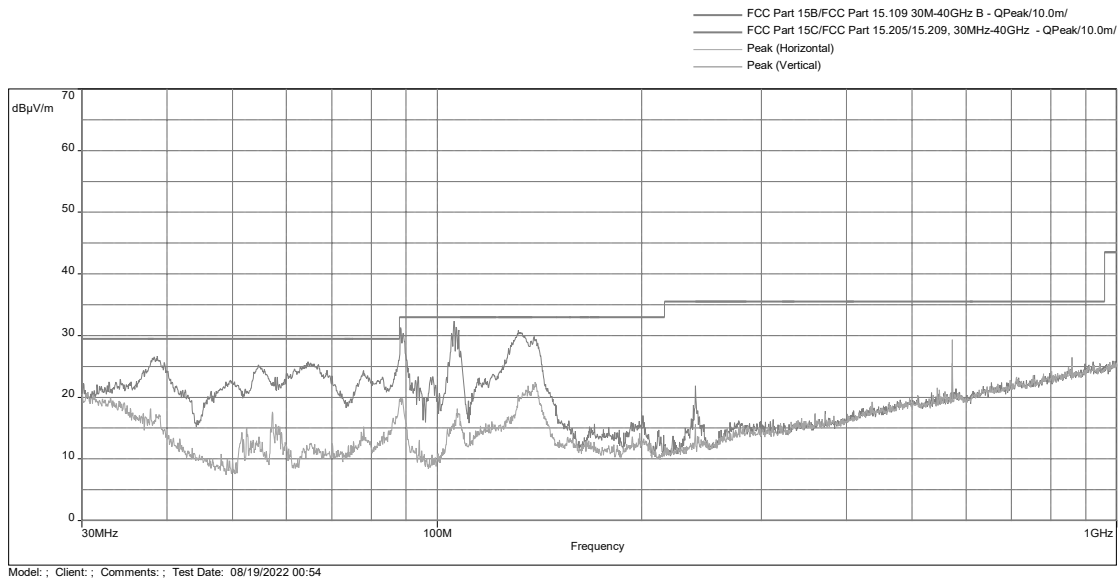


Antenna Position -  
Horizontal

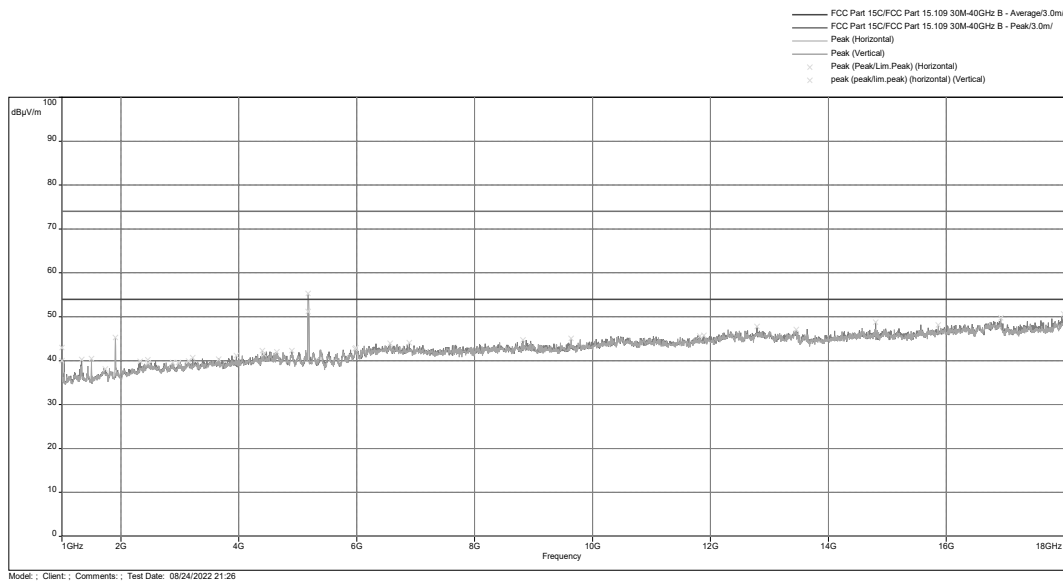


**Test Results: 15.209 Radiated Spurious Emissions, Tx at 802.11n 20MHz 5180MHz**

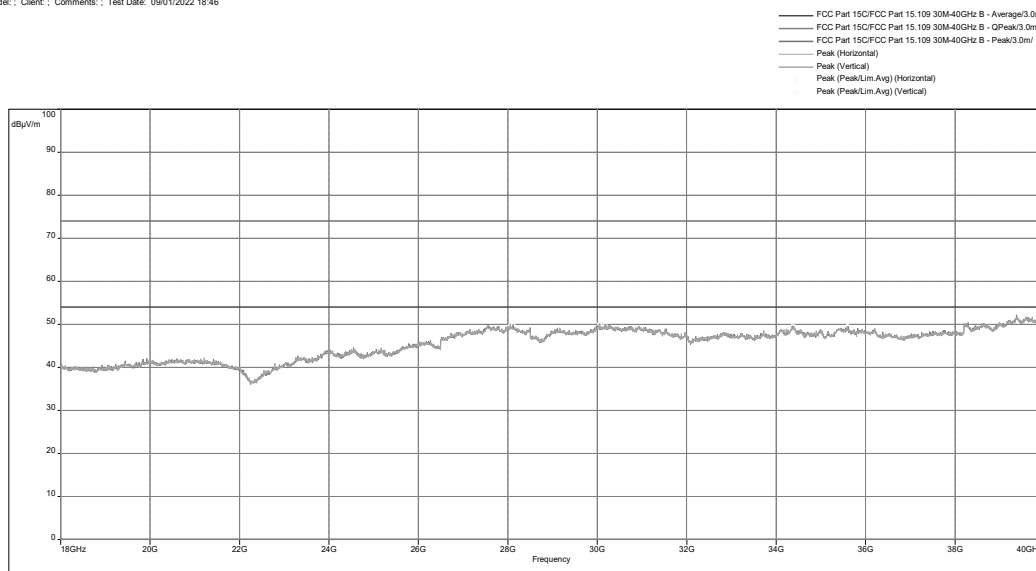
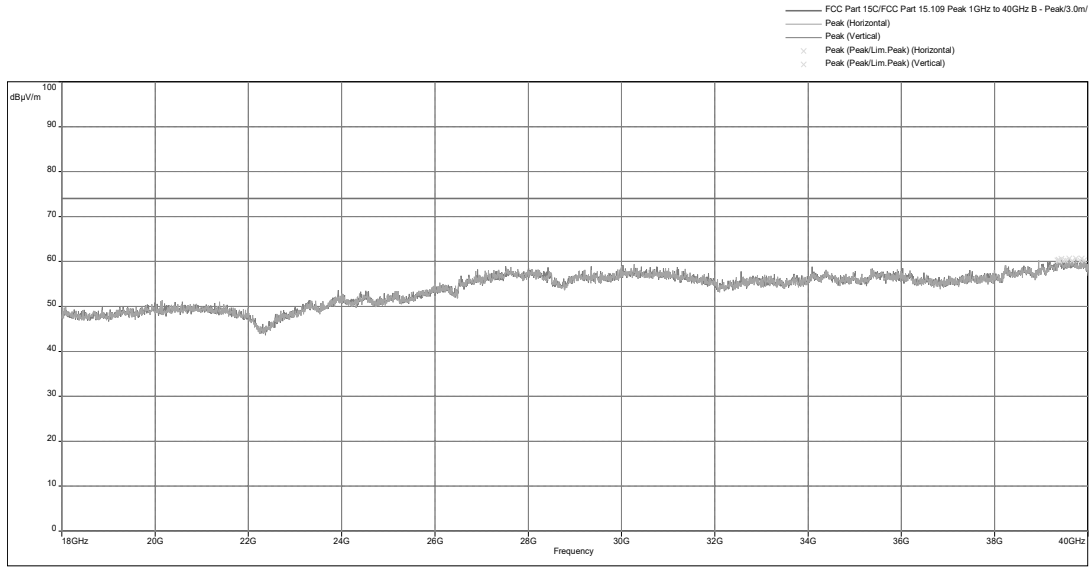
**Radiated Spurious Emissions 30 MHz to 1000 MHz, Peak Scan vs QP Limit**



**Radiated Spurious Emissions 1000 to 18000 MHz, Peak Scan vs Peak & Avg Limit**



## Radiated Spurious Emissions 18000 to 40000 MHz, Peak & Avg Scan vs Peak & Avg Limit

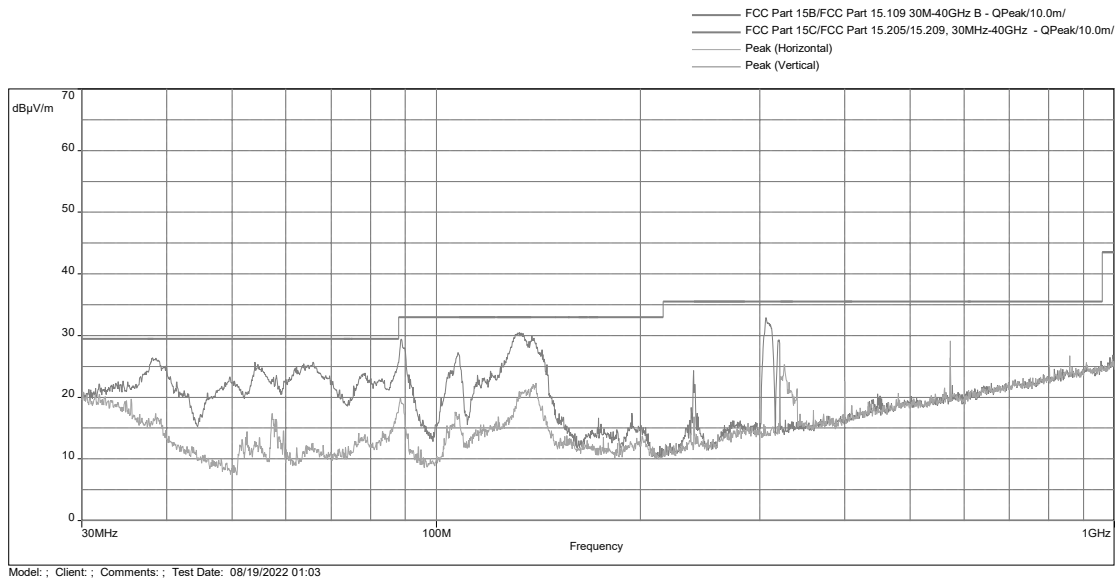


| Frequency | FS@10m | Limit@10m | Margin | Height | Azimuth | Polarity | Correction |
|-----------|--------|-----------|--------|--------|---------|----------|------------|
| MHz       | dBuV/m | dBuV/m    | (dB)   | (m)    | (deg)   |          | dB         |
| 38.69767  | 26.65  | 29.5      | -2.85  | 3      | 143     | Vertical | -12.41     |
| 88.32933  | 31.32  | 33        | -1.68  | 2      | 136.75  | Vertical | -19.27     |
| 105.8863  | 32.35  | 33        | -0.65  | 2      | 136.75  | Vertical | -14.99     |
| 106.6623  | 31.34  | 33        | -1.66  | 2      | 136.75  | Vertical | -14.83     |
| 107.5677  | 30.91  | 33        | -2.09  | 2      | 136.75  | Vertical | -14.64     |
| 131.6237  | 30.83  | 33        | -2.17  | 0.98   | 131.5   | Vertical | -12.52     |

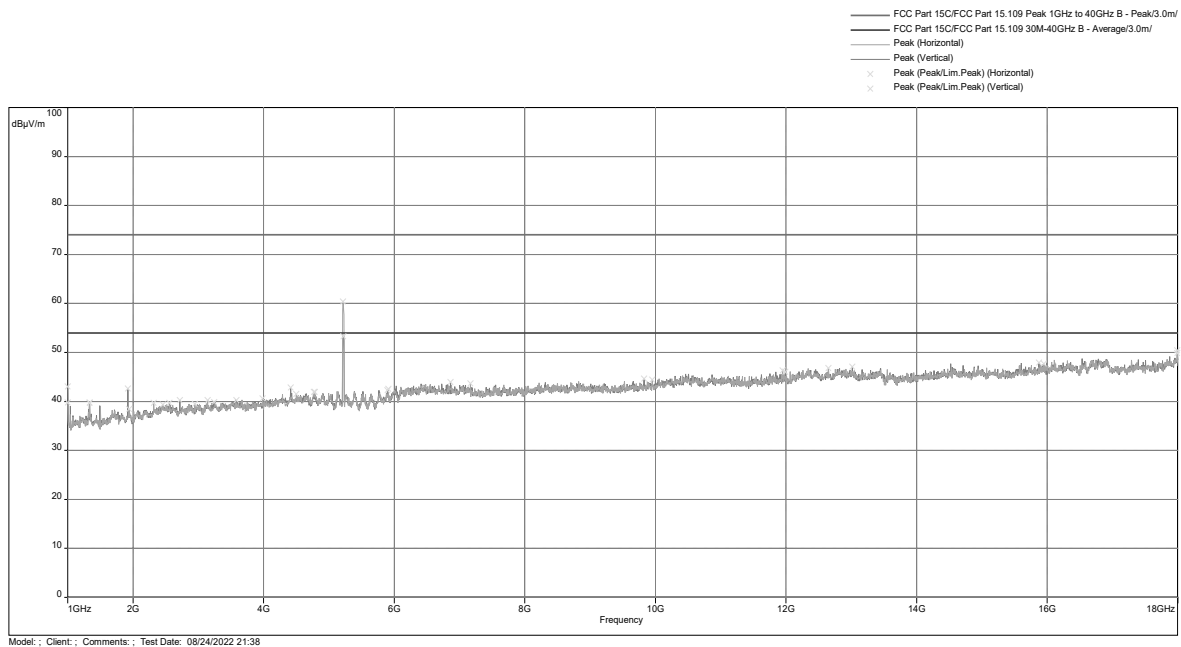
Note: Correction = AF + CF - Preamp

## Test Results: 15.209 Radiated Spurious Emissions, Tx at 802.11n 20MHz 5220MHz

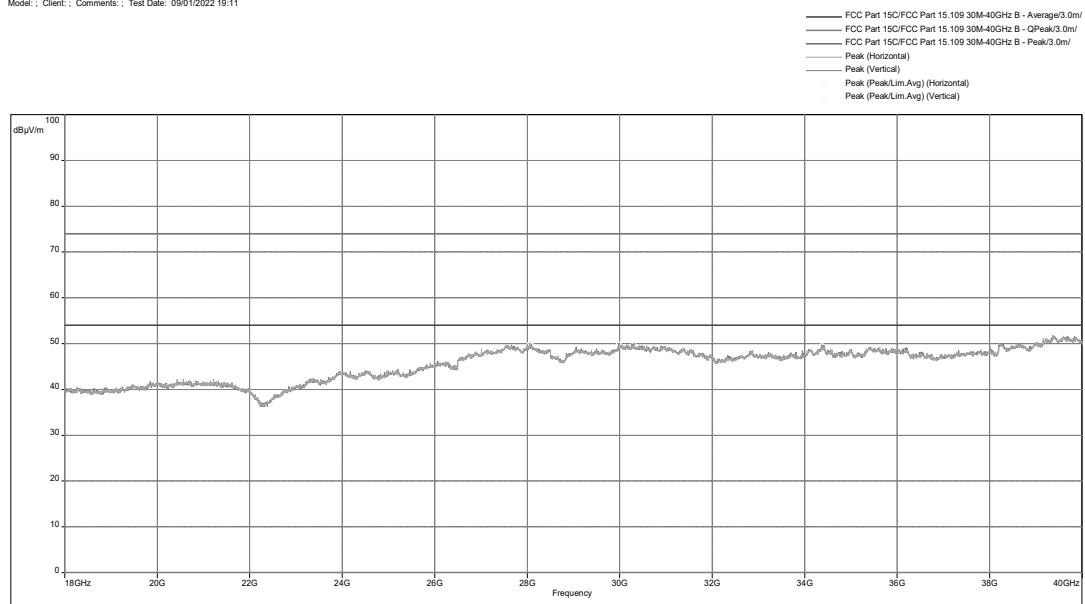
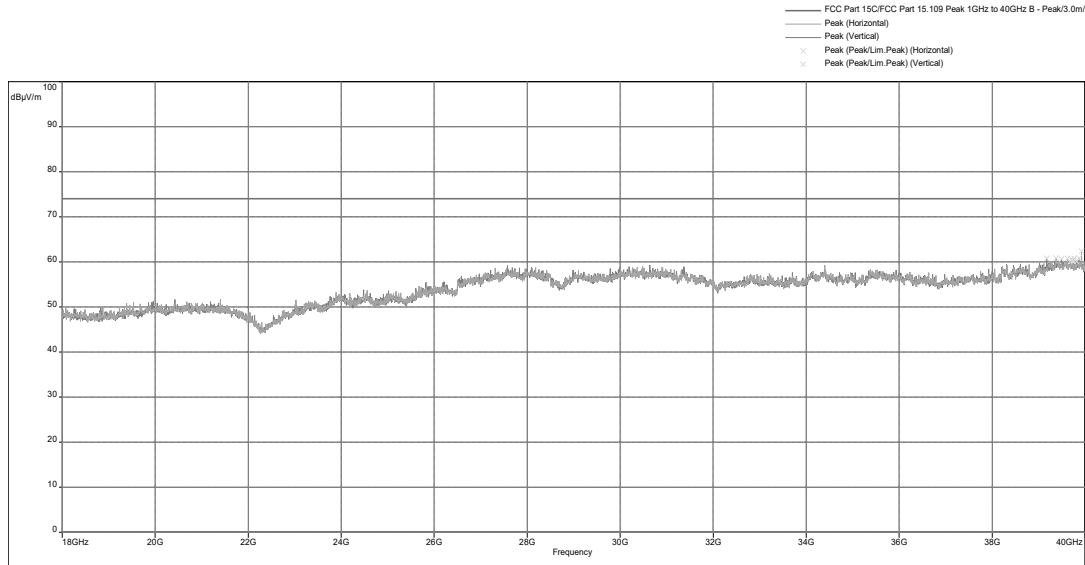
### Radiated Spurious Emissions 30 MHz to 1000 MHz, Peak Scan vs QP Limit



### Radiated Spurious Emissions 1000 to 18000 MHz, Peak Scan vs Peak & Avg Limit



## Radiated Spurious Emissions 18000 to 40000 MHz, Peak & Avg Scan vs Peak & Avg Limit

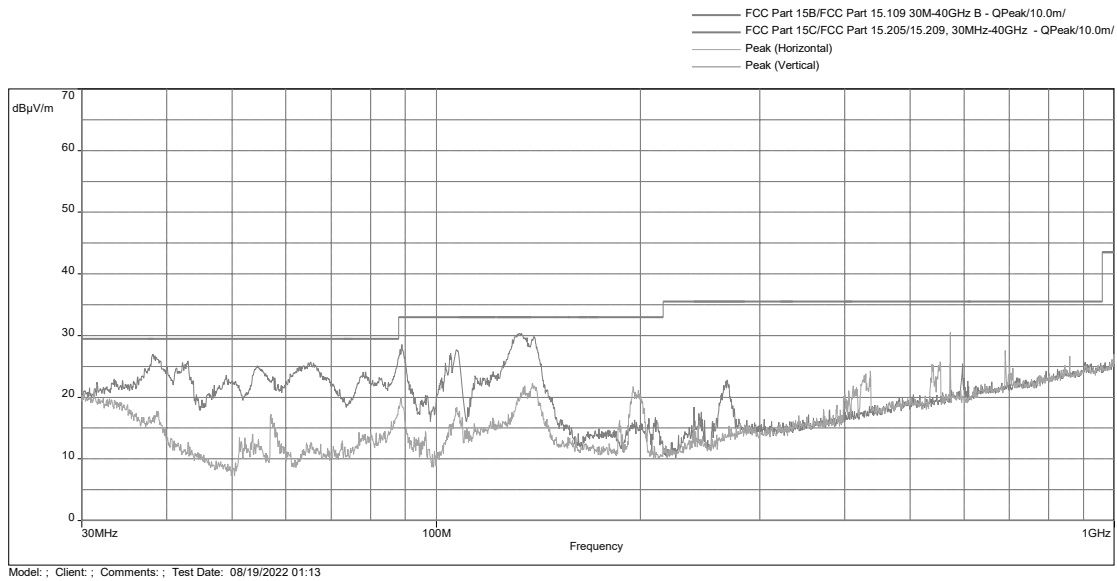


| Frequency | FS@10m | Limit@10m | Margin | Height | Azimuth | Polarity | Correction |
|-----------|--------|-----------|--------|--------|---------|----------|------------|
| MHz       | dBuV/m | dBuV/m    | (dB)   | (m)    | (deg)   |          | dB         |
| 38.148    | 26.44  | 29.5      | -3.06  | 3      | 127.75  | Vertical | -11.97     |
| 54.02367  | 25.73  | 29.5      | -3.77  | 4      | 174.75  | Vertical | -19.98     |
| 65.793    | 25.69  | 29.5      | -3.81  | 2      | 95.75   | Vertical | -19        |
| 88.782    | 29.43  | 33        | -3.57  | 0.98   | 157.5   | Vertical | -19.22     |
| 132.4967  | 30.51  | 33        | -2.49  | 2      | 162.75  | Vertical | -12.61     |
| 306.3853  | 32.92  | 35.5      | -2.58  | 4      | 331.5   | Vertical | -12.07     |
| 38.148    | 26.44  | 29.5      | -3.06  | 3      | 127.75  | Vertical | -11.97     |

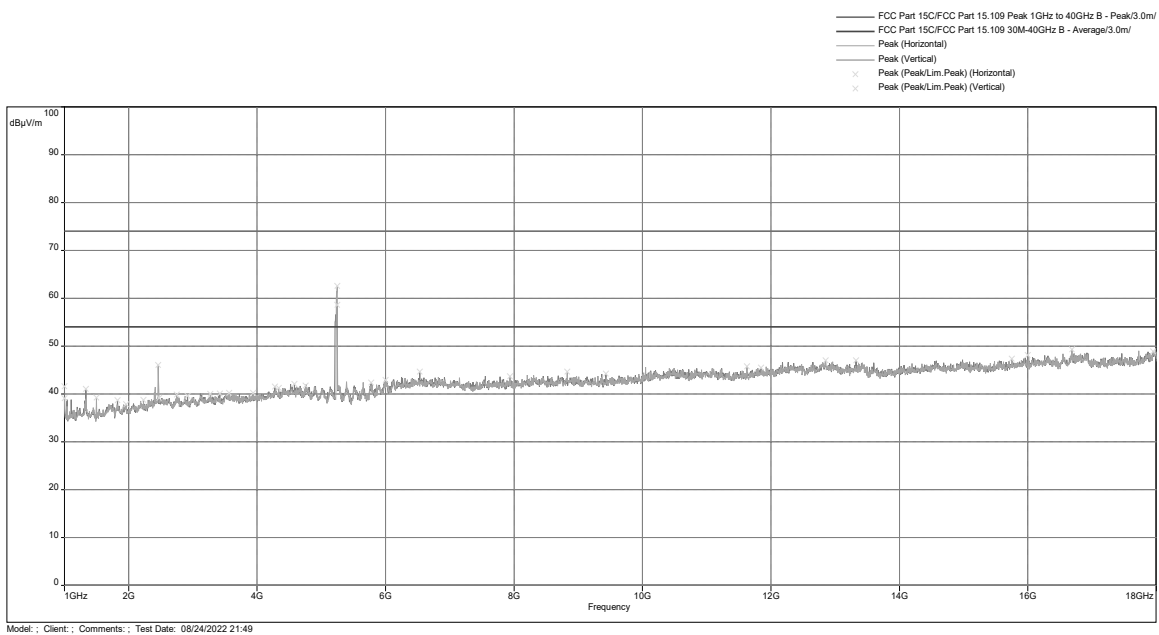
Note: Correction = AF + CF - Preamp

**Test Results: 15.209 Radiated Spurious Emissions, Tx at 802.11n 20MHz 5240MHz**

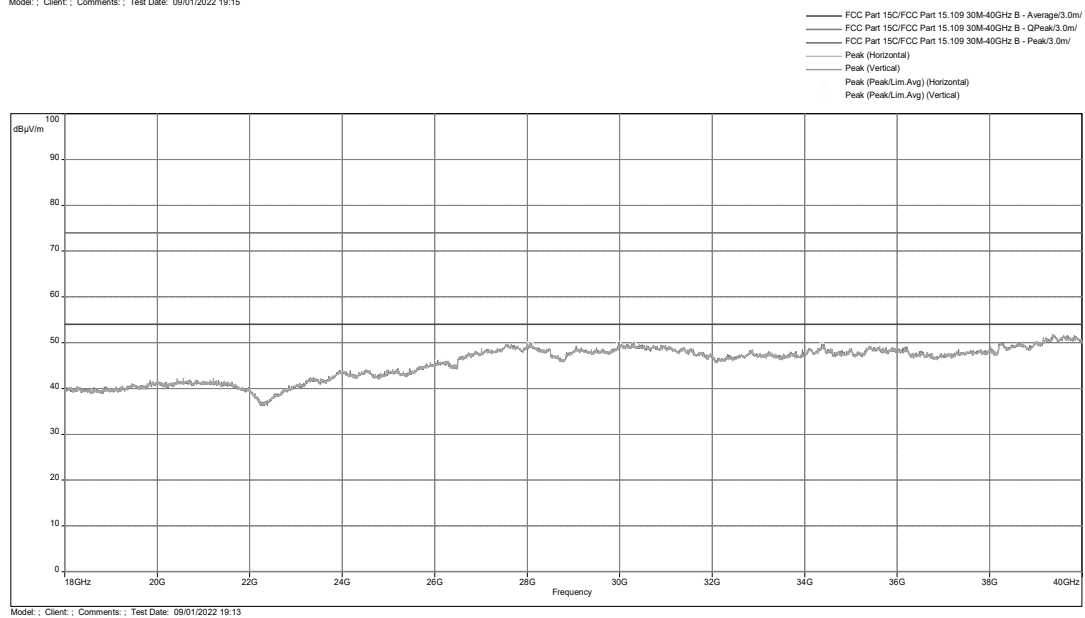
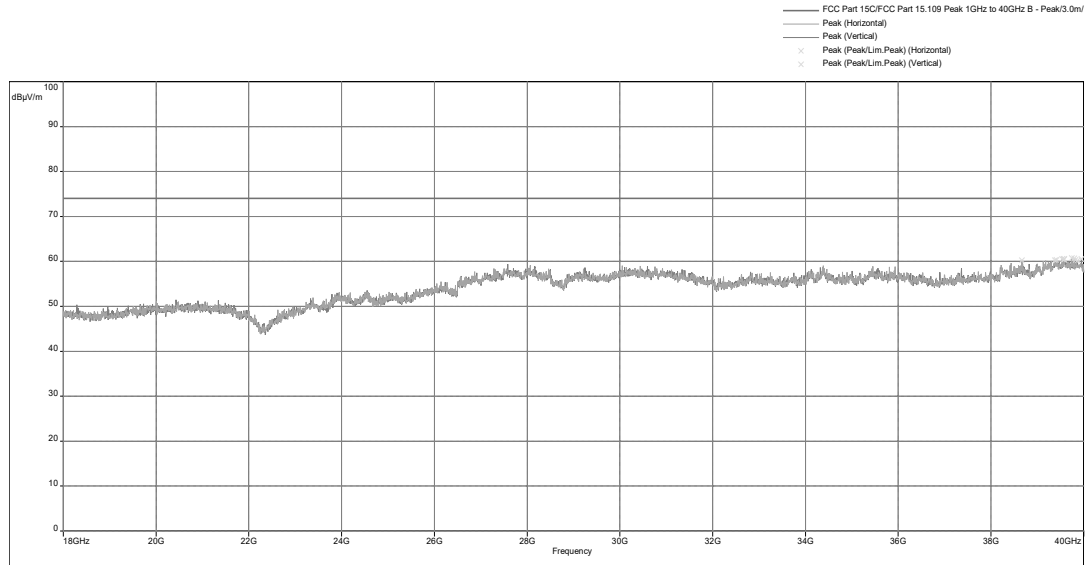
**Radiated Spurious Emissions 30 MHz to 1000 MHz, Peak Scan vs QP Limit**



**Radiated Spurious Emissions 1000 to 18000 MHz, Peak Scan vs Peak & Avg Limit**



## Radiated Spurious Emissions 18000 to 40000 MHz, Peak & Avg Scan vs Peak & Avg Limit

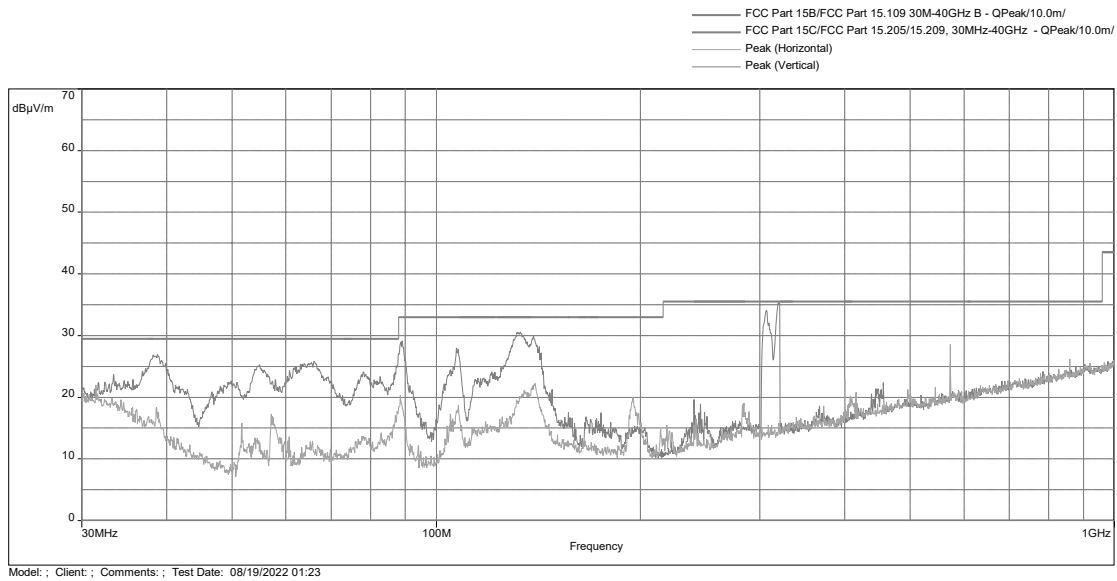


| Frequency | FS@10m | Limit@10m | Margin | Height | Azimuth | Polarity | Correction |
|-----------|--------|-----------|--------|--------|---------|----------|------------|
| MHz       | dBuV/m | dBuV/m    | (dB)   | (m)    | (deg)   |          | dB         |
| 38.21267  | 26.97  | 29.5      | -2.53  | 0.99   | 101.25  | Vertical | -12.02     |
| 43.03033  | 25.91  | 29.5      | -3.59  | 0.99   | 344.75  | Vertical | -15.53     |
| 54.47633  | 25.11  | 29.5      | -4.39  | 4      | 206.75  | Vertical | -19.97     |
| 65.24333  | 25.69  | 29.5      | -3.81  | 2      | 65.5    | Vertical | -19.06     |
| 88.976    | 28.58  | 33        | -4.42  | 0.99   | 153.75  | Vertical | -19.2      |
| 133.499   | 30.42  | 33        | -2.58  | 2      | 81.5    | Vertical | -12.7      |

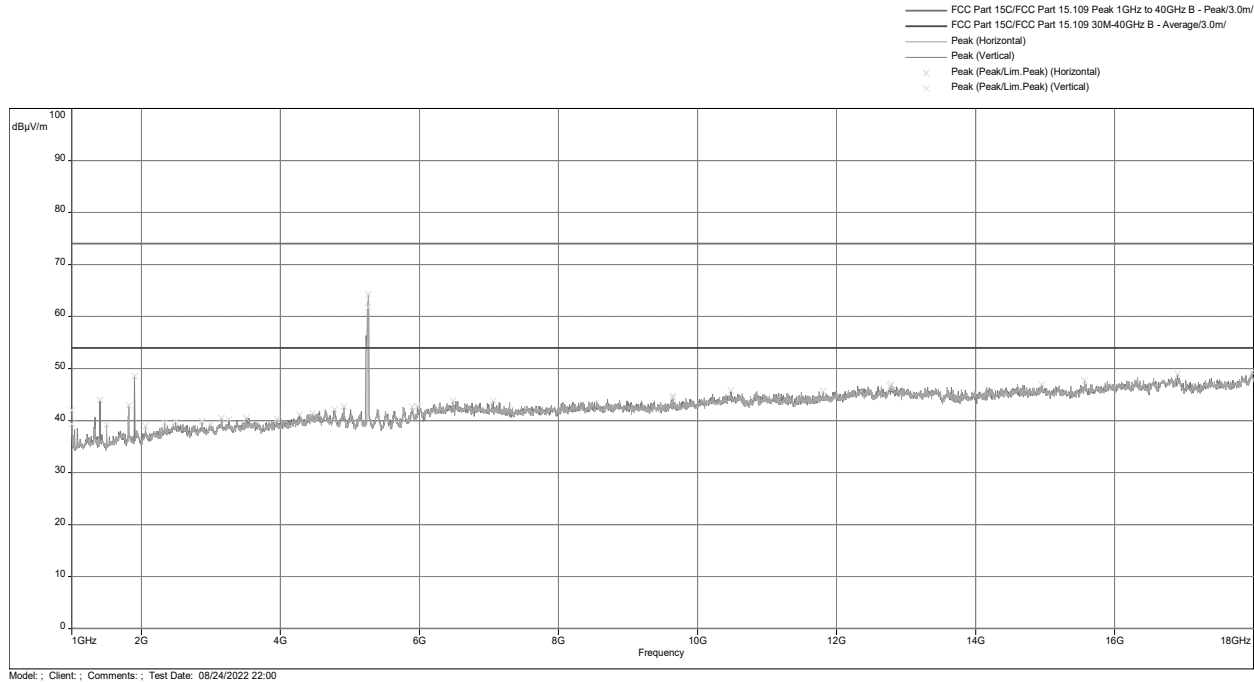
Note: Correction = AF + CF - Preamp

## Test Results: 15.209 Radiated Spurious Emissions, Tx at 802.11n 20MHz 5260MHz

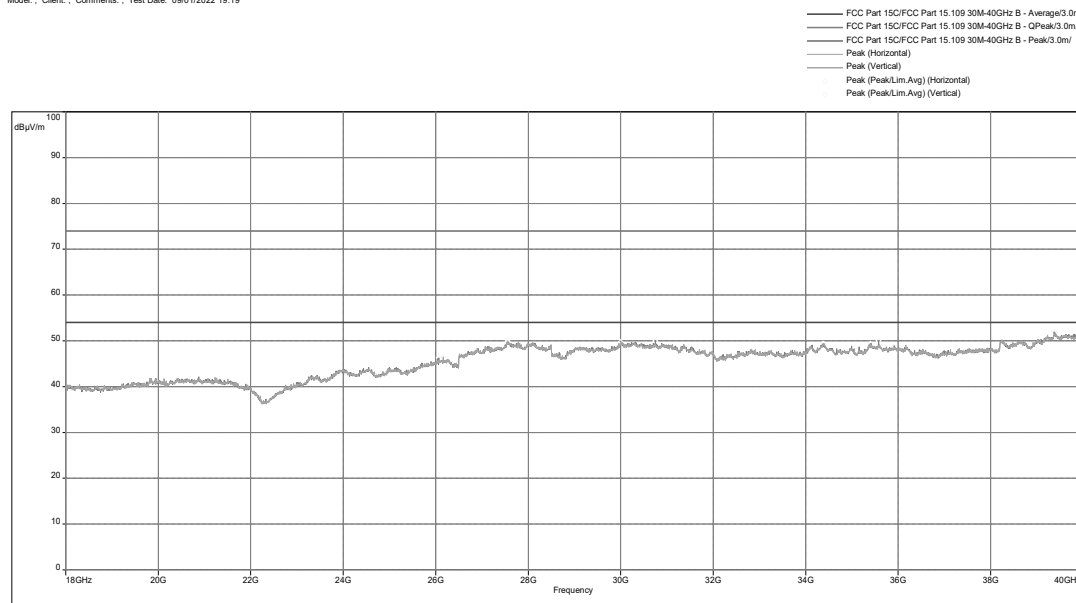
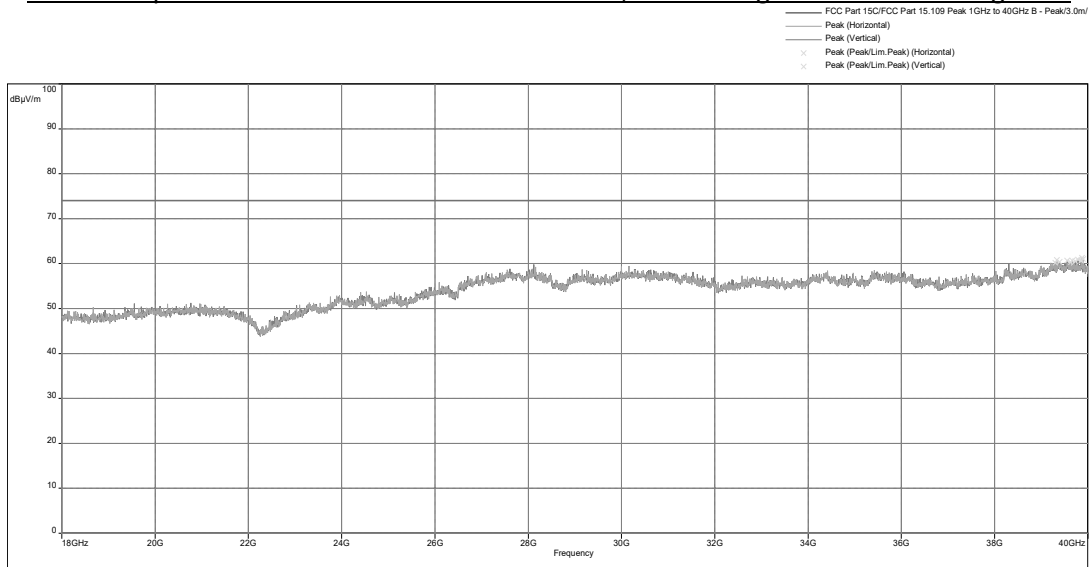
### Radiated Spurious Emissions 30 MHz to 1000 MHz, Peak Scan vs QP Limit



### Radiated Spurious Emissions 1000 to 18000 MHz, Peak Scan vs Peak & Avg Limit



## Radiated Spurious Emissions 18000 to 40000 MHz, Peak & Avg Scan vs Peak & Avg Limit

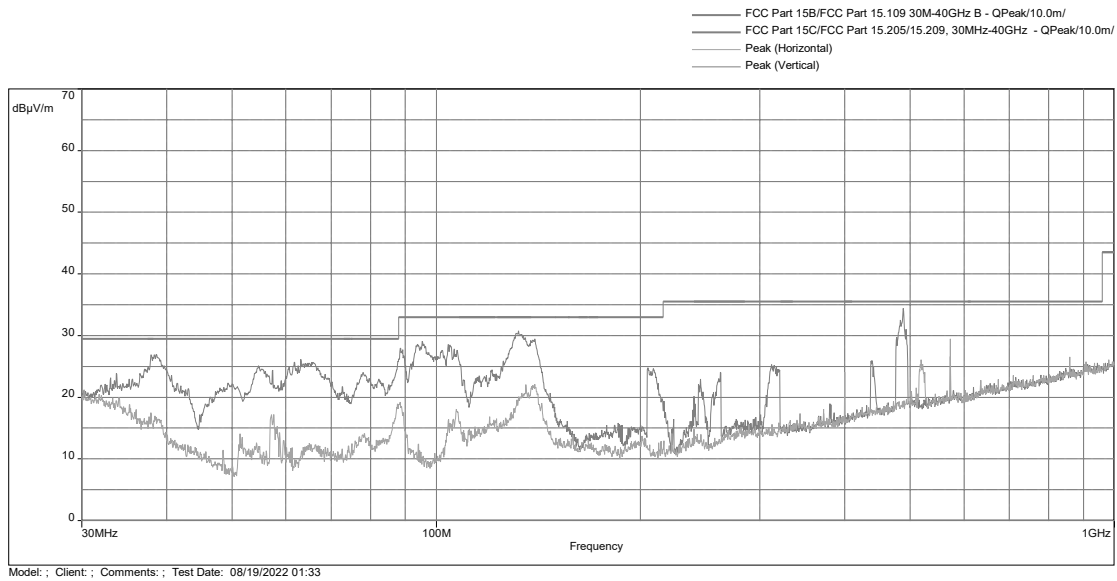


| Frequency | FS@10m | Limit@10m | Margin | Height | Azimuth | Polarity | Correction |
|-----------|--------|-----------|--------|--------|---------|----------|------------|
| MHz       | dBuV/m | dBuV/m    | (dB)   | (m)    | (deg)   |          | dB         |
| 38.79467  | 26.94  | 29.5      | -2.56  | 0.99   | 125.25  | Vertical | -12.48     |
| 66.084    | 25.86  | 29.5      | -3.64  | 2      | 97      | Vertical | -18.97     |
| 89.00833  | 29.13  | 33        | -3.87  | 0.99   | 148.25  | Vertical | -19.2      |
| 132.9817  | 30.58  | 33        | -2.42  | 2      | 127     | Vertical | -12.66     |
| 306.5147  | 34.06  | 35.5      | -1.44  | 2      | 342.5   | Vertical | -12.07     |
| 319.448   | 35.4   | 35.5      | -0.1   | 2      | 342.5   | Vertical | -11.6      |

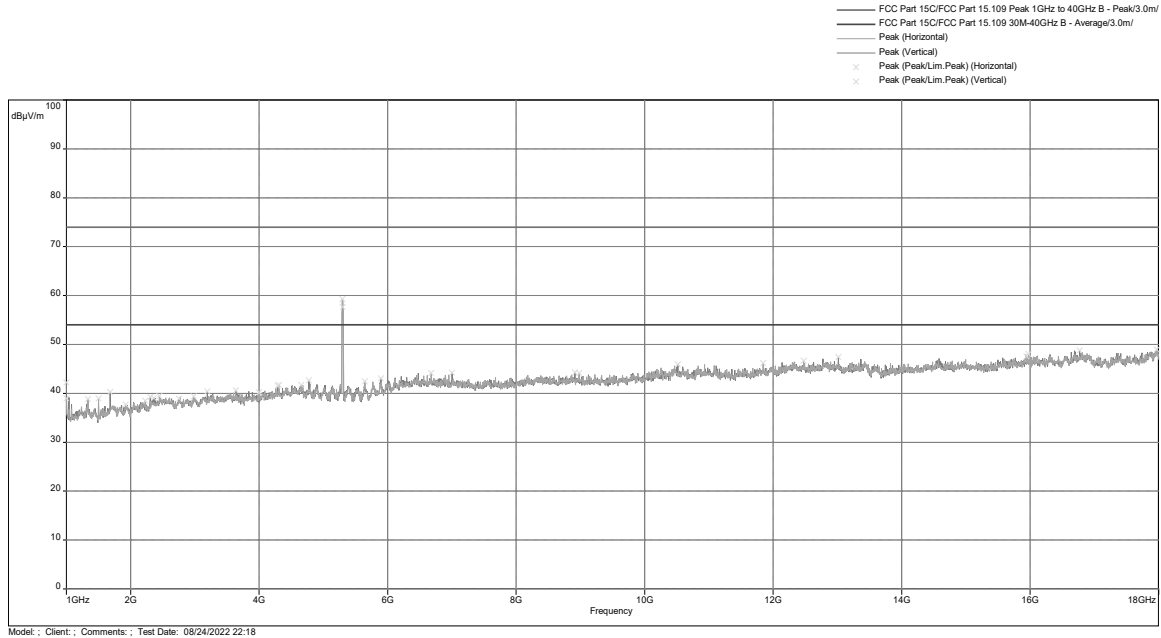
Note: Correction = AF + CF - Preamp

**Test Results: 15.209 Radiated Spurious Emissions, Tx at 802.11n 20MHz 5300MHz**

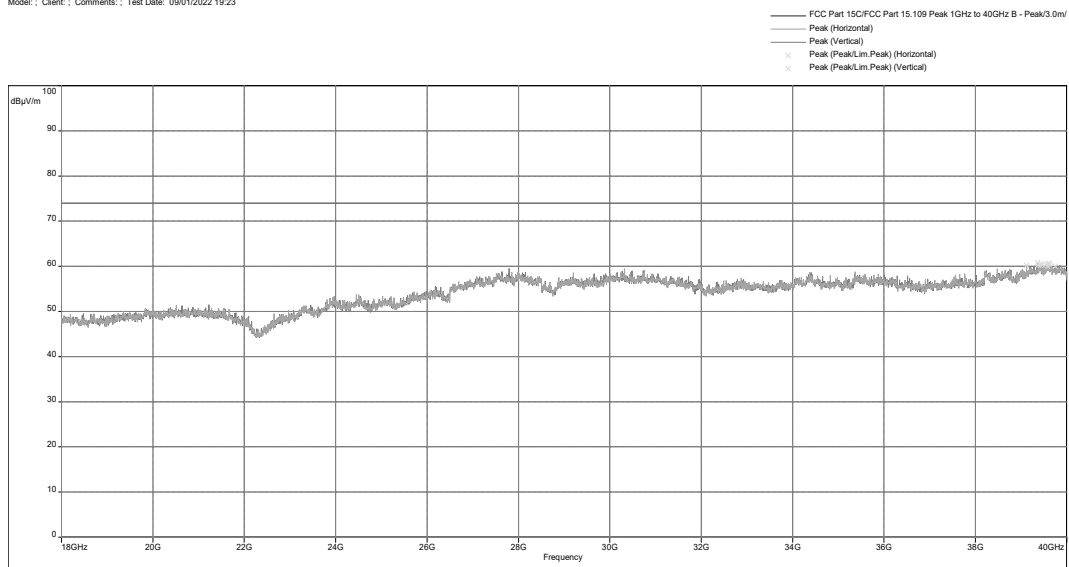
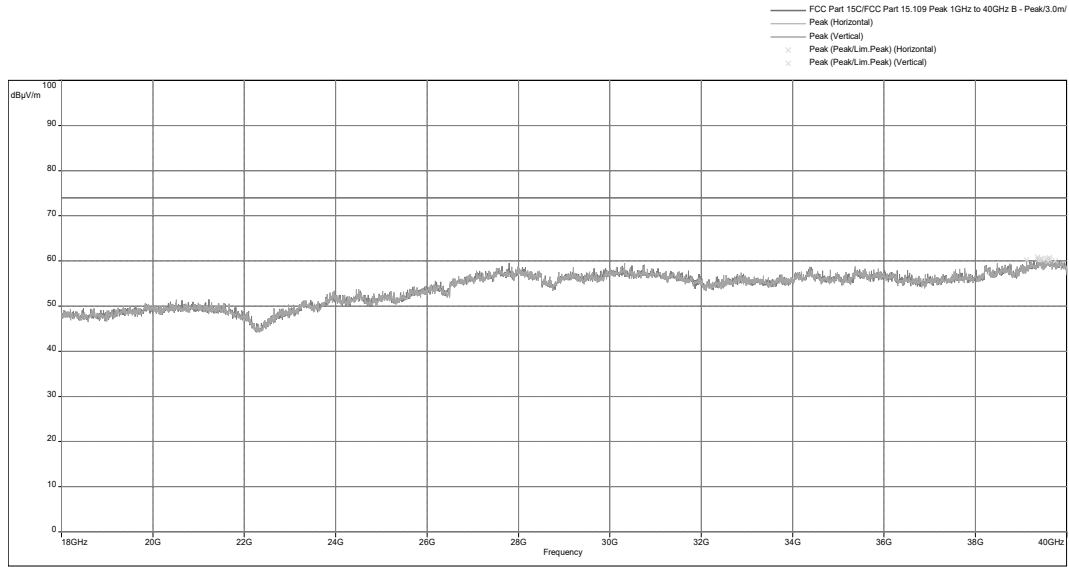
**Radiated Spurious Emissions 30 MHz to 1000 MHz, Peak Scan vs QP Limit**



**Radiated Spurious Emissions 1000 to 18000 MHz, Peak Scan vs Peak & Avg Limit**



## Radiated Spurious Emissions 18000 to 40000 MHz, Peak & Avg Scan vs Peak & Avg Limit

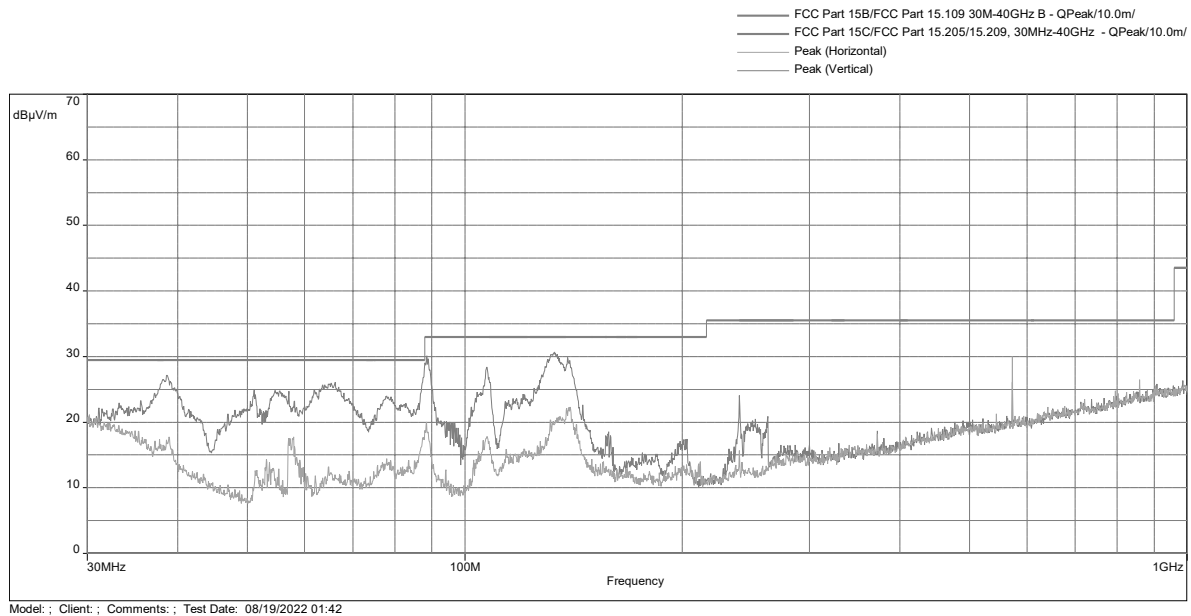


| Frequency | FS@10m | Limit@10m | Margin | Height | Azimuth | Polarity | Correction |
|-----------|--------|-----------|--------|--------|---------|----------|------------|
| MHz       | dBuV/m | dBuV/m    | (dB)   | (m)    | (deg)   |          | dB         |
| 38.79467  | 26.94  | 29.5      | -2.56  | 0.99   | 125.25  | Vertical | -12.48     |
| 66.084    | 25.86  | 29.5      | -3.64  | 2      | 97      | Vertical | -18.97     |
| 89.00833  | 29.13  | 33        | -3.87  | 0.99   | 148.25  | Vertical | -19.2      |
| 132.9817  | 30.58  | 33        | -2.42  | 2      | 127     | Vertical | -12.66     |
| 306.5147  | 34.06  | 35.5      | -1.44  | 2      | 342.5   | Vertical | -12.07     |
| 319.448   | 35.4   | 35.5      | -0.1   | 2      | 342.5   | Vertical | -11.6      |

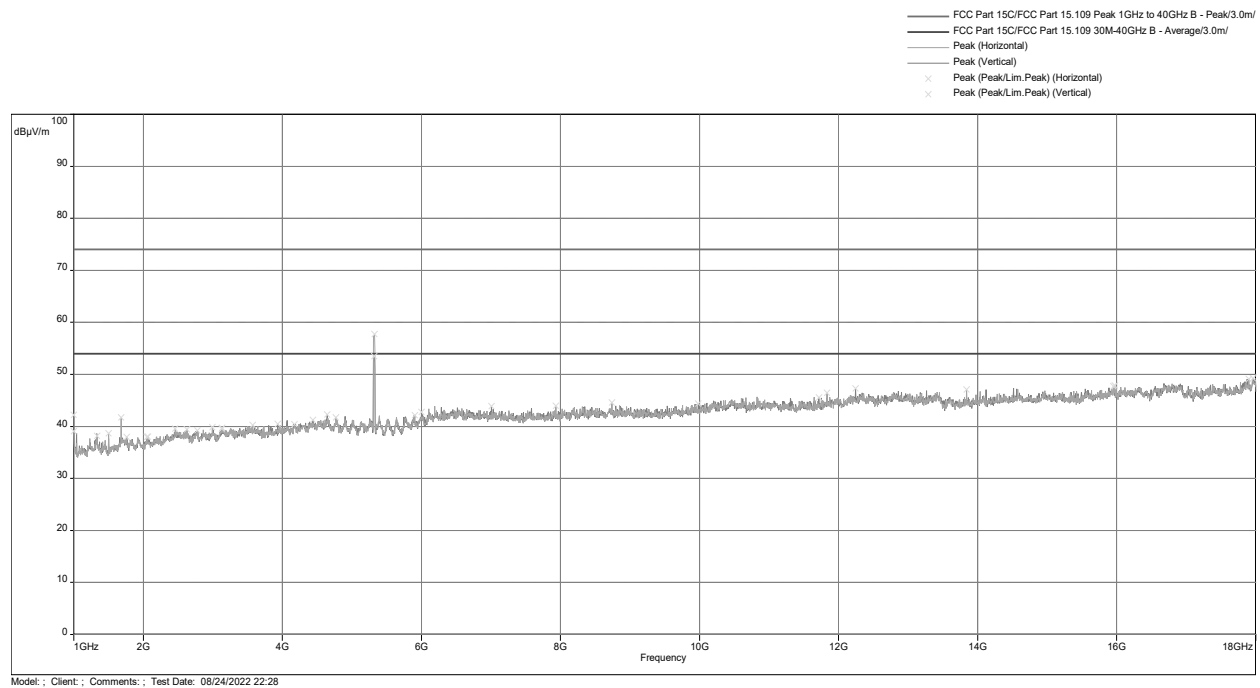
Note: Correction = AF + CF - Preamp

**Test Results: 15.209 Radiated Spurious Emissions, Tx at 802.11n 20MHz 5320MHz**

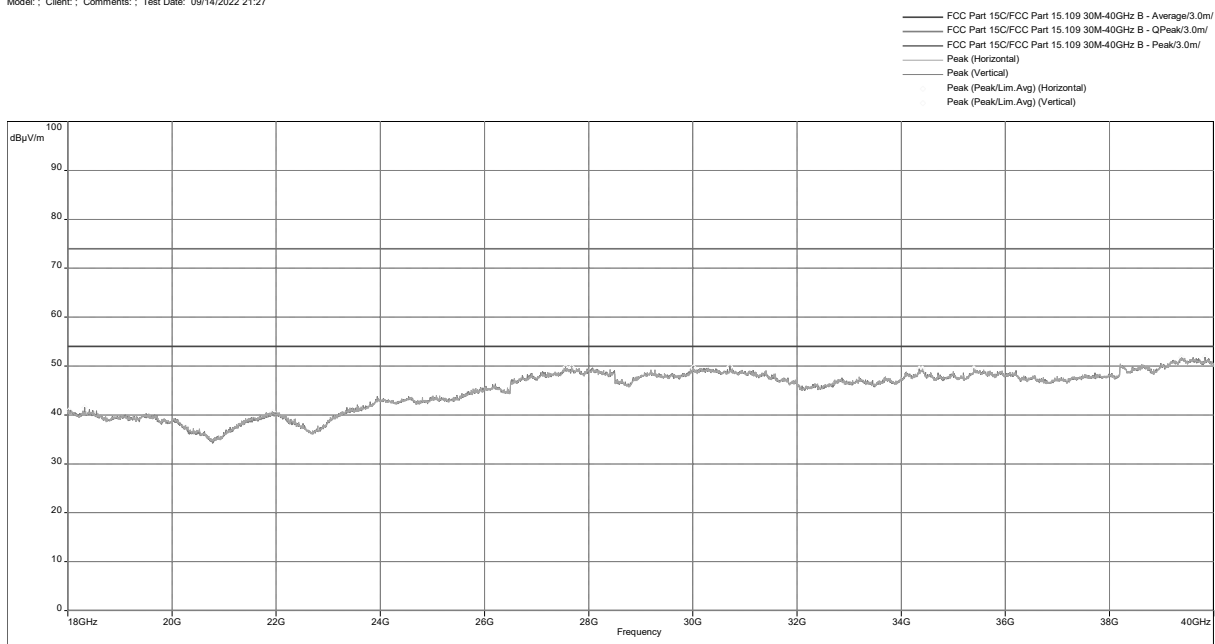
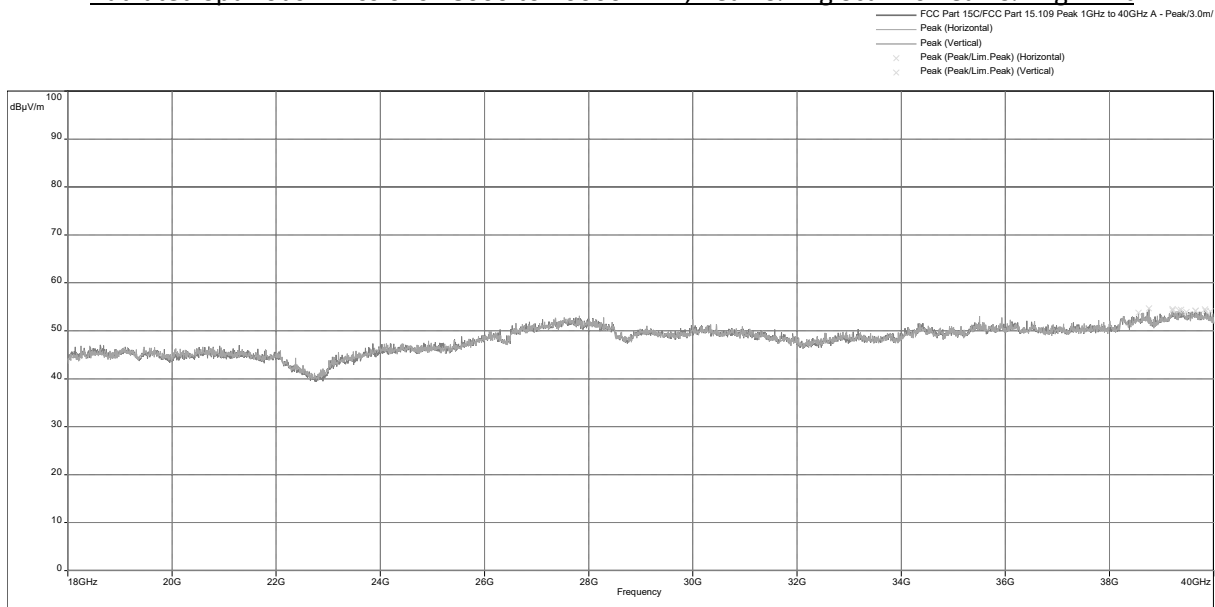
**Radiated Spurious Emissions 30 MHz to 1000 MHz, Peak Scan vs QP Limit**



**Radiated Spurious Emissions 1000 to 18000 MHz, Peak Scan vs Peak & Avg Limit**



## Radiated Spurious Emissions 18000 to 40000 MHz, Peak & Avg Scan vs Peak & Avg Limit

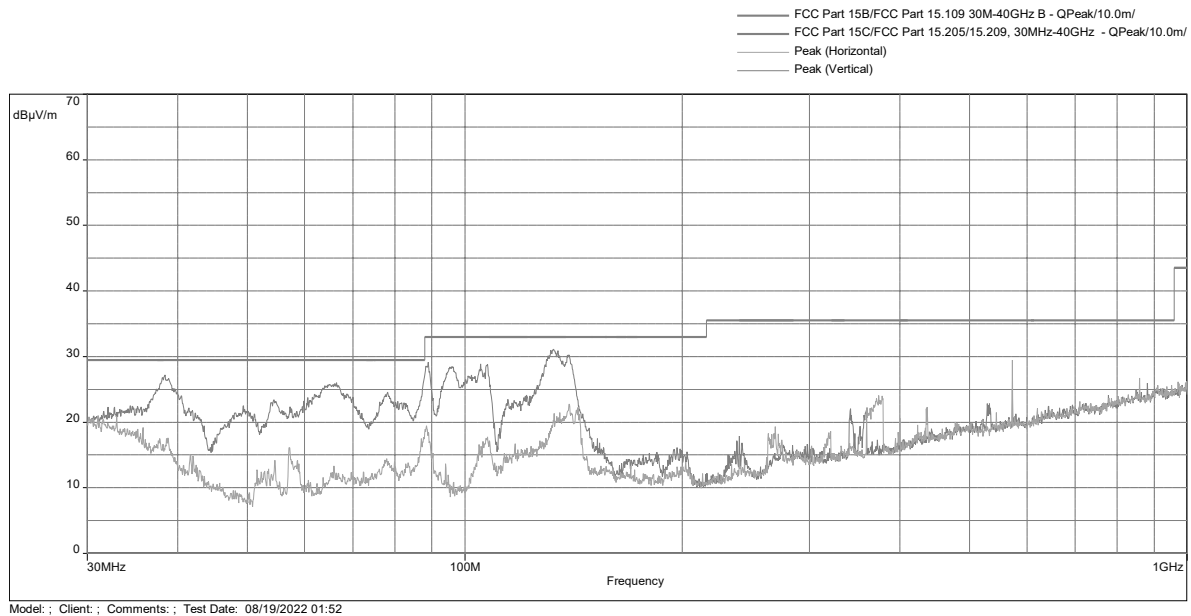


| Frequency | FS@10m | Limit@10m | Margin | Height | Azimuth | Polarity | Correction |
|-----------|--------|-----------|--------|--------|---------|----------|------------|
| MHz       | dBuV/m | dBuV/m    | (dB)   | (m)    | (deg)   |          | dB         |
| 38.69767  | 27.15  | 29.5      | -2.35  | 0.99   | 101     | Vertical | -12.41     |
| 51.08133  | 25.05  | 29.5      | -4.45  | 0.99   | 166.25  | Vertical | -19.53     |
| 66.11633  | 26.07  | 29.5      | -3.43  | 2      | 106.25  | Vertical | -18.97     |
| 88.55567  | 30.11  | 33        | -2.89  | 0.99   | 111.25  | Vertical | -19.25     |
| 107.2767  | 28.37  | 33        | -4.63  | 0.99   | 59.75   | Vertical | -14.7      |
| 133.111   | 30.74  | 33        | -2.26  | 2      | 92.25   | Vertical | -12.67     |

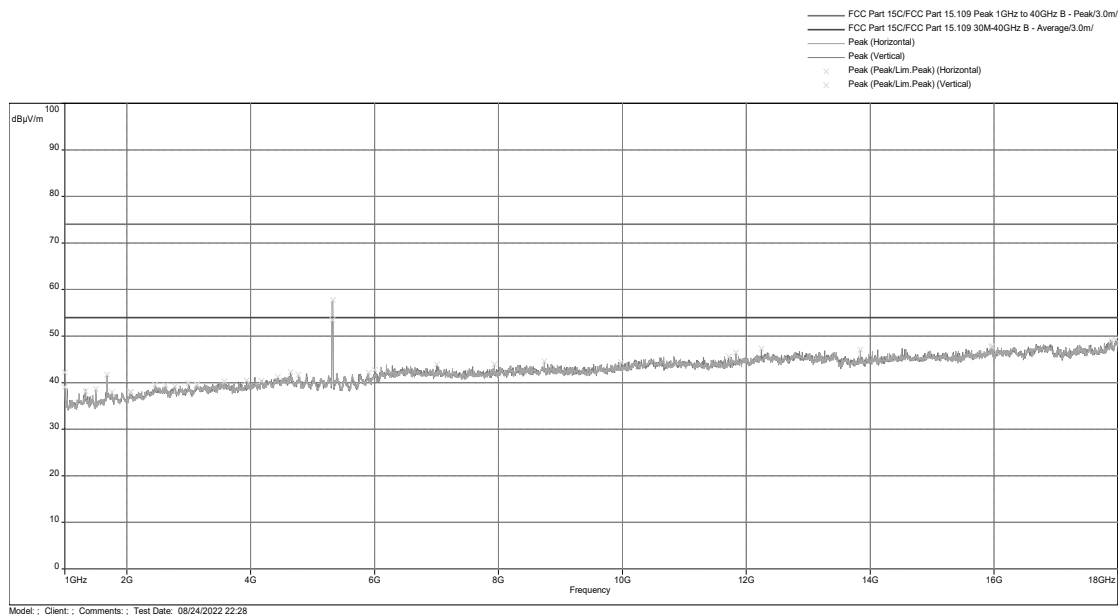
Note: Correction = AF + CF - Preamp

**Test Results: 15.209 Radiated Spurious Emissions, Tx at 802.11n 20MHz 5500MHz**

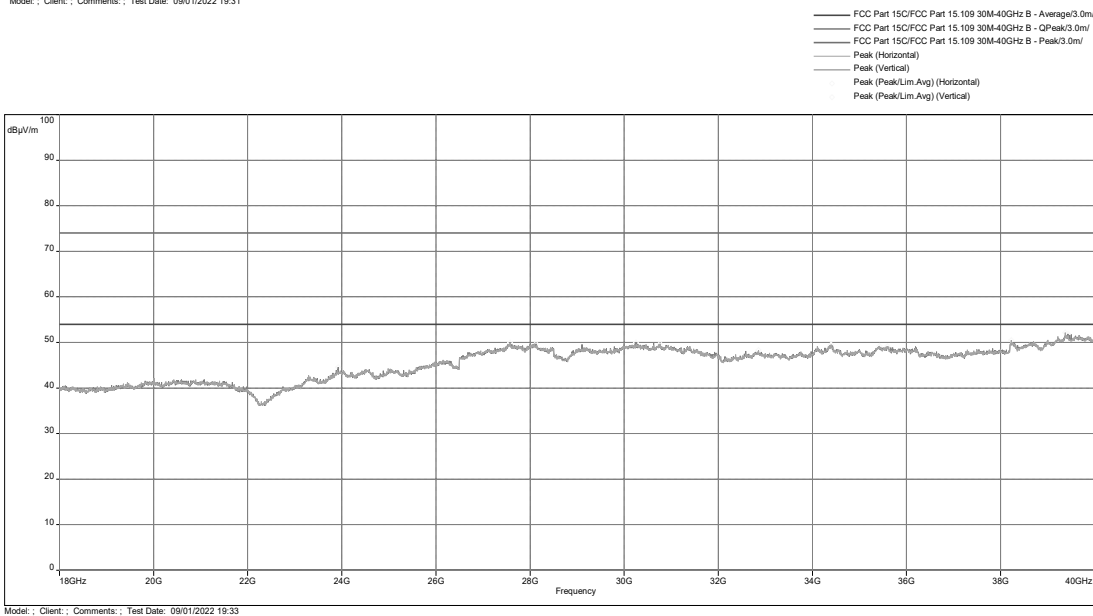
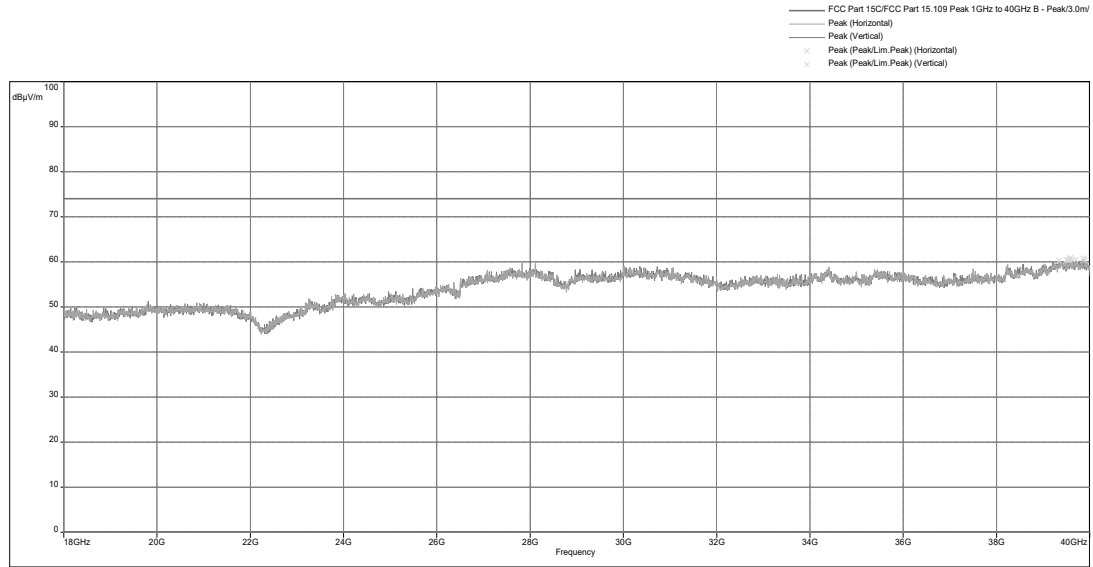
**Radiated Spurious Emissions 30 MHz to 1000 MHz, Peak Scan vs QP Limit**



**Radiated Spurious Emissions 1000 to 18000 MHz, Peak Scan vs Peak & Avg Limit**



## Radiated Spurious Emissions 18000 to 40000 MHz, Peak & Avg Scan vs Peak & Avg Limit

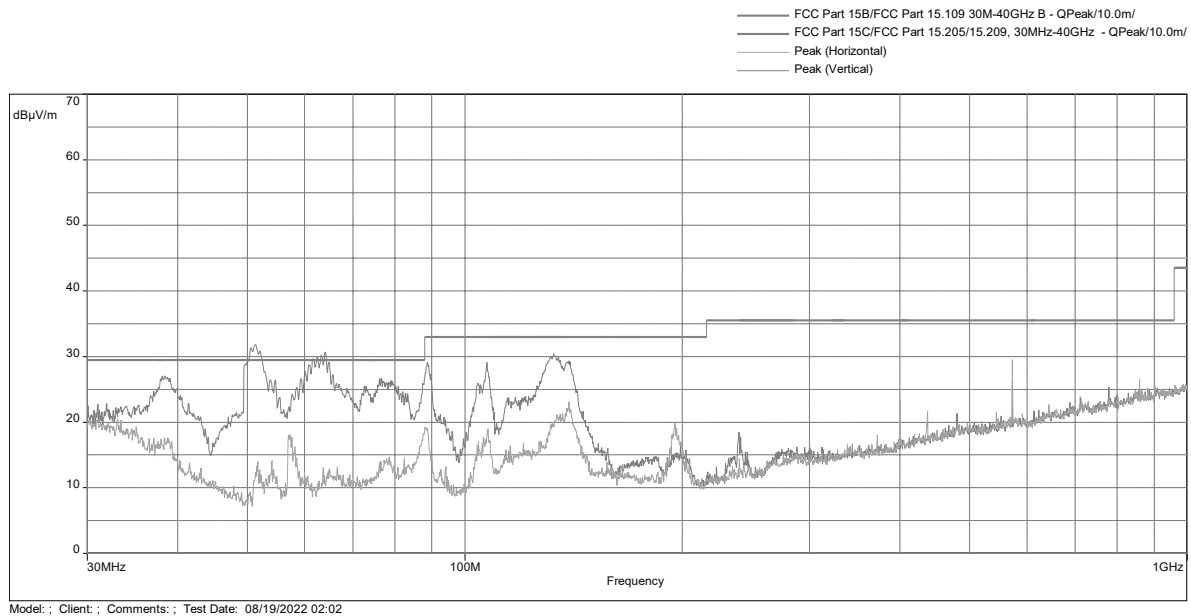


| Frequency | FS@10m | Limit@10m | Margin | Height | Azimuth | Polarity | Correction |
|-----------|--------|-----------|--------|--------|---------|----------|------------|
| MHz       | dBuV/m | dBuV/m    | (dB)   | (m)    | (deg)   |          | dB         |
| 38.439    | 27.2   | 29.5      | -2.3   | 0.99   | 141.5   | Vertical | -12.2      |
| 66.375    | 26     | 29.5      | -3.5   | 2      | 133.75  | Vertical | -18.93     |
| 88.976    | 29.17  | 33        | -3.83  | 0.99   | 139.25  | Vertical | -19.2      |
| 95.92767  | 28.52  | 33        | -4.48  | 4      | 277.5   | Vertical | -17.66     |
| 105.1103  | 28.88  | 33        | -4.12  | 4      | 277.5   | Vertical | -15.15     |
| 132.7877  | 31.12  | 33        | -1.88  | 3      | 102     | Vertical | -12.64     |

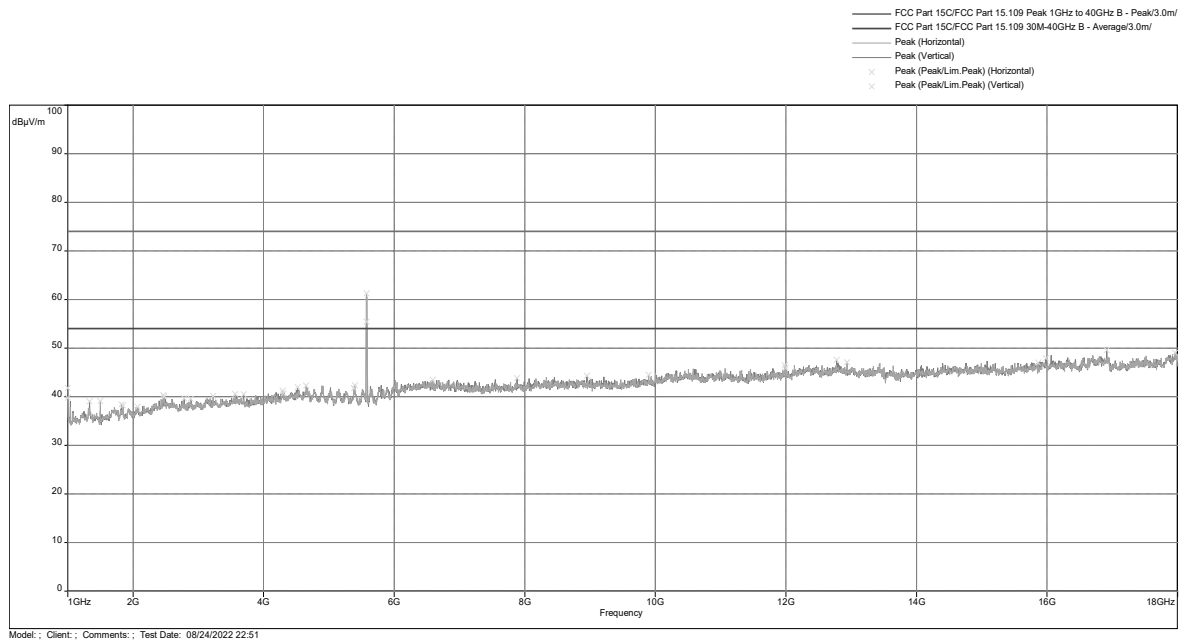
Note: Correction = AF + CF - Preamp

**Test Results: 15.209 Radiated Spurious Emissions, Tx at 802.11n 20MHz 5580MHz**

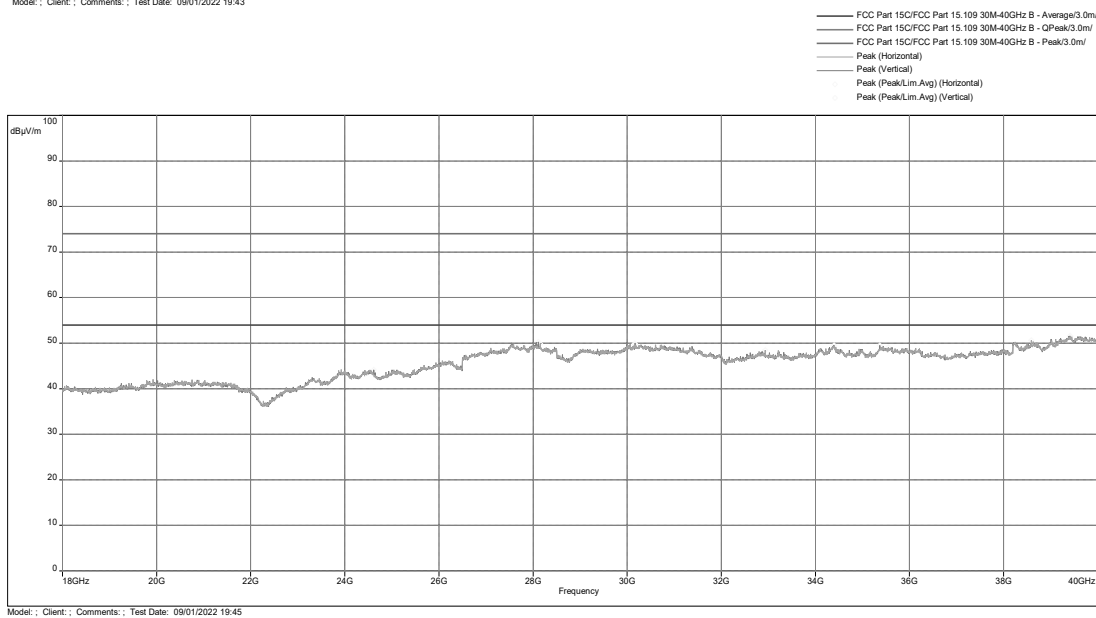
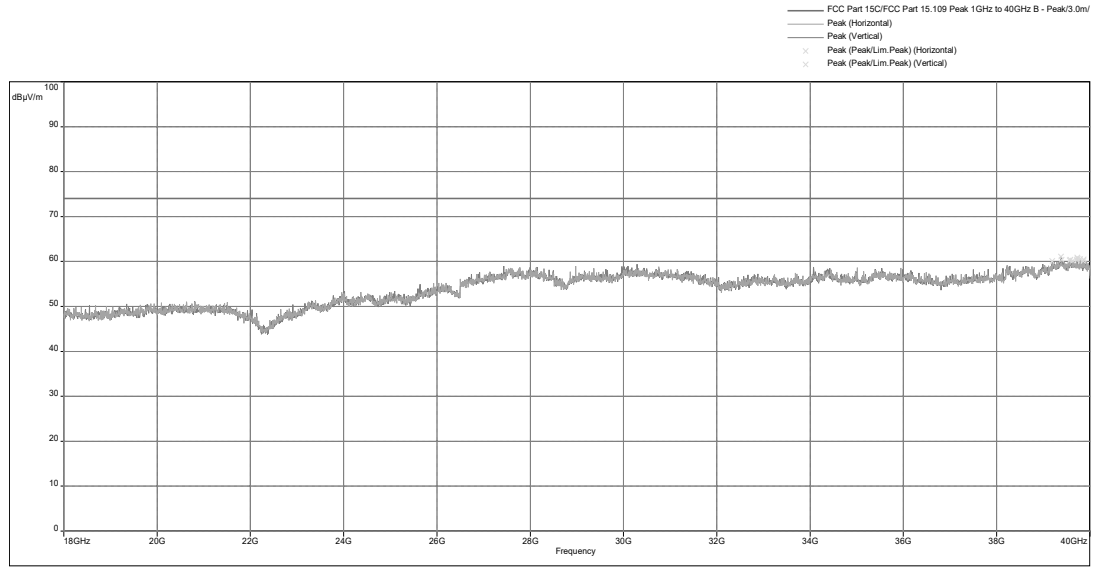
**Radiated Spurious Emissions 30 MHz to 1000 MHz, Peak Scan vs QP Limit**



**Radiated Spurious Emissions 1000 to 18000 MHz, Peak Scan vs Peak & Avg Limit**



## Radiated Spurious Emissions 18000 to 40000 MHz, Peak & Avg Scan vs Peak & Avg Limit

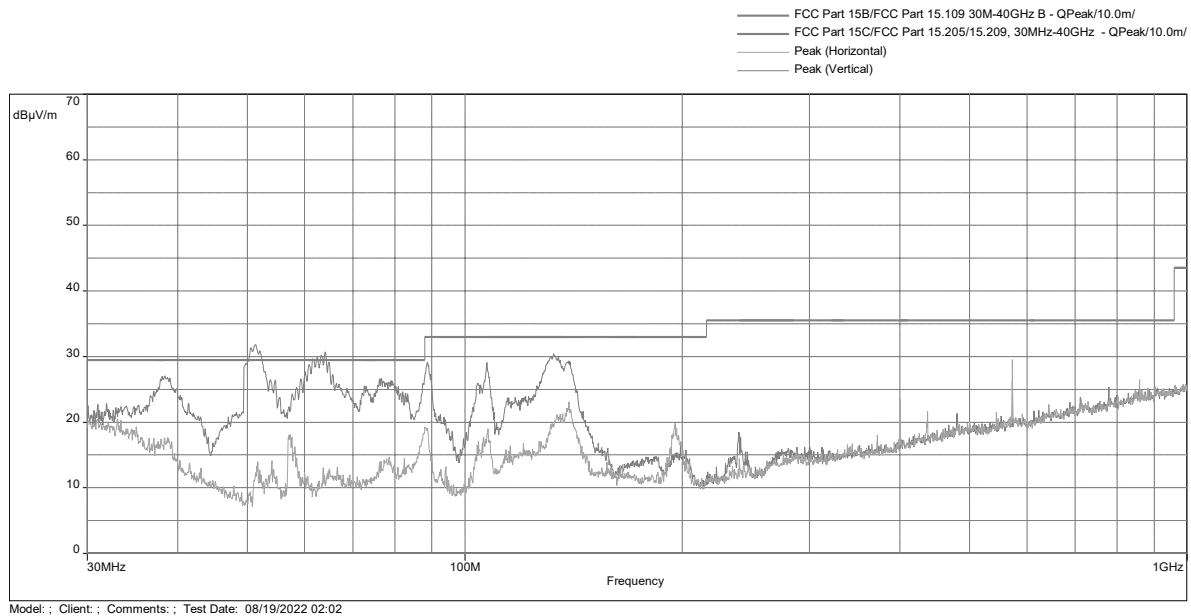


| Frequency | FS@10m | Limit@10m | Margin | Height | Azimuth | Polarity | Correction |
|-----------|--------|-----------|--------|--------|---------|----------|------------|
| MHz       | dBuV/m | dBuV/m    | (dB)   | (m)    | (deg)   |          | dB         |
| 38.40667  | 27.05  | 29.5      | -2.45  | 3      | 147.75  | Vertical | -12.17     |
| 72.61533  | 25.51  | 29.5      | -3.99  | 0.99   | 219     | Vertical | -18.63     |
| 76.59233  | 26.67  | 29.5      | -2.83  | 0.99   | 219     | Vertical | -18.85     |
| 88.685    | 29.18  | 33        | -3.82  | 0.99   | 102     | Vertical | -19.23     |
| 107.2767  | 29.1   | 33        | -3.9   | 0.99   | 99.5    | Vertical | -14.7      |
| 132.7553  | 30.46  | 33        | -2.54  | 2      | 139.5   | Vertical | -12.63     |

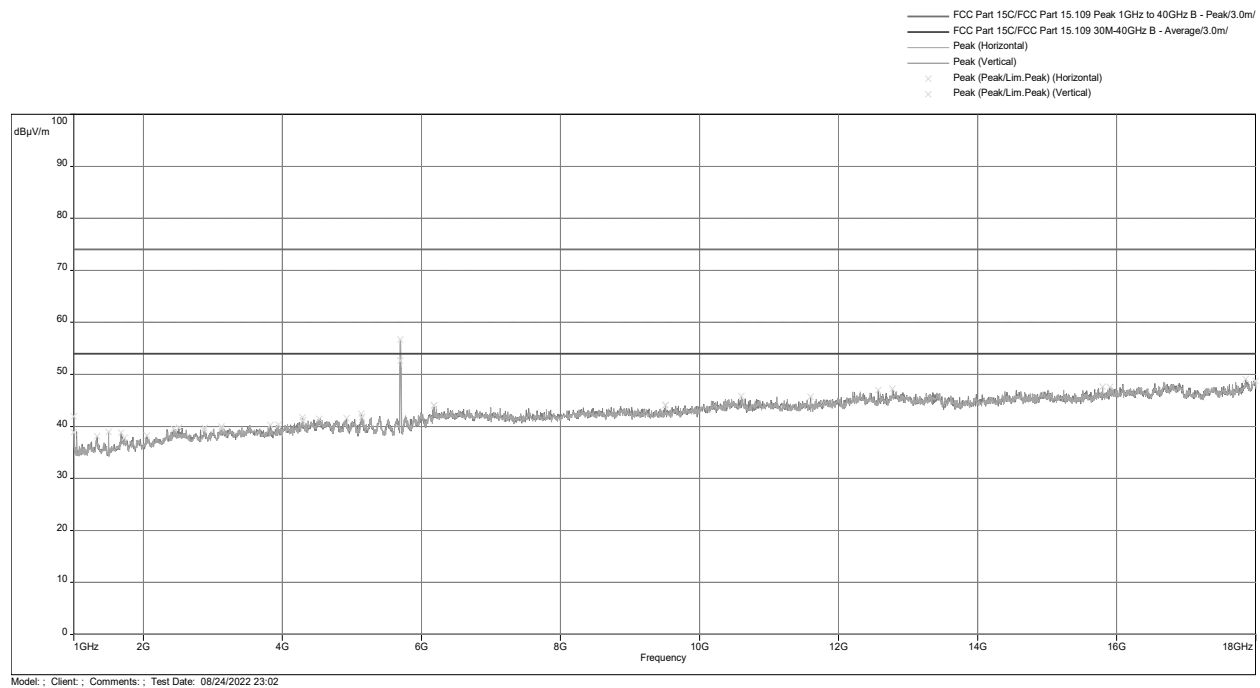
Note: Correction = AF + CF - Preamp

**Test Results: 15.209 Radiated Spurious Emissions, Tx at 802.11n 20MHz 5700MHz**

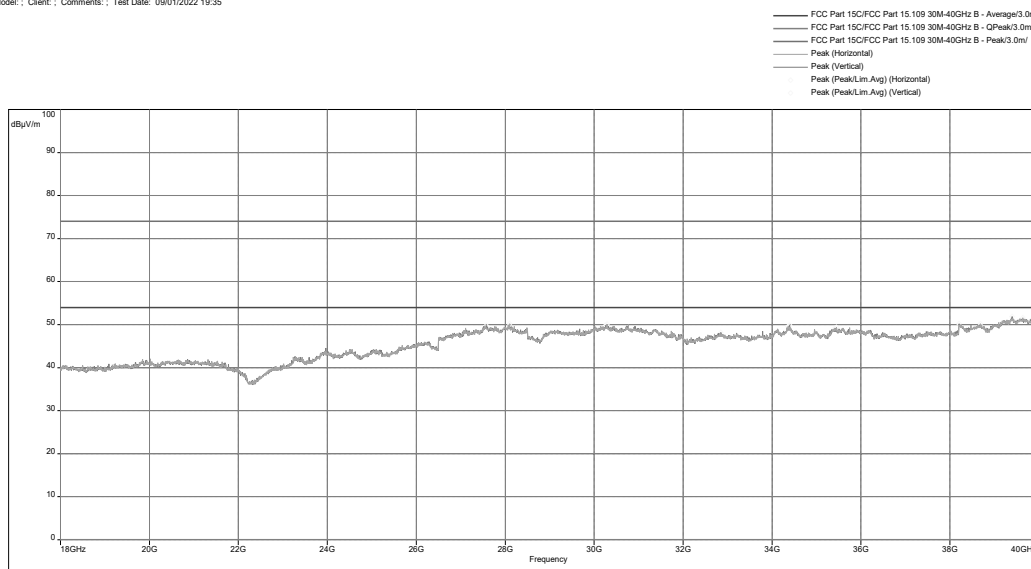
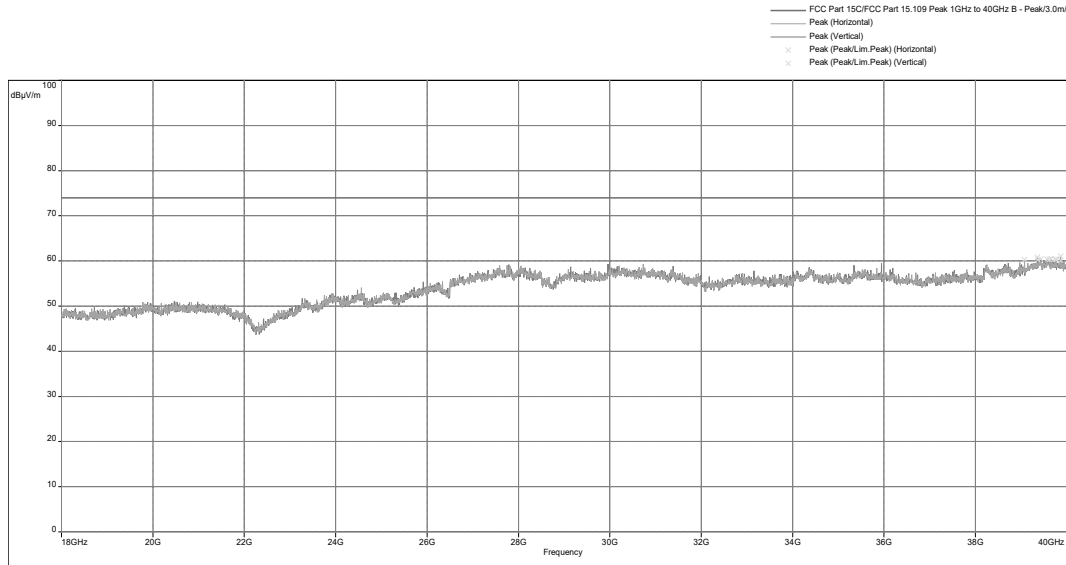
**Radiated Spurious Emissions 30 MHz to 1000 MHz, Peak Scan vs QP Limit**



**Radiated Spurious Emissions 1000 to 18000 MHz, Peak Scan vs Peak & Avg Limit**



## Radiated Spurious Emissions 18000 to 40000 MHz, Peak & Avg Scan vs Peak & Avg Limit

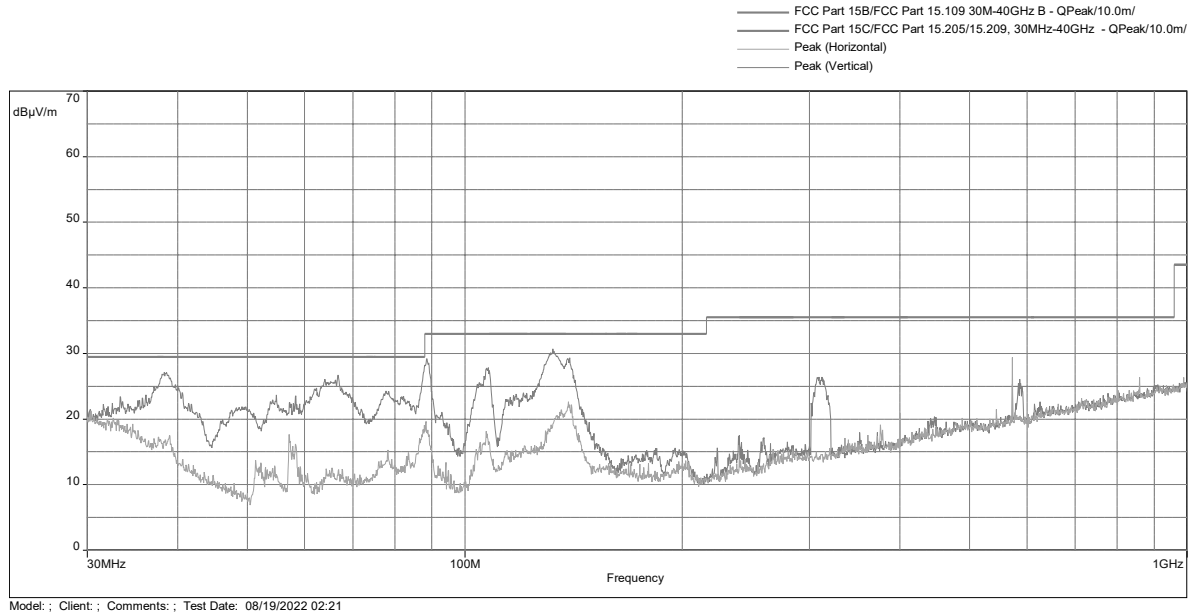


| Frequency | FS@10m | Limit@10m | Margin | Height | Azimuth | Polarity   | Correction |
|-----------|--------|-----------|--------|--------|---------|------------|------------|
| MHz       | dBuV/m | dBuV/m    | (dB)   | (m)    | (deg)   |            | dB         |
| 572.715   | 30.04  | 35.5      | -5.46  | 2.98   | 14.75   | Horizontal | -5.99      |
| 38.66533  | 27.03  | 29.5      | -2.47  | 3      | 153     | Vertical   | -12.38     |
| 77.53     | 24.73  | 29.5      | -4.77  | 0.99   | 82      | Vertical   | -18.94     |
| 88.71733  | 28.55  | 33        | -4.45  | 0.99   | 119.5   | Vertical   | -19.23     |
| 107.4707  | 27.93  | 33        | -5.07  | 0.99   | 51      | Vertical   | -14.66     |
| 133.2403  | 30.25  | 33        | -2.75  | 2      | 141.5   | Vertical   | -12.68     |

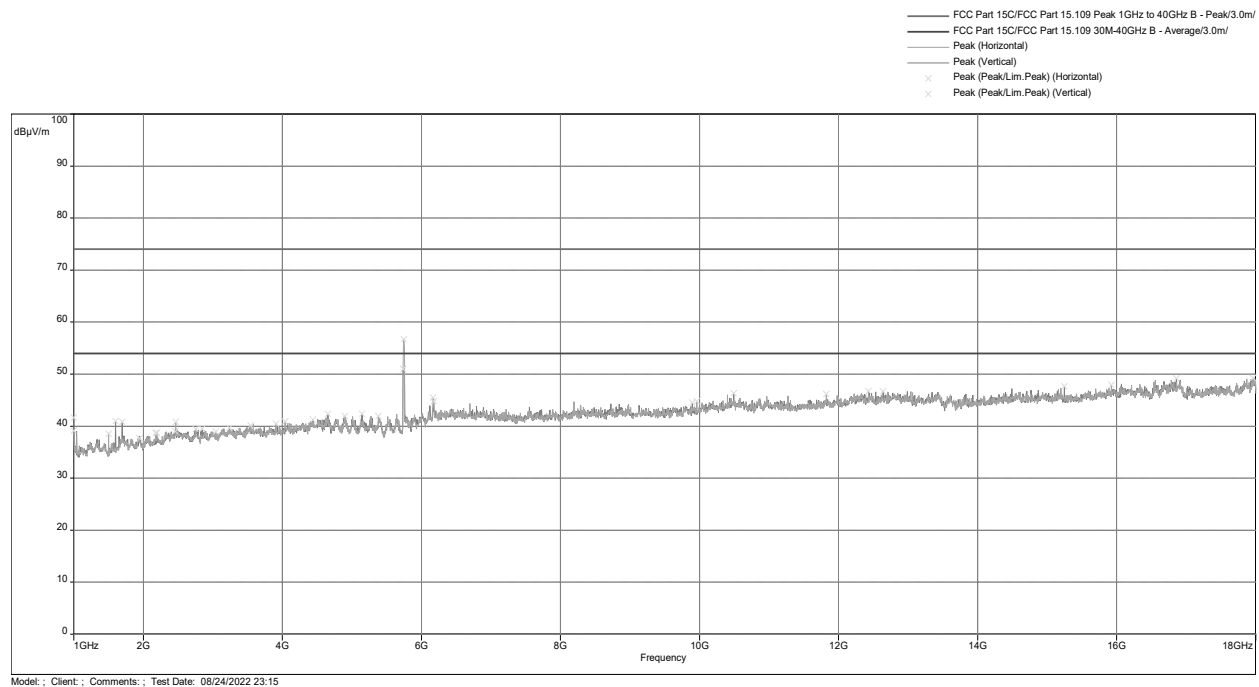
Note: Correction = AF + CF - Preamp

**Test Results: 15.209 Radiated Spurious Emissions, Tx at 802.11n 20MHz 5745MHz**

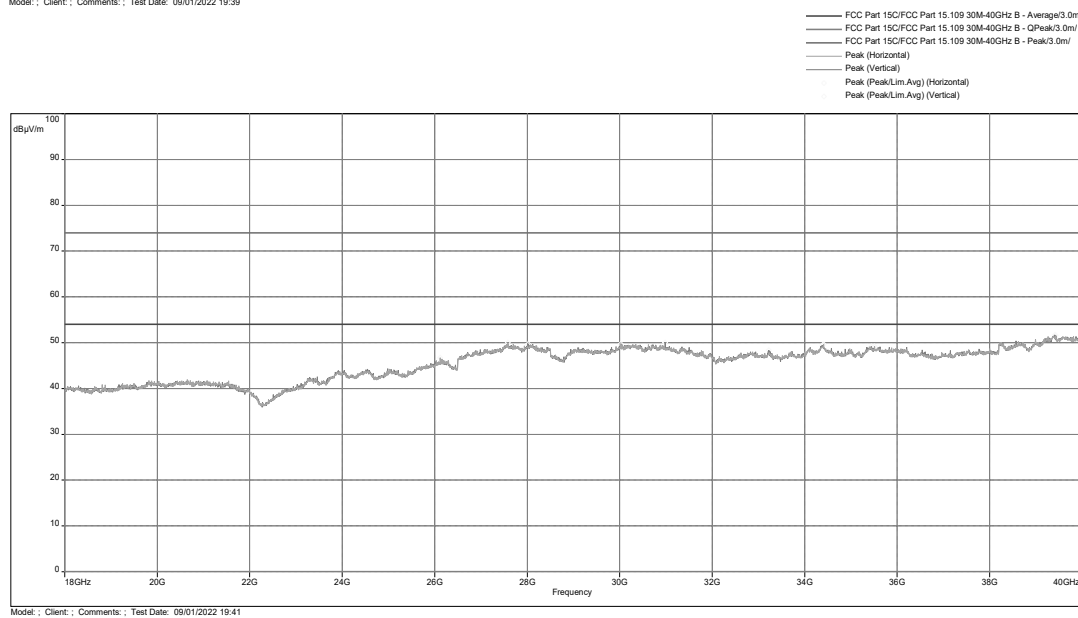
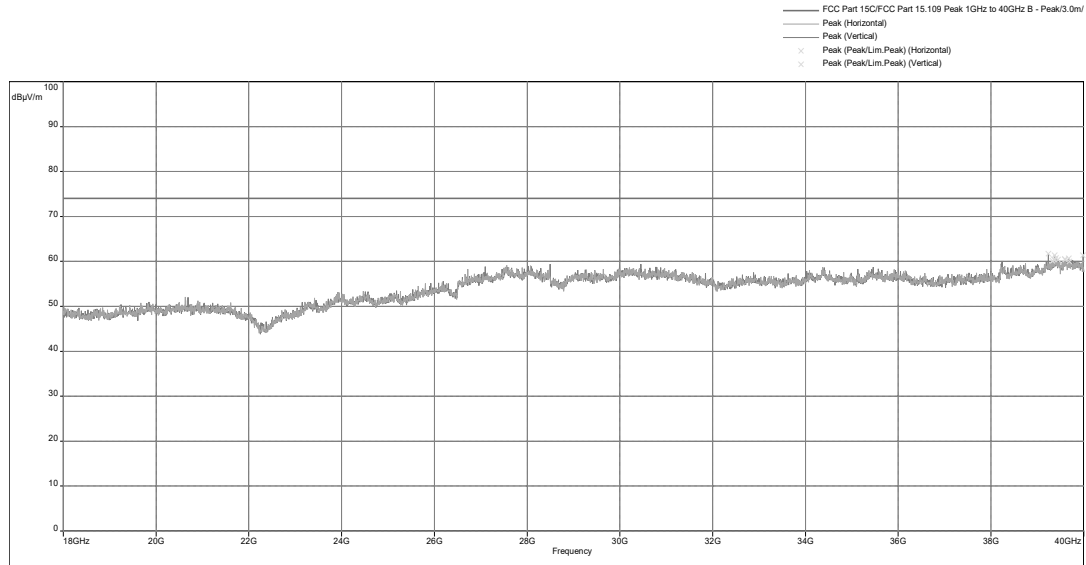
**Radiated Spurious Emissions 30 MHz to 1000 MHz, Peak Scan vs QP Limit**



**Radiated Spurious Emissions 1000 to 18000 MHz, Peak Scan vs Peak & Avg Limit**



## Radiated Spurious Emissions 18000 to 40000 MHz, Peak & Avg Scan vs Peak & Avg Limit

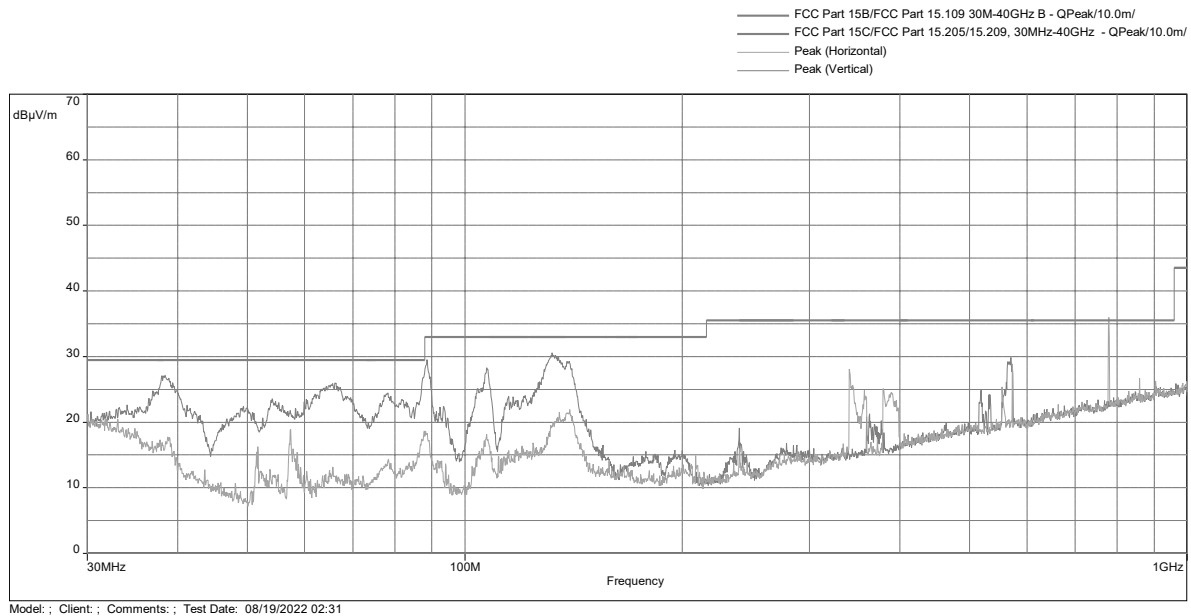


| Frequency | FS@10m | Limit@10m | Margin | Height | Azimuth | Polarity | Correction |
|-----------|--------|-----------|--------|--------|---------|----------|------------|
| MHz       | dBuV/m | dBuV/m    | (dB)   | (m)    | (deg)   |          | dB         |
| 38.342    | 27.11  | 29.5      | -2.39  | 3      | 144.5   | Vertical | -12.12     |
| 66.73067  | 26.68  | 29.5      | -2.82  | 2      | 84      | Vertical | -18.89     |
| 77.75633  | 24.25  | 29.5      | -5.25  | 2      | 84      | Vertical | -18.96     |
| 88.62033  | 29.19  | 33        | -3.81  | 0.99   | 101.25  | Vertical | -19.24     |
| 107.7293  | 27.84  | 33        | -5.16  | 0.99   | 48.5    | Vertical | -14.6      |
| 132.335   | 30.72  | 33        | -2.28  | 0.99   | 120     | Vertical | -12.59     |

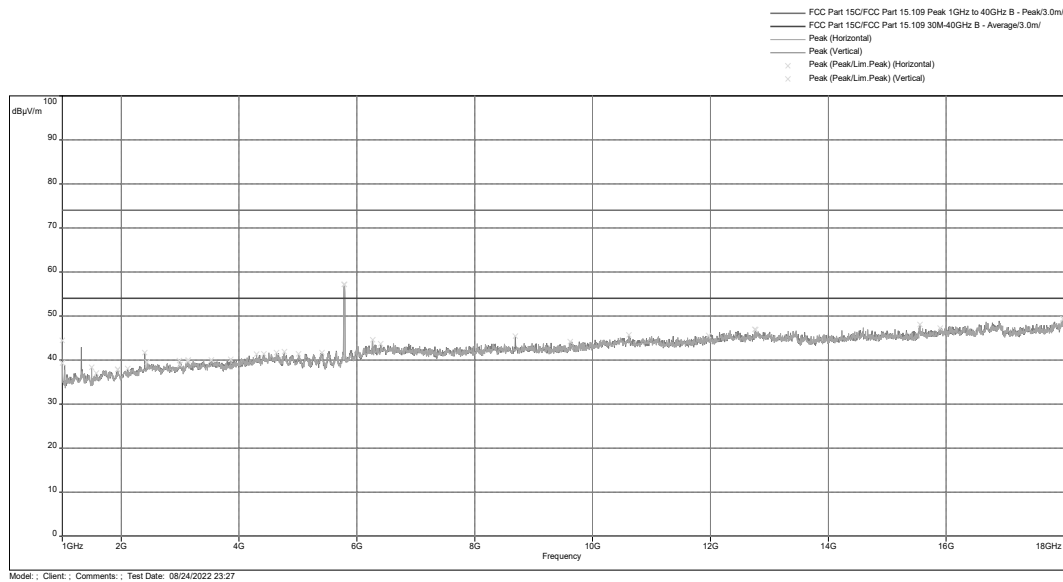
Note: Correction = AF + CF - Preamp

**Test Results: 15.209 Radiated Spurious Emissions, Tx at 802.11n 20MHz 5785MHz**

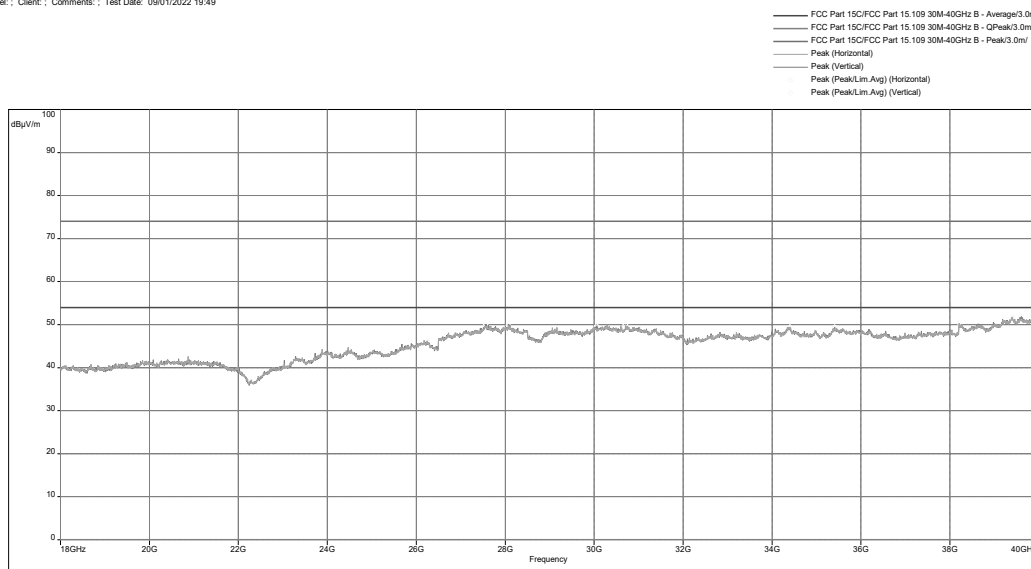
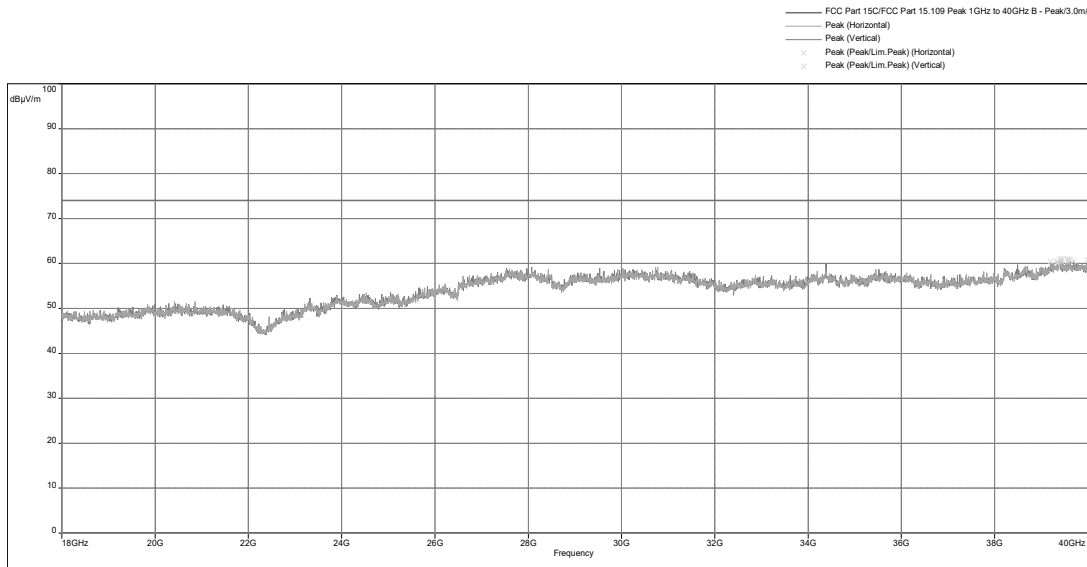
**Radiated Spurious Emissions 30 MHz to 1000 MHz, Peak Scan vs QP Limit**



**Radiated Spurious Emissions 1000 to 18000 MHz, Peak Scan vs Peak & Avg Limit**



## Radiated Spurious Emissions 18000 to 40000 MHz, Peak & Avg Scan vs Peak & Avg Limit

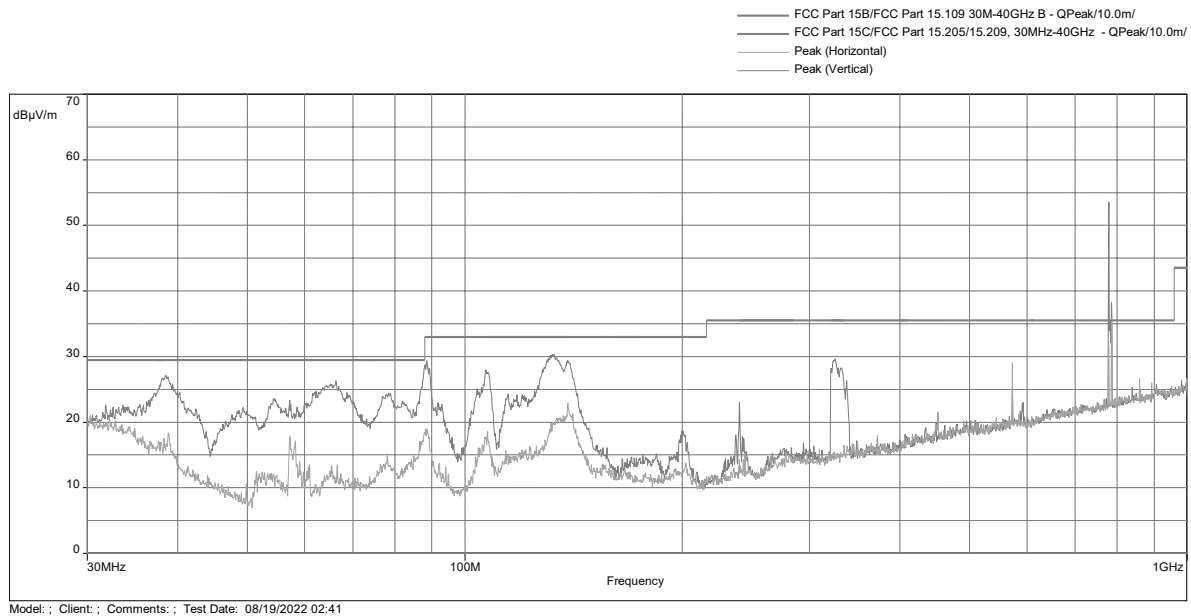


| Frequency | FS@10m | Limit@10m | Margin | Height | Azimuth | Polarity   | Correction |
|-----------|--------|-----------|--------|--------|---------|------------|------------|
| MHz       | dBuV/m | dBuV/m    | (dB)   | (m)    | (deg)   |            | dB         |
| 780.1333  | 32.87  | 35.5      | -2.63  | 4      | 306.5   | Horizontal | -2.45      |
| 38.439    | 27.11  | 29.5      | -2.39  | 3      | 147.25  | Vertical   | -12.2      |
| 66.084    | 25.97  | 29.5      | -3.53  | 2      | 116.75  | Vertical   | -18.97     |
| 88.62033  | 29.57  | 33        | -3.43  | 0.98   | 132.5   | Vertical   | -19.24     |
| 107.2443  | 28.29  | 33        | -4.71  | 0.98   | 113.5   | Vertical   | -14.7      |
| 132.044   | 30.56  | 33        | -2.44  | 2      | 120.5   | Vertical   | -12.56     |

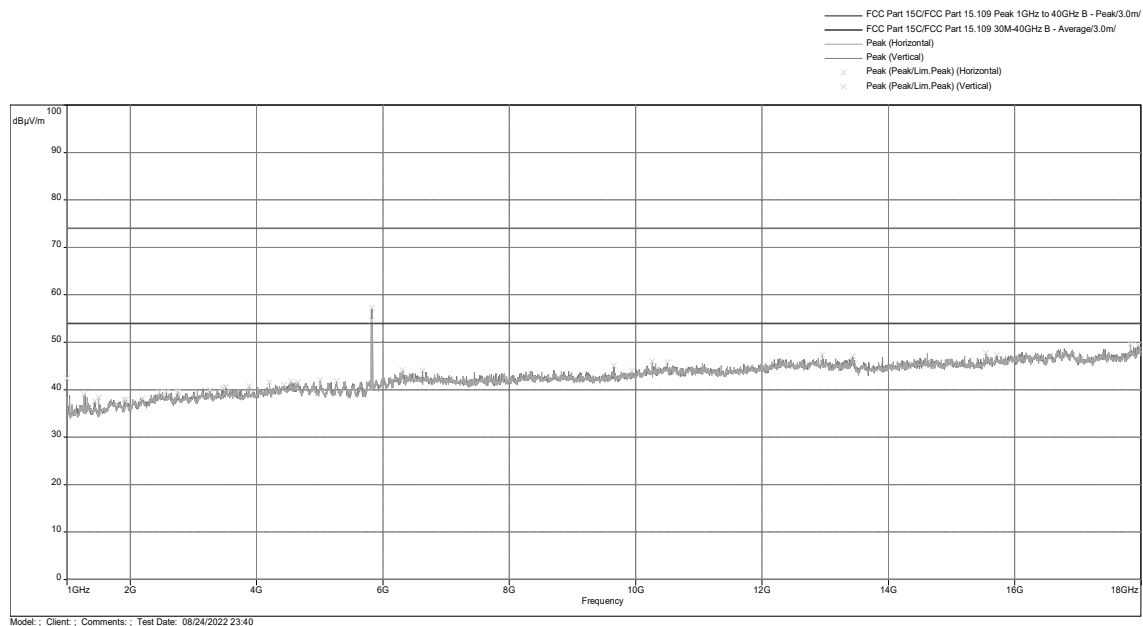
Note: Correction = AF + CF - Preamp

**Test Results: 15.209 Radiated Spurious Emissions, Tx at 802.11n 20MHz 5825MHz**

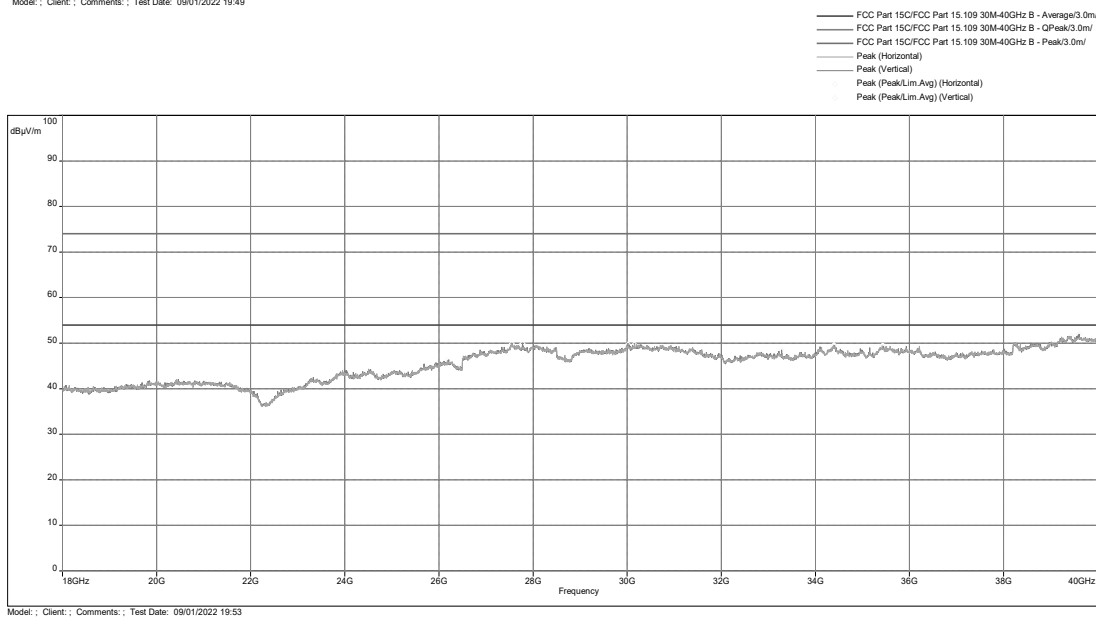
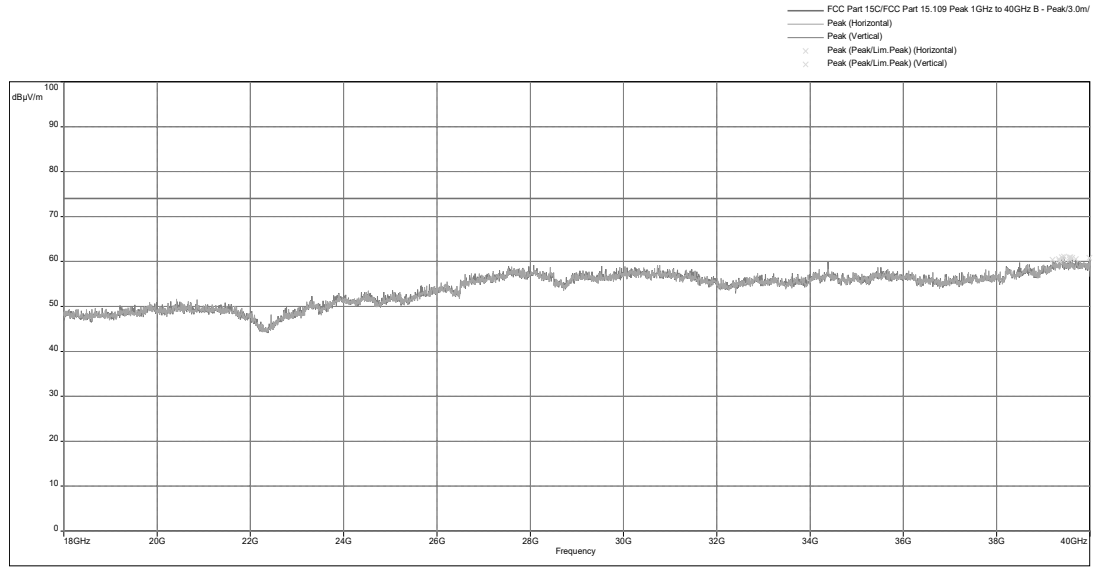
**Radiated Spurious Emissions 30 MHz to 1000 MHz, Peak Scan vs QP Limit**



**Radiated Spurious Emissions 1000 to 18000 MHz, Peak Scan vs Peak & Avg Limit**



## Radiated Spurious Emissions 18000 to 40000 MHz, Peak & Avg Scan vs Peak & Avg Limit



| Frequency | FS@10m | Limit@10m | Margin | Height | Azimuth | Polarity   | Correction |
|-----------|--------|-----------|--------|--------|---------|------------|------------|
| MHz       | dBuV/m | dBuV/m    | (dB)   | (m)    | (deg)   |            | dB         |
| 778.937   | 31.7   | 35.5      | -3.8   | 4      | 287.25  | Horizontal | -2.46      |
| 38.536    | 27.14  | 29.5      | -2.36  | 0.99   | 144.5   | Vertical   | -12.28     |
| 66.24567  | 26.3   | 29.5      | -3.2   | 2      | 105.25  | Vertical   | -18.95     |
| 88.55567  | 29.4   | 33        | -3.6   | 0.99   | 102     | Vertical   | -19.25     |
| 132.141   | 30.41  | 33        | -2.59  | 2      | 96      | Vertical   | -12.57     |
| 782.914   | 32.11  | 35.5      | -3.39  | 4      | 215.5   | Vertical   | -2.36      |

Note: Correction = AF + CF - Preamp

#### 4.3.7 Test setup

**The following photographs show the testing configurations used.**

#### 4.4 Dynamic Frequency Selection (DFS)

##### 4.4.1 Requirement

##### Applicability of DFS Requirements Prior to Use of a Channel

| Requirement                            | Operational Mode |                                |                             |
|----------------------------------------|------------------|--------------------------------|-----------------------------|
|                                        | Master           | Client Without Radar Detection | Client With Radar Detection |
| <i>Non-Occupancy Period</i>            | Yes              | Not Required                   | Yes                         |
| <i>DFS Detection Threshold</i>         | Yes              | Not Required                   | Yes                         |
| <i>Channel Availability Check Time</i> | Yes              | Not Required                   | Not Required                |
| <i>U-NII Detection Bandwidth</i>       | Yes              | Not Required                   | Yes                         |

##### Applicability of DFS requirements during normal operation

| Requirement                              | Operational Mode                             |                             |
|------------------------------------------|----------------------------------------------|-----------------------------|
|                                          | Master Device or Client with Radar Detection | Client With Radar Detection |
| <i>DFS Detection Threshold</i>           | Yes                                          | Not Required                |
| <i>Channel Closing Transmission Time</i> | Yes                                          | Yes                         |
| <i>Channel Move Time</i>                 | Yes                                          | Yes                         |
| <i>U-NII Detection Bandwidth</i>         | Yes                                          | Not Required                |

| Additional requirements for devices with multiple bandwidth modes  | Master Device or Client with Radar Detection | Client Without Radar Detection                       |
|--------------------------------------------------------------------|----------------------------------------------|------------------------------------------------------|
| <i>U-NII Detection Bandwidth and Statistical Performance Check</i> | All BW modes must be tested                  | Not required                                         |
| <i>Channel Move Time and Channel Closing Transmission Time</i>     | Test using widest BW mode available          | Test using the widest BW mode available for the link |
| <i>All other tests</i>                                             | Any single BW mode                           | Not required                                         |

**Note:** Frequencies selected for statistical performance check should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.

#### 4.4.1.1 DFS Detection Thresholds for Master or Client Devices with DFS Detection

| Maximum Transmit Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Values ( See Notes 1, 2, and 3) |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| <i>EIRP <math>\geq</math> 200 milliwatt</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -64 dBm                         |
| <i>EIRP &lt; 200 milliwatt and power spectral density &lt; 10 dBm/MHz</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | -62 dBm                         |
| <i>EIRP &lt; 200 milliwatt that do not meet the power spectral density requirement</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -64 dBm                         |
| <p><b>Note 1:</b> This is the level at the input of the receiver assuming a 0 dBi receive antenna.</p> <p><b>Note 2:</b> Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.</p> <p><b>Note3:</b> EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01</p> |                                 |

| Parameter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Value                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| <i>Non-Occupancy Period</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Minimum 30 minutes                                                                 |
| <i>Channel Availability Check Time</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 60 Seconds                                                                         |
| <i>Channel Move Time</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 10 seconds (see note 1)                                                            |
| <i>Channel Closing Transmission Time</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 200 ms + an aggregate of 60 ms over remaining 10 Second period. (see note 1 and 2) |
| <i>U-NII Detection Bandwidth</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Minimum 100% of the U-NII 99% transmission power bandwidth. (see note 3)           |
| <p><b>Note 1:</b> <i>Channel Move Time</i> and the <i>Channel Closing Transmission Time</i> should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.</p> <p><b>Note 2:</b> The <i>Channel Closing Transmission Time</i> is comprised of 200 milliseconds starting at the beginning of the <i>Channel Move Time</i> plus any additional intermittent control signals required to facilitate a <i>Channel</i> move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.</p> <p><b>Note 3:</b> During the <i>U-NII Detection Bandwidth</i> detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.</p> |                                                                                    |

#### 4.4.1.2 Test Waveform

| Radar Type                                                                                                                                  | Pulse Width (μsec) | PRI (μsec)                                                                                                                                                    | Number of Pulses                                                                                                              | Minimum Percentage of Successful Detection | Minimum Number of Trials |
|---------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------|
| 0                                                                                                                                           | 1                  | 1428                                                                                                                                                          | 18                                                                                                                            | See Note 1                                 | See Note 1               |
| 1                                                                                                                                           | 1                  | Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a                                                                     | Roundup $\left\{ \left( \frac{1}{360} \right) \cdot \left( \frac{19 \cdot 10^6}{\text{PRI}_{\mu\text{sec}}} \right) \right\}$ | 60.00%                                     | 30                       |
|                                                                                                                                             |                    | Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A |                                                                                                                               |                                            |                          |
| 2                                                                                                                                           | 1-5                | 150-230                                                                                                                                                       | 23-29                                                                                                                         | 60%                                        | 30                       |
| 3                                                                                                                                           | 6-10               | 200-500                                                                                                                                                       | 16-18                                                                                                                         | 60%                                        | 30                       |
| 4                                                                                                                                           | 11-20              | 200-500                                                                                                                                                       | 12-16                                                                                                                         | 60%                                        | 30                       |
| Aggregate (Radar Types 1-4)                                                                                                                 |                    |                                                                                                                                                               |                                                                                                                               | 80%                                        | 120                      |
| <b>Note 1:</b> Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests. |                    |                                                                                                                                                               |                                                                                                                               |                                            |                          |

| Radar Type | Pulse Width (μsec) | Chrip Width (MHz) | PRI (μsec) | Number of Pulses per Burst | Number of Burst | Minimum Percentage of Successful Detection | Minimum Number of Trials |
|------------|--------------------|-------------------|------------|----------------------------|-----------------|--------------------------------------------|--------------------------|
| 5          | 50-100             | 5-20              | 1000-2000  | 1-3                        | 8-20            | 80%                                        | 30                       |

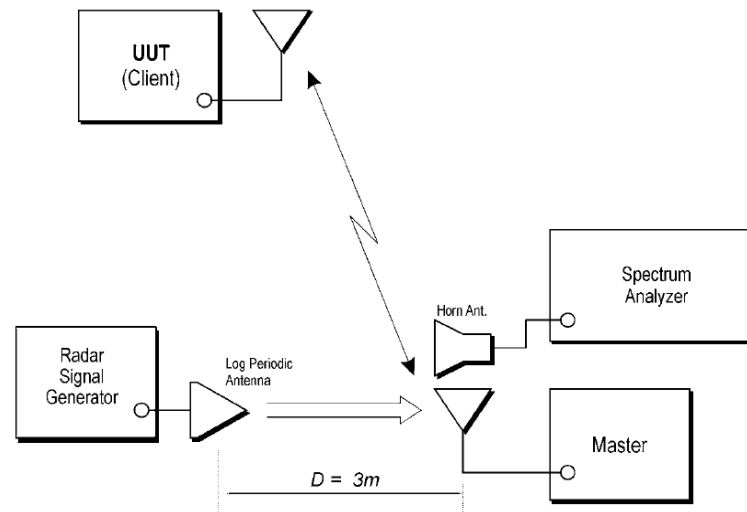
| Radar Type | Pulse Width (μsec) | PRI (μsec) | Pulses per Hop | Hopping Rate (kHz) | Hopping Sequence Length (msec) | Minimum Percentage of Successful Detection | Minimum Number of Trials |
|------------|--------------------|------------|----------------|--------------------|--------------------------------|--------------------------------------------|--------------------------|
| 6          | 1                  | 333        | 9              | 0.333              | 300                            | 70%                                        | 30                       |

#### 4.4.2 Procedure

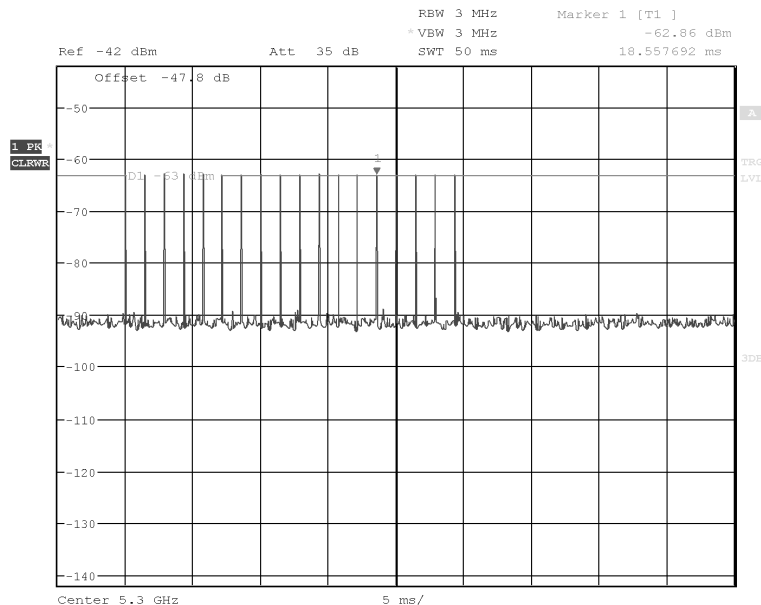
##### DFS Waveform Calibration

##### Calibration Procedure

For the DFS signal, horn antenna was attached to a signal generator (RS SMU200A). On the Receive side another horn antenna was attached to a spectrum analyzer with a preamp inline. The spectrum analyzer's resolution bandwidth was set to 3 MHz and the video bandwidth was set to 3 MHz with peak detection. The field was corrected to account for cable loss, antenna gain and preamp. The DFS signal was calibrated to a field strength of -63 dBm. Test wave form 0 was utilized. The calibration setup is diagrammed below along with a setup picture.

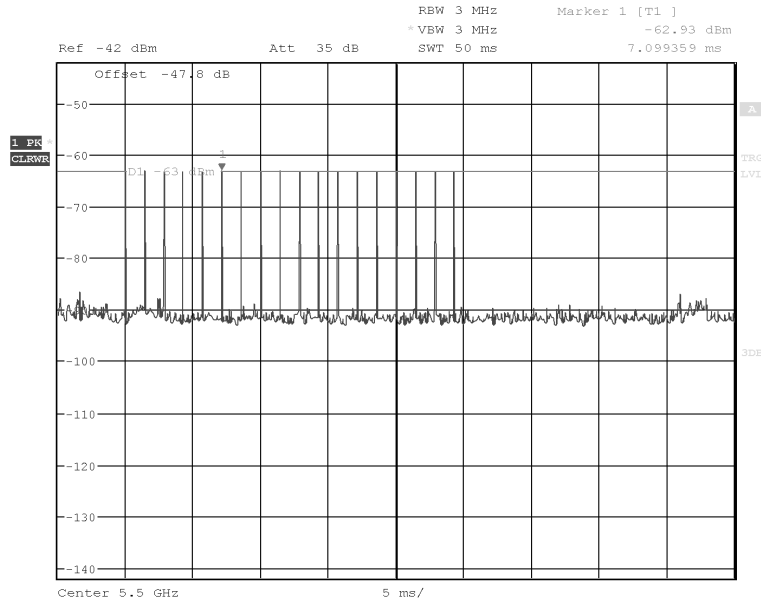


## Radar Type 0 Calibration 5310MHz



Date: 5.OCT.2022 21:35:28

## Radar Type 0 Calibration 5510MHz



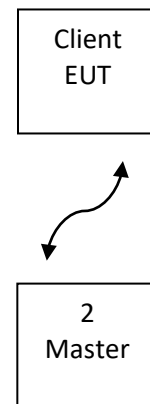
Date: 5.OCT.2022 21:32:08

## DFS Setup & Procedure

### Test Procedure

A radiated test method was used and the test setup was made as depicted in the diagram below. DFS testing was setup as a client with injection into the master.

The diagram below depicts the setup of the EUT along with associated support equipment.



| Item | Description | Model                                   | Serial        |
|------|-------------|-----------------------------------------|---------------|
| 2    | Netgear     | Nighthawk RAX200<br>FCC ID: PY318400434 | 69F31177A0646 |

## **Test Procedure Continued**

The Master and Client (EUT) were placed in a semi-anechoic chamber. The simulated radar waveform was transmitted from a horn antenna towards the Master. The signal level of the simulated radar waveform was set 1 dB higher than calibrated level to -62 dBm and was applied to the Master. The horn antenna was connected to the spectrum analyzer and positioned towards the client with a level higher than emissions from the Master.

A Rhode & Schwarz Vector Signal Generator with Pulse Sequencer Software was used to generate the DFS radar signals. A Rhode & Schwarz Spectrum Analyzer was used to monitor the transmissions of the Client. The trigger of the spectrum analyzer was aligned with the end of the radar waveform burst from the signal generator.

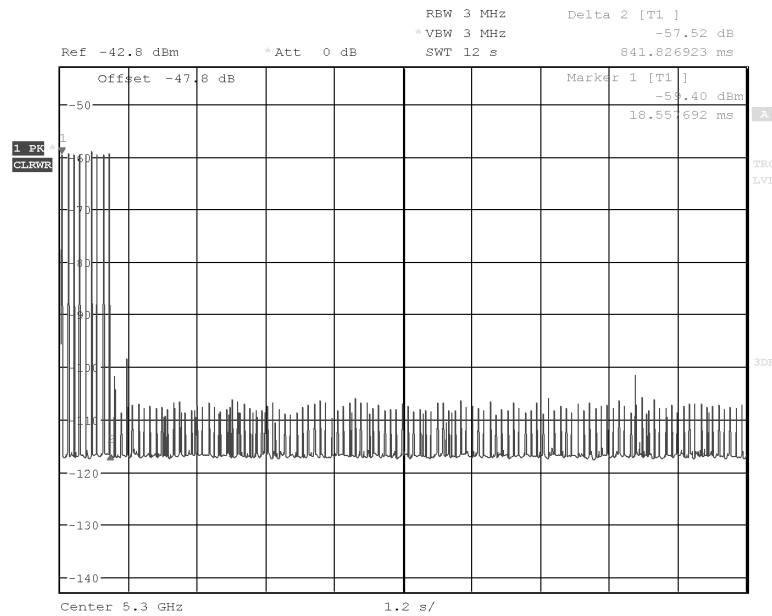
Channel closing transmission time and channel move time were measured by applying a radar signal to the Master device. The EUT transmissions were observed while Type 0 Radar waveforms were applied. The time between the end of the applied radar waveform and the final transmission on the channel is the channel move time. The channel closing transmission time comprises only those fragments of the channel move time during which the EUT transmits.

The EUT (client without DFS detection) was configured to communicate with a Master wirelessly. The test file/data was streamed from the Master to the Client. The channel load is recorded and presented in test results below.

#### 4.4.3 Test Results

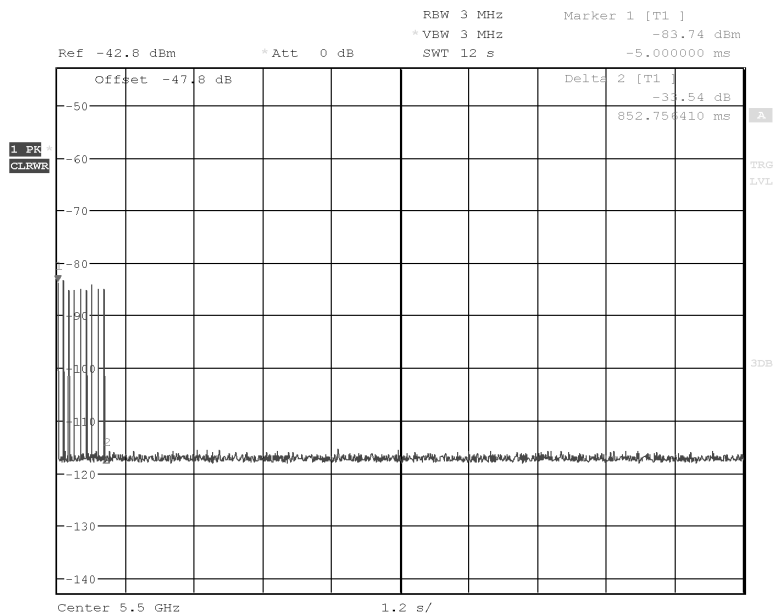
| Channel Move Time Test Summary                 |            |               |                          |                    |         |
|------------------------------------------------|------------|---------------|--------------------------|--------------------|---------|
| Description                                    | Radar Type | Frequency MHz | Measured Value           | Limit Requirements | Results |
| Channel Move Time                              | 0          | 5310          | 841.82 ms                | 10s                | Pass    |
|                                                |            | 5510          | 852.75 ms                | 10s                | Pass    |
| Channel Closing Transmission Time Test Summary |            |               |                          |                    |         |
| Description                                    | Radar Type | Frequency MHz | Aggregate Measured Value | Limit Requirements | Results |
| Closing Transmission Time                      | 0          | 5310          | 24.03 ms                 | 260ms              | Pass    |
|                                                |            | 5510          | 24.03 ms                 | 260ms              | Pass    |
| Channel Unoccupancy Time Test Summary          |            |               |                          |                    |         |
| Description                                    | Radar Type | Frequency MHz | Measured Value           | Limit Requirements | Results |
| Unoccupancy Time                               | 0          | 5310          | No Transmission Found    | Minimum 30 minutes | Pass    |
|                                                |            | 5510          | No Transmission Found    | Minimum 30 minutes | Pass    |

### Channel Move Time (CMT), @ 5310 MHz, 802.11n 40MHz



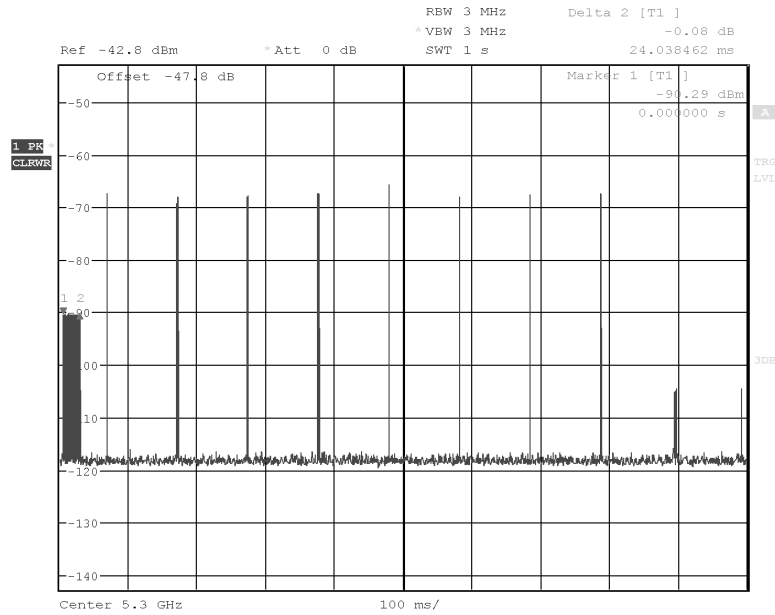
Date: 5.OCT.2022 22:39:10

### Channel Move Time (CMT), @ 5510 MHz, 802.11n 40MHz



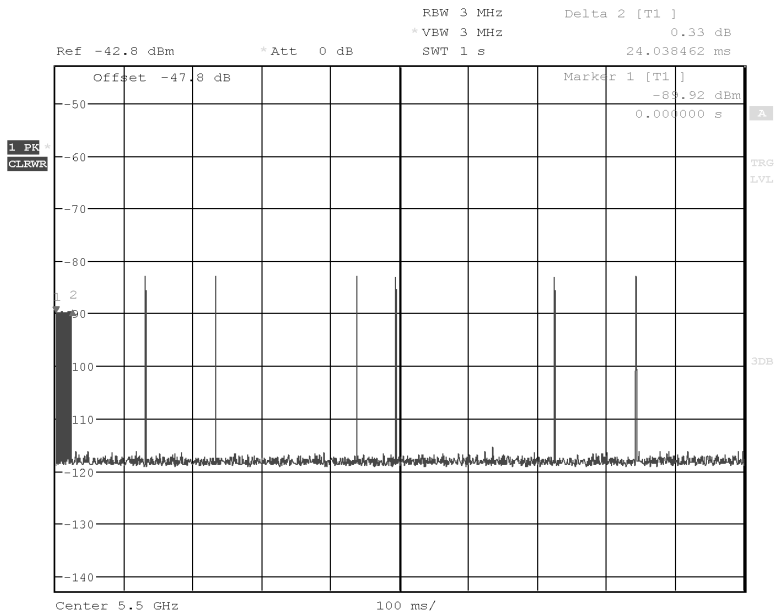
Date: 5.OCT.2022 23:22:12

### Channel Closing Transmission Time (CCTT), @ 5310 MHz, 802.11n 40MHz



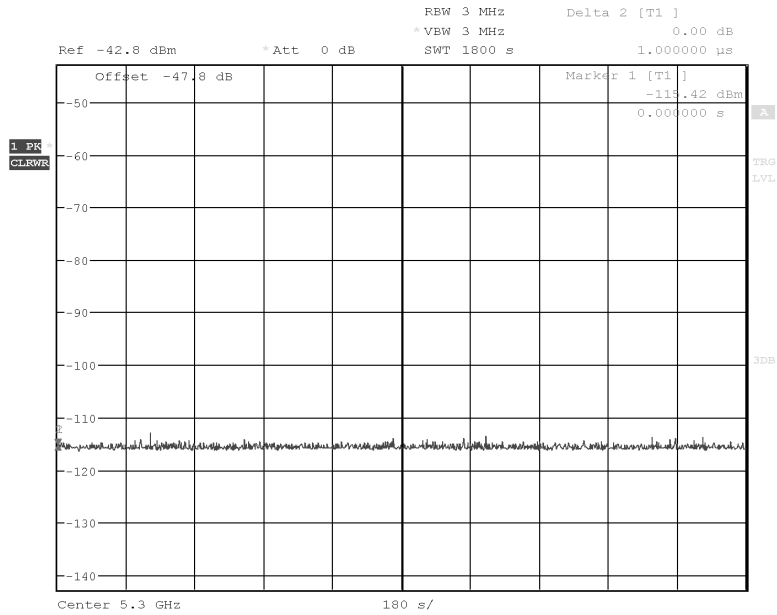
Date: 5.OCT.2022 22:58:25

### Channel Closing Transmission Time (CCTT), @ 5510 MHz, 802.11n 40MHz



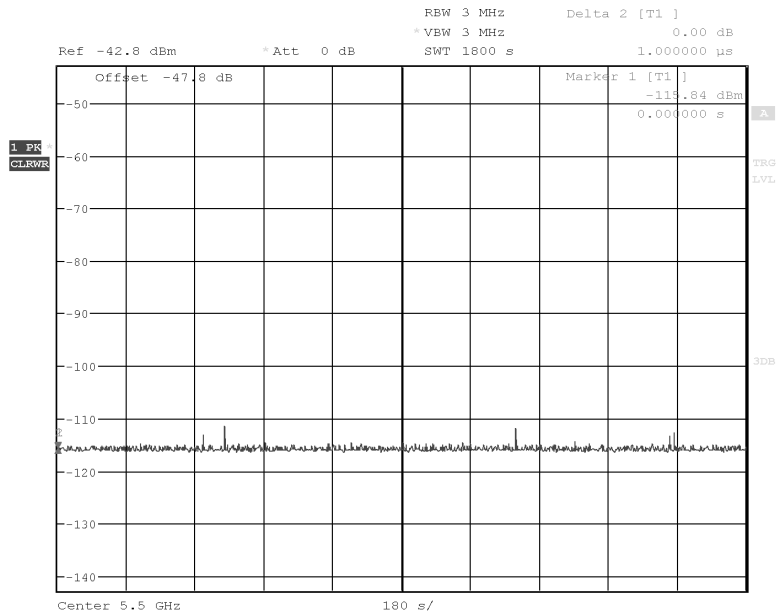
Date: 5.OCT.2022 23:41:58

### Channel Unoccupancy Time @ 5310 MHz, 802.11n 40MHz



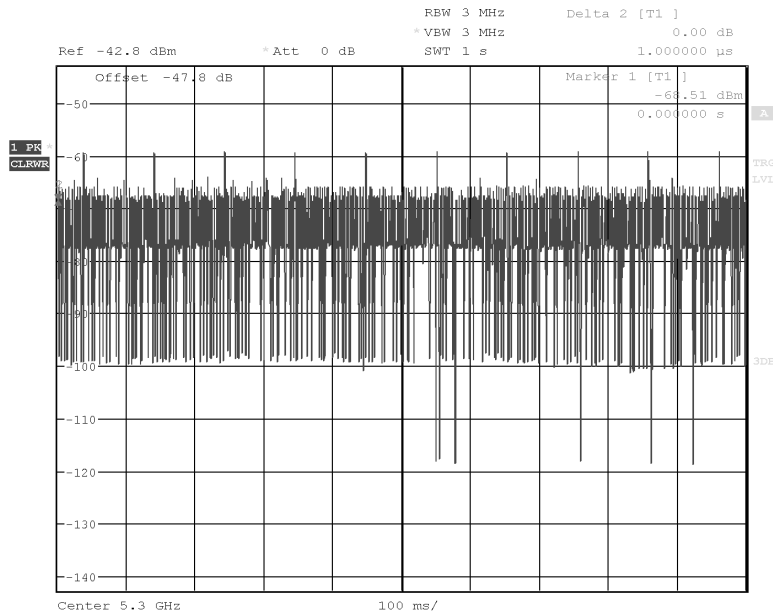
Date: 7.OCT.2022 19:47:42

### Channel Unoccupancy Time @ 5510 MHz, 802.11n 40MHz



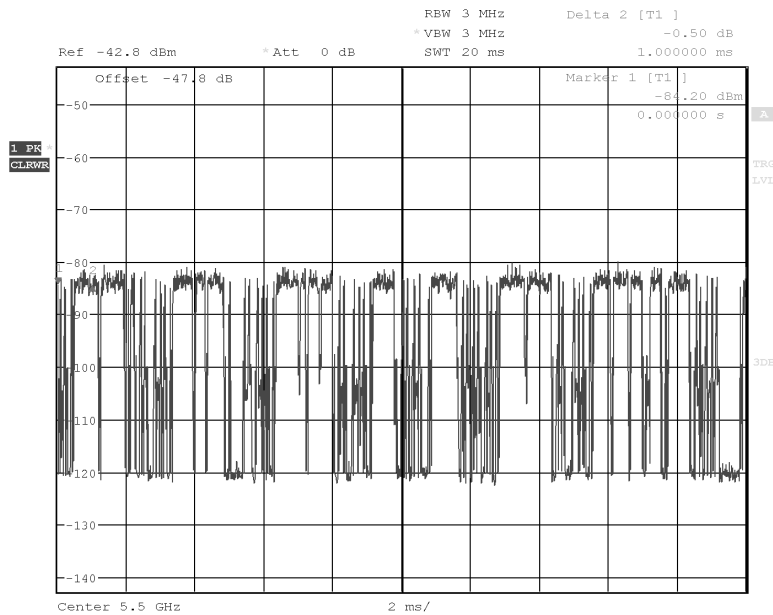
Date: 7.OCT.2022 21:03:47

### Channel Loading @ 5310MHz, 802.11n 40MHz



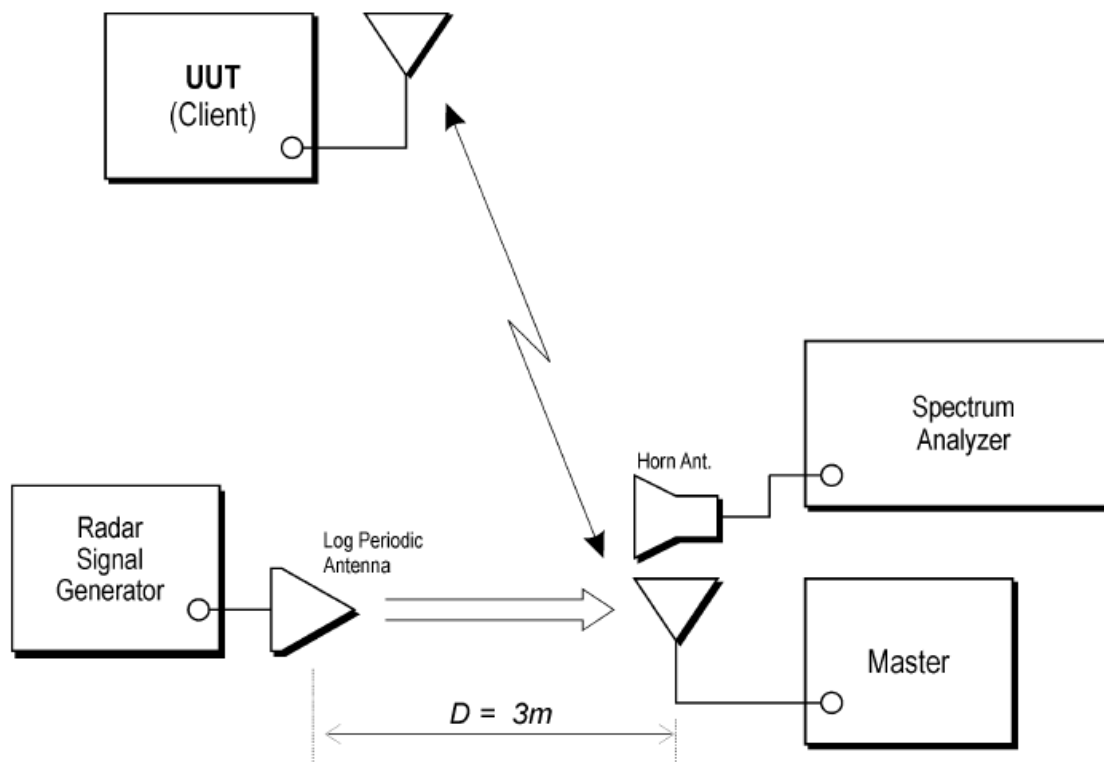
Date: 7.OCT.2022 18:59:28

### Channel Loading @ 5510MHz, 802.11n 40MHz



Date: 7.OCT.2022 18:45:36

#### 4.4.4 Test setup



4.5 AC Line Conducted Emission  
FCC: 15.207; RSS-GEN

4.5.1 Requirement

| Frequency Band MHz | FCC Part 15.207 Limits |            |
|--------------------|------------------------|------------|
|                    | Quasi-Peak             | Average    |
| 0.15-0.50          | 66 to 56 *             | 56 to 46 * |
| 0.50-5.00          | 56                     | 46         |
| 5.00-30.00         | 60                     | 50         |

*Note: \*Decreases linearly with the logarithm of the frequency  
At the transition frequency the lower limit applies.*

#### 4.5.2 Procedure

Measurements are carried out using quasi-peak and average detector receivers in accordance with CISPR 16. An AMN is required to provide a defined impedance at high frequencies across the power feed at the point of measurement of terminal voltage and also to provide isolation of the circuit under test from the ambient noise on the power lines. An AMN as defined in CISPR 16 shall be used.

The EUT is located so that the distance between the boundary of the EUT and the closest surface of the AMN is 0.8m.

Where a flexible mains cord is provided by the manufacturer, this shall be 1m long or if in excess of 1m, the excess cable is folded back and forth as far as possible so as to form a bundle not exceeding 0.4m in length.

The EUT is arranged and connected with cables terminated in accordance with the product specification.

Conducted disturbance is measured between the phase lead and the reference ground, and between the neutral lead and the reference ground. Both measured values are reported.

The EUT, where intended for tabletop use, is placed on a table whose top is 0.8m above the ground plane. A vertical, metal reference plane is placed 0.4m from the EUT. The vertical metal reference-plane is at least 2m by 2m. The EUT shall be kept at least 0.8m from any other metal surface or other ground plane not being part of the EUT. The table is constructed of non-conductive materials. Its dimensions are 1m by 1.5m, but may be extended for larger EUT.

Floor standing EUT are placed on a horizontal metal ground plane and isolated from the ground plane by resting on an insulating material. The metal ground plane extends at least 0.5m beyond the boundaries of the EUT and has minimum dimensions of 2m by 2m.

Equipment setup for conducted disturbance tests followed the guidelines of ANSI C63.10:2013.

#### 4.5.3 Test Results

15.207: Not Applicable. EUT is DC powered.

## 5.0 List of Test Equipment

Measurement equipment used for emission compliance testing utilized the equipment on the following list:

| Equipment                | Manufacturer      | Model/Type           | Asset # | Cal Int | Cal Due    |
|--------------------------|-------------------|----------------------|---------|---------|------------|
| 9kHz-30MHz Loop Antenna  | ETS Lindgren      | 6512                 | 01573   | 12      | 11/09/2022 |
| 30MHz-2GHz Bi-Log        | SunAR RF Motion   | JB1                  | 01577   | 12      | 02/10/2023 |
| 1-18GHz 2 meter RF Cable | TRU Corp.         | TRU Core 300         | 01330   | 12      | 08/25/2023 |
| 1-40GHz RF Cable (SMA    | MEGAPHASE         | EMC1-K1K1-20         | 01889   | 12      | 03/11/2023 |
| 1-40GHz DRG Horn (small) | ETS-Lindgren      | 3116                 | 01894   | 12      | 06/20/2023 |
| 1-18GHz Horn Antenna     | ETS Lindgren      | 3117-PA              | 01325   | 12      | 10/26/2022 |
| 9kHz-1GHz Pre-amplifier  | Sonoma Instrument | 310N                 | 01713   | 12      | 02/17/2023 |
| Vector Signal Generator  | Rohde & Schwarz   | SMU200A              | 00880   | 12      | 12/14/2022 |
| 1-40GHz RF Cable         | Mega PHASE        | TM40-K1K1-59         | 01655   | 12      | 01/11/2023 |
| 1GHz to 40GHz RF Cable   | MEGAPHASE         | EMC1-K1K1-236        | 01484   | 12      | 06/27/2023 |
| 1-18GHz Horn Antenna     | EMCO              | 3115                 | 001595  | 12      | #          |
| 18-40GHz Preamp          | uComp Nordic      | MCNS-50-18004000335p | 01799   | 12      | 03/24/2023 |
| USB Wideband Power       | Keysight          | U2021XA              | 01578   | 12      | 05/03/2023 |
| EMI Test Receiver 40GHz  | Rohde & Schwarz   | ESU40                | 00961   | 12      | 03/10/2023 |
| EMI Test Receiver        | Rohde & Schwarz   | ESR7                 | 01607   | 12      | 11/19/2022 |
| 10m chamber              | Panashield        | 10 Meter Chamber     | 00984   | 12      | #          |

# = Calibration not required.

Software used for emission compliance testing utilized the following:

| Name         | Manufacturer   | Version   | Template/Profile                                                          |
|--------------|----------------|-----------|---------------------------------------------------------------------------|
| Tile         | Quantum Change | 3.4.K.22  | Conducted Restricted Band Edge_Avg<br>Conducted Restricted Band Edge_Peak |
| BAT-EMC      | Nexio          | 3.20.0.23 | Lytx Wifi.bpp                                                             |
| RS Commander | Rohde Schwarz  | 1.6.4     | Not Applicable (Screen grabber)                                           |

## 6.0 Document History

| Revision/<br>Job Number | Writer<br>Initials | Reviewer<br>Initials | Date             | Change                                                                                        |
|-------------------------|--------------------|----------------------|------------------|-----------------------------------------------------------------------------------------------|
| 1.0 / G105146268        | JAV                | ML                   | October 29, 2022 | Original document                                                                             |
| 1.1 / G105146268        | AC                 | AS                   | April 10, 2023   | Modified channel list on pages 6, 11 & 12 to reflect actual channels used in the End Product. |