

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 0

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Directional Gain for Power (dBi) | Directional Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/1MHz) |
|---------|--------------------|-----------------------------|---|---|-------------------------|----------------------------|
| Low | 5260 | 20.00 | 3.20 | 7.70 | 24.00 | 9.30 |
| Mid | 5300 | 19.95 | 3.20 | 7.70 | 24.00 | 9.30 |
| High | 5320 | 20.05 | 3.20 | 7.70 | 24.00 | 9.30 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

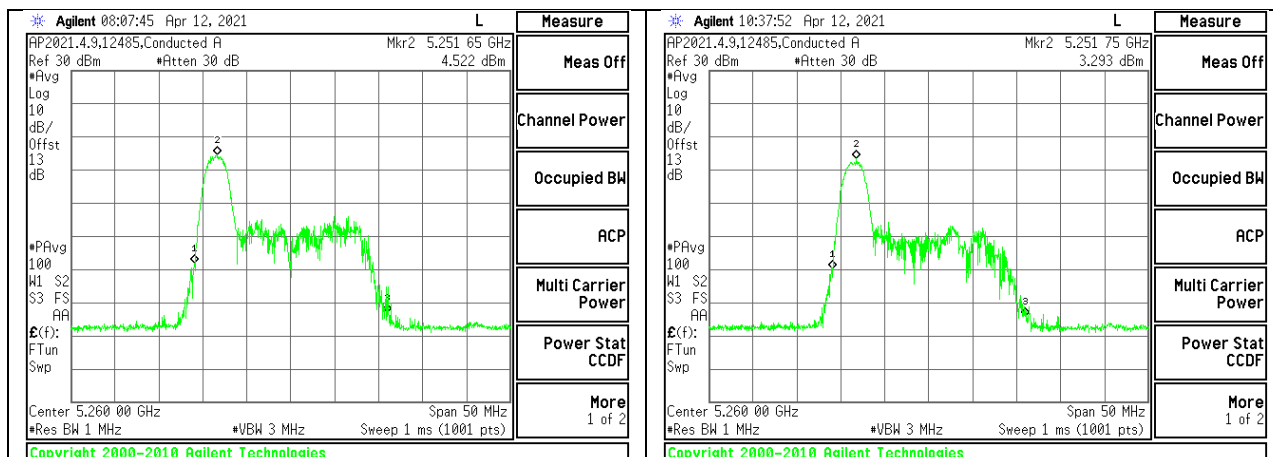
Output Power Results

| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low | 5260 | 6.70 | 5.76 | 5.95 | 10.93 | 24.00 | -13.07 |
| Mid | 5300 | 5.73 | 5.72 | 6.00 | 10.59 | 24.00 | -13.41 |
| High | 5320 | 5.89 | 5.27 | 6.00 | 10.50 | 24.00 | -13.50 |

PSD Results

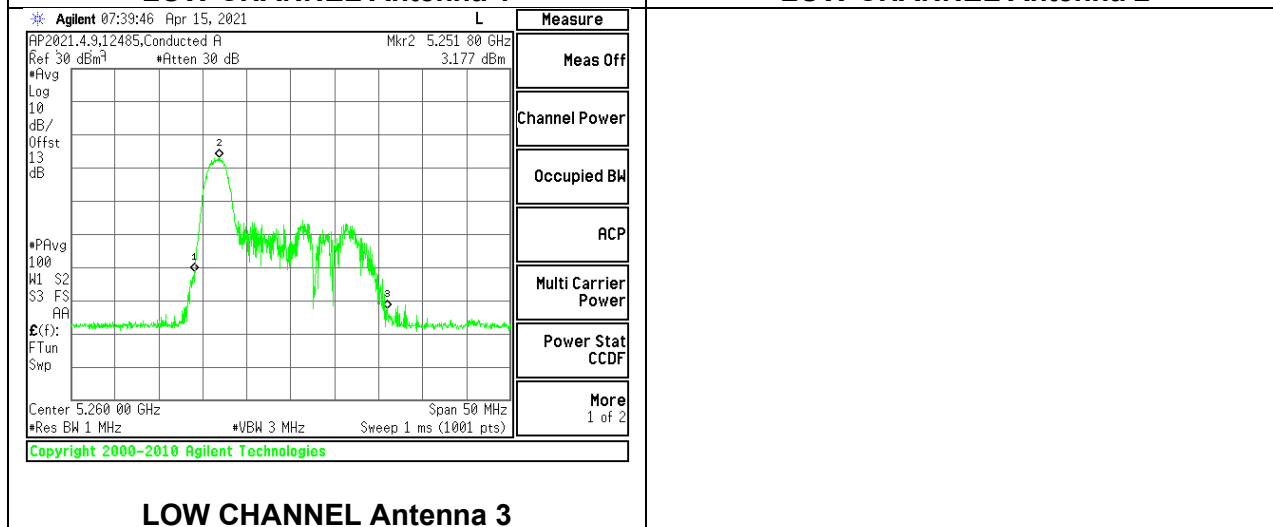
| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/1MHz) | Antenna 2 Meas PSD (dBm/1MHz) | Antenna 3 Meas PSD (dBm/1MHz) | Total Corr'd PSD (dBm/1MHz) | PSD Limit (dBm/1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--------------------------------------|----------------------------|-----------------------|
| Low | 5260 | 4.52 | 3.29 | 3.18 | 8.61 | 9.30 | -0.69 |
| Mid | 5300 | 4.53 | 2.70 | 3.03 | 8.40 | 9.30 | -0.90 |
| High | 5320 | 4.17 | 2.83 | 3.36 | 8.39 | 9.30 | -0.91 |

LOW



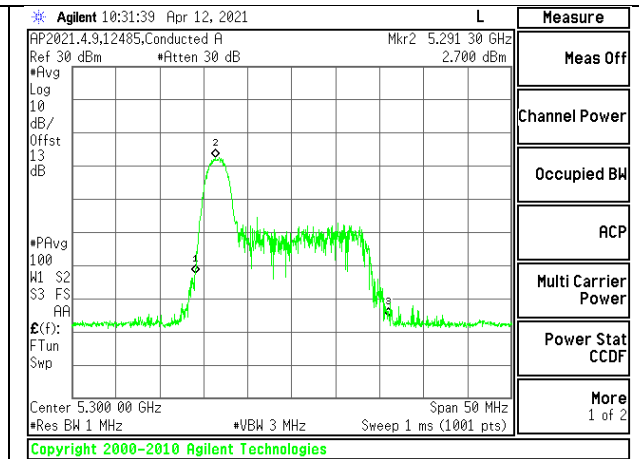
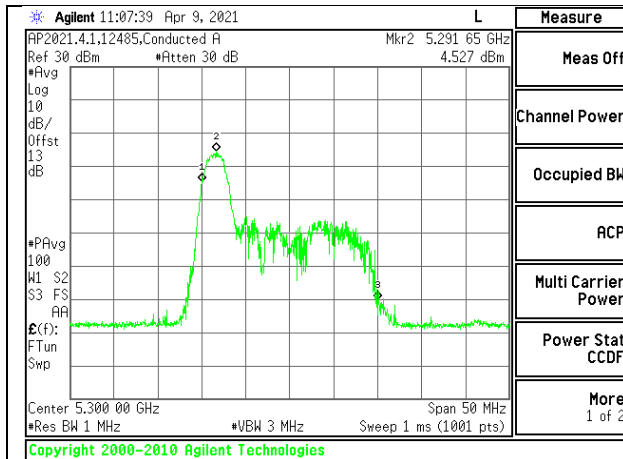
LOW CHANNEL Antenna 1

LOW CHANNEL Antenna 2



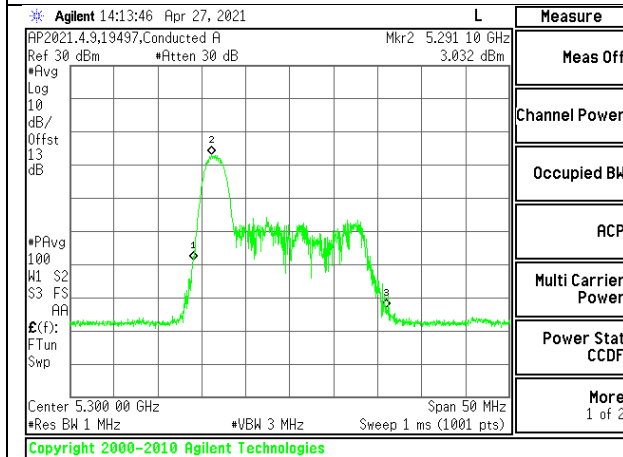
LOW CHANNEL Antenna 3

MID



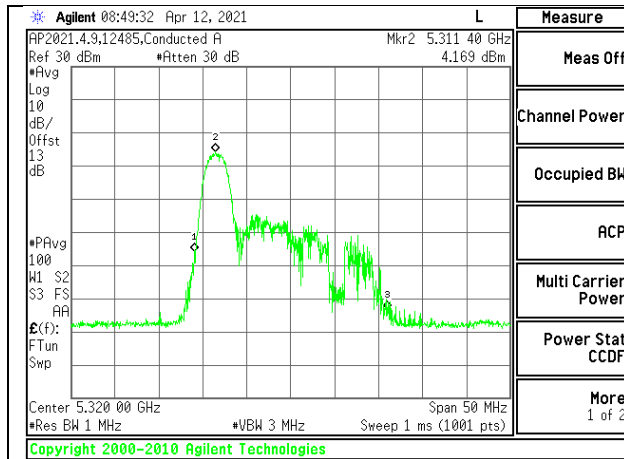
MID CHANNEL Antenna 1

MID CHANNEL Antenna 2

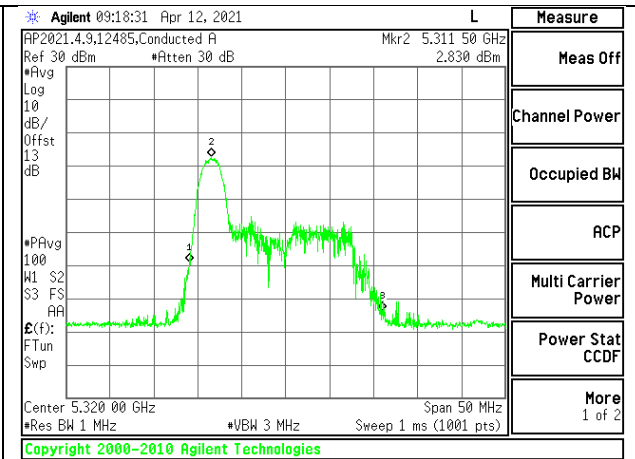


MID CHANNEL Antenna 3

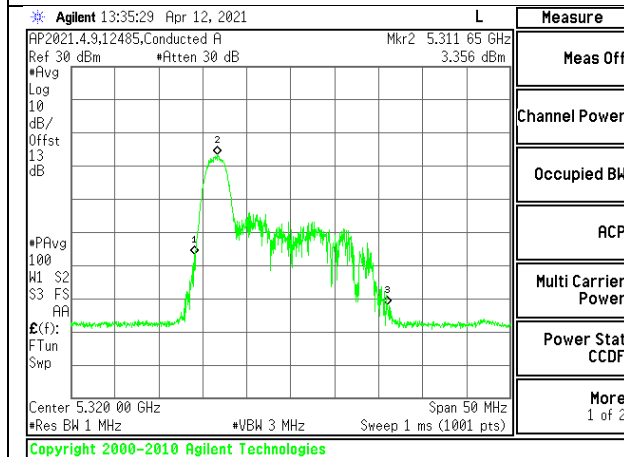
HIGH



HIGH CHANNEL Antenna 1



HIGH CHANNEL Antenna 2



HIGH CHANNEL Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 4

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Directional Gain for Power (dBi) | Directional Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/1MHz) |
|---------|--------------------|-----------------------------|---|---|-------------------------|----------------------------|
| Low | 5260 | 18.40 | 3.20 | 7.70 | 23.65 | 9.30 |
| Mid | 5300 | 18.45 | 3.20 | 7.70 | 23.66 | 9.30 |
| High | 5320 | 18.45 | 3.20 | 7.70 | 23.66 | 9.30 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

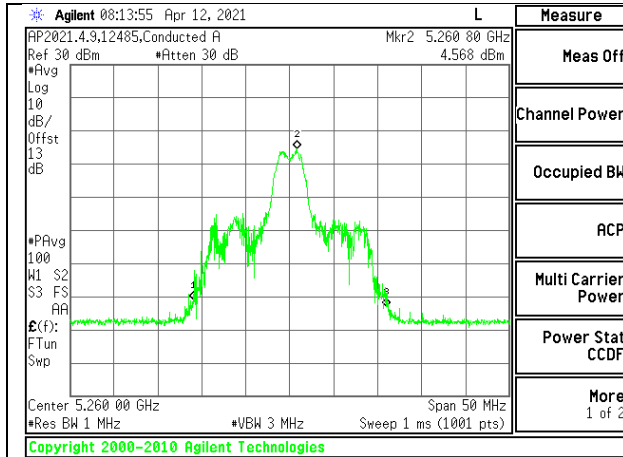
Output Power Results

| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low | 5260 | 6.36 | 6.62 | 6.24 | 11.18 | 23.65 | -12.47 |
| Mid | 5300 | 6.54 | 6.47 | 6.32 | 11.22 | 23.66 | -12.44 |
| High | 5320 | 6.84 | 6.76 | 6.22 | 11.39 | 23.66 | -12.27 |

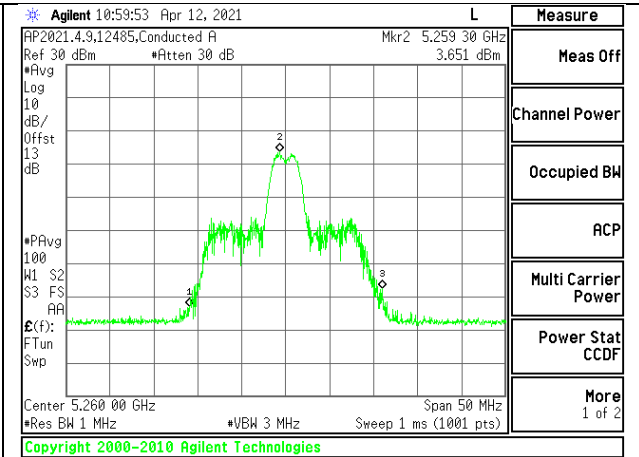
PSD Results

| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/1MHz) | Antenna 2 Meas PSD (dBm/1MHz) | Antenna 3 Meas PSD (dBm/1MHz) | Total Corr'd PSD (dBm/1MHz) | PSD Limit (dBm/1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--------------------------------------|----------------------------|-----------------------|
| Low | 5260 | 4.57 | 3.65 | 3.06 | 8.71 | 9.30 | -0.59 |
| Mid | 5300 | 3.66 | 3.82 | 3.09 | 8.44 | 9.30 | -0.86 |
| High | 5320 | 3.84 | 2.57 | 3.22 | 8.14 | 9.30 | -1.16 |

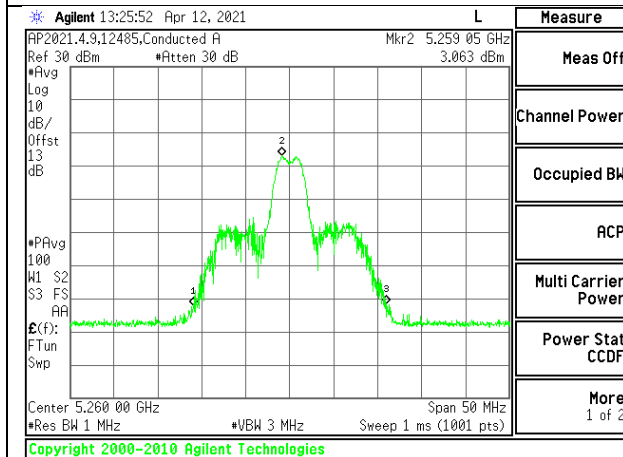
LOW



LOW CHANNEL Antenna 1

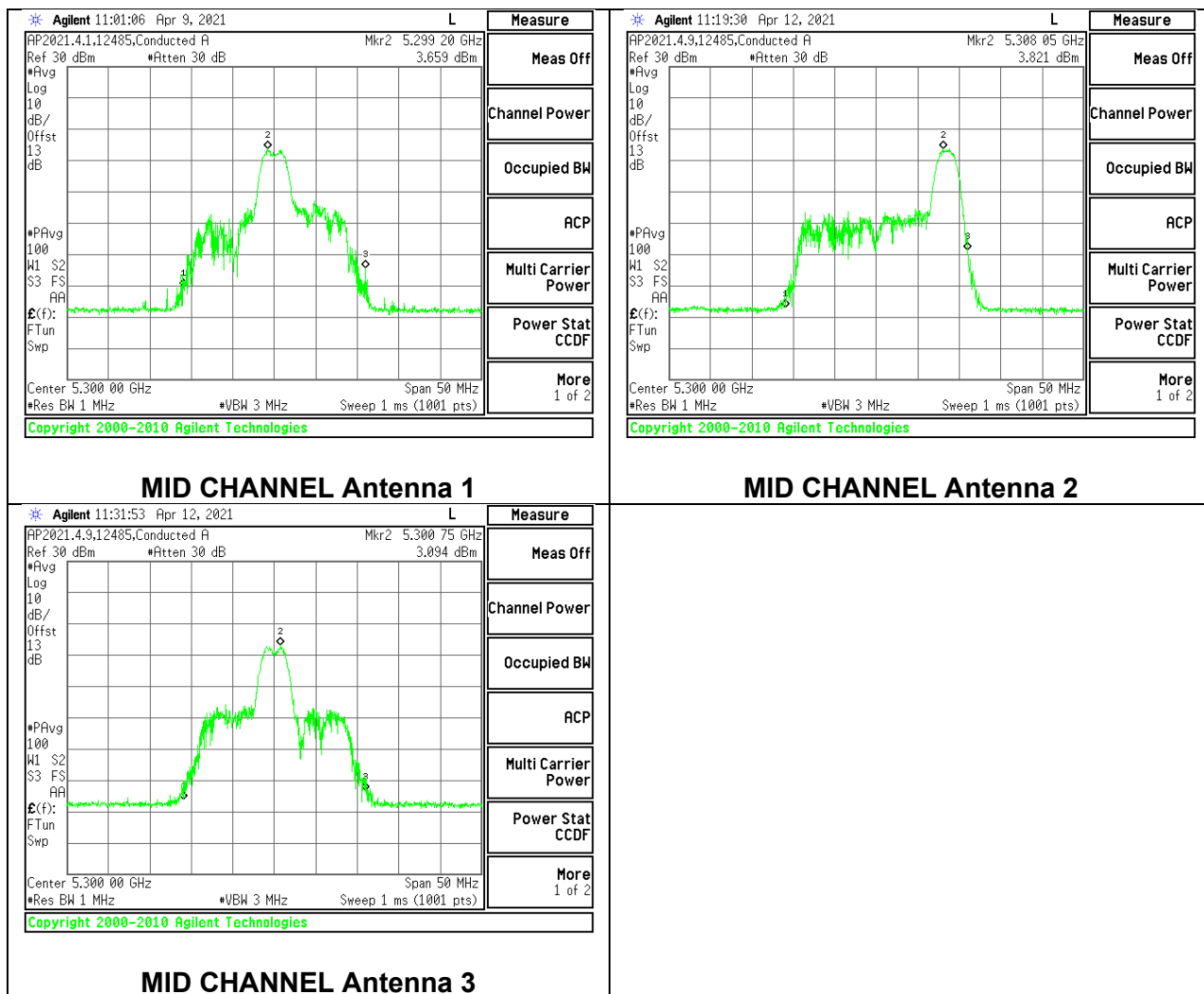


LOW CHANNEL Antenna 2

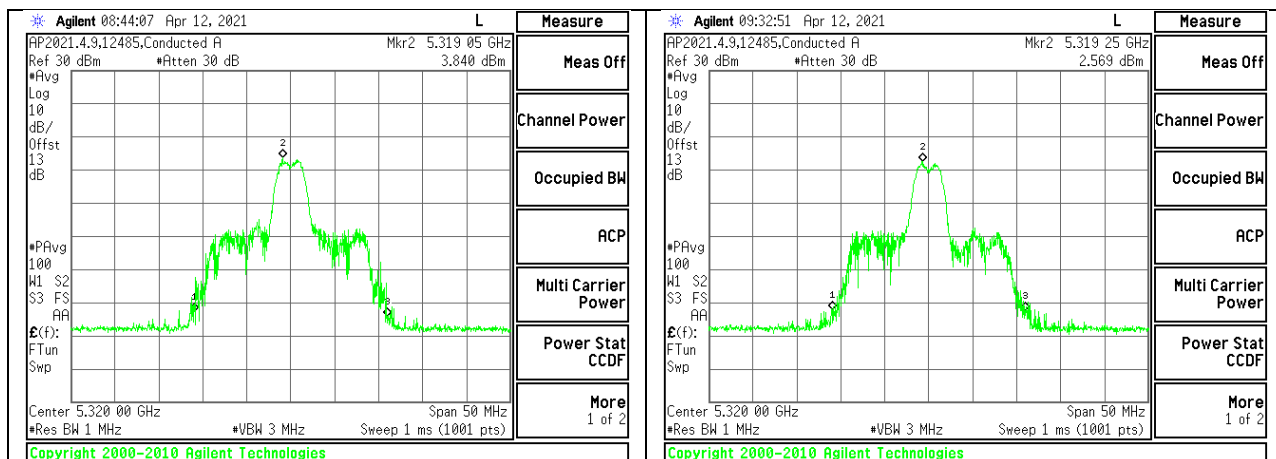


LOW CHANNEL Antenna 3

MID

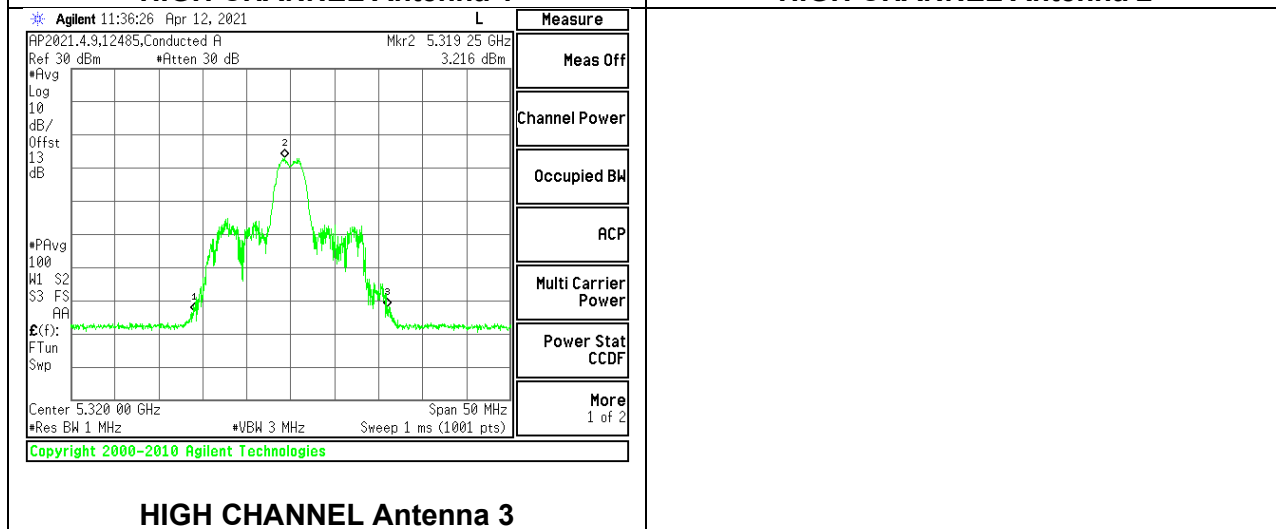


HIGH



HIGH CHANNEL Antenna 1

HIGH CHANNEL Antenna 2



HIGH CHANNEL Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 8

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Directional Gain for Power (dBi) | Directional Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/1MHz) |
|---------|--------------------|-----------------------------|---|---|-------------------------|----------------------------|
| Low | 5260 | 20.10 | 3.20 | 7.70 | 24.00 | 9.30 |
| Mid | 5300 | 20.10 | 3.20 | 7.70 | 24.00 | 9.30 |
| High | 5320 | 20.00 | 3.20 | 7.70 | 24.00 | 9.30 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

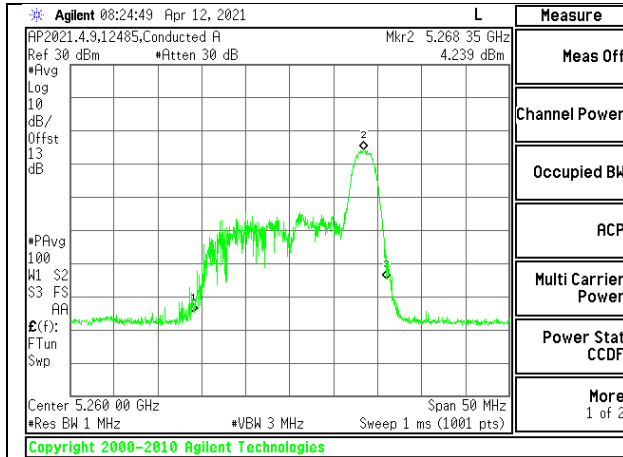
Output Power Results

| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low | 5260 | 6.16 | 6.12 | 6.79 | 11.14 | 24.00 | -12.86 |
| Mid | 5300 | 6.26 | 6.17 | 6.07 | 10.94 | 24.00 | -13.06 |
| High | 5320 | 6.66 | 6.17 | 6.72 | 11.29 | 24.00 | -12.71 |

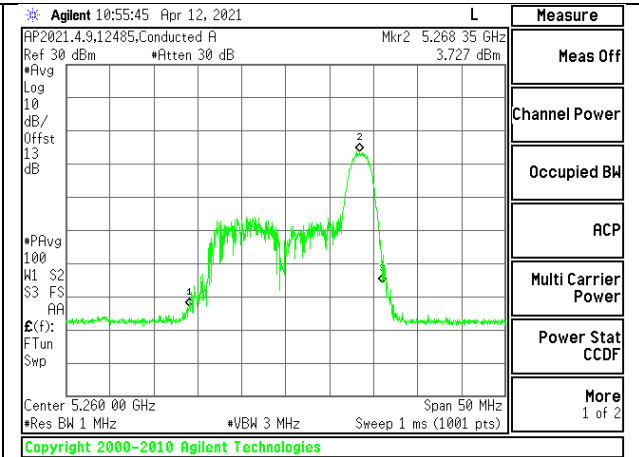
PSD Results

| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/1MHz) | Antenna 2 Meas PSD (dBm/1MHz) | Antenna 3 Meas PSD (dBm/1MHz) | Total Corr'd PSD (dBm/1MHz) | PSD Limit (dBm/1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--------------------------------------|----------------------------|-----------------------|
| Low | 5260 | 4.24 | 3.73 | 3.84 | 8.84 | 9.30 | -0.46 |
| Mid | 5300 | 3.91 | 3.34 | 3.70 | 8.56 | 9.30 | -0.74 |
| High | 5320 | 3.21 | 3.41 | 3.87 | 8.41 | 9.30 | -0.89 |

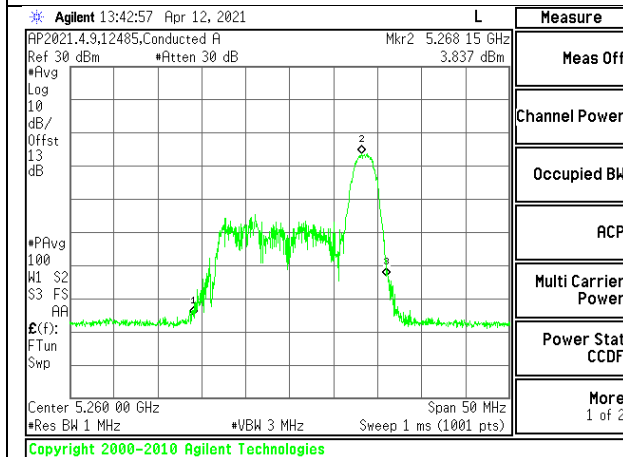
LOW



LOW CHANNEL Antenna 1

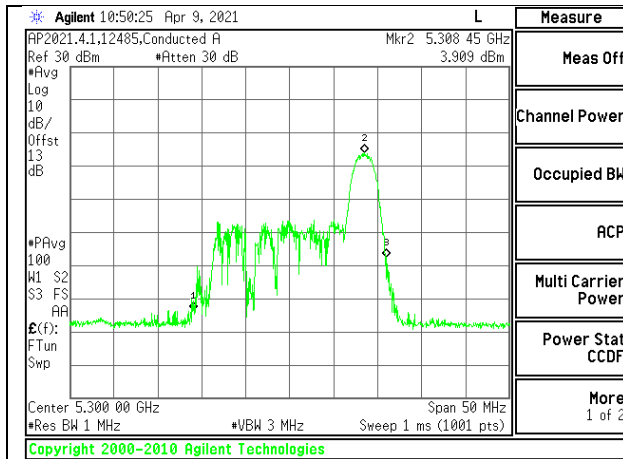


LOW CHANNEL Antenna 2

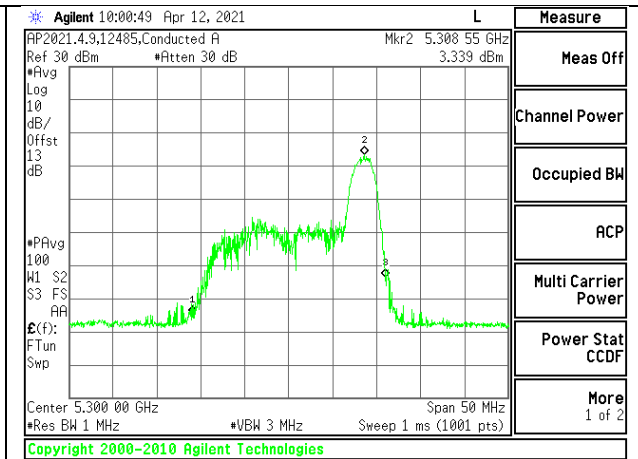


LOW CHANNEL Antenna 3

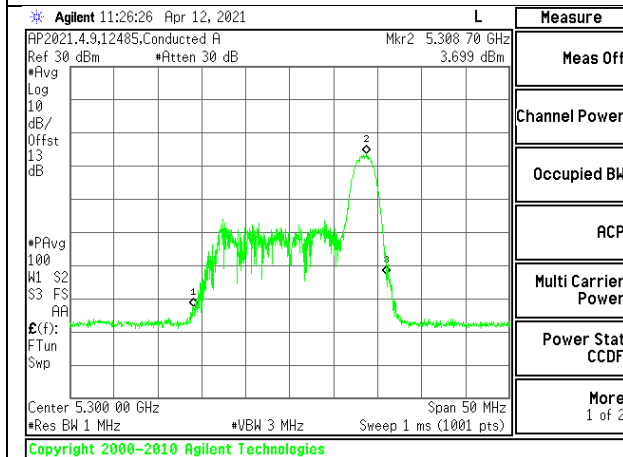
MID



MID CHANNEL Antenna 1

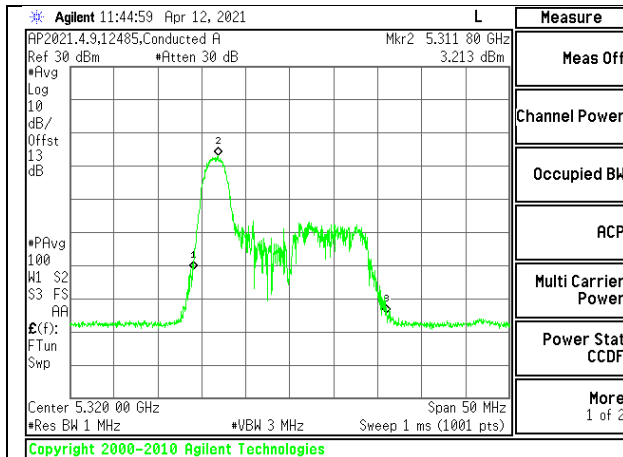


MID CHANNEL Antenna 2

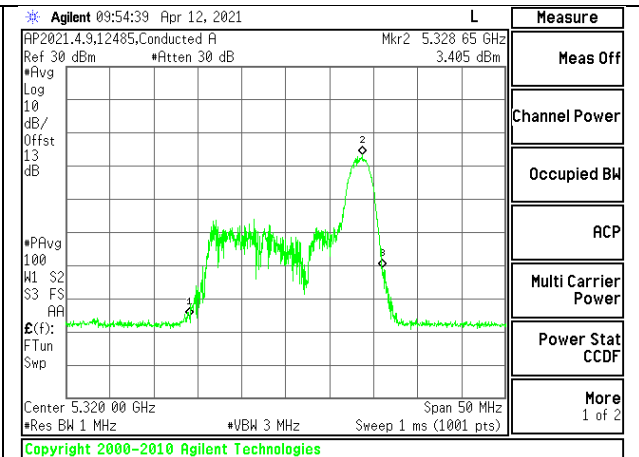


MID CHANNEL Antenna 3

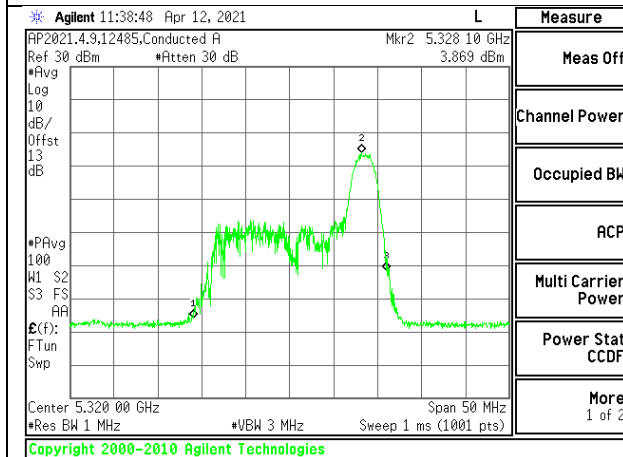
HIGH



HIGH CHANNEL Antenna 1



HIGH CHANNEL Antenna 2



HIGH CHANNEL Antenna 3

9.4.5. 802.11ax HE40 MODE 3TX IN THE 5.3GHz BAND (FCC)

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 484-Tones, RU Index 65

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Uncorrelated Gain for Power (dBi) | Correlated Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/1MHz) |
|---------|--------------------|-----------------------------|--|--|-------------------------|----------------------------|
| Low | 5270 | 40.80 | 3.20 | 7.70 | 24.00 | 9.30 |
| High | 5310 | 40.60 | 3.20 | 7.70 | 24.00 | 9.30 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

Output Power Results

| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low | 5270 | 15.44 | 14.66 | 15.01 | 19.82 | 24.00 | -4.18 |
| High | 5310 | 15.94 | 14.59 | 15.31 | 20.09 | 24.00 | -3.91 |

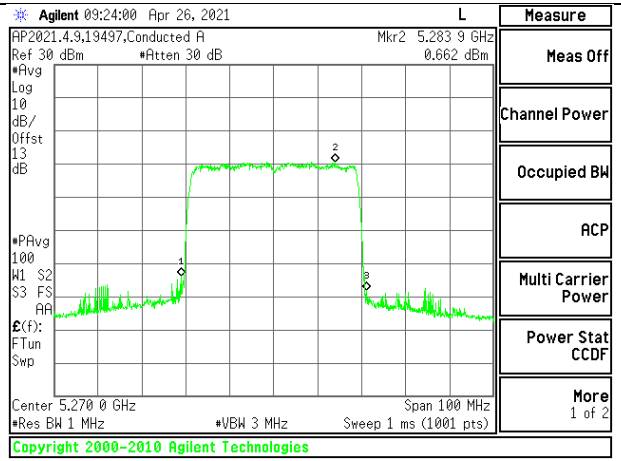
PSD Results

| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/1MHz) | Antenna 2 Meas PSD (dBm/1MHz) | Antenna 3 Meas PSD (dBm/1MHz) | Total Corr'd PSD (dBm/1MHz) | PSD Limit (dBm/1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--------------------------------------|----------------------------|-----------------------|
| Low | 5270 | 2.00 | 0.66 | 0.65 | 6.05 | 9.30 | -3.25 |
| High | 5310 | 1.61 | 0.76 | 0.13 | 5.77 | 9.30 | -3.53 |

LOW



LOW CHANNEL Antenna 1



LOW CHANNEL Antenna 2

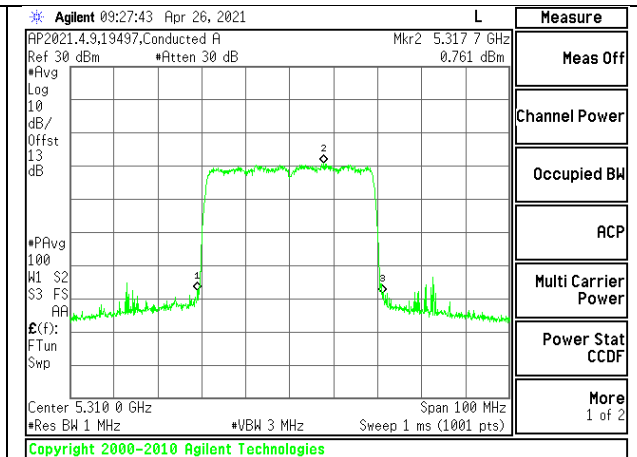


LOW CHANNEL Antenna 3

HIGH



HIGH CHANNEL Antenna 1



HIGH CHANNEL Antenna 2



HIGH CHANNEL Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 0

| | |
|-----------------------|----------|
| Test Engineer: | GA 12485 |
| Test Date: | 5/3/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Directional Gain for Power (dBi) | Directional Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/1MHz) |
|---------|--------------------|-----------------------------|---|---|-------------------------|----------------------------|
| Low | 5270 | 19.30 | 3.20 | 7.70 | 23.86 | 9.30 |
| High | 5310 | 19.30 | 3.20 | 7.70 | 23.86 | 9.30 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

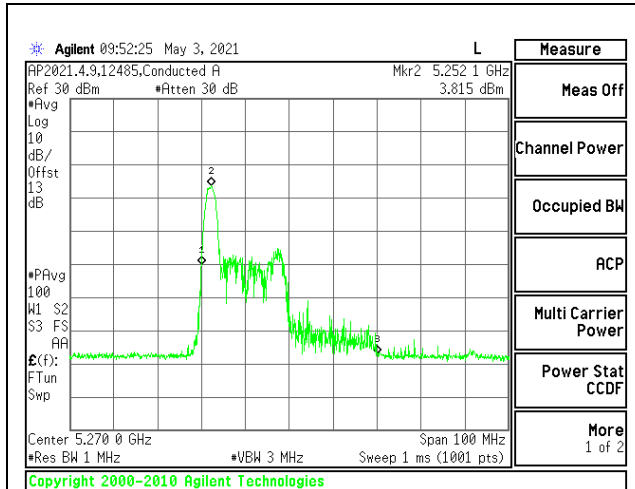
Output Power Results

| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low | 5270 | 5.04 | 4.43 | 4.97 | 9.59 | 23.86 | -14.26 |
| High | 5310 | 4.76 | 4.31 | 4.62 | 9.34 | 23.86 | -14.52 |

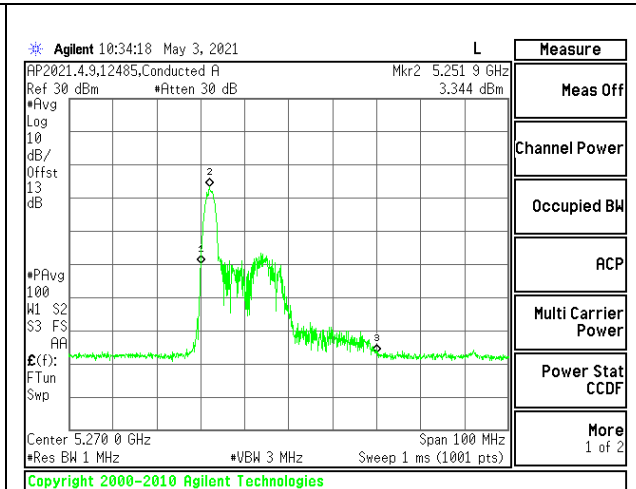
PSD Results

| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/1MHz) | Antenna 2 Meas PSD (dBm/1MHz) | Antenna 3 Meas PSD (dBm/1MHz) | Total Corr'd PSD (dBm/1MHz) | PSD Limit (dBm/1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--------------------------------------|----------------------------|-----------------------|
| Low | 5270 | 3.82 | 3.34 | 3.31 | 8.40 | 9.30 | -0.90 |
| High | 5310 | 3.35 | 3.06 | 3.15 | 8.09 | 9.30 | -1.21 |

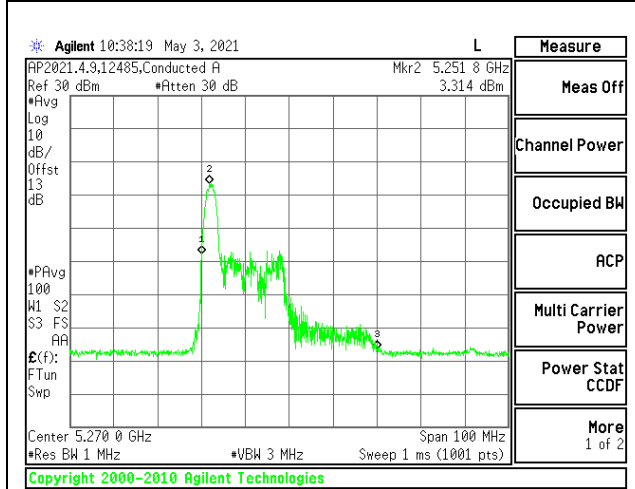
LOW



LOW CHANNEL Antenna 1

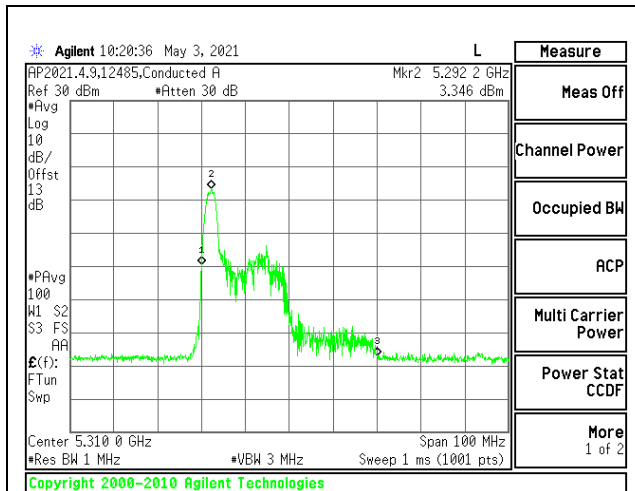


LOW CHANNEL Antenna 2

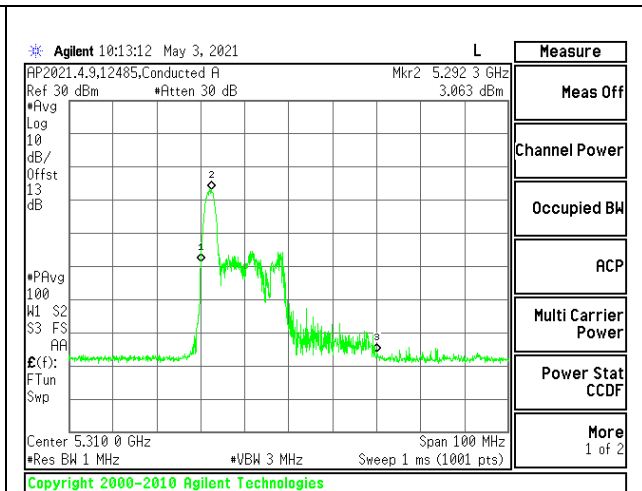


LOW CHANNEL Antenna 3

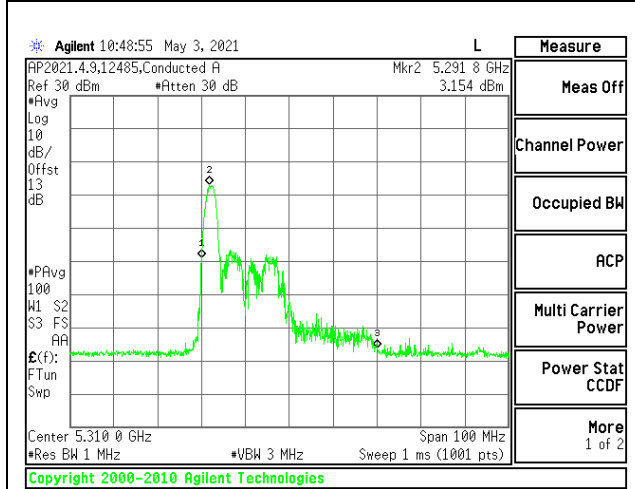
HIGH



HIGH CHANNEL Antenna 1



HIGH CHANNEL Antenna 2



HIGH CHANNEL Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 8

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Directional Gain for Power (dBi) | Directional Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/1MHz) |
|---------|--------------------|-----------------------------|---|---|-------------------------|----------------------------|
| Low | 5270 | 22.50 | 3.20 | 7.70 | 24.00 | 9.30 |
| High | 5310 | 22.30 | 3.20 | 7.70 | 24.00 | 9.30 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

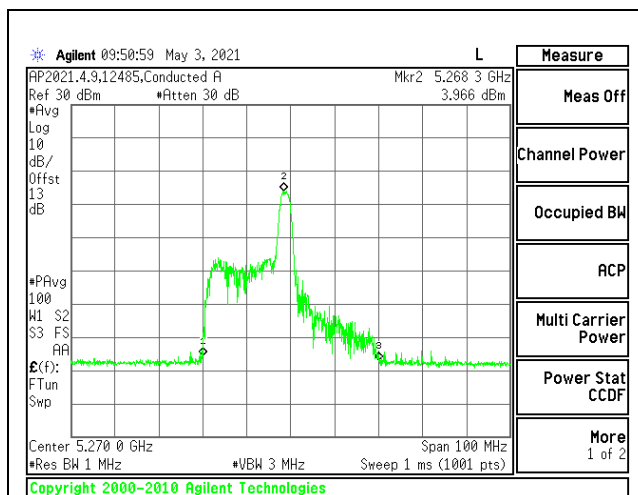
Output Power Results

| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low | 5270 | 6.87 | 5.52 | 6.89 | 11.24 | 24.00 | -12.76 |
| High | 5310 | 6.92 | 5.93 | 6.95 | 11.40 | 24.00 | -12.60 |

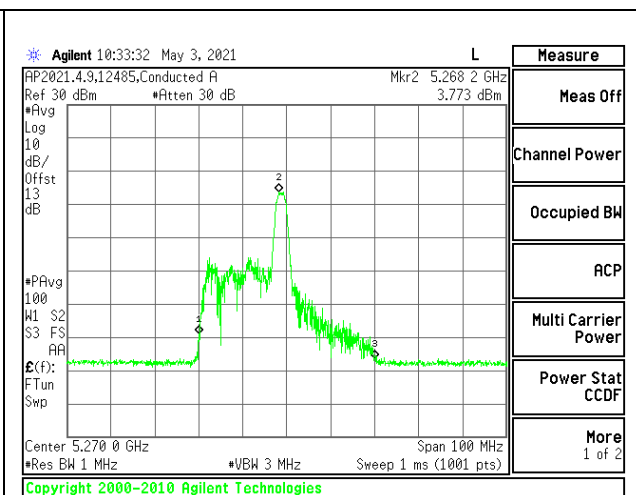
PSD Results

| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/1MHz) | Antenna 2 Meas PSD (dBm/1MHz) | Antenna 3 Meas PSD (dBm/1MHz) | Total Corr'd PSD (dBm/1MHz) | PSD Limit (dBm/1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--------------------------------------|----------------------------|-----------------------|
| Low | 5270 | 3.97 | 3.77 | 4.04 | 8.83 | 9.30 | -0.47 |
| High | 5310 | 3.65 | 3.28 | 3.77 | 8.47 | 9.30 | -0.83 |

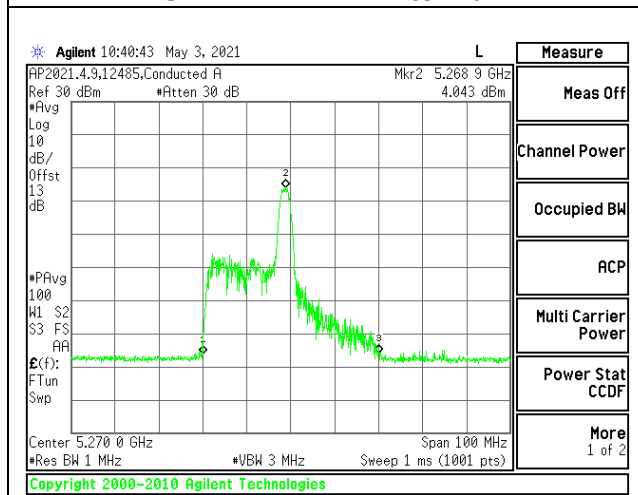
LOW



LOW CHANNEL Antenna 1

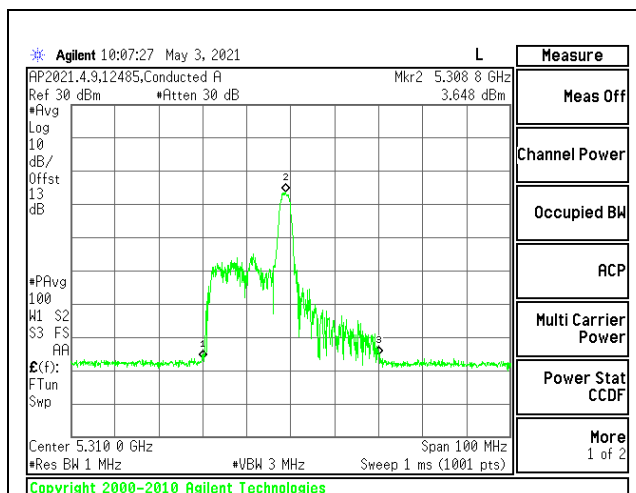


LOW CHANNEL Antenna 2

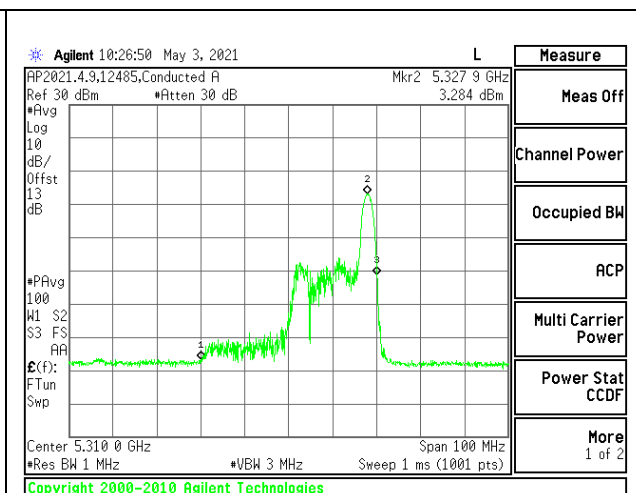


LOW CHANNEL Antenna 3

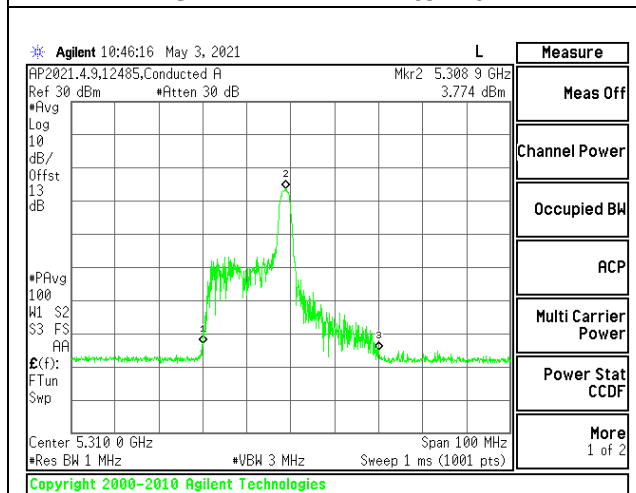
HIGH



HIGH CHANNEL Antenna 1



HIGH CHANNEL Antenna 2



HIGH CHANNEL Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 17

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Directional Gain for Power (dBi) | Directional Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/1MHz) |
|---------|--------------------|-----------------------------|---|---|-------------------------|----------------------------|
| Low | 5270 | 19.20 | 3.20 | 7.70 | 23.83 | 9.30 |
| High | 5310 | 19.20 | 3.20 | 7.70 | 23.83 | 9.30 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

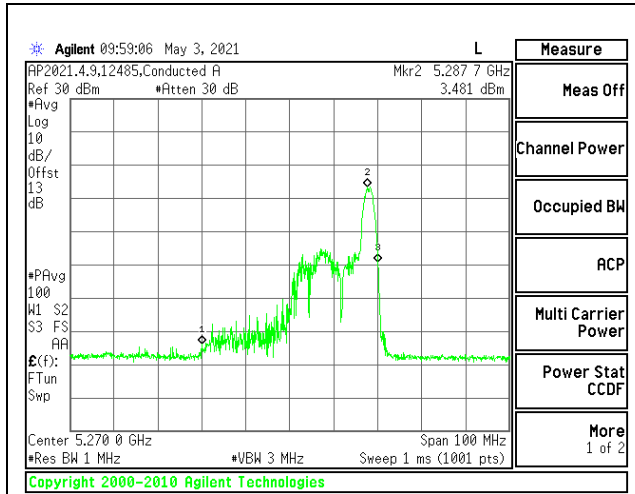
Output Power Results

| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low | 5270 | 5.93 | 4.74 | 5.68 | 10.25 | 23.83 | -13.58 |
| High | 5310 | 6.01 | 5.78 | 5.73 | 10.61 | 23.83 | -13.22 |

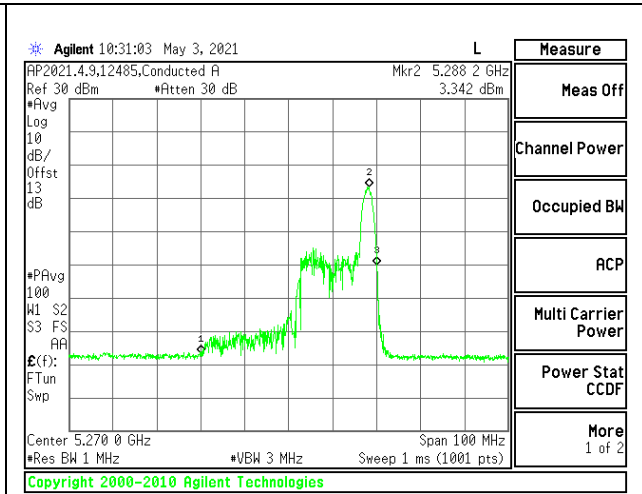
PSD Results

| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/1MHz) | Antenna 2 Meas PSD (dBm/1MHz) | Antenna 3 Meas PSD (dBm/1MHz) | Total Corr'd PSD (dBm/1MHz) | PSD Limit (dBm/1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--------------------------------------|----------------------------|-----------------------|
| Low | 5270 | 3.48 | 3.34 | 3.26 | 8.26 | 9.30 | -1.04 |
| High | 5310 | 4.06 | 3.13 | 3.49 | 8.48 | 9.30 | -0.82 |

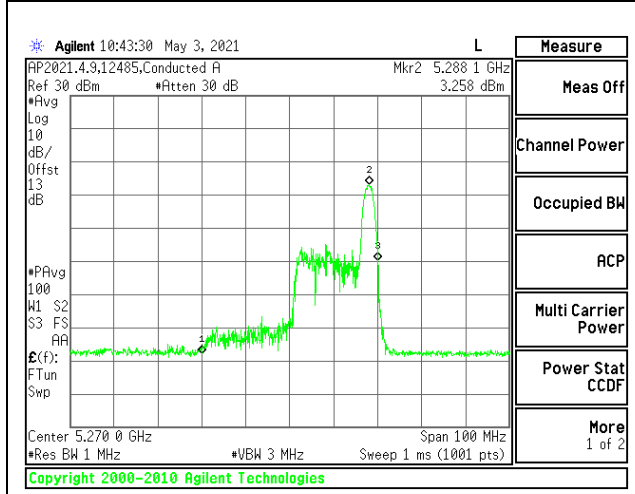
LOW



LOW CHANNEL Antenna 1

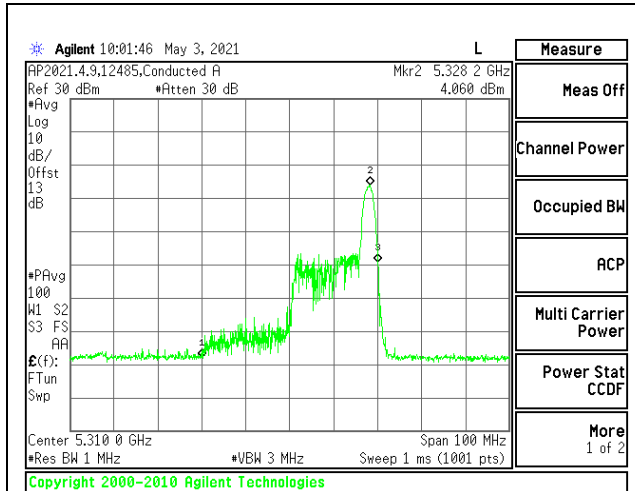


LOW CHANNEL Antenna 2

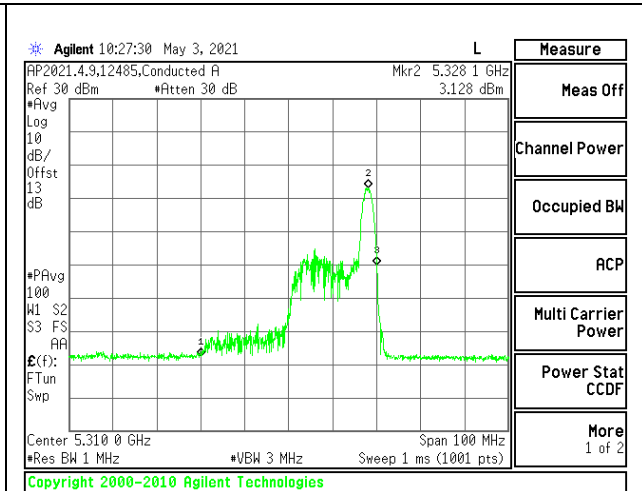


LOW CHANNEL Antenna 3

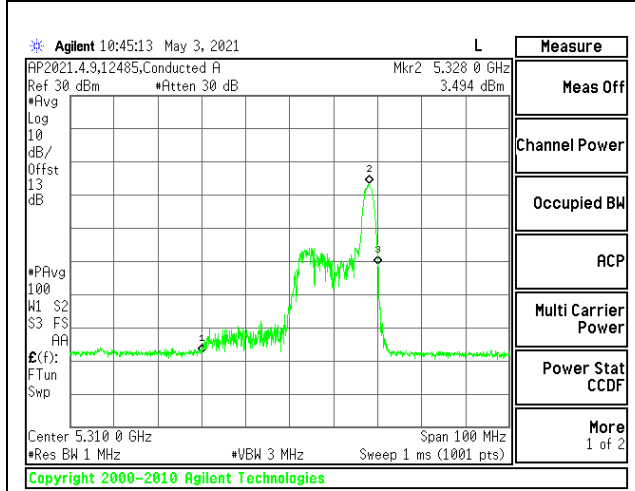
HIGH



HIGH CHANNEL Antenna 1



HIGH CHANNEL Antenna 2



HIGH CHANNEL Antenna 3

9.4.6. 802.11ax HE80 MODE 3TX IN THE 5.3GHz BAND (FCC)

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 996-Tones, RU Index 67

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Uncorrelated Gain for Power (dBi) | Correlated Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/1MHz) |
|---------|--------------------|-----------------------------|--|--|-------------------------|----------------------------|
| Mid | 5290 | 83.40 | 3.20 | 7.70 | 24.00 | 9.30 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

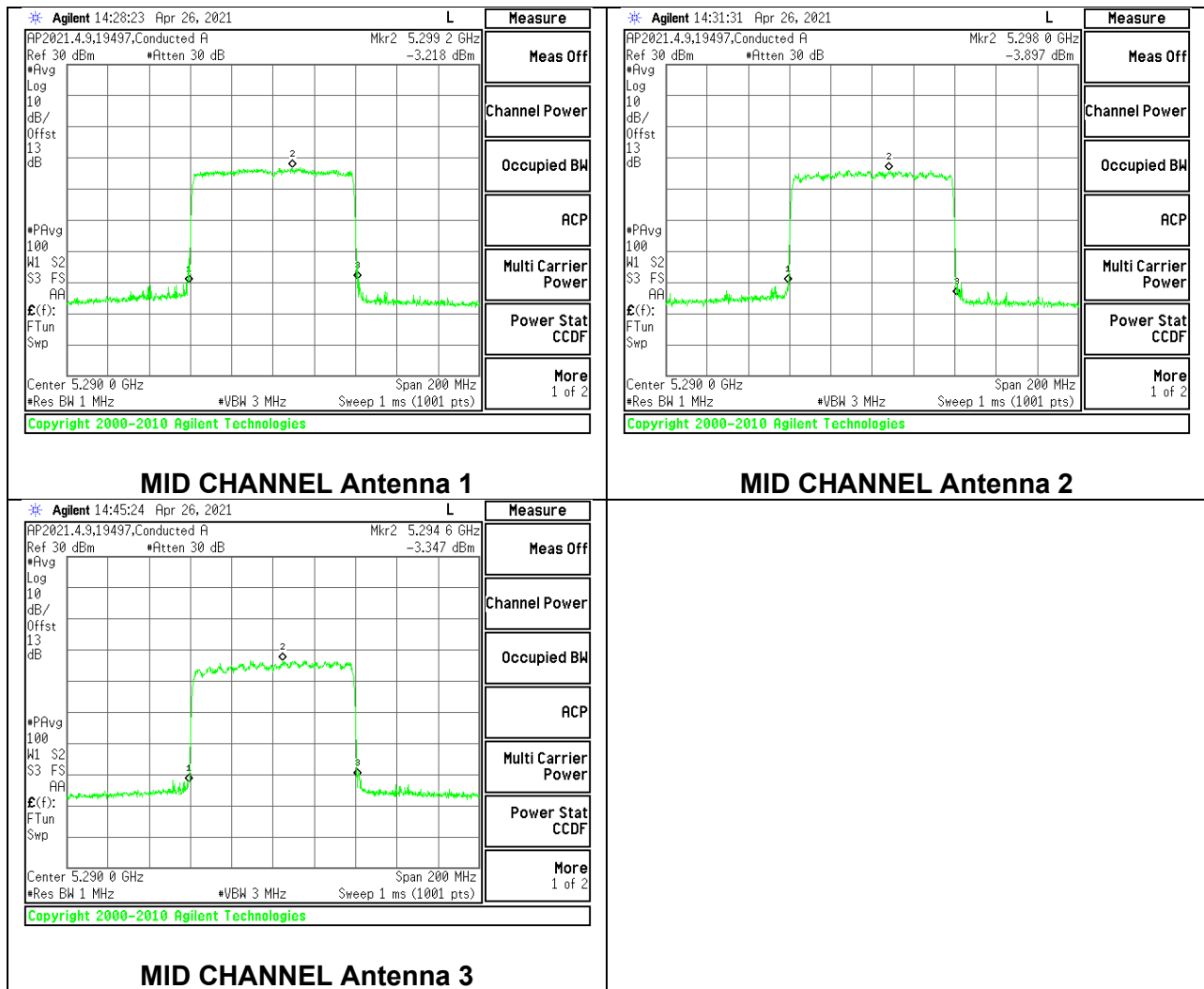
Output Power Results

| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Mid | 5290 | 13.84 | 13.28 | 13.71 | 18.39 | 24.00 | -5.61 |

PSD Results

| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/1MHz) | Antenna 2 Meas PSD (dBm/1MHz) | Antenna 3 Meas PSD (dBm/1MHz) | Total Corr'd PSD (dBm/1MHz) | PSD Limit (dBm/1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--------------------------------------|----------------------------|-----------------------|
| Mid | 5290 | -3.22 | -3.90 | -3.35 | 1.42 | 9.30 | -7.88 |

MID



3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 0

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Directional Gain for Power (dBi) | Directional Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/1MHz) |
|---------|--------------------|-----------------------------|---|---|-------------------------|----------------------------|
| Mid | 5290 | 20.20 | 3.20 | 7.70 | 24.00 | 9.30 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

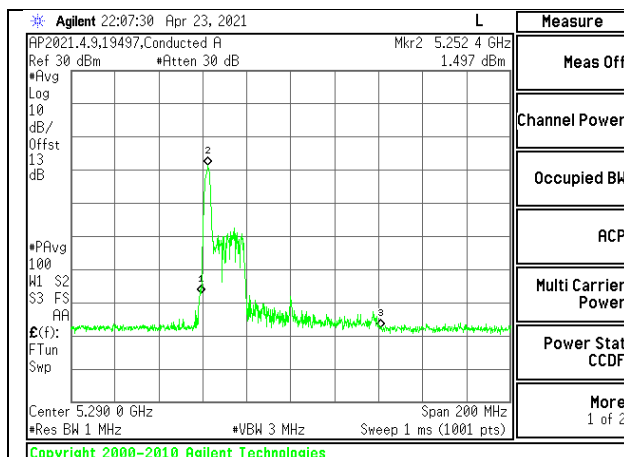
Output Power Results

| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Mid | 5290 | 5.59 | 4.91 | 5.33 | 10.06 | 24.00 | -13.94 |

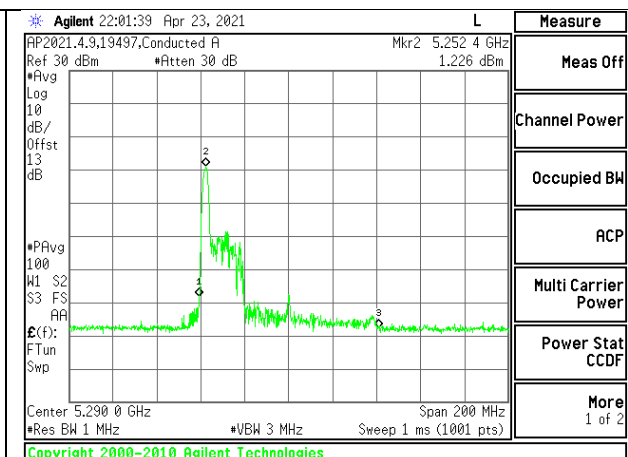
PSD Results

| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/1MHz) | Antenna 2 Meas PSD (dBm/1MHz) | Antenna 3 Meas PSD (dBm/1MHz) | Total Corr'd PSD (dBm/1MHz) | PSD Limit (dBm/1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--------------------------------------|----------------------------|-----------------------|
| Mid | 5290 | 1.50 | 1.23 | 1.26 | 6.23 | 9.30 | -3.07 |

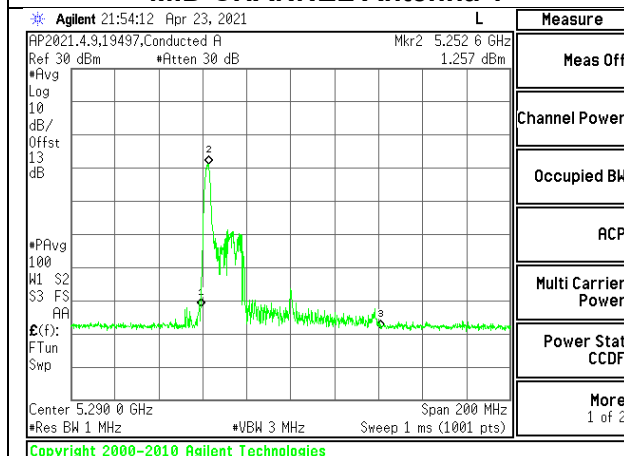
MID



MID CHANNEL Antenna 1



MID CHANNEL Antenna 2



MID CHANNEL Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 18

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Directional Gain for Power (dBi) | Directional Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/1MHz) |
|---------|--------------------|-----------------------------|---|---|-------------------------|----------------------------|
| Mid | 5290 | 39.40 | 3.20 | 7.70 | 24.00 | 9.30 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

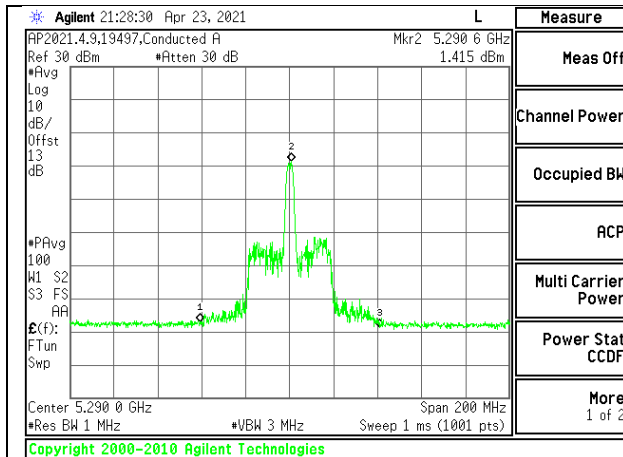
Output Power Results

| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Mid | 5290 | 5.45 | 4.96 | 5.34 | 10.03 | 24.00 | -13.97 |

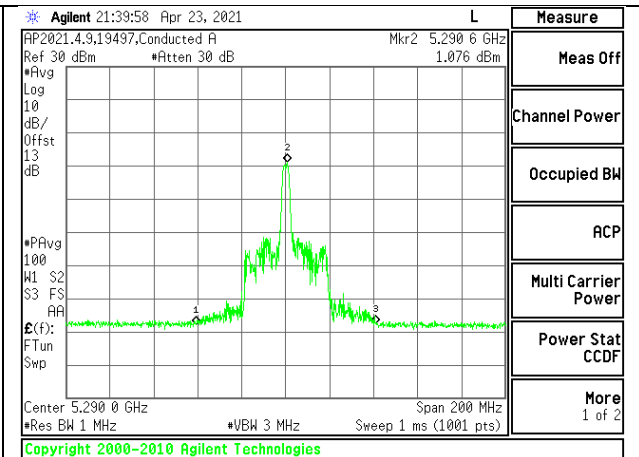
PSD Results

| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/1MHz) | Antenna 2 Meas PSD (dBm/1MHz) | Antenna 3 Meas PSD (dBm/1MHz) | Total Corr'd PSD (dBm/1MHz) | PSD Limit (dBm/1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--------------------------------------|----------------------------|-----------------------|
| Mid | 5290 | 1.42 | 1.08 | 1.30 | 6.17 | 9.30 | -3.13 |

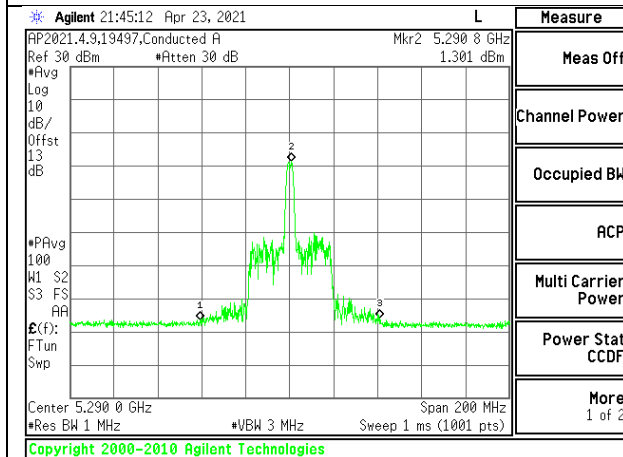
MID



MID CHANNEL Antenna 1



MID CHANNEL Antenna 2



MID CHANNEL Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 36

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Directional Gain for Power (dBi) | Directional Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/1MHz) |
|---------|--------------------|-----------------------------|---|---|-------------------------|----------------------------|
| Mid | 5290 | 20.00 | 3.20 | 7.70 | 24.00 | 9.30 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

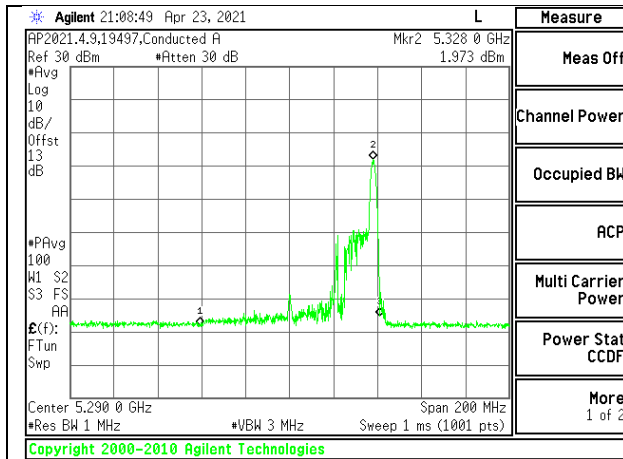
Output Power Results

| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Mid | 5290 | 5.35 | 4.97 | 5.19 | 9.94 | 24.00 | -14.06 |

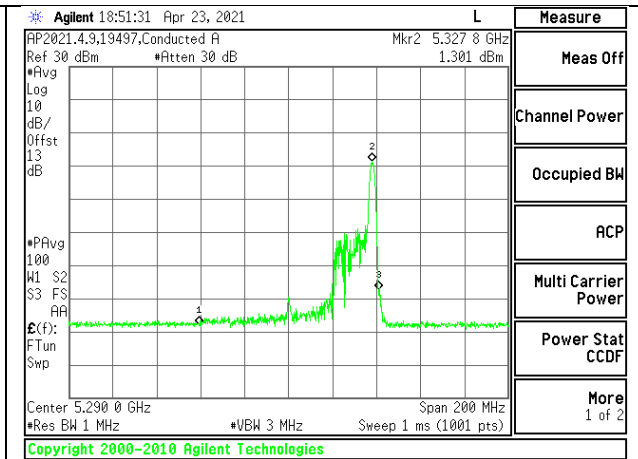
PSD Results

| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/1MHz) | Antenna 2 Meas PSD (dBm/1MHz) | Antenna 3 Meas PSD (dBm/1MHz) | Total Corr'd PSD (dBm/1MHz) | PSD Limit (dBm/1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--------------------------------------|----------------------------|-----------------------|
| Mid | 5290 | 1.97 | 1.30 | 1.65 | 6.55 | 9.30 | -2.75 |

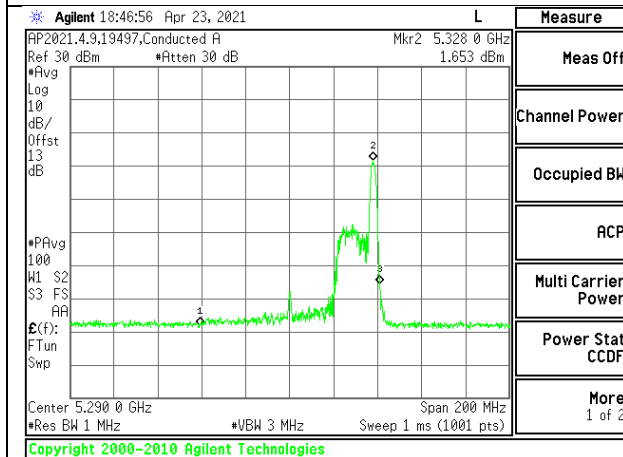
MID



MID CHANNEL Antenna 1



MID CHANNEL Antenna 2



MID CHANNEL Antenna 3

9.4.7. 802.11ax HE20 MODE 3TX IN THE 5.6GHz BAND (FCC)

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 242-Tones, RU Index 61

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Uncorrelated Gain for Power (dBi) | Correlated Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/1MHz) |
|---------|-----------------|--------------------|-----------------------------------|-------------------------------|-------------------|----------------------|
| Low | 5500 | 21.90 | 3.20 | 7.80 | 24.00 | 9.20 |
| Mid | 5580 | 21.95 | 3.20 | 7.80 | 24.00 | 9.20 |
| High | 5700 | 21.80 | 3.20 | 7.80 | 24.00 | 9.20 |
| *144 | 5720 | 22.00 | 3.20 | 7.80 | 24.00 | 9.20 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

Output Power Results

| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|-----------------|----------------------------|----------------------------|----------------------------|--------------------------|-------------------|-------------------|
| Low | 5500 | 15.27 | 14.73 | 15.34 | 19.89 | 24.00 | -4.11 |
| Mid | 5580 | 15.62 | 14.98 | 15.48 | 20.14 | 24.00 | -3.86 |
| High | 5700 | 15.02 | 14.62 | 14.96 | 19.64 | 24.00 | -4.36 |
| *144 | 5720 | 15.34 | 14.82 | 15.47 | 19.99 | 24.00 | -4.01 |

PSD Results

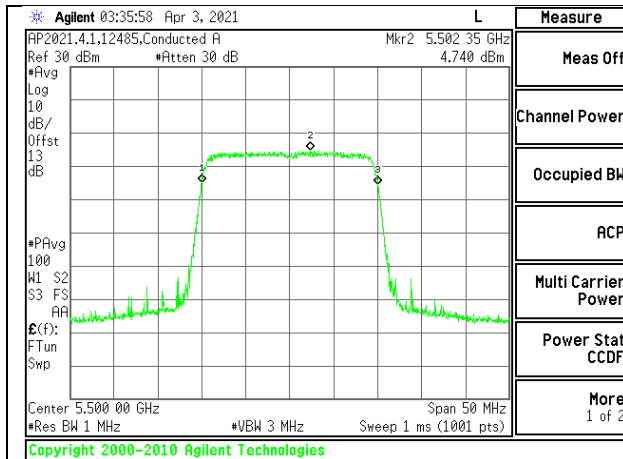
| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/1MHz) | Antenna 2 Meas PSD (dBm/1MHz) | Antenna 3 Meas PSD (dBm/1MHz) | Total Corr'd PSD (dBm/1MHz) | PSD Limit (dBm/1MHz) | PSD Margin (dB) |
|---------|-----------------|-------------------------------|-------------------------------|-------------------------------|-----------------------------|----------------------|-----------------|
| Low | 5500 | 4.74 | 3.03 | 3.24 | 8.64 | 9.20 | -0.56 |
| Mid | 5580 | 2.94 | 1.44 | 1.82 | 7.01 | 9.20 | -2.19 |
| High | 5700 | 3.00 | 1.03 | 1.56 | 6.84 | 9.20 | -2.36 |
| *144 | 5720 | 2.94 | 0.91 | 1.95 | 6.91 | 9.20 | -2.29 |

*As per the calculation in this formula, Measured total bandwidth(22MHz) / 2 + 5 MHz, the worst case bandwidth is 16.00 MHz.

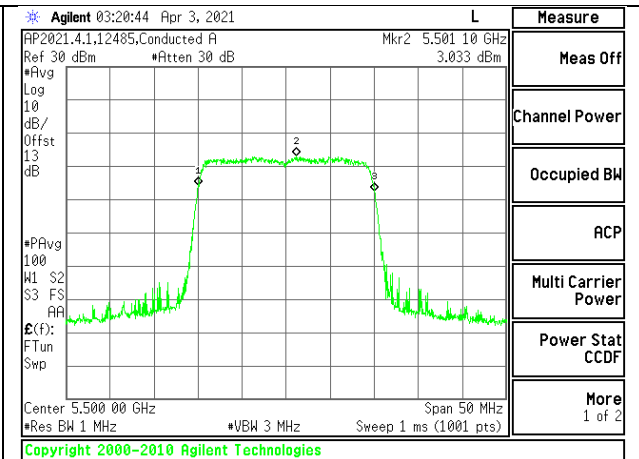
Based on the 16.00 MHz bandwidth for the portion that the straddle channel occupies in the UNII-2C band, the calculated power limit is $11+10*\log(16.00)=23.04$ dBm. The total signal power is 19.99 dBm which is less than the limit of 23.04 dBm.

Total power and Highest PSD across the entire channel meets the UNII-2C limits thus UNII-3 limits and therefore compliant

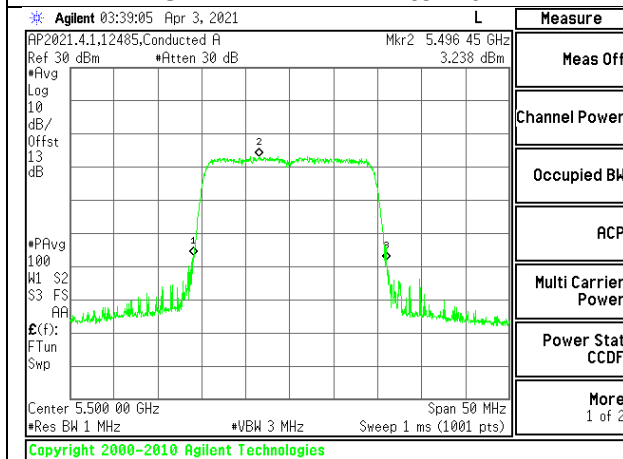
LOW



LOW CHANNEL Antenna 1

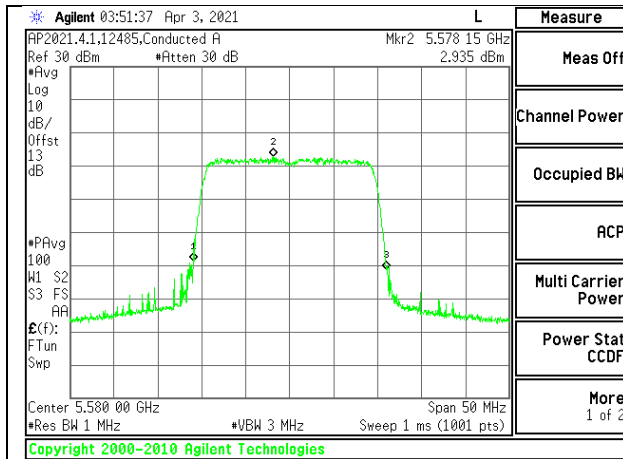


LOW CHANNEL Antenna 2

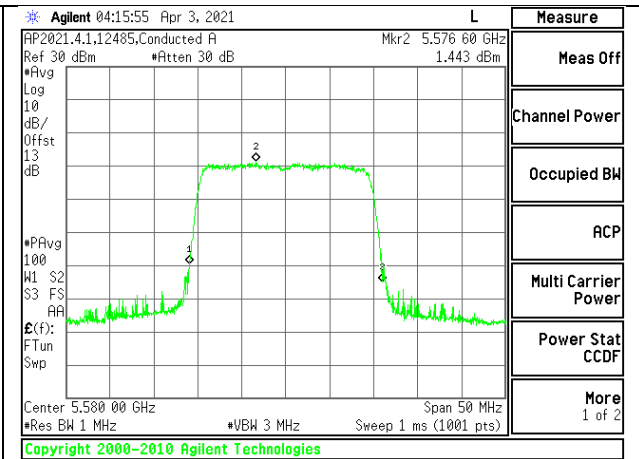


LOW CHANNEL Antenna 3

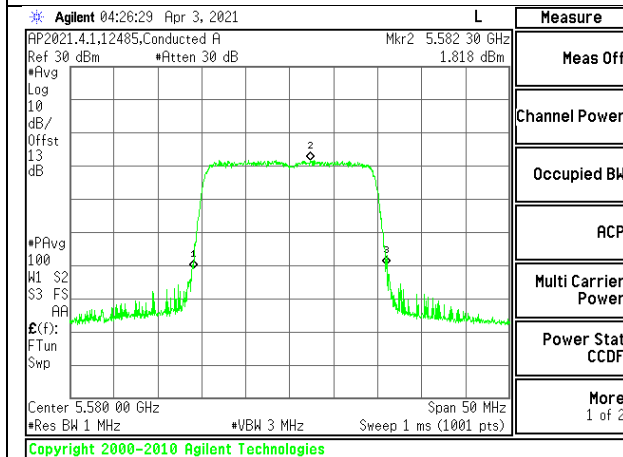
MID



MID CHANNEL Antenna 1

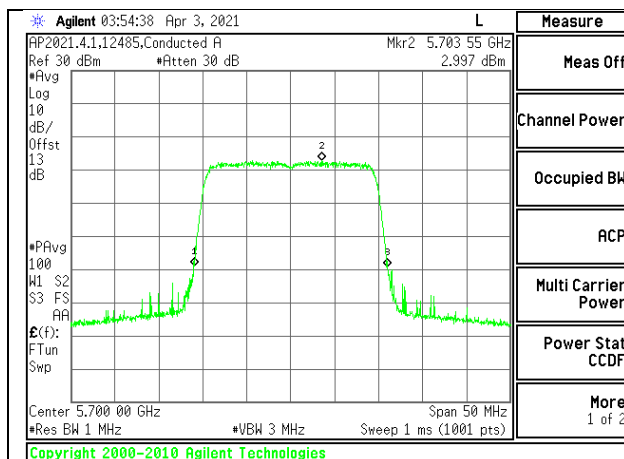


MID CHANNEL Antenna 2

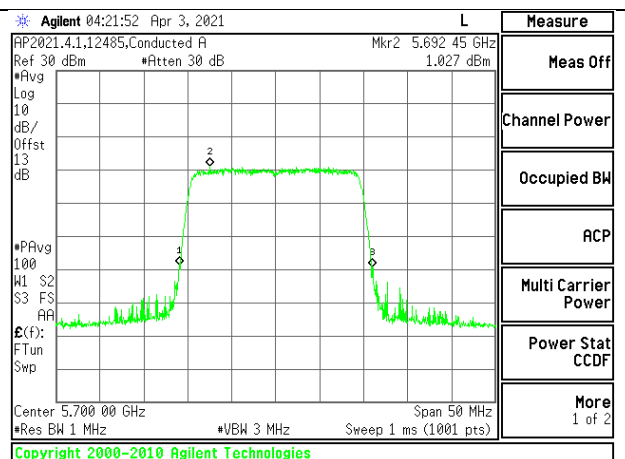


MID CHANNEL Antenna 3

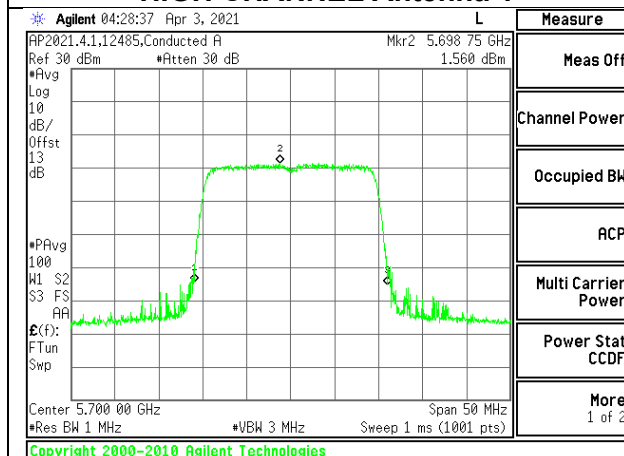
HIGH



HIGH CHANNEL Antenna 1

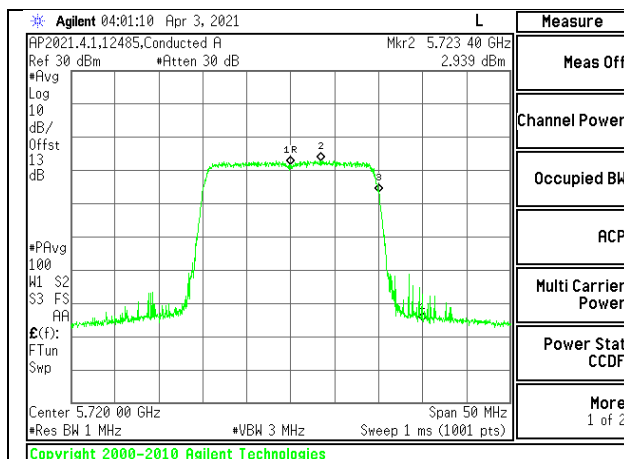


HIGH CHANNEL Antenna 2

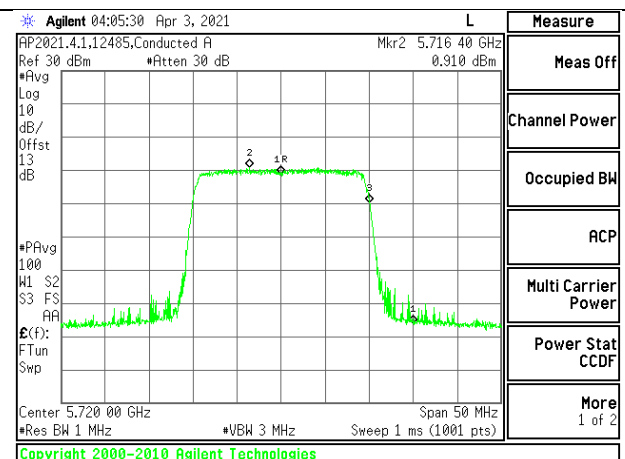


HIGH CHANNEL Antenna 3

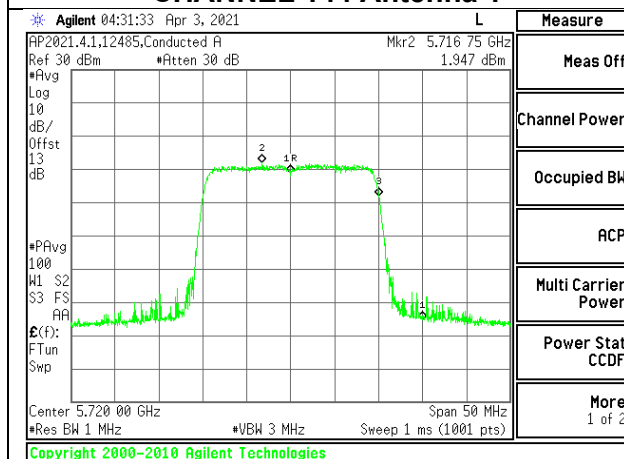
CHANNEL 144



CHANNEL 144 Antenna 1



CHANNEL 144 Antenna 2



CHANNEL 144 Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 0

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Directional Gain for Power (dBi) | Directional Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/ 1MHz) |
|---------|--------------------|-----------------------------|---|---|-------------------------|--------------------------------|
| Low | 5500 | 19.90 | 3.20 | 7.80 | 23.99 | 9.20 |
| Mid | 5580 | 19.95 | 3.20 | 7.80 | 24.00 | 9.20 |
| High | 5700 | 20.00 | 3.20 | 7.80 | 24.00 | 9.20 |
| 144 | 5720 | 19.95 | 3.20 | 7.80 | 24.00 | 9.20 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

Output Power Results

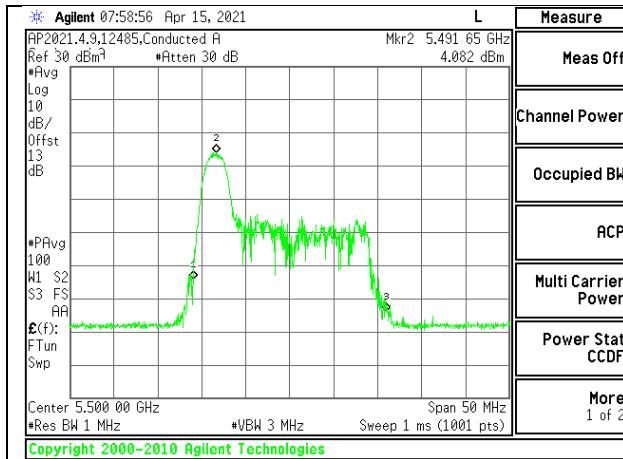
| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low | 5500 | 6.84 | 5.37 | 7.10 | 11.27 | 23.99 | -12.72 |
| Mid | 5580 | 6.76 | 5.70 | 6.90 | 11.26 | 24.00 | -12.74 |
| High | 5700 | 6.90 | 5.76 | 6.98 | 11.35 | 24.00 | -12.65 |
| 144 | 5720 | 6.97 | 5.45 | 7.03 | 11.31 | 24.00 | -12.69 |

PSD Results

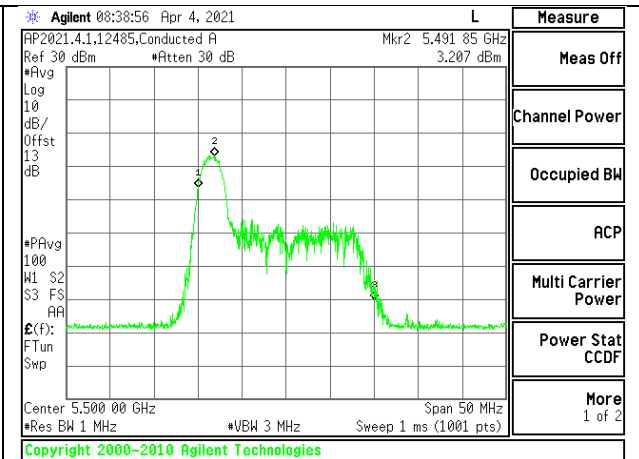
| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/ 1MHz) | Antenna 2 Meas PSD (dBm/ 1MHz) | Antenna 3 Meas PSD (dBm/ 1MHz) | Total Corr'd PSD (dBm/ 1MHz) | PSD Limit (dBm/ 1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--|--------------------------------|-----------------------|
| Low | 5500 | 4.08 | 3.21 | 3.86 | 8.63 | 9.20 | -0.57 |
| Mid | 5580 | 3.12 | 2.61 | 2.61 | 7.68 | 9.20 | -1.52 |
| High | 5700 | 3.51 | 0.81 | 1.99 | 7.15 | 9.20 | -2.05 |
| 144 | 5720 | 2.22 | 2.02 | 2.13 | 7.03 | 9.20 | -2.17 |

Total power and Highest PSD across the entire channel meets the UNII-2C limits thus UNII-3 limits and therefore compliant

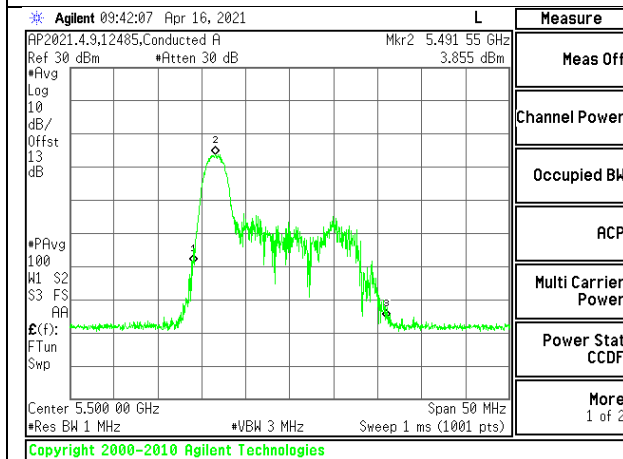
LOW



LOW CHANNEL Antenna 1

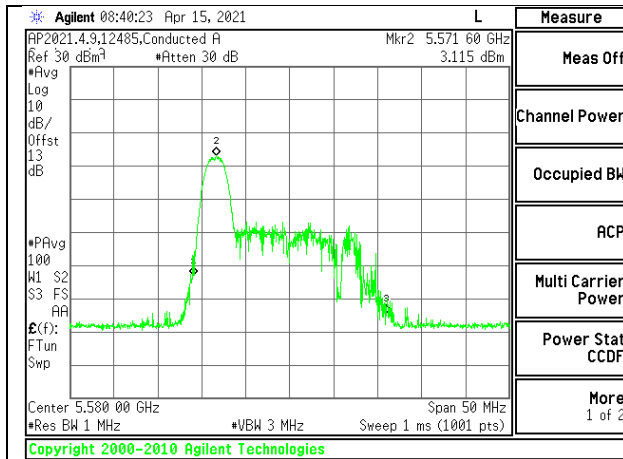


LOW CHANNEL Antenna 2

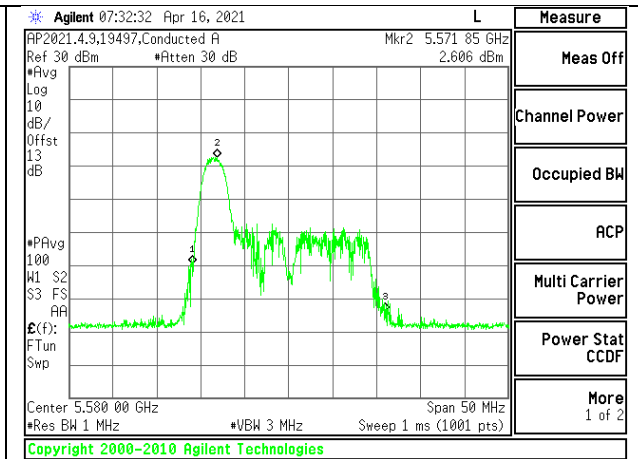


LOW CHANNEL Antenna 3

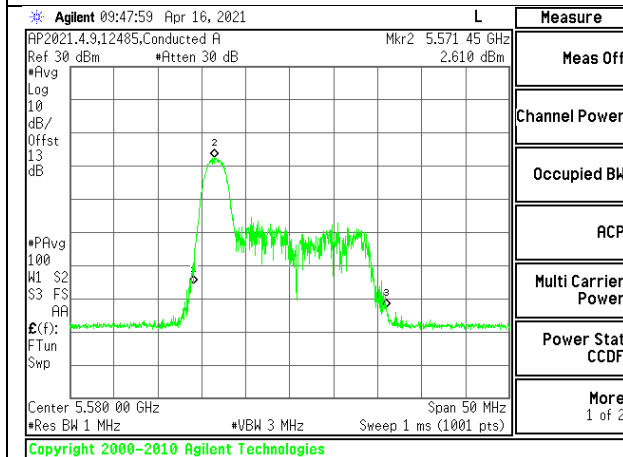
MID



MID CHANNEL Antenna 1

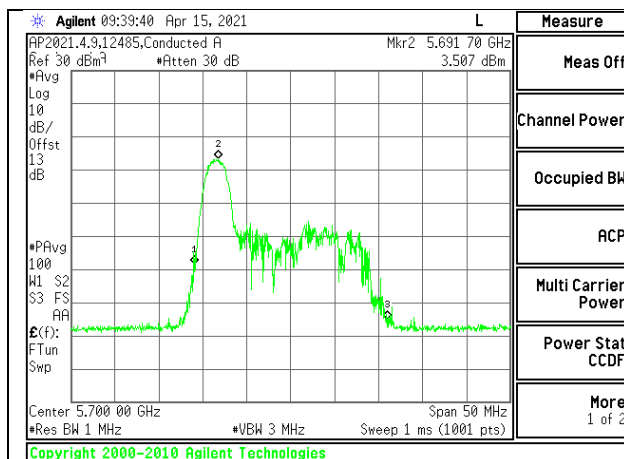


MID CHANNEL Antenna 2

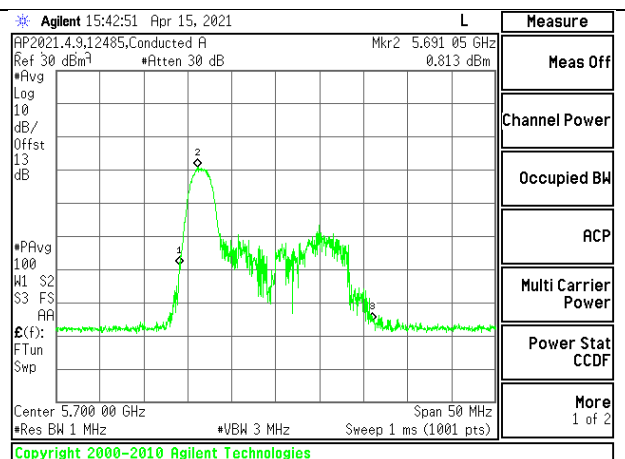


MID CHANNEL Antenna 3

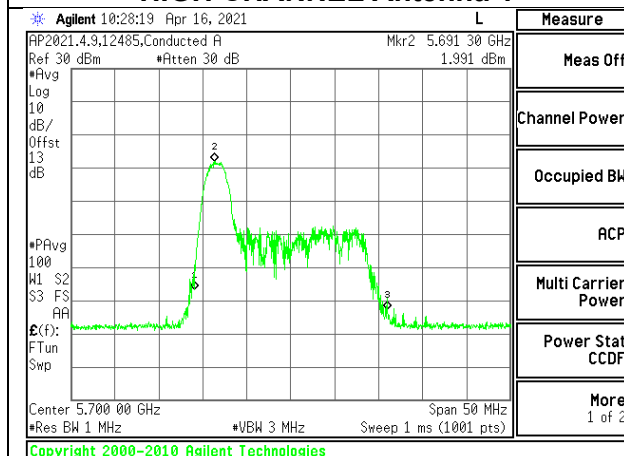
HIGH



HIGH CHANNEL Antenna 1

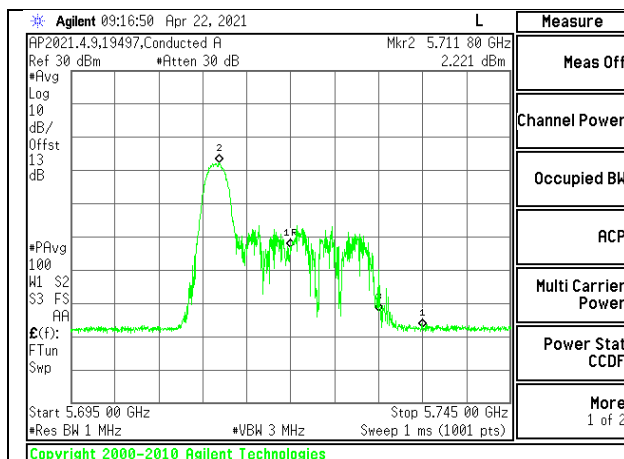


HIGH CHANNEL Antenna 2

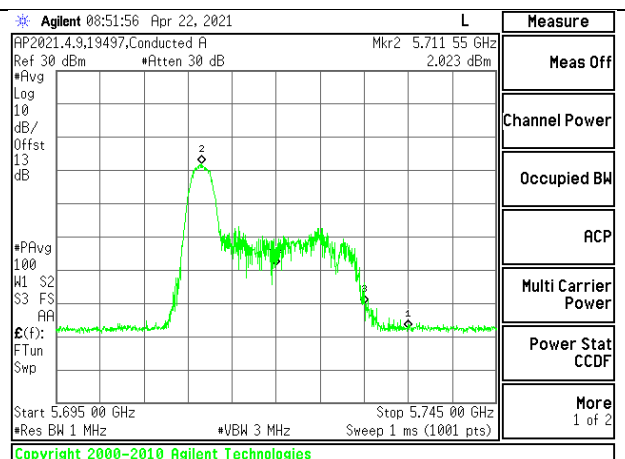


HIGH CHANNEL Antenna 3

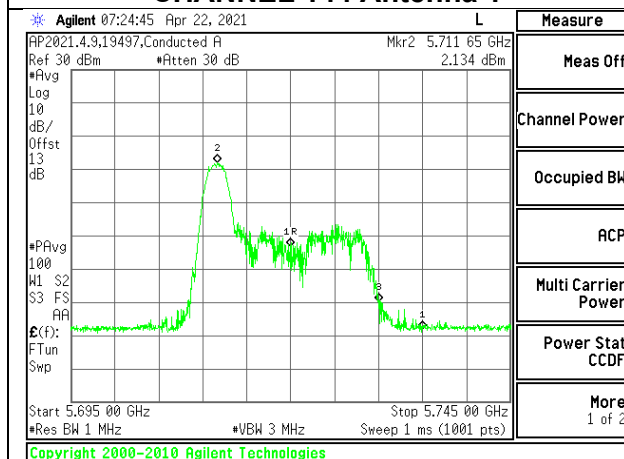
CHANNEL 144



CHANNEL 144 Antenna 1



CHANNEL 144 Antenna 2



CHANNEL 144 Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 4

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Directional Gain for Power (dBi) | Directional Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/ 1MHz) |
|---------|--------------------|-----------------------------|---|---|-------------------------|--------------------------------|
| Low | 5500 | 18.35 | 3.20 | 7.80 | 23.64 | 9.20 |
| Mid | 5580 | 18.30 | 3.20 | 7.80 | 23.62 | 9.20 |
| High | 5700 | 18.35 | 3.20 | 7.80 | 23.64 | 9.20 |
| 144 | 5720 | 18.45 | 3.20 | 7.80 | 23.66 | 9.20 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

Output Power Results

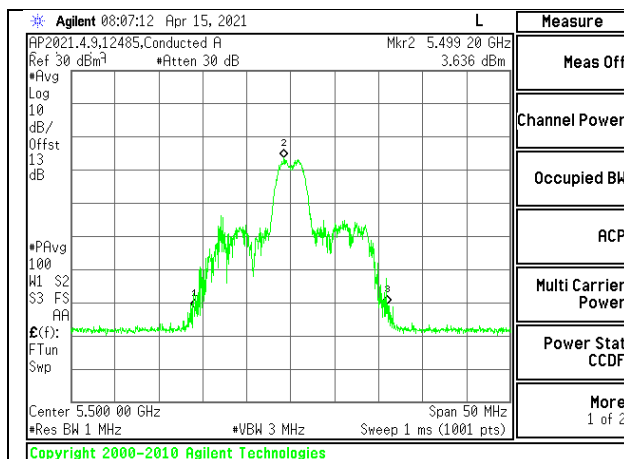
| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low | 5500 | 7.50 | 6.47 | 7.33 | 11.89 | 23.64 | -11.74 |
| Mid | 5580 | 7.43 | 6.34 | 7.36 | 11.84 | 23.62 | -11.78 |
| High | 5700 | 7.50 | 6.44 | 7.44 | 11.92 | 23.64 | -11.71 |
| 144 | 5720 | 7.47 | 6.59 | 7.46 | 11.96 | 23.66 | -11.70 |

PSD Results

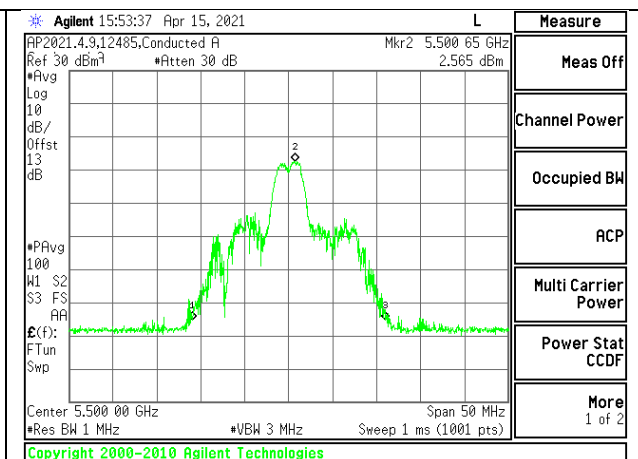
| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/ 1MHz) | Antenna 2 Meas PSD (dBm/ 1MHz) | Antenna 3 Meas PSD (dBm/ 1MHz) | Total Corr'd PSD (dBm/ 1MHz) | PSD Limit (dBm/ 1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--|--------------------------------|-----------------------|
| Low | 5500 | 3.64 | 2.57 | 3.01 | 7.99 | 9.20 | -1.21 |
| Mid | 5580 | 3.00 | 2.23 | 2.05 | 7.35 | 9.20 | -1.85 |
| High | 5700 | 2.94 | 0.81 | 1.70 | 6.80 | 9.20 | -2.40 |
| 144 | 5720 | 1.89 | 1.64 | 1.90 | 6.71 | 9.20 | -2.49 |

Total power and Highest PSD across the entire channel meets the UNII-2C limits thus UNII-3 limits and therefore compliant

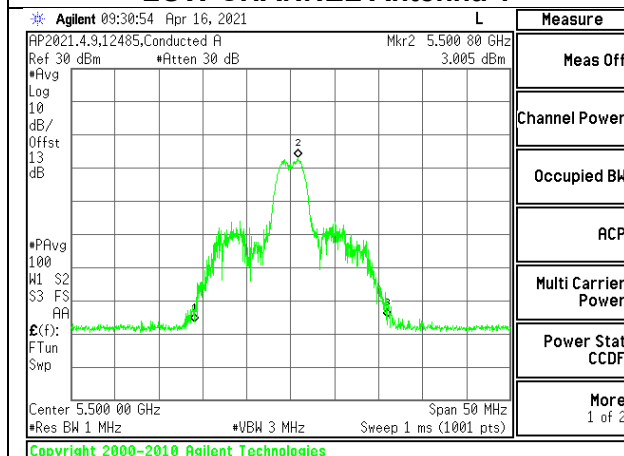
LOW



LOW CHANNEL Antenna 1

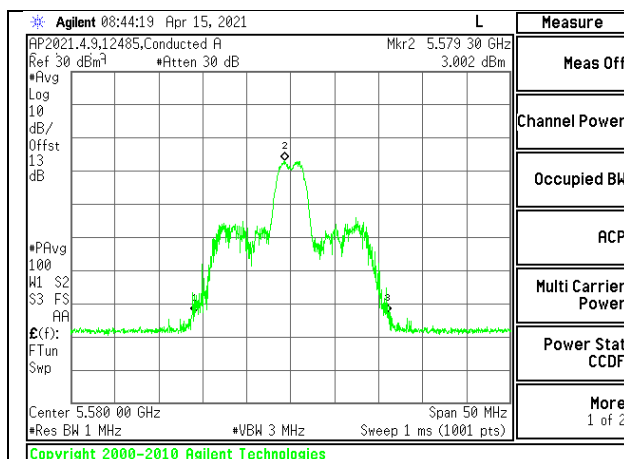


LOW CHANNEL Antenna 2

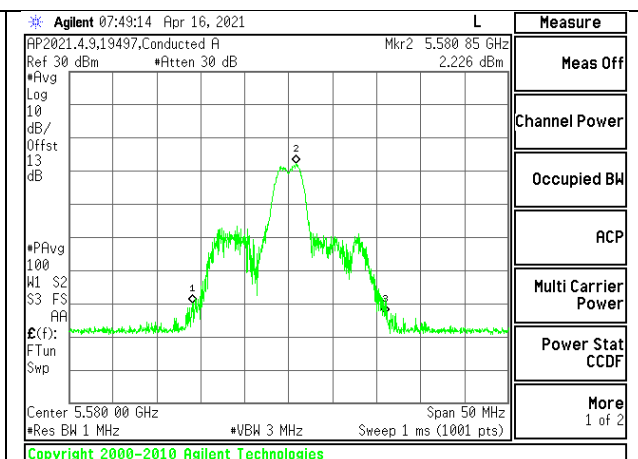


LOW CHANNEL Antenna 3

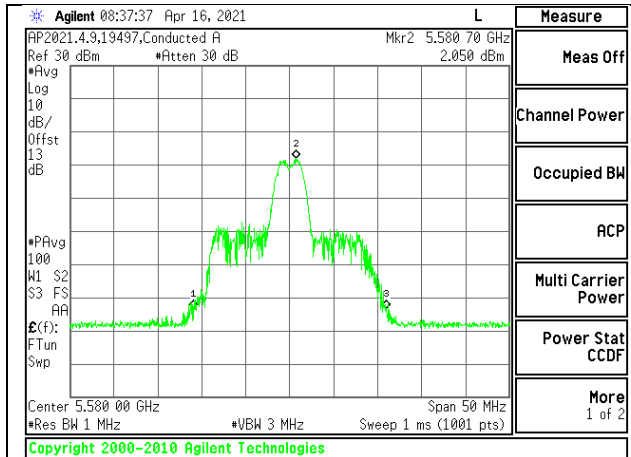
MID



MID CHANNEL Antenna 1

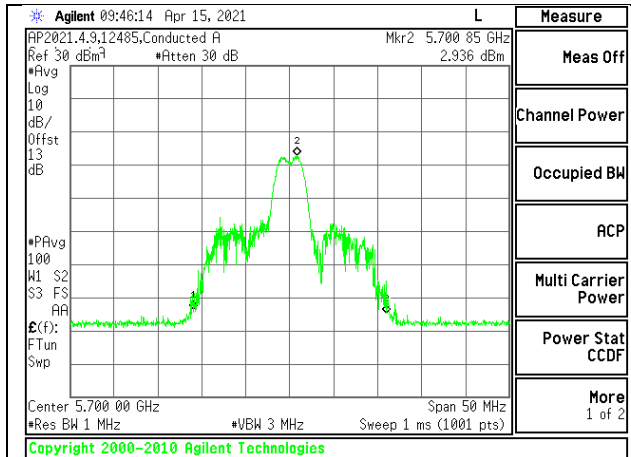


MID CHANNEL Antenna 2

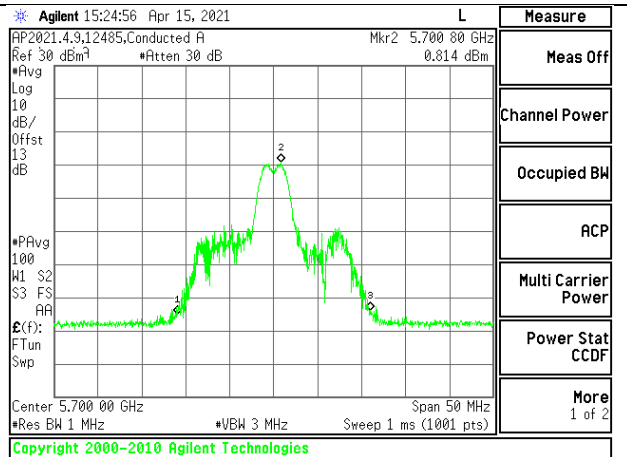


MID CHANNEL Antenna 3

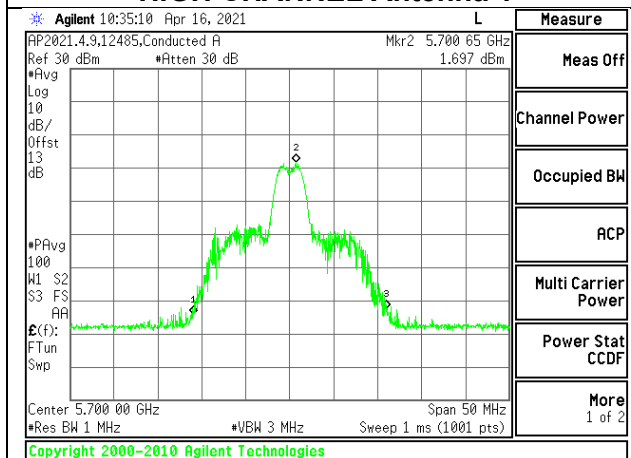
HIGH



HIGH CHANNEL Antenna 1

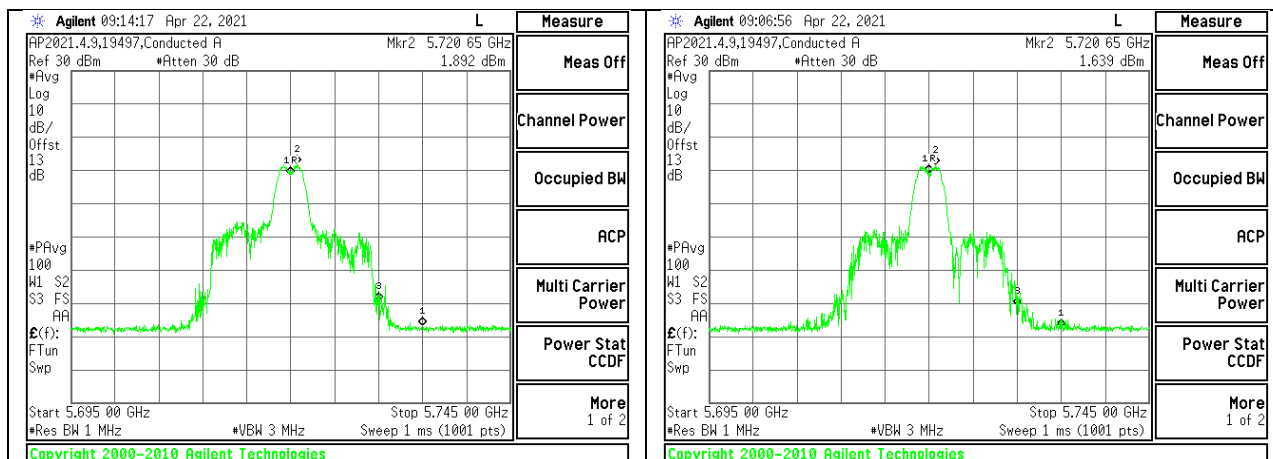


HIGH CHANNEL Antenna 2



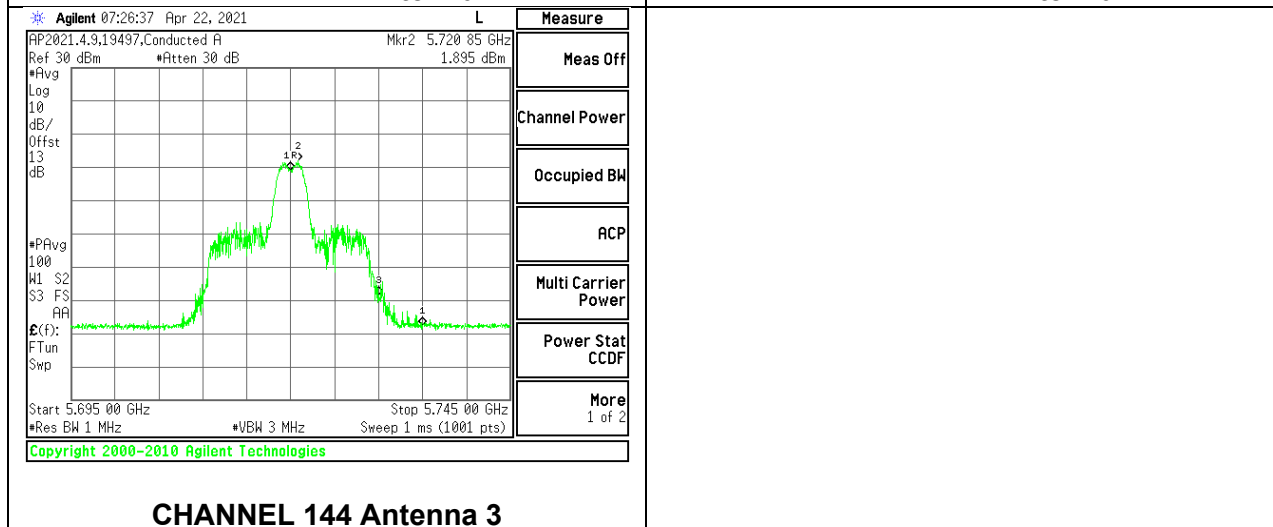
HIGH CHANNEL Antenna 3

CHANNEL 144



CHANNEL 144 Antenna 1

CHANNEL 144 Antenna 2



CHANNEL 144 Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 8

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Directional Gain for Power (dBi) | Directional Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/1MHz) |
|---------|-----------------|--------------------|----------------------------------|--------------------------------|-------------------|----------------------|
| Low | 5500 | 20.00 | 3.20 | 7.80 | 24.00 | 9.20 |
| Mid | 5580 | 20.15 | 3.20 | 7.80 | 24.00 | 9.20 |
| High | 5700 | 20.00 | 3.20 | 7.80 | 24.00 | 9.20 |
| *144 | 5720 | 20.00 | 3.20 | 7.80 | 24.00 | 9.20 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

Output Power Results

| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|-----------------|----------------------------|----------------------------|----------------------------|--------------------------|-------------------|-------------------|
| Low | 5500 | 7.14 | 5.85 | 7.02 | 11.48 | 24.00 | -12.52 |
| Mid | 5580 | 7.12 | 5.86 | 6.95 | 11.45 | 24.00 | -12.55 |
| High | 5700 | 7.06 | 5.98 | 7.21 | 11.55 | 24.00 | -12.45 |
| *144 | 5720 | 7.05 | 5.88 | 7.01 | 11.45 | 24.00 | -12.55 |

PSD Results

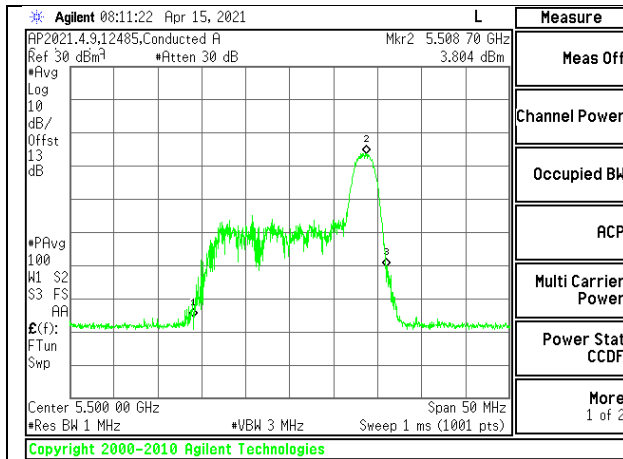
| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/1MHz) | Antenna 2 Meas PSD (dBm/1MHz) | Antenna 3 Meas PSD (dBm/1MHz) | Total Corr'd PSD (dBm/1MHz) | PSD Limit (dBm/1MHz) | PSD Margin (dB) |
|---------|-----------------|-------------------------------|-------------------------------|-------------------------------|-----------------------------|----------------------|-----------------|
| Low | 5500 | 3.80 | 3.25 | 2.97 | 8.26 | 9.20 | -0.94 |
| Mid | 5580 | 3.19 | 2.03 | 2.08 | 7.37 | 9.20 | -1.83 |
| High | 5700 | 2.18 | 0.79 | 2.03 | 6.61 | 9.20 | -2.59 |
| *144 | 5720 | 2.53 | 1.82 | 2.20 | 7.10 | 9.20 | -2.10 |

*As per the calculation in this formula, Measured total bandwidth(20) / 2 - 3 MHz, the worst case bandwidth is 7.00 MHz.

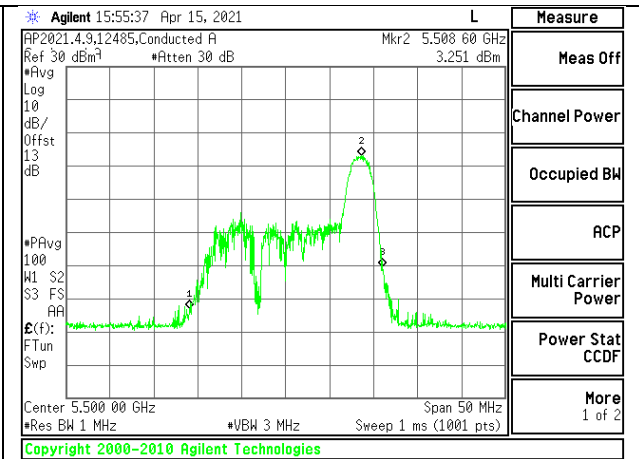
Based on the 7.00 MHz bandwidth for the portion that the straddle channel occupies in the UNII-2C band, the calculated worst case power limit is $11+10*\log(7.00)= 19.45$ dBm. The total signal power is 11.45 dBm which is less than the limit of 19.45 dBm.

Total power and Highest PSD across the entire channel meets the UNII-2C limits thus UNII-3 limits and therefore compliant

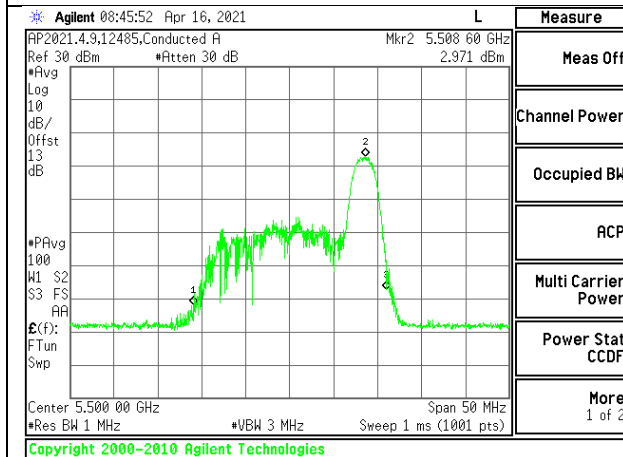
LOW



LOW CHANNEL Antenna 1

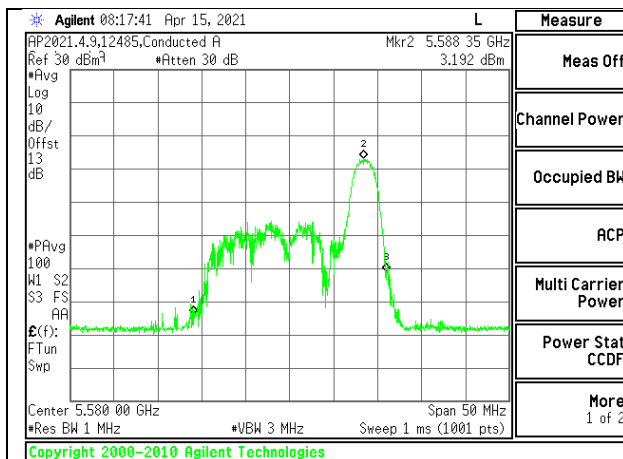


LOW CHANNEL Antenna 2

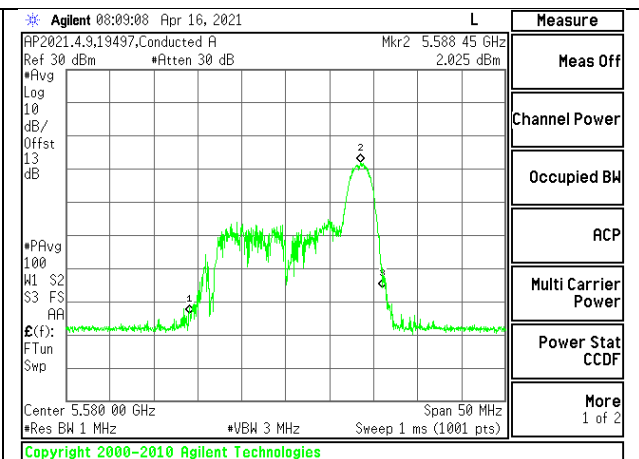


LOW CHANNEL Antenna 3

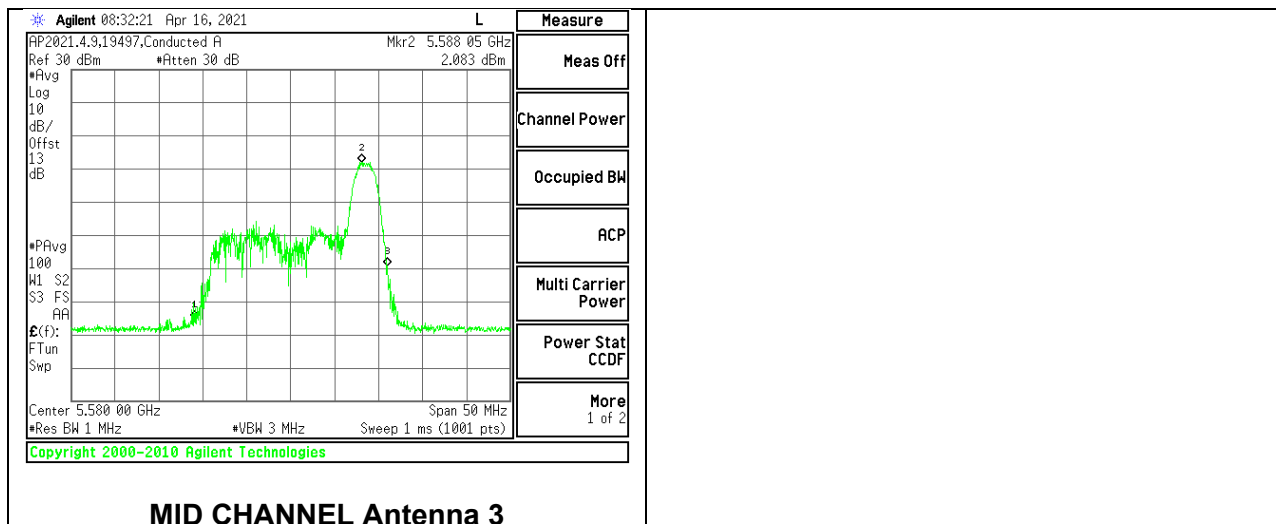
MID



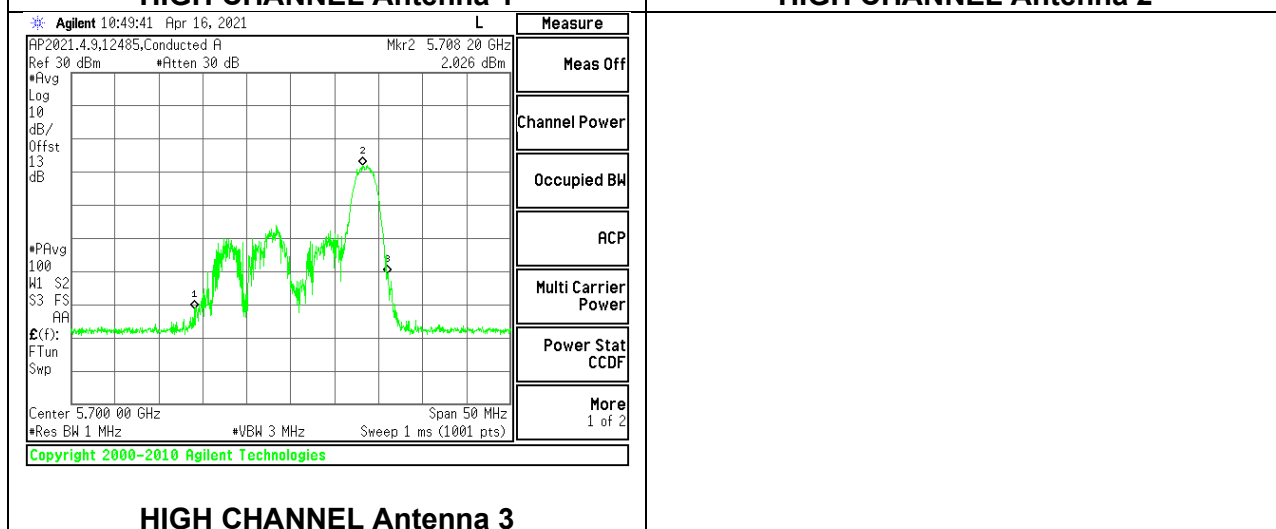
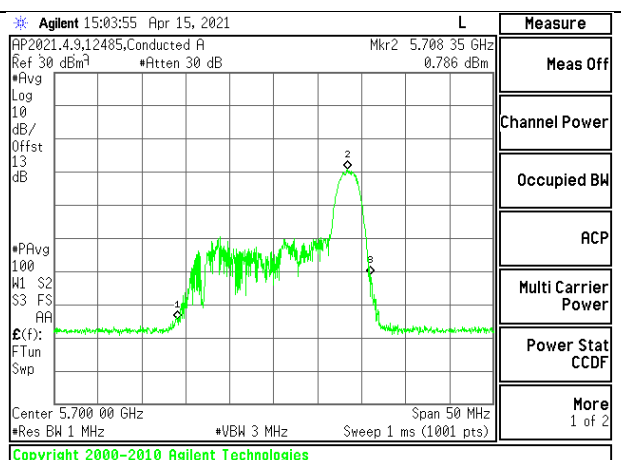
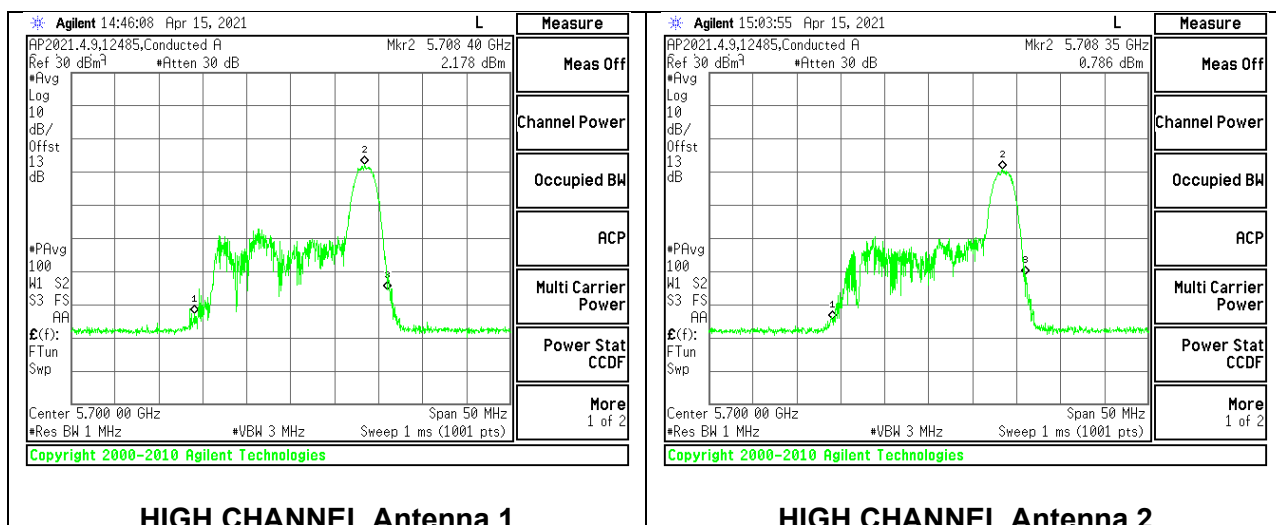
MID CHANNEL Antenna 1



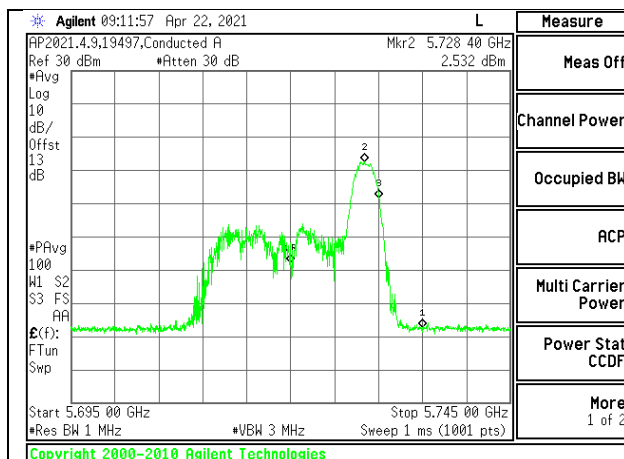
MID CHANNEL Antenna 2



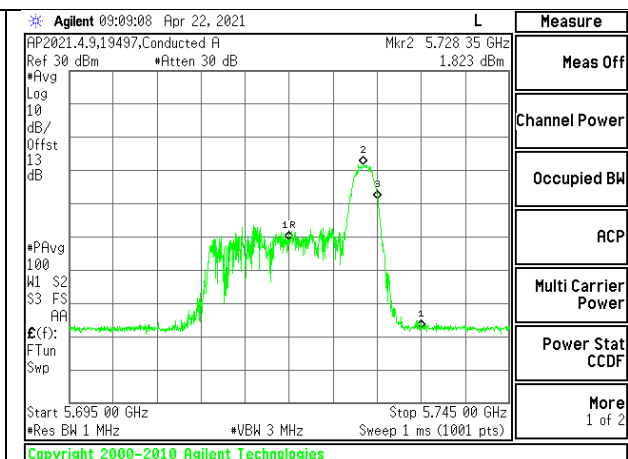
HIGH



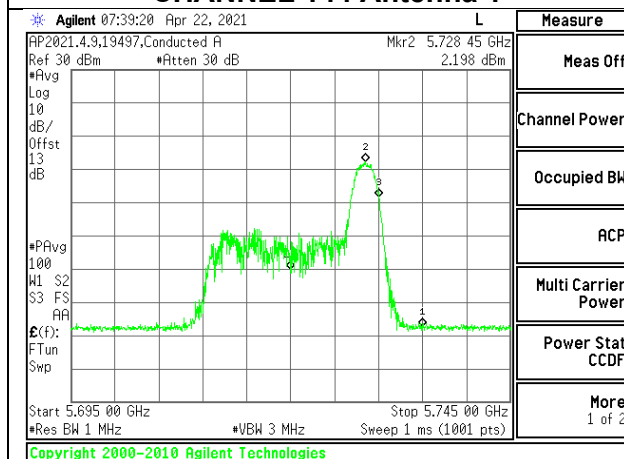
CHANNEL 144



CHANNEL 144 Antenna 1



CHANNEL 144 Antenna 2



CHANNEL 144 Antenna 3

9.4.8. 802.11ax HE40 MODE 3TX IN THE 5.6GHz BAND (FCC)

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 484-Tones, RU Index 65

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Uncorrelated Gain for Power (dBi) | Correlated Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/ 1MHz) |
|---------|--------------------|-----------------------------|--|--|-------------------------|--------------------------------|
| Low | 5510 | 40.60 | 3.20 | 7.80 | 24.00 | 9.20 |
| Mid | 5550 | 40.70 | 3.20 | 7.80 | 24.00 | 9.20 |
| High | 5670 | 40.70 | 3.20 | 7.80 | 24.00 | 9.20 |
| *142 | 5710 | 40.60 | 3.20 | 7.80 | 24.00 | 9.20 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

Output Power Results

| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low | 5510 | 12.49 | 12.22 | 12.55 | 17.19 | 24.00 | -6.81 |
| Mid | 5550 | 13.00 | 12.38 | 12.74 | 17.49 | 24.00 | -6.51 |
| High | 5670 | 12.88 | 12.40 | 12.71 | 17.44 | 24.00 | -6.56 |
| *142 | 5710 | 12.47 | 12.37 | 12.59 | 17.25 | 24.00 | -6.75 |

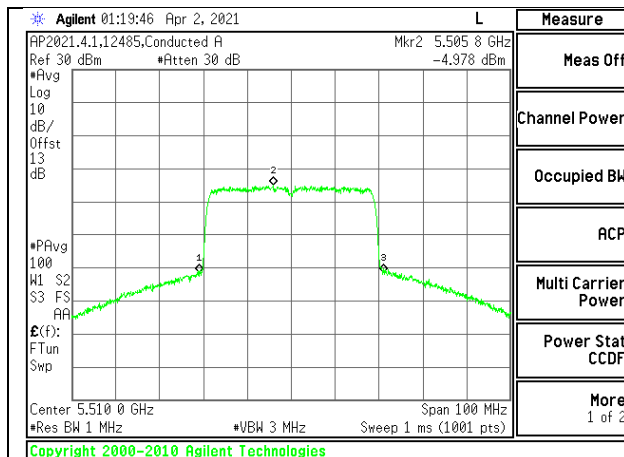
PSD Results

| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/ 1MHz) | Antenna 2 Meas PSD (dBm/ 1MHz) | Antenna 3 Meas PSD (dBm/ 1MHz) | Total Corr'd PSD (dBm/ 1MHz) | PSD Limit (dBm/ 1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--|--------------------------------|-----------------------|
| Low | 5510 | -4.98 | -2.20 | -1.94 | 2.06 | 9.20 | -7.14 |
| Mid | 5550 | -5.38 | -2.92 | -2.34 | 1.54 | 9.20 | -7.66 |
| High | 5670 | -4.34 | -4.41 | -3.78 | 0.74 | 9.20 | -8.46 |
| *142 | 5710 | -2.87 | -3.61 | -3.38 | 1.63 | 9.20 | -7.57 |

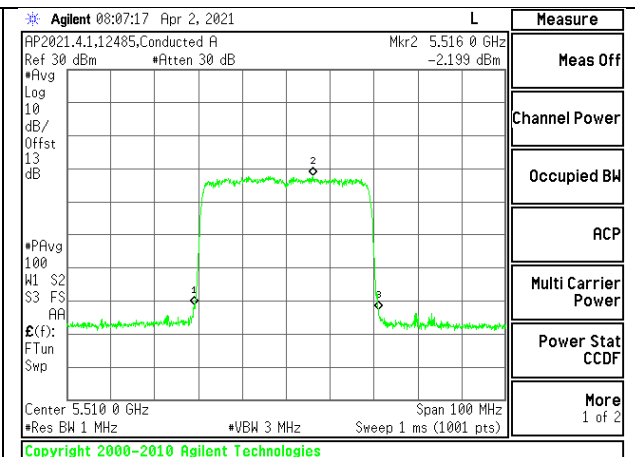
*The 26dB signal bandwidth within the 5470-5725 MHz band clearly exceed 20MHz and so the limit for the power within the 5470-5725MHz band is 24.00dBm.

Total power and Highest PSD across the entire channel meets the UNII-2C limits thus UNII-3 limits and therefore compliant

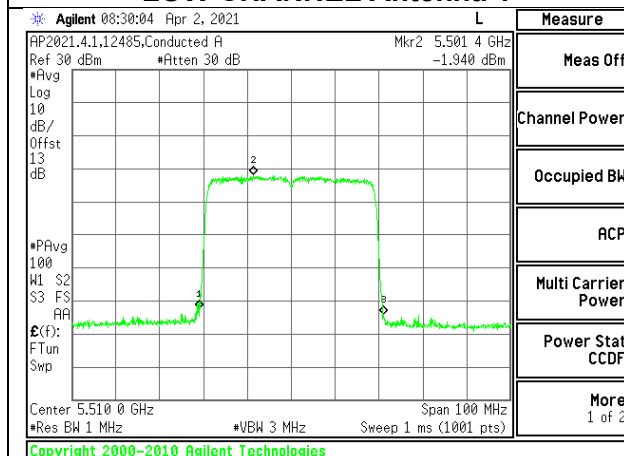
LOW



LOW CHANNEL Antenna 1

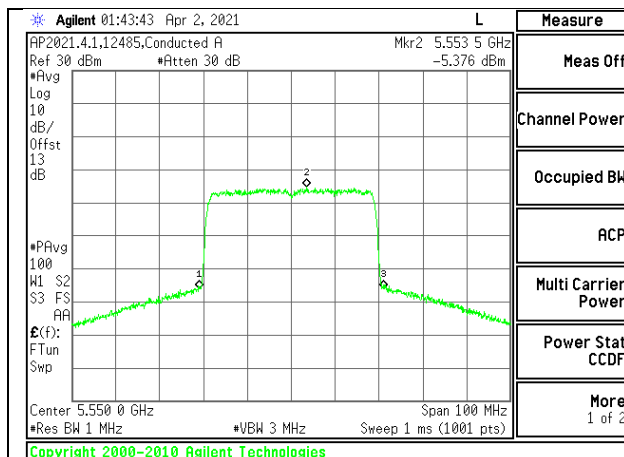


LOW CHANNEL Antenna 2

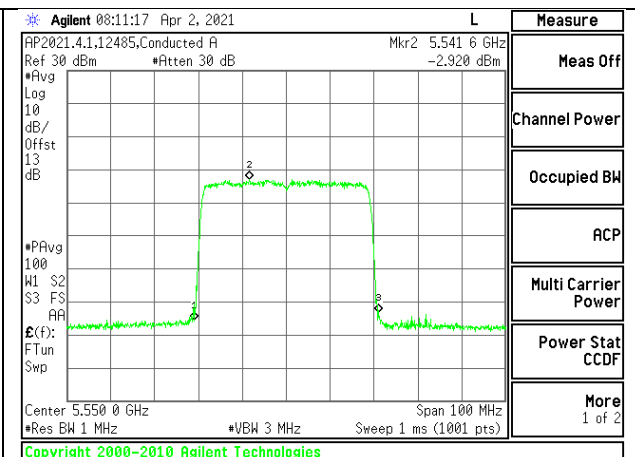


LOW CHANNEL Antenna 3

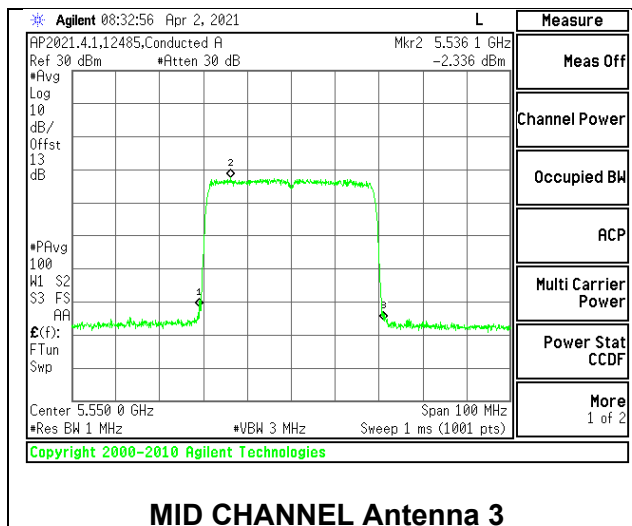
MID



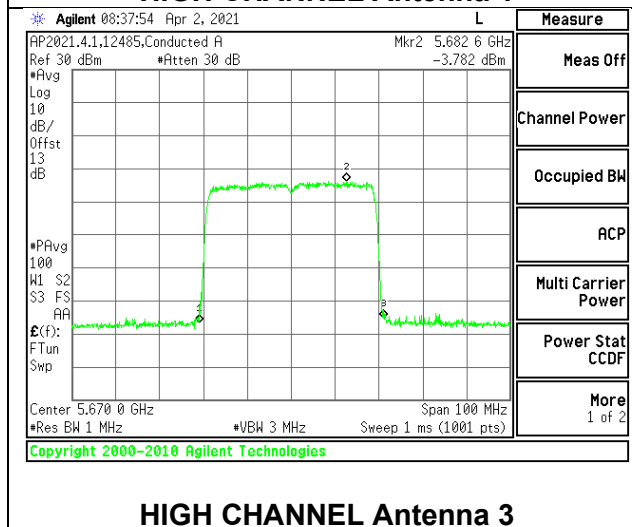
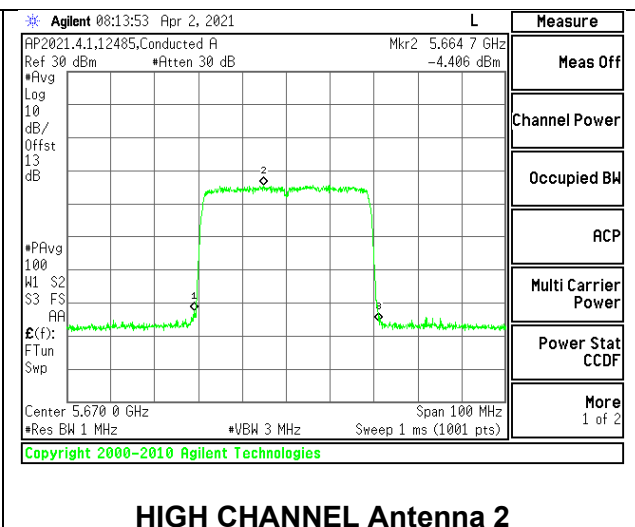
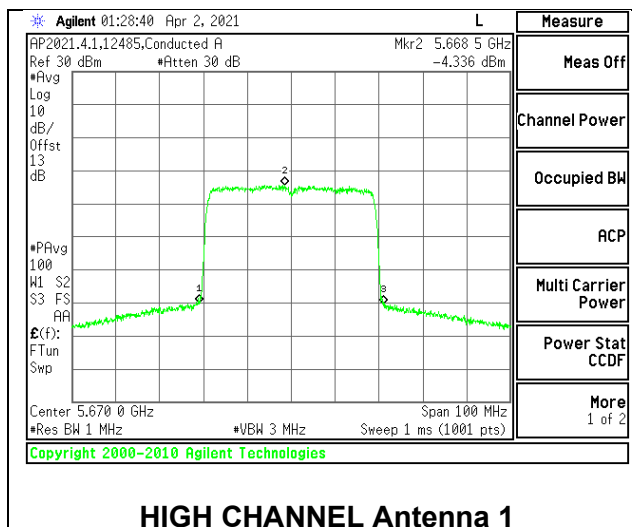
MID CHANNEL Antenna 1



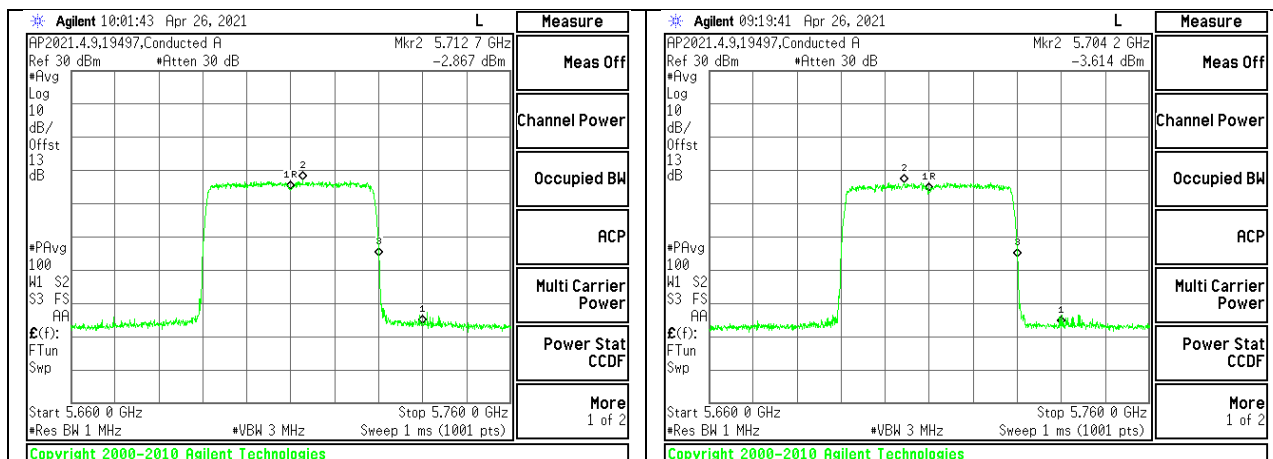
MID CHANNEL Antenna 2



HIGH

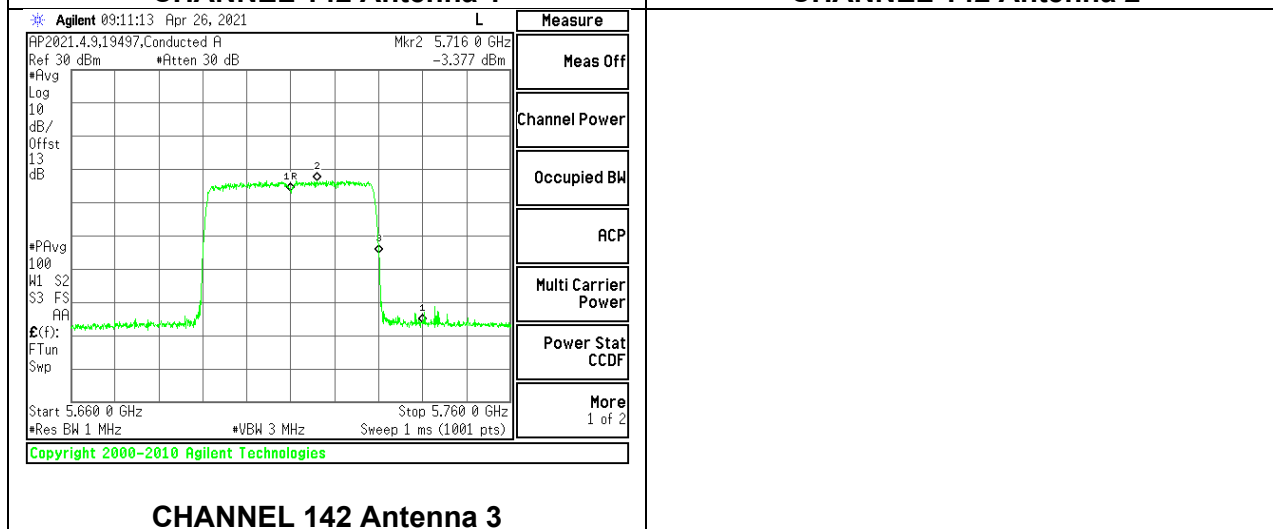


CHANNEL 142



CHANNEL 142 Antenna 1

CHANNEL 142 Antenna 2



3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 0

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Directional Gain for Power (dBi) | Directional Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/ 1MHz) |
|---------|--------------------|-----------------------------|---|---|-------------------------|--------------------------------|
| Low | 5510 | 19.20 | 3.20 | 7.80 | 23.83 | 9.20 |
| Mid | 5550 | 19.20 | 3.20 | 7.80 | 23.83 | 9.20 |
| High | 5670 | 19.30 | 3.20 | 7.80 | 23.86 | 9.20 |
| 142 | 5710 | 19.30 | 3.20 | 7.80 | 23.86 | 9.20 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

Output Power Results

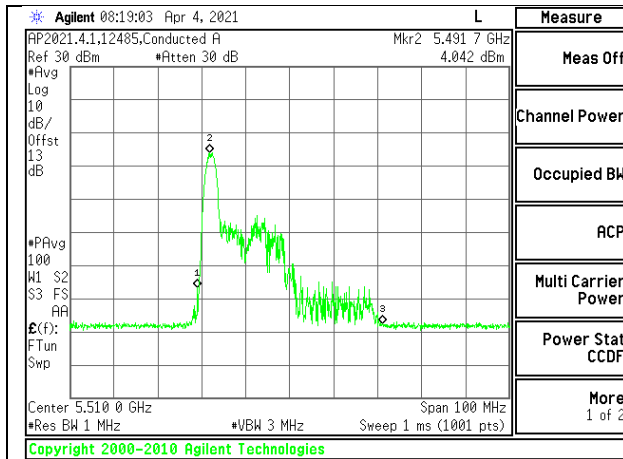
| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low | 5510 | 6.69 | 6.29 | 6.55 | 11.28 | 23.83 | -12.55 |
| Mid | 5550 | 6.16 | 5.49 | 5.88 | 10.62 | 23.83 | -13.21 |
| High | 5670 | 6.26 | 5.92 | 6.10 | 10.87 | 23.86 | -12.99 |
| 142 | 5710 | 5.18 | 4.82 | 5.06 | 9.79 | 23.86 | -14.06 |

PSD Results

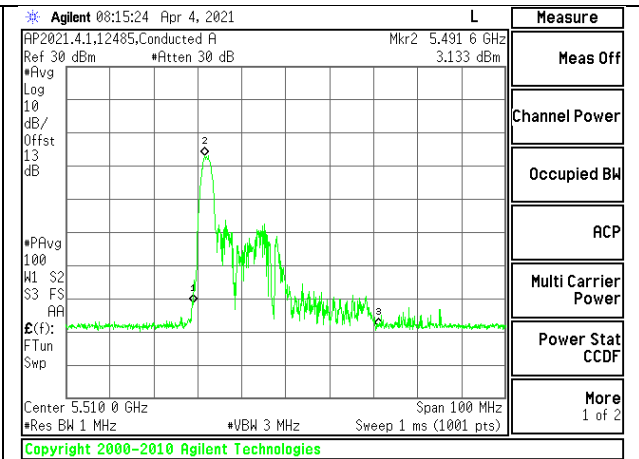
| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/ 1MHz) | Antenna 2 Meas PSD (dBm/ 1MHz) | Antenna 3 Meas PSD (dBm/ 1MHz) | Total Corr'd PSD (dBm/ 1MHz) | PSD Limit (dBm/ 1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--|--------------------------------|-----------------------|
| Low | 5510 | 4.04 | 3.13 | 3.57 | 8.50 | 9.20 | -0.70 |
| Mid | 5550 | 3.06 | 2.48 | 3.25 | 7.84 | 9.20 | -1.36 |
| High | 5670 | 2.85 | 0.63 | 1.41 | 6.63 | 9.20 | -2.57 |
| 142 | 5710 | 2.61 | 2.23 | 1.55 | 7.06 | 9.20 | -2.14 |

Total power and Highest PSD across the entire channel meets the UNII-2C limits thus UNII-3 limits and therefore compliant

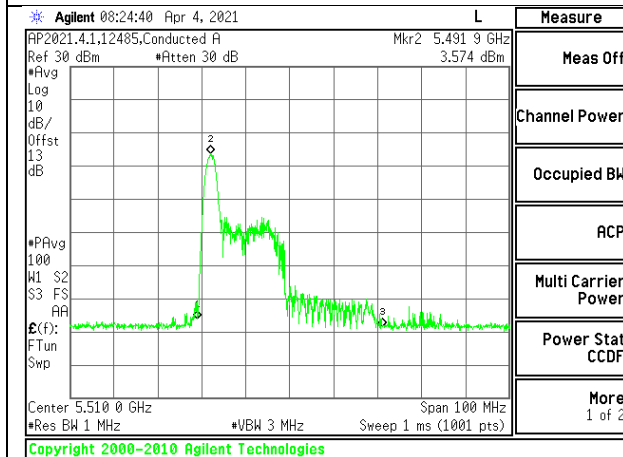
LOW



LOW CHANNEL Antenna 1

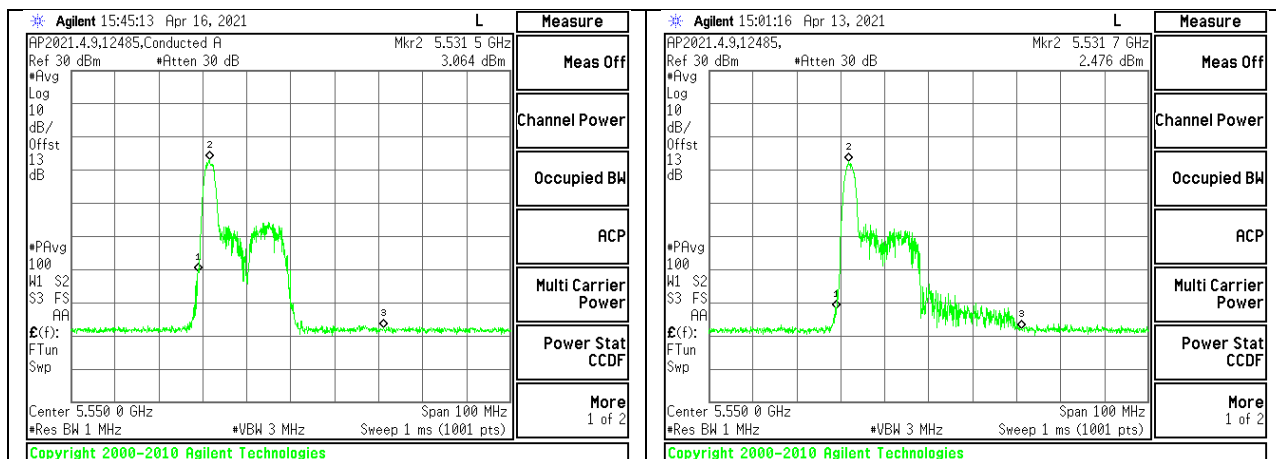


LOW CHANNEL Antenna 2



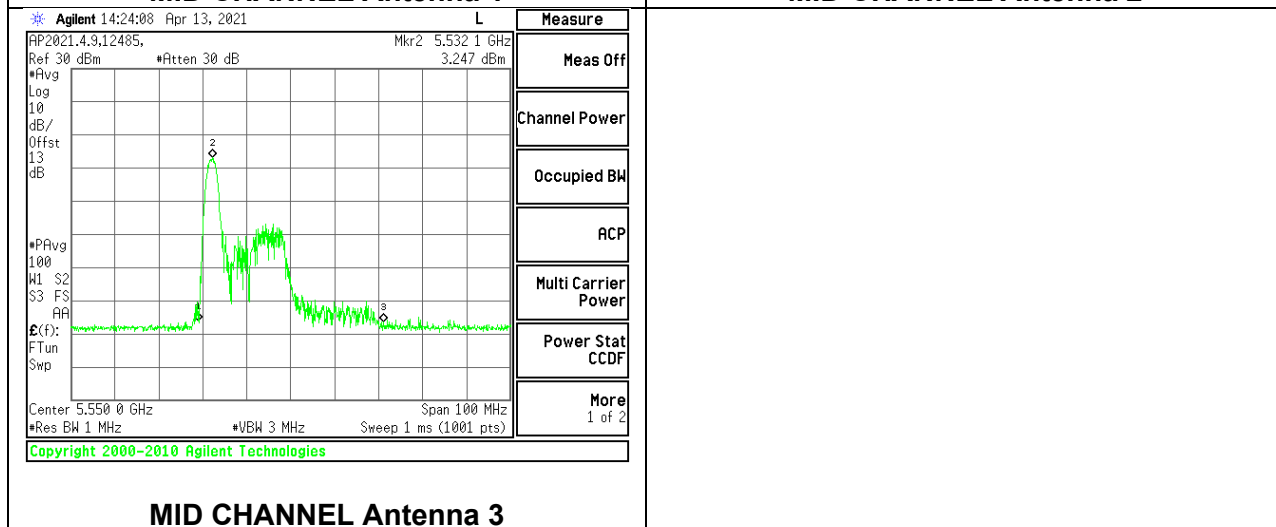
LOW CHANNEL Antenna 3

MID



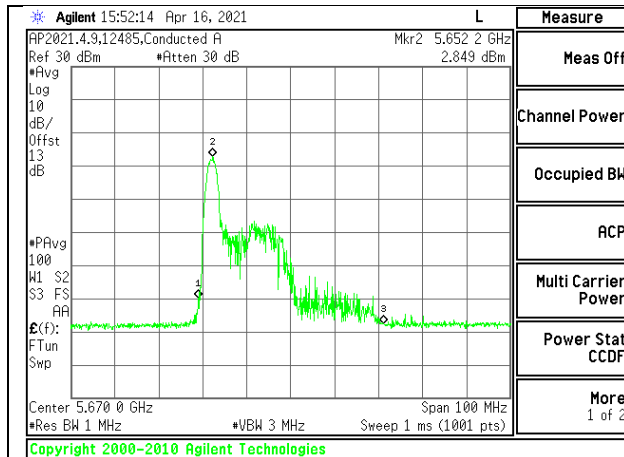
MID CHANNEL Antenna 1

MID CHANNEL Antenna 2

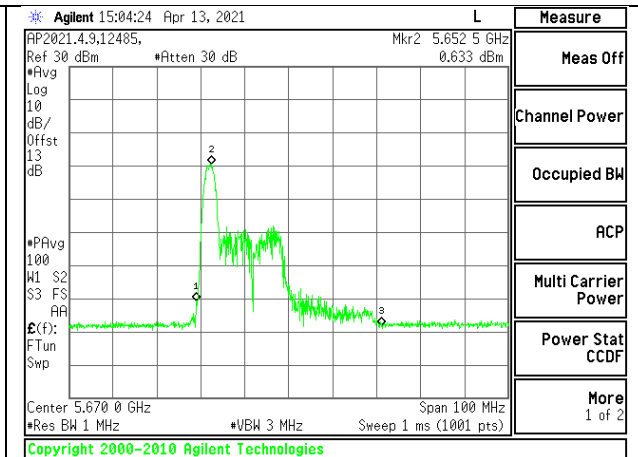


MID CHANNEL Antenna 3

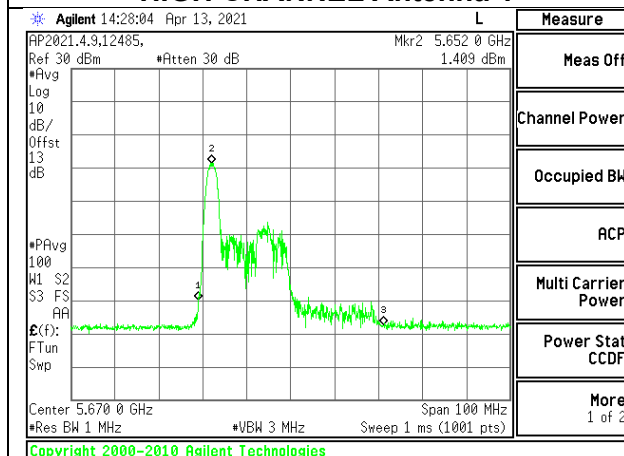
HIGH



HIGH CHANNEL Antenna 1

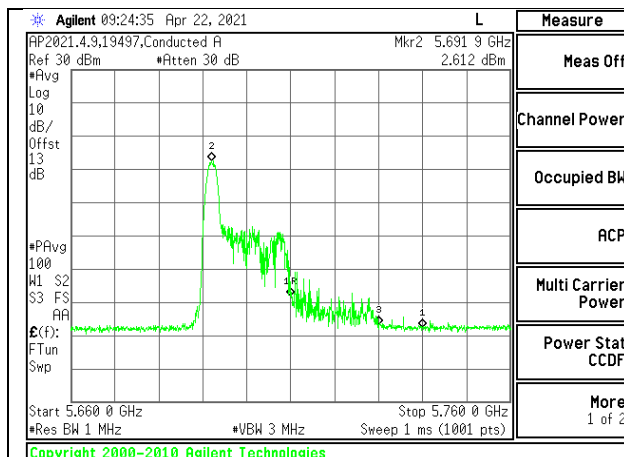


HIGH CHANNEL Antenna 2

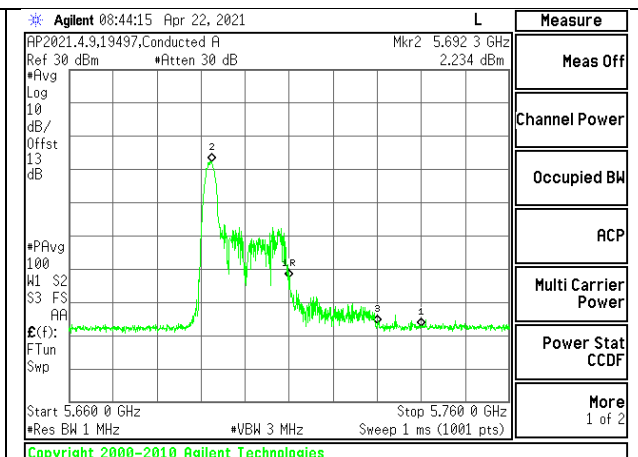


HIGH CHANNEL Antenna 3

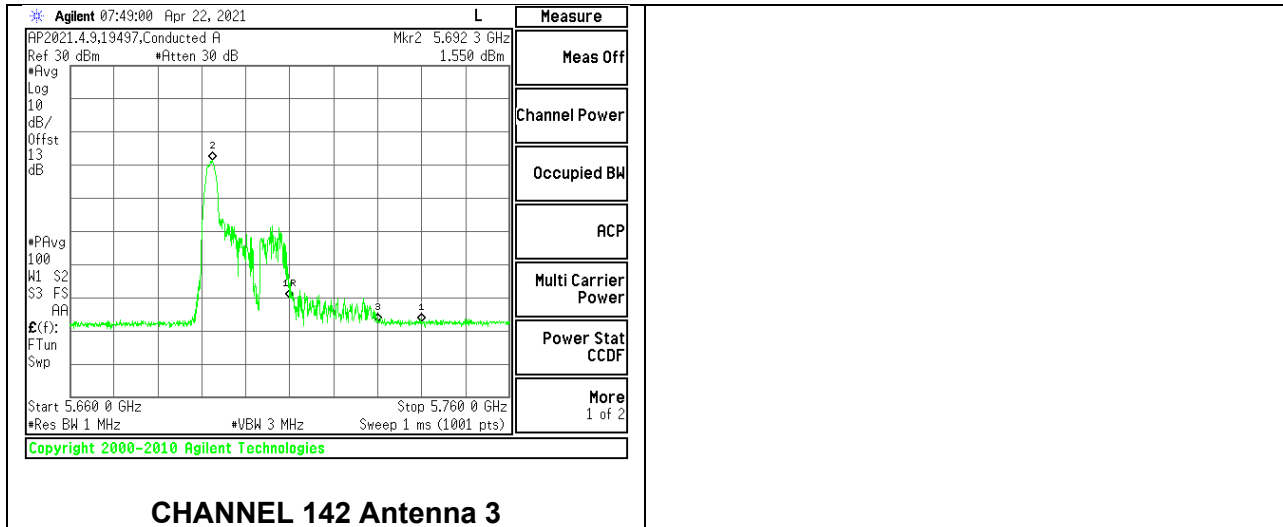
CHANNEL 142



CHANNEL 142 Antenna 1



CHANNEL 142 Antenna 2



3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 8

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Directional Gain for Power (dBi) | Directional Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/ 1MHz) |
|---------|--------------------|-----------------------------|---|---|-------------------------|--------------------------------|
| Low | 5510 | 22.30 | 3.20 | 7.80 | 24.00 | 9.20 |
| Mid | 5550 | 22.50 | 3.20 | 7.80 | 24.00 | 9.20 |
| High | 5670 | 22.50 | 3.20 | 7.80 | 24.00 | 9.20 |
| 142 | 5710 | 22.30 | 3.20 | 7.80 | 24.00 | 9.20 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

Output Power Results

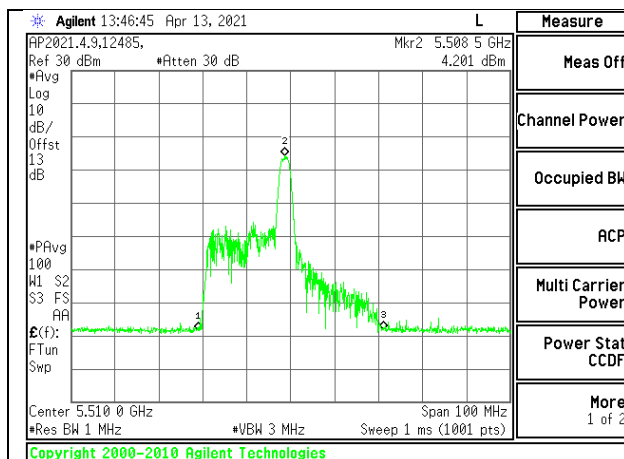
| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low | 5510 | 7.28 | 6.55 | 7.13 | 11.77 | 24.00 | -12.23 |
| Mid | 5550 | 7.36 | 6.60 | 6.94 | 11.75 | 24.00 | -12.25 |
| High | 5670 | 7.22 | 6.93 | 7.39 | 11.96 | 24.00 | -12.04 |
| 142 | 5710 | 5.97 | 5.20 | 5.66 | 10.39 | 24.00 | -13.61 |

PSD Results

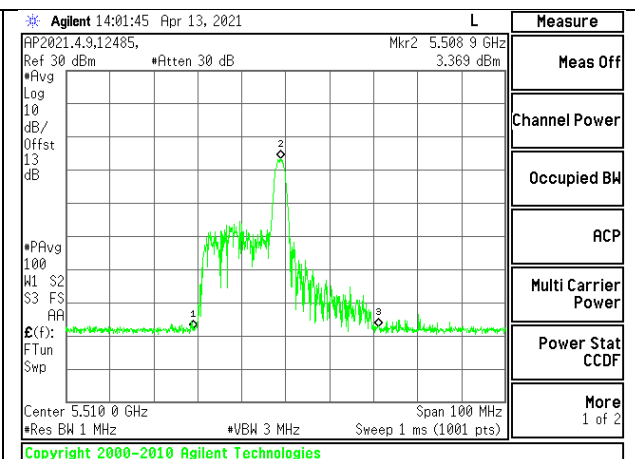
| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/ 1MHz) | Antenna 2 Meas PSD (dBm/ 1MHz) | Antenna 3 Meas PSD (dBm/ 1MHz) | Total Corr'd PSD (dBm/ 1MHz) | PSD Limit (dBm/ 1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--|--------------------------------|-----------------------|
| Low | 5510 | 4.20 | 3.37 | 3.58 | 8.63 | 9.20 | -0.57 |
| Mid | 5550 | 4.21 | 2.69 | 3.71 | 8.48 | 9.20 | -0.72 |
| High | 5670 | 3.31 | 1.84 | 2.67 | 7.55 | 9.20 | -1.65 |
| 142 | 5710 | 3.19 | 2.60 | 2.67 | 7.73 | 9.20 | -1.47 |

Total power and Highest PSD across the entire channel meets the UNII-2C limits thus UNII-3 limits and therefore compliant

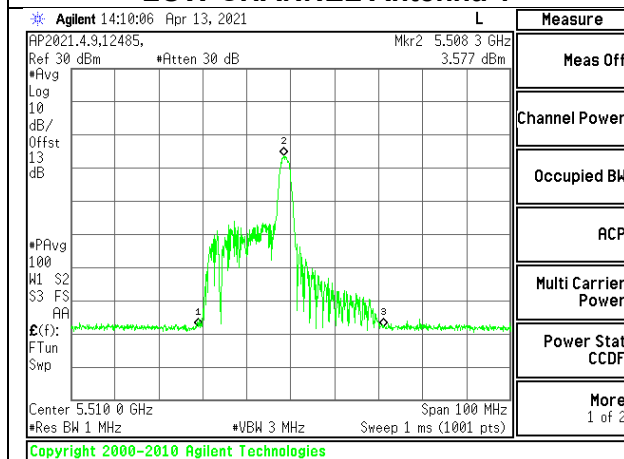
LOW



LOW CHANNEL Antenna 1

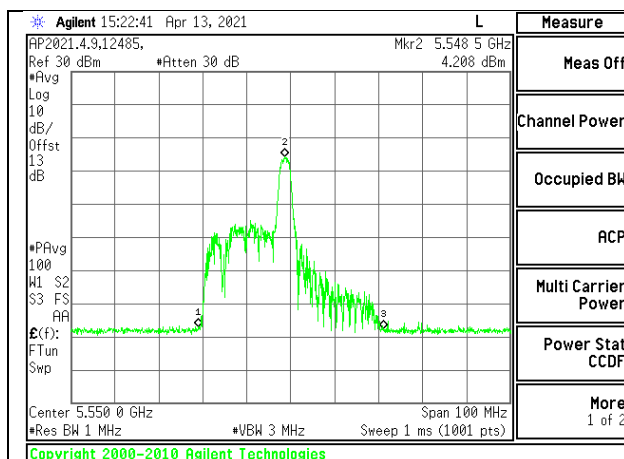


LOW CHANNEL Antenna 2

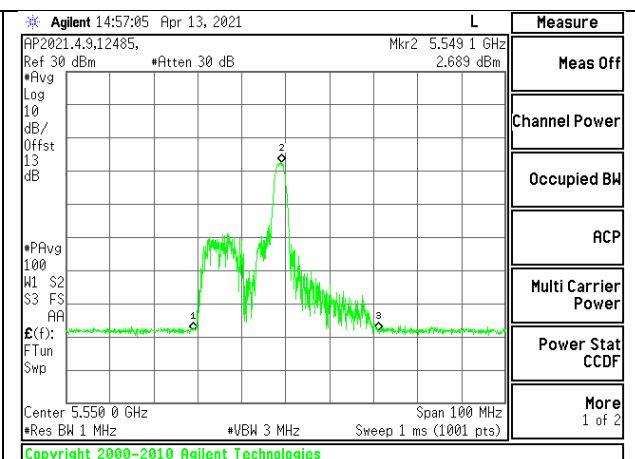


LOW CHANNEL Antenna 3

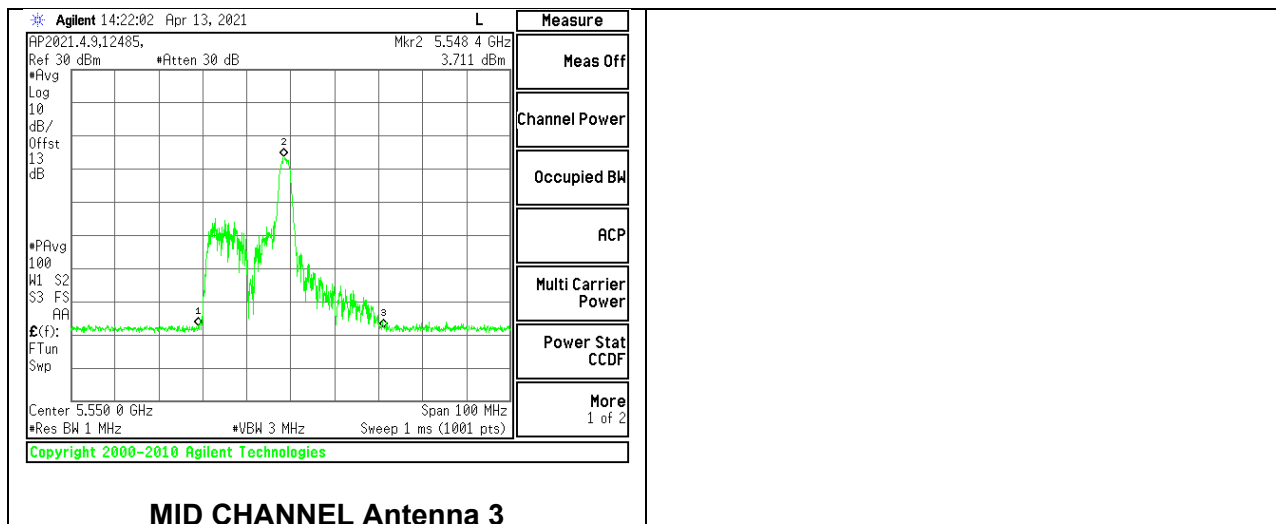
MID



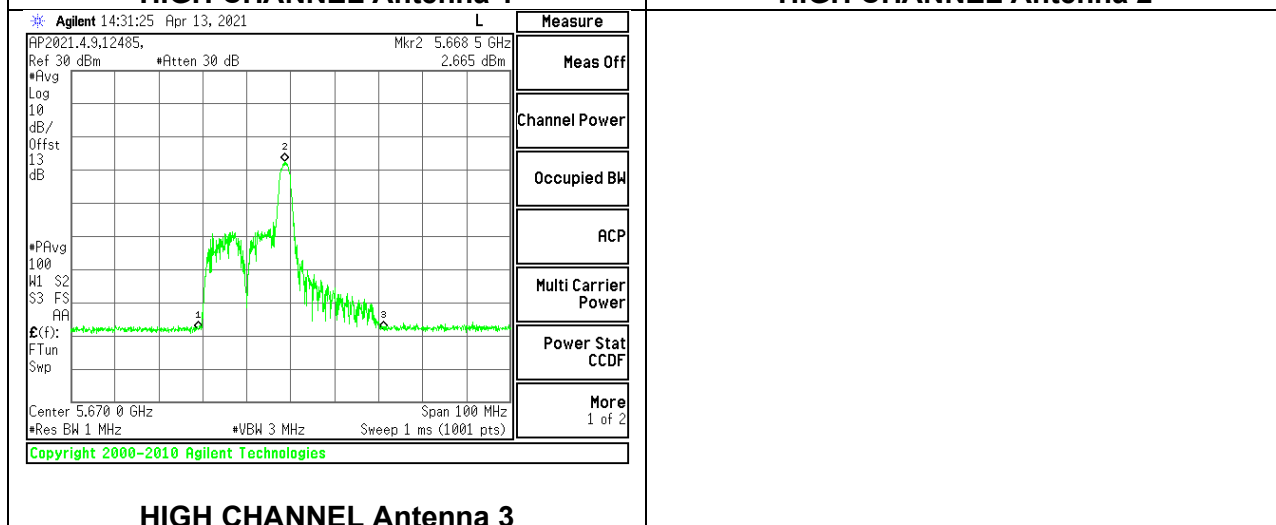
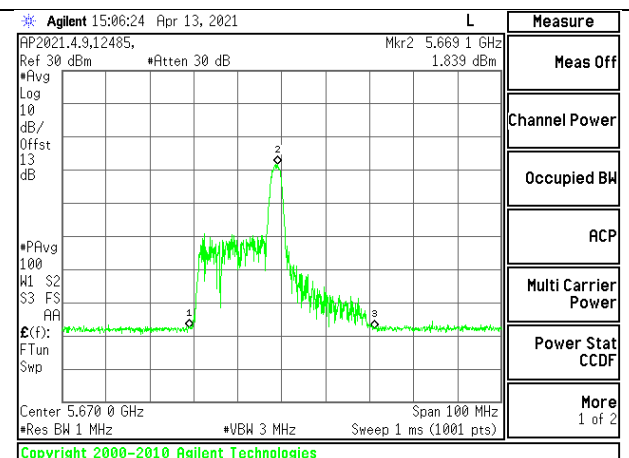
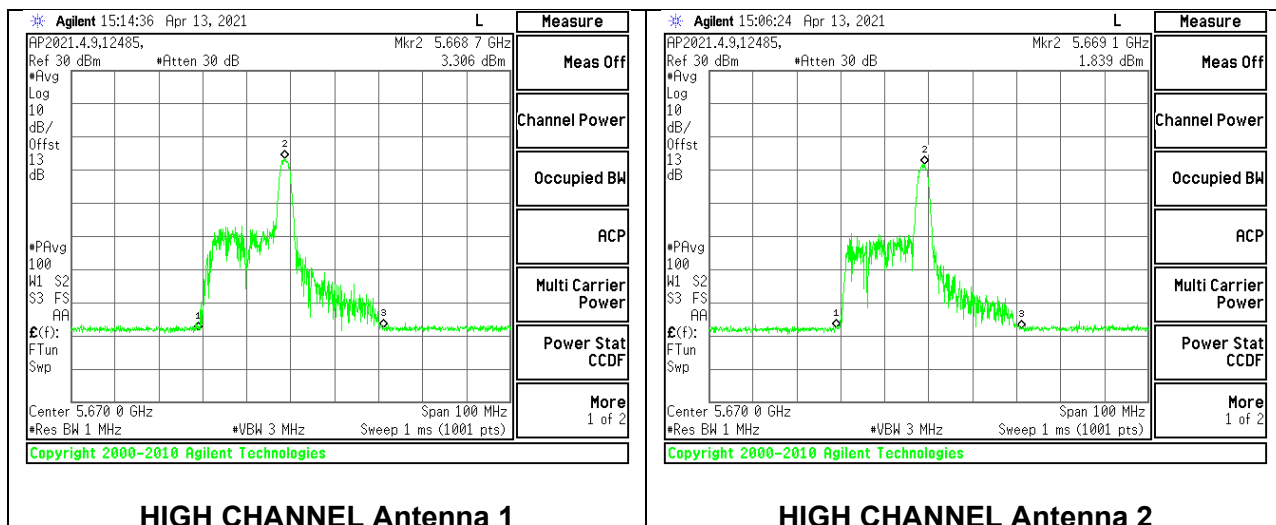
MID CHANNEL Antenna 1



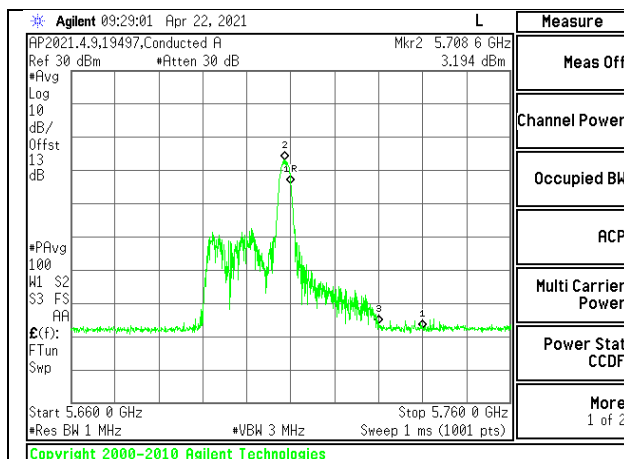
MID CHANNEL Antenna 2



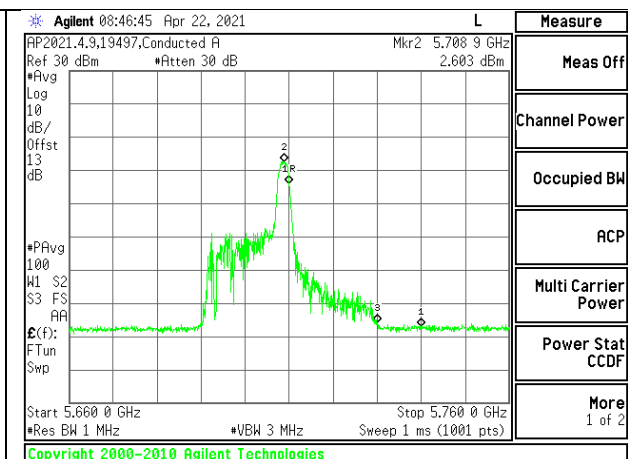
HIGH



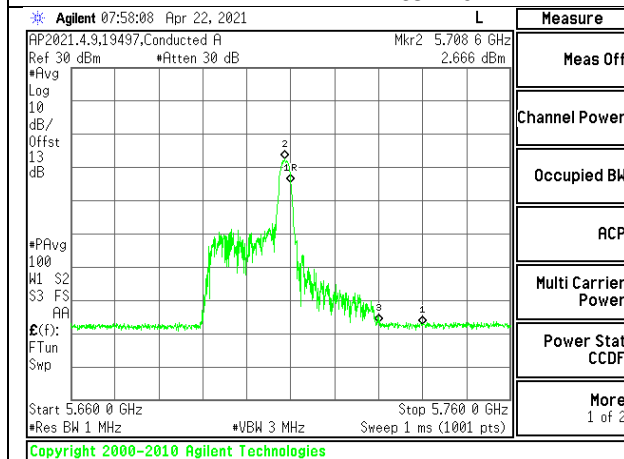
CHANNEL 142



CHANNEL 142 Antenna 1



CHANNEL 142 Antenna 2



CHANNEL 142 Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 17

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Directional Gain for Power (dBi) | Directional Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/ 1MHz) |
|---------|--------------------|-----------------------------|---|---|-------------------------|--------------------------------|
| Low | 5510 | 19.20 | 3.20 | 7.80 | 23.83 | 9.20 |
| Mid | 5550 | 19.20 | 3.20 | 7.80 | 23.83 | 9.20 |
| High | 5670 | 19.20 | 3.20 | 7.80 | 23.83 | 9.20 |
| *142 | 5710 | 19.30 | 3.20 | 7.80 | 23.86 | 9.20 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

Output Power Results

| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low | 5510 | 6.44 | 6.17 | 6.31 | 11.08 | 23.83 | -12.75 |
| Mid | 5550 | 6.04 | 5.77 | 6.10 | 10.74 | 23.83 | -13.09 |
| High | 5670 | 6.38 | 5.46 | 6.40 | 10.87 | 23.83 | -12.96 |
| *142 | 5710 | 5.22 | 4.97 | 5.20 | 9.90 | 23.86 | -13.95 |

PSD Results

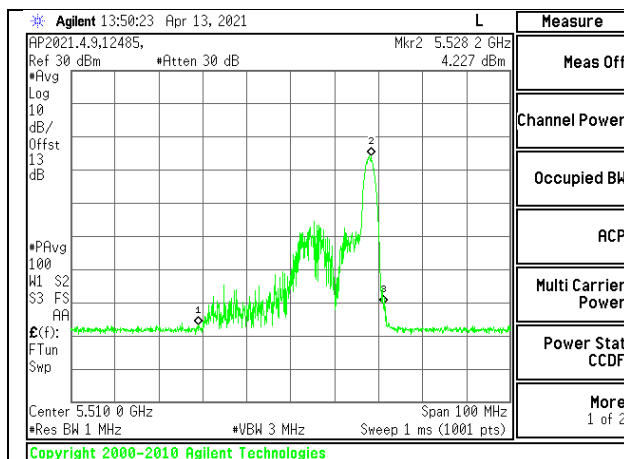
| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/ 1MHz) | Antenna 2 Meas PSD (dBm/ 1MHz) | Antenna 3 Meas PSD (dBm/ 1MHz) | Total Corr'd PSD (dBm/ 1MHz) | PSD Limit (dBm/ 1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--|--------------------------------|-----------------------|
| Low | 5510 | 4.23 | 2.86 | 3.57 | 8.49 | 9.20 | -0.71 |
| Mid | 5550 | 3.21 | 1.96 | 3.07 | 7.68 | 9.20 | -1.52 |
| High | 5670 | 3.47 | 1.26 | 2.06 | 7.26 | 9.20 | -1.94 |
| *142 | 5710 | 2.41 | 2.09 | 2.44 | 7.22 | 9.20 | -1.98 |

*As per the calculation in this formula, Measured total bandwidth (19.3) / 2 - 3 MHz, the worst case bandwidth is 6.65 MHz.

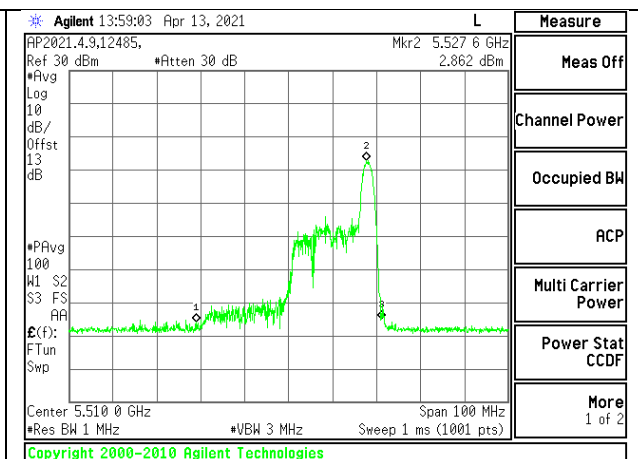
Based on the 6.65 MHz bandwidth for the portion that the straddle channel occupies in the UNII-2C band, the calculated worst case power limit is $11+10*\log(6.65)= 19.23$ dBm. The total signal power is 9.90 dBm which is less than the limit of 19.23 dBm.

Total power and Highest PSD across the entire channel meets the UNII-2C limits thus UNII-3 limits and therefore compliant

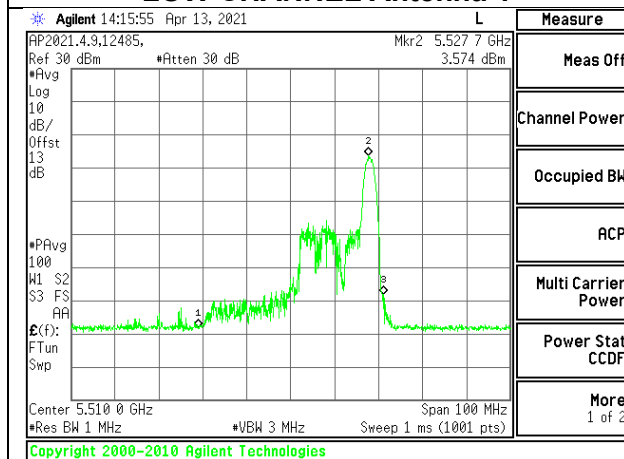
LOW



LOW CHANNEL Antenna 1

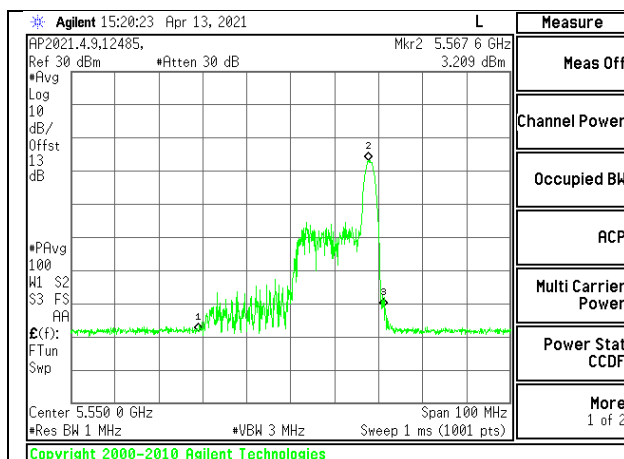


LOW CHANNEL Antenna 2

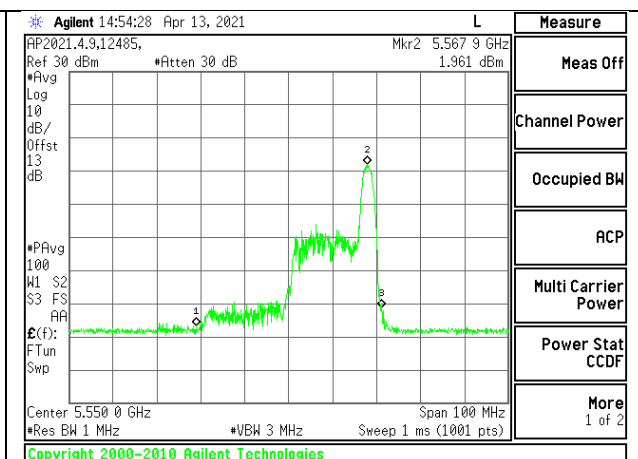


LOW CHANNEL Antenna 3

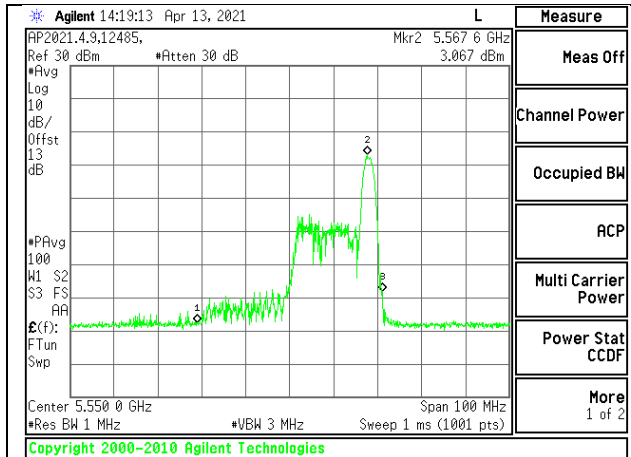
MID



MID CHANNEL Antenna 1

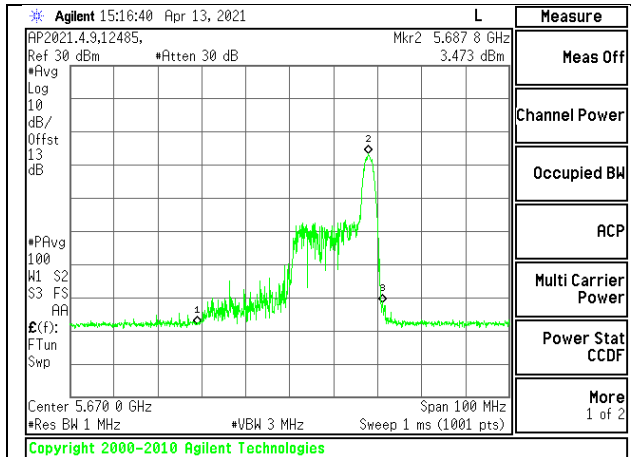


MID CHANNEL Antenna 2

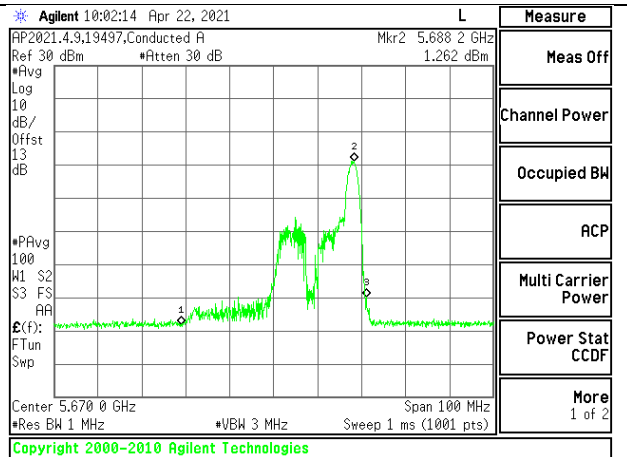


MID CHANNEL Antenna 3

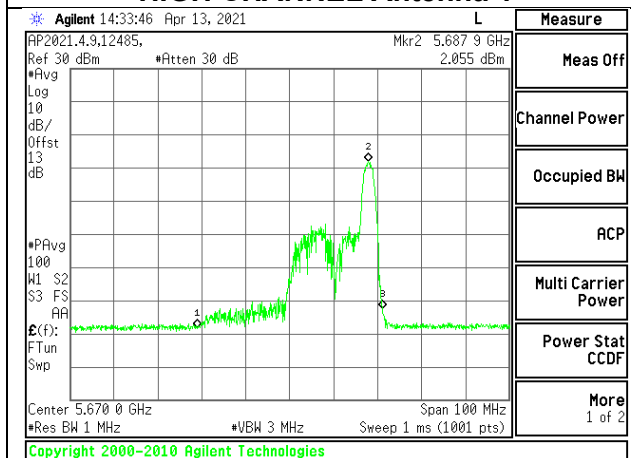
HIGH



HIGH CHANNEL Antenna 1

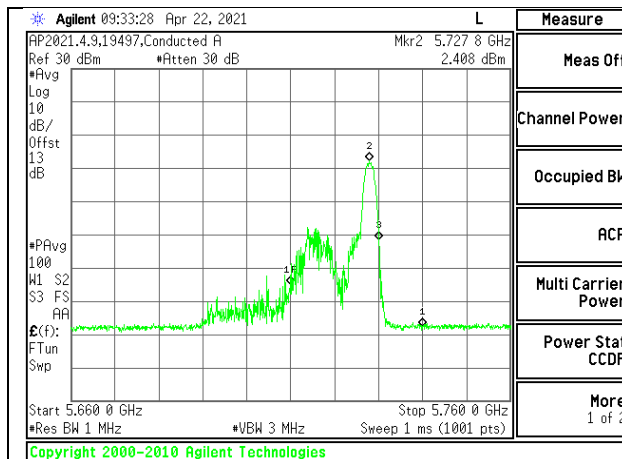


HIGH CHANNEL Antenna 2

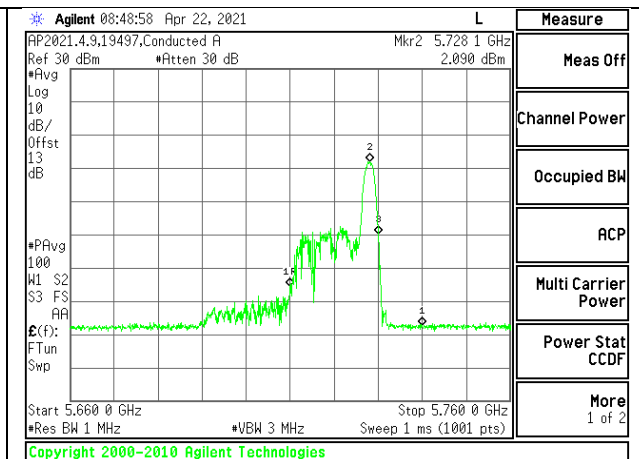


HIGH CHANNEL Antenna 3

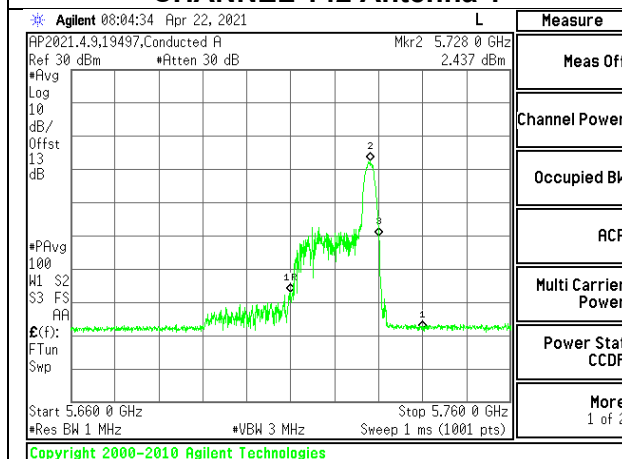
CHANNEL 142



CHANNEL 142 Antenna 1



CHANNEL 142 Antenna 2



CHANNEL 142 Antenna 3

9.4.9. 802.11ax HE80 MODE 3TX IN THE 5.6GHz BAND (FCC)

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 996-Tones, RU Index 67

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Uncorrelated Gain for Power (dBi) | Correlated Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/ 1MHz) |
|---------|--------------------|-----------------------------|--|--|-------------------------|--------------------------------|
| Low | 5530 | 87.00 | 3.20 | 7.80 | 24.00 | 9.20 |
| High | 5610 | 89.80 | 3.20 | 7.80 | 24.00 | 9.20 |
| *138 | 5690 | 87.60 | 3.20 | 7.80 | 24.00 | 9.20 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

Output Power Results

| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low | 5530 | 10.84 | 10.38 | 10.67 | 15.41 | 24.00 | -8.59 |
| High | 5610 | 9.32 | 8.86 | 9.15 | 13.89 | 24.00 | -10.11 |
| *138 | 5690 | 9.11 | 8.59 | 8.93 | 13.65 | 24.00 | -10.35 |

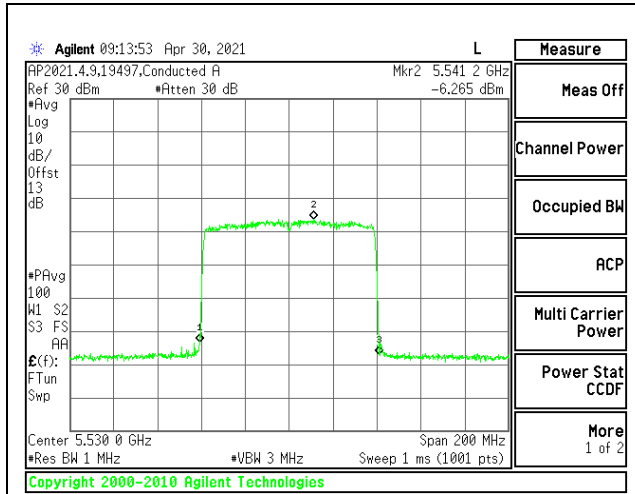
PSD Results

| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/ 1MHz) | Antenna 2 Meas PSD (dBm/ 1MHz) | Antenna 3 Meas PSD (dBm/ 1MHz) | Total Corr'd PSD (dBm/ 1MHz) | PSD Limit (dBm/ 1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--|--------------------------------|-----------------------|
| Low | 5530 | -6.27 | -6.79 | -6.36 | -1.57 | 9.20 | -10.77 |
| High | 5610 | -7.89 | -8.23 | -8.07 | -3.16 | 9.20 | -12.36 |
| *138 | 5690 | -7.74 | -8.01 | -7.67 | -2.90 | 9.20 | -12.10 |

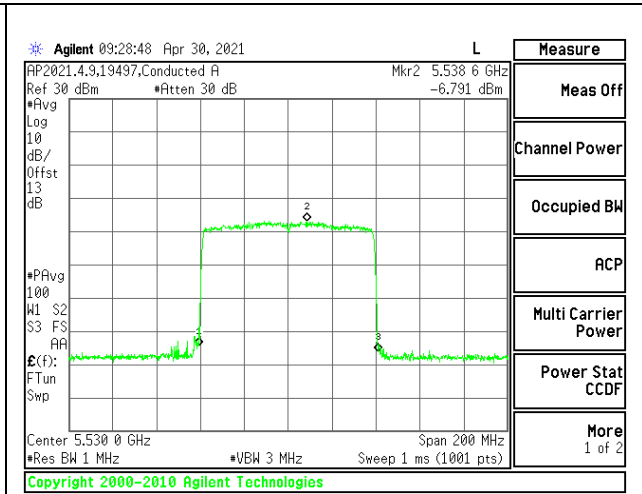
*The 26dB signal bandwidth within the 5470-5725 MHz band clearly exceed 20MHz and so the limit for the power within the 5470-5725MHz band is 24.00dBm.

Total power and Highest PSD across the entire channel meets the UNII-2C limits thus UNII-3 limits and therefore compliant

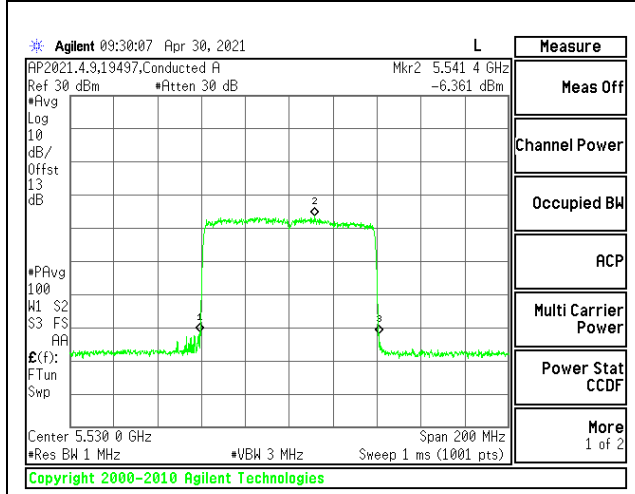
LOW



LOW CHANNEL Antenna 1

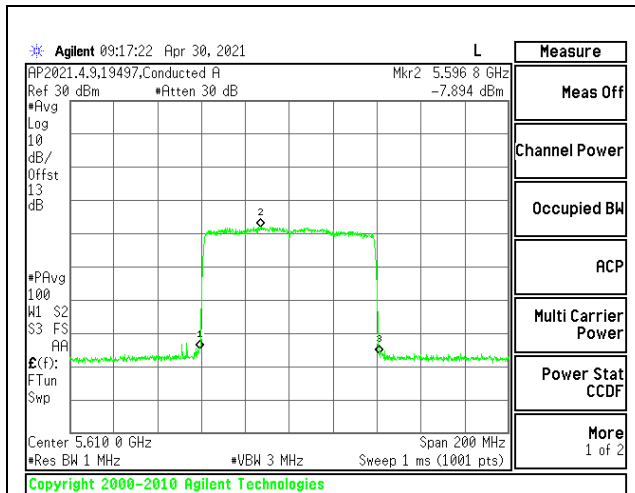


LOW CHANNEL Antenna 2

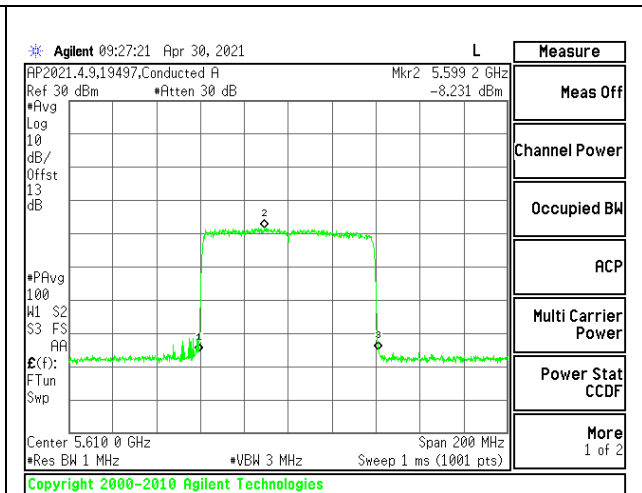


LOW CHANNEL Antenna 3

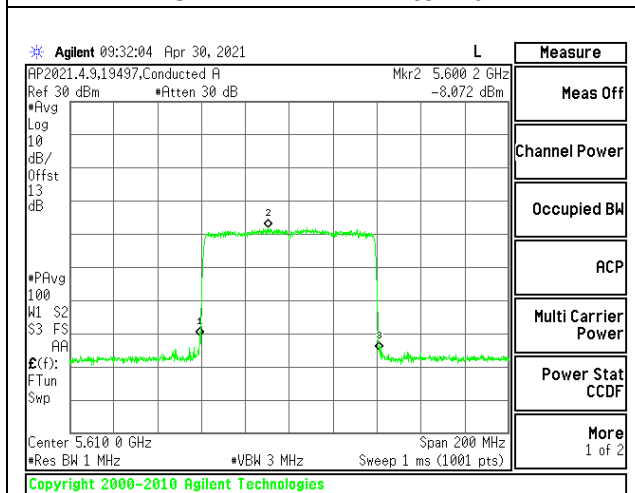
HIGH



HIGH CHANNEL Antenna 1

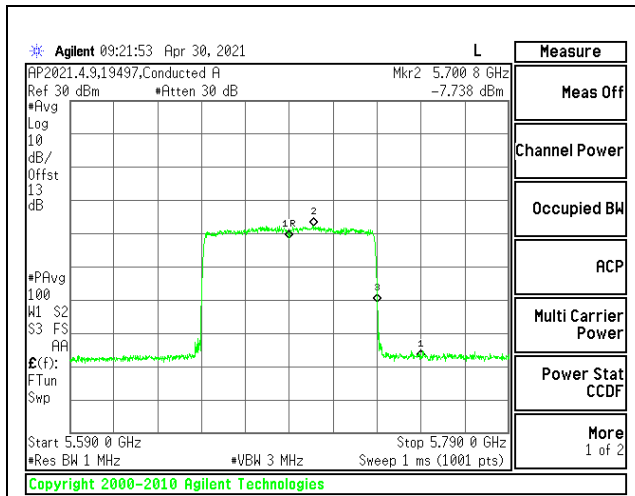


HIGH CHANNEL Antenna 2

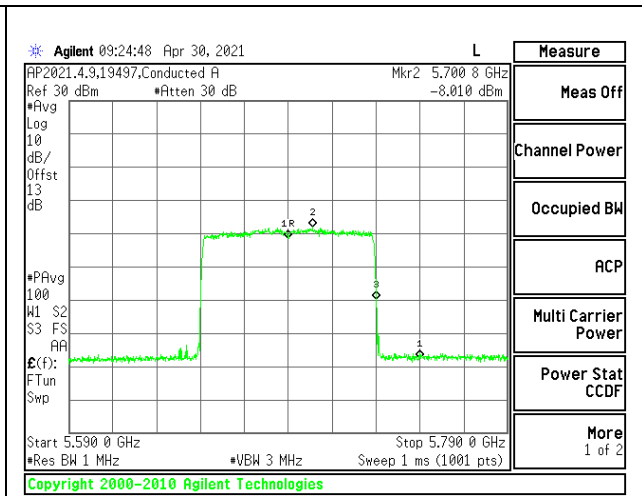


HIGH CHANNEL Antenna 3

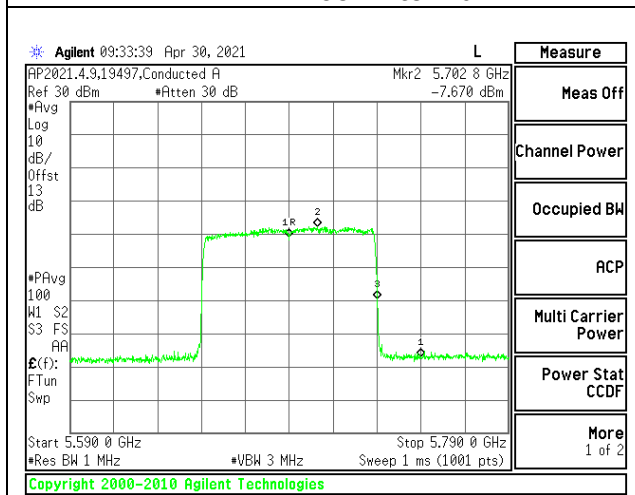
CHANNEL 138



CHANNEL 138 Antenna 1



CHANNEL 138 Antenna 2



CHANNEL 138 Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 0

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Directional Gain for Power (dBi) | Directional Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/ 1MHz) |
|---------|--------------------|-----------------------------|---|---|-------------------------|--------------------------------|
| Low | 5530 | 20.20 | 3.20 | 7.80 | 24.00 | 9.20 |
| High | 5610 | 20.20 | 3.20 | 7.80 | 24.00 | 9.20 |
| 138 | 5690 | 20.20 | 3.20 | 7.80 | 24.00 | 9.20 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

Output Power Results

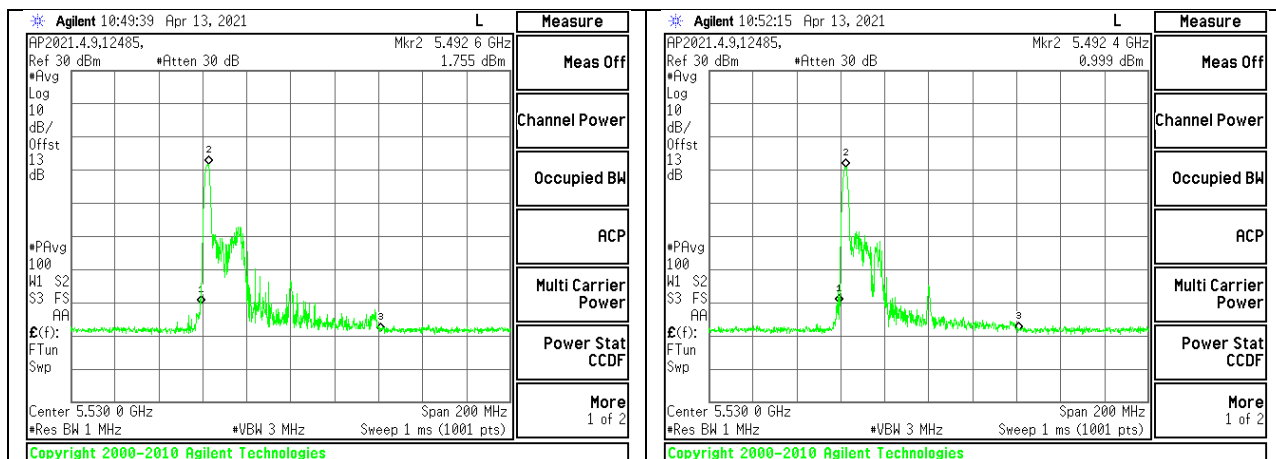
| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low | 5530 | 5.36 | 4.98 | 5.22 | 9.96 | 24.00 | -14.04 |
| High | 5610 | 5.22 | 4.87 | 5.14 | 9.85 | 24.00 | -14.15 |
| 138 | 5690 | 5.08 | 5.02 | 5.22 | 9.88 | 24.00 | -14.12 |

PSD Results

| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/ 1MHz) | Antenna 2 Meas PSD (dBm/ 1MHz) | Antenna 3 Meas PSD (dBm/ 1MHz) | Total Corr'd PSD (dBm/ 1MHz) | PSD Limit (dBm/ 1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--|--------------------------------|-----------------------|
| Low | 5530 | 1.76 | 1.00 | 1.69 | 6.40 | 9.20 | -2.80 |
| High | 5610 | 0.75 | 0.32 | 0.91 | 5.57 | 9.20 | -3.63 |
| 138 | 5690 | -0.13 | -0.21 | -0.37 | 4.67 | 9.20 | -4.53 |

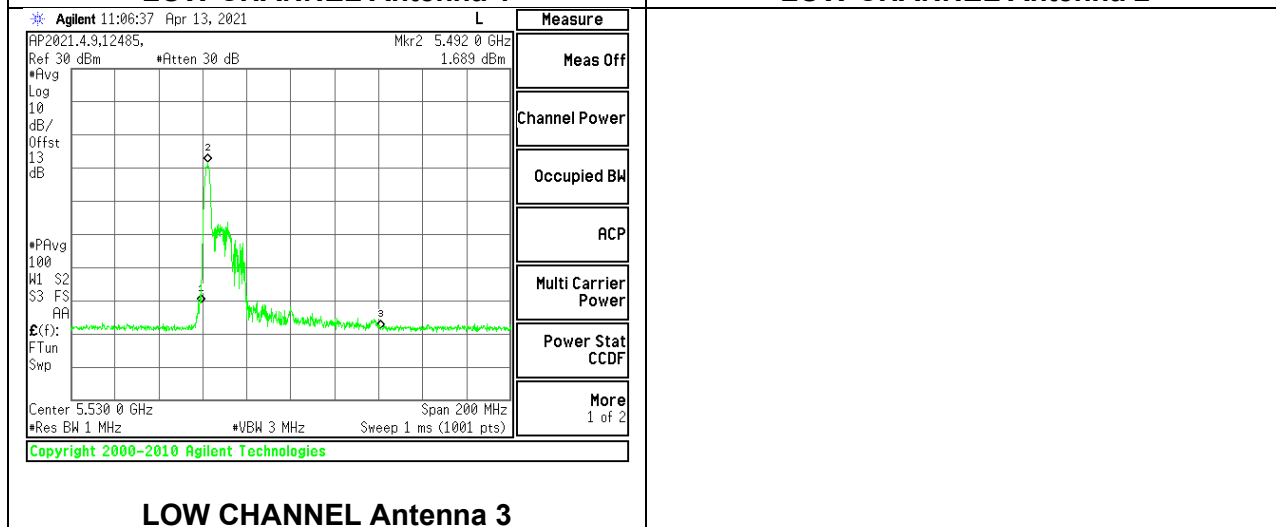
Total power and Highest PSD across the entire channel meets the UNII-2C limits thus UNII-3 limits and therefore compliant

LOW



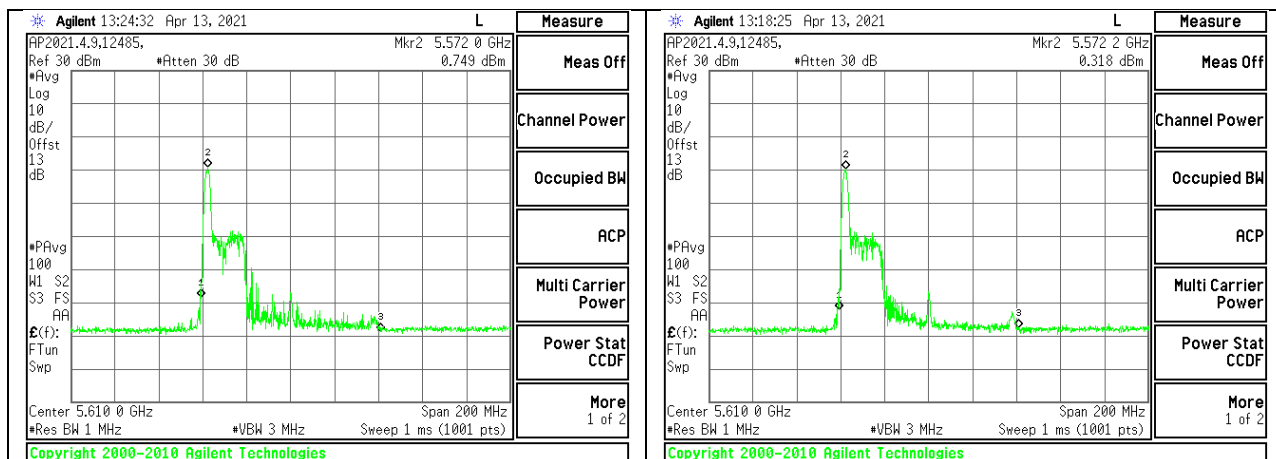
LOW CHANNEL Antenna 1

LOW CHANNEL Antenna 2



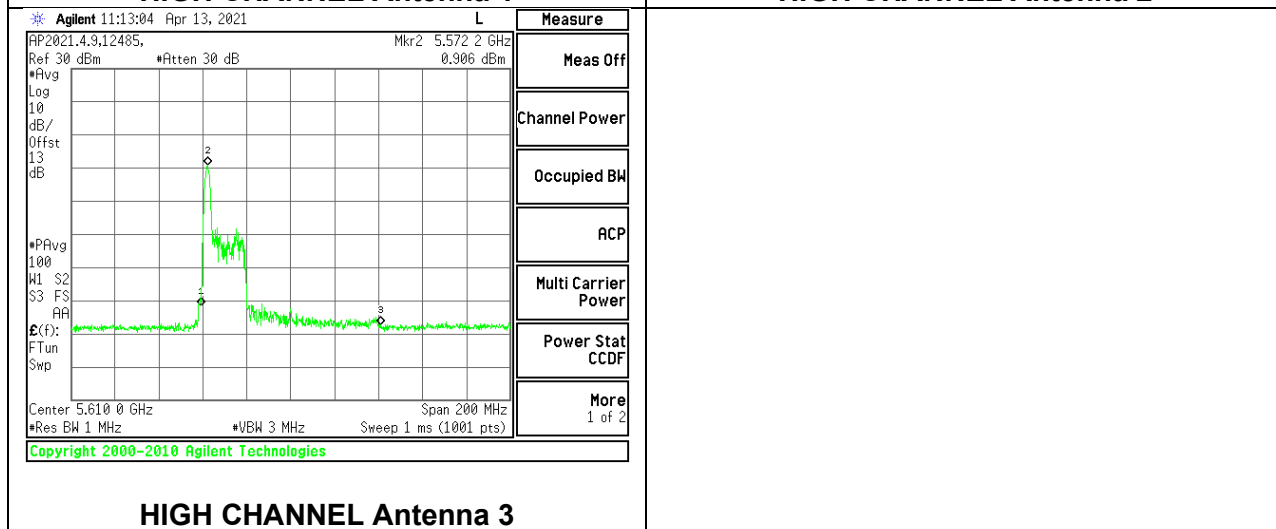
LOW CHANNEL Antenna 3

HIGH



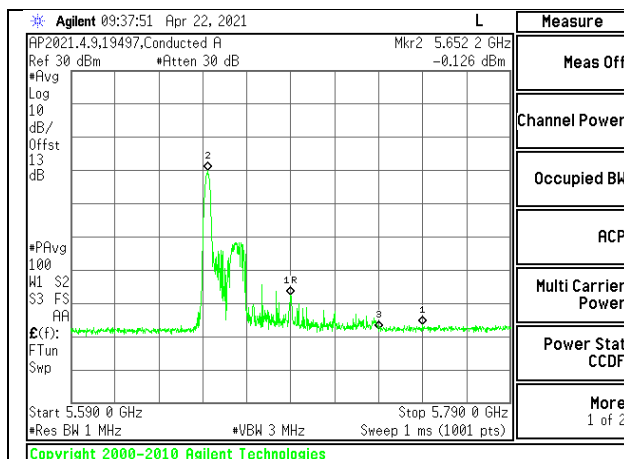
HIGH CHANNEL Antenna 1

HIGH CHANNEL Antenna 2

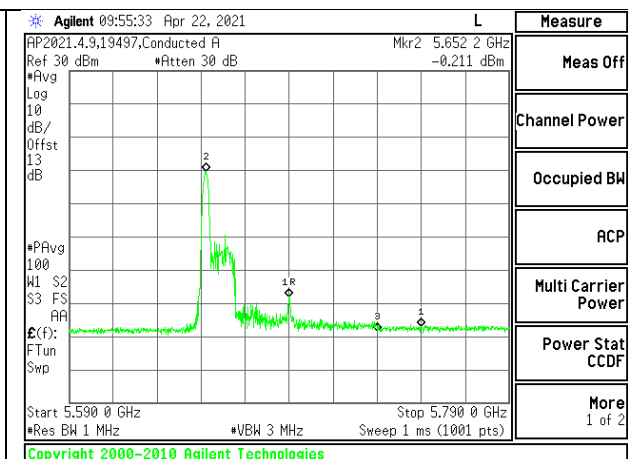


HIGH CHANNEL Antenna 3

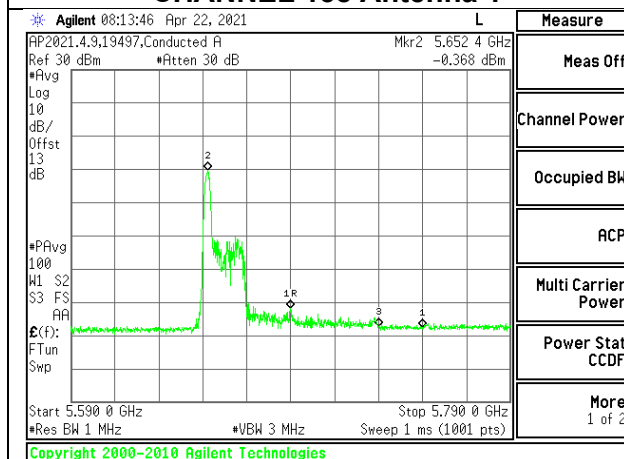
CHANNEL 138



CHANNEL 138 Antenna 1



CHANNEL 138 Antenna 2



CHANNEL 138 Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 18

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Directional Gain for Power (dBi) | Directional Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/ 1MHz) |
|---------|--------------------|-----------------------------|---|---|-------------------------|--------------------------------|
| Low | 5530 | 39.20 | 3.20 | 7.80 | 24.00 | 9.20 |
| High | 5610 | 39.20 | 3.20 | 7.80 | 24.00 | 9.20 |
| 138 | 5690 | 39.20 | 3.20 | 7.80 | 24.00 | 9.20 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

Output Power Results

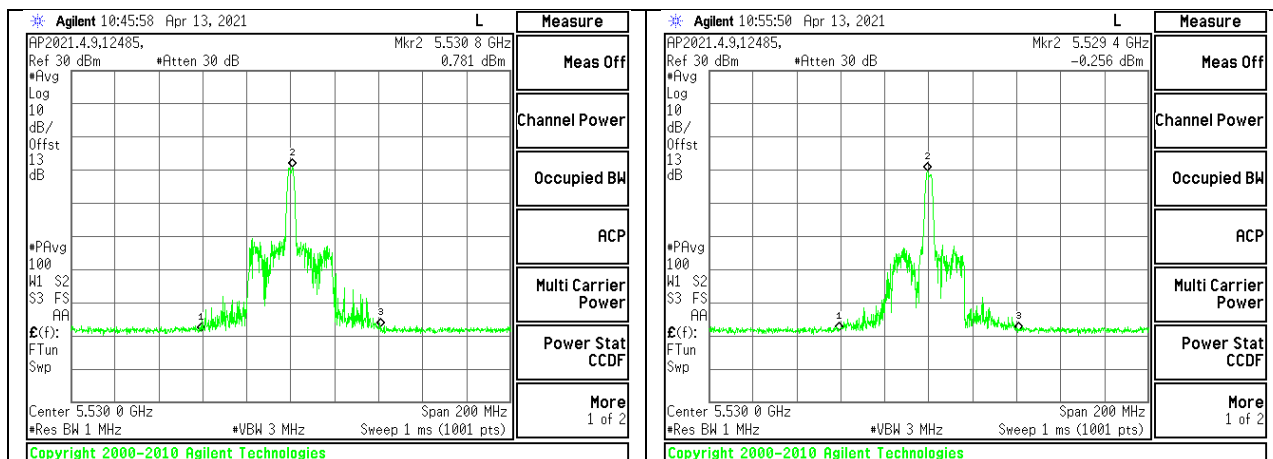
| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low | 5530 | 5.58 | 5.25 | 5.47 | 10.21 | 24.00 | -13.79 |
| High | 5610 | 5.41 | 5.06 | 5.33 | 10.04 | 24.00 | -13.96 |
| 138 | 5690 | 5.26 | 5.13 | 5.62 | 10.11 | 24.00 | -13.89 |

PSD Results

| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/ 1MHz) | Antenna 2 Meas PSD (dBm/ 1MHz) | Antenna 3 Meas PSD (dBm/ 1MHz) | Total Corr'd PSD (dBm/ 1MHz) | PSD Limit (dBm/ 1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--|--------------------------------|-----------------------|
| Low | 5530 | 0.78 | -0.26 | 0.24 | 5.18 | 9.20 | -4.02 |
| High | 5610 | -0.96 | -0.99 | -1.64 | 3.72 | 9.20 | -5.48 |
| 138 | 5690 | -0.05 | -0.46 | -0.49 | 4.57 | 9.20 | -4.63 |

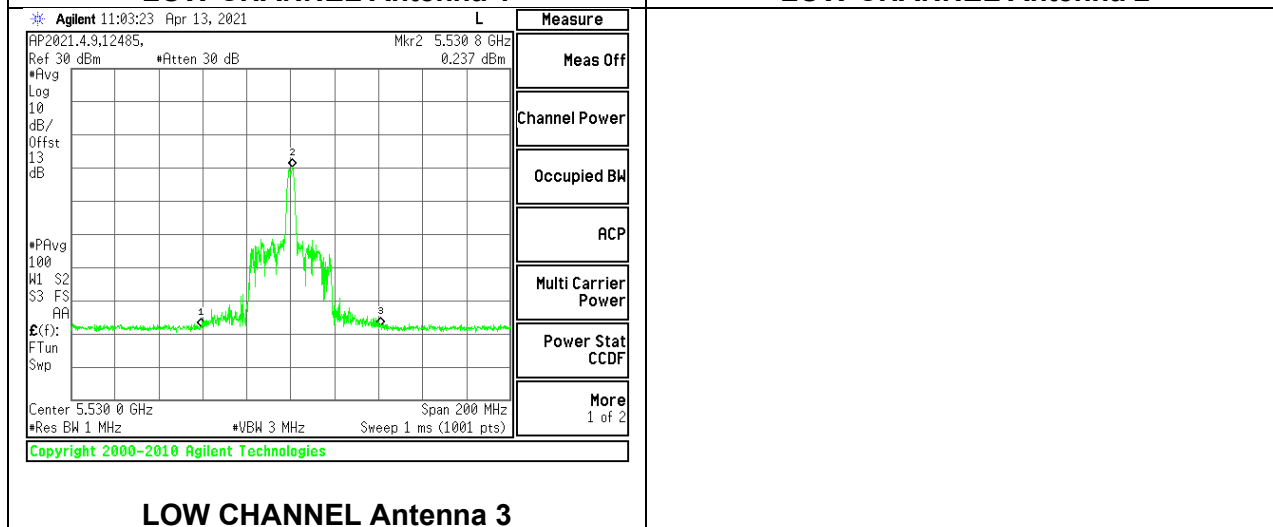
Total power and Highest PSD across the entire channel meets the UNII-2C limits thus UNII-3 limits and therefore compliant

LOW

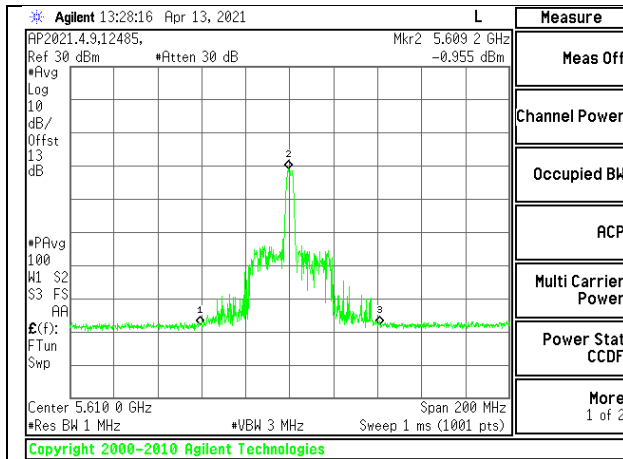


LOW CHANNEL Antenna 1

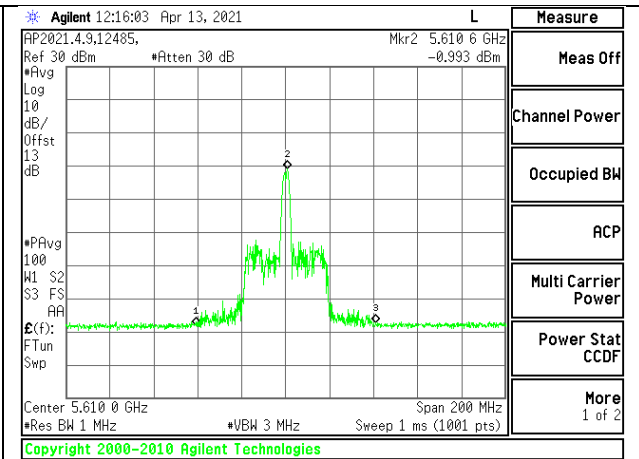
LOW CHANNEL Antenna 2



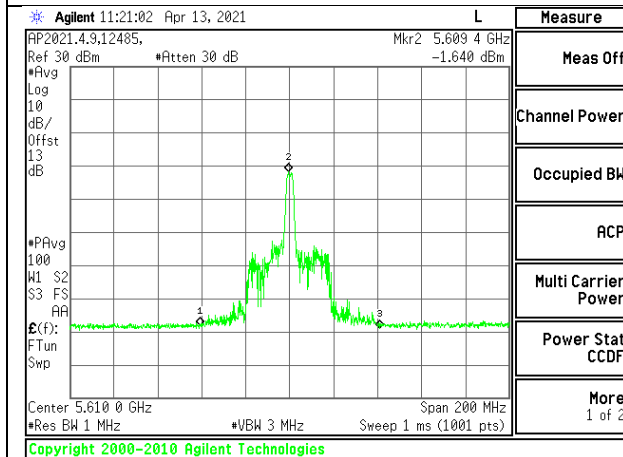
HIGH



HIGH CHANNEL Antenna 1

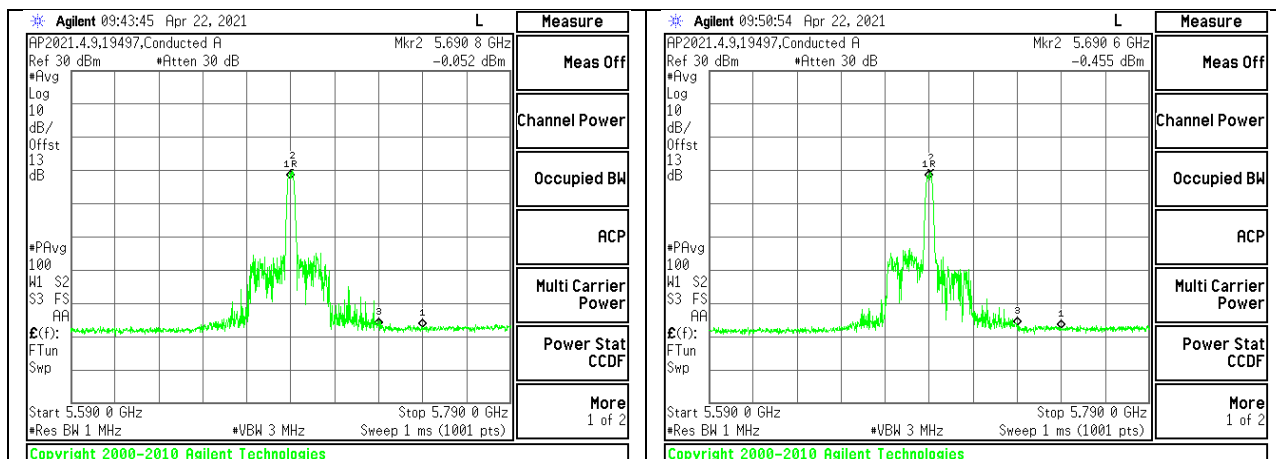


HIGH CHANNEL Antenna 2



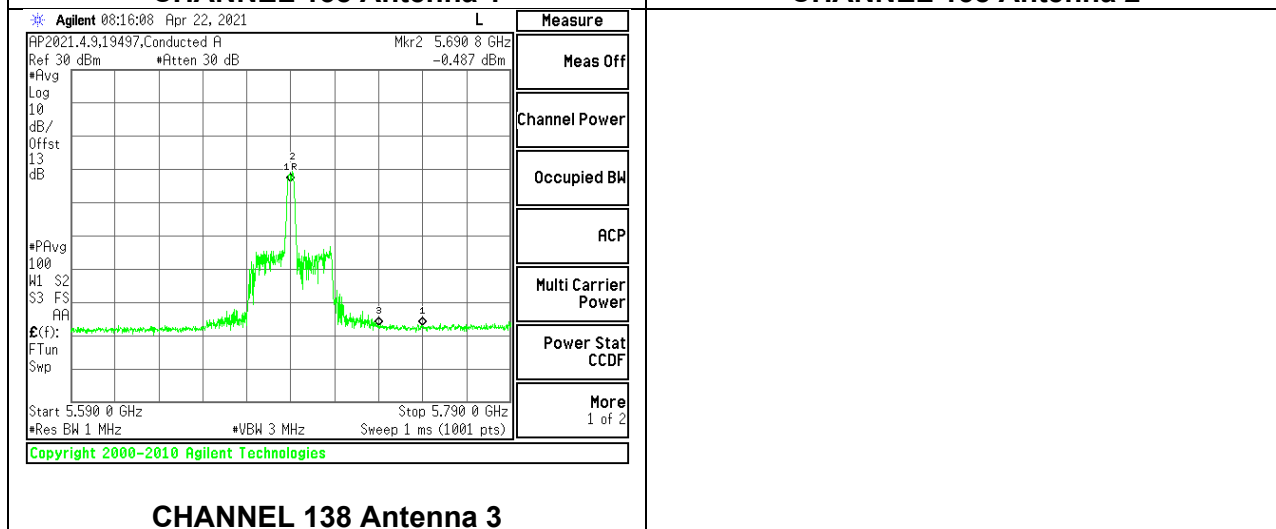
HIGH CHANNEL Antenna 3

CHANNEL 138



CHANNEL 138 Antenna 1

CHANNEL 138 Antenna 2



CHANNEL 138 Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 36

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency (MHz) | Min 26 dB BW (MHz) | Directional Gain for Power (dBi) | Directional Gain for PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/ 1MHz) |
|---------|--------------------|-----------------------------|---|---|-------------------------|--------------------------------|
| Low | 5530 | 20.00 | 3.20 | 7.80 | 24.00 | 9.20 |
| High | 5610 | 20.00 | 3.20 | 7.80 | 24.00 | 9.20 |
| *138 | 5690 | 19.80 | 3.20 | 7.80 | 23.97 | 9.20 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

Output Power Results

| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low | 5530 | 5.31 | 5.07 | 5.19 | 9.96 | 24.00 | -14.04 |
| High | 5610 | 5.03 | 4.99 | 5.35 | 9.90 | 24.00 | -14.10 |
| *138 | 5690 | 5.31 | 5.21 | 5.31 | 10.05 | 23.97 | -13.92 |

PSD Results

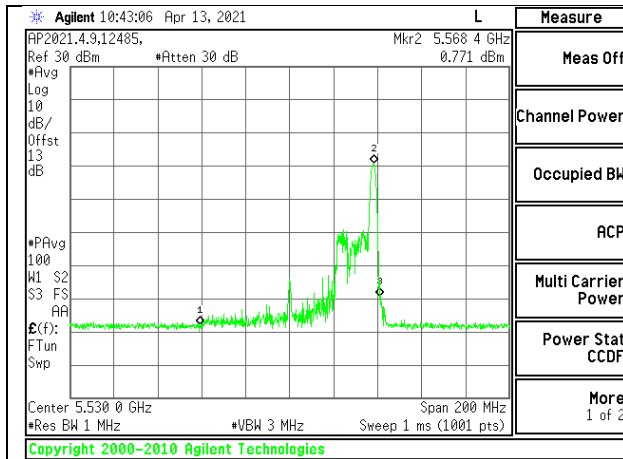
| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/ 1MHz) | Antenna 2 Meas PSD (dBm/ 1MHz) | Antenna 3 Meas PSD (dBm/ 1MHz) | Total Corr'd PSD (dBm/ 1MHz) | PSD Limit (dBm/ 1MHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--|--------------------------------|-----------------------|
| Low | 5530 | 0.77 | -0.22 | 0.47 | 5.26 | 9.20 | -3.94 |
| High | 5610 | -0.08 | -0.97 | -0.61 | 4.37 | 9.20 | -4.83 |
| *138 | 5690 | 1.82 | 1.19 | 1.09 | 6.28 | 9.20 | -2.92 |

*As per the calculation in this formula, Measured total bandwidth (19.8) / 2 - 3 MHz, the worst case bandwidth is 6.9 MHz.

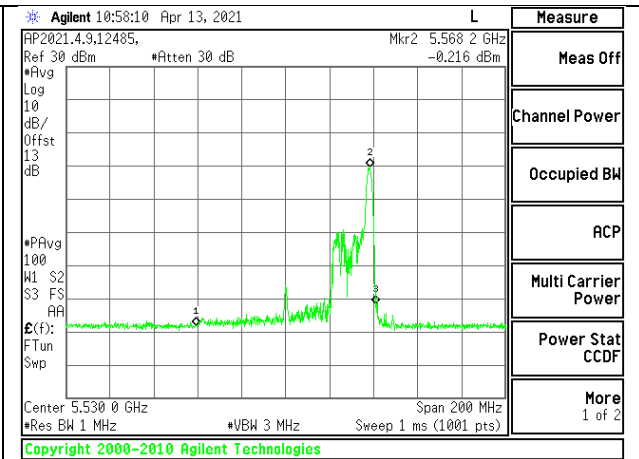
Based on the 6.9 MHz bandwidth for the portion that the straddle channel occupies in the UNII-2C band, the calculated worst case power limit is $11+10*\log(6.9)= 19.39$ dBm. The total signal power is 10.05 dBm which is less than the limit of 19.39 dBm.

Total power and Highest PSD across the entire channel meets the UNII-2C limits thus UNII-3 limits and therefore compliant

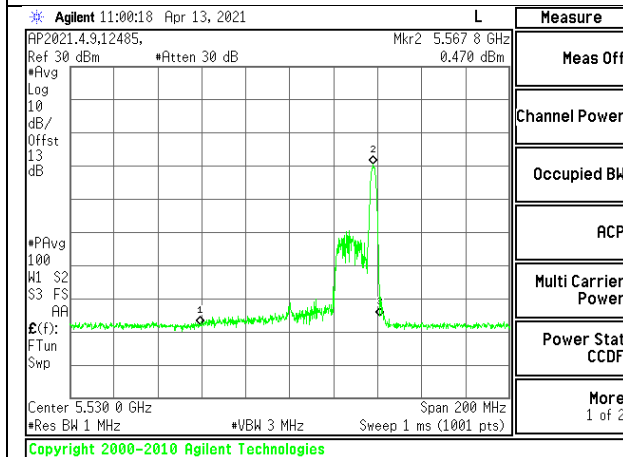
LOW



LOW CHANNEL Antenna 1

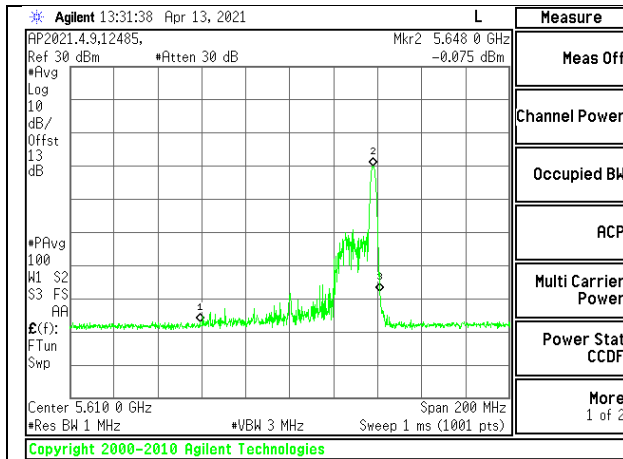


LOW CHANNEL Antenna 2

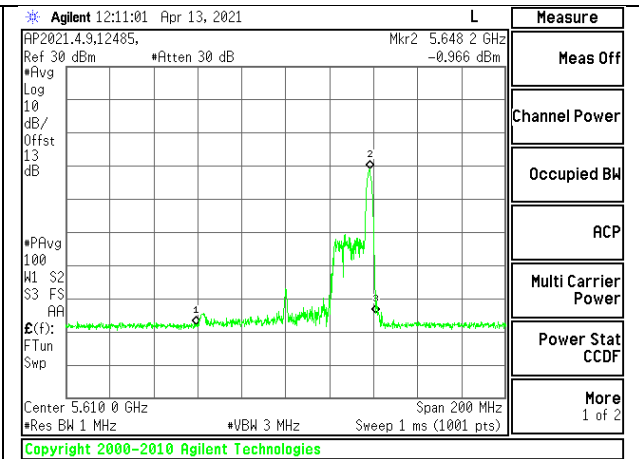


LOW CHANNEL Antenna 3

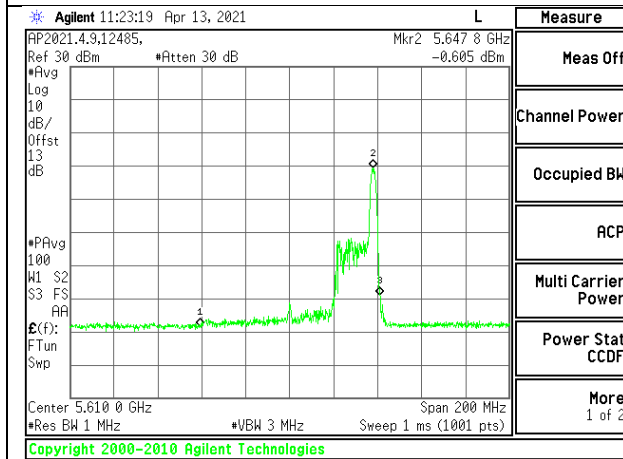
HIGH



HIGH CHANNEL Antenna 1

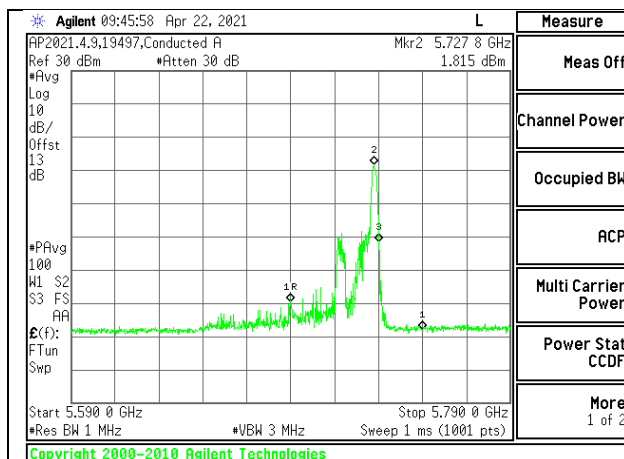


HIGH CHANNEL Antenna 2

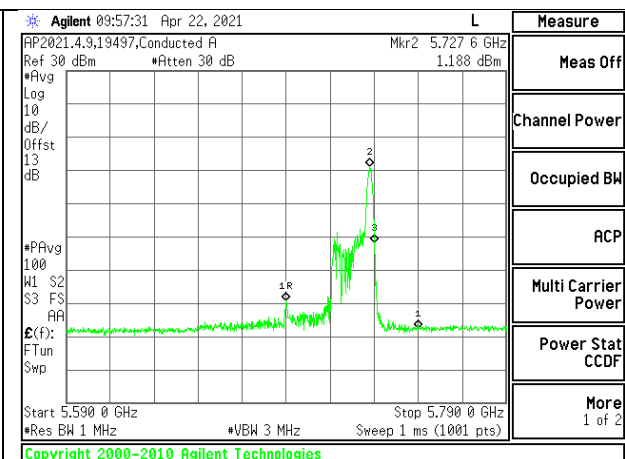


HIGH CHANNEL Antenna 3

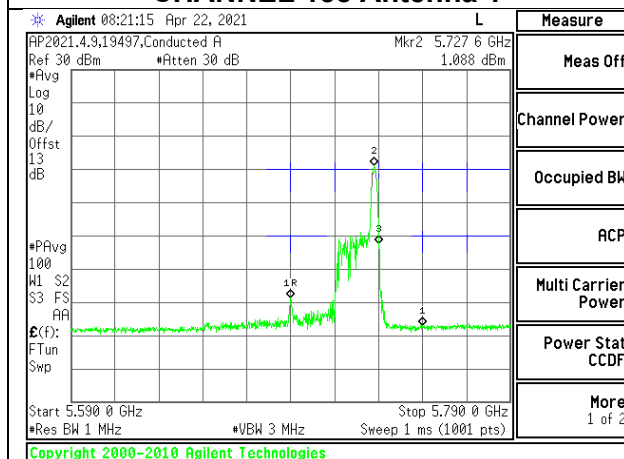
CHANNEL 138



CHANNEL 138 Antenna 1



CHANNEL 138 Antenna 2



CHANNEL 138 Antenna 3

9.4.10. 802.11ax HE20 MODE 3TX IN THE 5.8GHz BAND (FCC)

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 242-Tones, RU Index 61

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Antenna Gain and Limit

| Channel | Frequency (MHz) | Uncorrelated Gain For Power (dBi) | Correlated Gain For PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/500KHz) |
|---------|-----------------|-----------------------------------|-------------------------------|-------------------|------------------------|
| Low | 5745 | 2.90 | 7.60 | 30.00 | 28.40 |
| Mid | 5785 | 2.90 | 7.60 | 30.00 | 28.40 |
| High | 5825 | 2.90 | 7.60 | 30.00 | 28.40 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

Output Power Results

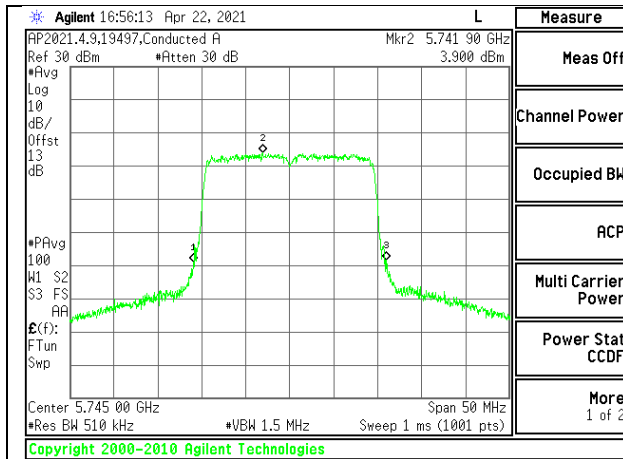
| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|-----------------|----------------------------|----------------------------|----------------------------|--------------------------|-------------------|-------------------|
| Low | 5745 | 17.84 | 17.05 | 17.37 | 22.20 | 30.00 | -7.80 |
| Mid | 5785 | 17.54 | 16.85 | 17.22 | 21.98 | 30.00 | -8.02 |
| High | 5825 | 18.00 | 16.88 | 16.91 | 22.07 | 30.00 | -7.93 |

PSD Results

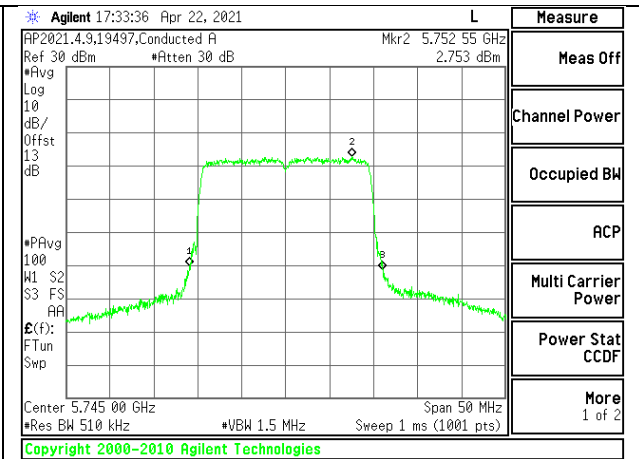
| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/500KHz) | Antenna 2 Meas PSD (dBm/500KHz) | Antenna 3 Meas PSD (dBm/500KHz) | Total Corr'd PSD (dBm/500KHz) | PSD Limit (dBm/500KHz) | PSD Margin (dB) |
|---------|-----------------|---------------------------------|---------------------------------|---------------------------------|-------------------------------|------------------------|-----------------|
| Low | 5745 | 3.90 | 2.75 | 2.80 | 8.09 | 28.40 | -20.31 |
| Mid | 5785 | 3.38 | 2.50 | 2.86 | 7.83 | 28.40 | -20.57 |
| High | 5825 | 3.25 | 2.49 | 2.36 | 7.62 | 28.40 | -20.78 |

Total power and Highest PSD across the entire channel meets the UNII-2C limits thus UNII-3 limits and therefore compliant

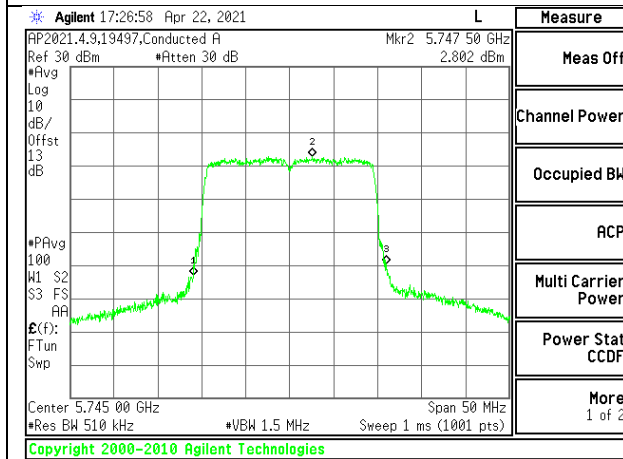
LOW



LOW CHANNEL Antenna 1

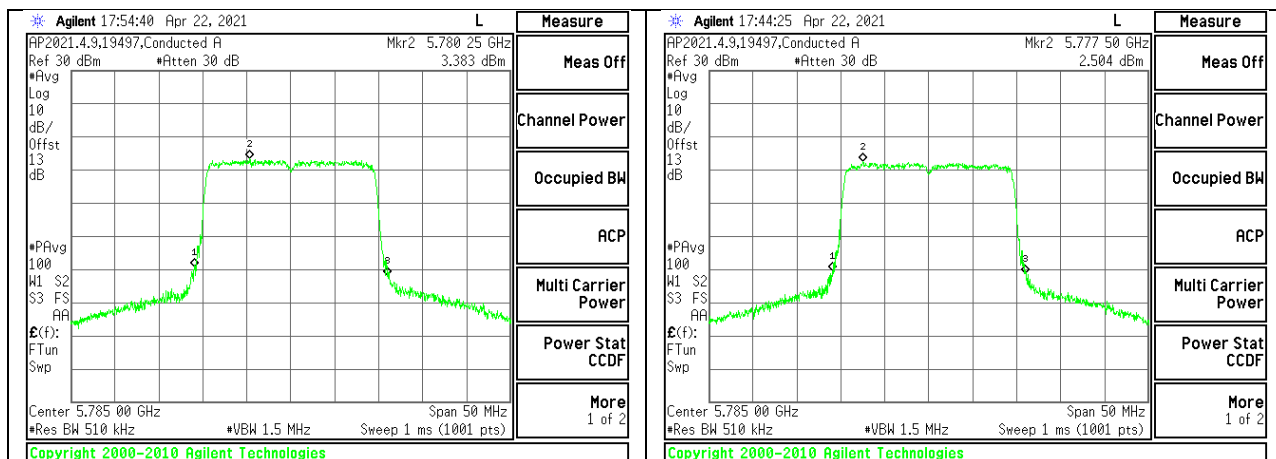


LOW CHANNEL Antenna 2



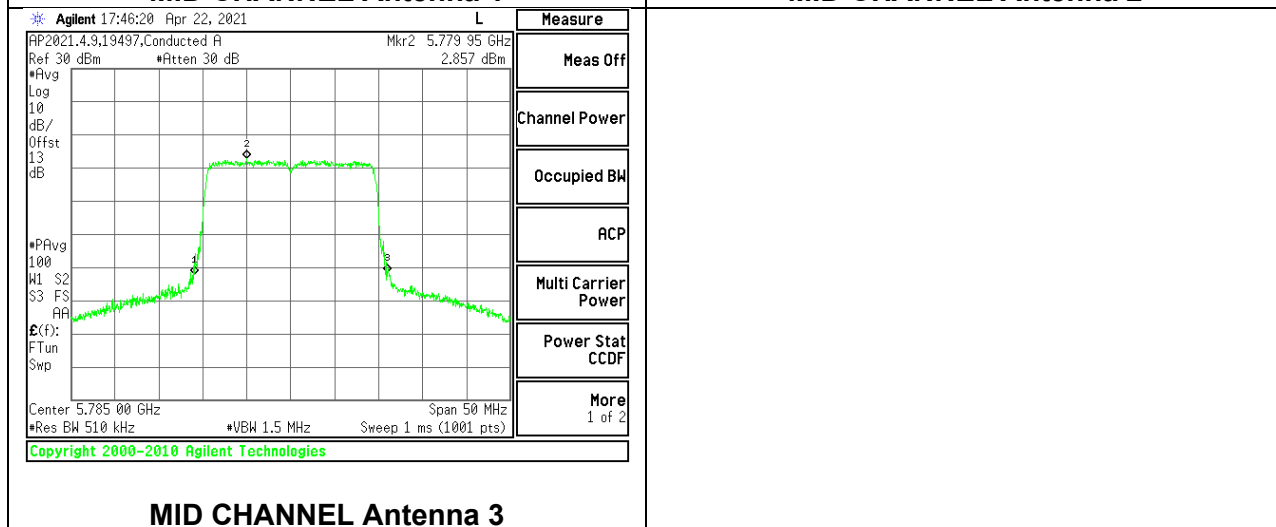
LOW CHANNEL Antenna 3

MID



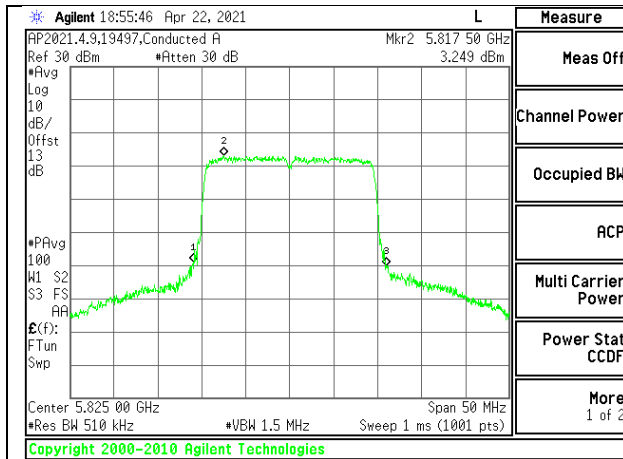
MID CHANNEL Antenna 1

MID CHANNEL Antenna 2

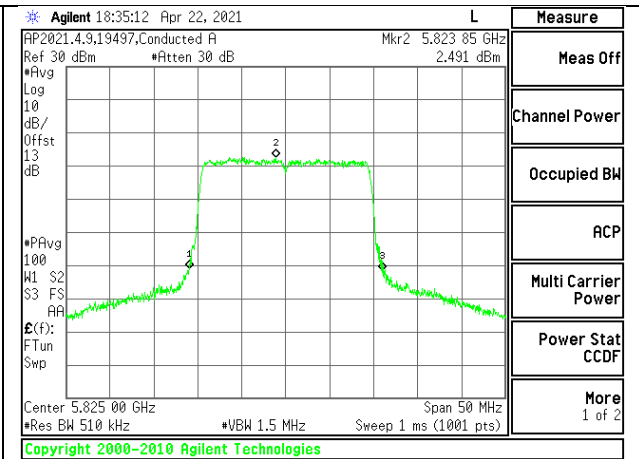


MID CHANNEL Antenna 3

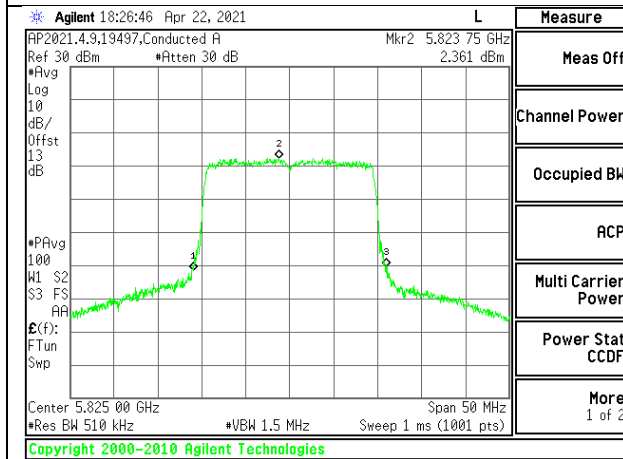
HIGH



HIGH CHANNEL Antenna 1



HIGH CHANNEL Antenna 2



HIGH CHANNEL Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 0

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Antenna Gain and Limit

| Channel | Frequency (MHz) | Directional Gain For Power (dBi) | Directional Gain For PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/500KHz) |
|---------|-----------------|----------------------------------|--------------------------------|-------------------|------------------------|
| Low | 5745 | 2.90 | 7.60 | 30.00 | 28.40 |
| Mid | 5785 | 2.90 | 7.60 | 30.00 | 28.40 |
| High | 5825 | 2.90 | 7.60 | 30.00 | 28.40 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

Output Power Results

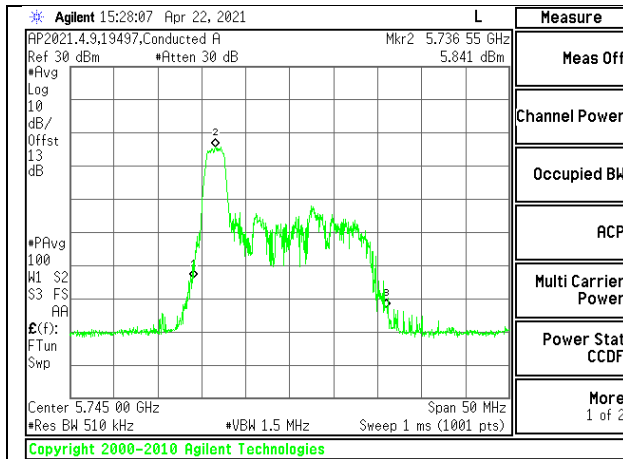
| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|-----------------|----------------------------|----------------------------|----------------------------|--------------------------|-------------------|-------------------|
| Low | 5745 | 6.74 | 5.77 | 6.91 | 11.27 | 30.00 | -18.73 |
| Mid | 5785 | 6.75 | 5.41 | 6.93 | 11.19 | 30.00 | -18.81 |
| High | 5825 | 6.76 | 5.44 | 7.11 | 11.27 | 30.00 | -18.73 |

PSD Results

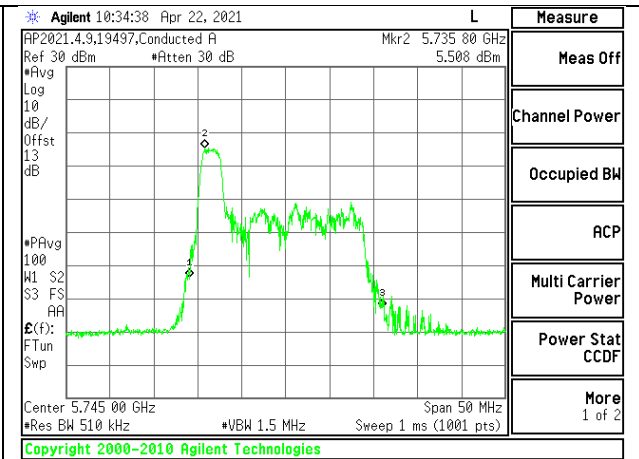
| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/500KHz) | Antenna 2 Meas PSD (dBm/500KHz) | Antenna 3 Meas PSD (dBm/500KHz) | Total Corr'd PSD (dBm/500KHz) | PSD Limit (dBm/500KHz) | PSD Margin (dB) |
|---------|-----------------|---------------------------------|---------------------------------|---------------------------------|-------------------------------|------------------------|-----------------|
| Low | 5745 | 5.84 | 5.51 | 5.73 | 10.60 | 28.40 | -17.80 |
| Mid | 5785 | 6.13 | 5.61 | 5.03 | 10.51 | 28.40 | -17.89 |
| High | 5825 | 5.79 | 5.32 | 5.26 | 10.36 | 28.40 | -18.04 |

Total power and Highest PSD across the entire channel meets the UNII-2C limits thus UNII-3 limits and therefore compliant

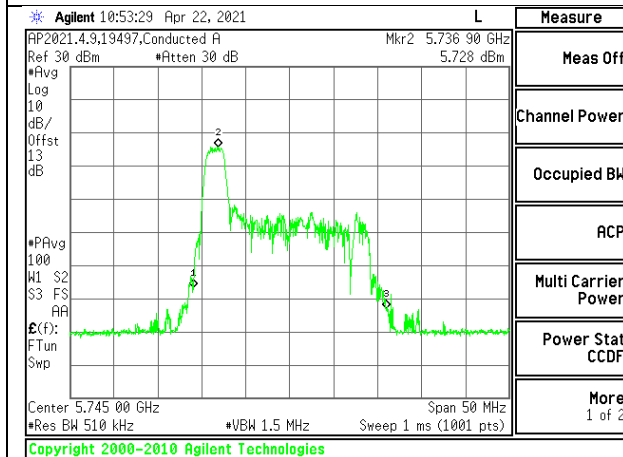
LOW



LOW CHANNEL Antenna 1

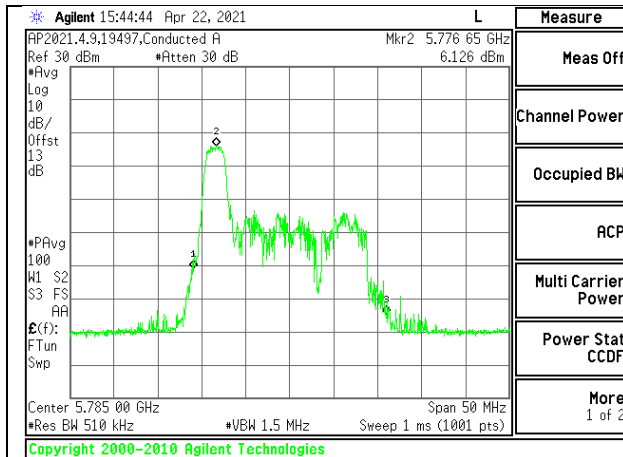


LOW CHANNEL Antenna 2

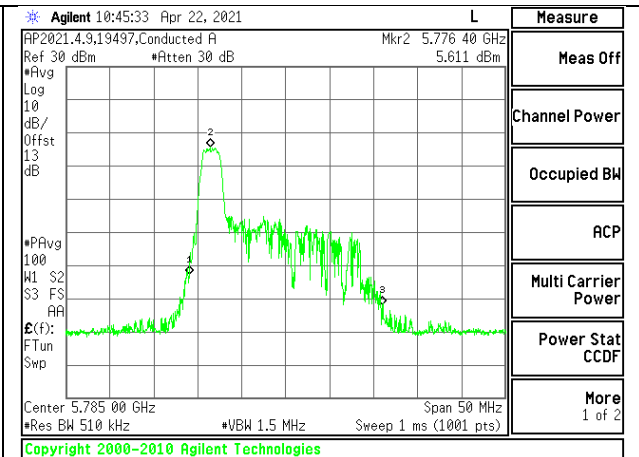


LOW CHANNEL Antenna 3

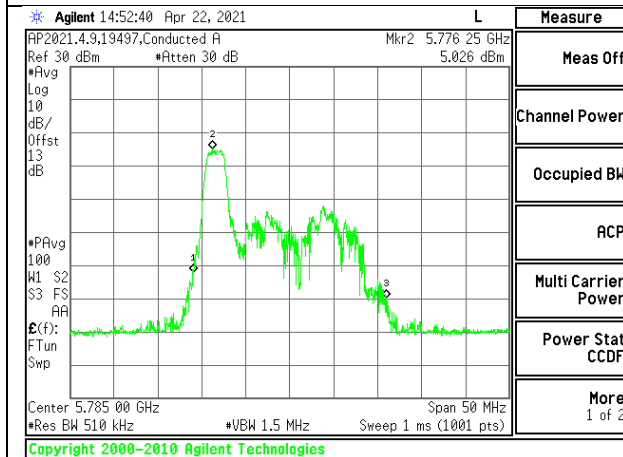
MID



MID CHANNEL Antenna 1

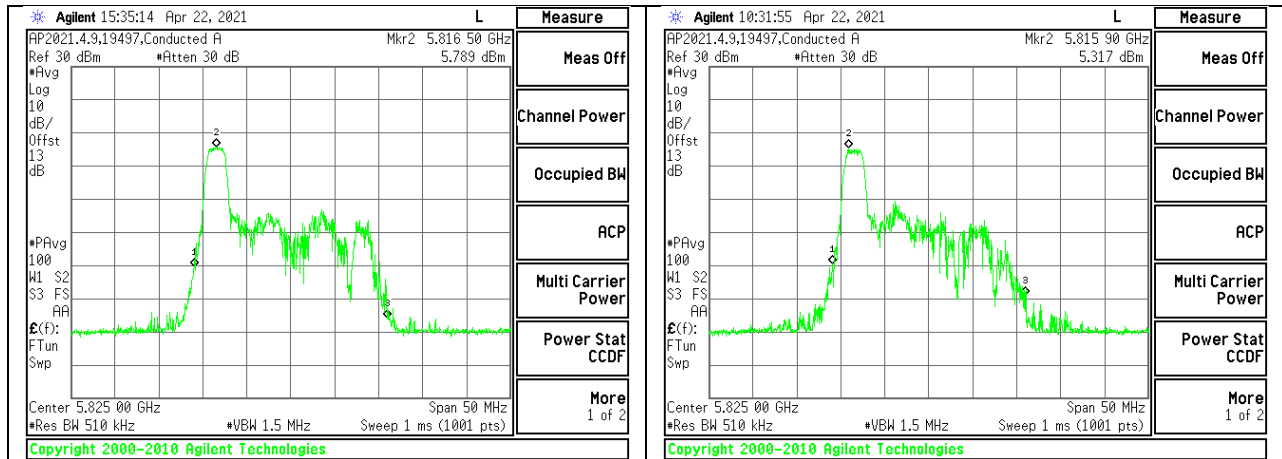


MID CHANNEL Antenna 2



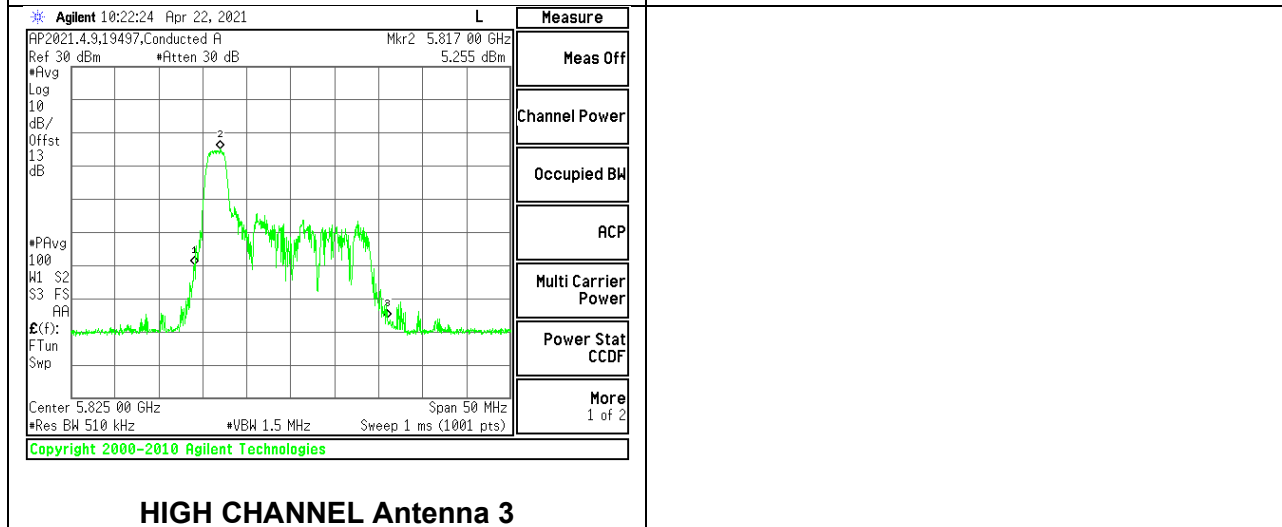
MID CHANNEL Antenna 3

HIGH



HIGH CHANNEL Antenna 1

HIGH CHANNEL Antenna 2



HIGH CHANNEL Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 4

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Antenna Gain and Limit

| Channel | Frequency (MHz) | Directional Gain For Power (dBi) | Directional Gain For PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/ 500KHz) |
|---------|--------------------|---|---|-------------------------|----------------------------------|
| Low | 5745 | 2.90 | 7.60 | 30.00 | 28.40 |
| Mid | 5785 | 2.90 | 7.60 | 30.00 | 28.40 |
| High | 5825 | 2.90 | 7.60 | 30.00 | 28.40 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

Output Power Results

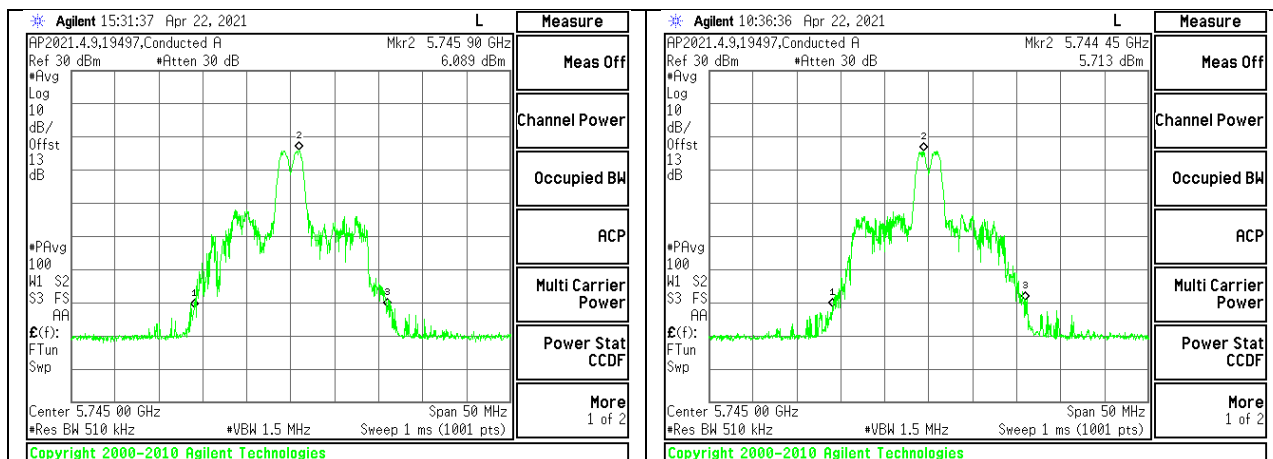
| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low | 5745 | 7.33 | 6.59 | 7.11 | 11.79 | 30.00 | -18.21 |
| Mid | 5785 | 7.34 | 5.51 | 7.39 | 11.60 | 30.00 | -18.40 |
| High | 5825 | 7.36 | 6.17 | 7.22 | 11.72 | 30.00 | -18.28 |

PSD Results

| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/ 500KHz) | Antenna 2 Meas PSD (dBm/ 500KHz) | Antenna 3 Meas PSD (dBm/ 500KHz) | Total Corr'd PSD (dBm/ 500KHz) | PSD Limit (dBm/ 500KHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--|----------------------------------|-----------------------|
| Low | 5745 | 6.09 | 5.71 | 5.24 | 10.60 | 28.40 | -17.80 |
| Mid | 5785 | 5.81 | 5.78 | 5.33 | 10.55 | 28.40 | -17.85 |
| High | 5825 | 6.00 | 5.49 | 5.34 | 10.52 | 28.40 | -17.88 |

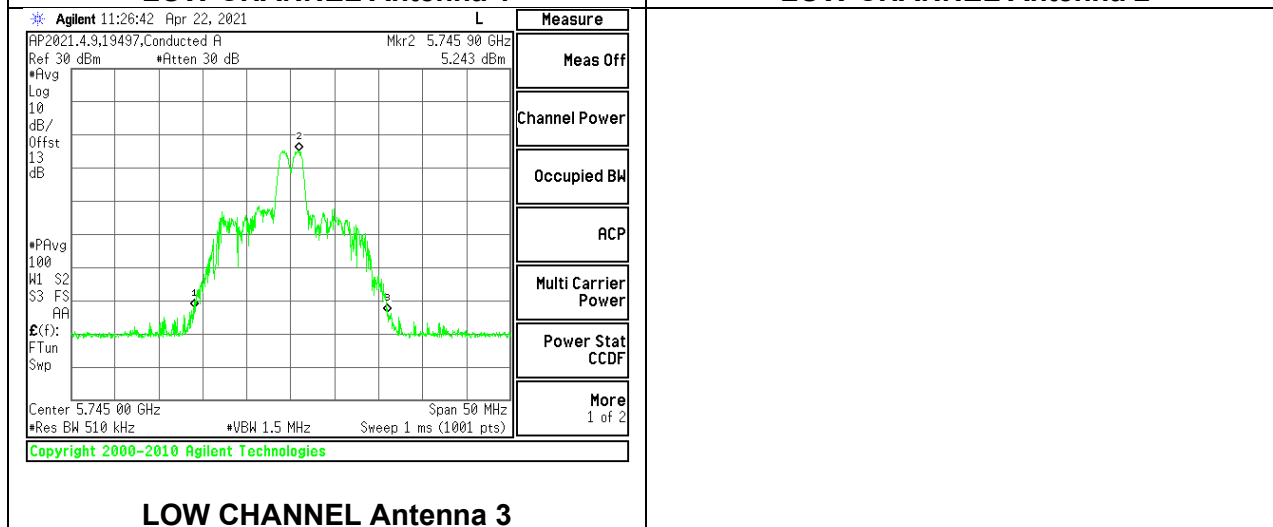
Total power and Highest PSD across the entire channel meets the UNII-2C limits thus UNII-3 limits and therefore compliant

LOW

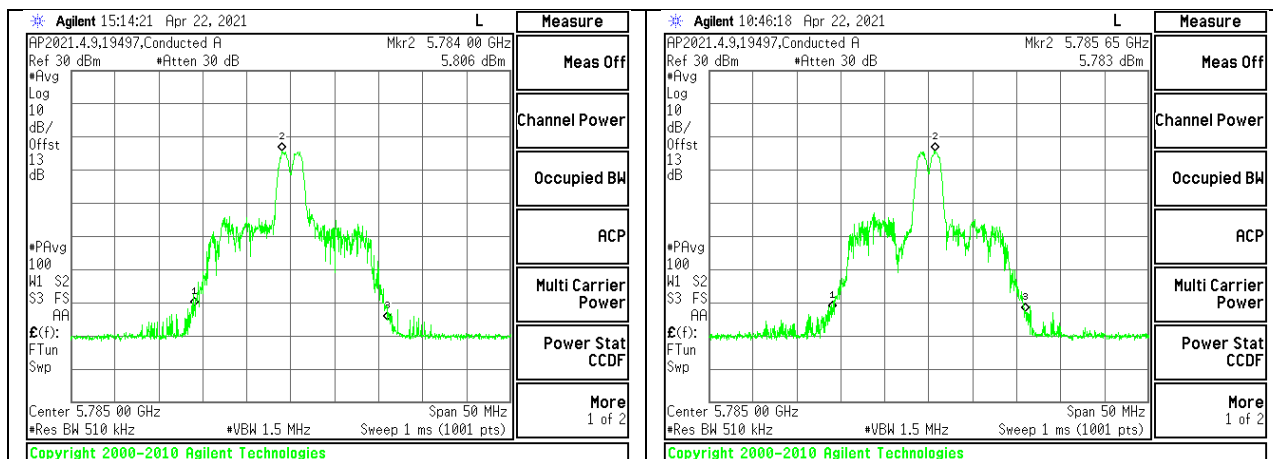


LOW CHANNEL Antenna 1

LOW CHANNEL Antenna 2

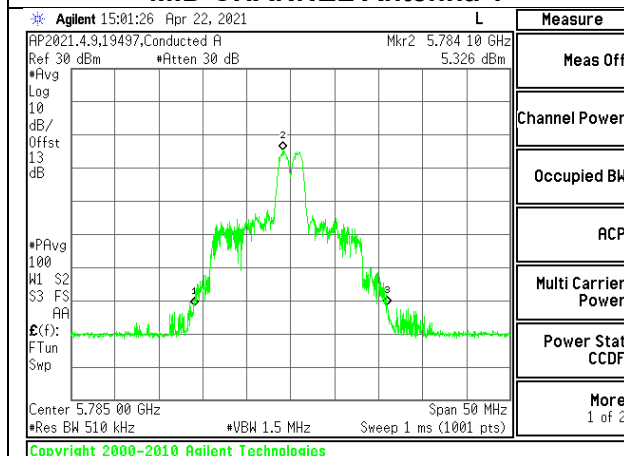


MID



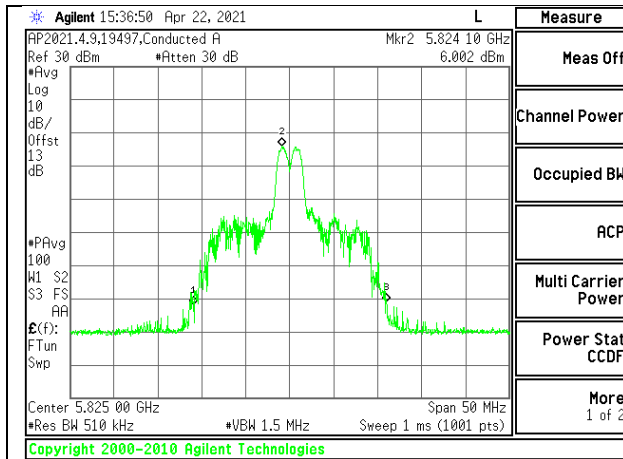
MID CHANNEL Antenna 1

MID CHANNEL Antenna 2

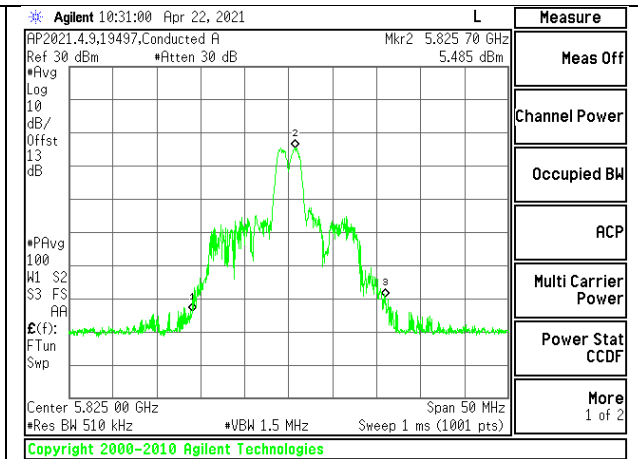


MID CHANNEL Antenna 3

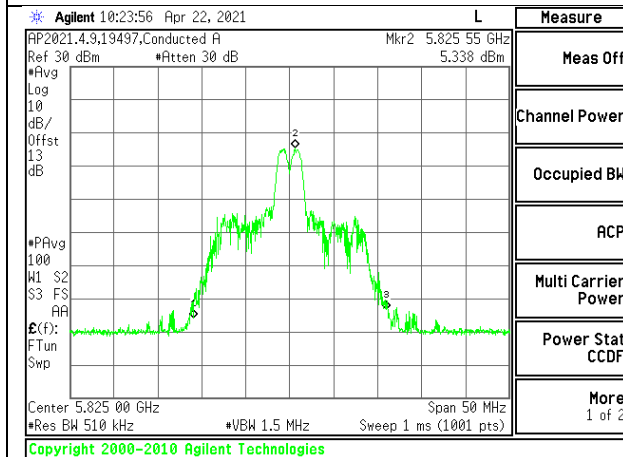
HIGH



HIGH CHANNEL Antenna 1



HIGH CHANNEL Antenna 2



HIGH CHANNEL Antenna 3

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 26-Tones, RU Index 8

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Antenna Gain and Limit

| Channel | Frequency (MHz) | Directional Gain For Power (dBi) | Directional Gain For PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/ 500KHz) |
|---------|--------------------|---|---|-------------------------|----------------------------------|
| Low | 5745 | 2.90 | 7.60 | 30.00 | 28.40 |
| Mid | 5785 | 2.90 | 7.60 | 30.00 | 28.40 |
| High | 5825 | 2.90 | 7.60 | 30.00 | 28.40 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

Output Power Results

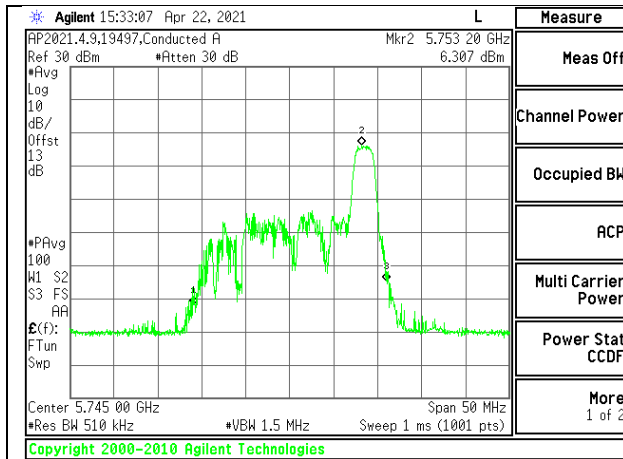
| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------------------|-------------------------|
| Low | 5745 | 6.87 | 5.74 | 6.91 | 11.31 | 30.00 | -18.69 |
| Mid | 5785 | 6.88 | 5.66 | 6.75 | 11.23 | 30.00 | -18.77 |
| High | 5825 | 6.91 | 5.62 | 7.03 | 11.34 | 30.00 | -18.66 |

PSD Results

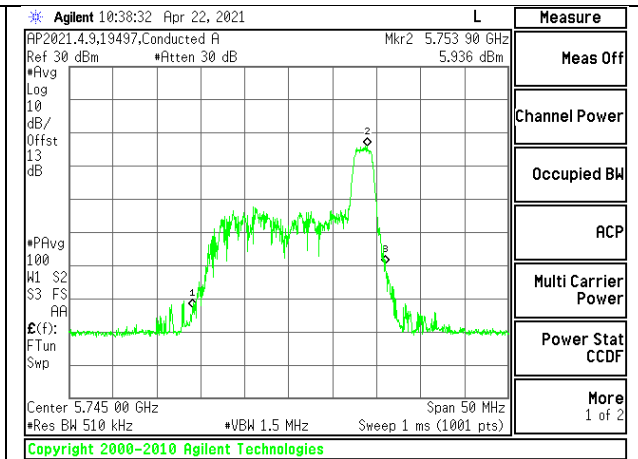
| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/ 500KHz) | Antenna 2 Meas PSD (dBm/ 500KHz) | Antenna 3 Meas PSD (dBm/ 500KHz) | Total Corr'd PSD (dBm/ 500KHz) | PSD Limit (dBm/ 500KHz) | PSD Margin (dB) |
|---------|--------------------|--|--|--|--|----------------------------------|-----------------------|
| Low | 5745 | 6.31 | 5.94 | 5.72 | 10.89 | 28.40 | -17.51 |
| Mid | 5785 | 5.73 | 5.54 | 5.13 | 10.37 | 28.40 | -18.03 |
| High | 5825 | 5.61 | 5.55 | 5.21 | 10.36 | 28.40 | -18.04 |

Total power and Highest PSD across the entire channel meets the UNII-2C limits thus UNII-3 limits and therefore compliant

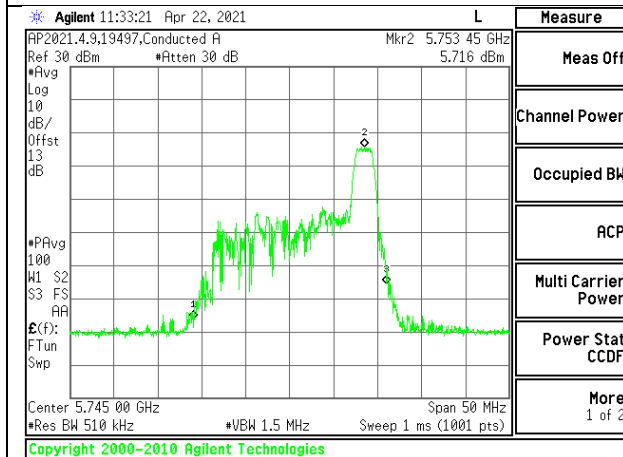
LOW



LOW CHANNEL Antenna 1

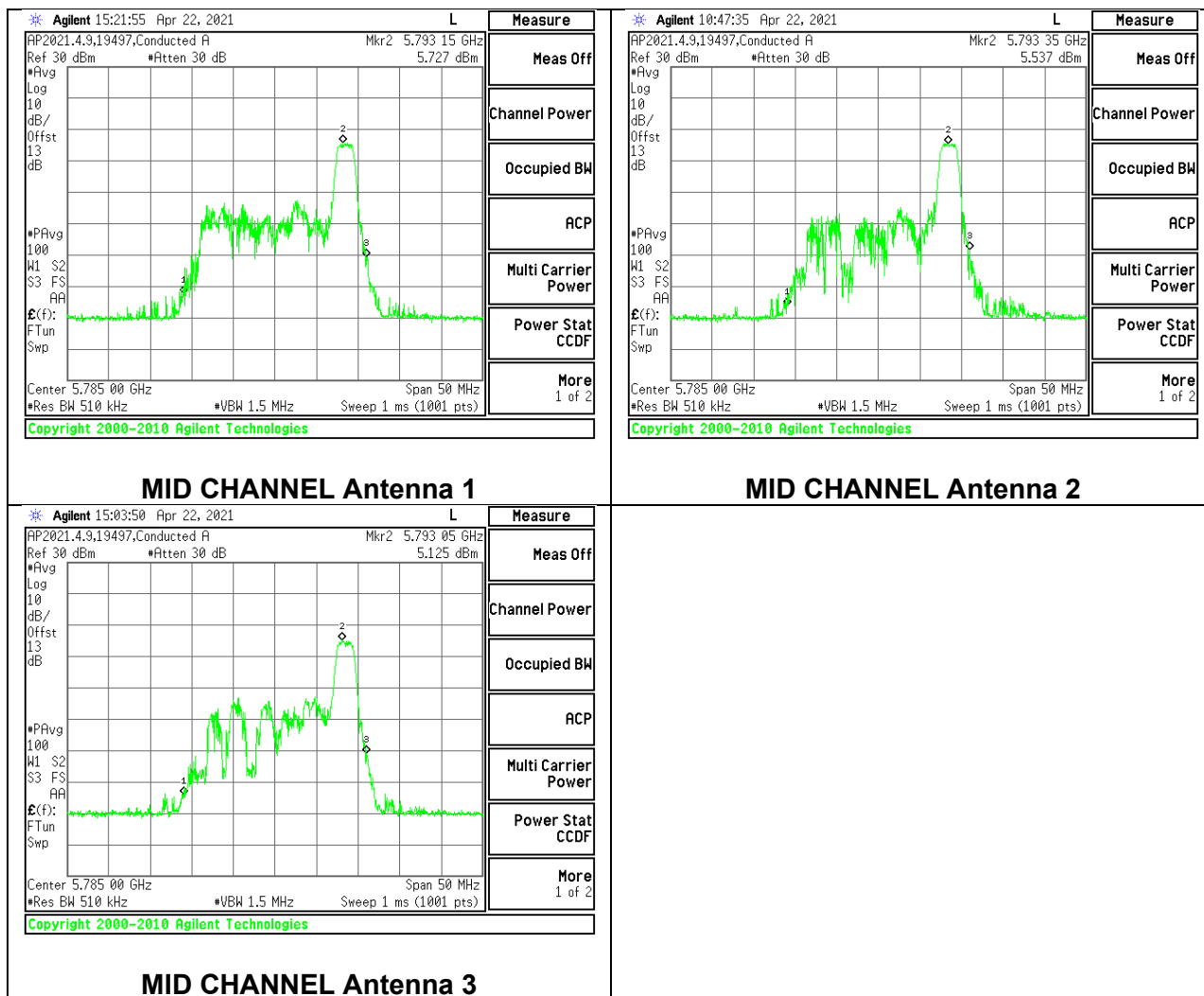


LOW CHANNEL Antenna 2

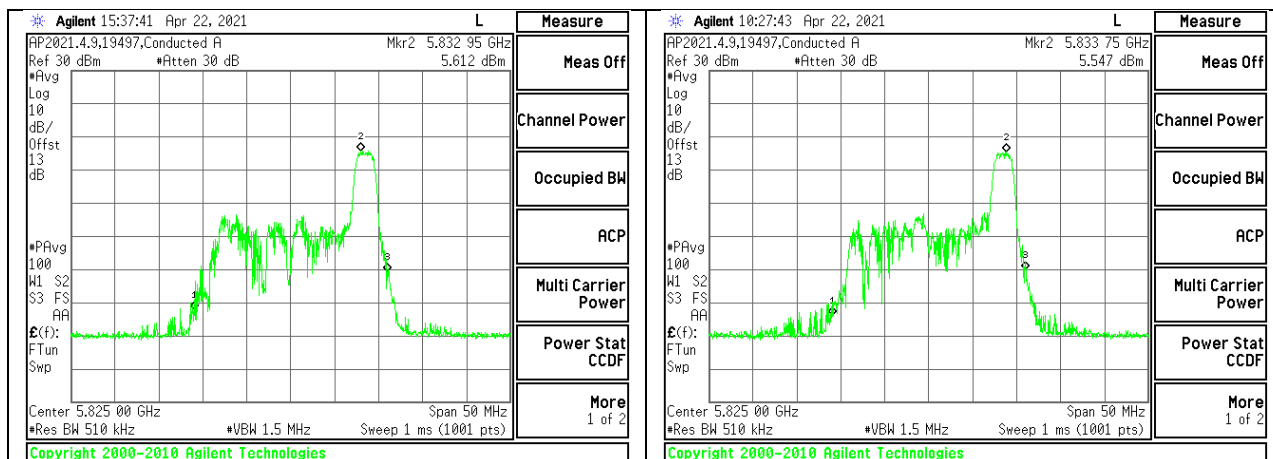


LOW CHANNEL Antenna 3

MID

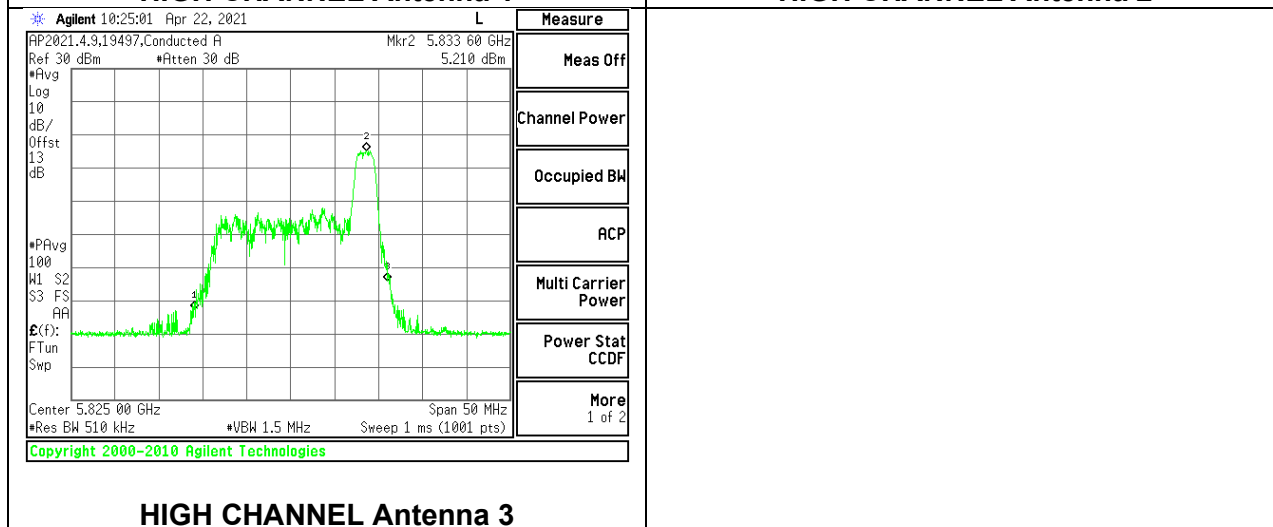


HIGH



HIGH CHANNEL Antenna 1

HIGH CHANNEL Antenna 2



HIGH CHANNEL Antenna 3

9.4.11. 802.11ax HE40 MODE 3TX IN THE 5.8GHz BAND (FCC)

3TX Antenna 1 + Antenna 2 + Antenna 3 CDD OFDMA MODE: 484-Tones, RU Index 65

| | |
|-----------------------|-----------|
| Test Engineer: | GA 12485 |
| Test Date: | 4/29/2021 |

Antenna Gain and Limit

| Channel | Frequency (MHz) | Uncorrelated Gain For Power (dBi) | Correlated Gain For PSD (dBi) | Power Limit (dBm) | PSD Limit (dBm/500KHz) |
|---------|-----------------|-----------------------------------|-------------------------------|-------------------|------------------------|
| Low | 5755 | 2.90 | 7.60 | 30.00 | 28.40 |
| High | 5795 | 2.90 | 7.60 | 30.00 | 28.40 |

| | | |
|---------------------------|------|---|
| Duty Cycle CF (dB) | 0.13 | Included in Calculations of Corr'd PSD |
|---------------------------|------|---|

Output Power Results

| Channel | Frequency (MHz) | Antenna 1 Meas Power (dBm) | Antenna 2 Meas Power (dBm) | Antenna 3 Meas Power (dBm) | Total Corr'd Power (dBm) | Power Limit (dBm) | Power Margin (dB) |
|---------|-----------------|----------------------------|----------------------------|----------------------------|--------------------------|-------------------|-------------------|
| Low | 5755 | 17.44 | 17.11 | 17.58 | 22.15 | 30.00 | -7.85 |
| High | 5795 | 17.69 | 17.08 | 17.42 | 22.18 | 30.00 | -7.82 |

PSD Results

| Channel | Frequency (MHz) | Antenna 1 Meas PSD (dBm/500KHz) | Antenna 2 Meas PSD (dBm/500KHz) | Antenna 3 Meas PSD (dBm/500KHz) | Total Corr'd PSD (dBm/500KHz) | PSD Limit (dBm/500KHz) | PSD Margin (dB) |
|---------|-----------------|---------------------------------|---------------------------------|---------------------------------|-------------------------------|------------------------|-----------------|
| Low | 5755 | -1.17 | 0.52 | 0.32 | 4.85 | 28.40 | -23.55 |
| High | 5795 | -1.21 | 0.31 | 0.19 | 4.72 | 28.40 | -23.68 |

Total power and Highest PSD across the entire channel meets the UNII-2C limits thus UNII-3 limits and therefore compliant