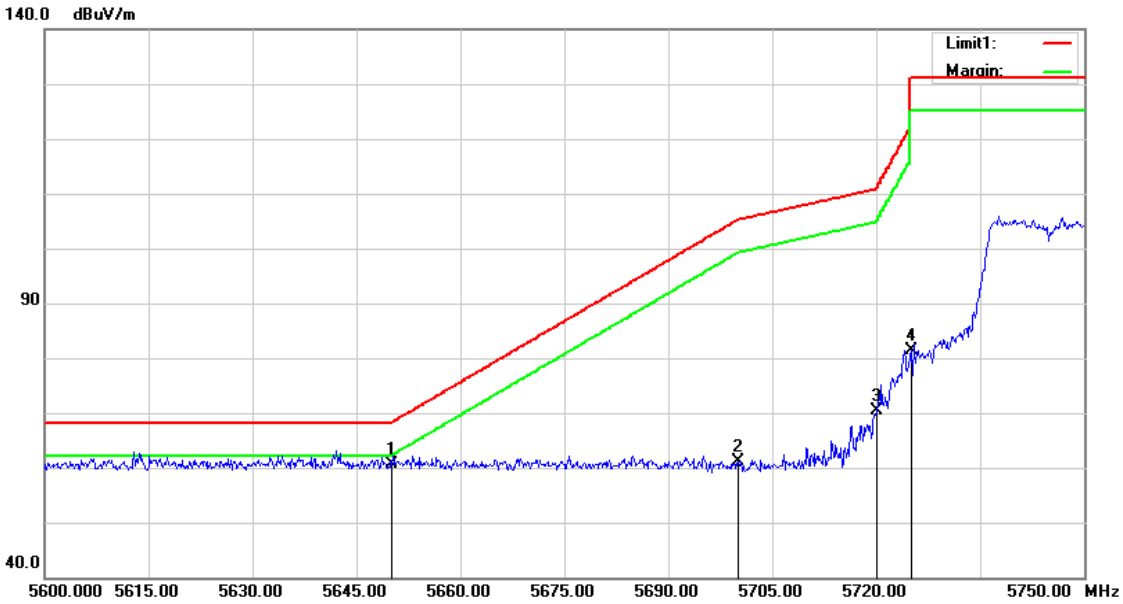
| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5745MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 3 | Date: | 09/28/2017 |
| Ant.Polar.: | Vertical | | |



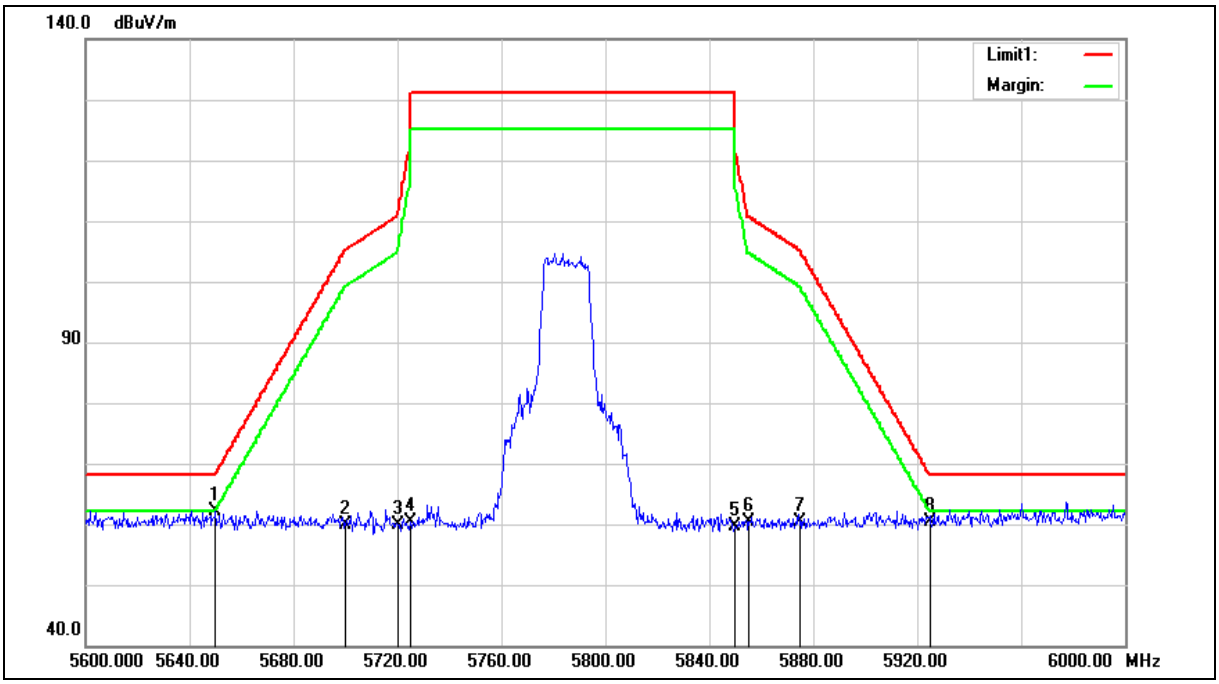

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5650.000 | 64.29 | -3.61 | 60.68 | 68.20 | -7.52 | peak |
| 2 | 5700.000 | 64.67 | -3.56 | 61.11 | 105.20 | -44.09 | peak |
| 3 | 5720.000 | 73.83 | -3.55 | 70.28 | 110.80 | -40.52 | peak |
| 4 | 5725.000 | 84.99 | -3.54 | 81.45 | 122.20 | -40.75 | peak |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5785MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 3 | Date: | 09/28/2017 |
| Ant.Polar.: | Horizontal | | |



| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5785MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 3 | Date: | 09/28/2017 |
| Ant.Polar.: | Horizontal | | |

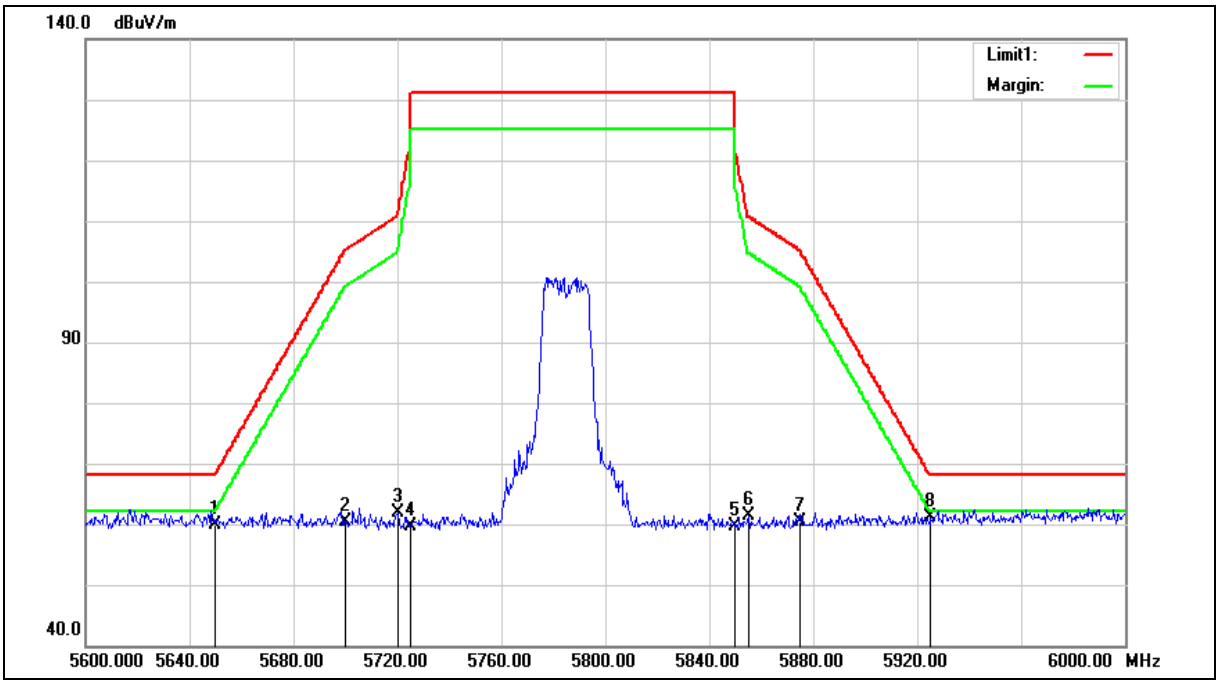
| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5650.000 | 65.72 | -3.61 | 62.11 | 68.20 | -6.09 | peak |
| 2 | 5700.000 | 63.37 | -3.56 | 59.81 | 105.20 | -45.39 | peak |
| 3 | 5720.000 | 63.39 | -3.55 | 59.84 | 110.80 | -50.96 | peak |
| 4 | 5725.000 | 64.02 | -3.54 | 60.48 | 122.20 | -61.72 | peak |
| 5 | 5850.000 | 62.81 | -3.17 | 59.64 | 122.20 | -62.56 | peak |
| 6 | 5855.000 | 63.43 | -3.16 | 60.27 | 110.80 | -50.53 | peak |
| 7 | 5875.000 | 63.49 | -3.08 | 60.41 | 105.20 | -44.79 | peak |
| 8 | 5925.000 | 63.20 | -2.91 | 60.29 | 68.20 | -7.91 | peak |

Note:1. Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5785MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 3 | Date: | 09/28/2017 |
| Ant.Polar.: | Vertical | | |



| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5785MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 3 | Date: | 09/28/2017 |
| Ant.Polar.: | Vertical | | |

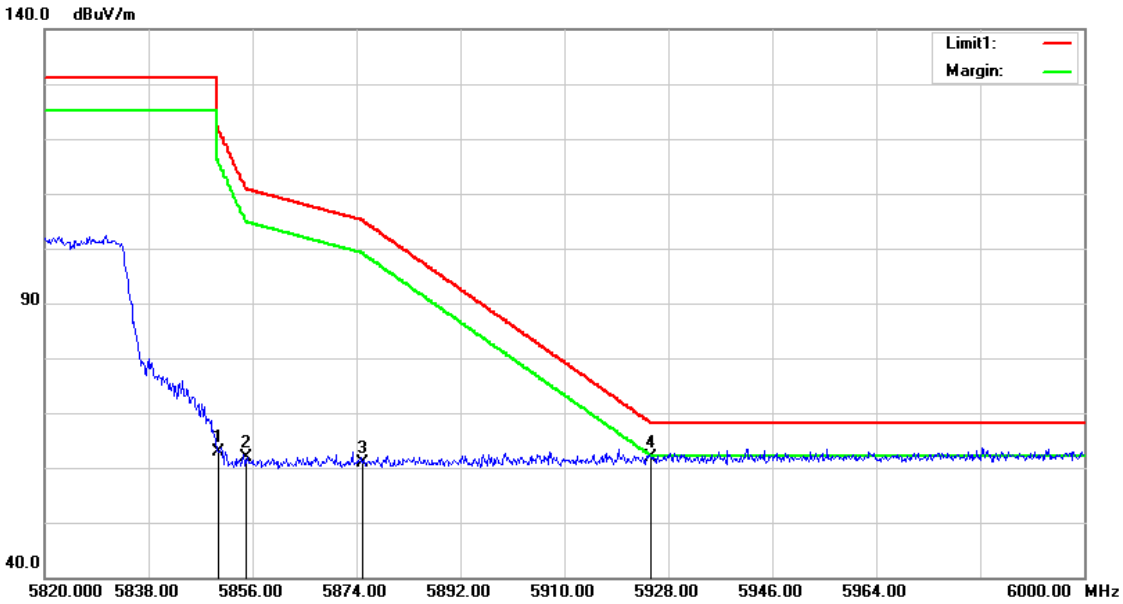
| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5650.000 | 63.61 | -3.61 | 60.00 | 68.20 | -8.20 | peak |
| 2 | 5700.000 | 63.86 | -3.56 | 60.30 | 105.20 | -44.90 | peak |
| 3 | 5720.000 | 65.38 | -3.55 | 61.83 | 110.80 | -48.97 | peak |
| 4 | 5725.000 | 63.27 | -3.54 | 59.73 | 122.20 | -62.47 | peak |
| 5 | 5850.000 | 62.68 | -3.17 | 59.51 | 122.20 | -62.69 | peak |
| 6 | 5855.000 | 64.43 | -3.16 | 61.27 | 110.80 | -49.53 | peak |
| 7 | 5875.000 | 63.48 | -3.08 | 60.40 | 105.20 | -44.80 | peak |
| 8 | 5925.000 | 64.12 | -2.91 | 61.21 | 68.20 | -6.99 | peak |

Note:1. Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5825MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 3 | Date: | 09/28/2017 |
| Ant.Polar.: | Horizontal | | |



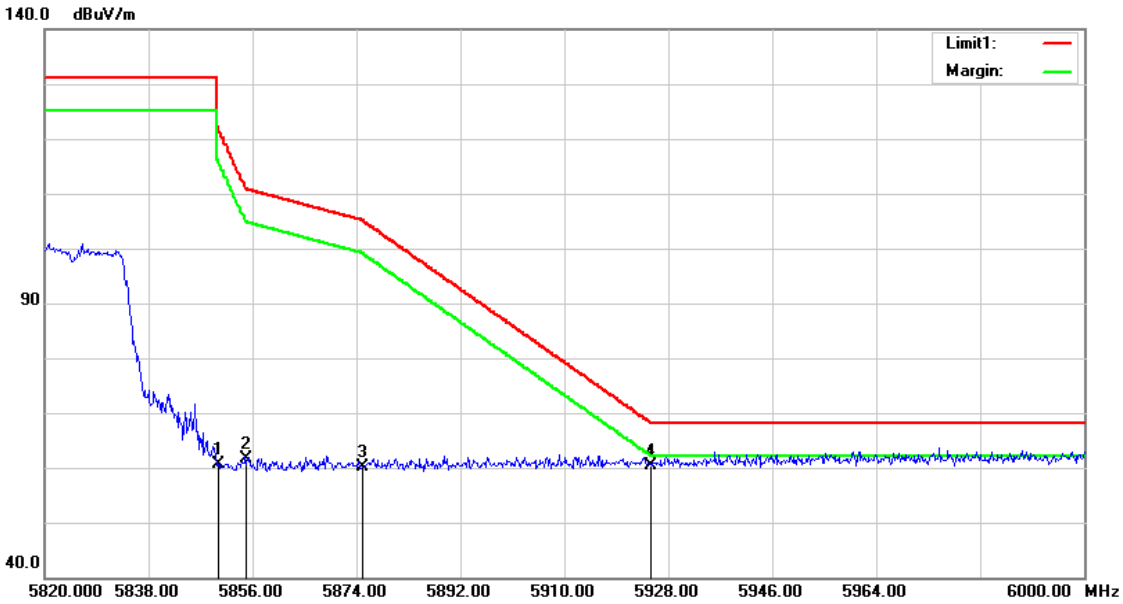

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5850.000 | 66.16 | -3.17 | 62.99 | 122.20 | -59.21 | peak |
| 2 | 5855.000 | 65.05 | -3.16 | 61.89 | 110.80 | -48.91 | peak |
| 3 | 5875.000 | 64.05 | -3.08 | 60.97 | 105.20 | -44.23 | peak |
| 4 | 5925.000 | 64.84 | -2.91 | 61.93 | 68.20 | -6.27 | peak |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5825MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 3 | Date: | 09/28/2017 |
| Ant.Polar.: | Vertical | | |



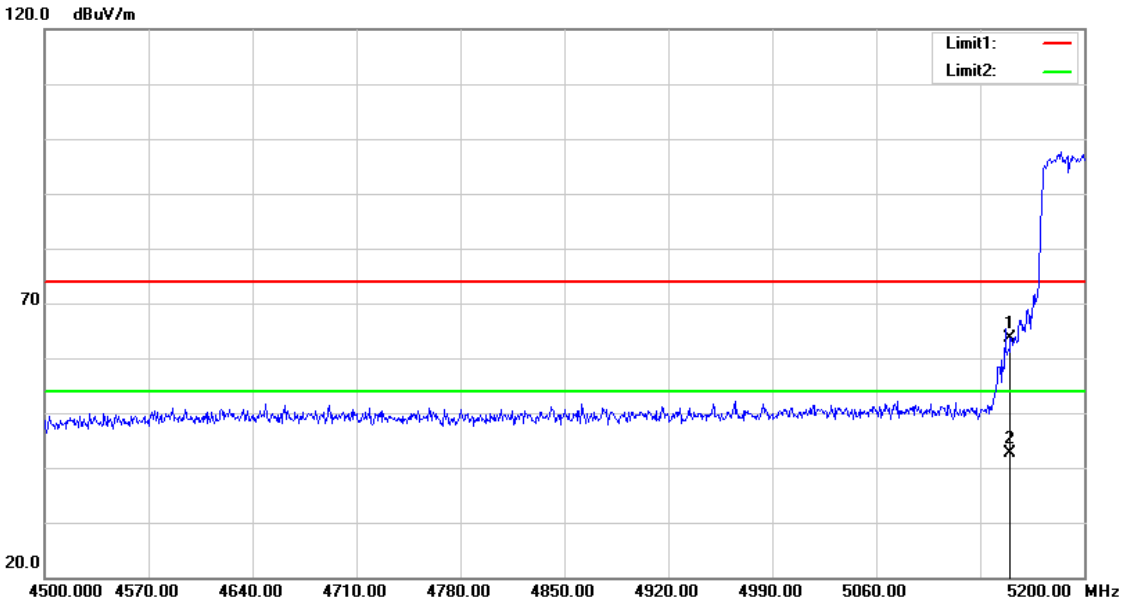

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5850.000 | 63.88 | -3.17 | 60.71 | 122.20 | -61.49 | peak |
| 2 | 5855.000 | 64.69 | -3.16 | 61.53 | 110.80 | -49.27 | peak |
| 3 | 5875.000 | 63.25 | -3.08 | 60.17 | 105.20 | -45.03 | peak |
| 4 | 5925.000 | 63.24 | -2.91 | 60.33 | 68.20 | -7.87 | peak |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5190MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 4 | Date: | 09/28/2017 |
| Ant.Polar.: | Horizontal | | |



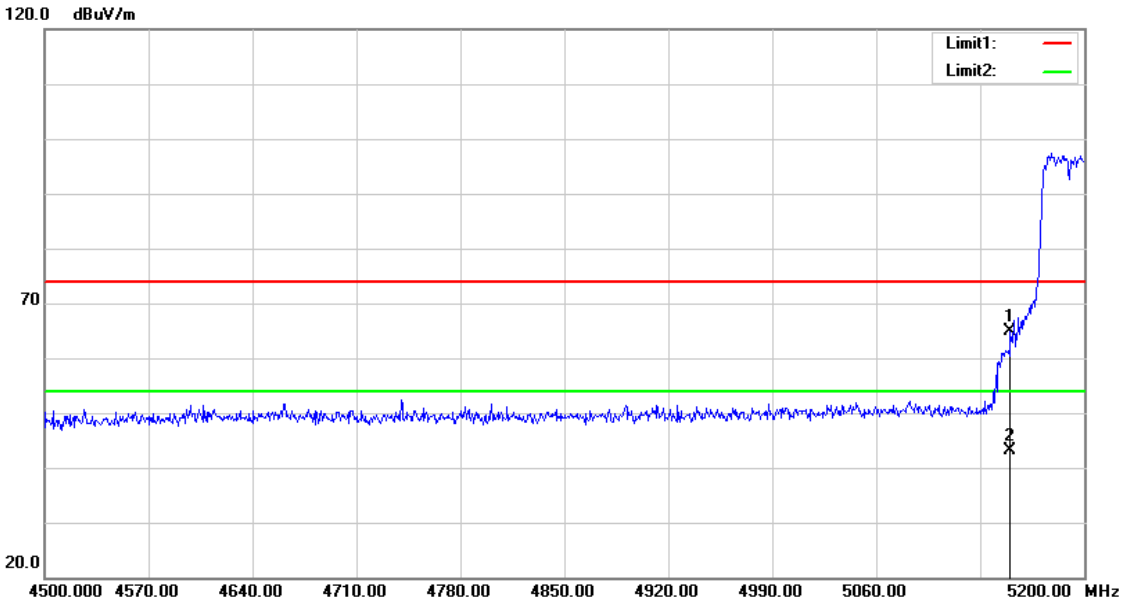

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5150.000 | 67.75 | -4.24 | 63.51 | 74.00 | -10.49 | peak |
| 2 | 5150.000 | 46.92 | -4.24 | 42.68 | 54.00 | -11.32 | AVG |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5190MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 4 | Date: | 09/28/2017 |
| Ant.Polar.: | Vertical | | |



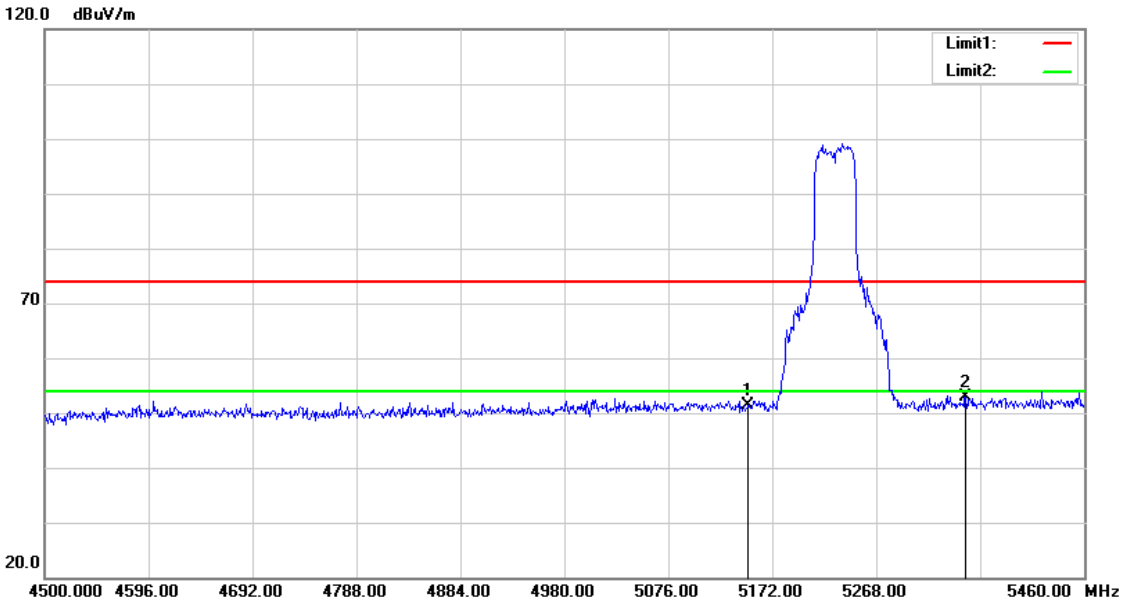

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5150.000 | 69.08 | -4.24 | 64.84 | 74.00 | -9.16 | peak |
| 2 | 5150.000 | 47.25 | -4.24 | 43.01 | 54.00 | -10.99 | AVG |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5230MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 4 | Date: | 09/28/2017 |
| Ant.Polar.: | Horizontal | | |



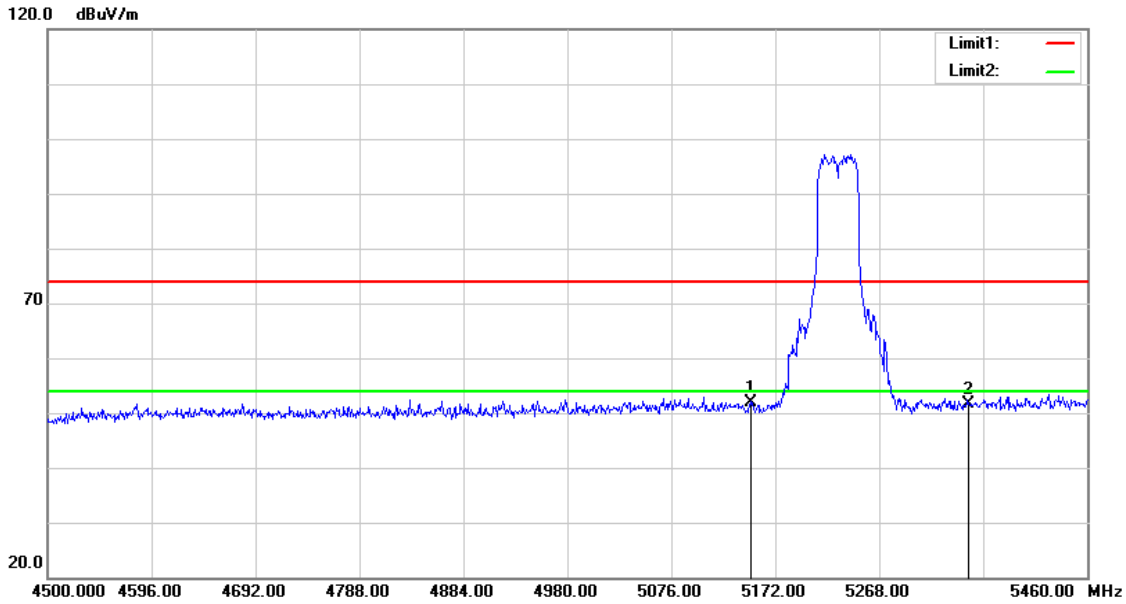

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5150.000 | 55.67 | -4.24 | 51.43 | 74.00 | -22.57 | peak |
| 2 | 5350.000 | 56.54 | -3.76 | 52.78 | 74.00 | -21.22 | peak |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5230MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 4 | Date: | 09/28/2017 |
| Ant.Polar.: | Vertical | | |



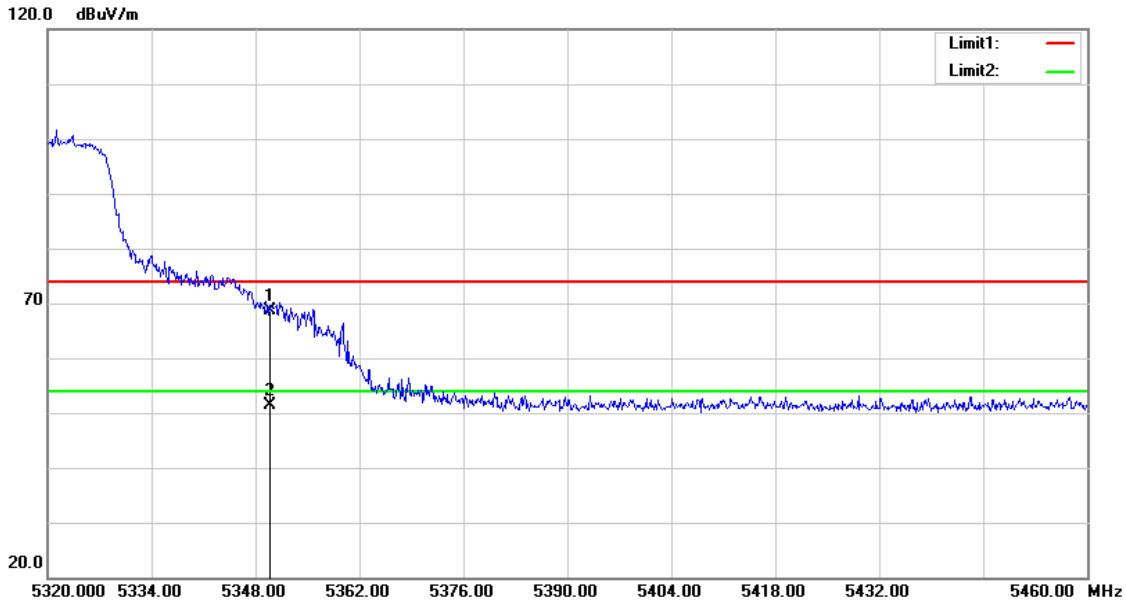

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5150.000 | 56.06 | -4.24 | 51.82 | 74.00 | -22.18 | peak |
| 2 | 5350.000 | 55.45 | -3.76 | 51.69 | 74.00 | -22.31 | peak |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5310MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 4 | Date: | 09/28/2017 |
| Ant.Polar.: | Horizontal | | |



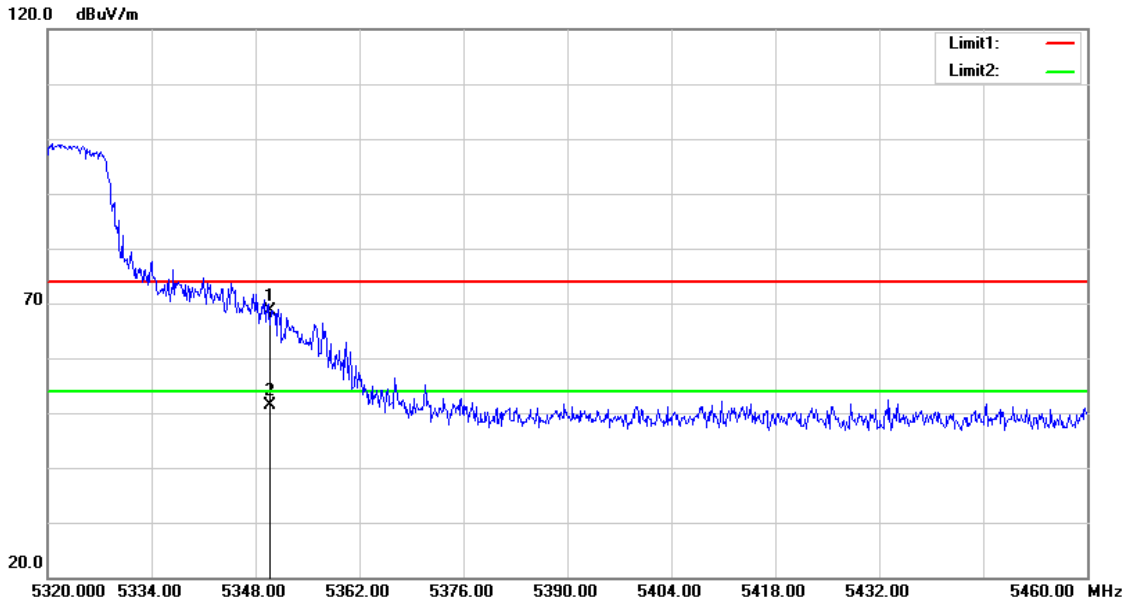

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5350.000 | 72.29 | -3.76 | 68.53 | 74.00 | -5.47 | peak |
| 2 | 5350.000 | 55.15 | -3.76 | 51.39 | 54.00 | -2.61 | AVG |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5310MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 4 | Date: | 09/28/2017 |
| Ant.Polar.: | Vertical | | |



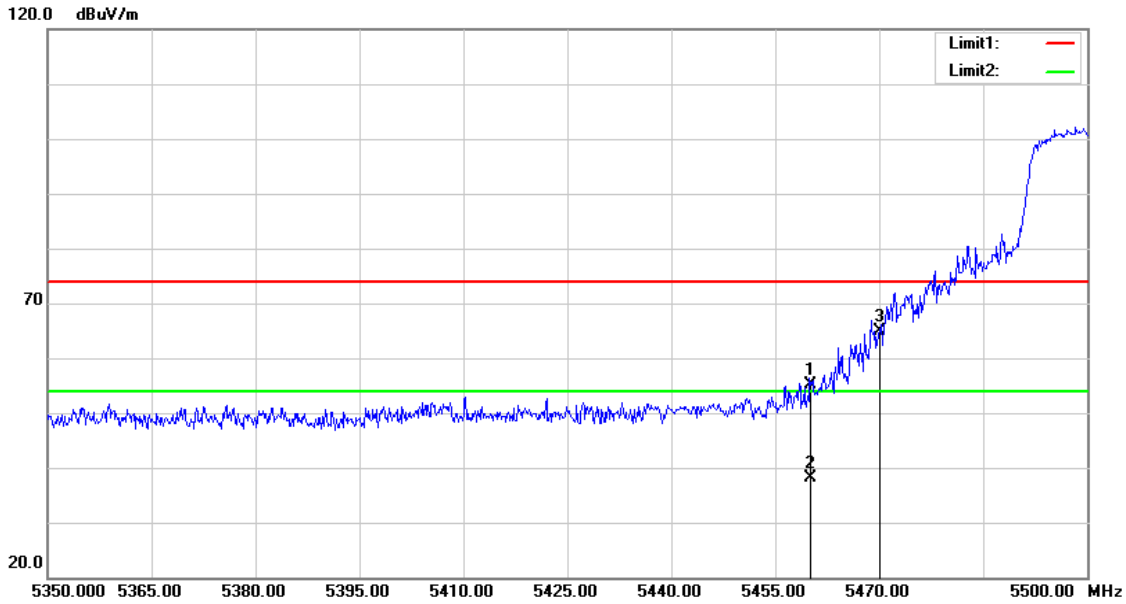

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5350.000 | 72.36 | -3.76 | 68.60 | 74.00 | -5.40 | peak |
| 2 | 5350.000 | 55.22 | -3.76 | 51.46 | 54.00 | -2.54 | AVG |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5510MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 4 | Date: | 09/28/2017 |
| Ant.Polar.: | Horizontal | | |



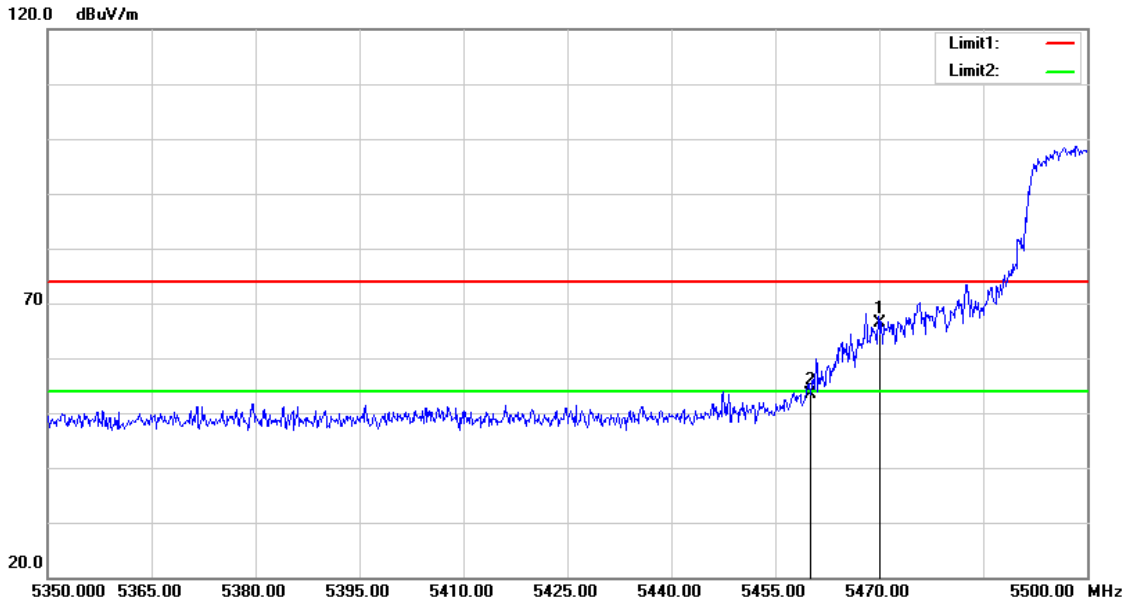

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5460.000 | 58.88 | -3.71 | 55.17 | 74.00 | -18.83 | peak |
| 2 | 5460.000 | 41.79 | -3.71 | 38.08 | 54.00 | -15.92 | AVG |
| 3 | 5470.000 | 68.63 | -3.72 | 64.91 | 74.00 | -9.09 | peak |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5510MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 4 | Date: | 09/28/2017 |
| Ant.Polar.: | Vertical | | |



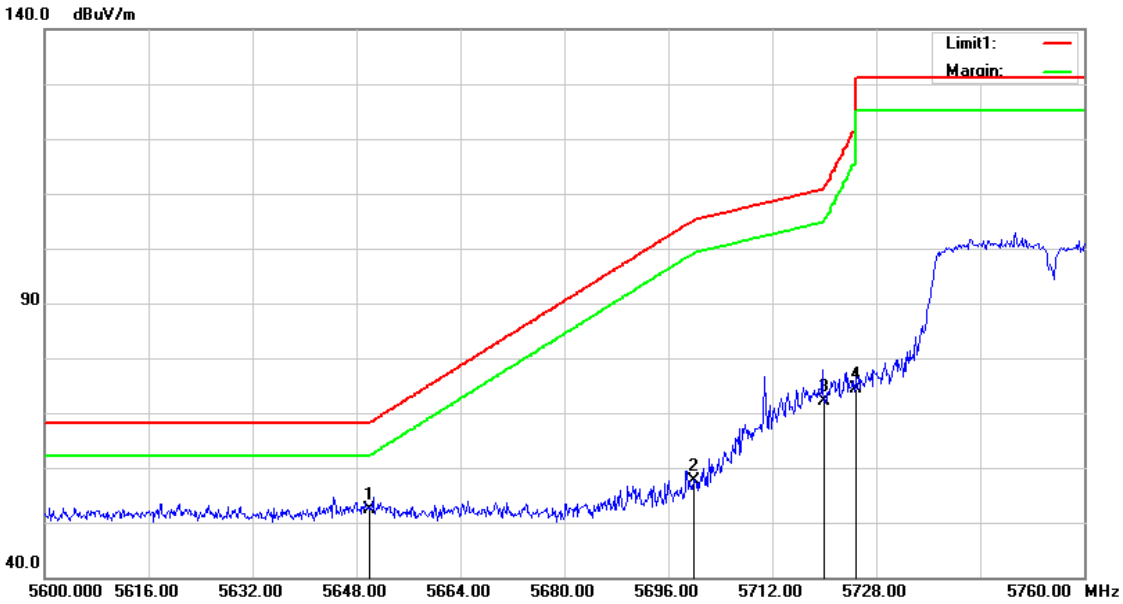

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5470.000 | 70.03 | -3.72 | 66.31 | 74.00 | -7.69 | peak |
| 2 | 5460.000 | 56.97 | -3.71 | 53.26 | 74.00 | -20.74 | peak |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5755MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 4 | Date: | 09/28/2017 |
| Ant.Polar.: | Horizontal | | |



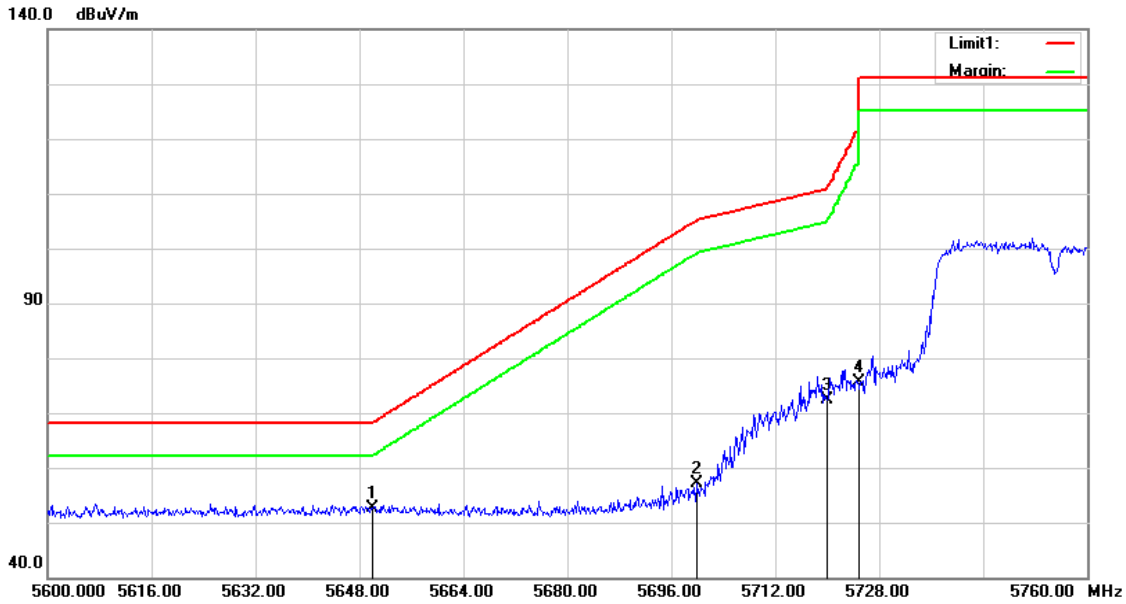

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5650.000 | 56.05 | -3.61 | 52.44 | 68.20 | -15.76 | peak |
| 2 | 5700.000 | 61.31 | -3.56 | 57.75 | 105.20 | -47.45 | peak |
| 3 | 5720.000 | 75.64 | -3.55 | 72.09 | 110.80 | -38.71 | peak |
| 4 | 5725.000 | 77.96 | -3.54 | 74.42 | 122.20 | -47.78 | peak |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5755MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 4 | Date: | 09/28/2017 |
| Ant.Polar.: | Vertical | | |



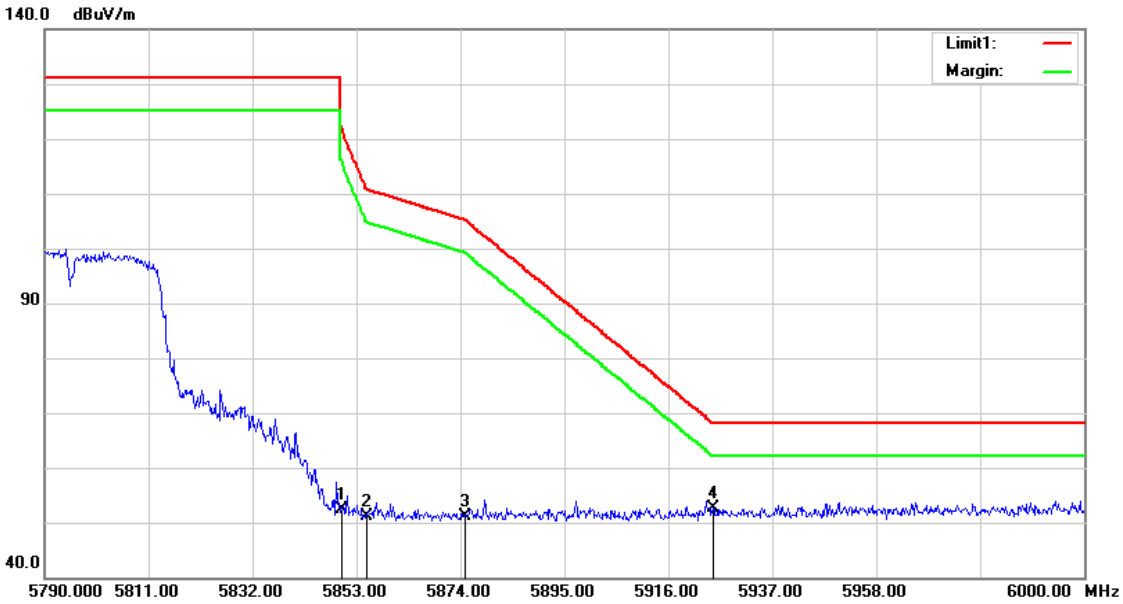

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5650.000 | 56.13 | -3.61 | 52.52 | 68.20 | -15.68 | peak |
| 2 | 5700.000 | 60.78 | -3.56 | 57.22 | 105.20 | -47.98 | peak |
| 3 | 5720.000 | 75.87 | -3.55 | 72.32 | 110.80 | -38.48 | peak |
| 4 | 5725.000 | 79.19 | -3.54 | 75.65 | 122.20 | -46.55 | peak |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5795MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 4 | Date: | 09/28/2017 |
| Ant.Polar.: | Horizontal | | |



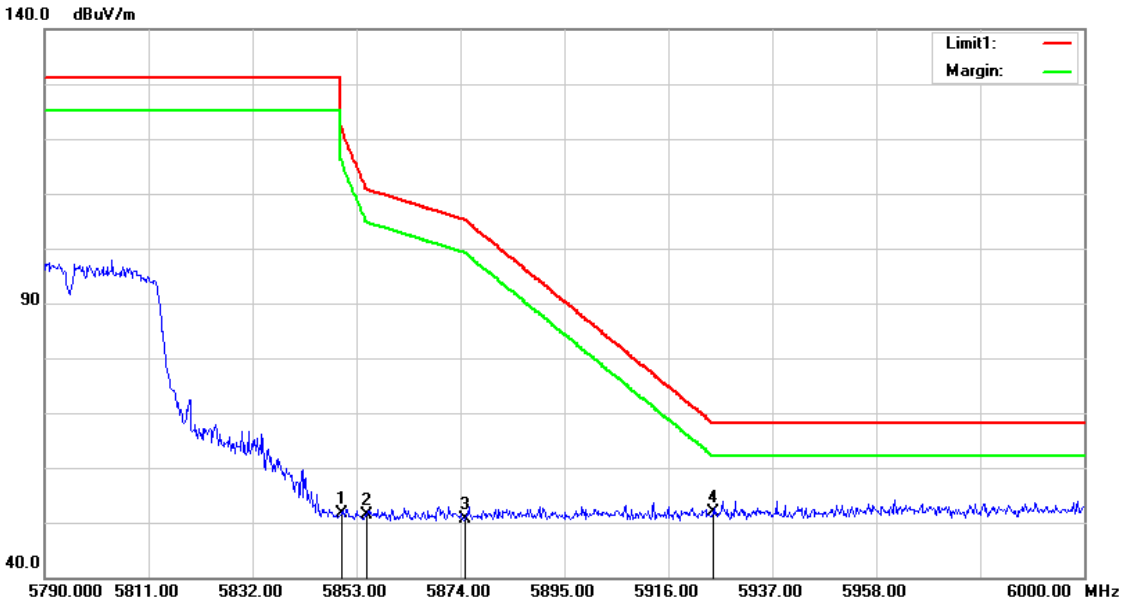

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5850.000 | 55.67 | -3.17 | 52.50 | 122.20 | -69.70 | peak |
| 2 | 5855.000 | 54.27 | -3.16 | 51.11 | 110.80 | -59.69 | peak |
| 3 | 5875.000 | 54.09 | -3.08 | 51.01 | 105.20 | -54.19 | peak |
| 4 | 5925.000 | 55.46 | -2.91 | 52.55 | 68.20 | -15.65 | peak |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5795MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 4 | Date: | 09/28/2017 |
| Ant.Polar.: | Vertical | | |



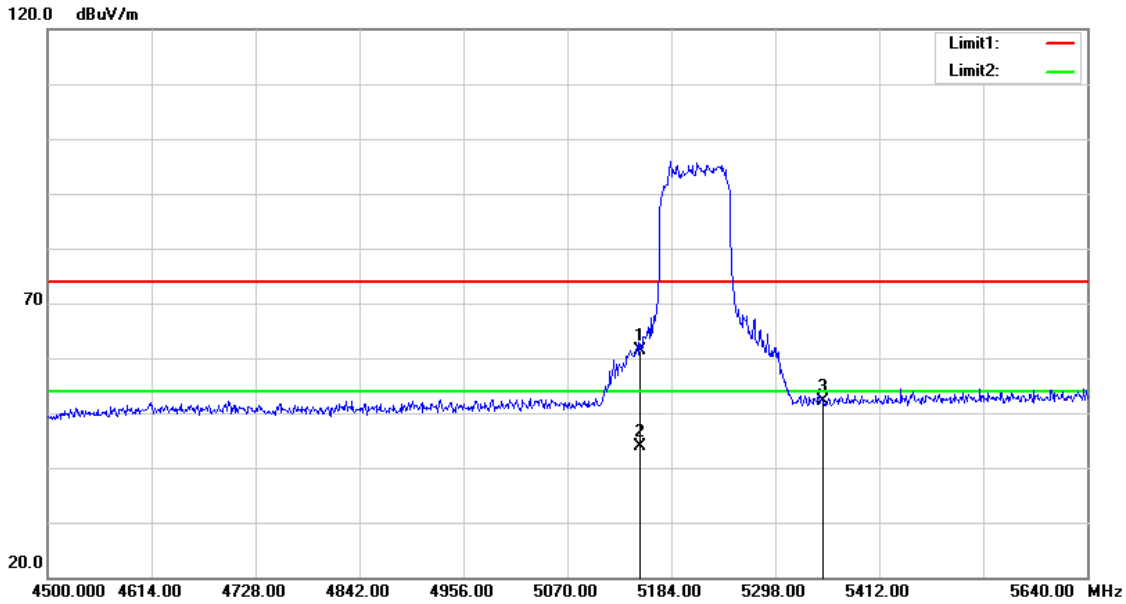

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5850.000 | 54.70 | -3.17 | 51.53 | 122.20 | -70.67 | peak |
| 2 | 5855.000 | 54.58 | -3.16 | 51.42 | 110.80 | -59.38 | peak |
| 3 | 5875.000 | 53.83 | -3.08 | 50.75 | 105.20 | -54.45 | peak |
| 4 | 5925.000 | 54.78 | -2.91 | 51.87 | 68.20 | -16.33 | peak |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5210MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 5 | Date: | 09/28/2017 |
| Ant.Polar.: | Horizontal | | |



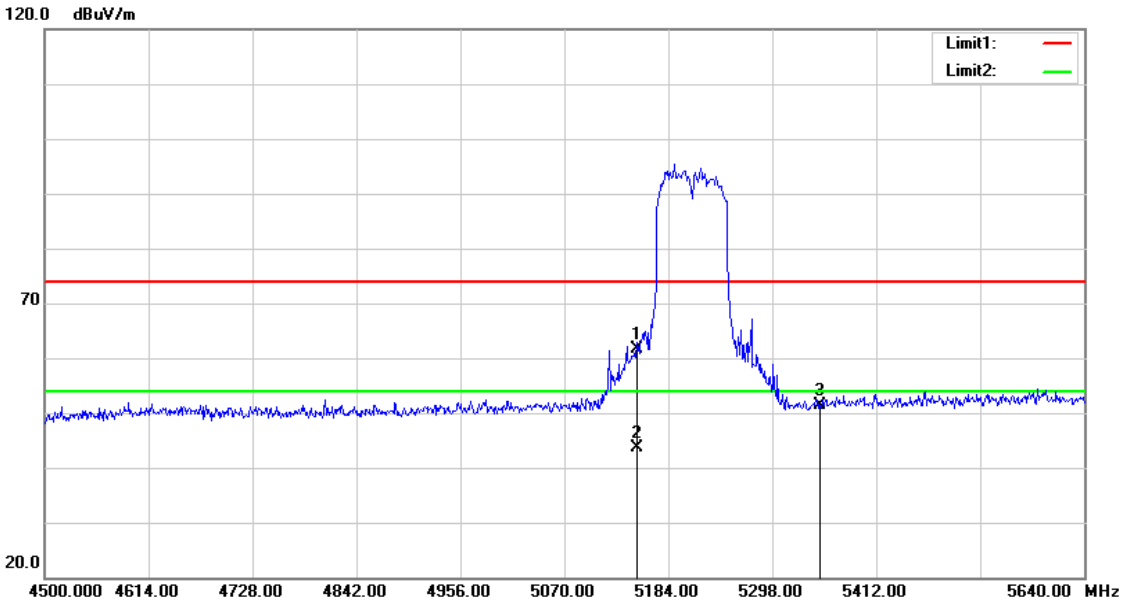

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5150.000 | 65.51 | -4.24 | 61.27 | 74.00 | -12.73 | peak |
| 2 | 5150.000 | 48.20 | -4.24 | 43.96 | 54.00 | -10.04 | AVG |
| 3 | 5350.000 | 55.80 | -3.76 | 52.04 | 74.00 | -21.96 | peak |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5210MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 5 | Date: | 09/28/2017 |
| Ant.Polar.: | Vertical | | |



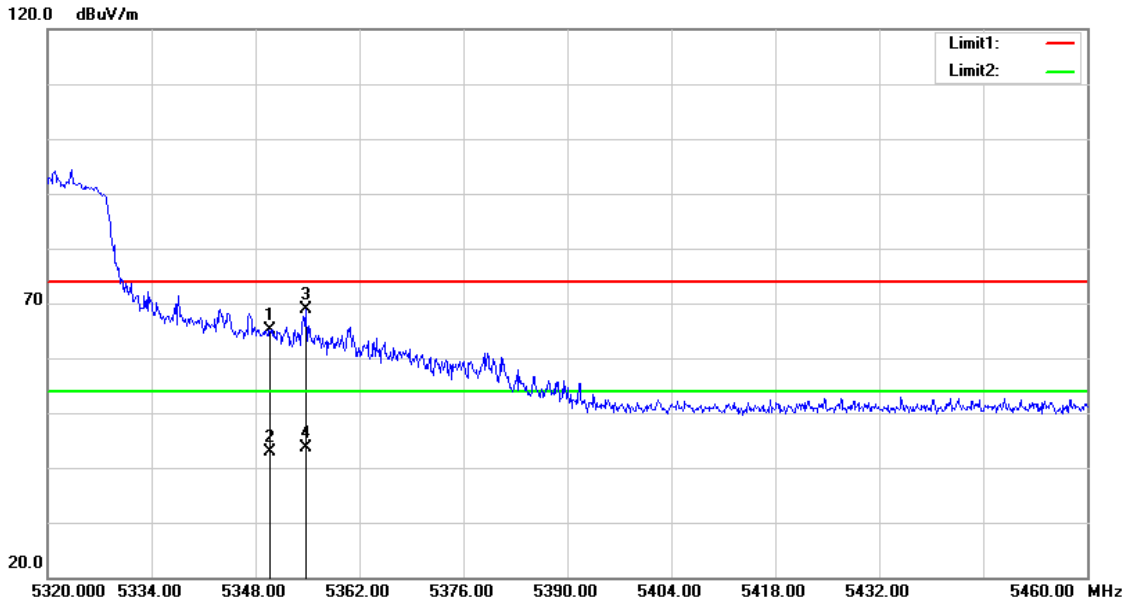

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5150.000 | 65.80 | -4.24 | 61.56 | 74.00 | -12.44 | peak |
| 2 | 5150.000 | 47.89 | -4.24 | 43.65 | 54.00 | -10.35 | AVG |
| 3 | 5350.000 | 55.04 | -3.76 | 51.28 | 74.00 | -22.72 | peak |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5290MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 5 | Date: | 09/28/2017 |
| Ant.Polar.: | Horizontal | | |



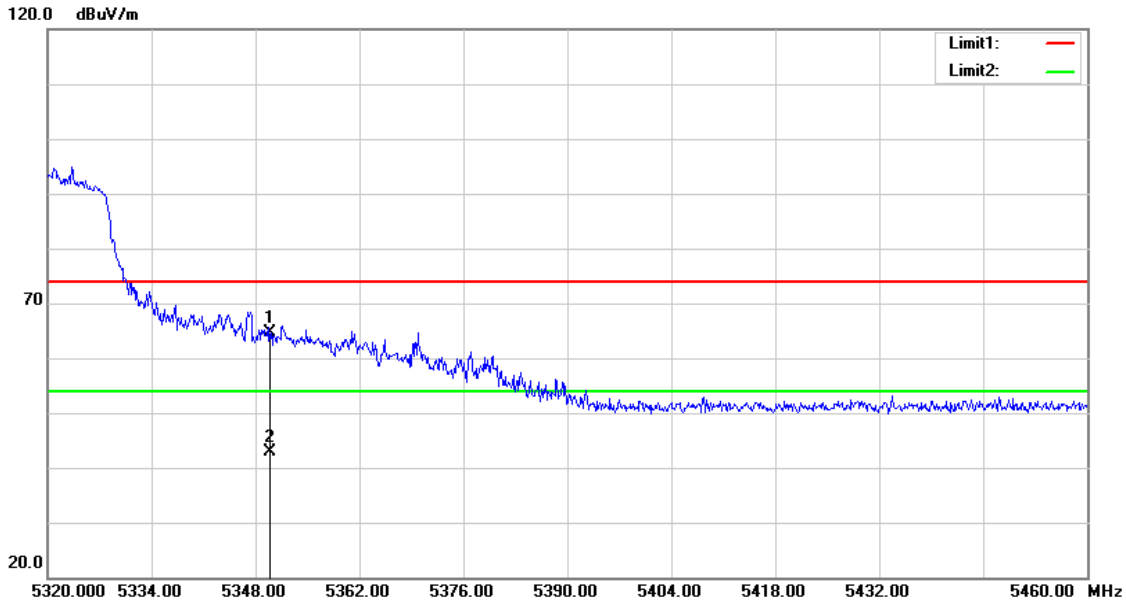

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5350.000 | 68.96 | -3.76 | 65.20 | 74.00 | -8.80 | peak |
| 2 | 5350.000 | 46.72 | -3.76 | 42.96 | 54.00 | -11.04 | AVG |
| 3 | 5354.720 | 72.61 | -3.75 | 68.86 | 74.00 | -5.14 | peak |
| 4 | 5354.720 | 47.43 | -3.75 | 43.68 | 54.00 | -10.32 | AVG |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5290MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 5 | Date: | 09/28/2017 |
| Ant.Polar.: | Vertical | | |



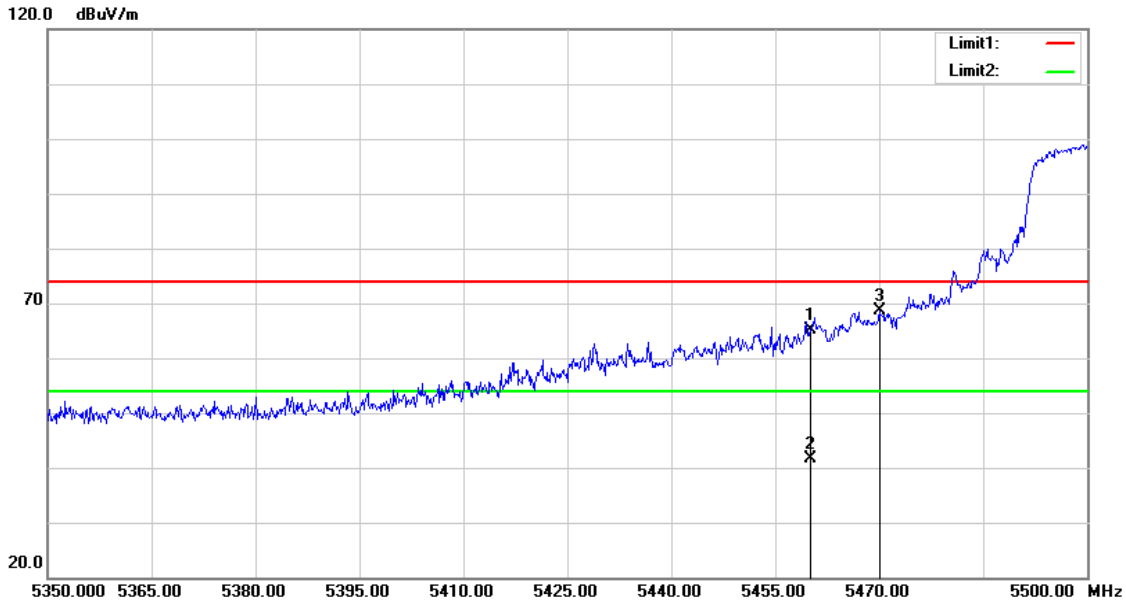

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5350.000 | 68.31 | -3.76 | 64.55 | 74.00 | -9.45 | peak |
| 2 | 5350.000 | 46.52 | -3.76 | 42.76 | 54.00 | -11.24 | AVG |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5530MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 5 | Date: | 09/28/2017 |
| Ant.Polar.: | Horizontal | | |



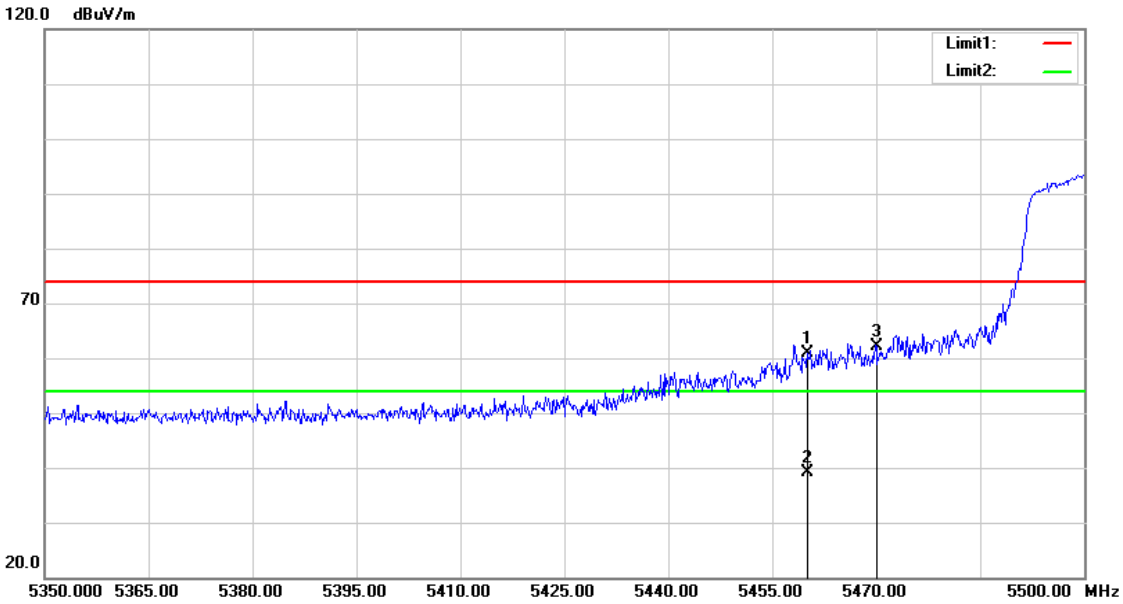

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5460.000 | 68.84 | -3.71 | 65.13 | 74.00 | -8.87 | peak |
| 2 | 5460.000 | 45.39 | -3.71 | 41.68 | 54.00 | -12.32 | AVG |
| 3 | 5470.000 | 72.30 | -3.72 | 68.58 | 74.00 | -5.42 | peak |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5530MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 5 | Date: | 09/28/2017 |
| Ant.Polar.: | Vertical | | |



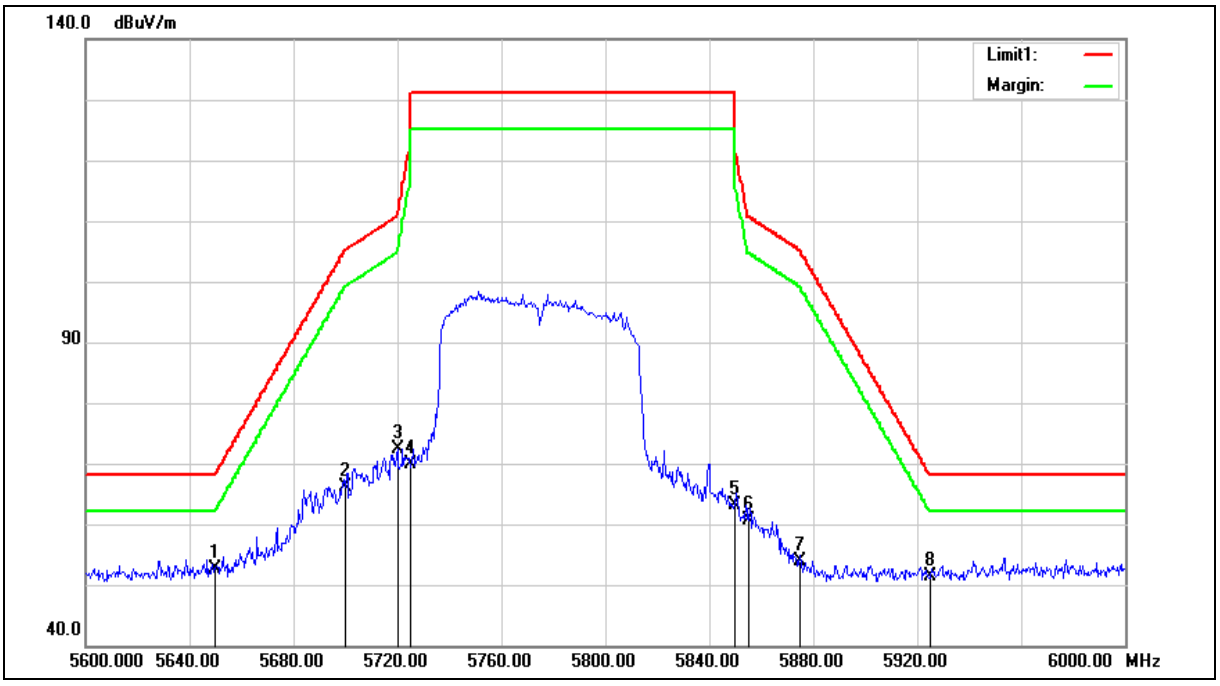

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5460.000 | 64.48 | -3.71 | 60.77 | 74.00 | -13.23 | peak |
| 2 | 5460.000 | 42.77 | -3.71 | 39.06 | 54.00 | -14.94 | AVG |
| 3 | 5470.000 | 65.92 | -3.72 | 62.20 | 74.00 | -11.80 | peak |

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5775MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 5 | Date: | 09/28/2017 |
| Ant.Polar.: | Horizontal | | |



| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5775MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 5 | Date: | 09/28/2017 |
| Ant.Polar.: | Horizontal | | |

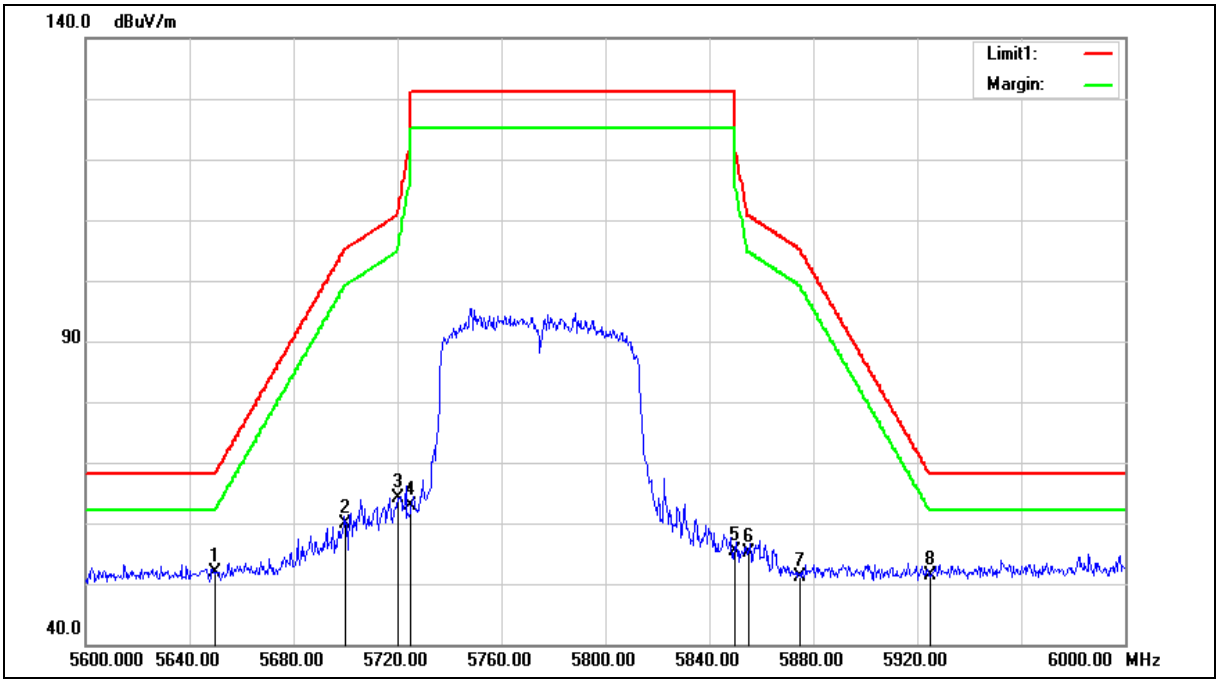
| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5650.000 | 56.25 | -3.61 | 52.64 | 68.20 | -15.56 | peak |
| 2 | 5700.000 | 69.73 | -3.56 | 66.17 | 105.20 | -39.03 | peak |
| 3 | 5720.000 | 76.01 | -3.55 | 72.46 | 110.80 | -38.34 | peak |
| 4 | 5725.000 | 73.42 | -3.54 | 69.88 | 122.20 | -52.32 | peak |
| 5 | 5850.000 | 66.22 | -3.17 | 63.05 | 122.20 | -59.15 | peak |
| 6 | 5855.000 | 63.87 | -3.16 | 60.71 | 110.80 | -50.09 | peak |
| 7 | 5875.000 | 56.96 | -3.08 | 53.88 | 105.20 | -51.32 | peak |
| 8 | 5925.000 | 54.17 | -2.91 | 51.26 | 68.20 | -16.94 | peak |

Note:1. Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5775MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 5 | Date: | 09/28/2017 |
| Ant.Polar.: | Vertical | | |



| | | | |
|---|---|---|---|
| Standard: | FCC Part 15.407 | Test Distance: | 3m |
| Test item: | Band edge | Power: | AC 120V/60Hz |
| Frequency: | 5775MHz | Temp.(℃)/Hum.(%RH): | 26(℃)/60%RH |
| Mode: | Mode 5 | Date: | 09/28/2017 |
| Ant.Polar.: | Vertical | | |

| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 5650.000 | 55.61 | -3.61 | 52.00 | 68.20 | -16.20 | peak |
| 2 | 5700.000 | 63.34 | -3.56 | 59.78 | 105.20 | -45.42 | peak |
| 3 | 5720.000 | 67.61 | -3.55 | 64.06 | 110.80 | -46.74 | peak |
| 4 | 5725.000 | 66.40 | -3.54 | 62.86 | 122.20 | -59.34 | peak |
| 5 | 5850.000 | 58.63 | -3.17 | 55.46 | 122.20 | -66.74 | peak |
| 6 | 5855.000 | 58.18 | -3.16 | 55.02 | 110.80 | -55.78 | peak |
| 7 | 5875.000 | 54.17 | -3.08 | 51.09 | 105.20 | -54.11 | peak |
| 8 | 5925.000 | 54.28 | -2.91 | 51.37 | 68.20 | -16.83 | peak |

Note:1. Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

## 4.4. Maximum Conducted Output Power Measurement

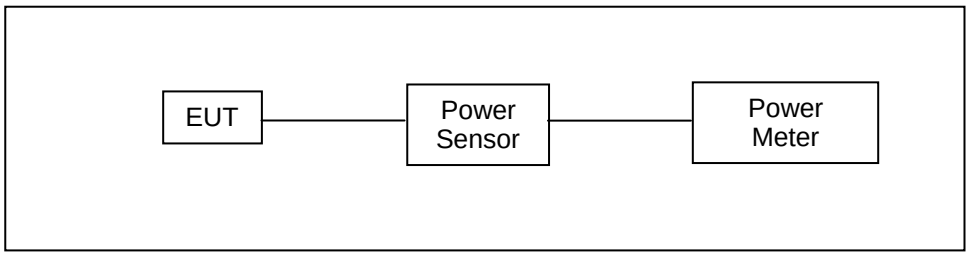
■ **Limit**

| Frequency Range (MHz) | FCC Maximum Conducted Output Power Limit |
|---|---|
| | Client |
| 5.150 ~ 5.250 GHz | The lesser of 250mW (24dBm) |
| 5.250 ~ 5.350 GHz | The lesser of 250mW (24dBm) or 11dBm + 10log (B) |
| 5.470 ~ 5.725 GHz | The lesser of 250mW (24dBm) or 11dBm + 10log (B) |
| 5.725 ~ 5.850 GHz | The lesser of 1W (30dBm) |

According FCC KDB 662911 D01 v02r01 – for power measurements on IEEE802.11 devices,

∗ Max. Gain = 1.5 dBi < 6dBi

■ **Test Setup**




■ **Test Procedure**

The test is performed in accordance with KDB789033: D02 General UNII Test Procedures New Rules v01r04, Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices

Section (E) Maximum Conducted Output Power

3. Measurement using a Power Meter (PM)

b) Method PM-G (Measurement using a gated RF average power meter)

■ **Test Result**

| Test Item | | Maximum Conducted Output Power | | |
|---|---|---|---|---|
| Test Mode | | Mode 2: IEEE 802.11a Continuous TX mode | | |
| Frequency (MHz) | Data Rate | ANT-0 Max. Output Power (dBm) | ANT-0 Max. Output Power (W) | FCC Limit (dBm) |
| 5180 | 6M | **16.14** | **0.041** | ≤ 24 |
| 5200 | | 15.90 | 0.039 | |
| 5220 | | 15.80 | 0.038 | |
| 5240 | | 14.85 | 0.031 | |
| 5260 | | **14.73** | **0.030** | ≤ 24 |
| 5280 | | 14.40 | 0.028 | |
| 5300 | | 14.33 | 0.027 | |
| 5320 | | 14.31 | 0.027 | |
| 5500 | | 15.96 | 0.039 | ≤ 24 |
| 5520 | | 16.32 | 0.043 | |
| 5540 | | **16.41** | **0.044** | |
| 5560 | | 16.28 | 0.042 | |
| 5580 | | 15.82 | 0.038 | |
| 5660 | | 14.57 | 0.029 | |
| 5680 | | 14.88 | 0.031 | |
| 5700 | | 15.06 | 0.032 | |
| 5745 | | 15.94 | 0.039 | ≤ 30 |
| 5765 | | 16.06 | 0.040 | |
| 5785 | | **16.35** | **0.043** | |
| 5805 | | 16.13 | 0.041 | |
| 5825 | | 15.93 | 0.039 | |

Note: The relevant measured result has the offset with cable loss already.

| Test Item | | Maximum Conducted Output Power | | |
|---|---|---|---|---|
| Test Mode | | Mode 2: IEEE 802.11a Continuous TX mode | | |
| Frequency (MHz) | Data Rate | ANT-0 | | FCC Limit (dBm) |
| | | Max. Output Power | | |
| | | (dBm) | (W) | |
| 5180 | 54M | 12.94 | 0.020 | ≤ 24 |
| 5200 | | 12.70 | 0.019 | |
| 5220 | | 12.60 | 0.018 | |
| 5240 | | 12.94 | 0.020 | |
| 5260 | | 12.82 | 0.019 | ≤ 24 |
| 5280 | | 12.49 | 0.018 | |
| 5300 | | 12.42 | 0.017 | |
| 5320 | | 12.40 | 0.017 | |
| 5500 | | 12.95 | 0.020 | ≤ 24 |
| 5520 | | 13.31 | 0.021 | |
| 5540 | | 13.40 | 0.022 | |
| 5560 | | 13.27 | 0.021 | |
| 5580 | | 12.81 | 0.019 | |
| 5660 | | 12.60 | 0.018 | |
| 5680 | | 12.91 | 0.020 | |
| 5700 | | 13.09 | 0.020 | |
| 5745 | | 13.05 | 0.020 | ≤ 30 |
| 5765 | | 13.17 | 0.021 | |
| 5785 | | 13.46 | 0.022 | |
| 5805 | | 13.24 | 0.021 | |
| 5825 | | 13.04 | 0.020 | |

Note: The relevant measured result has the offset with cable loss already.

| Test Item | | Maximum Conducted Output Power | | |
|---|---|---|---|---|
| Test Mode | | Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode | | |
| Frequency (MHz) | Data Rate | ANT-0 | | FCC Limit (dBm) |
| | | Max. Output Power | | |
| | | (dBm) | (W) | |
| 5180 | 6.5M | 14.75 | 0.030 | ≤ 24 |
| 5200 | | 14.51 | 0.028 | |
| 5220 | | 14.41 | 0.028 | |
| 5240 | | **14.92** | **0.031** | |
| 5260 | | **14.80** | **0.030** | ≤ 24 |
| 5280 | | 14.47 | 0.028 | |
| 5300 | | 14.40 | 0.028 | |
| 5320 | | 14.38 | 0.027 | |
| 5500 | | 15.12 | 0.033 | ≤ 24 |
| 5520 | | 15.48 | 0.035 | |
| 5540 | | **15.57** | **0.036** | |
| 5560 | | 15.44 | 0.035 | |
| 5580 | | 14.98 | 0.031 | |
| 5660 | | 14.62 | 0.029 | |
| 5680 | | 14.93 | 0.031 | |
| 5700 | | 15.11 | 0.032 | |
| 5745 | | 15.13 | 0.033 | ≤ 30 |
| 5765 | | 15.07 | 0.032 | |
| 5785 | | **15.36** | **0.034** | |
| 5805 | | 15.14 | 0.033 | |
| 5825 | | 14.94 | 0.031 | |

Note: The relevant measured result has the offset with cable loss already.

| Test Item | | Maximum Conducted Output Power | | |
|---|---|---|---|---|
| Test Mode | | Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode | | |
| Frequency (MHz) | Data Rate | ANT-0 | | FCC Limit (dBm) |
| | | Max. Output Power | | |
| | | (dBm) | (W) | |
| 5180 | 72.2M | 12.05 | 0.016 | ≤ 24 |
| 5200 | | 11.81 | 0.015 | |
| 5220 | | 11.71 | 0.015 | |
| 5240 | | 12.05 | 0.016 | |
| 5260 | | 11.93 | 0.016 | ≤ 24 |
| 5280 | | 11.60 | 0.014 | |
| 5300 | | 11.53 | 0.014 | |
| 5320 | | 11.79 | 0.015 | |
| 5500 | | 11.84 | 0.015 | ≤ 24 |
| 5520 | | 12.20 | 0.017 | |
| 5540 | | 12.29 | 0.017 | |
| 5560 | | 11.85 | 0.015 | |
| 5580 | | 11.39 | 0.014 | |
| 5660 | | 11.18 | 0.013 | |
| 5680 | | 11.49 | 0.014 | |
| 5700 | | 11.67 | 0.015 | |
| 5745 | | 11.63 | 0.015 | ≤ 30 |
| 5765 | | 11.79 | 0.015 | |
| 5785 | | 12.08 | 0.016 | |
| 5805 | | 11.86 | 0.015 | |
| 5825 | | 11.66 | 0.015 | |

Note: The relevant measured result has the offset with cable loss already.

| Test Item | | Maximum Conducted Output Power | | |
|---|---|---|---|---|
| Test Mode | | Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode | | |
| Frequency (MHz) | Data Rate | ANT-0 | | FCC Limit (dBm) |
| | | Max. Output Power | | |
| | | (dBm) | (W) | |
| 5190 | 13.5M | **15.83** | **0.038** | ≤ 24 |
| 5230 | | 15.59 | 0.036 | |
| 5270 | | **15.53** | **0.036** | |
| 5310 | | 15.12 | 0.033 | |
| 5510 | | 15.00 | 0.032 | |
| 5550 | | **15.15** | **0.033** | |
| 5670 | | 15.77 | 0.038 | |
| 5755 | | 15.93 | 0.039 | ≤ 30 |
| 5795 | | **16.02** | **0.040** | |
| 5190 | 150M | 12.46 | 0.018 | ≤ 24 |
| 5230 | | 12.43 | 0.017 | |
| 5270 | | 12.15 | 0.016 | |
| 5310 | | 11.86 | 0.015 | |
| 5510 | | 11.73 | 0.015 | |
| 5550 | | 12.04 | 0.016 | |
| 5670 | | 12.72 | 0.019 | |
| 5755 | | 13.01 | 0.020 | ≤ 30 |
| 5795 | | 12.79 | 0.019 | |

Note: The relevant measured result has the offset with cable loss already.

| Test Item | | Maximum Conducted Output Power | | |
|---|---|---|---|---|
| Test Mode | | Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode | | |
| Frequency (MHz) | Data Rate | ANT-0 | | FCC Limit (dBm) |
| | | Max. Output Power | | |
| | | (dBm) | (W) | |
| 5210 | 29.3M | **15.21** | **0.033** | ≤ 24 |
| 5290 | | **14.81** | **0.030** | |
| 5530 | | **14.38** | **0.027** | |
| 5775 | | **13.96** | **0.025** | ≤ 30 |
| 5210 | 433.3M | 11.39 | 0.014 | ≤ 24 |
| 5290 | | 11.51 | 0.014 | |
| 5530 | | 11.80 | 0.015 | |
| 5775 | | 11.38 | 0.014 | ≤ 30 |

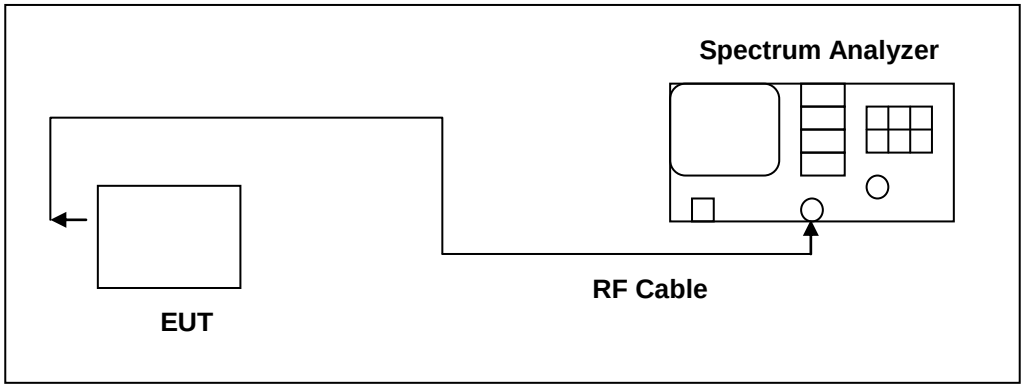
Note: The relevant measured result has the offset with cable loss already.

## 4.5. 26dB RF Bandwidth Measurement

■ **Limit**

N/A

■ **Test Setup**




■ **Test Procedure**

The test is performed in accordance with KDB789033: D02 General UNII Test Procedures New Rules v01r04, Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E.

| Spectrum Parameter | Setting |
|---|---|
| Attenuation | Auto |
| Span Frequency | >26dB Bandwidth |
| RBW | Approximately 1% of the emission bandwidth |
| VBW | VBW > RBW |
| Detector | Peak |
| Trace | Max Hold |
| Sweep Time | Auto |

■ **Test Result**

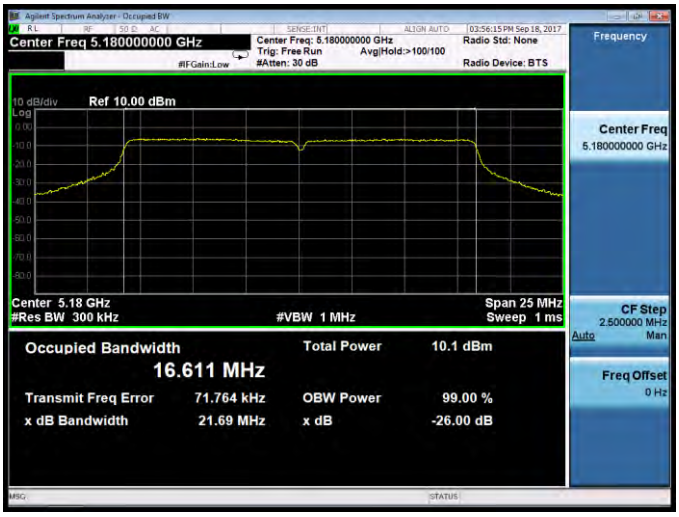
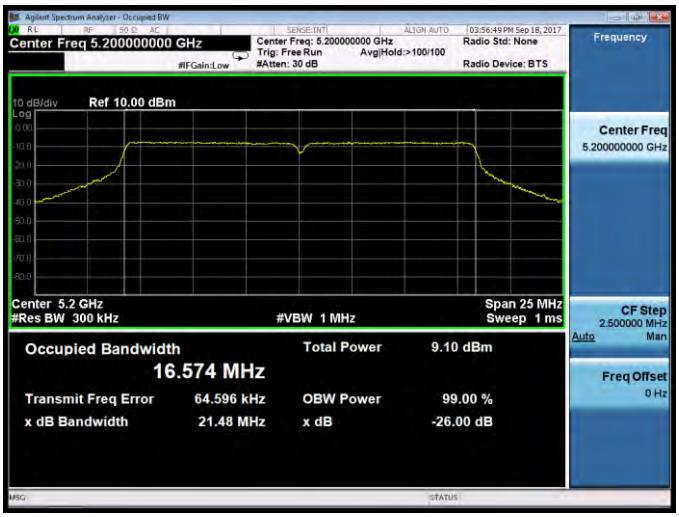
| Test Item | 26dB RF Bandwidth Measurement |
|---|---|
| Test Mode | Mode 2: IEEE 802.11a Continuous TX mode |
| Frequency (MHz) | Ant-0 |
| | 26dB Bandwidth (MHz) |
| 5180 | 21.690 |
| 5200 | 21.480 |
| 5240 | 20.990 |
| 5260 | 22.730 |
| 5280 | 22.440 |
| 5320 | 22.260 |
| 5500 | 22.490 |
| 5560 | 22.170 |
| 5700 | 22.340 |

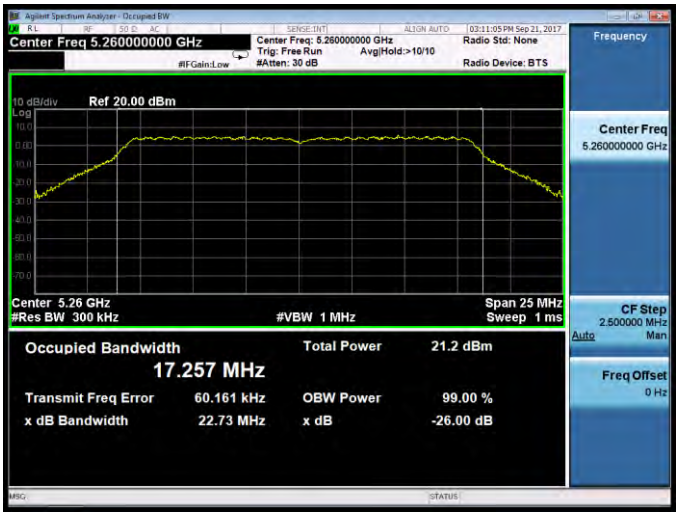
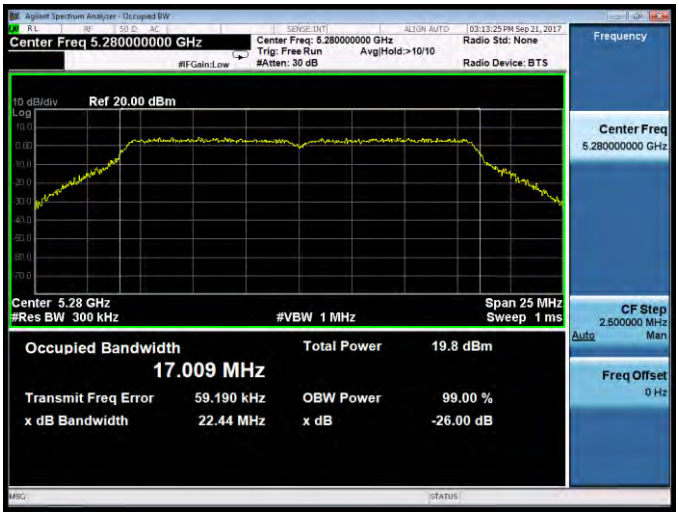
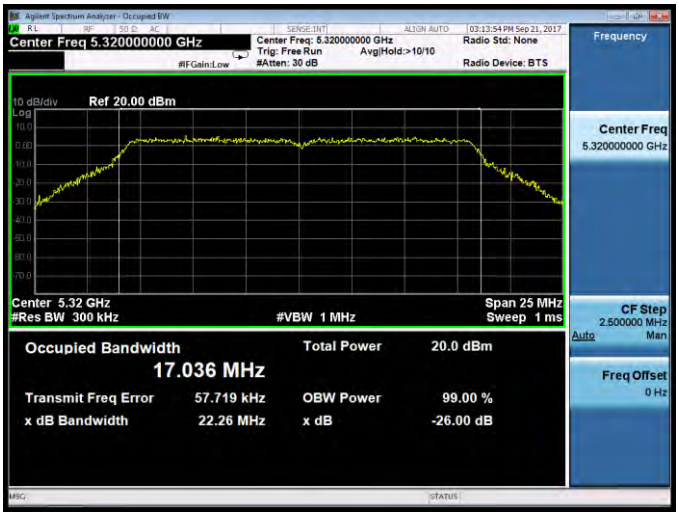
| Test Item | 26dB RF Bandwidth Measurement |
|---|---|
| Test Mode | Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode |
| Frequency (MHz) | Ant-0 |
| | 26dB Bandwidth (MHz) |
| 5180 | 22.020 |
| 5200 | 21.850 |
| 5240 | 21.470 |
| 5260 | 22.930 |
| 5280 | 22.710 |
| 5320 | 22.600 |
| 5500 | 23.180 |
| 5560 | 22.690 |
| 5700 | 22.450 |

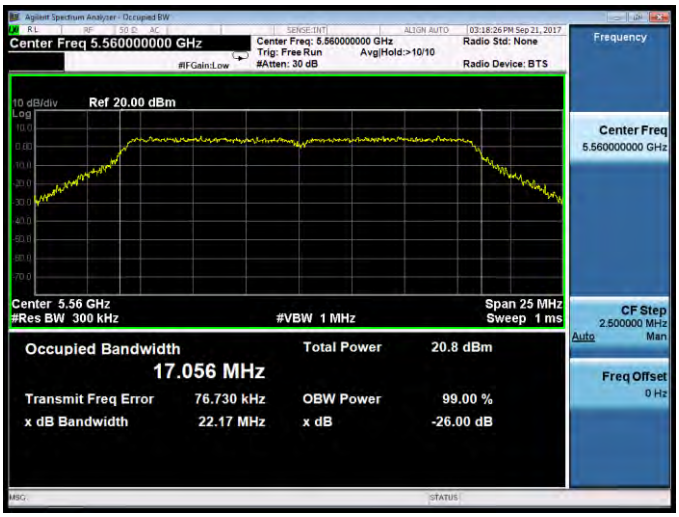
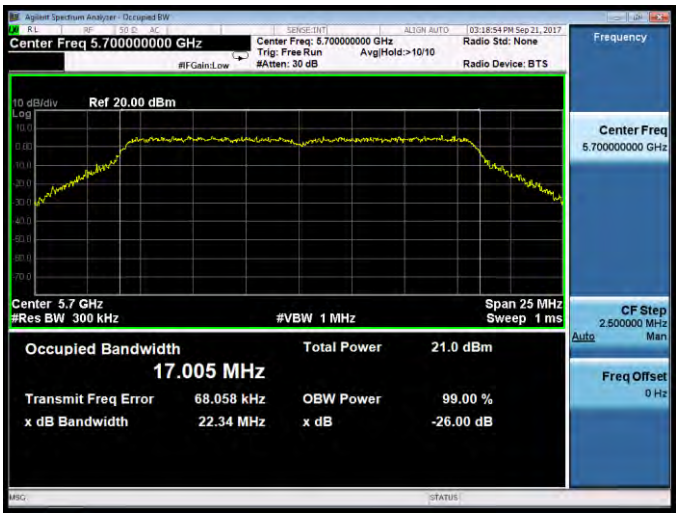
| Test Item | 26dB RF Bandwidth Measurement |
|---|---|
| Test Mode | Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode |
| Frequency (MHz) | Ant-0 |
| | 26dB Bandwidth (MHz) |
| 5190 | 49.130 |
| 5230 | 48.360 |
| 5270 | 40.830 |
| 5310 | 41.230 |
| 5510 | 41.520 |
| 5550 | 41.410 |
| 5670 | 48.500 |

| Test Item | 26dB RF Bandwidth Measurement |
|---|---|
| Test Mode | Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode |
| Frequency (MHz) | Ant-0 |
| | 26dB Bandwidth (MHz) |
| 5210 | 82.140 |
| 5290 | 84.350 |
| 5530 | 84.220 |

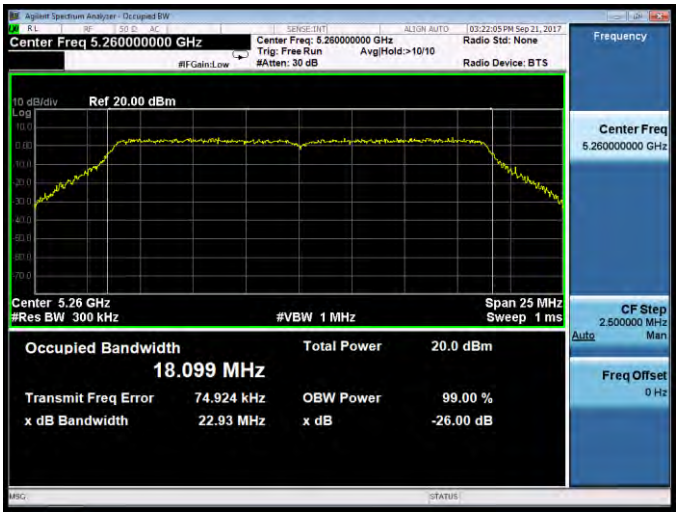
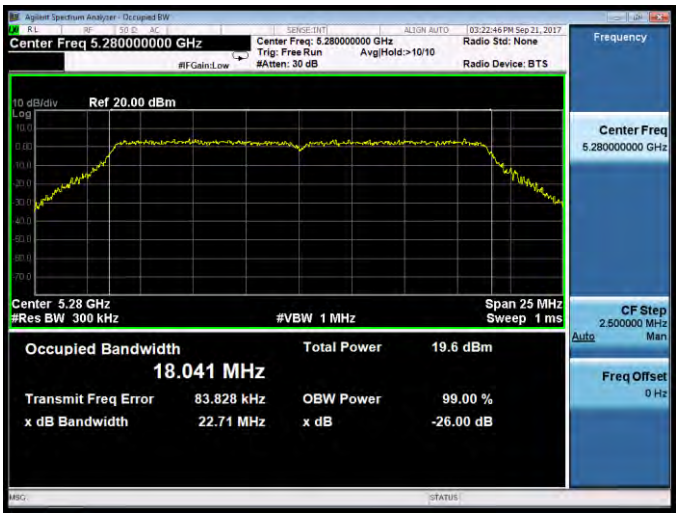
■ **Test Graphs**

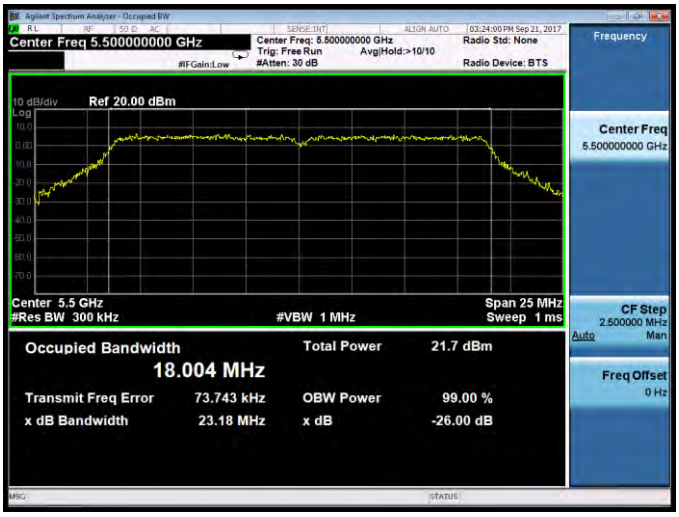
| Mode 2: IEEE 802.11a Continuous TX mode_ ANT-0 | |
|---|---|
| 5180 MHz |  |
| 5200 MHz |  |
| 5240 MHz |  |

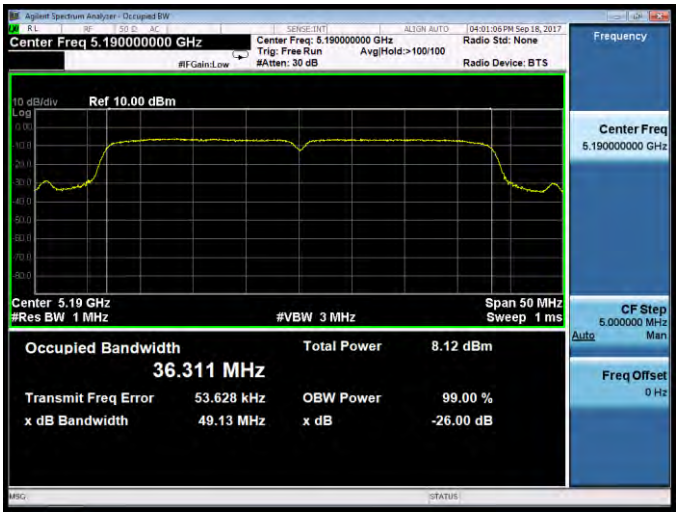
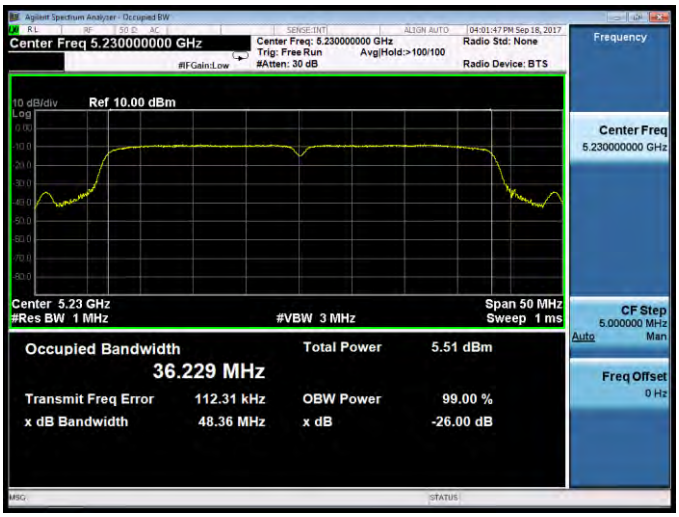
| Mode 2: IEEE 802.11a Continuous TX mode_ ANT-0 | |
|---|---|
| 5260 MHz |  |
| 5280 MHz |  |
| 5320 MHz |  |

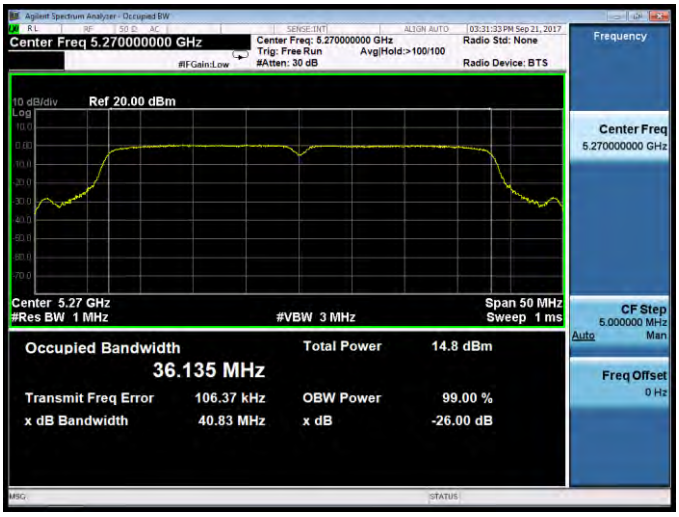
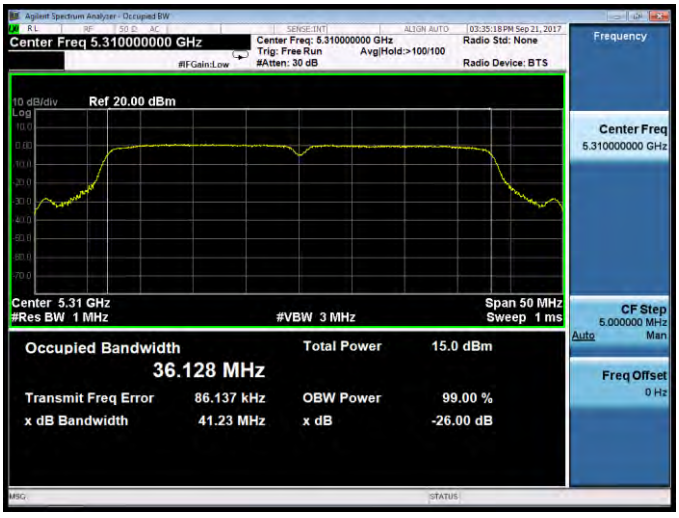
| Mode 2: IEEE 802.11a Continuous TX mode_ ANT-0 | |
|---|---|
| 5500 MHz |  |
| 5560 MHz |  |
| 5700 MHz |  |

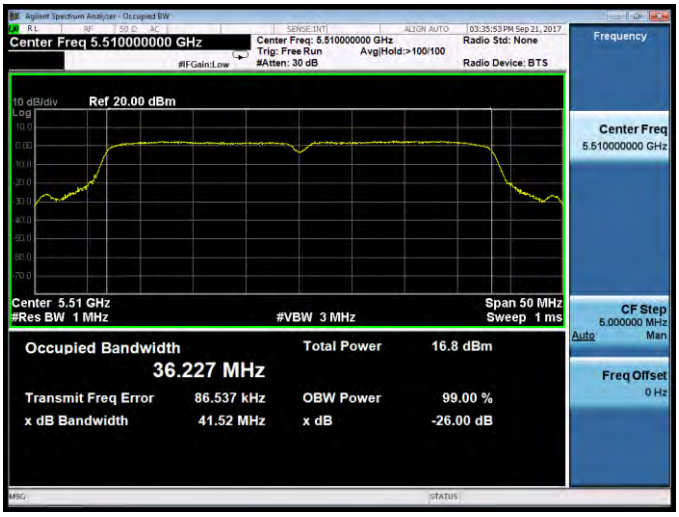
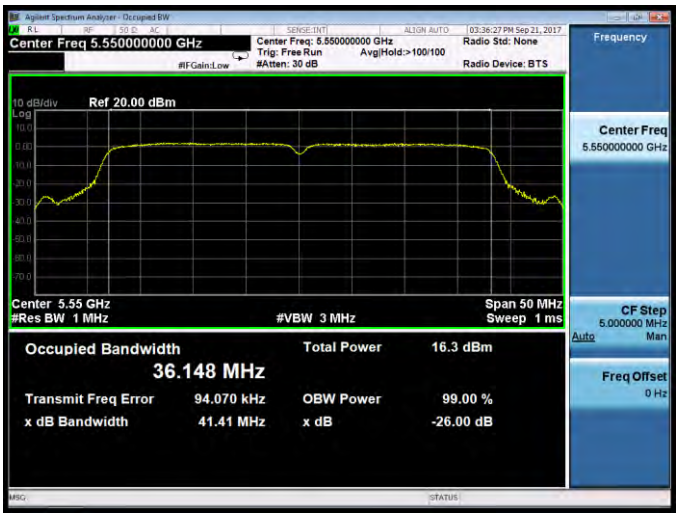
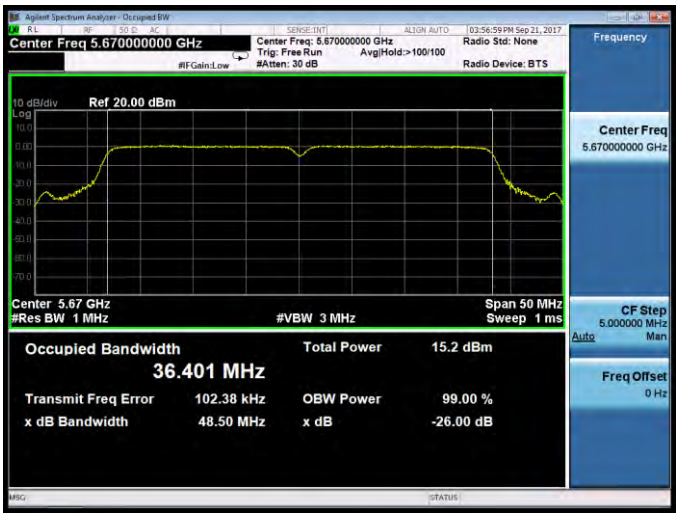
| Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ ANT-0 | |
|---|---|
| 5180 MHz |  |
| 5200 MHz |  |
| 5240 MHz |  |

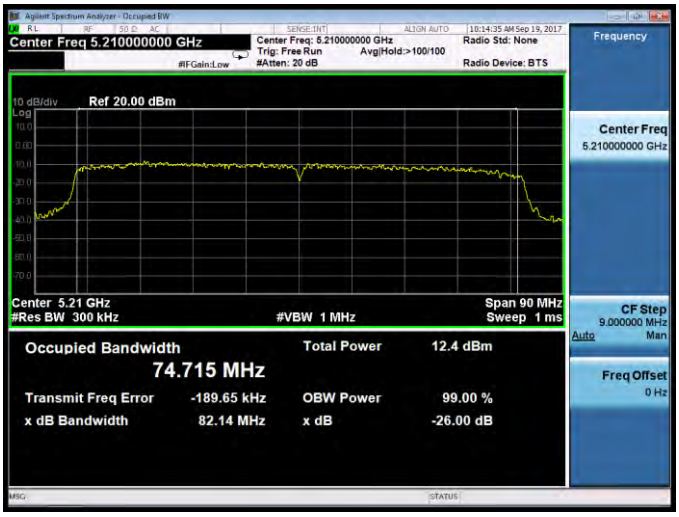
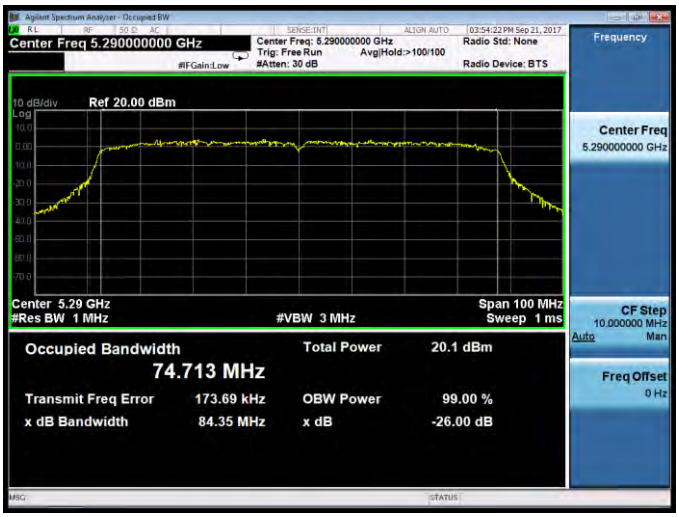
| Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ ANT-0 | |
|---|---|
| 5260 MHz |  |
| 5280 MHz |  |
| 5320 MHz |  |

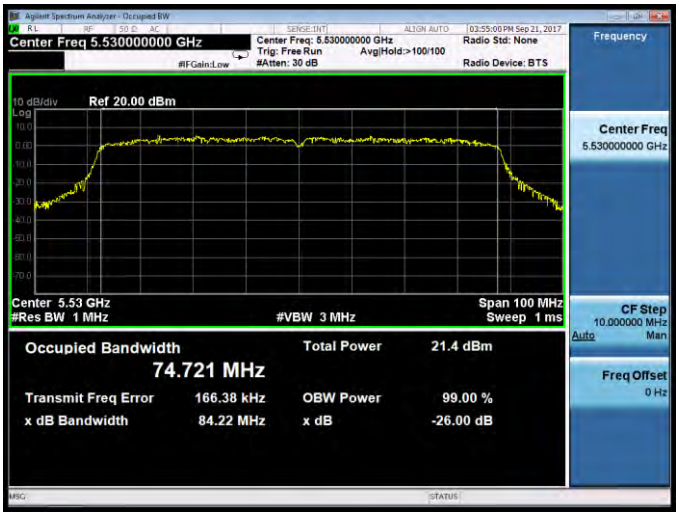
| Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode_ ANT-0 | |
|---|---|
| 5500 MHz |  |
| 5560 MHz |  |
| 5700 MHz |  |

| Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ ANT-0 | |
|---|---|
| 5190 MHz |  |
| 5230 MHz |  |

| Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ ANT-0 | |
|---|---|
| 5270 MHz |  |
| 5310 MHz |  |

| Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ ANT-0 | |
|---|---|
| 5510 MHz |  |
| 5550 MHz |  |
| 5670 MHz |  |

| Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode_ ANT-0 | |
|---|---|
| 5210 MHz |  |
| 5290 MHz |  |

| Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode_ ANT-0 | |
|---|---|
| 5530 MHz |  |

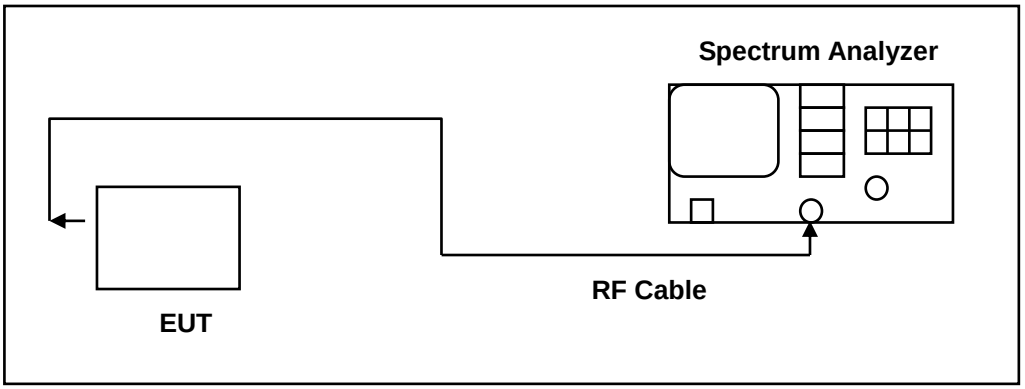
## 4.6. 6dB RF Bandwidth Measurement

■ **Limit**

**6dB RF Bandwidth**

Systems using digital modulation techniques may operate in the 5725~5850MHz bands. The minimum 6 dB band-width shall be at least 500 kHz.

■ **Test Setup**




■ **Test Procedure**

**6dB RF Bandwidth**

The EUT tested to UNII test procedure of KDB789033 D02 v01r04 for compliance to FCC 47CFR 15.407 requirements.

The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RES BW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A peak output reading was taken, a DISPLAY line was drawn 6 dB lower than peak level. The 6 dB bandwidth was determined from where the channel output spectrum intersected the display line.

The test was performed at 3 channels.

■ **Test Result**

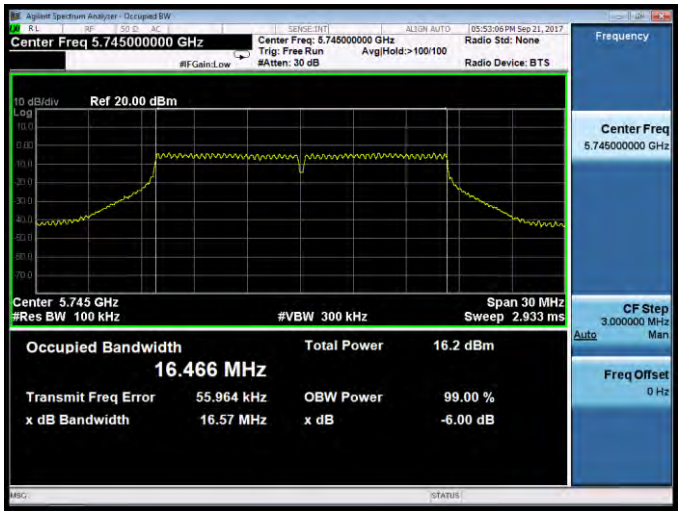
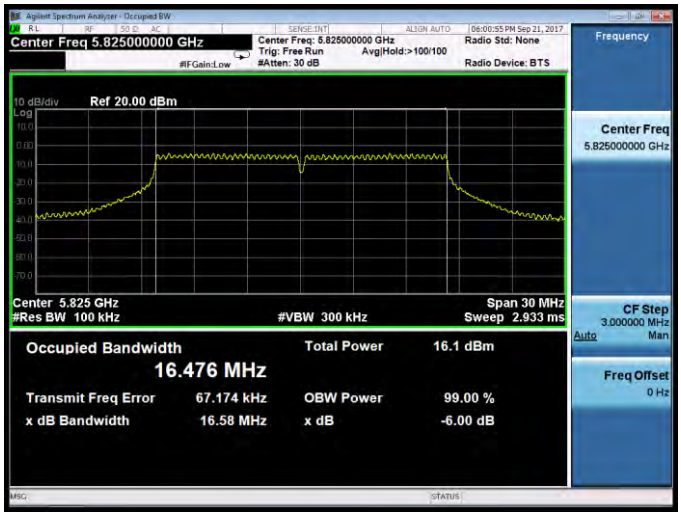
| Test Item | 6dB RF Bandwidth | |
|---|---|---|
| Test Mode | Mode 2: IEEE 802.11a Continuous TX mode | |
| Frequency (MHz) | 6dB Bandwidth (kHz) | Limit (kHz) |
| | ANT-0 | |
| 5745 | 16570 | > 500 |
| 5785 | 16580 | > 500 |
| 5825 | 16580 | > 500 |

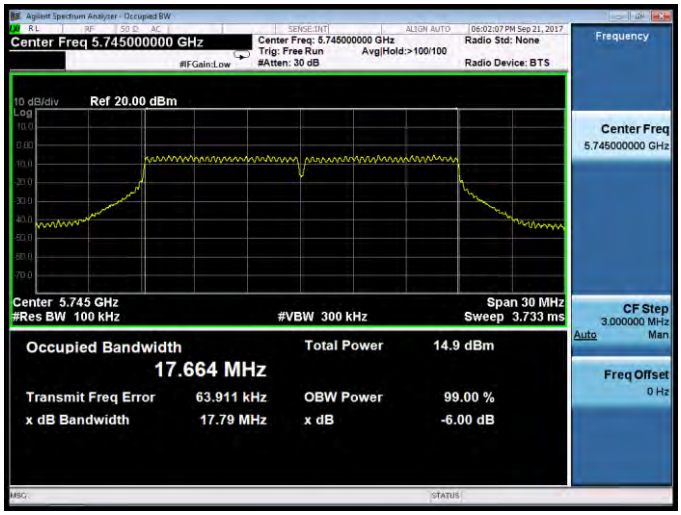
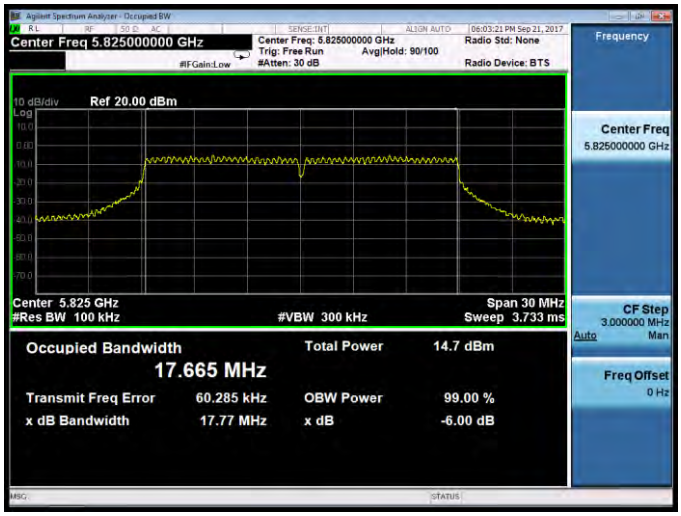
| Test Item | 6dB RF Bandwidth | |
|---|---|---|
| Test Mode | Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode | |
| Frequency (MHz) | 6dB Bandwidth (kHz) | Limit (kHz) |
| | ANT-0 | |
| 5745 | 17790 | > 500 |
| 5785 | 17790 | > 500 |
| 5825 | 17770 | > 500 |

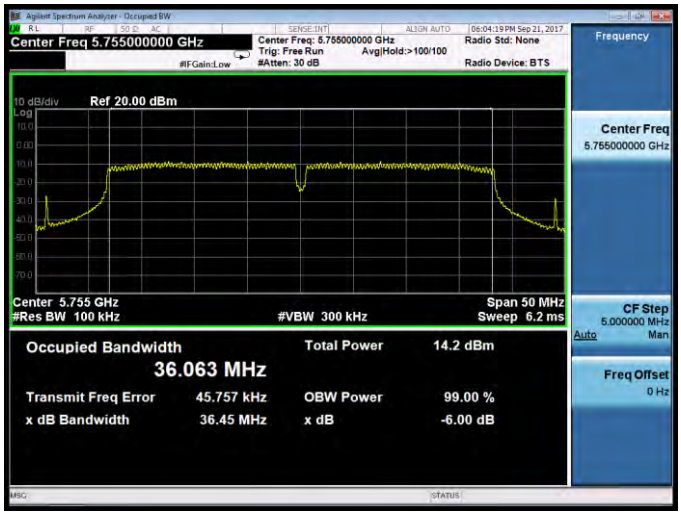
| Test Item | 6dB RF Bandwidth | |
|---|---|---|
| Test Mode | Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode | |
| Frequency (MHz) | 6dB Bandwidth (kHz) | Limit (kHz) |
| | ANT-0 | |
| 5755 | 36450 | > 500 |
| 5795 | 36450 | > 500 |

| Test Item | 6dB RF Bandwidth | |
|---|---|---|
| Test Mode | Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode | |
| Frequency (MHz) | 6dB Bandwidth (kHz) | Limit (kHz) |
| | ANT-0 | |
| 5775 | 75140 | > 500 |

■ **Test Graphs**

| Mode 2: IEEE 802.11a Link Mode_ANT-0 | |
|---|---|
| 5745 MHz |  |
| 5785 MHz |  |
| 5825 MHz |  |

| Mode 3: IEEE 802.11ac 20MHz Link Mode_ANT-0 | |
|---|---|
| 5745 MHz |  |
| 5785 MHz |  |
| 5825 MHz |  |

| Mode 4: IEEE 802.11ac 40MHz Link Mode_ANT-0 | |
|---|---|
| 5755 MHz |  |
| 5795 MHz |  |

| Mode 5: IEEE 802.11ac 80MHz Link Mode_ANT-0 | |
|---|---|
| 5775 MHz |  |

## 4.7. Maximum Power Spectral Density Measurement

■ **Limit**

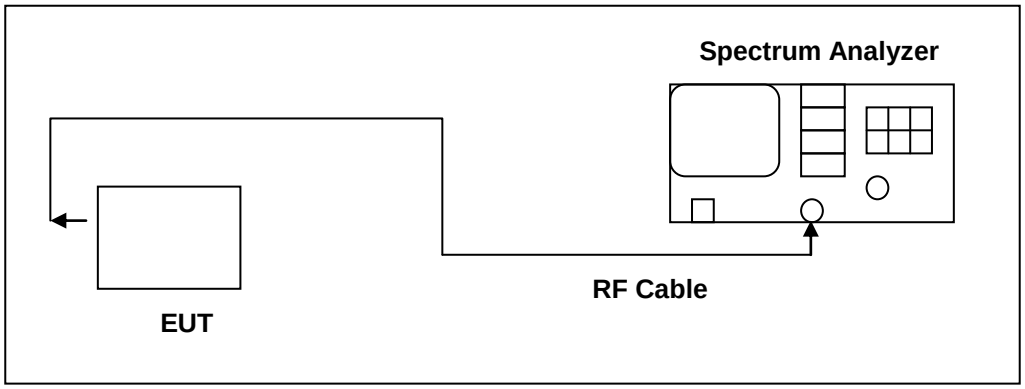
Conducted power spectral density

| Frequency Range (MHz) | FCC Limit |
|---|---|
| | Client |
| 5.150 ~ 5.250 GHz | 11 dBm/MHz |
| 5.250 ~ 5.350 GHz | 11 dBm/MHz |
| 5.470 ~ 5.725 GHz | 11 dBm/MHz |
| 5.725 ~ 5.850 GHz | 30 dBm/500KHz |

According FCC KDB 662911 D01 v02r01 – for power measurements on IEEE802.11 devices,

∗ Max. Gain = 1.5 dBi < 6dBi

■ **Test Setup**



■ **Test Procedure**

The test is performed in accordance with KDB789033: D02 General UNII Test Procedures New Rules v01r04, Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E.

| Spectrum Parameter | Setting |
|---|---|
| Attenuation | Auto |
| Span Frequency | Encompass the entire emissions bandwidth (EBW) of the signal |
| RBW | 1 MHz<br>(5725 ~ 5850MHz use 100 kHz) |
| VBW | 3 MHz<br>(5725 ~ 5850MHz use 300 kHz) |
| Detector | RMS |
| Trace | AVERAGE |
| Sweep Time | Auto |
| Trace Average | 100 times |
| Note: If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/100kHz) to the measured result. | |

■ **Test Result**

| Test Item | Conducted power spectral density | | | |
|---|---|---|---|---|
| Test Mode | Mode 2: IEEE 802.11a Continuous TX mode | | | |
| Frequency (MHz) | ANT-0 | | | |
| | Measurement (dBm/MHz) | Duty Factor (dB) | Calculated (dBm/MHz) | Limit (dBm/MHz) |
| 5180 | 2.819 | 0.498 | 3.317 | ≦ 11 |
| 5200 | 2.017 | 0.498 | 2.515 | |
| 5240 | 1.088 | 0.498 | 1.586 | |
| 5260 | 1.043 | 0.498 | 1.541 | |
| 5280 | 1.189 | 0.498 | 1.687 | |
| 5320 | 1.711 | 0.498 | 2.209 | |
| 5500 | 3.189 | 0.498 | 3.687 | |
| 5560 | 2.587 | 0.498 | 3.085 | |
| 5700 | 2.462 | 0.498 | 2.960 | |

| Test Item | Conducted power spectral density | | | |
|---|---|---|---|---|
| Test Mode | Mode 2: IEEE 802.11a Continuous TX mode | | | |
| Frequency (MHz) | ANT-0 | | | |
| | Measurement (dBm/100KHz) | Duty Factor (dB) | Calculated (dBm/500KHz) | Limit (dBm/500KHz) |
| 5745 | -5.48 | 0.498 | 2.01 | ≦ 30 |
| 5785 | -5.77 | 0.498 | 1.72 | |
| 5825 | -5.38 | 0.498 | 2.11 | |

Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10*Log(500k/100k)

| Test Item | Conducted power spectral density | | | |
|---|---|---|---|---|
| Test Mode | Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode | | | |
| Frequency (MHz) | ANT-0 | | | |
| | Measurement (dBm/MHz) | Duty Factor (dB) | Calculated (dBm/MHz) | Limit (dBm/MHz) |
| 5180 | 2.389 | 0.493 | 2.882 | ≦ 11 |
| 5200 | 2.224 | 0.493 | 2.717 | |
| 5240 | 0.644 | 0.493 | 1.137 | |
| 5260 | 0.546 | 0.493 | 1.039 | |
| 5280 | 0.671 | 0.493 | 1.164 | |
| 5320 | 0.805 | 0.493 | 1.298 | |
| 5500 | 3.002 | 0.493 | 3.495 | |
| 5560 | 1.958 | 0.493 | 2.451 | |
| 5700 | 1.730 | 0.493 | 2.223 | |

| Test Item | Conducted power spectral density | | | |
|---|---|---|---|---|
| Test Mode | Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode | | | |
| Frequency (MHz) | ANT-0 | | | |
| | Measurement (dBm/100KHz) | Duty Factor (dB) | Calculated (dBm/500KHz) | Limit (dBm/500KHz) |
| 5745 | -5.85 | 0.493 | 1.63 | ≦ 30 |
| 5785 | -5.70 | 0.493 | 1.78 | |
| 5825 | -6.01 | 0.493 | 1.48 | |

Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10*Log(500k/100k)

| Test Item | Conducted power spectral density | | | |
|---|---|---|---|---|
| Test Mode | Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode | | | |
| Frequency (MHz) | ANT-0 | | | |
| | Measurement (dBm/MHz) | Duty Factor (dB) | Calculated (dBm/MHz) | Limit (dBm/MHz) |
| 5190 | -0.832 | 0.930 | 0.098 | ≦ 11 |
| 5230 | -1.102 | 0.930 | -0.172 | |
| 5270 | -2.150 | 0.930 | -1.220 | |
| 5310 | -2.280 | 0.930 | -1.350 | |
| 5510 | -0.571 | 0.930 | 0.359 | |
| 5550 | -0.764 | 0.930 | 0.166 | |
| 5670 | -1.869 | 0.930 | -0.939 | |

| Test Item | Conducted power spectral density | | | |
|---|---|---|---|---|
| Test Mode | Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode | | | |
| Frequency (MHz) | ANT-0 | | | |
| | Measurement (dBm/100KHz) | Duty Factor (dB) | Calculated (dBm/500KHz) | Limit (dBm/500KHz) |
| 5755 | -8.82 | 0.930 | -0.90 | ≦ 30 |
| 5795 | -9.15 | 0.930 | -1.23 | |

Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10*Log(500k/100k)

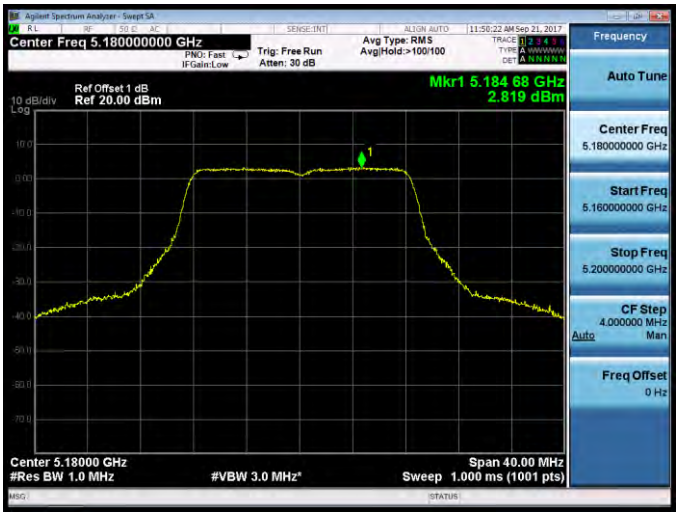
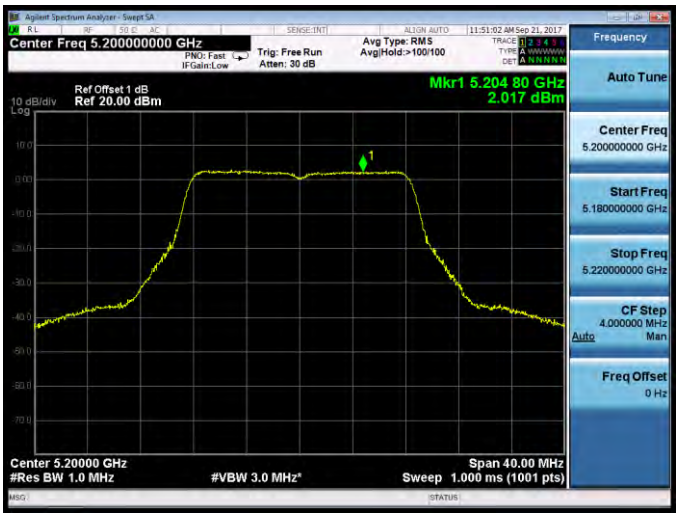
| Test Item | Conducted power spectral density | | | |
|---|---|---|---|---|
| Test Mode | Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode | | | |
| Frequency (MHz) | ANT-0 | | | |
| | Measurement (dBm/MHz) | Duty Factor (dB) | Calculated (dBm/MHz) | Limit (dBm/MHz) |
| 5210 | -6.572 | 2.121 | -4.451 | ≦ 11 |
| 5290 | -7.498 | 2.121 | -5.377 | |
| 5530 | -5.857 | 2.121 | -3.736 | |

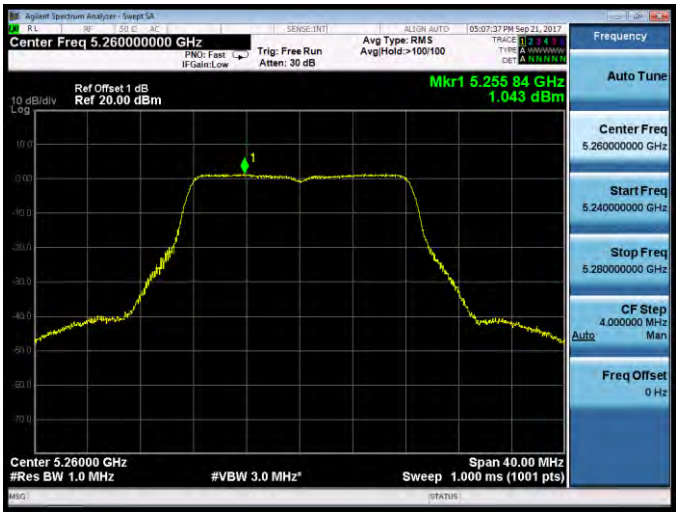
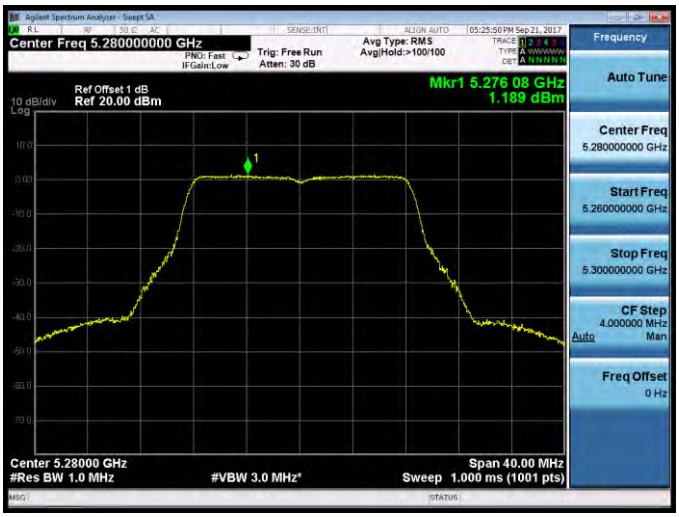
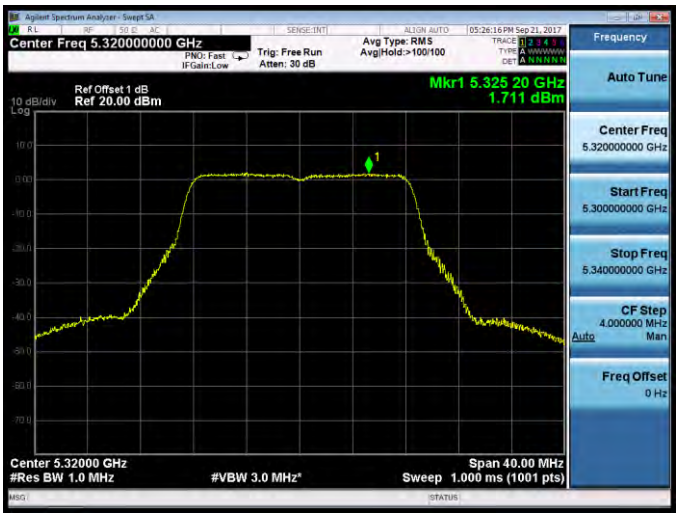
| Test Item | Conducted power spectral density | | | |
|---|---|---|---|---|
| Test Mode | Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode | | | |
| Frequency (MHz) | ANT-0 | | | |
| | Measurement (dBm/100KHz) | Duty Factor (dB) | Calculated (dBm/500KHz) | Limit (dBm/MHz) |
| 5775 | -13.73 | 2.121 | -4.62 | ≦ 30 |

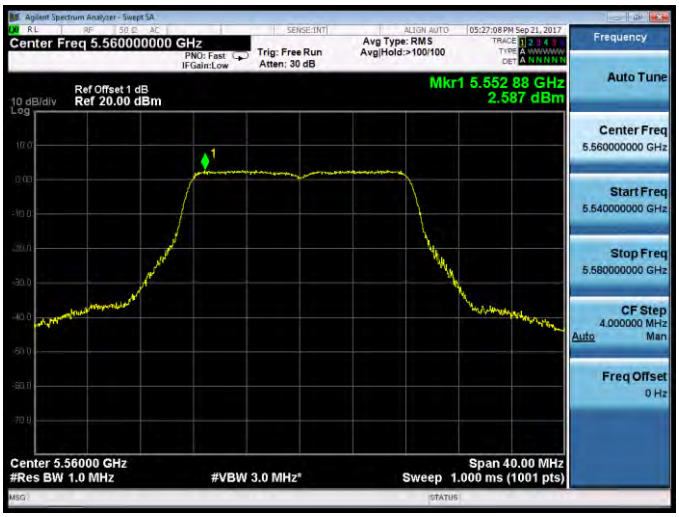
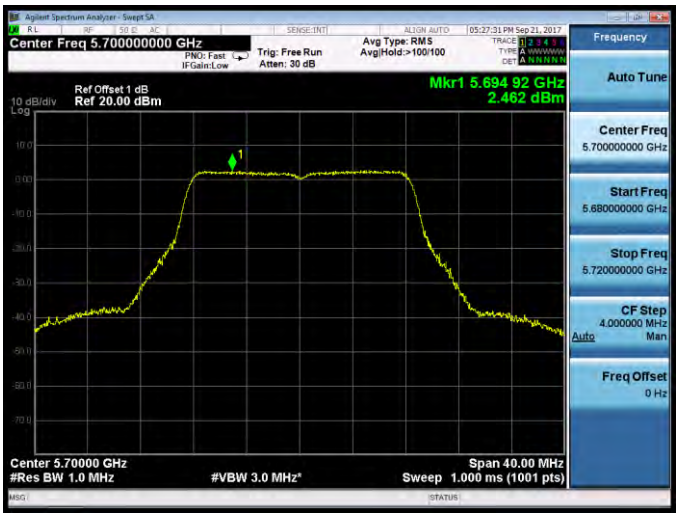
Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) + Conversion ratio = measured result + duty factor.

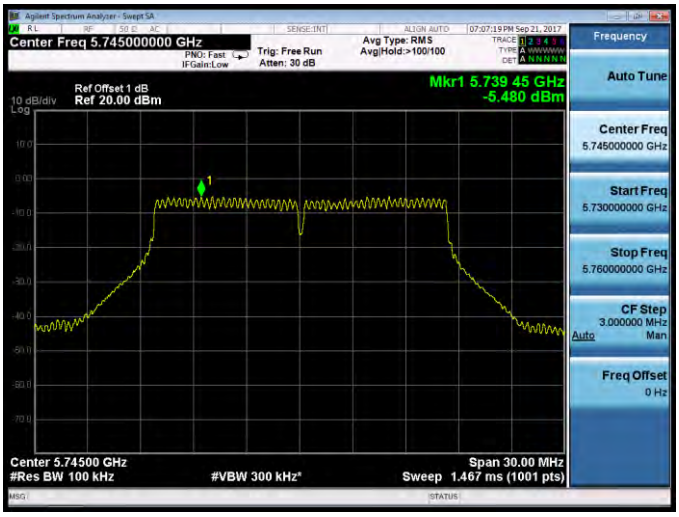
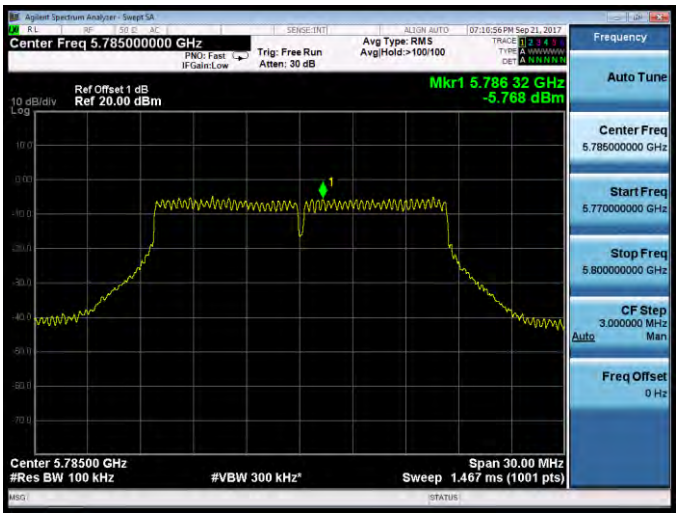
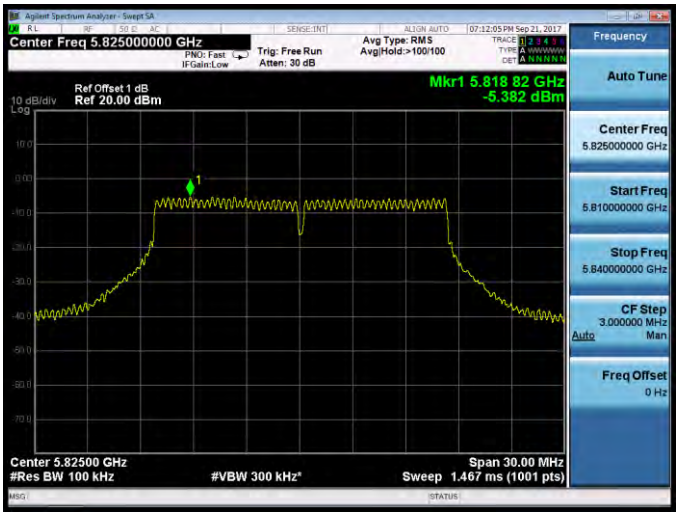
Conversion ratio = 10*Log(500k/100k)

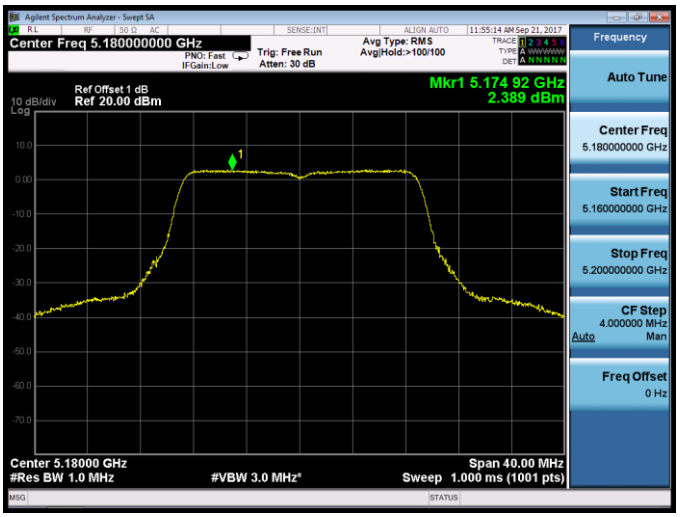
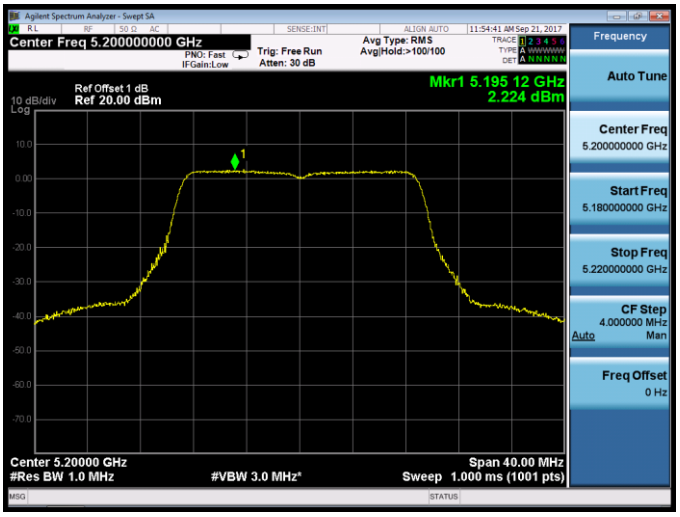
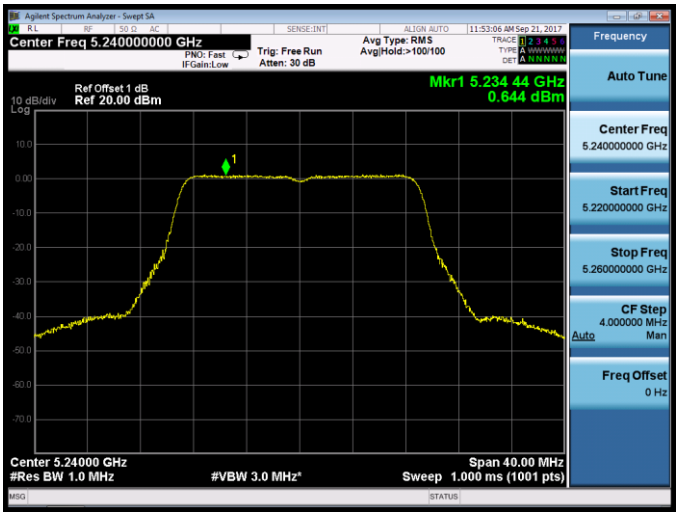
■ **Test Graphs**

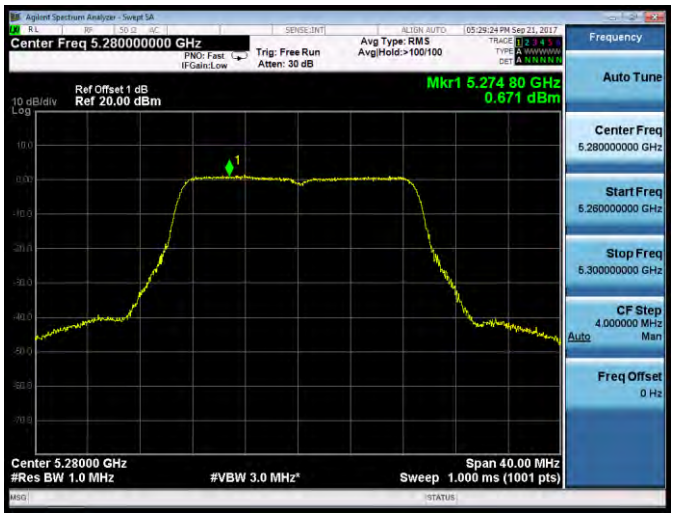
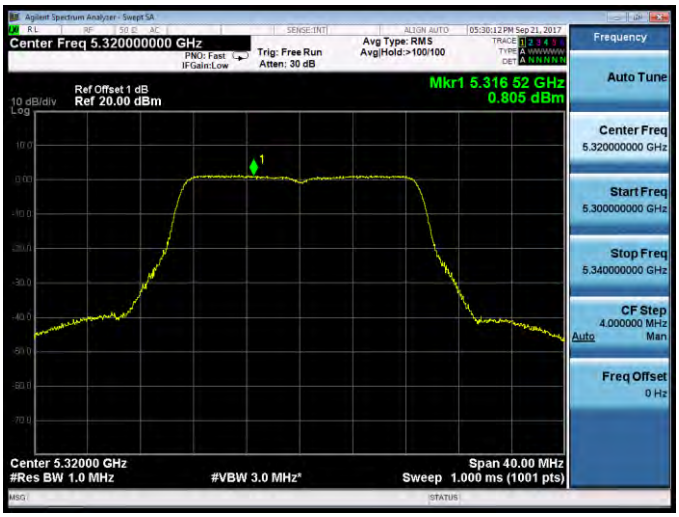
| Mode 2: IEEE 802.11a Continuous TX mode_ ANT-0 | |
|---|---|
| 5180 MHz |  |
| 5200 MHz |  |
| 5240 MHz |  |

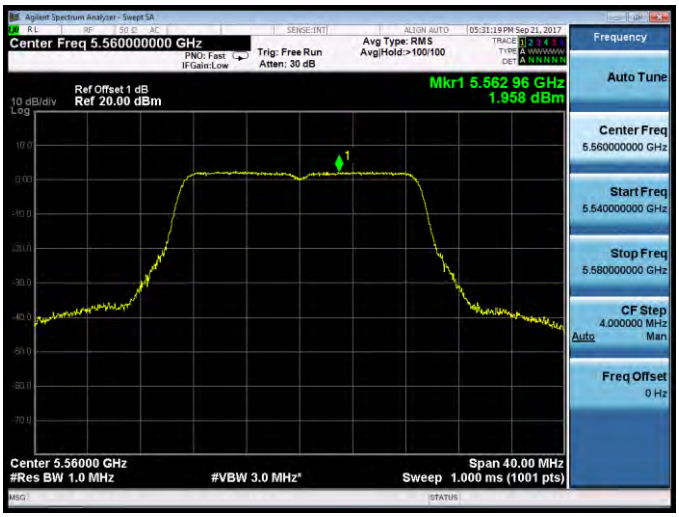
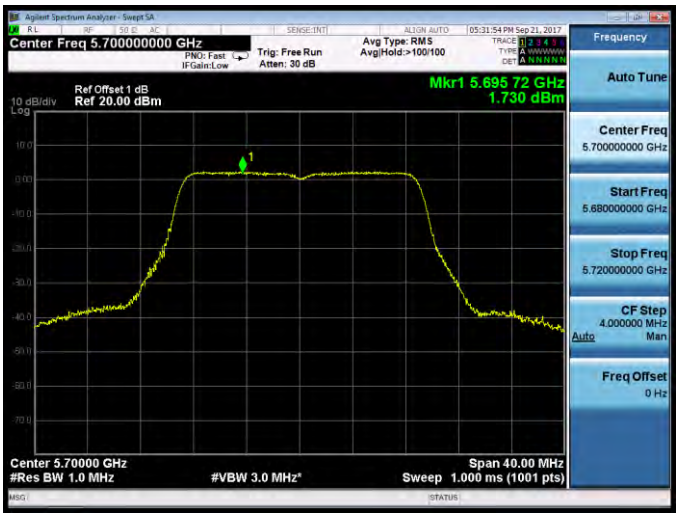
| Mode 2: IEEE 802.11a Continuous TX mode_ ANT-0 | |
|---|---|
| 5260 MHz |  |
| 5280 MHz |  |
| 5320 MHz |  |

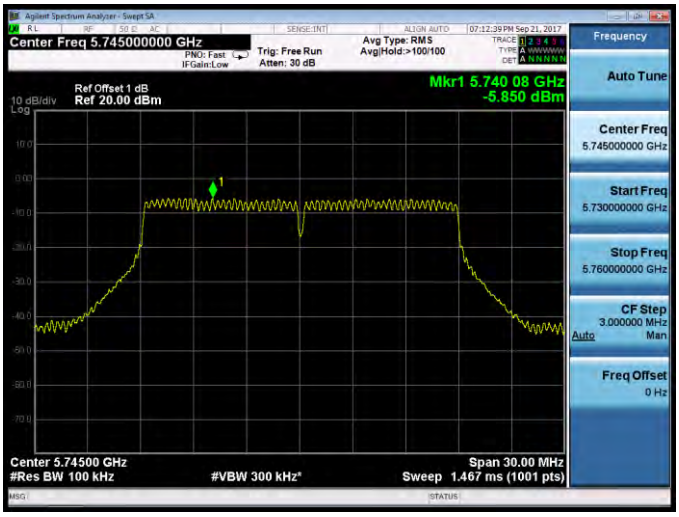
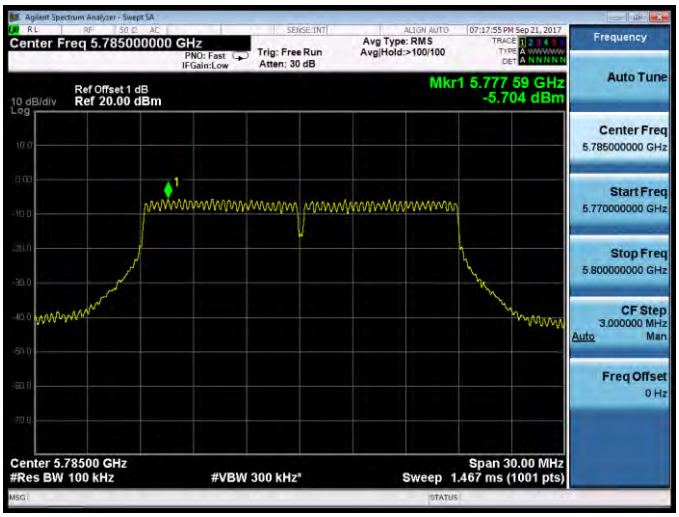
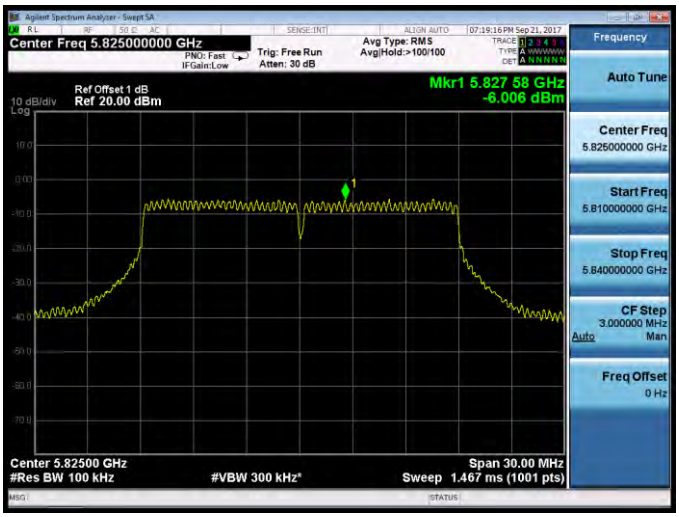
| Mode 2: IEEE 802.11a Continuous TX mode_ ANT-0 | |
|---|---|
| 5500 MHz |  |
| 5560 MHz |  |
| 5700 MHz |  |

| Mode 2: IEEE 802.11a Continuous TX mode_ ANT-0 | |
|---|---|
| 5745 MHz |  |
| 5785 MHz |  |
| 5825 MHz |  |

| Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode _ ANT-0 | |
|---|---|
| 5180 MHz |  |
| 5200 MHz |  |
| 5240 MHz |  |

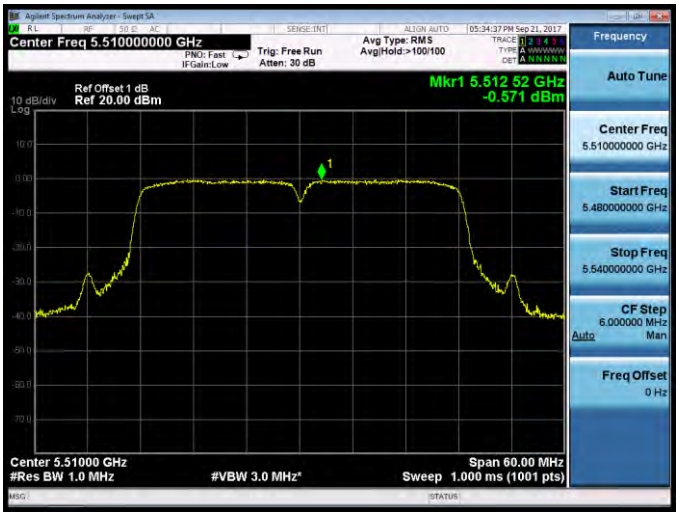
| Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode _ ANT-0 | |
|---|---|
| 5260 MHz |  |
| 5280 MHz |  |
| 5320 MHz |  |

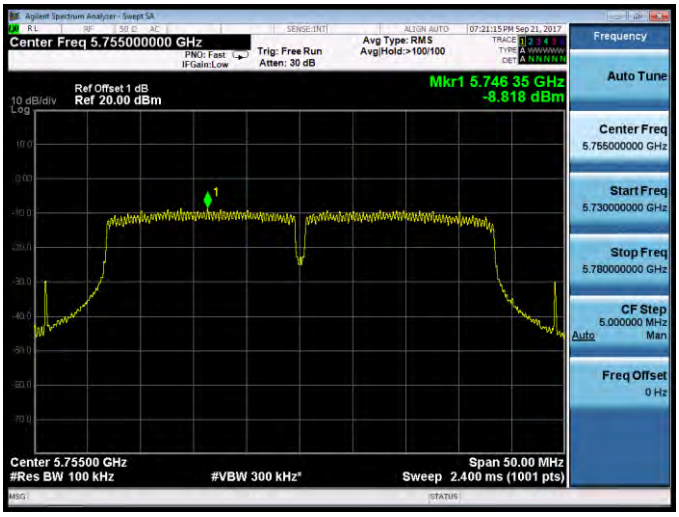
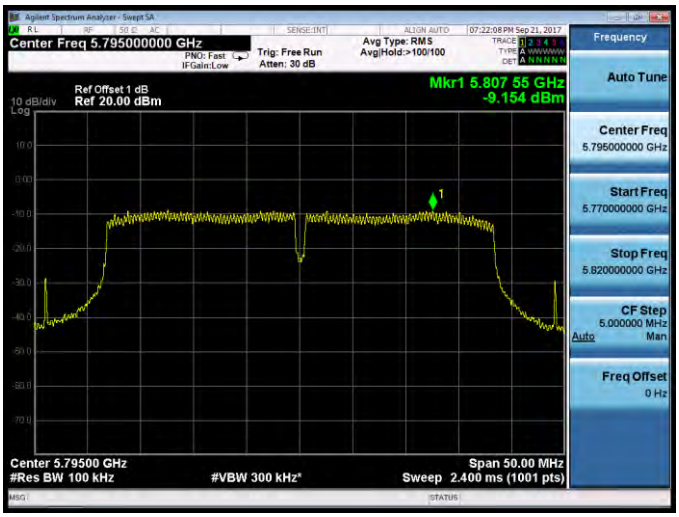
| Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode _ ANT-0 | |
|---|---|
| 5500 MHz |  |
| 5560 MHz |  |
| 5700 MHz |  |

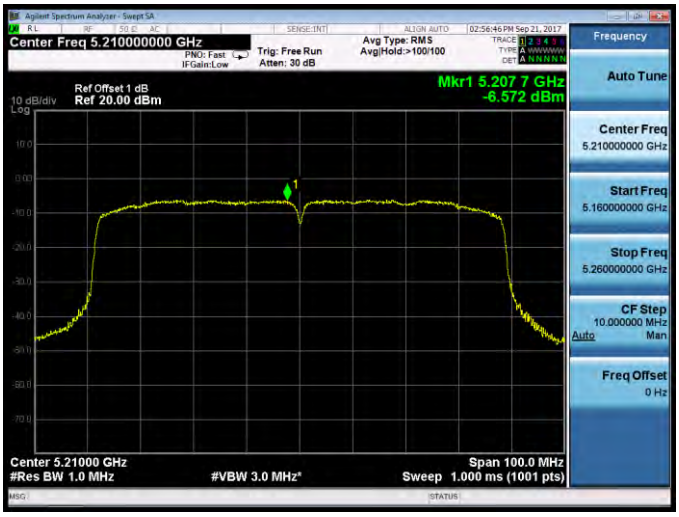
| Mode 3: IEEE 802.11ac 20 MHz Continuous TX mode _ ANT-0 | |
|---|---|
| 5745 MHz |  |
| 5785 MHz |  |
| 5825 MHz |  |

| Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ ANT-0 | |
|---|---|
| 5190 MHz |  |
| 5230 MHz |  |

| Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ ANT-0 | |
|---|---|
| 5270 MHz |  |
| 5310 MHz |  |

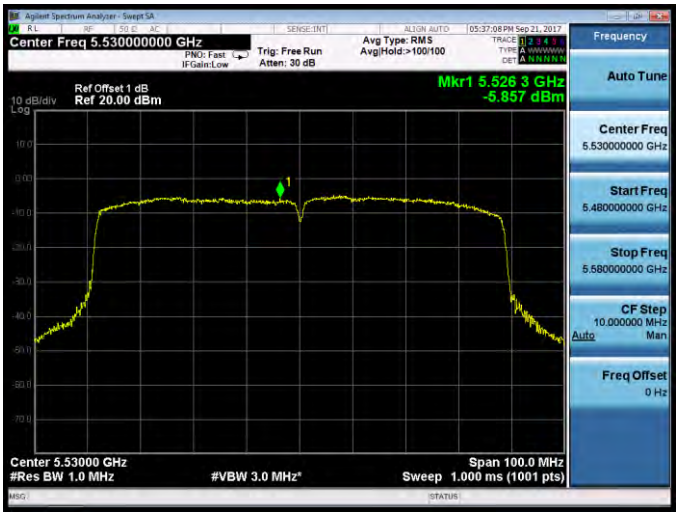
| Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ ANT-0 | |
|---|---|
| 5510 MHz |  |
| 5550 MHz |  |
| 5670 MHz |  |

| Mode 4: IEEE 802.11ac 40 MHz Continuous TX mode_ ANT-0 | |
|---|---|
| 5755 MHz |  |
| 5795 MHz |  |

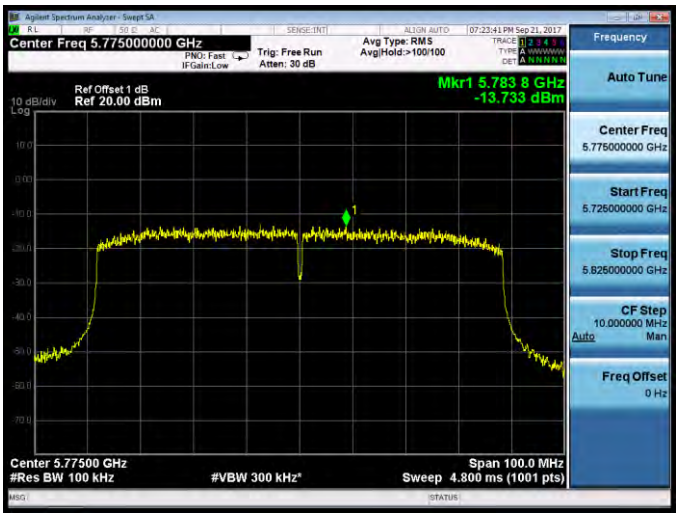
| Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode _ ANT-0 | |
|---|---|
| 5210 MHz |  |



| Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode _ ANT-0 | |
|---|---|
| 5290 MHz |  |

| Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode _ ANT-0 | |
|---|---|
| 5530 MHz |  |



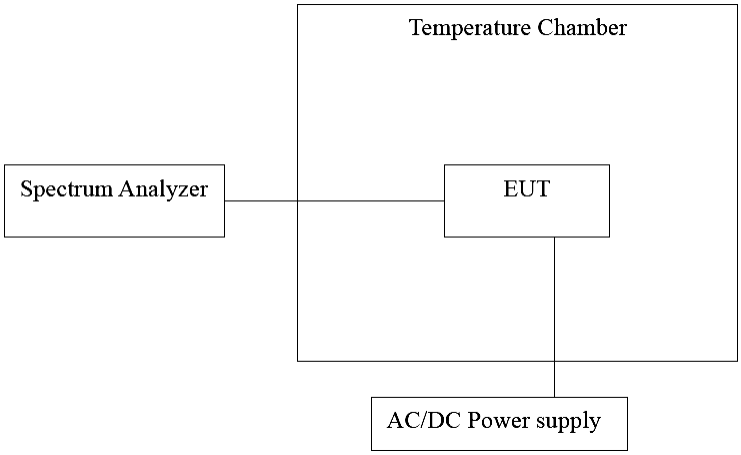
| Mode 5: IEEE 802.11ac 80 MHz Continuous TX mode _ ANT-0 | |
|---|---|
| 5775 MHz |  |

## 4.8. Frequency Stability Measurement

### ■ Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

### ■ Test Setup




### ■ Test Procedure

1. The EUT was placed inside the environmental test chamber and powered by nominal AC/DC voltage.
2. Turn the EUT on and couple its output to a spectrum analyzer.
3. Turn the EUT off and set the chamber to the highest temperature specified.
4. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize.
5. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
6. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

■ **Test Result**

**Temperature Variations**

| Test Item | Frequency Stability | | | | | |
|---|---|---|---|---|---|---|
| Frequency | Temp. (°C) | Voltage (Vac) | Measured Freq. (MHz) | Delta Freq. (Hz) | Tolerance (ppm) | Result (Pass/Fail) |
| 5200 MHz | -30 | 3.8 | 5199.972 | -28000 | -5.385 | Pass |
| | -20 | | 5199.981 | -19000 | -3.654 | Pass |
| | -10 | | 5199.997 | -3000 | -0.577 | Pass |
| | 0 | | 5199.987 | -13000 | -2.500 | Pass |
| | 10 | | 5199.931 | -69000 | -13.269 | Pass |
| | 20 | | 5199.956 | -44000 | -8.462 | Pass |
| | 30 | | 5199.96 | -40000 | -7.692 | Pass |
| | 40 | | 5199.912 | -88000 | -16.923 | Pass |
| | 50 | | 5199.985 | -15000 | -2.885 | Pass |
| 5280 MHz | -30 | 3.8 | 5279.961 | -39000 | -7.386 | Pass |
| | -20 | | 5279.979 | -21000 | -3.977 | Pass |
| | -10 | | 5279.918 | -82000 | -15.530 | Pass |
| | 0 | | 5279.932 | -68000 | -12.879 | Pass |
| | 10 | | 5279.993 | -7000 | -1.326 | Pass |
| | 20 | | 5279.965 | -35000 | -6.629 | Pass |
| | 30 | | 5279.958 | -42000 | -7.955 | Pass |
| | 40 | | 5279.981 | -19000 | -3.598 | Pass |
| | 50 | | 5279.987 | -13000 | -2.462 | Pass |
| 5560 MHz | -30 | 3.8 | 5559.9737 | -26300 | -4.730 | Pass |
| | -20 | | 5559.9749 | -25100 | -4.514 | Pass |
| | -10 | | 5559.9803 | -19700 | -3.543 | Pass |
| | 0 | | 5559.9685 | -31500 | -5.665 | Pass |
| | 10 | | 5559.977 | -23000 | -4.137 | Pass |
| | 20 | | 5559.9845 | -15500 | -2.788 | Pass |
| | 30 | | 5559.9859 | -14100 | -2.536 | Pass |
| | 40 | | 5559.9871 | -12900 | -2.320 | Pass |
| | 50 | | 5559.9926 | -7400 | -1.331 | Pass |
| 5785 MHz | -30 | 3.8 | 5784.9626 | -37400 | -6.465 | Pass |
| | -20 | | 5784.963 | -37000 | -6.396 | Pass |
| | -10 | | 5784.9687 | -31300 | -5.411 | Pass |
| | 0 | | 5784.957 | -43000 | -7.433 | Pass |
| | 10 | | 5784.9656 | -34400 | -5.946 | Pass |
| | 20 | | 5784.9732 | -26800 | -4.633 | Pass |
| | 30 | | 5784.9747 | -25300 | -4.373 | Pass |
| | 40 | | 5784.976 | -24000 | -4.149 | Pass |
| | 50 | | 5784.9816 | -18400 | -3.181 | Pass |

Note: The manufacturer's frequency stability specification is better then 20ppm.

**Voltage Variations**

| Test Item | Frequency Stability | | | | | |
|---|---|---|---|---|---|---|
| Frequency | Temp. (°C) | Voltage (Vac) | Measured Freq. (MHz) | Delta Freq. (Hz) | Tolerance (ppm) | Result (Pass/Fail) |
| 5200 MHz | 20 | 4.35 | 5199.918 | -82000 | -15.769 | Pass |
| | | 3.8 | 5199.962 | -38000 | -7.308 | Pass |
| | | 3.6 | 5199.965 | -35000 | -6.731 | Pass |
| 5280 MHz | 20 | 4.35 | 5280.01 | 10000 | 1.894 | Pass |
| | | 3.8 | 5279.98 | -20000 | -3.788 | Pass |
| | | 3.6 | 5279.971 | -29000 | -5.492 | Pass |
| 5560 MHz | 20 | 4.35 | 5559.98 | -20000 | -3.597 | Pass |
| | | 3.8 | 5559.94 | -60000 | -10.791 | Pass |
| | | 3.6 | 5559.9 | -100000 | -17.986 | Pass |
| 5785 MHz | 20 | 4.35 | 5784.971 | -29000 | -5.013 | Pass |
| | | 3.8 | 5784.965 | -35000 | -6.050 | Pass |
| | | 3.6 | 5784.98 | -20000 | -3.457 | Pass |

Note: The manufacturer's frequency stability specification is better then 20ppm.

## 4.9. Automatically discontinue transmission

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signalling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met.

- **Test Result**

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving.

## 4.10. Antenna Requirement

- **Limit**

For intentional device, according to 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.
And According to 15.407 (a), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

- **Antenna Connector Construction**

See section 2 – antenna information.