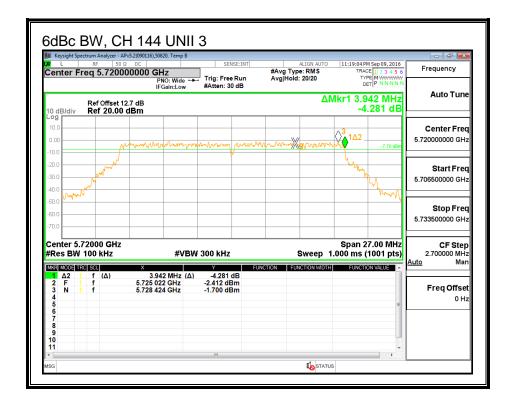
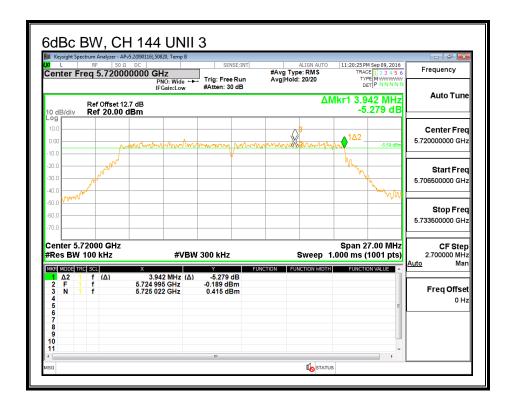
CHAIN 0



CHAIN 2



802.11n HT20 2Tx (CHAIN 1 + CHAIN 2) CDD MODE IN THE 5.6 GHz 8.16. **BAND**

8.16.1. **26 dB BANDWIDTH**

LIMITS

None; for reporting purposes only.

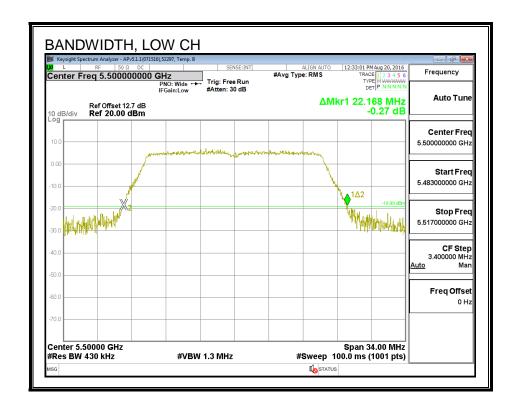
RESULTS

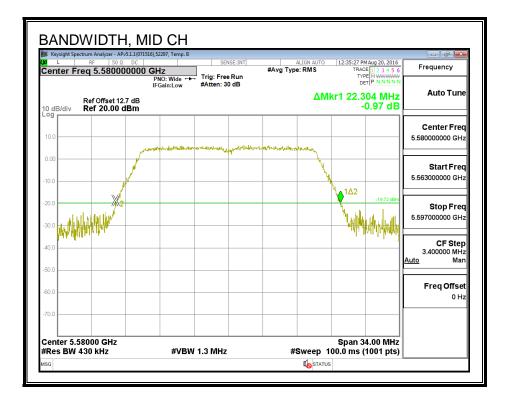
| Channel | Frequency | 26 dB BW | 26 dB BW |
|---------|-----------|----------|----------|
| | | Chain 1 | Chain 2 |
| | (MHz) | (MHz) | (MHz) |
| Low | 5500 | 22.168 | 22.270 |
| Mid | 5580 | 22.304 | 22.230 |
| High | 5700 | 22.406 | 21.879 |
| 144 | 5720 | 22.270 | 22.032 |

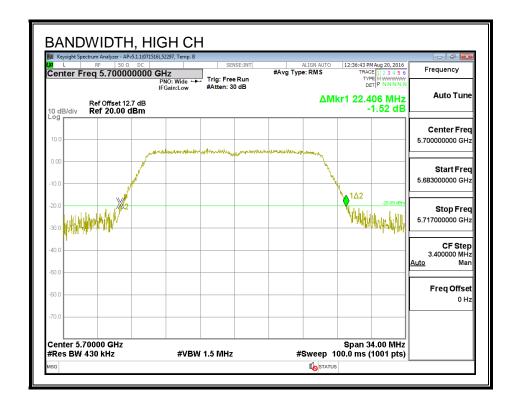
DATE: OCTOBER 13, 2016

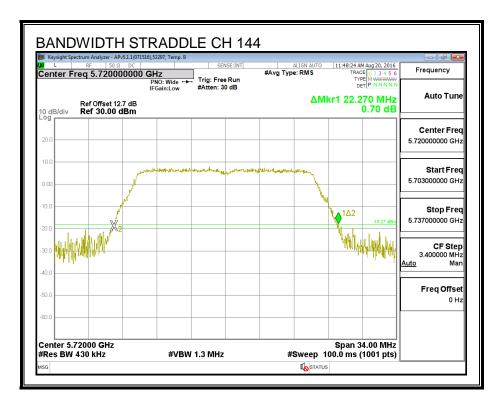
IC: 579C-A1707

26 dB BANDWIDTH, CHAIN 1

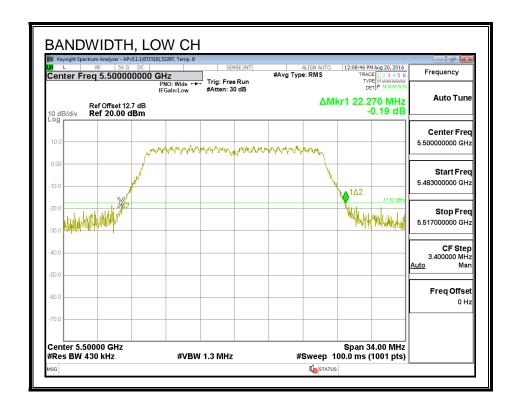


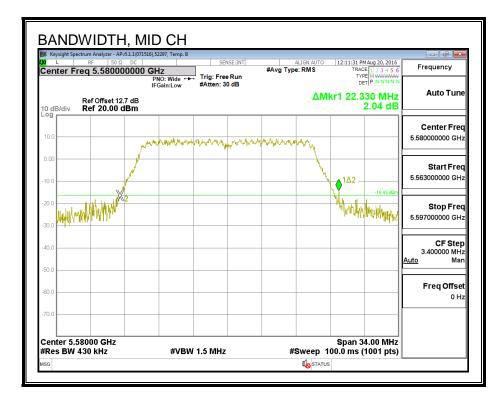


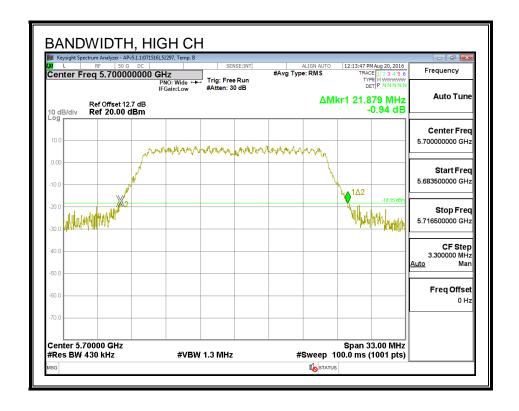


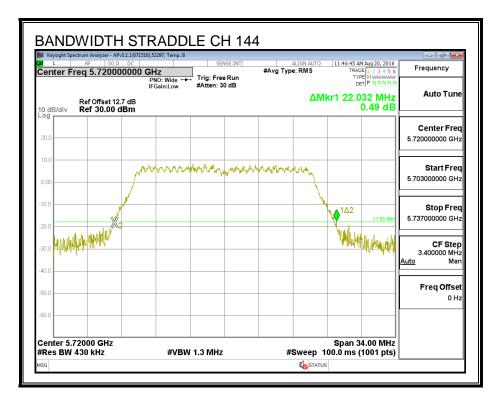


26 dB BANDWIDTH, CHAIN 2









8.16.2. **99% BANDWIDTH**

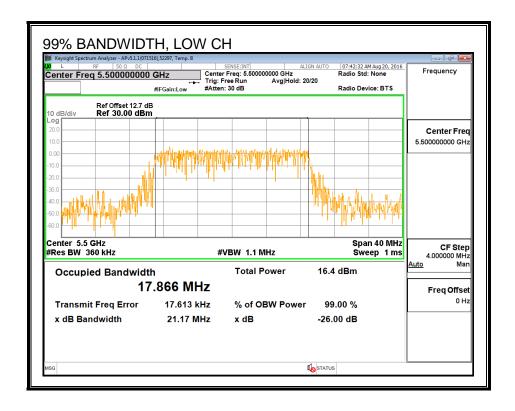
LIMITS

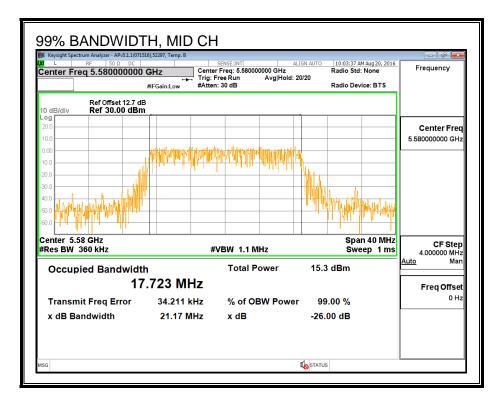
None; for reporting purposes only.

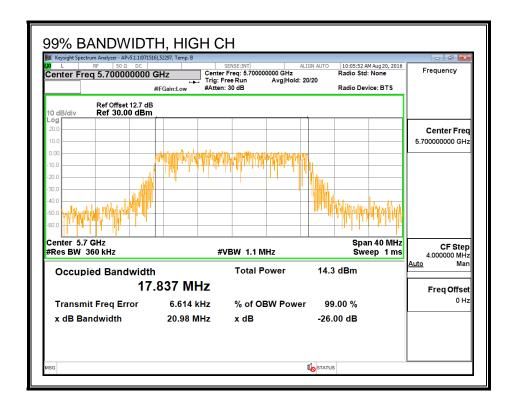
RESULTS

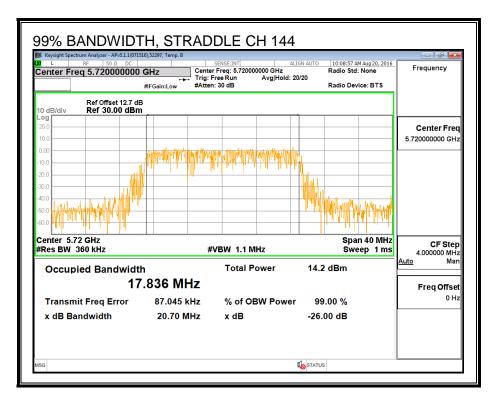
| Channel | Frequency | 99% BW | 99% BW | |
|---------|-----------|---------|---------|--|
| | | Chain 1 | Chain 2 | |
| | (MHz) | (MHz) | (MHz) | |
| Low | 5500 | 17.866 | 17.702 | |
| Mid | 5580 | 17.723 | 17.702 | |
| High | 5700 | 17.837 | 17.743 | |
| 144 | 5720 | 17.836 | 17.903 | |

99% BANDWIDTH, CHAIN 1

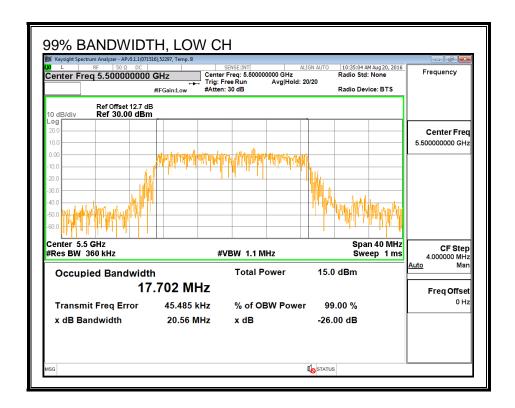


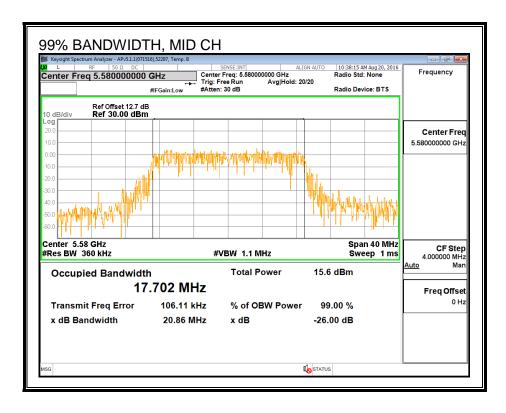


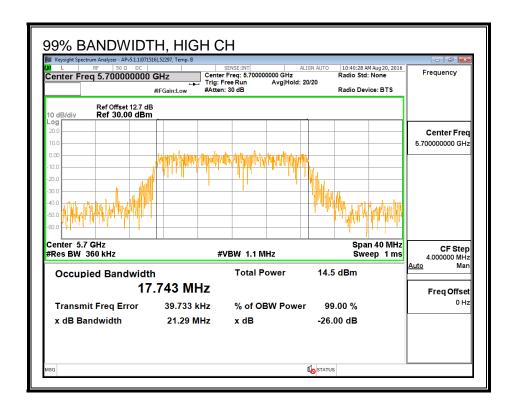


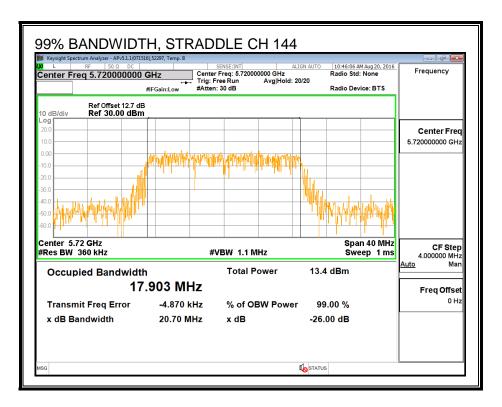


99% BANDWIDTH, CHAIN 2









8.16.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

| ID: | 43573 | Date: | 9/7/16 |
|-----|-------|-------|--------|
|-----|-------|-------|--------|

Average Power Results

| Channel | Frequency | Chain 1 | Chain 2 | Total |
|---------|-----------|---------|---------|-------|
| | | Power | Power | Power |
| | (MHz) | (dBm) | (dBm) | (dBm) |
| Low | 5500 | 11.85 | 11.87 | 14.87 |
| Mid | 5580 | 11.92 | 11.88 | 14.91 |
| High | 5700 | 11.86 | 11.95 | 14.92 |
| 144 | 5720 | 11.95 | 11.99 | 14.98 |

8.16.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-247 (6.2.3) (1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

Straddle channel power is measured using PXA spectrum analyzer, duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

The TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

| Chain 1 | Chain 2 | Uncorrelated Chains |
|---------|---------|----------------------------|
| Antenna | Antenna | Directional |
| Gain | Gain | Gain |
| (dBi) | (dBi) | (dBi) |
| 7.40 | 5.20 | 6.44 |

The TX chains are correlated and the antenna gain is unequal among the chains. The directional gain is:

| Chain 1 | Chain 2 | Correlated Chains |
|---------|---------|--------------------------|
| Antenna | Antenna | Directional |
| Gain | Gain | Gain |
| (dBi) | (dBi) | (dBi) |
| 7.40 | 5.20 | 9.38 |

REPORT NO: 16U23800-E4V2 DATE: OCTOBER 13, 2016 IC: 579C-A1707 FCC ID: BCGA1707

RESULTS

| ID: | 43573 | Date: | 9/7/16 |
|-----|-------|-------|--------|
|-----|-------|-------|--------|

Bandwidth, Antenna Gain and Limits

| Channel | Frequency | Min | Min | Directional | Directional | Power | PSD |
|---------|-----------|-------|--------|-------------|-------------|-------|-------|
| | | 26 dB | 99% | Gain | Gain | Limit | Limit |
| | | BW | BW | for Power | for PSD | | |
| | (MHz) | (MHz) | (MHz) | (dBi) | (dBi) | (dBm) | (dBm) |
| Low | 5500 | 22.17 | 17.702 | 6.44 | 9.38 | 23.04 | 7.62 |
| Mid | 5580 | 22.23 | 17.702 | 6.44 | 9.38 | 23.04 | 7.62 |
| High | 5700 | 21.88 | 17.743 | 6.44 | 9.38 | 23.05 | 7.62 |

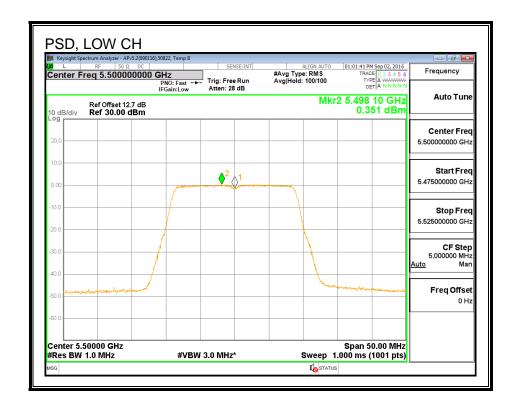
| Duty Cycle CF (dB) 0.00 | Included in Calculations of Corr'd PSD |
|-------------------------|--|
|-------------------------|--|

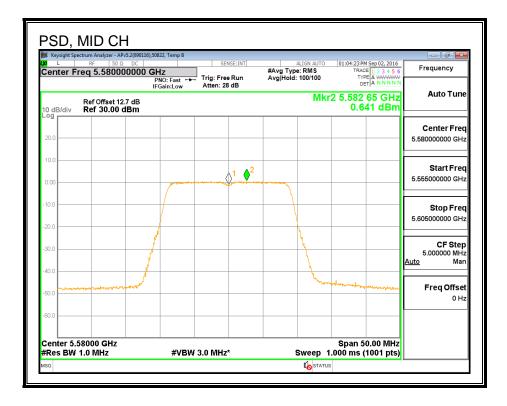
Output Power Results

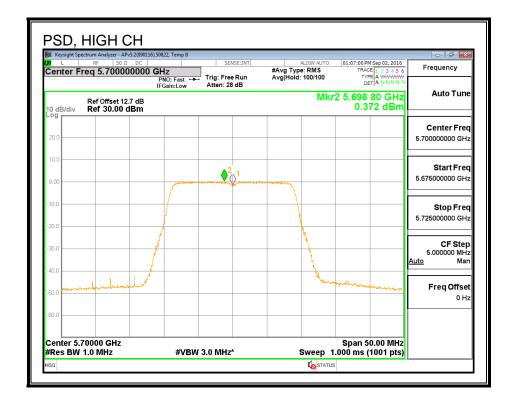
| Channel | Frequency | Chain 1 | Chain 2 | Total | Power | Power |
|---------|-----------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Corr'd | Limit | Margin |
| | | Power | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| Low | 5500 | 11.85 | 11.87 | 14.87 | 23.04 | -8.17 |
| Mid | 5580 | 11.92 | 11.88 | 14.91 | 23.04 | -8.13 |
| High | 5700 | 11.86 | 11.95 | 14.92 | 23.05 | -8.13 |

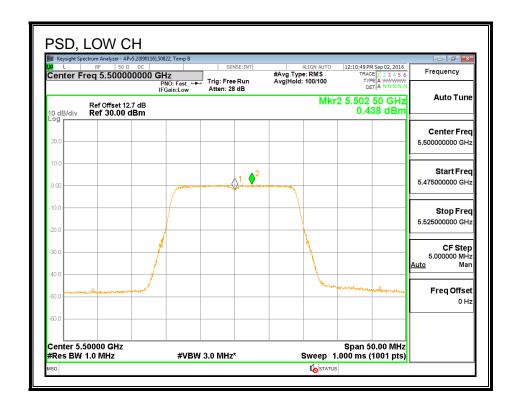
PSD Results

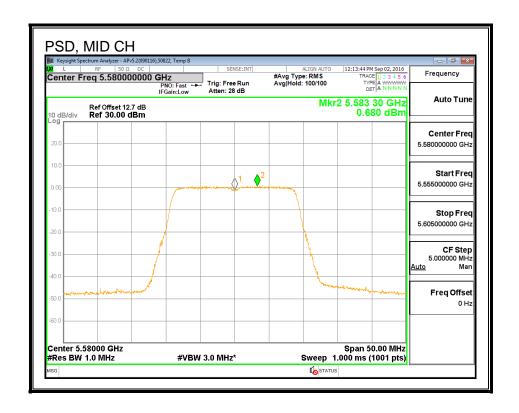
| 1 OF Robatio | | | | | | | | |
|--------------|-----------|---------|---------|--------|-------|--------|--|--|
| Channel | Frequency | Chain 1 | Chain 2 | Total | PSD | PSD | | |
| | | Meas | Meas | Corr'd | Limit | Margin | | |
| | | PSD | PSD | PSD | | | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) | | |
| Low | 5500 | 0.351 | 0.438 | 3.41 | 7.62 | -4.21 | | |
| Mid | 5580 | 0.641 | 0.68 | 3.67 | 7.62 | -3.95 | | |
| High | 5700 | 0.372 | 0.512 | 3.45 | 7.62 | -4.17 | | |

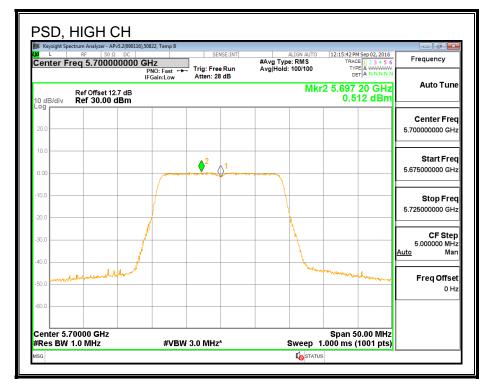












8.17. 802.11ac VHT20 2Tx (CHAIN 1 + CHAIN 2) CDD STRADDLE CHANNEL 144 RESULTS (FCC)

8.17.1. OUTPUT POWER AND PSD

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency | Min | Directional | Directional | Power | PSD |
|---------|-----------|-------|-------------|-------------|-------|-------|
| | | 26 dB | Gain | Gain | Limit | Limit |
| | | BW | for Power | for PSD | | |
| | (MHz) | (MHz) | (dBi) | (dBi) | (dBm) | (dBm) |
| 144 | 5720 | 16.02 | 6.44 | 9.38 | 22.61 | 7.62 |

| Duty Cycle CF (dB) 0.00 | Included in Calculations of Corr'd Power & PSD |
|-------------------------|--|
|-------------------------|--|

Output Power Results

| Channel | Frequency | Chain 1 | Chain 2 | Total | Power | Power |
|---------|-----------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Corr'd | Limit | Margin |
| | | Power | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 144 | 5720 | 10.82 | 10.91 | 13.87 | 22.61 | -8.73 |

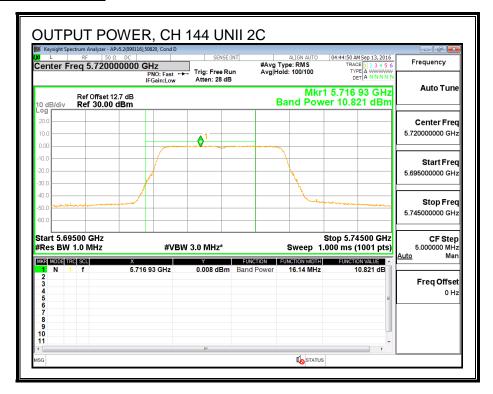
PSD Results

| Channel | Frequency | Chain 1 | Chain 2 | Total | PSD | PSD | | | |
|---------|-----------|---------|---------|--------|-------|--------|--|--|--|
| | | Meas | Meas | Corr'd | Limit | Margin | | | |
| | | PSD | PSD | PSD | | | | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) | | | |
| 144 | 5720 | 0.335 | 0.551 | 3.45 | 7.62 | -4.17 | | | |

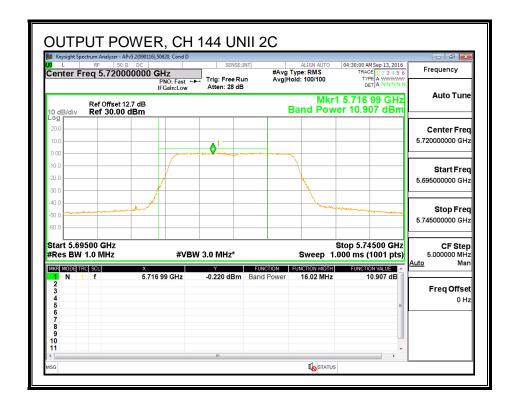
DATE: OCTOBER 13, 2016

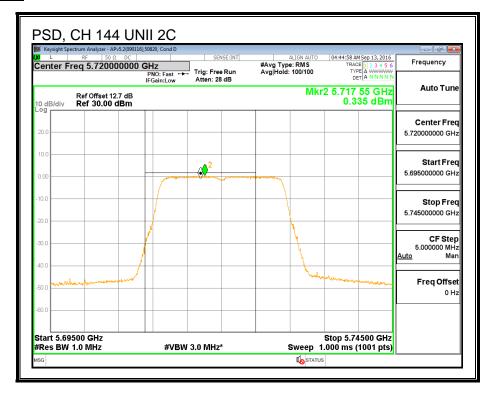
IC: 579C-A1707

OUTPUT POWER, CHAIN 1

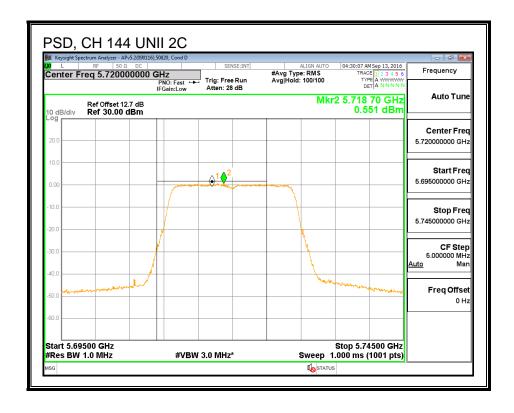


OUTPUT POWER, CHAIN 2





PSD, CHAIN 2



UNII-3 BAND

Antenna Gain and Limit

| Channel | Frequency | Min | Directional | Directional | Power | PSD |
|---------|-----------|-------|-------------|-------------|-------|-------|
| | | 26 dB | Gain | Gain | Limit | Limit |
| | | BW | For Power | For PSD | | |
| | (MHz) | (MHz) | (dBi) | (dBi) | (dBm) | (dBm) |
| 144 | 5720 | 6.02 | 6.44 | 9.38 | 29.56 | 26.62 |

| Duty Cycle CF | dB) | 0.00 | Included in Calculations of Corr'd Power & PSD |
|---------------|-----|------|--|
|---------------|-----|------|--|

Output Power Results

| Channel | Frequency | Chain 1 | Chain 2 | Total | Power | Power |
|---------|-----------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Corr'd | Limit | Margin |
| | | Power | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 144 | 5720 | 5.38 | 5.34 | 8.37 | 29.56 | -21.19 |

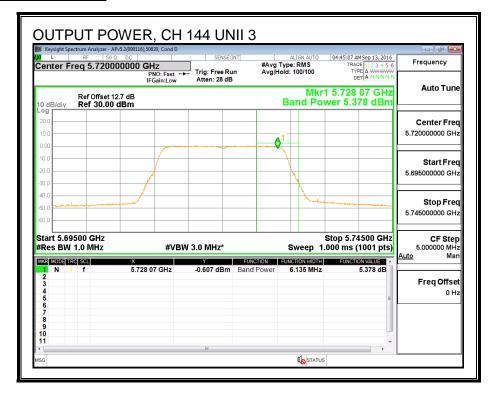
PSD Results

| Channel | Frequency | Chain 1 | Chain 2 | Total | PSD | PSD |
|---------|-----------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Corr'd | Limit | Margin |
| | | PSD | PSD | PSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 144 | 5720 | -2.53 | -2.63 | 0.43 | 26.62 | -26.19 |

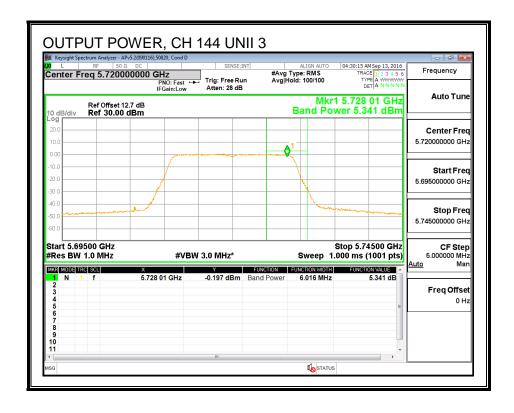
DATE: OCTOBER 13, 2016

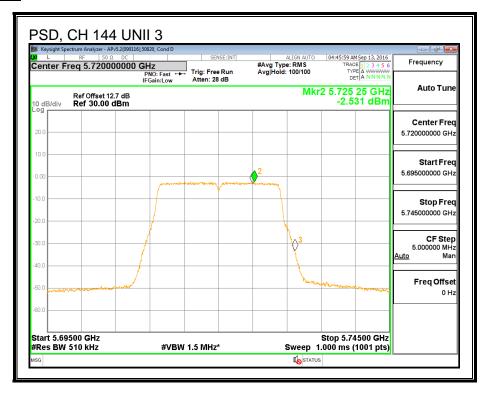
IC: 579C-A1707

OUTPUT POWER, CHAIN 1

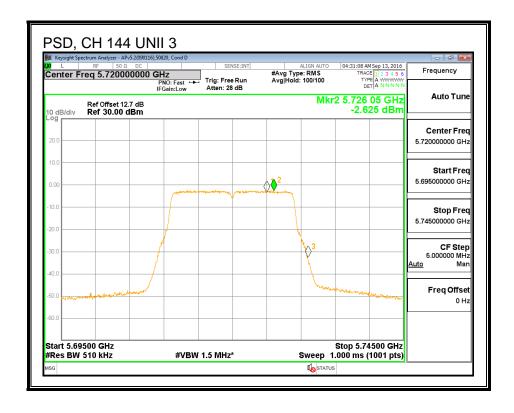


OUTPUT POWER, CHAIN 2





PSD, CHAIN 2



8.18. 802.11ac VHT20 2Tx (CHAIN 1 + CHAIN 2) CDD STRADDLE CHANNEL 144 RESULTS (IC)

8.18.1. OUTPUT POWER AND PSD

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency | Min | Directional | Directional | Power | PSD |
|---------|-----------|--------|-------------|-------------|-------|-------|
| | | 99% | Gain | Gain | Limit | Limit |
| | | BW | for Power | for PSD | | |
| | (MHz) | (MHz) | (dBi) | (dBi) | (dBm) | (dBm) |
| 144 | 5720 | 13.920 | 6.44 | 9.38 | 22.00 | 7.62 |

| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd Power & PSD |
|--------------------|------|--|
|--------------------|------|--|

Output Power Results

| Channel | Frequency | Chain 1 | Chain 2 | Total | Power | Power |
|---------|-----------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Corr'd | Limit | Margin |
| | | Power | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 144 | 5720 | 10.78 | 10.86 | 13.83 | 22.00 | -8.17 |

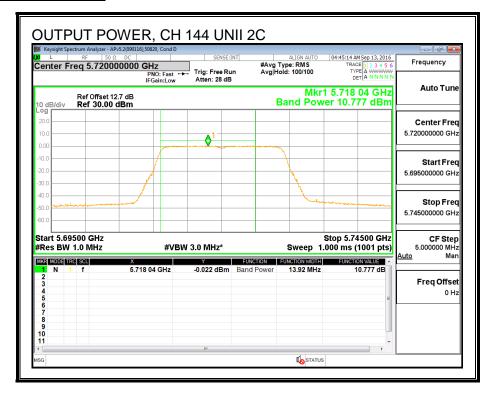
PSD Results

| Channel | Frequency | Chain 1 | Chain 2 | Total | PSD | PSD |
|---------|-----------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Corr'd | Limit | Margin |
| | | PSD | PSD | PSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 144 | 5720 | 0.34 | 0.55 | 3.45 | 7.62 | -4.17 |

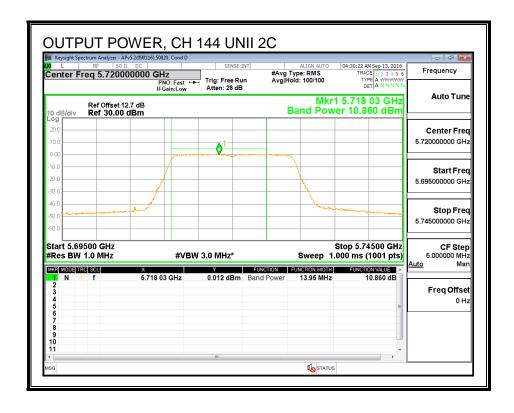
DATE: OCTOBER 13, 2016

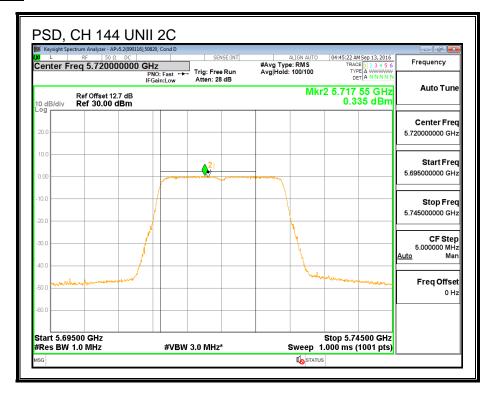
IC: 579C-A1707

OUTPUT POWER, CHAIN 1

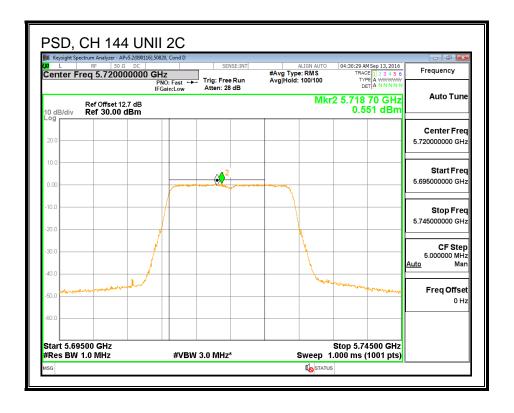


OUTPUT POWER, CHAIN 2





PSD, CHAIN 2



Page 187 of 1393

UNII-3 BAND

Antenna Gain and Limit

| Channel | Frequency | Min | Directional | Directional | Power | PSD |
|---------|-----------|-------|-------------|-------------|-------|-------|
| | | 99% | Gain | Gain | Limit | Limit |
| | | BW | For Power | For PSD | | |
| | (MHz) | (MHz) | (dBi) | (dBi) | (dBm) | (dBm) |
| 144 | 5720 | 3.918 | 6.44 | 9.38 | 29.56 | 26.62 |

| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd Power & PSD |
|--------------------|------|--|
|--------------------|------|--|

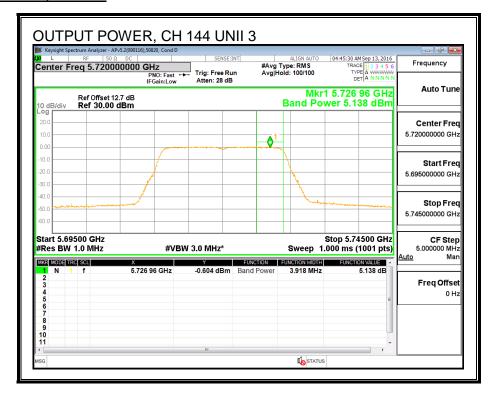
Output Power Results

| Channel | Frequency | Chain 1 | Chain 2 | Total | Power | Power |
|---------|-----------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Corr'd | Limit | Margin |
| | | Power | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 144 | 5720 | 5.14 | 5.15 | 8.16 | 29.56 | -21.40 |

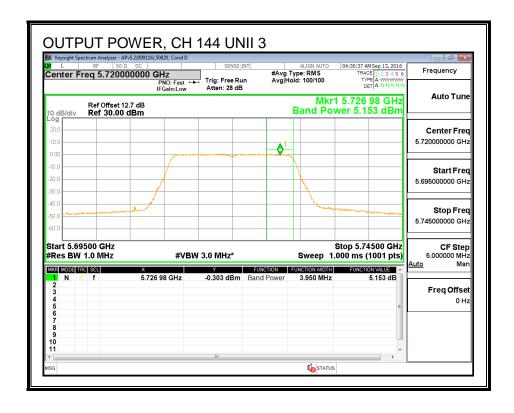
PSD Results

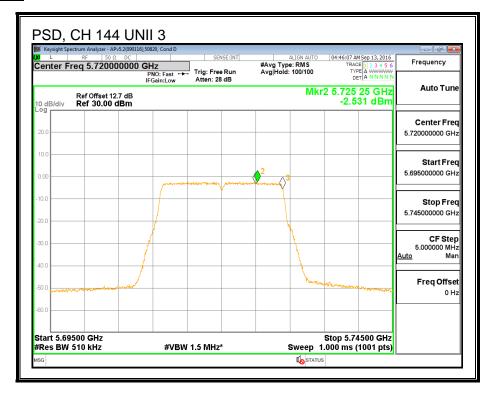
| Channel | Frequency | Chain 1 | Chain 2 | Total | PSD | PSD |
|---------|-----------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Corr'd | Limit | Margin |
| | | PSD | PSD | PSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 144 | 5720 | -2.53 | -2.63 | 0.43 | 26.62 | -26.19 |

OUTPUT POWER, CHAIN 1

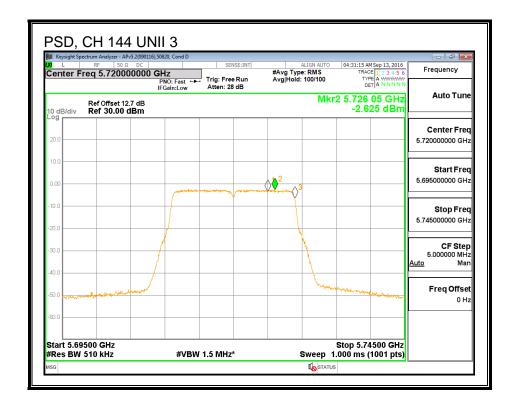


OUTPUT POWER, CHAIN 2





PSD, CHAIN 2



8.18.2. **6 dB BANDWIDTH**

LIMITS

FCC §15.407 (e)

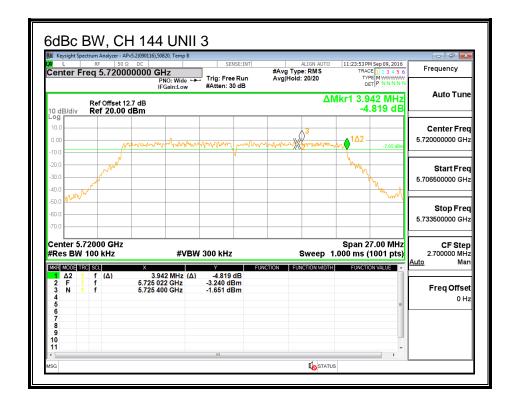
IC RSS-247 (6.2.4) (1)

The minimum 6 dB bandwidth shall be at least 500 kHz.

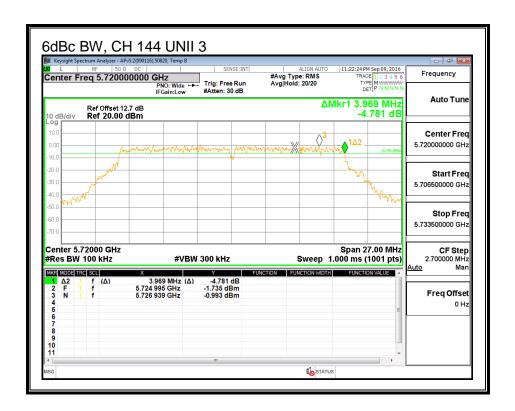
RESULTS

| Channel | Frequency | 6 dB BW | 6 dB BW | |
|---------|-----------|---------|---------|--|
| | | Chain 1 | Chain 2 | |
| | (MHz) | (MHz) | (MHz) | |
| 144 | 5720 | 3.942 | 3.969 | |

CHAIN 1



CHAIN 2



802.11n HT20 2Tx (CHAIN 0 + CHAIN 1) STBC MODE IN THE 5.6 GHz 8.19. **BAND**

8.19.1. **26 dB BANDWIDTH**

LIMITS

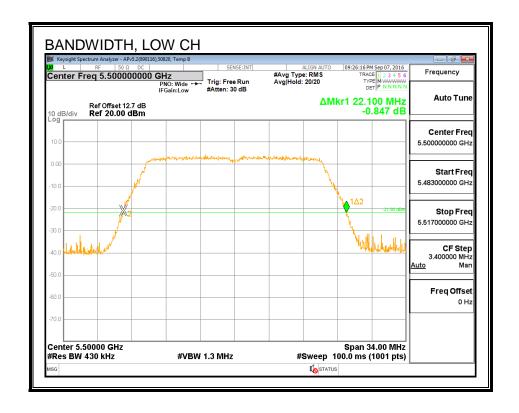
None; for reporting purposes only.

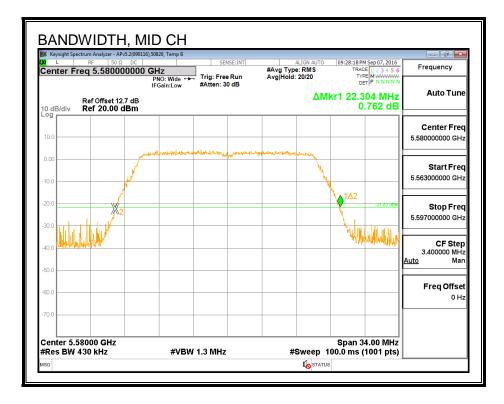
RESULTS

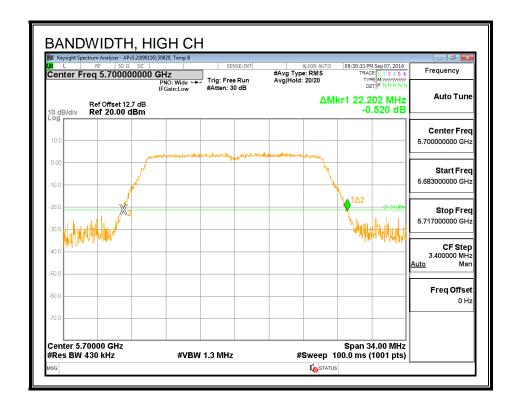
| Channel | Frequency | 26 dB BW | 26 dB BW | |
|---------|-----------|----------|----------|--|
| | | Chain 0 | Chain 1 | |
| | (MHz) | (MHz) | (MHz) | |
| Low | 5500 | 22.100 | 21.846 | |
| Mid | 5580 | 22.304 | 21.813 | |
| High | 5700 | 22.202 | 21.978 | |
| 144 | 5720 | 22.134 | 21.945 | |

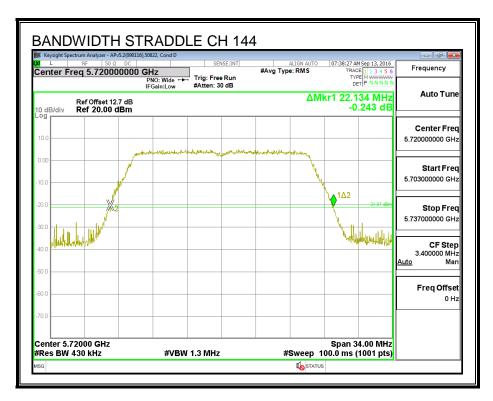
IC: 579C-A1707

26 dB BANDWIDTH, CHAIN 0

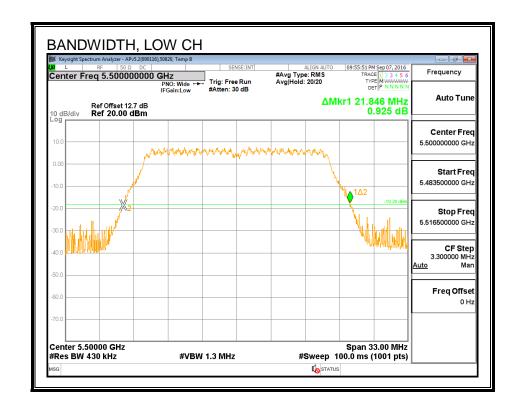


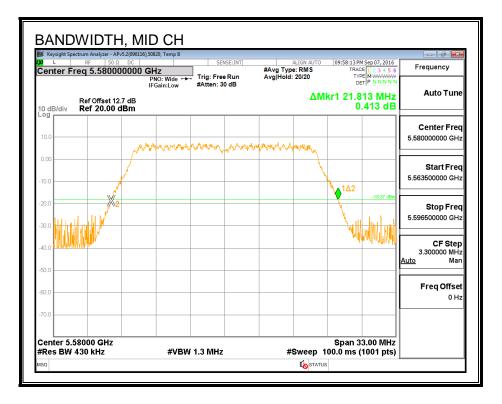


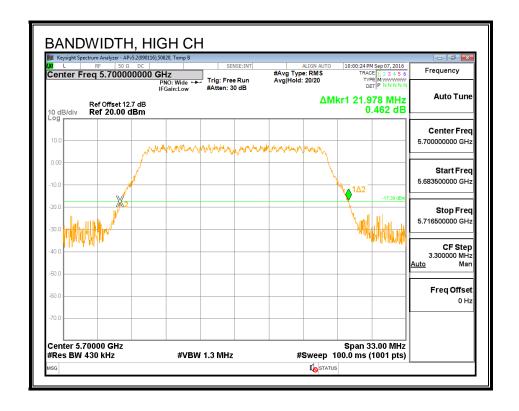


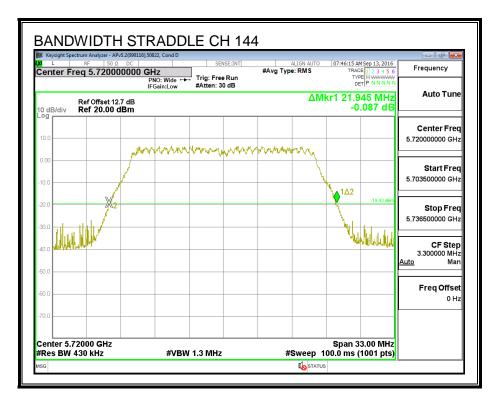


26 dB BANDWIDTH, CHAIN 1









8.19.2. **99% BANDWIDTH**

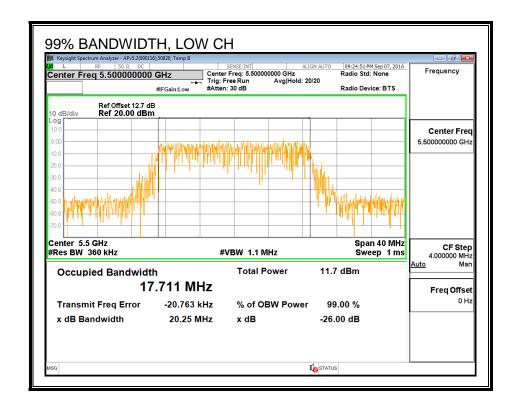
LIMITS

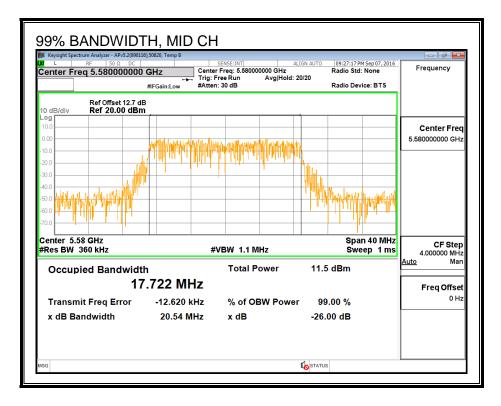
None; for reporting purposes only.

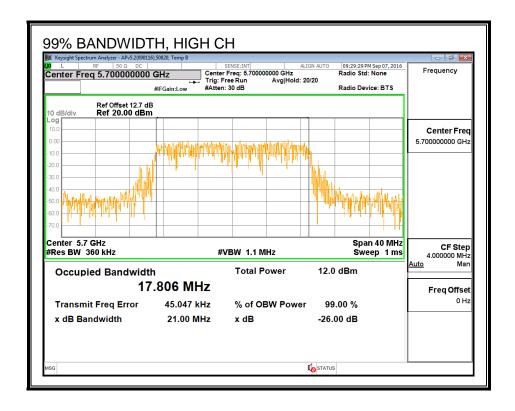
RESULTS

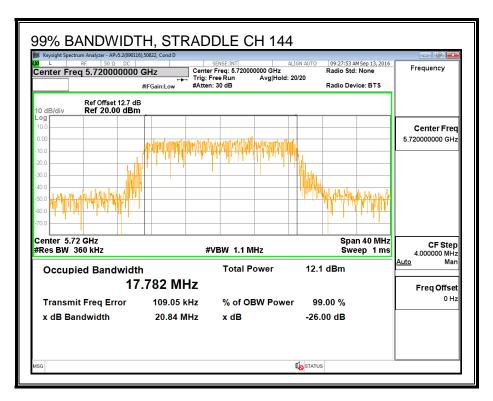
| Channel Frequency | | 99% BW | 99% BW |
|-------------------|-------|---------|---------|
| | | Chain 0 | Chain 1 |
| | (MHz) | (MHz) | (MHz) |
| Low | 5500 | 17.711 | 17.803 |
| Mid | 5580 | 17.722 | 17.710 |
| High | 5700 | 17.806 | 17.870 |
| 144 | 5720 | 17.782 | 17.803 |

99% BANDWIDTH, CHAIN 0

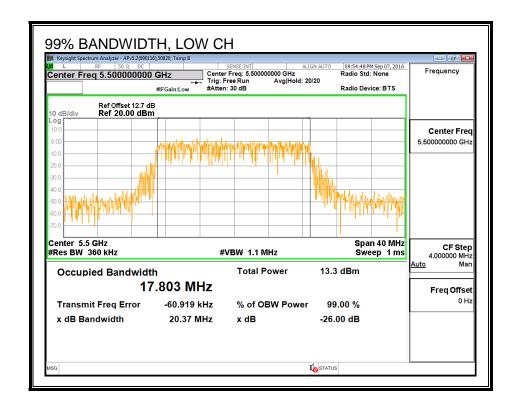


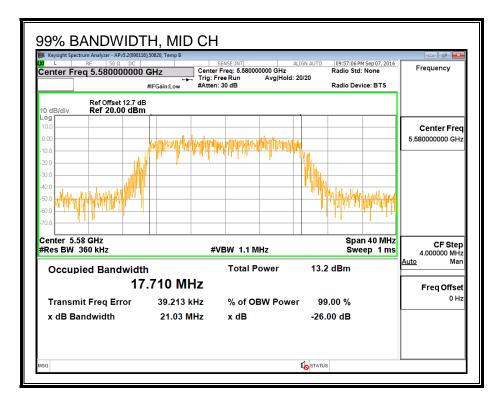


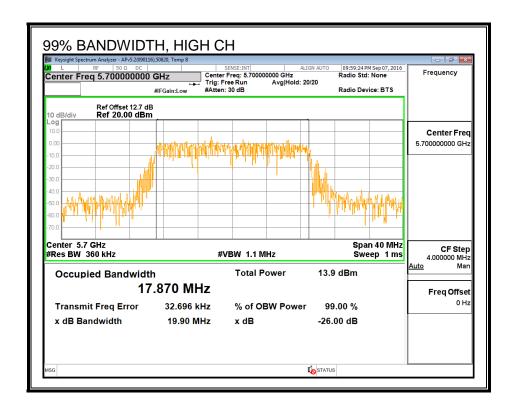


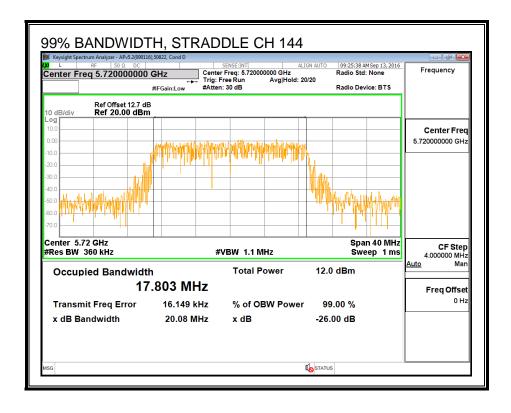


99% BANDWIDTH, CHAIN 1









8.19.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Average Power Results

| Channel | Frequency | Chain 0 | Chain 1 | Total |
|---------|-----------|---------|---------|-------|
| | | Power | Power | Power |
| | (MHz) | (dBm) | (dBm) | (dBm) |
| Low | 5500 | 12.18 | 12.15 | 15.18 |
| Mid | 5580 | 12.22 | 12.18 | 15.21 |
| High | 5700 | 12.15 | 12.21 | 15.19 |
| 144 | 5720 | 12.22 | 12.25 | 15.25 |

8.19.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-247 (6.2.3) (1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

Straddle channel power is measured using PXA spectrum analyzer, duty cycle correction factor is required.

FAX: (510) 661-0888

DIRECTIONAL ANTENNA GAIN

The TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

| Chain 0 | Chain 1 | Uncorrelated Chains |
|---------|---------|---------------------|
| Antenna | Antenna | Directional |
| Gain | Gain | Gain |
| (dBi) | (dBi) | (dBi) |
| 4.90 | 7.40 | 6.33 |

RESULTS

| ID: | 43573 | Date: | 9/7/16 |
|-----|-------|-------|--------|
|-----|-------|-------|--------|

Bandwidth, Antenna Gain and Limits

| Channel | Frequency | Min | Min | Directional | Directional | Power | PSD |
|---------|-----------|-------|--------|-------------|-------------|-------|-------|
| | | 26 dB | 99% | Gain | Gain | Limit | Limit |
| | | BW | BW | for Power | for PSD | | |
| | (MHz) | (MHz) | (MHz) | (dBi) | (dBi) | (dBm) | (dBm) |
| Low | 5500 | 21.85 | 17.711 | 6.33 | 6.33 | 23.15 | 10.67 |
| Mid | 5580 | 21.81 | 17.71 | 6.33 | 6.33 | 23.15 | 10.67 |
| High | 5700 | 21.98 | 17.806 | 6.33 | 6.33 | 23.18 | 10.67 |

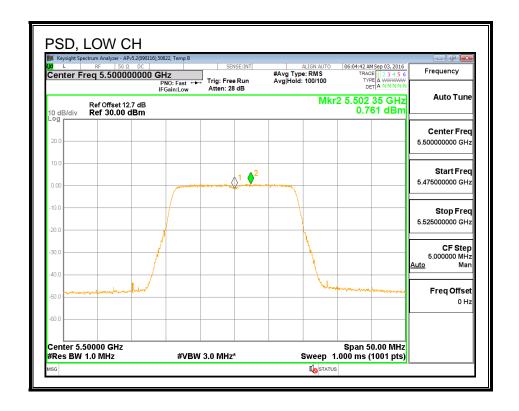
| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd PSD |
|--------------------|------|--|
|--------------------|------|--|

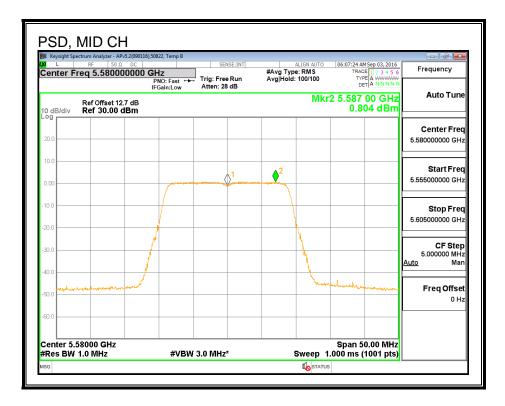
Output Power Results

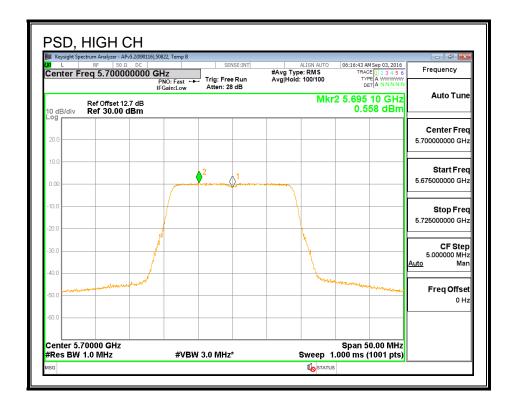
| | · | | | | | | | | | |
|---------|-----------|---------|---------|--------|-------|--------|--|--|--|--|
| Channel | Frequency | Chain 0 | Chain 1 | Total | Power | Power | | | | |
| | | Meas | Meas | Corr'd | Limit | Margin | | | | |
| | | Power | Power | Power | | | | | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) | | | | |
| Low | 5500 | 12.18 | 12.15 | 15.18 | 23.15 | -7.98 | | | | |
| Mid | 5580 | 12.22 | 12.18 | 15.21 | 23.15 | -7.94 | | | | |
| High | 5700 | 12.15 | 12.21 | 15.19 | 23.18 | -7.99 | | | | |

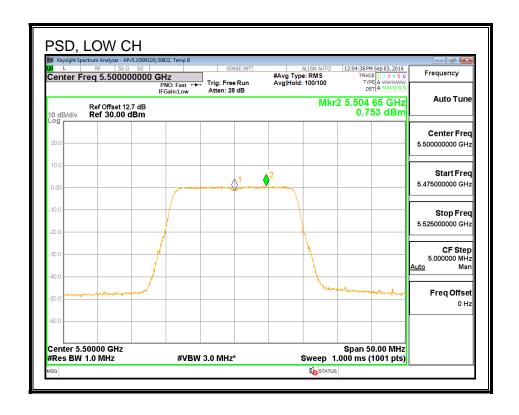
PSD Results

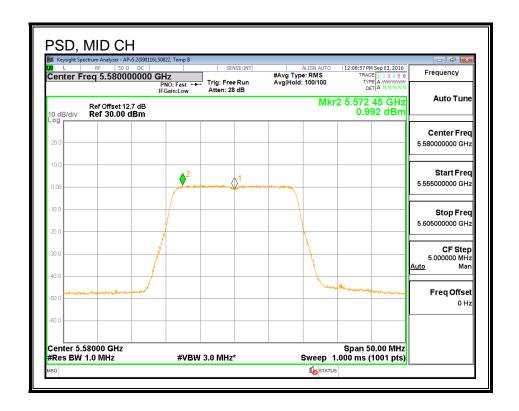
| Channel | Frequency | Chain 0 | Chain 1 | Total | PSD | PSD | | | |
|---------|-----------|---------|---------|--------|-------|--------|--|--|--|
| | | Meas | Meas | Corr'd | Limit | Margin | | | |
| | | PSD | PSD | PSD | | | | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) | | | |
| Low | 5500 | 0.761 | 0.753 | 3.77 | 10.67 | -6.90 | | | |
| Mid | 5580 | 0.804 | 0.992 | 3.91 | 10.67 | -6.76 | | | |
| High | 5700 | 0.558 | 0.856 | 3.72 | 10.67 | -6.95 | | | |

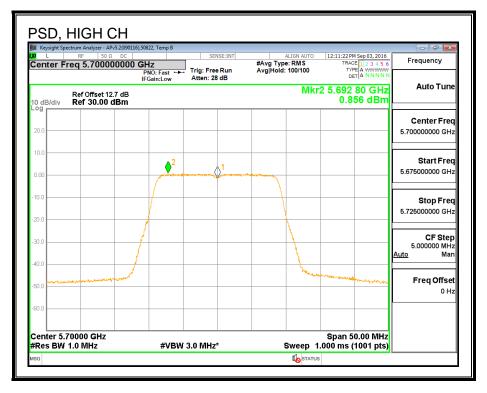












8.20. 802.11ac VHT20 2Tx (CHAIN 0 + CHAIN 1) STBC STRADDLE CHANNEL 144 RESULTS (FCC)

8.20.1. OUTPUT POWER AND PSD

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency | Min | Directional | Directional | Power | PSD |
|---------|-----------|-------|-------------|-------------|-------|-------|
| | | 26 dB | Gain | Gain | Limit | Limit |
| | | BW | for Power | for PSD | | |
| | (MHz) | (MHz) | (dBi) | (dBi) | (dBm) | (dBm) |
| 144 | 5720 | 15.97 | 6.33 | 6.33 | 22.70 | 10.67 |

| Duty Cycle CF (dB) 0.00 | Included in Calculations of Corr'd Power & PSD |
|-------------------------|--|
|-------------------------|--|

Output Power Results

| Channel | Frequency | Chain 0 | Chain 1 | Total | Power | Power |
|---------|-----------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Corr'd | Limit | Margin |
| | | Power | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 144 | 5720 | 11.11 | 11.15 | 14.14 | 22.70 | -8.56 |

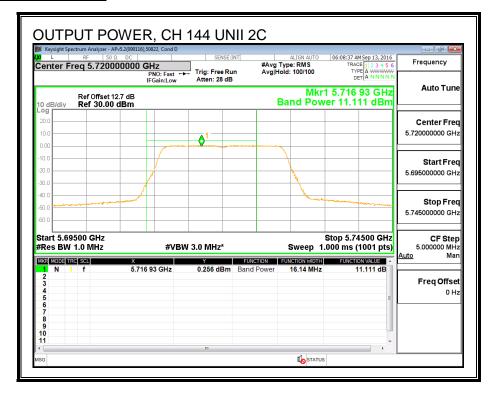
PSD Results

| Channel | Frequency | Chain 0 | Chain 1 | Total | PSD | PSD |
|---------|-----------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Corr'd | Limit | Margin |
| | | PSD | PSD | PSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 144 | 5720 | 0.658 | 0.85 | 3.77 | 10.67 | -6.90 |

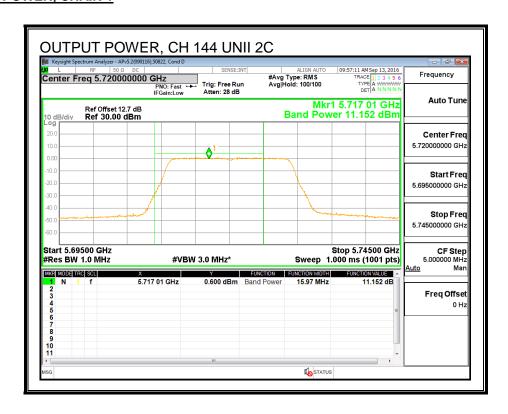
DATE: OCTOBER 13, 2016

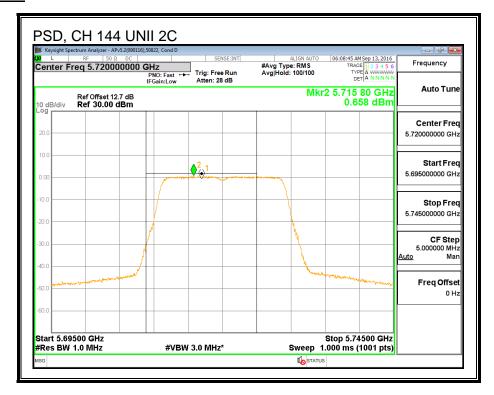
IC: 579C-A1707

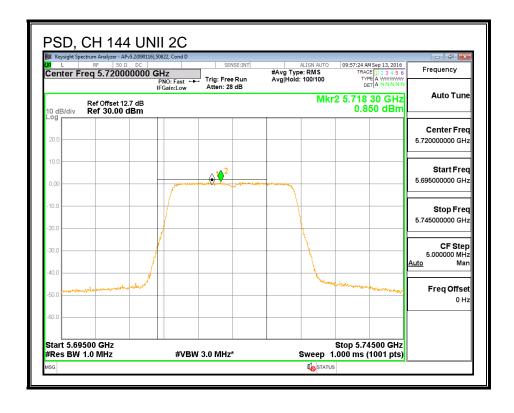
OUTPUT POWER, CHAIN 0



OUTPUT POWER, CHAIN 1







REPORT NO: 16U23800-E4V2 FCC ID: BCGA1707

UNII-3 BAND

Antenna Gain and Limit

| Channel | Frequency | Min | Directional | Directional | Power | PSD |
|---------|-----------|-------|-------------|-------------|-------|-------|
| | | 26 dB | Gain | Gain | Limit | Limit |
| | | BW | For Power | For PSD | | |
| | (MHz) | (MHz) | (dBi) | (dBi) | (dBm) | (dBm) |
| 144 | 5720 | 5.97 | 6.33 | 6.33 | 29.67 | 29.67 |

| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd Power & PSD |
|--------------------|------|--|
|--------------------|------|--|

Output Power Results

| Channel | Frequency | Chain 0 | Chain 1 | Total | Power | Power |
|---------|-----------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Corr'd | Limit | Margin |
| | | Power | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 144 | 5720 | 5.68 | 5.69 | 8.70 | 29.67 | -20.97 |

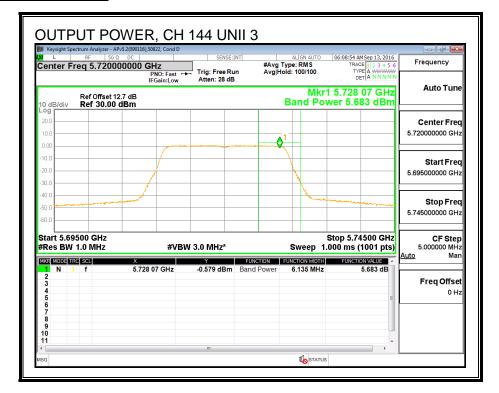
PSD Results

| Channel | Frequency | Chain 0 | Chain 1 | Total | PSD | PSD |
|---------|-----------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Corr'd | Limit | Margin |
| | | PSD | PSD | PSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 144 | 5720 | -2.40 | -2.39 | 0.62 | 29.67 | -29.05 |

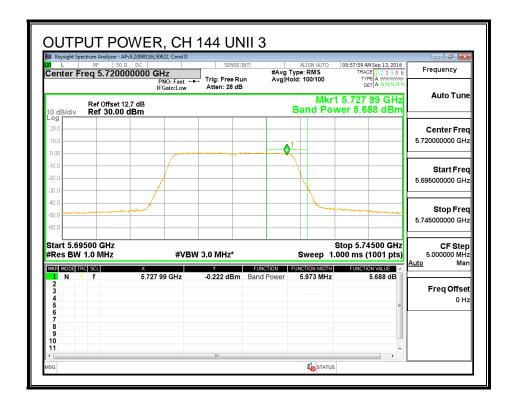
DATE: OCTOBER 13, 2016

IC: 579C-A1707

OUTPUT POWER, CHAIN 0

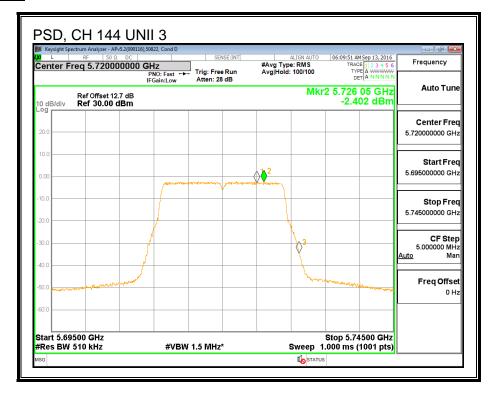


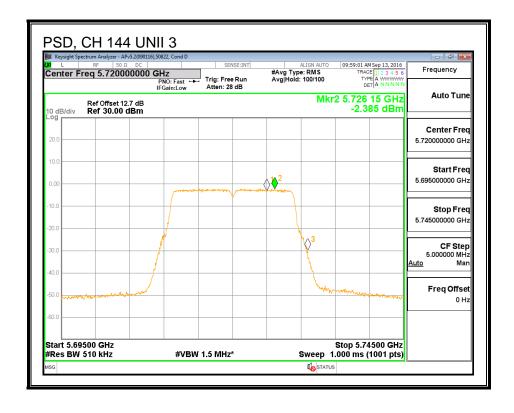
OUTPUT POWER, CHAIN 1



DATE: OCTOBER 13, 2016

IC: 579C-A1707





8.21. 802.11ac VHT20 2Tx (CHAIN 0 + CHAIN 1) STBC STRADDLE CHANNEL 144 RESULTS (IC)

8.21.1. OUTPUT POWER AND PSD

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

| Channel | Frequency | Min | Directional | Directional | Power | PSD |
|---------|-----------|--------|-------------|-------------|-------|-------|
| | | 99% | Gain | Gain | Limit | Limit |
| | | BW | for Power | for PSD | | |
| | (MHz) | (MHz) | (dBi) | (dBi) | (dBm) | (dBm) |
| 144 | 5720 | 13.880 | 6.33 | 6.33 | 22.09 | 10.67 |

| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd Power & PSD |
|--------------------|------|--|
|--------------------|------|--|

Output Power Results

| Channel | Frequency | Chain 0 | Chain 1 | Total | Power | Power |
|---------|-----------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Corr'd | Limit | Margin |
| | | Power | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 144 | 5720 | 11.06 | 11.11 | 14.09 | 22.09 | -8.00 |

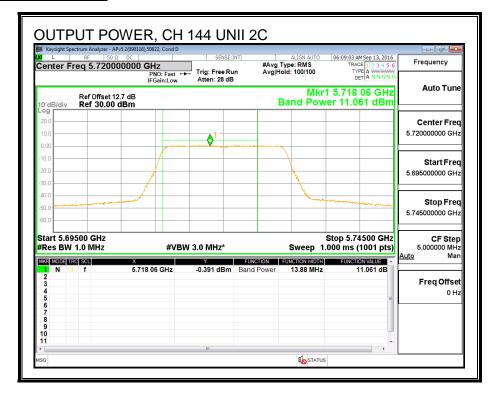
PSD Results

| Channel | Frequency | Chain 0 | Chain 1 | Total | PSD | PSD |
|---------|-----------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Corr'd | Limit | Margin |
| | | PSD | PSD | PSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 144 | 5720 | 0.66 | 0.85 | 3.77 | 10.67 | -6.90 |

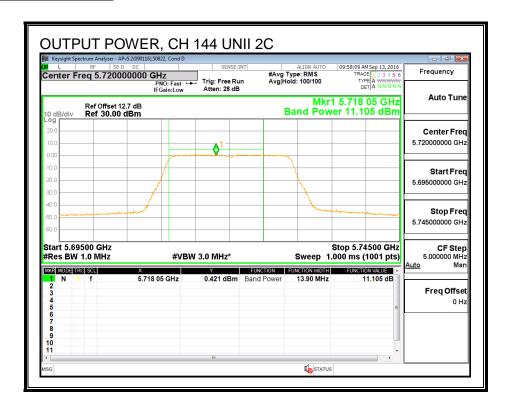
DATE: OCTOBER 13, 2016

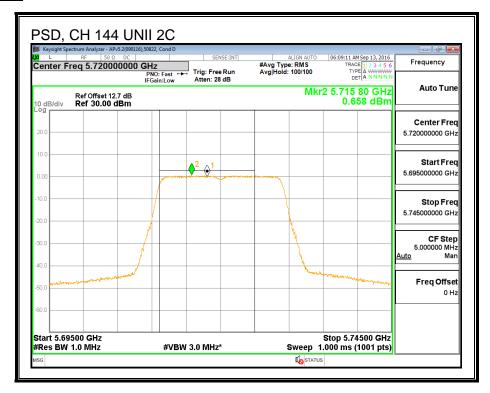
IC: 579C-A1707

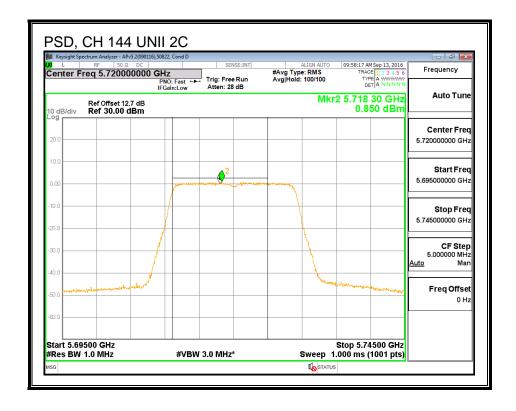
OUTPUT POWER, CHAIN 0



OUTPUT POWER, CHAIN 1







UNII-3 BAND

Antenna Gain and Limit

| Channel | Frequency | Min | Directional | Directional | Power | PSD |
|---------|-----------|-------|-------------|-------------|-------|-------|
| | | 99% | Gain | Gain | Limit | Limit |
| | | BW | For Power | For PSD | | |
| | (MHz) | (MHz) | (dBi) | (dBi) | (dBm) | (dBm) |
| 144 | 5720 | 3.880 | 6.33 | 6.33 | 29.67 | 29.67 |

| Duty Cycle CF (dB) | 0.00 | Included in Calculations of Corr'd Power & PSD |
|--------------------|------|--|
|--------------------|------|--|

Output Power Results

| Channel | Frequency | Chain 0 | Chain 1 | Total | Power | Power |
|---------|-----------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Corr'd | Limit | Margin |
| | | Power | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 144 | 5720 | 5.41 | 5.44 | 8.44 | 29.67 | -21.23 |

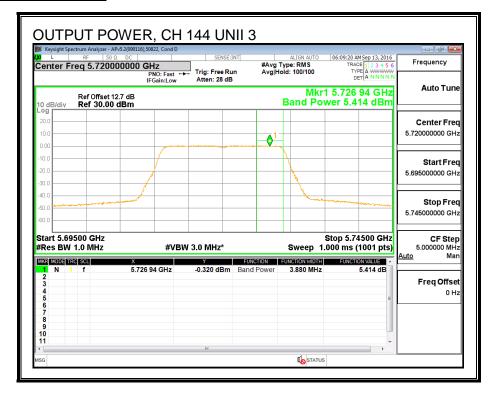
PSD Results

| Channel | Frequency | Chain 0 | Chain 1 | Total | PSD | PSD |
|---------|-----------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Corr'd | Limit | Margin |
| | | PSD | PSD | PSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| 144 | 5720 | -2.40 | -2.39 | 0.62 | 29.67 | -29.05 |

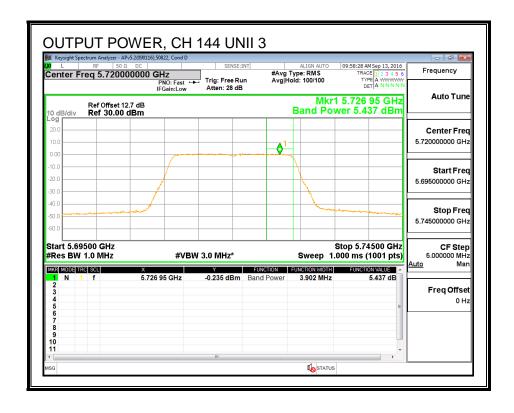
DATE: OCTOBER 13, 2016

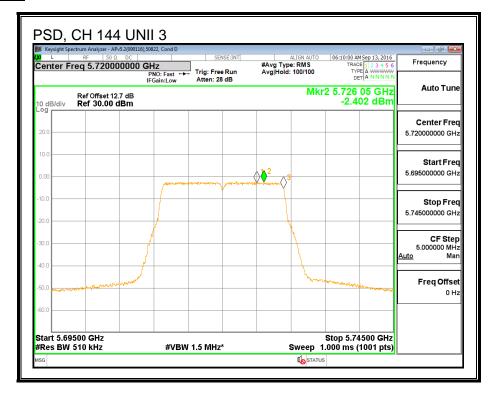
IC: 579C-A1707

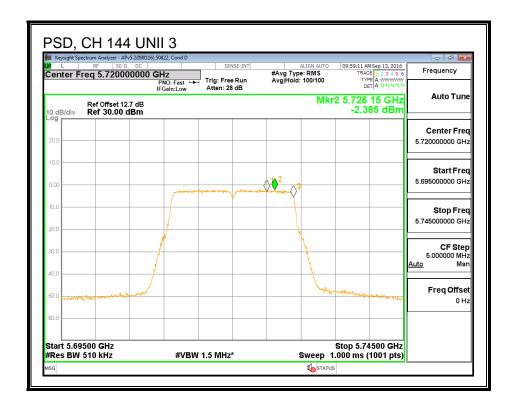
OUTPUT POWER, CHAIN 0



OUTPUT POWER, CHAIN 1







8.21.2. **6 dB BANDWIDTH**

LIMITS

FCC §15.407 (e)

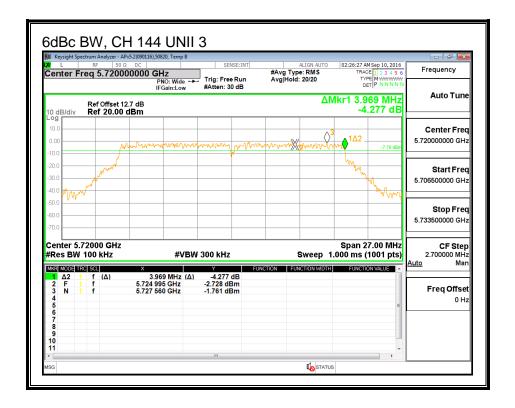
IC RSS-247 (6.2.4) (1)

The minimum 6 dB bandwidth shall be at least 500 kHz.

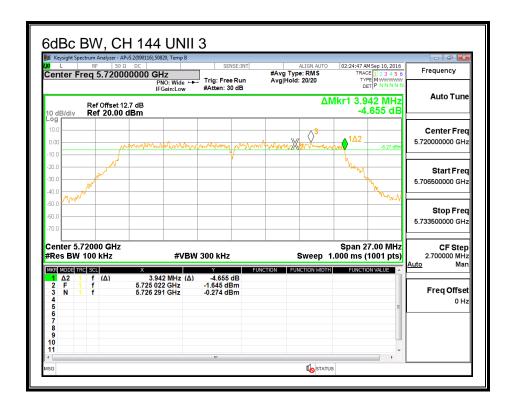
RESULTS

| Channel | Frequency | 6 dB BW | 6 dB BW |
|---------|-----------|---------|---------|
| | | Chain 0 | Chain 1 |
| | (MHz) | (MHz) | (MHz) |
| 144 | 5720 | 3.969 | 3.942 |

CHAIN 0



CHAIN 1



802.11n HT20 2Tx (CHAIN 0 + CHAIN 2) STBC MODE IN THE 5.6 GHz 8.22. **BAND**

8.22.1. **26 dB BANDWIDTH**

LIMITS

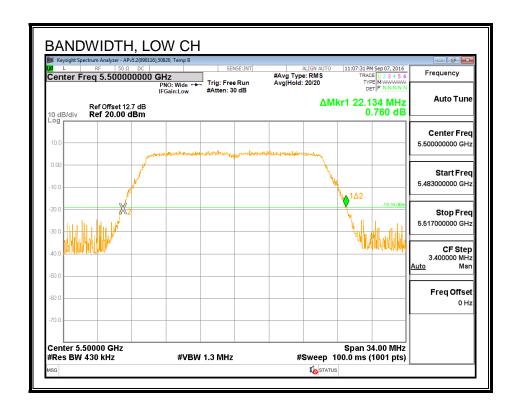
None; for reporting purposes only.

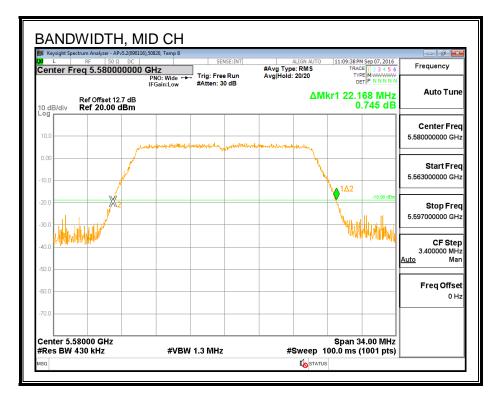
RESULTS

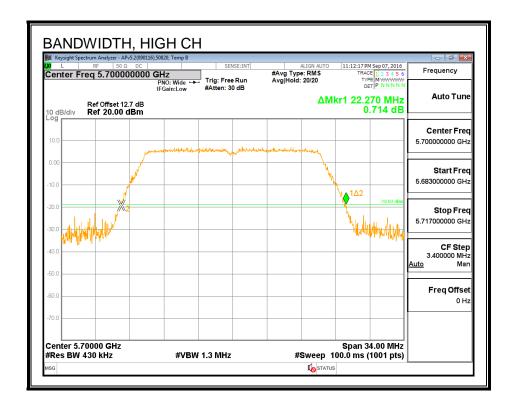
| Channel | Frequency | 26 dB BW | 26 dB BW |
|---------|-----------|----------|----------|
| | | Chain 0 | Chain 2 |
| | (MHz) | (MHz) | (MHz) |
| Low | 5500 | 22.134 | 21.780 |
| Mid | 5580 | 22.168 | 21.813 |
| High | 5700 | 22.270 | 21.780 |
| 144 | 5720 | 22.304 | 21.846 |

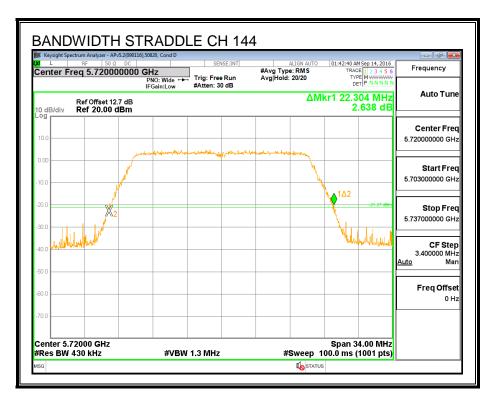
IC: 579C-A1707

26 dB BANDWIDTH, CHAIN 0

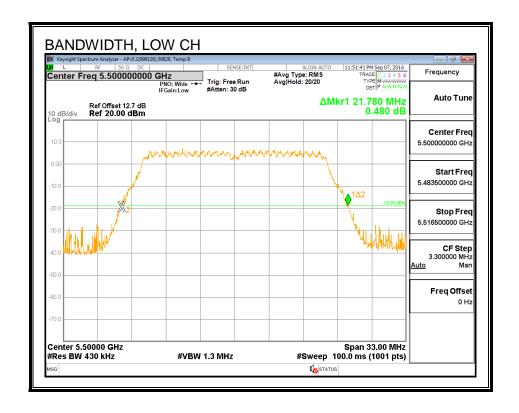


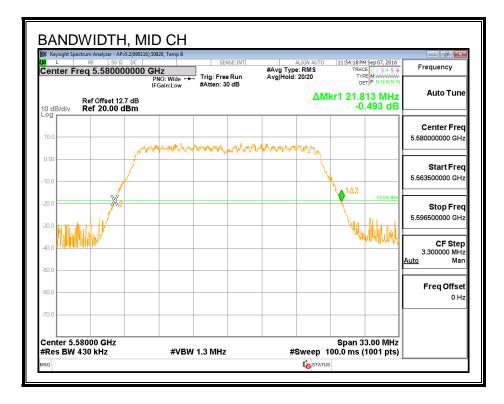


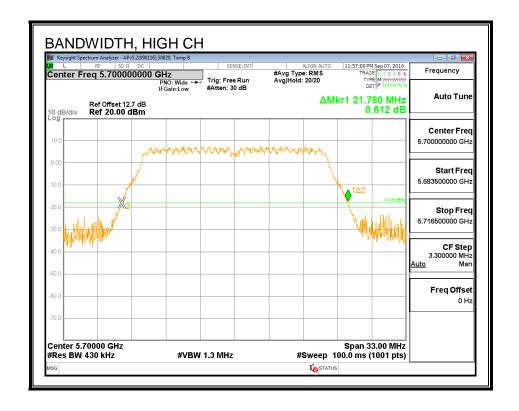


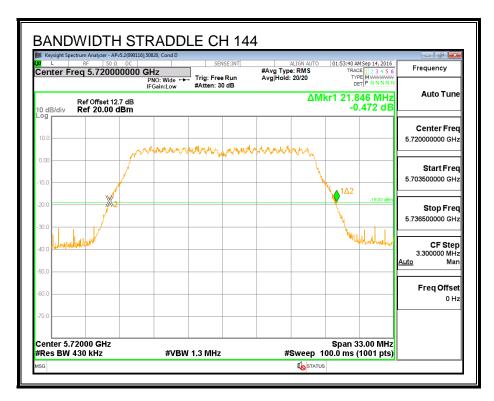


26 dB BANDWIDTH, CHAIN 2









8.22.2. 99% BANDWIDTH

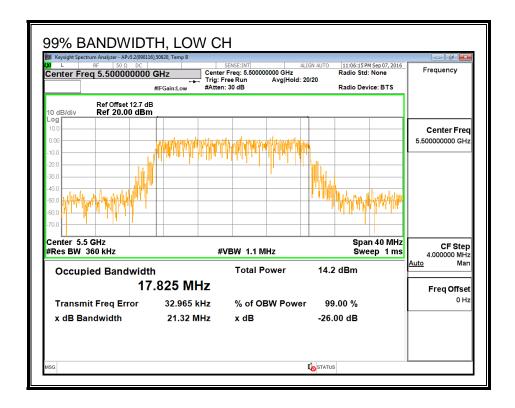
LIMITS

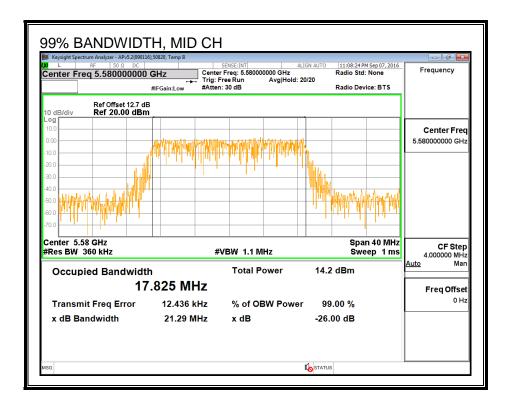
None; for reporting purposes only.

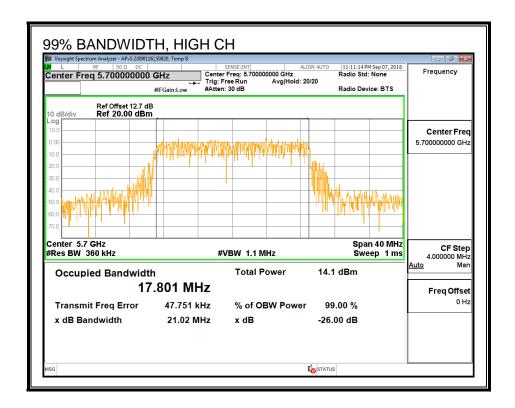
RESULTS

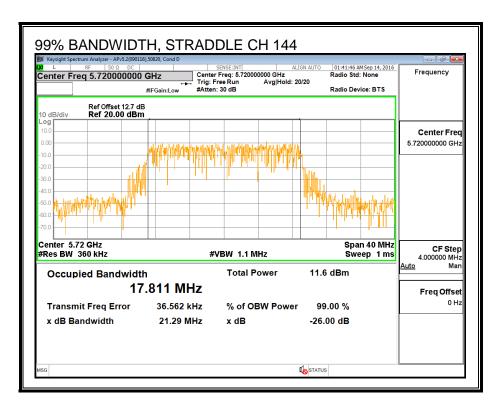
| Channel | Frequency | 99% BW | 99% BW |
|---------|-----------|---------|---------|
| | | Chain 0 | Chain 2 |
| | (MHz) | (MHz) | (MHz) |
| Low | 5500 | 17.825 | 17.959 |
| Mid | 5580 | 17.825 | 17.854 |
| High | 5700 | 17.801 | 17.846 |
| 144 | 5720 | 17.811 | 17.802 |

99% BANDWIDTH, CHAIN 0

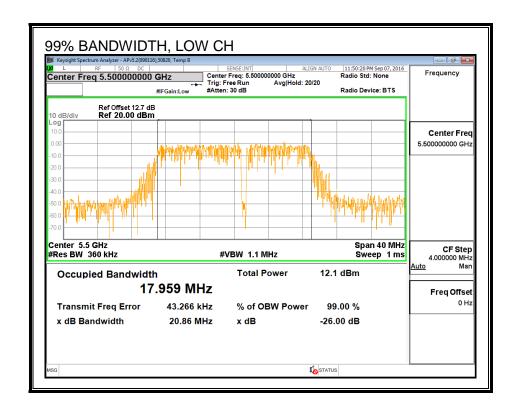


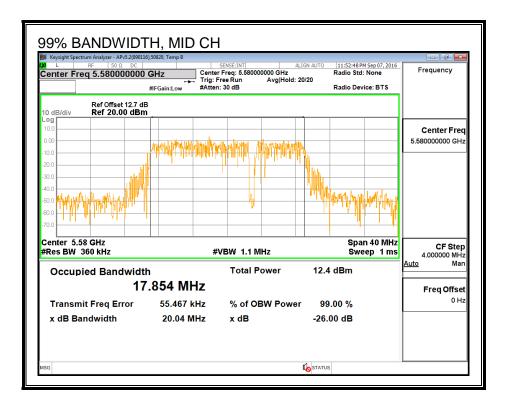


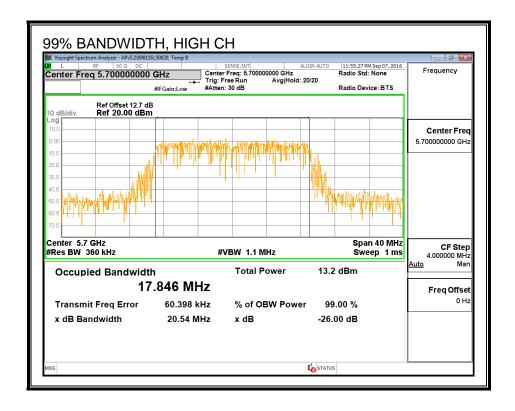


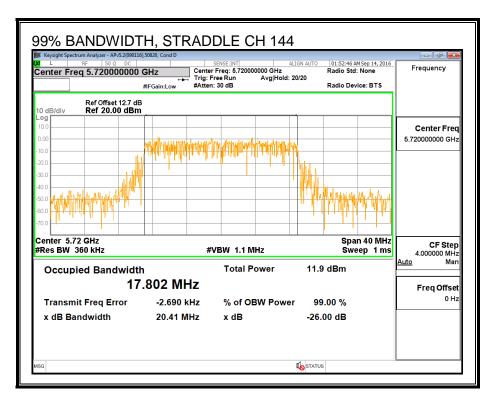


99% BANDWIDTH, CHAIN 2









8.22.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter.

RESULTS

Average Power Results

| Channel | Frequency | Chain 0 | Chain 2 | Total |
|---------|-----------|---------|---------|-------|
| | | Power | Power | Power |
| | (MHz) | (dBm) | (dBm) | (dBm) |
| Low | 5500 | 12.15 | 12.24 | 15.21 |
| Mid | 5580 | 12.22 | 12.24 | 15.24 |
| High | 5700 | 12.14 | 12.24 | 15.20 |
| 144 | 5720 | 12.18 | 12.21 | 15.21 |

8.22.4. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26–dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1–MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC RSS-247 (6.2.3) (1)

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

TEST PROCEDURE

Measurements perform using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

Straddle channel power is measured using PXA spectrum analyzer, duty cycle correction factor is required.

DIRECTIONAL ANTENNA GAIN

The TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

| Chain 0 | Chain 2 | Uncorrelated Chains |
|---------|---------|---------------------|
| Antenna | Antenna | Directional |
| Gain | Gain | Gain |
| (dBi) | (dBi) | (dBi) |
| 4.90 | 5.20 | 5.05 |

RESULTS

| ID : 43573 Date : 9/7/16 |
|--|
|--|

Bandwidth, Antenna Gain and Limits

| Channel | Frequency | Min | Min | Directional | Directional | Power | PSD |
|---------|-----------|-------|--------|-------------|-------------|-------|-------|
| | | 26 dB | 99% | Gain | Gain | Limit | Limit |
| | | BW | BW | for Power | for PSD | | |
| | (MHz) | (MHz) | (MHz) | (dBi) | (dBi) | (dBm) | (dBm) |
| Low | 5500 | 21.78 | 17.825 | 5.05 | 5.05 | 23.51 | 11.00 |
| Mid | 5580 | 21.81 | 17.825 | 5.05 | 5.05 | 23.51 | 11.00 |
| High | 5700 | 21.78 | 17.801 | 5.05 | 5.05 | 23.50 | 11.00 |

| Duty Cycle CF (dB) 0.00 | Included in Calculations of Corr'd PSD |
|-------------------------|--|
|-------------------------|--|

Output Power Results

| Channel | Frequency | Chain 0 | Chain 2 | Total | Power | Power |
|---------|-----------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Corr'd | Limit | Margin |
| | | Power | Power | Power | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| Low | 5500 | 12.15 | 12.24 | 15.21 | 23.51 | -8.30 |
| Mid | 5580 | 12.22 | 12.24 | 15.24 | 23.51 | -8.27 |
| High | 5700 | 12.14 | 12.24 | 15.20 | 23.50 | -8.30 |

PSD Results

| Channel | Frequency | Chain 0 | Chain 2 | Total | PSD | PSD |
|---------|-----------|---------|---------|--------|-------|--------|
| | | Meas | Meas | Corr'd | Limit | Margin |
| | | PSD | PSD | PSD | | |
| | (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dB) |
| Low | 5500 | 0.603 | 0.912 | 3.77 | 11.00 | -7.23 |
| Mid | 5580 | 0.824 | 0.927 | 3.89 | 11.00 | -7.11 |
| High | 5700 | 0.672 | 0.904 | 3.80 | 11.00 | -7.20 |

